STORMWATER MANAGEMENT REPORT

659 BALM BEACH ROAD

TOWN OF MIDLAND
COUNTY OF SIMCOE

PREPARED FOR:

2798860 ONTARIO LIMITED

PREPARED BY:

C.F. CROZIER & ASSOCIATES INC.
70 HURON STREET, SUITE 100
COLLINGWOOD, ON L9Y 4L4

AUGUST 2025

CFCA FILE NO. 2774-7263

CROZIER

Revision Number	Date	Comments
Rev.1	August 6, 2025	Issued for First Submission OPA

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

LIST OF FIGURES

1.0 Introduction

CF Crozier & Associates Inc. (Crozier) has been retained by 2798860 Ontario Limited (Developer) to prepare a Stormwater Management Report to support the Official Plan Amendment for lands located at 659 Balm Beach Road in the Town of Midland (Town), within Simcoe County (County). The development will herein be referred to as the Subject Lands. Refer to Figure 1 for the Site Location Plan.

The Subject Lands are approximately 20.7 ha (51.05 ac) in size and is legally described as Lot 105 Concession 1 West of Penetanguishene Road, in the Town of Midland. The proposed development is comprised of mixed-use high density (~320 units) and medium density residential (~575 units), in addition to park and stormwater management blocks. A 20m ROW is proposed with a single entrance through Balm Beach Road, with a potential second future access through Town development lands to the northeast of the site. There is also potential future access through lands to the west. Refer to **Figure 2** for the concept plan prepared by Innovative Planning Solutions Inc. (June 26, 2025).

The Owners of the Subject Lands have assembled a multi-disciplinary team, whose consultants have prepared studies/plans to support the planning application. This report should be read in conjunction with the following reports:

- Functional Servicing Report (C.F. Crozier & Associates, August 2025)
- Traffic Impact Study (JD Northcote Engineering Inc., July 2025)
- Environmental Impact Study (Cambium Inc, July 2025)

2.0 Background & Site Description

The Subject Lands cover an area of approximately 20.7 ha and currently consist of an existing building and parking area, with woodlands covering most of the Site. The Lands are designated 'Mixed Use Corridor' for the area fronting Balm Beach Road, and 'Natural Heritage' for the remainder of the site, per the Town of Midland Official Plan Schedule C. The Subject Lands are bound by Balm Beach Road to the north and Highway 93 to the east. Adjacent to the property to the south and west are forested lands. The Subject Lands are characterized by steep slopes near the south and east property lines, where the average grade change is approximately 30%. Within the Subject Lands, the average slope is about 2% to 8%.

The Subject Lands are located within the jurisdiction of the Severn Sound Environmental Association (SSEA) and is located within the Midland Area Subwatershed (Severn Sound Watershed and Subwatershed Boundaries Figure 2-2, August 2010). Based on the Source Water Protection GIS mapping, a small portion near the southern boundary is within Wellhead Protection Area Zone D.

As per the Soil Survey GeoHub GIS, the general soil types found on the Subject Property are classified as Vasey Sandy Loam (hydrologic soil group B) to the west and Tioga Loamy Sand (hydrologic soil group AB) to the east.

3.0 Site Grading

The site grading will be governed by the existing elevations of the site boundary and overall drainage system for the proposed development. Based on the topographic survey, there are significant grade changes across the site, including multiple high points and low points which impact the natural drainage patterns in the site. Given the existing noted grade changes across the site, substantial amounts of earthworks are anticipated to ensure maximum road gradients are not surpassed and to provide adequate stormwater conveyance routes throughout the site. The earthworks operations will result in an overall cut scenario for the development with excess soil anticipated to be hauled off-site. The internal roads will possess a longitudinal gradient as an overland flow route to the SWM facility located in the southeast part of the Subject Lands. The road network will have slopes at or greater than 0.5%, with a maximum road slope of 7.0%. The proposed road grading considers the future connection to the Town Owned lands to the north which identifies a ROW for potential future access to the site. Grading will be subject to refinement upon completion of a groundwater monitoring program as part of the detailed design process. Refer to Figure 4 for the Preliminary Grading Plan.

4.0 Proposed Stormwater Management Strategy

The following subsections provide a preliminary overview of the functional stormwater management design for the Subject Lands. Several documents/plans were reviewed during this engineering assessment which include:

- County Road 93 Phase 4 Reconstruction (RJ Burnside, March 2019)
- Balm Beach Road (County Road 25) Road Servicing Phase 1 (WSP, June 2023)

4.1 Stormwater Management Criteria

The management of stormwater from the Subject Lands must comply with the policies and standards of:

- The Town of Midland;
- The Severn Sound Environmental Association (SSEA); and,
- The Ministry of the Environment, Conservation and Parks (MECP);

The stormwater management strategy recommended for the proposed development has been included below:

Water Quantity Control
- Control of the post development peak flows to pre-development levels for the 24hr SCS and 4hr Chicago design storms up to and including the 100-yr generated by the Subject Property (on-site ‘post-to-pre’ control).

Water Quality Control
- “Enhanced Protection” per MECP 2003 SWM guidelines, given Little Lake as ultimate receiver.

Development Standard
- Lot Grading at 2% optimum
- Minor and major drainage systems to convey runoff from frequent and infrequent rainfall events to a suitable outlet.

4.2 Existing Drainage Conditions

The Subject Lands are currently characterized by steep changes in grade and forested areas. Existing drainage on the site is predominantly characterized by sheet flow draining towards the southeast corner towards Highway 93. There is an existing commercial structure along Balm Beach Road, with lawn and gravel parking areas. The Subject Lands generally drain from northwest to southeast, while the more north portion of the Subject Lands drains towards Balm Beach Road. There is an existing roadside ditch along Highway 93 that conveys runoff to a 900mm dia. HDPE culvert. The ultimate outlet for stormwater flows is Little Lake, east of the Subject Lands.

To facilitate the pre-development stormwater analysis, the following catchments have been discretized based on the existing drainage conditions.

- **PRE-1**: This catchment area is approximately 4.06 ha and is located at the southwest limit of the Subject Lands. It consists of the existing commercial structure and associated gravel driveway/parking area, along with steep wooded areas. Existing drainage flows north towards Balm Beach Road.

- **PRE-2**: This catchment area is approximately 7.95 ha and is located at the southern limit of the Subject Lands. This catchment consists of wooded areas and drains southeast towards Highway 93.

- **PRE-3**: This catchment area is approximately 1.73 ha and is near the northwest corner of the Subject Lands. This catchment consists of wooded areas. This catchment drains north towards Balm Beach Road.

- **PRE-4**: This catchment area is approximately 2.43 ha and is near the northeast corner of the Subject Lands. This catchment consists of steep wooded areas and drains towards the southeast. There is a topographic depression about 2m deep that collects drainage from catchments from PRE-4. Ultimately the stormwater would drain south after overtopping elevation contour 250.00 m.

- **PRE-5:** This catchment area is approximately 3.15 ha and is near the southeast corner of the Subject Lands. This catchment consists of very steep wooded areas and drains to the south.

- **PRE-6:** This catchment area is approximately 1.34 ha and is in the northeast of the Subject Lands. This catchment consists of very steep wooded areas and drains east towards Highway 93.

Refer to **Figure 5** for Pre-Development Drainage Figure, and **Appendix A** for the Hydrologic Parameter Sheets.

4.3 Proposed Drainage Conditions

The proposed development will be constructed to a fully urbanized system complete with curb and gutter and storm sewers. The minor drainage system will consist of storm sewers and catchbasins sized to convey the 5-year design storm event, per Town standards. The major drainage system for the residential areas will be provided through overland flow routes within the road allowance.

To meet the SWM criteria, the minor and major storm flows will be conveyed to the SWM Facility. The SWM Facility is located in the southeast corner of the Subject Lands. The SWM facility will control and treat stormwater prior to discharging to the roadside ditch on Highway 93 that will convey stormwater to Little Lake. Given that Block C is located downhill of the SWM facility, this block will have its own quantity and quality control measures. These measures can potentially be placed in Block G, which will be confirmed at the detailed design stage.

Preliminary site grading and storm sewer routing have been identified to ensure that the provided minor and major storm drainage systems can convey stormwater to the SWM Facility. The outlet location and storm sewer sizing will be confirmed at the detailed design stage. Note that the provided concept plan does not have internal road networks for blocks A, B, C, D, and E. Refinement of the post development drainage areas may be needed after a more detailed concept plan is published.

To facilitate the post-development stormwater analysis, the following five (5) catchments have been discretized based on the proposed drainage conditions.

- **POST-1**: This catchment area represents the Subject Lands in post-development conditions and is approximately 14.4 ha. Blocks A, B, D, E, F and I comprise of mixed-use high density, medium density residential developments, and park area. The Subject Lands within this catchment drain towards the Stormwater Management Facility (SWMF).

- **POST-2**: This catchment area is approximately 1.46 ha and is near the northeast corner of the Subject Lands. This catchment consists of very steep wooded areas, and is noted on the concept plan as non-developable area. In the pre-development conditions, this catchment drains east. In the post-development condition, this drainage area will be conveyed around the development in Block C.

- **POST-3:** This catchment area is approximately 1.34 ha and represents Block C and Block G. It is located in the northeast corner of the Subject Lands. The catchment is located downhill of the rest of the development. As a result, this catchment does not drain towards the SWMF and instead will outlet to the ditch along Highway 93.

- **UNC-1**: This catchment area is approximately 1.89 ha and represents a 20 m Environmental Buffer area along the south border of the Subject Lands. This area will drain uncontrolled to the adjacent properties.

- **SWMF:** This catchment area comprises of the SWM block located in the southeast corner of the Subject Lands and is approximately 1.58 ha.

The post-development drainage conditions and catchment areas have been presented in **Figure 6.**

4.4 Quantity Control

Quantity control for the Subject Lands Blocks A, B, D, E, F and I will be provided by the Stormwater Management Facility. A hydrologic model was prepared for the pre-development and post-development scenarios using the stormwater management hydrologic computer program Visual OTTHYMO 6.2 (VO6). The purpose of the modeling was to ensure that quantity control requirements are met (i.e., post-development peak flow rates do not exceed the pre-development flows to the respective drainage area). Pre-development and post-development drainage areas have been reflected in **Figure 5** and **Figure 6**, respectively.

Rainfall was simulated using a 24-hour SCS Type II distribution, a 4-hour Chicago distribution and the Timmins Regional Storm distribution. Rainfall depths and intensities were obtained from the Town of Midland Engineering Development Design Standards. The hydrologic modelling parameter sheets have been provided in **Appendix A**. VO6 modelling files, including input and output have been provided in **Appendix C**.

It should be noted that Block C does not drain to the SWM Facility. This block will have its own quantity and quality control measures. The ROUTE RESERVOIR command was used to model the on-site storage for Block C. The storage-discharge relationship is based on matching the post-development flows to the pre-development flows calculated for catchment PRE-6. It was found that approximately 413 m^3 of storage will be required to control post development flows for Block C. Runoff from POST-2 will be conveyed around Block C towards Highway 93 and will drain uncontrolled to the roadside ditch.

A summary of the pre-development and post-development stormwater flows towards the SWM Facility has been provided in **Table 1**:

Table 1: Summary of "Post to Pre" Peak Flows – Total Site

Return Period (Years)	Flow Rates (m^3/s)	
	Pre-Development (20.66 ha)	Post-Development – Controlled (20.66 ha)
4 Hour Chicago		
2	0.214	0.079
5	0.400	0.133
10	0.547	0.173
25	0.760	0.229
50	0.945	0.283
100	1.135	0.335
24 Hour SCS Type II		
2	0.370	0.127
5	0.609	0.200
10	0.769	0.251
25	1.013	0.340
50	1.198	0.406
100	1.399	0.476

As shown in **Table 1**, the proposed SWM Facility provides 'Post-to-Pre' peak flow control for all storm events up to and including the 100-year storm event.

A preliminary outlet structure has been designed to address both erosion and quantity control requirements. The outlet structure will consist of a 190 mm diameter extended detention orifice set at the permanent pool elevation, and a 150mm wide rectangular weir at invert 242.50. The emergency spillway was designed to convey the regional storm and will be set at an elevation of 244.05m. The Spillway will have a design width of 10m.

Using the ROUTE RESERVOIR command in VO6, the volume of detention storage required in the SWM Facility to attenuate the post-development peak flows to pre-development was determined based on a storage – discharge relationship. The ROUTE RESERVOIR command was used to model the SWM facility storage.

A summary of the release rates and storage volumes for the SWM Facility has been provided in **Table 2**:

Table 2: Summary of SWM Facility Release Rate & Storage Volumes

Return Period (Years)	SWM Facility	
	Release Rate (m^3/s)	Storage Volume (m^3)
4 Hour Chicago		
2	0.064	3047
5	0.110	4133
10	0.140	4837
25	0.183	5767
50	0.223	6492
100	0.260	7166
24 Hour SCS Type II		
2	0.081	3481
5	0.129	4584
10	0.158	5245
25	0.205	6170
50	0.240	6806
100	0.276	7461

4.5 Quality & Erosion Control

Stormwater management quality and erosion control will be provided by the SWM Facility. The conceptual design of the proposed SWM Facility has incorporated a permanent pool and sediment forebay to provide appropriate water quality treatment. The development will incorporate measures to provide "enhanced protection" (*Stormwater Management Planning and Design Manual*, Ministry of the Environment, 2003). The ultimate outlet for the Subject Lands is Little Lake.

Erosion control will be principally achieved by incorporating extended detention into the operation of the ponds. Sizing was based on providing a minimum 24-hour drawdown of the runoff volume produced during the 25mm event.

The Subject Development drainage area for the SWM Facility is 84.8% impervious and 15.34 ha. As such, the minimum water quality volume for a stormwater wet pond is 250 m^3/ha (*Stormwater Management Planning and Design Manual, Ministry of the Environment, 2003)*. The total water quality volume consists of 210 m^3/ha for permanent pool and 40 m^3/ha for extended detention. The required and provided extended detention and permanent pool values on the SWM Facility have been summarized in **Table 3**. Refer to **Appendix B** for the water quality and extended detention calculations.

Table 3: Stormwater Management Facility Quality Control Characteristics

	SWM Facility	
	Required Volume (m^3)	Provided Volume (m^3)
Permanent Pool	3,221	4,112
MOE Extended Detention	2,589	2,589

4.6 Stormwater Management Facility Operating Characteristics

Considering the water quantity and quality storage requirements for the POST-1, and SWMF drainage areas, a preliminary design for the SWM Facility has been completed to demonstrate that the SWM block is adequately sized. The SWM Facility incorporates max 4:1 side slope and includes benching at the permanent pool elevation contour for safety purposes. A preliminary operating profile of the SWM facility is presented in **Table 4.**

Table 4: SWM Facility Operating Characteristics

Component	Elevation (m)	Storage Required (m^3)	Storage Provided (m^3)
Bottom	240.80	--	--
Permanent Pool	242.00	3,221	4,112
Extended Detention	242.50	2,589	2,589
High-Water Level	244.00	7,807	13,111
Top of Berm	244.50	--	17,570

As evidenced by **Table 4**, the pond presented herein is sufficiently sized to provide the required stormwater quantity and quality controls. Permits and other regulatory instruments such as an Environmental Compliance Approval (MECP) will be secured at the detailed design stage.

5.0 Conclusions & Recommendations

Based on the foregoing, we conclude that the proposed 659 Balm Beach Development can be adequately serviced.

- A wet pond SWM Facility will provide both quality and quantity control for Blocks A, B, D, E, and F. The proposed SWM Facility is adequately sized to provide "enhanced protection" level treatment while controlling post-development flows to pre-development levels for all storms up to the 100-year storm event. The facility will incorporate 24-hour detention of the 25mm event to provide erosion control.

- Separate quality and quantity controls will be required to control post-development flows to pre-development flows for Block C and Block G, which is located downhill of the SWM Facility. The specifics of the stormwater management system for Block C will be confirmed at detailed design.

Based on the above, we recommend approval of the Planning Applications for the subject lands from the perspective of engineering servicing requirements.

Respectfully submitted,

C.F. CROZIER & ASSOCIATES INC.

Jonathon Kerschbaumer, P.Eng.
Project Engineer

C.F. CROZIER & ASSOCIATES INC.

Raphael de Mesa
Engineering Intern

XX/xx

J:\2700\2774 - HedBurn Homes\7263 - 659 Balm Beach Rd\Reports\1st Submission OPA\2025.05.16_1st Sub SWM OPA.docx

APPENDIX A

Hydroparameter Sheets

CROZIER CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	D.A. NAME	PRE-1
Project Number:	2774-7263	D.A. AREA (ha)	4.06
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment PRE-1

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Vasey Sandy Loam	VSL	B	100	4.06
				0
				0
				0
Total Area				4.06

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL		98		98	0.36	98	0.11	98	0	98	0.465	45.57
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0.36		0.105		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL	3.24	60	0	65	0	50	0.36	69	0	74	3.60	218.94
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	3.24		0.00		0.00		0.36		0.00			

Composite Area Calculations		
	Total Pervious Area	3.60
	Total Impervious Area	0.47
	% Impervious	11.45%
	Composite Curve #	**65.1**
	Total Area Check	4.06

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
Landuse	IA (mm)	Area (ha)	A * IA	Vasey Sandy		0		0		0		
				RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	3.24	32.4	0.35	3.24		0		0		0	1.13
Meadow	8	0.00	0.00	0.40	0.00		0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00		0		0		0	0
Lawn	5	0.36	1.80	0.35	0.36		0		0		0	0.13
Cultivated	7	0.00	0.00	0.22	0.00		0		0		0	0
Impervious	2	0.47	0.93	0.90	0.47		0		0		0	0.42
Composite		4.06	**8.64**	Composite Runoff Coefficient								0.41

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	135.89	13.5	9.9%	0.6	0.19	0.20	0.13	0.13	0.07	0.05	0.20	0.14

Appropriate calculated time to peak:	**0.14**	Appropriate Method:	Airport

CROZIER CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	**D.A. NAME**	**PRE-2**
Project Number:	2774-7263	**D.A. AREA (ha)**	**7.95**
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment PRE-2

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Vasey Sandy Loam	VSL	B	95	7.55
Tioga Loamy Sand	TLS	AB	5	0.40
				0
				0
Total Area				7.95

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL		98		98		98		98		98	0	0
TLS		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL	7.55	60	0	65	0	50	0.00	69	0	74	7.55	453.15
TLS	0.40	46	0.00	51	0.00	50	0.00	59	0.00	68	0.40	18.29
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	7.95		0.00		0.00		0.00		0.00			

Composite Area Calculations		
	Total Pervious Area	7.95
	Total Impervious Area	0.00
	% Impervious	0.00%
	Composite Curve #	**59.3**
	Total Area Check	7.95

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
Landuse	IA (mm)	Area (ha)	A * IA	Vasey Sandy		Tioga Loamy Sand		0		0		
				RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	7.95	79.5	0.35	7.55	0.18	0		0		0	2.71
Meadow	8	0.00	0.00	0.40	0.00	0.22	0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00	0.05	0		0		0	0
Lawn	5	0.00	0.00	0.35	0.00	0.20	0		0		0	0.00
Cultivated	7	0.00	0.00	0.65	0.00	0.40	0		0		0	0
Impervious	2	0.00	0	0.90	0.00	0.90	0		0		0	0.00
Composite		7.95	**10.00**	Composite Runoff Coefficient								0.34

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	309.5	31.5	10.2%	0.6	0.19	0.45	0.30	0.30	0.15	0.10	0.34	0.23

Appropriate calculated time to peak:	**0.23**	Appropriate Method:	Airport

CROZIER CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	D.A. NAME	PRE-3
Project Number:	2774-7263	D.A. AREA (ha)	1.73
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment PRE-3

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Vasey Sandy Loam	VSL	B	87	1.51
Tioga Loamy Sand	TLS	AB	13	0.22
				0
				0
Total Area				1.73

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL		98		98		98		98		98	0	0
TLS		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL	1.51	60	0	65	0	50	0.00	69	0	74	1.51	90.31
TLS	0.22	46	0.00	51	0.00	50	0.00	59	0.00	68	0.22	10.35
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	1.73		0.00		0.00		0.00		0.00			

Composite Area Calculations	Total Pervious Area	1.73
	Total Impervious Area	0.00
	% Impervious	0.00%
	Composite Curve #	**58.2**
	Total Area Check	1.73

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
Landuse	IA (mm)	Area (ha)	A * IA	Vasey Sandy		Tioga Loamy Sand		0		0		
				RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	1.73	17.3	0.35	1.51	0.18	0		0		0	0.57
Meadow	8	0.00	0.00	0.40	0.00	0.22	0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00	0.05	0		0		0	0
Lawn	5	0.00	0.00	0.35	0.00	0.20	0		0		0	0.00
Cultivated	7	0.00	0.00	0.65	0.00	0.40	0		0		0	0
Impervious	2	0.00	0	0.90	0.00	0.90	0		0		0	0.00
Composite		1.73	**10.00**	Composite Runoff Coefficient								0.33

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	223.87	11.5	5.1%	0.6	0.14	0.46	0.31	0.31	0.15	0.10	0.37	0.25

Appropriate calculated time to peak:	**0.25**	Appropriate Method:	Airport

CROZIER CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	D.A. NAME	PRE-4
Project Number:	2774-7263	D.A. AREA (ha)	2.43
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment PRE-4

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Tioga Loamy Sand	TLS	AB	88	2.14
Vasey Sandy Loam	VSL	B	12	0.29
				0
				0
Total Area				2.43

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TLS		98		98		98		98		98	0	0
VSL		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TLS	2.14	46	0	51	0	50	0.00	59	0	68	2.14	98.37
VSL	0.29	60	0.00	65	0.00	50	0.00	69	0.00	74	0.29	17.50
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	2.43		0.00		0.00		0.00		0.00			

Composite Area Calculations	Total Pervious Area	2.43
	Total Impervious Area	0.00
	% Impervious	0.00%
	Composite Curve #	**47.7**
	Total Area Check	2.43

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
Landuse	IA (mm)	Area (ha)	A * IA	Tioga Loamy		Vasey Sandy Loam		0		0		
				RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	2.43	24.3	0.18	2.14		0		0		0	0.38
Meadow	8	0.00	0.00	0.22	0.00		0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00		0		0		0	0
Lawn	5	0.00	0.00	0.20	0.00		0		0		0	0.00
Cultivated	7	0.00	0.00	0.40	0.00		0		0		0	0
Impervious	2	0.00	0	0.90	0.00		0		0		0	0.00
Composite		2.43	**10.00**	Composite Runoff Coefficient								0.16

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	90	10.5	11.7%	0.6	0.20	0.12	0.08	0.08	0.05	0.03	0.22	0.14

Appropriate calculated time to peak:	**0.14**	Appropriate Method:	Airport

CROZIER
CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	**D.A. NAME**	**PRE-5**
Project Number:	2774-7263	**D.A. AREA (ha)**	**3.15**
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment PRE-5

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Tioga Loamy Sand	TLS	AB	100	3.15
				0.00
				0
				0
Total Area				3.15

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TLS		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TLS	3.15	46	0	51	0	50	0.00	59	0	68	3.15	144.90
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	3.15		0.00		0.00		0.00		0.00			

Composite Area Calculations	Total Pervious Area	3.15
	Total Impervious Area	0.00
	% Impervious	0.00%
	Composite Curve #	**46.0**
	Total Area Check	3.15

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
				Tioga Loamy		0		0		0		
Landuse	IA (mm)	Area (ha)	A * IA	RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	3.15	31.5	0.18	3.15		0		0		0	0.57
Meadow	8	0.00	0.00	0.22	0.00		0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00		0		0		0	0
Lawn	5	0.00	0.00	0.20	0.00		0		0		0	0.00
Cultivated	7	0.00	0.00	0.40	0.00		0		0		0	0
Impervious	2	0.00	0	0.90	0.00		0		0		0	0.00
Composite		3.15	**10.00**	Composite Runoff Coefficient								0.18

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	133.56	35.0	26.2%	0.6	0.31	0.12	0.08	0.08	0.06	0.04	0.20	0.13

Appropriate calculated time to peak:	**0.13**	Appropriate Method:	Airport

CROZIER CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	**D.A. NAME**	**PRE-6**
Project Number:	2774-7263	**D.A. AREA (ha)**	**1.34**
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment PRE-6

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Tioga Loamy Sand	TLS	AB	100	1.34
				0.00
				0
				0
Total Area				1.34

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TLS		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TLS	1.34	60	0	65	0	50	0.00	69	0	74	1.34	80.40
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	1.34		0.00		0.00		0.00		0.00			

Composite Area Calculations	Total Pervious Area	1.34
	Total Impervious Area	0.00
	% Impervious	0.00%
	Composite Curve #	**46.0**
	Total Area Check	1.34

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
Landuse	IA (mm)	Area (ha)	A * IA	Tioga Loamy		0		0		0		
				RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	1.34	13.4	0.18	1.34		0		0		0	0.24
Meadow	8	0.00	0.00	0.22	0.00		0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00		0		0		0	0
Lawn	5	0.00	0.00	0.20	0.00		0		0		0	0.00
Cultivated	7	0.00	0.00	0.40	0.00		0		0		0	0
Impervious	2	0.00	0	0.90	0.00		0		0		0	0.00
Composite		1.34	**10.00**	Composite Runoff Coefficient								0.18

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	167.79	25.5	15.2%	0.6	0.23	0.20	0.13	0.13	0.09	0.06	0.26	0.18

Appropriate calculated time to peak:	**0.18**	Appropriate Method:	Airport

CROZIER
CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	D.A. NAME	POST-1
Project Number:	2774-7263	D.A. AREA (ha)	14.4
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB STANDHYD Command
Post Development Drainage Area: Catchment POST-1

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Vasey Sandy Loam	VSL	B	74	10.656
Tioga Sandy Loam	TSL	A	26	3.74
				0
				0
Total Area Check				14.4

Impervious Landuses Present:													
		Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils		Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area	A*CN
VSL		1.28	98		98	2.50	98	5.60	98		98	9.38	919
TSL		0.34	98		98	0.965	98	1.93	98		98	3.235	317.03
	0		98		98		98		98		98	0	0
	0		98		98		98		98		98	0	0
Subtotal Area		1.62		0		3.47		7.53		0			

Pervious Landuses Present:													
		Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils		Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area	A*CN
VSL		0	60	0	65	0	50	1.28	69	0	74	1.28	88.044
TSL		0	46	0	51	0	50	0.51	59	0	68	0.509	30.031
	0	0		0		0		0		0		0	0
	0	0		0		0		0		0		0	0
Subtotal Area		0		0		0		1.79		0			

Pervious Area Calculations	Total Pervious Area	1.79
	Composite Pervious Curve #	66.1
Impervious Area Calculations	Total Directly Connected Area	5.09
	Total Indirectly Connected Area	7.53
	Total Impervious Area	12.62
	% X imp	35.3
	% T imp	87.6
	Total Area Check	14.40

Initial Abstraction and Tp Calculations

Landuse	IA (mm)	Area (ha)	A * IA
Woodland	10	0	0
Meadow	8	0	0
Wetland	16	0	0
Lawn	5	1.79	8.93
Cultivated	7	0	0

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	2	40	0.25
Impervious	2.0	2	310	0.013

CROZIER CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	D.A. NAME	POST-2
Project Number:	2774-7263	D.A. AREA (ha)	1.46
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment POST-2

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Tioga Sandy Loam	TSL	AB	100	1.46
				0.00
				0
				0
Total Area				1.46

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TSL		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
TSL	1.46	46	0	51	0	50	0.00	59	0	68	1.46	67.16
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	1.46		0.00		0.00		0.00		0.00			

	Composite Area Calculations	Total Pervious Area	1.46
		Total Impervious Area	0.00
		% Impervious	0.00%
		Composite Curve #	**46.0**
		Total Area Check	1.46

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
Landuse	IA (mm)	Area (ha)	A * IA	Tioga Sandy		0		0		0		
				RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	1.46	14.6	0.18	1.46	0.18	0		0		0	0.26
Meadow	8	0.00	0.00	0.22	0.00	0.22	0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00	0.05	0		0		0	0
Lawn	5	0.00	0.00	0.20	0.00	0.20	0		0		0	0.00
Cultivated	7	0.00	0.00	0.40	0.00	0.40	0		0		0	0
Impervious	2	0.00	0	0.90	0.00	0.90	0		0		0	0.00
Composite		1.46	**10.00**	Composite Runoff Coefficient								0.18

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	47	20.0	42.6%	0.6	0.39	0.03	0.02	0.02	0.02	0.01	0.10	0.07

Appropriate calculated time to peak:	**0.07**	Appropriate Method:	Airport

CROZIER
CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road	D.A. NAME	POST-3
Project Number:	2774-7263	D.A. AREA (ha)	1.34
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB STANDHYD Command
Post Development Drainage Area: Catchment POST-3

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Tioga Sandy Loam	TSL	A	100	1.34
				0.00
				0
				0
Total Area Check				1.34

Impervious Landuses Present:

	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area	A*CN
TSL	0.35	98		98		98	0.72	98		98	1.07	105
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal Area	0.35		0		0.00		0.72		0			

Pervious Landuses Present:

		Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils		Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area	A*CN
TSL		0	46	0	51	0	50	0.27	59	0	68	0.27	15.93
	0	0		0		0		0		0		0	0
	0	0		0		0		0		0		0	0
	0	0		0		0		0		0		0	0
Subtotal Area		0		0		0		0.27		0			

Pervious Area Calculations	Total Pervious Area	0.27
	Composite Pervious Curve #	59
Impervious Area Calculations	Total Directly Connected Area	0.35
	Total Indirectly Connected Area	0.72
	Total Impervious Area	1.07
	% X imp	26.1
	% T imp	79.9
	Total Area Check	1.34

Initial Abstraction and Tp Calculations

Landuse	IA (mm)	Area (ha)	A * IA
Woodland	10	0	0
Meadow	8	0	0
Wetland	16	0	0
Lawn	5	0.27	1.35
Cultivated	7	0	0

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	2	40	0.25
Impervious	2.0	2	95	0.013

CROZIER
CONSULTING ENGINEERS

Project Name:	659 Balm Beach Road
Project Number:	2774-7263
Date:	2025-08-06
By:	RDM

D.A. NAME POST-4
D.A. AREA (ha) 1.89

Hydrologic Parameters: CALIB NASHYD Command
Pre Development Drainage Area: Catchment POST-4

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic	% Area	Area
Vasey Sandy Loam	VSL	B	68	1.29
Tioga Loamy Sand	TLS	AB	32	0.60
				0
				0
Total Area				1.89

Impervious Landuses Present:												
	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL		98		98		98		98		98	0	0
TLS		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal	0		0		0		0		0			

Pervious Landuses Present:												
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area	CN	Area	CN	Area	CN	Area (ha)	CN	Area	CN	Area	A*CN
VSL	1.29	60	0	65	0	50	0.00	69	0	74	1.29	77.11
TLS	0.60	46	0.00	51	0.00	50	0.00	59	0.00	68	0.60	27.82
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
0	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Subtotal	1.89		0.00		0.00		0.00		0.00			

Composite Area Calculations	Total Pervious Area	1.89
	Total Impervious Area	0.00
	% Impervious	0.00%
	Composite Curve #	**55.5**
	Total Area Check	1.89

Initial Abstraction and Tp Calculations

Initial Abstraction				Composite Runoff Coefficient								
				Vasey Sandy		Tioga Loamy Sand		0		0		
Landuse	IA (mm)	Area (ha)	A * IA	RC	Area	RC	Area	RC	Area	RC	Area	A*RC
Woodland	10	1.89	18.9	0.18	1.29	0.18	1		0		0	0.34
Meadow	8	0.00	0.00	0.22	0.00	0.22	0		0		0	0.00
Wetland	16	0.00	0.00	0.05	0.00	0.05	0		0		0	0
Lawn	5	0.00	0.00	0.20	0.00	0.20	0		0		0	0.00
Cultivated	7	0.00	0.00	0.40	0.00	0.40	0		0		0	0
Impervious	2	0.00	0	0.90	0.00	0.90	0		0		0	0.00
Composite		1.89	**10.00**	Composite Runoff Coefficient								0.18

Time to Peak Inputs						Uplands			Bransby Williams		Airport	
Flow Path Description	Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
SHEET	30	4.0	13.3%	0.6	0.22	0.04	0.03	0.03	0.02	0.01	0.12	0.08

Appropriate calculated time to peak:	**0.08**	Appropriate Method:	Airport

CROZIER CONSULTING ENGINEERS

Project Name:	659 BALM BEACH RD	**D.A. NAME**	**SWMF**
Project Number:	2774-7263	**D.A. AREA (ha)**	**1.58**
Date:	2025-08-06		
By:	RDM		

Hydrologic Parameters: CALIB STANDHYD Command
Post Development Drainage Area: Catchment SWMF

Curve Number Calculation

Soil Types Present:

Type	ID	Hydrologic Group	% Area	Area
Vasey Sandy Loam	VSL	B	20	0.316
Tioga Sandy Loam	TSL	A	80	1.264
				0
				0
Total Area Check				1.58

Impervious Landuses Present:

	Roadway		Sidewalk		Driveway		Building		SWMF		Subtotals	
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area	A*CN
VSL		98	0	98	0	98	0.000	98	0.158	50	0.1580	7.90
TSL		98		98		98		98	0.632	50	0.632	31.6
0		98		98		98		98		98	0	0
0		98		98		98		98		98	0	0
Subtotal Area	0		0		0		0.000		0.79			

Pervious Landuses Present:

	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotals	
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area	A*CN
VSL	0	60	0	65	0	50	0.16	69	0	74	0.158	10.90
TSL	0	46	0	51	0	50	0.63	59	0	68	0.632	37.288
0	0		0		0		0		0		0	0
0	0		0		0		0		0		0	0
Subtotal Area	0		0		0		1		0			

Pervious Area Calculations	Total Pervious Area	0.790
	Composite Pervious Curve Number	61
Impervious Area Calculations	Total Directly Connected Area	0.79
	Total Indirectly Connected Area	0.000
	Total Impervious Area	0.790
	% X imp	50.0
	% T imp	50.0
	Total Area Check	1.58

Initial Abstraction and Tp Calculations

Landuse	IA (mm)	Area (ha)	A * IA
Woodland	10	0	0
Meadow	8	0	0
Wetland	16	0	0
Lawn	5	0.790	3.950
Cultivated	7	0	0

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	2	40	0.25
Impervious	2.0	2	103	0.013

APPENDIX B

Stormwater Management Pond Design Sheets

CROZIER
CONSULTING ENGINEERS

Project: 659 Balm Beach Road
Project No.: 2774-7263
Design by: RDM
Date: July 18, 2025

Water Quality Requirements for SWMF

Areas Contributing	Area (ha)	% Imp	25mm RV (mm)	25mm RV (m^3)
POST-1	14.06	88.0	17.19	2417
SWMF	1.28	50.0	13.41	172
WEIGHTED IMP	**15.34**	**84.8**		**2589**

MOE Total WQ Volume (m^3/ha)	265
MOE ED Volume (m^3/ha)	40
MOE ED Volume (m^3)	614
MOE PP Volume (m^3/ha)	225
MOE PP Volume (m^3)	3452
Pond Required ED Volume (m^3)	2589
Pond Required PP Volume (m^3)	3452
Available ED Volume (m^3)	3127
Provided PP Volume (m^3)	4112

CROZIER
CONSULTING ENGINEERS

Project: 659 Balm Beach Road
Project No.: 2774-7263
Design by: RDM
Date: July 18, 2025

EXTENDED DETENTION SPECIFICATIONS - SWMF (PER MECP)

Extended Detention Volume (Area x runoff from 25 mm storm event)		2589
t (drawdown time - seconds, *hours in italics*)	*24.0*	86400
Ao (cross section area of orifice - sqm)		0.0284
h (maximum water elevation above orifice for extended detention- m)		0.50
C (discharge coefficient)		0.64
Ap (average surface area for extended detention - sqm)		5105

t = 2*Ap*(h^0.5)/(C*Ao*(g*2)^0.5)

Ao = 0.02947769 sqm d = 194 mm

Extended Detention Orifice Diameter (as designed) d = **190** mm

Project: 659 Balm Beach Road
Project No.: 2774-7263
Design by: RDM
Date: July 18, 2025

SWMF Pond Stage Storage Outflow Calculations

Outlet Structure Dimensions

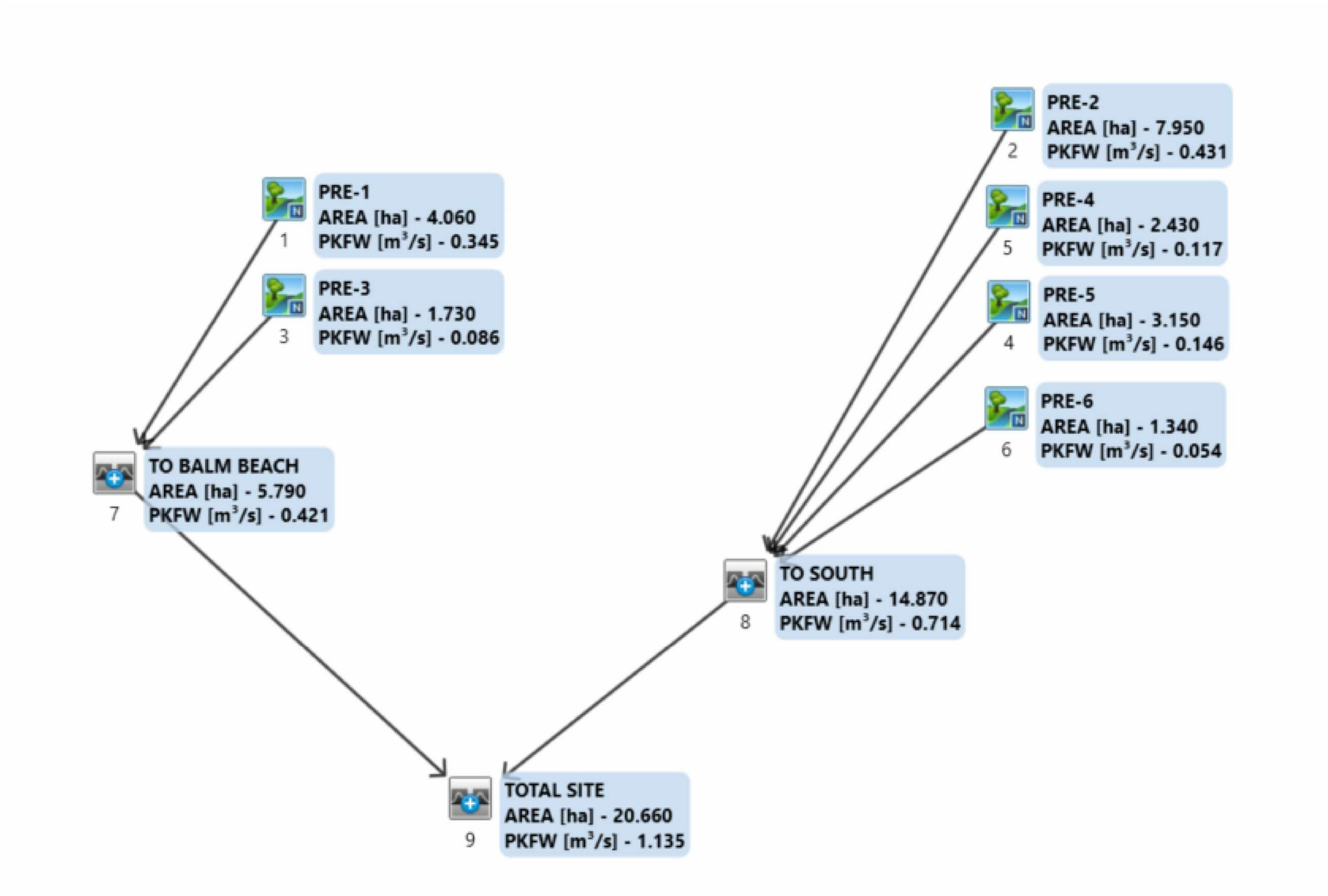
E.D. Orifice Diameter:	0.19 m
E.D. Orifice Invert Elevation:	242 m
Rectangular Weir width	0.15 m
Rectanular Weir Invert	242.50 m
Spillway Elev.	244.00 m
Spillway Bot. Width	10 m
Trap Side Slopes	3:1

Pond Dimensions				**Outlet Structure Discharge**						
Elev. (m)	Depth Above PP (m)	Area (sqm)	Storage Volume (cu.m)	ED Orifice Discharge (cu.m/s)	V-Notch Weir Discharge (cu.m/s)	Rectangular Weir Discharge (m)	Spillway Width (m)	Spillway Discharge (cu.m/s)	Storage (ha-m)	Total Discharge (cu.m/s)
242.00	0.00	4572.23	0.00	0.000	0.00	0.00	0.00	0.00	**0.000**	**0.000**
242.10	0.10	4785.46	467.88	0.006	0.00	0.00	0.00	0.00	0.047	0.006
242.20	0.20	4998.69	957.09	0.026	0.00	0.00	0.00	0.00	**0.096**	**0.026**
242.30	0.30	5211.92	1467.62	0.036	0.00	0.00	0.00	0.00	0.147	0.036
242.40	0.40	5425.15	1999.48	0.044	0.00	0.00	0.00	0.00	**0.200**	**0.044**
242.50	0.50	5638.38	2552.65	0.051	0.00	0.00	0.00	0.00	0.255	0.051
242.51	0.51	5651.87	2588.37	0.052	0.00	0.00	1.00	0.00	0.259	0.052
242.60	0.60	5851.61	3127.15	0.057	0.00	0.01	0.00	0.00	**0.313**	**0.066**
242.70	0.70	6036.19	3721.54	0.063	0.00	0.02	0.00	0.00	0.372	0.087
242.80	0.80	6197.84	4333.24	0.067	0.00	0.05	0.00	0.00	0.433	0.113
242.90	0.90	6384.32	4962.35	0.072	0.00	0.07	0.00	0.00	0.496	0.142
243.00	1.00	6570.81	5610.11	0.076	0.00	0.10	0.00	0.00	**0.561**	**0.174**
243.10	1.10	6757.30	6276.51	0.081	0.00	0.13	0.00	0.00	0.628	0.209
243.20	1.20	6943.78	6961.57	0.084	0.00	0.16	0.00	0.00	0.696	0.246
243.30	1.30	7130.27	7665.27	0.088	0.00	0.20	0.00	0.00	0.767	0.286
243.40	1.40	7316.75	8387.62	0.092	0.00	0.24	0.00	0.00	**0.839**	**0.327**
243.50	1.50	7503.24	9128.62	0.095	0.00	0.28	0.00	0.00	0.913	0.371
243.60	1.60	7689.73	9888.27	0.099	0.00	0.32	0.00	0.00	0.989	0.417
243.70	1.70	7876.21	10666.57	0.102	0.00	0.36	0.00	0.00	**1.067**	**0.465**
243.80	1.80	8062.70	11463.51	0.105	0.00	0.41	0.00	0.00	1.146	0.514
243.90	1.90	8249.18	12279.11	0.108	0.00	0.46	0.00	0.00	1.228	0.565
244.00	2.00	8435.67	13113.35	0.111	0.00	0.51	10.00	0.00	**1.311**	**0.618**
244.05	2.05	8536.07	13557.61	0.112	0.00	0.53	10.01	0.22	1.356	0.867
244.10	2.10	8627.45	13966.50	0.114	0.00	0.56	10.03	0.58	1.397	1.256
244.20	2.20	8819.23	14838.84	0.117	0.00	0.61	10.05	1.65	1.484	2.382
244.30	2.30	9011.01	15730.35	0.119	0.00	0.67	10.08	3.05	1.573	3.832
244.40	2.40	9202.79	16641.04	0.122	0.00	0.72	10.10	4.70	1.664	5.547
244.50	2.50	9394.57	17570.91	0.125	0.00	0.78	10.13	6.59	1.757	7.492

APPENDIX C

Visual OTTHYMO 6.2 (V06) Model Output

PRE-DEVELOPMENT



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

      V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO     TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.

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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\e2eca
446-df1a-4db1-9684-cb85b6baaa55\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\e2eca
446-df1a-4db1-9684-cb85b6baaa55\scena


DATE: 07-18-2025                           TIME: 03:07:00

USER:



COMMENTS: ____________________________________________________________


----------------------------------------------------------------------------------
------------------------
  ***********************************************
  ** SIMULATION : A. 2YR 4HR CHI                **
  ***********************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A= 807.440
| Ptotal= 33.70 mm |                          B=   6.750
--------------------                          C=   0.828
```

```
                     used in:   INTENSITY =  A / (t + B)^C

                     Duration of storm  =  4.00 hrs
                     Storm time step    = 15.00 min
                     Time to peak ratio =  0.33

              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.00    2.24 |  1.00   63.05 |  2.00    4.06 |  3.00    2.11
              0.25    3.01 |  1.25   16.33 |  2.25    3.28 |  3.25    1.89
              0.50    4.72 |  1.50    8.08 |  2.50    2.76 |  3.50    1.72
              0.75   12.20 |  1.75    5.39 |  2.75    2.39 |  3.75    1.58


-------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
             0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
             0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
             0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
             0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
             0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
             0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
             0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
             0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
             0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
             0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
             1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.069 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   4.959
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.147

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
                 0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
                 0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
                 0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
                 0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
                 0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
                 0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
                 0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
                 0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
                 0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
                 0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
                 1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.017 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   3.898
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.116

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

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.069     1.33     4.96
      + ID2= 2 (  0003):     1.73   0.017     1.50     3.90
        ====================================================
        ID = 3 (  0007):     5.79   0.083     1.33     4.64

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

```
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
                 0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
                 0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
                 0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
                 0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
                 0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
                 0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
                 0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
                 0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
                 0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
                 0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
                 1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.083 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   4.053
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.120

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
                 0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
                 0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
```

```
             0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
             0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
             0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
             0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
             0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
             0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
             0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
             0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
             1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   0.925

     PEAK FLOW       (cms)=   0.027 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   2.495
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.074

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

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
             0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
             0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
             0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
             0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
             0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
             0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
             0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
             0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
             0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
             0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
             1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.022 (i)
     TIME TO PEAK    (hrs)=   1.333
```

```
     RUNOFF VOLUME    (mm)=   2.661
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.079

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

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
             0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
             0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
             0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
             0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
             0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
             0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
             0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
             0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
             0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
             0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
             1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.010 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   2.513
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.075

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.083     1.50     4.05
      + ID2= 2 (  0004):     3.15   0.027     1.33     2.50
```

```
        ====================================================
        ID = 3 (  0008):    11.10  0.105     1.42     3.61

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10  0.105     1.42     3.61
      + ID2= 2 (  0005):     2.43  0.022     1.33     2.66
        ====================================================
        ID = 1 (  0008):    13.53  0.124     1.42     3.44

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53  0.124     1.42     3.44
      + ID2= 2 (  0006):     1.34  0.010     1.33     2.51
        ====================================================
        ID = 3 (  0008):    14.87  0.133     1.42     3.36

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79  0.083     1.33     4.64
      + ID2= 2 (  0008):    14.87  0.133     1.42     3.36
        ====================================================
        ID = 3 (  0009):    20.66  0.214     1.33     3.72

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       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
```


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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\1422b
092-3492-4618-b287-f69cc1925f97\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\1422b
092-3492-4618-b287-f69cc1925f97\scena


DATE: 07-18-2025                           TIME: 03:06:58

USER:


COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : B. 5YR 4HR CHI                **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1135.400
| Ptotal= 44.00 mm |                          B=   7.500
--------------------                          C=   0.841
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    2.81 |  1.00   82.79 |  2.00    5.20 |  3.00    2.63
```

```
                 0.25    3.81 |  1.25   21.84 |  2.25    4.16 |  3.25    2.35
                 0.50    6.08 |  1.50   10.61 |  2.50    3.48 |  3.50    2.13
                 0.75   16.21 |  1.75    6.97 |  2.75    2.99 |  3.75    1.95

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
                0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
                0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
                0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
                0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
                0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
                0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
                0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
                0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
                0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
                0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
                1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.126 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   8.620
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.196

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
                0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
                0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
                0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
                0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
                0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
                0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
                0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
                0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
                0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
                0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
                1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.031 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   6.865
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.156

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

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.126     1.33     8.62
      + ID2= 2 (  0003):     1.73   0.031     1.50     6.86
        ===============================================
        ID = 3 (  0007):     5.79   0.153     1.33     8.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
            0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
            0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
            0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
            0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
            0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
            0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
            0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
            0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
            0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
            0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
            1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.153 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   7.123
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.162

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
            0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
            0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
            0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
            0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
            0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
            0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
            0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
            0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
            0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
            0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
            1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95
```

```
     Unit Hyd Qpeak  (cms)=   0.925

     PEAK FLOW       (cms)=   0.050 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   4.467
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.102

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
            0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
            0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
            0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
            0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
            0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
            0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
            0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
            0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
            0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
            0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
            1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.040 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   4.756
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.108

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
```

```
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
                 0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
                 0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
                 0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
                 0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
                 0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
                 0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
                 0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
                 0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
                 0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
                 0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
                 1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.018 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   4.499
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.102

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0002):     7.95   0.153     1.42     7.12
     + ID2= 2 (  0004):     3.15   0.050     1.33     4.47
       ===============================================
       ID = 3 (  0008):    11.10   0.194     1.42     6.37

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0008):    11.10   0.194     1.42     6.37
     + ID2= 2 (  0005):     2.43   0.040     1.33     4.76
       ===============================================
       ID = 1 (  0008):    13.53   0.229     1.42     6.08

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):    13.53   0.229     1.42     6.08
     + ID2= 2 (  0006):     1.34   0.018     1.33     4.50
       ===============================================
       ID = 3 (  0008):    14.87   0.247     1.33     5.94

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0007):     5.79   0.153     1.33     8.10
     + ID2= 2 (  0008):    14.87   0.247     1.33     5.94
       ===============================================
       ID = 3 (  0009):    20.66   0.400     1.33     6.54

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```
Developed and Distributed by Smart City Water Inc

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\13bb2
f9f-1a1b-4ae4-a8e6-f9dd7847f9b8\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\13bb2
f9f-1a1b-4ae4-a8e6-f9dd7847f9b8\scena


DATE: 07-18-2025                           TIME: 03:06:58

USER:



COMMENTS: ____________________________________________________________

----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : C. 10YR 4HR CHI               **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1387.000
| Ptotal= 50.51 mm |                          B=   7.970
--------------------                          C=   0.852
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    3.09 |  1.00   96.02 |  2.00    5.84 |  3.00    2.89
                 0.25    4.24 |  1.25   25.43 |  2.25    4.64 |  3.25    2.58
                 0.50    6.86 |  1.50   12.17 |  2.50    3.85 |  3.50    2.33
                 0.75   18.79 |  1.75    7.90 |  2.75    3.30 |  3.75    2.12


------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
```

```
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
               0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
               0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
               0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
               0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
               0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
               0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
               0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
               0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
               0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
               0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
               1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW      (cms)=   0.171 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=  11.316
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.224

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
               0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
               0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
               0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
               0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
```

```
               0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
               0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
               0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
               0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
               0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
               0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
               1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.042 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   9.080
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.180

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

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.171     1.33    11.32
      + ID2= 2 (  0003):     1.73   0.042     1.50     9.08
        ====================================================
        ID = 3 (  0007):     5.79   0.207     1.33    10.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
               0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
               0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
               0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
               0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
               0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
               0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
```

```
               0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
               0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
               0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
               0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
               1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.209 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   9.412
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.186

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

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
               0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
               0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
               0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
               0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
               0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
               0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
               0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
               0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
               0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
               0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
               1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   0.925

     PEAK FLOW       (cms)=   0.069 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   5.967
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.118
```

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
                0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
                0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
                0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
                0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
                0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
                0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
                0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
                0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
                0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
                0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
                1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   6.345
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.126

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
                0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
                0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
                0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
                0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
                0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
                0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
                0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
                0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
                0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
                0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
                1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.025 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   6.010
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.119

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95    0.209     1.42     9.41
      + ID2= 2 (  0004):     3.15    0.069     1.33     5.97
        ==================================================
        ID = 3 (  0008):    11.10    0.266     1.42     8.43

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10    0.266     1.42     8.43
      + ID2= 2 (  0005):     2.43    0.056     1.33     6.35
        ==================================================
        ID = 1 (  0008):    13.53    0.315     1.33     8.06

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

```
--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.315     1.33     8.06
      + ID2= 2 (  0006):     1.34   0.025     1.33     6.01
        ====================================================
        ID = 3 (  0008):    14.87   0.340     1.33     7.87

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.207     1.33    10.65
      + ID2= 2 (  0008):    14.87   0.340     1.33     7.87
        ====================================================
        ID = 3 (  0009):    20.66   0.547     1.33     8.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T     H   H   Y Y   MM MM  O   O
       O   O    T      T     H   H    Y    M   M  O   O
        OOO     T      T     H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\d421e
217-cb8d-412f-94af-266152a33c2d\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\d421e
217-cb8d-412f-94af-266152a33c2d\scena


DATE: 07-18-2025                           TIME: 03:06:59

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : D. 25YR 4HR CHI               **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1676.200
| Ptotal= 58.99 mm |                          B=   8.300
--------------------                          C=   0.858
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    3.54 |  1.00  112.50 |  2.00    6.75 |  3.00    3.30
                 0.25    4.87 |  1.25   30.00 |  2.25    5.34 |  3.25    2.94
                 0.50    7.95 |  1.50   14.24 |  2.50    4.42 |  3.50    2.65
                 0.75   22.10 |  1.75    9.18 |  2.75    3.78 |  3.75    2.41


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
```

```
             0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
             0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
             0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
             0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
             0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
             0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
             0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
             0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
             0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
             0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
             0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
             1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.235 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=  15.216
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.258

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
             0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
             0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
             0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
             0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
             0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
             0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
             0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
             0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
             0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
             0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
             1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   0.264
```

```
     PEAK FLOW       (cms)=   0.058 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=  12.321
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.209

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

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.235     1.33    15.22
      + ID2= 2 (  0003):     1.73   0.058     1.50    12.32
        ====================================================
        ID = 3 (  0007):     5.79   0.285     1.33    14.35

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
             0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
             0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
             0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
             0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
             0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
             0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
             0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
             0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
             0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
             0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
             1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.289 (i)
```

```
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=  12.754
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.216

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
                0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
                0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
                0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
                0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
                0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
                0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
                0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
                0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
                0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
                0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
                1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   0.925

     PEAK FLOW       (cms)=   0.096 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   8.196
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.139

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

```
         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
                0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
                0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
                0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
                0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
                0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
                0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
                0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
                0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
                0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
                0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
                1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.078 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   8.702
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.148

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
                0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
                0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
                0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
                0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
                0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
                0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
                0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
```

```
           0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
           0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
           0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
           1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.035 (i)
     TIME TO PEAK    (hrs)=   1.333
     RUNOFF VOLUME    (mm)=   8.254
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.140

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.289     1.42    12.75
      + ID2= 2 (  0004):     3.15   0.096     1.33     8.20
        ===================================================
        ID = 3 (  0008):    11.10   0.368     1.42    11.46

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.368     1.42    11.46
      + ID2= 2 (  0005):     2.43   0.078     1.33     8.70
        ===================================================
        ID = 1 (  0008):    13.53   0.440     1.33    10.97

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.440     1.33    10.97
      + ID2= 2 (  0006):     1.34   0.035     1.33     8.25
        ===================================================
        ID = 3 (  0008):    14.87   0.475     1.33    10.72
```

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.285     1.33    14.35
      + ID2= 2 (  0008):    14.87   0.475     1.33    10.72
        ===================================================
        ID = 3 (  0009):    20.66   0.760     1.33    11.74

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
====================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\c50bd
d8c-c41d-4363-9521-f31dc4b6741c\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\c50bd
d8c-c41d-4363-9521-f31dc4b6741c\scena


DATE: 07-18-2025                           TIME: 03:06:59

USER:
```

```
COMMENTS: ____________________________________________________________

------------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : E. 50YR 4HR CHI              **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1973.100
| Ptotal= 65.56 mm |                          B=   9.000
--------------------                          C=   0.868
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    3.80 |  1.00  125.06 |   2.00    7.41 |  3.00    3.54
                 0.25    5.30 |  1.25   34.03 |   2.25    5.82 |  3.25    3.14
                 0.50    8.78 |  1.50   15.96 |   2.50    4.79 |  3.50    2.82
                 0.75   24.98 |  1.75   10.17 |   2.75    4.07 |  3.75    2.56


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
                0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
                0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
                0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
                0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
                0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
                0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
                0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
                0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
```

```
                0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
                0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
                1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW      (cms)=   0.289 (i)
     TIME TO PEAK   (hrs)=   1.333
     RUNOFF VOLUME    (mm)=  18.502
     TOTAL RAINFALL   (mm)=  65.558
     RUNOFF COEFFICIENT   =   0.282

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
                0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
                0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
                0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
                0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
                0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
                0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
                0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
                0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
                0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
                0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
                1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW      (cms)=   0.072 (i)
     TIME TO PEAK   (hrs)=   1.500
     RUNOFF VOLUME    (mm)=  15.080
     TOTAL RAINFALL   (mm)=  65.558
     RUNOFF COEFFICIENT   =   0.230

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

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.289     1.33    18.50
      + ID2= 2 (  0003):     1.73   0.072     1.50    15.08
        ===============================================
        ID = 3 (  0007):     5.79   0.352     1.33    17.48

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
                0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
                0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
                0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
                0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
                0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
                0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
                0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
                0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
                0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
                0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
                1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.360 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=  15.595
     TOTAL RAINFALL   (mm)=  65.558
     RUNOFF COEFFICIENT   =   0.238

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

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

```
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
                0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
                0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
                0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
                0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
                0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
                0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
                0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
                0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
                0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
                0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
                1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Unit Hyd Qpeak  (cms)=   0.925

     PEAK FLOW       (cms)=   0.121 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=  10.121
     TOTAL RAINFALL   (mm)=  65.558
     RUNOFF COEFFICIENT   =   0.154

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
                0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
                0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
```

```
          0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
          0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
          0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
          0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
          0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
          0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
          0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
          0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
          1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

   Unit Hyd Qpeak  (cms)=   0.663

   PEAK FLOW       (cms)=   0.097 (i)
   TIME TO PEAK    (hrs)=   1.333
   RUNOFF VOLUME    (mm)=  10.735
   TOTAL RAINFALL   (mm)=  65.558
   RUNOFF COEFFICIENT   =   0.164

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
          0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
          0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
          0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
          0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
          0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
          0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
          0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
          0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
          0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
          0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
          0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
          1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

   Unit Hyd Qpeak  (cms)=   0.284

   PEAK FLOW       (cms)=   0.044 (i)
   TIME TO PEAK    (hrs)=   1.333
```

```
   RUNOFF VOLUME    (mm)=  10.193
   TOTAL RAINFALL   (mm)=  65.558
   RUNOFF COEFFICIENT   =   0.155

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.360     1.42    15.60
      + ID2= 2 (  0004):     3.15   0.121     1.25    10.12
        ====================================================
        ID = 3 (  0008):    11.10   0.458     1.42    14.04

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.458     1.42    14.04
      + ID2= 2 (  0005):     2.43   0.097     1.33    10.73
        ====================================================
        ID = 1 (  0008):    13.53   0.548     1.33    13.45

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.548     1.33    13.45
      + ID2= 2 (  0006):     1.34   0.044     1.33    10.19
        ====================================================
        ID = 3 (  0008):    14.87   0.593     1.33    13.15

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.352     1.33    17.48
      + ID2= 2 (  0008):    14.87   0.593     1.33    13.15
```

```
        ====================================================
        ID = 3 (  0009):    20.66   0.945     1.33    14.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T     H   H   Y Y   MM MM  O   O
       O   O    T      T     H   H    Y    M   M  O   O
        OOO     T      T     H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```



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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\43aac
a04-1572-4f01-bce8-325408f1fdf5\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\43aac
a04-1572-4f01-bce8-325408f1fdf5\scena


DATE: 07-18-2025                           TIME: 03:06:59

USER:



COMMENTS: ____________________________________________________________


------------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : F. 100YR 4HR CHI              **
  ************************************************
```

```
 --------------------
 | CHICAGO STORM    |    IDF curve parameters: A=2193.100
 | Ptotal= 71.66 mm |                          B=   9.040
 --------------------                          C=   0.871
                         used in:   INTENSITY =  A / (t + B)^C

                         Duration of storm  =  4.00 hrs
                         Storm time step    = 15.00 min
                         Time to peak ratio =  0.33

                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.00    4.10 |  1.00  137.49 |  2.00    8.03 |  3.00    3.82
                  0.25    5.72 |  1.25   37.24 |  2.25    6.29 |  3.25    3.38
                  0.50    9.52 |  1.50   17.39 |  2.50    5.17 |  3.50    3.03
                  0.75   27.29 |  1.75   11.04 |  2.75    4.39 |  3.75    2.75


 --------------------------------------------------------------------------------
 --------------------
 | CALIB            |
 | NASHYD   (  0001)|   Area    (ha)=   4.06  Curve Number   (CN)= 65.1
 |ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00  # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.14

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                 0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                 0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                 0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                 0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                 0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                 0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                 0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                 0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                 0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                 0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                 1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW      (cms)=   0.345 (i)
     TIME TO PEAK   (hrs)=   1.333
     RUNOFF VOLUME    (mm)=  21.745
```

```
     TOTAL RAINFALL   (mm)=  71.662
     RUNOFF COEFFICIENT   =   0.303

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                 0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                 0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                 0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                 0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                 0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                 0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                 0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                 0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                 0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                 0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                 1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.086 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=  17.826
     TOTAL RAINFALL   (mm)=  71.662
     RUNOFF COEFFICIENT   =   0.249

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

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.345     1.33    21.74
      + ID2= 2 (  0003):     1.73   0.086     1.50    17.83
        ====================================================
```

```
        ID = 3 (  0007):     5.79   0.421     1.33    20.57

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                 0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                 0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                 0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                 0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                 0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                 0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                 0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                 0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                 0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                 0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                 1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.431 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=  18.419
     TOTAL RAINFALL   (mm)=  71.662
     RUNOFF COEFFICIENT   =   0.257

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	4.10	1.083	137.49	2.083	8.03	3.08	3.82
0.167	4.10	1.167	137.49	2.167	8.03	3.17	3.82
0.250	4.10	1.250	137.49	2.250	8.03	3.25	3.82
0.333	5.72	1.333	37.24	2.333	6.29	3.33	3.38
0.417	5.72	1.417	37.24	2.417	6.29	3.42	3.38
0.500	5.72	1.500	37.24	2.500	6.29	3.50	3.38
0.583	9.52	1.583	17.39	2.583	5.17	3.58	3.03
0.667	9.52	1.667	17.39	2.667	5.17	3.67	3.03
0.750	9.52	1.750	17.39	2.750	5.17	3.75	3.03
0.833	27.29	1.833	11.04	2.833	4.39	3.83	2.75
0.917	27.29	1.917	11.04	2.917	4.39	3.92	2.75
1.000	27.29	2.000	11.04	3.000	4.39	4.00	2.75

```
Unit Hyd Qpeak  (cms)=   0.925

PEAK FLOW       (cms)=   0.146 (i)
TIME TO PEAK    (hrs)=   1.250
RUNOFF VOLUME    (mm)=  12.060
TOTAL RAINFALL   (mm)=  71.662
RUNOFF COEFFICIENT   =   0.168

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	4.10	1.083	137.49	2.083	8.03	3.08	3.82
0.167	4.10	1.167	137.49	2.167	8.03	3.17	3.82
0.250	4.10	1.250	137.49	2.250	8.03	3.25	3.82
0.333	5.72	1.333	37.24	2.333	6.29	3.33	3.38
0.417	5.72	1.417	37.24	2.417	6.29	3.42	3.38
0.500	5.72	1.500	37.24	2.500	6.29	3.50	3.38
0.583	9.52	1.583	17.39	2.583	5.17	3.58	3.03
0.667	9.52	1.667	17.39	2.667	5.17	3.67	3.03
0.750	9.52	1.750	17.39	2.750	5.17	3.75	3.03
0.833	27.29	1.833	11.04	2.833	4.39	3.83	2.75
0.917	27.29	1.917	11.04	2.917	4.39	3.92	2.75
1.000	27.29	2.000	11.04	3.000	4.39	4.00	2.75

```
Unit Hyd Qpeak  (cms)=   0.663

PEAK FLOW       (cms)=   0.117 (i)
TIME TO PEAK    (hrs)=   1.333
RUNOFF VOLUME    (mm)=  12.778
TOTAL RAINFALL   (mm)=  71.662
RUNOFF COEFFICIENT   =   0.178

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	4.10	1.083	137.49	2.083	8.03	3.08	3.82
0.167	4.10	1.167	137.49	2.167	8.03	3.17	3.82
0.250	4.10	1.250	137.49	2.250	8.03	3.25	3.82
0.333	5.72	1.333	37.24	2.333	6.29	3.33	3.38
0.417	5.72	1.417	37.24	2.417	6.29	3.42	3.38
0.500	5.72	1.500	37.24	2.500	6.29	3.50	3.38
0.583	9.52	1.583	17.39	2.583	5.17	3.58	3.03
0.667	9.52	1.667	17.39	2.667	5.17	3.67	3.03
0.750	9.52	1.750	17.39	2.750	5.17	3.75	3.03
0.833	27.29	1.833	11.04	2.833	4.39	3.83	2.75
0.917	27.29	1.917	11.04	2.917	4.39	3.92	2.75
1.000	27.29	2.000	11.04	3.000	4.39	4.00	2.75

```
Unit Hyd Qpeak  (cms)=   0.284

PEAK FLOW       (cms)=   0.054 (i)
TIME TO PEAK    (hrs)=   1.333
RUNOFF VOLUME    (mm)=  12.145
TOTAL RAINFALL   (mm)=  71.662
RUNOFF COEFFICIENT   =   0.169

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

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

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

```
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.431     1.42    18.42
      + ID2= 2 (  0004):     3.15   0.146     1.25    12.06
        ====================================================
        ID = 3 (  0008):    11.10   0.550     1.42    16.61

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.550     1.42    16.61
      + ID2= 2 (  0005):     2.43   0.117     1.33    12.78
        ====================================================
        ID = 1 (  0008):    13.53   0.661     1.33    15.93

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.661     1.33    15.93
      + ID2= 2 (  0006):     1.34   0.054     1.33    12.15
        ====================================================
        ID = 3 (  0008):    14.87   0.714     1.33    15.58

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.421     1.33    20.57
      + ID2= 2 (  0008):    14.87   0.714     1.33    15.58
        ====================================================
        ID = 3 (  0009):    20.66   1.135     1.33    16.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
```

```
       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
```



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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\2bd76
837-36e4-4665-bad0-5d5eac107bd4\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\2bd76
837-36e4-4665-bad0-5d5eac107bd4\scena


DATE: 07-18-2025                           TIME: 03:06:58

USER:


COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ***********************************************
  ** SIMULATION : G. 2YR 24HR SCS              **
  ***********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\5da92b4f
| Ptotal= 46.83 mm |    Comments: 2yr 24hr 15min SCS Type II (MTO)
--------------------
                 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	0.84	12.50	6.74	18.75	0.84
0.25	0.52	6.50	0.84	12.75	3.47	19.00	0.84
0.50	0.52	6.75	0.84	13.00	3.47	19.25	0.84
0.75	0.52	7.00	0.84	13.25	2.53	19.50	0.84
1.00	0.52	7.25	1.03	13.50	2.53	19.75	0.84
1.25	0.52	7.50	1.03	13.75	1.97	20.00	0.84
1.50	0.52	7.75	1.03	14.00	1.97	20.25	0.56
1.75	0.52	8.00	1.03	14.25	1.40	20.50	0.56
2.00	0.52	8.25	1.22	14.50	1.40	20.75	0.56
2.25	0.61	8.50	1.22	14.75	1.40	21.00	0.56
2.50	0.61	8.75	1.31	15.00	1.40	21.25	0.56
2.75	0.61	9.00	1.31	15.25	1.40	21.50	0.56
3.00	0.61	9.25	1.50	15.50	1.40	21.75	0.56
3.25	0.61	9.50	1.50	15.75	1.40	22.00	0.56
3.50	0.61	9.75	1.69	16.00	1.40	22.25	0.56
3.75	0.61	10.00	1.69	16.25	0.84	22.50	0.56
4.00	0.61	10.25	2.15	16.50	0.84	22.75	0.56
4.25	0.75	10.50	2.15	16.75	0.84	23.00	0.56
4.50	0.75	10.75	2.90	17.00	0.84	23.25	0.56
4.75	0.75	11.00	2.90	17.25	0.84	23.50	0.56
5.00	0.75	11.25	4.50	17.50	0.84	23.75	0.56
5.25	0.75	11.50	4.50	17.75	0.84	24.00	0.56
5.50	0.75	11.75	13.86	18.00	0.84		
5.75	0.75	12.00	57.32	18.25	0.84		
6.00	0.75	12.25	6.74	18.50	0.84		

```
--------------------
| CALIB              |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	0.75	12.250	57.32	18.33	0.84
0.167	0.00	6.250	0.75	12.333	6.75	18.42	0.84
0.250	0.00	6.333	0.84	12.417	6.74	18.50	0.84
0.333	0.52	6.417	0.84	12.500	6.74	18.58	0.84
0.417	0.52	6.500	0.84	12.583	6.74	18.67	0.84
0.500	0.52	6.583	0.84	12.667	6.74	18.75	0.84
0.583	0.52	6.667	0.84	12.750	6.74	18.83	0.84
0.667	0.52	6.750	0.84	12.833	3.47	18.92	0.84
0.750	0.52	6.833	0.84	12.917	3.47	19.00	0.84
0.833	0.52	6.917	0.84	13.000	3.47	19.08	0.84
0.917	0.52	7.000	0.84	13.083	3.47	19.17	0.84
1.000	0.52	7.083	0.84	13.167	3.47	19.25	0.84
1.083	0.52	7.167	0.84	13.250	3.47	19.33	0.84
1.167	0.52	7.250	0.84	13.333	2.53	19.42	0.84
1.250	0.52	7.333	1.03	13.417	2.53	19.50	0.84
1.333	0.52	7.417	1.03	13.500	2.53	19.58	0.84
1.417	0.52	7.500	1.03	13.583	2.53	19.67	0.84
1.500	0.52	7.583	1.03	13.667	2.53	19.75	0.84
1.583	0.52	7.667	1.03	13.750	2.53	19.83	0.84
1.667	0.52	7.750	1.03	13.833	1.97	19.92	0.84
1.750	0.52	7.833	1.03	13.917	1.97	20.00	0.84
1.833	0.52	7.917	1.03	14.000	1.97	20.08	0.84
1.917	0.52	8.000	1.03	14.083	1.97	20.17	0.84
2.000	0.52	8.083	1.03	14.167	1.97	20.25	0.84
2.083	0.52	8.167	1.03	14.250	1.97	20.33	0.56
2.167	0.52	8.250	1.03	14.333	1.41	20.42	0.56
2.250	0.52	8.333	1.22	14.417	1.40	20.50	0.56
2.333	0.61	8.417	1.22	14.500	1.40	20.58	0.56
2.417	0.61	8.500	1.22	14.583	1.40	20.67	0.56
2.500	0.61	8.583	1.22	14.667	1.40	20.75	0.56
2.583	0.61	8.667	1.22	14.750	1.40	20.83	0.56
2.667	0.61	8.750	1.22	14.833	1.40	20.92	0.56
2.750	0.61	8.833	1.31	14.917	1.40	21.00	0.56
2.833	0.61	8.917	1.31	15.000	1.40	21.08	0.56
2.917	0.61	9.000	1.31	15.083	1.40	21.17	0.56
3.000	0.61	9.083	1.31	15.167	1.40	21.25	0.56
3.083	0.61	9.167	1.31	15.250	1.40	21.33	0.56
3.167	0.61	9.250	1.31	15.333	1.40	21.42	0.56
3.250	0.61	9.333	1.50	15.417	1.40	21.50	0.56
3.333	0.61	9.417	1.50	15.500	1.40	21.58	0.56
3.417	0.61	9.500	1.50	15.583	1.40	21.67	0.56
3.500	0.61	9.583	1.50	15.667	1.40	21.75	0.56
3.583	0.61	9.667	1.50	15.750	1.40	21.83	0.56
3.667	0.61	9.750	1.50	15.833	1.40	21.92	0.56
3.750	0.61	9.833	1.69	15.917	1.40	22.00	0.56
3.833	0.61	9.917	1.69	16.000	1.40	22.08	0.56
3.917	0.61	10.000	1.69	16.083	1.40	22.17	0.56
4.000	0.61	10.083	1.69	16.167	1.40	22.25	0.56
4.083	0.61	10.167	1.69	16.250	1.40	22.33	0.56
4.167	0.61	10.250	1.69	16.333	0.84	22.42	0.56
4.250	0.61	10.333	2.15	16.417	0.84	22.50	0.56
4.333	0.75	10.417	2.15	16.500	0.84	22.58	0.56
4.417	0.75	10.500	2.15	16.583	0.84	22.67	0.56
4.500	0.75	10.583	2.15	16.667	0.84	22.75	0.56
4.583	0.75	10.667	2.15	16.750	0.84	22.83	0.56
4.667	0.75	10.750	2.15	16.833	0.84	22.92	0.56
4.750	0.75	10.833	2.90	16.917	0.84	23.00	0.56
4.833	0.75	10.917	2.90	17.000	0.84	23.08	0.56
4.917	0.75	11.000	2.90	17.083	0.84	23.17	0.56

```
           5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
           5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
           5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
           5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
           5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
           5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
           5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
           5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
           5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
           5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
           5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
           5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
           6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
           6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.120 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=   9.756
     TOTAL RAINFALL   (mm)=  46.830
     RUNOFF COEFFICIENT   =   0.208

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
           0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
           0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
           0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
           0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
           0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
           0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
           0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
           0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
           0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
           0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
           0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
           1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
```

```
           1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
           1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
           1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
           1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
           1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
           1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
           1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
           1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
           1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
           1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
           1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
           2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
           2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
           2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
           2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
           2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
           2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
           2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
           2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
           2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
           2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
           2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
           2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
           3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
           3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
           3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
           3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
           3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
           3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
           3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
           3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
           3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
           3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
           3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
           3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
           4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
           4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
           4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
           4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
           4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
           4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
           4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
           4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
           4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
           4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
           4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
           4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
           5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
           5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
           5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
```

```
             5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
             5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
             5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
             5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
             5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
             5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
             5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
             5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
             5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
             6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
             6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.027 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=   7.796
     TOTAL RAINFALL   (mm)=  46.830
     RUNOFF COEFFICIENT   =   0.166

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

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.120    12.25     9.76
      + ID2= 2 (  0003):     1.73   0.027    12.33     7.80
        ===============================================
        ID = 3 (  0007):     5.79   0.143    12.25     9.17

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
             0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
             0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
```

```
             0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
             0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
             0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
             0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
             0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
             0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
             0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
             0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
             1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
             1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
             1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
             1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
             1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
             1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
             1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
             1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
             1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
             1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
             1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
             1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
             2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
             2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
             2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
             2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
             2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
             2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
             2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
             2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
             2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
             2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
             2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
             2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
             3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
             3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
             3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
             3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
             3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
             3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
             3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
             3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
             3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
             3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
             3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
             3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
             4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
             4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
             4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
             4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
             4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
             4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
```

```
              4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
              4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
              4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
              4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
              4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
              4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
              5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
              5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
              5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
              5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
              5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
              5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
              5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
              5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
              5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
              5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
              5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
              5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
              6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
              6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.140 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=   8.086
     TOTAL RAINFALL   (mm)=  46.830
     RUNOFF COEFFICIENT   =   0.173

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
              0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
              0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
              0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
              0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
              0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
              0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
```

```
              0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
              0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
              0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
              0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
              0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
              1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
              1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
              1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
              1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
              1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
              1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
              1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
              1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
              1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
              1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
              1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
              1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
              2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
              2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
              2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
              2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
              2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
              2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
              2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
              2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
              2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
              2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
              2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
              2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
              3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
              3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
              3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
              3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
              3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
              3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
              3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
              3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
              3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
              3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
              3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
              3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
              4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
              4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
              4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
              4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
              4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
              4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
              4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
              4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
              4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
```

4.750	0.75	10.833	2.90	16.917	0.84	23.00	0.56
4.833	0.75	10.917	2.90	17.000	0.84	23.08	0.56
4.917	0.75	11.000	2.90	17.083	0.84	23.17	0.56
5.000	0.75	11.083	2.90	17.167	0.84	23.25	0.56
5.083	0.75	11.167	2.90	17.250	0.84	23.33	0.56
5.167	0.75	11.250	2.90	17.333	0.84	23.42	0.56
5.250	0.75	11.333	4.50	17.417	0.84	23.50	0.56
5.333	0.75	11.417	4.50	17.500	0.84	23.58	0.56
5.417	0.75	11.500	4.50	17.583	0.84	23.67	0.56
5.500	0.75	11.583	4.50	17.667	0.84	23.75	0.56
5.583	0.75	11.667	4.50	17.750	0.84	23.83	0.56
5.667	0.75	11.750	4.50	17.833	0.84	23.92	0.56
5.750	0.75	11.833	13.86	17.917	0.84	24.00	0.56
5.833	0.75	11.917	13.86	18.000	0.84	24.08	0.56
5.917	0.75	12.000	13.86	18.083	0.84	24.17	0.56
6.000	0.75	12.083	57.31	18.167	0.84	24.25	0.56
6.083	0.75	12.167	57.32	18.250	0.84		

Unit Hyd Qpeak (cms)= 0.925

PEAK FLOW (cms)= 0.050 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 5.095
TOTAL RAINFALL (mm)= 46.830
RUNOFF COEFFICIENT = 0.109

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

```
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	0.75	12.250	57.32	18.33	0.84
0.167	0.00	6.250	0.75	12.333	6.75	18.42	0.84
0.250	0.00	6.333	0.84	12.417	6.74	18.50	0.84
0.333	0.52	6.417	0.84	12.500	6.74	18.58	0.84
0.417	0.52	6.500	0.84	12.583	6.74	18.67	0.84
0.500	0.52	6.583	0.84	12.667	6.74	18.75	0.84
0.583	0.52	6.667	0.84	12.750	6.74	18.83	0.84
0.667	0.52	6.750	0.84	12.833	3.47	18.92	0.84
0.750	0.52	6.833	0.84	12.917	3.47	19.00	0.84
0.833	0.52	6.917	0.84	13.000	3.47	19.08	0.84
0.917	0.52	7.000	0.84	13.083	3.47	19.17	0.84
1.000	0.52	7.083	0.84	13.167	3.47	19.25	0.84
1.083	0.52	7.167	0.84	13.250	3.47	19.33	0.84
1.167	0.52	7.250	0.84	13.333	2.53	19.42	0.84
1.250	0.52	7.333	1.03	13.417	2.53	19.50	0.84
1.333	0.52	7.417	1.03	13.500	2.53	19.58	0.84
1.417	0.52	7.500	1.03	13.583	2.53	19.67	0.84
1.500	0.52	7.583	1.03	13.667	2.53	19.75	0.84
1.583	0.52	7.667	1.03	13.750	2.53	19.83	0.84
1.667	0.52	7.750	1.03	13.833	1.97	19.92	0.84
1.750	0.52	7.833	1.03	13.917	1.97	20.00	0.84
1.833	0.52	7.917	1.03	14.000	1.97	20.08	0.84
1.917	0.52	8.000	1.03	14.083	1.97	20.17	0.84
2.000	0.52	8.083	1.03	14.167	1.97	20.25	0.84
2.083	0.52	8.167	1.03	14.250	1.97	20.33	0.56
2.167	0.52	8.250	1.03	14.333	1.41	20.42	0.56
2.250	0.52	8.333	1.22	14.417	1.40	20.50	0.56
2.333	0.61	8.417	1.22	14.500	1.40	20.58	0.56
2.417	0.61	8.500	1.22	14.583	1.40	20.67	0.56
2.500	0.61	8.583	1.22	14.667	1.40	20.75	0.56
2.583	0.61	8.667	1.22	14.750	1.40	20.83	0.56
2.667	0.61	8.750	1.22	14.833	1.40	20.92	0.56
2.750	0.61	8.833	1.31	14.917	1.40	21.00	0.56
2.833	0.61	8.917	1.31	15.000	1.40	21.08	0.56
2.917	0.61	9.000	1.31	15.083	1.40	21.17	0.56
3.000	0.61	9.083	1.31	15.167	1.40	21.25	0.56
3.083	0.61	9.167	1.31	15.250	1.40	21.33	0.56
3.167	0.61	9.250	1.31	15.333	1.40	21.42	0.56
3.250	0.61	9.333	1.50	15.417	1.40	21.50	0.56
3.333	0.61	9.417	1.50	15.500	1.40	21.58	0.56
3.417	0.61	9.500	1.50	15.583	1.40	21.67	0.56
3.500	0.61	9.583	1.50	15.667	1.40	21.75	0.56
3.583	0.61	9.667	1.50	15.750	1.40	21.83	0.56
3.667	0.61	9.750	1.50	15.833	1.40	21.92	0.56
3.750	0.61	9.833	1.69	15.917	1.40	22.00	0.56
3.833	0.61	9.917	1.69	16.000	1.40	22.08	0.56
3.917	0.61	10.000	1.69	16.083	1.40	22.17	0.56
4.000	0.61	10.083	1.69	16.167	1.40	22.25	0.56
4.083	0.61	10.167	1.69	16.250	1.40	22.33	0.56
4.167	0.61	10.250	1.69	16.333	0.84	22.42	0.56
4.250	0.61	10.333	2.15	16.417	0.84	22.50	0.56
4.333	0.75	10.417	2.15	16.500	0.84	22.58	0.56
4.417	0.75	10.500	2.15	16.583	0.84	22.67	0.56
4.500	0.75	10.583	2.15	16.667	0.84	22.75	0.56
4.583	0.75	10.667	2.15	16.750	0.84	22.83	0.56
4.667	0.75	10.750	2.15	16.833	0.84	22.92	0.56
4.750	0.75	10.833	2.90	16.917	0.84	23.00	0.56
4.833	0.75	10.917	2.90	17.000	0.84	23.08	0.56
4.917	0.75	11.000	2.90	17.083	0.84	23.17	0.56

```
            5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
            5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
            5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
            5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
            5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
            5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
            5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
            5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
            5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
            5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
            5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
            5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
            6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
            6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.039 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=   5.421
     TOTAL RAINFALL   (mm)=  46.830
     RUNOFF COEFFICIENT   =   0.116

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
            0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
            0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
            0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
            0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
            0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
            0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
            0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
            0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
            0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
            0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
            1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
```

```
            1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
            1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
            1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
            1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
            1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
            1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
            1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
            1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
            1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
            1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
            1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
            2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
            2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
            2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
            2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
            2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
            2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
            2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
            2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
            2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
            2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
            2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
            2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
            3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
            3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
            3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
            3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
            3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
            3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
            3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
            3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
            3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
            3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
            3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
            3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
            4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
            4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
            4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
            4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
            4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
            4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
            4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
            4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
            4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
            4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
            4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
            4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
            5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
            5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
            5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
```

```
            5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
            5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
            5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
            5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
            5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
            5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
            5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
            5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
            5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
            6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
            6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.017 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=   5.131
     TOTAL RAINFALL   (mm)=  46.830
     RUNOFF COEFFICIENT   =   0.110

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.140    12.33     8.09
      + ID2= 2 (  0004):     3.15   0.050    12.25     5.10
        ==================================================
        ID = 3 (  0008):    11.10   0.183    12.33     7.24

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.183    12.33     7.24
      + ID2= 2 (  0005):     2.43   0.039    12.25     5.42
        ==================================================
        ID = 1 (  0008):    13.53   0.218    12.33     6.91

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.218    12.33     6.91
      + ID2= 2 (  0006):     1.34   0.017    12.33     5.13
        ==================================================
        ID = 3 (  0008):    14.87   0.235    12.33     6.75

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.143    12.25     9.17
      + ID2= 2 (  0008):    14.87   0.235    12.33     6.75
        ==================================================
        ID = 3 (  0009):    20.66   0.370    12.33     7.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```
Developed and Distributed by Smart City Water Inc


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\1b93b
a9a-8e85-454f-b5d4-f320ee8bf524\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\1b93b
a9a-8e85-454f-b5d4-f320ee8bf524\scena
```

DATE: 07-18-2025 TIME: 03:06:58

USER:

COMMENTS: ____

****

** SIMULATION : H. 5YR 24HR SCS **

****

READ STORM	Filename: C:\Users\msimon\AppData\Local\Temp\5d9dddc3-88a8-4b95-afcf-72a47afba08b\d371e161
Ptotal= 59.88 mm	Comments: 5yr 24hr 15min SCS Type II (MTO)

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	1.08	12.50	8.62	18.75	1.08
0.25	0.66	6.50	1.08	12.75	4.43	19.00	1.08
0.50	0.66	6.75	1.08	13.00	4.43	19.25	1.08
0.75	0.66	7.00	1.08	13.25	3.23	19.50	1.08
1.00	0.66	7.25	1.32	13.50	3.23	19.75	1.08
1.25	0.66	7.50	1.32	13.75	2.51	20.00	1.08
1.50	0.66	7.75	1.32	14.00	2.51	20.25	0.72
1.75	0.66	8.00	1.32	14.25	1.80	20.50	0.72
2.00	0.66	8.25	1.56	14.50	1.80	20.75	0.72
2.25	0.78	8.50	1.56	14.75	1.80	21.00	0.72
2.50	0.78	8.75	1.68	15.00	1.80	21.25	0.72
2.75	0.78	9.00	1.68	15.25	1.80	21.50	0.72
3.00	0.78	9.25	1.92	15.50	1.80	21.75	0.72
3.25	0.78	9.50	1.92	15.75	1.80	22.00	0.72
3.50	0.78	9.75	2.16	16.00	1.80	22.25	0.72
3.75	0.78	10.00	2.16	16.25	1.08	22.50	0.72
4.00	0.78	10.25	2.75	16.50	1.08	22.75	0.72
4.25	0.96	10.50	2.75	16.75	1.08	23.00	0.72
4.50	0.96	10.75	3.71	17.00	1.08	23.25	0.72
4.75	0.96	11.00	3.71	17.25	1.08	23.50	0.72
5.00	0.96	11.25	5.75	17.50	1.08	23.75	0.72
5.25	0.96	11.50	5.75	17.75	1.08	24.00	0.72
5.50	0.96	11.75	17.72	18.00	1.08		
5.75	0.96	12.00	73.29	18.25	1.08		

6.00 0.96 | 12.25 8.62 | 18.50 1.08 |

CALIB NASHYD (0001)	Area (ha)= 4.06	Curve Number (CN)= 65.1
ID= 1 DT= 5.0 min	Ia (mm)= 5.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.14	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	0.96	12.250	73.29	18.33	1.08
0.167	0.00	6.250	0.96	12.333	8.63	18.42	1.08
0.250	0.00	6.333	1.08	12.417	8.62	18.50	1.08
0.333	0.66	6.417	1.08	12.500	8.62	18.58	1.08
0.417	0.66	6.500	1.08	12.583	8.62	18.67	1.08
0.500	0.66	6.583	1.08	12.667	8.62	18.75	1.08
0.583	0.66	6.667	1.08	12.750	8.62	18.83	1.08
0.667	0.66	6.750	1.08	12.833	4.43	18.92	1.08
0.750	0.66	6.833	1.08	12.917	4.43	19.00	1.08
0.833	0.66	6.917	1.08	13.000	4.43	19.08	1.08
0.917	0.66	7.000	1.08	13.083	4.43	19.17	1.08
1.000	0.66	7.083	1.08	13.167	4.43	19.25	1.08
1.083	0.66	7.167	1.08	13.250	4.43	19.33	1.08
1.167	0.66	7.250	1.08	13.333	3.23	19.42	1.08
1.250	0.66	7.333	1.32	13.417	3.23	19.50	1.08
1.333	0.66	7.417	1.32	13.500	3.23	19.58	1.08
1.417	0.66	7.500	1.32	13.583	3.23	19.67	1.08
1.500	0.66	7.583	1.32	13.667	3.23	19.75	1.08
1.583	0.66	7.667	1.32	13.750	3.23	19.83	1.08
1.667	0.66	7.750	1.32	13.833	2.52	19.92	1.08
1.750	0.66	7.833	1.32	13.917	2.51	20.00	1.08
1.833	0.66	7.917	1.32	14.000	2.51	20.08	1.08
1.917	0.66	8.000	1.32	14.083	2.51	20.17	1.08
2.000	0.66	8.083	1.32	14.167	2.51	20.25	1.08
2.083	0.66	8.167	1.32	14.250	2.51	20.33	0.72
2.167	0.66	8.250	1.32	14.333	1.80	20.42	0.72
2.250	0.66	8.333	1.56	14.417	1.80	20.50	0.72
2.333	0.78	8.417	1.56	14.500	1.80	20.58	0.72
2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72
2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72

```
            2.917    0.78 | 9.000    1.68 |15.083    1.80 | 21.17    0.72
            3.000    0.78 | 9.083    1.68 |15.167    1.80 | 21.25    0.72
            3.083    0.78 | 9.167    1.68 |15.250    1.80 | 21.33    0.72
            3.167    0.78 | 9.250    1.68 |15.333    1.80 | 21.42    0.72
            3.250    0.78 | 9.333    1.92 |15.417    1.80 | 21.50    0.72
            3.333    0.78 | 9.417    1.92 |15.500    1.80 | 21.58    0.72
            3.417    0.78 | 9.500    1.92 |15.583    1.80 | 21.67    0.72
            3.500    0.78 | 9.583    1.92 |15.667    1.80 | 21.75    0.72
            3.583    0.78 | 9.667    1.92 |15.750    1.80 | 21.83    0.72
            3.667    0.78 | 9.750    1.92 |15.833    1.80 | 21.92    0.72
            3.750    0.78 | 9.833    2.16 |15.917    1.80 | 22.00    0.72
            3.833    0.78 | 9.917    2.16 |16.000    1.80 | 22.08    0.72
            3.917    0.78 |10.000    2.16 |16.083    1.80 | 22.17    0.72
            4.000    0.78 |10.083    2.16 |16.167    1.80 | 22.25    0.72
            4.083    0.78 |10.167    2.16 |16.250    1.80 | 22.33    0.72
            4.167    0.78 |10.250    2.16 |16.333    1.08 | 22.42    0.72
            4.250    0.78 |10.333    2.75 |16.417    1.08 | 22.50    0.72
            4.333    0.96 |10.417    2.75 |16.500    1.08 | 22.58    0.72
            4.417    0.96 |10.500    2.75 |16.583    1.08 | 22.67    0.72
            4.500    0.96 |10.583    2.75 |16.667    1.08 | 22.75    0.72
            4.583    0.96 |10.667    2.75 |16.750    1.08 | 22.83    0.72
            4.667    0.96 |10.750    2.75 |16.833    1.08 | 22.92    0.72
            4.750    0.96 |10.833    3.71 |16.917    1.08 | 23.00    0.72
            4.833    0.96 |10.917    3.71 |17.000    1.08 | 23.08    0.72
            4.917    0.96 |11.000    3.71 |17.083    1.08 | 23.17    0.72
            5.000    0.96 |11.083    3.71 |17.167    1.08 | 23.25    0.72
            5.083    0.96 |11.167    3.71 |17.250    1.08 | 23.33    0.72
            5.167    0.96 |11.250    3.71 |17.333    1.08 | 23.42    0.72
            5.250    0.96 |11.333    5.75 |17.417    1.08 | 23.50    0.72
            5.333    0.96 |11.417    5.75 |17.500    1.08 | 23.58    0.72
            5.417    0.96 |11.500    5.75 |17.583    1.08 | 23.67    0.72
            5.500    0.96 |11.583    5.75 |17.667    1.08 | 23.75    0.72
            5.583    0.96 |11.667    5.75 |17.750    1.08 | 23.83    0.72
            5.667    0.96 |11.750    5.75 |17.833    1.08 | 23.92    0.72
            5.750    0.96 |11.833   17.72 |17.917    1.08 | 24.00    0.72
            5.833    0.96 |11.917   17.72 |18.000    1.08 | 24.08    0.72
            5.917    0.96 |12.000   17.72 |18.083    1.08 | 24.17    0.72
            6.000    0.96 |12.083   73.29 |18.167    1.08 | 24.25    0.72
            6.083    0.96 |12.167   73.29 |18.250    1.08 |

Unit Hyd Qpeak  (cms)=   1.108

PEAK FLOW       (cms)=   0.196 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  15.646
TOTAL RAINFALL   (mm)=  59.880
RUNOFF COEFFICIENT   =   0.261

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    0.00 | 6.167    0.96 |12.250   73.29 | 18.33    1.08
                 0.167    0.00 | 6.250    0.96 |12.333    8.63 | 18.42    1.08
                 0.250    0.00 | 6.333    1.08 |12.417    8.62 | 18.50    1.08
                 0.333    0.66 | 6.417    1.08 |12.500    8.62 | 18.58    1.08
                 0.417    0.66 | 6.500    1.08 |12.583    8.62 | 18.67    1.08
                 0.500    0.66 | 6.583    1.08 |12.667    8.62 | 18.75    1.08
                 0.583    0.66 | 6.667    1.08 |12.750    8.62 | 18.83    1.08
                 0.667    0.66 | 6.750    1.08 |12.833    4.43 | 18.92    1.08
                 0.750    0.66 | 6.833    1.08 |12.917    4.43 | 19.00    1.08
                 0.833    0.66 | 6.917    1.08 |13.000    4.43 | 19.08    1.08
                 0.917    0.66 | 7.000    1.08 |13.083    4.43 | 19.17    1.08
                 1.000    0.66 | 7.083    1.08 |13.167    4.43 | 19.25    1.08
                 1.083    0.66 | 7.167    1.08 |13.250    4.43 | 19.33    1.08
                 1.167    0.66 | 7.250    1.08 |13.333    3.23 | 19.42    1.08
                 1.250    0.66 | 7.333    1.32 |13.417    3.23 | 19.50    1.08
                 1.333    0.66 | 7.417    1.32 |13.500    3.23 | 19.58    1.08
                 1.417    0.66 | 7.500    1.32 |13.583    3.23 | 19.67    1.08
                 1.500    0.66 | 7.583    1.32 |13.667    3.23 | 19.75    1.08
                 1.583    0.66 | 7.667    1.32 |13.750    3.23 | 19.83    1.08
                 1.667    0.66 | 7.750    1.32 |13.833    2.52 | 19.92    1.08
                 1.750    0.66 | 7.833    1.32 |13.917    2.51 | 20.00    1.08
                 1.833    0.66 | 7.917    1.32 |14.000    2.51 | 20.08    1.08
                 1.917    0.66 | 8.000    1.32 |14.083    2.51 | 20.17    1.08
                 2.000    0.66 | 8.083    1.32 |14.167    2.51 | 20.25    1.08
                 2.083    0.66 | 8.167    1.32 |14.250    2.51 | 20.33    0.72
                 2.167    0.66 | 8.250    1.32 |14.333    1.80 | 20.42    0.72
                 2.250    0.66 | 8.333    1.56 |14.417    1.80 | 20.50    0.72
                 2.333    0.78 | 8.417    1.56 |14.500    1.80 | 20.58    0.72
                 2.417    0.78 | 8.500    1.56 |14.583    1.80 | 20.67    0.72
                 2.500    0.78 | 8.583    1.56 |14.667    1.80 | 20.75    0.72
                 2.583    0.78 | 8.667    1.56 |14.750    1.80 | 20.83    0.72
                 2.667    0.78 | 8.750    1.56 |14.833    1.80 | 20.92    0.72
                 2.750    0.78 | 8.833    1.68 |14.917    1.80 | 21.00    0.72
                 2.833    0.78 | 8.917    1.68 |15.000    1.80 | 21.08    0.72
                 2.917    0.78 | 9.000    1.68 |15.083    1.80 | 21.17    0.72
                 3.000    0.78 | 9.083    1.68 |15.167    1.80 | 21.25    0.72
                 3.083    0.78 | 9.167    1.68 |15.250    1.80 | 21.33    0.72
```

```
          3.167    0.78 | 9.250    1.68 |15.333    1.80 | 21.42    0.72
          3.250    0.78 | 9.333    1.92 |15.417    1.80 | 21.50    0.72
          3.333    0.78 | 9.417    1.92 |15.500    1.80 | 21.58    0.72
          3.417    0.78 | 9.500    1.92 |15.583    1.80 | 21.67    0.72
          3.500    0.78 | 9.583    1.92 |15.667    1.80 | 21.75    0.72
          3.583    0.78 | 9.667    1.92 |15.750    1.80 | 21.83    0.72
          3.667    0.78 | 9.750    1.92 |15.833    1.80 | 21.92    0.72
          3.750    0.78 | 9.833    2.16 |15.917    1.80 | 22.00    0.72
          3.833    0.78 | 9.917    2.16 |16.000    1.80 | 22.08    0.72
          3.917    0.78 |10.000    2.16 |16.083    1.80 | 22.17    0.72
          4.000    0.78 |10.083    2.16 |16.167    1.80 | 22.25    0.72
          4.083    0.78 |10.167    2.16 |16.250    1.80 | 22.33    0.72
          4.167    0.78 |10.250    2.16 |16.333    1.08 | 22.42    0.72
          4.250    0.78 |10.333    2.75 |16.417    1.08 | 22.50    0.72
          4.333    0.96 |10.417    2.75 |16.500    1.08 | 22.58    0.72
          4.417    0.96 |10.500    2.75 |16.583    1.08 | 22.67    0.72
          4.500    0.96 |10.583    2.75 |16.667    1.08 | 22.75    0.72
          4.583    0.96 |10.667    2.75 |16.750    1.08 | 22.83    0.72
          4.667    0.96 |10.750    2.75 |16.833    1.08 | 22.92    0.72
          4.750    0.96 |10.833    3.71 |16.917    1.08 | 23.00    0.72
          4.833    0.96 |10.917    3.71 |17.000    1.08 | 23.08    0.72
          4.917    0.96 |11.000    3.71 |17.083    1.08 | 23.17    0.72
          5.000    0.96 |11.083    3.71 |17.167    1.08 | 23.25    0.72
          5.083    0.96 |11.167    3.71 |17.250    1.08 | 23.33    0.72
          5.167    0.96 |11.250    3.71 |17.333    1.08 | 23.42    0.72
          5.250    0.96 |11.333    5.75 |17.417    1.08 | 23.50    0.72
          5.333    0.96 |11.417    5.75 |17.500    1.08 | 23.58    0.72
          5.417    0.96 |11.500    5.75 |17.583    1.08 | 23.67    0.72
          5.500    0.96 |11.583    5.75 |17.667    1.08 | 23.75    0.72
          5.583    0.96 |11.667    5.75 |17.750    1.08 | 23.83    0.72
          5.667    0.96 |11.750    5.75 |17.833    1.08 | 23.92    0.72
          5.750    0.96 |11.833   17.72 |17.917    1.08 | 24.00    0.72
          5.833    0.96 |11.917   17.72 |18.000    1.08 | 24.08    0.72
          5.917    0.96 |12.000   17.72 |18.083    1.08 | 24.17    0.72
          6.000    0.96 |12.083   73.29 |18.167    1.08 | 24.25    0.72
          6.083    0.96 |12.167   73.29 |18.250    1.08 |

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.045 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=  12.681
     TOTAL RAINFALL   (mm)=  59.880
     RUNOFF COEFFICIENT   =   0.212

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

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

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

```
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.196    12.25    15.65
      + ID2= 2 (  0003):     1.73   0.045    12.33    12.68
        =====================================================
        ID = 3 (  0007):     5.79   0.233    12.25    14.76

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    0.96 |12.250   73.29 | 18.33    1.08
                0.167    0.00 | 6.250    0.96 |12.333    8.63 | 18.42    1.08
                0.250    0.00 | 6.333    1.08 |12.417    8.62 | 18.50    1.08
                0.333    0.66 | 6.417    1.08 |12.500    8.62 | 18.58    1.08
                0.417    0.66 | 6.500    1.08 |12.583    8.62 | 18.67    1.08
                0.500    0.66 | 6.583    1.08 |12.667    8.62 | 18.75    1.08
                0.583    0.66 | 6.667    1.08 |12.750    8.62 | 18.83    1.08
                0.667    0.66 | 6.750    1.08 |12.833    4.43 | 18.92    1.08
                0.750    0.66 | 6.833    1.08 |12.917    4.43 | 19.00    1.08
                0.833    0.66 | 6.917    1.08 |13.000    4.43 | 19.08    1.08
                0.917    0.66 | 7.000    1.08 |13.083    4.43 | 19.17    1.08
                1.000    0.66 | 7.083    1.08 |13.167    4.43 | 19.25    1.08
                1.083    0.66 | 7.167    1.08 |13.250    4.43 | 19.33    1.08
                1.167    0.66 | 7.250    1.08 |13.333    3.23 | 19.42    1.08
                1.250    0.66 | 7.333    1.32 |13.417    3.23 | 19.50    1.08
                1.333    0.66 | 7.417    1.32 |13.500    3.23 | 19.58    1.08
                1.417    0.66 | 7.500    1.32 |13.583    3.23 | 19.67    1.08
                1.500    0.66 | 7.583    1.32 |13.667    3.23 | 19.75    1.08
                1.583    0.66 | 7.667    1.32 |13.750    3.23 | 19.83    1.08
                1.667    0.66 | 7.750    1.32 |13.833    2.52 | 19.92    1.08
                1.750    0.66 | 7.833    1.32 |13.917    2.51 | 20.00    1.08
                1.833    0.66 | 7.917    1.32 |14.000    2.51 | 20.08    1.08
                1.917    0.66 | 8.000    1.32 |14.083    2.51 | 20.17    1.08
                2.000    0.66 | 8.083    1.32 |14.167    2.51 | 20.25    1.08
                2.083    0.66 | 8.167    1.32 |14.250    2.51 | 20.33    0.72
                2.167    0.66 | 8.250    1.32 |14.333    1.80 | 20.42    0.72
                2.250    0.66 | 8.333    1.56 |14.417    1.80 | 20.50    0.72
                2.333    0.78 | 8.417    1.56 |14.500    1.80 | 20.58    0.72
```

2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72
2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72
2.917	0.78	9.000	1.68	15.083	1.80	21.17	0.72
3.000	0.78	9.083	1.68	15.167	1.80	21.25	0.72
3.083	0.78	9.167	1.68	15.250	1.80	21.33	0.72
3.167	0.78	9.250	1.68	15.333	1.80	21.42	0.72
3.250	0.78	9.333	1.92	15.417	1.80	21.50	0.72
3.333	0.78	9.417	1.92	15.500	1.80	21.58	0.72
3.417	0.78	9.500	1.92	15.583	1.80	21.67	0.72
3.500	0.78	9.583	1.92	15.667	1.80	21.75	0.72
3.583	0.78	9.667	1.92	15.750	1.80	21.83	0.72
3.667	0.78	9.750	1.92	15.833	1.80	21.92	0.72
3.750	0.78	9.833	2.16	15.917	1.80	22.00	0.72
3.833	0.78	9.917	2.16	16.000	1.80	22.08	0.72
3.917	0.78	10.000	2.16	16.083	1.80	22.17	0.72
4.000	0.78	10.083	2.16	16.167	1.80	22.25	0.72
4.083	0.78	10.167	2.16	16.250	1.80	22.33	0.72
4.167	0.78	10.250	2.16	16.333	1.08	22.42	0.72
4.250	0.78	10.333	2.75	16.417	1.08	22.50	0.72
4.333	0.96	10.417	2.75	16.500	1.08	22.58	0.72
4.417	0.96	10.500	2.75	16.583	1.08	22.67	0.72
4.500	0.96	10.583	2.75	16.667	1.08	22.75	0.72
4.583	0.96	10.667	2.75	16.750	1.08	22.83	0.72
4.667	0.96	10.750	2.75	16.833	1.08	22.92	0.72
4.750	0.96	10.833	3.71	16.917	1.08	23.00	0.72
4.833	0.96	10.917	3.71	17.000	1.08	23.08	0.72
4.917	0.96	11.000	3.71	17.083	1.08	23.17	0.72
5.000	0.96	11.083	3.71	17.167	1.08	23.25	0.72
5.083	0.96	11.167	3.71	17.250	1.08	23.33	0.72
5.167	0.96	11.250	3.71	17.333	1.08	23.42	0.72
5.250	0.96	11.333	5.75	17.417	1.08	23.50	0.72
5.333	0.96	11.417	5.75	17.500	1.08	23.58	0.72
5.417	0.96	11.500	5.75	17.583	1.08	23.67	0.72
5.500	0.96	11.583	5.75	17.667	1.08	23.75	0.72
5.583	0.96	11.667	5.75	17.750	1.08	23.83	0.72
5.667	0.96	11.750	5.75	17.833	1.08	23.92	0.72
5.750	0.96	11.833	17.72	17.917	1.08	24.00	0.72
5.833	0.96	11.917	17.72	18.000	1.08	24.08	0.72
5.917	0.96	12.000	17.72	18.083	1.08	24.17	0.72
6.000	0.96	12.083	73.29	18.167	1.08	24.25	0.72
6.083	0.96	12.167	73.29	18.250	1.08		

Unit Hyd Qpeak (cms)= 1.320

PEAK FLOW (cms)= 0.232 (i)
TIME TO PEAK (hrs)= 12.333

RUNOFF VOLUME (mm)= 13.125
TOTAL RAINFALL (mm)= 59.880
RUNOFF COEFFICIENT = 0.219

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

```
------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	0.96	12.250	73.29	18.33	1.08
0.167	0.00	6.250	0.96	12.333	8.63	18.42	1.08
0.250	0.00	6.333	1.08	12.417	8.62	18.50	1.08
0.333	0.66	6.417	1.08	12.500	8.62	18.58	1.08
0.417	0.66	6.500	1.08	12.583	8.62	18.67	1.08
0.500	0.66	6.583	1.08	12.667	8.62	18.75	1.08
0.583	0.66	6.667	1.08	12.750	8.62	18.83	1.08
0.667	0.66	6.750	1.08	12.833	4.43	18.92	1.08
0.750	0.66	6.833	1.08	12.917	4.43	19.00	1.08
0.833	0.66	6.917	1.08	13.000	4.43	19.08	1.08
0.917	0.66	7.000	1.08	13.083	4.43	19.17	1.08
1.000	0.66	7.083	1.08	13.167	4.43	19.25	1.08
1.083	0.66	7.167	1.08	13.250	4.43	19.33	1.08
1.167	0.66	7.250	1.08	13.333	3.23	19.42	1.08
1.250	0.66	7.333	1.32	13.417	3.23	19.50	1.08
1.333	0.66	7.417	1.32	13.500	3.23	19.58	1.08
1.417	0.66	7.500	1.32	13.583	3.23	19.67	1.08
1.500	0.66	7.583	1.32	13.667	3.23	19.75	1.08
1.583	0.66	7.667	1.32	13.750	3.23	19.83	1.08
1.667	0.66	7.750	1.32	13.833	2.52	19.92	1.08
1.750	0.66	7.833	1.32	13.917	2.51	20.00	1.08
1.833	0.66	7.917	1.32	14.000	2.51	20.08	1.08
1.917	0.66	8.000	1.32	14.083	2.51	20.17	1.08
2.000	0.66	8.083	1.32	14.167	2.51	20.25	1.08
2.083	0.66	8.167	1.32	14.250	2.51	20.33	0.72
2.167	0.66	8.250	1.32	14.333	1.80	20.42	0.72
2.250	0.66	8.333	1.56	14.417	1.80	20.50	0.72
2.333	0.78	8.417	1.56	14.500	1.80	20.58	0.72
2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72

2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72
2.917	0.78	9.000	1.68	15.083	1.80	21.17	0.72
3.000	0.78	9.083	1.68	15.167	1.80	21.25	0.72
3.083	0.78	9.167	1.68	15.250	1.80	21.33	0.72
3.167	0.78	9.250	1.68	15.333	1.80	21.42	0.72
3.250	0.78	9.333	1.92	15.417	1.80	21.50	0.72
3.333	0.78	9.417	1.92	15.500	1.80	21.58	0.72
3.417	0.78	9.500	1.92	15.583	1.80	21.67	0.72
3.500	0.78	9.583	1.92	15.667	1.80	21.75	0.72
3.583	0.78	9.667	1.92	15.750	1.80	21.83	0.72
3.667	0.78	9.750	1.92	15.833	1.80	21.92	0.72
3.750	0.78	9.833	2.16	15.917	1.80	22.00	0.72
3.833	0.78	9.917	2.16	16.000	1.80	22.08	0.72
3.917	0.78	10.000	2.16	16.083	1.80	22.17	0.72
4.000	0.78	10.083	2.16	16.167	1.80	22.25	0.72
4.083	0.78	10.167	2.16	16.250	1.80	22.33	0.72
4.167	0.78	10.250	2.16	16.333	1.08	22.42	0.72
4.250	0.78	10.333	2.75	16.417	1.08	22.50	0.72
4.333	0.96	10.417	2.75	16.500	1.08	22.58	0.72
4.417	0.96	10.500	2.75	16.583	1.08	22.67	0.72
4.500	0.96	10.583	2.75	16.667	1.08	22.75	0.72
4.583	0.96	10.667	2.75	16.750	1.08	22.83	0.72
4.667	0.96	10.750	2.75	16.833	1.08	22.92	0.72
4.750	0.96	10.833	3.71	16.917	1.08	23.00	0.72
4.833	0.96	10.917	3.71	17.000	1.08	23.08	0.72
4.917	0.96	11.000	3.71	17.083	1.08	23.17	0.72
5.000	0.96	11.083	3.71	17.167	1.08	23.25	0.72
5.083	0.96	11.167	3.71	17.250	1.08	23.33	0.72
5.167	0.96	11.250	3.71	17.333	1.08	23.42	0.72
5.250	0.96	11.333	5.75	17.417	1.08	23.50	0.72
5.333	0.96	11.417	5.75	17.500	1.08	23.58	0.72
5.417	0.96	11.500	5.75	17.583	1.08	23.67	0.72
5.500	0.96	11.583	5.75	17.667	1.08	23.75	0.72
5.583	0.96	11.667	5.75	17.750	1.08	23.83	0.72
5.667	0.96	11.750	5.75	17.833	1.08	23.92	0.72
5.750	0.96	11.833	17.72	17.917	1.08	24.00	0.72
5.833	0.96	11.917	17.72	18.000	1.08	24.08	0.72
5.917	0.96	12.000	17.72	18.083	1.08	24.17	0.72
6.000	0.96	12.083	73.29	18.167	1.08	24.25	0.72
6.083	0.96	12.167	73.29	18.250	1.08		

```
Unit Hyd Qpeak  (cms)=   0.925

PEAK FLOW       (cms)=   0.084 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=   8.446
TOTAL RAINFALL   (mm)=  59.880
RUNOFF COEFFICIENT   =   0.141

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	0.96	12.250	73.29	18.33	1.08
0.167	0.00	6.250	0.96	12.333	8.63	18.42	1.08
0.250	0.00	6.333	1.08	12.417	8.62	18.50	1.08
0.333	0.66	6.417	1.08	12.500	8.62	18.58	1.08
0.417	0.66	6.500	1.08	12.583	8.62	18.67	1.08
0.500	0.66	6.583	1.08	12.667	8.62	18.75	1.08
0.583	0.66	6.667	1.08	12.750	8.62	18.83	1.08
0.667	0.66	6.750	1.08	12.833	4.43	18.92	1.08
0.750	0.66	6.833	1.08	12.917	4.43	19.00	1.08
0.833	0.66	6.917	1.08	13.000	4.43	19.08	1.08
0.917	0.66	7.000	1.08	13.083	4.43	19.17	1.08
1.000	0.66	7.083	1.08	13.167	4.43	19.25	1.08
1.083	0.66	7.167	1.08	13.250	4.43	19.33	1.08
1.167	0.66	7.250	1.08	13.333	3.23	19.42	1.08
1.250	0.66	7.333	1.32	13.417	3.23	19.50	1.08
1.333	0.66	7.417	1.32	13.500	3.23	19.58	1.08
1.417	0.66	7.500	1.32	13.583	3.23	19.67	1.08
1.500	0.66	7.583	1.32	13.667	3.23	19.75	1.08
1.583	0.66	7.667	1.32	13.750	3.23	19.83	1.08
1.667	0.66	7.750	1.32	13.833	2.52	19.92	1.08
1.750	0.66	7.833	1.32	13.917	2.51	20.00	1.08
1.833	0.66	7.917	1.32	14.000	2.51	20.08	1.08
1.917	0.66	8.000	1.32	14.083	2.51	20.17	1.08
2.000	0.66	8.083	1.32	14.167	2.51	20.25	1.08
2.083	0.66	8.167	1.32	14.250	2.51	20.33	0.72
2.167	0.66	8.250	1.32	14.333	1.80	20.42	0.72
2.250	0.66	8.333	1.56	14.417	1.80	20.50	0.72
2.333	0.78	8.417	1.56	14.500	1.80	20.58	0.72
2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72
2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72

2.917	0.78	9.000	1.68	15.083	1.80	21.17	0.72
3.000	0.78	9.083	1.68	15.167	1.80	21.25	0.72
3.083	0.78	9.167	1.68	15.250	1.80	21.33	0.72
3.167	0.78	9.250	1.68	15.333	1.80	21.42	0.72
3.250	0.78	9.333	1.92	15.417	1.80	21.50	0.72
3.333	0.78	9.417	1.92	15.500	1.80	21.58	0.72
3.417	0.78	9.500	1.92	15.583	1.80	21.67	0.72
3.500	0.78	9.583	1.92	15.667	1.80	21.75	0.72
3.583	0.78	9.667	1.92	15.750	1.80	21.83	0.72
3.667	0.78	9.750	1.92	15.833	1.80	21.92	0.72
3.750	0.78	9.833	2.16	15.917	1.80	22.00	0.72
3.833	0.78	9.917	2.16	16.000	1.80	22.08	0.72
3.917	0.78	10.000	2.16	16.083	1.80	22.17	0.72
4.000	0.78	10.083	2.16	16.167	1.80	22.25	0.72
4.083	0.78	10.167	2.16	16.250	1.80	22.33	0.72
4.167	0.78	10.250	2.16	16.333	1.08	22.42	0.72
4.250	0.78	10.333	2.75	16.417	1.08	22.50	0.72
4.333	0.96	10.417	2.75	16.500	1.08	22.58	0.72
4.417	0.96	10.500	2.75	16.583	1.08	22.67	0.72
4.500	0.96	10.583	2.75	16.667	1.08	22.75	0.72
4.583	0.96	10.667	2.75	16.750	1.08	22.83	0.72
4.667	0.96	10.750	2.75	16.833	1.08	22.92	0.72
4.750	0.96	10.833	3.71	16.917	1.08	23.00	0.72
4.833	0.96	10.917	3.71	17.000	1.08	23.08	0.72
4.917	0.96	11.000	3.71	17.083	1.08	23.17	0.72
5.000	0.96	11.083	3.71	17.167	1.08	23.25	0.72
5.083	0.96	11.167	3.71	17.250	1.08	23.33	0.72
5.167	0.96	11.250	3.71	17.333	1.08	23.42	0.72
5.250	0.96	11.333	5.75	17.417	1.08	23.50	0.72
5.333	0.96	11.417	5.75	17.500	1.08	23.58	0.72
5.417	0.96	11.500	5.75	17.583	1.08	23.67	0.72
5.500	0.96	11.583	5.75	17.667	1.08	23.75	0.72
5.583	0.96	11.667	5.75	17.750	1.08	23.83	0.72
5.667	0.96	11.750	5.75	17.833	1.08	23.92	0.72
5.750	0.96	11.833	17.72	17.917	1.08	24.00	0.72
5.833	0.96	11.917	17.72	18.000	1.08	24.08	0.72
5.917	0.96	12.000	17.72	18.083	1.08	24.17	0.72
6.000	0.96	12.083	73.29	18.167	1.08	24.25	0.72
6.083	0.96	12.167	73.29	18.250	1.08		

```
Unit Hyd Qpeak  (cms)=   0.663

PEAK FLOW       (cms)=   0.065 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=   8.966
TOTAL RAINFALL   (mm)=  59.880
RUNOFF COEFFICIENT   =   0.150

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	0.96	12.250	73.29	18.33	1.08
0.167	0.00	6.250	0.96	12.333	8.63	18.42	1.08
0.250	0.00	6.333	1.08	12.417	8.62	18.50	1.08
0.333	0.66	6.417	1.08	12.500	8.62	18.58	1.08
0.417	0.66	6.500	1.08	12.583	8.62	18.67	1.08
0.500	0.66	6.583	1.08	12.667	8.62	18.75	1.08
0.583	0.66	6.667	1.08	12.750	8.62	18.83	1.08
0.667	0.66	6.750	1.08	12.833	4.43	18.92	1.08
0.750	0.66	6.833	1.08	12.917	4.43	19.00	1.08
0.833	0.66	6.917	1.08	13.000	4.43	19.08	1.08
0.917	0.66	7.000	1.08	13.083	4.43	19.17	1.08
1.000	0.66	7.083	1.08	13.167	4.43	19.25	1.08
1.083	0.66	7.167	1.08	13.250	4.43	19.33	1.08
1.167	0.66	7.250	1.08	13.333	3.23	19.42	1.08
1.250	0.66	7.333	1.32	13.417	3.23	19.50	1.08
1.333	0.66	7.417	1.32	13.500	3.23	19.58	1.08
1.417	0.66	7.500	1.32	13.583	3.23	19.67	1.08
1.500	0.66	7.583	1.32	13.667	3.23	19.75	1.08
1.583	0.66	7.667	1.32	13.750	3.23	19.83	1.08
1.667	0.66	7.750	1.32	13.833	2.52	19.92	1.08
1.750	0.66	7.833	1.32	13.917	2.51	20.00	1.08
1.833	0.66	7.917	1.32	14.000	2.51	20.08	1.08
1.917	0.66	8.000	1.32	14.083	2.51	20.17	1.08
2.000	0.66	8.083	1.32	14.167	2.51	20.25	1.08
2.083	0.66	8.167	1.32	14.250	2.51	20.33	0.72
2.167	0.66	8.250	1.32	14.333	1.80	20.42	0.72
2.250	0.66	8.333	1.56	14.417	1.80	20.50	0.72
2.333	0.78	8.417	1.56	14.500	1.80	20.58	0.72
2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72
2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72
2.917	0.78	9.000	1.68	15.083	1.80	21.17	0.72
3.000	0.78	9.083	1.68	15.167	1.80	21.25	0.72
3.083	0.78	9.167	1.68	15.250	1.80	21.33	0.72

```
      3.167    0.78 | 9.250    1.68 |15.333    1.80 | 21.42    0.72
      3.250    0.78 | 9.333    1.92 |15.417    1.80 | 21.50    0.72
      3.333    0.78 | 9.417    1.92 |15.500    1.80 | 21.58    0.72
      3.417    0.78 | 9.500    1.92 |15.583    1.80 | 21.67    0.72
      3.500    0.78 | 9.583    1.92 |15.667    1.80 | 21.75    0.72
      3.583    0.78 | 9.667    1.92 |15.750    1.80 | 21.83    0.72
      3.667    0.78 | 9.750    1.92 |15.833    1.80 | 21.92    0.72
      3.750    0.78 | 9.833    2.16 |15.917    1.80 | 22.00    0.72
      3.833    0.78 | 9.917    2.16 |16.000    1.80 | 22.08    0.72
      3.917    0.78 |10.000    2.16 |16.083    1.80 | 22.17    0.72
      4.000    0.78 |10.083    2.16 |16.167    1.80 | 22.25    0.72
      4.083    0.78 |10.167    2.16 |16.250    1.80 | 22.33    0.72
      4.167    0.78 |10.250    2.16 |16.333    1.08 | 22.42    0.72
      4.250    0.78 |10.333    2.75 |16.417    1.08 | 22.50    0.72
      4.333    0.96 |10.417    2.75 |16.500    1.08 | 22.58    0.72
      4.417    0.96 |10.500    2.75 |16.583    1.08 | 22.67    0.72
      4.500    0.96 |10.583    2.75 |16.667    1.08 | 22.75    0.72
      4.583    0.96 |10.667    2.75 |16.750    1.08 | 22.83    0.72
      4.667    0.96 |10.750    2.75 |16.833    1.08 | 22.92    0.72
      4.750    0.96 |10.833    3.71 |16.917    1.08 | 23.00    0.72
      4.833    0.96 |10.917    3.71 |17.000    1.08 | 23.08    0.72
      4.917    0.96 |11.000    3.71 |17.083    1.08 | 23.17    0.72
      5.000    0.96 |11.083    3.71 |17.167    1.08 | 23.25    0.72
      5.083    0.96 |11.167    3.71 |17.250    1.08 | 23.33    0.72
      5.167    0.96 |11.250    3.71 |17.333    1.08 | 23.42    0.72
      5.250    0.96 |11.333    5.75 |17.417    1.08 | 23.50    0.72
      5.333    0.96 |11.417    5.75 |17.500    1.08 | 23.58    0.72
      5.417    0.96 |11.500    5.75 |17.583    1.08 | 23.67    0.72
      5.500    0.96 |11.583    5.75 |17.667    1.08 | 23.75    0.72
      5.583    0.96 |11.667    5.75 |17.750    1.08 | 23.83    0.72
      5.667    0.96 |11.750    5.75 |17.833    1.08 | 23.92    0.72
      5.750    0.96 |11.833   17.72 |17.917    1.08 | 24.00    0.72
      5.833    0.96 |11.917   17.72 |18.000    1.08 | 24.08    0.72
      5.917    0.96 |12.000   17.72 |18.083    1.08 | 24.17    0.72
      6.000    0.96 |12.083   73.29 |18.167    1.08 | 24.25    0.72
      6.083    0.96 |12.167   73.29 |18.250    1.08 |

    Unit Hyd Qpeak  (cms)=   0.284

    PEAK FLOW       (cms)=   0.029 (i)
    TIME TO PEAK    (hrs)=  12.333
    RUNOFF VOLUME    (mm)=   8.506
    TOTAL RAINFALL   (mm)=  59.880
    RUNOFF COEFFICIENT   =   0.142

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

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

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

```
| ADD HYD  (  0008)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0002):     7.95   0.232    12.33    13.13
     + ID2= 2 (  0004):     3.15   0.084    12.25     8.45
       ====================================================
       ID = 3 (  0008):    11.10   0.302    12.33    11.80

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0008):    11.10   0.302    12.33    11.80
     + ID2= 2 (  0005):     2.43   0.065    12.25     8.97
       ====================================================
       ID = 1 (  0008):    13.53   0.361    12.33    11.29

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):    13.53   0.361    12.33    11.29
     + ID2= 2 (  0006):     1.34   0.029    12.33     8.51
       ====================================================
       ID = 3 (  0008):    14.87   0.389    12.33    11.04

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0007):     5.79   0.233    12.25    14.76
     + ID2= 2 (  0008):    14.87   0.389    12.33    11.04
       ====================================================
       ID = 3 (  0009):    20.66   0.609    12.33    12.08

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
```

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

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

Developed and Distributed by Smart City Water Inc

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

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\2360c
7e9-d496-499e-acf1-6ebaf545c5ea\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\2360c
7e9-d496-499e-acf1-6ebaf545c5ea\scena


DATE: 07-18-2025                          TIME: 03:06:58

USER:


COMMENTS: ____________________________________________________________

---------------------------------------------------------------------------------
-----------------------
  ************************************************
  ** SIMULATION : I. 10YR 24HR SCS              **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\f2d2a5f8
| Ptotal= 67.50 mm |    Comments: 10yr 24hr 15min SCS Type II (MTO)
--------------------
```

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	1.22	12.50	9.72	18.75	1.22
0.25	0.74	6.50	1.22	12.75	4.99	19.00	1.22
0.50	0.74	6.75	1.22	13.00	4.99	19.25	1.22
0.75	0.74	7.00	1.22	13.25	3.64	19.50	1.22
1.00	0.74	7.25	1.49	13.50	3.64	19.75	1.22
1.25	0.74	7.50	1.49	13.75	2.84	20.00	1.22
1.50	0.74	7.75	1.49	14.00	2.84	20.25	0.81
1.75	0.74	8.00	1.49	14.25	2.03	20.50	0.81
2.00	0.74	8.25	1.75	14.50	2.03	20.75	0.81
2.25	0.88	8.50	1.75	14.75	2.03	21.00	0.81
2.50	0.88	8.75	1.89	15.00	2.03	21.25	0.81
2.75	0.88	9.00	1.89	15.25	2.03	21.50	0.81
3.00	0.88	9.25	2.16	15.50	2.03	21.75	0.81
3.25	0.88	9.50	2.16	15.75	2.03	22.00	0.81
3.50	0.88	9.75	2.43	16.00	2.03	22.25	0.81
3.75	0.88	10.00	2.43	16.25	1.22	22.50	0.81
4.00	0.88	10.25	3.11	16.50	1.22	22.75	0.81
4.25	1.08	10.50	3.11	16.75	1.22	23.00	0.81
4.50	1.08	10.75	4.18	17.00	1.22	23.25	0.81
4.75	1.08	11.00	4.18	17.25	1.22	23.50	0.81
5.00	1.08	11.25	6.48	17.50	1.22	23.75	0.81
5.25	1.08	11.50	6.48	17.75	1.22	24.00	0.81
5.50	1.08	11.75	19.98	18.00	1.22		
5.75	1.08	12.00	82.62	18.25	1.22		
6.00	1.08	12.25	9.72	18.50	1.22		

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


--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22

0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81
3.917	0.88	10.000	2.43	16.083	2.02	22.17	0.81
4.000	0.88	10.083	2.43	16.167	2.03	22.25	0.81
4.083	0.88	10.167	2.43	16.250	2.03	22.33	0.81
4.167	0.88	10.250	2.43	16.333	1.22	22.42	0.81
4.250	0.88	10.333	3.10	16.417	1.22	22.50	0.81
4.333	1.08	10.417	3.11	16.500	1.22	22.58	0.81
4.417	1.08	10.500	3.11	16.583	1.22	22.67	0.81
4.500	1.08	10.583	3.10	16.667	1.22	22.75	0.81
4.583	1.08	10.667	3.11	16.750	1.22	22.83	0.81
4.667	1.08	10.750	3.11	16.833	1.22	22.92	0.81
4.750	1.08	10.833	4.18	16.917	1.22	23.00	0.81
4.833	1.08	10.917	4.18	17.000	1.22	23.08	0.81
4.917	1.08	11.000	4.18	17.083	1.22	23.17	0.81
5.000	1.08	11.083	4.18	17.167	1.22	23.25	0.81
5.083	1.08	11.167	4.18	17.250	1.22	23.33	0.81
5.167	1.08	11.250	4.18	17.333	1.22	23.42	0.81
5.250	1.08	11.333	6.48	17.417	1.22	23.50	0.81
5.333	1.08	11.417	6.48	17.500	1.22	23.58	0.81
5.417	1.08	11.500	6.48	17.583	1.22	23.67	0.81
5.500	1.08	11.583	6.48	17.667	1.22	23.75	0.81
5.583	1.08	11.667	6.48	17.750	1.22	23.83	0.81
5.667	1.08	11.750	6.48	17.833	1.22	23.92	0.81
5.750	1.08	11.833	19.98	17.917	1.22	24.00	0.81
5.833	1.08	11.917	19.98	18.000	1.22	24.08	0.81
5.917	1.08	12.000	19.98	18.083	1.22	24.17	0.81
6.000	1.08	12.083	82.61	18.167	1.22	24.25	0.81
6.083	1.08	12.167	82.62	18.250	1.22		

Unit Hyd Qpeak (cms)= 1.108

PEAK FLOW (cms)= 0.246 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 19.515
TOTAL RAINFALL (mm)= 67.500
RUNOFF COEFFICIENT = 0.289

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

```
------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22

```
1.083    0.74 | 7.167    1.22 |13.250    4.99 | 19.33    1.22
1.167    0.74 | 7.250    1.22 |13.333    3.65 | 19.42    1.22
1.250    0.74 | 7.333    1.49 |13.417    3.64 | 19.50    1.22
1.333    0.74 | 7.417    1.49 |13.500    3.64 | 19.58    1.22
1.417    0.74 | 7.500    1.49 |13.583    3.64 | 19.67    1.22
1.500    0.74 | 7.583    1.49 |13.667    3.64 | 19.75    1.22
1.583    0.74 | 7.667    1.49 |13.750    3.64 | 19.83    1.22
1.667    0.74 | 7.750    1.49 |13.833    2.84 | 19.92    1.22
1.750    0.74 | 7.833    1.49 |13.917    2.84 | 20.00    1.22
1.833    0.74 | 7.917    1.49 |14.000    2.84 | 20.08    1.22
1.917    0.74 | 8.000    1.49 |14.083    2.83 | 20.17    1.22
2.000    0.74 | 8.083    1.49 |14.167    2.84 | 20.25    1.21
2.083    0.74 | 8.167    1.49 |14.250    2.84 | 20.33    0.81
2.167    0.74 | 8.250    1.49 |14.333    2.03 | 20.42    0.81
2.250    0.74 | 8.333    1.75 |14.417    2.03 | 20.50    0.81
2.333    0.88 | 8.417    1.75 |14.500    2.03 | 20.58    0.81
2.417    0.88 | 8.500    1.75 |14.583    2.02 | 20.67    0.81
2.500    0.88 | 8.583    1.75 |14.667    2.03 | 20.75    0.81
2.583    0.88 | 8.667    1.75 |14.750    2.03 | 20.83    0.81
2.667    0.88 | 8.750    1.75 |14.833    2.02 | 20.92    0.81
2.750    0.88 | 8.833    1.89 |14.917    2.03 | 21.00    0.81
2.833    0.88 | 8.917    1.89 |15.000    2.03 | 21.08    0.81
2.917    0.88 | 9.000    1.89 |15.083    2.02 | 21.17    0.81
3.000    0.88 | 9.083    1.89 |15.167    2.03 | 21.25    0.81
3.083    0.88 | 9.167    1.89 |15.250    2.03 | 21.33    0.81
3.167    0.88 | 9.250    1.89 |15.333    2.02 | 21.42    0.81
3.250    0.88 | 9.333    2.16 |15.417    2.03 | 21.50    0.81
3.333    0.88 | 9.417    2.16 |15.500    2.03 | 21.58    0.81
3.417    0.88 | 9.500    2.16 |15.583    2.02 | 21.67    0.81
3.500    0.88 | 9.583    2.16 |15.667    2.03 | 21.75    0.81
3.583    0.88 | 9.667    2.16 |15.750    2.03 | 21.83    0.81
3.667    0.88 | 9.750    2.16 |15.833    2.02 | 21.92    0.81
3.750    0.88 | 9.833    2.43 |15.917    2.03 | 22.00    0.81
3.833    0.88 | 9.917    2.43 |16.000    2.03 | 22.08    0.81
3.917    0.88 |10.000    2.43 |16.083    2.02 | 22.17    0.81
4.000    0.88 |10.083    2.43 |16.167    2.03 | 22.25    0.81
4.083    0.88 |10.167    2.43 |16.250    2.03 | 22.33    0.81
4.167    0.88 |10.250    2.43 |16.333    1.22 | 22.42    0.81
4.250    0.88 |10.333    3.10 |16.417    1.22 | 22.50    0.81
4.333    1.08 |10.417    3.11 |16.500    1.22 | 22.58    0.81
4.417    1.08 |10.500    3.11 |16.583    1.22 | 22.67    0.81
4.500    1.08 |10.583    3.10 |16.667    1.22 | 22.75    0.81
4.583    1.08 |10.667    3.11 |16.750    1.22 | 22.83    0.81
4.667    1.08 |10.750    3.11 |16.833    1.22 | 22.92    0.81
4.750    1.08 |10.833    4.18 |16.917    1.22 | 23.00    0.81
4.833    1.08 |10.917    4.18 |17.000    1.22 | 23.08    0.81
4.917    1.08 |11.000    4.18 |17.083    1.22 | 23.17    0.81
5.000    1.08 |11.083    4.18 |17.167    1.22 | 23.25    0.81
5.083    1.08 |11.167    4.18 |17.250    1.22 | 23.33    0.81
5.167    1.08 |11.250    4.18 |17.333    1.22 | 23.42    0.81
```

```
                5.250    1.08 |11.333    6.48 |17.417    1.22 | 23.50    0.81
                5.333    1.08 |11.417    6.48 |17.500    1.22 | 23.58    0.81
                5.417    1.08 |11.500    6.48 |17.583    1.22 | 23.67    0.81
                5.500    1.08 |11.583    6.48 |17.667    1.22 | 23.75    0.81
                5.583    1.08 |11.667    6.48 |17.750    1.22 | 23.83    0.81
                5.667    1.08 |11.750    6.48 |17.833    1.22 | 23.92    0.81
                5.750    1.08 |11.833   19.98 |17.917    1.22 | 24.00    0.81
                5.833    1.08 |11.917   19.98 |18.000    1.22 | 24.08    0.81
                5.917    1.08 |12.000   19.98 |18.083    1.22 | 24.17    0.81
                6.000    1.08 |12.083   82.61 |18.167    1.22 | 24.25    0.81
                6.083    1.08 |12.167   82.62 |18.250    1.22 |

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW      (cms)=   0.057 (i)
     TIME TO PEAK   (hrs)=  12.333
     RUNOFF VOLUME    (mm)=  15.936
     TOTAL RAINFALL   (mm)=  67.500
     RUNOFF COEFFICIENT   =   0.236

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

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

--------------------
| ADD HYD  (  0007)|
|  1 +  2 =  3     |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):     4.06   0.246    12.25    19.51
     + ID2= 2 (  0003):     1.73   0.057    12.33    15.94
       ================================================
       ID = 3 (  0007):     5.79   0.293    12.25    18.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    1.08 |12.250   82.62 | 18.33    1.22
                0.167    0.00 | 6.250    1.08 |12.333    9.73 | 18.42    1.22
                0.250    0.00 | 6.333    1.22 |12.417    9.72 | 18.50    1.22
```

0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81
3.917	0.88	10.000	2.43	16.083	2.02	22.17	0.81
4.000	0.88	10.083	2.43	16.167	2.03	22.25	0.81
4.083	0.88	10.167	2.43	16.250	2.03	22.33	0.81
4.167	0.88	10.250	2.43	16.333	1.22	22.42	0.81
4.250	0.88	10.333	3.10	16.417	1.22	22.50	0.81
4.333	1.08	10.417	3.11	16.500	1.22	22.58	0.81
4.417	1.08	10.500	3.11	16.583	1.22	22.67	0.81
4.500	1.08	10.583	3.10	16.667	1.22	22.75	0.81
4.583	1.08	10.667	3.11	16.750	1.22	22.83	0.81
4.667	1.08	10.750	3.11	16.833	1.22	22.92	0.81
4.750	1.08	10.833	4.18	16.917	1.22	23.00	0.81
4.833	1.08	10.917	4.18	17.000	1.22	23.08	0.81
4.917	1.08	11.000	4.18	17.083	1.22	23.17	0.81
5.000	1.08	11.083	4.18	17.167	1.22	23.25	0.81
5.083	1.08	11.167	4.18	17.250	1.22	23.33	0.81
5.167	1.08	11.250	4.18	17.333	1.22	23.42	0.81
5.250	1.08	11.333	6.48	17.417	1.22	23.50	0.81
5.333	1.08	11.417	6.48	17.500	1.22	23.58	0.81
5.417	1.08	11.500	6.48	17.583	1.22	23.67	0.81
5.500	1.08	11.583	6.48	17.667	1.22	23.75	0.81
5.583	1.08	11.667	6.48	17.750	1.22	23.83	0.81
5.667	1.08	11.750	6.48	17.833	1.22	23.92	0.81
5.750	1.08	11.833	19.98	17.917	1.22	24.00	0.81
5.833	1.08	11.917	19.98	18.000	1.22	24.08	0.81
5.917	1.08	12.000	19.98	18.083	1.22	24.17	0.81
6.000	1.08	12.083	82.61	18.167	1.22	24.25	0.81
6.083	1.08	12.167	82.62	18.250	1.22		

Unit Hyd Qpeak (cms)= 1.320

PEAK FLOW (cms)= 0.293 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 16.476
TOTAL RAINFALL (mm)= 67.500
RUNOFF COEFFICIENT = 0.244

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22

0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81
3.917	0.88	10.000	2.43	16.083	2.02	22.17	0.81
4.000	0.88	10.083	2.43	16.167	2.03	22.25	0.81
4.083	0.88	10.167	2.43	16.250	2.03	22.33	0.81
4.167	0.88	10.250	2.43	16.333	1.22	22.42	0.81
4.250	0.88	10.333	3.10	16.417	1.22	22.50	0.81
4.333	1.08	10.417	3.11	16.500	1.22	22.58	0.81
4.417	1.08	10.500	3.11	16.583	1.22	22.67	0.81
4.500	1.08	10.583	3.10	16.667	1.22	22.75	0.81
4.583	1.08	10.667	3.11	16.750	1.22	22.83	0.81
4.667	1.08	10.750	3.11	16.833	1.22	22.92	0.81
4.750	1.08	10.833	4.18	16.917	1.22	23.00	0.81
4.833	1.08	10.917	4.18	17.000	1.22	23.08	0.81
4.917	1.08	11.000	4.18	17.083	1.22	23.17	0.81
5.000	1.08	11.083	4.18	17.167	1.22	23.25	0.81
5.083	1.08	11.167	4.18	17.250	1.22	23.33	0.81
5.167	1.08	11.250	4.18	17.333	1.22	23.42	0.81
5.250	1.08	11.333	6.48	17.417	1.22	23.50	0.81
5.333	1.08	11.417	6.48	17.500	1.22	23.58	0.81
5.417	1.08	11.500	6.48	17.583	1.22	23.67	0.81
5.500	1.08	11.583	6.48	17.667	1.22	23.75	0.81
5.583	1.08	11.667	6.48	17.750	1.22	23.83	0.81
5.667	1.08	11.750	6.48	17.833	1.22	23.92	0.81
5.750	1.08	11.833	19.98	17.917	1.22	24.00	0.81
5.833	1.08	11.917	19.98	18.000	1.22	24.08	0.81
5.917	1.08	12.000	19.98	18.083	1.22	24.17	0.81
6.000	1.08	12.083	82.61	18.167	1.22	24.25	0.81
6.083	1.08	12.167	82.62	18.250	1.22		

Unit Hyd Qpeak (cms)= 0.925

PEAK FLOW (cms)= 0.107 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 10.723
TOTAL RAINFALL (mm)= 67.500
RUNOFF COEFFICIENT = 0.159

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22

0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81
3.917	0.88	10.000	2.43	16.083	2.02	22.17	0.81
4.000	0.88	10.083	2.43	16.167	2.03	22.25	0.81
4.083	0.88	10.167	2.43	16.250	2.03	22.33	0.81
4.167	0.88	10.250	2.43	16.333	1.22	22.42	0.81
4.250	0.88	10.333	3.10	16.417	1.22	22.50	0.81
4.333	1.08	10.417	3.11	16.500	1.22	22.58	0.81
4.417	1.08	10.500	3.11	16.583	1.22	22.67	0.81
4.500	1.08	10.583	3.10	16.667	1.22	22.75	0.81
4.583	1.08	10.667	3.11	16.750	1.22	22.83	0.81
4.667	1.08	10.750	3.11	16.833	1.22	22.92	0.81
4.750	1.08	10.833	4.18	16.917	1.22	23.00	0.81
4.833	1.08	10.917	4.18	17.000	1.22	23.08	0.81
4.917	1.08	11.000	4.18	17.083	1.22	23.17	0.81
5.000	1.08	11.083	4.18	17.167	1.22	23.25	0.81
5.083	1.08	11.167	4.18	17.250	1.22	23.33	0.81
5.167	1.08	11.250	4.18	17.333	1.22	23.42	0.81
5.250	1.08	11.333	6.48	17.417	1.22	23.50	0.81
5.333	1.08	11.417	6.48	17.500	1.22	23.58	0.81
5.417	1.08	11.500	6.48	17.583	1.22	23.67	0.81
5.500	1.08	11.583	6.48	17.667	1.22	23.75	0.81
5.583	1.08	11.667	6.48	17.750	1.22	23.83	0.81
5.667	1.08	11.750	6.48	17.833	1.22	23.92	0.81
5.750	1.08	11.833	19.98	17.917	1.22	24.00	0.81
5.833	1.08	11.917	19.98	18.000	1.22	24.08	0.81
5.917	1.08	12.000	19.98	18.083	1.22	24.17	0.81
6.000	1.08	12.083	82.61	18.167	1.22	24.25	0.81
6.083	1.08	12.167	82.62	18.250	1.22		

```
Unit Hyd Qpeak  (cms)=   0.663

PEAK FLOW       (cms)=   0.083 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  11.370
TOTAL RAINFALL   (mm)=  67.500
RUNOFF COEFFICIENT   =   0.168

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

    NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22

```
1.083    0.74 | 7.167    1.22 |13.250    4.99 | 19.33    1.22
1.167    0.74 | 7.250    1.22 |13.333    3.65 | 19.42    1.22
1.250    0.74 | 7.333    1.49 |13.417    3.64 | 19.50    1.22
1.333    0.74 | 7.417    1.49 |13.500    3.64 | 19.58    1.22
1.417    0.74 | 7.500    1.49 |13.583    3.64 | 19.67    1.22
1.500    0.74 | 7.583    1.49 |13.667    3.64 | 19.75    1.22
1.583    0.74 | 7.667    1.49 |13.750    3.64 | 19.83    1.22
1.667    0.74 | 7.750    1.49 |13.833    2.84 | 19.92    1.22
1.750    0.74 | 7.833    1.49 |13.917    2.84 | 20.00    1.22
1.833    0.74 | 7.917    1.49 |14.000    2.84 | 20.08    1.22
1.917    0.74 | 8.000    1.49 |14.083    2.83 | 20.17    1.22
2.000    0.74 | 8.083    1.49 |14.167    2.84 | 20.25    1.21
2.083    0.74 | 8.167    1.49 |14.250    2.84 | 20.33    0.81
2.167    0.74 | 8.250    1.49 |14.333    2.03 | 20.42    0.81
2.250    0.74 | 8.333    1.75 |14.417    2.03 | 20.50    0.81
2.333    0.88 | 8.417    1.75 |14.500    2.03 | 20.58    0.81
2.417    0.88 | 8.500    1.75 |14.583    2.02 | 20.67    0.81
2.500    0.88 | 8.583    1.75 |14.667    2.03 | 20.75    0.81
2.583    0.88 | 8.667    1.75 |14.750    2.03 | 20.83    0.81
2.667    0.88 | 8.750    1.75 |14.833    2.02 | 20.92    0.81
2.750    0.88 | 8.833    1.89 |14.917    2.03 | 21.00    0.81
2.833    0.88 | 8.917    1.89 |15.000    2.03 | 21.08    0.81
2.917    0.88 | 9.000    1.89 |15.083    2.02 | 21.17    0.81
3.000    0.88 | 9.083    1.89 |15.167    2.03 | 21.25    0.81
3.083    0.88 | 9.167    1.89 |15.250    2.03 | 21.33    0.81
3.167    0.88 | 9.250    1.89 |15.333    2.02 | 21.42    0.81
3.250    0.88 | 9.333    2.16 |15.417    2.03 | 21.50    0.81
3.333    0.88 | 9.417    2.16 |15.500    2.03 | 21.58    0.81
3.417    0.88 | 9.500    2.16 |15.583    2.02 | 21.67    0.81
3.500    0.88 | 9.583    2.16 |15.667    2.03 | 21.75    0.81
3.583    0.88 | 9.667    2.16 |15.750    2.03 | 21.83    0.81
3.667    0.88 | 9.750    2.16 |15.833    2.02 | 21.92    0.81
3.750    0.88 | 9.833    2.43 |15.917    2.03 | 22.00    0.81
3.833    0.88 | 9.917    2.43 |16.000    2.03 | 22.08    0.81
3.917    0.88 |10.000    2.43 |16.083    2.02 | 22.17    0.81
4.000    0.88 |10.083    2.43 |16.167    2.03 | 22.25    0.81
4.083    0.88 |10.167    2.43 |16.250    2.03 | 22.33    0.81
4.167    0.88 |10.250    2.43 |16.333    1.22 | 22.42    0.81
4.250    0.88 |10.333    3.10 |16.417    1.22 | 22.50    0.81
4.333    1.08 |10.417    3.11 |16.500    1.22 | 22.58    0.81
4.417    1.08 |10.500    3.11 |16.583    1.22 | 22.67    0.81
4.500    1.08 |10.583    3.10 |16.667    1.22 | 22.75    0.81
4.583    1.08 |10.667    3.11 |16.750    1.22 | 22.83    0.81
4.667    1.08 |10.750    3.11 |16.833    1.22 | 22.92    0.81
4.750    1.08 |10.833    4.18 |16.917    1.22 | 23.00    0.81
4.833    1.08 |10.917    4.18 |17.000    1.22 | 23.08    0.81
4.917    1.08 |11.000    4.18 |17.083    1.22 | 23.17    0.81
5.000    1.08 |11.083    4.18 |17.167    1.22 | 23.25    0.81
5.083    1.08 |11.167    4.18 |17.250    1.22 | 23.33    0.81
5.167    1.08 |11.250    4.18 |17.333    1.22 | 23.42    0.81
```

```
                5.250    1.08 |11.333    6.48 |17.417    1.22 | 23.50    0.81
                5.333    1.08 |11.417    6.48 |17.500    1.22 | 23.58    0.81
                5.417    1.08 |11.500    6.48 |17.583    1.22 | 23.67    0.81
                5.500    1.08 |11.583    6.48 |17.667    1.22 | 23.75    0.81
                5.583    1.08 |11.667    6.48 |17.750    1.22 | 23.83    0.81
                5.667    1.08 |11.750    6.48 |17.833    1.22 | 23.92    0.81
                5.750    1.08 |11.833   19.98 |17.917    1.22 | 24.00    0.81
                5.833    1.08 |11.917   19.98 |18.000    1.22 | 24.08    0.81
                5.917    1.08 |12.000   19.98 |18.083    1.22 | 24.17    0.81
                6.000    1.08 |12.083   82.61 |18.167    1.22 | 24.25    0.81
                6.083    1.08 |12.167   82.62 |18.250    1.22 |

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.037 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=  10.799
     TOTAL RAINFALL   (mm)=  67.500
     RUNOFF COEFFICIENT   =   0.160

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):      7.95   0.293    12.33    16.48
      + ID2= 2 (  0004):      3.15   0.107    12.25    10.72
        ===============================================
        ID = 3 (  0008):     11.10   0.383    12.33    14.84

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):     11.10   0.383    12.33    14.84
      + ID2= 2 (  0005):      2.43   0.083    12.25    11.37
        ===============================================
        ID = 1 (  0008):     13.53   0.457    12.33    14.22

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

--------------------
| ADD HYD  (  0008)|
```

```
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.457    12.33    14.22
      + ID2= 2 (  0006):     1.34   0.037    12.33    10.80
        ==================================================
        ID = 3 (  0008):    14.87   0.493    12.33    13.91

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.293    12.25    18.45
      + ID2= 2 (  0008):    14.87   0.493    12.33    13.91
        ==================================================
        ID = 3 (  0009):    20.66   0.769    12.33    15.18

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\ed0e5
adb-5998-4bec-991d-e5b5471da56b\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\ed0e5
adb-5998-4bec-991d-e5b5471da56b\scena
```

```
DATE: 07-18-2025                            TIME: 03:07:00

USER:


COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : J. 25YR 24HR SCS             **
  ************************************************


--------------------
|    READ STORM     |    Filename: C:\Users\msimon\AppD
|                   |              ata\Local\Temp\
|                   |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\d9e2f083
| Ptotal= 78.08 mm |    Comments: 25yr 24hr 15min SCS Type II (MTO)
--------------------
                 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    1.41 | 12.50   11.24 | 18.75    1.41
                 0.25    0.86 |  6.50    1.41 | 12.75    5.78 | 19.00    1.41
                 0.50    0.86 |  6.75    1.41 | 13.00    5.78 | 19.25    1.41
                 0.75    0.86 |  7.00    1.41 | 13.25    4.22 | 19.50    1.41
                 1.00    0.86 |  7.25    1.72 | 13.50    4.22 | 19.75    1.41
                 1.25    0.86 |  7.50    1.72 | 13.75    3.28 | 20.00    1.41
                 1.50    0.86 |  7.75    1.72 | 14.00    3.28 | 20.25    0.94
                 1.75    0.86 |  8.00    1.72 | 14.25    2.34 | 20.50    0.94
                 2.00    0.86 |  8.25    2.03 | 14.50    2.34 | 20.75    0.94
                 2.25    1.02 |  8.50    2.03 | 14.75    2.34 | 21.00    0.94
                 2.50    1.02 |  8.75    2.19 | 15.00    2.34 | 21.25    0.94
                 2.75    1.02 |  9.00    2.19 | 15.25    2.34 | 21.50    0.94
                 3.00    1.02 |  9.25    2.50 | 15.50    2.34 | 21.75    0.94
                 3.25    1.02 |  9.50    2.50 | 15.75    2.34 | 22.00    0.94
                 3.50    1.02 |  9.75    2.81 | 16.00    2.34 | 22.25    0.94
                 3.75    1.02 | 10.00    2.81 | 16.25    1.41 | 22.50    0.94
                 4.00    1.02 | 10.25    3.59 | 16.50    1.41 | 22.75    0.94
                 4.25    1.25 | 10.50    3.59 | 16.75    1.41 | 23.00    0.94
                 4.50    1.25 | 10.75    4.84 | 17.00    1.41 | 23.25    0.94
                 4.75    1.25 | 11.00    4.84 | 17.25    1.41 | 23.50    0.94
                 5.00    1.25 | 11.25    7.50 | 17.50    1.41 | 23.75    0.94
                 5.25    1.25 | 11.50    7.50 | 17.75    1.41 | 24.00    0.94
                 5.50    1.25 | 11.75   23.11 | 18.00    1.41 |
                 5.75    1.25 | 12.00   95.57 | 18.25    1.41 |
```

```
                6.00    1.25 | 12.25   11.24 | 18.50    1.41 |

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

 --------------------
 | CALIB            |
 | NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
 |ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=   0.14

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    0.00 | 6.167    1.25 |12.250   95.57 | 18.33    1.41
               0.167    0.00 | 6.250    1.25 |12.333   11.25 | 18.42    1.41
               0.250    0.00 | 6.333    1.41 |12.417   11.24 | 18.50    1.41
               0.333    0.86 | 6.417    1.41 |12.500   11.24 | 18.58    1.41
               0.417    0.86 | 6.500    1.41 |12.583   11.24 | 18.67    1.41
               0.500    0.86 | 6.583    1.41 |12.667   11.24 | 18.75    1.41
               0.583    0.86 | 6.667    1.41 |12.750   11.24 | 18.83    1.41
               0.667    0.86 | 6.750    1.41 |12.833    5.78 | 18.92    1.41
               0.750    0.86 | 6.833    1.41 |12.917    5.78 | 19.00    1.41
               0.833    0.86 | 6.917    1.41 |13.000    5.78 | 19.08    1.41
               0.917    0.86 | 7.000    1.41 |13.083    5.78 | 19.17    1.41
               1.000    0.86 | 7.083    1.41 |13.167    5.78 | 19.25    1.41
               1.083    0.86 | 7.167    1.41 |13.250    5.78 | 19.33    1.41
               1.167    0.86 | 7.250    1.41 |13.333    4.22 | 19.42    1.41
               1.250    0.86 | 7.333    1.72 |13.417    4.22 | 19.50    1.41
               1.333    0.86 | 7.417    1.72 |13.500    4.22 | 19.58    1.41
               1.417    0.86 | 7.500    1.72 |13.583    4.22 | 19.67    1.41
               1.500    0.86 | 7.583    1.72 |13.667    4.22 | 19.75    1.41
               1.583    0.86 | 7.667    1.72 |13.750    4.22 | 19.83    1.41
               1.667    0.86 | 7.750    1.72 |13.833    3.28 | 19.92    1.41
               1.750    0.86 | 7.833    1.72 |13.917    3.28 | 20.00    1.41
               1.833    0.86 | 7.917    1.72 |14.000    3.28 | 20.08    1.41
               1.917    0.86 | 8.000    1.72 |14.083    3.28 | 20.17    1.41
               2.000    0.86 | 8.083    1.72 |14.167    3.28 | 20.25    1.41
               2.083    0.86 | 8.167    1.72 |14.250    3.28 | 20.33    0.94
               2.167    0.86 | 8.250    1.72 |14.333    2.34 | 20.42    0.94
               2.250    0.86 | 8.333    2.03 |14.417    2.34 | 20.50    0.94
               2.333    1.02 | 8.417    2.03 |14.500    2.34 | 20.58    0.94
               2.417    1.02 | 8.500    2.03 |14.583    2.34 | 20.67    0.94
               2.500    1.02 | 8.583    2.03 |14.667    2.34 | 20.75    0.94
               2.583    1.02 | 8.667    2.03 |14.750    2.34 | 20.83    0.94
               2.667    1.02 | 8.750    2.03 |14.833    2.34 | 20.92    0.94
               2.750    1.02 | 8.833    2.19 |14.917    2.34 | 21.00    0.94
               2.833    1.02 | 8.917    2.19 |15.000    2.34 | 21.08    0.94
```

```
               2.917    1.02 | 9.000    2.19 |15.083    2.34 | 21.17    0.94
               3.000    1.02 | 9.083    2.19 |15.167    2.34 | 21.25    0.94
               3.083    1.02 | 9.167    2.19 |15.250    2.34 | 21.33    0.94
               3.167    1.02 | 9.250    2.19 |15.333    2.34 | 21.42    0.94
               3.250    1.02 | 9.333    2.50 |15.417    2.34 | 21.50    0.94
               3.333    1.02 | 9.417    2.50 |15.500    2.34 | 21.58    0.94
               3.417    1.02 | 9.500    2.50 |15.583    2.34 | 21.67    0.94
               3.500    1.02 | 9.583    2.50 |15.667    2.34 | 21.75    0.94
               3.583    1.02 | 9.667    2.50 |15.750    2.34 | 21.83    0.94
               3.667    1.02 | 9.750    2.50 |15.833    2.34 | 21.92    0.94
               3.750    1.02 | 9.833    2.81 |15.917    2.34 | 22.00    0.94
               3.833    1.02 | 9.917    2.81 |16.000    2.34 | 22.08    0.94
               3.917    1.02 |10.000    2.81 |16.083    2.34 | 22.17    0.94
               4.000    1.02 |10.083    2.81 |16.167    2.34 | 22.25    0.94
               4.083    1.02 |10.167    2.81 |16.250    2.34 | 22.33    0.94
               4.167    1.02 |10.250    2.81 |16.333    1.41 | 22.42    0.94
               4.250    1.02 |10.333    3.59 |16.417    1.41 | 22.50    0.94
               4.333    1.25 |10.417    3.59 |16.500    1.41 | 22.58    0.94
               4.417    1.25 |10.500    3.59 |16.583    1.41 | 22.67    0.94
               4.500    1.25 |10.583    3.59 |16.667    1.41 | 22.75    0.94
               4.583    1.25 |10.667    3.59 |16.750    1.41 | 22.83    0.94
               4.667    1.25 |10.750    3.59 |16.833    1.41 | 22.92    0.94
               4.750    1.25 |10.833    4.84 |16.917    1.41 | 23.00    0.94
               4.833    1.25 |10.917    4.84 |17.000    1.41 | 23.08    0.94
               4.917    1.25 |11.000    4.84 |17.083    1.41 | 23.17    0.94
               5.000    1.25 |11.083    4.84 |17.167    1.41 | 23.25    0.94
               5.083    1.25 |11.167    4.84 |17.250    1.41 | 23.33    0.94
               5.167    1.25 |11.250    4.84 |17.333    1.41 | 23.42    0.94
               5.250    1.25 |11.333    7.50 |17.417    1.41 | 23.50    0.94
               5.333    1.25 |11.417    7.50 |17.500    1.41 | 23.58    0.94
               5.417    1.25 |11.500    7.50 |17.583    1.41 | 23.67    0.94
               5.500    1.25 |11.583    7.50 |17.667    1.41 | 23.75    0.94
               5.583    1.25 |11.667    7.50 |17.750    1.41 | 23.83    0.94
               5.667    1.25 |11.750    7.50 |17.833    1.41 | 23.92    0.94
               5.750    1.25 |11.833   23.11 |17.917    1.41 | 24.00    0.94
               5.833    1.25 |11.917   23.11 |18.000    1.41 | 24.08    0.94
               5.917    1.25 |12.000   23.11 |18.083    1.41 | 24.17    0.94
               6.000    1.25 |12.083   95.56 |18.167    1.41 | 24.25    0.94
               6.083    1.25 |12.167   95.57 |18.250    1.41 |

    Unit Hyd Qpeak  (cms)=   1.108

    PEAK FLOW       (cms)=   0.322 (i)
    TIME TO PEAK    (hrs)=  12.250
    RUNOFF VOLUME    (mm)=  25.332
    TOTAL RAINFALL   (mm)=  78.080
    RUNOFF COEFFICIENT   =   0.324

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.25	12.250	95.57	18.33	1.41
0.167	0.00	6.250	1.25	12.333	11.25	18.42	1.41
0.250	0.00	6.333	1.41	12.417	11.24	18.50	1.41
0.333	0.86	6.417	1.41	12.500	11.24	18.58	1.41
0.417	0.86	6.500	1.41	12.583	11.24	18.67	1.41
0.500	0.86	6.583	1.41	12.667	11.24	18.75	1.41
0.583	0.86	6.667	1.41	12.750	11.24	18.83	1.41
0.667	0.86	6.750	1.41	12.833	5.78	18.92	1.41
0.750	0.86	6.833	1.41	12.917	5.78	19.00	1.41
0.833	0.86	6.917	1.41	13.000	5.78	19.08	1.41
0.917	0.86	7.000	1.41	13.083	5.78	19.17	1.41
1.000	0.86	7.083	1.41	13.167	5.78	19.25	1.41
1.083	0.86	7.167	1.41	13.250	5.78	19.33	1.41
1.167	0.86	7.250	1.41	13.333	4.22	19.42	1.41
1.250	0.86	7.333	1.72	13.417	4.22	19.50	1.41
1.333	0.86	7.417	1.72	13.500	4.22	19.58	1.41
1.417	0.86	7.500	1.72	13.583	4.22	19.67	1.41
1.500	0.86	7.583	1.72	13.667	4.22	19.75	1.41
1.583	0.86	7.667	1.72	13.750	4.22	19.83	1.41
1.667	0.86	7.750	1.72	13.833	3.28	19.92	1.41
1.750	0.86	7.833	1.72	13.917	3.28	20.00	1.41
1.833	0.86	7.917	1.72	14.000	3.28	20.08	1.41
1.917	0.86	8.000	1.72	14.083	3.28	20.17	1.41
2.000	0.86	8.083	1.72	14.167	3.28	20.25	1.41
2.083	0.86	8.167	1.72	14.250	3.28	20.33	0.94
2.167	0.86	8.250	1.72	14.333	2.34	20.42	0.94
2.250	0.86	8.333	2.03	14.417	2.34	20.50	0.94
2.333	1.02	8.417	2.03	14.500	2.34	20.58	0.94
2.417	1.02	8.500	2.03	14.583	2.34	20.67	0.94
2.500	1.02	8.583	2.03	14.667	2.34	20.75	0.94
2.583	1.02	8.667	2.03	14.750	2.34	20.83	0.94
2.667	1.02	8.750	2.03	14.833	2.34	20.92	0.94
2.750	1.02	8.833	2.19	14.917	2.34	21.00	0.94
2.833	1.02	8.917	2.19	15.000	2.34	21.08	0.94
2.917	1.02	9.000	2.19	15.083	2.34	21.17	0.94
3.000	1.02	9.083	2.19	15.167	2.34	21.25	0.94
3.083	1.02	9.167	2.19	15.250	2.34	21.33	0.94
3.167	1.02	9.250	2.19	15.333	2.34	21.42	0.94
3.250	1.02	9.333	2.50	15.417	2.34	21.50	0.94
3.333	1.02	9.417	2.50	15.500	2.34	21.58	0.94
3.417	1.02	9.500	2.50	15.583	2.34	21.67	0.94
3.500	1.02	9.583	2.50	15.667	2.34	21.75	0.94
3.583	1.02	9.667	2.50	15.750	2.34	21.83	0.94
3.667	1.02	9.750	2.50	15.833	2.34	21.92	0.94
3.750	1.02	9.833	2.81	15.917	2.34	22.00	0.94
3.833	1.02	9.917	2.81	16.000	2.34	22.08	0.94
3.917	1.02	10.000	2.81	16.083	2.34	22.17	0.94
4.000	1.02	10.083	2.81	16.167	2.34	22.25	0.94
4.083	1.02	10.167	2.81	16.250	2.34	22.33	0.94
4.167	1.02	10.250	2.81	16.333	1.41	22.42	0.94
4.250	1.02	10.333	3.59	16.417	1.41	22.50	0.94
4.333	1.25	10.417	3.59	16.500	1.41	22.58	0.94
4.417	1.25	10.500	3.59	16.583	1.41	22.67	0.94
4.500	1.25	10.583	3.59	16.667	1.41	22.75	0.94
4.583	1.25	10.667	3.59	16.750	1.41	22.83	0.94
4.667	1.25	10.750	3.59	16.833	1.41	22.92	0.94
4.750	1.25	10.833	4.84	16.917	1.41	23.00	0.94
4.833	1.25	10.917	4.84	17.000	1.41	23.08	0.94
4.917	1.25	11.000	4.84	17.083	1.41	23.17	0.94
5.000	1.25	11.083	4.84	17.167	1.41	23.25	0.94
5.083	1.25	11.167	4.84	17.250	1.41	23.33	0.94
5.167	1.25	11.250	4.84	17.333	1.41	23.42	0.94
5.250	1.25	11.333	7.50	17.417	1.41	23.50	0.94
5.333	1.25	11.417	7.50	17.500	1.41	23.58	0.94
5.417	1.25	11.500	7.50	17.583	1.41	23.67	0.94
5.500	1.25	11.583	7.50	17.667	1.41	23.75	0.94
5.583	1.25	11.667	7.50	17.750	1.41	23.83	0.94
5.667	1.25	11.750	7.50	17.833	1.41	23.92	0.94
5.750	1.25	11.833	23.11	17.917	1.41	24.00	0.94
5.833	1.25	11.917	23.11	18.000	1.41	24.08	0.94
5.917	1.25	12.000	23.11	18.083	1.41	24.17	0.94
6.000	1.25	12.083	95.56	18.167	1.41	24.25	0.94
6.083	1.25	12.167	95.57	18.250	1.41		

```
     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.076 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=  20.885
     TOTAL RAINFALL   (mm)=  78.080
     RUNOFF COEFFICIENT   =   0.267

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

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

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

```
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):      4.06   0.322    12.25    25.33
     + ID2= 2 (  0003):      1.73   0.076    12.33    20.89
       ===================================================
       ID = 3 (  0007):      5.79   0.384    12.25    24.00

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.25	12.250	95.57	18.33	1.41
0.167	0.00	6.250	1.25	12.333	11.25	18.42	1.41
0.250	0.00	6.333	1.41	12.417	11.24	18.50	1.41
0.333	0.86	6.417	1.41	12.500	11.24	18.58	1.41
0.417	0.86	6.500	1.41	12.583	11.24	18.67	1.41
0.500	0.86	6.583	1.41	12.667	11.24	18.75	1.41
0.583	0.86	6.667	1.41	12.750	11.24	18.83	1.41
0.667	0.86	6.750	1.41	12.833	5.78	18.92	1.41
0.750	0.86	6.833	1.41	12.917	5.78	19.00	1.41
0.833	0.86	6.917	1.41	13.000	5.78	19.08	1.41
0.917	0.86	7.000	1.41	13.083	5.78	19.17	1.41
1.000	0.86	7.083	1.41	13.167	5.78	19.25	1.41
1.083	0.86	7.167	1.41	13.250	5.78	19.33	1.41
1.167	0.86	7.250	1.41	13.333	4.22	19.42	1.41
1.250	0.86	7.333	1.72	13.417	4.22	19.50	1.41
1.333	0.86	7.417	1.72	13.500	4.22	19.58	1.41
1.417	0.86	7.500	1.72	13.583	4.22	19.67	1.41
1.500	0.86	7.583	1.72	13.667	4.22	19.75	1.41
1.583	0.86	7.667	1.72	13.750	4.22	19.83	1.41
1.667	0.86	7.750	1.72	13.833	3.28	19.92	1.41
1.750	0.86	7.833	1.72	13.917	3.28	20.00	1.41
1.833	0.86	7.917	1.72	14.000	3.28	20.08	1.41
1.917	0.86	8.000	1.72	14.083	3.28	20.17	1.41
2.000	0.86	8.083	1.72	14.167	3.28	20.25	1.41
2.083	0.86	8.167	1.72	14.250	3.28	20.33	0.94
2.167	0.86	8.250	1.72	14.333	2.34	20.42	0.94
2.250	0.86	8.333	2.03	14.417	2.34	20.50	0.94
2.333	1.02	8.417	2.03	14.500	2.34	20.58	0.94
2.417	1.02	8.500	2.03	14.583	2.34	20.67	0.94
2.500	1.02	8.583	2.03	14.667	2.34	20.75	0.94
2.583	1.02	8.667	2.03	14.750	2.34	20.83	0.94
2.667	1.02	8.750	2.03	14.833	2.34	20.92	0.94
2.750	1.02	8.833	2.19	14.917	2.34	21.00	0.94
2.833	1.02	8.917	2.19	15.000	2.34	21.08	0.94
2.917	1.02	9.000	2.19	15.083	2.34	21.17	0.94
3.000	1.02	9.083	2.19	15.167	2.34	21.25	0.94
3.083	1.02	9.167	2.19	15.250	2.34	21.33	0.94
3.167	1.02	9.250	2.19	15.333	2.34	21.42	0.94
3.250	1.02	9.333	2.50	15.417	2.34	21.50	0.94
3.333	1.02	9.417	2.50	15.500	2.34	21.58	0.94
3.417	1.02	9.500	2.50	15.583	2.34	21.67	0.94
3.500	1.02	9.583	2.50	15.667	2.34	21.75	0.94
3.583	1.02	9.667	2.50	15.750	2.34	21.83	0.94
3.667	1.02	9.750	2.50	15.833	2.34	21.92	0.94
3.750	1.02	9.833	2.81	15.917	2.34	22.00	0.94
3.833	1.02	9.917	2.81	16.000	2.34	22.08	0.94
3.917	1.02	10.000	2.81	16.083	2.34	22.17	0.94
4.000	1.02	10.083	2.81	16.167	2.34	22.25	0.94
4.083	1.02	10.167	2.81	16.250	2.34	22.33	0.94
4.167	1.02	10.250	2.81	16.333	1.41	22.42	0.94
4.250	1.02	10.333	3.59	16.417	1.41	22.50	0.94
4.333	1.25	10.417	3.59	16.500	1.41	22.58	0.94
4.417	1.25	10.500	3.59	16.583	1.41	22.67	0.94
4.500	1.25	10.583	3.59	16.667	1.41	22.75	0.94
4.583	1.25	10.667	3.59	16.750	1.41	22.83	0.94
4.667	1.25	10.750	3.59	16.833	1.41	22.92	0.94
4.750	1.25	10.833	4.84	16.917	1.41	23.00	0.94
4.833	1.25	10.917	4.84	17.000	1.41	23.08	0.94
4.917	1.25	11.000	4.84	17.083	1.41	23.17	0.94
5.000	1.25	11.083	4.84	17.167	1.41	23.25	0.94
5.083	1.25	11.167	4.84	17.250	1.41	23.33	0.94
5.167	1.25	11.250	4.84	17.333	1.41	23.42	0.94
5.250	1.25	11.333	7.50	17.417	1.41	23.50	0.94
5.333	1.25	11.417	7.50	17.500	1.41	23.58	0.94
5.417	1.25	11.500	7.50	17.583	1.41	23.67	0.94
5.500	1.25	11.583	7.50	17.667	1.41	23.75	0.94
5.583	1.25	11.667	7.50	17.750	1.41	23.83	0.94
5.667	1.25	11.750	7.50	17.833	1.41	23.92	0.94
5.750	1.25	11.833	23.11	17.917	1.41	24.00	0.94
5.833	1.25	11.917	23.11	18.000	1.41	24.08	0.94
5.917	1.25	12.000	23.11	18.083	1.41	24.17	0.94
6.000	1.25	12.083	95.56	18.167	1.41	24.25	0.94
6.083	1.25	12.167	95.57	18.250	1.41		

```
Unit Hyd Qpeak  (cms)=   1.320

PEAK FLOW       (cms)=   0.386 (i)
TIME TO PEAK    (hrs)=  12.333
```

```
     RUNOFF VOLUME    (mm)=  21.562
     TOTAL RAINFALL   (mm)=  78.080
     RUNOFF COEFFICIENT   =   0.276

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

------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.25	12.250	95.57	18.33	1.41
0.167	0.00	6.250	1.25	12.333	11.25	18.42	1.41
0.250	0.00	6.333	1.41	12.417	11.24	18.50	1.41
0.333	0.86	6.417	1.41	12.500	11.24	18.58	1.41
0.417	0.86	6.500	1.41	12.583	11.24	18.67	1.41
0.500	0.86	6.583	1.41	12.667	11.24	18.75	1.41
0.583	0.86	6.667	1.41	12.750	11.24	18.83	1.41
0.667	0.86	6.750	1.41	12.833	5.78	18.92	1.41
0.750	0.86	6.833	1.41	12.917	5.78	19.00	1.41
0.833	0.86	6.917	1.41	13.000	5.78	19.08	1.41
0.917	0.86	7.000	1.41	13.083	5.78	19.17	1.41
1.000	0.86	7.083	1.41	13.167	5.78	19.25	1.41
1.083	0.86	7.167	1.41	13.250	5.78	19.33	1.41
1.167	0.86	7.250	1.41	13.333	4.22	19.42	1.41
1.250	0.86	7.333	1.72	13.417	4.22	19.50	1.41
1.333	0.86	7.417	1.72	13.500	4.22	19.58	1.41
1.417	0.86	7.500	1.72	13.583	4.22	19.67	1.41
1.500	0.86	7.583	1.72	13.667	4.22	19.75	1.41
1.583	0.86	7.667	1.72	13.750	4.22	19.83	1.41
1.667	0.86	7.750	1.72	13.833	3.28	19.92	1.41
1.750	0.86	7.833	1.72	13.917	3.28	20.00	1.41
1.833	0.86	7.917	1.72	14.000	3.28	20.08	1.41
1.917	0.86	8.000	1.72	14.083	3.28	20.17	1.41
2.000	0.86	8.083	1.72	14.167	3.28	20.25	1.41
2.083	0.86	8.167	1.72	14.250	3.28	20.33	0.94
2.167	0.86	8.250	1.72	14.333	2.34	20.42	0.94
2.250	0.86	8.333	2.03	14.417	2.34	20.50	0.94
2.333	1.02	8.417	2.03	14.500	2.34	20.58	0.94
2.417	1.02	8.500	2.03	14.583	2.34	20.67	0.94
2.500	1.02	8.583	2.03	14.667	2.34	20.75	0.94
2.583	1.02	8.667	2.03	14.750	2.34	20.83	0.94
2.667	1.02	8.750	2.03	14.833	2.34	20.92	0.94
2.750	1.02	8.833	2.19	14.917	2.34	21.00	0.94
2.833	1.02	8.917	2.19	15.000	2.34	21.08	0.94
2.917	1.02	9.000	2.19	15.083	2.34	21.17	0.94
3.000	1.02	9.083	2.19	15.167	2.34	21.25	0.94
3.083	1.02	9.167	2.19	15.250	2.34	21.33	0.94
3.167	1.02	9.250	2.19	15.333	2.34	21.42	0.94
3.250	1.02	9.333	2.50	15.417	2.34	21.50	0.94
3.333	1.02	9.417	2.50	15.500	2.34	21.58	0.94
3.417	1.02	9.500	2.50	15.583	2.34	21.67	0.94
3.500	1.02	9.583	2.50	15.667	2.34	21.75	0.94
3.583	1.02	9.667	2.50	15.750	2.34	21.83	0.94
3.667	1.02	9.750	2.50	15.833	2.34	21.92	0.94
3.750	1.02	9.833	2.81	15.917	2.34	22.00	0.94
3.833	1.02	9.917	2.81	16.000	2.34	22.08	0.94
3.917	1.02	10.000	2.81	16.083	2.34	22.17	0.94
4.000	1.02	10.083	2.81	16.167	2.34	22.25	0.94
4.083	1.02	10.167	2.81	16.250	2.34	22.33	0.94
4.167	1.02	10.250	2.81	16.333	1.41	22.42	0.94
4.250	1.02	10.333	3.59	16.417	1.41	22.50	0.94
4.333	1.25	10.417	3.59	16.500	1.41	22.58	0.94
4.417	1.25	10.500	3.59	16.583	1.41	22.67	0.94
4.500	1.25	10.583	3.59	16.667	1.41	22.75	0.94
4.583	1.25	10.667	3.59	16.750	1.41	22.83	0.94
4.667	1.25	10.750	3.59	16.833	1.41	22.92	0.94
4.750	1.25	10.833	4.84	16.917	1.41	23.00	0.94
4.833	1.25	10.917	4.84	17.000	1.41	23.08	0.94
4.917	1.25	11.000	4.84	17.083	1.41	23.17	0.94
5.000	1.25	11.083	4.84	17.167	1.41	23.25	0.94
5.083	1.25	11.167	4.84	17.250	1.41	23.33	0.94
5.167	1.25	11.250	4.84	17.333	1.41	23.42	0.94
5.250	1.25	11.333	7.50	17.417	1.41	23.50	0.94
5.333	1.25	11.417	7.50	17.500	1.41	23.58	0.94
5.417	1.25	11.500	7.50	17.583	1.41	23.67	0.94
5.500	1.25	11.583	7.50	17.667	1.41	23.75	0.94
5.583	1.25	11.667	7.50	17.750	1.41	23.83	0.94
5.667	1.25	11.750	7.50	17.833	1.41	23.92	0.94
5.750	1.25	11.833	23.11	17.917	1.41	24.00	0.94
5.833	1.25	11.917	23.11	18.000	1.41	24.08	0.94
5.917	1.25	12.000	23.11	18.083	1.41	24.17	0.94
6.000	1.25	12.083	95.56	18.167	1.41	24.25	0.94
6.083	1.25	12.167	95.57	18.250	1.41		

```
Unit Hyd Qpeak  (cms)=   0.925

PEAK FLOW       (cms)=   0.142 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  14.243
TOTAL RAINFALL   (mm)=  78.080
RUNOFF COEFFICIENT   =   0.182
```

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    0.00 | 6.167    1.25 |12.250   95.57 | 18.33    1.41
                 0.167    0.00 | 6.250    1.25 |12.333   11.25 | 18.42    1.41
                 0.250    0.00 | 6.333    1.41 |12.417   11.24 | 18.50    1.41
                 0.333    0.86 | 6.417    1.41 |12.500   11.24 | 18.58    1.41
                 0.417    0.86 | 6.500    1.41 |12.583   11.24 | 18.67    1.41
                 0.500    0.86 | 6.583    1.41 |12.667   11.24 | 18.75    1.41
                 0.583    0.86 | 6.667    1.41 |12.750   11.24 | 18.83    1.41
                 0.667    0.86 | 6.750    1.41 |12.833    5.78 | 18.92    1.41
                 0.750    0.86 | 6.833    1.41 |12.917    5.78 | 19.00    1.41
                 0.833    0.86 | 6.917    1.41 |13.000    5.78 | 19.08    1.41
                 0.917    0.86 | 7.000    1.41 |13.083    5.78 | 19.17    1.41
                 1.000    0.86 | 7.083    1.41 |13.167    5.78 | 19.25    1.41
                 1.083    0.86 | 7.167    1.41 |13.250    5.78 | 19.33    1.41
                 1.167    0.86 | 7.250    1.41 |13.333    4.22 | 19.42    1.41
                 1.250    0.86 | 7.333    1.72 |13.417    4.22 | 19.50    1.41
                 1.333    0.86 | 7.417    1.72 |13.500    4.22 | 19.58    1.41
                 1.417    0.86 | 7.500    1.72 |13.583    4.22 | 19.67    1.41
                 1.500    0.86 | 7.583    1.72 |13.667    4.22 | 19.75    1.41
                 1.583    0.86 | 7.667    1.72 |13.750    4.22 | 19.83    1.41
                 1.667    0.86 | 7.750    1.72 |13.833    3.28 | 19.92    1.41
                 1.750    0.86 | 7.833    1.72 |13.917    3.28 | 20.00    1.41
                 1.833    0.86 | 7.917    1.72 |14.000    3.28 | 20.08    1.41
                 1.917    0.86 | 8.000    1.72 |14.083    3.28 | 20.17    1.41
                 2.000    0.86 | 8.083    1.72 |14.167    3.28 | 20.25    1.41
                 2.083    0.86 | 8.167    1.72 |14.250    3.28 | 20.33    0.94
                 2.167    0.86 | 8.250    1.72 |14.333    2.34 | 20.42    0.94
                 2.250    0.86 | 8.333    2.03 |14.417    2.34 | 20.50    0.94
                 2.333    1.02 | 8.417    2.03 |14.500    2.34 | 20.58    0.94
                 2.417    1.02 | 8.500    2.03 |14.583    2.34 | 20.67    0.94
                 2.500    1.02 | 8.583    2.03 |14.667    2.34 | 20.75    0.94
                 2.583    1.02 | 8.667    2.03 |14.750    2.34 | 20.83    0.94
                 2.667    1.02 | 8.750    2.03 |14.833    2.34 | 20.92    0.94
                 2.750    1.02 | 8.833    2.19 |14.917    2.34 | 21.00    0.94
                 2.833    1.02 | 8.917    2.19 |15.000    2.34 | 21.08    0.94
```

```
                 2.917    1.02 | 9.000    2.19 |15.083    2.34 | 21.17    0.94
                 3.000    1.02 | 9.083    2.19 |15.167    2.34 | 21.25    0.94
                 3.083    1.02 | 9.167    2.19 |15.250    2.34 | 21.33    0.94
                 3.167    1.02 | 9.250    2.19 |15.333    2.34 | 21.42    0.94
                 3.250    1.02 | 9.333    2.50 |15.417    2.34 | 21.50    0.94
                 3.333    1.02 | 9.417    2.50 |15.500    2.34 | 21.58    0.94
                 3.417    1.02 | 9.500    2.50 |15.583    2.34 | 21.67    0.94
                 3.500    1.02 | 9.583    2.50 |15.667    2.34 | 21.75    0.94
                 3.583    1.02 | 9.667    2.50 |15.750    2.34 | 21.83    0.94
                 3.667    1.02 | 9.750    2.50 |15.833    2.34 | 21.92    0.94
                 3.750    1.02 | 9.833    2.81 |15.917    2.34 | 22.00    0.94
                 3.833    1.02 | 9.917    2.81 |16.000    2.34 | 22.08    0.94
                 3.917    1.02 |10.000    2.81 |16.083    2.34 | 22.17    0.94
                 4.000    1.02 |10.083    2.81 |16.167    2.34 | 22.25    0.94
                 4.083    1.02 |10.167    2.81 |16.250    2.34 | 22.33    0.94
                 4.167    1.02 |10.250    2.81 |16.333    1.41 | 22.42    0.94
                 4.250    1.02 |10.333    3.59 |16.417    1.41 | 22.50    0.94
                 4.333    1.25 |10.417    3.59 |16.500    1.41 | 22.58    0.94
                 4.417    1.25 |10.500    3.59 |16.583    1.41 | 22.67    0.94
                 4.500    1.25 |10.583    3.59 |16.667    1.41 | 22.75    0.94
                 4.583    1.25 |10.667    3.59 |16.750    1.41 | 22.83    0.94
                 4.667    1.25 |10.750    3.59 |16.833    1.41 | 22.92    0.94
                 4.750    1.25 |10.833    4.84 |16.917    1.41 | 23.00    0.94
                 4.833    1.25 |10.917    4.84 |17.000    1.41 | 23.08    0.94
                 4.917    1.25 |11.000    4.84 |17.083    1.41 | 23.17    0.94
                 5.000    1.25 |11.083    4.84 |17.167    1.41 | 23.25    0.94
                 5.083    1.25 |11.167    4.84 |17.250    1.41 | 23.33    0.94
                 5.167    1.25 |11.250    4.84 |17.333    1.41 | 23.42    0.94
                 5.250    1.25 |11.333    7.50 |17.417    1.41 | 23.50    0.94
                 5.333    1.25 |11.417    7.50 |17.500    1.41 | 23.58    0.94
                 5.417    1.25 |11.500    7.50 |17.583    1.41 | 23.67    0.94
                 5.500    1.25 |11.583    7.50 |17.667    1.41 | 23.75    0.94
                 5.583    1.25 |11.667    7.50 |17.750    1.41 | 23.83    0.94
                 5.667    1.25 |11.750    7.50 |17.833    1.41 | 23.92    0.94
                 5.750    1.25 |11.833   23.11 |17.917    1.41 | 24.00    0.94
                 5.833    1.25 |11.917   23.11 |18.000    1.41 | 24.08    0.94
                 5.917    1.25 |12.000   23.11 |18.083    1.41 | 24.17    0.94
                 6.000    1.25 |12.083   95.56 |18.167    1.41 | 24.25    0.94
                 6.083    1.25 |12.167   95.57 |18.250    1.41 |

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.111 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  15.077
     TOTAL RAINFALL   (mm)=  78.080
     RUNOFF COEFFICIENT   =   0.193

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

```
------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18
```

NOTE: RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.25	12.250	95.57	18.33	1.41
0.167	0.00	6.250	1.25	12.333	11.25	18.42	1.41
0.250	0.00	6.333	1.41	12.417	11.24	18.50	1.41
0.333	0.86	6.417	1.41	12.500	11.24	18.58	1.41
0.417	0.86	6.500	1.41	12.583	11.24	18.67	1.41
0.500	0.86	6.583	1.41	12.667	11.24	18.75	1.41
0.583	0.86	6.667	1.41	12.750	11.24	18.83	1.41
0.667	0.86	6.750	1.41	12.833	5.78	18.92	1.41
0.750	0.86	6.833	1.41	12.917	5.78	19.00	1.41
0.833	0.86	6.917	1.41	13.000	5.78	19.08	1.41
0.917	0.86	7.000	1.41	13.083	5.78	19.17	1.41
1.000	0.86	7.083	1.41	13.167	5.78	19.25	1.41
1.083	0.86	7.167	1.41	13.250	5.78	19.33	1.41
1.167	0.86	7.250	1.41	13.333	4.22	19.42	1.41
1.250	0.86	7.333	1.72	13.417	4.22	19.50	1.41
1.333	0.86	7.417	1.72	13.500	4.22	19.58	1.41
1.417	0.86	7.500	1.72	13.583	4.22	19.67	1.41
1.500	0.86	7.583	1.72	13.667	4.22	19.75	1.41
1.583	0.86	7.667	1.72	13.750	4.22	19.83	1.41
1.667	0.86	7.750	1.72	13.833	3.28	19.92	1.41
1.750	0.86	7.833	1.72	13.917	3.28	20.00	1.41
1.833	0.86	7.917	1.72	14.000	3.28	20.08	1.41
1.917	0.86	8.000	1.72	14.083	3.28	20.17	1.41
2.000	0.86	8.083	1.72	14.167	3.28	20.25	1.41
2.083	0.86	8.167	1.72	14.250	3.28	20.33	0.94
2.167	0.86	8.250	1.72	14.333	2.34	20.42	0.94
2.250	0.86	8.333	2.03	14.417	2.34	20.50	0.94
2.333	1.02	8.417	2.03	14.500	2.34	20.58	0.94
2.417	1.02	8.500	2.03	14.583	2.34	20.67	0.94
2.500	1.02	8.583	2.03	14.667	2.34	20.75	0.94
2.583	1.02	8.667	2.03	14.750	2.34	20.83	0.94
2.667	1.02	8.750	2.03	14.833	2.34	20.92	0.94
2.750	1.02	8.833	2.19	14.917	2.34	21.00	0.94
2.833	1.02	8.917	2.19	15.000	2.34	21.08	0.94
2.917	1.02	9.000	2.19	15.083	2.34	21.17	0.94
3.000	1.02	9.083	2.19	15.167	2.34	21.25	0.94
3.083	1.02	9.167	2.19	15.250	2.34	21.33	0.94
3.167	1.02	9.250	2.19	15.333	2.34	21.42	0.94
3.250	1.02	9.333	2.50	15.417	2.34	21.50	0.94
3.333	1.02	9.417	2.50	15.500	2.34	21.58	0.94
3.417	1.02	9.500	2.50	15.583	2.34	21.67	0.94
3.500	1.02	9.583	2.50	15.667	2.34	21.75	0.94
3.583	1.02	9.667	2.50	15.750	2.34	21.83	0.94
3.667	1.02	9.750	2.50	15.833	2.34	21.92	0.94
3.750	1.02	9.833	2.81	15.917	2.34	22.00	0.94
3.833	1.02	9.917	2.81	16.000	2.34	22.08	0.94
3.917	1.02	10.000	2.81	16.083	2.34	22.17	0.94
4.000	1.02	10.083	2.81	16.167	2.34	22.25	0.94
4.083	1.02	10.167	2.81	16.250	2.34	22.33	0.94
4.167	1.02	10.250	2.81	16.333	1.41	22.42	0.94
4.250	1.02	10.333	3.59	16.417	1.41	22.50	0.94
4.333	1.25	10.417	3.59	16.500	1.41	22.58	0.94
4.417	1.25	10.500	3.59	16.583	1.41	22.67	0.94
4.500	1.25	10.583	3.59	16.667	1.41	22.75	0.94
4.583	1.25	10.667	3.59	16.750	1.41	22.83	0.94
4.667	1.25	10.750	3.59	16.833	1.41	22.92	0.94
4.750	1.25	10.833	4.84	16.917	1.41	23.00	0.94
4.833	1.25	10.917	4.84	17.000	1.41	23.08	0.94
4.917	1.25	11.000	4.84	17.083	1.41	23.17	0.94
5.000	1.25	11.083	4.84	17.167	1.41	23.25	0.94
5.083	1.25	11.167	4.84	17.250	1.41	23.33	0.94
5.167	1.25	11.250	4.84	17.333	1.41	23.42	0.94
5.250	1.25	11.333	7.50	17.417	1.41	23.50	0.94
5.333	1.25	11.417	7.50	17.500	1.41	23.58	0.94
5.417	1.25	11.500	7.50	17.583	1.41	23.67	0.94
5.500	1.25	11.583	7.50	17.667	1.41	23.75	0.94
5.583	1.25	11.667	7.50	17.750	1.41	23.83	0.94
5.667	1.25	11.750	7.50	17.833	1.41	23.92	0.94
5.750	1.25	11.833	23.11	17.917	1.41	24.00	0.94
5.833	1.25	11.917	23.11	18.000	1.41	24.08	0.94
5.917	1.25	12.000	23.11	18.083	1.41	24.17	0.94
6.000	1.25	12.083	95.56	18.167	1.41	24.25	0.94
6.083	1.25	12.167	95.57	18.250	1.41		

```
Unit Hyd Qpeak  (cms)=   0.284

PEAK FLOW       (cms)=   0.049 (i)
TIME TO PEAK    (hrs)=  12.333
RUNOFF VOLUME    (mm)=  14.344
TOTAL RAINFALL   (mm)=  78.080
RUNOFF COEFFICIENT   =   0.184

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

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

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

```
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.386    12.33    21.56
      + ID2= 2 (  0004):     3.15   0.142    12.25    14.24
        ====================================================
        ID = 3 (  0008):    11.10   0.506    12.33    19.49

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.506    12.33    19.49
      + ID2= 2 (  0005):     2.43   0.111    12.25    15.08
        ====================================================
        ID = 1 (  0008):    13.53   0.604    12.33    18.69

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.604    12.33    18.69
      + ID2= 2 (  0006):     1.34   0.049    12.33    14.34
        ====================================================
        ID = 3 (  0008):    14.87   0.654    12.33    18.30

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.384    12.25    24.00
      + ID2= 2 (  0008):    14.87   0.654    12.33    18.30
        ====================================================
        ID = 3 (  0009):    20.66   1.013    12.33    19.90

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
```

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

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```


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

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\c8db5
2a6-5b2f-425a-878d-633be07a42ea\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\c8db5
2a6-5b2f-425a-878d-633be07a42ea\scena


DATE: 07-18-2025                           TIME: 03:06:59

USER:


COMMENTS: ____________________________________________________________


------------------------------------------------------------------------------------
------------------------
  **********************************************
  ** SIMULATION : K. 50YR 24HR SCS            **
  **********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\af0d0e87
| Ptotal= 85.42 mm |    Comments: 50yr 24hr 15min SCS Type II (MTO)
--------------------
                 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	1.54	12.50	12.30	18.75	1.54
0.25	0.94	6.50	1.54	12.75	6.32	19.00	1.54
0.50	0.94	6.75	1.54	13.00	6.32	19.25	1.54
0.75	0.94	7.00	1.54	13.25	4.61	19.50	1.54
1.00	0.94	7.25	1.88	13.50	4.61	19.75	1.54
1.25	0.94	7.50	1.88	13.75	3.59	20.00	1.54
1.50	0.94	7.75	1.88	14.00	3.59	20.25	1.03
1.75	0.94	8.00	1.88	14.25	2.56	20.50	1.03
2.00	0.94	8.25	2.22	14.50	2.56	20.75	1.03
2.25	1.11	8.50	2.22	14.75	2.56	21.00	1.03
2.50	1.11	8.75	2.39	15.00	2.56	21.25	1.03
2.75	1.11	9.00	2.39	15.25	2.56	21.50	1.03
3.00	1.11	9.25	2.73	15.50	2.56	21.75	1.03
3.25	1.11	9.50	2.73	15.75	2.56	22.00	1.03
3.50	1.11	9.75	3.08	16.00	2.56	22.25	1.03
3.75	1.11	10.00	3.08	16.25	1.54	22.50	1.03
4.00	1.11	10.25	3.93	16.50	1.54	22.75	1.03
4.25	1.37	10.50	3.93	16.75	1.54	23.00	1.03
4.50	1.37	10.75	5.30	17.00	1.54	23.25	1.03
4.75	1.37	11.00	5.30	17.25	1.54	23.50	1.03
5.00	1.37	11.25	8.20	17.50	1.54	23.75	1.03
5.25	1.37	11.50	8.20	17.75	1.54	24.00	1.03
5.50	1.37	11.75	25.28	18.00	1.54		
5.75	1.37	12.00	104.55	18.25	1.54		
6.00	1.37	12.25	12.30	18.50	1.54		

```
--------------------
| CALIB              |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.37	12.250	104.55	18.33	1.54
0.167	0.00	6.250	1.37	12.333	12.31	18.42	1.54
0.250	0.00	6.333	1.54	12.417	12.30	18.50	1.54
0.333	0.94	6.417	1.54	12.500	12.30	18.58	1.54
0.417	0.94	6.500	1.54	12.583	12.30	18.67	1.54
0.500	0.94	6.583	1.54	12.667	12.30	18.75	1.54
0.583	0.94	6.667	1.54	12.750	12.30	18.83	1.54
0.667	0.94	6.750	1.54	12.833	6.32	18.92	1.54
0.750	0.94	6.833	1.54	12.917	6.32	19.00	1.54
0.833	0.94	6.917	1.54	13.000	6.32	19.08	1.54
0.917	0.94	7.000	1.54	13.083	6.32	19.17	1.54
1.000	0.94	7.083	1.54	13.167	6.32	19.25	1.54
1.083	0.94	7.167	1.54	13.250	6.32	19.33	1.54
1.167	0.94	7.250	1.54	13.333	4.61	19.42	1.54
1.250	0.94	7.333	1.88	13.417	4.61	19.50	1.54
1.333	0.94	7.417	1.88	13.500	4.61	19.58	1.54
1.417	0.94	7.500	1.88	13.583	4.61	19.67	1.54
1.500	0.94	7.583	1.88	13.667	4.61	19.75	1.54
1.583	0.94	7.667	1.88	13.750	4.61	19.83	1.54
1.667	0.94	7.750	1.88	13.833	3.59	19.92	1.54
1.750	0.94	7.833	1.88	13.917	3.59	20.00	1.54
1.833	0.94	7.917	1.88	14.000	3.59	20.08	1.54
1.917	0.94	8.000	1.88	14.083	3.59	20.17	1.54
2.000	0.94	8.083	1.88	14.167	3.59	20.25	1.54
2.083	0.94	8.167	1.88	14.250	3.59	20.33	1.03
2.167	0.94	8.250	1.88	14.333	2.56	20.42	1.03
2.250	0.94	8.333	2.22	14.417	2.56	20.50	1.03
2.333	1.11	8.417	2.22	14.500	2.56	20.58	1.03
2.417	1.11	8.500	2.22	14.583	2.56	20.67	1.03
2.500	1.11	8.583	2.22	14.667	2.56	20.75	1.03
2.583	1.11	8.667	2.22	14.750	2.56	20.83	1.03
2.667	1.11	8.750	2.22	14.833	2.56	20.92	1.03
2.750	1.11	8.833	2.39	14.917	2.56	21.00	1.03
2.833	1.11	8.917	2.39	15.000	2.56	21.08	1.03
2.917	1.11	9.000	2.39	15.083	2.56	21.17	1.03
3.000	1.11	9.083	2.39	15.167	2.56	21.25	1.03
3.083	1.11	9.167	2.39	15.250	2.56	21.33	1.03
3.167	1.11	9.250	2.39	15.333	2.56	21.42	1.03
3.250	1.11	9.333	2.73	15.417	2.56	21.50	1.03
3.333	1.11	9.417	2.73	15.500	2.56	21.58	1.03
3.417	1.11	9.500	2.73	15.583	2.56	21.67	1.03
3.500	1.11	9.583	2.73	15.667	2.56	21.75	1.03
3.583	1.11	9.667	2.73	15.750	2.56	21.83	1.03
3.667	1.11	9.750	2.73	15.833	2.56	21.92	1.03
3.750	1.11	9.833	3.08	15.917	2.56	22.00	1.03
3.833	1.11	9.917	3.08	16.000	2.56	22.08	1.03
3.917	1.11	10.000	3.08	16.083	2.56	22.17	1.03
4.000	1.11	10.083	3.08	16.167	2.56	22.25	1.03
4.083	1.11	10.167	3.08	16.250	2.56	22.33	1.03
4.167	1.11	10.250	3.08	16.333	1.54	22.42	1.03
4.250	1.11	10.333	3.93	16.417	1.54	22.50	1.03
4.333	1.37	10.417	3.93	16.500	1.54	22.58	1.03
4.417	1.37	10.500	3.93	16.583	1.54	22.67	1.03
4.500	1.37	10.583	3.93	16.667	1.54	22.75	1.03
4.583	1.37	10.667	3.93	16.750	1.54	22.83	1.03
4.667	1.37	10.750	3.93	16.833	1.54	22.92	1.03
4.750	1.37	10.833	5.30	16.917	1.54	23.00	1.03
4.833	1.37	10.917	5.30	17.000	1.54	23.08	1.03
4.917	1.37	11.000	5.30	17.083	1.54	23.17	1.03

```
         5.000    1.37 |11.083    5.30 |17.167    1.54 | 23.25    1.03
         5.083    1.37 |11.167    5.30 |17.250    1.54 | 23.33    1.03
         5.167    1.37 |11.250    5.30 |17.333    1.54 | 23.42    1.03
         5.250    1.37 |11.333    8.20 |17.417    1.54 | 23.50    1.03
         5.333    1.37 |11.417    8.20 |17.500    1.54 | 23.58    1.03
         5.417    1.37 |11.500    8.20 |17.583    1.54 | 23.67    1.03
         5.500    1.37 |11.583    8.20 |17.667    1.54 | 23.75    1.03
         5.583    1.37 |11.667    8.20 |17.750    1.54 | 23.83    1.03
         5.667    1.37 |11.750    8.20 |17.833    1.54 | 23.92    1.03
         5.750    1.37 |11.833   25.28 |17.917    1.54 | 24.00    1.03
         5.833    1.37 |11.917   25.28 |18.000    1.54 | 24.08    1.03
         5.917    1.37 |12.000   25.28 |18.083    1.54 | 24.17    1.03
         6.000    1.37 |12.083  104.54 |18.167    1.54 | 24.25    1.02
         6.083    1.37 |12.167  104.55 |18.250    1.54 |

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.378 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  29.636
     TOTAL RAINFALL   (mm)=  85.420
     RUNOFF COEFFICIENT   =   0.347

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

-------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
         0.083    0.00 | 6.167    1.37 |12.250  104.55 | 18.33    1.54
         0.167    0.00 | 6.250    1.37 |12.333   12.31 | 18.42    1.54
         0.250    0.00 | 6.333    1.54 |12.417   12.30 | 18.50    1.54
         0.333    0.94 | 6.417    1.54 |12.500   12.30 | 18.58    1.54
         0.417    0.94 | 6.500    1.54 |12.583   12.30 | 18.67    1.54
         0.500    0.94 | 6.583    1.54 |12.667   12.30 | 18.75    1.54
         0.583    0.94 | 6.667    1.54 |12.750   12.30 | 18.83    1.54
         0.667    0.94 | 6.750    1.54 |12.833    6.32 | 18.92    1.54
         0.750    0.94 | 6.833    1.54 |12.917    6.32 | 19.00    1.54
         0.833    0.94 | 6.917    1.54 |13.000    6.32 | 19.08    1.54
         0.917    0.94 | 7.000    1.54 |13.083    6.32 | 19.17    1.54
         1.000    0.94 | 7.083    1.54 |13.167    6.32 | 19.25    1.54
```

```
         1.083    0.94 | 7.167    1.54 |13.250    6.32 | 19.33    1.54
         1.167    0.94 | 7.250    1.54 |13.333    4.61 | 19.42    1.54
         1.250    0.94 | 7.333    1.88 |13.417    4.61 | 19.50    1.54
         1.333    0.94 | 7.417    1.88 |13.500    4.61 | 19.58    1.54
         1.417    0.94 | 7.500    1.88 |13.583    4.61 | 19.67    1.54
         1.500    0.94 | 7.583    1.88 |13.667    4.61 | 19.75    1.54
         1.583    0.94 | 7.667    1.88 |13.750    4.61 | 19.83    1.54
         1.667    0.94 | 7.750    1.88 |13.833    3.59 | 19.92    1.54
         1.750    0.94 | 7.833    1.88 |13.917    3.59 | 20.00    1.54
         1.833    0.94 | 7.917    1.88 |14.000    3.59 | 20.08    1.54
         1.917    0.94 | 8.000    1.88 |14.083    3.59 | 20.17    1.54
         2.000    0.94 | 8.083    1.88 |14.167    3.59 | 20.25    1.54
         2.083    0.94 | 8.167    1.88 |14.250    3.59 | 20.33    1.03
         2.167    0.94 | 8.250    1.88 |14.333    2.56 | 20.42    1.03
         2.250    0.94 | 8.333    2.22 |14.417    2.56 | 20.50    1.03
         2.333    1.11 | 8.417    2.22 |14.500    2.56 | 20.58    1.03
         2.417    1.11 | 8.500    2.22 |14.583    2.56 | 20.67    1.03
         2.500    1.11 | 8.583    2.22 |14.667    2.56 | 20.75    1.03
         2.583    1.11 | 8.667    2.22 |14.750    2.56 | 20.83    1.03
         2.667    1.11 | 8.750    2.22 |14.833    2.56 | 20.92    1.03
         2.750    1.11 | 8.833    2.39 |14.917    2.56 | 21.00    1.03
         2.833    1.11 | 8.917    2.39 |15.000    2.56 | 21.08    1.03
         2.917    1.11 | 9.000    2.39 |15.083    2.56 | 21.17    1.03
         3.000    1.11 | 9.083    2.39 |15.167    2.56 | 21.25    1.03
         3.083    1.11 | 9.167    2.39 |15.250    2.56 | 21.33    1.03
         3.167    1.11 | 9.250    2.39 |15.333    2.56 | 21.42    1.03
         3.250    1.11 | 9.333    2.73 |15.417    2.56 | 21.50    1.03
         3.333    1.11 | 9.417    2.73 |15.500    2.56 | 21.58    1.03
         3.417    1.11 | 9.500    2.73 |15.583    2.56 | 21.67    1.03
         3.500    1.11 | 9.583    2.73 |15.667    2.56 | 21.75    1.03
         3.583    1.11 | 9.667    2.73 |15.750    2.56 | 21.83    1.03
         3.667    1.11 | 9.750    2.73 |15.833    2.56 | 21.92    1.03
         3.750    1.11 | 9.833    3.08 |15.917    2.56 | 22.00    1.03
         3.833    1.11 | 9.917    3.08 |16.000    2.56 | 22.08    1.03
         3.917    1.11 |10.000    3.08 |16.083    2.56 | 22.17    1.03
         4.000    1.11 |10.083    3.08 |16.167    2.56 | 22.25    1.03
         4.083    1.11 |10.167    3.08 |16.250    2.56 | 22.33    1.03
         4.167    1.11 |10.250    3.08 |16.333    1.54 | 22.42    1.03
         4.250    1.11 |10.333    3.93 |16.417    1.54 | 22.50    1.03
         4.333    1.37 |10.417    3.93 |16.500    1.54 | 22.58    1.03
         4.417    1.37 |10.500    3.93 |16.583    1.54 | 22.67    1.03
         4.500    1.37 |10.583    3.93 |16.667    1.54 | 22.75    1.03
         4.583    1.37 |10.667    3.93 |16.750    1.54 | 22.83    1.03
         4.667    1.37 |10.750    3.93 |16.833    1.54 | 22.92    1.03
         4.750    1.37 |10.833    5.30 |16.917    1.54 | 23.00    1.03
         4.833    1.37 |10.917    5.30 |17.000    1.54 | 23.08    1.03
         4.917    1.37 |11.000    5.30 |17.083    1.54 | 23.17    1.03
         5.000    1.37 |11.083    5.30 |17.167    1.54 | 23.25    1.03
         5.083    1.37 |11.167    5.30 |17.250    1.54 | 23.33    1.03
         5.167    1.37 |11.250    5.30 |17.333    1.54 | 23.42    1.03
```

5.250	1.37	11.333	8.20	17.417	1.54	23.50	1.03
5.333	1.37	11.417	8.20	17.500	1.54	23.58	1.03
5.417	1.37	11.500	8.20	17.583	1.54	23.67	1.03
5.500	1.37	11.583	8.20	17.667	1.54	23.75	1.03
5.583	1.37	11.667	8.20	17.750	1.54	23.83	1.03
5.667	1.37	11.750	8.20	17.833	1.54	23.92	1.03
5.750	1.37	11.833	25.28	17.917	1.54	24.00	1.03
5.833	1.37	11.917	25.28	18.000	1.54	24.08	1.03
5.917	1.37	12.000	25.28	18.083	1.54	24.17	1.03
6.000	1.37	12.083	104.54	18.167	1.54	24.25	1.02
6.083	1.37	12.167	104.55	18.250	1.54		

```
Unit Hyd Qpeak  (cms)=   0.264

PEAK FLOW       (cms)=   0.090 (i)
TIME TO PEAK    (hrs)=  12.333
RUNOFF VOLUME    (mm)=  24.585
TOTAL RAINFALL   (mm)=  85.420
RUNOFF COEFFICIENT   =   0.288

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

```
--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):     4.06    0.378    12.25    29.64
     + ID2= 2 (  0003):     1.73    0.090    12.33    24.59
       ===============================================
       ID = 3 (  0007):     5.79    0.452    12.25    28.13

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

```
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.37	12.250	104.55	18.33	1.54
0.167	0.00	6.250	1.37	12.333	12.31	18.42	1.54
0.250	0.00	6.333	1.54	12.417	12.30	18.50	1.54
0.333	0.94	6.417	1.54	12.500	12.30	18.58	1.54
0.417	0.94	6.500	1.54	12.583	12.30	18.67	1.54
0.500	0.94	6.583	1.54	12.667	12.30	18.75	1.54
0.583	0.94	6.667	1.54	12.750	12.30	18.83	1.54
0.667	0.94	6.750	1.54	12.833	6.32	18.92	1.54
0.750	0.94	6.833	1.54	12.917	6.32	19.00	1.54
0.833	0.94	6.917	1.54	13.000	6.32	19.08	1.54
0.917	0.94	7.000	1.54	13.083	6.32	19.17	1.54
1.000	0.94	7.083	1.54	13.167	6.32	19.25	1.54
1.083	0.94	7.167	1.54	13.250	6.32	19.33	1.54
1.167	0.94	7.250	1.54	13.333	4.61	19.42	1.54
1.250	0.94	7.333	1.88	13.417	4.61	19.50	1.54
1.333	0.94	7.417	1.88	13.500	4.61	19.58	1.54
1.417	0.94	7.500	1.88	13.583	4.61	19.67	1.54
1.500	0.94	7.583	1.88	13.667	4.61	19.75	1.54
1.583	0.94	7.667	1.88	13.750	4.61	19.83	1.54
1.667	0.94	7.750	1.88	13.833	3.59	19.92	1.54
1.750	0.94	7.833	1.88	13.917	3.59	20.00	1.54
1.833	0.94	7.917	1.88	14.000	3.59	20.08	1.54
1.917	0.94	8.000	1.88	14.083	3.59	20.17	1.54
2.000	0.94	8.083	1.88	14.167	3.59	20.25	1.54
2.083	0.94	8.167	1.88	14.250	3.59	20.33	1.03
2.167	0.94	8.250	1.88	14.333	2.56	20.42	1.03
2.250	0.94	8.333	2.22	14.417	2.56	20.50	1.03
2.333	1.11	8.417	2.22	14.500	2.56	20.58	1.03
2.417	1.11	8.500	2.22	14.583	2.56	20.67	1.03
2.500	1.11	8.583	2.22	14.667	2.56	20.75	1.03
2.583	1.11	8.667	2.22	14.750	2.56	20.83	1.03
2.667	1.11	8.750	2.22	14.833	2.56	20.92	1.03
2.750	1.11	8.833	2.39	14.917	2.56	21.00	1.03
2.833	1.11	8.917	2.39	15.000	2.56	21.08	1.03
2.917	1.11	9.000	2.39	15.083	2.56	21.17	1.03
3.000	1.11	9.083	2.39	15.167	2.56	21.25	1.03
3.083	1.11	9.167	2.39	15.250	2.56	21.33	1.03
3.167	1.11	9.250	2.39	15.333	2.56	21.42	1.03
3.250	1.11	9.333	2.73	15.417	2.56	21.50	1.03
3.333	1.11	9.417	2.73	15.500	2.56	21.58	1.03
3.417	1.11	9.500	2.73	15.583	2.56	21.67	1.03
3.500	1.11	9.583	2.73	15.667	2.56	21.75	1.03
3.583	1.11	9.667	2.73	15.750	2.56	21.83	1.03
3.667	1.11	9.750	2.73	15.833	2.56	21.92	1.03
3.750	1.11	9.833	3.08	15.917	2.56	22.00	1.03
3.833	1.11	9.917	3.08	16.000	2.56	22.08	1.03
3.917	1.11	10.000	3.08	16.083	2.56	22.17	1.03
4.000	1.11	10.083	3.08	16.167	2.56	22.25	1.03
4.083	1.11	10.167	3.08	16.250	2.56	22.33	1.03
4.167	1.11	10.250	3.08	16.333	1.54	22.42	1.03
4.250	1.11	10.333	3.93	16.417	1.54	22.50	1.03
4.333	1.37	10.417	3.93	16.500	1.54	22.58	1.03
4.417	1.37	10.500	3.93	16.583	1.54	22.67	1.03

```
           4.500    1.37 |10.583    3.93 |16.667    1.54 | 22.75    1.03
           4.583    1.37 |10.667    3.93 |16.750    1.54 | 22.83    1.03
           4.667    1.37 |10.750    3.93 |16.833    1.54 | 22.92    1.03
           4.750    1.37 |10.833    5.30 |16.917    1.54 | 23.00    1.03
           4.833    1.37 |10.917    5.30 |17.000    1.54 | 23.08    1.03
           4.917    1.37 |11.000    5.30 |17.083    1.54 | 23.17    1.03
           5.000    1.37 |11.083    5.30 |17.167    1.54 | 23.25    1.03
           5.083    1.37 |11.167    5.30 |17.250    1.54 | 23.33    1.03
           5.167    1.37 |11.250    5.30 |17.333    1.54 | 23.42    1.03
           5.250    1.37 |11.333    8.20 |17.417    1.54 | 23.50    1.03
           5.333    1.37 |11.417    8.20 |17.500    1.54 | 23.58    1.03
           5.417    1.37 |11.500    8.20 |17.583    1.54 | 23.67    1.03
           5.500    1.37 |11.583    8.20 |17.667    1.54 | 23.75    1.03
           5.583    1.37 |11.667    8.20 |17.750    1.54 | 23.83    1.03
           5.667    1.37 |11.750    8.20 |17.833    1.54 | 23.92    1.03
           5.750    1.37 |11.833   25.28 |17.917    1.54 | 24.00    1.03
           5.833    1.37 |11.917   25.28 |18.000    1.54 | 24.08    1.03
           5.917    1.37 |12.000   25.28 |18.083    1.54 | 24.17    1.03
           6.000    1.37 |12.083  104.54 |18.167    1.54 | 24.25    1.02
           6.083    1.37 |12.167  104.55 |18.250    1.54 |

     Unit Hyd Qpeak  (cms)=   1.320

     PEAK FLOW       (cms)=   0.456 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=  25.359
     TOTAL RAINFALL   (mm)=  85.420
     RUNOFF COEFFICIENT   =   0.297

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
           0.083    0.00 | 6.167    1.37 |12.250  104.55 | 18.33    1.54
           0.167    0.00 | 6.250    1.37 |12.333   12.31 | 18.42    1.54
           0.250    0.00 | 6.333    1.54 |12.417   12.30 | 18.50    1.54
           0.333    0.94 | 6.417    1.54 |12.500   12.30 | 18.58    1.54
           0.417    0.94 | 6.500    1.54 |12.583   12.30 | 18.67    1.54
           0.500    0.94 | 6.583    1.54 |12.667   12.30 | 18.75    1.54
```

```
           0.583    0.94 | 6.667    1.54 |12.750   12.30 | 18.83    1.54
           0.667    0.94 | 6.750    1.54 |12.833    6.32 | 18.92    1.54
           0.750    0.94 | 6.833    1.54 |12.917    6.32 | 19.00    1.54
           0.833    0.94 | 6.917    1.54 |13.000    6.32 | 19.08    1.54
           0.917    0.94 | 7.000    1.54 |13.083    6.32 | 19.17    1.54
           1.000    0.94 | 7.083    1.54 |13.167    6.32 | 19.25    1.54
           1.083    0.94 | 7.167    1.54 |13.250    6.32 | 19.33    1.54
           1.167    0.94 | 7.250    1.54 |13.333    4.61 | 19.42    1.54
           1.250    0.94 | 7.333    1.88 |13.417    4.61 | 19.50    1.54
           1.333    0.94 | 7.417    1.88 |13.500    4.61 | 19.58    1.54
           1.417    0.94 | 7.500    1.88 |13.583    4.61 | 19.67    1.54
           1.500    0.94 | 7.583    1.88 |13.667    4.61 | 19.75    1.54
           1.583    0.94 | 7.667    1.88 |13.750    4.61 | 19.83    1.54
           1.667    0.94 | 7.750    1.88 |13.833    3.59 | 19.92    1.54
           1.750    0.94 | 7.833    1.88 |13.917    3.59 | 20.00    1.54
           1.833    0.94 | 7.917    1.88 |14.000    3.59 | 20.08    1.54
           1.917    0.94 | 8.000    1.88 |14.083    3.59 | 20.17    1.54
           2.000    0.94 | 8.083    1.88 |14.167    3.59 | 20.25    1.54
           2.083    0.94 | 8.167    1.88 |14.250    3.59 | 20.33    1.03
           2.167    0.94 | 8.250    1.88 |14.333    2.56 | 20.42    1.03
           2.250    0.94 | 8.333    2.22 |14.417    2.56 | 20.50    1.03
           2.333    1.11 | 8.417    2.22 |14.500    2.56 | 20.58    1.03
           2.417    1.11 | 8.500    2.22 |14.583    2.56 | 20.67    1.03
           2.500    1.11 | 8.583    2.22 |14.667    2.56 | 20.75    1.03
           2.583    1.11 | 8.667    2.22 |14.750    2.56 | 20.83    1.03
           2.667    1.11 | 8.750    2.22 |14.833    2.56 | 20.92    1.03
           2.750    1.11 | 8.833    2.39 |14.917    2.56 | 21.00    1.03
           2.833    1.11 | 8.917    2.39 |15.000    2.56 | 21.08    1.03
           2.917    1.11 | 9.000    2.39 |15.083    2.56 | 21.17    1.03
           3.000    1.11 | 9.083    2.39 |15.167    2.56 | 21.25    1.03
           3.083    1.11 | 9.167    2.39 |15.250    2.56 | 21.33    1.03
           3.167    1.11 | 9.250    2.39 |15.333    2.56 | 21.42    1.03
           3.250    1.11 | 9.333    2.73 |15.417    2.56 | 21.50    1.03
           3.333    1.11 | 9.417    2.73 |15.500    2.56 | 21.58    1.03
           3.417    1.11 | 9.500    2.73 |15.583    2.56 | 21.67    1.03
           3.500    1.11 | 9.583    2.73 |15.667    2.56 | 21.75    1.03
           3.583    1.11 | 9.667    2.73 |15.750    2.56 | 21.83    1.03
           3.667    1.11 | 9.750    2.73 |15.833    2.56 | 21.92    1.03
           3.750    1.11 | 9.833    3.08 |15.917    2.56 | 22.00    1.03
           3.833    1.11 | 9.917    3.08 |16.000    2.56 | 22.08    1.03
           3.917    1.11 |10.000    3.08 |16.083    2.56 | 22.17    1.03
           4.000    1.11 |10.083    3.08 |16.167    2.56 | 22.25    1.03
           4.083    1.11 |10.167    3.08 |16.250    2.56 | 22.33    1.03
           4.167    1.11 |10.250    3.08 |16.333    1.54 | 22.42    1.03
           4.250    1.11 |10.333    3.93 |16.417    1.54 | 22.50    1.03
           4.333    1.37 |10.417    3.93 |16.500    1.54 | 22.58    1.03
           4.417    1.37 |10.500    3.93 |16.583    1.54 | 22.67    1.03
           4.500    1.37 |10.583    3.93 |16.667    1.54 | 22.75    1.03
           4.583    1.37 |10.667    3.93 |16.750    1.54 | 22.83    1.03
           4.667    1.37 |10.750    3.93 |16.833    1.54 | 22.92    1.03
```

4.750	1.37	10.833	5.30	16.917	1.54	23.00	1.03
4.833	1.37	10.917	5.30	17.000	1.54	23.08	1.03
4.917	1.37	11.000	5.30	17.083	1.54	23.17	1.03
5.000	1.37	11.083	5.30	17.167	1.54	23.25	1.03
5.083	1.37	11.167	5.30	17.250	1.54	23.33	1.03
5.167	1.37	11.250	5.30	17.333	1.54	23.42	1.03
5.250	1.37	11.333	8.20	17.417	1.54	23.50	1.03
5.333	1.37	11.417	8.20	17.500	1.54	23.58	1.03
5.417	1.37	11.500	8.20	17.583	1.54	23.67	1.03
5.500	1.37	11.583	8.20	17.667	1.54	23.75	1.03
5.583	1.37	11.667	8.20	17.750	1.54	23.83	1.03
5.667	1.37	11.750	8.20	17.833	1.54	23.92	1.03
5.750	1.37	11.833	25.28	17.917	1.54	24.00	1.03
5.833	1.37	11.917	25.28	18.000	1.54	24.08	1.03
5.917	1.37	12.000	25.28	18.083	1.54	24.17	1.03
6.000	1.37	12.083	104.54	18.167	1.54	24.25	1.02
6.083	1.37	12.167	104.55	18.250	1.54		

Unit Hyd Qpeak (cms)= 0.925

PEAK FLOW (cms)= 0.169 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 16.913
TOTAL RAINFALL (mm)= 85.420
RUNOFF COEFFICIENT = 0.198

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.37	12.250	104.55	18.33	1.54
0.167	0.00	6.250	1.37	12.333	12.31	18.42	1.54
0.250	0.00	6.333	1.54	12.417	12.30	18.50	1.54
0.333	0.94	6.417	1.54	12.500	12.30	18.58	1.54
0.417	0.94	6.500	1.54	12.583	12.30	18.67	1.54
0.500	0.94	6.583	1.54	12.667	12.30	18.75	1.54
0.583	0.94	6.667	1.54	12.750	12.30	18.83	1.54
0.667	0.94	6.750	1.54	12.833	6.32	18.92	1.54
0.750	0.94	6.833	1.54	12.917	6.32	19.00	1.54
0.833	0.94	6.917	1.54	13.000	6.32	19.08	1.54
0.917	0.94	7.000	1.54	13.083	6.32	19.17	1.54
1.000	0.94	7.083	1.54	13.167	6.32	19.25	1.54
1.083	0.94	7.167	1.54	13.250	6.32	19.33	1.54
1.167	0.94	7.250	1.54	13.333	4.61	19.42	1.54
1.250	0.94	7.333	1.88	13.417	4.61	19.50	1.54
1.333	0.94	7.417	1.88	13.500	4.61	19.58	1.54
1.417	0.94	7.500	1.88	13.583	4.61	19.67	1.54
1.500	0.94	7.583	1.88	13.667	4.61	19.75	1.54
1.583	0.94	7.667	1.88	13.750	4.61	19.83	1.54
1.667	0.94	7.750	1.88	13.833	3.59	19.92	1.54
1.750	0.94	7.833	1.88	13.917	3.59	20.00	1.54
1.833	0.94	7.917	1.88	14.000	3.59	20.08	1.54
1.917	0.94	8.000	1.88	14.083	3.59	20.17	1.54
2.000	0.94	8.083	1.88	14.167	3.59	20.25	1.54
2.083	0.94	8.167	1.88	14.250	3.59	20.33	1.03
2.167	0.94	8.250	1.88	14.333	2.56	20.42	1.03
2.250	0.94	8.333	2.22	14.417	2.56	20.50	1.03
2.333	1.11	8.417	2.22	14.500	2.56	20.58	1.03
2.417	1.11	8.500	2.22	14.583	2.56	20.67	1.03
2.500	1.11	8.583	2.22	14.667	2.56	20.75	1.03
2.583	1.11	8.667	2.22	14.750	2.56	20.83	1.03
2.667	1.11	8.750	2.22	14.833	2.56	20.92	1.03
2.750	1.11	8.833	2.39	14.917	2.56	21.00	1.03
2.833	1.11	8.917	2.39	15.000	2.56	21.08	1.03
2.917	1.11	9.000	2.39	15.083	2.56	21.17	1.03
3.000	1.11	9.083	2.39	15.167	2.56	21.25	1.03
3.083	1.11	9.167	2.39	15.250	2.56	21.33	1.03
3.167	1.11	9.250	2.39	15.333	2.56	21.42	1.03
3.250	1.11	9.333	2.73	15.417	2.56	21.50	1.03
3.333	1.11	9.417	2.73	15.500	2.56	21.58	1.03
3.417	1.11	9.500	2.73	15.583	2.56	21.67	1.03
3.500	1.11	9.583	2.73	15.667	2.56	21.75	1.03
3.583	1.11	9.667	2.73	15.750	2.56	21.83	1.03
3.667	1.11	9.750	2.73	15.833	2.56	21.92	1.03
3.750	1.11	9.833	3.08	15.917	2.56	22.00	1.03
3.833	1.11	9.917	3.08	16.000	2.56	22.08	1.03
3.917	1.11	10.000	3.08	16.083	2.56	22.17	1.03
4.000	1.11	10.083	3.08	16.167	2.56	22.25	1.03
4.083	1.11	10.167	3.08	16.250	2.56	22.33	1.03
4.167	1.11	10.250	3.08	16.333	1.54	22.42	1.03
4.250	1.11	10.333	3.93	16.417	1.54	22.50	1.03
4.333	1.37	10.417	3.93	16.500	1.54	22.58	1.03
4.417	1.37	10.500	3.93	16.583	1.54	22.67	1.03
4.500	1.37	10.583	3.93	16.667	1.54	22.75	1.03
4.583	1.37	10.667	3.93	16.750	1.54	22.83	1.03
4.667	1.37	10.750	3.93	16.833	1.54	22.92	1.03
4.750	1.37	10.833	5.30	16.917	1.54	23.00	1.03
4.833	1.37	10.917	5.30	17.000	1.54	23.08	1.03
4.917	1.37	11.000	5.30	17.083	1.54	23.17	1.03

5.000	1.37	11.083	5.30	17.167	1.54	23.25	1.03
5.083	1.37	11.167	5.30	17.250	1.54	23.33	1.03
5.167	1.37	11.250	5.30	17.333	1.54	23.42	1.03
5.250	1.37	11.333	8.20	17.417	1.54	23.50	1.03
5.333	1.37	11.417	8.20	17.500	1.54	23.58	1.03
5.417	1.37	11.500	8.20	17.583	1.54	23.67	1.03
5.500	1.37	11.583	8.20	17.667	1.54	23.75	1.03
5.583	1.37	11.667	8.20	17.750	1.54	23.83	1.03
5.667	1.37	11.750	8.20	17.833	1.54	23.92	1.03
5.750	1.37	11.833	25.28	17.917	1.54	24.00	1.03
5.833	1.37	11.917	25.28	18.000	1.54	24.08	1.03
5.917	1.37	12.000	25.28	18.083	1.54	24.17	1.03
6.000	1.37	12.083	104.54	18.167	1.54	24.25	1.02
6.083	1.37	12.167	104.55	18.250	1.54		

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.132 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 17.884
TOTAL RAINFALL (mm)= 85.420
RUNOFF COEFFICIENT = 0.209

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.37	12.250	104.55	18.33	1.54
0.167	0.00	6.250	1.37	12.333	12.31	18.42	1.54
0.250	0.00	6.333	1.54	12.417	12.30	18.50	1.54
0.333	0.94	6.417	1.54	12.500	12.30	18.58	1.54
0.417	0.94	6.500	1.54	12.583	12.30	18.67	1.54
0.500	0.94	6.583	1.54	12.667	12.30	18.75	1.54
0.583	0.94	6.667	1.54	12.750	12.30	18.83	1.54
0.667	0.94	6.750	1.54	12.833	6.32	18.92	1.54
0.750	0.94	6.833	1.54	12.917	6.32	19.00	1.54
0.833	0.94	6.917	1.54	13.000	6.32	19.08	1.54
0.917	0.94	7.000	1.54	13.083	6.32	19.17	1.54
1.000	0.94	7.083	1.54	13.167	6.32	19.25	1.54
1.083	0.94	7.167	1.54	13.250	6.32	19.33	1.54
1.167	0.94	7.250	1.54	13.333	4.61	19.42	1.54
1.250	0.94	7.333	1.88	13.417	4.61	19.50	1.54
1.333	0.94	7.417	1.88	13.500	4.61	19.58	1.54
1.417	0.94	7.500	1.88	13.583	4.61	19.67	1.54
1.500	0.94	7.583	1.88	13.667	4.61	19.75	1.54
1.583	0.94	7.667	1.88	13.750	4.61	19.83	1.54
1.667	0.94	7.750	1.88	13.833	3.59	19.92	1.54
1.750	0.94	7.833	1.88	13.917	3.59	20.00	1.54
1.833	0.94	7.917	1.88	14.000	3.59	20.08	1.54
1.917	0.94	8.000	1.88	14.083	3.59	20.17	1.54
2.000	0.94	8.083	1.88	14.167	3.59	20.25	1.54
2.083	0.94	8.167	1.88	14.250	3.59	20.33	1.03
2.167	0.94	8.250	1.88	14.333	2.56	20.42	1.03
2.250	0.94	8.333	2.22	14.417	2.56	20.50	1.03
2.333	1.11	8.417	2.22	14.500	2.56	20.58	1.03
2.417	1.11	8.500	2.22	14.583	2.56	20.67	1.03
2.500	1.11	8.583	2.22	14.667	2.56	20.75	1.03
2.583	1.11	8.667	2.22	14.750	2.56	20.83	1.03
2.667	1.11	8.750	2.22	14.833	2.56	20.92	1.03
2.750	1.11	8.833	2.39	14.917	2.56	21.00	1.03
2.833	1.11	8.917	2.39	15.000	2.56	21.08	1.03
2.917	1.11	9.000	2.39	15.083	2.56	21.17	1.03
3.000	1.11	9.083	2.39	15.167	2.56	21.25	1.03
3.083	1.11	9.167	2.39	15.250	2.56	21.33	1.03
3.167	1.11	9.250	2.39	15.333	2.56	21.42	1.03
3.250	1.11	9.333	2.73	15.417	2.56	21.50	1.03
3.333	1.11	9.417	2.73	15.500	2.56	21.58	1.03
3.417	1.11	9.500	2.73	15.583	2.56	21.67	1.03
3.500	1.11	9.583	2.73	15.667	2.56	21.75	1.03
3.583	1.11	9.667	2.73	15.750	2.56	21.83	1.03
3.667	1.11	9.750	2.73	15.833	2.56	21.92	1.03
3.750	1.11	9.833	3.08	15.917	2.56	22.00	1.03
3.833	1.11	9.917	3.08	16.000	2.56	22.08	1.03
3.917	1.11	10.000	3.08	16.083	2.56	22.17	1.03
4.000	1.11	10.083	3.08	16.167	2.56	22.25	1.03
4.083	1.11	10.167	3.08	16.250	2.56	22.33	1.03
4.167	1.11	10.250	3.08	16.333	1.54	22.42	1.03
4.250	1.11	10.333	3.93	16.417	1.54	22.50	1.03
4.333	1.37	10.417	3.93	16.500	1.54	22.58	1.03
4.417	1.37	10.500	3.93	16.583	1.54	22.67	1.03
4.500	1.37	10.583	3.93	16.667	1.54	22.75	1.03
4.583	1.37	10.667	3.93	16.750	1.54	22.83	1.03
4.667	1.37	10.750	3.93	16.833	1.54	22.92	1.03
4.750	1.37	10.833	5.30	16.917	1.54	23.00	1.03
4.833	1.37	10.917	5.30	17.000	1.54	23.08	1.03
4.917	1.37	11.000	5.30	17.083	1.54	23.17	1.03
5.000	1.37	11.083	5.30	17.167	1.54	23.25	1.03
5.083	1.37	11.167	5.30	17.250	1.54	23.33	1.03
5.167	1.37	11.250	5.30	17.333	1.54	23.42	1.03

```
              5.250    1.37 |11.333    8.20 |17.417    1.54 | 23.50    1.03
              5.333    1.37 |11.417    8.20 |17.500    1.54 | 23.58    1.03
              5.417    1.37 |11.500    8.20 |17.583    1.54 | 23.67    1.03
              5.500    1.37 |11.583    8.20 |17.667    1.54 | 23.75    1.03
              5.583    1.37 |11.667    8.20 |17.750    1.54 | 23.83    1.03
              5.667    1.37 |11.750    8.20 |17.833    1.54 | 23.92    1.03
              5.750    1.37 |11.833   25.28 |17.917    1.54 | 24.00    1.03
              5.833    1.37 |11.917   25.28 |18.000    1.54 | 24.08    1.03
              5.917    1.37 |12.000   25.28 |18.083    1.54 | 24.17    1.03
              6.000    1.37 |12.083  104.54 |18.167    1.54 | 24.25    1.02
              6.083    1.37 |12.167  104.55 |18.250    1.54 |

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.058 (i)
     TIME TO PEAK    (hrs)=  12.333
     RUNOFF VOLUME    (mm)=  17.034
     TOTAL RAINFALL   (mm)=  85.420
     RUNOFF COEFFICIENT   =   0.199

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95    0.456    12.33    25.36
      + ID2= 2 (  0004):     3.15    0.169    12.25    16.91
        ==================================================
        ID = 3 (  0008):    11.10    0.599    12.33    22.96

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10    0.599    12.33    22.96
      + ID2= 2 (  0005):     2.43    0.132    12.25    17.88
        ==================================================
        ID = 1 (  0008):    13.53    0.716    12.33    22.05

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53    0.716    12.33    22.05
      + ID2= 2 (  0006):     1.34    0.058    12.33    17.03
        ==================================================
        ID = 3 (  0008):    14.87    0.774    12.33    21.60

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79    0.452    12.25    28.13
      + ID2= 2 (  0008):    14.87    0.774    12.33    21.60
        ==================================================
        ID = 3 (  0009):    20.66    1.198    12.25    23.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\83db8
3bd-d43c-4dfc-9bb0-a641552cc871\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\83db8
3bd-d43c-4dfc-9bb0-a641552cc871\scena
```

DATE: 07-18-2025 TIME: 03:06:59

USER:

COMMENTS: ____

```
**************************************************
** SIMULATION : L. 100YR 24HR SCS             **
**************************************************
```

```
--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\1b591e71
| Ptotal= 92.89 mm |    Comments: 100yr 24hr 15min SCS Type II (MTO)
--------------------
```

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	6.87	19.00	1.67
0.50	1.02	6.75	1.67	13.00	6.87	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	1.11
1.75	1.02	8.00	2.04	14.25	2.79	20.50	1.11
2.00	1.02	8.25	2.42	14.50	2.79	20.75	1.11
2.25	1.21	8.50	2.42	14.75	2.79	21.00	1.11
2.50	1.21	8.75	2.60	15.00	2.79	21.25	1.11
2.75	1.21	9.00	2.60	15.25	2.79	21.50	1.11
3.00	1.21	9.25	2.97	15.50	2.79	21.75	1.11
3.25	1.21	9.50	2.97	15.75	2.79	22.00	1.11
3.50	1.21	9.75	3.34	16.00	2.79	22.25	1.11
3.75	1.21	10.00	3.34	16.25	1.67	22.50	1.11
4.00	1.21	10.25	4.27	16.50	1.67	22.75	1.11
4.25	1.49	10.50	4.27	16.75	1.67	23.00	1.11
4.50	1.49	10.75	5.76	17.00	1.67	23.25	1.11
4.75	1.49	11.00	5.76	17.25	1.67	23.50	1.11
5.00	1.49	11.25	8.92	17.50	1.67	23.75	1.11
5.25	1.49	11.50	8.92	17.75	1.67	24.00	1.11
5.50	1.49	11.75	27.50	18.00	1.67		
5.75	1.49	12.00	113.70	18.25	1.67		
6.00	1.49	12.25	13.38	18.50	1.67		

```
--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11

```
 2.917    1.21 | 9.000    2.60 |15.083    2.79 | 21.17    1.11
 3.000    1.21 | 9.083    2.60 |15.167    2.79 | 21.25    1.11
 3.083    1.21 | 9.167    2.60 |15.250    2.79 | 21.33    1.11
 3.167    1.21 | 9.250    2.60 |15.333    2.79 | 21.42    1.11
 3.250    1.21 | 9.333    2.97 |15.417    2.79 | 21.50    1.11
 3.333    1.21 | 9.417    2.97 |15.500    2.79 | 21.58    1.11
 3.417    1.21 | 9.500    2.97 |15.583    2.79 | 21.67    1.11
 3.500    1.21 | 9.583    2.97 |15.667    2.79 | 21.75    1.11
 3.583    1.21 | 9.667    2.97 |15.750    2.79 | 21.83    1.11
 3.667    1.21 | 9.750    2.97 |15.833    2.79 | 21.92    1.11
 3.750    1.21 | 9.833    3.34 |15.917    2.79 | 22.00    1.11
 3.833    1.21 | 9.917    3.34 |16.000    2.79 | 22.08    1.11
 3.917    1.21 |10.000    3.34 |16.083    2.79 | 22.17    1.11
 4.000    1.21 |10.083    3.34 |16.167    2.79 | 22.25    1.11
 4.083    1.21 |10.167    3.34 |16.250    2.79 | 22.33    1.11
 4.167    1.21 |10.250    3.34 |16.333    1.67 | 22.42    1.11
 4.250    1.21 |10.333    4.27 |16.417    1.67 | 22.50    1.11
 4.333    1.49 |10.417    4.27 |16.500    1.67 | 22.58    1.11
 4.417    1.49 |10.500    4.27 |16.583    1.67 | 22.67    1.11
 4.500    1.49 |10.583    4.27 |16.667    1.67 | 22.75    1.11
 4.583    1.49 |10.667    4.27 |16.750    1.67 | 22.83    1.11
 4.667    1.49 |10.750    4.27 |16.833    1.67 | 22.92    1.11
 4.750    1.49 |10.833    5.76 |16.917    1.67 | 23.00    1.11
 4.833    1.49 |10.917    5.76 |17.000    1.67 | 23.08    1.11
 4.917    1.49 |11.000    5.76 |17.083    1.67 | 23.17    1.11
 5.000    1.49 |11.083    5.76 |17.167    1.67 | 23.25    1.11
 5.083    1.49 |11.167    5.76 |17.250    1.67 | 23.33    1.11
 5.167    1.49 |11.250    5.76 |17.333    1.67 | 23.42    1.11
 5.250    1.49 |11.333    8.92 |17.417    1.67 | 23.50    1.11
 5.333    1.49 |11.417    8.92 |17.500    1.67 | 23.58    1.11
 5.417    1.49 |11.500    8.92 |17.583    1.67 | 23.67    1.11
 5.500    1.49 |11.583    8.92 |17.667    1.67 | 23.75    1.11
 5.583    1.49 |11.667    8.92 |17.750    1.67 | 23.83    1.11
 5.667    1.49 |11.750    8.92 |17.833    1.67 | 23.92    1.11
 5.750    1.49 |11.833   27.49 |17.917    1.67 | 24.00    1.11
 5.833    1.49 |11.917   27.50 |18.000    1.67 | 24.08    1.11
 5.917    1.49 |12.000   27.50 |18.083    1.67 | 24.17    1.11
 6.000    1.49 |12.083  113.69 |18.167    1.67 | 24.25    1.11
 6.083    1.49 |12.167  113.70 |18.250    1.67 |

Unit Hyd Qpeak  (cms)=   1.108

PEAK FLOW       (cms)=   0.438 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  34.218
TOTAL RAINFALL   (mm)=  92.890
RUNOFF COEFFICIENT   =   0.368

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                  0.083    0.00 | 6.167    1.49 |12.250  113.70 | 18.33    1.67
                  0.167    0.00 | 6.250    1.49 |12.333   13.39 | 18.42    1.67
                  0.250    0.00 | 6.333    1.67 |12.417   13.38 | 18.50    1.67
                  0.333    1.02 | 6.417    1.67 |12.500   13.38 | 18.58    1.67
                  0.417    1.02 | 6.500    1.67 |12.583   13.38 | 18.67    1.67
                  0.500    1.02 | 6.583    1.67 |12.667   13.38 | 18.75    1.67
                  0.583    1.02 | 6.667    1.67 |12.750   13.38 | 18.83    1.67
                  0.667    1.02 | 6.750    1.67 |12.833    6.87 | 18.92    1.67
                  0.750    1.02 | 6.833    1.67 |12.917    6.87 | 19.00    1.67
                  0.833    1.02 | 6.917    1.67 |13.000    6.87 | 19.08    1.67
                  0.917    1.02 | 7.000    1.67 |13.083    6.87 | 19.17    1.67
                  1.000    1.02 | 7.083    1.67 |13.167    6.87 | 19.25    1.67
                  1.083    1.02 | 7.167    1.67 |13.250    6.87 | 19.33    1.67
                  1.167    1.02 | 7.250    1.67 |13.333    5.02 | 19.42    1.67
                  1.250    1.02 | 7.333    2.04 |13.417    5.02 | 19.50    1.67
                  1.333    1.02 | 7.417    2.04 |13.500    5.02 | 19.58    1.67
                  1.417    1.02 | 7.500    2.04 |13.583    5.02 | 19.67    1.67
                  1.500    1.02 | 7.583    2.04 |13.667    5.02 | 19.75    1.67
                  1.583    1.02 | 7.667    2.04 |13.750    5.02 | 19.83    1.67
                  1.667    1.02 | 7.750    2.04 |13.833    3.90 | 19.92    1.67
                  1.750    1.02 | 7.833    2.04 |13.917    3.90 | 20.00    1.67
                  1.833    1.02 | 7.917    2.04 |14.000    3.90 | 20.08    1.67
                  1.917    1.02 | 8.000    2.04 |14.083    3.90 | 20.17    1.67
                  2.000    1.02 | 8.083    2.04 |14.167    3.90 | 20.25    1.67
                  2.083    1.02 | 8.167    2.04 |14.250    3.90 | 20.33    1.11
                  2.167    1.02 | 8.250    2.04 |14.333    2.79 | 20.42    1.11
                  2.250    1.02 | 8.333    2.42 |14.417    2.79 | 20.50    1.11
                  2.333    1.21 | 8.417    2.42 |14.500    2.79 | 20.58    1.11
                  2.417    1.21 | 8.500    2.42 |14.583    2.79 | 20.67    1.11
                  2.500    1.21 | 8.583    2.42 |14.667    2.79 | 20.75    1.11
                  2.583    1.21 | 8.667    2.42 |14.750    2.79 | 20.83    1.11
                  2.667    1.21 | 8.750    2.42 |14.833    2.79 | 20.92    1.11
                  2.750    1.21 | 8.833    2.60 |14.917    2.79 | 21.00    1.11
                  2.833    1.21 | 8.917    2.60 |15.000    2.79 | 21.08    1.11
                  2.917    1.21 | 9.000    2.60 |15.083    2.79 | 21.17    1.11
                  3.000    1.21 | 9.083    2.60 |15.167    2.79 | 21.25    1.11
                  3.083    1.21 | 9.167    2.60 |15.250    2.79 | 21.33    1.11
```

3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

Unit Hyd Qpeak (cms)= 0.264

PEAK FLOW (cms)= 0.105 (i)
TIME TO PEAK (hrs)= 12.333
RUNOFF VOLUME (mm)= 28.553
TOTAL RAINFALL (mm)= 92.890
RUNOFF COEFFICIENT = 0.307

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

```
| ADD HYD  (  0007)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):       4.06    0.438    12.25    34.22
     + ID2= 2 (  0003):       1.73    0.105    12.33    28.55
       ====================================================
       ID = 3 (  0007):       5.79    0.524    12.25    32.53

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11

2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11
2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11
3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

Unit Hyd Qpeak (cms)= 1.320

PEAK FLOW (cms)= 0.532 (i)
TIME TO PEAK (hrs)= 12.333

RUNOFF VOLUME (mm)= 29.426
TOTAL RAINFALL (mm)= 92.890
RUNOFF COEFFICIENT = 0.317

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11

2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11
2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11
3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

```
Unit Hyd Qpeak  (cms)=   0.925

PEAK FLOW       (cms)=   0.199 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  19.810
TOTAL RAINFALL   (mm)=  92.890
RUNOFF COEFFICIENT   =   0.213

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11

2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11
3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

```
Unit Hyd Qpeak  (cms)=   0.663

PEAK FLOW       (cms)=   0.155 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  20.925
TOTAL RAINFALL   (mm)=  92.890
RUNOFF COEFFICIENT   =   0.225

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11
2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11

3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

```
Unit Hyd Qpeak  (cms)=   0.284

PEAK FLOW       (cms)=   0.069 (i)
TIME TO PEAK    (hrs)=  12.333
RUNOFF VOLUME    (mm)=  19.951
TOTAL RAINFALL   (mm)=  92.890
RUNOFF COEFFICIENT   =   0.215

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

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

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

```
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.532    12.33    29.43
      + ID2= 2 (  0004):     3.15   0.199    12.25    19.81
        ==================================================
        ID = 3 (  0008):    11.10   0.699    12.33    26.70

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.699    12.33    26.70
      + ID2= 2 (  0005):     2.43   0.155    12.25    20.93
        ==================================================
        ID = 1 (  0008):    13.53   0.836    12.33    25.66

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.836    12.33    25.66
      + ID2= 2 (  0006):     1.34   0.069    12.33    19.95
        ==================================================
        ID = 3 (  0008):    14.87   0.905    12.33    25.15

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.524    12.25    32.53
      + ID2= 2 (  0008):    14.87   0.905    12.33    25.15
        ==================================================
        ID = 3 (  0009):    20.66   1.399    12.25    27.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
=====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
```

```
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
```



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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\2f44a
563-1848-4383-8a11-4e4a09dd7c0a\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\2f44a
563-1848-4383-8a11-4e4a09dd7c0a\scena


DATE: 07-18-2025                           TIME: 03:07:00

USER:



COMMENTS: ____________________________________________________________


----------------------------------------------------------------------------------
------------------------
  **********************************************
  ** SIMULATION : M. TIMMINS (REGIONAL)         **
  **********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\d9a83387
| Ptotal=193.00 mm |    Comments: Timmins
--------------------
```

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	8.00	3.00	23.00	6.00	20.00	9.00	10.00
1.00	13.00	4.00	20.00	7.00	5.00	10.00	20.00
2.00	13.00	5.00	43.00	8.00	3.00	11.00	15.00

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


--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	8.00	3.083	23.00	6.083	20.00	9.08	10.00
0.167	8.00	3.167	23.00	6.167	20.00	9.17	10.00
0.250	8.00	3.250	23.00	6.250	20.00	9.25	10.00
0.333	8.00	3.333	23.00	6.333	20.00	9.33	10.00
0.417	8.00	3.417	23.00	6.417	20.00	9.42	10.00
0.500	8.00	3.500	23.00	6.500	20.00	9.50	10.00
0.583	8.00	3.583	23.00	6.583	20.00	9.58	10.00
0.667	8.00	3.667	23.00	6.667	20.00	9.67	10.00
0.750	8.00	3.750	23.00	6.750	20.00	9.75	10.00
0.833	8.00	3.833	23.00	6.833	20.00	9.83	10.00
0.917	8.00	3.917	23.00	6.917	20.00	9.92	10.00
1.000	8.00	4.000	23.00	7.000	20.00	10.00	10.00
1.083	13.00	4.083	20.00	7.083	5.00	10.08	20.00
1.167	13.00	4.167	20.00	7.167	5.00	10.17	20.00
1.250	13.00	4.250	20.00	7.250	5.00	10.25	20.00
1.333	13.00	4.333	20.00	7.333	5.00	10.33	20.00
1.417	13.00	4.417	20.00	7.417	5.00	10.42	20.00
1.500	13.00	4.500	20.00	7.500	5.00	10.50	20.00
1.583	13.00	4.583	20.00	7.583	5.00	10.58	20.00
1.667	13.00	4.667	20.00	7.667	5.00	10.67	20.00
1.750	13.00	4.750	20.00	7.750	5.00	10.75	20.00
1.833	13.00	4.833	20.00	7.833	5.00	10.83	20.00
1.917	13.00	4.917	20.00	7.917	5.00	10.92	20.00
2.000	13.00	5.000	20.00	8.000	5.00	11.00	20.00
2.083	13.00	5.083	43.00	8.083	3.00	11.08	15.00
2.167	13.00	5.167	43.00	8.167	3.00	11.17	15.00
2.250	13.00	5.250	43.00	8.250	3.00	11.25	15.00
2.333	13.00	5.333	43.00	8.333	3.00	11.33	15.00
2.417	13.00	5.417	43.00	8.417	3.00	11.42	15.00
2.500	13.00	5.500	43.00	8.500	3.00	11.50	15.00
2.583	13.00	5.583	43.00	8.583	3.00	11.58	15.00

```
             2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
             2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
             2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
             2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
             3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.331 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)= 108.212
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.561

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

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    8.00 | 3.083   23.00 | 6.083   20.00 |  9.08   10.00
             0.167    8.00 | 3.167   23.00 | 6.167   20.00 |  9.17   10.00
             0.250    8.00 | 3.250   23.00 | 6.250   20.00 |  9.25   10.00
             0.333    8.00 | 3.333   23.00 | 6.333   20.00 |  9.33   10.00
             0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
             0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
             0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
             0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
             0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
             0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
             0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
             1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
             1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
             1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
             1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
             1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
             1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
             1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
             1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
             1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
             1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
```

```
             1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
             1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
             2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
             2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
             2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
             2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
             2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
             2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
             2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
             2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
             2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
             2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
             2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
             2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
             3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.120 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  95.338
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.494

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

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06   0.331     6.00   108.21
      + ID2= 2 (  0003):     1.73   0.120     6.00    95.34
        ==================================================
        ID = 3 (  0007):     5.79   0.451     6.00   104.37

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	8.00	3.083	23.00	6.083	20.00	9.08	10.00
0.167	8.00	3.167	23.00	6.167	20.00	9.17	10.00
0.250	8.00	3.250	23.00	6.250	20.00	9.25	10.00
0.333	8.00	3.333	23.00	6.333	20.00	9.33	10.00
0.417	8.00	3.417	23.00	6.417	20.00	9.42	10.00
0.500	8.00	3.500	23.00	6.500	20.00	9.50	10.00
0.583	8.00	3.583	23.00	6.583	20.00	9.58	10.00
0.667	8.00	3.667	23.00	6.667	20.00	9.67	10.00
0.750	8.00	3.750	23.00	6.750	20.00	9.75	10.00
0.833	8.00	3.833	23.00	6.833	20.00	9.83	10.00
0.917	8.00	3.917	23.00	6.917	20.00	9.92	10.00
1.000	8.00	4.000	23.00	7.000	20.00	10.00	10.00
1.083	13.00	4.083	20.00	7.083	5.00	10.08	20.00
1.167	13.00	4.167	20.00	7.167	5.00	10.17	20.00
1.250	13.00	4.250	20.00	7.250	5.00	10.25	20.00
1.333	13.00	4.333	20.00	7.333	5.00	10.33	20.00
1.417	13.00	4.417	20.00	7.417	5.00	10.42	20.00
1.500	13.00	4.500	20.00	7.500	5.00	10.50	20.00
1.583	13.00	4.583	20.00	7.583	5.00	10.58	20.00
1.667	13.00	4.667	20.00	7.667	5.00	10.67	20.00
1.750	13.00	4.750	20.00	7.750	5.00	10.75	20.00
1.833	13.00	4.833	20.00	7.833	5.00	10.83	20.00
1.917	13.00	4.917	20.00	7.917	5.00	10.92	20.00
2.000	13.00	5.000	20.00	8.000	5.00	11.00	20.00
2.083	13.00	5.083	43.00	8.083	3.00	11.08	15.00
2.167	13.00	5.167	43.00	8.167	3.00	11.17	15.00
2.250	13.00	5.250	43.00	8.250	3.00	11.25	15.00
2.333	13.00	5.333	43.00	8.333	3.00	11.33	15.00
2.417	13.00	5.417	43.00	8.417	3.00	11.42	15.00
2.500	13.00	5.500	43.00	8.500	3.00	11.50	15.00
2.583	13.00	5.583	43.00	8.583	3.00	11.58	15.00
2.667	13.00	5.667	43.00	8.667	3.00	11.67	15.00
2.750	13.00	5.750	43.00	8.750	3.00	11.75	15.00
2.833	13.00	5.833	43.00	8.833	3.00	11.83	15.00
2.917	13.00	5.917	43.00	8.917	3.00	11.92	15.00
3.000	13.00	6.000	43.00	9.000	3.00	12.00	15.00

Unit Hyd Qpeak (cms)= 1.320

PEAK FLOW (cms)= 0.568 (i)
TIME TO PEAK (hrs)= 6.000
RUNOFF VOLUME (mm)= 97.438
TOTAL RAINFALL (mm)= 193.000
RUNOFF COEFFICIENT = 0.505

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

```
| CALIB              |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	8.00	3.083	23.00	6.083	20.00	9.08	10.00
0.167	8.00	3.167	23.00	6.167	20.00	9.17	10.00
0.250	8.00	3.250	23.00	6.250	20.00	9.25	10.00
0.333	8.00	3.333	23.00	6.333	20.00	9.33	10.00
0.417	8.00	3.417	23.00	6.417	20.00	9.42	10.00
0.500	8.00	3.500	23.00	6.500	20.00	9.50	10.00
0.583	8.00	3.583	23.00	6.583	20.00	9.58	10.00
0.667	8.00	3.667	23.00	6.667	20.00	9.67	10.00
0.750	8.00	3.750	23.00	6.750	20.00	9.75	10.00
0.833	8.00	3.833	23.00	6.833	20.00	9.83	10.00
0.917	8.00	3.917	23.00	6.917	20.00	9.92	10.00
1.000	8.00	4.000	23.00	7.000	20.00	10.00	10.00
1.083	13.00	4.083	20.00	7.083	5.00	10.08	20.00
1.167	13.00	4.167	20.00	7.167	5.00	10.17	20.00
1.250	13.00	4.250	20.00	7.250	5.00	10.25	20.00
1.333	13.00	4.333	20.00	7.333	5.00	10.33	20.00
1.417	13.00	4.417	20.00	7.417	5.00	10.42	20.00
1.500	13.00	4.500	20.00	7.500	5.00	10.50	20.00
1.583	13.00	4.583	20.00	7.583	5.00	10.58	20.00
1.667	13.00	4.667	20.00	7.667	5.00	10.67	20.00
1.750	13.00	4.750	20.00	7.750	5.00	10.75	20.00
1.833	13.00	4.833	20.00	7.833	5.00	10.83	20.00
1.917	13.00	4.917	20.00	7.917	5.00	10.92	20.00
2.000	13.00	5.000	20.00	8.000	5.00	11.00	20.00
2.083	13.00	5.083	43.00	8.083	3.00	11.08	15.00
2.167	13.00	5.167	43.00	8.167	3.00	11.17	15.00
2.250	13.00	5.250	43.00	8.250	3.00	11.25	15.00
2.333	13.00	5.333	43.00	8.333	3.00	11.33	15.00
2.417	13.00	5.417	43.00	8.417	3.00	11.42	15.00
2.500	13.00	5.500	43.00	8.500	3.00	11.50	15.00
2.583	13.00	5.583	43.00	8.583	3.00	11.58	15.00
2.667	13.00	5.667	43.00	8.667	3.00	11.67	15.00
2.750	13.00	5.750	43.00	8.750	3.00	11.75	15.00
2.833	13.00	5.833	43.00	8.833	3.00	11.83	15.00
2.917	13.00	5.917	43.00	8.917	3.00	11.92	15.00
3.000	13.00	6.000	43.00	9.000	3.00	12.00	15.00

Unit Hyd Qpeak (cms)= 0.925

```
     PEAK FLOW       (cms)=   0.172 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  71.978
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.373

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    8.00 | 3.083   23.00 | 6.083   20.00 |  9.08   10.00
               0.167    8.00 | 3.167   23.00 | 6.167   20.00 |  9.17   10.00
               0.250    8.00 | 3.250   23.00 | 6.250   20.00 |  9.25   10.00
               0.333    8.00 | 3.333   23.00 | 6.333   20.00 |  9.33   10.00
               0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
               0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
               0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
               0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
               0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
               0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
               0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
               1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
               1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
               1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
               1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
               1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
               1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
               1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
               1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
               1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
               1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
               1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
               1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
               2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
               2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
               2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
               2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
               2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
               2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
```

```
               2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
               2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
               2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
               2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
               2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
               2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
               3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

     Unit Hyd Qpeak  (cms)=   0.663

     PEAK FLOW       (cms)=   0.138 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  75.197
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.390

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    8.00 | 3.083   23.00 | 6.083   20.00 |  9.08   10.00
               0.167    8.00 | 3.167   23.00 | 6.167   20.00 |  9.17   10.00
               0.250    8.00 | 3.250   23.00 | 6.250   20.00 |  9.25   10.00
               0.333    8.00 | 3.333   23.00 | 6.333   20.00 |  9.33   10.00
               0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
               0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
               0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
               0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
               0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
               0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
               0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
               1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
               1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
               1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
               1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
               1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
               1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
               1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
               1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
```

```
              1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
              1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
              1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
              1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
              2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
              2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
              2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
              2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
              2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
              2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
              2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
              2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
              2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
              2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
              2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
              2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
              3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

     Unit Hyd Qpeak  (cms)=   0.284

     PEAK FLOW       (cms)=   0.072 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  72.490
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.376

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0002):     7.95   0.568     6.00    97.44
      + ID2= 2 (  0004):     3.15   0.172     6.00    71.98
        ===================================================
        ID = 3 (  0008):    11.10   0.740     6.00    90.21

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    11.10   0.740     6.00    90.21
      + ID2= 2 (  0005):     2.43   0.138     6.00    75.20
        ===================================================
        ID = 1 (  0008):    13.53   0.878     6.00    87.52

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    13.53   0.878     6.00    87.52
      + ID2= 2 (  0006):     1.34   0.072     6.00    72.49
        ===================================================
        ID = 3 (  0008):    14.87   0.951     6.00    86.16

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.451     6.00   104.37
      + ID2= 2 (  0008):    14.87   0.951     6.00    86.16
        ===================================================
        ID = 3 (  0009):    20.66   1.402     6.00    91.26

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

 FINISH
====================================================================================
========================

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

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```
Developed and Distributed by Smart City Water Inc

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\9caaa
0d9-53f1-4745-bf96-c780f68eb365\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\9caaa
0d9-53f1-4745-bf96-c780f68eb365\scena


DATE: 07-18-2025                           TIME: 03:06:59

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : N. 25mm                       **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              5d9dddc3-88a8-4b95-afcf-72a47afba08b\5b142ad0
| Ptotal= 24.99 mm |    Comments: 25mm STORM
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    1.36 |  1.00    6.91 |  2.00    4.18 |  3.00    1.86
                 0.08    1.45 |  1.08   11.02 |  2.08    3.77 |  3.08    1.78
                 0.17    1.55 |  1.17   26.16 |  2.17    3.43 |  3.17    1.71
                 0.25    1.67 |  1.25   76.07 |  2.25    3.16 |  3.25    1.64
                 0.33    1.81 |  1.33   33.71 |  2.33    2.92 |  3.33    1.58
                 0.42    1.99 |  1.42   18.64 |  2.42    2.72 |  3.42    1.52
                 0.50    2.20 |  1.50   12.61 |  2.50    2.55 |  3.50    1.47
                 0.58    2.47 |  1.58    9.46 |  2.58    2.39 |  3.58    1.43
                 0.67    2.82 |  1.67    7.55 |  2.67    2.26 |  3.67    1.38
                 0.75    3.29 |  1.75    6.28 |  2.75    2.14 |  3.75    1.34
                 0.83    3.97 |  1.83    5.38 |  2.83    2.04 |  3.83    1.30
                 0.92    5.03 |  1.92    4.70 |  2.92    1.94 |  3.92    1.26
```

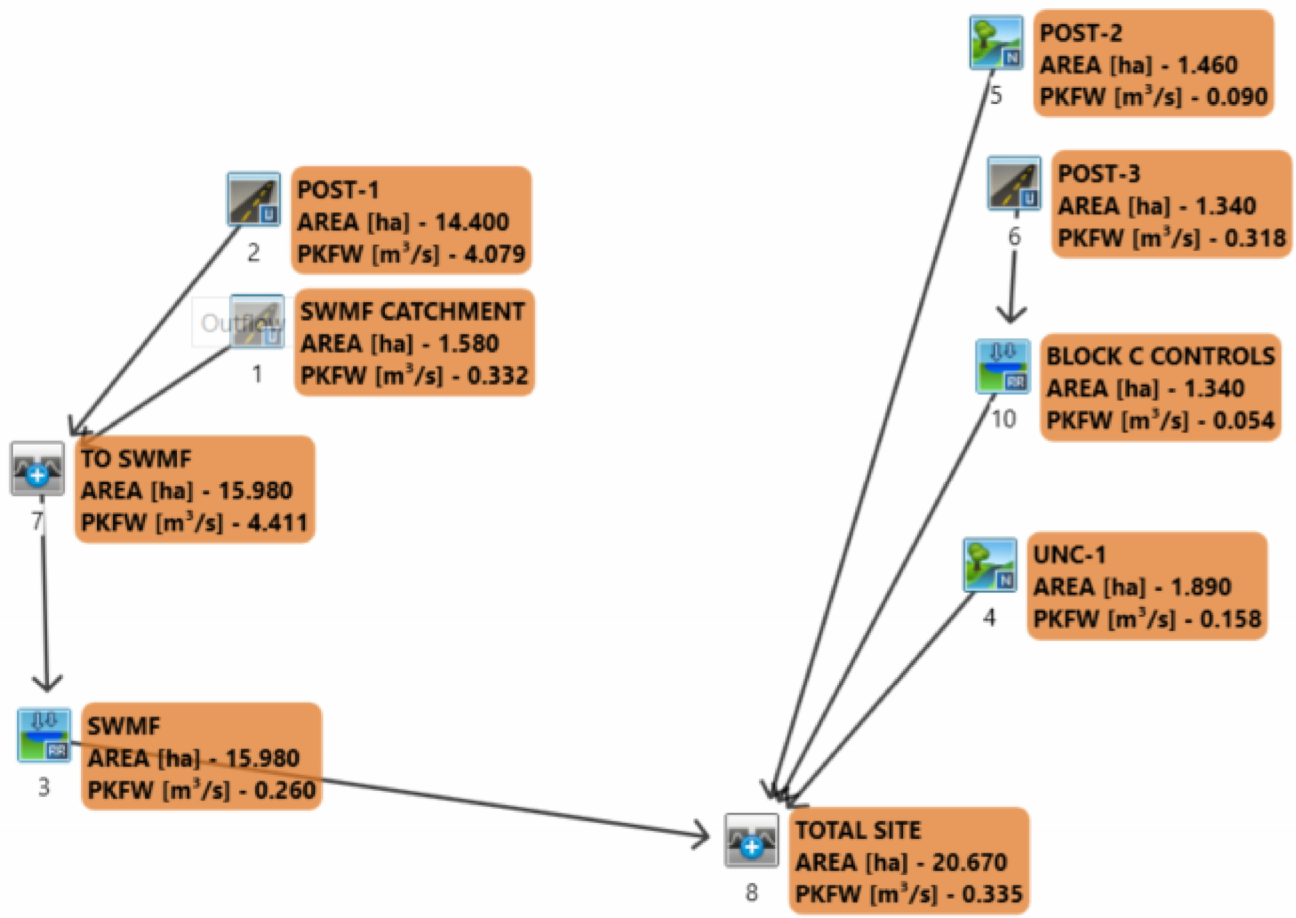
```
-------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=   4.06   Curve Number   (CN)= 65.1
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

     Unit Hyd Qpeak  (cms)=   1.108

     PEAK FLOW       (cms)=   0.033 (i)
     TIME TO PEAK    (hrs)=   1.500
     RUNOFF VOLUME    (mm)=   2.540
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.102

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

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0003)|   Area    (ha)=   1.73   Curve Number   (CN)= 58.2
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.25

     Unit Hyd Qpeak  (cms)=   0.264

     PEAK FLOW       (cms)=   0.008 (i)
     TIME TO PEAK    (hrs)=   1.667
     RUNOFF VOLUME    (mm)=   1.972
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.079

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

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     4.06    0.033     1.50     2.54
      + ID2= 2 (  0003):     1.73    0.008     1.67     1.97
        ==================================================
        ID = 3 (  0007):     5.79    0.039     1.50     2.37

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

```
| NASHYD   (  0002)|   Area    (ha)=   7.95   Curve Number   (CN)= 59.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.23

    Unit Hyd Qpeak  (cms)=   1.320

    PEAK FLOW       (cms)=   0.040 (i)
    TIME TO PEAK    (hrs)=   1.667
    RUNOFF VOLUME    (mm)=   2.054
    TOTAL RAINFALL   (mm)=  24.991
    RUNOFF COEFFICIENT   =   0.082

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   3.15   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.13

    Unit Hyd Qpeak  (cms)=   0.925

    PEAK FLOW       (cms)=   0.013 (i)
    TIME TO PEAK    (hrs)=   1.500
    RUNOFF VOLUME    (mm)=   1.244
    TOTAL RAINFALL   (mm)=  24.991
    RUNOFF COEFFICIENT   =   0.050

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   2.43   Curve Number   (CN)= 47.7
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.14

    Unit Hyd Qpeak  (cms)=   0.663

    PEAK FLOW       (cms)=   0.010 (i)
    TIME TO PEAK    (hrs)=   1.500
    RUNOFF VOLUME    (mm)=   1.329
    TOTAL RAINFALL   (mm)=  24.991
    RUNOFF COEFFICIENT   =   0.053

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

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

```
| CALIB            |
| NASHYD   (  0006)|   Area    (ha)=   1.34   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.18

    Unit Hyd Qpeak  (cms)=   0.284

    PEAK FLOW       (cms)=   0.005 (i)
    TIME TO PEAK    (hrs)=   1.583
    RUNOFF VOLUME    (mm)=   1.252
    TOTAL RAINFALL   (mm)=  24.991
    RUNOFF COEFFICIENT   =   0.050

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

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):     7.95   0.040     1.67     2.05
     + ID2= 2 (  0004):     3.15   0.013     1.50     1.24
       ====================================================
       ID = 3 (  0008):    11.10   0.051     1.58     1.82

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0008):    11.10   0.051     1.58     1.82
     + ID2= 2 (  0005):     2.43   0.010     1.50     1.33
       ====================================================
       ID = 1 (  0008):    13.53   0.060     1.58     1.74

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):    13.53   0.060     1.58     1.74
     + ID2= 2 (  0006):     1.34   0.005     1.58     1.25
       ====================================================
       ID = 3 (  0008):    14.87   0.065     1.58     1.69
```

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

--------------------
| ADD HYD  (  0009)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0007):     5.79   0.039     1.50     2.37
      + ID2= 2 (  0008):    14.87   0.065     1.58     1.69
        ====================================================
        ID = 3 (  0009):    20.66   0.103     1.58     1.88

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

POST-DEVELOPMENT



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

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```



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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\234fb
b18-1681-43f1-9a8c-fe1c3a819c18\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\234fb
b18-1681-43f1-9a8c-fe1c3a819c18\scena


DATE: 07-18-2025                           TIME: 03:09:18

USER:


COMMENTS: ____________________________________________________________

---------------------------------------------------------------------------------
-----------------------
  ************************************************
  ** SIMULATION : A. 2YR 4HR CHI                **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A= 807.440
| Ptotal= 33.70 mm |                          B=   6.750
--------------------                          C=   0.828

                     used in:   INTENSITY =  A / (t + B)^C

                     Duration of storm  =  4.00 hrs
                     Storm time step    = 15.00 min
                     Time to peak ratio =  0.33

              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.00    2.24 |  1.00   63.05 |  2.00    4.06 |  3.00    2.11
              0.25    3.01 |  1.25   16.33 |  2.25    3.28 |  3.25    1.89
              0.50    4.72 |  1.50    8.08 |  2.50    2.76 |  3.50    1.72
              0.75   12.20 |  1.75    5.39 |  2.75    2.39 |  3.75    1.58


-------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
             0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
             0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
             0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
             0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
             0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
             0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
             0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
             0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
             0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
             0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
             1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.031 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   3.344
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.099

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

```
------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
                0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
                0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
                0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
                0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
                0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
                0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
                0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
                0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
                0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
                0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
                1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW      (cms)=   0.017 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   2.298
     TOTAL RAINFALL   (mm)=  33.702
     RUNOFF COEFFICIENT   =   0.068

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

------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n           =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
                0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
                0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
                0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
                0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
                0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
                0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
                0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
                0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
                0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
                0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
                1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Max.Eff.Inten.(mm/hr)=      63.05         4.98
                over (min)        5.00        30.00
     Storage Coeff.  (min)=       2.53 (ii)   25.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.29         0.04
                                                        *TOTALS*
     PEAK FLOW      (cms)=       0.14         0.01         0.139 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.67          1.25
     RUNOFF VOLUME    (mm)=      32.70         4.31         18.50
     TOTAL RAINFALL   (mm)=      33.70        33.70         33.70
     RUNOFF COEFFICIENT   =       0.97         0.13          0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n           =      0.013        0.250
```

```
     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
            0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
            0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
            0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
            0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
            0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
            0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
            0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
            0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
            0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
            0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
            1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Max.Eff.Inten.(mm/hr)=      63.05       195.31
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       4.92 (ii)   10.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.22         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.87         0.60         1.333 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.42         1.25
     RUNOFF VOLUME    (mm)=      32.70        18.45        23.58
     TOTAL RAINFALL   (mm)=      33.70        33.70        33.70
     RUNOFF COEFFICIENT   =       0.97         0.55         0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.139     1.25    18.50
      + ID2= 2 (  0002):    14.40   1.333     1.25    23.58
        ==================================================
        ID = 3 (  0007):    15.98   1.472     1.25    23.08
```

```
     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW   STORAGE   |  OUTFLOW   STORAGE
--------------------      (cms)    (ha.m.)   |   (cms)    (ha.m.)
                          0.0000    0.0000   |   0.1740    0.5610
                          0.0260    0.0960   |   0.3270    0.8390
                          0.0440    0.2000   |   0.4650    1.0670
                          0.0660    0.3130   |   0.6180    1.3110

                                AREA     QPEAK     TPEAK      R.V.
                                (ha)     (cms)     (hrs)      (mm)
   INFLOW : ID= 2 (  0007)     15.980     1.472      1.25      23.08
   OUTFLOW: ID= 1 (  0003)     15.980     0.064      3.83      23.02

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.37
                   TIME SHIFT OF PEAK FLOW        (min)=155.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.3047

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    2.24 | 1.083   63.05 | 2.083    4.06 |  3.08    2.11
            0.167    2.24 | 1.167   63.05 | 2.167    4.06 |  3.17    2.11
            0.250    2.24 | 1.250   63.05 | 2.250    4.06 |  3.25    2.11
            0.333    3.01 | 1.333   16.33 | 2.333    3.28 |  3.33    1.89
            0.417    3.01 | 1.417   16.33 | 2.417    3.28 |  3.42    1.89
            0.500    3.01 | 1.500   16.33 | 2.500    3.28 |  3.50    1.89
            0.583    4.72 | 1.583    8.08 | 2.583    2.76 |  3.58    1.72
            0.667    4.72 | 1.667    8.08 | 2.667    2.76 |  3.67    1.72
            0.750    4.72 | 1.750    8.08 | 2.750    2.76 |  3.75    1.72
```

```
              0.833   12.20 | 1.833    5.39 | 2.833    2.39 |  3.83    1.58
              0.917   12.20 | 1.917    5.39 | 2.917    2.39 |  3.92    1.58
              1.000   12.20 | 2.000    5.39 | 3.000    2.39 |  4.00    1.58

     Max.Eff.Inten.(mm/hr)=      63.05        94.95
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.97 (ii)   10.18 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.04          0.093 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.42           1.25
     RUNOFF VOLUME    (mm)=      32.70        13.02          18.15
     TOTAL RAINFALL   (mm)=      33.70        33.70          33.70
     RUNOFF COEFFICIENT   =       0.97         0.39           0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.093      1.25      18.15
   OUTFLOW: ID= 1 (  0010)      1.340      0.010      2.42      17.71

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 10.86
                 TIME SHIFT OF PEAK FLOW        (min)= 70.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.0168

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0010):      1.34    0.010     2.42    17.71
     + ID2= 2 (  0003):     15.98    0.064     3.83    23.02
       ==================================================
       ID = 3 (  0008):     17.32    0.073     3.25    22.61

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 3 (  0008):     17.32    0.073     3.25    22.61
     + ID2= 2 (  0004):      1.89    0.031     1.25     3.34
       ==================================================
       ID = 1 (  0008):     19.21    0.076     3.00    20.71

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):     19.21    0.076     3.00    20.71
     + ID2= 2 (  0005):      1.46    0.017     1.25     2.30
       ==================================================
       ID = 3 (  0008):     20.67    0.079     1.25    19.41

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
=======================

      V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O     T      T    H   H   Y Y   MM MM  O   O
      O   O     T      T    H   H    Y    M   M  O   O
       OOO      T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\07fa4
0f2-52dc-4b1d-ac5c-f37b662f1f1b\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\07fa4
0f2-52dc-4b1d-ac5c-f37b662f1f1b\scena


DATE: 07-18-2025                           TIME: 03:09:17

USER:



COMMENTS: ____________________________________________________________

-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : B. 5YR 4HR CHI                **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1135.400
| Ptotal= 44.00 mm |                          B=   7.500
--------------------                          C=   0.841
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    2.81 |  1.00   82.79 |  2.00    5.20 |  3.00    2.63
                 0.25    3.81 |  1.25   21.84 |  2.25    4.16 |  3.25    2.35
                 0.50    6.08 |  1.50   10.61 |  2.50    3.48 |  3.50    2.13
                 0.75   16.21 |  1.75    6.97 |  2.75    2.99 |  3.75    1.95


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
               0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
               0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
               0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
               0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
               0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
               0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
               0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
               0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
               0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
               0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
               1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW      (cms)=   0.056 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   5.914
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.134

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

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
               0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
               0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
               0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
               0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
```

```
               0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
               0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
               0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
               0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
               0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
               0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
               1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.032 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   4.115
     TOTAL RAINFALL   (mm)=  44.004
     RUNOFF COEFFICIENT   =   0.094

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

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
               0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
               0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
               0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
               0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
               0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
               0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
               0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
               0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
               0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
               0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
               1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95
```

```
     Max.Eff.Inten.(mm/hr)=      82.79         9.75
                over (min)        5.00        25.00
     Storage Coeff.  (min)=       2.27 (ii)   20.18 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.30         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.01          0.185 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.58           1.25
     RUNOFF VOLUME    (mm)=      43.00         7.55          25.27
     TOTAL RAINFALL   (mm)=      44.00        44.00          44.00
     RUNOFF COEFFICIENT   =       0.98         0.17           0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
               0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
               0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
               0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
               0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
               0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
               0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
               0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
               0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
               0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
               0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
```

```
             1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Max.Eff.Inten.(mm/hr)=      82.79       290.96
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.41 (ii)    9.38 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.23         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.16         1.01        2.113 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33         1.25
     RUNOFF VOLUME    (mm)=      43.00        27.08        32.81
     TOTAL RAINFALL   (mm)=      44.00        44.00        44.00
     RUNOFF COEFFICIENT   =       0.98         0.62         0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.185     1.25    25.27
      + ID2= 2 (  0002):    14.40   2.113     1.25    32.81
        =================================================
        ID = 3 (  0007):    15.98   2.298     1.25    32.07

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      2.298      1.25      32.07
   OUTFLOW: ID= 1 (  0003)     15.980      0.110      3.17      32.01
```

```
                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.77
                   TIME SHIFT OF PEAK FLOW         (min)=115.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.4133

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                  0.083    2.81 | 1.083   82.79 | 2.083    5.20 |  3.08    2.63
                  0.167    2.81 | 1.167   82.79 | 2.167    5.20 |  3.17    2.63
                  0.250    2.81 | 1.250   82.79 | 2.250    5.20 |  3.25    2.63
                  0.333    3.81 | 1.333   21.84 | 2.333    4.16 |  3.33    2.35
                  0.417    3.81 | 1.417   21.84 | 2.417    4.16 |  3.42    2.35
                  0.500    3.81 | 1.500   21.84 | 2.500    4.16 |  3.50    2.35
                  0.583    6.08 | 1.583   10.61 | 2.583    3.48 |  3.58    2.13
                  0.667    6.08 | 1.667   10.61 | 2.667    3.48 |  3.67    2.13
                  0.750    6.08 | 1.750   10.61 | 2.750    3.48 |  3.75    2.13
                  0.833   16.21 | 1.833    6.97 | 2.833    2.99 |  3.83    1.95
                  0.917   16.21 | 1.917    6.97 | 2.917    2.99 |  3.92    1.95
                  1.000   16.21 | 2.000    6.97 | 3.000    2.99 |  4.00    1.95

     Max.Eff.Inten.(mm/hr)=      82.79       149.59
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.66 (ii)    8.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.08        0.154 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33         1.25
     RUNOFF VOLUME    (mm)=      43.00        20.06        26.05
     TOTAL RAINFALL   (mm)=      44.00        44.00        44.00
     RUNOFF COEFFICIENT   =       0.98         0.46         0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

```
      (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.

-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.154      1.25      26.05
   OUTFLOW: ID= 1 (  0010)      1.340      0.018      2.17      25.60

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.72
                   TIME SHIFT OF PEAK FLOW         (min)= 55.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0233

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34   0.018     2.17    25.60
      + ID2= 2 (  0003):    15.98   0.110     3.17    32.01
        ==================================================
        ID = 3 (  0008):    17.32   0.126     2.92    31.51

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.126     2.92    31.51
      + ID2= 2 (  0004):     1.89   0.056     1.25     5.91
        ==================================================
        ID = 1 (  0008):    19.21   0.130     2.75    29.00

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21   0.130     2.75    29.00
      + ID2= 2 (  0005):     1.46   0.032     1.25     4.11
        ==================================================
        ID = 3 (  0008):    20.67   0.133     2.50    27.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\a46c7
5cf-f24a-454e-97e2-66b60db9fe31\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\a46c7
5cf-f24a-454e-97e2-66b60db9fe31\scena


DATE: 07-18-2025                           TIME: 03:09:19

USER:
```

```
COMMENTS: ____________________________________________________________

-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : C. 10YR 4HR CHI              **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1387.000
| Ptotal= 50.51 mm |                          B=   7.970
--------------------                          C=   0.852
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    3.09 |  1.00   96.02 |  2.00    5.84 |  3.00    2.89
                 0.25    4.24 |  1.25   25.43 |  2.25    4.64 |  3.25    2.58
                 0.50    6.86 |  1.50   12.17 |  2.50    3.85 |  3.50    2.33
                 0.75   18.79 |  1.75    7.90 |  2.75    3.30 |  3.75    2.12


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
                0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
                0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
                0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
                0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
                0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
                0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
                0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
                0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
```

```
                0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
                0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
                1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.077 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   7.843
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.155

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

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
                0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
                0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
                0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
                0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
                0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
                0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
                0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
                0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
                0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
                0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
                1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.043 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   5.497
     TOTAL RAINFALL   (mm)=  50.514
     RUNOFF COEFFICIENT   =   0.109

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

```
---------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
                0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
                0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
                0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
                0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
                0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
                0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
                0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
                0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
                0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
                0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
                1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Max.Eff.Inten.(mm/hr)=      96.02        15.41
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       2.14 (ii)   17.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.31         0.06
                                                          *TOTALS*
     PEAK FLOW      (cms)=       0.21         0.02          0.219 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.50          1.25
     RUNOFF VOLUME    (mm)=      49.51         9.96         29.73
     TOTAL RAINFALL   (mm)=      50.51        50.51         50.51
     RUNOFF COEFFICIENT   =       0.98         0.20          0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

---------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
                0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
                0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
                0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
                0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
                0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
                0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
                0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
                0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
                0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
                0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
                1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

     Max.Eff.Inten.(mm/hr)=      96.02       357.16
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.16 (ii)    8.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
     PEAK FLOW      (cms)=       1.35         1.26          2.566 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33          1.25
     RUNOFF VOLUME    (mm)=      49.51        32.77         38.80
     TOTAL RAINFALL   (mm)=      50.51        50.51         50.51
     RUNOFF COEFFICIENT   =       0.98         0.65          0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0001):      1.58    0.219     1.25    29.73
     + ID2= 2 (  0002):     14.40    2.566     1.25    38.80
       ====================================================
       ID = 3 (  0007):     15.98    2.785     1.25    37.90

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740     0.5610
                          0.0260     0.0960   |   0.3270     0.8390
                          0.0440     0.2000   |   0.4650     1.0670
                          0.0660     0.3130   |   0.6180     1.3110

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      2.785      1.25      37.90
   OUTFLOW: ID= 1 (  0003)     15.980      0.140      2.92      37.85

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.04
                  TIME SHIFT OF PEAK FLOW         (min)=100.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.4837

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       1.07         0.27
    Dep. Storage     (mm)=       1.00         5.00
    Average Slope     (%)=       1.00         2.00
    Length            (m)=      94.52        40.00
    Mannings n          =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
          0.083    3.09 | 1.083   96.02 | 2.083    5.84 |  3.08    2.89
          0.167    3.09 | 1.167   96.02 | 2.167    5.84 |  3.17    2.89
          0.250    3.09 | 1.250   96.02 | 2.250    5.84 |  3.25    2.89
          0.333    4.24 | 1.333   25.43 | 2.333    4.64 |  3.33    2.58
          0.417    4.24 | 1.417   25.43 | 2.417    4.64 |  3.42    2.58
          0.500    4.24 | 1.500   25.43 | 2.500    4.64 |  3.50    2.58
          0.583    6.86 | 1.583   12.17 | 2.583    3.85 |  3.58    2.33
          0.667    6.86 | 1.667   12.17 | 2.667    3.85 |  3.67    2.33
          0.750    6.86 | 1.750   12.17 | 2.750    3.85 |  3.75    2.33
          0.833   18.79 | 1.833    7.90 | 2.833    3.30 |  3.83    2.12
          0.917   18.79 | 1.917    7.90 | 2.917    3.30 |  3.92    2.12
          1.000   18.79 | 2.000    7.90 | 3.000    3.30 |  4.00    2.12

    Max.Eff.Inten.(mm/hr)=      96.02       189.06
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       2.51 (ii)    7.98 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.29         0.13
                                                         *TOTALS*
    PEAK FLOW      (cms)=       0.09         0.10          0.190 (iii)
    TIME TO PEAK   (hrs)=       1.25         1.33           1.25
    RUNOFF VOLUME    (mm)=      49.51        24.87          31.30
    TOTAL RAINFALL   (mm)=      50.51        50.51          50.51
    RUNOFF COEFFICIENT   =       0.98         0.49           0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350     0.0329
                          0.0100     0.0168   |   0.0440     0.0373
                          0.0180     0.0233   |   0.0540     0.0411
                          0.0250     0.0275   |   0.0000     0.0000
```

```
                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.190      1.25      31.30
   OUTFLOW: ID= 1 (  0010)      1.340      0.025      2.00      30.85

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.15
                   TIME SHIFT OF PEAK FLOW         (min)= 45.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0275

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

 --------------------
 | ADD HYD  (  0008)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (  0010):     1.34   0.025     2.00    30.85
       + ID2= 2 (  0003):    15.98   0.140     2.92    37.85
         ==================================================
         ID = 3 (  0008):    17.32   0.162     2.58    37.30

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

 --------------------
 | ADD HYD  (  0008)|
 |   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 3 (  0008):    17.32   0.162     2.58    37.30
       + ID2= 2 (  0004):     1.89   0.077     1.25     7.84
         ==================================================
         ID = 1 (  0008):    19.21   0.169     2.50    34.41

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

 --------------------
 | ADD HYD  (  0008)|
 |   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
 --------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (  0008):    19.21   0.169     2.50    34.41
       + ID2= 2 (  0005):     1.46   0.043     1.25     5.50
         ==================================================
         ID = 3 (  0008):    20.67   0.173     2.25    32.36

      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
 --------------------------------------------------------------------------------
 ====================================================================================
 ========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
```

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

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\73189
2f4-4caf-4299-a861-f0c331e68960\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\73189
2f4-4caf-4299-a861-f0c331e68960\scena


DATE: 07-18-2025                           TIME: 03:09:19

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : D. 25YR 4HR CHI               **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1676.200
| Ptotal= 58.99 mm |                          B=   8.300
--------------------                          C=   0.858
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
```

```
                     Time to peak ratio =  0.33

              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.00    3.54 |  1.00  112.50 |  2.00    6.75 |  3.00    3.30
              0.25    4.87 |  1.25   30.00 |  2.25    5.34 |  3.25    2.94
              0.50    7.95 |  1.50   14.24 |  2.50    4.42 |  3.50    2.65
              0.75   22.10 |  1.75    9.18 |  2.75    3.78 |  3.75    2.41


--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
             0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
             0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
             0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
             0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
             0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
             0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
             0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
             0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
             0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
             0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
             1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW      (cms)=   0.106 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=  10.674
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.181

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
             0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
             0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
             0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
             0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
             0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
             0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
             0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
             0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
             0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
             0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
             0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
             1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW      (cms)=   0.060 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   7.550
     TOTAL RAINFALL   (mm)=  58.993
     RUNOFF COEFFICIENT   =   0.128

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
           0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
           0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
           0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
           0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
           0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
           0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
           0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
           0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
           0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
           0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
           0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
           1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Max.Eff.Inten.(mm/hr)=     112.50        21.46
                over (min)       5.00        20.00
     Storage Coeff.  (min)=       2.01 (ii)   15.07 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.31         0.07
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.03          0.259 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.50           1.25
     RUNOFF VOLUME    (mm)=      57.99        13.47          35.73
     TOTAL RAINFALL   (mm)=      58.99        58.99          58.99
     RUNOFF COEFFICIENT   =       0.98         0.23           0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
              0.083    3.54 | 1.083  112.50 | 2.083    6.75 |  3.08    3.30
              0.167    3.54 | 1.167  112.50 | 2.167    6.75 |  3.17    3.30
              0.250    3.54 | 1.250  112.50 | 2.250    6.75 |  3.25    3.30
              0.333    4.87 | 1.333   30.00 | 2.333    5.34 |  3.33    2.94
              0.417    4.87 | 1.417   30.00 | 2.417    5.34 |  3.42    2.94
              0.500    4.87 | 1.500   30.00 | 2.500    5.34 |  3.50    2.94
              0.583    7.95 | 1.583   14.24 | 2.583    4.42 |  3.58    2.65
              0.667    7.95 | 1.667   14.24 | 2.667    4.42 |  3.67    2.65
              0.750    7.95 | 1.750   14.24 | 2.750    4.42 |  3.75    2.65
              0.833   22.10 | 1.833    9.18 | 2.833    3.78 |  3.83    2.41
              0.917   22.10 | 1.917    9.18 | 2.917    3.78 |  3.92    2.41
              1.000   22.10 | 2.000    9.18 | 3.000    3.78 |  4.00    2.41

     Max.Eff.Inten.(mm/hr)=     112.50       442.13
                over (min)       5.00        10.00
     Storage Coeff.  (min)=       3.90 (ii)    8.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.25         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.59         1.60          3.155 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33           1.25
     RUNOFF VOLUME    (mm)=      57.99        40.38          46.72
     TOTAL RAINFALL   (mm)=      58.99        58.99          58.99
     RUNOFF COEFFICIENT   =       0.98         0.68           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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


--------------------
| ADD HYD  (  0007)|
|  1 +  2 =  3     |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.259     1.25    35.73
      + ID2= 2 (  0002):    14.40   3.155     1.25    46.72
        ==================================================
        ID = 3 (  0007):    15.98   3.415     1.25    45.63

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

```
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740     0.5610
                          0.0260     0.0960   |   0.3270     0.8390
                          0.0440     0.2000   |   0.4650     1.0670
                          0.0660     0.3130   |   0.6180     1.3110

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      3.415      1.25      45.63
   OUTFLOW: ID= 1 (  0003)     15.980      0.183      2.75      45.58

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.35
                   TIME SHIFT OF PEAK FLOW         (min)= 90.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.5767

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.54 | 1.083  112.50 | 2.083     6.75 |   3.08    3.30
                0.167    3.54 | 1.167  112.50 | 2.167     6.75 |   3.17    3.30
                0.250    3.54 | 1.250  112.50 | 2.250     6.75 |   3.25    3.30
                0.333    4.87 | 1.333   30.00 | 2.333     5.34 |   3.33    2.94
                0.417    4.87 | 1.417   30.00 | 2.417     5.34 |   3.42    2.94
                0.500    4.87 | 1.500   30.00 | 2.500     5.34 |   3.50    2.94
                0.583    7.95 | 1.583   14.24 | 2.583     4.42 |   3.58    2.65
                0.667    7.95 | 1.667   14.24 | 2.667     4.42 |   3.67    2.65
                0.750    7.95 | 1.750   14.24 | 2.750     4.42 |   3.75    2.65
                0.833   22.10 | 1.833    9.18 | 2.833     3.78 |   3.83    2.41
                0.917   22.10 | 1.917    9.18 | 2.917     3.78 |   3.92    2.41
                1.000   22.10 | 2.000    9.18 | 3.000     3.78 |   4.00    2.41
```

```
     Max.Eff.Inten.(mm/hr)=     112.50       241.51
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.36 (ii)    7.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.14         0.239 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33          1.25
     RUNOFF VOLUME    (mm)=      57.99        31.44         38.37
     TOTAL RAINFALL   (mm)=      58.99        58.99         58.99
     RUNOFF COEFFICIENT   =       0.98         0.53          0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350     0.0329
                          0.0100     0.0168   |   0.0440     0.0373
                          0.0180     0.0233   |   0.0540     0.0411
                          0.0250     0.0275   |   0.0000     0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.239      1.25      38.37
   OUTFLOW: ID= 1 (  0010)      1.340      0.035      1.92      37.93

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 14.67
                   TIME SHIFT OF PEAK FLOW         (min)= 40.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0330

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


--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34    0.035     1.92    37.93
      + ID2= 2 (  0003):    15.98    0.183     2.75    45.58
        ====================================================
```

```
      ID = 3 (  0008):    17.32   0.213     2.50    44.98

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.213     2.50    44.98
      + ID2= 2 (  0004):     1.89   0.106     1.25    10.67
        ==================================================
        ID = 1 (  0008):    19.21   0.223     2.25    41.61

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21   0.223     2.25    41.61
      + ID2= 2 (  0005):     1.46   0.060     1.25     7.55
        ==================================================
        ID = 3 (  0008):    20.67   0.229     1.25    39.20

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O     T      T    H   H   Y Y   MM MM  O   O
       O   O     T      T    H   H    Y    M   M  O   O
        OOO      T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat
```

```
  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\d9790
594-535d-4bac-8c3b-a8b859ffa307\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\d9790
594-535d-4bac-8c3b-a8b859ffa307\scena


DATE: 07-18-2025                             TIME: 03:09:19

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  *************************************************
  ** SIMULATION : E. 50YR 4HR CHI                **
  *************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=1973.100
| Ptotal= 65.56 mm |                          B=   9.000
--------------------                          C=   0.868
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    3.80 |  1.00  125.06 |   2.00    7.41 |  3.00    3.54
                 0.25    5.30 |  1.25   34.03 |   2.25    5.82 |  3.25    3.14
                 0.50    8.78 |  1.50   15.96 |   2.50    4.79 |  3.50    2.82
                 0.75   24.98 |  1.75   10.17 |   2.75    4.07 |  3.75    2.56


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=    1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=    5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
            0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
            0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
            0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
            0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
            0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
            0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
            0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
            0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
            0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
            0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
            1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.131 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=  13.094
     TOTAL RAINFALL   (mm)=  65.558
     RUNOFF COEFFICIENT   =   0.200

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
            0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
            0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
            0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
            0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
            0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
            0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
            0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
            0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
```

```
            0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
            0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
            1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.075 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=   9.323
     TOTAL RAINFALL   (mm)=  65.558
     RUNOFF COEFFICIENT   =   0.142

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
            0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
            0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
            0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
            0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
            0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
            0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
            0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
            0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
            0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
            0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
            1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Max.Eff.Inten.(mm/hr)=     125.06        26.66
                over (min)       5.00        15.00
     Storage Coeff.  (min)=       1.93 (ii)   13.90 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
```

```
     Unit Hyd. peak  (cms)=       0.31         0.08
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.27         0.04      0.298 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.42       1.25
     RUNOFF VOLUME    (mm)=      64.56        16.45      40.50
     TOTAL RAINFALL   (mm)=      65.56        65.56      65.56
     RUNOFF COEFFICIENT   =       0.98         0.25       0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
               0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
               0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
               0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
               0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
               0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
               0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
               0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
               0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
               0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
               0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
               1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Max.Eff.Inten.(mm/hr)=     125.06       508.14
                over (min)        5.00        10.00
```

```
     Storage Coeff.  (min)=       3.74 (ii)    7.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.25         0.13
                                                       *TOTALS*
     PEAK FLOW       (cms)=       1.77         1.86      3.618 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33       1.25
     RUNOFF VOLUME    (mm)=      64.56        46.38      52.93
     TOTAL RAINFALL   (mm)=      65.56        65.56      65.56
     RUNOFF COEFFICIENT   =       0.98         0.71       0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):    1.58   0.298     1.25    40.50
      + ID2= 2 (  0002):   14.40   3.618     1.25    52.93
        ===============================================
        ID = 3 (  0007):   15.98   3.917     1.25    51.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740     0.5610
                          0.0260     0.0960   |   0.3270     0.8390
                          0.0440     0.2000   |   0.4650     1.0670
                          0.0660     0.3130   |   0.6180     1.3110

                              AREA     QPEAK     TPEAK       R.V.
                              (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      3.917      1.25      51.70
   OUTFLOW: ID= 1 (  0003)     15.980      0.223      2.58      51.64

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.68
                 TIME SHIFT OF PEAK FLOW        (min)= 80.00
                 MAXIMUM  STORAGE   USED       (ha.m.)=  0.6492
```

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    3.80 | 1.083  125.06 | 2.083    7.41 |  3.08    3.54
                0.167    3.80 | 1.167  125.06 | 2.167    7.41 |  3.17    3.54
                0.250    3.80 | 1.250  125.06 | 2.250    7.41 |  3.25    3.54
                0.333    5.30 | 1.333   34.03 | 2.333    5.82 |  3.33    3.14
                0.417    5.30 | 1.417   34.03 | 2.417    5.82 |  3.42    3.14
                0.500    5.30 | 1.500   34.03 | 2.500    5.82 |  3.50    3.14
                0.583    8.78 | 1.583   15.96 | 2.583    4.79 |  3.58    2.82
                0.667    8.78 | 1.667   15.96 | 2.667    4.79 |  3.67    2.82
                0.750    8.78 | 1.750   15.96 | 2.750    4.79 |  3.75    2.82
                0.833   24.98 | 1.833   10.17 | 2.833    4.07 |  3.83    2.56
                0.917   24.98 | 1.917   10.17 | 2.917    4.07 |  3.92    2.56
                1.000   24.98 | 2.000   10.17 | 3.000    4.07 |  4.00    2.56

     Max.Eff.Inten.(mm/hr)=     125.06       283.40
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.26 (ii)    6.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.14
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.16          0.279 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33           1.25
     RUNOFF VOLUME    (mm)=      64.56        36.73          43.99
     TOTAL RAINFALL   (mm)=      65.56        65.56          65.56
     RUNOFF COEFFICIENT   =       0.98         0.56           0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350     0.0329
                          0.0100     0.0168   |   0.0440     0.0373
                          0.0180     0.0233   |   0.0540     0.0411
                          0.0250     0.0275   |   0.0000     0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340     0.279      1.25      43.99
   OUTFLOW: ID= 1 (  0010)      1.340     0.044      1.83      43.55

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.82
                  TIME SHIFT OF PEAK FLOW        (min)= 35.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0374

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):      1.34   0.044     1.83    43.55
      + ID2= 2 (  0003):     15.98   0.223     2.58    51.64
        ==================================================
        ID = 3 (  0008):     17.32   0.261     2.33    51.01

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):     17.32   0.261     2.33    51.01
      + ID2= 2 (  0004):      1.89   0.131     1.25    13.09
        ==================================================
        ID = 1 (  0008):     19.21   0.274     2.25    47.28

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

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

```
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):    19.21   0.274     2.25    47.28
     + ID2= 2 (  0005):     1.46   0.075     1.25     9.32
       ===================================================
       ID = 3 (  0008):    20.67   0.283     2.00    44.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

      V    V   I    SSSSS  U   U    A    L              (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```



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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\a6752
e8e-f3fc-40be-9531-523c4fc5fb5c\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\a6752
e8e-f3fc-40be-9531-523c4fc5fb5c\scena


DATE: 07-18-2025                           TIME: 03:09:19

USER:


COMMENTS: ____________________________________________________________
```

```
-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : F. 100YR 4HR CHI              **
  ************************************************

--------------------
| CHICAGO STORM    |    IDF curve parameters: A=2193.100
| Ptotal= 71.66 mm |                          B=   9.040
--------------------                          C=   0.871
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  4.00 hrs
                        Storm time step    = 15.00 min
                        Time to peak ratio =  0.33

                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    4.10 |  1.00  137.49 |  2.00    8.03 |  3.00    3.82
                 0.25    5.72 |  1.25   37.24 |  2.25    6.29 |  3.25    3.38
                 0.50    9.52 |  1.50   17.39 |  2.50    5.17 |  3.50    3.03
                 0.75   27.29 |  1.75   11.04 |  2.75    4.39 |  3.75    2.75


-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75
```

```
     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.158 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=  15.508
     TOTAL RAINFALL   (mm)=  71.662
     RUNOFF COEFFICIENT   =   0.216

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.090 (i)
     TIME TO PEAK    (hrs)=   1.250
     RUNOFF VOLUME    (mm)=  11.109
     TOTAL RAINFALL   (mm)=  71.662
     RUNOFF COEFFICIENT   =   0.155

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75

     Max.Eff.Inten.(mm/hr)=     137.49        32.05
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       1.86 (ii)   12.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.30         0.05         0.332 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.42          1.25
     RUNOFF VOLUME    (mm)=      70.66        19.40         45.03
     TOTAL RAINFALL   (mm)=      71.66        71.66         71.66
     RUNOFF COEFFICIENT   =       0.99         0.27          0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

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

```
| CALIB              |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    4.10 | 1.083  137.49 | 2.083    8.03 |  3.08    3.82
                 0.167    4.10 | 1.167  137.49 | 2.167    8.03 |  3.17    3.82
                 0.250    4.10 | 1.250  137.49 | 2.250    8.03 |  3.25    3.82
                 0.333    5.72 | 1.333   37.24 | 2.333    6.29 |  3.33    3.38
                 0.417    5.72 | 1.417   37.24 | 2.417    6.29 |  3.42    3.38
                 0.500    5.72 | 1.500   37.24 | 2.500    6.29 |  3.50    3.38
                 0.583    9.52 | 1.583   17.39 | 2.583    5.17 |  3.58    3.03
                 0.667    9.52 | 1.667   17.39 | 2.667    5.17 |  3.67    3.03
                 0.750    9.52 | 1.750   17.39 | 2.750    5.17 |  3.75    3.03
                 0.833   27.29 | 1.833   11.04 | 2.833    4.39 |  3.83    2.75
                 0.917   27.29 | 1.917   11.04 | 2.917    4.39 |  3.92    2.75
                 1.000   27.29 | 2.000   11.04 | 3.000    4.39 |  4.00    2.75

     Max.Eff.Inten.(mm/hr)=     137.49       573.25
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.60 (ii)    7.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.26         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.96         2.12         4.079 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.25          1.25
     RUNOFF VOLUME    (mm)=      70.66        52.03         58.74
     TOTAL RAINFALL   (mm)=      71.66        71.66         71.66
     RUNOFF COEFFICIENT   =       0.99         0.73          0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.
```

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58    0.332     1.25    45.03
      + ID2= 2 (  0002):    14.40    4.079     1.25    58.74
        ==================================================
        ID = 3 (  0007):    15.98    4.411     1.25    57.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                             AREA     QPEAK     TPEAK       R.V.
                             (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      4.411      1.25      57.38
   OUTFLOW: ID= 1 (  0003)     15.980      0.260      2.58      57.33

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.88
                   TIME SHIFT OF PEAK FLOW        (min)= 80.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.7166

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
              0.083     4.10 | 1.083  137.49 | 2.083     8.03 |  3.08     3.82
              0.167     4.10 | 1.167  137.49 | 2.167     8.03 |  3.17     3.82
              0.250     4.10 | 1.250  137.49 | 2.250     8.03 |  3.25     3.82
              0.333     5.72 | 1.333   37.24 | 2.333     6.29 |  3.33     3.38
              0.417     5.72 | 1.417   37.24 | 2.417     6.29 |  3.42     3.38
              0.500     5.72 | 1.500   37.24 | 2.500     6.29 |  3.50     3.38
              0.583     9.52 | 1.583   17.39 | 2.583     5.17 |  3.58     3.03
              0.667     9.52 | 1.667   17.39 | 2.667     5.17 |  3.67     3.03
              0.750     9.52 | 1.750   17.39 | 2.750     5.17 |  3.75     3.03
              0.833    27.29 | 1.833   11.04 | 2.833     4.39 |  3.83     2.75
              0.917    27.29 | 1.917   11.04 | 2.917     4.39 |  3.92     2.75
              1.000    27.29 | 2.000   11.04 | 3.000     4.39 |  4.00     2.75

     Max.Eff.Inten.(mm/hr)=     137.49       325.30
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.17 (ii)    6.58 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.19          0.318 (iii)
     TIME TO PEAK    (hrs)=       1.25         1.33           1.25
     RUNOFF VOLUME    (mm)=      70.66        41.77          49.31
     TOTAL RAINFALL   (mm)=      71.66        71.66          71.66
     RUNOFF COEFFICIENT   =       0.99         0.58           0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340     0.318     1.25       49.31
   OUTFLOW: ID= 1 (  0010)      1.340     0.054     1.83       48.87
```

```
                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 17.08
                   TIME SHIFT OF PEAK FLOW         (min)= 35.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0413

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34    0.054     1.83    48.87
      + ID2= 2 (  0003):    15.98    0.260     2.58    57.33
        ==================================================
        ID = 3 (  0008):    17.32    0.305     2.25    56.67

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32    0.305     2.25    56.67
      + ID2= 2 (  0004):     1.89    0.158     1.25    15.51
        ==================================================
        ID = 1 (  0008):    19.21    0.323     2.00    52.62

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21    0.323     2.00    52.62
      + ID2= 2 (  0005):     1.46    0.090     1.25    11.11
        ==================================================
        ID = 3 (  0008):    20.67    0.335     2.00    49.69

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL
```

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

Developed and Distributed by Smart City Water Inc

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

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\e6a86
129-22cd-401a-9d7b-0517f1b62b49\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\e6a86
129-22cd-401a-9d7b-0517f1b62b49\scena


DATE: 07-18-2025                           TIME: 03:09:20

USER:


COMMENTS: ____________________________________________________________

------------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : G. 2YR 24HR SCS              **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\5da92b4f
| Ptotal= 46.83 mm |    Comments: 2yr 24hr 15min SCS Type II (MTO)
--------------------
```

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	0.84	12.50	6.74	18.75	0.84
0.25	0.52	6.50	0.84	12.75	3.47	19.00	0.84
0.50	0.52	6.75	0.84	13.00	3.47	19.25	0.84
0.75	0.52	7.00	0.84	13.25	2.53	19.50	0.84
1.00	0.52	7.25	1.03	13.50	2.53	19.75	0.84
1.25	0.52	7.50	1.03	13.75	1.97	20.00	0.84
1.50	0.52	7.75	1.03	14.00	1.97	20.25	0.56
1.75	0.52	8.00	1.03	14.25	1.40	20.50	0.56
2.00	0.52	8.25	1.22	14.50	1.40	20.75	0.56
2.25	0.61	8.50	1.22	14.75	1.40	21.00	0.56
2.50	0.61	8.75	1.31	15.00	1.40	21.25	0.56
2.75	0.61	9.00	1.31	15.25	1.40	21.50	0.56
3.00	0.61	9.25	1.50	15.50	1.40	21.75	0.56
3.25	0.61	9.50	1.50	15.75	1.40	22.00	0.56
3.50	0.61	9.75	1.69	16.00	1.40	22.25	0.56
3.75	0.61	10.00	1.69	16.25	0.84	22.50	0.56
4.00	0.61	10.25	2.15	16.50	0.84	22.75	0.56
4.25	0.75	10.50	2.15	16.75	0.84	23.00	0.56
4.50	0.75	10.75	2.90	17.00	0.84	23.25	0.56
4.75	0.75	11.00	2.90	17.25	0.84	23.50	0.56
5.00	0.75	11.25	4.50	17.50	0.84	23.75	0.56
5.25	0.75	11.50	4.50	17.75	0.84	24.00	0.56
5.50	0.75	11.75	13.86	18.00	0.84		
5.75	0.75	12.00	57.32	18.25	0.84		
6.00	0.75	12.25	6.74	18.50	0.84		

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

--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	0.75	12.250	57.32	18.33	0.84
0.167	0.00	6.250	0.75	12.333	6.75	18.42	0.84
0.250	0.00	6.333	0.84	12.417	6.74	18.50	0.84
0.333	0.52	6.417	0.84	12.500	6.74	18.58	0.84
0.417	0.52	6.500	0.84	12.583	6.74	18.67	0.84
0.500	0.52	6.583	0.84	12.667	6.74	18.75	0.84
0.583	0.52	6.667	0.84	12.750	6.74	18.83	0.84
0.667	0.52	6.750	0.84	12.833	3.47	18.92	0.84
0.750	0.52	6.833	0.84	12.917	3.47	19.00	0.84
0.833	0.52	6.917	0.84	13.000	3.47	19.08	0.84
0.917	0.52	7.000	0.84	13.083	3.47	19.17	0.84
1.000	0.52	7.083	0.84	13.167	3.47	19.25	0.84
1.083	0.52	7.167	0.84	13.250	3.47	19.33	0.84

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
1.167	0.52	7.250	0.84	13.333	2.53	19.42	0.84
1.250	0.52	7.333	1.03	13.417	2.53	19.50	0.84
1.333	0.52	7.417	1.03	13.500	2.53	19.58	0.84
1.417	0.52	7.500	1.03	13.583	2.53	19.67	0.84
1.500	0.52	7.583	1.03	13.667	2.53	19.75	0.84
1.583	0.52	7.667	1.03	13.750	2.53	19.83	0.84
1.667	0.52	7.750	1.03	13.833	1.97	19.92	0.84
1.750	0.52	7.833	1.03	13.917	1.97	20.00	0.84
1.833	0.52	7.917	1.03	14.000	1.97	20.08	0.84
1.917	0.52	8.000	1.03	14.083	1.97	20.17	0.84
2.000	0.52	8.083	1.03	14.167	1.97	20.25	0.84
2.083	0.52	8.167	1.03	14.250	1.97	20.33	0.56
2.167	0.52	8.250	1.03	14.333	1.41	20.42	0.56
2.250	0.52	8.333	1.22	14.417	1.40	20.50	0.56
2.333	0.61	8.417	1.22	14.500	1.40	20.58	0.56
2.417	0.61	8.500	1.22	14.583	1.40	20.67	0.56
2.500	0.61	8.583	1.22	14.667	1.40	20.75	0.56
2.583	0.61	8.667	1.22	14.750	1.40	20.83	0.56
2.667	0.61	8.750	1.22	14.833	1.40	20.92	0.56
2.750	0.61	8.833	1.31	14.917	1.40	21.00	0.56
2.833	0.61	8.917	1.31	15.000	1.40	21.08	0.56
2.917	0.61	9.000	1.31	15.083	1.40	21.17	0.56
3.000	0.61	9.083	1.31	15.167	1.40	21.25	0.56
3.083	0.61	9.167	1.31	15.250	1.40	21.33	0.56
3.167	0.61	9.250	1.31	15.333	1.40	21.42	0.56
3.250	0.61	9.333	1.50	15.417	1.40	21.50	0.56
3.333	0.61	9.417	1.50	15.500	1.40	21.58	0.56
3.417	0.61	9.500	1.50	15.583	1.40	21.67	0.56
3.500	0.61	9.583	1.50	15.667	1.40	21.75	0.56
3.583	0.61	9.667	1.50	15.750	1.40	21.83	0.56
3.667	0.61	9.750	1.50	15.833	1.40	21.92	0.56
3.750	0.61	9.833	1.69	15.917	1.40	22.00	0.56
3.833	0.61	9.917	1.69	16.000	1.40	22.08	0.56
3.917	0.61	10.000	1.69	16.083	1.40	22.17	0.56
4.000	0.61	10.083	1.69	16.167	1.40	22.25	0.56
4.083	0.61	10.167	1.69	16.250	1.40	22.33	0.56
4.167	0.61	10.250	1.69	16.333	0.84	22.42	0.56
4.250	0.61	10.333	2.15	16.417	0.84	22.50	0.56
4.333	0.75	10.417	2.15	16.500	0.84	22.58	0.56
4.417	0.75	10.500	2.15	16.583	0.84	22.67	0.56
4.500	0.75	10.583	2.15	16.667	0.84	22.75	0.56
4.583	0.75	10.667	2.15	16.750	0.84	22.83	0.56
4.667	0.75	10.750	2.15	16.833	0.84	22.92	0.56
4.750	0.75	10.833	2.90	16.917	0.84	23.00	0.56
4.833	0.75	10.917	2.90	17.000	0.84	23.08	0.56
4.917	0.75	11.000	2.90	17.083	0.84	23.17	0.56
5.000	0.75	11.083	2.90	17.167	0.84	23.25	0.56
5.083	0.75	11.167	2.90	17.250	0.84	23.33	0.56
5.167	0.75	11.250	2.90	17.333	0.84	23.42	0.56
5.250	0.75	11.333	4.50	17.417	0.84	23.50	0.56
5.333	0.75	11.417	4.50	17.500	0.84	23.58	0.56
5.417	0.75	11.500	4.50	17.583	0.84	23.67	0.56
5.500	0.75	11.583	4.50	17.667	0.84	23.75	0.56
5.583	0.75	11.667	4.50	17.750	0.84	23.83	0.56
5.667	0.75	11.750	4.50	17.833	0.84	23.92	0.56
5.750	0.75	11.833	13.86	17.917	0.84	24.00	0.56
5.833	0.75	11.917	13.86	18.000	0.84	24.08	0.56
5.917	0.75	12.000	13.86	18.083	0.84	24.17	0.56
6.000	0.75	12.083	57.31	18.167	0.84	24.25	0.56
6.083	0.75	12.167	57.32	18.250	0.84		

```
Unit Hyd Qpeak  (cms)=   0.902

PEAK FLOW       (cms)=   0.050 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=   6.724
TOTAL RAINFALL   (mm)=  46.830
RUNOFF COEFFICIENT   =   0.144

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	0.75	12.250	57.32	18.33	0.84
0.167	0.00	6.250	0.75	12.333	6.75	18.42	0.84
0.250	0.00	6.333	0.84	12.417	6.74	18.50	0.84
0.333	0.52	6.417	0.84	12.500	6.74	18.58	0.84
0.417	0.52	6.500	0.84	12.583	6.74	18.67	0.84
0.500	0.52	6.583	0.84	12.667	6.74	18.75	0.84
0.583	0.52	6.667	0.84	12.750	6.74	18.83	0.84
0.667	0.52	6.750	0.84	12.833	3.47	18.92	0.84
0.750	0.52	6.833	0.84	12.917	3.47	19.00	0.84
0.833	0.52	6.917	0.84	13.000	3.47	19.08	0.84
0.917	0.52	7.000	0.84	13.083	3.47	19.17	0.84
1.000	0.52	7.083	0.84	13.167	3.47	19.25	0.84
1.083	0.52	7.167	0.84	13.250	3.47	19.33	0.84
1.167	0.52	7.250	0.84	13.333	2.53	19.42	0.84
1.250	0.52	7.333	1.03	13.417	2.53	19.50	0.84
1.333	0.52	7.417	1.03	13.500	2.53	19.58	0.84

```
1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
```

```
           5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
           5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
           5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
           5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
           5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
           6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
           6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.028 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=   4.693
     TOTAL RAINFALL   (mm)=  46.830
     RUNOFF COEFFICIENT   =   0.100

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

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
           0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
           0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
           0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
           0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
           0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
           0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
           0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
           0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
           0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
           0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
           0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
           1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
           1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
```

```
1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
```

```
            5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
            5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
            5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
            5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
            5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
            5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
            5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
            5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
            6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
            6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Max.Eff.Inten.(mm/hr)=      57.32         8.87
                over (min)        5.00        25.00
     Storage Coeff.  (min)=       2.63 (ii)   21.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00        25.00
     Unit Hyd. peak  (cms)=       0.29         0.05
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.01          0.131 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.50         12.25
     RUNOFF VOLUME    (mm)=      45.83         8.57         27.19
     TOTAL RAINFALL   (mm)=      46.83        46.83         46.83
     RUNOFF COEFFICIENT   =       0.98         0.18          0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
```

```
0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
```

```
           4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
           4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
           4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
           4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
           4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
           4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
           4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
           4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
           4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
           5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
           5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
           5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
           5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
           5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
           5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
           5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
           5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
           5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
           5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
           5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
           5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
           6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
           6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Max.Eff.Inten.(mm/hr)=      57.32       221.07
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       5.11 (ii)   10.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.21         0.09
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.79         0.73        1.441 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.33        12.25
     RUNOFF VOLUME    (mm)=      45.83        29.53        35.40
     TOTAL RAINFALL   (mm)=      46.83        46.83        46.83
     RUNOFF COEFFICIENT   =       0.98         0.63         0.76

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK      R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (  0001):     1.58   0.131    12.25     27.19
```

```
     + ID2= 2 (  0002):    14.40   1.441    12.25    35.40
       ==================================================
       ID = 3 (  0007):    15.98   1.572    12.25    34.59

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980     1.572     12.25      34.59
   OUTFLOW: ID= 1 (  0003)     15.980     0.081     14.08      34.53

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.17
                   TIME SHIFT OF PEAK FLOW        (min)=110.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.3481

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       1.07         0.27
    Dep. Storage     (mm)=       1.00         5.00
    Average Slope     (%)=       1.00         2.00
    Length            (m)=      94.52        40.00
    Mannings n          =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    0.00 | 6.167    0.75 |12.250   57.32 | 18.33    0.84
               0.167    0.00 | 6.250    0.75 |12.333    6.75 | 18.42    0.84
               0.250    0.00 | 6.333    0.84 |12.417    6.74 | 18.50    0.84
               0.333    0.52 | 6.417    0.84 |12.500    6.74 | 18.58    0.84
               0.417    0.52 | 6.500    0.84 |12.583    6.74 | 18.67    0.84
               0.500    0.52 | 6.583    0.84 |12.667    6.74 | 18.75    0.84
```

```
               0.583    0.52 | 6.667    0.84 |12.750    6.74 | 18.83    0.84
               0.667    0.52 | 6.750    0.84 |12.833    3.47 | 18.92    0.84
               0.750    0.52 | 6.833    0.84 |12.917    3.47 | 19.00    0.84
               0.833    0.52 | 6.917    0.84 |13.000    3.47 | 19.08    0.84
               0.917    0.52 | 7.000    0.84 |13.083    3.47 | 19.17    0.84
               1.000    0.52 | 7.083    0.84 |13.167    3.47 | 19.25    0.84
               1.083    0.52 | 7.167    0.84 |13.250    3.47 | 19.33    0.84
               1.167    0.52 | 7.250    0.84 |13.333    2.53 | 19.42    0.84
               1.250    0.52 | 7.333    1.03 |13.417    2.53 | 19.50    0.84
               1.333    0.52 | 7.417    1.03 |13.500    2.53 | 19.58    0.84
               1.417    0.52 | 7.500    1.03 |13.583    2.53 | 19.67    0.84
               1.500    0.52 | 7.583    1.03 |13.667    2.53 | 19.75    0.84
               1.583    0.52 | 7.667    1.03 |13.750    2.53 | 19.83    0.84
               1.667    0.52 | 7.750    1.03 |13.833    1.97 | 19.92    0.84
               1.750    0.52 | 7.833    1.03 |13.917    1.97 | 20.00    0.84
               1.833    0.52 | 7.917    1.03 |14.000    1.97 | 20.08    0.84
               1.917    0.52 | 8.000    1.03 |14.083    1.97 | 20.17    0.84
               2.000    0.52 | 8.083    1.03 |14.167    1.97 | 20.25    0.84
               2.083    0.52 | 8.167    1.03 |14.250    1.97 | 20.33    0.56
               2.167    0.52 | 8.250    1.03 |14.333    1.41 | 20.42    0.56
               2.250    0.52 | 8.333    1.22 |14.417    1.40 | 20.50    0.56
               2.333    0.61 | 8.417    1.22 |14.500    1.40 | 20.58    0.56
               2.417    0.61 | 8.500    1.22 |14.583    1.40 | 20.67    0.56
               2.500    0.61 | 8.583    1.22 |14.667    1.40 | 20.75    0.56
               2.583    0.61 | 8.667    1.22 |14.750    1.40 | 20.83    0.56
               2.667    0.61 | 8.750    1.22 |14.833    1.40 | 20.92    0.56
               2.750    0.61 | 8.833    1.31 |14.917    1.40 | 21.00    0.56
               2.833    0.61 | 8.917    1.31 |15.000    1.40 | 21.08    0.56
               2.917    0.61 | 9.000    1.31 |15.083    1.40 | 21.17    0.56
               3.000    0.61 | 9.083    1.31 |15.167    1.40 | 21.25    0.56
               3.083    0.61 | 9.167    1.31 |15.250    1.40 | 21.33    0.56
               3.167    0.61 | 9.250    1.31 |15.333    1.40 | 21.42    0.56
               3.250    0.61 | 9.333    1.50 |15.417    1.40 | 21.50    0.56
               3.333    0.61 | 9.417    1.50 |15.500    1.40 | 21.58    0.56
               3.417    0.61 | 9.500    1.50 |15.583    1.40 | 21.67    0.56
               3.500    0.61 | 9.583    1.50 |15.667    1.40 | 21.75    0.56
               3.583    0.61 | 9.667    1.50 |15.750    1.40 | 21.83    0.56
               3.667    0.61 | 9.750    1.50 |15.833    1.40 | 21.92    0.56
               3.750    0.61 | 9.833    1.69 |15.917    1.40 | 22.00    0.56
               3.833    0.61 | 9.917    1.69 |16.000    1.40 | 22.08    0.56
               3.917    0.61 |10.000    1.69 |16.083    1.40 | 22.17    0.56
               4.000    0.61 |10.083    1.69 |16.167    1.40 | 22.25    0.56
               4.083    0.61 |10.167    1.69 |16.250    1.40 | 22.33    0.56
               4.167    0.61 |10.250    1.69 |16.333    0.84 | 22.42    0.56
               4.250    0.61 |10.333    2.15 |16.417    0.84 | 22.50    0.56
               4.333    0.75 |10.417    2.15 |16.500    0.84 | 22.58    0.56
               4.417    0.75 |10.500    2.15 |16.583    0.84 | 22.67    0.56
               4.500    0.75 |10.583    2.15 |16.667    0.84 | 22.75    0.56
               4.583    0.75 |10.667    2.15 |16.750    0.84 | 22.83    0.56
               4.667    0.75 |10.750    2.15 |16.833    0.84 | 22.92    0.56
```

```
           4.750    0.75 |10.833    2.90 |16.917    0.84 | 23.00    0.56
           4.833    0.75 |10.917    2.90 |17.000    0.84 | 23.08    0.56
           4.917    0.75 |11.000    2.90 |17.083    0.84 | 23.17    0.56
           5.000    0.75 |11.083    2.90 |17.167    0.84 | 23.25    0.56
           5.083    0.75 |11.167    2.90 |17.250    0.84 | 23.33    0.56
           5.167    0.75 |11.250    2.90 |17.333    0.84 | 23.42    0.56
           5.250    0.75 |11.333    4.50 |17.417    0.84 | 23.50    0.56
           5.333    0.75 |11.417    4.50 |17.500    0.84 | 23.58    0.56
           5.417    0.75 |11.500    4.50 |17.583    0.84 | 23.67    0.56
           5.500    0.75 |11.583    4.50 |17.667    0.84 | 23.75    0.56
           5.583    0.75 |11.667    4.50 |17.750    0.84 | 23.83    0.56
           5.667    0.75 |11.750    4.50 |17.833    0.84 | 23.92    0.56
           5.750    0.75 |11.833   13.86 |17.917    0.84 | 24.00    0.56
           5.833    0.75 |11.917   13.86 |18.000    0.84 | 24.08    0.56
           5.917    0.75 |12.000   13.86 |18.083    0.84 | 24.17    0.56
           6.000    0.75 |12.083   57.31 |18.167    0.84 | 24.25    0.56
           6.083    0.75 |12.167   57.32 |18.250    0.84 |

     Max.Eff.Inten.(mm/hr)=      57.32       119.00
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       3.09 (ii)    9.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.27         0.11
                                                        *TOTALS*
     PEAK FLOW      (cms)=        0.06         0.06          0.118 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.25          12.25
     RUNOFF VOLUME    (mm)=      45.83        22.12          28.30
     TOTAL RAINFALL   (mm)=      46.83        46.83          46.83
     RUNOFF COEFFICIENT   =       0.98         0.47           0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000
```

```
                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.118     12.25      28.30
   OUTFLOW: ID= 1 (  0010)      1.340      0.014     12.92      27.86

                    PEAK   FLOW   REDUCTION [Qout/Qin](%)= 11.49
                    TIME SHIFT OF PEAK FLOW        (min)= 40.00
                    MAXIMUM  STORAGE   USED       (ha.m.)=  0.0197

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34    0.014    12.92    27.86
      + ID2= 2 (  0003):    15.98    0.081    14.08    34.53
        ==================================================
        ID = 3 (  0008):    17.32    0.093    13.83    34.01

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32    0.093    13.83    34.01
      + ID2= 2 (  0004):     1.89    0.050    12.25     6.72
        ==================================================
        ID = 1 (  0008):    19.21    0.099    12.25    31.33

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21    0.099    12.25    31.33
      + ID2= 2 (  0005):     1.46    0.028    12.25     4.69
        ==================================================
        ID = 3 (  0008):    20.67    0.127    12.25    29.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
```

```
       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
```



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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\102ae
e05-f789-424a-87f7-68e4882b97ec\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\102ae
e05-f789-424a-87f7-68e4882b97ec\scena


DATE: 07-18-2025                           TIME: 03:09:18

USER:


COMMENTS: ____________________________________________________________


----------------------------------------------------------------------------------
-----------------------
  ************************************************
  ** SIMULATION : H. 5YR 24HR SCS              **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\d371e161
| Ptotal= 59.88 mm |    Comments: 5yr 24hr 15min SCS Type II (MTO)
--------------------
                 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    1.08 | 12.50    8.62 | 18.75    1.08
                 0.25    0.66 |  6.50    1.08 | 12.75    4.43 | 19.00    1.08
                 0.50    0.66 |  6.75    1.08 | 13.00    4.43 | 19.25    1.08
                 0.75    0.66 |  7.00    1.08 | 13.25    3.23 | 19.50    1.08
                 1.00    0.66 |  7.25    1.32 | 13.50    3.23 | 19.75    1.08
                 1.25    0.66 |  7.50    1.32 | 13.75    2.51 | 20.00    1.08
                 1.50    0.66 |  7.75    1.32 | 14.00    2.51 | 20.25    0.72
                 1.75    0.66 |  8.00    1.32 | 14.25    1.80 | 20.50    0.72
                 2.00    0.66 |  8.25    1.56 | 14.50    1.80 | 20.75    0.72
                 2.25    0.78 |  8.50    1.56 | 14.75    1.80 | 21.00    0.72
                 2.50    0.78 |  8.75    1.68 | 15.00    1.80 | 21.25    0.72
                 2.75    0.78 |  9.00    1.68 | 15.25    1.80 | 21.50    0.72
                 3.00    0.78 |  9.25    1.92 | 15.50    1.80 | 21.75    0.72
                 3.25    0.78 |  9.50    1.92 | 15.75    1.80 | 22.00    0.72
                 3.50    0.78 |  9.75    2.16 | 16.00    1.80 | 22.25    0.72
                 3.75    0.78 | 10.00    2.16 | 16.25    1.08 | 22.50    0.72
                 4.00    0.78 | 10.25    2.75 | 16.50    1.08 | 22.75    0.72
                 4.25    0.96 | 10.50    2.75 | 16.75    1.08 | 23.00    0.72
                 4.50    0.96 | 10.75    3.71 | 17.00    1.08 | 23.25    0.72
                 4.75    0.96 | 11.00    3.71 | 17.25    1.08 | 23.50    0.72
                 5.00    0.96 | 11.25    5.75 | 17.50    1.08 | 23.75    0.72
                 5.25    0.96 | 11.50    5.75 | 17.75    1.08 | 24.00    0.72
                 5.50    0.96 | 11.75   17.72 | 18.00    1.08 |
                 5.75    0.96 | 12.00   73.29 | 18.25    1.08 |
                 6.00    0.96 | 12.25    8.62 | 18.50    1.08 |

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


--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=    1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=    5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    0.96 |12.250   73.29 | 18.33    1.08
                0.167    0.00 | 6.250    0.96 |12.333    8.63 | 18.42    1.08
                0.250    0.00 | 6.333    1.08 |12.417    8.62 | 18.50    1.08
                0.333    0.66 | 6.417    1.08 |12.500    8.62 | 18.58    1.08
                0.417    0.66 | 6.500    1.08 |12.583    8.62 | 18.67    1.08
                0.500    0.66 | 6.583    1.08 |12.667    8.62 | 18.75    1.08
                0.583    0.66 | 6.667    1.08 |12.750    8.62 | 18.83    1.08
                0.667    0.66 | 6.750    1.08 |12.833    4.43 | 18.92    1.08
                0.750    0.66 | 6.833    1.08 |12.917    4.43 | 19.00    1.08
```

```
 0.833    0.66 | 6.917    1.08 |13.000    4.43 | 19.08    1.08
 0.917    0.66 | 7.000    1.08 |13.083    4.43 | 19.17    1.08
 1.000    0.66 | 7.083    1.08 |13.167    4.43 | 19.25    1.08
 1.083    0.66 | 7.167    1.08 |13.250    4.43 | 19.33    1.08
 1.167    0.66 | 7.250    1.08 |13.333    3.23 | 19.42    1.08
 1.250    0.66 | 7.333    1.32 |13.417    3.23 | 19.50    1.08
 1.333    0.66 | 7.417    1.32 |13.500    3.23 | 19.58    1.08
 1.417    0.66 | 7.500    1.32 |13.583    3.23 | 19.67    1.08
 1.500    0.66 | 7.583    1.32 |13.667    3.23 | 19.75    1.08
 1.583    0.66 | 7.667    1.32 |13.750    3.23 | 19.83    1.08
 1.667    0.66 | 7.750    1.32 |13.833    2.52 | 19.92    1.08
 1.750    0.66 | 7.833    1.32 |13.917    2.51 | 20.00    1.08
 1.833    0.66 | 7.917    1.32 |14.000    2.51 | 20.08    1.08
 1.917    0.66 | 8.000    1.32 |14.083    2.51 | 20.17    1.08
 2.000    0.66 | 8.083    1.32 |14.167    2.51 | 20.25    1.08
 2.083    0.66 | 8.167    1.32 |14.250    2.51 | 20.33    0.72
 2.167    0.66 | 8.250    1.32 |14.333    1.80 | 20.42    0.72
 2.250    0.66 | 8.333    1.56 |14.417    1.80 | 20.50    0.72
 2.333    0.78 | 8.417    1.56 |14.500    1.80 | 20.58    0.72
 2.417    0.78 | 8.500    1.56 |14.583    1.80 | 20.67    0.72
 2.500    0.78 | 8.583    1.56 |14.667    1.80 | 20.75    0.72
 2.583    0.78 | 8.667    1.56 |14.750    1.80 | 20.83    0.72
 2.667    0.78 | 8.750    1.56 |14.833    1.80 | 20.92    0.72
 2.750    0.78 | 8.833    1.68 |14.917    1.80 | 21.00    0.72
 2.833    0.78 | 8.917    1.68 |15.000    1.80 | 21.08    0.72
 2.917    0.78 | 9.000    1.68 |15.083    1.80 | 21.17    0.72
 3.000    0.78 | 9.083    1.68 |15.167    1.80 | 21.25    0.72
 3.083    0.78 | 9.167    1.68 |15.250    1.80 | 21.33    0.72
 3.167    0.78 | 9.250    1.68 |15.333    1.80 | 21.42    0.72
 3.250    0.78 | 9.333    1.92 |15.417    1.80 | 21.50    0.72
 3.333    0.78 | 9.417    1.92 |15.500    1.80 | 21.58    0.72
 3.417    0.78 | 9.500    1.92 |15.583    1.80 | 21.67    0.72
 3.500    0.78 | 9.583    1.92 |15.667    1.80 | 21.75    0.72
 3.583    0.78 | 9.667    1.92 |15.750    1.80 | 21.83    0.72
 3.667    0.78 | 9.750    1.92 |15.833    1.80 | 21.92    0.72
 3.750    0.78 | 9.833    2.16 |15.917    1.80 | 22.00    0.72
 3.833    0.78 | 9.917    2.16 |16.000    1.80 | 22.08    0.72
 3.917    0.78 |10.000    2.16 |16.083    1.80 | 22.17    0.72
 4.000    0.78 |10.083    2.16 |16.167    1.80 | 22.25    0.72
 4.083    0.78 |10.167    2.16 |16.250    1.80 | 22.33    0.72
 4.167    0.78 |10.250    2.16 |16.333    1.08 | 22.42    0.72
 4.250    0.78 |10.333    2.75 |16.417    1.08 | 22.50    0.72
 4.333    0.96 |10.417    2.75 |16.500    1.08 | 22.58    0.72
 4.417    0.96 |10.500    2.75 |16.583    1.08 | 22.67    0.72
 4.500    0.96 |10.583    2.75 |16.667    1.08 | 22.75    0.72
 4.583    0.96 |10.667    2.75 |16.750    1.08 | 22.83    0.72
 4.667    0.96 |10.750    2.75 |16.833    1.08 | 22.92    0.72
 4.750    0.96 |10.833    3.71 |16.917    1.08 | 23.00    0.72
 4.833    0.96 |10.917    3.71 |17.000    1.08 | 23.08    0.72
 4.917    0.96 |11.000    3.71 |17.083    1.08 | 23.17    0.72
```

```
                5.000    0.96 |11.083    3.71 |17.167    1.08 | 23.25    0.72
                5.083    0.96 |11.167    3.71 |17.250    1.08 | 23.33    0.72
                5.167    0.96 |11.250    3.71 |17.333    1.08 | 23.42    0.72
                5.250    0.96 |11.333    5.75 |17.417    1.08 | 23.50    0.72
                5.333    0.96 |11.417    5.75 |17.500    1.08 | 23.58    0.72
                5.417    0.96 |11.500    5.75 |17.583    1.08 | 23.67    0.72
                5.500    0.96 |11.583    5.75 |17.667    1.08 | 23.75    0.72
                5.583    0.96 |11.667    5.75 |17.750    1.08 | 23.83    0.72
                5.667    0.96 |11.750    5.75 |17.833    1.08 | 23.92    0.72
                5.750    0.96 |11.833   17.72 |17.917    1.08 | 24.00    0.72
                5.833    0.96 |11.917   17.72 |18.000    1.08 | 24.08    0.72
                5.917    0.96 |12.000   17.72 |18.083    1.08 | 24.17    0.72
                6.000    0.96 |12.083   73.29 |18.167    1.08 | 24.25    0.72
                6.083    0.96 |12.167   73.29 |18.250    1.08 |

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.082 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  10.990
     TOTAL RAINFALL   (mm)=  59.880
     RUNOFF COEFFICIENT   =   0.184

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    0.96 |12.250   73.29 | 18.33    1.08
                0.167    0.00 | 6.250    0.96 |12.333    8.63 | 18.42    1.08
                0.250    0.00 | 6.333    1.08 |12.417    8.62 | 18.50    1.08
                0.333    0.66 | 6.417    1.08 |12.500    8.62 | 18.58    1.08
                0.417    0.66 | 6.500    1.08 |12.583    8.62 | 18.67    1.08
                0.500    0.66 | 6.583    1.08 |12.667    8.62 | 18.75    1.08
                0.583    0.66 | 6.667    1.08 |12.750    8.62 | 18.83    1.08
                0.667    0.66 | 6.750    1.08 |12.833    4.43 | 18.92    1.08
                0.750    0.66 | 6.833    1.08 |12.917    4.43 | 19.00    1.08
                0.833    0.66 | 6.917    1.08 |13.000    4.43 | 19.08    1.08
                0.917    0.66 | 7.000    1.08 |13.083    4.43 | 19.17    1.08
                1.000    0.66 | 7.083    1.08 |13.167    4.43 | 19.25    1.08
```

1.083	0.66	7.167	1.08	13.250	4.43	19.33	1.08
1.167	0.66	7.250	1.08	13.333	3.23	19.42	1.08
1.250	0.66	7.333	1.32	13.417	3.23	19.50	1.08
1.333	0.66	7.417	1.32	13.500	3.23	19.58	1.08
1.417	0.66	7.500	1.32	13.583	3.23	19.67	1.08
1.500	0.66	7.583	1.32	13.667	3.23	19.75	1.08
1.583	0.66	7.667	1.32	13.750	3.23	19.83	1.08
1.667	0.66	7.750	1.32	13.833	2.52	19.92	1.08
1.750	0.66	7.833	1.32	13.917	2.51	20.00	1.08
1.833	0.66	7.917	1.32	14.000	2.51	20.08	1.08
1.917	0.66	8.000	1.32	14.083	2.51	20.17	1.08
2.000	0.66	8.083	1.32	14.167	2.51	20.25	1.08
2.083	0.66	8.167	1.32	14.250	2.51	20.33	0.72
2.167	0.66	8.250	1.32	14.333	1.80	20.42	0.72
2.250	0.66	8.333	1.56	14.417	1.80	20.50	0.72
2.333	0.78	8.417	1.56	14.500	1.80	20.58	0.72
2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72
2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72
2.917	0.78	9.000	1.68	15.083	1.80	21.17	0.72
3.000	0.78	9.083	1.68	15.167	1.80	21.25	0.72
3.083	0.78	9.167	1.68	15.250	1.80	21.33	0.72
3.167	0.78	9.250	1.68	15.333	1.80	21.42	0.72
3.250	0.78	9.333	1.92	15.417	1.80	21.50	0.72
3.333	0.78	9.417	1.92	15.500	1.80	21.58	0.72
3.417	0.78	9.500	1.92	15.583	1.80	21.67	0.72
3.500	0.78	9.583	1.92	15.667	1.80	21.75	0.72
3.583	0.78	9.667	1.92	15.750	1.80	21.83	0.72
3.667	0.78	9.750	1.92	15.833	1.80	21.92	0.72
3.750	0.78	9.833	2.16	15.917	1.80	22.00	0.72
3.833	0.78	9.917	2.16	16.000	1.80	22.08	0.72
3.917	0.78	10.000	2.16	16.083	1.80	22.17	0.72
4.000	0.78	10.083	2.16	16.167	1.80	22.25	0.72
4.083	0.78	10.167	2.16	16.250	1.80	22.33	0.72
4.167	0.78	10.250	2.16	16.333	1.08	22.42	0.72
4.250	0.78	10.333	2.75	16.417	1.08	22.50	0.72
4.333	0.96	10.417	2.75	16.500	1.08	22.58	0.72
4.417	0.96	10.500	2.75	16.583	1.08	22.67	0.72
4.500	0.96	10.583	2.75	16.667	1.08	22.75	0.72
4.583	0.96	10.667	2.75	16.750	1.08	22.83	0.72
4.667	0.96	10.750	2.75	16.833	1.08	22.92	0.72
4.750	0.96	10.833	3.71	16.917	1.08	23.00	0.72
4.833	0.96	10.917	3.71	17.000	1.08	23.08	0.72
4.917	0.96	11.000	3.71	17.083	1.08	23.17	0.72
5.000	0.96	11.083	3.71	17.167	1.08	23.25	0.72
5.083	0.96	11.167	3.71	17.250	1.08	23.33	0.72
5.167	0.96	11.250	3.71	17.333	1.08	23.42	0.72
5.250	0.96	11.333	5.75	17.417	1.08	23.50	0.72
5.333	0.96	11.417	5.75	17.500	1.08	23.58	0.72
5.417	0.96	11.500	5.75	17.583	1.08	23.67	0.72
5.500	0.96	11.583	5.75	17.667	1.08	23.75	0.72
5.583	0.96	11.667	5.75	17.750	1.08	23.83	0.72
5.667	0.96	11.750	5.75	17.833	1.08	23.92	0.72
5.750	0.96	11.833	17.72	17.917	1.08	24.00	0.72
5.833	0.96	11.917	17.72	18.000	1.08	24.08	0.72
5.917	0.96	12.000	17.72	18.083	1.08	24.17	0.72
6.000	0.96	12.083	73.29	18.167	1.08	24.25	0.72
6.083	0.96	12.167	73.29	18.250	1.08		

Unit Hyd Qpeak (cms)= 0.797

PEAK FLOW (cms)= 0.046 (i)
TIME TO PEAK (hrs)= 12.250
RUNOFF VOLUME (mm)= 7.780
TOTAL RAINFALL (mm)= 59.880
RUNOFF COEFFICIENT = 0.130

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.79	0.79
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	2.00	2.00
Length	(m)=	102.63	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	0.96	12.250	73.29	18.33	1.08
0.167	0.00	6.250	0.96	12.333	8.63	18.42	1.08
0.250	0.00	6.333	1.08	12.417	8.62	18.50	1.08
0.333	0.66	6.417	1.08	12.500	8.62	18.58	1.08
0.417	0.66	6.500	1.08	12.583	8.62	18.67	1.08
0.500	0.66	6.583	1.08	12.667	8.62	18.75	1.08
0.583	0.66	6.667	1.08	12.750	8.62	18.83	1.08
0.667	0.66	6.750	1.08	12.833	4.43	18.92	1.08
0.750	0.66	6.833	1.08	12.917	4.43	19.00	1.08

```
0.833    0.66 | 6.917    1.08 |13.000    4.43 | 19.08    1.08
0.917    0.66 | 7.000    1.08 |13.083    4.43 | 19.17    1.08
1.000    0.66 | 7.083    1.08 |13.167    4.43 | 19.25    1.08
1.083    0.66 | 7.167    1.08 |13.250    4.43 | 19.33    1.08
1.167    0.66 | 7.250    1.08 |13.333    3.23 | 19.42    1.08
1.250    0.66 | 7.333    1.32 |13.417    3.23 | 19.50    1.08
1.333    0.66 | 7.417    1.32 |13.500    3.23 | 19.58    1.08
1.417    0.66 | 7.500    1.32 |13.583    3.23 | 19.67    1.08
1.500    0.66 | 7.583    1.32 |13.667    3.23 | 19.75    1.08
1.583    0.66 | 7.667    1.32 |13.750    3.23 | 19.83    1.08
1.667    0.66 | 7.750    1.32 |13.833    2.52 | 19.92    1.08
1.750    0.66 | 7.833    1.32 |13.917    2.51 | 20.00    1.08
1.833    0.66 | 7.917    1.32 |14.000    2.51 | 20.08    1.08
1.917    0.66 | 8.000    1.32 |14.083    2.51 | 20.17    1.08
2.000    0.66 | 8.083    1.32 |14.167    2.51 | 20.25    1.08
2.083    0.66 | 8.167    1.32 |14.250    2.51 | 20.33    0.72
2.167    0.66 | 8.250    1.32 |14.333    1.80 | 20.42    0.72
2.250    0.66 | 8.333    1.56 |14.417    1.80 | 20.50    0.72
2.333    0.78 | 8.417    1.56 |14.500    1.80 | 20.58    0.72
2.417    0.78 | 8.500    1.56 |14.583    1.80 | 20.67    0.72
2.500    0.78 | 8.583    1.56 |14.667    1.80 | 20.75    0.72
2.583    0.78 | 8.667    1.56 |14.750    1.80 | 20.83    0.72
2.667    0.78 | 8.750    1.56 |14.833    1.80 | 20.92    0.72
2.750    0.78 | 8.833    1.68 |14.917    1.80 | 21.00    0.72
2.833    0.78 | 8.917    1.68 |15.000    1.80 | 21.08    0.72
2.917    0.78 | 9.000    1.68 |15.083    1.80 | 21.17    0.72
3.000    0.78 | 9.083    1.68 |15.167    1.80 | 21.25    0.72
3.083    0.78 | 9.167    1.68 |15.250    1.80 | 21.33    0.72
3.167    0.78 | 9.250    1.68 |15.333    1.80 | 21.42    0.72
3.250    0.78 | 9.333    1.92 |15.417    1.80 | 21.50    0.72
3.333    0.78 | 9.417    1.92 |15.500    1.80 | 21.58    0.72
3.417    0.78 | 9.500    1.92 |15.583    1.80 | 21.67    0.72
3.500    0.78 | 9.583    1.92 |15.667    1.80 | 21.75    0.72
3.583    0.78 | 9.667    1.92 |15.750    1.80 | 21.83    0.72
3.667    0.78 | 9.750    1.92 |15.833    1.80 | 21.92    0.72
3.750    0.78 | 9.833    2.16 |15.917    1.80 | 22.00    0.72
3.833    0.78 | 9.917    2.16 |16.000    1.80 | 22.08    0.72
3.917    0.78 |10.000    2.16 |16.083    1.80 | 22.17    0.72
4.000    0.78 |10.083    2.16 |16.167    1.80 | 22.25    0.72
4.083    0.78 |10.167    2.16 |16.250    1.80 | 22.33    0.72
4.167    0.78 |10.250    2.16 |16.333    1.08 | 22.42    0.72
4.250    0.78 |10.333    2.75 |16.417    1.08 | 22.50    0.72
4.333    0.96 |10.417    2.75 |16.500    1.08 | 22.58    0.72
4.417    0.96 |10.500    2.75 |16.583    1.08 | 22.67    0.72
4.500    0.96 |10.583    2.75 |16.667    1.08 | 22.75    0.72
4.583    0.96 |10.667    2.75 |16.750    1.08 | 22.83    0.72
4.667    0.96 |10.750    2.75 |16.833    1.08 | 22.92    0.72
4.750    0.96 |10.833    3.71 |16.917    1.08 | 23.00    0.72
4.833    0.96 |10.917    3.71 |17.000    1.08 | 23.08    0.72
4.917    0.96 |11.000    3.71 |17.083    1.08 | 23.17    0.72
```

```
           5.000    0.96 |11.083    3.71 |17.167    1.08 | 23.25    0.72
           5.083    0.96 |11.167    3.71 |17.250    1.08 | 23.33    0.72
           5.167    0.96 |11.250    3.71 |17.333    1.08 | 23.42    0.72
           5.250    0.96 |11.333    5.75 |17.417    1.08 | 23.50    0.72
           5.333    0.96 |11.417    5.75 |17.500    1.08 | 23.58    0.72
           5.417    0.96 |11.500    5.75 |17.583    1.08 | 23.67    0.72
           5.500    0.96 |11.583    5.75 |17.667    1.08 | 23.75    0.72
           5.583    0.96 |11.667    5.75 |17.750    1.08 | 23.83    0.72
           5.667    0.96 |11.750    5.75 |17.833    1.08 | 23.92    0.72
           5.750    0.96 |11.833   17.72 |17.917    1.08 | 24.00    0.72
           5.833    0.96 |11.917   17.72 |18.000    1.08 | 24.08    0.72
           5.917    0.96 |12.000   17.72 |18.083    1.08 | 24.17    0.72
           6.000    0.96 |12.083   73.29 |18.167    1.08 | 24.25    0.72
           6.083    0.96 |12.167   73.29 |18.250    1.08 |

     Max.Eff.Inten.(mm/hr)=      73.29        18.44
                over (min)        5.00        20.00
     Storage Coeff.  (min)=       2.39 (ii)   16.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00        20.00
     Unit Hyd. peak  (cms)=       0.30         0.06
                                                           *TOTALS*
     PEAK FLOW      (cms)=        0.16         0.02          0.174 (iii)
     TIME TO PEAK   (hrs)=       12.25        12.42          12.25
     RUNOFF VOLUME    (mm)=      58.88        13.86          36.37
     TOTAL RAINFALL   (mm)=      59.88        59.88          59.88
     RUNOFF COEFFICIENT   =       0.98         0.23           0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	0.96	12.250	73.29	18.33	1.08
0.167	0.00	6.250	0.96	12.333	8.63	18.42	1.08
0.250	0.00	6.333	1.08	12.417	8.62	18.50	1.08
0.333	0.66	6.417	1.08	12.500	8.62	18.58	1.08
0.417	0.66	6.500	1.08	12.583	8.62	18.67	1.08
0.500	0.66	6.583	1.08	12.667	8.62	18.75	1.08
0.583	0.66	6.667	1.08	12.750	8.62	18.83	1.08
0.667	0.66	6.750	1.08	12.833	4.43	18.92	1.08
0.750	0.66	6.833	1.08	12.917	4.43	19.00	1.08
0.833	0.66	6.917	1.08	13.000	4.43	19.08	1.08
0.917	0.66	7.000	1.08	13.083	4.43	19.17	1.08
1.000	0.66	7.083	1.08	13.167	4.43	19.25	1.08
1.083	0.66	7.167	1.08	13.250	4.43	19.33	1.08
1.167	0.66	7.250	1.08	13.333	3.23	19.42	1.08
1.250	0.66	7.333	1.32	13.417	3.23	19.50	1.08
1.333	0.66	7.417	1.32	13.500	3.23	19.58	1.08
1.417	0.66	7.500	1.32	13.583	3.23	19.67	1.08
1.500	0.66	7.583	1.32	13.667	3.23	19.75	1.08
1.583	0.66	7.667	1.32	13.750	3.23	19.83	1.08
1.667	0.66	7.750	1.32	13.833	2.52	19.92	1.08
1.750	0.66	7.833	1.32	13.917	2.51	20.00	1.08
1.833	0.66	7.917	1.32	14.000	2.51	20.08	1.08
1.917	0.66	8.000	1.32	14.083	2.51	20.17	1.08
2.000	0.66	8.083	1.32	14.167	2.51	20.25	1.08
2.083	0.66	8.167	1.32	14.250	2.51	20.33	0.72
2.167	0.66	8.250	1.32	14.333	1.80	20.42	0.72
2.250	0.66	8.333	1.56	14.417	1.80	20.50	0.72
2.333	0.78	8.417	1.56	14.500	1.80	20.58	0.72
2.417	0.78	8.500	1.56	14.583	1.80	20.67	0.72
2.500	0.78	8.583	1.56	14.667	1.80	20.75	0.72
2.583	0.78	8.667	1.56	14.750	1.80	20.83	0.72
2.667	0.78	8.750	1.56	14.833	1.80	20.92	0.72
2.750	0.78	8.833	1.68	14.917	1.80	21.00	0.72
2.833	0.78	8.917	1.68	15.000	1.80	21.08	0.72
2.917	0.78	9.000	1.68	15.083	1.80	21.17	0.72
3.000	0.78	9.083	1.68	15.167	1.80	21.25	0.72
3.083	0.78	9.167	1.68	15.250	1.80	21.33	0.72
3.167	0.78	9.250	1.68	15.333	1.80	21.42	0.72
3.250	0.78	9.333	1.92	15.417	1.80	21.50	0.72
3.333	0.78	9.417	1.92	15.500	1.80	21.58	0.72
3.417	0.78	9.500	1.92	15.583	1.80	21.67	0.72
3.500	0.78	9.583	1.92	15.667	1.80	21.75	0.72
3.583	0.78	9.667	1.92	15.750	1.80	21.83	0.72
3.667	0.78	9.750	1.92	15.833	1.80	21.92	0.72
3.750	0.78	9.833	2.16	15.917	1.80	22.00	0.72
3.833	0.78	9.917	2.16	16.000	1.80	22.08	0.72
3.917	0.78	10.000	2.16	16.083	1.80	22.17	0.72
4.000	0.78	10.083	2.16	16.167	1.80	22.25	0.72
4.083	0.78	10.167	2.16	16.250	1.80	22.33	0.72
4.167	0.78	10.250	2.16	16.333	1.08	22.42	0.72
4.250	0.78	10.333	2.75	16.417	1.08	22.50	0.72
4.333	0.96	10.417	2.75	16.500	1.08	22.58	0.72
4.417	0.96	10.500	2.75	16.583	1.08	22.67	0.72
4.500	0.96	10.583	2.75	16.667	1.08	22.75	0.72
4.583	0.96	10.667	2.75	16.750	1.08	22.83	0.72
4.667	0.96	10.750	2.75	16.833	1.08	22.92	0.72
4.750	0.96	10.833	3.71	16.917	1.08	23.00	0.72
4.833	0.96	10.917	3.71	17.000	1.08	23.08	0.72
4.917	0.96	11.000	3.71	17.083	1.08	23.17	0.72
5.000	0.96	11.083	3.71	17.167	1.08	23.25	0.72
5.083	0.96	11.167	3.71	17.250	1.08	23.33	0.72
5.167	0.96	11.250	3.71	17.333	1.08	23.42	0.72
5.250	0.96	11.333	5.75	17.417	1.08	23.50	0.72
5.333	0.96	11.417	5.75	17.500	1.08	23.58	0.72
5.417	0.96	11.500	5.75	17.583	1.08	23.67	0.72
5.500	0.96	11.583	5.75	17.667	1.08	23.75	0.72
5.583	0.96	11.667	5.75	17.750	1.08	23.83	0.72
5.667	0.96	11.750	5.75	17.833	1.08	23.92	0.72
5.750	0.96	11.833	17.72	17.917	1.08	24.00	0.72
5.833	0.96	11.917	17.72	18.000	1.08	24.08	0.72
5.917	0.96	12.000	17.72	18.083	1.08	24.17	0.72
6.000	0.96	12.083	73.29	18.167	1.08	24.25	0.72
6.083	0.96	12.167	73.29	18.250	1.08		

```
Max.Eff.Inten.(mm/hr)=      73.29       305.14
          over (min)         5.00        10.00
Storage Coeff.  (min)=       4.63 (ii)    9.15 (ii)
Unit Hyd. Tpeak (min)=       5.00        10.00
Unit Hyd. peak  (cms)=       0.22         0.12
                                                    *TOTALS*
PEAK FLOW      (cms)=        1.02         1.13         2.155 (iii)
TIME TO PEAK   (hrs)=       12.25        12.25        12.25
RUNOFF VOLUME    (mm)=      58.88        41.19        47.56
TOTAL RAINFALL   (mm)=      59.88        59.88        59.88
RUNOFF COEFFICIENT   =       0.98         0.69         0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  66.0    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.

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

```
--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.174    12.25    36.37
      + ID2= 2 (  0002):    14.40   2.155    12.25    47.56
        ====================================================
        ID = 3 (  0007):    15.98   2.329    12.25    46.45

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      2.329     12.25      46.45
   OUTFLOW: ID= 1 (  0003)     15.980      0.129     13.75      46.39

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.55
                   TIME SHIFT OF PEAK FLOW        (min)= 90.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.4584

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    0.96 |12.250   73.29 | 18.33    1.08
```

```
0.167    0.00 | 6.250    0.96 |12.333    8.63 | 18.42    1.08
0.250    0.00 | 6.333    1.08 |12.417    8.62 | 18.50    1.08
0.333    0.66 | 6.417    1.08 |12.500    8.62 | 18.58    1.08
0.417    0.66 | 6.500    1.08 |12.583    8.62 | 18.67    1.08
0.500    0.66 | 6.583    1.08 |12.667    8.62 | 18.75    1.08
0.583    0.66 | 6.667    1.08 |12.750    8.62 | 18.83    1.08
0.667    0.66 | 6.750    1.08 |12.833    4.43 | 18.92    1.08
0.750    0.66 | 6.833    1.08 |12.917    4.43 | 19.00    1.08
0.833    0.66 | 6.917    1.08 |13.000    4.43 | 19.08    1.08
0.917    0.66 | 7.000    1.08 |13.083    4.43 | 19.17    1.08
1.000    0.66 | 7.083    1.08 |13.167    4.43 | 19.25    1.08
1.083    0.66 | 7.167    1.08 |13.250    4.43 | 19.33    1.08
1.167    0.66 | 7.250    1.08 |13.333    3.23 | 19.42    1.08
1.250    0.66 | 7.333    1.32 |13.417    3.23 | 19.50    1.08
1.333    0.66 | 7.417    1.32 |13.500    3.23 | 19.58    1.08
1.417    0.66 | 7.500    1.32 |13.583    3.23 | 19.67    1.08
1.500    0.66 | 7.583    1.32 |13.667    3.23 | 19.75    1.08
1.583    0.66 | 7.667    1.32 |13.750    3.23 | 19.83    1.08
1.667    0.66 | 7.750    1.32 |13.833    2.52 | 19.92    1.08
1.750    0.66 | 7.833    1.32 |13.917    2.51 | 20.00    1.08
1.833    0.66 | 7.917    1.32 |14.000    2.51 | 20.08    1.08
1.917    0.66 | 8.000    1.32 |14.083    2.51 | 20.17    1.08
2.000    0.66 | 8.083    1.32 |14.167    2.51 | 20.25    1.08
2.083    0.66 | 8.167    1.32 |14.250    2.51 | 20.33    0.72
2.167    0.66 | 8.250    1.32 |14.333    1.80 | 20.42    0.72
2.250    0.66 | 8.333    1.56 |14.417    1.80 | 20.50    0.72
2.333    0.78 | 8.417    1.56 |14.500    1.80 | 20.58    0.72
2.417    0.78 | 8.500    1.56 |14.583    1.80 | 20.67    0.72
2.500    0.78 | 8.583    1.56 |14.667    1.80 | 20.75    0.72
2.583    0.78 | 8.667    1.56 |14.750    1.80 | 20.83    0.72
2.667    0.78 | 8.750    1.56 |14.833    1.80 | 20.92    0.72
2.750    0.78 | 8.833    1.68 |14.917    1.80 | 21.00    0.72
2.833    0.78 | 8.917    1.68 |15.000    1.80 | 21.08    0.72
2.917    0.78 | 9.000    1.68 |15.083    1.80 | 21.17    0.72
3.000    0.78 | 9.083    1.68 |15.167    1.80 | 21.25    0.72
3.083    0.78 | 9.167    1.68 |15.250    1.80 | 21.33    0.72
3.167    0.78 | 9.250    1.68 |15.333    1.80 | 21.42    0.72
3.250    0.78 | 9.333    1.92 |15.417    1.80 | 21.50    0.72
3.333    0.78 | 9.417    1.92 |15.500    1.80 | 21.58    0.72
3.417    0.78 | 9.500    1.92 |15.583    1.80 | 21.67    0.72
3.500    0.78 | 9.583    1.92 |15.667    1.80 | 21.75    0.72
3.583    0.78 | 9.667    1.92 |15.750    1.80 | 21.83    0.72
3.667    0.78 | 9.750    1.92 |15.833    1.80 | 21.92    0.72
3.750    0.78 | 9.833    2.16 |15.917    1.80 | 22.00    0.72
3.833    0.78 | 9.917    2.16 |16.000    1.80 | 22.08    0.72
3.917    0.78 |10.000    2.16 |16.083    1.80 | 22.17    0.72
4.000    0.78 |10.083    2.16 |16.167    1.80 | 22.25    0.72
4.083    0.78 |10.167    2.16 |16.250    1.80 | 22.33    0.72
4.167    0.78 |10.250    2.16 |16.333    1.08 | 22.42    0.72
4.250    0.78 |10.333    2.75 |16.417    1.08 | 22.50    0.72
```

```
           4.333    0.96 |10.417    2.75 |16.500    1.08 | 22.58    0.72
           4.417    0.96 |10.500    2.75 |16.583    1.08 | 22.67    0.72
           4.500    0.96 |10.583    2.75 |16.667    1.08 | 22.75    0.72
           4.583    0.96 |10.667    2.75 |16.750    1.08 | 22.83    0.72
           4.667    0.96 |10.750    2.75 |16.833    1.08 | 22.92    0.72
           4.750    0.96 |10.833    3.71 |16.917    1.08 | 23.00    0.72
           4.833    0.96 |10.917    3.71 |17.000    1.08 | 23.08    0.72
           4.917    0.96 |11.000    3.71 |17.083    1.08 | 23.17    0.72
           5.000    0.96 |11.083    3.71 |17.167    1.08 | 23.25    0.72
           5.083    0.96 |11.167    3.71 |17.250    1.08 | 23.33    0.72
           5.167    0.96 |11.250    3.71 |17.333    1.08 | 23.42    0.72
           5.250    0.96 |11.333    5.75 |17.417    1.08 | 23.50    0.72
           5.333    0.96 |11.417    5.75 |17.500    1.08 | 23.58    0.72
           5.417    0.96 |11.500    5.75 |17.583    1.08 | 23.67    0.72
           5.500    0.96 |11.583    5.75 |17.667    1.08 | 23.75    0.72
           5.583    0.96 |11.667    5.75 |17.750    1.08 | 23.83    0.72
           5.667    0.96 |11.750    5.75 |17.833    1.08 | 23.92    0.72
           5.750    0.96 |11.833   17.72 |17.917    1.08 | 24.00    0.72
           5.833    0.96 |11.917   17.72 |18.000    1.08 | 24.08    0.72
           5.917    0.96 |12.000   17.72 |18.083    1.08 | 24.17    0.72
           6.000    0.96 |12.083   73.29 |18.167    1.08 | 24.25    0.72
           6.083    0.96 |12.167   73.29 |18.250    1.08 |

     Max.Eff.Inten.(mm/hr)=      73.29       172.45
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.80 (ii)    8.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.28         0.12
                                                        *TOTALS*
     PEAK FLOW      (cms)=        0.07         0.10         0.168 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.25        12.25
     RUNOFF VOLUME    (mm)=      58.88        32.15        39.12
     TOTAL RAINFALL   (mm)=      59.88        59.88        59.88
     RUNOFF COEFFICIENT   =       0.98         0.54         0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
```

```
                           0.0050     0.0118   |  0.0350      0.0329
                           0.0100     0.0168   |  0.0440      0.0373
                           0.0180     0.0233   |  0.0540      0.0411
                           0.0250     0.0275   |  0.0000      0.0000

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.168     12.25      39.12
   OUTFLOW: ID= 1 (  0010)      1.340      0.023     12.83      38.68

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 13.87
                   TIME SHIFT OF PEAK FLOW        (min)= 35.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0265

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34   0.023    12.83    38.68
      + ID2= 2 (  0003):    15.98   0.129    13.75    46.39
        ==================================================
        ID = 3 (  0008):    17.32   0.150    13.33    45.79

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.150    13.33    45.79
      + ID2= 2 (  0004):     1.89   0.082    12.25    10.99
        ==================================================
        ID = 1 (  0008):    19.21   0.156    13.25    42.37

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21   0.156    13.25    42.37
      + ID2= 2 (  0005):     1.46   0.046    12.25     7.78
        ==================================================
        ID = 3 (  0008):    20.67   0.200    12.25    39.93

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

```
-------------------------------------------------------------------------------
==================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\534f3
614-b8e3-4d4d-ab05-781d23b82e86\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\534f3
614-b8e3-4d4d-ab05-781d23b82e86\scena


DATE: 07-18-2025                           TIME: 03:09:19

USER:


COMMENTS: ____________________________________________________________

----------------------------------------------------------------------------------
------------------------
  **************************************************
  ** SIMULATION : I. 10YR 24HR SCS              **
  **************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\f2d2a5f8
| Ptotal= 67.50 mm |    Comments: 10yr 24hr 15min SCS Type II (MTO)
--------------------
```

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	1.22	12.50	9.72	18.75	1.22
0.25	0.74	6.50	1.22	12.75	4.99	19.00	1.22
0.50	0.74	6.75	1.22	13.00	4.99	19.25	1.22
0.75	0.74	7.00	1.22	13.25	3.64	19.50	1.22
1.00	0.74	7.25	1.49	13.50	3.64	19.75	1.22
1.25	0.74	7.50	1.49	13.75	2.84	20.00	1.22
1.50	0.74	7.75	1.49	14.00	2.84	20.25	0.81
1.75	0.74	8.00	1.49	14.25	2.03	20.50	0.81
2.00	0.74	8.25	1.75	14.50	2.03	20.75	0.81
2.25	0.88	8.50	1.75	14.75	2.03	21.00	0.81
2.50	0.88	8.75	1.89	15.00	2.03	21.25	0.81
2.75	0.88	9.00	1.89	15.25	2.03	21.50	0.81
3.00	0.88	9.25	2.16	15.50	2.03	21.75	0.81
3.25	0.88	9.50	2.16	15.75	2.03	22.00	0.81
3.50	0.88	9.75	2.43	16.00	2.03	22.25	0.81
3.75	0.88	10.00	2.43	16.25	1.22	22.50	0.81
4.00	0.88	10.25	3.11	16.50	1.22	22.75	0.81
4.25	1.08	10.50	3.11	16.75	1.22	23.00	0.81
4.50	1.08	10.75	4.18	17.00	1.22	23.25	0.81
4.75	1.08	11.00	4.18	17.25	1.22	23.50	0.81
5.00	1.08	11.25	6.48	17.50	1.22	23.75	0.81
5.25	1.08	11.50	6.48	17.75	1.22	24.00	0.81
5.50	1.08	11.75	19.98	18.00	1.22		
5.75	1.08	12.00	82.62	18.25	1.22		
6.00	1.08	12.25	9.72	18.50	1.22		

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

--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22

0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81
3.917	0.88	10.000	2.43	16.083	2.02	22.17	0.81
4.000	0.88	10.083	2.43	16.167	2.03	22.25	0.81
4.083	0.88	10.167	2.43	16.250	2.03	22.33	0.81
4.167	0.88	10.250	2.43	16.333	1.22	22.42	0.81
4.250	0.88	10.333	3.10	16.417	1.22	22.50	0.81
4.333	1.08	10.417	3.11	16.500	1.22	22.58	0.81
4.417	1.08	10.500	3.11	16.583	1.22	22.67	0.81
4.500	1.08	10.583	3.10	16.667	1.22	22.75	0.81
4.583	1.08	10.667	3.11	16.750	1.22	22.83	0.81
4.667	1.08	10.750	3.11	16.833	1.22	22.92	0.81
4.750	1.08	10.833	4.18	16.917	1.22	23.00	0.81
4.833	1.08	10.917	4.18	17.000	1.22	23.08	0.81
4.917	1.08	11.000	4.18	17.083	1.22	23.17	0.81
5.000	1.08	11.083	4.18	17.167	1.22	23.25	0.81
5.083	1.08	11.167	4.18	17.250	1.22	23.33	0.81
5.167	1.08	11.250	4.18	17.333	1.22	23.42	0.81
5.250	1.08	11.333	6.48	17.417	1.22	23.50	0.81
5.333	1.08	11.417	6.48	17.500	1.22	23.58	0.81
5.417	1.08	11.500	6.48	17.583	1.22	23.67	0.81
5.500	1.08	11.583	6.48	17.667	1.22	23.75	0.81
5.583	1.08	11.667	6.48	17.750	1.22	23.83	0.81
5.667	1.08	11.750	6.48	17.833	1.22	23.92	0.81
5.750	1.08	11.833	19.98	17.917	1.22	24.00	0.81
5.833	1.08	11.917	19.98	18.000	1.22	24.08	0.81
5.917	1.08	12.000	19.98	18.083	1.22	24.17	0.81
6.000	1.08	12.083	82.61	18.167	1.22	24.25	0.81
6.083	1.08	12.167	82.62	18.250	1.22		

```
Unit Hyd Qpeak  (cms)=   0.902

PEAK FLOW       (cms)=   0.104 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  13.845
TOTAL RAINFALL   (mm)=  67.500
RUNOFF COEFFICIENT   =   0.205

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22

```
 0.667    0.74 | 6.750    1.22 |12.833    5.00 | 18.92    1.22
 0.750    0.74 | 6.833    1.22 |12.917    4.99 | 19.00    1.22
 0.833    0.74 | 6.917    1.22 |13.000    4.99 | 19.08    1.22
 0.917    0.74 | 7.000    1.22 |13.083    4.99 | 19.17    1.22
 1.000    0.74 | 7.083    1.22 |13.167    4.99 | 19.25    1.22
 1.083    0.74 | 7.167    1.22 |13.250    4.99 | 19.33    1.22
 1.167    0.74 | 7.250    1.22 |13.333    3.65 | 19.42    1.22
 1.250    0.74 | 7.333    1.49 |13.417    3.64 | 19.50    1.22
 1.333    0.74 | 7.417    1.49 |13.500    3.64 | 19.58    1.22
 1.417    0.74 | 7.500    1.49 |13.583    3.64 | 19.67    1.22
 1.500    0.74 | 7.583    1.49 |13.667    3.64 | 19.75    1.22
 1.583    0.74 | 7.667    1.49 |13.750    3.64 | 19.83    1.22
 1.667    0.74 | 7.750    1.49 |13.833    2.84 | 19.92    1.22
 1.750    0.74 | 7.833    1.49 |13.917    2.84 | 20.00    1.22
 1.833    0.74 | 7.917    1.49 |14.000    2.84 | 20.08    1.22
 1.917    0.74 | 8.000    1.49 |14.083    2.83 | 20.17    1.22
 2.000    0.74 | 8.083    1.49 |14.167    2.84 | 20.25    1.21
 2.083    0.74 | 8.167    1.49 |14.250    2.84 | 20.33    0.81
 2.167    0.74 | 8.250    1.49 |14.333    2.03 | 20.42    0.81
 2.250    0.74 | 8.333    1.75 |14.417    2.03 | 20.50    0.81
 2.333    0.88 | 8.417    1.75 |14.500    2.03 | 20.58    0.81
 2.417    0.88 | 8.500    1.75 |14.583    2.02 | 20.67    0.81
 2.500    0.88 | 8.583    1.75 |14.667    2.03 | 20.75    0.81
 2.583    0.88 | 8.667    1.75 |14.750    2.03 | 20.83    0.81
 2.667    0.88 | 8.750    1.75 |14.833    2.02 | 20.92    0.81
 2.750    0.88 | 8.833    1.89 |14.917    2.03 | 21.00    0.81
 2.833    0.88 | 8.917    1.89 |15.000    2.03 | 21.08    0.81
 2.917    0.88 | 9.000    1.89 |15.083    2.02 | 21.17    0.81
 3.000    0.88 | 9.083    1.89 |15.167    2.03 | 21.25    0.81
 3.083    0.88 | 9.167    1.89 |15.250    2.03 | 21.33    0.81
 3.167    0.88 | 9.250    1.89 |15.333    2.02 | 21.42    0.81
 3.250    0.88 | 9.333    2.16 |15.417    2.03 | 21.50    0.81
 3.333    0.88 | 9.417    2.16 |15.500    2.03 | 21.58    0.81
 3.417    0.88 | 9.500    2.16 |15.583    2.02 | 21.67    0.81
 3.500    0.88 | 9.583    2.16 |15.667    2.03 | 21.75    0.81
 3.583    0.88 | 9.667    2.16 |15.750    2.03 | 21.83    0.81
 3.667    0.88 | 9.750    2.16 |15.833    2.02 | 21.92    0.81
 3.750    0.88 | 9.833    2.43 |15.917    2.03 | 22.00    0.81
 3.833    0.88 | 9.917    2.43 |16.000    2.03 | 22.08    0.81
 3.917    0.88 |10.000    2.43 |16.083    2.02 | 22.17    0.81
 4.000    0.88 |10.083    2.43 |16.167    2.03 | 22.25    0.81
 4.083    0.88 |10.167    2.43 |16.250    2.03 | 22.33    0.81
 4.167    0.88 |10.250    2.43 |16.333    1.22 | 22.42    0.81
 4.250    0.88 |10.333    3.10 |16.417    1.22 | 22.50    0.81
 4.333    1.08 |10.417    3.11 |16.500    1.22 | 22.58    0.81
 4.417    1.08 |10.500    3.11 |16.583    1.22 | 22.67    0.81
 4.500    1.08 |10.583    3.10 |16.667    1.22 | 22.75    0.81
 4.583    1.08 |10.667    3.11 |16.750    1.22 | 22.83    0.81
 4.667    1.08 |10.750    3.11 |16.833    1.22 | 22.92    0.81
 4.750    1.08 |10.833    4.18 |16.917    1.22 | 23.00    0.81
```

```
              4.833    1.08 |10.917    4.18 |17.000    1.22 | 23.08    0.81
              4.917    1.08 |11.000    4.18 |17.083    1.22 | 23.17    0.81
              5.000    1.08 |11.083    4.18 |17.167    1.22 | 23.25    0.81
              5.083    1.08 |11.167    4.18 |17.250    1.22 | 23.33    0.81
              5.167    1.08 |11.250    4.18 |17.333    1.22 | 23.42    0.81
              5.250    1.08 |11.333    6.48 |17.417    1.22 | 23.50    0.81
              5.333    1.08 |11.417    6.48 |17.500    1.22 | 23.58    0.81
              5.417    1.08 |11.500    6.48 |17.583    1.22 | 23.67    0.81
              5.500    1.08 |11.583    6.48 |17.667    1.22 | 23.75    0.81
              5.583    1.08 |11.667    6.48 |17.750    1.22 | 23.83    0.81
              5.667    1.08 |11.750    6.48 |17.833    1.22 | 23.92    0.81
              5.750    1.08 |11.833   19.98 |17.917    1.22 | 24.00    0.81
              5.833    1.08 |11.917   19.98 |18.000    1.22 | 24.08    0.81
              5.917    1.08 |12.000   19.98 |18.083    1.22 | 24.17    0.81
              6.000    1.08 |12.083   82.61 |18.167    1.22 | 24.25    0.81
              6.083    1.08 |12.167   82.62 |18.250    1.22 |

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW      (cms)=   0.058 (i)
     TIME TO PEAK   (hrs)=  12.250
     RUNOFF VOLUME    (mm)=   9.877
     TOTAL RAINFALL   (mm)=  67.500
     RUNOFF COEFFICIENT   =   0.146

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n           =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
              0.083    0.00 | 6.167    1.08 |12.250   82.62 | 18.33    1.22
              0.167    0.00 | 6.250    1.08 |12.333    9.73 | 18.42    1.22
              0.250    0.00 | 6.333    1.22 |12.417    9.72 | 18.50    1.22
              0.333    0.74 | 6.417    1.22 |12.500    9.72 | 18.58    1.22
```

```
0.417    0.74 | 6.500    1.22 |12.583    9.72 | 18.67    1.22
0.500    0.74 | 6.583    1.22 |12.667    9.72 | 18.75    1.22
0.583    0.74 | 6.667    1.22 |12.750    9.72 | 18.83    1.22
0.667    0.74 | 6.750    1.22 |12.833    5.00 | 18.92    1.22
0.750    0.74 | 6.833    1.22 |12.917    4.99 | 19.00    1.22
0.833    0.74 | 6.917    1.22 |13.000    4.99 | 19.08    1.22
0.917    0.74 | 7.000    1.22 |13.083    4.99 | 19.17    1.22
1.000    0.74 | 7.083    1.22 |13.167    4.99 | 19.25    1.22
1.083    0.74 | 7.167    1.22 |13.250    4.99 | 19.33    1.22
1.167    0.74 | 7.250    1.22 |13.333    3.65 | 19.42    1.22
1.250    0.74 | 7.333    1.49 |13.417    3.64 | 19.50    1.22
1.333    0.74 | 7.417    1.49 |13.500    3.64 | 19.58    1.22
1.417    0.74 | 7.500    1.49 |13.583    3.64 | 19.67    1.22
1.500    0.74 | 7.583    1.49 |13.667    3.64 | 19.75    1.22
1.583    0.74 | 7.667    1.49 |13.750    3.64 | 19.83    1.22
1.667    0.74 | 7.750    1.49 |13.833    2.84 | 19.92    1.22
1.750    0.74 | 7.833    1.49 |13.917    2.84 | 20.00    1.22
1.833    0.74 | 7.917    1.49 |14.000    2.84 | 20.08    1.22
1.917    0.74 | 8.000    1.49 |14.083    2.83 | 20.17    1.22
2.000    0.74 | 8.083    1.49 |14.167    2.84 | 20.25    1.21
2.083    0.74 | 8.167    1.49 |14.250    2.84 | 20.33    0.81
2.167    0.74 | 8.250    1.49 |14.333    2.03 | 20.42    0.81
2.250    0.74 | 8.333    1.75 |14.417    2.03 | 20.50    0.81
2.333    0.88 | 8.417    1.75 |14.500    2.03 | 20.58    0.81
2.417    0.88 | 8.500    1.75 |14.583    2.02 | 20.67    0.81
2.500    0.88 | 8.583    1.75 |14.667    2.03 | 20.75    0.81
2.583    0.88 | 8.667    1.75 |14.750    2.03 | 20.83    0.81
2.667    0.88 | 8.750    1.75 |14.833    2.02 | 20.92    0.81
2.750    0.88 | 8.833    1.89 |14.917    2.03 | 21.00    0.81
2.833    0.88 | 8.917    1.89 |15.000    2.03 | 21.08    0.81
2.917    0.88 | 9.000    1.89 |15.083    2.02 | 21.17    0.81
3.000    0.88 | 9.083    1.89 |15.167    2.03 | 21.25    0.81
3.083    0.88 | 9.167    1.89 |15.250    2.03 | 21.33    0.81
3.167    0.88 | 9.250    1.89 |15.333    2.02 | 21.42    0.81
3.250    0.88 | 9.333    2.16 |15.417    2.03 | 21.50    0.81
3.333    0.88 | 9.417    2.16 |15.500    2.03 | 21.58    0.81
3.417    0.88 | 9.500    2.16 |15.583    2.02 | 21.67    0.81
3.500    0.88 | 9.583    2.16 |15.667    2.03 | 21.75    0.81
3.583    0.88 | 9.667    2.16 |15.750    2.03 | 21.83    0.81
3.667    0.88 | 9.750    2.16 |15.833    2.02 | 21.92    0.81
3.750    0.88 | 9.833    2.43 |15.917    2.03 | 22.00    0.81
3.833    0.88 | 9.917    2.43 |16.000    2.03 | 22.08    0.81
3.917    0.88 |10.000    2.43 |16.083    2.02 | 22.17    0.81
4.000    0.88 |10.083    2.43 |16.167    2.03 | 22.25    0.81
4.083    0.88 |10.167    2.43 |16.250    2.03 | 22.33    0.81
4.167    0.88 |10.250    2.43 |16.333    1.22 | 22.42    0.81
4.250    0.88 |10.333    3.10 |16.417    1.22 | 22.50    0.81
4.333    1.08 |10.417    3.11 |16.500    1.22 | 22.58    0.81
4.417    1.08 |10.500    3.11 |16.583    1.22 | 22.67    0.81
4.500    1.08 |10.583    3.10 |16.667    1.22 | 22.75    0.81
```

```
             4.583    1.08 |10.667    3.11 |16.750    1.22 | 22.83    0.81
             4.667    1.08 |10.750    3.11 |16.833    1.22 | 22.92    0.81
             4.750    1.08 |10.833    4.18 |16.917    1.22 | 23.00    0.81
             4.833    1.08 |10.917    4.18 |17.000    1.22 | 23.08    0.81
             4.917    1.08 |11.000    4.18 |17.083    1.22 | 23.17    0.81
             5.000    1.08 |11.083    4.18 |17.167    1.22 | 23.25    0.81
             5.083    1.08 |11.167    4.18 |17.250    1.22 | 23.33    0.81
             5.167    1.08 |11.250    4.18 |17.333    1.22 | 23.42    0.81
             5.250    1.08 |11.333    6.48 |17.417    1.22 | 23.50    0.81
             5.333    1.08 |11.417    6.48 |17.500    1.22 | 23.58    0.81
             5.417    1.08 |11.500    6.48 |17.583    1.22 | 23.67    0.81
             5.500    1.08 |11.583    6.48 |17.667    1.22 | 23.75    0.81
             5.583    1.08 |11.667    6.48 |17.750    1.22 | 23.83    0.81
             5.667    1.08 |11.750    6.48 |17.833    1.22 | 23.92    0.81
             5.750    1.08 |11.833   19.98 |17.917    1.22 | 24.00    0.81
             5.833    1.08 |11.917   19.98 |18.000    1.22 | 24.08    0.81
             5.917    1.08 |12.000   19.98 |18.083    1.22 | 24.17    0.81
             6.000    1.08 |12.083   82.61 |18.167    1.22 | 24.25    0.81
             6.083    1.08 |12.167   82.62 |18.250    1.22 |

     Max.Eff.Inten.(mm/hr)=      82.62        23.23
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.27 (ii)   14.93 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.30         0.08
                                                          *TOTALS*
     PEAK FLOW      (cms)=       0.18         0.03          0.205 (iii)
     TIME TO PEAK   (hrs)=      12.25        12.33          12.25
     RUNOFF VOLUME   (mm)=      66.50        17.37          41.93
     TOTAL RAINFALL  (mm)=      67.50        67.50          67.50
     RUNOFF COEFFICIENT  =       0.99         0.26           0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
```

Length	(m)=	309.84	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81
3.917	0.88	10.000	2.43	16.083	2.02	22.17	0.81
4.000	0.88	10.083	2.43	16.167	2.03	22.25	0.81
4.083	0.88	10.167	2.43	16.250	2.03	22.33	0.81
4.167	0.88	10.250	2.43	16.333	1.22	22.42	0.81
4.250	0.88	10.333	3.10	16.417	1.22	22.50	0.81
4.333	1.08	10.417	3.11	16.500	1.22	22.58	0.81
4.417	1.08	10.500	3.11	16.583	1.22	22.67	0.81
4.500	1.08	10.583	3.10	16.667	1.22	22.75	0.81
4.583	1.08	10.667	3.11	16.750	1.22	22.83	0.81
4.667	1.08	10.750	3.11	16.833	1.22	22.92	0.81
4.750	1.08	10.833	4.18	16.917	1.22	23.00	0.81
4.833	1.08	10.917	4.18	17.000	1.22	23.08	0.81
4.917	1.08	11.000	4.18	17.083	1.22	23.17	0.81
5.000	1.08	11.083	4.18	17.167	1.22	23.25	0.81
5.083	1.08	11.167	4.18	17.250	1.22	23.33	0.81
5.167	1.08	11.250	4.18	17.333	1.22	23.42	0.81
5.250	1.08	11.333	6.48	17.417	1.22	23.50	0.81
5.333	1.08	11.417	6.48	17.500	1.22	23.58	0.81
5.417	1.08	11.500	6.48	17.583	1.22	23.67	0.81
5.500	1.08	11.583	6.48	17.667	1.22	23.75	0.81
5.583	1.08	11.667	6.48	17.750	1.22	23.83	0.81
5.667	1.08	11.750	6.48	17.833	1.22	23.92	0.81
5.750	1.08	11.833	19.98	17.917	1.22	24.00	0.81
5.833	1.08	11.917	19.98	18.000	1.22	24.08	0.81
5.917	1.08	12.000	19.98	18.083	1.22	24.17	0.81
6.000	1.08	12.083	82.61	18.167	1.22	24.25	0.81
6.083	1.08	12.167	82.62	18.250	1.22		

Max.Eff.Inten.(mm/hr)=	82.62	354.82	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.41 (ii)	9.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.12	
			TOTALS
PEAK FLOW (cms)=	1.16	1.31	2.467 (iii)
TIME TO PEAK (hrs)=	12.25	12.25	12.25
RUNOFF VOLUME (mm)=	66.50	48.17	54.77
TOTAL RAINFALL (mm)=	67.50	67.50	67.50
RUNOFF COEFFICIENT =	0.99	0.71	0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 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.

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.205    12.25    41.93
      + ID2= 2 (  0002):    14.40   2.467    12.25    54.77
        ===================================================
        ID = 3 (  0007):    15.98   2.673    12.25    53.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      2.673     12.25      53.50
   OUTFLOW: ID= 1 (  0003)     15.980      0.158     13.50      53.44

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  5.91
                   TIME SHIFT OF PEAK FLOW        (min)= 75.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.5245

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.08	12.250	82.62	18.33	1.22
0.167	0.00	6.250	1.08	12.333	9.73	18.42	1.22
0.250	0.00	6.333	1.22	12.417	9.72	18.50	1.22
0.333	0.74	6.417	1.22	12.500	9.72	18.58	1.22
0.417	0.74	6.500	1.22	12.583	9.72	18.67	1.22
0.500	0.74	6.583	1.22	12.667	9.72	18.75	1.22
0.583	0.74	6.667	1.22	12.750	9.72	18.83	1.22
0.667	0.74	6.750	1.22	12.833	5.00	18.92	1.22
0.750	0.74	6.833	1.22	12.917	4.99	19.00	1.22
0.833	0.74	6.917	1.22	13.000	4.99	19.08	1.22
0.917	0.74	7.000	1.22	13.083	4.99	19.17	1.22
1.000	0.74	7.083	1.22	13.167	4.99	19.25	1.22
1.083	0.74	7.167	1.22	13.250	4.99	19.33	1.22
1.167	0.74	7.250	1.22	13.333	3.65	19.42	1.22
1.250	0.74	7.333	1.49	13.417	3.64	19.50	1.22
1.333	0.74	7.417	1.49	13.500	3.64	19.58	1.22
1.417	0.74	7.500	1.49	13.583	3.64	19.67	1.22
1.500	0.74	7.583	1.49	13.667	3.64	19.75	1.22
1.583	0.74	7.667	1.49	13.750	3.64	19.83	1.22
1.667	0.74	7.750	1.49	13.833	2.84	19.92	1.22
1.750	0.74	7.833	1.49	13.917	2.84	20.00	1.22
1.833	0.74	7.917	1.49	14.000	2.84	20.08	1.22
1.917	0.74	8.000	1.49	14.083	2.83	20.17	1.22
2.000	0.74	8.083	1.49	14.167	2.84	20.25	1.21
2.083	0.74	8.167	1.49	14.250	2.84	20.33	0.81
2.167	0.74	8.250	1.49	14.333	2.03	20.42	0.81
2.250	0.74	8.333	1.75	14.417	2.03	20.50	0.81
2.333	0.88	8.417	1.75	14.500	2.03	20.58	0.81
2.417	0.88	8.500	1.75	14.583	2.02	20.67	0.81
2.500	0.88	8.583	1.75	14.667	2.03	20.75	0.81
2.583	0.88	8.667	1.75	14.750	2.03	20.83	0.81
2.667	0.88	8.750	1.75	14.833	2.02	20.92	0.81
2.750	0.88	8.833	1.89	14.917	2.03	21.00	0.81
2.833	0.88	8.917	1.89	15.000	2.03	21.08	0.81
2.917	0.88	9.000	1.89	15.083	2.02	21.17	0.81
3.000	0.88	9.083	1.89	15.167	2.03	21.25	0.81
3.083	0.88	9.167	1.89	15.250	2.03	21.33	0.81
3.167	0.88	9.250	1.89	15.333	2.02	21.42	0.81
3.250	0.88	9.333	2.16	15.417	2.03	21.50	0.81
3.333	0.88	9.417	2.16	15.500	2.03	21.58	0.81
3.417	0.88	9.500	2.16	15.583	2.02	21.67	0.81
3.500	0.88	9.583	2.16	15.667	2.03	21.75	0.81
3.583	0.88	9.667	2.16	15.750	2.03	21.83	0.81
3.667	0.88	9.750	2.16	15.833	2.02	21.92	0.81
3.750	0.88	9.833	2.43	15.917	2.03	22.00	0.81
3.833	0.88	9.917	2.43	16.000	2.03	22.08	0.81

```
                3.917    0.88 |10.000    2.43 |16.083    2.02 | 22.17    0.81
                4.000    0.88 |10.083    2.43 |16.167    2.03 | 22.25    0.81
                4.083    0.88 |10.167    2.43 |16.250    2.03 | 22.33    0.81
                4.167    0.88 |10.250    2.43 |16.333    1.22 | 22.42    0.81
                4.250    0.88 |10.333    3.10 |16.417    1.22 | 22.50    0.81
                4.333    1.08 |10.417    3.11 |16.500    1.22 | 22.58    0.81
                4.417    1.08 |10.500    3.11 |16.583    1.22 | 22.67    0.81
                4.500    1.08 |10.583    3.10 |16.667    1.22 | 22.75    0.81
                4.583    1.08 |10.667    3.11 |16.750    1.22 | 22.83    0.81
                4.667    1.08 |10.750    3.11 |16.833    1.22 | 22.92    0.81
                4.750    1.08 |10.833    4.18 |16.917    1.22 | 23.00    0.81
                4.833    1.08 |10.917    4.18 |17.000    1.22 | 23.08    0.81
                4.917    1.08 |11.000    4.18 |17.083    1.22 | 23.17    0.81
                5.000    1.08 |11.083    4.18 |17.167    1.22 | 23.25    0.81
                5.083    1.08 |11.167    4.18 |17.250    1.22 | 23.33    0.81
                5.167    1.08 |11.250    4.18 |17.333    1.22 | 23.42    0.81
                5.250    1.08 |11.333    6.48 |17.417    1.22 | 23.50    0.81
                5.333    1.08 |11.417    6.48 |17.500    1.22 | 23.58    0.81
                5.417    1.08 |11.500    6.48 |17.583    1.22 | 23.67    0.81
                5.500    1.08 |11.583    6.48 |17.667    1.22 | 23.75    0.81
                5.583    1.08 |11.667    6.48 |17.750    1.22 | 23.83    0.81
                5.667    1.08 |11.750    6.48 |17.833    1.22 | 23.92    0.81
                5.750    1.08 |11.833   19.98 |17.917    1.22 | 24.00    0.81
                5.833    1.08 |11.917   19.98 |18.000    1.22 | 24.08    0.81
                5.917    1.08 |12.000   19.98 |18.083    1.22 | 24.17    0.81
                6.000    1.08 |12.083   82.61 |18.167    1.22 | 24.25    0.81
                6.083    1.08 |12.167   82.62 |18.250    1.22 |

     Max.Eff.Inten.(mm/hr)=      82.62       205.09
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.67 (ii)    7.96 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.12          0.198 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.25          12.25
     RUNOFF VOLUME    (mm)=      66.50        38.32          45.67
     TOTAL RAINFALL   (mm)=      67.50        67.50          67.50
     RUNOFF COEFFICIENT   =       0.99         0.57           0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

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

```
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340     0.198     12.25      45.67
   OUTFLOW: ID= 1 (  0010)      1.340     0.030     12.75      45.23

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 15.26
                   TIME SHIFT OF PEAK FLOW         (min)= 30.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0304

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):      1.34   0.030    12.75    45.23
      + ID2= 2 (  0003):     15.98   0.158    13.50    53.44
        ==================================================
        ID = 3 (  0008):     17.32   0.185    13.25    52.81

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):     17.32   0.185    13.25    52.81
      + ID2= 2 (  0004):      1.89   0.104    12.25    13.85
        ==================================================
        ID = 1 (  0008):     19.21   0.193    12.75    48.97

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):     19.21   0.193    12.75    48.97
```

```
      + ID2= 2 (  0005):     1.46   0.058    12.25     9.88
        ====================================================
        ID = 3 (  0008):    20.67   0.251    12.25    46.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\42467
3df-c529-4cb0-bf55-3a1eca38ff5c\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\42467
3df-c529-4cb0-bf55-3a1eca38ff5c\scena


DATE: 07-18-2025                           TIME: 03:09:18

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  **************************************************
  ** SIMULATION : J. 25YR 24HR SCS              **
```

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


 --------------------
 |    READ STORM    |    Filename: C:\Users\msimon\AppD
 |                  |              ata\Local\Temp\
 |                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\d9e2f083
 | Ptotal= 78.08 mm |    Comments: 25yr 24hr 15min SCS Type II (MTO)
 --------------------
                    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    1.41 | 12.50   11.24 | 18.75    1.41
                    0.25    0.86 |  6.50    1.41 | 12.75    5.78 | 19.00    1.41
                    0.50    0.86 |  6.75    1.41 | 13.00    5.78 | 19.25    1.41
                    0.75    0.86 |  7.00    1.41 | 13.25    4.22 | 19.50    1.41
                    1.00    0.86 |  7.25    1.72 | 13.50    4.22 | 19.75    1.41
                    1.25    0.86 |  7.50    1.72 | 13.75    3.28 | 20.00    1.41
                    1.50    0.86 |  7.75    1.72 | 14.00    3.28 | 20.25    0.94
                    1.75    0.86 |  8.00    1.72 | 14.25    2.34 | 20.50    0.94
                    2.00    0.86 |  8.25    2.03 | 14.50    2.34 | 20.75    0.94
                    2.25    1.02 |  8.50    2.03 | 14.75    2.34 | 21.00    0.94
                    2.50    1.02 |  8.75    2.19 | 15.00    2.34 | 21.25    0.94
                    2.75    1.02 |  9.00    2.19 | 15.25    2.34 | 21.50    0.94
                    3.00    1.02 |  9.25    2.50 | 15.50    2.34 | 21.75    0.94
                    3.25    1.02 |  9.50    2.50 | 15.75    2.34 | 22.00    0.94
                    3.50    1.02 |  9.75    2.81 | 16.00    2.34 | 22.25    0.94
                    3.75    1.02 | 10.00    2.81 | 16.25    1.41 | 22.50    0.94
                    4.00    1.02 | 10.25    3.59 | 16.50    1.41 | 22.75    0.94
                    4.25    1.25 | 10.50    3.59 | 16.75    1.41 | 23.00    0.94
                    4.50    1.25 | 10.75    4.84 | 17.00    1.41 | 23.25    0.94
                    4.75    1.25 | 11.00    4.84 | 17.25    1.41 | 23.50    0.94
                    5.00    1.25 | 11.25    7.50 | 17.50    1.41 | 23.75    0.94
                    5.25    1.25 | 11.50    7.50 | 17.75    1.41 | 24.00    0.94
                    5.50    1.25 | 11.75   23.11 | 18.00    1.41 |
                    5.75    1.25 | 12.00   95.57 | 18.25    1.41 |
                    6.00    1.25 | 12.25   11.24 | 18.50    1.41 |

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


 --------------------
 | CALIB            |
 | NASHYD   (  0004)|   Area    (ha)=    1.89   Curve Number   (CN)= 55.5
 |ID= 1 DT= 5.0 min |   Ia      (mm)=    5.00   # of Linear Res.(N)= 3.00
 --------------------   U.H. Tp(hrs)=    0.08

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
 0.083    0.00 | 6.167    1.25 |12.250   95.57 | 18.33    1.41
 0.167    0.00 | 6.250    1.25 |12.333   11.25 | 18.42    1.41
 0.250    0.00 | 6.333    1.41 |12.417   11.24 | 18.50    1.41
 0.333    0.86 | 6.417    1.41 |12.500   11.24 | 18.58    1.41
 0.417    0.86 | 6.500    1.41 |12.583   11.24 | 18.67    1.41
 0.500    0.86 | 6.583    1.41 |12.667   11.24 | 18.75    1.41
 0.583    0.86 | 6.667    1.41 |12.750   11.24 | 18.83    1.41
 0.667    0.86 | 6.750    1.41 |12.833    5.78 | 18.92    1.41
 0.750    0.86 | 6.833    1.41 |12.917    5.78 | 19.00    1.41
 0.833    0.86 | 6.917    1.41 |13.000    5.78 | 19.08    1.41
 0.917    0.86 | 7.000    1.41 |13.083    5.78 | 19.17    1.41
 1.000    0.86 | 7.083    1.41 |13.167    5.78 | 19.25    1.41
 1.083    0.86 | 7.167    1.41 |13.250    5.78 | 19.33    1.41
 1.167    0.86 | 7.250    1.41 |13.333    4.22 | 19.42    1.41
 1.250    0.86 | 7.333    1.72 |13.417    4.22 | 19.50    1.41
 1.333    0.86 | 7.417    1.72 |13.500    4.22 | 19.58    1.41
 1.417    0.86 | 7.500    1.72 |13.583    4.22 | 19.67    1.41
 1.500    0.86 | 7.583    1.72 |13.667    4.22 | 19.75    1.41
 1.583    0.86 | 7.667    1.72 |13.750    4.22 | 19.83    1.41
 1.667    0.86 | 7.750    1.72 |13.833    3.28 | 19.92    1.41
 1.750    0.86 | 7.833    1.72 |13.917    3.28 | 20.00    1.41
 1.833    0.86 | 7.917    1.72 |14.000    3.28 | 20.08    1.41
 1.917    0.86 | 8.000    1.72 |14.083    3.28 | 20.17    1.41
 2.000    0.86 | 8.083    1.72 |14.167    3.28 | 20.25    1.41
 2.083    0.86 | 8.167    1.72 |14.250    3.28 | 20.33    0.94
 2.167    0.86 | 8.250    1.72 |14.333    2.34 | 20.42    0.94
 2.250    0.86 | 8.333    2.03 |14.417    2.34 | 20.50    0.94
 2.333    1.02 | 8.417    2.03 |14.500    2.34 | 20.58    0.94
 2.417    1.02 | 8.500    2.03 |14.583    2.34 | 20.67    0.94
 2.500    1.02 | 8.583    2.03 |14.667    2.34 | 20.75    0.94
 2.583    1.02 | 8.667    2.03 |14.750    2.34 | 20.83    0.94
 2.667    1.02 | 8.750    2.03 |14.833    2.34 | 20.92    0.94
 2.750    1.02 | 8.833    2.19 |14.917    2.34 | 21.00    0.94
 2.833    1.02 | 8.917    2.19 |15.000    2.34 | 21.08    0.94
 2.917    1.02 | 9.000    2.19 |15.083    2.34 | 21.17    0.94
 3.000    1.02 | 9.083    2.19 |15.167    2.34 | 21.25    0.94
 3.083    1.02 | 9.167    2.19 |15.250    2.34 | 21.33    0.94
 3.167    1.02 | 9.250    2.19 |15.333    2.34 | 21.42    0.94
 3.250    1.02 | 9.333    2.50 |15.417    2.34 | 21.50    0.94
 3.333    1.02 | 9.417    2.50 |15.500    2.34 | 21.58    0.94
 3.417    1.02 | 9.500    2.50 |15.583    2.34 | 21.67    0.94
 3.500    1.02 | 9.583    2.50 |15.667    2.34 | 21.75    0.94
 3.583    1.02 | 9.667    2.50 |15.750    2.34 | 21.83    0.94
 3.667    1.02 | 9.750    2.50 |15.833    2.34 | 21.92    0.94
 3.750    1.02 | 9.833    2.81 |15.917    2.34 | 22.00    0.94
 3.833    1.02 | 9.917    2.81 |16.000    2.34 | 22.08    0.94
 3.917    1.02 |10.000    2.81 |16.083    2.34 | 22.17    0.94
 4.000    1.02 |10.083    2.81 |16.167    2.34 | 22.25    0.94
 4.083    1.02 |10.167    2.81 |16.250    2.34 | 22.33    0.94
 4.167    1.02 |10.250    2.81 |16.333    1.41 | 22.42    0.94
 4.250    1.02 |10.333    3.59 |16.417    1.41 | 22.50    0.94
 4.333    1.25 |10.417    3.59 |16.500    1.41 | 22.58    0.94
 4.417    1.25 |10.500    3.59 |16.583    1.41 | 22.67    0.94
 4.500    1.25 |10.583    3.59 |16.667    1.41 | 22.75    0.94
 4.583    1.25 |10.667    3.59 |16.750    1.41 | 22.83    0.94
 4.667    1.25 |10.750    3.59 |16.833    1.41 | 22.92    0.94
 4.750    1.25 |10.833    4.84 |16.917    1.41 | 23.00    0.94
 4.833    1.25 |10.917    4.84 |17.000    1.41 | 23.08    0.94
 4.917    1.25 |11.000    4.84 |17.083    1.41 | 23.17    0.94
 5.000    1.25 |11.083    4.84 |17.167    1.41 | 23.25    0.94
 5.083    1.25 |11.167    4.84 |17.250    1.41 | 23.33    0.94
 5.167    1.25 |11.250    4.84 |17.333    1.41 | 23.42    0.94
 5.250    1.25 |11.333    7.50 |17.417    1.41 | 23.50    0.94
 5.333    1.25 |11.417    7.50 |17.500    1.41 | 23.58    0.94
 5.417    1.25 |11.500    7.50 |17.583    1.41 | 23.67    0.94
 5.500    1.25 |11.583    7.50 |17.667    1.41 | 23.75    0.94
 5.583    1.25 |11.667    7.50 |17.750    1.41 | 23.83    0.94
 5.667    1.25 |11.750    7.50 |17.833    1.41 | 23.92    0.94
 5.750    1.25 |11.833   23.11 |17.917    1.41 | 24.00    0.94
 5.833    1.25 |11.917   23.11 |18.000    1.41 | 24.08    0.94
 5.917    1.25 |12.000   23.11 |18.083    1.41 | 24.17    0.94
 6.000    1.25 |12.083   95.56 |18.167    1.41 | 24.25    0.94
 6.083    1.25 |12.167   95.57 |18.250    1.41 |

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.137 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  18.206
     TOTAL RAINFALL   (mm)=  78.080
     RUNOFF COEFFICIENT   =   0.233

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

-------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    0.00 | 6.167    1.25 |12.250   95.57 | 18.33    1.41
               0.167    0.00 | 6.250    1.25 |12.333   11.25 | 18.42    1.41
```

0.250	0.00	6.333	1.41	12.417	11.24	18.50	1.41
0.333	0.86	6.417	1.41	12.500	11.24	18.58	1.41
0.417	0.86	6.500	1.41	12.583	11.24	18.67	1.41
0.500	0.86	6.583	1.41	12.667	11.24	18.75	1.41
0.583	0.86	6.667	1.41	12.750	11.24	18.83	1.41
0.667	0.86	6.750	1.41	12.833	5.78	18.92	1.41
0.750	0.86	6.833	1.41	12.917	5.78	19.00	1.41
0.833	0.86	6.917	1.41	13.000	5.78	19.08	1.41
0.917	0.86	7.000	1.41	13.083	5.78	19.17	1.41
1.000	0.86	7.083	1.41	13.167	5.78	19.25	1.41
1.083	0.86	7.167	1.41	13.250	5.78	19.33	1.41
1.167	0.86	7.250	1.41	13.333	4.22	19.42	1.41
1.250	0.86	7.333	1.72	13.417	4.22	19.50	1.41
1.333	0.86	7.417	1.72	13.500	4.22	19.58	1.41
1.417	0.86	7.500	1.72	13.583	4.22	19.67	1.41
1.500	0.86	7.583	1.72	13.667	4.22	19.75	1.41
1.583	0.86	7.667	1.72	13.750	4.22	19.83	1.41
1.667	0.86	7.750	1.72	13.833	3.28	19.92	1.41
1.750	0.86	7.833	1.72	13.917	3.28	20.00	1.41
1.833	0.86	7.917	1.72	14.000	3.28	20.08	1.41
1.917	0.86	8.000	1.72	14.083	3.28	20.17	1.41
2.000	0.86	8.083	1.72	14.167	3.28	20.25	1.41
2.083	0.86	8.167	1.72	14.250	3.28	20.33	0.94
2.167	0.86	8.250	1.72	14.333	2.34	20.42	0.94
2.250	0.86	8.333	2.03	14.417	2.34	20.50	0.94
2.333	1.02	8.417	2.03	14.500	2.34	20.58	0.94
2.417	1.02	8.500	2.03	14.583	2.34	20.67	0.94
2.500	1.02	8.583	2.03	14.667	2.34	20.75	0.94
2.583	1.02	8.667	2.03	14.750	2.34	20.83	0.94
2.667	1.02	8.750	2.03	14.833	2.34	20.92	0.94
2.750	1.02	8.833	2.19	14.917	2.34	21.00	0.94
2.833	1.02	8.917	2.19	15.000	2.34	21.08	0.94
2.917	1.02	9.000	2.19	15.083	2.34	21.17	0.94
3.000	1.02	9.083	2.19	15.167	2.34	21.25	0.94
3.083	1.02	9.167	2.19	15.250	2.34	21.33	0.94
3.167	1.02	9.250	2.19	15.333	2.34	21.42	0.94
3.250	1.02	9.333	2.50	15.417	2.34	21.50	0.94
3.333	1.02	9.417	2.50	15.500	2.34	21.58	0.94
3.417	1.02	9.500	2.50	15.583	2.34	21.67	0.94
3.500	1.02	9.583	2.50	15.667	2.34	21.75	0.94
3.583	1.02	9.667	2.50	15.750	2.34	21.83	0.94
3.667	1.02	9.750	2.50	15.833	2.34	21.92	0.94
3.750	1.02	9.833	2.81	15.917	2.34	22.00	0.94
3.833	1.02	9.917	2.81	16.000	2.34	22.08	0.94
3.917	1.02	10.000	2.81	16.083	2.34	22.17	0.94
4.000	1.02	10.083	2.81	16.167	2.34	22.25	0.94
4.083	1.02	10.167	2.81	16.250	2.34	22.33	0.94
4.167	1.02	10.250	2.81	16.333	1.41	22.42	0.94
4.250	1.02	10.333	3.59	16.417	1.41	22.50	0.94
4.333	1.25	10.417	3.59	16.500	1.41	22.58	0.94
4.417	1.25	10.500	3.59	16.583	1.41	22.67	0.94
4.500	1.25	10.583	3.59	16.667	1.41	22.75	0.94
4.583	1.25	10.667	3.59	16.750	1.41	22.83	0.94
4.667	1.25	10.750	3.59	16.833	1.41	22.92	0.94
4.750	1.25	10.833	4.84	16.917	1.41	23.00	0.94
4.833	1.25	10.917	4.84	17.000	1.41	23.08	0.94
4.917	1.25	11.000	4.84	17.083	1.41	23.17	0.94
5.000	1.25	11.083	4.84	17.167	1.41	23.25	0.94
5.083	1.25	11.167	4.84	17.250	1.41	23.33	0.94
5.167	1.25	11.250	4.84	17.333	1.41	23.42	0.94
5.250	1.25	11.333	7.50	17.417	1.41	23.50	0.94
5.333	1.25	11.417	7.50	17.500	1.41	23.58	0.94
5.417	1.25	11.500	7.50	17.583	1.41	23.67	0.94
5.500	1.25	11.583	7.50	17.667	1.41	23.75	0.94
5.583	1.25	11.667	7.50	17.750	1.41	23.83	0.94
5.667	1.25	11.750	7.50	17.833	1.41	23.92	0.94
5.750	1.25	11.833	23.11	17.917	1.41	24.00	0.94
5.833	1.25	11.917	23.11	18.000	1.41	24.08	0.94
5.917	1.25	12.000	23.11	18.083	1.41	24.17	0.94
6.000	1.25	12.083	95.56	18.167	1.41	24.25	0.94
6.083	1.25	12.167	95.57	18.250	1.41		

```
Unit Hyd Qpeak  (cms)=   0.797

PEAK FLOW      (cms)=   0.078 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  13.120
TOTAL RAINFALL   (mm)=  78.080
RUNOFF COEFFICIENT   =   0.168

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

```
-------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083     0.00 | 6.167     1.25 |12.250   95.57 | 18.33     1.41
0.167     0.00 | 6.250     1.25 |12.333   11.25 | 18.42     1.41
0.250     0.00 | 6.333     1.41 |12.417   11.24 | 18.50     1.41
0.333     0.86 | 6.417     1.41 |12.500   11.24 | 18.58     1.41
0.417     0.86 | 6.500     1.41 |12.583   11.24 | 18.67     1.41
0.500     0.86 | 6.583     1.41 |12.667   11.24 | 18.75     1.41
0.583     0.86 | 6.667     1.41 |12.750   11.24 | 18.83     1.41
0.667     0.86 | 6.750     1.41 |12.833    5.78 | 18.92     1.41
0.750     0.86 | 6.833     1.41 |12.917    5.78 | 19.00     1.41
0.833     0.86 | 6.917     1.41 |13.000    5.78 | 19.08     1.41
0.917     0.86 | 7.000     1.41 |13.083    5.78 | 19.17     1.41
1.000     0.86 | 7.083     1.41 |13.167    5.78 | 19.25     1.41
1.083     0.86 | 7.167     1.41 |13.250    5.78 | 19.33     1.41
1.167     0.86 | 7.250     1.41 |13.333    4.22 | 19.42     1.41
1.250     0.86 | 7.333     1.72 |13.417    4.22 | 19.50     1.41
1.333     0.86 | 7.417     1.72 |13.500    4.22 | 19.58     1.41
1.417     0.86 | 7.500     1.72 |13.583    4.22 | 19.67     1.41
1.500     0.86 | 7.583     1.72 |13.667    4.22 | 19.75     1.41
1.583     0.86 | 7.667     1.72 |13.750    4.22 | 19.83     1.41
1.667     0.86 | 7.750     1.72 |13.833    3.28 | 19.92     1.41
1.750     0.86 | 7.833     1.72 |13.917    3.28 | 20.00     1.41
1.833     0.86 | 7.917     1.72 |14.000    3.28 | 20.08     1.41
1.917     0.86 | 8.000     1.72 |14.083    3.28 | 20.17     1.41
2.000     0.86 | 8.083     1.72 |14.167    3.28 | 20.25     1.41
2.083     0.86 | 8.167     1.72 |14.250    3.28 | 20.33     0.94
2.167     0.86 | 8.250     1.72 |14.333    2.34 | 20.42     0.94
2.250     0.86 | 8.333     2.03 |14.417    2.34 | 20.50     0.94
2.333     1.02 | 8.417     2.03 |14.500    2.34 | 20.58     0.94
2.417     1.02 | 8.500     2.03 |14.583    2.34 | 20.67     0.94
2.500     1.02 | 8.583     2.03 |14.667    2.34 | 20.75     0.94
2.583     1.02 | 8.667     2.03 |14.750    2.34 | 20.83     0.94
2.667     1.02 | 8.750     2.03 |14.833    2.34 | 20.92     0.94
2.750     1.02 | 8.833     2.19 |14.917    2.34 | 21.00     0.94
2.833     1.02 | 8.917     2.19 |15.000    2.34 | 21.08     0.94
2.917     1.02 | 9.000     2.19 |15.083    2.34 | 21.17     0.94
3.000     1.02 | 9.083     2.19 |15.167    2.34 | 21.25     0.94
3.083     1.02 | 9.167     2.19 |15.250    2.34 | 21.33     0.94
3.167     1.02 | 9.250     2.19 |15.333    2.34 | 21.42     0.94
3.250     1.02 | 9.333     2.50 |15.417    2.34 | 21.50     0.94
3.333     1.02 | 9.417     2.50 |15.500    2.34 | 21.58     0.94
3.417     1.02 | 9.500     2.50 |15.583    2.34 | 21.67     0.94
3.500     1.02 | 9.583     2.50 |15.667    2.34 | 21.75     0.94
3.583     1.02 | 9.667     2.50 |15.750    2.34 | 21.83     0.94
3.667     1.02 | 9.750     2.50 |15.833    2.34 | 21.92     0.94
3.750     1.02 | 9.833     2.81 |15.917    2.34 | 22.00     0.94
3.833     1.02 | 9.917     2.81 |16.000    2.34 | 22.08     0.94
3.917     1.02 |10.000     2.81 |16.083    2.34 | 22.17     0.94
4.000     1.02 |10.083     2.81 |16.167    2.34 | 22.25     0.94
4.083     1.02 |10.167     2.81 |16.250    2.34 | 22.33     0.94
```

```
4.167     1.02 |10.250     2.81 |16.333     1.41 | 22.42     0.94
4.250     1.02 |10.333     3.59 |16.417     1.41 | 22.50     0.94
4.333     1.25 |10.417     3.59 |16.500     1.41 | 22.58     0.94
4.417     1.25 |10.500     3.59 |16.583     1.41 | 22.67     0.94
4.500     1.25 |10.583     3.59 |16.667     1.41 | 22.75     0.94
4.583     1.25 |10.667     3.59 |16.750     1.41 | 22.83     0.94
4.667     1.25 |10.750     3.59 |16.833     1.41 | 22.92     0.94
4.750     1.25 |10.833     4.84 |16.917     1.41 | 23.00     0.94
4.833     1.25 |10.917     4.84 |17.000     1.41 | 23.08     0.94
4.917     1.25 |11.000     4.84 |17.083     1.41 | 23.17     0.94
5.000     1.25 |11.083     4.84 |17.167     1.41 | 23.25     0.94
5.083     1.25 |11.167     4.84 |17.250     1.41 | 23.33     0.94
5.167     1.25 |11.250     4.84 |17.333     1.41 | 23.42     0.94
5.250     1.25 |11.333     7.50 |17.417     1.41 | 23.50     0.94
5.333     1.25 |11.417     7.50 |17.500     1.41 | 23.58     0.94
5.417     1.25 |11.500     7.50 |17.583     1.41 | 23.67     0.94
5.500     1.25 |11.583     7.50 |17.667     1.41 | 23.75     0.94
5.583     1.25 |11.667     7.50 |17.750     1.41 | 23.83     0.94
5.667     1.25 |11.750     7.50 |17.833     1.41 | 23.92     0.94
5.750     1.25 |11.833    23.11 |17.917     1.41 | 24.00     0.94
5.833     1.25 |11.917    23.11 |18.000     1.41 | 24.08     0.94
5.917     1.25 |12.000    23.11 |18.083     1.41 | 24.17     0.94
6.000     1.25 |12.083    95.56 |18.167     1.41 | 24.25     0.94
6.083     1.25 |12.167    95.57 |18.250     1.41 |

     Max.Eff.Inten.(mm/hr)=      95.57        30.53
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       2.15 (ii)   13.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.04         0.244 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.33         12.25
     RUNOFF VOLUME    (mm)=      77.08        22.68         49.87
     TOTAL RAINFALL   (mm)=      78.08        78.08         78.08
     RUNOFF COEFFICIENT   =       0.99         0.29          0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
```

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	12.61	1.79
Dep. Storage	(mm)=	1.00	5.00
Average Slope	(%)=	2.00	2.00
Length	(m)=	309.84	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.25	12.250	95.57	18.33	1.41
0.167	0.00	6.250	1.25	12.333	11.25	18.42	1.41
0.250	0.00	6.333	1.41	12.417	11.24	18.50	1.41
0.333	0.86	6.417	1.41	12.500	11.24	18.58	1.41
0.417	0.86	6.500	1.41	12.583	11.24	18.67	1.41
0.500	0.86	6.583	1.41	12.667	11.24	18.75	1.41
0.583	0.86	6.667	1.41	12.750	11.24	18.83	1.41
0.667	0.86	6.750	1.41	12.833	5.78	18.92	1.41
0.750	0.86	6.833	1.41	12.917	5.78	19.00	1.41
0.833	0.86	6.917	1.41	13.000	5.78	19.08	1.41
0.917	0.86	7.000	1.41	13.083	5.78	19.17	1.41
1.000	0.86	7.083	1.41	13.167	5.78	19.25	1.41
1.083	0.86	7.167	1.41	13.250	5.78	19.33	1.41
1.167	0.86	7.250	1.41	13.333	4.22	19.42	1.41
1.250	0.86	7.333	1.72	13.417	4.22	19.50	1.41
1.333	0.86	7.417	1.72	13.500	4.22	19.58	1.41
1.417	0.86	7.500	1.72	13.583	4.22	19.67	1.41
1.500	0.86	7.583	1.72	13.667	4.22	19.75	1.41
1.583	0.86	7.667	1.72	13.750	4.22	19.83	1.41
1.667	0.86	7.750	1.72	13.833	3.28	19.92	1.41
1.750	0.86	7.833	1.72	13.917	3.28	20.00	1.41
1.833	0.86	7.917	1.72	14.000	3.28	20.08	1.41
1.917	0.86	8.000	1.72	14.083	3.28	20.17	1.41
2.000	0.86	8.083	1.72	14.167	3.28	20.25	1.41
2.083	0.86	8.167	1.72	14.250	3.28	20.33	0.94
2.167	0.86	8.250	1.72	14.333	2.34	20.42	0.94
2.250	0.86	8.333	2.03	14.417	2.34	20.50	0.94
2.333	1.02	8.417	2.03	14.500	2.34	20.58	0.94
2.417	1.02	8.500	2.03	14.583	2.34	20.67	0.94
2.500	1.02	8.583	2.03	14.667	2.34	20.75	0.94
2.583	1.02	8.667	2.03	14.750	2.34	20.83	0.94
2.667	1.02	8.750	2.03	14.833	2.34	20.92	0.94
2.750	1.02	8.833	2.19	14.917	2.34	21.00	0.94
2.833	1.02	8.917	2.19	15.000	2.34	21.08	0.94
2.917	1.02	9.000	2.19	15.083	2.34	21.17	0.94
3.000	1.02	9.083	2.19	15.167	2.34	21.25	0.94
3.083	1.02	9.167	2.19	15.250	2.34	21.33	0.94
3.167	1.02	9.250	2.19	15.333	2.34	21.42	0.94
3.250	1.02	9.333	2.50	15.417	2.34	21.50	0.94
3.333	1.02	9.417	2.50	15.500	2.34	21.58	0.94
3.417	1.02	9.500	2.50	15.583	2.34	21.67	0.94
3.500	1.02	9.583	2.50	15.667	2.34	21.75	0.94
3.583	1.02	9.667	2.50	15.750	2.34	21.83	0.94
3.667	1.02	9.750	2.50	15.833	2.34	21.92	0.94
3.750	1.02	9.833	2.81	15.917	2.34	22.00	0.94
3.833	1.02	9.917	2.81	16.000	2.34	22.08	0.94
3.917	1.02	10.000	2.81	16.083	2.34	22.17	0.94
4.000	1.02	10.083	2.81	16.167	2.34	22.25	0.94
4.083	1.02	10.167	2.81	16.250	2.34	22.33	0.94
4.167	1.02	10.250	2.81	16.333	1.41	22.42	0.94
4.250	1.02	10.333	3.59	16.417	1.41	22.50	0.94
4.333	1.25	10.417	3.59	16.500	1.41	22.58	0.94
4.417	1.25	10.500	3.59	16.583	1.41	22.67	0.94
4.500	1.25	10.583	3.59	16.667	1.41	22.75	0.94
4.583	1.25	10.667	3.59	16.750	1.41	22.83	0.94
4.667	1.25	10.750	3.59	16.833	1.41	22.92	0.94
4.750	1.25	10.833	4.84	16.917	1.41	23.00	0.94
4.833	1.25	10.917	4.84	17.000	1.41	23.08	0.94
4.917	1.25	11.000	4.84	17.083	1.41	23.17	0.94
5.000	1.25	11.083	4.84	17.167	1.41	23.25	0.94
5.083	1.25	11.167	4.84	17.250	1.41	23.33	0.94
5.167	1.25	11.250	4.84	17.333	1.41	23.42	0.94
5.250	1.25	11.333	7.50	17.417	1.41	23.50	0.94
5.333	1.25	11.417	7.50	17.500	1.41	23.58	0.94
5.417	1.25	11.500	7.50	17.583	1.41	23.67	0.94
5.500	1.25	11.583	7.50	17.667	1.41	23.75	0.94
5.583	1.25	11.667	7.50	17.750	1.41	23.83	0.94
5.667	1.25	11.750	7.50	17.833	1.41	23.92	0.94
5.750	1.25	11.833	23.11	17.917	1.41	24.00	0.94
5.833	1.25	11.917	23.11	18.000	1.41	24.08	0.94
5.917	1.25	12.000	23.11	18.083	1.41	24.17	0.94
6.000	1.25	12.083	95.56	18.167	1.41	24.25	0.94
6.083	1.25	12.167	95.57	18.250	1.41		

Max.Eff.Inten.(mm/hr)=	95.57	424.13	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.16 (ii)	8.86 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.24	0.12	
			TOTALS
PEAK FLOW (cms)=	1.35	1.61	2.955 (iii)
TIME TO PEAK (hrs)=	12.25	12.25	12.25
RUNOFF VOLUME (mm)=	77.08	58.03	64.89
TOTAL RAINFALL (mm)=	78.08	78.08	78.08
RUNOFF COEFFICIENT =	0.99	0.74	0.83

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):      1.58   0.244    12.25    49.87
      + ID2= 2 (  0002):     14.40   2.955    12.25    64.89
        ==================================================
        ID = 3 (  0007):     15.98   3.198    12.25    63.40

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740     0.5610
                          0.0260     0.0960   |   0.3270     0.8390
                          0.0440     0.2000   |   0.4650     1.0670
                          0.0660     0.3130   |   0.6180     1.3110

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      3.198     12.25      63.40
   OUTFLOW: ID= 1 (  0003)     15.980      0.205     13.42      63.35

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.40
                  TIME SHIFT OF PEAK FLOW        (min)= 70.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.6170

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
```

```
     Length           (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                 0.083    0.00 | 6.167    1.25 |12.250   95.57 | 18.33    1.41
                 0.167    0.00 | 6.250    1.25 |12.333   11.25 | 18.42    1.41
                 0.250    0.00 | 6.333    1.41 |12.417   11.24 | 18.50    1.41
                 0.333    0.86 | 6.417    1.41 |12.500   11.24 | 18.58    1.41
                 0.417    0.86 | 6.500    1.41 |12.583   11.24 | 18.67    1.41
                 0.500    0.86 | 6.583    1.41 |12.667   11.24 | 18.75    1.41
                 0.583    0.86 | 6.667    1.41 |12.750   11.24 | 18.83    1.41
                 0.667    0.86 | 6.750    1.41 |12.833    5.78 | 18.92    1.41
                 0.750    0.86 | 6.833    1.41 |12.917    5.78 | 19.00    1.41
                 0.833    0.86 | 6.917    1.41 |13.000    5.78 | 19.08    1.41
                 0.917    0.86 | 7.000    1.41 |13.083    5.78 | 19.17    1.41
                 1.000    0.86 | 7.083    1.41 |13.167    5.78 | 19.25    1.41
                 1.083    0.86 | 7.167    1.41 |13.250    5.78 | 19.33    1.41
                 1.167    0.86 | 7.250    1.41 |13.333    4.22 | 19.42    1.41
                 1.250    0.86 | 7.333    1.72 |13.417    4.22 | 19.50    1.41
                 1.333    0.86 | 7.417    1.72 |13.500    4.22 | 19.58    1.41
                 1.417    0.86 | 7.500    1.72 |13.583    4.22 | 19.67    1.41
                 1.500    0.86 | 7.583    1.72 |13.667    4.22 | 19.75    1.41
                 1.583    0.86 | 7.667    1.72 |13.750    4.22 | 19.83    1.41
                 1.667    0.86 | 7.750    1.72 |13.833    3.28 | 19.92    1.41
                 1.750    0.86 | 7.833    1.72 |13.917    3.28 | 20.00    1.41
                 1.833    0.86 | 7.917    1.72 |14.000    3.28 | 20.08    1.41
                 1.917    0.86 | 8.000    1.72 |14.083    3.28 | 20.17    1.41
                 2.000    0.86 | 8.083    1.72 |14.167    3.28 | 20.25    1.41
                 2.083    0.86 | 8.167    1.72 |14.250    3.28 | 20.33    0.94
                 2.167    0.86 | 8.250    1.72 |14.333    2.34 | 20.42    0.94
                 2.250    0.86 | 8.333    2.03 |14.417    2.34 | 20.50    0.94
                 2.333    1.02 | 8.417    2.03 |14.500    2.34 | 20.58    0.94
                 2.417    1.02 | 8.500    2.03 |14.583    2.34 | 20.67    0.94
                 2.500    1.02 | 8.583    2.03 |14.667    2.34 | 20.75    0.94
                 2.583    1.02 | 8.667    2.03 |14.750    2.34 | 20.83    0.94
                 2.667    1.02 | 8.750    2.03 |14.833    2.34 | 20.92    0.94
                 2.750    1.02 | 8.833    2.19 |14.917    2.34 | 21.00    0.94
                 2.833    1.02 | 8.917    2.19 |15.000    2.34 | 21.08    0.94
                 2.917    1.02 | 9.000    2.19 |15.083    2.34 | 21.17    0.94
                 3.000    1.02 | 9.083    2.19 |15.167    2.34 | 21.25    0.94
                 3.083    1.02 | 9.167    2.19 |15.250    2.34 | 21.33    0.94
                 3.167    1.02 | 9.250    2.19 |15.333    2.34 | 21.42    0.94
                 3.250    1.02 | 9.333    2.50 |15.417    2.34 | 21.50    0.94
                 3.333    1.02 | 9.417    2.50 |15.500    2.34 | 21.58    0.94
                 3.417    1.02 | 9.500    2.50 |15.583    2.34 | 21.67    0.94
```

```
              3.500    1.02 | 9.583    2.50 |15.667    2.34 | 21.75    0.94
              3.583    1.02 | 9.667    2.50 |15.750    2.34 | 21.83    0.94
              3.667    1.02 | 9.750    2.50 |15.833    2.34 | 21.92    0.94
              3.750    1.02 | 9.833    2.81 |15.917    2.34 | 22.00    0.94
              3.833    1.02 | 9.917    2.81 |16.000    2.34 | 22.08    0.94
              3.917    1.02 |10.000    2.81 |16.083    2.34 | 22.17    0.94
              4.000    1.02 |10.083    2.81 |16.167    2.34 | 22.25    0.94
              4.083    1.02 |10.167    2.81 |16.250    2.34 | 22.33    0.94
              4.167    1.02 |10.250    2.81 |16.333    1.41 | 22.42    0.94
              4.250    1.02 |10.333    3.59 |16.417    1.41 | 22.50    0.94
              4.333    1.25 |10.417    3.59 |16.500    1.41 | 22.58    0.94
              4.417    1.25 |10.500    3.59 |16.583    1.41 | 22.67    0.94
              4.500    1.25 |10.583    3.59 |16.667    1.41 | 22.75    0.94
              4.583    1.25 |10.667    3.59 |16.750    1.41 | 22.83    0.94
              4.667    1.25 |10.750    3.59 |16.833    1.41 | 22.92    0.94
              4.750    1.25 |10.833    4.84 |16.917    1.41 | 23.00    0.94
              4.833    1.25 |10.917    4.84 |17.000    1.41 | 23.08    0.94
              4.917    1.25 |11.000    4.84 |17.083    1.41 | 23.17    0.94
              5.000    1.25 |11.083    4.84 |17.167    1.41 | 23.25    0.94
              5.083    1.25 |11.167    4.84 |17.250    1.41 | 23.33    0.94
              5.167    1.25 |11.250    4.84 |17.333    1.41 | 23.42    0.94
              5.250    1.25 |11.333    7.50 |17.417    1.41 | 23.50    0.94
              5.333    1.25 |11.417    7.50 |17.500    1.41 | 23.58    0.94
              5.417    1.25 |11.500    7.50 |17.583    1.41 | 23.67    0.94
              5.500    1.25 |11.583    7.50 |17.667    1.41 | 23.75    0.94
              5.583    1.25 |11.667    7.50 |17.750    1.41 | 23.83    0.94
              5.667    1.25 |11.750    7.50 |17.833    1.41 | 23.92    0.94
              5.750    1.25 |11.833   23.11 |17.917    1.41 | 24.00    0.94
              5.833    1.25 |11.917   23.11 |18.000    1.41 | 24.08    0.94
              5.917    1.25 |12.000   23.11 |18.083    1.41 | 24.17    0.94
              6.000    1.25 |12.083   95.56 |18.167    1.41 | 24.25    0.94
              6.083    1.25 |12.167   95.57 |18.250    1.41 |

     Max.Eff.Inten.(mm/hr)=      95.57       251.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       2.51 (ii)    7.39 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.29         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.15       0.242 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.25       12.25
     RUNOFF VOLUME    (mm)=      77.08        47.19       54.99
     TOTAL RAINFALL   (mm)=      78.08        78.08       78.08
     RUNOFF COEFFICIENT   =       0.99         0.60        0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350     0.0329
                          0.0100     0.0168   |   0.0440     0.0373
                          0.0180     0.0233   |   0.0540     0.0411
                          0.0250     0.0275   |   0.0000     0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.242     12.25      54.99
   OUTFLOW: ID= 1 (  0010)      1.340      0.041     12.67      54.55

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 16.88
                   TIME SHIFT OF PEAK FLOW        (min)= 25.00
                   MAXIMUM  STORAGE   USED      (ha.m.)=  0.0358

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34    0.041    12.67    54.55
      + ID2= 2 (  0003):    15.98    0.205    13.42    63.35
        =====================================================
        ID = 3 (  0008):    17.32    0.240    13.08    62.67

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32    0.240    13.08    62.67
      + ID2= 2 (  0004):     1.89    0.137    12.25    18.21
        =====================================================
        ID = 1 (  0008):    19.21    0.262    12.25    58.29

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

```
--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21   0.262    12.25    58.29
      + ID2= 2 (  0005):     1.46   0.078    12.25    13.12
        ====================================================
        ID = 3 (  0008):    20.67   0.340    12.25    55.10

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
====================================================================================
========================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\25f67
307-c6d6-4692-8185-9e3238e7427a\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\25f67
307-c6d6-4692-8185-9e3238e7427a\scena

DATE: 07-18-2025                           TIME: 03:09:18

USER:


COMMENTS: ____________________________________________________________
```

```
------------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : K. 50YR 24HR SCS              **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\af0d0e87
| Ptotal= 85.42 mm |    Comments: 50yr 24hr 15min SCS Type II (MTO)
--------------------
```

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	1.54	12.50	12.30	18.75	1.54
0.25	0.94	6.50	1.54	12.75	6.32	19.00	1.54
0.50	0.94	6.75	1.54	13.00	6.32	19.25	1.54
0.75	0.94	7.00	1.54	13.25	4.61	19.50	1.54
1.00	0.94	7.25	1.88	13.50	4.61	19.75	1.54
1.25	0.94	7.50	1.88	13.75	3.59	20.00	1.54
1.50	0.94	7.75	1.88	14.00	3.59	20.25	1.03
1.75	0.94	8.00	1.88	14.25	2.56	20.50	1.03
2.00	0.94	8.25	2.22	14.50	2.56	20.75	1.03
2.25	1.11	8.50	2.22	14.75	2.56	21.00	1.03
2.50	1.11	8.75	2.39	15.00	2.56	21.25	1.03
2.75	1.11	9.00	2.39	15.25	2.56	21.50	1.03
3.00	1.11	9.25	2.73	15.50	2.56	21.75	1.03
3.25	1.11	9.50	2.73	15.75	2.56	22.00	1.03
3.50	1.11	9.75	3.08	16.00	2.56	22.25	1.03
3.75	1.11	10.00	3.08	16.25	1.54	22.50	1.03
4.00	1.11	10.25	3.93	16.50	1.54	22.75	1.03
4.25	1.37	10.50	3.93	16.75	1.54	23.00	1.03
4.50	1.37	10.75	5.30	17.00	1.54	23.25	1.03
4.75	1.37	11.00	5.30	17.25	1.54	23.50	1.03
5.00	1.37	11.25	8.20	17.50	1.54	23.75	1.03
5.25	1.37	11.50	8.20	17.75	1.54	24.00	1.03
5.50	1.37	11.75	25.28	18.00	1.54		
5.75	1.37	12.00	104.55	18.25	1.54		
6.00	1.37	12.25	12.30	18.50	1.54		

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


--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.37	12.250	104.55	18.33	1.54
0.167	0.00	6.250	1.37	12.333	12.31	18.42	1.54
0.250	0.00	6.333	1.54	12.417	12.30	18.50	1.54
0.333	0.94	6.417	1.54	12.500	12.30	18.58	1.54
0.417	0.94	6.500	1.54	12.583	12.30	18.67	1.54
0.500	0.94	6.583	1.54	12.667	12.30	18.75	1.54
0.583	0.94	6.667	1.54	12.750	12.30	18.83	1.54
0.667	0.94	6.750	1.54	12.833	6.32	18.92	1.54
0.750	0.94	6.833	1.54	12.917	6.32	19.00	1.54
0.833	0.94	6.917	1.54	13.000	6.32	19.08	1.54
0.917	0.94	7.000	1.54	13.083	6.32	19.17	1.54
1.000	0.94	7.083	1.54	13.167	6.32	19.25	1.54
1.083	0.94	7.167	1.54	13.250	6.32	19.33	1.54
1.167	0.94	7.250	1.54	13.333	4.61	19.42	1.54
1.250	0.94	7.333	1.88	13.417	4.61	19.50	1.54
1.333	0.94	7.417	1.88	13.500	4.61	19.58	1.54
1.417	0.94	7.500	1.88	13.583	4.61	19.67	1.54
1.500	0.94	7.583	1.88	13.667	4.61	19.75	1.54
1.583	0.94	7.667	1.88	13.750	4.61	19.83	1.54
1.667	0.94	7.750	1.88	13.833	3.59	19.92	1.54
1.750	0.94	7.833	1.88	13.917	3.59	20.00	1.54
1.833	0.94	7.917	1.88	14.000	3.59	20.08	1.54
1.917	0.94	8.000	1.88	14.083	3.59	20.17	1.54
2.000	0.94	8.083	1.88	14.167	3.59	20.25	1.54
2.083	0.94	8.167	1.88	14.250	3.59	20.33	1.03
2.167	0.94	8.250	1.88	14.333	2.56	20.42	1.03
2.250	0.94	8.333	2.22	14.417	2.56	20.50	1.03
2.333	1.11	8.417	2.22	14.500	2.56	20.58	1.03
2.417	1.11	8.500	2.22	14.583	2.56	20.67	1.03
2.500	1.11	8.583	2.22	14.667	2.56	20.75	1.03
2.583	1.11	8.667	2.22	14.750	2.56	20.83	1.03
2.667	1.11	8.750	2.22	14.833	2.56	20.92	1.03
2.750	1.11	8.833	2.39	14.917	2.56	21.00	1.03
2.833	1.11	8.917	2.39	15.000	2.56	21.08	1.03
2.917	1.11	9.000	2.39	15.083	2.56	21.17	1.03
3.000	1.11	9.083	2.39	15.167	2.56	21.25	1.03
3.083	1.11	9.167	2.39	15.250	2.56	21.33	1.03
3.167	1.11	9.250	2.39	15.333	2.56	21.42	1.03
3.250	1.11	9.333	2.73	15.417	2.56	21.50	1.03
3.333	1.11	9.417	2.73	15.500	2.56	21.58	1.03
3.417	1.11	9.500	2.73	15.583	2.56	21.67	1.03
3.500	1.11	9.583	2.73	15.667	2.56	21.75	1.03
3.583	1.11	9.667	2.73	15.750	2.56	21.83	1.03
3.667	1.11	9.750	2.73	15.833	2.56	21.92	1.03
3.750	1.11	9.833	3.08	15.917	2.56	22.00	1.03
3.833	1.11	9.917	3.08	16.000	2.56	22.08	1.03
3.917	1.11	10.000	3.08	16.083	2.56	22.17	1.03
4.000	1.11	10.083	3.08	16.167	2.56	22.25	1.03
4.083	1.11	10.167	3.08	16.250	2.56	22.33	1.03
4.167	1.11	10.250	3.08	16.333	1.54	22.42	1.03
4.250	1.11	10.333	3.93	16.417	1.54	22.50	1.03
4.333	1.37	10.417	3.93	16.500	1.54	22.58	1.03
4.417	1.37	10.500	3.93	16.583	1.54	22.67	1.03
4.500	1.37	10.583	3.93	16.667	1.54	22.75	1.03
4.583	1.37	10.667	3.93	16.750	1.54	22.83	1.03
4.667	1.37	10.750	3.93	16.833	1.54	22.92	1.03
4.750	1.37	10.833	5.30	16.917	1.54	23.00	1.03
4.833	1.37	10.917	5.30	17.000	1.54	23.08	1.03
4.917	1.37	11.000	5.30	17.083	1.54	23.17	1.03
5.000	1.37	11.083	5.30	17.167	1.54	23.25	1.03
5.083	1.37	11.167	5.30	17.250	1.54	23.33	1.03
5.167	1.37	11.250	5.30	17.333	1.54	23.42	1.03
5.250	1.37	11.333	8.20	17.417	1.54	23.50	1.03
5.333	1.37	11.417	8.20	17.500	1.54	23.58	1.03
5.417	1.37	11.500	8.20	17.583	1.54	23.67	1.03
5.500	1.37	11.583	8.20	17.667	1.54	23.75	1.03
5.583	1.37	11.667	8.20	17.750	1.54	23.83	1.03
5.667	1.37	11.750	8.20	17.833	1.54	23.92	1.03
5.750	1.37	11.833	25.28	17.917	1.54	24.00	1.03
5.833	1.37	11.917	25.28	18.000	1.54	24.08	1.03
5.917	1.37	12.000	25.28	18.083	1.54	24.17	1.03
6.000	1.37	12.083	104.54	18.167	1.54	24.25	1.02
6.083	1.37	12.167	104.55	18.250	1.54		

```
Unit Hyd Qpeak  (cms)=   0.902

PEAK FLOW       (cms)=   0.161 (i)
TIME TO PEAK    (hrs)=  12.250
RUNOFF VOLUME    (mm)=  21.477
TOTAL RAINFALL   (mm)=  85.420
RUNOFF COEFFICIENT   =   0.251

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
 0.083    0.00 | 6.167    1.37 |12.250  104.55 | 18.33    1.54
 0.167    0.00 | 6.250    1.37 |12.333   12.31 | 18.42    1.54
 0.250    0.00 | 6.333    1.54 |12.417   12.30 | 18.50    1.54
 0.333    0.94 | 6.417    1.54 |12.500   12.30 | 18.58    1.54
 0.417    0.94 | 6.500    1.54 |12.583   12.30 | 18.67    1.54
 0.500    0.94 | 6.583    1.54 |12.667   12.30 | 18.75    1.54
 0.583    0.94 | 6.667    1.54 |12.750   12.30 | 18.83    1.54
 0.667    0.94 | 6.750    1.54 |12.833    6.32 | 18.92    1.54
 0.750    0.94 | 6.833    1.54 |12.917    6.32 | 19.00    1.54
 0.833    0.94 | 6.917    1.54 |13.000    6.32 | 19.08    1.54
 0.917    0.94 | 7.000    1.54 |13.083    6.32 | 19.17    1.54
 1.000    0.94 | 7.083    1.54 |13.167    6.32 | 19.25    1.54
 1.083    0.94 | 7.167    1.54 |13.250    6.32 | 19.33    1.54
 1.167    0.94 | 7.250    1.54 |13.333    4.61 | 19.42    1.54
 1.250    0.94 | 7.333    1.88 |13.417    4.61 | 19.50    1.54
 1.333    0.94 | 7.417    1.88 |13.500    4.61 | 19.58    1.54
 1.417    0.94 | 7.500    1.88 |13.583    4.61 | 19.67    1.54
 1.500    0.94 | 7.583    1.88 |13.667    4.61 | 19.75    1.54
 1.583    0.94 | 7.667    1.88 |13.750    4.61 | 19.83    1.54
 1.667    0.94 | 7.750    1.88 |13.833    3.59 | 19.92    1.54
 1.750    0.94 | 7.833    1.88 |13.917    3.59 | 20.00    1.54
 1.833    0.94 | 7.917    1.88 |14.000    3.59 | 20.08    1.54
 1.917    0.94 | 8.000    1.88 |14.083    3.59 | 20.17    1.54
 2.000    0.94 | 8.083    1.88 |14.167    3.59 | 20.25    1.54
 2.083    0.94 | 8.167    1.88 |14.250    3.59 | 20.33    1.03
 2.167    0.94 | 8.250    1.88 |14.333    2.56 | 20.42    1.03
 2.250    0.94 | 8.333    2.22 |14.417    2.56 | 20.50    1.03
 2.333    1.11 | 8.417    2.22 |14.500    2.56 | 20.58    1.03
 2.417    1.11 | 8.500    2.22 |14.583    2.56 | 20.67    1.03
 2.500    1.11 | 8.583    2.22 |14.667    2.56 | 20.75    1.03
 2.583    1.11 | 8.667    2.22 |14.750    2.56 | 20.83    1.03
 2.667    1.11 | 8.750    2.22 |14.833    2.56 | 20.92    1.03
 2.750    1.11 | 8.833    2.39 |14.917    2.56 | 21.00    1.03
 2.833    1.11 | 8.917    2.39 |15.000    2.56 | 21.08    1.03
 2.917    1.11 | 9.000    2.39 |15.083    2.56 | 21.17    1.03
 3.000    1.11 | 9.083    2.39 |15.167    2.56 | 21.25    1.03
 3.083    1.11 | 9.167    2.39 |15.250    2.56 | 21.33    1.03
 3.167    1.11 | 9.250    2.39 |15.333    2.56 | 21.42    1.03
 3.250    1.11 | 9.333    2.73 |15.417    2.56 | 21.50    1.03
 3.333    1.11 | 9.417    2.73 |15.500    2.56 | 21.58    1.03
 3.417    1.11 | 9.500    2.73 |15.583    2.56 | 21.67    1.03
 3.500    1.11 | 9.583    2.73 |15.667    2.56 | 21.75    1.03
 3.583    1.11 | 9.667    2.73 |15.750    2.56 | 21.83    1.03
 3.667    1.11 | 9.750    2.73 |15.833    2.56 | 21.92    1.03
 3.750    1.11 | 9.833    3.08 |15.917    2.56 | 22.00    1.03
 3.833    1.11 | 9.917    3.08 |16.000    2.56 | 22.08    1.03
 3.917    1.11 |10.000    3.08 |16.083    2.56 | 22.17    1.03
```

```
 4.000    1.11 |10.083    3.08 |16.167    2.56 | 22.25    1.03
 4.083    1.11 |10.167    3.08 |16.250    2.56 | 22.33    1.03
 4.167    1.11 |10.250    3.08 |16.333    1.54 | 22.42    1.03
 4.250    1.11 |10.333    3.93 |16.417    1.54 | 22.50    1.03
 4.333    1.37 |10.417    3.93 |16.500    1.54 | 22.58    1.03
 4.417    1.37 |10.500    3.93 |16.583    1.54 | 22.67    1.03
 4.500    1.37 |10.583    3.93 |16.667    1.54 | 22.75    1.03
 4.583    1.37 |10.667    3.93 |16.750    1.54 | 22.83    1.03
 4.667    1.37 |10.750    3.93 |16.833    1.54 | 22.92    1.03
 4.750    1.37 |10.833    5.30 |16.917    1.54 | 23.00    1.03
 4.833    1.37 |10.917    5.30 |17.000    1.54 | 23.08    1.03
 4.917    1.37 |11.000    5.30 |17.083    1.54 | 23.17    1.03
 5.000    1.37 |11.083    5.30 |17.167    1.54 | 23.25    1.03
 5.083    1.37 |11.167    5.30 |17.250    1.54 | 23.33    1.03
 5.167    1.37 |11.250    5.30 |17.333    1.54 | 23.42    1.03
 5.250    1.37 |11.333    8.20 |17.417    1.54 | 23.50    1.03
 5.333    1.37 |11.417    8.20 |17.500    1.54 | 23.58    1.03
 5.417    1.37 |11.500    8.20 |17.583    1.54 | 23.67    1.03
 5.500    1.37 |11.583    8.20 |17.667    1.54 | 23.75    1.03
 5.583    1.37 |11.667    8.20 |17.750    1.54 | 23.83    1.03
 5.667    1.37 |11.750    8.20 |17.833    1.54 | 23.92    1.03
 5.750    1.37 |11.833   25.28 |17.917    1.54 | 24.00    1.03
 5.833    1.37 |11.917   25.28 |18.000    1.54 | 24.08    1.03
 5.917    1.37 |12.000   25.28 |18.083    1.54 | 24.17    1.03
 6.000    1.37 |12.083  104.54 |18.167    1.54 | 24.25    1.02
 6.083    1.37 |12.167  104.55 |18.250    1.54 |

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW      (cms)=   0.092 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  15.580
     TOTAL RAINFALL   (mm)=  85.420
     RUNOFF COEFFICIENT   =   0.182

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

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79          0.79
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       2.00          2.00
     Length            (m)=     102.63         40.00
     Mannings n           =      0.013         0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.37	12.250	104.55	18.33	1.54
0.167	0.00	6.250	1.37	12.333	12.31	18.42	1.54
0.250	0.00	6.333	1.54	12.417	12.30	18.50	1.54
0.333	0.94	6.417	1.54	12.500	12.30	18.58	1.54
0.417	0.94	6.500	1.54	12.583	12.30	18.67	1.54
0.500	0.94	6.583	1.54	12.667	12.30	18.75	1.54
0.583	0.94	6.667	1.54	12.750	12.30	18.83	1.54
0.667	0.94	6.750	1.54	12.833	6.32	18.92	1.54
0.750	0.94	6.833	1.54	12.917	6.32	19.00	1.54
0.833	0.94	6.917	1.54	13.000	6.32	19.08	1.54
0.917	0.94	7.000	1.54	13.083	6.32	19.17	1.54
1.000	0.94	7.083	1.54	13.167	6.32	19.25	1.54
1.083	0.94	7.167	1.54	13.250	6.32	19.33	1.54
1.167	0.94	7.250	1.54	13.333	4.61	19.42	1.54
1.250	0.94	7.333	1.88	13.417	4.61	19.50	1.54
1.333	0.94	7.417	1.88	13.500	4.61	19.58	1.54
1.417	0.94	7.500	1.88	13.583	4.61	19.67	1.54
1.500	0.94	7.583	1.88	13.667	4.61	19.75	1.54
1.583	0.94	7.667	1.88	13.750	4.61	19.83	1.54
1.667	0.94	7.750	1.88	13.833	3.59	19.92	1.54
1.750	0.94	7.833	1.88	13.917	3.59	20.00	1.54
1.833	0.94	7.917	1.88	14.000	3.59	20.08	1.54
1.917	0.94	8.000	1.88	14.083	3.59	20.17	1.54
2.000	0.94	8.083	1.88	14.167	3.59	20.25	1.54
2.083	0.94	8.167	1.88	14.250	3.59	20.33	1.03
2.167	0.94	8.250	1.88	14.333	2.56	20.42	1.03
2.250	0.94	8.333	2.22	14.417	2.56	20.50	1.03
2.333	1.11	8.417	2.22	14.500	2.56	20.58	1.03
2.417	1.11	8.500	2.22	14.583	2.56	20.67	1.03
2.500	1.11	8.583	2.22	14.667	2.56	20.75	1.03
2.583	1.11	8.667	2.22	14.750	2.56	20.83	1.03
2.667	1.11	8.750	2.22	14.833	2.56	20.92	1.03
2.750	1.11	8.833	2.39	14.917	2.56	21.00	1.03
2.833	1.11	8.917	2.39	15.000	2.56	21.08	1.03
2.917	1.11	9.000	2.39	15.083	2.56	21.17	1.03
3.000	1.11	9.083	2.39	15.167	2.56	21.25	1.03
3.083	1.11	9.167	2.39	15.250	2.56	21.33	1.03
3.167	1.11	9.250	2.39	15.333	2.56	21.42	1.03
3.250	1.11	9.333	2.73	15.417	2.56	21.50	1.03
3.333	1.11	9.417	2.73	15.500	2.56	21.58	1.03
3.417	1.11	9.500	2.73	15.583	2.56	21.67	1.03
3.500	1.11	9.583	2.73	15.667	2.56	21.75	1.03
3.583	1.11	9.667	2.73	15.750	2.56	21.83	1.03
3.667	1.11	9.750	2.73	15.833	2.56	21.92	1.03
3.750	1.11	9.833	3.08	15.917	2.56	22.00	1.03
3.833	1.11	9.917	3.08	16.000	2.56	22.08	1.03
3.917	1.11	10.000	3.08	16.083	2.56	22.17	1.03
4.000	1.11	10.083	3.08	16.167	2.56	22.25	1.03
4.083	1.11	10.167	3.08	16.250	2.56	22.33	1.03
4.167	1.11	10.250	3.08	16.333	1.54	22.42	1.03
4.250	1.11	10.333	3.93	16.417	1.54	22.50	1.03
4.333	1.37	10.417	3.93	16.500	1.54	22.58	1.03
4.417	1.37	10.500	3.93	16.583	1.54	22.67	1.03
4.500	1.37	10.583	3.93	16.667	1.54	22.75	1.03
4.583	1.37	10.667	3.93	16.750	1.54	22.83	1.03
4.667	1.37	10.750	3.93	16.833	1.54	22.92	1.03
4.750	1.37	10.833	5.30	16.917	1.54	23.00	1.03
4.833	1.37	10.917	5.30	17.000	1.54	23.08	1.03
4.917	1.37	11.000	5.30	17.083	1.54	23.17	1.03
5.000	1.37	11.083	5.30	17.167	1.54	23.25	1.03
5.083	1.37	11.167	5.30	17.250	1.54	23.33	1.03
5.167	1.37	11.250	5.30	17.333	1.54	23.42	1.03
5.250	1.37	11.333	8.20	17.417	1.54	23.50	1.03
5.333	1.37	11.417	8.20	17.500	1.54	23.58	1.03
5.417	1.37	11.500	8.20	17.583	1.54	23.67	1.03
5.500	1.37	11.583	8.20	17.667	1.54	23.75	1.03
5.583	1.37	11.667	8.20	17.750	1.54	23.83	1.03
5.667	1.37	11.750	8.20	17.833	1.54	23.92	1.03
5.750	1.37	11.833	25.28	17.917	1.54	24.00	1.03
5.833	1.37	11.917	25.28	18.000	1.54	24.08	1.03
5.917	1.37	12.000	25.28	18.083	1.54	24.17	1.03
6.000	1.37	12.083	104.54	18.167	1.54	24.25	1.02
6.083	1.37	12.167	104.55	18.250	1.54		

Max.Eff.Inten.(mm/hr)=	104.55	35.99	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.07 (ii)	12.69 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.31	0.08	
			TOTALS
PEAK FLOW (cms)=	0.23	0.05	0.271 (iii)
TIME TO PEAK (hrs)=	12.25	12.33	12.25
RUNOFF VOLUME (mm)=	84.42	26.63	55.52
TOTAL RAINFALL (mm)=	85.42	85.42	85.42
RUNOFF COEFFICIENT =	0.99	0.31	0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 61.0 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.

```
------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    1.37 |12.250  104.55 | 18.33    1.54
                0.167    0.00 | 6.250    1.37 |12.333   12.31 | 18.42    1.54
                0.250    0.00 | 6.333    1.54 |12.417   12.30 | 18.50    1.54
                0.333    0.94 | 6.417    1.54 |12.500   12.30 | 18.58    1.54
                0.417    0.94 | 6.500    1.54 |12.583   12.30 | 18.67    1.54
                0.500    0.94 | 6.583    1.54 |12.667   12.30 | 18.75    1.54
                0.583    0.94 | 6.667    1.54 |12.750   12.30 | 18.83    1.54
                0.667    0.94 | 6.750    1.54 |12.833    6.32 | 18.92    1.54
                0.750    0.94 | 6.833    1.54 |12.917    6.32 | 19.00    1.54
                0.833    0.94 | 6.917    1.54 |13.000    6.32 | 19.08    1.54
                0.917    0.94 | 7.000    1.54 |13.083    6.32 | 19.17    1.54
                1.000    0.94 | 7.083    1.54 |13.167    6.32 | 19.25    1.54
                1.083    0.94 | 7.167    1.54 |13.250    6.32 | 19.33    1.54
                1.167    0.94 | 7.250    1.54 |13.333    4.61 | 19.42    1.54
                1.250    0.94 | 7.333    1.88 |13.417    4.61 | 19.50    1.54
                1.333    0.94 | 7.417    1.88 |13.500    4.61 | 19.58    1.54
                1.417    0.94 | 7.500    1.88 |13.583    4.61 | 19.67    1.54
                1.500    0.94 | 7.583    1.88 |13.667    4.61 | 19.75    1.54
                1.583    0.94 | 7.667    1.88 |13.750    4.61 | 19.83    1.54
                1.667    0.94 | 7.750    1.88 |13.833    3.59 | 19.92    1.54
                1.750    0.94 | 7.833    1.88 |13.917    3.59 | 20.00    1.54
                1.833    0.94 | 7.917    1.88 |14.000    3.59 | 20.08    1.54
                1.917    0.94 | 8.000    1.88 |14.083    3.59 | 20.17    1.54
                2.000    0.94 | 8.083    1.88 |14.167    3.59 | 20.25    1.54
                2.083    0.94 | 8.167    1.88 |14.250    3.59 | 20.33    1.03
                2.167    0.94 | 8.250    1.88 |14.333    2.56 | 20.42    1.03
                2.250    0.94 | 8.333    2.22 |14.417    2.56 | 20.50    1.03
                2.333    1.11 | 8.417    2.22 |14.500    2.56 | 20.58    1.03
                2.417    1.11 | 8.500    2.22 |14.583    2.56 | 20.67    1.03
                2.500    1.11 | 8.583    2.22 |14.667    2.56 | 20.75    1.03
                2.583    1.11 | 8.667    2.22 |14.750    2.56 | 20.83    1.03
```

```
                2.667    1.11 | 8.750    2.22 |14.833    2.56 | 20.92    1.03
                2.750    1.11 | 8.833    2.39 |14.917    2.56 | 21.00    1.03
                2.833    1.11 | 8.917    2.39 |15.000    2.56 | 21.08    1.03
                2.917    1.11 | 9.000    2.39 |15.083    2.56 | 21.17    1.03
                3.000    1.11 | 9.083    2.39 |15.167    2.56 | 21.25    1.03
                3.083    1.11 | 9.167    2.39 |15.250    2.56 | 21.33    1.03
                3.167    1.11 | 9.250    2.39 |15.333    2.56 | 21.42    1.03
                3.250    1.11 | 9.333    2.73 |15.417    2.56 | 21.50    1.03
                3.333    1.11 | 9.417    2.73 |15.500    2.56 | 21.58    1.03
                3.417    1.11 | 9.500    2.73 |15.583    2.56 | 21.67    1.03
                3.500    1.11 | 9.583    2.73 |15.667    2.56 | 21.75    1.03
                3.583    1.11 | 9.667    2.73 |15.750    2.56 | 21.83    1.03
                3.667    1.11 | 9.750    2.73 |15.833    2.56 | 21.92    1.03
                3.750    1.11 | 9.833    3.08 |15.917    2.56 | 22.00    1.03
                3.833    1.11 | 9.917    3.08 |16.000    2.56 | 22.08    1.03
                3.917    1.11 |10.000    3.08 |16.083    2.56 | 22.17    1.03
                4.000    1.11 |10.083    3.08 |16.167    2.56 | 22.25    1.03
                4.083    1.11 |10.167    3.08 |16.250    2.56 | 22.33    1.03
                4.167    1.11 |10.250    3.08 |16.333    1.54 | 22.42    1.03
                4.250    1.11 |10.333    3.93 |16.417    1.54 | 22.50    1.03
                4.333    1.37 |10.417    3.93 |16.500    1.54 | 22.58    1.03
                4.417    1.37 |10.500    3.93 |16.583    1.54 | 22.67    1.03
                4.500    1.37 |10.583    3.93 |16.667    1.54 | 22.75    1.03
                4.583    1.37 |10.667    3.93 |16.750    1.54 | 22.83    1.03
                4.667    1.37 |10.750    3.93 |16.833    1.54 | 22.92    1.03
                4.750    1.37 |10.833    5.30 |16.917    1.54 | 23.00    1.03
                4.833    1.37 |10.917    5.30 |17.000    1.54 | 23.08    1.03
                4.917    1.37 |11.000    5.30 |17.083    1.54 | 23.17    1.03
                5.000    1.37 |11.083    5.30 |17.167    1.54 | 23.25    1.03
                5.083    1.37 |11.167    5.30 |17.250    1.54 | 23.33    1.03
                5.167    1.37 |11.250    5.30 |17.333    1.54 | 23.42    1.03
                5.250    1.37 |11.333    8.20 |17.417    1.54 | 23.50    1.03
                5.333    1.37 |11.417    8.20 |17.500    1.54 | 23.58    1.03
                5.417    1.37 |11.500    8.20 |17.583    1.54 | 23.67    1.03
                5.500    1.37 |11.583    8.20 |17.667    1.54 | 23.75    1.03
                5.583    1.37 |11.667    8.20 |17.750    1.54 | 23.83    1.03
                5.667    1.37 |11.750    8.20 |17.833    1.54 | 23.92    1.03
                5.750    1.37 |11.833   25.28 |17.917    1.54 | 24.00    1.03
                5.833    1.37 |11.917   25.28 |18.000    1.54 | 24.08    1.03
                5.917    1.37 |12.000   25.28 |18.083    1.54 | 24.17    1.03
                6.000    1.37 |12.083  104.54 |18.167    1.54 | 24.25    1.02
                6.083    1.37 |12.167  104.55 |18.250    1.54 |

     Max.Eff.Inten.(mm/hr)=     104.55       472.31
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       4.02 (ii)    8.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.24         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       1.48         1.82         3.297 (iii)
```

```
     TIME TO PEAK    (hrs)=      12.25        12.25          12.25
     RUNOFF VOLUME    (mm)=      84.42        64.95          71.96
     TOTAL RAINFALL   (mm)=      85.42        85.42          85.42
     RUNOFF COEFFICIENT   =       0.99         0.76           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.271    12.25    55.52
      + ID2= 2 (  0002):    14.40   3.297    12.25    71.96
        ===============================================
        ID = 3 (  0007):    15.98   3.568    12.25    70.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      3.568     12.25      70.34
   OUTFLOW: ID= 1 (  0003)     15.980      0.240     13.33      70.28

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.72
                   TIME SHIFT OF PEAK FLOW        (min)= 65.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.6806

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
```

```
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    1.37 |12.250  104.55 | 18.33    1.54
                0.167    0.00 | 6.250    1.37 |12.333   12.31 | 18.42    1.54
                0.250    0.00 | 6.333    1.54 |12.417   12.30 | 18.50    1.54
                0.333    0.94 | 6.417    1.54 |12.500   12.30 | 18.58    1.54
                0.417    0.94 | 6.500    1.54 |12.583   12.30 | 18.67    1.54
                0.500    0.94 | 6.583    1.54 |12.667   12.30 | 18.75    1.54
                0.583    0.94 | 6.667    1.54 |12.750   12.30 | 18.83    1.54
                0.667    0.94 | 6.750    1.54 |12.833    6.32 | 18.92    1.54
                0.750    0.94 | 6.833    1.54 |12.917    6.32 | 19.00    1.54
                0.833    0.94 | 6.917    1.54 |13.000    6.32 | 19.08    1.54
                0.917    0.94 | 7.000    1.54 |13.083    6.32 | 19.17    1.54
                1.000    0.94 | 7.083    1.54 |13.167    6.32 | 19.25    1.54
                1.083    0.94 | 7.167    1.54 |13.250    6.32 | 19.33    1.54
                1.167    0.94 | 7.250    1.54 |13.333    4.61 | 19.42    1.54
                1.250    0.94 | 7.333    1.88 |13.417    4.61 | 19.50    1.54
                1.333    0.94 | 7.417    1.88 |13.500    4.61 | 19.58    1.54
                1.417    0.94 | 7.500    1.88 |13.583    4.61 | 19.67    1.54
                1.500    0.94 | 7.583    1.88 |13.667    4.61 | 19.75    1.54
                1.583    0.94 | 7.667    1.88 |13.750    4.61 | 19.83    1.54
                1.667    0.94 | 7.750    1.88 |13.833    3.59 | 19.92    1.54
                1.750    0.94 | 7.833    1.88 |13.917    3.59 | 20.00    1.54
                1.833    0.94 | 7.917    1.88 |14.000    3.59 | 20.08    1.54
                1.917    0.94 | 8.000    1.88 |14.083    3.59 | 20.17    1.54
                2.000    0.94 | 8.083    1.88 |14.167    3.59 | 20.25    1.54
                2.083    0.94 | 8.167    1.88 |14.250    3.59 | 20.33    1.03
                2.167    0.94 | 8.250    1.88 |14.333    2.56 | 20.42    1.03
                2.250    0.94 | 8.333    2.22 |14.417    2.56 | 20.50    1.03
                2.333    1.11 | 8.417    2.22 |14.500    2.56 | 20.58    1.03
                2.417    1.11 | 8.500    2.22 |14.583    2.56 | 20.67    1.03
                2.500    1.11 | 8.583    2.22 |14.667    2.56 | 20.75    1.03
                2.583    1.11 | 8.667    2.22 |14.750    2.56 | 20.83    1.03
                2.667    1.11 | 8.750    2.22 |14.833    2.56 | 20.92    1.03
                2.750    1.11 | 8.833    2.39 |14.917    2.56 | 21.00    1.03
                2.833    1.11 | 8.917    2.39 |15.000    2.56 | 21.08    1.03
                2.917    1.11 | 9.000    2.39 |15.083    2.56 | 21.17    1.03
                3.000    1.11 | 9.083    2.39 |15.167    2.56 | 21.25    1.03
```

```
  3.083    1.11 | 9.167    2.39 |15.250    2.56 | 21.33    1.03
  3.167    1.11 | 9.250    2.39 |15.333    2.56 | 21.42    1.03
  3.250    1.11 | 9.333    2.73 |15.417    2.56 | 21.50    1.03
  3.333    1.11 | 9.417    2.73 |15.500    2.56 | 21.58    1.03
  3.417    1.11 | 9.500    2.73 |15.583    2.56 | 21.67    1.03
  3.500    1.11 | 9.583    2.73 |15.667    2.56 | 21.75    1.03
  3.583    1.11 | 9.667    2.73 |15.750    2.56 | 21.83    1.03
  3.667    1.11 | 9.750    2.73 |15.833    2.56 | 21.92    1.03
  3.750    1.11 | 9.833    3.08 |15.917    2.56 | 22.00    1.03
  3.833    1.11 | 9.917    3.08 |16.000    2.56 | 22.08    1.03
  3.917    1.11 |10.000    3.08 |16.083    2.56 | 22.17    1.03
  4.000    1.11 |10.083    3.08 |16.167    2.56 | 22.25    1.03
  4.083    1.11 |10.167    3.08 |16.250    2.56 | 22.33    1.03
  4.167    1.11 |10.250    3.08 |16.333    1.54 | 22.42    1.03
  4.250    1.11 |10.333    3.93 |16.417    1.54 | 22.50    1.03
  4.333    1.37 |10.417    3.93 |16.500    1.54 | 22.58    1.03
  4.417    1.37 |10.500    3.93 |16.583    1.54 | 22.67    1.03
  4.500    1.37 |10.583    3.93 |16.667    1.54 | 22.75    1.03
  4.583    1.37 |10.667    3.93 |16.750    1.54 | 22.83    1.03
  4.667    1.37 |10.750    3.93 |16.833    1.54 | 22.92    1.03
  4.750    1.37 |10.833    5.30 |16.917    1.54 | 23.00    1.03
  4.833    1.37 |10.917    5.30 |17.000    1.54 | 23.08    1.03
  4.917    1.37 |11.000    5.30 |17.083    1.54 | 23.17    1.03
  5.000    1.37 |11.083    5.30 |17.167    1.54 | 23.25    1.03
  5.083    1.37 |11.167    5.30 |17.250    1.54 | 23.33    1.03
  5.167    1.37 |11.250    5.30 |17.333    1.54 | 23.42    1.03
  5.250    1.37 |11.333    8.20 |17.417    1.54 | 23.50    1.03
  5.333    1.37 |11.417    8.20 |17.500    1.54 | 23.58    1.03
  5.417    1.37 |11.500    8.20 |17.583    1.54 | 23.67    1.03
  5.500    1.37 |11.583    8.20 |17.667    1.54 | 23.75    1.03
  5.583    1.37 |11.667    8.20 |17.750    1.54 | 23.83    1.03
  5.667    1.37 |11.750    8.20 |17.833    1.54 | 23.92    1.03
  5.750    1.37 |11.833   25.28 |17.917    1.54 | 24.00    1.03
  5.833    1.37 |11.917   25.28 |18.000    1.54 | 24.08    1.03
  5.917    1.37 |12.000   25.28 |18.083    1.54 | 24.17    1.03
  6.000    1.37 |12.083  104.54 |18.167    1.54 | 24.25    1.02
  6.083    1.37 |12.167  104.55 |18.250    1.54 |

Max.Eff.Inten.(mm/hr)=     104.55       284.49
           over (min)        5.00        10.00
Storage Coeff.  (min)=       2.43 (ii)    7.07 (ii)
Unit Hyd. Tpeak (min)=       5.00        10.00
Unit Hyd. peak  (cms)=       0.30         0.14
                                                      *TOTALS*
PEAK FLOW      (cms)=       0.10         0.17          0.274 (iii)
TIME TO PEAK    (hrs)=      12.25        12.25          12.25
RUNOFF VOLUME    (mm)=      84.42        53.50          61.57
TOTAL RAINFALL   (mm)=      85.42        85.42          85.42
RUNOFF COEFFICIENT   =       0.99         0.63           0.72
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.274     12.25      61.57
   OUTFLOW: ID= 1 (  0010)      1.340      0.050     12.67      61.13

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 18.25
                   TIME SHIFT OF PEAK FLOW        (min)= 25.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0396

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34   0.050    12.67    61.13
      + ID2= 2 (  0003):    15.98   0.240    13.33    70.28
        ====================================================
        ID = 3 (  0008):    17.32   0.283    12.92    69.57

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.283    12.92    69.57
      + ID2= 2 (  0004):     1.89   0.161    12.25    21.48
        ====================================================
```

```
       ID = 1 (  0008):    19.21   0.313    12.25    64.84

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


--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):    19.21   0.313    12.25    64.84
     + ID2= 2 (  0005):     1.46   0.092    12.25    15.58
       ====================================================
       ID = 3 (  0008):    20.67   0.406    12.25    61.36

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
========================

      V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\44d91
bd2-7828-4266-8b4b-97cd2d6650b1\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\44d91
bd2-7828-4266-8b4b-97cd2d6650b1\scena


DATE: 07-18-2025                            TIME: 03:09:18

USER:
```

```
COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  **************************************************
  ** SIMULATION : L. 100YR 24HR SCS               **
  **************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\1b591e71
| Ptotal= 92.89 mm |    Comments: 100yr 24hr 15min SCS Type II (MTO)
--------------------
                 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    1.67 | 12.50   13.38 | 18.75    1.67
                 0.25    1.02 |  6.50    1.67 | 12.75    6.87 | 19.00    1.67
                 0.50    1.02 |  6.75    1.67 | 13.00    6.87 | 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    1.11
                 1.75    1.02 |  8.00    2.04 | 14.25    2.79 | 20.50    1.11
                 2.00    1.02 |  8.25    2.42 | 14.50    2.79 | 20.75    1.11
                 2.25    1.21 |  8.50    2.42 | 14.75    2.79 | 21.00    1.11
                 2.50    1.21 |  8.75    2.60 | 15.00    2.79 | 21.25    1.11
                 2.75    1.21 |  9.00    2.60 | 15.25    2.79 | 21.50    1.11
                 3.00    1.21 |  9.25    2.97 | 15.50    2.79 | 21.75    1.11
                 3.25    1.21 |  9.50    2.97 | 15.75    2.79 | 22.00    1.11
                 3.50    1.21 |  9.75    3.34 | 16.00    2.79 | 22.25    1.11
                 3.75    1.21 | 10.00    3.34 | 16.25    1.67 | 22.50    1.11
                 4.00    1.21 | 10.25    4.27 | 16.50    1.67 | 22.75    1.11
                 4.25    1.49 | 10.50    4.27 | 16.75    1.67 | 23.00    1.11
                 4.50    1.49 | 10.75    5.76 | 17.00    1.67 | 23.25    1.11
                 4.75    1.49 | 11.00    5.76 | 17.25    1.67 | 23.50    1.11
                 5.00    1.49 | 11.25    8.92 | 17.50    1.67 | 23.75    1.11
                 5.25    1.49 | 11.50    8.92 | 17.75    1.67 | 24.00    1.11
                 5.50    1.49 | 11.75   27.50 | 18.00    1.67 |
                 5.75    1.49 | 12.00  113.70 | 18.25    1.67 |
                 6.00    1.49 | 12.25   13.38 | 18.50    1.67 |

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

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

```
| CALIB             |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
              0.083    0.00 | 6.167    1.49 |12.250  113.70 | 18.33    1.67
              0.167    0.00 | 6.250    1.49 |12.333   13.39 | 18.42    1.67
              0.250    0.00 | 6.333    1.67 |12.417   13.38 | 18.50    1.67
              0.333    1.02 | 6.417    1.67 |12.500   13.38 | 18.58    1.67
              0.417    1.02 | 6.500    1.67 |12.583   13.38 | 18.67    1.67
              0.500    1.02 | 6.583    1.67 |12.667   13.38 | 18.75    1.67
              0.583    1.02 | 6.667    1.67 |12.750   13.38 | 18.83    1.67
              0.667    1.02 | 6.750    1.67 |12.833    6.87 | 18.92    1.67
              0.750    1.02 | 6.833    1.67 |12.917    6.87 | 19.00    1.67
              0.833    1.02 | 6.917    1.67 |13.000    6.87 | 19.08    1.67
              0.917    1.02 | 7.000    1.67 |13.083    6.87 | 19.17    1.67
              1.000    1.02 | 7.083    1.67 |13.167    6.87 | 19.25    1.67
              1.083    1.02 | 7.167    1.67 |13.250    6.87 | 19.33    1.67
              1.167    1.02 | 7.250    1.67 |13.333    5.02 | 19.42    1.67
              1.250    1.02 | 7.333    2.04 |13.417    5.02 | 19.50    1.67
              1.333    1.02 | 7.417    2.04 |13.500    5.02 | 19.58    1.67
              1.417    1.02 | 7.500    2.04 |13.583    5.02 | 19.67    1.67
              1.500    1.02 | 7.583    2.04 |13.667    5.02 | 19.75    1.67
              1.583    1.02 | 7.667    2.04 |13.750    5.02 | 19.83    1.67
              1.667    1.02 | 7.750    2.04 |13.833    3.90 | 19.92    1.67
              1.750    1.02 | 7.833    2.04 |13.917    3.90 | 20.00    1.67
              1.833    1.02 | 7.917    2.04 |14.000    3.90 | 20.08    1.67
              1.917    1.02 | 8.000    2.04 |14.083    3.90 | 20.17    1.67
              2.000    1.02 | 8.083    2.04 |14.167    3.90 | 20.25    1.67
              2.083    1.02 | 8.167    2.04 |14.250    3.90 | 20.33    1.11
              2.167    1.02 | 8.250    2.04 |14.333    2.79 | 20.42    1.11
              2.250    1.02 | 8.333    2.42 |14.417    2.79 | 20.50    1.11
              2.333    1.21 | 8.417    2.42 |14.500    2.79 | 20.58    1.11
              2.417    1.21 | 8.500    2.42 |14.583    2.79 | 20.67    1.11
              2.500    1.21 | 8.583    2.42 |14.667    2.79 | 20.75    1.11
              2.583    1.21 | 8.667    2.42 |14.750    2.79 | 20.83    1.11
              2.667    1.21 | 8.750    2.42 |14.833    2.79 | 20.92    1.11
              2.750    1.21 | 8.833    2.60 |14.917    2.79 | 21.00    1.11
              2.833    1.21 | 8.917    2.60 |15.000    2.79 | 21.08    1.11
              2.917    1.21 | 9.000    2.60 |15.083    2.79 | 21.17    1.11
              3.000    1.21 | 9.083    2.60 |15.167    2.79 | 21.25    1.11
              3.083    1.21 | 9.167    2.60 |15.250    2.79 | 21.33    1.11
              3.167    1.21 | 9.250    2.60 |15.333    2.79 | 21.42    1.11
              3.250    1.21 | 9.333    2.97 |15.417    2.79 | 21.50    1.11
```

```
              3.333    1.21 | 9.417    2.97 |15.500    2.79 | 21.58    1.11
              3.417    1.21 | 9.500    2.97 |15.583    2.79 | 21.67    1.11
              3.500    1.21 | 9.583    2.97 |15.667    2.79 | 21.75    1.11
              3.583    1.21 | 9.667    2.97 |15.750    2.79 | 21.83    1.11
              3.667    1.21 | 9.750    2.97 |15.833    2.79 | 21.92    1.11
              3.750    1.21 | 9.833    3.34 |15.917    2.79 | 22.00    1.11
              3.833    1.21 | 9.917    3.34 |16.000    2.79 | 22.08    1.11
              3.917    1.21 |10.000    3.34 |16.083    2.79 | 22.17    1.11
              4.000    1.21 |10.083    3.34 |16.167    2.79 | 22.25    1.11
              4.083    1.21 |10.167    3.34 |16.250    2.79 | 22.33    1.11
              4.167    1.21 |10.250    3.34 |16.333    1.67 | 22.42    1.11
              4.250    1.21 |10.333    4.27 |16.417    1.67 | 22.50    1.11
              4.333    1.49 |10.417    4.27 |16.500    1.67 | 22.58    1.11
              4.417    1.49 |10.500    4.27 |16.583    1.67 | 22.67    1.11
              4.500    1.49 |10.583    4.27 |16.667    1.67 | 22.75    1.11
              4.583    1.49 |10.667    4.27 |16.750    1.67 | 22.83    1.11
              4.667    1.49 |10.750    4.27 |16.833    1.67 | 22.92    1.11
              4.750    1.49 |10.833    5.76 |16.917    1.67 | 23.00    1.11
              4.833    1.49 |10.917    5.76 |17.000    1.67 | 23.08    1.11
              4.917    1.49 |11.000    5.76 |17.083    1.67 | 23.17    1.11
              5.000    1.49 |11.083    5.76 |17.167    1.67 | 23.25    1.11
              5.083    1.49 |11.167    5.76 |17.250    1.67 | 23.33    1.11
              5.167    1.49 |11.250    5.76 |17.333    1.67 | 23.42    1.11
              5.250    1.49 |11.333    8.92 |17.417    1.67 | 23.50    1.11
              5.333    1.49 |11.417    8.92 |17.500    1.67 | 23.58    1.11
              5.417    1.49 |11.500    8.92 |17.583    1.67 | 23.67    1.11
              5.500    1.49 |11.583    8.92 |17.667    1.67 | 23.75    1.11
              5.583    1.49 |11.667    8.92 |17.750    1.67 | 23.83    1.11
              5.667    1.49 |11.750    8.92 |17.833    1.67 | 23.92    1.11
              5.750    1.49 |11.833   27.49 |17.917    1.67 | 24.00    1.11
              5.833    1.49 |11.917   27.50 |18.000    1.67 | 24.08    1.11
              5.917    1.49 |12.000   27.50 |18.083    1.67 | 24.17    1.11
              6.000    1.49 |12.083  113.69 |18.167    1.67 | 24.25    1.11
              6.083    1.49 |12.167  113.70 |18.250    1.67 |

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW      (cms)=   0.188 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  24.995
     TOTAL RAINFALL   (mm)=  92.890
     RUNOFF COEFFICIENT   =   0.269

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

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
```

```
--------------------   U.H. Tp(hrs)=   0.07

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11
2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11
3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

```
     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW      (cms)=   0.108 (i)
     TIME TO PEAK    (hrs)=  12.250
     RUNOFF VOLUME    (mm)=  18.248
     TOTAL RAINFALL   (mm)=  92.890
     RUNOFF COEFFICIENT   =   0.196

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
```

Dep. Storage (mm)=	1.00	5.00
Average Slope (%)=	2.00	2.00
Length (m)=	102.63	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11
2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11
3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

Max.Eff.Inten.(mm/hr)=	113.70	45.24	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.00 (ii)	11.69 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.31	0.09	
			TOTALS
PEAK FLOW (cms)=	0.25	0.06	0.300 (iii)
TIME TO PEAK (hrs)=	12.25	12.33	12.25
RUNOFF VOLUME (mm)=	91.89	30.86	61.37
TOTAL RAINFALL (mm)=	92.89	92.89	92.89
RUNOFF COEFFICIENT =	0.99	0.33	0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

```
          CN*  =  61.0    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.

-------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	0.00	6.167	1.49	12.250	113.70	18.33	1.67
0.167	0.00	6.250	1.49	12.333	13.39	18.42	1.67
0.250	0.00	6.333	1.67	12.417	13.38	18.50	1.67
0.333	1.02	6.417	1.67	12.500	13.38	18.58	1.67
0.417	1.02	6.500	1.67	12.583	13.38	18.67	1.67
0.500	1.02	6.583	1.67	12.667	13.38	18.75	1.67
0.583	1.02	6.667	1.67	12.750	13.38	18.83	1.67
0.667	1.02	6.750	1.67	12.833	6.87	18.92	1.67
0.750	1.02	6.833	1.67	12.917	6.87	19.00	1.67
0.833	1.02	6.917	1.67	13.000	6.87	19.08	1.67
0.917	1.02	7.000	1.67	13.083	6.87	19.17	1.67
1.000	1.02	7.083	1.67	13.167	6.87	19.25	1.67
1.083	1.02	7.167	1.67	13.250	6.87	19.33	1.67
1.167	1.02	7.250	1.67	13.333	5.02	19.42	1.67
1.250	1.02	7.333	2.04	13.417	5.02	19.50	1.67
1.333	1.02	7.417	2.04	13.500	5.02	19.58	1.67
1.417	1.02	7.500	2.04	13.583	5.02	19.67	1.67
1.500	1.02	7.583	2.04	13.667	5.02	19.75	1.67
1.583	1.02	7.667	2.04	13.750	5.02	19.83	1.67
1.667	1.02	7.750	2.04	13.833	3.90	19.92	1.67
1.750	1.02	7.833	2.04	13.917	3.90	20.00	1.67
1.833	1.02	7.917	2.04	14.000	3.90	20.08	1.67
1.917	1.02	8.000	2.04	14.083	3.90	20.17	1.67
2.000	1.02	8.083	2.04	14.167	3.90	20.25	1.67
2.083	1.02	8.167	2.04	14.250	3.90	20.33	1.11
2.167	1.02	8.250	2.04	14.333	2.79	20.42	1.11
2.250	1.02	8.333	2.42	14.417	2.79	20.50	1.11
2.333	1.21	8.417	2.42	14.500	2.79	20.58	1.11
2.417	1.21	8.500	2.42	14.583	2.79	20.67	1.11
2.500	1.21	8.583	2.42	14.667	2.79	20.75	1.11
2.583	1.21	8.667	2.42	14.750	2.79	20.83	1.11
2.667	1.21	8.750	2.42	14.833	2.79	20.92	1.11
2.750	1.21	8.833	2.60	14.917	2.79	21.00	1.11
2.833	1.21	8.917	2.60	15.000	2.79	21.08	1.11
2.917	1.21	9.000	2.60	15.083	2.79	21.17	1.11
3.000	1.21	9.083	2.60	15.167	2.79	21.25	1.11
3.083	1.21	9.167	2.60	15.250	2.79	21.33	1.11
3.167	1.21	9.250	2.60	15.333	2.79	21.42	1.11
3.250	1.21	9.333	2.97	15.417	2.79	21.50	1.11
3.333	1.21	9.417	2.97	15.500	2.79	21.58	1.11
3.417	1.21	9.500	2.97	15.583	2.79	21.67	1.11
3.500	1.21	9.583	2.97	15.667	2.79	21.75	1.11
3.583	1.21	9.667	2.97	15.750	2.79	21.83	1.11
3.667	1.21	9.750	2.97	15.833	2.79	21.92	1.11
3.750	1.21	9.833	3.34	15.917	2.79	22.00	1.11
3.833	1.21	9.917	3.34	16.000	2.79	22.08	1.11
3.917	1.21	10.000	3.34	16.083	2.79	22.17	1.11
4.000	1.21	10.083	3.34	16.167	2.79	22.25	1.11
4.083	1.21	10.167	3.34	16.250	2.79	22.33	1.11
4.167	1.21	10.250	3.34	16.333	1.67	22.42	1.11
4.250	1.21	10.333	4.27	16.417	1.67	22.50	1.11
4.333	1.49	10.417	4.27	16.500	1.67	22.58	1.11
4.417	1.49	10.500	4.27	16.583	1.67	22.67	1.11
4.500	1.49	10.583	4.27	16.667	1.67	22.75	1.11
4.583	1.49	10.667	4.27	16.750	1.67	22.83	1.11
4.667	1.49	10.750	4.27	16.833	1.67	22.92	1.11
4.750	1.49	10.833	5.76	16.917	1.67	23.00	1.11
4.833	1.49	10.917	5.76	17.000	1.67	23.08	1.11
4.917	1.49	11.000	5.76	17.083	1.67	23.17	1.11
5.000	1.49	11.083	5.76	17.167	1.67	23.25	1.11
5.083	1.49	11.167	5.76	17.250	1.67	23.33	1.11
5.167	1.49	11.250	5.76	17.333	1.67	23.42	1.11
5.250	1.49	11.333	8.92	17.417	1.67	23.50	1.11
5.333	1.49	11.417	8.92	17.500	1.67	23.58	1.11
5.417	1.49	11.500	8.92	17.583	1.67	23.67	1.11
5.500	1.49	11.583	8.92	17.667	1.67	23.75	1.11
5.583	1.49	11.667	8.92	17.750	1.67	23.83	1.11
5.667	1.49	11.750	8.92	17.833	1.67	23.92	1.11
5.750	1.49	11.833	27.49	17.917	1.67	24.00	1.11
5.833	1.49	11.917	27.50	18.000	1.67	24.08	1.11
5.917	1.49	12.000	27.50	18.083	1.67	24.17	1.11
6.000	1.49	12.083	113.69	18.167	1.67	24.25	1.11
6.083	1.49	12.167	113.70	18.250	1.67		

```
     Max.Eff.Inten.(mm/hr)=     113.70       521.36
                over (min)        5.00        10.00
```

```
     Storage Coeff.  (min)=       3.89 (ii)    8.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.25         0.13
                                                        *TOTALS*
     PEAK FLOW       (cms)=       1.61         2.04          3.648 (iii)
     TIME TO PEAK    (hrs)=      12.25        12.25         12.25
     RUNOFF VOLUME    (mm)=      91.89        72.05         79.19
     TOTAL RAINFALL   (mm)=      92.89        92.89         92.89
     RUNOFF COEFFICIENT   =       0.99         0.78          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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


--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58    0.300    12.25    61.37
      + ID2= 2 (  0002):    14.40    3.648    12.25    79.19
        =====================================================
        ID = 3 (  0007):    15.98    3.948    12.25    77.43

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                 AREA     QPEAK     TPEAK       R.V.
                                 (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      3.948     12.25      77.43
   OUTFLOW: ID= 1 (  0003)     15.980      0.276     13.33      77.37

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.98
                   TIME SHIFT OF PEAK FLOW        (min)= 65.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.7461
```

```
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07         0.27
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      94.52        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
                0.083    0.00 | 6.167    1.49 |12.250  113.70 | 18.33    1.67
                0.167    0.00 | 6.250    1.49 |12.333   13.39 | 18.42    1.67
                0.250    0.00 | 6.333    1.67 |12.417   13.38 | 18.50    1.67
                0.333    1.02 | 6.417    1.67 |12.500   13.38 | 18.58    1.67
                0.417    1.02 | 6.500    1.67 |12.583   13.38 | 18.67    1.67
                0.500    1.02 | 6.583    1.67 |12.667   13.38 | 18.75    1.67
                0.583    1.02 | 6.667    1.67 |12.750   13.38 | 18.83    1.67
                0.667    1.02 | 6.750    1.67 |12.833    6.87 | 18.92    1.67
                0.750    1.02 | 6.833    1.67 |12.917    6.87 | 19.00    1.67
                0.833    1.02 | 6.917    1.67 |13.000    6.87 | 19.08    1.67
                0.917    1.02 | 7.000    1.67 |13.083    6.87 | 19.17    1.67
                1.000    1.02 | 7.083    1.67 |13.167    6.87 | 19.25    1.67
                1.083    1.02 | 7.167    1.67 |13.250    6.87 | 19.33    1.67
                1.167    1.02 | 7.250    1.67 |13.333    5.02 | 19.42    1.67
                1.250    1.02 | 7.333    2.04 |13.417    5.02 | 19.50    1.67
                1.333    1.02 | 7.417    2.04 |13.500    5.02 | 19.58    1.67
                1.417    1.02 | 7.500    2.04 |13.583    5.02 | 19.67    1.67
                1.500    1.02 | 7.583    2.04 |13.667    5.02 | 19.75    1.67
                1.583    1.02 | 7.667    2.04 |13.750    5.02 | 19.83    1.67
                1.667    1.02 | 7.750    2.04 |13.833    3.90 | 19.92    1.67
                1.750    1.02 | 7.833    2.04 |13.917    3.90 | 20.00    1.67
                1.833    1.02 | 7.917    2.04 |14.000    3.90 | 20.08    1.67
                1.917    1.02 | 8.000    2.04 |14.083    3.90 | 20.17    1.67
                2.000    1.02 | 8.083    2.04 |14.167    3.90 | 20.25    1.67
                2.083    1.02 | 8.167    2.04 |14.250    3.90 | 20.33    1.11
                2.167    1.02 | 8.250    2.04 |14.333    2.79 | 20.42    1.11
                2.250    1.02 | 8.333    2.42 |14.417    2.79 | 20.50    1.11
                2.333    1.21 | 8.417    2.42 |14.500    2.79 | 20.58    1.11
                2.417    1.21 | 8.500    2.42 |14.583    2.79 | 20.67    1.11
                2.500    1.21 | 8.583    2.42 |14.667    2.79 | 20.75    1.11
                2.583    1.21 | 8.667    2.42 |14.750    2.79 | 20.83    1.11
```

```
    2.667    1.21 | 8.750    2.42 |14.833    2.79 | 20.92    1.11
    2.750    1.21 | 8.833    2.60 |14.917    2.79 | 21.00    1.11
    2.833    1.21 | 8.917    2.60 |15.000    2.79 | 21.08    1.11
    2.917    1.21 | 9.000    2.60 |15.083    2.79 | 21.17    1.11
    3.000    1.21 | 9.083    2.60 |15.167    2.79 | 21.25    1.11
    3.083    1.21 | 9.167    2.60 |15.250    2.79 | 21.33    1.11
    3.167    1.21 | 9.250    2.60 |15.333    2.79 | 21.42    1.11
    3.250    1.21 | 9.333    2.97 |15.417    2.79 | 21.50    1.11
    3.333    1.21 | 9.417    2.97 |15.500    2.79 | 21.58    1.11
    3.417    1.21 | 9.500    2.97 |15.583    2.79 | 21.67    1.11
    3.500    1.21 | 9.583    2.97 |15.667    2.79 | 21.75    1.11
    3.583    1.21 | 9.667    2.97 |15.750    2.79 | 21.83    1.11
    3.667    1.21 | 9.750    2.97 |15.833    2.79 | 21.92    1.11
    3.750    1.21 | 9.833    3.34 |15.917    2.79 | 22.00    1.11
    3.833    1.21 | 9.917    3.34 |16.000    2.79 | 22.08    1.11
    3.917    1.21 |10.000    3.34 |16.083    2.79 | 22.17    1.11
    4.000    1.21 |10.083    3.34 |16.167    2.79 | 22.25    1.11
    4.083    1.21 |10.167    3.34 |16.250    2.79 | 22.33    1.11
    4.167    1.21 |10.250    3.34 |16.333    1.67 | 22.42    1.11
    4.250    1.21 |10.333    4.27 |16.417    1.67 | 22.50    1.11
    4.333    1.49 |10.417    4.27 |16.500    1.67 | 22.58    1.11
    4.417    1.49 |10.500    4.27 |16.583    1.67 | 22.67    1.11
    4.500    1.49 |10.583    4.27 |16.667    1.67 | 22.75    1.11
    4.583    1.49 |10.667    4.27 |16.750    1.67 | 22.83    1.11
    4.667    1.49 |10.750    4.27 |16.833    1.67 | 22.92    1.11
    4.750    1.49 |10.833    5.76 |16.917    1.67 | 23.00    1.11
    4.833    1.49 |10.917    5.76 |17.000    1.67 | 23.08    1.11
    4.917    1.49 |11.000    5.76 |17.083    1.67 | 23.17    1.11
    5.000    1.49 |11.083    5.76 |17.167    1.67 | 23.25    1.11
    5.083    1.49 |11.167    5.76 |17.250    1.67 | 23.33    1.11
    5.167    1.49 |11.250    5.76 |17.333    1.67 | 23.42    1.11
    5.250    1.49 |11.333    8.92 |17.417    1.67 | 23.50    1.11
    5.333    1.49 |11.417    8.92 |17.500    1.67 | 23.58    1.11
    5.417    1.49 |11.500    8.92 |17.583    1.67 | 23.67    1.11
    5.500    1.49 |11.583    8.92 |17.667    1.67 | 23.75    1.11
    5.583    1.49 |11.667    8.92 |17.750    1.67 | 23.83    1.11
    5.667    1.49 |11.750    8.92 |17.833    1.67 | 23.92    1.11
    5.750    1.49 |11.833   27.49 |17.917    1.67 | 24.00    1.11
    5.833    1.49 |11.917   27.50 |18.000    1.67 | 24.08    1.11
    5.917    1.49 |12.000   27.50 |18.083    1.67 | 24.17    1.11
    6.000    1.49 |12.083  113.69 |18.167    1.67 | 24.25    1.11
    6.083    1.49 |12.167  113.70 |18.250    1.67 |

Max.Eff.Inten.(mm/hr)=     113.70       318.32
           over (min)        5.00        10.00
Storage Coeff.  (min)=       2.35 (ii)    6.79 (ii)
Unit Hyd. Tpeak (min)=       5.00        10.00
Unit Hyd. peak  (cms)=       0.30         0.14
                                                       *TOTALS*
PEAK FLOW      (cms)=        0.11         0.20          0.306 (iii)
```

```
     TIME TO PEAK    (hrs)=      12.25        12.25          12.25
     RUNOFF VOLUME    (mm)=      91.89        60.04          68.35
     TOTAL RAINFALL   (mm)=      92.89        92.89          92.89
     RUNOFF COEFFICIENT   =       0.99         0.65           0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.306     12.25      68.35
   OUTFLOW: ID= 1 (  0010)      1.340      0.060     12.58      67.91

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 19.61
                   TIME SHIFT OF PEAK FLOW        (min)= 20.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0434

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


--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34    0.060    12.58    67.91
      + ID2= 2 (  0003):    15.98    0.276    13.33    77.37
        ==================================================
        ID = 3 (  0008):    17.32    0.328    12.92    76.64

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

--------------------
| ADD HYD  (  0008)|
```

```
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.328    12.92    76.64
      + ID2= 2 (  0004):     1.89   0.188    12.25    24.99
        ====================================================
        ID = 1 (  0008):    19.21   0.368    12.25    71.56

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21   0.368    12.25    71.56
      + ID2= 2 (  0005):     1.46   0.108    12.25    18.25
        ====================================================
        ID = 3 (  0008):    20.67   0.476    12.25    67.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
===================================================================================
=======================

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.

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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\57422
279-9030-4b5f-8d55-d1260d6e14bc\scena
  Summary filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\57422
279-9030-4b5f-8d55-d1260d6e14bc\scena
```

```
DATE: 07-18-2025                           TIME: 03:09:20

USER:


COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  **********************************************
  ** SIMULATION : M. TIMMINS (REGIONAL)        **
  **********************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\d9a83387
| Ptotal=193.00 mm |    Comments: Timmins
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.00    8.00 |  3.00   23.00 |  6.00   20.00 |  9.00   10.00
                1.00   13.00 |  4.00   20.00 |  7.00    5.00 | 10.00   20.00
                2.00   13.00 |  5.00   43.00 |  8.00    3.00 | 11.00   15.00

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

--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
               0.083    8.00 | 3.083   23.00 | 6.083   20.00 |  9.08   10.00
               0.167    8.00 | 3.167   23.00 | 6.167   20.00 |  9.17   10.00
               0.250    8.00 | 3.250   23.00 | 6.250   20.00 |  9.25   10.00
               0.333    8.00 | 3.333   23.00 | 6.333   20.00 |  9.33   10.00
               0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
               0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
```

```
               0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
               0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
               0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
               0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
               0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
               1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
               1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
               1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
               1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
               1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
               1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
               1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
               1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
               1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
               1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
               1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
               1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
               2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
               2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
               2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
               2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
               2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
               2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
               2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
               2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
               2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
               2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
               2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
               2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
               3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

     Unit Hyd Qpeak  (cms)=   0.902

     PEAK FLOW       (cms)=   0.124 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  85.132
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.441

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

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
              0.083    8.00 | 3.083   23.00 | 6.083   20.00 |  9.08   10.00
              0.167    8.00 | 3.167   23.00 | 6.167   20.00 |  9.17   10.00
              0.250    8.00 | 3.250   23.00 | 6.250   20.00 |  9.25   10.00
              0.333    8.00 | 3.333   23.00 | 6.333   20.00 |  9.33   10.00
              0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
              0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
              0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
              0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
              0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
              0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
              0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
              1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
              1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
              1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
              1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
              1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
              1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
              1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
              1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
              1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
              1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
              1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
              1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
              2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
              2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
              2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
              2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
              2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
              2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
              2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
              2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
              2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
              2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
              2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
              2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
              3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.075 (i)
     TIME TO PEAK    (hrs)=   6.000
     RUNOFF VOLUME    (mm)=  66.301
     TOTAL RAINFALL   (mm)= 193.000
     RUNOFF COEFFICIENT   =   0.344

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

```
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	8.00	3.083	23.00	6.083	20.00	9.08	10.00
0.167	8.00	3.167	23.00	6.167	20.00	9.17	10.00
0.250	8.00	3.250	23.00	6.250	20.00	9.25	10.00
0.333	8.00	3.333	23.00	6.333	20.00	9.33	10.00
0.417	8.00	3.417	23.00	6.417	20.00	9.42	10.00
0.500	8.00	3.500	23.00	6.500	20.00	9.50	10.00
0.583	8.00	3.583	23.00	6.583	20.00	9.58	10.00
0.667	8.00	3.667	23.00	6.667	20.00	9.67	10.00
0.750	8.00	3.750	23.00	6.750	20.00	9.75	10.00
0.833	8.00	3.833	23.00	6.833	20.00	9.83	10.00
0.917	8.00	3.917	23.00	6.917	20.00	9.92	10.00
1.000	8.00	4.000	23.00	7.000	20.00	10.00	10.00
1.083	13.00	4.083	20.00	7.083	5.00	10.08	20.00
1.167	13.00	4.167	20.00	7.167	5.00	10.17	20.00
1.250	13.00	4.250	20.00	7.250	5.00	10.25	20.00
1.333	13.00	4.333	20.00	7.333	5.00	10.33	20.00
1.417	13.00	4.417	20.00	7.417	5.00	10.42	20.00
1.500	13.00	4.500	20.00	7.500	5.00	10.50	20.00
1.583	13.00	4.583	20.00	7.583	5.00	10.58	20.00
1.667	13.00	4.667	20.00	7.667	5.00	10.67	20.00
1.750	13.00	4.750	20.00	7.750	5.00	10.75	20.00
1.833	13.00	4.833	20.00	7.833	5.00	10.83	20.00
1.917	13.00	4.917	20.00	7.917	5.00	10.92	20.00
2.000	13.00	5.000	20.00	8.000	5.00	11.00	20.00
2.083	13.00	5.083	43.00	8.083	3.00	11.08	15.00
2.167	13.00	5.167	43.00	8.167	3.00	11.17	15.00
2.250	13.00	5.250	43.00	8.250	3.00	11.25	15.00
2.333	13.00	5.333	43.00	8.333	3.00	11.33	15.00
2.417	13.00	5.417	43.00	8.417	3.00	11.42	15.00
2.500	13.00	5.500	43.00	8.500	3.00	11.50	15.00
2.583	13.00	5.583	43.00	8.583	3.00	11.58	15.00
2.667	13.00	5.667	43.00	8.667	3.00	11.67	15.00
2.750	13.00	5.750	43.00	8.750	3.00	11.75	15.00
2.833	13.00	5.833	43.00	8.833	3.00	11.83	15.00
2.917	13.00	5.917	43.00	8.917	3.00	11.92	15.00
3.000	13.00	6.000	43.00	9.000	3.00	12.00	15.00

```
     Max.Eff.Inten.(mm/hr)=      43.00        27.67
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.95 (ii)   14.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.06          0.152 (iii)
     TIME TO PEAK    (hrs)=       5.75         6.00           6.00
     RUNOFF VOLUME    (mm)=     192.00       100.87         146.43
     TOTAL RAINFALL   (mm)=     193.00       193.00         193.00
     RUNOFF COEFFICIENT   =       0.99         0.52           0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
0.083	8.00	3.083	23.00	6.083	20.00	9.08	10.00
0.167	8.00	3.167	23.00	6.167	20.00	9.17	10.00
0.250	8.00	3.250	23.00	6.250	20.00	9.25	10.00
0.333	8.00	3.333	23.00	6.333	20.00	9.33	10.00

```
     0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
     0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
     0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
     0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
     0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
     0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
     0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
     1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
     1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
     1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
     1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
     1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
     1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
     1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
     1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
     1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
     1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
     1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
     1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
     2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
     2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
     2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
     2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
     2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
     2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
     2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
     2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
     2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
     2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
     2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
     2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
     3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

Max.Eff.Inten.(mm/hr)=      43.00       214.73
           over (min)        5.00        15.00
Storage Coeff.  (min)=       5.73 (ii)   10.93 (ii)
Unit Hyd. Tpeak (min)=       5.00        15.00
Unit Hyd. peak  (cms)=       0.20         0.09
                                                      *TOTALS*
PEAK FLOW      (cms)=        0.62         1.06          1.675 (iii)
TIME TO PEAK    (hrs)=       6.00         6.00          6.00
RUNOFF VOLUME    (mm)=     192.00       169.64        177.69
TOTAL RAINFALL   (mm)=     193.00       193.00        193.00
RUNOFF COEFFICIENT   =       0.99         0.88          0.92


  (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
       CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.152     6.00   146.43
      + ID2= 2 (  0002):    14.40   1.675     6.00   177.69
        ===============================================
        ID = 3 (  0007):    15.98   1.827     6.00   174.60

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740     0.5610
                          0.0260     0.0960   |   0.3270     0.8390
                          0.0440     0.2000   |   0.4650     1.0670
                          0.0660     0.3130   |   0.6180     1.3110

                             AREA     QPEAK     TPEAK       R.V.
                             (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      1.827      6.00     174.60
   OUTFLOW: ID= 1 (  0003)     15.980      0.656      7.08     174.54

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 35.93
                   TIME SHIFT OF PEAK FLOW        (min)= 65.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  1.3725

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       1.07         0.27
    Dep. Storage     (mm)=       1.00         5.00
    Average Slope     (%)=       1.00         2.00
    Length            (m)=      94.52        40.00
    Mannings n          =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 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
            0.083    8.00 | 3.083   23.00 | 6.083   20.00 |  9.08   10.00
            0.167    8.00 | 3.167   23.00 | 6.167   20.00 |  9.17   10.00
            0.250    8.00 | 3.250   23.00 | 6.250   20.00 |  9.25   10.00
            0.333    8.00 | 3.333   23.00 | 6.333   20.00 |  9.33   10.00
            0.417    8.00 | 3.417   23.00 | 6.417   20.00 |  9.42   10.00
            0.500    8.00 | 3.500   23.00 | 6.500   20.00 |  9.50   10.00
            0.583    8.00 | 3.583   23.00 | 6.583   20.00 |  9.58   10.00
            0.667    8.00 | 3.667   23.00 | 6.667   20.00 |  9.67   10.00
            0.750    8.00 | 3.750   23.00 | 6.750   20.00 |  9.75   10.00
            0.833    8.00 | 3.833   23.00 | 6.833   20.00 |  9.83   10.00
            0.917    8.00 | 3.917   23.00 | 6.917   20.00 |  9.92   10.00
            1.000    8.00 | 4.000   23.00 | 7.000   20.00 | 10.00   10.00
            1.083   13.00 | 4.083   20.00 | 7.083    5.00 | 10.08   20.00
            1.167   13.00 | 4.167   20.00 | 7.167    5.00 | 10.17   20.00
            1.250   13.00 | 4.250   20.00 | 7.250    5.00 | 10.25   20.00
            1.333   13.00 | 4.333   20.00 | 7.333    5.00 | 10.33   20.00
            1.417   13.00 | 4.417   20.00 | 7.417    5.00 | 10.42   20.00
            1.500   13.00 | 4.500   20.00 | 7.500    5.00 | 10.50   20.00
            1.583   13.00 | 4.583   20.00 | 7.583    5.00 | 10.58   20.00
            1.667   13.00 | 4.667   20.00 | 7.667    5.00 | 10.67   20.00
            1.750   13.00 | 4.750   20.00 | 7.750    5.00 | 10.75   20.00
            1.833   13.00 | 4.833   20.00 | 7.833    5.00 | 10.83   20.00
            1.917   13.00 | 4.917   20.00 | 7.917    5.00 | 10.92   20.00
            2.000   13.00 | 5.000   20.00 | 8.000    5.00 | 11.00   20.00
            2.083   13.00 | 5.083   43.00 | 8.083    3.00 | 11.08   15.00
            2.167   13.00 | 5.167   43.00 | 8.167    3.00 | 11.17   15.00
            2.250   13.00 | 5.250   43.00 | 8.250    3.00 | 11.25   15.00
            2.333   13.00 | 5.333   43.00 | 8.333    3.00 | 11.33   15.00
            2.417   13.00 | 5.417   43.00 | 8.417    3.00 | 11.42   15.00
            2.500   13.00 | 5.500   43.00 | 8.500    3.00 | 11.50   15.00
            2.583   13.00 | 5.583   43.00 | 8.583    3.00 | 11.58   15.00
            2.667   13.00 | 5.667   43.00 | 8.667    3.00 | 11.67   15.00
            2.750   13.00 | 5.750   43.00 | 8.750    3.00 | 11.75   15.00
            2.833   13.00 | 5.833   43.00 | 8.833    3.00 | 11.83   15.00
            2.917   13.00 | 5.917   43.00 | 8.917    3.00 | 11.92   15.00
            3.000   13.00 | 6.000   43.00 | 9.000    3.00 | 12.00   15.00

Max.Eff.Inten.(mm/hr)=      43.00       144.38
           over (min)        5.00        10.00
Storage Coeff.  (min)=       3.46 (ii)    9.55 (ii)
Unit Hyd. Tpeak (min)=       5.00        10.00
Unit Hyd. peak  (cms)=       0.26         0.12
                                                      *TOTALS*
PEAK FLOW       (cms)=       0.04         0.11          0.149 (iii)
TIME TO PEAK    (hrs)=       5.83         6.00          6.00
RUNOFF VOLUME    (mm)=     192.00       153.25        163.36
TOTAL RAINFALL   (mm)=     193.00       193.00        193.00
```

```
     RUNOFF COEFFICIENT   =       0.99         0.79           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (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.

-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.149      6.00     163.36
   OUTFLOW: ID= 1 (  0010)      1.340      0.107      6.17     162.92

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 71.71
                   TIME SHIFT OF PEAK FLOW        (min)= 10.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0613

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34   0.107     6.17   162.92
      + ID2= 2 (  0003):    15.98   0.656     7.08   174.54
        ====================================================
        ID = 3 (  0008):    17.32   0.744     7.08   173.64

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.744     7.08   173.64
```

```
     + ID2= 2 (  0004):     1.89   0.124     6.00    85.13
       ==================================================
       ID = 1 (  0008):    19.21   0.806     7.00   164.93

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (  0008):    19.21   0.806     7.00   164.93
     + ID2= 2 (  0005):     1.46   0.075     6.00    66.30
       ==================================================
       ID = 3 (  0008):    20.67   0.857     6.00   157.96

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

 FINISH
===================================================================================
========================

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

       V    V   I    SSSSS  U   U    A    L             (v 6.2.2015)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
Copyright 2007 - 2022 Smart City Water Inc
All rights reserved.


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


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

  Output  filename:
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\dd610
e80-7d90-41cd-a7ea-7a10a6371726\scena
  Summary filename:
```

```
C:\Users\msimon\AppData\Local\Civica\VH5\f4ae9ac0-7778-4f82-b22a-b9aa32d6a94e\dd610
e80-7d90-41cd-a7ea-7a10a6371726\scena


DATE: 07-18-2025                           TIME: 03:09:19

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------
------------------------
  ************************************************
  ** SIMULATION : N. 25mm                       **
  ************************************************


--------------------
|    READ STORM    |    Filename: C:\Users\msimon\AppD
|                  |              ata\Local\Temp\
|                  |              6b65d831-60fb-4514-92fa-2e90c8810e66\5b142ad0
| Ptotal= 24.99 mm |    Comments: 25mm STORM
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.00    1.36 |  1.00    6.91 |  2.00    4.18 |  3.00    1.86
                 0.08    1.45 |  1.08   11.02 |  2.08    3.77 |  3.08    1.78
                 0.17    1.55 |  1.17   26.16 |  2.17    3.43 |  3.17    1.71
                 0.25    1.67 |  1.25   76.07 |  2.25    3.16 |  3.25    1.64
                 0.33    1.81 |  1.33   33.71 |  2.33    2.92 |  3.33    1.58
                 0.42    1.99 |  1.42   18.64 |  2.42    2.72 |  3.42    1.52
                 0.50    2.20 |  1.50   12.61 |  2.50    2.55 |  3.50    1.47
                 0.58    2.47 |  1.58    9.46 |  2.58    2.39 |  3.58    1.43
                 0.67    2.82 |  1.67    7.55 |  2.67    2.26 |  3.67    1.38
                 0.75    3.29 |  1.75    6.28 |  2.75    2.14 |  3.75    1.34
                 0.83    3.97 |  1.83    5.38 |  2.83    2.04 |  3.83    1.30
                 0.92    5.03 |  1.92    4.70 |  2.92    1.94 |  3.92    1.26

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


--------------------
| CALIB            |
| NASHYD   (  0004)|   Area    (ha)=   1.89   Curve Number   (CN)= 55.5
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.08

     Unit Hyd Qpeak  (cms)=   0.902
```

```
     PEAK FLOW       (cms)=   0.013 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   1.686
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.067

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

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   (  0005)|   Area    (ha)=   1.46   Curve Number   (CN)= 46.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.00   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.07

     Unit Hyd Qpeak  (cms)=   0.797

     PEAK FLOW       (cms)=   0.007 (i)
     TIME TO PEAK    (hrs)=   1.417
     RUNOFF VOLUME    (mm)=   1.145
     TOTAL RAINFALL   (mm)=  24.991
     RUNOFF COEFFICIENT   =   0.046

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

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0001)|   Area    (ha)=   1.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  50.00   Dir. Conn.(%)=  50.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.79         0.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     102.63        40.00
     Mannings n           =      0.013        0.250

     Max.Eff.Inten.(mm/hr)=      76.07         2.12
                over (min)       5.00        40.00
     Storage Coeff.  (min)=       2.35 (ii)   35.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.30         0.03
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.00          0.153 (iii)
     TIME TO PEAK    (hrs)=       1.33         2.08           1.33
     RUNOFF VOLUME    (mm)=      23.99         2.19          13.08
     TOTAL RAINFALL   (mm)=      24.99        24.99          24.99
     RUNOFF COEFFICIENT   =       0.96         0.09           0.52
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  61.0    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.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  0002)|   Area    (ha)=  14.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.60   Dir. Conn.(%)=  36.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      12.61         1.79
     Dep. Storage     (mm)=       1.00         5.00
     Average Slope     (%)=       2.00         2.00
     Length            (m)=     309.84        40.00
     Mannings n           =      0.013        0.250

     Max.Eff.Inten.(mm/hr)=      76.07       132.94
                over (min)       5.00        15.00
     Storage Coeff.  (min)=       4.56 (ii)   10.86 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.23         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.83         0.37          0.953 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.50           1.33
     RUNOFF VOLUME    (mm)=      23.99        11.69          16.12
     TOTAL RAINFALL   (mm)=      24.99        24.99          24.99
     RUNOFF COEFFICIENT   =       0.96         0.47           0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  66.0    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.

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

--------------------
| ADD HYD  (  0007)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0001):     1.58   0.153     1.33    13.08
      + ID2= 2 (  0002):    14.40   0.953     1.33    16.12
```

```
        ====================================================
        ID = 3 (  0007):    15.98   1.107     1.33    15.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0003)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1740      0.5610
                          0.0260     0.0960   |   0.3270      0.8390
                          0.0440     0.2000   |   0.4650      1.0670
                          0.0660     0.3130   |   0.6180      1.3110

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0007)     15.980      1.107      1.33      15.82
   OUTFLOW: ID= 1 (  0003)     15.980      0.046      4.00      15.76

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  4.14
                   TIME SHIFT OF PEAK FLOW        (min)=160.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.2095

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0006)|   Area    (ha)=   1.34
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.90   Dir. Conn.(%)=  26.10
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       1.07          0.27
     Dep. Storage     (mm)=       1.00          5.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      94.52         40.00
     Mannings n          =       0.013         0.250

     Max.Eff.Inten.(mm/hr)=      76.07         59.55
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.76 (ii)    11.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.28          0.09
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02          0.073 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.58           1.33
     RUNOFF VOLUME    (mm)=      23.99          7.79          12.02
     TOTAL RAINFALL   (mm)=      24.99         24.99          24.99
     RUNOFF COEFFICIENT   =       0.96          0.31           0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

```
      (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.

--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0010)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
     **** WARNING : FIRST OUTFLOW IS NOT ZERO.
                          0.0050     0.0118   |   0.0350      0.0329
                          0.0100     0.0168   |   0.0440      0.0373
                          0.0180     0.0233   |   0.0540      0.0411
                          0.0250     0.0275   |   0.0000      0.0000

                                AREA     QPEAK     TPEAK       R.V.
                                (ha)     (cms)     (hrs)       (mm)
   INFLOW : ID= 2 (  0006)      1.340      0.073      1.33      12.02
   OUTFLOW: ID= 1 (  0010)      1.340      0.005      3.08      11.57

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)=  6.86
                   TIME SHIFT OF PEAK FLOW        (min)=105.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0118

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0010):     1.34   0.005     3.08    11.57
      + ID2= 2 (  0003):    15.98   0.046     4.00    15.76
        ====================================================
        ID = 3 (  0008):    17.32   0.051     3.92    15.43

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

--------------------
| ADD HYD  (  0008)|
|   3 +  2 =  1    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 3 (  0008):    17.32   0.051     3.92    15.43
      + ID2= 2 (  0004):     1.89   0.013     1.42     1.69
        ====================================================
        ID = 1 (  0008):    19.21   0.052     3.67    14.08
```

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

--------------------
| ADD HYD  (  0008)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (  0008):    19.21   0.052     3.67    14.08
      + ID2= 2 (  0005):     1.46   0.007     1.42     1.15
        ====================================================
        ID = 3 (  0008):    20.67   0.052     3.58    13.17

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

FIGURES

Legend

= SUBJECT LANDS

Project

659 BALM BEACH ROAD
TOWN OF MIDLAND

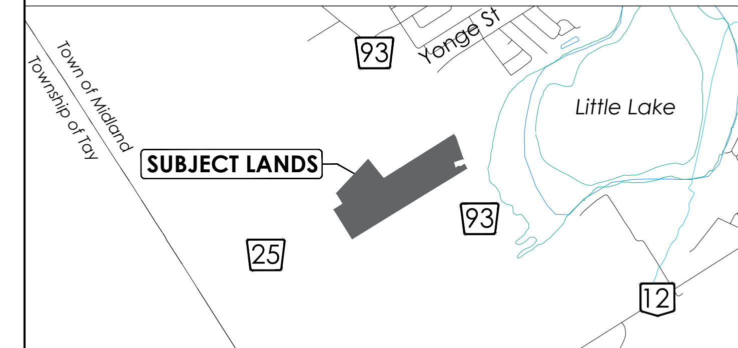
Drawing

SITE LOCATION PLAN

CROZIER
CONSULTING ENGINEERS

Drawn By	R.D.M.	Design By	J.K./R.D.M.	Project	2774-7263
Scale	N.T.S.	Date AUG/06/2025	Check By J.K./P.W.	Drawing	FIG. 1

Key Map



659 Balm Beach Road East,
(Lot 105 Concession 1 West of Penetanguishene Road)
Town of Midland

LEGEND

- Subject Site (±20.6ha)
- A - C Mixed-Use High Density:
  - 100 units / ha: ± 320 units
- D - F Medium Density Residential
  - 50 units / ha: ± 575 units
- G - H S.W.M. Area (1.7 ha)
- I Potential Park Area (± 0.8 ha)
- Natural Heritage Area (± 3.3 ha)
- Potential Roads - 20.0m width

* TOTAL UNITS: ± 895 units

FOR DISCUSSION PURPOSES ONLY

Note: This drawing is for discussion purposes only. The information shown is approximate and subject to change.

0 100 200m N

Date:	October 1, 2021	Drawn By:	A.S.
File:	17-728	Checked By:	G.B.

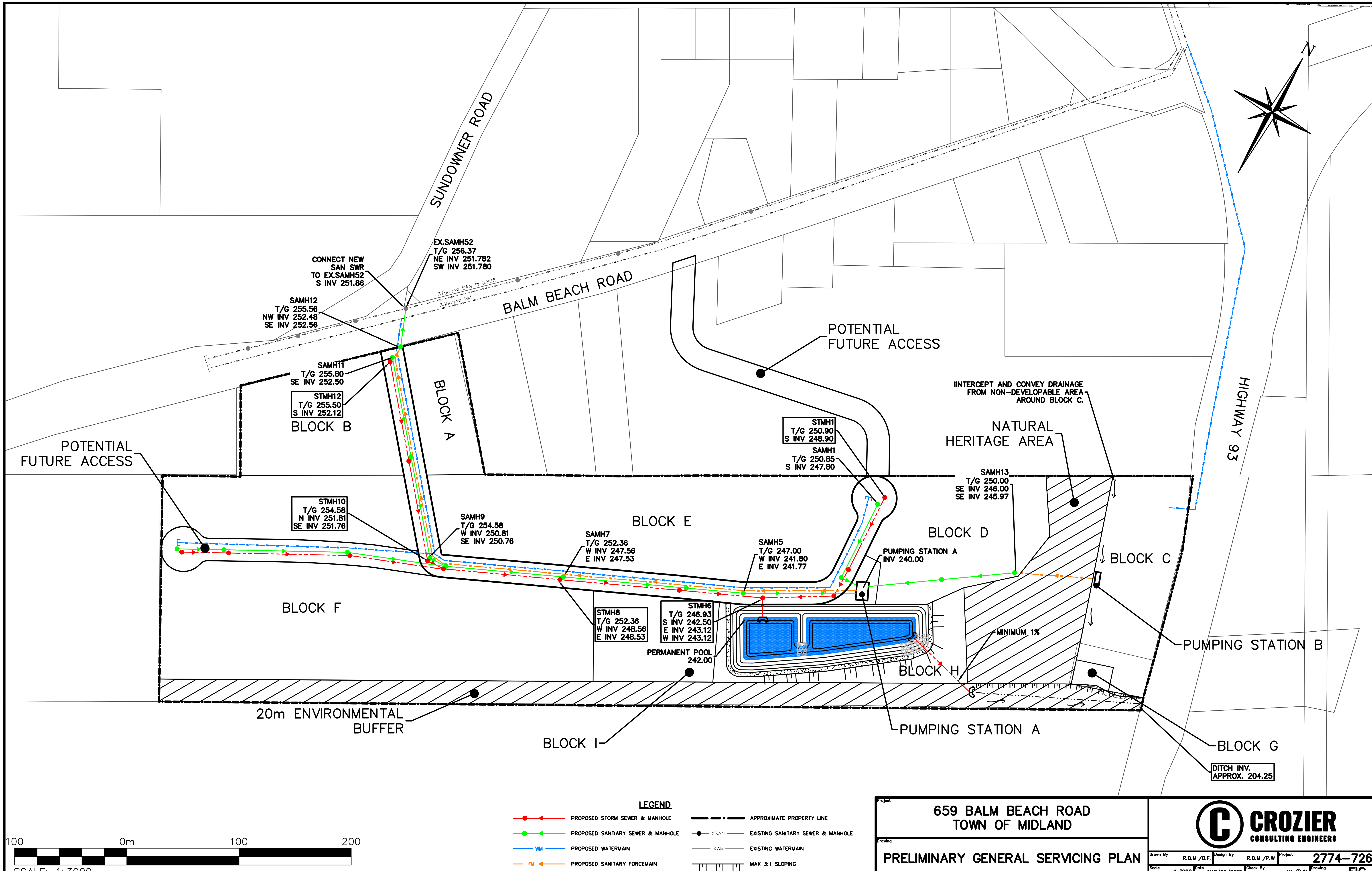
PROPOSED OFFICIAL PLAN AMENDMENT

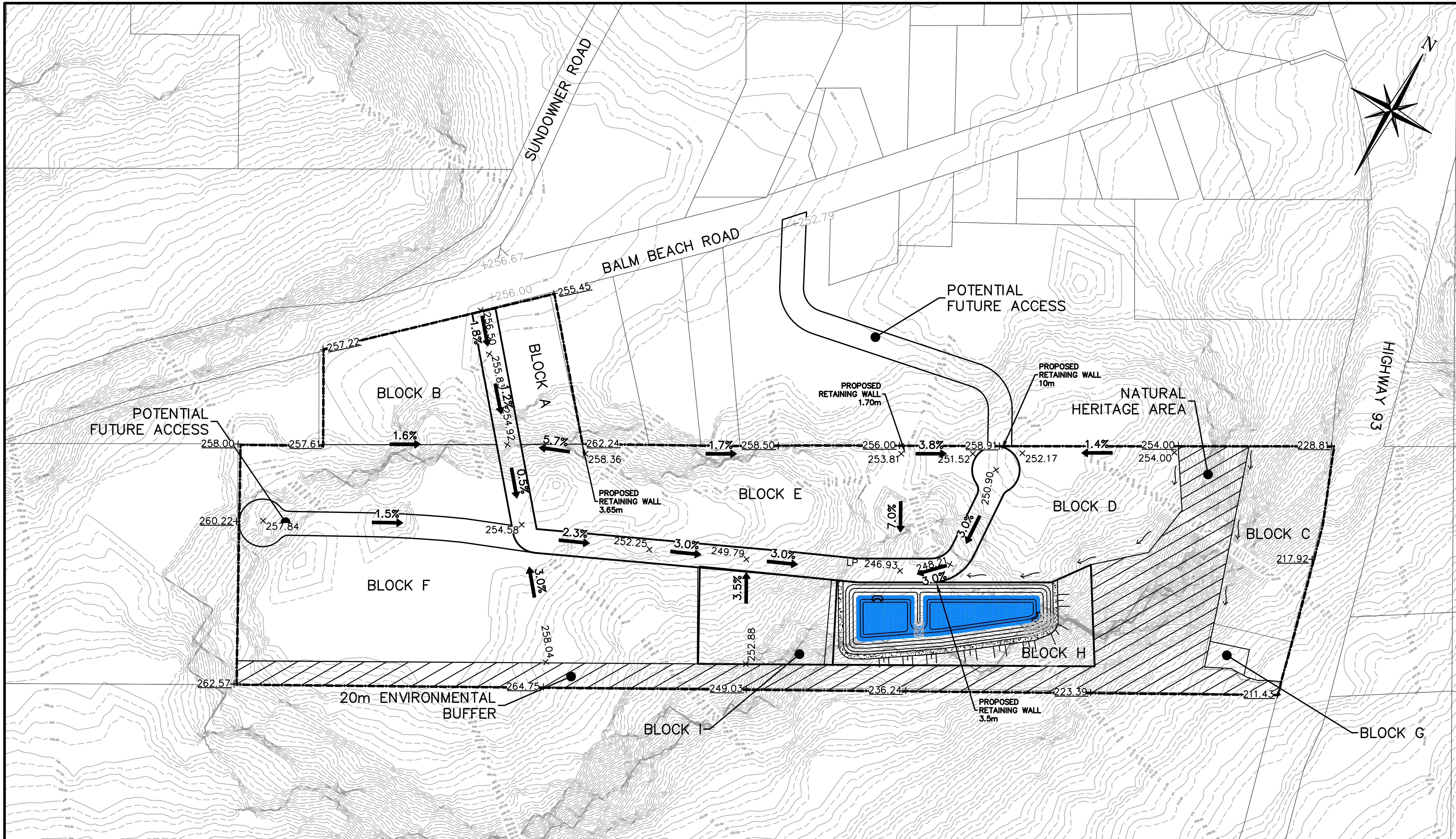
659 BALM BEACH ROAD

SCHEDULE OF REVISIONS

No.	Date	Description	By
11	May 14, 2025	Revise land-use designations and road network;	A.S.
12	May 23, 2025	Revise land-use designations and road network;	A.S.
13	June 12, 2025	Add new parcel to block 'G' and 'C';	A.S.
14	June 26, 2025	Revise land-use designations;	A.S.

IPS
INNOVATIVE PLANNING SOLUTIONS
PLANNERS • PROJECT MANAGERS • LAND DEVELOPMENT
647 WELHAM ROAD, UNIT 9, BARRIE, ON, L4N 0B7 Tel: 705-812-3281
3800 STEELS AVE. W, SUITE 200W, VAUGHAN, ON, L4L 4G9 Tel: 905-291-7525
info@ipsconsultinginc.com / www.ipsconsultinginc.com


SUNDOWNER ROAD
BALM BEACH ROAD
HIGHWAY 93
N
375mmø SAN @ 0.89%
300mmø WM
EX.SAMH52
T/G 256.37
NE INV 251.782
SW INV 251.780
CONNECT NEW SAN SWR TO EX.SAMH52 S INV 251.86
SAMH12
T/G 255.56
NW INV 252.48
SE INV 252.56
SAMH11
T/G 255.80
SE INV 252.50
STMH12
T/G 255.50
S INV 252.12
BLOCK B
BLOCK A
POTENTIAL FUTURE ACCESS
STMH10
T/G 254.58
N INV 251.81
SE INV 251.76
SAMH9
T/G 254.58
W INV 250.81
SE INV 250.76
SAMH7
T/G 252.36
W INV 247.56
E INV 247.53
BLOCK E
STMH8
T/G 252.36
W INV 248.56
E INV 248.53
SAMH5
T/G 247.00
W INV 241.80
E INV 241.77
STMH6
T/G 246.93
S INV 242.50
E INV 243.12
W INV 243.12
PERMANENT POOL 242.00
STMH1
T/G 250.90
S INV 248.90
SAMH1
T/G 250.85
S INV 247.80
POTENTIAL FUTURE ACCESS
INTERCEPT AND CONVEY DRAINAGE FROM NON-DEVELOPABLE AREA AROUND BLOCK C.
NATURAL HERITAGE AREA
SAMH13
T/G 250.00
SE INV 246.00
SE INV 245.97
BLOCK D
PUMPING STATION A
INV 240.00
BLOCK C
MINIMUM 1%
PUMPING STATION B
BLOCK F
BLOCK H
20m ENVIRONMENTAL BUFFER
BLOCK I
PUMPING STATION A
BLOCK G
DITCH INV. APPROX. 204.25
LEGEND
PROPOSED STORM SEWER & MANHOLE
PROPOSED SANTIARY SEWER & MANHOLE
WM PROPOSED WATERMAIN
FM PROPOSED SANITARY FORCEMAIN
APPROXIMATE PROPERTY LINE
XSAN EXISTING SANITARY SEWER & MANHOLE
XWM EXISTING WATERMAIN
MAX 3:1 SLOPING
100 0m 100 200
SCALE: 1:3000
Project
659 BALM BEACH ROAD
TOWN OF MIDLAND
Drawing
PRELIMINARY GENERAL SERVICING PLAN
CROZIER
CONSULTING ENGINEERS
Drawn By R.D.M./O.F.
Design By R.D.M./P.W.
Project 2774-7263
Scale 1:3000
Date AUG/06/2025
Check By J.K./P.W.
Drawing FIG 3

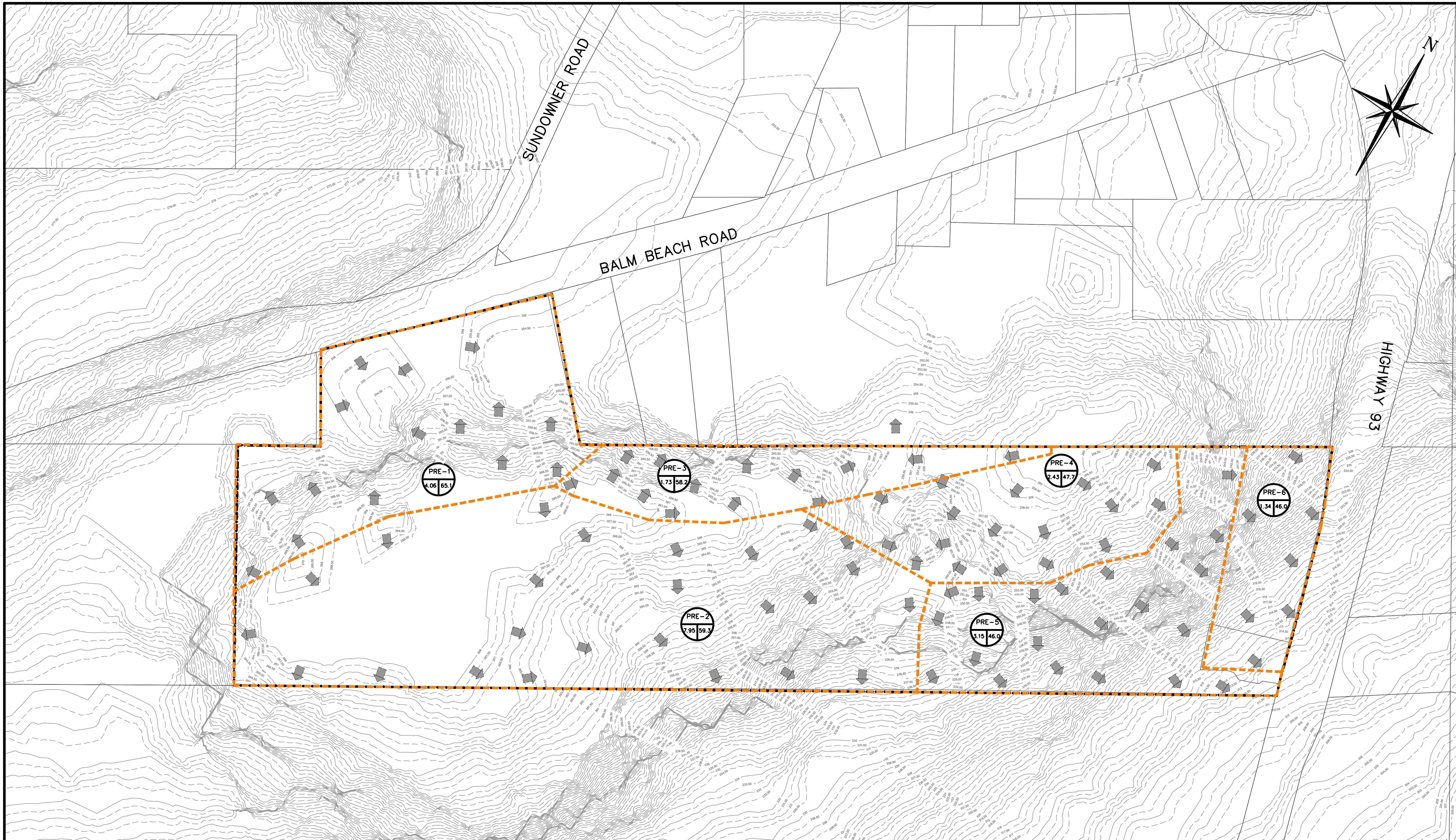


659 BALM BEACH ROAD
TOWN OF MIDLAND

PRELIMINARY GRADING PLAN

CROZIER
CONSULTING ENGINEERS

Drawn By	R.D.M./O.F.	Design By	R.D.M./P.W.	Project	2774-7263
Scale	1:3000	Date	AUG/06/2025	Check By	J.K./P.W.	Drawing	FIG 4



100 0m 100 200

SCALE: 1:3000

LEGEND

OVERLAND FLOW DIRECTION

DRAINAGE CATCHMENT AREAS

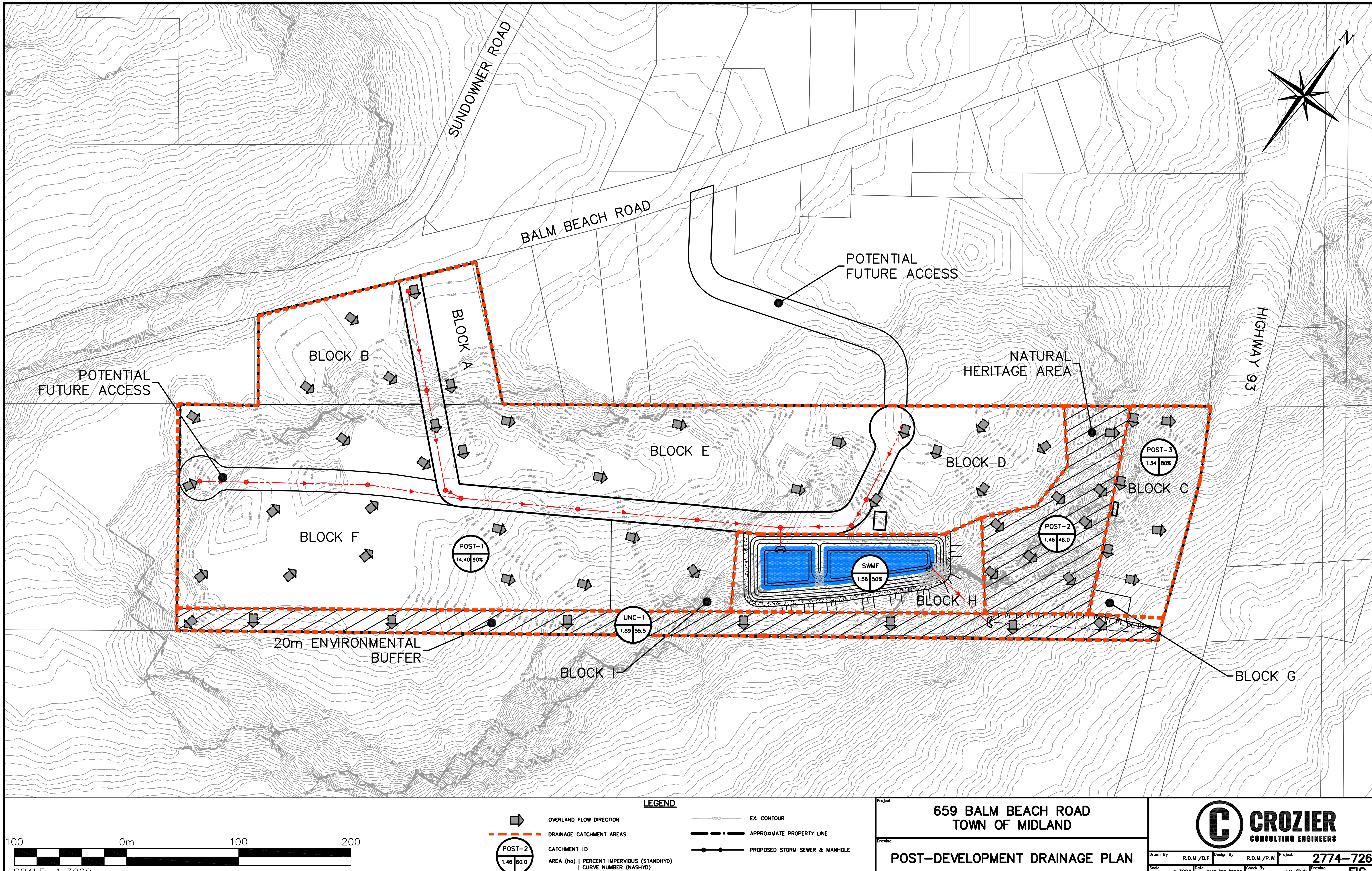
PRE-2 7.95 | 59.3 — CATCHMENT I.D. AREA (ha) | CURVE NUMBER (NASHYD)

EX. CONTOUR

APPROXIMATE PROPERTY LINE

Project	659 BALM BEACH ROAD TOWN OF MIDLAND						
Drawing	PRE-DEVELOPMENT DRAINAGE PLAN						
Drawn By	R.D.M./O.F.	Design By	R.D.M./P.W.	Project	2774-7263		
Scale	1:3000	Date	AUG/06/2025	Check By	J.K./P.W.	Drawing	FIG 5

CROZIER
CONSULTING ENGINEERS



LEGEND

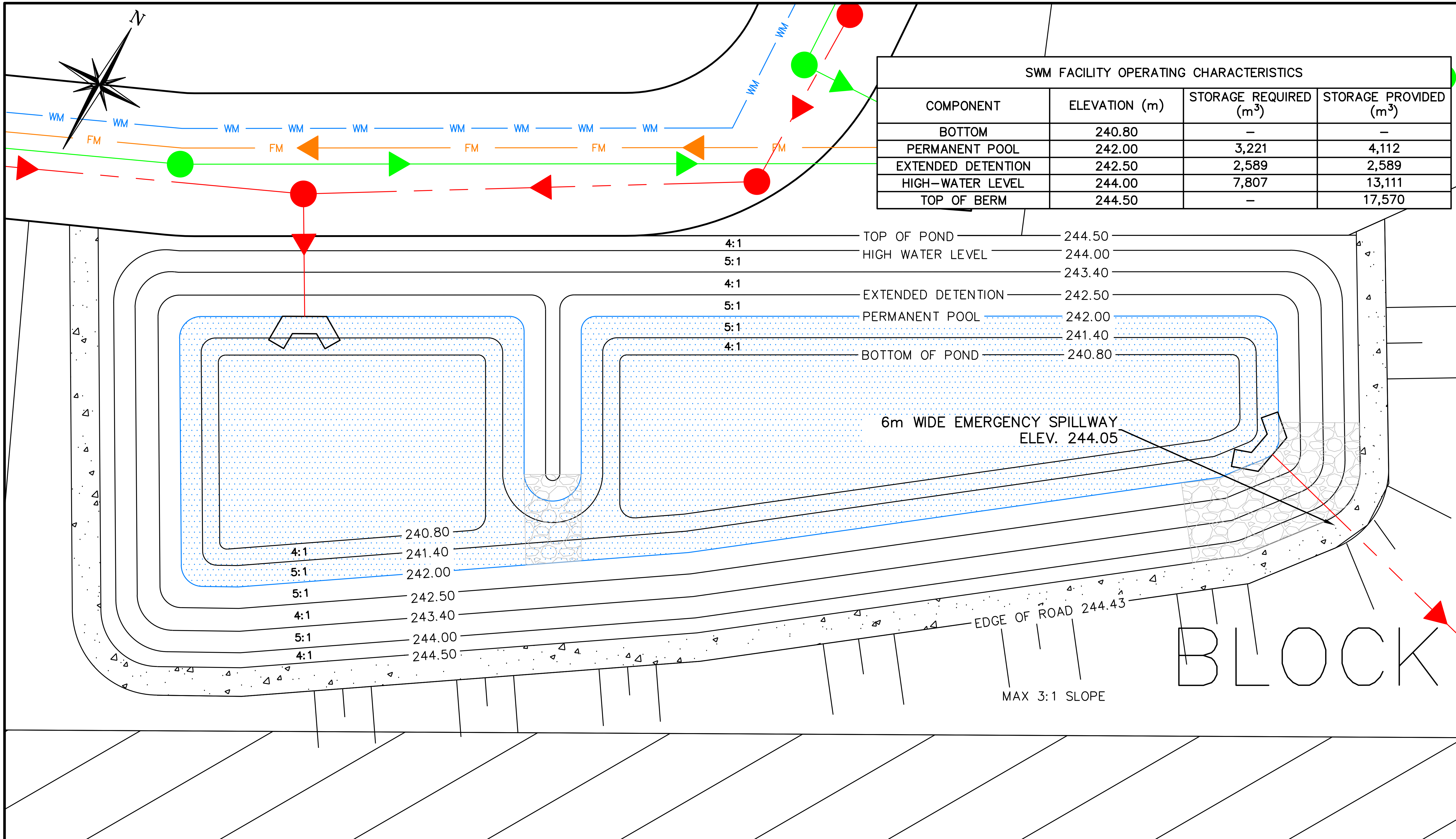
OVERLAND FLOW DIRECTION	EX. CONTOUR (XXX.X)
DRAINAGE CATCHMENT AREAS	APPROXIMATE PROPERTY LINE
CATCHMENT I.D (POST-2 / 1.46 / 60.0) AREA (ha) | PERCENT IMPERVIOUS (STANDHYD) | CURVE NUMBER (NASHYD)	PROPOSED STORM SEWER & MANHOLE

Project: 659 BALM BEACH ROAD
TOWN OF MIDLAND

Drawing: POST-DEVELOPMENT DRAINAGE PLAN

CROZIER
CONSULTING ENGINEERS

Drawn By	R.D.M./O.F.	Design By	R.D.M./P.W.	Project	2774-7263
Scale	1:3000	Date	AUG/06/2025	Check By	J.K./P.W.
Drawing	FIG 6				



SWM FACILITY OPERATING CHARACTERISTICS			
COMPONENT	ELEVATION (m)	STORAGE REQUIRED (m^3)	STORAGE PROVIDED (m^3)
BOTTOM	240.80	–	–
PERMANENT POOL	242.00	3,221	4,112
EXTENDED DETENTION	242.50	2,589	2,589
HIGH-WATER LEVEL	244.00	7,807	13,111
TOP OF BERM	244.50	–	17,570

10 0m 10 20 30 40

SCALE: 1:500

LEGEND

- PROPOSED STORM SEWER & MANHOLE
- PROPOSED SANTIARY SEWER & MANHOLE
- WM PROPOSED WATERMAIN
- FM PROPOSED SANITARY FORCEMAIN
- APPROXIMATE PROPERTY LINE
- MAX 3:1 SLOPING

Project

659 BALM BEACH ROAD
TOWN OF MIDLAND

Drawing

PRELIMINARY POND LAYOUT

CROZIER
CONSULTING ENGINEERS

Drawn By	R.D.M./O.F.	Design By	R.D.M./P.W.	Project	2774–7263
Scale	1:500	Date	AUG/06/2025	Check By	J.K./P.W.
Drawing	FIG 7				