

***Engineering Drainage Calculations
for
105 Lafayette Street
Arlington, Massachusetts***

Prepared by

***Gala Simon Associates, Inc.
394 Lowell Street, Suite 18
Lexington, MA 02420
781-676-2962***

March 26, 2020



Project: 105 Lafayette Street, Arlington, MA

Date: March 26, 2020

Project Narrative:

The site preparation of the project consists of the demolition of the existing dwelling and removal of a shed. The project consists of the construction of a new dwelling in the general vicinity as the existing dwelling. Porous pavement is proposed for the walkway and driveway.

Soils on the site are considered Hydrological Soil Type D per USDA soil maps. On-site soil testing performed by Gala Simon Associates, Inc., on August 15, 2011 indicate sandy loam (group B) on-site.

The 24-hour rainfall amounts used in the hydrological calculations were obtained from the Northeast Regional Climate Center's, "Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada".

Summary of Results:

The following table summarizes the peak flows and volumes from the property under Existing and Proposed Conditions.

Summary of Stormwater Runoff and Volume

<i>Storm Event</i>	<i>Existing Conditions Peak</i>		<i>Proposed Conditions Peak</i>		<i>Δ</i>	
	<i>Runoff (cfs)</i>	<i>Volume (af)</i>	<i>Runoff (cfs)</i>	<i>Volume (af)</i>	<i>Runoff (cfs)</i>	<i>Volume (af)</i>
<i>2-Year (3.23 in)</i>	0.20	0.014	0.20	0.014	0.00	0.000
<i>10-Year (4.90 in)</i>	0.49	0.033	0.46	0.031	-0.03	-0.002
<i>25-Year (6.20 in)</i>	0.73	0.049	0.69	0.046	-0.04	-0.003
<i>100-Year (8.89 in)</i>	1.26	0.086	1.18	0.080	-0.08	-0.006

Conclusions:

1. As analyzed, the peak rates of runoff and volumes will be maintained for the 2, 10, 25 and 100 year storm events.

Project: **105 Lafayette Street, Arlington**

Date: **March 26, 2020**

Existing Conditions

Total Area:	8,755 s.f.
Total Impervious Area:	1,641 s.f.
Dirt Road:	406 s.f.
Total Lawn Area:	5,271 s.f.

Hydrocad Model for Existing Conditions:

Total Area:	8,755 s.f.
Impervious:	1,641 s.f.
Dirt Road:	1,843 s.f.
Lawn Area:	5,271 s.f.

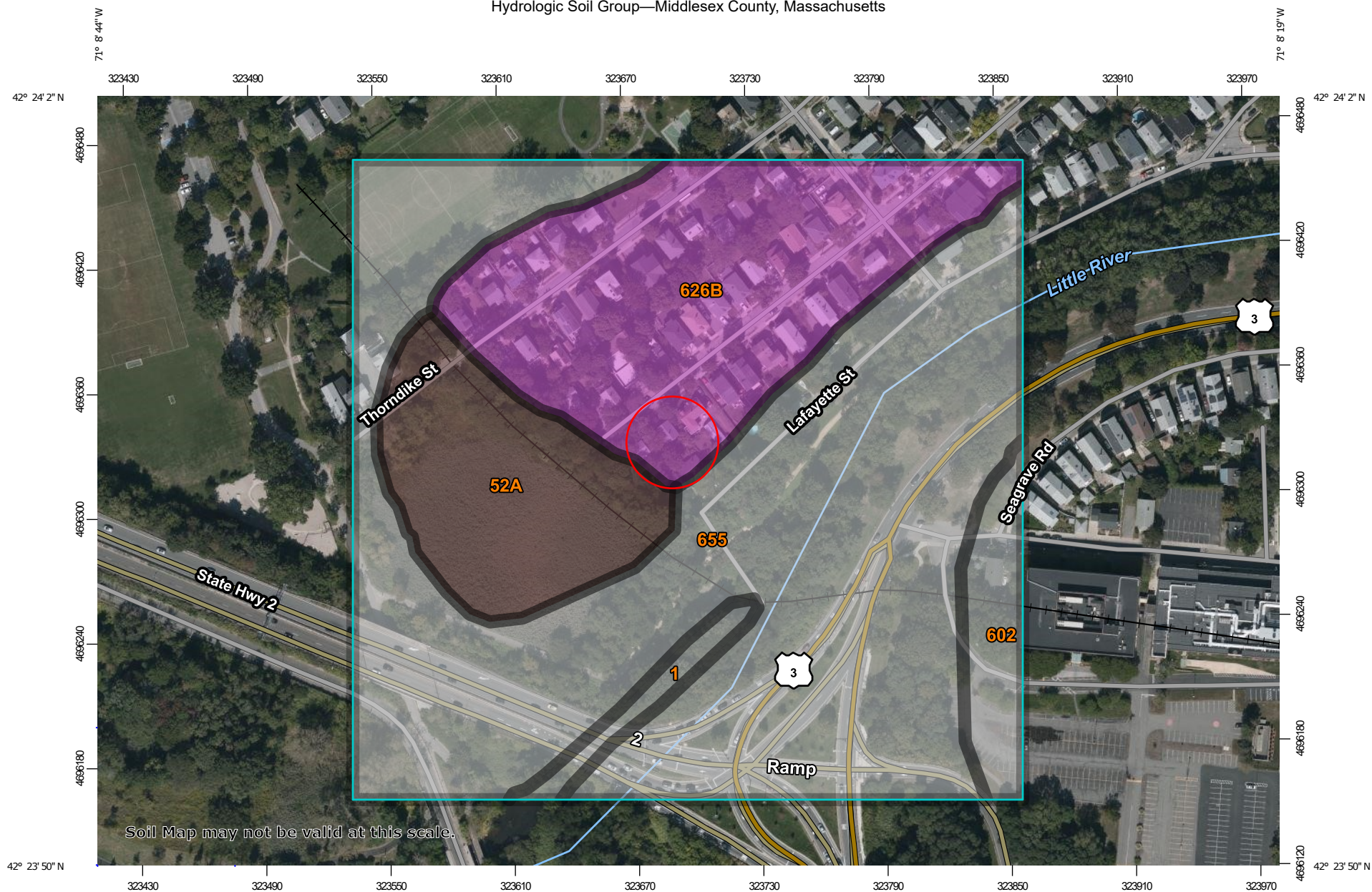
Hydrocad Model for Proposed Conditions

Total Area:	8,755 s.f.
	Impervious: 1,989 s.f.
	Dirt Road: 1,843 s.f.
	Lawn: 4,923 s.f.
Area into Porous Pavers:	765 s.f.
	Impervious: 548 s.f.
	Lawn: 217 s.f.
Remainder of Land:	7,990 s.f.
	Impervious: 1,441 s.f.
	Dirt Road: 1,843 s.f.
	Lawn: 4,706 s.f.

The storm values were compared using the Existing Conditions node and the Proposed Conditions Remainder of Land node.

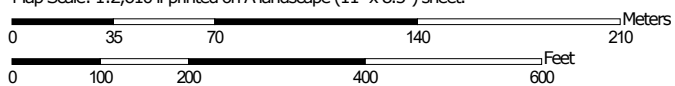
USDA
Soil Mapping

Hydrologic Soil Group—Middlesex County, Massachusetts



Soil Map may not be valid at this scale.

Map Scale: 1:2,610 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

3/10/2020
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

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 1:25,000.

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: Middlesex County, Massachusetts
 Survey Area Data: Version 19, Sep 12, 2019

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

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
1	Water		0.4	1.8%
52A	Freetown muck, 0 to 1 percent slopes	B/D	3.1	12.5%
602	Urban land		1.0	4.2%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	A	6.1	24.7%
655	Udorthents, wet substratum		14.0	56.7%
Totals for Area of Interest			24.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

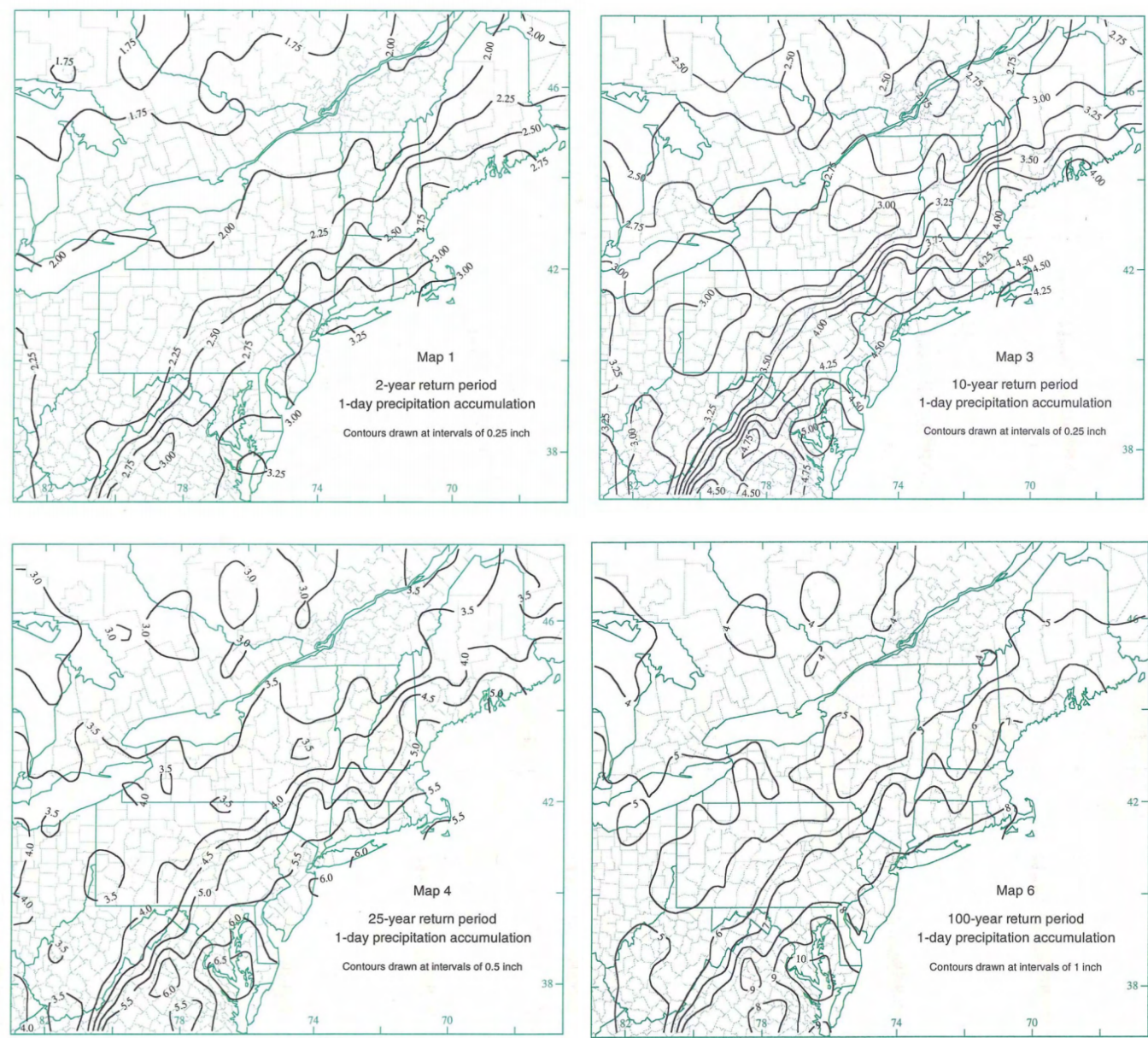
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

*Atlas
of
Precipitation Extremes*

24-hour rainfall amounts obtained from the Northeast Regional Climate Center, “Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada.”

24-Hour Storm Event	Rainfall (inches)
2-year	3.23
10-year	4.90
25-year	6.20
100-year	8.89



Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	Massachusetts
Location	
Longitude	71.142 degrees West
Latitude	42.399 degrees North
Elevation	0 feet
Date/Time	Tue, 10 Mar 2020 11:58:38 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.70	0.87	1.10	1yr	0.75	1.04	1.28	1.63	2.09	2.69	2.94	1yr	2.38	2.83	3.29	3.98	4.65	1yr
2yr	0.35	0.54	0.67	0.88	1.11	1.40	2yr	0.96	1.28	1.62	2.04	2.57	3.23	3.59	2yr	2.86	3.45	3.95	4.70	5.35	2yr
5yr	0.42	0.65	0.81	1.09	1.39	1.78	5yr	1.20	1.61	2.06	2.60	3.26	4.09	4.56	5yr	3.62	4.39	5.00	5.97	6.69	5yr
10yr	0.47	0.74	0.93	1.27	1.65	2.12	10yr	1.43	1.91	2.48	3.12	3.92	4.90	5.47	10yr	4.33	5.26	5.99	7.16	7.92	10yr
25yr	0.56	0.89	1.13	1.56	2.07	2.68	25yr	1.79	2.41	3.14	3.97	4.98	6.20	6.96	25yr	5.49	6.69	7.59	9.10	9.91	25yr
50yr	0.63	1.02	1.30	1.83	2.46	3.22	50yr	2.12	2.86	3.78	4.79	5.99	7.42	8.36	50yr	6.57	8.04	9.09	10.92	11.75	50yr
100yr	0.73	1.18	1.52	2.15	2.93	3.85	100yr	2.53	3.41	4.53	5.74	7.18	8.89	10.04	100yr	7.87	9.65	10.88	13.10	13.93	100yr
200yr	0.84	1.36	1.77	2.53	3.49	4.62	200yr	3.01	4.06	5.44	6.91	8.62	10.65	12.07	200yr	9.42	11.60	13.04	15.73	16.53	200yr
500yr	1.01	1.66	2.17	3.14	4.40	5.86	500yr	3.79	5.11	6.93	8.80	10.98	13.53	15.40	500yr	11.97	14.81	16.57	20.05	20.73	500yr

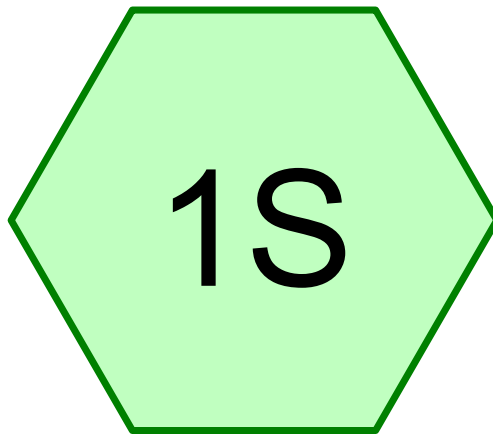
Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.25	0.38	0.46	0.62	0.76	0.85	1yr	0.66	0.83	1.15	1.44	1.78	2.45	2.51	1yr	2.17	2.42	2.94	3.53	4.09	1yr
2yr	0.33	0.51	0.63	0.85	1.05	1.26	2yr	0.91	1.23	1.45	1.92	2.48	3.13	3.47	2yr	2.77	3.34	3.82	4.54	5.19	2yr
5yr	0.39	0.60	0.75	1.03	1.31	1.51	5yr	1.13	1.48	1.73	2.25	2.89	3.78	4.19	5yr	3.34	4.03	4.59	5.48	6.17	5yr
10yr	0.44	0.67	0.83	1.16	1.50	1.73	10yr	1.30	1.69	1.95	2.53	3.25	4.36	4.84	10yr	3.86	4.65	5.27	6.30	7.01	10yr
25yr	0.51	0.77	0.96	1.37	1.80	2.05	25yr	1.55	2.01	2.31	2.97	3.79	5.24	5.83	25yr	4.64	5.61	6.32	7.54	8.28	25yr
50yr	0.56	0.85	1.06	1.53	2.06	2.36	50yr	1.78	2.30	2.62	3.35	4.25	6.01	6.71	50yr	5.32	6.45	7.23	8.63	9.38	50yr
100yr	0.63	0.95	1.19	1.72	2.36	2.68	100yr	2.04	2.62	2.97	3.62	4.78	6.92	7.71	100yr	6.13	7.41	8.28	9.83	10.63	100yr
200yr	0.71	1.06	1.35	1.95	2.72	3.07	200yr	2.35	3.00	3.37	4.04	5.39	7.95	8.86	200yr	7.04	8.52	9.47	11.18	12.01	200yr
500yr	0.83	1.23	1.59	2.31	3.28	3.66	500yr	2.83	3.58	3.97	4.69	6.31	9.56	10.63	500yr	8.46	10.22	11.31	13.21	14.07	500yr

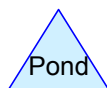
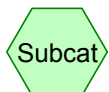
Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.31	0.48	0.58	0.79	0.97	1.13	1yr	0.83	1.11	1.33	1.77	2.26	2.86	3.17	1yr	2.53	3.05	3.51	4.28	5.03	1yr
2yr	0.36	0.56	0.69	0.94	1.16	1.36	2yr	1.00	1.33	1.57	2.08	2.69	3.35	3.74	2yr	2.97	3.59	4.11	4.88	5.55	2yr
5yr	0.45	0.70	0.87	1.19	1.51	1.79	5yr	1.30	1.75	2.06	2.66	3.39	4.43	4.99	5yr	3.92	4.80	5.42	6.48	7.21	5yr
10yr	0.55	0.84	1.05	1.46	1.89	2.21	10yr	1.63	2.16	2.56	3.23	4.07	5.50	6.24	10yr	4.87	6.00	6.71	8.04	8.82	10yr
25yr	0.71	1.09	1.35	1.93	2.54	2.91	25yr	2.19	2.84	3.41	4.17	5.19	7.30	8.41	25yr	6.46	8.08	8.89	10.74	11.54	25yr
50yr	0.86	1.32	1.64	2.35	3.17	3.60	50yr	2.74	3.52	4.22	5.06	6.24	9.05	10.53	50yr	8.01	10.12	11.00	13.40	14.15	50yr
100yr	1.06	1.60	2.00	2.89	3.97	4.44	100yr	3.42	4.34	5.25	6.40	7.49	11.24	13.21	100yr	9.95	12.70	13.62	16.74	17.39	100yr
200yr	1.29	1.94	2.46	3.56	4.96	5.48	200yr	4.28	5.36	6.52	7.82	8.99	13.96	16.58	200yr	12.36	15.94	16.89	20.93	21.40	200yr
500yr	1.68	2.50	3.22	4.67	6.64	7.23	500yr	5.73	7.07	8.71	10.21	11.46	18.61	22.42	500yr	16.47	21.56	22.44	28.19	28.21	500yr

Existing Conditions
2, 10, 25 and 100 Year Storm Events



Existing Conditions



[1120] Existing Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

Prepared by Gala Simon Associates

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Subcatchment 1S: Existing Conditions

Runoff = 0.20 cfs @ 12.10 hrs, Volume= 0.014 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

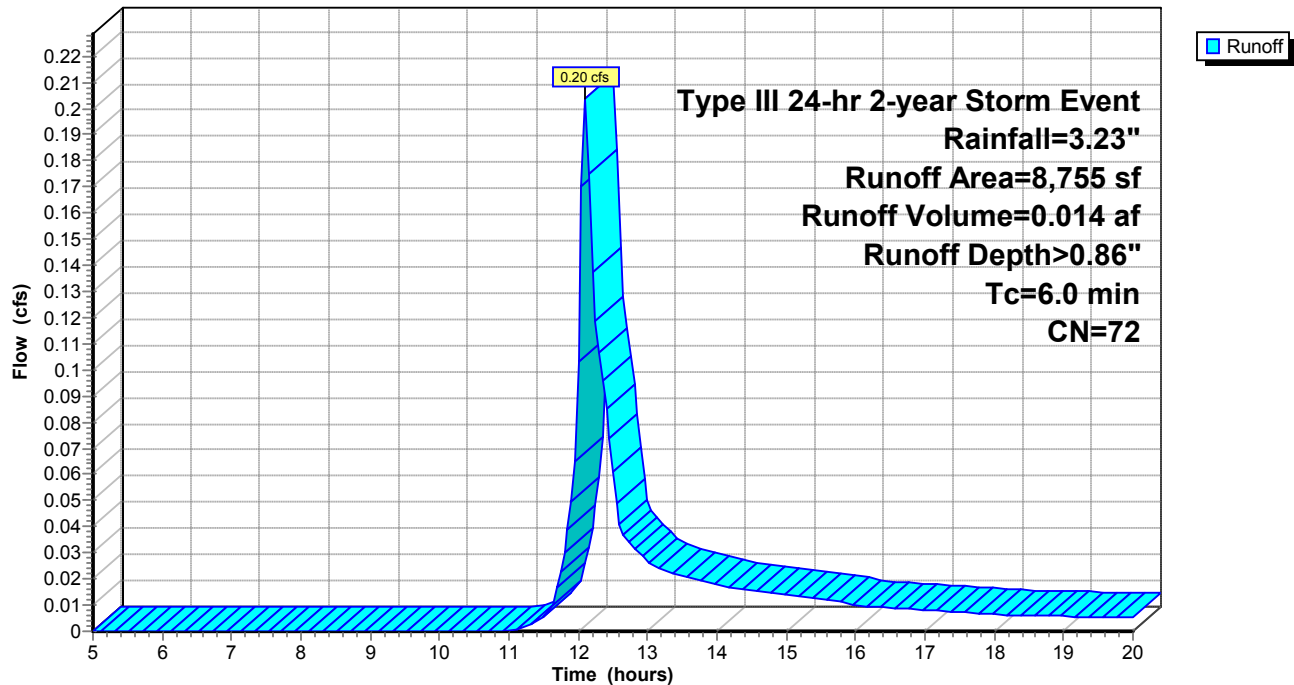
Type III 24-hr 2-year Storm Event Rainfall=3.23"

Area (sf)	CN	Description
1,641	98	Paved parking & roofs
5,271	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
8,755	72	Weighted Average
7,114		Pervious Area
1,641		Impervious Area

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

Subcatchment 1S: Existing Conditions

Hydrograph



[1120] Existing Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

Prepared by Gala Simon Associates

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Hydrograph for Subcatchment 1S: Existing Conditions

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00	18.00	3.00	0.81	0.01
5.25	0.20	0.00	0.00	18.25	3.01	0.81	0.01
5.50	0.21	0.00	0.00	18.50	3.02	0.82	0.01
5.75	0.22	0.00	0.00	18.75	3.03	0.83	0.01
6.00	0.23	0.00	0.00	19.00	3.05	0.84	0.01
6.25	0.25	0.00	0.00	19.25	3.06	0.84	0.01
6.50	0.26	0.00	0.00	19.50	3.07	0.85	0.01
6.75	0.28	0.00	0.00	19.75	3.08	0.86	0.01
7.00	0.29	0.00	0.00	20.00	3.09	0.86	0.01
7.25	0.31	0.00	0.00				
7.50	0.33	0.00	0.00				
7.75	0.35	0.00	0.00				
8.00	0.37	0.00	0.00				
8.25	0.39	0.00	0.00				
8.50	0.41	0.00	0.00				
8.75	0.44	0.00	0.00				
9.00	0.47	0.00	0.00				
9.25	0.50	0.00	0.00				
9.50	0.54	0.00	0.00				
9.75	0.57	0.00	0.00				
10.00	0.61	0.00	0.00				
10.25	0.65	0.00	0.00				
10.50	0.70	0.00	0.00				
10.75	0.75	0.00	0.00				
11.00	0.81	0.00	0.00				
11.25	0.88	0.00	0.00				
11.50	0.96	0.01	0.01				
11.75	1.15	0.03	0.02				
12.00	1.61	0.15	0.10				
12.25	2.08	0.33	0.12				
12.50	2.27	0.41	0.06				
12.75	2.35	0.45	0.03				
13.00	2.42	0.49	0.03				
13.25	2.48	0.52	0.02				
13.50	2.53	0.54	0.02				
13.75	2.58	0.57	0.02				
14.00	2.62	0.59	0.02				
14.25	2.66	0.61	0.02				
14.50	2.69	0.63	0.02				
14.75	2.73	0.65	0.02				
15.00	2.76	0.67	0.01				
15.25	2.79	0.69	0.01				
15.50	2.82	0.70	0.01				
15.75	2.84	0.71	0.01				
16.00	2.86	0.73	0.01				
16.25	2.88	0.74	0.01				
16.50	2.90	0.75	0.01				
16.75	2.92	0.76	0.01				
17.00	2.94	0.77	0.01				
17.25	2.95	0.78	0.01				
17.50	2.97	0.79	0.01				
17.75	2.98	0.80	0.01				

[1120] Existing Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

Prepared by Gala Simon Associates

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3/24/2020

Subcatchment 1S: Existing Conditions

Runoff = 0.49 cfs @ 12.10 hrs, Volume= 0.033 af, Depth> 1.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

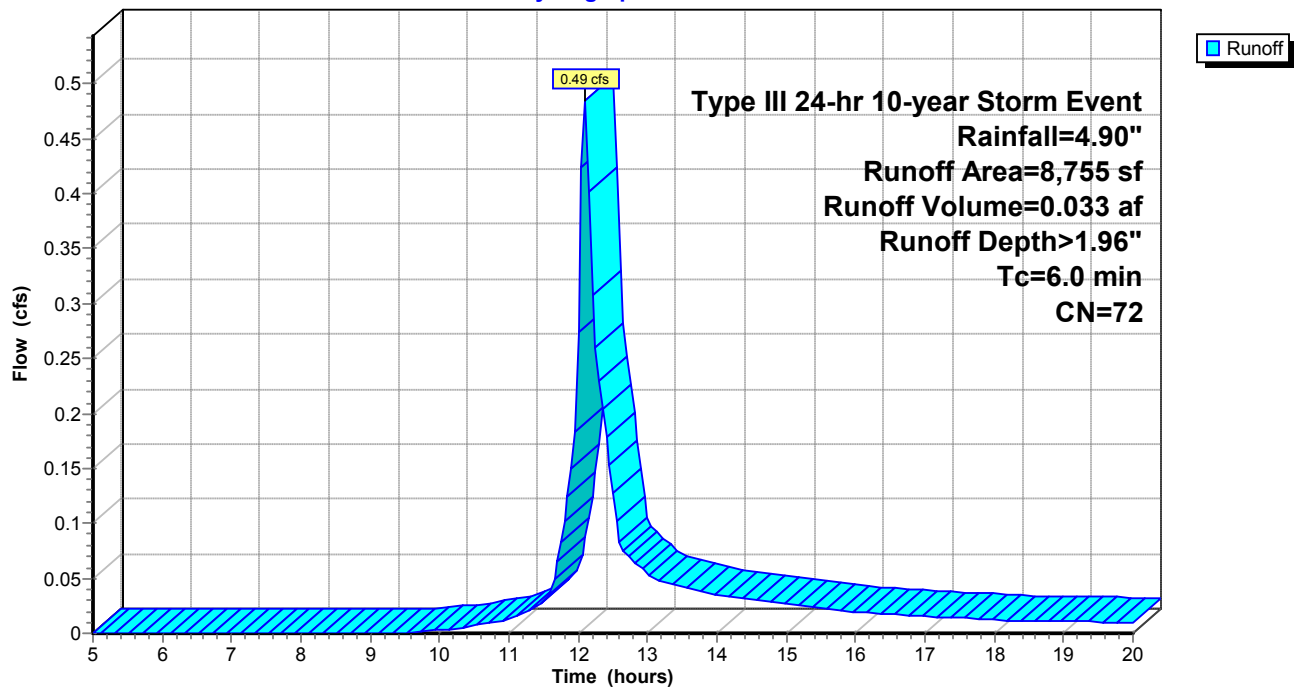
Type III 24-hr 10-year Storm Event Rainfall=4.90"

Area (sf)	CN	Description
1,641	98	Paved parking & roofs
5,271	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
8,755	72	Weighted Average
7,114		Pervious Area
1,641		Impervious Area

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

Subcatchment 1S: Existing Conditions

Hydrograph



[1120] Existing Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

Prepared by Gala Simon Associates

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3/24/2020

Hydrograph for Subcatchment 1S: Existing Conditions

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00	18.00	4.55	1.86	0.01
5.25	0.30	0.00	0.00	18.25	4.57	1.87	0.01
5.50	0.31	0.00	0.00	18.50	4.59	1.88	0.01
5.75	0.33	0.00	0.00	18.75	4.60	1.90	0.01
6.00	0.35	0.00	0.00	19.00	4.62	1.91	0.01
6.25	0.37	0.00	0.00	19.25	4.64	1.92	0.01
6.50	0.40	0.00	0.00	19.50	4.66	1.94	0.01
6.75	0.42	0.00	0.00	19.75	4.67	1.95	0.01
7.00	0.44	0.00	0.00	20.00	4.69	1.96	0.01
7.25	0.47	0.00	0.00				
7.50	0.50	0.00	0.00				
7.75	0.53	0.00	0.00				
8.00	0.56	0.00	0.00				
8.25	0.59	0.00	0.00				
8.50	0.63	0.00	0.00				
8.75	0.67	0.00	0.00				
9.00	0.71	0.00	0.00				
9.25	0.76	0.00	0.00				
9.50	0.81	0.00	0.00				
9.75	0.87	0.00	0.00				
10.00	0.93	0.01	0.00				
10.25	0.99	0.01	0.00				
10.50	1.06	0.02	0.01				
10.75	1.14	0.03	0.01				
11.00	1.22	0.05	0.01				
11.25	1.33	0.07	0.02				
11.50	1.46	0.10	0.03				
11.75	1.74	0.19	0.08				
12.00	2.45	0.50	0.27				
12.25	3.16	0.90	0.26				
12.50	3.44	1.08	0.13				
12.75	3.57	1.17	0.07				
13.00	3.67	1.24	0.05				
13.25	3.76	1.29	0.05				
13.50	3.84	1.35	0.04				
13.75	3.91	1.40	0.04				
14.00	3.97	1.44	0.04				
14.25	4.03	1.48	0.03				
14.50	4.09	1.52	0.03				
14.75	4.14	1.56	0.03				
15.00	4.19	1.59	0.03				
15.25	4.23	1.62	0.03				
15.50	4.27	1.65	0.02				
15.75	4.31	1.68	0.02				
16.00	4.34	1.70	0.02				
16.25	4.37	1.73	0.02				
16.50	4.40	1.75	0.02				
16.75	4.43	1.77	0.02				
17.00	4.46	1.79	0.02				
17.25	4.48	1.81	0.01				
17.50	4.50	1.82	0.01				
17.75	4.53	1.84	0.01				

[1120] Existing Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Subcatchment 1S: Existing Conditions

Runoff = 0.73 cfs @ 12.09 hrs, Volume= 0.049 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

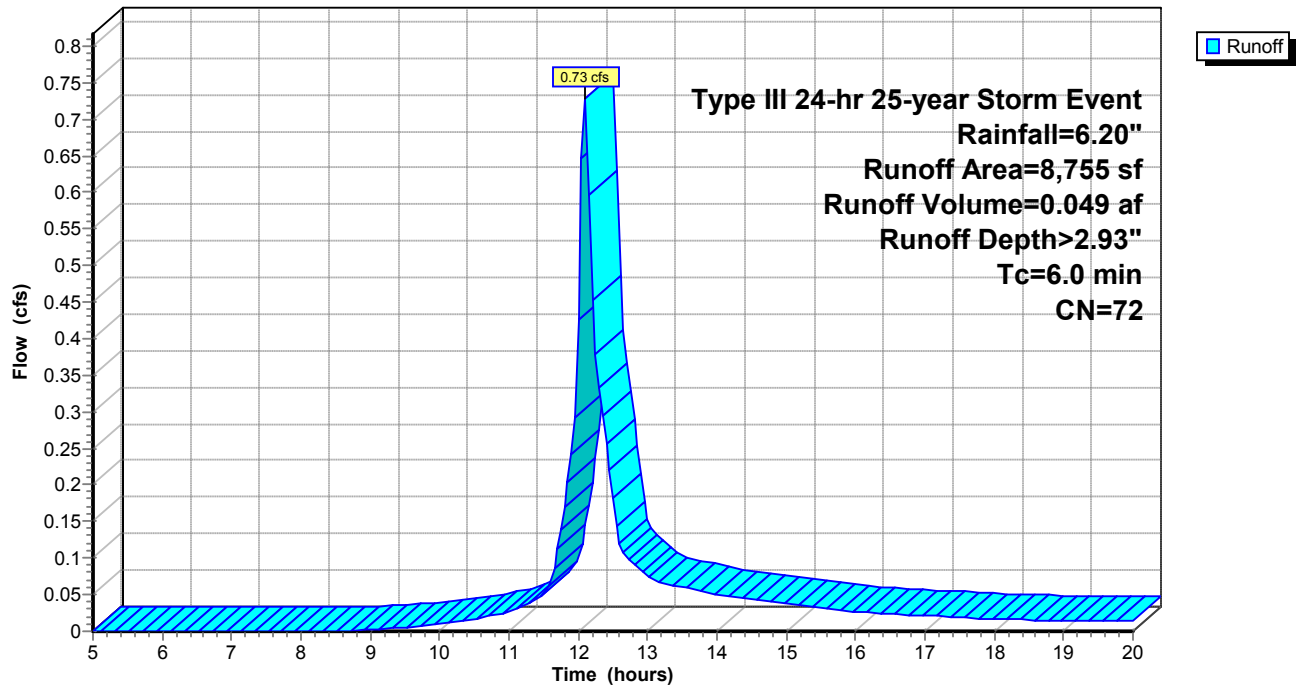
Type III 24-hr 25-year Storm Event Rainfall=6.20"

Area (sf)	CN	Description
1,641	98	Paved parking & roofs
5,271	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
8,755	72	Weighted Average
7,114		Pervious Area
1,641		Impervious Area

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

Subcatchment 1S: Existing Conditions

Hydrograph



[1120] Existing Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Hydrograph for Subcatchment 1S: Existing Conditions

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00	18.00	5.75	2.79	0.02
5.25	0.37	0.00	0.00	18.25	5.78	2.81	0.02
5.50	0.40	0.00	0.00	18.50	5.80	2.83	0.02
5.75	0.42	0.00	0.00	18.75	5.83	2.85	0.02
6.00	0.45	0.00	0.00	19.00	5.85	2.87	0.01
6.25	0.47	0.00	0.00	19.25	5.87	2.89	0.01
6.50	0.50	0.00	0.00	19.50	5.89	2.91	0.01
6.75	0.53	0.00	0.00	19.75	5.91	2.92	0.01
7.00	0.56	0.00	0.00	20.00	5.93	2.94	0.01
7.25	0.59	0.00	0.00				
7.50	0.63	0.00	0.00				
7.75	0.67	0.00	0.00				
8.00	0.71	0.00	0.00				
8.25	0.75	0.00	0.00				
8.50	0.80	0.00	0.00				
8.75	0.85	0.00	0.00				
9.00	0.90	0.00	0.00				
9.25	0.96	0.01	0.00				
9.50	1.03	0.02	0.01				
9.75	1.10	0.02	0.01				
10.00	1.17	0.04	0.01				
10.25	1.25	0.05	0.01				
10.50	1.34	0.07	0.02				
10.75	1.44	0.10	0.02				
11.00	1.55	0.13	0.03				
11.25	1.68	0.17	0.04				
11.50	1.85	0.23	0.05				
11.75	2.20	0.38	0.14				
12.00	3.10	0.87	0.43				
12.25	4.00	1.46	0.38				
12.50	4.35	1.71	0.18				
12.75	4.52	1.83	0.10				
13.00	4.65	1.93	0.08				
13.25	4.76	2.01	0.07				
13.50	4.86	2.09	0.06				
13.75	4.95	2.16	0.06				
14.00	5.03	2.22	0.05				
14.25	5.10	2.28	0.05				
14.50	5.17	2.33	0.04				
14.75	5.24	2.38	0.04				
15.00	5.30	2.43	0.04				
15.25	5.35	2.47	0.04				
15.50	5.40	2.51	0.03				
15.75	5.45	2.55	0.03				
16.00	5.49	2.58	0.03				
16.25	5.53	2.62	0.03				
16.50	5.57	2.65	0.02				
16.75	5.61	2.67	0.02				
17.00	5.64	2.70	0.02				
17.25	5.67	2.73	0.02				
17.50	5.70	2.75	0.02				
17.75	5.73	2.77	0.02				

[1120] Existing Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

Prepared by Gala Simon Associates

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Subcatchment 1S: Existing Conditions

Runoff = 1.26 cfs @ 12.09 hrs, Volume= 0.086 af, Depth> 5.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

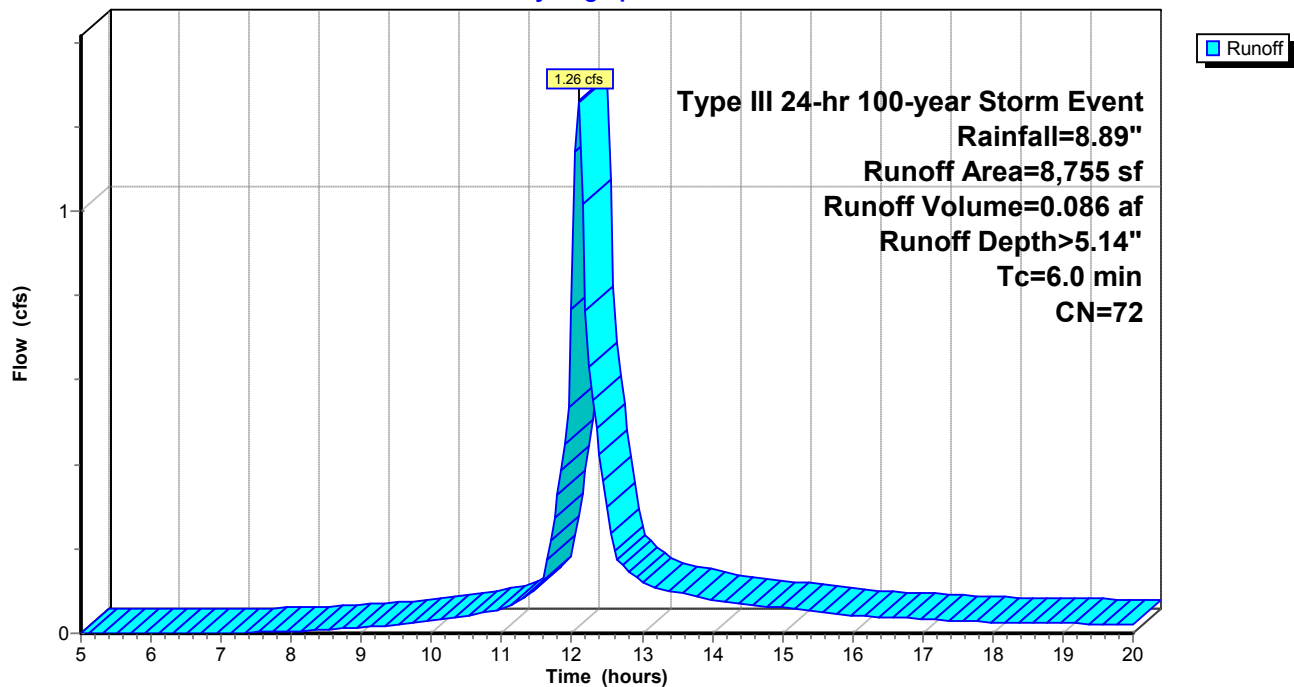
Type III 24-hr 100-year Storm Event Rainfall=8.89"

Area (sf)	CN	Description
1,641	98	Paved parking & roofs
5,271	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
8,755	72	Weighted Average
7,114		Pervious Area
1,641		Impervious Area

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

Subcatchment 1S: Existing Conditions

Hydrograph



[1120] Existing Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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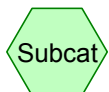
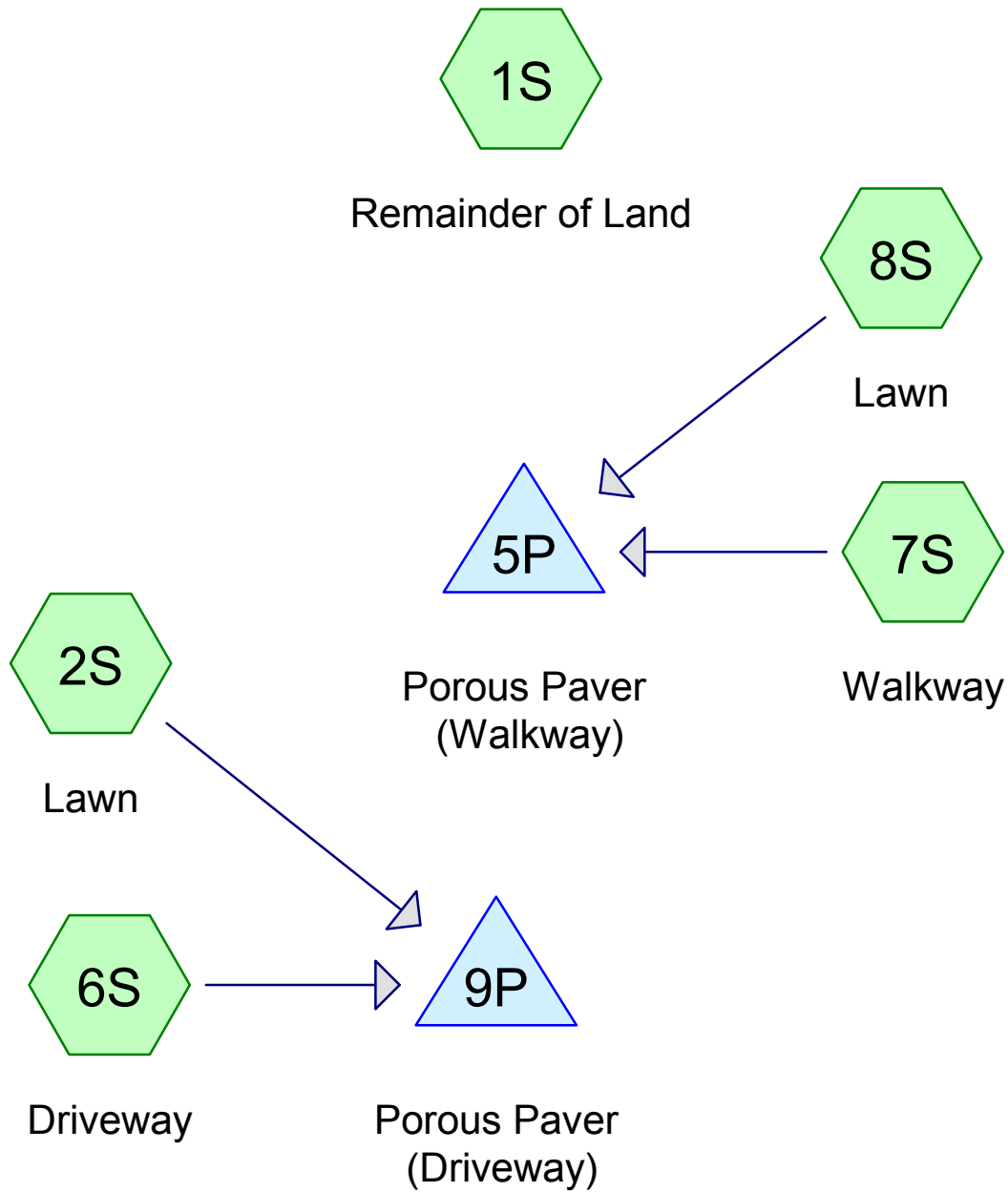
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Hydrograph for Subcatchment 1S: Existing Conditions

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.50	0.00	0.00	18.00	8.25	4.91	0.03
5.25	0.54	0.00	0.00	18.25	8.29	4.95	0.03
5.50	0.57	0.00	0.00	18.50	8.32	4.98	0.02
5.75	0.60	0.00	0.00	18.75	8.35	5.01	0.02
6.00	0.64	0.00	0.00	19.00	8.39	5.03	0.02
6.25	0.68	0.00	0.00	19.25	8.42	5.06	0.02
6.50	0.72	0.00	0.00	19.50	8.45	5.09	0.02
6.75	0.76	0.00	0.00	19.75	8.48	5.12	0.02
7.00	0.80	0.00	0.00	20.00	8.51	5.14	0.02
7.25	0.85	0.00	0.00				
7.50	0.90	0.00	0.00				
7.75	0.96	0.01	0.00				
8.00	1.01	0.01	0.00				
8.25	1.07	0.02	0.01				
8.50	1.14	0.03	0.01				
8.75	1.22	0.04	0.01				
9.00	1.30	0.06	0.01				
9.25	1.38	0.08	0.02				
9.50	1.48	0.11	0.02				
9.75	1.57	0.14	0.02				
10.00	1.68	0.17	0.03				
10.25	1.80	0.21	0.03				
10.50	1.92	0.26	0.04				
10.75	2.07	0.32	0.05				
11.00	2.22	0.39	0.06				
11.25	2.41	0.48	0.08				
11.50	2.65	0.61	0.11				
11.75	3.16	0.90	0.27				
12.00	4.44	1.78	0.77				
12.25	5.73	2.78	0.63				
12.50	6.24	3.19	0.30				
12.75	6.48	3.39	0.16				
13.00	6.67	3.55	0.12				
13.25	6.82	3.68	0.11				
13.50	6.97	3.80	0.10				
13.75	7.09	3.91	0.09				
14.00	7.21	4.01	0.08				
14.25	7.32	4.10	0.07				
14.50	7.41	4.18	0.07				
14.75	7.51	4.27	0.06				
15.00	7.59	4.34	0.06				
15.25	7.67	4.41	0.06				
15.50	7.75	4.47	0.05				
15.75	7.82	4.53	0.05				
16.00	7.88	4.59	0.04				
16.25	7.93	4.64	0.04				
16.50	7.99	4.68	0.04				
16.75	8.04	4.73	0.04				
17.00	8.09	4.77	0.03				
17.25	8.13	4.81	0.03				
17.50	8.17	4.85	0.03				
17.75	8.21	4.88	0.03				

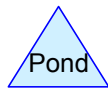
***Proposed Conditions
2, 10, 25 and 100 Year Storm Events***



Subcat



Reach



Pond



Link

Drainage Diagram for [1120] Proposed Conditions2

Prepared by Gala Simon Associates 3/26/2020

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[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

Prepared by Gala Simon Associates

Page 1

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Subcatchment 1S: Remainder of Land

Runoff = 0.20 cfs @ 12.10 hrs, Volume= 0.014 af, Depth> 0.91"

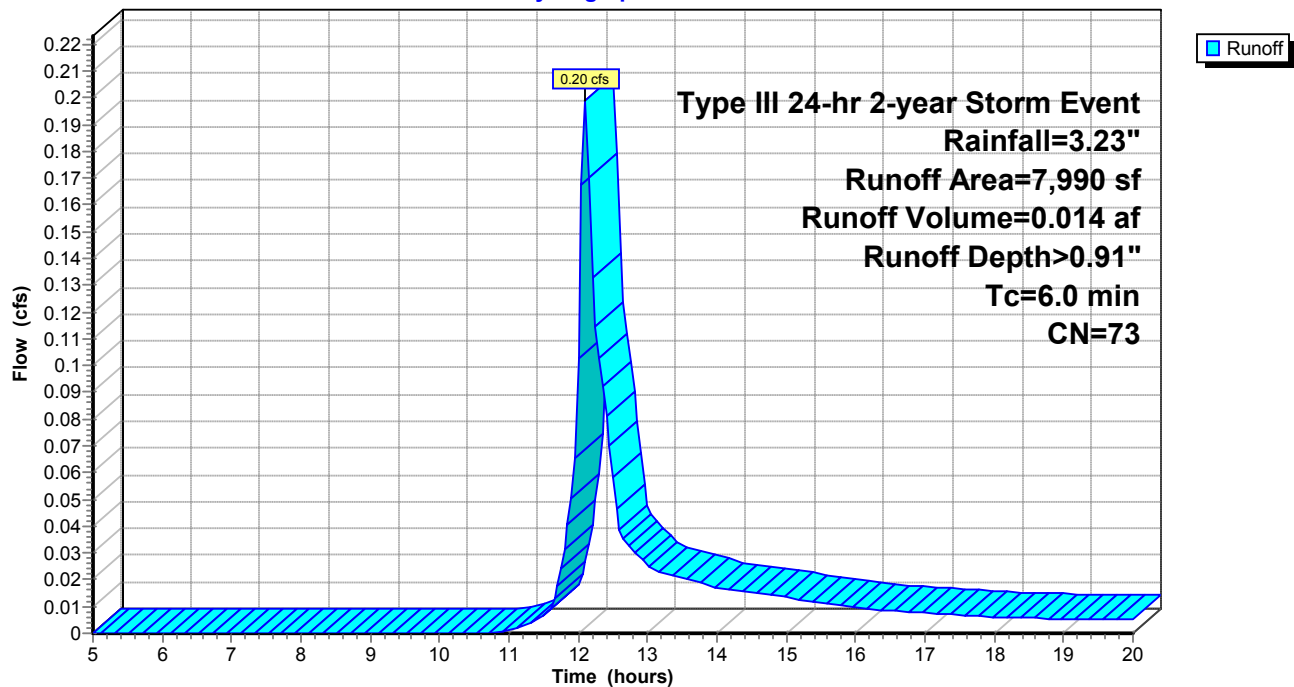
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Storm Event Rainfall=3.23"

Area (sf)	CN	Description
1,441	98	Paved parking & roofs
4,706	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
7,990	73	Weighted Average
6,549		Pervious Area
1,441		Impervious Area

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

Subcatchment 1S: Remainder of Land

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 2-year Storm Event Rainfall=3.23"*

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Hydrograph for Subcatchment 1S: Remainder of Land

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00	18.00	3.00	0.86	0.01
5.25	0.20	0.00	0.00	18.25	3.01	0.86	0.01
5.50	0.21	0.00	0.00	18.50	3.02	0.87	0.01
5.75	0.22	0.00	0.00	18.75	3.03	0.88	0.01
6.00	0.23	0.00	0.00	19.00	3.05	0.89	0.01
6.25	0.25	0.00	0.00	19.25	3.06	0.89	0.01
6.50	0.26	0.00	0.00	19.50	3.07	0.90	0.01
6.75	0.28	0.00	0.00	19.75	3.08	0.91	0.01
7.00	0.29	0.00	0.00	20.00	3.09	0.91	0.00
7.25	0.31	0.00	0.00				
7.50	0.33	0.00	0.00				
7.75	0.35	0.00	0.00				
8.00	0.37	0.00	0.00				
8.25	0.39	0.00	0.00				
8.50	0.41	0.00	0.00				
8.75	0.44	0.00	0.00				
9.00	0.47	0.00	0.00				
9.25	0.50	0.00	0.00				
9.50	0.54	0.00	0.00				
9.75	0.57	0.00	0.00				
10.00	0.61	0.00	0.00				
10.25	0.65	0.00	0.00				
10.50	0.70	0.00	0.00				
10.75	0.75	0.00	0.00				
11.00	0.81	0.00	0.00				
11.25	0.88	0.00	0.00				
11.50	0.96	0.01	0.01				
11.75	1.15	0.04	0.02				
12.00	1.61	0.17	0.10				
12.25	2.08	0.36	0.11				
12.50	2.27	0.45	0.06				
12.75	2.35	0.49	0.03				
13.00	2.42	0.53	0.03				
13.25	2.48	0.56	0.02				
13.50	2.53	0.58	0.02				
13.75	2.58	0.61	0.02				
14.00	2.62	0.63	0.02				
14.25	2.66	0.66	0.02				
14.50	2.69	0.68	0.02				
14.75	2.73	0.70	0.01				
15.00	2.76	0.71	0.01				
15.25	2.79	0.73	0.01				
15.50	2.82	0.75	0.01				
15.75	2.84	0.76	0.01				
16.00	2.86	0.77	0.01				
16.25	2.88	0.79	0.01				
16.50	2.90	0.80	0.01				
16.75	2.92	0.81	0.01				
17.00	2.94	0.82	0.01				
17.25	2.95	0.83	0.01				
17.50	2.97	0.84	0.01				
17.75	2.98	0.85	0.01				

[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Subcatchment 2S: Lawn

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

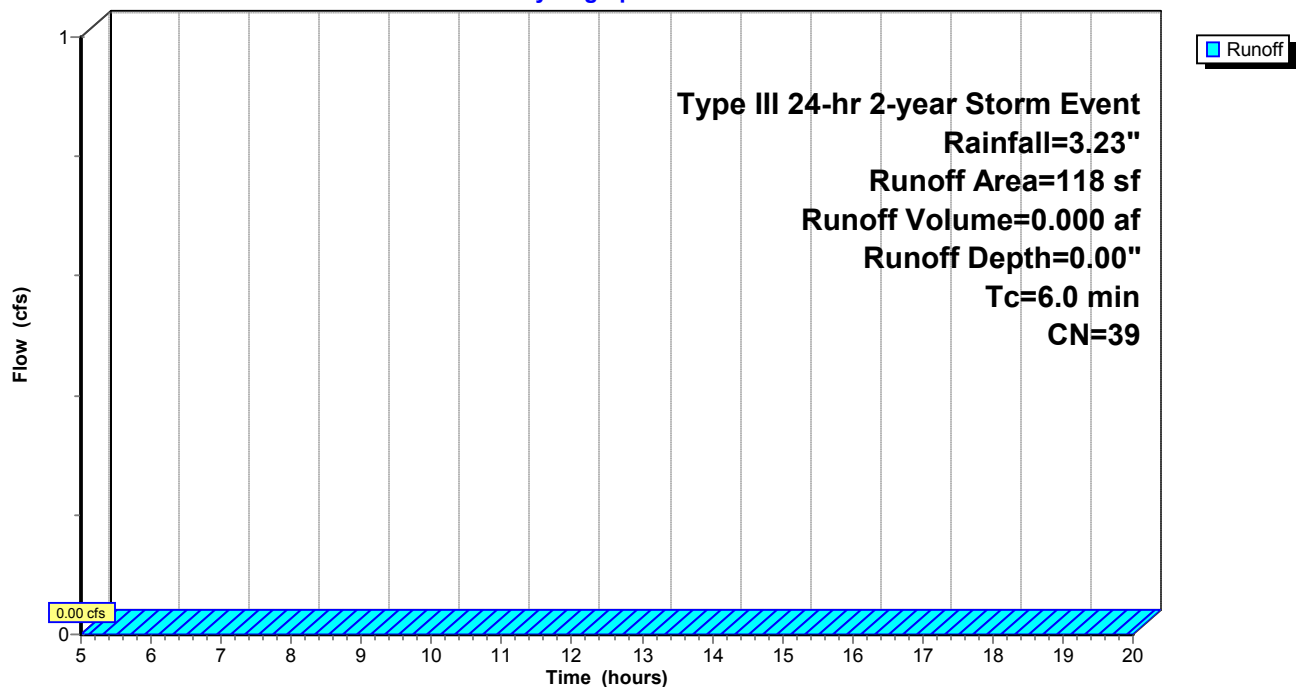
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Storm Event Rainfall=3.23"

Area (sf)	CN	Description
118	39	>75% Grass cover, Good, HSG A
118		Pervious Area

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

Subcatchment 2S: Lawn

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 2-year Storm Event Rainfall=3.23"*

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Hydrograph for Subcatchment 2S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00	18.00	3.00	0.00	0.00
5.25	0.20	0.00	0.00	18.25	3.01	0.00	0.00
5.50	0.21	0.00	0.00	18.50	3.02	0.00	0.00
5.75	0.22	0.00	0.00	18.75	3.03	0.00	0.00
6.00	0.23	0.00	0.00	19.00	3.05	0.00	0.00
6.25	0.25	0.00	0.00	19.25	3.06	0.00	0.00
6.50	0.26	0.00	0.00	19.50	3.07	0.00	0.00
6.75	0.28	0.00	0.00	19.75	3.08	0.00	0.00
7.00	0.29	0.00	0.00	20.00	3.09	0.00	0.00
7.25	0.31	0.00	0.00				
7.50	0.33	0.00	0.00				
7.75	0.35	0.00	0.00				
8.00	0.37	0.00	0.00				
8.25	0.39	0.00	0.00				
8.50	0.41	0.00	0.00				
8.75	0.44	0.00	0.00				
9.00	0.47	0.00	0.00				
9.25	0.50	0.00	0.00				
9.50	0.54	0.00	0.00				
9.75	0.57	0.00	0.00				
10.00	0.61	0.00	0.00				
10.25	0.65	0.00	0.00				
10.50	0.70	0.00	0.00				
10.75	0.75	0.00	0.00				
11.00	0.81	0.00	0.00				
11.25	0.88	0.00	0.00				
11.50	0.96	0.00	0.00				
11.75	1.15	0.00	0.00				
12.00	1.61	0.00	0.00				
12.25	2.08	0.00	0.00				
12.50	2.27	0.00	0.00				
12.75	2.35	0.00	0.00				
13.00	2.42	0.00	0.00				
13.25	2.48	0.00	0.00				
13.50	2.53	0.00	0.00				
13.75	2.58	0.00	0.00				
14.00	2.62	0.00	0.00				
14.25	2.66	0.00	0.00				
14.50	2.69	0.00	0.00				
14.75	2.73	0.00	0.00				
15.00	2.76	0.00	0.00				
15.25	2.79	0.00	0.00				
15.50	2.82	0.00	0.00				
15.75	2.84	0.00	0.00				
16.00	2.86	0.00	0.00				
16.25	2.88	0.00	0.00				
16.50	2.90	0.00	0.00				
16.75	2.92	0.00	0.00				
17.00	2.94	0.00	0.00				
17.25	2.95	0.00	0.00				
17.50	2.97	0.00	0.00				
17.75	2.98	0.00	0.00				

[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Subcatchment 6S: Driveway

Runoff = 0.03 cfs @ 12.09 hrs, Volume= 0.002 af, Depth> 2.80"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

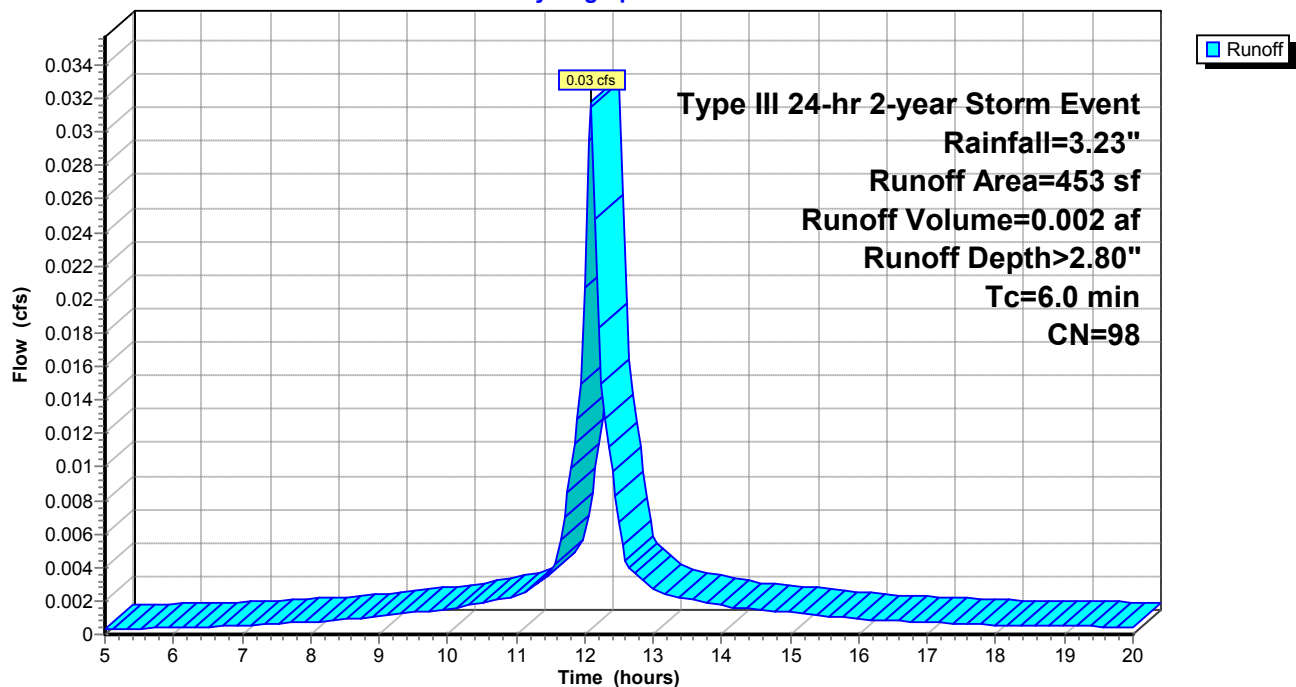
Type III 24-hr 2-year Storm Event Rainfall=3.23"

Area (sf)	CN	Description
453	98	Paved parking & roofs
453		Impervious Area

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

Subcatchment 6S: Driveway

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Hydrograph for Subcatchment 6S: Driveway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.06	0.00	18.00	3.00	2.77	0.00
5.25	0.20	0.07	0.00	18.25	3.01	2.78	0.00
5.50	0.21	0.07	0.00	18.50	3.02	2.79	0.00
5.75	0.22	0.08	0.00	18.75	3.03	2.80	0.00
6.00	0.23	0.09	0.00	19.00	3.05	2.81	0.00
6.25	0.25	0.10	0.00	19.25	3.06	2.83	0.00
6.50	0.26	0.11	0.00	19.50	3.07	2.84	0.00
6.75	0.28	0.13	0.00	19.75	3.08	2.85	0.00
7.00	0.29	0.14	0.00	20.00	3.09	2.86	0.00
7.25	0.31	0.15	0.00				
7.50	0.33	0.17	0.00				
7.75	0.35	0.18	0.00				
8.00	0.37	0.20	0.00				
8.25	0.39	0.22	0.00				
8.50	0.41	0.24	0.00				
8.75	0.44	0.27	0.00				
9.00	0.47	0.29	0.00				
9.25	0.50	0.32	0.00				
9.50	0.54	0.35	0.00				
9.75	0.57	0.38	0.00				
10.00	0.61	0.42	0.00				
10.25	0.65	0.46	0.00				
10.50	0.70	0.50	0.00				
10.75	0.75	0.55	0.00				
11.00	0.81	0.61	0.00				
11.25	0.88	0.67	0.00				
11.50	0.96	0.75	0.00				
11.75	1.15	0.93	0.01				
12.00	1.61	1.39	0.02				
12.25	2.08	1.86	0.01				
12.50	2.27	2.04	0.01				
12.75	2.35	2.13	0.00				
13.00	2.42	2.19	0.00				
13.25	2.48	2.25	0.00				
13.50	2.53	2.30	0.00				
13.75	2.58	2.35	0.00				
14.00	2.62	2.39	0.00				
14.25	2.66	2.43	0.00				
14.50	2.69	2.46	0.00				
14.75	2.73	2.50	0.00				
15.00	2.76	2.53	0.00				
15.25	2.79	2.56	0.00				
15.50	2.82	2.58	0.00				
15.75	2.84	2.61	0.00				
16.00	2.86	2.63	0.00				
16.25	2.88	2.65	0.00				
16.50	2.90	2.67	0.00				
16.75	2.92	2.69	0.00				
17.00	2.94	2.71	0.00				
17.25	2.95	2.72	0.00				
17.50	2.97	2.74	0.00				
17.75	2.98	2.75	0.00				

[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Subcatchment 7S: Walkway

Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth> 2.80"

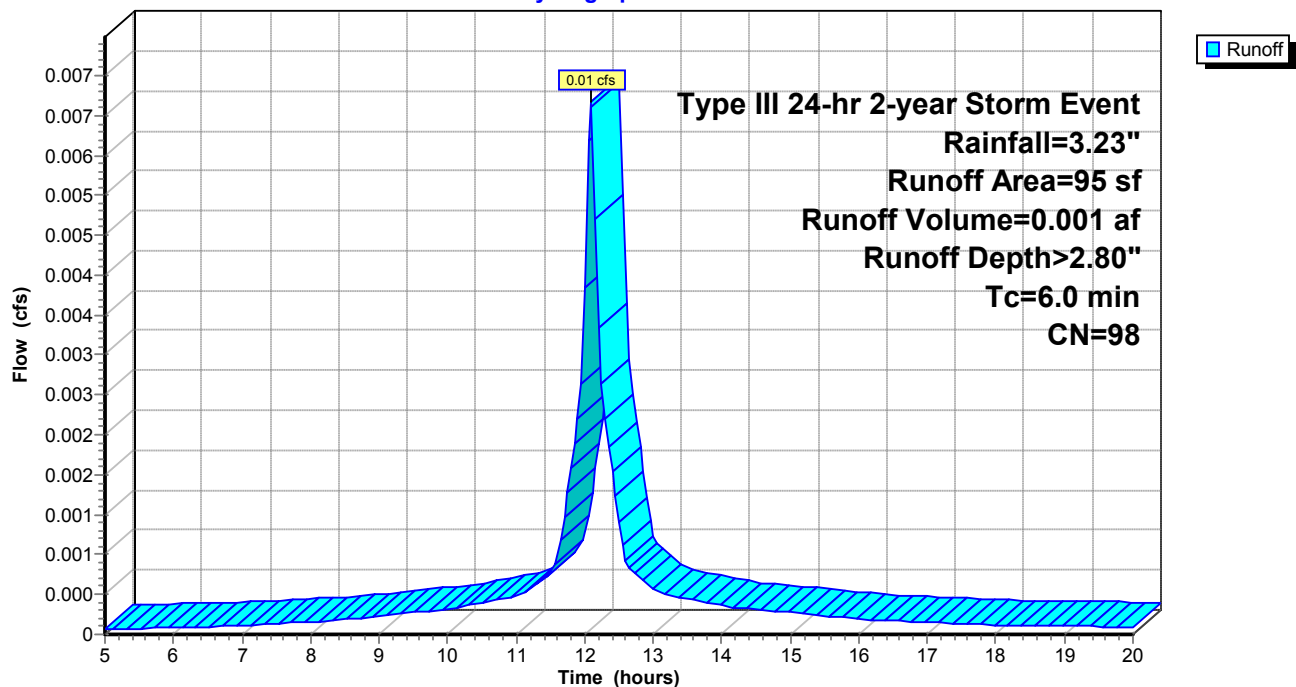
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Storm Event Rainfall=3.23"

Area (sf)	CN	Description
95	98	Paved parking & roofs
95		Impervious Area

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

Subcatchment 7S: Walkway

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 2-year Storm Event Rainfall=3.23"*

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Hydrograph for Subcatchment 7S: Walkway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.06	0.00	18.00	3.00	2.77	0.00
5.25	0.20	0.07	0.00	18.25	3.01	2.78	0.00
5.50	0.21	0.07	0.00	18.50	3.02	2.79	0.00
5.75	0.22	0.08	0.00	18.75	3.03	2.80	0.00
6.00	0.23	0.09	0.00	19.00	3.05	2.81	0.00
6.25	0.25	0.10	0.00	19.25	3.06	2.83	0.00
6.50	0.26	0.11	0.00	19.50	3.07	2.84	0.00
6.75	0.28	0.13	0.00	19.75	3.08	2.85	0.00
7.00	0.29	0.14	0.00	20.00	3.09	2.86	0.00
7.25	0.31	0.15	0.00				
7.50	0.33	0.17	0.00				
7.75	0.35	0.18	0.00				
8.00	0.37	0.20	0.00				
8.25	0.39	0.22	0.00				
8.50	0.41	0.24	0.00				
8.75	0.44	0.27	0.00				
9.00	0.47	0.29	0.00				
9.25	0.50	0.32	0.00				
9.50	0.54	0.35	0.00				
9.75	0.57	0.38	0.00				
10.00	0.61	0.42	0.00				
10.25	0.65	0.46	0.00				
10.50	0.70	0.50	0.00				
10.75	0.75	0.55	0.00				
11.00	0.81	0.61	0.00				
11.25	0.88	0.67	0.00				
11.50	0.96	0.75	0.00				
11.75	1.15	0.93	0.00				
12.00	1.61	1.39	0.00				
12.25	2.08	1.86	0.00				
12.50	2.27	2.04	0.00				
12.75	2.35	2.13	0.00				
13.00	2.42	2.19	0.00				
13.25	2.48	2.25	0.00				
13.50	2.53	2.30	0.00				
13.75	2.58	2.35	0.00				
14.00	2.62	2.39	0.00				
14.25	2.66	2.43	0.00				
14.50	2.69	2.46	0.00				
14.75	2.73	2.50	0.00				
15.00	2.76	2.53	0.00				
15.25	2.79	2.56	0.00				
15.50	2.82	2.58	0.00				
15.75	2.84	2.61	0.00				
16.00	2.86	2.63	0.00				
16.25	2.88	2.65	0.00				
16.50	2.90	2.67	0.00				
16.75	2.92	2.69	0.00				
17.00	2.94	2.71	0.00				
17.25	2.95	2.72	0.00				
17.50	2.97	2.74	0.00				
17.75	2.98	2.75	0.00				

[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Subcatchment 8S: Lawn

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

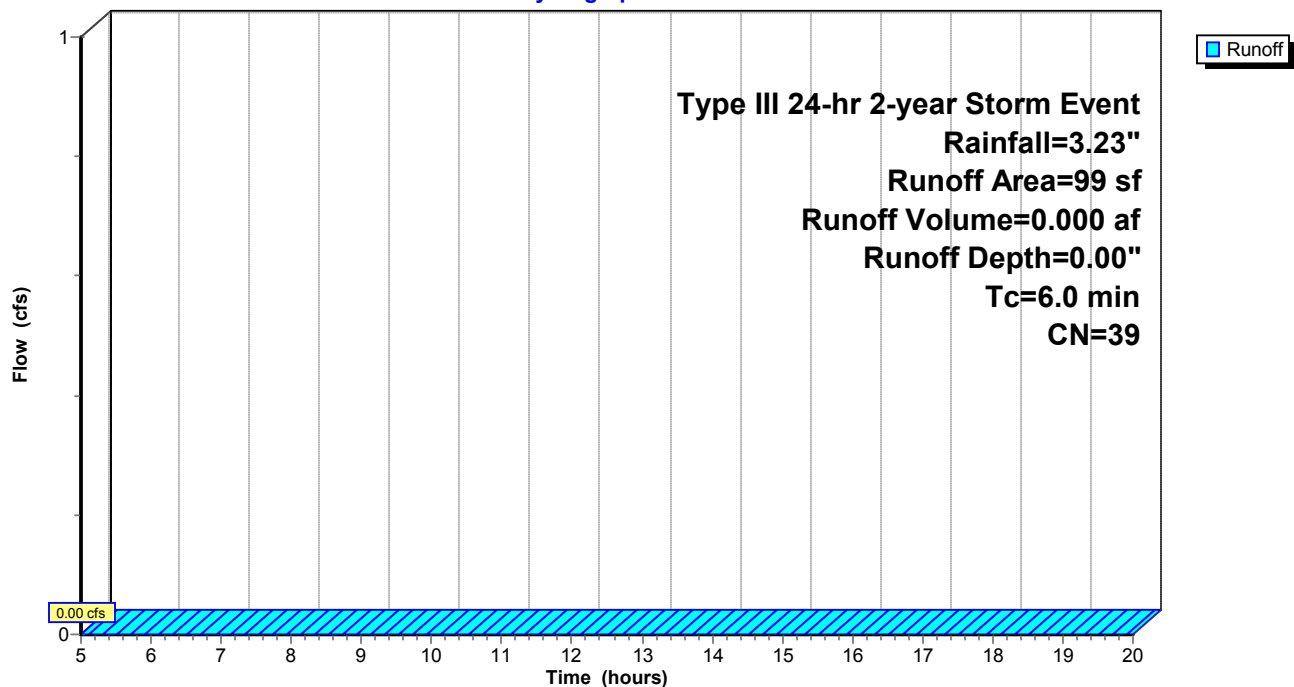
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Storm Event Rainfall=3.23"

Area (sf)	CN	Description
99	39	>75% Grass cover, Good, HSG A
99		Pervious Area

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

Subcatchment 8S: Lawn

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Hydrograph for Subcatchment 8S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00	18.00	3.00	0.00	0.00
5.25	0.20	0.00	0.00	18.25	3.01	0.00	0.00
5.50	0.21	0.00	0.00	18.50	3.02	0.00	0.00
5.75	0.22	0.00	0.00	18.75	3.03	0.00	0.00
6.00	0.23	0.00	0.00	19.00	3.05	0.00	0.00
6.25	0.25	0.00	0.00	19.25	3.06	0.00	0.00
6.50	0.26	0.00	0.00	19.50	3.07	0.00	0.00
6.75	0.28	0.00	0.00	19.75	3.08	0.00	0.00
7.00	0.29	0.00	0.00	20.00	3.09	0.00	0.00
7.25	0.31	0.00	0.00				
7.50	0.33	0.00	0.00				
7.75	0.35	0.00	0.00				
8.00	0.37	0.00	0.00				
8.25	0.39	0.00	0.00				
8.50	0.41	0.00	0.00				
8.75	0.44	0.00	0.00				
9.00	0.47	0.00	0.00				
9.25	0.50	0.00	0.00				
9.50	0.54	0.00	0.00				
9.75	0.57	0.00	0.00				
10.00	0.61	0.00	0.00				
10.25	0.65	0.00	0.00				
10.50	0.70	0.00	0.00				
10.75	0.75	0.00	0.00				
11.00	0.81	0.00	0.00				
11.25	0.88	0.00	0.00				
11.50	0.96	0.00	0.00				
11.75	1.15	0.00	0.00				
12.00	1.61	0.00	0.00				
12.25	2.08	0.00	0.00				
12.50	2.27	0.00	0.00				
12.75	2.35	0.00	0.00				
13.00	2.42	0.00	0.00				
13.25	2.48	0.00	0.00				
13.50	2.53	0.00	0.00				
13.75	2.58	0.00	0.00				
14.00	2.62	0.00	0.00				
14.25	2.66	0.00	0.00				
14.50	2.69	0.00	0.00				
14.75	2.73	0.00	0.00				
15.00	2.76	0.00	0.00				
15.25	2.79	0.00	0.00				
15.50	2.82	0.00	0.00				
15.75	2.84	0.00	0.00				
16.00	2.86	0.00	0.00				
16.25	2.88	0.00	0.00				
16.50	2.90	0.00	0.00				
16.75	2.92	0.00	0.00				
17.00	2.94	0.00	0.00				
17.25	2.95	0.00	0.00				
17.50	2.97	0.00	0.00				
17.75	2.98	0.00	0.00				

[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Pond 5P: Porous Paver (Walkway)

Inflow Area = 0.004 ac, Inflow Depth > 1.37" for 2-year Storm Event event
 Inflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af
 Outflow = 0.01 cfs @ 12.05 hrs, Volume= 0.001 af, Atten= 25%, Lag= 0.0 min
 Discarded = 0.01 cfs @ 12.05 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.28' @ 12.16 hrs Surf.Area= 0 sf Storage= 1 cf

Plug-Flow detention time= 1.4 min calculated for 0.001 af (100% of inflow)
 Center-of-Mass det. time= 1.1 min (739.6 - 738.5)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	16 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	16

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.005 0.005

Discarded OutFlow Max=0.01 cfs @ 12.05 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.01 cfs)

[1120] Proposed Conditions2

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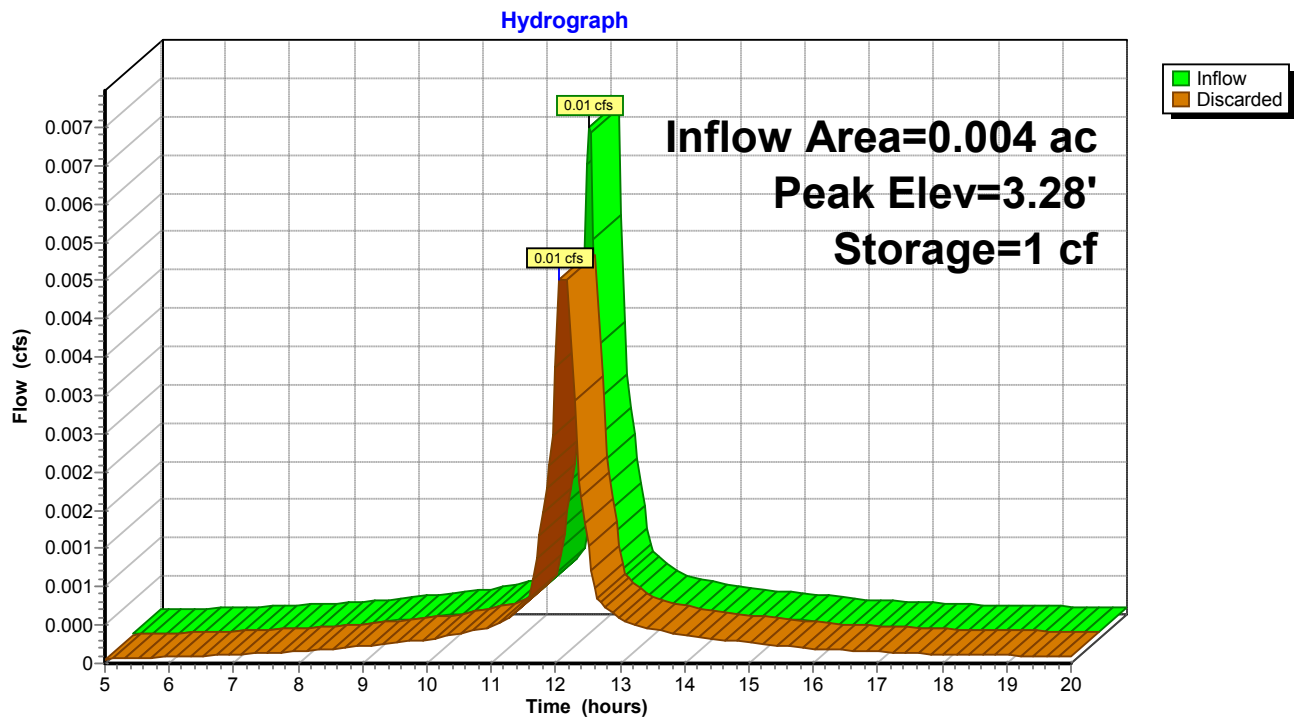
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Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Pond 5P: Porous Paver (Walkway)



[1120] Proposed Conditions2*Type III 24-hr 2-year Storm Event Rainfall=3.23"*

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Hydrograph for Pond 5P: Porous Paver (Walkway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.00	0	3.25	0.00
12.00	0.00	0	3.26	0.00
12.50	0.00	0	3.25	0.00
13.00	0.00	0	3.25	0.00
13.50	0.00	0	3.25	0.00
14.00	0.00	0	3.25	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Pond 9P: Porous Paver (Driveway)

Inflow Area = 0.013 ac, Inflow Depth > 2.22" for 2-year Storm Event event
 Inflow = 0.03 cfs @ 12.09 hrs, Volume= 0.002 af
 Outflow = 0.03 cfs @ 12.05 hrs, Volume= 0.002 af, Atten= 22%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 12.05 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.27' @ 12.15 hrs Surf.Area= 0 sf Storage= 3 cf

Plug-Flow detention time= 1.2 min calculated for 0.002 af (100% of inflow)
 Center-of-Mass det. time= 1.0 min (739.5 - 738.5)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	75 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	75

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.025 0.025

Discarded OutFlow Max=0.03 cfs @ 12.05 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.03 cfs)

[1120] Proposed Conditions2

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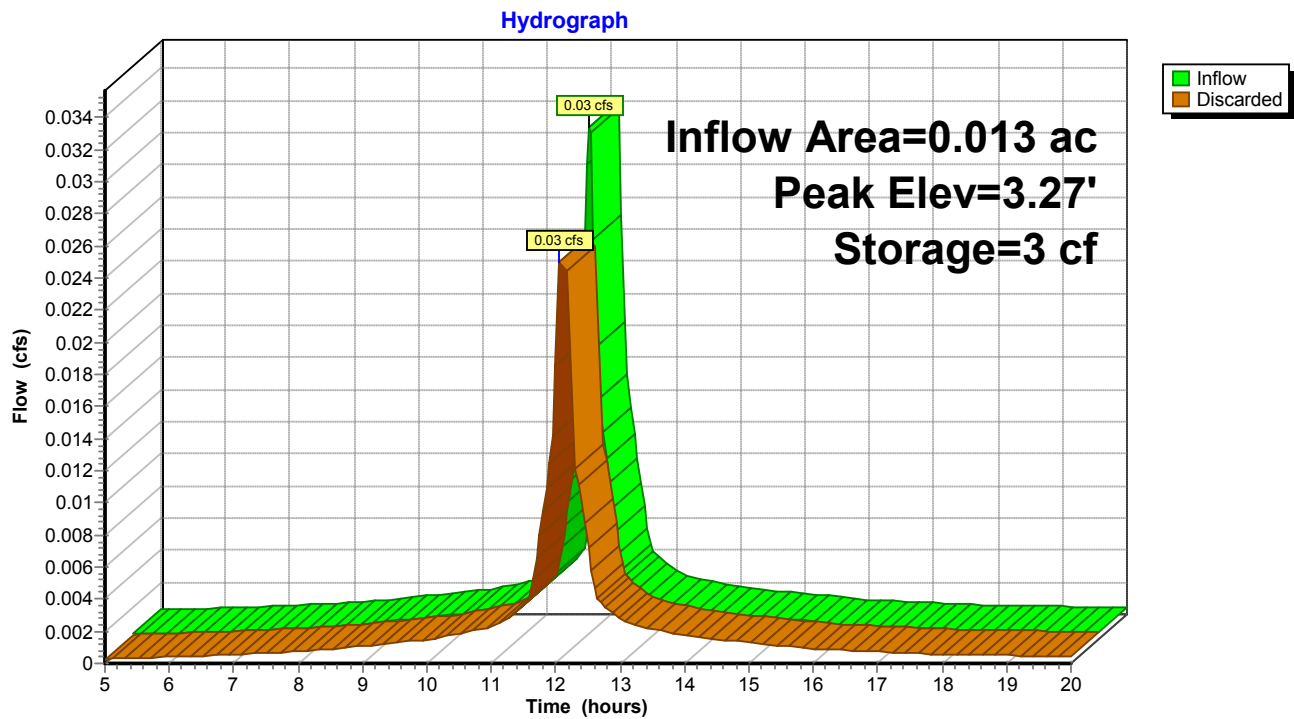
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Type III 24-hr 2-year Storm Event Rainfall=3.23"

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Pond 9P: Porous Paver (Driveway)



[1120] Proposed Conditions2*Type III 24-hr 2-year Storm Event Rainfall=3.23"*

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Hydrograph for Pond 9P: Porous Paver (Driveway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.00	0	3.25	0.00
12.00	0.02	1	3.26	0.02
12.50	0.01	0	3.25	0.01
13.00	0.00	0	3.25	0.00
13.50	0.00	0	3.25	0.00
14.00	0.00	0	3.25	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Subcatchment 1S: Remainder of Land

Runoff = 0.46 cfs @ 12.10 hrs, Volume= 0.031 af, Depth> 2.04"

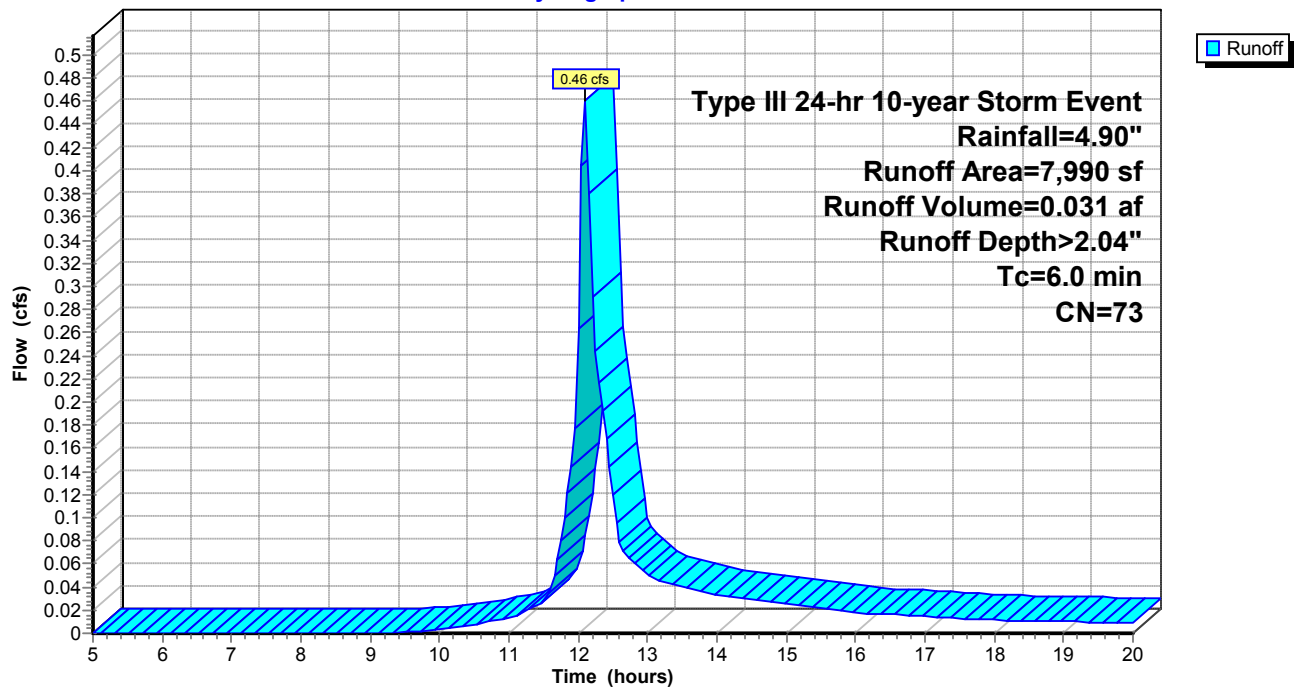
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Storm Event Rainfall=4.90"

Area (sf)	CN	Description
1,441	98	Paved parking & roofs
4,706	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
7,990	73	Weighted Average
6,549		Pervious Area
1,441		Impervious Area

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

Subcatchment 1S: Remainder of Land

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Hydrograph for Subcatchment 1S: Remainder of Land

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00	18.00	4.55	1.93	0.01
5.25	0.30	0.00	0.00	18.25	4.57	1.95	0.01
5.50	0.31	0.00	0.00	18.50	4.59	1.96	0.01
5.75	0.33	0.00	0.00	18.75	4.60	1.97	0.01
6.00	0.35	0.00	0.00	19.00	4.62	1.99	0.01
6.25	0.37	0.00	0.00	19.25	4.64	2.00	0.01
6.50	0.40	0.00	0.00	19.50	4.66	2.01	0.01
6.75	0.42	0.00	0.00	19.75	4.67	2.03	0.01
7.00	0.44	0.00	0.00	20.00	4.69	2.04	0.01
7.25	0.47	0.00	0.00				
7.50	0.50	0.00	0.00				
7.75	0.53	0.00	0.00				
8.00	0.56	0.00	0.00				
8.25	0.59	0.00	0.00				
8.50	0.63	0.00	0.00				
8.75	0.67	0.00	0.00				
9.00	0.71	0.00	0.00				
9.25	0.76	0.00	0.00				
9.50	0.81	0.00	0.00				
9.75	0.87	0.00	0.00				
10.00	0.93	0.01	0.00				
10.25	0.99	0.02	0.01				
10.50	1.06	0.03	0.01				
10.75	1.14	0.04	0.01				
11.00	1.22	0.06	0.01				
11.25	1.33	0.08	0.02				
11.50	1.46	0.12	0.03				
11.75	1.74	0.21	0.08				
12.00	2.45	0.54	0.26				
12.25	3.16	0.96	0.24				
12.50	3.44	1.14	0.12				
12.75	3.57	1.23	0.06				
13.00	3.67	1.30	0.05				
13.25	3.76	1.36	0.04				
13.50	3.84	1.41	0.04				
13.75	3.91	1.46	0.04				
14.00	3.97	1.51	0.03				
14.25	4.03	1.55	0.03				
14.50	4.09	1.59	0.03				
14.75	4.14	1.63	0.03				
15.00	4.19	1.66	0.03				
15.25	4.23	1.69	0.02				
15.50	4.27	1.72	0.02				
15.75	4.31	1.75	0.02				
16.00	4.34	1.78	0.02				
16.25	4.37	1.80	0.02				
16.50	4.40	1.82	0.02				
16.75	4.43	1.84	0.02				
17.00	4.46	1.86	0.01				
17.25	4.48	1.88	0.01				
17.50	4.50	1.90	0.01				
17.75	4.53	1.92	0.01				

[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Subcatchment 2S: Lawn

Runoff = 0.00 cfs @ 12.50 hrs, Volume= 0.000 af, Depth> 0.14"

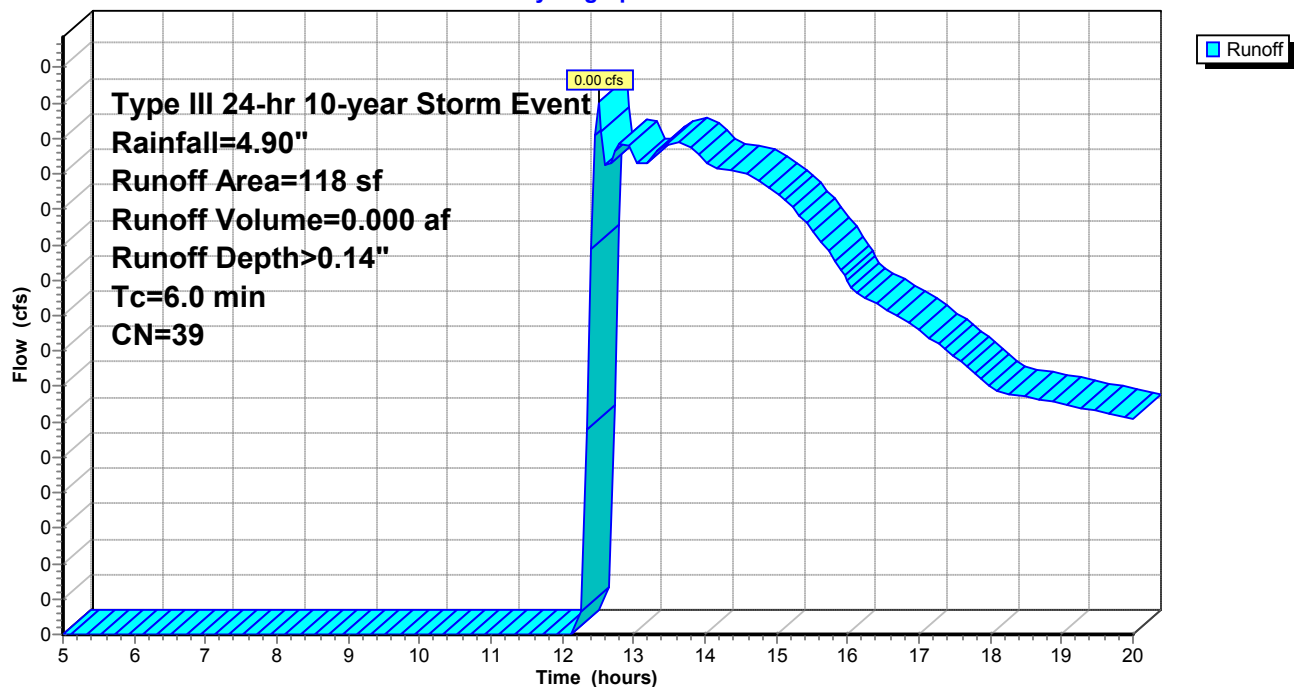
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Storm Event Rainfall=4.90"

Area (sf)	CN	Description
118	39	>75% Grass cover, Good, HSG A
118		Pervious Area

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

Subcatchment 2S: Lawn

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Hydrograph for Subcatchment 2S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00	18.00	4.55	0.12	0.00
5.25	0.30	0.00	0.00	18.25	4.57	0.12	0.00
5.50	0.31	0.00	0.00	18.50	4.59	0.12	0.00
5.75	0.33	0.00	0.00	18.75	4.60	0.13	0.00
6.00	0.35	0.00	0.00	19.00	4.62	0.13	0.00
6.25	0.37	0.00	0.00	19.25	4.64	0.13	0.00
6.50	0.40	0.00	0.00	19.50	4.66	0.14	0.00
6.75	0.42	0.00	0.00	19.75	4.67	0.14	0.00
7.00	0.44	0.00	0.00	20.00	4.69	0.14	0.00
7.25	0.47	0.00	0.00				
7.50	0.50	0.00	0.00				
7.75	0.53	0.00	0.00				
8.00	0.56	0.00	0.00				
8.25	0.59	0.00	0.00				
8.50	0.63	0.00	0.00				
8.75	0.67	0.00	0.00				
9.00	0.71	0.00	0.00				
9.25	0.76	0.00	0.00				
9.50	0.81	0.00	0.00				
9.75	0.87	0.00	0.00				
10.00	0.93	0.00	0.00				
10.25	0.99	0.00	0.00				
10.50	1.06	0.00	0.00				
10.75	1.14	0.00	0.00				
11.00	1.22	0.00	0.00				
11.25	1.33	0.00	0.00				
11.50	1.46	0.00	0.00				
11.75	1.74	0.00	0.00				
12.00	2.45	0.00	0.00				
12.25	3.16	0.00	0.00				
12.50	3.44	0.01	0.00				
12.75	3.57	0.01	0.00				
13.00	3.67	0.02	0.00				
13.25	3.76	0.02	0.00				
13.50	3.84	0.03	0.00				
13.75	3.91	0.04	0.00				
14.00	3.97	0.04	0.00				
14.25	4.03	0.05	0.00				
14.50	4.09	0.06	0.00				
14.75	4.14	0.06	0.00				
15.00	4.19	0.07	0.00				
15.25	4.23	0.07	0.00				
15.50	4.27	0.08	0.00				
15.75	4.31	0.08	0.00				
16.00	4.34	0.09	0.00				
16.25	4.37	0.09	0.00				
16.50	4.40	0.10	0.00				
16.75	4.43	0.10	0.00				
17.00	4.46	0.10	0.00				
17.25	4.48	0.11	0.00				
17.50	4.50	0.11	0.00				
17.75	4.53	0.11	0.00				

[1120] Proposed Conditions2

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Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Subcatchment 6S: Driveway

Runoff = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af, Depth> 4.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

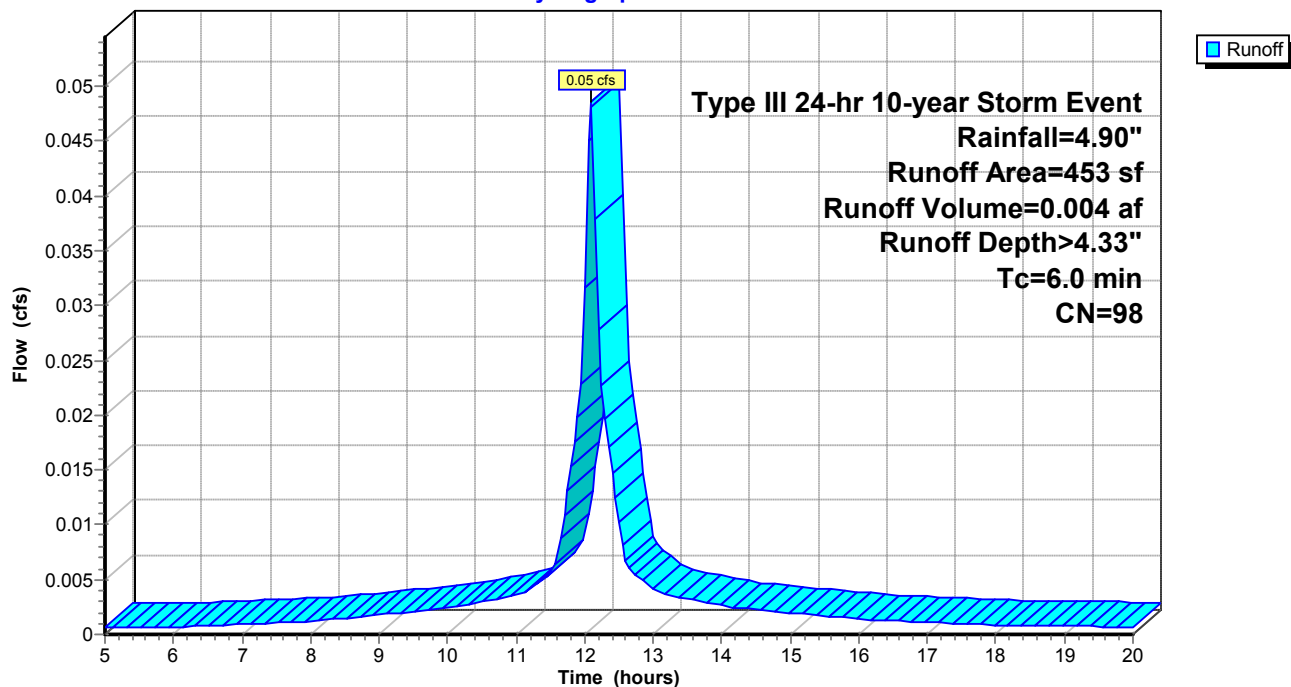
Type III 24-hr 10-year Storm Event Rainfall=4.90"

Area (sf)	CN	Description
453	98	Paved parking & roofs
453		Impervious Area

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

Subcatchment 6S: Driveway

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Hydrograph for Subcatchment 6S: Driveway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.13	0.00	18.00	4.55	4.31	0.00
5.25	0.30	0.14	0.00	18.25	4.57	4.33	0.00
5.50	0.31	0.16	0.00	18.50	4.59	4.35	0.00
5.75	0.33	0.17	0.00	18.75	4.60	4.37	0.00
6.00	0.35	0.19	0.00	19.00	4.62	4.39	0.00
6.25	0.37	0.21	0.00	19.25	4.64	4.40	0.00
6.50	0.40	0.22	0.00	19.50	4.66	4.42	0.00
6.75	0.42	0.25	0.00	19.75	4.67	4.44	0.00
7.00	0.44	0.27	0.00	20.00	4.69	4.45	0.00
7.25	0.47	0.29	0.00				
7.50	0.50	0.32	0.00				
7.75	0.53	0.34	0.00				
8.00	0.56	0.37	0.00				
8.25	0.59	0.40	0.00				
8.50	0.63	0.44	0.00				
8.75	0.67	0.48	0.00				
9.00	0.71	0.52	0.00				
9.25	0.76	0.56	0.00				
9.50	0.81	0.61	0.00				
9.75	0.87	0.66	0.00				
10.00	0.93	0.72	0.00				
10.25	0.99	0.78	0.00				
10.50	1.06	0.85	0.00				
10.75	1.14	0.93	0.00				
11.00	1.22	1.01	0.00				
11.25	1.33	1.11	0.00				
11.50	1.46	1.24	0.01				
11.75	1.74	1.52	0.01				
12.00	2.45	2.22	0.03				
12.25	3.16	2.93	0.02				
12.50	3.44	3.21	0.01				
12.75	3.57	3.34	0.01				
13.00	3.67	3.44	0.00				
13.25	3.76	3.53	0.00				
13.50	3.84	3.60	0.00				
13.75	3.91	3.68	0.00				
14.00	3.97	3.74	0.00				
14.25	4.03	3.80	0.00				
14.50	4.09	3.85	0.00				
14.75	4.14	3.90	0.00				
15.00	4.19	3.95	0.00				
15.25	4.23	3.99	0.00				
15.50	4.27	4.04	0.00				
15.75	4.31	4.07	0.00				
16.00	4.34	4.11	0.00				
16.25	4.37	4.14	0.00				
16.50	4.40	4.17	0.00				
16.75	4.43	4.19	0.00				
17.00	4.46	4.22	0.00				
17.25	4.48	4.25	0.00				
17.50	4.50	4.27	0.00				
17.75	4.53	4.29	0.00				

[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Subcatchment 7S: Walkway

Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth> 4.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

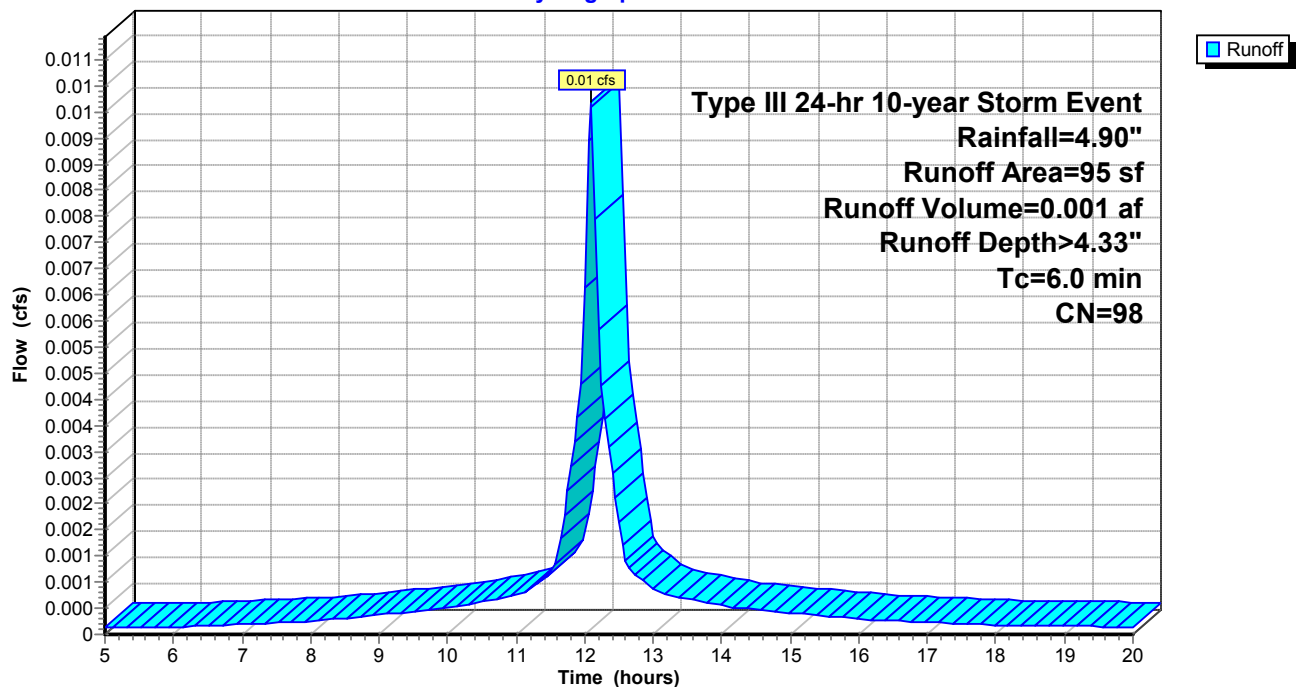
Type III 24-hr 10-year Storm Event Rainfall=4.90"

Area (sf)	CN	Description
95	98	Paved parking & roofs
95		Impervious Area

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

Subcatchment 7S: Walkway

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 10-year Storm Event Rainfall=4.90"*

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Hydrograph for Subcatchment 7S: Walkway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.13	0.00	18.00	4.55	4.31	0.00
5.25	0.30	0.14	0.00	18.25	4.57	4.33	0.00
5.50	0.31	0.16	0.00	18.50	4.59	4.35	0.00
5.75	0.33	0.17	0.00	18.75	4.60	4.37	0.00
6.00	0.35	0.19	0.00	19.00	4.62	4.39	0.00
6.25	0.37	0.21	0.00	19.25	4.64	4.40	0.00
6.50	0.40	0.22	0.00	19.50	4.66	4.42	0.00
6.75	0.42	0.25	0.00	19.75	4.67	4.44	0.00
7.00	0.44	0.27	0.00	20.00	4.69	4.45	0.00
7.25	0.47	0.29	0.00				
7.50	0.50	0.32	0.00				
7.75	0.53	0.34	0.00				
8.00	0.56	0.37	0.00				
8.25	0.59	0.40	0.00				
8.50	0.63	0.44	0.00				
8.75	0.67	0.48	0.00				
9.00	0.71	0.52	0.00				
9.25	0.76	0.56	0.00				
9.50	0.81	0.61	0.00				
9.75	0.87	0.66	0.00				
10.00	0.93	0.72	0.00				
10.25	0.99	0.78	0.00				
10.50	1.06	0.85	0.00				
10.75	1.14	0.93	0.00				
11.00	1.22	1.01	0.00				
11.25	1.33	1.11	0.00				
11.50	1.46	1.24	0.00				
11.75	1.74	1.52	0.00				
12.00	2.45	2.22	0.01				
12.25	3.16	2.93	0.00				
12.50	3.44	3.21	0.00				
12.75	3.57	3.34	0.00				
13.00	3.67	3.44	0.00				
13.25	3.76	3.53	0.00				
13.50	3.84	3.60	0.00				
13.75	3.91	3.68	0.00				
14.00	3.97	3.74	0.00				
14.25	4.03	3.80	0.00				
14.50	4.09	3.85	0.00				
14.75	4.14	3.90	0.00				
15.00	4.19	3.95	0.00				
15.25	4.23	3.99	0.00				
15.50	4.27	4.04	0.00				
15.75	4.31	4.07	0.00				
16.00	4.34	4.11	0.00				
16.25	4.37	4.14	0.00				
16.50	4.40	4.17	0.00				
16.75	4.43	4.19	0.00				
17.00	4.46	4.22	0.00				
17.25	4.48	4.25	0.00				
17.50	4.50	4.27	0.00				
17.75	4.53	4.29	0.00				

[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Subcatchment 8S: Lawn

Runoff = 0.00 cfs @ 12.50 hrs, Volume= 0.000 af, Depth> 0.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

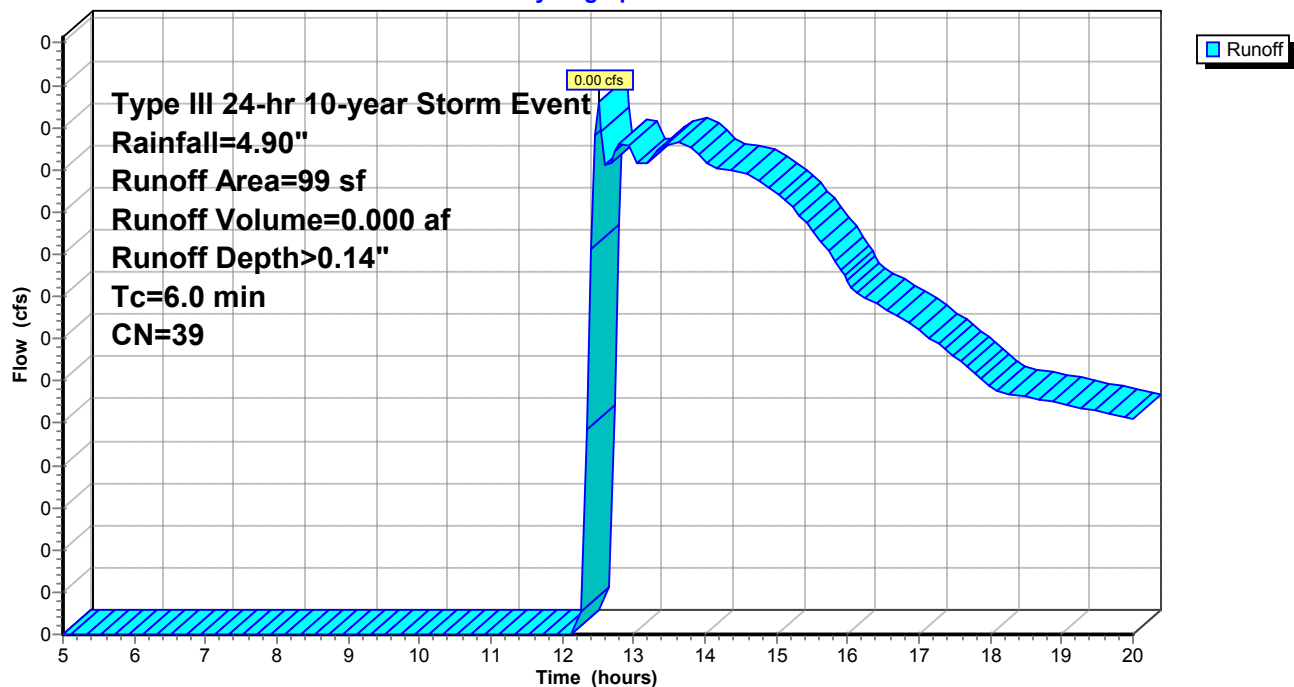
Type III 24-hr 10-year Storm Event Rainfall=4.90"

Area (sf)	CN	Description
99	39	>75% Grass cover, Good, HSG A
99		Pervious Area

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

Subcatchment 8S: Lawn

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 10-year Storm Event Rainfall=4.90"*

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Hydrograph for Subcatchment 8S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00	18.00	4.55	0.12	0.00
5.25	0.30	0.00	0.00	18.25	4.57	0.12	0.00
5.50	0.31	0.00	0.00	18.50	4.59	0.12	0.00
5.75	0.33	0.00	0.00	18.75	4.60	0.13	0.00
6.00	0.35	0.00	0.00	19.00	4.62	0.13	0.00
6.25	0.37	0.00	0.00	19.25	4.64	0.13	0.00
6.50	0.40	0.00	0.00	19.50	4.66	0.14	0.00
6.75	0.42	0.00	0.00	19.75	4.67	0.14	0.00
7.00	0.44	0.00	0.00	20.00	4.69	0.14	0.00
7.25	0.47	0.00	0.00				
7.50	0.50	0.00	0.00				
7.75	0.53	0.00	0.00				
8.00	0.56	0.00	0.00				
8.25	0.59	0.00	0.00				
8.50	0.63	0.00	0.00				
8.75	0.67	0.00	0.00				
9.00	0.71	0.00	0.00				
9.25	0.76	0.00	0.00				
9.50	0.81	0.00	0.00				
9.75	0.87	0.00	0.00				
10.00	0.93	0.00	0.00				
10.25	0.99	0.00	0.00				
10.50	1.06	0.00	0.00				
10.75	1.14	0.00	0.00				
11.00	1.22	0.00	0.00				
11.25	1.33	0.00	0.00				
11.50	1.46	0.00	0.00				
11.75	1.74	0.00	0.00				
12.00	2.45	0.00	0.00				
12.25	3.16	0.00	0.00				
12.50	3.44	0.01	0.00				
12.75	3.57	0.01	0.00				
13.00	3.67	0.02	0.00				
13.25	3.76	0.02	0.00				
13.50	3.84	0.03	0.00				
13.75	3.91	0.04	0.00				
14.00	3.97	0.04	0.00				
14.25	4.03	0.05	0.00				
14.50	4.09	0.06	0.00				
14.75	4.14	0.06	0.00				
15.00	4.19	0.07	0.00				
15.25	4.23	0.07	0.00				
15.50	4.27	0.08	0.00				
15.75	4.31	0.08	0.00				
16.00	4.34	0.09	0.00				
16.25	4.37	0.09	0.00				
16.50	4.40	0.10	0.00				
16.75	4.43	0.10	0.00				
17.00	4.46	0.10	0.00				
17.25	4.48	0.11	0.00				
17.50	4.50	0.11	0.00				
17.75	4.53	0.11	0.00				

[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Pond 5P: Porous Paver (Walkway)

Inflow Area = 0.004 ac, Inflow Depth > 2.19" for 10-year Storm Event event
 Inflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af
 Outflow = 0.01 cfs @ 12.00 hrs, Volume= 0.001 af, Atten= 51%, Lag= 0.0 min
 Discarded = 0.01 cfs @ 12.00 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.34' @ 12.24 hrs Surf.Area= 0 sf Storage= 3 cf

Plug-Flow detention time= 2.9 min calculated for 0.001 af (100% of inflow)
 Center-of-Mass det. time= 2.7 min (744.4 - 741.8)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	16 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	16

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.005 0.005

Discarded OutFlow Max=0.01 cfs @ 12.00 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.01 cfs)

[1120] Proposed Conditions2

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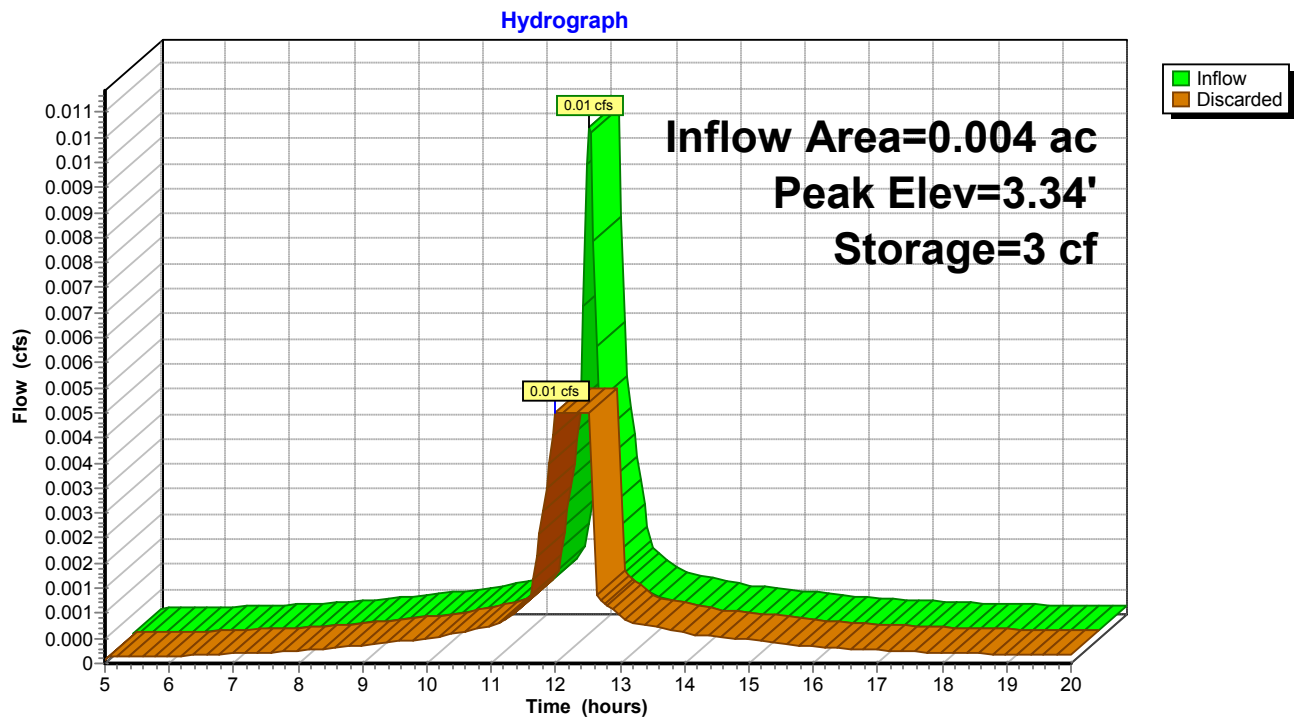
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Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Pond 5P: Porous Paver (Walkway)



[1120] Proposed Conditions2*Type III 24-hr 10-year Storm Event Rainfall=4.90"*

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Hydrograph for Pond 5P: Porous Paver (Walkway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.00	0	3.25	0.00
12.00	0.01	0	3.26	0.01
12.50	0.00	2	3.30	0.01
13.00	0.00	0	3.25	0.00
13.50	0.00	0	3.25	0.00
14.00	0.00	0	3.25	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Pond 9P: Porous Paver (Driveway)

Inflow Area = 0.013 ac, Inflow Depth > 3.46" for 10-year Storm Event event
 Inflow = 0.05 cfs @ 12.09 hrs, Volume= 0.004 af
 Outflow = 0.03 cfs @ 12.00 hrs, Volume= 0.004 af, Atten= 49%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 12.00 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.34' @ 12.23 hrs Surf.Area= 0 sf Storage= 13 cf

Plug-Flow detention time= 2.6 min calculated for 0.004 af (100% of inflow)
 Center-of-Mass det. time= 2.4 min (739.3 - 736.9)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	75 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	75

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.025 0.025

Discarded OutFlow Max=0.03 cfs @ 12.00 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.03 cfs)

[1120] Proposed Conditions2

Prepared by Gala Simon Associates

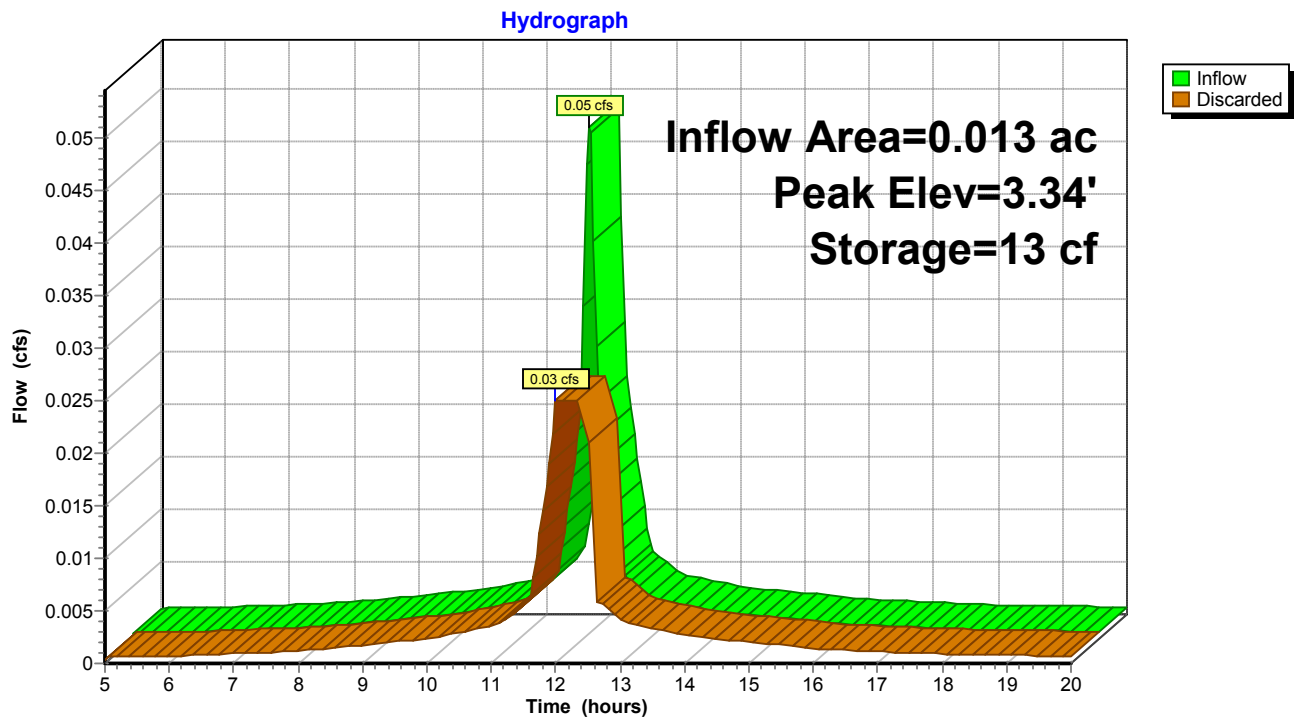
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Type III 24-hr 10-year Storm Event Rainfall=4.90"

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Pond 9P: Porous Paver (Driveway)



[1120] Proposed Conditions2*Type III 24-hr 10-year Storm Event Rainfall=4.90"*

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Hydrograph for Pond 9P: Porous Paver (Driveway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.01	0	3.25	0.01
12.00	0.03	2	3.26	0.03
12.50	0.01	5	3.28	0.03
13.00	0.00	0	3.25	0.00
13.50	0.00	0	3.25	0.00
14.00	0.00	0	3.25	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Subcatchment 1S: Remainder of Land

Runoff = 0.69 cfs @ 12.09 hrs, Volume= 0.046 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

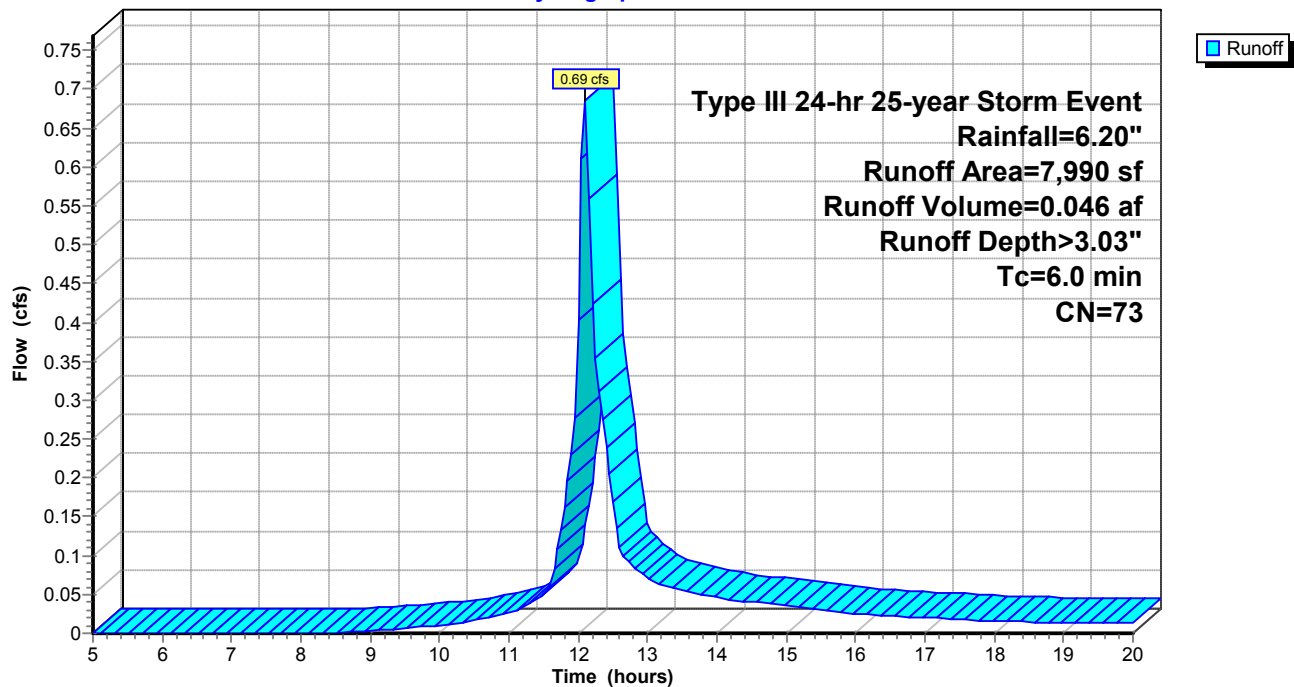
Type III 24-hr 25-year Storm Event Rainfall=6.20"

Area (sf)	CN	Description
1,441	98	Paved parking & roofs
4,706	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
7,990	73	Weighted Average
6,549		Pervious Area
1,441		Impervious Area

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

Subcatchment 1S: Remainder of Land

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Hydrograph for Subcatchment 1S: Remainder of Land

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00	18.00	5.75	2.89	0.02
5.25	0.37	0.00	0.00	18.25	5.78	2.91	0.01
5.50	0.40	0.00	0.00	18.50	5.80	2.93	0.01
5.75	0.42	0.00	0.00	18.75	5.83	2.94	0.01
6.00	0.45	0.00	0.00	19.00	5.85	2.96	0.01
6.25	0.47	0.00	0.00	19.25	5.87	2.98	0.01
6.50	0.50	0.00	0.00	19.50	5.89	3.00	0.01
6.75	0.53	0.00	0.00	19.75	5.91	3.02	0.01
7.00	0.56	0.00	0.00	20.00	5.93	3.03	0.01
7.25	0.59	0.00	0.00				
7.50	0.63	0.00	0.00				
7.75	0.67	0.00	0.00				
8.00	0.71	0.00	0.00				
8.25	0.75	0.00	0.00				
8.50	0.80	0.00	0.00				
8.75	0.85	0.00	0.00				
9.00	0.90	0.01	0.00				
9.25	0.96	0.01	0.00				
9.50	1.03	0.02	0.01				
9.75	1.10	0.03	0.01				
10.00	1.17	0.05	0.01				
10.25	1.25	0.06	0.01				
10.50	1.34	0.08	0.02				
10.75	1.44	0.11	0.02				
11.00	1.55	0.15	0.03				
11.25	1.68	0.19	0.04				
11.50	1.85	0.26	0.05				
11.75	2.20	0.41	0.13				
12.00	3.10	0.92	0.40				
12.25	4.00	1.53	0.35				
12.50	4.35	1.79	0.17				
12.75	4.52	1.91	0.09				
13.00	4.65	2.01	0.07				
13.25	4.76	2.09	0.06				
13.50	4.86	2.17	0.06				
13.75	4.95	2.24	0.05				
14.00	5.03	2.30	0.05				
14.25	5.10	2.36	0.04				
14.50	5.17	2.42	0.04				
14.75	5.24	2.47	0.04				
15.00	5.30	2.52	0.04				
15.25	5.35	2.56	0.03				
15.50	5.40	2.60	0.03				
15.75	5.45	2.64	0.03				
16.00	5.49	2.67	0.03				
16.25	5.53	2.71	0.02				
16.50	5.57	2.74	0.02				
16.75	5.61	2.76	0.02				
17.00	5.64	2.79	0.02				
17.25	5.67	2.82	0.02				
17.50	5.70	2.84	0.02				
17.75	5.73	2.86	0.02				

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Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Subcatchment 2S: Lawn

Runoff = 0.00 cfs @ 12.32 hrs, Volume= 0.000 af, Depth> 0.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

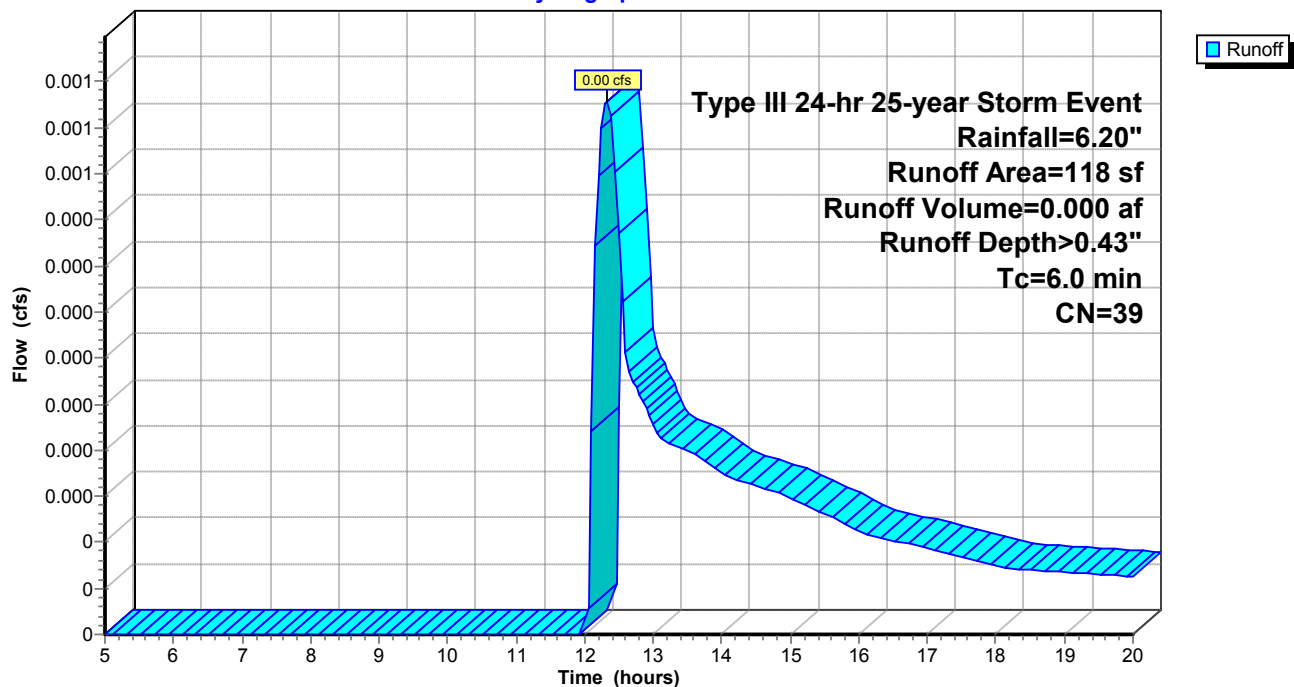
Type III 24-hr 25-year Storm Event Rainfall=6.20"

Area (sf)	CN	Description
118	39	>75% Grass cover, Good, HSG A
118		Pervious Area

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

Subcatchment 2S: Lawn

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Hydrograph for Subcatchment 2S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00	18.00	5.75	0.38	0.00
5.25	0.37	0.00	0.00	18.25	5.78	0.38	0.00
5.50	0.40	0.00	0.00	18.50	5.80	0.39	0.00
5.75	0.42	0.00	0.00	18.75	5.83	0.40	0.00
6.00	0.45	0.00	0.00	19.00	5.85	0.40	0.00
6.25	0.47	0.00	0.00	19.25	5.87	0.41	0.00
6.50	0.50	0.00	0.00	19.50	5.89	0.42	0.00
6.75	0.53	0.00	0.00	19.75	5.91	0.42	0.00
7.00	0.56	0.00	0.00	20.00	5.93	0.43	0.00
7.25	0.59	0.00	0.00				
7.50	0.63	0.00	0.00				
7.75	0.67	0.00	0.00				
8.00	0.71	0.00	0.00				
8.25	0.75	0.00	0.00				
8.50	0.80	0.00	0.00				
8.75	0.85	0.00	0.00				
9.00	0.90	0.00	0.00				
9.25	0.96	0.00	0.00				
9.50	1.03	0.00	0.00				
9.75	1.10	0.00	0.00				
10.00	1.17	0.00	0.00				
10.25	1.25	0.00	0.00				
10.50	1.34	0.00	0.00				
10.75	1.44	0.00	0.00				
11.00	1.55	0.00	0.00				
11.25	1.68	0.00	0.00				
11.50	1.85	0.00	0.00				
11.75	2.20	0.00	0.00				
12.00	3.10	0.00	0.00				
12.25	4.00	0.05	0.00				
12.50	4.35	0.09	0.00				
12.75	4.52	0.11	0.00				
13.00	4.65	0.13	0.00				
13.25	4.76	0.15	0.00				
13.50	4.86	0.17	0.00				
13.75	4.95	0.19	0.00				
14.00	5.03	0.21	0.00				
14.25	5.10	0.22	0.00				
14.50	5.17	0.24	0.00				
14.75	5.24	0.25	0.00				
15.00	5.30	0.26	0.00				
15.25	5.35	0.28	0.00				
15.50	5.40	0.29	0.00				
15.75	5.45	0.30	0.00				
16.00	5.49	0.31	0.00				
16.25	5.53	0.32	0.00				
16.50	5.57	0.33	0.00				
16.75	5.61	0.34	0.00				
17.00	5.64	0.35	0.00				
17.25	5.67	0.36	0.00				
17.50	5.70	0.36	0.00				
17.75	5.73	0.37	0.00				

[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Subcatchment 6S: Driveway

Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth> 5.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

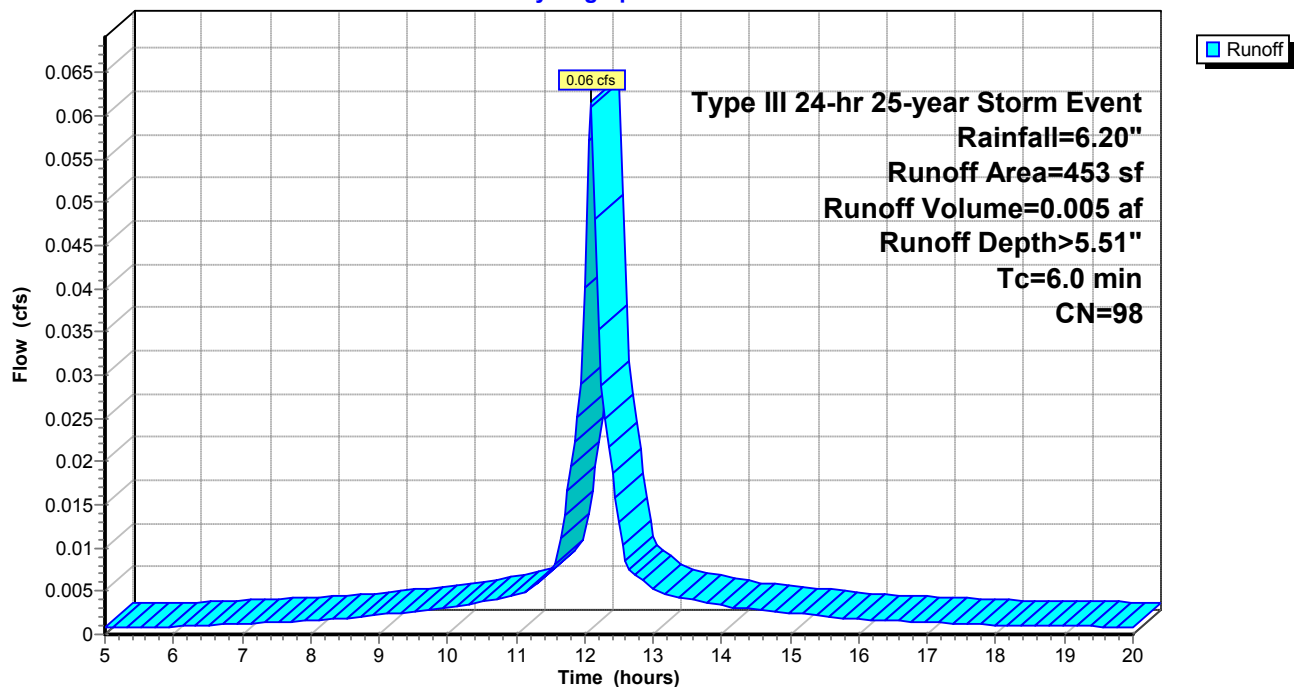
Type III 24-hr 25-year Storm Event Rainfall=6.20"

Area (sf)	CN	Description
453	98	Paved parking & roofs
453		Impervious Area

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

Subcatchment 6S: Driveway

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 25-year Storm Event Rainfall=6.20"*

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Hydrograph for Subcatchment 6S: Driveway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.19	0.00	18.00	5.75	5.52	0.00
5.25	0.37	0.21	0.00	18.25	5.78	5.54	0.00
5.50	0.40	0.23	0.00	18.50	5.80	5.56	0.00
5.75	0.42	0.25	0.00	18.75	5.83	5.59	0.00
6.00	0.45	0.27	0.00	19.00	5.85	5.61	0.00
6.25	0.47	0.29	0.00	19.25	5.87	5.63	0.00
6.50	0.50	0.32	0.00	19.50	5.89	5.65	0.00
6.75	0.53	0.34	0.00	19.75	5.91	5.67	0.00
7.00	0.56	0.37	0.00	20.00	5.93	5.70	0.00
7.25	0.59	0.40	0.00				
7.50	0.63	0.44	0.00				
7.75	0.67	0.47	0.00				
8.00	0.71	0.51	0.00				
8.25	0.75	0.55	0.00				
8.50	0.80	0.59	0.00				
8.75	0.85	0.64	0.00				
9.00	0.90	0.70	0.00				
9.25	0.96	0.76	0.00				
9.50	1.03	0.82	0.00				
9.75	1.10	0.89	0.00				
10.00	1.17	0.96	0.00				
10.25	1.25	1.04	0.00				
10.50	1.34	1.13	0.00				
10.75	1.44	1.22	0.00				
11.00	1.55	1.33	0.00				
11.25	1.68	1.46	0.01				
11.50	1.85	1.62	0.01				
11.75	2.20	1.98	0.02				
12.00	3.10	2.87	0.04				
12.25	4.00	3.76	0.03				
12.50	4.35	4.12	0.01				
12.75	4.52	4.28	0.01				
13.00	4.65	4.41	0.01				
13.25	4.76	4.52	0.00				
13.50	4.86	4.62	0.00				
13.75	4.95	4.71	0.00				
14.00	5.03	4.79	0.00				
14.25	5.10	4.86	0.00				
14.50	5.17	4.93	0.00				
14.75	5.24	5.00	0.00				
15.00	5.30	5.06	0.00				
15.25	5.35	5.11	0.00				
15.50	5.40	5.17	0.00				
15.75	5.45	5.21	0.00				
16.00	5.49	5.26	0.00				
16.25	5.53	5.29	0.00				
16.50	5.57	5.33	0.00				
16.75	5.61	5.37	0.00				
17.00	5.64	5.40	0.00				
17.25	5.67	5.43	0.00				
17.50	5.70	5.46	0.00				
17.75	5.73	5.49	0.00				

[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Subcatchment 7S: Walkway

Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth> 5.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

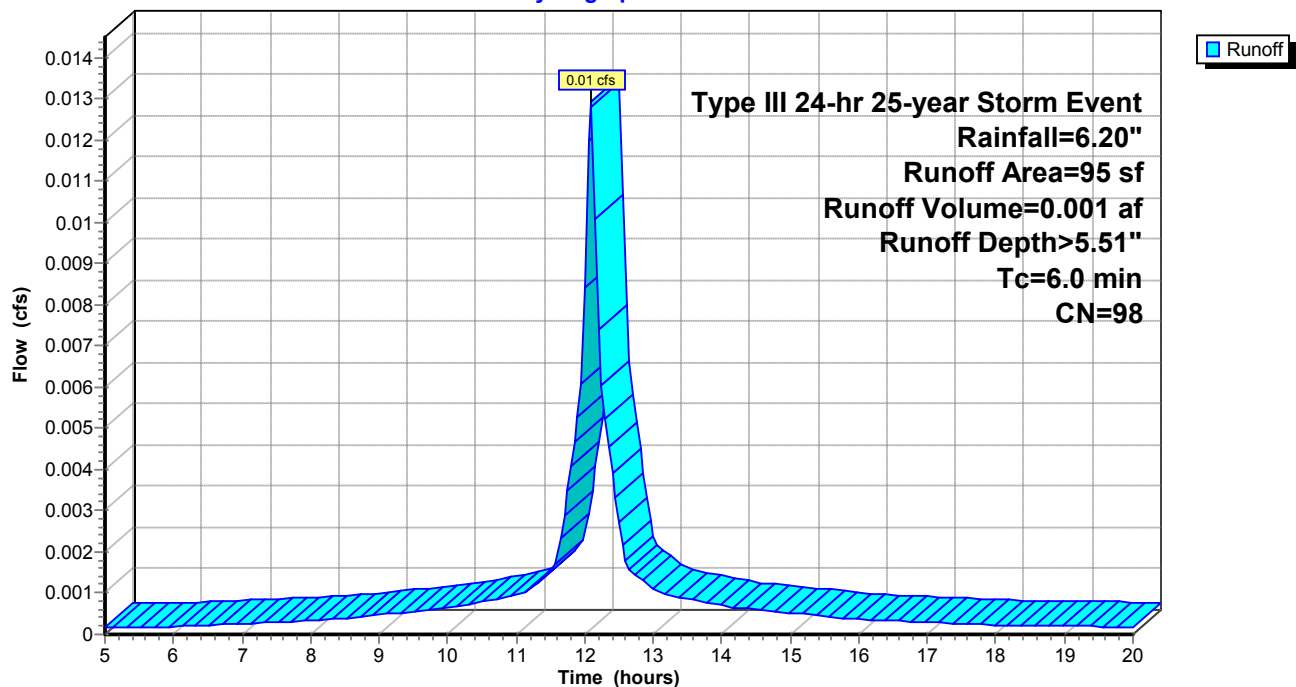
Type III 24-hr 25-year Storm Event Rainfall=6.20"

Area (sf)	CN	Description
95	98	Paved parking & roofs
95		Impervious Area

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

Subcatchment 7S: Walkway

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 25-year Storm Event Rainfall=6.20"*

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Hydrograph for Subcatchment 7S: Walkway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.19	0.00	18.00	5.75	5.52	0.00
5.25	0.37	0.21	0.00	18.25	5.78	5.54	0.00
5.50	0.40	0.23	0.00	18.50	5.80	5.56	0.00
5.75	0.42	0.25	0.00	18.75	5.83	5.59	0.00
6.00	0.45	0.27	0.00	19.00	5.85	5.61	0.00
6.25	0.47	0.29	0.00	19.25	5.87	5.63	0.00
6.50	0.50	0.32	0.00	19.50	5.89	5.65	0.00
6.75	0.53	0.34	0.00	19.75	5.91	5.67	0.00
7.00	0.56	0.37	0.00	20.00	5.93	5.70	0.00
7.25	0.59	0.40	0.00				
7.50	0.63	0.44	0.00				
7.75	0.67	0.47	0.00				
8.00	0.71	0.51	0.00				
8.25	0.75	0.55	0.00				
8.50	0.80	0.59	0.00				
8.75	0.85	0.64	0.00				
9.00	0.90	0.70	0.00				
9.25	0.96	0.76	0.00				
9.50	1.03	0.82	0.00				
9.75	1.10	0.89	0.00				
10.00	1.17	0.96	0.00				
10.25	1.25	1.04	0.00				
10.50	1.34	1.13	0.00				
10.75	1.44	1.22	0.00				
11.00	1.55	1.33	0.00				
11.25	1.68	1.46	0.00				
11.50	1.85	1.62	0.00				
11.75	2.20	1.98	0.00				
12.00	3.10	2.87	0.01				
12.25	4.00	3.76	0.01				
12.50	4.35	4.12	0.00				
12.75	4.52	4.28	0.00				
13.00	4.65	4.41	0.00				
13.25	4.76	4.52	0.00				
13.50	4.86	4.62	0.00				
13.75	4.95	4.71	0.00				
14.00	5.03	4.79	0.00				
14.25	5.10	4.86	0.00				
14.50	5.17	4.93	0.00				
14.75	5.24	5.00	0.00				
15.00	5.30	5.06	0.00				
15.25	5.35	5.11	0.00				
15.50	5.40	5.17	0.00				
15.75	5.45	5.21	0.00				
16.00	5.49	5.26	0.00				
16.25	5.53	5.29	0.00				
16.50	5.57	5.33	0.00				
16.75	5.61	5.37	0.00				
17.00	5.64	5.40	0.00				
17.25	5.67	5.43	0.00				
17.50	5.70	5.46	0.00				
17.75	5.73	5.49	0.00				

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Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Subcatchment 8S: Lawn

Runoff = 0.00 cfs @ 12.32 hrs, Volume= 0.000 af, Depth> 0.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

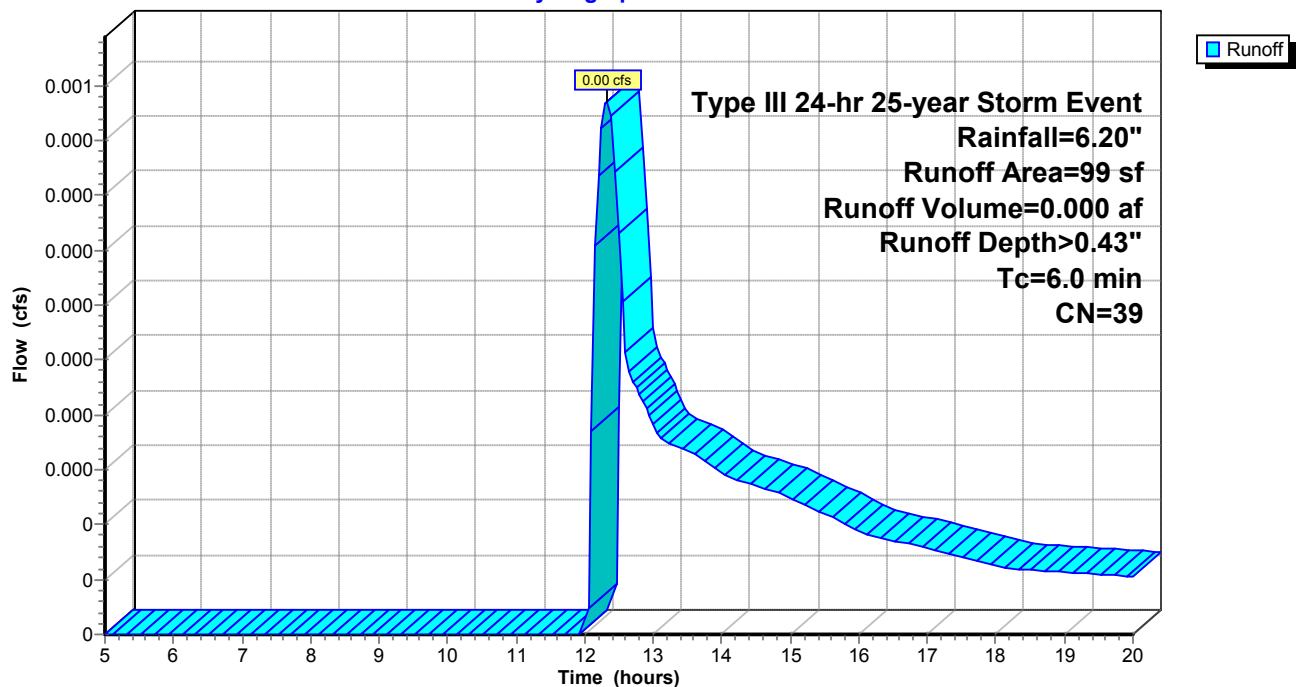
Type III 24-hr 25-year Storm Event Rainfall=6.20"

Area (sf)	CN	Description
99	39	>75% Grass cover, Good, HSG A
99		Pervious Area

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

Subcatchment 8S: Lawn

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Hydrograph for Subcatchment 8S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00	18.00	5.75	0.38	0.00
5.25	0.37	0.00	0.00	18.25	5.78	0.38	0.00
5.50	0.40	0.00	0.00	18.50	5.80	0.39	0.00
5.75	0.42	0.00	0.00	18.75	5.83	0.40	0.00
6.00	0.45	0.00	0.00	19.00	5.85	0.40	0.00
6.25	0.47	0.00	0.00	19.25	5.87	0.41	0.00
6.50	0.50	0.00	0.00	19.50	5.89	0.42	0.00
6.75	0.53	0.00	0.00	19.75	5.91	0.42	0.00
7.00	0.56	0.00	0.00	20.00	5.93	0.43	0.00
7.25	0.59	0.00	0.00				
7.50	0.63	0.00	0.00				
7.75	0.67	0.00	0.00				
8.00	0.71	0.00	0.00				
8.25	0.75	0.00	0.00				
8.50	0.80	0.00	0.00				
8.75	0.85	0.00	0.00				
9.00	0.90	0.00	0.00				
9.25	0.96	0.00	0.00				
9.50	1.03	0.00	0.00				
9.75	1.10	0.00	0.00				
10.00	1.17	0.00	0.00				
10.25	1.25	0.00	0.00				
10.50	1.34	0.00	0.00				
10.75	1.44	0.00	0.00				
11.00	1.55	0.00	0.00				
11.25	1.68	0.00	0.00				
11.50	1.85	0.00	0.00				
11.75	2.20	0.00	0.00				
12.00	3.10	0.00	0.00				
12.25	4.00	0.05	0.00				
12.50	4.35	0.09	0.00				
12.75	4.52	0.11	0.00				
13.00	4.65	0.13	0.00				
13.25	4.76	0.15	0.00				
13.50	4.86	0.17	0.00				
13.75	4.95	0.19	0.00				
14.00	5.03	0.21	0.00				
14.25	5.10	0.22	0.00				
14.50	5.17	0.24	0.00				
14.75	5.24	0.25	0.00				
15.00	5.30	0.26	0.00				
15.25	5.35	0.28	0.00				
15.50	5.40	0.29	0.00				
15.75	5.45	0.30	0.00				
16.00	5.49	0.31	0.00				
16.25	5.53	0.32	0.00				
16.50	5.57	0.33	0.00				
16.75	5.61	0.34	0.00				
17.00	5.64	0.35	0.00				
17.25	5.67	0.36	0.00				
17.50	5.70	0.36	0.00				
17.75	5.73	0.37	0.00				

[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Pond 5P: Porous Paver (Walkway)

Inflow Area = 0.004 ac, Inflow Depth > 2.92" for 25-year Storm Event event
 Inflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af
 Outflow = 0.01 cfs @ 11.90 hrs, Volume= 0.001 af, Atten= 62%, Lag= 0.0 min
 Discarded = 0.01 cfs @ 11.90 hrs, Volume= 0.001 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.43' @ 12.35 hrs Surf.Area= 0 sf Storage= 6 cf

Plug-Flow detention time= 5.4 min calculated for 0.001 af (100% of inflow)
 Center-of-Mass det. time= 5.1 min (750.3 - 745.2)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	16 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	16

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.005 0.005

Discarded OutFlow Max=0.01 cfs @ 11.90 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.01 cfs)

[1120] Proposed Conditions2

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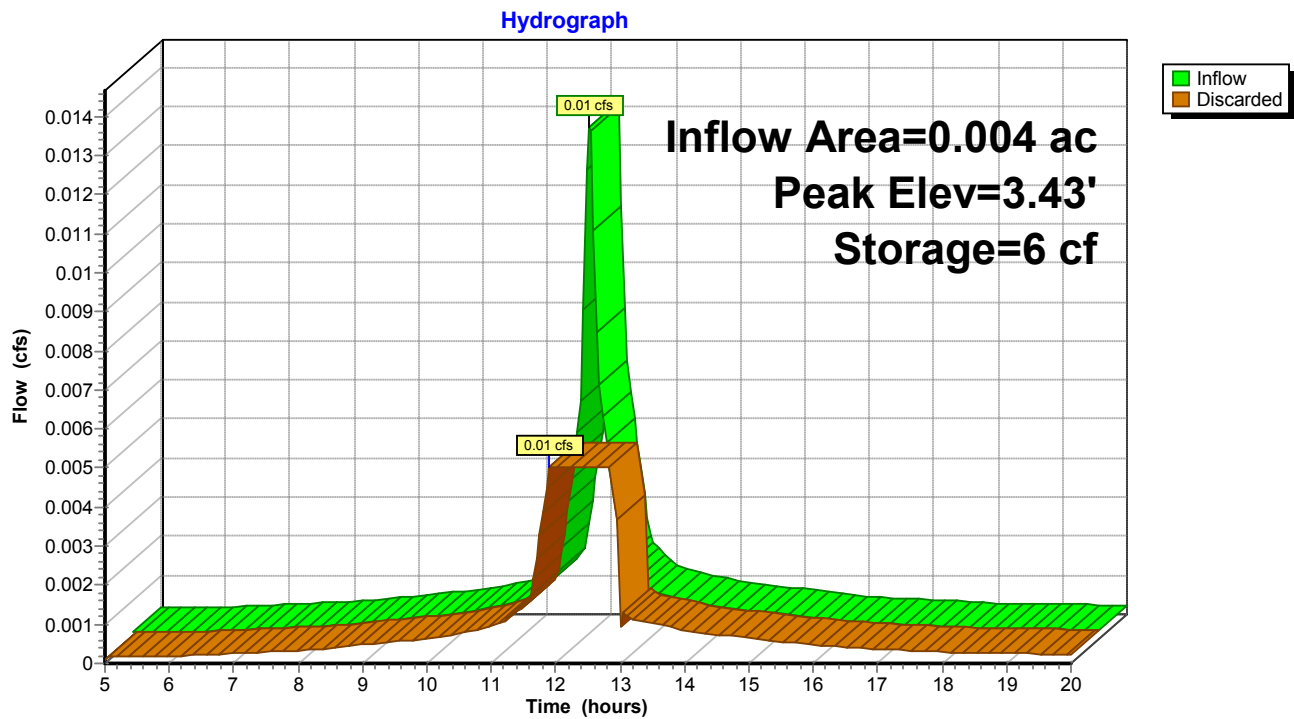
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Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Pond 5P: Porous Paver (Walkway)



[1120] Proposed Conditions2*Type III 24-hr 25-year Storm Event Rainfall=6.20"*

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Hydrograph for Pond 5P: Porous Paver (Walkway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.00	0	3.25	0.00
12.00	0.01	1	3.28	0.01
12.50	0.00	5	3.41	0.01
13.00	0.00	0	3.25	0.00
13.50	0.00	0	3.25	0.00
14.00	0.00	0	3.25	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Pond 9P: Porous Paver (Driveway)

Inflow Area = 0.013 ac, Inflow Depth > 4.46" for 25-year Storm Event event
 Inflow = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af
 Outflow = 0.03 cfs @ 11.95 hrs, Volume= 0.005 af, Atten= 60%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.95 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.41' @ 12.31 hrs Surf.Area= 0 sf Storage= 24 cf

Plug-Flow detention time= 4.6 min calculated for 0.005 af (100% of inflow)
 Center-of-Mass det. time= 4.3 min (741.3 - 737.0)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	75 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	75

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.025 0.025

Discarded OutFlow Max=0.03 cfs @ 11.95 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.03 cfs)

[1120] Proposed Conditions2

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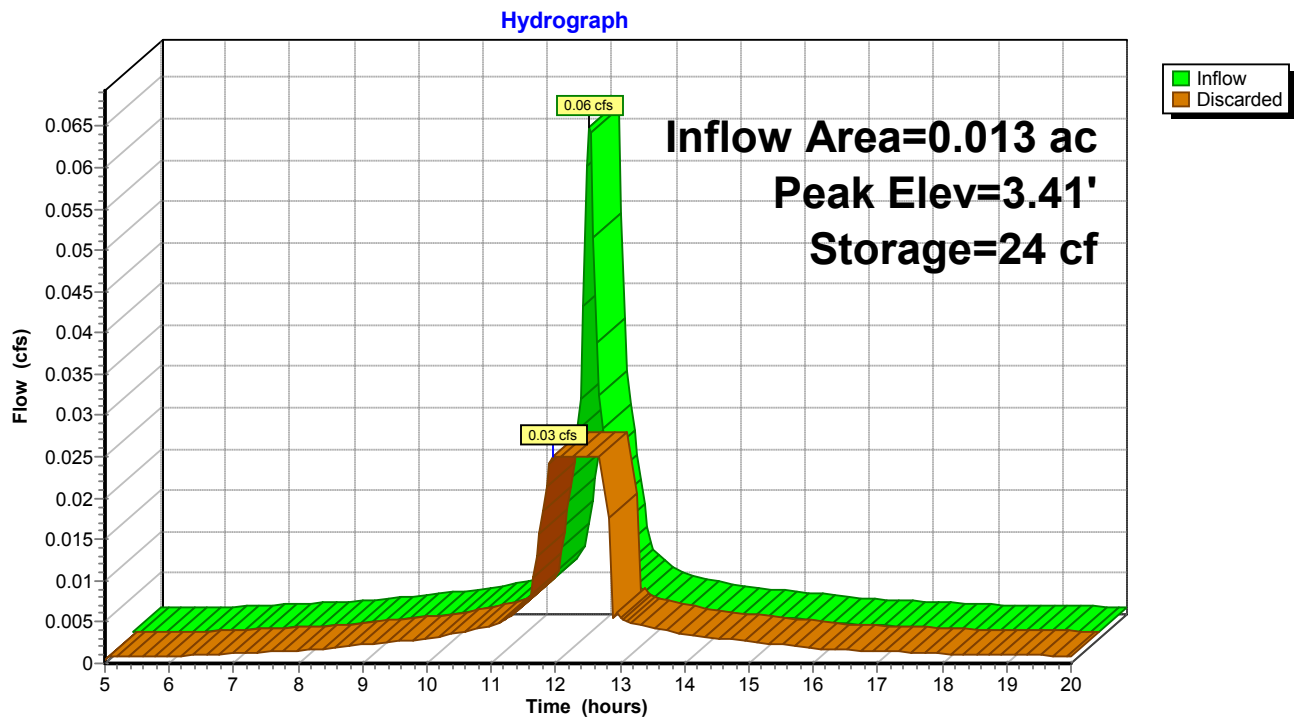
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Type III 24-hr 25-year Storm Event Rainfall=6.20"

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Pond 9P: Porous Paver (Driveway)



[1120] Proposed Conditions2*Type III 24-hr 25-year Storm Event Rainfall=6.20"*

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Hydrograph for Pond 9P: Porous Paver (Driveway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.01	0	3.25	0.01
12.00	0.04	4	3.27	0.03
12.50	0.01	20	3.39	0.03
13.00	0.01	0	3.25	0.01
13.50	0.00	0	3.25	0.00
14.00	0.00	0	3.25	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Subcatchment 1S: Remainder of Land

Runoff = 1.18 cfs @ 12.09 hrs, Volume= 0.080 af, Depth> 5.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

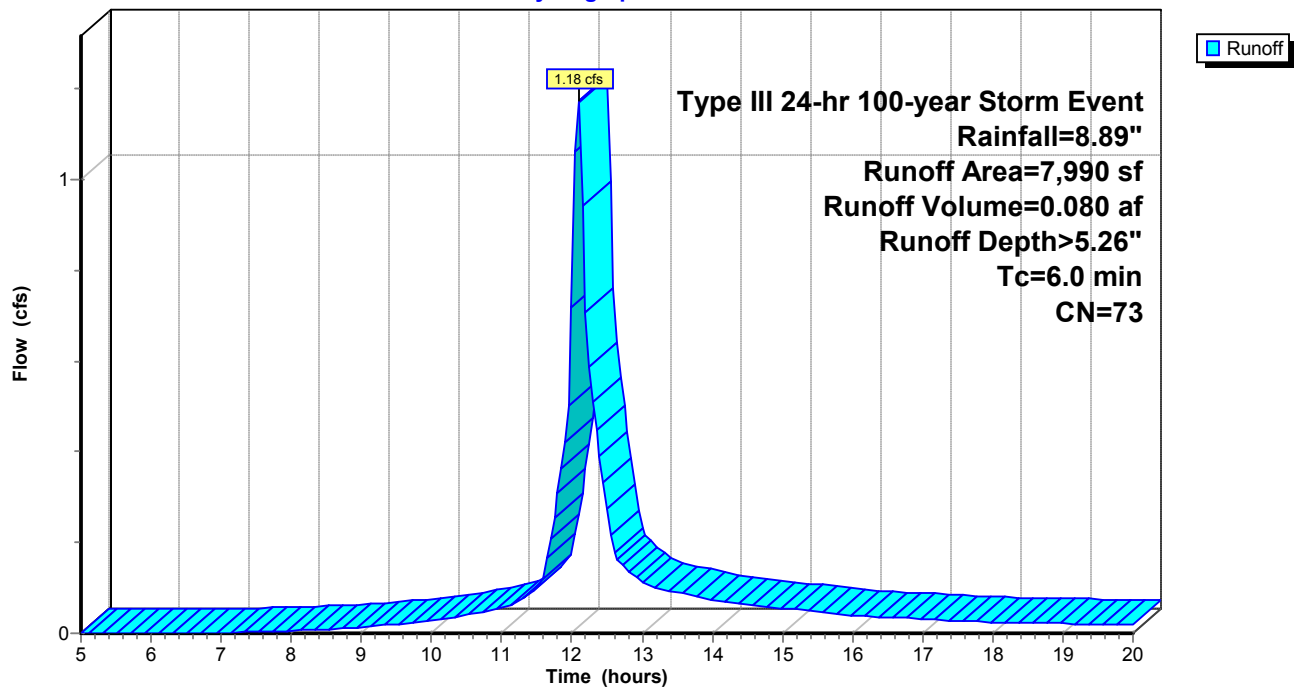
Type III 24-hr 100-year Storm Event Rainfall=8.89"

Area (sf)	CN	Description
1,441	98	Paved parking & roofs
4,706	61	>75% Grass cover, Good, HSG B
1,843	82	Dirt roads, HSG B
7,990	73	Weighted Average
6,549		Pervious Area
1,441		Impervious Area

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

Subcatchment 1S: Remainder of Land

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Hydrograph for Subcatchment 1S: Remainder of Land

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.50	0.00	0.00	18.00	8.25	5.03	0.02
5.25	0.54	0.00	0.00	18.25	8.29	5.06	0.02
5.50	0.57	0.00	0.00	18.50	8.32	5.09	0.02
5.75	0.60	0.00	0.00	18.75	8.35	5.12	0.02
6.00	0.64	0.00	0.00	19.00	8.39	5.15	0.02
6.25	0.68	0.00	0.00	19.25	8.42	5.18	0.02
6.50	0.72	0.00	0.00	19.50	8.45	5.21	0.02
6.75	0.76	0.00	0.00	19.75	8.48	5.24	0.02
7.00	0.80	0.00	0.00	20.00	8.51	5.26	0.02
7.25	0.85	0.00	0.00				
7.50	0.90	0.01	0.00				
7.75	0.96	0.01	0.00				
8.00	1.01	0.02	0.01				
8.25	1.07	0.03	0.01				
8.50	1.14	0.04	0.01				
8.75	1.22	0.05	0.01				
9.00	1.30	0.07	0.01				
9.25	1.38	0.10	0.02				
9.50	1.48	0.12	0.02				
9.75	1.57	0.15	0.02				
10.00	1.68	0.19	0.03				
10.25	1.80	0.23	0.03				
10.50	1.92	0.29	0.04				
10.75	2.07	0.35	0.05				
11.00	2.22	0.42	0.06				
11.25	2.41	0.52	0.07				
11.50	2.65	0.65	0.10				
11.75	3.16	0.96	0.26				
12.00	4.44	1.85	0.72				
12.25	5.73	2.87	0.59				
12.50	6.24	3.29	0.27				
12.75	6.48	3.49	0.15				
13.00	6.67	3.65	0.11				
13.25	6.82	3.78	0.10				
13.50	6.97	3.91	0.09				
13.75	7.09	4.02	0.08				
14.00	7.21	4.12	0.07				
14.25	7.32	4.21	0.07				
14.50	7.41	4.30	0.06				
14.75	7.51	4.38	0.06				
15.00	7.59	4.45	0.06				
15.25	7.67	4.52	0.05				
15.50	7.75	4.59	0.05				
15.75	7.82	4.65	0.04				
16.00	7.88	4.70	0.04				
16.25	7.93	4.75	0.04				
16.50	7.99	4.80	0.03				
16.75	8.04	4.84	0.03				
17.00	8.09	4.89	0.03				
17.25	8.13	4.93	0.03				
17.50	8.17	4.96	0.03				
17.75	8.21	5.00	0.03				

[1120] Proposed Conditions2

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Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Subcatchment 2S: Lawn

Runoff = 0.00 cfs @ 12.12 hrs, Volume= 0.000 af, Depth> 1.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

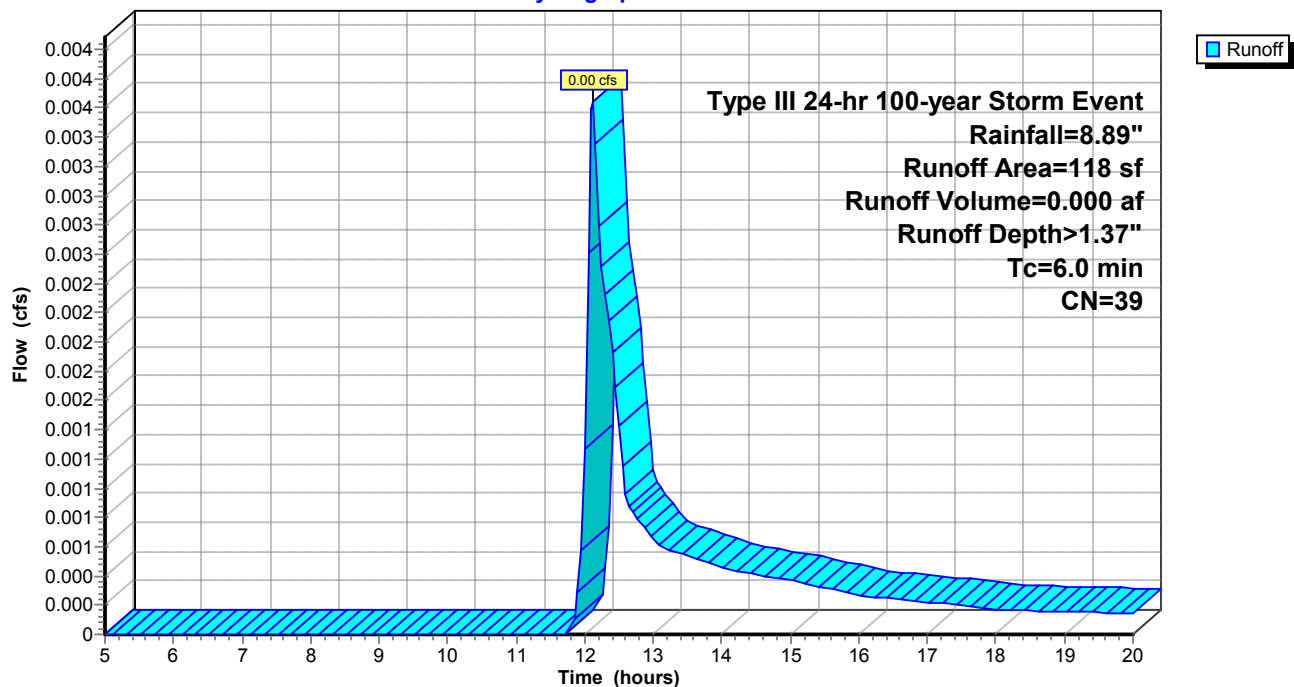
Type III 24-hr 100-year Storm Event Rainfall=8.89"

Area (sf)	CN	Description
118	39	>75% Grass cover, Good, HSG A
118		Pervious Area

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

Subcatchment 2S: Lawn

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Hydrograph for Subcatchment 2S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.50	0.00	0.00	18.00	8.25	1.26	0.00
5.25	0.54	0.00	0.00	18.25	8.29	1.28	0.00
5.50	0.57	0.00	0.00	18.50	8.32	1.29	0.00
5.75	0.60	0.00	0.00	18.75	8.35	1.31	0.00
6.00	0.64	0.00	0.00	19.00	8.39	1.32	0.00
6.25	0.68	0.00	0.00	19.25	8.42	1.34	0.00
6.50	0.72	0.00	0.00	19.50	8.45	1.35	0.00
6.75	0.76	0.00	0.00	19.75	8.48	1.36	0.00
7.00	0.80	0.00	0.00	20.00	8.51	1.38	0.00
7.25	0.85	0.00	0.00				
7.50	0.90	0.00	0.00				
7.75	0.96	0.00	0.00				
8.00	1.01	0.00	0.00				
8.25	1.07	0.00	0.00				
8.50	1.14	0.00	0.00				
8.75	1.22	0.00	0.00				
9.00	1.30	0.00	0.00				
9.25	1.38	0.00	0.00				
9.50	1.48	0.00	0.00				
9.75	1.57	0.00	0.00				
10.00	1.68	0.00	0.00				
10.25	1.80	0.00	0.00				
10.50	1.92	0.00	0.00				
10.75	2.07	0.00	0.00				
11.00	2.22	0.00	0.00				
11.25	2.41	0.00	0.00				
11.50	2.65	0.00	0.00				
11.75	3.16	0.00	0.00				
12.00	4.44	0.10	0.00				
12.25	5.73	0.37	0.00				
12.50	6.24	0.52	0.00				
12.75	6.48	0.59	0.00				
13.00	6.67	0.65	0.00				
13.25	6.82	0.71	0.00				
13.50	6.97	0.76	0.00				
13.75	7.09	0.80	0.00				
14.00	7.21	0.84	0.00				
14.25	7.32	0.88	0.00				
14.50	7.41	0.92	0.00				
14.75	7.51	0.96	0.00				
15.00	7.59	0.99	0.00				
15.25	7.67	1.02	0.00				
15.50	7.75	1.05	0.00				
15.75	7.82	1.08	0.00				
16.00	7.88	1.11	0.00				
16.25	7.93	1.13	0.00				
16.50	7.99	1.15	0.00				
16.75	8.04	1.17	0.00				
17.00	8.09	1.19	0.00				
17.25	8.13	1.21	0.00				
17.50	8.17	1.23	0.00				
17.75	8.21	1.25	0.00				

[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Subcatchment 6S: Driveway

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 7.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

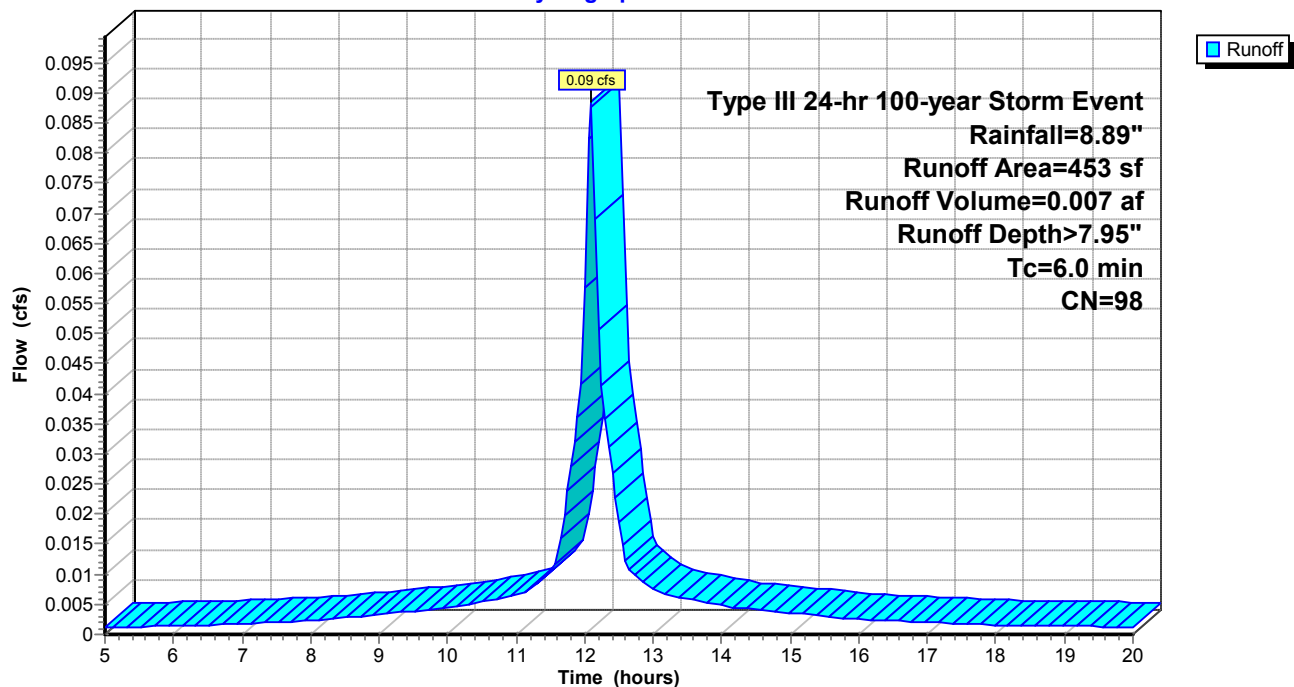
Type III 24-hr 100-year Storm Event Rainfall=8.89"

Area (sf)	CN	Description
453	98	Paved parking & roofs
453		Impervious Area

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

Subcatchment 6S: Driveway

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Hydrograph for Subcatchment 6S: Driveway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.50	0.32	0.00	18.00	8.25	8.01	0.00
5.25	0.54	0.35	0.00	18.25	8.29	8.05	0.00
5.50	0.57	0.38	0.00	18.50	8.32	8.08	0.00
5.75	0.60	0.41	0.00	18.75	8.35	8.11	0.00
6.00	0.64	0.45	0.00	19.00	8.39	8.15	0.00
6.25	0.68	0.48	0.00	19.25	8.42	8.18	0.00
6.50	0.72	0.52	0.00	19.50	8.45	8.21	0.00
6.75	0.76	0.56	0.00	19.75	8.48	8.24	0.00
7.00	0.80	0.60	0.00	20.00	8.51	8.27	0.00
7.25	0.85	0.65	0.00				
7.50	0.90	0.70	0.00				
7.75	0.96	0.75	0.00				
8.00	1.01	0.80	0.00				
8.25	1.07	0.86	0.00				
8.50	1.14	0.93	0.00				
8.75	1.22	1.00	0.00				
9.00	1.30	1.08	0.00				
9.25	1.38	1.16	0.00				
9.50	1.48	1.26	0.00				
9.75	1.57	1.35	0.00				
10.00	1.68	1.46	0.00				
10.25	1.80	1.57	0.00				
10.50	1.92	1.70	0.01				
10.75	2.07	1.84	0.01				
11.00	2.22	2.00	0.01				
11.25	2.41	2.18	0.01				
11.50	2.65	2.42	0.01				
11.75	3.16	2.93	0.02				
12.00	4.44	4.21	0.06				
12.25	5.73	5.49	0.04				
12.50	6.24	6.00	0.02				
12.75	6.48	6.24	0.01				
13.00	6.67	6.43	0.01				
13.25	6.82	6.58	0.01				
13.50	6.97	6.73	0.01				
13.75	7.09	6.86	0.01				
14.00	7.21	6.97	0.00				
14.25	7.32	7.08	0.00				
14.50	7.41	7.18	0.00				
14.75	7.51	7.27	0.00				
15.00	7.59	7.35	0.00				
15.25	7.67	7.43	0.00				
15.50	7.75	7.51	0.00				
15.75	7.82	7.58	0.00				
16.00	7.88	7.64	0.00				
16.25	7.93	7.69	0.00				
16.50	7.99	7.75	0.00				
16.75	8.04	7.80	0.00				
17.00	8.09	7.85	0.00				
17.25	8.13	7.89	0.00				
17.50	8.17	7.93	0.00				
17.75	8.21	7.97	0.00				

[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Subcatchment 7S: Walkway

Runoff = 0.02 cfs @ 12.09 hrs, Volume= 0.001 af, Depth> 7.95"

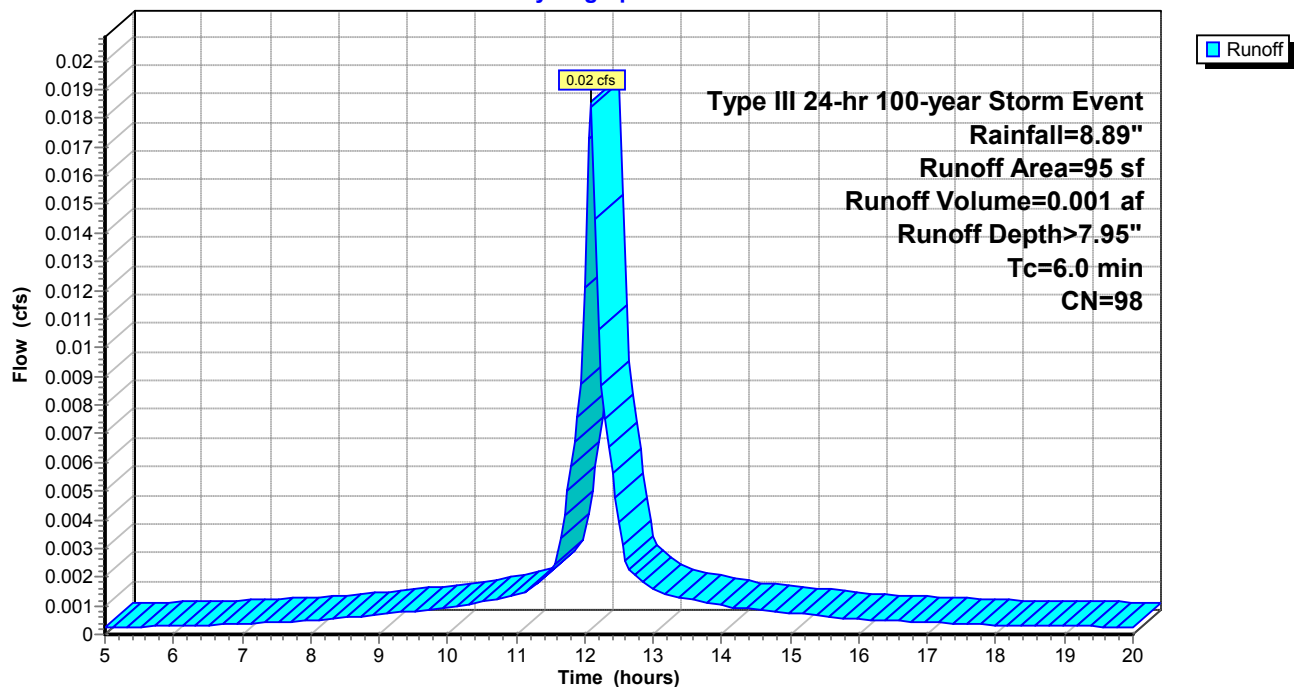
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Storm Event Rainfall=8.89"

Area (sf)	CN	Description
95	98	Paved parking & roofs
95		Impervious Area

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

Subcatchment 7S: Walkway

Hydrograph



[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Hydrograph for Subcatchment 7S: Walkway

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.50	0.32	0.00	18.00	8.25	8.01	0.00
5.25	0.54	0.35	0.00	18.25	8.29	8.05	0.00
5.50	0.57	0.38	0.00	18.50	8.32	8.08	0.00
5.75	0.60	0.41	0.00	18.75	8.35	8.11	0.00
6.00	0.64	0.45	0.00	19.00	8.39	8.15	0.00
6.25	0.68	0.48	0.00	19.25	8.42	8.18	0.00
6.50	0.72	0.52	0.00	19.50	8.45	8.21	0.00
6.75	0.76	0.56	0.00	19.75	8.48	8.24	0.00
7.00	0.80	0.60	0.00	20.00	8.51	8.27	0.00
7.25	0.85	0.65	0.00				
7.50	0.90	0.70	0.00				
7.75	0.96	0.75	0.00				
8.00	1.01	0.80	0.00				
8.25	1.07	0.86	0.00				
8.50	1.14	0.93	0.00				
8.75	1.22	1.00	0.00				
9.00	1.30	1.08	0.00				
9.25	1.38	1.16	0.00				
9.50	1.48	1.26	0.00				
9.75	1.57	1.35	0.00				
10.00	1.68	1.46	0.00				
10.25	1.80	1.57	0.00				
10.50	1.92	1.70	0.00				
10.75	2.07	1.84	0.00				
11.00	2.22	2.00	0.00				
11.25	2.41	2.18	0.00				
11.50	2.65	2.42	0.00				
11.75	3.16	2.93	0.01				
12.00	4.44	4.21	0.01				
12.25	5.73	5.49	0.01				
12.50	6.24	6.00	0.00				
12.75	6.48	6.24	0.00				
13.00	6.67	6.43	0.00				
13.25	6.82	6.58	0.00				
13.50	6.97	6.73	0.00				
13.75	7.09	6.86	0.00				
14.00	7.21	6.97	0.00				
14.25	7.32	7.08	0.00				
14.50	7.41	7.18	0.00				
14.75	7.51	7.27	0.00				
15.00	7.59	7.35	0.00				
15.25	7.67	7.43	0.00				
15.50	7.75	7.51	0.00				
15.75	7.82	7.58	0.00				
16.00	7.88	7.64	0.00				
16.25	7.93	7.69	0.00				
16.50	7.99	7.75	0.00				
16.75	8.04	7.80	0.00				
17.00	8.09	7.85	0.00				
17.25	8.13	7.89	0.00				
17.50	8.17	7.93	0.00				
17.75	8.21	7.97	0.00				

[1120] Proposed Conditions2

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Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Subcatchment 8S: Lawn

Runoff = 0.00 cfs @ 12.12 hrs, Volume= 0.000 af, Depth> 1.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

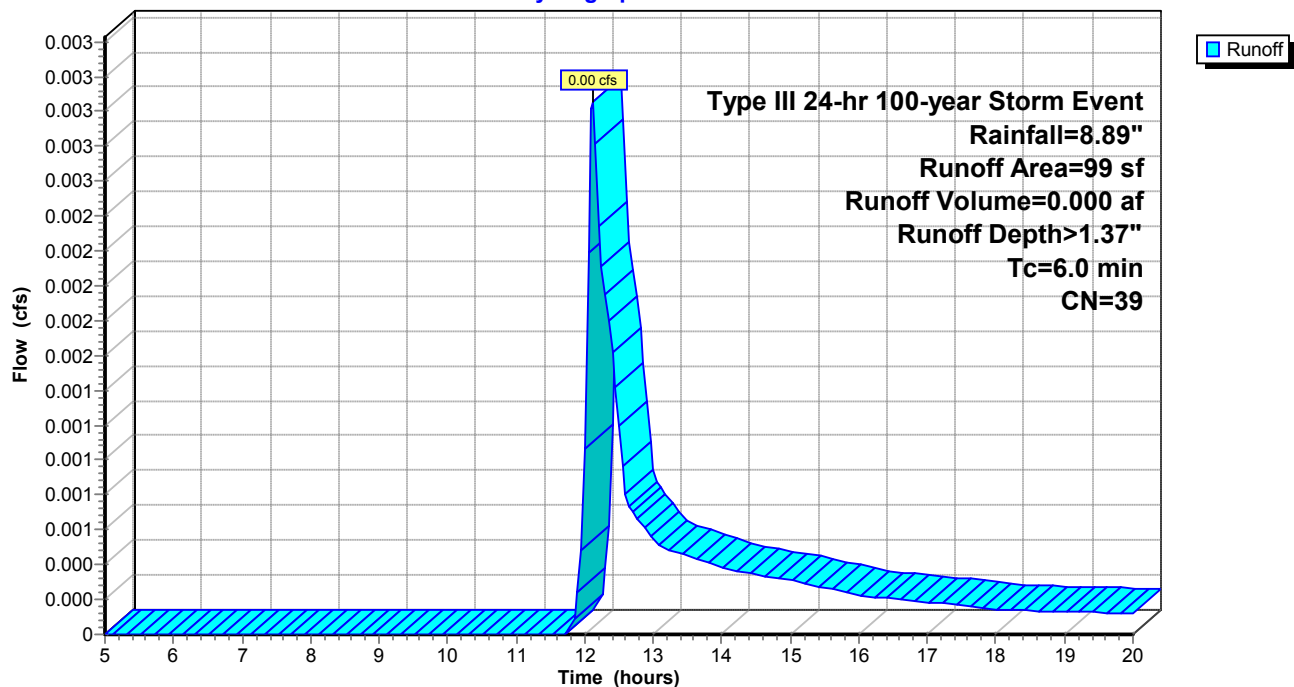
Type III 24-hr 100-year Storm Event Rainfall=8.89"

Area (sf)	CN	Description
99	39	>75% Grass cover, Good, HSG A
99		Pervious Area

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

Subcatchment 8S: Lawn

Hydrograph



[1120] Proposed Conditions2*Type III 24-hr 100-year Storm Event Rainfall=8.89"*

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Hydrograph for Subcatchment 8S: Lawn

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.50	0.00	0.00	18.00	8.25	1.26	0.00
5.25	0.54	0.00	0.00	18.25	8.29	1.28	0.00
5.50	0.57	0.00	0.00	18.50	8.32	1.29	0.00
5.75	0.60	0.00	0.00	18.75	8.35	1.31	0.00
6.00	0.64	0.00	0.00	19.00	8.39	1.32	0.00
6.25	0.68	0.00	0.00	19.25	8.42	1.34	0.00
6.50	0.72	0.00	0.00	19.50	8.45	1.35	0.00
6.75	0.76	0.00	0.00	19.75	8.48	1.36	0.00
7.00	0.80	0.00	0.00	20.00	8.51	1.38	0.00
7.25	0.85	0.00	0.00				
7.50	0.90	0.00	0.00				
7.75	0.96	0.00	0.00				
8.00	1.01	0.00	0.00				
8.25	1.07	0.00	0.00				
8.50	1.14	0.00	0.00				
8.75	1.22	0.00	0.00				
9.00	1.30	0.00	0.00				
9.25	1.38	0.00	0.00				
9.50	1.48	0.00	0.00				
9.75	1.57	0.00	0.00				
10.00	1.68	0.00	0.00				
10.25	1.80	0.00	0.00				
10.50	1.92	0.00	0.00				
10.75	2.07	0.00	0.00				
11.00	2.22	0.00	0.00				
11.25	2.41	0.00	0.00				
11.50	2.65	0.00	0.00				
11.75	3.16	0.00	0.00				
12.00	4.44	0.10	0.00				
12.25	5.73	0.37	0.00				
12.50	6.24	0.52	0.00				
12.75	6.48	0.59	0.00				
13.00	6.67	0.65	0.00				
13.25	6.82	0.71	0.00				
13.50	6.97	0.76	0.00				
13.75	7.09	0.80	0.00				
14.00	7.21	0.84	0.00				
14.25	7.32	0.88	0.00				
14.50	7.41	0.92	0.00				
14.75	7.51	0.96	0.00				
15.00	7.59	0.99	0.00				
15.25	7.67	1.02	0.00				
15.50	7.75	1.05	0.00				
15.75	7.82	1.08	0.00				
16.00	7.88	1.11	0.00				
16.25	7.93	1.13	0.00				
16.50	7.99	1.15	0.00				
16.75	8.04	1.17	0.00				
17.00	8.09	1.19	0.00				
17.25	8.13	1.21	0.00				
17.50	8.17	1.23	0.00				
17.75	8.21	1.25	0.00				

[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Pond 5P: Porous Paver (Walkway)

Inflow Area = 0.004 ac, Inflow Depth > 4.59" for 100-year Storm Event event
 Inflow = 0.02 cfs @ 12.09 hrs, Volume= 0.002 af
 Outflow = 0.01 cfs @ 11.80 hrs, Volume= 0.002 af, Atten= 77%, Lag= 0.0 min
 Discarded = 0.01 cfs @ 11.80 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.74' @ 12.51 hrs Surf.Area= 0 sf Storage= 16 cf

Plug-Flow detention time= 16.5 min calculated for 0.002 af (100% of inflow)
 Center-of-Mass det. time= 16.2 min (766.3 - 750.0)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	16 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	16

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.005 0.005

Discarded OutFlow Max=0.01 cfs @ 11.80 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.01 cfs)

[1120] Proposed Conditions2

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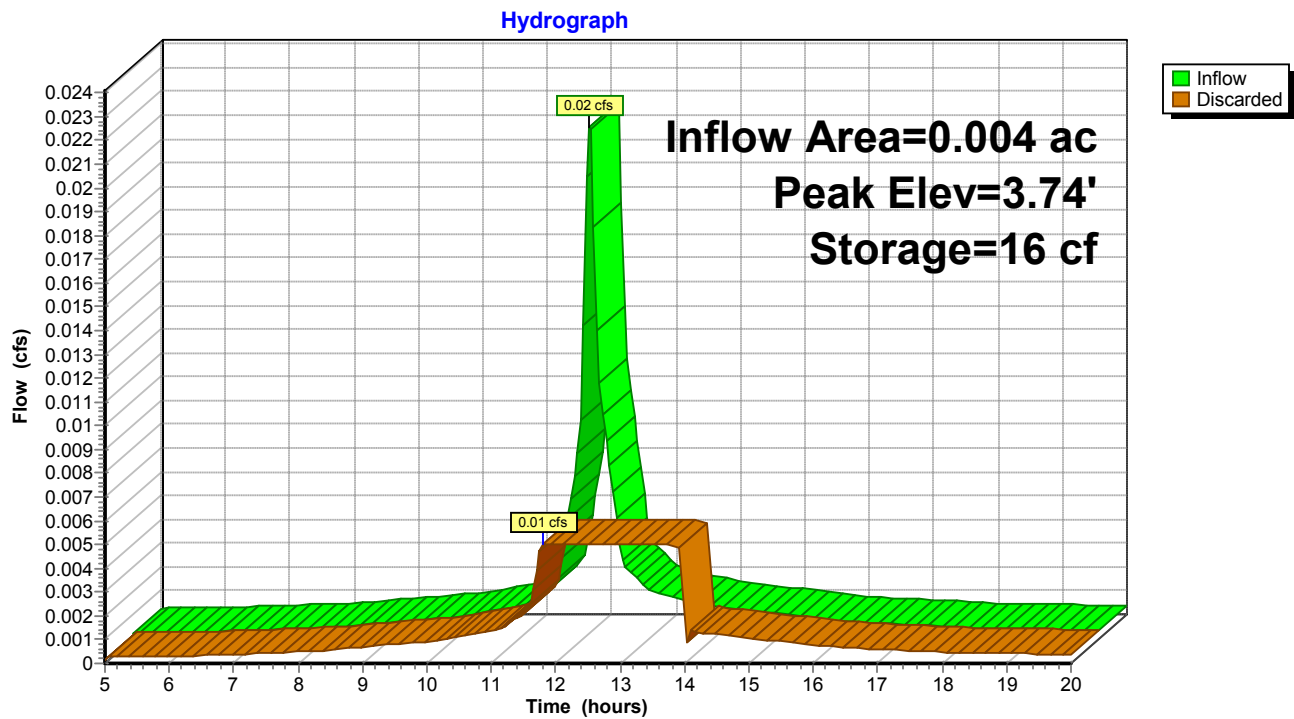
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Type III 24-hr 100-year Storm Event Rainfall=8.89"

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3/26/2020

Pond 5P: Porous Paver (Walkway)



[1120] Proposed Conditions2*Type III 24-hr 100-year Storm Event Rainfall=8.89"*

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Hydrograph for Pond 5P: Porous Paver (Walkway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.00	0	3.25	0.00
11.00	0.00	0	3.25	0.00
11.50	0.00	0	3.25	0.00
12.00	0.01	3	3.34	0.01
12.50	0.01	16	3.74	0.01
13.00	0.00	12	3.63	0.01
13.50	0.00	6	3.45	0.01
14.00	0.00	0	3.26	0.00
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

[1120] Proposed Conditions2

Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Pond 9P: Porous Paver (Driveway)

Inflow Area = 0.013 ac, Inflow Depth > 6.59" for 100-year Storm Event event
 Inflow = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af
 Outflow = 0.03 cfs @ 11.80 hrs, Volume= 0.007 af, Atten= 73%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.80 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.64' @ 12.44 hrs Surf.Area= 0 sf Storage= 59 cf

Plug-Flow detention time= 11.5 min calculated for 0.007 af (100% of inflow)
 Center-of-Mass det. time= 11.3 min (748.9 - 737.6)

Volume	Invert	Avail.Storage	Storage Description
#1	3.25'	75 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
3.25	0
3.75	75

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	Special & User-Defined Elev. (feet) 3.25 3.26 3.75 Disch. (cfs) 0.000 0.025 0.025

Discarded OutFlow Max=0.03 cfs @ 11.80 hrs HW=3.26' (Free Discharge)
 ↑1=Special & User-Defined (Custom Controls 0.03 cfs)

[1120] Proposed Conditions2

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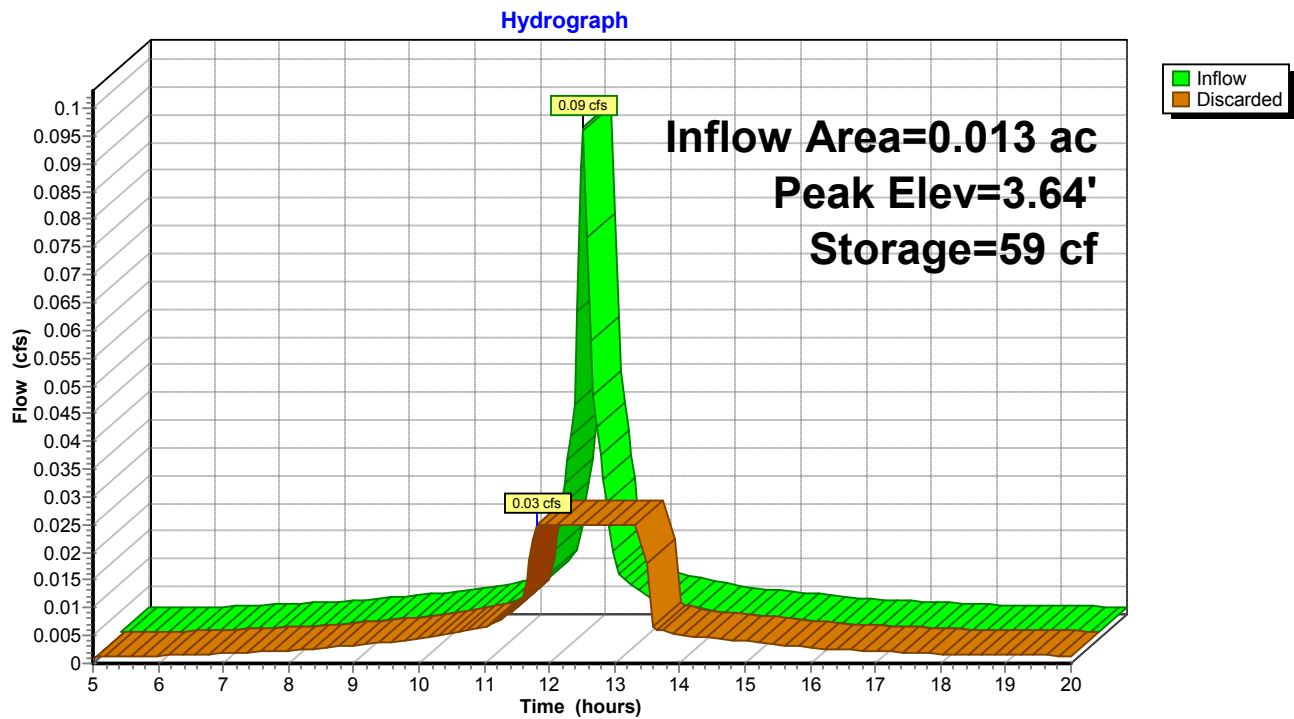
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Type III 24-hr 100-year Storm Event Rainfall=8.89"

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Pond 9P: Porous Paver (Driveway)



[1120] Proposed Conditions2*Type III 24-hr 100-year Storm Event Rainfall=8.89"*

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Hydrograph for Pond 9P: Porous Paver (Driveway)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
5.00	0.00	0	3.25	0.00
5.50	0.00	0	3.25	0.00
6.00	0.00	0	3.25	0.00
6.50	0.00	0	3.25	0.00
7.00	0.00	0	3.25	0.00
7.50	0.00	0	3.25	0.00
8.00	0.00	0	3.25	0.00
8.50	0.00	0	3.25	0.00
9.00	0.00	0	3.25	0.00
9.50	0.00	0	3.25	0.00
10.00	0.00	0	3.25	0.00
10.50	0.01	0	3.25	0.01
11.00	0.01	0	3.25	0.01
11.50	0.01	1	3.25	0.01
12.00	0.06	12	3.33	0.03
12.50	0.02	58	3.64	0.03
13.00	0.01	34	3.48	0.03
13.50	0.01	2	3.26	0.03
14.00	0.01	0	3.25	0.01
14.50	0.00	0	3.25	0.00
15.00	0.00	0	3.25	0.00
15.50	0.00	0	3.25	0.00
16.00	0.00	0	3.25	0.00
16.50	0.00	0	3.25	0.00
17.00	0.00	0	3.25	0.00
17.50	0.00	0	3.25	0.00
18.00	0.00	0	3.25	0.00
18.50	0.00	0	3.25	0.00
19.00	0.00	0	3.25	0.00
19.50	0.00	0	3.25	0.00
20.00	0.00	0	3.25	0.00

*Operation
and
Maintenance
of
Drainage Systems*

Operation and Maintenance Plan for Drainage Systems

Project Name: 105 Lafayette Street, Arlington, MA

Date: March 26, 2020

Site Location: 105 Lafayette Street
Arlington, Massachusetts

Site Operator:

Owner: Lori Philbin
Contact: 781-646-4101

The following Operation and Maintenance Plan (O & M Plan) has been developed to comply with DEP's Stormwater Management Policy. The responsibilities outlined in the O&M Plan run with ownership of the property.

Pervious Pavement

- Control of sediment is important to maintain the permeability of pervious pavements.
- The performance of the pavements shall be verified by the in-field test methodology described in ASTM C-1701 upon completion of paving activities.

Ensure proper operation of Porous Pavements

- Keep silt and debris from entering onto the pervious pavements
- Pavements shall not be sealed under any circumstances
- Sand or other abrasives for snow or ice conditions shall not be used as they reduce permeability of the pavements
- Observe the pavement surface for signs of sediment or organic debris accumulation
- Use high performance, regenerative air vacuum equipment to clean surfaces. Mechanical brooms shall not be used.

Semiannually inspection for proper functioning and look for:

- Standing water on pavement surface.
- Ruts or deformations in pavement exceeding ½".
- Small random cracks should not be sealed.
- Surrounding vegetation is to be well kept to prevent sedimentation to runoff onto pavements.

Construction Period Erosion and Sediment Control

Prior to start of construction the following measures will need to be in place:

- Stake erosion control barrier on the locations shown on the site plan.
- Contact Engineer for a pre-construction meeting and inspection of the erosion control barrier.
- Install the stabilized construction entrance at the beginning of the driveway to prevent sediment from entering the roadway. Sweep roadway daily during the site construction period and end of day activities. No sediment shall be left on roadway.
- After every major storm event and on a weekly basis, verify erosion control barrier is held in place properly and sediment is retained. Remove accumulated sediment and replace barrier as needed.