

GE Healthcare Experience Center

3000 N Grandview Blvd
Waukesha, WI

PREPARED FOR

Eppstein Uhen Architects
333 E. Chicago St
Milwaukee, WI 53202

PREPARED BY



Project Number – 23610
2025/05/21

Allyson Kuske
Project Engineer

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City of Waukesha Municipal Code Chapter 32	2

1. Introduction

This Storm Water Management report presents the design calculations and considerations for the proposed development located at 3000 N Grandview Blvd Waukesha, WI. The proposed development disturbs approximately 2.404 of the parcel's 531.47 acres. This storm water management report serves as a summary of calculations showing the proposed development meets all applicable ordinances.

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2. Design Criteria

City of Waukesha Municipal Code Chapter 32

Water Quality

- Total Suspended Solids. BMPs shall be designed, installed, and maintained to control total suspended solids carried in runoff from the post-construction site as follows:
 - For redevelopment, 40% reduction of total suspended solids load from parking areas and roads.

Water Quantity and Management of Peak Runoff

- BMPs shall be designed, installed, and maintained to control the runoff rate (CFS) discharge from the post-construction site as follows:
 - The calculated post-development peak storm water discharge rate shall not exceed the calculated pre-development discharge rates for the 1-year, 2-year, 10-year, and 100-year, 24-hour design storms.

Wisconsin Department of Natural Resources

- WDNR – Technical Standards (NR151 and NR216)

3. Design Analysis

- Rainfall data used in the hydrologic analysis were obtained from the NOAA Atlas 14 precipitation depths, and the appropriate NRCS Wisconsin MSE3 precipitation distribution for 24 hour duration (1-yr, 2-yr, 10-yr, and 100-yr storm events).

1 year	2 year	10 year	100 year
2.40"	2.70"	3.81"	6.18"

- Curve numbers for the soils within the analysis region were selected from the values published in TR-55. Native soil types were determined from NRCS maps and borings.
- Time of concentration values were calculated based on the standard TR-55 method.
- The hydraulic calculations and analysis presented in this report were performed using HydroCad Watershed Modeling software which utilizes the methodologies of TR-55 for a hydrograph based analysis of watershed conditions. Hydrographs were developed using a standard MSE-3 24 hour hydrograph for the various 24-hr storm events.
- Sediment reduction characteristics for the proposed water quality facilities were determined using WinSLAMM (Version 10.3.4) Source Loading and Management Model.

4. Existing Condition Analysis

The existing site is located on the northwest corner of the intersection at 3000 N Grandview Blvd in the City of Waukesha, WI. There are 4 existing buildings on site with associated car parking areas and access driveways.

The existing parcel is 531.47 acres in size, with approximately 2.404 acres of disturbed area. Based on NRCS soils mapping the site consists entirely of loamy land soils with a hydrologic soil group rating of D.

The site generally drains from west to east. There are 3 existing drainage areas in the respective disturbed area of the site that each correspond to a different outfall point where stormwater runoff will exit the site. Existing Drainage Area 1 and 2 (see figure SW 1.0) consist of 0.73 acres and 1.0 acre respectively that drain to the wetlands northeast and east of the development. Drainage Area 3 consists of 0.60 acres that connects to the existing private storm sewer system that ultimately drains into a wetland located east of the development. The wetlands drain into drainage ditches along N Grandview Boulevard and ultimately discharges to the Fox River.

5. Proposed Developed Conditions Description

The proposed site will include the construction of an approximately 20,516 square foot building addition, paved surface parking, and its associated drives and sidewalks. There is also a proposed garden terrace north of the building addition. The proposed impervious area within the disturbance limits is

1.835 acres, which results in a 0.0909 acre decrease in the impervious area within the limits. Up-flo filter devices are proposed to reduce the total suspended solids to meet the necessary requirements. Catch basins will be utilized in the proposed storm sewer system to allow for total suspended solids reduction for the rest of the site. The proposed catchment areas were modeled in WinSLAMM. Existing catch basins (as labeled in the models and civil plans) could not be opened to verify sump conditions and are therefore not included in the model.

6. Storm Water Quantity Modeling

A summary of results can be viewed in the table below:

Storm Frequency	Pre-Development Site Conditions	Post-Development Site Conditions
Year	Peak Flow (cfs)	Peak Flow (cfs)
1	7.06	6.74
2	8.16	7.83
10	12.18	11.87
100	20.66	20.39

7. Storm Water Quality Modeling

NR 151 regulations require that the project employ BMPs to reduce sediment load leaving the site by 40% compared to no controls.

Quality Summary Table

Total Suspended Solids Loading	
Total TSS prior to controls/treatment	1782.00 lbs
Total TSS After controls/treatment	928.60 lbs
Total Percent TSS Reduction	47.89%

8. Storm Sewer Sizing

The proposed storm sewer piping has been sized to convey the 100-year storm event with no surcharge to the top of the structure.

9. Conclusion

The proposed stormwater management plan meets the requirements of the local municipality, WDNR, and other regulatory bodies through the implementation of best management practices described within this report to the greatest extent practicable.

10. Maintenance Plan

The Owner will be responsible for the regular inspection of the storm water management facilities to ensure that they are functioning properly and the Owner will be required to enter into a storm water maintenance agreement with the City. A draft storm water maintenance agreement including a listing of inspection and maintenance activities with frequencies included in Appendix F.

Appendix A Site Location Map

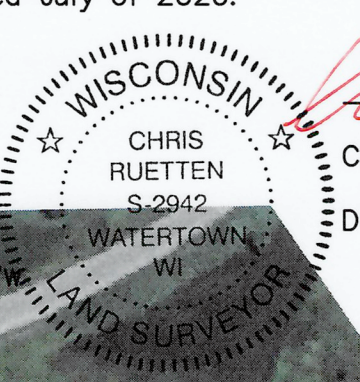
ALTA/NSPS LAND TITLE SURVEY

SURVEYOR'S CERTIFICATE

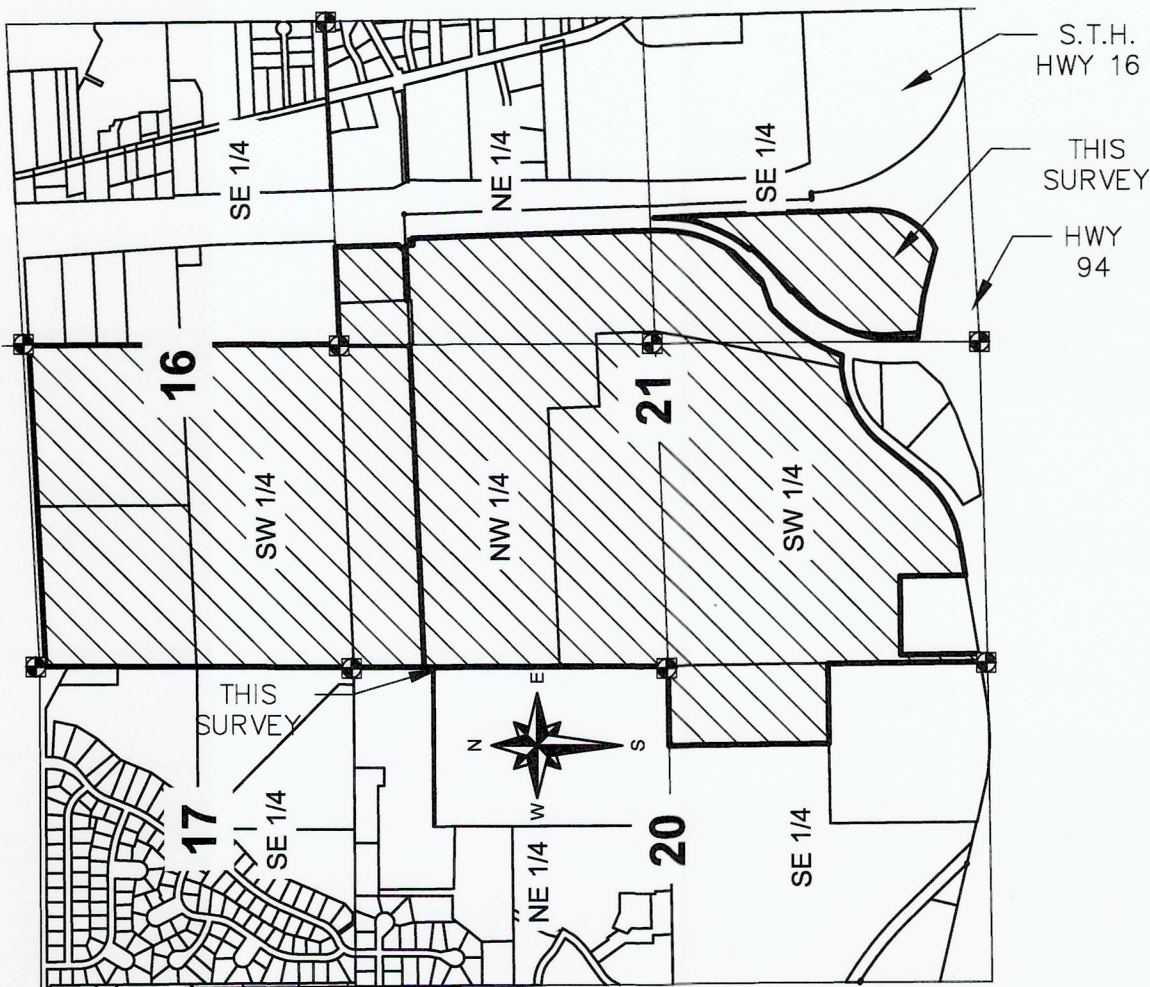
To: First American Title Insurance Company, GE Medical Systems, LLC.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 3, 7 and 11 of Table A thereof, and in accordance with the Wisconsin Administrative Code, Chapter A-E7, Minimum Standards for Property Surveys. The field work was completed July of 2020.

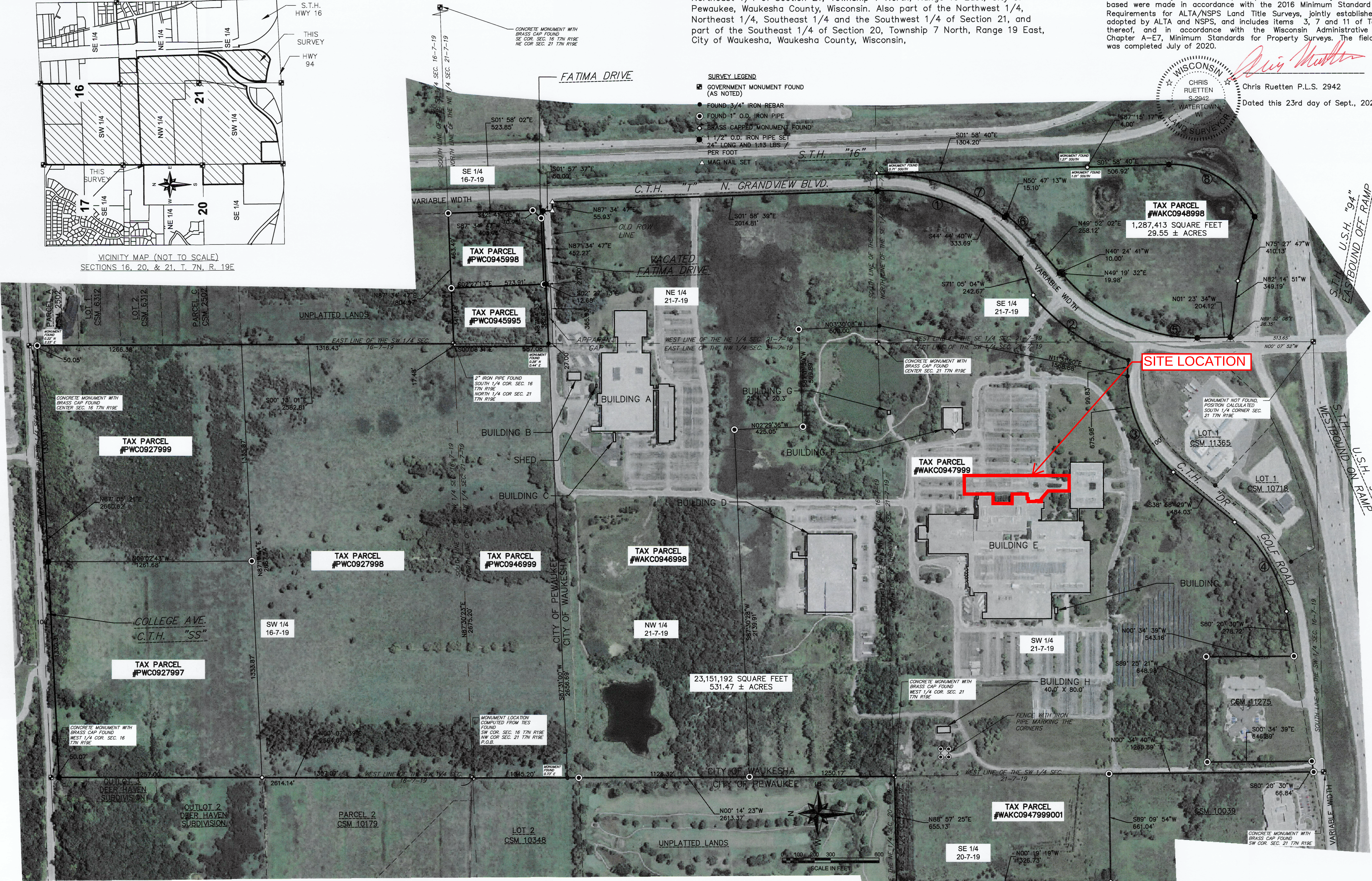
Chris Ruetten P.L.S. 2942
Dated this 23rd day of Sept., 2020



Part of the Southwest 1/4 of Section 16 and the Northwest 1/4 and Northeast 1/4 of Section 21, Township 7 North, Range 19 East, City of Pewaukee, Waukesha County, Wisconsin. Also part of the Northwest 1/4, Northeast 1/4, Southeast 1/4 and the Southwest 1/4 of Section 21, and part of the Southeast 1/4 of Section 20, Township 7 North, Range 19 East, City of Waukesha, Waukesha County, Wisconsin,



VICINITY MAP (NOT TO SCALE)
SECTIONS 16, 20, & 21, T. 7N, R. 19E



- ① Chord: 676.29' Course: S 15°59'38" W Arc Length: 687.51' Radius: 1095.92' Delta: 35°56'38"
- ② Chord: 711.46' Course: S 33°56'16" W Arc Length: 720.71' Radius: 1295.92' Delta: 31°51'33"
- ③ Chord: 654.27' Course: S 64°14'58" W Arc Length: 675.98' Radius: 1095.92' Delta: 50°32'58"
- ④ Chord: 639.25' Course: S 59°39'29" W Arc Length: 653.35' Radius: 1095.92' Delta: 41°22'01"
- ⑤ Chord: 919.39' Course: S 25°07'30" E Arc Length: 948.52' Radius: 1095.92' Delta: 49°24'56"
- ⑥ Chord: 228.56' Course: N 44°25'47" E Arc Length: 228.91' Radius: 1195.92' Delta: 10°58'01"
- ⑦ Chord: 837.44' Course: N 18°31'01" E Arc Length: 855.57' Radius: 1195.92' Delta: 40°59'24"
- ⑧ Chord: 619.87' Course: S 31°12'38" W Arc Length: 655.94' Radius: 566.20' Delta: 66°22'37"

PREPARED FOR (OWNER):
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Global Water Center • Fox Valley

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ALTANSPS LAND TITLE SURVEY
GE MEDICAL SYSTEMS, L.L.C
3000 NORTH GRANDVIEW BOULEVARD
CITY OF PEWAUKEE & WAUKESHA
WAUKESHA COUNTY, WISCONSIN

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RUEKERT & MIELKE INC.

DESIGNED BY:

DRAFTED BY: JMS

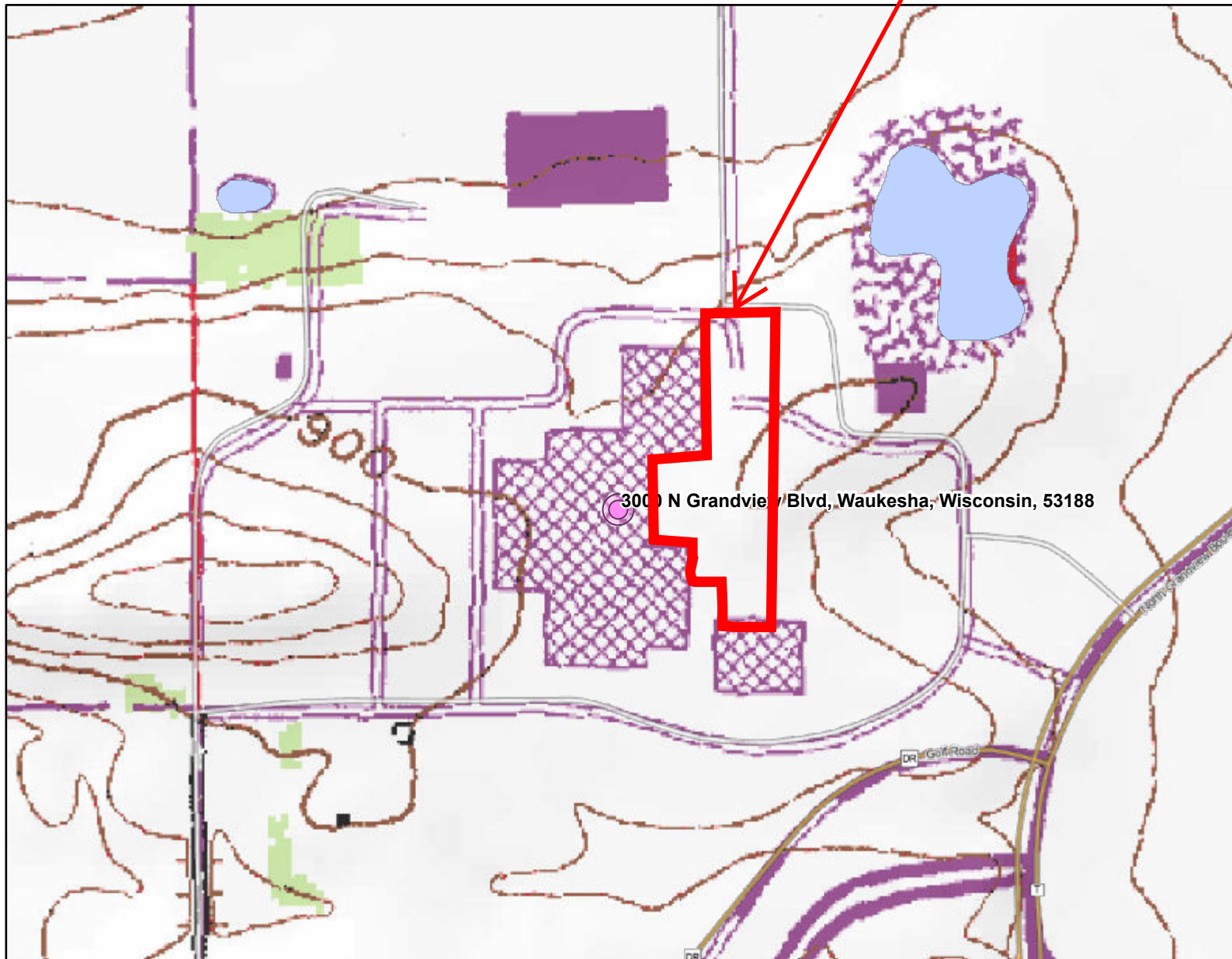
CHECKED BY: CJR

DATE: SEPT. 23, 2020

FILE NO.
1724-10000



SITE LOCATION



Legend: (some map layers may not be displayed)

- Open Water
- 24K Lakes and Open Water
- City or Village
- County Boundaries
- County and Local Roads
- County HWY
- Local Road
- 24K USGS Quad Index - Level 7 - 16

Notes:



Service Layer Credits:
Cities, Roads & Boundaries: , USGS Quad Indexes: Delorme Atlas, US Geological Survey (USGS),
Topographic Maps: , Surface Water (Cached): WIDNR, USGS, and other data

Map projection: NAD 1983 HARN Wisconsin TM



Map: 0 430 860 Feet
0 125 250 Meters

This map is a product generated by a DNR web mapping application.

This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user agrees to be bound by all disclaimers found here: <https://dnr.wisconsin.gov/legal>

Date Printed: 5/21/2025 4:13 PM

Appendix B NRCS Soils Map

Soil Map—Waukesha County, Wisconsin



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

3/27/2025
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Waukesha County, Wisconsin

Survey Area Data: Version 3, Dec 10, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

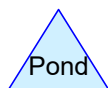
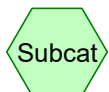
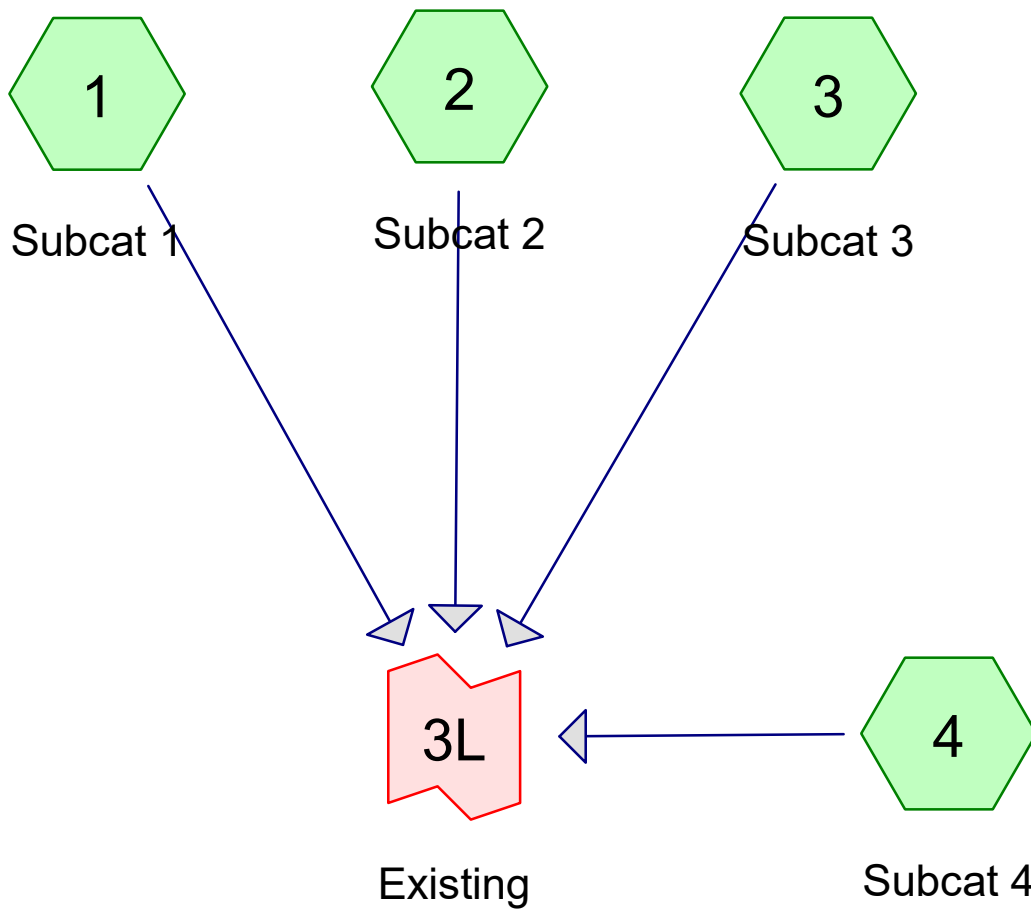
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BsA	Brookston silt loam, 0 to 2 percent slopes	2.4	5.8%
GP	Gravel pit	1.6	3.7%
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	17.2	41.0%
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	7.3	17.3%
LmB	Lamartine silt loam, 0 to 3 percent slopes	0.8	2.0%
MoB	Mayville silt loam, 2 to 6 percent slopes	5.0	12.0%
ThB	Theresa silt loam, 2 to 6 percent slopes	6.5	15.5%
W	Water	1.2	2.9%
Totals for Area of Interest		42.0	100.0%

Appendix C Calculations - Storm Water Quantity (HydroCAD Model)

Appendix D Calculations - Storm Water Quality (WinSLAMM)



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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	MSE 24-hr	3	Default	24.00	1	2.40	2
2	2-Year	MSE 24-hr	3	Default	24.00	1	2.70	2
3	10-Year	MSE 24-hr	3	Default	24.00	1	3.81	2
4	100-Year	MSE 24-hr	3	Default	24.00	1	6.18	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.478	74	>75% Grass cover, Good, HSG C (1, 2, 3, 4)
1.926	98	Paved parking, HSG C (1, 2, 3, 4)
2.404	93	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.404	HSG C	1, 2, 3, 4
0.000	HSG D	
0.000	Other	
2.404		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.478	0.000	0.000	0.478	>75% Grass cover, Good	1, 2, 3, 4
0.000	0.000	1.926	0.000	0.000	1.926	Paved parking	1, 2, 3, 4
0.000	0.000	2.404	0.000	0.000	2.404	TOTAL AREA	

23610 Existing*MSE 24-hr 3 1-Year Rainfall=2.40"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=31,592 sf 90.43% Impervious Runoff Depth>1.90"
Tc=6.0 min CN=96 Runoff=2.34 cfs 0.115 af

Subcatchment 2: Subcat 2 Runoff Area=45,487 sf 73.79% Impervious Runoff Depth>1.54"
Tc=6.0 min CN=92 Runoff=2.91 cfs 0.134 af

Subcatchment 3: Subcat 3 Runoff Area=26,023 sf 80.27% Impervious Runoff Depth>1.63"
Tc=6.0 min CN=93 Runoff=1.73 cfs 0.081 af

Subcatchment 4: Subcat 4 Runoff Area=1,626 sf 55.02% Impervious Runoff Depth>1.17"
Tc=6.0 min CN=87 Runoff=0.08 cfs 0.004 af

Link 3L: Existing Inflow=7.06 cfs 0.334 af
Primary=7.06 cfs 0.334 af

Total Runoff Area = 2.404 ac Runoff Volume = 0.334 af Average Runoff Depth = 1.67"
19.87% Pervious = 0.478 ac 80.13% Impervious = 1.926 ac

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 1: Subcat 1

Runoff = 2.34 cfs @ 12.13 hrs, Volume= 0.115 af, Depth> 1.90"
Routed to Link 3L : Existing

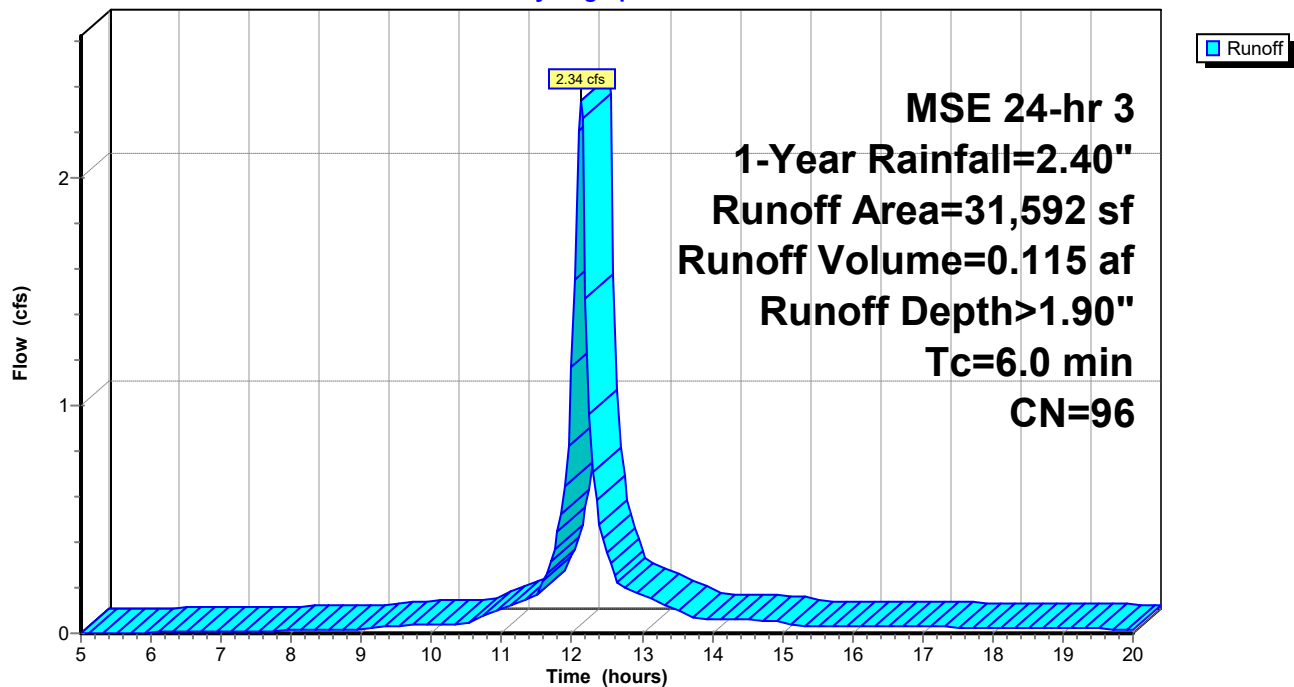
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
3,023	74	>75% Grass cover, Good, HSG C
28,568	98	Paved parking, HSG C
31,592	96	Weighted Average
3,023		9.57% Pervious Area
28,568		90.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.09	0.00	0.00	18.00	2.28	1.84	0.02
5.25	0.10	0.00	0.00	18.25	2.29	1.85	0.02
5.50	0.11	0.00	0.00	18.50	2.29	1.86	0.02
5.75	0.11	0.00	0.00	18.75	2.30	1.87	0.02
6.00	0.12	0.00	0.00	19.00	2.31	1.88	0.02
6.25	0.13	0.00	0.00	19.25	2.32	1.88	0.02
6.50	0.14	0.01	0.01	19.50	2.32	1.89	0.02
6.75	0.15	0.01	0.01	19.75	2.33	1.90	0.02
7.00	0.16	0.01	0.01	20.00	2.34	1.90	0.02
7.25	0.17	0.01	0.01				
7.50	0.18	0.02	0.01				
7.75	0.19	0.02	0.01				
8.00	0.20	0.03	0.01				
8.25	0.21	0.03	0.01				
8.50	0.22	0.04	0.01				
8.75	0.24	0.04	0.02				
9.00	0.25	0.05	0.02				
9.25	0.27	0.06	0.03				
9.50	0.29	0.07	0.03				
9.75	0.31	0.08	0.03				
10.00	0.33	0.09	0.04				
10.25	0.35	0.11	0.04				
10.50	0.38	0.12	0.04				
10.75	0.41	0.15	0.08				
11.00	0.46	0.18	0.11				
11.25	0.52	0.23	0.14				
11.50	0.60	0.28	0.17				
11.75	0.74	0.40	0.37				
12.00	1.11	0.73	1.17				
12.25	1.66	1.25	0.96				
12.50	1.80	1.39	0.35				
12.75	1.88	1.46	0.20				
13.00	1.94	1.51	0.17				
13.25	1.99	1.56	0.14				
13.50	2.02	1.60	0.10				
13.75	2.05	1.62	0.07				
14.00	2.07	1.64	0.06				
14.25	2.09	1.66	0.06				
14.50	2.11	1.68	0.06				
14.75	2.13	1.70	0.06				
15.00	2.15	1.72	0.06				
15.25	2.16	1.73	0.03				
15.50	2.18	1.75	0.03				
15.75	2.19	1.76	0.03				
16.00	2.20	1.77	0.03				
16.25	2.21	1.78	0.03				
16.50	2.22	1.79	0.03				
16.75	2.23	1.80	0.03				
17.00	2.24	1.81	0.03				
17.25	2.25	1.82	0.03				
17.50	2.26	1.83	0.03				
17.75	2.27	1.84	0.03				

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 2: Subcat 2

Runoff = 2.91 cfs @ 12.13 hrs, Volume= 0.134 af, Depth> 1.54"
Routed to Link 3L : Existing

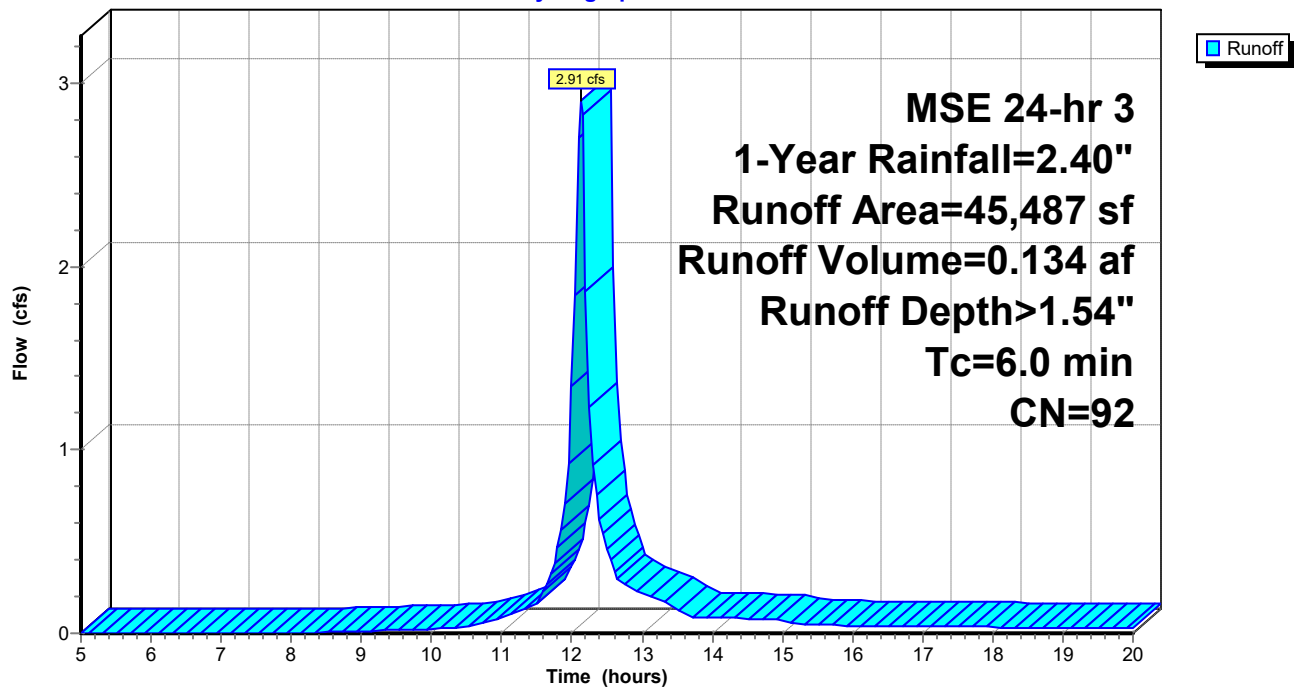
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
11,924	74	>75% Grass cover, Good, HSG C
33,563	98	Paved parking, HSG C
45,487	92	Weighted Average
11,924		26.21% Pervious Area
33,563		73.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.09	0.00	0.00	18.00	2.28	1.49	0.03
5.25	0.10	0.00	0.00	18.25	2.29	1.50	0.03
5.50	0.11	0.00	0.00	18.50	2.29	1.50	0.03
5.75	0.11	0.00	0.00	18.75	2.30	1.51	0.03
6.00	0.12	0.00	0.00	19.00	2.31	1.52	0.03
6.25	0.13	0.00	0.00	19.25	2.32	1.52	0.03
6.50	0.14	0.00	0.00	19.50	2.32	1.53	0.03
6.75	0.15	0.00	0.00	19.75	2.33	1.54	0.03
7.00	0.16	0.00	0.00	20.00	2.34	1.54	0.02
7.25	0.17	0.00	0.00				
7.50	0.18	0.00	0.00				
7.75	0.19	0.00	0.00				
8.00	0.20	0.00	0.00				
8.25	0.21	0.00	0.00				
8.50	0.22	0.00	0.00				
8.75	0.24	0.00	0.01				
9.00	0.25	0.01	0.01				
9.25	0.27	0.01	0.01				
9.50	0.29	0.01	0.02				
9.75	0.31	0.02	0.02				
10.00	0.33	0.02	0.02				
10.25	0.35	0.03	0.03				
10.50	0.38	0.04	0.03				
10.75	0.41	0.05	0.06				
11.00	0.46	0.07	0.09				
11.25	0.52	0.10	0.12				
11.50	0.60	0.14	0.16				
11.75	0.74	0.22	0.38				
12.00	1.11	0.49	1.35				
12.25	1.66	0.94	1.23				
12.50	1.80	1.06	0.46				
12.75	1.88	1.13	0.26				
13.00	1.94	1.18	0.22				
13.25	1.99	1.22	0.18				
13.50	2.02	1.26	0.14				
13.75	2.05	1.28	0.09				
14.00	2.07	1.30	0.08				
14.25	2.09	1.32	0.08				
14.50	2.11	1.34	0.08				
14.75	2.13	1.36	0.08				
15.00	2.15	1.37	0.07				
15.25	2.16	1.39	0.05				
15.50	2.18	1.40	0.04				
15.75	2.19	1.41	0.04				
16.00	2.20	1.42	0.04				
16.25	2.21	1.43	0.04				
16.50	2.22	1.44	0.04				
16.75	2.23	1.45	0.04				
17.00	2.24	1.45	0.04				
17.25	2.25	1.46	0.04				
17.50	2.26	1.47	0.04				
17.75	2.27	1.48	0.03				

23610 Existing

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 3: Subcat 3

Runoff = 1.73 cfs @ 12.13 hrs, Volume= 0.081 af, Depth> 1.63"
Routed to Link 3L : Existing

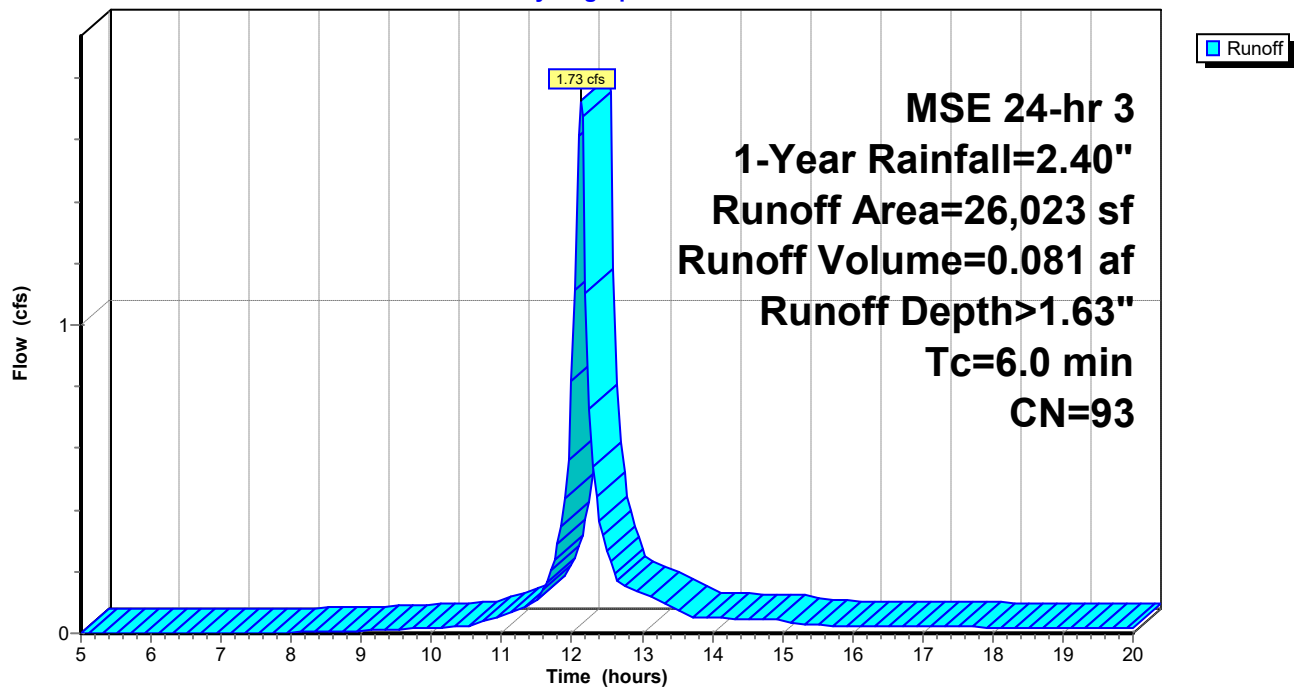
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
5,135	74	>75% Grass cover, Good, HSG C
20,887	98	Paved parking, HSG C
26,023	93	Weighted Average
5,135		19.73% Pervious Area
20,887		80.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.09	0.00	0.00	18.00	2.28	1.57	0.02
5.25	0.10	0.00	0.00	18.25	2.29	1.58	0.02
5.50	0.11	0.00	0.00	18.50	2.29	1.59	0.02
5.75	0.11	0.00	0.00	18.75	2.30	1.59	0.02
6.00	0.12	0.00	0.00	19.00	2.31	1.60	0.02
6.25	0.13	0.00	0.00	19.25	2.32	1.61	0.02
6.50	0.14	0.00	0.00	19.50	2.32	1.61	0.02
6.75	0.15	0.00	0.00	19.75	2.33	1.62	0.02
7.00	0.16	0.00	0.00	20.00	2.34	1.63	0.01
7.25	0.17	0.00	0.00				
7.50	0.18	0.00	0.00				
7.75	0.19	0.00	0.00				
8.00	0.20	0.00	0.00				
8.25	0.21	0.00	0.00				
8.50	0.22	0.01	0.00				
8.75	0.24	0.01	0.01				
9.00	0.25	0.01	0.01				
9.25	0.27	0.02	0.01				
9.50	0.29	0.02	0.01				
9.75	0.31	0.03	0.02				
10.00	0.33	0.03	0.02				
10.25	0.35	0.04	0.02				
10.50	0.38	0.05	0.02				
10.75	0.41	0.07	0.04				
11.00	0.46	0.09	0.06				
11.25	0.52	0.12	0.08				
11.50	0.60	0.17	0.10				
11.75	0.74	0.26	0.24				
12.00	1.11	0.54	0.82				
12.25	1.66	1.01	0.73				
12.50	1.80	1.14	0.27				
12.75	1.88	1.20	0.15				
13.00	1.94	1.26	0.13				
13.25	1.99	1.30	0.11				
13.50	2.02	1.34	0.08				
13.75	2.05	1.36	0.05				
14.00	2.07	1.38	0.05				
14.25	2.09	1.40	0.05				
14.50	2.11	1.42	0.05				
14.75	2.13	1.44	0.04				
15.00	2.15	1.46	0.04				
15.25	2.16	1.47	0.03				
15.50	2.18	1.48	0.03				
15.75	2.19	1.49	0.03				
16.00	2.20	1.50	0.02				
16.25	2.21	1.51	0.02				
16.50	2.22	1.52	0.02				
16.75	2.23	1.53	0.02				
17.00	2.24	1.54	0.02				
17.25	2.25	1.55	0.02				
17.50	2.26	1.55	0.02				
17.75	2.27	1.56	0.02				

23610 Existing

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.08 cfs @ 12.13 hrs, Volume= 0.004 af, Depth> 1.17"
Routed to Link 3L : Existing

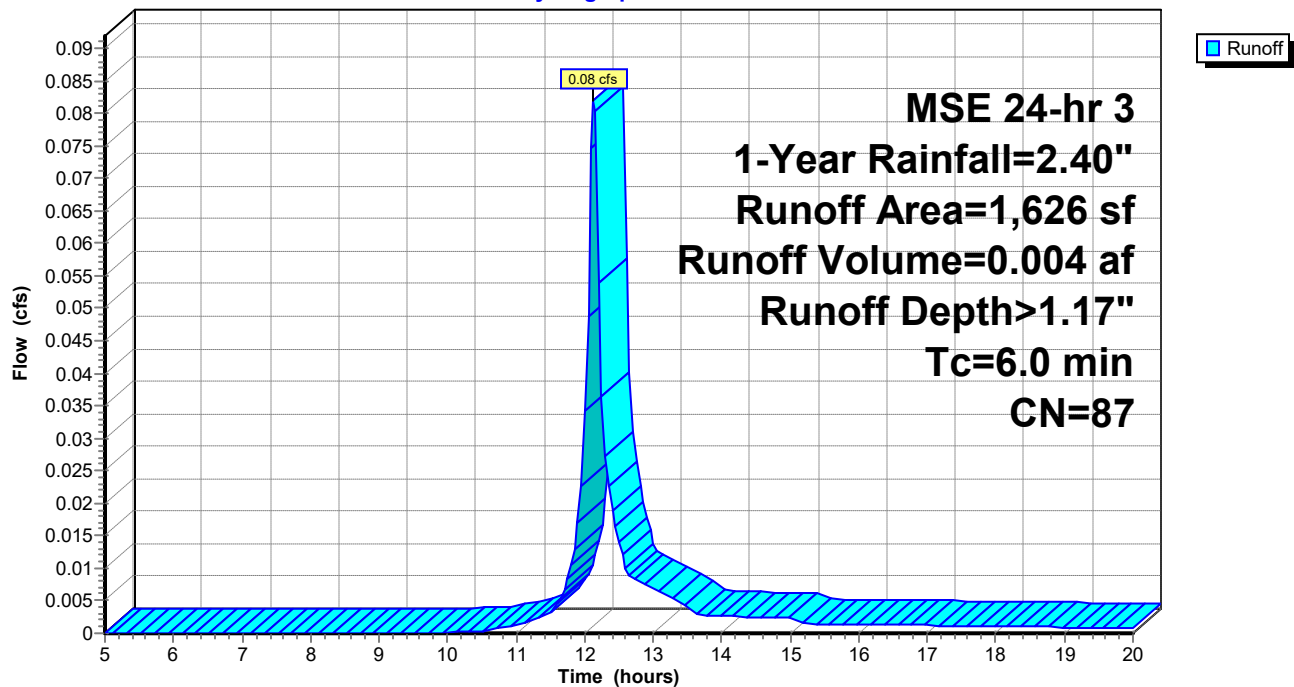
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
731	74	>75% Grass cover, Good, HSG C
894	98	Paved parking, HSG C
1,626	87	Weighted Average
731		44.98% Pervious Area
894		55.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.09	0.00	0.00	18.00	2.28	1.13	0.00
5.25	0.10	0.00	0.00	18.25	2.29	1.13	0.00
5.50	0.11	0.00	0.00	18.50	2.29	1.14	0.00
5.75	0.11	0.00	0.00	18.75	2.30	1.15	0.00
6.00	0.12	0.00	0.00	19.00	2.31	1.15	0.00
6.25	0.13	0.00	0.00	19.25	2.32	1.16	0.00
6.50	0.14	0.00	0.00	19.50	2.32	1.17	0.00
6.75	0.15	0.00	0.00	19.75	2.33	1.17	0.00
7.00	0.16	0.00	0.00	20.00	2.34	1.18	0.00
7.25	0.17	0.00	0.00				
7.50	0.18	0.00	0.00				
7.75	0.19	0.00	0.00				
8.00	0.20	0.00	0.00				
8.25	0.21	0.00	0.00				
8.50	0.22	0.00	0.00				
8.75	0.24	0.00	0.00				
9.00	0.25	0.00	0.00				
9.25	0.27	0.00	0.00				
9.50	0.29	0.00	0.00				
9.75	0.31	0.00	0.00				
10.00	0.33	0.00	0.00				
10.25	0.35	0.00	0.00				
10.50	0.38	0.00	0.00				
10.75	0.41	0.01	0.00				
11.00	0.46	0.02	0.00				
11.25	0.52	0.03	0.00				
11.50	0.60	0.05	0.00				
11.75	0.74	0.10	0.01				
12.00	1.11	0.29	0.03				
12.25	1.66	0.65	0.04				
12.50	1.80	0.76	0.01				
12.75	1.88	0.81	0.01				
13.00	1.94	0.86	0.01				
13.25	1.99	0.90	0.01				
13.50	2.02	0.93	0.00				
13.75	2.05	0.94	0.00				
14.00	2.07	0.96	0.00				
14.25	2.09	0.98	0.00				
14.50	2.11	0.99	0.00				
14.75	2.13	1.01	0.00				
15.00	2.15	1.03	0.00				
15.25	2.16	1.04	0.00				
15.50	2.18	1.05	0.00				
15.75	2.19	1.05	0.00				
16.00	2.20	1.06	0.00				
16.25	2.21	1.07	0.00				
16.50	2.22	1.08	0.00				
16.75	2.23	1.09	0.00				
17.00	2.24	1.10	0.00				
17.25	2.25	1.11	0.00				
17.50	2.26	1.11	0.00				
17.75	2.27	1.12	0.00				

23610 Existing

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MSE 24-hr 3 1-Year Rainfall=2.40"

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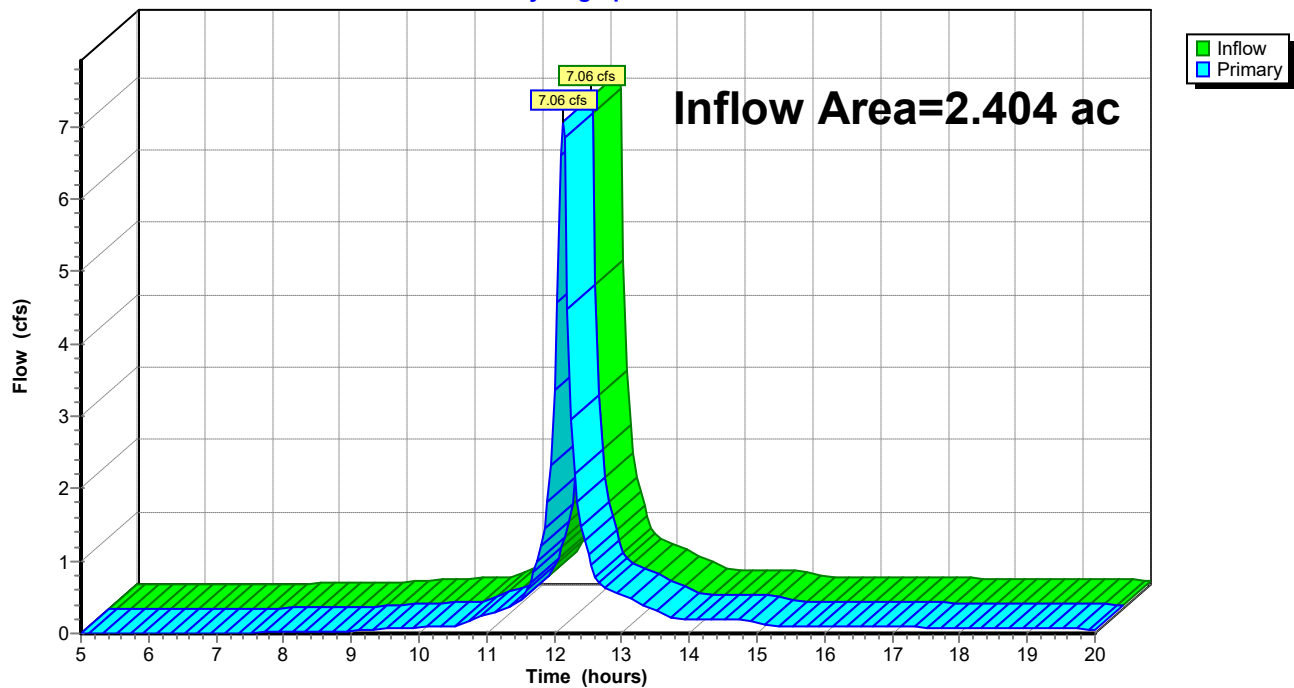
Summary for Link 3L: Existing

Inflow Area = 2.404 ac, 80.13% Impervious, Inflow Depth > 1.67" for 1-Year event
Inflow = 7.06 cfs @ 12.13 hrs, Volume= 0.334 af
Primary = 7.06 cfs @ 12.13 hrs, Volume= 0.334 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 3L: Existing

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Link 3L: Existing

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.00	0.08	0.00	0.08
5.25	0.00	0.00	0.00	18.25	0.08	0.00	0.08
5.50	0.00	0.00	0.00	18.50	0.07	0.00	0.07
5.75	0.00	0.00	0.00	18.75	0.07	0.00	0.07
6.00	0.00	0.00	0.00	19.00	0.07	0.00	0.07
6.25	0.00	0.00	0.00	19.25	0.07	0.00	0.07
6.50	0.01	0.00	0.01	19.50	0.06	0.00	0.06
6.75	0.01	0.00	0.01	19.75	0.06	0.00	0.06
7.00	0.01	0.00	0.01	20.00	0.06	0.00	0.06
7.25	0.01	0.00	0.01				
7.50	0.01	0.00	0.01				
7.75	0.01	0.00	0.01				
8.00	0.02	0.00	0.02				
8.25	0.02	0.00	0.02				
8.50	0.02	0.00	0.02				
8.75	0.03	0.00	0.03				
9.00	0.03	0.00	0.03				
9.25	0.05	0.00	0.05				
9.50	0.06	0.00	0.06				
9.75	0.07	0.00	0.07				
10.00	0.08	0.00	0.08				
10.25	0.09	0.00	0.09				
10.50	0.10	0.00	0.10				
10.75	0.18	0.00	0.18				
11.00	0.26	0.00	0.26				
11.25	0.34	0.00	0.34				
11.50	0.44	0.00	0.44				
11.75	0.99	0.00	0.99				
12.00	3.37	0.00	3.37				
12.25	2.96	0.00	2.96				
12.50	1.09	0.00	1.09				
12.75	0.63	0.00	0.63				
13.00	0.52	0.00	0.52				
13.25	0.43	0.00	0.43				
13.50	0.32	0.00	0.32				
13.75	0.21	0.00	0.21				
14.00	0.20	0.00	0.20				
14.25	0.19	0.00	0.19				
14.50	0.19	0.00	0.19				
14.75	0.18	0.00	0.18				
15.00	0.18	0.00	0.18				
15.25	0.11	0.00	0.11				
15.50	0.11	0.00	0.11				
15.75	0.10	0.00	0.10				
16.00	0.10	0.00	0.10				
16.25	0.10	0.00	0.10				
16.50	0.10	0.00	0.10				
16.75	0.09	0.00	0.09				
17.00	0.09	0.00	0.09				
17.25	0.09	0.00	0.09				
17.50	0.08	0.00	0.08				
17.75	0.08	0.00	0.08				

23610 Existing*MSE 24-hr 3 2-Year Rainfall=2.70"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=31,592 sf 90.43% Impervious Runoff Depth>2.19"
Tc=6.0 min CN=96 Runoff=2.67 cfs 0.132 af

Subcatchment 2: Subcat 2 Runoff Area=45,487 sf 73.79% Impervious Runoff Depth>1.81"
Tc=6.0 min CN=92 Runoff=3.39 cfs 0.158 af

Subcatchment 3: Subcat 3 Runoff Area=26,023 sf 80.27% Impervious Runoff Depth>1.90"
Tc=6.0 min CN=93 Runoff=2.01 cfs 0.095 af

Subcatchment 4: Subcat 4 Runoff Area=1,626 sf 55.02% Impervious Runoff Depth>1.42"
Tc=6.0 min CN=87 Runoff=0.10 cfs 0.004 af

Link 3L: Existing

Inflow=8.16 cfs 0.389 af
Primary=8.16 cfs 0.389 af

Total Runoff Area = 2.404 ac Runoff Volume = 0.389 af Average Runoff Depth = 1.94"
19.87% Pervious = 0.478 ac 80.13% Impervious = 1.926 ac

23610 Existing

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 1: Subcat 1

Runoff = 2.67 cfs @ 12.13 hrs, Volume= 0.132 af, Depth> 2.19"
Routed to Link 3L : Existing

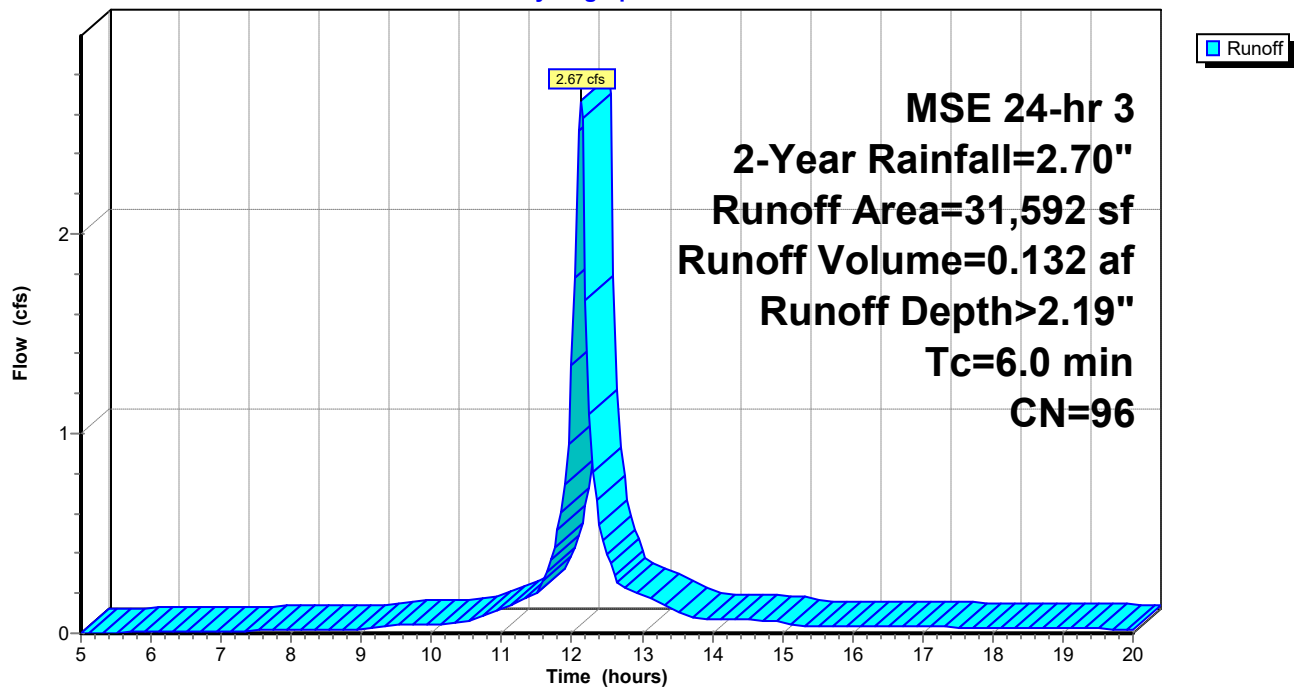
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
3,023	74	>75% Grass cover, Good, HSG C
28,568	98	Paved parking, HSG C
31,592	96	Weighted Average
3,023		9.57% Pervious Area
28,568		90.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.10	0.00	0.00	18.00	2.56	2.12	0.03
5.25	0.11	0.00	0.00	18.25	2.57	2.13	0.03
5.50	0.12	0.00	0.00	18.50	2.58	2.14	0.03
5.75	0.13	0.00	0.00	18.75	2.59	2.15	0.03
6.00	0.14	0.01	0.01	19.00	2.60	2.16	0.02
6.25	0.15	0.01	0.01	19.25	2.61	2.17	0.02
6.50	0.16	0.01	0.01	19.50	2.61	2.17	0.02
6.75	0.17	0.01	0.01	19.75	2.62	2.18	0.02
7.00	0.18	0.02	0.01	20.00	2.63	2.19	0.02
7.25	0.19	0.02	0.01				
7.50	0.20	0.03	0.01				
7.75	0.21	0.03	0.01				
8.00	0.23	0.04	0.02				
8.25	0.24	0.04	0.02				
8.50	0.25	0.05	0.02				
8.75	0.26	0.06	0.02				
9.00	0.28	0.06	0.02				
9.25	0.30	0.07	0.04				
9.50	0.32	0.09	0.04				
9.75	0.35	0.10	0.04				
10.00	0.37	0.12	0.05				
10.25	0.40	0.13	0.05				
10.50	0.42	0.15	0.05				
10.75	0.47	0.18	0.09				
11.00	0.52	0.22	0.13				
11.25	0.59	0.28	0.16				
11.50	0.67	0.34	0.20				
11.75	0.83	0.48	0.42				
12.00	1.25	0.86	1.34				
12.25	1.87	1.45	1.09				
12.50	2.03	1.60	0.40				
12.75	2.11	1.68	0.23				
13.00	2.18	1.75	0.19				
13.25	2.23	1.80	0.15				
13.50	2.28	1.84	0.12				
13.75	2.30	1.87	0.07				
14.00	2.33	1.89	0.07				
14.25	2.35	1.92	0.07				
14.50	2.38	1.94	0.07				
14.75	2.40	1.96	0.06				
15.00	2.42	1.98	0.06				
15.25	2.44	2.00	0.04				
15.50	2.45	2.01	0.04				
15.75	2.46	2.02	0.04				
16.00	2.47	2.04	0.04				
16.25	2.49	2.05	0.03				
16.50	2.50	2.06	0.03				
16.75	2.51	2.07	0.03				
17.00	2.52	2.08	0.03				
17.25	2.53	2.09	0.03				
17.50	2.54	2.10	0.03				
17.75	2.55	2.11	0.03				

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 2: Subcat 2

Runoff = 3.39 cfs @ 12.13 hrs, Volume= 0.158 af, Depth> 1.81"
Routed to Link 3L : Existing

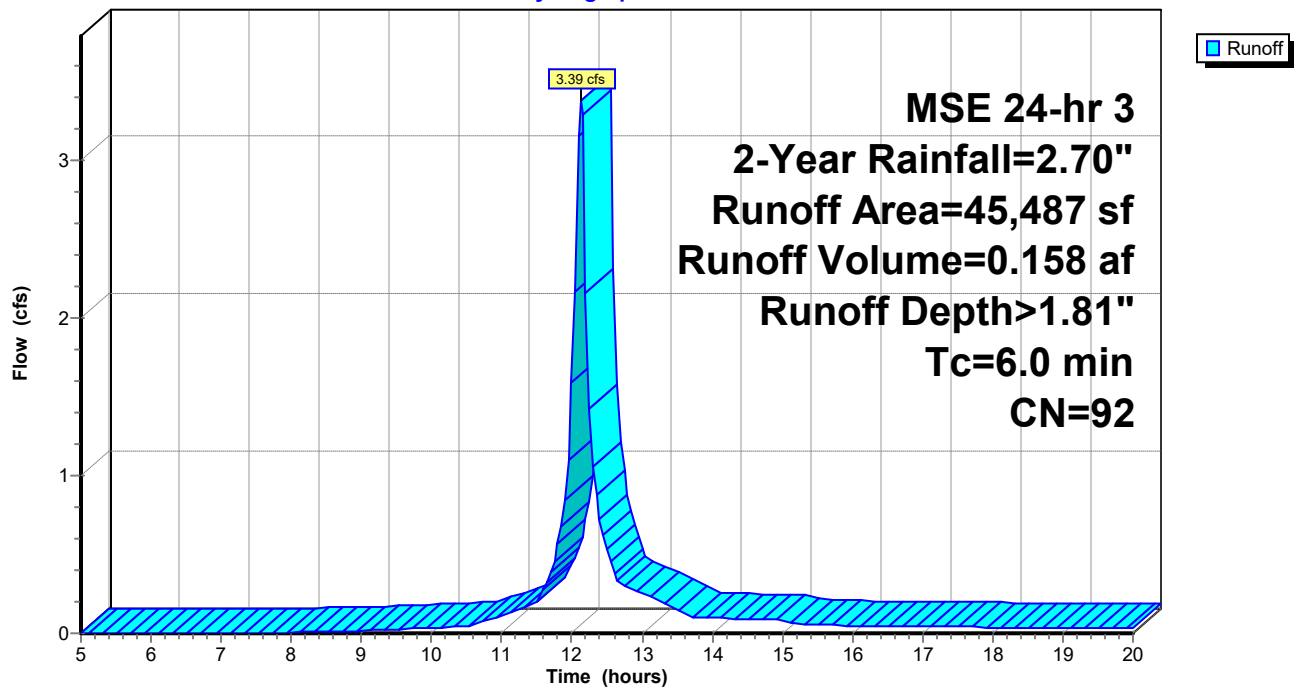
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
11,924	74	>75% Grass cover, Good, HSG C
33,563	98	Paved parking, HSG C
45,487	92	Weighted Average
11,924		26.21% Pervious Area
33,563		73.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.10	0.00	0.00	18.00	2.56	1.75	0.04
5.25	0.11	0.00	0.00	18.25	2.57	1.76	0.04
5.50	0.12	0.00	0.00	18.50	2.58	1.77	0.04
5.75	0.13	0.00	0.00	18.75	2.59	1.78	0.03
6.00	0.14	0.00	0.00	19.00	2.60	1.78	0.03
6.25	0.15	0.00	0.00	19.25	2.61	1.79	0.03
6.50	0.16	0.00	0.00	19.50	2.61	1.80	0.03
6.75	0.17	0.00	0.00	19.75	2.62	1.81	0.03
7.00	0.18	0.00	0.00	20.00	2.63	1.81	0.03
7.25	0.19	0.00	0.00				
7.50	0.20	0.00	0.00				
7.75	0.21	0.00	0.00				
8.00	0.23	0.00	0.01				
8.25	0.24	0.00	0.01				
8.50	0.25	0.01	0.01				
8.75	0.26	0.01	0.01				
9.00	0.28	0.01	0.01				
9.25	0.30	0.02	0.02				
9.50	0.32	0.02	0.03				
9.75	0.35	0.03	0.03				
10.00	0.37	0.04	0.03				
10.25	0.40	0.05	0.04				
10.50	0.42	0.06	0.04				
10.75	0.47	0.07	0.08				
11.00	0.52	0.10	0.11				
11.25	0.59	0.13	0.15				
11.50	0.67	0.18	0.20				
11.75	0.83	0.28	0.46				
12.00	1.25	0.59	1.59				
12.25	1.87	1.12	1.43				
12.50	2.03	1.26	0.53				
12.75	2.11	1.34	0.30				
13.00	2.18	1.40	0.25				
13.25	2.23	1.45	0.21				
13.50	2.28	1.49	0.16				
13.75	2.30	1.51	0.10				
14.00	2.33	1.54	0.10				
14.25	2.35	1.56	0.09				
14.50	2.38	1.58	0.09				
14.75	2.40	1.60	0.09				
15.00	2.42	1.62	0.09				
15.25	2.44	1.63	0.05				
15.50	2.45	1.65	0.05				
15.75	2.46	1.66	0.05				
16.00	2.47	1.67	0.05				
16.25	2.49	1.68	0.05				
16.50	2.50	1.69	0.05				
16.75	2.51	1.70	0.04				
17.00	2.52	1.71	0.04				
17.25	2.53	1.72	0.04				
17.50	2.54	1.73	0.04				
17.75	2.55	1.74	0.04				

23610 Existing

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 3: Subcat 3

Runoff = 2.01 cfs @ 12.13 hrs, Volume= 0.095 af, Depth> 1.90"
Routed to Link 3L : Existing

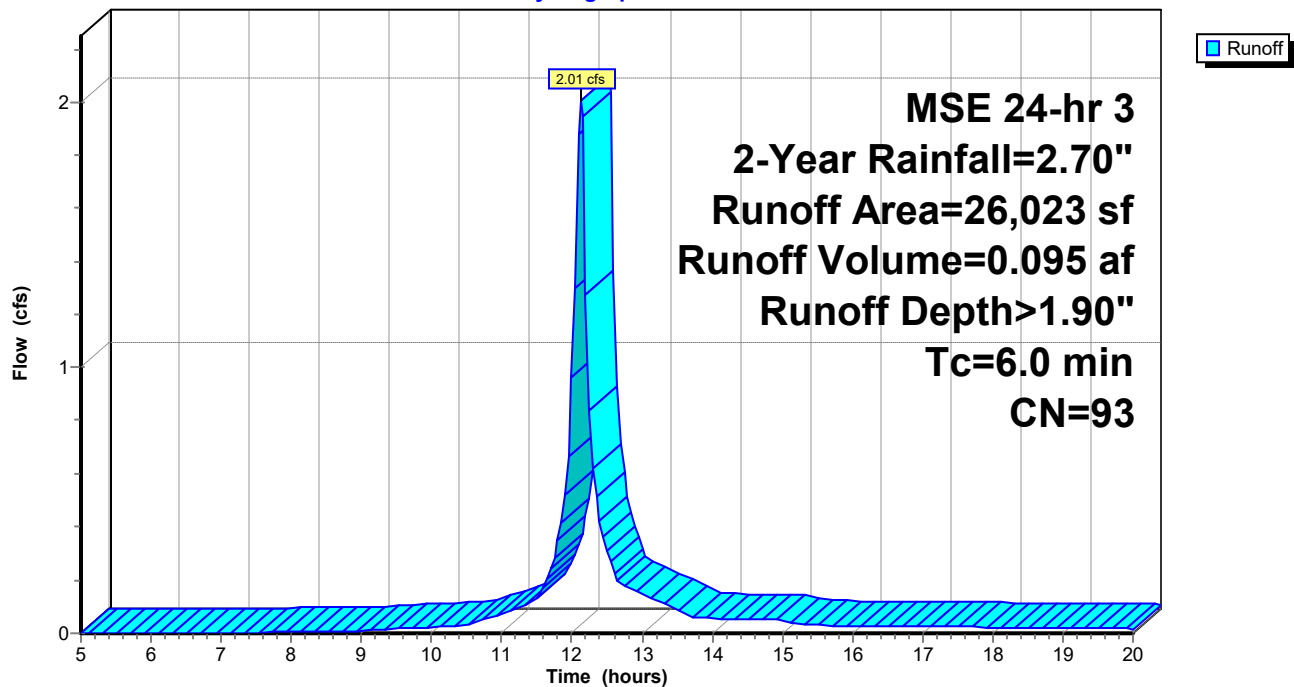
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
5,135	74	>75% Grass cover, Good, HSG C
20,887	98	Paved parking, HSG C
26,023	93	Weighted Average
5,135		19.73% Pervious Area
20,887		80.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.10	0.00	0.00	18.00	2.56	1.84	0.02
5.25	0.11	0.00	0.00	18.25	2.57	1.85	0.02
5.50	0.12	0.00	0.00	18.50	2.58	1.86	0.02
5.75	0.13	0.00	0.00	18.75	2.59	1.86	0.02
6.00	0.14	0.00	0.00	19.00	2.60	1.87	0.02
6.25	0.15	0.00	0.00	19.25	2.61	1.88	0.02
6.50	0.16	0.00	0.00	19.50	2.61	1.89	0.02
6.75	0.17	0.00	0.00	19.75	2.62	1.89	0.02
7.00	0.18	0.00	0.00	20.00	2.63	1.90	0.02
7.25	0.19	0.00	0.00				
7.50	0.20	0.00	0.00				
7.75	0.21	0.00	0.00				
8.00	0.23	0.01	0.00				
8.25	0.24	0.01	0.01				
8.50	0.25	0.01	0.01				
8.75	0.26	0.02	0.01				
9.00	0.28	0.02	0.01				
9.25	0.30	0.02	0.02				
9.50	0.32	0.03	0.02				
9.75	0.35	0.04	0.02				
10.00	0.37	0.05	0.02				
10.25	0.40	0.06	0.03				
10.50	0.42	0.07	0.03				
10.75	0.47	0.09	0.05				
11.00	0.52	0.12	0.07				
11.25	0.59	0.16	0.10				
11.50	0.67	0.21	0.13				
11.75	0.83	0.32	0.28				
12.00	1.25	0.65	0.96				
12.25	1.87	1.20	0.84				
12.50	2.03	1.34	0.31				
12.75	2.11	1.42	0.18				
13.00	2.18	1.48	0.15				
13.25	2.23	1.53	0.12				
13.50	2.28	1.57	0.09				
13.75	2.30	1.60	0.06				
14.00	2.33	1.62	0.06				
14.25	2.35	1.64	0.05				
14.50	2.38	1.66	0.05				
14.75	2.40	1.69	0.05				
15.00	2.42	1.71	0.05				
15.25	2.44	1.72	0.03				
15.50	2.45	1.73	0.03				
15.75	2.46	1.74	0.03				
16.00	2.47	1.75	0.03				
16.25	2.49	1.77	0.03				
16.50	2.50	1.78	0.03				
16.75	2.51	1.79	0.03				
17.00	2.52	1.80	0.03				
17.25	2.53	1.81	0.02				
17.50	2.54	1.82	0.02				
17.75	2.55	1.83	0.02				

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.10 cfs @ 12.13 hrs, Volume= 0.004 af, Depth> 1.42"
Routed to Link 3L : Existing

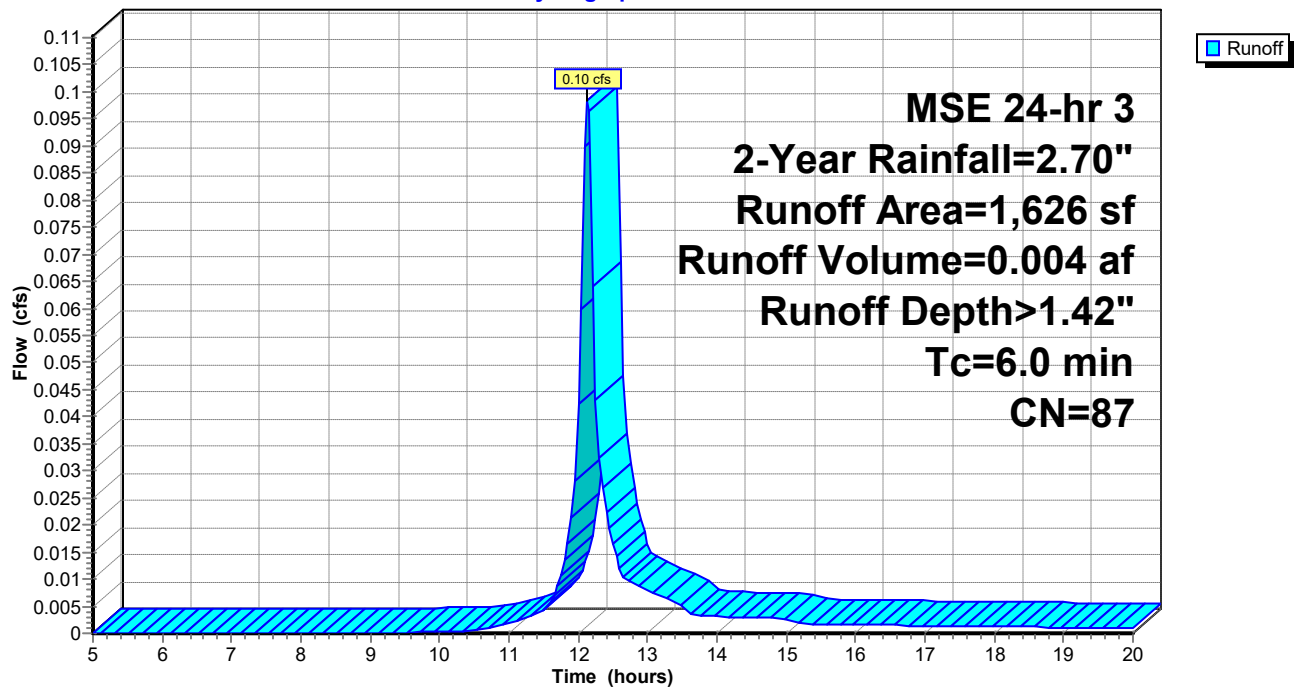
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
731	74	>75% Grass cover, Good, HSG C
894	98	Paved parking, HSG C
1,626	87	Weighted Average
731		44.98% Pervious Area
894		55.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.10	0.00	0.00	18.00	2.56	1.36	0.00
5.25	0.11	0.00	0.00	18.25	2.57	1.37	0.00
5.50	0.12	0.00	0.00	18.50	2.58	1.38	0.00
5.75	0.13	0.00	0.00	18.75	2.59	1.39	0.00
6.00	0.14	0.00	0.00	19.00	2.60	1.39	0.00
6.25	0.15	0.00	0.00	19.25	2.61	1.40	0.00
6.50	0.16	0.00	0.00	19.50	2.61	1.41	0.00
6.75	0.17	0.00	0.00	19.75	2.62	1.41	0.00
7.00	0.18	0.00	0.00	20.00	2.63	1.42	0.00
7.25	0.19	0.00	0.00				
7.50	0.20	0.00	0.00				
7.75	0.21	0.00	0.00				
8.00	0.23	0.00	0.00				
8.25	0.24	0.00	0.00				
8.50	0.25	0.00	0.00				
8.75	0.26	0.00	0.00				
9.00	0.28	0.00	0.00				
9.25	0.30	0.00	0.00				
9.50	0.32	0.00	0.00				
9.75	0.35	0.00	0.00				
10.00	0.37	0.00	0.00				
10.25	0.40	0.01	0.00				
10.50	0.42	0.01	0.00				
10.75	0.47	0.02	0.00				
11.00	0.52	0.03	0.00				
11.25	0.59	0.05	0.00				
11.50	0.67	0.07	0.00				
11.75	0.83	0.14	0.01				
12.00	1.25	0.37	0.04				
12.25	1.87	0.81	0.04				
12.50	2.03	0.93	0.02				
12.75	2.11	0.99	0.01				
13.00	2.18	1.05	0.01				
13.25	2.23	1.09	0.01				
13.50	2.28	1.13	0.01				
13.75	2.30	1.15	0.00				
14.00	2.33	1.17	0.00				
14.25	2.35	1.19	0.00				
14.50	2.38	1.21	0.00				
14.75	2.40	1.23	0.00				
15.00	2.42	1.25	0.00				
15.25	2.44	1.26	0.00				
15.50	2.45	1.27	0.00				
15.75	2.46	1.28	0.00				
16.00	2.47	1.29	0.00				
16.25	2.49	1.30	0.00				
16.50	2.50	1.31	0.00				
16.75	2.51	1.32	0.00				
17.00	2.52	1.33	0.00				
17.25	2.53	1.34	0.00				
17.50	2.54	1.35	0.00				
17.75	2.55	1.36	0.00				

23610 Existing

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MSE 24-hr 3 2-Year Rainfall=2.70"

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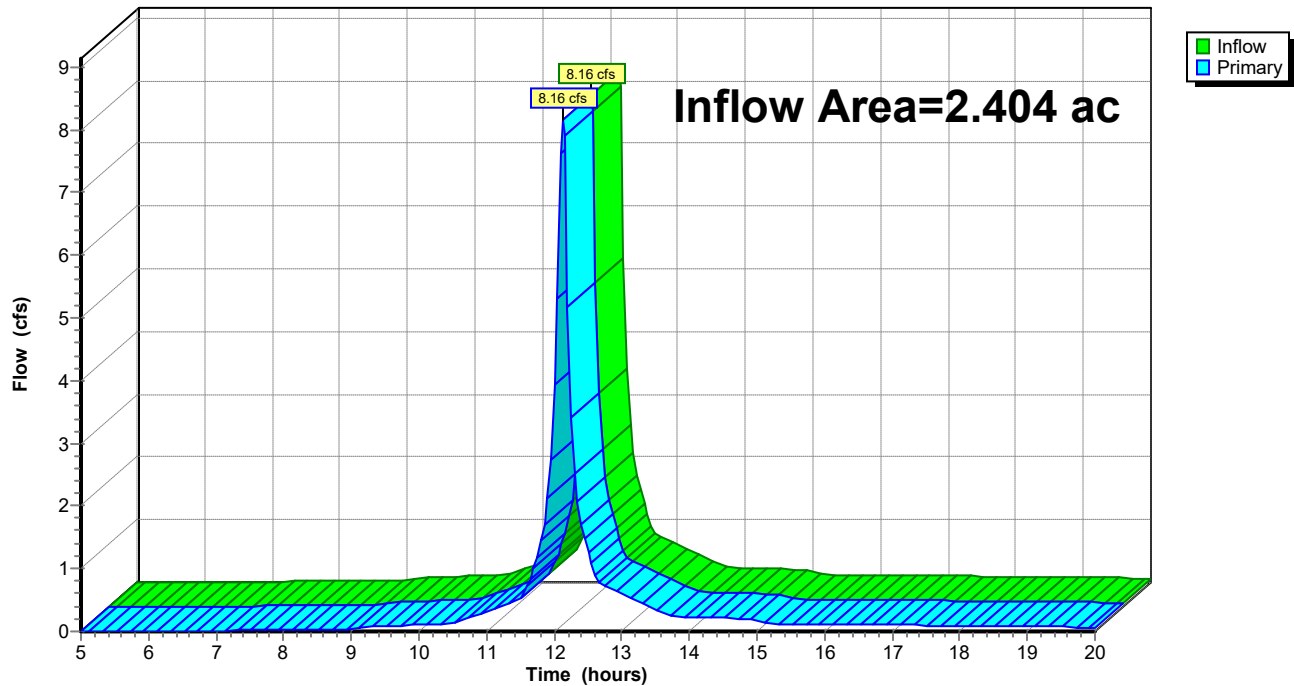
Summary for Link 3L: Existing

Inflow Area = 2.404 ac, 80.13% Impervious, Inflow Depth > 1.94" for 2-Year event
Inflow = 8.16 cfs @ 12.13 hrs, Volume= 0.389 af
Primary = 8.16 cfs @ 12.13 hrs, Volume= 0.389 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 3L: Existing

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Link 3L: Existing

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.00	0.09	0.00	0.09
5.25	0.00	0.00	0.00	18.25	0.09	0.00	0.09
5.50	0.00	0.00	0.00	18.50	0.08	0.00	0.08
5.75	0.00	0.00	0.00	18.75	0.08	0.00	0.08
6.00	0.01	0.00	0.01	19.00	0.08	0.00	0.08
6.25	0.01	0.00	0.01	19.25	0.08	0.00	0.08
6.50	0.01	0.00	0.01	19.50	0.07	0.00	0.07
6.75	0.01	0.00	0.01	19.75	0.07	0.00	0.07
7.00	0.01	0.00	0.01	20.00	0.07	0.00	0.07
7.25	0.02	0.00	0.02				
7.50	0.02	0.00	0.02				
7.75	0.02	0.00	0.02				
8.00	0.03	0.00	0.03				
8.25	0.03	0.00	0.03				
8.50	0.03	0.00	0.03				
8.75	0.04	0.00	0.04				
9.00	0.04	0.00	0.04				
9.25	0.07	0.00	0.07				
9.50	0.08	0.00	0.08				
9.75	0.09	0.00	0.09				
10.00	0.10	0.00	0.10				
10.25	0.11	0.00	0.11				
10.50	0.12	0.00	0.12				
10.75	0.22	0.00	0.22				
11.00	0.31	0.00	0.31				
11.25	0.41	0.00	0.41				
11.50	0.53	0.00	0.53				
11.75	1.18	0.00	1.18				
12.00	3.94	0.00	3.94				
12.25	3.40	0.00	3.40				
12.50	1.25	0.00	1.25				
12.75	0.72	0.00	0.72				
13.00	0.60	0.00	0.60				
13.25	0.49	0.00	0.49				
13.50	0.37	0.00	0.37				
13.75	0.24	0.00	0.24				
14.00	0.23	0.00	0.23				
14.25	0.22	0.00	0.22				
14.50	0.21	0.00	0.21				
14.75	0.21	0.00	0.21				
15.00	0.20	0.00	0.20				
15.25	0.12	0.00	0.12				
15.50	0.12	0.00	0.12				
15.75	0.12	0.00	0.12				
16.00	0.11	0.00	0.11				
16.25	0.11	0.00	0.11				
16.50	0.11	0.00	0.11				
16.75	0.11	0.00	0.11				
17.00	0.10	0.00	0.10				
17.25	0.10	0.00	0.10				
17.50	0.10	0.00	0.10				
17.75	0.09	0.00	0.09				

23610 Existing*MSE 24-hr 3 10-Year Rainfall=3.81"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=31,592 sf 90.43% Impervious Runoff Depth>3.24"
Tc=6.0 min CN=96 Runoff=3.86 cfs 0.196 af

Subcatchment 2: Subcat 2 Runoff Area=45,487 sf 73.79% Impervious Runoff Depth>2.84"
Tc=6.0 min CN=92 Runoff=5.15 cfs 0.247 af

Subcatchment 3: Subcat 3 Runoff Area=26,023 sf 80.27% Impervious Runoff Depth>2.94"
Tc=6.0 min CN=93 Runoff=3.01 cfs 0.146 af

Subcatchment 4: Subcat 4 Runoff Area=1,626 sf 55.02% Impervious Runoff Depth>2.37"
Tc=6.0 min CN=87 Runoff=0.16 cfs 0.007 af

Link 3L: Existing Inflow=12.18 cfs 0.596 af
Primary=12.18 cfs 0.596 af

Total Runoff Area = 2.404 ac Runoff Volume = 0.596 af Average Runoff Depth = 2.98"
19.87% Pervious = 0.478 ac 80.13% Impervious = 1.926 ac

23610 Existing

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 1: Subcat 1

Runoff = 3.86 cfs @ 12.13 hrs, Volume= 0.196 af, Depth> 3.24"
Routed to Link 3L : Existing

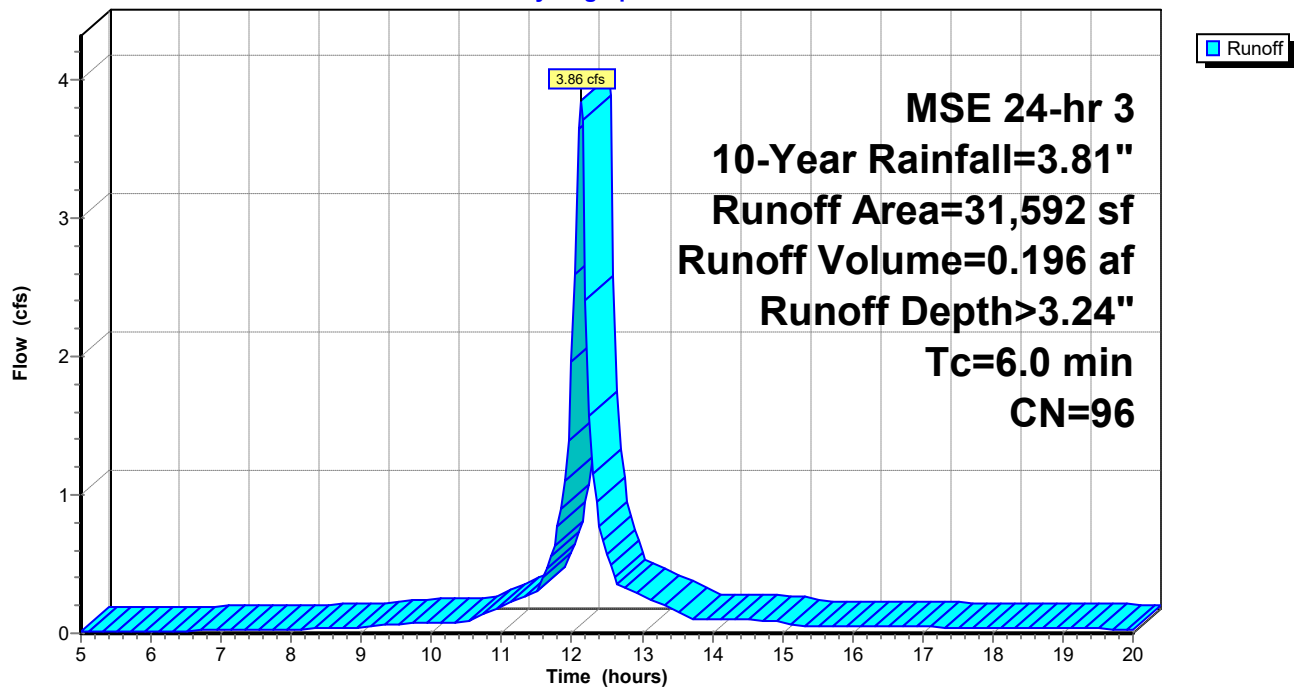
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
3,023	74	>75% Grass cover, Good, HSG C
28,568	98	Paved parking, HSG C
31,592	96	Weighted Average
3,023		9.57% Pervious Area
28,568		90.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.01	0.01	18.00	3.62	3.16	0.04
5.25	0.16	0.01	0.01	18.25	3.63	3.17	0.04
5.50	0.17	0.01	0.01	18.50	3.64	3.19	0.04
5.75	0.18	0.02	0.01	18.75	3.65	3.20	0.04
6.00	0.19	0.02	0.01	19.00	3.67	3.21	0.03
6.25	0.21	0.03	0.02	19.25	3.68	3.22	0.03
6.50	0.22	0.03	0.02	19.50	3.69	3.23	0.03
6.75	0.24	0.04	0.02	19.75	3.70	3.24	0.03
7.00	0.25	0.05	0.02	20.00	3.71	3.25	0.03
7.25	0.27	0.06	0.02				
7.50	0.28	0.07	0.03				
7.75	0.30	0.08	0.03				
8.00	0.32	0.09	0.03				
8.25	0.34	0.10	0.03				
8.50	0.35	0.11	0.03				
8.75	0.37	0.12	0.04				
9.00	0.39	0.13	0.04				
9.25	0.42	0.15	0.06				
9.50	0.46	0.18	0.07				
9.75	0.49	0.20	0.07				
10.00	0.52	0.23	0.08				
10.25	0.56	0.25	0.08				
10.50	0.60	0.28	0.09				
10.75	0.66	0.33	0.15				
11.00	0.73	0.40	0.20				
11.25	0.83	0.48	0.25				
11.50	0.94	0.58	0.30				
11.75	1.17	0.79	0.64				
12.00	1.76	1.35	1.97				
12.25	2.64	2.20	1.57				
12.50	2.87	2.42	0.57				
12.75	2.98	2.53	0.32				
13.00	3.08	2.63	0.27				
13.25	3.15	2.70	0.22				
13.50	3.21	2.76	0.17				
13.75	3.25	2.80	0.11				
14.00	3.29	2.83	0.10				
14.25	3.32	2.87	0.10				
14.50	3.35	2.90	0.10				
14.75	3.39	2.93	0.09				
15.00	3.42	2.96	0.09				
15.25	3.44	2.98	0.06				
15.50	3.46	3.00	0.05				
15.75	3.47	3.02	0.05				
16.00	3.49	3.04	0.05				
16.25	3.51	3.05	0.05				
16.50	3.53	3.07	0.05				
16.75	3.54	3.09	0.05				
17.00	3.56	3.10	0.05				
17.25	3.57	3.12	0.04				
17.50	3.59	3.13	0.04				
17.75	3.60	3.15	0.04				

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 2: Subcat 2

Runoff = 5.15 cfs @ 12.13 hrs, Volume= 0.247 af, Depth> 2.84"
Routed to Link 3L : Existing

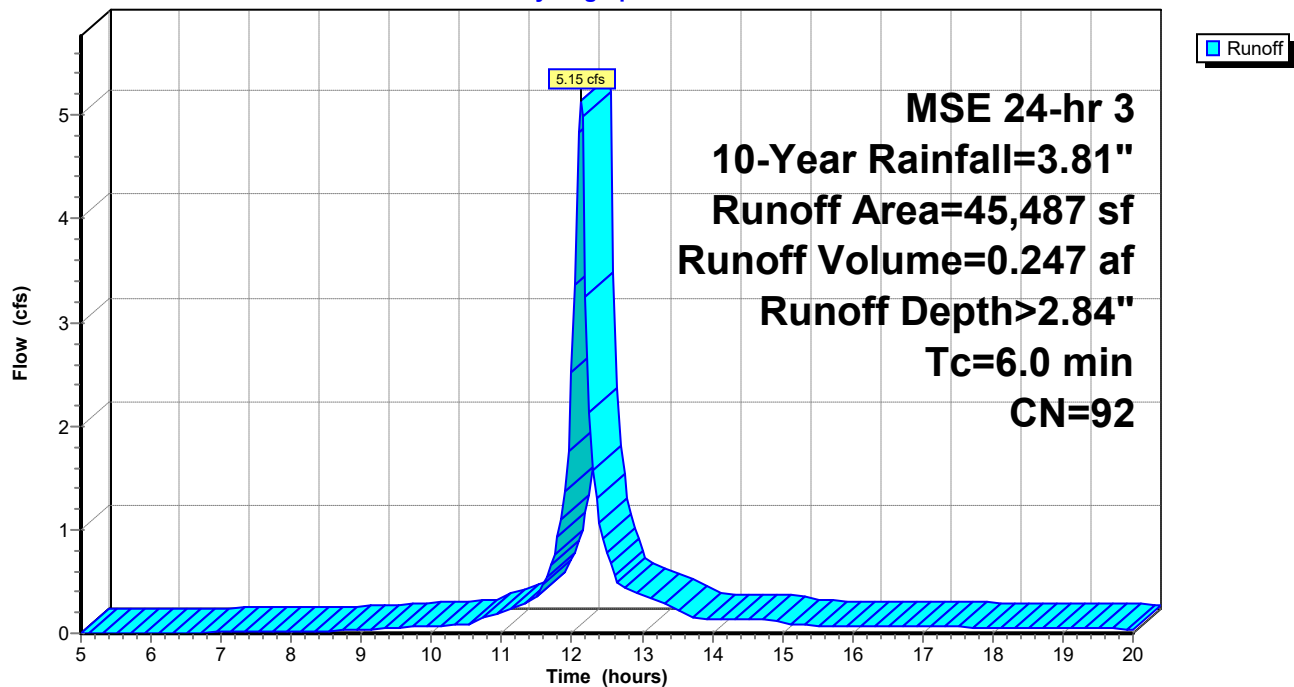
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
11,924	74	>75% Grass cover, Good, HSG C
33,563	98	Paved parking, HSG C
45,487	92	Weighted Average
11,924		26.21% Pervious Area
33,563		73.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



23610 Existing

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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00	18.00	3.62	2.75	0.06
5.25	0.16	0.00	0.00	18.25	3.63	2.76	0.05
5.50	0.17	0.00	0.00	18.50	3.64	2.77	0.05
5.75	0.18	0.00	0.00	18.75	3.65	2.79	0.05
6.00	0.19	0.00	0.00	19.00	3.67	2.80	0.05
6.25	0.21	0.00	0.00	19.25	3.68	2.81	0.05
6.50	0.22	0.00	0.01	19.50	3.69	2.82	0.04
6.75	0.24	0.00	0.01	19.75	3.70	2.83	0.04
7.00	0.25	0.01	0.01	20.00	3.71	2.84	0.04
7.25	0.27	0.01	0.01				
7.50	0.28	0.01	0.01				
7.75	0.30	0.02	0.02				
8.00	0.32	0.02	0.02				
8.25	0.34	0.03	0.02				
8.50	0.35	0.03	0.02				
8.75	0.37	0.04	0.03				
9.00	0.39	0.04	0.03				
9.25	0.42	0.06	0.05				
9.50	0.46	0.07	0.06				
9.75	0.49	0.08	0.06				
10.00	0.52	0.10	0.07				
10.25	0.56	0.12	0.08				
10.50	0.60	0.14	0.08				
10.75	0.66	0.17	0.15				
11.00	0.73	0.22	0.21				
11.25	0.83	0.28	0.27				
11.50	0.94	0.36	0.35				
11.75	1.17	0.53	0.77				
12.00	1.76	1.03	2.51				
12.25	2.64	1.82	2.14				
12.50	2.87	2.03	0.78				
12.75	2.98	2.14	0.45				
13.00	3.08	2.23	0.37				
13.25	3.15	2.31	0.30				
13.50	3.21	2.36	0.23				
13.75	3.25	2.40	0.15				
14.00	3.29	2.43	0.14				
14.25	3.32	2.47	0.14				
14.50	3.35	2.50	0.13				
14.75	3.39	2.53	0.13				
15.00	3.42	2.56	0.12				
15.25	3.44	2.58	0.08				
15.50	3.46	2.59	0.07				
15.75	3.47	2.61	0.07				
16.00	3.49	2.63	0.07				
16.25	3.51	2.64	0.07				
16.50	3.53	2.66	0.07				
16.75	3.54	2.68	0.07				
17.00	3.56	2.69	0.06				
17.25	3.57	2.71	0.06				
17.50	3.59	2.72	0.06				
17.75	3.60	2.73	0.06				

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Summary for Subcatchment 3: Subcat 3

Runoff = 3.01 cfs @ 12.13 hrs, Volume= 0.146 af, Depth> 2.94"
Routed to Link 3L : Existing

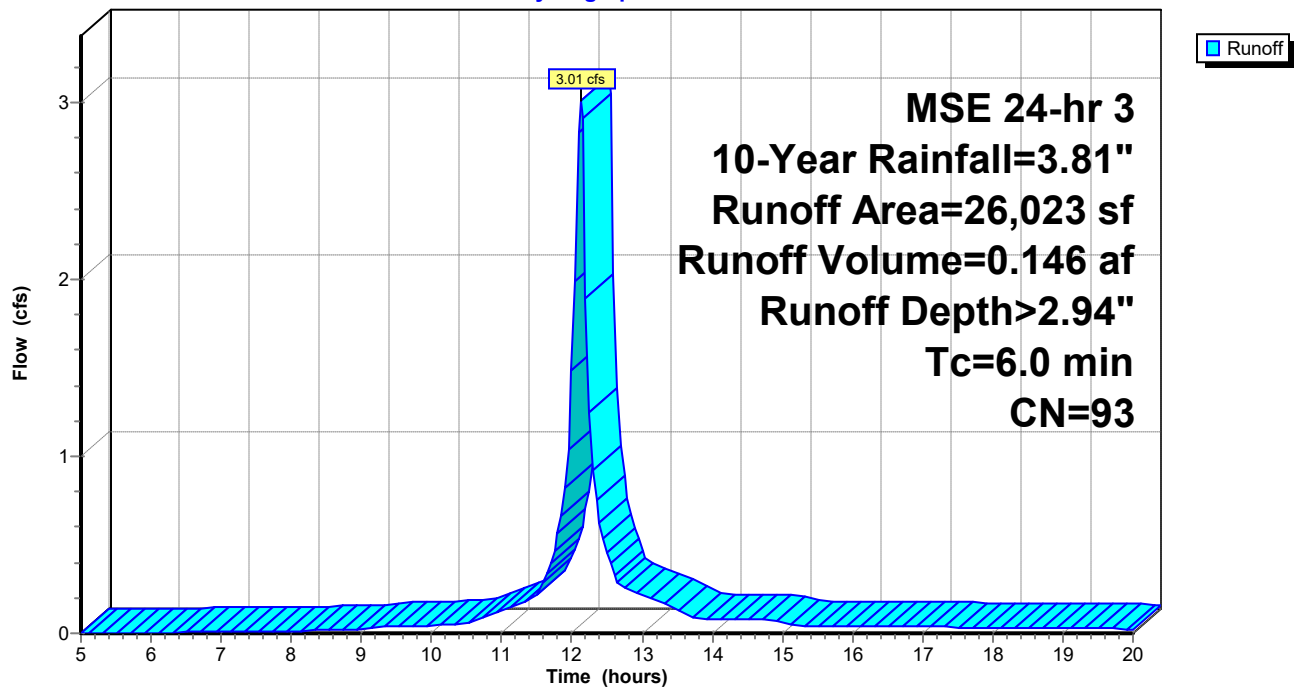
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
5,135	74	>75% Grass cover, Good, HSG C
20,887	98	Paved parking, HSG C
26,023	93	Weighted Average
5,135		19.73% Pervious Area
20,887		80.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00	18.00	3.62	2.85	0.03
5.25	0.16	0.00	0.00	18.25	3.63	2.86	0.03
5.50	0.17	0.00	0.00	18.50	3.64	2.87	0.03
5.75	0.18	0.00	0.00	18.75	3.65	2.88	0.03
6.00	0.19	0.00	0.00	19.00	3.67	2.90	0.03
6.25	0.21	0.00	0.00	19.25	3.68	2.91	0.03
6.50	0.22	0.01	0.01	19.50	3.69	2.92	0.03
6.75	0.24	0.01	0.01	19.75	3.70	2.93	0.02
7.00	0.25	0.01	0.01	20.00	3.71	2.94	0.02
7.25	0.27	0.02	0.01				
7.50	0.28	0.02	0.01				
7.75	0.30	0.03	0.01				
8.00	0.32	0.03	0.01				
8.25	0.34	0.04	0.01				
8.50	0.35	0.04	0.02				
8.75	0.37	0.05	0.02				
9.00	0.39	0.06	0.02				
9.25	0.42	0.07	0.03				
9.50	0.46	0.09	0.04				
9.75	0.49	0.11	0.04				
10.00	0.52	0.12	0.05				
10.25	0.56	0.14	0.05				
10.50	0.60	0.17	0.05				
10.75	0.66	0.20	0.09				
11.00	0.73	0.25	0.13				
11.25	0.83	0.32	0.17				
11.50	0.94	0.41	0.21				
11.75	1.17	0.59	0.46				
12.00	1.76	1.10	1.49				
12.25	2.64	1.91	1.24				
12.50	2.87	2.13	0.45				
12.75	2.98	2.23	0.26				
13.00	3.08	2.33	0.22				
13.25	3.15	2.40	0.18				
13.50	3.21	2.46	0.13				
13.75	3.25	2.49	0.08				
14.00	3.29	2.53	0.08				
14.25	3.32	2.56	0.08				
14.50	3.35	2.59	0.08				
14.75	3.39	2.63	0.07				
15.00	3.42	2.66	0.07				
15.25	3.44	2.67	0.04				
15.50	3.46	2.69	0.04				
15.75	3.47	2.71	0.04				
16.00	3.49	2.73	0.04				
16.25	3.51	2.74	0.04				
16.50	3.53	2.76	0.04				
16.75	3.54	2.77	0.04				
17.00	3.56	2.79	0.04				
17.25	3.57	2.81	0.04				
17.50	3.59	2.82	0.03				
17.75	3.60	2.83	0.03				

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.16 cfs @ 12.13 hrs, Volume= 0.007 af, Depth> 2.37"
Routed to Link 3L : Existing

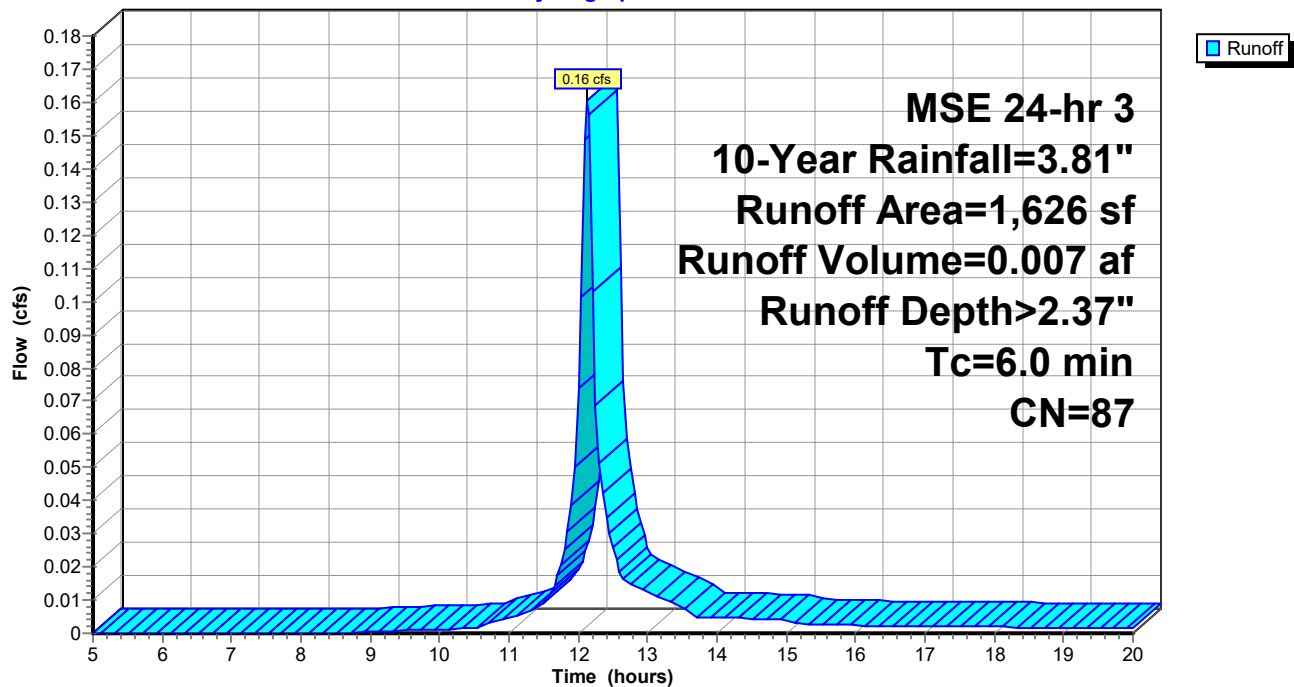
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
731	74	>75% Grass cover, Good, HSG C
894	98	Paved parking, HSG C
1,626	87	Weighted Average
731		44.98% Pervious Area
894		55.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00	18.00	3.62	2.29	0.00
5.25	0.16	0.00	0.00	18.25	3.63	2.30	0.00
5.50	0.17	0.00	0.00	18.50	3.64	2.31	0.00
5.75	0.18	0.00	0.00	18.75	3.65	2.32	0.00
6.00	0.19	0.00	0.00	19.00	3.67	2.33	0.00
6.25	0.21	0.00	0.00	19.25	3.68	2.34	0.00
6.50	0.22	0.00	0.00	19.50	3.69	2.35	0.00
6.75	0.24	0.00	0.00	19.75	3.70	2.36	0.00
7.00	0.25	0.00	0.00	20.00	3.71	2.37	0.00
7.25	0.27	0.00	0.00				
7.50	0.28	0.00	0.00				
7.75	0.30	0.00	0.00				
8.00	0.32	0.00	0.00				
8.25	0.34	0.00	0.00				
8.50	0.35	0.00	0.00				
8.75	0.37	0.00	0.00				
9.00	0.39	0.01	0.00				
9.25	0.42	0.01	0.00				
9.50	0.46	0.01	0.00				
9.75	0.49	0.02	0.00				
10.00	0.52	0.03	0.00				
10.25	0.56	0.04	0.00				
10.50	0.60	0.05	0.00				
10.75	0.66	0.07	0.00				
11.00	0.73	0.10	0.00				
11.25	0.83	0.14	0.01				
11.50	0.94	0.19	0.01				
11.75	1.17	0.32	0.02				
12.00	1.76	0.73	0.07				
12.25	2.64	1.43	0.07				
12.50	2.87	1.62	0.03				
12.75	2.98	1.72	0.01				
13.00	3.08	1.81	0.01				
13.25	3.15	1.87	0.01				
13.50	3.21	1.93	0.01				
13.75	3.25	1.96	0.00				
14.00	3.29	1.99	0.00				
14.25	3.32	2.02	0.00				
14.50	3.35	2.05	0.00				
14.75	3.39	2.08	0.00				
15.00	3.42	2.11	0.00				
15.25	3.44	2.13	0.00				
15.50	3.46	2.14	0.00				
15.75	3.47	2.16	0.00				
16.00	3.49	2.17	0.00				
16.25	3.51	2.19	0.00				
16.50	3.53	2.20	0.00				
16.75	3.54	2.22	0.00				
17.00	3.56	2.23	0.00				
17.25	3.57	2.25	0.00				
17.50	3.59	2.26	0.00				
17.75	3.60	2.27	0.00				

23610 Existing

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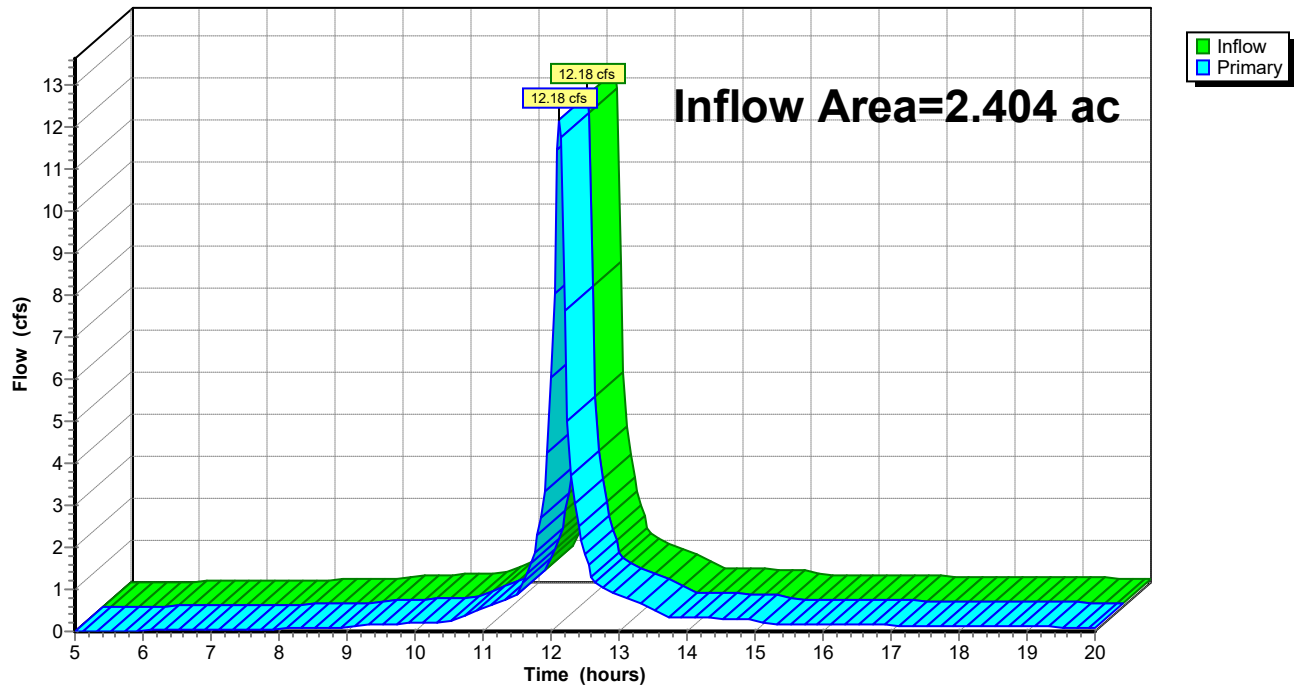
Summary for Link 3L: Existing

Inflow Area = 2.404 ac, 80.13% Impervious, Inflow Depth > 2.98" for 10-Year event
Inflow = 12.18 cfs @ 12.13 hrs, Volume= 0.596 af
Primary = 12.18 cfs @ 12.13 hrs, Volume= 0.596 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 3L: Existing

Hydrograph



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Hydrograph for Link 3L: Existing

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	0.00	0.01	18.00	0.13	0.00	0.13
5.25	0.01	0.00	0.01	18.25	0.13	0.00	0.13
5.50	0.01	0.00	0.01	18.50	0.12	0.00	0.12
5.75	0.01	0.00	0.01	18.75	0.12	0.00	0.12
6.00	0.02	0.00	0.02	19.00	0.11	0.00	0.11
6.25	0.02	0.00	0.02	19.25	0.11	0.00	0.11
6.50	0.03	0.00	0.03	19.50	0.10	0.00	0.10
6.75	0.03	0.00	0.03	19.75	0.10	0.00	0.10
7.00	0.04	0.00	0.04	20.00	0.10	0.00	0.10
7.25	0.04	0.00	0.04				
7.50	0.05	0.00	0.05				
7.75	0.06	0.00	0.06				
8.00	0.06	0.00	0.06				
8.25	0.07	0.00	0.07				
8.50	0.07	0.00	0.07				
8.75	0.08	0.00	0.08				
9.00	0.09	0.00	0.09				
9.25	0.15	0.00	0.15				
9.50	0.16	0.00	0.16				
9.75	0.18	0.00	0.18				
10.00	0.19	0.00	0.19				
10.25	0.21	0.00	0.21				
10.50	0.22	0.00	0.22				
10.75	0.40	0.00	0.40				
11.00	0.54	0.00	0.54				
11.25	0.70	0.00	0.70				
11.50	0.87	0.00	0.87				
11.75	1.89	0.00	1.89				
12.00	6.04	0.00	6.04				
12.25	5.02	0.00	5.02				
12.50	1.83	0.00	1.83				
12.75	1.04	0.00	1.04				
13.00	0.87	0.00	0.87				
13.25	0.71	0.00	0.71				
13.50	0.54	0.00	0.54				
13.75	0.34	0.00	0.34				
14.00	0.33	0.00	0.33				
14.25	0.32	0.00	0.32				
14.50	0.31	0.00	0.31				
14.75	0.30	0.00	0.30				
15.00	0.29	0.00	0.29				
15.25	0.18	0.00	0.18				
15.50	0.17	0.00	0.17				
15.75	0.17	0.00	0.17				
16.00	0.17	0.00	0.17				
16.25	0.16	0.00	0.16				
16.50	0.16	0.00	0.16				
16.75	0.15	0.00	0.15				
17.00	0.15	0.00	0.15				
17.25	0.14	0.00	0.14				
17.50	0.14	0.00	0.14				
17.75	0.14	0.00	0.14				

23610 Existing*MSE 24-hr 3 100-Year Rainfall=6.18"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=31,592 sf 90.43% Impervious Runoff Depth>5.51"
Tc=6.0 min CN=96 Runoff=6.38 cfs 0.333 af

Subcatchment 2: Subcat 2 Runoff Area=45,487 sf 73.79% Impervious Runoff Depth>5.08"
Tc=6.0 min CN=92 Runoff=8.86 cfs 0.442 af

Subcatchment 3: Subcat 3 Runoff Area=26,023 sf 80.27% Impervious Runoff Depth>5.19"
Tc=6.0 min CN=93 Runoff=5.12 cfs 0.258 af

Subcatchment 4: Subcat 4 Runoff Area=1,626 sf 55.02% Impervious Runoff Depth>4.53"
Tc=6.0 min CN=87 Runoff=0.30 cfs 0.014 af

Link 3L: Existing Inflow=20.66 cfs 1.047 af
Primary=20.66 cfs 1.047 af

Total Runoff Area = 2.404 ac Runoff Volume = 1.047 af Average Runoff Depth = 5.23"
19.87% Pervious = 0.478 ac 80.13% Impervious = 1.926 ac

23610 Existing

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 1: Subcat 1

Runoff = 6.38 cfs @ 12.13 hrs, Volume= 0.333 af, Depth> 5.51"
Routed to Link 3L : Existing

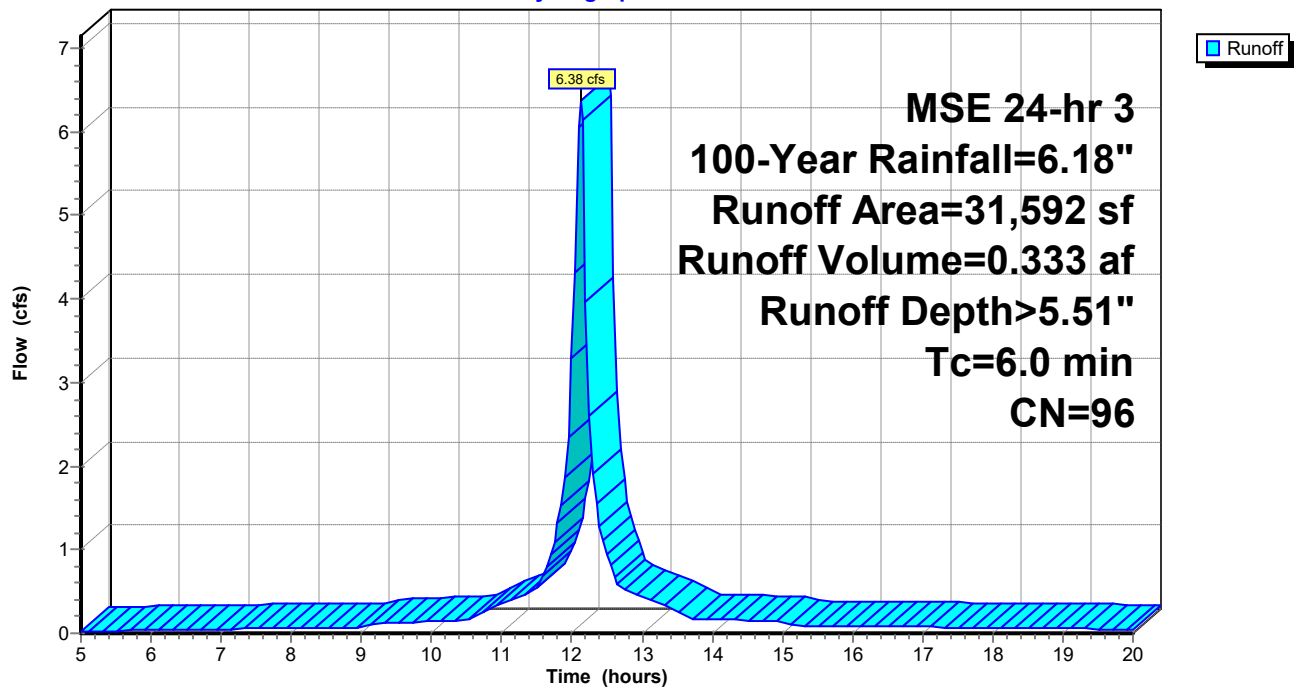
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
3,023	74	>75% Grass cover, Good, HSG C
28,568	98	Paved parking, HSG C
31,592	96	Weighted Average
3,023		9.57% Pervious Area
28,568		90.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.23	0.04	0.02	18.00	5.87	5.39	0.07
5.25	0.25	0.05	0.03	18.25	5.89	5.41	0.06
5.50	0.27	0.06	0.03	18.50	5.91	5.44	0.06
5.75	0.29	0.07	0.03	18.75	5.93	5.46	0.06
6.00	0.31	0.08	0.04	19.00	5.95	5.48	0.06
6.25	0.34	0.10	0.04	19.25	5.97	5.49	0.05
6.50	0.36	0.11	0.04	19.50	5.98	5.51	0.05
6.75	0.39	0.13	0.05	19.75	6.00	5.53	0.05
7.00	0.41	0.14	0.05	20.00	6.02	5.55	0.05
7.25	0.44	0.16	0.05				
7.50	0.46	0.18	0.06				
7.75	0.49	0.20	0.06				
8.00	0.52	0.22	0.06				
8.25	0.55	0.24	0.06				
8.50	0.58	0.27	0.07				
8.75	0.61	0.29	0.07				
9.00	0.64	0.32	0.07				
9.25	0.69	0.36	0.12				
9.50	0.74	0.40	0.13				
9.75	0.79	0.45	0.14				
10.00	0.85	0.50	0.14				
10.25	0.91	0.55	0.15				
10.50	0.97	0.60	0.16				
10.75	1.06	0.69	0.27				
11.00	1.19	0.80	0.35				
11.25	1.35	0.95	0.44				
11.50	1.53	1.13	0.53				
11.75	1.90	1.48	1.09				
12.00	2.86	2.42	3.29				
12.25	4.28	3.82	2.59				
12.50	4.65	4.18	0.93				
12.75	4.83	4.37	0.53				
13.00	4.99	4.52	0.44				
13.25	5.12	4.65	0.36				
13.50	5.21	4.74	0.27				
13.75	5.27	4.80	0.17				
14.00	5.33	4.86	0.17				
14.25	5.39	4.92	0.16				
14.50	5.44	4.97	0.16				
14.75	5.49	5.02	0.15				
15.00	5.54	5.07	0.15				
15.25	5.57	5.10	0.09				
15.50	5.60	5.13	0.09				
15.75	5.63	5.16	0.09				
16.00	5.66	5.19	0.08				
16.25	5.69	5.22	0.08				
16.50	5.72	5.25	0.08				
16.75	5.74	5.27	0.08				
17.00	5.77	5.30	0.07				
17.25	5.79	5.32	0.07				
17.50	5.82	5.35	0.07				
17.75	5.84	5.37	0.07				

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 2: Subcat 2

Runoff = 8.86 cfs @ 12.13 hrs, Volume= 0.442 af, Depth> 5.08"
Routed to Link 3L : Existing

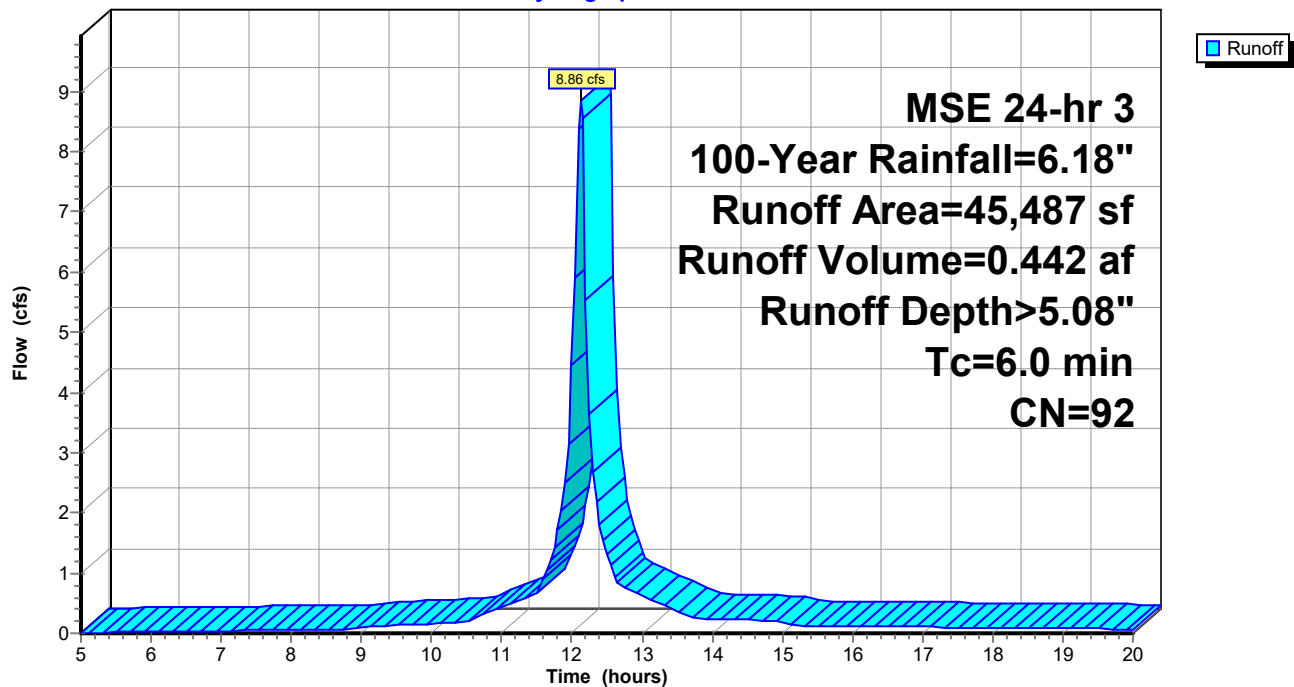
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
11,924	74	>75% Grass cover, Good, HSG C
33,563	98	Paved parking, HSG C
45,487	92	Weighted Average
11,924		26.21% Pervious Area
33,563		73.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



23610 Existing

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.23	0.00	0.01	18.00	5.87	4.94	0.09
5.25	0.25	0.01	0.01	18.25	5.89	4.96	0.09
5.50	0.27	0.01	0.02	18.50	5.91	4.98	0.09
5.75	0.29	0.01	0.02	18.75	5.93	5.00	0.08
6.00	0.31	0.02	0.02	19.00	5.95	5.02	0.08
6.25	0.34	0.03	0.03	19.25	5.97	5.04	0.08
6.50	0.36	0.03	0.03	19.50	5.98	5.05	0.07
6.75	0.39	0.04	0.03	19.75	6.00	5.07	0.07
7.00	0.41	0.05	0.04	20.00	6.02	5.09	0.07
7.25	0.44	0.06	0.04				
7.50	0.46	0.07	0.05				
7.75	0.49	0.08	0.05				
8.00	0.52	0.10	0.06				
8.25	0.55	0.11	0.06				
8.50	0.58	0.13	0.07				
8.75	0.61	0.14	0.07				
9.00	0.64	0.16	0.07				
9.25	0.69	0.19	0.13				
9.50	0.74	0.22	0.14				
9.75	0.79	0.26	0.15				
10.00	0.85	0.30	0.16				
10.25	0.91	0.34	0.17				
10.50	0.97	0.38	0.18				
10.75	1.06	0.45	0.32				
11.00	1.19	0.55	0.43				
11.25	1.35	0.67	0.54				
11.50	1.53	0.83	0.67				
11.75	1.90	1.15	1.43				
12.00	2.86	2.03	4.46				
12.25	4.28	3.39	3.63				
12.50	4.65	3.75	1.32				
12.75	4.83	3.93	0.75				
13.00	4.99	4.08	0.63				
13.25	5.12	4.20	0.51				
13.50	5.21	4.30	0.39				
13.75	5.27	4.36	0.24				
14.00	5.33	4.41	0.24				
14.25	5.39	4.47	0.23				
14.50	5.44	4.52	0.22				
14.75	5.49	4.57	0.21				
15.00	5.54	4.62	0.21				
15.25	5.57	4.65	0.13				
15.50	5.60	4.68	0.12				
15.75	5.63	4.71	0.12				
16.00	5.66	4.74	0.12				
16.25	5.69	4.77	0.12				
16.50	5.72	4.79	0.11				
16.75	5.74	4.82	0.11				
17.00	5.77	4.84	0.11				
17.25	5.79	4.87	0.10				
17.50	5.82	4.89	0.10				
17.75	5.84	4.91	0.10				

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 3: Subcat 3

Runoff = 5.12 cfs @ 12.13 hrs, Volume= 0.258 af, Depth> 5.19"
Routed to Link 3L : Existing

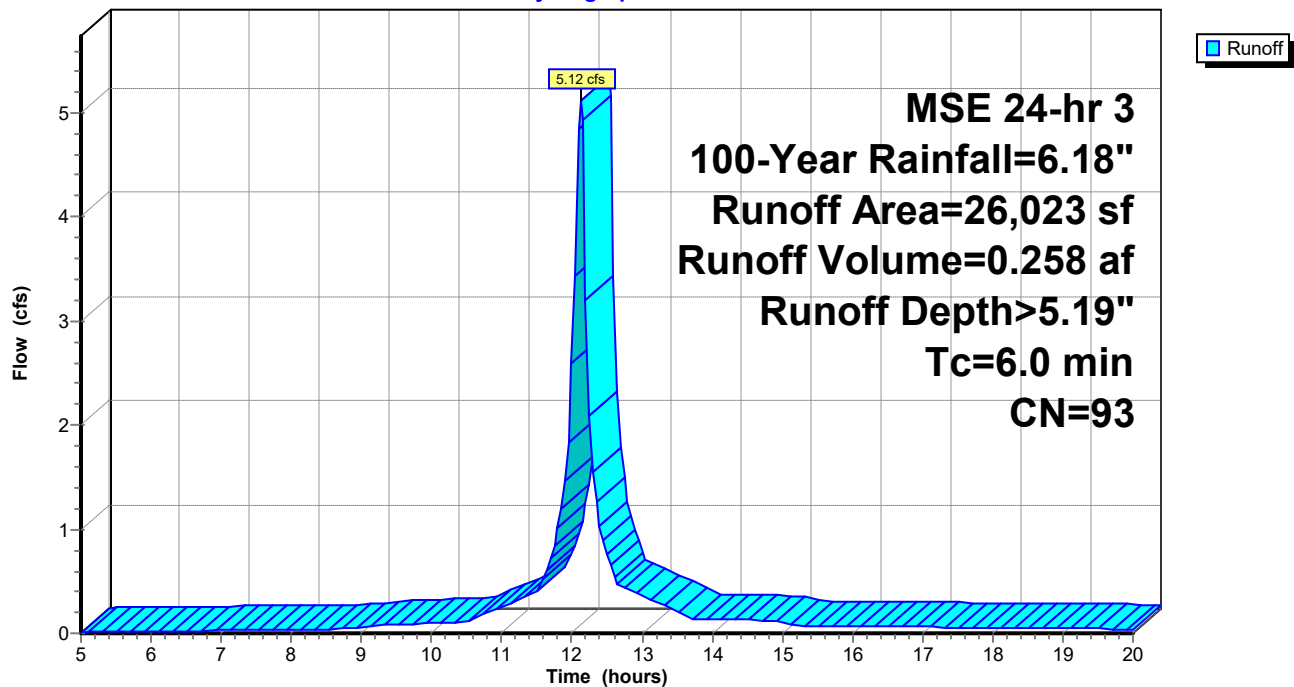
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
5,135	74	>75% Grass cover, Good, HSG C
20,887	98	Paved parking, HSG C
26,023	93	Weighted Average
5,135		19.73% Pervious Area
20,887		80.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.23	0.01	0.01	18.00	5.87	5.05	0.05
5.25	0.25	0.01	0.01	18.25	5.89	5.07	0.05
5.50	0.27	0.02	0.01	18.50	5.91	5.09	0.05
5.75	0.29	0.02	0.01	18.75	5.93	5.11	0.05
6.00	0.31	0.03	0.02	19.00	5.95	5.13	0.05
6.25	0.34	0.04	0.02	19.25	5.97	5.15	0.04
6.50	0.36	0.05	0.02	19.50	5.98	5.17	0.04
6.75	0.39	0.06	0.02	19.75	6.00	5.18	0.04
7.00	0.41	0.07	0.03	20.00	6.02	5.20	0.04
7.25	0.44	0.08	0.03				
7.50	0.46	0.09	0.03				
7.75	0.49	0.11	0.03				
8.00	0.52	0.12	0.04				
8.25	0.55	0.14	0.04				
8.50	0.58	0.15	0.04				
8.75	0.61	0.17	0.04				
9.00	0.64	0.19	0.05				
9.25	0.69	0.22	0.08				
9.50	0.74	0.26	0.09				
9.75	0.79	0.30	0.09				
10.00	0.85	0.34	0.10				
10.25	0.91	0.38	0.10				
10.50	0.97	0.42	0.11				
10.75	1.06	0.50	0.19				
11.00	1.19	0.60	0.26				
11.25	1.35	0.74	0.32				
11.50	1.53	0.89	0.40				
11.75	1.90	1.22	0.84				
12.00	2.86	2.12	2.60				
12.25	4.28	3.49	2.09				
12.50	4.65	3.85	0.76				
12.75	4.83	4.03	0.43				
13.00	4.99	4.19	0.36				
13.25	5.12	4.31	0.29				
13.50	5.21	4.41	0.22				
13.75	5.27	4.47	0.14				
14.00	5.33	4.52	0.14				
14.25	5.39	4.58	0.13				
14.50	5.44	4.63	0.13				
14.75	5.49	4.68	0.12				
15.00	5.54	4.73	0.12				
15.25	5.57	4.76	0.07				
15.50	5.60	4.79	0.07				
15.75	5.63	4.82	0.07				
16.00	5.66	4.85	0.07				
16.25	5.69	4.88	0.07				
16.50	5.72	4.90	0.06				
16.75	5.74	4.93	0.06				
17.00	5.77	4.96	0.06				
17.25	5.79	4.98	0.06				
17.50	5.82	5.00	0.06				
17.75	5.84	5.03	0.06				

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.30 cfs @ 12.13 hrs, Volume= 0.014 af, Depth> 4.53"
Routed to Link 3L : Existing

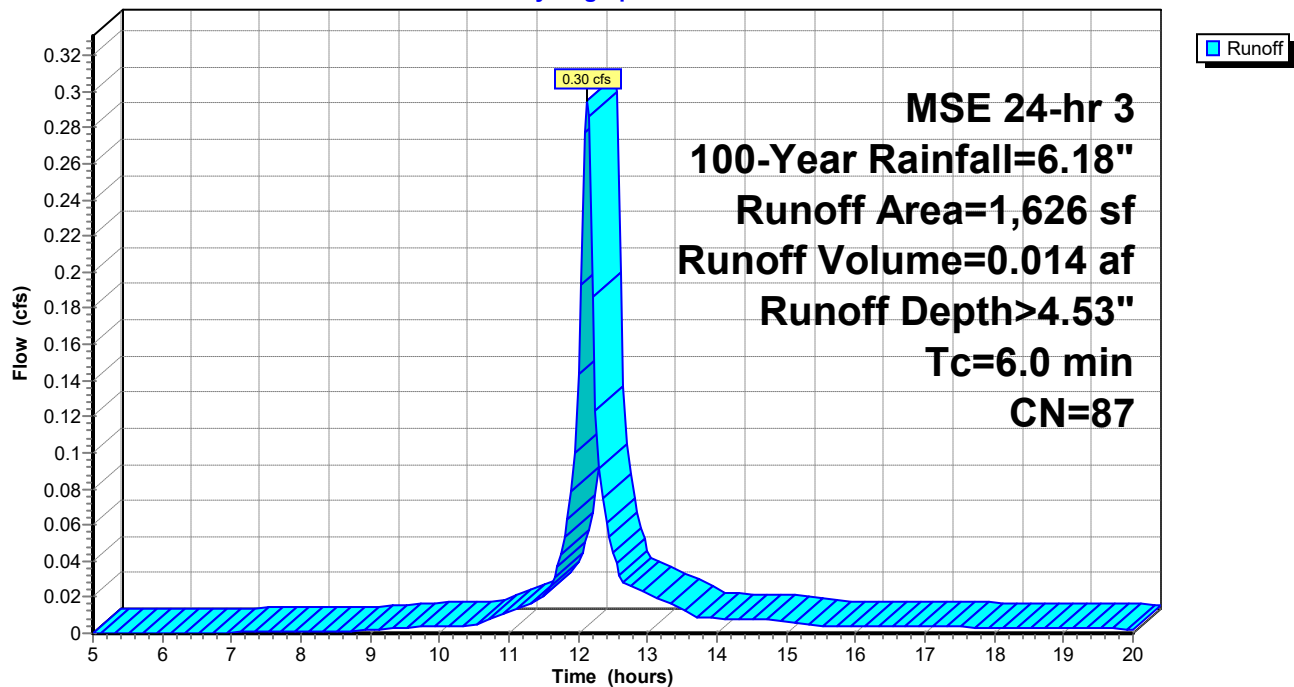
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
731	74	>75% Grass cover, Good, HSG C
894	98	Paved parking, HSG C
1,626	87	Weighted Average
731		44.98% Pervious Area
894		55.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.23	0.00	0.00	18.00	5.87	4.39	0.00
5.25	0.25	0.00	0.00	18.25	5.89	4.41	0.00
5.50	0.27	0.00	0.00	18.50	5.91	4.43	0.00
5.75	0.29	0.00	0.00	18.75	5.93	4.45	0.00
6.00	0.31	0.00	0.00	19.00	5.95	4.47	0.00
6.25	0.34	0.00	0.00	19.25	5.97	4.49	0.00
6.50	0.36	0.00	0.00	19.50	5.98	4.50	0.00
6.75	0.39	0.00	0.00	19.75	6.00	4.52	0.00
7.00	0.41	0.01	0.00	20.00	6.02	4.54	0.00
7.25	0.44	0.01	0.00				
7.50	0.46	0.02	0.00				
7.75	0.49	0.02	0.00				
8.00	0.52	0.03	0.00				
8.25	0.55	0.04	0.00				
8.50	0.58	0.04	0.00				
8.75	0.61	0.05	0.00				
9.00	0.64	0.06	0.00				
9.25	0.69	0.08	0.00				
9.50	0.74	0.10	0.00				
9.75	0.79	0.12	0.00				
10.00	0.85	0.15	0.00				
10.25	0.91	0.18	0.00				
10.50	0.97	0.21	0.00				
10.75	1.06	0.26	0.01				
11.00	1.19	0.33	0.01				
11.25	1.35	0.43	0.02				
11.50	1.53	0.56	0.02				
11.75	1.90	0.83	0.04				
12.00	2.86	1.62	0.14				
12.25	4.28	2.89	0.12				
12.50	4.65	3.24	0.05				
12.75	4.83	3.41	0.03				
13.00	4.99	3.56	0.02				
13.25	5.12	3.68	0.02				
13.50	5.21	3.77	0.01				
13.75	5.27	3.83	0.01				
14.00	5.33	3.88	0.01				
14.25	5.39	3.93	0.01				
14.50	5.44	3.98	0.01				
14.75	5.49	4.03	0.01				
15.00	5.54	4.08	0.01				
15.25	5.57	4.11	0.00				
15.50	5.60	4.14	0.00				
15.75	5.63	4.17	0.00				
16.00	5.66	4.20	0.00				
16.25	5.69	4.22	0.00				
16.50	5.72	4.25	0.00				
16.75	5.74	4.27	0.00				
17.00	5.77	4.30	0.00				
17.25	5.79	4.32	0.00				
17.50	5.82	4.34	0.00				
17.75	5.84	4.37	0.00				

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Summary for Link 3L: Existing

Inflow Area = 2.404 ac, 80.13% Impervious, Inflow Depth > 5.23" for 100-Year event

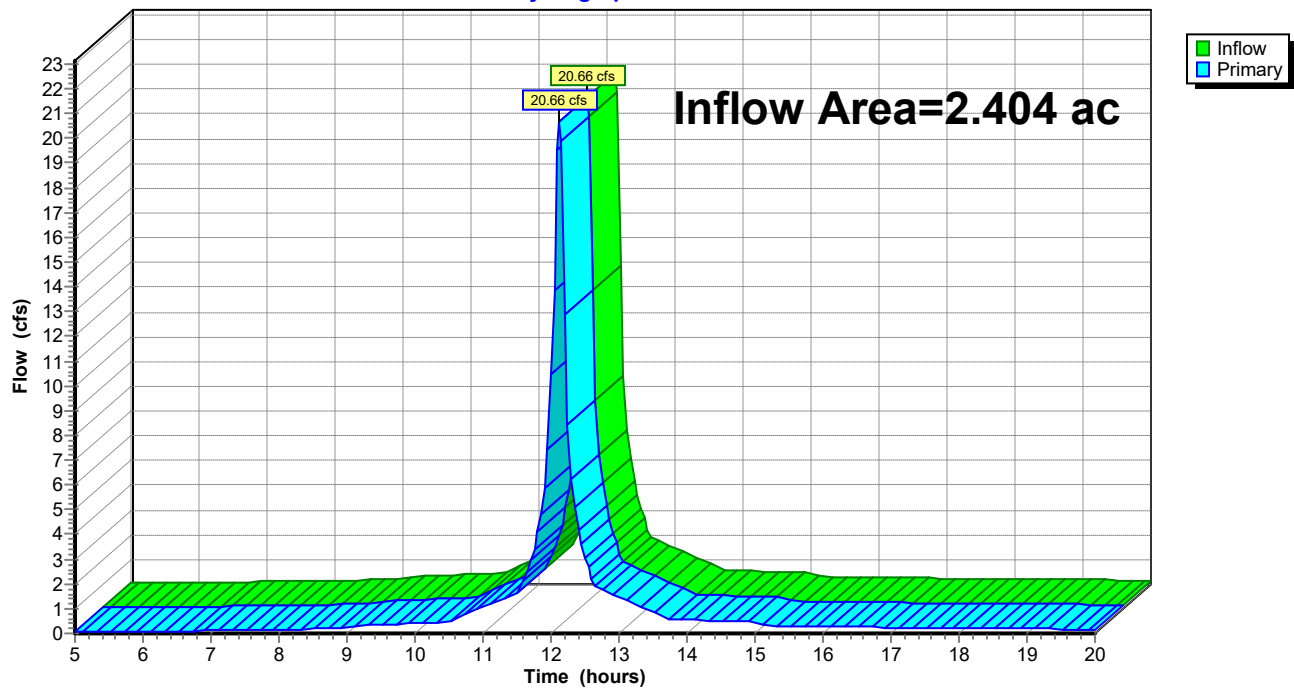
Inflow = 20.66 cfs @ 12.13 hrs, Volume= 1.047 af

Primary = 20.66 cfs @ 12.13 hrs, Volume= 1.047 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 3L: Existing

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Link 3L: Existing

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.04	0.00	0.04	18.00	0.22	0.00	0.22
5.25	0.05	0.00	0.05	18.25	0.21	0.00	0.21
5.50	0.06	0.00	0.06	18.50	0.20	0.00	0.20
5.75	0.07	0.00	0.07	18.75	0.19	0.00	0.19
6.00	0.08	0.00	0.08	19.00	0.19	0.00	0.19
6.25	0.09	0.00	0.09	19.25	0.18	0.00	0.18
6.50	0.10	0.00	0.10	19.50	0.17	0.00	0.17
6.75	0.11	0.00	0.11	19.75	0.16	0.00	0.16
7.00	0.12	0.00	0.12	20.00	0.16	0.00	0.16
7.25	0.13	0.00	0.13				
7.50	0.14	0.00	0.14				
7.75	0.15	0.00	0.15				
8.00	0.16	0.00	0.16				
8.25	0.17	0.00	0.17				
8.50	0.18	0.00	0.18				
8.75	0.19	0.00	0.19				
9.00	0.20	0.00	0.20				
9.25	0.33	0.00	0.33				
9.50	0.36	0.00	0.36				
9.75	0.38	0.00	0.38				
10.00	0.40	0.00	0.40				
10.25	0.43	0.00	0.43				
10.50	0.45	0.00	0.45				
10.75	0.78	0.00	0.78				
11.00	1.05	0.00	1.05				
11.25	1.32	0.00	1.32				
11.50	1.61	0.00	1.61				
11.75	3.40	0.00	3.40				
12.00	10.49	0.00	10.49				
12.25	8.43	0.00	8.43				
12.50	3.05	0.00	3.05				
12.75	1.74	0.00	1.74				
13.00	1.45	0.00	1.45				
13.25	1.18	0.00	1.18				
13.50	0.89	0.00	0.89				
13.75	0.57	0.00	0.57				
14.00	0.55	0.00	0.55				
14.25	0.53	0.00	0.53				
14.50	0.51	0.00	0.51				
14.75	0.50	0.00	0.50				
15.00	0.48	0.00	0.48				
15.25	0.30	0.00	0.30				
15.50	0.29	0.00	0.29				
15.75	0.28	0.00	0.28				
16.00	0.27	0.00	0.27				
16.25	0.27	0.00	0.27				
16.50	0.26	0.00	0.26				
16.75	0.25	0.00	0.25				
17.00	0.24	0.00	0.24				
17.25	0.24	0.00	0.24				
17.50	0.23	0.00	0.23				
17.75	0.22	0.00	0.22				

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Multi-Event Tables

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Events for Subcatchment 1: Subcat 1

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	2.34	0.115	1.90
2-Year	2.70	2.67	0.132	2.19
10-Year	3.81	3.86	0.196	3.24
100-Year	6.18	6.38	0.333	5.51

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Multi-Event Tables

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Events for Subcatchment 2: Subcat 2

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	2.91	0.134	1.54
2-Year	2.70	3.39	0.158	1.81
10-Year	3.81	5.15	0.247	2.84
100-Year	6.18	8.86	0.442	5.08

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Multi-Event Tables

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Events for Subcatchment 3: Subcat 3

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	1.73	0.081	1.63
2-Year	2.70	2.01	0.095	1.90
10-Year	3.81	3.01	0.146	2.94
100-Year	6.18	5.12	0.258	5.19

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Multi-Event Tables

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Events for Subcatchment 4: Subcat 4

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	0.08	0.004	1.17
2-Year	2.70	0.10	0.004	1.42
10-Year	3.81	0.16	0.007	2.37
100-Year	6.18	0.30	0.014	4.53

23610 Existing

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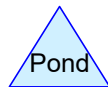
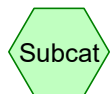
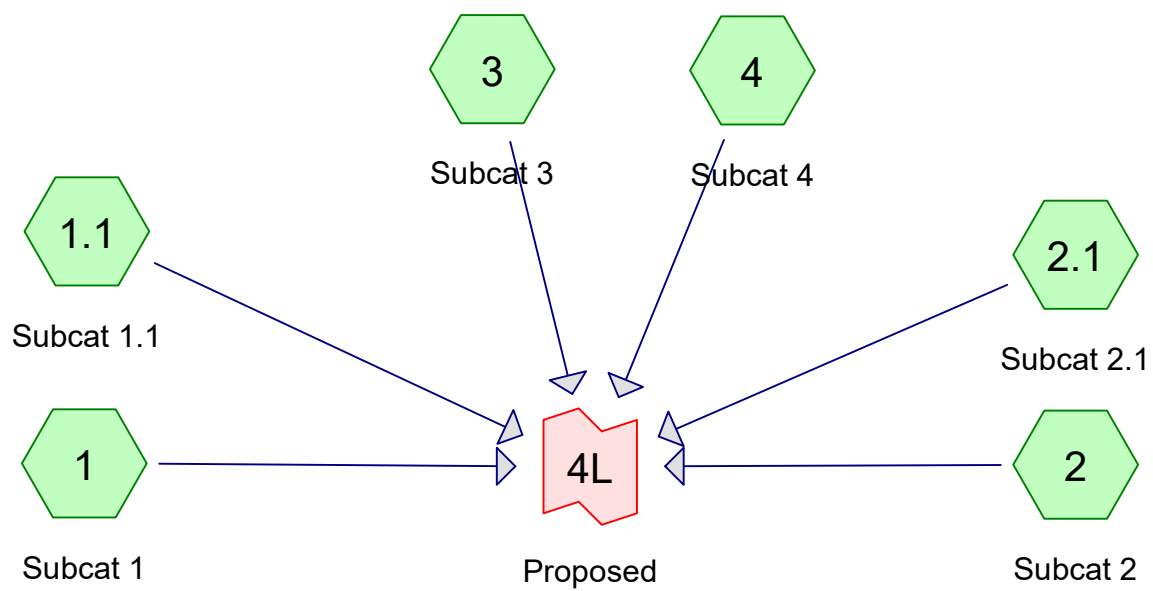
Multi-Event Tables

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Events for Link 3L: Existing

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
1-Year	7.06	7.06	0.00
2-Year	8.16	8.16	0.00
10-Year	12.18	12.18	0.00
100-Year	20.66	20.66	0.00



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Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	MSE 24-hr	3	Default	24.00	1	2.40	2
2	2-Year	MSE 24-hr	3	Default	24.00	1	2.70	2
3	10-Year	MSE 24-hr	3	Default	24.00	1	3.81	2
4	100-Year	MSE 24-hr	3	Default	24.00	1	6.18	2

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Page 3

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.569	74	>75% Grass cover, Good, HSG C (1, 1.1, 2, 2.1, 3, 4)
1.364	98	Paved parking, HSG C (1, 1.1, 2, 2.1, 3, 4)
0.471	98	Unconnected roofs, HSG C (1, 2)
2.404	92	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.404	HSG C	1, 1.1, 2, 2.1, 3, 4
0.000	HSG D	
0.000	Other	
2.404		TOTAL AREA

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Page 5

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.569	0.000	0.000	0.569	>75% Grass cover, Good	1, 1.1, 2, 2.1, 3, 4
0.000	0.000	1.364	0.000	0.000	1.364	Paved parking	1, 1.1, 2, 2.1, 3, 4
0.000	0.000	0.471	0.000	0.000	0.471	Unconnected roofs	1, 2
0.000	0.000	2.404	0.000	0.000	2.404	TOTAL AREA	

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=41,433 sf 83.08% Impervious Runoff Depth>1.77" Tc=6.0 min CN=94 Runoff=2.87 cfs 0.141 af
Subcatchment 1.1: Subcat 1.1	Runoff Area=6,710 sf 80.73% Impervious Runoff Depth>1.69" Tc=6.0 min CN=93 Runoff=0.45 cfs 0.022 af
Subcatchment 2: Subcat 2	Runoff Area=15,202 sf 72.18% Impervious Runoff Depth>1.52" Tc=6.0 min CN=91 Runoff=0.93 cfs 0.044 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=10,695 sf 89.09% Impervious Runoff Depth>1.87" Tc=6.0 min CN=95 Runoff=0.77 cfs 0.038 af
Subcatchment 3: Subcat 3	Runoff Area=25,255 sf 63.69% Impervious Runoff Depth>1.37" Tc=6.0 min CN=89 Runoff=1.41 cfs 0.066 af
Subcatchment 4: Subcat 4	Runoff Area=5,423 sf 64.98% Impervious Runoff Depth>1.44" Tc=6.0 min CN=90 Runoff=0.32 cfs 0.015 af
Link 4L: Proposed	Inflow=6.74 cfs 0.326 af Primary=6.74 cfs 0.326 af

Total Runoff Area = 2.404 ac Runoff Volume = 0.326 af Average Runoff Depth = 1.63"
23.65% Pervious = 0.569 ac 76.35% Impervious = 1.835 ac

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 1: Subcat 1

Runoff = 2.87 cfs @ 12.13 hrs, Volume= 0.141 af, Depth> 1.77"
Routed to Link 4L : Proposed

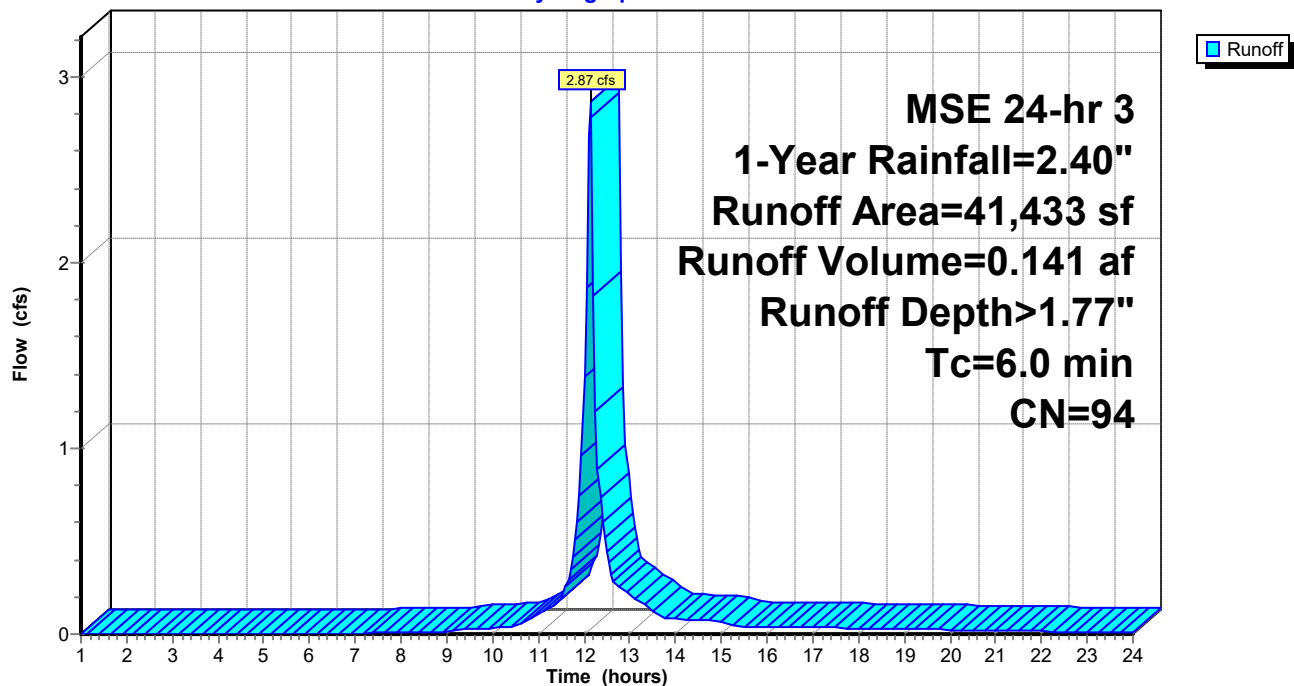
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
7,011	74	>75% Grass cover, Good, HSG C
13,905	98	Paved parking, HSG C
20,517	98	Unconnected roofs, HSG C
41,433	94	Weighted Average
7,011		16.92% Pervious Area
34,422		83.08% Impervious Area
20,517		59.60% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.07	1.46	0.08
1.25	0.01	0.00	0.00	14.25	2.09	1.48	0.08
1.50	0.01	0.00	0.00	14.50	2.11	1.50	0.08
1.75	0.02	0.00	0.00	14.75	2.13	1.52	0.07
2.00	0.02	0.00	0.00	15.00	2.15	1.54	0.07
2.25	0.03	0.00	0.00	15.25	2.16	1.55	0.04
2.50	0.03	0.00	0.00	15.50	2.18	1.56	0.04
2.75	0.03	0.00	0.00	15.75	2.19	1.57	0.04
3.00	0.04	0.00	0.00	16.00	2.20	1.58	0.04
3.25	0.05	0.00	0.00	16.25	2.21	1.59	0.04
3.50	0.05	0.00	0.00	16.50	2.22	1.60	0.04
3.75	0.06	0.00	0.00	16.75	2.23	1.61	0.04
4.00	0.06	0.00	0.00	17.00	2.24	1.62	0.04
4.25	0.07	0.00	0.00	17.25	2.25	1.63	0.04
4.50	0.08	0.00	0.00	17.50	2.26	1.64	0.03
4.75	0.08	0.00	0.00	17.75	2.27	1.65	0.03
5.00	0.09	0.00	0.00	18.00	2.28	1.66	0.03
5.25	0.10	0.00	0.00	18.25	2.29	1.67	0.03
5.50	0.11	0.00	0.00	18.50	2.29	1.67	0.03
5.75	0.11	0.00	0.00	18.75	2.30	1.68	0.03
6.00	0.12	0.00	0.00	19.00	2.31	1.69	0.03
6.25	0.13	0.00	0.00	19.25	2.32	1.70	0.03
6.50	0.14	0.00	0.00	19.50	2.32	1.70	0.03
6.75	0.15	0.00	0.00	19.75	2.33	1.71	0.02
7.00	0.16	0.00	0.00	20.00	2.34	1.71	0.02
7.25	0.17	0.00	0.00	20.25	2.34	1.72	0.02
7.50	0.18	0.00	0.01	20.50	2.35	1.73	0.02
7.75	0.19	0.01	0.01	20.75	2.35	1.73	0.02
8.00	0.20	0.01	0.01	21.00	2.36	1.74	0.02
8.25	0.21	0.01	0.01	21.25	2.37	1.74	0.02
8.50	0.22	0.01	0.01	21.50	2.37	1.75	0.02
8.75	0.24	0.02	0.01	21.75	2.37	1.75	0.02
9.00	0.25	0.02	0.01	22.00	2.38	1.75	0.01
9.25	0.27	0.02	0.02	22.25	2.38	1.76	0.01
9.50	0.29	0.03	0.03	22.50	2.39	1.76	0.01
9.75	0.31	0.04	0.03	22.75	2.39	1.76	0.01
10.00	0.33	0.05	0.03	23.00	2.39	1.77	0.01
10.25	0.35	0.06	0.04	23.25	2.39	1.77	0.01
10.50	0.38	0.07	0.04	23.50	2.40	1.77	0.01
10.75	0.41	0.09	0.08	23.75	2.40	1.77	0.01
11.00	0.46	0.12	0.11	24.00	2.40	1.77	0.01
11.25	0.52	0.15	0.14				
11.50	0.60	0.20	0.18				
11.75	0.74	0.30	0.41				
12.00	1.11	0.60	1.38				
12.25	1.66	1.08	1.20				
12.50	1.80	1.21	0.44				
12.75	1.88	1.28	0.25				
13.00	1.94	1.34	0.21				
13.25	1.99	1.38	0.17				
13.50	2.02	1.42	0.13				
13.75	2.05	1.44	0.08				

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 1.1: Subcat 1.1

Runoff = 0.45 cfs @ 12.13 hrs, Volume= 0.022 af, Depth> 1.69"
Routed to Link 4L : Proposed

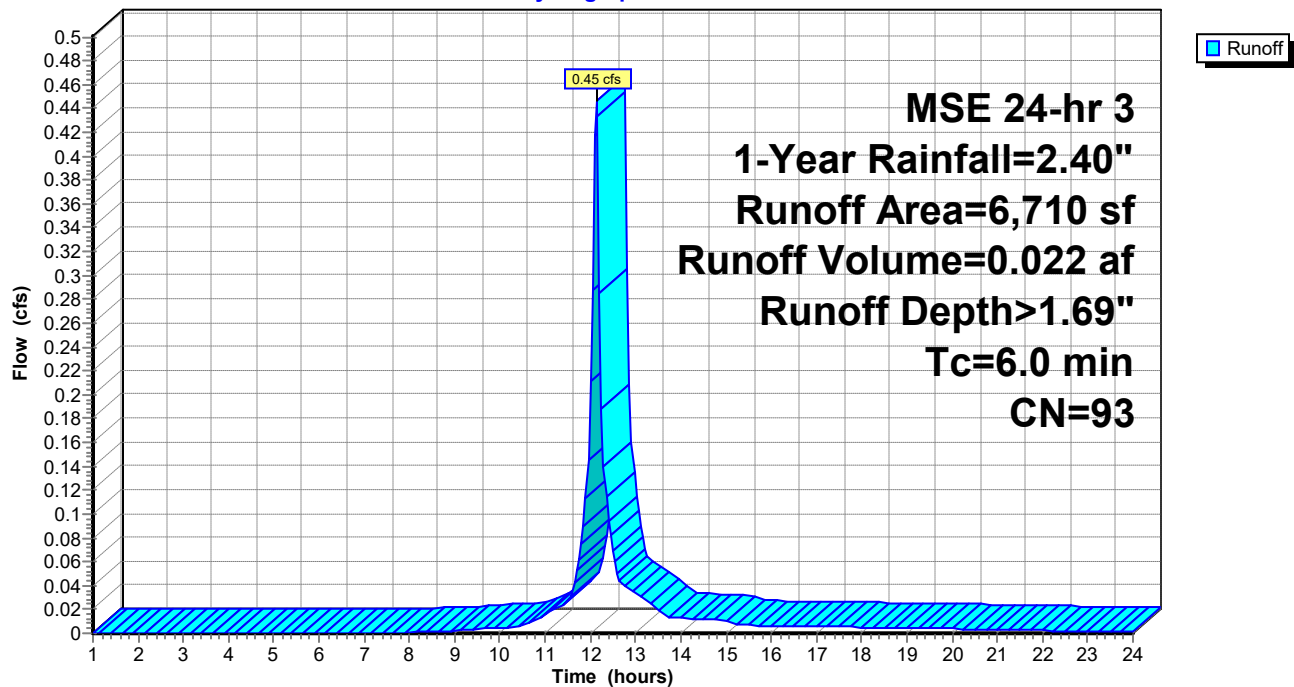
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
1,293	74	>75% Grass cover, Good, HSG C
5,417	98	Paved parking, HSG C
6,710	93	Weighted Average
1,293		19.27% Pervious Area
5,417		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1: Subcat 1.1

Hydrograph



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Hydrograph for Subcatchment 1.1: Subcat 1.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.07	1.38	0.01
1.25	0.01	0.00	0.00	14.25	2.09	1.40	0.01
1.50	0.01	0.00	0.00	14.50	2.11	1.42	0.01
1.75	0.02	0.00	0.00	14.75	2.13	1.44	0.01
2.00	0.02	0.00	0.00	15.00	2.15	1.46	0.01
2.25	0.03	0.00	0.00	15.25	2.16	1.47	0.01
2.50	0.03	0.00	0.00	15.50	2.18	1.48	0.01
2.75	0.03	0.00	0.00	15.75	2.19	1.49	0.01
3.00	0.04	0.00	0.00	16.00	2.20	1.50	0.01
3.25	0.05	0.00	0.00	16.25	2.21	1.51	0.01
3.50	0.05	0.00	0.00	16.50	2.22	1.52	0.01
3.75	0.06	0.00	0.00	16.75	2.23	1.53	0.01
4.00	0.06	0.00	0.00	17.00	2.24	1.54	0.01
4.25	0.07	0.00	0.00	17.25	2.25	1.55	0.01
4.50	0.08	0.00	0.00	17.50	2.26	1.55	0.01
4.75	0.08	0.00	0.00	17.75	2.27	1.56	0.01
5.00	0.09	0.00	0.00	18.00	2.28	1.57	0.01
5.25	0.10	0.00	0.00	18.25	2.29	1.58	0.00
5.50	0.11	0.00	0.00	18.50	2.29	1.59	0.00
5.75	0.11	0.00	0.00	18.75	2.30	1.59	0.00
6.00	0.12	0.00	0.00	19.00	2.31	1.60	0.00
6.25	0.13	0.00	0.00	19.25	2.32	1.61	0.00
6.50	0.14	0.00	0.00	19.50	2.32	1.61	0.00
6.75	0.15	0.00	0.00	19.75	2.33	1.62	0.00
7.00	0.16	0.00	0.00	20.00	2.34	1.63	0.00
7.25	0.17	0.00	0.00	20.25	2.34	1.63	0.00
7.50	0.18	0.00	0.00	20.50	2.35	1.64	0.00
7.75	0.19	0.00	0.00	20.75	2.35	1.64	0.00
8.00	0.20	0.00	0.00	21.00	2.36	1.65	0.00
8.25	0.21	0.00	0.00	21.25	2.37	1.65	0.00
8.50	0.22	0.01	0.00	21.50	2.37	1.66	0.00
8.75	0.24	0.01	0.00	21.75	2.37	1.66	0.00
9.00	0.25	0.01	0.00	22.00	2.38	1.67	0.00
9.25	0.27	0.02	0.00	22.25	2.38	1.67	0.00
9.50	0.29	0.02	0.00	22.50	2.39	1.67	0.00
9.75	0.31	0.03	0.00	22.75	2.39	1.67	0.00
10.00	0.33	0.03	0.00	23.00	2.39	1.68	0.00
10.25	0.35	0.04	0.01	23.25	2.39	1.68	0.00
10.50	0.38	0.05	0.01	23.50	2.40	1.68	0.00
10.75	0.41	0.07	0.01	23.75	2.40	1.68	0.00
11.00	0.46	0.09	0.02	24.00	2.40	1.69	0.00
11.25	0.52	0.12	0.02				
11.50	0.60	0.17	0.03				
11.75	0.74	0.26	0.06				
12.00	1.11	0.54	0.21				
12.25	1.66	1.01	0.19				
12.50	1.80	1.14	0.07				
12.75	1.88	1.20	0.04				
13.00	1.94	1.26	0.03				
13.25	1.99	1.30	0.03				
13.50	2.02	1.34	0.02				
13.75	2.05	1.36	0.01				

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 2: Subcat 2

Runoff = 0.93 cfs @ 12.13 hrs, Volume= 0.044 af, Depth> 1.52"
Routed to Link 4L : Proposed

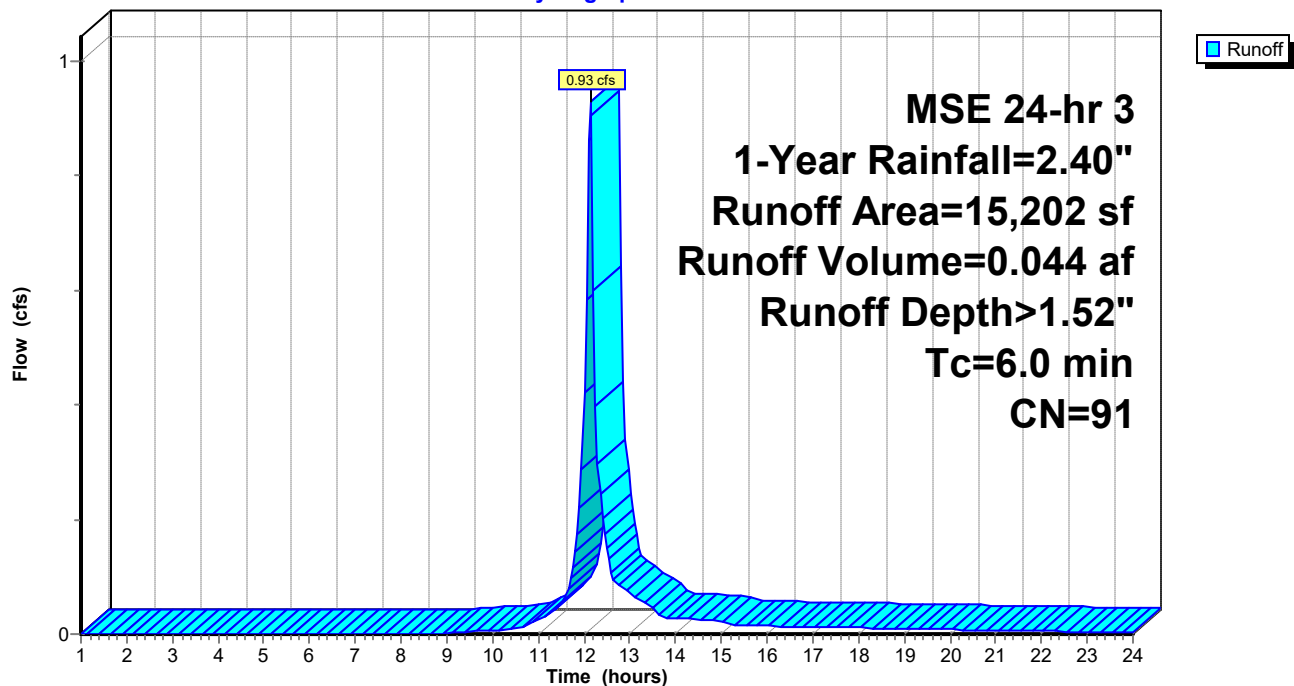
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
4,229	74	>75% Grass cover, Good, HSG C
10,974	98	Paved parking, HSG C
0	98	Unconnected roofs, HSG C
15,202	91	Weighted Average
4,229		27.82% Pervious Area
10,974		72.18% Impervious Area
0		0.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.07	1.23	0.03
1.25	0.01	0.00	0.00	14.25	2.09	1.24	0.03
1.50	0.01	0.00	0.00	14.50	2.11	1.26	0.03
1.75	0.02	0.00	0.00	14.75	2.13	1.28	0.03
2.00	0.02	0.00	0.00	15.00	2.15	1.30	0.02
2.25	0.03	0.00	0.00	15.25	2.16	1.31	0.02
2.50	0.03	0.00	0.00	15.50	2.18	1.32	0.01
2.75	0.03	0.00	0.00	15.75	2.19	1.33	0.01
3.00	0.04	0.00	0.00	16.00	2.20	1.34	0.01
3.25	0.05	0.00	0.00	16.25	2.21	1.35	0.01
3.50	0.05	0.00	0.00	16.50	2.22	1.36	0.01
3.75	0.06	0.00	0.00	16.75	2.23	1.37	0.01
4.00	0.06	0.00	0.00	17.00	2.24	1.38	0.01
4.25	0.07	0.00	0.00	17.25	2.25	1.39	0.01
4.50	0.08	0.00	0.00	17.50	2.26	1.39	0.01
4.75	0.08	0.00	0.00	17.75	2.27	1.40	0.01
5.00	0.09	0.00	0.00	18.00	2.28	1.41	0.01
5.25	0.10	0.00	0.00	18.25	2.29	1.42	0.01
5.50	0.11	0.00	0.00	18.50	2.29	1.42	0.01
5.75	0.11	0.00	0.00	18.75	2.30	1.43	0.01
6.00	0.12	0.00	0.00	19.00	2.31	1.44	0.01
6.25	0.13	0.00	0.00	19.25	2.32	1.45	0.01
6.50	0.14	0.00	0.00	19.50	2.32	1.45	0.01
6.75	0.15	0.00	0.00	19.75	2.33	1.46	0.01
7.00	0.16	0.00	0.00	20.00	2.34	1.46	0.01
7.25	0.17	0.00	0.00	20.25	2.34	1.47	0.01
7.50	0.18	0.00	0.00	20.50	2.35	1.47	0.01
7.75	0.19	0.00	0.00	20.75	2.35	1.48	0.01
8.00	0.20	0.00	0.00	21.00	2.36	1.48	0.01
8.25	0.21	0.00	0.00	21.25	2.37	1.49	0.01
8.50	0.22	0.00	0.00	21.50	2.37	1.49	0.01
8.75	0.24	0.00	0.00	21.75	2.37	1.50	0.01
9.00	0.25	0.00	0.00	22.00	2.38	1.50	0.01
9.25	0.27	0.00	0.00	22.25	2.38	1.50	0.00
9.50	0.29	0.01	0.00	22.50	2.39	1.51	0.00
9.75	0.31	0.01	0.01	22.75	2.39	1.51	0.00
10.00	0.33	0.02	0.01	23.00	2.39	1.51	0.00
10.25	0.35	0.02	0.01	23.25	2.39	1.51	0.00
10.50	0.38	0.03	0.01	23.50	2.40	1.52	0.00
10.75	0.41	0.04	0.02	23.75	2.40	1.52	0.00
11.00	0.46	0.06	0.03	24.00	2.40	1.52	0.00
11.25	0.52	0.08	0.04				
11.50	0.60	0.11	0.05				
11.75	0.74	0.19	0.12				
12.00	1.11	0.44	0.42				
12.25	1.66	0.87	0.40				
12.50	1.80	0.99	0.15				
12.75	1.88	1.06	0.09				
13.00	1.94	1.11	0.07				
13.25	1.99	1.15	0.06				
13.50	2.02	1.19	0.04				
13.75	2.05	1.21	0.03				

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 2.1: Subcat 2.1

Runoff = 0.77 cfs @ 12.13 hrs, Volume= 0.038 af, Depth> 1.87"
Routed to Link 4L : Proposed

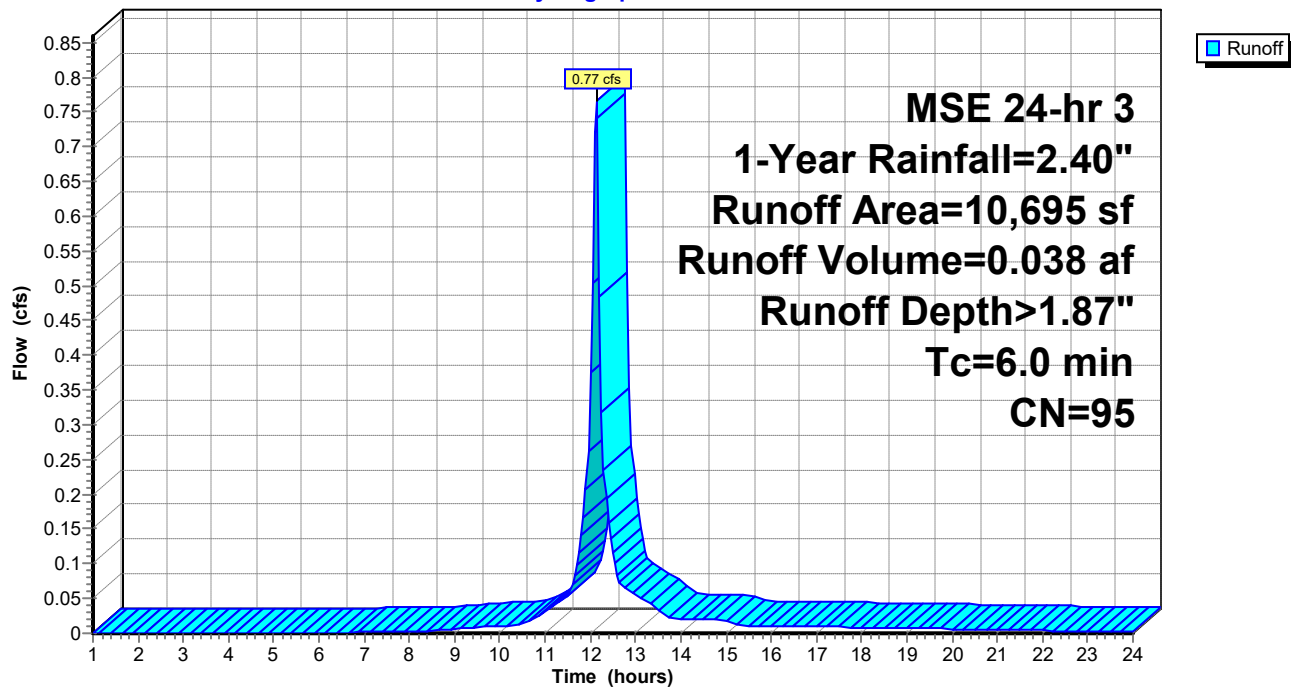
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
1,167	74	>75% Grass cover, Good, HSG C
9,528	98	Paved parking, HSG C
10,695	95	Weighted Average
1,167		10.91% Pervious Area
9,528		89.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2.1: Subcat 2.1

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Subcatchment 2.1: Subcat 2.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.07	1.55	0.02
1.25	0.01	0.00	0.00	14.25	2.09	1.57	0.02
1.50	0.01	0.00	0.00	14.50	2.11	1.59	0.02
1.75	0.02	0.00	0.00	14.75	2.13	1.61	0.02
2.00	0.02	0.00	0.00	15.00	2.15	1.63	0.02
2.25	0.03	0.00	0.00	15.25	2.16	1.64	0.01
2.50	0.03	0.00	0.00	15.50	2.18	1.65	0.01
2.75	0.03	0.00	0.00	15.75	2.19	1.66	0.01
3.00	0.04	0.00	0.00	16.00	2.20	1.67	0.01
3.25	0.05	0.00	0.00	16.25	2.21	1.68	0.01
3.50	0.05	0.00	0.00	16.50	2.22	1.69	0.01
3.75	0.06	0.00	0.00	16.75	2.23	1.70	0.01
4.00	0.06	0.00	0.00	17.00	2.24	1.71	0.01
4.25	0.07	0.00	0.00	17.25	2.25	1.72	0.01
4.50	0.08	0.00	0.00	17.50	2.26	1.73	0.01
4.75	0.08	0.00	0.00	17.75	2.27	1.74	0.01
5.00	0.09	0.00	0.00	18.00	2.28	1.75	0.01
5.25	0.10	0.00	0.00	18.25	2.29	1.76	0.01
5.50	0.11	0.00	0.00	18.50	2.29	1.76	0.01
5.75	0.11	0.00	0.00	18.75	2.30	1.77	0.01
6.00	0.12	0.00	0.00	19.00	2.31	1.78	0.01
6.25	0.13	0.00	0.00	19.25	2.32	1.79	0.01
6.50	0.14	0.00	0.00	19.50	2.32	1.79	0.01
6.75	0.15	0.00	0.00	19.75	2.33	1.80	0.01
7.00	0.16	0.01	0.00	20.00	2.34	1.81	0.01
7.25	0.17	0.01	0.00	20.25	2.34	1.81	0.01
7.50	0.18	0.01	0.00	20.50	2.35	1.82	0.01
7.75	0.19	0.01	0.00	20.75	2.35	1.82	0.01
8.00	0.20	0.01	0.00	21.00	2.36	1.83	0.00
8.25	0.21	0.02	0.00	21.25	2.37	1.83	0.00
8.50	0.22	0.02	0.00	21.50	2.37	1.84	0.00
8.75	0.24	0.03	0.00	21.75	2.37	1.84	0.00
9.00	0.25	0.03	0.00	22.00	2.38	1.85	0.00
9.25	0.27	0.04	0.01	22.25	2.38	1.85	0.00
9.50	0.29	0.05	0.01	22.50	2.39	1.85	0.00
9.75	0.31	0.06	0.01	22.75	2.39	1.86	0.00
10.00	0.33	0.07	0.01	23.00	2.39	1.86	0.00
10.25	0.35	0.08	0.01	23.25	2.39	1.86	0.00
10.50	0.38	0.09	0.01	23.50	2.40	1.86	0.00
10.75	0.41	0.11	0.02	23.75	2.40	1.86	0.00
11.00	0.46	0.14	0.03	24.00	2.40	1.87	0.00
11.25	0.52	0.19	0.04				
11.50	0.60	0.24	0.05				
11.75	0.74	0.35	0.12				
12.00	1.11	0.66	0.38				
12.25	1.66	1.16	0.32				
12.50	1.80	1.30	0.12				
12.75	1.88	1.37	0.07				
13.00	1.94	1.42	0.06				
13.25	1.99	1.47	0.05				
13.50	2.02	1.51	0.03				
13.75	2.05	1.53	0.02				

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 3: Subcat 3

Runoff = 1.41 cfs @ 12.13 hrs, Volume= 0.066 af, Depth> 1.37"
Routed to Link 4L : Proposed

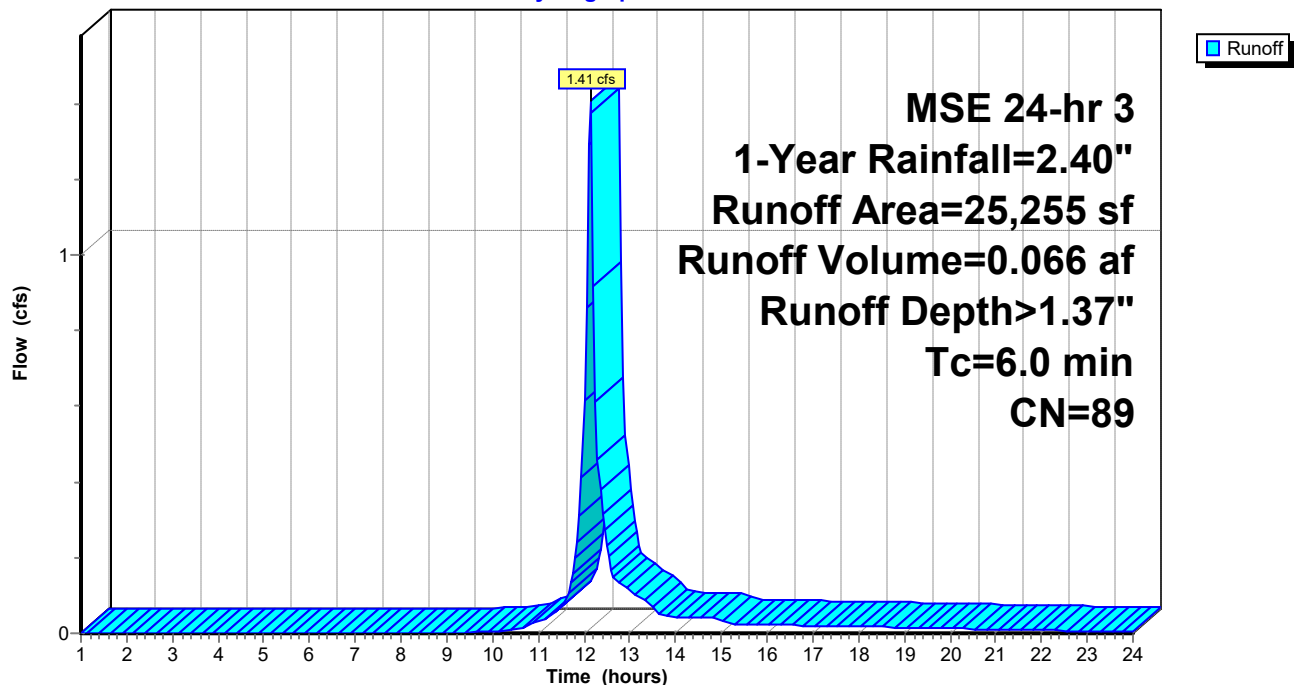
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
9,171	74	>75% Grass cover, Good, HSG C
16,085	98	Paved parking, HSG C
25,255	89	Weighted Average
9,171		36.31% Pervious Area
16,085		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.07	1.09	0.04
1.25	0.01	0.00	0.00	14.25	2.09	1.10	0.04
1.50	0.01	0.00	0.00	14.50	2.11	1.12	0.04
1.75	0.02	0.00	0.00	14.75	2.13	1.14	0.04
2.00	0.02	0.00	0.00	15.00	2.15	1.16	0.04
2.25	0.03	0.00	0.00	15.25	2.16	1.17	0.02
2.50	0.03	0.00	0.00	15.50	2.18	1.18	0.02
2.75	0.03	0.00	0.00	15.75	2.19	1.19	0.02
3.00	0.04	0.00	0.00	16.00	2.20	1.20	0.02
3.25	0.05	0.00	0.00	16.25	2.21	1.20	0.02
3.50	0.05	0.00	0.00	16.50	2.22	1.21	0.02
3.75	0.06	0.00	0.00	16.75	2.23	1.22	0.02
4.00	0.06	0.00	0.00	17.00	2.24	1.23	0.02
4.25	0.07	0.00	0.00	17.25	2.25	1.24	0.02
4.50	0.08	0.00	0.00	17.50	2.26	1.25	0.02
4.75	0.08	0.00	0.00	17.75	2.27	1.25	0.02
5.00	0.09	0.00	0.00	18.00	2.28	1.26	0.02
5.25	0.10	0.00	0.00	18.25	2.29	1.27	0.02
5.50	0.11	0.00	0.00	18.50	2.29	1.28	0.02
5.75	0.11	0.00	0.00	18.75	2.30	1.28	0.02
6.00	0.12	0.00	0.00	19.00	2.31	1.29	0.02
6.25	0.13	0.00	0.00	19.25	2.32	1.30	0.01
6.50	0.14	0.00	0.00	19.50	2.32	1.30	0.01
6.75	0.15	0.00	0.00	19.75	2.33	1.31	0.01
7.00	0.16	0.00	0.00	20.00	2.34	1.31	0.01
7.25	0.17	0.00	0.00	20.25	2.34	1.32	0.01
7.50	0.18	0.00	0.00	20.50	2.35	1.32	0.01
7.75	0.19	0.00	0.00	20.75	2.35	1.33	0.01
8.00	0.20	0.00	0.00	21.00	2.36	1.33	0.01
8.25	0.21	0.00	0.00	21.25	2.37	1.34	0.01
8.50	0.22	0.00	0.00	21.50	2.37	1.34	0.01
8.75	0.24	0.00	0.00	21.75	2.37	1.35	0.01
9.00	0.25	0.00	0.00	22.00	2.38	1.35	0.01
9.25	0.27	0.00	0.00	22.25	2.38	1.35	0.01
9.50	0.29	0.00	0.00	22.50	2.39	1.35	0.01
9.75	0.31	0.00	0.00	22.75	2.39	1.36	0.01
10.00	0.33	0.01	0.01	23.00	2.39	1.36	0.01
10.25	0.35	0.01	0.01	23.25	2.39	1.36	0.01
10.50	0.38	0.01	0.01	23.50	2.40	1.36	0.00
10.75	0.41	0.02	0.02	23.75	2.40	1.37	0.00
11.00	0.46	0.03	0.03	24.00	2.40	1.37	0.00
11.25	0.52	0.05	0.05				
11.50	0.60	0.08	0.06				
11.75	0.74	0.14	0.16				
12.00	1.11	0.36	0.62				
12.25	1.66	0.76	0.61				
12.50	1.80	0.87	0.23				
12.75	1.88	0.93	0.13				
13.00	1.94	0.98	0.11				
13.25	1.99	1.02	0.09				
13.50	2.02	1.05	0.07				
13.75	2.05	1.07	0.04				

23610 Proposed

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MSE 24-hr 3 1-Year Rainfall=2.40"

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.32 cfs @ 12.13 hrs, Volume= 0.015 af, Depth> 1.44"
Routed to Link 4L : Proposed

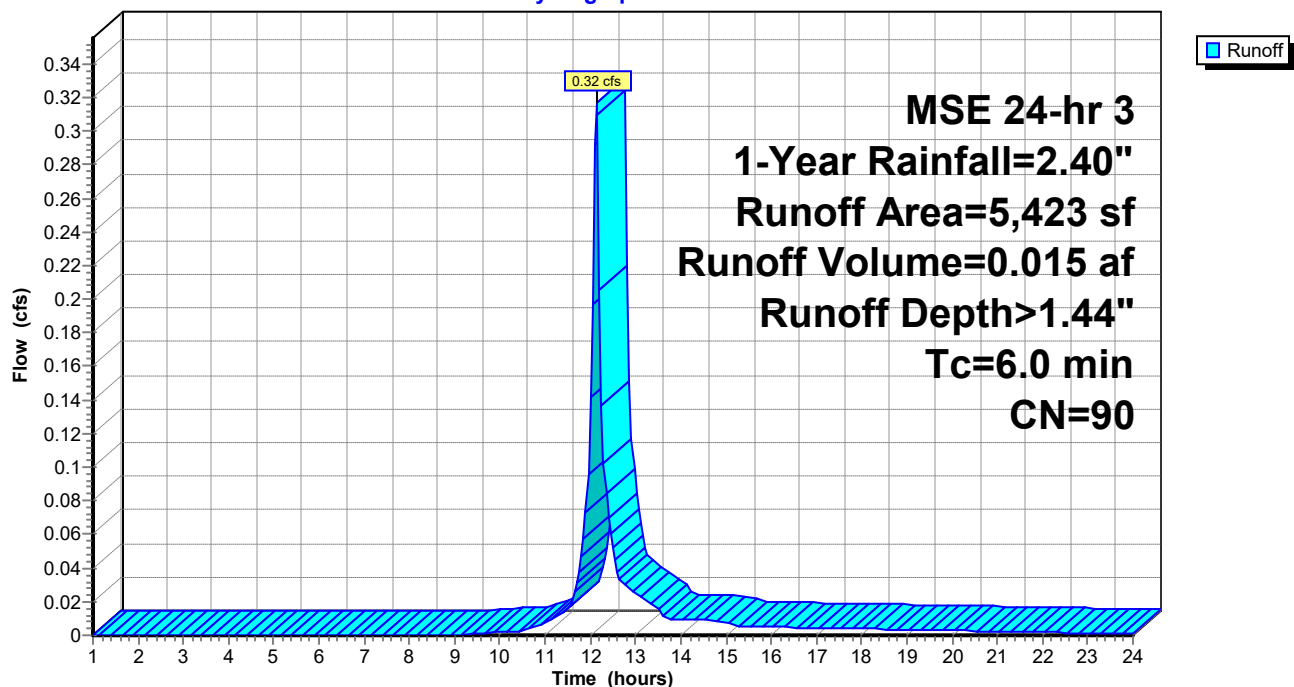
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.40"

Area (sf)	CN	Description
1,899	74	>75% Grass cover, Good, HSG C
3,524	98	Paved parking, HSG C
5,423	90	Weighted Average
1,899		35.02% Pervious Area
3,524		64.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.07	1.15	0.01
1.25	0.01	0.00	0.00	14.25	2.09	1.17	0.01
1.50	0.01	0.00	0.00	14.50	2.11	1.19	0.01
1.75	0.02	0.00	0.00	14.75	2.13	1.21	0.01
2.00	0.02	0.00	0.00	15.00	2.15	1.23	0.01
2.25	0.03	0.00	0.00	15.25	2.16	1.24	0.01
2.50	0.03	0.00	0.00	15.50	2.18	1.25	0.01
2.75	0.03	0.00	0.00	15.75	2.19	1.26	0.00
3.00	0.04	0.00	0.00	16.00	2.20	1.27	0.00
3.25	0.05	0.00	0.00	16.25	2.21	1.28	0.00
3.50	0.05	0.00	0.00	16.50	2.22	1.28	0.00
3.75	0.06	0.00	0.00	16.75	2.23	1.29	0.00
4.00	0.06	0.00	0.00	17.00	2.24	1.30	0.00
4.25	0.07	0.00	0.00	17.25	2.25	1.31	0.00
4.50	0.08	0.00	0.00	17.50	2.26	1.32	0.00
4.75	0.08	0.00	0.00	17.75	2.27	1.33	0.00
5.00	0.09	0.00	0.00	18.00	2.28	1.33	0.00
5.25	0.10	0.00	0.00	18.25	2.29	1.34	0.00
5.50	0.11	0.00	0.00	18.50	2.29	1.35	0.00
5.75	0.11	0.00	0.00	18.75	2.30	1.36	0.00
6.00	0.12	0.00	0.00	19.00	2.31	1.36	0.00
6.25	0.13	0.00	0.00	19.25	2.32	1.37	0.00
6.50	0.14	0.00	0.00	19.50	2.32	1.38	0.00
6.75	0.15	0.00	0.00	19.75	2.33	1.38	0.00
7.00	0.16	0.00	0.00	20.00	2.34	1.39	0.00
7.25	0.17	0.00	0.00	20.25	2.34	1.39	0.00
7.50	0.18	0.00	0.00	20.50	2.35	1.40	0.00
7.75	0.19	0.00	0.00	20.75	2.35	1.40	0.00
8.00	0.20	0.00	0.00	21.00	2.36	1.41	0.00
8.25	0.21	0.00	0.00	21.25	2.37	1.41	0.00
8.50	0.22	0.00	0.00	21.50	2.37	1.42	0.00
8.75	0.24	0.00	0.00	21.75	2.37	1.42	0.00
9.00	0.25	0.00	0.00	22.00	2.38	1.42	0.00
9.25	0.27	0.00	0.00	22.25	2.38	1.43	0.00
9.50	0.29	0.00	0.00	22.50	2.39	1.43	0.00
9.75	0.31	0.01	0.00	22.75	2.39	1.43	0.00
10.00	0.33	0.01	0.00	23.00	2.39	1.43	0.00
10.25	0.35	0.01	0.00	23.25	2.39	1.44	0.00
10.50	0.38	0.02	0.00	23.50	2.40	1.44	0.00
10.75	0.41	0.03	0.01	23.75	2.40	1.44	0.00
11.00	0.46	0.04	0.01	24.00	2.40	1.44	0.00
11.25	0.52	0.06	0.01				
11.50	0.60	0.09	0.02				
11.75	0.74	0.16	0.04				
12.00	1.11	0.39	0.14				
12.25	1.66	0.81	0.14				
12.50	1.80	0.93	0.05				
12.75	1.88	0.99	0.03				
13.00	1.94	1.04	0.03				
13.25	1.99	1.08	0.02				
13.50	2.02	1.12	0.02				
13.75	2.05	1.13	0.01				

23610 Proposed

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MSE 24-hr 3 1-Year Rainfall=2.40"

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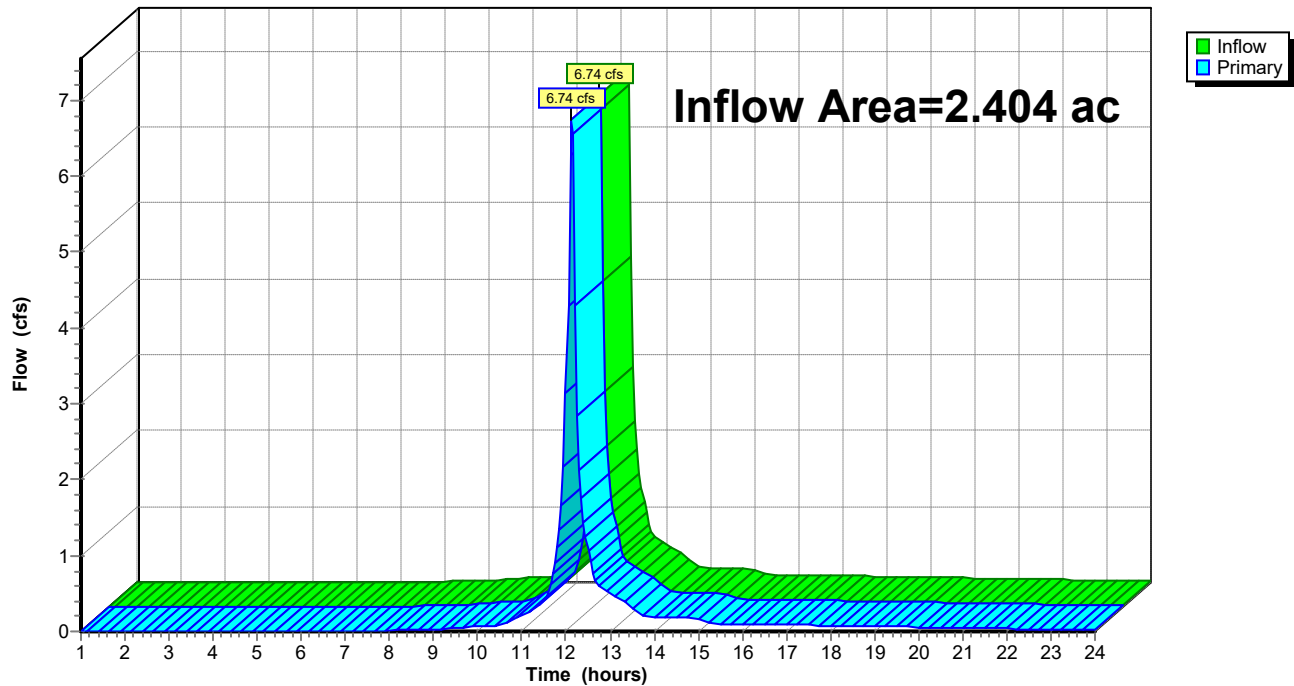
Summary for Link 4L: Proposed

Inflow Area = 2.404 ac, 76.35% Impervious, Inflow Depth > 1.63" for 1-Year event
Inflow = 6.74 cfs @ 12.13 hrs, Volume= 0.326 af
Primary = 6.74 cfs @ 12.13 hrs, Volume= 0.326 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 4L: Proposed

Hydrograph



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MSE 24-hr 3 1-Year Rainfall=2.40"

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Hydrograph for Link 4L: Proposed

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
1.00	0.00	0.00	0.00	14.00	0.19	0.00	0.19
1.25	0.00	0.00	0.00	14.25	0.19	0.00	0.19
1.50	0.00	0.00	0.00	14.50	0.18	0.00	0.18
1.75	0.00	0.00	0.00	14.75	0.18	0.00	0.18
2.00	0.00	0.00	0.00	15.00	0.17	0.00	0.17
2.25	0.00	0.00	0.00	15.25	0.11	0.00	0.11
2.50	0.00	0.00	0.00	15.50	0.10	0.00	0.10
2.75	0.00	0.00	0.00	15.75	0.10	0.00	0.10
3.00	0.00	0.00	0.00	16.00	0.10	0.00	0.10
3.25	0.00	0.00	0.00	16.25	0.10	0.00	0.10
3.50	0.00	0.00	0.00	16.50	0.09	0.00	0.09
3.75	0.00	0.00	0.00	16.75	0.09	0.00	0.09
4.00	0.00	0.00	0.00	17.00	0.09	0.00	0.09
4.25	0.00	0.00	0.00	17.25	0.09	0.00	0.09
4.50	0.00	0.00	0.00	17.50	0.08	0.00	0.08
4.75	0.00	0.00	0.00	17.75	0.08	0.00	0.08
5.00	0.00	0.00	0.00	18.00	0.08	0.00	0.08
5.25	0.00	0.00	0.00	18.25	0.08	0.00	0.08
5.50	0.00	0.00	0.00	18.50	0.07	0.00	0.07
5.75	0.00	0.00	0.00	18.75	0.07	0.00	0.07
6.00	0.00	0.00	0.00	19.00	0.07	0.00	0.07
6.25	0.00	0.00	0.00	19.25	0.06	0.00	0.06
6.50	0.00	0.00	0.00	19.50	0.06	0.00	0.06
6.75	0.00	0.00	0.00	19.75	0.06	0.00	0.06
7.00	0.00	0.00	0.00	20.00	0.06	0.00	0.06
7.25	0.01	0.00	0.01	20.25	0.05	0.00	0.05
7.50	0.01	0.00	0.01	20.50	0.05	0.00	0.05
7.75	0.01	0.00	0.01	20.75	0.05	0.00	0.05
8.00	0.01	0.00	0.01	21.00	0.05	0.00	0.05
8.25	0.01	0.00	0.01	21.25	0.04	0.00	0.04
8.50	0.02	0.00	0.02	21.50	0.04	0.00	0.04
8.75	0.02	0.00	0.02	21.75	0.04	0.00	0.04
9.00	0.02	0.00	0.02	22.00	0.04	0.00	0.04
9.25	0.04	0.00	0.04	22.25	0.03	0.00	0.03
9.50	0.05	0.00	0.05	22.50	0.03	0.00	0.03
9.75	0.06	0.00	0.06	22.75	0.03	0.00	0.03
10.00	0.06	0.00	0.06	23.00	0.03	0.00	0.03
10.25	0.07	0.00	0.07	23.25	0.02	0.00	0.02
10.50	0.08	0.00	0.08	23.50	0.02	0.00	0.02
10.75	0.15	0.00	0.15	23.75	0.02	0.00	0.02
11.00	0.22	0.00	0.22	24.00	0.01	0.00	0.01
11.25	0.30	0.00	0.30				
11.50	0.39	0.00	0.39				
11.75	0.90	0.00	0.90				
12.00	3.15	0.00	3.15				
12.25	2.85	0.00	2.85				
12.50	1.06	0.00	1.06				
12.75	0.61	0.00	0.61				
13.00	0.51	0.00	0.51				
13.25	0.42	0.00	0.42				
13.50	0.32	0.00	0.32				
13.75	0.20	0.00	0.20				

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=41,433 sf 83.08% Impervious Runoff Depth>2.06"
Tc=6.0 min CN=94 Runoff=3.30 cfs 0.163 af

Subcatchment 1.1: Subcat 1.1 Runoff Area=6,710 sf 80.73% Impervious Runoff Depth>1.97"
Tc=6.0 min CN=93 Runoff=0.52 cfs 0.025 af

Subcatchment 2: Subcat 2 Runoff Area=15,202 sf 72.18% Impervious Runoff Depth>1.79"
Tc=6.0 min CN=91 Runoff=1.09 cfs 0.052 af

Subcatchment 2.1: Subcat 2.1 Runoff Area=10,695 sf 89.09% Impervious Runoff Depth>2.16"
Tc=6.0 min CN=95 Runoff=0.88 cfs 0.044 af

Subcatchment 3: Subcat 3 Runoff Area=25,255 sf 63.69% Impervious Runoff Depth>1.63"
Tc=6.0 min CN=89 Runoff=1.67 cfs 0.079 af

Subcatchment 4: Subcat 4 Runoff Area=5,423 sf 64.98% Impervious Runoff Depth>1.71"
Tc=6.0 min CN=90 Runoff=0.37 cfs 0.018 af

Link 4L: Proposed

Inflow=7.83 cfs 0.381 af
Primary=7.83 cfs 0.381 af

Total Runoff Area = 2.404 ac Runoff Volume = 0.381 af Average Runoff Depth = 1.90"
23.65% Pervious = 0.569 ac 76.35% Impervious = 1.835 ac

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 1: Subcat 1

Runoff = 3.30 cfs @ 12.13 hrs, Volume= 0.163 af, Depth> 2.06"
Routed to Link 4L : Proposed

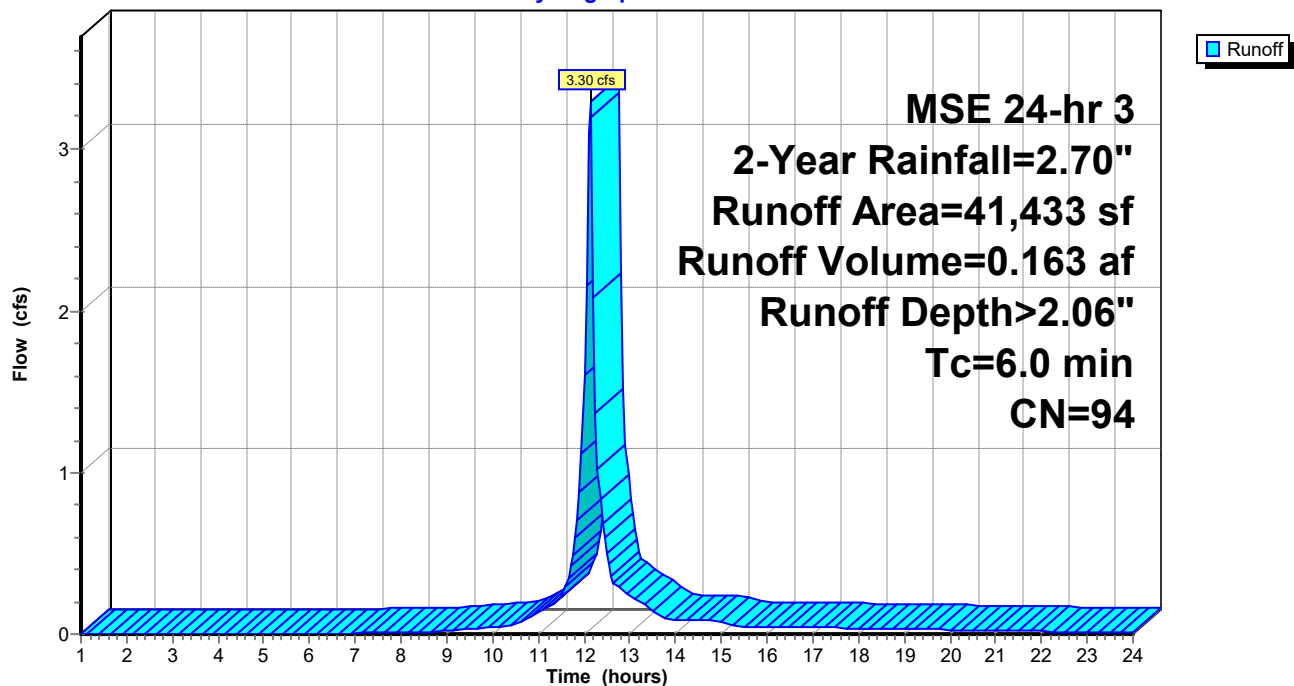
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
7,011	74	>75% Grass cover, Good, HSG C
13,905	98	Paved parking, HSG C
20,517	98	Unconnected roofs, HSG C
41,433	94	Weighted Average
7,011		16.92% Pervious Area
34,422		83.08% Impervious Area
20,517		59.60% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.33	1.71	0.09
1.25	0.01	0.00	0.00	14.25	2.35	1.73	0.09
1.50	0.02	0.00	0.00	14.50	2.38	1.75	0.09
1.75	0.02	0.00	0.00	14.75	2.40	1.77	0.08
2.00	0.02	0.00	0.00	15.00	2.42	1.79	0.08
2.25	0.03	0.00	0.00	15.25	2.44	1.81	0.05
2.50	0.03	0.00	0.00	15.50	2.45	1.82	0.05
2.75	0.04	0.00	0.00	15.75	2.46	1.83	0.05
3.00	0.04	0.00	0.00	16.00	2.47	1.84	0.05
3.25	0.05	0.00	0.00	16.25	2.49	1.86	0.04
3.50	0.06	0.00	0.00	16.50	2.50	1.87	0.04
3.75	0.06	0.00	0.00	16.75	2.51	1.88	0.04
4.00	0.07	0.00	0.00	17.00	2.52	1.89	0.04
4.25	0.08	0.00	0.00	17.25	2.53	1.90	0.04
4.50	0.09	0.00	0.00	17.50	2.54	1.91	0.04
4.75	0.09	0.00	0.00	17.75	2.55	1.92	0.04
5.00	0.10	0.00	0.00	18.00	2.56	1.93	0.04
5.25	0.11	0.00	0.00	18.25	2.57	1.94	0.03
5.50	0.12	0.00	0.00	18.50	2.58	1.95	0.03
5.75	0.13	0.00	0.00	18.75	2.59	1.96	0.03
6.00	0.14	0.00	0.00	19.00	2.60	1.96	0.03
6.25	0.15	0.00	0.00	19.25	2.61	1.97	0.03
6.50	0.16	0.00	0.00	19.50	2.61	1.98	0.03
6.75	0.17	0.00	0.00	19.75	2.62	1.99	0.03
7.00	0.18	0.00	0.01	20.00	2.63	1.99	0.03
7.25	0.19	0.01	0.01	20.25	2.64	2.00	0.03
7.50	0.20	0.01	0.01	20.50	2.64	2.01	0.02
7.75	0.21	0.01	0.01	20.75	2.65	2.01	0.02
8.00	0.23	0.01	0.01	21.00	2.66	2.02	0.02
8.25	0.24	0.02	0.01	21.25	2.66	2.02	0.02
8.50	0.25	0.02	0.01	21.50	2.67	2.03	0.02
8.75	0.26	0.02	0.02	21.75	2.67	2.03	0.02
9.00	0.28	0.03	0.02	22.00	2.68	2.04	0.02
9.25	0.30	0.04	0.03	22.25	2.68	2.04	0.02
9.50	0.32	0.05	0.04	22.50	2.68	2.05	0.01
9.75	0.35	0.06	0.04	22.75	2.69	2.05	0.01
10.00	0.37	0.07	0.04	23.00	2.69	2.05	0.01
10.25	0.40	0.08	0.05	23.25	2.69	2.05	0.01
10.50	0.42	0.09	0.05	23.50	2.70	2.06	0.01
10.75	0.47	0.12	0.09	23.75	2.70	2.06	0.01
11.00	0.52	0.15	0.13	24.00	2.70	2.06	0.01
11.25	0.59	0.19	0.17				
11.50	0.67	0.25	0.22				
11.75	0.83	0.37	0.49				
12.00	1.25	0.72	1.61				
12.25	1.87	1.27	1.37				
12.50	2.03	1.42	0.50				
12.75	2.11	1.50	0.29				
13.00	2.18	1.57	0.24				
13.25	2.23	1.62	0.20				
13.50	2.28	1.66	0.15				
13.75	2.30	1.68	0.09				

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 1.1: Subcat 1.1

Runoff = 0.52 cfs @ 12.13 hrs, Volume= 0.025 af, Depth> 1.97"
Routed to Link 4L : Proposed

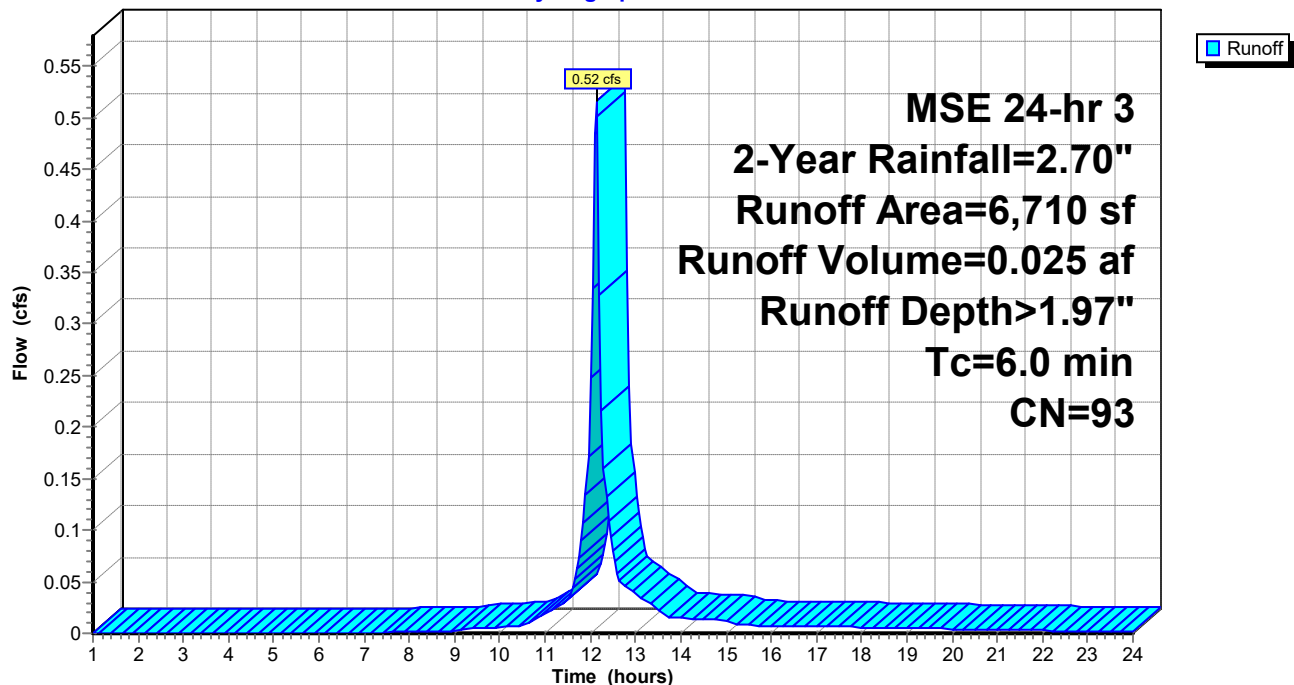
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
1,293	74	>75% Grass cover, Good, HSG C
5,417	98	Paved parking, HSG C
6,710	93	Weighted Average
1,293		19.27% Pervious Area
5,417		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1: Subcat 1.1

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Subcatchment 1.1: Subcat 1.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.33	1.62	0.01
1.25	0.01	0.00	0.00	14.25	2.35	1.64	0.01
1.50	0.02	0.00	0.00	14.50	2.38	1.66	0.01
1.75	0.02	0.00	0.00	14.75	2.40	1.69	0.01
2.00	0.02	0.00	0.00	15.00	2.42	1.71	0.01
2.25	0.03	0.00	0.00	15.25	2.44	1.72	0.01
2.50	0.03	0.00	0.00	15.50	2.45	1.73	0.01
2.75	0.04	0.00	0.00	15.75	2.46	1.74	0.01
3.00	0.04	0.00	0.00	16.00	2.47	1.75	0.01
3.25	0.05	0.00	0.00	16.25	2.49	1.77	0.01
3.50	0.06	0.00	0.00	16.50	2.50	1.78	0.01
3.75	0.06	0.00	0.00	16.75	2.51	1.79	0.01
4.00	0.07	0.00	0.00	17.00	2.52	1.80	0.01
4.25	0.08	0.00	0.00	17.25	2.53	1.81	0.01
4.50	0.09	0.00	0.00	17.50	2.54	1.82	0.01
4.75	0.09	0.00	0.00	17.75	2.55	1.83	0.01
5.00	0.10	0.00	0.00	18.00	2.56	1.84	0.01
5.25	0.11	0.00	0.00	18.25	2.57	1.85	0.01
5.50	0.12	0.00	0.00	18.50	2.58	1.86	0.01
5.75	0.13	0.00	0.00	18.75	2.59	1.86	0.01
6.00	0.14	0.00	0.00	19.00	2.60	1.87	0.00
6.25	0.15	0.00	0.00	19.25	2.61	1.88	0.00
6.50	0.16	0.00	0.00	19.50	2.61	1.89	0.00
6.75	0.17	0.00	0.00	19.75	2.62	1.89	0.00
7.00	0.18	0.00	0.00	20.00	2.63	1.90	0.00
7.25	0.19	0.00	0.00	20.25	2.64	1.91	0.00
7.50	0.20	0.00	0.00	20.50	2.64	1.91	0.00
7.75	0.21	0.00	0.00	20.75	2.65	1.92	0.00
8.00	0.23	0.01	0.00	21.00	2.66	1.93	0.00
8.25	0.24	0.01	0.00	21.25	2.66	1.93	0.00
8.50	0.25	0.01	0.00	21.50	2.67	1.94	0.00
8.75	0.26	0.02	0.00	21.75	2.67	1.94	0.00
9.00	0.28	0.02	0.00	22.00	2.68	1.95	0.00
9.25	0.30	0.02	0.00	22.25	2.68	1.95	0.00
9.50	0.32	0.03	0.00	22.50	2.68	1.95	0.00
9.75	0.35	0.04	0.01	22.75	2.69	1.96	0.00
10.00	0.37	0.05	0.01	23.00	2.69	1.96	0.00
10.25	0.40	0.06	0.01	23.25	2.69	1.96	0.00
10.50	0.42	0.07	0.01	23.50	2.70	1.96	0.00
10.75	0.47	0.09	0.01	23.75	2.70	1.97	0.00
11.00	0.52	0.12	0.02	24.00	2.70	1.97	0.00
11.25	0.59	0.16	0.03				
11.50	0.67	0.21	0.03				
11.75	0.83	0.32	0.07				
12.00	1.25	0.65	0.25				
12.25	1.87	1.20	0.22				
12.50	2.03	1.34	0.08				
12.75	2.11	1.42	0.05				
13.00	2.18	1.48	0.04				
13.25	2.23	1.53	0.03				
13.50	2.28	1.57	0.02				
13.75	2.30	1.60	0.02				

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 2: Subcat 2

Runoff = 1.09 cfs @ 12.13 hrs, Volume= 0.052 af, Depth> 1.79"
Routed to Link 4L : Proposed

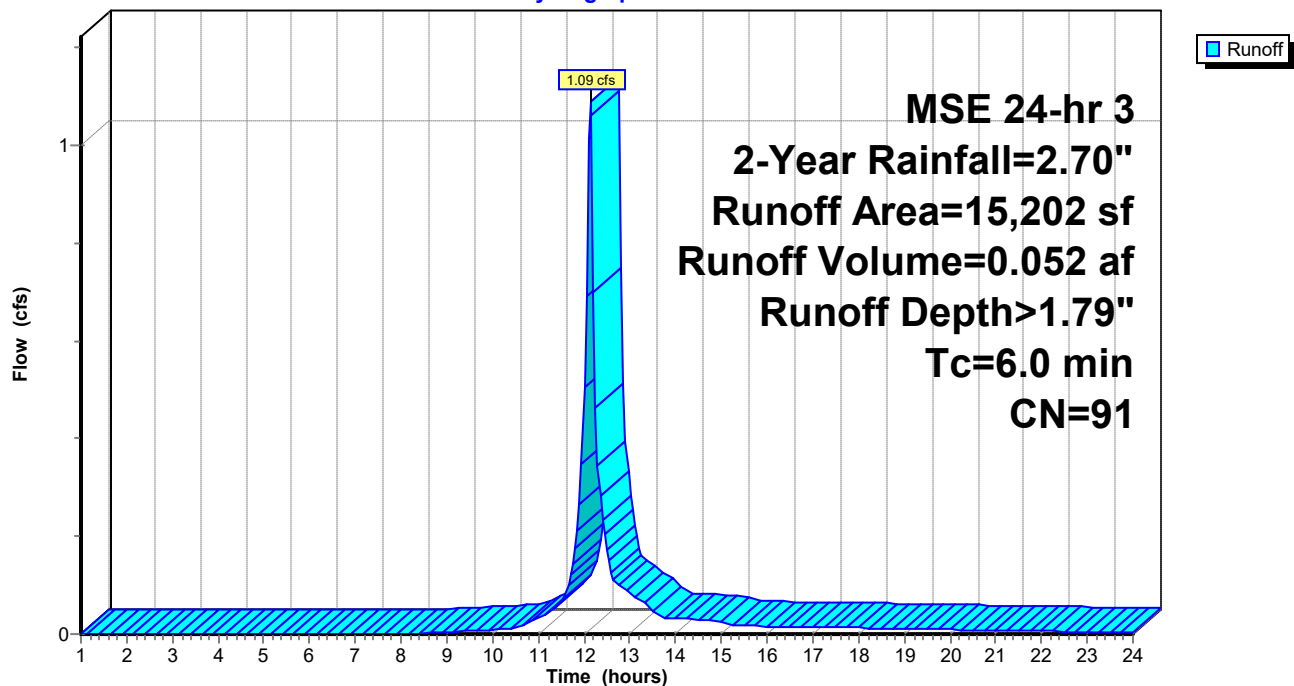
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
4,229	74	>75% Grass cover, Good, HSG C
10,974	98	Paved parking, HSG C
0	98	Unconnected roofs, HSG C
15,202	91	Weighted Average
4,229		27.82% Pervious Area
10,974		72.18% Impervious Area
0		0.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.33	1.46	0.03
1.25	0.01	0.00	0.00	14.25	2.35	1.48	0.03
1.50	0.02	0.00	0.00	14.50	2.38	1.50	0.03
1.75	0.02	0.00	0.00	14.75	2.40	1.52	0.03
2.00	0.02	0.00	0.00	15.00	2.42	1.54	0.03
2.25	0.03	0.00	0.00	15.25	2.44	1.55	0.02
2.50	0.03	0.00	0.00	15.50	2.45	1.56	0.02
2.75	0.04	0.00	0.00	15.75	2.46	1.58	0.02
3.00	0.04	0.00	0.00	16.00	2.47	1.59	0.02
3.25	0.05	0.00	0.00	16.25	2.49	1.60	0.02
3.50	0.06	0.00	0.00	16.50	2.50	1.61	0.02
3.75	0.06	0.00	0.00	16.75	2.51	1.62	0.01
4.00	0.07	0.00	0.00	17.00	2.52	1.63	0.01
4.25	0.08	0.00	0.00	17.25	2.53	1.64	0.01
4.50	0.09	0.00	0.00	17.50	2.54	1.65	0.01
4.75	0.09	0.00	0.00	17.75	2.55	1.66	0.01
5.00	0.10	0.00	0.00	18.00	2.56	1.67	0.01
5.25	0.11	0.00	0.00	18.25	2.57	1.68	0.01
5.50	0.12	0.00	0.00	18.50	2.58	1.68	0.01
5.75	0.13	0.00	0.00	18.75	2.59	1.69	0.01
6.00	0.14	0.00	0.00	19.00	2.60	1.70	0.01
6.25	0.15	0.00	0.00	19.25	2.61	1.71	0.01
6.50	0.16	0.00	0.00	19.50	2.61	1.72	0.01
6.75	0.17	0.00	0.00	19.75	2.62	1.72	0.01
7.00	0.18	0.00	0.00	20.00	2.63	1.73	0.01
7.25	0.19	0.00	0.00	20.25	2.64	1.74	0.01
7.50	0.20	0.00	0.00	20.50	2.64	1.74	0.01
7.75	0.21	0.00	0.00	20.75	2.65	1.75	0.01
8.00	0.23	0.00	0.00	21.00	2.66	1.75	0.01
8.25	0.24	0.00	0.00	21.25	2.66	1.76	0.01
8.50	0.25	0.00	0.00	21.50	2.67	1.76	0.01
8.75	0.26	0.00	0.00	21.75	2.67	1.77	0.01
9.00	0.28	0.01	0.00	22.00	2.68	1.77	0.01
9.25	0.30	0.01	0.01	22.25	2.68	1.77	0.01
9.50	0.32	0.01	0.01	22.50	2.68	1.78	0.01
9.75	0.35	0.02	0.01	22.75	2.69	1.78	0.00
10.00	0.37	0.03	0.01	23.00	2.69	1.78	0.00
10.25	0.40	0.03	0.01	23.25	2.69	1.79	0.00
10.50	0.42	0.04	0.01	23.50	2.70	1.79	0.00
10.75	0.47	0.06	0.02	23.75	2.70	1.79	0.00
11.00	0.52	0.08	0.03	24.00	2.70	1.79	0.00
11.25	0.59	0.11	0.05				
11.50	0.67	0.15	0.06				
11.75	0.83	0.25	0.14				
12.00	1.25	0.54	0.50				
12.25	1.87	1.05	0.46				
12.50	2.03	1.19	0.17				
12.75	2.11	1.26	0.10				
13.00	2.18	1.32	0.08				
13.25	2.23	1.37	0.07				
13.50	2.28	1.41	0.05				
13.75	2.30	1.43	0.03				

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 2.1: Subcat 2.1

Runoff = 0.88 cfs @ 12.13 hrs, Volume= 0.044 af, Depth> 2.16"
Routed to Link 4L : Proposed

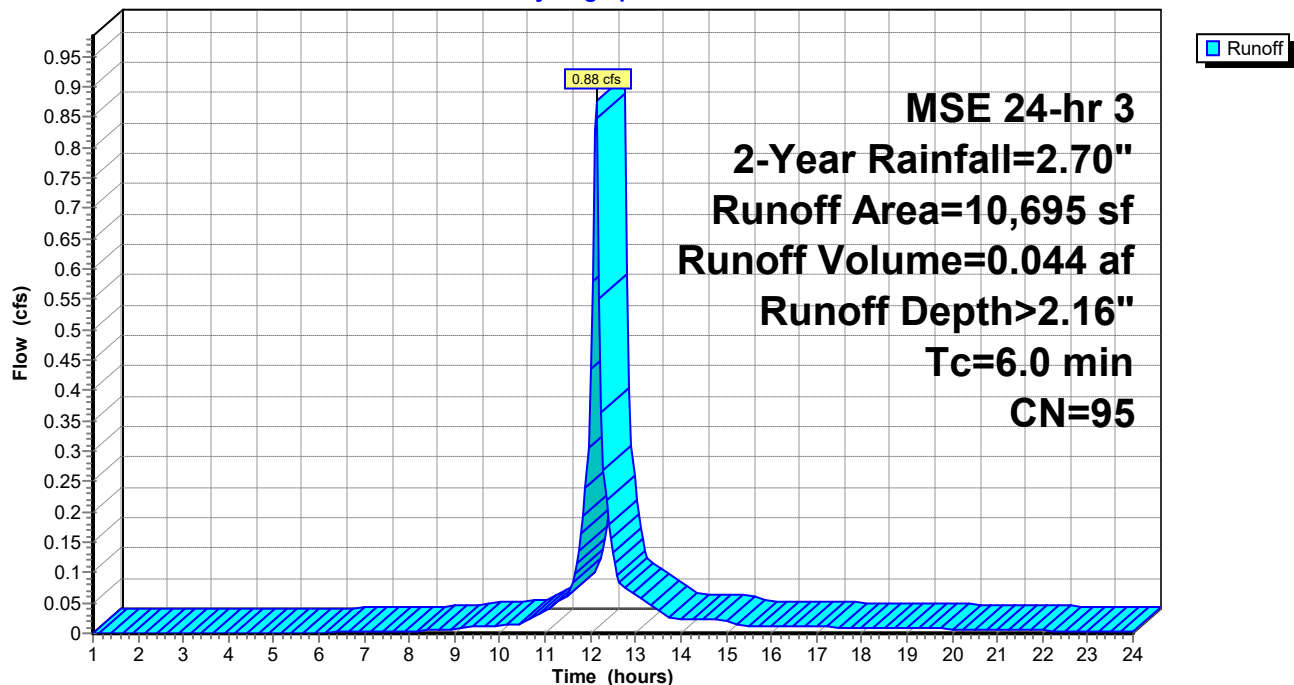
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
1,167	74	>75% Grass cover, Good, HSG C
9,528	98	Paved parking, HSG C
10,695	95	Weighted Average
1,167		10.91% Pervious Area
9,528		89.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2.1: Subcat 2.1

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Subcatchment 2.1: Subcat 2.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.33	1.80	0.02
1.25	0.01	0.00	0.00	14.25	2.35	1.82	0.02
1.50	0.02	0.00	0.00	14.50	2.38	1.84	0.02
1.75	0.02	0.00	0.00	14.75	2.40	1.87	0.02
2.00	0.02	0.00	0.00	15.00	2.42	1.89	0.02
2.25	0.03	0.00	0.00	15.25	2.44	1.90	0.01
2.50	0.03	0.00	0.00	15.50	2.45	1.91	0.01
2.75	0.04	0.00	0.00	15.75	2.46	1.93	0.01
3.00	0.04	0.00	0.00	16.00	2.47	1.94	0.01
3.25	0.05	0.00	0.00	16.25	2.49	1.95	0.01
3.50	0.06	0.00	0.00	16.50	2.50	1.96	0.01
3.75	0.06	0.00	0.00	16.75	2.51	1.97	0.01
4.00	0.07	0.00	0.00	17.00	2.52	1.98	0.01
4.25	0.08	0.00	0.00	17.25	2.53	1.99	0.01
4.50	0.09	0.00	0.00	17.50	2.54	2.00	0.01
4.75	0.09	0.00	0.00	17.75	2.55	2.01	0.01
5.00	0.10	0.00	0.00	18.00	2.56	2.02	0.01
5.25	0.11	0.00	0.00	18.25	2.57	2.03	0.01
5.50	0.12	0.00	0.00	18.50	2.58	2.04	0.01
5.75	0.13	0.00	0.00	18.75	2.59	2.05	0.01
6.00	0.14	0.00	0.00	19.00	2.60	2.06	0.01
6.25	0.15	0.00	0.00	19.25	2.61	2.07	0.01
6.50	0.16	0.00	0.00	19.50	2.61	2.07	0.01
6.75	0.17	0.01	0.00	19.75	2.62	2.08	0.01
7.00	0.18	0.01	0.00	20.00	2.63	2.09	0.01
7.25	0.19	0.01	0.00	20.25	2.64	2.10	0.01
7.50	0.20	0.01	0.00	20.50	2.64	2.10	0.01
7.75	0.21	0.02	0.00	20.75	2.65	2.11	0.01
8.00	0.23	0.02	0.00	21.00	2.66	2.11	0.01
8.25	0.24	0.03	0.00	21.25	2.66	2.12	0.01
8.50	0.25	0.03	0.00	21.50	2.67	2.12	0.00
8.75	0.26	0.04	0.01	21.75	2.67	2.13	0.00
9.00	0.28	0.04	0.01	22.00	2.68	2.13	0.00
9.25	0.30	0.05	0.01	22.25	2.68	2.14	0.00
9.50	0.32	0.06	0.01	22.50	2.68	2.14	0.00
9.75	0.35	0.08	0.01	22.75	2.69	2.14	0.00
10.00	0.37	0.09	0.01	23.00	2.69	2.15	0.00
10.25	0.40	0.10	0.01	23.25	2.69	2.15	0.00
10.50	0.42	0.12	0.02	23.50	2.70	2.15	0.00
10.75	0.47	0.15	0.03	23.75	2.70	2.16	0.00
11.00	0.52	0.18	0.04	24.00	2.70	2.16	0.00
11.25	0.59	0.23	0.05				
11.50	0.67	0.29	0.06				
11.75	0.83	0.42	0.13				
12.00	1.25	0.78	0.43				
12.25	1.87	1.36	0.36				
12.50	2.03	1.51	0.13				
12.75	2.11	1.59	0.08				
13.00	2.18	1.65	0.06				
13.25	2.23	1.71	0.05				
13.50	2.28	1.75	0.04				
13.75	2.30	1.77	0.02				

23610 Proposed

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 3: Subcat 3

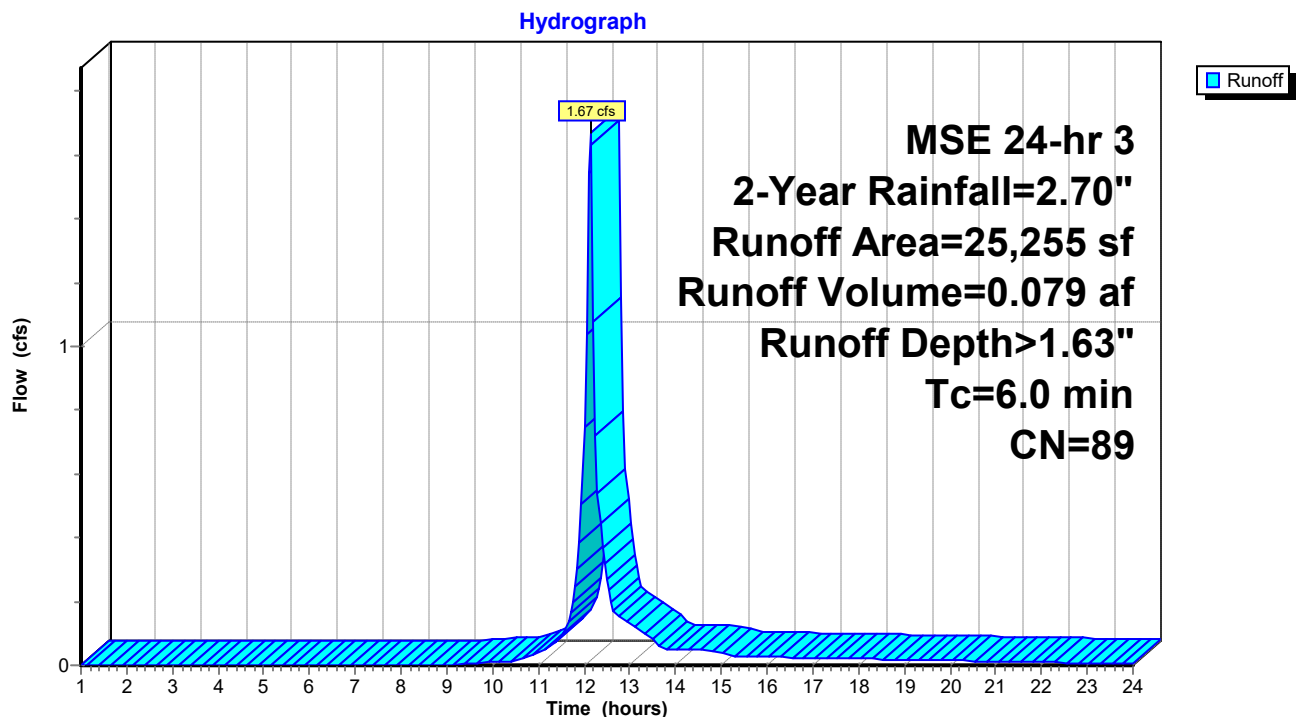
Runoff = 1.67 cfs @ 12.13 hrs, Volume= 0.079 af, Depth> 1.63"
Routed to Link 4L : Proposed

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
9,171	74	>75% Grass cover, Good, HSG C
16,085	98	Paved parking, HSG C
25,255	89	Weighted Average
9,171		36.31% Pervious Area
16,085		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.33	1.31	0.05
1.25	0.01	0.00	0.00	14.25	2.35	1.33	0.05
1.50	0.02	0.00	0.00	14.50	2.38	1.35	0.05
1.75	0.02	0.00	0.00	14.75	2.40	1.37	0.05
2.00	0.02	0.00	0.00	15.00	2.42	1.39	0.04
2.25	0.03	0.00	0.00	15.25	2.44	1.40	0.03
2.50	0.03	0.00	0.00	15.50	2.45	1.41	0.03
2.75	0.04	0.00	0.00	15.75	2.46	1.42	0.03
3.00	0.04	0.00	0.00	16.00	2.47	1.43	0.03
3.25	0.05	0.00	0.00	16.25	2.49	1.44	0.02
3.50	0.06	0.00	0.00	16.50	2.50	1.45	0.02
3.75	0.06	0.00	0.00	16.75	2.51	1.46	0.02
4.00	0.07	0.00	0.00	17.00	2.52	1.47	0.02
4.25	0.08	0.00	0.00	17.25	2.53	1.48	0.02
4.50	0.09	0.00	0.00	17.50	2.54	1.49	0.02
4.75	0.09	0.00	0.00	17.75	2.55	1.50	0.02
5.00	0.10	0.00	0.00	18.00	2.56	1.51	0.02
5.25	0.11	0.00	0.00	18.25	2.57	1.52	0.02
5.50	0.12	0.00	0.00	18.50	2.58	1.53	0.02
5.75	0.13	0.00	0.00	18.75	2.59	1.53	0.02
6.00	0.14	0.00	0.00	19.00	2.60	1.54	0.02
6.25	0.15	0.00	0.00	19.25	2.61	1.55	0.02
6.50	0.16	0.00	0.00	19.50	2.61	1.56	0.02
6.75	0.17	0.00	0.00	19.75	2.62	1.56	0.02
7.00	0.18	0.00	0.00	20.00	2.63	1.57	0.01
7.25	0.19	0.00	0.00	20.25	2.64	1.57	0.01
7.50	0.20	0.00	0.00	20.50	2.64	1.58	0.01
7.75	0.21	0.00	0.00	20.75	2.65	1.59	0.01
8.00	0.23	0.00	0.00	21.00	2.66	1.59	0.01
8.25	0.24	0.00	0.00	21.25	2.66	1.60	0.01
8.50	0.25	0.00	0.00	21.50	2.67	1.60	0.01
8.75	0.26	0.00	0.00	21.75	2.67	1.61	0.01
9.00	0.28	0.00	0.00	22.00	2.68	1.61	0.01
9.25	0.30	0.00	0.00	22.25	2.68	1.61	0.01
9.50	0.32	0.00	0.01	22.50	2.68	1.62	0.01
9.75	0.35	0.01	0.01	22.75	2.69	1.62	0.01
10.00	0.37	0.01	0.01	23.00	2.69	1.62	0.01
10.25	0.40	0.02	0.01	23.25	2.69	1.63	0.01
10.50	0.42	0.02	0.01	23.50	2.70	1.63	0.01
10.75	0.47	0.03	0.03	23.75	2.70	1.63	0.00
11.00	0.52	0.05	0.04	24.00	2.70	1.63	0.00
11.25	0.59	0.07	0.06				
11.50	0.67	0.11	0.08				
11.75	0.83	0.19	0.20				
12.00	1.25	0.45	0.75				
12.25	1.87	0.92	0.72				
12.50	2.03	1.05	0.27				
12.75	2.11	1.12	0.16				
13.00	2.18	1.18	0.13				
13.25	2.23	1.23	0.11				
13.50	2.28	1.26	0.08				
13.75	2.30	1.28	0.05				

23610 Proposed

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MSE 24-hr 3 2-Year Rainfall=2.70"

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.37 cfs @ 12.13 hrs, Volume= 0.018 af, Depth> 1.71"
Routed to Link 4L : Proposed

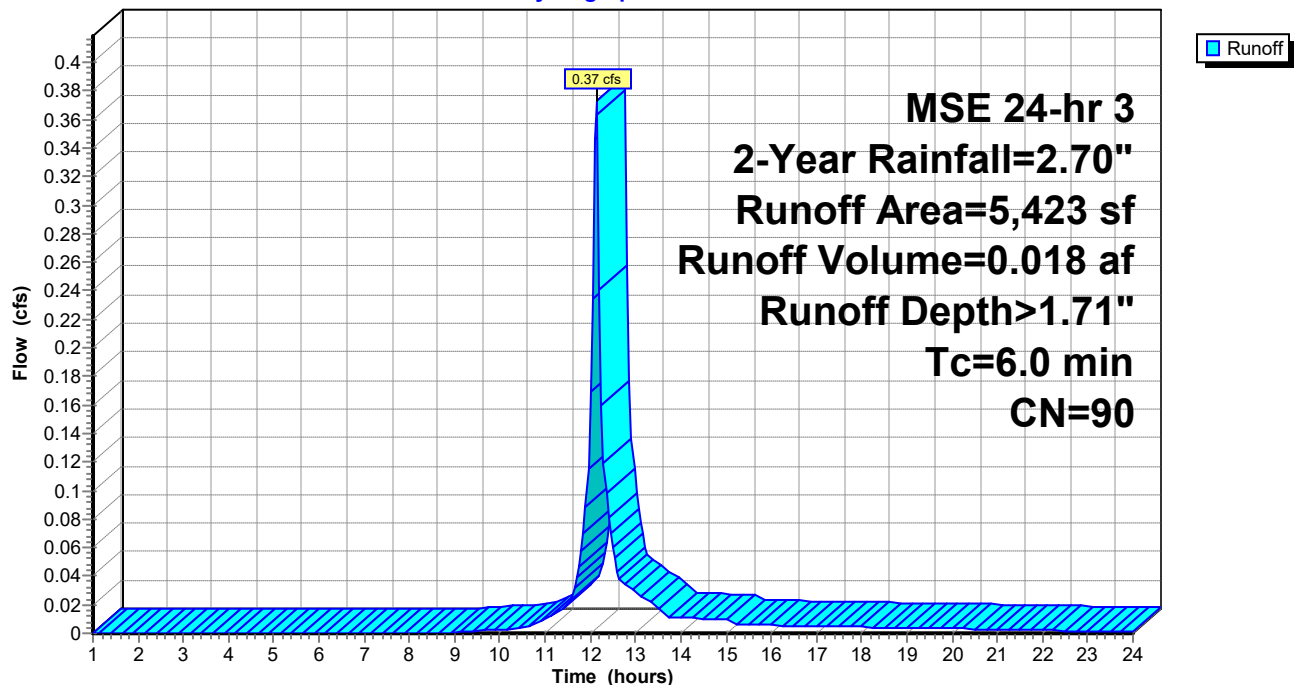
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.70"

Area (sf)	CN	Description
1,899	74	>75% Grass cover, Good, HSG C
3,524	98	Paved parking, HSG C
5,423	90	Weighted Average
1,899		35.02% Pervious Area
3,524		64.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	2.33	1.38	0.01
1.25	0.01	0.00	0.00	14.25	2.35	1.40	0.01
1.50	0.02	0.00	0.00	14.50	2.38	1.42	0.01
1.75	0.02	0.00	0.00	14.75	2.40	1.44	0.01
2.00	0.02	0.00	0.00	15.00	2.42	1.46	0.01
2.25	0.03	0.00	0.00	15.25	2.44	1.47	0.01
2.50	0.03	0.00	0.00	15.50	2.45	1.49	0.01
2.75	0.04	0.00	0.00	15.75	2.46	1.50	0.01
3.00	0.04	0.00	0.00	16.00	2.47	1.51	0.01
3.25	0.05	0.00	0.00	16.25	2.49	1.52	0.01
3.50	0.06	0.00	0.00	16.50	2.50	1.53	0.01
3.75	0.06	0.00	0.00	16.75	2.51	1.54	0.01
4.00	0.07	0.00	0.00	17.00	2.52	1.55	0.01
4.25	0.08	0.00	0.00	17.25	2.53	1.56	0.00
4.50	0.09	0.00	0.00	17.50	2.54	1.57	0.00
4.75	0.09	0.00	0.00	17.75	2.55	1.58	0.00
5.00	0.10	0.00	0.00	18.00	2.56	1.59	0.00
5.25	0.11	0.00	0.00	18.25	2.57	1.60	0.00
5.50	0.12	0.00	0.00	18.50	2.58	1.60	0.00
5.75	0.13	0.00	0.00	18.75	2.59	1.61	0.00
6.00	0.14	0.00	0.00	19.00	2.60	1.62	0.00
6.25	0.15	0.00	0.00	19.25	2.61	1.63	0.00
6.50	0.16	0.00	0.00	19.50	2.61	1.63	0.00
6.75	0.17	0.00	0.00	19.75	2.62	1.64	0.00
7.00	0.18	0.00	0.00	20.00	2.63	1.65	0.00
7.25	0.19	0.00	0.00	20.25	2.64	1.65	0.00
7.50	0.20	0.00	0.00	20.50	2.64	1.66	0.00
7.75	0.21	0.00	0.00	20.75	2.65	1.66	0.00
8.00	0.23	0.00	0.00	21.00	2.66	1.67	0.00
8.25	0.24	0.00	0.00	21.25	2.66	1.68	0.00
8.50	0.25	0.00	0.00	21.50	2.67	1.68	0.00
8.75	0.26	0.00	0.00	21.75	2.67	1.68	0.00
9.00	0.28	0.00	0.00	22.00	2.68	1.69	0.00
9.25	0.30	0.01	0.00	22.25	2.68	1.69	0.00
9.50	0.32	0.01	0.00	22.50	2.68	1.70	0.00
9.75	0.35	0.01	0.00	22.75	2.69	1.70	0.00
10.00	0.37	0.02	0.00	23.00	2.69	1.70	0.00
10.25	0.40	0.02	0.00	23.25	2.69	1.70	0.00
10.50	0.42	0.03	0.00	23.50	2.70	1.71	0.00
10.75	0.47	0.04	0.01	23.75	2.70	1.71	0.00
11.00	0.52	0.06	0.01	24.00	2.70	1.71	0.00
11.25	0.59	0.09	0.01				
11.50	0.67	0.13	0.02				
11.75	0.83	0.22	0.05				
12.00	1.25	0.49	0.17				
12.25	1.87	0.98	0.16				
12.50	2.03	1.12	0.06				
12.75	2.11	1.19	0.03				
13.00	2.18	1.25	0.03				
13.25	2.23	1.30	0.02				
13.50	2.28	1.33	0.02				
13.75	2.30	1.36	0.01				

23610 Proposed

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MSE 24-hr 3 2-Year Rainfall=2.70"

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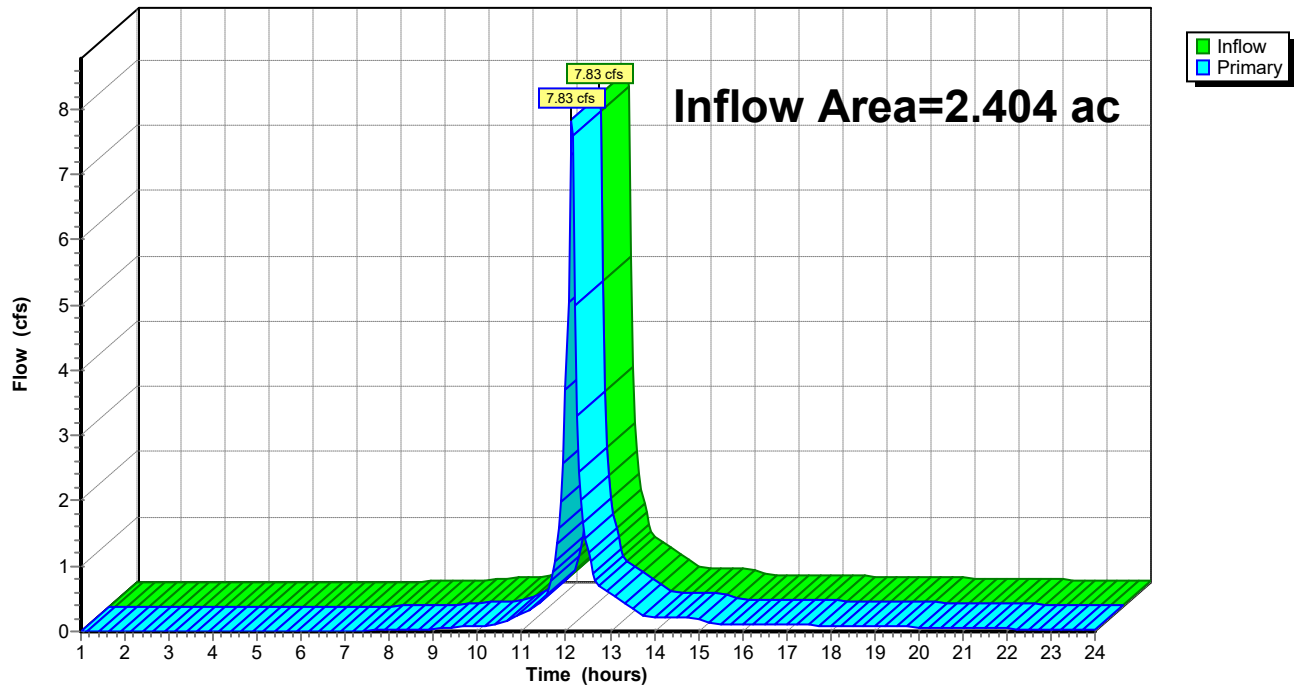
Summary for Link 4L: Proposed

Inflow Area = 2.404 ac, 76.35% Impervious, Inflow Depth > 1.90" for 2-Year event
Inflow = 7.83 cfs @ 12.13 hrs, Volume= 0.381 af
Primary = 7.83 cfs @ 12.13 hrs, Volume= 0.381 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 4L: Proposed

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.70"

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Hydrograph for Link 4L: Proposed

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
1.00	0.00	0.00	0.00	14.00	0.22	0.00	0.22
1.25	0.00	0.00	0.00	14.25	0.22	0.00	0.22
1.50	0.00	0.00	0.00	14.50	0.21	0.00	0.21
1.75	0.00	0.00	0.00	14.75	0.20	0.00	0.20
2.00	0.00	0.00	0.00	15.00	0.20	0.00	0.20
2.25	0.00	0.00	0.00	15.25	0.12	0.00	0.12
2.50	0.00	0.00	0.00	15.50	0.12	0.00	0.12
2.75	0.00	0.00	0.00	15.75	0.12	0.00	0.12
3.00	0.00	0.00	0.00	16.00	0.11	0.00	0.11
3.25	0.00	0.00	0.00	16.25	0.11	0.00	0.11
3.50	0.00	0.00	0.00	16.50	0.11	0.00	0.11
3.75	0.00	0.00	0.00	16.75	0.10	0.00	0.10
4.00	0.00	0.00	0.00	17.00	0.10	0.00	0.10
4.25	0.00	0.00	0.00	17.25	0.10	0.00	0.10
4.50	0.00	0.00	0.00	17.50	0.09	0.00	0.09
4.75	0.00	0.00	0.00	17.75	0.09	0.00	0.09
5.00	0.00	0.00	0.00	18.00	0.09	0.00	0.09
5.25	0.00	0.00	0.00	18.25	0.09	0.00	0.09
5.50	0.00	0.00	0.00	18.50	0.08	0.00	0.08
5.75	0.00	0.00	0.00	18.75	0.08	0.00	0.08
6.00	0.00	0.00	0.00	19.00	0.08	0.00	0.08
6.25	0.00	0.00	0.00	19.25	0.07	0.00	0.07
6.50	0.00	0.00	0.00	19.50	0.07	0.00	0.07
6.75	0.01	0.00	0.01	19.75	0.07	0.00	0.07
7.00	0.01	0.00	0.01	20.00	0.06	0.00	0.06
7.25	0.01	0.00	0.01	20.25	0.06	0.00	0.06
7.50	0.01	0.00	0.01	20.50	0.06	0.00	0.06
7.75	0.01	0.00	0.01	20.75	0.06	0.00	0.06
8.00	0.02	0.00	0.02	21.00	0.05	0.00	0.05
8.25	0.02	0.00	0.02	21.25	0.05	0.00	0.05
8.50	0.02	0.00	0.02	21.50	0.05	0.00	0.05
8.75	0.03	0.00	0.03	21.75	0.04	0.00	0.04
9.00	0.03	0.00	0.03	22.00	0.04	0.00	0.04
9.25	0.06	0.00	0.06	22.25	0.04	0.00	0.04
9.50	0.06	0.00	0.06	22.50	0.04	0.00	0.04
9.75	0.07	0.00	0.07	22.75	0.03	0.00	0.03
10.00	0.08	0.00	0.08	23.00	0.03	0.00	0.03
10.25	0.09	0.00	0.09	23.25	0.03	0.00	0.03
10.50	0.10	0.00	0.10	23.50	0.02	0.00	0.02
10.75	0.19	0.00	0.19	23.75	0.02	0.00	0.02
11.00	0.27	0.00	0.27	24.00	0.02	0.00	0.02
11.25	0.37	0.00	0.37				
11.50	0.48	0.00	0.48				
11.75	1.08	0.00	1.08				
12.00	3.71	0.00	3.71				
12.25	3.29	0.00	3.29				
12.50	1.22	0.00	1.22				
12.75	0.70	0.00	0.70				
13.00	0.58	0.00	0.58				
13.25	0.48	0.00	0.48				
13.50	0.36	0.00	0.36				
13.75	0.23	0.00	0.23				

23610 Proposed

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=41,433 sf 83.08% Impervious Runoff Depth>3.14" Tc=6.0 min CN=94 Runoff=4.89 cfs 0.249 af
Subcatchment 1.1: Subcat 1.1	Runoff Area=6,710 sf 80.73% Impervious Runoff Depth>3.03" Tc=6.0 min CN=93 Runoff=0.78 cfs 0.039 af
Subcatchment 2: Subcat 2	Runoff Area=15,202 sf 72.18% Impervious Runoff Depth>2.84" Tc=6.0 min CN=91 Runoff=1.68 cfs 0.082 af
Subcatchment 2.1: Subcat 2.1	Runoff Area=10,695 sf 89.09% Impervious Runoff Depth>3.24" Tc=6.0 min CN=95 Runoff=1.29 cfs 0.066 af
Subcatchment 3: Subcat 3	Runoff Area=25,255 sf 63.69% Impervious Runoff Depth>2.64" Tc=6.0 min CN=89 Runoff=2.65 cfs 0.128 af
Subcatchment 4: Subcat 4	Runoff Area=5,423 sf 64.98% Impervious Runoff Depth>2.74" Tc=6.0 min CN=90 Runoff=0.58 cfs 0.028 af
Link 4L: Proposed	Inflow=11.87 cfs 0.593 af Primary=11.87 cfs 0.593 af

Total Runoff Area = 2.404 ac Runoff Volume = 0.593 af Average Runoff Depth = 2.96"
23.65% Pervious = 0.569 ac 76.35% Impervious = 1.835 ac

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 1: Subcat 1

Runoff = 4.89 cfs @ 12.13 hrs, Volume= 0.249 af, Depth> 3.14"
Routed to Link 4L : Proposed

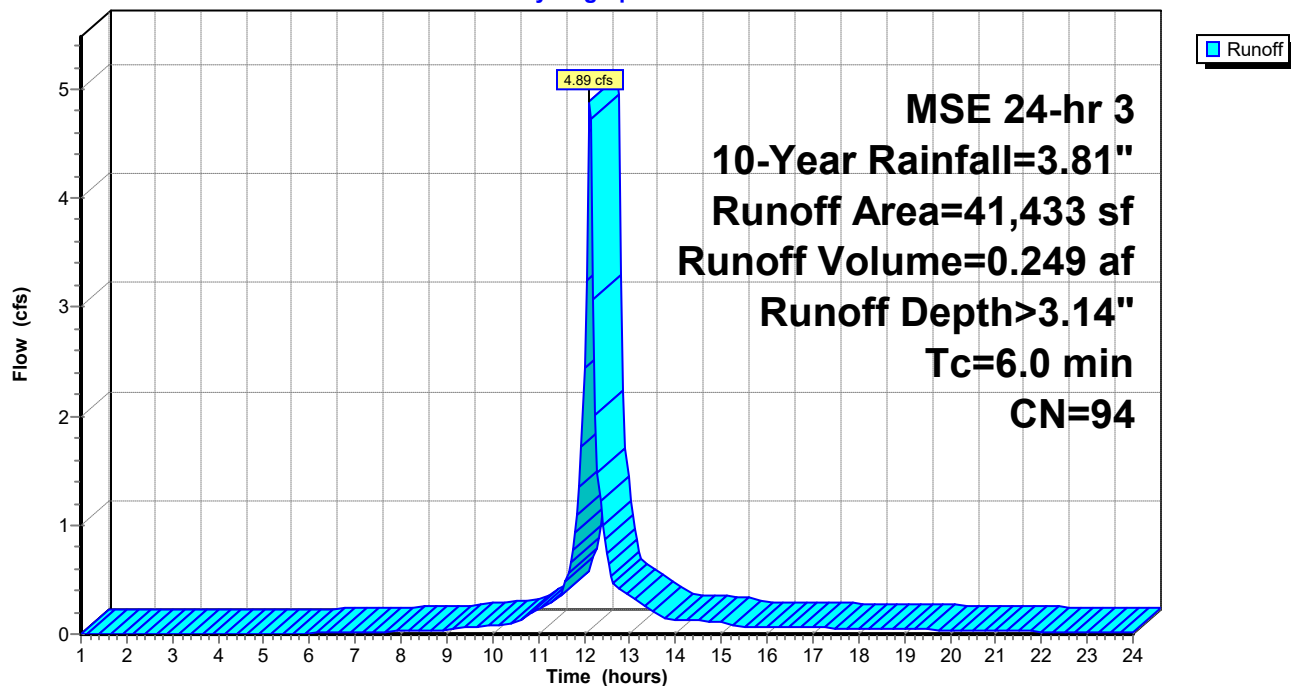
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
7,011	74	>75% Grass cover, Good, HSG C
13,905	98	Paved parking, HSG C
20,517	98	Unconnected roofs, HSG C
41,433	94	Weighted Average
7,011		16.92% Pervious Area
34,422		83.08% Impervious Area
20,517		59.60% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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MSE 24-hr 3 10-Year Rainfall=3.81"

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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	3.29	2.63	0.13
1.25	0.02	0.00	0.00	14.25	3.32	2.66	0.13
1.50	0.02	0.00	0.00	14.50	3.35	2.69	0.12
1.75	0.03	0.00	0.00	14.75	3.39	2.72	0.12
2.00	0.03	0.00	0.00	15.00	3.42	2.76	0.12
2.25	0.04	0.00	0.00	15.25	3.44	2.77	0.07
2.50	0.05	0.00	0.00	15.50	3.46	2.79	0.07
2.75	0.06	0.00	0.00	15.75	3.47	2.81	0.07
3.00	0.06	0.00	0.00	16.00	3.49	2.83	0.07
3.25	0.07	0.00	0.00	16.25	3.51	2.84	0.06
3.50	0.08	0.00	0.00	16.50	3.53	2.86	0.06
3.75	0.09	0.00	0.00	16.75	3.54	2.88	0.06
4.00	0.10	0.00	0.00	17.00	3.56	2.89	0.06
4.25	0.11	0.00	0.00	17.25	3.57	2.91	0.06
4.50	0.12	0.00	0.00	17.50	3.59	2.92	0.06
4.75	0.13	0.00	0.00	17.75	3.60	2.94	0.05
5.00	0.14	0.00	0.00	18.00	3.62	2.95	0.05
5.25	0.16	0.00	0.00	18.25	3.63	2.96	0.05
5.50	0.17	0.00	0.00	18.50	3.64	2.97	0.05
5.75	0.18	0.00	0.01	18.75	3.65	2.99	0.05
6.00	0.19	0.01	0.01	19.00	3.67	3.00	0.05
6.25	0.21	0.01	0.01	19.25	3.68	3.01	0.04
6.50	0.22	0.01	0.01	19.50	3.69	3.02	0.04
6.75	0.24	0.02	0.01	19.75	3.70	3.03	0.04
7.00	0.25	0.02	0.02	20.00	3.71	3.04	0.04
7.25	0.27	0.03	0.02	20.25	3.72	3.05	0.04
7.50	0.28	0.03	0.02	20.50	3.73	3.06	0.03
7.75	0.30	0.04	0.02	20.75	3.74	3.07	0.03
8.00	0.32	0.04	0.03	21.00	3.75	3.08	0.03
8.25	0.34	0.05	0.03	21.25	3.75	3.08	0.03
8.50	0.35	0.06	0.03	21.50	3.76	3.09	0.03
8.75	0.37	0.07	0.03	21.75	3.77	3.10	0.03
9.00	0.39	0.08	0.04	22.00	3.78	3.10	0.02
9.25	0.42	0.09	0.06	22.25	3.78	3.11	0.02
9.50	0.46	0.11	0.07	22.50	3.79	3.12	0.02
9.75	0.49	0.13	0.07	22.75	3.79	3.12	0.02
10.00	0.52	0.15	0.08	23.00	3.80	3.13	0.02
10.25	0.56	0.17	0.09	23.25	3.80	3.13	0.02
10.50	0.60	0.20	0.09	23.50	3.80	3.13	0.01
10.75	0.66	0.24	0.16	23.75	3.81	3.14	0.01
11.00	0.73	0.30	0.22	24.00	3.81	3.14	0.01
11.25	0.83	0.37	0.29				
11.50	0.94	0.46	0.36				
11.75	1.17	0.65	0.77				
12.00	1.76	1.18	2.44				
12.25	2.64	2.00	2.01				
12.50	2.87	2.22	0.73				
12.75	2.98	2.33	0.42				
13.00	3.08	2.42	0.35				
13.25	3.15	2.50	0.28				
13.50	3.21	2.56	0.21				
13.75	3.25	2.59	0.14				

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 1.1: Subcat 1.1

Runoff = 0.78 cfs @ 12.13 hrs, Volume= 0.039 af, Depth> 3.03"
Routed to Link 4L : Proposed

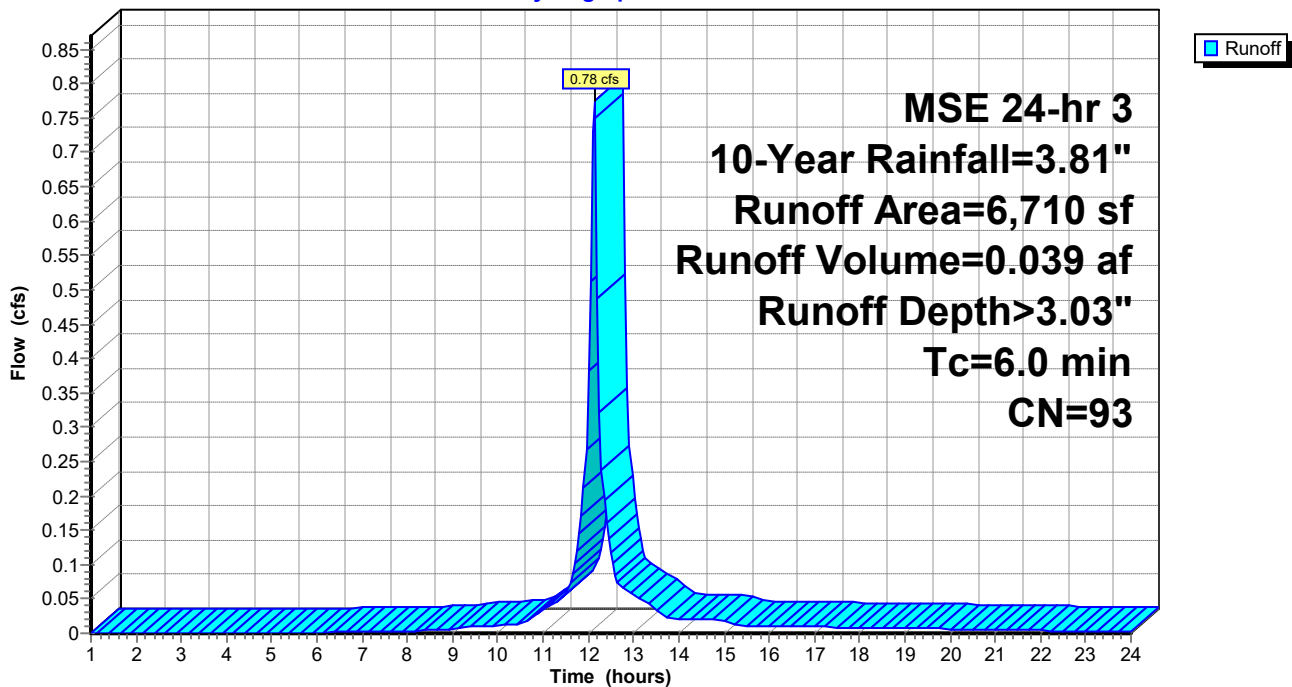
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
1,293	74	>75% Grass cover, Good, HSG C
5,417	98	Paved parking, HSG C
6,710	93	Weighted Average
1,293		19.27% Pervious Area
5,417		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1: Subcat 1.1

Hydrograph



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MSE 24-hr 3 10-Year Rainfall=3.81"

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Hydrograph for Subcatchment 1.1: Subcat 1.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	3.29	2.53	0.02
1.25	0.02	0.00	0.00	14.25	3.32	2.56	0.02
1.50	0.02	0.00	0.00	14.50	3.35	2.59	0.02
1.75	0.03	0.00	0.00	14.75	3.39	2.63	0.02
2.00	0.03	0.00	0.00	15.00	3.42	2.66	0.02
2.25	0.04	0.00	0.00	15.25	3.44	2.67	0.01
2.50	0.05	0.00	0.00	15.50	3.46	2.69	0.01
2.75	0.06	0.00	0.00	15.75	3.47	2.71	0.01
3.00	0.06	0.00	0.00	16.00	3.49	2.73	0.01
3.25	0.07	0.00	0.00	16.25	3.51	2.74	0.01
3.50	0.08	0.00	0.00	16.50	3.53	2.76	0.01
3.75	0.09	0.00	0.00	16.75	3.54	2.77	0.01
4.00	0.10	0.00	0.00	17.00	3.56	2.79	0.01
4.25	0.11	0.00	0.00	17.25	3.57	2.81	0.01
4.50	0.12	0.00	0.00	17.50	3.59	2.82	0.01
4.75	0.13	0.00	0.00	17.75	3.60	2.83	0.01
5.00	0.14	0.00	0.00	18.00	3.62	2.85	0.01
5.25	0.16	0.00	0.00	18.25	3.63	2.86	0.01
5.50	0.17	0.00	0.00	18.50	3.64	2.87	0.01
5.75	0.18	0.00	0.00	18.75	3.65	2.88	0.01
6.00	0.19	0.00	0.00	19.00	3.67	2.90	0.01
6.25	0.21	0.00	0.00	19.25	3.68	2.91	0.01
6.50	0.22	0.01	0.00	19.50	3.69	2.92	0.01
6.75	0.24	0.01	0.00	19.75	3.70	2.93	0.01
7.00	0.25	0.01	0.00	20.00	3.71	2.94	0.01
7.25	0.27	0.02	0.00	20.25	3.72	2.95	0.01
7.50	0.28	0.02	0.00	20.50	3.73	2.96	0.01
7.75	0.30	0.03	0.00	20.75	3.74	2.97	0.01
8.00	0.32	0.03	0.00	21.00	3.75	2.97	0.00
8.25	0.34	0.04	0.00	21.25	3.75	2.98	0.00
8.50	0.35	0.04	0.00	21.50	3.76	2.99	0.00
8.75	0.37	0.05	0.00	21.75	3.77	3.00	0.00
9.00	0.39	0.06	0.00	22.00	3.78	3.00	0.00
9.25	0.42	0.07	0.01	22.25	3.78	3.01	0.00
9.50	0.46	0.09	0.01	22.50	3.79	3.01	0.00
9.75	0.49	0.11	0.01	22.75	3.79	3.02	0.00
10.00	0.52	0.12	0.01	23.00	3.80	3.02	0.00
10.25	0.56	0.14	0.01	23.25	3.80	3.03	0.00
10.50	0.60	0.17	0.01	23.50	3.80	3.03	0.00
10.75	0.66	0.20	0.02	23.75	3.81	3.03	0.00
11.00	0.73	0.25	0.03	24.00	3.81	3.04	0.00
11.25	0.83	0.32	0.04				
11.50	0.94	0.41	0.05				
11.75	1.17	0.59	0.12				
12.00	1.76	1.10	0.38				
12.25	2.64	1.91	0.32				
12.50	2.87	2.13	0.12				
12.75	2.98	2.23	0.07				
13.00	3.08	2.33	0.06				
13.25	3.15	2.40	0.05				
13.50	3.21	2.46	0.03				
13.75	3.25	2.49	0.02				

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 2: Subcat 2

Runoff = 1.68 cfs @ 12.13 hrs, Volume= 0.082 af, Depth> 2.84"
Routed to Link 4L : Proposed

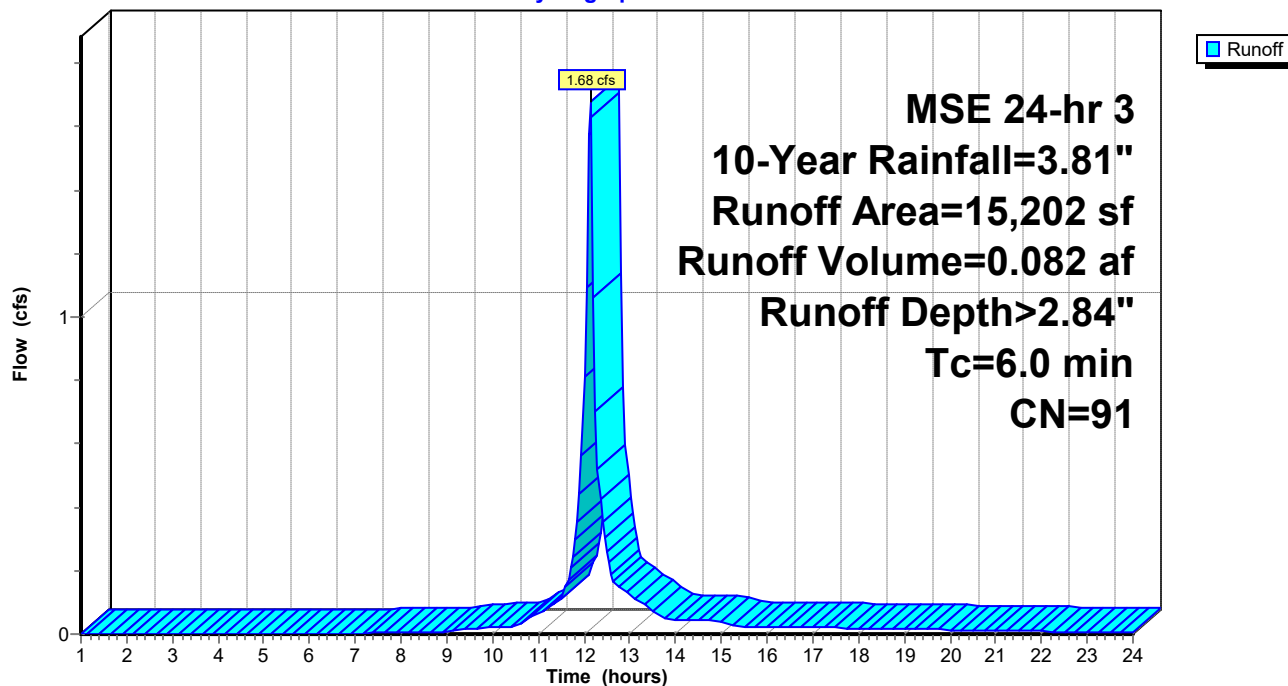
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
4,229	74	>75% Grass cover, Good, HSG C
10,974	98	Paved parking, HSG C
0	98	Unconnected roofs, HSG C
15,202	91	Weighted Average
4,229		27.82% Pervious Area
10,974		72.18% Impervious Area
0		0.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	3.29	2.34	0.05
1.25	0.02	0.00	0.00	14.25	3.32	2.37	0.05
1.50	0.02	0.00	0.00	14.50	3.35	2.40	0.04
1.75	0.03	0.00	0.00	14.75	3.39	2.43	0.04
2.00	0.03	0.00	0.00	15.00	3.42	2.46	0.04
2.25	0.04	0.00	0.00	15.25	3.44	2.48	0.03
2.50	0.05	0.00	0.00	15.50	3.46	2.50	0.02
2.75	0.06	0.00	0.00	15.75	3.47	2.52	0.02
3.00	0.06	0.00	0.00	16.00	3.49	2.53	0.02
3.25	0.07	0.00	0.00	16.25	3.51	2.55	0.02
3.50	0.08	0.00	0.00	16.50	3.53	2.56	0.02
3.75	0.09	0.00	0.00	16.75	3.54	2.58	0.02
4.00	0.10	0.00	0.00	17.00	3.56	2.60	0.02
4.25	0.11	0.00	0.00	17.25	3.57	2.61	0.02
4.50	0.12	0.00	0.00	17.50	3.59	2.62	0.02
4.75	0.13	0.00	0.00	17.75	3.60	2.64	0.02
5.00	0.14	0.00	0.00	18.00	3.62	2.65	0.02
5.25	0.16	0.00	0.00	18.25	3.63	2.66	0.02
5.50	0.17	0.00	0.00	18.50	3.64	2.68	0.02
5.75	0.18	0.00	0.00	18.75	3.65	2.69	0.02
6.00	0.19	0.00	0.00	19.00	3.67	2.70	0.02
6.25	0.21	0.00	0.00	19.25	3.68	2.71	0.02
6.50	0.22	0.00	0.00	19.50	3.69	2.72	0.01
6.75	0.24	0.00	0.00	19.75	3.70	2.73	0.01
7.00	0.25	0.00	0.00	20.00	3.71	2.74	0.01
7.25	0.27	0.00	0.00	20.25	3.72	2.75	0.01
7.50	0.28	0.01	0.00	20.50	3.73	2.76	0.01
7.75	0.30	0.01	0.00	20.75	3.74	2.77	0.01
8.00	0.32	0.01	0.00	21.00	3.75	2.78	0.01
8.25	0.34	0.02	0.01	21.25	3.75	2.78	0.01
8.50	0.35	0.02	0.01	21.50	3.76	2.79	0.01
8.75	0.37	0.03	0.01	21.75	3.77	2.80	0.01
9.00	0.39	0.03	0.01	22.00	3.78	2.80	0.01
9.25	0.42	0.04	0.01	22.25	3.78	2.81	0.01
9.50	0.46	0.05	0.02	22.50	3.79	2.81	0.01
9.75	0.49	0.07	0.02	22.75	3.79	2.82	0.01
10.00	0.52	0.08	0.02	23.00	3.80	2.82	0.01
10.25	0.56	0.10	0.02	23.25	3.80	2.83	0.01
10.50	0.60	0.11	0.02	23.50	3.80	2.83	0.00
10.75	0.66	0.15	0.05	23.75	3.81	2.83	0.00
11.00	0.73	0.19	0.06	24.00	3.81	2.84	0.00
11.25	0.83	0.25	0.08				
11.50	0.94	0.32	0.11				
11.75	1.17	0.48	0.24				
12.00	1.76	0.96	0.81				
12.25	2.64	1.74	0.70				
12.50	2.87	1.95	0.26				
12.75	2.98	2.05	0.15				
13.00	3.08	2.14	0.12				
13.25	3.15	2.21	0.10				
13.50	3.21	2.27	0.08				
13.75	3.25	2.31	0.05				

23610 Proposed

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 2.1: Subcat 2.1

Runoff = 1.29 cfs @ 12.13 hrs, Volume= 0.066 af, Depth> 3.24"
Routed to Link 4L : Proposed

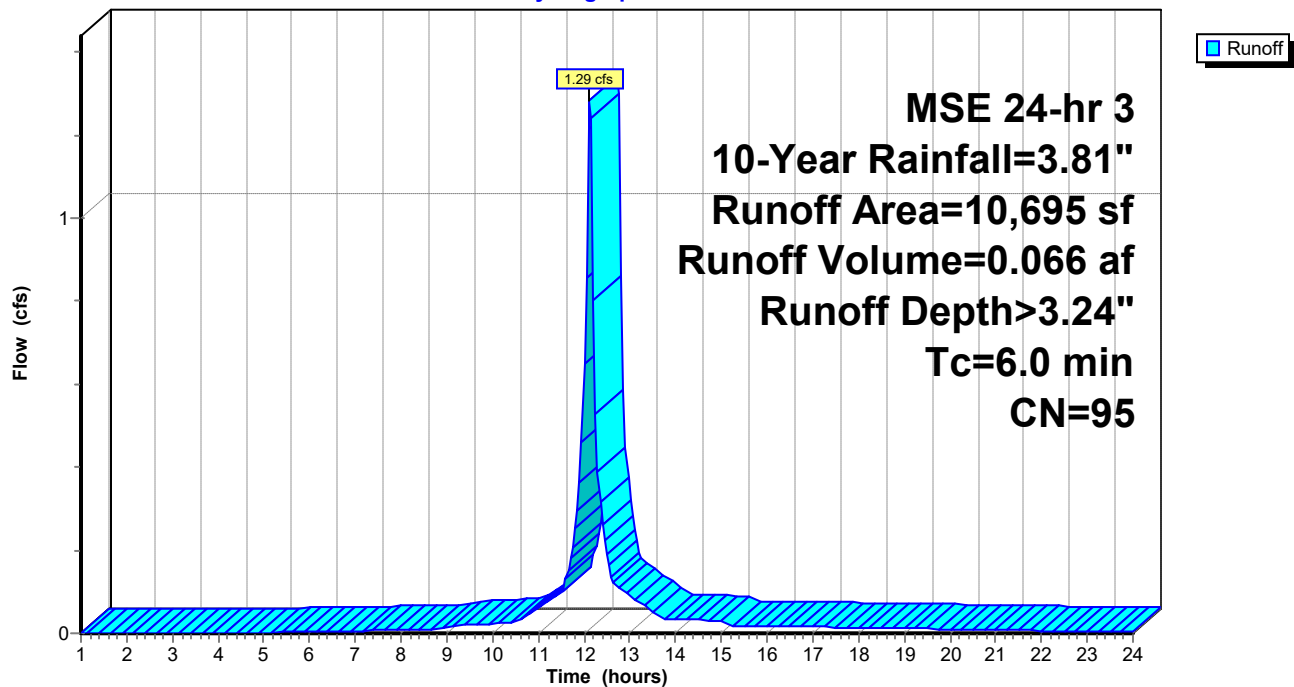
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
1,167	74	>75% Grass cover, Good, HSG C
9,528	98	Paved parking, HSG C
10,695	95	Weighted Average
1,167		10.91% Pervious Area
9,528		89.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2.1: Subcat 2.1

Hydrograph



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MSE 24-hr 3 10-Year Rainfall=3.81"

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Hydrograph for Subcatchment 2.1: Subcat 2.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	3.29	2.73	0.03
1.25	0.02	0.00	0.00	14.25	3.32	2.76	0.03
1.50	0.02	0.00	0.00	14.50	3.35	2.80	0.03
1.75	0.03	0.00	0.00	14.75	3.39	2.83	0.03
2.00	0.03	0.00	0.00	15.00	3.42	2.86	0.03
2.25	0.04	0.00	0.00	15.25	3.44	2.88	0.02
2.50	0.05	0.00	0.00	15.50	3.46	2.90	0.02
2.75	0.06	0.00	0.00	15.75	3.47	2.91	0.02
3.00	0.06	0.00	0.00	16.00	3.49	2.93	0.02
3.25	0.07	0.00	0.00	16.25	3.51	2.95	0.02
3.50	0.08	0.00	0.00	16.50	3.53	2.96	0.02
3.75	0.09	0.00	0.00	16.75	3.54	2.98	0.02
4.00	0.10	0.00	0.00	17.00	3.56	3.00	0.02
4.25	0.11	0.00	0.00	17.25	3.57	3.01	0.01
4.50	0.12	0.00	0.00	17.50	3.59	3.03	0.01
4.75	0.13	0.00	0.00	17.75	3.60	3.04	0.01
5.00	0.14	0.00	0.00	18.00	3.62	3.05	0.01
5.25	0.16	0.00	0.00	18.25	3.63	3.07	0.01
5.50	0.17	0.01	0.00	18.50	3.64	3.08	0.01
5.75	0.18	0.01	0.00	18.75	3.65	3.09	0.01
6.00	0.19	0.01	0.00	19.00	3.67	3.10	0.01
6.25	0.21	0.02	0.00	19.25	3.68	3.11	0.01
6.50	0.22	0.02	0.00	19.50	3.69	3.13	0.01
6.75	0.24	0.03	0.01	19.75	3.70	3.14	0.01
7.00	0.25	0.03	0.01	20.00	3.71	3.15	0.01
7.25	0.27	0.04	0.01	20.25	3.72	3.16	0.01
7.50	0.28	0.05	0.01	20.50	3.73	3.16	0.01
7.75	0.30	0.05	0.01	20.75	3.74	3.17	0.01
8.00	0.32	0.06	0.01	21.00	3.75	3.18	0.01
8.25	0.34	0.07	0.01	21.25	3.75	3.19	0.01
8.50	0.35	0.08	0.01	21.50	3.76	3.20	0.01
8.75	0.37	0.09	0.01	21.75	3.77	3.20	0.01
9.00	0.39	0.10	0.01	22.00	3.78	3.21	0.01
9.25	0.42	0.12	0.02	22.25	3.78	3.22	0.01
9.50	0.46	0.14	0.02	22.50	3.79	3.22	0.01
9.75	0.49	0.16	0.02	22.75	3.79	3.23	0.00
10.00	0.52	0.19	0.02	23.00	3.80	3.23	0.00
10.25	0.56	0.21	0.02	23.25	3.80	3.23	0.00
10.50	0.60	0.24	0.03	23.50	3.80	3.24	0.00
10.75	0.66	0.28	0.05	23.75	3.81	3.24	0.00
11.00	0.73	0.34	0.06	24.00	3.81	3.24	0.00
11.25	0.83	0.42	0.08				
11.50	0.94	0.52	0.10				
11.75	1.17	0.71	0.21				
12.00	1.76	1.26	0.65				
12.25	2.64	2.10	0.53				
12.50	2.87	2.32	0.19				
12.75	2.98	2.43	0.11				
13.00	3.08	2.52	0.09				
13.25	3.15	2.60	0.07				
13.50	3.21	2.66	0.06				
13.75	3.25	2.69	0.04				

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Summary for Subcatchment 3: Subcat 3

Runoff = 2.65 cfs @ 12.13 hrs, Volume= 0.128 af, Depth> 2.64"
Routed to Link 4L : Proposed

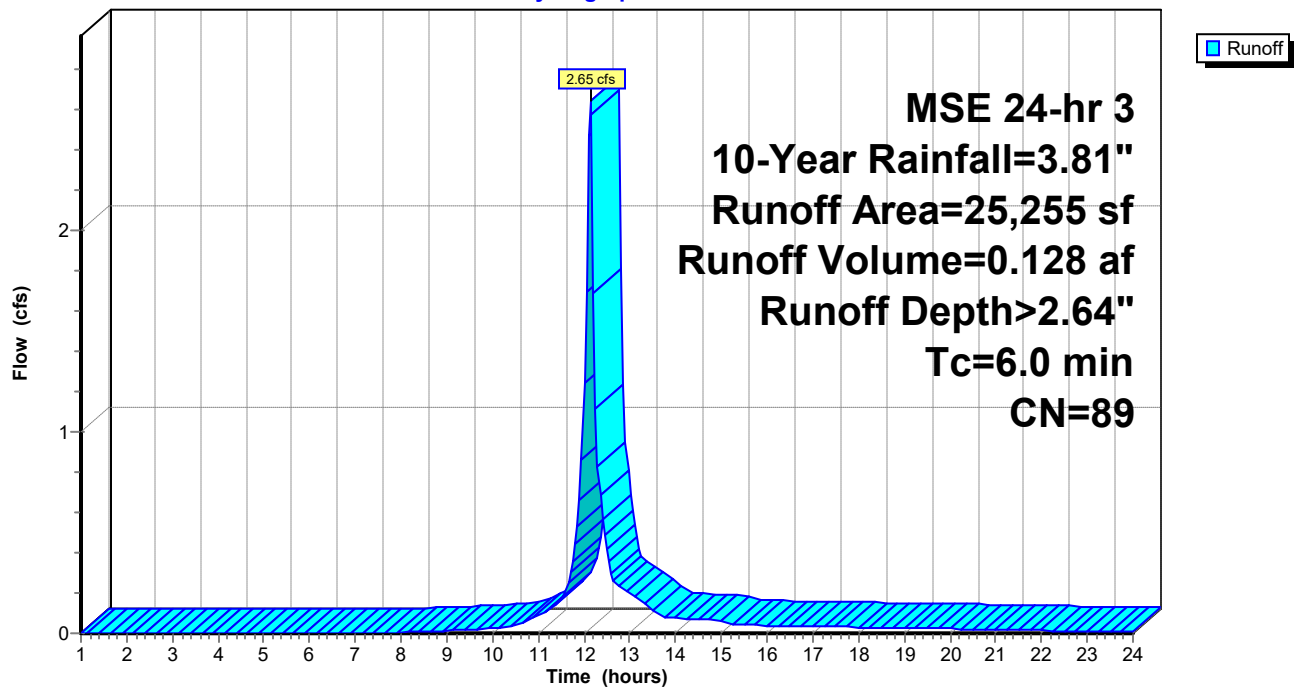
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
9,171	74	>75% Grass cover, Good, HSG C
16,085	98	Paved parking, HSG C
25,255	89	Weighted Average
9,171		36.31% Pervious Area
16,085		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	3.29	2.16	0.08
1.25	0.02	0.00	0.00	14.25	3.32	2.19	0.07
1.50	0.02	0.00	0.00	14.50	3.35	2.22	0.07
1.75	0.03	0.00	0.00	14.75	3.39	2.25	0.07
2.00	0.03	0.00	0.00	15.00	3.42	2.28	0.07
2.25	0.04	0.00	0.00	15.25	3.44	2.30	0.04
2.50	0.05	0.00	0.00	15.50	3.46	2.32	0.04
2.75	0.06	0.00	0.00	15.75	3.47	2.33	0.04
3.00	0.06	0.00	0.00	16.00	3.49	2.35	0.04
3.25	0.07	0.00	0.00	16.25	3.51	2.36	0.04
3.50	0.08	0.00	0.00	16.50	3.53	2.38	0.04
3.75	0.09	0.00	0.00	16.75	3.54	2.40	0.04
4.00	0.10	0.00	0.00	17.00	3.56	2.41	0.03
4.25	0.11	0.00	0.00	17.25	3.57	2.42	0.03
4.50	0.12	0.00	0.00	17.50	3.59	2.44	0.03
4.75	0.13	0.00	0.00	17.75	3.60	2.45	0.03
5.00	0.14	0.00	0.00	18.00	3.62	2.46	0.03
5.25	0.16	0.00	0.00	18.25	3.63	2.48	0.03
5.50	0.17	0.00	0.00	18.50	3.64	2.49	0.03
5.75	0.18	0.00	0.00	18.75	3.65	2.50	0.03
6.00	0.19	0.00	0.00	19.00	3.67	2.51	0.03
6.25	0.21	0.00	0.00	19.25	3.68	2.52	0.03
6.50	0.22	0.00	0.00	19.50	3.69	2.53	0.02
6.75	0.24	0.00	0.00	19.75	3.70	2.54	0.02
7.00	0.25	0.00	0.00	20.00	3.71	2.55	0.02
7.25	0.27	0.00	0.00	20.25	3.72	2.56	0.02
7.50	0.28	0.00	0.00	20.50	3.73	2.57	0.02
7.75	0.30	0.00	0.00	20.75	3.74	2.58	0.02
8.00	0.32	0.00	0.00	21.00	3.75	2.59	0.02
8.25	0.34	0.01	0.01	21.25	3.75	2.59	0.02
8.50	0.35	0.01	0.01	21.50	3.76	2.60	0.02
8.75	0.37	0.01	0.01	21.75	3.77	2.61	0.01
9.00	0.39	0.02	0.01	22.00	3.78	2.61	0.01
9.25	0.42	0.02	0.02	22.25	3.78	2.62	0.01
9.50	0.46	0.03	0.02	22.50	3.79	2.62	0.01
9.75	0.49	0.04	0.02	22.75	3.79	2.63	0.01
10.00	0.52	0.05	0.03	23.00	3.80	2.63	0.01
10.25	0.56	0.06	0.03	23.25	3.80	2.64	0.01
10.50	0.60	0.08	0.03	23.50	3.80	2.64	0.01
10.75	0.66	0.10	0.06	23.75	3.81	2.64	0.01
11.00	0.73	0.14	0.09	24.00	3.81	2.65	0.01
11.25	0.83	0.19	0.12				
11.50	0.94	0.25	0.16				
11.75	1.17	0.40	0.36				
12.00	1.76	0.84	1.25				
12.25	2.64	1.58	1.12				
12.50	2.87	1.78	0.41				
12.75	2.98	1.88	0.24				
13.00	3.08	1.97	0.20				
13.25	3.15	2.04	0.16				
13.50	3.21	2.09	0.12				
13.75	3.25	2.13	0.08				

23610 Proposed

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MSE 24-hr 3 10-Year Rainfall=3.81"

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Summary for Subcatchment 4: Subcat 4

Runoff = 0.58 cfs @ 12.13 hrs, Volume= 0.028 af, Depth> 2.74"
Routed to Link 4L : Proposed

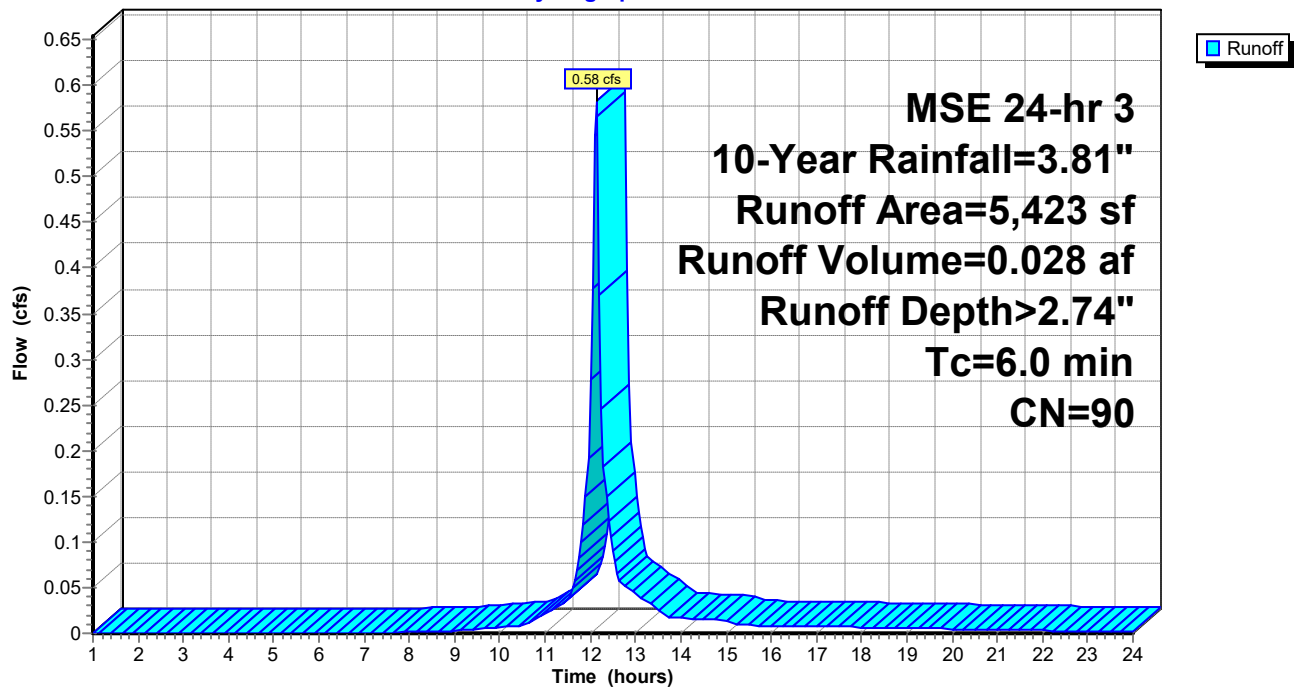
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.81"

Area (sf)	CN	Description
1,899	74	>75% Grass cover, Good, HSG C
3,524	98	Paved parking, HSG C
5,423	90	Weighted Average
1,899		35.02% Pervious Area
3,524		64.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.01	0.00	0.00	14.00	3.29	2.25	0.02
1.25	0.02	0.00	0.00	14.25	3.32	2.28	0.02
1.50	0.02	0.00	0.00	14.50	3.35	2.31	0.02
1.75	0.03	0.00	0.00	14.75	3.39	2.34	0.02
2.00	0.03	0.00	0.00	15.00	3.42	2.37	0.01
2.25	0.04	0.00	0.00	15.25	3.44	2.39	0.01
2.50	0.05	0.00	0.00	15.50	3.46	2.41	0.01
2.75	0.06	0.00	0.00	15.75	3.47	2.42	0.01
3.00	0.06	0.00	0.00	16.00	3.49	2.44	0.01
3.25	0.07	0.00	0.00	16.25	3.51	2.46	0.01
3.50	0.08	0.00	0.00	16.50	3.53	2.47	0.01
3.75	0.09	0.00	0.00	16.75	3.54	2.49	0.01
4.00	0.10	0.00	0.00	17.00	3.56	2.50	0.01
4.25	0.11	0.00	0.00	17.25	3.57	2.52	0.01
4.50	0.12	0.00	0.00	17.50	3.59	2.53	0.01
4.75	0.13	0.00	0.00	17.75	3.60	2.54	0.01
5.00	0.14	0.00	0.00	18.00	3.62	2.56	0.01
5.25	0.16	0.00	0.00	18.25	3.63	2.57	0.01
5.50	0.17	0.00	0.00	18.50	3.64	2.58	0.01
5.75	0.18	0.00	0.00	18.75	3.65	2.59	0.01
6.00	0.19	0.00	0.00	19.00	3.67	2.60	0.01
6.25	0.21	0.00	0.00	19.25	3.68	2.62	0.01
6.50	0.22	0.00	0.00	19.50	3.69	2.63	0.01
6.75	0.24	0.00	0.00	19.75	3.70	2.64	0.01
7.00	0.25	0.00	0.00	20.00	3.71	2.65	0.00
7.25	0.27	0.00	0.00	20.25	3.72	2.65	0.00
7.50	0.28	0.00	0.00	20.50	3.73	2.66	0.00
7.75	0.30	0.01	0.00	20.75	3.74	2.67	0.00
8.00	0.32	0.01	0.00	21.00	3.75	2.68	0.00
8.25	0.34	0.01	0.00	21.25	3.75	2.69	0.00
8.50	0.35	0.01	0.00	21.50	3.76	2.69	0.00
8.75	0.37	0.02	0.00	21.75	3.77	2.70	0.00
9.00	0.39	0.02	0.00	22.00	3.78	2.71	0.00
9.25	0.42	0.03	0.00	22.25	3.78	2.71	0.00
9.50	0.46	0.04	0.00	22.50	3.79	2.72	0.00
9.75	0.49	0.05	0.01	22.75	3.79	2.72	0.00
10.00	0.52	0.06	0.01	23.00	3.80	2.73	0.00
10.25	0.56	0.08	0.01	23.25	3.80	2.73	0.00
10.50	0.60	0.09	0.01	23.50	3.80	2.73	0.00
10.75	0.66	0.12	0.01	23.75	3.81	2.74	0.00
11.00	0.73	0.16	0.02	24.00	3.81	2.74	0.00
11.25	0.83	0.22	0.03				
11.50	0.94	0.28	0.04				
11.75	1.17	0.44	0.08				
12.00	1.76	0.90	0.28				
12.25	2.64	1.65	0.24				
12.50	2.87	1.86	0.09				
12.75	2.98	1.96	0.05				
13.00	3.08	2.05	0.04				
13.25	3.15	2.13	0.04				
13.50	3.21	2.18	0.03				
13.75	3.25	2.22	0.02				

23610 Proposed

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MSE 24-hr 3 10-Year Rainfall=3.81"

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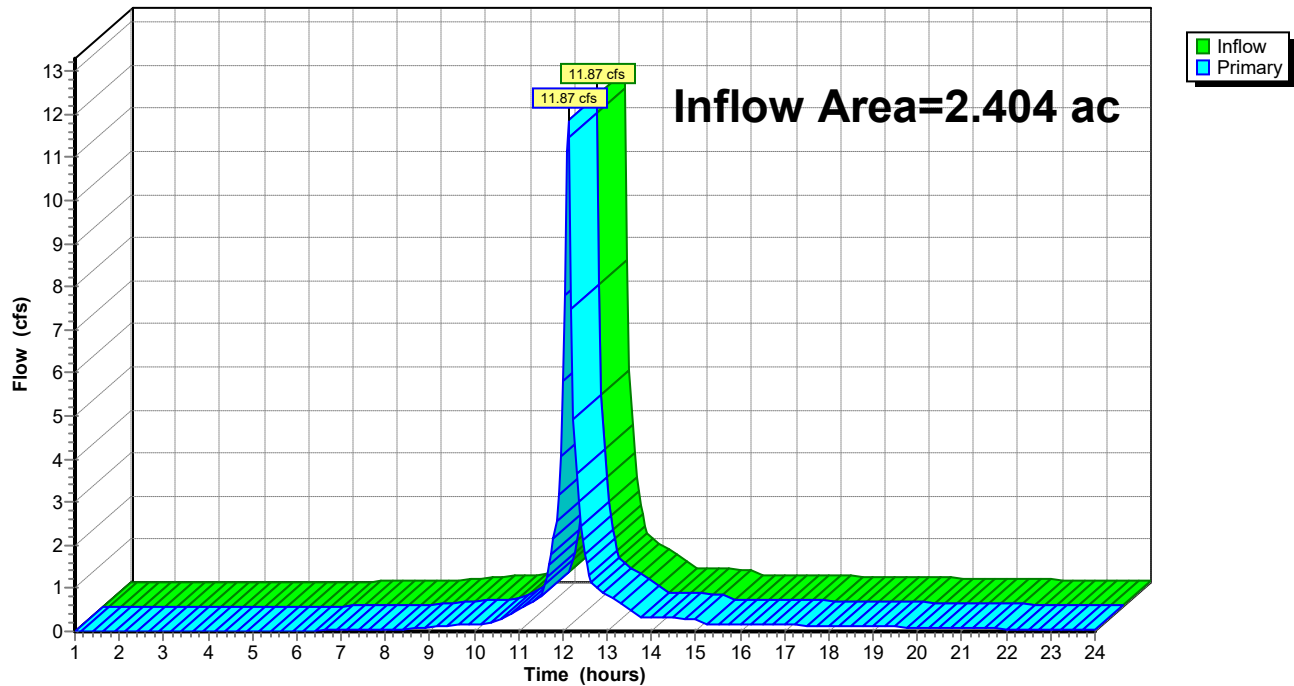
Summary for Link 4L: Proposed

Inflow Area = 2.404 ac, 76.35% Impervious, Inflow Depth > 2.96" for 10-Year event
Inflow = 11.87 cfs @ 12.13 hrs, Volume= 0.593 af
Primary = 11.87 cfs @ 12.13 hrs, Volume= 0.593 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 4L: Proposed

Hydrograph



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MSE 24-hr 3 10-Year Rainfall=3.81"

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Hydrograph for Link 4L: Proposed

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
1.00	0.00	0.00	0.00	14.00	0.33	0.00	0.33
1.25	0.00	0.00	0.00	14.25	0.32	0.00	0.32
1.50	0.00	0.00	0.00	14.50	0.31	0.00	0.31
1.75	0.00	0.00	0.00	14.75	0.30	0.00	0.30
2.00	0.00	0.00	0.00	15.00	0.29	0.00	0.29
2.25	0.00	0.00	0.00	15.25	0.18	0.00	0.18
2.50	0.00	0.00	0.00	15.50	0.17	0.00	0.17
2.75	0.00	0.00	0.00	15.75	0.17	0.00	0.17
3.00	0.00	0.00	0.00	16.00	0.16	0.00	0.16
3.25	0.00	0.00	0.00	16.25	0.16	0.00	0.16
3.50	0.00	0.00	0.00	16.50	0.16	0.00	0.16
3.75	0.00	0.00	0.00	16.75	0.15	0.00	0.15
4.00	0.00	0.00	0.00	17.00	0.15	0.00	0.15
4.25	0.00	0.00	0.00	17.25	0.14	0.00	0.14
4.50	0.00	0.00	0.00	17.50	0.14	0.00	0.14
4.75	0.00	0.00	0.00	17.75	0.13	0.00	0.13
5.00	0.00	0.00	0.00	18.00	0.13	0.00	0.13
5.25	0.01	0.00	0.01	18.25	0.12	0.00	0.12
5.50	0.01	0.00	0.01	18.50	0.12	0.00	0.12
5.75	0.01	0.00	0.01	18.75	0.12	0.00	0.12
6.00	0.01	0.00	0.01	19.00	0.11	0.00	0.11
6.25	0.02	0.00	0.02	19.25	0.11	0.00	0.11
6.50	0.02	0.00	0.02	19.50	0.10	0.00	0.10
6.75	0.02	0.00	0.02	19.75	0.10	0.00	0.10
7.00	0.03	0.00	0.03	20.00	0.09	0.00	0.09
7.25	0.03	0.00	0.03	20.25	0.09	0.00	0.09
7.50	0.04	0.00	0.04	20.50	0.09	0.00	0.09
7.75	0.04	0.00	0.04	20.75	0.08	0.00	0.08
8.00	0.05	0.00	0.05	21.00	0.08	0.00	0.08
8.25	0.05	0.00	0.05	21.25	0.07	0.00	0.07
8.50	0.06	0.00	0.06	21.50	0.07	0.00	0.07
8.75	0.07	0.00	0.07	21.75	0.06	0.00	0.06
9.00	0.07	0.00	0.07	22.00	0.06	0.00	0.06
9.25	0.12	0.00	0.12	22.25	0.06	0.00	0.06
9.50	0.14	0.00	0.14	22.50	0.05	0.00	0.05
9.75	0.15	0.00	0.15	22.75	0.05	0.00	0.05
10.00	0.17	0.00	0.17	23.00	0.04	0.00	0.04
10.25	0.18	0.00	0.18	23.25	0.04	0.00	0.04
10.50	0.20	0.00	0.20	23.50	0.03	0.00	0.03
10.75	0.36	0.00	0.36	23.75	0.03	0.00	0.03
11.00	0.49	0.00	0.49	24.00	0.02	0.00	0.02
11.25	0.64	0.00	0.64				
11.50	0.81	0.00	0.81				
11.75	1.78	0.00	1.78				
12.00	5.81	0.00	5.81				
12.25	4.92	0.00	4.92				
12.50	1.80	0.00	1.80				
12.75	1.03	0.00	1.03				
13.00	0.86	0.00	0.86				
13.25	0.70	0.00	0.70				
13.50	0.53	0.00	0.53				
13.75	0.34	0.00	0.34				

23610 Proposed*MSE 24-hr 3 100-Year Rainfall=6.18"*

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Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1 Runoff Area=41,433 sf 83.08% Impervious Runoff Depth>5.47"
Tc=6.0 min CN=94 Runoff=8.24 cfs 0.434 af

Subcatchment 1.1: Subcat 1.1 Runoff Area=6,710 sf 80.73% Impervious Runoff Depth>5.36"
Tc=6.0 min CN=93 Runoff=1.32 cfs 0.069 af

Subcatchment 2: Subcat 2 Runoff Area=15,202 sf 72.18% Impervious Runoff Depth>5.13"
Tc=6.0 min CN=91 Runoff=2.93 cfs 0.149 af

Subcatchment 2.1: Subcat 2.1 Runoff Area=10,695 sf 89.09% Impervious Runoff Depth>5.59"
Tc=6.0 min CN=95 Runoff=2.14 cfs 0.114 af

Subcatchment 3: Subcat 3 Runoff Area=25,255 sf 63.69% Impervious Runoff Depth>4.91"
Tc=6.0 min CN=89 Runoff=4.73 cfs 0.237 af

Subcatchment 4: Subcat 4 Runoff Area=5,423 sf 64.98% Impervious Runoff Depth>5.02"
Tc=6.0 min CN=90 Runoff=1.03 cfs 0.052 af

Link 4L: Proposed Inflow=20.39 cfs 1.056 af
Primary=20.39 cfs 1.056 af

Total Runoff Area = 2.404 ac Runoff Volume = 1.056 af Average Runoff Depth = 5.27"
23.65% Pervious = 0.569 ac 76.35% Impervious = 1.835 ac

23610 Proposed

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 1: Subcat 1

Runoff = 8.24 cfs @ 12.13 hrs, Volume= 0.434 af, Depth> 5.47"
Routed to Link 4L : Proposed

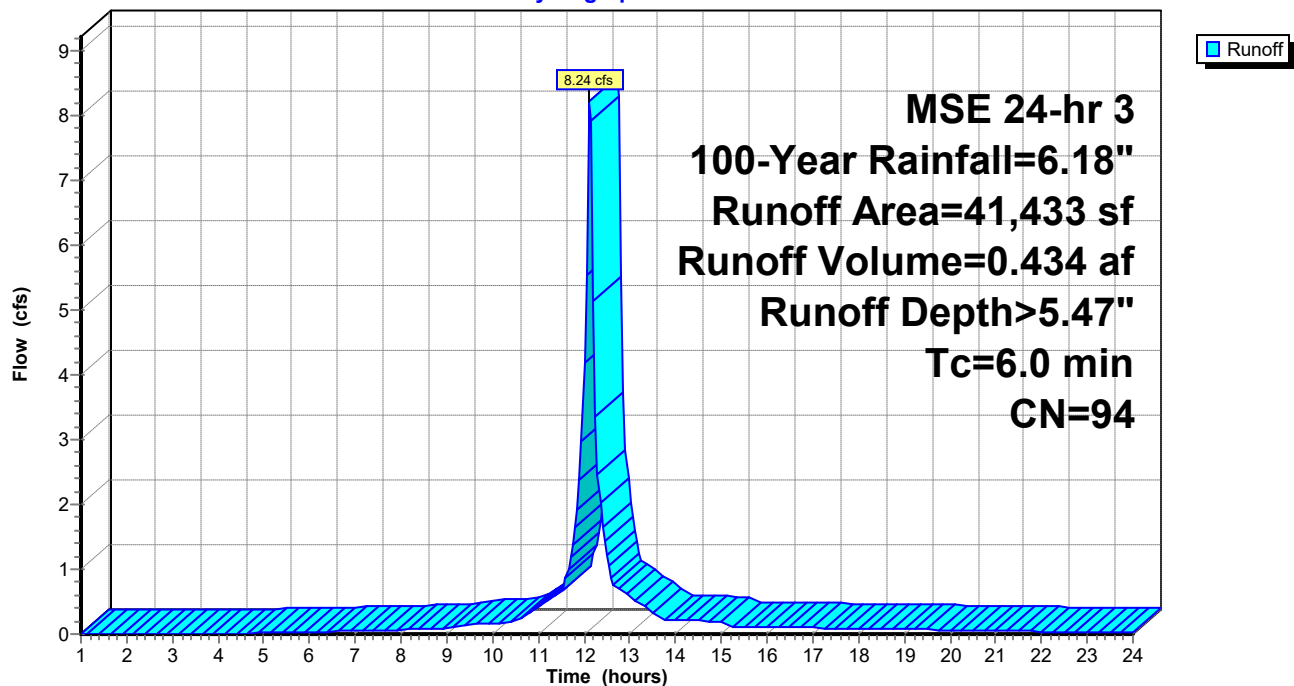
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
7,011	74	>75% Grass cover, Good, HSG C
13,905	98	Paved parking, HSG C
20,517	98	Unconnected roofs, HSG C
41,433	94	Weighted Average
7,011		16.92% Pervious Area
34,422		83.08% Impervious Area
20,517		59.60% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1: Subcat 1

Hydrograph



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Hydrograph for Subcatchment 1: Subcat 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.02	0.00	0.00	14.00	5.33	4.63	0.22
1.25	0.03	0.00	0.00	14.25	5.39	4.69	0.21
1.50	0.04	0.00	0.00	14.50	5.44	4.74	0.20
1.75	0.05	0.00	0.00	14.75	5.49	4.79	0.20
2.00	0.06	0.00	0.00	15.00	5.54	4.84	0.19
2.25	0.07	0.00	0.00	15.25	5.57	4.88	0.12
2.50	0.08	0.00	0.00	15.50	5.60	4.91	0.11
2.75	0.09	0.00	0.00	15.75	5.63	4.93	0.11
3.00	0.10	0.00	0.00	16.00	5.66	4.96	0.11
3.25	0.12	0.00	0.00	16.25	5.69	4.99	0.11
3.50	0.13	0.00	0.00	16.50	5.72	5.02	0.10
3.75	0.15	0.00	0.00	16.75	5.74	5.04	0.10
4.00	0.16	0.00	0.00	17.00	5.77	5.07	0.10
4.25	0.18	0.00	0.01	17.25	5.79	5.09	0.09
4.50	0.20	0.01	0.01	17.50	5.82	5.12	0.09
4.75	0.21	0.01	0.01	17.75	5.84	5.14	0.09
5.00	0.23	0.01	0.02	18.00	5.87	5.16	0.09
5.25	0.25	0.02	0.02	18.25	5.89	5.18	0.08
5.50	0.27	0.03	0.03	18.50	5.91	5.21	0.08
5.75	0.29	0.03	0.03	18.75	5.93	5.23	0.08
6.00	0.31	0.04	0.03	19.00	5.95	5.25	0.07
6.25	0.34	0.05	0.04	19.25	5.97	5.26	0.07
6.50	0.36	0.06	0.04	19.50	5.98	5.28	0.07
6.75	0.39	0.07	0.04	19.75	6.00	5.30	0.07
7.00	0.41	0.09	0.05	20.00	6.02	5.32	0.06
7.25	0.44	0.10	0.05	20.25	6.03	5.33	0.06
7.50	0.46	0.12	0.06	20.50	6.05	5.35	0.06
7.75	0.49	0.13	0.06	20.75	6.06	5.36	0.05
8.00	0.52	0.15	0.07	21.00	6.08	5.37	0.05
8.25	0.55	0.17	0.07	21.25	6.09	5.39	0.05
8.50	0.58	0.18	0.07	21.50	6.10	5.40	0.05
8.75	0.61	0.20	0.08	21.75	6.11	5.41	0.04
9.00	0.64	0.23	0.08	22.00	6.12	5.42	0.04
9.25	0.69	0.26	0.14	22.25	6.13	5.43	0.04
9.50	0.74	0.30	0.15	22.50	6.14	5.44	0.03
9.75	0.79	0.34	0.16	22.75	6.15	5.45	0.03
10.00	0.85	0.38	0.17	23.00	6.16	5.45	0.03
10.25	0.91	0.43	0.18	23.25	6.16	5.46	0.03
10.50	0.97	0.48	0.18	23.50	6.17	5.47	0.02
10.75	1.06	0.56	0.32	23.75	6.18	5.47	0.02
11.00	1.19	0.66	0.43	24.00	6.18	5.47	0.02
11.25	1.35	0.80	0.54				
11.50	1.53	0.97	0.65				
11.75	1.90	1.30	1.37				
12.00	2.86	2.22	4.20				
12.25	4.28	3.60	3.35				
12.50	4.65	3.96	1.21				
12.75	4.83	4.14	0.69				
13.00	4.99	4.30	0.58				
13.25	5.12	4.42	0.47				
13.50	5.21	4.52	0.35				
13.75	5.27	4.58	0.22				

23610 Proposed

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MSE 24-hr 3 100-Year Rainfall=6.18"

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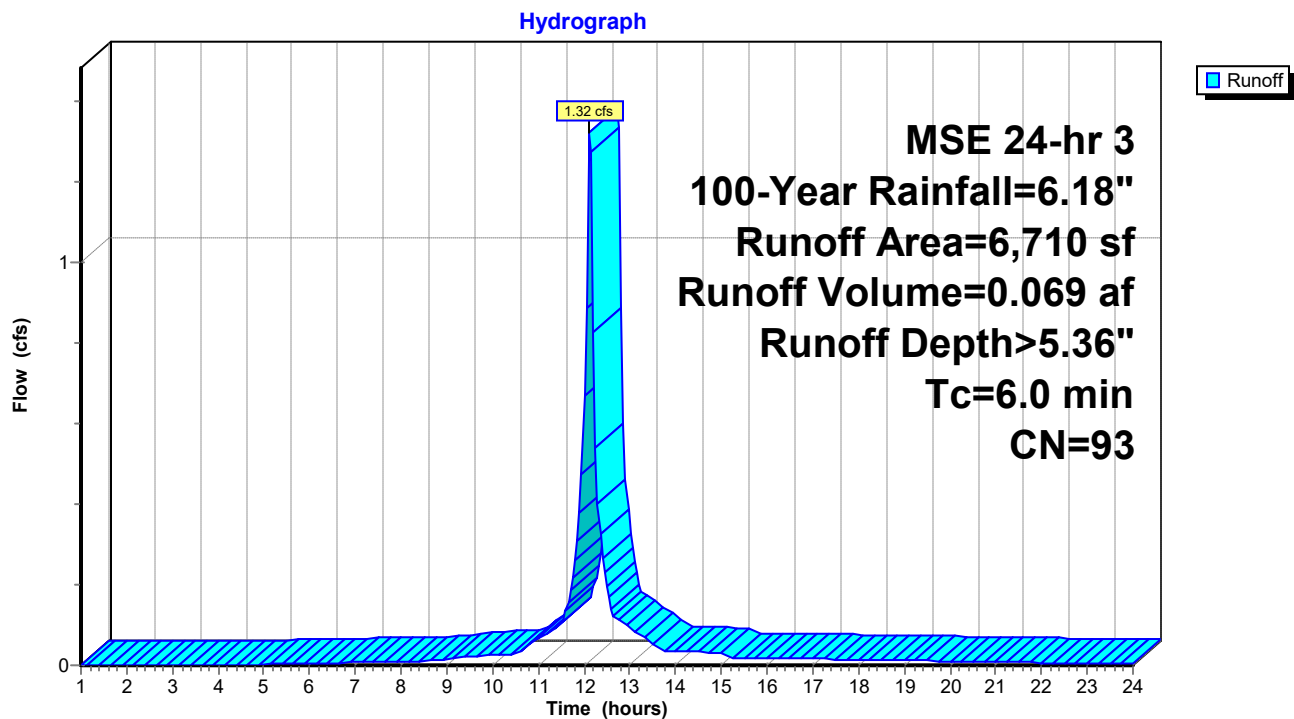
Summary for Subcatchment 1.1: Subcat 1.1

Runoff = 1.32 cfs @ 12.13 hrs, Volume= 0.069 af, Depth> 5.36"
Routed to Link 4L : Proposed

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
1,293	74	>75% Grass cover, Good, HSG C
5,417	98	Paved parking, HSG C
6,710	93	Weighted Average
1,293		19.27% Pervious Area
5,417		80.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1: Subcat 1.1

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Subcatchment 1.1: Subcat 1.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.02	0.00	0.00	14.00	5.33	4.52	0.04
1.25	0.03	0.00	0.00	14.25	5.39	4.58	0.03
1.50	0.04	0.00	0.00	14.50	5.44	4.63	0.03
1.75	0.05	0.00	0.00	14.75	5.49	4.68	0.03
2.00	0.06	0.00	0.00	15.00	5.54	4.73	0.03
2.25	0.07	0.00	0.00	15.25	5.57	4.76	0.02
2.50	0.08	0.00	0.00	15.50	5.60	4.79	0.02
2.75	0.09	0.00	0.00	15.75	5.63	4.82	0.02
3.00	0.10	0.00	0.00	16.00	5.66	4.85	0.02
3.25	0.12	0.00	0.00	16.25	5.69	4.88	0.02
3.50	0.13	0.00	0.00	16.50	5.72	4.90	0.02
3.75	0.15	0.00	0.00	16.75	5.74	4.93	0.02
4.00	0.16	0.00	0.00	17.00	5.77	4.96	0.02
4.25	0.18	0.00	0.00	17.25	5.79	4.98	0.02
4.50	0.20	0.00	0.00	17.50	5.82	5.00	0.01
4.75	0.21	0.00	0.00	17.75	5.84	5.03	0.01
5.00	0.23	0.01	0.00	18.00	5.87	5.05	0.01
5.25	0.25	0.01	0.00	18.25	5.89	5.07	0.01
5.50	0.27	0.02	0.00	18.50	5.91	5.09	0.01
5.75	0.29	0.02	0.00	18.75	5.93	5.11	0.01
6.00	0.31	0.03	0.00	19.00	5.95	5.13	0.01
6.25	0.34	0.04	0.00	19.25	5.97	5.15	0.01
6.50	0.36	0.05	0.01	19.50	5.98	5.17	0.01
6.75	0.39	0.06	0.01	19.75	6.00	5.18	0.01
7.00	0.41	0.07	0.01	20.00	6.02	5.20	0.01
7.25	0.44	0.08	0.01	20.25	6.03	5.22	0.01
7.50	0.46	0.09	0.01	20.50	6.05	5.23	0.01
7.75	0.49	0.11	0.01	20.75	6.06	5.25	0.01
8.00	0.52	0.12	0.01	21.00	6.08	5.26	0.01
8.25	0.55	0.14	0.01	21.25	6.09	5.27	0.01
8.50	0.58	0.15	0.01	21.50	6.10	5.28	0.01
8.75	0.61	0.17	0.01	21.75	6.11	5.29	0.01
9.00	0.64	0.19	0.01	22.00	6.12	5.30	0.01
9.25	0.69	0.22	0.02	22.25	6.13	5.31	0.01
9.50	0.74	0.26	0.02	22.50	6.14	5.32	0.01
9.75	0.79	0.30	0.02	22.75	6.15	5.33	0.00
10.00	0.85	0.34	0.03	23.00	6.16	5.34	0.00
10.25	0.91	0.38	0.03	23.25	6.16	5.35	0.00
10.50	0.97	0.42	0.03	23.50	6.17	5.35	0.00
10.75	1.06	0.50	0.05	23.75	6.18	5.36	0.00
11.00	1.19	0.60	0.07	24.00	6.18	5.36	0.00
11.25	1.35	0.74	0.08				
11.50	1.53	0.89	0.10				
11.75	1.90	1.22	0.22				
12.00	2.86	2.12	0.67				
12.25	4.28	3.49	0.54				
12.50	4.65	3.85	0.20				
12.75	4.83	4.03	0.11				
13.00	4.99	4.19	0.09				
13.25	5.12	4.31	0.08				
13.50	5.21	4.41	0.06				
13.75	5.27	4.47	0.04				

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 2: Subcat 2

Runoff = 2.93 cfs @ 12.13 hrs, Volume= 0.149 af, Depth> 5.13"
Routed to Link 4L : Proposed

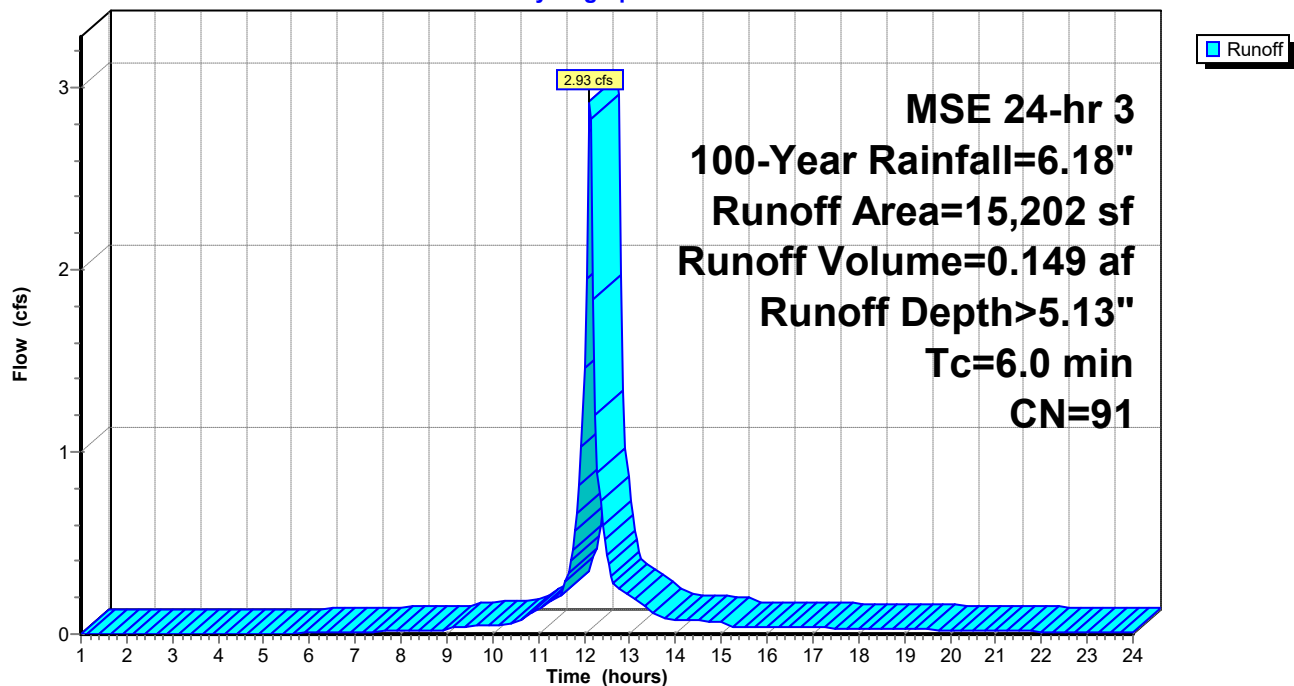
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
4,229	74	>75% Grass cover, Good, HSG C
10,974	98	Paved parking, HSG C
0	98	Unconnected roofs, HSG C
15,202	91	Weighted Average
4,229		27.82% Pervious Area
10,974		72.18% Impervious Area
0		0.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2: Subcat 2

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Subcatchment 2: Subcat 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.02	0.00	0.00	14.00	5.33	4.30	0.08
1.25	0.03	0.00	0.00	14.25	5.39	4.36	0.08
1.50	0.04	0.00	0.00	14.50	5.44	4.41	0.07
1.75	0.05	0.00	0.00	14.75	5.49	4.46	0.07
2.00	0.06	0.00	0.00	15.00	5.54	4.51	0.07
2.25	0.07	0.00	0.00	15.25	5.57	4.54	0.04
2.50	0.08	0.00	0.00	15.50	5.60	4.57	0.04
2.75	0.09	0.00	0.00	15.75	5.63	4.60	0.04
3.00	0.10	0.00	0.00	16.00	5.66	4.63	0.04
3.25	0.12	0.00	0.00	16.25	5.69	4.65	0.04
3.50	0.13	0.00	0.00	16.50	5.72	4.68	0.04
3.75	0.15	0.00	0.00	16.75	5.74	4.71	0.04
4.00	0.16	0.00	0.00	17.00	5.77	4.73	0.04
4.25	0.18	0.00	0.00	17.25	5.79	4.76	0.03
4.50	0.20	0.00	0.00	17.50	5.82	4.78	0.03
4.75	0.21	0.00	0.00	17.75	5.84	4.80	0.03
5.00	0.23	0.00	0.00	18.00	5.87	4.83	0.03
5.25	0.25	0.00	0.00	18.25	5.89	4.85	0.03
5.50	0.27	0.01	0.00	18.50	5.91	4.87	0.03
5.75	0.29	0.01	0.00	18.75	5.93	4.89	0.03
6.00	0.31	0.01	0.01	19.00	5.95	4.91	0.03
6.25	0.34	0.02	0.01	19.25	5.97	4.92	0.03
6.50	0.36	0.02	0.01	19.50	5.98	4.94	0.02
6.75	0.39	0.03	0.01	19.75	6.00	4.96	0.02
7.00	0.41	0.04	0.01	20.00	6.02	4.98	0.02
7.25	0.44	0.05	0.01	20.25	6.03	4.99	0.02
7.50	0.46	0.06	0.01	20.50	6.05	5.01	0.02
7.75	0.49	0.07	0.02	20.75	6.06	5.02	0.02
8.00	0.52	0.08	0.02	21.00	6.08	5.03	0.02
8.25	0.55	0.09	0.02	21.25	6.09	5.05	0.02
8.50	0.58	0.10	0.02	21.50	6.10	5.06	0.02
8.75	0.61	0.12	0.02	21.75	6.11	5.07	0.02
9.00	0.64	0.13	0.02	22.00	6.12	5.08	0.01
9.25	0.69	0.16	0.04	22.25	6.13	5.09	0.01
9.50	0.74	0.19	0.04	22.50	6.14	5.10	0.01
9.75	0.79	0.22	0.05	22.75	6.15	5.10	0.01
10.00	0.85	0.26	0.05	23.00	6.16	5.11	0.01
10.25	0.91	0.30	0.05	23.25	6.16	5.12	0.01
10.50	0.97	0.34	0.06	23.50	6.17	5.12	0.01
10.75	1.06	0.40	0.10	23.75	6.18	5.13	0.01
11.00	1.19	0.50	0.14	24.00	6.18	5.13	0.01
11.25	1.35	0.62	0.17				
11.50	1.53	0.77	0.22				
11.75	1.90	1.08	0.46				
12.00	2.86	1.94	1.46				
12.25	4.28	3.29	1.20				
12.50	4.65	3.64	0.44				
12.75	4.83	3.82	0.25				
13.00	4.99	3.97	0.21				
13.25	5.12	4.09	0.17				
13.50	5.21	4.19	0.13				
13.75	5.27	4.25	0.08				

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MSE 24-hr 3 100-Year Rainfall=6.18"

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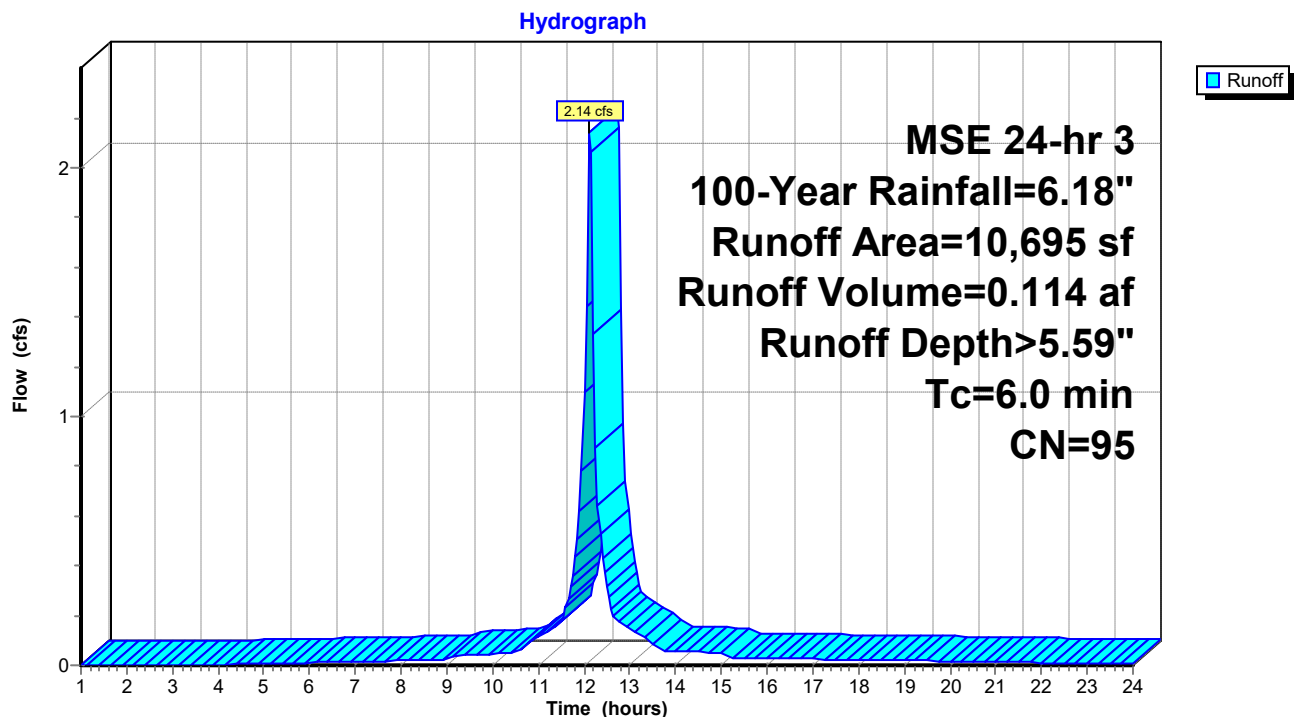
Summary for Subcatchment 2.1: Subcat 2.1

Runoff = 2.14 cfs @ 12.13 hrs, Volume= 0.114 af, Depth> 5.59"
Routed to Link 4L : Proposed

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
1,167	74	>75% Grass cover, Good, HSG C
9,528	98	Paved parking, HSG C
10,695	95	Weighted Average
1,167		10.91% Pervious Area
9,528		89.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2.1: Subcat 2.1

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Subcatchment 2.1: Subcat 2.1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.02	0.00	0.00	14.00	5.33	4.75	0.06
1.25	0.03	0.00	0.00	14.25	5.39	4.80	0.05
1.50	0.04	0.00	0.00	14.50	5.44	4.86	0.05
1.75	0.05	0.00	0.00	14.75	5.49	4.91	0.05
2.00	0.06	0.00	0.00	15.00	5.54	4.96	0.05
2.25	0.07	0.00	0.00	15.25	5.57	4.99	0.03
2.50	0.08	0.00	0.00	15.50	5.60	5.02	0.03
2.75	0.09	0.00	0.00	15.75	5.63	5.05	0.03
3.00	0.10	0.00	0.00	16.00	5.66	5.08	0.03
3.25	0.12	0.00	0.00	16.25	5.69	5.10	0.03
3.50	0.13	0.00	0.00	16.50	5.72	5.13	0.03
3.75	0.15	0.00	0.00	16.75	5.74	5.16	0.03
4.00	0.16	0.01	0.00	17.00	5.77	5.18	0.03
4.25	0.18	0.01	0.00	17.25	5.79	5.21	0.02
4.50	0.20	0.01	0.00	17.50	5.82	5.23	0.02
4.75	0.21	0.02	0.01	17.75	5.84	5.26	0.02
5.00	0.23	0.02	0.01	18.00	5.87	5.28	0.02
5.25	0.25	0.03	0.01	18.25	5.89	5.30	0.02
5.50	0.27	0.04	0.01	18.50	5.91	5.32	0.02
5.75	0.29	0.05	0.01	18.75	5.93	5.34	0.02
6.00	0.31	0.06	0.01	19.00	5.95	5.36	0.02
6.25	0.34	0.07	0.01	19.25	5.97	5.38	0.02
6.50	0.36	0.08	0.01	19.50	5.98	5.40	0.02
6.75	0.39	0.10	0.01	19.75	6.00	5.41	0.02
7.00	0.41	0.11	0.01	20.00	6.02	5.43	0.02
7.25	0.44	0.13	0.02	20.25	6.03	5.45	0.02
7.50	0.46	0.14	0.02	20.50	6.05	5.46	0.01
7.75	0.49	0.16	0.02	20.75	6.06	5.48	0.01
8.00	0.52	0.18	0.02	21.00	6.08	5.49	0.01
8.25	0.55	0.20	0.02	21.25	6.09	5.50	0.01
8.50	0.58	0.22	0.02	21.50	6.10	5.51	0.01
8.75	0.61	0.24	0.02	21.75	6.11	5.52	0.01
9.00	0.64	0.27	0.02	22.00	6.12	5.53	0.01
9.25	0.69	0.31	0.04	22.25	6.13	5.54	0.01
9.50	0.74	0.35	0.04	22.50	6.14	5.55	0.01
9.75	0.79	0.39	0.04	22.75	6.15	5.56	0.01
10.00	0.85	0.44	0.05	23.00	6.16	5.57	0.01
10.25	0.91	0.48	0.05	23.25	6.16	5.58	0.01
10.50	0.97	0.53	0.05	23.50	6.17	5.58	0.01
10.75	1.06	0.62	0.09	23.75	6.18	5.59	0.00
11.00	1.19	0.73	0.12	24.00	6.18	5.59	0.00
11.25	1.35	0.87	0.14				
11.50	1.53	1.04	0.17				
11.75	1.90	1.39	0.36				
12.00	2.86	2.31	1.10				
12.25	4.28	3.71	0.87				
12.50	4.65	4.07	0.31				
12.75	4.83	4.25	0.18				
13.00	4.99	4.41	0.15				
13.25	5.12	4.53	0.12				
13.50	5.21	4.63	0.09				
13.75	5.27	4.69	0.06				

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 3: Subcat 3

Runoff = 4.73 cfs @ 12.13 hrs, Volume= 0.237 af, Depth> 4.91"
Routed to Link 4L : Proposed

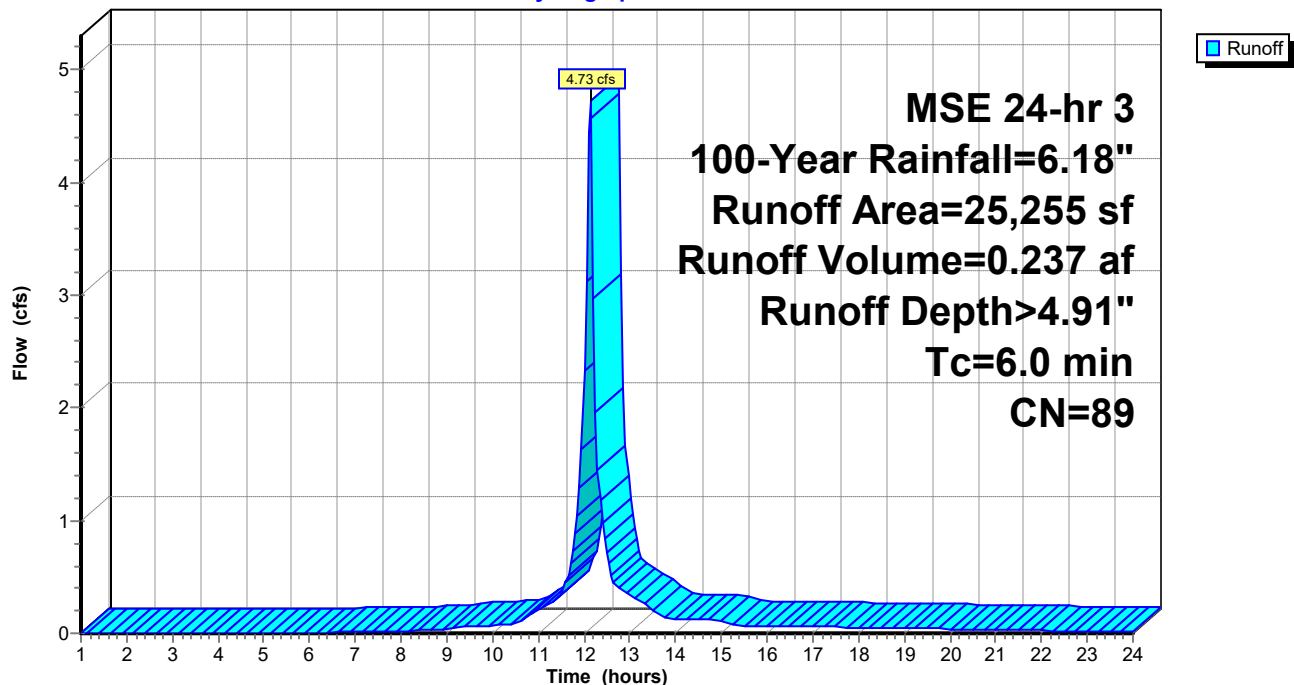
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
9,171	74	>75% Grass cover, Good, HSG C
16,085	98	Paved parking, HSG C
25,255	89	Weighted Average
9,171		36.31% Pervious Area
16,085		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 3: Subcat 3

Hydrograph



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Hydrograph for Subcatchment 3: Subcat 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.02	0.00	0.00	14.00	5.33	4.09	0.13
1.25	0.03	0.00	0.00	14.25	5.39	4.14	0.13
1.50	0.04	0.00	0.00	14.50	5.44	4.19	0.12
1.75	0.05	0.00	0.00	14.75	5.49	4.25	0.12
2.00	0.06	0.00	0.00	15.00	5.54	4.29	0.11
2.25	0.07	0.00	0.00	15.25	5.57	4.32	0.07
2.50	0.08	0.00	0.00	15.50	5.60	4.35	0.07
2.75	0.09	0.00	0.00	15.75	5.63	4.38	0.07
3.00	0.10	0.00	0.00	16.00	5.66	4.41	0.06
3.25	0.12	0.00	0.00	16.25	5.69	4.44	0.06
3.50	0.13	0.00	0.00	16.50	5.72	4.46	0.06
3.75	0.15	0.00	0.00	16.75	5.74	4.49	0.06
4.00	0.16	0.00	0.00	17.00	5.77	4.51	0.06
4.25	0.18	0.00	0.00	17.25	5.79	4.54	0.06
4.50	0.20	0.00	0.00	17.50	5.82	4.56	0.05
4.75	0.21	0.00	0.00	17.75	5.84	4.58	0.05
5.00	0.23	0.00	0.00	18.00	5.87	4.60	0.05
5.25	0.25	0.00	0.00	18.25	5.89	4.63	0.05
5.50	0.27	0.00	0.00	18.50	5.91	4.65	0.05
5.75	0.29	0.00	0.00	18.75	5.93	4.67	0.05
6.00	0.31	0.00	0.00	19.00	5.95	4.69	0.04
6.25	0.34	0.01	0.01	19.25	5.97	4.70	0.04
6.50	0.36	0.01	0.01	19.50	5.98	4.72	0.04
6.75	0.39	0.01	0.01	19.75	6.00	4.74	0.04
7.00	0.41	0.02	0.01	20.00	6.02	4.75	0.04
7.25	0.44	0.02	0.01	20.25	6.03	4.77	0.04
7.50	0.46	0.03	0.02	20.50	6.05	4.78	0.03
7.75	0.49	0.04	0.02	20.75	6.06	4.80	0.03
8.00	0.52	0.05	0.02	21.00	6.08	4.81	0.03
8.25	0.55	0.06	0.02	21.25	6.09	4.82	0.03
8.50	0.58	0.07	0.03	21.50	6.10	4.83	0.03
8.75	0.61	0.08	0.03	21.75	6.11	4.85	0.03
9.00	0.64	0.09	0.03	22.00	6.12	4.86	0.02
9.25	0.69	0.12	0.05	22.25	6.13	4.86	0.02
9.50	0.74	0.14	0.06	22.50	6.14	4.87	0.02
9.75	0.79	0.17	0.06	22.75	6.15	4.88	0.02
10.00	0.85	0.20	0.07	23.00	6.16	4.89	0.02
10.25	0.91	0.23	0.08	23.25	6.16	4.90	0.01
10.50	0.97	0.26	0.08	23.50	6.17	4.90	0.01
10.75	1.06	0.33	0.15	23.75	6.18	4.91	0.01
11.00	1.19	0.41	0.20	24.00	6.18	4.91	0.01
11.25	1.35	0.52	0.26				
11.50	1.53	0.66	0.33				
11.75	1.90	0.95	0.72				
12.00	2.86	1.77	2.33				
12.25	4.28	3.09	1.95				
12.50	4.65	3.44	0.71				
12.75	4.83	3.61	0.41				
13.00	4.99	3.76	0.34				
13.25	5.12	3.88	0.28				
13.50	5.21	3.98	0.21				
13.75	5.27	4.03	0.13				

23610 Proposed

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Subcatchment 4: Subcat 4

Runoff = 1.03 cfs @ 12.13 hrs, Volume= 0.052 af, Depth> 5.02"

Routed to Link 4L : Proposed

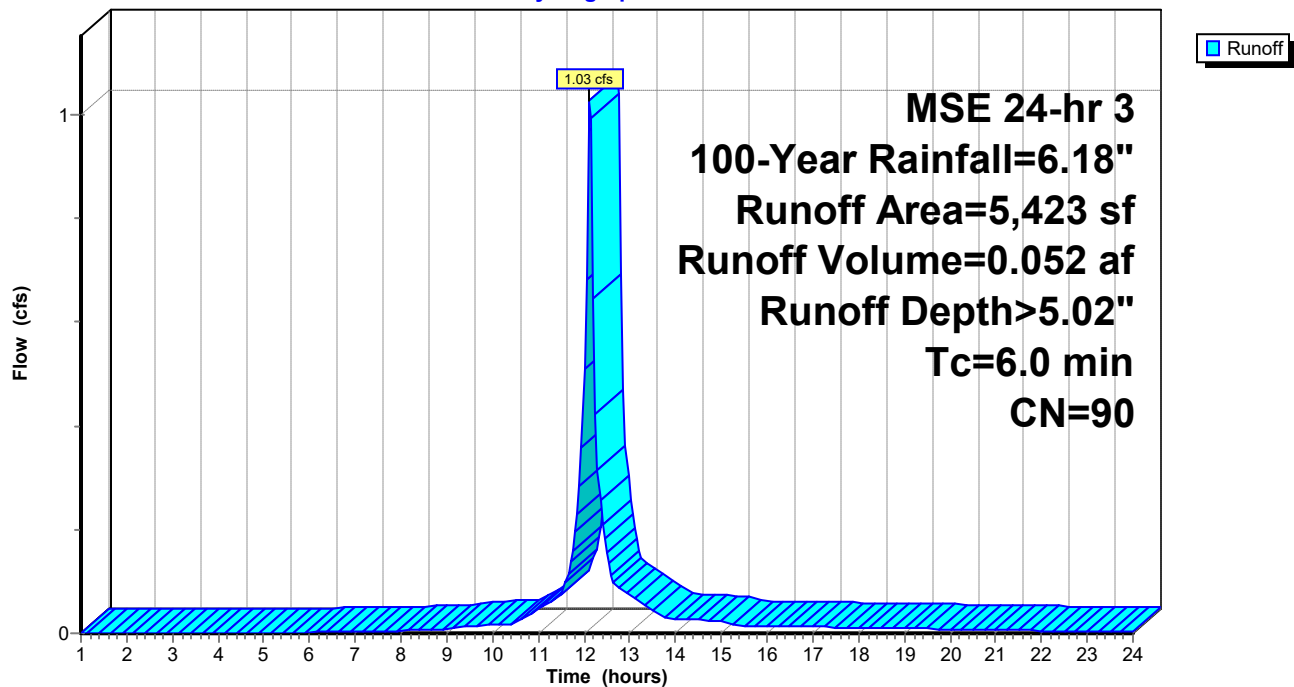
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.18"

Area (sf)	CN	Description
1,899	74	>75% Grass cover, Good, HSG C
3,524	98	Paved parking, HSG C
5,423	90	Weighted Average
1,899		35.02% Pervious Area
3,524		64.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 4: Subcat 4

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Subcatchment 4: Subcat 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
1.00	0.02	0.00	0.00	14.00	5.33	4.20	0.03
1.25	0.03	0.00	0.00	14.25	5.39	4.25	0.03
1.50	0.04	0.00	0.00	14.50	5.44	4.30	0.03
1.75	0.05	0.00	0.00	14.75	5.49	4.35	0.03
2.00	0.06	0.00	0.00	15.00	5.54	4.40	0.02
2.25	0.07	0.00	0.00	15.25	5.57	4.43	0.02
2.50	0.08	0.00	0.00	15.50	5.60	4.46	0.01
2.75	0.09	0.00	0.00	15.75	5.63	4.49	0.01
3.00	0.10	0.00	0.00	16.00	5.66	4.52	0.01
3.25	0.12	0.00	0.00	16.25	5.69	4.54	0.01
3.50	0.13	0.00	0.00	16.50	5.72	4.57	0.01
3.75	0.15	0.00	0.00	16.75	5.74	4.60	0.01
4.00	0.16	0.00	0.00	17.00	5.77	4.62	0.01
4.25	0.18	0.00	0.00	17.25	5.79	4.65	0.01
4.50	0.20	0.00	0.00	17.50	5.82	4.67	0.01
4.75	0.21	0.00	0.00	17.75	5.84	4.69	0.01
5.00	0.23	0.00	0.00	18.00	5.87	4.71	0.01
5.25	0.25	0.00	0.00	18.25	5.89	4.74	0.01
5.50	0.27	0.00	0.00	18.50	5.91	4.76	0.01
5.75	0.29	0.00	0.00	18.75	5.93	4.78	0.01
6.00	0.31	0.01	0.00	19.00	5.95	4.80	0.01
6.25	0.34	0.01	0.00	19.25	5.97	4.81	0.01
6.50	0.36	0.02	0.00	19.50	5.98	4.83	0.01
6.75	0.39	0.02	0.00	19.75	6.00	4.85	0.01
7.00	0.41	0.03	0.00	20.00	6.02	4.86	0.01
7.25	0.44	0.03	0.00	20.25	6.03	4.88	0.01
7.50	0.46	0.04	0.00	20.50	6.05	4.89	0.01
7.75	0.49	0.05	0.00	20.75	6.06	4.91	0.01
8.00	0.52	0.06	0.01	21.00	6.08	4.92	0.01
8.25	0.55	0.07	0.01	21.25	6.09	4.93	0.01
8.50	0.58	0.09	0.01	21.50	6.10	4.95	0.01
8.75	0.61	0.10	0.01	21.75	6.11	4.96	0.01
9.00	0.64	0.11	0.01	22.00	6.12	4.97	0.01
9.25	0.69	0.14	0.01	22.25	6.13	4.98	0.00
9.50	0.74	0.16	0.01	22.50	6.14	4.98	0.00
9.75	0.79	0.19	0.02	22.75	6.15	4.99	0.00
10.00	0.85	0.23	0.02	23.00	6.16	5.00	0.00
10.25	0.91	0.26	0.02	23.25	6.16	5.01	0.00
10.50	0.97	0.30	0.02	23.50	6.17	5.01	0.00
10.75	1.06	0.36	0.03	23.75	6.18	5.02	0.00
11.00	1.19	0.45	0.05	24.00	6.18	5.02	0.00
11.25	1.35	0.57	0.06				
11.50	1.53	0.71	0.07				
11.75	1.90	1.01	0.16				
12.00	2.86	1.86	0.51				
12.25	4.28	3.18	0.42				
12.50	4.65	3.54	0.15				
12.75	4.83	3.71	0.09				
13.00	4.99	3.87	0.07				
13.25	5.12	3.99	0.06				
13.50	5.21	4.08	0.05				
13.75	5.27	4.14	0.03				

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MSE 24-hr 3 100-Year Rainfall=6.18"

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Summary for Link 4L: Proposed

Inflow Area = 2.404 ac, 76.35% Impervious, Inflow Depth > 5.27" for 100-Year event

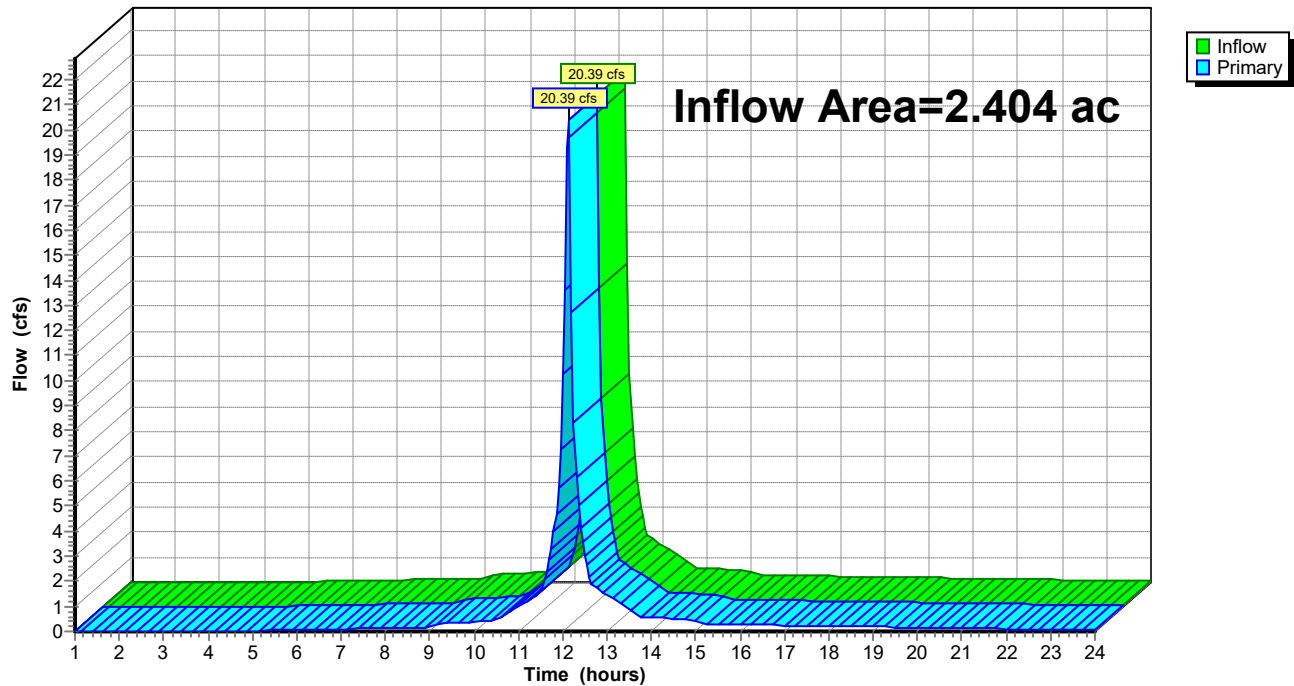
Inflow = 20.39 cfs @ 12.13 hrs, Volume= 1.056 af

Primary = 20.39 cfs @ 12.13 hrs, Volume= 1.056 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs

Link 4L: Proposed

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=6.18"

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Hydrograph for Link 4L: Proposed

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
1.00	0.00	0.00	0.00	14.00	0.54	0.00	0.54
1.25	0.00	0.00	0.00	14.25	0.53	0.00	0.53
1.50	0.00	0.00	0.00	14.50	0.51	0.00	0.51
1.75	0.00	0.00	0.00	14.75	0.49	0.00	0.49
2.00	0.00	0.00	0.00	15.00	0.48	0.00	0.48
2.25	0.00	0.00	0.00	15.25	0.30	0.00	0.30
2.50	0.00	0.00	0.00	15.50	0.29	0.00	0.29
2.75	0.00	0.00	0.00	15.75	0.28	0.00	0.28
3.00	0.00	0.00	0.00	16.00	0.27	0.00	0.27
3.25	0.00	0.00	0.00	16.25	0.27	0.00	0.27
3.50	0.00	0.00	0.00	16.50	0.26	0.00	0.26
3.75	0.00	0.00	0.00	16.75	0.25	0.00	0.25
4.00	0.01	0.00	0.01	17.00	0.24	0.00	0.24
4.25	0.01	0.00	0.01	17.25	0.24	0.00	0.24
4.50	0.02	0.00	0.02	17.50	0.23	0.00	0.23
4.75	0.02	0.00	0.02	17.75	0.22	0.00	0.22
5.00	0.03	0.00	0.03	18.00	0.21	0.00	0.21
5.25	0.03	0.00	0.03	18.25	0.21	0.00	0.21
5.50	0.04	0.00	0.04	18.50	0.20	0.00	0.20
5.75	0.05	0.00	0.05	18.75	0.19	0.00	0.19
6.00	0.06	0.00	0.06	19.00	0.19	0.00	0.19
6.25	0.07	0.00	0.07	19.25	0.18	0.00	0.18
6.50	0.08	0.00	0.08	19.50	0.17	0.00	0.17
6.75	0.09	0.00	0.09	19.75	0.16	0.00	0.16
7.00	0.10	0.00	0.10	20.00	0.16	0.00	0.16
7.25	0.11	0.00	0.11	20.25	0.15	0.00	0.15
7.50	0.12	0.00	0.12	20.50	0.14	0.00	0.14
7.75	0.13	0.00	0.13	20.75	0.14	0.00	0.14
8.00	0.14	0.00	0.14	21.00	0.13	0.00	0.13
8.25	0.15	0.00	0.15	21.25	0.12	0.00	0.12
8.50	0.16	0.00	0.16	21.50	0.11	0.00	0.11
8.75	0.17	0.00	0.17	21.75	0.11	0.00	0.11
9.00	0.18	0.00	0.18	22.00	0.10	0.00	0.10
9.25	0.30	0.00	0.30	22.25	0.09	0.00	0.09
9.50	0.32	0.00	0.32	22.50	0.08	0.00	0.08
9.75	0.35	0.00	0.35	22.75	0.08	0.00	0.08
10.00	0.37	0.00	0.37	23.00	0.07	0.00	0.07
10.25	0.40	0.00	0.40	23.25	0.06	0.00	0.06
10.50	0.42	0.00	0.42	23.50	0.06	0.00	0.06
10.75	0.74	0.00	0.74	23.75	0.05	0.00	0.05
11.00	0.99	0.00	0.99	24.00	0.04	0.00	0.04
11.25	1.26	0.00	1.26				
11.50	1.55	0.00	1.55				
11.75	3.30	0.00	3.30				
12.00	10.28	0.00	10.28				
12.25	8.35	0.00	8.35				
12.50	3.03	0.00	3.03				
12.75	1.72	0.00	1.72				
13.00	1.44	0.00	1.44				
13.25	1.17	0.00	1.17				
13.50	0.89	0.00	0.89				
13.75	0.56	0.00	0.56				

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Multi-Event Tables

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Page 66

Events for Subcatchment 1: Subcat 1

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	2.87	0.141	1.77
2-Year	2.70	3.30	0.163	2.06
10-Year	3.81	4.89	0.249	3.14
100-Year	6.18	8.24	0.434	5.47

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Multi-Event Tables

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Events for Subcatchment 1.1: Subcat 1.1

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	0.45	0.022	1.69
2-Year	2.70	0.52	0.025	1.97
10-Year	3.81	0.78	0.039	3.03
100-Year	6.18	1.32	0.069	5.36

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Multi-Event Tables

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Events for Subcatchment 2: Subcat 2

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	0.93	0.044	1.52
2-Year	2.70	1.09	0.052	1.79
10-Year	3.81	1.68	0.082	2.84
100-Year	6.18	2.93	0.149	5.13

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Multi-Event Tables

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Events for Subcatchment 2.1: Subcat 2.1

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	0.77	0.038	1.87
2-Year	2.70	0.88	0.044	2.16
10-Year	3.81	1.29	0.066	3.24
100-Year	6.18	2.14	0.114	5.59

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Events for Subcatchment 3: Subcat 3

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	1.41	0.066	1.37
2-Year	2.70	1.67	0.079	1.63
10-Year	3.81	2.65	0.128	2.64
100-Year	6.18	4.73	0.237	4.91

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Events for Subcatchment 4: Subcat 4

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1-Year	2.40	0.32	0.015	1.44
2-Year	2.70	0.37	0.018	1.71
10-Year	3.81	0.58	0.028	2.74
100-Year	6.18	1.03	0.052	5.02

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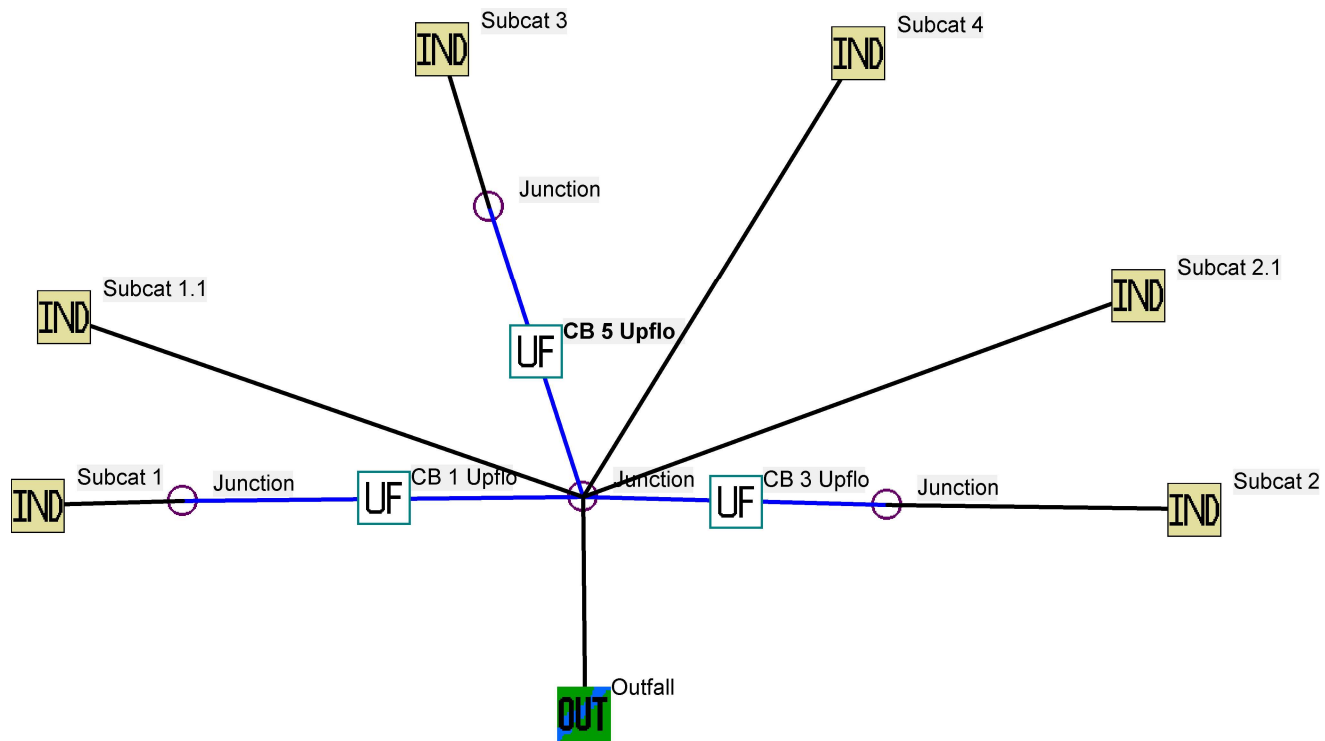
Multi-Event Tables

Printed 5/21/2025

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Events for Link 4L: Proposed

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
1-Year	6.74	6.74	0.00
2-Year	7.83	7.83	0.00
10-Year	11.87	11.87	0.00
100-Year	20.39	20.39	0.00



Data file name: I:\Eppstein Uhen\23610 - GE Healthcare Experience Center\060 CAD\800_SWMP\040_WinSLAMM\GE Healthcare Experience Center.mdb

WinSLAMM Version 10.5.0

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations

Seed for random number generator: -42

Study period starting date: 01/05/69

Study period ending date: 12/31/69

Start of Winter Season: 12/06

End of Winter Season: 03/28

Date: 05-22-2025

Time: 15:32:16

Site information:

LU# 1 - Industrial: Subcat 1.1 Total area (ac): 0.154

13 - Paved Parking 1: 0.124 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.030 ac. Normal Clayey Medium/High Density No Alleys

Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Industrial: Subcat 4 Total area (ac): 0.125

13 - Paved Parking 1: 0.081 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.044 ac. Normal Clayey Medium/High Density No Alleys

Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Industrial: Subcat 2.1 Total area (ac): 0.246

13 - Paved Parking 1: 0.219 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.027 ac. Normal Clayey Medium/High Density No Alleys

Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Industrial: Subcat 2 Total area (ac): 0.349
13 - Paved Parking 1: 0.252 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.097 ac. Normal Clayey Medium/High Density No Alleys
Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Industrial: Subcat 3 Total area (ac): 0.579
13 - Paved Parking 1: 0.369 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.210 ac. Normal Clayey Medium/High Density No Alleys
Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Industrial: Subcat 1 Total area (ac): 0.951
1 - Roofs 1: 0.471 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.319 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.161 ac. Normal Clayey Medium/High Density No Alleys
Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Upflo Filter CP# 1 (DS) - CB 3 Upflo
Media Type: CPZ
Fraction of Area Served by Upflo Filters (0-1): 1.0
Height from Outlet Invert to Structure Top (ft): 4.2
Sump Depth (ft): 2.00
The program will determine the Sump Cleaning/Filter Replacement Frequency
Solve for Given Conditions
Number of filters: 3

Control Practice 2: Upflo Filter CP# 2 (DS) - CB 5 Upflo
Media Type: CPZ
Fraction of Area Served by Upflo Filters (0-1): 1.0
Height from Outlet Invert to Structure Top (ft): 4.2
Sump Depth (ft): 3.00
Sump Cleaning/Filter Replacement is not considered during the model run
Solve for Given Conditions
Number of filters: 3

Control Practice 3: Upflo Filter CP# 3 (DS) - CB 1 Upflo
Media Type: CPZ
Fraction of Area Served by Upflo Filters (0-1): 1.0
Height from Outlet Invert to Structure Top (ft): 3.8

Sump Depth (ft): 2.00

Sump Cleaning/Filter Replacement is not considered during the model run

Solve for Given Conditions

Number of filters: 4

Data file name: I:\Eppstein Uhen\23610 - GE Healthcare Experience Center\060 CAD\800_SWMP\040_WinSLAMM\GE Healthcare Experience Center.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 05-22-2025 Time of run: 13:39:02
Total Area Modeled (acres): 2.404
Years in Model Run: 0.99

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	154701	-	184.5	1782	-
Outfall Total with Controls:	154835	-0.09%	96.07	928.6	47.89%
Annualized Total After Outfall Controls:	156986			941.5	

Appendix E Storm Sizing

Storm Sewer Tabulation

Page 1
Storm Sewers v2023.00

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)		
1	End	83.339	0.47	0.93	0.67	0.31	0.73	5.0	7.9	6.0	4.37	15.42	3.64	24	0.40	888.21	888.54	889.13	889.27	891.02	892.18	CB 1 TO EX CB 1	
2	1	91.471	0.05	0.07	0.90	0.05	0.06	5.0	6.2	6.6	0.42	0.64	3.26	6	1.10	890.00	891.01	890.29	891.34	892.18	893.65	AREA DRAIN 2 TO CB 1	
3	2	46.262	0.02	0.02	0.90	0.02	0.02	5.0	5.0	7.2	0.13	0.61	1.50	6	0.99	891.01	891.47	891.34	891.65	893.65	898.47	AREA DRAIN 1 TO AREA DRAIN 2	
4	1	137.779	0.39	0.39	0.90	0.35	0.35	5.0	5.0	7.2	2.52	16.96	2.99	24	0.48	888.54	889.20	889.27	889.75	892.18	894.62	EX CB 4 TO CB 1	
5	End	82.166	0.11	0.35	0.89	0.10	0.25	5.0	6.2	6.6	1.65	2.71	3.91	10	1.30	886.32	887.39	886.95	887.97	886.84	891.54	CB 3 TO EX CB 3	
6	5	145.60C	0.24	0.24	0.63	0.15	0.15	5.0	5.0	7.2	1.08	2.16	3.09	10	0.83	887.39	888.60	887.97	889.06	891.54	892.15	CB 2 TO CB 3	
7	End	75.000	0.16	0.77	0.33	0.05	0.42	5.0	5.3	7.0	2.94	4.71	4.67	12	1.49	883.88	885.00	884.64	885.73	890.86	889.21	CB 5 TO EX CB 5	
8	7	64.079	0.61	0.61	0.60	0.37	0.37	5.0	5.0	7.2	2.63	6.10	4.38	12	2.50	885.00	886.60	885.73	887.29	889.21	888.82	CB 4 TO CB 5	
Project File: New.stm																Number of lines: 8				Run Date: 5/22/2025			
NOTES:Intensity = 34.55 / (Inlet time + 4.70) " 0.69; Return period =Yrs. 10 , c = cir e = ellip b = box																							

Storm Sewer Tabulation

100-YEAR

Page 1
Storm Sewers v2023.00

Station		Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
Line	To Line		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)		
1	End	83.339	0.47	0.93	0.67	0.31	0.73	5.0	6.9	9.3	6.77	15.42	4.75	24	0.40	888.21	888.54	889.13	889.47	891.02	892.18	CB 1 TO EX CB 1	
2	1	91.471	0.05	0.07	0.90	0.05	0.06	5.0	5.8	10.0	0.63	0.64	3.71	6	1.10	890.00	891.01	890.41	891.42	892.18	893.65	AREA DRAIN 2 TO CB 1	
3	2	46.262	0.02	0.02	0.90	0.02	0.02	5.0	5.0	10.7	0.19	0.61	1.44	6	0.99	891.01	891.47	891.66	891.73	893.65	898.47	AREA DRAIN 1 TO AREA DRAIN 2	
4	1	137.779	0.39	0.39	0.90	0.35	0.35	5.0	5.0	10.7	3.74	16.96	2.78	24	0.48	888.54	889.20	889.96	889.88	892.18	894.62	EX CB 4 TO CB 1	
5	End	82.166	0.11	0.35	0.89	0.10	0.25	5.0	5.8	10.0	2.49	2.71	5.36	10	1.30	886.32	887.39	886.95	888.09	886.84	891.54	CB 3 TO EX CB 3	
6	5	145.60C	0.24	0.24	0.63	0.15	0.15	5.0	5.0	10.7	1.61	2.16	3.68	10	0.83	887.39	888.60	888.09	889.17	891.54	892.15	CB 2 TO CB 3	
7	End	75.000	0.16	0.77	0.33	0.05	0.42	5.0	5.2	10.5	4.39	4.71	6.41	12	1.49	883.88	885.00	884.64	885.88	890.86	889.21	CB 5 TO EX CB 5	
8	7	64.079	0.61	0.61	0.60	0.37	0.37	5.0	5.0	10.7	3.90	6.10	5.44	12	2.50	885.00	886.60	885.88	887.44	889.21	888.82	CB 4 TO CB 5	
Project File: New.stm																Number of lines: 8				Run Date: 5/22/2025			
NOTES:Intensity = 34.94 / (Inlet time + 2.40) " 0.59; Return period =Yrs. 100 , c = cir e = ellip b = box																							

Appendix F Storm Water Maintenance Agreement

Storm Water Management Practice Maintenance Agreement

Document Number

GE Medical Systems, LLC, as “Owner” of the property described below, in accordance with Chapter 32 City of Waukesha Storm Water Management and Erosion Control, agrees to install and maintain storm water management practice(s) on the subject property in accordance with approved plans and Storm Water Management Plan conditions. The owner further agrees to the terms stated in this document to ensure that the storm water management practice(s) continues serving the intended functions in perpetuity. This Agreement includes the following exhibits:

Exhibit A: Legal Description of the real estate for which this Agreement applies (“Property”).

Exhibit B: Location Map(s) – shows an accurate location of each storm water management practice affected by this Agreement.

Exhibit C: Maintenance Plan – prescribes those activities that must be carried out to maintain compliance with this Agreement.

Note: After construction verification has been accepted by the City of Waukesha, for all planned storm water management practices, an addendum(s) to this agreement shall be recorded by the Owner showing design and construction details. The addendum(s) may contain several additional exhibits, including certification by City of Waukesha of Storm Water and Erosion Control Permit termination, as described below.

Name and Return Address

City of Waukesha
201 Delafield Street
Waukesha, WI 53188

Parcel Identification Number(s)
WAKC0947999,

Through this Agreement, the Owner hereby subjects the Property to the following covenants, conditions and restrictions:

1. The Owner shall be responsible for the routine and extraordinary maintenance and repair of the storm water management practice(s) and drainage easements identified in Exhibit B until Storm Water and Erosion Control Permit termination by the City of Waukesha in accordance with Chapter 32 of the City Code of Ordinances.
2. After Storm Water and Erosion Control Permit termination under 1., the current Owner(s) shall be solely responsible for maintenance and repair of the storm water management practices and drainage easements in accordance with the maintenance plan contained in Exhibit C.
3. The Owner(s) shall, at their own cost, complete inspections of the storm water management practices at the time intervals listed in Exhibit C, and conduct the inspections by a qualified professional, file the reports with the City of Waukesha after each inspection and complete any maintenance or repair work recommended in the report. The Owner(s) shall be liable for the failure to undertake any maintenance or repairs. After the work is completed by the Contractor, the qualified professional shall verify that the work was properly completed and submit the follow-up report to the City within 30 days.
4. In addition, and independent of the requirements under paragraph 3 above, the City of Waukesha, or its designee, is authorized to access the property as necessary to conduct inspections of the storm water management practices or drainage easements to ascertain compliance with the intent of this Agreement and the activities prescribed in Exhibit C. The City of Waukesha may require work to be done which differs from the report described in paragraph 3 above, if the City of Waukesha reasonably concludes that such work is necessary and consistent with the intent of this agreement. Upon notification by the City of Waukesha of required maintenance or repairs, the Owner(s) shall complete the specified maintenance or repairs within a reasonable time frame determined by the City of Waukesha.
5. If the Owner(s) do not complete an inspection under 3. above or required maintenance or repairs under 4. above within the specified time period, the City of Waukesha is authorized, but not required, to perform the specified inspections, maintenance or repairs. In the case of an emergency situation, as determined by the City of Waukesha, no notice shall be required prior to the City of Waukesha performing emergency maintenance or repairs. The City of Waukesha may levy the costs and expenses of such inspections, maintenance or repair

related actions as a special charge against the Property and collected as such in accordance with the procedures under s. 66.0627 Wis. Stats. or subch. VII of ch. 66 Wis. Stats.

6. This Agreement shall run with the Property and be binding upon all heirs, successors and assigns. After the Owner records the addendum noted above, the City of Waukesha shall have the sole authority to modify this agreement upon a 30-day notice to the current Owner(s).

Dated this ____ day of _____, 2025.

Owner:
GE Medical Systems, LLC

By: _____

Name/Title:

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ____ day of _____, 2025, the above named _____ to me known to be the person who executed the foregoing instrument and acknowledged the same.

Notary Public, Waukesha County, WI
My commission expires: _____.

This document was drafted by:

Terry Meyer, P.E.
The Sigma Group, Inc.
1300 W. Canal Street
Milwaukee, WI 53233

For Certification Stamp

City of Waukesha Common Council Approval

Dated this ____ day of _____, 2025.

Shawn N. Reilly, Mayor

Katie Panella, City Clerk

Acknowledgements

State of Wisconsin:
County of Waukesha

Personally came before me this ____ day of _____, 2025, the above named _____ to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____.
Notary Public, Waukesha County, WI
My commission expires:_____.

Exhibit A – Legal Description

The following description and reduced copy map identifies the land parcel(s) affected by this Agreement. For a larger scale view of the referenced document, contact the Waukesha County Register of Deeds office.

Project Identifier: GE HealthCare

Acres: 307.60

Map Produced By: The Sigma Group

Legal Description:

PT SW1/4, NW1/4, NE1/4 & SE1/4 SEC 21 & SE1/4 SEC 20 T7N R19E BEG W 1/4 COR SEC 21, N0 15'W ON W LI NW1/4 899.16', N87 30'44" E 2140', S2 29'16" E 425', N87 30'44" E 600', S2 29'16" E 500', S11 31'33" W 1570.11', SW ON ARC 675.87', S38 58'59" W 484.03', SW ON ARC 653.35', S80 21'W 1002.78', N0 34'3" W 1265.39', S89 15'40" W 661.74', N0 19'W 1327.34', N88 57'30" E 655.95' TO BEG EXCEPT CSM 11275 (V111 CSM P150); EXCEPT PT NE1/4 OF SE1/4 SEC 20 T7N R19E DESCRIBED AS ALL E1/2 OF AFORESAID NE1/4 OF SE1/4 SEC 20 (LEGAL DESCRIPTION PROVIDED BY OWNER) 172.13 AC DOC NO 4378543

PT NW1/4, NE1/4, SE1/4 & SW1/4 SEC 21 T7N R19E - COM W 1/4 COR SEC 21, N0 15'W ON W LI NW1/4 899.16' TO BEG, N0 15'W 1128', N87 30'44" E 2674.96', S0 8'23" E 27', N87 34'14" E 874.26' TO W LI GRANDVIEW BL, S1 58'10" E ON W LI 2049.03', SW ON ARC 991.72', S71 5'34" W 276.36', SW ON ARC 720.97', NW ON ARC 100', N11 31'33" E 1570.11', N2 29'16" W 500', S87 30'44" W 600', N2 29'16" W 425', S87 30'44" W 2140' TO BEG ALSO VACATED FATIMA DR ADDED (DESC IN RES NO 83-02) 136.33 AC DOC NO 4389543

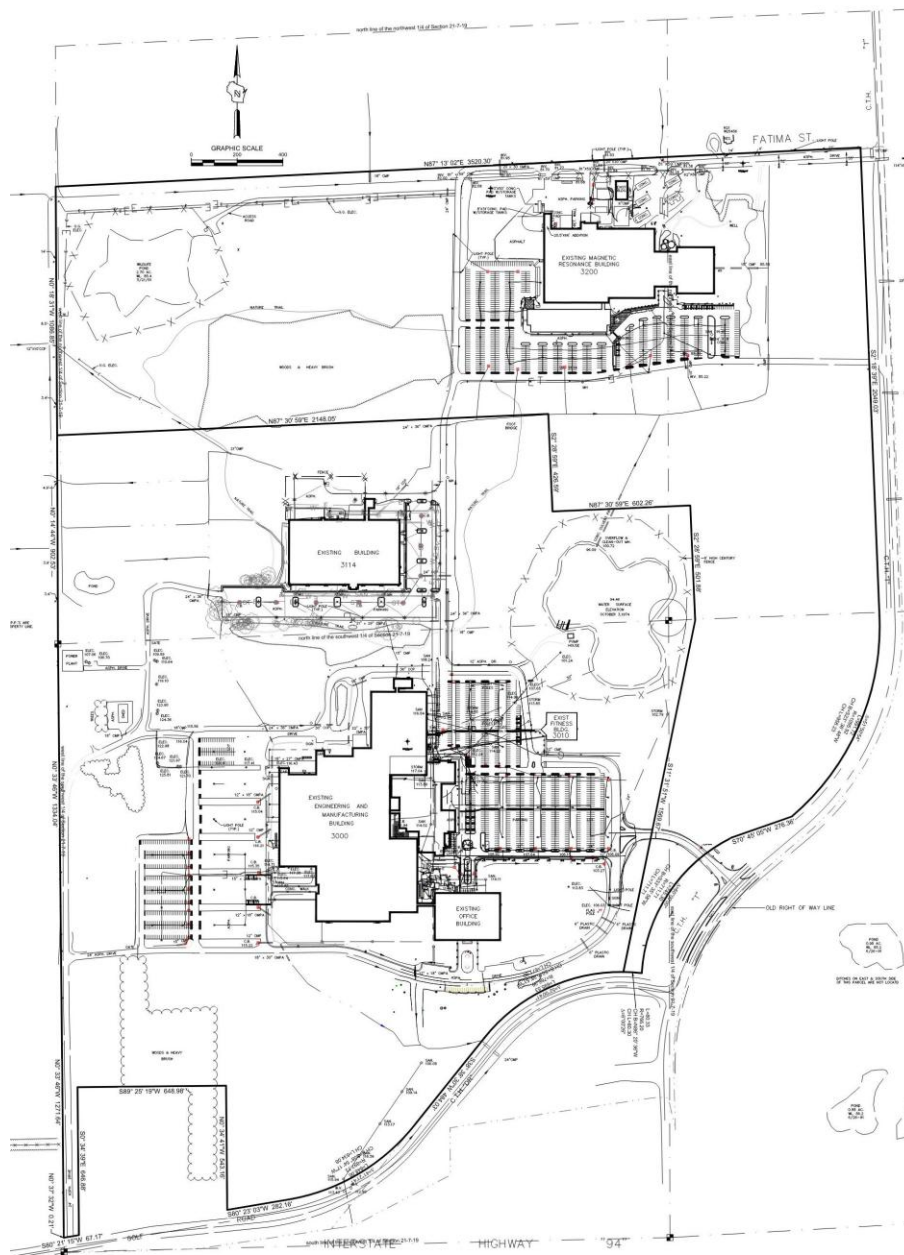


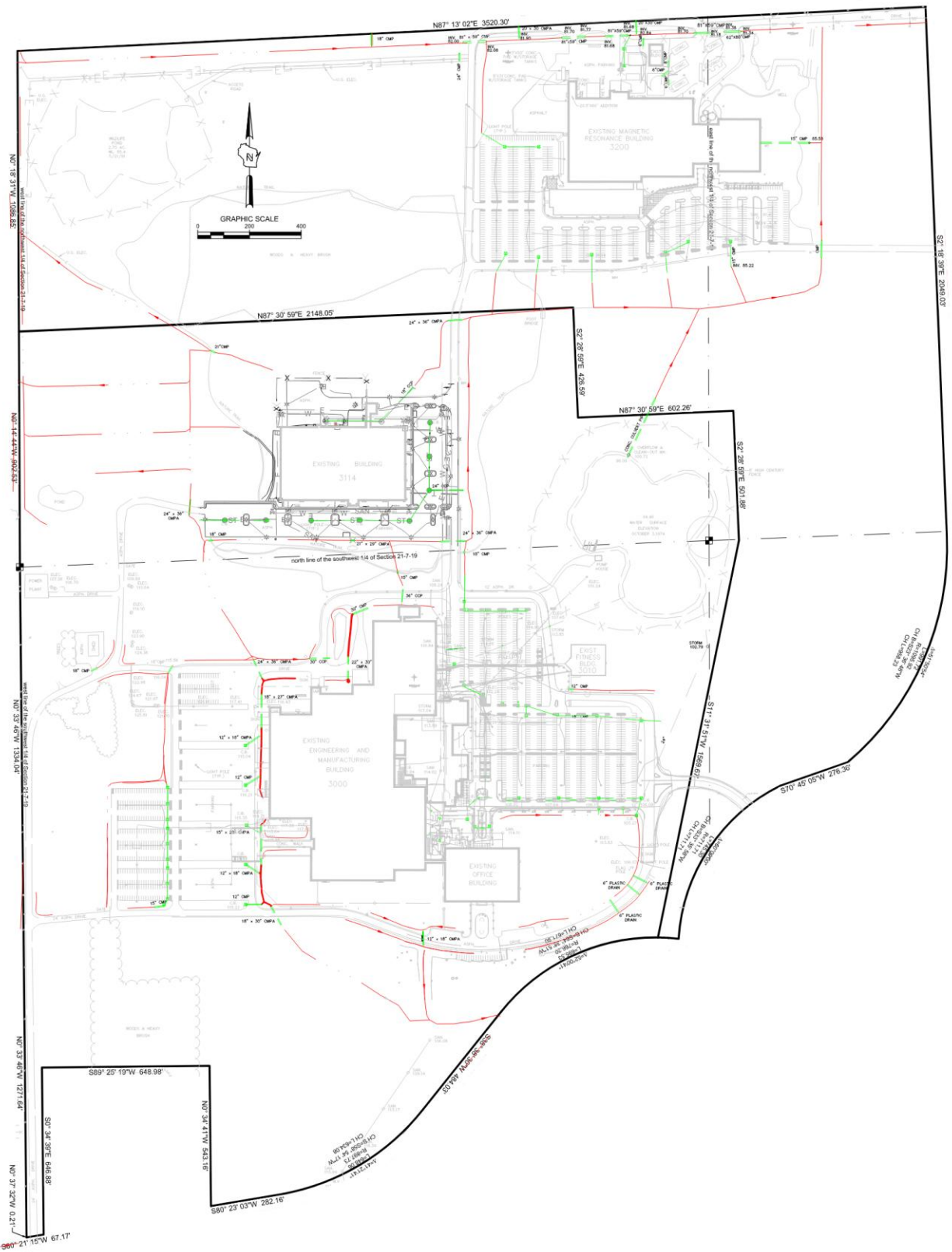
Exhibit B - Location Map

Storm Water Management Practices Covered by this Agreement

The stormwater management practices covered by this Agreement are depicted in the reduced copy of a portion of the construction plans, as shown below. The practices include general site stormwater maintenance and Up-flo filters, catch basins, and all associated pipes.

Development Name:	GE HealthCare
Stormwater Practices:	General Site Stormwater Maintenance, Upflo Filters
Location of Practices:	As shown in Figure B1, B2, located at the property indicated on Exhibit A in the City of Waukesha, WI
Owner:	GE Medical Systems, LLC
Drafter Name:	The Sigma Group

Figure B1
Overall Plan View of Storm Water Practices
Drafter Name: The Sigma Group



Drafter Name: **The Sigma Group**



Exhibit C - Storm Water Practice Maintenance Plan

This exhibit explains the basic function of each of the storm water practices listed in Exhibit B and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site. Access to the stormwater practices for maintenance vehicles is shown in Exhibit B. Any failure of a storm water practice that is caused by a lack of maintenance will subject the Owner(s) to enforcement of the provisions listed on page 1 of this Agreement by the City of Waukesha.

Storm Sewer and Storm Catch Basins Description:

The storm sewer directs the storm water from catch basin to the storm water facilities for control and treatment. The storm catch basin will provide pretreatment for the underground system. Sediment will settle within the sump of the catch basin. "As-built" construction drawings, showing actual dimensions, elevations, outlet structures, etc. will be recorded as an addendum(s) to this agreement within 60 days after the City accepts verification of construction from the project engineer.

Minimum Maintenance Requirements:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed by the Facility Manager:

1. Inspect all inlet/catch basins/area drains to ensure no clogging of the surface grates, or no blockage from floating debris or ice within the basins. Any blockage must be removed immediately.
2. Inspect the sump to determine the level of sediment build up. Remove sediment when it reaches a level within six inches of the discharge pipe invert.
3. Inspect the structural integrity of the structure/pipe connections. If any structural damage to the inlet/ catch basin structure/ pipe connections is identified the damage shall be repaired.
4. Inspect the pipe connections to ensure no clogging or blockage of the pipe. Any clogging or blockage must be removed immediately.
5. Any other repair or maintenance needed to ensure the continued function of the storm water practices or as ordered by the City under the provisions listed on page 1 of this Agreement.

Drainage Swales Description:

Grass swales collect storm water drainage in various areas of the site to direct storm water runoff to existing wet ponds and wetlands.

Minimum Maintenance Requirements for Drainage Swales:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed.

1. Grass swales shall be preserved to allow free flowing of surface runoff in accordance. No buildings or other structures are allowed in these areas. No grading or filling is allowed that may interrupt flows.
2. Grass swales must be checked after heavy rains (minimum of annually) for signs of erosion. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the downstream forebays or basin. Erosion matting is recommended for repairing grassed areas.
3. Periodic mowing of the grass swales will encourage rigorous grass cover and allow better inspections for erosion.

Minimum Maintenance Requirements for General Maintenance:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed.

1. Periodic litter and debris pick up and as needed

Up-Flo Filter Description

The Up-Flo filter system provides supplement treatment to the underground system. The system is designed to capture trash, oil, sediment and remove fine pollutants.

Minimum Maintenance Requirements:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed by the Facility Manager. An inspection and maintenance log for the devices is provided on the following pages:

1. A minimum of two inspections are required a year (May and October) to monitor sediment and pollutant accumulation.
 - a. Inspect the Up-Flo system for sediment building up within the sump. When sediment depth in the sump is found to be greater than 16 inches, sediment removal is required. There should always be a minimum of 8 inches separation between outlet pipe invert and the sediment built up within the sump.
 - b. Media filter bags and drain down filter shall be replaced at least once a year and properly disposed of in accordance with the Up-Flo manufacture's operation and maintenance manual.
 - c. The Up-Flo filtration system shall be inspected for outlet pipe clogging/blockage of debris or ice within the basins. Any blockage must be removed immediately.
 - d. Inspect the structural integrity of the structure/pipe connections. If any structural damage to the inlet/ catch basin structure/ pipe connections is identified the damage shall be repaired.
 - e. For detailed inspection and maintenance requirements refer to manufactures operation and maintenance manual.
 - f. Any other repair or maintenance needed to insure the continued function of the storm water practices or as ordered by the City of Waukesha under the provisions listed on Page 1 of this Agreement.



UP-FLO® FILTER INSPECTION LOG

Site Name: _____ Owner Change since last inspection? Y N

Location: _____

Owner Name: _____

Address: _____ Phone Number: _____

Site Status: _____

Date: _____ Time: _____ Site conditions*: _____

*(Stable, Under Construction, Needing Maintenance, etc.)

Inspection Frequency Key: A=annual; M=monthly; S=after major storms

Inspection Items	Inspection Frequency	Inspected? (Yes/No)	Maintenance Needed? (Yes/No)	Comments/Description
Debris Removal				
Adjacent area free of debris?	M			
Inlets and Outlets free of debris?	M			
Facility (internally) free of debris?	M			
Vegetation				
Surrounding area fully stabilized? (no evidence of eroding material into Up-Flo® Filter)	A			
Grass mowed?	M			
Water retention where required				
Water holding chamber(s) at normal pool?	A			
Evidence of erosion?	A			
Sediment Deposition				
Filtration Chamber free of sediments?	A			
Sedimentation sump not more than 50% full?	A			
Structural Components				
Any evidence of structural deterioration?	A			
Grates in good condition?	A			
Spalling or cracking of structural parts?	A			
Outlet/Overflow Spillway	A			
Other				
Noticeable odors?	A			
Any evidence of filter(s) clogging?	M			
Evidence of flow bypassing facility?	A			

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102

Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Inspection Log Page | 1 of 2



Inspector Comments: _____

Overall Condition of Up-Flo® Filter**: ☐ Acceptable ☐ Unacceptable

***"Acceptable" would mean properly functioning; "unacceptable" would mean damaged or required further maintenance.*

If any of the above Inspection Items are checked "Yes" for "Maintenance Needed", list Maintenance actions and their completion dates below or on the Maintenance Log provided on page 15 of the Up-Flo® Filter Operation & Maintenance Manual:

Maintenance Action Needed	Due Date

The next routine inspection is schedule for approximately: (date) _____

Inspected by: (signature) _____

Inspected by: (printed) _____



UP-FLO® FILTER MAINTENANCE LOG

Site Name: _____ Owner Change since last inspection? Y N

Location: _____

Owner Name: _____

Address: _____ Phone Number: _____

Site Status: _____

Date: _____ Time: _____ Site conditions: _____

**(Stable, Under Construction, Needing Maintenance, etc.)*

Estimated volume of oil/floatable trash removed: _____

Sediment depth measured in sump prior to removal: _____

Number of Filter Modules fitted with new media packs: _____

Inspector Comments: _____

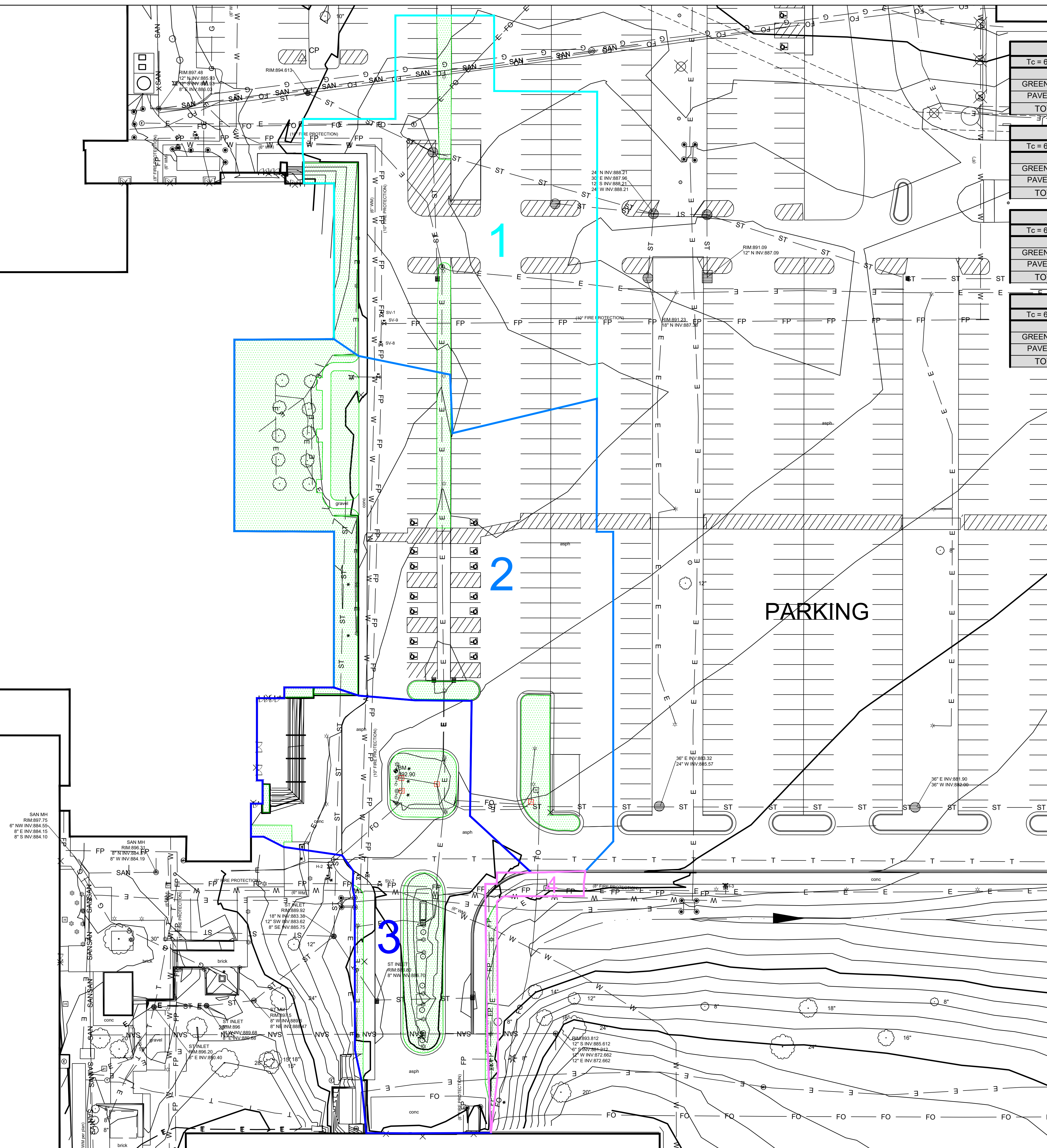
Overall Condition of Up-Flo® Filter: ☐ Acceptable ☐ Unacceptable

***"Acceptable" would mean properly functioning; "unacceptable" would mean damaged or required further maintenance.

Maintained by: (signature) _____

Maintained by: (printed) _____

Appendix G Figures



WATERSHED AREA 1			
Tc = 6.0 min.	SF	ACRE	CN
EXISTING			
GREENSPACE	3023	0.07	74
PAVEMENT	28568	0.66	98
TOTAL	31591	0.73	96

WATERSHED AREA 2			
Tc = 6.0 min.	SF	ACRE	CN
EXISTING			
GREENSPACE	11924	0.27	74
PAVEMENT	33563	0.77	98
TOTAL	45487	1.04	92

WATERSHED AREA 3			
Tc = 6.0 min.	SF	ACRE	CN
EXISTING			
GREENSPACE	5135	0.12	74
PAVEMENT	20887	0.48	98
TOTAL	26022	0.60	93

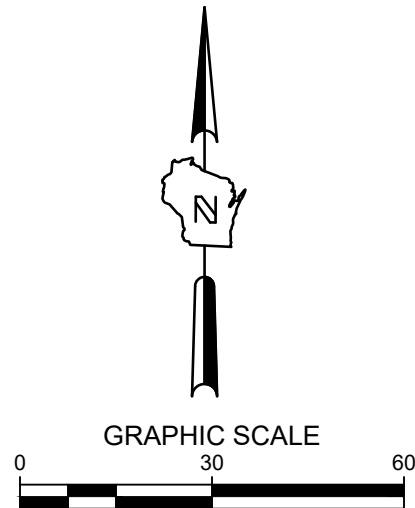
WATERSHED AREA 4 - OFFSITE			
Tc = 6.0 min.	SF	ACRE	CN
EXISTING			
GREENSPACE	741	0.02	74
PAVEMENT	915	0.02	98
TOTAL	1656	0.04	87

LEGEND:

- SUBCATCHMENT AREA 1
 SUBCATCHMENT AREA 2
 SUBCATCHMENT AREA 3
 SUBCATCHMENT AREA 4

 GRASS, GOOD HSG C

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210



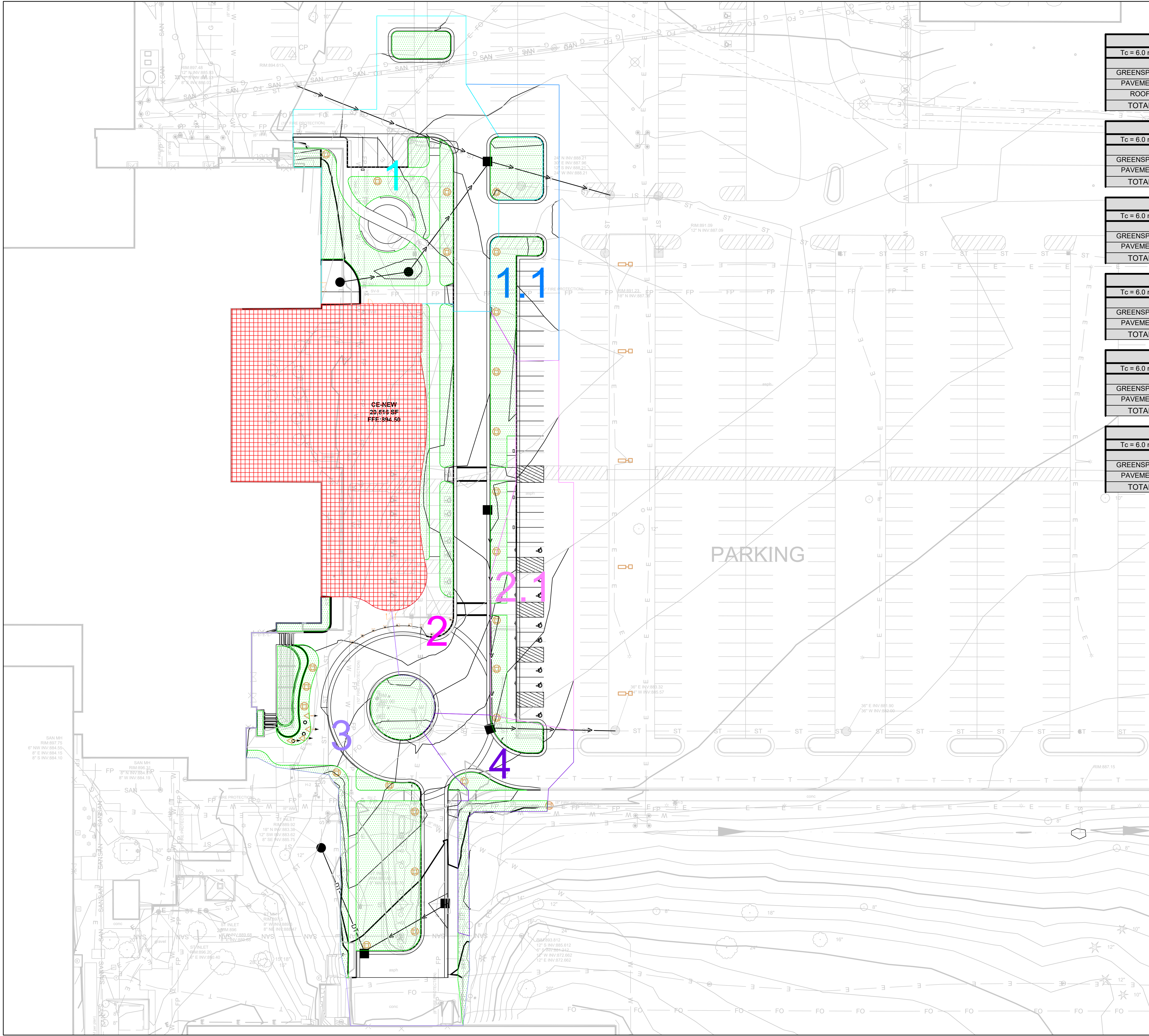
3000 N GRANDVIEW BLVD
WAUKESHA, WI 53188

EXISTING CONDITIONS

**PRELIMINARY
NOT FOR
CONSTRUCTION**

ISSUANCE		DATE
		***** ***** ***** ***** ***** ***** ***** ***** ***** *****
NO. REVISION		DATE
		***** ***** ***** ***** ***** ***** ***** *****
PROJECT NO:	23610	
DESIGN DATE:	****	
PLOT DATE:	2025.05.21	
DRAWN BY:	AKK	
CHECKED BY:	****	
APPROVED BY:	*****	
SHEET NO:		

SW 1.0



WATERSHED AREA 1			
Tc = 6.0 min.	SF	ACRE	CN
PROPOSED			
GREENSPACE	7011	0.16	74
PAVEMENT	13905	0.32	98
ROOF	20517	0.47	98
TOTAL	41433	0.95	94

WATERSHED AREA 1.1			
Tc = 6.0 min.	SF	ACRE	CN
PROPOSED			
GREENSPACE	1293	0.03	74
PAVEMENT	5417	0.12	98
TOTAL	6710	0.15	93

WATERSHED AREA 2			
Tc = 6.0 min.	SF	ACRE	CN
PROPOSED			
GREENSPACE	4229	0.10	74
PAVEMENT	10974	0.25	98
TOTAL	15203	0.35	91

WATERSHED AREA 2.1			
Tc = 6.0 min.	SF	ACRE	CN
PROPOSED			
GREENSPACE	1167	0.03	74
PAVEMENT	9528	0.22	98
TOTAL	10695	0.25	95

WATERSHED AREA 3			
Tc = 6.0 min.	SF	ACRE	CN
PROPOSED			
GREENSPACE	9171	0.21	74
PAVEMENT	16085	0.37	98
TOTAL	25256	0.58	89

WATERSHED AREA 4			
Tc = 6.0 min.	SF	ACRE	CN
PROPOSED			
GREENSPACE	1899	0.04	74
PAVEMENT	3524	0.08	98
TOTAL	5423	0.12	90

LEGEND:

SUBCATCHMENT AREA 1
SUBCATCHMENT AREA 1.1
SUBCATCHMENT AREA 2
SUBCATCHMENT AREA 2.1
SUBCATCHMENT AREA 3
SUBCATCHMENT AREA 4

GRASS, GOOD HSG C

ROOFS

THE SIGMA GROUP

Single Source. Sound Solutions.

www.thesigmagroup.com

1300 West Canal Street

Milwaukee, WI 53233

Phone: 414-643-4200

Fax: 414-643-4210

N

GRAPHIC SCALE

0

30

60

GE HEALTHCARE EXPERIENCE CENTER

3000 N GRANDVIEW BLVD

WAUKESHA, WI 53188

PROPOSED CONDITIONS

PRELIMINARY

NOT FOR

CONSTRUCTION

ISSUANCE	DATE
-----	-----
NO. REVISION	DATE
-----	-----

PROJECT NO:	23610
DESIGN DATE:	----
PLOT DATE:	2025.05.21
DRAWN BY:	AKK
CHECKED BY:	----
APPROVED BY:	----
SHEET NO:	SW 2.0



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THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

UP-FLO DEVICE WITH 3 FILTER MODULES

UP-FLO DEVICE WITH 3 FILTER MODULES

UP-FLO VAULT WITH 4 FILTER MODULES

LEGEND:	
—W—	PROPOSED WATER SERVICE
—FP—	PROPOSED FIRE PROTECTION
—SAN—	PROPOSED SANITARY SERVICE
—S—	PROPOSED STORM SEWER
■	PROPOSED STORM INLET
⊙	PROPOSED HYDRANT ASSEMBLY

GENERAL NOTES:

- THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS DRAWING IS BASED ON FIELD LOCATIONS AND/OR RECORDS FURNISHED BY MUNICIPALITIES AND UTILITY COMPANIES. THE LOCATION AND ACCURACY OF WHICH CANNOT BE GUARANTEED. THERE MAY BE ADDITIONAL UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- VERIFY ACTUAL LOCATIONS AND INVERTS IN THE FIELD. ANY POTENTIAL ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- WORK TO BE COMPLETED IS INDICATED IN BOLD TYPE LINES AND EXISTING CONDITIONS ARE INDICATED BY LIGHT TYPE LINES.
- ELECTRONIC CIVIL FILES ARE AVAILABLE UPON WRITTEN REQUEST. DO NOT USE ELECTRONIC CIVIL FILES TO LAYOUT FOUNDATIONS, COLUMN LINES, LIGHT POLES, OR OTHER NON CIVIL SITE WORK. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDING AND ARCHITECTURAL FEATURES.
- ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
- PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUBS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
- WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
- PRIVATE STORM SEWER 12-INCH DIAMETER OR LARGER SHALL BE HDPE. BELOW 12-INCH DIAMETER SHALL BE PVC SDR-35 ASTM D3034. PRIVATE WATER MAIN SHALL BE CLASS 250 DR 18 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
- COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES.
- IF PROJECT IS DESIGN BUILD MEP, THE GENERAL CONTRACTOR IS REQUIRED TO PROVIDE FINAL SEWER AND WATER DESIGN SHOWING LOCATION, INVERTS AND SIZES TO THE ENGINEER FOR FINAL REVIEW AND VERIFICATION PRIOR TO STARTING UNDERGROUND UTILITY CONSTRUCTION.
- WATER MAIN CONNECTION: TAP WATER MAIN WITH SIZE AND LOCATION INDICATED ON PLAN IN ACCORDANCE WITH LOCAL WATER UTILITY REQUIREMENTS. COORDINATE CONNECTION WITH LOCAL WATER UTILITY. ALL JOINTS SHALL BE RESTRAINED FROM CONNECTION OF WATER MAIN TO BUILDING WALL. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS. INSTALL MEGA-LUG OR APPROVED EQUAL TIGHT TO WALL FOR RESTRAINT FOR ALL BUILDING WALL PENETRATIONS AS APPROVED BY LOCAL PLUMBING INSPECTOR AND WATER UTILITY. INSTALL THRUST BLOCKING AND MEGA-LUG AT BEND BELOW FLOOR FOR ALL FLOOR PENETRATIONS.
- INSTALL JOINT RESTRAINT AND CONCRETE THRUST BLOCKS AT ALL OFFSET FITTINGS (TEES, BENDS, DEAD ENDS, VALVES, REDUCERS) USING MEGA-LUG OR APPROVED EQUAL. CONCRETE THRUST BLOCKS SHALL BE INSTALLED PER TABLE NOS 44, 45, 46 FROM THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. SEE DETAIL FOR MINIMUM LENGTH OF RESTRAINED JOINT REQUIRED. SUBMIT JOINT RESTRAINT DETAILS FOR ALL JOINT TYPES INCLUDING PUSH-ON AND MECHANICAL CONNECTIONS.
- ALL SANITARY SEWER TO BE INSTALLED IN ACCORDANCE WITH CITY OF WAUKESHA STANDARDS.
- ALL APPLICATIONS AND FEES FOR SANITARY SEWER MUST BE COMPLETED AND PAID PRIOR TO CONNECTION TO SEWER SYSTEMS.
- ANY UTILITY WORK IN THE RIGHT-OF-WAY AND ALL SANITARY SEWER CONNECTIONS TO BE INSPECTED BY THE CITY. NOTIFY CITY 72 HOURS IN ADVANCE OF CONNECTING TO SEWER.
- WHEN STARTING AN INSTALLATION, THE FARTHEST DOWNSTREAM LOCATION OF THE NEW SANITARY SEWER SYSTEM SHALL HAVE A PLUG INSTALLED AND MAINTAINED BY THE UTILITY CONTRACTOR. THAT PLUG SHALL NOT BE REMOVED UNTIL THE SYSTEM HAS BEEN ACCEPTED BY THE CITY ENGINEER AND DEEMED OPERATIONAL BY THE CITY.

SHEET INFORMATION

PROGRESS DOCUMENTS NOT FOR CONSTRUCTION

These documents reflect progress and intent and may be subject to change, including additional detail. These are not final construction documents and shall not be used for final bidding or construction-related purposes.

PROJECT MANAGER PK

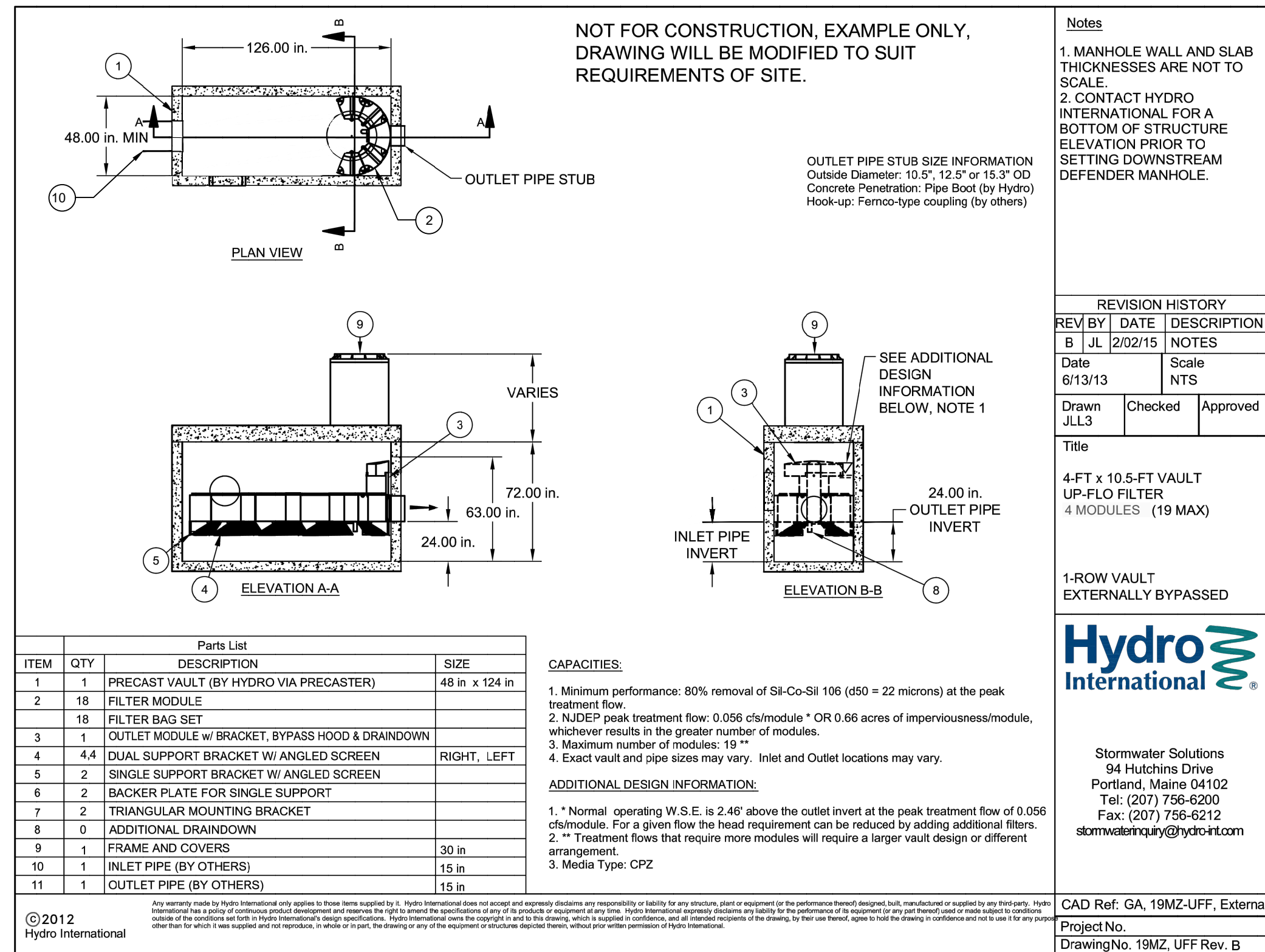
PROJECT NUMBER 223518-01

UTILITY PLAN

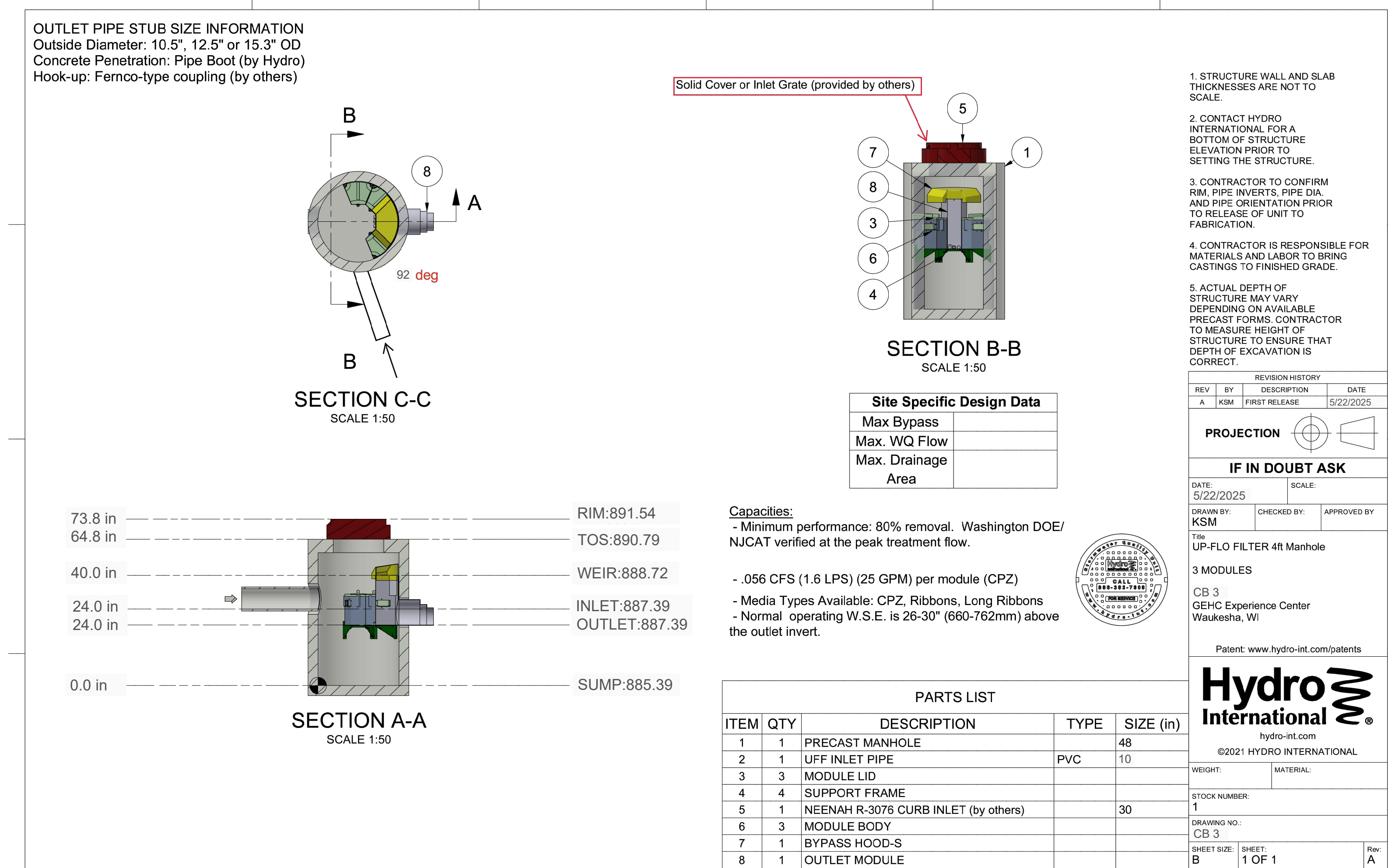
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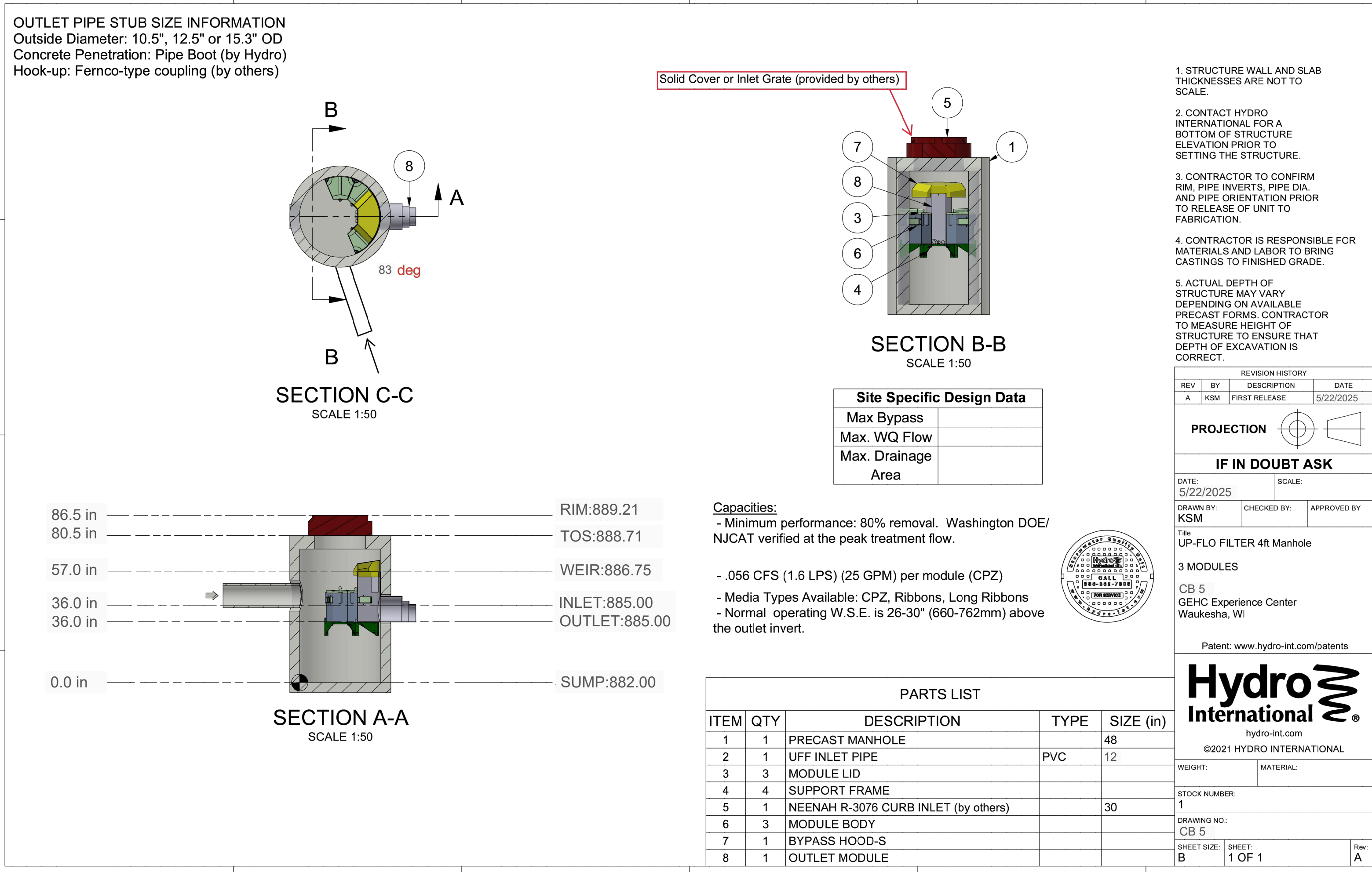
DATE	DESCRIPTION
04.11.2025	PRELIMINARY CITY SUBMITTAL
05.09.2025	SCHEMATIC DESIGN
06.23.2025	FINAL SITE PLAN & ARCHITECTURAL REVIEW



A CB 1 UPFLO FILTER VAULT
SCALE: NTS



B CB 3 UPFLO FILTER
SCALE: NTS



C CB 5 UPFLO FILTER
SCALE: NTS