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Metro Grocery Store No. 145

STORMWATER MANAGEMENT REPORT

Metro Ontario Inc.

File 421426 | December 6, 2022

Document Control

File:	Prepared by:	Prepared for:
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Date: **December 6, 2022**		

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Issue	Date	Description
1	December 6, 2022	Issued for Site Plan Approval

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1 Introduction

Tatham Engineering Limited (Tatham) has been retained by Metro Ontario Inc. (Metro) to prepare a Stormwater Management (SWM) report in support of a Site Plan Approval (SPA) application for a proposed Metro grocery store, located in the City of Barrie.

1.1 OBJECTIVES

This report was prepared to provide a summary of the stormwater management recommendations to demonstrate the proposed development will not adversely impact local drainage. As such, the SWM report presented herein will evaluate the effect of the proposed development on the local drainage conditions and, where necessary, provide solutions to mitigate any adverse impacts.

1.2 GUIDELINES AND BACKGROUND REPORTS

This report is prepared in consideration of the following municipal, provincial and agency guideline documents:

- The Ministry of the Environment, Conservation, and Parks (MECP, formerly known as Ministry of Environment), *Stormwater Management Practices Planning and Design Manual* (2003);
- The Ministry of the Environment, Conservation, and Parks (MECP, formerly known as Ministry of Environment), *Lake Simcoe Protection Plan* (LSPP) (2009);
- City of Barrie, *Storm Drainage and Stormwater Management Policies and Design Guidelines* (2020);
- City of Barrie, *Sanitary Sewage Collection System Policies and Design Guideline* (2017); and
- City of Barrie, *Water Transmission and Distribution Design Standard* (2021).

This report is prepared in consideration of the following site-specific studies and reports:

- Geotechnical Investigation (prepared by WSP Canada Inc., October 2022);
- Hydrogeological Study (prepared by WSP Canada Inc., October 2022);
- Functional Servicing Report (prepared by Tatham Engineering Limited, December 2022); and
- Traffic Impact Study (prepared by Tatham Engineering Limited, December 2022).

2 Site Description

The subject property (site) is located at 800 Yonge Street and 658 Mapleview Drive East (northeast of Goodwin Drive and Mapleview Drive East intersection) in the City of Barrie. The site is bound by Goodwin Drive to the west, existing residential and future development lands to the north (North lands), future development lands to the east (Retained lands) and Mapleview Drive East to the south.

The subject property is legally described as:

PART OF BLOCK 19
PLAN 51M-832
CITY OF BARRIE
COUNTY OF SIMCOE

Refer to Figure 1: Site Location Plan.

2.1 LAND USE & ZONING BY-LAW

The property is designated as 'Commercial District' based on the City of Barrie's current Official Plan, and 'C4 SP-348 – General Commercial' and 'MU1 SP-594 - Mixed-Use Node' based on the City of Barrie's Zoning By-law 2009-141.

2.2 TOPOGRAPHY

Information relating to existing topography, ground cover, and drainage patterns was obtained through a review of relevant background studies, available plans, base mapping, and topographic surveys, and was confirmed during site visits.

A detailed topographic survey of the site was completed by Dino Astri Surveying Ltd. on February 17, 2020. Additional topographic survey was completed by Tatham (October 2022) to reflect recent construction activity on Mapleview Drive East.

The subject property consists of 1.64 ha of undeveloped lands. The site is currently a ploughed agricultural field gently sloping (1-3%) northwest towards Goodwin Drive. The property includes a 4.0 m wide drainage easement for an existing ditch and catch basin located adjacent to Goodwin Drive.

Based on the Ontario Soil Survey the existing soils are classified as Dundonald Sandy Loam, Hydrologic Soil Group AB.

2.3 LSRCA REGULATION & SOURCE PROTECTION

The site is located within the Lake Simcoe Region Conservation Authority (LSRCA) watershed but is not within their regulated area. However, the site is classified as 'major development' under the Lake Simcoe Protection Plan (LSPP) and must demonstrate how the management of stormwater will be addressed and how changes in water balance will be minimized. In addition, the site is located within a Highly Vulnerable Aquifer (HVA) and as such, infiltration of parking lot runoff is not recommended.

2.4 BARRIE WEST LANDS

The proposed grocery store development is located on a parcel of a larger future development property referred to as the Barrie West development. The remainder of the Barrie West lands are expected to be developed as mixed-use (commercial, residential).

Two private driveways will be designed and constructed within the Barrie West lands in support of the Metro Grocery Store development and future Barrie West development(s). Driveway 'A' will connect Goodwin Drive to Yonge Street and Driveway 'B' will connect Driveway 'A' to Mapleview Drive East. Detailed engineering reports in support an SPA application for the private driveways have been prepared by Tatham Engineering Limited under separate cover.

2.5 PROPOSED SITE PLAN

The proposed grocery store footprint is approximately 4,064 m^2 and will consist of the store area, store office, mezzanine, and mechanical/electrical room.

Two accesses to the site will be provided via the private Driveway 'A', and one access to the site will be provided via Driveway 'B'. A 236-space parking lot will include barrier free parking spaces, electric vehicle charging spaces, cart corals, and a concrete loading bay provided at the building.

Refer to Appendix A for the Site Plan, prepared by Turner Fleischer Architects Inc.

Figure 1: Site Location Plan

3 Stormwater Management Plan

3.1 STORMWATER MANAGEMENT CRITERIA

This SWM plan is subject to the review and approval of the City of Barrie and the LSRCA. Applicable SWM design criteria for the proposed development are presented below.

3.1.1 Stormwater Quantity and Quality Control

The subject site is located within lands originally referred to as the Swallow Glen Subdivision, which was designed to contribute stormwater flows to the downstream SWM Pond LV19 and storm sewer infrastructure that has been installed on Goodwin Drive. The SWM plan for the subject site must provide quantity and quality controls to ensure the site release targets meet the assumptions from the original designs.

3.1.2 LSRCA Volume Control

In accordance with LSRCA policies, any works meeting the definition of 'major development' are required to meet the volume control requirements as outlined in Section 3.2.4 of the LSRCA Technical Guidelines (2022). Best efforts must be demonstrated to infiltrate, filter, or re-use the 25 mm storm event runoff from impervious areas on the site.

Per the City of Barrie's Infiltration Low Impact Development Screening Process, infiltration LIDs are not permitted to infiltrate runoff from paved surfaces in commercial areas designated as HVAs. Volume controls will therefore be provided for rooftop runoff only.

3.1.3 Water Balance

In accordance with policies outlined in the Lake Simcoe Protection Plan (LSPP), any works designated as 'major development' must demonstrate that best efforts have been provided to minimize changes in water balance between pre-development and post-development.

3.1.4 Phosphorous Mitigation

The proposed development will also be subject to the Lake Simcoe Phosphorous Offsetting Policy (LSPOP), which requires all major development projects to control 100% of the phosphorous generated from the site. Any remaining phosphorous load that cannot be controlled/removed will require compensation for off-site mitigation.

3.1.5 Siltation & Erosion Control

An overview of the siltation and erosion control strategy will be provided for implementation during construction.

3.2 ALLOWABLE RELEASE RATES

To determine the allowable release rates for the Metro site, the original Swallow Glen Subdivision catchment boundaries were extracted from the Country Lane Phase III, Part 6 Subdivision / Swallow Glen Subdivision drawing set (R.G. Robinson, 2005). The intended drainage patterns for the subject site are shown on the Internal Storm Drainage Plan (Drawing G-3) enclosed in Appendix B. Per Drawing G-3, the subject site is located within a 2.75 ha catchment that was assigned a runoff coefficient of 0.8, which was modelled using Visual OTTHYMO (VO6.2) hydrologic modelling software using City of Barrie rainfall data. Peak flow rates have been generated for the 1:2-year through 1:100-year return periods under AMC II conditions using the 4-Hour Chicago, and the 6-Hour, 12-Hour and 24-Hour SCS Type II (SCS) storm distributions.

Using a weighted average approach, allowable release rates from the subject site and the remainder of the Barrie West lands were determined. The total area to be released to the Goodwin Drive storm sewers is 4.85 ha (1.64 ha from the subject site and 3.21 ha from the Barrie West lands). The subject site is 33.7% of the total drainage area. Allocated allowable release rates are summarized in Table 1 below for the 4-Hour Chicago, and the 24-Hour SCS Type II (SCS) storm distributions, while detailed modelling output from all storm distributions is provided in Appendix B.

Table 1: Allowable Release Rates Summary

STORM	SWALLOW GLEN SUBDIVISION DESIGN PEAK FLOW TO GOODWIN DRIVE & SWM POND LV19 (m^3/s)		SUBJECT SITE ALLOWABLE RELEASE RATE (m^3/s)	
	4-HR CHICAGO	24-HR SCS	4-HR CHICAGO	24-HR SCS
1:2-year	0.49	0.42	0.16	0.14
1:5-year	0.66	0.61	0.22	0.21
1:10-year	0.77	0.74	0.26	0.25
1:25-year	0.93	0.90	0.31	0.30
1:50-year	1.03	1.03	0.35	0.35
1:100-year	1.17	1.13	0.39	0.38

Water quantity controls will be required for the subject site to ensure total flows released from the site do not exceed the allowable release rates shown in Table 1.

3.3 PROPOSED DRAINAGE CONDITIONS

A Post-Development Drainage Plan (Drawing DP-2) in enclosed for reference.

Under proposed conditions, the parking areas of the proposed development will drain internally via a combination of surface grading and storm sewer to the outlet at the northwest corner of the site. Water quantity controls will be provided through a combination of rooftop storage, parking lot surface ponding and an underground storage system (SWM Facility #1). The storm sewers are sized to convey the 1:5-year design storm (minor storm) peak flows to SWM Facility #1. The outlet from SWM Facility #1 will connect to the catch basin structure on Goodwin Drive, and all peak flows from SWM Facility #1 will be controlled to the 5-year allowable release rate in order to maintain the design capacity of the Goodwin Drive storm sewer. Storm events greater than the 1:5-year storm event will discharge overland via the driveway to Driveway 'A' in the northwest corner of the site.

Water quality controls will be provided through a combination of on- and off-site controls, consisting of a Jellyfish Filter structure and isolator row in in SWM Facility #1 on-site. The downstream SWM pond LV19 was originally sized to provide quality control for the site and will continue to provide additional quality control. A secondary underground storage unit (SWM Facility #2) has been proposed to infiltrate rooftop runoff to assist with the achieving volume control and water balance objectives.

Under post-development conditions, eleven site drainage catchment areas have been delineated and assessed. Eight catchments, totaling to an area of 1.51 ha contain the majority of the proposed development, including rooftop area, parking lot and landscaped areas, which will be controlled by the proposed drainage infrastructure.

The three remaining catchments will drain uncontrolled from the site and generally consist of driveway entrances, sidewalk and landscaped boulevard areas. The drainage from these catchments will be treated by the downstream SWM pond. These catchments were included in the hydrologic analysis to confirm that that total flows released from the site do not exceed the allowable release rates.

Details of the water quantity control and water quality treatment design is described in the following sections.

3.4 WATER QUANTITY CONTROL

The total required quantity storage volume to provide peak flow attenuation of all storm events up to and including the 100-year event was calculated in VO6.2 using the various storage features included in the design including: rooftop storage, underground storage, and surface parking lot

storage. A brief description of the proposed water quantity controls and summary of operating characteristics for each is provided below.

3.4.1 Parking Lot Storage

Parking lot ponding will be utilized to provide peak flow attenuation at surface, in order to reduce underground storage requirements. Ponding areas have been proposed at storm sewer structure CBMH1. An orifice plate has been sized to allow the 1:5-year return period peak flow to be conveyed unobstructed through the storm sewer to ensure that there is no ponding under the 1:5-year storm event, with the exception of the 1:5-year 4-Hour Chicago storm event, where minimal ponding is anticipated (0.04 m) in order to optimize the size of SWMF #1.

The ponding area has been modelled as a separate RouteReservoir in VO6.2 to confirm ponding depths and peak flow attenuation details. Proposed drainage patterns are shown on Drawing DP-2 and Site Grading Plan (SG-1).

A summary of parking lot storage water levels, storage volumes and release rates is provided in Table 2, while detailed calculations and modelling results are provided in Appendix C for reference.

Table 2: Operating Characteristics Summary - Parking Lot Storage Ponding Depths

STORM	PEAK FLOW RATE (m^3/s)		STORAGE VOLUME (m^3)		PONDING DEPTH (m)	
	4-HR CHI	24-HR SCS	4-HR CHI	24-HR SCS	4-HR CHI	24-HR SCS
1:2-year	0.18	0.15	0	0	0.00	0.00
1:5-year	0.23	0.21	0	0	0.02	0.00
1:10-year	0.27	0.25	7	3	0.10	0.07
1:25-year	0.30	0.29	17	15	0.13	0.13
1:50-year	0.31	0.32	25	27	0.14	0.14
1:100-year	0.34	0.34	38	38	0.16	0.16

A 290 mm dia. orifice plate at elevation 264.39 m will be utilized to provide peak flow attenuation for CBMH1. As discussed, peak flows under storm events greater than the 1:5-year return period can partially discharge from the ponding area at CBMH1 overland via the driveway entrance to Driveway 'A' in the site's northwest corner. The driveway entrance will serve as a 7.1 m wide broad crested weir, which will safely convey site discharge to Driveway 'A' under major storm events.

3.4.2 Underground Detention Storage

Water quantity control will also be provided through underground storage to attenuate post-development peak flows to the 1:5-year return period allowable release rate in order to ensure that the Goodwin Drive storm sewer capacity is not exceeded. A summary of water levels, storage volumes and release rates within SWM Facility #1 is provided in Table 3 while detailed calculations and design details are provided in Appendix C.

Table 3: Operating Characteristics Summary – SWM Facility #1

STORM	PEAK FLOW RATE (m^3/s)		STORAGE VOLUME (m^3)		PONDING DEPTH (m)	
	4-HR CHI	24-HR SCS	4-HR CHI	24-HR SCS	4-HR CHI	24-HR SCS
1:2-year	0.09	0.10	87	89	263.72	263.74
1:5-year	0.11	0.12	118	132	264.00	264.12
1:10-year	0.12	0.13	135	161	264.15	264.38
1:25-year	0.13	0.14	154	178	264.32	264.53
1:50-year	0.13	0.15	162	193	264.39	264.67
1:100-year	0.14	0.15	173	198	264.49	264.71

Peak flow attenuation for SWM Facility #1 will be provided by a 230 mm dia. orifice plate at elevation 262.95 m, located within the STM Control MH downstream of SWM Facility #1. A total of 199 m^3 of quantity storage is required to attenuate 1:100-year event peak flows. This volume will be provided within SWM Facility #1 through a Layfield Aquabox HP chamber system. The Aquabox HP chamber system design excludes all storage within the base of the system below the outlet invert and within the stone layer per City of Barrie Standards.

SWM Facility #1 will be lined with an impermeable liner to ensure no infiltration of parking lot runoff. Shop drawings for the underground storage system are provided in Appendix C.

3.4.3 Rooftop Storage

A total of 322 m^3 is provided in the design as rooftop ponding storage to provide additional water quantity control.

Design release assumptions for the roof have been provided by the building mechanical engineer with the assumption that roof drains will be designed to attenuate peak flows to 0.012 m^3/s at a

maximum ponding depth of 0.1 m. A summary of ponding depths, storage volume and release rates is provided in Table 4 below while detailed calculations and roof drain specifications are provided in Appendix C. It is noted the ultimate design of the roof drains will be completed by the Mechanical Engineer.

Table 4: Operating Characteristics Summary – Rooftop Storage

STORM	PEAK FLOW RATE (m^3/s)		STORAGE VOLUME (m^3)		PONDING DEPTH (m)	
	4-HR CHI	24-HR SCS	4-HR CHI	24-HR SCS	4-HR CHI	24-HR SCS
1:2-year	0.004	0.005	111	130	0.03	0.04
1:5-year	0.006	0.007	152	183	0.05	0.06
1:10-year	0.007	0.008	179	218	0.06	0.07
1:25-year	0.008	0.010	214	263	0.07	0.08
1:50-year	0.009	0.011	239	296	0.07	0.09
1:100-year	0.010	0.012	265	322	0.08	0.10

3.4.4 Peak Flow Summary

Due to the provided water quantity controls, post-development peak flows are attenuated to less than or equal to the allowable release rate. A summary of post-development peak flows is provided in Table 5 below.

Table 5: Post-Development Peak Flow Rates

STORM	ALLOWABLE RELEASE RATE (m^3/s)		POST-DEVELOPMENT PEAK FLOW (m^3/s)	
	4-HR CHICAGO	24-HR SCS	4-HR CHICAGO	24-HR SCS
1:2-year	0.16	0.14	0.14	0.13
1:5-year	0.22	0.21	0.18	0.18
1:10-year	0.26	0.25	0.22	0.22
1:25-year	0.31	0.30	0.28	0.28
1:50-year	0.35	0.35	0.31	0.33
1:100-year	0.39	0.38	0.35	0.36

As shown, the post-development peak flow rates are maintained to allowable release rates. We note the post-development peak flow rates calculated do not consider the infiltration volume provided in SWM Facility #2 and thus are conservative.

3.5 WATER QUALITY CONTROL

Water quality controls will be provided via an on-site treatment train to provide requisite treatment for the total suspended solids (TSS) from the proposed development that would not have been accounted for in the downstream SWM pond design. The treatment train will consist of a Layfield Aquabox sediment debris row in SWM Facility #1, and an offline Canadian Environmental Verification (ETV) verified Jellyfish Filter JF8-7-2 unit located immediately upstream of SWM Facility #1. The treatment train will provide treatment for 91% of the total area, given that 0.15 ha will drain uncontrolled to the downstream SWM pond.

Considering the sediment debris row is understood to have a TSS removal rate of approximately 30% and the Jellyfish Filter is verified to have a mean TSS removal efficiency rate of 89%, and 9% of the site area will not be treated, a weighted average TSS removal of 85% is provided. The calculated TSS removal exceeds the minimum TSS removal requirements for a standalone site and is therefore sufficient. Treatment train calculations are provided in Appendix D.

It is noted that the downstream SWM pond LV19 was sized to provide quality controls for the subject site. The proposed on-site controls are additional and intended to assist with phosphorous removal targets.

3.5.1 Volume Control

In accordance with LSRCA requirements, projects defined as 'major development' are required to meet the volume control requirements outlined in Section 3.2.4 of the LSRCA's 2022 SWM guidelines. Best efforts must be provided to infiltrate, filter or re-use runoff generated during the 25 mm rain event from impervious areas on site.

Per the City of Barrie's Infiltration Low Impact Development Screening Process, infiltration LIDs are not permitted to infiltrate runoff from paved surfaces in commercial areas designated as HVAs. Volume controls will therefore be provided for rooftop runoff only, as runoff generated from rooftops is generally considered to be clean.

A secondary underground storage unit (SWM Facility #2) has been proposed to infiltrate the 25 mm storm event runoff volume from the rooftop, which totals to 102.5 m^3. This volume will be provided within SWM Facility #2 through a Layfield Aquabox HP chamber system, with a total storage volume of 147 m^3. SWM Facility #2 will fitted with a 300 mm dia. overflow pipe that will connect to the site's internal storm sewer network. The SWM Facility #2 outlet pipe will be fitted with a backflow preventer to prevent stormwater from the parking lot backing up into the

infiltration unit to prevent infiltration of paved surface runoff. Shop drawings for the underground storage system are provided in Appendix D.

This approach to providing volume control represents best efforts, as per City of Barrie Standards for Infiltration LIDs, commercially zoned properties in highly vulnerable aquifers are not permitted to infiltrate paved areas.

3.5.2 Phosphorous Mitigation

In order to comply with Lake Simcoe Phosphorous Offset Program (LSPOP) requirements, a phosphorous budget for the site has been completed using loading rates and removal efficiencies from the Sustainable Technologies Evaluation Program (STEP) Low Impact Development Treatment Train Tool (LID TTT).

Proposed Conditions

Under proposed conditions, the site will consist of mostly impervious areas and landscaped areas. The site area has been modelled as Paved Surface, Rooftop and Landscaped areas with corresponding loading rates of 0.23 mg/L, 0.09 mg/L and 0.32 mg/L, respectively. Applying these loading rates, the estimated post-development phosphorous load without mitigation is 3.21 kg/year.

Proposed Conditions with Mitigation

A phosphorous removal efficiency rate of 77% has been applied to the controlled site area which drains to the Jellyfish Filter unit. The uncontrolled site area and controlled area are then routed to the downstream wet SWM pond, which is assigned a phosphorous removal efficiency rate of 60%.

Applying these removal rates and mitigation efforts, the estimated total annual post-development phosphorous load from the site is 0.09 kg/year. This represents a best-efforts approach to reducing phosphorous loading. Post-development with mitigation phosphorous loads is provided in Table 6 below while additional details are provided in Appendix D.

Table 6: Phosphorous Loading Summary

SCENARIO	AREA (ha)	PHOSPHORUS LOAD (kg/year)
Post Development (without mitigation)	1.64	3.21
Post-Development (with mitigation)	1.64	0.09

3.5.3 Water Balance

Water balance calculations will be completed by others at detailed design.

3.6 MINOR DRAINAGE

As previously mentioned, the attenuated peak flow of in the storm sewer outlet 0.23 m^3/s will drain from the site to the Goodwin Drive storm sewer via a 450 mm dia. storm sewer under the 1:100-year storm event. The calculated full-flow capacity of the proposed 450 mm dia. storm sewer is 0.23 m^3/s. Therefore, the sewer is adequately sized to convey attenuated peak flows up to and including the 100-year event to the existing Goodwin Drive storm sewer.

As the Goodwin Drive sewer was designed to convey the existing 5-year peak flow, the Goodwin Drive sewer and all downstream sewers are understood to be sufficiently sized. Therefore, the proposed development will not adversely impact local surface water conditions. Detailed calculations are provided in Appendix E.

3.7 MAJOR OVERLAND FLOW

Under major storm events and emergency conditions, in the event the outlet become blocked, site peak flows will flow overland via the proposed parking lot into Driveway 'A' and ultimately to Goodwin Drive. The major overland flow route is shown on Drawing DP-2 appended for reference.

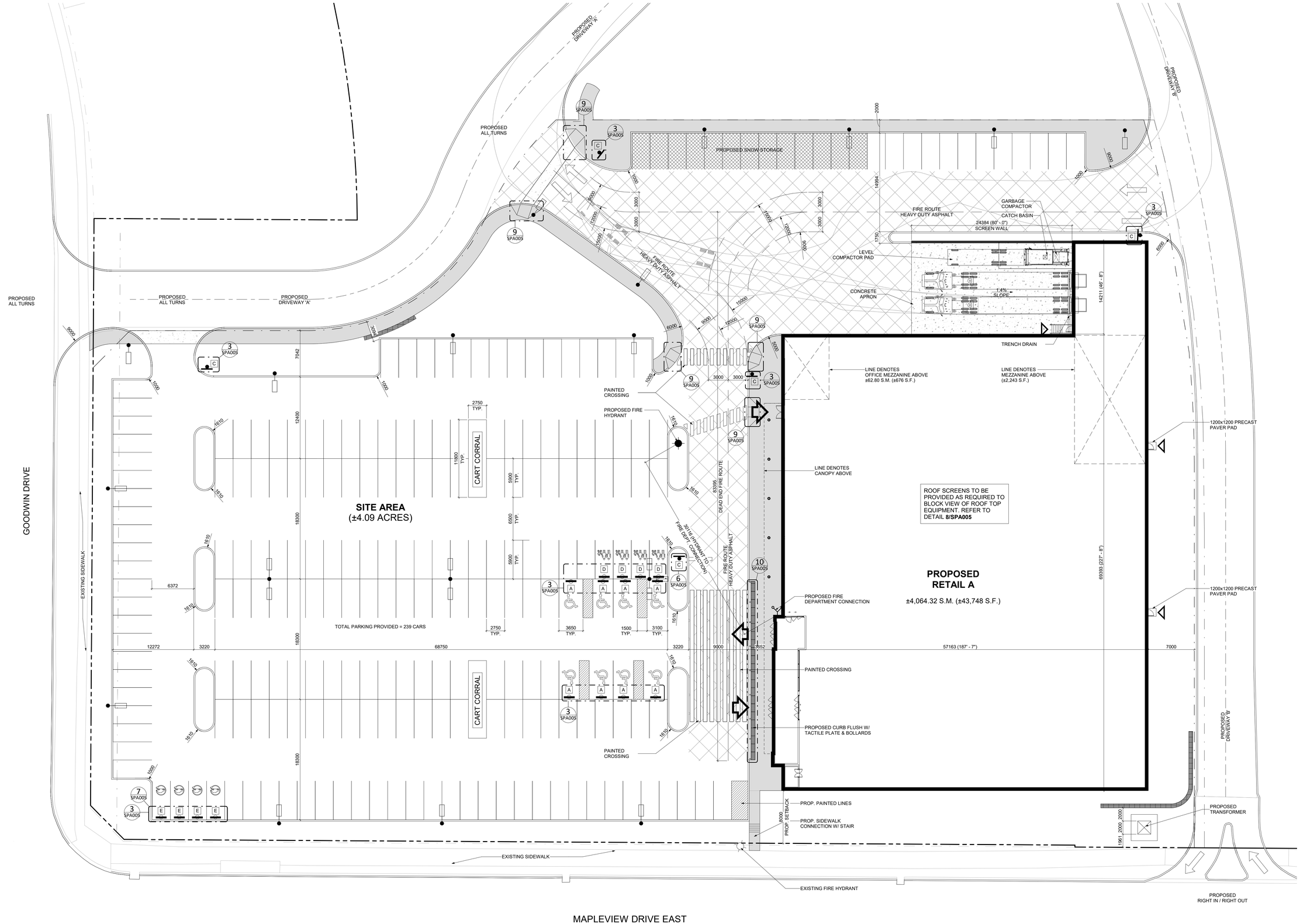
4 Summary

The SWM plan for the subject site provides quantity and quality controls to meet the current standards for flows in excess of the existing downstream SWM pond design flows. Water quantity controls will be provided via treatment train comprised of an underground detention facility (SWMF #1), rooftop ponding, and parking lot ponding storage. The proposed SWM plan demonstrates that the proposed development will not negatively impact landowners adjacent to, or downstream of, the subject site.

Peak flow attenuation will be provided by a 230 mm dia. orifice plate located in control maintenance structure (STM Control MH) downstream of SWMF #1. Additional peak flow attenuation will be provided via rooftop flow control drains which ensures post development peak flow rates do not exceed the defined allowable release rates for all storm events. Attenuated runoff will then be conveyed via a combination of the 450 mm dia. storm sewer to the existing Goodwin Drive storm sewer and overland via the site's parking lot entrance to Driveway 'A'.

Water quality controls will be provided by a Layfield Aquabox sediment debris row and a CA ETV verified Jellyfish Filter JF8-7-2 unit (or approved equivalent). An infiltration-based low impact development (LID) feature consisting of a secondary underground detention facility (SWMF #2) will infiltrate rooftop drainage to provide volume controls to best efforts. Phosphorous mitigation will be provided by the Jellyfish Filter JF8-7-2 unit in combination with the existing downstream SWM Pond.

Appendix A: Site Plan



TURNER FLEISCHER

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This drawing, as an instrument of service, is provided by and is the property of Turner Fleischer Architects Inc. The contractor must verify and accept responsibility for all dimensions and conditions on site before proceeding with the work. Do not scale drawings. Use only the latest issued information. This drawing is not to be scaled. The architect is not responsible for the accuracy of survey, structural, mechanical, electrical, etc., information shown on this drawing. Refer to the appropriate consultant's drawings before proceeding with the work. Construction must conform to all applicable codes and requirements of authorities having jurisdiction. The contractor working from drawings not specifically marked 'For Construction' must assume full responsibility and bear costs for any corrections or damages resulting from his work.

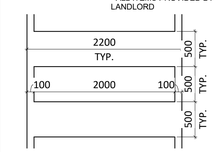
PROPOSED

DESIGN CONCEPT

LEGEND

- PROPOSED ENTRANCE ARROW
- PROPOSED EXIT ARROW
- PROPOSED FIRE HYDRANT
- PROPOSED SIAMESE CONNECTION
- PROPOSED SIGN
- PROPOSED FIRE & TRUCK ROUTE (HEAVY DUTY ASPHALT)
- PROPOSED CONCRETE SIDEWALK
- PROPOSED SNOW STORAGE
- PROPERTY LINE
- LOADING SPACE (3000 × 12000)

PAINTED CROSSING
- REFER TO SITE PLAN FOR LOCATIONS OF CROSSINGS
- PAINT COLOUR: WHITE
- ALL ITEMS PROVIDED BY LANDLORD



#	DATE	DESCRIPTION	BY
5	2022-10-24	ISSUED FOR SPA	MSH
4	2022-02-09	ISSUE FOR REVIEW	MSH
3	2021-08-27	ISSUED FOR REVIEW	RCH
2	2021-08-17	ISSUED FOR REVIEW	RCH
1	2021-03-17	ISSUED FOR PPR	RCH

metro

NEW STORE #

PROJECT

PROPOSED NEW METRO FOOD STORE

YONGE STREET & MAPLEVIEW DRIVE, BARRIE, ON

DRAWING

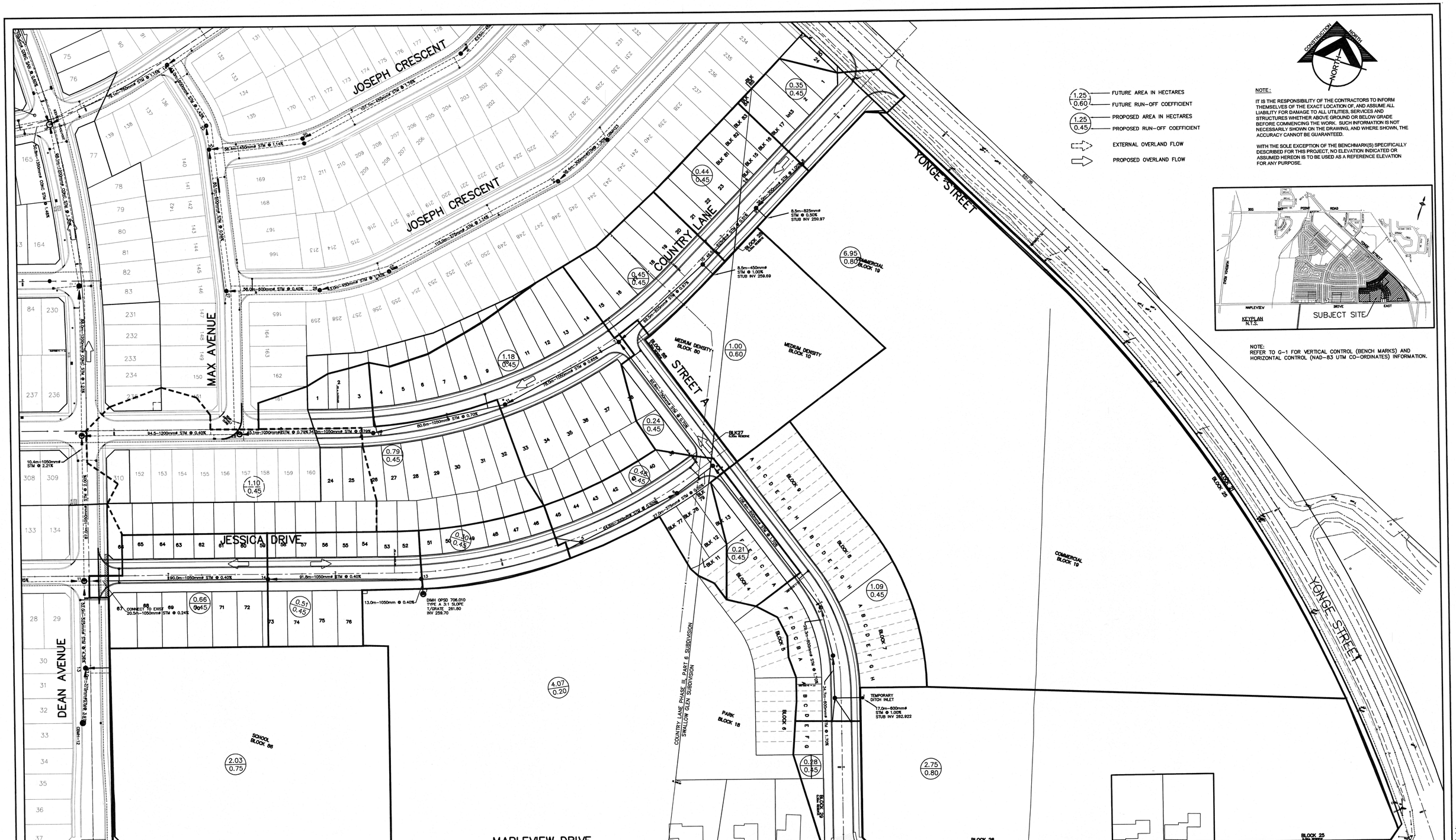
ENLARGED SITE PLAN

PROJECT NO. 21.009
SHEET ISSUE DATE 2022-10-24
DRAWN BY CFE
CHECKED BY JLB
SCALE AS NOTED

DRAWING NO. SPA004
REV. 5

2022-10-20 6:25:03 PM

Appendix B:
Allowable Release Rates



1.25 / 0.60 — FUTURE AREA IN HECTARES / FUTURE RUN-OFF COEFFICIENT

1.25 / 0.45 — PROPOSED AREA IN HECTARES / PROPOSED RUN-OFF COEFFICIENT

EXTERNAL OVERLAND FLOW

PROPOSED OVERLAND FLOW

NOTE:

IT IS THE RESPONSIBILITY OF THE CONTRACTORS TO INFORM THEMSELVES OF THE EXACT LOCATION OF, AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES, SERVICES AND STRUCTURES WHETHER ABOVE GROUND OR BELOW GRADE BEFORE COMMENCING THE WORK. SUCH INFORMATION IS NOT NECESSARILY SHOWN ON THE DRAWING, AND WHERE SHOWN, THE ACCURACY CANNOT BE GUARANTEED.

WITH THE SOLE EXCEPTION OF THE BENCHMARK(S) SPECIFICALLY DESCRIBED FOR THIS PROJECT, NO ELEVATION INDICATED OR ASSUMED HEREON IS TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

KEYPLAN
N.T.S.

NOTE:
REFER TO G-1 FOR VERTICAL CONTROL (BENCH MARKS) AND HORIZONTAL CONTROL (NAD-83 UTM CO-ORDINATES) INFORMATION.

ALL DIMENSIONS AND INFORMATION SHALL BE CHECKED AND VERIFIED ON THE JOB AND ANY DISCREPANCIES MUST BE REPORTED TO THE CONSULTANT BEFORE COMMENCING THE WORK. DRAWINGS ARE NOT TO BE SCALED.

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DRAWN BY: P.HAMMELL	CHECKED BY: R.PROVENCAL
DESIGNED BY: R.PROVENCAL	APPROVED BY:
SCALE: 1:1000 STORM	DATE: MAY/05

PROJECT:
COUNTRY LANE PHASE III, PART 6 SUBDIVISION / SWALLOW GLEN SUBDIVISION

DRAWING:
INTERNAL STORM DRAINAGE PLAN

PROJECT No. : 4400030116

DRAWING No. G-3

LandProjects\0030116\dwg\GENERAL.dwg, G-3, 5/30/2005 4:12:21 PM, kashz

PROJECT	Metro Grocery Store	FILE	421426
		DATE	2022-10-11
SUBJECT	Visual OTTHYMO Schematic	NAME	NHF
		PAGE	1 OF 1

PRE-DEVELOPMENT CONDITIONS (PER SWALLOW GLEN SUBDIVISION DESIGN)

NASHYD

ROUTE PIPE

DUHYD

STANDHYD

ROUTE CHANNEL

DIVERT HYD

ADDHYD

ROUTE RESERVOIR

SHIFTHYD

```
**********************************************
** SIMULATION:Run 01 - 2yr 4hr 10min Chicago **
**********************************************
--------------------
| CHICAGO STORM    |    IDF curve parameters: A= 678.085
| Ptotal= 36.94 mm |                          B=   4.699
--------------------                          C=   0.781
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.35
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.57	1.00	19.19	2.00	5.62	3.00	2.87
0.17	2.93	1.17	83.11	2.17	4.79	3.17	2.67
0.33	3.44	1.33	24.36	2.33	4.20	3.33	2.49
0.50	4.21	1.50	12.79	2.50	3.75	3.50	2.35
0.67	5.52	1.67	8.84	2.67	3.39	3.67	2.22
0.83	8.28	1.83	6.83	2.83	3.10	3.83	2.10

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	2.57	1.033	19.19	2.033	5.62	3.03	2.87
0.067	2.57	1.067	19.19	2.067	5.62	3.07	2.87
0.100	2.57	1.100	19.19	2.100	5.62	3.10	2.87
0.133	2.57	1.133	19.19	2.133	5.62	3.13	2.87
0.167	2.57	1.167	19.19	2.167	5.62	3.17	2.87
0.200	2.93	1.200	83.11	2.200	4.79	3.20	2.67
0.233	2.93	1.233	83.11	2.233	4.79	3.23	2.67
0.267	2.93	1.267	83.11	2.267	4.79	3.27	2.67
0.300	2.93	1.300	83.11	2.300	4.79	3.30	2.67
0.333	2.93	1.333	83.11	2.333	4.79	3.33	2.67
0.367	3.44	1.367	24.36	2.367	4.20	3.37	2.49
0.400	3.44	1.400	24.36	2.400	4.20	3.40	2.49
0.433	3.44	1.433	24.36	2.433	4.20	3.43	2.49
0.467	3.44	1.467	24.36	2.467	4.20	3.47	2.49
0.500	3.44	1.500	24.36	2.500	4.20	3.50	2.49
0.533	4.21	1.533	12.79	2.533	3.75	3.53	2.35
0.567	4.21	1.567	12.79	2.567	3.75	3.57	2.35
0.600	4.21	1.600	12.79	2.600	3.75	3.60	2.35
0.633	4.21	1.633	12.79	2.633	3.75	3.63	2.35
0.667	4.21	1.667	12.79	2.667	3.75	3.67	2.35
0.700	5.52	1.700	8.84	2.700	3.39	3.70	2.22
0.733	5.52	1.733	8.84	2.733	3.39	3.73	2.22
0.767	5.52	1.767	8.84	2.767	3.39	3.77	2.22
0.800	5.52	1.800	8.84	2.800	3.39	3.80	2.22
0.833	5.52	1.833	8.84	2.833	3.39	3.83	2.22
0.867	8.28	1.867	6.83	2.867	3.10	3.87	2.10
0.900	8.28	1.900	6.83	2.900	3.10	3.90	2.10
0.933	8.28	1.933	6.83	2.933	3.10	3.93	2.10
0.967	8.28	1.967	6.83	2.967	3.10	3.97	2.10
1.000	8.28	2.000	6.83	3.000	3.10	4.00	2.10

```
     Max.Eff.Inten.(mm/hr)=      83.11        11.00
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       3.30 (ii)    7.66 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.31         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.48         0.01        0.489 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.43         1.33
     RUNOFF VOLUME    (mm)=      35.94         5.92        29.93
     TOTAL RAINFALL   (mm)=      36.94        36.94        36.94
     RUNOFF COEFFICIENT   =       0.97         0.16         0.81

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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.

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 02 - 5yr 4hr 10min Chicago **
**********************************************
--------------------
| CHICAGO STORM    |    IDF curve parameters: A= 853.608
| Ptotal= 50.49 mm |                          B=   4.699
--------------------                          C=   0.766
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.35
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	3.71	1.00	26.19	2.00	7.96	3.00	4.14
0.17	4.23	1.17	108.92	2.17	6.82	3.17	3.85
0.33	4.95	1.33	33.04	2.33	6.00	3.33	3.61
0.50	6.02	1.50	17.70	2.50	5.37	3.50	3.40
0.67	7.82	1.67	12.37	2.67	4.87	3.67	3.22
0.83	11.61	1.83	9.64	2.83	4.47	3.83	3.06

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	3.71	1.033	26.19	2.033	7.96	3.03	4.14
0.067	3.71	1.067	26.19	2.067	7.96	3.07	4.14
0.100	3.71	1.100	26.19	2.100	7.96	3.10	4.14
0.133	3.71	1.133	26.19	2.133	7.96	3.13	4.14
0.167	3.71	1.167	26.19	2.167	7.96	3.17	4.14
0.200	4.23	1.200	108.92	2.200	6.82	3.20	3.85
0.233	4.23	1.233	108.92	2.233	6.82	3.23	3.85
0.267	4.23	1.267	108.92	2.267	6.82	3.27	3.85
0.300	4.23	1.300	108.92	2.300	6.82	3.30	3.85
0.333	4.23	1.333	108.92	2.333	6.82	3.33	3.85
0.367	4.95	1.367	33.04	2.367	6.00	3.37	3.61
0.400	4.95	1.400	33.04	2.400	6.00	3.40	3.61
0.433	4.95	1.433	33.04	2.433	6.00	3.43	3.61
0.467	4.95	1.467	33.04	2.467	6.00	3.47	3.61
0.500	4.95	1.500	33.04	2.500	6.00	3.50	3.61
0.533	6.02	1.533	17.70	2.533	5.37	3.53	3.40
0.567	6.02	1.567	17.70	2.567	5.37	3.57	3.40
0.600	6.02	1.600	17.70	2.600	5.37	3.60	3.40
0.633	6.02	1.633	17.70	2.633	5.37	3.63	3.40
0.667	6.02	1.667	17.70	2.667	5.37	3.67	3.40
0.700	7.82	1.700	12.37	2.700	4.87	3.70	3.22
0.733	7.82	1.733	12.37	2.733	4.87	3.73	3.22
0.767	7.82	1.767	12.37	2.767	4.87	3.77	3.22
0.800	7.82	1.800	12.37	2.800	4.87	3.80	3.22
0.833	7.82	1.833	12.37	2.833	4.87	3.83	3.22
0.867	11.61	1.867	9.64	2.867	4.47	3.87	3.06
0.900	11.61	1.900	9.64	2.900	4.47	3.90	3.06
0.933	11.61	1.933	9.64	2.933	4.47	3.93	3.06
0.967	11.61	1.967	9.64	2.967	4.47	3.97	3.06
1.000	11.61	2.000	9.64	3.000	4.47	4.00	3.06

```
     Max.Eff.Inten.(mm/hr)=     108.92        19.34
                over (min)        5.00         8.00
```

```
     Storage Coeff.  (min)=       2.96 (ii)    6.88 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.64         0.02         0.655 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.40          1.33
     RUNOFF VOLUME    (mm)=      49.49        10.64         41.72
     TOTAL RAINFALL   (mm)=      50.49        50.49         50.49
     RUNOFF COEFFICIENT   =       0.98         0.21          0.83


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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.

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 03 - 10yr 4hr 10min Chicago **
************************************************
--------------------
| CHICAGO STORM    |    IDF curve parameters: A= 975.865
| Ptotal= 59.66 mm |                          B=   4.699
--------------------                          C=   0.760
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.35

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    4.49 |  1.00   30.91 |  2.00    9.54 |  3.00    4.99
                 0.17    5.10 |  1.17  126.55 |  2.17    8.19 |  3.17    4.65
                 0.33    5.96 |  1.33   38.90 |  2.33    7.21 |  3.33    4.36
                 0.50    7.23 |  1.50   21.00 |  2.50    6.46 |  3.50    4.11
                 0.67    9.37 |  1.67   14.74 |  2.67    5.87 |  3.67    3.89
                 0.83   13.85 |  1.83   11.52 |  2.83    5.39 |  3.83    3.70


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
                0.033    4.49 | 1.033   30.91 | 2.033    9.54 |  3.03    4.99
                0.067    4.49 | 1.067   30.91 | 2.067    9.54 |  3.07    4.99
                0.100    4.49 | 1.100   30.91 | 2.100    9.54 |  3.10    4.99
                0.133    4.49 | 1.133   30.91 | 2.133    9.54 |  3.13    4.99
                0.167    4.49 | 1.167   30.91 | 2.167    9.54 |  3.17    4.99
                0.200    5.10 | 1.200  126.55 | 2.200    8.19 |  3.20    4.65
                0.233    5.10 | 1.233  126.55 | 2.233    8.19 |  3.23    4.65
                0.267    5.10 | 1.267  126.55 | 2.267    8.19 |  3.27    4.65
                0.300    5.10 | 1.300  126.55 | 2.300    8.19 |  3.30    4.65
                0.333    5.10 | 1.333  126.55 | 2.333    8.19 |  3.33    4.65
                0.367    5.96 | 1.367   38.90 | 2.367    7.21 |  3.37    4.36
                0.400    5.96 | 1.400   38.90 | 2.400    7.21 |  3.40    4.36
                0.433    5.96 | 1.433   38.90 | 2.433    7.21 |  3.43    4.36
                0.467    5.96 | 1.467   38.90 | 2.467    7.21 |  3.47    4.36
                0.500    5.96 | 1.500   38.90 | 2.500    7.21 |  3.50    4.36
                0.533    7.23 | 1.533   21.00 | 2.533    6.46 |  3.53    4.11
                0.567    7.23 | 1.567   21.00 | 2.567    6.46 |  3.57    4.11
                0.600    7.23 | 1.600   21.00 | 2.600    6.46 |  3.60    4.11
                0.633    7.23 | 1.633   21.00 | 2.633    6.46 |  3.63    4.11
                0.667    7.23 | 1.667   21.00 | 2.667    6.46 |  3.67    4.11
                0.700    9.37 | 1.700   14.74 | 2.700    5.87 |  3.70    3.89
                0.733    9.37 | 1.733   14.74 | 2.733    5.87 |  3.73    3.89
                0.767    9.37 | 1.767   14.74 | 2.767    5.87 |  3.77    3.89
                0.800    9.37 | 1.800   14.74 | 2.800    5.87 |  3.80    3.89
                0.833    9.37 | 1.833   14.74 | 2.833    5.87 |  3.83    3.89
                0.867   13.85 | 1.867   11.52 | 2.867    5.39 |  3.87    3.70
                0.900   13.85 | 1.900   11.52 | 2.900    5.39 |  3.90    3.70
                0.933   13.85 | 1.933   11.52 | 2.933    5.39 |  3.93    3.70
                0.967   13.85 | 1.967   11.52 | 2.967    5.39 |  3.97    3.70
                1.000   13.85 | 2.000   11.52 | 3.000    5.39 |  4.00    3.70

     Max.Eff.Inten.(mm/hr)=     126.55        26.07
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       2.79 (ii)    6.48 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.35         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.75         0.03         0.771 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.40          1.33
     RUNOFF VOLUME    (mm)=      58.66        14.42         49.81
     TOTAL RAINFALL   (mm)=      59.66        59.66         59.66
     RUNOFF COEFFICIENT   =       0.98         0.24          0.83


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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.

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 04 - 25yr 4hr 10min Chicago **
************************************************
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1146.275
| Ptotal= 71.25 mm |                          B=   4.699
--------------------                          C=   0.757
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.35

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    5.41 |  1.00   36.89 |  2.00   11.47 |  3.00    6.02
                 0.17    6.15 |  1.17  149.85 |  2.17    9.85 |  3.17    5.61
                 0.33    7.18 |  1.33   46.37 |  2.33    8.68 |  3.33    5.27
                 0.50    8.71 |  1.50   25.13 |  2.50    7.78 |  3.50    4.97
                 0.67   11.27 |  1.67   17.68 |  2.67    7.07 |  3.67    4.70
                 0.83   16.61 |  1.83   13.83 |  2.83    6.50 |  3.83    4.47


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
                0.033    5.41 | 1.033   36.89 | 2.033   11.47 |  3.03    6.02
                0.067    5.41 | 1.067   36.89 | 2.067   11.47 |  3.07    6.02
                0.100    5.41 | 1.100   36.89 | 2.100   11.47 |  3.10    6.02
                0.133    5.41 | 1.133   36.89 | 2.133   11.47 |  3.13    6.02
                0.167    5.41 | 1.167   36.89 | 2.167   11.47 |  3.17    6.02
                0.200    6.15 | 1.200  149.85 | 2.200    9.85 |  3.20    5.61
                0.233    6.15 | 1.233  149.85 | 2.233    9.85 |  3.23    5.61
                0.267    6.15 | 1.267  149.85 | 2.267    9.85 |  3.27    5.61
                0.300    6.15 | 1.300  149.85 | 2.300    9.85 |  3.30    5.61
                0.333    6.15 | 1.333  149.85 | 2.333    9.85 |  3.33    5.61
                0.367    7.18 | 1.367   46.37 | 2.367    8.68 |  3.37    5.27
                0.400    7.18 | 1.400   46.37 | 2.400    8.68 |  3.40    5.27
                0.433    7.18 | 1.433   46.37 | 2.433    8.68 |  3.43    5.27
                0.467    7.18 | 1.467   46.37 | 2.467    8.68 |  3.47    5.27
                0.500    7.18 | 1.500   46.37 | 2.500    8.68 |  3.50    5.27
```

0.533	8.71	1.533	25.13	2.533	7.78	3.53	4.97
0.567	8.71	1.567	25.13	2.567	7.78	3.57	4.97
0.600	8.71	1.600	25.13	2.600	7.78	3.60	4.97
0.633	8.71	1.633	25.13	2.633	7.78	3.63	4.97
0.667	8.71	1.667	25.13	2.667	7.78	3.67	4.97
0.700	11.27	1.700	17.68	2.700	7.07	3.70	4.70
0.733	11.27	1.733	17.68	2.733	7.07	3.73	4.70
0.767	11.27	1.767	17.68	2.767	7.07	3.77	4.70
0.800	11.27	1.800	17.68	2.800	7.07	3.80	4.70
0.833	11.27	1.833	17.68	2.833	7.07	3.83	4.70
0.867	16.61	1.867	13.83	2.867	6.50	3.87	4.47
0.900	16.61	1.900	13.83	2.900	6.50	3.90	4.47
0.933	16.61	1.933	13.83	2.933	6.50	3.93	4.47
0.967	16.61	1.967	13.83	2.967	6.50	3.97	4.47
1.000	16.61	2.000	13.83	3.000	6.50	4.00	4.47

```
Max.Eff.Inten.(mm/hr)=     149.85        35.98
            over (min)       5.00         8.00
Storage Coeff.  (min)=       2.61 (ii)    6.05 (ii)
Unit Hyd. Tpeak (min)=       4.00         8.00
Unit Hyd. peak  (cms)=       0.36         0.17
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.89         0.04        0.925 (iii)
TIME TO PEAK    (hrs)=       1.33         1.40         1.33
RUNOFF VOLUME    (mm)=      70.25        19.75        60.15
TOTAL RAINFALL   (mm)=      71.25        71.25        71.25
RUNOFF COEFFICIENT   =       0.99         0.28         0.84


  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  59.0    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.

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 05 - 50yr 4hr 10min Chicago **
************************************************
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1236.152
| Ptotal= 79.41 mm |                          B=   4.699
--------------------                          C=   0.751
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.35
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	6.16	1.00	41.06	2.00	12.95	3.00	6.84
0.17	7.00	1.17	164.22	2.17	11.15	3.17	6.39
0.33	8.15	1.33	51.50	2.33	9.83	3.33	6.00
0.50	9.86	1.50	28.13	2.50	8.83	3.50	5.66
0.67	12.73	1.67	19.87	2.67	8.03	3.67	5.36
0.83	18.68	1.83	15.59	2.83	7.38	3.83	5.09

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	6.16	1.033	41.06	2.033	12.95	3.03	6.84
0.067	6.16	1.067	41.06	2.067	12.95	3.07	6.84
0.100	6.16	1.100	41.06	2.100	12.95	3.10	6.84
0.133	6.16	1.133	41.06	2.133	12.95	3.13	6.84
0.167	6.16	1.167	41.06	2.167	12.95	3.17	6.84
0.200	7.00	1.200	164.22	2.200	11.15	3.20	6.39
0.233	7.00	1.233	164.22	2.233	11.15	3.23	6.39
0.267	7.00	1.267	164.22	2.267	11.15	3.27	6.39
0.300	7.00	1.300	164.22	2.300	11.15	3.30	6.39
0.333	7.00	1.333	164.22	2.333	11.15	3.33	6.39
0.367	8.15	1.367	51.50	2.367	9.83	3.37	6.00
0.400	8.15	1.400	51.50	2.400	9.83	3.40	6.00
0.433	8.15	1.433	51.50	2.433	9.83	3.43	6.00
0.467	8.15	1.467	51.50	2.467	9.83	3.47	6.00
0.500	8.15	1.500	51.50	2.500	9.83	3.50	6.00
0.533	9.86	1.533	28.13	2.533	8.83	3.53	5.66
0.567	9.86	1.567	28.13	2.567	8.83	3.57	5.66
0.600	9.86	1.600	28.13	2.600	8.83	3.60	5.66
0.633	9.86	1.633	28.13	2.633	8.83	3.63	5.66
0.667	9.86	1.667	28.13	2.667	8.83	3.67	5.66
0.700	12.73	1.700	19.87	2.700	8.03	3.70	5.36
0.733	12.73	1.733	19.87	2.733	8.03	3.73	5.36
0.767	12.73	1.767	19.87	2.767	8.03	3.77	5.36
0.800	12.73	1.800	19.87	2.800	8.03	3.80	5.36
0.833	12.73	1.833	19.87	2.833	8.03	3.83	5.36
0.867	18.68	1.867	15.59	2.867	7.38	3.87	5.09
0.900	18.68	1.900	15.59	2.900	7.38	3.90	5.09
0.933	18.68	1.933	15.59	2.933	7.38	3.93	5.09
0.967	18.68	1.967	15.59	2.967	7.38	3.97	5.09
1.000	18.68	2.000	15.59	3.000	7.38	4.00	5.09

```
Max.Eff.Inten.(mm/hr)=     164.22        43.08
            over (min)       5.00         6.00
Storage Coeff.  (min)=       2.51 (ii)    5.84 (ii)
Unit Hyd. Tpeak (min)=       4.00         6.00
Unit Hyd. peak  (cms)=       0.37         0.19
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.98         0.05        1.028 (iii)
TIME TO PEAK    (hrs)=       1.33         1.37         1.33
RUNOFF VOLUME    (mm)=      78.41        23.86        67.50
TOTAL RAINFALL   (mm)=      79.41        79.41        79.41
RUNOFF COEFFICIENT   =       0.99         0.30         0.85


  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  59.0    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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************************************************
** SIMULATION:Run 06 - 100yr 4hr 10min Chicago **
************************************************
--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1426.408
| Ptotal= 87.69 mm |                          B=   4.699
--------------------                          C=   0.759
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =  0.35
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	6.62	1.00	45.42	2.00	14.05	3.00	7.36
0.17	7.52	1.17	185.47	2.17	12.07	3.17	6.86
0.33	8.78	1.33	57.14	2.33	10.62	3.33	6.44
0.50	10.66	1.50	30.89	2.50	9.52	3.50	6.07
0.67	13.81	1.67	21.70	2.67	8.65	3.67	5.74
0.83	20.38	1.83	16.96	2.83	7.94	3.83	5.46

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
         0.033    6.62 | 1.033   45.42 | 2.033   14.05 |  3.03    7.36
         0.067    6.62 | 1.067   45.42 | 2.067   14.05 |  3.07    7.36
         0.100    6.62 | 1.100   45.42 | 2.100   14.05 |  3.10    7.36
         0.133    6.62 | 1.133   45.42 | 2.133   14.05 |  3.13    7.36
         0.167    6.62 | 1.167   45.42 | 2.167   14.05 |  3.17    7.36
         0.200    7.52 | 1.200  185.47 | 2.200   12.07 |  3.20    6.86
         0.233    7.52 | 1.233  185.47 | 2.233   12.07 |  3.23    6.86
         0.267    7.52 | 1.267  185.47 | 2.267   12.07 |  3.27    6.86
         0.300    7.52 | 1.300  185.47 | 2.300   12.07 |  3.30    6.86
         0.333    7.52 | 1.333  185.47 | 2.333   12.07 |  3.33    6.86
         0.367    8.78 | 1.367   57.14 | 2.367   10.62 |  3.37    6.44
         0.400    8.78 | 1.400   57.14 | 2.400   10.62 |  3.40    6.44
         0.433    8.78 | 1.433   57.14 | 2.433   10.62 |  3.43    6.44
         0.467    8.78 | 1.467   57.14 | 2.467   10.62 |  3.47    6.44
         0.500    8.78 | 1.500   57.14 | 2.500   10.62 |  3.50    6.44
         0.533   10.66 | 1.533   30.89 | 2.533    9.52 |  3.53    6.07
         0.567   10.66 | 1.567   30.89 | 2.567    9.52 |  3.57    6.07
         0.600   10.66 | 1.600   30.89 | 2.600    9.52 |  3.60    6.07
         0.633   10.66 | 1.633   30.89 | 2.633    9.52 |  3.63    6.07
         0.667   10.66 | 1.667   30.89 | 2.667    9.52 |  3.67    6.07
         0.700   13.81 | 1.700   21.70 | 2.700    8.65 |  3.70    5.74
         0.733   13.81 | 1.733   21.70 | 2.733    8.65 |  3.73    5.74
         0.767   13.81 | 1.767   21.70 | 2.767    8.65 |  3.77    5.74
         0.800   13.81 | 1.800   21.70 | 2.800    8.65 |  3.80    5.74
         0.833   13.81 | 1.833   21.70 | 2.833    8.65 |  3.83    5.74
         0.867   20.38 | 1.867   16.96 | 2.867    7.94 |  3.87    5.46
         0.900   20.38 | 1.900   16.96 | 2.900    7.94 |  3.90    5.46
         0.933   20.38 | 1.933   16.96 | 2.933    7.94 |  3.93    5.46
         0.967   20.38 | 1.967   16.96 | 2.967    7.94 |  3.97    5.46
         1.000   20.38 | 2.000   16.96 | 3.000    7.94 |  4.00    5.46

     Max.Eff.Inten.(mm/hr)=     185.47        52.88
                over (min)        5.00         6.00
     Storage Coeff.  (min)=       2.39 (ii)    5.56 (ii)
     Unit Hyd. Tpeak (min)=       4.00         6.00
     Unit Hyd. peak  (cms)=       0.37         0.20
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.11         0.07          1.171 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.37           1.33
     RUNOFF VOLUME    (mm)=      86.69        28.28          75.00
     TOTAL RAINFALL   (mm)=      87.69        87.69          87.69
     RUNOFF COEFFICIENT   =       0.99         0.32           0.86


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*******************************************
** SIMULATION:Run 07 - 2yr 6hr 15min SCS **
*******************************************

--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\20c2b742
| Ptotal= 40.60 mm |    Comments: 2yr 6hr 15min SCS
--------------------
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.00    0.00 |  1.75    4.06 |  3.50    8.93 |  5.25    1.62
         0.25    1.62 |  2.00    4.06 |  3.75    4.06 |  5.50    1.62
         0.50    1.62 |  2.25    4.87 |  4.00    4.06 |  5.75    1.62
         0.75    2.44 |  2.50    4.87 |  4.25    3.25 |  6.00    1.62
         1.00    2.44 |  2.75   24.36 |  4.50    3.25 |
         1.25    2.44 |  3.00   63.34 |  4.75    2.44 |
         1.50    2.44 |  3.25    8.93 |  5.00    2.44 |

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

--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
         0.033    0.00 | 1.600    2.44 | 3.167   63.34 |  4.73    3.25
         0.067    0.00 | 1.633    2.44 | 3.200   63.34 |  4.77    2.84
         0.100    0.00 | 1.667    2.44 | 3.233   63.34 |  4.80    2.44
         0.133    0.00 | 1.700    2.44 | 3.267   36.14 |  4.83    2.44
         0.167    0.00 | 1.733    2.44 | 3.300    8.93 |  4.87    2.44
         0.200    0.00 | 1.767    3.25 | 3.333    8.93 |  4.90    2.44
         0.233    0.00 | 1.800    4.06 | 3.367    8.93 |  4.93    2.44
         0.267    0.81 | 1.833    4.06 | 3.400    8.93 |  4.97    2.44
         0.300    1.62 | 1.867    4.06 | 3.433    8.93 |  5.00    2.44
         0.333    1.62 | 1.900    4.06 | 3.467    8.93 |  5.03    2.44
         0.367    1.62 | 1.933    4.06 | 3.500    8.93 |  5.07    2.44
         0.400    1.62 | 1.967    4.06 | 3.533    8.93 |  5.10    2.44
         0.433    1.62 | 2.000    4.06 | 3.567    8.93 |  5.13    2.44
         0.467    1.62 | 2.033    4.06 | 3.600    8.93 |  5.17    2.44
         0.500    1.62 | 2.067    4.06 | 3.633    8.93 |  5.20    2.44
         0.533    1.62 | 2.100    4.06 | 3.667    8.93 |  5.23    2.44
         0.567    1.62 | 2.133    4.06 | 3.700    8.93 |  5.27    2.03
         0.600    1.62 | 2.167    4.06 | 3.733    8.93 |  5.30    1.62
         0.633    1.62 | 2.200    4.06 | 3.767    6.50 |  5.33    1.62
         0.667    1.62 | 2.233    4.06 | 3.800    4.06 |  5.37    1.62
         0.700    1.62 | 2.267    4.47 | 3.833    4.06 |  5.40    1.62
         0.733    1.62 | 2.300    4.87 | 3.867    4.06 |  5.43    1.62
         0.767    2.03 | 2.333    4.87 | 3.900    4.06 |  5.47    1.62
         0.800    2.44 | 2.367    4.87 | 3.933    4.06 |  5.50    1.62
         0.833    2.44 | 2.400    4.87 | 3.967    4.06 |  5.53    1.62
         0.867    2.44 | 2.433    4.87 | 4.000    4.06 |  5.57    1.62
         0.900    2.44 | 2.467    4.87 | 4.033    4.06 |  5.60    1.62
         0.933    2.44 | 2.500    4.87 | 4.067    4.06 |  5.63    1.62
         0.967    2.44 | 2.533    4.87 | 4.100    4.06 |  5.67    1.62
         1.000    2.44 | 2.567    4.87 | 4.133    4.06 |  5.70    1.62
         1.033    2.44 | 2.600    4.87 | 4.167    4.06 |  5.73    1.62
         1.067    2.44 | 2.633    4.87 | 4.200    4.06 |  5.77    1.62
         1.100    2.44 | 2.667    4.87 | 4.233    4.06 |  5.80    1.62
         1.133    2.44 | 2.700    4.87 | 4.267    3.65 |  5.83    1.62
         1.167    2.44 | 2.733    4.87 | 4.300    3.25 |  5.87    1.62
         1.200    2.44 | 2.767   14.62 | 4.333    3.25 |  5.90    1.62
         1.233    2.44 | 2.800   24.36 | 4.367    3.25 |  5.93    1.62
         1.267    2.44 | 2.833   24.36 | 4.400    3.25 |  5.97    1.62
         1.300    2.44 | 2.867   24.36 | 4.433    3.25 |  6.00    1.62
         1.333    2.44 | 2.900   24.36 | 4.467    3.25 |  6.03    1.62
         1.367    2.44 | 2.933   24.36 | 4.500    3.25 |  6.07    1.62
         1.400    2.44 | 2.967   24.36 | 4.533    3.25 |  6.10    1.62
         1.433    2.44 | 3.000   24.36 | 4.567    3.25 |  6.13    1.62
         1.467    2.44 | 3.033   63.33 | 4.600    3.25 |  6.17    1.62
         1.500    2.44 | 3.067   63.34 | 4.633    3.25 |  6.20    1.62
         1.533    2.44 | 3.100   63.34 | 4.667    3.25 |  6.23    1.62
         1.567    2.44 | 3.133   63.34 | 4.700    3.25 |  6.27    0.81

     Max.Eff.Inten.(mm/hr)=      63.34        13.13
                over (min)        5.00        10.00
     Storage Coeff.   (min)=      3.68 (ii)    8.54 (ii)
     Unit Hyd. Tpeak (min)=       4.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.38         0.01          0.392 (iii)
     TIME TO PEAK    (hrs)=       3.23         3.33           3.23
     RUNOFF VOLUME    (mm)=      39.60         7.09          33.10
     TOTAL RAINFALL   (mm)=      40.60        40.60          40.60
     RUNOFF COEFFICIENT   =       0.98         0.17           0.82


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*******************************************
** SIMULATION:Run 08 - 5yr 6hr 15min SCS **
*******************************************

--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
```

```
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\c98d816f
| Ptotal= 55.84 mm |    Comments: 5yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	5.58	3.50	12.28	5.25	2.23
0.25	2.23	2.00	5.58	3.75	5.58	5.50	2.23
0.50	2.23	2.25	6.70	4.00	5.58	5.75	2.23
0.75	3.35	2.50	6.70	4.25	4.47	6.00	2.23
1.00	3.35	2.75	33.50	4.50	4.47		
1.25	3.35	3.00	87.11	4.75	3.35		
1.50	3.35	3.25	12.28	5.00	3.35		

```
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	1.600	3.35	3.167	87.11	4.73	4.47
0.067	0.00	1.633	3.35	3.200	87.11	4.77	3.91
0.100	0.00	1.667	3.35	3.233	87.11	4.80	3.35
0.133	0.00	1.700	3.35	3.267	49.70	4.83	3.35
0.167	0.00	1.733	3.35	3.300	12.28	4.87	3.35
0.200	0.00	1.767	4.47	3.333	12.28	4.90	3.35
0.233	0.00	1.800	5.58	3.367	12.28	4.93	3.35
0.267	1.12	1.833	5.58	3.400	12.28	4.97	3.35
0.300	2.23	1.867	5.58	3.433	12.28	5.00	3.35
0.333	2.23	1.900	5.58	3.467	12.28	5.03	3.35
0.367	2.23	1.933	5.58	3.500	12.28	5.07	3.35
0.400	2.23	1.967	5.58	3.533	12.28	5.10	3.35
0.433	2.23	2.000	5.58	3.567	12.28	5.13	3.35
0.467	2.23	2.033	5.58	3.600	12.28	5.17	3.35
0.500	2.23	2.067	5.58	3.633	12.28	5.20	3.35
0.533	2.23	2.100	5.58	3.667	12.28	5.23	3.35
0.567	2.23	2.133	5.58	3.700	12.28	5.27	2.79
0.600	2.23	2.167	5.58	3.733	12.28	5.30	2.23
0.633	2.23	2.200	5.58	3.767	8.93	5.33	2.23
0.667	2.23	2.233	5.58	3.800	5.58	5.37	2.23
0.700	2.23	2.267	6.14	3.833	5.58	5.40	2.23
0.733	2.23	2.300	6.70	3.867	5.58	5.43	2.23
0.767	2.79	2.333	6.70	3.900	5.58	5.47	2.23
0.800	3.35	2.367	6.70	3.933	5.58	5.50	2.23
0.833	3.35	2.400	6.70	3.967	5.58	5.53	2.23
0.867	3.35	2.433	6.70	4.000	5.58	5.57	2.23
0.900	3.35	2.467	6.70	4.033	5.58	5.60	2.23
0.933	3.35	2.500	6.70	4.067	5.58	5.63	2.23
0.967	3.35	2.533	6.70	4.100	5.58	5.67	2.23
1.000	3.35	2.567	6.70	4.133	5.58	5.70	2.23
1.033	3.35	2.600	6.70	4.167	5.58	5.73	2.23
1.067	3.35	2.633	6.70	4.200	5.58	5.77	2.23
1.100	3.35	2.667	6.70	4.233	5.58	5.80	2.23
1.133	3.35	2.700	6.70	4.267	5.03	5.83	2.23
1.167	3.35	2.733	6.70	4.300	4.47	5.87	2.23
1.200	3.35	2.767	20.10	4.333	4.47	5.90	2.23
1.233	3.35	2.800	33.50	4.367	4.47	5.93	2.23
1.267	3.35	2.833	33.50	4.400	4.47	5.97	2.23
1.300	3.35	2.867	33.50	4.433	4.47	6.00	2.23
1.333	3.35	2.900	33.50	4.467	4.47	6.03	2.23
1.367	3.35	2.933	33.50	4.500	4.47	6.07	2.23
1.400	3.35	2.967	33.50	4.533	4.47	6.10	2.23
1.433	3.35	3.000	33.50	4.567	4.47	6.13	2.23
1.467	3.35	3.033	87.11	4.600	4.47	6.17	2.23
1.500	3.35	3.067	87.11	4.633	4.47	6.20	2.23
1.533	3.35	3.100	87.11	4.667	4.47	6.23	2.23
1.567	3.35	3.133	87.11	4.700	4.47	6.27	1.12

```
     Max.Eff.Inten.(mm/hr)=      87.11        23.73
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       3.24 (ii)    7.52 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.53         0.03         0.552 (iii)
     TIME TO PEAK    (hrs)=       3.23         3.30          3.23
     RUNOFF VOLUME    (mm)=      54.84        12.79         46.43
     TOTAL RAINFALL   (mm)=      55.84        55.84         55.84
     RUNOFF COEFFICIENT   =       0.98         0.23          0.83

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*******************************************
** SIMULATION:Run 09 - 10yr 6hr 15min SCS **
*******************************************

--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\a23c1c23
| Ptotal= 66.14 mm |    Comments: 10yr 6hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	6.61	3.50	14.55	5.25	2.65
0.25	2.65	2.00	6.61	3.75	6.61	5.50	2.65
0.50	2.65	2.25	7.94	4.00	6.61	5.75	2.65
0.75	3.97	2.50	7.94	4.25	5.29	6.00	2.65
1.00	3.97	2.75	39.68	4.50	5.29		
1.25	3.97	3.00	103.18	4.75	3.97		
1.50	3.97	3.25	14.55	5.00	3.97		

```
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	1.600	3.97	3.167	103.18	4.73	5.29
0.067	0.00	1.633	3.97	3.200	103.18	4.77	4.63
0.100	0.00	1.667	3.97	3.233	103.18	4.80	3.97
0.133	0.00	1.700	3.97	3.267	58.87	4.83	3.97
0.167	0.00	1.733	3.97	3.300	14.55	4.87	3.97
0.200	0.00	1.767	5.29	3.333	14.55	4.90	3.97
0.233	0.00	1.800	6.61	3.367	14.55	4.93	3.97
0.267	1.32	1.833	6.61	3.400	14.55	4.97	3.97
0.300	2.65	1.867	6.61	3.433	14.55	5.00	3.97
0.333	2.65	1.900	6.61	3.467	14.55	5.03	3.97
0.367	2.65	1.933	6.61	3.500	14.55	5.07	3.97
0.400	2.65	1.967	6.61	3.533	14.55	5.10	3.97
0.433	2.65	2.000	6.61	3.567	14.55	5.13	3.97
0.467	2.65	2.033	6.61	3.600	14.55	5.17	3.97
0.500	2.65	2.067	6.61	3.633	14.55	5.20	3.97
0.533	2.65	2.100	6.61	3.667	14.55	5.23	3.97
0.567	2.65	2.133	6.61	3.700	14.55	5.27	3.31
0.600	2.65	2.167	6.61	3.733	14.55	5.30	2.65
0.633	2.65	2.200	6.61	3.767	10.58	5.33	2.65
0.667	2.65	2.233	6.61	3.800	6.61	5.37	2.65
0.700	2.65	2.267	7.28	3.833	6.61	5.40	2.65
0.733	2.65	2.300	7.94	3.867	6.61	5.43	2.65
0.767	3.31	2.333	7.94	3.900	6.61	5.47	2.65
0.800	3.97	2.367	7.94	3.933	6.61	5.50	2.65
0.833	3.97	2.400	7.94	3.967	6.61	5.53	2.65
0.867	3.97	2.433	7.94	4.000	6.61	5.57	2.65

0.900	3.97	2.467	7.94	4.033	6.61	5.60	2.65
0.933	3.97	2.500	7.94	4.067	6.61	5.63	2.65
0.967	3.97	2.533	7.94	4.100	6.61	5.67	2.65
1.000	3.97	2.567	7.94	4.133	6.61	5.70	2.65
1.033	3.97	2.600	7.94	4.167	6.61	5.73	2.65
1.067	3.97	2.633	7.94	4.200	6.61	5.77	2.65
1.100	3.97	2.667	7.94	4.233	6.61	5.80	2.65
1.133	3.97	2.700	7.94	4.267	5.95	5.83	2.65
1.167	3.97	2.733	7.94	4.300	5.29	5.87	2.65
1.200	3.97	2.767	23.81	4.333	5.29	5.90	2.65
1.233	3.97	2.800	39.68	4.367	5.29	5.93	2.65
1.267	3.97	2.833	39.68	4.400	5.29	5.97	2.65
1.300	3.97	2.867	39.68	4.433	5.29	6.00	2.65
1.333	3.97	2.900	39.68	4.467	5.29	6.03	2.65
1.367	3.97	2.933	39.68	4.500	5.29	6.07	2.65
1.400	3.97	2.967	39.68	4.533	5.29	6.10	2.65
1.433	3.97	3.000	39.68	4.567	5.29	6.13	2.65
1.467	3.97	3.033	103.18	4.600	5.29	6.17	2.65
1.500	3.97	3.067	103.18	4.633	5.29	6.20	2.65
1.533	3.97	3.100	103.18	4.667	5.29	6.23	2.65
1.567	3.97	3.133	103.18	4.700	5.29	6.27	1.32

```
     Max.Eff.Inten.(mm/hr)=     103.18        32.19
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       3.03 (ii)    7.03 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.62         0.04          0.661 (iii)
     TIME TO PEAK    (hrs)=       3.23         3.30           3.23
     RUNOFF VOLUME    (mm)=      65.14        17.33          55.58
     TOTAL RAINFALL   (mm)=      66.14        66.14          66.14
     RUNOFF COEFFICIENT   =       0.98         0.26           0.84


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*******************************************
** SIMULATION:Run 10 - 25yr 6hr 15min SCS **
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--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\0290ec19
| Ptotal= 79.08 mm |    Comments: 25yr 6hr 15min SCS
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    0.00 |  1.75    7.91 |  3.50   17.40 |  5.25    3.16
                 0.25    3.16 |  2.00    7.91 |  3.75    7.91 |  5.50    3.16
                 0.50    3.16 |  2.25    9.49 |  4.00    7.91 |  5.75    3.16
                 0.75    4.74 |  2.50    9.49 |  4.25    6.33 |  6.00    3.16
                 1.00    4.74 |  2.75   47.45 |  4.50    6.33 |
                 1.25    4.74 |  3.00  123.36 |  4.75    4.74 |
                 1.50    4.74 |  3.25   17.40 |  5.00    4.74 |

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--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
                0.033    0.00 | 1.600    4.74 | 3.167  123.36 |  4.73    6.33
                0.067    0.00 | 1.633    4.74 | 3.200  123.36 |  4.77    5.54
```

0.100	0.00	1.667	4.74	3.233	123.36	4.80	4.74
0.133	0.00	1.700	4.74	3.267	70.39	4.83	4.74
0.167	0.00	1.733	4.74	3.300	17.40	4.87	4.74
0.200	0.00	1.767	6.33	3.333	17.40	4.90	4.74
0.233	0.00	1.800	7.91	3.367	17.40	4.93	4.74
0.267	1.58	1.833	7.91	3.400	17.40	4.97	4.74
0.300	3.16	1.867	7.91	3.433	17.40	5.00	4.74
0.333	3.16	1.900	7.91	3.467	17.40	5.03	4.74
0.367	3.16	1.933	7.91	3.500	17.40	5.07	4.74
0.400	3.16	1.967	7.91	3.533	17.40	5.10	4.74
0.433	3.16	2.000	7.91	3.567	17.40	5.13	4.74
0.467	3.16	2.033	7.91	3.600	17.40	5.17	4.74
0.500	3.16	2.067	7.91	3.633	17.40	5.20	4.74
0.533	3.16	2.100	7.91	3.667	17.40	5.23	4.74
0.567	3.16	2.133	7.91	3.700	17.40	5.27	3.95
0.600	3.16	2.167	7.91	3.733	17.40	5.30	3.16
0.633	3.16	2.200	7.91	3.767	12.65	5.33	3.16
0.667	3.16	2.233	7.91	3.800	7.91	5.37	3.16
0.700	3.16	2.267	8.70	3.833	7.91	5.40	3.16
0.733	3.16	2.300	9.49	3.867	7.91	5.43	3.16
0.767	3.95	2.333	9.49	3.900	7.91	5.47	3.16
0.800	4.74	2.367	9.49	3.933	7.91	5.50	3.16
0.833	4.74	2.400	9.49	3.967	7.91	5.53	3.16
0.867	4.74	2.433	9.49	4.000	7.91	5.57	3.16
0.900	4.74	2.467	9.49	4.033	7.91	5.60	3.16
0.933	4.74	2.500	9.49	4.067	7.91	5.63	3.16
0.967	4.74	2.533	9.49	4.100	7.91	5.67	3.16
1.000	4.74	2.567	9.49	4.133	7.91	5.70	3.16
1.033	4.74	2.600	9.49	4.167	7.91	5.73	3.16
1.067	4.74	2.633	9.49	4.200	7.91	5.77	3.16
1.100	4.74	2.667	9.49	4.233	7.91	5.80	3.16
1.133	4.74	2.700	9.49	4.267	7.12	5.83	3.16
1.167	4.74	2.733	9.49	4.300	6.33	5.87	3.16
1.200	4.74	2.767	28.47	4.333	6.33	5.90	3.16
1.233	4.74	2.800	47.45	4.367	6.33	5.93	3.16
1.267	4.74	2.833	47.45	4.400	6.33	5.97	3.16
1.300	4.74	2.867	47.45	4.433	6.33	6.00	3.16
1.333	4.74	2.900	47.45	4.467	6.33	6.03	3.16
1.367	4.74	2.933	47.45	4.500	6.33	6.07	3.16
1.400	4.74	2.967	47.45	4.533	6.33	6.10	3.16
1.433	4.74	3.000	47.45	4.567	6.33	6.13	3.16
1.467	4.74	3.033	123.36	4.600	6.33	6.17	3.16
1.500	4.74	3.067	123.36	4.633	6.33	6.20	3.16
1.533	4.74	3.100	123.36	4.667	6.33	6.23	3.16
1.567	4.74	3.133	123.36	4.700	6.33	6.27	1.58

```
     Max.Eff.Inten.(mm/hr)=     123.36        44.07
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       2.82 (ii)    6.54 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.34         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.75         0.06          0.800 (iii)
     TIME TO PEAK    (hrs)=       3.23         3.30           3.23
     RUNOFF VOLUME    (mm)=      78.08        23.69          67.20
     TOTAL RAINFALL   (mm)=      79.08        79.08          79.08
     RUNOFF COEFFICIENT   =       0.99         0.30           0.85


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*******************************************
** SIMULATION:Run 11 - 50yr 6hr 15min SCS **
*******************************************

--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\28a71f87
| Ptotal= 88.35 mm |    Comments: 50yr 6hr 15min SCS
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    0.00 |  1.75    8.84 |  3.50   19.44 |  5.25    3.53
                 0.25    3.53 |  2.00    8.84 |  3.75    8.84 |  5.50    3.53
                 0.50    3.53 |  2.25   10.60 |  4.00    8.84 |  5.75    3.53
                 0.75    5.30 |  2.50   10.60 |  4.25    7.07 |  6.00    3.53
                 1.00    5.30 |  2.75   53.01 |  4.50    7.07 |
                 1.25    5.30 |  3.00  137.83 |  4.75    5.30 |
```

1.50	5.30	3.25	19.44	5.00	5.30

```
--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	1.600	5.30	3.167	137.83	4.73	7.07
0.067	0.00	1.633	5.30	3.200	137.83	4.77	6.18
0.100	0.00	1.667	5.30	3.233	137.83	4.80	5.30
0.133	0.00	1.700	5.30	3.267	78.64	4.83	5.30
0.167	0.00	1.733	5.30	3.300	19.44	4.87	5.30
0.200	0.00	1.767	7.07	3.333	19.44	4.90	5.30
0.233	0.00	1.800	8.84	3.367	19.44	4.93	5.30
0.267	1.77	1.833	8.84	3.400	19.44	4.97	5.30
0.300	3.53	1.867	8.84	3.433	19.44	5.00	5.30
0.333	3.53	1.900	8.84	3.467	19.44	5.03	5.30
0.367	3.53	1.933	8.84	3.500	19.44	5.07	5.30
0.400	3.53	1.967	8.84	3.533	19.44	5.10	5.30
0.433	3.53	2.000	8.84	3.567	19.44	5.13	5.30
0.467	3.53	2.033	8.83	3.600	19.44	5.17	5.30
0.500	3.53	2.067	8.84	3.633	19.44	5.20	5.30
0.533	3.53	2.100	8.84	3.667	19.44	5.23	5.30
0.567	3.53	2.133	8.84	3.700	19.44	5.27	4.42
0.600	3.53	2.167	8.84	3.733	19.44	5.30	3.53
0.633	3.53	2.200	8.84	3.767	14.14	5.33	3.53
0.667	3.53	2.233	8.84	3.800	8.84	5.37	3.53
0.700	3.53	2.267	9.72	3.833	8.84	5.40	3.53
0.733	3.53	2.300	10.60	3.867	8.84	5.43	3.53
0.767	4.42	2.333	10.60	3.900	8.84	5.47	3.53
0.800	5.30	2.367	10.60	3.933	8.84	5.50	3.53
0.833	5.30	2.400	10.60	3.967	8.84	5.53	3.53
0.867	5.30	2.433	10.60	4.000	8.84	5.57	3.53
0.900	5.30	2.467	10.60	4.033	8.83	5.60	3.53
0.933	5.30	2.500	10.60	4.067	8.84	5.63	3.53
0.967	5.30	2.533	10.60	4.100	8.84	5.67	3.53
1.000	5.30	2.567	10.60	4.133	8.84	5.70	3.53
1.033	5.30	2.600	10.60	4.167	8.84	5.73	3.53
1.067	5.30	2.633	10.60	4.200	8.84	5.77	3.53
1.100	5.30	2.667	10.60	4.233	8.84	5.80	3.53
1.133	5.30	2.700	10.60	4.267	7.95	5.83	3.53
1.167	5.30	2.733	10.60	4.300	7.07	5.87	3.53
1.200	5.30	2.767	31.80	4.333	7.07	5.90	3.53
1.233	5.30	2.800	53.01	4.367	7.07	5.93	3.53
1.267	5.30	2.833	53.01	4.400	7.07	5.97	3.53
1.300	5.30	2.867	53.01	4.433	7.07	6.00	3.53
1.333	5.30	2.900	53.01	4.467	7.07	6.03	3.53
1.367	5.30	2.933	53.01	4.500	7.07	6.07	3.53
1.400	5.30	2.967	53.01	4.533	7.07	6.10	3.53
1.433	5.30	3.000	53.01	4.567	7.07	6.13	3.53
1.467	5.30	3.033	137.82	4.600	7.07	6.17	3.53
1.500	5.30	3.067	137.83	4.633	7.07	6.20	3.53
1.533	5.30	3.100	137.83	4.667	7.07	6.23	3.53
1.567	5.30	3.133	137.83	4.700	7.07	6.27	1.77

```
     Max.Eff.Inten.(mm/hr)=     137.83        53.33
            over (min)          5.00         8.00
     Storage Coeff.  (min)=      2.70 (ii)    6.26 (ii)
     Unit Hyd. Tpeak (min)=      4.00         8.00
     Unit Hyd. peak  (cms)=      0.35         0.16
                                                        *TOTALS*
     PEAK FLOW       (cms)=      0.84         0.07        0.901 (iii)
     TIME TO PEAK    (hrs)=      3.23         3.27         3.23
     RUNOFF VOLUME    (mm)=     87.35        28.64        75.61
     TOTAL RAINFALL   (mm)=     88.35        88.35        88.35
     RUNOFF COEFFICIENT   =      0.99         0.32         0.86

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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**********************************************
** SIMULATION:Run 12 - 100yr 6hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\8cb5e88c
| Ptotal= 97.25 mm |    Comments: 100yr 6hr 15min SCS
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	1.75	9.73	3.50	21.40	5.25	3.89
0.25	3.89	2.00	9.73	3.75	9.73	5.50	3.89
0.50	3.89	2.25	11.67	4.00	9.73	5.75	3.89
0.75	5.84	2.50	11.67	4.25	7.78	6.00	3.89
1.00	5.84	2.75	58.35	4.50	7.78		
1.25	5.84	3.00	151.71	4.75	5.84		
1.50	5.84	3.25	21.40	5.00	5.84		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	1.600	5.84	3.167	151.71	4.73	7.78
0.067	0.00	1.633	5.84	3.200	151.71	4.77	6.81
0.100	0.00	1.667	5.84	3.233	151.71	4.80	5.84
0.133	0.00	1.700	5.84	3.267	86.56	4.83	5.84
0.167	0.00	1.733	5.84	3.300	21.40	4.87	5.84
0.200	0.00	1.767	7.78	3.333	21.40	4.90	5.84
0.233	0.00	1.800	9.73	3.367	21.40	4.93	5.84
0.267	1.95	1.833	9.73	3.400	21.40	4.97	5.84
0.300	3.89	1.867	9.73	3.433	21.40	5.00	5.84
0.333	3.89	1.900	9.73	3.467	21.40	5.03	5.83
0.367	3.89	1.933	9.73	3.500	21.40	5.07	5.84
0.400	3.89	1.967	9.73	3.533	21.39	5.10	5.84
0.433	3.89	2.000	9.73	3.567	21.40	5.13	5.84
0.467	3.89	2.033	9.72	3.600	21.40	5.17	5.84
0.500	3.89	2.067	9.73	3.633	21.40	5.20	5.84
0.533	3.89	2.100	9.73	3.667	21.40	5.23	5.84
0.567	3.89	2.133	9.73	3.700	21.40	5.27	4.86
0.600	3.89	2.167	9.73	3.733	21.40	5.30	3.89
0.633	3.89	2.200	9.73	3.767	15.56	5.33	3.89
0.667	3.89	2.233	9.73	3.800	9.73	5.37	3.89
0.700	3.89	2.267	10.70	3.833	9.73	5.40	3.89
0.733	3.89	2.300	11.67	3.867	9.73	5.43	3.89
0.767	4.86	2.333	11.67	3.900	9.73	5.47	3.89
0.800	5.84	2.367	11.67	3.933	9.73	5.50	3.89
0.833	5.84	2.400	11.67	3.967	9.73	5.53	3.89
0.867	5.84	2.433	11.67	4.000	9.73	5.57	3.89
0.900	5.84	2.467	11.67	4.033	9.72	5.60	3.89
0.933	5.84	2.500	11.67	4.067	9.73	5.63	3.89
0.967	5.84	2.533	11.67	4.100	9.73	5.67	3.89
1.000	5.84	2.567	11.67	4.133	9.73	5.70	3.89
1.033	5.84	2.600	11.67	4.167	9.73	5.73	3.89
1.067	5.84	2.633	11.67	4.200	9.73	5.77	3.89
1.100	5.84	2.667	11.67	4.233	9.73	5.80	3.89
1.133	5.84	2.700	11.67	4.267	8.75	5.83	3.89
1.167	5.84	2.733	11.67	4.300	7.78	5.87	3.89
1.200	5.84	2.767	35.01	4.333	7.78	5.90	3.89
1.233	5.84	2.800	58.35	4.367	7.78	5.93	3.89
1.267	5.83	2.833	58.35	4.400	7.78	5.97	3.89

1.300	5.84	2.867	58.35	4.433	7.78	6.00	3.89
1.333	5.84	2.900	58.35	4.467	7.78	6.03	3.89
1.367	5.84	2.933	58.35	4.500	7.78	6.07	3.89
1.400	5.84	2.967	58.35	4.533	7.78	6.10	3.89
1.433	5.84	3.000	58.35	4.567	7.78	6.13	3.89
1.467	5.84	3.033	151.71	4.600	7.78	6.17	3.89
1.500	5.84	3.067	151.71	4.633	7.78	6.20	3.89
1.533	5.83	3.100	151.71	4.667	7.78	6.23	3.89
1.567	5.84	3.133	151.71	4.700	7.78	6.27	1.95

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     Max.Eff.Inten.(mm/hr)=     151.71        62.74
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       2.59 (ii)    6.02 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.36         0.17
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.92         0.08          0.999 (iii)
     TIME TO PEAK    (hrs)=       3.23         3.27           3.23
     RUNOFF VOLUME    (mm)=      96.25        33.67          83.73
     TOTAL RAINFALL   (mm)=      97.25        97.25          97.25
     RUNOFF COEFFICIENT   =       0.99         0.35           0.86


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*********************************************
** SIMULATION:Run 13 - 2yr 12hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\ac545c82
| Ptotal= 47.50 mm |    Comments: 2yr 12hr 15min SCS
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	1.90	6.50	8.55	9.75	1.66
0.25	1.19	3.50	1.90	6.75	3.80	10.00	1.66
0.50	1.19	3.75	1.90	7.00	3.80	10.25	0.95
0.75	1.19	4.00	1.90	7.25	2.85	10.50	0.95
1.00	1.19	4.25	2.85	7.50	2.85	10.75	0.95
1.25	1.19	4.50	2.85	7.75	2.85	11.00	0.95
1.50	1.19	4.75	3.80	8.00	2.85	11.25	0.95
1.75	1.19	5.00	3.80	8.25	1.66	11.50	0.95
2.00	1.19	5.25	5.70	8.50	1.66	11.75	0.95
2.25	1.42	5.50	5.70	8.75	1.66	12.00	0.95
2.50	1.42	5.75	22.80	9.00	1.66		
2.75	1.42	6.00	62.70	9.25	1.66		
3.00	1.42	6.25	8.55	9.50	1.66		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	3.100	1.43	6.167	62.70	9.23	1.66
0.067	0.00	3.133	1.43	6.200	62.70	9.27	1.66
0.100	0.00	3.167	1.43	6.233	62.70	9.30	1.66
0.133	0.00	3.200	1.43	6.267	35.63	9.33	1.66
0.167	0.00	3.233	1.43	6.300	8.55	9.37	1.66
0.200	0.00	3.267	1.66	6.333	8.55	9.40	1.66
0.233	0.00	3.300	1.90	6.367	8.55	9.43	1.66
0.267	0.59	3.333	1.90	6.400	8.55	9.47	1.66
0.300	1.19	3.367	1.90	6.433	8.55	9.50	1.66
0.333	1.19	3.400	1.90	6.467	8.55	9.53	1.66
0.367	1.19	3.433	1.90	6.500	8.55	9.57	1.66
0.400	1.19	3.467	1.90	6.533	8.55	9.60	1.66
0.433	1.19	3.500	1.90	6.567	8.55	9.63	1.66
0.467	1.19	3.533	1.90	6.600	8.55	9.67	1.66
0.500	1.19	3.567	1.90	6.633	8.55	9.70	1.66
0.533	1.19	3.600	1.90	6.667	8.55	9.73	1.66
0.567	1.19	3.633	1.90	6.700	8.55	9.77	1.66
0.600	1.19	3.667	1.90	6.733	8.55	9.80	1.66
0.633	1.19	3.700	1.90	6.767	6.18	9.83	1.66
0.667	1.19	3.733	1.90	6.800	3.80	9.87	1.66
0.700	1.19	3.767	1.90	6.833	3.80	9.90	1.66
0.733	1.19	3.800	1.90	6.867	3.80	9.93	1.66
0.767	1.19	3.833	1.90	6.900	3.80	9.97	1.66
0.800	1.19	3.867	1.90	6.933	3.80	10.00	1.66
0.833	1.19	3.900	1.90	6.967	3.80	10.03	1.66
0.867	1.19	3.933	1.90	7.000	3.80	10.07	1.66
0.900	1.19	3.967	1.90	7.033	3.80	10.10	1.66
0.933	1.19	4.000	1.90	7.067	3.80	10.13	1.66
0.967	1.19	4.033	1.90	7.100	3.80	10.17	1.66
1.000	1.19	4.067	1.90	7.133	3.80	10.20	1.66
1.033	1.19	4.100	1.90	7.167	3.80	10.23	1.66
1.067	1.19	4.133	1.90	7.200	3.80	10.27	1.31
1.100	1.19	4.167	1.90	7.233	3.80	10.30	0.95
1.133	1.19	4.200	1.90	7.267	3.33	10.33	0.95
1.167	1.19	4.233	1.90	7.300	2.85	10.37	0.95
1.200	1.19	4.267	2.37	7.333	2.85	10.40	0.95
1.233	1.19	4.300	2.85	7.367	2.85	10.43	0.95
1.267	1.19	4.333	2.85	7.400	2.85	10.47	0.95
1.300	1.19	4.367	2.85	7.433	2.85	10.50	0.95
1.333	1.19	4.400	2.85	7.467	2.85	10.53	0.95
1.367	1.19	4.433	2.85	7.500	2.85	10.57	0.95
1.400	1.19	4.467	2.85	7.533	2.85	10.60	0.95
1.433	1.19	4.500	2.85	7.567	2.85	10.63	0.95
1.467	1.19	4.533	2.85	7.600	2.85	10.67	0.95
1.500	1.19	4.567	2.85	7.633	2.85	10.70	0.95
1.533	1.19	4.600	2.85	7.667	2.85	10.73	0.95
1.567	1.19	4.633	2.85	7.700	2.85	10.77	0.95
1.600	1.19	4.667	2.85	7.733	2.85	10.80	0.95
1.633	1.19	4.700	2.85	7.767	2.85	10.83	0.95
1.667	1.19	4.733	2.85	7.800	2.85	10.87	0.95
1.700	1.19	4.767	3.32	7.833	2.85	10.90	0.95
1.733	1.19	4.800	3.80	7.867	2.85	10.93	0.95
1.767	1.19	4.833	3.80	7.900	2.85	10.97	0.95
1.800	1.19	4.867	3.80	7.933	2.85	11.00	0.95
1.833	1.19	4.900	3.80	7.967	2.85	11.03	0.95
1.867	1.19	4.933	3.80	8.000	2.85	11.07	0.95
1.900	1.19	4.967	3.80	8.033	2.85	11.10	0.95
1.933	1.19	5.000	3.80	8.067	2.85	11.13	0.95
1.967	1.19	5.033	3.80	8.100	2.85	11.17	0.95
2.000	1.19	5.067	3.80	8.133	2.85	11.20	0.95
2.033	1.19	5.100	3.80	8.167	2.85	11.23	0.95
2.067	1.19	5.133	3.80	8.200	2.85	11.27	0.95
2.100	1.19	5.167	3.80	8.233	2.85	11.30	0.95
2.133	1.19	5.200	3.80	8.267	2.26	11.33	0.95
2.167	1.19	5.233	3.80	8.300	1.66	11.37	0.95
2.200	1.19	5.267	4.75	8.333	1.66	11.40	0.95
2.233	1.19	5.300	5.70	8.367	1.66	11.43	0.95
2.267	1.31	5.333	5.70	8.400	1.66	11.47	0.95
2.300	1.43	5.367	5.70	8.433	1.66	11.50	0.95
2.333	1.43	5.400	5.70	8.467	1.66	11.53	0.95
2.367	1.43	5.433	5.70	8.500	1.66	11.57	0.95
2.400	1.43	5.467	5.70	8.533	1.66	11.60	0.95
2.433	1.43	5.500	5.70	8.567	1.66	11.63	0.95
2.467	1.43	5.533	5.70	8.600	1.66	11.67	0.95
2.500	1.43	5.567	5.70	8.633	1.66	11.70	0.95
2.533	1.42	5.600	5.70	8.667	1.66	11.73	0.95
2.567	1.43	5.633	5.70	8.700	1.66	11.77	0.95
2.600	1.43	5.667	5.70	8.733	1.66	11.80	0.95
2.633	1.43	5.700	5.70	8.767	1.66	11.83	0.95
2.667	1.43	5.733	5.70	8.800	1.66	11.87	0.95
2.700	1.43	5.767	14.25	8.833	1.66	11.90	0.95
2.733	1.43	5.800	22.80	8.867	1.66	11.93	0.95
2.767	1.42	5.833	22.80	8.900	1.66	11.97	0.95
2.800	1.43	5.867	22.80	8.933	1.66	12.00	0.95
2.833	1.43	5.900	22.80	8.967	1.66	12.03	0.95
2.867	1.43	5.933	22.80	9.000	1.66	12.07	0.95
2.900	1.43	5.967	22.80	9.033	1.66	12.10	0.95
2.933	1.43	6.000	22.80	9.067	1.66	12.13	0.95
2.967	1.43	6.033	62.69	9.100	1.66	12.17	0.95
3.000	1.43	6.067	62.70	9.133	1.66	12.20	0.95
3.033	1.42	6.100	62.70	9.167	1.66	12.23	0.95
3.067	1.43	6.133	62.70	9.200	1.66	12.27	0.47

```
     Max.Eff.Inten.(mm/hr)=      62.70        14.79
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.69 (ii)    8.58 (ii)
     Unit Hyd. Tpeak (min)=       4.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.38         0.02          0.390 (iii)
     TIME TO PEAK    (hrs)=       6.23         6.30           6.23
     RUNOFF VOLUME    (mm)=      46.50         9.51          39.10
     TOTAL RAINFALL   (mm)=      47.50        47.50          47.50
     RUNOFF COEFFICIENT   =       0.98         0.20           0.82


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*******************************************
** SIMULATION:Run 14 - 5yr 12hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\8a37f4dc
| Ptotal= 66.00 mm |    Comments: 5yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  3.25    2.64 |  6.50   11.88 |  9.75    2.31
                0.25    1.65 |  3.50    2.64 |  6.75    5.28 | 10.00    2.31
                0.50    1.65 |  3.75    2.64 |  7.00    5.28 | 10.25    1.32
                0.75    1.65 |  4.00    2.64 |  7.25    3.96 | 10.50    1.32
                1.00    1.65 |  4.25    3.96 |  7.50    3.96 | 10.75    1.32
                1.25    1.65 |  4.50    3.96 |  7.75    3.96 | 11.00    1.32
                1.50    1.65 |  4.75    5.28 |  8.00    3.96 | 11.25    1.32
                1.75    1.65 |  5.00    5.28 |  8.25    2.31 | 11.50    1.32
                2.00    1.65 |  5.25    7.92 |  8.50    2.31 | 11.75    1.32
                2.25    1.98 |  5.50    7.92 |  8.75    2.31 | 12.00    1.32
                2.50    1.98 |  5.75   31.68 |  9.00    2.31 |
                2.75    1.98 |  6.00   87.12 |  9.25    2.31 |
                3.00    1.98 |  6.25   11.88 |  9.50    2.31 |

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| CALIB            |
| STANDHYD ( 0100) |   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
               0.033    0.00 | 3.100    1.98 | 6.167   87.12 |  9.23    2.31
               0.067    0.00 | 3.133    1.98 | 6.200   87.12 |  9.27    2.31
               0.100    0.00 | 3.167    1.98 | 6.233   87.12 |  9.30    2.31
               0.133    0.00 | 3.200    1.98 | 6.267   49.51 |  9.33    2.31
               0.167    0.00 | 3.233    1.98 | 6.300   11.88 |  9.37    2.31
               0.200    0.00 | 3.267    2.31 | 6.333   11.88 |  9.40    2.31
               0.233    0.00 | 3.300    2.64 | 6.367   11.88 |  9.43    2.31
               0.267    0.83 | 3.333    2.64 | 6.400   11.88 |  9.47    2.31
               0.300    1.65 | 3.367    2.64 | 6.433   11.88 |  9.50    2.31
               0.333    1.65 | 3.400    2.64 | 6.467   11.88 |  9.53    2.31
               0.367    1.65 | 3.433    2.64 | 6.500   11.88 |  9.57    2.31
               0.400    1.65 | 3.467    2.64 | 6.533   11.88 |  9.60    2.31
               0.433    1.65 | 3.500    2.64 | 6.567   11.88 |  9.63    2.31
               0.467    1.65 | 3.533    2.64 | 6.600   11.88 |  9.67    2.31
               0.500    1.65 | 3.567    2.64 | 6.633   11.88 |  9.70    2.31
               0.533    1.65 | 3.600    2.64 | 6.667   11.88 |  9.73    2.31
               0.567    1.65 | 3.633    2.64 | 6.700   11.88 |  9.77    2.31
               0.600    1.65 | 3.667    2.64 | 6.733   11.88 |  9.80    2.31
               0.633    1.65 | 3.700    2.64 | 6.767    8.58 |  9.83    2.31
               0.667    1.65 | 3.733    2.64 | 6.800    5.28 |  9.87    2.31
               0.700    1.65 | 3.767    2.64 | 6.833    5.28 |  9.90    2.31
               0.733    1.65 | 3.800    2.64 | 6.867    5.28 |  9.93    2.31
               0.767    1.65 | 3.833    2.64 | 6.900    5.28 |  9.97    2.31
               0.800    1.65 | 3.867    2.64 | 6.933    5.28 | 10.00    2.31
               0.833    1.65 | 3.900    2.64 | 6.967    5.28 | 10.03    2.31
               0.867    1.65 | 3.933    2.64 | 7.000    5.28 | 10.07    2.31
               0.900    1.65 | 3.967    2.64 | 7.033    5.28 | 10.10    2.31
               0.933    1.65 | 4.000    2.64 | 7.067    5.28 | 10.13    2.31
               0.967    1.65 | 4.033    2.64 | 7.100    5.28 | 10.17    2.31
               1.000    1.65 | 4.067    2.64 | 7.133    5.28 | 10.20    2.31
               1.033    1.65 | 4.100    2.64 | 7.167    5.28 | 10.23    2.31
               1.067    1.65 | 4.133    2.64 | 7.200    5.28 | 10.27    1.81
               1.100    1.65 | 4.167    2.64 | 7.233    5.28 | 10.30    1.32
               1.133    1.65 | 4.200    2.64 | 7.267    4.62 | 10.33    1.32
               1.167    1.65 | 4.233    2.64 | 7.300    3.96 | 10.37    1.32
               1.200    1.65 | 4.267    3.30 | 7.333    3.96 | 10.40    1.32
               1.233    1.65 | 4.300    3.96 | 7.367    3.96 | 10.43    1.32
               1.267    1.65 | 4.333    3.96 | 7.400    3.96 | 10.47    1.32
               1.300    1.65 | 4.367    3.96 | 7.433    3.96 | 10.50    1.32
               1.333    1.65 | 4.400    3.96 | 7.467    3.96 | 10.53    1.32
               1.367    1.65 | 4.433    3.96 | 7.500    3.96 | 10.57    1.32
               1.400    1.65 | 4.467    3.96 | 7.533    3.96 | 10.60    1.32
               1.433    1.65 | 4.500    3.96 | 7.567    3.96 | 10.63    1.32
               1.467    1.65 | 4.533    3.96 | 7.600    3.96 | 10.67    1.32
               1.500    1.65 | 4.567    3.96 | 7.633    3.96 | 10.70    1.32
               1.533    1.65 | 4.600    3.96 | 7.667    3.96 | 10.73    1.32
               1.567    1.65 | 4.633    3.96 | 7.700    3.96 | 10.77    1.32
               1.600    1.65 | 4.667    3.96 | 7.733    3.96 | 10.80    1.32
               1.633    1.65 | 4.700    3.96 | 7.767    3.96 | 10.83    1.32
               1.667    1.65 | 4.733    3.96 | 7.800    3.96 | 10.87    1.32
               1.700    1.65 | 4.767    4.62 | 7.833    3.96 | 10.90    1.32
               1.733    1.65 | 4.800    5.28 | 7.867    3.96 | 10.93    1.32
               1.767    1.65 | 4.833    5.28 | 7.900    3.96 | 10.97    1.32
               1.800    1.65 | 4.867    5.28 | 7.933    3.96 | 11.00    1.32
               1.833    1.65 | 4.900    5.28 | 7.967    3.96 | 11.03    1.32
               1.867    1.65 | 4.933    5.28 | 8.000    3.96 | 11.07    1.32
               1.900    1.65 | 4.967    5.28 | 8.033    3.96 | 11.10    1.32
               1.933    1.65 | 5.000    5.28 | 8.067    3.96 | 11.13    1.32
               1.967    1.65 | 5.033    5.28 | 8.100    3.96 | 11.17    1.32
               2.000    1.65 | 5.067    5.28 | 8.133    3.96 | 11.20    1.32
               2.033    1.65 | 5.100    5.28 | 8.167    3.96 | 11.23    1.32
               2.067    1.65 | 5.133    5.28 | 8.200    3.96 | 11.27    1.32
               2.100    1.65 | 5.167    5.28 | 8.233    3.96 | 11.30    1.32
               2.133    1.65 | 5.200    5.28 | 8.267    3.14 | 11.33    1.32
               2.167    1.65 | 5.233    5.28 | 8.300    2.31 | 11.37    1.32
               2.200    1.65 | 5.267    6.60 | 8.333    2.31 | 11.40    1.32
               2.233    1.65 | 5.300    7.92 | 8.367    2.31 | 11.43    1.32
               2.267    1.81 | 5.333    7.92 | 8.400    2.31 | 11.47    1.32
               2.300    1.98 | 5.367    7.92 | 8.433    2.31 | 11.50    1.32
               2.333    1.98 | 5.400    7.92 | 8.467    2.31 | 11.53    1.32
               2.367    1.98 | 5.433    7.92 | 8.500    2.31 | 11.57    1.32
               2.400    1.98 | 5.467    7.92 | 8.533    2.31 | 11.60    1.32
               2.433    1.98 | 5.500    7.92 | 8.567    2.31 | 11.63    1.32
               2.467    1.98 | 5.533    7.92 | 8.600    2.31 | 11.67    1.32
               2.500    1.98 | 5.567    7.92 | 8.633    2.31 | 11.70    1.32
               2.533    1.98 | 5.600    7.92 | 8.667    2.31 | 11.73    1.32
               2.567    1.98 | 5.633    7.92 | 8.700    2.31 | 11.77    1.32
               2.600    1.98 | 5.667    7.92 | 8.733    2.31 | 11.80    1.32
               2.633    1.98 | 5.700    7.92 | 8.767    2.31 | 11.83    1.32
               2.667    1.98 | 5.733    7.92 | 8.800    2.31 | 11.87    1.32
               2.700    1.98 | 5.767   19.80 | 8.833    2.31 | 11.90    1.32
               2.733    1.98 | 5.800   31.68 | 8.867    2.31 | 11.93    1.32
               2.767    1.98 | 5.833   31.68 | 8.900    2.31 | 11.97    1.32
               2.800    1.98 | 5.867   31.68 | 8.933    2.31 | 12.00    1.32
               2.833    1.98 | 5.900   31.68 | 8.967    2.31 | 12.03    1.32
               2.867    1.98 | 5.933   31.68 | 9.000    2.31 | 12.07    1.32
               2.900    1.98 | 5.967   31.68 | 9.033    2.31 | 12.10    1.32
               2.933    1.98 | 6.000   31.68 | 9.067    2.31 | 12.13    1.32
               2.967    1.98 | 6.033   87.11 | 9.100    2.31 | 12.17    1.32
               3.000    1.98 | 6.067   87.12 | 9.133    2.31 | 12.20    1.32
               3.033    1.98 | 6.100   87.12 | 9.167    2.31 | 12.23    1.32
               3.067    1.98 | 6.133   87.12 | 9.200    2.31 | 12.27    0.66

     Max.Eff.Inten.(mm/hr)=      87.12        26.94
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       3.24 (ii)    7.52 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.53         0.03          0.556 (iii)
     TIME TO PEAK    (hrs)=       6.23         6.30           6.23
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     RUNOFF VOLUME    (mm)=      65.00        17.26          55.45
     TOTAL RAINFALL   (mm)=      66.00        66.00          66.00
     RUNOFF COEFFICIENT   =       0.98         0.26           0.84


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*********************************************
** SIMULATION:Run 15 - 10yr 12hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\c7754e8c
| Ptotal= 78.50 mm |    Comments: 10yr 12hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  3.25    3.14 |  6.50   14.13 |  9.75    2.75
                0.25    1.96 |  3.50    3.14 |  6.75    6.28 | 10.00    2.75
                0.50    1.96 |  3.75    3.14 |  7.00    6.28 | 10.25    1.57
                0.75    1.96 |  4.00    3.14 |  7.25    4.71 | 10.50    1.57
                1.00    1.96 |  4.25    4.71 |  7.50    4.71 | 10.75    1.57
                1.25    1.96 |  4.50    4.71 |  7.75    4.71 | 11.00    1.57
                1.50    1.96 |  4.75    6.28 |  8.00    4.71 | 11.25    1.57
                1.75    1.96 |  5.00    6.28 |  8.25    2.75 | 11.50    1.57
                2.00    1.96 |  5.25    9.42 |  8.50    2.75 | 11.75    1.57
                2.25    2.36 |  5.50    9.42 |  8.75    2.75 | 12.00    1.57
                2.50    2.36 |  5.75   37.68 |  9.00    2.75 |
                2.75    2.36 |  6.00  103.62 |  9.25    2.75 |
                3.00    2.36 |  6.25   14.13 |  9.50    2.75 |

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
               0.033    0.00 | 3.100    2.36 | 6.167  103.62 |  9.23    2.75
               0.067    0.00 | 3.133    2.36 | 6.200  103.62 |  9.27    2.75
               0.100    0.00 | 3.167    2.36 | 6.233  103.62 |  9.30    2.75
               0.133    0.00 | 3.200    2.36 | 6.267   58.89 |  9.33    2.75
               0.167    0.00 | 3.233    2.36 | 6.300   14.13 |  9.37    2.75
               0.200    0.00 | 3.267    2.75 | 6.333   14.13 |  9.40    2.75
               0.233    0.00 | 3.300    3.14 | 6.367   14.13 |  9.43    2.75
               0.267    0.98 | 3.333    3.14 | 6.400   14.13 |  9.47    2.75
               0.300    1.96 | 3.367    3.14 | 6.433   14.13 |  9.50    2.75
               0.333    1.96 | 3.400    3.14 | 6.467   14.13 |  9.53    2.75
               0.367    1.96 | 3.433    3.14 | 6.500   14.13 |  9.57    2.75
               0.400    1.96 | 3.467    3.14 | 6.533   14.13 |  9.60    2.75
               0.433    1.96 | 3.500    3.14 | 6.567   14.13 |  9.63    2.75
               0.467    1.96 | 3.533    3.14 | 6.600   14.13 |  9.67    2.75
               0.500    1.96 | 3.567    3.14 | 6.633   14.13 |  9.70    2.75
               0.533    1.96 | 3.600    3.14 | 6.667   14.13 |  9.73    2.75
               0.567    1.96 | 3.633    3.14 | 6.700   14.13 |  9.77    2.75
               0.600    1.96 | 3.667    3.14 | 6.733   14.13 |  9.80    2.75
               0.633    1.96 | 3.700    3.14 | 6.767   10.21 |  9.83    2.75
               0.667    1.96 | 3.733    3.14 | 6.800    6.28 |  9.87    2.75
               0.700    1.96 | 3.767    3.14 | 6.833    6.28 |  9.90    2.75
               0.733    1.96 | 3.800    3.14 | 6.867    6.28 |  9.93    2.75
               0.767    1.96 | 3.833    3.14 | 6.900    6.28 |  9.97    2.75
               0.800    1.96 | 3.867    3.14 | 6.933    6.28 | 10.00    2.75
               0.833    1.96 | 3.900    3.14 | 6.967    6.28 | 10.03    2.75
               0.867    1.96 | 3.933    3.14 | 7.000    6.28 | 10.07    2.75
               0.900    1.96 | 3.967    3.14 | 7.033    6.28 | 10.10    2.75
               0.933    1.96 | 4.000    3.14 | 7.067    6.28 | 10.13    2.75
               0.967    1.96 | 4.033    3.14 | 7.100    6.28 | 10.17    2.75
               1.000    1.96 | 4.067    3.14 | 7.133    6.28 | 10.20    2.75
               1.033    1.96 | 4.100    3.14 | 7.167    6.28 | 10.23    2.75
               1.067    1.96 | 4.133    3.14 | 7.200    6.28 | 10.27    2.16
               1.100    1.96 | 4.167    3.14 | 7.233    6.28 | 10.30    1.57
               1.133    1.96 | 4.200    3.14 | 7.267    5.50 | 10.33    1.57
               1.167    1.96 | 4.233    3.14 | 7.300    4.71 | 10.37    1.57
               1.200    1.96 | 4.267    3.92 | 7.333    4.71 | 10.40    1.57
               1.233    1.96 | 4.300    4.71 | 7.367    4.71 | 10.43    1.57
               1.267    1.96 | 4.333    4.71 | 7.400    4.71 | 10.47    1.57
               1.300    1.96 | 4.367    4.71 | 7.433    4.71 | 10.50    1.57
               1.333    1.96 | 4.400    4.71 | 7.467    4.71 | 10.53    1.57
               1.367    1.96 | 4.433    4.71 | 7.500    4.71 | 10.57    1.57
               1.400    1.96 | 4.467    4.71 | 7.533    4.71 | 10.60    1.57
               1.433    1.96 | 4.500    4.71 | 7.567    4.71 | 10.63    1.57
               1.467    1.96 | 4.533    4.71 | 7.600    4.71 | 10.67    1.57
               1.500    1.96 | 4.567    4.71 | 7.633    4.71 | 10.70    1.57
               1.533    1.96 | 4.600    4.71 | 7.667    4.71 | 10.73    1.57
               1.567    1.96 | 4.633    4.71 | 7.700    4.71 | 10.77    1.57
               1.600    1.96 | 4.667    4.71 | 7.733    4.71 | 10.80    1.57
               1.633    1.96 | 4.700    4.71 | 7.767    4.71 | 10.83    1.57
               1.667    1.96 | 4.733    4.71 | 7.800    4.71 | 10.87    1.57
               1.700    1.96 | 4.767    5.49 | 7.833    4.71 | 10.90    1.57
               1.733    1.96 | 4.800    6.28 | 7.867    4.71 | 10.93    1.57
               1.767    1.96 | 4.833    6.28 | 7.900    4.71 | 10.97    1.57
               1.800    1.96 | 4.867    6.28 | 7.933    4.71 | 11.00    1.57
               1.833    1.96 | 4.900    6.28 | 7.967    4.71 | 11.03    1.57
               1.867    1.96 | 4.933    6.28 | 8.000    4.71 | 11.07    1.57
               1.900    1.96 | 4.967    6.28 | 8.033    4.71 | 11.10    1.57
               1.933    1.96 | 5.000    6.28 | 8.067    4.71 | 11.13    1.57
               1.967    1.96 | 5.033    6.28 | 8.100    4.71 | 11.17    1.57
               2.000    1.96 | 5.067    6.28 | 8.133    4.71 | 11.20    1.57
               2.033    1.96 | 5.100    6.28 | 8.167    4.71 | 11.23    1.57
               2.067    1.96 | 5.133    6.28 | 8.200    4.71 | 11.27    1.57
               2.100    1.96 | 5.167    6.28 | 8.233    4.71 | 11.30    1.57
               2.133    1.96 | 5.200    6.28 | 8.267    3.73 | 11.33    1.57
               2.167    1.96 | 5.233    6.28 | 8.300    2.75 | 11.37    1.57
               2.200    1.96 | 5.267    7.85 | 8.333    2.75 | 11.40    1.57
               2.233    1.96 | 5.300    9.42 | 8.367    2.75 | 11.43    1.57
               2.267    2.16 | 5.333    9.42 | 8.400    2.75 | 11.47    1.57
               2.300    2.36 | 5.367    9.42 | 8.433    2.75 | 11.50    1.57
               2.333    2.36 | 5.400    9.42 | 8.467    2.75 | 11.53    1.57
               2.367    2.36 | 5.433    9.42 | 8.500    2.75 | 11.57    1.57
               2.400    2.36 | 5.467    9.42 | 8.533    2.75 | 11.60    1.57
               2.433    2.36 | 5.500    9.42 | 8.567    2.75 | 11.63    1.57
               2.467    2.36 | 5.533    9.42 | 8.600    2.75 | 11.67    1.57
               2.500    2.36 | 5.567    9.42 | 8.633    2.75 | 11.70    1.57
               2.533    2.35 | 5.600    9.42 | 8.667    2.75 | 11.73    1.57
               2.567    2.36 | 5.633    9.42 | 8.700    2.75 | 11.77    1.57
               2.600    2.36 | 5.667    9.42 | 8.733    2.75 | 11.80    1.57
               2.633    2.36 | 5.700    9.42 | 8.767    2.75 | 11.83    1.57
               2.667    2.36 | 5.733    9.42 | 8.800    2.75 | 11.87    1.57
               2.700    2.36 | 5.767   23.55 | 8.833    2.75 | 11.90    1.57
               2.733    2.36 | 5.800   37.68 | 8.867    2.75 | 11.93    1.57
               2.767    2.35 | 5.833   37.68 | 8.900    2.75 | 11.97    1.57
               2.800    2.36 | 5.867   37.68 | 8.933    2.75 | 12.00    1.57
               2.833    2.36 | 5.900   37.68 | 8.967    2.75 | 12.03    1.57
               2.867    2.36 | 5.933   37.68 | 9.000    2.75 | 12.07    1.57
               2.900    2.36 | 5.967   37.68 | 9.033    2.75 | 12.10    1.57
               2.933    2.36 | 6.000   37.68 | 9.067    2.75 | 12.13    1.57
               2.967    2.36 | 6.033  103.61 | 9.100    2.75 | 12.17    1.57
               3.000    2.36 | 6.067  103.62 | 9.133    2.75 | 12.20    1.57
               3.033    2.35 | 6.100  103.62 | 9.167    2.75 | 12.23    1.57
               3.067    2.36 | 6.133  103.62 | 9.200    2.75 | 12.27    0.78

     Max.Eff.Inten.(mm/hr)=     103.62        36.57
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       3.02 (ii)    7.02 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.63         0.05        0.670 (iii)
     TIME TO PEAK    (hrs)=       6.23         6.30          6.23
     RUNOFF VOLUME    (mm)=      77.50        23.39         66.68
     TOTAL RAINFALL   (mm)=      78.50        78.50         78.50
     RUNOFF COEFFICIENT   =       0.99         0.30          0.85


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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.

****
** SIMULATION:Run 16 - 25yr 12hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\ce6310f7
| Ptotal= 94.04 mm |    Comments: 25yr 12hr 15min SCS
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	3.76	6.50	16.93	9.75	3.29
0.25	2.35	3.50	3.76	6.75	7.52	10.00	3.29
0.50	2.35	3.75	3.76	7.00	7.52	10.25	1.88
0.75	2.35	4.00	3.76	7.25	5.64	10.50	1.88
1.00	2.35	4.25	5.64	7.50	5.64	10.75	1.88
1.25	2.35	4.50	5.64	7.75	5.64	11.00	1.88
1.50	2.35	4.75	7.52	8.00	5.64	11.25	1.88
1.75	2.35	5.00	7.52	8.25	3.29	11.50	1.88
2.00	2.35	5.25	11.28	8.50	3.29	11.75	1.88
2.25	2.82	5.50	11.28	8.75	3.29	12.00	1.88
2.50	2.82	5.75	45.14	9.00	3.29		
2.75	2.82	6.00	124.13	9.25	3.29		
3.00	2.82	6.25	16.93	9.50	3.29		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.20	0.55
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.40	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 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
0.033	0.00	3.100	2.82	6.167	124.13	9.23	3.29
0.067	0.00	3.133	2.82	6.200	124.13	9.27	3.29
0.100	0.00	3.167	2.82	6.233	124.13	9.30	3.29
0.133	0.00	3.200	2.82	6.267	70.54	9.33	3.29
0.167	0.00	3.233	2.82	6.300	16.93	9.37	3.29
0.200	0.00	3.267	3.29	6.333	16.93	9.40	3.29
0.233	0.00	3.300	3.76	6.367	16.93	9.43	3.29
0.267	1.18	3.333	3.76	6.400	16.93	9.47	3.29
0.300	2.35	3.367	3.76	6.433	16.93	9.50	3.29
0.333	2.35	3.400	3.76	6.467	16.93	9.53	3.29
0.367	2.35	3.433	3.76	6.500	16.93	9.57	3.29
0.400	2.35	3.467	3.76	6.533	16.93	9.60	3.29
0.433	2.35	3.500	3.76	6.567	16.93	9.63	3.29
0.467	2.35	3.533	3.76	6.600	16.93	9.67	3.29
0.500	2.35	3.567	3.76	6.633	16.93	9.70	3.29
0.533	2.35	3.600	3.76	6.667	16.93	9.73	3.29
0.567	2.35	3.633	3.76	6.700	16.93	9.77	3.29
0.600	2.35	3.667	3.76	6.733	16.93	9.80	3.29
0.633	2.35	3.700	3.76	6.767	12.23	9.83	3.29
0.667	2.35	3.733	3.76	6.800	7.52	9.87	3.29
0.700	2.35	3.767	3.76	6.833	7.52	9.90	3.29
0.733	2.35	3.800	3.76	6.867	7.52	9.93	3.29
0.767	2.35	3.833	3.76	6.900	7.52	9.97	3.29
0.800	2.35	3.867	3.76	6.933	7.52	10.00	3.29
0.833	2.35	3.900	3.76	6.967	7.52	10.03	3.29
0.867	2.35	3.933	3.76	7.000	7.52	10.07	3.29
0.900	2.35	3.967	3.76	7.033	7.52	10.10	3.29
0.933	2.35	4.000	3.76	7.067	7.52	10.13	3.29
0.967	2.35	4.033	3.76	7.100	7.52	10.17	3.29
1.000	2.35	4.067	3.76	7.133	7.52	10.20	3.29
1.033	2.35	4.100	3.76	7.167	7.52	10.23	3.29
1.067	2.35	4.133	3.76	7.200	7.52	10.27	2.59
1.100	2.35	4.167	3.76	7.233	7.52	10.30	1.88
1.133	2.35	4.200	3.76	7.267	6.58	10.33	1.88
1.167	2.35	4.233	3.76	7.300	5.64	10.37	1.88
1.200	2.35	4.267	4.70	7.333	5.64	10.40	1.88
1.233	2.35	4.300	5.64	7.367	5.64	10.43	1.88
1.267	2.35	4.333	5.64	7.400	5.64	10.47	1.88
1.300	2.35	4.367	5.64	7.433	5.64	10.50	1.88
1.333	2.35	4.400	5.64	7.467	5.64	10.53	1.88
1.367	2.35	4.433	5.64	7.500	5.64	10.57	1.88
1.400	2.35	4.467	5.64	7.533	5.64	10.60	1.88
1.433	2.35	4.500	5.64	7.567	5.64	10.63	1.88
1.467	2.35	4.533	5.64	7.600	5.64	10.67	1.88
1.500	2.35	4.567	5.64	7.633	5.64	10.70	1.88
1.533	2.35	4.600	5.64	7.667	5.64	10.73	1.88
1.567	2.35	4.633	5.64	7.700	5.64	10.77	1.88
1.600	2.35	4.667	5.64	7.733	5.64	10.80	1.88
1.633	2.35	4.700	5.64	7.767	5.64	10.83	1.88
1.667	2.35	4.733	5.64	7.800	5.64	10.87	1.88
1.700	2.35	4.767	6.58	7.833	5.64	10.90	1.88
1.733	2.35	4.800	7.52	7.867	5.64	10.93	1.88
1.767	2.35	4.833	7.52	7.900	5.64	10.97	1.88
1.800	2.35	4.867	7.52	7.933	5.64	11.00	1.88
1.833	2.35	4.900	7.52	7.967	5.64	11.03	1.88
1.867	2.35	4.933	7.52	8.000	5.64	11.07	1.88
1.900	2.35	4.967	7.52	8.033	5.64	11.10	1.88
1.933	2.35	5.000	7.52	8.067	5.64	11.13	1.88
1.967	2.35	5.033	7.52	8.100	5.64	11.17	1.88
2.000	2.35	5.067	7.52	8.133	5.64	11.20	1.88
2.033	2.35	5.100	7.52	8.167	5.64	11.23	1.88
2.067	2.35	5.133	7.52	8.200	5.64	11.27	1.88
2.100	2.35	5.167	7.52	8.233	5.64	11.30	1.88
2.133	2.35	5.200	7.52	8.267	4.47	11.33	1.88
2.167	2.35	5.233	7.52	8.300	3.29	11.37	1.88
2.200	2.35	5.267	9.40	8.333	3.29	11.40	1.88
2.233	2.35	5.300	11.28	8.367	3.29	11.43	1.88
2.267	2.59	5.333	11.28	8.400	3.29	11.47	1.88
2.300	2.82	5.367	11.28	8.433	3.29	11.50	1.88
2.333	2.82	5.400	11.28	8.467	3.29	11.53	1.88
2.367	2.82	5.433	11.28	8.500	3.29	11.57	1.88
2.400	2.82	5.467	11.28	8.533	3.29	11.60	1.88
2.433	2.82	5.500	11.28	8.567	3.29	11.63	1.88
2.467	2.82	5.533	11.28	8.600	3.29	11.67	1.88
2.500	2.82	5.567	11.28	8.633	3.29	11.70	1.88
2.533	2.82	5.600	11.28	8.667	3.29	11.73	1.88
2.567	2.82	5.633	11.28	8.700	3.29	11.77	1.88
2.600	2.82	5.667	11.28	8.733	3.29	11.80	1.88
2.633	2.82	5.700	11.28	8.767	3.29	11.83	1.88
2.667	2.82	5.733	11.28	8.800	3.29	11.87	1.88
2.700	2.82	5.767	28.21	8.833	3.29	11.90	1.88
2.733	2.82	5.800	45.14	8.867	3.29	11.93	1.88
2.767	2.82	5.833	45.14	8.900	3.29	11.97	1.88
2.800	2.82	5.867	45.14	8.933	3.29	12.00	1.88
2.833	2.82	5.900	45.14	8.967	3.29	12.03	1.88
2.867	2.82	5.933	45.14	9.000	3.29	12.07	1.88
2.900	2.82	5.967	45.14	9.033	3.29	12.10	1.88
2.933	2.82	6.000	45.14	9.067	3.29	12.13	1.88
2.967	2.82	6.033	124.12	9.100	3.29	12.17	1.88
3.000	2.82	6.067	124.13	9.133	3.29	12.20	1.88
3.033	2.82	6.100	124.13	9.167	3.29	12.23	1.88
3.067	2.82	6.133	124.13	9.200	3.29	12.27	0.94

Max.Eff.Inten.(mm/hr)=		124.13	49.86	
over (min)		5.00	8.00	
Storage Coeff.	(min)=	2.81 (ii)	6.53 (ii)	
Unit Hyd. Tpeak	(min)=	4.00	8.00	
Unit Hyd. peak	(cms)=	0.34	0.16	
				TOTALS
PEAK FLOW	(cms)=	0.75	0.06	0.813 (iii)
TIME TO PEAK	(hrs)=	6.23	6.27	6.23
RUNOFF VOLUME	(mm)=	93.04	31.83	80.80
TOTAL RAINFALL	(mm)=	94.04	94.04	94.04
RUNOFF COEFFICIENT	=	0.99	0.34	0.86

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 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.

****
** SIMULATION:Run 17 - 50yr 12hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
```

```
|                    |              ata\Local\Temp\
|                    |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\0c0829aa
| Ptotal=105.51 mm |    Comments: 50yr 12hr 15min SCS
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	4.22	6.50	18.99	9.75	3.69
0.25	2.64	3.50	4.22	6.75	8.44	10.00	3.69
0.50	2.64	3.75	4.22	7.00	8.44	10.25	2.11
0.75	2.64	4.00	4.22	7.25	6.33	10.50	2.11
1.00	2.64	4.25	6.33	7.50	6.33	10.75	2.11
1.25	2.64	4.50	6.33	7.75	6.33	11.00	2.11
1.50	2.64	4.75	8.44	8.00	6.33	11.25	2.11
1.75	2.64	5.00	8.44	8.25	3.69	11.50	2.11
2.00	2.64	5.25	12.66	8.50	3.69	11.75	2.11
2.25	3.17	5.50	12.66	8.75	3.69	12.00	2.11
2.50	3.17	5.75	50.64	9.00	3.69		
2.75	3.17	6.00	139.27	9.25	3.69		
3.00	3.17	6.25	18.99	9.50	3.69		

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--------------------
| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.20	0.55
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.40	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 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
0.033	0.00	3.100	3.17	6.167	139.27	9.23	3.69
0.067	0.00	3.133	3.17	6.200	139.27	9.27	3.69
0.100	0.00	3.167	3.17	6.233	139.27	9.30	3.69
0.133	0.00	3.200	3.17	6.267	79.15	9.33	3.69
0.167	0.00	3.233	3.17	6.300	18.99	9.37	3.69
0.200	0.00	3.267	3.69	6.333	18.99	9.40	3.69
0.233	0.00	3.300	4.22	6.367	18.99	9.43	3.69
0.267	1.32	3.333	4.22	6.400	18.99	9.47	3.69
0.300	2.64	3.367	4.22	6.433	18.99	9.50	3.69
0.333	2.64	3.400	4.22	6.467	18.99	9.53	3.69
0.367	2.64	3.433	4.22	6.500	18.99	9.57	3.69
0.400	2.64	3.467	4.22	6.533	18.99	9.60	3.69
0.433	2.64	3.500	4.22	6.567	18.99	9.63	3.69
0.467	2.64	3.533	4.22	6.600	18.99	9.67	3.69
0.500	2.64	3.567	4.22	6.633	18.99	9.70	3.69
0.533	2.64	3.600	4.22	6.667	18.99	9.73	3.69
0.567	2.64	3.633	4.22	6.700	18.99	9.77	3.69
0.600	2.64	3.667	4.22	6.733	18.99	9.80	3.69
0.633	2.64	3.700	4.22	6.767	13.72	9.83	3.69
0.667	2.64	3.733	4.22	6.800	8.44	9.87	3.69
0.700	2.64	3.767	4.22	6.833	8.44	9.90	3.69
0.733	2.64	3.800	4.22	6.867	8.44	9.93	3.69
0.767	2.64	3.833	4.22	6.900	8.44	9.97	3.69
0.800	2.64	3.867	4.22	6.933	8.44	10.00	3.69
0.833	2.64	3.900	4.22	6.967	8.44	10.03	3.69
0.867	2.64	3.933	4.22	7.000	8.44	10.07	3.69
0.900	2.64	3.967	4.22	7.033	8.44	10.10	3.69
0.933	2.64	4.000	4.22	7.067	8.44	10.13	3.69
0.967	2.64	4.033	4.22	7.100	8.44	10.17	3.69
1.000	2.64	4.067	4.22	7.133	8.44	10.20	3.69
1.033	2.64	4.100	4.22	7.167	8.44	10.23	3.69
1.067	2.64	4.133	4.22	7.200	8.44	10.27	2.90
1.100	2.64	4.167	4.22	7.233	8.44	10.30	2.11
1.133	2.64	4.200	4.22	7.267	7.39	10.33	2.11
1.167	2.64	4.233	4.22	7.300	6.33	10.37	2.11
1.200	2.64	4.267	5.28	7.333	6.33	10.40	2.11
1.233	2.64	4.300	6.33	7.367	6.33	10.43	2.11
1.267	2.64	4.333	6.33	7.400	6.33	10.47	2.11
1.300	2.64	4.367	6.33	7.433	6.33	10.50	2.11
1.333	2.64	4.400	6.33	7.467	6.33	10.53	2.11
1.367	2.64	4.433	6.33	7.500	6.33	10.57	2.11
1.400	2.64	4.467	6.33	7.533	6.33	10.60	2.11
1.433	2.64	4.500	6.33	7.567	6.33	10.63	2.11
1.467	2.64	4.533	6.33	7.600	6.33	10.67	2.11
1.500	2.64	4.567	6.33	7.633	6.33	10.70	2.11
1.533	2.64	4.600	6.33	7.667	6.33	10.73	2.11
1.567	2.64	4.633	6.33	7.700	6.33	10.77	2.11
1.600	2.64	4.667	6.33	7.733	6.33	10.80	2.11
1.633	2.64	4.700	6.33	7.767	6.33	10.83	2.11
1.667	2.64	4.733	6.33	7.800	6.33	10.87	2.11
1.700	2.64	4.767	7.39	7.833	6.33	10.90	2.11
1.733	2.64	4.800	8.44	7.867	6.33	10.93	2.11
1.767	2.64	4.833	8.44	7.900	6.33	10.97	2.11
1.800	2.64	4.867	8.44	7.933	6.33	11.00	2.11
1.833	2.64	4.900	8.44	7.967	6.33	11.03	2.11
1.867	2.64	4.933	8.44	8.000	6.33	11.07	2.11
1.900	2.64	4.967	8.44	8.033	6.33	11.10	2.11
1.933	2.64	5.000	8.44	8.067	6.33	11.13	2.11
1.967	2.64	5.033	8.44	8.100	6.33	11.17	2.11
2.000	2.64	5.067	8.44	8.133	6.33	11.20	2.11
2.033	2.64	5.100	8.44	8.167	6.33	11.23	2.11
2.067	2.64	5.133	8.44	8.200	6.33	11.27	2.11
2.100	2.64	5.167	8.44	8.233	6.33	11.30	2.11
2.133	2.64	5.200	8.44	8.267	5.01	11.33	2.11
2.167	2.64	5.233	8.44	8.300	3.69	11.37	2.11
2.200	2.64	5.267	10.55	8.333	3.69	11.40	2.11
2.233	2.64	5.300	12.66	8.367	3.69	11.43	2.11
2.267	2.90	5.333	12.66	8.400	3.69	11.47	2.11
2.300	3.17	5.367	12.66	8.433	3.69	11.50	2.11
2.333	3.17	5.400	12.66	8.467	3.69	11.53	2.11
2.367	3.17	5.433	12.66	8.500	3.69	11.57	2.11
2.400	3.17	5.467	12.66	8.533	3.69	11.60	2.11
2.433	3.17	5.500	12.66	8.567	3.69	11.63	2.11
2.467	3.17	5.533	12.66	8.600	3.69	11.67	2.11
2.500	3.17	5.567	12.66	8.633	3.69	11.70	2.11
2.533	3.17	5.600	12.66	8.667	3.69	11.73	2.11
2.567	3.17	5.633	12.66	8.700	3.69	11.77	2.11
2.600	3.17	5.667	12.66	8.733	3.69	11.80	2.11
2.633	3.17	5.700	12.66	8.767	3.69	11.83	2.11
2.667	3.17	5.733	12.66	8.800	3.69	11.87	2.11
2.700	3.17	5.767	31.65	8.833	3.69	11.90	2.11
2.733	3.17	5.800	50.64	8.867	3.69	11.93	2.11
2.767	3.17	5.833	50.64	8.900	3.69	11.97	2.11
2.800	3.17	5.867	50.64	8.933	3.69	12.00	2.11
2.833	3.17	5.900	50.64	8.967	3.69	12.03	2.11
2.867	3.17	5.933	50.64	9.000	3.69	12.07	2.11
2.900	3.17	5.967	50.64	9.033	3.69	12.10	2.11
2.933	3.17	6.000	50.64	9.067	3.69	12.13	2.11
2.967	3.17	6.033	139.26	9.100	3.69	12.17	2.11
3.000	3.17	6.067	139.27	9.133	3.69	12.20	2.11
3.033	3.17	6.100	139.27	9.167	3.69	12.23	2.11
3.067	3.17	6.133	139.27	9.200	3.69	12.27	1.05

Max.Eff.Inten.(mm/hr)=		139.27	60.47	
over (min)		5.00	8.00	
Storage Coeff.	(min)=	2.68 (ii)	6.23 (ii)	
Unit Hyd. Tpeak	(min)=	4.00	8.00	
Unit Hyd. peak	(cms)=	0.35	0.17	
				TOTALS
PEAK FLOW	(cms)=	0.85	0.08	0.920 (iii)
TIME TO PEAK	(hrs)=	6.23	6.27	6.23
RUNOFF VOLUME	(mm)=	104.51	38.56	91.32
TOTAL RAINFALL	(mm)=	105.51	105.51	105.51
RUNOFF COEFFICIENT	=	0.99	0.37	0.87

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 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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**********************************************
** SIMULATION:Run 18 - 100yr 12hr 15min SCS **
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--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\ef499849
| Ptotal=115.50 mm |    Comments: 100yr 12hr 15min SCS
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	4.62	6.50	20.79	9.75	4.04
0.25	2.89	3.50	4.62	6.75	9.24	10.00	4.04
0.50	2.89	3.75	4.62	7.00	9.24	10.25	2.31

0.75	2.89	4.00	4.62	7.25	6.93	10.50	2.31
1.00	2.89	4.25	6.93	7.50	6.93	10.75	2.31
1.25	2.89	4.50	6.93	7.75	6.93	11.00	2.31
1.50	2.89	4.75	9.24	8.00	6.93	11.25	2.31
1.75	2.89	5.00	9.24	8.25	4.04	11.50	2.31
2.00	2.89	5.25	13.86	8.50	4.04	11.75	2.31
2.25	3.46	5.50	13.86	8.75	4.04	12.00	2.31
2.50	3.46	5.75	55.44	9.00	4.04		
2.75	3.46	6.00	152.46	9.25	4.04		
3.00	3.46	6.25	20.79	9.50	4.04		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	3.100	3.46	6.167	152.46	9.23	4.04
0.067	0.00	3.133	3.46	6.200	152.46	9.27	4.04
0.100	0.00	3.167	3.46	6.233	152.46	9.30	4.04
0.133	0.00	3.200	3.46	6.267	86.64	9.33	4.04
0.167	0.00	3.233	3.46	6.300	20.79	9.37	4.04
0.200	0.00	3.267	4.04	6.333	20.79	9.40	4.04
0.233	0.00	3.300	4.62	6.367	20.79	9.43	4.04
0.267	1.44	3.333	4.62	6.400	20.79	9.47	4.04
0.300	2.89	3.367	4.62	6.433	20.79	9.50	4.04
0.333	2.89	3.400	4.62	6.467	20.79	9.53	4.04
0.367	2.89	3.433	4.62	6.500	20.79	9.57	4.04
0.400	2.89	3.467	4.62	6.533	20.79	9.60	4.04
0.433	2.89	3.500	4.62	6.567	20.79	9.63	4.04
0.467	2.89	3.533	4.62	6.600	20.79	9.67	4.04
0.500	2.89	3.567	4.62	6.633	20.79	9.70	4.04
0.533	2.89	3.600	4.62	6.667	20.79	9.73	4.04
0.567	2.89	3.633	4.62	6.700	20.79	9.77	4.04
0.600	2.89	3.667	4.62	6.733	20.79	9.80	4.04
0.633	2.89	3.700	4.62	6.767	15.02	9.83	4.04
0.667	2.89	3.733	4.62	6.800	9.24	9.87	4.04
0.700	2.89	3.767	4.62	6.833	9.24	9.90	4.04
0.733	2.89	3.800	4.62	6.867	9.24	9.93	4.04
0.767	2.89	3.833	4.62	6.900	9.24	9.97	4.04
0.800	2.89	3.867	4.62	6.933	9.24	10.00	4.04
0.833	2.89	3.900	4.62	6.967	9.24	10.03	4.04
0.867	2.89	3.933	4.62	7.000	9.24	10.07	4.04
0.900	2.89	3.967	4.62	7.033	9.24	10.10	4.04
0.933	2.89	4.000	4.62	7.067	9.24	10.13	4.04
0.967	2.89	4.033	4.62	7.100	9.24	10.17	4.04
1.000	2.89	4.067	4.62	7.133	9.24	10.20	4.04
1.033	2.89	4.100	4.62	7.167	9.24	10.23	4.04
1.067	2.89	4.133	4.62	7.200	9.24	10.27	3.18
1.100	2.89	4.167	4.62	7.233	9.24	10.30	2.31
1.133	2.89	4.200	4.62	7.267	8.09	10.33	2.31
1.167	2.89	4.233	4.62	7.300	6.93	10.37	2.31
1.200	2.89	4.267	5.77	7.333	6.93	10.40	2.31
1.233	2.89	4.300	6.93	7.367	6.93	10.43	2.31
1.267	2.89	4.333	6.93	7.400	6.93	10.47	2.31
1.300	2.89	4.367	6.93	7.433	6.93	10.50	2.31
1.333	2.89	4.400	6.93	7.467	6.93	10.53	2.31
1.367	2.89	4.433	6.93	7.500	6.93	10.57	2.31
1.400	2.89	4.467	6.93	7.533	6.93	10.60	2.31
1.433	2.89	4.500	6.93	7.567	6.93	10.63	2.31
1.467	2.89	4.533	6.93	7.600	6.93	10.67	2.31
1.500	2.89	4.567	6.93	7.633	6.93	10.70	2.31
1.533	2.89	4.600	6.93	7.667	6.93	10.73	2.31
1.567	2.89	4.633	6.93	7.700	6.93	10.77	2.31
1.600	2.89	4.667	6.93	7.733	6.93	10.80	2.31
1.633	2.89	4.700	6.93	7.767	6.93	10.83	2.31
1.667	2.89	4.733	6.93	7.800	6.93	10.87	2.31
1.700	2.89	4.767	8.08	7.833	6.93	10.90	2.31
1.733	2.89	4.800	9.24	7.867	6.93	10.93	2.31
1.767	2.89	4.833	9.24	7.900	6.93	10.97	2.31
1.800	2.89	4.867	9.24	7.933	6.93	11.00	2.31
1.833	2.89	4.900	9.24	7.967	6.93	11.03	2.31
1.867	2.89	4.933	9.24	8.000	6.93	11.07	2.31
1.900	2.89	4.967	9.24	8.033	6.93	11.10	2.31
1.933	2.89	5.000	9.24	8.067	6.93	11.13	2.31
1.967	2.89	5.033	9.24	8.100	6.93	11.17	2.31
2.000	2.89	5.067	9.24	8.133	6.93	11.20	2.31
2.033	2.89	5.100	9.24	8.167	6.93	11.23	2.31
2.067	2.89	5.133	9.24	8.200	6.93	11.27	2.31
2.100	2.89	5.167	9.24	8.233	6.93	11.30	2.31
2.133	2.89	5.200	9.24	8.267	5.49	11.33	2.31
2.167	2.89	5.233	9.24	8.300	4.04	11.37	2.31
2.200	2.89	5.267	11.55	8.333	4.04	11.40	2.31
2.233	2.89	5.300	13.86	8.367	4.04	11.43	2.31
2.267	3.18	5.333	13.86	8.400	4.04	11.47	2.31
2.300	3.46	5.367	13.86	8.433	4.04	11.50	2.31
2.333	3.46	5.400	13.86	8.467	4.04	11.53	2.31
2.367	3.46	5.433	13.86	8.500	4.04	11.57	2.31
2.400	3.46	5.467	13.86	8.533	4.04	11.60	2.31
2.433	3.46	5.500	13.86	8.567	4.04	11.63	2.31
2.467	3.46	5.533	13.86	8.600	4.04	11.67	2.31
2.500	3.46	5.567	13.86	8.633	4.04	11.70	2.31
2.533	3.46	5.600	13.86	8.667	4.04	11.73	2.31
2.567	3.46	5.633	13.86	8.700	4.04	11.77	2.31
2.600	3.46	5.667	13.86	8.733	4.04	11.80	2.31
2.633	3.46	5.700	13.86	8.767	4.04	11.83	2.31
2.667	3.46	5.733	13.86	8.800	4.04	11.87	2.31
2.700	3.46	5.767	34.64	8.833	4.04	11.90	2.31
2.733	3.46	5.800	55.44	8.867	4.04	11.93	2.31
2.767	3.46	5.833	55.44	8.900	4.04	11.97	2.31
2.800	3.46	5.867	55.44	8.933	4.04	12.00	2.31
2.833	3.46	5.900	55.44	8.967	4.04	12.03	2.31
2.867	3.46	5.933	55.44	9.000	4.04	12.07	2.31
2.900	3.46	5.967	55.44	9.033	4.04	12.10	2.31
2.933	3.46	6.000	55.44	9.067	4.04	12.13	2.31
2.967	3.46	6.033	152.45	9.100	4.04	12.17	2.31
3.000	3.46	6.067	152.46	9.133	4.04	12.20	2.31
3.033	3.46	6.100	152.46	9.167	4.04	12.23	2.31
3.067	3.46	6.133	152.46	9.200	4.04	12.27	1.15

```
     Max.Eff.Inten.(mm/hr)=     152.46        70.19
                over (min)        5.00         8.00
     Storage Coeff.  (min)=       2.59 (ii)    6.01 (ii)
     Unit Hyd. Tpeak (min)=       4.00         8.00
     Unit Hyd. peak  (cms)=       0.36         0.17
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.93         0.09         1.014 (iii)
     TIME TO PEAK    (hrs)=       6.23         6.27          6.23
     RUNOFF VOLUME    (mm)=     114.50        44.74        100.55
     TOTAL RAINFALL   (mm)=     115.50       115.50        115.50
     RUNOFF COEFFICIENT   =       0.99         0.39          0.87


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*********************************************
** SIMULATION:Run 19 - 2yr 24hr 15min SCS **
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--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\64d18c55
| Ptotal= 55.43 mm |    Comments: 2yr 24hr 15min SCS
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	6.25	1.00	12.50	7.98	18.75	1.00
0.25	0.61	6.50	1.00	12.75	4.10	19.00	1.00
0.50	0.61	6.75	1.00	13.00	4.10	19.25	1.00
0.75	0.61	7.00	1.00	13.25	2.99	19.50	1.00
1.00	0.61	7.25	1.22	13.50	2.99	19.75	1.00
1.25	0.61	7.50	1.22	13.75	2.33	20.00	1.00
1.50	0.61	7.75	1.22	14.00	2.33	20.25	0.67
1.75	0.61	8.00	1.22	14.25	1.66	20.50	0.67
2.00	0.61	8.25	1.44	14.50	1.66	20.75	0.67
2.25	0.72	8.50	1.44	14.75	1.66	21.00	0.67
2.50	0.72	8.75	1.55	15.00	1.66	21.25	0.67
2.75	0.72	9.00	1.55	15.25	1.66	21.50	0.67

3.00	0.72	9.25	1.77	15.50	1.66	21.75	0.67
3.25	0.72	9.50	1.77	15.75	1.66	22.00	0.67
3.50	0.72	9.75	2.00	16.00	1.66	22.25	0.67
3.75	0.72	10.00	2.00	16.25	1.00	22.50	0.67
4.00	0.72	10.25	2.55	16.50	1.00	22.75	0.67
4.25	0.89	10.50	2.55	16.75	1.00	23.00	0.67
4.50	0.89	10.75	3.44	17.00	1.00	23.25	0.67
4.75	0.89	11.00	3.44	17.25	1.00	23.50	0.67
5.00	0.89	11.25	5.32	17.50	1.00	23.75	0.67
5.25	0.89	11.50	5.32	17.75	1.00	24.00	0.67
5.50	0.89	11.75	16.41	18.00	1.00		
5.75	0.89	12.00	67.85	18.25	1.00		
6.00	0.89	12.25	7.98	18.50	1.00		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20         0.55
     Dep. Storage     (mm)=       1.00         1.50
     Average Slope     (%)=       1.00         2.00
     Length            (m)=     135.40        40.00
     Mannings n          =       0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	6.100	0.89	12.167	67.85	18.23	1.00
0.067	0.00	6.133	0.89	12.200	67.85	18.27	1.00
0.100	0.00	6.167	0.89	12.233	67.85	18.30	1.00
0.133	0.00	6.200	0.89	12.267	37.82	18.33	1.00
0.167	0.00	6.233	0.89	12.300	7.98	18.37	1.00
0.200	0.00	6.267	0.94	12.333	7.98	18.40	1.00
0.233	0.00	6.300	1.00	12.367	7.98	18.43	1.00
0.267	0.30	6.333	1.00	12.400	7.98	18.47	1.00
0.300	0.61	6.367	1.00	12.433	7.98	18.50	1.00
0.333	0.61	6.400	1.00	12.467	7.98	18.53	1.00
0.367	0.61	6.433	1.00	12.500	7.98	18.57	1.00
0.400	0.61	6.467	1.00	12.533	7.98	18.60	1.00
0.433	0.61	6.500	1.00	12.567	7.98	18.63	1.00
0.467	0.61	6.533	1.00	12.600	7.98	18.67	1.00
0.500	0.61	6.567	1.00	12.633	7.98	18.70	1.00
0.533	0.61	6.600	1.00	12.667	7.98	18.73	1.00
0.567	0.61	6.633	1.00	12.700	7.98	18.77	1.00
0.600	0.61	6.667	1.00	12.733	7.98	18.80	1.00
0.633	0.61	6.700	1.00	12.767	6.04	18.83	1.00
0.667	0.61	6.733	1.00	12.800	4.10	18.87	1.00
0.700	0.61	6.767	1.00	12.833	4.10	18.90	1.00
0.733	0.61	6.800	1.00	12.867	4.10	18.93	1.00
0.767	0.61	6.833	1.00	12.900	4.10	18.97	1.00
0.800	0.61	6.867	1.00	12.933	4.10	19.00	1.00
0.833	0.61	6.900	1.00	12.967	4.10	19.03	1.00
0.867	0.61	6.933	1.00	13.000	4.10	19.07	1.00
0.900	0.61	6.967	1.00	13.033	4.10	19.10	1.00
0.933	0.61	7.000	1.00	13.067	4.10	19.13	1.00
0.967	0.61	7.033	1.00	13.100	4.10	19.17	1.00
1.000	0.61	7.067	1.00	13.133	4.10	19.20	1.00
1.033	0.61	7.100	1.00	13.167	4.10	19.23	1.00
1.067	0.61	7.133	1.00	13.200	4.10	19.27	1.00
1.100	0.61	7.167	1.00	13.233	4.10	19.30	1.00
1.133	0.61	7.200	1.00	13.267	3.55	19.33	1.00
1.167	0.61	7.233	1.00	13.300	2.99	19.37	1.00
1.200	0.61	7.267	1.11	13.333	2.99	19.40	1.00
1.233	0.61	7.300	1.22	13.367	2.99	19.43	1.00
1.267	0.61	7.333	1.22	13.400	2.99	19.47	1.00
1.300	0.61	7.367	1.22	13.433	2.99	19.50	1.00
1.333	0.61	7.400	1.22	13.467	2.99	19.53	1.00
1.367	0.61	7.433	1.22	13.500	2.99	19.57	1.00
1.400	0.61	7.467	1.22	13.533	2.99	19.60	1.00
1.433	0.61	7.500	1.22	13.567	2.99	19.63	1.00
1.467	0.61	7.533	1.22	13.600	2.99	19.67	1.00
1.500	0.61	7.567	1.22	13.633	2.99	19.70	1.00
1.533	0.61	7.600	1.22	13.667	2.99	19.73	1.00
1.567	0.61	7.633	1.22	13.700	2.99	19.77	1.00
1.600	0.61	7.667	1.22	13.733	2.99	19.80	1.00
1.633	0.61	7.700	1.22	13.767	2.66	19.83	1.00
1.667	0.61	7.733	1.22	13.800	2.33	19.87	1.00
1.700	0.61	7.767	1.22	13.833	2.33	19.90	1.00
1.733	0.61	7.800	1.22	13.867	2.33	19.93	1.00
1.767	0.61	7.833	1.22	13.900	2.33	19.97	1.00
1.800	0.61	7.867	1.22	13.933	2.33	20.00	1.00
1.833	0.61	7.900	1.22	13.967	2.33	20.03	1.00
1.867	0.61	7.933	1.22	14.000	2.33	20.07	1.00
1.900	0.61	7.967	1.22	14.033	2.33	20.10	1.00
1.933	0.61	8.000	1.22	14.067	2.33	20.13	1.00
1.967	0.61	8.033	1.22	14.100	2.33	20.17	1.00
2.000	0.61	8.067	1.22	14.133	2.33	20.20	1.00
2.033	0.61	8.100	1.22	14.167	2.33	20.23	1.00
2.067	0.61	8.133	1.22	14.200	2.33	20.27	0.83
2.100	0.61	8.167	1.22	14.233	2.33	20.30	0.67
2.133	0.61	8.200	1.22	14.267	1.99	20.33	0.67
2.167	0.61	8.233	1.22	14.300	1.66	20.37	0.67
2.200	0.61	8.267	1.33	14.333	1.66	20.40	0.67
2.233	0.61	8.300	1.44	14.367	1.66	20.43	0.67
2.267	0.67	8.333	1.44	14.400	1.66	20.47	0.67
2.300	0.72	8.367	1.44	14.433	1.66	20.50	0.67
2.333	0.72	8.400	1.44	14.467	1.66	20.53	0.67
2.367	0.72	8.433	1.44	14.500	1.66	20.57	0.67
2.400	0.72	8.467	1.44	14.533	1.66	20.60	0.67
2.433	0.72	8.500	1.44	14.567	1.66	20.63	0.67
2.467	0.72	8.533	1.44	14.600	1.66	20.67	0.67
2.500	0.72	8.567	1.44	14.633	1.66	20.70	0.67
2.533	0.72	8.600	1.44	14.667	1.66	20.73	0.67
2.567	0.72	8.633	1.44	14.700	1.66	20.77	0.67
2.600	0.72	8.667	1.44	14.733	1.66	20.80	0.67
2.633	0.72	8.700	1.44	14.767	1.66	20.83	0.67
2.667	0.72	8.733	1.44	14.800	1.66	20.87	0.67
2.700	0.72	8.767	1.50	14.833	1.66	20.90	0.67
2.733	0.72	8.800	1.55	14.867	1.66	20.93	0.67
2.767	0.72	8.833	1.55	14.900	1.66	20.97	0.67
2.800	0.72	8.867	1.55	14.933	1.66	21.00	0.67
2.833	0.72	8.900	1.55	14.967	1.66	21.03	0.67
2.867	0.72	8.933	1.55	15.000	1.66	21.07	0.67
2.900	0.72	8.967	1.55	15.033	1.66	21.10	0.67
2.933	0.72	9.000	1.55	15.067	1.66	21.13	0.67
2.967	0.72	9.033	1.55	15.100	1.66	21.17	0.67
3.000	0.72	9.067	1.55	15.133	1.66	21.20	0.67
3.033	0.72	9.100	1.55	15.167	1.66	21.23	0.67
3.067	0.72	9.133	1.55	15.200	1.66	21.27	0.67
3.100	0.72	9.167	1.55	15.233	1.66	21.30	0.67
3.133	0.72	9.200	1.55	15.267	1.66	21.33	0.67
3.167	0.72	9.233	1.55	15.300	1.66	21.37	0.67
3.200	0.72	9.267	1.66	15.333	1.66	21.40	0.67
3.233	0.72	9.300	1.77	15.367	1.66	21.43	0.67
3.267	0.72	9.333	1.77	15.400	1.66	21.47	0.67
3.300	0.72	9.367	1.77	15.433	1.66	21.50	0.67
3.333	0.72	9.400	1.77	15.467	1.66	21.53	0.67
3.367	0.72	9.433	1.77	15.500	1.66	21.57	0.67
3.400	0.72	9.467	1.77	15.533	1.66	21.60	0.67
3.433	0.72	9.500	1.77	15.567	1.66	21.63	0.67
3.467	0.72	9.533	1.77	15.600	1.66	21.67	0.67
3.500	0.72	9.567	1.77	15.633	1.66	21.70	0.67
3.533	0.72	9.600	1.77	15.667	1.66	21.73	0.67
3.567	0.72	9.633	1.77	15.700	1.66	21.77	0.67
3.600	0.72	9.667	1.77	15.733	1.66	21.80	0.67
3.633	0.72	9.700	1.77	15.767	1.66	21.83	0.67
3.667	0.72	9.733	1.77	15.800	1.66	21.87	0.67
3.700	0.72	9.767	1.88	15.833	1.66	21.90	0.67
3.733	0.72	9.800	2.00	15.867	1.66	21.93	0.67
3.767	0.72	9.833	2.00	15.900	1.66	21.97	0.67
3.800	0.72	9.867	2.00	15.933	1.66	22.00	0.67
3.833	0.72	9.900	2.00	15.967	1.66	22.03	0.67
3.867	0.72	9.933	2.00	16.000	1.66	22.07	0.67
3.900	0.72	9.967	2.00	16.033	1.66	22.10	0.67
3.933	0.72	10.000	2.00	16.067	1.66	22.13	0.67
3.967	0.72	10.033	2.00	16.100	1.66	22.17	0.67
4.000	0.72	10.067	2.00	16.133	1.66	22.20	0.67
4.033	0.72	10.100	2.00	16.167	1.66	22.23	0.67
4.067	0.72	10.133	2.00	16.200	1.66	22.27	0.67
4.100	0.72	10.167	2.00	16.233	1.66	22.30	0.67
4.133	0.72	10.200	2.00	16.267	1.33	22.33	0.67
4.167	0.72	10.233	2.00	16.300	1.00	22.37	0.67
4.200	0.72	10.267	2.27	16.333	1.00	22.40	0.67
4.233	0.72	10.300	2.55	16.367	1.00	22.43	0.67
4.267	0.80	10.333	2.55	16.400	1.00	22.47	0.67
4.300	0.89	10.367	2.55	16.433	1.00	22.50	0.67
4.333	0.89	10.400	2.55	16.467	1.00	22.53	0.67
4.367	0.89	10.433	2.55	16.500	1.00	22.57	0.67
4.400	0.89	10.467	2.55	16.533	1.00	22.60	0.67
4.433	0.89	10.500	2.55	16.567	1.00	22.63	0.67
4.467	0.89	10.533	2.55	16.600	1.00	22.67	0.67

4.500	0.89	10.567	2.55	16.633	1.00	22.70	0.67
4.533	0.89	10.600	2.55	16.667	1.00	22.73	0.67
4.567	0.89	10.633	2.55	16.700	1.00	22.77	0.67
4.600	0.89	10.667	2.55	16.733	1.00	22.80	0.67
4.633	0.89	10.700	2.55	16.767	1.00	22.83	0.67
4.667	0.89	10.733	2.55	16.800	1.00	22.87	0.67
4.700	0.89	10.767	2.99	16.833	1.00	22.90	0.67
4.733	0.89	10.800	3.44	16.867	1.00	22.93	0.67
4.767	0.89	10.833	3.44	16.900	1.00	22.97	0.67
4.800	0.89	10.867	3.44	16.933	1.00	23.00	0.67
4.833	0.89	10.900	3.44	16.967	1.00	23.03	0.67
4.867	0.89	10.933	3.44	17.000	1.00	23.07	0.67
4.900	0.89	10.967	3.44	17.033	1.00	23.10	0.67
4.933	0.89	11.000	3.44	17.067	1.00	23.13	0.67
4.967	0.89	11.033	3.44	17.100	1.00	23.17	0.67
5.000	0.89	11.067	3.44	17.133	1.00	23.20	0.67
5.033	0.89	11.100	3.44	17.167	1.00	23.23	0.67
5.067	0.89	11.133	3.44	17.200	1.00	23.27	0.67
5.100	0.89	11.167	3.44	17.233	1.00	23.30	0.67
5.133	0.89	11.200	3.44	17.267	1.00	23.33	0.67
5.167	0.89	11.233	3.44	17.300	1.00	23.37	0.67
5.200	0.89	11.267	4.38	17.333	1.00	23.40	0.67
5.233	0.89	11.300	5.32	17.367	1.00	23.43	0.67
5.267	0.89	11.333	5.32	17.400	1.00	23.47	0.67
5.300	0.89	11.367	5.32	17.433	1.00	23.50	0.67
5.333	0.89	11.400	5.32	17.467	1.00	23.53	0.67
5.367	0.89	11.433	5.32	17.500	1.00	23.57	0.67
5.400	0.89	11.467	5.32	17.533	1.00	23.60	0.67
5.433	0.89	11.500	5.32	17.567	1.00	23.63	0.67
5.467	0.89	11.533	5.32	17.600	1.00	23.67	0.67
5.500	0.89	11.567	5.32	17.633	1.00	23.70	0.67
5.533	0.89	11.600	5.32	17.667	1.00	23.73	0.67
5.567	0.89	11.633	5.32	17.700	1.00	23.77	0.67
5.600	0.89	11.667	5.32	17.733	1.00	23.80	0.67
5.633	0.89	11.700	5.32	17.767	1.00	23.83	0.67
5.667	0.89	11.733	5.32	17.800	1.00	23.87	0.67
5.700	0.89	11.767	10.88	17.833	1.00	23.90	0.67
5.733	0.89	11.800	16.41	17.867	1.00	23.93	0.67
5.767	0.89	11.833	16.41	17.900	1.00	23.97	0.67
5.800	0.89	11.867	16.41	17.933	1.00	24.00	0.67
5.833	0.89	11.900	16.41	17.967	1.00	24.03	0.67
5.867	0.89	11.933	16.41	18.000	1.00	24.07	0.67
5.900	0.89	11.967	16.41	18.033	1.00	24.10	0.67
5.933	0.89	12.000	16.48	18.067	1.00	24.13	0.67
5.967	0.89	12.033	67.85	18.100	1.00	24.17	0.67
6.000	0.89	12.067	67.85	18.133	1.00	24.20	0.67
6.033	0.89	12.100	67.85	18.167	1.00	24.23	0.67
6.067	0.89	12.133	67.85	18.200	1.00	24.27	0.33

```
Max.Eff.Inten.(mm/hr)=      67.85        17.50
            over (min)       5.00        10.00
Storage Coeff.  (min)=       3.58 (ii)    8.31 (ii)
Unit Hyd. Tpeak (min)=       4.00        10.00
Unit Hyd. peak  (cms)=       0.30         0.13
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.41         0.02        0.423 (iii)
TIME TO PEAK    (hrs)=      12.23        12.30       12.23
RUNOFF VOLUME    (mm)=      54.43        12.62       46.07
TOTAL RAINFALL   (mm)=      55.43        55.43       55.43
RUNOFF COEFFICIENT   =       0.98         0.23        0.83


  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN*  =  59.0    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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*********************************************
** SIMULATION:Run 20 - 5yr 24hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\20a57e08
| Ptotal= 77.82 mm |    Comments: 5yr 24hr 15min SCS
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	6.25	1.40	12.50	11.21	18.75	1.40
0.25	0.86	6.50	1.40	12.75	5.76	19.00	1.40
0.50	0.86	6.75	1.40	13.00	5.76	19.25	1.40
0.75	0.86	7.00	1.40	13.25	4.20	19.50	1.40
1.00	0.86	7.25	1.71	13.50	4.20	19.75	1.40
1.25	0.86	7.50	1.71	13.75	3.27	20.00	1.40
1.50	0.86	7.75	1.71	14.00	3.27	20.25	0.93
1.75	0.86	8.00	1.71	14.25	2.33	20.50	0.93
2.00	0.86	8.25	2.02	14.50	2.33	20.75	0.93
2.25	1.01	8.50	2.02	14.75	2.33	21.00	0.93
2.50	1.01	8.75	2.18	15.00	2.33	21.25	0.93
2.75	1.01	9.00	2.18	15.25	2.33	21.50	0.93
3.00	1.01	9.25	2.49	15.50	2.33	21.75	0.93
3.25	1.01	9.50	2.49	15.75	2.33	22.00	0.93
3.50	1.01	9.75	2.80	16.00	2.33	22.25	0.93
3.75	1.01	10.00	2.80	16.25	1.40	22.50	0.93
4.00	1.01	10.25	3.58	16.50	1.40	22.75	0.93
4.25	1.25	10.50	3.58	16.75	1.40	23.00	0.93
4.50	1.25	10.75	4.82	17.00	1.40	23.25	0.93
4.75	1.25	11.00	4.82	17.25	1.40	23.50	0.93
5.00	1.25	11.25	7.47	17.50	1.40	23.75	0.93
5.25	1.25	11.50	7.47	17.75	1.40	24.00	0.93
5.50	1.25	11.75	23.03	18.00	1.40		
5.75	1.25	12.00	95.25	18.25	1.40		
6.00	1.25	12.25	11.21	18.50	1.40		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
0.033	0.00	6.100	1.25	12.167	95.25	18.23	1.40
0.067	0.00	6.133	1.25	12.200	95.25	18.27	1.40
0.100	0.00	6.167	1.25	12.233	95.25	18.30	1.40
0.133	0.00	6.200	1.25	12.267	53.10	18.33	1.40
0.167	0.00	6.233	1.25	12.300	11.21	18.37	1.40
0.200	0.00	6.267	1.32	12.333	11.21	18.40	1.40
0.233	0.00	6.300	1.40	12.367	11.21	18.43	1.40
0.267	0.43	6.333	1.40	12.400	11.21	18.47	1.40
0.300	0.86	6.367	1.40	12.433	11.21	18.50	1.40
0.333	0.86	6.400	1.40	12.467	11.21	18.53	1.40
0.367	0.86	6.433	1.40	12.500	11.21	18.57	1.40
0.400	0.86	6.467	1.40	12.533	11.21	18.60	1.40
0.433	0.86	6.500	1.40	12.567	11.21	18.63	1.40
0.467	0.86	6.533	1.40	12.600	11.21	18.67	1.40
0.500	0.86	6.567	1.40	12.633	11.21	18.70	1.40
0.533	0.86	6.600	1.40	12.667	11.21	18.73	1.40
0.567	0.86	6.633	1.40	12.700	11.21	18.77	1.40
0.600	0.86	6.667	1.40	12.733	11.21	18.80	1.40
0.633	0.86	6.700	1.40	12.767	8.47	18.83	1.40
0.667	0.86	6.733	1.40	12.800	5.76	18.87	1.40
0.700	0.86	6.767	1.40	12.833	5.76	18.90	1.40
0.733	0.86	6.800	1.40	12.867	5.76	18.93	1.40
0.767	0.86	6.833	1.40	12.900	5.76	18.97	1.40
0.800	0.86	6.867	1.40	12.933	5.76	19.00	1.40
0.833	0.86	6.900	1.40	12.967	5.76	19.03	1.40
0.867	0.86	6.933	1.40	13.000	5.76	19.07	1.40
0.900	0.86	6.967	1.40	13.033	5.76	19.10	1.40
0.933	0.86	7.000	1.40	13.067	5.76	19.13	1.40
0.967	0.86	7.033	1.40	13.100	5.76	19.17	1.40
1.000	0.86	7.067	1.40	13.133	5.76	19.20	1.40
1.033	0.86	7.100	1.40	13.167	5.76	19.23	1.40
1.067	0.86	7.133	1.40	13.200	5.76	19.27	1.40
1.100	0.86	7.167	1.40	13.233	5.76	19.30	1.40
1.133	0.86	7.200	1.40	13.267	4.98	19.33	1.40
1.167	0.86	7.233	1.40	13.300	4.20	19.37	1.40
1.200	0.86	7.267	1.56	13.333	4.20	19.40	1.40
1.233	0.86	7.300	1.71	13.367	4.20	19.43	1.40
1.267	0.86	7.333	1.71	13.400	4.20	19.47	1.40
1.300	0.86	7.367	1.71	13.433	4.20	19.50	1.40
1.333	0.86	7.400	1.71	13.467	4.20	19.53	1.40
1.367	0.86	7.433	1.71	13.500	4.20	19.57	1.40

1.400	0.86	7.467	1.71	13.533	4.20	19.60	1.40
1.433	0.86	7.500	1.71	13.567	4.20	19.63	1.40
1.467	0.86	7.533	1.71	13.600	4.20	19.67	1.40
1.500	0.86	7.567	1.71	13.633	4.20	19.70	1.40
1.533	0.86	7.600	1.71	13.667	4.20	19.73	1.40
1.567	0.86	7.633	1.71	13.700	4.20	19.77	1.40
1.600	0.86	7.667	1.71	13.733	4.20	19.80	1.40
1.633	0.86	7.700	1.71	13.767	3.73	19.83	1.40
1.667	0.86	7.733	1.71	13.800	3.27	19.87	1.40
1.700	0.86	7.767	1.71	13.833	3.27	19.90	1.40
1.733	0.86	7.800	1.71	13.867	3.27	19.93	1.40
1.767	0.86	7.833	1.71	13.900	3.27	19.97	1.40
1.800	0.86	7.867	1.71	13.933	3.27	20.00	1.40
1.833	0.86	7.900	1.71	13.967	3.27	20.03	1.40
1.867	0.86	7.933	1.71	14.000	3.27	20.07	1.40
1.900	0.86	7.967	1.71	14.033	3.27	20.10	1.40
1.933	0.86	8.000	1.71	14.067	3.27	20.13	1.40
1.967	0.86	8.033	1.71	14.100	3.27	20.17	1.40
2.000	0.86	8.067	1.71	14.133	3.27	20.20	1.40
2.033	0.86	8.100	1.71	14.167	3.27	20.23	1.40
2.067	0.86	8.133	1.71	14.200	3.27	20.27	1.17
2.100	0.86	8.167	1.71	14.233	3.27	20.30	0.93
2.133	0.86	8.200	1.71	14.267	2.80	20.33	0.93
2.167	0.86	8.233	1.71	14.300	2.33	20.37	0.93
2.200	0.86	8.267	1.87	14.333	2.33	20.40	0.93
2.233	0.86	8.300	2.02	14.367	2.33	20.43	0.93
2.267	0.93	8.333	2.02	14.400	2.33	20.47	0.93
2.300	1.01	8.367	2.02	14.433	2.33	20.50	0.93
2.333	1.01	8.400	2.02	14.467	2.33	20.53	0.93
2.367	1.01	8.433	2.02	14.500	2.33	20.57	0.93
2.400	1.01	8.467	2.02	14.533	2.33	20.60	0.93
2.433	1.01	8.500	2.02	14.567	2.33	20.63	0.93
2.467	1.01	8.533	2.02	14.600	2.33	20.67	0.93
2.500	1.01	8.567	2.02	14.633	2.33	20.70	0.93
2.533	1.01	8.600	2.02	14.667	2.33	20.73	0.93
2.567	1.01	8.633	2.02	14.700	2.33	20.77	0.93
2.600	1.01	8.667	2.02	14.733	2.33	20.80	0.93
2.633	1.01	8.700	2.02	14.767	2.33	20.83	0.93
2.667	1.01	8.733	2.02	14.800	2.33	20.87	0.93
2.700	1.01	8.767	2.10	14.833	2.33	20.90	0.93
2.733	1.01	8.800	2.18	14.867	2.33	20.93	0.93
2.767	1.01	8.833	2.18	14.900	2.33	20.97	0.93
2.800	1.01	8.867	2.18	14.933	2.33	21.00	0.93
2.833	1.01	8.900	2.18	14.967	2.33	21.03	0.93
2.867	1.01	8.933	2.18	15.000	2.33	21.07	0.93
2.900	1.01	8.967	2.18	15.033	2.33	21.10	0.93
2.933	1.01	9.000	2.18	15.067	2.33	21.13	0.93
2.967	1.01	9.033	2.18	15.100	2.33	21.17	0.93
3.000	1.01	9.067	2.18	15.133	2.33	21.20	0.93
3.033	1.01	9.100	2.18	15.167	2.33	21.23	0.93
3.067	1.01	9.133	2.18	15.200	2.33	21.27	0.93
3.100	1.01	9.167	2.18	15.233	2.33	21.30	0.93
3.133	1.01	9.200	2.18	15.267	2.33	21.33	0.93
3.167	1.01	9.233	2.18	15.300	2.33	21.37	0.93
3.200	1.01	9.267	2.33	15.333	2.33	21.40	0.93
3.233	1.01	9.300	2.49	15.367	2.33	21.43	0.93
3.267	1.01	9.333	2.49	15.400	2.33	21.47	0.93
3.300	1.01	9.367	2.49	15.433	2.33	21.50	0.93
3.333	1.01	9.400	2.49	15.467	2.33	21.53	0.93
3.367	1.01	9.433	2.49	15.500	2.33	21.57	0.93
3.400	1.01	9.467	2.49	15.533	2.33	21.60	0.93
3.433	1.01	9.500	2.49	15.567	2.33	21.63	0.93
3.467	1.01	9.533	2.49	15.600	2.33	21.67	0.93
3.500	1.01	9.567	2.49	15.633	2.33	21.70	0.93
3.533	1.01	9.600	2.49	15.667	2.33	21.73	0.93
3.567	1.01	9.633	2.49	15.700	2.33	21.77	0.93
3.600	1.01	9.667	2.49	15.733	2.33	21.80	0.93
3.633	1.01	9.700	2.49	15.767	2.33	21.83	0.93
3.667	1.01	9.733	2.49	15.800	2.33	21.87	0.93
3.700	1.01	9.767	2.65	15.833	2.33	21.90	0.93
3.733	1.01	9.800	2.80	15.867	2.33	21.93	0.93
3.767	1.01	9.833	2.80	15.900	2.33	21.97	0.93
3.800	1.01	9.867	2.80	15.933	2.33	22.00	0.93
3.833	1.01	9.900	2.80	15.967	2.33	22.03	0.93
3.867	1.01	9.933	2.80	16.000	2.33	22.07	0.93
3.900	1.01	9.967	2.80	16.033	2.33	22.10	0.93
3.933	1.01	10.000	2.80	16.067	2.33	22.13	0.93
3.967	1.01	10.033	2.80	16.100	2.33	22.17	0.93
4.000	1.01	10.067	2.80	16.133	2.33	22.20	0.93
4.033	1.01	10.100	2.80	16.167	2.33	22.23	0.93
4.067	1.01	10.133	2.80	16.200	2.33	22.27	0.93
4.100	1.01	10.167	2.80	16.233	2.33	22.30	0.93
4.133	1.01	10.200	2.80	16.267	1.86	22.33	0.93
4.167	1.01	10.233	2.80	16.300	1.40	22.37	0.93
4.200	1.01	10.267	3.19	16.333	1.40	22.40	0.93
4.233	1.01	10.300	3.58	16.367	1.40	22.43	0.93
4.267	1.13	10.333	3.58	16.400	1.40	22.47	0.93
4.300	1.25	10.367	3.58	16.433	1.40	22.50	0.93
4.333	1.25	10.400	3.58	16.467	1.40	22.53	0.93
4.367	1.25	10.433	3.58	16.500	1.40	22.57	0.93
4.400	1.25	10.467	3.58	16.533	1.40	22.60	0.93
4.433	1.25	10.500	3.58	16.567	1.40	22.63	0.93
4.467	1.25	10.533	3.58	16.600	1.40	22.67	0.93
4.500	1.25	10.567	3.58	16.633	1.40	22.70	0.93
4.533	1.25	10.600	3.58	16.667	1.40	22.73	0.93
4.567	1.25	10.633	3.58	16.700	1.40	22.77	0.93
4.600	1.25	10.667	3.58	16.733	1.40	22.80	0.93
4.633	1.25	10.700	3.58	16.767	1.40	22.83	0.93
4.667	1.25	10.733	3.58	16.800	1.40	22.87	0.93
4.700	1.25	10.767	4.20	16.833	1.40	22.90	0.93
4.733	1.25	10.800	4.82	16.867	1.40	22.93	0.93
4.767	1.25	10.833	4.82	16.900	1.40	22.97	0.93
4.800	1.25	10.867	4.82	16.933	1.40	23.00	0.93
4.833	1.25	10.900	4.82	16.967	1.40	23.03	0.93
4.867	1.25	10.933	4.82	17.000	1.40	23.07	0.93
4.900	1.25	10.967	4.82	17.033	1.40	23.10	0.93
4.933	1.25	11.000	4.82	17.067	1.40	23.13	0.93
4.967	1.25	11.033	4.82	17.100	1.40	23.17	0.93
5.000	1.25	11.067	4.82	17.133	1.40	23.20	0.93
5.033	1.25	11.100	4.82	17.167	1.40	23.23	0.93
5.067	1.25	11.133	4.82	17.200	1.40	23.27	0.93
5.100	1.25	11.167	4.82	17.233	1.40	23.30	0.93
5.133	1.25	11.200	4.82	17.267	1.40	23.33	0.93
5.167	1.25	11.233	4.82	17.300	1.40	23.37	0.93
5.200	1.25	11.267	6.15	17.333	1.40	23.40	0.93
5.233	1.25	11.300	7.47	17.367	1.40	23.43	0.93
5.267	1.25	11.333	7.47	17.400	1.40	23.47	0.93
5.300	1.25	11.367	7.47	17.433	1.40	23.50	0.93
5.333	1.25	11.400	7.47	17.467	1.40	23.53	0.93
5.367	1.25	11.433	7.47	17.500	1.40	23.57	0.93
5.400	1.25	11.467	7.47	17.533	1.40	23.60	0.93
5.433	1.25	11.500	7.47	17.567	1.40	23.63	0.93
5.467	1.25	11.533	7.47	17.600	1.40	23.67	0.93
5.500	1.25	11.567	7.47	17.633	1.40	23.70	0.93
5.533	1.25	11.600	7.47	17.667	1.40	23.73	0.93
5.567	1.25	11.633	7.47	17.700	1.40	23.77	0.93
5.600	1.25	11.667	7.47	17.733	1.40	23.80	0.93
5.633	1.25	11.700	7.47	17.767	1.40	23.83	0.93
5.667	1.25	11.733	7.47	17.800	1.40	23.87	0.93
5.700	1.25	11.767	15.27	17.833	1.40	23.90	0.93
5.733	1.25	11.800	23.03	17.867	1.40	23.93	0.93
5.767	1.25	11.833	23.03	17.900	1.40	23.97	0.93
5.800	1.25	11.867	23.03	17.933	1.40	24.00	0.93
5.833	1.25	11.900	23.03	17.967	1.40	24.03	0.93
5.867	1.25	11.933	23.03	18.000	1.40	24.07	0.93
5.900	1.25	11.967	23.03	18.033	1.40	24.10	0.93
5.933	1.25	12.000	23.14	18.067	1.40	24.13	0.93
5.967	1.25	12.033	95.25	18.100	1.40	24.17	0.93
6.000	1.25	12.067	95.25	18.133	1.40	24.20	0.93
6.033	1.25	12.100	95.25	18.167	1.40	24.23	0.93
6.067	1.25	12.133	95.25	18.200	1.40	24.27	0.47

```
Max.Eff.Inten.(mm/hr)=      95.25        32.19
           over (min)        5.00         8.00
Storage Coeff.   (min)=      3.12 (ii)    7.26 (ii)
Unit Hyd. Tpeak (min)=       4.00         8.00
Unit Hyd. peak  (cms)=       0.32         0.15
                                                        *TOTALS*
PEAK FLOW       (cms)=       0.57         0.04          0.611 (iii)
TIME TO PEAK    (hrs)=      12.23        12.30          12.23
RUNOFF VOLUME    (mm)=      76.82        23.04          66.06
TOTAL RAINFALL   (mm)=      77.82        77.82          77.82
RUNOFF COEFFICIENT   =       0.99         0.30           0.85


  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  59.0    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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*********************************************
** SIMULATION:Run 21 - 10yr 24hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
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|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\6445b1f5
| Ptotal= 92.93 mm |    Comments: 10yr 24hr 15min SCS
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TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	6.25	1.67	12.50	13.38	18.75	1.67
0.25	1.02	6.50	1.67	12.75	6.88	19.00	1.67
0.50	1.02	6.75	1.67	13.00	6.88	19.25	1.67
0.75	1.02	7.00	1.67	13.25	5.02	19.50	1.67
1.00	1.02	7.25	2.04	13.50	5.02	19.75	1.67
1.25	1.02	7.50	2.04	13.75	3.90	20.00	1.67
1.50	1.02	7.75	2.04	14.00	3.90	20.25	1.12
1.75	1.02	8.00	2.04	14.25	2.79	20.50	1.12
2.00	1.02	8.25	2.42	14.50	2.79	20.75	1.12
2.25	1.21	8.50	2.42	14.75	2.79	21.00	1.12
2.50	1.21	8.75	2.60	15.00	2.79	21.25	1.12
2.75	1.21	9.00	2.60	15.25	2.79	21.50	1.12
3.00	1.21	9.25	2.97	15.50	2.79	21.75	1.12
3.25	1.21	9.50	2.97	15.75	2.79	22.00	1.12
3.50	1.21	9.75	3.35	16.00	2.79	22.25	1.12
3.75	1.21	10.00	3.35	16.25	1.67	22.50	1.12
4.00	1.21	10.25	4.27	16.50	1.67	22.75	1.12
4.25	1.49	10.50	4.27	16.75	1.67	23.00	1.12
4.50	1.49	10.75	5.76	17.00	1.67	23.25	1.12
4.75	1.49	11.00	5.76	17.25	1.67	23.50	1.12
5.00	1.49	11.25	8.92	17.50	1.67	23.75	1.12
5.25	1.49	11.50	8.92	17.75	1.67	24.00	1.12
5.50	1.49	11.75	27.51	18.00	1.67		
5.75	1.49	12.00	113.75	18.25	1.67		
6.00	1.49	12.25	13.38	18.50	1.67		

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.20	0.55
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.40	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 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
0.033	0.00	6.100	1.49	12.167	113.75	18.23	1.67
0.067	0.00	6.133	1.49	12.200	113.75	18.27	1.67
0.100	0.00	6.167	1.49	12.233	113.75	18.30	1.67
0.133	0.00	6.200	1.49	12.267	63.41	18.33	1.67
0.167	0.00	6.233	1.49	12.300	13.38	18.37	1.67
0.200	0.00	6.267	1.58	12.333	13.38	18.40	1.67
0.233	0.00	6.300	1.67	12.367	13.38	18.43	1.67
0.267	0.51	6.333	1.67	12.400	13.38	18.47	1.67
0.300	1.02	6.367	1.67	12.433	13.38	18.50	1.67
0.333	1.02	6.400	1.67	12.467	13.38	18.53	1.67
0.367	1.02	6.433	1.67	12.500	13.38	18.57	1.67
0.400	1.02	6.467	1.67	12.533	13.38	18.60	1.67
0.433	1.02	6.500	1.67	12.567	13.38	18.63	1.67
0.467	1.02	6.533	1.67	12.600	13.38	18.67	1.67
0.500	1.02	6.567	1.67	12.633	13.38	18.70	1.67
0.533	1.02	6.600	1.67	12.667	13.38	18.73	1.67
0.567	1.02	6.633	1.67	12.700	13.38	18.77	1.67
0.600	1.02	6.667	1.67	12.733	13.38	18.80	1.67
0.633	1.02	6.700	1.67	12.767	10.12	18.83	1.67
0.667	1.02	6.733	1.67	12.800	6.88	18.87	1.67
0.700	1.02	6.767	1.67	12.833	6.88	18.90	1.67
0.733	1.02	6.800	1.67	12.867	6.88	18.93	1.67
0.767	1.02	6.833	1.67	12.900	6.88	18.97	1.67
0.800	1.02	6.867	1.67	12.933	6.88	19.00	1.67
0.833	1.02	6.900	1.67	12.967	6.88	19.03	1.67
0.867	1.02	6.933	1.67	13.000	6.88	19.07	1.67
0.900	1.02	6.967	1.67	13.033	6.88	19.10	1.67
0.933	1.02	7.000	1.67	13.067	6.88	19.13	1.67
0.967	1.02	7.033	1.67	13.100	6.88	19.17	1.67
1.000	1.02	7.067	1.67	13.133	6.88	19.20	1.67
1.033	1.02	7.100	1.67	13.167	6.88	19.23	1.67
1.067	1.02	7.133	1.67	13.200	6.88	19.27	1.67
1.100	1.02	7.167	1.67	13.233	6.88	19.30	1.67
1.133	1.02	7.200	1.67	13.267	5.94	19.33	1.67
1.167	1.02	7.233	1.67	13.300	5.02	19.37	1.67
1.200	1.02	7.267	1.86	13.333	5.02	19.40	1.67
1.233	1.02	7.300	2.04	13.367	5.02	19.43	1.67
1.267	1.02	7.333	2.04	13.400	5.02	19.47	1.67
1.300	1.02	7.367	2.04	13.433	5.02	19.50	1.67
1.333	1.02	7.400	2.04	13.467	5.02	19.53	1.67
1.367	1.02	7.433	2.04	13.500	5.02	19.57	1.67
1.400	1.02	7.467	2.04	13.533	5.02	19.60	1.67
1.433	1.02	7.500	2.04	13.567	5.02	19.63	1.67
1.467	1.02	7.533	2.04	13.600	5.02	19.67	1.67
1.500	1.02	7.567	2.04	13.633	5.02	19.70	1.67
1.533	1.02	7.600	2.04	13.667	5.02	19.73	1.67
1.567	1.02	7.633	2.04	13.700	5.02	19.77	1.67
1.600	1.02	7.667	2.04	13.733	5.02	19.80	1.67
1.633	1.02	7.700	2.04	13.767	4.46	19.83	1.67
1.667	1.02	7.733	2.04	13.800	3.90	19.87	1.67
1.700	1.02	7.767	2.04	13.833	3.90	19.90	1.67
1.733	1.02	7.800	2.04	13.867	3.90	19.93	1.67
1.767	1.02	7.833	2.04	13.900	3.90	19.97	1.67
1.800	1.02	7.867	2.04	13.933	3.90	20.00	1.67
1.833	1.02	7.900	2.04	13.967	3.90	20.03	1.67
1.867	1.02	7.933	2.04	14.000	3.90	20.07	1.67
1.900	1.02	7.967	2.04	14.033	3.90	20.10	1.67
1.933	1.02	8.000	2.04	14.067	3.90	20.13	1.67
1.967	1.02	8.033	2.04	14.100	3.90	20.17	1.67
2.000	1.02	8.067	2.04	14.133	3.90	20.20	1.67
2.033	1.02	8.100	2.04	14.167	3.90	20.23	1.67
2.067	1.02	8.133	2.04	14.200	3.90	20.27	1.39
2.100	1.02	8.167	2.04	14.233	3.90	20.30	1.12
2.133	1.02	8.200	2.04	14.267	3.34	20.33	1.12
2.167	1.02	8.233	2.04	14.300	2.79	20.37	1.12
2.200	1.02	8.267	2.23	14.333	2.79	20.40	1.12
2.233	1.02	8.300	2.42	14.367	2.79	20.43	1.12
2.267	1.12	8.333	2.42	14.400	2.79	20.47	1.12
2.300	1.21	8.367	2.42	14.433	2.79	20.50	1.12
2.333	1.21	8.400	2.42	14.467	2.79	20.53	1.12
2.367	1.21	8.433	2.42	14.500	2.79	20.57	1.12
2.400	1.21	8.467	2.42	14.533	2.79	20.60	1.12
2.433	1.21	8.500	2.42	14.567	2.79	20.63	1.12
2.467	1.21	8.533	2.42	14.600	2.79	20.67	1.12
2.500	1.21	8.567	2.42	14.633	2.79	20.70	1.12
2.533	1.21	8.600	2.42	14.667	2.79	20.73	1.12
2.567	1.21	8.633	2.42	14.700	2.79	20.77	1.12
2.600	1.21	8.667	2.42	14.733	2.79	20.80	1.12
2.633	1.21	8.700	2.42	14.767	2.79	20.83	1.12
2.667	1.21	8.733	2.42	14.800	2.79	20.87	1.12
2.700	1.21	8.767	2.51	14.833	2.79	20.90	1.12
2.733	1.21	8.800	2.60	14.867	2.79	20.93	1.12
2.767	1.21	8.833	2.60	14.900	2.79	20.97	1.12
2.800	1.21	8.867	2.60	14.933	2.79	21.00	1.12
2.833	1.21	8.900	2.60	14.967	2.79	21.03	1.12
2.867	1.21	8.933	2.60	15.000	2.79	21.07	1.12
2.900	1.21	8.967	2.60	15.033	2.79	21.10	1.12
2.933	1.21	9.000	2.60	15.067	2.79	21.13	1.12
2.967	1.21	9.033	2.60	15.100	2.79	21.17	1.12
3.000	1.21	9.067	2.60	15.133	2.79	21.20	1.12
3.033	1.21	9.100	2.60	15.167	2.79	21.23	1.12
3.067	1.21	9.133	2.60	15.200	2.79	21.27	1.12
3.100	1.21	9.167	2.60	15.233	2.79	21.30	1.12
3.133	1.21	9.200	2.60	15.267	2.79	21.33	1.12
3.167	1.21	9.233	2.60	15.300	2.79	21.37	1.12
3.200	1.21	9.267	2.79	15.333	2.79	21.40	1.12
3.233	1.21	9.300	2.97	15.367	2.79	21.43	1.12
3.267	1.21	9.333	2.97	15.400	2.79	21.47	1.12
3.300	1.21	9.367	2.97	15.433	2.79	21.50	1.12
3.333	1.21	9.400	2.97	15.467	2.79	21.53	1.12
3.367	1.21	9.433	2.97	15.500	2.79	21.57	1.12
3.400	1.21	9.467	2.97	15.533	2.79	21.60	1.12
3.433	1.21	9.500	2.97	15.567	2.79	21.63	1.12
3.467	1.21	9.533	2.97	15.600	2.79	21.67	1.12
3.500	1.21	9.567	2.97	15.633	2.79	21.70	1.12
3.533	1.21	9.600	2.97	15.667	2.79	21.73	1.12
3.567	1.21	9.633	2.97	15.700	2.79	21.77	1.12
3.600	1.21	9.667	2.97	15.733	2.79	21.80	1.12
3.633	1.21	9.700	2.97	15.767	2.79	21.83	1.12
3.667	1.21	9.733	2.97	15.800	2.79	21.87	1.12
3.700	1.21	9.767	3.16	15.833	2.79	21.90	1.12
3.733	1.21	9.800	3.35	15.867	2.79	21.93	1.12
3.767	1.21	9.833	3.35	15.900	2.79	21.97	1.12
3.800	1.21	9.867	3.35	15.933	2.79	22.00	1.12
3.833	1.21	9.900	3.35	15.967	2.79	22.03	1.12
3.867	1.21	9.933	3.35	16.000	2.79	22.07	1.12

3.900	1.21	9.967	3.35	16.033	2.79	22.10	1.12
3.933	1.21	10.000	3.35	16.067	2.79	22.13	1.12
3.967	1.21	10.033	3.35	16.100	2.79	22.17	1.12
4.000	1.21	10.067	3.35	16.133	2.79	22.20	1.12
4.033	1.21	10.100	3.35	16.167	2.79	22.23	1.12
4.067	1.21	10.133	3.35	16.200	2.79	22.27	1.12
4.100	1.21	10.167	3.35	16.233	2.79	22.30	1.12
4.133	1.21	10.200	3.35	16.267	2.23	22.33	1.12
4.167	1.21	10.233	3.35	16.300	1.67	22.37	1.12
4.200	1.21	10.267	3.81	16.333	1.67	22.40	1.12
4.233	1.21	10.300	4.27	16.367	1.67	22.43	1.12
4.267	1.35	10.333	4.27	16.400	1.67	22.47	1.12
4.300	1.49	10.367	4.27	16.433	1.67	22.50	1.12
4.333	1.49	10.400	4.27	16.467	1.67	22.53	1.12
4.367	1.49	10.433	4.27	16.500	1.67	22.57	1.12
4.400	1.49	10.467	4.27	16.533	1.67	22.60	1.12
4.433	1.49	10.500	4.27	16.567	1.67	22.63	1.12
4.467	1.49	10.533	4.27	16.600	1.67	22.67	1.12
4.500	1.49	10.567	4.27	16.633	1.67	22.70	1.12
4.533	1.49	10.600	4.27	16.667	1.67	22.73	1.12
4.567	1.49	10.633	4.27	16.700	1.67	22.77	1.12
4.600	1.49	10.667	4.27	16.733	1.67	22.80	1.12
4.633	1.49	10.700	4.27	16.767	1.67	22.83	1.12
4.667	1.49	10.733	4.27	16.800	1.67	22.87	1.12
4.700	1.49	10.767	5.02	16.833	1.67	22.90	1.12
4.733	1.49	10.800	5.76	16.867	1.67	22.93	1.12
4.767	1.49	10.833	5.76	16.900	1.67	22.97	1.12
4.800	1.49	10.867	5.76	16.933	1.67	23.00	1.12
4.833	1.49	10.900	5.76	16.967	1.67	23.03	1.12
4.867	1.49	10.933	5.76	17.000	1.67	23.07	1.12
4.900	1.49	10.967	5.76	17.033	1.67	23.10	1.12
4.933	1.49	11.000	5.76	17.067	1.67	23.13	1.12
4.967	1.49	11.033	5.76	17.100	1.67	23.17	1.12
5.000	1.49	11.067	5.76	17.133	1.67	23.20	1.12
5.033	1.49	11.100	5.76	17.167	1.67	23.23	1.12
5.067	1.49	11.133	5.76	17.200	1.67	23.27	1.12
5.100	1.49	11.167	5.76	17.233	1.67	23.30	1.12
5.133	1.49	11.200	5.76	17.267	1.67	23.33	1.12
5.167	1.49	11.233	5.76	17.300	1.67	23.37	1.12
5.200	1.49	11.267	7.35	17.333	1.67	23.40	1.12
5.233	1.49	11.300	8.92	17.367	1.67	23.43	1.12
5.267	1.49	11.333	8.92	17.400	1.67	23.47	1.12
5.300	1.49	11.367	8.92	17.433	1.67	23.50	1.12
5.333	1.49	11.400	8.92	17.467	1.67	23.53	1.12
5.367	1.49	11.433	8.92	17.500	1.67	23.57	1.12
5.400	1.49	11.467	8.92	17.533	1.67	23.60	1.12
5.433	1.49	11.500	8.92	17.567	1.67	23.63	1.12
5.467	1.49	11.533	8.92	17.600	1.67	23.67	1.12
5.500	1.49	11.567	8.92	17.633	1.67	23.70	1.12
5.533	1.49	11.600	8.92	17.667	1.67	23.73	1.12
5.567	1.49	11.633	8.92	17.700	1.67	23.77	1.12
5.600	1.49	11.667	8.92	17.733	1.67	23.80	1.12
5.633	1.49	11.700	8.92	17.767	1.67	23.83	1.12
5.667	1.49	11.733	8.92	17.800	1.67	23.87	1.12
5.700	1.49	11.767	18.24	17.833	1.67	23.90	1.12
5.733	1.49	11.800	27.51	17.867	1.67	23.93	1.12
5.767	1.49	11.833	27.51	17.900	1.67	23.97	1.12
5.800	1.49	11.867	27.51	17.933	1.67	24.00	1.12
5.833	1.49	11.900	27.51	17.967	1.67	24.03	1.12
5.867	1.49	11.933	27.51	18.000	1.67	24.07	1.12
5.900	1.49	11.967	27.51	18.033	1.67	24.10	1.12
5.933	1.49	12.000	27.63	18.067	1.67	24.13	1.12
5.967	1.49	12.033	113.75	18.100	1.67	24.17	1.12
6.000	1.49	12.067	113.75	18.133	1.67	24.20	1.12
6.033	1.49	12.100	113.75	18.167	1.67	24.23	1.12
6.067	1.49	12.133	113.75	18.200	1.67	24.27	0.56

Max.Eff.Inten.(mm/hr)=	113.75	43.78	
over (min)	5.00	8.00	
Storage Coeff. (min)=	2.91 (ii)	6.76 (ii)	
Unit Hyd. Tpeak (min)=	4.00	8.00	
Unit Hyd. peak (cms)=	0.34	0.16	
			TOTALS
PEAK FLOW (cms)=	0.69	0.05	0.739 (iii)
TIME TO PEAK (hrs)=	12.23	12.27	12.23
RUNOFF VOLUME (mm)=	91.93	31.20	79.78
TOTAL RAINFALL (mm)=	92.93	92.93	92.93
RUNOFF COEFFICIENT =	0.99	0.34	0.86

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 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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**********************************************
** SIMULATION:Run 22 - 25yr 24hr 15min SCS **
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READ STORM	Filename: C:\Users\NForis\AppData\Local\Temp\f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\2958c64a
Ptotal=111.57 mm	Comments: 25yr 24hr 15min SCS

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	6.25	2.01	12.50	16.07	18.75	2.01
0.25	1.23	6.50	2.01	12.75	8.26	19.00	2.01
0.50	1.23	6.75	2.01	13.00	8.26	19.25	2.01
0.75	1.23	7.00	2.01	13.25	6.02	19.50	2.01
1.00	1.23	7.25	2.45	13.50	6.02	19.75	2.01
1.25	1.23	7.50	2.45	13.75	4.69	20.00	2.01
1.50	1.23	7.75	2.45	14.00	4.69	20.25	1.34
1.75	1.23	8.00	2.45	14.25	3.35	20.50	1.34
2.00	1.23	8.25	2.90	14.50	3.35	20.75	1.34
2.25	1.45	8.50	2.90	14.75	3.35	21.00	1.34
2.50	1.45	8.75	3.12	15.00	3.35	21.25	1.34
2.75	1.45	9.00	3.12	15.25	3.35	21.50	1.34
3.00	1.45	9.25	3.57	15.50	3.35	21.75	1.34
3.25	1.45	9.50	3.57	15.75	3.35	22.00	1.34
3.50	1.45	9.75	4.02	16.00	3.35	22.25	1.34
3.75	1.45	10.00	4.02	16.25	2.01	22.50	1.34
4.00	1.45	10.25	5.13	16.50	2.01	22.75	1.34
4.25	1.79	10.50	5.13	16.75	2.01	23.00	1.34
4.50	1.79	10.75	6.92	17.00	2.01	23.25	1.34
4.75	1.79	11.00	6.92	17.25	2.01	23.50	1.34
5.00	1.79	11.25	10.71	17.50	2.01	23.75	1.34
5.25	1.79	11.50	10.71	17.75	2.01	24.00	1.34
5.50	1.79	11.75	33.02	18.00	2.01		
5.75	1.79	12.00	136.56	18.25	2.01		
6.00	1.79	12.25	16.07	18.50	2.01		

CALIB STANDHYD (0100) ID= 1 DT= 2.0 min	Area (ha)= 2.75 Total Imp(%)= 80.00 Dir. Conn.(%)= 80.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.20	0.55
Dep. Storage	(mm)=	1.00	1.50
Average Slope	(%)=	1.00	2.00
Length	(m)=	135.40	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 2.0 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
0.033	0.00	6.100	1.79	12.167	136.56	18.23	2.01
0.067	0.00	6.133	1.79	12.200	136.56	18.27	2.01
0.100	0.00	6.167	1.79	12.233	136.56	18.30	2.01
0.133	0.00	6.200	1.79	12.267	76.13	18.33	2.01
0.167	0.00	6.233	1.79	12.300	16.07	18.37	2.01
0.200	0.00	6.267	1.90	12.333	16.07	18.40	2.01
0.233	0.00	6.300	2.01	12.367	16.07	18.43	2.01
0.267	0.61	6.333	2.01	12.400	16.07	18.47	2.01
0.300	1.23	6.367	2.01	12.433	16.07	18.50	2.01
0.333	1.23	6.400	2.01	12.467	16.07	18.53	2.01
0.367	1.23	6.433	2.01	12.500	16.07	18.57	2.01
0.400	1.23	6.467	2.01	12.533	16.07	18.60	2.01
0.433	1.23	6.500	2.01	12.567	16.07	18.63	2.01
0.467	1.23	6.533	2.01	12.600	16.07	18.67	2.01
0.500	1.23	6.567	2.01	12.633	16.07	18.70	2.01
0.533	1.23	6.600	2.01	12.667	16.07	18.73	2.01
0.567	1.23	6.633	2.01	12.700	16.07	18.77	2.01
0.600	1.23	6.667	2.01	12.733	16.07	18.80	2.01
0.633	1.23	6.700	2.01	12.767	12.15	18.83	2.01
0.667	1.23	6.733	2.01	12.800	8.26	18.87	2.01
0.700	1.23	6.767	2.01	12.833	8.26	18.90	2.01
0.733	1.23	6.800	2.01	12.867	8.26	18.93	2.01
0.767	1.23	6.833	2.01	12.900	8.26	18.97	2.01

0.800	1.23	6.867	2.01	12.933	8.26	19.00	2.01
0.833	1.23	6.900	2.01	12.967	8.26	19.03	2.01
0.867	1.23	6.933	2.01	13.000	8.26	19.07	2.01
0.900	1.23	6.967	2.01	13.033	8.26	19.10	2.01
0.933	1.23	7.000	2.01	13.067	8.26	19.13	2.01
0.967	1.23	7.033	2.01	13.100	8.26	19.17	2.01
1.000	1.23	7.067	2.01	13.133	8.26	19.20	2.01
1.033	1.23	7.100	2.01	13.167	8.26	19.23	2.01
1.067	1.23	7.133	2.01	13.200	8.26	19.27	2.01
1.100	1.23	7.167	2.01	13.233	8.26	19.30	2.01
1.133	1.23	7.200	2.01	13.267	7.14	19.33	2.01
1.167	1.23	7.233	2.01	13.300	6.02	19.37	2.01
1.200	1.23	7.267	2.23	13.333	6.02	19.40	2.01
1.233	1.23	7.300	2.45	13.367	6.02	19.43	2.01
1.267	1.23	7.333	2.45	13.400	6.02	19.47	2.01
1.300	1.23	7.367	2.45	13.433	6.02	19.50	2.01
1.333	1.23	7.400	2.45	13.467	6.02	19.53	2.01
1.367	1.23	7.433	2.45	13.500	6.02	19.57	2.01
1.400	1.23	7.467	2.45	13.533	6.02	19.60	2.01
1.433	1.23	7.500	2.45	13.567	6.02	19.63	2.01
1.467	1.23	7.533	2.45	13.600	6.02	19.67	2.01
1.500	1.23	7.567	2.45	13.633	6.02	19.70	2.01
1.533	1.23	7.600	2.45	13.667	6.02	19.73	2.01
1.567	1.23	7.633	2.45	13.700	6.02	19.77	2.01
1.600	1.23	7.667	2.45	13.733	6.02	19.80	2.01
1.633	1.23	7.700	2.45	13.767	5.35	19.83	2.01
1.667	1.23	7.733	2.45	13.800	4.69	19.87	2.01
1.700	1.23	7.767	2.45	13.833	4.69	19.90	2.01
1.733	1.23	7.800	2.45	13.867	4.69	19.93	2.01
1.767	1.23	7.833	2.45	13.900	4.69	19.97	2.01
1.800	1.23	7.867	2.45	13.933	4.69	20.00	2.01
1.833	1.23	7.900	2.45	13.967	4.69	20.03	2.01
1.867	1.23	7.933	2.45	14.000	4.69	20.07	2.01
1.900	1.23	7.967	2.45	14.033	4.69	20.10	2.01
1.933	1.23	8.000	2.45	14.067	4.69	20.13	2.01
1.967	1.23	8.033	2.45	14.100	4.69	20.17	2.01
2.000	1.23	8.067	2.45	14.133	4.69	20.20	2.01
2.033	1.23	8.100	2.45	14.167	4.69	20.23	2.01
2.067	1.23	8.133	2.45	14.200	4.69	20.27	1.67
2.100	1.23	8.167	2.45	14.233	4.69	20.30	1.34
2.133	1.23	8.200	2.45	14.267	4.01	20.33	1.34
2.167	1.23	8.233	2.45	14.300	3.35	20.37	1.34
2.200	1.23	8.267	2.68	14.333	3.35	20.40	1.34
2.233	1.23	8.300	2.90	14.367	3.35	20.43	1.34
2.267	1.34	8.333	2.90	14.400	3.35	20.47	1.34
2.300	1.45	8.367	2.90	14.433	3.35	20.50	1.34
2.333	1.45	8.400	2.90	14.467	3.35	20.53	1.34
2.367	1.45	8.433	2.90	14.500	3.35	20.57	1.34
2.400	1.45	8.467	2.90	14.533	3.35	20.60	1.34
2.433	1.45	8.500	2.90	14.567	3.35	20.63	1.34
2.467	1.45	8.533	2.90	14.600	3.35	20.67	1.34
2.500	1.45	8.567	2.90	14.633	3.35	20.70	1.34
2.533	1.45	8.600	2.90	14.667	3.35	20.73	1.34
2.567	1.45	8.633	2.90	14.700	3.35	20.77	1.34
2.600	1.45	8.667	2.90	14.733	3.35	20.80	1.34
2.633	1.45	8.700	2.90	14.767	3.35	20.83	1.34
2.667	1.45	8.733	2.90	14.800	3.35	20.87	1.34
2.700	1.45	8.767	3.01	14.833	3.35	20.90	1.34
2.733	1.45	8.800	3.12	14.867	3.35	20.93	1.34
2.767	1.45	8.833	3.12	14.900	3.35	20.97	1.34
2.800	1.45	8.867	3.12	14.933	3.35	21.00	1.34
2.833	1.45	8.900	3.12	14.967	3.35	21.03	1.34
2.867	1.45	8.933	3.12	15.000	3.35	21.07	1.34
2.900	1.45	8.967	3.12	15.033	3.35	21.10	1.34
2.933	1.45	9.000	3.12	15.067	3.35	21.13	1.34
2.967	1.45	9.033	3.12	15.100	3.35	21.17	1.34
3.000	1.45	9.067	3.12	15.133	3.35	21.20	1.34
3.033	1.45	9.100	3.12	15.167	3.35	21.23	1.34
3.067	1.45	9.133	3.12	15.200	3.35	21.27	1.34
3.100	1.45	9.167	3.12	15.233	3.35	21.30	1.34
3.133	1.45	9.200	3.12	15.267	3.35	21.33	1.34
3.167	1.45	9.233	3.12	15.300	3.35	21.37	1.34
3.200	1.45	9.267	3.35	15.333	3.35	21.40	1.34
3.233	1.45	9.300	3.57	15.367	3.35	21.43	1.34
3.267	1.45	9.333	3.57	15.400	3.35	21.47	1.34
3.300	1.45	9.367	3.57	15.433	3.35	21.50	1.34
3.333	1.45	9.400	3.57	15.467	3.35	21.53	1.34
3.367	1.45	9.433	3.57	15.500	3.35	21.57	1.34
3.400	1.45	9.467	3.57	15.533	3.35	21.60	1.34
3.433	1.45	9.500	3.57	15.567	3.35	21.63	1.34
3.467	1.45	9.533	3.57	15.600	3.35	21.67	1.34
3.500	1.45	9.567	3.57	15.633	3.35	21.70	1.34
3.533	1.45	9.600	3.57	15.667	3.35	21.73	1.34
3.567	1.45	9.633	3.57	15.700	3.35	21.77	1.34
3.600	1.45	9.667	3.57	15.733	3.35	21.80	1.34
3.633	1.45	9.700	3.57	15.767	3.35	21.83	1.34
3.667	1.45	9.733	3.57	15.800	3.35	21.87	1.34
3.700	1.45	9.767	3.79	15.833	3.35	21.90	1.34
3.733	1.45	9.800	4.02	15.867	3.35	21.93	1.34
3.767	1.45	9.833	4.02	15.900	3.35	21.97	1.34
3.800	1.45	9.867	4.02	15.933	3.35	22.00	1.34
3.833	1.45	9.900	4.02	15.967	3.35	22.03	1.34
3.867	1.45	9.933	4.02	16.000	3.35	22.07	1.34
3.900	1.45	9.967	4.02	16.033	3.35	22.10	1.34
3.933	1.45	10.000	4.02	16.067	3.35	22.13	1.34
3.967	1.45	10.033	4.02	16.100	3.35	22.17	1.34
4.000	1.45	10.067	4.02	16.133	3.35	22.20	1.34
4.033	1.45	10.100	4.02	16.167	3.35	22.23	1.34
4.067	1.45	10.133	4.02	16.200	3.35	22.27	1.34
4.100	1.45	10.167	4.02	16.233	3.35	22.30	1.34
4.133	1.45	10.200	4.02	16.267	2.67	22.33	1.34
4.167	1.45	10.233	4.02	16.300	2.01	22.37	1.34
4.200	1.45	10.267	4.58	16.333	2.01	22.40	1.34
4.233	1.45	10.300	5.13	16.367	2.01	22.43	1.34
4.267	1.62	10.333	5.13	16.400	2.01	22.47	1.34
4.300	1.79	10.367	5.13	16.433	2.01	22.50	1.34
4.333	1.79	10.400	5.13	16.467	2.01	22.53	1.34
4.367	1.79	10.433	5.13	16.500	2.01	22.57	1.34
4.400	1.79	10.467	5.13	16.533	2.01	22.60	1.34
4.433	1.79	10.500	5.13	16.567	2.01	22.63	1.34
4.467	1.79	10.533	5.13	16.600	2.01	22.67	1.34
4.500	1.79	10.567	5.13	16.633	2.01	22.70	1.34
4.533	1.79	10.600	5.13	16.667	2.01	22.73	1.34
4.567	1.79	10.633	5.13	16.700	2.01	22.77	1.34
4.600	1.79	10.667	5.13	16.733	2.01	22.80	1.34
4.633	1.79	10.700	5.13	16.767	2.01	22.83	1.34
4.667	1.79	10.733	5.13	16.800	2.01	22.87	1.34
4.700	1.79	10.767	6.03	16.833	2.01	22.90	1.34
4.733	1.79	10.800	6.92	16.867	2.01	22.93	1.34
4.767	1.79	10.833	6.92	16.900	2.01	22.97	1.34
4.800	1.79	10.867	6.92	16.933	2.01	23.00	1.34
4.833	1.79	10.900	6.92	16.967	2.01	23.03	1.34
4.867	1.79	10.933	6.92	17.000	2.01	23.07	1.34
4.900	1.79	10.967	6.92	17.033	2.01	23.10	1.34
4.933	1.79	11.000	6.92	17.067	2.01	23.13	1.34
4.967	1.79	11.033	6.92	17.100	2.01	23.17	1.34
5.000	1.79	11.067	6.92	17.133	2.01	23.20	1.34
5.033	1.79	11.100	6.92	17.167	2.01	23.23	1.34
5.067	1.79	11.133	6.92	17.200	2.01	23.27	1.34
5.100	1.79	11.167	6.92	17.233	2.01	23.30	1.34
5.133	1.79	11.200	6.92	17.267	2.01	23.33	1.34
5.167	1.79	11.233	6.92	17.300	2.01	23.37	1.34
5.200	1.79	11.267	8.82	17.333	2.01	23.40	1.34
5.233	1.79	11.300	10.71	17.367	2.01	23.43	1.34
5.267	1.79	11.333	10.71	17.400	2.01	23.47	1.34
5.300	1.79	11.367	10.71	17.433	2.01	23.50	1.34
5.333	1.79	11.400	10.71	17.467	2.01	23.53	1.34
5.367	1.79	11.433	10.71	17.500	2.01	23.57	1.34
5.400	1.79	11.467	10.71	17.533	2.01	23.60	1.34
5.433	1.79	11.500	10.71	17.567	2.01	23.63	1.34
5.467	1.79	11.533	10.71	17.600	2.01	23.67	1.34
5.500	1.79	11.567	10.71	17.633	2.01	23.70	1.34
5.533	1.79	11.600	10.71	17.667	2.01	23.73	1.34
5.567	1.79	11.633	10.71	17.700	2.01	23.77	1.34
5.600	1.79	11.667	10.71	17.733	2.01	23.80	1.34
5.633	1.79	11.700	10.71	17.767	2.01	23.83	1.34
5.667	1.79	11.733	10.71	17.800	2.01	23.87	1.34
5.700	1.79	11.767	21.90	17.833	2.01	23.90	1.34
5.733	1.79	11.800	33.02	17.867	2.01	23.93	1.34
5.767	1.79	11.833	33.02	17.900	2.01	23.97	1.34
5.800	1.79	11.867	33.02	17.933	2.01	24.00	1.34
5.833	1.79	11.900	33.02	17.967	2.01	24.03	1.34
5.867	1.79	11.933	33.02	18.000	2.01	24.07	1.34
5.900	1.79	11.967	33.02	18.033	2.01	24.10	1.34
5.933	1.79	12.000	33.17	18.067	2.01	24.13	1.34
5.967	1.79	12.033	136.56	18.100	2.01	24.17	1.34
6.000	1.79	12.067	136.56	18.133	2.01	24.20	1.34
6.033	1.79	12.100	136.56	18.167	2.01	24.23	1.34
6.067	1.79	12.133	136.56	18.200	2.01	24.27	0.67

Max.Eff.Inten.(mm/hr)=		136.56	59.56	
over (min)		5.00	8.00	
Storage Coeff.	(min)=	2.71 (ii)	6.28 (ii)	
Unit Hyd. Tpeak	(min)=	4.00	8.00	
Unit Hyd. peak	(cms)=	0.35	0.16	
				TOTALS
PEAK FLOW	(cms)=	0.83	0.08	0.900 (iii)
TIME TO PEAK	(hrs)=	12.23	12.27	12.23

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     RUNOFF VOLUME    (mm)=     110.57        42.28          96.91
     TOTAL RAINFALL   (mm)=     111.57       111.57         111.57
     RUNOFF COEFFICIENT   =       0.99         0.38           0.87


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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*********************************************
** SIMULATION:Run 23 - 50yr 24hr 15min SCS **
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|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\14f4f803
| Ptotal=125.69 mm |    Comments: 50yr 24hr 15min SCS
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    0.00 |  6.25    2.26 | 12.50   18.10 | 18.75    2.26
                0.25    1.38 |  6.50    2.26 | 12.75    9.30 | 19.00    2.26
                0.50    1.38 |  6.75    2.26 | 13.00    9.30 | 19.25    2.26
                0.75    1.38 |  7.00    2.26 | 13.25    6.79 | 19.50    2.26
                1.00    1.38 |  7.25    2.77 | 13.50    6.79 | 19.75    2.26
                1.25    1.38 |  7.50    2.77 | 13.75    5.28 | 20.00    2.26
                1.50    1.38 |  7.75    2.77 | 14.00    5.28 | 20.25    1.51
                1.75    1.38 |  8.00    2.77 | 14.25    3.77 | 20.50    1.51
                2.00    1.38 |  8.25    3.27 | 14.50    3.77 | 20.75    1.51
                2.25    1.63 |  8.50    3.27 | 14.75    3.77 | 21.00    1.51
                2.50    1.63 |  8.75    3.52 | 15.00    3.77 | 21.25    1.51
                2.75    1.63 |  9.00    3.52 | 15.25    3.77 | 21.50    1.51
                3.00    1.63 |  9.25    4.02 | 15.50    3.77 | 21.75    1.51
                3.25    1.63 |  9.50    4.02 | 15.75    3.77 | 22.00    1.51
                3.50    1.63 |  9.75    4.52 | 16.00    3.77 | 22.25    1.51
                3.75    1.63 | 10.00    4.52 | 16.25    2.26 | 22.50    1.51
                4.00    1.63 | 10.25    5.78 | 16.50    2.26 | 22.75    1.51
                4.25    2.01 | 10.50    5.78 | 16.75    2.26 | 23.00    1.51
                4.50    2.01 | 10.75    7.79 | 17.00    2.26 | 23.25    1.51
                4.75    2.01 | 11.00    7.79 | 17.25    2.26 | 23.50    1.51
                5.00    2.01 | 11.25   12.07 | 17.50    2.26 | 23.75    1.51
                5.25    2.01 | 11.50   12.07 | 17.75    2.26 | 24.00    1.51
                5.50    2.01 | 11.75   37.20 | 18.00    2.26 |
                5.75    2.01 | 12.00  153.84 | 18.25    2.26 |
                6.00    2.01 | 12.25   18.10 | 18.50    2.26 |

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
               0.033    0.00 | 6.100    2.01 |12.167  153.84 | 18.23    2.26
               0.067    0.00 | 6.133    2.01 |12.200  153.84 | 18.27    2.26
               0.100    0.00 | 6.167    2.01 |12.233  153.84 | 18.30    2.26
               0.133    0.00 | 6.200    2.01 |12.267   85.77 | 18.33    2.26
               0.167    0.00 | 6.233    2.01 |12.300   18.10 | 18.37    2.26
               0.200    0.00 | 6.267    2.14 |12.333   18.10 | 18.40    2.26
               0.233    0.00 | 6.300    2.26 |12.367   18.10 | 18.43    2.26
               0.267    0.69 | 6.333    2.26 |12.400   18.10 | 18.47    2.26
               0.300    1.38 | 6.367    2.26 |12.433   18.10 | 18.50    2.26
               0.333    1.38 | 6.400    2.26 |12.467   18.10 | 18.53    2.26
               0.367    1.38 | 6.433    2.26 |12.500   18.10 | 18.57    2.26
               0.400    1.38 | 6.467    2.26 |12.533   18.10 | 18.60    2.26
               0.433    1.38 | 6.500    2.26 |12.567   18.10 | 18.63    2.26
               0.467    1.38 | 6.533    2.26 |12.600   18.10 | 18.67    2.26
               0.500    1.38 | 6.567    2.26 |12.633   18.10 | 18.70    2.26
               0.533    1.38 | 6.600    2.26 |12.667   18.10 | 18.73    2.26
               0.567    1.38 | 6.633    2.26 |12.700   18.10 | 18.77    2.26
               0.600    1.38 | 6.667    2.26 |12.733   18.10 | 18.80    2.26
               0.633    1.38 | 6.700    2.26 |12.767   13.69 | 18.83    2.26
               0.667    1.38 | 6.733    2.26 |12.800    9.30 | 18.87    2.26
               0.700    1.38 | 6.767    2.26 |12.833    9.30 | 18.90    2.26
               0.733    1.38 | 6.800    2.26 |12.867    9.30 | 18.93    2.26
               0.767    1.38 | 6.833    2.26 |12.900    9.30 | 18.97    2.26
               0.800    1.38 | 6.867    2.26 |12.933    9.30 | 19.00    2.26
               0.833    1.38 | 6.900    2.26 |12.967    9.30 | 19.03    2.26
               0.867    1.38 | 6.933    2.26 |13.000    9.30 | 19.07    2.26
               0.900    1.38 | 6.967    2.26 |13.033    9.30 | 19.10    2.26
               0.933    1.38 | 7.000    2.26 |13.067    9.30 | 19.13    2.26
               0.967    1.38 | 7.033    2.26 |13.100    9.30 | 19.17    2.26
               1.000    1.38 | 7.067    2.26 |13.133    9.30 | 19.20    2.26
               1.033    1.38 | 7.100    2.26 |13.167    9.30 | 19.23    2.26
               1.067    1.38 | 7.133    2.26 |13.200    9.30 | 19.27    2.26
               1.100    1.38 | 7.167    2.26 |13.233    9.30 | 19.30    2.26
               1.133    1.38 | 7.200    2.26 |13.267    8.04 | 19.33    2.26
               1.167    1.38 | 7.233    2.26 |13.300    6.79 | 19.37    2.26
               1.200    1.38 | 7.267    2.51 |13.333    6.79 | 19.40    2.26
               1.233    1.38 | 7.300    2.77 |13.367    6.79 | 19.43    2.26
               1.267    1.38 | 7.333    2.77 |13.400    6.79 | 19.47    2.26
               1.300    1.38 | 7.367    2.77 |13.433    6.79 | 19.50    2.26
               1.333    1.38 | 7.400    2.77 |13.467    6.79 | 19.53    2.26
               1.367    1.38 | 7.433    2.77 |13.500    6.79 | 19.57    2.26
               1.400    1.38 | 7.467    2.77 |13.533    6.79 | 19.60    2.26
               1.433    1.38 | 7.500    2.77 |13.567    6.79 | 19.63    2.26
               1.467    1.38 | 7.533    2.77 |13.600    6.79 | 19.67    2.26
               1.500    1.38 | 7.567    2.77 |13.633    6.79 | 19.70    2.26
               1.533    1.38 | 7.600    2.77 |13.667    6.79 | 19.73    2.26
               1.567    1.38 | 7.633    2.77 |13.700    6.79 | 19.77    2.26
               1.600    1.38 | 7.667    2.77 |13.733    6.79 | 19.80    2.26
               1.633    1.38 | 7.700    2.77 |13.767    6.03 | 19.83    2.26
               1.667    1.38 | 7.733    2.77 |13.800    5.28 | 19.87    2.26
               1.700    1.38 | 7.767    2.77 |13.833    5.28 | 19.90    2.26
               1.733    1.38 | 7.800    2.77 |13.867    5.28 | 19.93    2.26
               1.767    1.38 | 7.833    2.77 |13.900    5.28 | 19.97    2.26
               1.800    1.38 | 7.867    2.77 |13.933    5.28 | 20.00    2.26
               1.833    1.38 | 7.900    2.77 |13.967    5.28 | 20.03    2.26
               1.867    1.38 | 7.933    2.77 |14.000    5.28 | 20.07    2.26
               1.900    1.38 | 7.967    2.77 |14.033    5.28 | 20.10    2.26
               1.933    1.38 | 8.000    2.77 |14.067    5.28 | 20.13    2.26
               1.967    1.38 | 8.033    2.77 |14.100    5.28 | 20.17    2.26
               2.000    1.38 | 8.067    2.77 |14.133    5.28 | 20.20    2.26
               2.033    1.38 | 8.100    2.77 |14.167    5.28 | 20.23    2.26
               2.067    1.38 | 8.133    2.77 |14.200    5.28 | 20.27    1.88
               2.100    1.38 | 8.167    2.77 |14.233    5.28 | 20.30    1.51
               2.133    1.38 | 8.200    2.77 |14.267    4.52 | 20.33    1.51
               2.167    1.38 | 8.233    2.77 |14.300    3.77 | 20.37    1.51
               2.200    1.38 | 8.267    3.02 |14.333    3.77 | 20.40    1.51
               2.233    1.38 | 8.300    3.27 |14.367    3.77 | 20.43    1.51
               2.267    1.51 | 8.333    3.27 |14.400    3.77 | 20.47    1.51
               2.300    1.63 | 8.367    3.27 |14.433    3.77 | 20.50    1.51
               2.333    1.63 | 8.400    3.27 |14.467    3.77 | 20.53    1.51
               2.367    1.63 | 8.433    3.27 |14.500    3.77 | 20.57    1.51
               2.400    1.63 | 8.467    3.27 |14.533    3.77 | 20.60    1.51
               2.433    1.63 | 8.500    3.27 |14.567    3.77 | 20.63    1.51
               2.467    1.63 | 8.533    3.27 |14.600    3.77 | 20.67    1.51
               2.500    1.63 | 8.567    3.27 |14.633    3.77 | 20.70    1.51
               2.533    1.63 | 8.600    3.27 |14.667    3.77 | 20.73    1.51
               2.567    1.63 | 8.633    3.27 |14.700    3.77 | 20.77    1.51
               2.600    1.63 | 8.667    3.27 |14.733    3.77 | 20.80    1.51
               2.633    1.63 | 8.700    3.27 |14.767    3.77 | 20.83    1.51
               2.667    1.63 | 8.733    3.27 |14.800    3.77 | 20.87    1.51
               2.700    1.63 | 8.767    3.39 |14.833    3.77 | 20.90    1.51
               2.733    1.63 | 8.800    3.52 |14.867    3.77 | 20.93    1.51
               2.767    1.63 | 8.833    3.52 |14.900    3.77 | 20.97    1.51
               2.800    1.63 | 8.867    3.52 |14.933    3.77 | 21.00    1.51
               2.833    1.63 | 8.900    3.52 |14.967    3.77 | 21.03    1.51
               2.867    1.63 | 8.933    3.52 |15.000    3.77 | 21.07    1.51
               2.900    1.63 | 8.967    3.52 |15.033    3.77 | 21.10    1.51
               2.933    1.63 | 9.000    3.52 |15.067    3.77 | 21.13    1.51
               2.967    1.63 | 9.033    3.52 |15.100    3.77 | 21.17    1.51
               3.000    1.63 | 9.067    3.52 |15.133    3.77 | 21.20    1.51
               3.033    1.63 | 9.100    3.52 |15.167    3.77 | 21.23    1.51
               3.067    1.63 | 9.133    3.52 |15.200    3.77 | 21.27    1.51
               3.100    1.63 | 9.167    3.52 |15.233    3.77 | 21.30    1.51
               3.133    1.63 | 9.200    3.52 |15.267    3.77 | 21.33    1.51
               3.167    1.63 | 9.233    3.52 |15.300    3.77 | 21.37    1.51
               3.200    1.63 | 9.267    3.77 |15.333    3.77 | 21.40    1.51
               3.233    1.63 | 9.300    4.02 |15.367    3.77 | 21.43    1.51
               3.267    1.63 | 9.333    4.02 |15.400    3.77 | 21.47    1.51
```

3.300	1.63	9.367	4.02	15.433	3.77	21.50	1.51
3.333	1.63	9.400	4.02	15.467	3.77	21.53	1.51
3.367	1.63	9.433	4.02	15.500	3.77	21.57	1.51
3.400	1.63	9.467	4.02	15.533	3.77	21.60	1.51
3.433	1.63	9.500	4.02	15.567	3.77	21.63	1.51
3.467	1.63	9.533	4.02	15.600	3.77	21.67	1.51
3.500	1.63	9.567	4.02	15.633	3.77	21.70	1.51
3.533	1.63	9.600	4.02	15.667	3.77	21.73	1.51
3.567	1.63	9.633	4.02	15.700	3.77	21.77	1.51
3.600	1.63	9.667	4.02	15.733	3.77	21.80	1.51
3.633	1.63	9.700	4.02	15.767	3.77	21.83	1.51
3.667	1.63	9.733	4.02	15.800	3.77	21.87	1.51
3.700	1.63	9.767	4.27	15.833	3.77	21.90	1.51
3.733	1.63	9.800	4.52	15.867	3.77	21.93	1.51
3.767	1.63	9.833	4.52	15.900	3.77	21.97	1.51
3.800	1.63	9.867	4.52	15.933	3.77	22.00	1.51
3.833	1.63	9.900	4.52	15.967	3.77	22.03	1.51
3.867	1.63	9.933	4.52	16.000	3.77	22.07	1.51
3.900	1.63	9.967	4.52	16.033	3.77	22.10	1.51
3.933	1.63	10.000	4.52	16.067	3.77	22.13	1.51
3.967	1.63	10.033	4.52	16.100	3.77	22.17	1.51
4.000	1.63	10.067	4.52	16.133	3.77	22.20	1.51
4.033	1.63	10.100	4.52	16.167	3.77	22.23	1.51
4.067	1.63	10.133	4.52	16.200	3.77	22.27	1.51
4.100	1.63	10.167	4.52	16.233	3.77	22.30	1.51
4.133	1.63	10.200	4.52	16.267	3.01	22.33	1.51
4.167	1.63	10.233	4.52	16.300	2.26	22.37	1.51
4.200	1.63	10.267	5.15	16.333	2.26	22.40	1.51
4.233	1.63	10.300	5.78	16.367	2.26	22.43	1.51
4.267	1.82	10.333	5.78	16.400	2.26	22.47	1.51
4.300	2.01	10.367	5.78	16.433	2.26	22.50	1.51
4.333	2.01	10.400	5.78	16.467	2.26	22.53	1.51
4.367	2.01	10.433	5.78	16.500	2.26	22.57	1.51
4.400	2.01	10.467	5.78	16.533	2.26	22.60	1.51
4.433	2.01	10.500	5.78	16.567	2.26	22.63	1.51
4.467	2.01	10.533	5.78	16.600	2.26	22.67	1.51
4.500	2.01	10.567	5.78	16.633	2.26	22.70	1.51
4.533	2.01	10.600	5.78	16.667	2.26	22.73	1.51
4.567	2.01	10.633	5.78	16.700	2.26	22.77	1.51
4.600	2.01	10.667	5.78	16.733	2.26	22.80	1.51
4.633	2.01	10.700	5.78	16.767	2.26	22.83	1.51
4.667	2.01	10.733	5.78	16.800	2.26	22.87	1.51
4.700	2.01	10.767	6.79	16.833	2.26	22.90	1.51
4.733	2.01	10.800	7.79	16.867	2.26	22.93	1.51
4.767	2.01	10.833	7.79	16.900	2.26	22.97	1.51
4.800	2.01	10.867	7.79	16.933	2.26	23.00	1.51
4.833	2.01	10.900	7.79	16.967	2.26	23.03	1.51
4.867	2.01	10.933	7.79	17.000	2.26	23.07	1.51
4.900	2.01	10.967	7.79	17.033	2.26	23.10	1.51
4.933	2.01	11.000	7.79	17.067	2.26	23.13	1.51
4.967	2.01	11.033	7.79	17.100	2.26	23.17	1.51
5.000	2.01	11.067	7.79	17.133	2.26	23.20	1.51
5.033	2.01	11.100	7.79	17.167	2.26	23.23	1.51
5.067	2.01	11.133	7.79	17.200	2.26	23.27	1.51
5.100	2.01	11.167	7.79	17.233	2.26	23.30	1.51
5.133	2.01	11.200	7.79	17.267	2.26	23.33	1.51
5.167	2.01	11.233	7.79	17.300	2.26	23.37	1.51
5.200	2.01	11.267	9.93	17.333	2.26	23.40	1.51
5.233	2.01	11.300	12.07	17.367	2.26	23.43	1.51
5.267	2.01	11.333	12.07	17.400	2.26	23.47	1.51
5.300	2.01	11.367	12.07	17.433	2.26	23.50	1.51
5.333	2.01	11.400	12.07	17.467	2.26	23.53	1.51
5.367	2.01	11.433	12.07	17.500	2.26	23.57	1.51
5.400	2.01	11.467	12.07	17.533	2.26	23.60	1.51
5.433	2.01	11.500	12.07	17.567	2.26	23.63	1.51
5.467	2.01	11.533	12.07	17.600	2.26	23.67	1.51
5.500	2.01	11.567	12.07	17.633	2.26	23.70	1.51
5.533	2.01	11.600	12.07	17.667	2.26	23.73	1.51
5.567	2.01	11.633	12.07	17.700	2.26	23.77	1.51
5.600	2.01	11.667	12.07	17.733	2.26	23.80	1.51
5.633	2.01	11.700	12.07	17.767	2.26	23.83	1.51
5.667	2.01	11.733	12.07	17.800	2.26	23.87	1.51
5.700	2.01	11.767	24.67	17.833	2.26	23.90	1.51
5.733	2.01	11.800	37.20	17.867	2.26	23.93	1.51
5.767	2.01	11.833	37.20	17.900	2.26	23.97	1.51
5.800	2.01	11.867	37.20	17.933	2.26	24.00	1.51
5.833	2.01	11.900	37.20	17.967	2.26	24.03	1.51
5.867	2.01	11.933	37.20	18.000	2.26	24.07	1.51
5.900	2.01	11.967	37.20	18.033	2.26	24.10	1.51
5.933	2.01	12.000	37.37	18.067	2.26	24.13	1.51
5.967	2.01	12.033	153.84	18.100	2.26	24.17	1.51
6.000	2.01	12.067	153.84	18.133	2.26	24.20	1.51
6.033	2.01	12.100	153.84	18.167	2.26	24.23	1.51
6.067	2.01	12.133	153.84	18.200	2.26	24.27	0.76

```
     Max.Eff.Inten.(mm/hr)=     153.84        72.42
                over (min)        5.00         6.00
     Storage Coeff.  (min)=       2.58 (ii)    5.99 (ii)
     Unit Hyd. Tpeak (min)=       4.00         6.00
     Unit Hyd. peak  (cms)=       0.36         0.19
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.93         0.10           1.029 (iii)
     TIME TO PEAK    (hrs)=      12.23        12.27          12.23
     RUNOFF VOLUME    (mm)=     124.69        51.29         110.01
     TOTAL RAINFALL   (mm)=     125.69       125.69         125.69
     RUNOFF COEFFICIENT   =       0.99         0.41           0.88


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  59.0    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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**********************************************
** SIMULATION:Run 24 - 100yr 24hr 15min SCS **
**********************************************

--------------------
|    READ STORM    |    Filename: C:\Users\NForis\AppD
|                  |              ata\Local\Temp\
|                  |              f6c2be5a-0ca6-4203-ba7c-3f19eea715bf\c62ca9f3
| Ptotal=136.83 mm |    Comments: 100yr 24hr 15min SCS
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    0.00 |  6.25    2.46 | 12.50   19.70 | 18.75    2.46
                 0.25    1.51 |  6.50    2.46 | 12.75   10.13 | 19.00    2.46
                 0.50    1.51 |  6.75    2.46 | 13.00   10.13 | 19.25    2.46
                 0.75    1.51 |  7.00    2.46 | 13.25    7.39 | 19.50    2.46
                 1.00    1.51 |  7.25    3.01 | 13.50    7.39 | 19.75    2.46
                 1.25    1.51 |  7.50    3.01 | 13.75    5.75 | 20.00    2.46
                 1.50    1.51 |  7.75    3.01 | 14.00    5.75 | 20.25    1.64
                 1.75    1.51 |  8.00    3.01 | 14.25    4.10 | 20.50    1.64
                 2.00    1.51 |  8.25    3.56 | 14.50    4.10 | 20.75    1.64
                 2.25    1.78 |  8.50    3.56 | 14.75    4.10 | 21.00    1.64
                 2.50    1.78 |  8.75    3.83 | 15.00    4.10 | 21.25    1.64
                 2.75    1.78 |  9.00    3.83 | 15.25    4.10 | 21.50    1.64
                 3.00    1.78 |  9.25    4.38 | 15.50    4.10 | 21.75    1.64
                 3.25    1.78 |  9.50    4.38 | 15.75    4.10 | 22.00    1.64
                 3.50    1.78 |  9.75    4.93 | 16.00    4.10 | 22.25    1.64
                 3.75    1.78 | 10.00    4.93 | 16.25    2.46 | 22.50    1.64
                 4.00    1.78 | 10.25    6.29 | 16.50    2.46 | 22.75    1.64
                 4.25    2.19 | 10.50    6.29 | 16.75    2.46 | 23.00    1.64
                 4.50    2.19 | 10.75    8.48 | 17.00    2.46 | 23.25    1.64
                 4.75    2.19 | 11.00    8.48 | 17.25    2.46 | 23.50    1.64
                 5.00    2.19 | 11.25   13.14 | 17.50    2.46 | 23.75    1.64
                 5.25    2.19 | 11.50   13.14 | 17.75    2.46 | 24.00    1.64
                 5.50    2.19 | 11.75   40.50 | 18.00    2.46 |
                 5.75    2.19 | 12.00  167.48 | 18.25    2.46 |
                 6.00    2.19 | 12.25   19.70 | 18.50    2.46 |

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| CALIB            |
| STANDHYD (  0100)|   Area    (ha)=   2.75
|ID= 1 DT= 2.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.20          0.55
     Dep. Storage     (mm)=       1.00          1.50
     Average Slope     (%)=       1.00          2.00
     Length            (m)=     135.40         40.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   2.0 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
                0.033    0.00 | 6.100    2.19 |12.167  167.48 | 18.23    2.46
                0.067    0.00 | 6.133    2.19 |12.200  167.48 | 18.27    2.46
                0.100    0.00 | 6.167    2.19 |12.233  167.48 | 18.30    2.46
                0.133    0.00 | 6.200    2.19 |12.267   93.37 | 18.33    2.46
                0.167    0.00 | 6.233    2.19 |12.300   19.70 | 18.37    2.46
```

0.200	0.00	6.267	2.33	12.333	19.70	18.40	2.46
0.233	0.00	6.300	2.46	12.367	19.70	18.43	2.46
0.267	0.75	6.333	2.46	12.400	19.70	18.47	2.46
0.300	1.51	6.367	2.46	12.433	19.70	18.50	2.46
0.333	1.51	6.400	2.46	12.467	19.70	18.53	2.46
0.367	1.51	6.433	2.46	12.500	19.70	18.57	2.46
0.400	1.51	6.467	2.46	12.533	19.70	18.60	2.46
0.433	1.51	6.500	2.46	12.567	19.70	18.63	2.46
0.467	1.51	6.533	2.46	12.600	19.70	18.67	2.46
0.500	1.51	6.567	2.46	12.633	19.70	18.70	2.46
0.533	1.51	6.600	2.46	12.667	19.70	18.73	2.46
0.567	1.51	6.633	2.46	12.700	19.70	18.77	2.46
0.600	1.51	6.667	2.46	12.733	19.70	18.80	2.46
0.633	1.51	6.700	2.46	12.767	14.90	18.83	2.46
0.667	1.51	6.733	2.46	12.800	10.13	18.87	2.46
0.700	1.51	6.767	2.46	12.833	10.13	18.90	2.46
0.733	1.51	6.800	2.46	12.867	10.13	18.93	2.46
0.767	1.51	6.833	2.46	12.900	10.13	18.97	2.46
0.800	1.51	6.867	2.46	12.933	10.13	19.00	2.46
0.833	1.51	6.900	2.46	12.967	10.13	19.03	2.46
0.867	1.51	6.933	2.46	13.000	10.13	19.07	2.46
0.900	1.51	6.967	2.46	13.033	10.13	19.10	2.46
0.933	1.51	7.000	2.46	13.067	10.13	19.13	2.46
0.967	1.51	7.033	2.46	13.100	10.13	19.17	2.46
1.000	1.51	7.067	2.46	13.133	10.13	19.20	2.46
1.033	1.51	7.100	2.46	13.167	10.13	19.23	2.46
1.067	1.51	7.133	2.46	13.200	10.13	19.27	2.46
1.100	1.51	7.167	2.46	13.233	10.13	19.30	2.46
1.133	1.51	7.200	2.46	13.267	8.75	19.33	2.46
1.167	1.51	7.233	2.46	13.300	7.39	19.37	2.46
1.200	1.51	7.267	2.74	13.333	7.39	19.40	2.46
1.233	1.51	7.300	3.01	13.367	7.39	19.43	2.46
1.267	1.51	7.333	3.01	13.400	7.39	19.47	2.46
1.300	1.51	7.367	3.01	13.433	7.39	19.50	2.46
1.333	1.51	7.400	3.01	13.467	7.39	19.53	2.46
1.367	1.51	7.433	3.01	13.500	7.39	19.57	2.46
1.400	1.51	7.467	3.01	13.533	7.39	19.60	2.46
1.433	1.51	7.500	3.01	13.567	7.39	19.63	2.46
1.467	1.51	7.533	3.01	13.600	7.39	19.67	2.46
1.500	1.51	7.567	3.01	13.633	7.39	19.70	2.46
1.533	1.51	7.600	3.01	13.667	7.39	19.73	2.46
1.567	1.51	7.633	3.01	13.700	7.39	19.77	2.46
1.600	1.51	7.667	3.01	13.733	7.39	19.80	2.46
1.633	1.51	7.700	3.01	13.767	6.56	19.83	2.46
1.667	1.51	7.733	3.01	13.800	5.75	19.87	2.46
1.700	1.51	7.767	3.01	13.833	5.75	19.90	2.46
1.733	1.51	7.800	3.01	13.867	5.75	19.93	2.46
1.767	1.51	7.833	3.01	13.900	5.75	19.97	2.46
1.800	1.51	7.867	3.01	13.933	5.75	20.00	2.46
1.833	1.51	7.900	3.01	13.967	5.75	20.03	2.46
1.867	1.51	7.933	3.01	14.000	5.75	20.07	2.46
1.900	1.51	7.967	3.01	14.033	5.75	20.10	2.46
1.933	1.51	8.000	3.01	14.067	5.75	20.13	2.46
1.967	1.51	8.033	3.01	14.100	5.75	20.17	2.46
2.000	1.51	8.067	3.01	14.133	5.75	20.20	2.46
2.033	1.51	8.100	3.01	14.167	5.75	20.23	2.46
2.067	1.51	8.133	3.01	14.200	5.75	20.27	2.05
2.100	1.51	8.167	3.01	14.233	5.75	20.30	1.64
2.133	1.51	8.200	3.01	14.267	4.92	20.33	1.64
2.167	1.51	8.233	3.01	14.300	4.10	20.37	1.64
2.200	1.51	8.267	3.28	14.333	4.10	20.40	1.64
2.233	1.51	8.300	3.56	14.367	4.10	20.43	1.64
2.267	1.64	8.333	3.56	14.400	4.10	20.47	1.64
2.300	1.78	8.367	3.56	14.433	4.10	20.50	1.64
2.333	1.78	8.400	3.56	14.467	4.10	20.53	1.64
2.367	1.78	8.433	3.56	14.500	4.10	20.57	1.64
2.400	1.78	8.467	3.56	14.533	4.10	20.60	1.64
2.433	1.78	8.500	3.56	14.567	4.10	20.63	1.64
2.467	1.78	8.533	3.56	14.600	4.10	20.67	1.64
2.500	1.78	8.567	3.56	14.633	4.10	20.70	1.64
2.533	1.78	8.600	3.56	14.667	4.10	20.73	1.64
2.567	1.78	8.633	3.56	14.700	4.10	20.77	1.64
2.600	1.78	8.667	3.56	14.733	4.10	20.80	1.64
2.633	1.78	8.700	3.56	14.767	4.10	20.83	1.64
2.667	1.78	8.733	3.56	14.800	4.10	20.87	1.64
2.700	1.78	8.767	3.69	14.833	4.10	20.90	1.64
2.733	1.78	8.800	3.83	14.867	4.10	20.93	1.64
2.767	1.78	8.833	3.83	14.900	4.10	20.97	1.64
2.800	1.78	8.867	3.83	14.933	4.10	21.00	1.64
2.833	1.78	8.900	3.83	14.967	4.10	21.03	1.64
2.867	1.78	8.933	3.83	15.000	4.10	21.07	1.64
2.900	1.78	8.967	3.83	15.033	4.10	21.10	1.64
2.933	1.78	9.000	3.83	15.067	4.10	21.13	1.64
2.967	1.78	9.033	3.83	15.100	4.10	21.17	1.64
3.000	1.78	9.067	3.83	15.133	4.10	21.20	1.64
3.033	1.78	9.100	3.83	15.167	4.10	21.23	1.64
3.067	1.78	9.133	3.83	15.200	4.10	21.27	1.64
3.100	1.78	9.167	3.83	15.233	4.10	21.30	1.64
3.133	1.78	9.200	3.83	15.267	4.10	21.33	1.64
3.167	1.78	9.233	3.83	15.300	4.10	21.37	1.64
3.200	1.78	9.267	4.11	15.333	4.10	21.40	1.64
3.233	1.78	9.300	4.38	15.367	4.10	21.43	1.64
3.267	1.78	9.333	4.38	15.400	4.10	21.47	1.64
3.300	1.78	9.367	4.38	15.433	4.10	21.50	1.64
3.333	1.78	9.400	4.38	15.467	4.10	21.53	1.64
3.367	1.78	9.433	4.38	15.500	4.10	21.57	1.64
3.400	1.78	9.467	4.38	15.533	4.10	21.60	1.64
3.433	1.78	9.500	4.38	15.567	4.10	21.63	1.64
3.467	1.78	9.533	4.38	15.600	4.10	21.67	1.64
3.500	1.78	9.567	4.38	15.633	4.10	21.70	1.64
3.533	1.78	9.600	4.38	15.667	4.10	21.73	1.64
3.567	1.78	9.633	4.38	15.700	4.10	21.77	1.64
3.600	1.78	9.667	4.38	15.733	4.10	21.80	1.64
3.633	1.78	9.700	4.38	15.767	4.10	21.83	1.64
3.667	1.78	9.733	4.38	15.800	4.10	21.87	1.64
3.700	1.78	9.767	4.65	15.833	4.10	21.90	1.64
3.733	1.78	9.800	4.93	15.867	4.10	21.93	1.64
3.767	1.78	9.833	4.93	15.900	4.10	21.97	1.64
3.800	1.78	9.867	4.93	15.933	4.10	22.00	1.64
3.833	1.78	9.900	4.93	15.967	4.10	22.03	1.64
3.867	1.78	9.933	4.93	16.000	4.10	22.07	1.64
3.900	1.78	9.967	4.93	16.033	4.10	22.10	1.64
3.933	1.78	10.000	4.93	16.067	4.10	22.13	1.64
3.967	1.78	10.033	4.93	16.100	4.10	22.17	1.64
4.000	1.78	10.067	4.93	16.133	4.10	22.20	1.64
4.033	1.78	10.100	4.93	16.167	4.10	22.23	1.64
4.067	1.78	10.133	4.93	16.200	4.10	22.27	1.64
4.100	1.78	10.167	4.93	16.233	4.10	22.30	1.64
4.133	1.78	10.200	4.93	16.267	3.28	22.33	1.64
4.167	1.78	10.233	4.93	16.300	2.46	22.37	1.64
4.200	1.78	10.267	5.61	16.333	2.46	22.40	1.64
4.233	1.78	10.300	6.29	16.367	2.46	22.43	1.64
4.267	1.98	10.333	6.29	16.400	2.46	22.47	1.64
4.300	2.19	10.367	6.29	16.433	2.46	22.50	1.64
4.333	2.19	10.400	6.29	16.467	2.46	22.53	1.64
4.367	2.19	10.433	6.29	16.500	2.46	22.57	1.64
4.400	2.19	10.467	6.29	16.533	2.46	22.60	1.64
4.433	2.19	10.500	6.29	16.567	2.46	22.63	1.64
4.467	2.19	10.533	6.29	16.600	2.46	22.67	1.64
4.500	2.19	10.567	6.29	16.633	2.46	22.70	1.64
4.533	2.19	10.600	6.29	16.667	2.46	22.73	1.64
4.567	2.19	10.633	6.29	16.700	2.46	22.77	1.64
4.600	2.19	10.667	6.29	16.733	2.46	22.80	1.64
4.633	2.19	10.700	6.29	16.767	2.46	22.83	1.64
4.667	2.19	10.733	6.29	16.800	2.46	22.87	1.64
4.700	2.19	10.767	7.39	16.833	2.46	22.90	1.64
4.733	2.19	10.800	8.48	16.867	2.46	22.93	1.64
4.767	2.19	10.833	8.48	16.900	2.46	22.97	1.64
4.800	2.19	10.867	8.48	16.933	2.46	23.00	1.64
4.833	2.19	10.900	8.48	16.967	2.46	23.03	1.64
4.867	2.19	10.933	8.48	17.000	2.46	23.07	1.64
4.900	2.19	10.967	8.48	17.033	2.46	23.10	1.64
4.933	2.19	11.000	8.48	17.067	2.46	23.13	1.64
4.967	2.19	11.033	8.48	17.100	2.46	23.17	1.64
5.000	2.19	11.067	8.48	17.133	2.46	23.20	1.64
5.033	2.19	11.100	8.48	17.167	2.46	23.23	1.64
5.067	2.19	11.133	8.48	17.200	2.46	23.27	1.64
5.100	2.19	11.167	8.48	17.233	2.46	23.30	1.64
5.133	2.19	11.200	8.48	17.267	2.46	23.33	1.64
5.167	2.19	11.233	8.48	17.300	2.46	23.37	1.64
5.200	2.19	11.267	10.81	17.333	2.46	23.40	1.64
5.233	2.19	11.300	13.14	17.367	2.46	23.43	1.64
5.267	2.19	11.333	13.14	17.400	2.46	23.47	1.64
5.300	2.19	11.367	13.14	17.433	2.46	23.50	1.64
5.333	2.19	11.400	13.14	17.467	2.46	23.53	1.64
5.367	2.19	11.433	13.14	17.500	2.46	23.57	1.64
5.400	2.19	11.467	13.14	17.533	2.46	23.60	1.64
5.433	2.19	11.500	13.14	17.567	2.46	23.63	1.64
5.467	2.19	11.533	13.14	17.600	2.46	23.67	1.64
5.500	2.19	11.567	13.14	17.633	2.46	23.70	1.64
5.533	2.19	11.600	13.14	17.667	2.46	23.73	1.64
5.567	2.19	11.633	13.14	17.700	2.46	23.77	1.64
5.600	2.19	11.667	13.14	17.733	2.46	23.80	1.64
5.633	2.19	11.700	13.14	17.767	2.46	23.83	1.64
5.667	2.19	11.733	13.14	17.800	2.46	23.87	1.64
5.700	2.19	11.767	26.85	17.833	2.46	23.90	1.64
5.733	2.19	11.800	40.50	17.867	2.46	23.93	1.64
5.767	2.19	11.833	40.50	17.900	2.46	23.97	1.64

5.800	2.19	11.867	40.50	17.933	2.46	24.00	1.64
5.833	2.19	11.900	40.50	17.967	2.46	24.03	1.64
5.867	2.19	11.933	40.50	18.000	2.46	24.07	1.64
5.900	2.19	11.967	40.50	18.033	2.46	24.10	1.64
5.933	2.19	12.000	40.68	18.067	2.46	24.13	1.64
5.967	2.19	12.033	167.48	18.100	2.46	24.17	1.64
6.000	2.19	12.067	167.48	18.133	2.46	24.20	1.64
6.033	2.19	12.100	167.48	18.167	2.46	24.23	1.64
6.067	2.19	12.133	167.48	18.200	2.46	24.27	0.82

Max.Eff.Inten.(mm/hr)=	167.48	83.05	
over (min)	5.00	6.00	
Storage Coeff. (min)=	2.49 (ii)	5.79 (ii)	
Unit Hyd. Tpeak (min)=	4.00	6.00	
Unit Hyd. peak (cms)=	0.37	0.19	
			TOTALS
PEAK FLOW (cms)=	1.02	0.11	1.127 (iii)
TIME TO PEAK (hrs)=	12.23	12.27	12.23
RUNOFF VOLUME (mm)=	135.83	58.73	120.41
TOTAL RAINFALL (mm)=	136.83	136.83	136.83
RUNOFF COEFFICIENT =	0.99	0.43	0.88

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 59.0 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.

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 5, 2022
SUBJECT	Allowable Release Rates Summary	NAME	NHF
		PAGE	1 OF 1

Allowable Release Rates

Summary Table

Catchment Parameters

ID: 100

Area: 2.75 ha

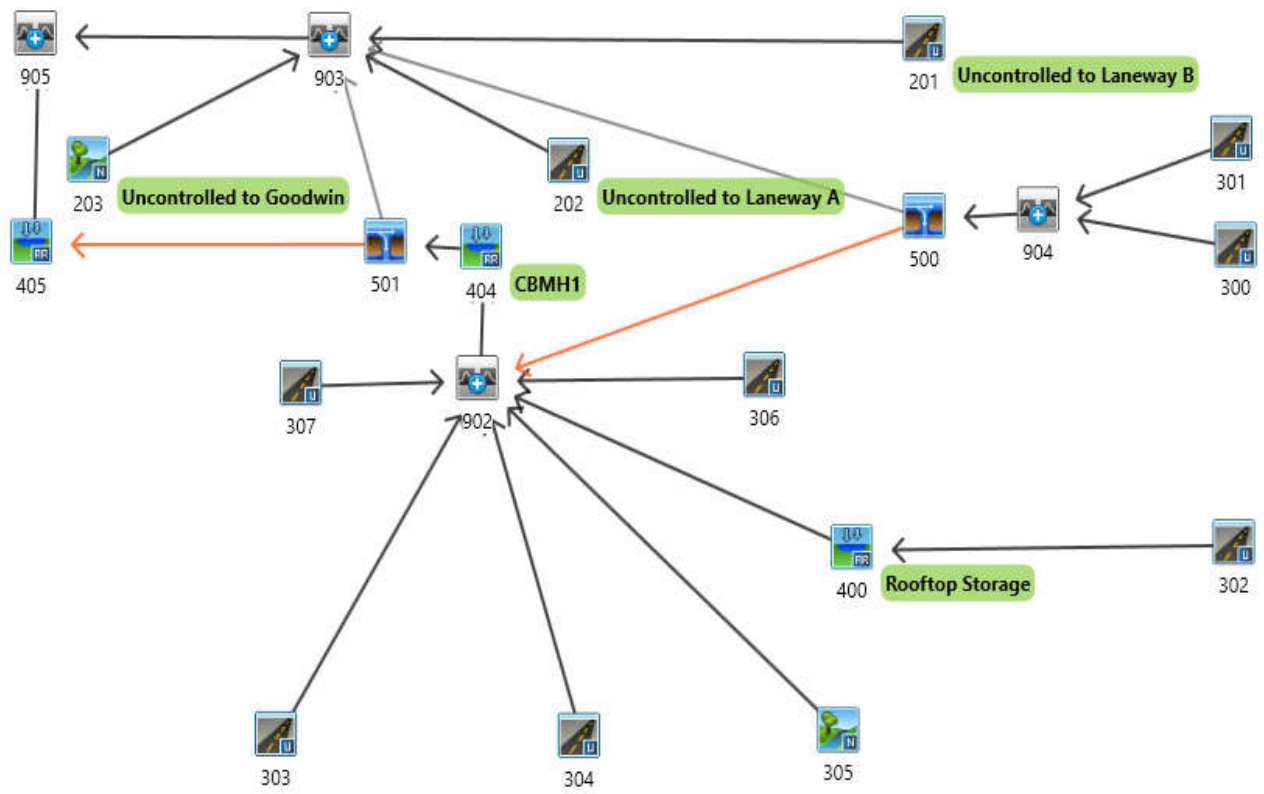
Percent Impervious: 80%

RETURN PERIOD	STORM DISTRIBUTION	PEAK FLOW (m^3/s)	SITE ALLOWABLE RELEASE RATE (33.7%) (m^3/s)
1:2-year	4-Hour Chicago	0.49	0.16
1:5-year	4-Hour Chicago	0.66	0.22
1:10-year	4-Hour Chicago	0.77	0.26
1:25-year	4-Hour Chicago	0.93	0.31
1:50-year	4-Hour Chicago	1.03	0.35
1:100-year	4-Hour Chicago	1.17	0.39
1:2-year	6-Hour SCS	0.39	0.13
1:5-year	6-Hour SCS	0.55	0.19
1:10-year	6-Hour SCS	0.66	0.22
1:25-year	6-Hour SCS	0.80	0.27
1:50-year	6-Hour SCS	0.90	0.30
1:100-year	6-Hour SCS	1.00	0.34
1:2-year	12-Hour SCS	0.39	0.13
1:5-year	12-Hour SCS	0.56	0.19
1:10-year	12-Hour SCS	0.67	0.23
1:25-year	12-Hour SCS	0.81	0.27
1:50-year	12-Hour SCS	0.92	0.31
1:100-year	12-Hour SCS	1.01	0.34
1:2-year	24-Hour SCS	0.42	0.14
1:5-year	24-Hour SCS	0.61	0.21
1:10-year	24-Hour SCS	0.74	0.25
1:25-year	24-Hour SCS	0.90	0.30
1:50-year	24-Hour SCS	1.03	0.35
1:100-year	24-Hour SCS	1.13	0.38

Appendix C: Water Quantity Calculations and Modelling Output

PROJECT	Metro Grocery Store	FILE	421426
		DATE	2022-10-11
SUBJECT	Visual OTTHYMO Schematic	NAME	NHF
	Post-Development Conditions	PAGE	1 OF 1

POST-DEVELOPMENT CONDITIONS



NASHYD

ROUTE PIPE

DUHYD

STANDHYD

ROUTE CHANNEL

DIVERT HYD

ADDHYD

ROUTE RESERVOIR

SHIFTHYD

TATHAM ENGINEERING

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	Structure Quantity Storage	NAME	NHF
		PAGE	1 OF 4

Stage Storage Table — Structure Quantity Storage Volume

ID	CBMH1 Surface	CBMH1
T/G Elev.	266.48	265.99
Inv. Elev.	265.99	264.39
Diameter		1.5
Length		
Width		
Area		1.77

Orifice Control

Orifice Dia. (mm)	290
Orifice Invert (m)	264.39
Orifice Area (m)	0.066
Orifice Coef.	0.63

Orifice Equation
Q = C x A x (2gH)^0.5
Q = flow rate (m^3)
C = constant
A = area of opening (m^2)
H = net head on orifice (m)
g = gravitational

Weir Control

Weir Sill Elev. (m)	266.05	
Bottom Width (m)	7.10	
Side Slope	0	:1

Weir Discharge Calculated per Hydraulic Structures, C.D. Smith, University of Saskatchewan

Elevation	Surface Area (m^2)	Average Surface Area (m^2)	Surface Volume (m^3)	CBMH1 Volume (m^3)	Total Volume (ha-m)
264.39	0.00	0.00	0.00	0.00	0.00000
264.40	0.00	0.00	0.00	0.02	0.00000
264.50	0.00	0.00	0.00	0.19	0.00002
264.60	0.00	0.00	0.00	0.37	0.00004
264.70	0.00	0.00	0.00	0.55	0.00005
264.80	0.00	0.00	0.00	0.72	0.00007
264.90	0.00	0.00	0.00	0.90	0.00009
265.00	0.00	0.00	0.00	1.08	0.00011
265.10	0.00	0.00	0.00	1.25	0.00013
265.20	0.00	0.00	0.00	1.43	0.00014
265.30	0.00	0.00	0.00	1.61	0.00016
265.40	0.00	0.00	0.00	1.78	0.00018
265.50	0.00	0.00	0.00	1.96	0.00020
265.60	0.00	0.00	0.00	2.14	0.00021
265.70	0.00	0.00	0.00	2.31	0.00023
265.80	0.00	0.00	0.00	2.49	0.00025
265.90	0.00	0.00	0.00	2.67	0.00027
266.00	0.60	0.30	0.00	2.83	0.00028
266.10	69.13	34.86	3.84	2.83	0.00067
266.12	88.22	78.68	14.07	2.83	0.00169
266.14	107.32	97.77	28.73	2.83	0.00316
266.16	126.41	116.86	48.60	2.83	0.00514
266.18	145.51	135.96	74.43	2.83	0.00773
266.20	164.60	116.87	98.97	2.83	0.01018
266.25	218.37	191.49	148.76	2.83	0.01516

Orifice Stage (m)	Orifice Discharge (m^3/s)	Weir Stage (m)	Weir Discharge (m^3/s)	Total Discharge (m^3/s)
0.00	0.000	0.00	0.000	0.000
0.00	0.001	0.00	0.000	0.001
0.00	0.009	0.00	0.000	0.009
0.07	0.030	0.00	0.000	0.030
0.17	0.056	0.00	0.000	0.056
0.27	0.077	0.00	0.000	0.077
0.37	0.111	0.00	0.000	0.111
0.47	0.126	0.00	0.000	0.126
0.57	0.139	0.00	0.000	0.139
0.67	0.150	0.00	0.000	0.150
0.77	0.161	0.00	0.000	0.161
0.87	0.171	0.00	0.000	0.171
0.97	0.181	0.00	0.000	0.181
1.07	0.190	0.00	0.000	0.190
1.17	0.199	0.00	0.000	0.199
1.27	0.207	0.00	0.000	0.207
1.37	0.215	0.00	0.000	0.215
1.47	0.223	0.00	0.000	0.223
1.57	0.231	0.05	0.040	0.271
1.59	0.232	0.07	0.068	0.300
1.61	0.234	0.09	0.096	0.330
1.63	0.235	0.11	0.148	0.383
1.65	0.236	0.13	0.214	0.450
1.67	0.238	0.15	0.293	0.531
1.72	0.241	0.20	0.534	0.775

Values in shaded cells have been calculated using partially full orifice outlet control equations (Hydraulic Structures, C.D. Smith, University of Saskatchewan

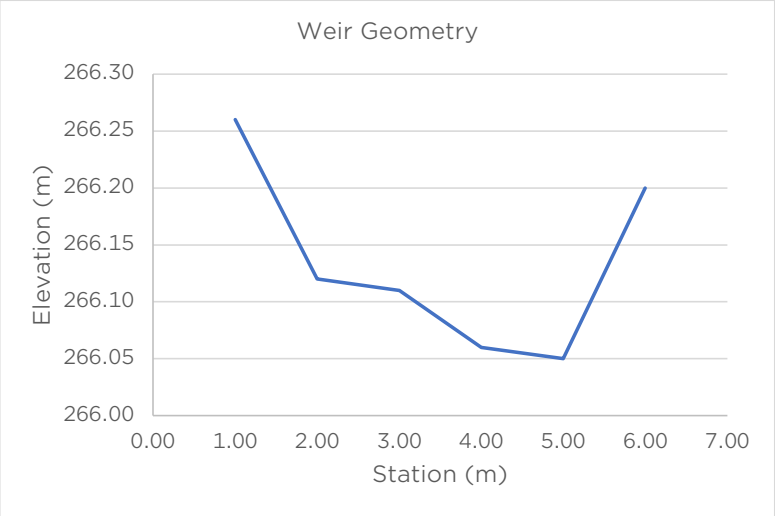
PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	CBMH1 Weir Discharge	NAME	NHF
		PAGE	2 OF 4

CBMH1 Weir Discharge Summary Table

Trapezoidal Broad Crested Weir Discharge Calculated per Hydraulic Structures, C.D. Smith, University of Saskatchewan

Weir Geometry

WEIR STATION (m)	WEIR ELEVATION (m)
0.00	266.26
0.19	266.12
1.59	266.11
4.74	266.06
7.28	266.05
7.50	266.20



Weir Discharge

Elevation (m)	Head (m)	Bottom Width (m)	Right Side Slope (:1)	Left Side Slope (:1)	Section Discharge (m^3/s)	Total Weir Discharge (m^3/s)
266.05	0.00	0.00	0.00	0.00	0.000	0.000
266.06	0.01	0.00	254.00	0.00	0.001	0.001
266.10	0.04	2.54	63.00	0.00	0.039	0.040
266.11	0.05	2.54	63.00	0.00	0.058	0.060
266.12	0.01	5.69	140.00	0.00	0.009	0.068
266.14	0.02	7.09	0.00	0.00	0.028	0.096
266.16	0.04	7.09	0.00	0.00	0.079	0.148
266.18	0.06	7.09	0.00	0.00	0.146	0.214
266.20	0.08	7.09	0.00	0.00	0.225	0.293
266.25	0.13	7.09	0.00	0.00	0.465	0.534

Trapezoidal Broad Crested Weir

Source: Hydraulic Structures, C.D.Smith, University of Saskatchewan

Trapezoidal Weir

The trapezoidal weir is a combination of the rectangular weir and the triangular weir

Enter

W	Weir Bottom Width (m)	2.54
H	Head (m)	0.04
L	Weir Downstream Length	10
S	Side Slope (horizontal):1	63

Rectangular Weir

$$Q = CWH^{3/2}$$

H/L	0.004
C	1.40000

Result

Q Rectangular Weir	Flow (m^3/s)	**0.028448**

Triangular Weir

$$Q = CH^{5/2}\tan(\theta/2)$$

Notch Angle (one side)	89.09061955	degrees
Notch Angle (one side)	1.554924644	radians

$\tan(\theta/2)$ 63.000000

Triangular H/L	0.004
C	1.0500E+00

Result

Q Triangular Weir	Flow (m^3/s)	**0.0212**

Total Rectangular + Triangular Weir

Q Total	**Flow (m^3/s)**	**0.0496**

TATHAM ENGINEERING	Project:	Metro Grocery Store	Designed By:	NHF
	File:	421296	Checked By:	NHF
	Municipality:	City of Barrie	Date:	2022-10-11

Underground Detention Facility Outlet Hydraulics - Partially Full Orifice - CBMH1

Orifice Plate = C x A x (2gH)^0.5 **C= 0.63**

Depth Increment m	Min Elevation m (invert of Control)	Max Elevation Max (Top of Ponding)
0.1	264.39	266.5

Pipe Flowing Partially Full or full Coefficient Mertic = 1, Imperial=1.49	1
Pipe Diameter (m)	0.29
Mannings N Full	0.013
Pipe Slope (m/m)	
Elevation (m)	264.39
Inlet Type: 1= Projecting 2= Flush	1

Water Elevation m	Depth From Min Elev m	Pipe Partially Full Inlet Control (Smith) m^3/s
264.39	0	
264.4	0.01	0.001
264.5	0.11	0.009
264.6	0.21	0.030
264.7	0.31	0.056
264.8	0.41	0.077
264.9	0.51	0.111
265	0.61	0.126
265.1	0.71	0.139
265.2	0.81	0.150
265.3	0.91	0.161
265.4	1.01	0.171
265.5	1.11	0.181
265.6	1.21	0.190
265.7	1.31	0.199
265.8	1.41	0.207
265.9	1.51	0.215
266	1.61	0.223

Inlet Control (Smith) Projecting Inlet
MMF Model: y=(a*b+c*x^d)/(b+x^d)
Coefficient Data:

a =	1.68E-02
b =	1.77E+00
c =	3.06E+00
d =	2.27E+00

Inlet Control (Smith) Flush Inlet
MMF Model: y=(a*b+c*x^d)/(b+x^d)
Coefficient Data:

a =	-1.08E-03
b =	2.30E+00
c =	3.95E+00
d =	2.08E+00

Parking Lot Storage
Detailed Visual OTTHYMO Output

```
************************************************
** SIMULATION:Run 01 - 2yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.418      0.178      1.33      31.88
   OUTFLOW: ID= 1 (  0404)      1.418      0.178      1.33      31.88

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=100.07
                  TIME SHIFT OF PEAK FLOW         (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0002

     **** WARNING : HYDROGRAPH PEAK WAS NOT REDUCED.
                    CHECK OUTFLOW/STORAGE TABLE  OR REDUCE DT.
-------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 02 - 5yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.407      0.232      1.33      44.29
   OUTFLOW: ID= 1 (  0404)      1.407      0.230      1.33      44.29

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.20
                  TIME SHIFT OF PEAK FLOW         (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0003

-------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 03 - 10yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.401      0.269      1.33      52.73
   OUTFLOW: ID= 1 (  0404)      1.401      0.267      1.33      52.73

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.14
                  TIME SHIFT OF PEAK FLOW         (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0007

-------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 04 - 25yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.393      0.319      1.33      63.45
   OUTFLOW: ID= 1 (  0404)      1.393      0.296      1.33      63.45

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 92.85
                  TIME SHIFT OF PEAK FLOW         (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0017

-------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 05 - 50yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.389      0.350      1.33      71.04
   OUTFLOW: ID= 1 (  0404)      1.389      0.313      1.37      71.04

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 89.60
                  TIME SHIFT OF PEAK FLOW         (min)=  2.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0025

-------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 06 - 100yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
```

```
   INFLOW : ID= 2 (  0902)      1.383      0.395      1.33      78.76
   OUTFLOW: ID= 1 (  0404)      1.383      0.343      1.37      78.76

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 86.91
                    TIME SHIFT OF PEAK FLOW         (min)=  2.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0038

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 07 - 2yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.424      0.141      3.23      35.24
   OUTFLOW: ID= 1 (  0404)      1.424      0.140      3.23      35.24

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.93
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0001

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 08 - 5yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.412      0.192      3.23      49.23
   OUTFLOW: ID= 1 (  0404)      1.412      0.192      3.23      49.23

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=100.01
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0002

     **** WARNING : HYDROGRAPH PEAK WAS NOT REDUCED.
                     CHECK OUTFLOW/STORAGE TABLE  OR REDUCE DT.
--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 09 - 10yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.405      0.227      3.23      58.75
   OUTFLOW: ID= 1 (  0404)      1.405      0.226      3.23      58.75

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.60
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0003

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 10 - 25yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.398      0.271      3.23      70.77
   OUTFLOW: ID= 1 (  0404)      1.398      0.270      3.23      70.77

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.56
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0007

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 11 - 50yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.394      0.303      3.23      79.42
   OUTFLOW: ID= 1 (  0404)      1.394      0.293      3.23      79.43

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 96.49
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0015

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 12 - 100yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
```

```
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.390      0.334      3.23      87.77
   OUTFLOW: ID= 1 (  0404)      1.390      0.314      3.27      87.77

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 94.11
                    TIME SHIFT OF PEAK FLOW         (min)=  2.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0025

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 13 - 2yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.439      0.140      6.23      41.61
   OUTFLOW: ID= 1 (  0404)      1.439      0.140      6.23      41.61

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.95
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0001

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 14 - 5yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.429      0.193      6.23      58.69
   OUTFLOW: ID= 1 (  0404)      1.429      0.193      6.23      58.69

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=100.00
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0002

     **** WARNING : HYDROGRAPH PEAK WAS NOT REDUCED.
                     CHECK OUTFLOW/STORAGE TABLE  OR REDUCE DT.
--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 15 - 10yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
```

```
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.423      0.230      6.23      70.32
   OUTFLOW: ID= 1 (  0404)      1.423      0.229      6.23      70.32

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.57
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0003

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 16 - 25yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.417      0.275      6.23      84.86
   OUTFLOW: ID= 1 (  0404)      1.417      0.272      6.23      84.86

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 98.91
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0007

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 17 - 50yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.413      0.309      6.23      95.65
   OUTFLOW: ID= 1 (  0404)      1.413      0.297      6.23      95.65

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 96.16
                    TIME SHIFT OF PEAK FLOW         (min)=  0.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0017

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 18 - 100yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
```

```
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.410      0.339      6.23     105.08
   OUTFLOW: ID= 1 (  0404)      1.410      0.318      6.27     105.10

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 93.80
                   TIME SHIFT OF PEAK FLOW         (min)=  2.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0027

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 19 - 2yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.450      0.151     12.23      48.89
   OUTFLOW: ID= 1 (  0404)      1.450      0.151     12.23      48.89

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.97
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0001

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 20 - 5yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.442      0.211     12.23      69.75
   OUTFLOW: ID= 1 (  0404)      1.442      0.211     12.23      69.75

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.92
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0003

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 21 - 10yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.438      0.252     12.23      83.90
   OUTFLOW: ID= 1 (  0404)      1.438      0.250     12.23      83.90

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 99.54
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0005

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 22 - 25yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.432      0.303     12.23     101.46
   OUTFLOW: ID= 1 (  0404)      1.432      0.292     12.23     101.46

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 96.38
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0015

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 23 - 50yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.429      0.341     12.23     114.83
   OUTFLOW: ID= 1 (  0404)      1.429      0.319     12.27     114.90

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 93.51
                   TIME SHIFT OF PEAK FLOW         (min)=  2.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0027
```

```
--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 24 - 100yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0404)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1990      0.0002
                          0.0300     0.0000   |   0.2070      0.0003
                          0.0560     0.0000   |   0.2150      0.0003
                          0.0770     0.0001   |   0.2230      0.0003
                          0.1110     0.0001   |   0.2710      0.0007
                          0.1390     0.0001   |   0.3000      0.0017
                          0.1500     0.0001   |   0.3300      0.0032
                          0.1610     0.0002   |   0.3830      0.0051
                          0.1710     0.0002   |   0.4500      0.0077
                          0.1810     0.0002   |   0.5310      0.0102

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0902)      1.427      0.372     12.23     125.42
   OUTFLOW: ID= 1 (  0404)      1.427      0.344     12.27     125.42

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 92.58
                    TIME SHIFT OF PEAK FLOW         (min)=  2.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0038

--------------------------------------------------------------------------------
```

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	SWMF #1 Stage Storage Summary	NAME	NHF
		PAGE	1 OF 2

Stage Storage Table — Underground Quantity Storage Volume

Unit: Layfield Group Limited Aquabox HP Module
System Footprint: 128.38 m^2
Height of Module: 2.4
Void Ratio per module: 96.29%
Void Ratio of stone: 40%

Elevation	Elevation Reference	Incremental Depth (m)	Incremental Volume (m^3)	Accumulative Volume - below outlet (m^3)	Accumulate Volume - above outlet (m^3)
262.79	Base of Stone	0.00	0.00	0.00	-
262.90	Base of Module	0.11	5.65	5.65	-
262.95	Outlet Invert	0.05	5.78	11.43	0.00
263.00		0.05	5.63	-	5.63
263.10		0.10	11.25	-	16.88
263.20		0.10	11.25	-	28.13
263.30		0.10	11.25	-	39.38
263.40		0.10	11.25	-	50.63
263.50		0.10	11.25	-	61.88
263.60		0.10	11.25	-	73.13
263.70		0.10	11.25	-	84.38
263.80		0.10	11.25	-	95.63
263.90		0.10	11.25	-	106.88
264.00		0.10	11.25	-	118.13
264.10		0.10	11.25	-	129.38
264.20	Outlet Invert	0.10	11.25	-	140.63
264.30		0.10	11.25	-	151.88
264.40		0.10	11.25	-	163.13
264.50		0.10	11.25	-	174.38
264.60		0.10	11.25	-	185.63
264.70		0.10	11.25	-	196.88
264.80		0.10	11.25	-	208.13
264.90		0.10	11.25	-	219.38
265.00		0.10	11.25	-	230.63
265.10		0.10	11.25	-	241.88
265.20		0.10	11.25	-	253.13
265.30	Top of Module	0.10	11.25	-	264.38

Note: Incremental volume above outlet calculated per incremental depth, footprint area of system and applicable void ratio for Aquabox HP module, stone storage not included.

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	SWMF#1 Stage Storage Discharge Summary	NAME	NHF
		PAGE	2 OF 2

Stage Discharge Table — Summary Table

Orifice Control

Orifice Dia. (mm)	230
Orifice Invert (m)	262.95
Orifice Area (m)	0.042
Orifice Coef.	0.63

Orifice Equation

Q = C x A x (2gH)^0.5

Q = flow rate (m^3)

C = constant

A = area of opening (m^2)

H = net head on the orifice

g = Acceleration due to gravity

Values in shaded cells have been calculated using partially full orifice outlet control equations (Hydraulic Structures,C.D. Smith, University of Saskatchewan

Elevation	Head (m)	Orifice Discharge (m^3/s)	Total Discharge (m^3/s)	Total Storage (ha-m)
262.95	0.00	0.000	0.000	0.0000
263.00	0.00	0.002	0.002	0.0006
263.10	0.04	0.014	0.014	0.0017
263.20	0.14	0.032	0.032	0.0028
263.30	0.24	0.056	0.056	0.0039
263.40	0.34	0.067	0.067	0.0051
263.50	0.44	0.076	0.076	0.0062
263.60	0.54	0.085	0.085	0.0073
263.70	0.64	0.092	0.092	0.0084
263.80	0.74	0.099	0.099	0.0096
263.90	0.84	0.106	0.106	0.0107
264.00	0.94	0.112	0.112	0.0118
264.10	1.04	0.118	0.118	0.0129
264.20	1.14	0.124	0.124	0.0141
264.30	1.24	0.129	0.129	0.0152
264.40	1.34	0.134	0.134	0.0163
264.50	1.44	0.139	0.139	0.0174
264.60	1.54	0.144	0.144	0.0186
264.70	1.64	0.148	0.148	0.0197
264.80	1.74	0.153	0.153	0.0208
264.90	1.84	0.157	0.157	0.0219
265.00	1.94	0.161	0.161	0.0231
265.10	2.04	0.165	0.165	0.0242
265.20	2.14	0.169	0.169	0.0253
265.30	2.24	0.173	0.173	0.0264

TATHAM ENGINEERING	Project:	Metro Grocery Store	Designed By:	NHF
	File:	421296	Checked By:	NHF
	Municipality:	City of Barrie	Date:	2022-10-11

Underground Detention Facility Outlet Hydraulics - Partially Full Orifice - Underground Storage Chamber

Orifice Plate = C x A x (2gH)^0.5 **C= 0.63**

Depth Increment m	Min Elevation m (invert of Control)	Max Elevation Max (Top of Ponding)
0.1	262.95	264.02

Pipe Flowing Partially Full or full Coefficient Metric = 1, Imperial=1.49	1
Pipe Diameter (m)	0.23
Mannings N Full	0.013
Pipe Slope (m/m)	
Elevation (m)	262.95
Inlet Type: 1= Projecting 2= Flush	1

Inlet Control (Smith) Projecting Inlet MMF Model: y=(a*b+c*x^d)/(b+x^d) Coefficient Data:	
a =	1.68E-02
b =	1.77E+00
c =	3.06E+00
d =	2.27E+00

Inlet Control (Smith) Flush Inlet MMF Model: y=(a*b+c*x^d)/(b+x^d) Coefficient Data:	
a =	-1.08E-03
b =	2.30E+00
c =	3.95E+00
d =	2.08E+00

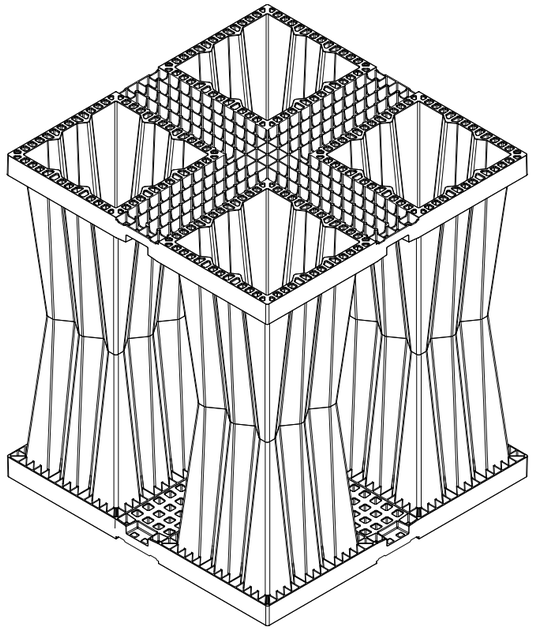
Water Elevation m	Depth From Min Elev m	Pipe Partially Full Inlet Control (Smith) m^3/s
262.95	0	
263	0.05	0.002
263.1	0.15	0.014
263.2	0.25	0.032
263.3	0.35	0.056
263.4	0.45	0.067
263.5	0.55	0.076
263.6	0.65	0.085
263.7	0.75	0.092
263.8	0.85	0.099
263.9	0.95	0.106
264	1.05	0.11

LAYFIELD

AQUABOX MODULE LAYOUT DRAWINGS

METRO SWM TANK-1

Barrie, ON



Pages:

Cover Page	01 OF 07
Module Layout	02 OF 07
TYP. Construction Details	03 OF 07
TYP. Pipe Penetration Details	04 OF 07
TYP. Isolator Row Details	05 OF 07
Supplementary Notes	06 OF 07
Supplementary Notes	07 OF 07

REFER TO AQUABOX INSTALLATION INSTRUCTIONS

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		264.38 m^3
Module Storage Volume		264.38 m^3
Stone Storage Volume		0.00 m^3
System Footprint		128.38 m^2
Estimated Geotextile Fabric	NuBarrier	663 m^2
Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1

Barrie, ON

REV	Record of Changes	Date	By
0	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720

Page Name: Cover Page

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 14OCT2022

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE AQUABOX SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH GEOPLAST'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet:

01 OF 07

ANSI B Size Page (Horizontal)

Material Quantity (AQUABOX HP)

AquaBox HP	1212
Sidewall Grid HP	174
Top Cap HP	816
Single Joint	758
Double Joint	782

Material Quantity (AQUABOX CUBE HP)

AquaBox Cube HP	24
Sidewall Grid Cube HP	0
Circular Cap D400 HP	2
Surface Grate	2

Elevations

Leveling Stone Bottom	262.7984
Module Invert	262.9000
Top of Module	265.3000
Top of Stone Backfill	265.6048
Minimum Finished Grade	265.9096
Maximum Finished Grade	267.1000

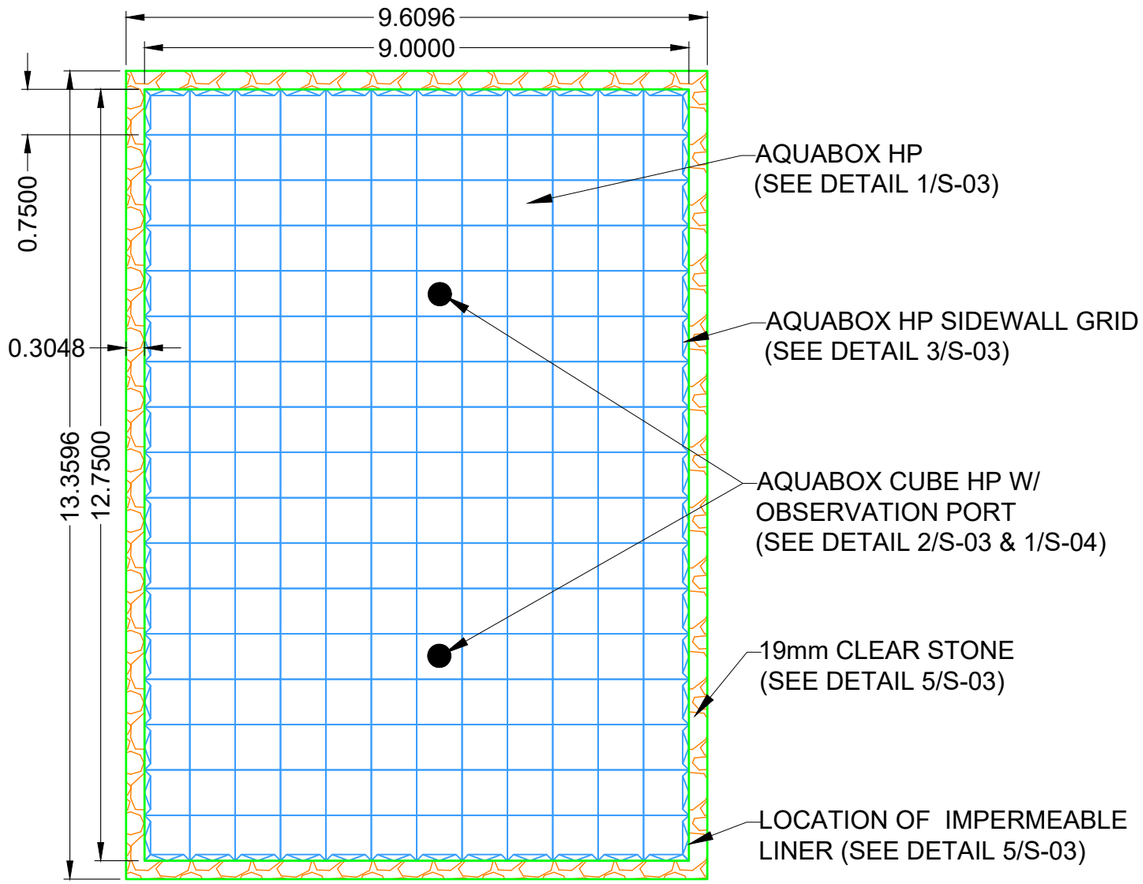
Contractor to confirm that quantities shipped to site match those listed above. Please report any discrepancy or damage to Layfield immediately.

GROUNDWATER LEVEL REVIEW	
Groundwater Elevation (as provided by xxx)	N/A
Has the tank design included a review for uplift pressure due to the groundwater level?	No
Is geogrid required for uplift pressure?	No

NOTES:

a. All dimensions are measured in meters unless noted otherwise.
b. Reference Aquabox standard drawings and notes for detailed information.
c. Reference current Aquabox Module installation instructions for proper installation practices.
https://www.geoplastglobal.com/en/downloads/aquabox
d. Engineer of record to confirm conformance to manufacturer's allowable proximity to other structures and slopes.
e. All inlet and pipe locations and designs by others.
f. The sub-grade and side backfill needs to be compacted to 97%, unless noted otherwise.
g. During and after installation, the AquaBox Module area should be clearly marked and roped off to prevent unauthorized construction and equipment trafficking over the modules.
h. Top of Ground water is to be maintained 610 mm (2 ft) below the module to prevent buoyancy, unless otherwise noted by engineer.
i. The quantities related to stone and geosynthetics are estimated values as the roll size, overlaps, waste, ect. may vary.
j. Materials must be stored in a manner to prevent prolonged exposure to UV light.

1 S-02 NOTES



ACTIVE STORAGE ABOVE ELEV 262.95 (EXCLUDING STONE)= 264.38m^3

2 S-02 MODULE LAYOUT SCALE: NTS

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		264.38 m^3
Module Storage Volume		264.38 m^3
Stone Storage Volume		0.00 m^3
System Footprint		128.38 m^2
Estimated Geotextile Fabric	NuBarrier	663 m^2
Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1
Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720

Page Name: Module Layout

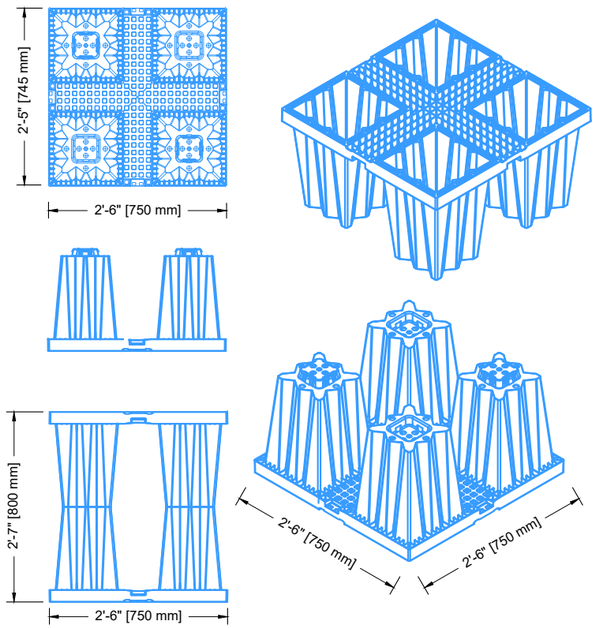
Drawn by: LP | Checked By: AW

Scale: NTS | Date: 14OCT2022

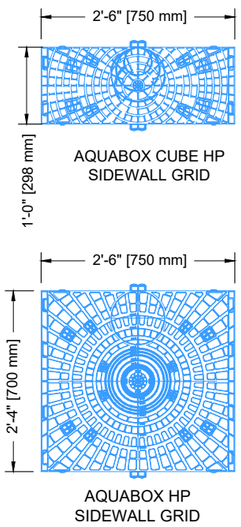
THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE AQUABOX SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH GEOPLAST'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

Sheet:

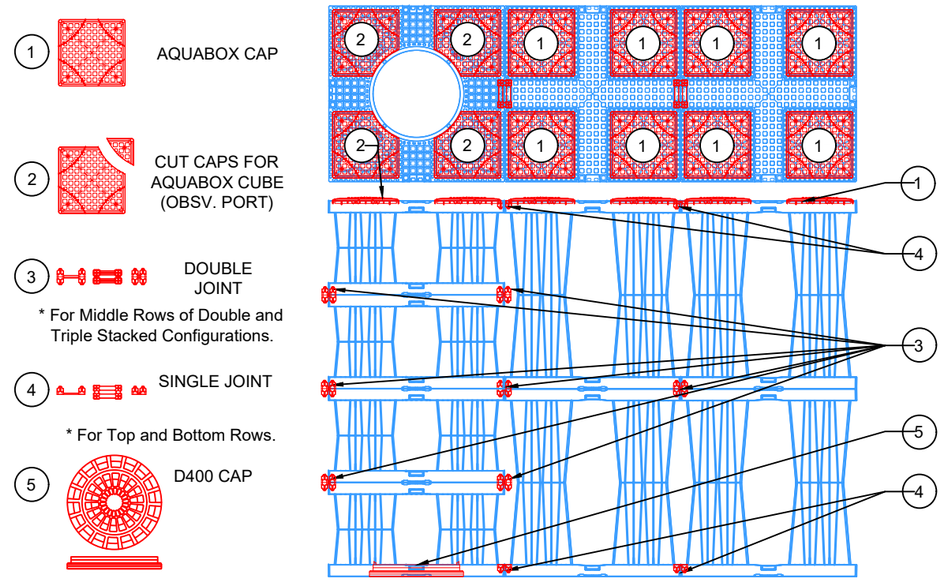
ANSI B Size Page (Horizontal)



1 S-03 AQUABOX HP

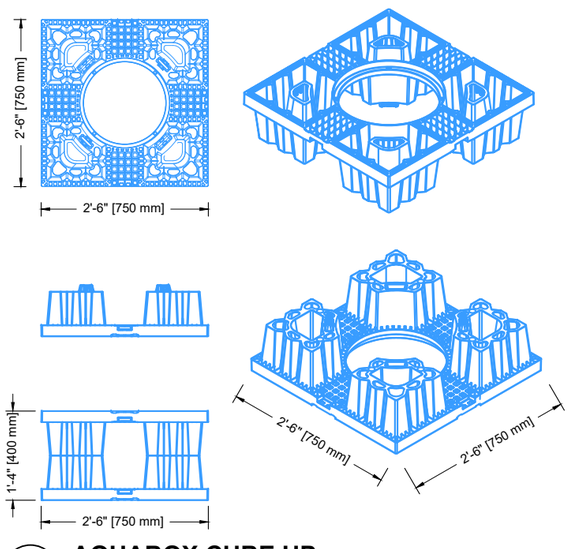


3 S-03 AQUABOX SIDEWALL GRID

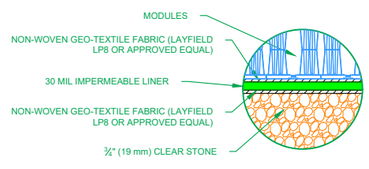


NOTE: THIS DETAIL DEPICTS ONLY THE LOCATION OF AQUABOX ACCESSORIES (CAPS/ CONNECTORS) AND DOES **NOT** REPRESENT THE PROJECT-SPECIFIC STACKING CONFIGURATION. REFER TO DETAIL 5/S-03 FOR STACKING CONFIGURATION AND CROSS-SECTIONAL DETAILS.

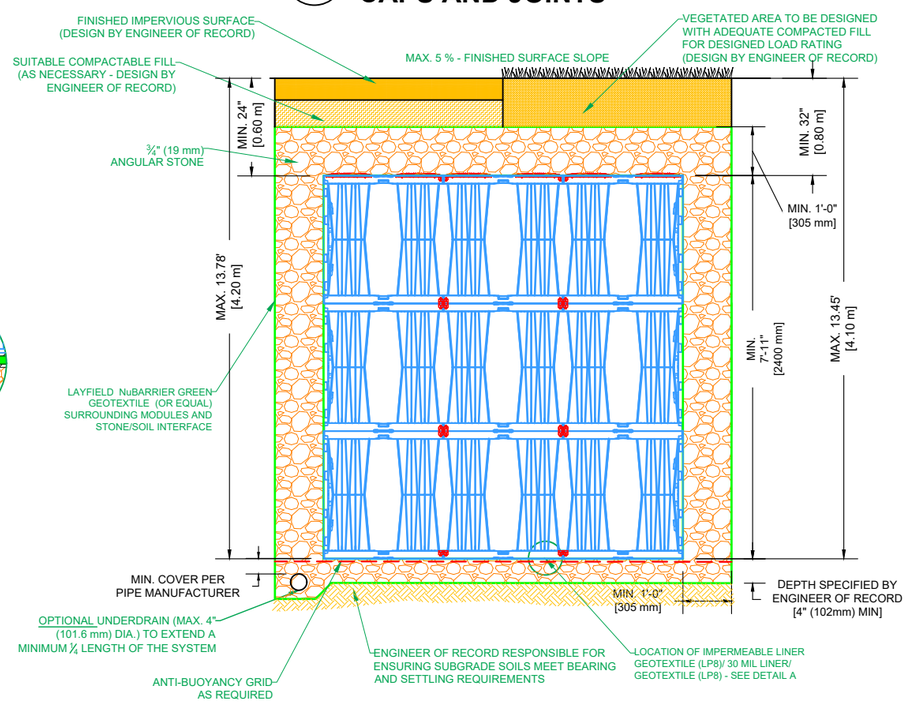
4 S-03 AQUABOX ACCESSORIES CAPS AND JOINTS



2 S-03 AQUABOX CUBE HP



DETAIL "A"
IMPERMEABLE LINER
TOP, SIDES AND BOTTOM



5 S-03 TYPICAL SYSTEM CROSS SECTION

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		264.38 m^3
Module Storage Volume		264.38 m^3
Stone Storage Volume		0.00 m^3
System Footprint		128.38 m^2
Estimated Geotextile Fabric	NuBarrier	663 m^2
Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1
Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
△1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720

Page Name: TYP. Construction Details

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 14OCT2022

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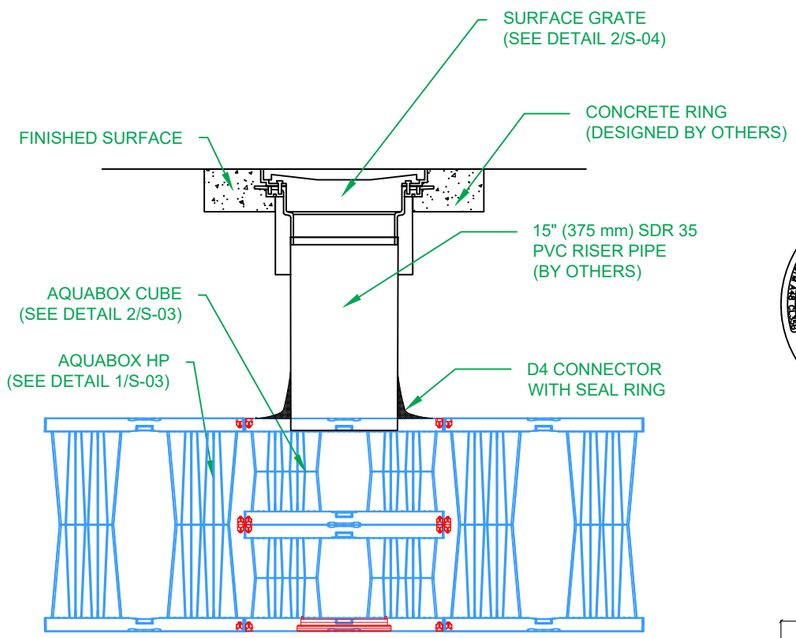
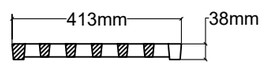
Sheet:

ANSI B Size Page (Horizontal)

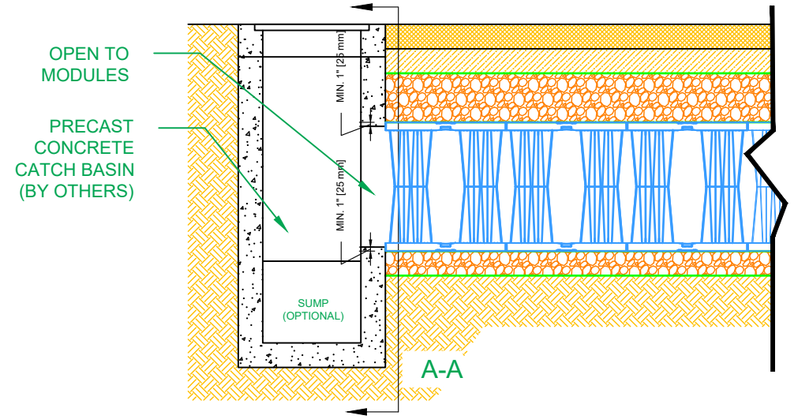


PLAN VIEW

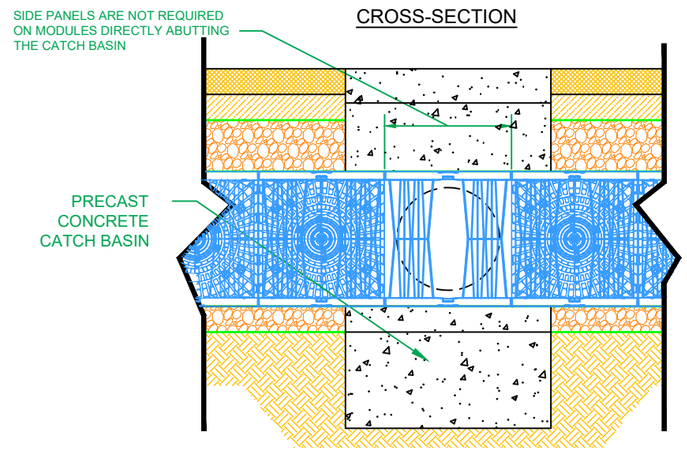


GRATE SECTION

FRAME SECTION



CROSS-SECTION



SECTION A-A

INSTALLATION SEQUENCE:

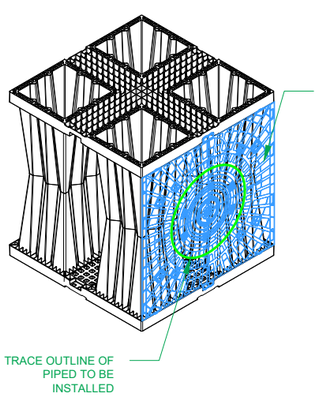
1. D4 CONNECTOR WITH SEAL RING
2. 15" (375 mm) SDR 35 PVC PIPE
3. SURFACE GRATE AT FINISHED GRADE

1 S-04 AQUABOX OBSERVATION PORT

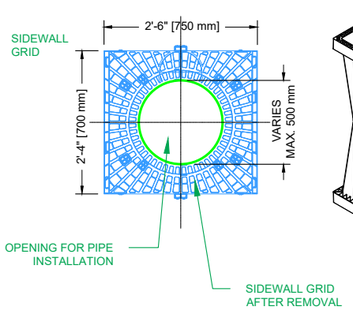
2 S-04 OBSERVATION PORT SURFACE GRATE

3 S-04 AQUABOX CATCHBASIN ABUTMENT (IF APPLICABLE)

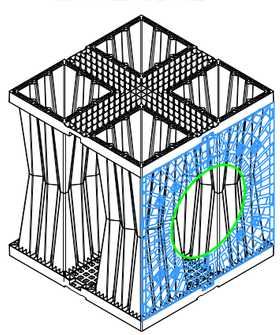
STEP 1:
LOCATE AND MARK OPENING



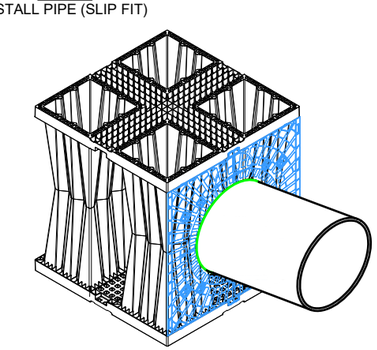
STEP 2:
REMOVE SIDEWALL FROM MODULES AND CUT OPENING



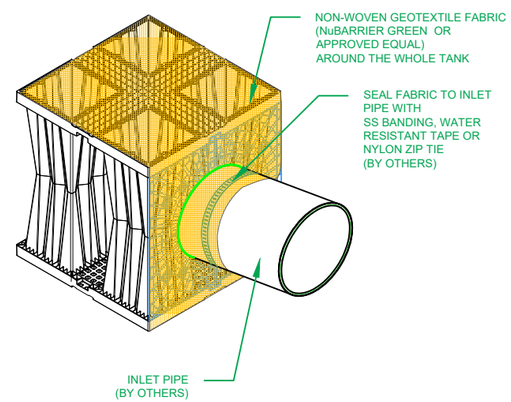
STEP 3:
REINSTALL SIDEWALL



STEP 4:
INSTALL PIPE (SLIP FIT)



STEP 5:
WRAP AND SECURE GEOTEXTILE



4 S-04 PIPE CONNECTION DETAIL

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		264.38 m^3
Module Storage Volume		264.38 m^3
Stone Storage Volume		0.00 m^3
System Footprint		128.38 m^2
Estimated Geotextile Fabric	NuBarrier	663 m^2
Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1
Barrie, ON

REV	Record of Changes	Date	By
0	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720

Page Name: TYP. Pipe Penetration Details

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 14OCT2022

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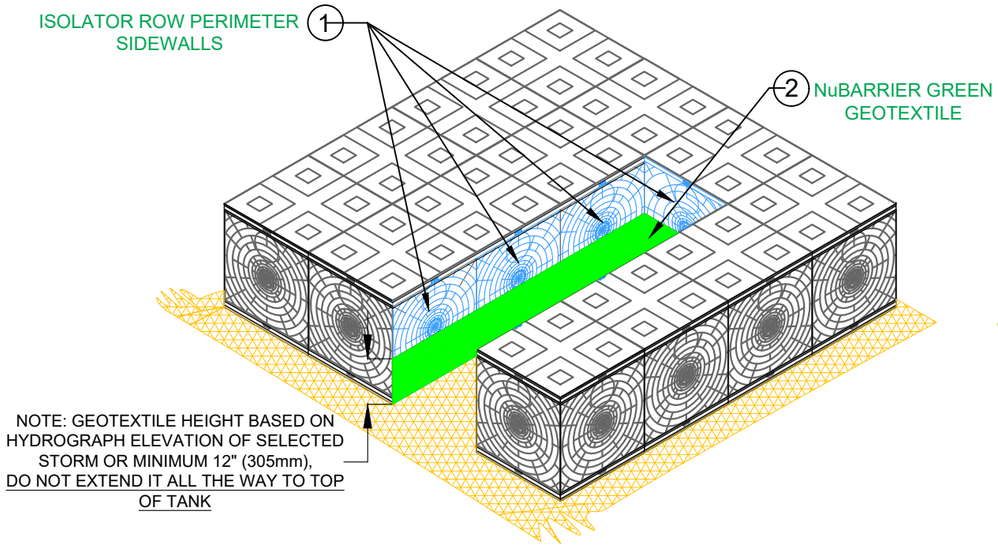
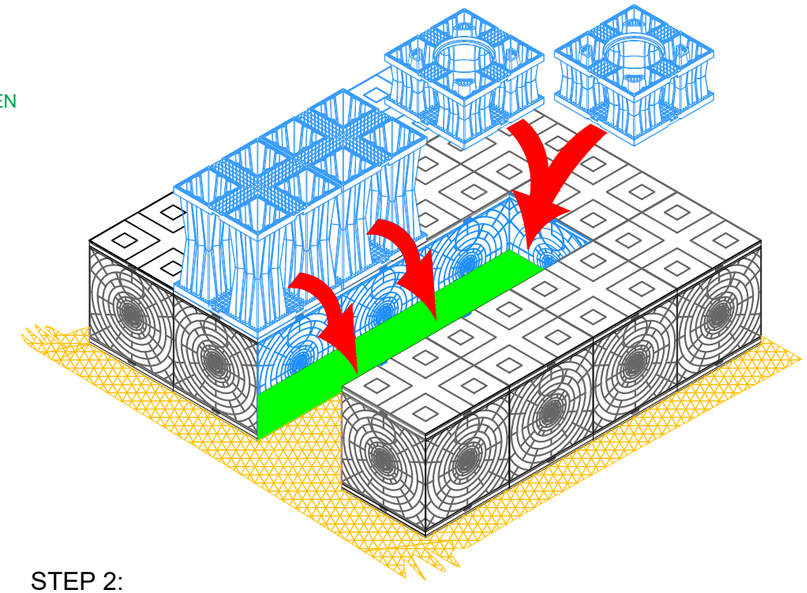
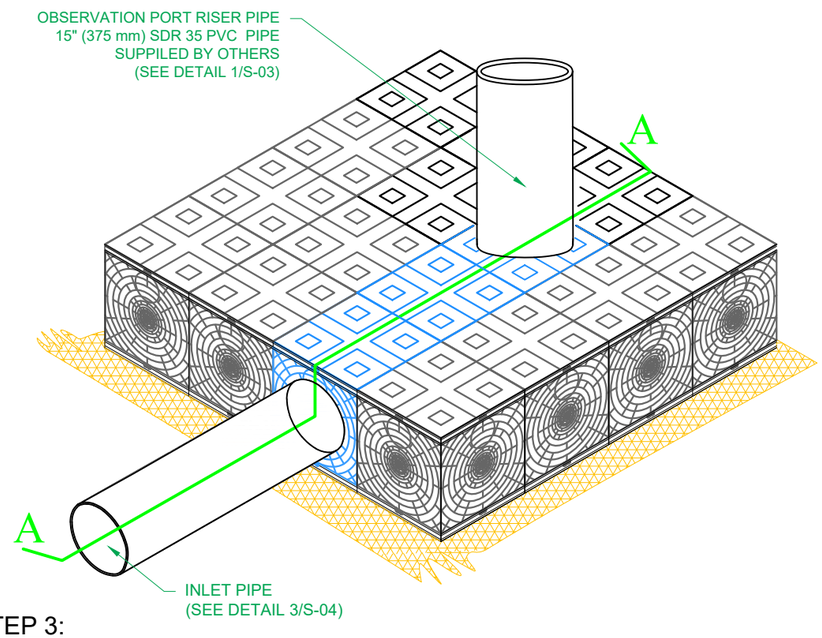


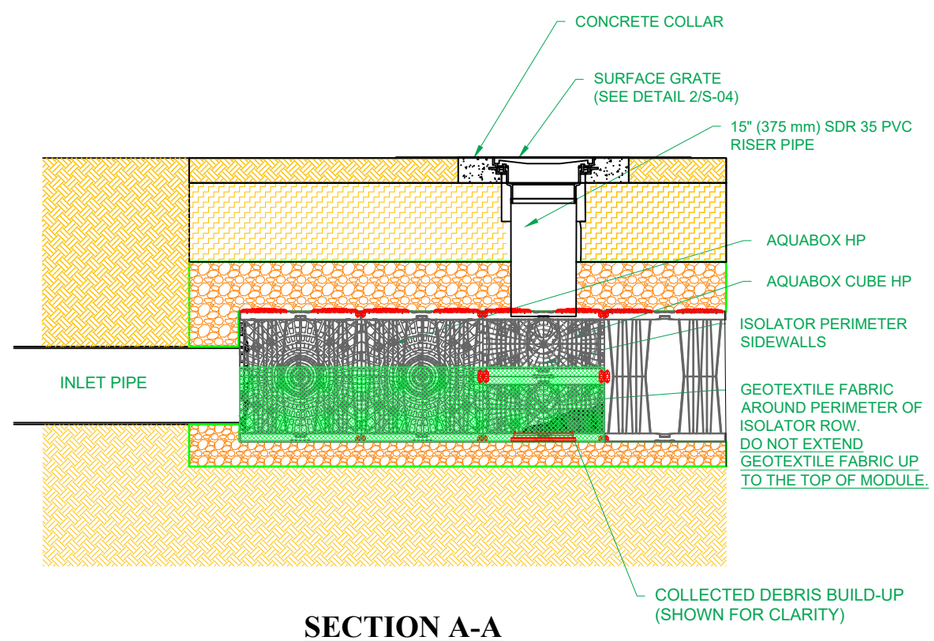
STEP 1:
INSTALL ISOLATER ROW PERIMETER SIDEWALLS AND ATTACH GEOTEXTITLE TO THEM.



STEP 2:
PLACE AQUABOX HP AND AQUABOX HP CUBE MODULES IN THE ISOLATER ROW AS PER MODULE LAYOUT 2/S-02



STEP 3:
INSTALL INLET PIPE AS PER DETAIL 4/S-04 AND CONNECTOR PIPE FOR OBSERVATION PORT AS PER DETAIL 1/S-04



SECTION A-A

1
S-05
ISOLATOR ROW INSTALLATION DETAIL

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		264.38 m^3
Module Storage Volume		264.38 m^3
Stone Storage Volume		0.00 m^3
System Footprint		128.38 m^2
Estimated Geotextile Fabric	NuBarrier	663 m^2
Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1
Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720
Page Name: TYP. Isolater Row Details
Drawn by: LP | Checked By: AW
Scale: NTS | Date: 14OCT2022

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ANSI B Size Page (Horizontal)

General Conditions

- Review installation procedures and coordinate the installation with other construction activities, such as grading, excavation, utilities, construction access, erosion control, etc.
- Engineered Contract Drawings supersede all provided documentation, as the information furnished in this document is based on a typical installation.
- Coordinate the installation with the manufacturer's representative/distributor to be on-site to review start-up procedures and installation instructions.
- Components shall be unloaded, handled and stored in an area protected from traffic and in a manner to prevent damage.
- Assembled modules may be walked on, but vehicular traffic is prohibited until backfilled per the Manufacturer's requirements. Protect the installation against damage with highly visible construction tape, fencing, or other means until construction is complete.
- Ensure all construction occurs in accordance with Federal, Provincial and Local Laws, Ordinances, Regulations, and Safety Requirements.
- Extra care and caution should be taken when temperatures are at or below -5.0° C.

NOT FOR CONSTRUCTION

These drawings shall not be used for construction until they have been reviewed for all design aspects (structural, geotechnical, stormwater) and approved by the Engineer of Record for the Project.

It is the Buyer's responsibility to ensure that the design into which the Product will be used has been approved by the Engineer of Record (not Layfield) with a review that may include, but not be limited to, Inlet and outlet configurations including inverts and pipe connections, storage volume, system footprint, Aquabox elevations including cover soil requirements, and proximity to structures and slopes.

Site design/engineering elements may include but not be limited to the following:

- Review elevations and if necessary adjust grading to ensure the chamber cover requirements are met.
- Evaluating site-specific information on soil conditions and/or bearing capacity.
- Assessing the bearing resistance (allowable bearing capacity) of the subgrade soils and the depth of foundation stone with consideration for the range of expected soil moisture conditions.

1.0 Basin Excavation

1. Stake out and excavate to elevations per approved plans. Excavation Requirements:
   a. Sub-grade excavation must be a minimum of 4" (102 mm) below the designed AquaBox Module invert.
   b. The excavation should extend a minimum of 12" (305 mm) beyond the AquaBox dimensions in each length and width (an additional 24" [610 mm] in total length and total width) to allow for adequate placement of side backfill material.
   c. Remove objectionable material encountered within the excavation, including protruding material from the walls.
   d. Furnish, install, monitor, and maintain excavation support (e.g., shoring, bracing, trench boxes, etc.) as required by Federal, Provincial and Local Laws, Ordinances, Regulations, and Safety Requirements.

2.0 Sub-Grade Requirements

1. Sub-grade shall be unfrozen, level (plus or minus 1%), and free of lumps, or debris with no standing water, mud or muck. Do not use materials nor mix with materials that are frozen and/or coated with ice or frost.
2. Unstable, unsuitable, and/or compromised areas should be brought to the Engineer's attention and mitigating efforts determined prior to compacting the sub-grade.
3. Sub-grade must be compacted to 97% Standard Proctor Density or as approved by the Engineer of Record. If code requirements restrict subgrade compaction, it is the requirement of the geotechnical engineer to verify that the bearing capacity and settlement criteria for support of the system are met.

* The Engineer of Record shall confirm minimum soil bearing capacity required based on Load Rating and top cover depth. Minimum soil bearing capacity is required so that settlements are less than 1" through the entire sub-grade and do not exceed long-term 1/2" differential settlement between any two adjacent units within the system. Sub-grade must be designed to ensure soil bearing capacity is maintained throughout all soil saturation levels.

3.0 Leveling Bed Installation

1. Install geotextile fabric and/or liner material, as specified.
   a. Geotextile fabric shall be placed per the manufacturer's recommendations.
   b. Additional material to be utilized for wrapping above the system must be protected from damage until use.
2. After the geotextile is secured, place a minimum 4" (102 mm) Leveling Bed.
   a. Material should be a 3/4" (19 mm) angular stone meeting AASTHO #56, 57, 67, 68 Material specifications.
   b. Material should be raked free of voids, lumps, debris, sharp objects, and plate vibrated to a level with a maximum 1% slope.
3. Correct any unsatisfactory conditions.

4.0 AquaBox Module Assembly and Placement

1.0 AquaBox Assembly

AquaBox modules are delivered to the site as palletized components requiring simple assembly. No special equipment, tools or bonding agents are required; only a rubber mallet. The modules can be pre-assembled either inside or outside the trench. The pre-assembled modules must then be organized according to the design specifications.

ASSEMBLY INSTRUCTIONS:

1. Each AquaBox features plug and socket connections which makes assembling the modules quick and easy. Simply lay one element on the ground and join it to another by applying some pressure on the top.

GENERAL NOTES:

- Remove packaging material and check for any damage. Report any damaged components to an AquaBox Distributor or Layfield personnel.
- AquaBox components are backed by a 50 year warranty when installed per the manufacturer's recommendations.

2.0 AquaBox Placement

1. Install geotextile fabric and/or liner material, as specified.
   a. Geotextile fabric shall be placed per the manufacturer's recommendations.
   b. Additional material to be utilized for wrapping above the system must be protected from damage until use.
2. Mark the footprint of the modules for placement.
   a. Ensure module perimeter outline is square or similar prior to Module placement.
   b. Care should be taken to note any connections, ports or other irregular units to be placed.
3. Install the individual modules by hand, as detailed below.
   a. The modules should be installed as shown in the AquaBox submittal drawings. Place AquaBox Cubes at the location of observation ports.
   b. Modules are connected horizontally to adjacent modules with Single or Double Joints.
   c. Use Single Joints for Bottom and Top rows while Double Joints are used for middle rows in Double or Triple stacking configuration.
   d. For double/ triple stack configurations:
      i. Use the Single Joints for the first bottom row.
      ii. Install Double Joints on all the middle rows.
      iii. Place the upper module directly on top of the bottom module in the same direction.

LAYFIELD
117 Basaltic Rd,
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Ph: (905) 761-9123
www.layfieldgroup.com

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System Footprint		128.38 m^2
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Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1

Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
△1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720

Page Name: Supplementary Notes

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 14OCT2022

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4. Install the modules to completion, taking care to avoid damage to the geotextile and/or liner material.
5. Once all the modules have been placed, Install SIDEWALLS on the perimeter and CAPS on the top.
6. Locate any ports or other penetration of the AquaBox.
   a. Install ports/penetrations in accordance with the approved submittals, contract documents, and manufacturer's recommendations.
6. Upon completion of module installation, wrap the modules in geotextile fabric and/or liner.
   a. Geotextile fabric shall be wrapped and secured per the manufacturer's recommendations.
   b. Seal any ports/penetrations per the Manufacturer's requirements

Notes:

- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations

6.0 Side Backfill

1. Inspect all geotextiles, ensuring that no voids or damage exists; which will allow sediment into the AquaBox system.
2. Adjust the stone/soil interface geotextile along the side of the native soil to ensure the geotextile is taught to the native soil.
3. Once the geotextile is secured, begin to place the Side Backfill.
   a. Material should be a 3/4" (19 mm) angular stone meeting AASTHO #56, 57, 67, 68 Material specifications.
   b. Backfill sides "evenly" around the perimeter without exceeding single 12" (305 mm) lifts.
   c. Place material utilizing an excavator, dozer, or conveyor boom.
   d. Utilize a plate vibrator to settle the stone and provide uniform distribution.

Notes:

- Do not apply vehicular load to the modules during placement of side backfill. All material placement should occur with equipment located on the native soil surrounding the system.
- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations

7.0 Top Backfill (Stone)

1. Begin to place the Top Backfill.
   a. Material should be a 3/4" (19 mm) angular stone meeting AASTHO #56, 57, 67, 68 Material specifications.
   b. Place material utilizing an excavator, dozer, or conveyor boom and use a walk-behind plate vibrator to settle the stone and provide even distribution.

DO NOT DRIVE ON THE MODULES WITHOUT REQUIRED MINIMUM COVER.

2. Upon completion of Top Backfilling, wrap the system in geotextile fabric and/or liner per the manufacturer's recommendations.
3. Install metallic tape around the perimeter of the system to mark the area for future utility detection.

Notes:

- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations.
- Only Low Ground Pressure tracked equipment can be used during construction with at least 300 mm suitably compacted covering created over the AquaBox System. Abrupt maneuvers such as steering should be avoided at this stage.
- The passage of heavy goods vehicles with a wheel load of more than 50 kN over the basin is possible if the thickness of the covering is adequately compacted and not less than 600 mm. When dumping the backfill material, the load per wheel shall not exceed 50 kN.

8.0 Suitable Compactable Fill

Following Top Backfill placement and geotextile fabric wrapping; complete the installation as noted below.

Vegetated Area

1. Place fill onto the geotextile.
   a. Maximum 12" (305 mm) lifts, compacted with a vibratory plate or walk behind roller to a minimum of 90% Standard Proctor Density.
   b. The minimum top cover to finished grade should not be less than 32" (0.80 m) and the maximum depth from final grade to the bottom of the lowest module should not exceed 13.45' (4.10 m).
2. Finish to the surface and complete with vegetative cover.

Impervious Area

1. Place fill onto the geotextile.
   a. Maximum 12" (305 mm) lifts, compacted with a vibratory plate or walk behind roller to a minimum of 90% Standard Proctor Density.
   b. The minimum top cover to finished grade should not be less than 24" (0.60 m) and the maximum depth from final grade to the bottom of the lowest module should not exceed 13.78' (4.20 m).
2. Finish to the surface and complete with asphalt, concrete, etc.

Notes:

- A vibratory roller may only be utilized after a minimum cover has been placed or for the installation of the asphalt wearing course.
- If damage occurs to the geotextile fabric, repair the material in accordance with the geotextile Manufacturer's recommendations.
- For most recent installation guidelines visit: https://www.geoplastglobal.com/en/downloads/aquabox

9.0 Inspection and Maintenance

If the following inspections and maintenance procedures are not followed as specified below then the end-user is responsible for the performance of the modules. This maintenance procedure must be performed after termination of site operations, heavy rainfall, flooding, or any incident that will vary the flow of water drastically.

Inspection

1. Inspect all observation ports, inflow, and outflow connection and the discharge area
2. Identify and log any sediment and debris accumulation, system backup, or discharge rate changes.
3. If there is a sufficient need for a cleanout, contact a local cleaning company for assistance.

Cleaning:

1. If a pre-treatment device is installed, follow manufacturer recommendations.
2. Using a vacuum pump truck, evacuate debris from the inflow and outflow points.
3. Flush the system with clean water, forcing debris from the system.
4. Repeat steps 2 and 3 until no debris is evident

Notes:

- For spray probe cleaning, the use of a 90° rotating nozzle with a 45° water jet is recommended. The nozzles used should have a pressure of 80 to 120 bar; higher pressures may damage the geotextile.

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		264.38 m^3
Module Storage Volume		264.38 m^3
Stone Storage Volume		0.00 m^3
System Footprint		128.38 m^2
Estimated Geotextile Fabric	NuBarrier	663 m^2
Estimated Geotextile Fabric	LP8	1155 m^2
Estimated Liner		578 m^2
Estimated GeoGrid		N/A m^2
Estimated Stone Volume		84.89 m^3
Excavation Required		399.42 m^3
Excavation Depth		3.11 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		3
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	4.20 m	4.10 m

METRO SWM TANK-1

Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP

Project Number: OP2022-00003720

Page Name: Supplementary Notes

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 14OCT2022

THIS LAYOUT DRAWING WAS PREPARED TO SUPPORT THE ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO REVIEW THE INFORMATION AND ENSURE THAT THE LAYOUT AND DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS AND THAT THE AQUABOX SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH GEOPLAST'S REQUIREMENTS. LAYFIELD DOES NOT REVIEW OR APPROVE PLANS, SIZING OR DESIGNS.

ANSI B Size Page (Horizontal)

Underground Chamber Storage
Detailed Visual OTTHYMO Output

```
************************************************
** SIMULATION:Run 01 - 2yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.418      0.178      1.33      31.88
   OUTFLOW: ID= 1 (  0405)      1.418      0.094      1.40      31.83

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 52.62
                   TIME SHIFT OF PEAK FLOW         (min)=  4.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0087

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 02 - 5yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.407      0.230      1.33      44.29
   OUTFLOW: ID= 1 (  0405)      1.407      0.112      1.40      44.24

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 48.55
                   TIME SHIFT OF PEAK FLOW         (min)=  4.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0118

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 03 - 10yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.387      0.241      1.27      52.73
   OUTFLOW: ID= 1 (  0405)      1.387      0.120      1.40      52.68

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 49.80
                   TIME SHIFT OF PEAK FLOW         (min)=  8.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0135

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 04 - 25yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.353      0.241      1.23      63.45
   OUTFLOW: ID= 1 (  0405)      1.353      0.128      1.43      63.40

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 53.11
                   TIME SHIFT OF PEAK FLOW         (min)= 12.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0154

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 05 - 50yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.336      0.241      1.23      71.04
   OUTFLOW: ID= 1 (  0405)      1.336      0.133      1.47      70.99

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 55.03
                   TIME SHIFT OF PEAK FLOW         (min)= 14.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0162

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 06 - 100yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.309      0.241      1.23      78.76
   OUTFLOW: ID= 1 (  0405)      1.309      0.138      1.50      78.70
```

```
                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 57.33
                    TIME SHIFT OF PEAK FLOW         (min)= 16.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0173

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 07 - 2yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.424      0.140      3.23      35.24
   OUTFLOW: ID= 1 (  0405)      1.424      0.093      3.30      35.19

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 66.27
                    TIME SHIFT OF PEAK FLOW         (min)=  4.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0086

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 08 - 5yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.412      0.192      3.23      49.23
   OUTFLOW: ID= 1 (  0405)      1.412      0.115      3.30      49.18

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 60.06
                    TIME SHIFT OF PEAK FLOW         (min)=  4.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0125

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 09 - 10yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.405      0.226      3.23      58.75
   OUTFLOW: ID= 1 (  0405)      1.405      0.129      3.30      58.70

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 57.13
                    TIME SHIFT OF PEAK FLOW         (min)=  4.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0153

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 10 - 25yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.377      0.241      3.10      70.77
   OUTFLOW: ID= 1 (  0405)      1.377      0.140      3.30      70.72

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 58.13
                    TIME SHIFT OF PEAK FLOW         (min)= 12.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0180

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 11 - 50yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.350      0.241      3.10      79.43
   OUTFLOW: ID= 1 (  0405)      1.350      0.145      3.33      79.37

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 60.15
                    TIME SHIFT OF PEAK FLOW         (min)= 14.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0192

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 12 - 100yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
```

```
                          0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.330      0.241      3.07      87.77
   OUTFLOW: ID= 1 (  0405)      1.330      0.150      3.33      87.71

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 62.29
                   TIME SHIFT OF PEAK FLOW         (min)= 16.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0204

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 13 - 2yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.439      0.140      6.23      41.61
   OUTFLOW: ID= 1 (  0405)      1.439      0.093      6.30      41.56

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 66.19
                   TIME SHIFT OF PEAK FLOW         (min)=  4.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0085

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 14 - 5yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.429      0.193      6.23      58.69
   OUTFLOW: ID= 1 (  0405)      1.429      0.115      6.30      58.64

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 59.71
                   TIME SHIFT OF PEAK FLOW         (min)=  4.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0125

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 15 - 10yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.423      0.229      6.23      70.32
   OUTFLOW: ID= 1 (  0405)      1.423      0.130      6.30      70.27

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 56.72
                   TIME SHIFT OF PEAK FLOW         (min)=  4.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0154

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 16 - 25yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.397      0.241      6.10      84.86
   OUTFLOW: ID= 1 (  0405)      1.397      0.140      6.30      84.81

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 58.13
                   TIME SHIFT OF PEAK FLOW         (min)= 12.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0181

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 17 - 50yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
                          0.0320     0.0028   |   0.1340      0.0163
                          0.0560     0.0039   |   0.1440      0.0186
                          0.0670     0.0051   |   0.1530      0.0208
                          0.0760     0.0062   |   0.1610      0.0231
                          0.0920     0.0084   |   0.1650      0.0242
                          0.0990     0.0096   |   0.1690      0.0253
                          0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.374      0.241      6.10      95.65
   OUTFLOW: ID= 1 (  0405)      1.374      0.145      6.33      95.60

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 60.34
                   TIME SHIFT OF PEAK FLOW         (min)= 14.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0192

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 18 - 100yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1120      0.0118
                          0.0020     0.0006   |   0.1240      0.0141
                          0.0140     0.0017   |   0.1290      0.0152
```

```
                         0.0320     0.0028   |   0.1340      0.0163
                         0.0560     0.0039   |   0.1440      0.0186
                         0.0670     0.0051   |   0.1530      0.0208
                         0.0760     0.0062   |   0.1610      0.0231
                         0.0920     0.0084   |   0.1650      0.0242
                         0.0990     0.0096   |   0.1690      0.0253
                         0.1060     0.0107   |   0.1730      0.0264

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)     1.358      0.241      6.07     105.10
   OUTFLOW: ID= 1 (  0405)     1.358      0.150      6.33     105.05

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 62.37
                  TIME SHIFT OF PEAK FLOW         (min)= 16.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0206

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 19 - 2yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1120      0.0118
                         0.0020     0.0006   |   0.1240      0.0141
                         0.0140     0.0017   |   0.1290      0.0152
                         0.0320     0.0028   |   0.1340      0.0163
                         0.0560     0.0039   |   0.1440      0.0186
                         0.0670     0.0051   |   0.1530      0.0208
                         0.0760     0.0062   |   0.1610      0.0231
                         0.0920     0.0084   |   0.1650      0.0242
                         0.0990     0.0096   |   0.1690      0.0253
                         0.1060     0.0107   |   0.1730      0.0264

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)     1.450      0.151     12.23      48.89
   OUTFLOW: ID= 1 (  0405)     1.450      0.095     12.30      48.84

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 62.97
                  TIME SHIFT OF PEAK FLOW         (min)=  4.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0089

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 20 - 5yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1120      0.0118
                         0.0020     0.0006   |   0.1240      0.0141
                         0.0140     0.0017   |   0.1290      0.0152
                         0.0320     0.0028   |   0.1340      0.0163
                         0.0560     0.0039   |   0.1440      0.0186
                         0.0670     0.0051   |   0.1530      0.0208
                         0.0760     0.0062   |   0.1610      0.0231
                         0.0920     0.0084   |   0.1650      0.0242
                         0.0990     0.0096   |   0.1690      0.0253
                         0.1060     0.0107   |   0.1730      0.0264

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)     1.442      0.211     12.23      69.75
   OUTFLOW: ID= 1 (  0405)     1.442      0.119     12.30      69.70

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 56.42
                  TIME SHIFT OF PEAK FLOW         (min)=  4.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0132

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 21 - 10yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
```

```
                         0.0000     0.0000   |   0.1120      0.0118
                         0.0020     0.0006   |   0.1240      0.0141
                         0.0140     0.0017   |   0.1290      0.0152
                         0.0320     0.0028   |   0.1340      0.0163
                         0.0560     0.0039   |   0.1440      0.0186
                         0.0670     0.0051   |   0.1530      0.0208
                         0.0760     0.0062   |   0.1610      0.0231
                         0.0920     0.0084   |   0.1650      0.0242
                         0.0990     0.0096   |   0.1690      0.0253
                         0.1060     0.0107   |   0.1730      0.0264

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)     1.435      0.241     12.17      83.90
   OUTFLOW: ID= 1 (  0405)     1.435      0.132     12.30      83.85

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 54.88
                  TIME SHIFT OF PEAK FLOW         (min)=  8.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0161

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 22 - 25yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1120      0.0118
                         0.0020     0.0006   |   0.1240      0.0141
                         0.0140     0.0017   |   0.1290      0.0152
                         0.0320     0.0028   |   0.1340      0.0163
                         0.0560     0.0039   |   0.1440      0.0186
                         0.0670     0.0051   |   0.1530      0.0208
                         0.0760     0.0062   |   0.1610      0.0231
                         0.0920     0.0084   |   0.1650      0.0242
                         0.0990     0.0096   |   0.1690      0.0253
                         0.1060     0.0107   |   0.1730      0.0264

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)     1.400      0.241     12.10     101.46
   OUTFLOW: ID= 1 (  0405)     1.400      0.139     12.33     101.41

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 57.62
                  TIME SHIFT OF PEAK FLOW         (min)= 14.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0178

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 23 - 50yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000   |   0.1120      0.0118
                         0.0020     0.0006   |   0.1240      0.0141
                         0.0140     0.0017   |   0.1290      0.0152
                         0.0320     0.0028   |   0.1340      0.0163
                         0.0560     0.0039   |   0.1440      0.0186
                         0.0670     0.0051   |   0.1530      0.0208
                         0.0760     0.0062   |   0.1610      0.0231
                         0.0920     0.0084   |   0.1650      0.0242
                         0.0990     0.0096   |   0.1690      0.0253
                         0.1060     0.0107   |   0.1730      0.0264

                               AREA     QPEAK     TPEAK       R.V.
                               (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)     1.382      0.241     12.07     114.90
   OUTFLOW: ID= 1 (  0405)     1.382      0.145     12.33     114.85

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 60.06
                  TIME SHIFT OF PEAK FLOW         (min)= 16.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0193

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 24 - 100yr 24hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0405)|     OVERFLOW IS OFF
```

```
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                           0.0000     0.0000   |   0.1120      0.0118
                           0.0020     0.0006   |   0.1240      0.0141
                           0.0140     0.0017   |   0.1290      0.0152
                           0.0320     0.0028   |   0.1340      0.0163
                           0.0560     0.0039   |   0.1440      0.0186
                           0.0670     0.0051   |   0.1530      0.0208
                           0.0760     0.0062   |   0.1610      0.0231
                           0.0920     0.0084   |   0.1650      0.0242
                           0.0990     0.0096   |   0.1690      0.0253
                           0.1060     0.0107   |   0.1730      0.0264

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0501)      1.366      0.241     12.07     125.42
   OUTFLOW: ID= 1 (  0405)      1.366      0.147     12.33     125.37

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 60.79
                    TIME SHIFT OF PEAK FLOW         (min)= 16.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0198

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PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	Rooftop Stage Storage Summary	NAME	NHF
		PAGE	1 OF 1

Stage Storage Discharge Table Rooftop Quantity Storage Volume

Rooftop Area = 4100 m2

Rooftop Control = Roof Drain as specified by Mechanical Engineering Consultant

Max Ponding Depth = 100.0 mm (~ 4 inches)

Elevation	Discharge (m^3/s)	Accumulated Volume (m^3)
100.00	0.00	0.00
100.01	0.001	32.20
100.02	0.002	64.40
100.03	0.004	96.60
100.04	0.005	128.80
100.05	0.006	161.00
100.06	0.007	193.20
100.07	0.009	225.40
100.08	0.010	257.60
100.09	0.011	289.80
100.10	0.012	322.00

Maximum Q per notch per 1 inch of ponding depth: 5 GPM

Number of Drains specified by Mechanical Engineer: 10 drains

Number of Notches per Drain specified by Mechanical Engin 1 notch

Maximum Q @ 100.0 mm of ponding =

5 GPM* 3.94 inches* 10 notches = 197 GPM = 12.4 LPS = 0.0124 m^3/s

Rooftop Storage
Detailed Visual OTTHYMO Output

```
************************************************
** SIMULATION:Run 01 - 2yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.093      1.33      35.62
   OUTFLOW: ID= 1 (  0400)      0.410      0.004      2.70      33.98

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.46
                   TIME SHIFT OF PEAK FLOW         (min)= 82.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0111

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 02 - 5yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.122      1.33      49.09
   OUTFLOW: ID= 1 (  0400)      0.410      0.006      2.73      47.44

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.64
                   TIME SHIFT OF PEAK FLOW         (min)= 84.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0152

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 03 - 10yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.142      1.33      58.20
   OUTFLOW: ID= 1 (  0400)      0.410      0.007      2.77      56.55

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.72
                   TIME SHIFT OF PEAK FLOW         (min)= 86.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0179

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 04 - 25yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.169      1.33      69.72
   OUTFLOW: ID= 1 (  0400)      0.410      0.008      2.77      68.07

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.76
                   TIME SHIFT OF PEAK FLOW         (min)= 86.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0214

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 05 - 50yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.185      1.33      77.84
   OUTFLOW: ID= 1 (  0400)      0.410      0.009      2.87      76.19

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.84
                   TIME SHIFT OF PEAK FLOW         (min)= 92.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0239

--------------------------------------------------------------------------------
************************************************
** SIMULATION:Run 06 - 100yr 4hr 10min Chicago **
************************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.209      1.33      86.08
   OUTFLOW: ID= 1 (  0400)      0.410      0.010      2.73      84.43

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.74
                   TIME SHIFT OF PEAK FLOW         (min)= 84.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0265

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 07 - 2yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.071      3.23      39.26
   OUTFLOW: ID= 1 (  0400)      0.410      0.005      4.27      37.61

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.31
                   TIME SHIFT OF PEAK FLOW         (min)= 62.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0120

--------------------------------------------------------------------------------
*******************************************
** SIMULATION:Run 08 - 5yr 6hr 15min SCS **
*******************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.098      3.23      54.40
   OUTFLOW: ID= 1 (  0400)      0.410      0.006      4.23      52.75

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.34
                   TIME SHIFT OF PEAK FLOW         (min)= 60.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0166

--------------------------------------------------------------------------------
********************************************
** SIMULATION:Run 09 - 10yr 6hr 15min SCS **
********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
```

```
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.117      3.23      64.64
   OUTFLOW: ID= 1 (  0400)      0.410      0.007      4.23      62.99

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.36
                   TIME SHIFT OF PEAK FLOW         (min)= 60.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0198

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 10 - 25yr 6hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.140      3.23      77.52
   OUTFLOW: ID= 1 (  0400)      0.410      0.009      4.23      75.86

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.37
                   TIME SHIFT OF PEAK FLOW         (min)= 60.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0237

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 11 - 50yr 6hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.156      3.23      86.74
   OUTFLOW: ID= 1 (  0400)      0.410      0.010      4.23      85.09

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.37
                   TIME SHIFT OF PEAK FLOW         (min)= 60.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0265

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 12 - 100yr 6hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.172      3.23      95.60
   OUTFLOW: ID= 1 (  0400)      0.410      0.011      4.23      93.95

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.38
                   TIME SHIFT OF PEAK FLOW         (min)= 60.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0292

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 13 - 2yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.071      6.23      46.11
   OUTFLOW: ID= 1 (  0400)      0.410      0.005      6.87      44.46

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.75
                   TIME SHIFT OF PEAK FLOW         (min)= 38.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0127

--------------------------------------------------------------------------------
*********************************************
** SIMULATION:Run 14 - 5yr 12hr 15min SCS **
*********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.098      6.23      64.50
   OUTFLOW: ID= 1 (  0400)      0.410      0.007      6.87      62.85

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.77
                   TIME SHIFT OF PEAK FLOW         (min)= 38.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0178

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 15 - 10yr 12hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.117      6.23      76.94
   OUTFLOW: ID= 1 (  0400)      0.410      0.008      6.87      75.29

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.78
                   TIME SHIFT OF PEAK FLOW         (min)= 38.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0212

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 16 - 25yr 12hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.140      6.23      92.40
   OUTFLOW: ID= 1 (  0400)      0.410      0.010      6.83      90.75

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.79
                   TIME SHIFT OF PEAK FLOW         (min)= 36.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0254

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 17 - 50yr 12hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.158      6.23     103.83
   OUTFLOW: ID= 1 (  0400)      0.410      0.011      6.83     102.18

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.79
```

```
                    TIME SHIFT OF PEAK FLOW         (min)= 36.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0286

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 18 - 100yr 12hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.173      6.23     113.78
   OUTFLOW: ID= 1 (  0400)      0.410      0.012      6.83     112.12

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.79
                    TIME SHIFT OF PEAK FLOW         (min)= 36.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0313

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 19 - 2yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.077     12.23      53.99
   OUTFLOW: ID= 1 (  0400)      0.410      0.005     12.87      52.34

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.36
                    TIME SHIFT OF PEAK FLOW         (min)= 38.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0130

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 20 - 5yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.108     12.23      76.26
   OUTFLOW: ID= 1 (  0400)      0.410      0.007     12.87      74.61

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.36
                    TIME SHIFT OF PEAK FLOW         (min)= 38.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0183

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 21 - 10yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.129     12.23      91.30
   OUTFLOW: ID= 1 (  0400)      0.410      0.008     12.87      89.65

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.37
                    TIME SHIFT OF PEAK FLOW         (min)= 38.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0218

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 22 - 25yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.155     12.23     109.86
   OUTFLOW: ID= 1 (  0400)      0.410      0.010     12.87     108.22

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.37
                    TIME SHIFT OF PEAK FLOW         (min)= 38.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0263

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 23 - 50yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.174     12.23     123.93
   OUTFLOW: ID= 1 (  0400)      0.410      0.011     12.87     122.28

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.37
                    TIME SHIFT OF PEAK FLOW         (min)= 38.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0296

--------------------------------------------------------------------------------
**********************************************
** SIMULATION:Run 24 - 100yr 24hr 15min SCS **
**********************************************
--------------------
| RESERVOIR(  0400)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  2.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0120      0.0320

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0302)      0.410      0.190     12.23     135.03
   OUTFLOW: ID= 1 (  0400)      0.410      0.012     12.87     133.38

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.37
                    TIME SHIFT OF PEAK FLOW         (min)= 38.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0322

--------------------------------------------------------------------------------
```

Peak Flow Summary
Summary Visual OTTHYMO Output

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

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\791adbb5-7ea
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\791adbb5-7ea


DATE: 10-24-2022                          TIME: 04:28:34

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 01 - 2yr 4hr 10min Chicag **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.03  1.33  35.62 0.96   0.000
    [I%=99.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.03  1.33  32.52 0.88   0.000
    [I%=89.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.05  1.33  33.66 0.91   0.000
    [I%=93.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  1.57   3.43 0.09   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.05  1.33  33.00 0.89   0.000
    [I%=91.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  1.33  35.60 0.96   0.000
    [I%=99.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.04  1.33  34.63 0.94   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.05  1.33  34.84  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.05  1.33  34.84  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.09    0.04  1.33  34.84  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.14    0.01  1.07  34.84  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.09  1.33  35.62 0.96   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.00  2.70  33.98  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.08  1.33  33.20  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.09  1.33  27.73  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.14  1.33  29.51  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.17  1.33  30.43  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.17  1.33  31.56  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.42    0.18  1.33  31.88  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.42    0.18  1.33  31.88  n/a   0.000
*
    DUHYD                0501  1  2.0    1.42    0.18  1.33  31.88  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.42    0.18  1.33  31.88  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.42    0.09  1.40  31.83  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  1.53   4.24 0.11   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.00  1.33  18.67 0.51   0.000
    [I%=45.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 36.94 mm ]
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  1.33  20.98 0.57   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.01  1.33  20.14  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.01  1.33  17.69  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.22    0.06  1.33  24.82  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.22    0.06  1.33  24.82  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.14  1.33  30.88  n/a   0.000
*
==========================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\1ad5a593-507
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\1ad5a593-507

DATE: 10-24-2022                          TIME: 04:28:34

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 02 - 5yr 4hr 10min Chicag **
  ************************************************

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

     START @  0.00 hrs
     --------------------
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.04  1.33  49.09 0.97   0.000
   [I%=99.0:S%= 2.00]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.04  1.33  45.07 0.89   0.000
   [I%=89.0:S%= 2.00]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.07  1.33  46.49 0.92   0.000
   [I%=93.0:S%= 2.00]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  1.53   6.67 0.13   0.000
   [CN=49.0          ]
   [ N = 3.0:Tp 0.20]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.07  1.33  45.64 0.90   0.000
   [I%=91.0:S%= 2.00]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  1.33  49.06 0.97   0.000
   [I%=99.0:S%= 2.00]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.05  1.33  47.78 0.95   0.000
   [I%=96.0:S%= 2.00]
*
   ADD [  0300+  0301]  0904  3  2.0    0.23    0.07  1.33  48.06  n/a   0.000
*
   DUHYD                0500  1  2.0    0.23    0.07  1.33  48.06  n/a   0.000
      MAJOR SYSTEM:     0500  2  2.0    0.10    0.06  1.33  48.06  n/a   0.000
      MINOR SYSTEM:     0500  3  2.0    0.13    0.01  1.03  48.06  n/a   0.000
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.12  1.33  49.09 0.97   0.000
   [I%=99.0:S%= 2.00]
*
 ** Reservoir
   OUTFLOW:             0400  1  2.0    0.41    0.01  2.73  47.44  n/a   0.000
*
   ADD [  0303+  0304]  0902  3  2.0    0.40    0.11  1.33  45.92  n/a   0.000
*
   ADD [  0902+  0305]  0902  1  2.0    0.49    0.11  1.33  38.71  n/a   0.000
*
   ADD [  0902+  0306]  0902  3  2.0    0.74    0.18  1.33  41.05  n/a   0.000
*
   ADD [  0902+  0307]  0902  1  2.0    0.87    0.22  1.33  42.25  n/a   0.000
*
   ADD [  0902+  0400]  0902  3  2.0    1.28    0.22  1.33  43.91  n/a   0.000
*
   ADD [  0902+  0500]  0902  1  2.0    1.41    0.23  1.33  44.29  n/a   0.000
*
 ** Reservoir
   OUTFLOW:             0404  1  2.0    1.41    0.23  1.33  44.29  n/a   0.000
*
   DUHYD                0501  1  2.0    1.41    0.23  1.33  44.29  n/a   0.000
      MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
      MINOR SYSTEM:     0501  3  2.0    1.41    0.23  1.33  44.29  n/a   0.000
*
 ** Reservoir
   OUTFLOW:             0405  1  2.0    1.41    0.11  1.40  44.24  n/a   0.000
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  1.53   7.75 0.15   0.000
   [CN=49.0          ]
   [ N = 3.0:Tp 0.20]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  1.33  27.29 0.54   0.000
   [I%=45.0:S%= 2.00]
*
   CHIC STORM                  10.0
   [ Ptot= 50.49 mm ]
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  1.33  30.15 0.60   0.000
   [I%=52.0:S%= 2.00]
*
   ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  1.33  29.11  n/a   0.000
*
   ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  1.33  25.83  n/a   0.000
*
   ADD [  0903+  0500]  0903  3  2.0    0.23    0.08  1.33  35.65  n/a   0.000
*
   ADD [  0903+  0501]  0903  1  2.0    0.23    0.08  1.33  35.65  n/a   0.000
*
   ADD [  0405+  0903]  0905  3  2.0    1.64    0.18  1.33  43.02  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\9cbf2ca3-cc2
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\9cbf2ca3-cc2

DATE: 10-24-2022                          TIME: 04:28:35

USER:

COMMENTS: ____________________________________________________________
```

```
  ************************************************
  ** SIMULATION : Run 03 - 10yr 4hr 10min Chica **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05  1.33  58.20 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.05  1.33  53.62 0.90   0.000
    [I%=89.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.08  1.33  55.20 0.93   0.000
    [I%=93.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  1.53   9.36 0.16   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.08  1.33  54.22 0.91   0.000
    [I%=91.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  1.33  58.16 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.06  1.33  56.69 0.95   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.08  1.33  57.01  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.08  1.33  57.01  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.11    0.07  1.33  57.01  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.12    0.01  0.90  57.01  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.14  1.33  58.20 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  2.77  56.55  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.13  1.33  54.57  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.13  1.33  46.27  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.21  1.33  48.96  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.26  1.33  50.34  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.26  1.33  52.33  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.40    0.27  1.33  52.73  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.40    0.27  1.33  52.73  n/a   0.000
*
    DUHYD                0501  1  2.0    1.40    0.27  1.33  52.73  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.01    0.03  1.33  52.73  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.39    0.24  1.27  52.73  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.39    0.12  1.40  52.68  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  1.53  10.59 0.18   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  1.33  33.39 0.56   0.000
    [I%=45.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 59.66 mm ]
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  1.33  36.65 0.61   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  1.33  35.46  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  1.33  31.64  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.24    0.09  1.33  43.22  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.25    0.12  1.33  43.74  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.22  1.33  51.30  n/a   0.000
*
==========================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\9c8380ff-5c9
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\9c8380ff-5c9


DATE: 10-24-2022                          TIME: 04:28:35

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 04 - 25yr 4hr 10min Chica **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    CHIC STORM                 10.0
    [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05  1.33  69.72 0.98   0.000
    [I%=99.0:S%= 2.00]
```

```
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06  1.33  64.50 0.91   0.000
   [I%=89.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.09  1.33  66.26 0.93   0.000
   [I%=93.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  1.53  13.27 0.19   0.000
   [CN=49.0         ]
   [ N = 3.0:Tp 0.20]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.10  1.33  65.12 0.91   0.000
   [I%=91.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  1.33  69.67 0.98   0.000
   [I%=99.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.07  1.33  67.96 0.95   0.000
   [I%=96.0:S%= 2.00]
*
   ADD [  0300+  0301]  0904  3  2.0    0.23    0.09  1.33  68.33  n/a   0.000
*
   DUHYD                0500  1  2.0    0.23    0.09  1.33  68.33  n/a   0.000
      MAJOR SYSTEM:     0500  2  2.0    0.12    0.08  1.33  68.33  n/a   0.000
      MINOR SYSTEM:     0500  3  2.0    0.11    0.01  0.90  68.33  n/a   0.000
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.17  1.33  69.72 0.98   0.000
   [I%=99.0:S%= 2.00]
*
 ** Reservoir
   OUTFLOW:             0400  1  2.0    0.41    0.01  2.77  68.07  n/a   0.000
*
   ADD [  0303+  0304]  0902  3  2.0    0.40    0.15  1.33  65.55  n/a   0.000
*
   ADD [  0902+  0305]  0902  1  2.0    0.49    0.16  1.33  55.95  n/a   0.000
*
   ADD [  0902+  0306]  0902  3  2.0    0.74    0.25  1.33  59.05  n/a   0.000
*
   ADD [  0902+  0307]  0902  1  2.0    0.87    0.31  1.33  60.64  n/a   0.000
*
   ADD [  0902+  0400]  0902  3  2.0    1.28    0.31  1.33  63.02  n/a   0.000
*
   ADD [  0902+  0500]  0902  1  2.0    1.39    0.32  1.33  63.45  n/a   0.000
*
 ** Reservoir
   OUTFLOW:             0404  1  2.0    1.39    0.30  1.33  63.45  n/a   0.000
*
   DUHYD                0501  1  2.0    1.39    0.30  1.33  63.45  n/a   0.000
      MAJOR SYSTEM:     0501  2  2.0    0.04    0.06  1.33  63.45  n/a   0.000
      MINOR SYSTEM:     0501  3  2.0    1.35    0.24  1.23  63.45  n/a   0.000
*
 ** Reservoir
   OUTFLOW:             0405  1  2.0    1.35    0.13  1.43  63.40  n/a   0.000
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  1.53  14.69 0.21   0.000
   [CN=49.0         ]
   [ N = 3.0:Tp 0.20]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  1.33  41.44 0.58   0.000
   [I%=45.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 71.25 mm ]
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  1.33  45.15 0.63   0.000
   [I%=52.0:S%= 2.00]
*
   ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  1.33  43.80  n/a   0.000
*
   ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  1.33  39.32  n/a   0.000
*
   ADD [  0903+  0500]  0903  3  2.0    0.25    0.11  1.33  53.07  n/a   0.000
*
   ADD [  0903+  0501]  0903  1  2.0    0.29    0.17  1.33  54.51  n/a   0.000
*
   ADD [  0405+  0903]  0905  3  2.0    1.64    0.28  1.33  61.84  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\43c591e3-3ca
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\43c591e3-3ca


DATE: 10-24-2022                          TIME: 04:28:35

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 05 - 50yr 4hr 10min Chica **
  ************************************************

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

      START @  0.00 hrs
      --------------------
   CHIC STORM                 10.0
   [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.06  1.33  77.84 0.98   0.000
   [I%=99.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.07  1.33  72.20 0.91   0.000
   [I%=89.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.10  1.33  74.06 0.93   0.000
   [I%=93.0:S%= 2.00]
*
   CHIC STORM                 10.0
   [ Ptot= 79.41 mm ]
*
```

```
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  1.53  16.34 0.21   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.11  1.33  72.82 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  1.33  77.78 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.08  1.33  75.92 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.10  1.33  76.33  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.10  1.33  76.33  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.12    0.09  1.33  76.33  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.11    0.01  0.87  76.33  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.19  1.33  77.84 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  2.87  76.19  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.17  1.33  73.32  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.17  1.33  62.85  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.28  1.33  66.22  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.34  1.33  67.96  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.34  1.33  70.59  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.39    0.35  1.33  71.04  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.39    0.31  1.37  71.04  n/a   0.000
*
    DUHYD                0501  1  2.0    1.39    0.31  1.37  71.04  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.05    0.07  1.37  71.04  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.34    0.24  1.23  71.04  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.34    0.13  1.47  70.99  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  1.53  17.88 0.23   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  1.33  47.32 0.60   0.000
    [I%=45.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 79.41 mm ]
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  1.33  51.31 0.65   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  1.33  49.85  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  1.33  44.94  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.25    0.12  1.33  60.07  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.30    0.19  1.33  61.99  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.31  1.33  69.32  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\cc25a5c4-4e5
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\cc25a5c4-4e5

DATE: 10-24-2022                          TIME: 04:28:35

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 06 - 100yr 4hr 10min Chic **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.07  1.33  86.08 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.08  1.33  80.05 0.91   0.000
    [I%=89.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.12  1.33  81.99 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  1.53  19.69 0.22   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.12  1.33  80.66 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.03  1.33  86.01 0.98   0.000
    [I%=99.0:S%= 2.00]
*
```

```
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.09  1.33  84.00 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.12  1.33  84.44  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.12  1.33  84.44  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.13    0.11  1.33  84.44  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.10    0.01  0.73  84.44  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.21  1.33  86.08 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  2.73  84.43  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.19  1.33  81.21  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.19  1.33  69.91  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.31  1.33  73.54  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.38  1.33  75.42  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.39  1.33  78.30  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.38    0.39  1.33  78.76  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.38    0.34  1.37  78.76  n/a   0.000
*
    DUHYD                0501  1  2.0    1.38    0.34  1.37  78.76  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.07    0.10  1.37  78.76  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.31    0.24  1.23  78.76  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.31    0.14  1.50  78.70  n/a   0.000
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  1.53  21.34 0.24   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  1.33  53.41 0.61   0.000
    [I%=45.0:S%= 2.00]
*
    CHIC STORM                 10.0
    [ Ptot= 87.69 mm ]
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  1.33  57.70 0.66   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  1.33  56.14  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  1.33  50.78  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.26    0.14  1.33  67.45  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.33    0.24  1.33  69.97  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.35  1.33  76.94  n/a   0.000
*
==============================================================================================

        V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
        V    V   I    SS     U   U   A A   L
         V  V    I     SS    U   U  AAAAA  L
         V  V    I      SS   U   U  A   A  L
          VV     I    SSSSS  UUUUU  A   A  LLLLL

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

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\1c7ed0ca-cc4
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\1c7ed0ca-cc4


DATE: 10-24-2022                          TIME: 04:28:35

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 07 - 2yr 6hr 15min SCS    **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.02  3.23  39.26 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.03  3.23  35.89 0.88   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.04  3.23  37.12 0.91   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  3.37   4.22 0.10   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.04  3.23  36.41 0.90   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  3.23  39.22 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
```

```
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.03  3.23  38.18 0.94   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.04  3.23  38.41  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.04  3.23  38.41  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.09    0.03  3.23  38.41  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.14    0.01  2.80  38.41  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.07  3.23  39.26 0.97   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.00  4.27  37.61  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.07  3.23  36.63  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.07  3.23  30.67  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.11  3.23  32.61  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.13  3.23  33.60  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.13  3.23  34.89  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.42    0.14  3.23  35.24  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.42    0.14  3.23  35.24  n/a   0.000
*
    DUHYD                0501  1  2.0    1.42    0.14  3.23  35.24  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.42    0.14  3.23  35.24  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.42    0.09  3.30  35.19  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  3.37   5.10 0.13   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.00  3.23  20.96 0.52   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 40.60 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20c2b742-cc0f-4ed4-8454-8b
    remark: 2yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  3.23  23.35 0.58   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.01  3.23  22.48  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.01  3.23  19.80  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.22    0.04  3.23  27.23  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.22    0.04  3.23  27.23  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.13  3.23  34.14  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
```

```
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\3da4aacb-752
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\3da4aacb-752

DATE: 10-24-2022                          TIME: 04:28:35

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 08 - 5yr 6hr 15min SCS    **
  ************************************************

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

      START @  0.00 hrs
      -----------------
    READ STORM                15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.03  3.23  54.40 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.04  3.23  50.05 0.90   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.05  3.23  51.57 0.92   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  3.37   8.19 0.15   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.06  3.23  50.64 0.91   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  3.23  54.37 0.97   0.000
```

```
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.04  3.23  52.97 0.95   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.05  3.23  53.28  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.05  3.23  53.28  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.10    0.05  3.23  53.28  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.13    0.01  2.80  53.28  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.10  3.23  54.40 0.97   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  4.23  52.75  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.09  3.23  50.96  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.09  3.23  43.11  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.15  3.23  45.65  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.18  3.23  46.96  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.18  3.23  48.81  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.41    0.19  3.23  49.23  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.41    0.19  3.23  49.23  n/a   0.000
*
    DUHYD                0501  1  2.0    1.41    0.19  3.23  49.23  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.41    0.19  3.23  49.23  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.41    0.12  3.30  49.18  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  3.37   9.37 0.17   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.00  3.23  30.75 0.55   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.84 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c98d816f-0df1-4bbf-992a-22
    remark: 5yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  3.23  33.91 0.61   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.01  3.23  32.76  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  3.23  29.16  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.23    0.06  3.23  39.51  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.23    0.06  3.23  39.51  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.17  3.23  47.84  n/a   0.000
*
```

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

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\beed8200-17f
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\beed8200-17f


DATE: 10-24-2022                          TIME: 04:28:35

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 09 - 10yr 6hr 15min SCS   **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.04  3.23  64.64 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.04  3.23  59.70 0.90   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.06  3.23  61.38 0.93   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  3.37  11.48 0.17   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.07  3.23  60.31 0.91   0.000
    [I%=91.0:S%= 2.00]
*
```

```
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  3.23  64.60 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.05  3.23  62.99 0.95   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.06  3.23  63.34  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.06  3.23  63.34  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.10    0.06  3.23  63.34  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.13    0.01  2.80  63.34  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.12  3.23  64.64 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  4.23  62.99  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.11  3.23  60.71  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.11  3.23  51.66  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.18  3.23  54.58  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.21  3.23  56.09  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.22  3.23  58.30  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.41    0.23  3.23  58.75  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.41    0.23  3.23  58.75  n/a   0.000
*
    DUHYD                0501  1  2.0    1.41    0.23  3.23  58.75  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.41    0.23  3.23  58.75  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.41    0.13  3.30  58.70  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  3.37  12.83 0.19   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  3.23  37.86 0.57   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.14 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\a23c1c23-666d-4dfc-ab75-e8
    remark: 10yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  3.23  41.37 0.63   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  3.23  40.09  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  3.23  35.90  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.23    0.08  3.23  48.15  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.23    0.08  3.23  48.15  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.20  3.23  57.19  n/a   0.000
*
==========================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\858c5640-2ea
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\858c5640-2ea

DATE: 10-24-2022                          TIME: 04:28:35

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 10 - 25yr 6hr 15min SCS   **
  ************************************************

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

     START @  0.00 hrs
     ----------------
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.04  3.23  77.51 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.05  3.23  71.89 0.91   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.08  3.23  73.75 0.93   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  3.37  16.21 0.20   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
```

```
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.08  3.23  72.51 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  3.23  77.46 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.06  3.23  75.60 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.08  3.23  76.01  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.08  3.23  76.01  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.11    0.07  3.23  76.01  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.12    0.01  2.77  76.01  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.14  3.23  77.52 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  4.23  75.86  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.13  3.23  73.00  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.13  3.23  62.57  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.21  3.23  65.93  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.26  3.23  67.66  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.26  3.23  70.29  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.40    0.27  3.23  70.77  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.40    0.27  3.23  70.77  n/a   0.000
*
    DUHYD                0501  1  2.0    1.40    0.27  3.23  70.77  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.02    0.03  3.23  70.77  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.38    0.24  3.10  70.77  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.38    0.14  3.30  70.72  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  3.33  17.75 0.22   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  3.23  47.07 0.60   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 79.08 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0290ec19-a76b-4f8e-b3da-f6
    remark: 25yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  3.23  51.05 0.65   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  3.23  49.60  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  3.23  44.70  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.24    0.09  3.23  59.21  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.26    0.12  3.23  60.12  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.25  3.23  69.02  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\bd81fb8c-8a0
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\bd81fb8c-8a0


DATE: 10-24-2022                          TIME: 04:28:35

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 11 - 50yr 6hr 15min SCS   **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05  3.23  86.73 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06  3.23  80.68 0.91   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.09  3.23  82.63 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
```

```
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01  3.37  19.97 0.23   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.09  3.23  81.28 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  3.23  86.67 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.07  3.23  84.65 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.09  3.23  85.09  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.09  3.23  85.09  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.12    0.08  3.23  85.09  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.11    0.01  2.77  85.09  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.16  3.23  86.74 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  4.23  85.09  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.14  3.23  81.85  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.15  3.23  70.48  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.24  3.23  74.13  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.29  3.23  76.01  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.30  3.23  78.92  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.39    0.30  3.23  79.42  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.39    0.29  3.23  79.43  n/a   0.000
*
    DUHYD                0501  1  2.0    1.39    0.29  3.23  79.43  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.04    0.05  3.23  79.43  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.35    0.24  3.10  79.43  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.35    0.14  3.33  79.37  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  3.33  21.65 0.25   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  3.23  53.89 0.61   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 88.35 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\28a71f87-058c-4989-bd9d-e2
    remark: 50yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  3.23  58.20 0.66   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  3.23  56.63  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  3.23  51.25  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.25    0.11  3.23  67.24  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.29    0.16  3.23  69.06  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.29  3.23  77.55  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\eab5f429-9e7
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\eab5f429-9e7

DATE: 10-24-2022                          TIME: 04:28:35

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 12 - 100yr 6hr 15min SCS  **
  ************************************************

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

     START @  0.00 hrs
     -------------------
    READ STORM                 15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05  3.23  95.60 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06  3.23  89.14 0.92   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.10  3.23  91.18 0.94   0.000
    [I%=93.0:S%= 2.00]
```

```
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB NASHYD        0305  1  2.0    0.09    0.01  3.37  23.86 0.25   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD      0306  1  2.0    0.25    0.10  3.23  89.73 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD      0300  1  2.0    0.05    0.02  3.23  95.52 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD      0301  1  2.0    0.18    0.07  3.23  93.35 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.09  3.23  93.82  n/a   0.000
*
    DUHYD               0500  1  2.0    0.23    0.09  3.23  93.82  n/a   0.000
       MAJOR SYSTEM:    0500  2  2.0    0.12    0.09  3.23  93.82  n/a   0.000
       MINOR SYSTEM:    0500  3  2.0    0.11    0.01  2.77  93.82  n/a   0.000
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD      0302  1  2.0    0.41    0.17  3.23  95.60 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:            0400  1  2.0    0.41    0.01  4.23  93.95  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.16  3.23  90.36  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.16  3.23  78.15  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.26  3.23  82.06  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.32  3.23  84.08  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.33  3.23  87.25  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.39    0.33  3.23  87.77  n/a   0.000
*
 ** Reservoir
    OUTFLOW:            0404  1  2.0    1.39    0.31  3.27  87.77  n/a   0.000
*
    DUHYD               0501  1  2.0    1.39    0.31  3.27  87.77  n/a   0.000
       MAJOR SYSTEM:    0501  2  2.0    0.06    0.07  3.27  87.77  n/a   0.000
       MINOR SYSTEM:    0501  3  2.0    1.33    0.24  3.07  87.77  n/a   0.000
*
 ** Reservoir
    OUTFLOW:            0405  1  2.0    1.33    0.15  3.33  87.71  n/a   0.000
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB NASHYD        0203  1  2.0    0.02    0.00  3.33  25.64 0.26   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD      0201  1  2.0    0.04    0.01  3.23  60.62 0.62   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                  15.0
    [ Ptot= 97.25 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8cb5e88c-c4e5-45b2-a289-0d
    remark: 100yr 6hr 15min SCS
*
 *  CALIB STANDHYD      0202  1  2.0    0.07    0.02  3.23  65.19 0.67   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  3.23  63.53  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  3.23  57.70  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.25    0.12  3.23  75.01  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.31    0.19  3.23  77.48  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.33  3.23  85.78  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\decc6a6c-9b9
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\decc6a6c-9b9


DATE: 10-24-2022                          TIME: 04:28:35

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 13 - 2yr 12hr 15min SCS   **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    READ STORM                  15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD      0307  1  2.0    0.13    0.02  6.23  46.11 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                  15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD      0303  1  2.0    0.16    0.03  6.23  42.28 0.89   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                  15.0
```

```
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.04  6.23  43.65 0.92   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  6.37   5.88 0.12   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.04  6.23  42.84 0.90   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  6.23  46.08 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.03  6.23  44.87 0.94   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.04  6.23  45.13  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.04  6.23  45.13  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.07    0.03  6.23  45.13  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.16    0.01  5.80  45.13  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.07  6.23  46.11 0.97   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.00  6.87  44.46  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.06  6.23  43.11  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.07  6.23  36.27  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.11  6.23  38.49  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.13  6.23  39.63  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.13  6.23  41.18  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.44    0.14  6.23  41.61  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.44    0.14  6.23  41.61  n/a   0.000
*
    DUHYD                0501  1  2.0    1.44    0.14  6.23  41.61  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.44    0.14  6.23  41.61  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.44    0.09  6.30  41.56  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  6.33   6.90 0.15   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.00  6.23  24.10 0.51   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ac545c82-b0d8-4ee8-b110-48
    remark: 2yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  6.23  28.06 0.59   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.01  6.23  26.62  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.01  6.23  23.59  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.20    0.04  6.23  31.19  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.20    0.04  6.23  31.19  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.13  6.23  40.29  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\a1c6f3b5-321
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\a1c6f3b5-321

DATE: 10-24-2022                          TIME: 04:28:36

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 14 - 5yr 12hr 15min SCS   **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    READ STORM                15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.03  6.23  64.50 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
```

```
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.04  6.23  59.56 0.90   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.05  6.23  61.25 0.93   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  6.33  11.43 0.17   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.06  6.23  60.18 0.91   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  6.23  64.44 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.04  6.23  62.85 0.95   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.05  6.23  63.20  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.05  6.23  63.20  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.08    0.05  6.23  63.20  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.15    0.01  5.80  63.20  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.10  6.23  64.50 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  6.87  62.85  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.09  6.23  60.57  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.09  6.23  51.55  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.15  6.23  54.46  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.18  6.23  55.96  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.19  6.23  58.17  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.43    0.19  6.23  58.69  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.43    0.19  6.23  58.69  n/a   0.000
*
    DUHYD                0501  1  2.0    1.43    0.19  6.23  58.69  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.43    0.19  6.23  58.69  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.43    0.12  6.30  58.64  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  6.33  12.79 0.19   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.00  6.23  37.73 0.57   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 66.00 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\8a37f4dc-d034-4b3a-90fc-bf
    remark: 5yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  6.23  41.28 0.63   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  6.23  39.99  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  6.23  35.80  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.21    0.06  6.23  46.31  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.21    0.06  6.23  46.31  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.17  6.23  57.06  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\d55441cd-fa1
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\d55441cd-fa1


DATE: 10-24-2022                          TIME: 04:28:36

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 15 - 10yr 12hr 15min SCS  **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
```

```
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.04  6.23  76.94 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.04  6.23  71.34 0.91   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.07  6.23  73.19 0.93   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00  6.33  15.98 0.20   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.07  6.23  71.96 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01  6.23  76.86 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.05  6.23  75.03 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.06  6.23  75.43  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.06  6.23  75.43  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.09    0.06  6.23  75.43  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.14    0.01  5.77  75.43  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.12  6.23  76.94 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  6.87  75.29  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.11  6.23  72.45  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.11  6.23  62.08  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.18  6.23  65.42  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.22  6.23  67.14  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.22  6.23  69.75  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.42    0.23  6.23  70.32  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.42    0.23  6.23  70.32  n/a   0.000
*
    DUHYD                0501  1  2.0    1.42    0.23  6.23  70.32  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.42    0.23  6.23  70.32  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.42    0.13  6.30  70.27  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  6.33  17.53 0.22   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  6.23  46.67 0.59   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 78.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c7754e8c-d844-4483-8d9b-ee
    remark: 10yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01  6.23  50.62 0.64   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  6.23  49.19  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02  6.23  44.32  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.22    0.08  6.23  56.75  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.22    0.08  6.23  56.75  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.20  6.23  68.48  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\d2d19c67-f3fa
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\d2d19c67-f3fa


DATE: 10-24-2022                          TIME: 04:28:36

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 16 - 25yr 12hr 15min SCS  **
  ************************************************

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

      START @  0.00 hrs
```

```
  --------------------
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.04  6.23  92.40 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.05  6.23  86.08 0.92   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.08  6.23  88.09 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01  6.33  22.43 0.24   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.08  6.23  86.68 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  6.23  92.31 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.06  6.23  90.21 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.08  6.23  90.66  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.08  6.23  90.66  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.09    0.07  6.23  90.66  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.14    0.01  5.77  90.66  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.14  6.23  92.40 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  6.83  90.75  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.13  6.23  87.29  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.13  6.23  75.37  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.21  6.23  79.19  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.26  6.23  81.17  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.27  6.23  84.24  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.42    0.28  6.23  84.86  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.42    0.27  6.23  84.86  n/a   0.000
*
    DUHYD                0501  1  2.0    1.42    0.27  6.23  84.86  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.02    0.03  6.23  84.86  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.40    0.24  6.10  84.86  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.40    0.14  6.30  84.81  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  6.33  24.18 0.26   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  6.23  58.19 0.62   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 94.04 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ce6310f7-2349-47f9-aa40-4f
    remark: 25yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  6.23  62.65 0.67   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02  6.23  61.03  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  6.23  55.36  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.22    0.09  6.23  70.09  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.24    0.13  6.23  71.31  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.26  6.23  82.81  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\dacba5bb-db5
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\dacba5bb-db5


DATE: 10-24-2022                          TIME: 04:28:36

USER:


COMMENTS: ____________________________________________________


  ************************************************
  ** SIMULATION : Run 17 - 50yr 12hr 15min SCS  **
```

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

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

     START @  0.00 hrs
     --------------------
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05  6.23 103.82 0.98   0.000
   [I%=99.0:S%= 2.00]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06  6.23  97.02 0.92   0.000
   [I%=89.0:S%= 2.00]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.09  6.23  99.13 0.94   0.000
   [I%=93.0:S%= 2.00]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01  6.33  27.68 0.26   0.000
   [CN=49.0        ]
   [ N = 3.0:Tp 0.20]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.09  6.23  97.59 0.92   0.000
   [I%=91.0:S%= 2.00]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  6.23 103.74 0.98   0.000
   [I%=99.0:S%= 2.00]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.07  6.23 101.43 0.96   0.000
   [I%=96.0:S%= 2.00]
*
   ADD [  0300+  0301]  0904  3  2.0    0.23    0.09  6.23 101.93  n/a   0.000
*
   DUHYD                0500  1  2.0    0.23    0.09  6.23 101.93  n/a   0.000
      MAJOR SYSTEM:     0500  2  2.0    0.10    0.08  6.23 101.93  n/a   0.000
      MINOR SYSTEM:     0500  3  2.0    0.13    0.01  5.77 101.93  n/a   0.000
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.16  6.23 103.83 0.98   0.000
   [I%=99.0:S%= 2.00]
*
 ** Reservoir
   OUTFLOW:             0400  1  2.0    0.41    0.01  6.83 102.18  n/a   0.000
*
   ADD [  0303+  0304]  0902  3  2.0    0.40    0.15  6.23  98.28  n/a   0.000
*
   ADD [  0902+  0305]  0902  1  2.0    0.49    0.15  6.23  85.32  n/a   0.000
*
   ADD [  0902+  0306]  0902  3  2.0    0.74    0.24  6.23  89.46  n/a   0.000
*
   ADD [  0902+  0307]  0902  1  2.0    0.87    0.29  6.23  91.61  n/a   0.000
*
   ADD [  0902+  0400]  0902  3  2.0    1.28    0.30  6.23  94.99  n/a   0.000
*
   ADD [  0902+  0500]  0902  1  2.0    1.41    0.31  6.23  95.65  n/a   0.000
*
 ** Reservoir
   OUTFLOW:             0404  1  2.0    1.41    0.30  6.23  95.65  n/a   0.000
*
   DUHYD                0501  1  2.0    1.41    0.30  6.23  95.65  n/a   0.000
      MAJOR SYSTEM:     0501  2  2.0    0.04    0.06  6.23  95.65  n/a   0.000
      MINOR SYSTEM:     0501  3  2.0    1.37    0.24  6.10  95.65  n/a   0.000
*
 ** Reservoir
   OUTFLOW:             0405  1  2.0    1.37    0.15  6.33  95.60  n/a   0.000
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  6.33  29.57 0.28   0.000
   [CN=49.0        ]
   [ N = 3.0:Tp 0.20]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  6.23  67.00 0.64   0.000
   [I%=45.0:S%= 2.00]
*
   READ STORM                 15.0
   [ Ptot=105.51 mm ]
   fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\0c0829aa-5788-451a-a42b-8d
   remark: 50yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  6.23  71.80 0.68   0.000
   [I%=52.0:S%= 2.00]
*
   ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  6.23  70.06  n/a   0.000
*
   ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  6.23  63.83  n/a   0.000
*
   ADD [  0903+  0500]  0903  3  2.0    0.23    0.11  6.23  80.07  n/a   0.000
*
   ADD [  0903+  0501]  0903  1  2.0    0.27    0.16  6.23  82.38  n/a   0.000
*
   ADD [  0405+  0903]  0905  3  2.0    1.64    0.30  6.23  93.45  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\888a353a-51a
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\888a353a-51a


DATE: 10-24-2022                          TIME: 04:28:36

USER:
```

```
COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 18 - 100yr 12hr 15min SCS **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05  6.23 113.78 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06  6.23 106.57 0.92   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.10  6.23 108.76 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01  6.33  32.57 0.28   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.10  6.23 107.12 0.93   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02  6.23 113.68 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.07  6.23 111.22 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.10  6.23 111.75  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.10  6.23 111.75  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.10    0.09  6.23 111.75  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.13    0.01  5.33 111.75  n/a   0.000
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.17  6.23 113.78 0.99   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01  6.83 112.12  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.16  6.23 107.89  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.17  6.23  94.05  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.27  6.23  98.47  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.32  6.23 100.76  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.33  6.23 104.40  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.41    0.34  6.23 105.08  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.41    0.32  6.27 105.10  n/a   0.000
*
    DUHYD                0501  1  2.0    1.41    0.32  6.27 105.10  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.05    0.08  6.27 105.10  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.36    0.24  6.07 105.10  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.36    0.15  6.33 105.05  n/a   0.000
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00  6.33  34.56 0.30   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01  6.23  74.83 0.65   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=115.50 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\ef499849-9818-42e1-83a8-5d
    remark: 100yr 12hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02  6.23  79.91 0.69   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03  6.23  78.06  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03  6.23  71.37  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.23    0.12  6.23  88.91  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.28    0.20  6.23  91.90  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.33  6.23 102.79  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\151f4a14-626
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\151f4a14-626
```

```
DATE: 10-24-2022                          TIME: 04:28:36

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 19 - 2yr 24hr 15min SCS   **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.02 12.23  53.99 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.03 12.23  49.67 0.90   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.04 12.23  51.18 0.92   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00 12.37   8.07 0.15   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.04 12.23  50.25 0.91   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01 12.23  51.34 0.93   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.03 12.23  52.57 0.95   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.04 12.23  52.30  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.04 12.23  52.30  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.06    0.03 12.23  52.30  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.17    0.01 11.83  52.30  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.08 12.23  53.99 0.97   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.00 12.87  52.34  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.07 12.23  50.58  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.07 12.23  42.77  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.11 12.23  45.30  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.14 12.23  46.60  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.14 12.23  48.44  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.45    0.15 12.23  48.89  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.45    0.15 12.23  48.89  n/a   0.000
*
    DUHYD                0501  1  2.0    1.45    0.15 12.23  48.89  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.45    0.15 12.23  48.89  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.45    0.10 12.30  48.84  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00 12.33   9.24 0.17   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.00 12.23  26.15 0.47   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 55.43 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\64d18c55-bb12-48bb-ad59-cf
    remark: 2yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01 12.23  31.82 0.57   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.01 12.23  29.75  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.01 12.23  26.60  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.19    0.05 12.23  34.73  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.19    0.05 12.23  34.73  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.13 12.23  47.20  n/a   0.000
*
==============================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\241da6a0-53b
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\241da6a0-53b

DATE: 10-24-2022                          TIME: 04:28:36

USER:

COMMENTS: ____________________________________________________________

  ************************************************
  ** SIMULATION : Run 20 - 5yr 24hr 15min SCS   **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.03 12.23  76.26 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.04 12.23  70.70 0.91   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.06 12.23  72.54 0.93   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00 12.33  15.72 0.20   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.06 12.23  71.31 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.01 12.23  76.19 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.05 12.23  74.37 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.06 12.23  74.77  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.06 12.23  74.77  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.07    0.05 12.23  74.77  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.16    0.01 11.80  74.77  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.11 12.23  76.26 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01 12.87  74.61  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.10 12.23  71.80  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.10 12.23  61.50  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.16 12.23  64.82  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.20 12.23  66.53  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.20 12.23  69.12  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.44    0.21 12.23  69.75  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.44    0.21 12.23  69.75  n/a   0.000
*
    DUHYD                0501  1  2.0    1.44    0.21 12.23  69.75  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.00  0.00   0.00  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.44    0.21 12.23  69.75  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.44    0.12 12.30  69.70  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00 12.33  17.26 0.22   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01 12.23  43.50 0.56   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 77.82 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\20a57e08-f2bb-4abc-ac57-54
    remark: 5yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01 12.23  50.11 0.64   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02 12.23  47.70  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02 12.23  43.02  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.20    0.07 12.23  53.93  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.20    0.07 12.23  53.93  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.18 12.23  67.80  n/a   0.000
*
==============================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\19cf7e90-9d6
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\19cf7e90-9d6


DATE: 10-24-2022                          TIME: 04:28:36

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 21 - 10yr 24hr 15min SCS  **
  ************************************************

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

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.04 12.23  91.30 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.05 12.23  85.03 0.91   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.07 12.23  87.02 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.00 12.33  21.94 0.24   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.07 12.23  85.62 0.92   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02 12.23  91.21 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.06 12.23  89.13 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.07 12.23  89.58  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.07 12.23  89.58  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.07    0.06 12.23  89.58  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.16    0.01 11.80  89.58  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.13 12.23  91.30 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01 12.87  89.65  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.12 12.23  86.23  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.12 12.23  74.42  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.20 12.23  78.20  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.24 12.23  80.16  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.24 12.23  83.20  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.44    0.25 12.23  83.90  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.44    0.25 12.23  83.90  n/a   0.000
*
    DUHYD                0501  1  2.0    1.44    0.25 12.23  83.90  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.00    0.01 12.23  83.90  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.43    0.24 12.17  83.90  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.43    0.13 12.30  83.85  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00 12.33  23.68 0.25   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01 12.23  54.17 0.58   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 92.93 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\6445b1f5-926a-46d3-b480-24
    remark: 10yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.01 12.23  61.78 0.66   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.02 12.23  59.01  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.02 12.23  53.58  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.20    0.09 12.23  66.43  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.21    0.09 12.23  66.69  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.22 12.23  81.70  n/a   0.000
*
==========================================================================================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
```

```
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\66c236ad-31e
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\66c236ad-31e


DATE: 10-24-2022                          TIME: 04:28:36

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 22 - 25yr 24hr 15min SCS  **
  ************************************************

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

      START @  0.00 hrs
      -----------------
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.05 12.23 109.86 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06 12.23 102.81 0.92   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.09 12.23 104.97 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01 12.33  30.61 0.27   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.09 12.23 103.37 0.93   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02 12.23 109.75 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.07 12.23 107.37 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.09 12.23 107.88  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.09 12.23 107.88  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.08    0.08 12.23 107.88  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.15    0.01 11.77 107.88  n/a   0.000
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.15 12.23 109.86 0.98   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01 12.87 108.22  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.14 12.23 104.11  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.15 12.23  90.61  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.24 12.23  94.92  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.29 12.23  97.15  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.29 12.23 100.69  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.43    0.30 12.23 101.46  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.43    0.29 12.23 101.46  n/a   0.000
*
    DUHYD                0501  1  2.0    1.43    0.29 12.23 101.46  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.03    0.05 12.23 101.46  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.40    0.24 12.10 101.46  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.40    0.14 12.33 101.41  n/a   0.000
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00 12.33  32.57 0.29   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01 12.23  71.75 0.64   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=111.57 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\2958c64a-6622-43e7-ba2e-25
    remark: 25yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02 12.23  76.71 0.69   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03 12.23  74.90  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03 12.23  68.39  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.21    0.11 12.23  83.15  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.24    0.16 12.23  85.63  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.28 12.23  99.10  n/a   0.000
*
```

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

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\562d5bb8-1ba
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\562d5bb8-1ba


DATE: 10-24-2022                          TIME: 04:28:37

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 23 - 50yr 24hr 15min SCS  **
  ************************************************

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

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.06 12.23 123.93 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.06 12.23 116.36 0.93   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.10 12.23 118.60 0.94   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01 12.33  37.82 0.30   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.10 12.23 116.87 0.93   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02 12.23 123.80 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.07 12.23 121.21 0.96   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.10 12.23 121.77  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.10 12.23 121.77  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.08    0.09 12.23 121.77  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.15    0.01 11.77 121.77  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.17 12.23 123.93 0.99   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01 12.87 122.28  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.16 12.23 117.70  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.17 12.23 103.03  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.27 12.23 107.71  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.32 12.23 110.13  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.33 12.23 114.02  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.43    0.34 12.23 114.83  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.43    0.32 12.27 114.90  n/a   0.000
*
    DUHYD                0501  1  2.0    1.43    0.32 12.27 114.90  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.05    0.08 12.27 114.90  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.38    0.24 12.07 114.90  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.38    0.14 12.33 114.85  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00 12.33  39.93 0.32   0.000
    [CN=49.0          ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01 12.23  82.98 0.66   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot=125.69 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\14f4f803-ecec-4683-83e7-27
    remark: 50yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02 12.23  88.31 0.70   0.000
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03 12.23  86.37  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.03 12.23  79.23  n/a   0.000
*
```

```
    ADD [  0903+  0500]  0903  3  2.0    0.21    0.12 12.23  95.52  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.26    0.20 12.23  99.10  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.33 12.23 112.37  n/a   0.000
*
==========================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.2.2011)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
  Output  filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\dd0bc4b8-c9e
  Summary filename: C:\Users\NForis\AppData\Local\Civica\VH5\3b7e8304-0f81-48cd-b5cb-7e02ad0ede4e\dd0bc4b8-c9e


DATE: 10-24-2022                          TIME: 04:28:37

USER:


COMMENTS: ____________________________________________________________


  ************************************************
  ** SIMULATION : Run 24 - 100yr 24hr 15min SCS **
  ************************************************

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

     START @  0.00 hrs
     -------------------
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0307  1  2.0    0.13    0.06 12.23 135.03 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0303  1  2.0    0.16    0.07 12.23 127.08 0.93   0.000
    [I%=89.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0304  1  2.0    0.24    0.11 12.23 129.38 0.95   0.000
    [I%=93.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB NASHYD         0305  1  2.0    0.09    0.01 12.33  43.86 0.32   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0306  1  2.0    0.25    0.11 12.23 127.55 0.93   0.000
    [I%=91.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0300  1  2.0    0.05    0.02 12.23 134.89 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0301  1  2.0    0.18    0.08 12.23 132.15 0.97   0.000
    [I%=96.0:S%= 2.00]
*
    ADD [  0300+  0301]  0904  3  2.0    0.23    0.10 12.23 132.74  n/a   0.000
*
    DUHYD                0500  1  2.0    0.23    0.10 12.23 132.74  n/a   0.000
       MAJOR SYSTEM:     0500  2  2.0    0.08    0.10 12.23 132.74  n/a   0.000
       MINOR SYSTEM:     0500  3  2.0    0.15    0.01 11.37 132.74  n/a   0.000
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0302  1  2.0    0.41    0.19 12.23 135.03 0.99   0.000
    [I%=99.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0400  1  2.0    0.41    0.01 12.87 133.38  n/a   0.000
*
    ADD [  0303+  0304]  0902  3  2.0    0.40    0.18 12.23 128.46  n/a   0.000
*
    ADD [  0902+  0305]  0902  1  2.0    0.49    0.18 12.23 112.92  n/a   0.000
*
    ADD [  0902+  0306]  0902  3  2.0    0.74    0.29 12.23 117.86  n/a   0.000
*
    ADD [  0902+  0307]  0902  1  2.0    0.87    0.35 12.23 120.43  n/a   0.000
*
    ADD [  0902+  0400]  0902  3  2.0    1.28    0.36 12.23 124.58  n/a   0.000
*
    ADD [  0902+  0500]  0902  1  2.0    1.43    0.37 12.23 125.42  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0404  1  2.0    1.43    0.34 12.27 125.42  n/a   0.000
*
    DUHYD                0501  1  2.0    1.43    0.34 12.27 125.42  n/a   0.000
       MAJOR SYSTEM:     0501  2  2.0    0.06    0.10 12.27 125.42  n/a   0.000
       MINOR SYSTEM:     0501  3  2.0    1.37    0.24 12.07 125.42  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0405  1  2.0    1.37    0.15 12.33 125.37  n/a   0.000
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB NASHYD         0203  1  2.0    0.02    0.00 12.33  46.06 0.34   0.000
    [CN=49.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0201  1  2.0    0.04    0.01 12.23  92.03 0.67   0.000
    [I%=45.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot=136.83 mm ]
    fname : C:\Users\NForis\AppData\Local\Temp\50e8c7d4-2677-4420-bc12-43c9df064762\c62ca9f3-8b1c-4f78-ab07-62
    remark: 100yr 24hr 15min SCS
*
 *  CALIB STANDHYD       0202  1  2.0    0.07    0.02 12.23  97.63 0.71   0.000
```

```
    [I%=52.0:S%= 2.00]
*
    ADD [  0201+  0202]  0903  3  2.0    0.11    0.03 12.23  95.59  n/a   0.000
*
    ADD [  0903+  0203]  0903  1  2.0    0.13    0.04 12.23  87.97  n/a   0.000
*
    ADD [  0903+  0500]  0903  3  2.0    0.21    0.13 12.23 105.39  n/a   0.000
*
    ADD [  0903+  0501]  0903  1  2.0    0.27    0.23 12.23 109.84  n/a   0.000
*
    ADD [  0405+  0903]  0905  3  2.0    1.64    0.36 12.23 122.78  n/a   0.000
*
 FINISH
==========================================================================================
```

Appendix D:
Water Quality Calculations

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 12, 2022
SUBJECT	Treatment Train Calculation	NAME	NHF
		PAGE	1 OF 1

Total Suspended Solids (TSS) Removal Calculation

Treated Area =	1.51 ha	represents 91% of total site area
Uncontrolled Area =	0.13 ha	represents 9% of total site area

Water Quality Treatment Methods:

JellyFish Filter Unit JF-8-7-2	89%	TSS Removal Rate
Sediment Debris Row	30%	TSS Removal Rate

$$Total\ TSS\ Removal = 0.91(1 - ((1 - .89)(1 - 0.3)) = 84\%$$

The calculated TSS removal exceeds the minimum TSS removal requirements for a standalone site (80%) and is therefore sufficient.

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	SWMF #2 Storage Volume	NAME	NHF
		PAGE	1 OF 2

Stage Storage Table — SWMF #2 Quantity Storage Volume

Unit: Layfield Aquabox HP
System Footprint: 92.8 m^2
Height of Module: 1.6
Void Ratio per module: 0.96
Void Ratio of stone: 0.4

Elevation	Elevation Reference	Incremental Depth (m)	Incremental Volume (m^3)	Accumulative Volume - below outlet (m^3)	Accumulate Volume - above outlet (m^3)
264.74	Base of Stone	0.00	0.00	0.00	-
264.84	Base of Module	0.10	9.14	9.14	-
264.94		0.10	9.14	18.29	-
265.04		0.10	9.14	27.43	-
265.14		0.10	9.14	36.58	-
265.24		0.10	9.14	45.72	-
265.34		0.10	9.14	54.87	-
265.44		0.10	9.14	64.01	-
265.54		0.10	9.14	73.15	-
265.64		0.10	9.14	82.30	-
265.74		0.10	9.14	91.44	-
265.84		0.10	9.14	100.59	-
265.89	Outlet Invert	0.05	4.57	105.16	0.00
265.94		0.05	4.57		4.57
266.04		0.10	9.14		13.72
266.14		0.10	9.14		22.86
266.24		0.10	9.14		32.01
266.34		0.10	9.14		41.15
266.44	Top of Module	0.10	9.14		50.29

Note: Incremental volume calculated per incremental depth, footprint area of system and applicable void ratio for stone and Aquabox HP module

Unit:	Layfield Aquabox HP
System Footprint:	92.8 m^2
System Volume Below Outlet:	105 m^2
Height of Module:	1.60 m
Void Ratio per module:	0.96
Height of Stone Layer:	0.10 m
Void Ratio of stone:	0.40

25 mm Storm for Rooftop Surface**

Catchment	Area (ha)	Runoff Volume (mm)	Runoff Volume to Infiltrate (m^3)
302	0.41	25	102.50

**Per the City of Barrie LID Screening Tool, Commercial Developments located in Highly Vulnerable Aquifer areas are only permitted to infiltrate runoff from rooftop and landscaped areas. Therefore, only infiltration of rooptop runoff has been considered.

Infiltration Drawdown Calculation

Assumed Native Soil Hydraulic Conductiv 0.0001 cm/s
(From Fetter 2001, Table 3.7 for Silty Sands, Fine Sands)

Assumed Infiltration Rate of Native Soils : 46 mm/hr
(Per TRCA LID Manual Figure C1)

Infiltration Rate with Safety Factor (i) = 13.14 mm/hr
(Safety Factor Assumed to be 3.5)

Chamber Module Drawdown

Void Space Ratio for Chambers (Vr) =	0.96	
Time to Drain (ts) =	48	hr
Max Depth of Chamber below Outlet =	2.30	m

Stone Layer Drawdown

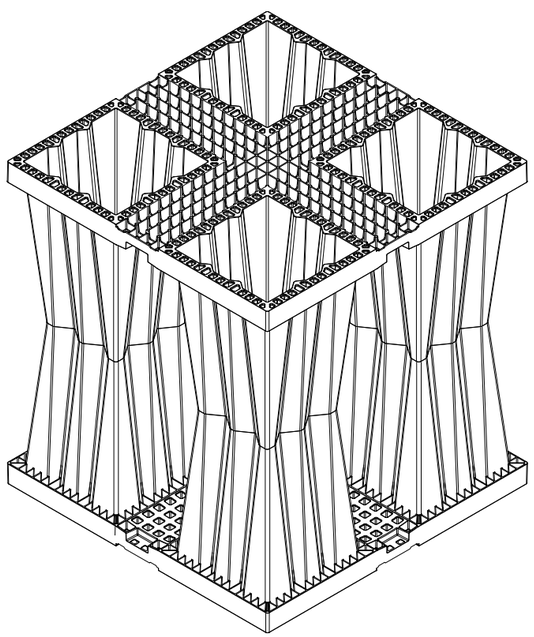
Void Space Ratio for Aggregate Used (Vr) =	0.4	
Time to Drain (ts) =	48	hr
Max Depth of Stone Reservoir Below Outlet =	1.58	m

LAYFIELD

AQUABOX MODULE LAYOUT DRAWINGS

METRO SWM TANK-2

Barrie, ON



Pages:

Cover Page	01 OF 07
Module Layout	02 OF 07
TYP. Construction Details	03 OF 07
TYP. Pipe Penetration Details	04 OF 07
TYP. Isolator Row Details	05 OF 07
Supplementary Notes	06 OF 07
Supplementary Notes	07 OF 07

REFER TO AQUABOX INSTALLATION INSTRUCTIONS

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		165.13 m^3
Module Storage Volume		139.10 m^3
Stone Storage Volume		26.03 m^3
System Footprint		104.65 m^2
Estimated Geotextile Fabric	NuBarrier	944 m^2
Estimated Geotextile Fabric	LP8	N/A
Estimated Liner		N/A
Estimated GeoGrid		N/A
Estimated Stone Volume		65.07 m^3
Excavation Required		241.87 m^3
Excavation Depth		2.31 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		2
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	3.50 m	3.40 m

METRO SWM TANK-2

Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP
2	Revised Layout & Elevations	24OCT2022	LP

Project Number: OP2022-00003720

Page Name: Cover Page

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 24OCT2022

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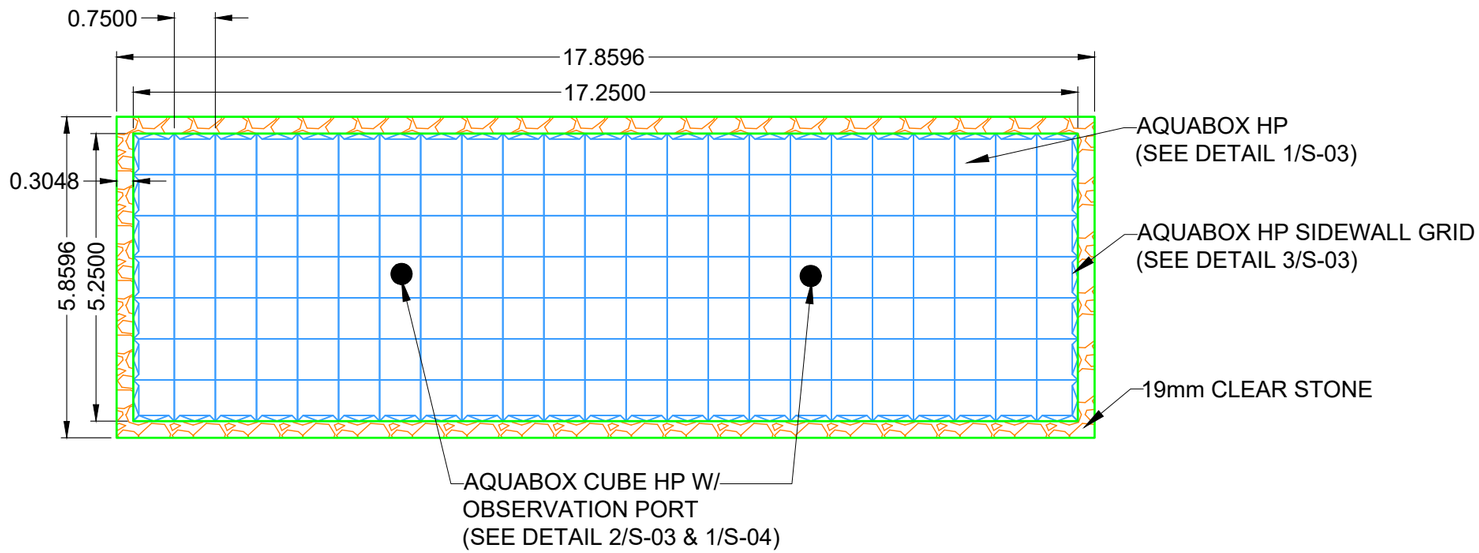
Sheet:

01 OF 07

ANSI B Size Page (Horizontal)



DEAD STORAGE BELOW ELEV 265.89m (INCLUDING STONE)= 105.16m^3

2 S-02 MODULE LAYOUT SCALE: NTS

NOTES:

a. All dimensions are measured in meters unless noted otherwise.
b. Reference Aquabox standard drawings and notes for detailed information.
c. Reference current Aquabox Module installation instructions for proper installation practices.
https://www.geoplastglobal.com/en/downloads/aquabox
d. Engineer of record to confirm conformance to manufacturer's allowable proximity to other structures and slopes.
e. All inlet and pipe locations and designs by others.
f. The sub-grade and side backfill needs to be compacted to 97%, unless noted otherwise.
g. During and after installation, the AquaBox Module area should be clearly marked and roped off to prevent unauthorized construction and equipment trafficking over the modules.
h. Top of Ground water is to be maintained 610 mm (2 ft) below the module to prevent buoyancy, unless otherwise noted by engineer.
i. The quantities related to stone and geosynthetics are estimated values as the roll size, overlaps, waste, ect. may vary.
j. Materials must be stored in a manner to prevent prolonged exposure to UV light.

1 S-02 NOTES

Material Quantity (AQUABOX HP)

AquaBox HP	636
Sidewall Grid HP	120
Top Cap HP	644
Single Joint	584
Double Joint	308

Material Quantity (AQUABOX CUBE HP)

AquaBox Cube HP	16
Sidewall Grid Cube HP	0
Circular Cap D400 HP	2
Surface Grate	2

Elevations

Leveling Stone Bottom	264.6984
Module Invert	264.8000
Top of Module	266.4000
Top of Stone Backfill	266.7048
Minimum Finished Grade	267.0096
Maximum Finished Grade	269.7500

Contractor to confirm that quantities shipped to site match those listed above. Please report any discrepancy or damage to Layfield immediately.

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

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Module Storage Volume		139.10 m^3
Stone Storage Volume		26.03 m^3
System Footprint		104.65 m^2
Estimated Geotextile Fabric	NuBarrier	944 m^2
Estimated Geotextile Fabric	LP8	N/A
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METRO SWM TANK-2

Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
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Project Number: OP2022-00003720

Page Name: Module Layout

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 24OCT2022

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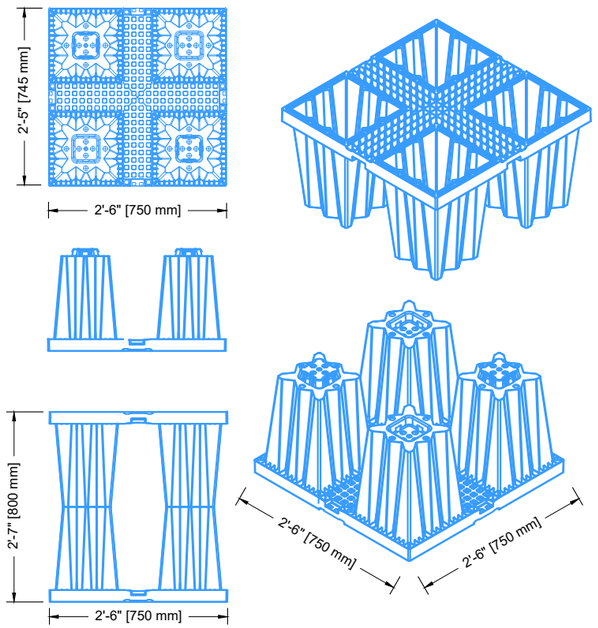
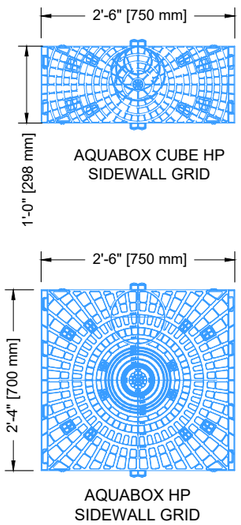
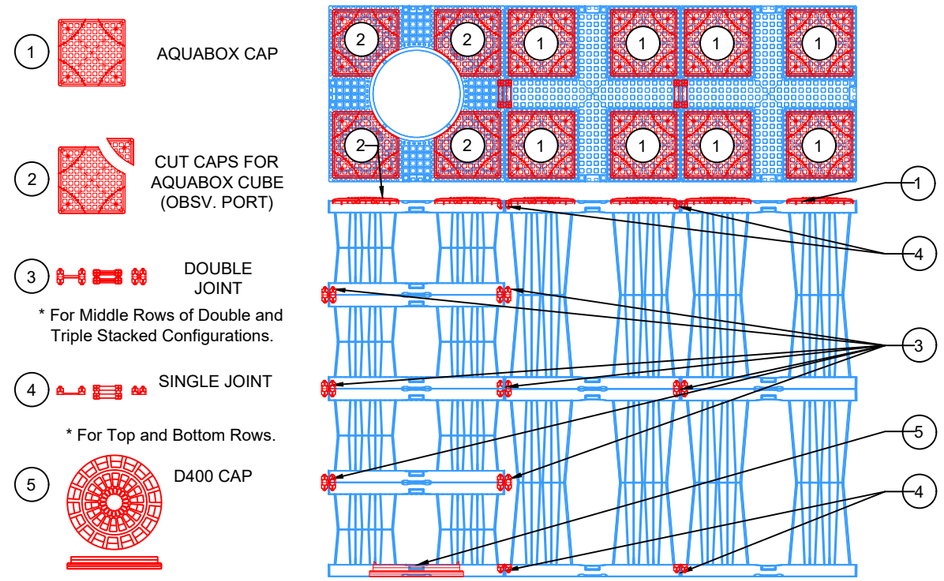


1 S-03 **AQUABOX HP**

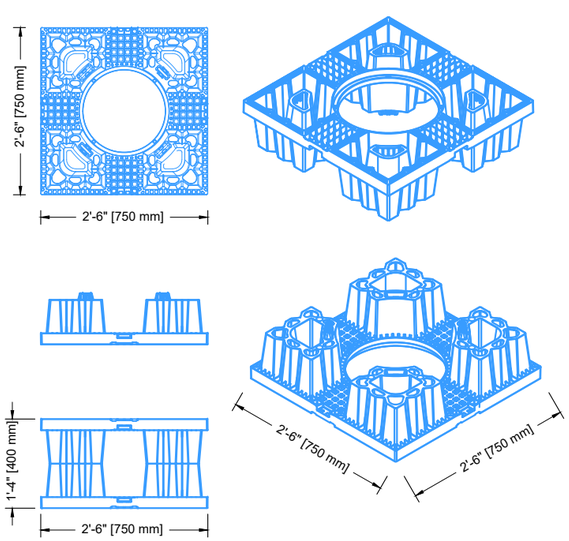


3 S-03 **AQUABOX SIDEWALL GRID**

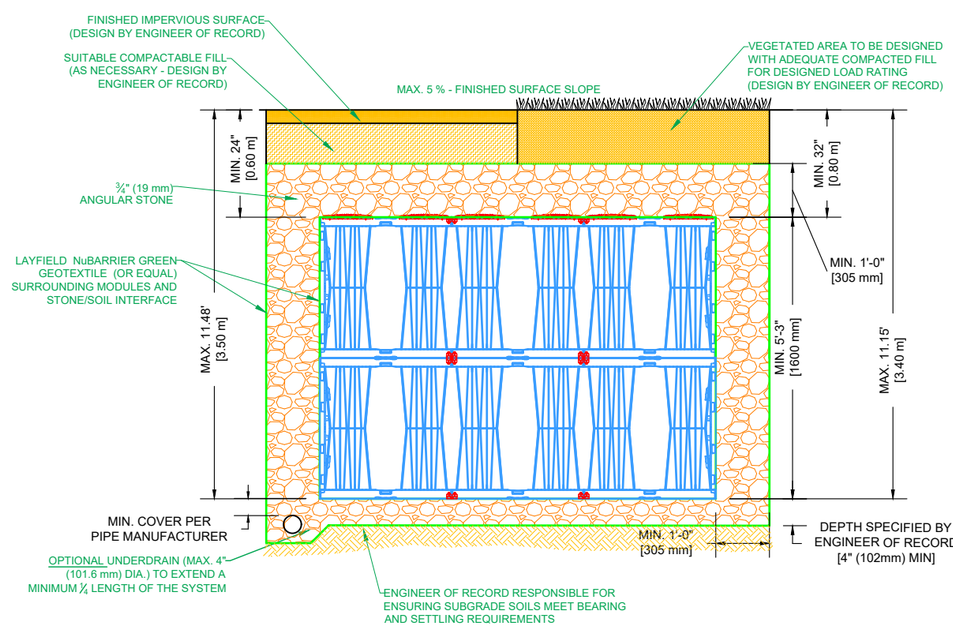


NOTE: THIS DETAIL DEPICTS ONLY THE LOCATION OF AQUABOX ACCESSORIES (CAPS/ CONNECTORS) AND DOES **NOT** REPRESENT THE PROJECT-SPECIFIC STACKING CONFIGURATION. REFER TO DETAIL 5/S-03 FOR STACKING CONFIGURATION AND CROSS-SECTIONAL DETAILS.

4 S-03 **AQUABOX ACCESSORIES CAPS AND JOINTS**



2 S-03 **AQUABOX CUBE HP**



5 S-03 **TYPICAL SYSTEM CROSS SECTION**

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		165.13 m^3
Module Storage Volume		139.10 m^3
Stone Storage Volume		26.03 m^3
System Footprint		104.65 m^2
Estimated Geotextile Fabric	NuBarrier	944 m^2
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METRO SWM TANK-2

Barrie, ON

REV	Record of Changes	Date	By
0	Preliminary Drawing	03OCT2022	LP
1	Revised Layout	14OCT2022	LP
2	Revised Layout & Elevations	24OCT2022	LP

Project Number: OP2022-00003720

Page Name: TYP. Construction Details

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 24OCT2022

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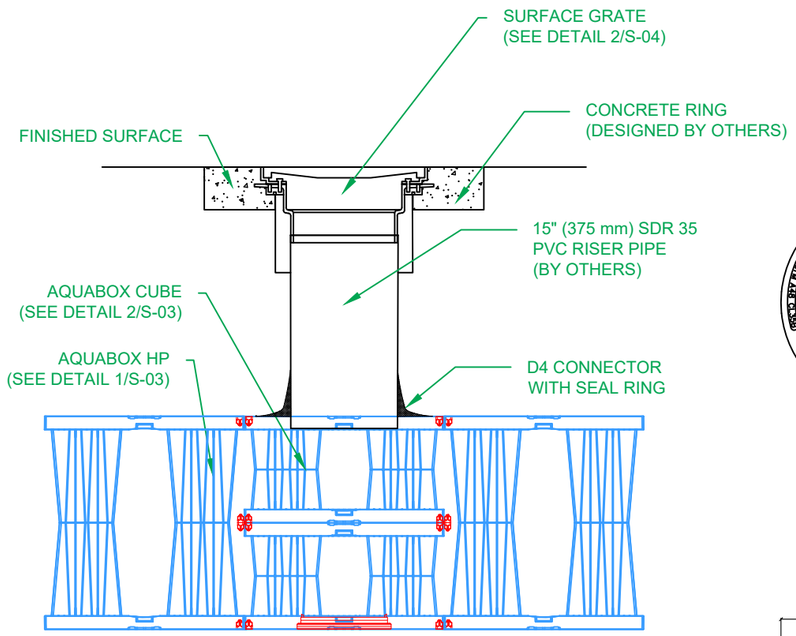
Sheet:

03 OF 07

ANSI B Size Page (Horizontal)

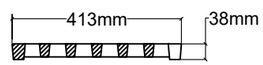


INSTALLATION SEQUENCE:

1. D4 CONNECTOR WITH SEAL RING
2. 15" (375 mm) SDR 35 PVC PIPE
3. SURFACE GRATE AT FINISHED GRADE

1 S-04 AQUABOX OBSERVATION PORT

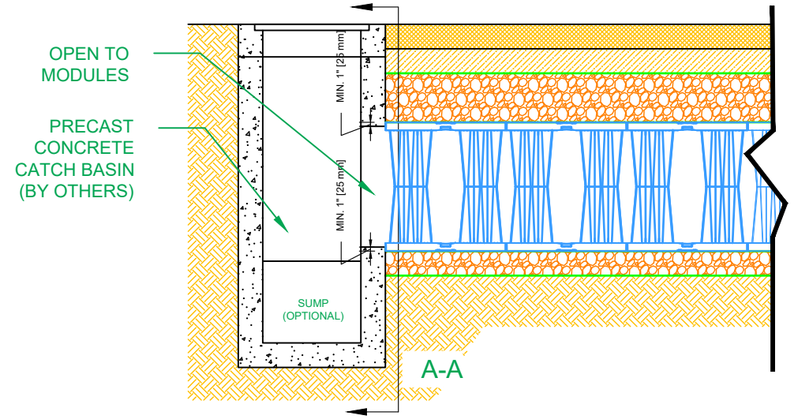
PLAN VIEW



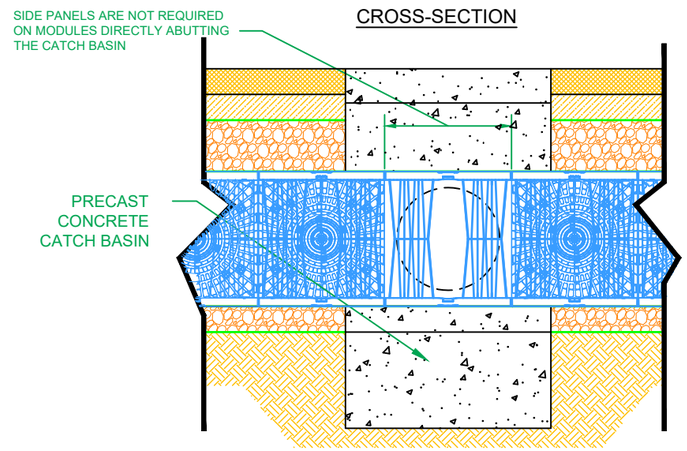
GRATE SECTION

FRAME SECTION

2 S-04 OBSERVATION PORT SURFACE GRATE



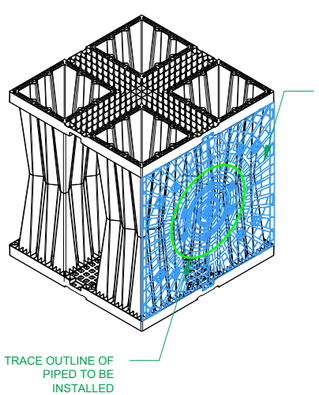
CROSS-SECTION



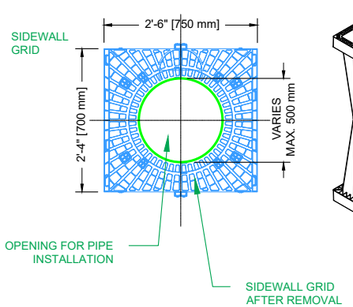
SECTION A-A

3 S-04 AQUABOX CATCHBASIN ABUTMENT (IF APPLICABLE)

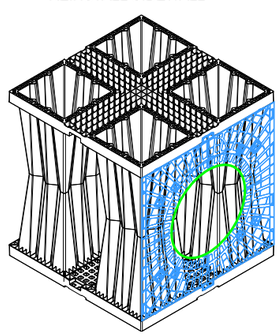
STEP 1:
LOCATE AND MARK OPENING



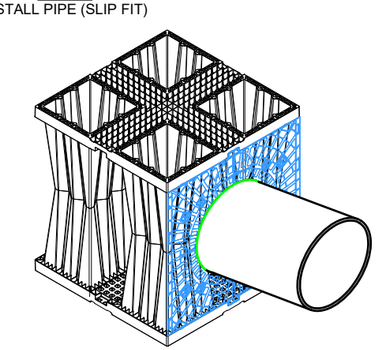
STEP 2:
REMOVE SIDEWALL FROM MODULES AND CUT OPENING



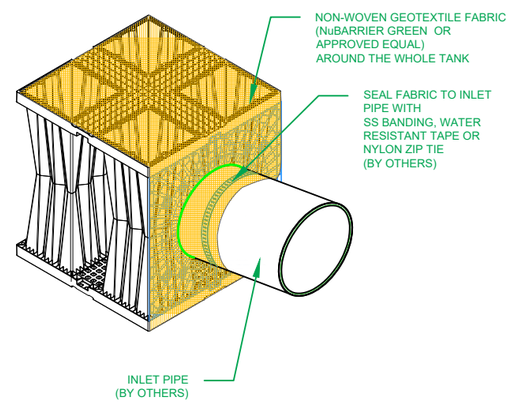
STEP 3:
REINSTALL SIDEWALL



STEP 4:
INSTALL PIPE (SLIP FIT)



STEP 5:
WRAP AND SECURE GEOTEXTILE



4 S-04 PIPE CONNECTION DETAIL

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

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Number of Layers		2
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
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METRO SWM TANK-2
Barrie, ON

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0	Preliminary Drawing	03OCT2022	LP
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Project Number: OP2022-00003720

Page Name: TYP. Pipe Penetration Details

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 24OCT2022

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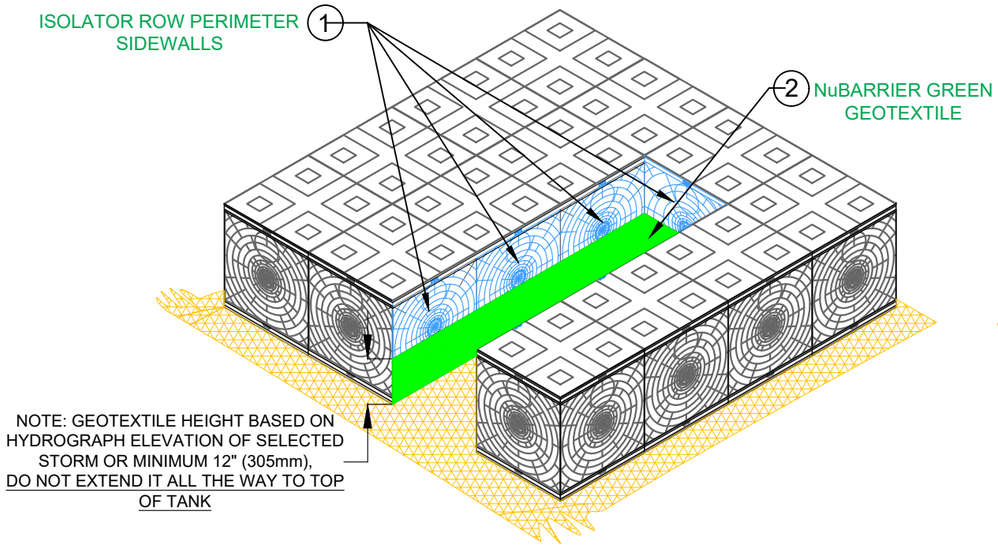
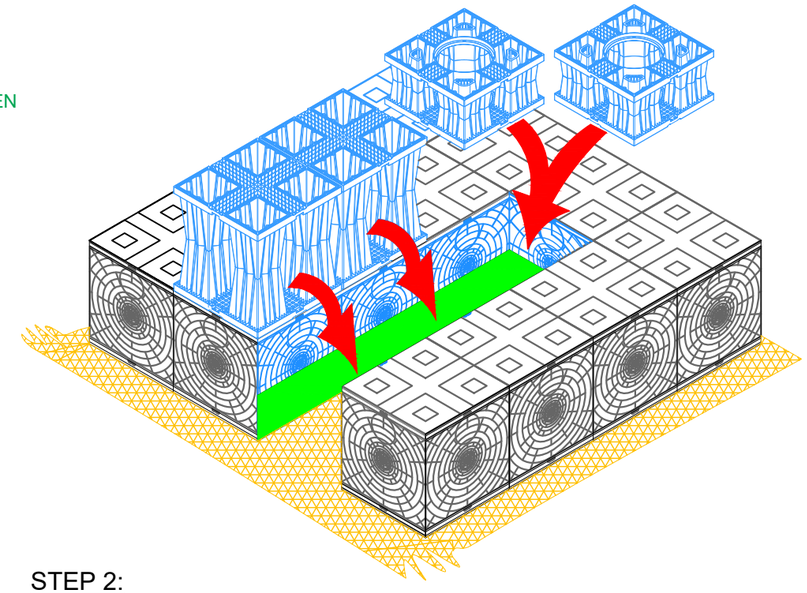
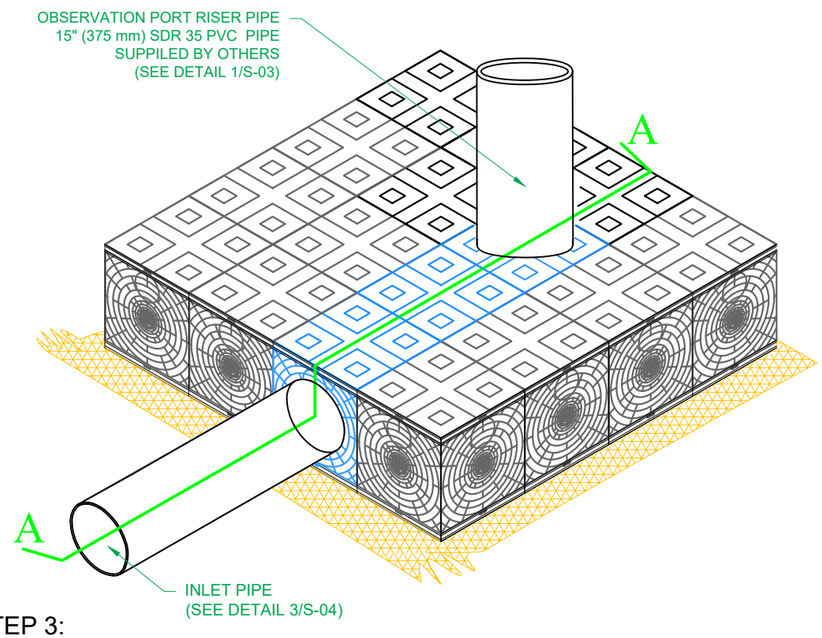
ANSI B Size Page (Horizontal)



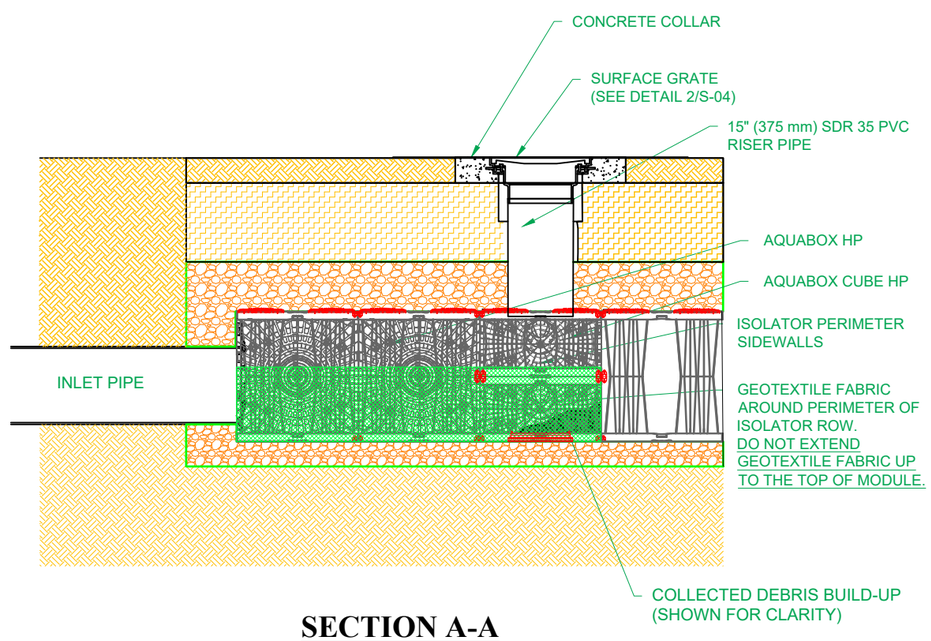
STEP 1:
INSTALL ISOLATER ROW PERIMETER SIDEWALLS AND ATTACH GEOTEXTITLE TO THEM.



STEP 2:
PLACE AQUABOX HP AND AQUABOX HP CUBE MODULES IN THE ISOLATER ROW AS PER MODULE LAYOUT 2/S-02



STEP 3:
INSTALL INLET PIPE AS PER DETAIL 4/S-04 AND CONNECTOR PIPE FOR OBSERVATION PORT AS PER DETAIL 1/S-04



SECTION A-A

1
S-05
ISOLATOR ROW INSTALLATION DETAIL

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

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METRO SWM TANK-2
Barrie, ON

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Project Number: OP2022-00003720
Page Name: TYP. Isolater Row Details
Drawn by: LP | Checked By: AW
Scale: NTS | Date: 24OCT2022

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ANSI B Size Page (Horizontal)

General Conditions

- Review installation procedures and coordinate the installation with other construction activities, such as grading, excavation, utilities, construction access, erosion control, etc.
- Engineered Contract Drawings supersede all provided documentation, as the information furnished in this document is based on a typical installation.
- Coordinate the installation with the manufacturer's representative/distributor to be on-site to review start-up procedures and installation instructions.
- Components shall be unloaded, handled and stored in an area protected from traffic and in a manner to prevent damage.
- Assembled modules may be walked on, but vehicular traffic is prohibited until backfilled per the Manufacturer's requirements. Protect the installation against damage with highly visible construction tape, fencing, or other means until construction is complete.
- Ensure all construction occurs in accordance with Federal, Provincial and Local Laws, Ordinances, Regulations, and Safety Requirements.
- Extra care and caution should be taken when temperatures are at or below -5.0° C.

NOT FOR CONSTRUCTION

These drawings shall not be used for construction until they have been reviewed for all design aspects (structural, geotechnical, stormwater) and approved by the Engineer of Record for the Project.

It is the Buyer's responsibility to ensure that the design into which the Product will be used has been approved by the Engineer of Record (not Layfield) with a review that may include, but not be limited to, Inlet and outlet configurations including inverts and pipe connections, storage volume, system footprint, Aquabox elevations including cover soil requirements, and proximity to structures and slopes.

Site design/engineering elements may include but not be limited to the following:

- Review elevations and if necessary adjust grading to ensure the chamber cover requirements are met.
- Evaluating site-specific information on soil conditions and/or bearing capacity.
- Assessing the bearing resistance (allowable bearing capacity) of the subgrade soils and the depth of foundation stone with consideration for the range of expected soil moisture conditions.

1.0 Basin Excavation

1. Stake out and excavate to elevations per approved plans. Excavation Requirements:
   a. Sub-grade excavation must be a minimum of 4" (102 mm) below the designed AquaBox Module invert.
   b. The excavation should extend a minimum of 12" (305 mm) beyond the AquaBox dimensions in each length and width (an additional 24" [610 mm] in total length and total width) to allow for adequate placement of side backfill material.
   c. Remove objectionable material encountered within the excavation, including protruding material from the walls.
   d. Furnish, install, monitor, and maintain excavation support (e.g., shoring, bracing, trench boxes, etc.) as required by Federal, Provincial and Local Laws, Ordinances, Regulations, and Safety Requirements.

2.0 Sub-Grade Requirements

1. Sub-grade shall be unfrozen, level (plus or minus 1%), and free of lumps, or debris with no standing water, mud or muck. Do not use materials nor mix with materials that are frozen and/or coated with ice or frost.
2. Unstable, unsuitable, and/or compromised areas should be brought to the Engineer's attention and mitigating efforts determined prior to compacting the sub-grade.
3. Sub-grade must be compacted to 97% Standard Proctor Density or as approved by the Engineer of Record. If code requirements restrict subgrade compaction, it is the requirement of the geotechnical engineer to verify that the bearing capacity and settlement criteria for support of the system are met.

* The Engineer of Record shall confirm minimum soil bearing capacity required based on Load Rating and top cover depth. Minimum soil bearing capacity is required so that settlements are less than 1" through the entire sub-grade and do not exceed long-term 1/2" differential settlement between any two adjacent units within the system. Sub-grade must be designed to ensure soil bearing capacity is maintained throughout all soil saturation levels.

3.0 Leveling Bed Installation

1. Install geotextile fabric and/or liner material, as specified.
   a. Geotextile fabric shall be placed per the manufacturer's recommendations.
   b. Additional material to be utilized for wrapping above the system must be protected from damage until use.
2. After the geotextile is secured, place a minimum 4" (102 mm) Leveling Bed.
   a. Material should be a 3/4" (19 mm) angular stone meeting AASTHO #56, 57, 67, 68 Material specifications.
   b. Material should be raked free of voids, lumps, debris, sharp objects, and plate vibrated to a level with a maximum 1% slope.
3. Correct any unsatisfactory conditions.

4.0 AquaBox Module Assembly and Placement

1.0 AquaBox Assembly

AquaBox modules are delivered to the site as palletized components requiring simple assembly. No special equipment, tools or bonding agents are required; only a rubber mallet. The modules can be pre-assembled either inside or outside the trench. The pre-assembled modules must then be organized according to the design specifications.

ASSEMBLY INSTRUCTIONS:

1. Each AquaBox features plug and socket connections which makes assembling the modules quick and easy. Simply lay one element on the ground and join it to another by applying some pressure on the top.

GENERAL NOTES:

- Remove packaging material and check for any damage. Report any damaged components to an AquaBox Distributor or Layfield personnel.
- AquaBox components are backed by a 50 year warranty when installed per the manufacturer's recommendations.

2.0 AquaBox Placement

1. Install geotextile fabric and/or liner material, as specified.
   a. Geotextile fabric shall be placed per the manufacturer's recommendations.
   b. Additional material to be utilized for wrapping above the system must be protected from damage until use.
2. Mark the footprint of the modules for placement.
   a. Ensure module perimeter outline is square or similar prior to Module placement.
   b. Care should be taken to note any connections, ports or other irregular units to be placed.
3. Install the individual modules by hand, as detailed below.
   a. The modules should be installed as shown in the AquaBox submittal drawings. Place AquaBox Cubes at the location of observation ports.
   b. Modules are connected horizontally to adjacent modules with Single or Double Joints.
   c. Use Single Joints for Bottom and Top rows while Double Joints are used for middle rows in Double or Triple stacking configuration.
   d. For double/ triple stack configurations:
      i. Use the Single Joints for the first bottom row.
      ii. Install Double Joints on all the middle rows.
      iii. Place the upper module directly on top of the bottom module in the same direction.

LAYFIELD
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Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	3.50 m	3.40 m

METRO SWM TANK-2

Barrie, ON

REV	Record of Changes	Date	By
△	Preliminary Drawing	03OCT2022	LP
△1	Revised Layout	14OCT2022	LP
△2	Revised Layout & Elevations	24OCT2022	LP

Project Number: OP2022-00003720

Page Name: Supplementary Notes

Drawn by: LP | Checked By: AW

Scale: NTS | Date: 24OCT2022

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4. Install the modules to completion, taking care to avoid damage to the geotextile and/or liner material.
5. Once all the modules have been placed, Install SIDEWALLS on the perimeter and CAPS on the top.
6. Locate any ports or other penetration of the AquaBox.
   a. Install ports/penetrations in accordance with the approved submittals, contract documents, and manufacturer's recommendations.
6. Upon completion of module installation, wrap the modules in geotextile fabric and/or liner.
   a. Geotextile fabric shall be wrapped and secured per the manufacturer's recommendations.
   b. Seal any ports/penetrations per the Manufacturer's requirements

Notes:

- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations

6.0 Side Backfill

1. Inspect all geotextiles, ensuring that no voids or damage exists; which will allow sediment into the AquaBox system.
2. Adjust the stone/soil interface geotextile along the side of the native soil to ensure the geotextile is taught to the native soil.
3. Once the geotextile is secured, begin to place the Side Backfill.
   a. Material should be a 3/4" (19 mm) angular stone meeting AASTHO #56, 57, 67, 68 Material specifications.
   b. Backfill sides "evenly" around the perimeter without exceeding single 12" (305 mm) lifts.
   c. Place material utilizing an excavator, dozer, or conveyor boom.
   d. Utilize a plate vibrator to settle the stone and provide uniform distribution.

Notes:

- Do not apply vehicular load to the modules during placement of side backfill. All material placement should occur with equipment located on the native soil surrounding the system.
- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations

7.0 Top Backfill (Stone)

1. Begin to place the Top Backfill.
   a. Material should be a 3/4" (19 mm) angular stone meeting AASTHO #56, 57, 67, 68 Material specifications.
   b. Place material utilizing an excavator, dozer, or conveyor boom and use a walk-behind plate vibrator to settle the stone and provide even distribution.

DO NOT DRIVE ON THE MODULES WITHOUT REQUIRED MINIMUM COVER.

2. Upon completion of Top Backfilling, wrap the system in geotextile fabric and/or liner per the manufacturer's recommendations.
3. Install metallic tape around the perimeter of the system to mark the area for future utility detection.

Notes:

- If damage occurs to the geotextile fabric or impermeable liner, repair the material in accordance with the geotextile/liner Manufacturer's recommendations.
- Only Low Ground Pressure tracked equipment can be used during construction with at least 300 mm suitably compacted covering created over the AquaBox System. Abrupt maneuvers such as steering should be avoided at this stage.
- The passage of heavy goods vehicles with a wheel load of more than 50 kN over the basin is possible if the thickness of the covering is adequately compacted and not less than 600 mm. When dumping the backfill material, the load per wheel shall not exceed 50 kN.

8.0 Suitable Compactable Fill

Following Top Backfill placement and geotextile fabric wrapping; complete the installation as noted below.

Vegetated Area

1. Place fill onto the geotextile.
   a. Maximum 12" (305 mm) lifts, compacted with a vibratory plate or walk behind roller to a minimum of 90% Standard Proctor Density.
   b. The minimum top cover to finished grade should not be less than 32" (0.80 m) and the maximum depth from final grade to the bottom of the lowest module should not exceed 11.15' (3.40 m).
2. Finish to the surface and complete with vegetative cover.

Impervious Area

1. Place fill onto the geotextile.
   a. Maximum 12" (305 mm) lifts, compacted with a vibratory plate or walk behind roller to a minimum of 90% Standard Proctor Density.
   b. The minimum top cover to finished grade should not be less than 24" (0.60 m) and the maximum depth from final grade to the bottom of the lowest module should not exceed 11.48' (3.50 m).
2. Finish to the surface and complete with asphalt, concrete, etc.

Notes:

- A vibratory roller may only be utilized after a minimum cover has been placed or for the installation of the asphalt wearing course.
- If damage occurs to the geotextile fabric, repair the material in accordance with the geotextile Manufacturer's recommendations.
- For most recent installation guidelines visit: https://www.geoplastglobal.com/en/downloads/aquabox

9.0 Inspection and Maintenance

If the following inspections and maintenance procedures are not followed as specified below then the end-user is responsible for the performance of the modules. This maintenance procedure must be performed after termination of site operations, heavy rainfall, flooding, or any incident that will vary the flow of water drastically.

Inspection

1. Inspect all observation ports, inflow, and outflow connection and the discharge area
2. Identify and log any sediment and debris accumulation, system backup, or discharge rate changes.
3. If there is a sufficient need for a cleanout, contact a local cleaning company for assistance.

Cleaning:

1. If a pre-treatment device is installed, follow manufacturer recommendations.
2. Using a vacuum pump truck, evacuate debris from the inflow and outflow points.
3. Flush the system with clean water, forcing debris from the system.
4. Repeat steps 2 and 3 until no debris is evident

Notes:

- For spray probe cleaning, the use of a 90° rotating nozzle with a 45° water jet is recommended. The nozzles used should have a pressure of 80 to 120 bar; higher pressures may damage the geotextile.

LAYFIELD
117 Basaltic Rd,
Concord, ON L4K 1G4 Canada
Ph: (905) 761-9123
www.layfieldgroup.com

Total Storage Volume		165.13 m^3
Module Storage Volume		139.10 m^3
Stone Storage Volume		26.03 m^3
System Footprint		104.65 m^2
Estimated Geotextile Fabric	NuBarrier	944 m^2
Estimated Geotextile Fabric	LP8	N/A
Estimated Liner		N/A
Estimated GeoGrid		N/A
Estimated Stone Volume		65.07 m^3
Excavation Required		241.87 m^3
Excavation Depth		2.31 m
Stone Type		19mm Clear Stone
Stone Void Space		40%
Number of Layers		2
Allowable Loading		HS-25
Surface	Paved Surface	Vegetated/ Unpaved
Minimum Top Cover	0.60 m	0.80 m
Maximum Tank Depth	3.50 m	3.40 m

METRO SWM TANK-2

Barrie, ON

REV	Record of Changes	Date	By
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ANSI B Size Page (Horizontal)

Summary

post-development	Metro Grocery Store	421426	avg-annual	-0.001	-0.051

These continuity errors represent the percent difference between initial storage+ total inflow for the entire drainage system versus final storage + total outflow for the entire drainage system. If the continuity error exceed some reasonable level, such as 10 percent, then the validity of the analysis results must be questioned. The most common reasons for an excessive continuity error are conduits that are too short, abrupt changes in storage (very small or very large storage areas), or flooding losses in the model (insufficient node depth).

Water Balance | 421426

1	1.64 ha	944.7 mm	40.2 mm	498.6 mm	329.27 mm	615.43 mm
		15,493.08 m^3	659.22 m^3	8,176.98 m^3	5,400 m^3	65.15 %
TOTAL	**1.64 ha**	**944.7 mm**	**40.2 mm**	**498.6 mm**	**329.27 mm**	**615.43 mm**
		15,493.08 m^3	**659.22 m^3**	**8,176.98 m^3**	**5,400 m^3**	**65.15 %**

Storage Volumes | 421426

Catchment 1

Subatchment

Phase 1 (Controlled)	0.19	0.19
Phase 1 (Uncontrolled)	0.19	0.19

Storage

SWMF_LV19	1	1.05

Map | 421426

LID Summary | 421426

Jellyfish Filter	Oil-Grit-Separator	-	-	-	10,500 m^3 10,500 m^3 0 %	716.354 kg 78.799 kg 89 %	2.1 kg 0.483 kg 77 %
SWMF_LV19	Wet-Pond	-	-	-	15,500 m^3 11,160 m^3 28 %	126.703 kg 18.245 kg 85.6 %	0.624 kg 0.18 kg 71.2 %

Loading Summary TSS | 421426

Catchment 1	97.684 %	0.014 m^3/s	15.493.08 m^3 70.591 mg/l 1,093.667 kg	5.399 m^3 1.635 mg/l 8.828 kg
Total	**99.193 %**	**0.014 m^3/s**	**15.493.08 m^3** **70.591 mg/l** **1,093.667 kg**	**5.399 m^3** **1.635 mg/l** **8.828 kg**

Loading Summary TP | 421426

Catchment 1	92.22 %	0.014 m^3/s	15,493.08 m^3 0.207 mg/l 3.208 kg	5,399 m^3 0.016 mg/l 0.087 kg
Total	**97.289 %**	**0.014 m^3/s**	**15,493.08 m^3** **0.207 mg/l** **3.208 kg**	**5,399 m^3** **0.016 mg/l** **0.087 kg**

Peak Flow | 421426

	Phase 1 (Controlled)	PEAK RUNOFF FLOW from	0.20 m^3/s
	Jellyfish Filter	MAXIMUM LATERAL INFLOW at	0.200 m^3/s
	SWMF_LV19	MAXIMUM OUTFLOW from	0.015 m^3/s
	Phase 1 (Uncontrolled)	PEAK RUNOFF FLOW from	0.01 m^3/s
1	Goodwin	MAXIMUM LATERAL INFLOW at	0.214 m^3/s
	Pipe1	MAXIMUM FLOW in	0.200 m^3/s
	Pipe2	MAXIMUM FLOW in	0.209 m^3/s
	Outfall	MAXIMUM FLOW at	0.014 m^3/s
	Pipe3	MAXIMUM FLOW in	0.014 m^3/s

Loading TSS | 421426

TSS - Catchment 1

Phase 1 (Controlled)	0 %	0.2 m^3/s	14,264.97 m^3	10,470 m^3
			68.42 mg/l	68.42 mg/l
			976.005 kg	716.354 kg
Phase 1 (Uncontrolled)	0 %	0.01 m^3/s	1,228.11 m^3	500 m^3
			95.808 mg/l	95.808 mg/l
			117.662 kg	47.904 kg
Jellyfish Filter	89 %	0.2 m^3/s	10,500 m^3	10,500 m^3
			68.224 mg/l	7.505 mg/l
			716.354 kg	78.799 kg
Goodwin	0 %	0.214 m^3/s	11,000 m^3	11,000 m^3
			11.518 mg/l	11.518 mg/l

Loading TP | 421426

TP - Catchment 1

Phase 1 (Controlled)	0 %	0.2 m^3/s	14,264.97 m^3	10,470 m^3
			0.201 mg/l	0.201 mg/l
			2.862 kg	2.1 kg
Phase 1 (Uncontrolled)	0 %	0.01 m^3/s	1,228.11 m^3	500 m^3
			0.282 mg/l	0.282 mg/l
			0.347 kg	0.141 kg
Jellyfish Filter	77 %	0.2 m^3/s	10,500 m^3	10,500 m^3
			0.2 mg/l	0.046 mg/l
			2.1 kg	0.483 kg
Goodwin	0 %	0.214 m^3/s	11,000 m^3	11,000 m^3
			0.057 mg/l	0.057 mg/l

Phase 1 (Controlled)

Subcatchment name	Phase 1 (Controlled)
Catchment	1
Soil type	Fine Sandy Loam
Weighted EMC TSS (mg/L)	68.42
Weighted EMC TP (mg/L)	0.2
Total AREA (HA)	1.51
Impervious area (HA)	0.9549693000000001
Roof area (HA)	0.41007069999999995
Landscaped area (HA)	0.14496
Row Crop area (HA)	0
Open Space / Parkland area (HA)	0
Forest area (HA)	0
Wetland area (HA)	0
Other area (HA)	0

Appendix E:
Minor Storm Conveyance

PROJECT	Metro Grocery Store	FILE	421426
		DATE	October 11, 2022
SUBJECT	Catch Basin Grate Capacity	NAME	NHF
		PAGE	1 OF 1

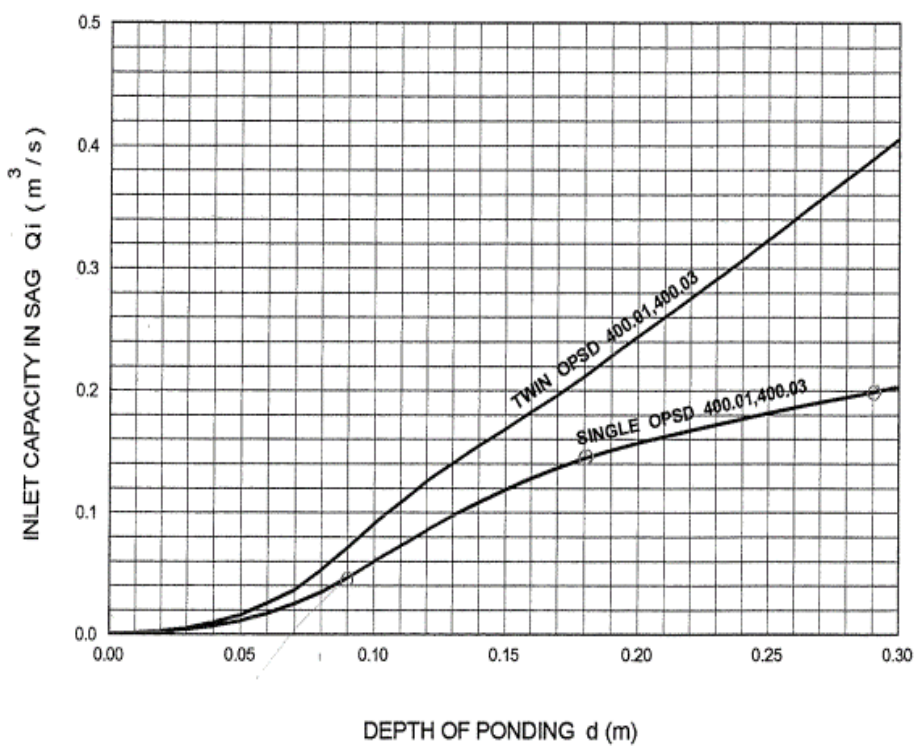
Catch Basin Grate Capacity Summary Table

As per MTO Design Chart 4.19

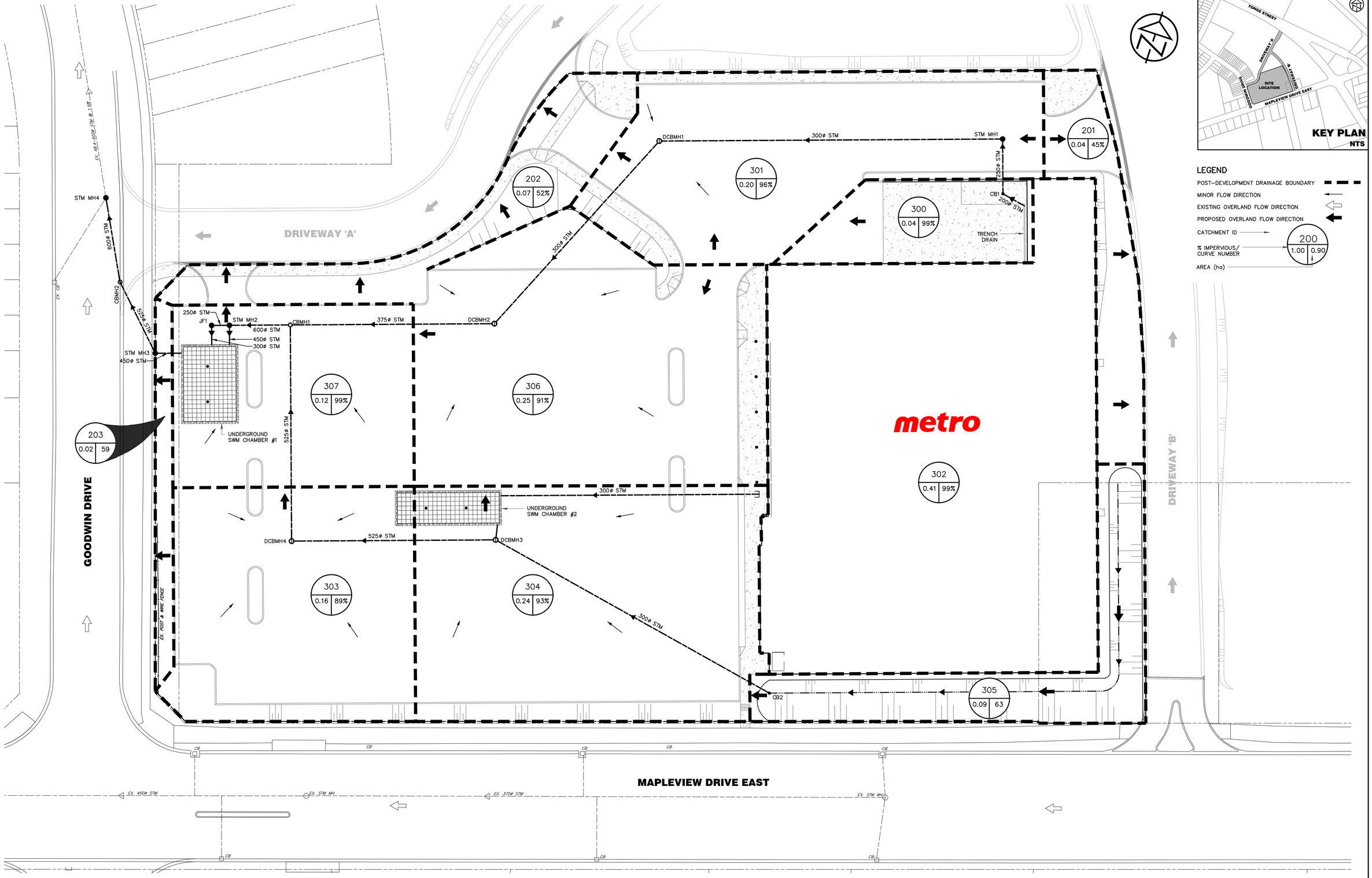
Structure	Ponding Depth (m)	Single Grate Capacity (m^3/s)	Double Grate Capacity (m^3/s)	Required Grate Capacity (m^3/s)	Minimum Grate Required
CB1	0.11	0.07	0.15	0.03	SINGLE
DCBMH1	0.09	0.04	0.08	0.05	DOUBLE
DCBMH2	0.10	0.06	0.09	0.06	SINGLE
CB3	0.30	0.20	0.40	0.01	SINGLE
DCBMH3	0.10	0.06	0.09	0.06	SINGLE
DCBMH4	0.10	0.06	0.09	0.04	SINGLE
CBMH1	0.10	0.06	0.09	0.01	SINGLE

Required Grate Capacity is equal to the 1:5-year Peak Flow Rate calculated in the storm sewer design sheet (using Rational Method).

Design Chart 4.19: Inlet Capacity at Road Sag



Drawings



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DRAWING REFERENCES

SITE PLAN DESIGN SHOWN ON THIS PLAN PREPARED BY TURNER FLEISCHER ARCHITECTS INC. DATED NOVEMBER 30, 2022.

TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS PLAN COMPILED BY KRCMAR SURVEYORS LTD., DATED NOVEMBER 17, 2022.

BENCHMARK

TBM#1 ELEV. 263.48 m

MNR No. 001193 1U460S – SOUTHWEST CORNER OF ST. PAUL'S CRESCENT AND YONGE STREET, TABLET SET HORIZONTALLY IN NORTH FACE OF CONCRETE FOUNDATION OF ST. PAUL'S ANGLICAN CHURCH, AT NORTH-EAST CORNER (TOWER) 15.2 m WEST OF BEL POLE AND 9.2 m SOUTH-EAST OF "V" IN TWIN BIRCH TREES 15 cm BELOW BRICK.

No.	REVISION DESCRIPTION	DATE
1.	ISSUED FOR SITE PLAN APPROVAL	DEC. 2/22

ENGINEER STAMP

LICENSED PROFESSIONAL ENGINEER
N. H. FORIS
100224762
DEC. 6, 2022
PROVINCE OF ONTARIO

METRO GROCERY STORE NO. 145
658 YONGE STREET
CITY OF BARRIE

POST-DEVELOPMENT DRAINAGE PLAN

TATHAM ENGINEERING

DESIGN: LMB	FILE: 421426	DWG:
DRAWN: LMB/LC	DATE: SEPT 2022	DP-2
CHECK: LC	SCALE: 1:300	

Drawing Name: 421426-DP02.dwg, Plotted: Dec 02, 2022