


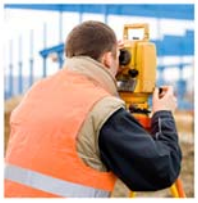

JONES
CONSULTING GROUP LTD.
PLANNERS & ENGINEERS

Excellence Reliance Innovation

Preliminary Servicing & Stormwater Management Report

St. Andrew's Lake Village Development

Tonking Management Inc.

January 2019

The Jones Consulting Group Ltd.
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1. Introduction

1.1. Appointment

The Jones Consulting Group Ltd. (TJCG) was retained by Tonking Management Inc. (Client) to prepare this Preliminary Servicing and Stormwater Management Report for the proposed residential development known as St. Andrew's Lake Village. The proposed development is located in the Town of Penetanguishene (Town), and consists primarily of residential type (single detached and townhouse) development, as well as a small Commercial Block and Future Residential Block. This Report is provided to the Town in support of the required Zoning By-Law Amendment.

1.2. Property Description

The site is generally rectangular in shape; bound to the north by Pine Grove Road and existing residential dwellings, to the west by Fuller Avenue, to the east by St. Andrew's Lake, and to the south by existing rural residential and agricultural lands. The site and surrounding land uses are shown on the accompanying Zoning Map. Refer to **Appendix A**.

The properties total area is approximately 13.0 hectares (ha). The development is municipally known as 1145 Fuller Avenue, Penetanguishene, and legally described as Lots 21B, 53B, 63B, and part of Lot 77B Registered Plan 69, formerly in the Township of Tay, now in the Town of Penetanguishene, County of Simcoe. The location of the subject property is shown overleaf in **Figure 1**.

The development lands are mainly vegetated with a combination of pasture and forest type land cover. A portion of the site is also grassed, surrounding the existing residential dwelling and barn. Wetland vegetation is also present along the eastern development limit within the proposed EP Block adjacent to St. Andrew's Lake.

In general, the existing topography is considered gently sloping and drains in an easterly direction (towards St. Andrew's Lake) at an average gradient between 2 and 6%. Along the southern development limit the topography is more steeply sloped. This area drains north easterly at slopes ranging from 10 to 15%. Topographic survey information for the site was complete by others with additional topographic survey and field truthing completed by TJCG.

A Geotechnical Investigation of the subject lands was undertaken by Geospec Engineering Ltd., in 2006. Their fieldwork program included five (5) boreholes ranging in depth from 6.5m to 11.1m below existing ground. The boreholes generally encountered a layer of organic topsoil/peat over a layer of sand, silt and sand, and sand and silt till which extended beyond the final depths of investigation. The density of founding soil generally varied from compact to very dense and no groundwater was encountered during drilling. A copy of the Geotechnical Report can be found under separate cover. Refer to "Geotechnical Investigation, St. Andrew's Village, Penetanguishene, Ontario" dated January 16, 2006. Based on the Soil Survey of Simcoe County Report No. 29, the soils on site are represented by the Tioga Loamy Sand soil series, which corresponds to hydrologic soil group A.

Figure 1: Site Location Plan

1.3. Proposed Land Use

The latest St. Andrew's Lake Village Site Plan prepared by Innovative Planning Solutions indicates that the property will be subdivided into various sized residential lots and blocks (single detached and Townhouse), a commercial block, future residential block, parkland block, open space block, stormwater management blocks, and an environmental protection block. The Site's proposed land use statistics are summarized in **Table 1,** below. Refer to the Site Plan attached in **Appendix A** for the location and orientation of the lots, blocks and streets/Lanes.

Table 1: St. Andrews Lake Village - Site Plan Land Use Statistics

Residential Lot Breakdown	**Area (ha)**	**Units**
40ft Singles	1.662	38
35ft Singles	1.532	50
30ft Singles	1.013	38
20ft Street Townhomes	0.785	47
Sub-Total	**4.992**	**173**
Other Block Breakdown		
Future Residential Block	0.228	30 (estimated)
Neighborhood Commercial Block	0.227	N/A
Stormwater Management Block	0.675	N/A
Parkland Block	0.100	N/A
Open Space Block	0.140	N/A
Environmental Protection Block	5.612	N/A
Streets/Lanes and Parking	1.064	N/A
Sub-Total	**8.046**	**30**
Total	**13.038**	**203**

The proposed development will be serviced with privately owned sanitary and water infrastructure that connects to existing municipal infrastructure. In addition, privately owned storm sewer infrastructure, Low Impact Development (LID) systems and SWM facilities will be employed to convey drainage and provide the required levels of quality and quantity control of stormwater run-off.

Due to the narrow nature of the proposed streets/laneways (7.4m wide), 3.0m easements will be provided on both sides of the internal roads to accommodate water servicing and utility infrastructure. Two (2) site accesses are proposed to connect the internal roadways to the existing municipal right-of-ways. The first access/egress is to Fuller Drive and the second access/egress is to Pine Grove Road.

2. Supporting Documents

The following documents have been referenced in the preparation of this report:

- Town of Penetanguishene Land Development Engineering Policy, April 2009;
- Ministry of the Environment, Design Guidelines for Sewage Works, 2008
- Ministry of the Environment, Design Guidelines for Drinking-Water Systems, 2008
- Ministry of the Environment, Stormwater Management Planning and Design Manual, March 2003;
- Severn Sound Environmental Association, Urban Stormwater Management Strategy, 1998;
- Ontario Regulation 350/06, Ontario Building Code;
- Soils Map of Simcoe County, Ontario, Soil Survey Report No. 29
- Town of Penetanguishene Zoning Schedule "A"

3. Sanitary Servicing

3.1. Overview

The Town of Penetanguishene's Fox Street Sewage Treatment Plant (STP) serves the area where the development is situated. Sewage conveyance to the Fox Street STP is proposed via the existing sanitary sewers on Sheffcote Road and Cambridge Street, located in close proximity to the proposed development. Based on discussion with the Town, it is understood that sufficient treatment capacity is available at the Fox Street STP. The Town has confirmed that they are not aware of downstream sewer capacity concerns.

The proposed sanitary servicing is detailed on Drawings SAN-1 and SAN-2. Refer to **Appendix D**. Internally, sewage flows will be collected via proposed 200mm diameter PVC SDR35 sanitary mains and a series of 1200mm diameter maintenance holes to facilitate bends, appropriate clean out lengths, etc. Each proposed residential dwelling unit will be serviced with individual 100mm diameter PVC SDR28 service laterals that connect to the internal sanitary main. The Future Residential Block and Commercial Block are each proposed to be serviced via individual 200mm diameter PVC SDR35 mains.

Due to grading constraints the sanitary drainage associated with the development lands are separated north and south. The majority of the internal sanitary flows are proposed to be

conveyed via gravity sewer to the proposed Sanitary Pumping Station (SPS) centrally located within the development's Open Space Block. The sanitary flows are pumped southwest, within the development right-of-ways, from the SPS to the existing gravity sanitary sewer located at the intersection of Cambridge Street and Fuller Avenue via a 125mm diameter HDPE DR11 forcemain. The design of the SPS and forcemain has been completed by Gerrits Engineering Limited. A copy of their Design Brief is included in **Appendix B** for reference. It is noted that at this preliminary design stage the SPS is designed to accommodate a peak flow of 12.05l/s, which exceeds the currently proposed peak flow (11.39l/s) to the SPS. This surplus capacity would allow for additional peak flows to the SPS should adjustments to the proposed zoning be required.

A small northern portion of the development lands is proposed to drain via gravity sewers with Pine Grove Road; ultimately connecting to the existing sanitary sewer on Sheffcote Street immediately west of Fuller Ave. Drainage form the proposed development to Sheffcote Street is limited to ten (10) single residential lots fronting Street "C", and the future Neighbourhood Commercial Block fronting Pine Grove Road.

3.2. Sanitary Service Design Flows

For proposed residential development, the analytical sanitary forecast is determined based on estimated population. In order to determine population each residential building type is assigned a number of Persons Per Unit (PPU). The following PPU's have been assigned to the proposed building types:

Single Family Residential = 3.13 PPU

Townhouse Unit = 2.34 PPU

Future MD Residential = 1.67 PPU

With the above PPU's the estimated population of the development is determined to be 556 people (126 Units x 3.13 PPU + 47 Units x 2.34 PPU + 30 Units x 1.67 PPU). The estimated sanitary flow for commercial development is based on the Ministry of Environment Design Guidelines for Sewage works and corresponds to a peak flow of 28m^3/day/Ha or 0.32L/s/Ha. The total sanitary flow for the development can therefore be calculated with the following formula.

$$Qd = Qpd + Qpcom + Qi = \left[\frac{PQM}{86400}\right] + [Qcom \times Acom] + [I \times Ares]$$

Where: Qd = Total peak sewage flow (L/s)

Qpd = Peak domestic sewage flow (L/s)

Qpcom = Peak commercial sewage flow (L/s)

Qi = Extraneous sewage flow (L/s)

P = Design population (556 people)

Q = Average daily flow (450 L/person/day)

Acom = Area of commercial development (0.227Ha)

Qcom = Minimum peak commercial sewage flow (0.32L/s/Ha)

Ares = Area of Residential Development (6.32Ha)

I = Units of extraneous flow (0.10 L/s/Ha)

M = Harmon Peaking Factor; $1 + \left[\frac{14}{\left[\left(\frac{P}{1000}\right)^{0.5}+4\right]}\right]$ (2.0<M<4.0)

Therefore: $M = 1 + \left[\frac{14}{\left[\left(\frac{556}{1000}\right)^{0.5}+4\right]}\right]$

M = 3.95

$$Qd = \left[\frac{556\times450\times3.95}{86400}\right] + [0.32 \times 0.227] + [0.1 \times 6.32]$$

Qd = 12.14 L/s ← total peak sewage flow

In order to confirm the proposed sanitary infrastructure within the development lands has been appropriately sized a sanitary sewer design sheet has been completed. Refer to **Appendix B**. The design sheet demonstrates that the proposed sewers have been appropriately sized to convey the required flows, in addition to meeting the minimum (0.6m/s) and maximum (3.0m/s) velocity requirements stipulated by the Ministry of Environment.

Furthermore, in order to demonstrate sufficient downstream capacity at the connection points, external sanitary design sheets have been created to confirm peak flows can be accommodated at the Sheffcote Street connection point, through the Church Street Meadows Subdivision to Church Street, as well as at the Cambridge Street connection and immediate downstream sewers within Cambridge Street. Refer to **Appendix B** for supporting calculations.

Existing sanitary sewer design sheets were not available for the Sheffcote Street subdivision nor the Cambridge Street sewer. Therefore, the as recorded Sanitary Drainage Plan for the Church Street Meadows subdivision was utilized to recreate the existing subdivision design sheet, and the Town's

Web Map, Zoning Map, and existing sewer profile drawings were utilized in assessing the Cambridge Street sewer capacity. Refer to **Appendix B** for supporting documentation.

4. Water Servicing and Distribution

4.1. Overview

Based on record information provided by the Town, an existing 250mm diameter watermain is located along Fuller Avenue fronting the development lands. In addition, an existing 150mm diameter watermain is located along the north side of Pine Grove Road adjacent to Site.

The proposed domestic and fire water servicing is detailed on drawing GS-1and GS-2, **Appendix D**. In order to provide a fully looped water distribution system, two (2) connections to the existing water system is proposed. The first connection will be to the existing 250mm diameter watermain on Fuller Avenue and the second connection will be to the existing 150mm diameter watermain on Pine Grove Road. These connections will coincide with the Site entrance locations. As the proposed watermain will be privately owned, backflow prevention chambers will be provided at each of the connections to prevent potential contamination between the private water system and municipal water system. Internally, the development will be serviced with 150mm diameter PVC Class 150 watermain. A 50mm diameter loop (connected to the 150mm diameter main) will be provided at the Street D cul-de-sac to help improve water quality issues associated with dead-end watermains. A 19mm diameter (PE or Copper) domestic water service will be provided to each of the proposed single family dwellings and townhouse units. The Future Residential Block and Commercial Block will be serviced with 100mm diameter PVC Class 150 domestic water services and a 150mm diameter PVC Class 150 fire water services that will be stubbed within the respective Blocks. The Future Residential Block will be serviced from the development's internal watermain, and the Commercial Block will be serviced directly from the existing watermain on Pine Grove Road. Fire hydrants will be provided and strategically located within the development to meet Ontario Building Code (OBC) requirements for Fire Department suppression coverage.

4.2. Domestic Water Design Flows

Similar to Section 3.2, the Average Daily Flow (ADF) is determined by combining the anticipated residential flows and commercial flows for the development. Based on the estimated population of 556 people the residential ADF is determined to be 250,200L/day or 2.896L/s (556 people x 450 L/day/person). The commercial demand is based from the Ministry of Environment Design Guidelines for Sewage works and corresponds to a peak flow of 0.073L/s (0.32L/s/Ha x 0.227Ha).

Therefore the total ADF for the development can be calculated to be 2.97L/s. In order to determine the appropriate water distribution design flows for the Maximum Daily Demand (MDD) and Peak Hour Demand (PHD), the ADF is multiplied by the Ministry of Environment standard peaking factors. Refer to Table 3-1, Design Guidelines for Drinking-Water Systems 2008 prepared by the Ministry of Environment. The peaking factors and corresponding flows are summarized below:

Maximum Daily Demand Factor: 2.75

Maximum Daily Demand: 2.97L/s x 2.75 = 8.17L/s

Peak Hourly Demand Factor: 4.13

Peak Hourly Demand: 2.97L/s x 4.13 = 12.27 L/s

Based on the determined flows above and discussion with Town technical staff, it is anticipated that the Town's overall water supply has sufficient pressure and capacity to provide the required flows to the development. A Water System Analysis (WSA) will be completed at the detailed design stage to confirm watermain sizing and ensure adequate supply for potable use and fire protection is achieved for this development.

5. Stormwater Management Plan

5.1. Overview

The eastern limit of the proposed development encompasses what is known as St. Andrew's Lake Wetland. This wetland is currently the main receptacle for storm drainage from the development lands and ultimately drains to St. Andrew's Lake. The storm drainage system will be designed in accordance with the Town of Penetanguishene Land Development Engineering Policy, the Severn Sound Remedial Action Plan – Urban Stormwater Management Strategy and the Ministry of Environment Policies and Guidelines. Specifically, the following criteria will be utilized:

- Minor system (storm sewers) will be sized to convey runoff up to the 5 year storm event;
- Major system (overland flow) will be designed to safely convey regulatory event run-off to the designated outlets;
- Quantity control of stormwater runoff will be provided to reduce post development peak flows to corresponding pre development flows for the 2 to 100 year storm events;

- Quality control of stormwater run-off will be provided in accordance with the "Enhanced" level of protection stipulated by the Ministry of Environment; and,
- Maintain existing annual water balance characteristics by promoting infiltration to counteract the increase in hard surfaces.

5.2. Pre and Post Development Drainage

The existing or pre development condition of the Site was determined through topographic field survey and field reconnaissance. The development lands predominately drain in an easterly direction towards St. Andrew's Lake, with a small portion of the Site draining to Fuller Avenue. The pre development catchments are outlined on drawing SWM-1, refer to **Appendix D**. Pre development catchments 101 to 104 drain easterly to St. Andrew's Lake and catchment 105 drains westerly to Fuller Avenue.

The modelled pre development hydrologic catchment properties are summarized below in **Table 2**. The catchment properties are derived from the MTO Drainage Management Manual, and are based on the existing mixture of pasture and forest type ground cover, present on-site. As previously noted, the underlying soil is Tioga Loamy Sand, corresponding to the type 'A' hydrologic soil group. Catchment coefficients i.e. CN and Rational 'C' are based on the weighted mean of land cover over the determined soil group. Supporting catchment property calculations are provided in **Appendix C**.

Table 2: Pre Development Catchment Properties.

Catchment	Area (ha)	Curve Number	Pervious Curve Number	Rational Coefficient	Impervious Fraction (%)	Initial Abstraction (mm)	Time of Concentration (hrs)
101	2.264	37	35	0.14	1.77	8.86	0.37
102	0.905	32	32	0.08	0.00	10.00	0.18
103	4.021	35	35	0.08	0.00	9.05	0.59
104	1.177	32	32	0.08	0.00	10.00	0.24
105	0.252	41	41	0.09	0.00	7.50	0.31

The post development drainage conditions are derived from the proposed servicing and grading plans accompanying this Report. Refer to Drawings, SS-1, SS-2, LG-1 and LG-2, **Appendix D**. In order to meet the required quality and quantity control targets outlined in Section 5.1 of this Report, a combination of OGS units, dry ponds and rain gardens will be employed. The post development condition has been broken down into six (6) catchments. Refer to drawing SWM-2, **Appendix D**.

Catchment areas 201 and 203, represent the bulk of development and drain to the proposed south and north OGS unit and dry pond facility, respectively. These catchments ultimately drain easterly to St. Andrew's Lake post quality and quantity control.

Catchment area 202, represents uncontrolled areas that due to grading constraints, are not directed to the proposed SWM Facilities. This catchment drains easterly to St. Andrew's Lake and largely includes the rear lots and blocks adjacent to the proposed EP Block. It is important to recognize that the modelling has been completed based on the assumption that the proposed rear roof leaders of the houses in this catchment will be directed to the front of each lot.

Catchment 204 represents the rear lots of the development that drain west to Fuller Avenue. Due to grading constraints, this catchment could not be directed to the proposed SWM Facilities, as such, a linear rain garden is proposed along the rear yards of this catchment to provide quantity control of storm run-off to Fuller Avenue.

Catchment 205 represents a small area of the development that drains north to Pine Grove Road. In order to provide quantity control for this catchment, a rain garden is proposed along the flankages of Lot 1 and 173, as well as along the rear of lots 1 to 5, adjacent to the commercial block.

Catchment 206 represents the proposed commercial block. As the current development plan for the commercial block is unknown at this time, it is anticipated that this block will provide its own on-site quality and quantity control of storm run-off. This has been accounted for in the Development's overall stormwater design and allowable peak post development storm discharge rates have been assigned to this block. Refer to Drawing SWM-2, **Appendix D**. The required on-site stormwater quality and quantity control features for the commercial block are to be determined based on the development proposal and incorporated into the development layout at the Site Plan Control stage.

The post development properties of catchments 201 to 206 are summarized in **Table 3**. Catchment coefficients i.e. CN and Rational 'C' are based on the weighted mean of land cover over the determined soil group. Supporting catchment property calculations are provided in **Appendix C**.

Table 3: Post Development Catchment Properties.

Catchment	Area (ha)	Curve Number	Pervious Curve Number	Rational Coefficient	Impervious Fraction (%)	Initial Abstraction (mm)	Time of Concentration (hrs)
201	2.737	82	49	0.65	65	3.05	0.155
202	2.314	42	40	0.11	3	7.36	0.275
203	2.475	82	49	0.65	65	3.05	0.319
204	0.625	64	49	0.35	30	4.10	0.089
205	0.240	82	49	0.65	65	3.05	0.057
206*	0.228	TBD	TBD	TBD	TBD	TBD	TBD

*Note: Catchment 206 to provide on-site stormwater quality and quantity control to meet allowable peak flow targets. Required stormwater management infrastructure will be determined at Site Plan Control stage.

Modeling of pre and post development catchments was undertaken using Visual Otthymo 3.0 software. The 4-hour Chicago Storm Distribution and 24-hour SCS Type II Distribution were used to generate design storms based on the Orillia rain gauge in accordance with Town Standards. Event modeling design storms included the 25mm and 2 to 100-year 4-hour Chicago Storms, 2 to 100-year 24-hour SCS storms as well as the Regional (Timmins) storm. Detailed Visual Otthymo Outputs are provided in **Appendix C**. **Table 4** summarizes the determined pre and post development peak flow drainage patterns at the east and west outlets.

5.3. Stormwater Quality Control

In terms of the quality control requirements for stormwater run-off, the "Enhanced" level of protection as stipulated by the Ministry of Environment is to be provided. i.e. 80% removal of Total Suspended Solids (TSS). Furthermore, erosion control is required to ensure that the 25mm post development peak flow is released over a 24-hour period. These requirements are achieved through the proposed stormwater treatment train approach.

Catchment areas 201 and 203 encompass the vast majority of the development and its associated impervious surfaces requiring quality treatment. These catchments drain through a series of catchbasins and storm sewers that direct run-off to proposed OGS units, prior to outletting to the respective dry ponds. The OGS units have been sized with the PCSWMM for Stormceptor software using the Orillia rain gauge (Station ID # 5820). A Stormceptor Model STC 6000 is proposed to service catchment 201. This unit achieves the water quality objective by removing 80% TSS for a Fine (organics, silts and sand) particle distribution, treating 94% of the average annual run-off. A Stormceptor Model STC 6000 is also proposed to service catchment 203. This unit provides 81% TSS removal for a fine (organics, silts and sand) particle distribution, treating 95% of the average annual run-off. Refer to **Appendix C** for detailed Stormceptor Design Reports.

In addition to the quality treatment provided by the OGS units, further quality treatment is provided by the downstream dry ponds. Both the South and North dry ponds utilize a Hickenbottom style riser with a 50mm diameter orifice plate to provide 32.8 hour and 38.0 hour extended detention of the 25mm 4-hour Chicago event, respectively. This extended detention further enhances removal of TSS, while providing the required erosion control volume retention on-site. The drawdown characteristics of the proposed dry ponds are derived from Equation 4.1 of the Ministry of Environment Stormwater Management Planning and Design Manual. Refer to **Appendix C** for supporting drawdown calculations.

5.4. Stormwater Quantity Control

The proposed South and North dry pond facilities, as well as the proposed linear rain gardens, provide the necessary stormwater quantity control for the development. The dry pond facilities have been designed to attenuate post development event run-off for storm events up to and including the 100-year event. The dry ponds capture run-off from the main development area (catchments 201 and 203) ensuring post development flows to the East are controlled to corresponding pre development peak flows.

The proposed rain gardens will be employed to control peak flows from the small catchment areas that drain to Fuller Avenue and Pine Grove Road, catchments 204 and 205, respectively. As previously noted, these catchments were unable to drain to the proposed OGS units and dry ponds due to grading constraints. The rain gardens have been designed to allow the 100-year event from these catchments to be attenuated and infiltrated into the ground.

The proposed southern dry pond (SWMF #1) has a bottom elevation of 225.90m and a minimum top elevation of 228.20m. Flow control is provided through a Hickenbottom style riser, and a 50mm diameter orifice plate at an invert elevation of 225.90m. The dry pond facility has been graded with 4:1 internal side slopes, and 3:1 external side slopes have been used to match into the existing and proposed ground surrounding the facility. A 3.5m wide access road is provided along the east side of the dry pond to facilitate any required maintenance procedures. In the event of a blockage to the dry pond outlet, a 2.0m wide emergency overflow weir is provided at an elevation of 227.65m. The overflow weir has been sized to allow the uncontrolled regulatory peak flow to be conveyed through the dry pond while maintaining a minimum 0.3m freeboard. The maximum ponding elevation in this pond is 227.55m, which occurs during the 24-hour 100-year SCS storm.

The proposed northern dry pond (SWM Facility #2) has a bottom elevation of 225.80m and a minimum top elevation of 228.10m. Flow control is provided through a Hickenbottom style riser

and a 50mm diameter orifice plate at an invert elevation of 225.80m. Similar to the southern dry pond facility, the northern facility has been graded with 4:1 internal side slopes, and 3:1 external side slopes. A 3.5m wide access road is provided around the entire dry pond to facilitate any required maintenance procedures. In the event of a blockage to the dry pond outlet, a 2.0m wide emergency overflow weir is provided at an elevation of 227.50m. The overflow weir has been sized to allow the uncontrolled regulatory peak flow to be conveyed through the dry pond while maintaining a minimum 0.3m freeboard. The maximum ponding elevation in this pond is 227.22m, which occurs during the 24-hour 100-year SCS storm.

The Fuller Avenue rain garden is located along the rear of lots 10 to 58, adjacent to the Fuller Avenue Right-of-Way. The proposed rain garden will be comprised of 1.0m wide x 1.3m deep 50mm diameter clearstone wrapped in non-woven geotextile. A layer of 100mm diameter river stone 200mm thick (underlain with non-woven geotextile), will be placed on top of the clearstone trench. Refer to Typical Rain Garden Detail on drawing STM-1 and STM-2, **Appendix D**. The total length of this rain garden is 340m corresponding to a total volume of approximately 176m^3. (176.8 = 340m x 1.0m x 1.3m x 0.4 (void ratio)). The maximum required storage occurs during the 100-year 24-hour SCS and corresponds to a volume of 174m^3.

The Pine Grove Road rain garden is located along the flankages of lot 1 and lot 173, adjacent to Pine Grove Road, as well as the rear of lots 1 to 5. The proposed rain garden will be comprised of 2.0m wide x 2.0m deep 50mm diameter clearstone wrapped in non-woven geotextile. A layer of 100mm diameter river stone 200mm thick (underlain with non-woven geotextile), will be placed on top of the clearstone trench. Refer to Typical Rain Garden Detail on drawing STM-1 and STM-2, **Appendix D**. The total length of this rain garden is 95m corresponding to a total volume of approximately 152m^3. (152 = 95m x 2.0m x 2.0m x 0.4 (void ratio)). The maximum required storage occurs during the 100-year 24-hour SCS and corresponds to a volume of 140m^3.

The proposed commercial block's development plan is unknown at this time. In order to meet pre development flows to the west, the commercial block will be required to provide on-site stormwater quality and quantity control. The allowable post development peak flows for the commercial block are outlined in **Table 4**. Details for the proposed commercial block's stormwater management infrastructure are to be determined at the Site Plan Control Stage.

Modelling of the quantity control features was completed using Visual Otthymo 3.0 and the Route Reservoir routine. The determined pre and post development flows to the East and West, as well as the event storage conditions for each quantity control feature are outlined in **Table 4**. Supporting Visual Otthymo outputs and stage, storage and discharge calculations for the Dry Ponds are included in **Appendix C** for reference.

Table 4: Pre Development, Post Development and Stormwater Management Facility Operations Summary

Storm Event	Pre Development		Post Development		South SWM Facility		North SWM Facility		Fuller Avenue Rain Garden	Pine Grove Rain Garden
	Peak Flow (Uncontrolled)		Peak Flow (Controlled)		Storage Volume	Elevation	Storage Volume	Elevation	Storage Volume	Storage Volume
	West Outlet	East Outlet	*West Outlet	East Outlet						
	m^3/s	m^3/s	m^3/s	m^3/s	m^3	m	m^3	m	m^3	m^3
25mm Event	N/A	0.005	N/A	0.009	228	226.41	210	226.16	17	23
4 HR CHI										
2-year	0.001	0.019	0.001	0.019	348	226.60	317	226.31	32	34
5-year	0.002	0.041	0.002	0.032	504	226.81	458	226.50	54	48
10-year	0.003	0.059	0.003	0.042	610	226.93	583	226.65	71	57
25-year	0.005	0.087	0.005	0.058	753	227.08	682	226.76	95	70
50-year	0.006	0.113	0.006	0.071	870	227.20	788	226.87	115	81
100-year	0.007	0.139	0.007	0.085	985	227.31	891	226.97	135	91
24 HR SCS										
2-year	0.002	0.034	0.002	0.028	392	226.66	363	226.38	38	49
5-year	0.004	0.069	0.004	0.047	590	226.91	543	226.60	67	71
10-year	0.005	0.098	0.005	0.063	745	227.08	681	226.76	89	87
25-year	0.007	0.140	0.007	0.085	949	227.27	867	226.95	121	108
50-year	0.009	0.175	0.009	0.103	1111	227.42	1010	227.09	147	124
100-year	0.011	0.214	0.011	0.123	1278	227.55	1161	227.22	174	140
Timmins	0.011	0.285	0.011	0.378	1588	227.78	1634	227.60	N/A	N/A

*West Outlet Post Development Peak Flows represent the allowable peak flows for the Commercial Block in the post development condition.

5.5. Minor and Major Stormwater Conveyance

In terms of minor event conveyance (i.e. storm events less than or equal to the 5-year event) run-off will discharge to the proposed OGS and Dry Pond facilities via the proposed storm sewer network. Refer to drawings STM-1 and STM-2, **Appendix D**. Supporting storm sewer sizing calculations are provided in **Appendix C**. During major storm events (storm events greater than the 5-year event) or in the event that a blockage to the storm sewer network was to occur, site grading has been completed to safely direct flows to the proposed dry ponds without causing flooding to the proposed buildings or adjacent properties. The post development overland flow route is shown on drawing STM-1 and STM-2, **Appendix D**.

Two (2) existing external drainage catchments drain through the subject lands in the pre development condition. The first external catchment is located along the south property boundary. Flows from this catchment will be diverted around the subject lands via a proposed swale/berm. The second external catchment is located along the north property boundary. Flows from this catchment will also be diverted via proposed swales and a separate storm sewer network. Flows from these external catchments will be uncontrolled and will not contribute flow in the post development condition.

5.6. Water Balance

A pre to post development water balance has been undertaken for the site. The analysis has been completed using the Hydrologic Cycle Component Values from Table 3.1 of the Ministry of Environment Stormwater Management Planning and Design Manual, dated March 2003. Supporting calculations are provided in **Appendix C**. The completed analysis does not include the proposed commercial block as it is anticipated that this block will complete its own water balance at the Site Plan Control Stage.

In the pre development condition, the average annual infiltration has been determined to be approximately 220.5mm. Based on the pervious area of the development (8.351Ha), this corresponds to an annual average infiltration volume of 18,414m^3. In the post development condition the average annual infiltration has been determined to be 193.2mm. The pervious area in the post development condition has been determined to be 4.598Ha corresponding to an average annual infiltration volume of 8,883m^3. This corresponds to a net loss of approximately 9,531m^3 of infiltration between the pre development and post development condition.

In order to acheive the required water balance, a clearstone layer below the northern dry pond facility will be utilized to promote infiltration in the post development condition. The clearstone

layer has an area of approximately 532m^2 and will be 0.5m thick. Based on a porosity of 0.40 for the clearstone the total volume of storage is 106.4m^3. The total drainage area to the norther dry pond is 2.475Ha (Refer to Catchment 203). Climate data indicates that an average of 99 rain events occur each year (excluding December, January and February), and that the average precipitation during an event is 4.8mm. The average rainfall event corresponds to a volume of 118.8m^3 (2.475Ha x 4.8mm). This is greater than the volume of storage provided in the clearstone layer below the dry pond facility. Depending on the duration between storm events it is expected that 10,534m^3 (106.4m^3 x 99 events) could potentially infiltrate into the ground below the dry pond facility. This additional infiltration volume is more than the net loss of infiltration between the pre and post development condition. In addition, further infiltration will be provided by the proposed rain gardens, however, this volume of infiltration has not been included in the assessment in order to add further conservatism to the preliminary design. Based on the above, it is evident that the proposed stormwater management plan achieves the required water balance, in turn promoting groundwater recharge in this area of the watershed.

6. Erosion and Sediment Control

During construction, the majority of the development's natural features will be removed and the topsoil stripped within the development area. The exposed surface will be susceptible to erosion, increasing the potential for sediment runoff. To minimize local and downstream impacts from erosion and sedimentation during construction, the following measures have been recommended:

- Excess earth and topsoil is to be stockpiled away from environmentally sensitive areas and/or removed from site. Stockpiles shall be seeded or covered with erosion control if left for periods of greater than 30 days.
- Temporary sediment control fencing should be erected around the perimeter of all grading activities;
- Temporary sediment traps should be installed on catch basins until surface cover has been stabilized;
- Temporary rock flow check dams should be installed within drainage cut-off swales;
- A temporary construction access mud mat should be installed at the construction accesses to reduce the amount of materials that may be transported off site;

- Temporary sediment and erosion control ponds should be installed to attenuate and treat sediment laden runoff during earthworks operations.
- Construction during drier months should be monitored for wind-borne transport of sediments. At the direction of the engineer, the contractor may be directed to water down exposed earth areas with an aqueous solution of calcium chloride or suitable alternative;
- All disturbed areas not under immediate construction for 30 days, or not intended for building activities within a 3-month time period, should be stabilized with hydro-seeding.

A detailed Erosion and Sediment Control Plan (ESC Plan) will be prepared and submitted at the detailed design stage to identify the location and details of the temporary devices.

7. Secondary Utilities

All secondary utility services will be co-coordinated and a Composite Utility Plan provided to indicate all underground locations once feedback from each utility company is provided. Electrical, Telephone/Cable are all available within the adjacent Right of Ways. At this time we do not foresee any limitations in servicing the development with secondary utilities; however, formal confirmation from each service provider is still required.

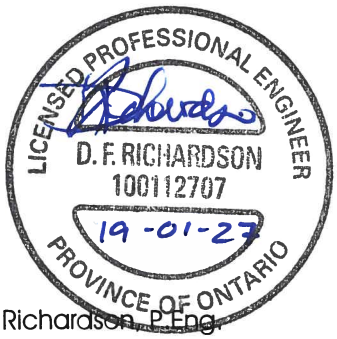
8. Conclusion

The St. Andrew's Lake Village development has been fully examined for serviceability in this Report. The development lands can be appropriately serviced via the proposed private and municipal sanitary, water and storm infrastructure. Through proper execution of the preliminary site servicing described herein and on the accompanying drawings, it is evident that the proposed development can become a functional part of the Town of Penetanguishene.

This Preliminary Servicing & Stormwater Management Report is respectfully submitted,

THE JONES CONSULTING GROUP LTD.

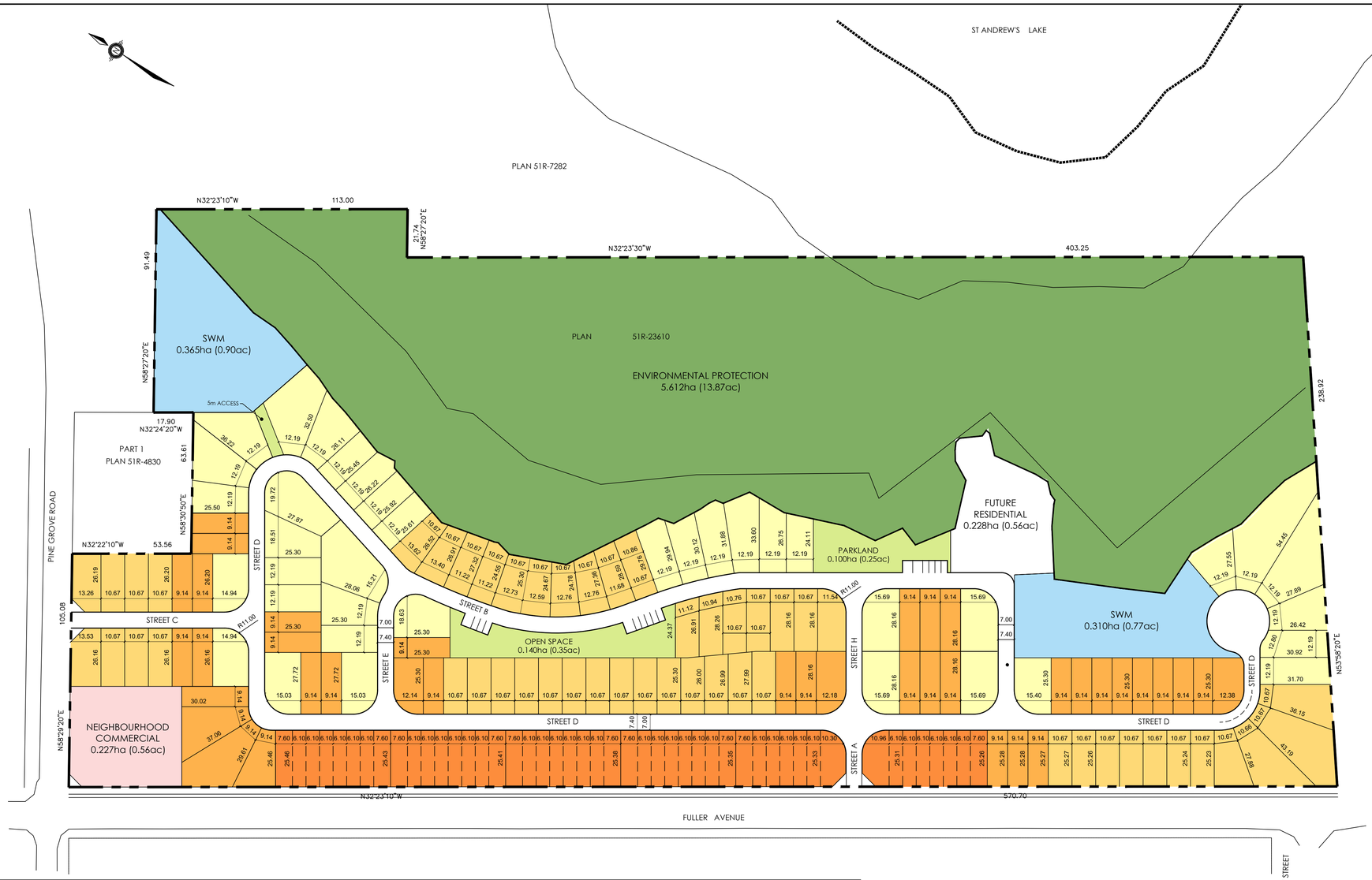
Jon Ingram, P. Eng.
Project Engineer



Duncan Richardson, P.Eng.
Partner

Appendix A

Background Information

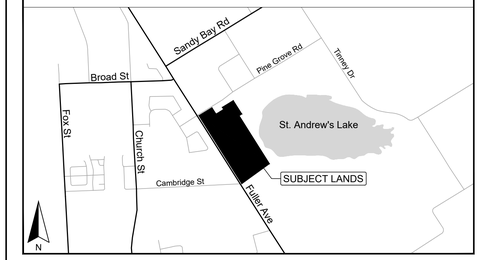


PROPOSED ZONING

	REQUIRED **R3 (ROW HOUSE)**	PROPOSED R3-XX (ROW HOUSE)
Min. Lot Frontage	30.0m	30m
Min. Lot Area	230.0m²	150m²
Max. Lot Coverage	35%	60%
Min. Front Yard Setback	6.0m	4.5m/6.0m
Min. Interior Side Yard Setback	4.0m and 6.0m other side	1.5m
Min. Exterior Side Yard Setback	4.5m	3.0m
Min. Rear Yard Setback	7.5m	5.0
Max. Height	11.0m	11.0m
Max. Accessory Building Height	4.0m	4.0m
Min. Gross Floor Area Bachelor 1 Bedroom 2 Bedroom	 32.0 m² 51.0 m² 65.0 m² (+ 10.0m2 for each additional bedroom over 2)	 32.0 m² 51.0 m² 65.0 m² (+ 10.0m2 for each additional bedroom over 2)

	REQUIRED **R3 (SINGLE DETACHED)**	PROPOSED R3-XX (SINGLE DETACHED)
Min. Lot Frontage	15.0m	9.0m
Min. Lot Area	511.0m²	225m²
Max. Lot Coverage	35%	55%
Min. Front Yard Setback	6.0	4.5m/6.0m
Min. Interior Side Yard Setback	1.0m	0.6m
Min. Exterior Side Yard Setback	4.5m	3.0m
Min. Rear Yard Setback	7.5m	5.0m
Max. Height	11.0m	11.0m
Max. Accessory Building Height	4.0m	4.0m
Min. Ground Floor Area	74.0m²	74.0m²

KEY MAP Scale 1 : 20,000



SITE PLAN

LOTS 21B, 53B, 63B, & PART OF LOT 77B
REGISTERED PLAN 69
FORMERLY IN THE TOWNSHIP OF TAY
NOW IN THE
TOWN OF PENETANGUISHENE
COUNTY OF SIMCOE
2018

0 20 40 60 80 100m

LEGEND

- SUBJECT LANDS — *Area:* 13.038 ha (32.22 ac); *Visitor Parking:* 16
- 38 Lots — SINGLE DETACHED LOTS (40')
- 50 Lots — SINGLE DETACHED LOTS (35')
- 38 Lots — SINGLE DETACHED LOTS (30')
- 47 Units — TOWNHOUSE UNITS (20')
- FUTURE RESIDENTIAL BLOCK
- NEIGHBOURHOOD COMMERCIAL
- STORMWATER MANAGEMENT
- PARKLAND/OPEN SPACE
- ENVIRONMENTAL PROTECTION

DRAFT

Note: 3.0m servicing easements will be created in all yards abutting lanes.
This drawing is for discussion purposes only.

ST. ANDREW'S LAKE VILLAGE (173 LOTS)

TOWN OF PENETANGUISHENE

SCHEDULE OF REVISIONS

No.	Date	Description	By

INNOVATIVE PLANNING SOLUTIONS
PLANNERS • PROJECT MANAGERS • LAND DEVELOPERS
150 DUNLOP STREET EAST, SUITE 201, BARRIE, ONTARIO L4M 1B1
tel: 705 • 812 • 3281 fax: 705 • 812 • 3438 e: info@ipsconsultinginc.com www.ipsconsultinginc.com

Date:	November 20, 2018	Drawn By:	AM
File:	05-137	Reviewed By:	TS

PENETANGUISHENE

Ontario Canada

Schedule 'A' to Bylaw No. 2000-02 (as amended by By-Law 2003-14) Town of Penetanguishene

Zoning Map

SEVERN SOUND OF GEORGIAN BAY

TOWNSHIP OF TINY

PENETANG HARBOUR

TOWN OF MIDLAND

Subject Site

LEGEND

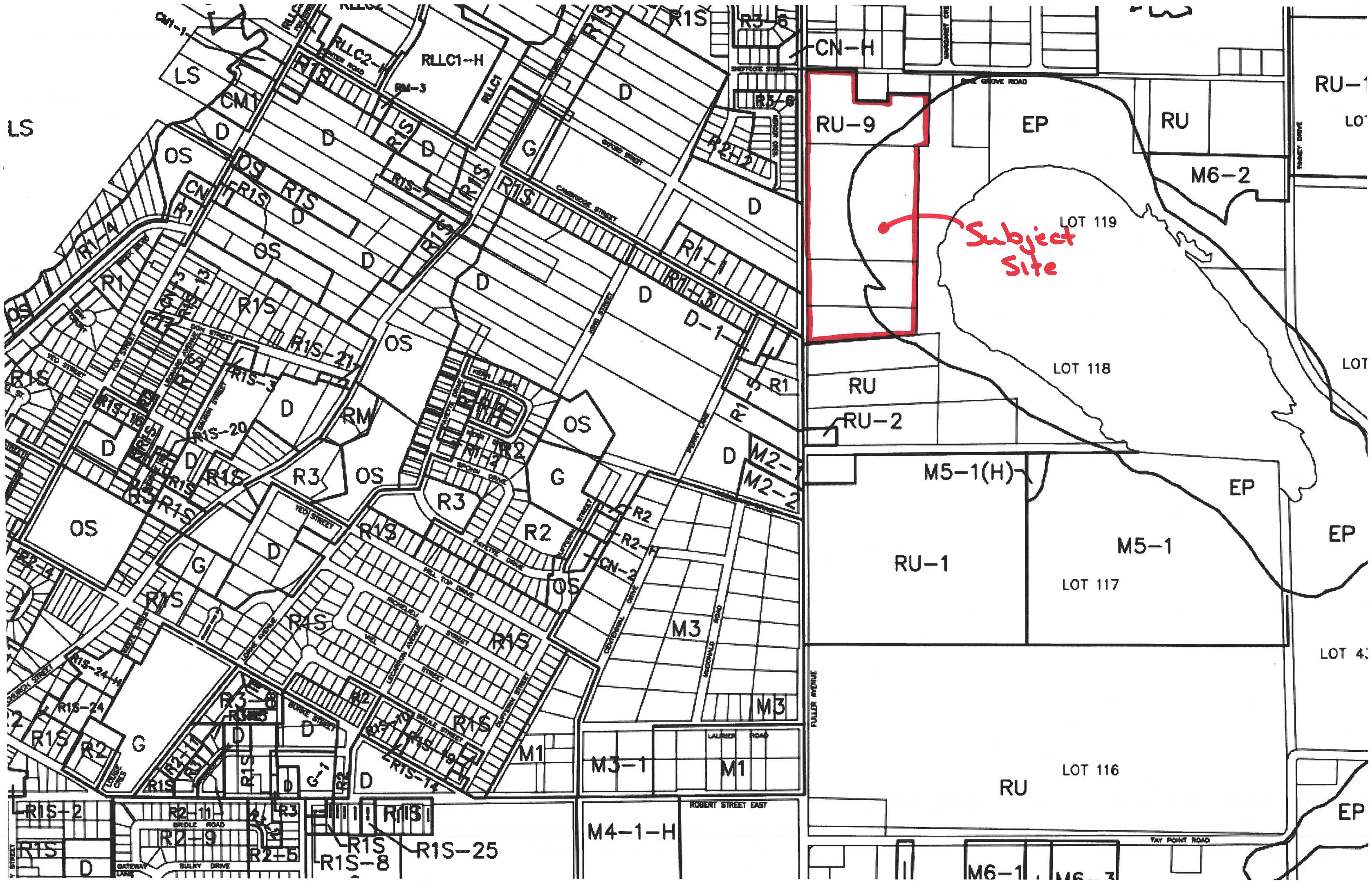
Residential First Density	R1
Residential Second Density	R2
Residential Third Density	R3
Residential Multiple Density	RM
Residential First Density Special	R1S
Rural Residential	RR
Rural Residential Estate	RE
Shoreline Rural Residential One	SR1
Shoreline Rural Residential Two	SR2
Limited Services Rural Residential	LSR
Commercial General	CG
Commercial Neighbourhood	CN
Commercial Marine One	CM1
Commercial Marine Two	CM2
Industrial Services	M1
Storage and Light Manufacturing	M2
Yard Storage and Heavy Manufacturing	M3
Industrial Packaging	M4
Extractive Industrial	M5
Rural Industrial	M6
Rural	RU
Institutional	G
Open Space	OS
Deferred Development	D
Environmental Protection	EP
Lake Side	LS
	ZONE BOUNDARY
	TOWN BOUNDARY

LIST OF REVISIONS

JULY 23, 2003 – MODIFICATIONS DONE BY M.LEFAIVE
DECEMBER 22, 2004 – MODIFICATIONS DONE BY M.LEFAIVE
DECEMBER 20, 2006 – MODIFICATIONS DONE BY D. WALTER
JANUARY 5, 2009 – MODIFICATIONS DONE BY M. MURRAY
MAY 13, 2011 – MODIFICATIONS DONE BY M. MURRAY
JANUARY 9, 2012 – MODIFICATIONS DONE BY G. DEVILLERS

200 100 0 200 400 600 800 1000

1 = 7500


Subject Site
RU-9
EP
RU
M6-2
LOT 119
LOT 118
RU-2
M5-1(H)
M5-1
RU-1
LOT 117
LOT 116
CN-H
FULLER AVENUE
ROBERT STREET EAST
TAY POINT ROAD
CAMBRIDGE STREET
OXFORD STREET
KING STREET
CENTENNIAL DRIVE
M3
M1
M3-1
M4-1-H
R1S-25
R1S-8
RLLC1-H
LS
OS

Appendix B

Supporting Sanitary Design Information and Calculations

SEWAGE PUMPING STATION

DESIGN BRIEF

ST. ANDREWS LAKE VILLAGE

ISSUED FOR CLIENT REVIEW

TOWN OF PENETANGUISHENE

COUNTY OF SIMCOE

GERRITS ENGINEERING LIMITED

222 Mapleview Dr. W, Suite 300
Barrie, ON
L4M 9E7

Project No. 228-008
Revision 1 – December 2018

Table of Contents

Appendices

SEWAGE PUMPING STATION
ST. ANDREWS LAKE VILLAGE

1 Introduction

The purpose of this Design Brief is to provide preliminary design information for the proposed municipal infrastructure required to service the St. Andrews Lake Village in the Town Penetanguishene. This Design Brief covers the sewage pump station located within the proposed Development together with related sewage forcemains.

The Sewage Pump Station will include the following:

- A wet well type station
- Inlet sanitary sewer and Outlet Forcemain
- Submersible pumps (2) complete with suction and discharge piping
- An exterior control panel to house controls
- Lifting Davit for Pump Maintenance
- Internal Aluminum Access Platform
- Emergency Overflow

2 Design Criteria

A summary of the wastewater design criteria is as follows:

Wastewater Criteria

Average Daily Flow (ADF) - Residential	=	450 L/cap/d
Peak Extraneous Flows (per developable ha)	=	0.10 L/s/ha
Peak Factor (Residential and Commercial		Harmon

Residential Unit Density		=	3.13 ppu
Townhouse Unit Density		=	2.34 ppu
Future MD		=	1.67 ppu
Detatched Unit Population	= 126 Units x 3.13ppu	=	395 pers
Townhouse Unit Polulation	= 47 Units x 2.34ppu	=	110 pers
Future MD Unit Population	= 30 Units x 1.67ppu	=	51 pers
Total equivalent Population of Development		=	556 pers

3 Wastewater Flows

The Design Analysis of the Sewage Pumping Station has been completed per the Town and MOE design guidelines based on the criteria outlined in Section 2.

Wastewater flows generated from the full buildout of the Development are calculated as follows:

- ADF Domestic = 556 pers x 450 L/cap/d = 2.90 L/s
- Peak Extraneous Flow = 0.10 L/s/ha x 6.14ha = 0.614 L/s
- PF = 2.90 L/s x Harmon (3.95 for population of 566 persons) = 11.44 L/s
- Total Peak Flow = 11.44 L/s + 0.614 L/s = 12.05 L/s

Based on the above calculations, the proposed Sewage Pumping Station and forcemain have been preliminarily sized for a Peak Inflow of 12.05 L/s.

4 Wastewater Pumping Station

4.1 General

The Sanitary Sewage Pump Station with a rated capacity of 12.6 L/s is to be located within the Multi-Density Residential Block and will service the proposed residential and commercial development.

The Sewage Pump Station will be a wet well type facility. The station will consist of a pre-cast maintenance hole structure and be sized in order to provide sufficient pump cycle time. The anticipated ground elevation at the site of the Pump Station is approximately 230.25 m, and the proposed elevation of the base of the chamber is 221.79 m. The depth, therefore, of this proposed pump station is 8.46 m plus the thickness of the chamber base. The approximate invert of the sanitary sewer pipe is at 223.74 as it enters the pump station. The diameter of this sanitary sewer pipe is anticipated to be 200 mm. The station has been designed to operate with two (2) pumps designed to pump sewage through one (1) 125mm diameter forcemain connecting to the existing sanitary maintenance hole at the intersection of Cambridge Street and Fuller Ave.

4.2 Sewage Pump Station Maintenance Hole

4.2.1 Access

It is proposed that one (1) 1050 mm x 800 mm aluminum hatch in the concrete lid of the maintenance hole be provided to allow access to the structure. Two additional aluminum hatches will be provided for pump maintenance. The aluminum hatches will be equipped with an appropriate lock and a pry lip.

4.2.1.1 Wet Well Sizing

The calculation to determine the volume required is as follows:

- Phase 3 Peak Flow = 12.05 L/s
- Pump capacity based on pump and system curves will be 25.2 L/s or the differential between inflow of pumping of 50% of the pump flow = 12.6 L/s
- Assumed pump run time of 8 minutes
- Volume Required = 0.01205 m^3/s x 60 x 8.00 = 5.78 m^3
- Wet Well Design (3000mm diameter MH) = π x (1.5^2) = 7.07 m^2 surface area
- The invert of the sewer entering the wet well will be 223.74 m. The range for start to stop for Pumps 1 & 2 will be 0.9m and 1.35m respectively.
- Operating limits Start 222.99m to Stop 222.09 m of 0.90 m
- Volume Available – 7.07 x 0.9 = 6.4 m^3 which is greater than the required volume of 5.78 m^3.

4.2.2 Level Control

Ultrasonic level detection devices are proposed as the primary level detection and pump control system. Float switches will be provided as back-up.

Key Elevations are listed as follows:

Pump #1 & 2 OFF (m)	222.09
Pump #1 ON, Pump #2 OFF (m)	222.99
Pump #2 ON (m)	223.44
High Water Alarm (m)	223.59
Emergency Outlet (m)	224.15

4.2.3 Pump/System Curve

Variable frequency drives (VFDs) will be provided on both pumps to allow a range of flows to be pumped.

Three system conditions have been analyzed to produce the pump/system curve.

Condition 1 - Smooth force main piping with high sewage level

Condition 2 - med. roughness force main piping with med. sewage level

Condition 3 - higher roughness force main piping with lower sewage level

A copy of the system curve is included in Appendix “A”. The duty point is 12.6 L/s per pump at 13.1 m TDH based on the 125 mm forcemain. All the pumps will have VFD drives to accommodate the variation in flows during the build out of the residential area. Pump run-times can be optimized in the initial stages of the Development at the control panel location exterior to the structure and to ensure the minimum scouring velocity in the forcemain is 0.80 m/s.

4.2.4 Pump Selection

To accommodate the design peak flow of 12.05 L/s at 13.1m TDH, two (2) Flygt Model DP 3102 HT 3~ 276 pumps with a 120mm impeller each having a capacity of 12.6 L/s at 13.1 m TDH have been selected. The proposed pump will have a 4.2 kW 3/50/400 volt motor. A copy of the pump curve is included in Appendix "A". According to the MOE guidelines for sewage pump station pumps shall be capable of passing spheres of at least 62 mm diameter.

4.2.5 Overflow

An emergency overflow has been preliminarily sized at an elevation of 224.15. This elevation will be reviewed at detailed design to ensure that it is below the lowest basement slab in the Development. Details of the emergency outlet route will be further reviewed at the detailed design stage.

4.2.6 Forcemain

From the proposed pumping station, it is anticipated that the forcemain will tie into the existing sanitary manhole located at the intersection of Cambridge St. and Fuller Ave. where from here it will flow by gravity. With respect to the forcemain, the following nominal velocities would result from the pumped flow rate through various sizes of pipe:

Table 1 – Forcemain Velocities

Dia. (mm)	Area (m^2)	1 Pump		2 Pumps
		Q = 12.6 L/s	Q = 18.9 L/s	Q = 25.2 L/s
75	0.0044	2.85	4.28	5.70
100	0.0079	1.60	2.41	3.21
125	0.0123	1.03	1.54	2.05
150	0.0177	0.71	1.07	1.43

The MOE Guidelines suggest a velocity range in the low end of 0.8 to 3.0 m/s. Based on this, it is recommended that a 125mm diameter forcemain would be utilized. The forcemain is proposed to be HDPE DR 11 with a pressure rating of 1103 kPa (160 psi). No air release valves are proposed as the route selected does not experience any significant or abrupt grade changes.

4.3 Ventilation

Ventilation for the Sewage Pumping Station Maintenance Hole will be provided by two (2) 100mm diameter bird screen gooseneck vents, one terminating at the underside of the structure lid, and one terminating 300mm above the sanitary inlet obvert. The ducting will be made of stainless steel.

All of which is respectfully submitted,

GERRITS ENGINEERING

Peter Derro, P.Eng.

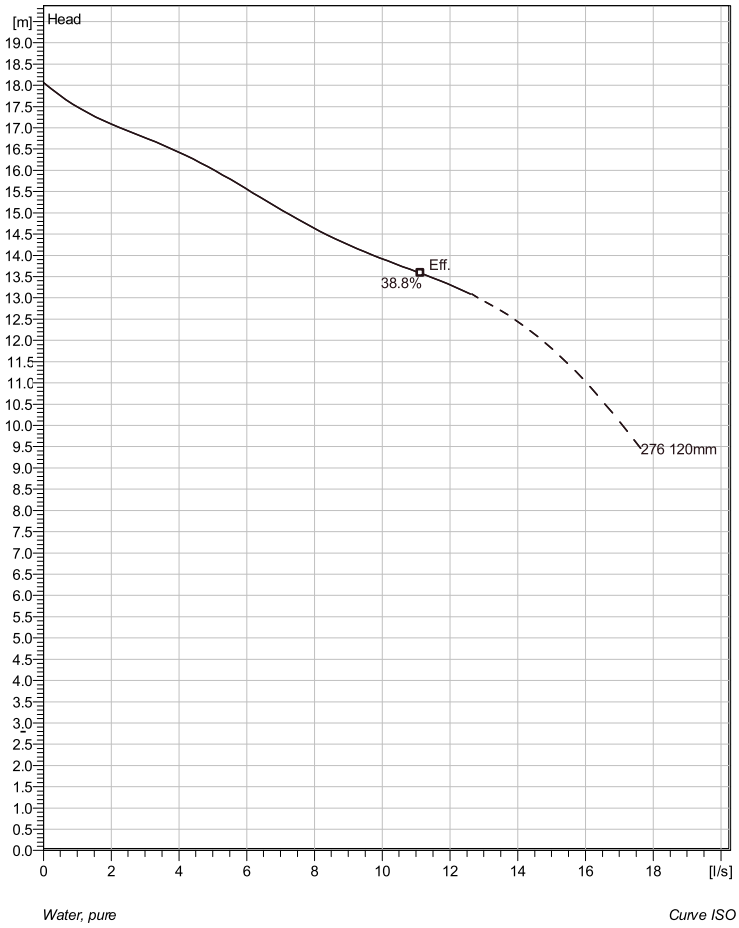
Jeff McCuaig, P.Eng.
Partner

APPENDIX A

Pump Selection

DP 3102 HT 3~ 276

Technical specification



Installation: P - Semi permanent, Wet

Note: Picture might not correspond to the current configuration.

General

Portable pumps with vortex impellers ideal for applications in which the water or liquid contains concentrations of abrasives when clogging problems can occur.

Impeller

Impeller material	Grey cast iron
Discharge Flange Diameter	3 1/8 inch
Suction Flange Diameter	3 1/8 inch
Impeller diameter	120 mm
Number of blades	6
Throughlet diameter	2 1/16 inch

Motor

Motor #	D3102.181 18-10-2AL-W 4.2KW Standard
Stator variant	67
Frequency	50 Hz
Rated voltage	400 V
Number of poles	2
Phases	3~
Rated power	5.6 hp
Rated current	7.8 A
Starting current	53 A
Rated speed	2860 rpm
Power factor	
1/1 Load	0.93
3/4 Load	0.91
1/2 Load	0.87
Motor efficiency	
1/1 Load	83.5 %
3/4 Load	85.3 %
1/2 Load	85.3 %

Configuration

Project	Project ID	Created by	Created on	Last update
			12/11/2018	

DP 3102 HT 3~ 276

Performance curve

Pump

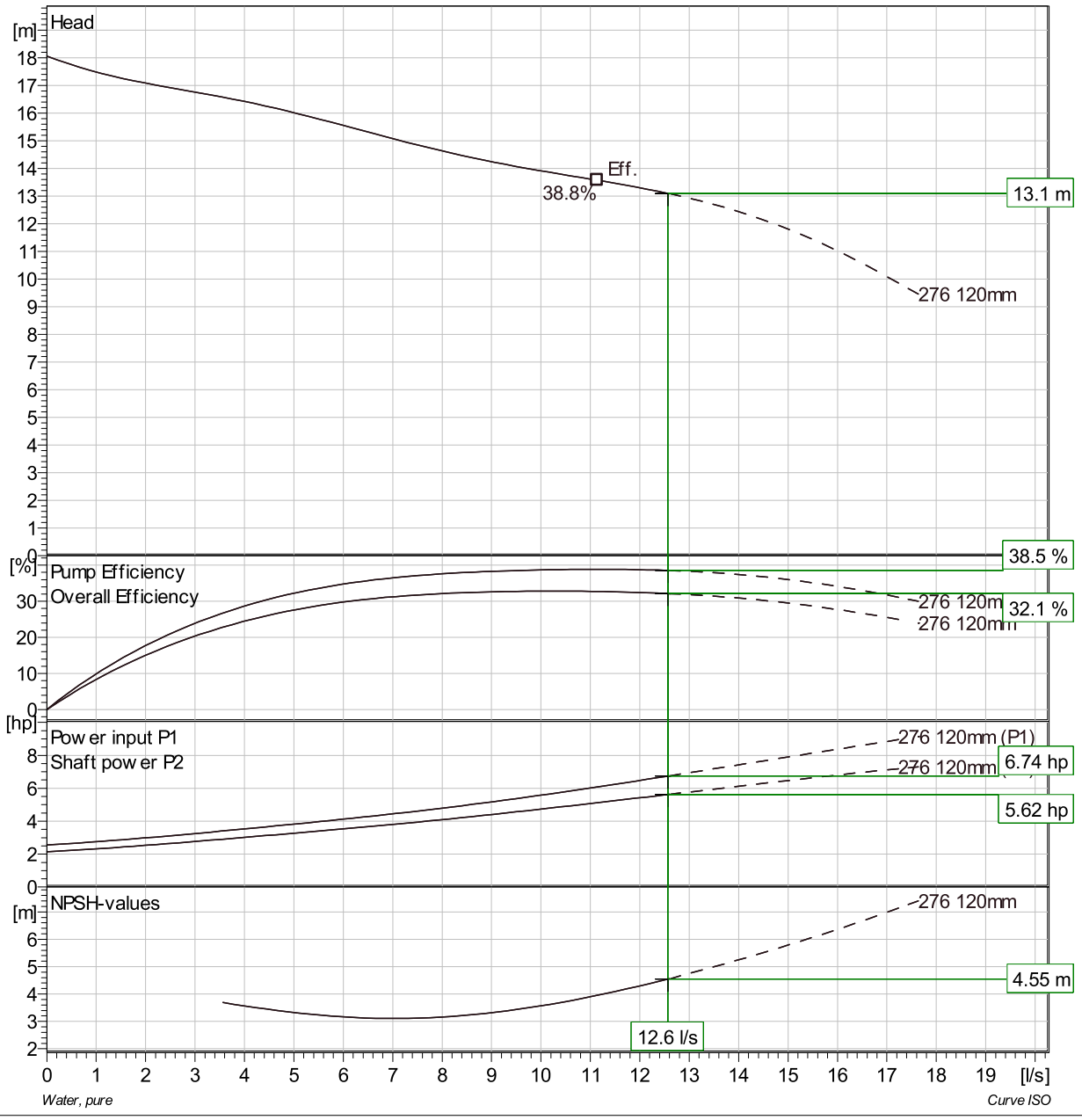
Discharge Flange Diameter	3 1/8 inch
Suction Flange Diameter	80 mm
Impeller diameter	$4^{3}/_{4}$"
Number of blades	6
Throughlet diameter	2 1/16 inch

Motor

Motor #	D3102.181 18-10-2AL-W 4.2KW
Stator variant	67
Frequency	50 Hz
Rated voltage	400 V
Number of poles	2
Phases	3~
Rated power	5.6 hp
Rated current	7.8 A
Starting current	53 A
Rated speed	2860 rpm

Power factor	
1/1 Load	0.93
3/4 Load	0.91
1/2 Load	0.87

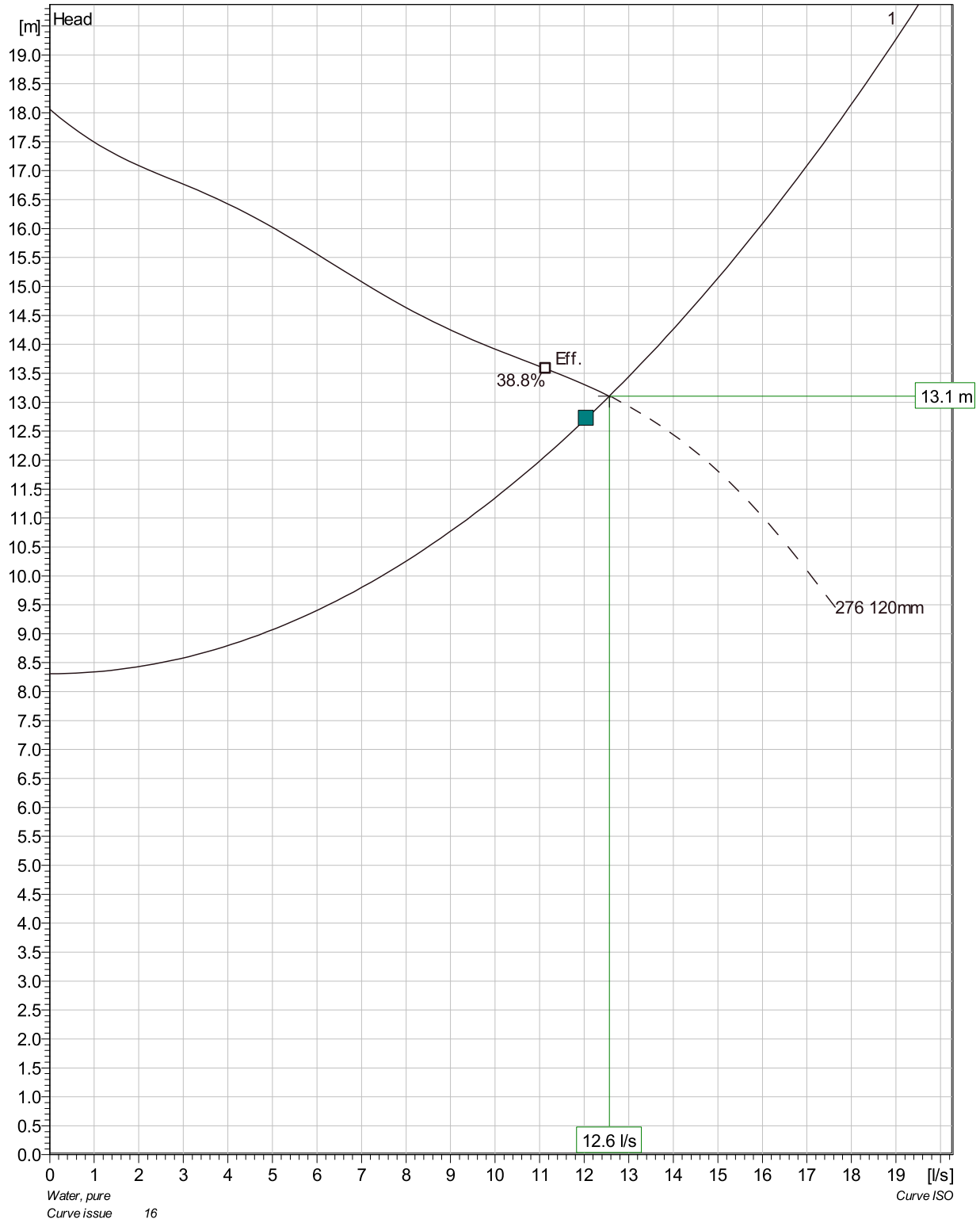
Motor efficiency	
1/1 Load	83.5 %
3/4 Load	85.3 %
1/2 Load	85.3 %



Project	Project ID	Created by	Created on	Last update
			12/11/2018	

DP 3102 HT 3~ 276

Duty Analysis

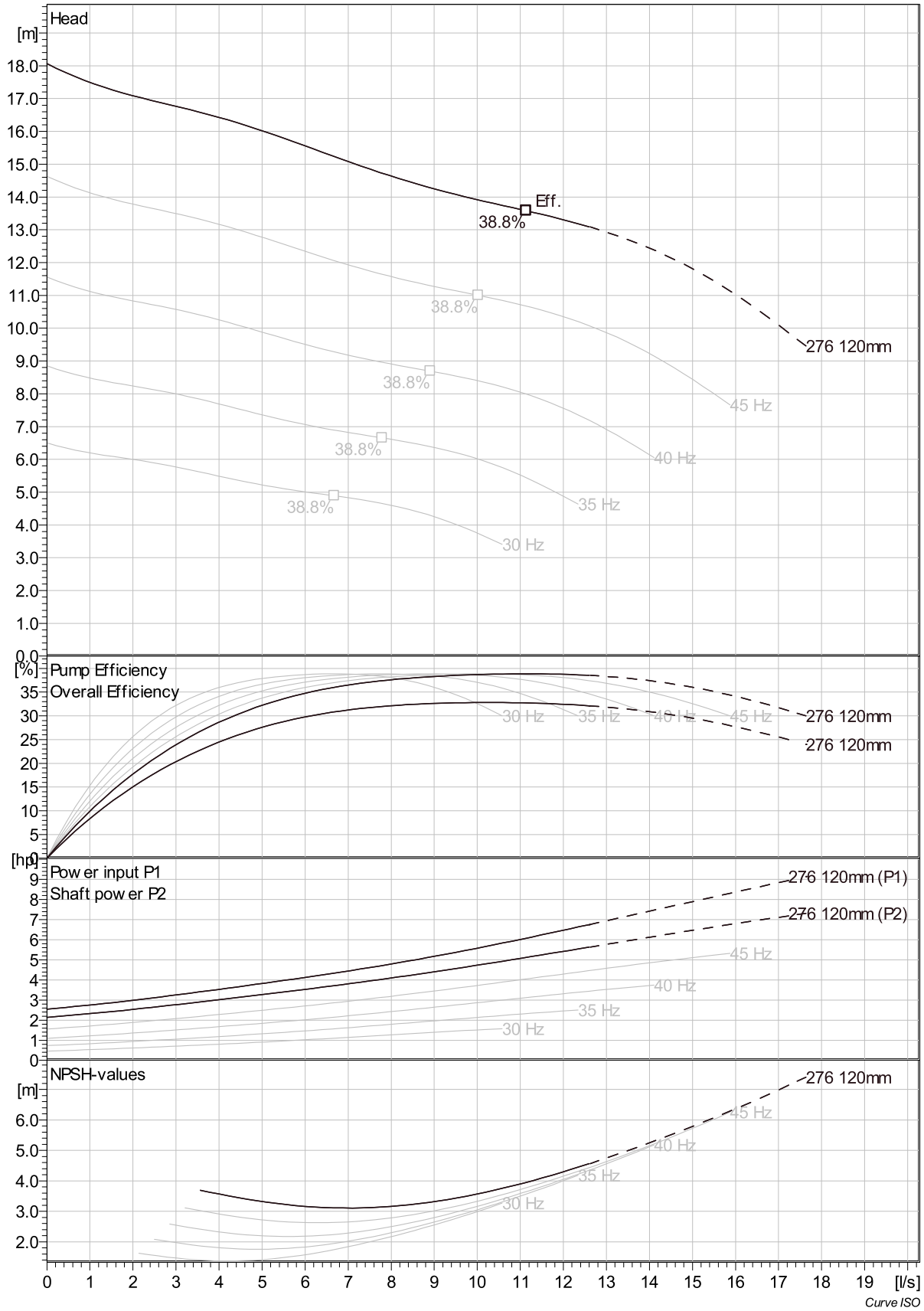


Pumps running /System	Individual pump			Total					
	Flow	Head	Shaft power	Flow	Head	Shaft power	Pump eff.	Specific energy	NPSHre
1	12.6 l/s	13.1 m	5.62 hp	12.6 l/s	13.1 m	5.62 hp	38.5 %	420 kWh/US MG	4.55 m

Project	Project ID	Created by	Created on	Last update
			12/11/2018	

DP 3102 HT 3~ 276

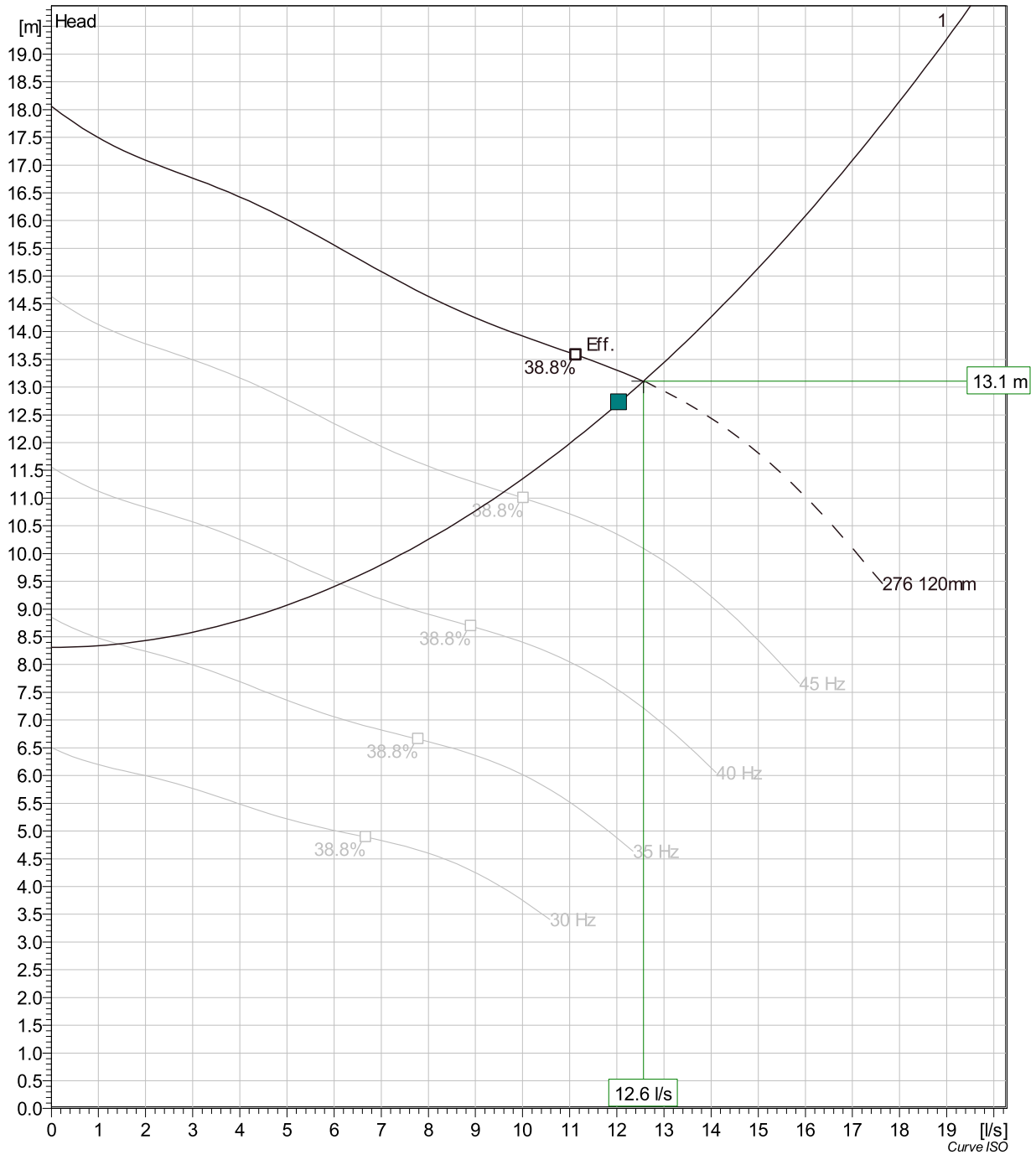
VFD Curve



Project	Project ID	Created by	Created on	Last update
			12/11/2018	

DP 3102 HT 3~ 276

VFD Analysis



Pumps running /System	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hyd eff.	Specific energy	NPSHre
1	50 Hz	12.6 l/s	13.1 m	5.62 hp	12.6 l/s	13.1 m	5.62 hp	38.5 %	420 kWh/US MG	4.55 m
1	45 Hz	9.6 l/s	11.1 m	3.62 hp	9.6 l/s	11.1 m	3.62 hp	38.8 %	345 kWh/US MG	3.2 m
1	40 Hz	6.14 l/s	9.46 m	2.05 hp	6.14 l/s	9.46 m	2.05 hp	37.3 %	313 kWh/US MG	2.19 m
1	35 Hz	1.41 l/s	8.37 m	0.87 hp	1.41 l/s	8.37 m	0.87 hp	17.9 %	662 kWh/US MG	
1	30 Hz									

Project	Project ID	Created by	Created on	Last update
			12/11/2018	

DP 3102 HT 3~ 276

Dimensional drawing

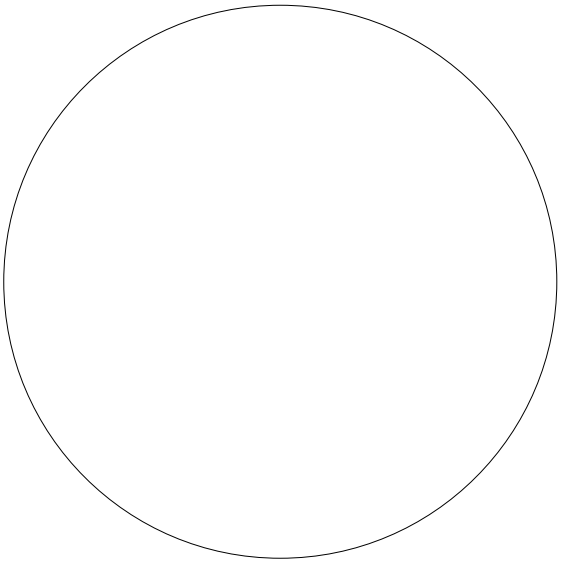
Project	Project ID	Created by	Created on	Last update
			12/11/2018	

DP 3102 HT 3~ 276

Life cycle costs (LCC)

Total lifetime	15	Inflation rate (rate of price increases)	2 %
Annual operating time	5600	Interest rate (for investment)	3 %
Energy cost per kWh	0.00 CAD		
Power input P1			

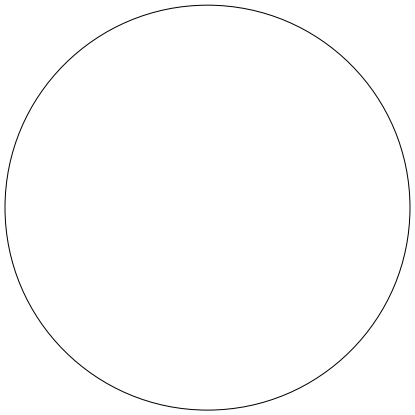
Total costs



0.00
CAD

0%	**0.00 CAD**	Energy
0%	**0.00 CAD**	Investment costs
0%	**0.00 CAD**	Installation & commissioning
0%	**0.00 CAD**	Operating cost
0%	**0.00 CAD**	Maintenance & repair
0%	**0.00 CAD**	Downtime
0%	**0.00 CAD**	Environmental
0%	**0.00 CAD**	Decommissioning

First year costs



0.00
CAD

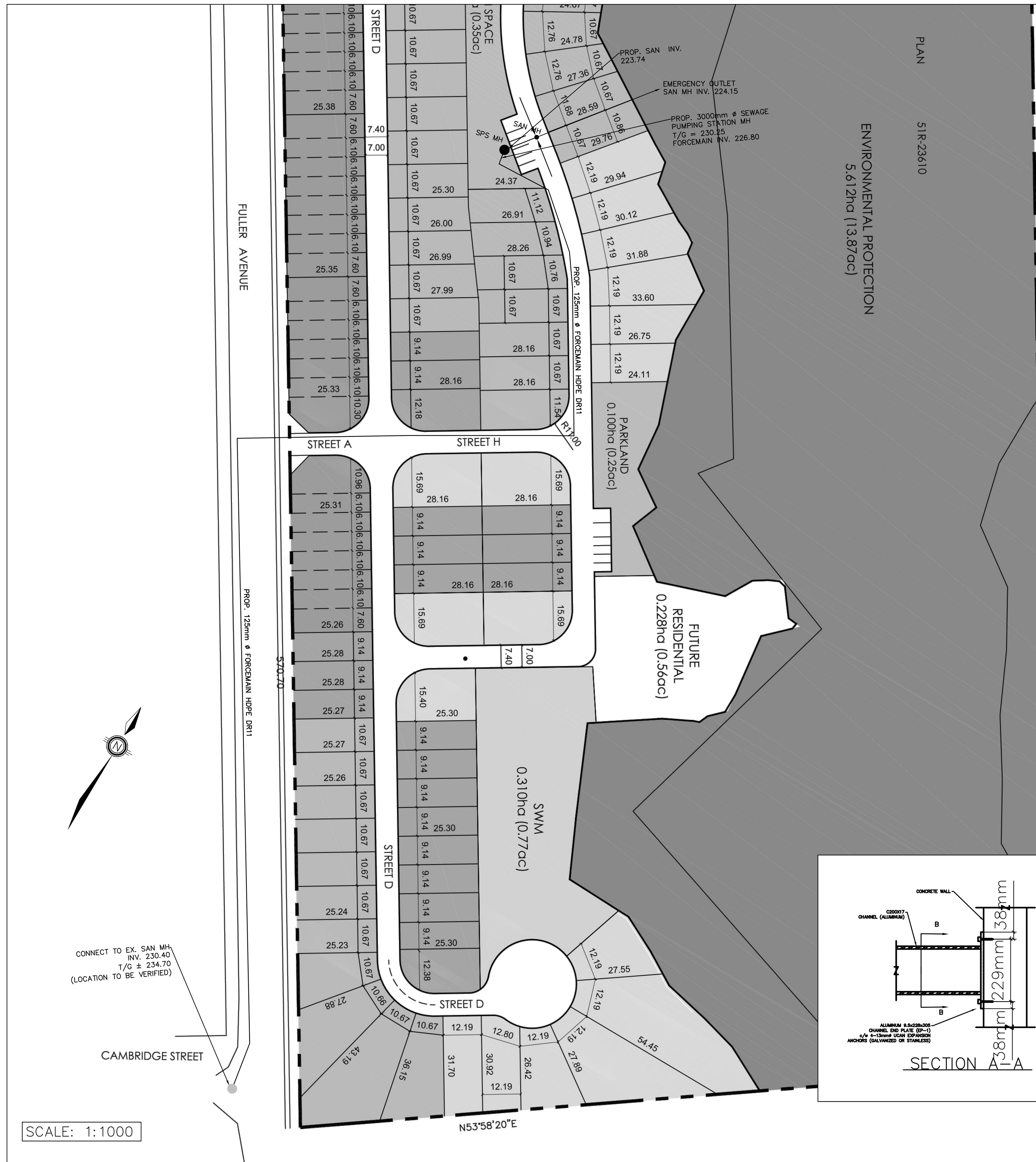
0%	**0.00 CAD**	Energy (1st year)
0%	**0.00 CAD**	Investment costs (1st year)
0%	**0.00 CAD**	Installation & commissioning (1st year)
0%	**0.00 CAD**	Operating cost (1st year)
0%	**0.00 CAD**	Maintenance & repair (1st year)
0%	**0.00 CAD**	Downtime (1st year)
0%	**0.00 CAD**	Environmental (1st year)
0%	**0.00 CAD**	Decommissioning (1st year)

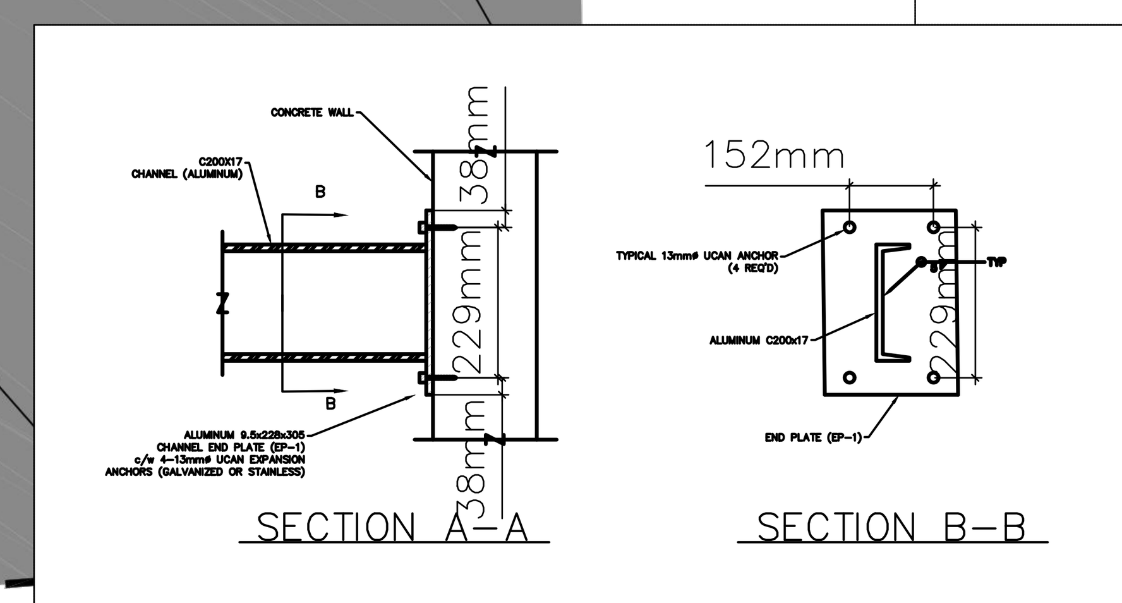
Disclaimer: The calculations and the results are based on user input values and general assumptions and provide only estimated costs for the input data. Xyleminc can therefore not guarantee that the estimated savings will actually occur.

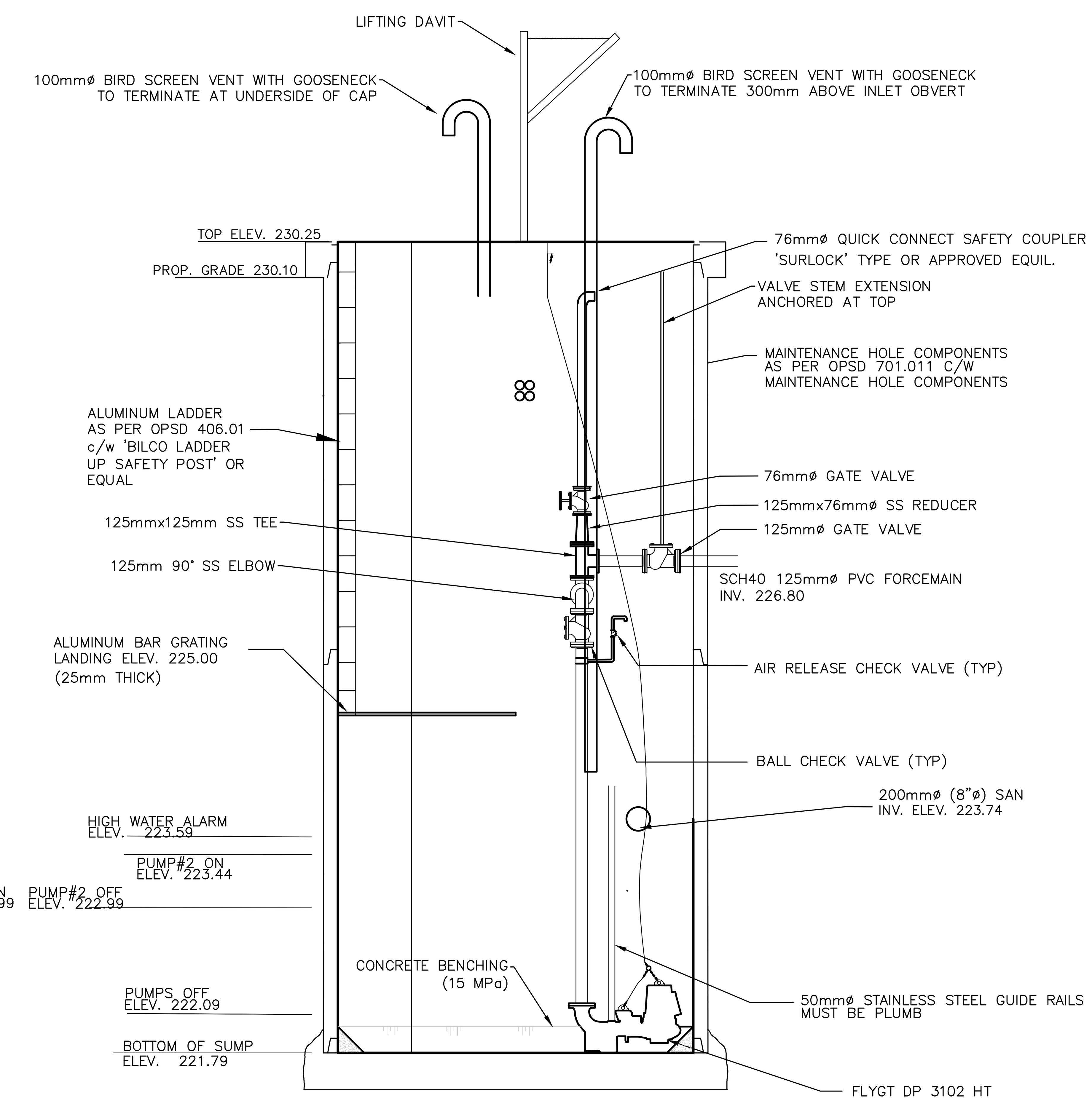
Project	Project ID	Created by	Created on	Last update
			12/11/2018	

APPENDIX B

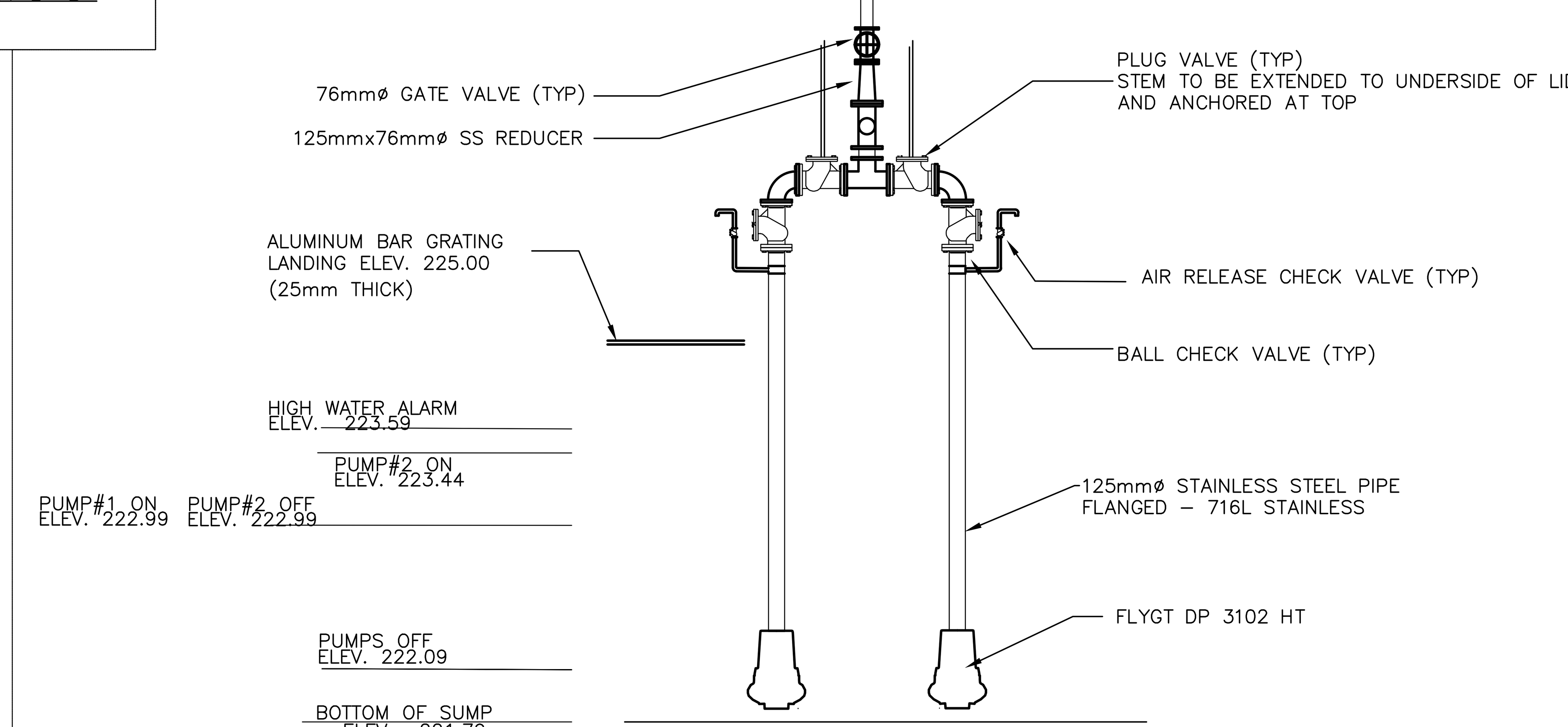
Figures



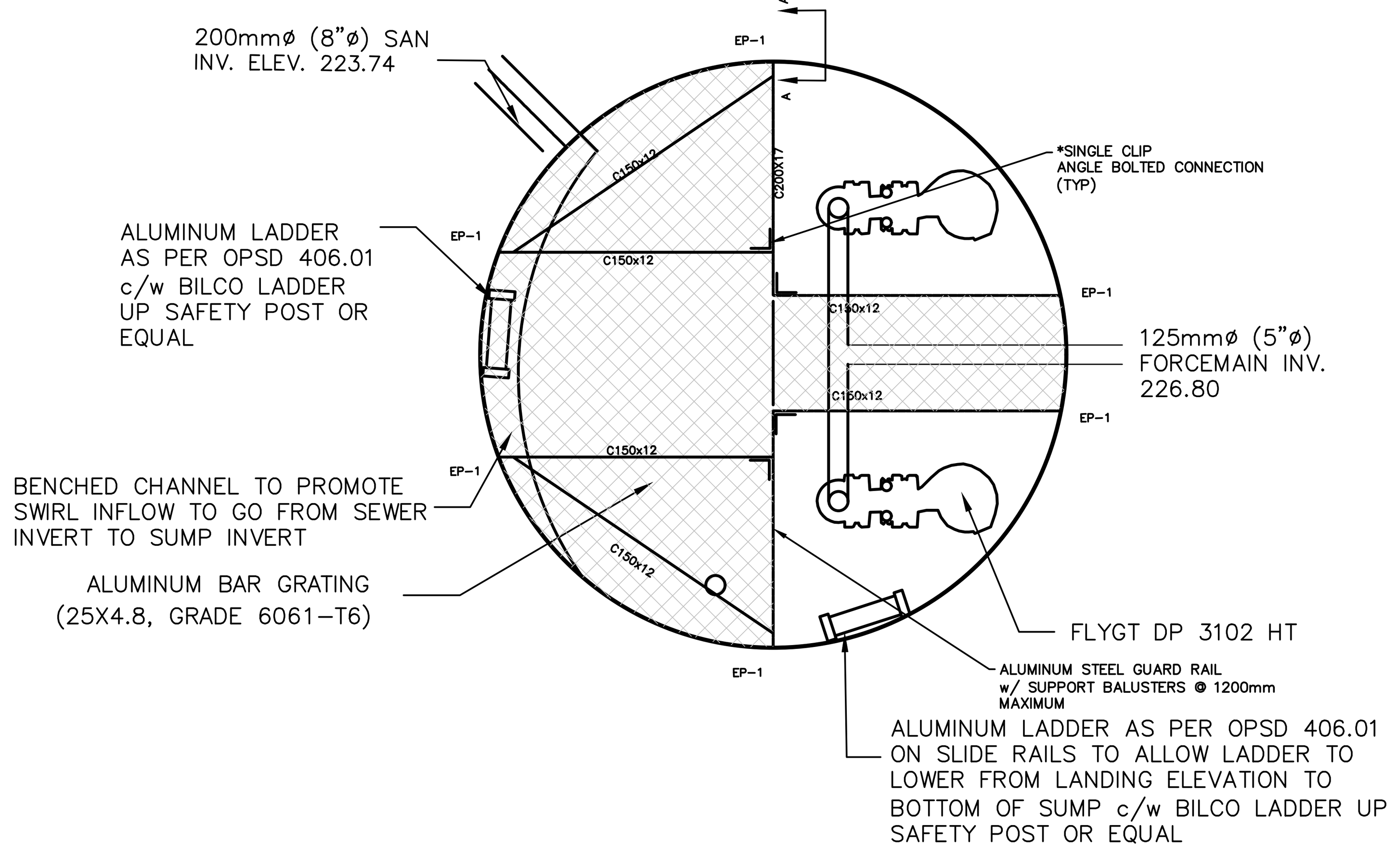




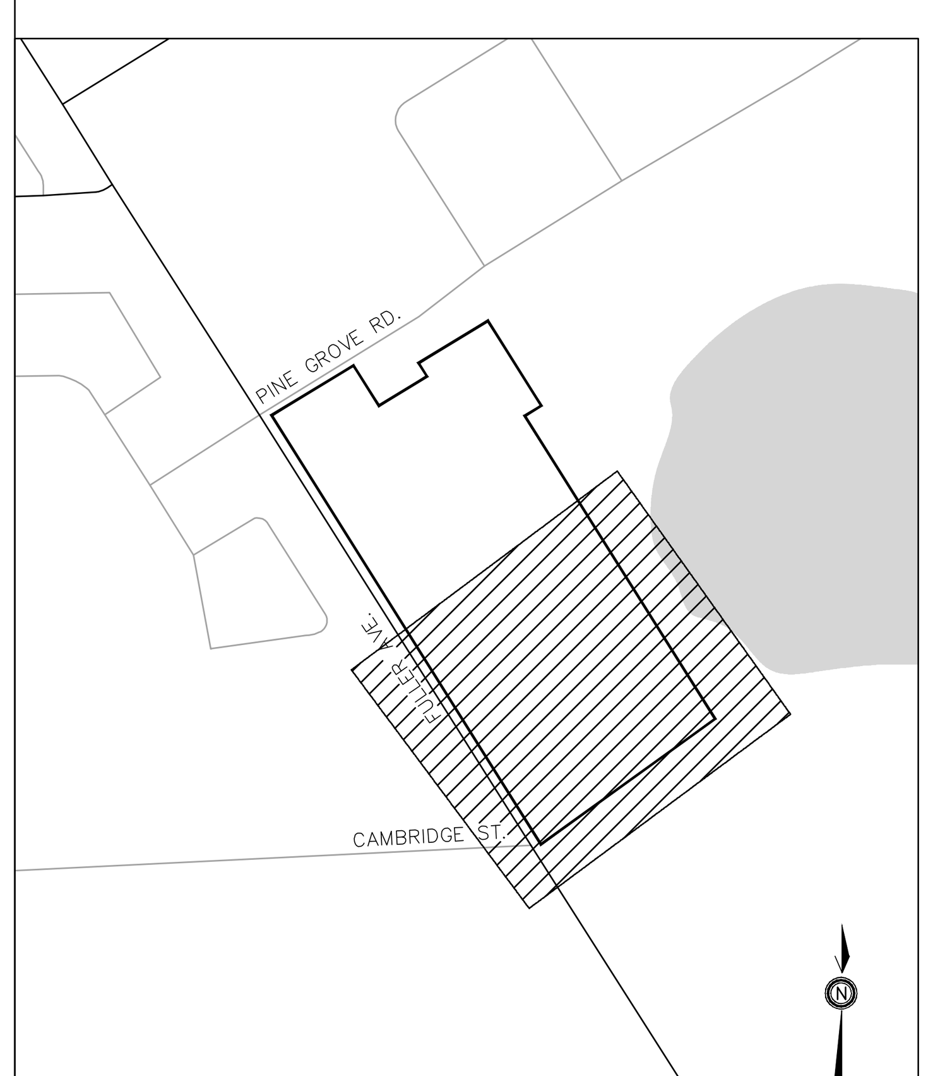
PROFILE – SPS
N.T.S.



PROCESS VIEW
N.T.S.



PLAN VIEW – SPS
N.T.S.



KEYPLAN – N.T.S.

NOTES:
1 – ALL STRUCTURAL MEMBERS, BAR GRATING PANELS, AND END PLATES ARE TO BE ALUMINUM GRADE 6061–T6
2 – THICKNESS OF CONCRETE WALLS ASSUMED TO BE 280mm
3 – MINIMUM EMBEDMENT LENGTH FOR EXPANSION ANCHORS TO BE 65mm
4 – INDIVIDUAL FRAMING MEMBERS (CHANNELS) TO BE CONNECTED BY MEANS OF SINGLE CLIP ANGLE BOLTED CONNECTIONS. MINIMUM CLIP ANGLE SIZE TO BE L102x102x6.4x152 LONG WITH MINIMUM 2–19mmø BOLTS

GERRITS ENGINEERING LIMITED
231 Bayview Drive, Suite 303, Barrie, ON, L4N 4Y5 Canada
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www.gerreng.com

No.	Issuance Description	YY/MM/DD
1.	SEWAGE PUMP STATION	18/10/29
2.		

ISSUED FOR:
CLIENT REVIEW

Client
JONES CONSULTING

Project
ST. ANDREWS LAKE VILLAGE

Drawing:
SEWAGE PUMPING STATION

Project No. 228-008	Designed by: PMD	Checked by: JDM	
Scale: AS SHOWN	Drawn by: PMD	Approved by: JDM	
Orientation	Stamp		

Drawing No.
SPS-1

q = average daily per capita flow (450 L/cap.d)
I = unit of peak estraneous flow (0.1 L/ha.s)
M = peaking factor
Q(p) = peak Popukation flow (L/s)
Q(i) = peak extraneous flow (L/s)
Q(d) = peak design flow

St. Andrew's Village
Sanitary Sewer Design Sheet

CLIENT: Tonking Management Inc.

DATE: JANUARY 2019

DESIGN: MG

CHECKED: DR

Location			Individual		Cumulative		Peaking	Pop Flow Q(p)	Extraneous Flow	Design Flow	Proposed Sewer							%	RESIDENTIAL UNITS			
																			LOW	MEDIUM	HIGH
Street	From	To	Population	Area (ha)	Population	Area (ha)	Factor	(L/s)	Q(i) (L/s)	Q(d) (L/s)	Type of Pipe	Diameter (mm)	Slope (%)	Length (m)	Capacity (L/s) n=0.013	Full Flow Velocity (m/s)	Actual Velocity at Q(d)	Capacity	PPU:	3.13	2.34	1.67
STREET 'D'	SAN1	SAN2	16	0.37	16	0.37	4.00	0.326	0.037	0.363	PVC	200	1.00%	25.7	32.798	1.044	0.0116	1.11%		5	0	0
STREET 'D'	SAN2	SAN3	6	0.10	22	0.47	4.00	0.456	0.047	0.503	PVC	200	1.00%	22.4	32.798	1.044	0.0160	1.54%		2	0	0
STREET 'D'	SAN3	SAN4	6	0.14	28	0.61	4.00	0.587	0.061	0.648	PVC	200	1.00%	11.3	32.798	1.044	0.0206	1.98%		2	0	0
STREET 'D'	SAN4	SAN5	63	0.60	91	1.21	4.00	1.891	0.121	2.012	PVC	200	0.50%	102.6	23.192	0.738	0.0640	8.68%		20	0	0
STREET 'D'	SAN5	SAN6	38	0.40	128	1.61	4.00	2.672	0.161	2.833	PVC	200	0.50%	68.4	23.192	0.738	0.0902	12.22%		6	8	0
STREET 'D'	SAN7	SAN6	63	0.59	63	0.59	4.00	1.318	0.059	1.377	PVC	200	1.00%	105.4	32.798	1.044	0.0438	4.20%		9	15	0
STREET 'A'	SAN6	SAN9	0	0.05	192	2.25	4.00	3.990	0.225	4.215	PVC	200	1.00%	63.7	32.798	1.044	0.1342	12.85%		0	0	0
STREET 'B'	STUB1	SAN8	50	0.23	50	0.23	4.00	1.044	0.023	1.067	PVC	200	2.00%	6.7	46.384	1.476	0.0340	2.30%		0	0	30
STREET 'B'	SAN8	SAN9	16	0.22	66	0.45	4.00	1.370	0.045	1.415	PVC	200	1.00%	60.6	32.798	1.044	0.0450	4.31%		5	0	0
STREET 'B'	SAN9	SAN10	22	0.28	279	2.98	4.00	5.817	0.298	6.115	PVC	200	0.50%	51.3	23.192	0.738	0.1946	26.37%		7	0	0
STREET 'B'	SAN10	SAN11	22	0.27	301	3.25	4.00	6.273	0.325	6.598	PVC	200	0.50%	44.9	23.192	0.738	0.2100	28.45%		7	0	0
STREET 'D'	SAN17	SAN16	31	0.30	31	0.30	4.00	0.651	0.030	0.681	PVC	200	1.00%	50.0	32.798	1.044	0.0217	2.08%		4	8	0
STREET 'D'	SAN7	SAN16	69	0.61	69	0.61	4.00	1.432	0.061	1.493	PVC	200	1.00%	105.4	32.798	1.044	0.0475	4.55%		10	16	0
STREET 'E'	SAN16	SAN15	13	0.18	113	1.09	4.00	2.344	0.109	2.453	PVC	200	1.00%	52.7	32.798	1.044	0.0781	7.48%		4	0	0
STREET 'E'	SAN15	SAN14	0	0.01	113	1.10	4.00	2.344	0.110	2.454	PVC	200	1.00%	14.5	32.798	1.044	0.0781	7.48%		0	0	0
STREET 'D'	SAN17	SAN22	9	0.15	9	0.15	4.00	0.196	0.015	0.211	PVC	200	1.00%	11.3	32.798	1.044	0.0067	0.64%		3	0	0
STREET 'D'	SAN22	SAN21	9	0.1	19	0.25	4.00	0.391	0.025	0.416	PVC	200	1.00%	38.0	32.798	1.044	0.0132	1.27%		3	0	0
STREET 'C'	SAN23	SAN21	13	0.15	13	0.15	4.00	0.261	0.015	0.276	PVC	200	1.00%	29.4	32.798	1.044	0.0088	0.84%		4	0	0
STREET 'D'	SAN21	SAN20	19	0.22	50	0.62	4.00	1.043	0.062	1.105	PVC	200	0.76%	57.3	28.593	0.910	0.0352	3.87%		6	0	0
STREET 'B'	SAN20	SAN19	6	0.11	56	0.73	4.00	1.174	0.073	1.247	PVC	200	0.50%	13.7	23.192	0.738	0.0397	5.38%		2	0	0
STREET 'B'	SAN19	SAN18	6	0.14	63	0.87	4.00	1.304	0.087	1.391	PVC	200	0.50%	14.4	23.192	0.738	0.0443	6.00%		2	0	0
STREET 'B'	SAN18	SAN14	22	0.34	85	1.21	4.00	1.761	0.121	1.882	PVC	200	0.50%	65.9	23.192	0.738	0.0599	8.11%		7	0	0
STREET 'B'	SAN14	SAN13	13	0.17	210	2.48	4.00	4.365	0.248	4.613	PVC	200	0.50%	52.5	23.192	0.738	0.1468	19.89%		4	0	0
STREET 'B'	SAN13	SAN12	6	0.08	216	2.56	4.00	4.496	0.256	4.752	PVC	200	0.50%	31.6	23.192	0.738	0.1512	20.49%		2	0	0
STREET 'B'	SAN12	SAN11	6	0.09	222	2.65	4.00	4.626	0.265	4.891	PVC	200	0.50%	28.9	23.192	0.738	0.1557	21.09%		2	0	0
STREET 'B'	SAN11	SPS	0	0.01	523	5.91	3.96	10.801	0.591	11.392	PVC	200	0.50%	10.0	23.192	0.738	0.3626	49.12%		0	0	0
Fuller Ave.	EXTERNAL	EX MH 43																				
			16	4.97	16	4.97	4.00	0.333	0.497	0.830										5	0	0
		50 m^3/d/ha	0	16.16	0	21.13		9.352	1.616	10.968												
										11.798	PVC	300	0.40%	134.0	61.159	0.865	0.1669	19.29%				
	FORCEMAIN		0	0	523	5.91	3.96	10.801	0.591	11.392												
Cambridge St.	EX MH 43	EX MH 42	28	2.23	567	34.24	3.95	21.010	3.424	24.434	PVC	300	0.40%	143.0	61.159	0.865	0.3457	39.95%		9	0	0
Cambridge St.	EX MH 42	EX MH 41	28	1.25	596	35.49	3.93	21.553	3.549	25.102	PVC	300	0.40%	97.0	61.159	0.865	0.3551	41.04%		9	0	0

q = average daily per capita flow (450 L/cap.d)
I = unit of peak estraneous flow (0.1 L/ha.s)
M = peaking factor
Q(p) = peak Popukation flow (L/s)
Q(i) = peak extraneous flow (L/s)
Q(d) = peak design flow

St. Andrew's Lake Village
External Sanitary Sewer Design Sheet

Recreated Based on L.S.D. Developments Inc. Church Street Meadows - Project No. 9401 DWG 2, prepared by High Point Engineering dated March 9, 1998.

DATE: JANUARY 2019

DESIGN: MG

CHECKED: DR

Location			Individual		Cumulative		Peaking	Commercial	Pop Flow Q(p)	Extraneous Flow	Design Flow	Sewer							
Street	From	To	Population	Area (ha)	Population	Area (ha)	Factor	Flow (L/s)	(L/s)	Q(i) (L/s)	Q(d) (L/s)	Type of Pipe	Diameter (mm)	Slope (%)	Length (m)	Capacity (L/s) n=0.013	Full Flow Velocity (m/s)	Actual Velocity at Q(d) (m/s)	% Capacity
Existing Church Street Meadows																			
Mercer Crescent	MH25A	MH13A	21	0.54	21.0	0.54	4.00	0.000	0.438	0.054	0.492	PVC	200	1.10%	115.0	34.399	1.095	0.0156	1.43%
Oxley Drive	BLK109	MH13A	35	0.96	35.0	0.96	4.00	0.000	0.729	0.096	0.825	PVC	200	3.00%	10.0	56.809	1.808	0.0263	1.45%
Oxley Drive	MH13A	MH12A	24.5	0.73	80.5	2.23	4.00	0.000	1.677	0.223	1.900	PVC	200	3.00%	84.0	56.809	1.808	0.0605	3.34%
Oxley Drive	MH12A	MH11A	7	0.22	87.5	2.45	4.00	0.000	1.823	0.245	2.068	PVC	200	2.00%	25.0	46.384	1.476	0.0658	4.46%
Mercer Crescent	MH26A	MH14A	24.5	0.55	24.5	0.55	4.00	0.000	0.510	0.055	0.565	PVC	200	1.62%	76.5	41.746	1.329	0.0180	1.35%
Mercer Crescent	MH14A	MH15A	35.0	0.79	59.5	1.34	4.00	0.000	1.240	0.134	1.374	PVC	200	1.31%	75.2	37.540	1.195	0.0437	3.66%
Mercer Crescent	MH15A	MH11A	21.0	0.60	80.5	1.94	4.00	0.000	1.677	0.194	1.871	PVC	200	0.70%	88.6	27.441	0.873	0.0596	6.82%
Oxley Drive	MH11A	MH10A	7	0.29	175.0	4.68	4.00	0.000	3.646	0.468	4.114	PVC	200	0.70%	93.8	27.441	0.873	0.1309	14.99%
Proposed Development																			
STREET D	SAN23	SAN24	31	0.41	31.3	0.41	4.00	0.000	0.652	0.041	0.693	PVC	200	3.05%	64.4	57.280	1.823	0.0221	1.21%
PINE GROVE ROAD	SAN24	SAN25	0	0.08	31.3	0.49	4.00	0.000	0.652	0.049	0.701	PVC	200	1.00%	66.5	32.798	1.044	0.0223	2.14%
Commercial	STUB2	SAN25		0.26	31.3	0.26	4.00	0.073	0.652	0.026	0.751	PVC	200	1.00%	12.3	32.798	1.044	0.0239	2.29%
PINE GROVE RD	SAN25	MH17A	0	0.09	31.3	0.84	4.00	0.073	0.652	0.084	0.809	PVC	200	1.00%	46.2	32.798	1.044	0.0258	2.47%
Existing Church Street Meadows																			
Sheffcote Street	MH17A	MH24A	63	1.03	94.3	1.87	4.00	0.073	1.965	0.187	2.225	PVC	200	1.31%	97.3	37.540	1.195	0.0708	5.93%
Sheffcote Street	MH24A	MH10A	7	0.22	101.3	2.09	4.00	0.073	2.110	0.209	2.392	PVC	200	1.23%	26.7	36.375	1.158	0.0762	6.58%
Oxley Drive	STUB	MH10A	7	0.21	7.0	0.21	4.00	0.000	0.146	0.021	0.167	PVC	200	0.71%	9.0	27.636	0.880	0.0053	0.60%
Oxley Drive	MH10A	MH9A	10.5	0.43	293.8	7.41	4.00	0.073	6.121	0.741	6.935	PVC	200	0.50%	94.8	23.192	0.738	0.2207	29.90%
Byrnes Crescent	MH22A	MH21A	52.5	1.52	52.5	1.52	4.00	0.000	1.094	0.152	1.246	PVC	200	1.00%	70.0	32.798	1.044	0.0397	3.80%
Byrnes Crescent	MH21A	MH20A	17.5	0.44	70.0	1.96	4.00	0.000	1.458	0.196	1.654	PVC	200	0.60%	100.0	25.406	0.809	0.0527	6.51%
Byrnes Crescent	MH20A	MH19A	35	0.89	105.0	2.85	4.00	0.000	2.188	0.285	2.473	PVC	200	0.60%	108.0	25.406	0.809	0.0787	9.73%
Byrnes Crescent	MH19A	MH18A	7	0.22	112.0	3.07	4.00	0.000	2.333	0.307	2.640	PVC	200	0.60%	12.0	25.406	0.809	0.0840	10.39%
Byrnes Crescent	MH18A	MH9A	28	0.6	140.0	3.67	4.00	0.000	2.917	0.367	3.284	PVC	200	0.60%	72.0	25.406	0.809	0.1045	12.92%
Oxley Drive	MH9A	MH8A	3.5	0.15	437.3	11.23	4.00	0.073	9.110	1.123	10.306	PVC	200	0.54%	42.3	24.102	0.767	0.3281	42.76%
Oxley Drive	MH8A	MH7A	7	0.24	444.3	11.47	4.00	0.073	9.256	1.147	10.476	PVC	200	0.50%	18.4	23.192	0.738	0.3335	45.17%
Oxley Drive	MH7A	MH6A	24.5	0.76	468.8	12.23	3.99	0.073	9.738	1.223	11.034	PVC	200	0.50%	89.9	23.192	0.738	0.3512	47.58%

q = average daily per capita flow (450 L/cap.d)
I = unit of peak estraneous flow (0.1 L/ha.s)
M = peaking factor
Q(p) = peak Popukation flow (L/s)
Q(i) = peak extraneous flow (L/s)
Q(d) = peak design flow

St. Andrew's Lake Village
External Sanitary Sewer Design Sheet

Recreated Based on L.S.D. Developments Inc. Church Street Meadows - Project No. 9401 DWG 2,
prepared by High Point Engineering dated March 9, 1998.

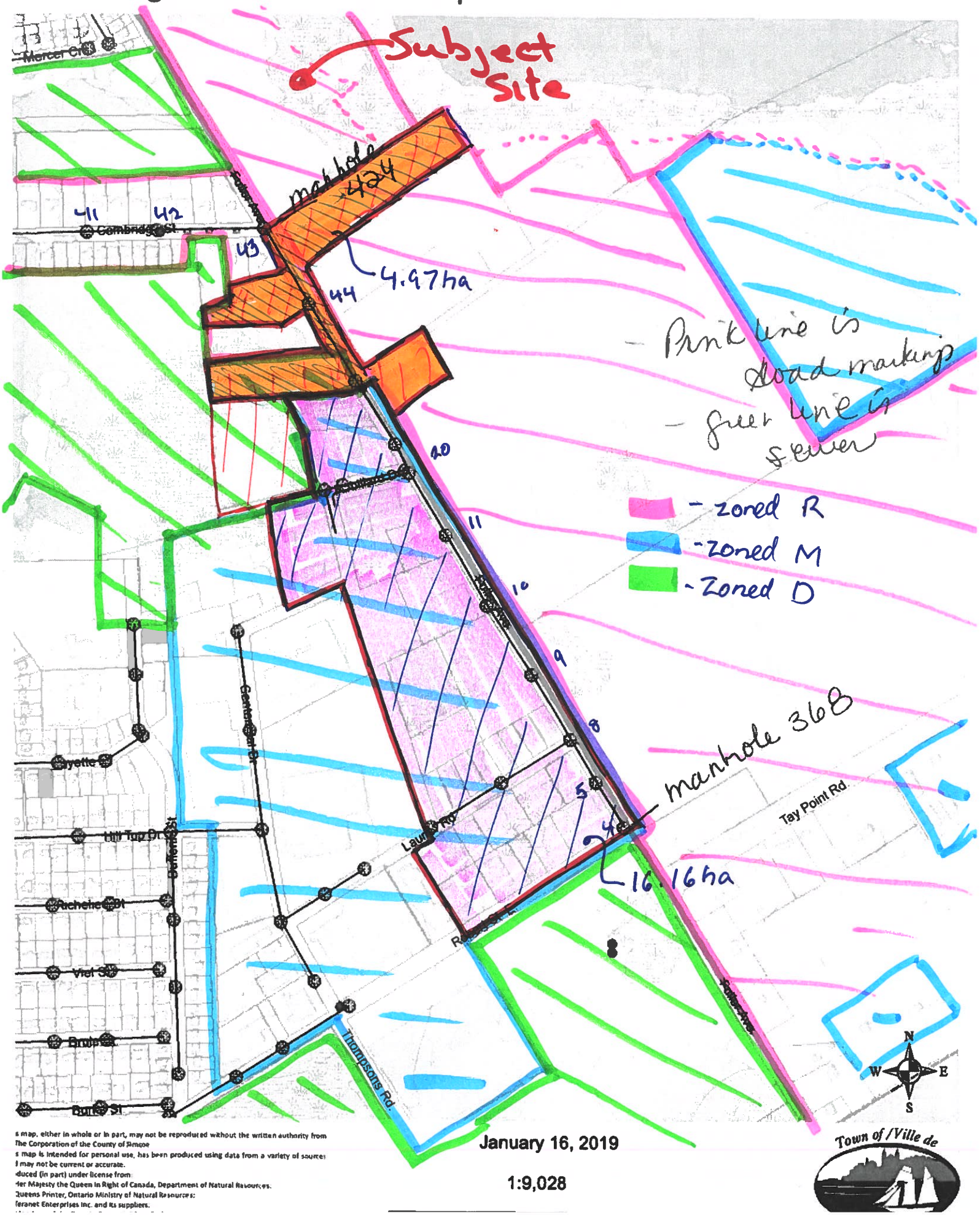
DATE: JANUARY 2019

DESIGN: MG

CHECKED: DR

Location			Individual		Cumulative		Peaking	Commercial	Pop Flow Q(p)	Extraneous Flow	Design Flow	Sewer							
Street	From	To	Population	Area (ha)	Population	Area (ha)	Factor	Flow (L/s)	(L/s)	Q(i) (L/s)	Q(d) (L/s)	Type of Pipe	Diameter (mm)	Slope (%)	Length (m)	Capacity (L/s) n=0.013	Full Flow Velocity (m/s)	Actual Velocity at Q(d) (m/s)	% Capacity
Oxley Drive	MH6A	MH5A	7	0.28	475.8	12.51	3.99	0.073	9.876	1.251	11.200	PVC	200	0.64%	23.9	26.239	0.835	0.3565	42.68%
Byrnes Crescent	MH22A	MH23A	14	0.45	14.0	0.45	4.00	0.000	0.292	0.045	0.337	PVC	200	1.00%	78.5	32.798	1.044	0.0107	1.03%
Byrnes Crescent	MH23A	MH5A	7	0.24	21.0	0.69	4.00	0.000	0.438	0.069	0.507	PVC	200	1.00%	31.0	32.798	1.044	0.0161	1.54%
Oxley Drive	MH5A	MH4A	3.5	0.14	500.3	13.34	3.97	0.073	10.355	1.334	11.762	PVC	200	0.60%	24.7	25.406	0.809	0.3744	46.30%
Oxley Drive	MH4A	MH2A	17.5	0.47	517.8	13.81	3.97	0.073	10.697	1.381	12.151	PVC	200	0.57%	74.8	24.762	0.788	0.3868	49.07%
Oxley Drive	MH3A	MH2A	7	0.25	7.0	0.25	4.00	0.000	0.146	0.025	0.171	PVC	200	1.02%	32.8	33.125	1.054	0.0054	0.52%
O'Reilley Streeet	MH2A	MH1A	14	0.39	538.8	14.45	3.96	0.073	11.105	1.445	12.623	PVC	200	0.66%	100.3	26.646	0.848	0.4018	47.37%
O'Reilley Streeet	MH1A	EX MH 17	0	0	538.8	14.45	3.96	0.073	11.105	1.445	12.623	PVC	200	0.86%	21.0	30.416	0.968	0.4018	41.50%

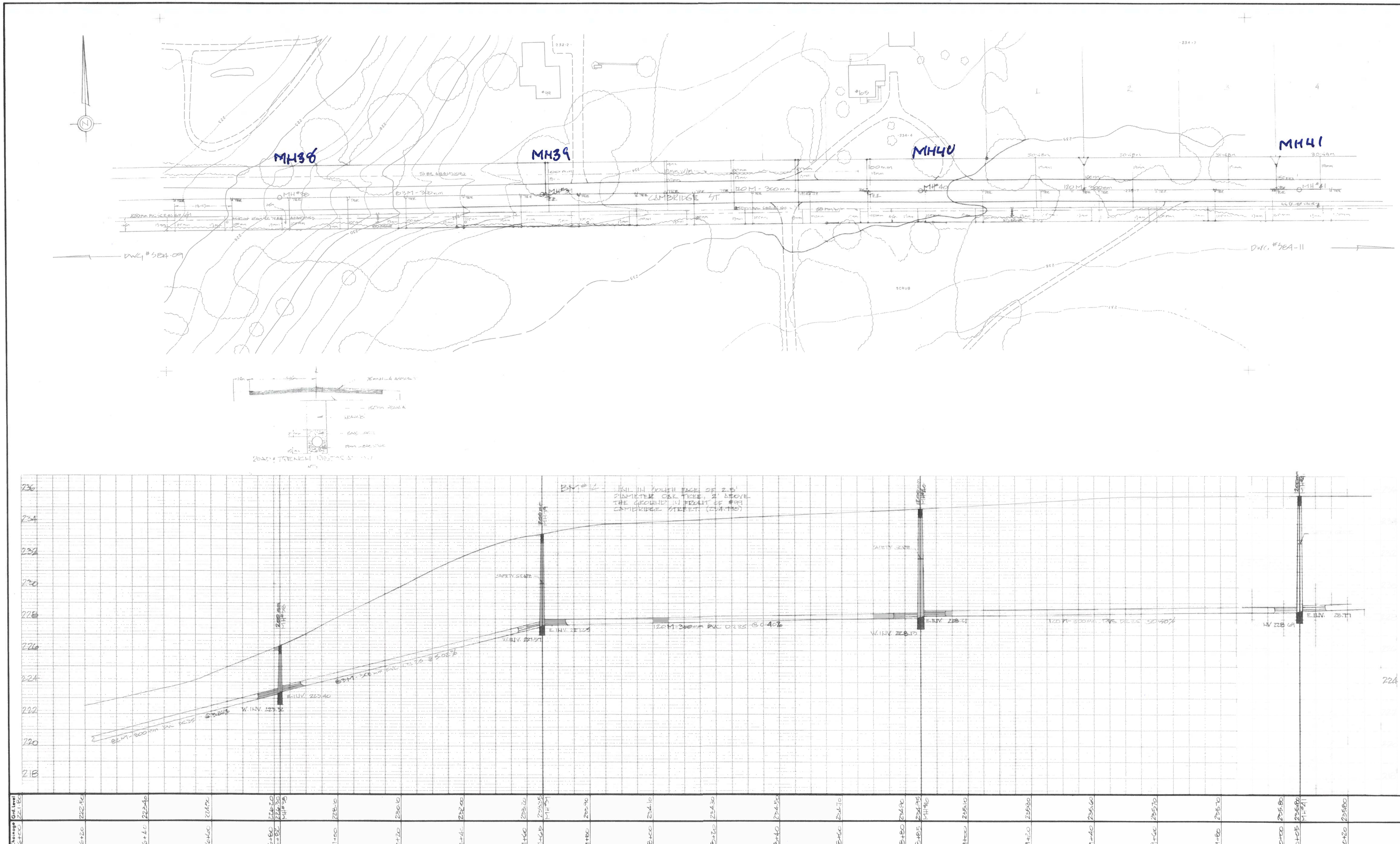
Penetanguishene - Web Map



January 16, 2019

1:9,028

Town of /Ville de



No.	Revision	Date	Initial
1	RELOCATION OF LOT SERVICES [illegible]	[illegible]	[illegible]

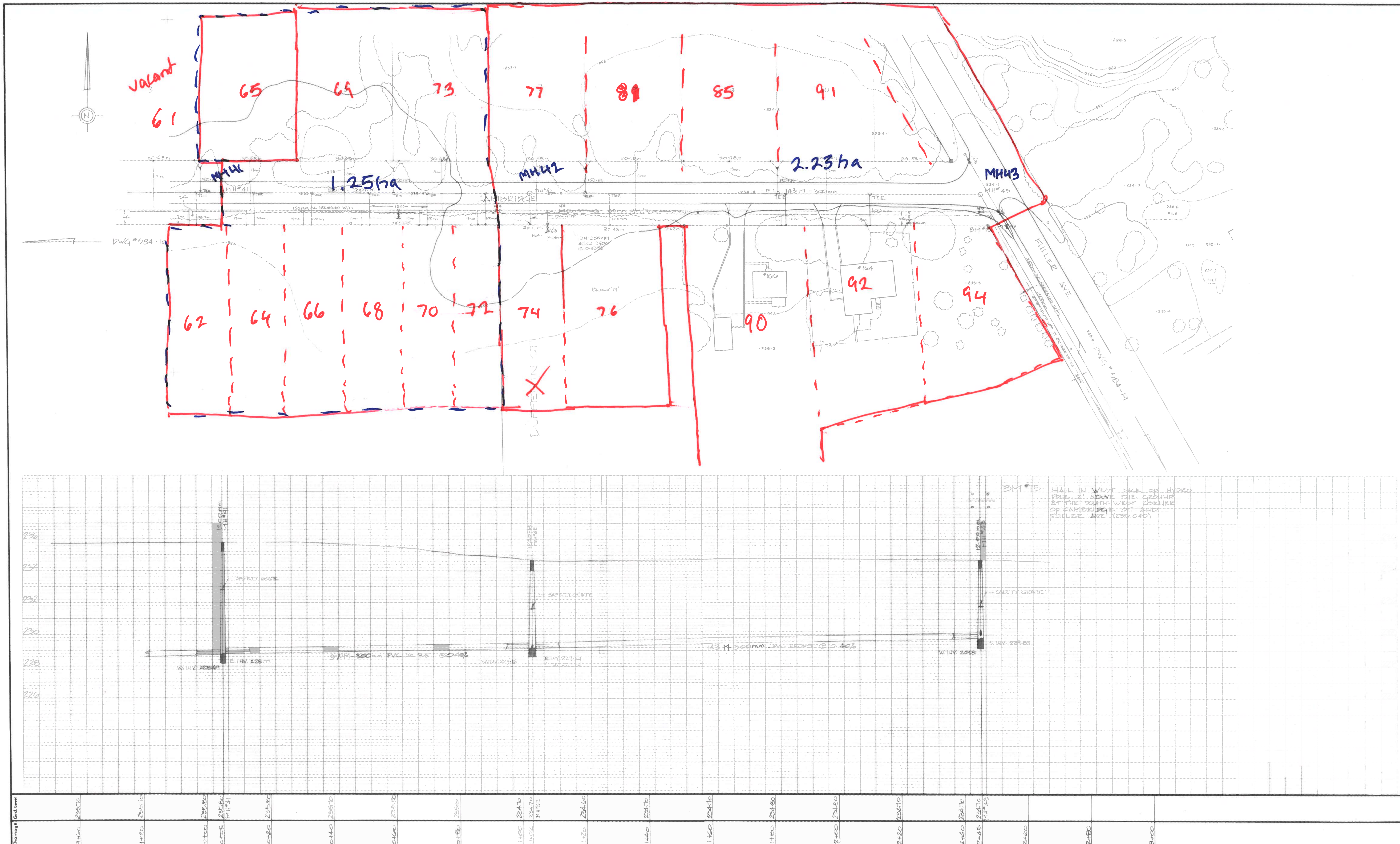
Town of Penetanguishene
Public Works Department

CAMBRIDGE ST. SAN. SEWER CHURCH ST. TO FULLER AVE.

Scale: Hor. 1:500 Ver. 1:100

Date: MARCH '84

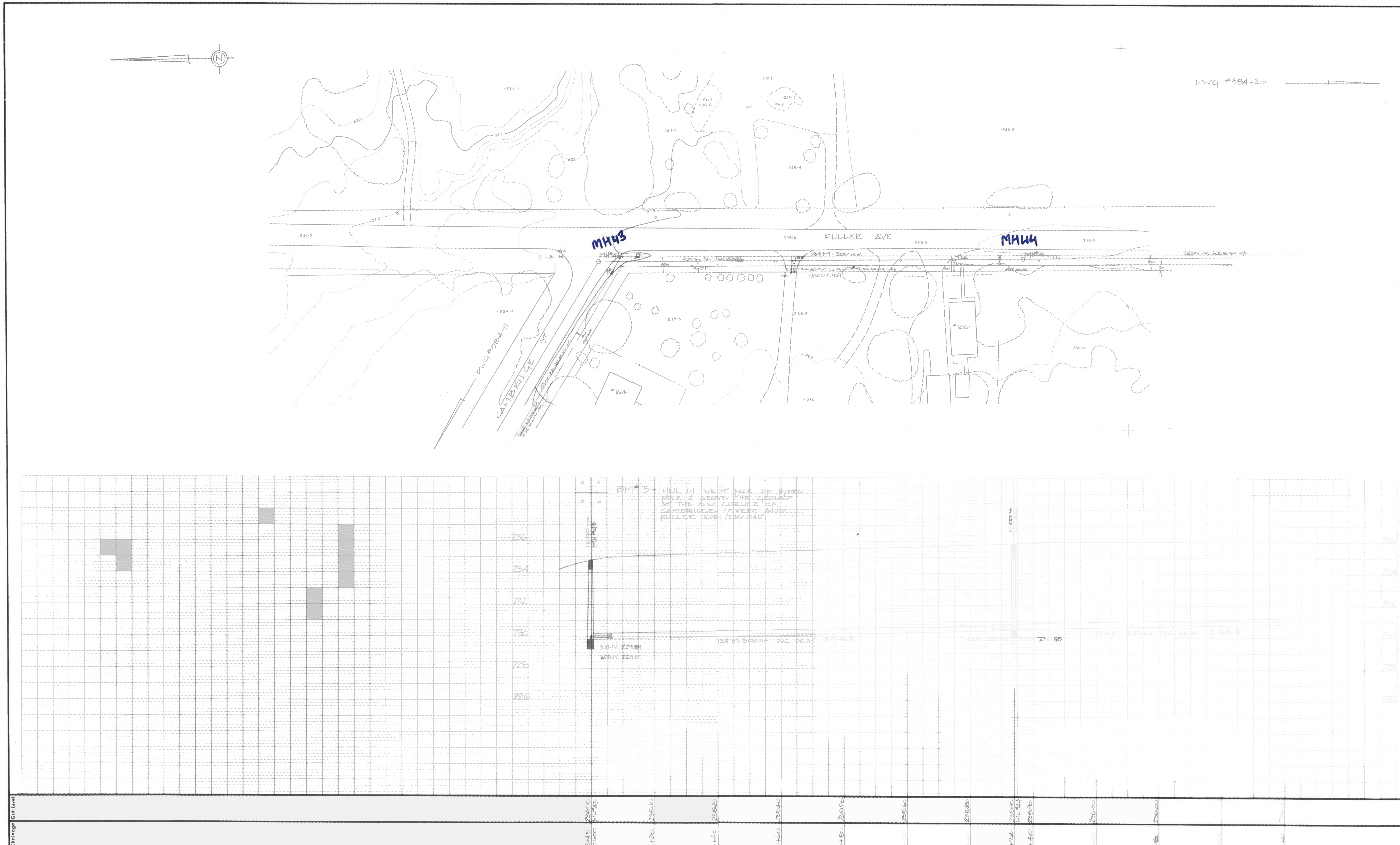
Drawing No. 584-10



No.	Revision	Date	Initial
1.	RELOCATION OF LOT SERVICES - S. SIDE	AUG. '86	

Town of Penetanguishene
Public Works Department

Dsn. FWL	Dwg. WG	Ckd. HN	
Scale	Hor. 1:500 Ver. 1:100		
Date	MARCH '84	Drawing No.	584-11



Town of Penetanguishene
Public Works Department

Scale Hor. 1:500 Ver. 1:100

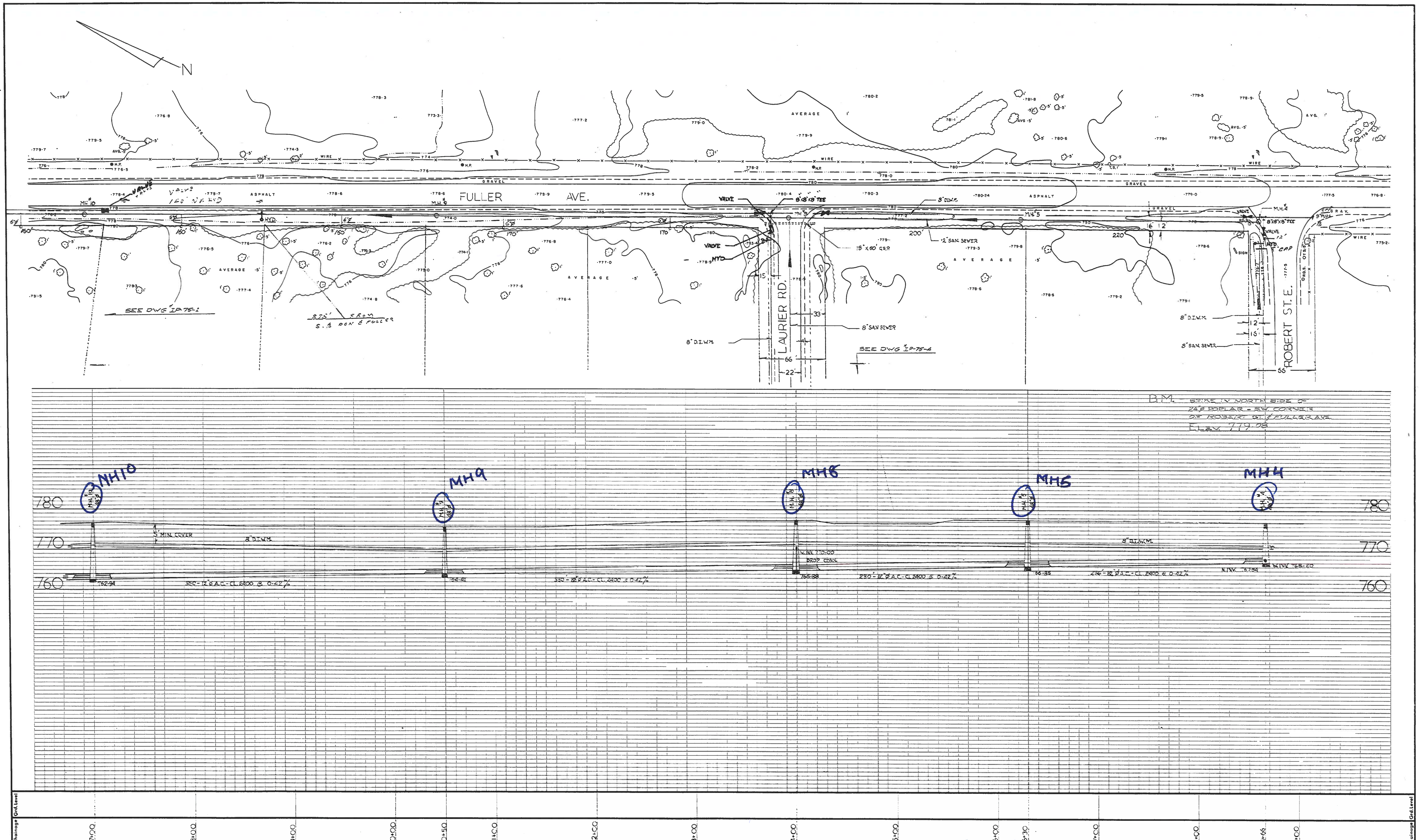
Nº	Revision	Date	Initial

PHILIP H. JONES

Town of Penetanguishene
Public Works Department

Dsn. FW	Dwg. FW	Ckd. PHJ	FULLER AVE FROM DON ST. TO ROBERT ST. E.
Scale	Hor. 1" = 40' Ver. 1" = 10'		
Date	Nov. 1974		Drawing Nº. 2P-

A-7



N
FULLER AVE.
ASPHALT
GRAVEL
WIRE
AVERAGE
VALVE
HYD
8"x8"x8" TEE
8" D.I.W.M.
8" SAN. SEWER
12" SAN. SEWER
15" x 60' C.S.P.
SEE DWG IP-75-1
SEE DWG IP-75-4
LAURIER RD.
ROBERT ST. E.
B.M. SPIKE IN NORTH SIDE OF 24" POPLAR - SW CORNER OF ROBERT ST. & FULLER AVE.
ELEV. 779.08
MH10
MH9
MH8
MH5
MH4
5' MIN. COVER
DROP CONN.
762.94
764.41
765.88
766.85
780
770
760
7+00
8+00
9+00
10+00
10+50
11+00
12+00
13+00
14+00
15+00
16+00
16+30
17+00
18+00
18+66
19+00
Chainage
Grd. Level

No.	Revision	Date	Initial

Town of Penetanguishene
Public Works Department

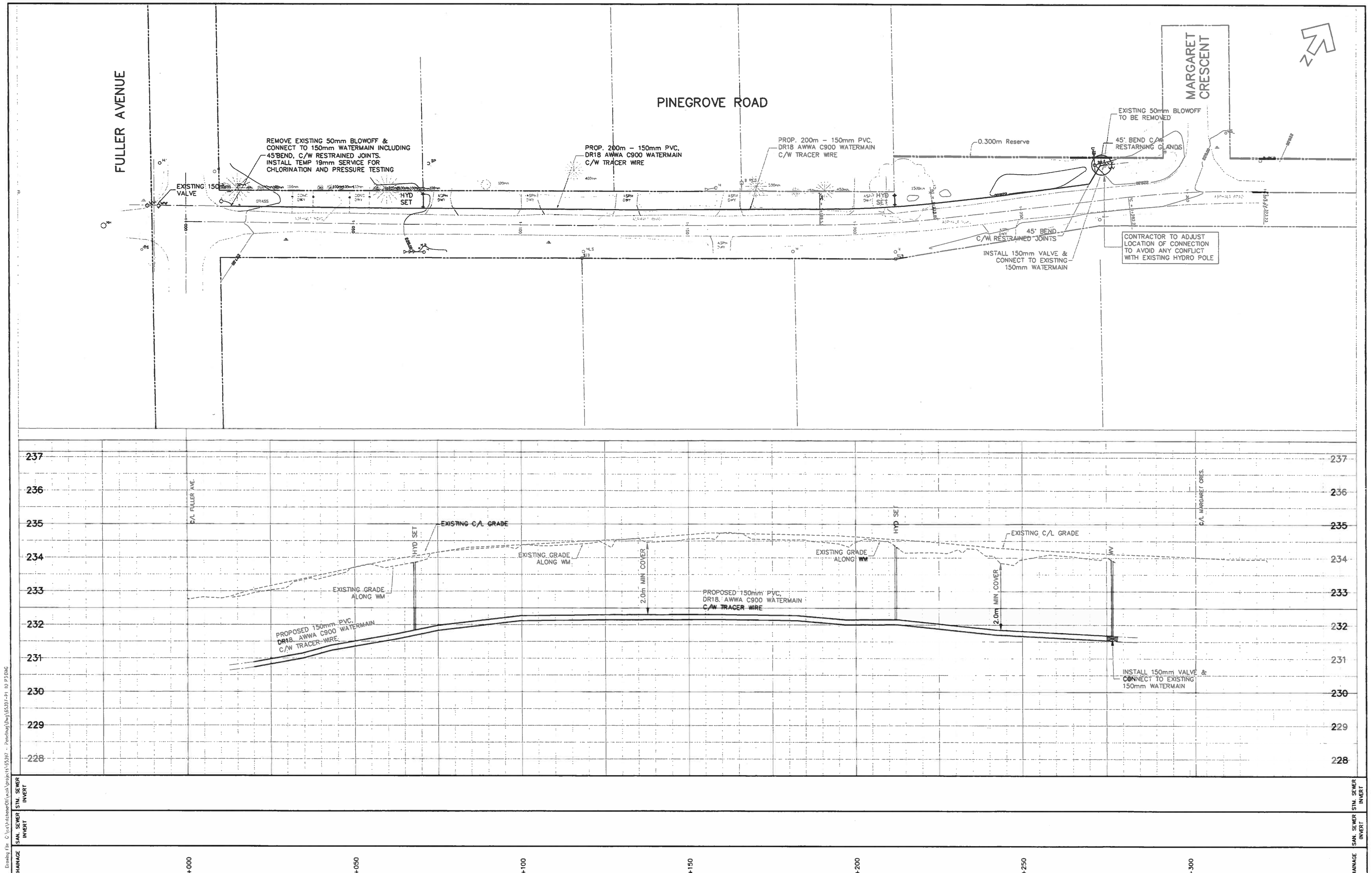
FULLER AVE. FROM DON ST. TO ROBERT ST. E.

Dsn. S.W.L. | Dwg. S.W.L. | Ckd. R.H.T.

Scale: Hor. 1" = 40' Ver. 1" = 10'

Date: Nov. 1974 | Drawing No. IP-75-2

1-1



NOTES:

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVER GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME LIABILITY FOR DAMAGE TO THEM.

NO.	REVISION	DATE	INITIAL

APPROVED

PINEGROVE ROAD
STA. 1+000
TO
STA. 1+325

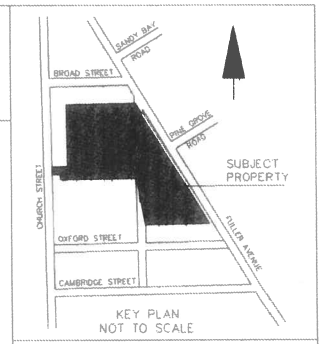
J. J. GEMIN

TOWN OF PENETANGUISHENE
GILWOOD, PINEGROVE & SANDY BAY WATERMAIN EXTENSIONS AND MODIFICATIONS

EARTH TECH
Earth Tech (Canada) Inc. Kitchener, Ontario 519.570.4886

DRAWN BY: C.L.S. CHECKED BY: J.J.G.	SCALE: H=1:500 V=1:50	DATE: MARCH 2003	SHEET NO.
CADD SYSTEM AutoCAD	DWG NO. A1- 65397-P1	REV. A	CONTRACT

SITE BENCHMARKS
BM-1 ELEV. 236.134m
NAIL IN W. FACE OF H.P. APPROX. 0.6m ABOVE GROUND AT THE S/W CORNER OF CAMBRIDGE ST. AND FULLER AVE.
BM-3 ELEV. 219.035m
TOP OF S. FLANGE OF HYD. AT N/E CORNER OF BROAD & CHURCH STREET.



KEY PLAN
NOT TO SCALE

EX NH 6
EX NH 15
EX NH 10
EX NH 17
EX NH 18
CHURCH STREET
100m 200mm AC CL4500 @ 0.70 %
150m 200mm AC CL3300 @ 0.70%
105m 200mm AC CL2400 @ 2.50 %
105m 200mm AC CL2400 @ 7.50 %
FULLER AVENUE
PINE GROVE ROAD
BYRNES CRESCENT
OXLEY DRIVE
O'REILLEY STREET
SHEFFCOTE STREET
MERCER CRESCENT
PHASE 1
PHASE 2
PHASE 3
BLOCK 124
PROPOSED STORM WATER MANAGEMENT FACILITY
TURNING BASIN (OPSD 500.03)
BLK 108
BLK 109 0.3 RESERVE
BLK 110 0.3 RESERVE
BLK 111
BLK 112
BLK 113 0.3 RESERVE
BLK 115
BLK 116 0.3 RESERVE
BLK 117 0.3 RESERVE
BLK 118 0.3 RESERVE
BLK 119 0.3 RESERVE
BLK 120 0.3 RESERVE
BLK 121
BLK 122
BLK 123 0.3 RESERVE
BLK 125
70m 200mm PVC SAN 1.00%
100m 200mm PVC SAN @ 0.6%
89.9m 200mm PVC SAN @ 0.6%
74.7m 200mm PVC SAN @ 0.6%
23.9m 200mm PVC SAN @ 0.64%
21m 200mm PVC SAN @ 0.86%
100.3m 200mm PVC SAN @ 0.66%
25m 200mm PVC SDR 35 SAN @ 2.0 %
115m 200mm PVC SDR 35 SAN @ 1.10 %
10.0m 200mm PVC SDR35 SAN @ 3.0 %
9.0m STUB @ 0.71%
10.9m STUB @1%
STUB 3.7m 200mm PVC SAN @ 0.6%
STUB END PLUGGED
MH1A MH2A MH3A MH4A MH5A MH6A MH7A MH8A MH9A MH10A MH11A MH12A MH13A MH14A MH15A MH16A MH17A MH18A MH19A MH20A MH21A MH22A MH23A MH24A MH25A MH26A MH27A MH28A MH29A MH30A MH31A MH32A MH33A MH34A MH35A MH36A MH37A MH38A MH39A MH40A MH41A MH42A MH43A MH44A MH45A MH46A MH47A MH48A MH49A MH50A MH51A MH52A MH53A MH54A MH55A MH56A MH57A MH58A MH59A MH60A MH61A MH62A MH63A MH64A MH65A MH66A MH67A MH68A MH69A MH70A MH71A MH72A MH73A MH74A MH75A MH76A MH77A MH78A MH79A MH80A MH81A MH82A MH83A MH84A MH85A MH86A MH87A MH88A MH89A MH90A MH91A MH92A MH93A MH94A MH95A MH96A MH97A MH98A MH99A MH100A MH101A MH102A MH103A MH104A MH105A MH106A MH107A MH108A MH109A MH110A MH111A MH112A MH113A MH114A MH115A MH116A MH117A MH118A MH119A MH120A MH121A MH122A MH123A MH124A MH125A MH126A MH127A MH128A MH129A MH130A MH131A MH132A MH133A MH134A MH135A MH136A MH137A MH138A MH139A MH140A MH141A MH142A MH143A MH144A MH145A MH146A MH147A MH148A MH149A MH150A MH151A MH152A MH153A MH154A MH155A MH156A MH157A MH158A MH159A MH160A MH161A MH162A MH163A MH164A MH165A MH166A MH167A MH168A MH169A MH170A MH171A MH172A MH173A MH174A MH175A MH176A MH177A MH178A MH179A MH180A MH181A MH182A MH183A MH184A MH185A MH186A MH187A MH188A MH189A MH190A MH191A MH192A MH193A MH194A MH195A MH196A MH197A MH198A MH199A MH200A MH201A MH202A MH203A MH204A MH205A MH206A MH207A MH208A MH209A MH210A MH211A MH212A MH213A MH214A MH215A MH216A MH217A MH218A MH219A MH220A MH221A MH222A MH223A MH224A MH225A MH226A MH227A MH228A MH229A MH230A MH231A MH232A MH233A MH234A MH235A MH236A MH237A MH238A MH239A MH240A MH241A MH242A MH243A MH244A MH245A MH246A MH247A MH248A MH249A MH250A MH251A MH252A MH253A MH254A MH255A MH256A MH257A MH258A MH259A MH260A MH261A MH262A MH263A MH264A MH265A MH266A MH267A MH268A MH269A MH270A MH271A MH272A MH273A MH274A MH275A MH276A MH277A MH278A MH279A MH280A MH281A MH282A MH283A MH284A MH285A MH286A MH287A MH288A MH289A MH290A MH291A MH292A MH293A MH294A MH295A MH296A MH297A MH298A MH299A MH300A MH301A MH302A MH303A MH304A MH305A MH306A MH307A MH308A MH309A MH310A MH311A MH312A MH313A MH314A MH315A MH316A MH317A MH318A MH319A MH320A MH321A MH322A MH323A MH324A MH325A MH326A MH327A MH328A MH329A MH330A MH331A MH332A MH333A MH334A MH335A MH336A MH337A MH338A MH339A MH340A MH341A MH342A MH343A MH344A MH345A MH346A MH347A MH348A MH349A MH350A MH351A MH352A MH353A MH354A MH355A MH356A MH357A MH358A MH359A MH360A MH361A MH362A MH363A MH364A MH365A MH366A MH367A MH368A MH369A MH370A MH371A MH372A MH373A MH374A MH375A MH376A MH377A MH378A MH379A MH380A MH381A MH382A MH383A MH384A MH385A MH386A MH387A MH388A MH389A MH390A MH391A MH392A MH393A MH394A MH395A MH396A MH397A MH398A MH399A MH400A MH401A MH402A MH403A MH404A MH405A MH406A MH407A MH408A MH409A MH410A MH411A MH412A MH413A MH414A MH415A MH416A MH417A MH418A MH419A MH420A MH421A MH422A MH423A MH424A MH425A MH426A MH427A MH428A MH429A MH430A MH431A MH432A MH433A MH434A MH435A MH436A MH437A MH438A MH439A MH440A MH441A MH442A MH443A MH444A MH445A MH446A MH447A MH448A MH449A MH450A MH451A MH452A MH453A MH454A MH455A MH456A MH457A MH458A MH459A MH460A MH461A MH462A MH463A MH464A MH465A MH466A MH467A MH468A MH469A MH470A MH471A MH472A MH473A MH474A MH475A MH476A MH477A MH478A MH479A MH480A MH481A MH482A MH483A MH484A MH485A MH486A MH487A MH488A MH489A MH490A MH491A MH492A MH493A MH494A MH495A MH496A MH497A MH498A MH499A MH500A MH501A MH502A MH503A MH504A MH505A MH506A MH507A MH508A MH509A MH510A MH511A MH512A MH513A MH514A MH515A MH516A MH517A MH518A MH519A MH520A MH521A MH522A MH523A MH524A MH525A MH526A MH527A MH528A MH529A MH530A MH531A MH532A MH533A MH534A MH535A MH536A MH537A MH538A MH539A MH540A MH541A MH542A MH543A MH544A MH545A MH546A MH547A MH548A MH549A MH550A MH551A MH552A MH553A MH554A MH555A MH556A MH557A MH558A MH559A MH560A MH561A MH562A MH563A MH564A MH565A MH566A MH567A MH568A MH569A MH570A MH571A MH572A MH573A MH574A MH575A MH576A MH577A MH578A MH579A MH580A MH581A MH582A MH583A MH584A MH585A MH586A MH587A MH588A MH589A MH590A MH591A MH592A MH593A MH594A MH595A MH596A MH597A MH598A MH599A MH600A MH601A MH602A MH603A MH604A MH605A MH606A MH607A MH608A MH609A MH610A MH611A MH612A MH613A MH614A MH615A MH616A MH617A MH618A MH619A MH620A MH621A MH622A MH623A MH624A MH625A MH626A MH627A MH628A MH629A MH630A MH631A MH632A MH633A MH634A MH635A MH636A MH637A MH638A MH639A MH640A MH641A MH642A MH643A MH644A MH645A MH646A MH647A MH648A MH649A MH650A MH651A MH652A MH653A MH654A MH655A MH656A MH657A MH658A MH659A MH660A MH661A MH662A MH663A MH664A MH665A MH666A MH667A MH668A MH669A MH670A MH671A MH672A MH673A MH674A MH675A MH676A MH677A MH678A MH679A MH680A MH681A MH682A MH683A MH684A MH685A MH686A MH687A MH688A MH689A MH690A MH691A MH692A MH693A MH694A MH695A MH696A MH697A MH698A MH699A MH700A MH701A MH702A MH703A MH704A MH705A MH706A MH707A MH708A MH709A MH710A MH711A MH712A MH713A MH714A MH715A MH716A MH717A MH718A MH719A MH720A MH721A MH722A MH723A MH724A MH725A MH726A MH727A MH728A MH729A MH730A MH731A MH732A MH733A MH734A MH735A MH736A MH737A MH738A MH739A MH740A MH741A MH742A MH743A MH744A MH745A MH746A MH747A MH748A MH749A MH750A MH751A MH752A MH753A MH754A MH755A MH756A MH757A MH758A MH759A MH760A MH761A MH762A MH763A MH764A MH765A MH766A MH767A MH768A MH769A MH770A MH771A MH772A MH773A MH774A MH775A MH776A MH777A MH778A MH779A MH780A MH781A MH782A MH783A MH784A MH785A MH786A MH787A MH788A MH789A MH790A MH791A MH792A MH793A MH794A MH795A MH796A MH797A MH798A MH799A MH800A MH801A MH802A MH803A MH804A MH805A MH806A MH807A MH808A MH809A MH810A MH811A MH812A MH813A MH814A MH815A MH816A MH817A MH818A MH819A MH820A MH821A MH822A MH823A MH824A MH825A MH826A MH827A MH828A MH829A MH830A MH831A MH832A MH833A MH834A MH835A MH836A MH837A MH838A MH839A MH840A MH841A MH842A MH843A MH844A MH845A MH846A MH847A MH848A MH849A MH850A MH851A MH852A MH853A MH854A MH855A MH856A MH857A MH858A MH859A MH860A MH861A MH862A MH863A MH864A MH865A MH866A MH867A MH868A MH869A MH870A MH871A MH872A MH873A 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LEGEND
10.5 / 0.44 — POPULATION / AREA (ha)
SANITARY MANHOLE

LEGEND
MH1A ● SANITARY MANHOLE

REVISION BLOCK

DATE	REVISIONS	APPR'D
MAR9/98	SANITARY SEWER REVISED	
MAR9/98	AREAS REVISED	
MAY /95	AS RECORDED	
MAY /98	AS RECORDED ADDED UG PHASE 3	

CLIENT:
L.S.D. DEVELOPMENTS INC.

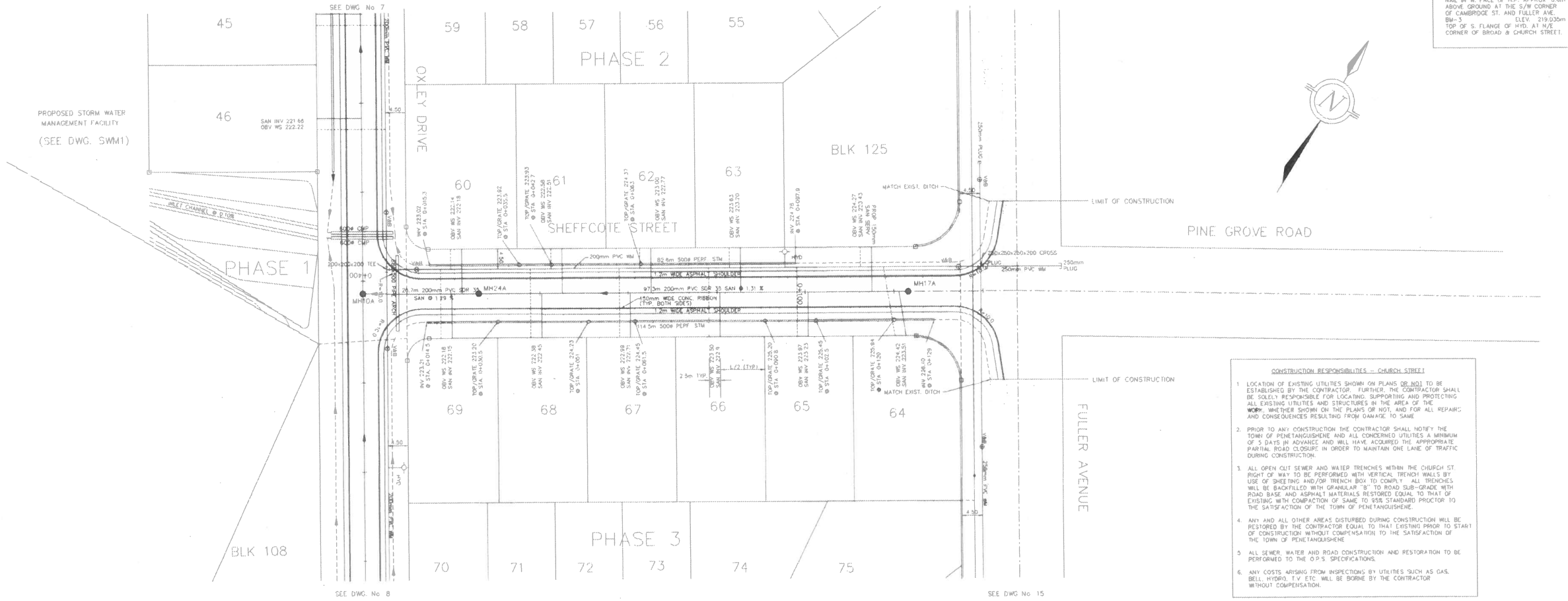
PROJECT:
CHURCH ST. MEADOWS
PROJECT No. 9401

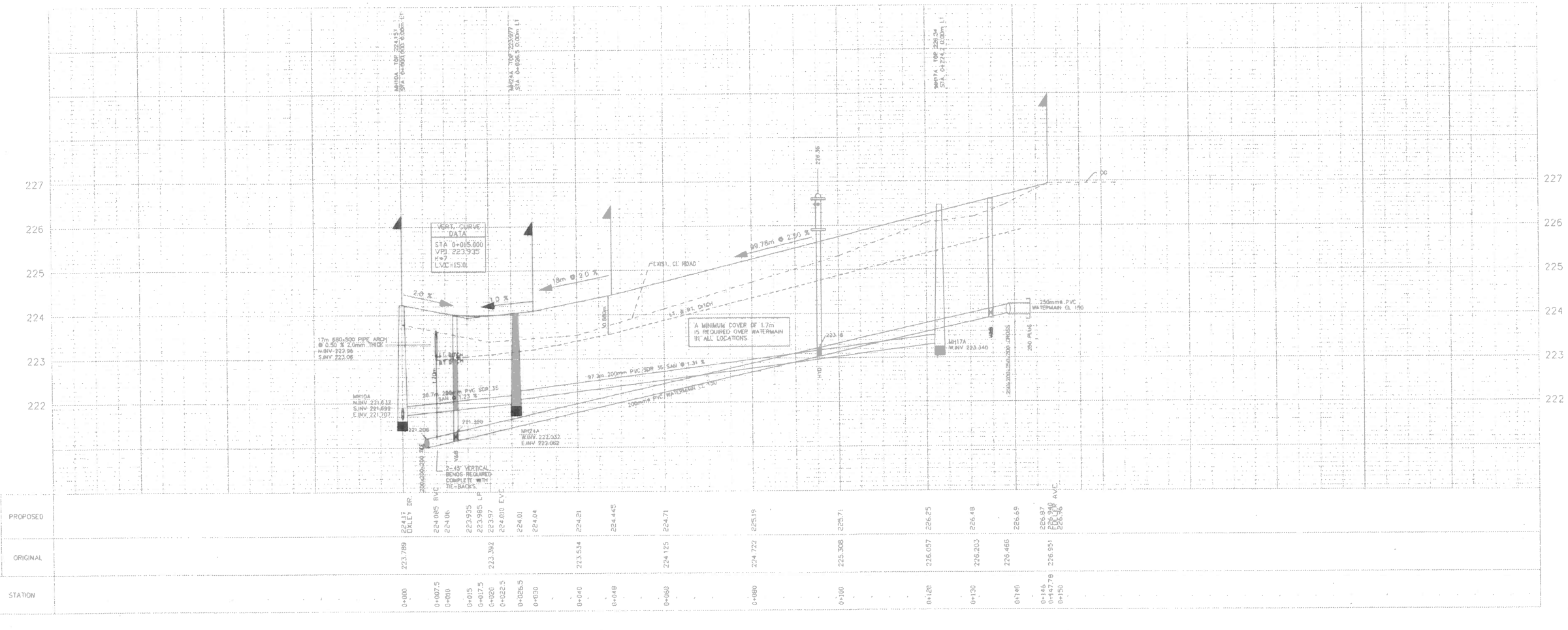
MUNICIPALITY:
TOWN OF PENETANGUISHENE

TITLE
SANITARY DRAINAGE PLAN

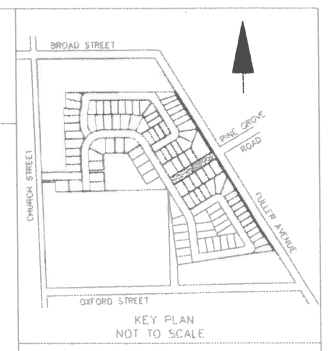
HIGHPOINT ENGINEERING
865 HERITAGE DRIVE, P.O. BOX 697, MIDLAND, ONTARIO L4R 4P4
TELEPHONE (705) 527-8000 FAX (705) 527-0828

DRAWN BY:	ALM/LJH
CHECKED BY:	JH
DATE:	MARCH 31, 1995
SCALE:	1:1000
DRAWING No.:	DWG 2





SITE BENCHMARKS
BM-1 ELEV. 236.154m
NAIL IN W. FACE OF H.P. APPROX. 0.6m ABOVE GROUND AT THE S/W CORNER OF CAMBRIDGE ST. AND FULLER AVE.
BM-3 ELEV. 219.035m
TOP OF S. FLANGE OF HYD. AT N/E CORNER OF BROAD & CHURCH STREET.



KEY PLAN
NOT TO SCALE

CONSTRUCTION RESPONSIBILITIES - CHURCH STREET

1. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS OR NOT TO BE ESTABLISHED BY THE CONTRACTOR. FURTHER, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL EXISTING UTILITIES AND STRUCTURES IN THE AREA OF THE WORK, WHETHER SHOWN ON THE PLANS OR NOT, AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
2. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE TOWN OF PENETANGUISHENE AND ALL CONCERNED UTILITIES A MINIMUM OF 5 DAYS IN ADVANCE AND WILL HAVE ACQUIRED THE APPROPRIATE PARTIAL ROAD CLOSURE IN ORDER TO MAINTAIN ONE LANE OF TRAFFIC DURING CONSTRUCTION.
3. ALL OPEN CUT SEWER AND WATER TRENCHES WITHIN THE CHURCH ST. RIGHT OF WAY TO BE PERFORMED WITH VERTICAL TRENCH WALLS BY USE OF SHEETING AND/OR TRENCH BOX TO COMPLY. ALL TRENCHES WILL BE BACKFILLED WITH GRANULAR 'B' TO ROAD SUB-GRADE WITH ROAD BASE AND ASPHALT MATERIALS RESTORED EQUAL TO THAT OF EXISTING WITH COMPACTION OF SAME TO 95% STANDARD PROCTOR TO THE SATISFACTION OF THE TOWN OF PENETANGUISHENE.
4. ANY AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION WILL BE RESTORED BY THE CONTRACTOR EQUAL TO THAT EXISTING PRIOR TO START OF CONSTRUCTION WITHOUT COMPENSATION TO THE SATISFACTION OF THE TOWN OF PENETANGUISHENE.
5. ALL SEWER, WATER AND ROAD CONSTRUCTION AND RESTORATION TO BE PERFORMED TO THE O.P.S. SPECIFICATIONS.
6. ANY COSTS ARISING FROM INSPECTIONS BY UTILITIES SUCH AS GAS, BELL, HYDRO, T.V. ETC. WILL BE BORNE BY THE CONTRACTOR WITHOUT COMPENSATION.

LEGEND
MH1A ● SANITARY MANHOLE

REVISION BLOCK

DATE	REVISIONS	APPR'D
MAY 95	AS RECORDED	

CLIENT:
L.S.D. DEVELOPMENTS INC.

PROJECT:
CHURCH ST. MEADOWS
PROJECT No. 9401

MUNICIPALITY:
TOWN OF PENETANGUISHENE

DRAWING TITLE
SHEFFCOTE STREET
STA 0+000 TO 0+147.78

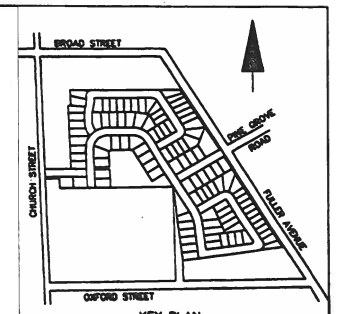
HIGHPOINT ENGINEERING
865 HERITAGE DRIVE, P.O. BOX 697, MIDLAND, ONTARIO L4R 4P4
TELEPHONE (705) 527-6000 FAX (705) 527-0828

DRAWN BY:	ALM/LJH
CHECKED BY:	JH
DATE:	APRIL 12, 1995
SCALE:	H 1:500 V 1:50
DRAWING No.:	DWG 11

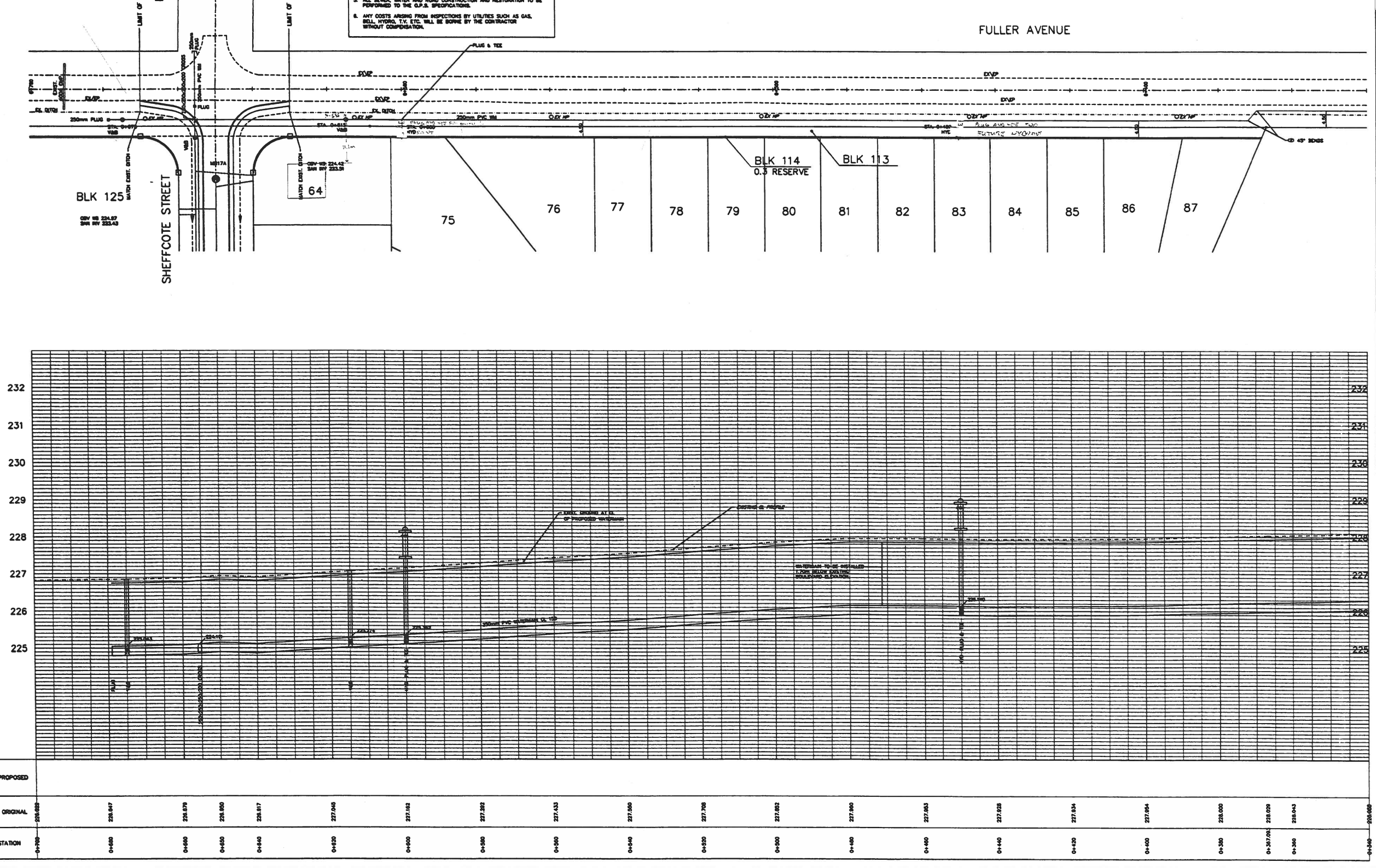
CONSTRUCTION RESPONSIBILITIES – FULLER AVENUE

1. LOCATION OF EXISTING UTILITIES SHOWN ON PLANS OR NOT TO BE ESTABLISHED BY THE CONTRACTOR. FURTHER, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL EXISTING UTILITIES AND STRUCTURES IN THE AREA OF THE WORK, WHETHER SHOWN ON THE PLANS OR NOT, AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
2. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE TOWN OF PENETANGUISHENE AND ALL CONCERNED UTILITIES A MINIMUM OF 5 DAYS IN ADVANCE AND WILL HAVE ACQUIRED THE APPROPRIATE PARTIAL ROAD CLOSURE IN ORDER TO MAINTAIN ONE LANE OF TRAFFIC DURING CONSTRUCTION.
3. ALL OPEN CUT SEWER AND WATER TRENCHES WITHIN THE CHURCH ST. RIGHT OF WAY TO BE PERFORMED WITH VERTICAL TRENCH WALLS BY USE OF SHEETING AND/OR TRENCH BOX TO COMPLY. ALL TRENCHES WILL BE BACKFILLED WITH NATIVE MATERIAL TO ROAD SUB-GRADE WITH ROAD BASE AND ASPHALT MATERIALS RESTORED EQUAL TO THAT OF EXISTING WITH COMPACTION OF SAME TO 95% STANDARD PROCTOR TO THE SATISFACTION OF THE TOWN OF PENETANGUISHENE.
4. ANY AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION WILL BE RESTORED BY THE CONTRACTOR EQUAL TO THAT EXISTING PRIOR TO START OF CONSTRUCTION WITHOUT COMPENSATION TO THE SATISFACTION OF THE TOWN OF PENETANGUISHENE.
5. ALL SEWER, WATER AND ROAD CONSTRUCTION AND RESTORATION TO BE PERFORMED TO THE O.P.S. SPECIFICATIONS.
6. ANY COSTS ARISING FROM INSPECTIONS BY UTILITIES SUCH AS GAS, BELL, HYDRO, T.V. ETC. WILL BE BORNE BY THE CONTRACTOR WITHOUT COMPENSATION.

NOTE: WHERE WATERMAIN IS WITHIN 2.0m OF EXISTING HYDRO POLES VERTICAL TRENCH USING SHEATHING AND OR BOX TO COMPLY.



KEY PLAN
NOT TO SCALE



LEGEND
MH1A ● SANITARY MANHOLE

REVISION BLOCK		
DATE	REVISIONS	APPR'D
MAY /95	AS RECORDED	

CLIENT:
L.S.D. DEVELOPMENTS INC.

PROJECT:
CHURCH ST. MEADOWS
PROJECT No. 9401

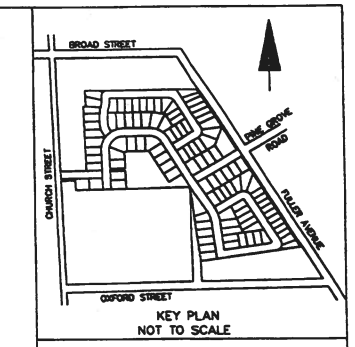
MUNICIPALITY:
TOWN OF PENETANGUISHENE

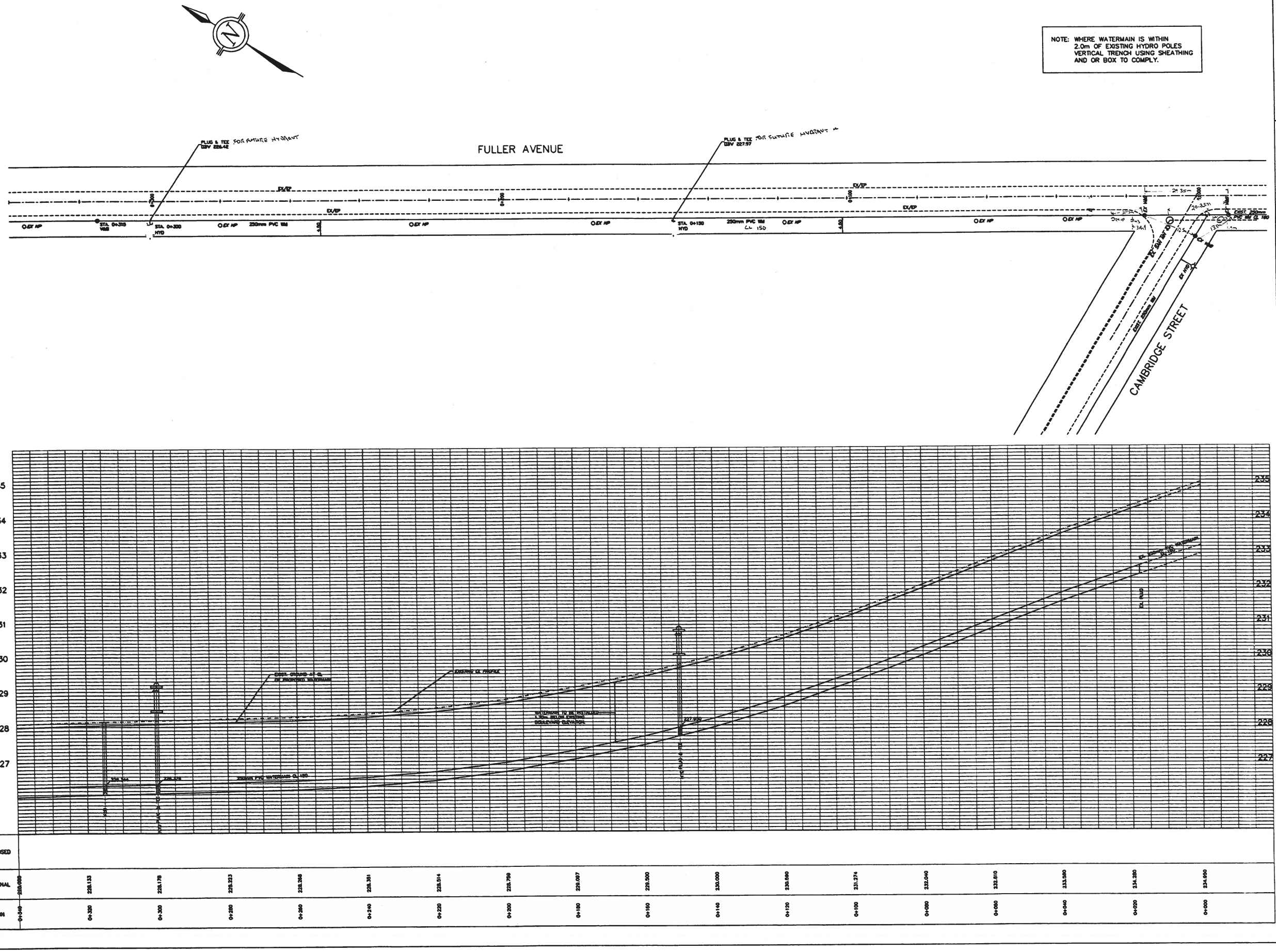
DRAWING TITLE:
FULLER AVENUE
STA 0+340 TO 0+700

A-7

HIGHPOINT ENGINEERING
685 HERITAGE DRIVE, P.O. BOX 697, MIDLAND, ONTARIO L4R 4P4
TELEPHONE (705) 527-6020 FAX (705) 527-0228

DRAWN BY:	ALH, TJH
CHECKED BY:	JH
DATE:	MARCH 31, 1995
SCALE:	H 1:300 V 1:50
DRAWING No.:	DWG 13





NOTE: WHERE WATERMAIN IS WITHIN 2.0m OF EXISTING HYDRO POLES VERTICAL TRENCH USING SHEATHING AND OR BOX TO COMPLY.

STATION	CL ROAD ELEV. ORIGINAL	CL ROAD ELEV. PROPOSED
0+340	228.088	
0+320	228.133	
0+300	228.178	
0+280	228.223	
0+260	228.268	
0+240	228.351	
0+220	228.514	
0+200	228.759	
0+180	229.097	
0+160	229.500	
0+140	230.000	
0+120	230.590	
0+100	231.274	
0+080	232.040	
0+060	232.810	
0+040	333.580	
0+020	234.280	
0+000	234.950	

KEY PLAN
NOT TO SCALE

LEGEND
MH1A ● SANITARY MANHOLE

REVISION BLOCK

DATE	REVISIONS	APPR'D
MAY /95	AS RECORDED	

CLIENT:
L.S.D. DEVELOPMENTS INC.

PROJECT:
CHURCH ST. MEADOWS
PROJECT No. 9401

MUNICIPALITY:
TOWN OF PENETANGUISHENE

DRAWING TITLE:
FULLER AVENUE
STA 0+000 TO 0+340 A.1

HIGHPOINT ENGINEERING
865 HERITAGE DRIVE, P.O. BOX 897, MIDLAND, ONTARIO L4R 4P4
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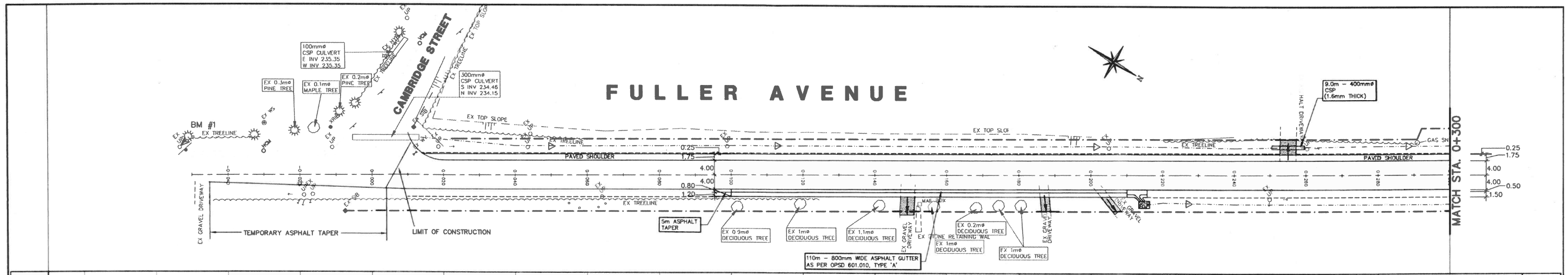
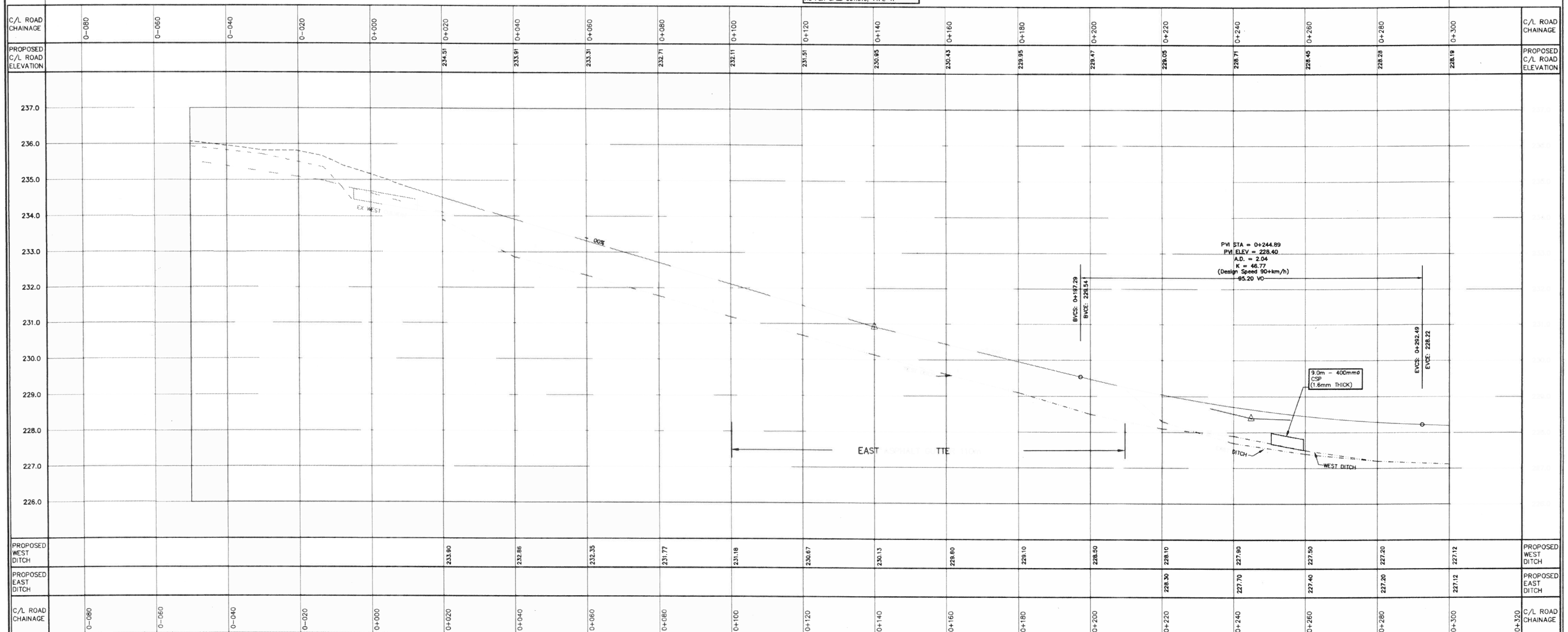
DRAWN BY: ALM/LJH
CHECKED BY: JH
DATE: MAR.JH 31, 1995
SCALE: H 1:300 V 1:50
DRAWING No.: DWG 14





C/L ROAD CHAINAGE	0-080	0-060	0-040	0-020	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	C/L ROAD CHAINAGE
PROPOSED C/L ROAD ELEVATION						234.51	233.91	233.31	232.71	232.11	231.51	230.95	230.43	229.95	229.47	229.05	228.71	228.45	228.28	228.19	PROPOSED C/L ROAD ELEVATION
PROPOSED WEST DITCH						233.90	232.86	232.35	231.77	231.18	230.67	230.13	229.80	229.10	228.50	228.10	227.90	227.50	227.20	227.12	PROPOSED WEST DITCH
PROPOSED EAST DITCH																228.30	227.70	227.40	227.20	227.12	PROPOSED EAST DITCH
C/L ROAD CHAINAGE	0-080	0-060	0-040	0-020	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	C/L ROAD CHAINAGE

NOTES

BENCHMARKS

	ELEVATION
#1. NAIL IN WEST FACE OF HYDRO POLE, WEST SIDE OF FULLER AVENUE, SECOND POLE SOUTH OF CAMBRIDGE STREET.	233.768
#2. NAIL IN WEST FACE OF HYDRO POLE AT NORTH EAST CORNER OF FULLER AVENUE AND PINEGROVE ROAD.	226.829
#3. NAIL IN EAST FACE OF HYDRO POLE AT SOUTH WEST CORNER OF FULLER AVENUE AND BROAD STREET.	231.566
#4. TOP OF SOUTH EAST CORNER OF CONCRETE BASE FOR LIGHT STANDARD ON WEST SIDE OF FULLER AVENUE SOUTH OF CHURCH STREET.	228.586

LICENSED PROFESSIONAL ENGINEER
S. R. MORASH
Feb 14/02
PROVINCE OF ONTARIO

NO.	REVISIONS	DATE	APP'D
1	CONSTRUCTION RECORD	DEC 14/01	S.M.

CONSTRUCTION RECORD

NOTE:
THIS DRAWING HAS BEEN PREPARED BY "RJ BURNSIDE AND ASSOCIATES" TO REFLECT CONSTRUCTION RECORD INFORMATION AND IS BELIEVED TO BE CORRECT, HOWEVER, THOSE RELYING ON THIS INFORMATION ARE ADVISED TO OBTAIN INDEPENDANT VERIFICATION AS TO ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

(XXX.XX) DENOTES - CONTRUCTION RECORD INFORMATION

CLIENT
TOWN OF PENETANGUISHENE
FULLER AVENUE RECONSTRUCTION

TITLE
FULLER AVENUE
STA 0+000 to 0+300

R.J. BURNSIDE & ASSOCIATES LIMITED
ENGINEERS - HYDROECOLOGISTS - ENVIRONMENTAL CONSULTANTS
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DRAWN: J.O.	DRAWING NO.: G00104P01-AC
DESIGNED: J.O.	SCALE: HORIZ. 1:500, VERT. 1:50
REVIEWED: S.M.	DATE: 03/14/01

Appendix C

Supporting Stormwater Design Information and Calculations

Weighted Curve Number Calculator

Input:

Catchment ID	101		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	1.771	32.0	0.12
Pasture/Lawn Area(ha)/CN	0.453	49.0	0.15
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.040	100.0	0.95

Calculated:

Area	2.264
Average CN	37
Average Pervious CN	35
Average Runoff 'C'	0.14

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	8.86	mm
Average Pervious IA	8.98	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	160	m

Calculated:

Catchment Ave. Slope	6.00	%
Imperviousness	1.77%	
Directly Connected Imperviousness	0.00%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.14

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.15
50YR Rational 'C'	0.17
100YR Rational 'C'	0.18

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	21.90	min
Time of Concentration	0.37	hr
Time to Peak	0.24	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	5.87	min
Time of Concentration	0.10	hr
Time to Peak	0.07	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.37**	**hr**
Time to Peak	**0.24**	**hr**

Catchment Area Summary (101)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	1.771	32	56.672	0.12	0.21252
Pasture/Lawn "A"	0.4528	49	22.1872	0.15	0.06792
Cultivated "A"	0	62	0	0.3	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0.04	100	4	0.95	0.038
Total Area "A"	2.2638				
Weighted CN "A"			36.60182		0.140666
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.18	0
Pasture/Lawn "AB"	0	59	0	0.22	0
Cultivated "AB"	0	68	0	0.4	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.28	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.4	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	2.2638	Weighted CN	36.60182	Weighted "C"	0.140666

Mannings Woods =	0.40	Average Pervious Mannings=	0.36
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	102		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	0.905	32.0	0.08
Pasture/Lawn Area(ha)/CN	0.000	N/A	N/A
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.000	N/A	N/A

Calculated:

Area	0.905
Average CN	32
Average Pervious CN	32
Average Runoff 'C'	0.08

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	10.00	mm
Average Pervious IA	10.00	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	30	m

Calculated:

Catchment Ave. Slope	5.00	%
Imperviousness	0.00%	
Directly Connected Imperviousness	0.00%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.08

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.09
50YR Rational 'C'	0.10
100YR Rational 'C'	0.10

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	10.71	min
Time of Concentration	0.18	hr
Time to Peak	0.12	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	1.25	min
Time of Concentration	0.02	hr
Time to Peak	0.01	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.18**	**hr**
Time to Peak	**0.12**	**hr**

Catchment Area Summary (102)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	0.9053	32	28.9696	0.08	0.072424
Pasture/Lawn "A"	0	49	0	0.1	0
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0	100	0	0.95	0
Total Area "A"	0.9053				
Weighted CN "A"			32		0.08
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.18	0
Pasture/Lawn "AB"	0	59	0	0.22	0
Cultivated "AB"	0	68	0	0.4	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.28	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.4	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	0.9053	Weighted CN	32	Weighted "C"	0.08

Mannings Woods =	0.40	Average Pervious Mannings=	0.40
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	103		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	3.253	32.0	0.08
Pasture/Lawn Area(ha)/CN	0.768	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.000	N/A	N/A

Calculated:

Area	4.021
Average CN	35
Average Pervious CN	35
Average Runoff 'C'	0.08

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	9.05	mm
Average Pervious IA	9.05	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	180	m

Calculated:

Catchment Ave. Slope	2.00	%
Imperviousness	0.00%	
Directly Connected Imperviousness	0.00%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.08

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.09
50YR Rational 'C'	0.10
100YR Rational 'C'	0.10

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	35.36	min
Time of Concentration	0.59	hr
Time to Peak	0.39	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	7.77	min
Time of Concentration	0.13	hr
Time to Peak	0.09	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.59**	**hr**
Time to Peak	**0.39**	**hr**

Catchment Area Summary (103)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	3.2532	32	104.1024	0.08	0.260256
Pasture/Lawn "A"	0.7678	49	37.6222	0.1	0.07678
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0	100	0	0.95	0
Total Area "A"	4.021				
Weighted CN "A"			35.24611		0.083819
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.18	0
Pasture/Lawn "AB"	0	59	0	0.22	0
Cultivated "AB"	0	68	0	0.4	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.28	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.4	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	4.021	Weighted CN	35.24611	Weighted "C"	0.083819

Mannings Woods =	0.40	Average Pervious Mannings=	0.36
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	104		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	1.177	32.0	0.08
Pasture/Lawn Area(ha)/CN	0.000	N/A	N/A
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.000	N/A	N/A

Calculated:

Area	1.177
Average CN	32
Average Pervious CN	32
Average Runoff 'C'	0.08

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	10.00	mm
Average Pervious IA	10.00	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	40	m

Calculated:

Catchment Ave. Slope	3.00	%
Imperviousness	0.00%	
Directly Connected Imperviousness	0.00%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.08

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.09
50YR Rational 'C'	0.10
100YR Rational 'C'	0.10

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	14.64	min
Time of Concentration	0.24	hr
Time to Peak	0.16	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	1.80	min
Time of Concentration	0.03	hr
Time to Peak	0.02	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.24**	**hr**
Time to Peak	**0.16**	**hr**

Catchment Area Summary (104)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	1.1771	32	37.6672	0.08	0.094168
Pasture/Lawn "A"	0	49	0	0.1	0
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0	100	0	0.95	0
Total Area "A"	1.1771				
Weighted CN "A"			32		0.08
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.18	0
Pasture/Lawn "AB"	0	59	0	0.22	0
Cultivated "AB"	0	68	0	0.4	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.28	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.4	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	1.1771	Weighted CN	32	Weighted "C"	0.08

Mannings Woods =	0.40	Average Pervious Mannings=	0.40
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	105		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	0.126	32.0	0.08
Pasture/Lawn Area(ha)/CN	0.126	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.000	N/A	N/A

Calculated:

Area	0.252
Average CN	41
Average Pervious CN	41
Average Runoff 'C'	0.09

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	7.50	mm
Average Pervious IA	7.50	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	60	m

Calculated:

Catchment Ave. Slope	2.50	%
Imperviousness	0.00%	
Directly Connected Imperviousness	0.00%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.09

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.10
50YR Rational 'C'	0.11
100YR Rational 'C'	0.11

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	18.85	min
Time of Concentration	0.31	hr
Time to Peak	0.21	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	3.27	min
Time of Concentration	0.05	hr
Time to Peak	0.04	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.31**	**hr**
Time to Peak	**0.21**	**hr**

Catchment Area Summary (105)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	0.1261	32	4.0352	0.08	0.010088
Pasture/Lawn "A"	0.1262	49	6.1838	0.1	0.01262
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0	100	0	0.95	0
Total Area "A"	0.2523				
Weighted CN "A"			40.50337		0.090004
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.18	0
Pasture/Lawn "AB"	0	59	0	0.22	0
Cultivated "AB"	0	68	0	0.4	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.28	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.4	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	0.2523	Weighted CN	40.50337	Weighted "C"	0.090004

Mannings Woods =	0.40	Average Pervious Mannings=	0.29
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	201		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	0.000	N/A	N/A
Pasture/Lawn Area(ha)/CN	0.958	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	1.779	100.0	0.95

Calculated:

Area	2.737
Average CN	82
Average Pervious CN	49
Average Runoff 'C'	0.65

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	3.05	mm
Average Pervious IA	5.00	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	230.60	m
Catchment Min. El.	228.80	m
Catchment Flow Length	180	m

Calculated:

Catchment Ave. Slope	1.00	%
Imperviousness	65%	
Directly Connected Imperviousness	33%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.65

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.72
50YR Rational 'C'	0.78
100YR Rational 'C'	0.82

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	19.57	min
Time of Concentration	0.33	hr
Time to Peak	0.22	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	9.28	min
Time of Concentration	0.15	hr
Time to Peak	0.10	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.155**	**hr**
Time to Peak	**0.103**	**hr**

Catchment Area Summary (201)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	0	32	0	0.08	0
Pasture/Lawn "A"	0.9581	49	46.9469	0.1	0.09581
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0.8896	100	88.96	0.95	0.84512
Impervious "A" (Dis-Connected)	0.8895	100	88.95	0.95	0.845025
Total Area "A"	2.7372				
Weighted CN "A"			82.14851		0.652475
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.08	0
Pasture/Lawn "AB"	0	59	0	0.1	0
Cultivated "AB"	0	68	0	0.22	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.16	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.22	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	2.7372	Weighted CN	82.14851	Weighted "C"	0.652475

Mannings Woods =	0.50	Average Pervious Mannings=	0.19
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	202		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	1.129	32.0	0.08
Pasture/Lawn Area(ha)/CN	1.123	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.063	100.0	0.95

Calculated:

Area	2.314
Average CN	42
Average Pervious CN	40
Average Runoff 'C'	0.11

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	7.36	mm
Average Pervious IA	7.51	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	60	m

Calculated:

Catchment Ave. Slope	3.50	%
Imperviousness	3%	
Directly Connected Imperviousness	0%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.11

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.12
50YR Rational 'C'	0.14
100YR Rational 'C'	0.14

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	16.48	min
Time of Concentration	0.27	hr
Time to Peak	0.18	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	2.45	min
Time of Concentration	0.04	hr
Time to Peak	0.03	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.275**	**hr**
Time to Peak	**0.183**	**hr**

Catchment Area Summary (202)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	1.1289	32	36.1248	0.08	0.090312
Pasture/Lawn "A"	1.1227	49	55.0123	0.1	0.11227
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0.0625	100	6.25	0.95	0.059375
Total Area "A"	2.3141				
Weighted CN "A"			42.08422		0.1132
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.08	0
Pasture/Lawn "AB"	0	59	0	0.1	0
Cultivated "AB"	0	68	0	0.22	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.16	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.22	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	2.3141	Weighted CN	42.08422	Weighted "C"	0.1132

Mannings Woods =	0.50	Average Pervious Mannings=	0.35
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	203		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	0.000	N/A	N/A
Pasture/Lawn Area(ha)/CN	0.866	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	1.609	100.0	0.95

Calculated:

Area	2.475
Average CN	82
Average Pervious CN	49
Average Runoff 'C'	0.65

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	3.05	mm
Average Pervious IA	5.00	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	230.60	m
Catchment Min. El.	229.00	m
Catchment Flow Length	320	m

Calculated:

Catchment Ave. Slope	0.50	%
Imperviousness	65%	
Directly Connected Imperviousness	33%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.65

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.72
50YR Rational 'C'	0.78
100YR Rational 'C'	0.82

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	32.80	min
Time of Concentration	0.55	hr
Time to Peak	0.36	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	19.14	min
Time of Concentration	0.32	hr
Time to Peak	0.21	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.319**	**hr**
Time to Peak	**0.213**	**hr**

Catchment Area Summary (203)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	0	32	0	0.08	0
Pasture/Lawn "A"	0.8661	49	42.4389	0.1	0.08661
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0.8043	100	80.43	0.95	0.764085
Impervious "A" (Dis-Connected)	0.8042	100	80.42	0.95	0.76399
Total Area "A"	2.4746				
Weighted CN "A"			82.15021		0.652503
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.08	0
Pasture/Lawn "AB"	0	59	0	0.1	0
Cultivated "AB"	0	68	0	0.22	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.16	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.22	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	2.4746	Weighted CN	82.15021	Weighted "C"	0.652503

Mannings Woods =	0.50	Average Pervious Mannings=	0.19
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	204		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	0.000	N/A	N/A
Pasture/Lawn Area(ha)/CN	0.437	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.187	100.0	0.95

Calculated:

Area	0.625
Average CN	64
Average Pervious CN	49
Average Runoff 'C'	0.35

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	4.10	mm
Average Pervious IA	5.00	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	10	m

Calculated:

Catchment Ave. Slope	3.00	%
Imperviousness	30%	
Directly Connected Imperviousness	0%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.35

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.39
50YR Rational 'C'	0.43
100YR Rational 'C'	0.44

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	5.35	min
Time of Concentration	0.09	hr
Time to Peak	0.06	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	0.48	min
Time of Concentration	0.01	hr
Time to Peak	0.01	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.089**	**hr**
Time to Peak	**0.059**	**hr**

Catchment Area Summary (204)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	0	32	0	0.08	0
Pasture/Lawn "A"	0.4374	49	21.4326	0.1	0.04374
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0	100	0	0.95	0
Impervious "A" (Dis-Connected)	0.1871	100	18.71	0.95	0.177745
Total Area "A"	0.6245				
Weighted CN "A"			64.27958		0.35466
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.08	0
Pasture/Lawn "AB"	0	59	0	0.1	0
Cultivated "AB"	0	68	0	0.22	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.16	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.22	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	0.6245	Weighted CN	64.27958	Weighted "C"	0.35466

Mannings Woods =	0.50	Average Pervious Mannings=	0.19
Mannings Pasture/Lawn =	0.19		

Weighted Curve Number Calculator

Input:

Catchment ID	205		
Hydrologic Soil Group	A		
Soil Texture	Tioga	Weighted Curve Number	Weighted Runoff 'C'
Wetland(ha)/CN	0.000	N/A	N/A
Woods(ha)/CN	0.000	N/A	N/A
Pasture/Lawn Area(ha)/CN	0.084	49.0	0.10
Cultivated(ha)/CN	0.000	N/A	N/A
Impervious Area(ha)/CN	0.156	100.0	0.95

Calculated:

Area	0.240
Average CN	82
Average Pervious CN	49
Average Runoff 'C'	0.65

Initial Abstraction Calculator

Input:

Wetland	16	mm
Woods	10	mm
Pasture/Lawns	5	mm
Cultivated	7	mm
Impervious Areas	2	mm

Calculated:

Total Average IA	3.05	mm
Average Pervious IA	5.00	mm

*Weighted Curve Numbers and Weighted Rational Coefficients are determined from the weighted average of the area and Curve Number or Rational Coefficient in a given soil type, i.e. Type A, B, C or D.

Time of Concentration Calculator

Input:

Catchment Max El.	N/A	m
Catchment Min. El.	N/A	m
Catchment Flow Length	60	m

Calculated:

Catchment Ave. Slope	2.00	%
Imperviousness	65%	
Directly Connected Imperviousness	32%	

Calculated: RATIONAL COEFFICIENT

5YR Rational 'C'	0.65

Calculated: MTO DRAINAGE MANUAL

25YR Rational 'C'	0.72
50YR Rational 'C'	0.78
100YR Rational 'C'	0.82

Calculated: AIRPORT METHOD (Runoff Coef <0.4)

Time of Concentration	8.99	min
Time of Concentration	0.15	hr
Time to Peak	0.10	hr

$Tc=3.26*(1.1-C)*L^{0.5}*S^{-0.33}$

Calculated: BRANSBY-WILLIAMS METHOD (Runoff Coef >=0.4)

Time of Concentration	3.43	min
Time of Concentration	0.06	hr
Time to Peak	0.04	hr

$Tc=0.057*L*S^{-0.2}*A^{-0.1}$

Use:

Time of Concentration	**0.057**	**hr**
Time to Peak	**0.038**	**hr**

Catchment Area Summary (205)

	Areas	CN	CN*A	Rational "C"	C*A
Wetlands "A"	0	50	0	0.05	0
Woods "A"	0	32	0	0.08	0
Pasture/Lawn "A"	0.0842	49	4.1258	0.1	0.00842
Cultivated "A"	0	62	0	0.22	0
Impervious "A" (Connected)	0.0781	100	7.81	0.95	0.074195
Impervious "A" (Dis-Connected)	0.0781	100	7.81	0.95	0.074195
Total Area "A"	0.2404				
Weighted CN "A"			82.13727		0.652288
Wetlands "AB"	0	50	0	0.05	0
Woods "AB"	0	46	0	0.08	0
Pasture/Lawn "AB"	0	59	0	0.1	0
Cultivated "AB"	0	68	0	0.22	0
Impervious "AB" (Connected)	0	100	0	0.95	0
Impervious "AB" (Dis-Connected	0	100	0	0.95	0
Total Area "AB"	0				
Weighted CN "AB"			0		0
Wetlands "B"	0	50	0	0.05	0
Woods "B"	0	60	0	0.25	0
Pasture/Lawn "B"	0	69	0	0.16	0
Cultivated "B"	0	74	0	0.35	0
Impervious "B" (Connected)	0	100	0	0.95	0
Impervious "B" (Dis-Connected)	0	100	0	0.95	0
Total Area "B"	0				
Weighted CN "B"			0		0
Wetlands "CD"	0	50	0	0.05	0
Woods "CD"	0	76	0	0.35	0
Pasture/Lawn "CD"	0	82	0	0.22	0
Cultivated "CD"	0	84	0	0.55	0
Impervious "CD" (Connected)	0	100	0	0.95	0
Impervious "CD" (Dis-Connected	0	100	0	0.95	0
Total Area "CD"	0				
Weighted CN "CD"			0		0
Totals:	0.2404	Weighted CN	82.13727	Weighted "C"	0.652288

Mannings Woods =	0.50	Average Pervious Mannings=	0.19
Mannings Pasture/Lawn =	0.19		

Detailed Stormceptor Sizing Report – South Pond OGS Unit

Project Information & Location			
Project Name	St. Andrew's Lake Village	**Project Number**	WRI-14182
City	Penetanguishene	**State/ Province**	Ontario
Country	Canada	**Date**	1/25/2019
Designer Information		**EOR Information (optional)**	
Name	Jon Ingram	**Name**	
Company	The Jones Consulting Group Ltd.	**Company**	
Phone #	705-734-2538	**Phone #**	
Email	jingram@jonesconsulting.com	**Email**	

Stormwater Treatment Recommendation

The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Site Name	South Pond OGS Unit
Recommended Stormceptor Model	STC 6000
Target TSS Removal (%)	80.0
TSS Removal (%) Provided	80
PSD	Fine Distribution
Rainfall Station	ORILLIA TS

The recommended Stormceptor model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

Stormceptor Sizing Summary		
Stormceptor Model	**% TSS Removal Provided**	**% Runoff Volume Captured Provided**
STC 300	50	55
STC 750	63	73
STC 1000	64	73
STC 1500	65	73
STC 2000	70	83
STC 3000	71	83
STC 4000	76	91
STC 5000	77	91
STC 6000	80	94
STC 9000	84	97
STC 10000	84	97
STC 14000	87	98
StormceptorMAX	Custom	Custom

Stormceptor
The Stormceptor oil and sediment separator is sized to treat stormwater runoff by removing pollutants through gravity separation and flotation. Stormceptor's patented design generates positive TSS removal for each rainfall event, including large storms. Significant levels of pollutants such as heavy metals, free oils and nutrients are prevented from entering natural water resources and the re-suspension of previously captured sediment (scour) does not occur.
Stormceptor provides a high level of TSS removal for small frequent storm events that represent the majority of annual rainfall volume and pollutant load. Positive treatment continues for large infrequent events, however, such events have little impact on the average annual TSS removal as they represent a small percentage of the total runoff volume and pollutant load.

Design Methodology
Stormceptor is sized using PCSWMM for Stormceptor, a continuous simulation model based on US EPA SWMM. The program calculates hydrology using local historical rainfall data and specified site parameters. With US EPA SWMM's precision, every Stormceptor unit is designed to achieve a defined water quality objective. The TSS removal data presented follows US EPA guidelines to reduce the average annual TSS load. The Stormceptor's unit process for TSS removal is settling. The settling model calculates TSS removal by analyzing:
• Site parameters
• Continuous historical rainfall data, including duration, distribution, peaks & inter-event dry periods
• Particle size distribution, and associated settling velocities (Stokes Law, corrected for drag)
• TSS load
• Detention time of the system

Hydrology Analysis
PCSWMM for Stormceptor calculates annual hydrology with the US EPA SWMM and local continuous historical rainfall data. Performance calculations of Stormceptor are based on the average annual removal of TSS for the selected site parameters. The Stormceptor is engineered to capture sediment particles by treating the required average annual runoff volume, ensuring positive removal efficiency is maintained during each rainfall event, and preventing negative removal efficiency (scour). Smaller recurring storms account for the majority of rainfall events and average annual runoff volume, as observed in the historical rainfall data analyses presented in this section.

Rainfall Station			
State/Province	Ontario	**Total Number of Rainfall Events**	2670
Rainfall Station Name	ORILLIA TS	**Total Rainfall (mm)**	13591.3
Station ID #	5820	**Average Annual Rainfall (mm)**	485.4
Coordinates	44°23'N, 79°25'W	**Total Evaporation (mm)**	878.3
Elevation (ft)	720	**Total Infiltration (mm)**	4738.5
Years of Rainfall Data	28	**Total Rainfall that is Runoff (mm)**	7974.5

Notes
• Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules. • Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed. • For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

Drainage Area	
Total Area (ha)	2.737
Imperviousness %	65.0

Up Stream Storage	
Storage (ha-m)	Discharge (cms)
0.000	0.000

Water Quality Objective	
TSS Removal (%)	80.0
Runoff Volume Capture (%)	90.00
Oil Spill Capture Volume (L)	
Peak Conveyed Flow Rate (L/s)	
Water Quality Flow Rate (L/s)	

Up Stream Flow Diversion	
Max. Flow to Stormceptor (cms)	

Design Details	
Stormceptor Inlet Invert Elev (m)	
Stormceptor Outlet Invert Elev (m)	
Stormceptor Rim Elev (m)	
Normal Water Level Elevation (m)	
Pipe Diameter (mm)	
Pipe Material	
Multiple Inlets (Y/N)	No
Grate Inlet (Y/N)	No

Particle Size Distribution (PSD)

Removing the smallest fraction of particulates from runoff ensures the majority of pollutants, such as metals, hydrocarbons and nutrients are captured. The table below identifies the Particle Size Distribution (PSD) that was selected to define TSS removal for the Stormceptor design.

Fine Distribution		
Particle Diameter (microns)	Distribution %	Specific Gravity
20.0	20.0	1.30
60.0	20.0	1.80
150.0	20.0	2.20
400.0	20.0	2.65
2000.0	20.0	2.65

Site Name	South Pond OGS Unit

Site Details

Drainage Area

Total Area (ha)	2.737
Imperviousness %	65.0

Surface Characteristics

Width (m)	331.00
Slope %	2
Impervious Depression Storage (mm)	0.508
Pervious Depression Storage (mm)	5.08
Impervious Manning's n	0.015
Pervious Manning's n	0.25

Maintenance Frequency

Maintenance Frequency (months) >	12

Infiltration Parameters

Horton's equation is used to estimate infiltration

Max. Infiltration Rate (mm/hr)	61.98
Min. Infiltration Rate (mm/hr)	10.16
Decay Rate (1/sec)	0.00055
Regeneration Rate (1/sec)	0.01

Evaporation

Daily Evaporation Rate (mm/day)	2.54

Dry Weather Flow

Dry Weather Flow (lps)	0

Winter Months

Winter Infiltration	0

TSS Loading Parameters

TSS Loading Function	

Buildup/Wash-off Parameters

Target Event Mean Conc. (EMC) mg/L	
Exponential Buildup Power	
Exponential Washoff Exponent	

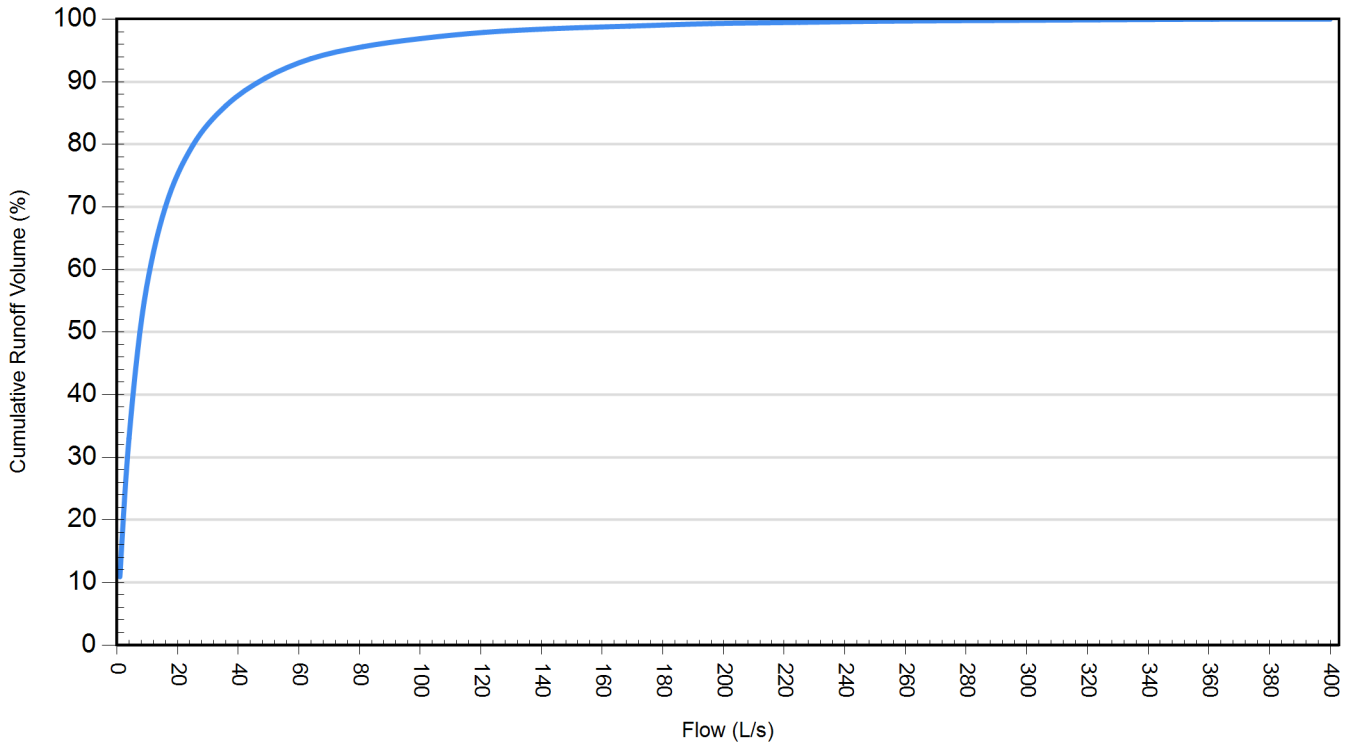
TSS Availability Parameters

Availability Constant A	
Availability Factor B	
Availability Exponent C	
Min. Particle Size Affected by Availability (micron)	

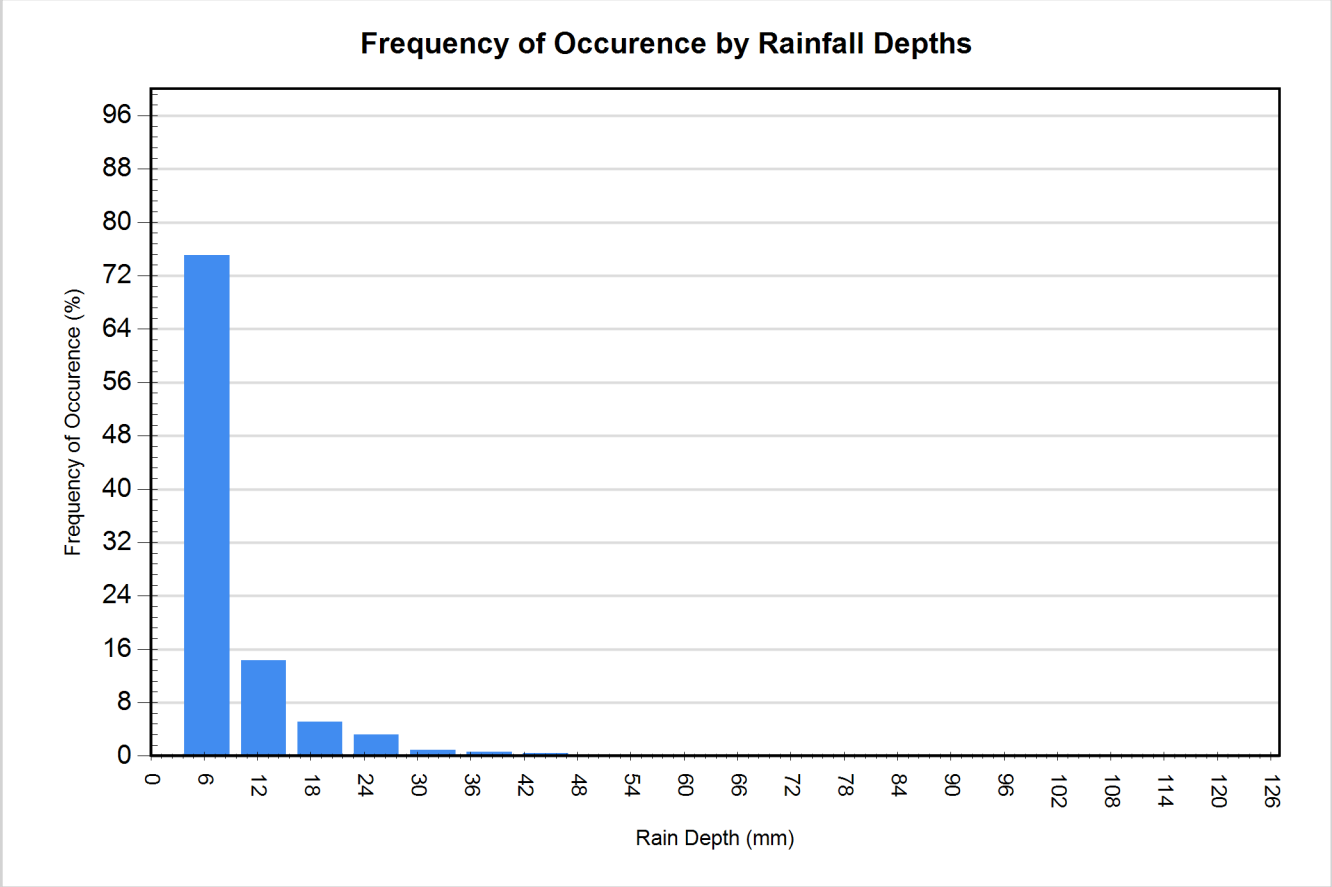
Cumulative Runoff Volume by Runoff Rate			
Runoff Rate (L/s)	**Runoff Volume (m^3)**	**Volume Over (m^3)**	**Cumulative Runoff Volume (%)**
1	24001	195536	10.9
4	72440	147098	33.0
9	120305	99269	54.8
16	153657	65873	70.0
25	175194	44347	79.8
36	189325	30201	86.2
49	198997	20534	90.6
64	205591	13935	93.7
81	209873	9654	95.6
100	212724	6802	96.9
121	214821	4705	97.9
144	216295	3230	98.5
169	217217	2308	98.9
196	217906	1619	99.3
225	218446	1080	99.5
256	218839	686	99.7
289	219118	407	99.8
324	219323	203	99.9
361	219470	55	100.0
400	219523	2	100.0

Cumulative Runoff Volume by Runoff Rate

For area: 2.737(ha), imperviousness: 65.0%, rainfall station: ORILLIA TS



Rainfall Event Analysis				
Rainfall Depth (mm)	No. of Events	Percentage of Total Events (%)	Total Volume (mm)	Percentage of Annual Volume (%)
6.35	2005	75.1	3739	27.5
12.70	382	14.3	3473	25.6
19.05	137	5.1	2203	16.2
25.40	85	3.2	1871	13.8
31.75	24	0.9	691	5.1
38.10	16	0.6	550	4.0
44.45	11	0.4	456	3.4
50.80	4	0.1	191	1.4
57.15	1	0.0	52	0.4
63.50	1	0.0	58	0.4
69.85	2	0.1	130	1.0
76.20	1	0.0	73	0.5
82.55	0	0.0	0	0.0
88.90	0	0.0	0	0.0
95.25	0	0.0	0	0.0
101.60	0	0.0	0	0.0
107.95	1	0.0	104	0.8
114.30	0	0.0	0	0.0
120.65	0	0.0	0	0.0



For Stormceptor Specifications and Drawings Please Visit:
http://www.imbriumsystems.com/technical-specifications

Detailed Stormceptor Sizing Report – North Pond OGS Unit

Project Information & Location			
Project Name	St. Andrew's Lake Village	**Project Number**	WRI-14182
City	Penetanguishene	**State/ Province**	Ontario
Country	Canada	**Date**	1/25/2019
Designer Information		**EOR Information (optional)**	
Name	Jon Ingram	**Name**	
Company	The Jones Consulting Group Ltd.	**Company**	
Phone #	705-734-2538	**Phone #**	
Email	jingram@jonesconsulting.com	**Email**	

Stormwater Treatment Recommendation

The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

Site Name	North Pond OGS Unit
Recommended Stormceptor Model	STC 6000
Target TSS Removal (%)	80.0
TSS Removal (%) Provided	81
PSD	Fine Distribution
Rainfall Station	ORILLIA TS

The recommended Stormceptor model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

Stormceptor Sizing Summary		
Stormceptor Model	**% TSS Removal Provided**	**% Runoff Volume Captured Provided**
STC 300	52	58
STC 750	64	75
STC 1000	66	75
STC 1500	66	75
STC 2000	71	85
STC 3000	73	85
STC 4000	77	92
STC 5000	78	92
STC 6000	81	95
STC 9000	85	97
STC 10000	85	97
STC 14000	88	99
StormceptorMAX	Custom	Custom

Stormceptor
The Stormceptor oil and sediment separator is sized to treat stormwater runoff by removing pollutants through gravity separation and flotation. Stormceptor's patented design generates positive TSS removal for each rainfall event, including large storms. Significant levels of pollutants such as heavy metals, free oils and nutrients are prevented from entering natural water resources and the re-suspension of previously captured sediment (scour) does not occur.
Stormceptor provides a high level of TSS removal for small frequent storm events that represent the majority of annual rainfall volume and pollutant load. Positive treatment continues for large infrequent events, however, such events have little impact on the average annual TSS removal as they represent a small percentage of the total runoff volume and pollutant load.

Design Methodology
Stormceptor is sized using PCSWMM for Stormceptor, a continuous simulation model based on US EPA SWMM. The program calculates hydrology using local historical rainfall data and specified site parameters. With US EPA SWMM's precision, every Stormceptor unit is designed to achieve a defined water quality objective. The TSS removal data presented follows US EPA guidelines to reduce the average annual TSS load. The Stormceptor's unit process for TSS removal is settling. The settling model calculates TSS removal by analyzing:
• Site parameters
• Continuous historical rainfall data, including duration, distribution, peaks & inter-event dry periods
• Particle size distribution, and associated settling velocities (Stokes Law, corrected for drag)
• TSS load
• Detention time of the system

Hydrology Analysis
PCSWMM for Stormceptor calculates annual hydrology with the US EPA SWMM and local continuous historical rainfall data. Performance calculations of Stormceptor are based on the average annual removal of TSS for the selected site parameters. The Stormceptor is engineered to capture sediment particles by treating the required average annual runoff volume, ensuring positive removal efficiency is maintained during each rainfall event, and preventing negative removal efficiency (scour). Smaller recurring storms account for the majority of rainfall events and average annual runoff volume, as observed in the historical rainfall data analyses presented in this section.

Rainfall Station			
State/Province	Ontario	**Total Number of Rainfall Events**	2670
Rainfall Station Name	ORILLIA TS	**Total Rainfall (mm)**	13591.3
Station ID #	5820	**Average Annual Rainfall (mm)**	485.4
Coordinates	44°23'N, 79°25'W	**Total Evaporation (mm)**	875.1
Elevation (ft)	720	**Total Infiltration (mm)**	4738.3
Years of Rainfall Data	28	**Total Rainfall that is Runoff (mm)**	7977.9

Notes
• Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules. • Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed. • For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.

Drainage Area	
Total Area (ha)	2.475
Imperviousness %	65.0

Up Stream Storage	
Storage (ha-m)	Discharge (cms)
0.000	0.000

Water Quality Objective	
TSS Removal (%)	80.0
Runoff Volume Capture (%)	90.00
Oil Spill Capture Volume (L)	
Peak Conveyed Flow Rate (L/s)	
Water Quality Flow Rate (L/s)	

Up Stream Flow Diversion	
Max. Flow to Stormceptor (cms)	

Design Details	
Stormceptor Inlet Invert Elev (m)	227.04
Stormceptor Outlet Invert Elev (m)	227.01
Stormceptor Rim Elev (m)	228.95
Normal Water Level Elevation (m)	
Pipe Diameter (mm)	
Pipe Material	PVC - plastic
Multiple Inlets (Y/N)	No
Grate Inlet (Y/N)	No

Particle Size Distribution (PSD)

Removing the smallest fraction of particulates from runoff ensures the majority of pollutants, such as metals, hydrocarbons and nutrients are captured. The table below identifies the Particle Size Distribution (PSD) that was selected to define TSS removal for the Stormceptor design.

Fine Distribution		
Particle Diameter (microns)	Distribution %	Specific Gravity
20.0	20.0	1.30
60.0	20.0	1.80
150.0	20.0	2.20
400.0	20.0	2.65
2000.0	20.0	2.65

Site Name	North Pond OGS Unit

Site Details

Drainage Area

Total Area (ha)	2.475
Imperviousness %	65.0

Surface Characteristics

Width (m)	315.00
Slope %	2
Impervious Depression Storage (mm)	0.508
Pervious Depression Storage (mm)	5.08
Impervious Manning's n	0.015
Pervious Manning's n	0.25

Maintenance Frequency

Maintenance Frequency (months) >	12

Infiltration Parameters

Horton's equation is used to estimate infiltration

Max. Infiltration Rate (mm/hr)	61.98
Min. Infiltration Rate (mm/hr)	10.16
Decay Rate (1/sec)	0.00055
Regeneration Rate (1/sec)	0.01

Evaporation

Daily Evaporation Rate (mm/day)	2.54

Dry Weather Flow

Dry Weather Flow (lps)	0

Winter Months

Winter Infiltration	0

TSS Loading Parameters

TSS Loading Function	

Buildup/Wash-off Parameters

Target Event Mean Conc. (EMC) mg/L	
Exponential Buildup Power	
Exponential Washoff Exponent	

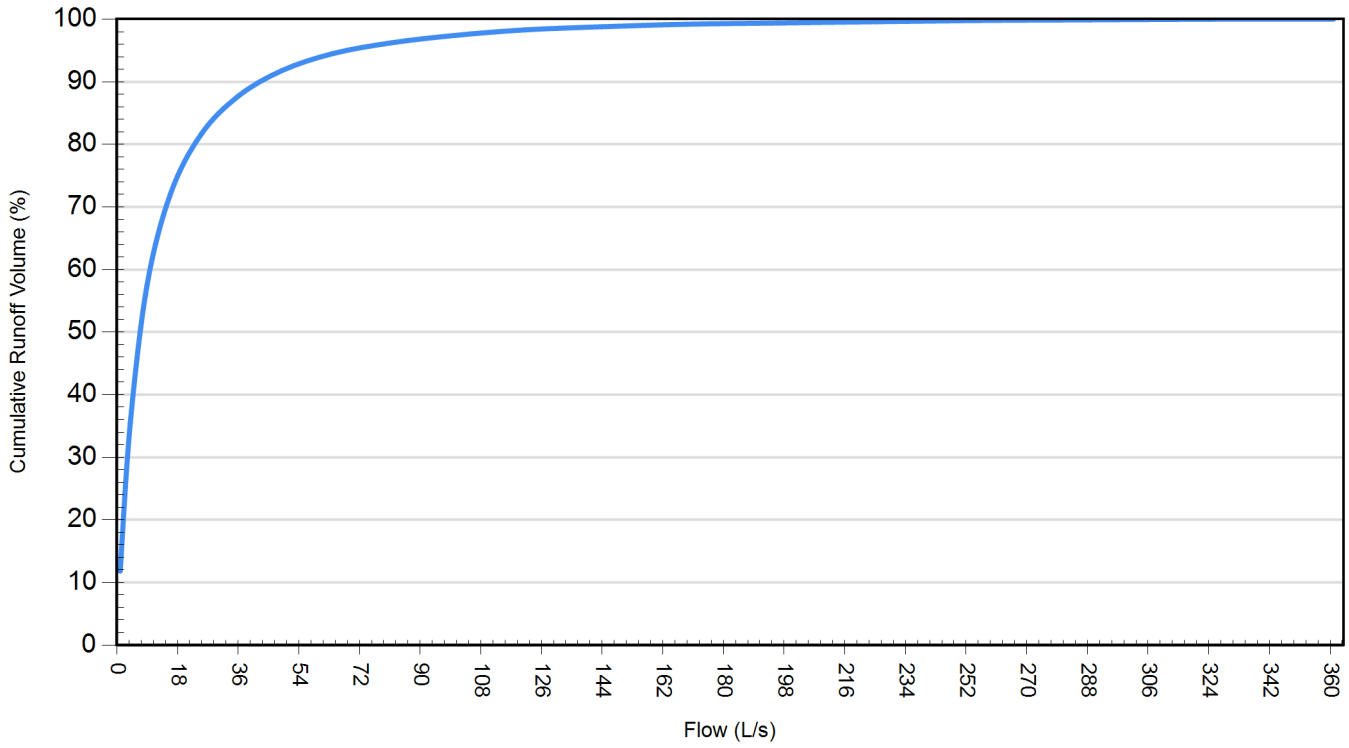
TSS Availability Parameters

Availability Constant A	
Availability Factor B	
Availability Exponent C	
Min. Particle Size Affected by Availability (micron)	

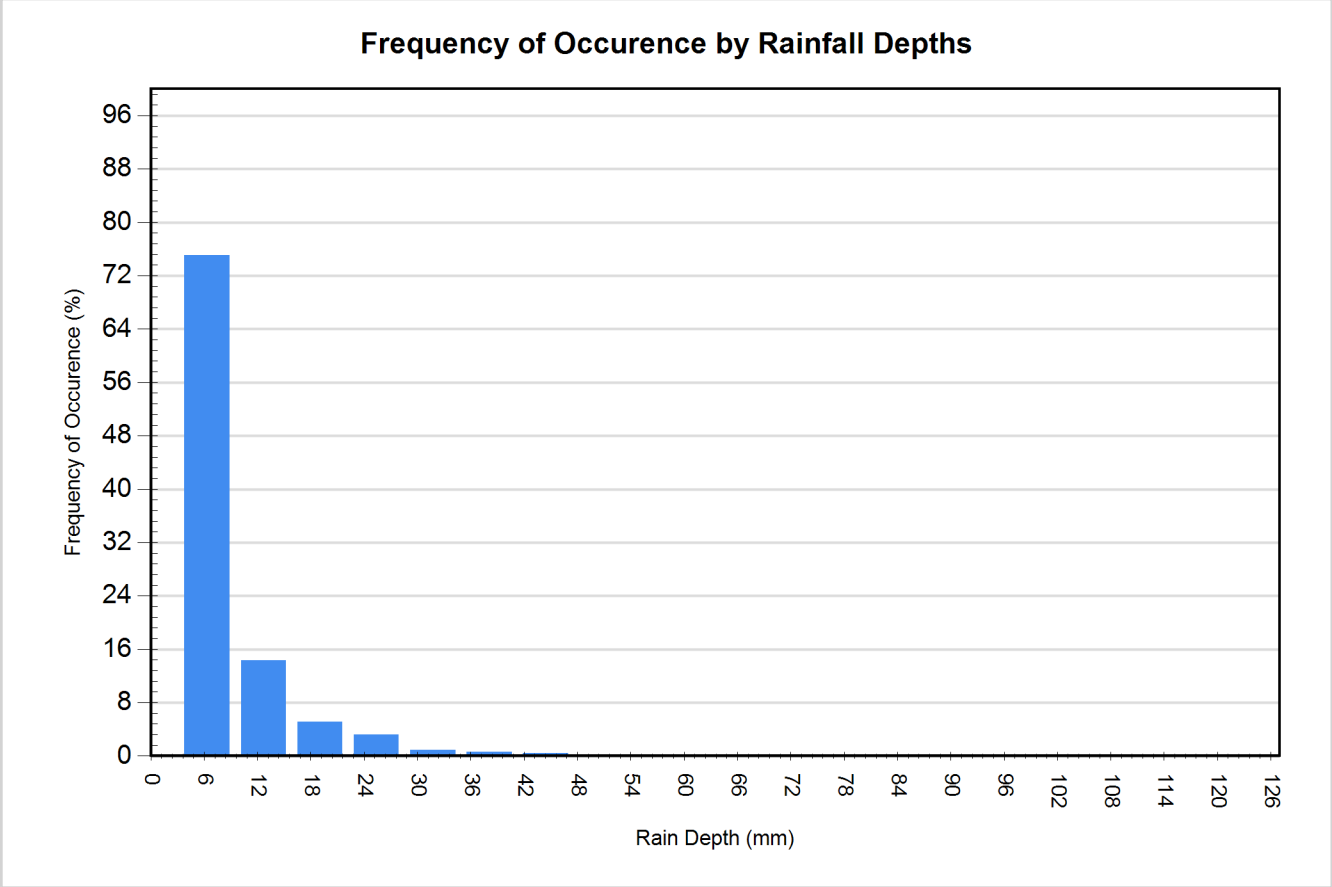
Cumulative Runoff Volume by Runoff Rate			
Runoff Rate (L/s)	**Runoff Volume (m^3)**	**Volume Over (m^3)**	**Cumulative Runoff Volume (%)**
1	23424	175250	11.8
4	70450	128225	35.5
9	114414	84291	57.6
16	143458	55212	72.2
25	162110	36571	81.6
36	174256	24414	87.7
49	182444	16229	91.8
64	187781	10888	94.5
81	191175	7496	96.2
100	193502	5168	97.4
121	195195	3476	98.3
144	196278	2392	98.8
169	196985	1685	99.2
196	197559	1111	99.4
225	197962	708	99.6
256	198258	412	99.8
289	198461	209	99.9
324	198611	60	100.0
361	198667	3	100.0

Cumulative Runoff Volume by Runoff Rate

For area: 2.475(ha), imperviousness: 65.0%, rainfall station: ORILLIA TS



Rainfall Event Analysis				
Rainfall Depth (mm)	No. of Events	Percentage of Total Events (%)	Total Volume (mm)	Percentage of Annual Volume (%)
6.35	2005	75.1	3739	27.5
12.70	382	14.3	3473	25.6
19.05	137	5.1	2203	16.2
25.40	85	3.2	1871	13.8
31.75	24	0.9	691	5.1
38.10	16	0.6	550	4.0
44.45	11	0.4	456	3.4
50.80	4	0.1	191	1.4
57.15	1	0.0	52	0.4
63.50	1	0.0	58	0.4
69.85	2	0.1	130	1.0
76.20	1	0.0	73	0.5
82.55	0	0.0	0	0.0
88.90	0	0.0	0	0.0
95.25	0	0.0	0	0.0
101.60	0	0.0	0	0.0
107.95	1	0.0	104	0.8
114.30	0	0.0	0	0.0
120.65	0	0.0	0	0.0



For Stormceptor Specifications and Drawings Please Visit:
http://www.imbriumsystems.com/technical-specifications

St. Andrew's Lake Village
Dry Pond Quality Calculations

CLIENT: Tonking Management Inc.

DATE: January 2019

PROJECT: St. Andrew's Lake Village

FILE: WRI-14182

DESIGN: JWI

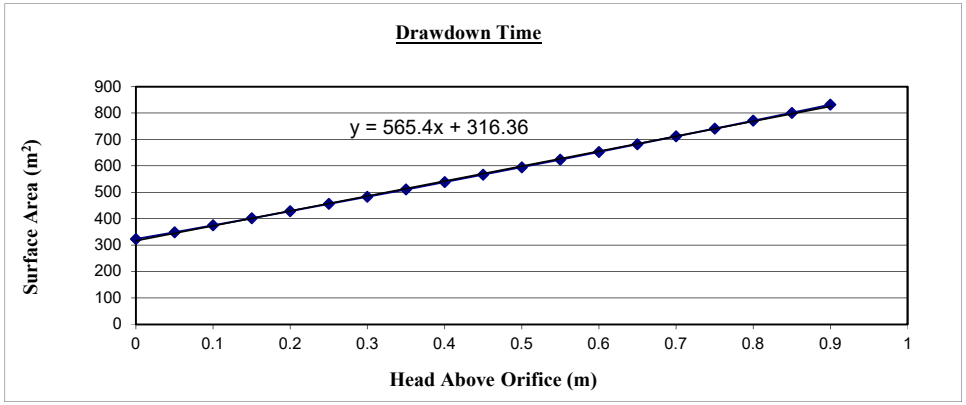
Erosion Control Volume:

25mm 4hr Chi. Runoff Volume- Post Development	**9.68 mm**	(Refer to Otthymo Output)
Erosion Contol Volume Required	**265 m^3**	(=9.68 mm x 2.74 ha x 10 m^3/mm ha)

Based on Eqn. 4.11 MOE SWM Planning and Design Manual

25mm Event Runoff - Detention Time			
Intercept of Regression, C3		316.4	
Slope of Regression, C2		565.4	
Ultimate Ponding Elevation		226.47	m
Depth over Orifice		0.57	m
Orifice Area		0.0020	m2

Drawdown Time	118,209	Sec
	32.8	Hours



St. Andrew's Lake Village
North Dry Pond Quality Calculations

CLIENT: Tonking Management Inc.

DATE: January 2019

PROJECT: St. Andrew's Lake Village

FILE: WRI-14182

DESIGN: JWI

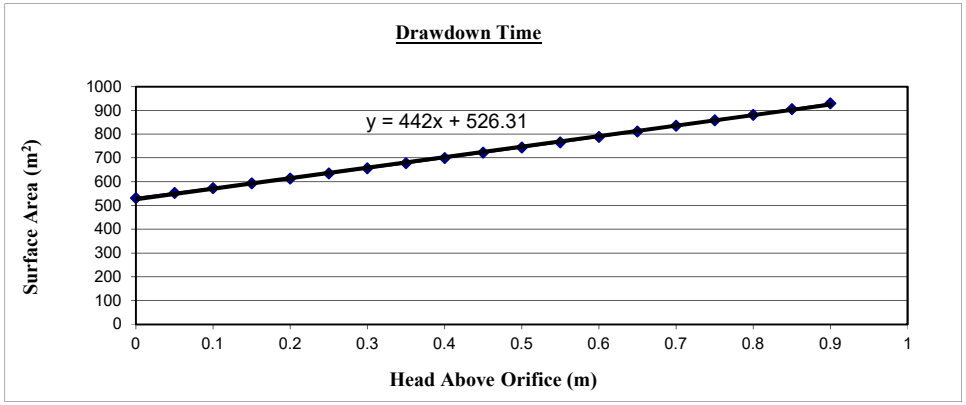
Erosion Control Volume:

25mm 4hr Chi. Runoff Volume- Post Development	**9.68 mm**	(Refer to Otthymo Output)
Erosion Contol Volume Required	**239 m^3**	(=9.68 mm x 2.47 ha x 10 m^3/mm ha)

Based on Eqn. 4.11 MOE SWM Planning and Design Manual

25mm Event Runoff - Detention Time			
Intercept of Regression, C3		526.3	
Slope of Regression, C2		442.0	
Ultimate Ponding Elevation		226.20	m
Depth over Orifice		0.40	m
Orifice Area		0.0020	m2

Drawdown Time	136,961	Sec
	38.0	Hours



St. Andrew's Lake Village
South Dry Pond Stage-Storage-Discharge

CLIENT: Tonking Management Inc. **DATE:** January 2019

PROJECT: St. Andrew's Lake Village

FILE: WRI-14182 **DESIGN:** JWI

Stage (m):	0.05

Elevation (m)	Total Area (m^2)	Pond Volume* (m^3)	Orifice No. 1 Flow (m^3/s)	Depth Above Overflow Weir (m)	Overflow Weir Flow (m^3/s)	Total Storage (m^3)	Total Flow (m^3/s)
225.90	323.00	0.00	0.0000	0.00	0.0000	0.00	0.0000
225.95	349.00	16.58	0.0009	0.00	0.0000	16.58	0.0009
226.00	375.00	17.81	0.0015	0.00	0.0000	34.39	0.0015
226.05	402.00	19.10	0.0019	0.00	0.0000	53.49	0.0019
226.10	429.00	20.38	0.0023	0.00	0.0000	73.86	0.0023
226.15	456.00	21.66	0.0026	0.00	0.0000	95.52	0.0026
226.20	483.00	22.94	0.0029	0.00	0.0000	118.47	0.0029
226.25	511.00	24.27	0.0031	0.00	0.0000	142.74	0.0031
226.30	539.00	25.60	0.0034	0.00	0.0000	168.34	0.0034
226.35	567.00	26.93	0.0036	0.00	0.0000	195.27	0.0036
226.40	595.00	28.26	0.0038	0.00	0.0000	223.54	0.0038
226.45	624.00	29.64	0.0040	0.00	0.0000	253.18	0.0040
226.50	653.00	31.02	0.0042	0.00	0.0000	284.19	0.0042
226.55	682.00	32.40	0.0043	0.00	0.0000	316.59	0.0043
226.60	712.00	33.82	0.0045	0.00	0.0000	350.41	0.0045
226.65	741.00	35.20	0.0047	0.00	0.0000	385.61	0.0047
226.70	771.00	36.62	0.0048	0.00	0.0000	422.23	0.0048
226.75	801.00	38.05	0.0050	0.00	0.0000	460.28	0.0050
226.80	832.00	39.52	0.0051	0.00	0.0000	499.80	0.0051
226.85	862.00	40.95	0.0053	0.00	0.0000	540.74	0.0053
226.90	893.00	42.42	0.0054	0.00	0.0000	583.16	0.0054
226.95	924.00	43.89	0.0055	0.00	0.0000	627.05	0.0055
227.00	956.00	45.41	0.0057	0.00	0.0000	672.46	0.0057
227.05	988.00	46.93	0.0058	0.00	0.0000	719.39	0.0058
227.10	1019.00	48.40	0.0059	0.00	0.0000	767.79	0.0059
227.15	1052.00	49.97	0.0061	0.00	0.0000	817.76	0.0061
227.20	1084.00	51.49	0.0062	0.00	0.0000	869.25	0.0062
227.25	1117.00	53.06	0.0063	0.00	0.0000	922.31	0.0063
227.30	1150.00	54.63	0.0064	0.00	0.0000	976.93	0.0064
227.35	1183.00	56.19	0.0065	0.00	0.0000	1033.13	0.0065
227.40	1216.00	57.76	0.0067	0.00	0.0000	1090.89	0.0067
227.45	1250.00	59.38	0.0068	0.00	0.0000	1150.26	0.0068
227.50	1284.00	60.99	0.0069	0.00	0.0000	1211.25	0.0069
227.55	1318.00	62.61	0.0070	0.00	0.0000	1273.86	0.0070
227.60	1353.00	64.27	0.0071	0.00	0.0000	1338.12	0.0071
227.65	1387.00	65.88	0.0072	0.00	0.0000	1404.01	0.0072
227.70	1422.00	67.55	0.0073	0.05	0.0229	1471.55	0.0302
227.75	1457.00	69.21	0.0074	0.10	0.1031	1540.76	0.1105
227.80	1493.00	70.92	0.0075	0.15	0.2356	1611.68	0.2431
227.85	1528.00	72.58	0.0076	0.20	0.4256	1684.26	0.4332
227.90	1564.00	74.29	0.0077	0.25	0.6787	1758.55	0.6864
227.95	1601.00	76.05	0.0078	0.30	1.0000	1834.59	1.0078
228.00	1637.00	77.76	0.0079	0.35	1.3945	1912.35	1.4023
228.05	1674.00	79.52	0.0080	0.40	1.8666	1991.87	1.8746
228.10	1711.00	81.27	0.0081	0.45	2.4208	2073.14	2.4289
228.15	1748.00	83.03	0.0082	0.50	3.0614	2156.17	3.0695
228.20	1785.00	84.79	0.0083	0.55	3.7922	2240.96	3.8005

*Volume Considers 5% Loss due to Vegetation (i.e. Volume x 0.95)

ORIFICE CONTROLS

Orifice No. 1

- Orifice diameter (m)	0.050
- Area (m^2)	0.001963
- Orifice C	0.63
- Invert (m)	225.90

Submerged Orifice Equation (Flow Above Orifice Centroid):
$Q = CxAx(2gH)^{0.5}$

where;
Q = flow rate (m^3/s)
C = constant
A = area of opening(m^2)
H = net head on the orifice
g = Acceleration due to gravity
D=orifice diameter (m)

WEIR CONTROL

Overflow Weir

- Length of Weir(m)	2	
- Weir Sill(m)	227.65	
- Downstream Length of 'Overflow' Weir (m)	7.35	@227.65m
- Weir Side Slopes (H:V)	10	
- Acces Road Width	3.5	

- Weir Equation: Broad Crested Weir $Q = (C\ L\ (H3/2)) + (C(H5/2)Tan(\alpha/2))$

where ; Q = flow rate (m^3/s)
C = constant (refer to Triangular and Rectangular 'C' Equations below)
L = length (m)
H = head on the weir (m)
α = angle at apex of triangle (radians)
x = head divided by downstream Length of Weir (H/l)

Triangular 'C' Equation
$C=(a+bx)/(1+cx+dx^2)$

a	-1E-05
b	143.5987
c	114.5047
d	-4.76857

Rectangular 'C' Equation
$C=(a+bx)/(1+cx+dx^2)$

a	-10383.5
b	3418997
c	2131595
d	-235014

St. Andrews Lake Village
North Dry Pond Stage-Storage-Discharge

CLIENT: Tonking Management Inc. **DATE:** January 2019

PROJECT: St. Andrew's Lake Village

FILE: WRI-14182 **DESIGN:** JWI

Stage (m):	0.05						
Elevation (m)	**Total Area (m^2)**	**Pond Volume* (m^3)**	**Orifice No. 1 Flow (m^3/s)**	**Depth Above Overflow Weir (m)**	**Overflow Weir Flow (m^3/s)**	**Total Storage (m^3)**	**Total Flow (m^3/s)**
225.80	532.00	0.00	0.0000	0.00	0.0000	0.00	0.0000
225.85	553.00	26.27	0.0009	0.00	0.0000	26.27	0.0009
225.90	573.00	27.22	0.0015	0.00	0.0000	53.49	0.0015
225.95	593.00	28.17	0.0019	0.00	0.0000	81.65	0.0019
226.00	614.00	29.17	0.0023	0.00	0.0000	110.82	0.0023
226.05	635.00	30.16	0.0026	0.00	0.0000	140.98	0.0026
226.10	656.00	31.16	0.0029	0.00	0.0000	172.14	0.0029
226.15	678.00	32.21	0.0031	0.00	0.0000	204.35	0.0031
226.20	700.00	33.25	0.0034	0.00	0.0000	237.60	0.0034
226.25	722.00	34.30	0.0036	0.00	0.0000	271.89	0.0036
226.30	744.00	35.34	0.0038	0.00	0.0000	307.23	0.0038
226.35	766.00	36.39	0.0040	0.00	0.0000	343.62	0.0040
226.40	789.00	37.48	0.0042	0.00	0.0000	381.09	0.0042
226.45	812.00	38.57	0.0043	0.00	0.0000	419.66	0.0043
226.50	835.00	39.66	0.0045	0.00	0.0000	459.33	0.0045
226.55	859.00	40.80	0.0047	0.00	0.0000	500.13	0.0047
226.60	882.00	41.90	0.0048	0.00	0.0000	542.02	0.0048
226.65	906.00	43.04	0.0050	0.00	0.0000	585.06	0.0050
226.70	930.00	44.18	0.0051	0.00	0.0000	629.23	0.0051
226.75	955.00	45.36	0.0053	0.00	0.0000	674.60	0.0053
226.80	980.00	46.55	0.0054	0.00	0.0000	721.15	0.0054
226.85	1004.00	47.69	0.0055	0.00	0.0000	768.84	0.0055
226.90	1030.00	48.93	0.0057	0.00	0.0000	817.76	0.0057
226.95	1055.00	50.11	0.0058	0.00	0.0000	867.87	0.0058
227.00	1081.00	51.35	0.0059	0.00	0.0000	919.22	0.0059
227.05	1107.00	52.58	0.0061	0.00	0.0000	971.80	0.0061
227.10	1133.00	53.82	0.0062	0.00	0.0000	1025.62	0.0062
227.15	1159.00	55.05	0.0063	0.00	0.0000	1080.67	0.0063
227.20	1186.00	56.34	0.0064	0.00	0.0000	1137.01	0.0064
227.25	1213.00	57.62	0.0065	0.00	0.0000	1194.63	0.0065
227.30	1240.00	58.90	0.0067	0.00	0.0000	1253.53	0.0067
227.35	1268.00	60.23	0.0068	0.00	0.0000	1313.76	0.0068
227.40	1295.00	61.51	0.0069	0.00	0.0000	1375.27	0.0069
227.45	1323.00	62.84	0.0070	0.00	0.0000	1438.11	0.0070
227.50	1351.00	64.17	0.0071	0.00	0.0000	1502.28	0.0071
227.55	1380.00	65.55	0.0072	0.05	0.0221	1567.83	0.0293
227.60	1409.00	66.93	0.0073	0.10	0.1015	1634.76	0.1088
227.65	1437.00	68.26	0.0074	0.15	0.2331	1703.02	0.2405
227.70	1467.00	69.68	0.0075	0.20	0.4221	1772.70	0.4296
227.75	1496.00	71.06	0.0076	0.25	0.6739	1843.76	0.6815
227.80	1526.00	72.49	0.0077	0.30	0.9938	1916.25	1.0015
227.85	1556.00	73.91	0.0078	0.35	1.3866	1990.16	1.3944
227.90	1586.00	75.34	0.0079	0.40	1.8569	2065.49	1.8648
227.95	1616.00	76.76	0.0080	0.45	2.4092	2142.25	2.4172
228.00	1647.00	78.23	0.0081	0.50	3.0477	2220.48	3.0558
228.05	1678.00	79.71	0.0082	0.55	3.7764	2300.19	3.7845
228.10	1710.00	81.23	0.0083	0.60	4.5990	2381.41	4.6073

*Volume Considers 5% Loss due to Vegetation (i.e. Volume x 0.95)

ORIFICE CONTROLS

Orifice No. 1

- Orifice diameter (m)	0.050
- Area (m^2)	0.001963
- Orifice C	0.63
- Invert (m)	225.80

WEIR CONTROL

Overflow Weir

- Length of Weir(m)	2	
- Weir Sill(m)	227.50	
- Downstream Length of 'Overflow' Weir (m)	7.70	@227.5m
- Weir Side Slopes (H:V)	10	
- Acces Road Width	3.5	

Triangular 'C' Equation
C=(a+bx)/(1+cx+dx^2)

a	-1.0071E-05
b	143.5986704
c	114.5046511
d	-4.76857422

Submerged Orifice Equation (Flow Above Orifice Centroid):
Q = CxAx(2gH)^0.5
where;
Q = flow rate (m^3/s)
C = constant
A = area of opening(m^2)
H = net head on the orifice (m)
g = Acceleration due to gravity
D=orifice diameter (m)

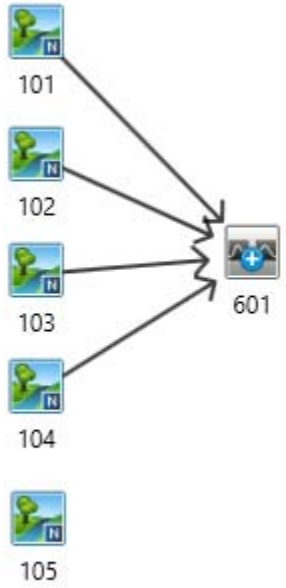
- Weir Equation: Broad Crested Weir Q = (C L (H3/2)) + (C(H5/2)Tan (α/2))

where ; Q = flow rate (m^3/s)
C = constant (refer to Triangular and Rectangular 'C' Equations below)
L = length (m)
H = head on the weir (m)
α = angle at apex of triangle (radians)
x = head divided by downstream Length of Weir (H/l)

Rectangular 'C' Equation
C=(a+bx)/(1+cx+dx^2)

a	-10383.4898
b	3418997.012
c	2131595.078
d	-235014.247

PRE DEVELOPMENT MODEL SCHEMATIC



```
V    V   I    SSSSS  U   U    A    L
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 Civica Infrastructure

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\VO Suite 3.0\VO2\voin.dat
Output filename: C:\Users\jingram\AppData\Local\Temp\7da980c9-fae1-48d3-a7d7-8807c07333a4\Scenario.out
Summary filename: C:\Users\jingram\AppData\Local\Temp\7da980c9-fae1-48d3-a7d7-8807c07333a4\Scenario.sum

DATE: 01/27/2019 TIME: 11:09:29

USER:

COMMENTS: _____

****
** SIMULATION NUMBER: 1 **
****

READ STORM | Filename: C:\Users\jingram\AppData\Local\Temp\7da980c9-fae1-48d3-a7d7-8807c07333a4\2e7ecae9
Ptotal= 25.00 mm | Comments: Twenty-Five mm Four Hour Chicago Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.07	1.17	5.70	2.17	5.19	3.17	2.80
0.33	2.27	1.33	10.78	2.33	4.47	3.33	2.62
0.50	2.52	1.50	50.21	2.50	3.95	3.50	2.48
0.67	2.88	1.67	13.37	2.67	3.56	3.67	2.35
0.83	3.38	1.83	8.29	2.83	3.25	3.83	2.23
1.00	4.18	2.00	6.30	3.00	3.01	4.00	2.14

CALIB NASHYD (0103) ID= 1 DT= 1.0 min | Area (ha)= 4.02 | Ia (mm)= 9.05 | U.H. Tp(hrs)= 0.39 | Curve Number (CN)= 35.0 | # of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.07	1.017	5.70	2.017	5.19	3.02	2.80
0.033	2.07	1.033	5.70	2.033	5.19	3.03	2.80
0.050	2.07	1.050	5.70	2.050	5.19	3.05	2.80
0.067	2.07	1.067	5.70	2.067	5.19	3.07	2.80
0.083	2.07	1.083	5.70	2.083	5.19	3.08	2.80
0.100	2.07	1.100	5.70	2.100	5.19	3.10	2.80
0.117	2.07	1.117	5.70	2.117	5.19	3.12	2.80
0.133	2.07	1.133	5.70	2.133	5.19	3.13	2.80
0.150	2.07	1.150	5.70	2.150	5.19	3.15	2.80
0.167	2.07	1.167	5.70	2.167	5.19	3.17	2.80
0.183	2.27	1.183	10.78	2.183	4.47	3.18	2.62
0.200	2.27	1.200	10.78	2.200	4.47	3.20	2.62
0.217	2.27	1.217	10.78	2.217	4.47	3.22	2.62
0.233	2.27	1.233	10.78	2.233	4.47	3.23	2.62
0.250	2.27	1.250	10.78	2.250	4.47	3.25	2.62
0.267	2.27	1.267	10.78	2.267	4.47	3.27	2.62
0.283	2.27	1.283	10.78	2.283	4.47	3.28	2.62
0.300	2.27	1.300	10.78	2.300	4.47	3.30	2.62
0.317	2.27	1.317	10.78	2.317	4.47	3.32	2.62
0.333	2.27	1.333	10.78	2.333	4.47	3.33	2.62
0.350	2.52	1.350	50.21	2.350	3.95	3.35	2.48
0.367	2.52	1.367	50.21	2.367	3.95	3.37	2.48
0.383	2.52	1.383	50.21	2.383	3.95	3.38	2.48
0.400	2.52	1.400	50.21	2.400	3.95	3.40	2.48
0.417	2.52	1.417	50.21	2.417	3.95	3.42	2.48
0.433	2.52	1.433	50.21	2.433	3.95	3.43	2.48
0.450	2.52	1.450	50.21	2.450	3.95	3.45	2.48
0.467	2.52	1.467	50.21	2.467	3.95	3.47	2.48
0.483	2.52	1.483	50.21	2.483	3.95	3.48	2.48
0.500	2.52	1.500	50.21	2.500	3.95	3.50	2.48
0.517	2.88	1.517	13.37	2.517	3.56	3.52	2.35
0.533	2.88	1.533	13.37	2.533	3.56	3.53	2.35
0.550	2.88	1.550	13.37	2.550	3.56	3.55	2.35
0.567	2.88	1.567	13.37	2.567	3.56	3.57	2.35
0.583	2.88	1.583	13.37	2.583	3.56	3.58	2.35
0.600	2.88	1.600	13.37	2.600	3.56	3.60	2.35
0.617	2.88	1.617	13.37	2.617	3.56	3.62	2.35
0.633	2.88	1.633	13.37	2.633	3.56	3.63	2.35
0.650	2.88	1.650	13.37	2.650	3.56	3.65	2.35
0.667	2.88	1.667	13.37	2.667	3.56	3.67	2.35
0.683	3.38	1.683	8.29	2.683	3.25	3.68	2.23
0.700	3.38	1.700	8.29	2.700	3.25	3.70	2.23
0.717	3.38	1.717	8.29	2.717	3.25	3.72	2.23
0.733	3.38	1.733	8.29	2.733	3.25	3.73	2.23
0.750	3.38	1.750	8.29	2.750	3.25	3.75	2.23
0.767	3.38	1.767	8.29	2.767	3.25	3.77	2.23
0.783	3.38	1.783	8.29	2.783	3.25	3.78	2.23
0.800	3.38	1.800	8.29	2.800	3.25	3.80	2.23
0.817	3.38	1.817	8.29	2.817	3.25	3.82	2.23
0.833	3.38	1.833	8.29	2.833	3.25	3.83	2.23
0.850	4.17	1.850	6.30	2.850	3.01	3.85	2.14
0.867	4.18	1.867	6.30	2.867	3.01	3.87	2.14
0.883	4.18	1.883	6.30	2.883	3.01	3.88	2.14
0.900	4.18	1.900	6.30	2.900	3.01	3.90	2.14
0.917	4.18	1.917	6.30	2.917	3.01	3.92	2.14
0.933	4.18	1.933	6.30	2.933	3.01	3.93	2.14
0.950	4.18	1.950	6.30	2.950	3.01	3.95	2.14
0.967	4.18	1.967	6.30	2.967	3.01	3.97	2.14
0.983	4.18	1.983	6.30	2.983	3.01	3.98	2.14
1.000	4.18	2.000	6.30	3.000	3.01	4.00	2.14

Unit Hyd Qpeak (cms)= 0.394

PEAK FLOW (cms)= 0.003 (i)
TIME TO PEAK (hrs)= 2.283
RUNOFF VOLUME (mm)= 0.521
TOTAL RAINFALL (mm)= 24.996
RUNOFF COEFFICIENT = 0.021

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB NASHYD (0104) ID= 1 DT= 1.0 min | Area (ha)= 1.18 | Ia (mm)= 10.00 | U.H. Tp(hrs)= 0.16 | Curve Number (CN)= 32.0 | # of Linear Res.(N)= 3.00

Unit Hyd Qpeak (cms)= 0.281

PEAK FLOW (cms)= 0.001 (i)
TIME TO PEAK (hrs)= 1.833
RUNOFF VOLUME (mm)= 0.405
TOTAL RAINFALL (mm)= 24.996
RUNOFF COEFFICIENT = 0.016

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB NASHYD (0102) ID= 1 DT= 1.0 min | Area (ha)= 0.90 | Ia (mm)= 10.00 | U.H. Tp(hrs)= 0.12 | Curve Number (CN)= 32.0 | # of Linear Res.(N)= 3.00

Unit Hyd Qpeak (cms)= 0.288

PEAK FLOW (cms)= 0.001 (i)
TIME TO PEAK (hrs)= 1.733

```
     RUNOFF VOLUME    (mm)=   0.405
     TOTAL RAINFALL   (mm)=  24.996
     RUNOFF COEFFICIENT   =   0.016

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0101) |   Area     (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.002 (i)
     TIME TO PEAK    (hrs)=   1.933
     RUNOFF VOLUME    (mm)=   0.580
     TOTAL RAINFALL   (mm)=  24.996
     RUNOFF COEFFICIENT   =   0.023

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0101):     2.26   0.002     1.93     0.58
       + ID2= 2 (0102):     0.90   0.001     1.73     0.41
         ================================================
         ID = 3 (0601):     3.17   0.002     1.90     0.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     3.17   0.002     1.90     0.53
       + ID2= 2 (0103):     4.02   0.003     2.28     0.52
         ================================================
         ID = 1 (0601):     7.19   0.005     2.10     0.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0601):     7.19   0.005     2.10     0.53
       + ID2= 2 (0104):     1.18   0.001     1.83     0.41
         ================================================
         ID = 3 (0601):     8.37   0.005     2.07     0.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0105) |   Area     (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.000 (i)
     TIME TO PEAK    (hrs)=   1.833
     RUNOFF VOLUME    (mm)=   0.797
     TOTAL RAINFALL   (mm)=  24.996
     RUNOFF COEFFICIENT   =   0.032

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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  ****************************
  ** SIMULATION NUMBER:   2 **
  ****************************
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--------------------
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|                  |              ata\Local\Temp\
|                  |              7da980c9-fae1-48d3-a7d7-8807c07333a4\e1d381fe
| Ptotal= 33.84 mm |    Comments: 2-Year Orillia 4-hour Chicago Storm
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	1.95	1.17	18.39	2.17	4.97	3.17	2.35
0.33	2.26	1.33	78.23	2.33	4.16	3.33	2.17
0.50	2.70	1.50	24.43	2.50	3.59	3.50	2.02
0.67	3.37	1.67	12.37	2.67	3.17	3.67	1.89
0.83	4.56	1.83	8.24	2.83	2.83	3.83	1.77
1.00	7.20	2.00	6.19	3.00	2.57	4.00	1.67

```
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--------------------
| CALIB            |
| NASHYD    (0103) |   Area     (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.95	1.017	18.39	2.017	4.97	3.02	2.35
0.033	1.95	1.033	18.39	2.033	4.97	3.03	2.35
0.050	1.95	1.050	18.39	2.050	4.97	3.05	2.35
0.067	1.95	1.067	18.39	2.067	4.97	3.07	2.35
0.083	1.95	1.083	18.39	2.083	4.97	3.08	2.35
0.100	1.95	1.100	18.39	2.100	4.97	3.10	2.35
0.117	1.95	1.117	18.39	2.117	4.97	3.12	2.35
0.133	1.95	1.133	18.39	2.133	4.97	3.13	2.35
0.150	1.95	1.150	18.39	2.150	4.97	3.15	2.35
0.167	1.95	1.167	18.39	2.167	4.97	3.17	2.35
0.183	2.26	1.183	78.23	2.183	4.16	3.18	2.17
0.200	2.26	1.200	78.23	2.200	4.16	3.20	2.17
0.217	2.26	1.217	78.23	2.217	4.16	3.22	2.17
0.233	2.26	1.233	78.23	2.233	4.16	3.23	2.17
0.250	2.26	1.250	78.23	2.250	4.16	3.25	2.17
0.267	2.26	1.267	78.23	2.267	4.16	3.27	2.17
0.283	2.26	1.283	78.23	2.283	4.16	3.28	2.17
0.300	2.26	1.300	78.23	2.300	4.16	3.30	2.17
0.317	2.26	1.317	78.23	2.317	4.16	3.32	2.17
0.333	2.26	1.333	78.23	2.333	4.16	3.33	2.17
0.350	2.70	1.350	24.43	2.350	3.59	3.35	2.02
0.367	2.70	1.367	24.43	2.367	3.59	3.37	2.02
0.383	2.70	1.383	24.43	2.383	3.59	3.38	2.02
0.400	2.70	1.400	24.43	2.400	3.59	3.40	2.02
0.417	2.70	1.417	24.43	2.417	3.59	3.42	2.02
0.433	2.70	1.433	24.43	2.433	3.59	3.43	2.02
0.450	2.70	1.450	24.43	2.450	3.59	3.45	2.02
0.467	2.70	1.467	24.43	2.467	3.59	3.47	2.02
0.483	2.70	1.483	24.43	2.483	3.59	3.48	2.02
0.500	2.70	1.500	24.43	2.500	3.59	3.50	2.02
0.517	3.37	1.517	12.37	2.517	3.17	3.52	1.89
0.533	3.37	1.533	12.37	2.533	3.17	3.53	1.89
0.550	3.37	1.550	12.37	2.550	3.17	3.55	1.89
0.567	3.37	1.567	12.37	2.567	3.17	3.57	1.89
0.583	3.37	1.583	12.37	2.583	3.17	3.58	1.89
0.600	3.37	1.600	12.37	2.600	3.17	3.60	1.89
0.617	3.37	1.617	12.37	2.617	3.17	3.62	1.89
0.633	3.37	1.633	12.37	2.633	3.17	3.63	1.89
0.650	3.37	1.650	12.37	2.650	3.17	3.65	1.89
0.667	3.37	1.667	12.37	2.667	3.17	3.67	1.89
0.683	4.56	1.683	8.24	2.683	2.83	3.68	1.77
0.700	4.56	1.700	8.24	2.700	2.83	3.70	1.77
0.717	4.56	1.717	8.24	2.717	2.83	3.72	1.77
0.733	4.56	1.733	8.24	2.733	2.83	3.73	1.77
0.750	4.56	1.750	8.24	2.750	2.83	3.75	1.77
0.767	4.56	1.767	8.24	2.767	2.83	3.77	1.77
0.783	4.56	1.783	8.24	2.783	2.83	3.78	1.77
0.800	4.56	1.800	8.24	2.800	2.83	3.80	1.77
0.817	4.56	1.817	8.24	2.817	2.83	3.82	1.77
0.833	4.56	1.833	8.24	2.833	2.83	3.83	1.77
0.850	7.20	1.850	6.19	2.850	2.57	3.85	1.67
0.867	7.20	1.867	6.19	2.867	2.57	3.87	1.67
0.883	7.20	1.883	6.19	2.883	2.57	3.88	1.67
0.900	7.20	1.900	6.19	2.900	2.57	3.90	1.67

```
              0.917    7.20 | 1.917    6.19 | 2.917    2.57 |  3.92    1.67
              0.933    7.20 | 1.933    6.19 | 2.933    2.57 |  3.93    1.67
              0.950    7.20 | 1.950    6.19 | 2.950    2.57 |  3.95    1.67
              0.967    7.20 | 1.967    6.19 | 2.967    2.57 |  3.97    1.67
              0.983    7.20 | 1.983    6.19 | 2.983    2.57 |  3.98    1.67
              1.000    7.20 | 2.000    6.19 | 3.000    2.57 |  4.00    1.67

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.009 (i)
     TIME TO PEAK    (hrs)=   1.917
     RUNOFF VOLUME    (mm)=   1.238
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.037

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.003 (i)
     TIME TO PEAK    (hrs)=   1.567
     RUNOFF VOLUME    (mm)=   1.008
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.030

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.003 (i)
     TIME TO PEAK    (hrs)=   1.517
     RUNOFF VOLUME    (mm)=   1.008
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.030

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.007 (i)
     TIME TO PEAK    (hrs)=   1.683
     RUNOFF VOLUME    (mm)=   1.364
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.040

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0101):     2.26   0.007     1.68     1.36
        + ID2= 2 (0102):     0.90   0.003     1.52     1.01
          ================================================
          ID = 3 (0601):     3.17   0.009     1.63     1.26

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 3 (0601):     3.17   0.009     1.63     1.26
        + ID2= 2 (0103):     4.02   0.009     1.92     1.24
          ================================================
          ID = 1 (0601):     7.19   0.017     1.77     1.25

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0601):     7.19   0.017     1.77     1.25
        + ID2= 2 (0104):     1.18   0.003     1.57     1.01
          ================================================
          ID = 3 (0601):     8.37   0.019     1.72     1.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.001 (i)
     TIME TO PEAK    (hrs)=   1.617
     RUNOFF VOLUME    (mm)=   1.768
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.052

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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  ****************************
  ** SIMULATION NUMBER:   3 **
  ****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              7da980c9-fae1-48d3-a7d7-8807c07333a4\b7c4f471
| Ptotal= 44.10 mm |    Comments: 5-Year Orillia 4-hour Chicago Storm
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.37 |  1.17   24.71 |  2.17    6.34 |  3.17    2.89
               0.33    2.77 |  1.33  102.62 |  2.33    5.26 |  3.33    2.66
               0.50    3.33 |  1.50   33.01 |  2.50    4.50 |  3.50    2.46
               0.67    4.22 |  1.67   16.45 |  2.67    3.94 |  3.67    2.29
               0.83    5.79 |  1.83   10.77 |  2.83    3.51 |  3.83    2.15
               1.00    9.36 |  2.00    7.98 |  3.00    3.17 |  4.00    2.02

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--------------------
| CALIB            |
| NASHYD    (0103) |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.017    2.37 | 1.017   24.71 | 2.017    6.34 |  3.02    2.89
              0.033    2.37 | 1.033   24.71 | 2.033    6.34 |  3.03    2.89
              0.050    2.37 | 1.050   24.71 | 2.050    6.34 |  3.05    2.89
              0.067    2.37 | 1.067   24.71 | 2.067    6.34 |  3.07    2.89
              0.083    2.37 | 1.083   24.71 | 2.083    6.34 |  3.08    2.89
              0.100    2.37 | 1.100   24.71 | 2.100    6.34 |  3.10    2.89
              0.117    2.37 | 1.117   24.71 | 2.117    6.34 |  3.12    2.89
              0.133    2.37 | 1.133   24.71 | 2.133    6.34 |  3.13    2.89
              0.150    2.37 | 1.150   24.71 | 2.150    6.34 |  3.15    2.89
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              0.167    2.37 | 1.167   24.71 | 2.167    6.34 |  3.17    2.89
              0.183    2.77 | 1.183  102.62 | 2.183    5.26 |  3.18    2.66
              0.200    2.77 | 1.200  102.62 | 2.200    5.26 |  3.20    2.66
              0.217    2.77 | 1.217  102.62 | 2.217    5.26 |  3.22    2.66
              0.233    2.77 | 1.233  102.62 | 2.233    5.26 |  3.23    2.66
              0.250    2.77 | 1.250  102.62 | 2.250    5.26 |  3.25    2.66
              0.267    2.77 | 1.267  102.62 | 2.267    5.26 |  3.27    2.66
              0.283    2.77 | 1.283  102.62 | 2.283    5.26 |  3.28    2.66
              0.300    2.77 | 1.300  102.62 | 2.300    5.26 |  3.30    2.66
              0.317    2.77 | 1.317  102.62 | 2.317    5.26 |  3.32    2.66
              0.333    2.77 | 1.333  102.62 | 2.333    5.26 |  3.33    2.66
              0.350    3.33 | 1.350   33.01 | 2.350    4.50 |  3.35    2.46
              0.367    3.33 | 1.367   33.01 | 2.367    4.50 |  3.37    2.46
              0.383    3.33 | 1.383   33.01 | 2.383    4.50 |  3.38    2.46
              0.400    3.33 | 1.400   33.01 | 2.400    4.50 |  3.40    2.46
              0.417    3.33 | 1.417   33.01 | 2.417    4.50 |  3.42    2.46
              0.433    3.33 | 1.433   33.01 | 2.433    4.50 |  3.43    2.46
              0.450    3.33 | 1.450   33.01 | 2.450    4.50 |  3.45    2.46
              0.467    3.33 | 1.467   33.01 | 2.467    4.50 |  3.47    2.46
              0.483    3.33 | 1.483   33.01 | 2.483    4.50 |  3.48    2.46
              0.500    3.33 | 1.500   33.01 | 2.500    4.50 |  3.50    2.46
              0.517    4.22 | 1.517   16.45 | 2.517    3.94 |  3.52    2.29
              0.533    4.22 | 1.533   16.45 | 2.533    3.94 |  3.53    2.29
              0.550    4.22 | 1.550   16.45 | 2.550    3.94 |  3.55    2.29
              0.567    4.22 | 1.567   16.45 | 2.567    3.94 |  3.57    2.29
              0.583    4.22 | 1.583   16.45 | 2.583    3.94 |  3.58    2.29
              0.600    4.22 | 1.600   16.45 | 2.600    3.94 |  3.60    2.29
              0.617    4.22 | 1.617   16.45 | 2.617    3.94 |  3.62    2.29
              0.633    4.22 | 1.633   16.45 | 2.633    3.94 |  3.63    2.29
              0.650    4.22 | 1.650   16.45 | 2.650    3.94 |  3.65    2.29
              0.667    4.22 | 1.667   16.45 | 2.667    3.94 |  3.67    2.29
              0.683    5.79 | 1.683   10.77 | 2.683    3.51 |  3.68    2.15
              0.700    5.79 | 1.700   10.77 | 2.700    3.51 |  3.70    2.15
              0.717    5.79 | 1.717   10.77 | 2.717    3.51 |  3.72    2.15
              0.733    5.79 | 1.733   10.77 | 2.733    3.51 |  3.73    2.15
              0.750    5.79 | 1.750   10.77 | 2.750    3.51 |  3.75    2.15
              0.767    5.79 | 1.767   10.77 | 2.767    3.51 |  3.77    2.15
              0.783    5.79 | 1.783   10.77 | 2.783    3.51 |  3.78    2.15
              0.800    5.79 | 1.800   10.77 | 2.800    3.51 |  3.80    2.15
              0.817    5.79 | 1.817   10.77 | 2.817    3.51 |  3.82    2.15
              0.833    5.79 | 1.833   10.77 | 2.833    3.51 |  3.83    2.15
              0.850    9.36 | 1.850    7.98 | 2.850    3.17 |  3.85    2.02
              0.867    9.36 | 1.867    7.98 | 2.867    3.17 |  3.87    2.02
              0.883    9.36 | 1.883    7.98 | 2.883    3.17 |  3.88    2.02
              0.900    9.36 | 1.900    7.98 | 2.900    3.17 |  3.90    2.02
              0.917    9.36 | 1.917    7.98 | 2.917    3.17 |  3.92    2.02
              0.933    9.36 | 1.933    7.98 | 2.933    3.17 |  3.93    2.02
              0.950    9.36 | 1.950    7.98 | 2.950    3.17 |  3.95    2.02
              0.967    9.36 | 1.967    7.98 | 2.967    3.17 |  3.97    2.02
              0.983    9.36 | 1.983    7.98 | 2.983    3.17 |  3.98    2.02
              1.000    9.36 | 2.000    7.98 | 3.000    3.17 |  4.00    2.02

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.018 (i)
     TIME TO PEAK    (hrs)=   1.883
     RUNOFF VOLUME    (mm)=   2.423
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.055

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.007 (i)
     TIME TO PEAK    (hrs)=   1.550
     RUNOFF VOLUME    (mm)=   2.025
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.046

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.006 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   2.025
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.046

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.015 (i)
     TIME TO PEAK    (hrs)=   1.667
     RUNOFF VOLUME    (mm)=   2.654
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.060

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (0101):     2.26   0.015     1.67     2.65
       + ID2= 2 (0102):     0.90   0.006     1.50     2.03
         ================================================
         ID = 3 (0601):     3.17   0.020     1.60     2.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 3 (0601):     3.17   0.020     1.60     2.47
       + ID2= 2 (0103):     4.02   0.018     1.88     2.42
         ================================================
         ID = 1 (0601):     7.19   0.035     1.73     2.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (0601):     7.19   0.035     1.73     2.45
       + ID2= 2 (0104):     1.18   0.007     1.55     2.03
         ================================================
         ID = 3 (0601):     8.37   0.041     1.68     2.39

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.002 (i)
     TIME TO PEAK    (hrs)=   1.600
     RUNOFF VOLUME    (mm)=   3.328
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.075

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

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  ******************************
  ** SIMULATION NUMBER:   4 **
  ******************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              7da980c9-fae1-48d3-a7d7-8807c07333a4\b11a9452
| Ptotal= 50.61 mm |    Comments: 10-Year Orillia 4-hour Chicago Storm
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.65	1.17	28.56	2.17	7.19	3.17	3.24
0.33	3.10	1.33	118.66	2.33	5.95	3.33	2.97
0.50	3.75	1.50	38.22	2.50	5.09	3.50	2.75
0.67	4.76	1.67	18.93	2.67	4.44	3.67	2.56
0.83	6.56	1.83	12.33	2.83	3.95	3.83	2.40
1.00	10.69	2.00	9.09	3.00	3.56	4.00	2.26

```
--------------------
| CALIB            |
| NASHYD   (0103)  |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.65	1.017	28.56	2.017	7.19	3.02	3.24
0.033	2.65	1.033	28.56	2.033	7.19	3.03	3.24
0.050	2.65	1.050	28.56	2.050	7.19	3.05	3.24
0.067	2.65	1.067	28.56	2.067	7.19	3.07	3.24
0.083	2.65	1.083	28.56	2.083	7.19	3.08	3.24
0.100	2.65	1.100	28.56	2.100	7.19	3.10	3.24
0.117	2.65	1.117	28.56	2.117	7.19	3.12	3.24
0.133	2.65	1.133	28.56	2.133	7.19	3.13	3.24
0.150	2.65	1.150	28.56	2.150	7.19	3.15	3.24
0.167	2.65	1.167	28.56	2.167	7.19	3.17	3.24
0.183	3.10	1.183	118.66	2.183	5.95	3.18	2.97
0.200	3.10	1.200	118.66	2.200	5.95	3.20	2.97
0.217	3.10	1.217	118.66	2.217	5.95	3.22	2.97
0.233	3.10	1.233	118.66	2.233	5.95	3.23	2.97
0.250	3.10	1.250	118.66	2.250	5.95	3.25	2.97
0.267	3.10	1.267	118.66	2.267	5.95	3.27	2.97
0.283	3.10	1.283	118.66	2.283	5.95	3.28	2.97
0.300	3.10	1.300	118.66	2.300	5.95	3.30	2.97
0.317	3.10	1.317	118.66	2.317	5.95	3.32	2.97
0.333	3.10	1.333	118.66	2.333	5.95	3.33	2.97
0.350	3.75	1.350	38.22	2.350	5.09	3.35	2.75
0.367	3.75	1.367	38.22	2.367	5.09	3.37	2.75
0.383	3.75	1.383	38.22	2.383	5.09	3.38	2.75
0.400	3.75	1.400	38.22	2.400	5.09	3.40	2.75
0.417	3.75	1.417	38.22	2.417	5.09	3.42	2.75
0.433	3.75	1.433	38.22	2.433	5.09	3.43	2.75
0.450	3.75	1.450	38.22	2.450	5.09	3.45	2.75
0.467	3.75	1.467	38.22	2.467	5.09	3.47	2.75
0.483	3.75	1.483	38.22	2.483	5.09	3.48	2.75
0.500	3.75	1.500	38.22	2.500	5.09	3.50	2.75
0.517	4.76	1.517	18.93	2.517	4.44	3.52	2.56
0.533	4.76	1.533	18.93	2.533	4.44	3.53	2.56
0.550	4.76	1.550	18.93	2.550	4.44	3.55	2.56
0.567	4.76	1.567	18.93	2.567	4.44	3.57	2.56
0.583	4.76	1.583	18.93	2.583	4.44	3.58	2.56
0.600	4.76	1.600	18.93	2.600	4.44	3.60	2.56
0.617	4.76	1.617	18.93	2.617	4.44	3.62	2.56
0.633	4.76	1.633	18.93	2.633	4.44	3.63	2.56
0.650	4.76	1.650	18.93	2.650	4.44	3.65	2.56
0.667	4.76	1.667	18.93	2.667	4.44	3.67	2.56
0.683	6.56	1.683	12.33	2.683	3.95	3.68	2.40
0.700	6.56	1.700	12.33	2.700	3.95	3.70	2.40
0.717	6.56	1.717	12.33	2.717	3.95	3.72	2.40
0.733	6.56	1.733	12.33	2.733	3.95	3.73	2.40
0.750	6.56	1.750	12.33	2.750	3.95	3.75	2.40
0.767	6.56	1.767	12.33	2.767	3.95	3.77	2.40
0.783	6.56	1.783	12.33	2.783	3.95	3.78	2.40
0.800	6.56	1.800	12.33	2.800	3.95	3.80	2.40
0.817	6.56	1.817	12.33	2.817	3.95	3.82	2.40
0.833	6.56	1.833	12.33	2.833	3.95	3.83	2.40
0.850	10.69	1.850	9.09	2.850	3.56	3.85	2.26
0.867	10.69	1.867	9.09	2.867	3.56	3.87	2.26
0.883	10.69	1.883	9.09	2.883	3.56	3.88	2.26
0.900	10.69	1.900	9.09	2.900	3.56	3.90	2.26
0.917	10.69	1.917	9.09	2.917	3.56	3.92	2.26
0.933	10.69	1.933	9.09	2.933	3.56	3.93	2.26
0.950	10.69	1.950	9.09	2.950	3.56	3.95	2.26
0.967	10.69	1.967	9.09	2.967	3.56	3.97	2.26
0.983	10.69	1.983	9.09	2.983	3.56	3.98	2.26
1.000	10.69	2.000	9.09	3.000	3.56	4.00	2.26

```
     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.026 (i)
     TIME TO PEAK    (hrs)=   1.867
     RUNOFF VOLUME    (mm)=   3.365
     TOTAL RAINFALL   (mm)=  50.610
     RUNOFF COEFFICIENT   =   0.066

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (0104)  |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.010 (i)
     TIME TO PEAK    (hrs)=   1.550
     RUNOFF VOLUME    (mm)=   2.841
     TOTAL RAINFALL   (mm)=  50.610
     RUNOFF COEFFICIENT   =   0.056

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (0102)  |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.009 (i)
     TIME TO PEAK    (hrs)=   1.467
     RUNOFF VOLUME    (mm)=   2.841
     TOTAL RAINFALL   (mm)=  50.610
     RUNOFF COEFFICIENT   =   0.056

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (0101)  |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.022 (i)
     TIME TO PEAK    (hrs)=   1.650
     RUNOFF VOLUME    (mm)=   3.675
     TOTAL RAINFALL   (mm)=  50.610
     RUNOFF COEFFICIENT   =   0.073

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (0601)  |
|  1 +  2 =  3     |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0101):     2.26    0.022     1.65     3.68
        + ID2= 2 (0102):     0.90    0.009     1.47     2.84
          ================================================
          ID = 3 (0601):     3.17    0.029     1.58     3.44
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1	ID1= 3 (0601):	3.17	0.029	1.58	3.44
	+ ID2= 2 (0103):	4.02	0.026	1.87	3.36
	ID = 1 (0601):	7.19	0.051	1.72	3.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3	ID1= 1 (0601):	7.19	0.051	1.72	3.40
	+ ID2= 2 (0104):	1.18	0.010	1.55	2.84
	ID = 3 (0601):	8.37	0.059	1.68	3.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0105)	Area (ha)=	0.25	Curve Number (CN)=	41.0	
ID= 1 DT= 1.0 min	Ia (mm)=	7.50	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.21			

Unit Hyd Qpeak (cms)= 0.046

PEAK FLOW (cms)= 0.003 (i)
TIME TO PEAK (hrs)= 1.600
RUNOFF VOLUME (mm)= 4.546
TOTAL RAINFALL (mm)= 50.610
RUNOFF COEFFICIENT = 0.090

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

****
** SIMULATION NUMBER: 5 **
****

READ STORM	Filename: C:\Users\jingram\AppData\Local\Temp\7da980c9-fae1-48d3-a7d7-8807c07333a4\4a313f10
Ptotal= 58.97 mm	Comments: 25-Year Orillia 4-hour Chicago Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.96	1.17	33.93	2.17	8.29	3.17	3.63
0.33	3.47	1.33	138.48	2.33	6.82	3.33	3.33
0.50	4.22	1.50	45.53	2.50	5.79	3.50	3.07
0.67	5.41	1.67	22.38	2.67	5.04	3.67	2.85
0.83	7.54	1.83	14.43	2.83	4.46	3.83	2.67
1.00	12.47	2.00	10.55	3.00	4.00	4.00	2.50

CALIB					
NASHYD (0103)	Area (ha)=	4.02	Curve Number (CN)=	35.0	
ID= 1 DT= 1.0 min	Ia (mm)=	9.05	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.39			

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.96	1.017	33.93	2.017	8.29	3.02	3.63
0.033	2.96	1.033	33.93	2.033	8.29	3.03	3.63
0.050	2.96	1.050	33.93	2.050	8.29	3.05	3.63
0.067	2.96	1.067	33.93	2.067	8.29	3.07	3.63
0.083	2.96	1.083	33.93	2.083	8.29	3.08	3.63
0.100	2.96	1.100	33.93	2.100	8.29	3.10	3.63
0.117	2.96	1.117	33.93	2.117	8.29	3.12	3.63
0.133	2.96	1.133	33.93	2.133	8.29	3.13	3.63
0.150	2.96	1.150	33.93	2.150	8.29	3.15	3.63
0.167	2.96	1.167	33.93	2.167	8.29	3.17	3.63
0.183	3.47	1.183	138.48	2.183	6.82	3.18	3.33
0.200	3.47	1.200	138.48	2.200	6.82	3.20	3.33
0.217	3.47	1.217	138.48	2.217	6.82	3.22	3.33
0.233	3.47	1.233	138.48	2.233	6.82	3.23	3.33
0.250	3.47	1.250	138.48	2.250	6.82	3.25	3.33
0.267	3.47	1.267	138.48	2.267	6.82	3.27	3.33
0.283	3.47	1.283	138.48	2.283	6.82	3.28	3.33
0.300	3.47	1.300	138.48	2.300	6.82	3.30	3.33
0.317	3.47	1.317	138.48	2.317	6.82	3.32	3.33
0.333	3.47	1.333	138.48	2.333	6.82	3.33	3.33
0.350	4.22	1.350	45.53	2.350	5.79	3.35	3.07
0.367	4.22	1.367	45.53	2.367	5.79	3.37	3.07
0.383	4.22	1.383	45.53	2.383	5.79	3.38	3.07
0.400	4.22	1.400	45.53	2.400	5.79	3.40	3.07
0.417	4.22	1.417	45.53	2.417	5.79	3.42	3.07
0.433	4.22	1.433	45.53	2.433	5.79	3.43	3.07
0.450	4.22	1.450	45.53	2.450	5.79	3.45	3.07
0.467	4.22	1.467	45.53	2.467	5.79	3.47	3.07
0.483	4.22	1.483	45.53	2.483	5.79	3.48	3.07
0.500	4.22	1.500	45.53	2.500	5.79	3.50	3.07
0.517	5.41	1.517	22.38	2.517	5.04	3.52	2.85
0.533	5.41	1.533	22.38	2.533	5.04	3.53	2.85
0.550	5.41	1.550	22.38	2.550	5.04	3.55	2.85
0.567	5.41	1.567	22.38	2.567	5.04	3.57	2.85
0.583	5.41	1.583	22.38	2.583	5.04	3.58	2.85
0.600	5.41	1.600	22.38	2.600	5.04	3.60	2.85
0.617	5.41	1.617	22.38	2.617	5.04	3.62	2.85
0.633	5.41	1.633	22.38	2.633	5.04	3.63	2.85
0.650	5.41	1.650	22.38	2.650	5.04	3.65	2.85
0.667	5.41	1.667	22.38	2.667	5.04	3.67	2.85
0.683	7.54	1.683	14.43	2.683	4.46	3.68	2.67
0.700	7.54	1.700	14.43	2.700	4.46	3.70	2.67
0.717	7.54	1.717	14.43	2.717	4.46	3.72	2.67
0.733	7.54	1.733	14.43	2.733	4.46	3.73	2.67
0.750	7.54	1.750	14.43	2.750	4.46	3.75	2.67
0.767	7.54	1.767	14.43	2.767	4.46	3.77	2.67
0.783	7.54	1.783	14.43	2.783	4.46	3.78	2.67
0.800	7.54	1.800	14.43	2.800	4.46	3.80	2.67
0.817	7.54	1.817	14.43	2.817	4.46	3.82	2.67
0.833	7.54	1.833	14.43	2.833	4.46	3.83	2.67
0.850	12.47	1.850	10.55	2.850	4.00	3.85	2.50
0.867	12.47	1.867	10.55	2.867	4.00	3.87	2.50
0.883	12.47	1.883	10.55	2.883	4.00	3.88	2.50
0.900	12.47	1.900	10.55	2.900	4.00	3.90	2.50
0.917	12.47	1.917	10.55	2.917	4.00	3.92	2.50
0.933	12.47	1.933	10.55	2.933	4.00	3.93	2.50
0.950	12.47	1.950	10.55	2.950	4.00	3.95	2.50
0.967	12.47	1.967	10.55	2.967	4.00	3.97	2.50
0.983	12.47	1.983	10.55	2.983	4.00	3.98	2.50
1.000	12.47	2.000	10.55	3.000	4.00	4.00	2.50

Unit Hyd Qpeak (cms)= 0.394

PEAK FLOW (cms)= 0.039 (i)
TIME TO PEAK (hrs)= 1.850
RUNOFF VOLUME (mm)= 4.777
TOTAL RAINFALL (mm)= 58.970
RUNOFF COEFFICIENT = 0.081

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0104)	Area (ha)=	1.18	Curve Number (CN)=	32.0	
ID= 1 DT= 1.0 min	Ia (mm)=	10.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.16			

Unit Hyd Qpeak (cms)= 0.281

PEAK FLOW (cms)= 0.016 (i)
TIME TO PEAK (hrs)= 1.533
RUNOFF VOLUME (mm)= 4.073
TOTAL RAINFALL (mm)= 58.970
RUNOFF COEFFICIENT = 0.069

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.013 (i)
     TIME TO PEAK    (hrs)=   1.467
     RUNOFF VOLUME    (mm)=   4.073
     TOTAL RAINFALL   (mm)=  58.970
     RUNOFF COEFFICIENT   =   0.069

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.032 (i)
     TIME TO PEAK    (hrs)=   1.633
     RUNOFF VOLUME    (mm)=   5.203
     TOTAL RAINFALL   (mm)=  58.970
     RUNOFF COEFFICIENT   =   0.088

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0101):     2.26   0.032     1.63     5.20
       + ID2= 2 (0102):     0.90   0.013     1.47     4.07
         ================================================
         ID = 3 (0601):     3.17   0.042     1.58     4.88

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     3.17   0.042     1.58     4.88
       + ID2= 2 (0103):     4.02   0.039     1.85     4.78
         ================================================
         ID = 1 (0601):     7.19   0.075     1.70     4.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0601):     7.19   0.075     1.70     4.82
       + ID2= 2 (0104):     1.18   0.016     1.53     4.07
         ================================================
         ID = 3 (0601):     8.37   0.087     1.67     4.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
--------------------
| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.005 (i)
     TIME TO PEAK    (hrs)=   1.583
     RUNOFF VOLUME    (mm)=   6.351
     TOTAL RAINFALL   (mm)=  58.970
     RUNOFF COEFFICIENT   =   0.108

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
  *****************************
  ** SIMULATION NUMBER:   6 **
  *****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              7da980c9-fae1-48d3-a7d7-8807c07333a4\60c61b7a
| Ptotal= 65.52 mm |    Comments: 50-Year Orillia 4-hour Chicago Storm
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	3.21	1.17	38.13	2.17	9.16	3.17	3.95
0.33	3.78	1.33	153.74	2.33	7.51	3.33	3.62
0.50	4.61	1.50	51.22	2.50	6.36	3.50	3.33
0.67	5.93	1.67	25.10	2.67	5.52	3.67	3.09
0.83	8.32	1.83	16.10	2.83	4.87	3.83	2.89
1.00	13.89	2.00	11.71	3.00	4.36	4.00	2.71

```
--------------------
| CALIB            |
| NASHYD    (0103) |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	3.21	1.017	38.13	2.017	9.16	3.02	3.95
0.033	3.21	1.033	38.13	2.033	9.16	3.03	3.95
0.050	3.21	1.050	38.13	2.050	9.16	3.05	3.95
0.067	3.21	1.067	38.13	2.067	9.16	3.07	3.95
0.083	3.21	1.083	38.13	2.083	9.16	3.08	3.95
0.100	3.21	1.100	38.13	2.100	9.16	3.10	3.95
0.117	3.21	1.117	38.13	2.117	9.16	3.12	3.95
0.133	3.21	1.133	38.13	2.133	9.16	3.13	3.95
0.150	3.21	1.150	38.13	2.150	9.16	3.15	3.95
0.167	3.21	1.167	38.13	2.167	9.16	3.17	3.95
0.183	3.78	1.183	153.74	2.183	7.51	3.18	3.62
0.200	3.78	1.200	153.74	2.200	7.51	3.20	3.62
0.217	3.78	1.217	153.74	2.217	7.51	3.22	3.62
0.233	3.78	1.233	153.74	2.233	7.51	3.23	3.62
0.250	3.78	1.250	153.74	2.250	7.51	3.25	3.62
0.267	3.78	1.267	153.74	2.267	7.51	3.27	3.62
0.283	3.78	1.283	153.74	2.283	7.51	3.28	3.62
0.300	3.78	1.300	153.74	2.300	7.51	3.30	3.62
0.317	3.78	1.317	153.74	2.317	7.51	3.32	3.62
0.333	3.78	1.333	153.74	2.333	7.51	3.33	3.62
0.350	4.61	1.350	51.22	2.350	6.36	3.35	3.33
0.367	4.61	1.367	51.22	2.367	6.36	3.37	3.33
0.383	4.61	1.383	51.22	2.383	6.36	3.38	3.33
0.400	4.61	1.400	51.22	2.400	6.36	3.40	3.33
0.417	4.61	1.417	51.22	2.417	6.36	3.42	3.33
0.433	4.61	1.433	51.22	2.433	6.36	3.43	3.33
0.450	4.61	1.450	51.22	2.450	6.36	3.45	3.33
0.467	4.61	1.467	51.22	2.467	6.36	3.47	3.33
0.483	4.61	1.483	51.22	2.483	6.36	3.48	3.33
0.500	4.61	1.500	51.22	2.500	6.36	3.50	3.33
0.517	5.93	1.517	25.10	2.517	5.52	3.52	3.09
0.533	5.93	1.533	25.10	2.533	5.52	3.53	3.09
0.550	5.93	1.550	25.10	2.550	5.52	3.55	3.09
0.567	5.93	1.567	25.10	2.567	5.52	3.57	3.09
0.583	5.93	1.583	25.10	2.583	5.52	3.58	3.09
0.600	5.93	1.600	25.10	2.600	5.52	3.60	3.09
0.617	5.93	1.617	25.10	2.617	5.52	3.62	3.09
0.633	5.93	1.633	25.10	2.633	5.52	3.63	3.09
0.650	5.93	1.650	25.10	2.650	5.52	3.65	3.09
0.667	5.93	1.667	25.10	2.667	5.52	3.67	3.09
0.683	8.32	1.683	16.10	2.683	4.87	3.68	2.89
0.700	8.32	1.700	16.10	2.700	4.87	3.70	2.89

```
              0.717    8.32 | 1.717   16.10 | 2.717    4.87 |  3.72    2.89
              0.733    8.32 | 1.733   16.10 | 2.733    4.87 |  3.73    2.89
              0.750    8.32 | 1.750   16.10 | 2.750    4.87 |  3.75    2.89
              0.767    8.32 | 1.767   16.10 | 2.767    4.87 |  3.77    2.89
              0.783    8.32 | 1.783   16.10 | 2.783    4.87 |  3.78    2.89
              0.800    8.32 | 1.800   16.10 | 2.800    4.87 |  3.80    2.89
              0.817    8.32 | 1.817   16.10 | 2.817    4.87 |  3.82    2.89
              0.833    8.32 | 1.833   16.10 | 2.833    4.87 |  3.83    2.89
              0.850   13.89 | 1.850   11.71 | 2.850    4.36 |  3.85    2.71
              0.867   13.89 | 1.867   11.71 | 2.867    4.36 |  3.87    2.71
              0.883   13.89 | 1.883   11.71 | 2.883    4.36 |  3.88    2.71
              0.900   13.89 | 1.900   11.71 | 2.900    4.36 |  3.90    2.71
              0.917   13.89 | 1.917   11.71 | 2.917    4.36 |  3.92    2.71
              0.933   13.89 | 1.933   11.71 | 2.933    4.36 |  3.93    2.71
              0.950   13.89 | 1.950   11.71 | 2.950    4.36 |  3.95    2.71
              0.967   13.89 | 1.967   11.71 | 2.967    4.36 |  3.97    2.71
              0.983   13.89 | 1.983   11.71 | 2.983    4.36 |  3.98    2.71
              1.000   13.89 | 2.000   11.71 | 3.000    4.36 |  4.00    2.71

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   1.850
     RUNOFF VOLUME    (mm)=   6.037
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.092

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.020 (i)
     TIME TO PEAK    (hrs)=   1.533
     RUNOFF VOLUME    (mm)=   5.178
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.079

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.017 (i)
     TIME TO PEAK    (hrs)=   1.450
     RUNOFF VOLUME    (mm)=   5.178
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.079

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.041 (i)
     TIME TO PEAK    (hrs)=   1.633
     RUNOFF VOLUME    (mm)=   6.563
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.100

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0101):     2.26   0.041     1.63     6.56
       + ID2= 2 (0102):     0.90   0.017     1.45     5.18
         ================================================
         ID = 3 (0601):     3.17   0.054     1.58     6.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     3.17   0.054     1.58     6.17
       + ID2= 2 (0103):     4.02   0.050     1.85     6.04
         ================================================
         ID = 1 (0601):     7.19   0.096     1.70     6.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0601):     7.19   0.096     1.70     6.09
       + ID2= 2 (0104):     1.18   0.020     1.53     5.18
         ================================================
         ID = 3 (0601):     8.37   0.113     1.65     5.97

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.006 (i)
     TIME TO PEAK    (hrs)=   1.583
     RUNOFF VOLUME    (mm)=   7.946
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.121

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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  *****************************
  ** SIMULATION NUMBER:   7 **
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--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              7da980c9-fae1-48d3-a7d7-8807c07333a4\8db59ea9
| Ptotal= 71.71 mm |    Comments: 100-Year Orillia 4-hour Chicago Storm
--------------------
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
                0.17     3.48 |  1.17    41.81 |'  2.17     9.98 |  3.17     4.29
                0.33     4.10 |  1.33   168.81 |'  2.33     8.17 |  3.33     3.92
                0.50     5.01 |  1.50    56.20 |'  2.50     6.92 |  3.50     3.61
                0.67     6.45 |  1.67    27.48 |'  2.67     5.99 |  3.67     3.35
                0.83     9.06 |  1.83    17.59 |'  2.83     5.29 |  3.83     3.13
                1.00    15.16 |  2.00    12.78 |'  3.00     4.74 |  4.00     2.93

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--------------------
| CALIB            |
| NASHYD    (0103) |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	3.48	1.017	41.81	2.017	9.98	3.02	4.29
0.033	3.48	1.033	41.81	2.033	9.98	3.03	4.29
0.050	3.48	1.050	41.81	2.050	9.98	3.05	4.29
0.067	3.48	1.067	41.81	2.067	9.98	3.07	4.29
0.083	3.48	1.083	41.81	2.083	9.98	3.08	4.29
0.100	3.48	1.100	41.81	2.100	9.98	3.10	4.29
0.117	3.48	1.117	41.81	2.117	9.98	3.12	4.29
0.133	3.48	1.133	41.81	2.133	9.98	3.13	4.29
0.150	3.48	1.150	41.81	2.150	9.98	3.15	4.29
0.167	3.48	1.167	41.81	2.167	9.98	3.17	4.29
0.183	4.10	1.183	168.81	2.183	8.17	3.18	3.92
0.200	4.10	1.200	168.81	2.200	8.17	3.20	3.92
0.217	4.10	1.217	168.81	2.217	8.17	3.22	3.92
0.233	4.10	1.233	168.81	2.233	8.17	3.23	3.92
0.250	4.10	1.250	168.81	2.250	8.17	3.25	3.92
0.267	4.10	1.267	168.81	2.267	8.17	3.27	3.92
0.283	4.10	1.283	168.81	2.283	8.17	3.28	3.92
0.300	4.10	1.300	168.81	2.300	8.17	3.30	3.92
0.317	4.10	1.317	168.81	2.317	8.17	3.32	3.92
0.333	4.10	1.333	168.81	2.333	8.17	3.33	3.92
0.350	5.01	1.350	56.20	2.350	6.92	3.35	3.61
0.367	5.01	1.367	56.20	2.367	6.92	3.37	3.61
0.383	5.01	1.383	56.20	2.383	6.92	3.38	3.61
0.400	5.01	1.400	56.20	2.400	6.92	3.40	3.61
0.417	5.01	1.417	56.20	2.417	6.92	3.42	3.61
0.433	5.01	1.433	56.20	2.433	6.92	3.43	3.61
0.450	5.01	1.450	56.20	2.450	6.92	3.45	3.61
0.467	5.01	1.467	56.20	2.467	6.92	3.47	3.61
0.483	5.01	1.483	56.20	2.483	6.92	3.48	3.61
0.500	5.01	1.500	56.20	2.500	6.92	3.50	3.61
0.517	6.45	1.517	27.48	2.517	5.99	3.52	3.35
0.533	6.45	1.533	27.48	2.533	5.99	3.53	3.35
0.550	6.45	1.550	27.48	2.550	5.99	3.55	3.35
0.567	6.45	1.567	27.48	2.567	5.99	3.57	3.35
0.583	6.45	1.583	27.48	2.583	5.99	3.58	3.35
0.600	6.45	1.600	27.48	2.600	5.99	3.60	3.35
0.617	6.45	1.617	27.48	2.617	5.99	3.62	3.35
0.633	6.45	1.633	27.48	2.633	5.99	3.63	3.35
0.650	6.45	1.650	27.48	2.650	5.99	3.65	3.35
0.667	6.45	1.667	27.48	2.667	5.99	3.67	3.35
0.683	9.06	1.683	17.59	2.683	5.29	3.68	3.13
0.700	9.06	1.700	17.59	2.700	5.29	3.70	3.13
0.717	9.06	1.717	17.59	2.717	5.29	3.72	3.13
0.733	9.06	1.733	17.59	2.733	5.29	3.73	3.13
0.750	9.06	1.750	17.59	2.750	5.29	3.75	3.13
0.767	9.06	1.767	17.59	2.767	5.29	3.77	3.13
0.783	9.06	1.783	17.59	2.783	5.29	3.78	3.13
0.800	9.06	1.800	17.59	2.800	5.29	3.80	3.13
0.817	9.06	1.817	17.59	2.817	5.29	3.82	3.13
0.833	9.06	1.833	17.59	2.833	5.29	3.83	3.13
0.850	15.16	1.850	12.78	2.850	4.74	3.85	2.93
0.867	15.16	1.867	12.78	2.867	4.74	3.87	2.93
0.883	15.16	1.883	12.78	2.883	4.74	3.88	2.93
0.900	15.16	1.900	12.78	2.900	4.74	3.90	2.93
0.917	15.16	1.917	12.78	2.917	4.74	3.92	2.93
0.933	15.16	1.933	12.78	2.933	4.74	3.93	2.93
0.950	15.16	1.950	12.78	2.950	4.74	3.95	2.93
0.967	15.16	1.967	12.78	2.967	4.74	3.97	2.93
0.983	15.16	1.983	12.78	2.983	4.74	3.98	2.93
1.000	15.16	2.000	12.78	3.000	4.74	4.00	2.93

Unit Hyd Qpeak (cms)= 0.394

PEAK FLOW (cms)= 0.061 (i)
TIME TO PEAK (hrs)= 1.850
RUNOFF VOLUME (mm)= 7.347
TOTAL RAINFALL (mm)= 71.708
RUNOFF COEFFICIENT = 0.102

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0104)	Area (ha)= 1.18	Curve Number (CN)= 32.0
ID= 1 DT= 1.0 min	Ia (mm)= 10.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.16	

Unit Hyd Qpeak (cms)= 0.281

PEAK FLOW (cms)= 0.025 (i)
TIME TO PEAK (hrs)= 1.533
RUNOFF VOLUME (mm)= 6.331
TOTAL RAINFALL (mm)= 71.708
RUNOFF COEFFICIENT = 0.088

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0102)	Area (ha)= 0.90	Curve Number (CN)= 32.0
ID= 1 DT= 1.0 min	Ia (mm)= 10.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.12	

Unit Hyd Qpeak (cms)= 0.288

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 1.450
RUNOFF VOLUME (mm)= 6.331
TOTAL RAINFALL (mm)= 71.708
RUNOFF COEFFICIENT = 0.088

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0101)	Area (ha)= 2.26	Curve Number (CN)= 37.0
ID= 1 DT= 1.0 min	Ia (mm)= 8.86	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.24	

Unit Hyd Qpeak (cms)= 0.360

PEAK FLOW (cms)= 0.050 (i)
TIME TO PEAK (hrs)= 1.633
RUNOFF VOLUME (mm)= 7.974
TOTAL RAINFALL (mm)= 71.708
RUNOFF COEFFICIENT = 0.111

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0601)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0101):	2.26	0.050	1.63	7.97
+ ID2= 2 (0102):	0.90	0.022	1.45	6.33
ID = 3 (0601):	3.17	0.067	1.57	7.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)					
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0601):	3.17	0.067	1.57	7.50
+ ID2= 2 (0103):	4.02	0.061	1.85	7.35
ID = 1 (0601):	7.19	0.118	1.70	7.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0601):	7.19	0.118	1.70	7.42
+ ID2= 2 (0104):	1.18	0.025	1.53	6.33
ID = 3 (0601):	8.37	0.139	1.65	7.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0105)	Area (ha)= 0.25	Curve Number (CN)= 41.0

ID= 1 DT= 1.0 min	Ia (mm)= 7.50 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.21

Unit Hyd Qpeak (cms)= 0.046

PEAK FLOW (cms)= 0.007 (i)
TIME TO PEAK (hrs)= 1.583
RUNOFF VOLUME (mm)= 9.592
TOTAL RAINFALL (mm)= 71.708
RUNOFF COEFFICIENT = 0.134

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

** SIMULATION NUMBER: 8 **

READ STORM	Filename: C:\Users\jingram\AppD ata\Local\Temp\ 7da980c9-fae1-48d3-a7d7-8807c07333a4\fd708aa7
Ptotal=193.00 mm	Comments: REGIONAL STORM TIMMINS - 12 hour storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
1.00	15.00	4.00	3.00	7.00	43.00	10.00	13.00
2.00	20.00	5.00	5.00	8.00	20.00	11.00	13.00
3.00	10.00	6.00	20.00	9.00	23.00	12.00	8.00

CALIB NASHYD (0103)	Area (ha)= 4.02 Curve Number (CN)= 35.0
ID= 1 DT= 1.0 min	Ia (mm)= 9.05 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.39

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	15.00	3.017	3.00	6.017	43.00	9.02	13.00
0.033	15.00	3.033	3.00	6.033	43.00	9.03	13.00
0.050	15.00	3.050	3.00	6.050	43.00	9.05	13.00
0.067	15.00	3.067	3.00	6.067	43.00	9.07	13.00
0.083	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.100	15.00	3.100	3.00	6.100	43.00	9.10	13.00
0.117	15.00	3.117	3.00	6.117	43.00	9.12	13.00
0.133	15.00	3.133	3.00	6.133	43.00	9.13	13.00
0.150	15.00	3.150	3.00	6.150	43.00	9.15	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.183	15.00	3.183	3.00	6.183	43.00	9.18	13.00
0.200	15.00	3.200	3.00	6.200	43.00	9.20	13.00
0.217	15.00	3.217	3.00	6.217	43.00	9.22	13.00
0.233	15.00	3.233	3.00	6.233	43.00	9.23	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.267	15.00	3.267	3.00	6.267	43.00	9.27	13.00
0.283	15.00	3.283	3.00	6.283	43.00	9.28	13.00
0.300	15.00	3.300	3.00	6.300	43.00	9.30	13.00
0.317	15.00	3.317	3.00	6.317	43.00	9.32	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.350	15.00	3.350	3.00	6.350	43.00	9.35	13.00
0.367	15.00	3.367	3.00	6.367	43.00	9.37	13.00
0.383	15.00	3.383	3.00	6.383	43.00	9.38	13.00
0.400	15.00	3.400	3.00	6.400	43.00	9.40	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.433	15.00	3.433	3.00	6.433	43.00	9.43	13.00
0.450	15.00	3.450	3.00	6.450	43.00	9.45	13.00
0.467	15.00	3.467	3.00	6.467	43.00	9.47	13.00
0.483	15.00	3.483	3.00	6.483	43.00	9.48	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.517	15.00	3.517	3.00	6.517	43.00	9.52	13.00
0.533	15.00	3.533	3.00	6.533	43.00	9.53	13.00
0.550	15.00	3.550	3.00	6.550	43.00	9.55	13.00
0.567	15.00	3.567	3.00	6.567	43.00	9.57	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.600	15.00	3.600	3.00	6.600	43.00	9.60	13.00
0.617	15.00	3.617	3.00	6.617	43.00	9.62	13.00
0.633	15.00	3.633	3.00	6.633	43.00	9.63	13.00
0.650	15.00	3.650	3.00	6.650	43.00	9.65	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.683	15.00	3.683	3.00	6.683	43.00	9.68	13.00
0.700	15.00	3.700	3.00	6.700	43.00	9.70	13.00
0.717	15.00	3.717	3.00	6.717	43.00	9.72	13.00
0.733	15.00	3.733	3.00	6.733	43.00	9.73	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.767	15.00	3.767	3.00	6.767	43.00	9.77	13.00
0.783	15.00	3.783	3.00	6.783	43.00	9.78	13.00
0.800	15.00	3.800	3.00	6.800	43.00	9.80	13.00
0.817	15.00	3.817	3.00	6.817	43.00	9.82	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.850	15.00	3.850	3.00	6.850	43.00	9.85	13.00
0.867	15.00	3.867	3.00	6.867	43.00	9.87	13.00
0.883	15.00	3.883	3.00	6.883	43.00	9.88	13.00
0.900	15.00	3.900	3.00	6.900	43.00	9.90	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
0.933	15.00	3.933	3.00	6.933	43.00	9.93	13.00
0.950	15.00	3.950	3.00	6.950	43.00	9.95	13.00
0.967	15.00	3.967	3.00	6.967	43.00	9.97	13.00
0.983	15.00	3.983	3.00	6.983	43.00	9.98	13.00
1.000	15.00	4.000	3.00	7.000	42.95	10.00	13.00
1.017	20.00	4.017	5.00	7.017	20.00	10.02	13.00
1.033	20.00	4.033	5.00	7.033	20.00	10.03	13.00
1.050	20.00	4.050	5.00	7.050	20.00	10.05	13.00
1.067	20.00	4.067	5.00	7.067	20.00	10.07	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.100	20.00	4.100	5.00	7.100	20.00	10.10	13.00
1.117	20.00	4.117	5.00	7.117	20.00	10.12	13.00
1.133	20.00	4.133	5.00	7.133	20.00	10.13	13.00
1.150	20.00	4.150	5.00	7.150	20.00	10.15	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.183	20.00	4.183	5.00	7.183	20.00	10.18	13.00
1.200	20.00	4.200	5.00	7.200	20.00	10.20	13.00
1.217	20.00	4.217	5.00	7.217	20.00	10.22	13.00
1.233	20.00	4.233	5.00	7.233	20.00	10.23	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.267	20.00	4.267	5.00	7.267	20.00	10.27	13.00
1.283	20.00	4.283	5.00	7.283	20.00	10.28	13.00
1.300	20.00	4.300	5.00	7.300	20.00	10.30	13.00
1.317	20.00	4.317	5.00	7.317	20.00	10.32	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.350	20.00	4.350	5.00	7.350	20.00	10.35	13.00
1.367	20.00	4.367	5.00	7.367	20.00	10.37	13.00
1.383	20.00	4.383	5.00	7.383	20.00	10.38	13.00
1.400	20.00	4.400	5.00	7.400	20.00	10.40	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.433	20.00	4.433	5.00	7.433	20.00	10.43	13.00
1.450	20.00	4.450	5.00	7.450	20.00	10.45	13.00
1.467	20.00	4.467	5.00	7.467	20.00	10.47	13.00
1.483	20.00	4.483	5.00	7.483	20.00	10.48	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.517	20.00	4.517	5.00	7.517	20.00	10.52	13.00
1.533	20.00	4.533	5.00	7.533	20.00	10.53	13.00
1.550	20.00	4.550	5.00	7.550	20.00	10.55	13.00
1.567	20.00	4.567	5.00	7.567	20.00	10.57	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.600	20.00	4.600	5.00	7.600	20.00	10.60	13.00
1.617	20.00	4.617	5.00	7.617	20.00	10.62	13.00
1.633	20.00	4.633	5.00	7.633	20.00	10.63	13.00
1.650	20.00	4.650	5.00	7.650	20.00	10.65	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.683	20.00	4.683	5.00	7.683	20.00	10.68	13.00
1.700	20.00	4.700	5.00	7.700	20.00	10.70	13.00
1.717	20.00	4.717	5.00	7.717	20.00	10.72	13.00
1.733	20.00	4.733	5.00	7.733	20.00	10.73	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.767	20.00	4.767	5.00	7.767	20.00	10.77	13.00
1.783	20.00	4.783	5.00	7.783	20.00	10.78	13.00
1.800	20.00	4.800	5.00	7.800	20.00	10.80	13.00
1.817	20.00	4.817	5.00	7.817	20.00	10.82	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.850	20.00	4.850	5.00	7.850	20.00	10.85	13.00
1.867	20.00	4.867	5.00	7.867	20.00	10.87	13.00
1.883	20.00	4.883	5.00	7.883	20.00	10.88	13.00
1.900	20.00	4.900	5.00	7.900	20.00	10.90	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
1.933	20.00	4.933	5.00	7.933	20.00	10.93	13.00
1.950	20.00	4.950	5.00	7.950	20.00	10.95	13.00
1.967	20.00	4.967	5.00	7.967	20.00	10.97	13.00
1.983	20.00	4.983	5.00	7.983	20.00	10.98	13.00
2.000	20.00	5.000	5.01	8.000	20.01	11.00	13.00
2.017	10.00	5.017	20.00	8.017	23.00	11.02	8.00
2.033	10.00	5.033	20.00	8.033	23.00	11.03	8.00
2.050	10.00	5.050	20.00	8.050	23.00	11.05	8.00

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              2.067   10.00 | 5.067   20.00 | 8.067   23.00 | 11.07    8.00
              2.083   10.00 | 5.083   20.00 | 8.083   23.00 | 11.08    8.00
              2.100   10.00 | 5.100   20.00 | 8.100   23.00 | 11.10    8.00
              2.117   10.00 | 5.117   20.00 | 8.117   23.00 | 11.12    8.00
              2.133   10.00 | 5.133   20.00 | 8.133   23.00 | 11.13    8.00
              2.150   10.00 | 5.150   20.00 | 8.150   23.00 | 11.15    8.00
              2.167   10.00 | 5.167   20.00 | 8.167   23.00 | 11.17    8.00
              2.183   10.00 | 5.183   20.00 | 8.183   23.00 | 11.18    8.00
              2.200   10.00 | 5.200   20.00 | 8.200   23.00 | 11.20    8.00
              2.217   10.00 | 5.217   20.00 | 8.217   23.00 | 11.22    8.00
              2.233   10.00 | 5.233   20.00 | 8.233   23.00 | 11.23    8.00
              2.250   10.00 | 5.250   20.00 | 8.250   23.00 | 11.25    8.00
              2.267   10.00 | 5.267   20.00 | 8.267   23.00 | 11.27    8.00
              2.283   10.00 | 5.283   20.00 | 8.283   23.00 | 11.28    8.00
              2.300   10.00 | 5.300   20.00 | 8.300   23.00 | 11.30    8.00
              2.317   10.00 | 5.317   20.00 | 8.317   23.00 | 11.32    8.00
              2.333   10.00 | 5.333   20.00 | 8.333   23.00 | 11.33    8.00
              2.350   10.00 | 5.350   20.00 | 8.350   23.00 | 11.35    8.00
              2.367   10.00 | 5.367   20.00 | 8.367   23.00 | 11.37    8.00
              2.383   10.00 | 5.383   20.00 | 8.383   23.00 | 11.38    8.00
              2.400   10.00 | 5.400   20.00 | 8.400   23.00 | 11.40    8.00
              2.417   10.00 | 5.417   20.00 | 8.417   23.00 | 11.42    8.00
              2.433   10.00 | 5.433   20.00 | 8.433   23.00 | 11.43    8.00
              2.450   10.00 | 5.450   20.00 | 8.450   23.00 | 11.45    8.00
              2.467   10.00 | 5.467   20.00 | 8.467   23.00 | 11.47    8.00
              2.483   10.00 | 5.483   20.00 | 8.483   23.00 | 11.48    8.00
              2.500   10.00 | 5.500   20.00 | 8.500   23.00 | 11.50    8.00
              2.517   10.00 | 5.517   20.00 | 8.517   23.00 | 11.52    8.00
              2.533   10.00 | 5.533   20.00 | 8.533   23.00 | 11.53    8.00
              2.550   10.00 | 5.550   20.00 | 8.550   23.00 | 11.55    8.00
              2.567   10.00 | 5.567   20.00 | 8.567   23.00 | 11.57    8.00
              2.583   10.00 | 5.583   20.00 | 8.583   23.00 | 11.58    8.00
              2.600   10.00 | 5.600   20.00 | 8.600   23.00 | 11.60    8.00
              2.617   10.00 | 5.617   20.00 | 8.617   23.00 | 11.62    8.00
              2.633   10.00 | 5.633   20.00 | 8.633   23.00 | 11.63    8.00
              2.650   10.00 | 5.650   20.00 | 8.650   23.00 | 11.65    8.00
              2.667   10.00 | 5.667   20.00 | 8.667   23.00 | 11.67    8.00
              2.683   10.00 | 5.683   20.00 | 8.683   23.00 | 11.68    8.00
              2.700   10.00 | 5.700   20.00 | 8.700   23.00 | 11.70    8.00
              2.717   10.00 | 5.717   20.00 | 8.717   23.00 | 11.72    8.00
              2.733   10.00 | 5.733   20.00 | 8.733   23.00 | 11.73    8.00
              2.750   10.00 | 5.750   20.00 | 8.750   23.00 | 11.75    8.00
              2.767   10.00 | 5.767   20.00 | 8.767   23.00 | 11.77    8.00
              2.783   10.00 | 5.783   20.00 | 8.783   23.00 | 11.78    8.00
              2.800   10.00 | 5.800   20.00 | 8.800   23.00 | 11.80    8.00
              2.817   10.00 | 5.817   20.00 | 8.817   23.00 | 11.82    8.00
              2.833   10.00 | 5.833   20.00 | 8.833   23.00 | 11.83    8.00
              2.850   10.00 | 5.850   20.00 | 8.850   23.00 | 11.85    8.00
              2.867   10.00 | 5.867   20.00 | 8.867   23.00 | 11.87    8.00
              2.883   10.00 | 5.883   20.00 | 8.883   23.00 | 11.88    8.00
              2.900   10.00 | 5.900   20.00 | 8.900   23.00 | 11.90    8.00
              2.917   10.00 | 5.917   20.00 | 8.917   23.00 | 11.92    8.00
              2.933   10.00 | 5.933   20.00 | 8.933   23.00 | 11.93    8.00
              2.950   10.00 | 5.950   20.00 | 8.950   23.00 | 11.95    8.00
              2.967   10.00 | 5.967   20.00 | 8.967   23.00 | 11.97    8.00
              2.983   10.00 | 5.983   20.00 | 8.983   23.00 | 11.98    8.00
              3.000   10.00 | 6.000   20.03 | 9.000   22.98 | 12.00    8.00

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.132 (i)
     TIME TO PEAK    (hrs)=   7.150
     RUNOFF VOLUME    (mm)=  51.608
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.267

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.039 (i)
     TIME TO PEAK    (hrs)=   7.017
     RUNOFF VOLUME    (mm)=  46.335
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.240

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.031 (i)
     TIME TO PEAK    (hrs)=   7.017
     RUNOFF VOLUME    (mm)=  46.334
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.240

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.087 (i)
     TIME TO PEAK    (hrs)=   7.050
     RUNOFF VOLUME    (mm)=  54.988
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.285

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (0101):      2.26   0.087     7.05     54.99
       + ID2= 2 (0102):      0.90   0.031     7.02     46.33
         ================================================
         ID = 3 (0601):      3.17   0.117     7.03     52.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 3 (0601):      3.17   0.117     7.03     52.52
       + ID2= 2 (0103):      4.02   0.132     7.15     51.61
         ================================================
         ID = 1 (0601):      7.19   0.246     7.05     52.01

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (0601):      7.19   0.246     7.05     52.01
       + ID2= 2 (0104):      1.18   0.039     7.02     46.33
         ================================================
         ID = 3 (0601):      8.37   0.285     7.05     51.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.011 (i)
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      TIME TO PEAK    (hrs)=   7.033
      RUNOFF VOLUME    (mm)=  62.447
      TOTAL RAINFALL   (mm)= 193.000
      RUNOFF COEFFICIENT   =   0.324

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 FINISH
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       V    V   I    SSSSS  U   U    A    L
       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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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\VO Suite 3.0\VO2\voin.dat
  Output  filename: C:\Users\jingram\AppData\Local\Temp\297fe064-6d37-460a-935c-4a533ffb288a\Scenario.out
  Summary filename: C:\Users\jingram\AppData\Local\Temp\297fe064-6d37-460a-935c-4a533ffb288a\Scenario.sum


DATE: 01/27/2019                          TIME: 11:10:07

USER:


COMMENTS: _____________________________________________________


----------------------------------------------------------------------------------------------------------------
  ****************************
  ** SIMULATION NUMBER:   1 **
  ****************************


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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              297fe064-6d37-460a-935c-4a533ffb288a\d374fae5
| Ptotal= 45.68 mm |    Comments: 2-Year Orillia 24-hour SCS Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.51 |  6.25    0.00 | 12.25    6.58 | 18.25    0.82
               0.50    0.49 |  6.50    0.00 | 12.50    6.58 | 18.50    0.82
               0.75    0.51 |  6.75    0.00 | 12.75    3.38 | 18.75    0.82
               1.00    0.49 |  7.00    0.00 | 13.00    3.38 | 19.00    0.82
               1.25    0.51 |  7.25    1.83 | 13.25    0.64 | 19.25    0.82
               1.50    0.49 |  7.50    1.83 | 13.50    0.64 | 19.50    0.82
               1.75    0.51 |  7.75    1.83 | 13.75    3.75 | 19.75    0.82
               2.00    0.49 |  8.00    1.83 | 14.00    3.75 | 20.00    0.82
               2.25    0.60 |  8.25    0.00 | 14.25    1.37 | 20.25    0.55
               2.50    0.58 |  8.50    0.00 | 14.50    1.37 | 20.50    0.55
               2.75    0.60 |  8.75    2.47 | 14.75    1.37 | 20.75    0.55
               3.00    0.58 |  9.00    2.47 | 15.00    1.37 | 21.00    0.55
               3.25    0.60 |  9.25    1.46 | 15.25    1.37 | 21.25    0.55
               3.50    0.58 |  9.50    1.46 | 15.50    1.37 | 21.50    0.55
               3.75    0.60 |  9.75    0.00 | 15.75    1.37 | 21.75    0.55
               4.00    0.58 | 10.00    3.29 | 16.00    1.37 | 22.00    0.55
               4.25    0.73 | 10.25    2.10 | 16.25    0.82 | 22.25    0.55
               4.50    0.73 | 10.50    2.10 | 16.50    0.82 | 22.50    0.55
               4.75    0.73 | 10.75    2.83 | 16.75    0.82 | 22.75    0.55
               5.00    0.73 | 11.00    2.83 | 17.00    0.82 | 23.00    0.55
               5.25    0.73 | 11.25    4.39 | 17.25    0.82 | 23.25    0.55
               5.50    0.73 | 11.50    4.39 | 17.50    0.82 | 23.50    0.55
               5.75    0.73 | 11.75   19.01 | 17.75    0.82 | 23.75    0.55
               6.00    0.73 | 12.00   50.45 | 18.00    0.82 | 24.00    0.55

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| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.51	6.017	0.00	12.017	6.61	18.02	0.82
0.033	0.51	6.033	0.00	12.033	6.58	18.03	0.82
0.050	0.51	6.050	0.00	12.050	6.58	18.05	0.82
0.067	0.51	6.067	0.00	12.067	6.58	18.07	0.82
0.083	0.51	6.083	0.00	12.083	6.58	18.08	0.82
0.100	0.51	6.100	0.00	12.100	6.58	18.10	0.82
0.117	0.51	6.117	0.00	12.117	6.58	18.12	0.82
0.133	0.51	6.133	0.00	12.133	6.58	18.13	0.82
0.150	0.51	6.150	0.00	12.150	6.58	18.15	0.82
0.167	0.51	6.167	0.00	12.167	6.58	18.17	0.82
0.183	0.51	6.183	0.00	12.183	6.58	18.18	0.82
0.200	0.51	6.200	0.00	12.200	6.58	18.20	0.82
0.217	0.51	6.217	0.00	12.217	6.58	18.22	0.82
0.233	0.51	6.233	0.00	12.233	6.58	18.23	0.82
0.250	0.51	6.250	0.00	12.250	6.58	18.25	0.82
0.267	0.49	6.267	0.00	12.267	6.58	18.27	0.82
0.283	0.49	6.283	0.00	12.283	6.58	18.28	0.82
0.300	0.49	6.300	0.00	12.300	6.58	18.30	0.82
0.317	0.49	6.317	0.00	12.317	6.58	18.32	0.82
0.333	0.49	6.333	0.00	12.333	6.58	18.33	0.82
0.350	0.49	6.350	0.00	12.350	6.58	18.35	0.82
0.367	0.49	6.367	0.00	12.367	6.58	18.37	0.82
0.383	0.49	6.383	0.00	12.383	6.58	18.38	0.82
0.400	0.49	6.400	0.00	12.400	6.58	18.40	0.82
0.417	0.49	6.417	0.00	12.417	6.58	18.42	0.82
0.433	0.49	6.433	0.00	12.433	6.58	18.43	0.82
0.450	0.49	6.450	0.00	12.450	6.58	18.45	0.82
0.467	0.49	6.467	0.00	12.467	6.58	18.47	0.82
0.483	0.49	6.483	0.00	12.483	6.58	18.48	0.82
0.500	0.49	6.500	0.00	12.500	6.58	18.50	0.82
0.517	0.51	6.517	0.00	12.517	3.38	18.52	0.82
0.533	0.51	6.533	0.00	12.533	3.38	18.53	0.82
0.550	0.51	6.550	0.00	12.550	3.38	18.55	0.82
0.567	0.51	6.567	0.00	12.567	3.38	18.57	0.82
0.583	0.51	6.583	0.00	12.583	3.38	18.58	0.82
0.600	0.51	6.600	0.00	12.600	3.38	18.60	0.82
0.617	0.51	6.617	0.00	12.617	3.38	18.62	0.82
0.633	0.51	6.633	0.00	12.633	3.38	18.63	0.82
0.650	0.51	6.650	0.00	12.650	3.38	18.65	0.82
0.667	0.51	6.667	0.00	12.667	3.38	18.67	0.82
0.683	0.51	6.683	0.00	12.683	3.38	18.68	0.82
0.700	0.51	6.700	0.00	12.700	3.38	18.70	0.82
0.717	0.51	6.717	0.00	12.717	3.38	18.72	0.82
0.733	0.51	6.733	0.00	12.733	3.38	18.73	0.82
0.750	0.51	6.750	0.00	12.750	3.38	18.75	0.82
0.767	0.49	6.767	0.00	12.767	3.38	18.77	0.82
0.783	0.49	6.783	0.00	12.783	3.38	18.78	0.82
0.800	0.49	6.800	0.00	12.800	3.38	18.80	0.82
0.817	0.49	6.817	0.00	12.817	3.38	18.82	0.82
0.833	0.49	6.833	0.00	12.833	3.38	18.83	0.82
0.850	0.49	6.850	0.00	12.850	3.38	18.85	0.82
0.867	0.49	6.867	0.00	12.867	3.38	18.87	0.82
0.883	0.49	6.883	0.00	12.883	3.38	18.88	0.82
0.900	0.49	6.900	0.00	12.900	3.38	18.90	0.82
0.917	0.49	6.917	0.00	12.917	3.38	18.92	0.82
0.933	0.49	6.933	0.00	12.933	3.38	18.93	0.82
0.950	0.49	6.950	0.00	12.950	3.38	18.95	0.82
0.967	0.49	6.967	0.00	12.967	3.38	18.97	0.82
0.983	0.49	6.983	0.00	12.983	3.38	18.98	0.82
1.000	0.49	7.000	0.00	13.000	3.38	19.00	0.82
1.017	0.51	7.017	1.83	13.017	0.64	19.02	0.82
1.033	0.51	7.033	1.83	13.033	0.64	19.03	0.82
1.050	0.51	7.050	1.83	13.050	0.64	19.05	0.82
1.067	0.51	7.067	1.83	13.067	0.64	19.07	0.82
1.083	0.51	7.083	1.83	13.083	0.64	19.08	0.82
1.100	0.51	7.100	1.83	13.100	0.64	19.10	0.82
1.117	0.51	7.117	1.83	13.117	0.64	19.12	0.82
1.133	0.51	7.133	1.83	13.133	0.64	19.13	0.82
1.150	0.51	7.150	1.83	13.150	0.64	19.15	0.82
1.167	0.51	7.167	1.83	13.167	0.64	19.17	0.82
1.183	0.51	7.183	1.83	13.183	0.64	19.18	0.82
1.200	0.51	7.200	1.83	13.200	0.64	19.20	0.82
1.217	0.51	7.217	1.83	13.217	0.64	19.22	0.82
1.233	0.51	7.233	1.83	13.233	0.64	19.23	0.82
1.250	0.51	7.250	1.83	13.250	0.64	19.25	0.82
1.267	0.49	7.267	1.83	13.267	0.64	19.27	0.82
1.283	0.49	7.283	1.83	13.283	0.64	19.28	0.82
1.300	0.49	7.300	1.83	13.300	0.64	19.30	0.82
1.317	0.49	7.317	1.83	13.317	0.64	19.32	0.82
1.333	0.49	7.333	1.83	13.333	0.64	19.33	0.82
1.350	0.49	7.350	1.83	13.350	0.64	19.35	0.82

1.367	0.49	7.367	1.83	13.367	0.64	19.37	0.82
1.383	0.49	7.383	1.83	13.383	0.64	19.38	0.82
1.400	0.49	7.400	1.83	13.400	0.64	19.40	0.82
1.417	0.49	7.417	1.83	13.417	0.64	19.42	0.82
1.433	0.49	7.433	1.83	13.433	0.64	19.43	0.82
1.450	0.49	7.450	1.83	13.450	0.64	19.45	0.82
1.467	0.49	7.467	1.83	13.467	0.64	19.47	0.82
1.483	0.49	7.483	1.83	13.483	0.64	19.48	0.82
1.500	0.49	7.500	1.83	13.500	0.64	19.50	0.82
1.517	0.51	7.517	1.83	13.517	3.74	19.52	0.82
1.533	0.51	7.533	1.83	13.533	3.75	19.53	0.82
1.550	0.51	7.550	1.83	13.550	3.75	19.55	0.82
1.567	0.51	7.567	1.83	13.567	3.75	19.57	0.82
1.583	0.51	7.583	1.83	13.583	3.75	19.58	0.82
1.600	0.51	7.600	1.83	13.600	3.75	19.60	0.82
1.617	0.51	7.617	1.83	13.617	3.75	19.62	0.82
1.633	0.51	7.633	1.83	13.633	3.75	19.63	0.82
1.650	0.51	7.650	1.83	13.650	3.75	19.65	0.82
1.667	0.51	7.667	1.83	13.667	3.75	19.67	0.82
1.683	0.51	7.683	1.83	13.683	3.75	19.68	0.82
1.700	0.51	7.700	1.83	13.700	3.75	19.70	0.82
1.717	0.51	7.717	1.83	13.717	3.75	19.72	0.82
1.733	0.51	7.733	1.83	13.733	3.75	19.73	0.82
1.750	0.51	7.750	1.83	13.750	3.75	19.75	0.82
1.767	0.49	7.767	1.83	13.767	3.75	19.77	0.82
1.783	0.49	7.783	1.83	13.783	3.75	19.78	0.82
1.800	0.49	7.800	1.83	13.800	3.75	19.80	0.82
1.817	0.49	7.817	1.83	13.817	3.75	19.82	0.82
1.833	0.49	7.833	1.83	13.833	3.75	19.83	0.82
1.850	0.49	7.850	1.83	13.850	3.75	19.85	0.82
1.867	0.49	7.867	1.83	13.867	3.75	19.87	0.82
1.883	0.49	7.883	1.83	13.883	3.75	19.88	0.82
1.900	0.49	7.900	1.83	13.900	3.75	19.90	0.82
1.917	0.49	7.917	1.83	13.917	3.75	19.92	0.82
1.933	0.49	7.933	1.83	13.933	3.75	19.93	0.82
1.950	0.49	7.950	1.83	13.950	3.75	19.95	0.82
1.967	0.49	7.967	1.83	13.967	3.75	19.97	0.82
1.983	0.49	7.983	1.83	13.983	3.75	19.98	0.82
2.000	0.49	8.000	1.82	14.000	3.75	20.00	0.82
2.017	0.60	8.017	0.00	14.017	1.38	20.02	0.55
2.033	0.60	8.033	0.00	14.033	1.37	20.03	0.55
2.050	0.60	8.050	0.00	14.050	1.37	20.05	0.55
2.067	0.60	8.067	0.00	14.067	1.37	20.07	0.55
2.083	0.60	8.083	0.00	14.083	1.37	20.08	0.55
2.100	0.60	8.100	0.00	14.100	1.37	20.10	0.55
2.117	0.60	8.117	0.00	14.117	1.37	20.12	0.55
2.133	0.60	8.133	0.00	14.133	1.37	20.13	0.55
2.150	0.60	8.150	0.00	14.150	1.37	20.15	0.55
2.167	0.60	8.167	0.00	14.167	1.37	20.17	0.55
2.183	0.60	8.183	0.00	14.183	1.37	20.18	0.55
2.200	0.60	8.200	0.00	14.200	1.37	20.20	0.55
2.217	0.60	8.217	0.00	14.217	1.37	20.22	0.55
2.233	0.60	8.233	0.00	14.233	1.37	20.23	0.55
2.250	0.60	8.250	0.00	14.250	1.37	20.25	0.55
2.267	0.58	8.267	0.00	14.267	1.37	20.27	0.55
2.283	0.58	8.283	0.00	14.283	1.37	20.28	0.55
2.300	0.58	8.300	0.00	14.300	1.37	20.30	0.55
2.317	0.58	8.317	0.00	14.317	1.37	20.32	0.55
2.333	0.58	8.333	0.00	14.333	1.37	20.33	0.55
2.350	0.58	8.350	0.00	14.350	1.37	20.35	0.55
2.367	0.58	8.367	0.00	14.367	1.37	20.37	0.55
2.383	0.58	8.383	0.00	14.383	1.37	20.38	0.55
2.400	0.58	8.400	0.00	14.400	1.37	20.40	0.55
2.417	0.58	8.417	0.00	14.417	1.37	20.42	0.55
2.433	0.58	8.433	0.00	14.433	1.37	20.43	0.55
2.450	0.58	8.450	0.00	14.450	1.37	20.45	0.55
2.467	0.58	8.467	0.00	14.467	1.37	20.47	0.55
2.483	0.58	8.483	0.00	14.483	1.37	20.48	0.55
2.500	0.58	8.500	0.01	14.500	1.37	20.50	0.55
2.517	0.60	8.517	2.47	14.517	1.37	20.52	0.55
2.533	0.60	8.533	2.47	14.533	1.37	20.53	0.55
2.550	0.60	8.550	2.47	14.550	1.37	20.55	0.55
2.567	0.60	8.567	2.47	14.567	1.37	20.57	0.55
2.583	0.60	8.583	2.47	14.583	1.37	20.58	0.55
2.600	0.60	8.600	2.47	14.600	1.37	20.60	0.55
2.617	0.60	8.617	2.47	14.617	1.37	20.62	0.55
2.633	0.60	8.633	2.47	14.633	1.37	20.63	0.55
2.650	0.60	8.650	2.47	14.650	1.37	20.65	0.55
2.667	0.60	8.667	2.47	14.667	1.37	20.67	0.55
2.683	0.60	8.683	2.47	14.683	1.37	20.68	0.55
2.700	0.60	8.700	2.47	14.700	1.37	20.70	0.55
2.717	0.60	8.717	2.47	14.717	1.37	20.72	0.55
2.733	0.60	8.733	2.47	14.733	1.37	20.73	0.55
2.750	0.60	8.750	2.47	14.750	1.37	20.75	0.55
2.767	0.58	8.767	2.47	14.767	1.37	20.77	0.55
2.783	0.58	8.783	2.47	14.783	1.37	20.78	0.55
2.800	0.58	8.800	2.47	14.800	1.37	20.80	0.55
2.817	0.58	8.817	2.47	14.817	1.37	20.82	0.55
2.833	0.58	8.833	2.47	14.833	1.37	20.83	0.55
2.850	0.58	8.850	2.47	14.850	1.37	20.85	0.55
2.867	0.58	8.867	2.47	14.867	1.37	20.87	0.55
2.883	0.58	8.883	2.47	14.883	1.37	20.88	0.55
2.900	0.58	8.900	2.47	14.900	1.37	20.90	0.55
2.917	0.58	8.917	2.47	14.917	1.37	20.92	0.55
2.933	0.58	8.933	2.47	14.933	1.37	20.93	0.55
2.950	0.58	8.950	2.47	14.950	1.37	20.95	0.55
2.967	0.58	8.967	2.47	14.967	1.37	20.97	0.55
2.983	0.58	8.983	2.47	14.983	1.37	20.98	0.55
3.000	0.58	9.000	2.47	15.000	1.37	21.00	0.55
3.017	0.60	9.017	1.46	15.017	1.37	21.02	0.55
3.033	0.60	9.033	1.46	15.033	1.37	21.03	0.55
3.050	0.60	9.050	1.46	15.050	1.37	21.05	0.55
3.067	0.60	9.067	1.46	15.067	1.37	21.07	0.55
3.083	0.60	9.083	1.46	15.083	1.37	21.08	0.55
3.100	0.60	9.100	1.46	15.100	1.37	21.10	0.55
3.117	0.60	9.117	1.46	15.117	1.37	21.12	0.55
3.133	0.60	9.133	1.46	15.133	1.37	21.13	0.55
3.150	0.60	9.150	1.46	15.150	1.37	21.15	0.55
3.167	0.60	9.167	1.46	15.167	1.37	21.17	0.55
3.183	0.60	9.183	1.46	15.183	1.37	21.18	0.55
3.200	0.60	9.200	1.46	15.200	1.37	21.20	0.55
3.217	0.60	9.217	1.46	15.217	1.37	21.22	0.55
3.233	0.60	9.233	1.46	15.233	1.37	21.23	0.55
3.250	0.60	9.250	1.46	15.250	1.37	21.25	0.55
3.267	0.58	9.267	1.46	15.267	1.37	21.27	0.55
3.283	0.58	9.283	1.46	15.283	1.37	21.28	0.55
3.300	0.58	9.300	1.46	15.300	1.37	21.30	0.55
3.317	0.58	9.317	1.46	15.317	1.37	21.32	0.55
3.333	0.58	9.333	1.46	15.333	1.37	21.33	0.55
3.350	0.58	9.350	1.46	15.350	1.37	21.35	0.55
3.367	0.58	9.367	1.46	15.367	1.37	21.37	0.55
3.383	0.58	9.383	1.46	15.383	1.37	21.38	0.55
3.400	0.58	9.400	1.46	15.400	1.37	21.40	0.55
3.417	0.58	9.417	1.46	15.417	1.37	21.42	0.55
3.433	0.58	9.433	1.46	15.433	1.37	21.43	0.55
3.450	0.58	9.450	1.46	15.450	1.37	21.45	0.55
3.467	0.58	9.467	1.46	15.467	1.37	21.47	0.55
3.483	0.58	9.483	1.46	15.483	1.37	21.48	0.55
3.500	0.58	9.500	1.46	15.500	1.37	21.50	0.55
3.517	0.60	9.517	0.00	15.517	1.37	21.52	0.55
3.533	0.60	9.533	0.00	15.533	1.37	21.53	0.55
3.550	0.60	9.550	0.00	15.550	1.37	21.55	0.55
3.567	0.60	9.567	0.00	15.567	1.37	21.57	0.55
3.583	0.60	9.583	0.00	15.583	1.37	21.58	0.55
3.600	0.60	9.600	0.00	15.600	1.37	21.60	0.55
3.617	0.60	9.617	0.00	15.617	1.37	21.62	0.55
3.633	0.60	9.633	0.00	15.633	1.37	21.63	0.55
3.650	0.60	9.650	0.00	15.650	1.37	21.65	0.55
3.667	0.60	9.667	0.00	15.667	1.37	21.67	0.55
3.683	0.60	9.683	0.00	15.683	1.37	21.68	0.55
3.700	0.60	9.700	0.00	15.700	1.37	21.70	0.55
3.717	0.60	9.717	0.00	15.717	1.37	21.72	0.55
3.733	0.60	9.733	0.00	15.733	1.37	21.73	0.55
3.750	0.60	9.750	0.00	15.750	1.37	21.75	0.55
3.767	0.58	9.767	3.29	15.767	1.37	21.77	0.55
3.783	0.58	9.783	3.29	15.783	1.37	21.78	0.55
3.800	0.58	9.800	3.29	15.800	1.37	21.80	0.55
3.817	0.58	9.817	3.29	15.817	1.37	21.82	0.55
3.833	0.58	9.833	3.29	15.833	1.37	21.83	0.55
3.850	0.58	9.850	3.29	15.850	1.37	21.85	0.55
3.867	0.58	9.867	3.29	15.867	1.37	21.87	0.55
3.883	0.58	9.883	3.29	15.883	1.37	21.88	0.55
3.900	0.58	9.900	3.29	15.900	1.37	21.90	0.55
3.917	0.58	9.917	3.29	15.917	1.37	21.92	0.55
3.933	0.58	9.933	3.29	15.933	1.37	21.93	0.55
3.950	0.58	9.950	3.29	15.950	1.37	21.95	0.55
3.967	0.58	9.967	3.29	15.967	1.37	21.97	0.55
3.983	0.58	9.983	3.29	15.983	1.37	21.98	0.55
4.000	0.58	10.000	3.29	16.000	1.37	22.00	0.55
4.017	0.73	10.017	2.10	16.017	0.82	22.02	0.55
4.033	0.73	10.033	2.10	16.033	0.82	22.03	0.55
4.050	0.73	10.050	2.10	16.050	0.82	22.05	0.55
4.067	0.73	10.067	2.10	16.067	0.82	22.07	0.55
4.083	0.73	10.083	2.10	16.083	0.82	22.08	0.55
4.100	0.73	10.100	2.10	16.100	0.82	22.10	0.55
4.117	0.73	10.117	2.10	16.117	0.82	22.12	0.55
4.133	0.73	10.133	2.10	16.133	0.82	22.13	0.55
4.150	0.73	10.150	2.10	16.150	0.82	22.15	0.55

4.167	0.73	10.167	2.10	16.167	0.82	22.17	0.55
4.183	0.73	10.183	2.10	16.183	0.82	22.18	0.55
4.200	0.73	10.200	2.10	16.200	0.82	22.20	0.55
4.217	0.73	10.217	2.10	16.217	0.82	22.22	0.55
4.233	0.73	10.233	2.10	16.233	0.82	22.23	0.55
4.250	0.73	10.250	2.10	16.250	0.82	22.25	0.55
4.267	0.73	10.267	2.10	16.267	0.82	22.27	0.55
4.283	0.73	10.283	2.10	16.283	0.82	22.28	0.55
4.300	0.73	10.300	2.10	16.300	0.82	22.30	0.55
4.317	0.73	10.317	2.10	16.317	0.82	22.32	0.55
4.333	0.73	10.333	2.10	16.333	0.82	22.33	0.55
4.350	0.73	10.350	2.10	16.350	0.82	22.35	0.55
4.367	0.73	10.367	2.10	16.367	0.82	22.37	0.55
4.383	0.73	10.383	2.10	16.383	0.82	22.38	0.55
4.400	0.73	10.400	2.10	16.400	0.82	22.40	0.55
4.417	0.73	10.417	2.10	16.417	0.82	22.42	0.55
4.433	0.73	10.433	2.10	16.433	0.82	22.43	0.55
4.450	0.73	10.450	2.10	16.450	0.82	22.45	0.55
4.467	0.73	10.467	2.10	16.467	0.82	22.47	0.55
4.483	0.73	10.483	2.10	16.483	0.82	22.48	0.55
4.500	0.73	10.500	2.10	16.500	0.82	22.50	0.55
4.517	0.73	10.517	2.83	16.517	0.82	22.52	0.55
4.533	0.73	10.533	2.83	16.533	0.82	22.53	0.55
4.550	0.73	10.550	2.83	16.550	0.82	22.55	0.55
4.567	0.73	10.567	2.83	16.567	0.82	22.57	0.55
4.583	0.73	10.583	2.83	16.583	0.82	22.58	0.55
4.600	0.73	10.600	2.83	16.600	0.82	22.60	0.55
4.617	0.73	10.617	2.83	16.617	0.82	22.62	0.55
4.633	0.73	10.633	2.83	16.633	0.82	22.63	0.55
4.650	0.73	10.650	2.83	16.650	0.82	22.65	0.55
4.667	0.73	10.667	2.83	16.667	0.82	22.67	0.55
4.683	0.73	10.683	2.83	16.683	0.82	22.68	0.55
4.700	0.73	10.700	2.83	16.700	0.82	22.70	0.55
4.717	0.73	10.717	2.83	16.717	0.82	22.72	0.55
4.733	0.73	10.733	2.83	16.733	0.82	22.73	0.55
4.750	0.73	10.750	2.83	16.750	0.82	22.75	0.55
4.767	0.73	10.767	2.83	16.767	0.82	22.77	0.55
4.783	0.73	10.783	2.83	16.783	0.82	22.78	0.55
4.800	0.73	10.800	2.83	16.800	0.82	22.80	0.55
4.817	0.73	10.817	2.83	16.817	0.82	22.82	0.55
4.833	0.73	10.833	2.83	16.833	0.82	22.83	0.55
4.850	0.73	10.850	2.83	16.850	0.82	22.85	0.55
4.867	0.73	10.867	2.83	16.867	0.82	22.87	0.55
4.883	0.73	10.883	2.83	16.883	0.82	22.88	0.55
4.900	0.73	10.900	2.83	16.900	0.82	22.90	0.55
4.917	0.73	10.917	2.83	16.917	0.82	22.92	0.55
4.933	0.73	10.933	2.83	16.933	0.82	22.93	0.55
4.950	0.73	10.950	2.83	16.950	0.82	22.95	0.55
4.967	0.73	10.967	2.83	16.967	0.82	22.97	0.55
4.983	0.73	10.983	2.83	16.983	0.82	22.98	0.55
5.000	0.73	11.000	2.83	17.000	0.82	23.00	0.55
5.017	0.73	11.017	4.39	17.017	0.82	23.02	0.55
5.033	0.73	11.033	4.39	17.033	0.82	23.03	0.55
5.050	0.73	11.050	4.39	17.050	0.82	23.05	0.55
5.067	0.73	11.067	4.39	17.067	0.82	23.07	0.55
5.083	0.73	11.083	4.39	17.083	0.82	23.08	0.55
5.100	0.73	11.100	4.39	17.100	0.82	23.10	0.55
5.117	0.73	11.117	4.39	17.117	0.82	23.12	0.55
5.133	0.73	11.133	4.39	17.133	0.82	23.13	0.55
5.150	0.73	11.150	4.39	17.150	0.82	23.15	0.55
5.167	0.73	11.167	4.39	17.167	0.82	23.17	0.55
5.183	0.73	11.183	4.39	17.183	0.82	23.18	0.55
5.200	0.73	11.200	4.39	17.200	0.82	23.20	0.55
5.217	0.73	11.217	4.39	17.217	0.82	23.22	0.55
5.233	0.73	11.233	4.39	17.233	0.82	23.23	0.55
5.250	0.73	11.250	4.39	17.250	0.82	23.25	0.55
5.267	0.73	11.267	4.39	17.267	0.82	23.27	0.55
5.283	0.73	11.283	4.39	17.283	0.82	23.28	0.55
5.300	0.73	11.300	4.39	17.300	0.82	23.30	0.55
5.317	0.73	11.317	4.39	17.317	0.82	23.32	0.55
5.333	0.73	11.333	4.39	17.333	0.82	23.33	0.55
5.350	0.73	11.350	4.39	17.350	0.82	23.35	0.55
5.367	0.73	11.367	4.39	17.367	0.82	23.37	0.55
5.383	0.73	11.383	4.39	17.383	0.82	23.38	0.55
5.400	0.73	11.400	4.39	17.400	0.82	23.40	0.55
5.417	0.73	11.417	4.39	17.417	0.82	23.42	0.55
5.433	0.73	11.433	4.39	17.433	0.82	23.43	0.55
5.450	0.73	11.450	4.39	17.450	0.82	23.45	0.55
5.467	0.73	11.467	4.39	17.467	0.82	23.47	0.55
5.483	0.73	11.483	4.39	17.483	0.82	23.48	0.55
5.500	0.73	11.500	4.39	17.500	0.82	23.50	0.55
5.517	0.73	11.517	19.01	17.517	0.82	23.52	0.55
5.533	0.73	11.533	19.01	17.533	0.82	23.53	0.55
5.550	0.73	11.550	19.01	17.550	0.82	23.55	0.55
5.567	0.73	11.567	19.01	17.567	0.82	23.57	0.55
5.583	0.73	11.583	19.01	17.583	0.82	23.58	0.55
5.600	0.73	11.600	19.01	17.600	0.82	23.60	0.55
5.617	0.73	11.617	19.01	17.617	0.82	23.62	0.55
5.633	0.73	11.633	19.01	17.633	0.82	23.63	0.55
5.650	0.73	11.650	19.01	17.650	0.82	23.65	0.55
5.667	0.73	11.667	19.01	17.667	0.82	23.67	0.55
5.683	0.73	11.683	19.01	17.683	0.82	23.68	0.55
5.700	0.73	11.700	19.01	17.700	0.82	23.70	0.55
5.717	0.73	11.717	19.01	17.717	0.82	23.72	0.55
5.733	0.73	11.733	19.01	17.733	0.82	23.73	0.55
5.750	0.73	11.750	19.01	17.750	0.82	23.75	0.55
5.767	0.73	11.767	50.44	17.767	0.82	23.77	0.55
5.783	0.73	11.783	50.45	17.783	0.82	23.78	0.55
5.800	0.73	11.800	50.45	17.800	0.82	23.80	0.55
5.817	0.73	11.817	50.45	17.817	0.82	23.82	0.55
5.833	0.73	11.833	50.45	17.833	0.82	23.83	0.55
5.850	0.73	11.850	50.45	17.850	0.82	23.85	0.55
5.867	0.73	11.867	50.45	17.867	0.82	23.87	0.55
5.883	0.73	11.883	50.45	17.883	0.82	23.88	0.55
5.900	0.73	11.900	50.45	17.900	0.82	23.90	0.55
5.917	0.73	11.917	50.45	17.917	0.82	23.92	0.55
5.933	0.73	11.933	50.45	17.933	0.82	23.93	0.55
5.950	0.73	11.950	50.45	17.950	0.82	23.95	0.55
5.967	0.73	11.967	50.45	17.967	0.82	23.97	0.55
5.983	0.73	11.983	50.45	17.983	0.82	23.98	0.55
6.000	0.73	12.000	50.45	18.000	0.82	24.00	0.55

Unit Hyd Qpeak (cms)= 0.046

PEAK FLOW (cms)= 0.002 (i)
TIME TO PEAK (hrs)= 12.117
RUNOFF VOLUME (mm)= 2.728
TOTAL RAINFALL (mm)= 45.678
RUNOFF COEFFICIENT = 0.060

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0103)	Area (ha)=	4.02	Curve Number (CN)=	35.0
ID= 1 DT= 1.0 min	Ia (mm)=	9.05	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.39		

Unit Hyd Qpeak (cms)= 0.394

PEAK FLOW (cms)= 0.014 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 1.929
TOTAL RAINFALL (mm)= 45.678
RUNOFF COEFFICIENT = 0.042

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0102)	Area (ha)=	0.90	Curve Number (CN)=	32.0
ID= 1 DT= 1.0 min	Ia (mm)=	10.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.12		

Unit Hyd Qpeak (cms)= 0.288

PEAK FLOW (cms)= 0.006 (i)
TIME TO PEAK (hrs)= 12.050
RUNOFF VOLUME (mm)= 1.640
TOTAL RAINFALL (mm)= 45.678
RUNOFF COEFFICIENT = 0.036

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0101)	Area (ha)=	2.26	Curve Number (CN)=	37.0
ID= 1 DT= 1.0 min	Ia (mm)=	8.86	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.24		

Unit Hyd Qpeak (cms)= 0.360

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 12.150
RUNOFF VOLUME (mm)= 2.147

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     TOTAL RAINFALL   (mm)=  45.678
     RUNOFF COEFFICIENT   =   0.047

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.006 (i)
     TIME TO PEAK    (hrs)=  12.083
     RUNOFF VOLUME    (mm)=   1.635
     TOTAL RAINFALL   (mm)=  45.678
     RUNOFF COEFFICIENT   =   0.036

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0101):     2.26   0.012    12.15     2.15
        + ID2= 2 (0102):     0.90   0.006    12.05     1.64
          ================================================
          ID = 3 (0601):     3.17   0.017    12.10     2.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 3 (0601):     3.17   0.017    12.10     2.70
        + ID2= 2 (0103):     4.02   0.014    12.33     1.93
          ================================================
          ID = 1 (0601):     7.19   0.029    12.17     2.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0601):     7.19   0.029    12.17     2.66
        + ID2= 2 (0104):     1.18   0.006    12.08     1.63
          ================================================
          ID = 3 (0601):     8.37   0.034    12.13     2.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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  ** SIMULATION NUMBER:   2 **
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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              297fe064-6d37-460a-935c-4a533ffb288a\20d0d5bc
| Ptotal= 60.52 mm |    Comments: 5-Year Orillia 24-hour SCS Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.68 |  6.25    0.00 | 12.25    8.71 | 18.25    1.09
               0.50    0.65 |  6.50    0.00 | 12.50    8.71 | 18.50    1.09
               0.75    0.68 |  6.75    0.00 | 12.75    4.48 | 18.75    1.09
               1.00    0.65 |  7.00    0.00 | 13.00    4.48 | 19.00    1.09
               1.25    0.68 |  7.25    2.42 | 13.25    0.85 | 19.25    1.09
               1.50    0.65 |  7.50    2.42 | 13.50    0.85 | 19.50    1.09
               1.75    0.68 |  7.75    2.42 | 13.75    4.96 | 19.75    1.09
               2.00    0.65 |  8.00    2.42 | 14.00    4.96 | 20.00    1.09
               2.25    0.80 |  8.25    0.00 | 14.25    1.81 | 20.25    0.73
               2.50    0.77 |  8.50    0.00 | 14.50    1.81 | 20.50    0.73
               2.75    0.80 |  8.75    3.27 | 14.75    1.81 | 20.75    0.73
               3.00    0.77 |  9.00    3.27 | 15.00    1.82 | 21.00    0.73
               3.25    0.80 |  9.25    1.94 | 15.25    1.81 | 21.25    0.73
               3.50    0.77 |  9.50    1.94 | 15.50    1.81 | 21.50    0.73
               3.75    0.80 |  9.75    0.00 | 15.75    1.81 | 21.75    0.73
               4.00    0.77 | 10.00    4.36 | 16.00    1.81 | 22.00    0.73
               4.25    0.97 | 10.25    2.78 | 16.25    1.09 | 22.25    0.73
               4.50    0.97 | 10.50    2.78 | 16.50    1.09 | 22.50    0.73
               4.75    0.97 | 10.75    3.75 | 16.75    1.09 | 22.75    0.73
               5.00    0.97 | 11.00    3.75 | 17.00    1.09 | 23.00    0.73
               5.25    0.97 | 11.25    5.81 | 17.25    1.09 | 23.25    0.73
               5.50    0.97 | 11.50    5.81 | 17.50    1.09 | 23.50    0.73
               5.75    0.97 | 11.75   25.17 | 17.75    1.09 | 23.75    0.73
               6.00    0.97 | 12.00   66.79 | 18.00    1.09 | 24.00    0.73

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| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    0.68 | 6.017    0.00 |12.017    8.75 | 18.02    1.09
               0.033    0.68 | 6.033    0.00 |12.033    8.71 | 18.03    1.09
               0.050    0.68 | 6.050    0.00 |12.050    8.71 | 18.05    1.09
               0.067    0.68 | 6.067    0.00 |12.067    8.71 | 18.07    1.09
               0.083    0.68 | 6.083    0.00 |12.083    8.71 | 18.08    1.09
               0.100    0.68 | 6.100    0.00 |12.100    8.71 | 18.10    1.09
               0.117    0.68 | 6.117    0.00 |12.117    8.71 | 18.12    1.09
               0.133    0.68 | 6.133    0.00 |12.133    8.71 | 18.13    1.09
               0.150    0.68 | 6.150    0.00 |12.150    8.71 | 18.15    1.09
               0.167    0.68 | 6.167    0.00 |12.167    8.71 | 18.17    1.09
               0.183    0.68 | 6.183    0.00 |12.183    8.71 | 18.18    1.09
               0.200    0.68 | 6.200    0.00 |12.200    8.71 | 18.20    1.09
               0.217    0.68 | 6.217    0.00 |12.217    8.71 | 18.22    1.09
               0.233    0.68 | 6.233    0.00 |12.233    8.71 | 18.23    1.09
               0.250    0.68 | 6.250    0.00 |12.250    8.71 | 18.25    1.09
               0.267    0.65 | 6.267    0.00 |12.267    8.71 | 18.27    1.09
               0.283    0.65 | 6.283    0.00 |12.283    8.71 | 18.28    1.09
               0.300    0.65 | 6.300    0.00 |12.300    8.71 | 18.30    1.09
               0.317    0.65 | 6.317    0.00 |12.317    8.71 | 18.32    1.09
               0.333    0.65 | 6.333    0.00 |12.333    8.71 | 18.33    1.09
               0.350    0.65 | 6.350    0.00 |12.350    8.71 | 18.35    1.09
               0.367    0.65 | 6.367    0.00 |12.367    8.71 | 18.37    1.09
               0.383    0.65 | 6.383    0.00 |12.383    8.71 | 18.38    1.09
               0.400    0.65 | 6.400    0.00 |12.400    8.71 | 18.40    1.09
               0.417    0.65 | 6.417    0.00 |12.417    8.71 | 18.42    1.09
               0.433    0.65 | 6.433    0.00 |12.433    8.71 | 18.43    1.09
               0.450    0.65 | 6.450    0.00 |12.450    8.71 | 18.45    1.09
               0.467    0.65 | 6.467    0.00 |12.467    8.71 | 18.47    1.09
               0.483    0.65 | 6.483    0.00 |12.483    8.71 | 18.48    1.09
               0.500    0.65 | 6.500    0.00 |12.500    8.71 | 18.50    1.09
               0.517    0.68 | 6.517    0.00 |12.517    4.48 | 18.52    1.09
               0.533    0.68 | 6.533    0.00 |12.533    4.48 | 18.53    1.09
               0.550    0.68 | 6.550    0.00 |12.550    4.48 | 18.55    1.09
               0.567    0.68 | 6.567    0.00 |12.567    4.48 | 18.57    1.09
               0.583    0.68 | 6.583    0.00 |12.583    4.48 | 18.58    1.09
               0.600    0.68 | 6.600    0.00 |12.600    4.48 | 18.60    1.09
               0.617    0.68 | 6.617    0.00 |12.617    4.48 | 18.62    1.09
               0.633    0.68 | 6.633    0.00 |12.633    4.48 | 18.63    1.09
               0.650    0.68 | 6.650    0.00 |12.650    4.48 | 18.65    1.09
               0.667    0.68 | 6.667    0.00 |12.667    4.48 | 18.67    1.09
               0.683    0.68 | 6.683    0.00 |12.683    4.48 | 18.68    1.09
               0.700    0.68 | 6.700    0.00 |12.700    4.48 | 18.70    1.09
               0.717    0.68 | 6.717    0.00 |12.717    4.48 | 18.72    1.09
               0.733    0.68 | 6.733    0.00 |12.733    4.48 | 18.73    1.09
               0.750    0.68 | 6.750    0.00 |12.750    4.48 | 18.75    1.09
               0.767    0.65 | 6.767    0.00 |12.767    4.48 | 18.77    1.09
               0.783    0.65 | 6.783    0.00 |12.783    4.48 | 18.78    1.09
               0.800    0.65 | 6.800    0.00 |12.800    4.48 | 18.80    1.09
               0.817    0.65 | 6.817    0.00 |12.817    4.48 | 18.82    1.09
               0.833    0.65 | 6.833    0.00 |12.833    4.48 | 18.83    1.09
               0.850    0.65 | 6.850    0.00 |12.850    4.48 | 18.85    1.09
               0.867    0.65 | 6.867    0.00 |12.867    4.48 | 18.87    1.09
               0.883    0.65 | 6.883    0.00 |12.883    4.48 | 18.88    1.09
               0.900    0.65 | 6.900    0.00 |12.900    4.48 | 18.90    1.09
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0.917	0.65	6.917	0.00	12.917	4.48	18.92	1.09
0.933	0.65	6.933	0.00	12.933	4.48	18.93	1.09
0.950	0.65	6.950	0.00	12.950	4.48	18.95	1.09
0.967	0.65	6.967	0.00	12.967	4.48	18.97	1.09
0.983	0.65	6.983	0.00	12.983	4.48	18.98	1.09
1.000	0.65	7.000	0.01	13.000	4.48	19.00	1.09
1.017	0.68	7.017	2.42	13.017	0.86	19.02	1.09
1.033	0.68	7.033	2.42	13.033	0.85	19.03	1.09
1.050	0.68	7.050	2.42	13.050	0.85	19.05	1.09
1.067	0.68	7.067	2.42	13.067	0.85	19.07	1.09
1.083	0.68	7.083	2.42	13.083	0.85	19.08	1.09
1.100	0.68	7.100	2.42	13.100	0.85	19.10	1.09
1.117	0.68	7.117	2.42	13.117	0.85	19.12	1.09
1.133	0.68	7.133	2.42	13.133	0.85	19.13	1.09
1.150	0.68	7.150	2.42	13.150	0.85	19.15	1.09
1.167	0.68	7.167	2.42	13.167	0.85	19.17	1.09
1.183	0.68	7.183	2.42	13.183	0.85	19.18	1.09
1.200	0.68	7.200	2.42	13.200	0.85	19.20	1.09
1.217	0.68	7.217	2.42	13.217	0.85	19.22	1.09
1.233	0.68	7.233	2.42	13.233	0.85	19.23	1.09
1.250	0.68	7.250	2.42	13.250	0.85	19.25	1.09
1.267	0.65	7.267	2.42	13.267	0.85	19.27	1.09
1.283	0.65	7.283	2.42	13.283	0.85	19.28	1.09
1.300	0.65	7.300	2.42	13.300	0.85	19.30	1.09
1.317	0.65	7.317	2.42	13.317	0.85	19.32	1.09
1.333	0.65	7.333	2.42	13.333	0.85	19.33	1.09
1.350	0.65	7.350	2.42	13.350	0.85	19.35	1.09
1.367	0.65	7.367	2.42	13.367	0.85	19.37	1.09
1.383	0.65	7.383	2.42	13.383	0.85	19.38	1.09
1.400	0.65	7.400	2.42	13.400	0.85	19.40	1.09
1.417	0.65	7.417	2.42	13.417	0.85	19.42	1.09
1.433	0.65	7.433	2.42	13.433	0.85	19.43	1.09
1.450	0.65	7.450	2.42	13.450	0.85	19.45	1.09
1.467	0.65	7.467	2.42	13.467	0.85	19.47	1.09
1.483	0.65	7.483	2.42	13.483	0.85	19.48	1.09
1.500	0.65	7.500	2.42	13.500	0.85	19.50	1.09
1.517	0.68	7.517	2.42	13.517	4.95	19.52	1.09
1.533	0.68	7.533	2.42	13.533	4.96	19.53	1.09
1.550	0.68	7.550	2.42	13.550	4.96	19.55	1.09
1.567	0.68	7.567	2.42	13.567	4.96	19.57	1.09
1.583	0.68	7.583	2.42	13.583	4.96	19.58	1.09
1.600	0.68	7.600	2.42	13.600	4.96	19.60	1.09
1.617	0.68	7.617	2.42	13.617	4.96	19.62	1.09
1.633	0.68	7.633	2.42	13.633	4.96	19.63	1.09
1.650	0.68	7.650	2.42	13.650	4.96	19.65	1.09
1.667	0.68	7.667	2.42	13.667	4.96	19.67	1.09
1.683	0.68	7.683	2.42	13.683	4.96	19.68	1.09
1.700	0.68	7.700	2.42	13.700	4.96	19.70	1.09
1.717	0.68	7.717	2.42	13.717	4.96	19.72	1.09
1.733	0.68	7.733	2.42	13.733	4.96	19.73	1.09
1.750	0.68	7.750	2.42	13.750	4.96	19.75	1.09
1.767	0.65	7.767	2.42	13.767	4.96	19.77	1.09
1.783	0.65	7.783	2.42	13.783	4.96	19.78	1.09
1.800	0.65	7.800	2.42	13.800	4.96	19.80	1.09
1.817	0.65	7.817	2.42	13.817	4.96	19.82	1.09
1.833	0.65	7.833	2.42	13.833	4.96	19.83	1.09
1.850	0.65	7.850	2.42	13.850	4.96	19.85	1.09
1.867	0.65	7.867	2.42	13.867	4.96	19.87	1.09
1.883	0.65	7.883	2.42	13.883	4.96	19.88	1.09
1.900	0.65	7.900	2.42	13.900	4.96	19.90	1.09
1.917	0.65	7.917	2.42	13.917	4.96	19.92	1.09
1.933	0.65	7.933	2.42	13.933	4.96	19.93	1.09
1.950	0.65	7.950	2.42	13.950	4.96	19.95	1.09
1.967	0.65	7.967	2.42	13.967	4.96	19.97	1.09
1.983	0.65	7.983	2.42	13.983	4.96	19.98	1.09
2.000	0.65	8.000	2.41	14.000	4.96	20.00	1.09
2.017	0.80	8.017	0.00	14.017	1.82	20.02	0.73
2.033	0.80	8.033	0.00	14.033	1.81	20.03	0.73
2.050	0.80	8.050	0.00	14.050	1.81	20.05	0.73
2.067	0.80	8.067	0.00	14.067	1.81	20.07	0.73
2.083	0.80	8.083	0.00	14.083	1.81	20.08	0.73
2.100	0.80	8.100	0.00	14.100	1.81	20.10	0.73
2.117	0.80	8.117	0.00	14.117	1.81	20.12	0.73
2.133	0.80	8.133	0.00	14.133	1.81	20.13	0.73
2.150	0.80	8.150	0.00	14.150	1.81	20.15	0.73
2.167	0.80	8.167	0.00	14.167	1.81	20.17	0.73
2.183	0.80	8.183	0.00	14.183	1.81	20.18	0.73
2.200	0.80	8.200	0.00	14.200	1.81	20.20	0.73
2.217	0.80	8.217	0.00	14.217	1.81	20.22	0.73
2.233	0.80	8.233	0.00	14.233	1.81	20.23	0.73
2.250	0.80	8.250	0.00	14.250	1.81	20.25	0.73
2.267	0.77	8.267	0.00	14.267	1.81	20.27	0.73
2.283	0.77	8.283	0.00	14.283	1.81	20.28	0.73
2.300	0.77	8.300	0.00	14.300	1.81	20.30	0.73
2.317	0.77	8.317	0.00	14.317	1.81	20.32	0.73
2.333	0.77	8.333	0.00	14.333	1.81	20.33	0.73
2.350	0.77	8.350	0.00	14.350	1.81	20.35	0.73
2.367	0.77	8.367	0.00	14.367	1.81	20.37	0.73
2.383	0.77	8.383	0.00	14.383	1.81	20.38	0.73
2.400	0.77	8.400	0.00	14.400	1.81	20.40	0.73
2.417	0.77	8.417	0.00	14.417	1.81	20.42	0.73
2.433	0.77	8.433	0.00	14.433	1.81	20.43	0.73
2.450	0.77	8.450	0.00	14.450	1.81	20.45	0.73
2.467	0.77	8.467	0.00	14.467	1.81	20.47	0.73
2.483	0.77	8.483	0.00	14.483	1.81	20.48	0.73
2.500	0.77	8.500	0.01	14.500	1.81	20.50	0.73
2.517	0.80	8.517	3.27	14.517	1.81	20.52	0.73
2.533	0.80	8.533	3.27	14.533	1.81	20.53	0.73
2.550	0.80	8.550	3.27	14.550	1.81	20.55	0.73
2.567	0.80	8.567	3.27	14.567	1.81	20.57	0.73
2.583	0.80	8.583	3.27	14.583	1.81	20.58	0.73
2.600	0.80	8.600	3.27	14.600	1.81	20.60	0.73
2.617	0.80	8.617	3.27	14.617	1.81	20.62	0.73
2.633	0.80	8.633	3.27	14.633	1.81	20.63	0.73
2.650	0.80	8.650	3.27	14.650	1.81	20.65	0.73
2.667	0.80	8.667	3.27	14.667	1.81	20.67	0.73
2.683	0.80	8.683	3.27	14.683	1.81	20.68	0.73
2.700	0.80	8.700	3.27	14.700	1.81	20.70	0.73
2.717	0.80	8.717	3.27	14.717	1.81	20.72	0.73
2.733	0.80	8.733	3.27	14.733	1.81	20.73	0.73
2.750	0.80	8.750	3.27	14.750	1.81	20.75	0.73
2.767	0.77	8.767	3.27	14.767	1.82	20.77	0.73
2.783	0.77	8.783	3.27	14.783	1.82	20.78	0.73
2.800	0.77	8.800	3.27	14.800	1.82	20.80	0.73
2.817	0.77	8.817	3.27	14.817	1.82	20.82	0.73
2.833	0.77	8.833	3.27	14.833	1.82	20.83	0.73
2.850	0.77	8.850	3.27	14.850	1.82	20.85	0.73
2.867	0.77	8.867	3.27	14.867	1.82	20.87	0.73
2.883	0.77	8.883	3.27	14.883	1.82	20.88	0.73
2.900	0.77	8.900	3.27	14.900	1.82	20.90	0.73
2.917	0.77	8.917	3.27	14.917	1.82	20.92	0.73
2.933	0.77	8.933	3.27	14.933	1.82	20.93	0.73
2.950	0.77	8.950	3.27	14.950	1.82	20.95	0.73
2.967	0.77	8.967	3.27	14.967	1.82	20.97	0.73
2.983	0.77	8.983	3.27	14.983	1.82	20.98	0.73
3.000	0.77	9.000	3.27	15.000	1.82	21.00	0.73
3.017	0.80	9.017	1.94	15.017	1.81	21.02	0.73
3.033	0.80	9.033	1.94	15.033	1.81	21.03	0.73
3.050	0.80	9.050	1.94	15.050	1.81	21.05	0.73
3.067	0.80	9.067	1.94	15.067	1.81	21.07	0.73
3.083	0.80	9.083	1.94	15.083	1.81	21.08	0.73
3.100	0.80	9.100	1.94	15.100	1.81	21.10	0.73
3.117	0.80	9.117	1.94	15.117	1.81	21.12	0.73
3.133	0.80	9.133	1.94	15.133	1.81	21.13	0.73
3.150	0.80	9.150	1.94	15.150	1.81	21.15	0.73
3.167	0.80	9.167	1.94	15.167	1.81	21.17	0.73
3.183	0.80	9.183	1.94	15.183	1.81	21.18	0.73
3.200	0.80	9.200	1.94	15.200	1.81	21.20	0.73
3.217	0.80	9.217	1.94	15.217	1.81	21.22	0.73
3.233	0.80	9.233	1.94	15.233	1.81	21.23	0.73
3.250	0.80	9.250	1.94	15.250	1.81	21.25	0.73
3.267	0.77	9.267	1.94	15.267	1.81	21.27	0.73
3.283	0.77	9.283	1.94	15.283	1.81	21.28	0.73
3.300	0.77	9.300	1.94	15.300	1.81	21.30	0.73
3.317	0.77	9.317	1.94	15.317	1.81	21.32	0.73
3.333	0.77	9.333	1.94	15.333	1.81	21.33	0.73
3.350	0.77	9.350	1.94	15.350	1.81	21.35	0.73
3.367	0.77	9.367	1.94	15.367	1.81	21.37	0.73
3.383	0.77	9.383	1.94	15.383	1.81	21.38	0.73
3.400	0.77	9.400	1.94	15.400	1.81	21.40	0.73
3.417	0.77	9.417	1.94	15.417	1.81	21.42	0.73
3.433	0.77	9.433	1.94	15.433	1.81	21.43	0.73
3.450	0.77	9.450	1.94	15.450	1.81	21.45	0.73
3.467	0.77	9.467	1.94	15.467	1.81	21.47	0.73
3.483	0.77	9.483	1.94	15.483	1.81	21.48	0.73
3.500	0.77	9.500	1.94	15.500	1.81	21.50	0.73
3.517	0.80	9.517	0.00	15.517	1.81	21.52	0.73
3.533	0.80	9.533	0.00	15.533	1.81	21.53	0.73
3.550	0.80	9.550	0.00	15.550	1.81	21.55	0.73
3.567	0.80	9.567	0.00	15.567	1.81	21.57	0.73
3.583	0.80	9.583	0.00	15.583	1.81	21.58	0.73
3.600	0.80	9.600	0.00	15.600	1.81	21.60	0.73
3.617	0.80	9.617	0.00	15.617	1.81	21.62	0.73
3.633	0.80	9.633	0.00	15.633	1.81	21.63	0.73
3.650	0.80	9.650	0.00	15.650	1.81	21.65	0.73
3.667	0.80	9.667	0.00	15.667	1.81	21.67	0.73
3.683	0.80	9.683	0.00	15.683	1.81	21.68	0.73
3.700	0.80	9.700	0.00	15.700	1.81	21.70	0.73

3.717	0.80	9.717	0.00	15.717	1.81	21.72	0.73
3.733	0.80	9.733	0.00	15.733	1.81	21.73	0.73
3.750	0.80	9.750	0.01	15.750	1.81	21.75	0.73
3.767	0.77	9.767	4.36	15.767	1.81	21.77	0.73
3.783	0.77	9.783	4.36	15.783	1.81	21.78	0.73
3.800	0.77	9.800	4.36	15.800	1.81	21.80	0.73
3.817	0.77	9.817	4.36	15.817	1.81	21.82	0.73
3.833	0.77	9.833	4.36	15.833	1.81	21.83	0.73
3.850	0.77	9.850	4.36	15.850	1.81	21.85	0.73
3.867	0.77	9.867	4.36	15.867	1.81	21.87	0.73
3.883	0.77	9.883	4.36	15.883	1.81	21.88	0.73
3.900	0.77	9.900	4.36	15.900	1.81	21.90	0.73
3.917	0.77	9.917	4.36	15.917	1.81	21.92	0.73
3.933	0.77	9.933	4.36	15.933	1.81	21.93	0.73
3.950	0.77	9.950	4.36	15.950	1.81	21.95	0.73
3.967	0.77	9.967	4.36	15.967	1.81	21.97	0.73
3.983	0.77	9.983	4.36	15.983	1.81	21.98	0.73
4.000	0.77	10.000	4.36	16.000	1.81	22.00	0.73
4.017	0.97	10.017	2.78	16.017	1.09	22.02	0.73
4.033	0.97	10.033	2.78	16.033	1.09	22.03	0.73
4.050	0.97	10.050	2.78	16.050	1.09	22.05	0.73
4.067	0.97	10.067	2.78	16.067	1.09	22.07	0.73
4.083	0.97	10.083	2.78	16.083	1.09	22.08	0.73
4.100	0.97	10.100	2.78	16.100	1.09	22.10	0.73
4.117	0.97	10.117	2.78	16.117	1.09	22.12	0.73
4.133	0.97	10.133	2.78	16.133	1.09	22.13	0.73
4.150	0.97	10.150	2.78	16.150	1.09	22.15	0.73
4.167	0.97	10.167	2.78	16.167	1.09	22.17	0.73
4.183	0.97	10.183	2.78	16.183	1.09	22.18	0.73
4.200	0.97	10.200	2.78	16.200	1.09	22.20	0.73
4.217	0.97	10.217	2.78	16.217	1.09	22.22	0.73
4.233	0.97	10.233	2.78	16.233	1.09	22.23	0.73
4.250	0.97	10.250	2.78	16.250	1.09	22.25	0.73
4.267	0.97	10.267	2.78	16.267	1.09	22.27	0.73
4.283	0.97	10.283	2.78	16.283	1.09	22.28	0.73
4.300	0.97	10.300	2.78	16.300	1.09	22.30	0.73
4.317	0.97	10.317	2.78	16.317	1.09	22.32	0.73
4.333	0.97	10.333	2.78	16.333	1.09	22.33	0.73
4.350	0.97	10.350	2.78	16.350	1.09	22.35	0.73
4.367	0.97	10.367	2.78	16.367	1.09	22.37	0.73
4.383	0.97	10.383	2.78	16.383	1.09	22.38	0.73
4.400	0.97	10.400	2.78	16.400	1.09	22.40	0.73
4.417	0.97	10.417	2.78	16.417	1.09	22.42	0.73
4.433	0.97	10.433	2.78	16.433	1.09	22.43	0.73
4.450	0.97	10.450	2.78	16.450	1.09	22.45	0.73
4.467	0.97	10.467	2.78	16.467	1.09	22.47	0.73
4.483	0.97	10.483	2.78	16.483	1.09	22.48	0.73
4.500	0.97	10.500	2.78	16.500	1.09	22.50	0.73
4.517	0.97	10.517	3.75	16.517	1.09	22.52	0.73
4.533	0.97	10.533	3.75	16.533	1.09	22.53	0.73
4.550	0.97	10.550	3.75	16.550	1.09	22.55	0.73
4.567	0.97	10.567	3.75	16.567	1.09	22.57	0.73
4.583	0.97	10.583	3.75	16.583	1.09	22.58	0.73
4.600	0.97	10.600	3.75	16.600	1.09	22.60	0.73
4.617	0.97	10.617	3.75	16.617	1.09	22.62	0.73
4.633	0.97	10.633	3.75	16.633	1.09	22.63	0.73
4.650	0.97	10.650	3.75	16.650	1.09	22.65	0.73
4.667	0.97	10.667	3.75	16.667	1.09	22.67	0.73
4.683	0.97	10.683	3.75	16.683	1.09	22.68	0.73
4.700	0.97	10.700	3.75	16.700	1.09	22.70	0.73
4.717	0.97	10.717	3.75	16.717	1.09	22.72	0.73
4.733	0.97	10.733	3.75	16.733	1.09	22.73	0.73
4.750	0.97	10.750	3.75	16.750	1.09	22.75	0.73
4.767	0.97	10.767	3.75	16.767	1.09	22.77	0.73
4.783	0.97	10.783	3.75	16.783	1.09	22.78	0.73
4.800	0.97	10.800	3.75	16.800	1.09	22.80	0.73
4.817	0.97	10.817	3.75	16.817	1.09	22.82	0.73
4.833	0.97	10.833	3.75	16.833	1.09	22.83	0.73
4.850	0.97	10.850	3.75	16.850	1.09	22.85	0.73
4.867	0.97	10.867	3.75	16.867	1.09	22.87	0.73
4.883	0.97	10.883	3.75	16.883	1.09	22.88	0.73
4.900	0.97	10.900	3.75	16.900	1.09	22.90	0.73
4.917	0.97	10.917	3.75	16.917	1.09	22.92	0.73
4.933	0.97	10.933	3.75	16.933	1.09	22.93	0.73
4.950	0.97	10.950	3.75	16.950	1.09	22.95	0.73
4.967	0.97	10.967	3.75	16.967	1.09	22.97	0.73
4.983	0.97	10.983	3.75	16.983	1.09	22.98	0.73
5.000	0.97	11.000	3.75	17.000	1.09	23.00	0.73
5.017	0.97	11.017	5.81	17.017	1.09	23.02	0.73
5.033	0.97	11.033	5.81	17.033	1.09	23.03	0.73
5.050	0.97	11.050	5.81	17.050	1.09	23.05	0.73
5.067	0.97	11.067	5.81	17.067	1.09	23.07	0.73
5.083	0.97	11.083	5.81	17.083	1.09	23.08	0.73
5.100	0.97	11.100	5.81	17.100	1.09	23.10	0.73
5.117	0.97	11.117	5.81	17.117	1.09	23.12	0.73
5.133	0.97	11.133	5.81	17.133	1.09	23.13	0.73
5.150	0.97	11.150	5.81	17.150	1.09	23.15	0.73
5.167	0.97	11.167	5.81	17.167	1.09	23.17	0.73
5.183	0.97	11.183	5.81	17.183	1.09	23.18	0.73
5.200	0.97	11.200	5.81	17.200	1.09	23.20	0.73
5.217	0.97	11.217	5.81	17.217	1.09	23.22	0.73
5.233	0.97	11.233	5.81	17.233	1.09	23.23	0.73
5.250	0.97	11.250	5.81	17.250	1.09	23.25	0.73
5.267	0.97	11.267	5.81	17.267	1.09	23.27	0.73
5.283	0.97	11.283	5.81	17.283	1.09	23.28	0.73
5.300	0.97	11.300	5.81	17.300	1.09	23.30	0.73
5.317	0.97	11.317	5.81	17.317	1.09	23.32	0.73
5.333	0.97	11.333	5.81	17.333	1.09	23.33	0.73
5.350	0.97	11.350	5.81	17.350	1.09	23.35	0.73
5.367	0.97	11.367	5.81	17.367	1.09	23.37	0.73
5.383	0.97	11.383	5.81	17.383	1.09	23.38	0.73
5.400	0.97	11.400	5.81	17.400	1.09	23.40	0.73
5.417	0.97	11.417	5.81	17.417	1.09	23.42	0.73
5.433	0.97	11.433	5.81	17.433	1.09	23.43	0.73
5.450	0.97	11.450	5.81	17.450	1.09	23.45	0.73
5.467	0.97	11.467	5.81	17.467	1.09	23.47	0.73
5.483	0.97	11.483	5.81	17.483	1.09	23.48	0.73
5.500	0.97	11.500	5.81	17.500	1.09	23.50	0.73
5.517	0.97	11.517	25.17	17.517	1.09	23.52	0.73
5.533	0.97	11.533	25.17	17.533	1.09	23.53	0.73
5.550	0.97	11.550	25.17	17.550	1.09	23.55	0.73
5.567	0.97	11.567	25.17	17.567	1.09	23.57	0.73
5.583	0.97	11.583	25.17	17.583	1.09	23.58	0.73
5.600	0.97	11.600	25.17	17.600	1.09	23.60	0.73
5.617	0.97	11.617	25.17	17.617	1.09	23.62	0.73
5.633	0.97	11.633	25.17	17.633	1.09	23.63	0.73
5.650	0.97	11.650	25.17	17.650	1.09	23.65	0.73
5.667	0.97	11.667	25.17	17.667	1.09	23.67	0.73
5.683	0.97	11.683	25.17	17.683	1.09	23.68	0.73
5.700	0.97	11.700	25.17	17.700	1.09	23.70	0.73
5.717	0.97	11.717	25.17	17.717	1.09	23.72	0.73
5.733	0.97	11.733	25.17	17.733	1.09	23.73	0.73
5.750	0.97	11.750	25.17	17.750	1.09	23.75	0.73
5.767	0.97	11.767	66.77	17.767	1.09	23.77	0.73
5.783	0.97	11.783	66.79	17.783	1.09	23.78	0.73
5.800	0.97	11.800	66.79	17.800	1.09	23.80	0.73
5.817	0.97	11.817	66.79	17.817	1.09	23.82	0.73
5.833	0.97	11.833	66.79	17.833	1.09	23.83	0.73
5.850	0.97	11.850	66.79	17.850	1.09	23.85	0.73
5.867	0.97	11.867	66.79	17.867	1.09	23.87	0.73
5.883	0.97	11.883	66.79	17.883	1.09	23.88	0.73
5.900	0.97	11.900	66.79	17.900	1.09	23.90	0.73
5.917	0.97	11.917	66.79	17.917	1.09	23.92	0.73
5.933	0.97	11.933	66.79	17.933	1.09	23.93	0.73
5.950	0.97	11.950	66.79	17.950	1.09	23.95	0.73
5.967	0.97	11.967	66.79	17.967	1.09	23.97	0.73
5.983	0.97	11.983	66.79	17.983	1.09	23.98	0.73
6.000	0.97	12.000	66.79	18.000	1.09	24.00	0.73

Unit Hyd Qpeak (cms)= 0.046

PEAK FLOW (cms)= 0.004 (i)
TIME TO PEAK (hrs)= 12.117
RUNOFF VOLUME (mm)= 5.163
TOTAL RAINFALL (mm)= 60.518
RUNOFF COEFFICIENT = 0.085

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0103)	Area (ha)=	4.02	Curve Number (CN)=	35.0	
ID= 1 DT= 1.0 min	Ia (mm)=	9.05	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.39			

Unit Hyd Qpeak (cms)= 0.394

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 12.317
RUNOFF VOLUME (mm)= 3.784
TOTAL RAINFALL (mm)= 60.518
RUNOFF COEFFICIENT = 0.063

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| CALIB             |
| NASHYD    (0102) |   Area     (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=  10.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.011 (i)
     TIME TO PEAK    (hrs)=  12.050
     RUNOFF VOLUME    (mm)=   3.280
     TOTAL RAINFALL   (mm)=  60.518
     RUNOFF COEFFICIENT   =   0.054

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB             |
| NASHYD    (0101) |   Area     (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   8.86   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.025 (i)
     TIME TO PEAK    (hrs)=  12.150
     RUNOFF VOLUME    (mm)=   4.184
     TOTAL RAINFALL   (mm)=  60.518
     RUNOFF COEFFICIENT   =   0.069

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
| CALIB             |
| NASHYD    (0104) |   Area     (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=  10.00   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.013 (i)
     TIME TO PEAK    (hrs)=  12.067
     RUNOFF VOLUME    (mm)=   3.271
     TOTAL RAINFALL   (mm)=  60.518
     RUNOFF COEFFICIENT   =   0.054

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
-------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------            (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0101):     2.26   0.025    12.15     4.18
       + ID2= 2 (0102):     0.90   0.011    12.05     3.28
         ================================================
         ID = 3 (0601):     3.17   0.034    12.10     5.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
-------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
-------------------            (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     3.17   0.034    12.10     5.17
       + ID2= 2 (0103):     4.02   0.028    12.32     3.78
         ================================================
         ID = 1 (0601):     7.19   0.057    12.17     5.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
-------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
-------------------            (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0601):     7.19   0.057    12.17     5.11
       + ID2= 2 (0104):     1.18   0.013    12.07     3.27
         ================================================
         ID = 3 (0601):     8.37   0.069    12.13     5.00

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
```

```
  ****************************
  ** SIMULATION NUMBER:   3 **
  ****************************


-------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              297fe064-6d37-460a-935c-4a533ffb288a\72871e70
| Ptotal= 70.40 mm |    Comments: 10-Year Orillia 24-hour SCS Storm
-------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.79	6.25	0.00	12.25	10.14	18.25	1.27
0.50	0.76	6.50	0.00	12.50	10.14	18.50	1.27
0.75	0.79	6.75	0.00	12.75	5.21	18.75	1.27
1.00	0.76	7.00	0.00	13.00	5.21	19.00	1.27
1.25	0.79	7.25	2.82	13.25	0.99	19.25	1.27
1.50	0.76	7.50	2.82	13.50	0.99	19.50	1.27
1.75	0.79	7.75	2.82	13.75	5.77	19.75	1.27
2.00	0.76	8.00	2.82	14.00	5.77	20.00	1.27
2.25	0.93	8.25	0.00	14.25	2.11	20.25	0.84
2.50	0.90	8.50	0.00	14.50	2.11	20.50	0.84
2.75	0.93	8.75	3.80	14.75	2.11	20.75	0.84
3.00	0.90	9.00	3.80	15.00	2.11	21.00	0.84
3.25	0.93	9.25	2.25	15.25	2.11	21.25	0.84
3.50	0.90	9.50	2.25	15.50	2.11	21.50	0.84
3.75	0.93	9.75	0.00	15.75	2.11	21.75	0.84
4.00	0.90	10.00	5.07	16.00	2.11	22.00	0.84
4.25	1.13	10.25	3.24	16.25	1.27	22.25	0.84
4.50	1.13	10.50	3.24	16.50	1.27	22.50	0.84
4.75	1.13	10.75	4.36	16.75	1.27	22.75	0.84
5.00	1.13	11.00	4.36	17.00	1.27	23.00	0.84
5.25	1.13	11.25	6.76	17.25	1.27	23.25	0.84
5.50	1.13	11.50	6.76	17.50	1.27	23.50	0.84
5.75	1.13	11.75	29.29	17.75	1.27	23.75	0.84
6.00	1.13	12.00	77.72	18.00	1.27	24.00	0.84

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-------------------
| CALIB             |
| NASHYD    (0105) |   Area     (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   7.50   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.21

     NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.79	6.017	0.00	12.017	10.19	18.02	1.27
0.033	0.79	6.033	0.00	12.033	10.14	18.03	1.27
0.050	0.79	6.050	0.00	12.050	10.14	18.05	1.27
0.067	0.79	6.067	0.00	12.067	10.14	18.07	1.27
0.083	0.79	6.083	0.00	12.083	10.14	18.08	1.27
0.100	0.79	6.100	0.00	12.100	10.14	18.10	1.27
0.117	0.79	6.117	0.00	12.117	10.14	18.12	1.27
0.133	0.79	6.133	0.00	12.133	10.14	18.13	1.27
0.150	0.79	6.150	0.00	12.150	10.14	18.15	1.27
0.167	0.79	6.167	0.00	12.167	10.14	18.17	1.27
0.183	0.79	6.183	0.00	12.183	10.14	18.18	1.27
0.200	0.79	6.200	0.00	12.200	10.14	18.20	1.27
0.217	0.79	6.217	0.00	12.217	10.14	18.22	1.27
0.233	0.79	6.233	0.00	12.233	10.14	18.23	1.27
0.250	0.79	6.250	0.00	12.250	10.14	18.25	1.27
0.267	0.76	6.267	0.00	12.267	10.14	18.27	1.27
0.283	0.76	6.283	0.00	12.283	10.14	18.28	1.27
0.300	0.76	6.300	0.00	12.300	10.14	18.30	1.27
0.317	0.76	6.317	0.00	12.317	10.14	18.32	1.27
0.333	0.76	6.333	0.00	12.333	10.14	18.33	1.27
0.350	0.76	6.350	0.00	12.350	10.14	18.35	1.27
0.367	0.76	6.367	0.00	12.367	10.14	18.37	1.27
0.383	0.76	6.383	0.00	12.383	10.14	18.38	1.27
0.400	0.76	6.400	0.00	12.400	10.14	18.40	1.27
0.417	0.76	6.417	0.00	12.417	10.14	18.42	1.27
0.433	0.76	6.433	0.00	12.433	10.14	18.43	1.27
0.450	0.76	6.450	0.00	12.450	10.14	18.45	1.27

0.467	0.76	6.467	0.00	12.467	10.14	18.47	1.27
0.483	0.76	6.483	0.00	12.483	10.14	18.48	1.27
0.500	0.76	6.500	0.00	12.500	10.14	18.50	1.27
0.517	0.79	6.517	0.00	12.517	5.22	18.52	1.27
0.533	0.79	6.533	0.00	12.533	5.21	18.53	1.27
0.550	0.79	6.550	0.00	12.550	5.21	18.55	1.27
0.567	0.79	6.567	0.00	12.567	5.21	18.57	1.27
0.583	0.79	6.583	0.00	12.583	5.21	18.58	1.27
0.600	0.79	6.600	0.00	12.600	5.21	18.60	1.27
0.617	0.79	6.617	0.00	12.617	5.21	18.62	1.27
0.633	0.79	6.633	0.00	12.633	5.21	18.63	1.27
0.650	0.79	6.650	0.00	12.650	5.21	18.65	1.27
0.667	0.79	6.667	0.00	12.667	5.21	18.67	1.27
0.683	0.79	6.683	0.00	12.683	5.21	18.68	1.27
0.700	0.79	6.700	0.00	12.700	5.21	18.70	1.27
0.717	0.79	6.717	0.00	12.717	5.21	18.72	1.27
0.733	0.79	6.733	0.00	12.733	5.21	18.73	1.27
0.750	0.79	6.750	0.00	12.750	5.21	18.75	1.27
0.767	0.76	6.767	0.00	12.767	5.21	18.77	1.27
0.783	0.76	6.783	0.00	12.783	5.21	18.78	1.27
0.800	0.76	6.800	0.00	12.800	5.21	18.80	1.27
0.817	0.76	6.817	0.00	12.817	5.21	18.82	1.27
0.833	0.76	6.833	0.00	12.833	5.21	18.83	1.27
0.850	0.76	6.850	0.00	12.850	5.21	18.85	1.27
0.867	0.76	6.867	0.00	12.867	5.21	18.87	1.27
0.883	0.76	6.883	0.00	12.883	5.21	18.88	1.27
0.900	0.76	6.900	0.00	12.900	5.21	18.90	1.27
0.917	0.76	6.917	0.00	12.917	5.21	18.92	1.27
0.933	0.76	6.933	0.00	12.933	5.21	18.93	1.27
0.950	0.76	6.950	0.00	12.950	5.21	18.95	1.27
0.967	0.76	6.967	0.00	12.967	5.21	18.97	1.27
0.983	0.76	6.983	0.00	12.983	5.21	18.98	1.27
1.000	0.76	7.000	0.01	13.000	5.21	19.00	1.27
1.017	0.79	7.017	2.82	13.017	1.00	19.02	1.27
1.033	0.79	7.033	2.82	13.033	0.99	19.03	1.27
1.050	0.79	7.050	2.82	13.050	0.99	19.05	1.27
1.067	0.79	7.067	2.82	13.067	0.99	19.07	1.27
1.083	0.79	7.083	2.82	13.083	0.99	19.08	1.27
1.100	0.79	7.100	2.82	13.100	0.99	19.10	1.27
1.117	0.79	7.117	2.82	13.117	0.99	19.12	1.27
1.133	0.79	7.133	2.82	13.133	0.99	19.13	1.27
1.150	0.79	7.150	2.82	13.150	0.99	19.15	1.27
1.167	0.79	7.167	2.82	13.167	0.99	19.17	1.27
1.183	0.79	7.183	2.82	13.183	0.99	19.18	1.27
1.200	0.79	7.200	2.82	13.200	0.99	19.20	1.27
1.217	0.79	7.217	2.82	13.217	0.99	19.22	1.27
1.233	0.79	7.233	2.82	13.233	0.99	19.23	1.27
1.250	0.79	7.250	2.82	13.250	0.99	19.25	1.27
1.267	0.76	7.267	2.82	13.267	0.99	19.27	1.27
1.283	0.76	7.283	2.82	13.283	0.99	19.28	1.27
1.300	0.76	7.300	2.82	13.300	0.99	19.30	1.27
1.317	0.76	7.317	2.82	13.317	0.99	19.32	1.27
1.333	0.76	7.333	2.82	13.333	0.99	19.33	1.27
1.350	0.76	7.350	2.82	13.350	0.99	19.35	1.27
1.367	0.76	7.367	2.82	13.367	0.99	19.37	1.27
1.383	0.76	7.383	2.82	13.383	0.99	19.38	1.27
1.400	0.76	7.400	2.82	13.400	0.99	19.40	1.27
1.417	0.76	7.417	2.82	13.417	0.99	19.42	1.27
1.433	0.76	7.433	2.82	13.433	0.99	19.43	1.27
1.450	0.76	7.450	2.82	13.450	0.99	19.45	1.27
1.467	0.76	7.467	2.82	13.467	0.99	19.47	1.27
1.483	0.76	7.483	2.82	13.483	0.99	19.48	1.27
1.500	0.76	7.500	2.82	13.500	0.99	19.50	1.27
1.517	0.79	7.517	2.82	13.517	5.76	19.52	1.27
1.533	0.79	7.533	2.82	13.533	5.77	19.53	1.27
1.550	0.79	7.550	2.82	13.550	5.77	19.55	1.27
1.567	0.79	7.567	2.82	13.567	5.77	19.57	1.27
1.583	0.79	7.583	2.82	13.583	5.77	19.58	1.27
1.600	0.79	7.600	2.82	13.600	5.77	19.60	1.27
1.617	0.79	7.617	2.82	13.617	5.77	19.62	1.27
1.633	0.79	7.633	2.82	13.633	5.77	19.63	1.27
1.650	0.79	7.650	2.82	13.650	5.77	19.65	1.27
1.667	0.79	7.667	2.82	13.667	5.77	19.67	1.27
1.683	0.79	7.683	2.82	13.683	5.77	19.68	1.27
1.700	0.79	7.700	2.82	13.700	5.77	19.70	1.27
1.717	0.79	7.717	2.82	13.717	5.77	19.72	1.27
1.733	0.79	7.733	2.82	13.733	5.77	19.73	1.27
1.750	0.79	7.750	2.82	13.750	5.77	19.75	1.27
1.767	0.76	7.767	2.82	13.767	5.77	19.77	1.27
1.783	0.76	7.783	2.82	13.783	5.77	19.78	1.27
1.800	0.76	7.800	2.82	13.800	5.77	19.80	1.27
1.817	0.76	7.817	2.82	13.817	5.77	19.82	1.27
1.833	0.76	7.833	2.82	13.833	5.77	19.83	1.27
1.850	0.76	7.850	2.82	13.850	5.77	19.85	1.27
1.867	0.76	7.867	2.82	13.867	5.77	19.87	1.27
1.883	0.76	7.883	2.82	13.883	5.77	19.88	1.27
1.900	0.76	7.900	2.82	13.900	5.77	19.90	1.27
1.917	0.76	7.917	2.82	13.917	5.77	19.92	1.27
1.933	0.76	7.933	2.82	13.933	5.77	19.93	1.27
1.950	0.76	7.950	2.82	13.950	5.77	19.95	1.27
1.967	0.76	7.967	2.82	13.967	5.77	19.97	1.27
1.983	0.76	7.983	2.82	13.983	5.77	19.98	1.27
2.000	0.76	8.000	2.81	14.000	5.77	20.00	1.27
2.017	0.93	8.017	0.00	14.017	2.12	20.02	0.84
2.033	0.93	8.033	0.00	14.033	2.11	20.03	0.84
2.050	0.93	8.050	0.00	14.050	2.11	20.05	0.84
2.067	0.93	8.067	0.00	14.067	2.11	20.07	0.84
2.083	0.93	8.083	0.00	14.083	2.11	20.08	0.84
2.100	0.93	8.100	0.00	14.100	2.11	20.10	0.84
2.117	0.93	8.117	0.00	14.117	2.11	20.12	0.84
2.133	0.93	8.133	0.00	14.133	2.11	20.13	0.84
2.150	0.93	8.150	0.00	14.150	2.11	20.15	0.84
2.167	0.93	8.167	0.00	14.167	2.11	20.17	0.84
2.183	0.93	8.183	0.00	14.183	2.11	20.18	0.84
2.200	0.93	8.200	0.00	14.200	2.11	20.20	0.84
2.217	0.93	8.217	0.00	14.217	2.11	20.22	0.84
2.233	0.93	8.233	0.00	14.233	2.11	20.23	0.84
2.250	0.93	8.250	0.00	14.250	2.11	20.25	0.84
2.267	0.90	8.267	0.00	14.267	2.11	20.27	0.84
2.283	0.90	8.283	0.00	14.283	2.11	20.28	0.84
2.300	0.90	8.300	0.00	14.300	2.11	20.30	0.84
2.317	0.90	8.317	0.00	14.317	2.11	20.32	0.84
2.333	0.90	8.333	0.00	14.333	2.11	20.33	0.84
2.350	0.90	8.350	0.00	14.350	2.11	20.35	0.84
2.367	0.90	8.367	0.00	14.367	2.11	20.37	0.84
2.383	0.90	8.383	0.00	14.383	2.11	20.38	0.84
2.400	0.90	8.400	0.00	14.400	2.11	20.40	0.84
2.417	0.90	8.417	0.00	14.417	2.11	20.42	0.84
2.433	0.90	8.433	0.00	14.433	2.11	20.43	0.84
2.450	0.90	8.450	0.00	14.450	2.11	20.45	0.84
2.467	0.90	8.467	0.00	14.467	2.11	20.47	0.84
2.483	0.90	8.483	0.00	14.483	2.11	20.48	0.84
2.500	0.90	8.500	0.01	14.500	2.11	20.50	0.84
2.517	0.93	8.517	3.80	14.517	2.11	20.52	0.84
2.533	0.93	8.533	3.80	14.533	2.11	20.53	0.84
2.550	0.93	8.550	3.80	14.550	2.11	20.55	0.84
2.567	0.93	8.567	3.80	14.567	2.11	20.57	0.84
2.583	0.93	8.583	3.80	14.583	2.11	20.58	0.84
2.600	0.93	8.600	3.80	14.600	2.11	20.60	0.84
2.617	0.93	8.617	3.80	14.617	2.11	20.62	0.84
2.633	0.93	8.633	3.80	14.633	2.11	20.63	0.84
2.650	0.93	8.650	3.80	14.650	2.11	20.65	0.84
2.667	0.93	8.667	3.80	14.667	2.11	20.67	0.84
2.683	0.93	8.683	3.80	14.683	2.11	20.68	0.84
2.700	0.93	8.700	3.80	14.700	2.11	20.70	0.84
2.717	0.93	8.717	3.80	14.717	2.11	20.72	0.84
2.733	0.93	8.733	3.80	14.733	2.11	20.73	0.84
2.750	0.93	8.750	3.80	14.750	2.11	20.75	0.84
2.767	0.90	8.767	3.80	14.767	2.11	20.77	0.84
2.783	0.90	8.783	3.80	14.783	2.11	20.78	0.84
2.800	0.90	8.800	3.80	14.800	2.11	20.80	0.84
2.817	0.90	8.817	3.80	14.817	2.11	20.82	0.84
2.833	0.90	8.833	3.80	14.833	2.11	20.83	0.84
2.850	0.90	8.850	3.80	14.850	2.11	20.85	0.84
2.867	0.90	8.867	3.80	14.867	2.11	20.87	0.84
2.883	0.90	8.883	3.80	14.883	2.11	20.88	0.84
2.900	0.90	8.900	3.80	14.900	2.11	20.90	0.84
2.917	0.90	8.917	3.80	14.917	2.11	20.92	0.84
2.933	0.90	8.933	3.80	14.933	2.11	20.93	0.84
2.950	0.90	8.950	3.80	14.950	2.11	20.95	0.84
2.967	0.90	8.967	3.80	14.967	2.11	20.97	0.84
2.983	0.90	8.983	3.80	14.983	2.11	20.98	0.84
3.000	0.90	9.000	3.80	15.000	2.11	21.00	0.84
3.017	0.93	9.017	2.25	15.017	2.11	21.02	0.84
3.033	0.93	9.033	2.25	15.033	2.11	21.03	0.84
3.050	0.93	9.050	2.25	15.050	2.11	21.05	0.84
3.067	0.93	9.067	2.25	15.067	2.11	21.07	0.84
3.083	0.93	9.083	2.25	15.083	2.11	21.08	0.84
3.100	0.93	9.100	2.25	15.100	2.11	21.10	0.84
3.117	0.93	9.117	2.25	15.117	2.11	21.12	0.84
3.133	0.93	9.133	2.25	15.133	2.11	21.13	0.84
3.150	0.93	9.150	2.25	15.150	2.11	21.15	0.84
3.167	0.93	9.167	2.25	15.167	2.11	21.17	0.84
3.183	0.93	9.183	2.25	15.183	2.11	21.18	0.84
3.200	0.93	9.200	2.25	15.200	2.11	21.20	0.84
3.217	0.93	9.217	2.25	15.217	2.11	21.22	0.84
3.233	0.93	9.233	2.25	15.233	2.11	21.23	0.84
3.250	0.93	9.250	2.25	15.250	2.11	21.25	0.84

3.267	0.90	9.267	2.25	15.267	2.11	21.27	0.84
3.283	0.90	9.283	2.25	15.283	2.11	21.28	0.84
3.300	0.90	9.300	2.25	15.300	2.11	21.30	0.84
3.317	0.90	9.317	2.25	15.317	2.11	21.32	0.84
3.333	0.90	9.333	2.25	15.333	2.11	21.33	0.84
3.350	0.90	9.350	2.25	15.350	2.11	21.35	0.84
3.367	0.90	9.367	2.25	15.367	2.11	21.37	0.84
3.383	0.90	9.383	2.25	15.383	2.11	21.38	0.84
3.400	0.90	9.400	2.25	15.400	2.11	21.40	0.84
3.417	0.90	9.417	2.25	15.417	2.11	21.42	0.84
3.433	0.90	9.433	2.25	15.433	2.11	21.43	0.84
3.450	0.90	9.450	2.25	15.450	2.11	21.45	0.84
3.467	0.90	9.467	2.25	15.467	2.11	21.47	0.84
3.483	0.90	9.483	2.25	15.483	2.11	21.48	0.84
3.500	0.90	9.500	2.25	15.500	2.11	21.50	0.84
3.517	0.93	9.517	0.00	15.517	2.11	21.52	0.84
3.533	0.93	9.533	0.00	15.533	2.11	21.53	0.84
3.550	0.93	9.550	0.00	15.550	2.11	21.55	0.84
3.567	0.93	9.567	0.00	15.567	2.11	21.57	0.84
3.583	0.93	9.583	0.00	15.583	2.11	21.58	0.84
3.600	0.93	9.600	0.00	15.600	2.11	21.60	0.84
3.617	0.93	9.617	0.00	15.617	2.11	21.62	0.84
3.633	0.93	9.633	0.00	15.633	2.11	21.63	0.84
3.650	0.93	9.650	0.00	15.650	2.11	21.65	0.84
3.667	0.93	9.667	0.00	15.667	2.11	21.67	0.84
3.683	0.93	9.683	0.00	15.683	2.11	21.68	0.84
3.700	0.93	9.700	0.00	15.700	2.11	21.70	0.84
3.717	0.93	9.717	0.00	15.717	2.11	21.72	0.84
3.733	0.93	9.733	0.00	15.733	2.11	21.73	0.84
3.750	0.93	9.750	0.01	15.750	2.11	21.75	0.84
3.767	0.90	9.767	5.07	15.767	2.11	21.77	0.84
3.783	0.90	9.783	5.07	15.783	2.11	21.78	0.84
3.800	0.90	9.800	5.07	15.800	2.11	21.80	0.84
3.817	0.90	9.817	5.07	15.817	2.11	21.82	0.84
3.833	0.90	9.833	5.07	15.833	2.11	21.83	0.84
3.850	0.90	9.850	5.07	15.850	2.11	21.85	0.84
3.867	0.90	9.867	5.07	15.867	2.11	21.87	0.84
3.883	0.90	9.883	5.07	15.883	2.11	21.88	0.84
3.900	0.90	9.900	5.07	15.900	2.11	21.90	0.84
3.917	0.90	9.917	5.07	15.917	2.11	21.92	0.84
3.933	0.90	9.933	5.07	15.933	2.11	21.93	0.84
3.950	0.90	9.950	5.07	15.950	2.11	21.95	0.84
3.967	0.90	9.967	5.07	15.967	2.11	21.97	0.84
3.983	0.90	9.983	5.07	15.983	2.11	21.98	0.84
4.000	0.90	10.000	5.07	16.000	2.11	22.00	0.84
4.017	1.13	10.017	3.24	16.017	1.27	22.02	0.84
4.033	1.13	10.033	3.24	16.033	1.27	22.03	0.84
4.050	1.13	10.050	3.24	16.050	1.27	22.05	0.84
4.067	1.13	10.067	3.24	16.067	1.27	22.07	0.84
4.083	1.13	10.083	3.24	16.083	1.27	22.08	0.84
4.100	1.13	10.100	3.24	16.100	1.27	22.10	0.84
4.117	1.13	10.117	3.24	16.117	1.27	22.12	0.84
4.133	1.13	10.133	3.24	16.133	1.27	22.13	0.84
4.150	1.13	10.150	3.24	16.150	1.27	22.15	0.84
4.167	1.13	10.167	3.24	16.167	1.27	22.17	0.84
4.183	1.13	10.183	3.24	16.183	1.27	22.18	0.84
4.200	1.13	10.200	3.24	16.200	1.27	22.20	0.84
4.217	1.13	10.217	3.24	16.217	1.27	22.22	0.84
4.233	1.13	10.233	3.24	16.233	1.27	22.23	0.84
4.250	1.13	10.250	3.24	16.250	1.27	22.25	0.84
4.267	1.13	10.267	3.24	16.267	1.27	22.27	0.84
4.283	1.13	10.283	3.24	16.283	1.27	22.28	0.84
4.300	1.13	10.300	3.24	16.300	1.27	22.30	0.84
4.317	1.13	10.317	3.24	16.317	1.27	22.32	0.84
4.333	1.13	10.333	3.24	16.333	1.27	22.33	0.84
4.350	1.13	10.350	3.24	16.350	1.27	22.35	0.84
4.367	1.13	10.367	3.24	16.367	1.27	22.37	0.84
4.383	1.13	10.383	3.24	16.383	1.27	22.38	0.84
4.400	1.13	10.400	3.24	16.400	1.27	22.40	0.84
4.417	1.13	10.417	3.24	16.417	1.27	22.42	0.84
4.433	1.13	10.433	3.24	16.433	1.27	22.43	0.84
4.450	1.13	10.450	3.24	16.450	1.27	22.45	0.84
4.467	1.13	10.467	3.24	16.467	1.27	22.47	0.84
4.483	1.13	10.483	3.24	16.483	1.27	22.48	0.84
4.500	1.13	10.500	3.24	16.500	1.27	22.50	0.84
4.517	1.13	10.517	4.36	16.517	1.27	22.52	0.84
4.533	1.13	10.533	4.36	16.533	1.27	22.53	0.84
4.550	1.13	10.550	4.36	16.550	1.27	22.55	0.84
4.567	1.13	10.567	4.36	16.567	1.27	22.57	0.84
4.583	1.13	10.583	4.36	16.583	1.27	22.58	0.84
4.600	1.13	10.600	4.36	16.600	1.27	22.60	0.84
4.617	1.13	10.617	4.36	16.617	1.27	22.62	0.84
4.633	1.13	10.633	4.36	16.633	1.27	22.63	0.84
4.650	1.13	10.650	4.36	16.650	1.27	22.65	0.84
4.667	1.13	10.667	4.36	16.667	1.27	22.67	0.84
4.683	1.13	10.683	4.36	16.683	1.27	22.68	0.84
4.700	1.13	10.700	4.36	16.700	1.27	22.70	0.84
4.717	1.13	10.717	4.36	16.717	1.27	22.72	0.84
4.733	1.13	10.733	4.36	16.733	1.27	22.73	0.84
4.750	1.13	10.750	4.36	16.750	1.27	22.75	0.84
4.767	1.13	10.767	4.36	16.767	1.27	22.77	0.84
4.783	1.13	10.783	4.36	16.783	1.27	22.78	0.84
4.800	1.13	10.800	4.36	16.800	1.27	22.80	0.84
4.817	1.13	10.817	4.36	16.817	1.27	22.82	0.84
4.833	1.13	10.833	4.36	16.833	1.27	22.83	0.84
4.850	1.13	10.850	4.36	16.850	1.27	22.85	0.84
4.867	1.13	10.867	4.36	16.867	1.27	22.87	0.84
4.883	1.13	10.883	4.36	16.883	1.27	22.88	0.84
4.900	1.13	10.900	4.36	16.900	1.27	22.90	0.84
4.917	1.13	10.917	4.36	16.917	1.27	22.92	0.84
4.933	1.13	10.933	4.36	16.933	1.27	22.93	0.84
4.950	1.13	10.950	4.36	16.950	1.27	22.95	0.84
4.967	1.13	10.967	4.36	16.967	1.27	22.97	0.84
4.983	1.13	10.983	4.36	16.983	1.27	22.98	0.84
5.000	1.13	11.000	4.36	17.000	1.27	23.00	0.84
5.017	1.13	11.017	6.76	17.017	1.27	23.02	0.84
5.033	1.13	11.033	6.76	17.033	1.27	23.03	0.84
5.050	1.13	11.050	6.76	17.050	1.27	23.05	0.84
5.067	1.13	11.067	6.76	17.067	1.27	23.07	0.84
5.083	1.13	11.083	6.76	17.083	1.27	23.08	0.84
5.100	1.13	11.100	6.76	17.100	1.27	23.10	0.84
5.117	1.13	11.117	6.76	17.117	1.27	23.12	0.84
5.133	1.13	11.133	6.76	17.133	1.27	23.13	0.84
5.150	1.13	11.150	6.76	17.150	1.27	23.15	0.84
5.167	1.13	11.167	6.76	17.167	1.27	23.17	0.84
5.183	1.13	11.183	6.76	17.183	1.27	23.18	0.84
5.200	1.13	11.200	6.76	17.200	1.27	23.20	0.84
5.217	1.13	11.217	6.76	17.217	1.27	23.22	0.84
5.233	1.13	11.233	6.76	17.233	1.27	23.23	0.84
5.250	1.13	11.250	6.76	17.250	1.27	23.25	0.84
5.267	1.13	11.267	6.76	17.267	1.27	23.27	0.84
5.283	1.13	11.283	6.76	17.283	1.27	23.28	0.84
5.300	1.13	11.300	6.76	17.300	1.27	23.30	0.84
5.317	1.13	11.317	6.76	17.317	1.27	23.32	0.84
5.333	1.13	11.333	6.76	17.333	1.27	23.33	0.84
5.350	1.13	11.350	6.76	17.350	1.27	23.35	0.84
5.367	1.13	11.367	6.76	17.367	1.27	23.37	0.84
5.383	1.13	11.383	6.76	17.383	1.27	23.38	0.84
5.400	1.13	11.400	6.76	17.400	1.27	23.40	0.84
5.417	1.13	11.417	6.76	17.417	1.27	23.42	0.84
5.433	1.13	11.433	6.76	17.433	1.27	23.43	0.84
5.450	1.13	11.450	6.76	17.450	1.27	23.45	0.84
5.467	1.13	11.467	6.76	17.467	1.27	23.47	0.84
5.483	1.13	11.483	6.76	17.483	1.27	23.48	0.84
5.500	1.13	11.500	6.76	17.500	1.27	23.50	0.84
5.517	1.13	11.517	29.28	17.517	1.27	23.52	0.84
5.533	1.13	11.533	29.29	17.533	1.27	23.53	0.84
5.550	1.13	11.550	29.29	17.550	1.27	23.55	0.84
5.567	1.13	11.567	29.29	17.567	1.27	23.57	0.84
5.583	1.13	11.583	29.29	17.583	1.27	23.58	0.84
5.600	1.13	11.600	29.29	17.600	1.27	23.60	0.84
5.617	1.13	11.617	29.29	17.617	1.27	23.62	0.84
5.633	1.13	11.633	29.29	17.633	1.27	23.63	0.84
5.650	1.13	11.650	29.29	17.650	1.27	23.65	0.84
5.667	1.13	11.667	29.29	17.667	1.27	23.67	0.84
5.683	1.13	11.683	29.29	17.683	1.27	23.68	0.84
5.700	1.13	11.700	29.29	17.700	1.27	23.70	0.84
5.717	1.13	11.717	29.29	17.717	1.27	23.72	0.84
5.733	1.13	11.733	29.29	17.733	1.27	23.73	0.84
5.750	1.13	11.750	29.29	17.750	1.27	23.75	0.84
5.767	1.13	11.767	77.70	17.767	1.27	23.77	0.84
5.783	1.13	11.783	77.72	17.783	1.27	23.78	0.84
5.800	1.13	11.800	77.72	17.800	1.27	23.80	0.84
5.817	1.13	11.817	77.72	17.817	1.27	23.82	0.84
5.833	1.13	11.833	77.72	17.833	1.27	23.83	0.84
5.850	1.13	11.850	77.72	17.850	1.27	23.85	0.84
5.867	1.13	11.867	77.72	17.867	1.27	23.87	0.84
5.883	1.13	11.883	77.72	17.883	1.27	23.88	0.84
5.900	1.13	11.900	77.72	17.900	1.27	23.90	0.84
5.917	1.13	11.917	77.72	17.917	1.27	23.92	0.84
5.933	1.13	11.933	77.72	17.933	1.27	23.93	0.84
5.950	1.13	11.950	77.72	17.950	1.27	23.95	0.84
5.967	1.13	11.967	77.72	17.967	1.27	23.97	0.84
5.983	1.13	11.983	77.72	17.983	1.27	23.98	0.84
6.000	1.13	12.000	77.72	18.000	1.27	24.00	0.84

Unit Hyd Qpeak (cms)= 0.046

```
     PEAK FLOW       (cms)=   0.005 (i)
     TIME TO PEAK    (hrs)=  12.117
     RUNOFF VOLUME    (mm)=   7.164
     TOTAL RAINFALL   (mm)=  70.400
     RUNOFF COEFFICIENT   =   0.102

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0103) |   Area     (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.040 (i)
     TIME TO PEAK    (hrs)=  12.317
     RUNOFF VOLUME    (mm)=   5.336
     TOTAL RAINFALL   (mm)=  70.400
     RUNOFF COEFFICIENT   =   0.076

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0102) |   Area     (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.016 (i)
     TIME TO PEAK    (hrs)=  12.033
     RUNOFF VOLUME    (mm)=   4.664
     TOTAL RAINFALL   (mm)=  70.400
     RUNOFF COEFFICIENT   =   0.066

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0101) |   Area     (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.035 (i)
     TIME TO PEAK    (hrs)=  12.150
     RUNOFF VOLUME    (mm)=   5.881
     TOTAL RAINFALL   (mm)=  70.400
     RUNOFF COEFFICIENT   =   0.084

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0104) |   Area     (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.018 (i)
     TIME TO PEAK    (hrs)=  12.067
     RUNOFF VOLUME    (mm)=   4.651
     TOTAL RAINFALL   (mm)=  70.400
     RUNOFF COEFFICIENT   =   0.066

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0101):     2.26   0.035    12.15     5.88
       + ID2= 2 (0102):     0.90   0.016    12.03     4.66
         ==============================================
         ID = 3 (0601):     3.17   0.048    12.08     7.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     3.17   0.048    12.08     7.21
       + ID2= 2 (0103):     4.02   0.040    12.32     5.34
         ==============================================
         ID = 1 (0601):     7.19   0.081    12.15     7.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0601):     7.19   0.081    12.15     7.13
       + ID2= 2 (0104):     1.18   0.018    12.07     4.65
         ==============================================
         ID = 3 (0601):     8.37   0.098    12.13     6.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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  ** SIMULATION NUMBER:   4 **
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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              297fe064-6d37-460a-935c-4a533ffb288a\758a2a4a
| Ptotal= 82.76 mm |    Comments: 25-Year Orillia 24-hour SCS Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    0.93 |  6.25    0.00 | 12.25   11.92 | 18.25    1.49
                0.50    0.89 |  6.50    0.00 | 12.50   11.92 | 18.50    1.49
                0.75    0.93 |  6.75    0.00 | 12.75    6.13 | 18.75    1.49
                1.00    0.89 |  7.00    0.00 | 13.00    6.13 | 19.00    1.49
                1.25    0.93 |  7.25    3.31 | 13.25    1.16 | 19.25    1.49
                1.50    0.89 |  7.50    3.31 | 13.50    1.16 | 19.50    1.49
                1.75    0.93 |  7.75    3.31 | 13.75    6.79 | 19.75    1.49
                2.00    0.89 |  8.00    3.31 | 14.00    6.79 | 20.00    1.49
                2.25    1.09 |  8.25    0.00 | 14.25    2.48 | 20.25    0.99
                2.50    1.06 |  8.50    0.00 | 14.50    2.48 | 20.50    0.99
                2.75    1.09 |  8.75    4.47 | 14.75    2.48 | 20.75    0.99
                3.00    1.06 |  9.00    4.47 | 15.00    2.48 | 21.00    0.99
                3.25    1.09 |  9.25    2.65 | 15.25    2.48 | 21.25    0.99
                3.50    1.06 |  9.50    2.65 | 15.50    2.48 | 21.50    0.99
                3.75    1.09 |  9.75    0.00 | 15.75    2.48 | 21.75    0.99
                4.00    1.06 | 10.00    5.96 | 16.00    2.48 | 22.00    0.99
                4.25    1.32 | 10.25    3.81 | 16.25    1.49 | 22.25    0.99
                4.50    1.32 | 10.50    3.81 | 16.50    1.49 | 22.50    0.99
                4.75    1.32 | 10.75    5.13 | 16.75    1.49 | 22.75    0.99
                5.00    1.32 | 11.00    5.13 | 17.00    1.49 | 23.00    0.99
                5.25    1.32 | 11.25    7.95 | 17.25    1.49 | 23.25    0.99
                5.50    1.32 | 11.50    7.95 | 17.50    1.49 | 23.50    0.99
                5.75    1.32 | 11.75   34.44 | 17.75    1.49 | 23.75    0.99
                6.00    1.32 | 12.00   91.41 | 18.00    1.49 | 24.00    0.99

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--------------------
| CALIB            |
| NASHYD    (0105) |   Area     (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia       (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                                ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

0.017	0.93	6.017	0.00	12.017	11.98	18.02	1.49
0.033	0.93	6.033	0.00	12.033	11.92	18.03	1.49
0.050	0.93	6.050	0.00	12.050	11.92	18.05	1.49
0.067	0.93	6.067	0.00	12.067	11.92	18.07	1.49
0.083	0.93	6.083	0.00	12.083	11.92	18.08	1.49
0.100	0.93	6.100	0.00	12.100	11.92	18.10	1.49
0.117	0.93	6.117	0.00	12.117	11.92	18.12	1.49
0.133	0.93	6.133	0.00	12.133	11.92	18.13	1.49
0.150	0.93	6.150	0.00	12.150	11.92	18.15	1.49
0.167	0.93	6.167	0.00	12.167	11.92	18.17	1.49
0.183	0.93	6.183	0.00	12.183	11.92	18.18	1.49
0.200	0.93	6.200	0.00	12.200	11.92	18.20	1.49
0.217	0.93	6.217	0.00	12.217	11.92	18.22	1.49
0.233	0.93	6.233	0.00	12.233	11.92	18.23	1.49
0.250	0.93	6.250	0.00	12.250	11.92	18.25	1.49
0.267	0.89	6.267	0.00	12.267	11.92	18.27	1.49
0.283	0.89	6.283	0.00	12.283	11.92	18.28	1.49
0.300	0.89	6.300	0.00	12.300	11.92	18.30	1.49
0.317	0.89	6.317	0.00	12.317	11.92	18.32	1.49
0.333	0.89	6.333	0.00	12.333	11.92	18.33	1.49
0.350	0.89	6.350	0.00	12.350	11.92	18.35	1.49
0.367	0.89	6.367	0.00	12.367	11.92	18.37	1.49
0.383	0.89	6.383	0.00	12.383	11.92	18.38	1.49
0.400	0.89	6.400	0.00	12.400	11.92	18.40	1.49
0.417	0.89	6.417	0.00	12.417	11.92	18.42	1.49
0.433	0.89	6.433	0.00	12.433	11.92	18.43	1.49
0.450	0.89	6.450	0.00	12.450	11.92	18.45	1.49
0.467	0.89	6.467	0.00	12.467	11.92	18.47	1.49
0.483	0.89	6.483	0.00	12.483	11.92	18.48	1.49
0.500	0.89	6.500	0.00	12.500	11.92	18.50	1.49
0.517	0.93	6.517	0.00	12.517	6.14	18.52	1.49
0.533	0.93	6.533	0.00	12.533	6.13	18.53	1.49
0.550	0.93	6.550	0.00	12.550	6.13	18.55	1.49
0.567	0.93	6.567	0.00	12.567	6.13	18.57	1.49
0.583	0.93	6.583	0.00	12.583	6.13	18.58	1.49
0.600	0.93	6.600	0.00	12.600	6.13	18.60	1.49
0.617	0.93	6.617	0.00	12.617	6.13	18.62	1.49
0.633	0.93	6.633	0.00	12.633	6.13	18.63	1.49
0.650	0.93	6.650	0.00	12.650	6.13	18.65	1.49
0.667	0.93	6.667	0.00	12.667	6.13	18.67	1.49
0.683	0.93	6.683	0.00	12.683	6.13	18.68	1.49
0.700	0.93	6.700	0.00	12.700	6.13	18.70	1.49
0.717	0.93	6.717	0.00	12.717	6.13	18.72	1.49
0.733	0.93	6.733	0.00	12.733	6.13	18.73	1.49
0.750	0.93	6.750	0.00	12.750	6.13	18.75	1.49
0.767	0.89	6.767	0.00	12.767	6.13	18.77	1.49
0.783	0.89	6.783	0.00	12.783	6.13	18.78	1.49
0.800	0.89	6.800	0.00	12.800	6.13	18.80	1.49
0.817	0.89	6.817	0.00	12.817	6.13	18.82	1.49
0.833	0.89	6.833	0.00	12.833	6.13	18.83	1.49
0.850	0.89	6.850	0.00	12.850	6.13	18.85	1.49
0.867	0.89	6.867	0.00	12.867	6.13	18.87	1.49
0.883	0.89	6.883	0.00	12.883	6.13	18.88	1.49
0.900	0.89	6.900	0.00	12.900	6.13	18.90	1.49
0.917	0.89	6.917	0.00	12.917	6.13	18.92	1.49
0.933	0.89	6.933	0.00	12.933	6.13	18.93	1.49
0.950	0.89	6.950	0.00	12.950	6.13	18.95	1.49
0.967	0.89	6.967	0.00	12.967	6.13	18.97	1.49
0.983	0.89	6.983	0.00	12.983	6.13	18.98	1.49
1.000	0.89	7.000	0.01	13.000	6.13	19.00	1.49
1.017	0.93	7.017	3.31	13.017	1.17	19.02	1.49
1.033	0.93	7.033	3.31	13.033	1.16	19.03	1.49
1.050	0.93	7.050	3.31	13.050	1.16	19.05	1.49
1.067	0.93	7.067	3.31	13.067	1.16	19.07	1.49
1.083	0.93	7.083	3.31	13.083	1.16	19.08	1.49
1.100	0.93	7.100	3.31	13.100	1.16	19.10	1.49
1.117	0.93	7.117	3.31	13.117	1.16	19.12	1.49
1.133	0.93	7.133	3.31	13.133	1.16	19.13	1.49
1.150	0.93	7.150	3.31	13.150	1.16	19.15	1.49
1.167	0.93	7.167	3.31	13.167	1.16	19.17	1.49
1.183	0.93	7.183	3.31	13.183	1.16	19.18	1.49
1.200	0.93	7.200	3.31	13.200	1.16	19.20	1.49
1.217	0.93	7.217	3.31	13.217	1.16	19.22	1.49
1.233	0.93	7.233	3.31	13.233	1.16	19.23	1.49
1.250	0.93	7.250	3.31	13.250	1.16	19.25	1.49
1.267	0.89	7.267	3.31	13.267	1.16	19.27	1.49
1.283	0.89	7.283	3.31	13.283	1.16	19.28	1.49
1.300	0.89	7.300	3.31	13.300	1.16	19.30	1.49
1.317	0.89	7.317	3.31	13.317	1.16	19.32	1.49
1.333	0.89	7.333	3.31	13.333	1.16	19.33	1.49
1.350	0.89	7.350	3.31	13.350	1.16	19.35	1.49
1.367	0.89	7.367	3.31	13.367	1.16	19.37	1.49
1.383	0.89	7.383	3.31	13.383	1.16	19.38	1.49
1.400	0.89	7.400	3.31	13.400	1.16	19.40	1.49
1.417	0.89	7.417	3.31	13.417	1.16	19.42	1.49
1.433	0.89	7.433	3.31	13.433	1.16	19.43	1.49
1.450	0.89	7.450	3.31	13.450	1.16	19.45	1.49
1.467	0.89	7.467	3.31	13.467	1.16	19.47	1.49
1.483	0.89	7.483	3.31	13.483	1.16	19.48	1.49
1.500	0.89	7.500	3.31	13.500	1.16	19.50	1.49
1.517	0.93	7.517	3.31	13.517	6.78	19.52	1.49
1.533	0.93	7.533	3.31	13.533	6.79	19.53	1.49
1.550	0.93	7.550	3.31	13.550	6.79	19.55	1.49
1.567	0.93	7.567	3.31	13.567	6.79	19.57	1.49
1.583	0.93	7.583	3.31	13.583	6.79	19.58	1.49
1.600	0.93	7.600	3.31	13.600	6.79	19.60	1.49
1.617	0.93	7.617	3.31	13.617	6.79	19.62	1.49
1.633	0.93	7.633	3.31	13.633	6.79	19.63	1.49
1.650	0.93	7.650	3.31	13.650	6.79	19.65	1.49
1.667	0.93	7.667	3.31	13.667	6.79	19.67	1.49
1.683	0.93	7.683	3.31	13.683	6.79	19.68	1.49
1.700	0.93	7.700	3.31	13.700	6.79	19.70	1.49
1.717	0.93	7.717	3.31	13.717	6.79	19.72	1.49
1.733	0.93	7.733	3.31	13.733	6.79	19.73	1.49
1.750	0.93	7.750	3.31	13.750	6.79	19.75	1.49
1.767	0.89	7.767	3.31	13.767	6.79	19.77	1.49
1.783	0.89	7.783	3.31	13.783	6.79	19.78	1.49
1.800	0.89	7.800	3.31	13.800	6.79	19.80	1.49
1.817	0.89	7.817	3.31	13.817	6.79	19.82	1.49
1.833	0.89	7.833	3.31	13.833	6.79	19.83	1.49
1.850	0.89	7.850	3.31	13.850	6.79	19.85	1.49
1.867	0.89	7.867	3.31	13.867	6.79	19.87	1.49
1.883	0.89	7.883	3.31	13.883	6.79	19.88	1.49
1.900	0.89	7.900	3.31	13.900	6.79	19.90	1.49
1.917	0.89	7.917	3.31	13.917	6.79	19.92	1.49
1.933	0.89	7.933	3.31	13.933	6.79	19.93	1.49
1.950	0.89	7.950	3.31	13.950	6.79	19.95	1.49
1.967	0.89	7.967	3.31	13.967	6.79	19.97	1.49
1.983	0.89	7.983	3.31	13.983	6.79	19.98	1.49
2.000	0.89	8.000	3.30	14.000	6.79	20.00	1.49
2.017	1.09	8.017	0.00	14.017	2.49	20.02	0.99
2.033	1.09	8.033	0.00	14.033	2.48	20.03	0.99
2.050	1.09	8.050	0.00	14.050	2.48	20.05	0.99
2.067	1.09	8.067	0.00	14.067	2.48	20.07	0.99
2.083	1.09	8.083	0.00	14.083	2.48	20.08	0.99
2.100	1.09	8.100	0.00	14.100	2.48	20.10	0.99
2.117	1.09	8.117	0.00	14.117	2.48	20.12	0.99
2.133	1.09	8.133	0.00	14.133	2.48	20.13	0.99
2.150	1.09	8.150	0.00	14.150	2.48	20.15	0.99
2.167	1.09	8.167	0.00	14.167	2.48	20.17	0.99
2.183	1.09	8.183	0.00	14.183	2.48	20.18	0.99
2.200	1.09	8.200	0.00	14.200	2.48	20.20	0.99
2.217	1.09	8.217	0.00	14.217	2.48	20.22	0.99
2.233	1.09	8.233	0.00	14.233	2.48	20.23	0.99
2.250	1.09	8.250	0.00	14.250	2.48	20.25	0.99
2.267	1.06	8.267	0.00	14.267	2.48	20.27	0.99
2.283	1.06	8.283	0.00	14.283	2.48	20.28	0.99
2.300	1.06	8.300	0.00	14.300	2.48	20.30	0.99
2.317	1.06	8.317	0.00	14.317	2.48	20.32	0.99
2.333	1.06	8.333	0.00	14.333	2.48	20.33	0.99
2.350	1.06	8.350	0.00	14.350	2.48	20.35	0.99
2.367	1.06	8.367	0.00	14.367	2.48	20.37	0.99
2.383	1.06	8.383	0.00	14.383	2.48	20.38	0.99
2.400	1.06	8.400	0.00	14.400	2.48	20.40	0.99
2.417	1.06	8.417	0.00	14.417	2.48	20.42	0.99
2.433	1.06	8.433	0.00	14.433	2.48	20.43	0.99
2.450	1.06	8.450	0.00	14.450	2.48	20.45	0.99
2.467	1.06	8.467	0.00	14.467	2.48	20.47	0.99
2.483	1.06	8.483	0.00	14.483	2.48	20.48	0.99
2.500	1.06	8.500	0.01	14.500	2.48	20.50	0.99
2.517	1.09	8.517	4.47	14.517	2.48	20.52	0.99
2.533	1.09	8.533	4.47	14.533	2.48	20.53	0.99
2.550	1.09	8.550	4.47	14.550	2.48	20.55	0.99
2.567	1.09	8.567	4.47	14.567	2.48	20.57	0.99
2.583	1.09	8.583	4.47	14.583	2.48	20.58	0.99
2.600	1.09	8.600	4.47	14.600	2.48	20.60	0.99
2.617	1.09	8.617	4.47	14.617	2.48	20.62	0.99
2.633	1.09	8.633	4.47	14.633	2.48	20.63	0.99
2.650	1.09	8.650	4.47	14.650	2.48	20.65	0.99
2.667	1.09	8.667	4.47	14.667	2.48	20.67	0.99
2.683	1.09	8.683	4.47	14.683	2.48	20.68	0.99
2.700	1.09	8.700	4.47	14.700	2.48	20.70	0.99
2.717	1.09	8.717	4.47	14.717	2.48	20.72	0.99
2.733	1.09	8.733	4.47	14.733	2.48	20.73	0.99
2.750	1.09	8.750	4.47	14.750	2.48	20.75	0.99
2.767	1.06	8.767	4.47	14.767	2.48	20.77	0.99
2.783	1.06	8.783	4.47	14.783	2.48	20.78	0.99
2.800	1.06	8.800	4.47	14.800	2.48	20.80	0.99

2.817	1.06	8.817	4.47	14.817	2.48	20.82	0.99
2.833	1.06	8.833	4.47	14.833	2.48	20.83	0.99
2.850	1.06	8.850	4.47	14.850	2.48	20.85	0.99
2.867	1.06	8.867	4.47	14.867	2.48	20.87	0.99
2.883	1.06	8.883	4.47	14.883	2.48	20.88	0.99
2.900	1.06	8.900	4.47	14.900	2.48	20.90	0.99
2.917	1.06	8.917	4.47	14.917	2.48	20.92	0.99
2.933	1.06	8.933	4.47	14.933	2.48	20.93	0.99
2.950	1.06	8.950	4.47	14.950	2.48	20.95	0.99
2.967	1.06	8.967	4.47	14.967	2.48	20.97	0.99
2.983	1.06	8.983	4.47	14.983	2.48	20.98	0.99
3.000	1.06	9.000	4.47	15.000	2.48	21.00	0.99
3.017	1.09	9.017	2.65	15.017	2.48	21.02	0.99
3.033	1.09	9.033	2.65	15.033	2.48	21.03	0.99
3.050	1.09	9.050	2.65	15.050	2.48	21.05	0.99
3.067	1.09	9.067	2.65	15.067	2.48	21.07	0.99
3.083	1.09	9.083	2.65	15.083	2.48	21.08	0.99
3.100	1.09	9.100	2.65	15.100	2.48	21.10	0.99
3.117	1.09	9.117	2.65	15.117	2.48	21.12	0.99
3.133	1.09	9.133	2.65	15.133	2.48	21.13	0.99
3.150	1.09	9.150	2.65	15.150	2.48	21.15	0.99
3.167	1.09	9.167	2.65	15.167	2.48	21.17	0.99
3.183	1.09	9.183	2.65	15.183	2.48	21.18	0.99
3.200	1.09	9.200	2.65	15.200	2.48	21.20	0.99
3.217	1.09	9.217	2.65	15.217	2.48	21.22	0.99
3.233	1.09	9.233	2.65	15.233	2.48	21.23	0.99
3.250	1.09	9.250	2.65	15.250	2.48	21.25	0.99
3.267	1.06	9.267	2.65	15.267	2.48	21.27	0.99
3.283	1.06	9.283	2.65	15.283	2.48	21.28	0.99
3.300	1.06	9.300	2.65	15.300	2.48	21.30	0.99
3.317	1.06	9.317	2.65	15.317	2.48	21.32	0.99
3.333	1.06	9.333	2.65	15.333	2.48	21.33	0.99
3.350	1.06	9.350	2.65	15.350	2.48	21.35	0.99
3.367	1.06	9.367	2.65	15.367	2.48	21.37	0.99
3.383	1.06	9.383	2.65	15.383	2.48	21.38	0.99
3.400	1.06	9.400	2.65	15.400	2.48	21.40	0.99
3.417	1.06	9.417	2.65	15.417	2.48	21.42	0.99
3.433	1.06	9.433	2.65	15.433	2.48	21.43	0.99
3.450	1.06	9.450	2.65	15.450	2.48	21.45	0.99
3.467	1.06	9.467	2.65	15.467	2.48	21.47	0.99
3.483	1.06	9.483	2.65	15.483	2.48	21.48	0.99
3.500	1.06	9.500	2.65	15.500	2.48	21.50	0.99
3.517	1.09	9.517	0.00	15.517	2.48	21.52	0.99
3.533	1.09	9.533	0.00	15.533	2.48	21.53	0.99
3.550	1.09	9.550	0.00	15.550	2.48	21.55	0.99
3.567	1.09	9.567	0.00	15.567	2.48	21.57	0.99
3.583	1.09	9.583	0.00	15.583	2.48	21.58	0.99
3.600	1.09	9.600	0.00	15.600	2.48	21.60	0.99
3.617	1.09	9.617	0.00	15.617	2.48	21.62	0.99
3.633	1.09	9.633	0.00	15.633	2.48	21.63	0.99
3.650	1.09	9.650	0.00	15.650	2.48	21.65	0.99
3.667	1.09	9.667	0.00	15.667	2.48	21.67	0.99
3.683	1.09	9.683	0.00	15.683	2.48	21.68	0.99
3.700	1.09	9.700	0.00	15.700	2.48	21.70	0.99
3.717	1.09	9.717	0.00	15.717	2.48	21.72	0.99
3.733	1.09	9.733	0.00	15.733	2.48	21.73	0.99
3.750	1.09	9.750	0.01	15.750	2.48	21.75	0.99
3.767	1.06	9.767	5.96	15.767	2.48	21.77	0.99
3.783	1.06	9.783	5.96	15.783	2.48	21.78	0.99
3.800	1.06	9.800	5.96	15.800	2.48	21.80	0.99
3.817	1.06	9.817	5.96	15.817	2.48	21.82	0.99
3.833	1.06	9.833	5.96	15.833	2.48	21.83	0.99
3.850	1.06	9.850	5.96	15.850	2.48	21.85	0.99
3.867	1.06	9.867	5.96	15.867	2.48	21.87	0.99
3.883	1.06	9.883	5.96	15.883	2.48	21.88	0.99
3.900	1.06	9.900	5.96	15.900	2.48	21.90	0.99
3.917	1.06	9.917	5.96	15.917	2.48	21.92	0.99
3.933	1.06	9.933	5.96	15.933	2.48	21.93	0.99
3.950	1.06	9.950	5.96	15.950	2.48	21.95	0.99
3.967	1.06	9.967	5.96	15.967	2.48	21.97	0.99
3.983	1.06	9.983	5.96	15.983	2.48	21.98	0.99
4.000	1.06	10.000	5.96	16.000	2.48	22.00	0.99
4.017	1.32	10.017	3.81	16.017	1.49	22.02	0.99
4.033	1.32	10.033	3.81	16.033	1.49	22.03	0.99
4.050	1.32	10.050	3.81	16.050	1.49	22.05	0.99
4.067	1.32	10.067	3.81	16.067	1.49	22.07	0.99
4.083	1.32	10.083	3.81	16.083	1.49	22.08	0.99
4.100	1.32	10.100	3.81	16.100	1.49	22.10	0.99
4.117	1.32	10.117	3.81	16.117	1.49	22.12	0.99
4.133	1.32	10.133	3.81	16.133	1.49	22.13	0.99
4.150	1.32	10.150	3.81	16.150	1.49	22.15	0.99
4.167	1.32	10.167	3.81	16.167	1.49	22.17	0.99
4.183	1.32	10.183	3.81	16.183	1.49	22.18	0.99
4.200	1.32	10.200	3.81	16.200	1.49	22.20	0.99
4.217	1.32	10.217	3.81	16.217	1.49	22.22	0.99
4.233	1.32	10.233	3.81	16.233	1.49	22.23	0.99
4.250	1.32	10.250	3.81	16.250	1.49	22.25	0.99
4.267	1.32	10.267	3.81	16.267	1.49	22.27	0.99
4.283	1.32	10.283	3.81	16.283	1.49	22.28	0.99
4.300	1.32	10.300	3.81	16.300	1.49	22.30	0.99
4.317	1.32	10.317	3.81	16.317	1.49	22.32	0.99
4.333	1.32	10.333	3.81	16.333	1.49	22.33	0.99
4.350	1.32	10.350	3.81	16.350	1.49	22.35	0.99
4.367	1.32	10.367	3.81	16.367	1.49	22.37	0.99
4.383	1.32	10.383	3.81	16.383	1.49	22.38	0.99
4.400	1.32	10.400	3.81	16.400	1.49	22.40	0.99
4.417	1.32	10.417	3.81	16.417	1.49	22.42	0.99
4.433	1.32	10.433	3.81	16.433	1.49	22.43	0.99
4.450	1.32	10.450	3.81	16.450	1.49	22.45	0.99
4.467	1.32	10.467	3.81	16.467	1.49	22.47	0.99
4.483	1.32	10.483	3.81	16.483	1.49	22.48	0.99
4.500	1.32	10.500	3.81	16.500	1.49	22.50	0.99
4.517	1.32	10.517	5.13	16.517	1.49	22.52	0.99
4.533	1.32	10.533	5.13	16.533	1.49	22.53	0.99
4.550	1.32	10.550	5.13	16.550	1.49	22.55	0.99
4.567	1.32	10.567	5.13	16.567	1.49	22.57	0.99
4.583	1.32	10.583	5.13	16.583	1.49	22.58	0.99
4.600	1.32	10.600	5.13	16.600	1.49	22.60	0.99
4.617	1.32	10.617	5.13	16.617	1.49	22.62	0.99
4.633	1.32	10.633	5.13	16.633	1.49	22.63	0.99
4.650	1.32	10.650	5.13	16.650	1.49	22.65	0.99
4.667	1.32	10.667	5.13	16.667	1.49	22.67	0.99
4.683	1.32	10.683	5.13	16.683	1.49	22.68	0.99
4.700	1.32	10.700	5.13	16.700	1.49	22.70	0.99
4.717	1.32	10.717	5.13	16.717	1.49	22.72	0.99
4.733	1.32	10.733	5.13	16.733	1.49	22.73	0.99
4.750	1.32	10.750	5.13	16.750	1.49	22.75	0.99
4.767	1.32	10.767	5.13	16.767	1.49	22.77	0.99
4.783	1.32	10.783	5.13	16.783	1.49	22.78	0.99
4.800	1.32	10.800	5.13	16.800	1.49	22.80	0.99
4.817	1.32	10.817	5.13	16.817	1.49	22.82	0.99
4.833	1.32	10.833	5.13	16.833	1.49	22.83	0.99
4.850	1.32	10.850	5.13	16.850	1.49	22.85	0.99
4.867	1.32	10.867	5.13	16.867	1.49	22.87	0.99
4.883	1.32	10.883	5.13	16.883	1.49	22.88	0.99
4.900	1.32	10.900	5.13	16.900	1.49	22.90	0.99
4.917	1.32	10.917	5.13	16.917	1.49	22.92	0.99
4.933	1.32	10.933	5.13	16.933	1.49	22.93	0.99
4.950	1.32	10.950	5.13	16.950	1.49	22.95	0.99
4.967	1.32	10.967	5.13	16.967	1.49	22.97	0.99
4.983	1.32	10.983	5.13	16.983	1.49	22.98	0.99
5.000	1.32	11.000	5.13	17.000	1.49	23.00	0.99
5.017	1.32	11.017	7.95	17.017	1.49	23.02	0.99
5.033	1.32	11.033	7.95	17.033	1.49	23.03	0.99
5.050	1.32	11.050	7.95	17.050	1.49	23.05	0.99
5.067	1.32	11.067	7.95	17.067	1.49	23.07	0.99
5.083	1.32	11.083	7.95	17.083	1.49	23.08	0.99
5.100	1.32	11.100	7.95	17.100	1.49	23.10	0.99
5.117	1.32	11.117	7.95	17.117	1.49	23.12	0.99
5.133	1.32	11.133	7.95	17.133	1.49	23.13	0.99
5.150	1.32	11.150	7.95	17.150	1.49	23.15	0.99
5.167	1.32	11.167	7.95	17.167	1.49	23.17	0.99
5.183	1.32	11.183	7.95	17.183	1.49	23.18	0.99
5.200	1.32	11.200	7.95	17.200	1.49	23.20	0.99
5.217	1.32	11.217	7.95	17.217	1.49	23.22	0.99
5.233	1.32	11.233	7.95	17.233	1.49	23.23	0.99
5.250	1.32	11.250	7.95	17.250	1.49	23.25	0.99
5.267	1.32	11.267	7.95	17.267	1.49	23.27	0.99
5.283	1.32	11.283	7.95	17.283	1.49	23.28	0.99
5.300	1.32	11.300	7.95	17.300	1.49	23.30	0.99
5.317	1.32	11.317	7.95	17.317	1.49	23.32	0.99
5.333	1.32	11.333	7.95	17.333	1.49	23.33	0.99
5.350	1.32	11.350	7.95	17.350	1.49	23.35	0.99
5.367	1.32	11.367	7.95	17.367	1.49	23.37	0.99
5.383	1.32	11.383	7.95	17.383	1.49	23.38	0.99
5.400	1.32	11.400	7.95	17.400	1.49	23.40	0.99
5.417	1.32	11.417	7.95	17.417	1.49	23.42	0.99
5.433	1.32	11.433	7.95	17.433	1.49	23.43	0.99
5.450	1.32	11.450	7.95	17.450	1.49	23.45	0.99
5.467	1.32	11.467	7.95	17.467	1.49	23.47	0.99
5.483	1.32	11.483	7.95	17.483	1.49	23.48	0.99
5.500	1.32	11.500	7.95	17.500	1.49	23.50	0.99
5.517	1.32	11.517	34.43	17.517	1.49	23.52	0.99
5.533	1.32	11.533	34.44	17.533	1.49	23.53	0.99
5.550	1.32	11.550	34.44	17.550	1.49	23.55	0.99
5.567	1.32	11.567	34.44	17.567	1.49	23.57	0.99
5.583	1.32	11.583	34.44	17.583	1.49	23.58	0.99
5.600	1.32	11.600	34.44	17.600	1.49	23.60	0.99

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              5.617    1.32 |11.617    34.44 |17.617    1.49 | 23.62    0.99
              5.633    1.32 |11.633    34.44 |17.633    1.49 | 23.63    0.99
              5.650    1.32 |11.650    34.44 |17.650    1.49 | 23.65    0.99
              5.667    1.32 |11.667    34.44 |17.667    1.49 | 23.67    0.99
              5.683    1.32 |11.683    34.44 |17.683    1.49 | 23.68    0.99
              5.700    1.32 |11.700    34.44 |17.700    1.49 | 23.70    0.99
              5.717    1.32 |11.717    34.44 |17.717    1.49 | 23.72    0.99
              5.733    1.32 |11.733    34.44 |17.733    1.49 | 23.73    0.99
              5.750    1.32 |11.750    34.44 |17.750    1.49 | 23.75    0.99
              5.767    1.32 |11.767    91.38 |17.767    1.49 | 23.77    0.99
              5.783    1.32 |11.783    91.41 |17.783    1.49 | 23.78    0.99
              5.800    1.32 |11.800    91.41 |17.800    1.49 | 23.80    0.99
              5.817    1.32 |11.817    91.41 |17.817    1.49 | 23.82    0.99
              5.833    1.32 |11.833    91.41 |17.833    1.49 | 23.83    0.99
              5.850    1.32 |11.850    91.41 |17.850    1.49 | 23.85    0.99
              5.867    1.32 |11.867    91.41 |17.867    1.49 | 23.87    0.99
              5.883    1.32 |11.883    91.41 |17.883    1.49 | 23.88    0.99
              5.900    1.32 |11.900    91.41 |17.900    1.49 | 23.90    0.99
              5.917    1.32 |11.917    91.41 |17.917    1.49 | 23.92    0.99
              5.933    1.32 |11.933    91.41 |17.933    1.49 | 23.93    0.99
              5.950    1.32 |11.950    91.41 |17.950    1.49 | 23.95    0.99
              5.967    1.32 |11.967    91.41 |17.967    1.49 | 23.97    0.99
              5.983    1.32 |11.983    91.41 |17.983    1.49 | 23.98    0.99
              6.000    1.32 |12.000    91.41 |18.000    1.49 | 24.00    0.99

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.007 (i)
     TIME TO PEAK    (hrs)=  12.117
     RUNOFF VOLUME    (mm)=  10.047
     TOTAL RAINFALL   (mm)=  82.757
     RUNOFF COEFFICIENT   =   0.121

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD    (0103) |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.058 (i)
     TIME TO PEAK    (hrs)=  12.300
     RUNOFF VOLUME    (mm)=   7.597
     TOTAL RAINFALL   (mm)=  82.757
     RUNOFF COEFFICIENT   =   0.092

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.023 (i)
     TIME TO PEAK    (hrs)=  12.033
     RUNOFF VOLUME    (mm)=   6.692
     TOTAL RAINFALL   (mm)=  82.757
     RUNOFF COEFFICIENT   =   0.081

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.049 (i)
     TIME TO PEAK    (hrs)=  12.150
     RUNOFF VOLUME    (mm)=   8.346
     TOTAL RAINFALL   (mm)=  82.757
     RUNOFF COEFFICIENT   =   0.101

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.026 (i)
     TIME TO PEAK    (hrs)=  12.067
     RUNOFF VOLUME    (mm)=   6.674
     TOTAL RAINFALL   (mm)=  82.757
     RUNOFF COEFFICIENT   =   0.081

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =   3   |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)     (cms)    (hrs)      (mm)
         ID1= 1 (0101):      2.26    0.049    12.15      8.35
       + ID2= 2 (0102):      0.90    0.023    12.03      6.69
         ==========================================================
         ID = 3 (0601):      3.17    0.069    12.08     10.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =   1   |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)     (cms)    (hrs)      (mm)
         ID1= 3 (0601):      3.17    0.069    12.08     10.17
       + ID2= 2 (0103):      4.02    0.058    12.30      7.60
         ==========================================================
         ID = 1 (0601):      7.19    0.116    12.15     10.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =   3   |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)     (cms)    (hrs)      (mm)
         ID1= 1 (0601):      7.19    0.116    12.15     10.05
       + ID2= 2 (0104):      1.18    0.026    12.07      6.67
         ==========================================================
         ID = 3 (0601):      8.37    0.140    12.12      9.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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  ****************************
  ** SIMULATION NUMBER:   5 **
  ****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              297fe064-6d37-460a-935c-4a533ffb288a\1e3de83a
| Ptotal= 91.99 mm |    Comments: 50-Year Orillia 24-hour SCS Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    1.03 |  6.25    0.00 | 12.25   13.25 | 18.25    1.66
                0.50    0.99 |  6.50    0.00 | 12.50   13.25 | 18.50    1.66
                0.75    1.03 |  6.75    0.00 | 12.75    6.81 | 18.75    1.66
                1.00    0.99 |  7.00    0.00 | 13.00    6.81 | 19.00    1.66
                1.25    1.03 |  7.25    3.68 | 13.25    1.29 | 19.25    1.66
                1.50    0.99 |  7.50    3.68 | 13.50    1.29 | 19.50    1.66
                1.75    1.03 |  7.75    3.68 | 13.75    7.54 | 19.75    1.66
                2.00    0.99 |  8.00    3.68 | 14.00    7.54 | 20.00    1.66
                2.25    1.21 |  8.25    0.00 | 14.25    2.76 | 20.25    1.10
                2.50    1.18 |  8.50    0.00 | 14.50    2.76 | 20.50    1.10
                2.75    1.21 |  8.75    4.97 | 14.75    2.76 | 20.75    1.10
                3.00    1.18 |  9.00    4.97 | 15.00    2.76 | 21.00    1.10
```

3.25	1.21	9.25	2.94	15.25	2.76	21.25	1.10
3.50	1.18	9.50	2.94	15.50	2.76	21.50	1.10
3.75	1.21	9.75	0.00	15.75	2.76	21.75	1.10
4.00	1.18	10.00	6.62	16.00	2.76	22.00	1.10
4.25	1.47	10.25	4.23	16.25	1.66	22.25	1.10
4.50	1.47	10.50	4.23	16.50	1.66	22.50	1.10
4.75	1.47	10.75	5.70	16.75	1.66	22.75	1.10
5.00	1.47	11.00	5.70	17.00	1.66	23.00	1.10
5.25	1.47	11.25	8.83	17.25	1.66	23.25	1.10
5.50	1.47	11.50	8.83	17.50	1.66	23.50	1.10
5.75	1.47	11.75	38.27	17.75	1.66	23.75	1.10
6.00	1.47	12.00	101.57	18.00	1.66	24.00	1.10

CALIB			
NASHYD (0105)	Area (ha)=	0.25	Curve Number (CN)= 41.0
ID= 1 DT= 1.0 min	Ia (mm)=	7.50	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.21	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.03	6.017	0.00	12.017	13.31	18.02	1.66
0.033	1.03	6.033	0.00	12.033	13.25	18.03	1.66
0.050	1.03	6.050	0.00	12.050	13.25	18.05	1.66
0.067	1.03	6.067	0.00	12.067	13.25	18.07	1.66
0.083	1.03	6.083	0.00	12.083	13.25	18.08	1.66
0.100	1.03	6.100	0.00	12.100	13.25	18.10	1.66
0.117	1.03	6.117	0.00	12.117	13.25	18.12	1.66
0.133	1.03	6.133	0.00	12.133	13.25	18.13	1.66
0.150	1.03	6.150	0.00	12.150	13.25	18.15	1.66
0.167	1.03	6.167	0.00	12.167	13.25	18.17	1.66
0.183	1.03	6.183	0.00	12.183	13.25	18.18	1.66
0.200	1.03	6.200	0.00	12.200	13.25	18.20	1.66
0.217	1.03	6.217	0.00	12.217	13.25	18.22	1.66
0.233	1.03	6.233	0.00	12.233	13.25	18.23	1.66
0.250	1.03	6.250	0.00	12.250	13.25	18.25	1.66
0.267	0.99	6.267	0.00	12.267	13.25	18.27	1.66
0.283	0.99	6.283	0.00	12.283	13.25	18.28	1.66
0.300	0.99	6.300	0.00	12.300	13.25	18.30	1.66
0.317	0.99	6.317	0.00	12.317	13.25	18.32	1.66
0.333	0.99	6.333	0.00	12.333	13.25	18.33	1.66
0.350	0.99	6.350	0.00	12.350	13.25	18.35	1.66
0.367	0.99	6.367	0.00	12.367	13.25	18.37	1.66
0.383	0.99	6.383	0.00	12.383	13.25	18.38	1.66
0.400	0.99	6.400	0.00	12.400	13.25	18.40	1.66
0.417	0.99	6.417	0.00	12.417	13.25	18.42	1.66
0.433	0.99	6.433	0.00	12.433	13.25	18.43	1.66
0.450	0.99	6.450	0.00	12.450	13.25	18.45	1.66
0.467	0.99	6.467	0.00	12.467	13.25	18.47	1.66
0.483	0.99	6.483	0.00	12.483	13.25	18.48	1.66
0.500	0.99	6.500	0.00	12.500	13.25	18.50	1.66
0.517	1.03	6.517	0.00	12.517	6.82	18.52	1.66
0.533	1.03	6.533	0.00	12.533	6.81	18.53	1.66
0.550	1.03	6.550	0.00	12.550	6.81	18.55	1.66
0.567	1.03	6.567	0.00	12.567	6.81	18.57	1.66
0.583	1.03	6.583	0.00	12.583	6.81	18.58	1.66
0.600	1.03	6.600	0.00	12.600	6.81	18.60	1.66
0.617	1.03	6.617	0.00	12.617	6.81	18.62	1.66
0.633	1.03	6.633	0.00	12.633	6.81	18.63	1.66
0.650	1.03	6.650	0.00	12.650	6.81	18.65	1.66
0.667	1.03	6.667	0.00	12.667	6.81	18.67	1.66
0.683	1.03	6.683	0.00	12.683	6.81	18.68	1.66
0.700	1.03	6.700	0.00	12.700	6.81	18.70	1.66
0.717	1.03	6.717	0.00	12.717	6.81	18.72	1.66
0.733	1.03	6.733	0.00	12.733	6.81	18.73	1.66
0.750	1.03	6.750	0.00	12.750	6.81	18.75	1.66
0.767	0.99	6.767	0.00	12.767	6.81	18.77	1.66
0.783	0.99	6.783	0.00	12.783	6.81	18.78	1.66
0.800	0.99	6.800	0.00	12.800	6.81	18.80	1.66
0.817	0.99	6.817	0.00	12.817	6.81	18.82	1.66
0.833	0.99	6.833	0.00	12.833	6.81	18.83	1.66
0.850	0.99	6.850	0.00	12.850	6.81	18.85	1.66
0.867	0.99	6.867	0.00	12.867	6.81	18.87	1.66
0.883	0.99	6.883	0.00	12.883	6.81	18.88	1.66
0.900	0.99	6.900	0.00	12.900	6.81	18.90	1.66
0.917	0.99	6.917	0.00	12.917	6.81	18.92	1.66
0.933	0.99	6.933	0.00	12.933	6.81	18.93	1.66
0.950	0.99	6.950	0.00	12.950	6.81	18.95	1.66
0.967	0.99	6.967	0.00	12.967	6.81	18.97	1.66
0.983	0.99	6.983	0.00	12.983	6.81	18.98	1.66
1.000	0.99	7.000	0.01	13.000	6.81	19.00	1.66
1.017	1.03	7.017	3.68	13.017	1.30	19.02	1.66
1.033	1.03	7.033	3.68	13.033	1.29	19.03	1.66
1.050	1.03	7.050	3.68	13.050	1.29	19.05	1.66
1.067	1.03	7.067	3.68	13.067	1.29	19.07	1.66
1.083	1.03	7.083	3.68	13.083	1.29	19.08	1.66
1.100	1.03	7.100	3.68	13.100	1.29	19.10	1.66
1.117	1.03	7.117	3.68	13.117	1.29	19.12	1.66
1.133	1.03	7.133	3.68	13.133	1.29	19.13	1.66
1.150	1.03	7.150	3.68	13.150	1.29	19.15	1.66
1.167	1.03	7.167	3.68	13.167	1.29	19.17	1.66
1.183	1.03	7.183	3.68	13.183	1.29	19.18	1.66
1.200	1.03	7.200	3.68	13.200	1.29	19.20	1.66
1.217	1.03	7.217	3.68	13.217	1.29	19.22	1.66
1.233	1.03	7.233	3.68	13.233	1.29	19.23	1.66
1.250	1.03	7.250	3.68	13.250	1.29	19.25	1.66
1.267	0.99	7.267	3.68	13.267	1.29	19.27	1.66
1.283	0.99	7.283	3.68	13.283	1.29	19.28	1.66
1.300	0.99	7.300	3.68	13.300	1.29	19.30	1.66
1.317	0.99	7.317	3.68	13.317	1.29	19.32	1.66
1.333	0.99	7.333	3.68	13.333	1.29	19.33	1.66
1.350	0.99	7.350	3.68	13.350	1.29	19.35	1.66
1.367	0.99	7.367	3.68	13.367	1.29	19.37	1.66
1.383	0.99	7.383	3.68	13.383	1.29	19.38	1.66
1.400	0.99	7.400	3.68	13.400	1.29	19.40	1.66
1.417	0.99	7.417	3.68	13.417	1.29	19.42	1.66
1.433	0.99	7.433	3.68	13.433	1.29	19.43	1.66
1.450	0.99	7.450	3.68	13.450	1.29	19.45	1.66
1.467	0.99	7.467	3.68	13.467	1.29	19.47	1.66
1.483	0.99	7.483	3.68	13.483	1.29	19.48	1.66
1.500	0.99	7.500	3.68	13.500	1.29	19.50	1.66
1.517	1.03	7.517	3.68	13.517	7.53	19.52	1.66
1.533	1.03	7.533	3.68	13.533	7.54	19.53	1.66
1.550	1.03	7.550	3.68	13.550	7.54	19.55	1.66
1.567	1.03	7.567	3.68	13.567	7.54	19.57	1.66
1.583	1.03	7.583	3.68	13.583	7.54	19.58	1.66
1.600	1.03	7.600	3.68	13.600	7.54	19.60	1.66
1.617	1.03	7.617	3.68	13.617	7.54	19.62	1.66
1.633	1.03	7.633	3.68	13.633	7.54	19.63	1.66
1.650	1.03	7.650	3.68	13.650	7.54	19.65	1.66
1.667	1.03	7.667	3.68	13.667	7.54	19.67	1.66
1.683	1.03	7.683	3.68	13.683	7.54	19.68	1.66
1.700	1.03	7.700	3.68	13.700	7.54	19.70	1.66
1.717	1.03	7.717	3.68	13.717	7.54	19.72	1.66
1.733	1.03	7.733	3.68	13.733	7.54	19.73	1.66
1.750	1.03	7.750	3.68	13.750	7.54	19.75	1.66
1.767	0.99	7.767	3.68	13.767	7.54	19.77	1.66
1.783	0.99	7.783	3.68	13.783	7.54	19.78	1.66
1.800	0.99	7.800	3.68	13.800	7.54	19.80	1.66
1.817	0.99	7.817	3.68	13.817	7.54	19.82	1.66
1.833	0.99	7.833	3.68	13.833	7.54	19.83	1.66
1.850	0.99	7.850	3.68	13.850	7.54	19.85	1.66
1.867	0.99	7.867	3.68	13.867	7.54	19.87	1.66
1.883	0.99	7.883	3.68	13.883	7.54	19.88	1.66
1.900	0.99	7.900	3.68	13.900	7.54	19.90	1.66
1.917	0.99	7.917	3.68	13.917	7.54	19.92	1.66
1.933	0.99	7.933	3.68	13.933	7.54	19.93	1.66
1.950	0.99	7.950	3.68	13.950	7.54	19.95	1.66
1.967	0.99	7.967	3.68	13.967	7.54	19.97	1.66
1.983	0.99	7.983	3.68	13.983	7.54	19.98	1.66
2.000	0.99	8.000	3.67	14.000	7.54	20.00	1.66
2.017	1.21	8.017	0.00	14.017	2.77	20.02	1.10
2.033	1.21	8.033	0.00	14.033	2.76	20.03	1.10
2.050	1.21	8.050	0.00	14.050	2.76	20.05	1.10
2.067	1.21	8.067	0.00	14.067	2.76	20.07	1.10
2.083	1.21	8.083	0.00	14.083	2.76	20.08	1.10
2.100	1.21	8.100	0.00	14.100	2.76	20.10	1.10
2.117	1.21	8.117	0.00	14.117	2.76	20.12	1.10
2.133	1.21	8.133	0.00	14.133	2.76	20.13	1.10
2.150	1.21	8.150	0.00	14.150	2.76	20.15	1.10
2.167	1.21	8.167	0.00	14.167	2.76	20.17	1.10
2.183	1.21	8.183	0.00	14.183	2.76	20.18	1.10
2.200	1.21	8.200	0.00	14.200	2.76	20.20	1.10
2.217	1.21	8.217	0.00	14.217	2.76	20.22	1.10
2.233	1.21	8.233	0.00	14.233	2.76	20.23	1.10
2.250	1.21	8.250	0.00	14.250	2.76	20.25	1.10
2.267	1.18	8.267	0.00	14.267	2.76	20.27	1.10
2.283	1.18	8.283	0.00	14.283	2.76	20.28	1.10
2.300	1.18	8.300	0.00	14.300	2.76	20.30	1.10
2.317	1.18	8.317	0.00	14.317	2.76	20.32	1.10
2.333	1.18	8.333	0.00	14.333	2.76	20.33	1.10
2.350	1.18	8.350	0.00	14.350	2.76	20.35	1.10

2.367	1.18	8.367	0.00	14.367	2.76	20.37	1.10
2.383	1.18	8.383	0.00	14.383	2.76	20.38	1.10
2.400	1.18	8.400	0.00	14.400	2.76	20.40	1.10
2.417	1.18	8.417	0.00	14.417	2.76	20.42	1.10
2.433	1.18	8.433	0.00	14.433	2.76	20.43	1.10
2.450	1.18	8.450	0.00	14.450	2.76	20.45	1.10
2.467	1.18	8.467	0.00	14.467	2.76	20.47	1.10
2.483	1.18	8.483	0.00	14.483	2.76	20.48	1.10
2.500	1.18	8.500	0.01	14.500	2.76	20.50	1.10
2.517	1.21	8.517	4.97	14.517	2.76	20.52	1.10
2.533	1.21	8.533	4.97	14.533	2.76	20.53	1.10
2.550	1.21	8.550	4.97	14.550	2.76	20.55	1.10
2.567	1.21	8.567	4.97	14.567	2.76	20.57	1.10
2.583	1.21	8.583	4.97	14.583	2.76	20.58	1.10
2.600	1.21	8.600	4.97	14.600	2.76	20.60	1.10
2.617	1.21	8.617	4.97	14.617	2.76	20.62	1.10
2.633	1.21	8.633	4.97	14.633	2.76	20.63	1.10
2.650	1.21	8.650	4.97	14.650	2.76	20.65	1.10
2.667	1.21	8.667	4.97	14.667	2.76	20.67	1.10
2.683	1.21	8.683	4.97	14.683	2.76	20.68	1.10
2.700	1.21	8.700	4.97	14.700	2.76	20.70	1.10
2.717	1.21	8.717	4.97	14.717	2.76	20.72	1.10
2.733	1.21	8.733	4.97	14.733	2.76	20.73	1.10
2.750	1.21	8.750	4.97	14.750	2.76	20.75	1.10
2.767	1.18	8.767	4.97	14.767	2.76	20.77	1.10
2.783	1.18	8.783	4.97	14.783	2.76	20.78	1.10
2.800	1.18	8.800	4.97	14.800	2.76	20.80	1.10
2.817	1.18	8.817	4.97	14.817	2.76	20.82	1.10
2.833	1.18	8.833	4.97	14.833	2.76	20.83	1.10
2.850	1.18	8.850	4.97	14.850	2.76	20.85	1.10
2.867	1.18	8.867	4.97	14.867	2.76	20.87	1.10
2.883	1.18	8.883	4.97	14.883	2.76	20.88	1.10
2.900	1.18	8.900	4.97	14.900	2.76	20.90	1.10
2.917	1.18	8.917	4.97	14.917	2.76	20.92	1.10
2.933	1.18	8.933	4.97	14.933	2.76	20.93	1.10
2.950	1.18	8.950	4.97	14.950	2.76	20.95	1.10
2.967	1.18	8.967	4.97	14.967	2.76	20.97	1.10
2.983	1.18	8.983	4.97	14.983	2.76	20.98	1.10
3.000	1.18	9.000	4.97	15.000	2.76	21.00	1.10
3.017	1.21	9.017	2.94	15.017	2.76	21.02	1.10
3.033	1.21	9.033	2.94	15.033	2.76	21.03	1.10
3.050	1.21	9.050	2.94	15.050	2.76	21.05	1.10
3.067	1.21	9.067	2.94	15.067	2.76	21.07	1.10
3.083	1.21	9.083	2.94	15.083	2.76	21.08	1.10
3.100	1.21	9.100	2.94	15.100	2.76	21.10	1.10
3.117	1.21	9.117	2.94	15.117	2.76	21.12	1.10
3.133	1.21	9.133	2.94	15.133	2.76	21.13	1.10
3.150	1.21	9.150	2.94	15.150	2.76	21.15	1.10
3.167	1.21	9.167	2.94	15.167	2.76	21.17	1.10
3.183	1.21	9.183	2.94	15.183	2.76	21.18	1.10
3.200	1.21	9.200	2.94	15.200	2.76	21.20	1.10
3.217	1.21	9.217	2.94	15.217	2.76	21.22	1.10
3.233	1.21	9.233	2.94	15.233	2.76	21.23	1.10
3.250	1.21	9.250	2.94	15.250	2.76	21.25	1.10
3.267	1.18	9.267	2.94	15.267	2.76	21.27	1.10
3.283	1.18	9.283	2.94	15.283	2.76	21.28	1.10
3.300	1.18	9.300	2.94	15.300	2.76	21.30	1.10
3.317	1.18	9.317	2.94	15.317	2.76	21.32	1.10
3.333	1.18	9.333	2.94	15.333	2.76	21.33	1.10
3.350	1.18	9.350	2.94	15.350	2.76	21.35	1.10
3.367	1.18	9.367	2.94	15.367	2.76	21.37	1.10
3.383	1.18	9.383	2.94	15.383	2.76	21.38	1.10
3.400	1.18	9.400	2.94	15.400	2.76	21.40	1.10
3.417	1.18	9.417	2.94	15.417	2.76	21.42	1.10
3.433	1.18	9.433	2.94	15.433	2.76	21.43	1.10
3.450	1.18	9.450	2.94	15.450	2.76	21.45	1.10
3.467	1.18	9.467	2.94	15.467	2.76	21.47	1.10
3.483	1.18	9.483	2.94	15.483	2.76	21.48	1.10
3.500	1.18	9.500	2.94	15.500	2.76	21.50	1.10
3.517	1.21	9.517	0.00	15.517	2.76	21.52	1.10
3.533	1.21	9.533	0.00	15.533	2.76	21.53	1.10
3.550	1.21	9.550	0.00	15.550	2.76	21.55	1.10
3.567	1.21	9.567	0.00	15.567	2.76	21.57	1.10
3.583	1.21	9.583	0.00	15.583	2.76	21.58	1.10
3.600	1.21	9.600	0.00	15.600	2.76	21.60	1.10
3.617	1.21	9.617	0.00	15.617	2.76	21.62	1.10
3.633	1.21	9.633	0.00	15.633	2.76	21.63	1.10
3.650	1.21	9.650	0.00	15.650	2.76	21.65	1.10
3.667	1.21	9.667	0.00	15.667	2.76	21.67	1.10
3.683	1.21	9.683	0.00	15.683	2.76	21.68	1.10
3.700	1.21	9.700	0.00	15.700	2.76	21.70	1.10
3.717	1.21	9.717	0.00	15.717	2.76	21.72	1.10
3.733	1.21	9.733	0.00	15.733	2.76	21.73	1.10
3.750	1.21	9.750	0.01	15.750	2.76	21.75	1.10

3.767	1.18	9.767	6.62	15.767	2.76	21.77	1.10
3.783	1.18	9.783	6.62	15.783	2.76	21.78	1.10
3.800	1.18	9.800	6.62	15.800	2.76	21.80	1.10
3.817	1.18	9.817	6.62	15.817	2.76	21.82	1.10
3.833	1.18	9.833	6.62	15.833	2.76	21.83	1.10
3.850	1.18	9.850	6.62	15.850	2.76	21.85	1.10
3.867	1.18	9.867	6.62	15.867	2.76	21.87	1.10
3.883	1.18	9.883	6.62	15.883	2.76	21.88	1.10
3.900	1.18	9.900	6.62	15.900	2.76	21.90	1.10
3.917	1.18	9.917	6.62	15.917	2.76	21.92	1.10
3.933	1.18	9.933	6.62	15.933	2.76	21.93	1.10
3.950	1.18	9.950	6.62	15.950	2.76	21.95	1.10
3.967	1.18	9.967	6.62	15.967	2.76	21.97	1.10
3.983	1.18	9.983	6.62	15.983	2.76	21.98	1.10
4.000	1.18	10.000	6.62	16.000	2.76	22.00	1.10
4.017	1.47	10.017	4.23	16.017	1.66	22.02	1.10
4.033	1.47	10.033	4.23	16.033	1.66	22.03	1.10
4.050	1.47	10.050	4.23	16.050	1.66	22.05	1.10
4.067	1.47	10.067	4.23	16.067	1.66	22.07	1.10
4.083	1.47	10.083	4.23	16.083	1.66	22.08	1.10
4.100	1.47	10.100	4.23	16.100	1.66	22.10	1.10
4.117	1.47	10.117	4.23	16.117	1.66	22.12	1.10
4.133	1.47	10.133	4.23	16.133	1.66	22.13	1.10
4.150	1.47	10.150	4.23	16.150	1.66	22.15	1.10
4.167	1.47	10.167	4.23	16.167	1.66	22.17	1.10
4.183	1.47	10.183	4.23	16.183	1.66	22.18	1.10
4.200	1.47	10.200	4.23	16.200	1.66	22.20	1.10
4.217	1.47	10.217	4.23	16.217	1.66	22.22	1.10
4.233	1.47	10.233	4.23	16.233	1.66	22.23	1.10
4.250	1.47	10.250	4.23	16.250	1.66	22.25	1.10
4.267	1.47	10.267	4.23	16.267	1.66	22.27	1.10
4.283	1.47	10.283	4.23	16.283	1.66	22.28	1.10
4.300	1.47	10.300	4.23	16.300	1.66	22.30	1.10
4.317	1.47	10.317	4.23	16.317	1.66	22.32	1.10
4.333	1.47	10.333	4.23	16.333	1.66	22.33	1.10
4.350	1.47	10.350	4.23	16.350	1.66	22.35	1.10
4.367	1.47	10.367	4.23	16.367	1.66	22.37	1.10
4.383	1.47	10.383	4.23	16.383	1.66	22.38	1.10
4.400	1.47	10.400	4.23	16.400	1.66	22.40	1.10
4.417	1.47	10.417	4.23	16.417	1.66	22.42	1.10
4.433	1.47	10.433	4.23	16.433	1.66	22.43	1.10
4.450	1.47	10.450	4.23	16.450	1.66	22.45	1.10
4.467	1.47	10.467	4.23	16.467	1.66	22.47	1.10
4.483	1.47	10.483	4.23	16.483	1.66	22.48	1.10
4.500	1.47	10.500	4.23	16.500	1.66	22.50	1.10
4.517	1.47	10.517	5.70	16.517	1.66	22.52	1.10
4.533	1.47	10.533	5.70	16.533	1.66	22.53	1.10
4.550	1.47	10.550	5.70	16.550	1.66	22.55	1.10
4.567	1.47	10.567	5.70	16.567	1.66	22.57	1.10
4.583	1.47	10.583	5.70	16.583	1.66	22.58	1.10
4.600	1.47	10.600	5.70	16.600	1.66	22.60	1.10
4.617	1.47	10.617	5.70	16.617	1.66	22.62	1.10
4.633	1.47	10.633	5.70	16.633	1.66	22.63	1.10
4.650	1.47	10.650	5.70	16.650	1.66	22.65	1.10
4.667	1.47	10.667	5.70	16.667	1.66	22.67	1.10
4.683	1.47	10.683	5.70	16.683	1.66	22.68	1.10
4.700	1.47	10.700	5.70	16.700	1.66	22.70	1.10
4.717	1.47	10.717	5.70	16.717	1.66	22.72	1.10
4.733	1.47	10.733	5.70	16.733	1.66	22.73	1.10
4.750	1.47	10.750	5.70	16.750	1.66	22.75	1.10
4.767	1.47	10.767	5.70	16.767	1.66	22.77	1.10
4.783	1.47	10.783	5.70	16.783	1.66	22.78	1.10
4.800	1.47	10.800	5.70	16.800	1.66	22.80	1.10
4.817	1.47	10.817	5.70	16.817	1.66	22.82	1.10
4.833	1.47	10.833	5.70	16.833	1.66	22.83	1.10
4.850	1.47	10.850	5.70	16.850	1.66	22.85	1.10
4.867	1.47	10.867	5.70	16.867	1.66	22.87	1.10
4.883	1.47	10.883	5.70	16.883	1.66	22.88	1.10
4.900	1.47	10.900	5.70	16.900	1.66	22.90	1.10
4.917	1.47	10.917	5.70	16.917	1.66	22.92	1.10
4.933	1.47	10.933	5.70	16.933	1.66	22.93	1.10
4.950	1.47	10.950	5.70	16.950	1.66	22.95	1.10
4.967	1.47	10.967	5.70	16.967	1.66	22.97	1.10
4.983	1.47	10.983	5.70	16.983	1.66	22.98	1.10
5.000	1.47	11.000	5.70	17.000	1.66	23.00	1.10
5.017	1.47	11.017	8.83	17.017	1.66	23.02	1.10
5.033	1.47	11.033	8.83	17.033	1.66	23.03	1.10
5.050	1.47	11.050	8.83	17.050	1.66	23.05	1.10
5.067	1.47	11.067	8.83	17.067	1.66	23.07	1.10
5.083	1.47	11.083	8.83	17.083	1.66	23.08	1.10
5.100	1.47	11.100	8.83	17.100	1.66	23.10	1.10
5.117	1.47	11.117	8.83	17.117	1.66	23.12	1.10
5.133	1.47	11.133	8.83	17.133	1.66	23.13	1.10
5.150	1.47	11.150	8.83	17.150	1.66	23.15	1.10

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              5.167    1.47 |11.167    8.83 |17.167    1.66 | 23.17    1.10
              5.183    1.47 |11.183    8.83 |17.183    1.66 | 23.18    1.10
              5.200    1.47 |11.200    8.83 |17.200    1.66 | 23.20    1.10
              5.217    1.47 |11.217    8.83 |17.217    1.66 | 23.22    1.10
              5.233    1.47 |11.233    8.83 |17.233    1.66 | 23.23    1.10
              5.250    1.47 |11.250    8.83 |17.250    1.66 | 23.25    1.10
              5.267    1.47 |11.267    8.83 |17.267    1.66 | 23.27    1.10
              5.283    1.47 |11.283    8.83 |17.283    1.66 | 23.28    1.10
              5.300    1.47 |11.300    8.83 |17.300    1.66 | 23.30    1.10
              5.317    1.47 |11.317    8.83 |17.317    1.66 | 23.32    1.10
              5.333    1.47 |11.333    8.83 |17.333    1.66 | 23.33    1.10
              5.350    1.47 |11.350    8.83 |17.350    1.66 | 23.35    1.10
              5.367    1.47 |11.367    8.83 |17.367    1.66 | 23.37    1.10
              5.383    1.47 |11.383    8.83 |17.383    1.66 | 23.38    1.10
              5.400    1.47 |11.400    8.83 |17.400    1.66 | 23.40    1.10
              5.417    1.47 |11.417    8.83 |17.417    1.66 | 23.42    1.10
              5.433    1.47 |11.433    8.83 |17.433    1.66 | 23.43    1.10
              5.450    1.47 |11.450    8.83 |17.450    1.66 | 23.45    1.10
              5.467    1.47 |11.467    8.83 |17.467    1.66 | 23.47    1.10
              5.483    1.47 |11.483    8.83 |17.483    1.66 | 23.48    1.10
              5.500    1.47 |11.500    8.83 |17.500    1.66 | 23.50    1.10
              5.517    1.47 |11.517   38.26 |17.517    1.66 | 23.52    1.10
              5.533    1.47 |11.533   38.27 |17.533    1.66 | 23.53    1.10
              5.550    1.47 |11.550   38.27 |17.550    1.66 | 23.55    1.10
              5.567    1.47 |11.567   38.27 |17.567    1.66 | 23.57    1.10
              5.583    1.47 |11.583   38.27 |17.583    1.66 | 23.58    1.10
              5.600    1.47 |11.600   38.27 |17.600    1.66 | 23.60    1.10
              5.617    1.47 |11.617   38.27 |17.617    1.66 | 23.62    1.10
              5.633    1.47 |11.633   38.27 |17.633    1.66 | 23.63    1.10
              5.650    1.47 |11.650   38.27 |17.650    1.66 | 23.65    1.10
              5.667    1.47 |11.667   38.27 |17.667    1.66 | 23.67    1.10
              5.683    1.47 |11.683   38.27 |17.683    1.66 | 23.68    1.10
              5.700    1.47 |11.700   38.27 |17.700    1.66 | 23.70    1.10
              5.717    1.47 |11.717   38.27 |17.717    1.66 | 23.72    1.10
              5.733    1.47 |11.733   38.27 |17.733    1.66 | 23.73    1.10
              5.750    1.47 |11.750   38.27 |17.750    1.66 | 23.75    1.10
              5.767    1.47 |11.767  101.54 |17.767    1.66 | 23.77    1.10
              5.783    1.47 |11.783  101.57 |17.783    1.66 | 23.78    1.10
              5.800    1.47 |11.800  101.57 |17.800    1.66 | 23.80    1.10
              5.817    1.47 |11.817  101.57 |17.817    1.66 | 23.82    1.10
              5.833    1.47 |11.833  101.57 |17.833    1.66 | 23.83    1.10
              5.850    1.47 |11.850  101.57 |17.850    1.66 | 23.85    1.10
              5.867    1.47 |11.867  101.57 |17.867    1.66 | 23.87    1.10
              5.883    1.47 |11.883  101.57 |17.883    1.66 | 23.88    1.10
              5.900    1.47 |11.900  101.57 |17.900    1.66 | 23.90    1.10
              5.917    1.47 |11.917  101.57 |17.917    1.66 | 23.92    1.10
              5.933    1.47 |11.933  101.57 |17.933    1.66 | 23.93    1.10
              5.950    1.47 |11.950  101.57 |17.950    1.66 | 23.95    1.10
              5.967    1.47 |11.967  101.57 |17.967    1.66 | 23.97    1.10
              5.983    1.47 |11.983  101.57 |17.983    1.66 | 23.98    1.10
              6.000    1.47 |12.000  101.57 |18.000    1.66 | 24.00    1.10

     Unit Hyd Qpeak  (cms)=   0.046

     PEAK FLOW       (cms)=   0.009 (i)
     TIME TO PEAK    (hrs)=  12.117
     RUNOFF VOLUME    (mm)=  12.457
     TOTAL RAINFALL   (mm)=  91.985
     RUNOFF COEFFICIENT   =   0.135

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0103) |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.39

     Unit Hyd Qpeak  (cms)=   0.394

     PEAK FLOW       (cms)=   0.072 (i)
     TIME TO PEAK    (hrs)=  12.300
     RUNOFF VOLUME    (mm)=   9.507
     TOTAL RAINFALL   (mm)=  91.985
     RUNOFF COEFFICIENT   =   0.103

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.12

     Unit Hyd Qpeak  (cms)=   0.288

     PEAK FLOW       (cms)=   0.029 (i)
     TIME TO PEAK    (hrs)=  12.033
     RUNOFF VOLUME    (mm)=   8.413
     TOTAL RAINFALL   (mm)=  91.985
     RUNOFF COEFFICIENT   =   0.091

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.24

     Unit Hyd Qpeak  (cms)=   0.360

     PEAK FLOW       (cms)=   0.062 (i)
     TIME TO PEAK    (hrs)=  12.150
     RUNOFF VOLUME    (mm)=  10.422
     TOTAL RAINFALL   (mm)=  91.985
     RUNOFF COEFFICIENT   =   0.113

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.16

     Unit Hyd Qpeak  (cms)=   0.281

     PEAK FLOW       (cms)=   0.033 (i)
     TIME TO PEAK    (hrs)=  12.067
     RUNOFF VOLUME    (mm)=   8.391
     TOTAL RAINFALL   (mm)=  91.985
     RUNOFF COEFFICIENT   =   0.091

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (0101):     2.26   0.062    12.15    10.42
       + ID2= 2 (0102):     0.90   0.029    12.03     8.41
         ================================================
         ID = 3 (0601):     3.17   0.086    12.08    12.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 3 (0601):     3.17   0.086    12.08    12.66
       + ID2= 2 (0103):     4.02   0.072    12.30     9.51
         ================================================
         ID = 1 (0601):     7.19   0.145    12.15    12.52

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (0601):     7.19   0.145    12.15    12.52
       + ID2= 2 (0104):     1.18   0.033    12.07     8.39
         ================================================
         ID = 3 (0601):     8.37   0.175    12.12    12.28

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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  ** SIMULATION NUMBER:   6 **
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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              297fe064-6d37-460a-935c-4a533ffb288a\834a28df
| Ptotal=101.19 mm |    Comments: 100-Year Orillia 24-hour SCS Storm
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.13	6.25	0.00	12.25	14.57	18.25	1.82
0.50	1.09	6.50	0.00	12.50	14.57	18.50	1.82
0.75	1.13	6.75	0.00	12.75	7.49	18.75	1.82
1.00	1.09	7.00	0.00	13.00	7.49	19.00	1.82
1.25	1.13	7.25	4.05	13.25	1.42	19.25	1.82
1.50	1.09	7.50	4.05	13.50	1.42	19.50	1.82
1.75	1.13	7.75	4.05	13.75	8.30	19.75	1.82
2.00	1.09	8.00	4.05	14.00	8.30	20.00	1.82
2.25	1.34	8.25	0.00	14.25	3.04	20.25	1.21
2.50	1.30	8.50	0.00	14.50	3.04	20.50	1.21
2.75	1.34	8.75	5.46	14.75	3.04	20.75	1.21
3.00	1.30	9.00	5.46	15.00	3.04	21.00	1.21
3.25	1.34	9.25	3.24	15.25	3.04	21.25	1.21
3.50	1.30	9.50	3.24	15.50	3.04	21.50	1.21
3.75	1.34	9.75	0.00	15.75	3.04	21.75	1.21
4.00	1.30	10.00	7.29	16.00	3.04	22.00	1.21
4.25	1.62	10.25	4.66	16.25	1.82	22.25	1.21
4.50	1.62	10.50	4.66	16.50	1.82	22.50	1.21
4.75	1.62	10.75	6.27	16.75	1.82	22.75	1.21
5.00	1.62	11.00	6.27	17.00	1.82	23.00	1.21
5.25	1.62	11.25	9.72	17.25	1.82	23.25	1.21
5.50	1.62	11.50	9.72	17.50	1.82	23.50	1.21
5.75	1.62	11.75	42.10	17.75	1.82	23.75	1.21
6.00	1.62	12.00	111.72	18.00	1.82	24.00	1.21

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| CALIB            |
| NASHYD    (0105) |   Area    (ha)=   0.25   Curve Number   (CN)= 41.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.21

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.13	6.017	0.00	12.017	14.64	18.02	1.82
0.033	1.13	6.033	0.00	12.033	14.57	18.03	1.82
0.050	1.13	6.050	0.00	12.050	14.57	18.05	1.82
0.067	1.13	6.067	0.00	12.067	14.57	18.07	1.82
0.083	1.13	6.083	0.00	12.083	14.57	18.08	1.82
0.100	1.13	6.100	0.00	12.100	14.57	18.10	1.82
0.117	1.13	6.117	0.00	12.117	14.57	18.12	1.82
0.133	1.13	6.133	0.00	12.133	14.57	18.13	1.82
0.150	1.13	6.150	0.00	12.150	14.57	18.15	1.82
0.167	1.13	6.167	0.00	12.167	14.57	18.17	1.82
0.183	1.13	6.183	0.00	12.183	14.57	18.18	1.82
0.200	1.13	6.200	0.00	12.200	14.57	18.20	1.82
0.217	1.13	6.217	0.00	12.217	14.57	18.22	1.82
0.233	1.13	6.233	0.00	12.233	14.57	18.23	1.82
0.250	1.13	6.250	0.00	12.250	14.57	18.25	1.82
0.267	1.09	6.267	0.00	12.267	14.57	18.27	1.82
0.283	1.09	6.283	0.00	12.283	14.57	18.28	1.82
0.300	1.09	6.300	0.00	12.300	14.57	18.30	1.82
0.317	1.09	6.317	0.00	12.317	14.57	18.32	1.82
0.333	1.09	6.333	0.00	12.333	14.57	18.33	1.82
0.350	1.09	6.350	0.00	12.350	14.57	18.35	1.82
0.367	1.09	6.367	0.00	12.367	14.57	18.37	1.82
0.383	1.09	6.383	0.00	12.383	14.57	18.38	1.82
0.400	1.09	6.400	0.00	12.400	14.57	18.40	1.82
0.417	1.09	6.417	0.00	12.417	14.57	18.42	1.82
0.433	1.09	6.433	0.00	12.433	14.57	18.43	1.82
0.450	1.09	6.450	0.00	12.450	14.57	18.45	1.82
0.467	1.09	6.467	0.00	12.467	14.57	18.47	1.82
0.483	1.09	6.483	0.00	12.483	14.57	18.48	1.82
0.500	1.09	6.500	0.00	12.500	14.57	18.50	1.82
0.517	1.13	6.517	0.00	12.517	7.50	18.52	1.82
0.533	1.13	6.533	0.00	12.533	7.49	18.53	1.82
0.550	1.13	6.550	0.00	12.550	7.49	18.55	1.82
0.567	1.13	6.567	0.00	12.567	7.49	18.57	1.82
0.583	1.13	6.583	0.00	12.583	7.49	18.58	1.82
0.600	1.13	6.600	0.00	12.600	7.49	18.60	1.82
0.617	1.13	6.617	0.00	12.617	7.49	18.62	1.82
0.633	1.13	6.633	0.00	12.633	7.49	18.63	1.82
0.650	1.13	6.650	0.00	12.650	7.49	18.65	1.82
0.667	1.13	6.667	0.00	12.667	7.49	18.67	1.82
0.683	1.13	6.683	0.00	12.683	7.49	18.68	1.82
0.700	1.13	6.700	0.00	12.700	7.49	18.70	1.82
0.717	1.13	6.717	0.00	12.717	7.49	18.72	1.82
0.733	1.13	6.733	0.00	12.733	7.49	18.73	1.82
0.750	1.13	6.750	0.00	12.750	7.49	18.75	1.82
0.767	1.09	6.767	0.00	12.767	7.49	18.77	1.82
0.783	1.09	6.783	0.00	12.783	7.49	18.78	1.82
0.800	1.09	6.800	0.00	12.800	7.49	18.80	1.82
0.817	1.09	6.817	0.00	12.817	7.49	18.82	1.82
0.833	1.09	6.833	0.00	12.833	7.49	18.83	1.82
0.850	1.09	6.850	0.00	12.850	7.49	18.85	1.82
0.867	1.09	6.867	0.00	12.867	7.49	18.87	1.82
0.883	1.09	6.883	0.00	12.883	7.49	18.88	1.82
0.900	1.09	6.900	0.00	12.900	7.49	18.90	1.82
0.917	1.09	6.917	0.00	12.917	7.49	18.92	1.82
0.933	1.09	6.933	0.00	12.933	7.49	18.93	1.82
0.950	1.09	6.950	0.00	12.950	7.49	18.95	1.82
0.967	1.09	6.967	0.00	12.967	7.49	18.97	1.82
0.983	1.09	6.983	0.00	12.983	7.49	18.98	1.82
1.000	1.09	7.000	0.01	13.000	7.49	19.00	1.82
1.017	1.13	7.017	4.05	13.017	1.43	19.02	1.82
1.033	1.13	7.033	4.05	13.033	1.42	19.03	1.82
1.050	1.13	7.050	4.05	13.050	1.42	19.05	1.82
1.067	1.13	7.067	4.05	13.067	1.42	19.07	1.82
1.083	1.13	7.083	4.05	13.083	1.42	19.08	1.82
1.100	1.13	7.100	4.05	13.100	1.42	19.10	1.82
1.117	1.13	7.117	4.05	13.117	1.42	19.12	1.82
1.133	1.13	7.133	4.05	13.133	1.42	19.13	1.82
1.150	1.13	7.150	4.05	13.150	1.42	19.15	1.82
1.167	1.13	7.167	4.05	13.167	1.42	19.17	1.82
1.183	1.13	7.183	4.05	13.183	1.42	19.18	1.82
1.200	1.13	7.200	4.05	13.200	1.42	19.20	1.82
1.217	1.13	7.217	4.05	13.217	1.42	19.22	1.82
1.233	1.13	7.233	4.05	13.233	1.42	19.23	1.82
1.250	1.13	7.250	4.05	13.250	1.42	19.25	1.82
1.267	1.09	7.267	4.05	13.267	1.42	19.27	1.82
1.283	1.09	7.283	4.05	13.283	1.42	19.28	1.82
1.300	1.09	7.300	4.05	13.300	1.42	19.30	1.82
1.317	1.09	7.317	4.05	13.317	1.42	19.32	1.82
1.333	1.09	7.333	4.05	13.333	1.42	19.33	1.82
1.350	1.09	7.350	4.05	13.350	1.42	19.35	1.82
1.367	1.09	7.367	4.05	13.367	1.42	19.37	1.82
1.383	1.09	7.383	4.05	13.383	1.42	19.38	1.82
1.400	1.09	7.400	4.05	13.400	1.42	19.40	1.82
1.417	1.09	7.417	4.05	13.417	1.42	19.42	1.82
1.433	1.09	7.433	4.05	13.433	1.42	19.43	1.82
1.450	1.09	7.450	4.05	13.450	1.42	19.45	1.82
1.467	1.09	7.467	4.05	13.467	1.42	19.47	1.82
1.483	1.09	7.483	4.05	13.483	1.42	19.48	1.82
1.500	1.09	7.500	4.05	13.500	1.42	19.50	1.82
1.517	1.13	7.517	4.05	13.517	8.29	19.52	1.82
1.533	1.13	7.533	4.05	13.533	8.30	19.53	1.82
1.550	1.13	7.550	4.05	13.550	8.30	19.55	1.82
1.567	1.13	7.567	4.05	13.567	8.30	19.57	1.82
1.583	1.13	7.583	4.05	13.583	8.30	19.58	1.82
1.600	1.13	7.600	4.05	13.600	8.30	19.60	1.82
1.617	1.13	7.617	4.05	13.617	8.30	19.62	1.82
1.633	1.13	7.633	4.05	13.633	8.30	19.63	1.82
1.650	1.13	7.650	4.05	13.650	8.30	19.65	1.82
1.667	1.13	7.667	4.05	13.667	8.30	19.67	1.82
1.683	1.13	7.683	4.05	13.683	8.30	19.68	1.82
1.700	1.13	7.700	4.05	13.700	8.30	19.70	1.82
1.717	1.13	7.717	4.05	13.717	8.30	19.72	1.82
1.733	1.13	7.733	4.05	13.733	8.30	19.73	1.82
1.750	1.13	7.750	4.05	13.750	8.30	19.75	1.82
1.767	1.09	7.767	4.05	13.767	8.30	19.77	1.82
1.783	1.09	7.783	4.05	13.783	8.30	19.78	1.82
1.800	1.09	7.800	4.05	13.800	8.30	19.80	1.82
1.817	1.09	7.817	4.05	13.817	8.30	19.82	1.82
1.833	1.09	7.833	4.05	13.833	8.30	19.83	1.82
1.850	1.09	7.850	4.05	13.850	8.30	19.85	1.82
1.867	1.09	7.867	4.05	13.867	8.30	19.87	1.82
1.883	1.09	7.883	4.05	13.883	8.30	19.88	1.82
1.900	1.09	7.900	4.05	13.900	8.30	19.90	1.82

1.917	1.09	7.917	4.05	13.917	8.30	19.92	1.82
1.933	1.09	7.933	4.05	13.933	8.30	19.93	1.82
1.950	1.09	7.950	4.05	13.950	8.30	19.95	1.82
1.967	1.09	7.967	4.05	13.967	8.30	19.97	1.82
1.983	1.09	7.983	4.05	13.983	8.30	19.98	1.82
2.000	1.09	8.000	4.04	14.000	8.30	20.00	1.82
2.017	1.34	8.017	0.00	14.017	3.05	20.02	1.21
2.033	1.34	8.033	0.00	14.033	3.04	20.03	1.21
2.050	1.34	8.050	0.00	14.050	3.04	20.05	1.21
2.067	1.34	8.067	0.00	14.067	3.04	20.07	1.21
2.083	1.34	8.083	0.00	14.083	3.04	20.08	1.21
2.100	1.34	8.100	0.00	14.100	3.04	20.10	1.21
2.117	1.34	8.117	0.00	14.117	3.04	20.12	1.21
2.133	1.34	8.133	0.00	14.133	3.04	20.13	1.21
2.150	1.34	8.150	0.00	14.150	3.04	20.15	1.21
2.167	1.34	8.167	0.00	14.167	3.04	20.17	1.21
2.183	1.34	8.183	0.00	14.183	3.04	20.18	1.21
2.200	1.34	8.200	0.00	14.200	3.04	20.20	1.21
2.217	1.34	8.217	0.00	14.217	3.04	20.22	1.21
2.233	1.34	8.233	0.00	14.233	3.04	20.23	1.21
2.250	1.34	8.250	0.00	14.250	3.04	20.25	1.21
2.267	1.30	8.267	0.00	14.267	3.04	20.27	1.21
2.283	1.30	8.283	0.00	14.283	3.04	20.28	1.21
2.300	1.30	8.300	0.00	14.300	3.04	20.30	1.21
2.317	1.30	8.317	0.00	14.317	3.04	20.32	1.21
2.333	1.30	8.333	0.00	14.333	3.04	20.33	1.21
2.350	1.30	8.350	0.00	14.350	3.04	20.35	1.21
2.367	1.30	8.367	0.00	14.367	3.04	20.37	1.21
2.383	1.30	8.383	0.00	14.383	3.04	20.38	1.21
2.400	1.30	8.400	0.00	14.400	3.04	20.40	1.21
2.417	1.30	8.417	0.00	14.417	3.04	20.42	1.21
2.433	1.30	8.433	0.00	14.433	3.04	20.43	1.21
2.450	1.30	8.450	0.00	14.450	3.04	20.45	1.21
2.467	1.30	8.467	0.00	14.467	3.04	20.47	1.21
2.483	1.30	8.483	0.00	14.483	3.04	20.48	1.21
2.500	1.30	8.500	0.01	14.500	3.04	20.50	1.21
2.517	1.34	8.517	5.46	14.517	3.04	20.52	1.21
2.533	1.34	8.533	5.46	14.533	3.04	20.53	1.21
2.550	1.34	8.550	5.46	14.550	3.04	20.55	1.21
2.567	1.34	8.567	5.46	14.567	3.04	20.57	1.21
2.583	1.34	8.583	5.46	14.583	3.04	20.58	1.21
2.600	1.34	8.600	5.46	14.600	3.04	20.60	1.21
2.617	1.34	8.617	5.46	14.617	3.04	20.62	1.21
2.633	1.34	8.633	5.46	14.633	3.04	20.63	1.21
2.650	1.34	8.650	5.46	14.650	3.04	20.65	1.21
2.667	1.34	8.667	5.46	14.667	3.04	20.67	1.21
2.683	1.34	8.683	5.46	14.683	3.04	20.68	1.21
2.700	1.34	8.700	5.46	14.700	3.04	20.70	1.21
2.717	1.34	8.717	5.46	14.717	3.04	20.72	1.21
2.733	1.34	8.733	5.46	14.733	3.04	20.73	1.21
2.750	1.34	8.750	5.46	14.750	3.04	20.75	1.21
2.767	1.30	8.767	5.46	14.767	3.04	20.77	1.21
2.783	1.30	8.783	5.46	14.783	3.04	20.78	1.21
2.800	1.30	8.800	5.46	14.800	3.04	20.80	1.21
2.817	1.30	8.817	5.46	14.817	3.04	20.82	1.21
2.833	1.30	8.833	5.46	14.833	3.04	20.83	1.21
2.850	1.30	8.850	5.46	14.850	3.04	20.85	1.21
2.867	1.30	8.867	5.46	14.867	3.04	20.87	1.21
2.883	1.30	8.883	5.46	14.883	3.04	20.88	1.21
2.900	1.30	8.900	5.46	14.900	3.04	20.90	1.21
2.917	1.30	8.917	5.46	14.917	3.04	20.92	1.21
2.933	1.30	8.933	5.46	14.933	3.04	20.93	1.21
2.950	1.30	8.950	5.46	14.950	3.04	20.95	1.21
2.967	1.30	8.967	5.46	14.967	3.04	20.97	1.21
2.983	1.30	8.983	5.46	14.983	3.04	20.98	1.21
3.000	1.30	9.000	5.46	15.000	3.04	21.00	1.21
3.017	1.34	9.017	3.24	15.017	3.04	21.02	1.21
3.033	1.34	9.033	3.24	15.033	3.04	21.03	1.21
3.050	1.34	9.050	3.24	15.050	3.04	21.05	1.21
3.067	1.34	9.067	3.24	15.067	3.04	21.07	1.21
3.083	1.34	9.083	3.24	15.083	3.04	21.08	1.21
3.100	1.34	9.100	3.24	15.100	3.04	21.10	1.21
3.117	1.34	9.117	3.24	15.117	3.04	21.12	1.21
3.133	1.34	9.133	3.24	15.133	3.04	21.13	1.21
3.150	1.34	9.150	3.24	15.150	3.04	21.15	1.21
3.167	1.34	9.167	3.24	15.167	3.04	21.17	1.21
3.183	1.34	9.183	3.24	15.183	3.04	21.18	1.21
3.200	1.34	9.200	3.24	15.200	3.04	21.20	1.21
3.217	1.34	9.217	3.24	15.217	3.04	21.22	1.21
3.233	1.34	9.233	3.24	15.233	3.04	21.23	1.21
3.250	1.34	9.250	3.24	15.250	3.04	21.25	1.21
3.267	1.30	9.267	3.24	15.267	3.04	21.27	1.21
3.283	1.30	9.283	3.24	15.283	3.04	21.28	1.21
3.300	1.30	9.300	3.24	15.300	3.04	21.30	1.21
3.317	1.30	9.317	3.24	15.317	3.04	21.32	1.21
3.333	1.30	9.333	3.24	15.333	3.04	21.33	1.21
3.350	1.30	9.350	3.24	15.350	3.04	21.35	1.21
3.367	1.30	9.367	3.24	15.367	3.04	21.37	1.21
3.383	1.30	9.383	3.24	15.383	3.04	21.38	1.21
3.400	1.30	9.400	3.24	15.400	3.04	21.40	1.21
3.417	1.30	9.417	3.24	15.417	3.04	21.42	1.21
3.433	1.30	9.433	3.24	15.433	3.04	21.43	1.21
3.450	1.30	9.450	3.24	15.450	3.04	21.45	1.21
3.467	1.30	9.467	3.24	15.467	3.04	21.47	1.21
3.483	1.30	9.483	3.24	15.483	3.04	21.48	1.21
3.500	1.30	9.500	3.23	15.500	3.04	21.50	1.21
3.517	1.34	9.517	0.00	15.517	3.04	21.52	1.21
3.533	1.34	9.533	0.00	15.533	3.04	21.53	1.21
3.550	1.34	9.550	0.00	15.550	3.04	21.55	1.21
3.567	1.34	9.567	0.00	15.567	3.04	21.57	1.21
3.583	1.34	9.583	0.00	15.583	3.04	21.58	1.21
3.600	1.34	9.600	0.00	15.600	3.04	21.60	1.21
3.617	1.34	9.617	0.00	15.617	3.04	21.62	1.21
3.633	1.34	9.633	0.00	15.633	3.04	21.63	1.21
3.650	1.34	9.650	0.00	15.650	3.04	21.65	1.21
3.667	1.34	9.667	0.00	15.667	3.04	21.67	1.21
3.683	1.34	9.683	0.00	15.683	3.04	21.68	1.21
3.700	1.34	9.700	0.00	15.700	3.04	21.70	1.21
3.717	1.34	9.717	0.00	15.717	3.04	21.72	1.21
3.733	1.34	9.733	0.00	15.733	3.04	21.73	1.21
3.750	1.34	9.750	0.01	15.750	3.04	21.75	1.21
3.767	1.30	9.767	7.29	15.767	3.04	21.77	1.21
3.783	1.30	9.783	7.29	15.783	3.04	21.78	1.21
3.800	1.30	9.800	7.29	15.800	3.04	21.80	1.21
3.817	1.30	9.817	7.29	15.817	3.04	21.82	1.21
3.833	1.30	9.833	7.29	15.833	3.04	21.83	1.21
3.850	1.30	9.850	7.29	15.850	3.04	21.85	1.21
3.867	1.30	9.867	7.29	15.867	3.04	21.87	1.21
3.883	1.30	9.883	7.29	15.883	3.04	21.88	1.21
3.900	1.30	9.900	7.29	15.900	3.04	21.90	1.21
3.917	1.30	9.917	7.29	15.917	3.04	21.92	1.21
3.933	1.30	9.933	7.29	15.933	3.04	21.93	1.21
3.950	1.30	9.950	7.29	15.950	3.04	21.95	1.21
3.967	1.30	9.967	7.29	15.967	3.04	21.97	1.21
3.983	1.30	9.983	7.29	15.983	3.04	21.98	1.21
4.000	1.30	10.000	7.29	16.000	3.04	22.00	1.21
4.017	1.62	10.017	4.66	16.017	1.83	22.02	1.21
4.033	1.62	10.033	4.66	16.033	1.82	22.03	1.21
4.050	1.62	10.050	4.66	16.050	1.82	22.05	1.21
4.067	1.62	10.067	4.66	16.067	1.82	22.07	1.21
4.083	1.62	10.083	4.66	16.083	1.82	22.08	1.21
4.100	1.62	10.100	4.66	16.100	1.82	22.10	1.21
4.117	1.62	10.117	4.66	16.117	1.82	22.12	1.21
4.133	1.62	10.133	4.66	16.133	1.82	22.13	1.21
4.150	1.62	10.150	4.66	16.150	1.82	22.15	1.21
4.167	1.62	10.167	4.66	16.167	1.82	22.17	1.21
4.183	1.62	10.183	4.66	16.183	1.82	22.18	1.21
4.200	1.62	10.200	4.66	16.200	1.82	22.20	1.21
4.217	1.62	10.217	4.66	16.217	1.82	22.22	1.21
4.233	1.62	10.233	4.66	16.233	1.82	22.23	1.21
4.250	1.62	10.250	4.66	16.250	1.82	22.25	1.21
4.267	1.62	10.267	4.66	16.267	1.82	22.27	1.21
4.283	1.62	10.283	4.66	16.283	1.82	22.28	1.21
4.300	1.62	10.300	4.66	16.300	1.82	22.30	1.21
4.317	1.62	10.317	4.66	16.317	1.82	22.32	1.21
4.333	1.62	10.333	4.66	16.333	1.82	22.33	1.21
4.350	1.62	10.350	4.66	16.350	1.82	22.35	1.21
4.367	1.62	10.367	4.66	16.367	1.82	22.37	1.21
4.383	1.62	10.383	4.66	16.383	1.82	22.38	1.21
4.400	1.62	10.400	4.66	16.400	1.82	22.40	1.21
4.417	1.62	10.417	4.66	16.417	1.82	22.42	1.21
4.433	1.62	10.433	4.66	16.433	1.82	22.43	1.21
4.450	1.62	10.450	4.66	16.450	1.82	22.45	1.21
4.467	1.62	10.467	4.66	16.467	1.82	22.47	1.21
4.483	1.62	10.483	4.66	16.483	1.82	22.48	1.21
4.500	1.62	10.500	4.66	16.500	1.82	22.50	1.21
4.517	1.62	10.517	6.27	16.517	1.82	22.52	1.21
4.533	1.62	10.533	6.27	16.533	1.82	22.53	1.21
4.550	1.62	10.550	6.27	16.550	1.82	22.55	1.21
4.567	1.62	10.567	6.27	16.567	1.82	22.57	1.21
4.583	1.62	10.583	6.27	16.583	1.82	22.58	1.21
4.600	1.62	10.600	6.27	16.600	1.82	22.60	1.21
4.617	1.62	10.617	6.27	16.617	1.82	22.62	1.21
4.633	1.62	10.633	6.27	16.633	1.82	22.63	1.21
4.650	1.62	10.650	6.27	16.650	1.82	22.65	1.21
4.667	1.62	10.667	6.27	16.667	1.82	22.67	1.21
4.683	1.62	10.683	6.27	16.683	1.82	22.68	1.21
4.700	1.62	10.700	6.27	16.700	1.82	22.70	1.21

```
            4.717    1.62 |10.717    6.27 |16.717    1.82 | 22.72    1.21
            4.733    1.62 |10.733    6.27 |16.733    1.82 | 22.73    1.21
            4.750    1.62 |10.750    6.27 |16.750    1.82 | 22.75    1.21
            4.767    1.62 |10.767    6.27 |16.767    1.82 | 22.77    1.21
            4.783    1.62 |10.783    6.27 |16.783    1.82 | 22.78    1.21
            4.800    1.62 |10.800    6.27 |16.800    1.82 | 22.80    1.21
            4.817    1.62 |10.817    6.27 |16.817    1.82 | 22.82    1.21
            4.833    1.62 |10.833    6.27 |16.833    1.82 | 22.83    1.21
            4.850    1.62 |10.850    6.27 |16.850    1.82 | 22.85    1.21
            4.867    1.62 |10.867    6.27 |16.867    1.82 | 22.87    1.21
            4.883    1.62 |10.883    6.27 |16.883    1.82 | 22.88    1.21
            4.900    1.62 |10.900    6.27 |16.900    1.82 | 22.90    1.21
            4.917    1.62 |10.917    6.27 |16.917    1.82 | 22.92    1.21
            4.933    1.62 |10.933    6.27 |16.933    1.82 | 22.93    1.21
            4.950    1.62 |10.950    6.27 |16.950    1.82 | 22.95    1.21
            4.967    1.62 |10.967    6.27 |16.967    1.82 | 22.97    1.21
            4.983    1.62 |10.983    6.27 |16.983    1.82 | 22.98    1.21
            5.000    1.62 |11.000    6.27 |17.000    1.82 | 23.00    1.21
            5.017    1.62 |11.017    9.72 |17.017    1.82 | 23.02    1.21
            5.033    1.62 |11.033    9.72 |17.033    1.82 | 23.03    1.21
            5.050    1.62 |11.050    9.72 |17.050    1.82 | 23.05    1.21
            5.067    1.62 |11.067    9.72 |17.067    1.82 | 23.07    1.21
            5.083    1.62 |11.083    9.72 |17.083    1.82 | 23.08    1.21
            5.100    1.62 |11.100    9.72 |17.100    1.82 | 23.10    1.21
            5.117    1.62 |11.117    9.72 |17.117    1.82 | 23.12    1.21
            5.133    1.62 |11.133    9.72 |17.133    1.82 | 23.13    1.21
            5.150    1.62 |11.150    9.72 |17.150    1.82 | 23.15    1.21
            5.167    1.62 |11.167    9.72 |17.167    1.82 | 23.17    1.21
            5.183    1.62 |11.183    9.72 |17.183    1.82 | 23.18    1.21
            5.200    1.62 |11.200    9.72 |17.200    1.82 | 23.20    1.21
            5.217    1.62 |11.217    9.72 |17.217    1.82 | 23.22    1.21
            5.233    1.62 |11.233    9.72 |17.233    1.82 | 23.23    1.21
            5.250    1.62 |11.250    9.72 |17.250    1.82 | 23.25    1.21
            5.267    1.62 |11.267    9.72 |17.267    1.82 | 23.27    1.21
            5.283    1.62 |11.283    9.72 |17.283    1.82 | 23.28    1.21
            5.300    1.62 |11.300    9.72 |17.300    1.82 | 23.30    1.21
            5.317    1.62 |11.317    9.72 |17.317    1.82 | 23.32    1.21
            5.333    1.62 |11.333    9.72 |17.333    1.82 | 23.33    1.21
            5.350    1.62 |11.350    9.72 |17.350    1.82 | 23.35    1.21
            5.367    1.62 |11.367    9.72 |17.367    1.82 | 23.37    1.21
            5.383    1.62 |11.383    9.72 |17.383    1.82 | 23.38    1.21
            5.400    1.62 |11.400    9.72 |17.400    1.82 | 23.40    1.21
            5.417    1.62 |11.417    9.72 |17.417    1.82 | 23.42    1.21
            5.433    1.62 |11.433    9.72 |17.433    1.82 | 23.43    1.21
            5.450    1.62 |11.450    9.72 |17.450    1.82 | 23.45    1.21
            5.467    1.62 |11.467    9.72 |17.467    1.82 | 23.47    1.21
            5.483    1.62 |11.483    9.72 |17.483    1.82 | 23.48    1.21
            5.500    1.62 |11.500    9.72 |17.500    1.82 | 23.50    1.21
            5.517    1.62 |11.517   42.09 |17.517    1.82 | 23.52    1.21
            5.533    1.62 |11.533   42.10 |17.533    1.82 | 23.53    1.21
            5.550    1.62 |11.550   42.10 |17.550    1.82 | 23.55    1.21
            5.567    1.62 |11.567   42.10 |17.567    1.82 | 23.57    1.21
            5.583    1.62 |11.583   42.10 |17.583    1.82 | 23.58    1.21
            5.600    1.62 |11.600   42.10 |17.600    1.82 | 23.60    1.21
            5.617    1.62 |11.617   42.10 |17.617    1.82 | 23.62    1.21
            5.633    1.62 |11.633   42.10 |17.633    1.82 | 23.63    1.21
            5.650    1.62 |11.650   42.10 |17.650    1.82 | 23.65    1.21
            5.667    1.62 |11.667   42.10 |17.667    1.82 | 23.67    1.21
            5.683    1.62 |11.683   42.10 |17.683    1.82 | 23.68    1.21
            5.700    1.62 |11.700   42.10 |17.700    1.82 | 23.70    1.21
            5.717    1.62 |11.717   42.10 |17.717    1.82 | 23.72    1.21
            5.733    1.62 |11.733   42.10 |17.733    1.82 | 23.73    1.21
            5.750    1.62 |11.750   42.10 |17.750    1.82 | 23.75    1.21
            5.767    1.62 |11.767  111.69 |17.767    1.82 | 23.77    1.21
            5.783    1.62 |11.783  111.72 |17.783    1.82 | 23.78    1.21
            5.800    1.62 |11.800  111.72 |17.800    1.82 | 23.80    1.21
            5.817    1.62 |11.817  111.72 |17.817    1.82 | 23.82    1.21
            5.833    1.62 |11.833  111.72 |17.833    1.82 | 23.83    1.21
            5.850    1.62 |11.850  111.72 |17.850    1.82 | 23.85    1.21
            5.867    1.62 |11.867  111.72 |17.867    1.82 | 23.87    1.21
            5.883    1.62 |11.883  111.72 |17.883    1.82 | 23.88    1.21
            5.900    1.62 |11.900  111.72 |17.900    1.82 | 23.90    1.21
            5.917    1.62 |11.917  111.72 |17.917    1.82 | 23.92    1.21
            5.933    1.62 |11.933  111.72 |17.933    1.82 | 23.93    1.21
            5.950    1.62 |11.950  111.72 |17.950    1.82 | 23.95    1.21
            5.967    1.62 |11.967  111.72 |17.967    1.82 | 23.97    1.21
            5.983    1.62 |11.983  111.72 |17.983    1.82 | 23.98    1.21
            6.000    1.62 |12.000  111.72 |18.000    1.82 | 24.00    1.21

 Unit Hyd Qpeak  (cms)=   0.046

 PEAK FLOW       (cms)=   0.011 (i)
 TIME TO PEAK    (hrs)=  12.117
 RUNOFF VOLUME    (mm)=  15.083
```

```
      TOTAL RAINFALL   (mm)= 101.194
      RUNOFF COEFFICIENT   =   0.149

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------
 --------------------
 | CALIB             |
 | NASHYD    (0103) |   Area    (ha)=   4.02   Curve Number   (CN)= 35.0
 |ID= 1 DT= 1.0 min |   Ia      (mm)=   9.05   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.39

      Unit Hyd Qpeak  (cms)=   0.394

      PEAK FLOW       (cms)=   0.088 (i)
      TIME TO PEAK    (hrs)=  12.300
      RUNOFF VOLUME    (mm)=  11.605
      TOTAL RAINFALL   (mm)= 101.194
      RUNOFF COEFFICIENT   =   0.115

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------
 --------------------
 | CALIB             |
 | NASHYD    (0102) |   Area    (ha)=   0.90   Curve Number   (CN)= 32.0
 |ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.12

      Unit Hyd Qpeak  (cms)=   0.288

      PEAK FLOW       (cms)=   0.036 (i)
      TIME TO PEAK    (hrs)=  12.033
      RUNOFF VOLUME    (mm)=  10.309
      TOTAL RAINFALL   (mm)= 101.194
      RUNOFF COEFFICIENT   =   0.102

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------
 --------------------
 | CALIB             |
 | NASHYD    (0101) |   Area    (ha)=   2.26   Curve Number   (CN)= 37.0
 |ID= 1 DT= 1.0 min |   Ia      (mm)=   8.86   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.24

      Unit Hyd Qpeak  (cms)=   0.360

      PEAK FLOW       (cms)=   0.075 (i)
      TIME TO PEAK    (hrs)=  12.133
      RUNOFF VOLUME    (mm)=  12.697
      TOTAL RAINFALL   (mm)= 101.194
      RUNOFF COEFFICIENT   =   0.125

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

 ------------------------------------------------------------------------------
 --------------------
 | CALIB             |
 | NASHYD    (0104) |   Area    (ha)=   1.18   Curve Number   (CN)= 32.0
 |ID= 1 DT= 1.0 min |   Ia      (mm)=  10.00   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.16

      Unit Hyd Qpeak  (cms)=   0.281

      PEAK FLOW       (cms)=   0.040 (i)
      TIME TO PEAK    (hrs)=  12.067
      RUNOFF VOLUME    (mm)=  10.283
      TOTAL RAINFALL   (mm)= 101.194
      RUNOFF COEFFICIENT   =   0.102

      (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 --------------------
 | ADD HYD   (0601) |
 |   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
 --------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0101):      2.26   0.075    12.13    12.70
        + ID2= 2 (0102):      0.90   0.036    12.03    10.31
          ================================================
          ID = 3 (0601):      3.17   0.105    12.08    15.37
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
	ID1= 3 (0601):	3.17	0.105	12.08	15.37
	+ ID2= 2 (0103):	4.02	0.088	12.30	11.60
	ID = 1 (0601):	7.19	0.177	12.15	15.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
	ID1= 1 (0601):	7.19	0.177	12.15	15.20
	+ ID2= 2 (0104):	1.18	0.040	12.07	10.28
	ID = 3 (0601):	8.37	0.214	12.12	14.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

FINISH

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POST DEVELOPMENT MODEL SCHEMATIC

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

       V    V   I    SSSSS  U   U    A    L
       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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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\VO Suite 3.0\VO2\voin.dat
  Output  filename: C:\Users\jingram\AppData\Local\Temp\1882d32b-7632-4fb7-8c4e-65497f39a634\Scenario.out
  Summary filename: C:\Users\jingram\AppData\Local\Temp\1882d32b-7632-4fb7-8c4e-65497f39a634\Scenario.sum


DATE: 01/27/2019                          TIME: 11:17:21

USER:


COMMENTS: _____________________________________________________


-----------------------------------------------------------------------------------------------------------------
  ****************************
  ** SIMULATION NUMBER:   1 **
  ****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1882d32b-7632-4fb7-8c4e-65497f39a634\2e7ecae9
| Ptotal= 25.00 mm |    Comments: Twenty-Five mm Four Hour Chicago Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.07 |  1.17    5.70 |  2.17    5.19 |  3.17    2.80
               0.33    2.27 |  1.33   10.78 |  2.33    4.47 |  3.33    2.62
               0.50    2.52 |  1.50   50.21 |  2.50    3.95 |  3.50    2.48
               0.67    2.88 |  1.67   13.37 |  2.67    3.56 |  3.67    2.35
               0.83    3.38 |  1.83    8.29 |  2.83    3.25 |  3.83    2.23
               1.00    4.18 |  2.00    6.30 |  3.00    3.01 |  4.00    2.14

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--------------------
| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    2.07 | 1.017    5.70 | 2.017    5.19 |  3.02    2.80
               0.033    2.07 | 1.033    5.70 | 2.033    5.19 |  3.03    2.80
               0.050    2.07 | 1.050    5.70 | 2.050    5.19 |  3.05    2.80
               0.067    2.07 | 1.067    5.70 | 2.067    5.19 |  3.07    2.80
               0.083    2.07 | 1.083    5.70 | 2.083    5.19 |  3.08    2.80
               0.100    2.07 | 1.100    5.70 | 2.100    5.19 |  3.10    2.80
               0.117    2.07 | 1.117    5.70 | 2.117    5.19 |  3.12    2.80
               0.133    2.07 | 1.133    5.70 | 2.133    5.19 |  3.13    2.80
               0.150    2.07 | 1.150    5.70 | 2.150    5.19 |  3.15    2.80
               0.167    2.07 | 1.167    5.70 | 2.167    5.19 |  3.17    2.80
               0.183    2.27 | 1.183   10.78 | 2.183    4.47 |  3.18    2.62
               0.200    2.27 | 1.200   10.78 | 2.200    4.47 |  3.20    2.62
               0.217    2.27 | 1.217   10.78 | 2.217    4.47 |  3.22    2.62
               0.233    2.27 | 1.233   10.78 | 2.233    4.47 |  3.23    2.62
               0.250    2.27 | 1.250   10.78 | 2.250    4.47 |  3.25    2.62
               0.267    2.27 | 1.267   10.78 | 2.267    4.47 |  3.27    2.62
               0.283    2.27 | 1.283   10.78 | 2.283    4.47 |  3.28    2.62
               0.300    2.27 | 1.300   10.78 | 2.300    4.47 |  3.30    2.62
               0.317    2.27 | 1.317   10.78 | 2.317    4.47 |  3.32    2.62
               0.333    2.27 | 1.333   10.78 | 2.333    4.47 |  3.33    2.62
               0.350    2.52 | 1.350   50.21 | 2.350    3.95 |  3.35    2.48
               0.367    2.52 | 1.367   50.21 | 2.367    3.95 |  3.37    2.48
               0.383    2.52 | 1.383   50.21 | 2.383    3.95 |  3.38    2.48
               0.400    2.52 | 1.400   50.21 | 2.400    3.95 |  3.40    2.48
               0.417    2.52 | 1.417   50.21 | 2.417    3.95 |  3.42    2.48
               0.433    2.52 | 1.433   50.21 | 2.433    3.95 |  3.43    2.48
               0.450    2.52 | 1.450   50.21 | 2.450    3.95 |  3.45    2.48
               0.467    2.52 | 1.467   50.21 | 2.467    3.95 |  3.47    2.48
               0.483    2.52 | 1.483   50.21 | 2.483    3.95 |  3.48    2.48
               0.500    2.52 | 1.500   50.21 | 2.500    3.95 |  3.50    2.48
               0.517    2.88 | 1.517   13.37 | 2.517    3.56 |  3.52    2.35
               0.533    2.88 | 1.533   13.37 | 2.533    3.56 |  3.53    2.35
               0.550    2.88 | 1.550   13.37 | 2.550    3.56 |  3.55    2.35
               0.567    2.88 | 1.567   13.37 | 2.567    3.56 |  3.57    2.35
               0.583    2.88 | 1.583   13.37 | 2.583    3.56 |  3.58    2.35
               0.600    2.88 | 1.600   13.37 | 2.600    3.56 |  3.60    2.35
               0.617    2.88 | 1.617   13.37 | 2.617    3.56 |  3.62    2.35
               0.633    2.88 | 1.633   13.37 | 2.633    3.56 |  3.63    2.35
               0.650    2.88 | 1.650   13.37 | 2.650    3.56 |  3.65    2.35
               0.667    2.88 | 1.667   13.37 | 2.667    3.56 |  3.67    2.35
               0.683    3.38 | 1.683    8.29 | 2.683    3.25 |  3.68    2.23
               0.700    3.38 | 1.700    8.29 | 2.700    3.25 |  3.70    2.23
               0.717    3.38 | 1.717    8.29 | 2.717    3.25 |  3.72    2.23
               0.733    3.38 | 1.733    8.29 | 2.733    3.25 |  3.73    2.23
               0.750    3.38 | 1.750    8.29 | 2.750    3.25 |  3.75    2.23
               0.767    3.38 | 1.767    8.29 | 2.767    3.25 |  3.77    2.23
               0.783    3.38 | 1.783    8.29 | 2.783    3.25 |  3.78    2.23
               0.800    3.38 | 1.800    8.29 | 2.800    3.25 |  3.80    2.23
               0.817    3.38 | 1.817    8.29 | 2.817    3.25 |  3.82    2.23
               0.833    3.38 | 1.833    8.29 | 2.833    3.25 |  3.83    2.23
               0.850    4.17 | 1.850    6.30 | 2.850    3.01 |  3.85    2.14
               0.867    4.18 | 1.867    6.30 | 2.867    3.01 |  3.87    2.14
               0.883    4.18 | 1.883    6.30 | 2.883    3.01 |  3.88    2.14
               0.900    4.18 | 1.900    6.30 | 2.900    3.01 |  3.90    2.14
               0.917    4.18 | 1.917    6.30 | 2.917    3.01 |  3.92    2.14
               0.933    4.18 | 1.933    6.30 | 2.933    3.01 |  3.93    2.14
               0.950    4.18 | 1.950    6.30 | 2.950    3.01 |  3.95    2.14
               0.967    4.18 | 1.967    6.30 | 2.967    3.01 |  3.97    2.14
               0.983    4.18 | 1.983    6.30 | 2.983    3.01 |  3.98    2.14
               1.000    4.18 | 2.000    6.30 | 3.000    3.01 |  4.00    2.14

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.004 (i)
     TIME TO PEAK    (hrs)=   1.767
     RUNOFF VOLUME    (mm)=   0.844
     TOTAL RAINFALL   (mm)=  24.996
     RUNOFF COEFFICIENT   =   0.034

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78         0.96
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       1.00         3.00
     Length            (m)=     135.08        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      50.21         9.22
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.03 (ii)    9.80 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.02          0.121 (iii)
     TIME TO PEAK    (hrs)=       1.52         1.63          1.52
     RUNOFF VOLUME    (mm)=      23.00         3.12          9.68
     TOTAL RAINFALL   (mm)=      25.00        25.00         25.00
     RUNOFF COEFFICIENT   =       0.92         0.12          0.39


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
```

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0065	0.1033
0.0015	0.0034	0.0070	0.1274
0.0026	0.0096	0.0072	0.1404
0.0034	0.0168	0.0302	0.1472
0.0040	0.0253	0.1105	0.1541
0.0045	0.0350	0.4332	0.1684
0.0051	0.0500	1.0078	0.1835
0.0055	0.0627	1.8746	0.1992
0.0059	0.0768	3.0695	0.2156
0.0062	0.0869	3.8005	0.2241

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	2.737	0.121	1.52	9.68
OUTFLOW: ID= 1 (0801)	2.737	0.004	4.13	9.39

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.17
TIME SHIFT OF PEAK FLOW (min)=157.00
MAXIMUM STORAGE USED (ha.m.)= 0.0228

CALIB
STANDHYD (0203)
ID= 1 DT= 1.0 min

Area (ha)= 2.47
Total Imp(%)= 65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.61	0.87	
Dep. Storage	(mm)=	2.00	5.00	
Average Slope	(%)=	0.50	3.00	
Length	(m)=	128.45	28.00	
Mannings n	=	0.013	0.190	
Max.Eff.Inten.(mm/hr)=		50.21	9.22	
over (min)		5.00	11.00	
Storage Coeff.	(min)=	4.81 (ii)	10.59 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	11.00	
Unit Hyd. peak	(cms)=	0.23	0.11	
				TOTALS
PEAK FLOW	(cms)=	0.10	0.01	0.104 (iii)
TIME TO PEAK	(hrs)=	1.52	1.65	1.52
RUNOFF VOLUME	(mm)=	23.00	3.12	9.68
TOTAL RAINFALL	(mm)=	25.00	25.00	25.00
RUNOFF COEFFICIENT	=	0.92	0.12	0.39

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0802)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0061	0.0972
0.0015	0.0053	0.0064	0.1137
0.0026	0.0141	0.0067	0.1254
0.0031	0.0204	0.0069	0.1375
0.0038	0.0307	0.0071	0.1502
0.0043	0.0420	0.0293	0.1568
0.0048	0.0542	0.2405	0.1703
0.0053	0.0675	1.0015	0.1916
0.0055	0.0769	2.4172	0.2142
0.0059	0.0919	4.6073	0.2381

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0203)	2.475	0.104	1.52	9.68
OUTFLOW: ID= 1 (0802)	2.475	0.003	4.15	8.91

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.02
TIME SHIFT OF PEAK FLOW (min)=158.00
MAXIMUM STORAGE USED (ha.m.)= 0.0210

ADD HYD (0601)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	2.31	0.004	1.77	0.84
+ ID2= 2 (0801):	2.74	0.004	4.13	9.39
ID = 3 (0601):	5.05	0.007	1.80	5.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0601):	5.05	0.007	1.80	5.47
+ ID2= 2 (0802):	2.47	0.003	4.15	8.91
ID = 1 (0601):	7.53	0.009	1.85	6.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0204)
ID= 1 DT= 1.0 min

Area (ha)= 0.62 Curve Number (CN)= 64.0
Ia (mm)= 4.10 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.09

Unit Hyd Qpeak (cms)= 0.268

PEAK FLOW (cms)= 0.006 (i)
TIME TO PEAK (hrs)= 1.550
RUNOFF VOLUME (mm)= 2.666
TOTAL RAINFALL (mm)= 24.996
RUNOFF COEFFICIENT = 0.107

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0803)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.0000	0.0177
0.0001	0.0176	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0204)	0.625	0.006	1.55	2.67
OUTFLOW: ID= 1 (0803)	0.625	0.000	4.35	0.01

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.16
TIME SHIFT OF PEAK FLOW (min)=168.00
MAXIMUM STORAGE USED (ha.m.)= 0.0017

CALIB
STANDHYD (0205)
ID= 1 DT= 1.0 min

Area (ha)= 0.24
Total Imp(%)= 65.00 Dir. Conn.(%)= 32.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	0.16	0.08	
Dep. Storage	(mm)=	2.00	5.00	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	40.00	60.00	
Mannings n	=	0.013	0.190	
Max.Eff.Inten.(mm/hr)=		50.21	6.20	
over (min)		5.00	25.00	
Storage Coeff.	(min)=	1.58 (ii)	24.80 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	25.00	
Unit Hyd. peak	(cms)=	0.41	0.05	
				TOTALS

```
     PEAK FLOW       (cms)=       0.01          0.00          0.011 (iii)
     TIME TO PEAK    (hrs)=       1.50          1.90           1.50
     RUNOFF VOLUME    (mm)=      23.00          3.17           9.45
     TOTAL RAINFALL   (mm)=      25.00         25.00          25.00
     RUNOFF COEFFICIENT   =       0.92          0.13           0.38


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   1.0000     0.0153
                         0.0001     0.0152    |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)    0.240     0.011      1.50        9.45
     OUTFLOW: ID= 1 (0804)    0.240     0.000      4.67        0.06

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.14
                    TIME SHIFT OF PEAK FLOW         (min)=190.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0023

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  ****************************
  ** SIMULATION NUMBER:   2 **
  ****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1882d32b-7632-4fb7-8c4e-65497f39a634\e1d381fe
| Ptotal= 33.84 mm |    Comments: 2-Year Orillia 4-hour Chicago Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    1.95 |  1.17   18.39 |  2.17    4.97 |  3.17    2.35
                0.33    2.26 |  1.33   78.23 |  2.33    4.16 |  3.33    2.17
                0.50    2.70 |  1.50   24.43 |  2.50    3.59 |  3.50    2.02
                0.67    3.37 |  1.67   12.37 |  2.67    3.17 |  3.67    1.89
                0.83    4.56 |  1.83    8.24 |  2.83    2.83 |  3.83    1.77
                1.00    7.20 |  2.00    6.19 |  3.00    2.57 |  4.00    1.67

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| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    1.95 | 1.017   18.39 | 2.017    4.97 |  3.02    2.35
               0.033    1.95 | 1.033   18.39 | 2.033    4.97 |  3.03    2.35
               0.050    1.95 | 1.050   18.39 | 2.050    4.97 |  3.05    2.35
               0.067    1.95 | 1.067   18.39 | 2.067    4.97 |  3.07    2.35
               0.083    1.95 | 1.083   18.39 | 2.083    4.97 |  3.08    2.35
               0.100    1.95 | 1.100   18.39 | 2.100    4.97 |  3.10    2.35
               0.117    1.95 | 1.117   18.39 | 2.117    4.97 |  3.12    2.35
               0.133    1.95 | 1.133   18.39 | 2.133    4.97 |  3.13    2.35
               0.150    1.95 | 1.150   18.39 | 2.150    4.97 |  3.15    2.35
               0.167    1.95 | 1.167   18.39 | 2.167    4.97 |  3.17    2.35
               0.183    2.26 | 1.183   78.23 | 2.183    4.16 |  3.18    2.17
               0.200    2.26 | 1.200   78.23 | 2.200    4.16 |  3.20    2.17
               0.217    2.26 | 1.217   78.23 | 2.217    4.16 |  3.22    2.17
               0.233    2.26 | 1.233   78.23 | 2.233    4.16 |  3.23    2.17
               0.250    2.26 | 1.250   78.23 | 2.250    4.16 |  3.25    2.17
               0.267    2.26 | 1.267   78.23 | 2.267    4.16 |  3.27    2.17
               0.283    2.26 | 1.283   78.23 | 2.283    4.16 |  3.28    2.17
               0.300    2.26 | 1.300   78.23 | 2.300    4.16 |  3.30    2.17
               0.317    2.26 | 1.317   78.23 | 2.317    4.16 |  3.32    2.17
               0.333    2.26 | 1.333   78.23 | 2.333    4.16 |  3.33    2.17
               0.350    2.70 | 1.350   24.43 | 2.350    3.59 |  3.35    2.02
               0.367    2.70 | 1.367   24.43 | 2.367    3.59 |  3.37    2.02
               0.383    2.70 | 1.383   24.43 | 2.383    3.59 |  3.38    2.02
               0.400    2.70 | 1.400   24.43 | 2.400    3.59 |  3.40    2.02
               0.417    2.70 | 1.417   24.43 | 2.417    3.59 |  3.42    2.02
               0.433    2.70 | 1.433   24.43 | 2.433    3.59 |  3.43    2.02
               0.450    2.70 | 1.450   24.43 | 2.450    3.59 |  3.45    2.02
               0.467    2.70 | 1.467   24.43 | 2.467    3.59 |  3.47    2.02
               0.483    2.70 | 1.483   24.43 | 2.483    3.59 |  3.48    2.02
               0.500    2.70 | 1.500   24.43 | 2.500    3.59 |  3.50    2.02
               0.517    3.37 | 1.517   12.37 | 2.517    3.17 |  3.52    1.89
               0.533    3.37 | 1.533   12.37 | 2.533    3.17 |  3.53    1.89
               0.550    3.37 | 1.550   12.37 | 2.550    3.17 |  3.55    1.89
               0.567    3.37 | 1.567   12.37 | 2.567    3.17 |  3.57    1.89
               0.583    3.37 | 1.583   12.37 | 2.583    3.17 |  3.58    1.89
               0.600    3.37 | 1.600   12.37 | 2.600    3.17 |  3.60    1.89
               0.617    3.37 | 1.617   12.37 | 2.617    3.17 |  3.62    1.89
               0.633    3.37 | 1.633   12.37 | 2.633    3.17 |  3.63    1.89
               0.650    3.37 | 1.650   12.37 | 2.650    3.17 |  3.65    1.89
               0.667    3.37 | 1.667   12.37 | 2.667    3.17 |  3.67    1.89
               0.683    4.56 | 1.683    8.24 | 2.683    2.83 |  3.68    1.77
               0.700    4.56 | 1.700    8.24 | 2.700    2.83 |  3.70    1.77
               0.717    4.56 | 1.717    8.24 | 2.717    2.83 |  3.72    1.77
               0.733    4.56 | 1.733    8.24 | 2.733    2.83 |  3.73    1.77
               0.750    4.56 | 1.750    8.24 | 2.750    2.83 |  3.75    1.77
               0.767    4.56 | 1.767    8.24 | 2.767    2.83 |  3.77    1.77
               0.783    4.56 | 1.783    8.24 | 2.783    2.83 |  3.78    1.77
               0.800    4.56 | 1.800    8.24 | 2.800    2.83 |  3.80    1.77
               0.817    4.56 | 1.817    8.24 | 2.817    2.83 |  3.82    1.77
               0.833    4.56 | 1.833    8.24 | 2.833    2.83 |  3.83    1.77
               0.850    7.20 | 1.850    6.19 | 2.850    2.57 |  3.85    1.67
               0.867    7.20 | 1.867    6.19 | 2.867    2.57 |  3.87    1.67
               0.883    7.20 | 1.883    6.19 | 2.883    2.57 |  3.88    1.67
               0.900    7.20 | 1.900    6.19 | 2.900    2.57 |  3.90    1.67
               0.917    7.20 | 1.917    6.19 | 2.917    2.57 |  3.92    1.67
               0.933    7.20 | 1.933    6.19 | 2.933    2.57 |  3.93    1.67
               0.950    7.20 | 1.950    6.19 | 2.950    2.57 |  3.95    1.67
               0.967    7.20 | 1.967    6.19 | 2.967    2.57 |  3.97    1.67
               0.983    7.20 | 1.983    6.19 | 2.983    2.57 |  3.98    1.67
               1.000    7.20 | 2.000    6.19 | 3.000    2.57 |  4.00    1.67

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.012 (i)
     TIME TO PEAK    (hrs)=   1.583
     RUNOFF VOLUME    (mm)=   1.859
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.055

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78          0.96
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       1.00          3.00
     Length            (m)=     135.08         28.00
     Mannings n             =     0.013         0.190

     Max.Eff.Inten.(mm/hr)=      78.23         20.42
               over (min)        5.00          9.00
     Storage Coeff.  (min)=       3.38 (ii)     8.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00          9.00
     Unit Hyd. peak  (cms)=       0.29          0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.18          0.04          0.206 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.45           1.35
     RUNOFF VOLUME    (mm)=      31.84          5.76          14.36
     TOTAL RAINFALL   (mm)=      33.84         33.84          33.84
     RUNOFF COEFFICIENT   =       0.94          0.17           0.42


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |
--------------------
```

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0065	0.1033
0.0015	0.0034	0.0070	0.1274
0.0026	0.0096	0.0072	0.1404
0.0034	0.0168	0.0302	0.1472
0.0040	0.0253	0.1105	0.1541
0.0045	0.0350	0.4332	0.1684
0.0051	0.0500	1.0078	0.1835
0.0055	0.0627	1.8746	0.1992
0.0059	0.0768	3.0695	0.2156
0.0062	0.0869	3.8005	0.2241

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	2.737	0.206	1.35	14.36
OUTFLOW: ID= 1 (0801)	2.737	0.004	4.08	13.34

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.18
TIME SHIFT OF PEAK FLOW (min)=164.00
MAXIMUM STORAGE USED (ha.m.)= 0.0348

```
--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.61	0.87	
Dep. Storage	(mm)=	2.00	5.00	
Average Slope	(%)=	0.50	3.00	
Length	(m)=	128.45	28.00	
Mannings n	=	0.013	0.190	
Max.Eff.Inten.(mm/hr)=		78.23	20.42	
over (min)		5.00	9.00	
Storage Coeff. (min)=		4.03 (ii)	8.87 (ii)	
Unit Hyd. Tpeak (min)=		5.00	9.00	
Unit Hyd. peak (cms)=		0.26	0.13	
				TOTALS
PEAK FLOW	(cms)=	0.16	0.03	0.180 (iii)
TIME TO PEAK	(hrs)=	1.35	1.45	1.35
RUNOFF VOLUME	(mm)=	31.84	5.76	14.36
TOTAL RAINFALL	(mm)=	33.84	33.84	33.84
RUNOFF COEFFICIENT	=	0.94	0.17	0.42

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |
--------------------
```

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0061	0.0972
0.0015	0.0053	0.0064	0.1137
0.0026	0.0141	0.0067	0.1254
0.0031	0.0204	0.0069	0.1375
0.0038	0.0307	0.0071	0.1502
0.0043	0.0420	0.0293	0.1568
0.0048	0.0542	0.2405	0.1703
0.0053	0.0675	1.0015	0.1916
0.0055	0.0769	2.4172	0.2142
0.0059	0.0919	4.6073	0.2381

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0203)	2.475	0.180	1.35	14.36
OUTFLOW: ID= 1 (0802)	2.475	0.004	4.10	12.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.14
TIME SHIFT OF PEAK FLOW (min)=165.00
MAXIMUM STORAGE USED (ha.m.)= 0.0317

```
--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |
--------------------
```

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):		2.31	0.012	1.58	1.86
+ ID2= 2 (0801):		2.74	0.004	4.08	13.34
ID = 3 (0601):		5.05	0.016	1.58	8.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |
--------------------
```

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0601):		5.05	0.016	1.58	8.08
+ ID2= 2 (0802):		2.47	0.004	4.10	12.56
ID = 1 (0601):		7.53	0.019	1.60	9.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.014 (i)
     TIME TO PEAK    (hrs)=   1.383
     RUNOFF VOLUME    (mm)=   5.124
     TOTAL RAINFALL   (mm)=  33.842
     RUNOFF COEFFICIENT   =   0.151

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |
--------------------
```

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.0000	0.0177
0.0001	0.0176	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0204)	0.625	0.014	1.38	5.12
OUTFLOW: ID= 1 (0803)	0.625	0.000	4.33	0.02

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.13
TIME SHIFT OF PEAK FLOW (min)=177.00
MAXIMUM STORAGE USED (ha.m.)= 0.0032

```
--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	0.16	0.08	
Dep. Storage	(mm)=	2.00	5.00	
Average Slope	(%)=	2.00	2.00	
Length	(m)=	40.00	60.00	
Mannings n	=	0.013	0.190	
Max.Eff.Inten.(mm/hr)=		78.23	21.07	
over (min)		5.00	11.00	
Storage Coeff. (min)=		1.32 (ii)	10.05 (ii)	
Unit Hyd. Tpeak (min)=		5.00	11.00	
Unit Hyd. peak (cms)=		0.44	0.11	
				TOTALS
PEAK FLOW	(cms)=	0.02	0.00	0.018 (iii)
TIME TO PEAK	(hrs)=	1.33	1.48	1.33
RUNOFF VOLUME	(mm)=	31.84	5.84	14.14

```
     TOTAL RAINFALL   (mm)=      33.84         33.84          33.84
     RUNOFF COEFFICIENT   =       0.94          0.17           0.42


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE    |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)    |   (cms)     (ha.m.)
                           0.0000     0.0000    |   1.0000      0.0153
                           0.0001     0.0152    |   0.0000      0.0000

                                 AREA     QPEAK     TPEAK        R.V.
                                 (ha)     (cms)     (hrs)        (mm)
     INFLOW : ID= 2 (0205)      0.240     0.018      1.33       14.14
     OUTFLOW: ID= 1 (0804)      0.240     0.000      4.27        0.08

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.12
                    TIME SHIFT OF PEAK FLOW         (min)=176.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0034

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  ****************************
  ** SIMULATION NUMBER:   3 **
  ****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1882d32b-7632-4fb7-8c4e-65497f39a634\b7c4f471
| Ptotal= 44.10 mm |    Comments: 5-Year Orillia 4-hour Chicago Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.37 |  1.17   24.71 |  2.17    6.34 |  3.17    2.89
               0.33    2.77 |  1.33  102.62 |  2.33    5.26 |  3.33    2.66
               0.50    3.33 |  1.50   33.01 |  2.50    4.50 |  3.50    2.46
               0.67    4.22 |  1.67   16.45 |  2.67    3.94 |  3.67    2.29
               0.83    5.79 |  1.83   10.77 |  2.83    3.51 |  3.83    2.15
               1.00    9.36 |  2.00    7.98 |  3.00    3.17 |  4.00    2.02

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--------------------
| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    2.37 | 1.017   24.71 | 2.017    6.34 |  3.02    2.89
               0.033    2.37 | 1.033   24.71 | 2.033    6.34 |  3.03    2.89
               0.050    2.37 | 1.050   24.71 | 2.050    6.34 |  3.05    2.89
               0.067    2.37 | 1.067   24.71 | 2.067    6.34 |  3.07    2.89
               0.083    2.37 | 1.083   24.71 | 2.083    6.34 |  3.08    2.89
               0.100    2.37 | 1.100   24.71 | 2.100    6.34 |  3.10    2.89
               0.117    2.37 | 1.117   24.71 | 2.117    6.34 |  3.12    2.89
               0.133    2.37 | 1.133   24.71 | 2.133    6.34 |  3.13    2.89
               0.150    2.37 | 1.150   24.71 | 2.150    6.34 |  3.15    2.89
               0.167    2.37 | 1.167   24.71 | 2.167    6.34 |  3.17    2.89
               0.183    2.77 | 1.183  102.62 | 2.183    5.26 |  3.18    2.66
               0.200    2.77 | 1.200  102.62 | 2.200    5.26 |  3.20    2.66
               0.217    2.77 | 1.217  102.62 | 2.217    5.26 |  3.22    2.66
               0.233    2.77 | 1.233  102.62 | 2.233    5.26 |  3.23    2.66
               0.250    2.77 | 1.250  102.62 | 2.250    5.26 |  3.25    2.66
               0.267    2.77 | 1.267  102.62 | 2.267    5.26 |  3.27    2.66
               0.283    2.77 | 1.283  102.62 | 2.283    5.26 |  3.28    2.66
               0.300    2.77 | 1.300  102.62 | 2.300    5.26 |  3.30    2.66
               0.317    2.77 | 1.317  102.62 | 2.317    5.26 |  3.32    2.66
               0.333    2.77 | 1.333  102.62 | 2.333    5.26 |  3.33    2.66
               0.350    3.33 | 1.350   33.01 | 2.350    4.50 |  3.35    2.46
               0.367    3.33 | 1.367   33.01 | 2.367    4.50 |  3.37    2.46
               0.383    3.33 | 1.383   33.01 | 2.383    4.50 |  3.38    2.46
               0.400    3.33 | 1.400   33.01 | 2.400    4.50 |  3.40    2.46
               0.417    3.33 | 1.417   33.01 | 2.417    4.50 |  3.42    2.46
               0.433    3.33 | 1.433   33.01 | 2.433    4.50 |  3.43    2.46
               0.450    3.33 | 1.450   33.01 | 2.450    4.50 |  3.45    2.46
               0.467    3.33 | 1.467   33.01 | 2.467    4.50 |  3.47    2.46
               0.483    3.33 | 1.483   33.01 | 2.483    4.50 |  3.48    2.46
               0.500    3.33 | 1.500   33.01 | 2.500    4.50 |  3.50    2.46
               0.517    4.22 | 1.517   16.45 | 2.517    3.94 |  3.52    2.29
               0.533    4.22 | 1.533   16.45 | 2.533    3.94 |  3.53    2.29
               0.550    4.22 | 1.550   16.45 | 2.550    3.94 |  3.55    2.29
               0.567    4.22 | 1.567   16.45 | 2.567    3.94 |  3.57    2.29
               0.583    4.22 | 1.583   16.45 | 2.583    3.94 |  3.58    2.29
               0.600    4.22 | 1.600   16.45 | 2.600    3.94 |  3.60    2.29
               0.617    4.22 | 1.617   16.45 | 2.617    3.94 |  3.62    2.29
               0.633    4.22 | 1.633   16.45 | 2.633    3.94 |  3.63    2.29
               0.650    4.22 | 1.650   16.45 | 2.650    3.94 |  3.65    2.29
               0.667    4.22 | 1.667   16.45 | 2.667    3.94 |  3.67    2.29
               0.683    5.79 | 1.683   10.77 | 2.683    3.51 |  3.68    2.15
               0.700    5.79 | 1.700   10.77 | 2.700    3.51 |  3.70    2.15
               0.717    5.79 | 1.717   10.77 | 2.717    3.51 |  3.72    2.15
               0.733    5.79 | 1.733   10.77 | 2.733    3.51 |  3.73    2.15
               0.750    5.79 | 1.750   10.77 | 2.750    3.51 |  3.75    2.15
               0.767    5.79 | 1.767   10.77 | 2.767    3.51 |  3.77    2.15
               0.783    5.79 | 1.783   10.77 | 2.783    3.51 |  3.78    2.15
               0.800    5.79 | 1.800   10.77 | 2.800    3.51 |  3.80    2.15
               0.817    5.79 | 1.817   10.77 | 2.817    3.51 |  3.82    2.15
               0.833    5.79 | 1.833   10.77 | 2.833    3.51 |  3.83    2.15
               0.850    9.36 | 1.850    7.98 | 2.850    3.17 |  3.85    2.02
               0.867    9.36 | 1.867    7.98 | 2.867    3.17 |  3.87    2.02
               0.883    9.36 | 1.883    7.98 | 2.883    3.17 |  3.88    2.02
               0.900    9.36 | 1.900    7.98 | 2.900    3.17 |  3.90    2.02
               0.917    9.36 | 1.917    7.98 | 2.917    3.17 |  3.92    2.02
               0.933    9.36 | 1.933    7.98 | 2.933    3.17 |  3.93    2.02
               0.950    9.36 | 1.950    7.98 | 2.950    3.17 |  3.95    2.02
               0.967    9.36 | 1.967    7.98 | 2.967    3.17 |  3.97    2.02
               0.983    9.36 | 1.983    7.98 | 2.983    3.17 |  3.98    2.02
               1.000    9.36 | 2.000    7.98 | 3.000    3.17 |  4.00    2.02

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.024 (i)
     TIME TO PEAK    (hrs)=   1.567
     RUNOFF VOLUME    (mm)=   3.482
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.079

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------

                                    IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=           1.78           0.96
     Dep. Storage     (mm)=           2.00           5.00
     Average Slope     (%)=           1.00           3.00
     Length            (m)=         135.08          28.00
     Mannings n             =         0.013          0.190

     Max.Eff.Inten.(mm/hr)=         102.62          35.47
               over (min)             5.00           8.00
     Storage Coeff.  (min)=           3.03 (ii)      7.36 (ii)
     Unit Hyd. Tpeak (min)=           5.00           8.00
     Unit Hyd. peak  (cms)=           0.31           0.15
                                                              *TOTALS*
     PEAK FLOW       (cms)=           0.24           0.07       0.293 (iii)
     TIME TO PEAK    (hrs)=           1.33           1.43        1.35
     RUNOFF VOLUME    (mm)=          42.09           9.58       20.31
     TOTAL RAINFALL   (mm)=          44.09          44.09       44.09
     RUNOFF COEFFICIENT   =           0.95           0.22        0.46


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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```
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0065     0.1033
                         0.0015     0.0034   |   0.0070     0.1274
                         0.0026     0.0096   |   0.0072     0.1404
                         0.0034     0.0168   |   0.0302     0.1472
                         0.0040     0.0253   |   0.1105     0.1541
                         0.0045     0.0350   |   0.4332     0.1684
                         0.0051     0.0500   |   1.0078     0.1835
                         0.0055     0.0627   |   1.8746     0.1992
                         0.0059     0.0768   |   3.0695     0.2156
                         0.0062     0.0869   |   3.8005     0.2241

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)    2.737     0.293      1.35      20.31
     OUTFLOW: ID= 1 (0801)    2.737     0.005      4.10      17.07

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.74
                  TIME SHIFT OF PEAK FLOW         (min)=165.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0504

--------------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61         0.87
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       0.50         3.00
     Length            (m)=     128.45        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     102.62        35.47
               over (min)         5.00         8.00
     Storage Coeff.  (min)=       3.62 (ii)    7.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.28         0.14
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.06         0.257 (iii)
     TIME TO PEAK    (hrs)=       1.35         1.43          1.35
     RUNOFF VOLUME    (mm)=      42.09         9.58         20.31
     TOTAL RAINFALL   (mm)=      44.09        44.09         44.09
     RUNOFF COEFFICIENT   =       0.95         0.22          0.46


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0061     0.0972
                         0.0015     0.0053   |   0.0064     0.1137
                         0.0026     0.0141   |   0.0067     0.1254
                         0.0031     0.0204   |   0.0069     0.1375
                         0.0038     0.0307   |   0.0071     0.1502
                         0.0043     0.0420   |   0.0293     0.1568
                         0.0048     0.0542   |   0.2405     0.1703
                         0.0053     0.0675   |   1.0015     0.1916
                         0.0055     0.0769   |   2.4172     0.2142
                         0.0059     0.0919   |   4.6073     0.2381

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)    2.475     0.257      1.35      20.31
     OUTFLOW: ID= 1 (0802)    2.475     0.004      4.12      16.15

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.73
                  TIME SHIFT OF PEAK FLOW         (min)=166.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0458

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-------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
-------------------           (ha)    (cms)    (hrs)      (mm)
          ID1= 1 (0202):     2.31    0.024     1.57      3.48
        + ID2= 2 (0801):     2.74    0.005     4.10     17.07
          ================================================
          ID = 3 (0601):     5.05    0.028     1.57     10.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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-------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK      R.V.
-------------------           (ha)    (cms)    (hrs)      (mm)
          ID1= 3 (0601):     5.05    0.028     1.57     10.84
        + ID2= 2 (0802):     2.47    0.004     4.12     16.15
          ================================================
          ID = 1 (0601):     7.53    0.032     1.57     12.59

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
-------------------
| CALIB           |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
-------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.025 (i)
     TIME TO PEAK    (hrs)=   1.383
     RUNOFF VOLUME    (mm)=   8.746
     TOTAL RAINFALL   (mm)=  44.095
     RUNOFF COEFFICIENT   =   0.198

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
-------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
-------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   1.0000     0.0177
                         0.0001     0.0176   |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)    0.625     0.025      1.38       8.75
     OUTFLOW: ID= 1 (0803)    0.625     0.000      4.32       0.04

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.12
                  TIME SHIFT OF PEAK FLOW         (min)=176.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0054

--------------------------------------------------------------------------------
-------------------
| CALIB           |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
-------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16         0.08
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=      40.00        60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     102.62        36.54
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.19 (ii)    9.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.45         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.01         0.025 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.47          1.33
     RUNOFF VOLUME    (mm)=      42.09         9.71         20.05
     TOTAL RAINFALL   (mm)=      44.09        44.09         44.09
     RUNOFF COEFFICIENT   =       0.95         0.22          0.45
```

```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0153
                          0.0001     0.0152   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)      0.240     0.025      1.33      20.05
     OUTFLOW: ID= 1 (0804)      0.240     0.000      4.30       0.12

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.13
                   TIME SHIFT OF PEAK FLOW         (min)=178.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0048

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  ****************************
  ** SIMULATION NUMBER:   4 **
  ****************************


--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1882d32b-7632-4fb7-8c4e-65497f39a634\b11a9452
| Ptotal= 50.61 mm |    Comments: 10-Year Orillia 4-hour Chicago Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.17    2.65 |  1.17   28.56 |  2.17    7.19 |  3.17    3.24
                0.33    3.10 |  1.33  118.66 |  2.33    5.95 |  3.33    2.97
                0.50    3.75 |  1.50   38.22 |  2.50    5.09 |  3.50    2.75
                0.67    4.76 |  1.67   18.93 |  2.67    4.44 |  3.67    2.56
                0.83    6.56 |  1.83   12.33 |  2.83    3.95 |  3.83    2.40
                1.00   10.69 |  2.00    9.09 |  3.00    3.56 |  4.00    2.26

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.017    2.65 | 1.017   28.56 | 2.017    7.19 |  3.02    3.24
               0.033    2.65 | 1.033   28.56 | 2.033    7.19 |  3.03    3.24
               0.050    2.65 | 1.050   28.56 | 2.050    7.19 |  3.05    3.24
               0.067    2.65 | 1.067   28.56 | 2.067    7.19 |  3.07    3.24
               0.083    2.65 | 1.083   28.56 | 2.083    7.19 |  3.08    3.24
               0.100    2.65 | 1.100   28.56 | 2.100    7.19 |  3.10    3.24
               0.117    2.65 | 1.117   28.56 | 2.117    7.19 |  3.12    3.24
               0.133    2.65 | 1.133   28.56 | 2.133    7.19 |  3.13    3.24
               0.150    2.65 | 1.150   28.56 | 2.150    7.19 |  3.15    3.24
               0.167    2.65 | 1.167   28.56 | 2.167    7.19 |  3.17    3.24
               0.183    3.10 | 1.183  118.66 | 2.183    5.95 |  3.18    2.97
               0.200    3.10 | 1.200  118.66 | 2.200    5.95 |  3.20    2.97
               0.217    3.10 | 1.217  118.66 | 2.217    5.95 |  3.22    2.97
               0.233    3.10 | 1.233  118.66 | 2.233    5.95 |  3.23    2.97
               0.250    3.10 | 1.250  118.66 | 2.250    5.95 |  3.25    2.97
               0.267    3.10 | 1.267  118.66 | 2.267    5.95 |  3.27    2.97
               0.283    3.10 | 1.283  118.66 | 2.283    5.95 |  3.28    2.97
               0.300    3.10 | 1.300  118.66 | 2.300    5.95 |  3.30    2.97
               0.317    3.10 | 1.317  118.66 | 2.317    5.95 |  3.32    2.97
               0.333    3.10 | 1.333  118.66 | 2.333    5.95 |  3.33    2.97
               0.350    3.75 | 1.350   38.22 | 2.350    5.09 |  3.35    2.75
               0.367    3.75 | 1.367   38.22 | 2.367    5.09 |  3.37    2.75
               0.383    3.75 | 1.383   38.22 | 2.383    5.09 |  3.38    2.75
               0.400    3.75 | 1.400   38.22 | 2.400    5.09 |  3.40    2.75
               0.417    3.75 | 1.417   38.22 | 2.417    5.09 |  3.42    2.75
               0.433    3.75 | 1.433   38.22 | 2.433    5.09 |  3.43    2.75
               0.450    3.75 | 1.450   38.22 | 2.450    5.09 |  3.45    2.75
               0.467    3.75 | 1.467   38.22 | 2.467    5.09 |  3.47    2.75
               0.483    3.75 | 1.483   38.22 | 2.483    5.09 |  3.48    2.75
               0.500    3.75 | 1.500   38.22 | 2.500    5.09 |  3.50    2.75
               0.517    4.76 | 1.517   18.93 | 2.517    4.44 |  3.52    2.56
               0.533    4.76 | 1.533   18.93 | 2.533    4.44 |  3.53    2.56
               0.550    4.76 | 1.550   18.93 | 2.550    4.44 |  3.55    2.56
               0.567    4.76 | 1.567   18.93 | 2.567    4.44 |  3.57    2.56
               0.583    4.76 | 1.583   18.93 | 2.583    4.44 |  3.58    2.56
               0.600    4.76 | 1.600   18.93 | 2.600    4.44 |  3.60    2.56
               0.617    4.76 | 1.617   18.93 | 2.617    4.44 |  3.62    2.56
               0.633    4.76 | 1.633   18.93 | 2.633    4.44 |  3.63    2.56
               0.650    4.76 | 1.650   18.93 | 2.650    4.44 |  3.65    2.56
               0.667    4.76 | 1.667   18.93 | 2.667    4.44 |  3.67    2.56
               0.683    6.56 | 1.683   12.33 | 2.683    3.95 |  3.68    2.40
               0.700    6.56 | 1.700   12.33 | 2.700    3.95 |  3.70    2.40
               0.717    6.56 | 1.717   12.33 | 2.717    3.95 |  3.72    2.40
               0.733    6.56 | 1.733   12.33 | 2.733    3.95 |  3.73    2.40
               0.750    6.56 | 1.750   12.33 | 2.750    3.95 |  3.75    2.40
               0.767    6.56 | 1.767   12.33 | 2.767    3.95 |  3.77    2.40
               0.783    6.56 | 1.783   12.33 | 2.783    3.95 |  3.78    2.40
               0.800    6.56 | 1.800   12.33 | 2.800    3.95 |  3.80    2.40
               0.817    6.56 | 1.817   12.33 | 2.817    3.95 |  3.82    2.40
               0.833    6.56 | 1.833   12.33 | 2.833    3.95 |  3.83    2.40
               0.850   10.69 | 1.850    9.09 | 2.850    3.56 |  3.85    2.26
               0.867   10.69 | 1.867    9.09 | 2.867    3.56 |  3.87    2.26
               0.883   10.69 | 1.883    9.09 | 2.883    3.56 |  3.88    2.26
               0.900   10.69 | 1.900    9.09 | 2.900    3.56 |  3.90    2.26
               0.917   10.69 | 1.917    9.09 | 2.917    3.56 |  3.92    2.26
               0.933   10.69 | 1.933    9.09 | 2.933    3.56 |  3.93    2.26
               0.950   10.69 | 1.950    9.09 | 2.950    3.56 |  3.95    2.26
               0.967   10.69 | 1.967    9.09 | 2.967    3.56 |  3.97    2.26
               0.983   10.69 | 1.983    9.09 | 2.983    3.56 |  3.98    2.26
               1.000   10.69 | 2.000    9.09 | 3.000    3.56 |  4.00    2.26

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.034 (i)
     TIME TO PEAK    (hrs)=   1.550
     RUNOFF VOLUME    (mm)=   4.747
     TOTAL RAINFALL   (mm)=  50.610
     RUNOFF COEFFICIENT   =   0.094

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78          0.96
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       1.00          3.00
     Length            (m)=     135.08         28.00
     Mannings n           =      0.013         0.190

     Max.Eff.Inten.(mm/hr)=     118.66         47.00
               over (min)          5.00          7.00
     Storage Coeff.  (min)=       2.86 (ii)     6.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00          7.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28          0.10        0.359 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42         1.35
     RUNOFF VOLUME    (mm)=      48.61         12.38        24.33
     TOTAL RAINFALL   (mm)=      50.61         50.61        50.61
     RUNOFF COEFFICIENT   =       0.96          0.24         0.48


      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
```

```
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0065     0.1033
                         0.0015     0.0034   |   0.0070     0.1274
                         0.0026     0.0096   |   0.0072     0.1404
                         0.0034     0.0168   |   0.0302     0.1472
                         0.0040     0.0253   |   0.1105     0.1541
                         0.0045     0.0350   |   0.4332     0.1684
                         0.0051     0.0500   |   1.0078     0.1835
                         0.0055     0.0627   |   1.8746     0.1992
                         0.0059     0.0768   |   3.0695     0.2156
                         0.0062     0.0869   |   3.8005     0.2241

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)   2.737     0.359      1.35      24.33
     OUTFLOW: ID= 1 (0801)   2.737     0.005      4.10      19.02

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.52
                   TIME SHIFT OF PEAK FLOW         (min)=165.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0610

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61         0.87
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       0.50         3.00
     Length            (m)=     128.45        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     118.66        47.00
               over (min)         5.00         8.00
     Storage Coeff.  (min)=       3.41 (ii)    7.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.29         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.08         0.310 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.43          1.35
     RUNOFF VOLUME    (mm)=      48.61        12.38         24.33
     TOTAL RAINFALL   (mm)=      50.61        50.61         50.61
     RUNOFF COEFFICIENT   =       0.96         0.24          0.48


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.0061     0.0972
                         0.0015     0.0053   |   0.0064     0.1137
                         0.0026     0.0141   |   0.0067     0.1254
                         0.0031     0.0204   |   0.0069     0.1375
                         0.0038     0.0307   |   0.0071     0.1502
                         0.0043     0.0420   |   0.0293     0.1568
                         0.0048     0.0542   |   0.2405     0.1703
                         0.0053     0.0675   |   1.0015     0.1916
                         0.0055     0.0769   |   2.4172     0.2142
                         0.0059     0.0919   |   4.6073     0.2381

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)   2.475     0.310      1.35      24.33
     OUTFLOW: ID= 1 (0802)   2.475     0.005      4.12      18.16

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.56
                   TIME SHIFT OF PEAK FLOW         (min)=166.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0553

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------              (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0202):     2.31   0.034     1.55     4.75
       + ID2= 2 (0801):     2.74   0.005     4.10    19.02
         ================================================
         ID = 3 (0601):     5.05   0.038     1.57    12.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------              (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     5.05   0.038     1.57    12.48
       + ID2= 2 (0802):     2.47   0.005     4.12    18.16
         ================================================
         ID = 1 (0601):     7.53   0.042     1.57    14.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.034 (i)
     TIME TO PEAK    (hrs)=   1.383
     RUNOFF VOLUME    (mm)=  11.421
     TOTAL RAINFALL   (mm)=  50.610
     RUNOFF COEFFICIENT   =   0.226

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   1.0000     0.0177
                         0.0001     0.0176   |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)   0.625     0.034      1.38      11.42
     OUTFLOW: ID= 1 (0803)   0.625     0.000      4.32       0.06

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.12
                   TIME SHIFT OF PEAK FLOW         (min)=176.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0071

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------

                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16         0.08
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=      40.00        60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     118.66        48.38
               over (min)         5.00         9.00
     Storage Coeff.  (min)=       1.12 (ii)    8.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00         9.00
     Unit Hyd. peak  (cms)=       0.46         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.03         0.01         0.030 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.45          1.33
     RUNOFF VOLUME    (mm)=      48.61        12.53         24.06
     TOTAL RAINFALL   (mm)=      50.61        50.61         50.61
     RUNOFF COEFFICIENT   =       0.96         0.25          0.48


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
```

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0804)					
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		1.0000	0.0153
	0.0001	0.0152		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	0.240	0.030	1.33	24.06
OUTFLOW: ID= 1 (0804)	0.240	0.000	4.32	0.15

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.13
TIME SHIFT OF PEAK FLOW (min)=179.00
MAXIMUM STORAGE USED (ha.m.)= 0.0057

****
** SIMULATION NUMBER: 5 **
****

READ STORM	Filename: C:\Users\jingram\AppData\Local\Temp\1882d32b-7632-4fb7-8c4e-65497f39a634\4a313f10
Ptotal= 58.97 mm	Comments: 25-Year Orillia 4-hour Chicago Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	2.96	1.17	33.93	2.17	8.29	3.17	3.63
0.33	3.47	1.33	138.48	2.33	6.82	3.33	3.33
0.50	4.22	1.50	45.53	2.50	5.79	3.50	3.07
0.67	5.41	1.67	22.38	2.67	5.04	3.67	2.85
0.83	7.54	1.83	14.43	2.83	4.46	3.83	2.67
1.00	12.47	2.00	10.55	3.00	4.00	4.00	2.50

CALIB					
NASHYD (0202)	Area (ha)=	2.31	Curve Number (CN)=	42.0	
ID= 1 DT= 1.0 min	Ia (mm)=	7.36	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.18			

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	2.96	1.017	33.93	2.017	8.29	3.02	3.63
0.033	2.96	1.033	33.93	2.033	8.29	3.03	3.63
0.050	2.96	1.050	33.93	2.050	8.29	3.05	3.63
0.067	2.96	1.067	33.93	2.067	8.29	3.07	3.63
0.083	2.96	1.083	33.93	2.083	8.29	3.08	3.63
0.100	2.96	1.100	33.93	2.100	8.29	3.10	3.63
0.117	2.96	1.117	33.93	2.117	8.29	3.12	3.63
0.133	2.96	1.133	33.93	2.133	8.29	3.13	3.63
0.150	2.96	1.150	33.93	2.150	8.29	3.15	3.63
0.167	2.96	1.167	33.93	2.167	8.29	3.17	3.63
0.183	3.47	1.183	138.48	2.183	6.82	3.18	3.33
0.200	3.47	1.200	138.48	2.200	6.82	3.20	3.33
0.217	3.47	1.217	138.48	2.217	6.82	3.22	3.33
0.233	3.47	1.233	138.48	2.233	6.82	3.23	3.33
0.250	3.47	1.250	138.48	2.250	6.82	3.25	3.33
0.267	3.47	1.267	138.48	2.267	6.82	3.27	3.33
0.283	3.47	1.283	138.48	2.283	6.82	3.28	3.33
0.300	3.47	1.300	138.48	2.300	6.82	3.30	3.33
0.317	3.47	1.317	138.48	2.317	6.82	3.32	3.33
0.333	3.47	1.333	138.48	2.333	6.82	3.33	3.33
0.350	4.22	1.350	45.53	2.350	5.79	3.35	3.07
0.367	4.22	1.367	45.53	2.367	5.79	3.37	3.07
0.383	4.22	1.383	45.53	2.383	5.79	3.38	3.07
0.400	4.22	1.400	45.53	2.400	5.79	3.40	3.07
0.417	4.22	1.417	45.53	2.417	5.79	3.42	3.07
0.433	4.22	1.433	45.53	2.433	5.79	3.43	3.07
0.450	4.22	1.450	45.53	2.450	5.79	3.45	3.07
0.467	4.22	1.467	45.53	2.467	5.79	3.47	3.07
0.483	4.22	1.483	45.53	2.483	5.79	3.48	3.07
0.500	4.22	1.500	45.53	2.500	5.79	3.50	3.07
0.517	5.41	1.517	22.38	2.517	5.04	3.52	2.85
0.533	5.41	1.533	22.38	2.533	5.04	3.53	2.85
0.550	5.41	1.550	22.38	2.550	5.04	3.55	2.85
0.567	5.41	1.567	22.38	2.567	5.04	3.57	2.85
0.583	5.41	1.583	22.38	2.583	5.04	3.58	2.85
0.600	5.41	1.600	22.38	2.600	5.04	3.60	2.85
0.617	5.41	1.617	22.38	2.617	5.04	3.62	2.85
0.633	5.41	1.633	22.38	2.633	5.04	3.63	2.85
0.650	5.41	1.650	22.38	2.650	5.04	3.65	2.85
0.667	5.41	1.667	22.38	2.667	5.04	3.67	2.85
0.683	7.54	1.683	14.43	2.683	4.46	3.68	2.67
0.700	7.54	1.700	14.43	2.700	4.46	3.70	2.67
0.717	7.54	1.717	14.43	2.717	4.46	3.72	2.67
0.733	7.54	1.733	14.43	2.733	4.46	3.73	2.67
0.750	7.54	1.750	14.43	2.750	4.46	3.75	2.67
0.767	7.54	1.767	14.43	2.767	4.46	3.77	2.67
0.783	7.54	1.783	14.43	2.783	4.46	3.78	2.67
0.800	7.54	1.800	14.43	2.800	4.46	3.80	2.67
0.817	7.54	1.817	14.43	2.817	4.46	3.82	2.67
0.833	7.54	1.833	14.43	2.833	4.46	3.83	2.67
0.850	12.47	1.850	10.55	2.850	4.00	3.85	2.50
0.867	12.47	1.867	10.55	2.867	4.00	3.87	2.50
0.883	12.47	1.883	10.55	2.883	4.00	3.88	2.50
0.900	12.47	1.900	10.55	2.900	4.00	3.90	2.50
0.917	12.47	1.917	10.55	2.917	4.00	3.92	2.50
0.933	12.47	1.933	10.55	2.933	4.00	3.93	2.50
0.950	12.47	1.950	10.55	2.950	4.00	3.95	2.50
0.967	12.47	1.967	10.55	2.967	4.00	3.97	2.50
0.983	12.47	1.983	10.55	2.983	4.00	3.98	2.50
1.000	12.47	2.000	10.55	3.000	4.00	4.00	2.50

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.049 (i)
TIME TO PEAK (hrs)= 1.550
RUNOFF VOLUME (mm)= 6.620
TOTAL RAINFALL (mm)= 58.970
RUNOFF COEFFICIENT = 0.112

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0201)	Area (ha)=	2.74	
ID= 1 DT= 1.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.78	0.96	
Dep. Storage	(mm)=	2.00	5.00	
Average Slope	(%)=	1.00	3.00	
Length	(m)=	135.08	28.00	
Mannings n	=	0.013	0.190	
Max.Eff.Inten.(mm/hr)=		138.48	63.27	
over (min)		5.00	7.00	
Storage Coeff. (min)=		2.69 (ii)	6.53 (ii)	
Unit Hyd. Tpeak (min)=		5.00	7.00	
Unit Hyd. peak (cms)=		0.33	0.17	
				TOTALS
PEAK FLOW	(cms)=	0.33	0.13	0.439 (iii)
TIME TO PEAK	(hrs)=	1.33	1.42	1.35
RUNOFF VOLUME	(mm)=	56.97	16.33	29.74
TOTAL RAINFALL	(mm)=	58.97	58.97	58.97
RUNOFF COEFFICIENT	=	0.97	0.28	0.50

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)					
IN= 2---> OUT= 1					
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)		OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000		0.0065	0.1033
	0.0015	0.0034		0.0070	0.1274

```
                        0.0026     0.0096   |   0.0072      0.1404
                        0.0034     0.0168   |   0.0302      0.1472
                        0.0040     0.0253   |   0.1105      0.1541
                        0.0045     0.0350   |   0.4332      0.1684
                        0.0051     0.0500   |   1.0078      0.1835
                        0.0055     0.0627   |   1.8746      0.1992
                        0.0059     0.0768   |   3.0695      0.2156
                        0.0062     0.0869   |   3.8005      0.2241

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)      2.737     0.439      1.35      29.74
     OUTFLOW: ID= 1 (0801)      2.737     0.006      4.10      21.15

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.33
                   TIME SHIFT OF PEAK FLOW         (min)=165.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0753

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--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61         0.87
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       0.50         3.00
     Length            (m)=     128.45        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     138.48        63.27
               over (min)         5.00         8.00
     Storage Coeff.  (min)=       3.21 (ii)    7.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.30         0.15
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.29         0.11      0.380 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.43       1.35
     RUNOFF VOLUME    (mm)=      56.97        16.33      29.74
     TOTAL RAINFALL   (mm)=      58.97        58.97      58.97
     RUNOFF COEFFICIENT   =       0.97         0.28       0.50


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   0.0061      0.0972
                        0.0015     0.0053    |   0.0064      0.1137
                        0.0026     0.0141    |   0.0067      0.1254
                        0.0031     0.0204    |   0.0069      0.1375
                        0.0038     0.0307    |   0.0071      0.1502
                        0.0043     0.0420    |   0.0293      0.1568
                        0.0048     0.0542    |   0.2405      0.1703
                        0.0053     0.0675    |   1.0015      0.1916
                        0.0055     0.0769    |   2.4172      0.2142
                        0.0059     0.0919    |   4.6073      0.2381

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)      2.475     0.380      1.35      29.74
     OUTFLOW: ID= 1 (0802)      2.475     0.005      4.12      20.52

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.40
                   TIME SHIFT OF PEAK FLOW         (min)=166.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0682

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0202):     2.31   0.049     1.55     6.62
        + ID2= 2 (0801):     2.74   0.006     4.10    21.15
          ================================================
          ID = 3 (0601):     5.05   0.053     1.55    14.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
          ID1= 3 (0601):     5.05   0.053     1.55    14.49
        + ID2= 2 (0802):     2.47   0.005     4.12    20.52
          ================================================
          ID = 1 (0601):     7.53   0.058     1.55    16.47

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.046 (i)
     TIME TO PEAK    (hrs)=   1.383
     RUNOFF VOLUME    (mm)=  15.224
     TOTAL RAINFALL   (mm)=  58.970
     RUNOFF COEFFICIENT   =   0.258

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   1.0000      0.0177
                        0.0001     0.0176    |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)      0.625     0.046      1.38      15.22
     OUTFLOW: ID= 1 (0803)      0.625     0.000      4.32       0.08

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.12
                   TIME SHIFT OF PEAK FLOW         (min)=176.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0095

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--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16         0.08
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=      40.00        60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     138.48        65.08
               over (min)         5.00         8.00
     Storage Coeff.  (min)=       1.05 (ii)    8.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.47         0.14
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.03         0.01      0.037 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.43       1.33
     RUNOFF VOLUME    (mm)=      56.97        16.53      29.45
     TOTAL RAINFALL   (mm)=      58.97        58.97      58.97
     RUNOFF COEFFICIENT   =       0.97         0.28       0.50


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE    |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)    |   (cms)     (ha.m.)
                          0.0000     0.0000    |   1.0000      0.0153
                          0.0001     0.0152    |   0.0000      0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)     0.240     0.037      1.33      29.45
     OUTFLOW: ID= 1 (0804)     0.240     0.000      4.32       0.18

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.12
                    TIME SHIFT OF PEAK FLOW         (min)=179.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0070
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  ****************************
  ** SIMULATION NUMBER:   6 **
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--------------------
|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1882d32b-7632-4fb7-8c4e-65497f39a634\60c61b7a
| Ptotal= 65.52 mm |    Comments: 50-Year Orillia 4-hour Chicago Storm
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	3.21	1.17	38.13	2.17	9.16	3.17	3.95
0.33	3.78	1.33	153.74	2.33	7.51	3.33	3.62
0.50	4.61	1.50	51.22	2.50	6.36	3.50	3.33
0.67	5.93	1.67	25.10	2.67	5.52	3.67	3.09
0.83	8.32	1.83	16.10	2.83	4.87	3.83	2.89
1.00	13.89	2.00	11.71	3.00	4.36	4.00	2.71

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--------------------
| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18
```

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	3.21	1.017	38.13	2.017	9.16	3.02	3.95
0.033	3.21	1.033	38.13	2.033	9.16	3.03	3.95
0.050	3.21	1.050	38.13	2.050	9.16	3.05	3.95
0.067	3.21	1.067	38.13	2.067	9.16	3.07	3.95
0.083	3.21	1.083	38.13	2.083	9.16	3.08	3.95
0.100	3.21	1.100	38.13	2.100	9.16	3.10	3.95
0.117	3.21	1.117	38.13	2.117	9.16	3.12	3.95
0.133	3.21	1.133	38.13	2.133	9.16	3.13	3.95
0.150	3.21	1.150	38.13	2.150	9.16	3.15	3.95
0.167	3.21	1.167	38.13	2.167	9.16	3.17	3.95
0.183	3.78	1.183	153.74	2.183	7.51	3.18	3.62
0.200	3.78	1.200	153.74	2.200	7.51	3.20	3.62
0.217	3.78	1.217	153.74	2.217	7.51	3.22	3.62
0.233	3.78	1.233	153.74	2.233	7.51	3.23	3.62
0.250	3.78	1.250	153.74	2.250	7.51	3.25	3.62
0.267	3.78	1.267	153.74	2.267	7.51	3.27	3.62
0.283	3.78	1.283	153.74	2.283	7.51	3.28	3.62
0.300	3.78	1.300	153.74	2.300	7.51	3.30	3.62
0.317	3.78	1.317	153.74	2.317	7.51	3.32	3.62
0.333	3.78	1.333	153.74	2.333	7.51	3.33	3.62
0.350	4.61	1.350	51.22	2.350	6.36	3.35	3.33
0.367	4.61	1.367	51.22	2.367	6.36	3.37	3.33
0.383	4.61	1.383	51.22	2.383	6.36	3.38	3.33
0.400	4.61	1.400	51.22	2.400	6.36	3.40	3.33
0.417	4.61	1.417	51.22	2.417	6.36	3.42	3.33
0.433	4.61	1.433	51.22	2.433	6.36	3.43	3.33
0.450	4.61	1.450	51.22	2.450	6.36	3.45	3.33
0.467	4.61	1.467	51.22	2.467	6.36	3.47	3.33
0.483	4.61	1.483	51.22	2.483	6.36	3.48	3.33
0.500	4.61	1.500	51.22	2.500	6.36	3.50	3.33
0.517	5.93	1.517	25.10	2.517	5.52	3.52	3.09
0.533	5.93	1.533	25.10	2.533	5.52	3.53	3.09
0.550	5.93	1.550	25.10	2.550	5.52	3.55	3.09
0.567	5.93	1.567	25.10	2.567	5.52	3.57	3.09
0.583	5.93	1.583	25.10	2.583	5.52	3.58	3.09
0.600	5.93	1.600	25.10	2.600	5.52	3.60	3.09
0.617	5.93	1.617	25.10	2.617	5.52	3.62	3.09
0.633	5.93	1.633	25.10	2.633	5.52	3.63	3.09
0.650	5.93	1.650	25.10	2.650	5.52	3.65	3.09
0.667	5.93	1.667	25.10	2.667	5.52	3.67	3.09
0.683	8.32	1.683	16.10	2.683	4.87	3.68	2.89
0.700	8.32	1.700	16.10	2.700	4.87	3.70	2.89
0.717	8.32	1.717	16.10	2.717	4.87	3.72	2.89
0.733	8.32	1.733	16.10	2.733	4.87	3.73	2.89
0.750	8.32	1.750	16.10	2.750	4.87	3.75	2.89
0.767	8.32	1.767	16.10	2.767	4.87	3.77	2.89
0.783	8.32	1.783	16.10	2.783	4.87	3.78	2.89
0.800	8.32	1.800	16.10	2.800	4.87	3.80	2.89
0.817	8.32	1.817	16.10	2.817	4.87	3.82	2.89
0.833	8.32	1.833	16.10	2.833	4.87	3.83	2.89
0.850	13.89	1.850	11.71	2.850	4.36	3.85	2.71
0.867	13.89	1.867	11.71	2.867	4.36	3.87	2.71
0.883	13.89	1.883	11.71	2.883	4.36	3.88	2.71
0.900	13.89	1.900	11.71	2.900	4.36	3.90	2.71
0.917	13.89	1.917	11.71	2.917	4.36	3.92	2.71
0.933	13.89	1.933	11.71	2.933	4.36	3.93	2.71
0.950	13.89	1.950	11.71	2.950	4.36	3.95	2.71
0.967	13.89	1.967	11.71	2.967	4.36	3.97	2.71
0.983	13.89	1.983	11.71	2.983	4.36	3.98	2.71
1.000	13.89	2.000	11.71	3.000	4.36	4.00	2.71

```
     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.062 (i)
     TIME TO PEAK    (hrs)=   1.550
     RUNOFF VOLUME    (mm)=   8.271
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.126

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

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--------------------
| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=          1.78          0.96
     Dep. Storage     (mm)=          2.00          5.00
     Average Slope     (%)=          1.00          3.00
     Length            (m)=        135.08         28.00
     Mannings n            =         0.013         0.190

     Max.Eff.Inten.(mm/hr)=        153.74         77.14
               over (min)             5.00          7.00
     Storage Coeff.  (min)=          2.58 (ii)     6.27 (ii)
     Unit Hyd. Tpeak (min)=          5.00          7.00
     Unit Hyd. peak  (cms)=          0.33          0.17
                                                          *TOTALS*
     PEAK FLOW       (cms)=          0.37          0.16          0.505 (iii)
     TIME TO PEAK    (hrs)=          1.33          1.40           1.35
     RUNOFF VOLUME    (mm)=         63.52         19.69          34.15
     TOTAL RAINFALL   (mm)=         65.52         65.52          65.52
     RUNOFF COEFFICIENT   =          0.97          0.30           0.52


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
--------------------
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE    |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)    |   (cms)     (ha.m.)
                          0.0000     0.0000    |   0.0065      0.1033
                          0.0015     0.0034    |   0.0070      0.1274
                          0.0026     0.0096    |   0.0072      0.1404
                          0.0034     0.0168    |   0.0302      0.1472
                          0.0040     0.0253    |   0.1105      0.1541
```

```
                        0.0045     0.0350   |   0.4332      0.1684
                        0.0051     0.0500   |   1.0078      0.1835
                        0.0055     0.0627   |   1.8746      0.1992
                        0.0059     0.0768   |   3.0695      0.2156
                        0.0062     0.0869   |   3.8005      0.2241

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)      2.737     0.505      1.35      34.15
     OUTFLOW: ID= 1 (0801)      2.737     0.006      4.12      22.64

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.23
                   TIME SHIFT OF PEAK FLOW         (min)=166.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0870

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--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61          0.87
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       0.50          3.00
     Length            (m)=     128.45         28.00
     Mannings n           =      0.013         0.190

     Max.Eff.Inten.(mm/hr)=     153.74         77.14
               over (min)         5.00          7.00
     Storage Coeff.  (min)=       3.08 (ii)     6.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00          7.00
     Unit Hyd. peak  (cms)=       0.30          0.17
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.32          0.14          0.446 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.35
     RUNOFF VOLUME    (mm)=      63.52         19.69          34.15
     TOTAL RAINFALL   (mm)=      65.52         65.52          65.52
     RUNOFF COEFFICIENT   =       0.97          0.30           0.52


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000   |   0.0061      0.0972
                        0.0015     0.0053   |   0.0064      0.1137
                        0.0026     0.0141   |   0.0067      0.1254
                        0.0031     0.0204   |   0.0069      0.1375
                        0.0038     0.0307   |   0.0071      0.1502
                        0.0043     0.0420   |   0.0293      0.1568
                        0.0048     0.0542   |   0.2405      0.1703
                        0.0053     0.0675   |   1.0015      0.1916
                        0.0055     0.0769   |   2.4172      0.2142
                        0.0059     0.0919   |   4.6073      0.2381

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)      2.475     0.446      1.35      34.15
     OUTFLOW: ID= 1 (0802)      2.475     0.006      4.12      22.17

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.25
                   TIME SHIFT OF PEAK FLOW         (min)=166.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0788

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0202):     2.31   0.062     1.55     8.27
       + ID2= 2 (0801):     2.74   0.006     4.12    22.64
         ================================================
         ID = 3 (0601):     5.05   0.067     1.55    16.06
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     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     5.05   0.067     1.55    16.06
       + ID2= 2 (0802):     2.47   0.006     4.12    22.17
         ================================================
         ID = 1 (0601):     7.53   0.071     1.55    18.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.057 (i)
     TIME TO PEAK    (hrs)=   1.383
     RUNOFF VOLUME    (mm)=  18.463
     TOTAL RAINFALL   (mm)=  65.518
     RUNOFF COEFFICIENT   =   0.282

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000   |   1.0000      0.0177
                        0.0001     0.0176   |   0.0000      0.0000

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)      0.625     0.057      1.38      18.46
     OUTFLOW: ID= 1 (0803)      0.625     0.000      4.32       0.10

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.11
                   TIME SHIFT OF PEAK FLOW         (min)=176.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0115

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--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16          0.08
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       2.00          2.00
     Length            (m)=      40.00         60.00
     Mannings n           =      0.013         0.190

     Max.Eff.Inten.(mm/hr)=     153.74         79.31
               over (min)         5.00          8.00
     Storage Coeff.  (min)=       1.01 (ii)     7.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00          8.00
     Unit Hyd. peak  (cms)=       0.47          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.01          0.042 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.43           1.35
     RUNOFF VOLUME    (mm)=      63.52         19.91          33.84
     TOTAL RAINFALL   (mm)=      65.52         65.52          65.52
     RUNOFF COEFFICIENT   =       0.97          0.30           0.52


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT= 1.0 min |

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.0000	0.0153
0.0001	0.0152	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	0.240	0.042	1.35	33.84
OUTFLOW: ID= 1 (0804)	0.240	0.000	4.32	0.21

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.13
TIME SHIFT OF PEAK FLOW (min)=178.00
MAXIMUM STORAGE USED (ha.m.)= 0.0081

****
** SIMULATION NUMBER: 7 **
****

READ STORM	Filename: C:\Users\jingram\AppData\Local\Temp\1882d32b-7632-4fb7-8c4e-65497f39a634\8db59ea9
Ptotal= 71.71 mm	Comments: 100-Year Orillia 4-hour Chicago Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.17	3.48	1.17	41.81	2.17	9.98	3.17	4.29
0.33	4.10	1.33	168.81	2.33	8.17	3.33	3.92
0.50	5.01	1.50	56.20	2.50	6.92	3.50	3.61
0.67	6.45	1.67	27.48	2.67	5.99	3.67	3.35
0.83	9.06	1.83	17.59	2.83	5.29	3.83	3.13
1.00	15.16	2.00	12.78	3.00	4.74	4.00	2.93

CALIB	
NASHYD (0202)	Area (ha)= 2.31 Curve Number (CN)= 42.0
ID= 1 DT= 1.0 min	Ia (mm)= 7.36 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	3.48	1.017	41.81	2.017	9.98	3.02	4.29
0.033	3.48	1.033	41.81	2.033	9.98	3.03	4.29
0.050	3.48	1.050	41.81	2.050	9.98	3.05	4.29
0.067	3.48	1.067	41.81	2.067	9.98	3.07	4.29
0.083	3.48	1.083	41.81	2.083	9.98	3.08	4.29
0.100	3.48	1.100	41.81	2.100	9.98	3.10	4.29
0.117	3.48	1.117	41.81	2.117	9.98	3.12	4.29
0.133	3.48	1.133	41.81	2.133	9.98	3.13	4.29
0.150	3.48	1.150	41.81	2.150	9.98	3.15	4.29
0.167	3.48	1.167	41.81	2.167	9.98	3.17	4.29
0.183	4.10	1.183	168.81	2.183	8.17	3.18	3.92
0.200	4.10	1.200	168.81	2.200	8.17	3.20	3.92
0.217	4.10	1.217	168.81	2.217	8.17	3.22	3.92
0.233	4.10	1.233	168.81	2.233	8.17	3.23	3.92
0.250	4.10	1.250	168.81	2.250	8.17	3.25	3.92
0.267	4.10	1.267	168.81	2.267	8.17	3.27	3.92
0.283	4.10	1.283	168.81	2.283	8.17	3.28	3.92
0.300	4.10	1.300	168.81	2.300	8.17	3.30	3.92
0.317	4.10	1.317	168.81	2.317	8.17	3.32	3.92
0.333	4.10	1.333	168.81	2.333	8.17	3.33	3.92
0.350	5.01	1.350	56.20	2.350	6.92	3.35	3.61
0.367	5.01	1.367	56.20	2.367	6.92	3.37	3.61
0.383	5.01	1.383	56.20	2.383	6.92	3.38	3.61
0.400	5.01	1.400	56.20	2.400	6.92	3.40	3.61
0.417	5.01	1.417	56.20	2.417	6.92	3.42	3.61
0.433	5.01	1.433	56.20	2.433	6.92	3.43	3.61
0.450	5.01	1.450	56.20	2.450	6.92	3.45	3.61
0.467	5.01	1.467	56.20	2.467	6.92	3.47	3.61
0.483	5.01	1.483	56.20	2.483	6.92	3.48	3.61
0.500	5.01	1.500	56.20	2.500	6.92	3.50	3.61
0.517	6.45	1.517	27.48	2.517	5.99	3.52	3.35
0.533	6.45	1.533	27.48	2.533	5.99	3.53	3.35
0.550	6.45	1.550	27.48	2.550	5.99	3.55	3.35
0.567	6.45	1.567	27.48	2.567	5.99	3.57	3.35
0.583	6.45	1.583	27.48	2.583	5.99	3.58	3.35
0.600	6.45	1.600	27.48	2.600	5.99	3.60	3.35
0.617	6.45	1.617	27.48	2.617	5.99	3.62	3.35
0.633	6.45	1.633	27.48	2.633	5.99	3.63	3.35
0.650	6.45	1.650	27.48	2.650	5.99	3.65	3.35
0.667	6.45	1.667	27.48	2.667	5.99	3.67	3.35
0.683	9.06	1.683	17.59	2.683	5.29	3.68	3.13
0.700	9.06	1.700	17.59	2.700	5.29	3.70	3.13
0.717	9.06	1.717	17.59	2.717	5.29	3.72	3.13
0.733	9.06	1.733	17.59	2.733	5.29	3.73	3.13
0.750	9.06	1.750	17.59	2.750	5.29	3.75	3.13
0.767	9.06	1.767	17.59	2.767	5.29	3.77	3.13
0.783	9.06	1.783	17.59	2.783	5.29	3.78	3.13
0.800	9.06	1.800	17.59	2.800	5.29	3.80	3.13
0.817	9.06	1.817	17.59	2.817	5.29	3.82	3.13
0.833	9.06	1.833	17.59	2.833	5.29	3.83	3.13
0.850	15.16	1.850	12.78	2.850	4.74	3.85	2.93
0.867	15.16	1.867	12.78	2.867	4.74	3.87	2.93
0.883	15.16	1.883	12.78	2.883	4.74	3.88	2.93
0.900	15.16	1.900	12.78	2.900	4.74	3.90	2.93
0.917	15.16	1.917	12.78	2.917	4.74	3.92	2.93
0.933	15.16	1.933	12.78	2.933	4.74	3.93	2.93
0.950	15.16	1.950	12.78	2.950	4.74	3.95	2.93
0.967	15.16	1.967	12.78	2.967	4.74	3.97	2.93
0.983	15.16	1.983	12.78	2.983	4.74	3.98	2.93
1.000	15.16	2.000	12.78	3.000	4.74	4.00	2.93

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.075 (i)
TIME TO PEAK (hrs)= 1.550
RUNOFF VOLUME (mm)= 9.975
TOTAL RAINFALL (mm)= 71.708
RUNOFF COEFFICIENT = 0.139

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0201)	Area (ha)= 2.74
ID= 1 DT= 1.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.78	0.96	
Dep. Storage	(mm)=	2.00	5.00	
Average Slope	(%)=	1.00	3.00	
Length	(m)=	135.08	28.00	
Mannings n	=	0.013	0.190	
Max.Eff.Inten.(mm/hr)=		168.81	91.55	
over (min)		5.00	7.00	
Storage Coeff. (min)=		2.48 (ii)	6.04 (ii)	
Unit Hyd. Tpeak (min)=		5.00	7.00	
Unit Hyd. peak (cms)=		0.34	0.18	
				TOTALS
PEAK FLOW	(cms)=	0.41	0.20	0.571 (iii)
TIME TO PEAK	(hrs)=	1.33	1.40	1.35
RUNOFF VOLUME	(mm)=	69.71	23.04	38.44
TOTAL RAINFALL	(mm)=	71.71	71.71	71.71
RUNOFF COEFFICIENT	=	0.97	0.32	0.54

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0065	0.1033
0.0015	0.0034	0.0070	0.1274
0.0026	0.0096	0.0072	0.1404
0.0034	0.0168	0.0302	0.1472
0.0040	0.0253	0.1105	0.1541
0.0045	0.0350	0.4332	0.1684
0.0051	0.0500	1.0078	0.1835
0.0055	0.0627	1.8746	0.1992

```
                        0.0059     0.0768   |   3.0695      0.2156
                        0.0062     0.0869   |   3.8005      0.2241

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)      2.737      0.571      1.35      38.44
     OUTFLOW: ID= 1 (0801)      2.737      0.006      4.12      23.93

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.12
                   TIME SHIFT OF PEAK FLOW          (min)=166.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0985

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--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61         0.87
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       0.50         3.00
     Length            (m)=     128.45        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     168.81        91.55
               over (min)         5.00         7.00
     Storage Coeff.  (min)=       2.96 (ii)    6.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00         7.00
     Unit Hyd. peak  (cms)=       0.31         0.17
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.36         0.17          0.505 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42          1.35
     RUNOFF VOLUME    (mm)=      69.71        23.04         38.44
     TOTAL RAINFALL   (mm)=      71.71        71.71         71.71
     RUNOFF COEFFICIENT   =       0.97         0.32          0.54


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.0061      0.0972
                         0.0015     0.0053    |   0.0064      0.1137
                         0.0026     0.0141    |   0.0067      0.1254
                         0.0031     0.0204    |   0.0069      0.1375
                         0.0038     0.0307    |   0.0071      0.1502
                         0.0043     0.0420    |   0.0293      0.1568
                         0.0048     0.0542    |   0.2405      0.1703
                         0.0053     0.0675    |   1.0015      0.1916
                         0.0055     0.0769    |   2.4172      0.2142
                         0.0059     0.0919    |   4.6073      0.2381

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)      2.475      0.505      1.35      38.44
     OUTFLOW: ID= 1 (0802)      2.475      0.006      4.12      23.59

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.15
                   TIME SHIFT OF PEAK FLOW          (min)=166.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0891

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0202):     2.31   0.075     1.55     9.97
        + ID2= 2 (0801):     2.74   0.006     4.12    23.93
          ================================================
          ID = 3 (0601):     5.05   0.081     1.55    17.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
          ID1= 3 (0601):     5.05   0.081     1.55    17.54
        + ID2= 2 (0802):     2.47   0.006     4.12    23.59
          ================================================
          ID = 1 (0601):     7.53   0.085     1.55    19.53

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.068 (i)
     TIME TO PEAK    (hrs)=   1.383
     RUNOFF VOLUME    (mm)=  21.714
     TOTAL RAINFALL   (mm)=  71.708
     RUNOFF COEFFICIENT   =   0.303

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   1.0000      0.0177
                         0.0001     0.0176    |   0.0000      0.0000

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)      0.625      0.068      1.38      21.71
     OUTFLOW: ID= 1 (0803)      0.625      0.000      4.30       0.11

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.11
                   TIME SHIFT OF PEAK FLOW          (min)=175.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0135

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| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16         0.08
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=      40.00        60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     168.81        94.08
               over (min)         5.00         8.00
     Storage Coeff.  (min)=       0.97 (ii)    7.39 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.48         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.02          0.048 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.43          1.35
     RUNOFF VOLUME    (mm)=      69.71        23.29         38.13
     TOTAL RAINFALL   (mm)=      71.71        71.71         71.71
     RUNOFF COEFFICIENT   =       0.97         0.32          0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
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DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	1.0000	0.0153
	0.0001	0.0152	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	0.240	0.048	1.35	38.13
OUTFLOW: ID= 1 (0804)	0.240	0.000	4.32	0.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.13
TIME SHIFT OF PEAK FLOW (min)=178.00
MAXIMUM STORAGE USED (ha.m.)= 0.0091

****
** SIMULATION NUMBER: 8 **
****

READ STORM	Filename: C:\Users\jingram\AppData\Local\Temp\1882d32b-7632-4fb7-8c4e-65497f39a634\fd708aa7
Ptotal=193.00 mm	Comments: REGIONAL STORM TIMMINS - 12 hour storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
1.00	15.00	4.00	3.00	7.00	43.00	10.00	13.00
2.00	20.00	5.00	5.00	8.00	20.00	11.00	13.00
3.00	10.00	6.00	20.00	9.00	23.00	12.00	8.00

CALIB NASHYD (0202) ID= 1 DT= 1.0 min	Area (ha)= 2.31	Curve Number (CN)= 42.0
	Ia (mm)= 7.36	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.18	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	15.00	3.017	3.00	6.017	43.00	9.02	13.00
0.033	15.00	3.033	3.00	6.033	43.00	9.03	13.00
0.050	15.00	3.050	3.00	6.050	43.00	9.05	13.00
0.067	15.00	3.067	3.00	6.067	43.00	9.07	13.00
0.083	15.00	3.083	3.00	6.083	43.00	9.08	13.00
0.100	15.00	3.100	3.00	6.100	43.00	9.10	13.00
0.117	15.00	3.117	3.00	6.117	43.00	9.12	13.00
0.133	15.00	3.133	3.00	6.133	43.00	9.13	13.00
0.150	15.00	3.150	3.00	6.150	43.00	9.15	13.00
0.167	15.00	3.167	3.00	6.167	43.00	9.17	13.00
0.183	15.00	3.183	3.00	6.183	43.00	9.18	13.00
0.200	15.00	3.200	3.00	6.200	43.00	9.20	13.00
0.217	15.00	3.217	3.00	6.217	43.00	9.22	13.00
0.233	15.00	3.233	3.00	6.233	43.00	9.23	13.00
0.250	15.00	3.250	3.00	6.250	43.00	9.25	13.00
0.267	15.00	3.267	3.00	6.267	43.00	9.27	13.00
0.283	15.00	3.283	3.00	6.283	43.00	9.28	13.00
0.300	15.00	3.300	3.00	6.300	43.00	9.30	13.00
0.317	15.00	3.317	3.00	6.317	43.00	9.32	13.00
0.333	15.00	3.333	3.00	6.333	43.00	9.33	13.00
0.350	15.00	3.350	3.00	6.350	43.00	9.35	13.00
0.367	15.00	3.367	3.00	6.367	43.00	9.37	13.00
0.383	15.00	3.383	3.00	6.383	43.00	9.38	13.00
0.400	15.00	3.400	3.00	6.400	43.00	9.40	13.00
0.417	15.00	3.417	3.00	6.417	43.00	9.42	13.00
0.433	15.00	3.433	3.00	6.433	43.00	9.43	13.00
0.450	15.00	3.450	3.00	6.450	43.00	9.45	13.00
0.467	15.00	3.467	3.00	6.467	43.00	9.47	13.00
0.483	15.00	3.483	3.00	6.483	43.00	9.48	13.00
0.500	15.00	3.500	3.00	6.500	43.00	9.50	13.00
0.517	15.00	3.517	3.00	6.517	43.00	9.52	13.00
0.533	15.00	3.533	3.00	6.533	43.00	9.53	13.00
0.550	15.00	3.550	3.00	6.550	43.00	9.55	13.00
0.567	15.00	3.567	3.00	6.567	43.00	9.57	13.00
0.583	15.00	3.583	3.00	6.583	43.00	9.58	13.00
0.600	15.00	3.600	3.00	6.600	43.00	9.60	13.00
0.617	15.00	3.617	3.00	6.617	43.00	9.62	13.00
0.633	15.00	3.633	3.00	6.633	43.00	9.63	13.00
0.650	15.00	3.650	3.00	6.650	43.00	9.65	13.00
0.667	15.00	3.667	3.00	6.667	43.00	9.67	13.00
0.683	15.00	3.683	3.00	6.683	43.00	9.68	13.00
0.700	15.00	3.700	3.00	6.700	43.00	9.70	13.00
0.717	15.00	3.717	3.00	6.717	43.00	9.72	13.00
0.733	15.00	3.733	3.00	6.733	43.00	9.73	13.00
0.750	15.00	3.750	3.00	6.750	43.00	9.75	13.00
0.767	15.00	3.767	3.00	6.767	43.00	9.77	13.00
0.783	15.00	3.783	3.00	6.783	43.00	9.78	13.00
0.800	15.00	3.800	3.00	6.800	43.00	9.80	13.00
0.817	15.00	3.817	3.00	6.817	43.00	9.82	13.00
0.833	15.00	3.833	3.00	6.833	43.00	9.83	13.00
0.850	15.00	3.850	3.00	6.850	43.00	9.85	13.00
0.867	15.00	3.867	3.00	6.867	43.00	9.87	13.00
0.883	15.00	3.883	3.00	6.883	43.00	9.88	13.00
0.900	15.00	3.900	3.00	6.900	43.00	9.90	13.00
0.917	15.00	3.917	3.00	6.917	43.00	9.92	13.00
0.933	15.00	3.933	3.00	6.933	43.00	9.93	13.00
0.950	15.00	3.950	3.00	6.950	43.00	9.95	13.00
0.967	15.00	3.967	3.00	6.967	43.00	9.97	13.00
0.983	15.00	3.983	3.00	6.983	43.00	9.98	13.00
1.000	15.00	4.000	3.00	7.000	42.95	10.00	13.00
1.017	20.00	4.017	5.00	7.017	20.00	10.02	13.00
1.033	20.00	4.033	5.00	7.033	20.00	10.03	13.00
1.050	20.00	4.050	5.00	7.050	20.00	10.05	13.00
1.067	20.00	4.067	5.00	7.067	20.00	10.07	13.00
1.083	20.00	4.083	5.00	7.083	20.00	10.08	13.00
1.100	20.00	4.100	5.00	7.100	20.00	10.10	13.00
1.117	20.00	4.117	5.00	7.117	20.00	10.12	13.00
1.133	20.00	4.133	5.00	7.133	20.00	10.13	13.00
1.150	20.00	4.150	5.00	7.150	20.00	10.15	13.00
1.167	20.00	4.167	5.00	7.167	20.00	10.17	13.00
1.183	20.00	4.183	5.00	7.183	20.00	10.18	13.00
1.200	20.00	4.200	5.00	7.200	20.00	10.20	13.00
1.217	20.00	4.217	5.00	7.217	20.00	10.22	13.00
1.233	20.00	4.233	5.00	7.233	20.00	10.23	13.00
1.250	20.00	4.250	5.00	7.250	20.00	10.25	13.00
1.267	20.00	4.267	5.00	7.267	20.00	10.27	13.00
1.283	20.00	4.283	5.00	7.283	20.00	10.28	13.00
1.300	20.00	4.300	5.00	7.300	20.00	10.30	13.00
1.317	20.00	4.317	5.00	7.317	20.00	10.32	13.00
1.333	20.00	4.333	5.00	7.333	20.00	10.33	13.00
1.350	20.00	4.350	5.00	7.350	20.00	10.35	13.00
1.367	20.00	4.367	5.00	7.367	20.00	10.37	13.00
1.383	20.00	4.383	5.00	7.383	20.00	10.38	13.00
1.400	20.00	4.400	5.00	7.400	20.00	10.40	13.00
1.417	20.00	4.417	5.00	7.417	20.00	10.42	13.00
1.433	20.00	4.433	5.00	7.433	20.00	10.43	13.00
1.450	20.00	4.450	5.00	7.450	20.00	10.45	13.00
1.467	20.00	4.467	5.00	7.467	20.00	10.47	13.00
1.483	20.00	4.483	5.00	7.483	20.00	10.48	13.00
1.500	20.00	4.500	5.00	7.500	20.00	10.50	13.00
1.517	20.00	4.517	5.00	7.517	20.00	10.52	13.00
1.533	20.00	4.533	5.00	7.533	20.00	10.53	13.00
1.550	20.00	4.550	5.00	7.550	20.00	10.55	13.00
1.567	20.00	4.567	5.00	7.567	20.00	10.57	13.00
1.583	20.00	4.583	5.00	7.583	20.00	10.58	13.00
1.600	20.00	4.600	5.00	7.600	20.00	10.60	13.00
1.617	20.00	4.617	5.00	7.617	20.00	10.62	13.00
1.633	20.00	4.633	5.00	7.633	20.00	10.63	13.00
1.650	20.00	4.650	5.00	7.650	20.00	10.65	13.00
1.667	20.00	4.667	5.00	7.667	20.00	10.67	13.00
1.683	20.00	4.683	5.00	7.683	20.00	10.68	13.00
1.700	20.00	4.700	5.00	7.700	20.00	10.70	13.00
1.717	20.00	4.717	5.00	7.717	20.00	10.72	13.00
1.733	20.00	4.733	5.00	7.733	20.00	10.73	13.00
1.750	20.00	4.750	5.00	7.750	20.00	10.75	13.00
1.767	20.00	4.767	5.00	7.767	20.00	10.77	13.00
1.783	20.00	4.783	5.00	7.783	20.00	10.78	13.00
1.800	20.00	4.800	5.00	7.800	20.00	10.80	13.00
1.817	20.00	4.817	5.00	7.817	20.00	10.82	13.00
1.833	20.00	4.833	5.00	7.833	20.00	10.83	13.00
1.850	20.00	4.850	5.00	7.850	20.00	10.85	13.00
1.867	20.00	4.867	5.00	7.867	20.00	10.87	13.00
1.883	20.00	4.883	5.00	7.883	20.00	10.88	13.00
1.900	20.00	4.900	5.00	7.900	20.00	10.90	13.00
1.917	20.00	4.917	5.00	7.917	20.00	10.92	13.00
1.933	20.00	4.933	5.00	7.933	20.00	10.93	13.00
1.950	20.00	4.950	5.00	7.950	20.00	10.95	13.00
1.967	20.00	4.967	5.00	7.967	20.00	10.97	13.00
1.983	20.00	4.983	5.00	7.983	20.00	10.98	13.00
2.000	20.00	5.000	5.01	8.000	20.01	11.00	13.00
2.017	10.00	5.017	20.00	8.017	23.00	11.02	8.00
2.033	10.00	5.033	20.00	8.033	23.00	11.03	8.00

2.050	10.00	5.050	20.00	8.050	23.00	11.05	8.00
2.067	10.00	5.067	20.00	8.067	23.00	11.07	8.00
2.083	10.00	5.083	20.00	8.083	23.00	11.08	8.00
2.100	10.00	5.100	20.00	8.100	23.00	11.10	8.00
2.117	10.00	5.117	20.00	8.117	23.00	11.12	8.00
2.133	10.00	5.133	20.00	8.133	23.00	11.13	8.00
2.150	10.00	5.150	20.00	8.150	23.00	11.15	8.00
2.167	10.00	5.167	20.00	8.167	23.00	11.17	8.00
2.183	10.00	5.183	20.00	8.183	23.00	11.18	8.00
2.200	10.00	5.200	20.00	8.200	23.00	11.20	8.00
2.217	10.00	5.217	20.00	8.217	23.00	11.22	8.00
2.233	10.00	5.233	20.00	8.233	23.00	11.23	8.00
2.250	10.00	5.250	20.00	8.250	23.00	11.25	8.00
2.267	10.00	5.267	20.00	8.267	23.00	11.27	8.00
2.283	10.00	5.283	20.00	8.283	23.00	11.28	8.00
2.300	10.00	5.300	20.00	8.300	23.00	11.30	8.00
2.317	10.00	5.317	20.00	8.317	23.00	11.32	8.00
2.333	10.00	5.333	20.00	8.333	23.00	11.33	8.00
2.350	10.00	5.350	20.00	8.350	23.00	11.35	8.00
2.367	10.00	5.367	20.00	8.367	23.00	11.37	8.00
2.383	10.00	5.383	20.00	8.383	23.00	11.38	8.00
2.400	10.00	5.400	20.00	8.400	23.00	11.40	8.00
2.417	10.00	5.417	20.00	8.417	23.00	11.42	8.00
2.433	10.00	5.433	20.00	8.433	23.00	11.43	8.00
2.450	10.00	5.450	20.00	8.450	23.00	11.45	8.00
2.467	10.00	5.467	20.00	8.467	23.00	11.47	8.00
2.483	10.00	5.483	20.00	8.483	23.00	11.48	8.00
2.500	10.00	5.500	20.00	8.500	23.00	11.50	8.00
2.517	10.00	5.517	20.00	8.517	23.00	11.52	8.00
2.533	10.00	5.533	20.00	8.533	23.00	11.53	8.00
2.550	10.00	5.550	20.00	8.550	23.00	11.55	8.00
2.567	10.00	5.567	20.00	8.567	23.00	11.57	8.00
2.583	10.00	5.583	20.00	8.583	23.00	11.58	8.00
2.600	10.00	5.600	20.00	8.600	23.00	11.60	8.00
2.617	10.00	5.617	20.00	8.617	23.00	11.62	8.00
2.633	10.00	5.633	20.00	8.633	23.00	11.63	8.00
2.650	10.00	5.650	20.00	8.650	23.00	11.65	8.00
2.667	10.00	5.667	20.00	8.667	23.00	11.67	8.00
2.683	10.00	5.683	20.00	8.683	23.00	11.68	8.00
2.700	10.00	5.700	20.00	8.700	23.00	11.70	8.00
2.717	10.00	5.717	20.00	8.717	23.00	11.72	8.00
2.733	10.00	5.733	20.00	8.733	23.00	11.73	8.00
2.750	10.00	5.750	20.00	8.750	23.00	11.75	8.00
2.767	10.00	5.767	20.00	8.767	23.00	11.77	8.00
2.783	10.00	5.783	20.00	8.783	23.00	11.78	8.00
2.800	10.00	5.800	20.00	8.800	23.00	11.80	8.00
2.817	10.00	5.817	20.00	8.817	23.00	11.82	8.00
2.833	10.00	5.833	20.00	8.833	23.00	11.83	8.00
2.850	10.00	5.850	20.00	8.850	23.00	11.85	8.00
2.867	10.00	5.867	20.00	8.867	23.00	11.87	8.00
2.883	10.00	5.883	20.00	8.883	23.00	11.88	8.00
2.900	10.00	5.900	20.00	8.900	23.00	11.90	8.00
2.917	10.00	5.917	20.00	8.917	23.00	11.92	8.00
2.933	10.00	5.933	20.00	8.933	23.00	11.93	8.00
2.950	10.00	5.950	20.00	8.950	23.00	11.95	8.00
2.967	10.00	5.967	20.00	8.967	23.00	11.97	8.00
2.983	10.00	5.983	20.00	8.983	23.00	11.98	8.00
3.000	10.00	6.000	20.03	9.000	22.98	12.00	8.00

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.107 (i)
TIME TO PEAK (hrs)= 7.033
RUNOFF VOLUME (mm)= 64.247
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.333

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0201)	Area (ha)= 2.74
ID= 1 DT= 1.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.96
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	1.00	3.00
Length	(m)=	135.08	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)=		43.00	56.76
over (min)		5.00	11.00
Storage Coeff. (min)=		4.29 (ii)	10.43 (ii)
Unit Hyd. Tpeak (min)=		5.00	11.00
Unit Hyd. peak (cms)=		0.25	0.11
			TOTALS
PEAK FLOW	(cms)=	0.11	0.15 0.254 (iii)
TIME TO PEAK	(hrs)=	6.98	7.00 7.00
RUNOFF VOLUME	(mm)=	190.99	110.34 136.96
TOTAL RAINFALL	(mm)=	193.00	193.00 193.00
RUNOFF COEFFICIENT	=	0.99	0.57 0.71

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)				
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0065	0.1033
	0.0015	0.0034	0.0070	0.1274
	0.0026	0.0096	0.0072	0.1404
	0.0034	0.0168	0.0302	0.1472
	0.0040	0.0253	0.1105	0.1541
	0.0045	0.0350	0.4332	0.1684
	0.0051	0.0500	1.0078	0.1835
	0.0055	0.0627	1.8746	0.1992
	0.0059	0.0768	3.0695	0.2156
	0.0062	0.0869	3.8005	0.2241

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)		2.737	0.254	7.00	136.96
OUTFLOW: ID= 1 (0801)		2.737	0.217	7.10	103.20

PEAK FLOW REDUCTION [Qout/Qin](%)= 85.34
TIME SHIFT OF PEAK FLOW (min)= 6.00
MAXIMUM STORAGE USED (ha.m.)= 0.1588

CALIB	
STANDHYD (0203)	Area (ha)= 2.47
ID= 1 DT= 1.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.61	0.87
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	0.50	3.00
Length	(m)=	128.45	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)=		43.00	56.76
over (min)		5.00	12.00
Storage Coeff. (min)=		5.12 (ii)	11.26 (ii)
Unit Hyd. Tpeak (min)=		5.00	12.00
Unit Hyd. peak (cms)=		0.22	0.10
			TOTALS
PEAK FLOW	(cms)=	0.10	0.13 0.229 (iii)
TIME TO PEAK	(hrs)=	6.98	7.02 7.00
RUNOFF VOLUME	(mm)=	190.99	110.33 136.96
TOTAL RAINFALL	(mm)=	193.00	193.00 193.00
RUNOFF COEFFICIENT	=	0.99	0.57 0.71

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0802)				
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0061	0.0972
	0.0015	0.0053	0.0064	0.1137
	0.0026	0.0141	0.0067	0.1254

```
                        0.0031     0.0204   |   0.0069      0.1375
                        0.0038     0.0307   |   0.0071      0.1502
                        0.0043     0.0420   |   0.0293      0.1568
                        0.0048     0.0542   |   0.2405      0.1703
                        0.0053     0.0675   |   1.0015      0.1916
                        0.0055     0.0769   |   2.4172      0.2142
                        0.0059     0.0919   |   4.6073      0.2381

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)    2.475      0.229      7.00     136.96
     OUTFLOW: ID= 1 (0802)    2.475      0.133      9.02      95.44

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 57.96
                   TIME SHIFT OF PEAK FLOW         (min)=121.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.1634

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0202):     2.31   0.107     7.03    64.25
       + ID2= 2 (0801):     2.74   0.217     7.10   103.20
         ==========================================
         ID = 3 (0601):     5.05   0.321     7.08    85.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     5.05   0.321     7.08    85.36
       + ID2= 2 (0802):     2.47   0.133     9.02    95.44
         ==========================================
         ID = 1 (0601):     7.53   0.378     7.20    88.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 64.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   7.000
     RUNOFF VOLUME    (mm)= 107.543
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.557

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0177
                          0.0001     0.0176   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)    0.625      0.050      7.00     107.54
     OUTFLOW: ID= 1 (0803)    0.625      0.075      6.38      79.39

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=149.98
                   TIME SHIFT OF PEAK FLOW         (min)=-37.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0176

     **** WARNING : HYDROGRAPH PEAK WAS NOT REDUCED.
                    CHECK OUTFLOW/STORAGE TABLE  OR REDUCE DT.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
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```
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
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                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.16          0.08
     Dep. Storage     (mm)=        2.00          5.00
     Average Slope     (%)=        2.00          2.00
     Length            (m)=       40.00         60.00
     Mannings n           =       0.013         0.190

     Max.Eff.Inten.(mm/hr)=       43.00         57.95
               over (min)         5.00          12.00
     Storage Coeff.  (min)=        1.68 (ii)    11.18 (ii)
     Unit Hyd. Tpeak (min)=        5.00          12.00
     Unit Hyd. peak  (cms)=        0.40          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.01          0.01       0.022 (iii)
     TIME TO PEAK    (hrs)=        6.40          7.02        7.00
     RUNOFF VOLUME    (mm)=      190.99        111.06      136.62
     TOTAL RAINFALL   (mm)=      193.00        193.00      193.00
     RUNOFF COEFFICIENT   =        0.99          0.58        0.71


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0153
                          0.0001     0.0152   |   0.0000      0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)    0.240      0.022      7.00     136.62
     OUTFLOW: ID= 1 (0804)    0.240      0.038      6.98      73.29

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=172.74
                   TIME SHIFT OF PEAK FLOW         (min)= -1.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0152

     **** WARNING : HYDROGRAPH PEAK WAS NOT REDUCED.
                    CHECK OUTFLOW/STORAGE TABLE  OR REDUCE DT.
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 FINISH
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       V    V   I    SSSSS  U   U    A    L
       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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                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\VO Suite 3.0\VO2\voin.dat
  Output  filename: C:\Users\jingram\AppData\Local\Temp\1e5d3a6c-a110-4269-ae5a-28e33273b8b8\Scenario.out
  Summary filename: C:\Users\jingram\AppData\Local\Temp\1e5d3a6c-a110-4269-ae5a-28e33273b8b8\Scenario.sum


DATE: 01/27/2019                          TIME: 11:16:04

USER:


COMMENTS: _____________________________________________________


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  ****************************
  ** SIMULATION NUMBER:   1 **
  ****************************


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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1e5d3a6c-a110-4269-ae5a-28e33273b8b8\d374fae5
| Ptotal= 45.68 mm |    Comments: 2-Year Orillia 24-hour SCS Storm
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    0.51 |  6.25    0.00 | 12.25    6.58 | 18.25    0.82
               0.50    0.49 |  6.50    0.00 | 12.50    6.58 | 18.50    0.82
               0.75    0.51 |  6.75    0.00 | 12.75    3.38 | 18.75    0.82
               1.00    0.49 |  7.00    0.00 | 13.00    3.38 | 19.00    0.82
               1.25    0.51 |  7.25    1.83 | 13.25    0.64 | 19.25    0.82
               1.50    0.49 |  7.50    1.83 | 13.50    0.64 | 19.50    0.82
               1.75    0.51 |  7.75    1.83 | 13.75    3.75 | 19.75    0.82
               2.00    0.49 |  8.00    1.83 | 14.00    3.75 | 20.00    0.82
               2.25    0.60 |  8.25    0.00 | 14.25    1.37 | 20.25    0.55
               2.50    0.58 |  8.50    0.00 | 14.50    1.37 | 20.50    0.55
               2.75    0.60 |  8.75    2.47 | 14.75    1.37 | 20.75    0.55
               3.00    0.58 |  9.00    2.47 | 15.00    1.37 | 21.00    0.55
               3.25    0.60 |  9.25    1.46 | 15.25    1.37 | 21.25    0.55
               3.50    0.58 |  9.50    1.46 | 15.50    1.37 | 21.50    0.55
               3.75    0.60 |  9.75    0.00 | 15.75    1.37 | 21.75    0.55
               4.00    0.58 | 10.00    3.29 | 16.00    1.37 | 22.00    0.55
               4.25    0.73 | 10.25    2.10 | 16.25    0.82 | 22.25    0.55
               4.50    0.73 | 10.50    2.10 | 16.50    0.82 | 22.50    0.55
               4.75    0.73 | 10.75    2.83 | 16.75    0.82 | 22.75    0.55
               5.00    0.73 | 11.00    2.83 | 17.00    0.82 | 23.00    0.55
               5.25    0.73 | 11.25    4.39 | 17.25    0.82 | 23.25    0.55
               5.50    0.73 | 11.50    4.39 | 17.50    0.82 | 23.50    0.55
               5.75    0.73 | 11.75   19.01 | 17.75    0.82 | 23.75    0.55
               6.00    0.73 | 12.00   50.45 | 18.00    0.82 | 24.00    0.55

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| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.51	6.017	0.00	12.017	6.61	18.02	0.82
0.033	0.51	6.033	0.00	12.033	6.58	18.03	0.82
0.050	0.51	6.050	0.00	12.050	6.58	18.05	0.82
0.067	0.51	6.067	0.00	12.067	6.58	18.07	0.82
0.083	0.51	6.083	0.00	12.083	6.58	18.08	0.82
0.100	0.51	6.100	0.00	12.100	6.58	18.10	0.82
0.117	0.51	6.117	0.00	12.117	6.58	18.12	0.82
0.133	0.51	6.133	0.00	12.133	6.58	18.13	0.82
0.150	0.51	6.150	0.00	12.150	6.58	18.15	0.82
0.167	0.51	6.167	0.00	12.167	6.58	18.17	0.82
0.183	0.51	6.183	0.00	12.183	6.58	18.18	0.82
0.200	0.51	6.200	0.00	12.200	6.58	18.20	0.82
0.217	0.51	6.217	0.00	12.217	6.58	18.22	0.82
0.233	0.51	6.233	0.00	12.233	6.58	18.23	0.82
0.250	0.51	6.250	0.00	12.250	6.58	18.25	0.82
0.267	0.49	6.267	0.00	12.267	6.58	18.27	0.82
0.283	0.49	6.283	0.00	12.283	6.58	18.28	0.82
0.300	0.49	6.300	0.00	12.300	6.58	18.30	0.82
0.317	0.49	6.317	0.00	12.317	6.58	18.32	0.82
0.333	0.49	6.333	0.00	12.333	6.58	18.33	0.82
0.350	0.49	6.350	0.00	12.350	6.58	18.35	0.82
0.367	0.49	6.367	0.00	12.367	6.58	18.37	0.82
0.383	0.49	6.383	0.00	12.383	6.58	18.38	0.82
0.400	0.49	6.400	0.00	12.400	6.58	18.40	0.82
0.417	0.49	6.417	0.00	12.417	6.58	18.42	0.82
0.433	0.49	6.433	0.00	12.433	6.58	18.43	0.82
0.450	0.49	6.450	0.00	12.450	6.58	18.45	0.82
0.467	0.49	6.467	0.00	12.467	6.58	18.47	0.82
0.483	0.49	6.483	0.00	12.483	6.58	18.48	0.82
0.500	0.49	6.500	0.00	12.500	6.58	18.50	0.82
0.517	0.51	6.517	0.00	12.517	3.38	18.52	0.82
0.533	0.51	6.533	0.00	12.533	3.38	18.53	0.82
0.550	0.51	6.550	0.00	12.550	3.38	18.55	0.82
0.567	0.51	6.567	0.00	12.567	3.38	18.57	0.82
0.583	0.51	6.583	0.00	12.583	3.38	18.58	0.82
0.600	0.51	6.600	0.00	12.600	3.38	18.60	0.82
0.617	0.51	6.617	0.00	12.617	3.38	18.62	0.82
0.633	0.51	6.633	0.00	12.633	3.38	18.63	0.82
0.650	0.51	6.650	0.00	12.650	3.38	18.65	0.82
0.667	0.51	6.667	0.00	12.667	3.38	18.67	0.82
0.683	0.51	6.683	0.00	12.683	3.38	18.68	0.82
0.700	0.51	6.700	0.00	12.700	3.38	18.70	0.82
0.717	0.51	6.717	0.00	12.717	3.38	18.72	0.82
0.733	0.51	6.733	0.00	12.733	3.38	18.73	0.82
0.750	0.51	6.750	0.00	12.750	3.38	18.75	0.82
0.767	0.49	6.767	0.00	12.767	3.38	18.77	0.82
0.783	0.49	6.783	0.00	12.783	3.38	18.78	0.82
0.800	0.49	6.800	0.00	12.800	3.38	18.80	0.82
0.817	0.49	6.817	0.00	12.817	3.38	18.82	0.82
0.833	0.49	6.833	0.00	12.833	3.38	18.83	0.82
0.850	0.49	6.850	0.00	12.850	3.38	18.85	0.82
0.867	0.49	6.867	0.00	12.867	3.38	18.87	0.82
0.883	0.49	6.883	0.00	12.883	3.38	18.88	0.82
0.900	0.49	6.900	0.00	12.900	3.38	18.90	0.82
0.917	0.49	6.917	0.00	12.917	3.38	18.92	0.82
0.933	0.49	6.933	0.00	12.933	3.38	18.93	0.82
0.950	0.49	6.950	0.00	12.950	3.38	18.95	0.82
0.967	0.49	6.967	0.00	12.967	3.38	18.97	0.82
0.983	0.49	6.983	0.00	12.983	3.38	18.98	0.82
1.000	0.49	7.000	0.00	13.000	3.38	19.00	0.82
1.017	0.51	7.017	1.83	13.017	0.64	19.02	0.82
1.033	0.51	7.033	1.83	13.033	0.64	19.03	0.82
1.050	0.51	7.050	1.83	13.050	0.64	19.05	0.82
1.067	0.51	7.067	1.83	13.067	0.64	19.07	0.82
1.083	0.51	7.083	1.83	13.083	0.64	19.08	0.82
1.100	0.51	7.100	1.83	13.100	0.64	19.10	0.82
1.117	0.51	7.117	1.83	13.117	0.64	19.12	0.82
1.133	0.51	7.133	1.83	13.133	0.64	19.13	0.82
1.150	0.51	7.150	1.83	13.150	0.64	19.15	0.82
1.167	0.51	7.167	1.83	13.167	0.64	19.17	0.82
1.183	0.51	7.183	1.83	13.183	0.64	19.18	0.82
1.200	0.51	7.200	1.83	13.200	0.64	19.20	0.82
1.217	0.51	7.217	1.83	13.217	0.64	19.22	0.82
1.233	0.51	7.233	1.83	13.233	0.64	19.23	0.82
1.250	0.51	7.250	1.83	13.250	0.64	19.25	0.82
1.267	0.49	7.267	1.83	13.267	0.64	19.27	0.82
1.283	0.49	7.283	1.83	13.283	0.64	19.28	0.82
1.300	0.49	7.300	1.83	13.300	0.64	19.30	0.82
1.317	0.49	7.317	1.83	13.317	0.64	19.32	0.82
1.333	0.49	7.333	1.83	13.333	0.64	19.33	0.82
1.350	0.49	7.350	1.83	13.350	0.64	19.35	0.82

1.367	0.49	7.367	1.83	13.367	0.64	19.37	0.82
1.383	0.49	7.383	1.83	13.383	0.64	19.38	0.82
1.400	0.49	7.400	1.83	13.400	0.64	19.40	0.82
1.417	0.49	7.417	1.83	13.417	0.64	19.42	0.82
1.433	0.49	7.433	1.83	13.433	0.64	19.43	0.82
1.450	0.49	7.450	1.83	13.450	0.64	19.45	0.82
1.467	0.49	7.467	1.83	13.467	0.64	19.47	0.82
1.483	0.49	7.483	1.83	13.483	0.64	19.48	0.82
1.500	0.49	7.500	1.83	13.500	0.64	19.50	0.82
1.517	0.51	7.517	1.83	13.517	3.74	19.52	0.82
1.533	0.51	7.533	1.83	13.533	3.75	19.53	0.82
1.550	0.51	7.550	1.83	13.550	3.75	19.55	0.82
1.567	0.51	7.567	1.83	13.567	3.75	19.57	0.82
1.583	0.51	7.583	1.83	13.583	3.75	19.58	0.82
1.600	0.51	7.600	1.83	13.600	3.75	19.60	0.82
1.617	0.51	7.617	1.83	13.617	3.75	19.62	0.82
1.633	0.51	7.633	1.83	13.633	3.75	19.63	0.82
1.650	0.51	7.650	1.83	13.650	3.75	19.65	0.82
1.667	0.51	7.667	1.83	13.667	3.75	19.67	0.82
1.683	0.51	7.683	1.83	13.683	3.75	19.68	0.82
1.700	0.51	7.700	1.83	13.700	3.75	19.70	0.82
1.717	0.51	7.717	1.83	13.717	3.75	19.72	0.82
1.733	0.51	7.733	1.83	13.733	3.75	19.73	0.82
1.750	0.51	7.750	1.83	13.750	3.75	19.75	0.82
1.767	0.49	7.767	1.83	13.767	3.75	19.77	0.82
1.783	0.49	7.783	1.83	13.783	3.75	19.78	0.82
1.800	0.49	7.800	1.83	13.800	3.75	19.80	0.82
1.817	0.49	7.817	1.83	13.817	3.75	19.82	0.82
1.833	0.49	7.833	1.83	13.833	3.75	19.83	0.82
1.850	0.49	7.850	1.83	13.850	3.75	19.85	0.82
1.867	0.49	7.867	1.83	13.867	3.75	19.87	0.82
1.883	0.49	7.883	1.83	13.883	3.75	19.88	0.82
1.900	0.49	7.900	1.83	13.900	3.75	19.90	0.82
1.917	0.49	7.917	1.83	13.917	3.75	19.92	0.82
1.933	0.49	7.933	1.83	13.933	3.75	19.93	0.82
1.950	0.49	7.950	1.83	13.950	3.75	19.95	0.82
1.967	0.49	7.967	1.83	13.967	3.75	19.97	0.82
1.983	0.49	7.983	1.83	13.983	3.75	19.98	0.82
2.000	0.49	8.000	1.82	14.000	3.75	20.00	0.82
2.017	0.60	8.017	0.00	14.017	1.38	20.02	0.55
2.033	0.60	8.033	0.00	14.033	1.37	20.03	0.55
2.050	0.60	8.050	0.00	14.050	1.37	20.05	0.55
2.067	0.60	8.067	0.00	14.067	1.37	20.07	0.55
2.083	0.60	8.083	0.00	14.083	1.37	20.08	0.55
2.100	0.60	8.100	0.00	14.100	1.37	20.10	0.55
2.117	0.60	8.117	0.00	14.117	1.37	20.12	0.55
2.133	0.60	8.133	0.00	14.133	1.37	20.13	0.55
2.150	0.60	8.150	0.00	14.150	1.37	20.15	0.55
2.167	0.60	8.167	0.00	14.167	1.37	20.17	0.55
2.183	0.60	8.183	0.00	14.183	1.37	20.18	0.55
2.200	0.60	8.200	0.00	14.200	1.37	20.20	0.55
2.217	0.60	8.217	0.00	14.217	1.37	20.22	0.55
2.233	0.60	8.233	0.00	14.233	1.37	20.23	0.55
2.250	0.60	8.250	0.00	14.250	1.37	20.25	0.55
2.267	0.58	8.267	0.00	14.267	1.37	20.27	0.55
2.283	0.58	8.283	0.00	14.283	1.37	20.28	0.55
2.300	0.58	8.300	0.00	14.300	1.37	20.30	0.55
2.317	0.58	8.317	0.00	14.317	1.37	20.32	0.55
2.333	0.58	8.333	0.00	14.333	1.37	20.33	0.55
2.350	0.58	8.350	0.00	14.350	1.37	20.35	0.55
2.367	0.58	8.367	0.00	14.367	1.37	20.37	0.55
2.383	0.58	8.383	0.00	14.383	1.37	20.38	0.55
2.400	0.58	8.400	0.00	14.400	1.37	20.40	0.55
2.417	0.58	8.417	0.00	14.417	1.37	20.42	0.55
2.433	0.58	8.433	0.00	14.433	1.37	20.43	0.55
2.450	0.58	8.450	0.00	14.450	1.37	20.45	0.55
2.467	0.58	8.467	0.00	14.467	1.37	20.47	0.55
2.483	0.58	8.483	0.00	14.483	1.37	20.48	0.55
2.500	0.58	8.500	0.01	14.500	1.37	20.50	0.55
2.517	0.60	8.517	2.47	14.517	1.37	20.52	0.55
2.533	0.60	8.533	2.47	14.533	1.37	20.53	0.55
2.550	0.60	8.550	2.47	14.550	1.37	20.55	0.55
2.567	0.60	8.567	2.47	14.567	1.37	20.57	0.55
2.583	0.60	8.583	2.47	14.583	1.37	20.58	0.55
2.600	0.60	8.600	2.47	14.600	1.37	20.60	0.55
2.617	0.60	8.617	2.47	14.617	1.37	20.62	0.55
2.633	0.60	8.633	2.47	14.633	1.37	20.63	0.55
2.650	0.60	8.650	2.47	14.650	1.37	20.65	0.55
2.667	0.60	8.667	2.47	14.667	1.37	20.67	0.55
2.683	0.60	8.683	2.47	14.683	1.37	20.68	0.55
2.700	0.60	8.700	2.47	14.700	1.37	20.70	0.55
2.717	0.60	8.717	2.47	14.717	1.37	20.72	0.55
2.733	0.60	8.733	2.47	14.733	1.37	20.73	0.55
2.750	0.60	8.750	2.47	14.750	1.37	20.75	0.55
2.767	0.58	8.767	2.47	14.767	1.37	20.77	0.55
2.783	0.58	8.783	2.47	14.783	1.37	20.78	0.55
2.800	0.58	8.800	2.47	14.800	1.37	20.80	0.55
2.817	0.58	8.817	2.47	14.817	1.37	20.82	0.55
2.833	0.58	8.833	2.47	14.833	1.37	20.83	0.55
2.850	0.58	8.850	2.47	14.850	1.37	20.85	0.55
2.867	0.58	8.867	2.47	14.867	1.37	20.87	0.55
2.883	0.58	8.883	2.47	14.883	1.37	20.88	0.55
2.900	0.58	8.900	2.47	14.900	1.37	20.90	0.55
2.917	0.58	8.917	2.47	14.917	1.37	20.92	0.55
2.933	0.58	8.933	2.47	14.933	1.37	20.93	0.55
2.950	0.58	8.950	2.47	14.950	1.37	20.95	0.55
2.967	0.58	8.967	2.47	14.967	1.37	20.97	0.55
2.983	0.58	8.983	2.47	14.983	1.37	20.98	0.55
3.000	0.58	9.000	2.47	15.000	1.37	21.00	0.55
3.017	0.60	9.017	1.46	15.017	1.37	21.02	0.55
3.033	0.60	9.033	1.46	15.033	1.37	21.03	0.55
3.050	0.60	9.050	1.46	15.050	1.37	21.05	0.55
3.067	0.60	9.067	1.46	15.067	1.37	21.07	0.55
3.083	0.60	9.083	1.46	15.083	1.37	21.08	0.55
3.100	0.60	9.100	1.46	15.100	1.37	21.10	0.55
3.117	0.60	9.117	1.46	15.117	1.37	21.12	0.55
3.133	0.60	9.133	1.46	15.133	1.37	21.13	0.55
3.150	0.60	9.150	1.46	15.150	1.37	21.15	0.55
3.167	0.60	9.167	1.46	15.167	1.37	21.17	0.55
3.183	0.60	9.183	1.46	15.183	1.37	21.18	0.55
3.200	0.60	9.200	1.46	15.200	1.37	21.20	0.55
3.217	0.60	9.217	1.46	15.217	1.37	21.22	0.55
3.233	0.60	9.233	1.46	15.233	1.37	21.23	0.55
3.250	0.60	9.250	1.46	15.250	1.37	21.25	0.55
3.267	0.58	9.267	1.46	15.267	1.37	21.27	0.55
3.283	0.58	9.283	1.46	15.283	1.37	21.28	0.55
3.300	0.58	9.300	1.46	15.300	1.37	21.30	0.55
3.317	0.58	9.317	1.46	15.317	1.37	21.32	0.55
3.333	0.58	9.333	1.46	15.333	1.37	21.33	0.55
3.350	0.58	9.350	1.46	15.350	1.37	21.35	0.55
3.367	0.58	9.367	1.46	15.367	1.37	21.37	0.55
3.383	0.58	9.383	1.46	15.383	1.37	21.38	0.55
3.400	0.58	9.400	1.46	15.400	1.37	21.40	0.55
3.417	0.58	9.417	1.46	15.417	1.37	21.42	0.55
3.433	0.58	9.433	1.46	15.433	1.37	21.43	0.55
3.450	0.58	9.450	1.46	15.450	1.37	21.45	0.55
3.467	0.58	9.467	1.46	15.467	1.37	21.47	0.55
3.483	0.58	9.483	1.46	15.483	1.37	21.48	0.55
3.500	0.58	9.500	1.46	15.500	1.37	21.50	0.55
3.517	0.60	9.517	0.00	15.517	1.37	21.52	0.55
3.533	0.60	9.533	0.00	15.533	1.37	21.53	0.55
3.550	0.60	9.550	0.00	15.550	1.37	21.55	0.55
3.567	0.60	9.567	0.00	15.567	1.37	21.57	0.55
3.583	0.60	9.583	0.00	15.583	1.37	21.58	0.55
3.600	0.60	9.600	0.00	15.600	1.37	21.60	0.55
3.617	0.60	9.617	0.00	15.617	1.37	21.62	0.55
3.633	0.60	9.633	0.00	15.633	1.37	21.63	0.55
3.650	0.60	9.650	0.00	15.650	1.37	21.65	0.55
3.667	0.60	9.667	0.00	15.667	1.37	21.67	0.55
3.683	0.60	9.683	0.00	15.683	1.37	21.68	0.55
3.700	0.60	9.700	0.00	15.700	1.37	21.70	0.55
3.717	0.60	9.717	0.00	15.717	1.37	21.72	0.55
3.733	0.60	9.733	0.00	15.733	1.37	21.73	0.55
3.750	0.60	9.750	0.00	15.750	1.37	21.75	0.55
3.767	0.58	9.767	3.29	15.767	1.37	21.77	0.55
3.783	0.58	9.783	3.29	15.783	1.37	21.78	0.55
3.800	0.58	9.800	3.29	15.800	1.37	21.80	0.55
3.817	0.58	9.817	3.29	15.817	1.37	21.82	0.55
3.833	0.58	9.833	3.29	15.833	1.37	21.83	0.55
3.850	0.58	9.850	3.29	15.850	1.37	21.85	0.55
3.867	0.58	9.867	3.29	15.867	1.37	21.87	0.55
3.883	0.58	9.883	3.29	15.883	1.37	21.88	0.55
3.900	0.58	9.900	3.29	15.900	1.37	21.90	0.55
3.917	0.58	9.917	3.29	15.917	1.37	21.92	0.55
3.933	0.58	9.933	3.29	15.933	1.37	21.93	0.55
3.950	0.58	9.950	3.29	15.950	1.37	21.95	0.55
3.967	0.58	9.967	3.29	15.967	1.37	21.97	0.55
3.983	0.58	9.983	3.29	15.983	1.37	21.98	0.55
4.000	0.58	10.000	3.29	16.000	1.37	22.00	0.55
4.017	0.73	10.017	2.10	16.017	0.82	22.02	0.55
4.033	0.73	10.033	2.10	16.033	0.82	22.03	0.55
4.050	0.73	10.050	2.10	16.050	0.82	22.05	0.55
4.067	0.73	10.067	2.10	16.067	0.82	22.07	0.55
4.083	0.73	10.083	2.10	16.083	0.82	22.08	0.55
4.100	0.73	10.100	2.10	16.100	0.82	22.10	0.55
4.117	0.73	10.117	2.10	16.117	0.82	22.12	0.55
4.133	0.73	10.133	2.10	16.133	0.82	22.13	0.55
4.150	0.73	10.150	2.10	16.150	0.82	22.15	0.55

4.167	0.73	10.167	2.10	16.167	0.82	22.17	0.55
4.183	0.73	10.183	2.10	16.183	0.82	22.18	0.55
4.200	0.73	10.200	2.10	16.200	0.82	22.20	0.55
4.217	0.73	10.217	2.10	16.217	0.82	22.22	0.55
4.233	0.73	10.233	2.10	16.233	0.82	22.23	0.55
4.250	0.73	10.250	2.10	16.250	0.82	22.25	0.55
4.267	0.73	10.267	2.10	16.267	0.82	22.27	0.55
4.283	0.73	10.283	2.10	16.283	0.82	22.28	0.55
4.300	0.73	10.300	2.10	16.300	0.82	22.30	0.55
4.317	0.73	10.317	2.10	16.317	0.82	22.32	0.55
4.333	0.73	10.333	2.10	16.333	0.82	22.33	0.55
4.350	0.73	10.350	2.10	16.350	0.82	22.35	0.55
4.367	0.73	10.367	2.10	16.367	0.82	22.37	0.55
4.383	0.73	10.383	2.10	16.383	0.82	22.38	0.55
4.400	0.73	10.400	2.10	16.400	0.82	22.40	0.55
4.417	0.73	10.417	2.10	16.417	0.82	22.42	0.55
4.433	0.73	10.433	2.10	16.433	0.82	22.43	0.55
4.450	0.73	10.450	2.10	16.450	0.82	22.45	0.55
4.467	0.73	10.467	2.10	16.467	0.82	22.47	0.55
4.483	0.73	10.483	2.10	16.483	0.82	22.48	0.55
4.500	0.73	10.500	2.10	16.500	0.82	22.50	0.55
4.517	0.73	10.517	2.83	16.517	0.82	22.52	0.55
4.533	0.73	10.533	2.83	16.533	0.82	22.53	0.55
4.550	0.73	10.550	2.83	16.550	0.82	22.55	0.55
4.567	0.73	10.567	2.83	16.567	0.82	22.57	0.55
4.583	0.73	10.583	2.83	16.583	0.82	22.58	0.55
4.600	0.73	10.600	2.83	16.600	0.82	22.60	0.55
4.617	0.73	10.617	2.83	16.617	0.82	22.62	0.55
4.633	0.73	10.633	2.83	16.633	0.82	22.63	0.55
4.650	0.73	10.650	2.83	16.650	0.82	22.65	0.55
4.667	0.73	10.667	2.83	16.667	0.82	22.67	0.55
4.683	0.73	10.683	2.83	16.683	0.82	22.68	0.55
4.700	0.73	10.700	2.83	16.700	0.82	22.70	0.55
4.717	0.73	10.717	2.83	16.717	0.82	22.72	0.55
4.733	0.73	10.733	2.83	16.733	0.82	22.73	0.55
4.750	0.73	10.750	2.83	16.750	0.82	22.75	0.55
4.767	0.73	10.767	2.83	16.767	0.82	22.77	0.55
4.783	0.73	10.783	2.83	16.783	0.82	22.78	0.55
4.800	0.73	10.800	2.83	16.800	0.82	22.80	0.55
4.817	0.73	10.817	2.83	16.817	0.82	22.82	0.55
4.833	0.73	10.833	2.83	16.833	0.82	22.83	0.55
4.850	0.73	10.850	2.83	16.850	0.82	22.85	0.55
4.867	0.73	10.867	2.83	16.867	0.82	22.87	0.55
4.883	0.73	10.883	2.83	16.883	0.82	22.88	0.55
4.900	0.73	10.900	2.83	16.900	0.82	22.90	0.55
4.917	0.73	10.917	2.83	16.917	0.82	22.92	0.55
4.933	0.73	10.933	2.83	16.933	0.82	22.93	0.55
4.950	0.73	10.950	2.83	16.950	0.82	22.95	0.55
4.967	0.73	10.967	2.83	16.967	0.82	22.97	0.55
4.983	0.73	10.983	2.83	16.983	0.82	22.98	0.55
5.000	0.73	11.000	2.83	17.000	0.82	23.00	0.55
5.017	0.73	11.017	4.39	17.017	0.82	23.02	0.55
5.033	0.73	11.033	4.39	17.033	0.82	23.03	0.55
5.050	0.73	11.050	4.39	17.050	0.82	23.05	0.55
5.067	0.73	11.067	4.39	17.067	0.82	23.07	0.55
5.083	0.73	11.083	4.39	17.083	0.82	23.08	0.55
5.100	0.73	11.100	4.39	17.100	0.82	23.10	0.55
5.117	0.73	11.117	4.39	17.117	0.82	23.12	0.55
5.133	0.73	11.133	4.39	17.133	0.82	23.13	0.55
5.150	0.73	11.150	4.39	17.150	0.82	23.15	0.55
5.167	0.73	11.167	4.39	17.167	0.82	23.17	0.55
5.183	0.73	11.183	4.39	17.183	0.82	23.18	0.55
5.200	0.73	11.200	4.39	17.200	0.82	23.20	0.55
5.217	0.73	11.217	4.39	17.217	0.82	23.22	0.55
5.233	0.73	11.233	4.39	17.233	0.82	23.23	0.55
5.250	0.73	11.250	4.39	17.250	0.82	23.25	0.55
5.267	0.73	11.267	4.39	17.267	0.82	23.27	0.55
5.283	0.73	11.283	4.39	17.283	0.82	23.28	0.55
5.300	0.73	11.300	4.39	17.300	0.82	23.30	0.55
5.317	0.73	11.317	4.39	17.317	0.82	23.32	0.55
5.333	0.73	11.333	4.39	17.333	0.82	23.33	0.55
5.350	0.73	11.350	4.39	17.350	0.82	23.35	0.55
5.367	0.73	11.367	4.39	17.367	0.82	23.37	0.55
5.383	0.73	11.383	4.39	17.383	0.82	23.38	0.55
5.400	0.73	11.400	4.39	17.400	0.82	23.40	0.55
5.417	0.73	11.417	4.39	17.417	0.82	23.42	0.55
5.433	0.73	11.433	4.39	17.433	0.82	23.43	0.55
5.450	0.73	11.450	4.39	17.450	0.82	23.45	0.55
5.467	0.73	11.467	4.39	17.467	0.82	23.47	0.55
5.483	0.73	11.483	4.39	17.483	0.82	23.48	0.55
5.500	0.73	11.500	4.39	17.500	0.82	23.50	0.55
5.517	0.73	11.517	19.01	17.517	0.82	23.52	0.55
5.533	0.73	11.533	19.01	17.533	0.82	23.53	0.55
5.550	0.73	11.550	19.01	17.550	0.82	23.55	0.55
5.567	0.73	11.567	19.01	17.567	0.82	23.57	0.55
5.583	0.73	11.583	19.01	17.583	0.82	23.58	0.55
5.600	0.73	11.600	19.01	17.600	0.82	23.60	0.55
5.617	0.73	11.617	19.01	17.617	0.82	23.62	0.55
5.633	0.73	11.633	19.01	17.633	0.82	23.63	0.55
5.650	0.73	11.650	19.01	17.650	0.82	23.65	0.55
5.667	0.73	11.667	19.01	17.667	0.82	23.67	0.55
5.683	0.73	11.683	19.01	17.683	0.82	23.68	0.55
5.700	0.73	11.700	19.01	17.700	0.82	23.70	0.55
5.717	0.73	11.717	19.01	17.717	0.82	23.72	0.55
5.733	0.73	11.733	19.01	17.733	0.82	23.73	0.55
5.750	0.73	11.750	19.01	17.750	0.82	23.75	0.55
5.767	0.73	11.767	50.44	17.767	0.82	23.77	0.55
5.783	0.73	11.783	50.45	17.783	0.82	23.78	0.55
5.800	0.73	11.800	50.45	17.800	0.82	23.80	0.55
5.817	0.73	11.817	50.45	17.817	0.82	23.82	0.55
5.833	0.73	11.833	50.45	17.833	0.82	23.83	0.55
5.850	0.73	11.850	50.45	17.850	0.82	23.85	0.55
5.867	0.73	11.867	50.45	17.867	0.82	23.87	0.55
5.883	0.73	11.883	50.45	17.883	0.82	23.88	0.55
5.900	0.73	11.900	50.45	17.900	0.82	23.90	0.55
5.917	0.73	11.917	50.45	17.917	0.82	23.92	0.55
5.933	0.73	11.933	50.45	17.933	0.82	23.93	0.55
5.950	0.73	11.950	50.45	17.950	0.82	23.95	0.55
5.967	0.73	11.967	50.45	17.967	0.82	23.97	0.55
5.983	0.73	11.983	50.45	17.983	0.82	23.98	0.55
6.000	0.73	12.000	50.45	18.000	0.82	24.00	0.55

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.020 (i)
TIME TO PEAK (hrs)= 12.100
RUNOFF VOLUME (mm)= 2.861
TOTAL RAINFALL (mm)= 45.678
RUNOFF COEFFICIENT = 0.063

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (0203)	Area (ha)=	2.47
ID= 1 DT= 1.0 min	Total Imp(%)=	65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.61	0.87
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	0.50	3.00
Length	(m)=	128.45	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)=		50.45	25.97
over (min)		5.00	11.00
Storage Coeff. (min)=		4.81 (ii)	10.57 (ii)
Unit Hyd. Tpeak (min)=		5.00	11.00
Unit Hyd. peak (cms)=		0.23	0.11

				TOTALS
PEAK FLOW	(cms)=	0.11	0.04	0.146 (iii)
TIME TO PEAK	(hrs)=	12.00	12.08	12.02
RUNOFF VOLUME	(mm)=	43.67	10.24	21.27
TOTAL RAINFALL	(mm)=	45.68	45.68	45.68
RUNOFF COEFFICIENT	=	0.96	0.22	0.47

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0802)				
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0061	0.0972
	0.0015	0.0053	0.0064	0.1137
	0.0026	0.0141	0.0067	0.1254
	0.0031	0.0204	0.0069	0.1375
	0.0038	0.0307	0.0071	0.1502
	0.0043	0.0420	0.0293	0.1568
	0.0048	0.0542	0.2405	0.1703
	0.0053	0.0675	1.0015	0.1916

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                        0.0055     0.0769   |   2.4172      0.2142
                        0.0059     0.0919   |   4.6073      0.2381

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)      2.475      0.146     12.02      21.27
     OUTFLOW: ID= 1 (0802)      2.475      0.004     16.20      12.65

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.78
                   TIME SHIFT OF PEAK FLOW          (min)=251.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0363

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| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78         0.96
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       1.00         3.00
     Length            (m)=     135.08        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      50.45        25.97
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       4.02 (ii)    9.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.05          0.166 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.07          12.00
     RUNOFF VOLUME    (mm)=      43.68        10.24          21.27
     TOTAL RAINFALL   (mm)=      45.68        45.68          45.68
     RUNOFF COEFFICIENT   =       0.96         0.22           0.47


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   0.0065      0.1033
                        0.0015     0.0034    |   0.0070      0.1274
                        0.0026     0.0096    |   0.0072      0.1404
                        0.0034     0.0168    |   0.0302      0.1472
                        0.0040     0.0253    |   0.1105      0.1541
                        0.0045     0.0350    |   0.4332      0.1684
                        0.0051     0.0500    |   1.0078      0.1835
                        0.0055     0.0627    |   1.8746      0.1992
                        0.0059     0.0768    |   3.0695      0.2156
                        0.0062     0.0869    |   3.8005      0.2241

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)      2.737      0.166     12.00      21.27
     OUTFLOW: ID= 1 (0801)      2.737      0.005     16.15      13.46

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.81
                   TIME SHIFT OF PEAK FLOW          (min)=249.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0392

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (0202):     2.31   0.020    12.10     2.86
        + ID2= 2 (0801):     2.74   0.005    16.15    13.46
          ================================================
          ID = 3 (0601):     5.05   0.024    12.10     9.02

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD   (0601) |
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
          ID1= 3 (0601):     5.05   0.024    12.10     9.02
        + ID2= 2 (0802):     2.47   0.004    16.20    12.65
          ================================================
          ID = 1 (0601):     7.53   0.028    12.10    10.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 52.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.013 (i)
     TIME TO PEAK    (hrs)=  12.017
     RUNOFF VOLUME    (mm)=   4.922
     TOTAL RAINFALL   (mm)=  45.678
     RUNOFF COEFFICIENT   =   0.108

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                        0.0000     0.0000    |   1.0000      0.0177
                        0.0001     0.0176    |   0.0000      0.0000

                                  AREA     QPEAK     TPEAK       R.V.
                                  (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)      0.625      0.013     12.02       4.92
     OUTFLOW: ID= 1 (0803)      0.625      0.000     24.23       0.13

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.17
                   TIME SHIFT OF PEAK FLOW          (min)=733.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0038

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--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16         0.08
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=      40.00        60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      50.45        25.12
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       1.57 (ii)   14.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.41         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.01         0.00          0.013 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.15          12.00
     RUNOFF VOLUME    (mm)=      43.68        10.37          20.99
     TOTAL RAINFALL   (mm)=      45.68        45.68          45.68
     RUNOFF COEFFICIENT   =       0.96         0.23           0.46


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
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	(cms)	(ha.m.)		(cms)	(ha.m.)
	0.0000	0.0000		1.0000	0.0153
	0.0001	0.0152		0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	0.240	0.013	12.00	20.99
OUTFLOW: ID= 1 (0804)	0.240	0.000	24.13	0.54

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.24
TIME SHIFT OF PEAK FLOW (min)=728.00
MAXIMUM STORAGE USED (ha.m.)= 0.0049

****
** SIMULATION NUMBER: 2 **
****

READ STORM	Filename: C:\Users\jingram\AppData\Local\Temp\1e5d3a6c-a110-4269-ae5a-28e33273b8b8\20d0d5bc
Ptotal= 60.52 mm	Comments: 5-Year Orillia 24-hour SCS Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.68	6.25	0.00	12.25	8.71	18.25	1.09
0.50	0.65	6.50	0.00	12.50	8.71	18.50	1.09
0.75	0.68	6.75	0.00	12.75	4.48	18.75	1.09
1.00	0.65	7.00	0.00	13.00	4.48	19.00	1.09
1.25	0.68	7.25	2.42	13.25	0.85	19.25	1.09
1.50	0.65	7.50	2.42	13.50	0.85	19.50	1.09
1.75	0.68	7.75	2.42	13.75	4.96	19.75	1.09
2.00	0.65	8.00	2.42	14.00	4.96	20.00	1.09
2.25	0.80	8.25	0.00	14.25	1.81	20.25	0.73
2.50	0.77	8.50	0.00	14.50	1.81	20.50	0.73
2.75	0.80	8.75	3.27	14.75	1.81	20.75	0.73
3.00	0.77	9.00	3.27	15.00	1.82	21.00	0.73
3.25	0.80	9.25	1.94	15.25	1.81	21.25	0.73
3.50	0.77	9.50	1.94	15.50	1.81	21.50	0.73
3.75	0.80	9.75	0.00	15.75	1.81	21.75	0.73
4.00	0.77	10.00	4.36	16.00	1.81	22.00	0.73
4.25	0.97	10.25	2.78	16.25	1.09	22.25	0.73
4.50	0.97	10.50	2.78	16.50	1.09	22.50	0.73
4.75	0.97	10.75	3.75	16.75	1.09	22.75	0.73
5.00	0.97	11.00	3.75	17.00	1.09	23.00	0.73
5.25	0.97	11.25	5.81	17.25	1.09	23.25	0.73
5.50	0.97	11.50	5.81	17.50	1.09	23.50	0.73
5.75	0.97	11.75	25.17	17.75	1.09	23.75	0.73
6.00	0.97	12.00	66.79	18.00	1.09	24.00	0.73

CALIB NASHYD (0202) ID= 1 DT= 1.0 min	Area (ha)= 2.31	Curve Number (CN)= 42.0
	Ia (mm)= 7.36	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.18	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.68	6.017	0.00	12.017	8.75	18.02	1.09
0.033	0.68	6.033	0.00	12.033	8.71	18.03	1.09
0.050	0.68	6.050	0.00	12.050	8.71	18.05	1.09
0.067	0.68	6.067	0.00	12.067	8.71	18.07	1.09
0.083	0.68	6.083	0.00	12.083	8.71	18.08	1.09
0.100	0.68	6.100	0.00	12.100	8.71	18.10	1.09
0.117	0.68	6.117	0.00	12.117	8.71	18.12	1.09
0.133	0.68	6.133	0.00	12.133	8.71	18.13	1.09
0.150	0.68	6.150	0.00	12.150	8.71	18.15	1.09
0.167	0.68	6.167	0.00	12.167	8.71	18.17	1.09
0.183	0.68	6.183	0.00	12.183	8.71	18.18	1.09
0.200	0.68	6.200	0.00	12.200	8.71	18.20	1.09
0.217	0.68	6.217	0.00	12.217	8.71	18.22	1.09
0.233	0.68	6.233	0.00	12.233	8.71	18.23	1.09
0.250	0.68	6.250	0.00	12.250	8.71	18.25	1.09
0.267	0.65	6.267	0.00	12.267	8.71	18.27	1.09
0.283	0.65	6.283	0.00	12.283	8.71	18.28	1.09
0.300	0.65	6.300	0.00	12.300	8.71	18.30	1.09
0.317	0.65	6.317	0.00	12.317	8.71	18.32	1.09
0.333	0.65	6.333	0.00	12.333	8.71	18.33	1.09
0.350	0.65	6.350	0.00	12.350	8.71	18.35	1.09
0.367	0.65	6.367	0.00	12.367	8.71	18.37	1.09
0.383	0.65	6.383	0.00	12.383	8.71	18.38	1.09
0.400	0.65	6.400	0.00	12.400	8.71	18.40	1.09
0.417	0.65	6.417	0.00	12.417	8.71	18.42	1.09
0.433	0.65	6.433	0.00	12.433	8.71	18.43	1.09
0.450	0.65	6.450	0.00	12.450	8.71	18.45	1.09
0.467	0.65	6.467	0.00	12.467	8.71	18.47	1.09
0.483	0.65	6.483	0.00	12.483	8.71	18.48	1.09
0.500	0.65	6.500	0.00	12.500	8.71	18.50	1.09
0.517	0.68	6.517	0.00	12.517	4.48	18.52	1.09
0.533	0.68	6.533	0.00	12.533	4.48	18.53	1.09
0.550	0.68	6.550	0.00	12.550	4.48	18.55	1.09
0.567	0.68	6.567	0.00	12.567	4.48	18.57	1.09
0.583	0.68	6.583	0.00	12.583	4.48	18.58	1.09
0.600	0.68	6.600	0.00	12.600	4.48	18.60	1.09
0.617	0.68	6.617	0.00	12.617	4.48	18.62	1.09
0.633	0.68	6.633	0.00	12.633	4.48	18.63	1.09
0.650	0.68	6.650	0.00	12.650	4.48	18.65	1.09
0.667	0.68	6.667	0.00	12.667	4.48	18.67	1.09
0.683	0.68	6.683	0.00	12.683	4.48	18.68	1.09
0.700	0.68	6.700	0.00	12.700	4.48	18.70	1.09
0.717	0.68	6.717	0.00	12.717	4.48	18.72	1.09
0.733	0.68	6.733	0.00	12.733	4.48	18.73	1.09
0.750	0.68	6.750	0.00	12.750	4.48	18.75	1.09
0.767	0.65	6.767	0.00	12.767	4.48	18.77	1.09
0.783	0.65	6.783	0.00	12.783	4.48	18.78	1.09
0.800	0.65	6.800	0.00	12.800	4.48	18.80	1.09
0.817	0.65	6.817	0.00	12.817	4.48	18.82	1.09
0.833	0.65	6.833	0.00	12.833	4.48	18.83	1.09
0.850	0.65	6.850	0.00	12.850	4.48	18.85	1.09
0.867	0.65	6.867	0.00	12.867	4.48	18.87	1.09
0.883	0.65	6.883	0.00	12.883	4.48	18.88	1.09
0.900	0.65	6.900	0.00	12.900	4.48	18.90	1.09
0.917	0.65	6.917	0.00	12.917	4.48	18.92	1.09
0.933	0.65	6.933	0.00	12.933	4.48	18.93	1.09
0.950	0.65	6.950	0.00	12.950	4.48	18.95	1.09
0.967	0.65	6.967	0.00	12.967	4.48	18.97	1.09
0.983	0.65	6.983	0.00	12.983	4.48	18.98	1.09
1.000	0.65	7.000	0.01	13.000	4.48	19.00	1.09
1.017	0.68	7.017	2.42	13.017	0.86	19.02	1.09
1.033	0.68	7.033	2.42	13.033	0.85	19.03	1.09
1.050	0.68	7.050	2.42	13.050	0.85	19.05	1.09
1.067	0.68	7.067	2.42	13.067	0.85	19.07	1.09
1.083	0.68	7.083	2.42	13.083	0.85	19.08	1.09
1.100	0.68	7.100	2.42	13.100	0.85	19.10	1.09
1.117	0.68	7.117	2.42	13.117	0.85	19.12	1.09
1.133	0.68	7.133	2.42	13.133	0.85	19.13	1.09
1.150	0.68	7.150	2.42	13.150	0.85	19.15	1.09
1.167	0.68	7.167	2.42	13.167	0.85	19.17	1.09
1.183	0.68	7.183	2.42	13.183	0.85	19.18	1.09
1.200	0.68	7.200	2.42	13.200	0.85	19.20	1.09
1.217	0.68	7.217	2.42	13.217	0.85	19.22	1.09
1.233	0.68	7.233	2.42	13.233	0.85	19.23	1.09
1.250	0.68	7.250	2.42	13.250	0.85	19.25	1.09
1.267	0.65	7.267	2.42	13.267	0.85	19.27	1.09
1.283	0.65	7.283	2.42	13.283	0.85	19.28	1.09
1.300	0.65	7.300	2.42	13.300	0.85	19.30	1.09
1.317	0.65	7.317	2.42	13.317	0.85	19.32	1.09
1.333	0.65	7.333	2.42	13.333	0.85	19.33	1.09
1.350	0.65	7.350	2.42	13.350	0.85	19.35	1.09
1.367	0.65	7.367	2.42	13.367	0.85	19.37	1.09
1.383	0.65	7.383	2.42	13.383	0.85	19.38	1.09
1.400	0.65	7.400	2.42	13.400	0.85	19.40	1.09
1.417	0.65	7.417	2.42	13.417	0.85	19.42	1.09
1.433	0.65	7.433	2.42	13.433	0.85	19.43	1.09
1.450	0.65	7.450	2.42	13.450	0.85	19.45	1.09
1.467	0.65	7.467	2.42	13.467	0.85	19.47	1.09
1.483	0.65	7.483	2.42	13.483	0.85	19.48	1.09
1.500	0.65	7.500	2.42	13.500	0.85	19.50	1.09
1.517	0.68	7.517	2.42	13.517	4.95	19.52	1.09
1.533	0.68	7.533	2.42	13.533	4.96	19.53	1.09
1.550	0.68	7.550	2.42	13.550	4.96	19.55	1.09
1.567	0.68	7.567	2.42	13.567	4.96	19.57	1.09
1.583	0.68	7.583	2.42	13.583	4.96	19.58	1.09
1.600	0.68	7.600	2.42	13.600	4.96	19.60	1.09
1.617	0.68	7.617	2.42	13.617	4.96	19.62	1.09
1.633	0.68	7.633	2.42	13.633	4.96	19.63	1.09
1.650	0.68	7.650	2.42	13.650	4.96	19.65	1.09
1.667	0.68	7.667	2.42	13.667	4.96	19.67	1.09
1.683	0.68	7.683	2.42	13.683	4.96	19.68	1.09
1.700	0.68	7.700	2.42	13.700	4.96	19.70	1.09

1.717	0.68	7.717	2.42	13.717	4.96	19.72	1.09
1.733	0.68	7.733	2.42	13.733	4.96	19.73	1.09
1.750	0.68	7.750	2.42	13.750	4.96	19.75	1.09
1.767	0.65	7.767	2.42	13.767	4.96	19.77	1.09
1.783	0.65	7.783	2.42	13.783	4.96	19.78	1.09
1.800	0.65	7.800	2.42	13.800	4.96	19.80	1.09
1.817	0.65	7.817	2.42	13.817	4.96	19.82	1.09
1.833	0.65	7.833	2.42	13.833	4.96	19.83	1.09
1.850	0.65	7.850	2.42	13.850	4.96	19.85	1.09
1.867	0.65	7.867	2.42	13.867	4.96	19.87	1.09
1.883	0.65	7.883	2.42	13.883	4.96	19.88	1.09
1.900	0.65	7.900	2.42	13.900	4.96	19.90	1.09
1.917	0.65	7.917	2.42	13.917	4.96	19.92	1.09
1.933	0.65	7.933	2.42	13.933	4.96	19.93	1.09
1.950	0.65	7.950	2.42	13.950	4.96	19.95	1.09
1.967	0.65	7.967	2.42	13.967	4.96	19.97	1.09
1.983	0.65	7.983	2.42	13.983	4.96	19.98	1.09
2.000	0.65	8.000	2.41	14.000	4.96	20.00	1.09
2.017	0.80	8.017	0.00	14.017	1.82	20.02	0.73
2.033	0.80	8.033	0.00	14.033	1.81	20.03	0.73
2.050	0.80	8.050	0.00	14.050	1.81	20.05	0.73
2.067	0.80	8.067	0.00	14.067	1.81	20.07	0.73
2.083	0.80	8.083	0.00	14.083	1.81	20.08	0.73
2.100	0.80	8.100	0.00	14.100	1.81	20.10	0.73
2.117	0.80	8.117	0.00	14.117	1.81	20.12	0.73
2.133	0.80	8.133	0.00	14.133	1.81	20.13	0.73
2.150	0.80	8.150	0.00	14.150	1.81	20.15	0.73
2.167	0.80	8.167	0.00	14.167	1.81	20.17	0.73
2.183	0.80	8.183	0.00	14.183	1.81	20.18	0.73
2.200	0.80	8.200	0.00	14.200	1.81	20.20	0.73
2.217	0.80	8.217	0.00	14.217	1.81	20.22	0.73
2.233	0.80	8.233	0.00	14.233	1.81	20.23	0.73
2.250	0.80	8.250	0.00	14.250	1.81	20.25	0.73
2.267	0.77	8.267	0.00	14.267	1.81	20.27	0.73
2.283	0.77	8.283	0.00	14.283	1.81	20.28	0.73
2.300	0.77	8.300	0.00	14.300	1.81	20.30	0.73
2.317	0.77	8.317	0.00	14.317	1.81	20.32	0.73
2.333	0.77	8.333	0.00	14.333	1.81	20.33	0.73
2.350	0.77	8.350	0.00	14.350	1.81	20.35	0.73
2.367	0.77	8.367	0.00	14.367	1.81	20.37	0.73
2.383	0.77	8.383	0.00	14.383	1.81	20.38	0.73
2.400	0.77	8.400	0.00	14.400	1.81	20.40	0.73
2.417	0.77	8.417	0.00	14.417	1.81	20.42	0.73
2.433	0.77	8.433	0.00	14.433	1.81	20.43	0.73
2.450	0.77	8.450	0.00	14.450	1.81	20.45	0.73
2.467	0.77	8.467	0.00	14.467	1.81	20.47	0.73
2.483	0.77	8.483	0.00	14.483	1.81	20.48	0.73
2.500	0.77	8.500	0.01	14.500	1.81	20.50	0.73
2.517	0.80	8.517	3.27	14.517	1.81	20.52	0.73
2.533	0.80	8.533	3.27	14.533	1.81	20.53	0.73
2.550	0.80	8.550	3.27	14.550	1.81	20.55	0.73
2.567	0.80	8.567	3.27	14.567	1.81	20.57	0.73
2.583	0.80	8.583	3.27	14.583	1.81	20.58	0.73
2.600	0.80	8.600	3.27	14.600	1.81	20.60	0.73
2.617	0.80	8.617	3.27	14.617	1.81	20.62	0.73
2.633	0.80	8.633	3.27	14.633	1.81	20.63	0.73
2.650	0.80	8.650	3.27	14.650	1.81	20.65	0.73
2.667	0.80	8.667	3.27	14.667	1.81	20.67	0.73
2.683	0.80	8.683	3.27	14.683	1.81	20.68	0.73
2.700	0.80	8.700	3.27	14.700	1.81	20.70	0.73
2.717	0.80	8.717	3.27	14.717	1.81	20.72	0.73
2.733	0.80	8.733	3.27	14.733	1.81	20.73	0.73
2.750	0.80	8.750	3.27	14.750	1.81	20.75	0.73
2.767	0.77	8.767	3.27	14.767	1.82	20.77	0.73
2.783	0.77	8.783	3.27	14.783	1.82	20.78	0.73
2.800	0.77	8.800	3.27	14.800	1.82	20.80	0.73
2.817	0.77	8.817	3.27	14.817	1.82	20.82	0.73
2.833	0.77	8.833	3.27	14.833	1.82	20.83	0.73
2.850	0.77	8.850	3.27	14.850	1.82	20.85	0.73
2.867	0.77	8.867	3.27	14.867	1.82	20.87	0.73
2.883	0.77	8.883	3.27	14.883	1.82	20.88	0.73
2.900	0.77	8.900	3.27	14.900	1.82	20.90	0.73
2.917	0.77	8.917	3.27	14.917	1.82	20.92	0.73
2.933	0.77	8.933	3.27	14.933	1.82	20.93	0.73
2.950	0.77	8.950	3.27	14.950	1.82	20.95	0.73
2.967	0.77	8.967	3.27	14.967	1.82	20.97	0.73
2.983	0.77	8.983	3.27	14.983	1.82	20.98	0.73
3.000	0.77	9.000	3.27	15.000	1.82	21.00	0.73
3.017	0.80	9.017	1.94	15.017	1.81	21.02	0.73
3.033	0.80	9.033	1.94	15.033	1.81	21.03	0.73
3.050	0.80	9.050	1.94	15.050	1.81	21.05	0.73
3.067	0.80	9.067	1.94	15.067	1.81	21.07	0.73
3.083	0.80	9.083	1.94	15.083	1.81	21.08	0.73
3.100	0.80	9.100	1.94	15.100	1.81	21.10	0.73
3.117	0.80	9.117	1.94	15.117	1.81	21.12	0.73
3.133	0.80	9.133	1.94	15.133	1.81	21.13	0.73
3.150	0.80	9.150	1.94	15.150	1.81	21.15	0.73
3.167	0.80	9.167	1.94	15.167	1.81	21.17	0.73
3.183	0.80	9.183	1.94	15.183	1.81	21.18	0.73
3.200	0.80	9.200	1.94	15.200	1.81	21.20	0.73
3.217	0.80	9.217	1.94	15.217	1.81	21.22	0.73
3.233	0.80	9.233	1.94	15.233	1.81	21.23	0.73
3.250	0.80	9.250	1.94	15.250	1.81	21.25	0.73
3.267	0.77	9.267	1.94	15.267	1.81	21.27	0.73
3.283	0.77	9.283	1.94	15.283	1.81	21.28	0.73
3.300	0.77	9.300	1.94	15.300	1.81	21.30	0.73
3.317	0.77	9.317	1.94	15.317	1.81	21.32	0.73
3.333	0.77	9.333	1.94	15.333	1.81	21.33	0.73
3.350	0.77	9.350	1.94	15.350	1.81	21.35	0.73
3.367	0.77	9.367	1.94	15.367	1.81	21.37	0.73
3.383	0.77	9.383	1.94	15.383	1.81	21.38	0.73
3.400	0.77	9.400	1.94	15.400	1.81	21.40	0.73
3.417	0.77	9.417	1.94	15.417	1.81	21.42	0.73
3.433	0.77	9.433	1.94	15.433	1.81	21.43	0.73
3.450	0.77	9.450	1.94	15.450	1.81	21.45	0.73
3.467	0.77	9.467	1.94	15.467	1.81	21.47	0.73
3.483	0.77	9.483	1.94	15.483	1.81	21.48	0.73
3.500	0.77	9.500	1.94	15.500	1.81	21.50	0.73
3.517	0.80	9.517	0.00	15.517	1.81	21.52	0.73
3.533	0.80	9.533	0.00	15.533	1.81	21.53	0.73
3.550	0.80	9.550	0.00	15.550	1.81	21.55	0.73
3.567	0.80	9.567	0.00	15.567	1.81	21.57	0.73
3.583	0.80	9.583	0.00	15.583	1.81	21.58	0.73
3.600	0.80	9.600	0.00	15.600	1.81	21.60	0.73
3.617	0.80	9.617	0.00	15.617	1.81	21.62	0.73
3.633	0.80	9.633	0.00	15.633	1.81	21.63	0.73
3.650	0.80	9.650	0.00	15.650	1.81	21.65	0.73
3.667	0.80	9.667	0.00	15.667	1.81	21.67	0.73
3.683	0.80	9.683	0.00	15.683	1.81	21.68	0.73
3.700	0.80	9.700	0.00	15.700	1.81	21.70	0.73
3.717	0.80	9.717	0.00	15.717	1.81	21.72	0.73
3.733	0.80	9.733	0.00	15.733	1.81	21.73	0.73
3.750	0.80	9.750	0.01	15.750	1.81	21.75	0.73
3.767	0.77	9.767	4.36	15.767	1.81	21.77	0.73
3.783	0.77	9.783	4.36	15.783	1.81	21.78	0.73
3.800	0.77	9.800	4.36	15.800	1.81	21.80	0.73
3.817	0.77	9.817	4.36	15.817	1.81	21.82	0.73
3.833	0.77	9.833	4.36	15.833	1.81	21.83	0.73
3.850	0.77	9.850	4.36	15.850	1.81	21.85	0.73
3.867	0.77	9.867	4.36	15.867	1.81	21.87	0.73
3.883	0.77	9.883	4.36	15.883	1.81	21.88	0.73
3.900	0.77	9.900	4.36	15.900	1.81	21.90	0.73
3.917	0.77	9.917	4.36	15.917	1.81	21.92	0.73
3.933	0.77	9.933	4.36	15.933	1.81	21.93	0.73
3.950	0.77	9.950	4.36	15.950	1.81	21.95	0.73
3.967	0.77	9.967	4.36	15.967	1.81	21.97	0.73
3.983	0.77	9.983	4.36	15.983	1.81	21.98	0.73
4.000	0.77	10.000	4.36	16.000	1.81	22.00	0.73
4.017	0.97	10.017	2.78	16.017	1.09	22.02	0.73
4.033	0.97	10.033	2.78	16.033	1.09	22.03	0.73
4.050	0.97	10.050	2.78	16.050	1.09	22.05	0.73
4.067	0.97	10.067	2.78	16.067	1.09	22.07	0.73
4.083	0.97	10.083	2.78	16.083	1.09	22.08	0.73
4.100	0.97	10.100	2.78	16.100	1.09	22.10	0.73
4.117	0.97	10.117	2.78	16.117	1.09	22.12	0.73
4.133	0.97	10.133	2.78	16.133	1.09	22.13	0.73
4.150	0.97	10.150	2.78	16.150	1.09	22.15	0.73
4.167	0.97	10.167	2.78	16.167	1.09	22.17	0.73
4.183	0.97	10.183	2.78	16.183	1.09	22.18	0.73
4.200	0.97	10.200	2.78	16.200	1.09	22.20	0.73
4.217	0.97	10.217	2.78	16.217	1.09	22.22	0.73
4.233	0.97	10.233	2.78	16.233	1.09	22.23	0.73
4.250	0.97	10.250	2.78	16.250	1.09	22.25	0.73
4.267	0.97	10.267	2.78	16.267	1.09	22.27	0.73
4.283	0.97	10.283	2.78	16.283	1.09	22.28	0.73
4.300	0.97	10.300	2.78	16.300	1.09	22.30	0.73
4.317	0.97	10.317	2.78	16.317	1.09	22.32	0.73
4.333	0.97	10.333	2.78	16.333	1.09	22.33	0.73
4.350	0.97	10.350	2.78	16.350	1.09	22.35	0.73
4.367	0.97	10.367	2.78	16.367	1.09	22.37	0.73
4.383	0.97	10.383	2.78	16.383	1.09	22.38	0.73
4.400	0.97	10.400	2.78	16.400	1.09	22.40	0.73
4.417	0.97	10.417	2.78	16.417	1.09	22.42	0.73
4.433	0.97	10.433	2.78	16.433	1.09	22.43	0.73
4.450	0.97	10.450	2.78	16.450	1.09	22.45	0.73
4.467	0.97	10.467	2.78	16.467	1.09	22.47	0.73
4.483	0.97	10.483	2.78	16.483	1.09	22.48	0.73
4.500	0.97	10.500	2.78	16.500	1.09	22.50	0.73

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4.517    0.97 |10.517    3.75 |16.517    1.09 | 22.52    0.73
4.533    0.97 |10.533    3.75 |16.533    1.09 | 22.53    0.73
4.550    0.97 |10.550    3.75 |16.550    1.09 | 22.55    0.73
4.567    0.97 |10.567    3.75 |16.567    1.09 | 22.57    0.73
4.583    0.97 |10.583    3.75 |16.583    1.09 | 22.58    0.73
4.600    0.97 |10.600    3.75 |16.600    1.09 | 22.60    0.73
4.617    0.97 |10.617    3.75 |16.617    1.09 | 22.62    0.73
4.633    0.97 |10.633    3.75 |16.633    1.09 | 22.63    0.73
4.650    0.97 |10.650    3.75 |16.650    1.09 | 22.65    0.73
4.667    0.97 |10.667    3.75 |16.667    1.09 | 22.67    0.73
4.683    0.97 |10.683    3.75 |16.683    1.09 | 22.68    0.73
4.700    0.97 |10.700    3.75 |16.700    1.09 | 22.70    0.73
4.717    0.97 |10.717    3.75 |16.717    1.09 | 22.72    0.73
4.733    0.97 |10.733    3.75 |16.733    1.09 | 22.73    0.73
4.750    0.97 |10.750    3.75 |16.750    1.09 | 22.75    0.73
4.767    0.97 |10.767    3.75 |16.767    1.09 | 22.77    0.73
4.783    0.97 |10.783    3.75 |16.783    1.09 | 22.78    0.73
4.800    0.97 |10.800    3.75 |16.800    1.09 | 22.80    0.73
4.817    0.97 |10.817    3.75 |16.817    1.09 | 22.82    0.73
4.833    0.97 |10.833    3.75 |16.833    1.09 | 22.83    0.73
4.850    0.97 |10.850    3.75 |16.850    1.09 | 22.85    0.73
4.867    0.97 |10.867    3.75 |16.867    1.09 | 22.87    0.73
4.883    0.97 |10.883    3.75 |16.883    1.09 | 22.88    0.73
4.900    0.97 |10.900    3.75 |16.900    1.09 | 22.90    0.73
4.917    0.97 |10.917    3.75 |16.917    1.09 | 22.92    0.73
4.933    0.97 |10.933    3.75 |16.933    1.09 | 22.93    0.73
4.950    0.97 |10.950    3.75 |16.950    1.09 | 22.95    0.73
4.967    0.97 |10.967    3.75 |16.967    1.09 | 22.97    0.73
4.983    0.97 |10.983    3.75 |16.983    1.09 | 22.98    0.73
5.000    0.97 |11.000    3.75 |17.000    1.09 | 23.00    0.73
5.017    0.97 |11.017    5.81 |17.017    1.09 | 23.02    0.73
5.033    0.97 |11.033    5.81 |17.033    1.09 | 23.03    0.73
5.050    0.97 |11.050    5.81 |17.050    1.09 | 23.05    0.73
5.067    0.97 |11.067    5.81 |17.067    1.09 | 23.07    0.73
5.083    0.97 |11.083    5.81 |17.083    1.09 | 23.08    0.73
5.100    0.97 |11.100    5.81 |17.100    1.09 | 23.10    0.73
5.117    0.97 |11.117    5.81 |17.117    1.09 | 23.12    0.73
5.133    0.97 |11.133    5.81 |17.133    1.09 | 23.13    0.73
5.150    0.97 |11.150    5.81 |17.150    1.09 | 23.15    0.73
5.167    0.97 |11.167    5.81 |17.167    1.09 | 23.17    0.73
5.183    0.97 |11.183    5.81 |17.183    1.09 | 23.18    0.73
5.200    0.97 |11.200    5.81 |17.200    1.09 | 23.20    0.73
5.217    0.97 |11.217    5.81 |17.217    1.09 | 23.22    0.73
5.233    0.97 |11.233    5.81 |17.233    1.09 | 23.23    0.73
5.250    0.97 |11.250    5.81 |17.250    1.09 | 23.25    0.73
5.267    0.97 |11.267    5.81 |17.267    1.09 | 23.27    0.73
5.283    0.97 |11.283    5.81 |17.283    1.09 | 23.28    0.73
5.300    0.97 |11.300    5.81 |17.300    1.09 | 23.30    0.73
5.317    0.97 |11.317    5.81 |17.317    1.09 | 23.32    0.73
5.333    0.97 |11.333    5.81 |17.333    1.09 | 23.33    0.73
5.350    0.97 |11.350    5.81 |17.350    1.09 | 23.35    0.73
5.367    0.97 |11.367    5.81 |17.367    1.09 | 23.37    0.73
5.383    0.97 |11.383    5.81 |17.383    1.09 | 23.38    0.73
5.400    0.97 |11.400    5.81 |17.400    1.09 | 23.40    0.73
5.417    0.97 |11.417    5.81 |17.417    1.09 | 23.42    0.73
5.433    0.97 |11.433    5.81 |17.433    1.09 | 23.43    0.73
5.450    0.97 |11.450    5.81 |17.450    1.09 | 23.45    0.73
5.467    0.97 |11.467    5.81 |17.467    1.09 | 23.47    0.73
5.483    0.97 |11.483    5.81 |17.483    1.09 | 23.48    0.73
5.500    0.97 |11.500    5.81 |17.500    1.09 | 23.50    0.73
5.517    0.97 |11.517   25.17 |17.517    1.09 | 23.52    0.73
5.533    0.97 |11.533   25.17 |17.533    1.09 | 23.53    0.73
5.550    0.97 |11.550   25.17 |17.550    1.09 | 23.55    0.73
5.567    0.97 |11.567   25.17 |17.567    1.09 | 23.57    0.73
5.583    0.97 |11.583   25.17 |17.583    1.09 | 23.58    0.73
5.600    0.97 |11.600   25.17 |17.600    1.09 | 23.60    0.73
5.617    0.97 |11.617   25.17 |17.617    1.09 | 23.62    0.73
5.633    0.97 |11.633   25.17 |17.633    1.09 | 23.63    0.73
5.650    0.97 |11.650   25.17 |17.650    1.09 | 23.65    0.73
5.667    0.97 |11.667   25.17 |17.667    1.09 | 23.67    0.73
5.683    0.97 |11.683   25.17 |17.683    1.09 | 23.68    0.73
5.700    0.97 |11.700   25.17 |17.700    1.09 | 23.70    0.73
5.717    0.97 |11.717   25.17 |17.717    1.09 | 23.72    0.73
5.733    0.97 |11.733   25.17 |17.733    1.09 | 23.73    0.73
5.750    0.97 |11.750   25.17 |17.750    1.09 | 23.75    0.73
5.767    0.97 |11.767   66.77 |17.767    1.09 | 23.77    0.73
5.783    0.97 |11.783   66.79 |17.783    1.09 | 23.78    0.73
5.800    0.97 |11.800   66.79 |17.800    1.09 | 23.80    0.73
5.817    0.97 |11.817   66.79 |17.817    1.09 | 23.82    0.73
5.833    0.97 |11.833   66.79 |17.833    1.09 | 23.83    0.73
5.850    0.97 |11.850   66.79 |17.850    1.09 | 23.85    0.73
5.867    0.97 |11.867   66.79 |17.867    1.09 | 23.87    0.73
5.883    0.97 |11.883   66.79 |17.883    1.09 | 23.88    0.73
5.900    0.97 |11.900   66.79 |17.900    1.09 | 23.90    0.73
5.917    0.97 |11.917   66.79 |17.917    1.09 | 23.92    0.73
5.933    0.97 |11.933   66.79 |17.933    1.09 | 23.93    0.73
5.950    0.97 |11.950   66.79 |17.950    1.09 | 23.95    0.73
5.967    0.97 |11.967   66.79 |17.967    1.09 | 23.97    0.73
5.983    0.97 |11.983   66.79 |17.983    1.09 | 23.98    0.73
6.000    0.97 |12.000   66.79 |18.000    1.09 | 24.00    0.73

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.039 (i)
     TIME TO PEAK    (hrs)=  12.083
     RUNOFF VOLUME    (mm)=   5.396
     TOTAL RAINFALL   (mm)=  60.518
     RUNOFF COEFFICIENT   =   0.089

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61          0.87
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       0.50          3.00
     Length            (m)=     128.45         28.00
     Mannings n           =      0.013         0.190

     Max.Eff.Inten.(mm/hr)=      66.79         43.43
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       4.30 (ii)     9.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.25          0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.07          0.214 (iii)
     TIME TO PEAK    (hrs)=      12.00         12.07          12.02
     RUNOFF VOLUME    (mm)=      58.52         17.10          30.77
     TOTAL RAINFALL   (mm)=      60.52         60.52          60.52
     RUNOFF COEFFICIENT   =       0.97          0.28           0.51


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.0061     0.0972
                         0.0015     0.0053    |   0.0064     0.1137
                         0.0026     0.0141    |   0.0067     0.1254
                         0.0031     0.0204    |   0.0069     0.1375
                         0.0038     0.0307    |   0.0071     0.1502
                         0.0043     0.0420    |   0.0293     0.1568
                         0.0048     0.0542    |   0.2405     0.1703
                         0.0053     0.0675    |   1.0015     0.1916
                         0.0055     0.0769    |   2.4172     0.2142
                         0.0059     0.0919    |   4.6073     0.2381

                                  AREA     QPEAK     TPEAK        R.V.
                                  (ha)     (cms)     (hrs)        (mm)
     INFLOW : ID= 2 (0203)       2.475     0.214     12.02       30.77
     OUTFLOW: ID= 1 (0802)       2.475     0.005     20.03       15.52

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.25
                TIME SHIFT OF PEAK FLOW         (min)=481.00
                MAXIMUM  STORAGE   USED        (ha.m.)=  0.0543

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| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------

                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78          0.96
     Dep. Storage     (mm)=       2.00          5.00
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     Average Slope     (%)=       1.00         3.00
     Length            (m)=     135.08        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      66.79        43.43
               over (min)        5.00         9.00
     Storage Coeff.  (min)=      3.60 (ii)    8.74 (ii)
     Unit Hyd. Tpeak (min)=      5.00         9.00
     Unit Hyd. peak  (cms)=      0.28         0.13
                                                      *TOTALS*
     PEAK FLOW       (cms)=      0.16         0.09        0.244 (iii)
     TIME TO PEAK    (hrs)=     12.00        12.05       12.00
     RUNOFF VOLUME    (mm)=     58.51        17.10       30.77
     TOTAL RAINFALL   (mm)=     60.52        60.52       60.52
     RUNOFF COEFFICIENT   =      0.97         0.28        0.51


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0065      0.1033
                          0.0015     0.0034   |   0.0070      0.1274
                          0.0026     0.0096   |   0.0072      0.1404
                          0.0034     0.0168   |   0.0302      0.1472
                          0.0040     0.0253   |   0.1105      0.1541
                          0.0045     0.0350   |   0.4332      0.1684
                          0.0051     0.0500   |   1.0078      0.1835
                          0.0055     0.0627   |   1.8746      0.1992
                          0.0059     0.0768   |   3.0695      0.2156
                          0.0062     0.0869   |   3.8005      0.2241

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)      2.737     0.244     12.00      30.77
     OUTFLOW: ID= 1 (0801)      2.737     0.005     20.02      16.13

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.21
                   TIME SHIFT OF PEAK FLOW         (min)=481.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0590

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0202):     2.31   0.039    12.08     5.40
       + ID2= 2 (0801):     2.74   0.005    20.02    16.13
         ================================================
         ID = 3 (0601):     5.05   0.043    12.10    11.95

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     5.05   0.043    12.10    11.95
       + ID2= 2 (0802):     2.47   0.005    20.03    15.52
         ================================================
         ID = 1 (0601):     7.53   0.047    12.10    13.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 52.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.023 (i)
     TIME TO PEAK    (hrs)=  12.017
     RUNOFF VOLUME    (mm)=   8.692
     TOTAL RAINFALL   (mm)=  60.518
     RUNOFF COEFFICIENT   =   0.144

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0177
                          0.0001     0.0176   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)      0.625     0.023     12.02       8.69
     OUTFLOW: ID= 1 (0803)      0.625     0.000     24.23       0.24

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.17
                   TIME SHIFT OF PEAK FLOW         (min)=733.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0067

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| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16          0.08
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       2.00          2.00
     Length            (m)=      40.00         60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      66.79        44.00
               over (min)        5.00         13.00
     Storage Coeff.  (min)=      1.41 (ii)    12.01 (ii)
     Unit Hyd. Tpeak (min)=      5.00         13.00
     Unit Hyd. peak  (cms)=      0.43         0.09
                                                      *TOTALS*
     PEAK FLOW       (cms)=      0.01         0.01        0.020 (iii)
     TIME TO PEAK    (hrs)=     12.00        12.12       12.00
     RUNOFF VOLUME    (mm)=     58.52        17.30       30.46
     TOTAL RAINFALL   (mm)=     60.52        60.52       60.52
     RUNOFF COEFFICIENT   =      0.97         0.29        0.50


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0153
                          0.0001     0.0152   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)      0.240     0.020     12.00      30.46
     OUTFLOW: ID= 1 (0804)      0.240     0.000     24.23       0.79

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.24
                   TIME SHIFT OF PEAK FLOW         (min)=734.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0071

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  ******************************
  ** SIMULATION NUMBER:   3 **
  ******************************


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|    READ STORM    |    Filename: C:\Users\jingram\AppD
```

| | ata\Local\Temp\
| | 1e5d3a6c-a110-4269-ae5a-28e33273b8b8\72871e70
| Ptotal= 70.40 mm | Comments: 10-Year Orillia 24-hour SCS Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.79	6.25	0.00	12.25	10.14	18.25	1.27
0.50	0.76	6.50	0.00	12.50	10.14	18.50	1.27
0.75	0.79	6.75	0.00	12.75	5.21	18.75	1.27
1.00	0.76	7.00	0.00	13.00	5.21	19.00	1.27
1.25	0.79	7.25	2.82	13.25	0.99	19.25	1.27
1.50	0.76	7.50	2.82	13.50	0.99	19.50	1.27
1.75	0.79	7.75	2.82	13.75	5.77	19.75	1.27
2.00	0.76	8.00	2.82	14.00	5.77	20.00	1.27
2.25	0.93	8.25	0.00	14.25	2.11	20.25	0.84
2.50	0.90	8.50	0.00	14.50	2.11	20.50	0.84
2.75	0.93	8.75	3.80	14.75	2.11	20.75	0.84
3.00	0.90	9.00	3.80	15.00	2.11	21.00	0.84
3.25	0.93	9.25	2.25	15.25	2.11	21.25	0.84
3.50	0.90	9.50	2.25	15.50	2.11	21.50	0.84
3.75	0.93	9.75	0.00	15.75	2.11	21.75	0.84
4.00	0.90	10.00	5.07	16.00	2.11	22.00	0.84
4.25	1.13	10.25	3.24	16.25	1.27	22.25	0.84
4.50	1.13	10.50	3.24	16.50	1.27	22.50	0.84
4.75	1.13	10.75	4.36	16.75	1.27	22.75	0.84
5.00	1.13	11.00	4.36	17.00	1.27	23.00	0.84
5.25	1.13	11.25	6.76	17.25	1.27	23.25	0.84
5.50	1.13	11.50	6.76	17.50	1.27	23.50	0.84
5.75	1.13	11.75	29.29	17.75	1.27	23.75	0.84
6.00	1.13	12.00	77.72	18.00	1.27	24.00	0.84

CALIB	
NASHYD (0202)	Area (ha)= 2.31 Curve Number (CN)= 42.0
ID= 1 DT= 1.0 min	Ia (mm)= 7.36 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.18

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.79	6.017	0.00	12.017	10.19	18.02	1.27
0.033	0.79	6.033	0.00	12.033	10.14	18.03	1.27
0.050	0.79	6.050	0.00	12.050	10.14	18.05	1.27
0.067	0.79	6.067	0.00	12.067	10.14	18.07	1.27
0.083	0.79	6.083	0.00	12.083	10.14	18.08	1.27
0.100	0.79	6.100	0.00	12.100	10.14	18.10	1.27
0.117	0.79	6.117	0.00	12.117	10.14	18.12	1.27
0.133	0.79	6.133	0.00	12.133	10.14	18.13	1.27
0.150	0.79	6.150	0.00	12.150	10.14	18.15	1.27
0.167	0.79	6.167	0.00	12.167	10.14	18.17	1.27
0.183	0.79	6.183	0.00	12.183	10.14	18.18	1.27
0.200	0.79	6.200	0.00	12.200	10.14	18.20	1.27
0.217	0.79	6.217	0.00	12.217	10.14	18.22	1.27
0.233	0.79	6.233	0.00	12.233	10.14	18.23	1.27
0.250	0.79	6.250	0.00	12.250	10.14	18.25	1.27
0.267	0.76	6.267	0.00	12.267	10.14	18.27	1.27
0.283	0.76	6.283	0.00	12.283	10.14	18.28	1.27
0.300	0.76	6.300	0.00	12.300	10.14	18.30	1.27
0.317	0.76	6.317	0.00	12.317	10.14	18.32	1.27
0.333	0.76	6.333	0.00	12.333	10.14	18.33	1.27
0.350	0.76	6.350	0.00	12.350	10.14	18.35	1.27
0.367	0.76	6.367	0.00	12.367	10.14	18.37	1.27
0.383	0.76	6.383	0.00	12.383	10.14	18.38	1.27
0.400	0.76	6.400	0.00	12.400	10.14	18.40	1.27
0.417	0.76	6.417	0.00	12.417	10.14	18.42	1.27
0.433	0.76	6.433	0.00	12.433	10.14	18.43	1.27
0.450	0.76	6.450	0.00	12.450	10.14	18.45	1.27
0.467	0.76	6.467	0.00	12.467	10.14	18.47	1.27
0.483	0.76	6.483	0.00	12.483	10.14	18.48	1.27
0.500	0.76	6.500	0.00	12.500	10.14	18.50	1.27
0.517	0.79	6.517	0.00	12.517	5.22	18.52	1.27
0.533	0.79	6.533	0.00	12.533	5.21	18.53	1.27
0.550	0.79	6.550	0.00	12.550	5.21	18.55	1.27
0.567	0.79	6.567	0.00	12.567	5.21	18.57	1.27
0.583	0.79	6.583	0.00	12.583	5.21	18.58	1.27
0.600	0.79	6.600	0.00	12.600	5.21	18.60	1.27
0.617	0.79	6.617	0.00	12.617	5.21	18.62	1.27
0.633	0.79	6.633	0.00	12.633	5.21	18.63	1.27
0.650	0.79	6.650	0.00	12.650	5.21	18.65	1.27
0.667	0.79	6.667	0.00	12.667	5.21	18.67	1.27
0.683	0.79	6.683	0.00	12.683	5.21	18.68	1.27
0.700	0.79	6.700	0.00	12.700	5.21	18.70	1.27
0.717	0.79	6.717	0.00	12.717	5.21	18.72	1.27
0.733	0.79	6.733	0.00	12.733	5.21	18.73	1.27
0.750	0.79	6.750	0.00	12.750	5.21	18.75	1.27
0.767	0.76	6.767	0.00	12.767	5.21	18.77	1.27
0.783	0.76	6.783	0.00	12.783	5.21	18.78	1.27
0.800	0.76	6.800	0.00	12.800	5.21	18.80	1.27
0.817	0.76	6.817	0.00	12.817	5.21	18.82	1.27
0.833	0.76	6.833	0.00	12.833	5.21	18.83	1.27
0.850	0.76	6.850	0.00	12.850	5.21	18.85	1.27
0.867	0.76	6.867	0.00	12.867	5.21	18.87	1.27
0.883	0.76	6.883	0.00	12.883	5.21	18.88	1.27
0.900	0.76	6.900	0.00	12.900	5.21	18.90	1.27
0.917	0.76	6.917	0.00	12.917	5.21	18.92	1.27
0.933	0.76	6.933	0.00	12.933	5.21	18.93	1.27
0.950	0.76	6.950	0.00	12.950	5.21	18.95	1.27
0.967	0.76	6.967	0.00	12.967	5.21	18.97	1.27
0.983	0.76	6.983	0.00	12.983	5.21	18.98	1.27
1.000	0.76	7.000	0.01	13.000	5.21	19.00	1.27
1.017	0.79	7.017	2.82	13.017	1.00	19.02	1.27
1.033	0.79	7.033	2.82	13.033	0.99	19.03	1.27
1.050	0.79	7.050	2.82	13.050	0.99	19.05	1.27
1.067	0.79	7.067	2.82	13.067	0.99	19.07	1.27
1.083	0.79	7.083	2.82	13.083	0.99	19.08	1.27
1.100	0.79	7.100	2.82	13.100	0.99	19.10	1.27
1.117	0.79	7.117	2.82	13.117	0.99	19.12	1.27
1.133	0.79	7.133	2.82	13.133	0.99	19.13	1.27
1.150	0.79	7.150	2.82	13.150	0.99	19.15	1.27
1.167	0.79	7.167	2.82	13.167	0.99	19.17	1.27
1.183	0.79	7.183	2.82	13.183	0.99	19.18	1.27
1.200	0.79	7.200	2.82	13.200	0.99	19.20	1.27
1.217	0.79	7.217	2.82	13.217	0.99	19.22	1.27
1.233	0.79	7.233	2.82	13.233	0.99	19.23	1.27
1.250	0.79	7.250	2.82	13.250	0.99	19.25	1.27
1.267	0.76	7.267	2.82	13.267	0.99	19.27	1.27
1.283	0.76	7.283	2.82	13.283	0.99	19.28	1.27
1.300	0.76	7.300	2.82	13.300	0.99	19.30	1.27
1.317	0.76	7.317	2.82	13.317	0.99	19.32	1.27
1.333	0.76	7.333	2.82	13.333	0.99	19.33	1.27
1.350	0.76	7.350	2.82	13.350	0.99	19.35	1.27
1.367	0.76	7.367	2.82	13.367	0.99	19.37	1.27
1.383	0.76	7.383	2.82	13.383	0.99	19.38	1.27
1.400	0.76	7.400	2.82	13.400	0.99	19.40	1.27
1.417	0.76	7.417	2.82	13.417	0.99	19.42	1.27
1.433	0.76	7.433	2.82	13.433	0.99	19.43	1.27
1.450	0.76	7.450	2.82	13.450	0.99	19.45	1.27
1.467	0.76	7.467	2.82	13.467	0.99	19.47	1.27
1.483	0.76	7.483	2.82	13.483	0.99	19.48	1.27
1.500	0.76	7.500	2.82	13.500	0.99	19.50	1.27
1.517	0.79	7.517	2.82	13.517	5.76	19.52	1.27
1.533	0.79	7.533	2.82	13.533	5.77	19.53	1.27
1.550	0.79	7.550	2.82	13.550	5.77	19.55	1.27
1.567	0.79	7.567	2.82	13.567	5.77	19.57	1.27
1.583	0.79	7.583	2.82	13.583	5.77	19.58	1.27
1.600	0.79	7.600	2.82	13.600	5.77	19.60	1.27
1.617	0.79	7.617	2.82	13.617	5.77	19.62	1.27
1.633	0.79	7.633	2.82	13.633	5.77	19.63	1.27
1.650	0.79	7.650	2.82	13.650	5.77	19.65	1.27
1.667	0.79	7.667	2.82	13.667	5.77	19.67	1.27
1.683	0.79	7.683	2.82	13.683	5.77	19.68	1.27
1.700	0.79	7.700	2.82	13.700	5.77	19.70	1.27
1.717	0.79	7.717	2.82	13.717	5.77	19.72	1.27
1.733	0.79	7.733	2.82	13.733	5.77	19.73	1.27
1.750	0.79	7.750	2.82	13.750	5.77	19.75	1.27
1.767	0.76	7.767	2.82	13.767	5.77	19.77	1.27
1.783	0.76	7.783	2.82	13.783	5.77	19.78	1.27
1.800	0.76	7.800	2.82	13.800	5.77	19.80	1.27
1.817	0.76	7.817	2.82	13.817	5.77	19.82	1.27
1.833	0.76	7.833	2.82	13.833	5.77	19.83	1.27
1.850	0.76	7.850	2.82	13.850	5.77	19.85	1.27
1.867	0.76	7.867	2.82	13.867	5.77	19.87	1.27
1.883	0.76	7.883	2.82	13.883	5.77	19.88	1.27
1.900	0.76	7.900	2.82	13.900	5.77	19.90	1.27
1.917	0.76	7.917	2.82	13.917	5.77	19.92	1.27
1.933	0.76	7.933	2.82	13.933	5.77	19.93	1.27
1.950	0.76	7.950	2.82	13.950	5.77	19.95	1.27
1.967	0.76	7.967	2.82	13.967	5.77	19.97	1.27
1.983	0.76	7.983	2.82	13.983	5.77	19.98	1.27
2.000	0.76	8.000	2.81	14.000	5.77	20.00	1.27
2.017	0.93	8.017	0.00	14.017	2.12	20.02	0.84
2.033	0.93	8.033	0.00	14.033	2.11	20.03	0.84
2.050	0.93	8.050	0.00	14.050	2.11	20.05	0.84

2.067	0.93	8.067	0.00	14.067	2.11	20.07	0.84
2.083	0.93	8.083	0.00	14.083	2.11	20.08	0.84
2.100	0.93	8.100	0.00	14.100	2.11	20.10	0.84
2.117	0.93	8.117	0.00	14.117	2.11	20.12	0.84
2.133	0.93	8.133	0.00	14.133	2.11	20.13	0.84
2.150	0.93	8.150	0.00	14.150	2.11	20.15	0.84
2.167	0.93	8.167	0.00	14.167	2.11	20.17	0.84
2.183	0.93	8.183	0.00	14.183	2.11	20.18	0.84
2.200	0.93	8.200	0.00	14.200	2.11	20.20	0.84
2.217	0.93	8.217	0.00	14.217	2.11	20.22	0.84
2.233	0.93	8.233	0.00	14.233	2.11	20.23	0.84
2.250	0.93	8.250	0.00	14.250	2.11	20.25	0.84
2.267	0.90	8.267	0.00	14.267	2.11	20.27	0.84
2.283	0.90	8.283	0.00	14.283	2.11	20.28	0.84
2.300	0.90	8.300	0.00	14.300	2.11	20.30	0.84
2.317	0.90	8.317	0.00	14.317	2.11	20.32	0.84
2.333	0.90	8.333	0.00	14.333	2.11	20.33	0.84
2.350	0.90	8.350	0.00	14.350	2.11	20.35	0.84
2.367	0.90	8.367	0.00	14.367	2.11	20.37	0.84
2.383	0.90	8.383	0.00	14.383	2.11	20.38	0.84
2.400	0.90	8.400	0.00	14.400	2.11	20.40	0.84
2.417	0.90	8.417	0.00	14.417	2.11	20.42	0.84
2.433	0.90	8.433	0.00	14.433	2.11	20.43	0.84
2.450	0.90	8.450	0.00	14.450	2.11	20.45	0.84
2.467	0.90	8.467	0.00	14.467	2.11	20.47	0.84
2.483	0.90	8.483	0.00	14.483	2.11	20.48	0.84
2.500	0.90	8.500	0.01	14.500	2.11	20.50	0.84
2.517	0.93	8.517	3.80	14.517	2.11	20.52	0.84
2.533	0.93	8.533	3.80	14.533	2.11	20.53	0.84
2.550	0.93	8.550	3.80	14.550	2.11	20.55	0.84
2.567	0.93	8.567	3.80	14.567	2.11	20.57	0.84
2.583	0.93	8.583	3.80	14.583	2.11	20.58	0.84
2.600	0.93	8.600	3.80	14.600	2.11	20.60	0.84
2.617	0.93	8.617	3.80	14.617	2.11	20.62	0.84
2.633	0.93	8.633	3.80	14.633	2.11	20.63	0.84
2.650	0.93	8.650	3.80	14.650	2.11	20.65	0.84
2.667	0.93	8.667	3.80	14.667	2.11	20.67	0.84
2.683	0.93	8.683	3.80	14.683	2.11	20.68	0.84
2.700	0.93	8.700	3.80	14.700	2.11	20.70	0.84
2.717	0.93	8.717	3.80	14.717	2.11	20.72	0.84
2.733	0.93	8.733	3.80	14.733	2.11	20.73	0.84
2.750	0.93	8.750	3.80	14.750	2.11	20.75	0.84
2.767	0.90	8.767	3.80	14.767	2.11	20.77	0.84
2.783	0.90	8.783	3.80	14.783	2.11	20.78	0.84
2.800	0.90	8.800	3.80	14.800	2.11	20.80	0.84
2.817	0.90	8.817	3.80	14.817	2.11	20.82	0.84
2.833	0.90	8.833	3.80	14.833	2.11	20.83	0.84
2.850	0.90	8.850	3.80	14.850	2.11	20.85	0.84
2.867	0.90	8.867	3.80	14.867	2.11	20.87	0.84
2.883	0.90	8.883	3.80	14.883	2.11	20.88	0.84
2.900	0.90	8.900	3.80	14.900	2.11	20.90	0.84
2.917	0.90	8.917	3.80	14.917	2.11	20.92	0.84
2.933	0.90	8.933	3.80	14.933	2.11	20.93	0.84
2.950	0.90	8.950	3.80	14.950	2.11	20.95	0.84
2.967	0.90	8.967	3.80	14.967	2.11	20.97	0.84
2.983	0.90	8.983	3.80	14.983	2.11	20.98	0.84
3.000	0.90	9.000	3.80	15.000	2.11	21.00	0.84
3.017	0.93	9.017	2.25	15.017	2.11	21.02	0.84
3.033	0.93	9.033	2.25	15.033	2.11	21.03	0.84
3.050	0.93	9.050	2.25	15.050	2.11	21.05	0.84
3.067	0.93	9.067	2.25	15.067	2.11	21.07	0.84
3.083	0.93	9.083	2.25	15.083	2.11	21.08	0.84
3.100	0.93	9.100	2.25	15.100	2.11	21.10	0.84
3.117	0.93	9.117	2.25	15.117	2.11	21.12	0.84
3.133	0.93	9.133	2.25	15.133	2.11	21.13	0.84
3.150	0.93	9.150	2.25	15.150	2.11	21.15	0.84
3.167	0.93	9.167	2.25	15.167	2.11	21.17	0.84
3.183	0.93	9.183	2.25	15.183	2.11	21.18	0.84
3.200	0.93	9.200	2.25	15.200	2.11	21.20	0.84
3.217	0.93	9.217	2.25	15.217	2.11	21.22	0.84
3.233	0.93	9.233	2.25	15.233	2.11	21.23	0.84
3.250	0.93	9.250	2.25	15.250	2.11	21.25	0.84
3.267	0.90	9.267	2.25	15.267	2.11	21.27	0.84
3.283	0.90	9.283	2.25	15.283	2.11	21.28	0.84
3.300	0.90	9.300	2.25	15.300	2.11	21.30	0.84
3.317	0.90	9.317	2.25	15.317	2.11	21.32	0.84
3.333	0.90	9.333	2.25	15.333	2.11	21.33	0.84
3.350	0.90	9.350	2.25	15.350	2.11	21.35	0.84
3.367	0.90	9.367	2.25	15.367	2.11	21.37	0.84
3.383	0.90	9.383	2.25	15.383	2.11	21.38	0.84
3.400	0.90	9.400	2.25	15.400	2.11	21.40	0.84
3.417	0.90	9.417	2.25	15.417	2.11	21.42	0.84
3.433	0.90	9.433	2.25	15.433	2.11	21.43	0.84
3.450	0.90	9.450	2.25	15.450	2.11	21.45	0.84
3.467	0.90	9.467	2.25	15.467	2.11	21.47	0.84
3.483	0.90	9.483	2.25	15.483	2.11	21.48	0.84
3.500	0.90	9.500	2.25	15.500	2.11	21.50	0.84
3.517	0.93	9.517	0.00	15.517	2.11	21.52	0.84
3.533	0.93	9.533	0.00	15.533	2.11	21.53	0.84
3.550	0.93	9.550	0.00	15.550	2.11	21.55	0.84
3.567	0.93	9.567	0.00	15.567	2.11	21.57	0.84
3.583	0.93	9.583	0.00	15.583	2.11	21.58	0.84
3.600	0.93	9.600	0.00	15.600	2.11	21.60	0.84
3.617	0.93	9.617	0.00	15.617	2.11	21.62	0.84
3.633	0.93	9.633	0.00	15.633	2.11	21.63	0.84
3.650	0.93	9.650	0.00	15.650	2.11	21.65	0.84
3.667	0.93	9.667	0.00	15.667	2.11	21.67	0.84
3.683	0.93	9.683	0.00	15.683	2.11	21.68	0.84
3.700	0.93	9.700	0.00	15.700	2.11	21.70	0.84
3.717	0.93	9.717	0.00	15.717	2.11	21.72	0.84
3.733	0.93	9.733	0.00	15.733	2.11	21.73	0.84
3.750	0.93	9.750	0.01	15.750	2.11	21.75	0.84
3.767	0.90	9.767	5.07	15.767	2.11	21.77	0.84
3.783	0.90	9.783	5.07	15.783	2.11	21.78	0.84
3.800	0.90	9.800	5.07	15.800	2.11	21.80	0.84
3.817	0.90	9.817	5.07	15.817	2.11	21.82	0.84
3.833	0.90	9.833	5.07	15.833	2.11	21.83	0.84
3.850	0.90	9.850	5.07	15.850	2.11	21.85	0.84
3.867	0.90	9.867	5.07	15.867	2.11	21.87	0.84
3.883	0.90	9.883	5.07	15.883	2.11	21.88	0.84
3.900	0.90	9.900	5.07	15.900	2.11	21.90	0.84
3.917	0.90	9.917	5.07	15.917	2.11	21.92	0.84
3.933	0.90	9.933	5.07	15.933	2.11	21.93	0.84
3.950	0.90	9.950	5.07	15.950	2.11	21.95	0.84
3.967	0.90	9.967	5.07	15.967	2.11	21.97	0.84
3.983	0.90	9.983	5.07	15.983	2.11	21.98	0.84
4.000	0.90	10.000	5.07	16.000	2.11	22.00	0.84
4.017	1.13	10.017	3.24	16.017	1.27	22.02	0.84
4.033	1.13	10.033	3.24	16.033	1.27	22.03	0.84
4.050	1.13	10.050	3.24	16.050	1.27	22.05	0.84
4.067	1.13	10.067	3.24	16.067	1.27	22.07	0.84
4.083	1.13	10.083	3.24	16.083	1.27	22.08	0.84
4.100	1.13	10.100	3.24	16.100	1.27	22.10	0.84
4.117	1.13	10.117	3.24	16.117	1.27	22.12	0.84
4.133	1.13	10.133	3.24	16.133	1.27	22.13	0.84
4.150	1.13	10.150	3.24	16.150	1.27	22.15	0.84
4.167	1.13	10.167	3.24	16.167	1.27	22.17	0.84
4.183	1.13	10.183	3.24	16.183	1.27	22.18	0.84
4.200	1.13	10.200	3.24	16.200	1.27	22.20	0.84
4.217	1.13	10.217	3.24	16.217	1.27	22.22	0.84
4.233	1.13	10.233	3.24	16.233	1.27	22.23	0.84
4.250	1.13	10.250	3.24	16.250	1.27	22.25	0.84
4.267	1.13	10.267	3.24	16.267	1.27	22.27	0.84
4.283	1.13	10.283	3.24	16.283	1.27	22.28	0.84
4.300	1.13	10.300	3.24	16.300	1.27	22.30	0.84
4.317	1.13	10.317	3.24	16.317	1.27	22.32	0.84
4.333	1.13	10.333	3.24	16.333	1.27	22.33	0.84
4.350	1.13	10.350	3.24	16.350	1.27	22.35	0.84
4.367	1.13	10.367	3.24	16.367	1.27	22.37	0.84
4.383	1.13	10.383	3.24	16.383	1.27	22.38	0.84
4.400	1.13	10.400	3.24	16.400	1.27	22.40	0.84
4.417	1.13	10.417	3.24	16.417	1.27	22.42	0.84
4.433	1.13	10.433	3.24	16.433	1.27	22.43	0.84
4.450	1.13	10.450	3.24	16.450	1.27	22.45	0.84
4.467	1.13	10.467	3.24	16.467	1.27	22.47	0.84
4.483	1.13	10.483	3.24	16.483	1.27	22.48	0.84
4.500	1.13	10.500	3.24	16.500	1.27	22.50	0.84
4.517	1.13	10.517	4.36	16.517	1.27	22.52	0.84
4.533	1.13	10.533	4.36	16.533	1.27	22.53	0.84
4.550	1.13	10.550	4.36	16.550	1.27	22.55	0.84
4.567	1.13	10.567	4.36	16.567	1.27	22.57	0.84
4.583	1.13	10.583	4.36	16.583	1.27	22.58	0.84
4.600	1.13	10.600	4.36	16.600	1.27	22.60	0.84
4.617	1.13	10.617	4.36	16.617	1.27	22.62	0.84
4.633	1.13	10.633	4.36	16.633	1.27	22.63	0.84
4.650	1.13	10.650	4.36	16.650	1.27	22.65	0.84
4.667	1.13	10.667	4.36	16.667	1.27	22.67	0.84
4.683	1.13	10.683	4.36	16.683	1.27	22.68	0.84
4.700	1.13	10.700	4.36	16.700	1.27	22.70	0.84
4.717	1.13	10.717	4.36	16.717	1.27	22.72	0.84
4.733	1.13	10.733	4.36	16.733	1.27	22.73	0.84
4.750	1.13	10.750	4.36	16.750	1.27	22.75	0.84
4.767	1.13	10.767	4.36	16.767	1.27	22.77	0.84
4.783	1.13	10.783	4.36	16.783	1.27	22.78	0.84
4.800	1.13	10.800	4.36	16.800	1.27	22.80	0.84
4.817	1.13	10.817	4.36	16.817	1.27	22.82	0.84
4.833	1.13	10.833	4.36	16.833	1.27	22.83	0.84
4.850	1.13	10.850	4.36	16.850	1.27	22.85	0.84

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              4.867    1.13 |10.867    4.36 |16.867    1.27 | 22.87    0.84
              4.883    1.13 |10.883    4.36 |16.883    1.27 | 22.88    0.84
              4.900    1.13 |10.900    4.36 |16.900    1.27 | 22.90    0.84
              4.917    1.13 |10.917    4.36 |16.917    1.27 | 22.92    0.84
              4.933    1.13 |10.933    4.36 |16.933    1.27 | 22.93    0.84
              4.950    1.13 |10.950    4.36 |16.950    1.27 | 22.95    0.84
              4.967    1.13 |10.967    4.36 |16.967    1.27 | 22.97    0.84
              4.983    1.13 |10.983    4.36 |16.983    1.27 | 22.98    0.84
              5.000    1.13 |11.000    4.36 |17.000    1.27 | 23.00    0.84
              5.017    1.13 |11.017    6.76 |17.017    1.27 | 23.02    0.84
              5.033    1.13 |11.033    6.76 |17.033    1.27 | 23.03    0.84
              5.050    1.13 |11.050    6.76 |17.050    1.27 | 23.05    0.84
              5.067    1.13 |11.067    6.76 |17.067    1.27 | 23.07    0.84
              5.083    1.13 |11.083    6.76 |17.083    1.27 | 23.08    0.84
              5.100    1.13 |11.100    6.76 |17.100    1.27 | 23.10    0.84
              5.117    1.13 |11.117    6.76 |17.117    1.27 | 23.12    0.84
              5.133    1.13 |11.133    6.76 |17.133    1.27 | 23.13    0.84
              5.150    1.13 |11.150    6.76 |17.150    1.27 | 23.15    0.84
              5.167    1.13 |11.167    6.76 |17.167    1.27 | 23.17    0.84
              5.183    1.13 |11.183    6.76 |17.183    1.27 | 23.18    0.84
              5.200    1.13 |11.200    6.76 |17.200    1.27 | 23.20    0.84
              5.217    1.13 |11.217    6.76 |17.217    1.27 | 23.22    0.84
              5.233    1.13 |11.233    6.76 |17.233    1.27 | 23.23    0.84
              5.250    1.13 |11.250    6.76 |17.250    1.27 | 23.25    0.84
              5.267    1.13 |11.267    6.76 |17.267    1.27 | 23.27    0.84
              5.283    1.13 |11.283    6.76 |17.283    1.27 | 23.28    0.84
              5.300    1.13 |11.300    6.76 |17.300    1.27 | 23.30    0.84
              5.317    1.13 |11.317    6.76 |17.317    1.27 | 23.32    0.84
              5.333    1.13 |11.333    6.76 |17.333    1.27 | 23.33    0.84
              5.350    1.13 |11.350    6.76 |17.350    1.27 | 23.35    0.84
              5.367    1.13 |11.367    6.76 |17.367    1.27 | 23.37    0.84
              5.383    1.13 |11.383    6.76 |17.383    1.27 | 23.38    0.84
              5.400    1.13 |11.400    6.76 |17.400    1.27 | 23.40    0.84
              5.417    1.13 |11.417    6.76 |17.417    1.27 | 23.42    0.84
              5.433    1.13 |11.433    6.76 |17.433    1.27 | 23.43    0.84
              5.450    1.13 |11.450    6.76 |17.450    1.27 | 23.45    0.84
              5.467    1.13 |11.467    6.76 |17.467    1.27 | 23.47    0.84
              5.483    1.13 |11.483    6.76 |17.483    1.27 | 23.48    0.84
              5.500    1.13 |11.500    6.76 |17.500    1.27 | 23.50    0.84
              5.517    1.13 |11.517   29.28 |17.517    1.27 | 23.52    0.84
              5.533    1.13 |11.533   29.29 |17.533    1.27 | 23.53    0.84
              5.550    1.13 |11.550   29.29 |17.550    1.27 | 23.55    0.84
              5.567    1.13 |11.567   29.29 |17.567    1.27 | 23.57    0.84
              5.583    1.13 |11.583   29.29 |17.583    1.27 | 23.58    0.84
              5.600    1.13 |11.600   29.29 |17.600    1.27 | 23.60    0.84
              5.617    1.13 |11.617   29.29 |17.617    1.27 | 23.62    0.84
              5.633    1.13 |11.633   29.29 |17.633    1.27 | 23.63    0.84
              5.650    1.13 |11.650   29.29 |17.650    1.27 | 23.65    0.84
              5.667    1.13 |11.667   29.29 |17.667    1.27 | 23.67    0.84
              5.683    1.13 |11.683   29.29 |17.683    1.27 | 23.68    0.84
              5.700    1.13 |11.700   29.29 |17.700    1.27 | 23.70    0.84
              5.717    1.13 |11.717   29.29 |17.717    1.27 | 23.72    0.84
              5.733    1.13 |11.733   29.29 |17.733    1.27 | 23.73    0.84
              5.750    1.13 |11.750   29.29 |17.750    1.27 | 23.75    0.84
              5.767    1.13 |11.767   77.70 |17.767    1.27 | 23.77    0.84
              5.783    1.13 |11.783   77.72 |17.783    1.27 | 23.78    0.84
              5.800    1.13 |11.800   77.72 |17.800    1.27 | 23.80    0.84
              5.817    1.13 |11.817   77.72 |17.817    1.27 | 23.82    0.84
              5.833    1.13 |11.833   77.72 |17.833    1.27 | 23.83    0.84
              5.850    1.13 |11.850   77.72 |17.850    1.27 | 23.85    0.84
              5.867    1.13 |11.867   77.72 |17.867    1.27 | 23.87    0.84
              5.883    1.13 |11.883   77.72 |17.883    1.27 | 23.88    0.84
              5.900    1.13 |11.900   77.72 |17.900    1.27 | 23.90    0.84
              5.917    1.13 |11.917   77.72 |17.917    1.27 | 23.92    0.84
              5.933    1.13 |11.933   77.72 |17.933    1.27 | 23.93    0.84
              5.950    1.13 |11.950   77.72 |17.950    1.27 | 23.95    0.84
              5.967    1.13 |11.967   77.72 |17.967    1.27 | 23.97    0.84
              5.983    1.13 |11.983   77.72 |17.983    1.27 | 23.98    0.84
              6.000    1.13 |12.000   77.72 |18.000    1.27 | 24.00    0.84

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.053 (i)
     TIME TO PEAK    (hrs)=  12.083
     RUNOFF VOLUME    (mm)=   7.474
     TOTAL RAINFALL   (mm)=  70.400
     RUNOFF COEFFICIENT   =   0.106

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
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|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61         0.87
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       0.50         3.00
     Length            (m)=     128.45        28.00
     Mannings n            =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      77.72        56.73
               over (min)        5.00         9.00
     Storage Coeff.  (min)=       4.04 (ii)    8.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00         9.00
     Unit Hyd. peak  (cms)=       0.26         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.10          0.266 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.05          12.02
     RUNOFF VOLUME    (mm)=      68.39        22.32          37.52
     TOTAL RAINFALL   (mm)=      70.40        70.40          70.40
     RUNOFF COEFFICIENT   =       0.97         0.32           0.53

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |   0.0061      0.0972
                         0.0015     0.0053    |   0.0064      0.1137
                         0.0026     0.0141    |   0.0067      0.1254
                         0.0031     0.0204    |   0.0069      0.1375
                         0.0038     0.0307    |   0.0071      0.1502
                         0.0043     0.0420    |   0.0293      0.1568
                         0.0048     0.0542    |   0.2405      0.1703
                         0.0053     0.0675    |   1.0015      0.1916
                         0.0055     0.0769    |   2.4172      0.2142
                         0.0059     0.0919    |   4.6073      0.2381

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)    2.475     0.266     12.02      37.52
     OUTFLOW: ID= 1 (0802)    2.475     0.005     20.10      17.33

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  2.00
                TIME SHIFT OF PEAK FLOW          (min)=485.00
                MAXIMUM  STORAGE   USED       (ha.m.)=  0.0681

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--------------------
| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78         0.96
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       1.00         3.00
     Length            (m)=     135.08        28.00
     Mannings n            =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=      77.72        56.73
               over (min)        5.00         9.00
     Storage Coeff.  (min)=       3.38 (ii)    8.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         9.00
     Unit Hyd. peak  (cms)=       0.29         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.19         0.11          0.299 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.05          12.00
     RUNOFF VOLUME    (mm)=      68.40        22.32          37.52
     TOTAL RAINFALL   (mm)=      70.40        70.40          70.40
     RUNOFF COEFFICIENT   =       0.97         0.32           0.53

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0065	0.1033
0.0015	0.0034	0.0070	0.1274
0.0026	0.0096	0.0072	0.1404
0.0034	0.0168	0.0302	0.1472
0.0040	0.0253	0.1105	0.1541
0.0045	0.0350	0.4332	0.1684
0.0051	0.0500	1.0078	0.1835
0.0055	0.0627	1.8746	0.1992
0.0059	0.0768	3.0695	0.2156
0.0062	0.0869	3.8005	0.2241

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	2.737	0.299	12.00	37.52
OUTFLOW: ID= 1 (0801)	2.737	0.006	20.10	17.67

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.95
TIME SHIFT OF PEAK FLOW (min)=486.00
MAXIMUM STORAGE USED (ha.m.)= 0.0745

ADD HYD (0601)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	2.31	0.053	12.08	7.47
+ ID2= 2 (0801):	2.74	0.006	20.10	17.67
ID = 3 (0601):	5.05	0.058	12.08	13.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0601)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0601):	5.05	0.058	12.08	13.98
+ ID2= 2 (0802):	2.47	0.005	20.10	17.33
ID = 1 (0601):	7.53	0.063	12.10	15.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (0204)	Area (ha)=	0.62	Curve Number (CN)=	52.0	
ID= 1 DT= 1.0 min	Ia (mm)=	4.10	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.09			

Unit Hyd Qpeak (cms)= 0.268

PEAK FLOW (cms)= 0.031 (i)
TIME TO PEAK (hrs)= 12.017
RUNOFF VOLUME (mm)= 11.687
TOTAL RAINFALL (mm)= 70.400
RUNOFF COEFFICIENT = 0.166

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0803)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.0000	0.0177
0.0001	0.0176	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0204)	0.625	0.031	12.02	11.69
OUTFLOW: ID= 1 (0803)	0.625	0.000	24.23	0.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.17
TIME SHIFT OF PEAK FLOW (min)=733.00
MAXIMUM STORAGE USED (ha.m.)= 0.0089

CALIB			
STANDHYD (0205)	Area (ha)=	0.24	
ID= 1 DT= 1.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)= 32.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.16	0.08
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	2.00	2.00
Length	(m)=	40.00	60.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)=		77.72	58.21
over (min)		5.00	11.00
Storage Coeff. (min)=		1.32 (ii)	10.08 (ii)
Unit Hyd. Tpeak (min)=		5.00	11.00
Unit Hyd. peak (cms)=		0.44	0.11
			TOTALS
PEAK FLOW	(cms)=	0.02	0.01 0.025 (iii)
TIME TO PEAK	(hrs)=	12.00	12.08 12.00
RUNOFF VOLUME	(mm)=	68.40	22.56 37.21
TOTAL RAINFALL	(mm)=	70.40	70.40 70.40
RUNOFF COEFFICIENT	=	0.97	0.32 0.53

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0804)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	1.0000	0.0153
0.0001	0.0152	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0205)	0.240	0.025	12.00	37.21
OUTFLOW: ID= 1 (0804)	0.240	0.000	24.22	0.97

PEAK FLOW REDUCTION [Qout/Qin](%)= 0.23
TIME SHIFT OF PEAK FLOW (min)=733.00
MAXIMUM STORAGE USED (ha.m.)= 0.0087

****
** SIMULATION NUMBER: 4 **
****

READ STORM
Ptotal= 82.76 mm

Filename: C:\Users\jingram\AppData\Local\Temp\1e5d3a6c-a110-4269-ae5a-28e33273b8b8\758a2a4a
Comments: 25-Year Orillia 24-hour SCS Storm

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	0.93	6.25	0.00	12.25	11.92	18.25	1.49
0.50	0.89	6.50	0.00	12.50	11.92	18.50	1.49
0.75	0.93	6.75	0.00	12.75	6.13	18.75	1.49
1.00	0.89	7.00	0.00	13.00	6.13	19.00	1.49
1.25	0.93	7.25	3.31	13.25	1.16	19.25	1.49
1.50	0.89	7.50	3.31	13.50	1.16	19.50	1.49
1.75	0.93	7.75	3.31	13.75	6.79	19.75	1.49
2.00	0.89	8.00	3.31	14.00	6.79	20.00	1.49
2.25	1.09	8.25	0.00	14.25	2.48	20.25	0.99
2.50	1.06	8.50	0.00	14.50	2.48	20.50	0.99
2.75	1.09	8.75	4.47	14.75	2.48	20.75	0.99
3.00	1.06	9.00	4.47	15.00	2.48	21.00	0.99
3.25	1.09	9.25	2.65	15.25	2.48	21.25	0.99
3.50	1.06	9.50	2.65	15.50	2.48	21.50	0.99
3.75	1.09	9.75	0.00	15.75	2.48	21.75	0.99

4.00	1.06	10.00	5.96	16.00	2.48	22.00	0.99
4.25	1.32	10.25	3.81	16.25	1.49	22.25	0.99
4.50	1.32	10.50	3.81	16.50	1.49	22.50	0.99
4.75	1.32	10.75	5.13	16.75	1.49	22.75	0.99
5.00	1.32	11.00	5.13	17.00	1.49	23.00	0.99
5.25	1.32	11.25	7.95	17.25	1.49	23.25	0.99
5.50	1.32	11.50	7.95	17.50	1.49	23.50	0.99
5.75	1.32	11.75	34.44	17.75	1.49	23.75	0.99
6.00	1.32	12.00	91.41	18.00	1.49	24.00	0.99

CALIB			
NASHYD (0202)	Area (ha)=	2.31	Curve Number (CN)= 42.0
ID= 1 DT= 1.0 min	Ia (mm)=	7.36	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.18	

NOTE: RAINFALL WAS TRANSFORMED TO 1.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	0.93	6.017	0.00	12.017	11.98	18.02	1.49
0.033	0.93	6.033	0.00	12.033	11.92	18.03	1.49
0.050	0.93	6.050	0.00	12.050	11.92	18.05	1.49
0.067	0.93	6.067	0.00	12.067	11.92	18.07	1.49
0.083	0.93	6.083	0.00	12.083	11.92	18.08	1.49
0.100	0.93	6.100	0.00	12.100	11.92	18.10	1.49
0.117	0.93	6.117	0.00	12.117	11.92	18.12	1.49
0.133	0.93	6.133	0.00	12.133	11.92	18.13	1.49
0.150	0.93	6.150	0.00	12.150	11.92	18.15	1.49
0.167	0.93	6.167	0.00	12.167	11.92	18.17	1.49
0.183	0.93	6.183	0.00	12.183	11.92	18.18	1.49
0.200	0.93	6.200	0.00	12.200	11.92	18.20	1.49
0.217	0.93	6.217	0.00	12.217	11.92	18.22	1.49
0.233	0.93	6.233	0.00	12.233	11.92	18.23	1.49
0.250	0.93	6.250	0.00	12.250	11.92	18.25	1.49
0.267	0.89	6.267	0.00	12.267	11.92	18.27	1.49
0.283	0.89	6.283	0.00	12.283	11.92	18.28	1.49
0.300	0.89	6.300	0.00	12.300	11.92	18.30	1.49
0.317	0.89	6.317	0.00	12.317	11.92	18.32	1.49
0.333	0.89	6.333	0.00	12.333	11.92	18.33	1.49
0.350	0.89	6.350	0.00	12.350	11.92	18.35	1.49
0.367	0.89	6.367	0.00	12.367	11.92	18.37	1.49
0.383	0.89	6.383	0.00	12.383	11.92	18.38	1.49
0.400	0.89	6.400	0.00	12.400	11.92	18.40	1.49
0.417	0.89	6.417	0.00	12.417	11.92	18.42	1.49
0.433	0.89	6.433	0.00	12.433	11.92	18.43	1.49
0.450	0.89	6.450	0.00	12.450	11.92	18.45	1.49
0.467	0.89	6.467	0.00	12.467	11.92	18.47	1.49
0.483	0.89	6.483	0.00	12.483	11.92	18.48	1.49
0.500	0.89	6.500	0.00	12.500	11.92	18.50	1.49
0.517	0.93	6.517	0.00	12.517	6.14	18.52	1.49
0.533	0.93	6.533	0.00	12.533	6.13	18.53	1.49
0.550	0.93	6.550	0.00	12.550	6.13	18.55	1.49
0.567	0.93	6.567	0.00	12.567	6.13	18.57	1.49
0.583	0.93	6.583	0.00	12.583	6.13	18.58	1.49
0.600	0.93	6.600	0.00	12.600	6.13	18.60	1.49
0.617	0.93	6.617	0.00	12.617	6.13	18.62	1.49
0.633	0.93	6.633	0.00	12.633	6.13	18.63	1.49
0.650	0.93	6.650	0.00	12.650	6.13	18.65	1.49
0.667	0.93	6.667	0.00	12.667	6.13	18.67	1.49
0.683	0.93	6.683	0.00	12.683	6.13	18.68	1.49
0.700	0.93	6.700	0.00	12.700	6.13	18.70	1.49
0.717	0.93	6.717	0.00	12.717	6.13	18.72	1.49
0.733	0.93	6.733	0.00	12.733	6.13	18.73	1.49
0.750	0.93	6.750	0.00	12.750	6.13	18.75	1.49
0.767	0.89	6.767	0.00	12.767	6.13	18.77	1.49
0.783	0.89	6.783	0.00	12.783	6.13	18.78	1.49
0.800	0.89	6.800	0.00	12.800	6.13	18.80	1.49
0.817	0.89	6.817	0.00	12.817	6.13	18.82	1.49
0.833	0.89	6.833	0.00	12.833	6.13	18.83	1.49
0.850	0.89	6.850	0.00	12.850	6.13	18.85	1.49
0.867	0.89	6.867	0.00	12.867	6.13	18.87	1.49
0.883	0.89	6.883	0.00	12.883	6.13	18.88	1.49
0.900	0.89	6.900	0.00	12.900	6.13	18.90	1.49
0.917	0.89	6.917	0.00	12.917	6.13	18.92	1.49
0.933	0.89	6.933	0.00	12.933	6.13	18.93	1.49
0.950	0.89	6.950	0.00	12.950	6.13	18.95	1.49
0.967	0.89	6.967	0.00	12.967	6.13	18.97	1.49
0.983	0.89	6.983	0.00	12.983	6.13	18.98	1.49
1.000	0.89	7.000	0.01	13.000	6.13	19.00	1.49
1.017	0.93	7.017	3.31	13.017	1.17	19.02	1.49
1.033	0.93	7.033	3.31	13.033	1.16	19.03	1.49
1.050	0.93	7.050	3.31	13.050	1.16	19.05	1.49
1.067	0.93	7.067	3.31	13.067	1.16	19.07	1.49
1.083	0.93	7.083	3.31	13.083	1.16	19.08	1.49
1.100	0.93	7.100	3.31	13.100	1.16	19.10	1.49
1.117	0.93	7.117	3.31	13.117	1.16	19.12	1.49
1.133	0.93	7.133	3.31	13.133	1.16	19.13	1.49
1.150	0.93	7.150	3.31	13.150	1.16	19.15	1.49
1.167	0.93	7.167	3.31	13.167	1.16	19.17	1.49
1.183	0.93	7.183	3.31	13.183	1.16	19.18	1.49
1.200	0.93	7.200	3.31	13.200	1.16	19.20	1.49
1.217	0.93	7.217	3.31	13.217	1.16	19.22	1.49
1.233	0.93	7.233	3.31	13.233	1.16	19.23	1.49
1.250	0.93	7.250	3.31	13.250	1.16	19.25	1.49
1.267	0.89	7.267	3.31	13.267	1.16	19.27	1.49
1.283	0.89	7.283	3.31	13.283	1.16	19.28	1.49
1.300	0.89	7.300	3.31	13.300	1.16	19.30	1.49
1.317	0.89	7.317	3.31	13.317	1.16	19.32	1.49
1.333	0.89	7.333	3.31	13.333	1.16	19.33	1.49
1.350	0.89	7.350	3.31	13.350	1.16	19.35	1.49
1.367	0.89	7.367	3.31	13.367	1.16	19.37	1.49
1.383	0.89	7.383	3.31	13.383	1.16	19.38	1.49
1.400	0.89	7.400	3.31	13.400	1.16	19.40	1.49
1.417	0.89	7.417	3.31	13.417	1.16	19.42	1.49
1.433	0.89	7.433	3.31	13.433	1.16	19.43	1.49
1.450	0.89	7.450	3.31	13.450	1.16	19.45	1.49
1.467	0.89	7.467	3.31	13.467	1.16	19.47	1.49
1.483	0.89	7.483	3.31	13.483	1.16	19.48	1.49
1.500	0.89	7.500	3.31	13.500	1.16	19.50	1.49
1.517	0.93	7.517	3.31	13.517	6.78	19.52	1.49
1.533	0.93	7.533	3.31	13.533	6.79	19.53	1.49
1.550	0.93	7.550	3.31	13.550	6.79	19.55	1.49
1.567	0.93	7.567	3.31	13.567	6.79	19.57	1.49
1.583	0.93	7.583	3.31	13.583	6.79	19.58	1.49
1.600	0.93	7.600	3.31	13.600	6.79	19.60	1.49
1.617	0.93	7.617	3.31	13.617	6.79	19.62	1.49
1.633	0.93	7.633	3.31	13.633	6.79	19.63	1.49
1.650	0.93	7.650	3.31	13.650	6.79	19.65	1.49
1.667	0.93	7.667	3.31	13.667	6.79	19.67	1.49
1.683	0.93	7.683	3.31	13.683	6.79	19.68	1.49
1.700	0.93	7.700	3.31	13.700	6.79	19.70	1.49
1.717	0.93	7.717	3.31	13.717	6.79	19.72	1.49
1.733	0.93	7.733	3.31	13.733	6.79	19.73	1.49
1.750	0.93	7.750	3.31	13.750	6.79	19.75	1.49
1.767	0.89	7.767	3.31	13.767	6.79	19.77	1.49
1.783	0.89	7.783	3.31	13.783	6.79	19.78	1.49
1.800	0.89	7.800	3.31	13.800	6.79	19.80	1.49
1.817	0.89	7.817	3.31	13.817	6.79	19.82	1.49
1.833	0.89	7.833	3.31	13.833	6.79	19.83	1.49
1.850	0.89	7.850	3.31	13.850	6.79	19.85	1.49
1.867	0.89	7.867	3.31	13.867	6.79	19.87	1.49
1.883	0.89	7.883	3.31	13.883	6.79	19.88	1.49
1.900	0.89	7.900	3.31	13.900	6.79	19.90	1.49
1.917	0.89	7.917	3.31	13.917	6.79	19.92	1.49
1.933	0.89	7.933	3.31	13.933	6.79	19.93	1.49
1.950	0.89	7.950	3.31	13.950	6.79	19.95	1.49
1.967	0.89	7.967	3.31	13.967	6.79	19.97	1.49
1.983	0.89	7.983	3.31	13.983	6.79	19.98	1.49
2.000	0.89	8.000	3.30	14.000	6.79	20.00	1.49
2.017	1.09	8.017	0.00	14.017	2.49	20.02	0.99
2.033	1.09	8.033	0.00	14.033	2.48	20.03	0.99
2.050	1.09	8.050	0.00	14.050	2.48	20.05	0.99
2.067	1.09	8.067	0.00	14.067	2.48	20.07	0.99
2.083	1.09	8.083	0.00	14.083	2.48	20.08	0.99
2.100	1.09	8.100	0.00	14.100	2.48	20.10	0.99
2.117	1.09	8.117	0.00	14.117	2.48	20.12	0.99
2.133	1.09	8.133	0.00	14.133	2.48	20.13	0.99
2.150	1.09	8.150	0.00	14.150	2.48	20.15	0.99
2.167	1.09	8.167	0.00	14.167	2.48	20.17	0.99
2.183	1.09	8.183	0.00	14.183	2.48	20.18	0.99
2.200	1.09	8.200	0.00	14.200	2.48	20.20	0.99
2.217	1.09	8.217	0.00	14.217	2.48	20.22	0.99
2.233	1.09	8.233	0.00	14.233	2.48	20.23	0.99
2.250	1.09	8.250	0.00	14.250	2.48	20.25	0.99
2.267	1.06	8.267	0.00	14.267	2.48	20.27	0.99
2.283	1.06	8.283	0.00	14.283	2.48	20.28	0.99
2.300	1.06	8.300	0.00	14.300	2.48	20.30	0.99
2.317	1.06	8.317	0.00	14.317	2.48	20.32	0.99
2.333	1.06	8.333	0.00	14.333	2.48	20.33	0.99
2.350	1.06	8.350	0.00	14.350	2.48	20.35	0.99
2.367	1.06	8.367	0.00	14.367	2.48	20.37	0.99
2.383	1.06	8.383	0.00	14.383	2.48	20.38	0.99
2.400	1.06	8.400	0.00	14.400	2.48	20.40	0.99

2.417	1.06	8.417	0.00	14.417	2.48	20.42	0.99
2.433	1.06	8.433	0.00	14.433	2.48	20.43	0.99
2.450	1.06	8.450	0.00	14.450	2.48	20.45	0.99
2.467	1.06	8.467	0.00	14.467	2.48	20.47	0.99
2.483	1.06	8.483	0.00	14.483	2.48	20.48	0.99
2.500	1.06	8.500	0.01	14.500	2.48	20.50	0.99
2.517	1.09	8.517	4.47	14.517	2.48	20.52	0.99
2.533	1.09	8.533	4.47	14.533	2.48	20.53	0.99
2.550	1.09	8.550	4.47	14.550	2.48	20.55	0.99
2.567	1.09	8.567	4.47	14.567	2.48	20.57	0.99
2.583	1.09	8.583	4.47	14.583	2.48	20.58	0.99
2.600	1.09	8.600	4.47	14.600	2.48	20.60	0.99
2.617	1.09	8.617	4.47	14.617	2.48	20.62	0.99
2.633	1.09	8.633	4.47	14.633	2.48	20.63	0.99
2.650	1.09	8.650	4.47	14.650	2.48	20.65	0.99
2.667	1.09	8.667	4.47	14.667	2.48	20.67	0.99
2.683	1.09	8.683	4.47	14.683	2.48	20.68	0.99
2.700	1.09	8.700	4.47	14.700	2.48	20.70	0.99
2.717	1.09	8.717	4.47	14.717	2.48	20.72	0.99
2.733	1.09	8.733	4.47	14.733	2.48	20.73	0.99
2.750	1.09	8.750	4.47	14.750	2.48	20.75	0.99
2.767	1.06	8.767	4.47	14.767	2.48	20.77	0.99
2.783	1.06	8.783	4.47	14.783	2.48	20.78	0.99
2.800	1.06	8.800	4.47	14.800	2.48	20.80	0.99
2.817	1.06	8.817	4.47	14.817	2.48	20.82	0.99
2.833	1.06	8.833	4.47	14.833	2.48	20.83	0.99
2.850	1.06	8.850	4.47	14.850	2.48	20.85	0.99
2.867	1.06	8.867	4.47	14.867	2.48	20.87	0.99
2.883	1.06	8.883	4.47	14.883	2.48	20.88	0.99
2.900	1.06	8.900	4.47	14.900	2.48	20.90	0.99
2.917	1.06	8.917	4.47	14.917	2.48	20.92	0.99
2.933	1.06	8.933	4.47	14.933	2.48	20.93	0.99
2.950	1.06	8.950	4.47	14.950	2.48	20.95	0.99
2.967	1.06	8.967	4.47	14.967	2.48	20.97	0.99
2.983	1.06	8.983	4.47	14.983	2.48	20.98	0.99
3.000	1.06	9.000	4.47	15.000	2.48	21.00	0.99
3.017	1.09	9.017	2.65	15.017	2.48	21.02	0.99
3.033	1.09	9.033	2.65	15.033	2.48	21.03	0.99
3.050	1.09	9.050	2.65	15.050	2.48	21.05	0.99
3.067	1.09	9.067	2.65	15.067	2.48	21.07	0.99
3.083	1.09	9.083	2.65	15.083	2.48	21.08	0.99
3.100	1.09	9.100	2.65	15.100	2.48	21.10	0.99
3.117	1.09	9.117	2.65	15.117	2.48	21.12	0.99
3.133	1.09	9.133	2.65	15.133	2.48	21.13	0.99
3.150	1.09	9.150	2.65	15.150	2.48	21.15	0.99
3.167	1.09	9.167	2.65	15.167	2.48	21.17	0.99
3.183	1.09	9.183	2.65	15.183	2.48	21.18	0.99
3.200	1.09	9.200	2.65	15.200	2.48	21.20	0.99
3.217	1.09	9.217	2.65	15.217	2.48	21.22	0.99
3.233	1.09	9.233	2.65	15.233	2.48	21.23	0.99
3.250	1.09	9.250	2.65	15.250	2.48	21.25	0.99
3.267	1.06	9.267	2.65	15.267	2.48	21.27	0.99
3.283	1.06	9.283	2.65	15.283	2.48	21.28	0.99
3.300	1.06	9.300	2.65	15.300	2.48	21.30	0.99
3.317	1.06	9.317	2.65	15.317	2.48	21.32	0.99
3.333	1.06	9.333	2.65	15.333	2.48	21.33	0.99
3.350	1.06	9.350	2.65	15.350	2.48	21.35	0.99
3.367	1.06	9.367	2.65	15.367	2.48	21.37	0.99
3.383	1.06	9.383	2.65	15.383	2.48	21.38	0.99
3.400	1.06	9.400	2.65	15.400	2.48	21.40	0.99
3.417	1.06	9.417	2.65	15.417	2.48	21.42	0.99
3.433	1.06	9.433	2.65	15.433	2.48	21.43	0.99
3.450	1.06	9.450	2.65	15.450	2.48	21.45	0.99
3.467	1.06	9.467	2.65	15.467	2.48	21.47	0.99
3.483	1.06	9.483	2.65	15.483	2.48	21.48	0.99
3.500	1.06	9.500	2.65	15.500	2.48	21.50	0.99
3.517	1.09	9.517	0.00	15.517	2.48	21.52	0.99
3.533	1.09	9.533	0.00	15.533	2.48	21.53	0.99
3.550	1.09	9.550	0.00	15.550	2.48	21.55	0.99
3.567	1.09	9.567	0.00	15.567	2.48	21.57	0.99
3.583	1.09	9.583	0.00	15.583	2.48	21.58	0.99
3.600	1.09	9.600	0.00	15.600	2.48	21.60	0.99
3.617	1.09	9.617	0.00	15.617	2.48	21.62	0.99
3.633	1.09	9.633	0.00	15.633	2.48	21.63	0.99
3.650	1.09	9.650	0.00	15.650	2.48	21.65	0.99
3.667	1.09	9.667	0.00	15.667	2.48	21.67	0.99
3.683	1.09	9.683	0.00	15.683	2.48	21.68	0.99
3.700	1.09	9.700	0.00	15.700	2.48	21.70	0.99
3.717	1.09	9.717	0.00	15.717	2.48	21.72	0.99
3.733	1.09	9.733	0.00	15.733	2.48	21.73	0.99
3.750	1.09	9.750	0.01	15.750	2.48	21.75	0.99
3.767	1.06	9.767	5.96	15.767	2.48	21.77	0.99
3.783	1.06	9.783	5.96	15.783	2.48	21.78	0.99
3.800	1.06	9.800	5.96	15.800	2.48	21.80	0.99
3.817	1.06	9.817	5.96	15.817	2.48	21.82	0.99
3.833	1.06	9.833	5.96	15.833	2.48	21.83	0.99
3.850	1.06	9.850	5.96	15.850	2.48	21.85	0.99
3.867	1.06	9.867	5.96	15.867	2.48	21.87	0.99
3.883	1.06	9.883	5.96	15.883	2.48	21.88	0.99
3.900	1.06	9.900	5.96	15.900	2.48	21.90	0.99
3.917	1.06	9.917	5.96	15.917	2.48	21.92	0.99
3.933	1.06	9.933	5.96	15.933	2.48	21.93	0.99
3.950	1.06	9.950	5.96	15.950	2.48	21.95	0.99
3.967	1.06	9.967	5.96	15.967	2.48	21.97	0.99
3.983	1.06	9.983	5.96	15.983	2.48	21.98	0.99
4.000	1.06	10.000	5.96	16.000	2.48	22.00	0.99
4.017	1.32	10.017	3.81	16.017	1.49	22.02	0.99
4.033	1.32	10.033	3.81	16.033	1.49	22.03	0.99
4.050	1.32	10.050	3.81	16.050	1.49	22.05	0.99
4.067	1.32	10.067	3.81	16.067	1.49	22.07	0.99
4.083	1.32	10.083	3.81	16.083	1.49	22.08	0.99
4.100	1.32	10.100	3.81	16.100	1.49	22.10	0.99
4.117	1.32	10.117	3.81	16.117	1.49	22.12	0.99
4.133	1.32	10.133	3.81	16.133	1.49	22.13	0.99
4.150	1.32	10.150	3.81	16.150	1.49	22.15	0.99
4.167	1.32	10.167	3.81	16.167	1.49	22.17	0.99
4.183	1.32	10.183	3.81	16.183	1.49	22.18	0.99
4.200	1.32	10.200	3.81	16.200	1.49	22.20	0.99
4.217	1.32	10.217	3.81	16.217	1.49	22.22	0.99
4.233	1.32	10.233	3.81	16.233	1.49	22.23	0.99
4.250	1.32	10.250	3.81	16.250	1.49	22.25	0.99
4.267	1.32	10.267	3.81	16.267	1.49	22.27	0.99
4.283	1.32	10.283	3.81	16.283	1.49	22.28	0.99
4.300	1.32	10.300	3.81	16.300	1.49	22.30	0.99
4.317	1.32	10.317	3.81	16.317	1.49	22.32	0.99
4.333	1.32	10.333	3.81	16.333	1.49	22.33	0.99
4.350	1.32	10.350	3.81	16.350	1.49	22.35	0.99
4.367	1.32	10.367	3.81	16.367	1.49	22.37	0.99
4.383	1.32	10.383	3.81	16.383	1.49	22.38	0.99
4.400	1.32	10.400	3.81	16.400	1.49	22.40	0.99
4.417	1.32	10.417	3.81	16.417	1.49	22.42	0.99
4.433	1.32	10.433	3.81	16.433	1.49	22.43	0.99
4.450	1.32	10.450	3.81	16.450	1.49	22.45	0.99
4.467	1.32	10.467	3.81	16.467	1.49	22.47	0.99
4.483	1.32	10.483	3.81	16.483	1.49	22.48	0.99
4.500	1.32	10.500	3.81	16.500	1.49	22.50	0.99
4.517	1.32	10.517	5.13	16.517	1.49	22.52	0.99
4.533	1.32	10.533	5.13	16.533	1.49	22.53	0.99
4.550	1.32	10.550	5.13	16.550	1.49	22.55	0.99
4.567	1.32	10.567	5.13	16.567	1.49	22.57	0.99
4.583	1.32	10.583	5.13	16.583	1.49	22.58	0.99
4.600	1.32	10.600	5.13	16.600	1.49	22.60	0.99
4.617	1.32	10.617	5.13	16.617	1.49	22.62	0.99
4.633	1.32	10.633	5.13	16.633	1.49	22.63	0.99
4.650	1.32	10.650	5.13	16.650	1.49	22.65	0.99
4.667	1.32	10.667	5.13	16.667	1.49	22.67	0.99
4.683	1.32	10.683	5.13	16.683	1.49	22.68	0.99
4.700	1.32	10.700	5.13	16.700	1.49	22.70	0.99
4.717	1.32	10.717	5.13	16.717	1.49	22.72	0.99
4.733	1.32	10.733	5.13	16.733	1.49	22.73	0.99
4.750	1.32	10.750	5.13	16.750	1.49	22.75	0.99
4.767	1.32	10.767	5.13	16.767	1.49	22.77	0.99
4.783	1.32	10.783	5.13	16.783	1.49	22.78	0.99
4.800	1.32	10.800	5.13	16.800	1.49	22.80	0.99
4.817	1.32	10.817	5.13	16.817	1.49	22.82	0.99
4.833	1.32	10.833	5.13	16.833	1.49	22.83	0.99
4.850	1.32	10.850	5.13	16.850	1.49	22.85	0.99
4.867	1.32	10.867	5.13	16.867	1.49	22.87	0.99
4.883	1.32	10.883	5.13	16.883	1.49	22.88	0.99
4.900	1.32	10.900	5.13	16.900	1.49	22.90	0.99
4.917	1.32	10.917	5.13	16.917	1.49	22.92	0.99
4.933	1.32	10.933	5.13	16.933	1.49	22.93	0.99
4.950	1.32	10.950	5.13	16.950	1.49	22.95	0.99
4.967	1.32	10.967	5.13	16.967	1.49	22.97	0.99
4.983	1.32	10.983	5.13	16.983	1.49	22.98	0.99
5.000	1.32	11.000	5.13	17.000	1.49	23.00	0.99
5.017	1.32	11.017	7.95	17.017	1.49	23.02	0.99
5.033	1.32	11.033	7.95	17.033	1.49	23.03	0.99
5.050	1.32	11.050	7.95	17.050	1.49	23.05	0.99
5.067	1.32	11.067	7.95	17.067	1.49	23.07	0.99
5.083	1.32	11.083	7.95	17.083	1.49	23.08	0.99
5.100	1.32	11.100	7.95	17.100	1.49	23.10	0.99
5.117	1.32	11.117	7.95	17.117	1.49	23.12	0.99
5.133	1.32	11.133	7.95	17.133	1.49	23.13	0.99
5.150	1.32	11.150	7.95	17.150	1.49	23.15	0.99
5.167	1.32	11.167	7.95	17.167	1.49	23.17	0.99
5.183	1.32	11.183	7.95	17.183	1.49	23.18	0.99
5.200	1.32	11.200	7.95	17.200	1.49	23.20	0.99

5.217	1.32	11.217	7.95	17.217	1.49	23.22	0.99
5.233	1.32	11.233	7.95	17.233	1.49	23.23	0.99
5.250	1.32	11.250	7.95	17.250	1.49	23.25	0.99
5.267	1.32	11.267	7.95	17.267	1.49	23.27	0.99
5.283	1.32	11.283	7.95	17.283	1.49	23.28	0.99
5.300	1.32	11.300	7.95	17.300	1.49	23.30	0.99
5.317	1.32	11.317	7.95	17.317	1.49	23.32	0.99
5.333	1.32	11.333	7.95	17.333	1.49	23.33	0.99
5.350	1.32	11.350	7.95	17.350	1.49	23.35	0.99
5.367	1.32	11.367	7.95	17.367	1.49	23.37	0.99
5.383	1.32	11.383	7.95	17.383	1.49	23.38	0.99
5.400	1.32	11.400	7.95	17.400	1.49	23.40	0.99
5.417	1.32	11.417	7.95	17.417	1.49	23.42	0.99
5.433	1.32	11.433	7.95	17.433	1.49	23.43	0.99
5.450	1.32	11.450	7.95	17.450	1.49	23.45	0.99
5.467	1.32	11.467	7.95	17.467	1.49	23.47	0.99
5.483	1.32	11.483	7.95	17.483	1.49	23.48	0.99
5.500	1.32	11.500	7.95	17.500	1.49	23.50	0.99
5.517	1.32	11.517	34.43	17.517	1.49	23.52	0.99
5.533	1.32	11.533	34.44	17.533	1.49	23.53	0.99
5.550	1.32	11.550	34.44	17.550	1.49	23.55	0.99
5.567	1.32	11.567	34.44	17.567	1.49	23.57	0.99
5.583	1.32	11.583	34.44	17.583	1.49	23.58	0.99
5.600	1.32	11.600	34.44	17.600	1.49	23.60	0.99
5.617	1.32	11.617	34.44	17.617	1.49	23.62	0.99
5.633	1.32	11.633	34.44	17.633	1.49	23.63	0.99
5.650	1.32	11.650	34.44	17.650	1.49	23.65	0.99
5.667	1.32	11.667	34.44	17.667	1.49	23.67	0.99
5.683	1.32	11.683	34.44	17.683	1.49	23.68	0.99
5.700	1.32	11.700	34.44	17.700	1.49	23.70	0.99
5.717	1.32	11.717	34.44	17.717	1.49	23.72	0.99
5.733	1.32	11.733	34.44	17.733	1.49	23.73	0.99
5.750	1.32	11.750	34.44	17.750	1.49	23.75	0.99
5.767	1.32	11.767	91.38	17.767	1.49	23.77	0.99
5.783	1.32	11.783	91.41	17.783	1.49	23.78	0.99
5.800	1.32	11.800	91.41	17.800	1.49	23.80	0.99
5.817	1.32	11.817	91.41	17.817	1.49	23.82	0.99
5.833	1.32	11.833	91.41	17.833	1.49	23.83	0.99
5.850	1.32	11.850	91.41	17.850	1.49	23.85	0.99
5.867	1.32	11.867	91.41	17.867	1.49	23.87	0.99
5.883	1.32	11.883	91.41	17.883	1.49	23.88	0.99
5.900	1.32	11.900	91.41	17.900	1.49	23.90	0.99
5.917	1.32	11.917	91.41	17.917	1.49	23.92	0.99
5.933	1.32	11.933	91.41	17.933	1.49	23.93	0.99
5.950	1.32	11.950	91.41	17.950	1.49	23.95	0.99
5.967	1.32	11.967	91.41	17.967	1.49	23.97	0.99
5.983	1.32	11.983	91.41	17.983	1.49	23.98	0.99
6.000	1.32	12.000	91.41	18.000	1.49	24.00	0.99

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.075 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 10.462
TOTAL RAINFALL (mm)= 82.757
RUNOFF COEFFICIENT = 0.126

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0203) | Area (ha)= 2.47
ID= 1 DT= 1.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.61	0.87
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	0.50	3.00
Length	(m)=	128.45	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)	=	91.41	74.88
over (min)		5.00	9.00
Storage Coeff.	(min)=	3.79 (ii)	8.33 (ii)
Unit Hyd. Tpeak	(min)=	5.00	9.00
Unit Hyd. peak	(cms)=	0.27	0.13

		TOTALS
PEAK FLOW	(cms)=	0.331 (iii)
TIME TO PEAK	(hrs)=	12.02
RUNOFF VOLUME	(mm)=	46.37
TOTAL RAINFALL	(mm)=	82.76
RUNOFF COEFFICIENT	=	0.56

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0802)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0061	0.0972
0.0015	0.0053	0.0064	0.1137
0.0026	0.0141	0.0067	0.1254
0.0031	0.0204	0.0069	0.1375
0.0038	0.0307	0.0071	0.1502
0.0043	0.0420	0.0293	0.1568
0.0048	0.0542	0.2405	0.1703
0.0053	0.0675	1.0015	0.1916
0.0055	0.0769	2.4172	0.2142
0.0059	0.0919	4.6073	0.2381

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0203)	2.475	0.331	12.02	46.37
OUTFLOW: ID= 1 (0802)	2.475	0.006	20.17	19.13

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.74
TIME SHIFT OF PEAK FLOW (min)=489.00
MAXIMUM STORAGE USED (ha.m.)= 0.0867

CALIB
STANDHYD (0201) | Area (ha)= 2.74
ID= 1 DT= 1.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.96
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	1.00	3.00
Length	(m)=	135.08	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)	=	91.41	74.88
over (min)		5.00	8.00
Storage Coeff.	(min)=	3.17 (ii)	7.71 (ii)
Unit Hyd. Tpeak	(min)=	5.00	8.00
Unit Hyd. peak	(cms)=	0.30	0.14

		TOTALS
PEAK FLOW	(cms)=	0.377 (iii)
TIME TO PEAK	(hrs)=	12.00
RUNOFF VOLUME	(mm)=	46.37
TOTAL RAINFALL	(mm)=	82.76
RUNOFF COEFFICIENT	=	0.56

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)
IN= 2---> OUT= 1
DT= 1.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0065	0.1033
0.0015	0.0034	0.0070	0.1274
0.0026	0.0096	0.0072	0.1404
0.0034	0.0168	0.0302	0.1472
0.0040	0.0253	0.1105	0.1541
0.0045	0.0350	0.4332	0.1684
0.0051	0.0500	1.0078	0.1835
0.0055	0.0627	1.8746	0.1992
0.0059	0.0768	3.0695	0.2156
0.0062	0.0869	3.8005	0.2241

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

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     INFLOW : ID= 2 (0201)      2.737      0.377     12.00      46.37
     OUTFLOW: ID= 1 (0801)      2.737      0.006     20.15      19.49

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.68
                   TIME SHIFT OF PEAK FLOW         (min)=489.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0949

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0202):     2.31   0.075    12.08    10.46
       + ID2= 2 (0801):     2.74   0.006    20.15    19.49
         ================================================
         ID = 3 (0601):     5.05   0.080    12.08    16.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     5.05   0.080    12.08    16.67
       + ID2= 2 (0802):     2.47   0.006    20.17    19.13
         ================================================
         ID = 1 (0601):     7.53   0.085    12.08    17.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 52.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.042 (i)
     TIME TO PEAK    (hrs)=  12.017
     RUNOFF VOLUME    (mm)=  15.893
     TOTAL RAINFALL   (mm)=  82.757
     RUNOFF COEFFICIENT   =   0.192

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000     0.0177
                          0.0001     0.0176   |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)    0.625     0.042     12.02      15.89
     OUTFLOW: ID= 1 (0803)    0.625     0.000     24.23       0.44

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.16
                   TIME SHIFT OF PEAK FLOW         (min)=733.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0121

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--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------

                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.16         0.08
     Dep. Storage     (mm)=      2.00         5.00
     Average Slope     (%)=      2.00         2.00
     Length            (m)=     40.00        60.00
     Mannings n           =     0.013        0.190

     Max.Eff.Inten.(mm/hr)=     91.41        76.78
               over (min)        5.00        10.00
     Storage Coeff.  (min)=      1.24 (ii)    9.44 (ii)

     Unit Hyd. Tpeak (min)=      5.00        10.00
     Unit Hyd. peak  (cms)=      0.45         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.02         0.01          0.031 (iii)
     TIME TO PEAK    (hrs)=     12.00        12.07         12.00
     RUNOFF VOLUME    (mm)=     80.76        29.73         46.04
     TOTAL RAINFALL   (mm)=     82.76        82.76         82.76
     RUNOFF COEFFICIENT   =      0.98         0.36          0.56

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000     0.0153
                          0.0001     0.0152   |   0.0000     0.0000

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)    0.240     0.031     12.00      46.04
     OUTFLOW: ID= 1 (0804)    0.240     0.000     24.23       1.21

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.23
                   TIME SHIFT OF PEAK FLOW         (min)=734.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0108

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  ** SIMULATION NUMBER:   5 **
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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1e5d3a6c-a110-4269-ae5a-28e33273b8b8\1e3de83a
| Ptotal= 91.99 mm |    Comments: 50-Year Orillia 24-hour SCS Storm
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.25	1.03	6.25	0.00	12.25	13.25	18.25	1.66
0.50	0.99	6.50	0.00	12.50	13.25	18.50	1.66
0.75	1.03	6.75	0.00	12.75	6.81	18.75	1.66
1.00	0.99	7.00	0.00	13.00	6.81	19.00	1.66
1.25	1.03	7.25	3.68	13.25	1.29	19.25	1.66
1.50	0.99	7.50	3.68	13.50	1.29	19.50	1.66
1.75	1.03	7.75	3.68	13.75	7.54	19.75	1.66
2.00	0.99	8.00	3.68	14.00	7.54	20.00	1.66
2.25	1.21	8.25	0.00	14.25	2.76	20.25	1.10
2.50	1.18	8.50	0.00	14.50	2.76	20.50	1.10
2.75	1.21	8.75	4.97	14.75	2.76	20.75	1.10
3.00	1.18	9.00	4.97	15.00	2.76	21.00	1.10
3.25	1.21	9.25	2.94	15.25	2.76	21.25	1.10
3.50	1.18	9.50	2.94	15.50	2.76	21.50	1.10
3.75	1.21	9.75	0.00	15.75	2.76	21.75	1.10
4.00	1.18	10.00	6.62	16.00	2.76	22.00	1.10
4.25	1.47	10.25	4.23	16.25	1.66	22.25	1.10
4.50	1.47	10.50	4.23	16.50	1.66	22.50	1.10
4.75	1.47	10.75	5.70	16.75	1.66	22.75	1.10
5.00	1.47	11.00	5.70	17.00	1.66	23.00	1.10
5.25	1.47	11.25	8.83	17.25	1.66	23.25	1.10
5.50	1.47	11.50	8.83	17.50	1.66	23.50	1.10
5.75	1.47	11.75	38.27	17.75	1.66	23.75	1.10
6.00	1.47	12.00	101.57	18.00	1.66	24.00	1.10

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| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.
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---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.017	1.03	6.017	0.00	12.017	13.31	18.02	1.66
0.033	1.03	6.033	0.00	12.033	13.25	18.03	1.66
0.050	1.03	6.050	0.00	12.050	13.25	18.05	1.66
0.067	1.03	6.067	0.00	12.067	13.25	18.07	1.66
0.083	1.03	6.083	0.00	12.083	13.25	18.08	1.66
0.100	1.03	6.100	0.00	12.100	13.25	18.10	1.66
0.117	1.03	6.117	0.00	12.117	13.25	18.12	1.66
0.133	1.03	6.133	0.00	12.133	13.25	18.13	1.66
0.150	1.03	6.150	0.00	12.150	13.25	18.15	1.66
0.167	1.03	6.167	0.00	12.167	13.25	18.17	1.66
0.183	1.03	6.183	0.00	12.183	13.25	18.18	1.66
0.200	1.03	6.200	0.00	12.200	13.25	18.20	1.66
0.217	1.03	6.217	0.00	12.217	13.25	18.22	1.66
0.233	1.03	6.233	0.00	12.233	13.25	18.23	1.66
0.250	1.03	6.250	0.00	12.250	13.25	18.25	1.66
0.267	0.99	6.267	0.00	12.267	13.25	18.27	1.66
0.283	0.99	6.283	0.00	12.283	13.25	18.28	1.66
0.300	0.99	6.300	0.00	12.300	13.25	18.30	1.66
0.317	0.99	6.317	0.00	12.317	13.25	18.32	1.66
0.333	0.99	6.333	0.00	12.333	13.25	18.33	1.66
0.350	0.99	6.350	0.00	12.350	13.25	18.35	1.66
0.367	0.99	6.367	0.00	12.367	13.25	18.37	1.66
0.383	0.99	6.383	0.00	12.383	13.25	18.38	1.66
0.400	0.99	6.400	0.00	12.400	13.25	18.40	1.66
0.417	0.99	6.417	0.00	12.417	13.25	18.42	1.66
0.433	0.99	6.433	0.00	12.433	13.25	18.43	1.66
0.450	0.99	6.450	0.00	12.450	13.25	18.45	1.66
0.467	0.99	6.467	0.00	12.467	13.25	18.47	1.66
0.483	0.99	6.483	0.00	12.483	13.25	18.48	1.66
0.500	0.99	6.500	0.00	12.500	13.25	18.50	1.66
0.517	1.03	6.517	0.00	12.517	6.82	18.52	1.66
0.533	1.03	6.533	0.00	12.533	6.81	18.53	1.66
0.550	1.03	6.550	0.00	12.550	6.81	18.55	1.66
0.567	1.03	6.567	0.00	12.567	6.81	18.57	1.66
0.583	1.03	6.583	0.00	12.583	6.81	18.58	1.66
0.600	1.03	6.600	0.00	12.600	6.81	18.60	1.66
0.617	1.03	6.617	0.00	12.617	6.81	18.62	1.66
0.633	1.03	6.633	0.00	12.633	6.81	18.63	1.66
0.650	1.03	6.650	0.00	12.650	6.81	18.65	1.66
0.667	1.03	6.667	0.00	12.667	6.81	18.67	1.66
0.683	1.03	6.683	0.00	12.683	6.81	18.68	1.66
0.700	1.03	6.700	0.00	12.700	6.81	18.70	1.66
0.717	1.03	6.717	0.00	12.717	6.81	18.72	1.66
0.733	1.03	6.733	0.00	12.733	6.81	18.73	1.66
0.750	1.03	6.750	0.00	12.750	6.81	18.75	1.66
0.767	0.99	6.767	0.00	12.767	6.81	18.77	1.66
0.783	0.99	6.783	0.00	12.783	6.81	18.78	1.66
0.800	0.99	6.800	0.00	12.800	6.81	18.80	1.66
0.817	0.99	6.817	0.00	12.817	6.81	18.82	1.66
0.833	0.99	6.833	0.00	12.833	6.81	18.83	1.66
0.850	0.99	6.850	0.00	12.850	6.81	18.85	1.66
0.867	0.99	6.867	0.00	12.867	6.81	18.87	1.66
0.883	0.99	6.883	0.00	12.883	6.81	18.88	1.66
0.900	0.99	6.900	0.00	12.900	6.81	18.90	1.66
0.917	0.99	6.917	0.00	12.917	6.81	18.92	1.66
0.933	0.99	6.933	0.00	12.933	6.81	18.93	1.66
0.950	0.99	6.950	0.00	12.950	6.81	18.95	1.66
0.967	0.99	6.967	0.00	12.967	6.81	18.97	1.66
0.983	0.99	6.983	0.00	12.983	6.81	18.98	1.66
1.000	0.99	7.000	0.01	13.000	6.81	19.00	1.66
1.017	1.03	7.017	3.68	13.017	1.30	19.02	1.66
1.033	1.03	7.033	3.68	13.033	1.29	19.03	1.66
1.050	1.03	7.050	3.68	13.050	1.29	19.05	1.66
1.067	1.03	7.067	3.68	13.067	1.29	19.07	1.66
1.083	1.03	7.083	3.68	13.083	1.29	19.08	1.66
1.100	1.03	7.100	3.68	13.100	1.29	19.10	1.66
1.117	1.03	7.117	3.68	13.117	1.29	19.12	1.66
1.133	1.03	7.133	3.68	13.133	1.29	19.13	1.66
1.150	1.03	7.150	3.68	13.150	1.29	19.15	1.66
1.167	1.03	7.167	3.68	13.167	1.29	19.17	1.66
1.183	1.03	7.183	3.68	13.183	1.29	19.18	1.66
1.200	1.03	7.200	3.68	13.200	1.29	19.20	1.66
1.217	1.03	7.217	3.68	13.217	1.29	19.22	1.66
1.233	1.03	7.233	3.68	13.233	1.29	19.23	1.66
1.250	1.03	7.250	3.68	13.250	1.29	19.25	1.66
1.267	0.99	7.267	3.68	13.267	1.29	19.27	1.66
1.283	0.99	7.283	3.68	13.283	1.29	19.28	1.66
1.300	0.99	7.300	3.68	13.300	1.29	19.30	1.66
1.317	0.99	7.317	3.68	13.317	1.29	19.32	1.66
1.333	0.99	7.333	3.68	13.333	1.29	19.33	1.66
1.350	0.99	7.350	3.68	13.350	1.29	19.35	1.66
1.367	0.99	7.367	3.68	13.367	1.29	19.37	1.66
1.383	0.99	7.383	3.68	13.383	1.29	19.38	1.66
1.400	0.99	7.400	3.68	13.400	1.29	19.40	1.66
1.417	0.99	7.417	3.68	13.417	1.29	19.42	1.66
1.433	0.99	7.433	3.68	13.433	1.29	19.43	1.66
1.450	0.99	7.450	3.68	13.450	1.29	19.45	1.66
1.467	0.99	7.467	3.68	13.467	1.29	19.47	1.66
1.483	0.99	7.483	3.68	13.483	1.29	19.48	1.66
1.500	0.99	7.500	3.68	13.500	1.29	19.50	1.66
1.517	1.03	7.517	3.68	13.517	7.53	19.52	1.66
1.533	1.03	7.533	3.68	13.533	7.54	19.53	1.66
1.550	1.03	7.550	3.68	13.550	7.54	19.55	1.66
1.567	1.03	7.567	3.68	13.567	7.54	19.57	1.66
1.583	1.03	7.583	3.68	13.583	7.54	19.58	1.66
1.600	1.03	7.600	3.68	13.600	7.54	19.60	1.66
1.617	1.03	7.617	3.68	13.617	7.54	19.62	1.66
1.633	1.03	7.633	3.68	13.633	7.54	19.63	1.66
1.650	1.03	7.650	3.68	13.650	7.54	19.65	1.66
1.667	1.03	7.667	3.68	13.667	7.54	19.67	1.66
1.683	1.03	7.683	3.68	13.683	7.54	19.68	1.66
1.700	1.03	7.700	3.68	13.700	7.54	19.70	1.66
1.717	1.03	7.717	3.68	13.717	7.54	19.72	1.66
1.733	1.03	7.733	3.68	13.733	7.54	19.73	1.66
1.750	1.03	7.750	3.68	13.750	7.54	19.75	1.66
1.767	0.99	7.767	3.68	13.767	7.54	19.77	1.66
1.783	0.99	7.783	3.68	13.783	7.54	19.78	1.66
1.800	0.99	7.800	3.68	13.800	7.54	19.80	1.66
1.817	0.99	7.817	3.68	13.817	7.54	19.82	1.66
1.833	0.99	7.833	3.68	13.833	7.54	19.83	1.66
1.850	0.99	7.850	3.68	13.850	7.54	19.85	1.66
1.867	0.99	7.867	3.68	13.867	7.54	19.87	1.66
1.883	0.99	7.883	3.68	13.883	7.54	19.88	1.66
1.900	0.99	7.900	3.68	13.900	7.54	19.90	1.66
1.917	0.99	7.917	3.68	13.917	7.54	19.92	1.66
1.933	0.99	7.933	3.68	13.933	7.54	19.93	1.66
1.950	0.99	7.950	3.68	13.950	7.54	19.95	1.66
1.967	0.99	7.967	3.68	13.967	7.54	19.97	1.66
1.983	0.99	7.983	3.68	13.983	7.54	19.98	1.66
2.000	0.99	8.000	3.67	14.000	7.54	20.00	1.66
2.017	1.21	8.017	0.00	14.017	2.77	20.02	1.10
2.033	1.21	8.033	0.00	14.033	2.76	20.03	1.10
2.050	1.21	8.050	0.00	14.050	2.76	20.05	1.10
2.067	1.21	8.067	0.00	14.067	2.76	20.07	1.10
2.083	1.21	8.083	0.00	14.083	2.76	20.08	1.10
2.100	1.21	8.100	0.00	14.100	2.76	20.10	1.10
2.117	1.21	8.117	0.00	14.117	2.76	20.12	1.10
2.133	1.21	8.133	0.00	14.133	2.76	20.13	1.10
2.150	1.21	8.150	0.00	14.150	2.76	20.15	1.10
2.167	1.21	8.167	0.00	14.167	2.76	20.17	1.10
2.183	1.21	8.183	0.00	14.183	2.76	20.18	1.10
2.200	1.21	8.200	0.00	14.200	2.76	20.20	1.10
2.217	1.21	8.217	0.00	14.217	2.76	20.22	1.10
2.233	1.21	8.233	0.00	14.233	2.76	20.23	1.10
2.250	1.21	8.250	0.00	14.250	2.76	20.25	1.10
2.267	1.18	8.267	0.00	14.267	2.76	20.27	1.10
2.283	1.18	8.283	0.00	14.283	2.76	20.28	1.10
2.300	1.18	8.300	0.00	14.300	2.76	20.30	1.10
2.317	1.18	8.317	0.00	14.317	2.76	20.32	1.10
2.333	1.18	8.333	0.00	14.333	2.76	20.33	1.10
2.350	1.18	8.350	0.00	14.350	2.76	20.35	1.10
2.367	1.18	8.367	0.00	14.367	2.76	20.37	1.10
2.383	1.18	8.383	0.00	14.383	2.76	20.38	1.10
2.400	1.18	8.400	0.00	14.400	2.76	20.40	1.10
2.417	1.18	8.417	0.00	14.417	2.76	20.42	1.10
2.433	1.18	8.433	0.00	14.433	2.76	20.43	1.10
2.450	1.18	8.450	0.00	14.450	2.76	20.45	1.10
2.467	1.18	8.467	0.00	14.467	2.76	20.47	1.10
2.483	1.18	8.483	0.00	14.483	2.76	20.48	1.10
2.500	1.18	8.500	0.01	14.500	2.76	20.50	1.10
2.517	1.21	8.517	4.97	14.517	2.76	20.52	1.10
2.533	1.21	8.533	4.97	14.533	2.76	20.53	1.10
2.550	1.21	8.550	4.97	14.550	2.76	20.55	1.10
2.567	1.21	8.567	4.97	14.567	2.76	20.57	1.10
2.583	1.21	8.583	4.97	14.583	2.76	20.58	1.10
2.600	1.21	8.600	4.97	14.600	2.76	20.60	1.10
2.617	1.21	8.617	4.97	14.617	2.76	20.62	1.10
2.633	1.21	8.633	4.97	14.633	2.76	20.63	1.10
2.650	1.21	8.650	4.97	14.650	2.76	20.65	1.10
2.667	1.21	8.667	4.97	14.667	2.76	20.67	1.10
2.683	1.21	8.683	4.97	14.683	2.76	20.68	1.10
2.700	1.21	8.700	4.97	14.700	2.76	20.70	1.10
2.717	1.21	8.717	4.97	14.717	2.76	20.72	1.10
2.733	1.21	8.733	4.97	14.733	2.76	20.73	1.10
2.750	1.21	8.750	4.97	14.750	2.76	20.75	1.10

2.767	1.18	8.767	4.97	14.767	2.76	20.77	1.10
2.783	1.18	8.783	4.97	14.783	2.76	20.78	1.10
2.800	1.18	8.800	4.97	14.800	2.76	20.80	1.10
2.817	1.18	8.817	4.97	14.817	2.76	20.82	1.10
2.833	1.18	8.833	4.97	14.833	2.76	20.83	1.10
2.850	1.18	8.850	4.97	14.850	2.76	20.85	1.10
2.867	1.18	8.867	4.97	14.867	2.76	20.87	1.10
2.883	1.18	8.883	4.97	14.883	2.76	20.88	1.10
2.900	1.18	8.900	4.97	14.900	2.76	20.90	1.10
2.917	1.18	8.917	4.97	14.917	2.76	20.92	1.10
2.933	1.18	8.933	4.97	14.933	2.76	20.93	1.10
2.950	1.18	8.950	4.97	14.950	2.76	20.95	1.10
2.967	1.18	8.967	4.97	14.967	2.76	20.97	1.10
2.983	1.18	8.983	4.97	14.983	2.76	20.98	1.10
3.000	1.18	9.000	4.97	15.000	2.76	21.00	1.10
3.017	1.21	9.017	2.94	15.017	2.76	21.02	1.10
3.033	1.21	9.033	2.94	15.033	2.76	21.03	1.10
3.050	1.21	9.050	2.94	15.050	2.76	21.05	1.10
3.067	1.21	9.067	2.94	15.067	2.76	21.07	1.10
3.083	1.21	9.083	2.94	15.083	2.76	21.08	1.10
3.100	1.21	9.100	2.94	15.100	2.76	21.10	1.10
3.117	1.21	9.117	2.94	15.117	2.76	21.12	1.10
3.133	1.21	9.133	2.94	15.133	2.76	21.13	1.10
3.150	1.21	9.150	2.94	15.150	2.76	21.15	1.10
3.167	1.21	9.167	2.94	15.167	2.76	21.17	1.10
3.183	1.21	9.183	2.94	15.183	2.76	21.18	1.10
3.200	1.21	9.200	2.94	15.200	2.76	21.20	1.10
3.217	1.21	9.217	2.94	15.217	2.76	21.22	1.10
3.233	1.21	9.233	2.94	15.233	2.76	21.23	1.10
3.250	1.21	9.250	2.94	15.250	2.76	21.25	1.10
3.267	1.18	9.267	2.94	15.267	2.76	21.27	1.10
3.283	1.18	9.283	2.94	15.283	2.76	21.28	1.10
3.300	1.18	9.300	2.94	15.300	2.76	21.30	1.10
3.317	1.18	9.317	2.94	15.317	2.76	21.32	1.10
3.333	1.18	9.333	2.94	15.333	2.76	21.33	1.10
3.350	1.18	9.350	2.94	15.350	2.76	21.35	1.10
3.367	1.18	9.367	2.94	15.367	2.76	21.37	1.10
3.383	1.18	9.383	2.94	15.383	2.76	21.38	1.10
3.400	1.18	9.400	2.94	15.400	2.76	21.40	1.10
3.417	1.18	9.417	2.94	15.417	2.76	21.42	1.10
3.433	1.18	9.433	2.94	15.433	2.76	21.43	1.10
3.450	1.18	9.450	2.94	15.450	2.76	21.45	1.10
3.467	1.18	9.467	2.94	15.467	2.76	21.47	1.10
3.483	1.18	9.483	2.94	15.483	2.76	21.48	1.10
3.500	1.18	9.500	2.94	15.500	2.76	21.50	1.10
3.517	1.21	9.517	0.00	15.517	2.76	21.52	1.10
3.533	1.21	9.533	0.00	15.533	2.76	21.53	1.10
3.550	1.21	9.550	0.00	15.550	2.76	21.55	1.10
3.567	1.21	9.567	0.00	15.567	2.76	21.57	1.10
3.583	1.21	9.583	0.00	15.583	2.76	21.58	1.10
3.600	1.21	9.600	0.00	15.600	2.76	21.60	1.10
3.617	1.21	9.617	0.00	15.617	2.76	21.62	1.10
3.633	1.21	9.633	0.00	15.633	2.76	21.63	1.10
3.650	1.21	9.650	0.00	15.650	2.76	21.65	1.10
3.667	1.21	9.667	0.00	15.667	2.76	21.67	1.10
3.683	1.21	9.683	0.00	15.683	2.76	21.68	1.10
3.700	1.21	9.700	0.00	15.700	2.76	21.70	1.10
3.717	1.21	9.717	0.00	15.717	2.76	21.72	1.10
3.733	1.21	9.733	0.00	15.733	2.76	21.73	1.10
3.750	1.21	9.750	0.01	15.750	2.76	21.75	1.10
3.767	1.18	9.767	6.62	15.767	2.76	21.77	1.10
3.783	1.18	9.783	6.62	15.783	2.76	21.78	1.10
3.800	1.18	9.800	6.62	15.800	2.76	21.80	1.10
3.817	1.18	9.817	6.62	15.817	2.76	21.82	1.10
3.833	1.18	9.833	6.62	15.833	2.76	21.83	1.10
3.850	1.18	9.850	6.62	15.850	2.76	21.85	1.10
3.867	1.18	9.867	6.62	15.867	2.76	21.87	1.10
3.883	1.18	9.883	6.62	15.883	2.76	21.88	1.10
3.900	1.18	9.900	6.62	15.900	2.76	21.90	1.10
3.917	1.18	9.917	6.62	15.917	2.76	21.92	1.10
3.933	1.18	9.933	6.62	15.933	2.76	21.93	1.10
3.950	1.18	9.950	6.62	15.950	2.76	21.95	1.10
3.967	1.18	9.967	6.62	15.967	2.76	21.97	1.10
3.983	1.18	9.983	6.62	15.983	2.76	21.98	1.10
4.000	1.18	10.000	6.62	16.000	2.76	22.00	1.10
4.017	1.47	10.017	4.23	16.017	1.66	22.02	1.10
4.033	1.47	10.033	4.23	16.033	1.66	22.03	1.10
4.050	1.47	10.050	4.23	16.050	1.66	22.05	1.10
4.067	1.47	10.067	4.23	16.067	1.66	22.07	1.10
4.083	1.47	10.083	4.23	16.083	1.66	22.08	1.10
4.100	1.47	10.100	4.23	16.100	1.66	22.10	1.10
4.117	1.47	10.117	4.23	16.117	1.66	22.12	1.10
4.133	1.47	10.133	4.23	16.133	1.66	22.13	1.10
4.150	1.47	10.150	4.23	16.150	1.66	22.15	1.10
4.167	1.47	10.167	4.23	16.167	1.66	22.17	1.10
4.183	1.47	10.183	4.23	16.183	1.66	22.18	1.10
4.200	1.47	10.200	4.23	16.200	1.66	22.20	1.10
4.217	1.47	10.217	4.23	16.217	1.66	22.22	1.10
4.233	1.47	10.233	4.23	16.233	1.66	22.23	1.10
4.250	1.47	10.250	4.23	16.250	1.66	22.25	1.10
4.267	1.47	10.267	4.23	16.267	1.66	22.27	1.10
4.283	1.47	10.283	4.23	16.283	1.66	22.28	1.10
4.300	1.47	10.300	4.23	16.300	1.66	22.30	1.10
4.317	1.47	10.317	4.23	16.317	1.66	22.32	1.10
4.333	1.47	10.333	4.23	16.333	1.66	22.33	1.10
4.350	1.47	10.350	4.23	16.350	1.66	22.35	1.10
4.367	1.47	10.367	4.23	16.367	1.66	22.37	1.10
4.383	1.47	10.383	4.23	16.383	1.66	22.38	1.10
4.400	1.47	10.400	4.23	16.400	1.66	22.40	1.10
4.417	1.47	10.417	4.23	16.417	1.66	22.42	1.10
4.433	1.47	10.433	4.23	16.433	1.66	22.43	1.10
4.450	1.47	10.450	4.23	16.450	1.66	22.45	1.10
4.467	1.47	10.467	4.23	16.467	1.66	22.47	1.10
4.483	1.47	10.483	4.23	16.483	1.66	22.48	1.10
4.500	1.47	10.500	4.23	16.500	1.66	22.50	1.10
4.517	1.47	10.517	5.70	16.517	1.66	22.52	1.10
4.533	1.47	10.533	5.70	16.533	1.66	22.53	1.10
4.550	1.47	10.550	5.70	16.550	1.66	22.55	1.10
4.567	1.47	10.567	5.70	16.567	1.66	22.57	1.10
4.583	1.47	10.583	5.70	16.583	1.66	22.58	1.10
4.600	1.47	10.600	5.70	16.600	1.66	22.60	1.10
4.617	1.47	10.617	5.70	16.617	1.66	22.62	1.10
4.633	1.47	10.633	5.70	16.633	1.66	22.63	1.10
4.650	1.47	10.650	5.70	16.650	1.66	22.65	1.10
4.667	1.47	10.667	5.70	16.667	1.66	22.67	1.10
4.683	1.47	10.683	5.70	16.683	1.66	22.68	1.10
4.700	1.47	10.700	5.70	16.700	1.66	22.70	1.10
4.717	1.47	10.717	5.70	16.717	1.66	22.72	1.10
4.733	1.47	10.733	5.70	16.733	1.66	22.73	1.10
4.750	1.47	10.750	5.70	16.750	1.66	22.75	1.10
4.767	1.47	10.767	5.70	16.767	1.66	22.77	1.10
4.783	1.47	10.783	5.70	16.783	1.66	22.78	1.10
4.800	1.47	10.800	5.70	16.800	1.66	22.80	1.10
4.817	1.47	10.817	5.70	16.817	1.66	22.82	1.10
4.833	1.47	10.833	5.70	16.833	1.66	22.83	1.10
4.850	1.47	10.850	5.70	16.850	1.66	22.85	1.10
4.867	1.47	10.867	5.70	16.867	1.66	22.87	1.10
4.883	1.47	10.883	5.70	16.883	1.66	22.88	1.10
4.900	1.47	10.900	5.70	16.900	1.66	22.90	1.10
4.917	1.47	10.917	5.70	16.917	1.66	22.92	1.10
4.933	1.47	10.933	5.70	16.933	1.66	22.93	1.10
4.950	1.47	10.950	5.70	16.950	1.66	22.95	1.10
4.967	1.47	10.967	5.70	16.967	1.66	22.97	1.10
4.983	1.47	10.983	5.70	16.983	1.66	22.98	1.10
5.000	1.47	11.000	5.70	17.000	1.66	23.00	1.10
5.017	1.47	11.017	8.83	17.017	1.66	23.02	1.10
5.033	1.47	11.033	8.83	17.033	1.66	23.03	1.10
5.050	1.47	11.050	8.83	17.050	1.66	23.05	1.10
5.067	1.47	11.067	8.83	17.067	1.66	23.07	1.10
5.083	1.47	11.083	8.83	17.083	1.66	23.08	1.10
5.100	1.47	11.100	8.83	17.100	1.66	23.10	1.10
5.117	1.47	11.117	8.83	17.117	1.66	23.12	1.10
5.133	1.47	11.133	8.83	17.133	1.66	23.13	1.10
5.150	1.47	11.150	8.83	17.150	1.66	23.15	1.10
5.167	1.47	11.167	8.83	17.167	1.66	23.17	1.10
5.183	1.47	11.183	8.83	17.183	1.66	23.18	1.10
5.200	1.47	11.200	8.83	17.200	1.66	23.20	1.10
5.217	1.47	11.217	8.83	17.217	1.66	23.22	1.10
5.233	1.47	11.233	8.83	17.233	1.66	23.23	1.10
5.250	1.47	11.250	8.83	17.250	1.66	23.25	1.10
5.267	1.47	11.267	8.83	17.267	1.66	23.27	1.10
5.283	1.47	11.283	8.83	17.283	1.66	23.28	1.10
5.300	1.47	11.300	8.83	17.300	1.66	23.30	1.10
5.317	1.47	11.317	8.83	17.317	1.66	23.32	1.10
5.333	1.47	11.333	8.83	17.333	1.66	23.33	1.10
5.350	1.47	11.350	8.83	17.350	1.66	23.35	1.10
5.367	1.47	11.367	8.83	17.367	1.66	23.37	1.10
5.383	1.47	11.383	8.83	17.383	1.66	23.38	1.10
5.400	1.47	11.400	8.83	17.400	1.66	23.40	1.10
5.417	1.47	11.417	8.83	17.417	1.66	23.42	1.10
5.433	1.47	11.433	8.83	17.433	1.66	23.43	1.10
5.450	1.47	11.450	8.83	17.450	1.66	23.45	1.10
5.467	1.47	11.467	8.83	17.467	1.66	23.47	1.10
5.483	1.47	11.483	8.83	17.483	1.66	23.48	1.10
5.500	1.47	11.500	8.83	17.500	1.66	23.50	1.10
5.517	1.47	11.517	38.26	17.517	1.66	23.52	1.10
5.533	1.47	11.533	38.27	17.533	1.66	23.53	1.10
5.550	1.47	11.550	38.27	17.550	1.66	23.55	1.10

5.567	1.47	11.567	38.27	17.567	1.66	23.57	1.10
5.583	1.47	11.583	38.27	17.583	1.66	23.58	1.10
5.600	1.47	11.600	38.27	17.600	1.66	23.60	1.10
5.617	1.47	11.617	38.27	17.617	1.66	23.62	1.10
5.633	1.47	11.633	38.27	17.633	1.66	23.63	1.10
5.650	1.47	11.650	38.27	17.650	1.66	23.65	1.10
5.667	1.47	11.667	38.27	17.667	1.66	23.67	1.10
5.683	1.47	11.683	38.27	17.683	1.66	23.68	1.10
5.700	1.47	11.700	38.27	17.700	1.66	23.70	1.10
5.717	1.47	11.717	38.27	17.717	1.66	23.72	1.10
5.733	1.47	11.733	38.27	17.733	1.66	23.73	1.10
5.750	1.47	11.750	38.27	17.750	1.66	23.75	1.10
5.767	1.47	11.767	101.54	17.767	1.66	23.77	1.10
5.783	1.47	11.783	101.57	17.783	1.66	23.78	1.10
5.800	1.47	11.800	101.57	17.800	1.66	23.80	1.10
5.817	1.47	11.817	101.57	17.817	1.66	23.82	1.10
5.833	1.47	11.833	101.57	17.833	1.66	23.83	1.10
5.850	1.47	11.850	101.57	17.850	1.66	23.85	1.10
5.867	1.47	11.867	101.57	17.867	1.66	23.87	1.10
5.883	1.47	11.883	101.57	17.883	1.66	23.88	1.10
5.900	1.47	11.900	101.57	17.900	1.66	23.90	1.10
5.917	1.47	11.917	101.57	17.917	1.66	23.92	1.10
5.933	1.47	11.933	101.57	17.933	1.66	23.93	1.10
5.950	1.47	11.950	101.57	17.950	1.66	23.95	1.10
5.967	1.47	11.967	101.57	17.967	1.66	23.97	1.10
5.983	1.47	11.983	101.57	17.983	1.66	23.98	1.10
6.000	1.47	12.000	101.57	18.000	1.66	24.00	1.10

Unit Hyd Qpeak (cms)= 0.483

PEAK FLOW (cms)= 0.093 (i)
TIME TO PEAK (hrs)= 12.083
RUNOFF VOLUME (mm)= 12.957
TOTAL RAINFALL (mm)= 91.985
RUNOFF COEFFICIENT = 0.141

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (0203)	Area (ha)= 2.47	
ID= 1 DT= 1.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.61	0.87
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	0.50	3.00
Length	(m)=	128.45	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)=		101.57	89.31
over (min)		5.00	8.00
Storage Coeff. (min)=		3.63 (ii)	7.99 (ii)
Unit Hyd. Tpeak (min)=		5.00	8.00
Unit Hyd. peak (cms)=		0.28	0.14

				TOTALS
PEAK FLOW	(cms)=	0.23	0.17	0.387 (iii)
TIME TO PEAK	(hrs)=	12.00	12.03	12.00
RUNOFF VOLUME	(mm)=	89.98	35.11	53.22
TOTAL RAINFALL	(mm)=	91.99	91.99	91.99
RUNOFF COEFFICIENT	=	0.98	0.38	0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0802)				
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0061	0.0972
	0.0015	0.0053	0.0064	0.1137
	0.0026	0.0141	0.0067	0.1254
	0.0031	0.0204	0.0069	0.1375
	0.0038	0.0307	0.0071	0.1502
	0.0043	0.0420	0.0293	0.1568
	0.0048	0.0542	0.2405	0.1703
	0.0053	0.0675	1.0015	0.1916
	0.0055	0.0769	2.4172	0.2142
	0.0059	0.0919	4.6073	0.2381

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0203)	2.475	0.387	12.00	53.22
OUTFLOW: ID= 1 (0802)	2.475	0.006	20.23	20.51

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.60
TIME SHIFT OF PEAK FLOW (min)=494.00
MAXIMUM STORAGE USED (ha.m.)= 0.1010

CALIB		
STANDHYD (0201)	Area (ha)= 2.74	
ID= 1 DT= 1.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 33.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.78	0.96
Dep. Storage	(mm)=	2.00	5.00
Average Slope	(%)=	1.00	3.00
Length	(m)=	135.08	28.00
Mannings n	=	0.013	0.190
Max.Eff.Inten.(mm/hr)=		101.57	89.31
over (min)		5.00	8.00
Storage Coeff. (min)=		3.04 (ii)	7.39 (ii)
Unit Hyd. Tpeak (min)=		5.00	8.00
Unit Hyd. peak (cms)=		0.31	0.15

				TOTALS
PEAK FLOW	(cms)=	0.25	0.19	0.435 (iii)
TIME TO PEAK	(hrs)=	12.00	12.03	12.00
RUNOFF VOLUME	(mm)=	89.98	35.11	53.22
TOTAL RAINFALL	(mm)=	91.99	91.99	91.99
RUNOFF COEFFICIENT	=	0.98	0.38	0.58

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 49.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR (0801)				
IN= 2---> OUT= 1				
DT= 1.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0065	0.1033
	0.0015	0.0034	0.0070	0.1274
	0.0026	0.0096	0.0072	0.1404
	0.0034	0.0168	0.0302	0.1472
	0.0040	0.0253	0.1105	0.1541
	0.0045	0.0350	0.4332	0.1684
	0.0051	0.0500	1.0078	0.1835
	0.0055	0.0627	1.8746	0.1992
	0.0059	0.0768	3.0695	0.2156
	0.0062	0.0869	3.8005	0.2241

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0201)	2.737	0.435	12.00	53.22
OUTFLOW: ID= 1 (0801)	2.737	0.007	20.25	20.61

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.53
TIME SHIFT OF PEAK FLOW (min)=495.00
MAXIMUM STORAGE USED (ha.m.)= 0.1111

ADD HYD (0601)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0202):	2.31	0.093	12.08	12.96
+ ID2= 2 (0801):	2.74	0.007	20.25	20.61
ID = 3 (0601):	5.05	0.098	12.08	18.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 3 (0601):     5.05   0.098    12.08    18.70
       + ID2= 2 (0802):     2.47   0.006    20.23    20.51
         ================================================
         ID = 1 (0601):     7.53   0.103    12.08    19.30

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 52.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268

     PEAK FLOW       (cms)=   0.051 (i)
     TIME TO PEAK    (hrs)=  12.017
     RUNOFF VOLUME    (mm)=  19.340
     TOTAL RAINFALL   (mm)=  91.985
     RUNOFF COEFFICIENT   =   0.210

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000     0.0177
                          0.0001     0.0176   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)     0.625     0.051     12.02      19.34
     OUTFLOW: ID= 1 (0803)     0.625     0.000     24.23       0.53

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.16
                    TIME SHIFT OF PEAK FLOW         (min)=733.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0147

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--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
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                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16          0.08
     Dep. Storage     (mm)=       2.00          5.00
     Average Slope     (%)=       2.00          2.00
     Length            (m)=      40.00         60.00
     Mannings n           =      0.013         0.190

     Max.Eff.Inten.(mm/hr)=     101.57         91.52
               over (min)          5.00         10.00
     Storage Coeff.  (min)=       1.19 (ii)     9.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.45          0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02          0.02          0.036 (iii)
     TIME TO PEAK    (hrs)=      12.00         12.07         12.00
     RUNOFF VOLUME    (mm)=      89.98         35.45         52.88
     TOTAL RAINFALL   (mm)=      91.99         91.99         91.99
     RUNOFF COEFFICIENT   =       0.98          0.39          0.57


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000     0.0153
                          0.0001     0.0152   |   0.0000     0.0000

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)     0.240     0.036     12.00      52.88
     OUTFLOW: ID= 1 (0804)     0.240     0.000     24.25       1.39

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.23
                    TIME SHIFT OF PEAK FLOW         (min)=735.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0124

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  ** SIMULATION NUMBER:   6 **
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|    READ STORM    |    Filename: C:\Users\jingram\AppD
|                  |              ata\Local\Temp\
|                  |              1e5d3a6c-a110-4269-ae5a-28e33273b8b8\834a28df
| Ptotal=101.19 mm |    Comments: 100-Year Orillia 24-hour SCS Storm
--------------------
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
                0.25     1.13 |  6.25     0.00 | 12.25    14.57 | 18.25     1.82
                0.50     1.09 |  6.50     0.00 | 12.50    14.57 | 18.50     1.82
                0.75     1.13 |  6.75     0.00 | 12.75     7.49 | 18.75     1.82
                1.00     1.09 |  7.00     0.00 | 13.00     7.49 | 19.00     1.82
                1.25     1.13 |  7.25     4.05 | 13.25     1.42 | 19.25     1.82
                1.50     1.09 |  7.50     4.05 | 13.50     1.42 | 19.50     1.82
                1.75     1.13 |  7.75     4.05 | 13.75     8.30 | 19.75     1.82
                2.00     1.09 |  8.00     4.05 | 14.00     8.30 | 20.00     1.82
                2.25     1.34 |  8.25     0.00 | 14.25     3.04 | 20.25     1.21
                2.50     1.30 |  8.50     0.00 | 14.50     3.04 | 20.50     1.21
                2.75     1.34 |  8.75     5.46 | 14.75     3.04 | 20.75     1.21
                3.00     1.30 |  9.00     5.46 | 15.00     3.04 | 21.00     1.21
                3.25     1.34 |  9.25     3.24 | 15.25     3.04 | 21.25     1.21
                3.50     1.30 |  9.50     3.24 | 15.50     3.04 | 21.50     1.21
                3.75     1.34 |  9.75     0.00 | 15.75     3.04 | 21.75     1.21
                4.00     1.30 | 10.00     7.29 | 16.00     3.04 | 22.00     1.21
                4.25     1.62 | 10.25     4.66 | 16.25     1.82 | 22.25     1.21
                4.50     1.62 | 10.50     4.66 | 16.50     1.82 | 22.50     1.21
                4.75     1.62 | 10.75     6.27 | 16.75     1.82 | 22.75     1.21
                5.00     1.62 | 11.00     6.27 | 17.00     1.82 | 23.00     1.21
                5.25     1.62 | 11.25     9.72 | 17.25     1.82 | 23.25     1.21
                5.50     1.62 | 11.50     9.72 | 17.50     1.82 | 23.50     1.21
                5.75     1.62 | 11.75    42.10 | 17.75     1.82 | 23.75     1.21
                6.00     1.62 | 12.00   111.72 | 18.00     1.82 | 24.00     1.21

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| CALIB            |
| NASHYD    (0202) |   Area    (ha)=   2.31   Curve Number   (CN)= 42.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   7.36   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   1.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.017     1.13 | 6.017     0.00 |12.017    14.64 | 18.02     1.82
               0.033     1.13 | 6.033     0.00 |12.033    14.57 | 18.03     1.82
               0.050     1.13 | 6.050     0.00 |12.050    14.57 | 18.05     1.82
               0.067     1.13 | 6.067     0.00 |12.067    14.57 | 18.07     1.82
               0.083     1.13 | 6.083     0.00 |12.083    14.57 | 18.08     1.82
               0.100     1.13 | 6.100     0.00 |12.100    14.57 | 18.10     1.82
               0.117     1.13 | 6.117     0.00 |12.117    14.57 | 18.12     1.82
               0.133     1.13 | 6.133     0.00 |12.133    14.57 | 18.13     1.82
               0.150     1.13 | 6.150     0.00 |12.150    14.57 | 18.15     1.82
               0.167     1.13 | 6.167     0.00 |12.167    14.57 | 18.17     1.82
               0.183     1.13 | 6.183     0.00 |12.183    14.57 | 18.18     1.82
               0.200     1.13 | 6.200     0.00 |12.200    14.57 | 18.20     1.82
               0.217     1.13 | 6.217     0.00 |12.217    14.57 | 18.22     1.82
               0.233     1.13 | 6.233     0.00 |12.233    14.57 | 18.23     1.82
               0.250     1.13 | 6.250     0.00 |12.250    14.57 | 18.25     1.82
               0.267     1.09 | 6.267     0.00 |12.267    14.57 | 18.27     1.82
               0.283     1.09 | 6.283     0.00 |12.283    14.57 | 18.28     1.82
               0.300     1.09 | 6.300     0.00 |12.300    14.57 | 18.30     1.82
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0.317	1.09	6.317	0.00	12.317	14.57	18.32	1.82
0.333	1.09	6.333	0.00	12.333	14.57	18.33	1.82
0.350	1.09	6.350	0.00	12.350	14.57	18.35	1.82
0.367	1.09	6.367	0.00	12.367	14.57	18.37	1.82
0.383	1.09	6.383	0.00	12.383	14.57	18.38	1.82
0.400	1.09	6.400	0.00	12.400	14.57	18.40	1.82
0.417	1.09	6.417	0.00	12.417	14.57	18.42	1.82
0.433	1.09	6.433	0.00	12.433	14.57	18.43	1.82
0.450	1.09	6.450	0.00	12.450	14.57	18.45	1.82
0.467	1.09	6.467	0.00	12.467	14.57	18.47	1.82
0.483	1.09	6.483	0.00	12.483	14.57	18.48	1.82
0.500	1.09	6.500	0.00	12.500	14.57	18.50	1.82
0.517	1.13	6.517	0.00	12.517	7.50	18.52	1.82
0.533	1.13	6.533	0.00	12.533	7.49	18.53	1.82
0.550	1.13	6.550	0.00	12.550	7.49	18.55	1.82
0.567	1.13	6.567	0.00	12.567	7.49	18.57	1.82
0.583	1.13	6.583	0.00	12.583	7.49	18.58	1.82
0.600	1.13	6.600	0.00	12.600	7.49	18.60	1.82
0.617	1.13	6.617	0.00	12.617	7.49	18.62	1.82
0.633	1.13	6.633	0.00	12.633	7.49	18.63	1.82
0.650	1.13	6.650	0.00	12.650	7.49	18.65	1.82
0.667	1.13	6.667	0.00	12.667	7.49	18.67	1.82
0.683	1.13	6.683	0.00	12.683	7.49	18.68	1.82
0.700	1.13	6.700	0.00	12.700	7.49	18.70	1.82
0.717	1.13	6.717	0.00	12.717	7.49	18.72	1.82
0.733	1.13	6.733	0.00	12.733	7.49	18.73	1.82
0.750	1.13	6.750	0.00	12.750	7.49	18.75	1.82
0.767	1.09	6.767	0.00	12.767	7.49	18.77	1.82
0.783	1.09	6.783	0.00	12.783	7.49	18.78	1.82
0.800	1.09	6.800	0.00	12.800	7.49	18.80	1.82
0.817	1.09	6.817	0.00	12.817	7.49	18.82	1.82
0.833	1.09	6.833	0.00	12.833	7.49	18.83	1.82
0.850	1.09	6.850	0.00	12.850	7.49	18.85	1.82
0.867	1.09	6.867	0.00	12.867	7.49	18.87	1.82
0.883	1.09	6.883	0.00	12.883	7.49	18.88	1.82
0.900	1.09	6.900	0.00	12.900	7.49	18.90	1.82
0.917	1.09	6.917	0.00	12.917	7.49	18.92	1.82
0.933	1.09	6.933	0.00	12.933	7.49	18.93	1.82
0.950	1.09	6.950	0.00	12.950	7.49	18.95	1.82
0.967	1.09	6.967	0.00	12.967	7.49	18.97	1.82
0.983	1.09	6.983	0.00	12.983	7.49	18.98	1.82
1.000	1.09	7.000	0.01	13.000	7.49	19.00	1.82
1.017	1.13	7.017	4.05	13.017	1.43	19.02	1.82
1.033	1.13	7.033	4.05	13.033	1.42	19.03	1.82
1.050	1.13	7.050	4.05	13.050	1.42	19.05	1.82
1.067	1.13	7.067	4.05	13.067	1.42	19.07	1.82
1.083	1.13	7.083	4.05	13.083	1.42	19.08	1.82
1.100	1.13	7.100	4.05	13.100	1.42	19.10	1.82
1.117	1.13	7.117	4.05	13.117	1.42	19.12	1.82
1.133	1.13	7.133	4.05	13.133	1.42	19.13	1.82
1.150	1.13	7.150	4.05	13.150	1.42	19.15	1.82
1.167	1.13	7.167	4.05	13.167	1.42	19.17	1.82
1.183	1.13	7.183	4.05	13.183	1.42	19.18	1.82
1.200	1.13	7.200	4.05	13.200	1.42	19.20	1.82
1.217	1.13	7.217	4.05	13.217	1.42	19.22	1.82
1.233	1.13	7.233	4.05	13.233	1.42	19.23	1.82
1.250	1.13	7.250	4.05	13.250	1.42	19.25	1.82
1.267	1.09	7.267	4.05	13.267	1.42	19.27	1.82
1.283	1.09	7.283	4.05	13.283	1.42	19.28	1.82
1.300	1.09	7.300	4.05	13.300	1.42	19.30	1.82
1.317	1.09	7.317	4.05	13.317	1.42	19.32	1.82
1.333	1.09	7.333	4.05	13.333	1.42	19.33	1.82
1.350	1.09	7.350	4.05	13.350	1.42	19.35	1.82
1.367	1.09	7.367	4.05	13.367	1.42	19.37	1.82
1.383	1.09	7.383	4.05	13.383	1.42	19.38	1.82
1.400	1.09	7.400	4.05	13.400	1.42	19.40	1.82
1.417	1.09	7.417	4.05	13.417	1.42	19.42	1.82
1.433	1.09	7.433	4.05	13.433	1.42	19.43	1.82
1.450	1.09	7.450	4.05	13.450	1.42	19.45	1.82
1.467	1.09	7.467	4.05	13.467	1.42	19.47	1.82
1.483	1.09	7.483	4.05	13.483	1.42	19.48	1.82
1.500	1.09	7.500	4.05	13.500	1.42	19.50	1.82
1.517	1.13	7.517	4.05	13.517	8.29	19.52	1.82
1.533	1.13	7.533	4.05	13.533	8.30	19.53	1.82
1.550	1.13	7.550	4.05	13.550	8.30	19.55	1.82
1.567	1.13	7.567	4.05	13.567	8.30	19.57	1.82
1.583	1.13	7.583	4.05	13.583	8.30	19.58	1.82
1.600	1.13	7.600	4.05	13.600	8.30	19.60	1.82
1.617	1.13	7.617	4.05	13.617	8.30	19.62	1.82
1.633	1.13	7.633	4.05	13.633	8.30	19.63	1.82
1.650	1.13	7.650	4.05	13.650	8.30	19.65	1.82
1.667	1.13	7.667	4.05	13.667	8.30	19.67	1.82
1.683	1.13	7.683	4.05	13.683	8.30	19.68	1.82
1.700	1.13	7.700	4.05	13.700	8.30	19.70	1.82
1.717	1.13	7.717	4.05	13.717	8.30	19.72	1.82
1.733	1.13	7.733	4.05	13.733	8.30	19.73	1.82
1.750	1.13	7.750	4.05	13.750	8.30	19.75	1.82
1.767	1.09	7.767	4.05	13.767	8.30	19.77	1.82
1.783	1.09	7.783	4.05	13.783	8.30	19.78	1.82
1.800	1.09	7.800	4.05	13.800	8.30	19.80	1.82
1.817	1.09	7.817	4.05	13.817	8.30	19.82	1.82
1.833	1.09	7.833	4.05	13.833	8.30	19.83	1.82
1.850	1.09	7.850	4.05	13.850	8.30	19.85	1.82
1.867	1.09	7.867	4.05	13.867	8.30	19.87	1.82
1.883	1.09	7.883	4.05	13.883	8.30	19.88	1.82
1.900	1.09	7.900	4.05	13.900	8.30	19.90	1.82
1.917	1.09	7.917	4.05	13.917	8.30	19.92	1.82
1.933	1.09	7.933	4.05	13.933	8.30	19.93	1.82
1.950	1.09	7.950	4.05	13.950	8.30	19.95	1.82
1.967	1.09	7.967	4.05	13.967	8.30	19.97	1.82
1.983	1.09	7.983	4.05	13.983	8.30	19.98	1.82
2.000	1.09	8.000	4.04	14.000	8.30	20.00	1.82
2.017	1.34	8.017	0.00	14.017	3.05	20.02	1.21
2.033	1.34	8.033	0.00	14.033	3.04	20.03	1.21
2.050	1.34	8.050	0.00	14.050	3.04	20.05	1.21
2.067	1.34	8.067	0.00	14.067	3.04	20.07	1.21
2.083	1.34	8.083	0.00	14.083	3.04	20.08	1.21
2.100	1.34	8.100	0.00	14.100	3.04	20.10	1.21
2.117	1.34	8.117	0.00	14.117	3.04	20.12	1.21
2.133	1.34	8.133	0.00	14.133	3.04	20.13	1.21
2.150	1.34	8.150	0.00	14.150	3.04	20.15	1.21
2.167	1.34	8.167	0.00	14.167	3.04	20.17	1.21
2.183	1.34	8.183	0.00	14.183	3.04	20.18	1.21
2.200	1.34	8.200	0.00	14.200	3.04	20.20	1.21
2.217	1.34	8.217	0.00	14.217	3.04	20.22	1.21
2.233	1.34	8.233	0.00	14.233	3.04	20.23	1.21
2.250	1.34	8.250	0.00	14.250	3.04	20.25	1.21
2.267	1.30	8.267	0.00	14.267	3.04	20.27	1.21
2.283	1.30	8.283	0.00	14.283	3.04	20.28	1.21
2.300	1.30	8.300	0.00	14.300	3.04	20.30	1.21
2.317	1.30	8.317	0.00	14.317	3.04	20.32	1.21
2.333	1.30	8.333	0.00	14.333	3.04	20.33	1.21
2.350	1.30	8.350	0.00	14.350	3.04	20.35	1.21
2.367	1.30	8.367	0.00	14.367	3.04	20.37	1.21
2.383	1.30	8.383	0.00	14.383	3.04	20.38	1.21
2.400	1.30	8.400	0.00	14.400	3.04	20.40	1.21
2.417	1.30	8.417	0.00	14.417	3.04	20.42	1.21
2.433	1.30	8.433	0.00	14.433	3.04	20.43	1.21
2.450	1.30	8.450	0.00	14.450	3.04	20.45	1.21
2.467	1.30	8.467	0.00	14.467	3.04	20.47	1.21
2.483	1.30	8.483	0.00	14.483	3.04	20.48	1.21
2.500	1.30	8.500	0.01	14.500	3.04	20.50	1.21
2.517	1.34	8.517	5.46	14.517	3.04	20.52	1.21
2.533	1.34	8.533	5.46	14.533	3.04	20.53	1.21
2.550	1.34	8.550	5.46	14.550	3.04	20.55	1.21
2.567	1.34	8.567	5.46	14.567	3.04	20.57	1.21
2.583	1.34	8.583	5.46	14.583	3.04	20.58	1.21
2.600	1.34	8.600	5.46	14.600	3.04	20.60	1.21
2.617	1.34	8.617	5.46	14.617	3.04	20.62	1.21
2.633	1.34	8.633	5.46	14.633	3.04	20.63	1.21
2.650	1.34	8.650	5.46	14.650	3.04	20.65	1.21
2.667	1.34	8.667	5.46	14.667	3.04	20.67	1.21
2.683	1.34	8.683	5.46	14.683	3.04	20.68	1.21
2.700	1.34	8.700	5.46	14.700	3.04	20.70	1.21
2.717	1.34	8.717	5.46	14.717	3.04	20.72	1.21
2.733	1.34	8.733	5.46	14.733	3.04	20.73	1.21
2.750	1.34	8.750	5.46	14.750	3.04	20.75	1.21
2.767	1.30	8.767	5.46	14.767	3.04	20.77	1.21
2.783	1.30	8.783	5.46	14.783	3.04	20.78	1.21
2.800	1.30	8.800	5.46	14.800	3.04	20.80	1.21
2.817	1.30	8.817	5.46	14.817	3.04	20.82	1.21
2.833	1.30	8.833	5.46	14.833	3.04	20.83	1.21
2.850	1.30	8.850	5.46	14.850	3.04	20.85	1.21
2.867	1.30	8.867	5.46	14.867	3.04	20.87	1.21
2.883	1.30	8.883	5.46	14.883	3.04	20.88	1.21
2.900	1.30	8.900	5.46	14.900	3.04	20.90	1.21
2.917	1.30	8.917	5.46	14.917	3.04	20.92	1.21
2.933	1.30	8.933	5.46	14.933	3.04	20.93	1.21
2.950	1.30	8.950	5.46	14.950	3.04	20.95	1.21
2.967	1.30	8.967	5.46	14.967	3.04	20.97	1.21
2.983	1.30	8.983	5.46	14.983	3.04	20.98	1.21
3.000	1.30	9.000	5.46	15.000	3.04	21.00	1.21
3.017	1.34	9.017	3.24	15.017	3.04	21.02	1.21
3.033	1.34	9.033	3.24	15.033	3.04	21.03	1.21
3.050	1.34	9.050	3.24	15.050	3.04	21.05	1.21
3.067	1.34	9.067	3.24	15.067	3.04	21.07	1.21
3.083	1.34	9.083	3.24	15.083	3.04	21.08	1.21
3.100	1.34	9.100	3.24	15.100	3.04	21.10	1.21

3.117	1.34	9.117	3.24	15.117	3.04	21.12	1.21
3.133	1.34	9.133	3.24	15.133	3.04	21.13	1.21
3.150	1.34	9.150	3.24	15.150	3.04	21.15	1.21
3.167	1.34	9.167	3.24	15.167	3.04	21.17	1.21
3.183	1.34	9.183	3.24	15.183	3.04	21.18	1.21
3.200	1.34	9.200	3.24	15.200	3.04	21.20	1.21
3.217	1.34	9.217	3.24	15.217	3.04	21.22	1.21
3.233	1.34	9.233	3.24	15.233	3.04	21.23	1.21
3.250	1.34	9.250	3.24	15.250	3.04	21.25	1.21
3.267	1.30	9.267	3.24	15.267	3.04	21.27	1.21
3.283	1.30	9.283	3.24	15.283	3.04	21.28	1.21
3.300	1.30	9.300	3.24	15.300	3.04	21.30	1.21
3.317	1.30	9.317	3.24	15.317	3.04	21.32	1.21
3.333	1.30	9.333	3.24	15.333	3.04	21.33	1.21
3.350	1.30	9.350	3.24	15.350	3.04	21.35	1.21
3.367	1.30	9.367	3.24	15.367	3.04	21.37	1.21
3.383	1.30	9.383	3.24	15.383	3.04	21.38	1.21
3.400	1.30	9.400	3.24	15.400	3.04	21.40	1.21
3.417	1.30	9.417	3.24	15.417	3.04	21.42	1.21
3.433	1.30	9.433	3.24	15.433	3.04	21.43	1.21
3.450	1.30	9.450	3.24	15.450	3.04	21.45	1.21
3.467	1.30	9.467	3.24	15.467	3.04	21.47	1.21
3.483	1.30	9.483	3.24	15.483	3.04	21.48	1.21
3.500	1.30	9.500	3.23	15.500	3.04	21.50	1.21
3.517	1.34	9.517	0.00	15.517	3.04	21.52	1.21
3.533	1.34	9.533	0.00	15.533	3.04	21.53	1.21
3.550	1.34	9.550	0.00	15.550	3.04	21.55	1.21
3.567	1.34	9.567	0.00	15.567	3.04	21.57	1.21
3.583	1.34	9.583	0.00	15.583	3.04	21.58	1.21
3.600	1.34	9.600	0.00	15.600	3.04	21.60	1.21
3.617	1.34	9.617	0.00	15.617	3.04	21.62	1.21
3.633	1.34	9.633	0.00	15.633	3.04	21.63	1.21
3.650	1.34	9.650	0.00	15.650	3.04	21.65	1.21
3.667	1.34	9.667	0.00	15.667	3.04	21.67	1.21
3.683	1.34	9.683	0.00	15.683	3.04	21.68	1.21
3.700	1.34	9.700	0.00	15.700	3.04	21.70	1.21
3.717	1.34	9.717	0.00	15.717	3.04	21.72	1.21
3.733	1.34	9.733	0.00	15.733	3.04	21.73	1.21
3.750	1.34	9.750	0.01	15.750	3.04	21.75	1.21
3.767	1.30	9.767	7.29	15.767	3.04	21.77	1.21
3.783	1.30	9.783	7.29	15.783	3.04	21.78	1.21
3.800	1.30	9.800	7.29	15.800	3.04	21.80	1.21
3.817	1.30	9.817	7.29	15.817	3.04	21.82	1.21
3.833	1.30	9.833	7.29	15.833	3.04	21.83	1.21
3.850	1.30	9.850	7.29	15.850	3.04	21.85	1.21
3.867	1.30	9.867	7.29	15.867	3.04	21.87	1.21
3.883	1.30	9.883	7.29	15.883	3.04	21.88	1.21
3.900	1.30	9.900	7.29	15.900	3.04	21.90	1.21
3.917	1.30	9.917	7.29	15.917	3.04	21.92	1.21
3.933	1.30	9.933	7.29	15.933	3.04	21.93	1.21
3.950	1.30	9.950	7.29	15.950	3.04	21.95	1.21
3.967	1.30	9.967	7.29	15.967	3.04	21.97	1.21
3.983	1.30	9.983	7.29	15.983	3.04	21.98	1.21
4.000	1.30	10.000	7.29	16.000	3.04	22.00	1.21
4.017	1.62	10.017	4.66	16.017	1.83	22.02	1.21
4.033	1.62	10.033	4.66	16.033	1.82	22.03	1.21
4.050	1.62	10.050	4.66	16.050	1.82	22.05	1.21
4.067	1.62	10.067	4.66	16.067	1.82	22.07	1.21
4.083	1.62	10.083	4.66	16.083	1.82	22.08	1.21
4.100	1.62	10.100	4.66	16.100	1.82	22.10	1.21
4.117	1.62	10.117	4.66	16.117	1.82	22.12	1.21
4.133	1.62	10.133	4.66	16.133	1.82	22.13	1.21
4.150	1.62	10.150	4.66	16.150	1.82	22.15	1.21
4.167	1.62	10.167	4.66	16.167	1.82	22.17	1.21
4.183	1.62	10.183	4.66	16.183	1.82	22.18	1.21
4.200	1.62	10.200	4.66	16.200	1.82	22.20	1.21
4.217	1.62	10.217	4.66	16.217	1.82	22.22	1.21
4.233	1.62	10.233	4.66	16.233	1.82	22.23	1.21
4.250	1.62	10.250	4.66	16.250	1.82	22.25	1.21
4.267	1.62	10.267	4.66	16.267	1.82	22.27	1.21
4.283	1.62	10.283	4.66	16.283	1.82	22.28	1.21
4.300	1.62	10.300	4.66	16.300	1.82	22.30	1.21
4.317	1.62	10.317	4.66	16.317	1.82	22.32	1.21
4.333	1.62	10.333	4.66	16.333	1.82	22.33	1.21
4.350	1.62	10.350	4.66	16.350	1.82	22.35	1.21
4.367	1.62	10.367	4.66	16.367	1.82	22.37	1.21
4.383	1.62	10.383	4.66	16.383	1.82	22.38	1.21
4.400	1.62	10.400	4.66	16.400	1.82	22.40	1.21
4.417	1.62	10.417	4.66	16.417	1.82	22.42	1.21
4.433	1.62	10.433	4.66	16.433	1.82	22.43	1.21
4.450	1.62	10.450	4.66	16.450	1.82	22.45	1.21
4.467	1.62	10.467	4.66	16.467	1.82	22.47	1.21
4.483	1.62	10.483	4.66	16.483	1.82	22.48	1.21
4.500	1.62	10.500	4.66	16.500	1.82	22.50	1.21
4.517	1.62	10.517	6.27	16.517	1.82	22.52	1.21
4.533	1.62	10.533	6.27	16.533	1.82	22.53	1.21
4.550	1.62	10.550	6.27	16.550	1.82	22.55	1.21
4.567	1.62	10.567	6.27	16.567	1.82	22.57	1.21
4.583	1.62	10.583	6.27	16.583	1.82	22.58	1.21
4.600	1.62	10.600	6.27	16.600	1.82	22.60	1.21
4.617	1.62	10.617	6.27	16.617	1.82	22.62	1.21
4.633	1.62	10.633	6.27	16.633	1.82	22.63	1.21
4.650	1.62	10.650	6.27	16.650	1.82	22.65	1.21
4.667	1.62	10.667	6.27	16.667	1.82	22.67	1.21
4.683	1.62	10.683	6.27	16.683	1.82	22.68	1.21
4.700	1.62	10.700	6.27	16.700	1.82	22.70	1.21
4.717	1.62	10.717	6.27	16.717	1.82	22.72	1.21
4.733	1.62	10.733	6.27	16.733	1.82	22.73	1.21
4.750	1.62	10.750	6.27	16.750	1.82	22.75	1.21
4.767	1.62	10.767	6.27	16.767	1.82	22.77	1.21
4.783	1.62	10.783	6.27	16.783	1.82	22.78	1.21
4.800	1.62	10.800	6.27	16.800	1.82	22.80	1.21
4.817	1.62	10.817	6.27	16.817	1.82	22.82	1.21
4.833	1.62	10.833	6.27	16.833	1.82	22.83	1.21
4.850	1.62	10.850	6.27	16.850	1.82	22.85	1.21
4.867	1.62	10.867	6.27	16.867	1.82	22.87	1.21
4.883	1.62	10.883	6.27	16.883	1.82	22.88	1.21
4.900	1.62	10.900	6.27	16.900	1.82	22.90	1.21
4.917	1.62	10.917	6.27	16.917	1.82	22.92	1.21
4.933	1.62	10.933	6.27	16.933	1.82	22.93	1.21
4.950	1.62	10.950	6.27	16.950	1.82	22.95	1.21
4.967	1.62	10.967	6.27	16.967	1.82	22.97	1.21
4.983	1.62	10.983	6.27	16.983	1.82	22.98	1.21
5.000	1.62	11.000	6.27	17.000	1.82	23.00	1.21
5.017	1.62	11.017	9.72	17.017	1.82	23.02	1.21
5.033	1.62	11.033	9.72	17.033	1.82	23.03	1.21
5.050	1.62	11.050	9.72	17.050	1.82	23.05	1.21
5.067	1.62	11.067	9.72	17.067	1.82	23.07	1.21
5.083	1.62	11.083	9.72	17.083	1.82	23.08	1.21
5.100	1.62	11.100	9.72	17.100	1.82	23.10	1.21
5.117	1.62	11.117	9.72	17.117	1.82	23.12	1.21
5.133	1.62	11.133	9.72	17.133	1.82	23.13	1.21
5.150	1.62	11.150	9.72	17.150	1.82	23.15	1.21
5.167	1.62	11.167	9.72	17.167	1.82	23.17	1.21
5.183	1.62	11.183	9.72	17.183	1.82	23.18	1.21
5.200	1.62	11.200	9.72	17.200	1.82	23.20	1.21
5.217	1.62	11.217	9.72	17.217	1.82	23.22	1.21
5.233	1.62	11.233	9.72	17.233	1.82	23.23	1.21
5.250	1.62	11.250	9.72	17.250	1.82	23.25	1.21
5.267	1.62	11.267	9.72	17.267	1.82	23.27	1.21
5.283	1.62	11.283	9.72	17.283	1.82	23.28	1.21
5.300	1.62	11.300	9.72	17.300	1.82	23.30	1.21
5.317	1.62	11.317	9.72	17.317	1.82	23.32	1.21
5.333	1.62	11.333	9.72	17.333	1.82	23.33	1.21
5.350	1.62	11.350	9.72	17.350	1.82	23.35	1.21
5.367	1.62	11.367	9.72	17.367	1.82	23.37	1.21
5.383	1.62	11.383	9.72	17.383	1.82	23.38	1.21
5.400	1.62	11.400	9.72	17.400	1.82	23.40	1.21
5.417	1.62	11.417	9.72	17.417	1.82	23.42	1.21
5.433	1.62	11.433	9.72	17.433	1.82	23.43	1.21
5.450	1.62	11.450	9.72	17.450	1.82	23.45	1.21
5.467	1.62	11.467	9.72	17.467	1.82	23.47	1.21
5.483	1.62	11.483	9.72	17.483	1.82	23.48	1.21
5.500	1.62	11.500	9.72	17.500	1.82	23.50	1.21
5.517	1.62	11.517	42.09	17.517	1.82	23.52	1.21
5.533	1.62	11.533	42.10	17.533	1.82	23.53	1.21
5.550	1.62	11.550	42.10	17.550	1.82	23.55	1.21
5.567	1.62	11.567	42.10	17.567	1.82	23.57	1.21
5.583	1.62	11.583	42.10	17.583	1.82	23.58	1.21
5.600	1.62	11.600	42.10	17.600	1.82	23.60	1.21
5.617	1.62	11.617	42.10	17.617	1.82	23.62	1.21
5.633	1.62	11.633	42.10	17.633	1.82	23.63	1.21
5.650	1.62	11.650	42.10	17.650	1.82	23.65	1.21
5.667	1.62	11.667	42.10	17.667	1.82	23.67	1.21
5.683	1.62	11.683	42.10	17.683	1.82	23.68	1.21
5.700	1.62	11.700	42.10	17.700	1.82	23.70	1.21
5.717	1.62	11.717	42.10	17.717	1.82	23.72	1.21
5.733	1.62	11.733	42.10	17.733	1.82	23.73	1.21
5.750	1.62	11.750	42.10	17.750	1.82	23.75	1.21
5.767	1.62	11.767	111.69	17.767	1.82	23.77	1.21
5.783	1.62	11.783	111.72	17.783	1.82	23.78	1.21
5.800	1.62	11.800	111.72	17.800	1.82	23.80	1.21
5.817	1.62	11.817	111.72	17.817	1.82	23.82	1.21
5.833	1.62	11.833	111.72	17.833	1.82	23.83	1.21
5.850	1.62	11.850	111.72	17.850	1.82	23.85	1.21
5.867	1.62	11.867	111.72	17.867	1.82	23.87	1.21
5.883	1.62	11.883	111.72	17.883	1.82	23.88	1.21
5.900	1.62	11.900	111.72	17.900	1.82	23.90	1.21

```
            5.917    1.62 |11.917  111.72 |17.917    1.82 | 23.92    1.21
            5.933    1.62 |11.933  111.72 |17.933    1.82 | 23.93    1.21
            5.950    1.62 |11.950  111.72 |17.950    1.82 | 23.95    1.21
            5.967    1.62 |11.967  111.72 |17.967    1.82 | 23.97    1.21
            5.983    1.62 |11.983  111.72 |17.983    1.82 | 23.98    1.21
            6.000    1.62 |12.000  111.72 |18.000    1.82 | 24.00    1.21

     Unit Hyd Qpeak  (cms)=   0.483

     PEAK FLOW       (cms)=   0.112 (i)
     TIME TO PEAK    (hrs)=  12.083
     RUNOFF VOLUME    (mm)=  15.673
     TOTAL RAINFALL   (mm)= 101.194
     RUNOFF COEFFICIENT   =   0.155

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD  (0203) |   Area    (ha)=   2.47
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.61         0.87
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       0.50         3.00
     Length            (m)=     128.45        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     111.72       104.43
               over (min)        5.00         8.00
     Storage Coeff.  (min)=       3.50 (ii)    7.69 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.28         0.15
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.20          0.440 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.03          12.00
     RUNOFF VOLUME    (mm)=      99.19        41.05          60.24
     TOTAL RAINFALL   (mm)=     101.19       101.19         101.19
     RUNOFF COEFFICIENT   =       0.98         0.41           0.60


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0802) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.0061      0.0972
                         0.0015     0.0053    |  0.0064      0.1137
                         0.0026     0.0141    |  0.0067      0.1254
                         0.0031     0.0204    |  0.0069      0.1375
                         0.0038     0.0307    |  0.0071      0.1502
                         0.0043     0.0420    |  0.0293      0.1568
                         0.0048     0.0542    |  0.2405      0.1703
                         0.0053     0.0675    |  1.0015      0.1916
                         0.0055     0.0769    |  2.4172      0.2142
                         0.0059     0.0919    |  4.6073      0.2381

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0203)    2.475     0.440     12.00      60.24
     OUTFLOW: ID= 1 (0802)    2.475     0.006     20.43      21.72

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.47
                TIME SHIFT OF PEAK FLOW          (min)=506.00
                MAXIMUM  STORAGE   USED        (ha.m.)=  0.1161

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--------------------
| CALIB            |
| STANDHYD  (0201) |   Area    (ha)=   2.74
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  33.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.78         0.96
     Dep. Storage     (mm)=       2.00         5.00

     Average Slope     (%)=       1.00         3.00
     Length            (m)=     135.08        28.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     111.72       104.43
               over (min)        5.00         8.00
     Storage Coeff.  (min)=       2.93 (ii)    7.12 (ii)
     Unit Hyd. Tpeak (min)=       5.00         8.00
     Unit Hyd. peak  (cms)=       0.31         0.15
                                                    *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.23          0.495 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.03          12.00
     RUNOFF VOLUME    (mm)=      99.19        41.05          60.24
     TOTAL RAINFALL   (mm)=     101.19       101.19         101.19
     RUNOFF COEFFICIENT   =       0.98         0.41           0.60


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR (0801) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.0065      0.1033
                         0.0015     0.0034    |  0.0070      0.1274
                         0.0026     0.0096    |  0.0072      0.1404
                         0.0034     0.0168    |  0.0302      0.1472
                         0.0040     0.0253    |  0.1105      0.1541
                         0.0045     0.0350    |  0.4332      0.1684
                         0.0051     0.0500    |  1.0078      0.1835
                         0.0055     0.0627    |  1.8746      0.1992
                         0.0059     0.0768    |  3.0695      0.2156
                         0.0062     0.0869    |  3.8005      0.2241

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0201)    2.737     0.495     12.00      60.24
     OUTFLOW: ID= 1 (0801)    2.737     0.007     24.02      21.73

                PEAK   FLOW   REDUCTION [Qout/Qin](%)=  1.42
                TIME SHIFT OF PEAK FLOW          (min)=721.00
                MAXIMUM  STORAGE   USED        (ha.m.)=  0.1278

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--------------------
| ADD HYD   (0601) |
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (0202):     2.31    0.112    12.08    15.67
       + ID2= 2 (0801):     2.74    0.007    24.02    21.73
         ================================================
         ID = 3 (0601):     5.05    0.118    12.08    20.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| ADD HYD   (0601) |
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (0601):     5.05    0.118    12.08    20.85
       + ID2= 2 (0802):     2.47    0.006    20.43    21.72
         ================================================
         ID = 1 (0601):     7.53    0.123    12.08    21.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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--------------------
| CALIB            |
| NASHYD    (0204) |   Area    (ha)=   0.62   Curve Number   (CN)= 52.0
|ID= 1 DT= 1.0 min |   Ia      (mm)=   4.10   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.09

     Unit Hyd Qpeak  (cms)=   0.268
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     PEAK FLOW       (cms)=   0.060 (i)
     TIME TO PEAK    (hrs)=  12.017
     RUNOFF VOLUME    (mm)=  23.037
     TOTAL RAINFALL   (mm)= 101.194
     RUNOFF COEFFICIENT   =   0.228

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0803) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0177
                          0.0001     0.0176   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0204)      0.625     0.060     12.02      23.04
     OUTFLOW: ID= 1 (0803)      0.625     0.000     24.23       0.63

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.16
                    TIME SHIFT OF PEAK FLOW         (min)=733.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0174

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--------------------
| CALIB            |
| STANDHYD  (0205) |   Area    (ha)=   0.24
|ID= 1 DT= 1.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  32.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.16         0.08
     Dep. Storage     (mm)=       2.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=      40.00        60.00
     Mannings n           =      0.013        0.190

     Max.Eff.Inten.(mm/hr)=     111.72       106.97
               over (min)         5.00         9.00
     Storage Coeff.  (min)=       1.15 (ii)    8.72 (ii)
     Unit Hyd. Tpeak (min)=       5.00         9.00
     Unit Hyd. peak  (cms)=       0.46         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.02          0.041 (iii)
     TIME TO PEAK    (hrs)=      12.00        12.05          12.00
     RUNOFF VOLUME    (mm)=      99.19        41.44          59.90
     TOTAL RAINFALL   (mm)=     101.19       101.19         101.19
     RUNOFF COEFFICIENT   =       0.98         0.41           0.59


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  49.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR (0804) |
| IN= 2---> OUT= 1 |
| DT=  1.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   1.0000      0.0153
                          0.0001     0.0152   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
     INFLOW : ID= 2 (0205)      0.240     0.041     12.00      59.90
     OUTFLOW: ID= 1 (0804)      0.240     0.000     24.27       1.58

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  0.22
                    TIME SHIFT OF PEAK FLOW         (min)=736.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0140

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 FINISH
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Q=2.78AIR

where, Q = peak flow in liters per second (L/s)
A = area in hectares (ha)
I = rainfall Intensity in millimeters per hour (mm/hr)
R = Runoff Coefficient

5 Year Storm Sewer Design Sheet

ST. ANDREWS LAKE VILLAGE

Client: Tonking Management Inc.

A	491.75
B	0.063
C	0.7

Date: January 2019
Designed: MG
Checked: DR

Location				Area (ha)	Runoff Coefficient	Individual 2.78 AR	Accumulated 2.78 AR	Time of Concentration	Rainfall Intensity I	Peak Flow Q (L/s)	Sewer Data								
Street	DA	From	To								Type of Pipe	Diameter (mm)	Slope (%)	Length (m)	Capacity (L/s) n=0.013	Velocity (m/s)	Time of Flow (minutes)	% Capacity	Velocity Check
SWMF1																			
STREET D	216	CBMH19	CBMH18	0.50	0.65	0.9035	0.9035	10.000	97.687	88.260	PVC	375	0.50%	70.6	123.977	1.123	1.048	71%	Good
STREET D	217	CBMH18	MH14	0.08	0.71	0.1579	1.0614	11.048	91.140	102.651	PVC	375	0.50%	10.4	123.977	1.123	0.154	83%	Good
STREET D	218	CBMH17	CBMH16	0.22	0.71	0.4342	0.4342	10.000	97.687	42.419	PVC	300	0.50%	43.7	68.378	0.967	0.753	62%	Good
STREET D	219	CBMH16	MH14	0.07	0.74	0.1440	0.5782	10.753	92.875	55.793	PVC	300	0.50%	42.1	68.378	0.967	0.725	82%	Good
STREET D	220	CB14	MH14	0.35	0.68	0.6616	0.6616	10.000	97.687	64.633	PVC	300	1.00%	6.9	96.701	1.368	0.084	67%	Good
STREET B		MH14	CBMH15				2.3013	11.478	88.750	223.078	PVC	525	0.50%	39.1	304.100	1.405	0.464	73%	Good
STREET B	221	CBMH11	CBMH13	0.18	0.65	0.3253	0.3253	10.000	97.687	31.774	PVC	300	0.50%	44.2	68.378	0.967	0.762	46%	Good
STREET A	222	CBMH12	CBMH13	0.29	0.68	0.5482	0.5482	10.000	97.687	53.553	PVC	300	0.50%	12.3	68.378	0.967	0.212	78%	Good
STREET B	223	CBMH13	CBMH14	0.06	0.71	0.1184	0.9919	10.762	92.824	96.320	PVC	375	0.50%	60.7	123.977	1.123	0.901	78%	Good
STREET B	224	MD BLK	CBMH14	0.13	0.74	0.2674	0.2674	10.000	97.687	26.125	PVC	300	0.50%	3.5	68.378	0.967	0.060	38%	Good
STREET B	225	CBMH14	MH13	0.05	0.74	0.1029	1.3622	11.663	87.770	131.473	PVC	450	0.50%	8.5	201.600	1.268	0.112	65%	Good
STREET B		MH13	CBMH15				1.3622	11.775	87.189	131.473	PVC	450	0.50%	18.6	201.600	1.268	0.245	65%	Good
STREET B	226	CBMH15	OGS1	0.37	0.68	0.6994	4.3629	12.019	85.950	414.668	PVC	675	0.50%	1.8	594.386	1.661	0.018	70%	Good
STREET B		OGS1	SWMF1HW				4.3629	12.037	85.860	414.668	PVC	675	0.50%	7.2	594.386	1.661	0.072	70%	Good
SWMF2																			
STREET D	201	CBMH1	CBMH2	0.21	0.74	0.4320	0.4320	10.000	97.687	42.202	PVC	300	0.50%	41.0	68.378	0.967	0.706	62%	Good
STREET D	202	CBMH2	CBMH3	0.12	0.74	0.2469	0.6789	10.706	93.156	65.199	PVC	375	0.50%	55.2	123.977	1.123	0.820	53%	Good
STREET D	203	CBMH3	MH1	0.16	0.74	0.3292	1.0080	11.526	88.494	94.327	PVC	375	0.50%	23.2	123.977	1.123	0.344	76%	Good
	204	RLCB1	TEE1	0.02	0.52	0.0289	0.0289	10.000	97.687	2.824	PVC	300	0.50%	22.9	68.378	0.967	0.395	4%	Good
STREET D		MH1	MH2				1.0369	11.870	86.698	97.151	PVC	375	0.50%	43.8	123.977	1.123	0.650	78%	Good
STREET C	205	CBMH4	MH2	0.16	0.71	0.3158	0.3158	10.000	97.687	30.850	PVC	300	0.50%	6.7	68.378	0.967	0.115	45%	Good
STREET D	206	CB5	MH2	0.07	0.71	0.1382	0.1382	10.000	97.687	13.497	PVC	300	1.00%	7.0	96.701	1.368	0.085	14%	Good
	207	RLCB2	TEE2	0.08	0.52	0.1156	0.1156	10.000	97.687	11.297	PVC	300	1.00%	32.1	96.701	1.368	0.391	12%	Good
STREET D		MH2	CBMH5				1.6066	12.521	83.537	152.795	PVC	450	0.50%	53.3	201.600	1.268	0.701	76%	Good
STREET B	208	CBMH5	MH3	0.07	0.71	0.1382	1.7447	13.222	80.427	163.908	PVC	450	0.50%	11.0	201.600	1.268	0.145	81%	Good
STREET B		MH3	CBMH6				1.7447	13.366	79.819	163.908	PVC	450	0.50%	11.3	201.600	1.268	0.149	81%	Good
STREET B	209	CBMH10	MH9	0.29	0.65	0.5240	0.5240	10.000	97.687	51.191	PVC	300	0.50%	14.9	68.378	0.967	0.257	75%	Good
STREET B		MH9	CBMH9				0.5240	10.257	95.979	51.191	PVC	300	0.50%	16.4	68.378	0.967	0.283	75%	Good

Q=2.78AIR

where,

Q = peak flow in liters per second (L/s)

A = area in hectares (ha)

I = rainfall Intensity in millimeters per hour (mm/hr)

R = Runoff Coefficient

5 Year Storm Sewer Design Sheet

ST. ANDREWS LAKE VILLAGE

Client: Tonking Management Inc.

A	491.75
B	0.063
C	0.7

Date: January 2019

Designed: MG

Checked: DR

Location				Area (ha)	Runoff Coefficient	Individual 2.78 AR	Accumulated 2.78 AR	Time of Concentration	Rainfall Intensity I	Peak Flow Q (L/s)	Sewer Data							
Street	DA	From	To								Type of Pipe	Diameter (mm)	Slope (%)	Length (m)	Capacity (L/s) n=0.013	Velocity (m/s)	Time of Flow (minutes)	% Capacity	Velocity Check
STREET B	210	CB9	CBMH9	0.23	0.52	0.3325	0.3325	10.000	97.687	32.480	PVC	300	1.00%	6.7	96.701	1.368	0.082	34%	Good
STREET B	211	CBMH9	MH8	0.10	0.71	0.1974	1.0539	10.539	94.181	102.260	PVC	375	0.50%	28.3	123.977	1.123	0.420	82%	Good
STREET B		MH8	MH5				1.0539	10.959	91.654	102.260	PVC	375	0.50%	17.7	123.977	1.123	0.263	82%	Good
	212	RLCB3	MH7	0.02	0.52	0.0289	0.0289	10.000	97.687	2.824	PVC	300	1.00%	16.1	96.701	1.368	0.196	3%	Good
STREET E		MH7	MH6				0.0289	10.196	96.375	2.824	PVC	300	0.50%	18.6	68.378	0.967	0.320	4%	Good
STREET E		MH6	CBMH8				0.0289	10.517	94.323	2.824	PVC	300	0.50%	7.9	68.378	0.967	0.136	4%	Good
STREET E	213	CBMH8	MH5	0.25	0.71	0.4935	0.5224	10.653	93.482	48.953	PVC	300	0.50%	15.2	68.378	0.967	0.262	72%	Good
STREET B		MH5	CBMH7				1.5763	11.222	90.154	151.213	PVC	450	0.50%	38.8	201.600	1.268	0.510	75%	Good
STREET B	214	CBMH7	MH4	0.17	0.65	0.3072	1.8835	11.732	87.407	178.064	PVC	450	0.50%	26.0	201.600	1.268	0.342	88%	Good
STREET B		MH4	CBMH6				1.8835	12.074	85.676	178.064	PVC	450	0.50%	13.4	201.600	1.268	0.176	88%	Good
STREET B	215	CBMH6	OGS2	0.27	0.65	0.4879	4.1161	13.515	79.207	380.615	PVC	600	0.50%	3.9	434.172	1.536	0.042	88%	Good
		OGS2	SWMF2HW				4.1161	13.557	79.035	380.615	PVC	600	0.50%	29.7	434.172	1.536	0.322	88%	Good

Water Balance Calculations

St. Andrew's Lake Village

Project Number: WRI-14182
Date: January 2019

Pre Development

Total Area (ha)	8.391	
Impervious Area	0.040	
Pervious Area	8.351	
(Hydrologic Soil Group A)		

	Precipitation	Evapo-Tanspiration	Infiltration*	Infiltration Factor	Actual Infiltration	Run-off
Annual Depth (mm)	940	546	315	0.70	220.5	174
Annual Volume (m^3)	78875	45815			18414	14558

Post Development

Total Area (ha)	8.391	
Impervious Area	3.793	
Pervious Area	4.598	
(Hydrologic Soil Group A)		

	Precipitation	Evapo-Tanspiration	Infiltration*	Infiltration Factor	Actual Infiltration	Run-off
Annual Depth (mm)	940	515	276	0.70	193.2	232
Annual Volume (m^3)	78875	43214			8883	19450

Pre - Post Development Volume (m^3):	**9531**

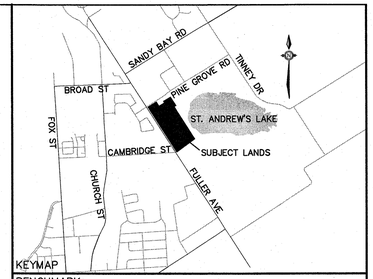
Infiltration Factors		
Sub Factors	Description	Factor
Topography	Flat Land	0.3
	Rolling Land	0.2
	Hilly Land	0.1
Soils	Tight Impervious Clay	0.1
	Medium Combinations of Clay/Loam	0.2
	Open Sandy Loam	0.4
Cover	Cultivated Land	0.1
	Woodland	0.2

Appendix D

Engineering Drawings

PLAN 51R-23610

PRELIMINARY SERVICING
NOT FOR CONSTRUCTION



BENCHMARK:

LEGEND

- STM1 — PROP. STORM MAINTENANCE HOLE
- CBMH1 — PROP. CATCHBASIN MAINTENANCE HOLE
- CB1 — PROP. CATCHBASIN
- PROP. STORM SEWER & DIRECTION OF FLOW
- PROP. SERVICING EASEMENT
- SAN1 — PROP. SANITARY MAINTENANCE HOLE
- PROP. SANITARY SEWER & DIRECTION OF FLOW
- PROP. 150mmø PVC WATERMAIN
- VB — PROP. VALVE AND BOX
- H&V — PROP. HYDRANT AND VALVE
- VB H&V VB — PROP. DOUBLE BACKFLOW CHECK VALVE
- PROP. RETAINING WALL
- PROP. RETAINING WALL
- EXISTING CONTOUR AND ELEVATION
- SLOPING (3:1 OR AS LABELLED)
- SPLIT — SPLIT DRAINAGE LOT
- WO — WALK OUT LOT
- LO — LOOK OUT LOT
- WP — WALK UP LOT
- RF — REAR TO FRONT DRAINAGE LOT
- DEVELOPMENT BOUNDARY

REFER TO DWG. No. SS-2

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FSR SUBMISSION	JAN.2019	DR

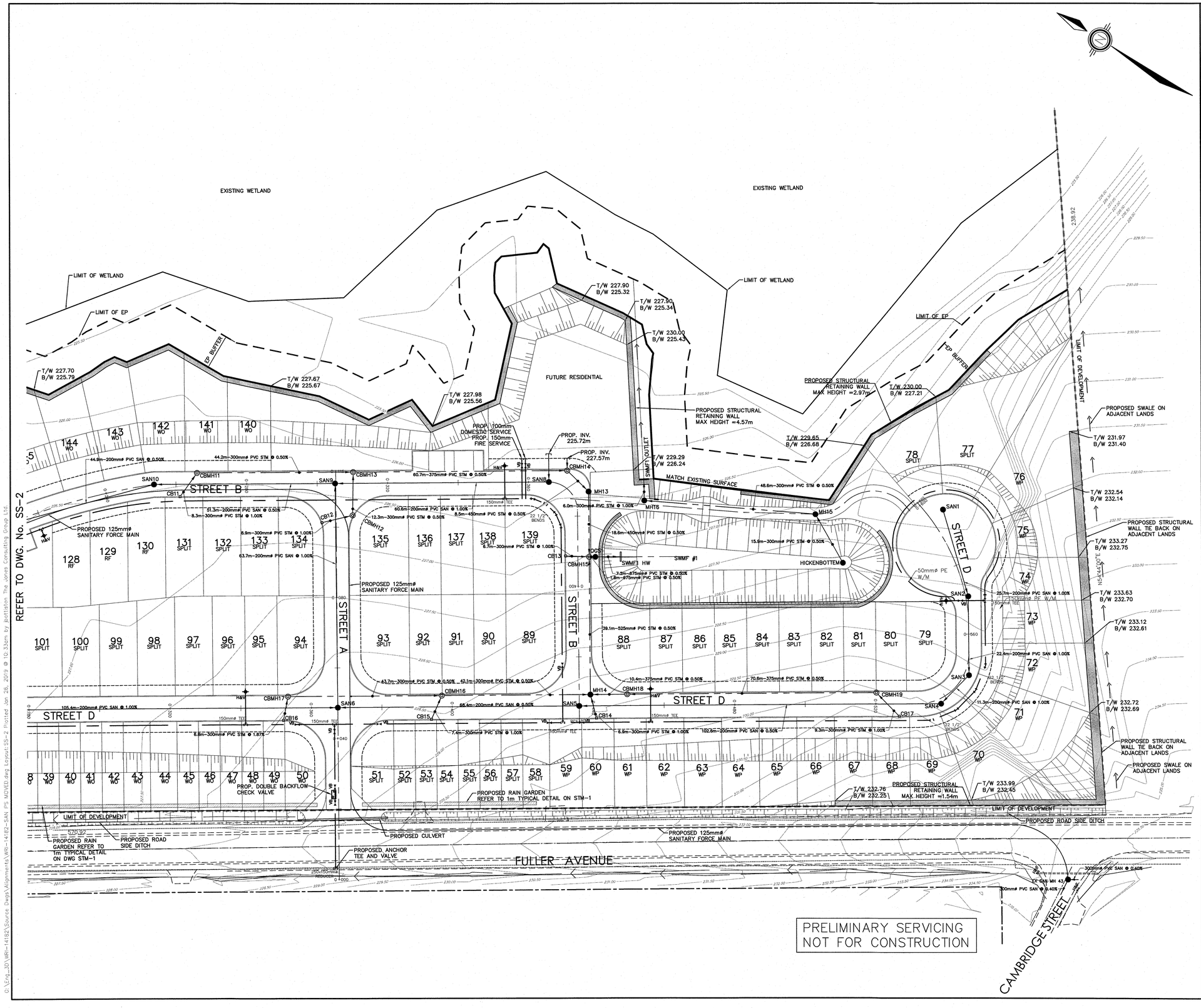
LICENSED PROFESSIONAL ENGINEER
D.F.RICHARDSON
100112707
PROVINCE OF ONTARIO

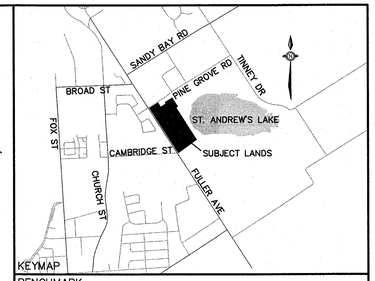
ST. ANDREW'S LAKE VILLAGE
TOWN OF PENETANGUISHENE

SITE SERVICING PLAN

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019	
DRAWN MG	PROJECT WRI-14182	DWG. Nº SS-1	
CHECKED DR			





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- H&V — PROP. HYDRANT AND VALVE
- VB H&V VB — PROP. DOUBLE BACKFLOW CHECK VALVE
- PROP. RETAINING WALL
- PROP. RETAINING WALL
- 253.00 — EXISTING CONTOUR AND ELEVATION
- SLOPING (3:1 OR AS LABELLED)
- SPLIT — SPLIT DRAINAGE LOT
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1.	FSR SUBMISSION	JAN.2019	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
PROVINCE OF ONTARIO

PRELIMINARY SERVICING
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TOWN OF PENETANGUISHENE

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DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019	
DRAWN MG	PROJECT WRI-14182	DWG. Nº SS-2	
CHECKED DR			

PLAN 51R-23610

PART 1
PLAN 51R-4830

PINE GROVE ROAD

STREET B

STREET C

STREET D

STREET E

FULLER AVENUE

SWMF #2

PROPOSED STRUCTURAL RETAINING WALL MAX HEIGHT =1.4m

PROPOSED STRUCTURAL RETAINING WALL MAX HEIGHT =2.6m

PROPOSED SWALE

EP BUFFER

LIMIT OF DEVELOPMENT

LIMIT OF WETLAND

LIMIT OF EP

MATCH EXISTING SURFACE

PROPOSED CULVERT

PROPOSED ROAD SIDE DITCH

PROPOSED 125mmø SANITARY FORCE MAIN

PROPOSED SANITARY PUMPING STATION

SPS

T/W 226.77
B/W 225.95

T/W 227.37
B/W 226.14

T/W 227.67
B/W 226.13

T/W 227.70
B/W 225.79

14.1m–200mm@PVC SAN @ 0.50%

13.7m–200mm@PVC SAN @ 0.50%

14.5m–200mm@PVC SAN @ 1.00%

52.5m–200mm@PVC SAN @ 0.50%

44.9m–200mm@PVC SAN @ 0.50%

64.4m–200mm@PVC SAN @ 1.00%

29.4m–200mm@PVC SAN @ 1.00%

38.0m–200mm@PVC SAN @ 1.00%

52.7m–200mm@PVC SAN @ 1.00%

31.6m–200mm@PVC SAN @ 0.50%

10.0m–200mm@PVC SAN @ 0.50%

105.4m–200mm@PVC SAN @ 1.00%

46.2m–200mm@PVC SAN @ 1.00%

11.3m–200mm@PVC SAN @ 1.00%

12.5m–200mm@PVC SAN @ 1.00%

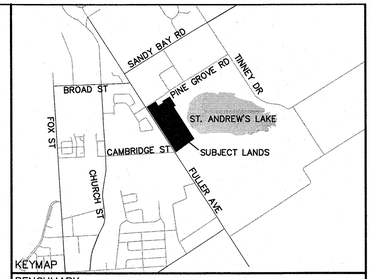
SAN1 SAN2 SAN3 SAN4 SAN5 SAN6 SAN7 SAN8 SAN9 SAN10 SAN11 SAN12 SAN13 SAN14 SAN15 SAN16 SAN17 SAN18 SAN19 SAN20 SAN21 SAN22 SAN23 SAN24 SAN25

EX SAN MH 17A

REFER TO DWG. No. SAN–2

PRELIMINARY SERVICING
NOT FOR CONSTRUCTION

KEYMAP



BENCHMARK:

LEGEND

- PROP. SERVICING EASEMENT
- SAN1 — PROP. SANITARY MAINTENANCE HOLE
- PROP. SANITARY SEWER & DIRECTION OF FLOW
- PROP. RETAINING WALL
- 253.00 — EXISTING CONTOUR AND ELEVATION
- SLOPING (3:1 OR AS LABELLED)
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- WO — WALK OUT LOT
- LO — LOOK OUT LOT
- WP — WALK UP LOT
- RF — REAR TO FRONT DRAINAGE LOT
- DEVELOPMENT BOUNDARY
- CATCHMENT BOUNDARY

AREA (ha.) — PERSONS PER UNIT
No. OF UNITS — CATCHMENT AREA ID NUMBER
AREA (ha.) — CATCHMENT AREA ID NUMBER
FLOWRATE IN L/s

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FSR SUBMISSION	JAN.2019	DR

LICENSED PROFESSIONAL ENGINEER
D. F. RICHARDSON
100112707
PROVINCE OF ONTARIO

ST. ANDREW'S LAKE VILLAGE
TOWN OF PENETANGUISHENE

OVERALL SANITARY PLAN

JONES CONSULTING GROUP LTD.
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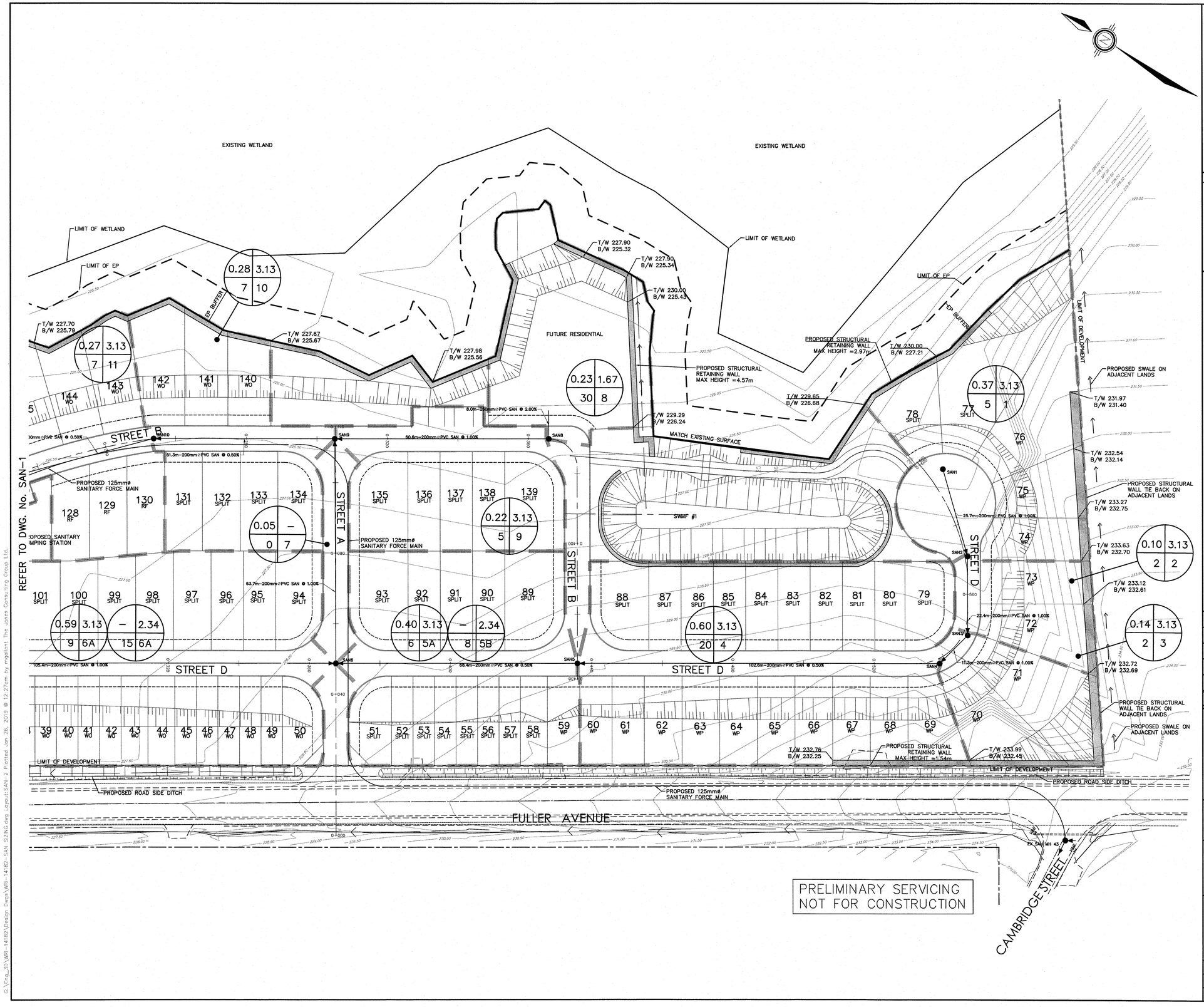
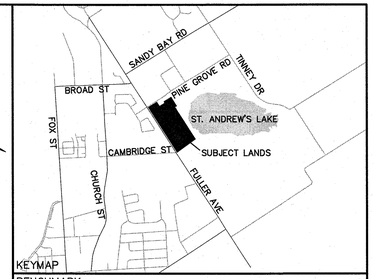
DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019
DRAWN MG	PROJECT WRI–14182	DWG. № SAN–1
CHECKED DR		





BENCHMARK:

LEGEND

SAN1	PROP. SANITARY MAINTENANCE HOLE
	PROP. SANITARY SEWER & DIRECTION OF FLOW
	PROP. RETAINING WALL
	EXISTING CONTOUR AND ELEVATION
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WO	WALK OUT LOT
LO	LOOK OUT LOT
WP	WALK UP LOT
RF	REAR TO FRONT DRAINAGE LOT
	DEVELOPMENT BOUNDARY
	CATCHMENT BOUNDARY

AREA (ha.) — PERSONS PER UNIT
0.42 3.13 / 10 13
No. OF UNITS — CATCHMENT AREA ID NUMBER

AREA (ha.) — CATCHMENT AREA ID NUMBER
0.26 29 / 0.084L/s
FLOWRATE IN L/s

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FSR SUBMISSION	JAN.2019	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
Jan 24/19
PROVINCE OF ONTARIO

ST. ANDREW'S LAKE VILLAGE
TOWN OF PENETANGUISHENE

OVERALL SANITARY PLAN

PRELIMINARY SERVICING
NOT FOR CONSTRUCTION

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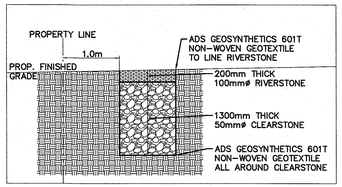
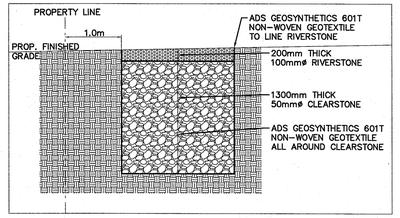
DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019	
DRAWN MG	PROJECT WRI-14182	DWG. № SAN-2	
CHECKED DR			

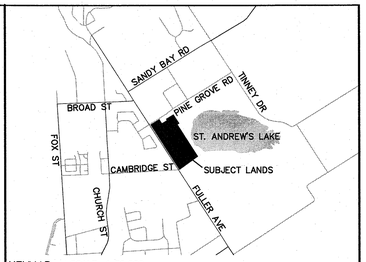
PRELIMINARY SERVICING
NOT FOR CONSTRUCTION



TYPICAL 1m WIDE RAIN GARDEN



TYPICAL 2m WIDE RAIN GARDEN



KEYMAP SCALE: 1:30,000

BENCHMARK:

LEGEND

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CBMH1 ⊕	PROP. CATCHBASIN MAINTENANCE HOLE
CB1 □	PROP. CATCHBASIN
	PROP. STORM SEWER & DIRECTION OF FLOW
	PROP. SERVICING EASEMENT
	PROP. RAIN GARDEN
	PROP. RETAINING WALL
253.00	EXISTING CONTOUR AND ELEVATION
	SLOPING (3:1 OR AS LABELLED)
SPLIT	SPLIT DRAINAGE LOT
WO	WALK OUT LOT
LO	LOOK OUT LOT
WP	WALK UP LOT
RF	REAR TO FRONT DRAINAGE LOT
	DEVELOPMENT BOUNDARY
	CATCHMENT BOUNDARY
	DIRECTION OF POST DEVELOPMENT 100 YEAR STORM EVENT OVERLAND FLOW

CATCHMENT AREA ID NUMBER
RUN-OFF COEFFICIENT
210 | 0.52
0.22
AREA (ha.)

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FSR SUBMISSION	JAN.2019	DR

LICENCED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100127
Nov 26/19
PROVINCE OF ONTARIO

ST. ANDREW'S LAKE VILLAGE
TOWN OF PENETANGUISHENE

OVERALL STORM PLAN

JONES CONSULTING GROUP LTD.
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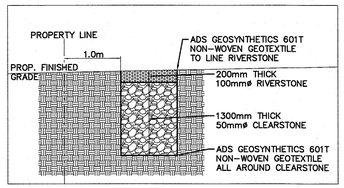
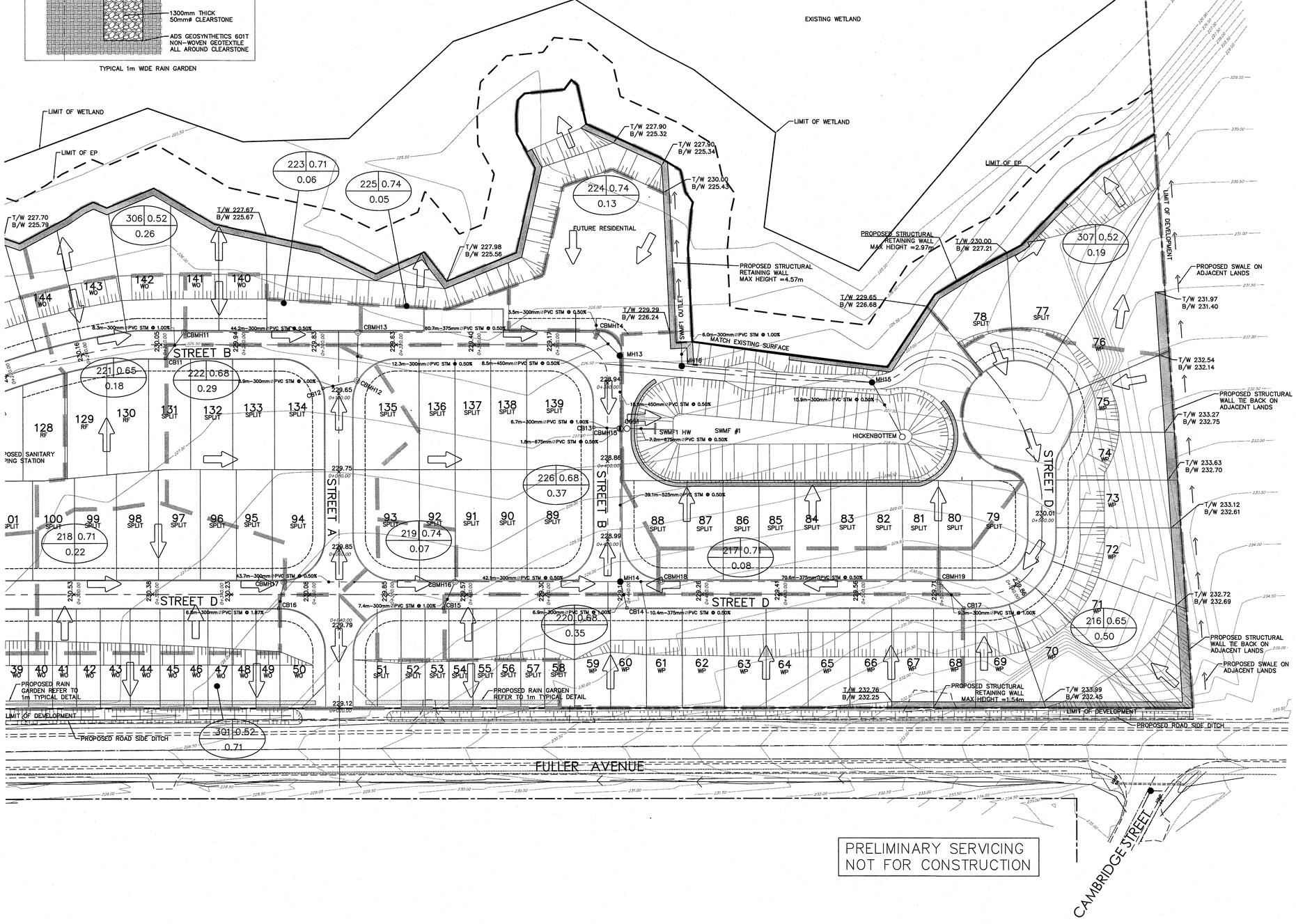
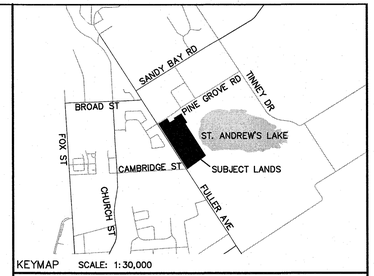
DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019	
DRAWN MG	PROJECT WRI-14182	DWG. Nº STM-1	
CHECKED DR			



TYPICAL 1m WIDE RAIN GARDEN





KEYMAP SCALE: 1:30,000

BENCHMARK:

LEGEND

- STM1 — PROP. STORM MAINTENANCE HOLE
- CBMH1 — PROP. CATCHBASIN MAINTENANCE HOLE
- CB1 — PROP. CATCHBASIN
- PROP. STORM SEWER & DIRECTION OF FLOW
- PROP. SERVICING EASEMENT
- PROP. RAIN GARDEN
- PROP. RETAINING WALL
- EXISTING CONTOUR AND ELEVATION
- SLOPING (3:1 OR AS LABELLED)
- SPLIT — SPLIT DRAINAGE LOT
- WO — WALK OUT LOT
- LO — LOOK OUT LOT
- WP — WALK UP LOT
- RF — REAR TO FRONT DRAINAGE LOT
- DEVELOPMENT BOUNDARY
- CATCHMENT BOUNDARY
- DIRECTION OF POST DEVELOPMENT 100 YEAR STORM EVENT OVERLAND FLOW
- CATCHMENT AREA ID NUMBER
- RUN-OFF COEFFICIENT
- AREA (ha.)

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FIRST SUBMISSION	JAN.2019	DR

LICENSED PROFESSIONAL ENGINEER D. F. RICHARDSON 100112707 Jan 26/19 PROVINCE OF ONTARIO

ST. ANDREW'S LAKE VILLAGE TOWN OF PENETANGUISHENE

OVERALL STORM PLAN

PRELIMINARY SERVICING NOT FOR CONSTRUCTION

JONES CONSULTING GROUP LTD. PLANNERS & ENGINEERS
229 Mapleview Dr. E, Unit 1
Barrie, ON L4N 0W5
P. 705.734.2538
F. 705.734.1056

DESIGN DR	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019	
DRAWN MG	PROJECT WRI-14182	DWG. № STM-2	
CHECKED DR			

PLAN 51R-23610

PRELIMINARY GRADING
NOT FOR CONSTRUCTION

PART 1
PLAN 51R-4830

PINE GROVE ROAD

FULLER AVENUE

STREET B

STREET C

STREET D

STREET E

HICKENBOTTEM

SWMF #1

SWMF2 OUTLET

SWMF2 HW

LIMIT OF DEVELOPMENT

LIMIT OF WETLAND

LIMIT OF EP

EP BUFFER

MATCH EXISTING SURFACE

PROPOSED STRUCTURAL RETAINING WALL MAX HEIGHT =1.4m

PROPOSED STRUCTURAL RETAINING WALL MAX HEIGHT =2.6m

PROPOSED SWALE

PROPOSED CULVERT

PROPOSED ROAD SIDE DITCH

PROPOSED RAIN GARDEN REFER TO 2m TYPICAL DETAIL ON DWG STM-1

PROPOSED RAIN GARDEN REFER TO 1m TYPICAL DETAIL ON DWG STM-1

TOWNHOUSE BLOCK

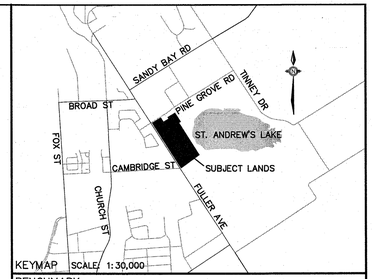
T/W 226.77
B/W 225.95

T/W 227.37
B/W 226.14

T/W 227.67
B/W 226.13

T/W 227.70
B/W 225.79

REFER TO DWG. No. GP-2



KEYMAP SCALE 1:30,000

BENCHMARK:

LEGEND

- EX. SANITARY MAINTENANCE HOLE
- EX. STORM MAINTENANCE HOLE
- EX. VALVE & BOX
- EX. HYDRANT & VALVE
- EX. HYDRO POLE
- HYDRANT AND VALVE
- VALVE AND BOX
- EXISTING CONTOUR AND ELEVATION
- PROPOSED GRADE
- SLOPING (3:1 OR AS LABELLED)
- EXISTING GRADE
- CATCHBASIN
- DOUBLE CATCHBASIN
- STORM MAINTENANCE HOLE
- CATCHBASIN MAINTENANCE HOLE
- DOUBLE CATCH BASIN MAINTENANCE HOLE
- SANITARY MAINTENANCE HOLE
- EXISTING TREELINE
- SPLIT — SPLIT DRAINAGE LOT
- WO — WALK OUT LOT
- LO — LOOK OUT LOT
- WP — WALK UP LOT
- RF — REAR TO FRONT DRAINAGE LOT
- DEVELOPMENT BOUNDARY

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FSR SUBMISSION	JAN.2019	DR

D.E. RICHARDSON
100112707
Jan 28/19
PROVINCE OF ONTARIO

ST. ANDREW'S LAKE VILLAGE
TOWN OF PENETANGUISHENE

OVERALL LOT GRADING PLAN

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
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Barrie, ON L4N 0W5
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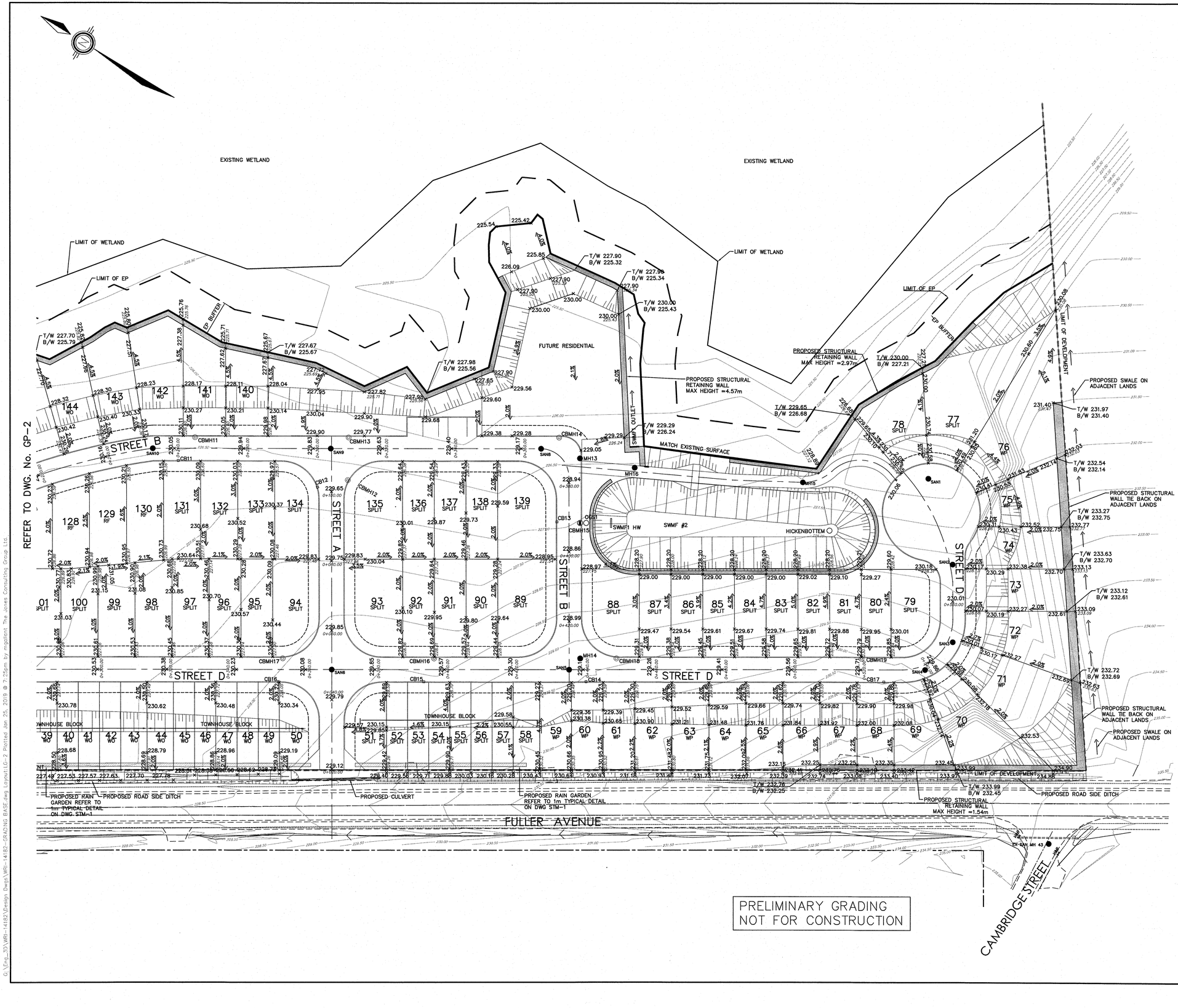
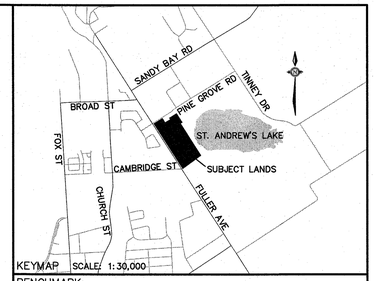
F. 705.734.1056

DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019
DRAWN MG	PROJECT WRI-14182	DWG. № LG-1
CHECKED DR		





KEYMAP SCALE: 1:30,000

BENCHMARK:

LEGEND

- EX. SANITARY MAINTENANCE HOLE
- EX. STORM MAINTENANCE HOLE
- EX. VALVE & BOX
- EX. HYDRANT & VALVE
- EX. HYDRO POLE
- HYDRANT AND VALVE
- VALVE AND BOX
- EXISTING CONTOUR AND ELEVATION
- PROPOSED GRADE
- SLOPING (3:1 OR AS LABELLED)
- EXISTING GRADE
- CATCHBASIN
- DOUBLE CATCHBASIN
- STORM MAINTENANCE HOLE
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- DEVELOPMENT BOUNDARY

NO.	REVISIONS	DATE (Y/M/D)	INITIAL
1.	FSR SUBMISSION	JAN.2019	DR

LICENSED PROFESSIONAL ENGINEER
D.F. RICHARDSON
100112707
Jan 26/19
PROVINCE OF ONTARIO

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DESIGN MG	SCALE: HOR. 1:500 VERT. 1:500	DATE JANUARY 2019	
DRAWN MG	PROJECT WRI-14182	DWG. Nº LG-2	
CHECKED DR			

ST. ANDREW'S LAKE

PINE GROVE ROAD

N31°34'36"W 113.00

91.48

N31°38'30"W 403.28

238.92

N59°14'10"E 63.61

N31°37'30"W 17.89

WETLAND BOUNDARY

NHS BOUNDARY

225.50 226.00 226.50 227.00 227.50 228.00 228.50

229.00 229.50 230.00 230.50 231.00 231.50 232.00 232.50 233.00 233.50 234.00 234.50 235.00 235.50

104 | 32
1.177

102 | 32
0.905

105 | 41
0.252

103 | 35
4.021

101 | 37
2.264

N59°14'10"E 105.02

N31°37'30"W 53.56

N59°14'10"E

N54°44'00"E

N31°37'30"W 570.92

FULLER AVENUE

FULLER AVENUE

EXISTING 250mmø PVC W/M

CAMBRIDGE STREET

LEGEND

DIRECTION OF PRE DEVELOPMENT OVERLAND FLOW

CATCHMENT ID
105 | 41 — CURVE NUMBER
0.25 — AREA (ha.)

PRE DEVELOPMENT DRAINAGE AREA

EP LIMIT

DEVELOPMENT BOUNDARY

253.00 EXISTING CONTOUR AND ELEVATION

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS

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F. 705.734.1056

PRE DEVELOPMENT STORM DRAINAGE PLAN ST. ANDREW'S LAKE VILLAGE

DRAWN BY:	MG	CHECKED BY:	DR
SCALE:	1:1750	DATE:	JAN. 2019
PROJECT No.	WRI-14182	FIG No.	SWM-1

ST. ANDREW'S LAKE

PINE GROVE ROAD

PROPOSED SWM FACILITY No. 2
NORTH DRY POND
BOTTOM ELEV: 225.80m
TOP ELEV: 228.10m
MAX VOLUME: 2381cu.m

PROPOSED SWM FACILITY No. 1
SOUTH DRY POND
BOTTOM ELEV: 225.90m
TOP ELEV: 228.20m
MAX VOLUME: 2241cu.m

NOTE: ROOF LEADERS FOR BUILDINGS IN CATCHMENT 202 ARE TO DRAIN TO THE FRONT OF THE LOT.

WETLAND BOUNDARY

NHS BOUNDARY

PROPOSED RAIN GARDEN
TOTAL LENGTH: 95m
TOTAL VOLUME: 152cu.m

202 | 42
2.314

205 | 82
0.240

206 | 82
0.23

203 | 82
2.475

201 | 82
2.737

204 | 64
0.625

NOTE: COMMERCIAL BLOCK TO PROVIDE ON-SITE SWM CONTROLS. REFER TO TABLE 1 THIS DRAWING FOR ALLOWABLE PEAK FLOWS.

FULLER AVENUE

FULLER AVENUE

EXISTING 250mmø PVC W/M

PROPOSED RAIN GARDEN
TOTAL LENGTH: 340m
TOTAL VOLUME: 176cu.m

CAMBRIDGE STREET

Commercial Development Allowable Peak Flows

Storm Event	Allowable Peak Flow (m^3/s)
4 HR CHI	
2-year	0.001
5-year	0.002
10-year	0.003
25-year	0.005
50-year	0.006
100-year	0.007
24 HR SCS	
2-year	0.002
5-year	0.004
10-year	0.005
25-year	0.007
50-year	0.009
100-year	0.011

LEGEND

- DIRECTION OF PRE DEVELOPMENT OVERLAND FLOW
- CATCHMENT ID / CURVE NUMBER / AREA (ha.)
- POST DEVELOPMENT DRAINAGE AREA
- EP LIMIT
- DEVELOPMENT BOUNDARY
- 253.00 EXISTING CONTOUR AND ELEVATION

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F. 705.734.1056

POST DEVELOPMENT STORM DRAINAGE PLAN ST. ANDREW'S LAKE VILLAGE

DRAWN BY:	MG	CHECKED BY:	DR
SCALE:	1:1750	DATE:	JAN. 2019
PROJECT No.	WRI-14182	FIG No.	SWM-2