Easton Staff Development Review
MEETING AGENDA

Wednesday, February 28, 2024 - 10:00 AM
Council Chambers, Easton Town Office
14 S Harrison Street

1. Staff Review

a. Staff review only time: 10:00 AM - 11:00 AM

Easton Staff Development Review (ESDR) meetings are an opportunity for staff to meet with applicants to discuss our preliminary review of their application. At the ESDR meeting, staff also confirm with the applicant the next steps in the review process.

No public comments will be taken at this meeting, but there will be opportunities for public comment at future Planning Commission and/or Town Council public hearings.

2. Discussion Items

a.

Application Number:	2023 - 09
Location:	28860 Fausley Wood Ct Tax Map 25, Grid 016, Parcel 0138, Lot 6C
Applicant:	Blue Crab Self Storage LLC
Request:	Sketch Site Plan and Stormwater Management review of a proposed warehouse and climate-controlled self-storage building with associated parking and landscaping.

b.

Application Number:	2024 - 02
Location:	East Side of Ocean Gateway, South of Dutchmans Lane Tax Map 0034, Grid 0024, Parcels 0128 & 0175
Applicant:	Corrigan & Trippe Ventures, LLC
Request:	Discussion of the Annexation of 17.329 acres of property located on the easterly side of the public known as Ocean Gateway, and southern side of

Dutchmans Lane, Easton, Maryland, Tax Map 0034, Parcels 0128 and 0175 with a formal recommendation to the Town Council on the Annexation and the appropriate zoning classificaiton.

c.

Application Number: 2024 - 03
Location: 29501 Canvasback Drive
Tax Map 109, Grid 0EA, Parcel 4582, Lot 16
Applicant: Fink, Whiitten & Assoc.
Request: Site Plan review to amend a previously approved site plan for two (2) climate controlled storage buildings with associated parking, stormwater management, and landscaping.

d.

Application Number: 2024 - 05
Location: 220 South Street
Tax Map 104, Grid 0EA, Parcel 1902
Applicant: Fink, Whitten & Associates
Request: Minor Subdivision review.

e.

Application Number: 2024 - 04
Location: 7872 Ocean Gateway
Tax Map 105, Grid 000, Parcel 2990
Applicant: Lane Engineering, LLC
Request: Site Plan review for the redevelopment of a two-story medical clinic, and a one-story retail store with overhead office space.

TOWN OF
EASTON
ENGINEERING DEPARTMENT

DATE: **October 25, 2023**

TO: **Daniel Lerian - Owner**

cc: **Sierra Clem - Town of Easton Engineering Department**

FROM: **Rick Van Emburgh, P.E. – Town Engineer**

SUBJECT: **Blue Crab Self Storage LLC**
Sketch Site Plan Review

I reviewed the revised application for the subject project received on October 5, 2023.

Sketch Site Plan

The Sketch Site Plan is **Acceptable** to the Engineering Department.

Stormwater Management

The Sketch Stormwater Management Plan must be revised to address the following comments:

1. **SHEET 3 OF 3** - Quantity Summary Chart - Both Summary Charts are labeled "ESD SUMMARY CHART". The chart with quantity management information should be labeled "QUANTITY SUMMARY CHART". Comment acknowledged. The table title has been changed
2. **SHEET 3 OF 3** - It appears there is an increase in flow. The 2-year and 10-year storms must be managed. See response below

Please address the comments above and submit a revised Sketch Stormwater Management Plan.

Please contact me if you have any questions. Thank you.

Dear Sierra,

We have provided a response (attached) to Comment #2, above. We are demonstrating in the attached report and calculations that their will be no increase in flow for the 2-year and 10-year storms.

Please let us know if you have any questions, and reply to the parties below.

Thanks,

Thomas Hall
THall@cpja.com

John Wortmann
JWortmann@cpja.com

Stefan Costner
SCostner@cpja.com

Daniel Lerian (owner)
danlerian@yahoo.com

December 7, 2023:Response to Comment # 2 from previous sheet

Summary

This stormwater analysis is written in response to comments received from Rick Van Emburgh, the Town of Easton, MD engineer in our office dated October 25, 2023, for the project that is for the commercial development of Mistletoe Hall, Lot 6 C (aka Blue Crab Self Storage, LLC), located at 28860 Fausley Wood Court, Easton, MD. The project consists of construction of two new buildings, one of which is approximately 4,460 square feet (sf), and the other which is approximately 4,445 sf. Development will also include a paved parking area with 12 spaces, loading areas, sidewalks, and landscaped areas and an entry driveway. The proposal adds 22,302 sf of impervious surfaces, which includes the aforementioned paved areas, as well as the building roofs. The site is currently undeveloped and consists of grassy lawn areas.

Comment #2 commented on what was shown on the plans (sheet 3 of 3) as an increase between the pre- and post-development flow for each of the three drainage areas that are to drain to the three practices proposed for stormwater management (SWM). The three proposed practices consist of a micro bioretention area (MBR), along the north boundary of the project area, and two (2) wet-soil rain gardens (WSR#1 and WSR#2) along the southern limits of the project area.

Stormwater Drainage Areas Analysis

The drainage area (DA) to the microbiorention area was analyzed under pre-construction (current) conditions, and under the proposed conditions. The DA has an overall area of 0.45 acres (ac) of which 0.32 ac are impervious. Much of the proposed development of the site will drain to this practice, including much of the north part of the parking area and the roofs of the two buildings. The surface of the parking lot will drain via sheet flow to the practice, while the two building roofs will drain via downspouts to a subsurface conveyance system consisting of differing sizes of PVC pipe that will drain to the MBR. The ultimate outfall to the MBR will be a 12” pipe.

Using TR-20 methodology with a conservative time of concentration (Tc) of 6 minutes (0.1 hour) and analyzing for Type II rainfall, for Talbot County, it was found that the runoff for this drainage area pre-construction is 0.87 cubic feet per second (cfs), for the two-year storm event of 3.33 inches of rainfall in 24 hours, and 1.97 cfs for the 10-year storm event of 5.20 inches of rainfall for the same duration. The post construction study included analyzing the increase in runoff due to the increase in imperviousness, while analyzing the impact of storage in the MBR at the practice outfall. The practice has three (3) outfalls: a 4” pipe that drains from the base of the MBR, draining the 6” underdrain, a 6” PVC outfall that is designed to help control and convey the 10-year storm, and a broad crested weir designed to handle higher flows and as an emergency spillway. The MBR has a surface area of 1,024 sf, a media depth of 3.75 feet and at the ponding depth of one foot. Analyzing the system, it was found that the two-year storm post construction when mitigated through the practice, would have a flow of 0.60 cfs through the 4” pipe, which is less than the 0.87 cfs preconstruction noted above. The 10-year storm showed a runoff through both the 4” and 6” pipes of 1.10 cfs, which is less than the 1.97 cfs under preconstruction conditions noted above.

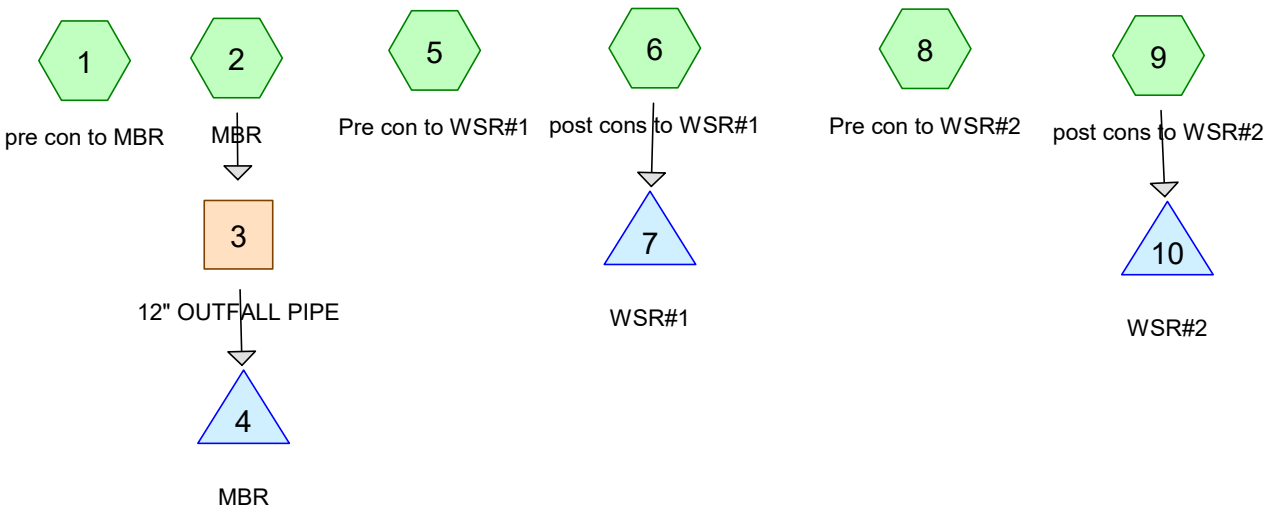
The DA to WSR#1 contains 0.07 ac of which 0.04 is impervious. WSR#1 has a surface area of 318 sf, a media depth of 2.25 feet and a ponding depth of one-half foot. The practice has one 4” outfall. The

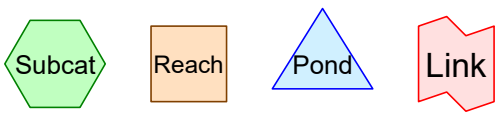
runoff for this drainage area pre-construction is 0.13 cubic feet per second (cfs), for the two-year storm event of 3.33 inches of rainfall in 24 hours, and 0.30 cfs for the 10-year storm event of 5.20 inches of rainfall for the same duration. The post construction study included analyzing the increase in runoff due to the increase in imperviousness, while analyzing the impact of storage in the WSR#1 at the practice outfall. Analyzing the system, it was found that the two-year storm post construction when mitigated through the practice, would have a flow of 0.13 cfs through the 4" pipe, which is the same as the 0.13 cfs preconstruction noted above (no increase). The 10-year storm showed a runoff through the 4" of 0.26 cfs, which is less than the 0.30 cfs under preconstruction conditions noted above.

The DA to WSR#2 contains 0.06 ac of which 0.04 is impervious. WSR#2 has a surface area of 318 sf, a media depth of 2.25 feet and a ponding depth of one-half foot. The practice has one 4" outfall. The runoff for this drainage area pre-construction is 0.12 cubic feet per second (cfs), for the two-year storm event of 3.33 inches of rainfall in 24 hours, and 0.27 cfs for the 10-year storm event of 5.20 inches of rainfall for the same duration. The post construction study included analyzing the increase in runoff due to the increase in imperviousness, while analyzing the impact of storage in the WSR#2 at the practice outfall. Analyzing the system, it was found that the two-year storm post construction when mitigated through the practice, would have a flow of 0.09 cfs through the 4" pipe, which is less than the 0.12 cfs preconstruction noted above. The 10-year storm showed a runoff through the 4" of 0.24 cfs, which is less than the 0.30 cfs under preconstruction conditions noted above.

Conclusion

In summary, it can be seen that the practices as designed serve to mitigate the runoff from their drainage areas to volumes that in each of the three practices DA does not increase runoff to exceed that for before the site is developed.





Routing Diagram for Mitigation analysis

Prepared by HydroCAD SAMPLER 1-800-927-7246 www.hydrocad.net, Printed 12/7/2023

HydroCAD® 10.20-4a Sampler s/n S25355 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-YR	Type II 24-hr		Default	24.00	1	3.33	2
2	10-YR	Type II 24-hr		Default	24.00	1	5.20	2

Summary for Subcatchment 1: pre con to MBR

Runoff = 0.87 cfs @ 11.98 hrs, Volume= 0.041 af, Depth> 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.33"

Area (sf)	CN	Description
19,044	74	>75% Grass cover, Good, HSG C
19,044		100.00% Pervious Area

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

Summary for Subcatchment 2: MBR

Runoff = 1.82 cfs @ 11.97 hrs, Volume= 0.090 af, Depth> 2.47"
Routed to Reach 3 : 12" OUTFALL PIPE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.33"

Area (sf)	CN	Description
4,935	74	>75% Grass cover, Good, HSG C
14,109	98	Paved parking, HSG C
19,044	92	Weighted Average
4,935		25.91% Pervious Area
14,109		74.09% Impervious Area

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

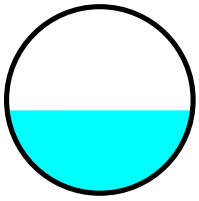
Summary for Reach 3: 12" OUTFALL PIPE

Inflow Area = 0.437 ac, 74.09% Impervious, Inflow Depth > 2.47" for 2-YR event
Inflow = 1.82 cfs @ 11.97 hrs, Volume= 0.090 af
Outflow = 1.82 cfs @ 11.97 hrs, Volume= 0.090 af, Atten= 0%, Lag= 0.2 min
Routed to Pond 4 : MBR

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.41 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 11.97 hrs
Average Depth at Peak Storage= 0.44' , Surface Width= 0.99'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.47 cfs

12.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 30.0' Slope= 0.0093 '/'
Inlet Invert= 30.28', Outlet Invert= 30.00'



Summary for Pond 4: MBR

Inflow Area = 0.437 ac, 74.09% Impervious, Inflow Depth > 2.47" for 2-YR event
Inflow = 1.82 cfs @ 11.97 hrs, Volume= 0.090 af
Outflow = 0.60 cfs @ 12.09 hrs, Volume= 0.087 af, Atten= 67%, Lag= 7.1 min
Primary = 0.60 cfs @ 12.09 hrs, Volume= 0.087 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 29.29' @ 12.09 hrs Surf.Area= 1,024 sf Storage= 1,246 cf
Flood Elev= 31.00' Surf.Area= 2,674 sf Storage= 2,861 cf

Plug-Flow detention time= 50.5 min calculated for 0.087 af (96% of inflow)
Center-of-Mass det. time= 29.2 min (821.8 - 792.6)

Volume	Invert	Avail.Storage	Storage Description
#1	26.25'	1,536 cf	**Custom Stage Data (Irregular)** Listed below (Recalc) 3,840 cf Overall x 40.0% Voids
#2	30.00'	1,325 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		2,861 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
26.25	1,024	127.0	0	0	1,024
30.00	1,024	127.0	3,840	3,840	1,500

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	1,024	127.0	0	0	1,024
31.00	1,650	179.0	1,325	1,325	2,299

Device	Routing	Invert	Outlet Devices
#1	Primary	26.50'	**4.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.50' / 26.40' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 0.09 sf
#2	Primary	31.00'	**64.0' long + 1.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.60 cfs @ 12.09 hrs HW=29.29' (Free Discharge)
1=Culvert (Barrel Controls 0.60 cfs @ 6.92 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Subcatchment 5: Pre con to WSR#1

Runoff = 0.13 cfs @ 11.98 hrs, Volume= 0.006 af, Depth> 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.33"

Area (sf)	CN	Description
2,935	74	>75% Grass cover, Good, HSG C
2,935		100.00% Pervious Area

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

Summary for Subcatchment 6: post cons to WSR#1

Runoff = 0.27 cfs @ 11.97 hrs, Volume= 0.013 af, Depth> 2.29"
Routed to Pond 7 : WSR#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.33"

Area (sf)	CN	Description
956	74	>75% Grass cover, Good, HSG C
1,979	98	Paved parking, HSG C
2,935	90	Weighted Average
956		32.57% Pervious Area
1,979		67.43% Impervious Area

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

Summary for Pond 7: WSR#1

Inflow Area = 0.067 ac, 67.43% Impervious, Inflow Depth > 2.29" for 2-YR event
Inflow = 0.27 cfs @ 11.97 hrs, Volume= 0.013 af
Outflow = 0.13 cfs @ 12.06 hrs, Volume= 0.008 af, Atten= 49%, Lag= 5.3 min
Primary = 0.13 cfs @ 12.06 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 32.08' @ 12.06 hrs Surf.Area= 318 sf Storage= 265 cf

Plug-Flow detention time= 193.9 min calculated for 0.008 af (59% of inflow)
Center-of-Mass det. time= 87.7 min (889.1 - 801.4)

Volume	Invert	Avail.Storage	Storage Description
#1	30.00'	286 cf	**Custom Stage Data (Irregular)** Listed below (Recalc) 716 cf Overall x 40.0% Voids
#2	32.25'	185 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		472 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	318	67.0	0	0	318
32.25	318	67.0	716	716	469

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
32.25	318	67.0	0	0	318
32.75	426	77.0	185	185	438

Device	Routing	Invert	Outlet Devices
#1	Primary	31.75'	**4.0" Round Culvert** L= 7.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 31.75' / 31.65' S= 0.0133 '/' Cc= 0.900 n= 0.011, Flow Area= 0.09 sf

Primary OutFlow Max=0.13 cfs @ 12.06 hrs HW=32.08' (Free Discharge)
1=Culvert (Inlet Controls 0.13 cfs @ 1.55 fps)

Summary for Subcatchment 8: Pre con to WSR#2

Runoff = 0.12 cfs @ 11.98 hrs, Volume= 0.006 af, Depth> 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.33"

Area (sf)	CN	Description
2,610	74	>75% Grass cover, Good, HSG C
2,610		100.00% Pervious Area

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

Summary for Subcatchment 9: post cons to WSR#2

Runoff = 0.23 cfs @ 11.97 hrs, Volume= 0.011 af, Depth> 2.20"
Routed to Pond 10 : WSR#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.33"

Area (sf)	CN	Description
938	74	>75% Grass cover, Good, HSG C
1,672	98	Paved parking, HSG C
2,610	89	Weighted Average
938		35.94% Pervious Area
1,672		64.06% Impervious Area

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

Summary for Pond 10: WSR#2

Inflow Area = 0.060 ac, 64.06% Impervious, Inflow Depth > 2.20" for 2-YR event
Inflow = 0.23 cfs @ 11.97 hrs, Volume= 0.011 af
Outflow = 0.07 cfs @ 12.09 hrs, Volume= 0.006 af, Atten= 69%, Lag= 7.3 min
Primary = 0.07 cfs @ 12.09 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 31.91' @ 12.09 hrs Surf.Area= 318 sf Storage= 243 cf

Plug-Flow detention time= 215.4 min calculated for 0.006 af (54% of inflow)
Center-of-Mass det. time= 104.9 min (910.4 - 805.6)

Volume	Invert	Avail.Storage	Storage Description
#1	30.00'	286 cf	**Custom Stage Data (Irregular)** Listed below (Recalc) 716 cf Overall x 40.0% Voids
#2	32.25'	185 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		472 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	318	67.0	0	0	318
32.25	318	67.0	716	716	469

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
32.25	318	67.0	0	0	318
32.75	426	77.0	185	185	438

Device	Routing	Invert	Outlet Devices
#1	Primary	31.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 31.70' / 31.60' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.09 sf

Primary OutFlow Max=0.07 cfs @ 12.09 hrs HW=31.91' (Free Discharge)
1=Culvert (Inlet Controls 0.07 cfs @ 1.23 fps)

Summary for Subcatchment 1: pre con to MBR

Runoff = 1.97 cfs @ 11.97 hrs, Volume= 0.092 af, Depth> 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=5.20"

Area (sf)	CN	Description
19,044	74	>75% Grass cover, Good, HSG C
19,044		100.00% Pervious Area

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

Summary for Subcatchment 2: MBR

Runoff = 3.05 cfs @ 11.97 hrs, Volume= 0.156 af, Depth> 4.28"
Routed to Reach 3 : 12" OUTFALL PIPE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=5.20"

Area (sf)	CN	Description
4,935	74	>75% Grass cover, Good, HSG C
14,109	98	Paved parking, HSG C
19,044	92	Weighted Average
4,935		25.91% Pervious Area
14,109		74.09% Impervious Area

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

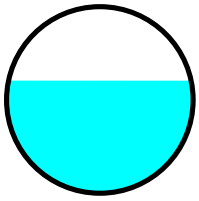
Summary for Reach 3: 12" OUTFALL PIPE

Inflow Area = 0.437 ac, 74.09% Impervious, Inflow Depth > 4.28" for 10-YR event
Inflow = 3.05 cfs @ 11.97 hrs, Volume= 0.156 af
Outflow = 3.04 cfs @ 11.97 hrs, Volume= 0.156 af, Atten= 0%, Lag= 0.1 min
Routed to Pond 4 : MBR

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.84 fps, Avg. Travel Time= 0.3 min

Peak Storage= 15 cf @ 11.97 hrs
Average Depth at Peak Storage= 0.61' , Surface Width= 0.98'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.47 cfs

12.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 30.0' Slope= 0.0093 '/'
Inlet Invert= 30.28', Outlet Invert= 30.00'



Summary for Pond 4: MBR

Inflow Area = 0.437 ac, 74.09% Impervious, Inflow Depth > 4.28" for 10-YR event
Inflow = 3.04 cfs @ 11.97 hrs, Volume= 0.156 af
Outflow = 0.74 cfs @ 12.11 hrs, Volume= 0.152 af, Atten= 76%, Lag= 8.6 min
Primary = 0.74 cfs @ 12.11 hrs, Volume= 0.152 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 30.59' @ 12.11 hrs Surf.Area= 2,398 sf Storage= 2,239 cf
Flood Elev= 31.00' Surf.Area= 2,674 sf Storage= 2,861 cf

Plug-Flow detention time= 45.6 min calculated for 0.152 af (98% of inflow)
Center-of-Mass det. time= 31.7 min (809.2 - 777.6)

Volume	Invert	Avail.Storage	Storage Description
#1	26.25'	1,536 cf	**Custom Stage Data (Irregular)** Listed below (Recalc) 3,840 cf Overall x 40.0% Voids
#2	30.00'	1,325 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		2,861 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
26.25	1,024	127.0	0	0	1,024
30.00	1,024	127.0	3,840	3,840	1,500

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	1,024	127.0	0	0	1,024
31.00	1,650	179.0	1,325	1,325	2,299

Device	Routing	Invert	Outlet Devices
#1	Primary	26.50'	**4.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.50' / 26.40' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 0.09 sf
#2	Primary	31.00'	**64.0' long + 1.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.74 cfs @ 12.11 hrs HW=30.59' (Free Discharge)
1=Culvert (Barrel Controls 0.74 cfs @ 8.49 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Subcatchment 5: Pre con to WSR#1

Runoff = 0.30 cfs @ 11.97 hrs, Volume= 0.014 af, Depth> 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=5.20"

Area (sf)	CN	Description
2,935	74	>75% Grass cover, Good, HSG C
2,935		100.00% Pervious Area

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

Summary for Subcatchment 6: post cons to WSR#1

Runoff = 0.45 cfs @ 11.97 hrs, Volume= 0.023 af, Depth> 4.06"
Routed to Pond 7 : WSR#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=5.20"

Area (sf)	CN	Description
956	74	>75% Grass cover, Good, HSG C
1,979	98	Paved parking, HSG C
2,935	90	Weighted Average
956		32.57% Pervious Area
1,979		67.43% Impervious Area

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

Summary for Pond 7: WSR#1

Inflow Area = 0.067 ac, 67.43% Impervious, Inflow Depth > 4.06" for 10-YR event
Inflow = 0.45 cfs @ 11.97 hrs, Volume= 0.023 af
Outflow = 0.26 cfs @ 12.05 hrs, Volume= 0.018 af, Atten= 44%, Lag= 4.9 min
Primary = 0.26 cfs @ 12.05 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 32.51' @ 12.05 hrs Surf.Area= 690 sf Storage= 376 cf

Plug-Flow detention time= 139.3 min calculated for 0.018 af (77% of inflow)
Center-of-Mass det. time= 54.4 min (839.7 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	30.00'	286 cf	**Custom Stage Data (Irregular)** Listed below (Recalc) 716 cf Overall x 40.0% Voids
#2	32.25'	185 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		472 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	318	67.0	0	0	318
32.25	318	67.0	716	716	469

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
32.25	318	67.0	0	0	318
32.75	426	77.0	185	185	438

Device	Routing	Invert	Outlet Devices
#1	Primary	31.75'	**4.0" Round Culvert** L= 7.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 31.75' / 31.65' S= 0.0133 '/' Cc= 0.900 n= 0.011, Flow Area= 0.09 sf

Primary OutFlow Max=0.26 cfs @ 12.05 hrs HW=32.51' (Free Discharge)
1=Culvert (Inlet Controls 0.26 cfs @ 2.93 fps)

Summary for Subcatchment 8: Pre con to WSR#2

Runoff = 0.27 cfs @ 11.97 hrs, Volume= 0.013 af, Depth> 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=5.20"

Area (sf)	CN	Description
2,610	74	>75% Grass cover, Good, HSG C
2,610		100.00% Pervious Area

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

Summary for Subcatchment 9: post cons to WSR#2

Runoff = 0.40 cfs @ 11.97 hrs, Volume= 0.020 af, Depth> 3.96"
Routed to Pond 10 : WSR#2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=5.20"

Area (sf)	CN	Description
938	74	>75% Grass cover, Good, HSG C
1,672	98	Paved parking, HSG C
2,610	89	Weighted Average
938		35.94% Pervious Area
1,672		64.06% Impervious Area

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

Summary for Pond 10: WSR#2

Inflow Area = 0.060 ac, 64.06% Impervious, Inflow Depth > 3.96" for 10-YR event
Inflow = 0.40 cfs @ 11.97 hrs, Volume= 0.020 af
Outflow = 0.24 cfs @ 12.04 hrs, Volume= 0.015 af, Atten= 40%, Lag= 4.5 min
Primary = 0.24 cfs @ 12.04 hrs, Volume= 0.015 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 32.39' @ 12.04 hrs Surf.Area= 665 sf Storage= 333 cf

Plug-Flow detention time= 146.9 min calculated for 0.015 af (74% of inflow)
Center-of-Mass det. time= 57.4 min (846.4 - 789.0)

Volume	Invert	Avail.Storage	Storage Description
#1	30.00'	286 cf	**Custom Stage Data (Irregular)** Listed below (Recalc) 716 cf Overall x 40.0% Voids
#2	32.25'	185 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		472 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	318	67.0	0	0	318
32.25	318	67.0	716	716	469

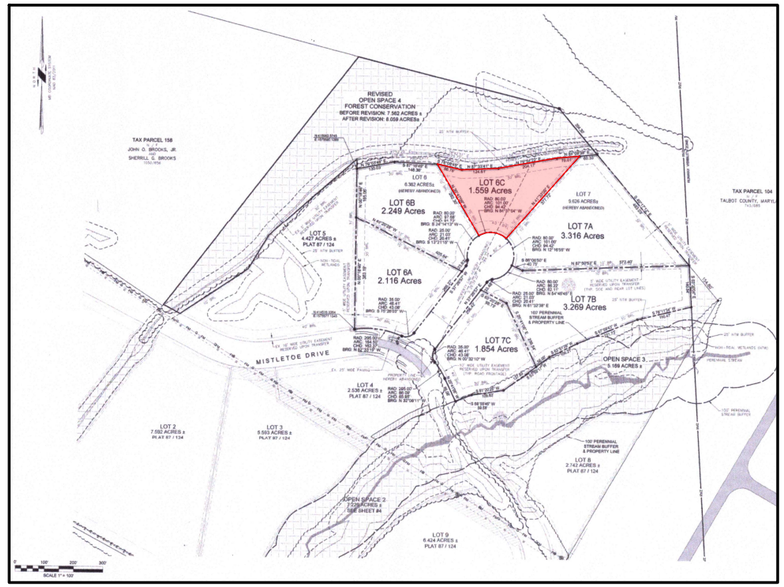
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
32.25	318	67.0	0	0	318
32.75	426	77.0	185	185	438

Device	Routing	Invert	Outlet Devices
#1	Primary	31.70'	**4.0" Round Culvert** L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 31.70' / 31.60' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.09 sf

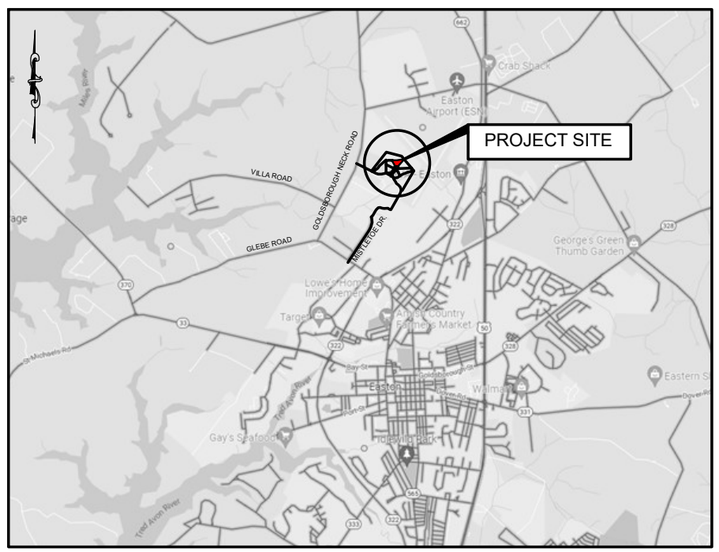
Primary OutFlow Max=0.24 cfs @ 12.04 hrs HW=32.39' (Free Discharge)
1=Culvert (Inlet Controls 0.24 cfs @ 2.75 fps)

MISTLETOE HALL FARM SUBDIVISION
LOT 6C IMPROVEMENTS
28860 FAUSLEY WOOD COURT

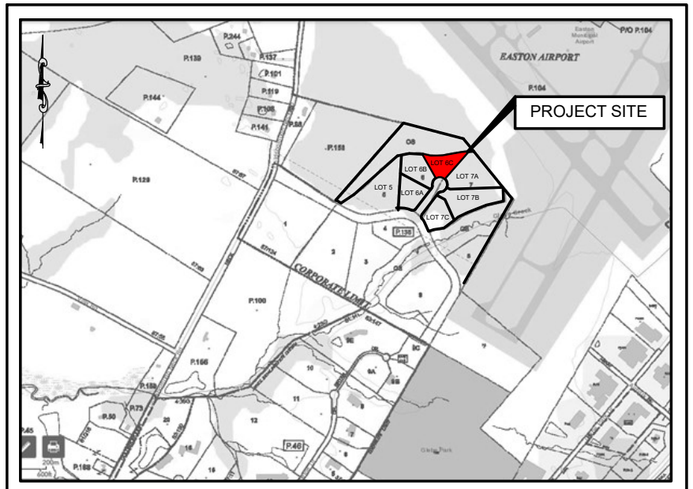
TOWN OF EASTON, MARYLAND



MISTLETOE FARM SUBDIVISION
(N.T.S.)



TOWN OF EASTON, MD
(N.T.S.)



TAX MAP
(N.T.S.)

STANDARD SYMBOLS*	
PLUNGE POOL	PP
PORTABLE SEDIMENT TANK	PST
REMOVABLE PUMPING STATION	RPS
RIPRAP INFLOW PROTECTION	RRP
RIPRAP OUTLET SEDIMENT TRAP ST III	ST-III
ROCK OUTLET PROTECTION I	ROP I
ROCK OUTLET PROTECTION II	ROP II
ROCK OUTLET PROTECTION III	ROP III
SILT FENCE	SF
SILT FENCE ON PAVEMENT	SFOP
STABILIZED CONSTRUCTION ENTRANCE	SCE
STANDARD INLET PROTECTION	SIP
STONE CHECK DAM	SCD

STANDARD SYMBOLS*	
STONE/RIPRAP OUTLET SEDIMENT TRAP ST II	ST-II
SUBSURFACE DRAINS	SSD
SUMP PIT	SP
SUPER SILT FENCE	SSF
TEMPORARY ACCESS BRIDGE	TB
TEMPORARY ACCESS CULVERT	
TEMPORARY ASPHALT BERM	TAB
TEMPORARY BARRIER DIVERSION	TBD
TEMPORARY GABION OUTLET STRUCTURE	TGOS
TEMPORARY SOIL STABILIZATION MATTING CHANNEL	TSSMC- lb/ft² (INCLUDE SHEAR STRESS)
TEMPORARY SOIL STABILIZATION MATTING SLOPE	TSSMS- lb/ft² (INCLUDE SHEAR STRESS)
TEMPORARY STONE OUTLET STRUCTURE	TSOS
TEMPORARY SWALE	A-1

STANDARD SYMBOLS*	
FILTER LOG	FL-18 (DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG)
GABION INFLOW PROTECTION	GIP
GABION INLET PROTECTION	GIP
HORIZONTAL DRAW-DOWN DEVICE	HDDD
LIMIT OF DISTURBANCE	LOD
MEDIAN INLET PROTECTION	MIP
MEDIAN SUMP INLET PROTECTION	MSIP
MOUNTABLE BERM	MB
PERIMETER DIKE/SWALE	PDS-1
PERMANENT SOIL STABILIZATION MATTING CHANNEL	PSSMC- lb/ft² (INCLUDE SHEAR STRESS)
PERMANENT SOIL STABILIZATION MATTING SLOPE	PSSMS- lb/ft² (INCLUDE SHEAR STRESS)
PIPE OUTLET SEDIMENT TRAP ST I	ST-I
PIPE SLOPE DRAIN	PSD - 12 (DESIGNATION PSD-12 REFERS TO 12 IN PIPE SLOPE DRAIN)

STANDARD SYMBOLS*	
VERTICAL DRAW-DOWN DEVICE	VDDD
WASH RACK OPTION	WR

GENERAL NOTES:

1. OWNER: BLUE CRAB SELF STORAGE, LLC
   8693 BROOKS DR.
   EASTON, MD 21601
2. ZONING: I
3. BUILDING SETBACKS: 40' FRONT
   10' SIDES
   30' REAR
4. THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN THE COASTAL FLOOD PLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAPS COMMUNITY PANEL FOR TALBOT COUNTY, MARYLAND
5. WATER SUPPLY & SEWAGE DISPOSAL: TOWN OF EASTON
6. CONTOURS SHOWN HEREON ARE REFERENCED TO NAVD 1988
7. TAX MAP 25 PARCEL 138 LOT 6C
8. DEED REF: BOOK 00743, PAGE 00703
9. WARD DISTRICT 1
10. BUILDING 1, STORAGE: MIN. 4 SPACES AND 2 FOR MANAGER
    BUILDING 2, LIGHT INDUSTRAL: MIN. 1 SPACE PER 2,000 SF GFA. MAX. 1 SPACE / 300SF GFA

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO._____, EXPIRATION DATE: _____

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REVIEWED FOR THE TALBOT COUNTY SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS

APPROVED:

TALBOT SOIL CONSERVATION DISTRICT _____ DATE

NOTE: THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE MODIFY, OR OTHERWISE ALTER THE EROSION CONTROL PREVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPERS CERTIFICATION

I, HEREBY CERTIFY THAT ALL THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE ACCORDING TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

SIGNATURE _____ DATE

1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE TO THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID SHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.
2. ANY RESPONSIBLEPERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

REV. 12/11/23

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21661
410-820-8822

APPROVED: _____ TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED: _____ TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED: _____ EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

SEAL

TITLE SHEET

MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE: AS SHOWN

SHEET NO. 1

DANIEL M. LERIAN
BLUE CRAB SELF STORAGE LLC
10555 Lake Road
Easton, MD 21601
danlerian@yahoo.com

MHIC# 101234
MARINE CONTRACTOR LICENSE # 020E
MARYLAND HOME BUILDER LICENSE # 7169
MARYLAND STATE ELEVATOR LICENSE # 1485

March 27, 2023
Joseph A. Mayer, Plan Reviewer Town of Easton
14 South Harrison Street
Easton, MD 21601 410-822-1943
jmayer@eastonmd.gov

COMPREHENSIVE PLAN DESIGN PRINCIPLES RESPONSE NARRATIVE

Principle #1 - INTEGERATED USES ARE DESIRABLE
This development proposalprovides additional shop space and warehouse in a mixed business park

Principle #2 - NATURAL FEATURES SHOULD DETERMINE DESIGN
There are no compelling natural features; site layout is oriented to take advantage of natural drainage patterns and to orient the building's foot print relative to the street.

Principle #3 - AUTOMOBILES SHOULD NOT DETERMINE DESIGN
Parking for shop, wharehouse and customers are provided for convenience, with all parking to be on the sides of both buildings.

Principle #4 - AMPLE OPEN SPACE SHOULD BE PROVIDED WITHIN AND AROUND NEIGHBORHOODS
At the rear of the proposed buildings is a bufferof open space that has been provided

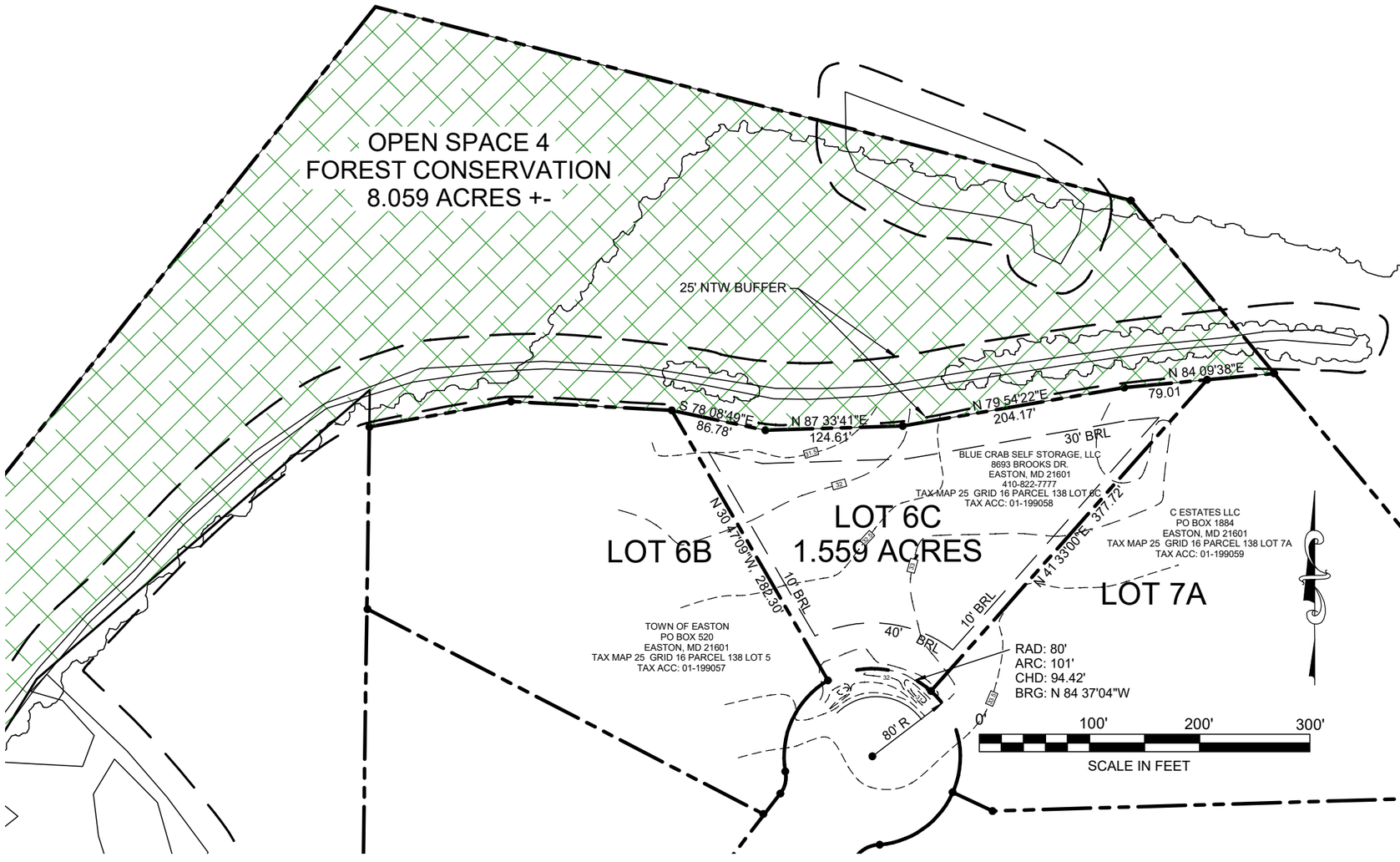
Principle #5 - ARCHITECTURE SHOULD RESPECT EASTON'SHISTORICAL DEVELOPMENT
This application proposes architecture that is compatable with Easton and the Commerce Park's architecture palette.

Principle #7 - NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES
This is not appicable to this application.

Principle #8 - RESIDENTAL NEIGHBORHOODS SHOULD BE INTERESTING PLACES
This is not appicable to this application.

Principle #9 - NEIGHBORHOODS SHOULD CONNECT
This is not appicable to this application.

SINCERELY,
DANIEL M. LERIAN



ADDITIONAL NOTES:
THE SITE WILL HAVE LIMITED VEHICLE ACTIVITY
The contractor building 3 vehicles in and out per day
The storage building 4 vehicles in and out per day
Deliveries 1 per week

PROPOSED USE:
One building is for contractor use and the other building is a climate controlled self storage building.
Daily tontractor will pick up materials in the morning and return at the end of the work day to store excess materials.
1 vehicle.
The self storage building will have up to 4 vbehicles per day in and out to pick up and deliver goods. Once a week a large truck will make deliveries to the contractor building.

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410-820-8822

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OWNER / DEVELOPER / APPLICANT
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8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

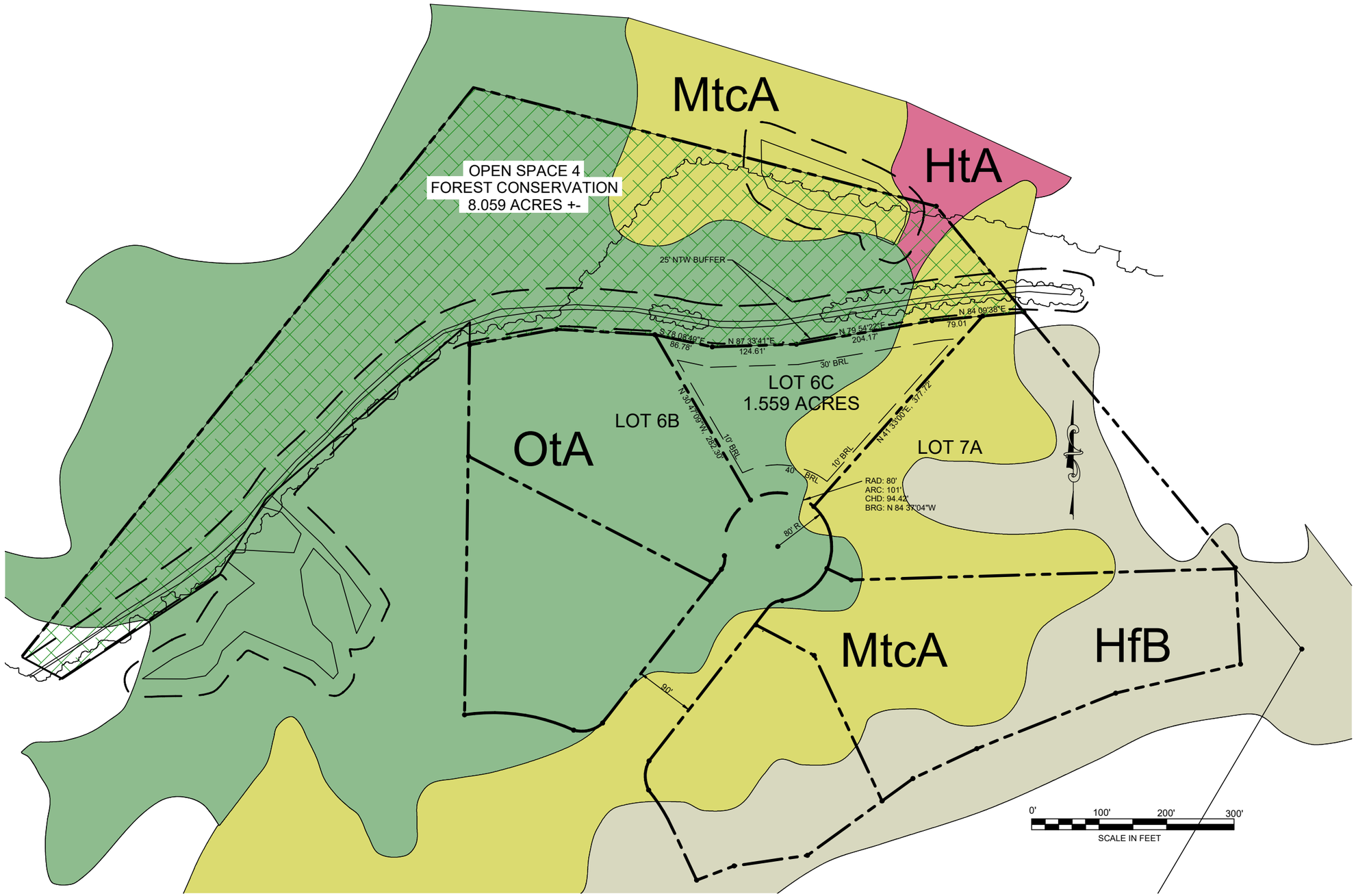
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

EXISTING SITE PLAN

MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE AS SHOWN

SHEET NO. 2



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410-820-8822

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APPROVED: EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

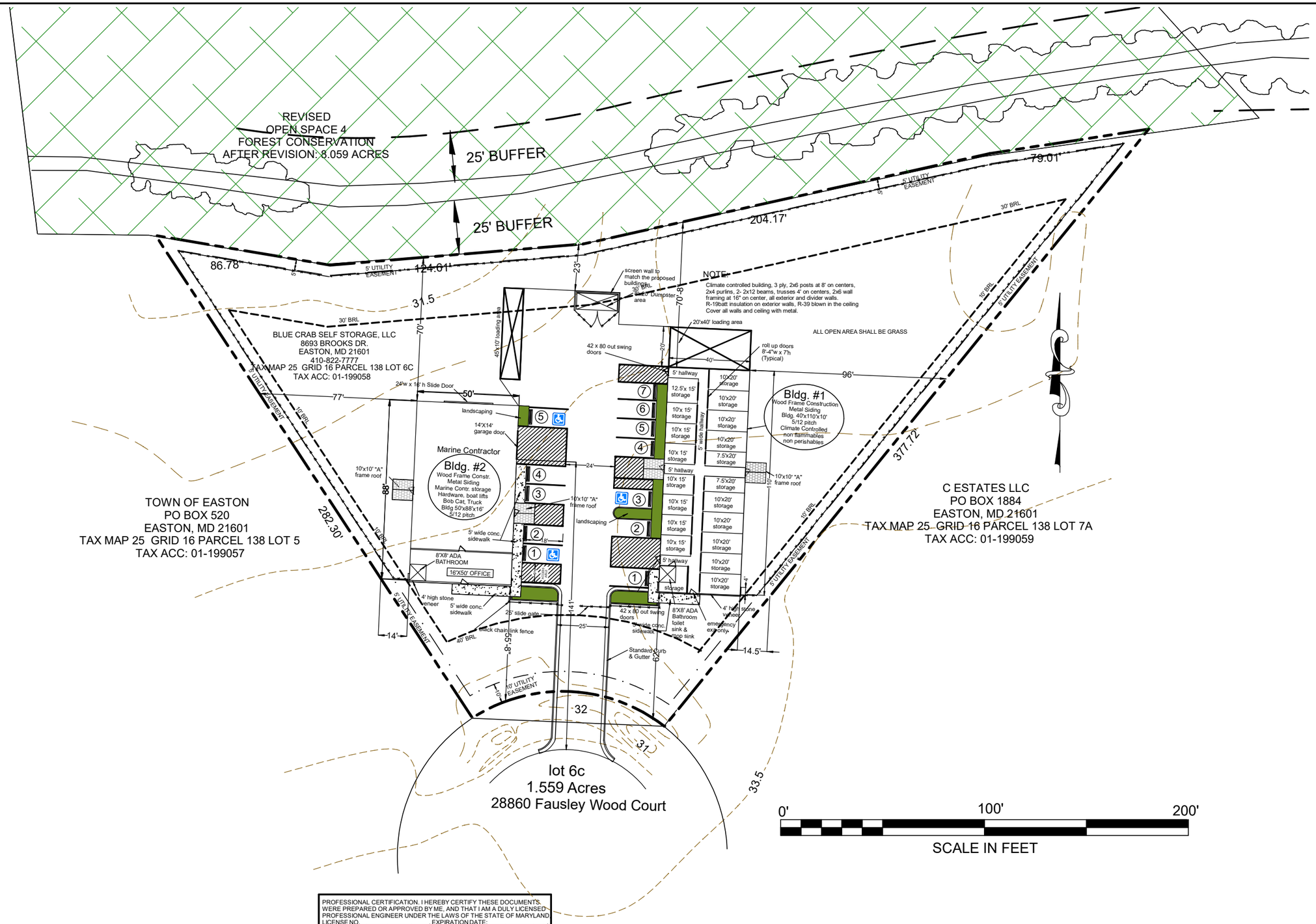
BY	NO.	REVISION	DATE
FMB		ORIGINAL DRAWING DATE	12/1/23

SOIL TYPES

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

SHEET NO.
3



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APPROVED: _____ EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT

BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

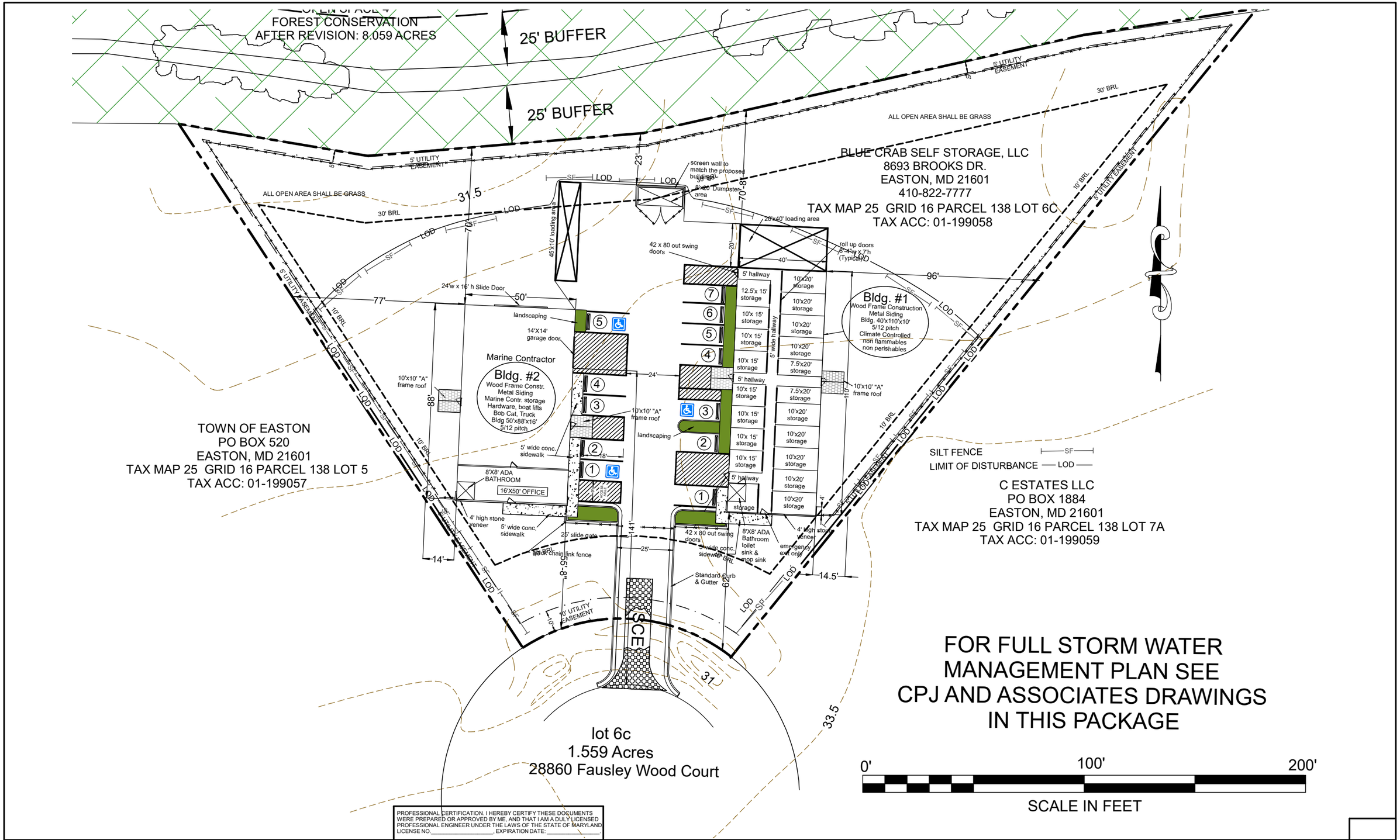
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

PROPOSED SITE PLAN

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

SHEET NO.
4



FOR FULL STORM WATER MANAGEMENT PLAN SEE CPJ AND ASSOCIATES DRAWINGS IN THIS PACKAGE

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE:_____

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21601
410-820-8822

APPROVED: TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED: TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED: EASTON UTILITES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE
FMB		ORIGINAL DRAWING DATE	12/1/23

STORM WATER MANAGEMENT

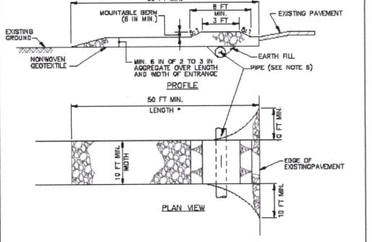
MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE AS SHOWN

SHEET NO. 5

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



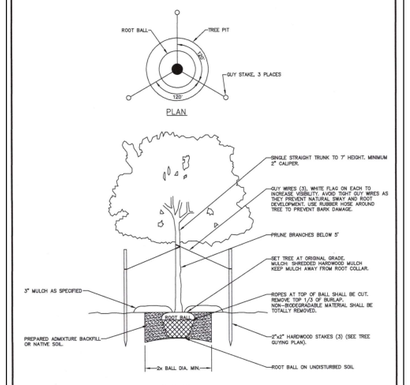
CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 8 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

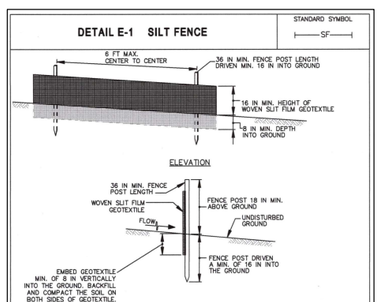
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	TREE PLANTING
ISSUED: JANUARY 2020	STANDARD NO.: TOE-R-2.01



DETAIL E-1 SILT FENCE

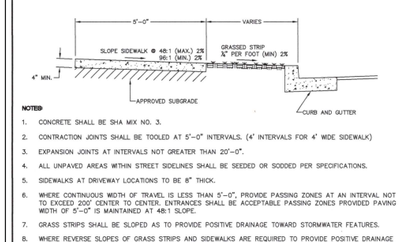
STANDARD SYMBOL: SF



1 OF 2

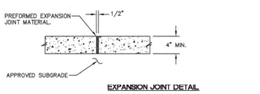
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



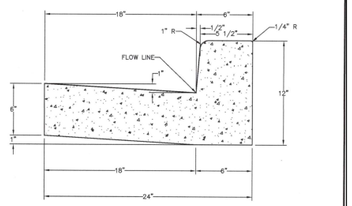
NOTES:

1. CONCRETE SHALL BE SHA MIX NO. 3.
2. CONTRACTION JOINTS SHALL BE TOOLED AT 5'-0" INTERVALS. (4' INTERVALS FOR 4' WIDE SIDEWALK)
3. EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20'-0".
4. ALL UNPAVED AREAS WITHIN STREET SIDELINES SHALL BE SEEDED OR SODDED PER SPECIFICATIONS.
5. SIDEWALKS AT DRIVEWAY LOCATIONS TO BE 6" THICK.
6. WHERE CONTINUOUS WIDTH OF TRAVEL IS LESS THAN 5'-0", PROVIDE PASSING ZONES AT AN INTERVAL NOT TO EXCEED 200' CENTER TO CENTER. ENTRANCES SHALL BE ACCEPTABLE PASSING ZONES PROVIDED PAVING WIDTH OF 5'-0" IS MAINTAINED AT 48:1 SLOPE.
7. GRASS STRIPS SHALL BE SLOPED AS TO PROVIDE POSITIVE DRAINAGE TOWARD STORMWATER FEATURES.
8. WHERE REVERSE SLOPES OF GRASS STRIPS AND SIDEWALKS ARE REQUIRED TO PROVIDE POSITIVE DRAINAGE TOWARDS A STORMWATER FEATURE, SPOT ELEVATIONS SHALL BE PROVIDED ON FRONT AND BACK OF SIDEWALK. (REVERSE SLOPES MUST BE APPROVED BY THE TOWN PRIOR TO CONSTRUCTION)
9. MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL SHALL BE 5% IN LOCATIONS WITHOUT HANDICAPPED RAMPS.
10. SIDEWALKS SHALL COMPLY WITH ADA REQUIREMENTS PER THE MOST UP TO DATE DEPARTMENT OF JUSTICE REGULATION 28CFR PART 36.



EXPANSION JOINT DETAIL

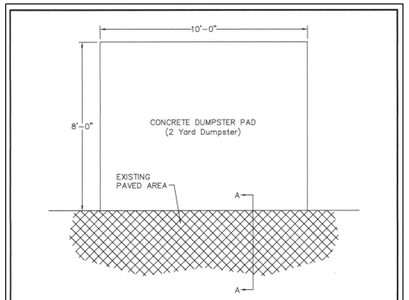
APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	CONCRETE SIDEWALK
ISSUED: JANUARY 2020	STANDARD NO.: TOE-R-7.01



NOTES:

1. ALL CONCRETE USED FOR CURB AND GUTTER SHALL BE SHA MIX NO. 7.
2. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 40'-0". EXTRUDED CONCRETE AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 100'-0".
3. DEPRESSED CURB AND GUTTER SHALL BE UTILIZED AT HANDICAPPED RAMPS WHEN TRANSITIONING FROM STANDARD CURB AND GUTTER.
4. MAXIMUM GUTTER AND SLOPE ON CURB RETURNS SHALL BE 2% WHERE HANDICAPPED RAMPS ARE REQUIRED.

APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	STANDARD CURB AND GUTTER
ISSUED: JANUARY 2020	STANDARD NO.: TOE-R-6.01

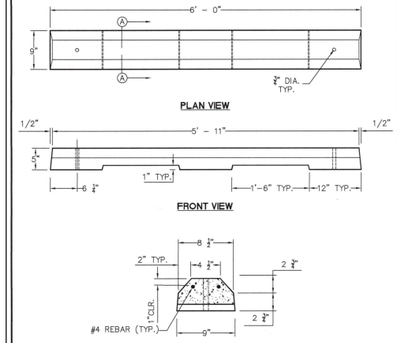


SECTION A-A

APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	CONCRETE DUMPSTER PAD
ISSUED: JANUARY 2020	STANDARD NO.: TOE-SI-3.01

NOTES:

1. CONCRETE STRENGTH: 5000 PSI AT 28 DAYS.
2. REINFORCEMENT: ASTM A-615 GRADE 60.
3. PINS AVAILABLE: #5 REBAR AT 18" LONG.
4. WEIGHT: 170 LBS.



SECTION VIEW A-A

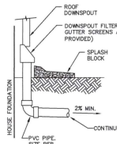
APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	6' PRECAST CONCRETE WHEEL STOP
ISSUED: JANUARY 2020	STANDARD NO.: TOE-SI-5.01

CONSTRUCTION INSPECTIONS

1. CALL THE TOWN OF EASTON ENGINEERING DEPARTMENT AT 410-820-8822 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:
2. EXCAVATION TO SUB-GRADE AND BEFORE PLACEMENT OF SOIL.
3. FINE GRADING AND PERMANENT STABILIZATION OF ADJACENT SOILS.

SITE PLAN SYMBOL: WSR ##

TREATED AREA (SQ. FT.)



DOWNSPOUT DETAIL

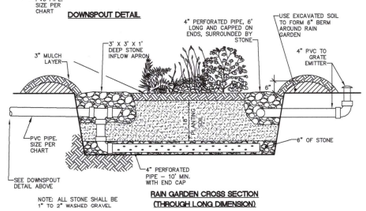
SIZING CHART

TREATED AREA (SQ. FT.)	RAIN GARDEN AREA (SQ. FT.)	PVC SIZE	SUGGESTED DIMENSIONS LENGTH	WIDTH
500	70	4"	14	6
1000	140	6"	20	8
1500	210	6"	24	10
2000	280	8"	30	11

LENGTH × WIDTH

MINIMUM SETBACKS

1. 10 FEET FROM A BUILDING OR PROPERTY LINE



RAIN GARDEN CROSS SECTION (THROUGH LONG DIMENSION)

APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	WET SOIL RAIN GARDEN CONSTRUCTION DETAIL
ISSUED: JANUARY 2020	STANDARD NO.: TOE-SWM-6.01-3

CONSTRUCTION NOTES

1. RAIN GARDENS SHALL BE CONSTRUCTED AFTER ALL UPSTREAM AREAS HAVE BEEN STABILIZED WITH EITHER IMPERVIOUS SURFACES OR TOPSOIL AND VEGETATION.
2. RAIN GARDEN EXCAVATION SHALL BE ROUGH AND UNCOMPACTED. IF SMEARING OF BOTTOM OR WALLS OCCURS, SCRATCH WITH A RAKE AS NECESSARY TO EXPOSE ROUGH EARTH.
3. LANDSCAPING MATERIALS SHOULD BE INSTALLED DURING THE SPRING OR FALL IF POSSIBLE.
4. OVERFLOW FROM RAIN GARDEN SHALL BE DIRECTED OVER A 3" DEEP BY 10' WIDE DEPRESSION IN THE PERIMETER BERM AND SHALL NOT BE A SOURCE OF DOWNSTREAM EROSION.
5. THE OWNER IS ENCOURAGED TO ENHANCE THE VISUAL APPEAL OF THE RAIN GARDEN BY USING STONE OR TIMBER RETAINING WALLS INSTEAD OF USING EXCAVATED SOIL. EPDM LINER MAY BE NEEDED TO MAKE A WATERTIGHT WALL.

SOIL SPECIFICATIONS

1. THE RAIN GARDEN PLANTING SOIL SHALL HAVE A COMPOSITION OF 50% SAND, 20% WOOD CHIPS LEAVES, AND 30% TOPSOIL.
2. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, DEBRIS, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH.
3. SOIL SHALL BE FREE OF PLANTS (OR PLANT PARTS) OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, OR CANADIAN THISTLE.
4. PLANTING SOIL SHALL BE OVERFILLED BY 2-3" TO ALLOW FOR SETTLING. DO NOT COMPACT.

MAINTENANCE CRITERIA:

1. WATER PLANTS LIBERALLY THE FIRST GROWING SEASON AND DURING PERIODS OF DROUGHT THEREAFTER.
2. REMOVE ACCUMULATED TRASH AND VEGETATIVE DEBRIS EVERY FEW MONTHS AND ENSURE THAT INFLOW PIPE(S) FLOW FREELY.
3. PRUNE AND REMOVE DEAD VEGETATION PERIODICALLY, AS WITH ANY LANDSCAPE BED. IF SPECIFIC PLANTS ARE NOT SURVIVING, REPLACE WITH A DIFFERENT SPECIES. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
4. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH. THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS.
5. REFRESH MULCH WITH AN ADDITIONAL THIN LAYER ANNUALLY; REMOVE ALL MULCH AND REPLACE WITH A NEW THREE-INCH LAYER EVERY 3-5 YEARS.

APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	WET SOIL RAIN GARDEN NOTES
ISSUED: JANUARY 2020	STANDARD NO.: TOE-SWM-6.01-4

WET SOIL RAIN GARDEN PLANTING SCHEDULE

BOTANICAL NAME	COMMON NAME	SYMB.	SIZE	RAIN GARDEN SIZE (SQ. FT.) 70 QTY.	140 QTY.	210 QTY.	280 QTY.
SHRUBS:							
CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	CA	2 GAL.	1	2	3	3
ITEA VIRGINICA	VIRGINIA SWEETSPIRE	IV	2 GAL.	1	1	2	3
VIBURNUM NUDUM	SMOOTH WITHEROD	VN	2 GAL.	1	2	2	3
GROUND COVER:							
CALAMAGROSTIS CANADENSIS	BLUE JOINT GRASS	CC	PLUG	6	12	18	24
HELENIUM AUTUMNALE	YELLOW SNEEZEWEED	HA	PLUG	6	12	18	24
LOBELIA CARDINALIS	CARDINAL FLOWER	LC	PLUG	6	12	18	24

PLANTING EXAMPLE
FOR 140 SQ. FT. RAIN GARDEN

PLANT SELECTION

1. THE OWNER IS ENCOURAGED TO WORK WITH A REGISTERED LANDSCAPE ARCHITECT OR NURSERY TO CREATE AN ATTRACTIVE AND FUNCTIONAL MIX OF NATIVE PLANT SPECIES THAT ARE TOLERANT OF BOTH SATURATED AND DRY CONDITIONS.
2. INFORMATION ON APPROPRIATE SPECIES IS AVAILABLE BY TYPING "BAYSCAPES NATIVE PLANTS" INTO YOUR FAVORITE SEARCH ENGINE.
3. THE SCHEDULE AND TYPICAL DETAIL BELOW CAN BE USED AS A BASIS FOR PLANT SELECTION AND GROUPINGS, IF DESIRED.

APPROVAL	TOWN OF EASTON STANDARD DETAILS
TOWN ENGINEER 1/2020 DATE	WET SOIL RAIN GARDEN PLANTING NOTES AND SCHEDULE
ISSUED: JANUARY 2020	STANDARD NO.: TOE-SWM-6.01-5

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE:_____.

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21601
410-820-8822

APPROVED: TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED: TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED: EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT

BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

DETAILS

MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

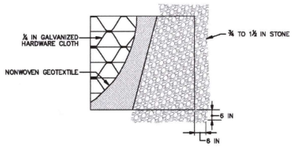
SCALE: AS SHOWN

SHEET NO. 6

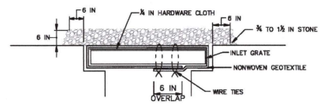
DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



PLAN / CUT AWAY VIEW



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION AND SEDIMENT CONTROL STANDARDS & SPECIFICATIONS FOR VEGETATIVE STABILIZATION

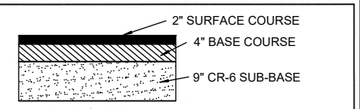
1) Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and seven (7) days as to all other disturbed or graded areas on the project site not under active grading.
2) All temporary erosion and sediment control devices are to be provided as indicated on this plan, with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.
3) Clearing and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.
4) Temporary seeding shall be accomplished between February 15th through April 30th, and August 15th through November 30th. During other times, temporary mulching shall be provided.
5) Temporary seeding shall conform to the following applications: 436 lbs. per acre of 10-20-20; 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual ryegrass shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding.

Seed Mixture (For Hardiness Zone 7a) (From Table B.1)				Fertilizer Rate (10-20-20)	Lime Rate
Species	Appl. Rate (lbs. /ac.)	Seeding Dates	Seeding Depths		
ANNUAL RYEGRASS	50#	2/15 - 4/30 8/15 - 11/30	½"	436 lbs. / ac. 10 lbs. / 1000 sf	2 tons / ac. 90 lbs. / 1000 sf
BARLEY OATS WHEAT CEREAL RYE	96# 72# 120# 112#	2/15 – 4/30; 8/15 – 11/30 2/15 – 4/30; 8/15 – 11/30 2/15 – 4/30; 8/15 – 11/30 2/15 – 4/30; 8/15 – 12/15	1" 1" 1" 1"		
FOXTAIL MILLET PEARL MILLET	30# 20#	5/1 – 8/14 5/1 – 8/14	½" ½"		

6) Mulching shall be un-chopped, un-rotted, small grain straw applied at a rate of 2-2½ tons per acre. Anchor mulch with a mulch anchoring tool on the Contour. Wood cellulose fiber may be used for anchoring straw at a rate of 750 lbs. per acre mixed with water at a maximum of 50 lbs. of wood cellulose fiber per 100 gals. of water, or with a synthetic liquid binder according to manufacturer recommendations. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1,500 lbs. per acre. Mix wood cellulose fiber with water to attain a mixture with a maximum of 50 lbs. of wood cellulose fiber per 100 gals. of water.
7) Permanent seeding shall be accomplished between February 15th through April 30th, or August 15th through October 31st. Permanent seeding at other than specified times will be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3"-5" of the soil by disking or other suitable means. Mulching shall be accomplished as discussed in Item #6 of these specifications.

Seed Mixture (For Hardiness Zone 7a) (From Table B.3)					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Appl. Rate (lbs. / ac.)	Seeding Dates	Seeding Depths	N	P2O5	K2O	
7	CREEPING RED FESCUE KENTUCKY BLUEGRASS	60# 15#	2/15-4/30 8/15-10/31	¼"-½"	45 lb. / ac. 1 lb. / 1000 sf	90 lb. / ac. 2 lbs. / 1000 sf	90 lb. / ac. 2 lbs. / 1000 sf	2 tons / ac. 90 lbs. / 1000 sf
8	TALL FESCUE	100#	2/15-4/30 8/15-10/31	¼"-½"				
9	TALL FESCUE KENTUCKY BLUEGRASS PERENIAL RYEGERASS	60# 40# 20#	2/15-4/30 8/15-10/31	¼"-½"				

8) Any spoil or borrow will be placed at a site approved by the Talbot Soil Conservation District.
9) All areas remaining or intended to remain disturbed for longer than seven (7) days shall be stabilized in accordance with the USDA, Natural Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.
10) It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.



PAVING DETAIL

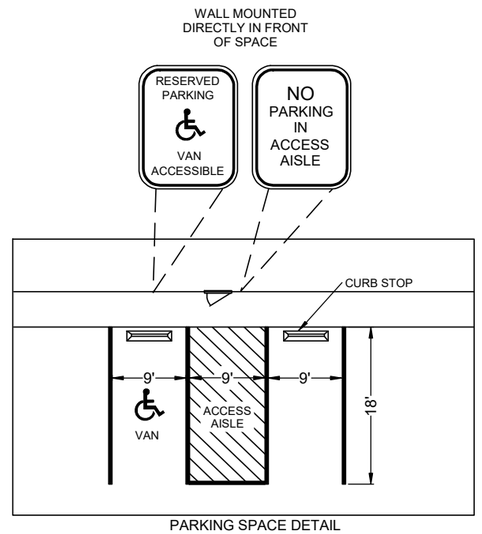
OVERLAY	• HMA SUPERPAVE 9.5 MM, PG 64-22,LEVEL 2, FOR 1-1/2" OVERLAYS. • HMA SUPERPAVE 12.5 MM, PG 64-22,LEVEL 2, FOR 2" OVERLAYS. • MATCH THE SURFACE COURSE SPECIFIED FOR THE ADJUSTMENT FULL DEPTH PAVING IF DIFFERENT FROM THE ABOVE.
COMMERCIAL ASPHALT PAVEMENT FOR ROADS	SURFACE COURSE: 2" HOT MIX ASPHALT SUPERPAVE 9.5 MM BASE COURSE: 4" HOT MIX ASPHALT SUPERPAVE, 19.0 MM PLACED IN 2–2" LIFTS. SUB BASE: 9" CR–6 GRADED AGGREGATE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
RESIDENTIAL ASPHALT PAVEMENT FOR ALLEYS	SURFACE COURSE:2" HOT MIX ASPHALT SUPERPAVE 9.5 MM BASE COURSE: 2 1/2" HOT MIX ASPHALT SUPERPAVE, 19.0 MM SUB BASE: 6" CR–6 GRADED AGGREGATE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
CONCRETE PAVEMENT	8" PORTLAND CEMENT CONCRETE MVAT. SUB BASE: 6" CR–6 GRADED AGGREGATE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.

TOWN OF EASTON MARYLAND FOUNDED 1710

APPROVAL
TOWN ENGINEER
DATE 11/2020

TOWN OF EASTON STANDARD DETAILS
PAVING SPECIFICATIONS

ISSUED: JANUARY 2020 | STANDARD NO.: TOE-R-1.01



PARKING SPACE DETAIL
(NOT TO SCALE)

PHASE OF CONSTRUCTION

1. CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, PHONE (410) 901-4020 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE CONSTRUCTION MEETING TO REVIEW PLANS AND BECOME FAMILIAR WITH ALL PERMITS.
2. CONTRACTOR SHALL HAVE ALL SITE UTILITIES MARKED A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.
3. INSTALL TEMPORARY SEDIMENT CONTROL MEASURES / PERIMETER CONTROLS. MAINTAIN THROUGHOUT PROJECT.
4. REMOVE A MINIMUM OF 6" OF TOPSOIL AS NEEDED AND DISPOSE OF EXCESS TOPSOIL OFFSITE AT AN APPROVED LANDFILL.
5. ROUGH GRADE SITE.
6. BEGIN BUILDING CONSTRUCTION.
7. MAINTAIN ALL SEDIMENT CONTROLS THROUGHOUT CONSTRUCTION.
8. ONCE BUILDING CONSTRUCTION IS TO SUFFICIENT POINT, INSTALL ENTRANCE, SITE PAVEMENT (PER SECTION) AND SIDEWALKS.
9. ONCE DRAINAGE AREAS ARE ADEQUATELY STABILIZED (PAVEMENT SUBBASE INSTALLED AT A MINIMUM) AFTER NOTIFYING THE TOWN OF EASTON STORMWATER MANAGEMENT INSPECTOR, INSTALL STORMWATER MANAGEMENT BIORETENTION PONDS AND QUANTITY CONTROL AREA. CONNECT ROOF LEADERS TO STORMWATER MANAGEMENT AREAS.
10. INSTALL SITE LANDSCAPING, FOREST CONSERVATION PLANTINGS AND STORMWATER MANAGEMENT PLANTINGS.
11. SEED AND MULCH PER SPECIFICATIONS, PROVIDE STABILIZATION MATTING WHERE APPLICABLE. PROVIDE PERMANENT STABILIZATION TO WHOLE SITE.
12. ONCE THE SITE IS FULLY STABILIZED AND THROUGH COORDINATION AND APPROVAL OF THE MDE & TOWN OF EASTON INSPECTORS. REMOVE SEDIMENT CONTROL MEASURES.

THE FOLLOWING ITEMS HAVE BEEN ADDRESSED TO MEET THE REQUIREMENTS OF THE GENERAL PERMIT FOR STORMWATER ASSIOATED WITH CONSTRUCTION ACTIVITY (NPDES NUMBER MDR10, STATE DISCHARGE PERMIT NUMBER 09GP).

1. UTILIZATION OF ENVIRONMENTAL SITE DESIGN
2. MAINTENANCE OF LIMITS OF DISTURBANCE TO PROTECT NATURAL AREAS
3. CONTROL OF CONSTRUCTION EQUIPMENT AND VEHICLES
4. EVALUATION AND APPROPRIATE LIMITATION OF SITE CLEARING
5. EVALUATION AND DESIGNATION OF SITE AREA FOR PHASING OR SEQUENCING
6. IDENTIFICATION OF SOILS AT HIGH RISK FOR EROSION AND ADVANCED STABILIZATION TECHNIQUES TO BE USED
7. IDENTIFICATION OF STEEP SLOPES AND DESIGNATION OF LIMITATIONS ON CLEARING THEM
8. EVALUATION AND DESIGNATION OF STABILIZATION REQUIREMENTS AND THE LIMITS AND PROTECTION MEASURES FOR DISCHARGES TO THE CHESAPEAKE BAY, IMPARED WATERS OR WATERS WITH AN ESTABLISHED TOTAL MAXIMUM DAILY LOAD (TMDL)

GENERAL NOTES:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL BUILDING CODES, BEST PRACTICES OF THE RESPECTIVE TRADES AND THE STANDARD SPECIFICATIONS AND DETAILS REFERED TO HERIN.

THIS DRAWING SHOWS INFORMATION OBTAINED FROM AVAILABE RECORDS REGARDING PIPES, CONDUITS, TELEPOHONE LINES AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST WITHIN LIMITS OF THE WORK. AT AND BELOW THE SURFACE OF THE GROUND. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITIES FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEING SHOWN ONLY FOR THE CONVIENCE OF THE CONTRACTOR WHO MUST VERIFY THE INFORMATION TO HIS OWN SATIFICATION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORTING AND PROTECTING ALL PIPES, CONDUITS, TELEPHONE LINES AND OTHER STRUCTURES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL COORDINATE ALL PHASES WITH THEM:

MDE_____410-901-4020
TALBOT COUNTY____410-770-8030
MISS UTILITY_____800-441-8355

SHOULD ANY DAMAGE OCCUR TO AN UTILITIES, THEY SHALL BE REPAIRD SOLELY AT THE CONTRACTOR'S EXPENSE.

ALL LANDSCAPING SHALL BE PREFORMED BY QUALIFIED PROFESSIONALS. ALL PLANT MATERIALS SHALL BE FROM CERTIFIED NURSERYMEN AND BE GUARNTEED FOR ONE (1) YEAR FROM THE DATE OF PLANTING.

ANY PROPERTY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTOR'S EXPENSE.

OWNER/DEVELOPER:
NAME: DAN LERINAN
STREET:10555 LAKE ROAD
TOWN: EASTON, MD 21601

TOTAL LOT AREA = 67,910 SF
BUILDING #1 = 4,400 SF
BUILDING #2 = 4,400 SF
PAVING AREA = 10,900 SF
TOTAL DISTURBANCE = 19,700 SF

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE: _____.

TOWN OF EASTON MARYLAND FOUNDED 1710

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21061
410-820-8822

APPROVED:
TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED:
TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED:
EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

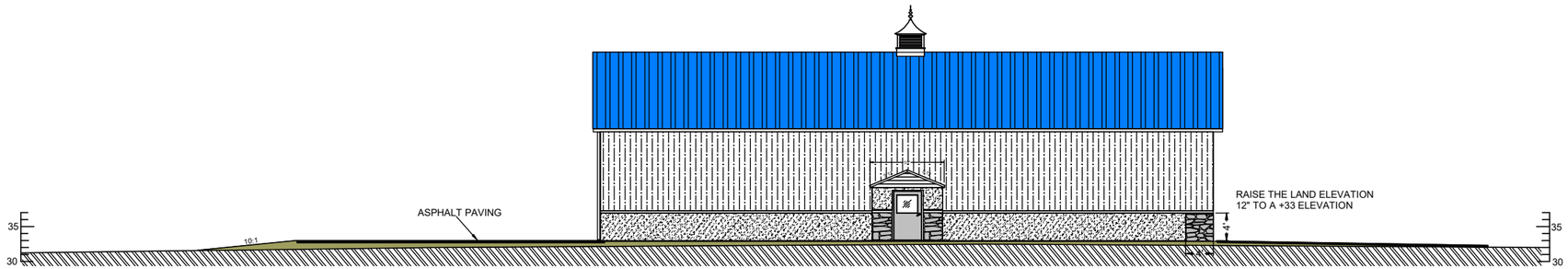
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

DETAILS

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE: AS SHOWN

SHEET NO. 7

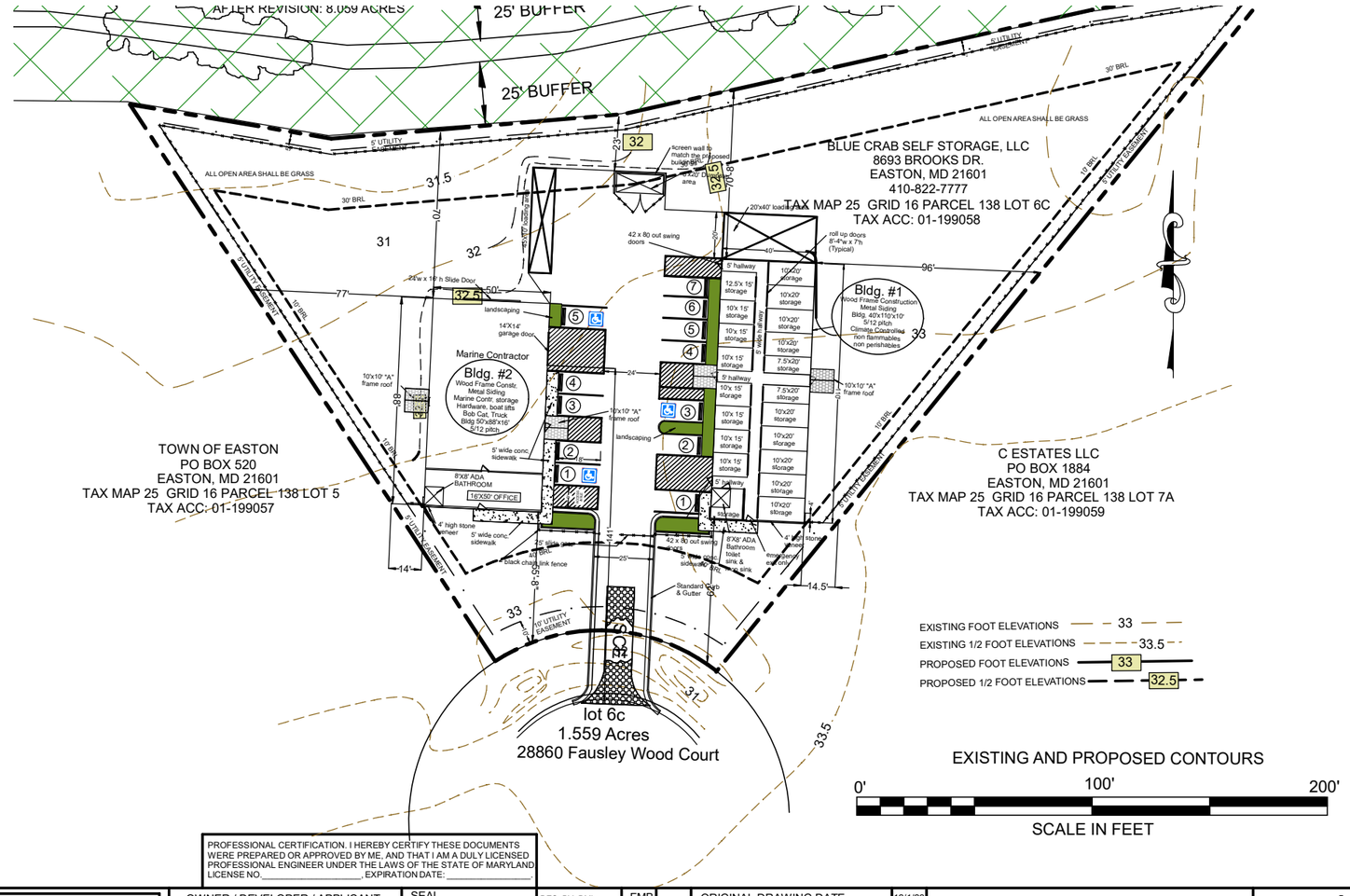


PROPOSED GRADE CHANGE TO +33 ELEVATION

GROUND RAISED 12"

0' 50'

SCALE IN FEET



EXISTING AND PROPOSED CONTOURS

0' 100' 200'

SCALE IN FEET

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ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21601

APPROVED: TOWN OF EASTON - PLANNING & ZONING DATE

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APPROVED: EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
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8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

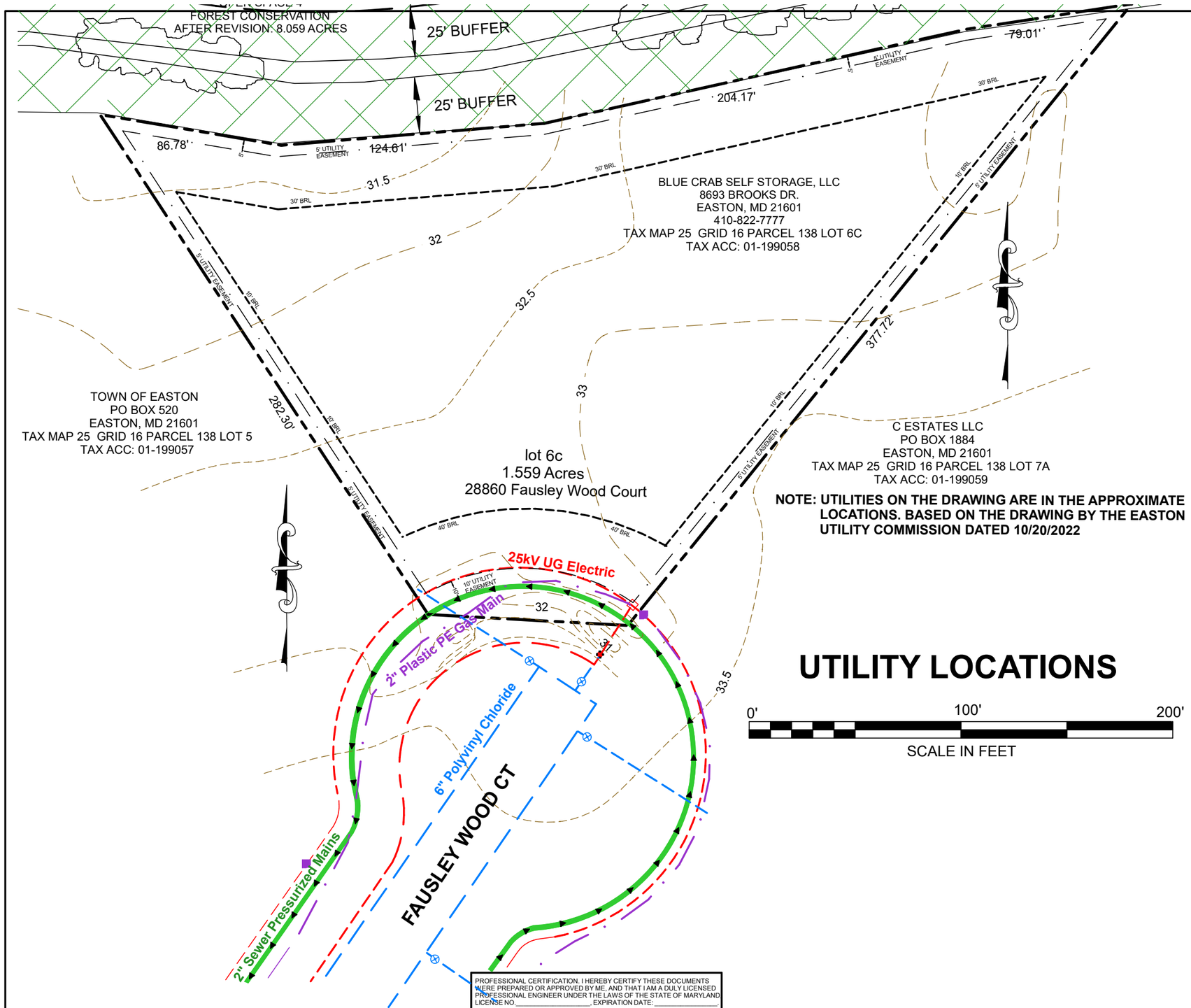
BY	NO	REVISION	DATE
FMB		ORIGINAL DRAWING DATE	12/1/23

EXISTING AND PROPOSED CONTOURS

MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE AS SHOWN

SHEET NO. 8



NOTE: UTILITIES ON THE DRAWING ARE IN THE APPROXIMATE LOCATIONS. BASED ON THE DRAWING BY THE EASTON UTILITY COMMISSION DATED 10/20/2022

UTILITY LOCATIONS

0' 100' 200'

SCALE IN FEET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO._____, EXPIRATION DATE: _____.

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14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21061
410-820-8822

APPROVED: TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED: TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED: EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

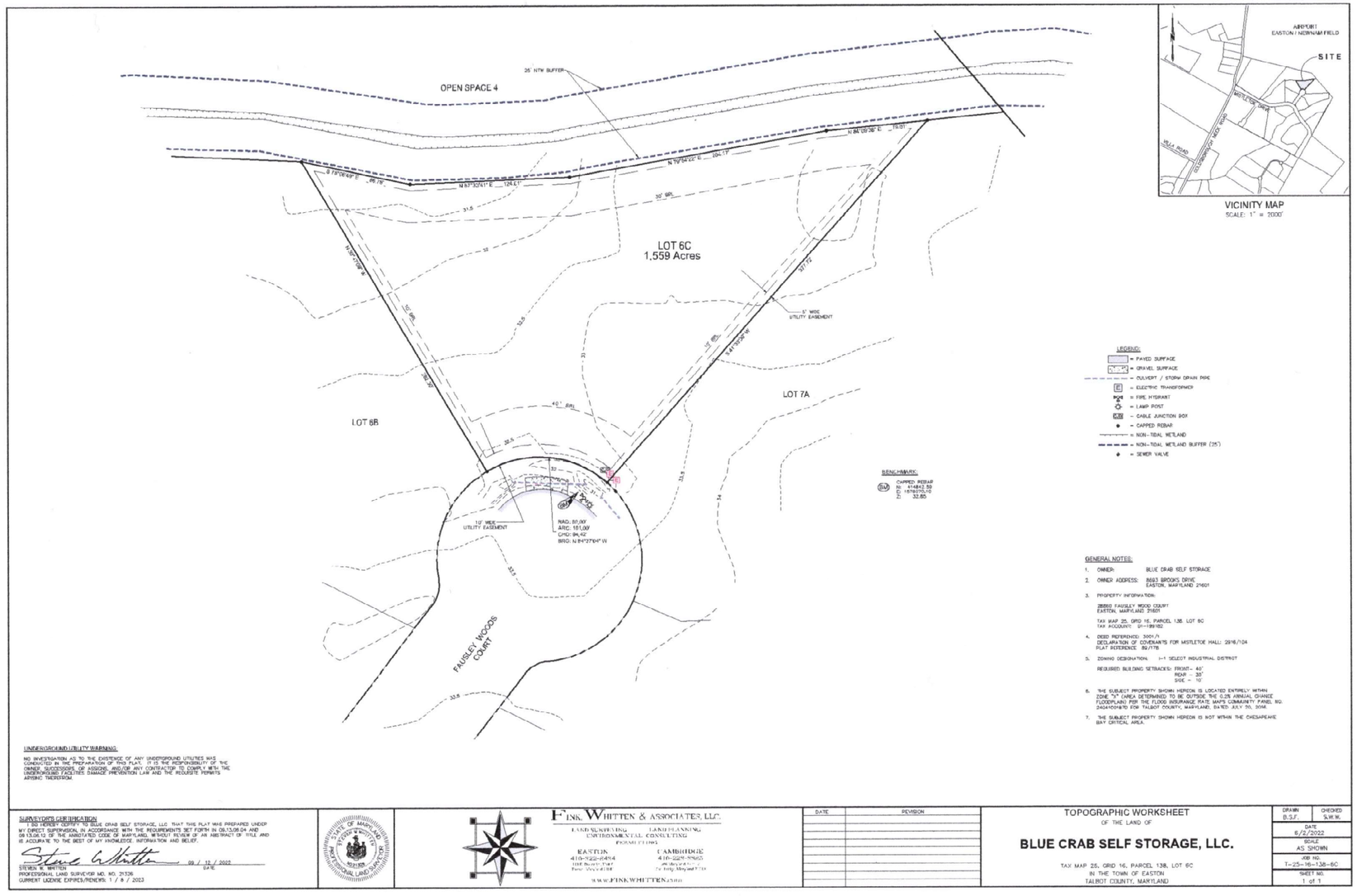
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

UTILITY LOCATIONS

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE AS SHOWN

SHEET NO. 9



VICINITY MAP
SCALE: 1" = 2000'

SURVEYOR'S CERTIFICATION

I DO HEREBY CERTIFY TO BLUE CRAB SELF STORAGE, LLC, THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN 09.13.06.04 AND 09.13.06.12 OF THE ANNOTATED CODE OF MARYLAND, WITHOUT REVIEW OF AN ABSTRACT OF TITLE AND IS ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Steve Whitten 09 / 12 / 2022
STEVEN R. WHITTEN DATE
PROFESSIONAL LAND SURVEYOR MD. NO. 21326
CURRENT LICENSE EXPIRES/RENEWS: 1 / 8 / 2023

FINK, WHITTEN & ASSOCIATES, LLC.
LAND SURVEYING LAND PLANNING
ENVIRONMENTAL CONSULTING
FORMATIONS
EASTON 410-822-6454
CAMBRIDGE 410-228-5665
WWW.FINKWHITTEN.COM

DATE	REVISION

TOPOGRAPHIC WORKSHEET
OF THE LAND OF
BLUE CRAB SELF STORAGE, LLC.
TAX MAP 25, GRID 16, PARCEL 138, LOT 6C
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

DRAWN	CHECKED
B.S.F.	S.W.W.
DATE	
6/2/2022	
SCALE	
AS SHOWN	
JOB NO.	
T-25-16-138-6C	
SHEET NO.	
1 of 1	

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. _____, EXPIRATION DATE: _____.

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21661
410-820-8822

APPROVED:
TOWN OF EASTON - PLANNING & ZONING DATE

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APPROVED:
EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

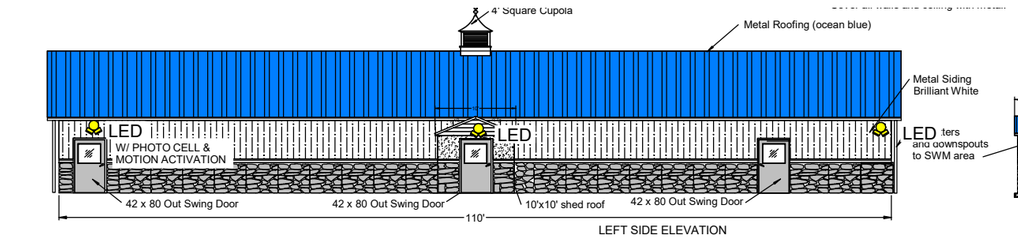
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

SEALED PROPERTY SURVEY

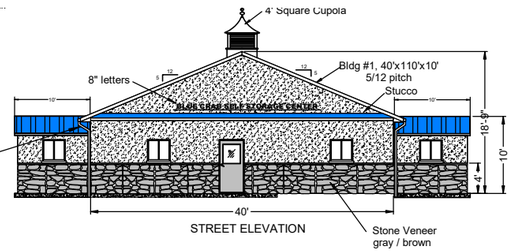
MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

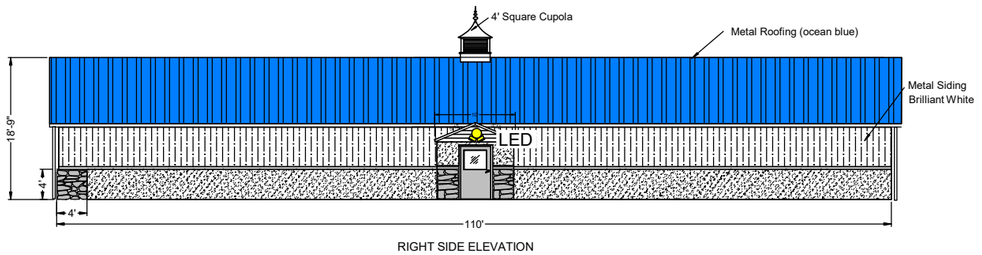
SHEET NO.
10



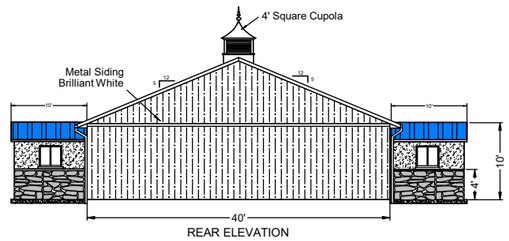
LEFT SIDE ELEVATION



STREET ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

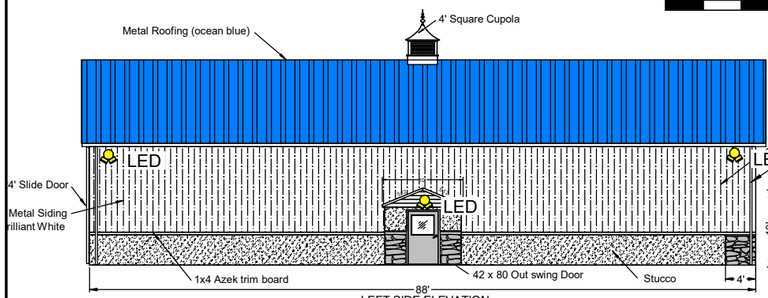
ELECTRICAL SYMBOLS

- DUPLEX RECEPTACLE
- 240 VOLT RECEPTACLE
- CEILING LIGHT FIXTURE
- SPLIT WIRED DUPLEX RECEPTACLE
- QUADPLEX RECEPTACLE
- WALL LIGHT
- WALL JUNCTION BOX
- CEILING FAN
- VENT FAN
- SWITCHED RECEPTACLE
- FLUORESCENT CEILING LIGHT
- DOUBLE LED FLOOD LIGHTS
- OCCUPANCY SENSOR
- LED
- RECESSED LIGHT
- GFCI OUTLET
- INDOOR TELEPHONE
- SMOKE DETECTOR
- TELEVISION JACK
- SERVICE PANEL
- SINGLE POLE SWITCH
- REMOTE LIGHT SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- EMERGENCY LIGHT
- 4' STRIP LED LIGHTS
- TRACK LIGHTING

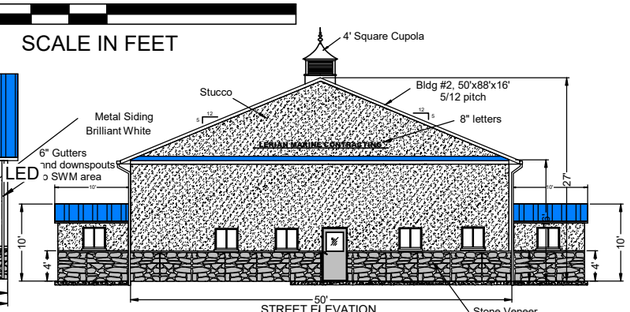
BUILDING # 1

0' 50'

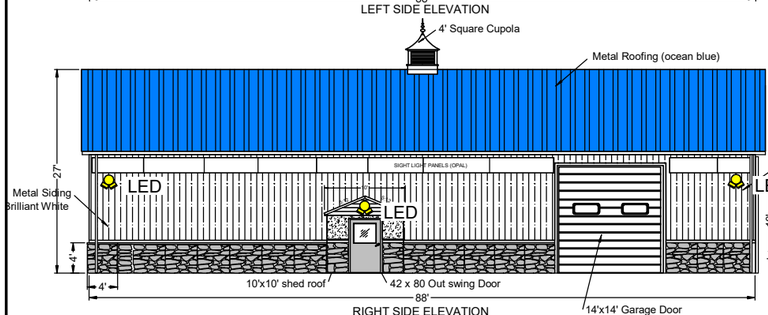
SCALE IN FEET



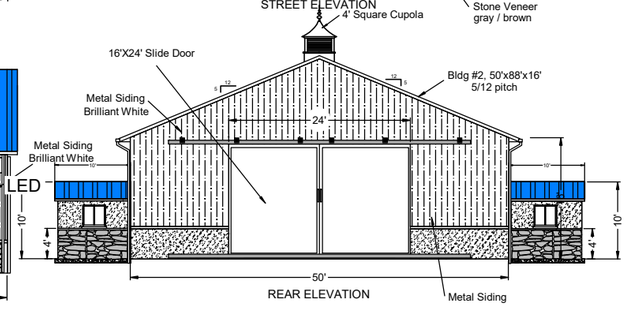
LEFT SIDE ELEVATION



STREET ELEVATION



RIGHT SIDE ELEVATION

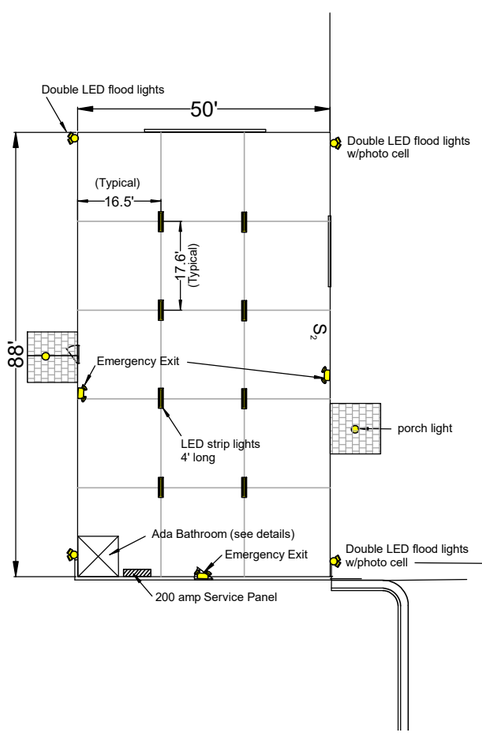


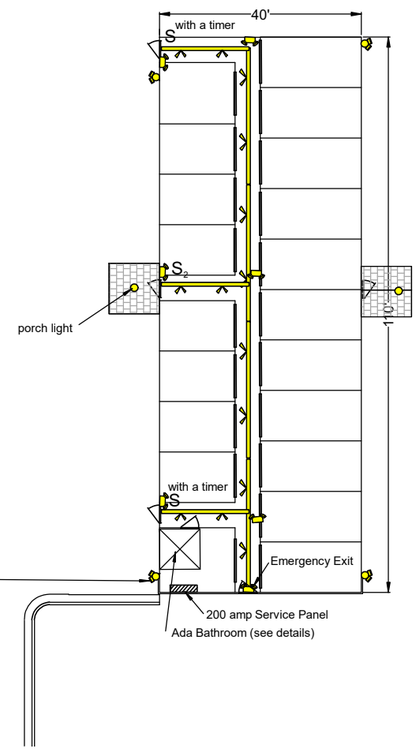
REAR ELEVATION

BUILDING # 2

0' 50'

SCALE IN FEET





PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO._____, EXPIRATION DATE:_____

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21061
410-820-8622

APPROVED: TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED: TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED: EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE
FMB		ORIGINAL DRAWING DATE	12/1/23

ELECTRIC

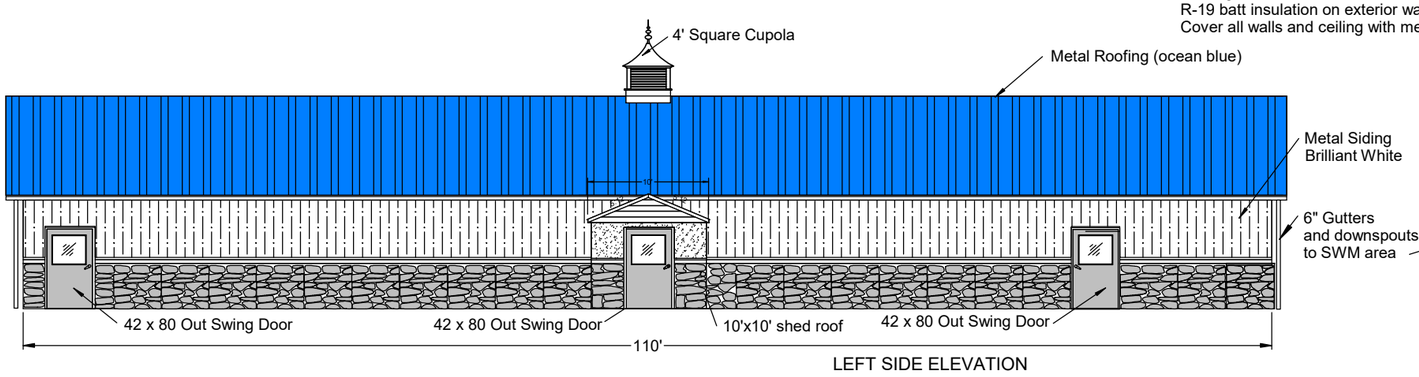
MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

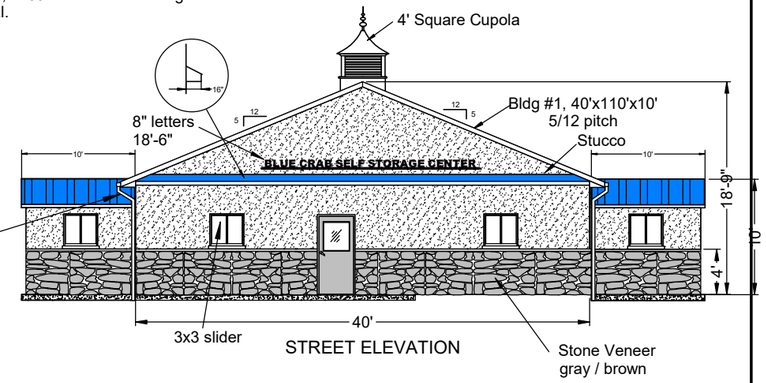
SHEET NO.
11

NOTE:

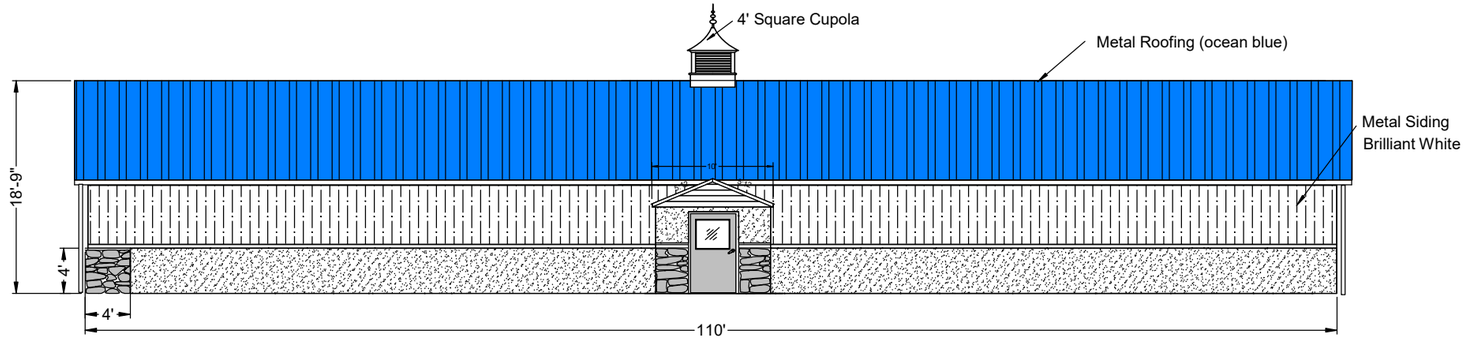
Climate controlled building, 3 ply, 2x6 posts at 8' on centers,
2x4 purlins, 2- 2x12 beams, trusses 4' on centers, 2x6 wall
framing at 16" on center, all exterior and divider walls.
R-19 batt insulation on exterior walls, R-39 blown in the ceiling
Cover all walls and ceiling with metal.



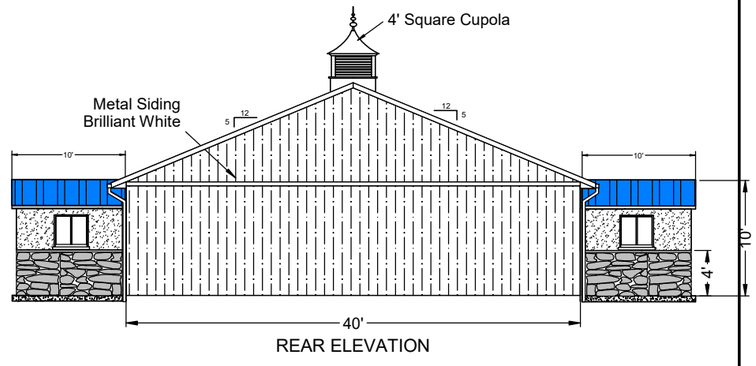
LEFT SIDE ELEVATION



STREET ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

BUILDING # 1

0' 50'

SCALE IN FEET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE:_____.

ENGINEERING DEPARTMENT
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OWNER / DEVELOPER / APPLICANT

BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
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410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

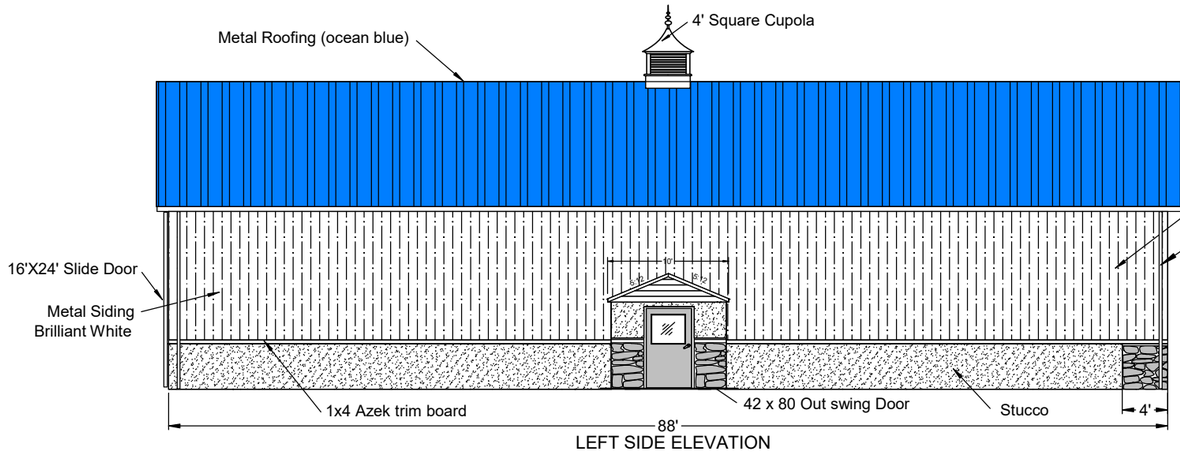
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

PROPOSED
BUILDING #1

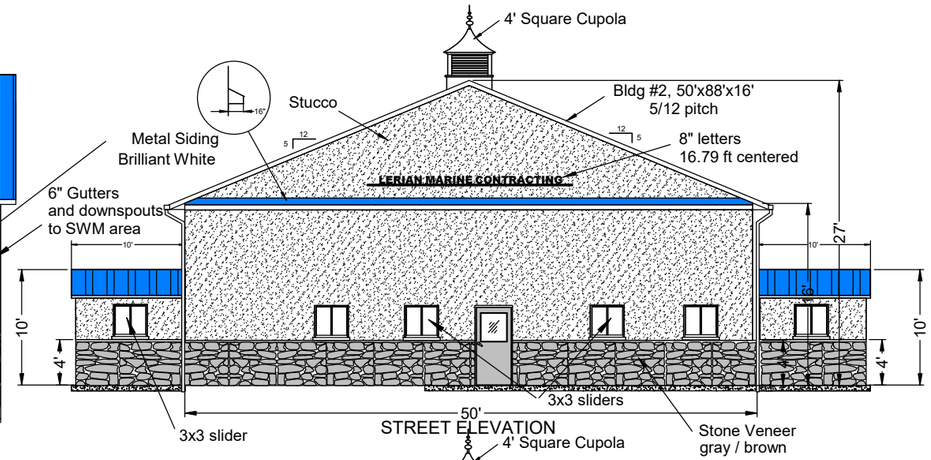
MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

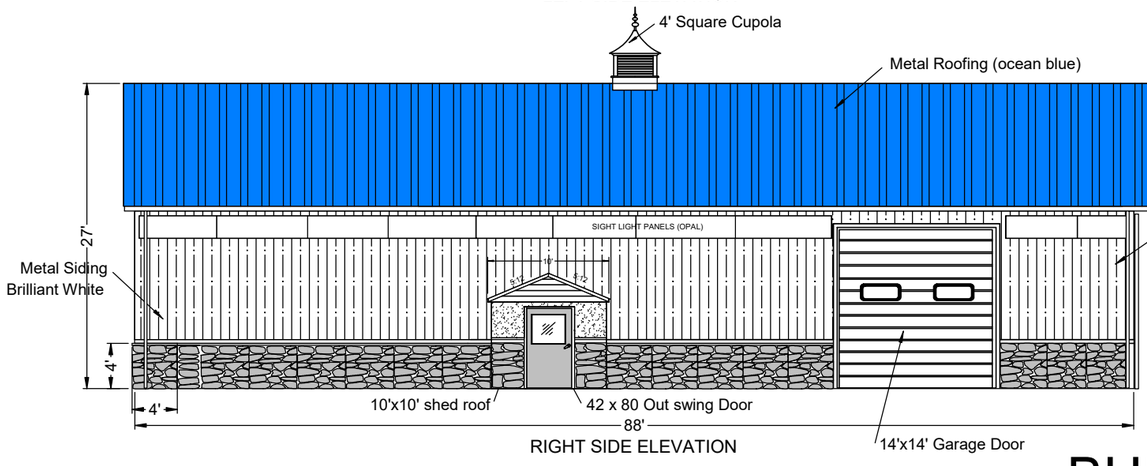
SHEET NO.
12



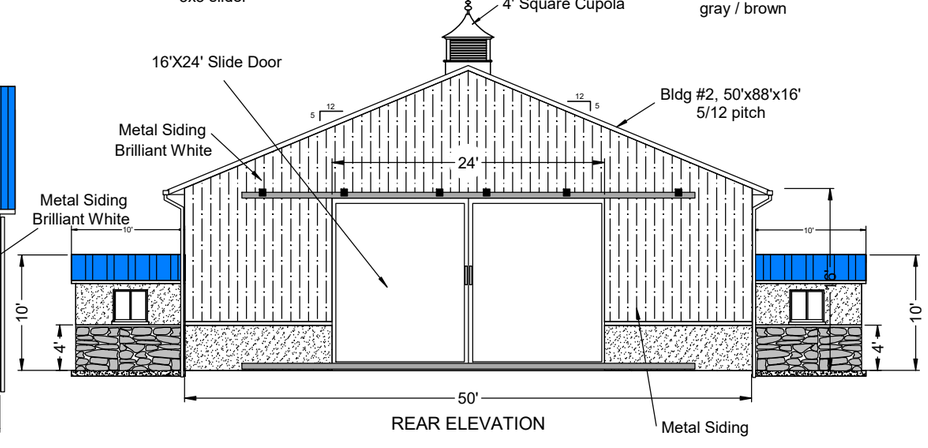
LEFT SIDE ELEVATION



STREET ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

BUILDING # 2

0' 50'

SCALE IN FEET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE:_____.

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21061
410-820-8822

APPROVED:
TOWN OF EASTON - PLANNING & ZONING DATE

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OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

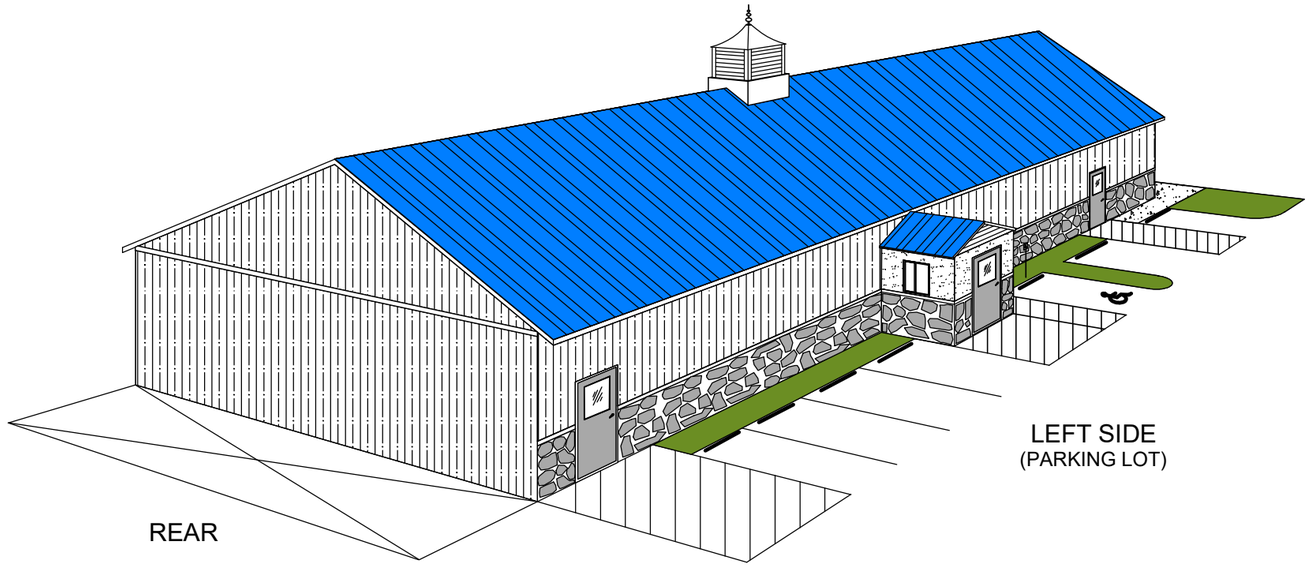
DES. BY: DML	FMB		ORIGINAL DRAWING DATE	12/1/23	
DRN BY: FMB					
CHK BY:					
DATE:					
	BY	NO.	REVISION	DATE:	

PROPOSED
BUILDING #2

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

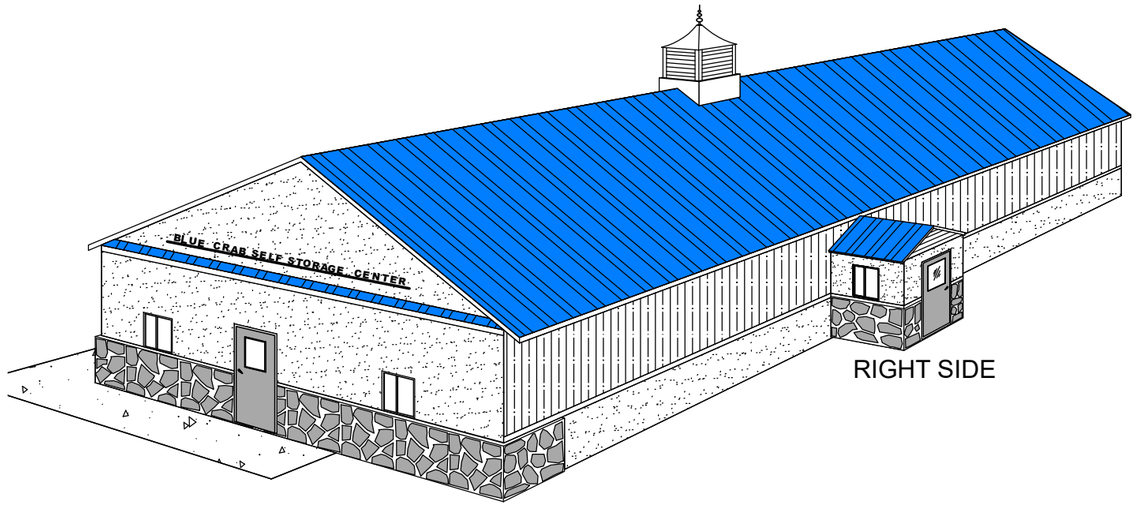
SHEET NO.
13



REAR

LEFT SIDE
(PARKING LOT)

BUILDING #1



STREET SIDE

RIGHT SIDE

BUILDING #1

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO._____, EXPIRATION DATE: _____.

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21061
410-820-8822

APPROVED:
TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED:
TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED:
EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT

BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

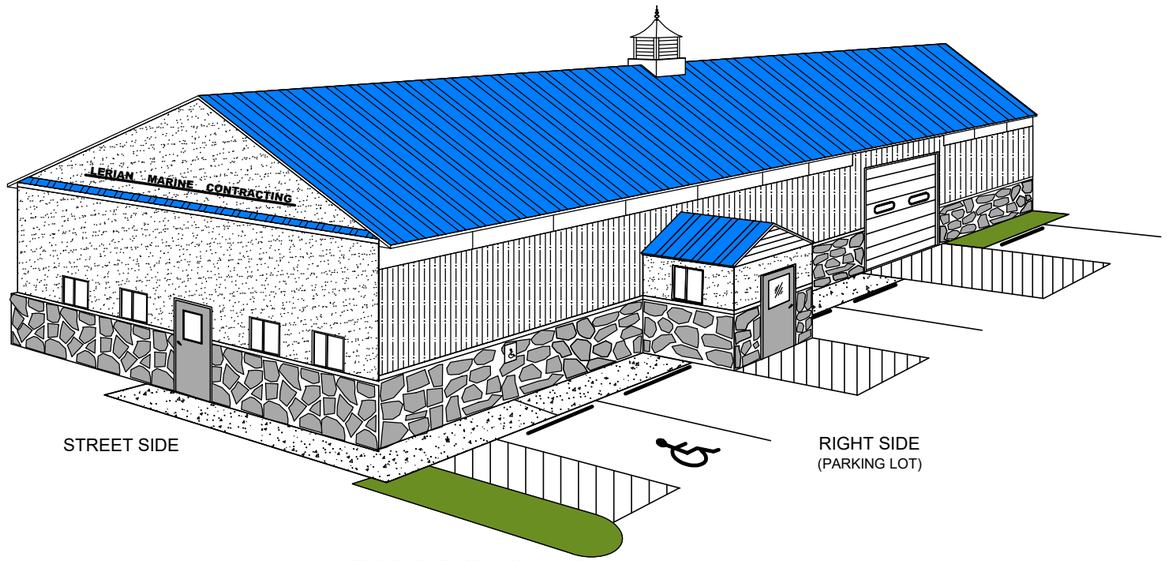
ISOMETRIC
BUILDING #1

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

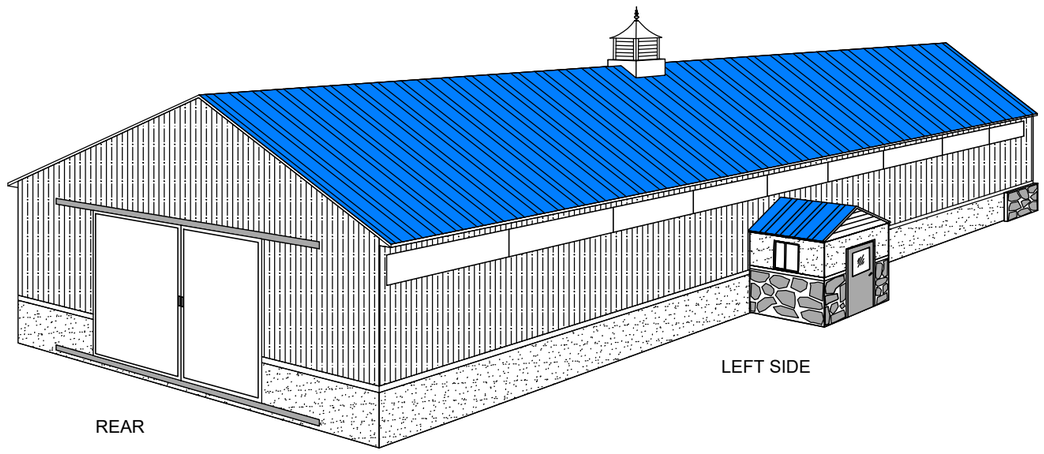
14

SCALE
AS SHOWN

SHEET NO.
14



BUILDING # 2



BUILDING # 2

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15

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410-820-8822

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APPROVED:
TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED:
EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
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8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

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DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

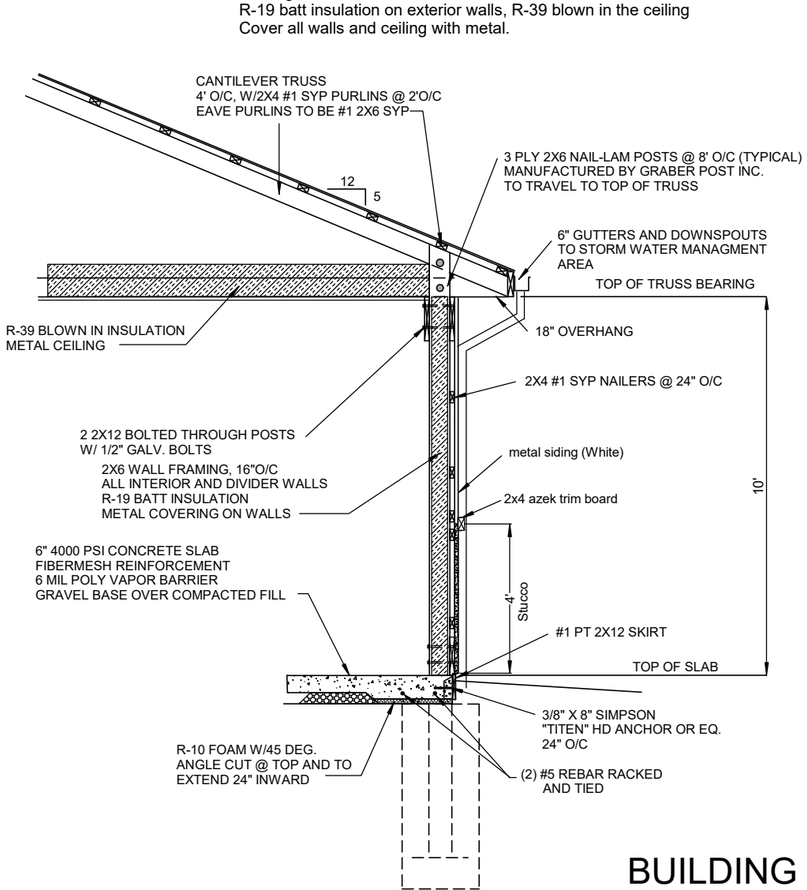
ISOMETRIC
BUILDING #2

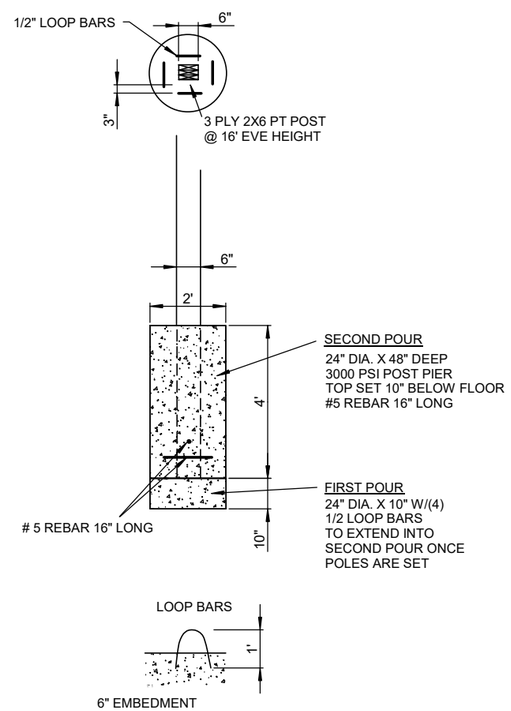
MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

SHEET NO.
15

Climate controlled building, 3 ply, 2x6 posts at 8' on centers,
2x4 purlins, 2- 2x12 beams, trusses 4' on centers, 2x6 wall
framing at 16" on center, all exterior and divider walls.
R-19 batt insulation on exterior walls, R-39 blown in the ceiling
Cover all walls and ceiling with metal.





BUILDING #1
10' HIGH WALL SECTION

0' 5' 10'

SCALE IN FEET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE:_____.

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OWNER / DEVELOPER / APPLICANT

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DATE:

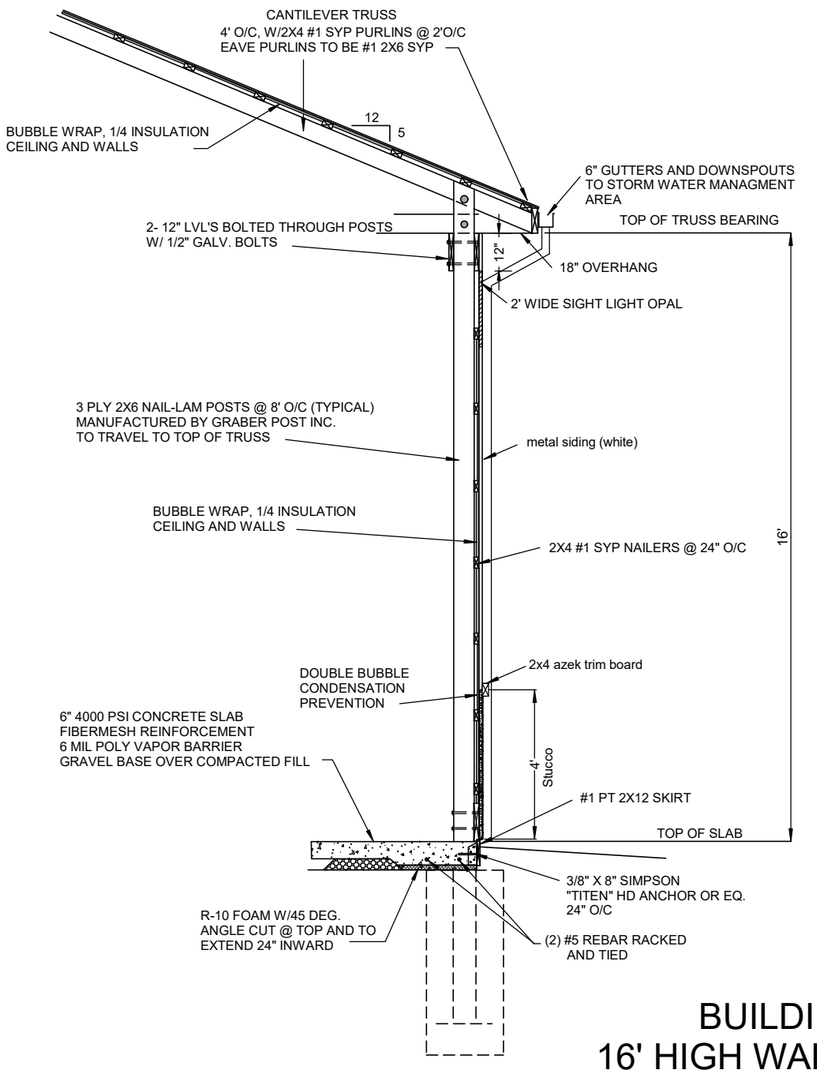
BY	NO.	REVISION	DATE
FMB		ORIGINAL DRAWING DATE	12/1/23

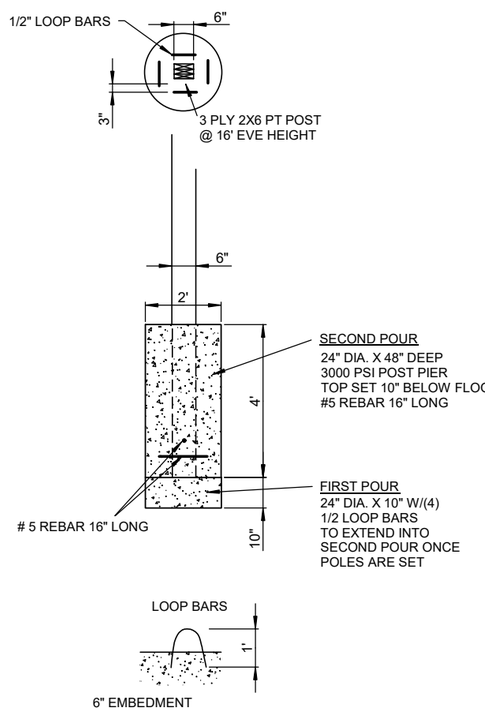
BUILDING #1
WALL DETAILS

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

SHEET NO.
16





BUILDING #2
16' HIGH WALL SECTION

0' 5' 10'

SCALE IN FEET

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO._____, EXPIRATION DATE: _____.

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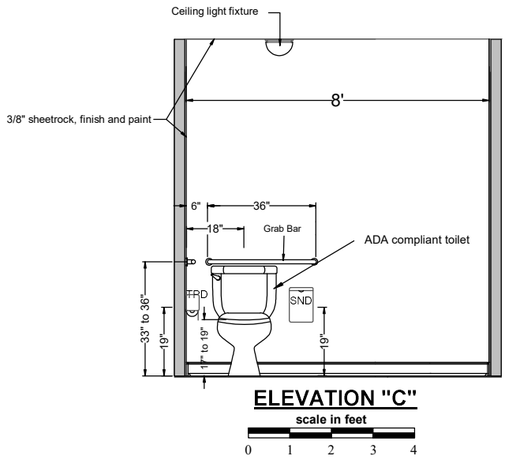
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

BUILDING #2
WALL DETAILS

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

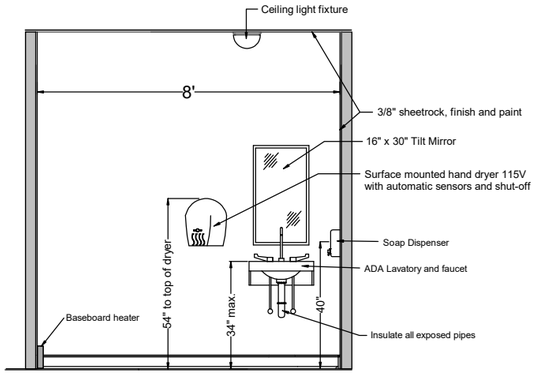
SHEET NO.
17



ELEVATION "C"

scale in feet

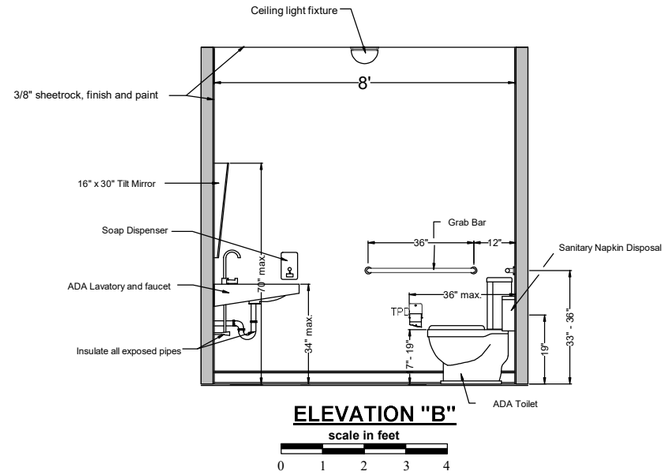
0 1 2 3 4



ELEVATION "A"

scale in feet

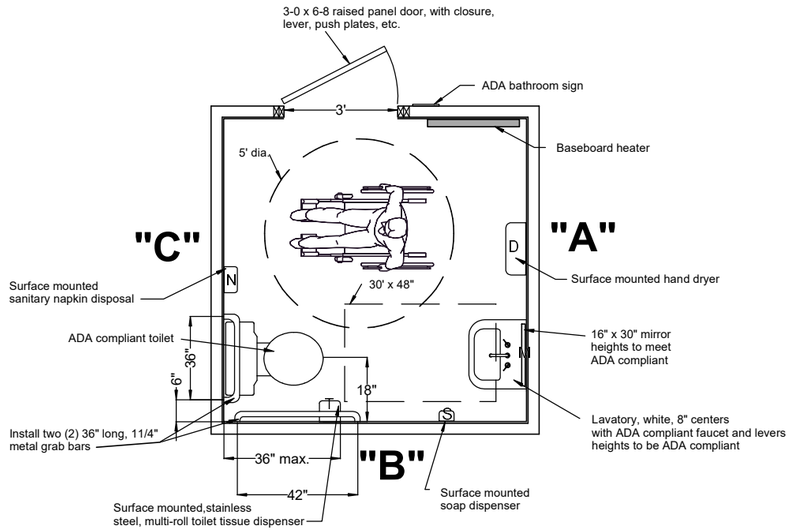
0 1 2 3 4



ELEVATION "B"

scale in feet

0 1 2 3 4



PROPOSED ADA BATHROOM

scale in feet

0 1 2 3 4

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410-822-7777

SEAL

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DRN BY: FMB
CHK BY:
DATE:

BY	NO.	REVISION	DATE
FMB		ORIGINAL DRAWING DATE	12/1/23

ADA BATHROOMS

MISTLETOE HALL FARM
SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

SHEET NO.
18

Job	Truss	Truss Type	Qty	Ply
2304149SB	PV40	GABLE	1	1

40' Stock
Job Reference (optional)

UFP Site Built, LLC, UFP 30256 — Run: 8.620 s Sep 22 2022 Print: 8.620 s Sep 22 2022 MiTek Industries, Inc. Wed Apr 19 23:49:20 2023 Page 1
ID:dsPDwY9ecWENLOmBnrd1PazCs52-4FGtC3NFL_V8VMmH2JHeRdZK_Kkn50p1ao2YMuzPO6q

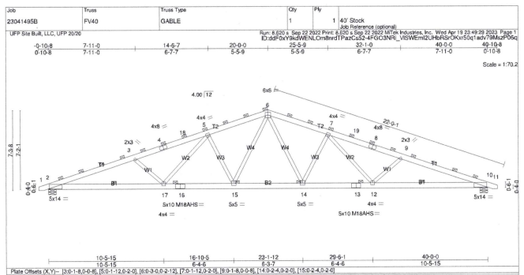


Plate Offsets (X,Y)--	[3:0-1-8,0-0-8], [5:0-1-12,0-2-0], [6:0-3-0,0-2-12], [7:0-1-12,0-2-0], [8:0-3-8,0-0-8], [14:0-2-4,0-2-0], [15:0-2-4,0-2-0]

LOADING (psf)	SPACING-	4-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 33.6	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.50 14-15	>962	240	MT20	197/144
(Ground Snow=40.0)	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.72 14-15	>687	180	MT20HS	187/179
TCDL 5.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.22 10	n/a	n/a		
BCLL 0.0	Code IBC2018/TPI2014		Matrix-S						Weight: 246 lb	FT = 20%
BCDL 5.0										

LUMBER.
TOP CHORD 2x6 SP 2400F 2.0E *Except*
T2: 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E *Except*
B2: 2x6 SP No.1
WEBS 2x4 SPF No.2

REACTIONS. (lb/size) 2=3582/0-8-8, 10=3582/0-8-8
Max Horz 2=-137(LC 11)
Max Uplift2=-586(LC 6), 10=-586(LC 7)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0.0, 2-3=-8649/1307, 3-4=-7762/1141, 4-18=-7590/1152, 5-18=-7532/1164, 5-6=-6230/991, 6-7=-6230/991, 7-19=-7532/1165, 8-19=-7590/1152, 8-9=-7762/1141, 9-10=-8649/1308, 10-11=0.0
BOT CHORD 2-17=-12397/992, 16-17=-8645/643, 15-16=-8645/643, 14-15=-5645/047, 13-14=-7628/443, 12-13=-7628/443, 10-12=-11377/992
WEBS 3-17=-1090/366, 5-17=-180/1199, 5-15=-1940/390, 6-15=-318/2073, 6-14=-318/2073, 7-14=-1940/390, 7-12=-181/1199, 9-12=-1090/366

NOTES:
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=3.0psf; BCDL=3.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pg= 40.0 psf; Pf=33.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.20
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 33.6 psf on overhangs non-concurrent with other live loads.
5) Dead loads shown include weight of truss. Top chord dead load of 5.0 psf (or less) is not adequate for a shingle roof. Architect to verify adequacy of top chord dead load.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide adequate drainage to prevent water ponding.
9) This truss is designed in accordance with the 2018 International Building Code section 2303.1 and referenced standard ANSI/TPI 1.
10) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MARYLAND · JAMES M. CAPPIANO · 55321 · PROFESSIONAL ENGINEER
04/20/2023

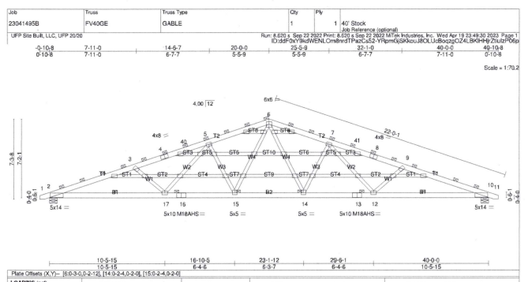


Plate Offsets (X,Y)--	[6:0-3-0,0-2-12], [14:0-2-4,0-2-0], [15:0-2-4,0-2-0]

LOADING (psf)	SPACING-	4-0-0	CSI.		DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 33.6	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.50 14-15	>962	240	MT20	197/144
(Ground Snow=40.0)	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.72 14-15	>687	180	MT20HS	187/179
TCDL 5.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.22 10	n/a	n/a		
BCLL 0.0	Code IBC2018/TPI2014		Matrix-S						Weight: 306 lb	FT = 20%
BCDL 5.0										

LUMBER.
TOP CHORD 2x6 SP 2400F 2.0E *Except*
T2: 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E *Except*
B2: 2x6 SP No.1
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

REACTIONS. (lb/size) 2=3582/0-8-8, 15=3582/0-8-8
Max Horz 2=-137(LC 11)
Max Uplift2=-586(LC 6), 15=-586(LC 7)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0.0, 2-3=-8649/1307, 3-4=-7762/1141, 4-16=-7590/1152, 5-49=-7533/1164, 5-6=-6230/991, 6-7=-6230/991, 7-41=-7532/1165, 8-41=-7590/1152, 8-9=-7762/1141, 9-10=-8649/1308, 10-11=0.0
BOT CHORD 2-17=-12397/992, 16-17=-8645/643, 15-16=-8645/643, 14-15=-5645/047, 13-14=-7628/443, 12-13=-7628/443, 10-12=-11377/992
WEBS 3-17=-1090/366, 5-17=-180/1199, 5-15=-1940/390, 6-15=-318/2073, 6-14=-318/2073, 7-14=-1940/390, 7-12=-181/1199, 9-12=-1090/366

NOTES:
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=3.0psf; BCDL=3.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pg= 40.0 psf; Pf=33.6 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.20
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 33.6 psf on overhangs non-concurrent with other live loads.
6) Dead loads shown include weight of truss. Top chord dead load of 5.0 psf (or less) is not adequate for a shingle roof. Architect to verify adequacy of top chord dead load.
7) All plates are MT20 plates unless otherwise indicated.
8) All plates are 4x4 MT20 unless otherwise indicated.
9) Provide adequate drainage to prevent water ponding.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 586 lb uplift at joint 2 and 586 lb uplift at joint 15.
12) This truss is designed in accordance with the 2018 International Building Code section 2303.1 and referenced standard ANSI/TPI 1.
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MARYLAND · JAMES M. CAPPIANO · 55321 · PROFESSIONAL ENGINEER
04/20/2023

12/30/2022

Alpine, an ITW company
155 Harlem Ave.
North Building, 4th Floor
Glenview, IL 60025
Phone: (800)326-4102 (314)344-9121
alpinebw.com

Site Information:	Page 1:
Customer: D. L. Truss	*Job Number:* 29991
Job Description: /29991 /Fetterville/Gonzales#031F	
Address: 8933 Jersey Rd, Salisbury, MD 21801	

Job Engineering Criteria:			
Design Code: IBC 2018		*IntelliVIEW Version:*	22.02.00
		JRef #:	1XL-K96970006
Wind Standard: ASCE 7-16	*Wind Speed (mph):* 125	*Design Loading (psf):*	40.00
Building Type: Closed			

This package contains general notes pages, 2 truss drawing(s) and 0 detail(s).

Item	Drawing Number	Truss
1	364.22.1309.46293	30Ags/Com/50/412

Item	Drawing Number	Truss
2	364.22.1309.51987	30Ags/SGab/50/412

References:
1. AWC: American Wood Council; 222 Catoctin Circle SE, Suite 201; Leesburg, VA 20175; www.awc.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 155 Harlem Ave, North Building, 4th Floor, Glenview, IL 60025; www.alpinebw.com.
4. TPI: Truss Plate Institute, 2670 Crain Highway, Suite 203, Waldorf, MD 20601; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www. sbcacomponents.com.

General Notes

Truss Design Engineer Scope of Work, Design Assumptions and Design Responsibilities:
The design responsibilities assumed in the preparation of these design drawings are those specified in ANSI/TPI 1, Chapter 2; and the National Design Standard for Metal Plate Connected Wood Truss Construction, by the Truss Plate Institute. The truss component designs conform to the applicable provisions of ANSI/TPI 1 and NDS, the National Design Specification for Wood Construction by AWC. The truss component designs are based on the specified loading and dimension information furnished by others to the Truss Design Engineer. The Truss Design Engineer has no duty to independently verify the accuracy or completeness of the information provided by others and may rely on that information without liability. The responsibility for verification of that information remains with others neither employed nor controlled by the Truss Design Engineer. The Truss Design Engineer's seal and signature on the attached drawings, or cover page listing these drawings, indicates acceptance of professional engineering responsibility solely for the truss component designs and not for the technical information furnished by others which technical information and consequences thereof remain their sole responsibility.

The suitability and use of these drawings for any particular structure is the responsibility of the Building Designer in accordance with ANSI/TPI 1 Chapter 2. The Building Designer is responsible for determining that the dimensions and loads for each truss component match those required by the plans and by the actual use of the individual component, and for ascertaining that the loads shown on the drawings meet or exceed applicable building code requirements and any additional factors required in the particular application. Truss components using metal connector plates with integral teeth shall not be placed in environments that will cause the moisture content of the wood in which plates are embedded to exceed 19% and/or cause corrosion of connector plates and other metal fasteners.

The Truss Design Engineer shall not be responsible for items beyond the specific scope of the agreed contracted work set forth herein, including but not limited to: verifying the dimensions of the truss component, calculation of any of the truss component design loads, inspection of the truss components before or after installation, the design of temporary or permanent bracing and their attachment required in the roof and/or floor systems, the design of diaphragms or shear walls, the design of load transfer connections to and from diaphragms and shear walls, the design of load transfer to the foundation, the design of connections for truss components to their bearing supports, the design of the bearing supports, installation of the truss components, observation of the truss component installation process, review of truss assembly procedures, sequencing of the truss component installation, construction means and methods, site and/or worker safety in the installation of the truss components and/or its connections.

This document may be a high quality facsimile of the original engineering document which is a digitally signed electronic file with third party authentication. A wet or embossed seal copy of this engineering document is available upon request.

Temporary Lateral Restraint and Bracing:
Temporary lateral restraint and diagonal bracing shall be installed according to the provisions of BCSI chapters B1, B2, B7 and/or B10 (Building Component Safety Information, by TPI and SBCA), or as specified by the Building Designer or other Registered Design Professional. The required locations for lateral restraint and/or bracing depicted on these drawings are only for the permanent lateral support of the truss members to reduce buckling lengths, and do not apply to and may not be relied upon for the temporary stability of the truss components during their installation.

Permanent Lateral Restraint and Bracing:
The required locations for lateral restraint or bracing depicted on these drawings are for the permanent lateral support of the truss members to reduce buckling lengths. Permanent lateral support shall be installed according to the provisions of BCSI chapters B3, B7 and/or B10, or as specified by the Building Designer or other Registered Design Professional. These drawings do not depict or specify installation/erection bracing, wind bracing, portal bracing or similar building stability bracing which are parts of the overall building design to be specified, designed and detailed by the Building Designer.

Connector Plate Information:
Alpine connector plates are made of ASTM A653 or ASTM A1063 galvanized steel with the following designations, gauges and grades: W=Wave, 20ga, grade 40; H=High Strength, 20ga, grade 60; S=Super Strength, 18ga, grade 60. Information on model code compliance is contained in the ICC Evaluation Service report ESR-1118, available on-line at www.icc-es.org.

Fire Retardant Treated Lumber:
Fire retardant treated lumber must be properly re-dried and maintained below 19% or less moisture level through all stages of construction and usage. Fire retardant treated lumber may be more brittle than untreated lumber. Special handling care must be taken to prevent breakage during all handling activities.

General Notes (continued)

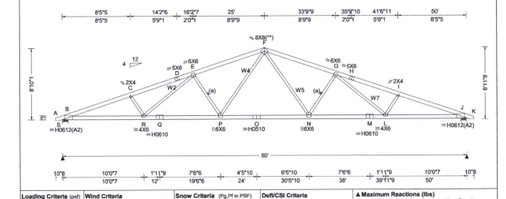
Key to Terms:
Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written request.

BCDL = Bottom Chord standard design Dead Load in pounds per square foot.
BCLL = Bottom Chord standard design Live Load in pounds per square foot.
CL = Certified lumber.
Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.
FRT = Fire Retardant Treated lumber.
FRT-DB = D-Blaze Fire Retardant Treated lumber.
FRT-DC = Dricon Fire Retardant Treated lumber.
FRT-FP = FirePRO Fire Retardant Treated lumber.
FRT-FL = FlamePRO Fire Retardant Treated lumber.
FRT-FT = FlameTech Fire Retardant Treated lumber.
FRT-PG = PYRO-GUARD Fire Retardant Treated lumber.
g = green lumber.
HORZ(LL) = maximum Horizontal panel point deflection due to Live Load, in inches.
HORZ(TL) = maximum Horizontal panel point long term deflection in inches, due to Total Load, including creep adjustment.
HPL = additional Horizontal Load added to a truss Piece in pounds per linear foot or pounds.
Ic = Incised lumber.
FJ = Finger Jointed lumber.
L/# = user specified divisor for limiting span/deflection ratio for evaluation of actual L/defl value.
L/defl = ratio of Length between bearings, in inches, divided by the vertical Deflection due to creep, in inches, at the referenced panel point. Reported as 999 if greater than or equal to 999.
Loc = Location, starting location of left end of bearing or panel point (joint) location of deflection.
Max BC CSI = Maximum bending and axial Combined Stress Index for Bottom Chords for of all load cases.
Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for of all load cases.
Max Web CSI= Maximum bending and axial Combined Stress Index for Webs for of all load cases.
NCBCLL = Non-Concurrent Bottom Chord design Live Load in pounds per square foot.
PL = additional Load applied at a user specified angle on a truss Piece in pounds per linear foot or pounds.
PLB = additional vertical load added to a Bottom chord Piece of a truss in pounds per linear foot or pounds
PLT = additional vertical load added to a Top chord Piece of a truss in pounds per linear foot or pounds.
PP = Panel Point.
R = maximum downward design Reaction, in pounds, from all specified gravity load cases, at the indicated location (Loc).
-R = maximum upward design Reaction, in pounds, from all specified gravity load cases, at the identified location (Loc).
Rh = maximum horizontal design Reaction in either direction, in pounds, from all specified gravity load cases, at the indicated location (Loc).
RL = maximum horizontal design Reaction in either direction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).
Rw = maximum downward design Reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the identified location (Loc).
TCDL = Top Chord standard design Dead Load in pounds per square foot.
TCLL = Top Chord standard design Live Load in pounds per square foot.
U = maximum Vertical design reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).
VERT(CL) = maximum Vertical panel point deflection in inches due to Live Load and Creep Component of Dead Load in inches.
VERT(CTL) = maximum Vertical panel point deflection ratios due to Live Load and Creep Component of Dead Load, and maximum long term Vertical panel point deflection in inches due to Total load, including creep adjustment.
VERT(LL) = maximum Vertical panel point deflection in inches due to Live Load.
VERT(TL) = maximum Vertical panel point long term deflection in inches due to Total load, including creep adjustment.
W = Width of non-hanger bearing, in inches.

Refer to ASCE-7 for Wind and Seismic abbreviations.
Uppercase Acronyms not explained above are as defined in TPI 1.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO._____, EXPIRATION DATE: _____.

SEQN: 53095	COMN	Ply: 1	Job Number: 29991	Cust: R 6697 JRef: 1XL-K96970008 T258
FROM:		Qty: 24	/29991 /Fetterville/Gonzales#031F	DrwNo: 364.22.1309.46293
			Truss Label: 30Ags/Com/50/412	/ BAF 12/30/2022



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	A Maximum Reactions (lbs)
TCLL: 30.00	Wind Std: ASCE 7-16	Pg: 30.0 Ct: 1.2 CAT: II	PP Deflection in loc L/defl L/#	Gravity / Non-Gravity
TCDL: 5.00	Speed: 125 mph	Pf: 25.2 Cs: 1.0	VERT(LL): 0.762 P 782 240	Loc: R+ / R- / Rh / Rw / 1U / RL
BCLL: 0.00	Enclosure: Closed	Lu: - Ce: 1.00	VERT(CL): 1.020 P 584 240	S 4158 /- /- /1216 /1136 /337
BCDL: 5.00	Risk Category: II	Snow Duration: 1.15	HORZ(LL): 0.234 J - - -	J 4158 /- /- /1216 /1136 /-
Des Ld: 40.00	Exp: C Kzt: NA		HORZ(TL): 0.313 J - - -	Wind reactions based on MWFRS
NCBCLL: 10.00	Mean Height: 19.00 ft	Building Code:	Creep Factor: 2.0	S Rig Wnd = 8.5 Min Req = 4.2 (Truss)
Soffit: 2.00	TCDL: 3.0 psf	IBC 2018	Max TC CSI: 0.875	J Rig Wnd = 8.5 Min Req = 4.2 (Truss)
Load Duration: 1.15	BCDL: 3.0 psf	TPI Std: 2014	Max BC CSI: 0.989	Bearings S & J are a rigid surface.
Spacing: 48.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: No	Max Web CSI: 0.877	Members not listed have forces less than 375#
	C&C Dist a: 5.00 ft	Loc. from endwall: Any		**Maximum Top Chord Forces Per Ply (lbs)**
	GCpi: 0.18	Plate Type(s):		Chords Tens. Comp.
	Wind Duration: 1.60	HS, WAVE	VIEW Ver: 22.02.00.0914.12	B - C 4465- 10464 F - G 3624 - 7761
				C - D 4352 - 9938 G - H 4360 - 9678
				D - E 4360 - 9678 H - I 4352 - 9938
				E - F 3624 - 7761 I - J 4465 - 10464

Lumber
Top chord: 2x6 SP 2400F 2.0E;
Bot chord: 2x6 SP SS Dense;
Webs: 2x4 SPF Stud: W2,W7 2x4 SPF #1/#2; W4, WS 2x4 SPF 2100f-1.8E;

Bracing
(a) Continuous lateral restraint, equally spaced on member.

Plating Notes
All plates are H6612(A2) except as noted.
(**) 1 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Purlins
In lieu of structural panels or rigid ceiling use purlins to laterally brace chords as follows:

Chord	Spacing(in oc)	Start(ft)	End(ft)
TC	24	-0.88	25.00
TC	24	25.00	50.88
BC	61	0.15	49.85

Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Loading
Bottom chord checked for 10.00 psf non-concurrent live load.
Truss designed for unbalanced snow loads.

Wind
Wind loads based on MWFRS with additional C&C member design.
Wind loading based on both gable and hip roof types.

Additional Notes
WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.

Maximum Bot Chord Forces Per Ply (lbs)			
Chords	Tens.	Comp.	
B - R	9782 - 4105	O - N	6030 - 2367
R - Q	8138 - 3416	N - M	8138 - 3328
Q - P	8138 - 3416	M - L	8138 - 3328
P - O	6030 - 2367	L - J	9782 - 4053

Maximum Web Forces Per Ply (lbs)			
Webs	Tens.	Comp.	
C - R	647 - 989	F - N	2199 - 899
R - E	1526 - 662	N - G	1027 - 1911
E - P	1027 - 1911	G - L	1526 - 662
P - F	2199 - 899	L - I	647 - 989

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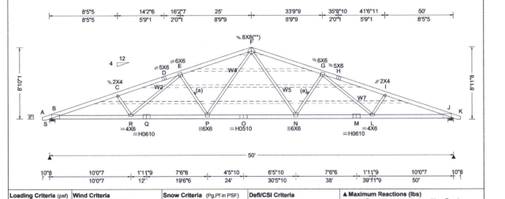
MD COA 07-68695

SEQN: 53097	GABL	Ply: 1	Job Number: 29991	Cust: R 6697 JRef: 1XL-K96970008 T259
FROM:		Qty: 2	/29991 /Fetterville/Gonzales#031F	DrwNo: 364.22.1309.51987
Page 1 of 2			Truss Label: 30Ags/SGab/50/412	/ BAF 12/30/2022



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	A Maximum Reactions (lbs)
TCLL: 30.00	Wind Std: ASCE 7-16	Pg: 30.0 Ct: 1.2 CAT: II	PP Deflection in loc L/defl L/#	Gravity / Non-Gravity
TCDL: 5.00	Speed: 125 mph	Pf: 25.2 Cs: 1.0	VERT(LL): 0.762 P 782 240	Loc: R+ / R- / Rh / Rw / 1U / RL
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BCDL: 5.00	Risk Category: II	Snow Duration: 1.15	HORZ(LL): 0.234 J - - -	J 4158 /- /- /1216 /1136 /-
Des Ld: 40.00	Exp: C Kzt: NA		HORZ(TL): 0.313 J - - -	Wind reactions based on MWFRS
NCBCLL: 10.00	Mean Height: 19.00 ft	Building Code:	Creep Factor: 2.0	S Rig Wnd = 8.5 Min Req = 4.2 (Truss)
Soffit: 2.00	TCDL: 3.0 psf	IBC 2018	Max TC CSI: 0.875	J Rig Wnd = 8.5 Min Req = 4.2 (Truss)
Load Duration: 1.15	BCDL: 3.0 psf	TPI Std: 2014	Max BC CSI: 0.989	Bearings S & J are a rigid surface.
Spacing: 48.0 "	MWFRS Parallel Dist: 0 to h/2	Rep Fac: No	Max Web CSI: 0.877	Members not listed have forces less than 375#
	C&C Dist a: 5.00 ft	Loc. from endwall: Any		**Maximum Top Chord Forces Per Ply (lbs)**
	GCpi: 0.18	Plate Type(s):		Chords Tens. Comp.
	Wind Duration: 1.60	HS, WAVE	VIEW Ver: 22.02.00.0914.12	B - C 4465- 10464 F - G 3624 - 7761
				C - D 4352 - 9938 G - H 4360 - 9678
				D - E 4360 - 9678 H - I 4352 - 9938
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Plating Notes
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Apply purlins to any chords above or below fillers at 24" OC unless shown otherwise above.

Loading
Bottom chord checked for 10.00 psf non-concurrent live load.
Truss designed for unbalanced snow loads.

Wind
Wind loads based on MWFRS with additional C&C member design.
Wind loading based on both gable and hip roof types.

Gable Studs
Dashed pieces are not analyzed and are optional; and may be attached at each end to adjacent pieces and members with connector plates, staples, nails, or other fasteners.

Maximum Bot Chord Forces Per Ply (lbs)			
Chords	Tens.	Comp.	
B - R	9782 - 4105	O - N	6030 - 2367
R - Q	8138 - 3416	N - M	8138 - 3328
Q - P	8138 - 3416	M - L	8138 - 3328
P - O	6030 - 2367	L - J	9782 - 4053

Maximum Web Forces Per Ply (lbs)			
Webs	Tens.	Comp.	
C - R	647 - 989	F - N	2199 - 899
R - E	1526 - 662	N - G	1027 - 1911
E - P	1027 - 1911	G - L	1526 - 662
P - F	2199 - 899	L - I	647 - 989

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For more information see these web sites: Alpine: alpinebw.com; TPI: tpinst.org; SBCA: sbcacomponents.com; ICC: iccsafe.org; AWC: awc.org

MD COA 07-68695

SEQN: 53097	GABL	Ply: 1	Job Number: 29991	Cust: R 6697 JRef: 1XL-K96970008 T259
FROM:		Qty: 2	/29991 /Fetterville/Gonzales#031F	DrwNo: 364.22.1309.51987
Page 2 of 2			Truss Label: 30Ags/SGab/50/412	/ BAF 12/30/2022

Additional Notes
Truss has been designed for vertical in-plane loads only. Any lateral/horizontal wind loads shall be transferred into the roof and ceiling diaphragms. Installation and design of these systems is the responsibility of the Building Designer in accordance with ANSI/TPI 1.

WARNING: Furnish a copy of this DWG to the installation contractor. Special care must be taken during handling, shipping and installation of trusses. See "WARNING" note below.

12/30/2022

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!
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MD COA 07-68695

ENGINEERING DEPARTMENT
14 S. HARRISON ST.
P.O. BOX 520
EASTON, MD 21601
410-820-8822

APPROVED:
TOWN OF EASTON - PLANNING & ZONING DATE

APPROVED:
TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED:
EASTON UTILITIES - ENGINEER DATE

OWNER / DEVELOPER / APPLICANT
BLUE CRAB SELF STORAGE, LLC
8693 BROOKS DR.
EASTON, MD 21601
410-822-7777

SEAL

DES. BY: DML
DRN BY: FMB
CHK BY:
DATE:

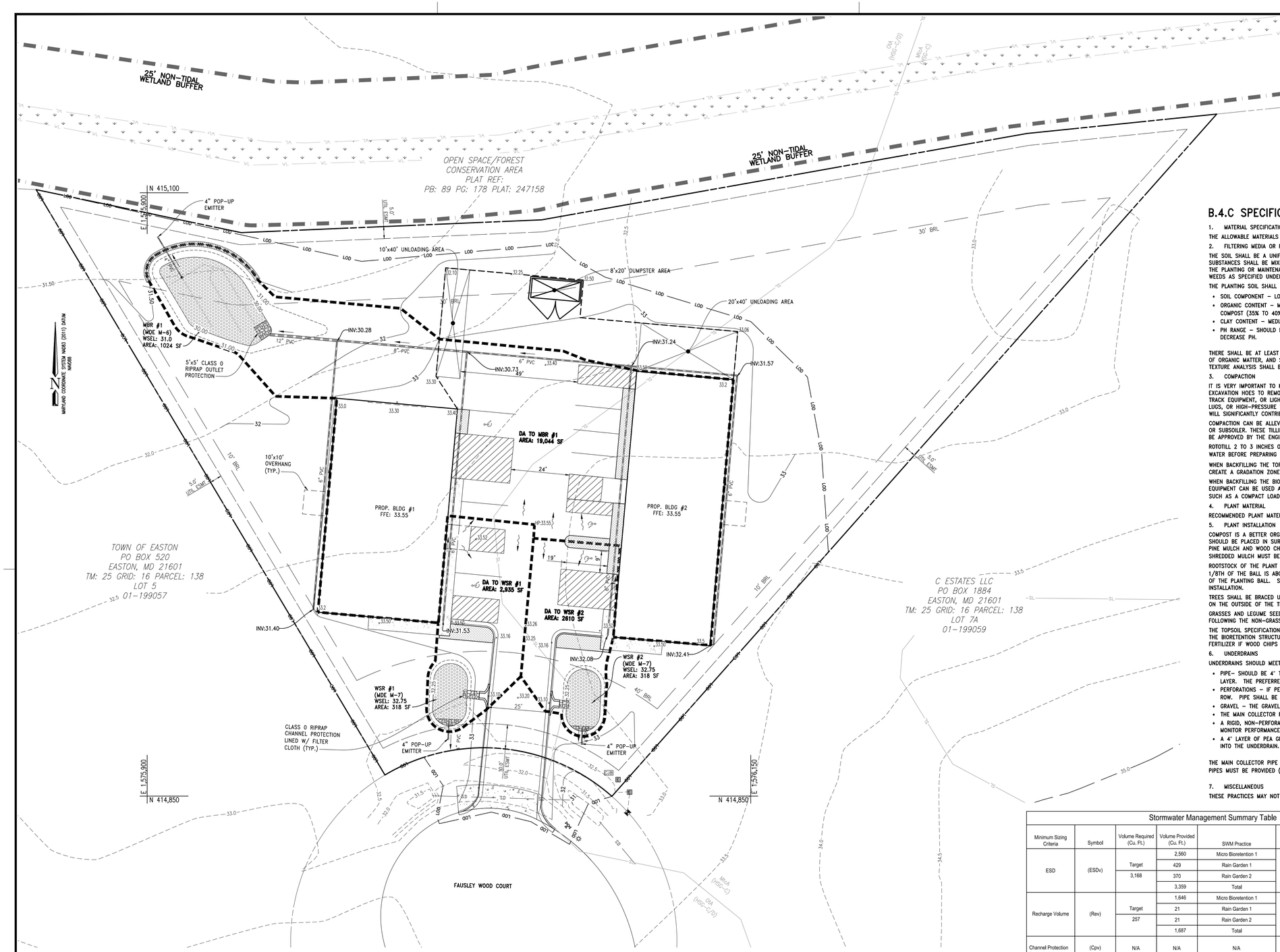
BY	NO.	REVISION	DATE:
FMB		ORIGINAL DRAWING DATE	12/1/23

SEALED TRUSS DRAWINGS

MISTLETOE HALL FARM SUBDIVISION
28860 FAUSLEY WOOD COURT
WARD DISTRICT #1, EASTON, MD

SCALE
AS SHOWN

SHEET NO.
19



PROPOSED STORMWATER MANAGEMENT PLAN

SCALE: 1"=20'

SITE DATA:

TOTAL SITE AREA: 1.56 AC.
EXISTING IMPERVIOUS: 0.0 AC.
PROPOSED IMPERVIOUS: 0.51 AC.

PARKING NOTES:

PARKING REQUIRED: 11 SPACES
USE:MINI-WAREHOUSE OR SELF-STORAGE
4 SPACES + 2 FOR MANAGER'S QUARTERS
6 SPACES
USE: CONSTRUCTION-RELATED BUSINESSES
1 SPACE / 1,000SF GFA MINIMUM
1 SPACE / 2000SF GFA MAXIMUM
4,400 / 1,000 = 4.4 SPACES MINIMUM
4,400 / 200 = 22 SPACES MAXIMUM
5 SPACES MIN., 22 SPACES MAX.

PROPOSED PARKING: 12 SPACES

LEGEND

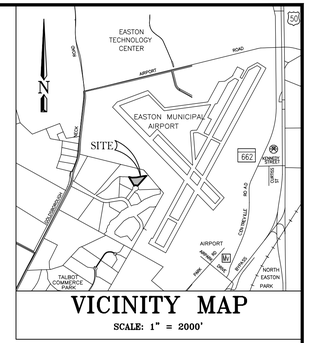
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- —10— EXISTING MAJOR CONTOUR
- — 2 — EXISTING MINOR CONTOUR
- ROOF DRAIN SPOUT
- LOD LIMITS OF DISTURBANCE
- SOILS DELINEATION
- SD EXISTING STORM DRAIN PIPE
- INV. INVERT
- N/F NOW OR FORMERLY
- L. F. LIBER ; FOLIO
- B.R.L. BUILDING RESTRICTION LINE
- UTILITY BOX
- POWER TRANSFORMER
- FIRE HYDRANT
- LIGHT POLE
- NON TIDAL WETLANDS
- PROPOSED SWM FACILITY
- PROPOSED STORMDRAIN PIPES
- PROPOSED STRUCTURE
- DRAINAGE AREA
- MICRO-BIORETENTION WEIR
- PROPOSED CONTOURS

SOILS TABLE				
MAP UNIT SYMBOL	MAP UNIT NAME	HSG TYPE	K FACTOR, WHOLE SOIL	HYDRIC
MtcA	Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C	0.49	5%
OfA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C/D	0.43	*86%

*SOILS THAT CONTAIN POTENTIALLY HYDRIC COMPONENTS

NOTES:

1. CONTRACTOR IS SOLELY RESPONSIBLE TO LOCATE ALL UTILITIES TO DETERMINE EXACT LOCATIONS, AND TO RELOCATE/RECONNECT AS REQUIRED.
2. EXISTING CONDITIONS PROVIDED TO CPJA BY DAN LERIAN



VICINITY MAP

SCALE: 1" = 2000'

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION.

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICROBIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- SOIL COMPONENT – LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT – MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT – MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE – SHOULD BE BETWEEN 5.5 – 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE- SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE).
- PERFORATIONS – IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE ⅜" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A ¼" (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH.
- GRAVEL – THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (⅛" TO ½" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.

Stormwater Management Summary Table					
Minimum Sizing Criteria	Symbol	Volume Required (Cu. Ft.)	Volume Provided (Cu. Ft.)	SWM Practice	Notes
ESD	(ESDv)	Target 3,168	2,560	Micro Bioretention 1	
			429	Rain Garden 1	
			370	Rain Garden 2	
			3,359	Total	
Recharge Volume	(Rev)	Target 257	1,646	Micro Bioretention 1	
			21	Rain Garden 1	
			21	Rain Garden 2	
			1,687	Total	
Channel Protection Storage Volume	(Cpv)	N/A	N/A	N/A	CPV not required for this site
Overbank Flood Protection	(Qp10)	N/A	N/A	N/A	Site discharges to FCE, controlling downstream development
Extreme Flood Volume	(QF)	N/A	N/A	N/A	No historical flooding or floodplain downstream of site

GRAPHIC SCALE
20 0 10 20 40
SCALE: 1" = 20'

* FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
I) THREE (3) CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND II.) SEVEN (7) CALENDAR DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

1/4/2024

STATE OF MARYLAND — THOMAS J. WEIR — No. 49860 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.49860, EXPIRATION DATE: 1-10-2025

UPDATES/REVISIONS:

STORMWATER MANAGEMENT PLAN
28860 FAUSLEY WOOD COURT
TAX MAP 25, GRID 16, TAX PARCEL 138

MISTLETOE HALL, LOT 6C
EASTON
TALBOT COUNTY, MARYLAND

CPJ Associates
Charles P. Johnson & Associates, Inc.
Civil and Environmental Engineers • Planners • Landscape Architects • Surveyors
45 Old Solomons Island Rd., Ste. 204 Annapolis, MD 410-266-5599 Fax: 410-266-3871
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CLIENT:
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8693 BROOKS DRIVE
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(410) 822-7777
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TAX ACCOUNT NO. 01-199582		STANDARD GRADING PLAN NO.	
DESIGN JWW		SHEET 01	OF 03
DRAFT SC			
DATE 12/04/2023		FILE NO: 2022-5067-24-01	
SCALE AS SHOWN			

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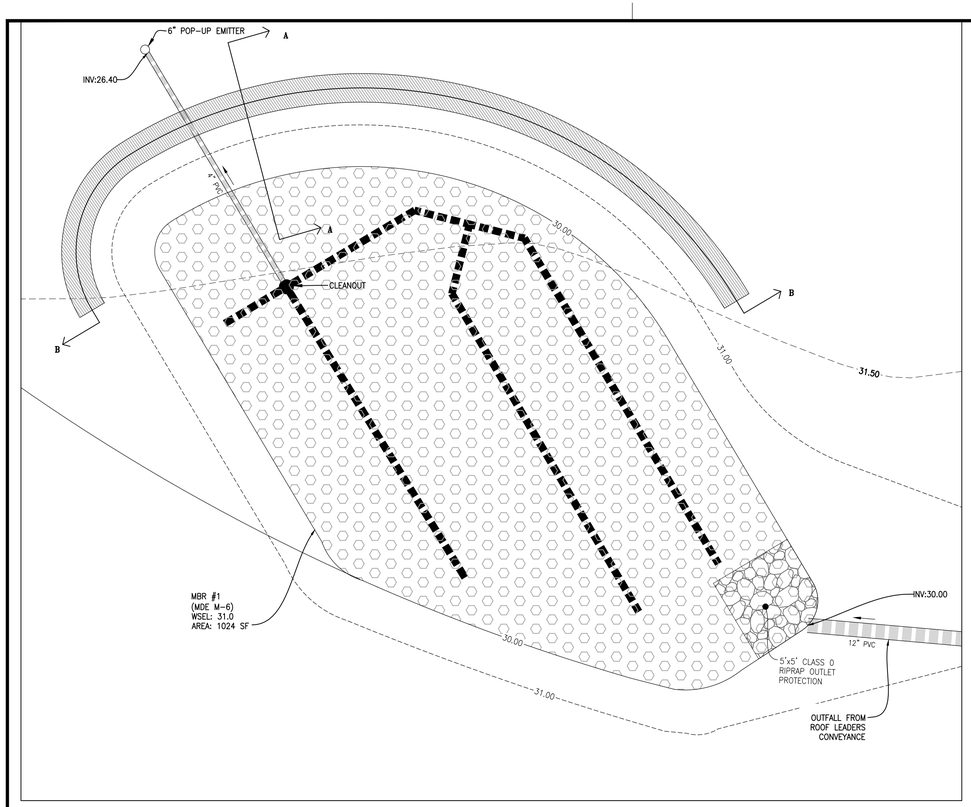
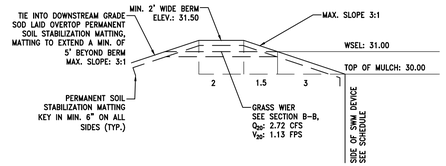


MICRO-BIORETENTION #1 INSET
SCALE: 1"=5'

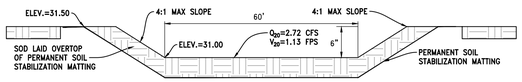
MICRO-BIORETENTION #1 PLANTING			
SYMBOL	LATIN NAME	COMMON NAME	QUANTITY
IV	IRIS VERSICOLOR	BLUE FLAG	150
PA	PACKERA AUREA	GOLDEN RAGWORT	150
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	150
*ALTERNATE SPECIES MAY BE USED IN PLACE OF THE REFERENCED PLANTS, PROVIDED THAT THE SPECIES ARE NATIVE TO TALBOT COUNTY AND THE PLANTINGS ARE APPROVED BY THE TOWN OF EASTON PRIOR TO INSTALLATION			

LEGEND

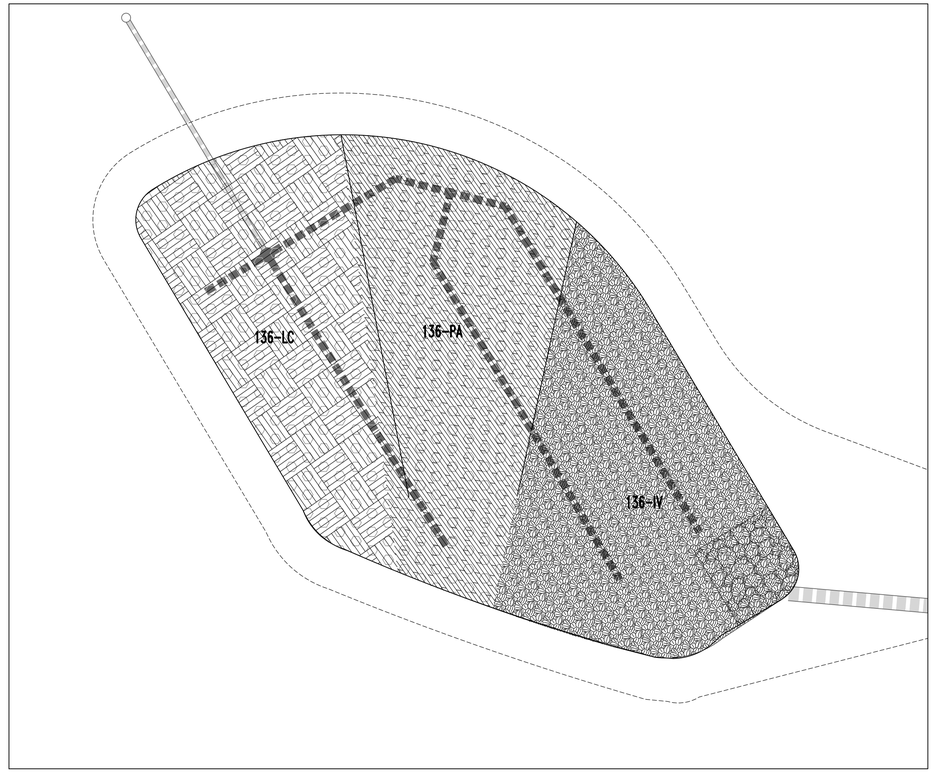
- 32.5 — PROPOSED CONTOUR LINE
- 4" PERF. UNDERDRAIN
- PROPOSED STORMDRAIN PIPE
- PROPOSED WEIR
- SWM DEVICE
- 2.00 — EXISTING CONTOUR



WEIR CREST SECTION A-A
SCALE: N.T.S



WEIR CREST SECTION B-B
SCALE: N.T.S

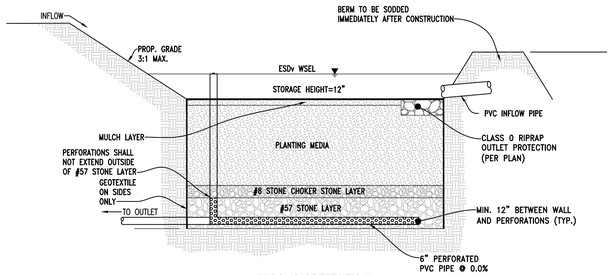


MICRO-BIORETENTION #1 PLANTINGS INSET
SCALE: 1"=5'

Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration-

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
planting soil [2' to 4' deep]	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content <5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone; washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infitration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f_c=3500 psi @28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) *not using previously approved State or local standards* requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone(AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand

MICRO-BIORETENTION SCHEDULE	
	MBR
WATER SURFACE ELEVATION	31.00
FILTER BED ELEVATION	30.00
BOTTOM OF MULCH ELEVATION	29.75
PLANTING SOIL DEPTH	2.00
BOTTOM OF PLANTING SOIL ELEVATION	27.75
BOTTOM OF CHOKER LAYER	27.25
UNDERDRAIN INVERT	26.50
BOTTOM OF GRAVEL JACKET	26.25
SURFACE AREA (SF)	1024



MICRO-BIORETENTION TYPICAL CROSS SECTION
SCALE: NTS

UPDATES/REVISIONS:

STORMWATER MANAGEMENT DETAILS 1 of 2
28860 FAUSLEY WOOD COURT
TAX MAP 25, GRID 16, TAX PARCEL 138

MISTLETOE HALL, LOT 6C
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1/4/2024

STATE OF MARYLAND — THOMAS W. JAMES — No. 49860 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.49860, EXPIRATION DATE: 1-10-2025

CLIENT:
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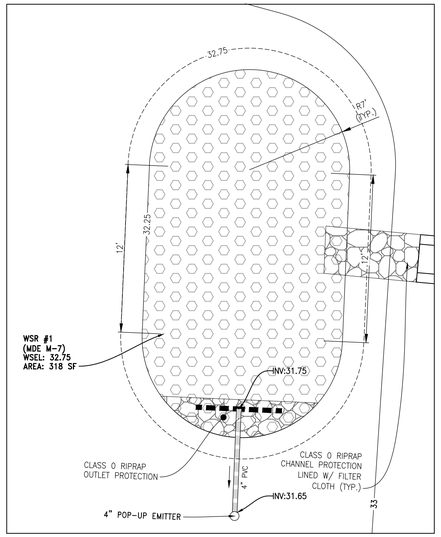
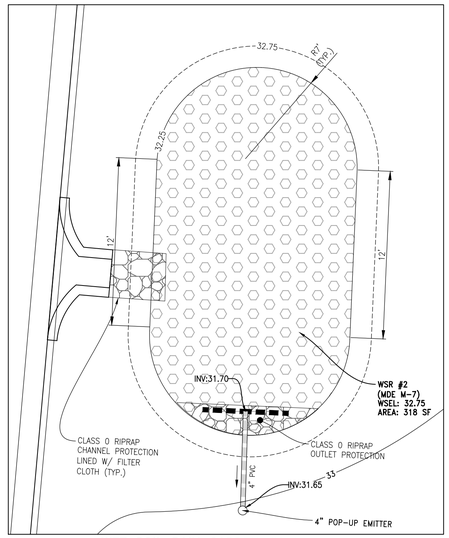
TAX ACCOUNT NO. 01-199182	STANDARD GRADING PLAN NO.
DESIGN JWW	SHEET 02 OF 03
DRAFT SC	
DATE 12/04/2023	FILE NO: 2022-5067-24-02
SCALE AS SHOWN	

Attached XREFS: _TB24x36 — ENG\TB24x36\40-099\04-099\24-099\21-099\94-099 — PR. SITE RUNOFF\94-099 — EX. SITE RUNOFF



WET SOIL RAIN GARDEN #1 INSET
SCALE: 1"=5'



WET SOIL RAIN GARDEN #2 INSET
SCALE: 1"=5'

WET SOIL RAIN GARDEN SCHEDULE		
DESCRIPTION	1	2
WATER SURFACE ELEVATION	32.75	32.75
FILTER BED ELEVATION	32.25	32.25
BOTTOM OF MULCH ELEVATION	32.00	32.00
BOTTOM OF PLANTING SOIL ELEVATION	30.50	30.50
BOTTOM OF STONE	30.00	30.00
SURFACE AREA	318	318

ESD SUMMARY CHART

DRAINAGE AREA	TYPE OF ESD PRACTICE	NAME OF ESD PRACTICE (STRUCTURE NAME)	ON-SITE OR OFF-SITE STRUCTURE	RUNOFF CURVE NUMBER (RCN) WEIGHTED	MARYLAND GRID COORDIATE NAD 83 METERS NORTHING	MARYLAND GRID COORDIATE NAD 83 METERS EASTING	ESD PRACTICE TOTAL DRAINAGE AREA (ACRES)	ESD PRACTICE IMPERVIOUS DRAINAGE AREA (ACRES)	SURFACE AREA OF ESD PRACTICE (ACRES)	TARGET PE (IN.)	ACTUAL PE (IN.)	TARGET ESDv (FT^3)	ACTUAL ESDv (FT^3)
1	MICRO-BIORETENTION	MICRO-BIORETENTION #1	ON	92	415,059	1,575,929	0.44	0.32	0.02	0.81	2.24	926	2,560
2	WET SOIL RAIN GARDEN	WSR #1	ON	89	414,892	1,576,025	0.07	0.05	0.01	1.08	2.70	172	429
3	WET SOIL RAIN GARDEN	WSR #2	ON	89	414,890	1,576,078	0.06	0.04	0.01	1.22	2.70	167	370
TOTAL\ AVERAGE				90			0.58	0.40	0.04	0.80	1.65	1,265	2,801

QUANTITY SUMMARY CHART

PRACTICE	DA (ACRES)	IMPERVIOUS (ACRES)	RCN	Tc (HOURS)	PRE 2 YEARS	POST 2 YEARS	W.S.E	PRE 10 YEARS	POST 10 YEARS	W.S.E
MICRO-BIORETENTION #1	0.44	0.32	92	0.10	0.87	0.60	31.00	1.97	1.10	31.00
WSR #1	0.07	0.05	89	0.10	0.13	0.13	32.75	0.30	0.26	32.75
WSR #2	0.06	0.04	89	0.10	0.12	0.09	32.75	0.27	0.24	32.75

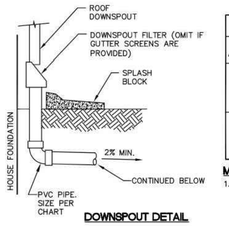
LEGEND

- 32.5 — PROPOSED CONTOUR LINE
- 6" PERF. UNDERDRAIN
- PROPOSED STORMDRAIN PIPE
- SWM DEVICE

CONSTRUCTION INSPECTIONS

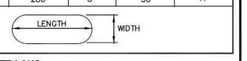
1. CALL THE TOWN OF EASTON ENGINEERING DEPARTMENT AT 410-820-8822 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:
2. EXCAVATION TO SUB-GRADE AND BEFORE PLACEMENT OF SOIL.
3. FINE GRADING AND PERMANENT STABILIZATION OF ADJACENT SOILS.

SITE PLAN SYMBOL



SIZING CHART

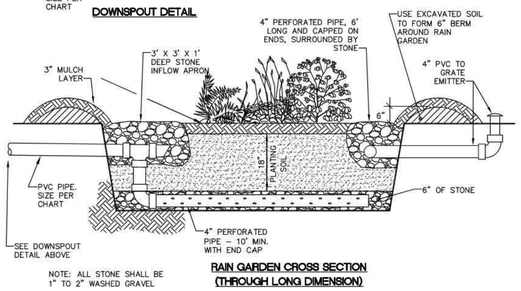
TREATED AREA (SQ. FT.)	RAIN GARDEN AREA (SQ. FT.)	PVC SIZE	SUGGESTED DIMENSIONS	
			LENGTH	WIDTH
500	70	4"	14	6
1000	140	6"	20	8
1500	210	6"	24	10
2000	280	8"	30	11



MINIMUM SETBACKS

1. 10 FEET FROM A BUILDING OR PROPERTY LINE

DOWNSPOUT DETAIL



NOTE: ALL STONE SHALL BE 1" TO 2" WASHED GRAVEL

RAIN GARDEN CROSS SECTION (THROUGH LONG DIMENSION)

APPROVAL
TOWN ENGINEER
1/2020
DATE

TOWN OF EASTON STANDARD DETAILS

WET SOIL RAIN GARDEN CONSTRUCTION DETAIL

ISSUED: JANUARY 2020 STANDARD NO.: TOE-SWM-6.01-3

CONSTRUCTION NOTES

1. RAIN GARDENS SHALL BE CONSTRUCTED AFTER ALL UPSTREAM AREAS HAVE BEEN STABILIZED WITH EITHER IMPERVIOUS SURFACES OR TOPSOIL AND VEGETATION.
2. RAIN GARDEN EXCAVATION SHALL BE ROUGH AND UNCOMPACTED. IF SMEARING OF BOTTOM OR WALLS OCCURS, SCRATCH WITH A RAKE AS NECESSARY TO EXPOSE ROUGH EARTH.
3. LANDSCAPING MATERIALS SHOULD BE INSTALLED DURING THE SPRING OR FALL IF POSSIBLE.
4. OVERFLOW FROM RAIN GARDEN SHALL BE DIRECTED OVER A 3" DEEP BY 10' WIDE DEPRESSION IN THE PERIMETER BERM AND SHALL NOT BE A SOURCE OF DOWNSTREAM EROSION.
5. THE OWNER IS ENCOURAGED TO ENHANCE THE VISUAL APPEAL OF THE RAIN GARDEN BY USING STONE OR TIMBER RETAINING WALLS INSTEAD OF USING EXCAVATED SOIL. EPDM LINER MAY BE NEEDED TO MAKE A WATERTIGHT WALL.

SOIL SPECIFICATIONS

1. THE RAIN GARDEN PLANTING SOIL SHALL HAVE A COMPOSITION OF 50% SAND, 20% WOOD CHIPS LEAVES, AND 30% TOPSOIL.
2. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, DEBRIS, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH.
3. SOIL SHALL BE FREE OF PLANTS (OR PLANT PARTS) OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, OR CANADIAN THISTLE.
4. PLANTING SOIL SHALL BE OVERFILLED BY 2-3" TO ALLOW FOR SETTLING. DO NOT COMPACT.

MAINTENANCE CRITERIA:

1. WATER PLANTS LIBERALLY THE FIRST GROWING SEASON AND DURING PERIODS OF DROUGHT THEREAFTER.
2. REMOVE ACCUMULATED TRASH AND VEGETATIVE DEBRIS EVERY FEW MONTHS AND ENSURE THAT INFLOW PIPE(S) FLOW FREELY.
3. PRUNE AND REMOVE DEAD VEGETATION PERIODICALLY, AS WITH ANY LANDSCAPE BED. IF SPECIFIC PLANTS ARE NOT SURVIVING, REPLACE WITH A DIFFERENT SPECIES. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
4. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH. THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS.
5. REFRESH MULCH WITH AN ADDITIONAL THIN LAYER ANNUALLY. REMOVE ALL MULCH AND REPLACE WITH A NEW THREE-INCH LAYER EVERY 3-5 YEARS.

APPROVAL
TOWN ENGINEER
1/2020
DATE

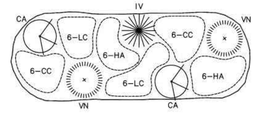
TOWN OF EASTON STANDARD DETAILS

WET SOIL RAIN GARDEN NOTES

ISSUED: JANUARY 2020 STANDARD NO.: TOE-SWM-6.01-4

WET SOIL RAIN GARDEN PLANTING SCHEDULE

BOTANICAL NAME	COMMON NAME	SYMB.	SIZE	RAIN GARDEN SIZE (SQ. FT.) 70 QTY.	140 QTY.	210 QTY.	280 QTY.
SHRUBS:							
CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	CA	2 GAL.	1	2	3	3
ITEA VIRGINICA	VIRGINIA SWEETSPIRE	IV	2 GAL.	1	1	2	3
VIBURNUM NUDUM	SMOOTH WITHEROD	VN	2 GAL.	1	2	2	3
GROUND COVER:							
CALAMAGROSTIS CANADENSIS	BLUE JOINT GRASS	CC	PLUG	6	12	18	24
HELENIUM AUTUMNALE	YELLOW SNEEZEWEED	HA	PLUG	6	12	18	24
LOBELIA CARDINALIS	CARDINAL FLOWER	LC	PLUG	6	12	18	24



PLANTING EXAMPLE
FOR 140 SQ. FT. RAIN GARDEN

PLANT SELECTION

1. THE OWNER IS ENCOURAGED TO WORK WITH A REGISTERED LANDSCAPE ARCHITECT OR NURSERY TO CREATE AN ATTRACTIVE AND FUNCTIONAL MIX OF NATIVE PLANT SPECIES THAT ARE TOLERANT OF BOTH SATURATED AND DRY CONDITIONS.
2. INFORMATION ON APPROPRIATE SPECIES IS AVAILABLE BY TYPING "BAYSCAPES NATIVE PLANTS" INTO YOUR FAVORITE SEARCH ENGINE.
3. THE SCHEDULE AND TYPICAL DETAIL BELOW CAN BE USED AS A BASIS FOR PLANT SELECTION AND GROUPINGS, IF DESIRED.

APPROVAL
TOWN ENGINEER
1/2020
DATE

TOWN OF EASTON STANDARD DETAILS

WET SOIL RAIN GARDEN PLANTING NOTES AND SCHEDULE

ISSUED: JANUARY 2020 STANDARD NO.: TOE-SWM-6.01-5

APPROVED:

TOWN OF EASTON – PLANNING & ZONING DATE

APPROVED:

TOWN OF EASTON – TOWN ENGINEER DATE

APPROVED:

EASTON UTILITIES – ENGINEER DATE

UPDATES/REVISIONS:

STORMWATER MANAGEMENT DETAILS 2 of 2
28860 FAUSLEY WOOD COURT
TAX MAP 25, GRID 16, TAX PARCEL 138

MISTLETOE HALL, LOT 6C

EASTON
TALBOT COUNTY, MARYLAND

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1/4/2024

STATE OF MARYLAND — THOMAS M. LEHNERT — No. 49980 — PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.49980, EXPIRATION DATE: 1-10-2025

CLIENT:
BLUE CRAB SELF STORAGE, LLC
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(410) 822-7777
DANLERIAN@YAHOO.COM

TAX ACCOUNT NO. 01-199182	STANDARD GRADING PLAN NO.
DESIGN JWW	SHEET 03 OF 03
DRAFT SC	
DATE 12/04/2023	FILE NO: 2022-5067-24-03
SCALE AS SHOWN	

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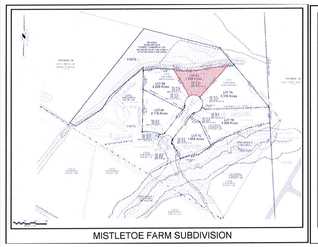
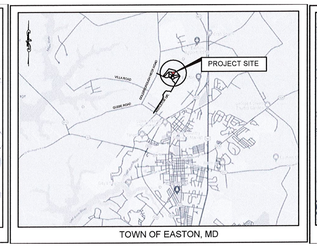
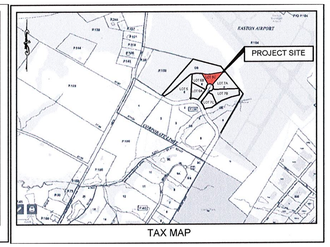
Attached Xrefs: TB24x36 - ENG/TB24x36/40-099/04-099/24-099/21-099/94-099 - PR: SITE RUNOFF/94-099 - EX: SITE RUNOFF







LANDSCAPE TABULATIONS

LANDSCAPE PLANT LIST				
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON	SIZE
CC	5	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	8'
VD	3	VIBURNUM DENTATUM	ARROWOOD VIBURNUM	3 GAL.
RK	21	ROSA x KNOCK OUT	RED KNOCK OUT ROSE	3 GAL.
SB	18	SPIRAEA x BUMALDA	ANTHONY WATERER SPIREA	3 GAL.
IG	21	ILEX GLABRA	INKBERRY	3 GAL.
NF	23	NEPETA x FASSENII	CATMINT	1 GAL.
PA	12	PANICUM VIRGATUM	SWITCHGRASS	1 GAL.

LANDSCAPE AREA TAB		
TOTAL LOT AREA = 67,910 SF		
TOTAL LANDSCAPE AREA REQUIRED = 8,498 SF OF 12.5% OF TOTAL LOT AREA		
	LANDSCAPE AREA #1	3,484 SF
	LANDSCAPE AREA #2	2,966 SF
	LANDSCAPE AREA #3	614 SF
	LANDSCAPE AREA #4	869 SF
	LANDSCAPE AREA #5	639 SF
	TOTAL LANDSCAPE AREA	8,572 SF

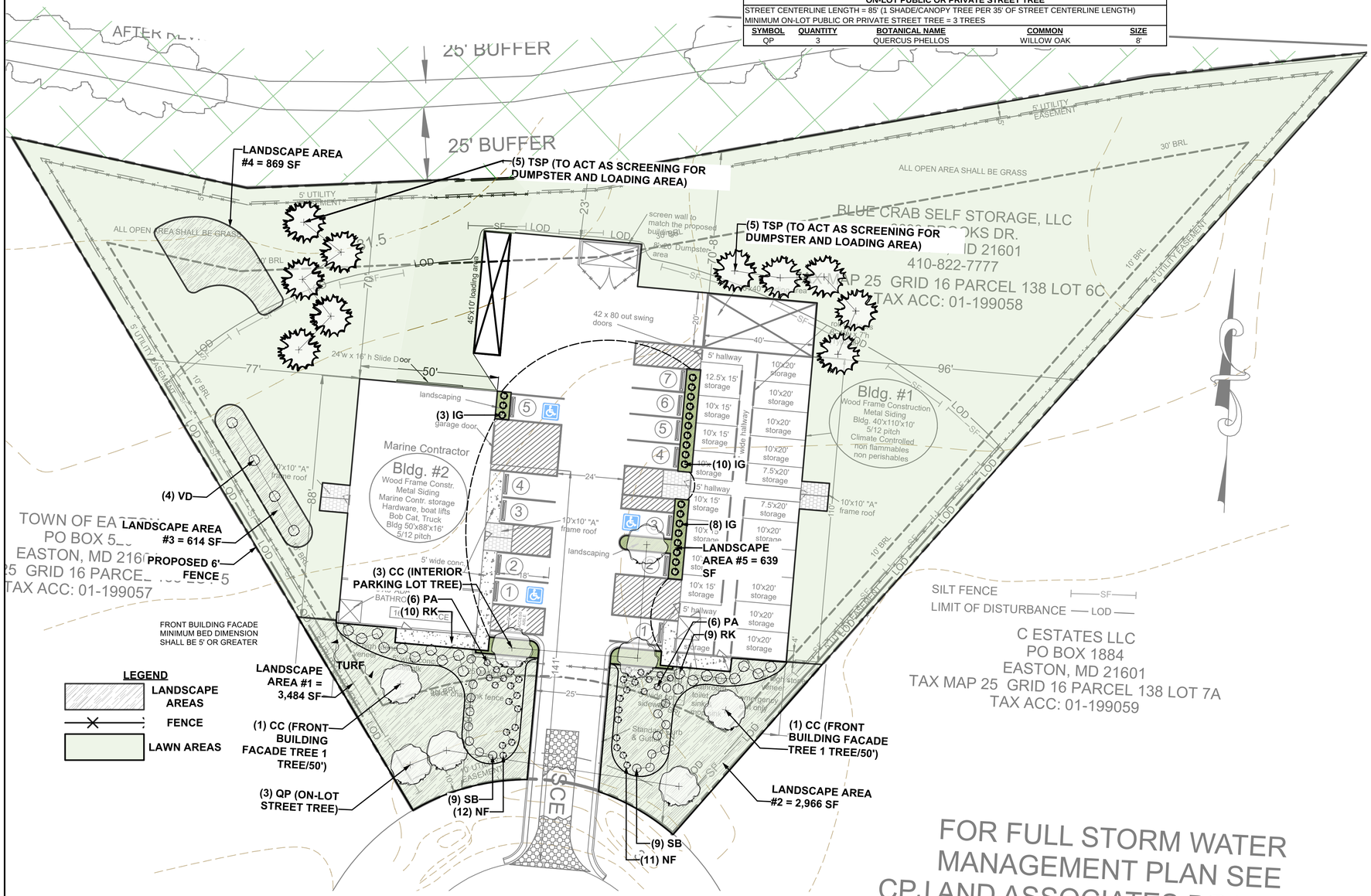
OVERALL MINIMUM TREE PLANTINGS				
TOTAL AREA DISTURBED = 19,700 SF (DISTURBED AREA 11,001 TO 100,000 SF = 1 TREE/1,500 SF)				
MINIMUM TREE PLANTINGS REQUIRED = 14 TREES				
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON	SIZE
CC	2	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	8'
TSP	10	THUJA STANDISHII X PLICATA	GREEN GIANT ARBORVITAE	8'
QP	3	QUERCUS PHELLOS	WILLOW OAK	8'

ON-LOT PUBLIC OR PRIVATE STREET TREE				
STREET CENTERLINE LENGTH = 85' (1 SHADE/CANOPY TREE PER 35' OF STREET CENTERLINE LENGTH)				
MINIMUM ON-LOT PUBLIC OR PRIVATE STREET TREE = 3 TREES				
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON	SIZE
QP	3	QUERCUS PHELLOS	WILLOW OAK	8'

NOTE: *Plant material in conformance with the American Standard for Nursery Stock, latest edition*

NOTE: *Landscaping installed within the next planting season of occupancy or within 6 months of substantial completion (date on which the exterior walls and roofs have been installed) of any Building, whichever occurs first, provided that an extension may be granted by the Declarant.*

NOTE: *In the event that the specified plant material is nto available, equivalent plantings (size, type, native where applicable) will be provided.*



McHALE LANDSCAPE DESIGN, INC.

©McHale Landscape Design, Inc.

DRAWING TITLE:

28860 FAUSLEY WOOD COURT
TAX MAP 25, GRID 16, TAX PARCEL 138
MISTLETOE HALL, LOT 6C
EASTON
TALBOT COUNTY, MARYLAND

DRAWING TITLE:

LANDSCAPE PLAN

SCALE: 1" = 20'-0"

DATE: 02-08-23	
DRAWN BY:	CHECKED BY:
REVISION DATES:	
07/21/23	
09/27/23	
01/05/24	

SHEET NUMBER:	
JOB NUMBER:	
DRAWING NUMBER:	
A100	

Mistletoe Hall, Lot 6C

SWM Computations and Report

December 2023

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01/04/2024

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I - Narrative

Existing Conditions

This project, known as Mistletoe Hall, Lot 6C, is located at 28860 Fausley Wood Court in Easton. The project site is located on a parcel totaling approximately 1.56 acres. The site is zoned I-1 – Select Industrial District.

The site, in existing conditions, is unimproved. The site is stabilized with turf lawn. There are no steep slopes or other environmental features located onsite, though wetlands are located immediately to the North of the property. These wetlands are encompassed by a Forest Conservation Easement, dedicated to the Town of Easton during the original subdivision process. In existing conditions runoff from the site discharges to both the South and North of the property. The Northern discharge point discharges to the wetland and Forest Conservation Easement, while the Southern discharge point discharges to the public right-of-way of Mistletoe Drive.

There are two soil types located onsite, see Table 1-1 for the summary of the soils. There are no visible signs of erosion location onsite.

Table 1-1

Map Unit Symbol	*Map Unit Name*	*Hydric*	*Hydrologic Soil Group*	*K-Factor (Whole Soil)*
OtA	*Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain*	*Y**	*C/D*	*0.43*
MtcA	*Mattapex silt loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain*	*Y**	*C*	*0.49*

**Soil contains potentially hydric components*

Resource Mapping

a. **Primary Environmental Features identified onsite:**
   1. **Streams** – There are no streams located onsite.
   2. **Stream Order** – N/A
   3. **Stream Buffers** – N/A
   4. **Wetlands and Wetland Buffers** – There are no wetlands or wetland buffers located onsite. Wetlands are located immediately to the North, however the buffer does not encroach on the subject property.
   5. **Floodplain** – The site lies within Flood Zone 'X' – Area of Minimal Flooding as shown on the FEMA flood insurance rate maps for Talbot County, Maryland. Map No. 24041C0187D, effective July 20, 2016.
   6. **Steep Slopes** – Steep slopes do not exist on the subject property.

b. **Secondary Environmental Features identified onsite:**
   1. **Critical Area** – This site is not located within the Chesapeake Bay Critical Area Overlay.
   2. **Soils** – There are two soil types located onsite, see Table 1-1 for a summary.

3. **Forests** – There are no forests located onsite. An existing Forest Conservation Easement is located immediately to the North of the property.
4. **Cultural Resources** – This site is not located within a Historic District and there are no other known Cultural Resources located onsite.
5. **Miscellaneous** – No additional secondary environmental features are known to exist onsite.

Stormwater Management Concept

a. Alternative Surfaces

1. **Greens Roofs** shall not be utilized as green roofs are not included in the architectural design.
2. **Pervious Pavements** shall not be utilized as this device typically works best in sandy soils and the areas available for this practice are being treated in other devices.
3. **Reinforced Turf** shall not be utilized as this device typically works best in sandy soils and the areas available for this practice are being treated in other devices.

b. Non-Structural Practices

1. **Rooftop Disconnects** shall not be utilized as this practice works best in sandy soils, and the rooftop is being treated in other devices.
2. **Non-rooftop Disconnects** will not be utilized as this practice works best in sandy soils, and the areas available for this practice are being treated in other devices.
3. **Sheet flow to Conservation Areas** will not be used as part of this development as the areas available for this practice are being treated in alternative, more efficient, practices.

c. Micro-Scale Practices

1. **Rainwater Harvesting** will not be used as there are no plans for greywater reuse, rendering this practice impractical.
2. **Submerged Gravel Wetlands** will not be used as the areas available for use in this practice are not large enough to maintain submerged flow conditions, which is vital to the functionality of this practice.
3. **Landscape Infiltration** will not be utilized as the areas available for this practice are being treated in more efficient practices.
4. **Infiltration Berms** will not be utilized as this practice works best in high infiltration rate soil and infiltration berms have limited capacity to meet ESDv requirements as a stand-alone practice, typically being use for pre-treatment for other devices.
5. **Drywells** shall not be utilized as the in-situ soils are HSG-C and are not conducive to infiltration.
6. **Micro-Bioretention** shall be utilized as this device will promote filtration of stormwater runoff. This device has not been designed with an underdrain system as the elevation of the site will not allow proper discharge. The device has been designed with an overflow weir to safely convey the larger 10-year storms.

7. **Rain Gardens** will be used as the areas available to drain to this practice are of allowable area. The Town of Easton Standard Detail for a Wet Soil Rain Garden (Std. Dtl. TOE-SWM-6.01-3) will be used in order to promote dewatering of the device.
8. **Swales** will not be used in this development as this practice is suitable for linear applications only.
9. **Enhanced Filters** will not be used as part of this development as the state minimums are being met with other devices.

Proposed Conditions

The owner of this property wishes to construct two buildings, along with a supporting parking lot. The property is currently undeveloped and will require no demolition prior to construction.

This development will provide stormwater management onsite, and a stable outfall for the drainage that leaves the site. Grading will only be performed where required to construct the buildings, parking lot, stormwater management, and to establish the drainage areas as shown on the development plans.

The existing site flow patterns will remain largely unchanged, while using minor grading and piping to support the use of the stormwater management. ESD measures will be implemented to the maximum extent practicable in order to meet the stormwater management requirements.

II - Environmental Site Design – ESDv

This site is being designed per the MDE 2000 Maryland Stormwater Management Manual. ESD devices are being proposed to the MEP and will adhere to the MDE Manual.

Per the Town of Easton Stormwater Management Ordinance (*'The Ordinance'*) planning techniques were implemented during the design process to ensure compliance with the applicable minimum control requirements. The discussion below outlines the various ways ESD was accomplished to the MEP.

a) Preserving and protecting natural resources
There are no sensitive environmental features located onsite.

b) Conserving natural drainage patterns.
Overall natural drainage patterns are largely left intact in the final development of this project. The Site Outfall locations will remain largely the same, and discharge conditions will not change as part of this development.

c) Minimizing impervious area
The proposed development is located near the front of the property in order to limit the amount of impervious required for the drive aisle and parking.

d) Reducing Runoff Volume

The entirety of the impervious surfaces will enter a stormwater management facility, reducing runoff leaving the site.

e) Using ESD practices to maintain 100 percent of the annual average predevelopment groundwater recharge volume
The proposed ESD practices meet and exceed the minimum recharge volume, required to maintain the groundwater recharge volume of the site.

f) Using green roofs, permeable pavement, reinforced turf, and other alternative surfaces
Green roofs are not included in the architectural design, and other alternative surface function best within sandy soils. The in-situ soils are HSG-C and do not lend themselves to the use of alternative surfaces.

g) Limiting soil disturbance, mass grading, and compaction
The proposed development is located near the front of the property, limiting the amount of disturbance and grading.

h) Clustering development
The proposed development is located near the front of the property, limiting the amount of impervious located onsite.

i) Any practices approved by the Administration
The proposed development will be treated using devices from Chapter 5 of the MDE Stormwater Design Manual.

Soils in the development areas have a type **'C'** HSG classification; therefore, the target RCN for woods in good condition is **70**. The proposed imperviousness for the site is 33**%**. Using Table 5.3 from the MDE Manual yields a target rainfall depth (P_E) of **1.60** inches and a target runoff depth (Q_E) of **0.56** inches. From the initial computations, the minimum and target ESD volume is **3,168** cf, of which **257** cf needs to be recharge volume.

Stormwater management will be achieved using a combination of the practices discussed above.

III – Minimum Control Requirements (SWM Ordinance 4.1)

Per the Town of Easton Stormwater Management Ordinance Section 4.1 planning techniques, nonstructural practices, and design methods specified in the Design Manual shall be used to implement ESD to the MEP. Stormwater Management plans for development projects subject to the ordinance shall be designed using ESD sizing criteria, recharge volume, water quality volume, and channel protection storage volume criteria according to the Design Manual and that the MEP standard is met when channel stability is maintained, predevelopment groundwater discharge is replicated, nonpoint source pollution is minimized, and structural stormwater management practices are used only if determined to be absolutely necessary.

ESD Sizing Criteria (ESD_v)
The proposed stormwater management exceeds the minimum ESD_v for the site.

Recharge Volume (Re_v)
The proposed stormwater management will maintain the predeveloped groundwater recharge for the site.

Water Quality Volume (WQ_v)
The proposed stormwater management exceeds the required WQ_v as it also exceeds the required ESD_v for the site.

Channel Protection Volume (Cp_v)
Per Chapter 2 of the MDE Stormwater Management Manual this development is not subject to the Channel Protection Volume requirement.

Overbank Flood Protection Volume (Q_p)
While not required, the Overbank Flood Protection Volume was considered during the design phase of this project. The proposed stormwater management will aid in the reduction of runoff from the proposed development, allowing stormwater to be temporarily stored in the devices.

Attachments

Designer:	TMH	Date: December 1, 2023	Checked By:	Date:
Title:	Mistletoe Hall, Lot 6C			Job No.: 2022-5067
Subject:	Stormwater Management Computations			Sheet No. of

Site Tabulations:

Location:	28860 Fausley Wood Ct							
Site Area:		67,891	sf	or	1.56	Ac.		
Soils:	HSG 'A' =	0	sf	or	0.00	Ac.	or	0 % of Site
	HSG 'B' =	0	sf	or	0.00	Ac.	or	0 % of Site
	HSG 'C' =	67,891	sf	or	1.56	Ac.	or	100 % of Site
	HSG 'D' =	0	sf	or	0.00	Ac.	or	0 % of Site

Impervious Surface Tabulations:

Proposed Impervious:	22,303	sf	or	0.51 Ac.
Alternative Surfaces:	0	sf	or	0.00 Ac.
Prop. Impervious:	**22,303**	**sf**	**or**	**0.51 Ac.**

Step 1: Determine SWM Requirements:

A. Determine Pre-Developed Conditions:

Soil Conditions and RCNs for "woods in good condition"

HSG	RCN*	Area	Percent
A	38	0.00 Ac.	0.00
B	55	0.00 Ac.	0.00
C	70	1.56 Ac.	100.00
D	77	0.00 Ac.	0.00

* RCN for "woods in good condition" (*AACo, Appx F*)

** Actual RCN is less than 30, use RCN = 38

Composite RCN for "woods in good condition"

RCN_{woods} = [(38x0.00ac)+(55x0.00ac)+(70x1.56ac)+(77x0.00ac)] / 1.56ac

RCN_{woods} = 70

Target RCN for "woods in good condition" = 70

B. Determine Target P_E Using Table 5.3

P_E = Rainfall used to size ESD practices

Proposed imperviousness (%I)

Impervious Area (from above): 22,303 sf

%I = Imperv. Coverage / Site Area = 22,303sf / 67,891sf = 32.85 % = 33 %

- Determine P_E from Table

Hydrologic Soil Group 'A'										
%I	RCN*	P_E = 1"	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	40									
5%	43									
10%	46									
15%	48	**38**								
20%	51	40	**38**	**38**						
25%	54	41	40	39						
30%	57	42	41	39	**38**					
35%	60	44	42	40	39					
40%	61	44	42	40	39					
45%	66	48	46	41	40					
50%	69	51	48	42	41	**38**				
55%	72	54	50	42	41	39				
60%	74	57	52	44	42	40	**38**			
65%	77	61	55	47	44	42	40			
70%	80	66	61	55	50	45	40			
75%	84	71	67	62	56	48	40	**38**		
80%	86	73	70	65	60	52	44	40		
85%	89	77	74	70	65	58	49	42	**38**	
90%	92	81	78	74	70	65	58	48	42	**38**
95%	95	85	82	78	75	70	65	57	50	39
100%	98	89	86	83	80	76	72	66	59	40

Use P_E = 0 inches of rainfall as the target for ESD implementation

Hydrologic Soil Group 'B'										
%I	RCN*	P_E = 1"	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	61									
5%	63									
10%	65									
15%	67	**55**								
20%	68	60	**55**	**55**						
25%	70	64	61	58						
30%	72	65	62	59	**55**					
35%	74	66	63	60	56					
40%	75	66	63	60	56					
45%	78	68	66	62	58					
50%	80	70	67	64	60					
55%	81	71	68	65	61	**55**				
60%	83	73	70	67	63	58				
65%	85	75	72	69	65	60	**55**			
70%	87	77	74	71	67	62	57			
75%	89	79	76	73	69	65	59			
80%	91	81	78	75	71	66	61			
85%	92	82	79	76	72	67	62	**55**		
90%	94	84	81	78	74	70	65	59	**55**	
95%	96	87	84	81	77	73	69	63	57	
100%	98	89	86	83	80	76	72	66	59	**55**

Use P_E = 0 inches of rainfall as the target for ESD implementation

Hydrologic Soil Group 'C'										
%I	RCN*	P_E = 1"	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	74									
5%	75									
10%	76									
15%	78									
20%	79	**70**								
25%	80	72	**70**	**70**						
30%	81	73	72	71						
35%	~~82~~	~~74~~	~~73~~	~~72~~	**70**					
40%	84	77	75	73	71					
45%	85	78	76	74	71					
50%	86	78	76	74	71					
55%	86	78	76	74	71	**70**				
60%	88	80	78	76	73	71				
65%	90	82	80	77	75	72				
70%	91	82	80	78	75	72				
75%	92	83	81	79	75	72				
80%	93	84	82	79	76	72				
85%	94	85	82	79	76	72				
90%	95	86	83	80	77	73	**70**			
95%	97	88	85	82	79	75	71			
100%	98	89	86	83	80	76	72	**70**		

Use P_E = 1.6 inches of rainfall as the target for ESD implementation

Hydrologic Soil Group 'D'										
%I	RCN*	P_E = 1"	1.2"	1.4"	1.6"	1.8"	2.0"	2.2"	2.4"	2.6"
0%	80									
5%	81									
10%	82									
15%	83									
20%	84	**77**								
25%	85	78								
30%	85	78	**77**	**77**						
35%	86	79	78	78						
40%	87	82	81	79	**77**					
45%	88	82	81	79	78					
50%	89	83	82	80	78					
55%	90	84	82	80	78					
60%	91	85	83	81	78					
65%	92	85	83	81	78					
70%	93	86	84	81	78					
75%	94	86	84	81	78					
80%	94	86	84	92	79					
85%	95	86	84	82	79					
90%	96	87	84	82	79	**77**				
95%	97	88	85	82	80	78				
100%	98	89	86	83	80	78	**77**			

Use P_E = 0 inches of rainfall as the target for ESD implementation

Composite P_E

HSG	Area	P_E		
A	0 sf	0 in	0sf x 0.00in / 67,891sf =	0 in
B	0 sf	0 in	0sf x 0.00in / 67,891sf =	0 in
C	67,891 sf	1.6 in	67,891sf x 1.60in / 67,891sf =	1.6 in
D	0 sf	0 in	0sf x 0.00in / 67,891sf =	0 in
			Composite P_E =	**1.6 in**

C. Compute Q_E:

Q_E = Runoff depth used to size ESD practices

Q_E = P_E * R_v , where:

P_E = 1.6 in (Composite P_E from above)

R_v = 0.05 + (0.009)(I); I = 32.9 %

= 0.05 + 0.009 x (32.9)

= 0.35

Q_E = 1.6 " x 0.35

= 0.56 inches

ESD Target for the Project

P_E = 1.60 Inches

Q_E = 0.56 Inches

D. Compute Minimum ESD_V & Re_V for Site:

Required Minimum ESD_V for Site:

ESD_V = $[(P_E) \times (R_v) \times (A)]/ 12$

Where: P_E = 1.60 in. (WQ_V)

R_v = 0.05 + (0.009 x %I)

= 0.05 + (0.009 x 33%)

= 0.35

Site Area: = 67,891 sf or 1.56 ac

Target ESD_V = [(1.60 in.) x (0.35) x (67,891sf)] / 12 =

= **3,168 cf**

Required Minimum Recharge Volume (Re_V) for Site:

Re_V = $[(S) \times (R_V) \times (A)]/ 12$

Where:

HSG	Area	Recharge Factor		Net 'S'
A	0.00 Ac	0.38	0.00 ac x 0.38 / 1.56 ac	0.00
B	0.00 Ac	0.26	0.00 ac x 0.26 / 1.56 ac	0.00
C	1.56 Ac	0.13	1.56 ac x 0.13 / 1.56 ac	0.13
D	0.00 Ac	0.07	0.00 ac x 0.07 / 1.56 ac	0.00
			Composite 'S' =	**0.13**

R_V = 0.05 + (0.009 x %I)

= 0.05 + (0.009 x 32.85%)

= 0.35

Target Re_V = [(0.13) x (0.35) x (67,891sf)] / 12

= **257 cf**

MDE Section 5.4.3 - Micro-Scale Practices

DA-A1: ESD Practice (M-6) - Micro Bioretention 1

Contributing Drainage Area	=	19,044	sf	or	0.44 Ac.
Impervious Surfaces in DA	=	14,109	sf	or	0.32 Ac.
Percent Imperviousness (%I)	=	74	%	= 14,109 sf / 19,044 sf	
Minimum Surface Area (A_f)	=	381	sf	MINIMUM; 2% of Contributing DA	
Provided Surface Area (A_f)	=	1,024	sf	≥ 381 sf O.K.	

Concept Design Computations:

ESD_V = (P_E x R_v x DA)/12

where: P_E = 15 in x (A_f/DA) *(MDE Eqn 5.2)*

= 15 in x (1,024sf / 19,044sf)

P_E = 0.81 in. *(Concept Design Estimate)*

R_V = 0.05 + (0.009 x %I)

= 0.05 + (0.009 x 74%)

= 0.72

ESD_V = (0.81 in. x 0.72 x 19,044 sf) / 12

= 926 cf *(Concept Design Estimate)*

Re_V = [(S) x (R_V) x (A)]/ 12

= [(0.13) x (0.72) x (19,044sf)] / 12

= 110 cf

Final Design Computations:

Media Storage: Surface Area x Depth x Void Ratio

Mulch	=	0.25	ft	*Shredded Hardwood*
Filter Media	=	2	ft	*Bioretention Soil*
Choker Layer	=	0.5	ft	*#8 Stone*
Gravel Jacket	=	1	ft	*#57 Stone*
Enhanced Filter	=	0	ft	*#57 Stone Below Underdrain*
Total Depth	=	3.75	ft	

Media Storage/ESDv = 1,024 sf x 3.75 ft x 0.40

Media Storage/ESDv = 1,536 cf

Ponding Storage: Average of Water & Device Surface Area x Ponding Depth

Device Surface Area = 1,024 sf

Ponding Water Surface Area = 1,495 sf

Ponding Depth = 1.00 ft

Ponding Storage = (1,024 sf + 1,495 sf) / 2 x 1.00 ft

1,260 cf

Ponding ESDv = Device Surface Area x Ponding Depth

= (1,024 sf x 1.00 ft)

= 1,024 cf

Total Storage = 2,796 cf **Total ESDv = 2,560 cf** **Total Re_v = 1646 cf**

P_E Provided = (12 x ESD_V)/(R_V x DA)

= (12 x 2,560cf)/(0.72 x 19,044sf)

= 2.24 in.

ESDv Max = (PE x Rv x DA)/12

= (2.7 x 0.72 x 19,044 sf) / 12

= 3,085 cf

TOTAL ESDv PROVIDED OK!

MDE Section 5.4.3 - Micro-Scale Practices

DA-B1: ESD Practice (M-7) - Rain Garden 1

Contributing Drainage Area	=	2,935	sf	or	0.07 Ac.
Impervious Surfaces in DA	=	1,979	sf	or	0.05 Ac.
Percent Imperviousness (%I)	=	67	%	= 1,979 sf / 2,935 sf	
Minimum Surface Area (A_f)	=	59	sf	MINIMUM; 2% of Contributing DA	
Provided Surface Area (A_f)	=	318	sf	≥ 59 sf	O.K.

Concept Design Computations:

ESD_V = (P_E x R_v x DA)/12

where: P_E = 10 in x (A_f/DA) *(MDE Eqn 5.2)*

= 10 in x (318sf / 2,935sf)

P_E = 1.08 in. *(Concept Design Estimate)*

R_V = 0.05 + (0.009 x %I)

= 0.05 + (0.009 x 67%)

= 0.65

ESD_V = (1.08 in. x 0.65 x 2,935 sf) / 12

= 172 cf *(Concept Design Estimate)*

Re_V = [(S) x (R_V) x (A)]/ 12

= [(0.13) x (0.65) x (2,935sf)] / 12

= 21 cf

Final Design Computations:

Media Storage: Surface Area x Depth x Void Ratio

Mulch Layer	=	0.25	ft	*Mulch*
Filter Media	=	1.5	ft	*Bioretention Soil*
Choker Layer	=	0	ft	*Pea Gravel*
Gravel Jacket	=	0.5	ft	*#57 Stone*
Total Depth	=	2.25	ft	

Media Storage/ESDv = 318 sf x 2.25 ft x 0.40

Media Storage/ESDv = 286 cf

Ponding Storage: Average of Water & Device Surface Area x Ponding Depth

Device Surface Area = 318 sf

Ponding Water Surface Area = 426 sf

Ponding Depth = 0.50 ft

Ponding Storage = (318 sf + 426 sf) / 2 x 0.50 ft

186 cf

Ponding ESDv = Device Surface Area x Ponding Depth

= (318 sf x 0.50 ft)

= 159 cf

Total Storage = 472 cf **Total ESDv = 445 cf** **Total Re_v = 21 cf**

P_E Provided = (12 x ESD_V)/(R_V x DA)

= (12 x 445cf)/(0.65 x 2,935sf)

= 2.8 in.

ESDv Max = (PE x Rv x DA)/12

= (2.7 x 0.65 x 2,935 sf) / 12

= 429 cf

TOTAL ESDv PROVIDED EXCEEDS ALLOWABLE TREATMENT. USE PE=2.7" FOR ESDv CALCS

MDE Section 5.4.3 - Micro-Scale Practices

DA-B2: ESD Practice (M-7) - Rain Garden 2

Contributing Drainage Area	=	2,610	sf	or	0.06 Ac.
Impervious Surfaces in DA	=	1,672	sf	or	0.04 Ac.
Percent Imperviousness (%I)	=	64	%	= 1,672 sf / 2,610 sf	
Minimum Surface Area (A_f)	=	52	sf	MINIMUM; 2% of Contributing DA	
Provided Surface Area (A_f)	=	318	sf	≥ 52 sf	O.K.

Concept Design Computations:

ESD_V = (P_E x R_v x DA)/12

where: P_E = 10 in x (A_f/DA) *(MDE Eqn 5.2)*

= 10 in x (318sf / 2,610sf)

P_E = 1.22 in. *(Concept Design Estimate)*

R_V = 0.05 + (0.009 x %I)

= 0.05 + (0.009 x 64%)

= 0.63

ESD_V = (1.22 in. x 0.63 x 2,610 sf) / 12

= 167 cf *(Concept Design Estimate)*

Re_V = [(S) x (R_V) x (A)]/ 12

= [(0.13) x (0.63) x (2,610sf)] / 12

= 21 cf

Final Design Computations:

Media Storage: Surface Area x Depth x Void Ratio

Mulch Layer	=	0.25	ft	*Mulch*
Filter Media	=	1.5	ft	*Bioretention Soil*
Choker Layer	=	0	ft	*Pea Gravel*
Gravel Jacket	=	0.5	ft	*#57 Stone*
Total Depth	=	2.25	ft	

Media Storage/ESDv = 318 sf x 2.25 ft x 0.40

Media Storage/ESDv = 286 cf

Ponding Storage: Average of Water & Device Surface Area x Ponding Depth

Device Surface Area	=	318	sf
Ponding Water Surface Area	=	426	sf
Ponding Depth	=	0.50	ft

Ponding Storage = (318 sf + 426 sf) / 2 x 0.50 ft

186 cf

Ponding ESDv = Device Surface Area x Ponding Depth

= (318 sf x 0.50 ft)

= 159 cf

Total Storage = 472 cf **Total ESDv = 445 cf** **Total Re_v = 21 cf**

P_E Provided = (12 x ESD_V)/(R_V x DA)

= (12 x 445cf)/(0.63 x 2,610sf)

= 3.25 in.

ESDv Max = (PE x Rv x DA)/12

= (2.7 x 0.63 x 2,610 sf) / 12

= 370 cf

TOTAL ESDv PROVIDED EXCEEDS ALLOWABLE TREATMENT. USE PE=2.7" FOR ESDv CALCS

P_E Value Calculations:

SWM Summary Chart

DA #	ESD Practice	DA	Storage Provided	ESD_V	Re_V	P_E Value	Net P_E Value
DA-A1:	Micro Bioretention 1	19,044 sf	2,796 cf	2,560 cf	1,646 cf	2.24 in.	2.24" x 19,044 sf / 67,891 sf = 0.63 in.
DA-B1:	Rain Garden 1	2,935 sf	472 cf	429 cf	21 cf	2.70 in.	2.70" x 2,935 sf / 67,891 sf = 0.12 in.
DA-B2:	Rain Garden 2	2,610 sf	472 cf	370 cf	21 cf	2.70 in.	2.70" x 2,610 sf / 67,891 sf = 0.10 in.
		sf	cf	cf	cf	in.	in.
		Totals:		**3,359 cf**	**1,687 cf**		**Total Net P_E Value = 0.85 in.**
		Target ESD_V:		**3,168 cf**	**257 cf**		**Target P_E = 1.60 in.**
					P_E Provided:		**(12 x 3,359cf) / (0.35 x 67,891sf) = 1.70 in.**

ARMISTEAD, LEE, RUST & WRIGHT, P.A.
ATTORNEYS AT LAW

114 Bay STREET, BUILDING C
EASTON, MARYLAND 21601

TELEPHONE: (410) 819-8989
FACSIMILE: (410) 822-4787

EMAIL ADDRESS
ZACHSMITH@ALRWLAW.COM

January 11, 2024

FOR HAND-DELIVERY

Don Richardson, Town Manager
Town of Easton
14 South Harrison Street
Easton, Maryland 21601

Re: Petition for Annexation
Corrigan & Trippe Ventures, LLC
Tax Map 34, Parcel 128

Dear Don:

On behalf of Corrigan & Trippe Ventures, LLC, enclosed please find a Petition for Annexation of its above-referenced property. An annexation plat (reduced size) and a metes and bounds description are attached to the Petition as exhibits. I will provide electronic copies of these documents to the Town Clerk for distribution to the Council. Also enclosed please find a check for Fifteen Thousand Dollars ($15,000.00) representing the application fee.

Consistent with the existing adjacent Town zoning, my client proposes that the property be zoned R10-A upon annexation. Following annexation, my client intends to submit a PUD application proposing to construct multi-family housing on the property, specifically housing intended to provide attainable rental housing for our community. My client has held preliminary discussions with the Talbot County Housing Authority, and is exploring the possibility of collaborating with that organization to develop attainable housing on this this site.

Please provide this request to the Easton Town Council for its consideration and referral to the Easton Planning Commission.

If any additional information is required at this time or if there are any questions, please contact me at (410) 819-8989 or by e-mail at zachsmith@alrwlaw.com.

Sincerely,

Zach A. Smith

Enclosures
cc: Corrigan & Trippe Ventures, LLC

RECEIVED
JAN 22 2024
TOWN OF EASTON

Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

Petition for Annexation Application

Property Information

Property Size	Acres	17.329		Square Feet			
Current Land Use	Vacant			Proposed Land Use	Residential		
Address	East Side of Ocean Gateway, South of Dutchmans Lane						
Tax Map	34	Grid	24	Parcel	128 & 175	Lot(s)	
Deed Refernce:	Liber	2937	Folio	5			
Plat Reference:	Liber	23	Folio	46	(52/18)		
Current Country Zoning District		TC/TR			Requested Town Zoning District	R10-A	

Town of Easton Comprehensive Plan Priority Designation *(circle)* (1) 2 3

Property Owner

Owner Name	Corrigan & Trippe Ventures, LLC		
Mailing Address	27849 Little Park Road, Easton		
Telephone No.		Email	

Agent Information

Agent Name	Zachary A. Smith	License No.		Expiration Date	
Mailing Address	114 Bay Street, Building C, Easton, Maryland 21601				
Telephone No.	410-819-8989	Email	zachsmith@alrwlaw.com		

ALL OF THE ITEMS ARE REQUIRED TO BE FILED SIMULTANEOUSLY FOR A COMPLETED APPLICATION
(check if included)

- ☒ Petition for Annexation (Needs to be signed by 25% of person who reside in the area to be annexed and who are registered voters and owners of 25% of assessed value of area to be annexed. Can also do by ballot vote ahead of time and initiation of resolution by Town.)
- ☒ An application fee of $15,000 shall be paid to the Town of Easton. Please Note that the fee collected is a deposit only and that additional fees may be required.
- ☐ The applicant must sign a Town Reimbursement Agreement to ensure all fees, costs, and expenses incurred by the Town in excess of the application fee amount will be reimbursed.
- ☒ Metes and bounds description for property
- ☐ Plats of property which shall include 2 mylar and 8 paper copies.
- ☐ Proposed Annexation Resolution, Proposed Ordinance for Zoning, Proposed Annexation Plan, and Proposed Annexation Agreement.
- NA ☐ If Special Tax District proposed a Resolution to Create Special Tax District shall be required. -Need consent of owners of 2/3 of assessed value of area, plus 2/3 of number of different property owners. Can also do by ballot vote ahead of time and initiation of resolution by Town.

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

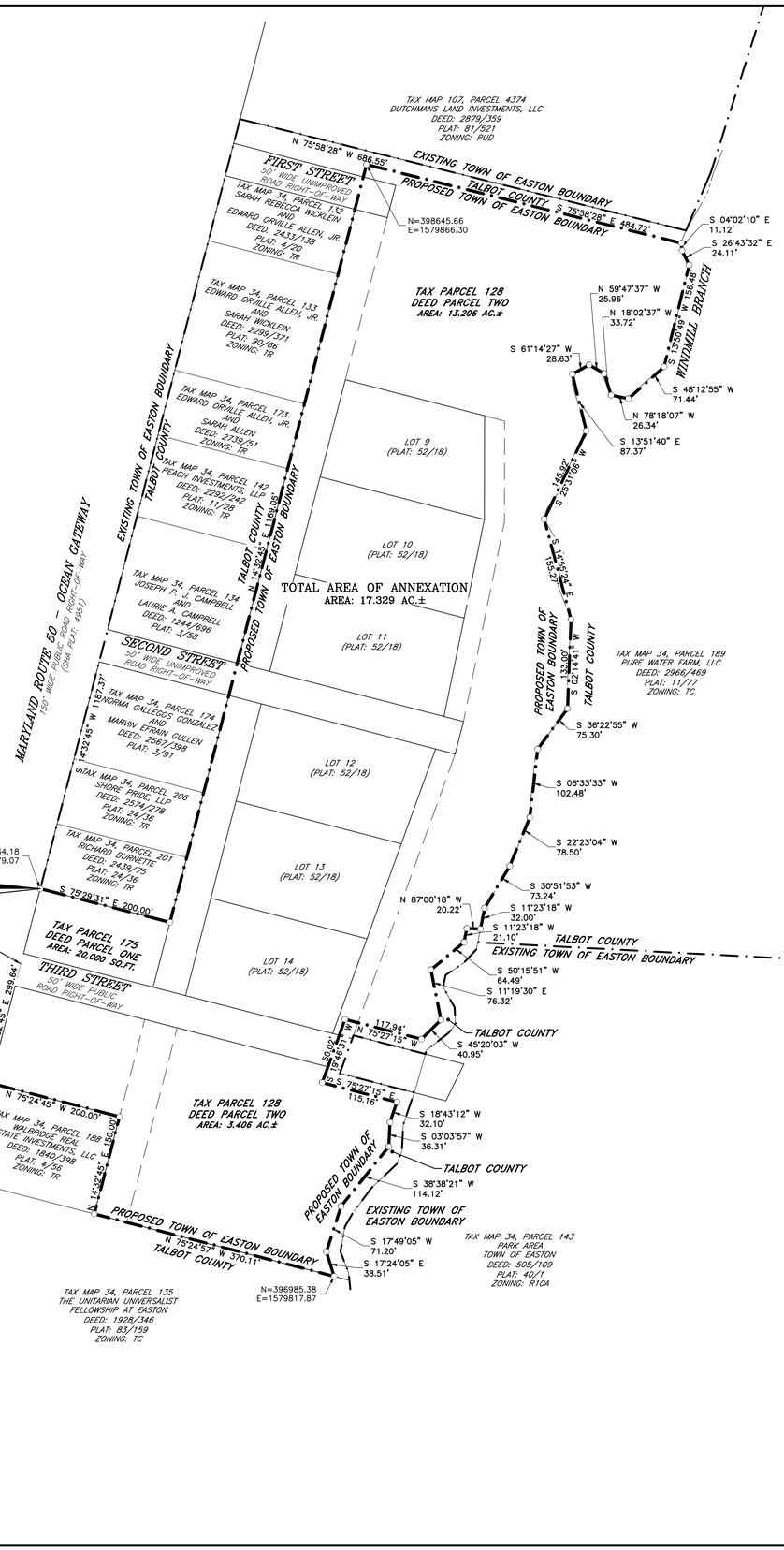
Date 01-22-24

Printed Name of Applicant or Agent Zachary A. Smith

For Office Use Only **ESDR 2024-02 / AX 24-02**

Application No.	2024-1115	Fee Paid	01/23/2024
Date Resolution Introduced to Town Council			
Planning Commission Meeting	TBD	Positive Recommendation to Council? Y ☐ N ☐	
Town Council Public Hearing	TBD	Is a Zoning Waiver Required? Y ☐ N ☐	
Resolution Enactment Date		Resolution Effective Date	
ESDR Y / N Date	02/28/2024		

Revised 2-2020


TAX MAP 107, PARCEL 4374
DUTCHMANS LAND INVESTMENTS, LLC
DEED: 2879/359
PLAT: 81/521
ZONING: PUD
N 75°58'28" W 686.55'
EXISTING TOWN OF EASTON BOUNDARY
TALBOT COUNTY
PROPOSED TOWN OF EASTON BOUNDARY
S 75°58'28" E 484.72'
FIRST STREET
50' WIDE UNIMPROVED ROAD RIGHT-OF-WAY
N=398645.66
E=1579866.30
S 04°02'10" E 11.12'
S 26°43'32" E 24.11'
TAX MAP 34, PARCEL 132
SARAH REBECCA WICKLEIN AND EDWARD ORVILLE ALLEN, JR.
DEED: 2433/138
PLAT: 47/20
ZONING: TR
TAX PARCEL 128
DEED PARCEL TWO
AREA: 13.206 AC.±
N 59°47'37" W 25.96'
N 18°02'37" W 33.72'
S 61°14'27" W 28.63'
S 13°57'19" W 154.48'
WINDMILL BRANCH
S 48°12'55" W 71.44'
N 78°18'07" W 26.34'
S 13°51'40" E 87.37'
TAX MAP 34, PARCEL 133
EDWARD ORVILLE ALLEN, JR. AND SARAH WICKLEIN
DEED: 2299/371
PLAT: 90/66
ZONING: TR
TAX MAP 34, PARCEL 173
EDWARD ORVILLE ALLEN, JR. AND SARAH ALLEN
DEED: 2779/51
ZONING: TR
TAX MAP 34, PARCEL 142
PEACH INVESTMENTS, LLC
DEED: 2298/242
PLAT: 11/28
ZONING: TR
LOT 9
(PLAT: 52/18)
LOT 10
(PLAT: 52/18)
TOTAL AREA OF ANNEXATION
AREA: 17.329 AC.±
LOT 11
(PLAT: 52/18)
TAX MAP 34, PARCEL 134
JOSEPH P. J. CAMPBELL AND LAURIE A. CAMPBELL
DEED: 1244/696
PLAT: 3/59
SECOND STREET
30' WIDE UNIMPROVED ROAD RIGHT-OF-WAY
N 14°32'45" W 187.37'
TAX MAP 34, PARCEL 174
NORMA GALLEGOS GONZALEZ AND MARVIN EPHAIN GULLEN
DEED: 2567/398
PLAT: 3/91
TAX MAP 34, PARCEL 206
SHORE PRIDE, LLC
DEED: 2574/278
PLAT: 34/126
ZONING: TR
TAX MAP 34, PARCEL 201
RICHARD BURNETTE
DEED: 2439/75
PLAT: 24/126
ZONING: TR
LOT 12
(PLAT: 52/18)
LOT 13
(PLAT: 52/18)
LOT 14
(PLAT: 52/18)
N=397564.18
E=1579379.07
POB
S 75°28'31" E 200.00'
TAX PARCEL 175
DEED PARCEL ONE
AREA: 20,000 SQ.FT.
EXISTING TOWN OF EASTON BOUNDARY HEREBY ABANDONED
THIRD STREET
50' WIDE PUBLIC ROAD RIGHT-OF-WAY
N 14°32'45" E 299.64'
N=397274.14
E=1579303.81
N 75°24'45" W 200.00'
TAX MAP 34, PARCEL 188
WALBRIDGE REAL ESTATE INVESTMENTS, LLC
DEED: 1840/398
PLAT: 4/58
ZONING: TR
S 14°32'45" E 89.00'
PROPOSED TOWN OF EASTON BOUNDARY
TALBOT COUNTY
N 75°24'45" W 370.11'
S 14°32'45" W
EXISTING TOWN OF EASTON BOUNDARY
TALBOT COUNTY
N 14°32'45" E 1189.00'
PROPOSED TOWN OF EASTON BOUNDARY
TAX PARCEL 128
DEED PARCEL TWO
AREA: 3.406 AC.±
S 75°22'15" E 115.16'
S 18°43'12" W 32.10'
S 03°03'57" W 36.31'
TALBOT COUNTY
S 38°38'21" W 114.12'
PROPOSED TOWN OF EASTON BOUNDARY
EXISTING TOWN OF EASTON BOUNDARY
S 17°49'05" W 71.20'
S 17°24'05" E 38.51'
N=396985.38
E=1579817.87
TAX MAP 34, PARCEL 135
THE UNITARIAN UNIVERSALIST FELLOWSHIP AT EASTON
DEED: 1928/346
PLAT: 83/159
ZONING: TC
TAX MAP 34, PARCEL 143
PARK AREA
TOWN OF EASTON
DEED: 505/109
PLAT: 40/1
ZONING: R10A
PROPOSED TOWN OF EASTON BOUNDARY
TALBOT COUNTY
S 02°14'41" W 133.00'
TAX MAP 34, PARCEL 189
PURE WATER FARM, LLC
DEED: 2966/469
PLAT: 11/77
ZONING: TC
S 36°22'55" W 75.30'
S 06°33'33" W 102.48'
S 22°23'04" W 78.50'
S 30°51'53" W 73.24'
N 87°00'18" W 20.22'
S 11°23'18" W 32.00'
S 11°23'18" W 21.10'
TALBOT COUNTY
EXISTING TOWN OF EASTON BOUNDARY
S 50°15'51" W 64.49'
S 11°19'30" E 76.32'
N 79°27'15" W 117.94'
TALBOT COUNTY
S 45°20'03" W 40.95'
S 14°32'45" W 59.00'
S 14°32'45" W 188.63'

SITE
HAROLD ROUSE DR
OCEAN GATEWAY
OUTBACKS AVE
P-135
P-139
P-140
P-141
P-142
P-143
P-144
P-145
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P-176
P-177
P-178

Lane Engineering, LLC

Established 1986

Civil Engineers • Land Planning • Land Surveyors

15 Washington Street
Cambridge, Maryland 21613
Tel 410-221-0818

117 Bay Street
Easton, Maryland 21601
Tel 410-822-8003
Fax 410-822-2024

354 Pennsylvania Avenue
Centreville, Maryland 21617
Tel 410-758-2095

ANNEXATION DESCRIPTION

ON THE LANDS OF

CORRIGAN AND TRIPPE VENTURES, LLC

IN THE FIRST ELECTION DISTRICT

TALBOT COUNTY, MARYLAND

January 11, 2024

All that piece, parcel or tract of land situate, lying and being in the First Election District, Talbot County, Maryland, and being more particularly described as follows.

Beginning for the same at a point, said point also being on the easterly side of the public known as Ocean Gateway (150-foot-wide right-of-way) as delineated on a plat titled "Plat showing division of Lots 6 & 7, Mecklenburg Lots (Second Block – E Section" recorded among the Land Records of Talbot County, Maryland in Plat Book 24, Folio 36, said point also being on the easterly "Right-of-Way Line" as delineated on State Roads Commission of Maryland Plat Number 4951, said point also being at the southwest corner of the lands of Richard Burnette (Liber 2439, Folio75), and from said point of beginning and running in the meridian of the Maryland State Coordinate System NAD 83 (2011), and by and with said southerly side of Richard Burnette lands following course and distance

(1) South 75 degrees 29 minutes 31 seconds East, 200.00 feet to a point and the rear property line of said Richard Burnette; thence by and with said rear property line and the extension thereof the following course and distance.

(2) North 14 degrees 32 minutes 45 seconds East, 1169.05 feet to a point 20-feet south of the lands of Dutchmans Land Investments, LLC (Liber 2879, Folio359) as delineated on a plat of subdivision titled "Plat Showing Proposed Annexation to the Town of Easton" recorded among the aforesaid Land Records in Plat Book 78, Folio 47; thence running 20-feet south and parallel to said Dutchmans Land Investments, LLC lands the following course and distance

(3) South 75 degrees 58 minutes 28 seconds East, 484.72 feet more or less to a point and the center of Windmill Branch; thence by and with the center of the said Windmill Branch and many meanderings thereof generally the following seventeen courses and distances

(4) South 04 degrees 02 minutes 10 seconds East, 11.12 feet to a point; thence

(5) South 26 degrees 43 minutes 32 seconds East, 24.11 feet to a point; thence

(6) South 13 degrees 50 minutes 49 seconds West, 156.48 feet to a point; thence

(7) South 48 degrees 12 minutes 55 seconds West, 71.44 feet to a point; thence

(8) North 78 degrees 18 minutes 07 seconds West, 26.34 feet to a point; thence

(9) North 18 degrees 02 minutes 37 seconds West, 33.72 feet to a point; thence

(10) North 59 degrees 47 minutes 37 seconds West, 25.96 feet to a point; thence

(11) South 61 degrees 14 minutes 27 seconds West, 28.63 feet to a point; thence

(12) South 13 degrees 51 minutes 40 seconds East, 87.37 feet to a point; thence

(13) South 25 degrees 32 minutes 02 seconds West, 145.73 feet to a point; thence

(14) South 14 degrees 53 minutes 22 seconds East, 155.44 feet to a point; thence

(15) South 02 degrees 14 minutes 41 seconds West, 133.00 feet to a point; thence

(15) South 36 degrees 22 minutes 55 seconds West, 75.30 feet to a point; thence

(16) South 06 degrees 33 minutes 33 seconds West, 102.48 feet to a point; thence

(17) South 22 degrees 23 minutes 04 seconds West, 78.50 feet to a point; thence

(18) South 30 degrees 51 minutes 53 seconds West, 73.24 feet to a point; thence

(19) South 11 degrees 23 minutes 18 seconds West, 32.00 feet to a point; thence leaving said Windmill Branch and running in, through, over and across Tax Parcel 128, Deed Parcel Two as to include a portion thereof the following twelve courses and distances

(20) North 87 degrees 00 minutes 18 seconds West, 20.22 feet more or less to a point; thence

(21) South 11 degrees 23 minutes 18 seconds West, 21.10 feet to a point; thence

(22) South 50 degrees 15 minutes 51 seconds West, 64.49 feet to a point; thence

(23) South 11 degrees 19 minutes 30 seconds East, 76.32 feet to a point; thence

(24) South 45 degrees 20 minutes 03 seconds West, 40.95 feet to a point; thence

(25) North 75 degrees 27 minutes 15 seconds West, 117.94 feet to a point; thence

(26) South 19 degrees 46 minutes 31 seconds West, 100.42 feet to a point; thence

(27) South 75 degrees 27 minutes 15 seconds East, 115.16 feet to a point; thence

(28) South 18 degrees 43 minutes 12 seconds West, 32.10 feet to a point; thence

(29) South 03 degrees 03 minutes 57 seconds West, 36.31 feet to a point; thence

(30) South 38 degrees 38 minutes 21 seconds West, 114.12 feet to a point; thence

(31) South 17 degrees 49 minutes 05 seconds West, 71.20 feet to a point; thence

(32) South 17 degrees 24 minutes 05 seconds East, 38.51 feet to a point and the lands of The Unitarian Universalist Fellowship at Easton (Liber 1928, Folio 346); thence by and with said The Unitarian Universalist Fellowship at Easton lands

(33) North 75 degrees 24 minutes 57 seconds West, 370.11 feet to a point and the lands of Walbridge Real Estate Investments, LLC (Liber 1840, Folio 398; thence by and with said Walbridge Real Estate Investments, LLC land the following two courses and distances

(34) North 14 degrees 32 minutes 45 seconds East, 150.00 feet to a point; thence

(35) North 75 degrees 24 minutes 45 seconds West, 200.00 feet to a point and the aforementioned easterly side of Ocean Gateway; thence by and with said easterly side of Ocean Gateway

(36) North 14 degrees 32 minutes 45 seconds East, 299.64 feet to the Place of Beginning, containing 17.329 Acres of Land, more or less, and

The above parcel is intended to be all of the same land, as shown as Total Area of Annexation on a plan entitled "Annexation Plat on the lands of Corrigan and Trippe Ventures, LLC" as prepared by Lane Engineering, LLC, on January 5, 2024, I hereby certify that these documents were prepared by me or under my responsible charge and complies with requirements as set forth in regulation 09.13.06.12, and that I am a duly licensed property line surveyor under the laws of the State of Maryland, License No. 363, and, subject to biennial renewal, my current expiration date is August 3, 2025

1/11/24

Jefferson Ewell Hubbard
Registered Property Line Surveyor
Maryland Registration Number 363

www.leinc.com
general@leinc.com

IN THE MATTER OF THE ANNEXATION OF THE PROPERTY OF CORRIGAN & TRIPPE VENTURES, LLC	* * *	**BEFORE THE TOWN COUNCIL OF EASTON, MARYLAND**

PETITION FOR ANNEXATION

A. THIS PETITION FOR ANNEXATION ("Petition") is submitted by Corrigan & Trippe Ventures, LLC, a Maryland limited liability company ("Petitioner"), the owner of certain real property shown and depicted on Exhibit "1" attached hereto and titled "ANNEXATION PLAT ON THE LANDS OF CORRIGAN AND TRIPPE VENTURES, LLC IN THE FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND TAX MAP 34 GRID 24, PARCEL128," and described in the metes and bounds description attached hereto as Exhibit "2" ("Annexation Property").

B. The Annexation Property consists of a total of 17.329 acres of land, more or less.

C. Petitioner hereby petitions the Town Council of Easton, Maryland to annex the Annexation Property by extending the municipal boundaries of the Town of Easton, Maryland to include the Annexation Property.

D. Petitioner owns all of the Annexation Property, and accordingly, constitutes at least twenty-five percent (25%) of the persons eligible to sign this Petition.

E. There are no registered voters residing within the boundaries of the Annexation Property.

F. The Annexation Property is contiguous and adjoining to the existing municipal boundaries of the Town of Easton, Maryland.

G. The expansion of the existing municipal boundaries of the Town of Easton, Maryland to include the Annexation Property will not create enclaves of unincorporated land bounded on all sides by real property located within the municipal boundaries of the Town of Easton, Maryland.

H. The Annexation Property is shown as a "*Priority 1 – Boundary Refinement Area*" on the "*Growth Areas Map*" included in the 2010 Easton Comprehensive Plan, which areas are described in the Comprehensive Plan as "*deemed appropriate for consideration for Annexation*" (2010 Town of Easton Comprehensive Plan, Municipal Growth Element, page 49).

NOW, THEREFORE, Petitioner hereby petitions the Town Council of Easton, Maryland to introduce a resolution to extend the municipal boundaries of the Town of Easton, Maryland to include the Annexation Property.

IN WITNESS WHEREOF, Petitioner has caused this Petition to be signed and sealed by its duly authorized representative this 8th day of January, 2024.

CORRIGAN & TRIPPE VENTURES, LLC,
a Maryland limited liability company

By: William Coyne
William Coyne, Authorized Member

Good Neighbors

THE HOUSING COMMISSION
Of Talbot County

900 Doverbrook ☐ Easton, MD 21601 ☐ phone: 410.822.5358 ☐ fax: 410.822.3213

Don E. Bibb, Executive Director

January 23, 2024

Easton Town Council
c/o Frank Gunsallus, Council President
14 South Harrison Street
P.O. Box 520
Easton, Maryland 21601

Re: Annexation of the Lands of Corrigan & Trippe Ventures, LLC

Dear President Gunsallus and Members of the Town Council:

The Housing Commission of Talbot has met recently with Zach Smith and Bill Coyne to discuss the potential development of affordable housing on the approximately 17 acres of land owned by Corrigan & Trippe Ventures, LLC and that is the subject of a pending Petition for Annexation into the Town of Easton. These discussions have centered on the prospect of building multi-family rental housing on this property that will be available to the populations that the Housing Authority of Talbot County serves, and the possibility of a public private partnership to develop and/or to operate such units. While there is no formal and/or final agreement between our organizations at this point, the discussions thus far have been very encouraging. As we all know there is a shortage of affordable housing units within our community, and the construction of multi-family residential on the subject property will certainly help to address this shortage.

The Housing Commission of Talbot supports the effort to annex this land into the Town, and hopes to continue collaborating with the property owner following its annexation to help create additional affordable units within our community. Please support the annexation.

Sincerely,

Don E. Bibb, PHM
Executive Director
Housing Commission of Talbot

RECEIVED
FEB 02 2024
TOWN OF EASTON

EQUAL HOUSING OPPORTUNITY

FINK, WHITTEN & ASSOCIATES, LLC

Land Surveying • Land Planning • Environmental Consulting • Permitting
www.finkwhitten.com

504 Maryland Avenue
Cambridge, MD 21613
410-228-8885 phone
410-228-8845 fax

113 East Dover Street
Unit C, 1st Floor
Easton, MD 21601
410-822-8484

February 7, 2024

Mr. Lynn Thomas, Town Planner
Town of Easton Planning & Zoning
16 S. Harrison Street
Easton, MD 21601

RE: Site Plan – Canvasback Properties, LLC c/\/o Keith Prettyman
29501 Canvasback Drive, Easton
Map 109, Parcel 4586, Lot 16 – Carlton Business Park – Zoned CG

Dear Lynn:

Please find enclosed four (4) copies of the Site Plan on the Lands of Canvasback Properties, LLC c/o Keith Prettyman, as well as the ESDR application, site plan application and review fee, deeds and plats of record.

As such, please place on the ESDR agenda for February 28, 2024. Please note that this project started with DBF and upon zoning change, Mr. Prettyman had to change his plans to proposed (2) climate controlled buildings. FWA has taken the plans previously prepared and only slightly modified them. Note that SWM was previously approved and taken from DBF plans as well. FWA is acting as Mr. Prettyman's agent / surveyor in the finalization of this site plan. Full architectural plans are forthcoming.

Sincerely,
Fink, Whitten & Associates, LLC

Elizabeth

Elizabeth Fink
Co-owner, Planner

RECEIVED
FEB 07 2024
TOWN OF EASTON

Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

Easton Staff Development Review

Property Information

Address	29501 Canvasback Drive						
Tax Map	109	Grid	EA	Parcel	4582	Lot	16
Deed Refernce:	Liber	2690	Folio	5			
Plat Reference:	Liber	1	Folio	18A			
Base Zoning District	CG	Historic District Y ☐ N ☒		Planning Redevelopment Y ☐ N ☒			

Purpose of Application / Description of Work:

Finalization of previasly approved site plan - scope changed when Zoning changed. Seeking approval of (2) climate controlled storage buildings with associated parking, stormwater management and landscaping.

Owner

Name	Canvasback Properties, LLC c/o Keith Prethyman
Mailing Address	30360 Kings meadow Place Easton 21601
Telephone No.	410 310 9792 Email Keithprethymanconstruction.com

Applicant / Agent

Name	Fink, Whitten + Assoc - Elizabeth Fink
Mailing Address	113 E Dover St Unit C Easton 21601
Telephone No.	410 822 8484 Email efink@finkwhitten.com

Surveyor / Engineer

Name	Steve Whitten	License No.	21326	Expiration Date	1-8-25
Mailing Address	504 Maryland Ave Cambridge md 21613				
Telephone No.	410 228 8885	Email	stevewhitten.ls@gmail.com		

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent: Elizabeth Fink, FWA

Date: 2-7-24

Printed Name of Applicant or Agent: Elizabeth Fink

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

Easton Staff Development Review Meeting Date **02/28/2024** **2024-1128 / ESDR 24-03**

Completeness Check Date

Revisions/Resubmissions Required Y ☐ N ☐

Resubmission Date Documents Received Y ☐ N ☐

Staff Determination

Planning Commission Requir Y ☐ N ☐

BOZA Required Y ☐ N ☐

Historic District Commission Required Y ☐ N ☐

Resubmission for ESDR Required Y ☐ N ☐

Staff Signature Date

Revised 02-2019

RECEIVED
FEB 07 2024
TOWN OF EASTON

Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

Site Plan, PUD, Planned Healthcare Application

Application Type

Planned Unit Development ☐ Amendment ☐ Health Care (HC) ☐ Site Plan ☒

Subdivision Information

Name	Canvasback Properties, LLC c/o Keith Prettyman				
Original Property Size	Acres	.86	Square Feet		
Telephone No.	410-310-9792	Email	keithprettymanconstructioninc.com		

Site Plan Information

Property Size	Acres	.86	Square Feet	37,547	
Structure's Floor Area	12,000SF		Structure's Square Feet	12,000	
Area of Disturbance	37,547 SF		Number of Dwelling Units	0	

Property Information

Address	29501 Canvasback Drive Easton						
Tax Map	109	Grid	EA	Parcel	4582	Lot	16
Deed Refernce:	Liber	2690	Folio	5			
Plat Reference:	Liber	1	Folio	18A			
Base Zoning District	CG	Historic Y ☒ N ☐		Planned Redevelopment Y ☐ N ☒			
Source of Electricity	Easton Utilities						

Owner

Name	Canvasback Properties, LLC c/o Keith Prettyman
Mailing Address	30360 Kings Meadow Place Easton 21601
Telephone No.	410 310 9792 Email keithprettymanconstructioninc.com

Applicant or Agent

Name	Fink, Whitten + Associates, LLC - Elizabeth Fink
Mailing Address	113 E Dover Street Unit C Easton
Telephone No.	410 822 8484 Email efink@finkwhitten.com

Surveyor / Engineer

Name	Steve Whitten	License No.	21326	Expiration Date	1-8-25
Mailing Address	504 Maryland Avenue Cambridge md 21613				
Telephone No.	410 228 8885	Email	stevewhitten.1s@gmail.com		

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Development Standards and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

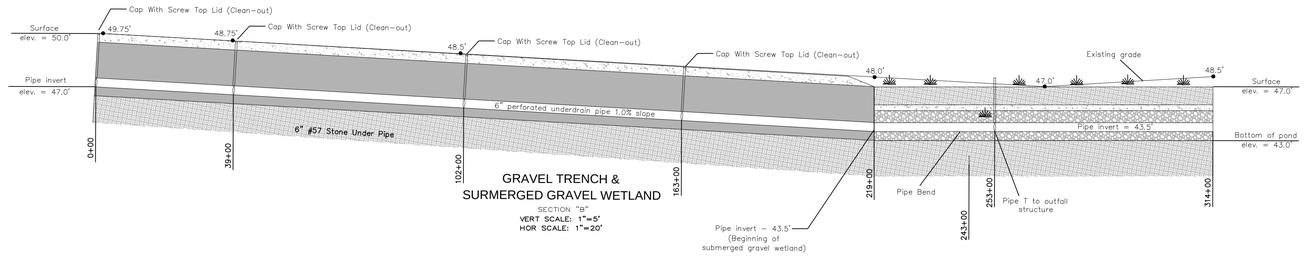
Date 2-7-24

Printed Name of Applicant or Agent Elizabeth Fink

For Office Use Only

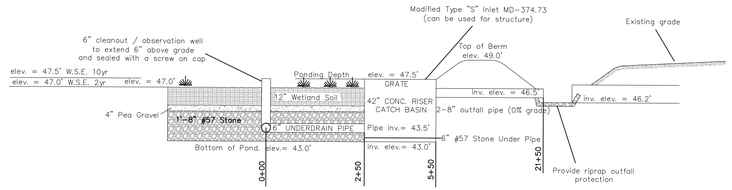
Planning Commission Required	Y ☐ N ☐		
Planning Commission Meeting Date	**TBD**		
Sketch Approval Date		Project No.	**ESDR 24-03**
Prelim/Dev. Approval Date		Application No.	**2024-1128**
Final Approval Date		Sketch Fee Paid	**02/07/2024**
Recordation Date		Develop. Fee Paid	

Revised 02-2019



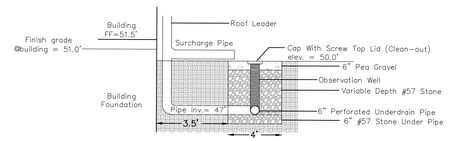
GRAVEL TRENCH & SURMERGED GRAVEL WETLAND

SECTION "B"
VERT SCALE: 1"=5'
HOR SCALE: 1"=20'



OUTFALL RISER STRUCTURE & SURMERGED GRAVEL WETLAND

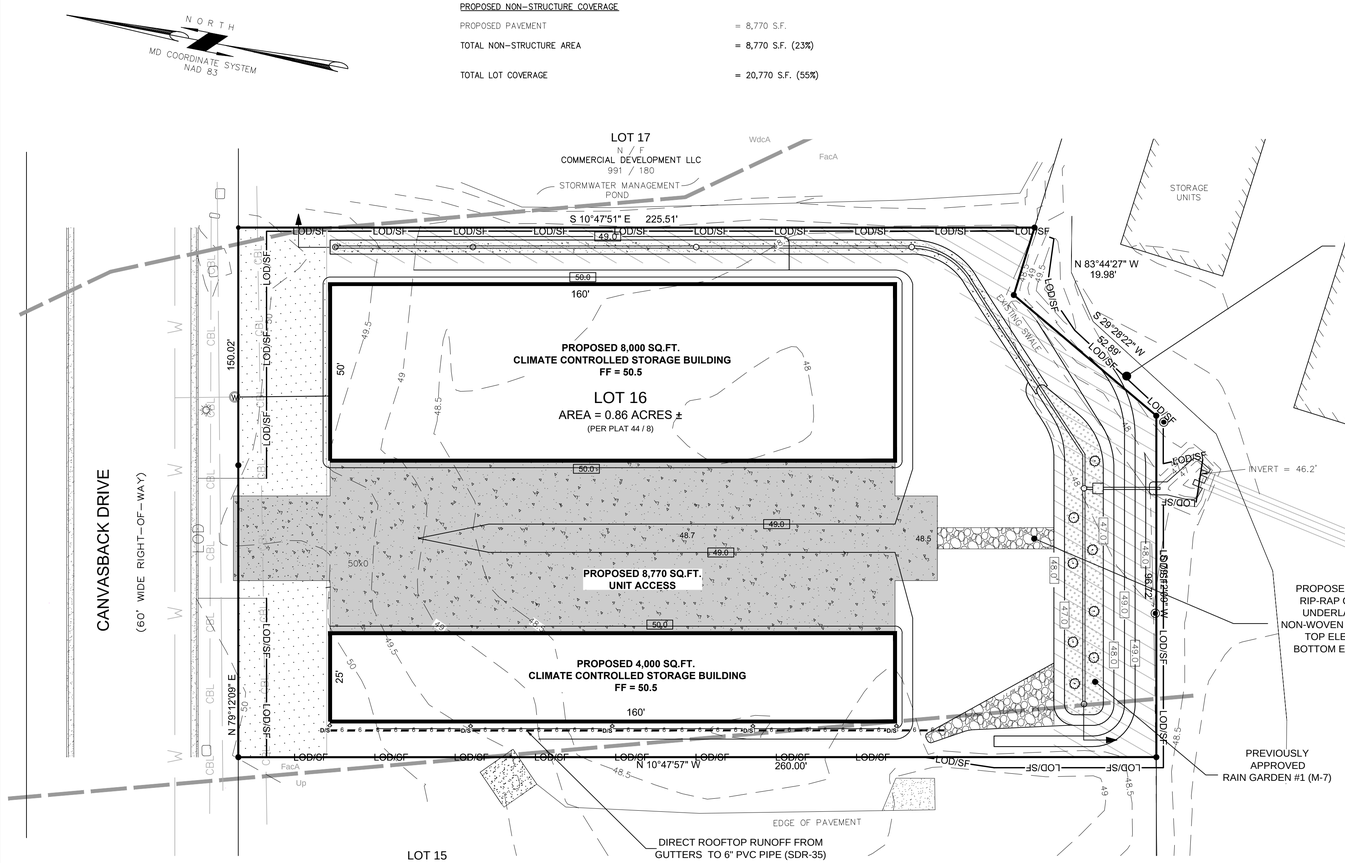
SECTION "A"
NTS



GRAVEL TRENCH & STORMDRAIN DISCONNECT STRUCTURE

NTS

TOTAL LOT AREA	= 37,462 SQ.FT.
50% LOT COVERAGE ALLOWED FOR ALL BUILDINGS & STRUCTURES	= 18,730 SQ.FT.
PROPOSED STRUCTURE COVERAGE	
PROPOSED BUILDINGS	= 12,000 S.F.
TOTAL BUILDING / STRUCTURE AREA	= 12,000 S.F. (32%)
REMAINING BUILDING / STRUCTURE COVERAGE ALLOWED	= 6,730 S.F.
PROPOSED NON-STRUCTURE COVERAGE	
PROPOSED PAVEMENT	= 8,770 S.F.
TOTAL NON-STRUCTURE AREA	= 8,770 S.F. (23%)
TOTAL LOT COVERAGE	= 20,770 S.F. (55%)



1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL BUILDING CODES, BEST PRACTICES OF THE RESPECTIVE TRADES AND THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREON.
2. THESE DRAWINGS SHOW INFORMATION FROM THE BEST AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST ALONG THE LINE OF WORK, BOTH AT AND BELOW THE SURFACE OF THE GROUND . THE OWNER AND THE ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION, BEING SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR, WHO MUST VERIFY THE INFORMATION GIVEN TO HIS OWN SATISFACTION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THE CONTRACT DRAWINGS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO SUPPORT AND PROTECT ALL PIPES, CONDUITS, TELEPHONE LINES, UTILITIES AND OTHER STRUCTURES.
3. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:

4. MDE	1-410-901-4020
TALBOT COUNTY	1-410-770-8030
MISS UTILITY	1-800-441-8355
TOWN OF EASTON	410-822-2525
TALBOT SOIL CONSERVATION DISTRICT	410-822-1583

5. SHOULD ANY DAMAGE OCCUR TO ANY UTILITIES, THEY SHALL BE REPAIRED SOLELY AT THE CONTRACTORS EXPENSE.
6. ALL LANDSCAPING SHALL BE PERFORMED BY QUALIFIED PROFESSIONALS. ALL PLANT MATERIAL SHALL BE FROM CERTIFIED NURSERYMAN AND BE GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PLANTING.
7. ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTORS EXPENSE.
8. THE IMPACT FEES (🐭) INDICATED IN THIS NOTATION SHALL NOT BE CONSTRUCTED AS VESTED UNLESS AND UNTIL SUBMISSION OF BUILDING PERMIT APPLICATION.
9. PARKING REQUIREMENTS
STORAGE AND WAREHOUSE – 1 SPACE PER 2,000 SQ.FT. OF GFA PLUS REQUIRED SPACES FOR ANY OFFICE AREA AND 1 SPACE FOR EACH VEHICLE USED IN THE BUSINESS.
10. A MAXIMUM OF 🐭 EMPLOYEES DAILY.
11. HOURS OF OPERATION: 🐭 **WEEKLY 8AM TO 5PM, MONDAY-FRIDAY**
12. OWNER WILL EXCEPT MAINTENANCE RESPONSIBILITIES FOR STORMWATER MANAGEMENT PRACTICES.

DESIGN PRINCIPLES

PRINCIPLE #1
INTEGRATED USES ARE DESIRABLE: AS THIS DEVELOPMENT IS LOCATED WITHIN AN INDUSTRIAL ZONED DISTRICT, THIS ELEMENT IS NOT PARTICULARLY APPLICABLE TO THIS SITE. THE SITE IS CONSIDERED INFILL DEVELOPMENT, AS THE LOT IS CURRENTLY UNIMPROVED, LOCATED WITHIN AN ESTABLISHED BUSINESS PARK. THE PROPOSED NEW STRUCTURE WILL SERVE AS WAREHOUSE/CONTRACTORS STORAGE.

PRINCIPLE #2
NATURAL FEATURES SHOULD DETERMINE DESIGN: THIS ELEMENT REFERS TO THE PLANNING OF SITES BASED ON THE ENVIRONMENTAL RESOURCES PRESENT. IN THIS CASE, THE SITE IS UNIMPROVED BUT BORDERED BY DEVELOPED LOTS ON EITHER SIDE. THIS LOT SHALL BE AN INFILL DEVELOPMENT, TO BE IMPROVED WITH A WAREHOUSE/CONTRACTORS STORAGE BUILDING. MDE HAS VISITED THE SITE AND IS CALLING THE DITCH ALONG THE REAR PROPERTY LINE A LINEAR NONTIDAL WETLAND, REQUIRING A 25' BUFFER. THERE IS LITTLE TO NO TOPOGRAPHIC RELIEF. THE SITE IS DESIGNED TO COMPLEMENT THE SURROUNDING DEVELOPED LOTS.

PRINCIPLE #3
AUTOMOBILES SHOULD NOT DETERMINE DESIGN: PER THE ZONING CODE AND WITH THE USES EXISTING AND PROPOSED WITHIN THIS SITE, 9 PARKING SPACES ARE REQUIRED AS WELL AS ONE UNLOADING SPACE, ALL WHICH HAVE BEEN SATISFIED. THE PROPOSED PAVEMENT AREA ON SITE, AT THE FRONT OF THE PROPOSED STRUCTURE, IS DIRECTLY COMPARABLE TO THAT OF THE OTHER DEVELOPED LOTS WITHIN THIS BUSINESS PARK.

PRINCIPLE #4
AMPLE OPEN SPACES SHOULD BE PROVIDED WITHIN AND AROUND NEIGHBORHOODS: AS THIS SITE IS LOCATED IN AN INDUSTRIAL ZONE AND IS NOT LOCATED NEAR TO NEIGHBORHOODS, THIS IS NOT APPLICABLE.

PRINCIPLE #5
ARCHITECTURE SHOULD RESPECT EASTON'S HISTORICAL DEVELOPMENT:
AS THE PROPOSED BUILDING ADDITION IS NOT "OPEN TO THE PUBLIC", AND IS MEANT TO SERVE AS WAREHOUSE SPACE AND/OR A CONTRACTORS' SHOP, THIS IS NOT PARTICULARLY RELEVANT TO OUR REQUEST. THE BUILDING WILL BE A METAL POLE BUILDING AS ARE SEEN IN MANY WAREHOUSE UNITS.

PRINCIPLE #6
SIGNS SHOULD INFORM BUT NOT DOMINATE: AT THIS TIME, ONE FREESTANDING SIGN IS PROPOSED IN ACCORDANCE WITH THE CODE. SMALLER SHRUBS ARE PROPOSED AT THE BASE OF THE PROPOSED SIGN.

PRINCIPLE #7
NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES:
THIS PRINCIPLE IS NOT APPLICABLE TO OUR REQUEST.

PRINCIPLE #8
RESIDENTIAL DEVELOPMENT SHOULD BE INTERESTING PLACES:
THIS PRINCIPLE IS NOT APPLICABLE TO OUR REQUEST.

PRINCIPLE #9
NEIGHBORHOODS SHOULD CONNECT: THIS PRINCIPLE IS NOT APPLICABLE TO OUR REQUEST.

NOTES:

1. SITE INFORMATION:
OWNERS:
CANVASBACK PROPERTIES, LLC
30360 KINGS MEADOW PLACE
EASTON, MD. 21601
TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
TAX ACCOUNT No.: 01-072080
2. DEED REFERENCE: 2690 / 005
PLAT REFERENCE: PC 1 / 18A
3. ZONING: CG – COMMERCIAL GENERAL
4. BUILDING SETBACKS: FRONT 25'
SIDE 10'
REAR 30'
5. THE ENTIRE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE COASTAL FLOOD PLAIN ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 24041C0193C FOR TALBOT COUNTY, MARYLAND DATED AUGUST 5, 2013.
6. THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA.
7. THE PROPERTY LINES SHOWN HEREON ARE PER PLAT 1 / 18A.
8. ALL PROPOSED SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TOWN OF EASTON & EASTON UTILITIES CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR WATER, SEWER AND STREETS ISSUED APRIL 12, 2011.
9. THE CONTRACTOR SHALL NOTIFY THE TOWN OF EASTON ENGINEERING DEPARTMENT AT 410-820-8822 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING.

APPROVED:

TOWN OF EASTON – PLANNING & ZONING DATE

APPROVED:

TOWN OF EASTON – TOWN PLANNER DATE

APPROVED:

EASTON UTILITIES – MANAGER OF ENGINEERING DATE

UNDERGROUND UTILITY WARNING:

NO INVESTIGATION AS TO THE EXISTENCE OF ANY UNDERGROUND UTILITIES WAS CONDUCTED IN THE PREPARATION OF THIS PLAT. IT IS THE RESPONSIBILITY OF THE OWNER, SUCCESSORS, OR ASSIGNS, AND/OR ANY CONTRACTOR TO COMPLY WITH THE UNDERGROUND FACILITIES DAMAGE PREVENTION LAW AND THE REQUISITE PERMITS ARISING THEREFROM.

PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH COMAR 09.13.06.12

CURRENT LICENSE STATE OF MARYLAND STEVEN W. WHITTEN 21326 PROFESSIONAL LAND SURVEYOR RENEWS 1/31/22

05 / 14 / 2020

FINK, WHITTEN & ASSOCIATES, LLC.
LAND SURVEYING LAND PLANNING
ENVIRONMENTAL CONSULTING
PERMITTING
EASTON 410-822-8484 113 E. Dover St., Unit C Easton, Maryland 21601
CAMBRIDGE 410-228-8885 504 Maryland Avenue Cambridge, Maryland 21613
www.FINKWHITTEN.com

DATE	REVISION

SITE PLAN
ON THE LAND OF

CANVASBACK PROPERTIES, LLC

TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

DRAWN	CHECKED
B.S.F.	S.W.W.
DATE	
05/05/2022	
SCALE	
1" = 20'	
JOB NO.	
T-109-EA-4582-16	
SHEET NO.	
1 of 5	

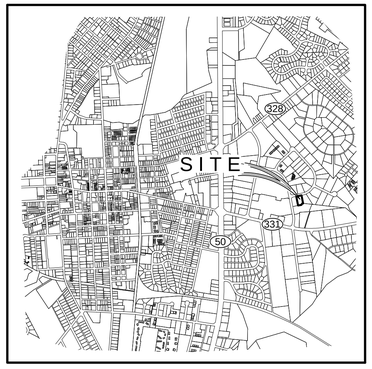
SEDIMENT AND EROSION CONTROL PLAN

ON THE LAND OF

CANVASBACK PROPERTIES, LLC

TAX MAP 109, GRID EA, PARCEL 4582, LOT 16

TALBOT COUNTY, MD



VICINITY MAP

SCALE: 1" = 2000'

GENERAL NOTES:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL BUILDING CODES, BEST PRACTICES OF THE RESPECTIVE TRADES AND THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREON.

THIS DRAWING SHOWS INFORMATION OBTAINED FROM AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST WITHIN LIMITS OF THE WORK AT AND BELOW THE SURFACE OF THE GROUND. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITIES FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEING SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR WHO MUST VERIFY THE INFORMATION TO HIS OWN SATISFACTION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORTING AND PROTECTING ALL PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:

MDE_____410-901-4020
TALBOT COUNTY_____410-770-8030
MISS UTILITY_____800-441-8355

SHOULD ANY DAMAGE OCCUR TO ANY UTILITIES, THEY SHALL BE REPAIRED SOLELY AT THE CONTRACTORS EXPENSE.

ALL LANDSCAPING SHALL BE PERFORMED BY QUALIFIED PROFESSIONALS. ALL PLANT MATERIALS SHALL BE FROM CERTIFIED NURSERYMEN AND BE GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PLANTING.

ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTORS EXPENSE.

ZONING: CG – COMMERCIAL GENERAL

OWNER/DEVELOPER:
NAME: KEITH PRETTYMAN
STREET: 29501 CANVASBACK DRIVE
TOWN: EASTON, MD 21601
PHONE: 410-310-9792

PROJECT LOCATION: TAX MAP NO. 109, GRID EA, PARCEL 4582, LOT 16

SCD NOTES

TOTAL AREA OF SITE	= 37,599	SQ.FT.±	
TOTAL DISTURBED AREA	= 37,646	SQ.FT.±	
AREA TO BE SEEDED	= 16,400	SQ.FT.±	
TOTAL VOLUME OF CUT	= 132	CU.YDS.±	*
TOTAL VOLUME OF FILL	= 600	CU.YDS.±	*

APPROXIMATE CUBIC YARDS OF MATERIAL TO BE TRANSPORTED FROM THE SITE = 0 CU. YDS±

* = ESTIMATE ONLY. NOT FOR BID. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE APPROVAL FOR ANY BORROW OR SPOIL LOCATIONS NOT SHOWN ON THIS PLAN.

PHASE OF CONSTRUCTION

1. CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, PHONE # (410)901-4020 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE CONSTRUCTION MEETING TO REVIEW PLANS AND BECOME FAMILIAR WITH ALL PERMITS.
2. INSTALL TEMPORARY SEDIMENT CONTROL MEASURES/PERIMETER CONTROLS.
3. REMOVE A MINIMUM OF 6" OF TOPSOIL AS NEEDED AND STOCKPILE AS SHOWN. DISPOSE OF EXCESS TOPSOIL OFFSITE AT AN APPROVED LAND FILL.
4. CONSTRUCT ALL PROPOSED IMPROVEMENTS.
5. MAINTAIN ALL SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION.
6. CONSTRUCT RAIN GARDEN.
7. SEED AND MULCH PER SPECIFICATIONS.
8. ONCE THE SITE IS FULLY STABILIZED, AND THROUGH COORDINATION AND APPROVAL OF THE MDE INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES.

EROSION & SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

1.) CONTRACTOR SHALL INSTALL SOIL EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO ANY GRADING. FOLLOWING INITIAL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES GREATER THAN THREE (3) HORIZONTAL TO ONE (1) VERTICAL (3:1) AND SEVEN (7) DAYS ON ALL OTHER DISTURBED OR GRADED AREAS ON THE SITE NOT UNDER ACTIVE GRADING.

2.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE PROVIDED AS INDICATED ON THIS PLAN, WITH LOCATION ADJUSTMENTS TO BE MADE IN THE FIELD AS NECESSARY, AND TO BE MAINTAINED AT THE END OF EACH WORKING DAY UNTIL PROJECT COMPLETION. THE MINIMUM AREA PRACTICAL SHALL BE DISTURBED FOR THE MINIMAL AMOUNT OF TIME POSSIBLE.

3.) CLEARING AND GRUBBING SHALL INCLUDE ALL TREES, BRUSH, DEBRIS, ROOT MAT AND ORGANIC MATERIALS TO BE REMOVED.

4.) TEMPORARY SEEDING SHALL BE ACCOMPLISHED BETWEEN FEBRUARY 15TH THROUGH APRIL 30TH, OR AUGUST 15TH THROUGH NOVEMBER 30TH. DURING OTHER TIMES, TEMPORARY MULCHING SHALL BE PROVIDED.

5.) TEMPORARY SEEDING SHALL CONFORM TO THE FOLLOWING APPLICATIONS: 436 LBS. PER ACRE OF 10–20–20; 4,000 LBS. PER ACRE OF GROUND LIMESTONE, TO BE INCORPORATED INTO THE SOIL BY DISKING OR OTHER SUITABLE MEANS. ANNUAL RYEGRASS SHALL BE APPLIED AT A RATE OF 50 LBS. PER ACRE USING SUITABLE EQUIPMENT. MULCHING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER SEEDING.

Seed Mixture (For Hazard Zone 7a) (From Table B.1)					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths		
	ANNUAL RYE GRASS	50 lbs.	2/15-4/30 8/15-11/30	1/2"		
	BARLEY	96 lbs.	2/15-4/30 / 8/15-11/30	1"		
	OATS	72 lbs.	2/15-4/30 / 8/15-11/30	1"		
	WHEAT	120 lbs.	2/15-4/30 / 8/15-11/30	1"		
	CEREAL RYE	112 lbs.	2/15-4/30 8/15-12/15	1"	436 lb/ac 10 lb/ 1000 sf	2 tons/ac 90 lb/ 1000 sf
	FOXTAIL MILLET	96 lbs.	2/15-4/30 / 8/15-11/30	1/2"		
	PEARL MILLET	72 lbs.	2/15-4/30 / 8/15-11/30	1/2"		

6.) MULCHING SHALL BE UNCHOPPED, UNROTTED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2–2½ TONS PER ACRE. ANCHOR MULCH WITH A MULCH ANCHORING TOOL ON THE CONTOUR. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW AT A RATE OF 750 LBS. PER ACRE MIXED WITH WATER AT A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALS. OF WATER, OR WITH A SYNTHETIC LIQUID BINDER ACCORDING TO MANUFACTURER RECOMMENDATIONS. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. MIX WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALS. OF WATER.

7.) PERMANENT SEEDING SHALL BE ACCOMPLISHED BETWEEN MARCH 1ST THROUGH MAY 15TH, OR AUGUST 15TH THROUGH OCTOBER 15TH. PERMANENT SEEDING AT OTHER THAN SPECIFIED TIMES WILL BE ALLOWED ONLY UPON WRITTEN APPROVAL. PERMANENT SEEDING SHALL CONFORM TO THE FOLLOWING APPLICATIONS: PERMANENT SEEDING FOR SITES HAVING DISTURBED OVER FIVE (5) ACRES SHALL USE FERTILIZER RATES RECOMMENDED BY A SOIL TESTING AGENCY AND THE RECOMMENDATIONS PROVIDED IN THE PERMANENT SEEDING SUMMARY TABLE. PERMANENT SEEDING FOR CONDITIONS OTHER THAN LISTED ABOVE SHALL BE PERFORMED AT THE RATES AND DATES AS PROVIDED IN THE PERMANENT SEEDING SUMMARY TABLE BELOW. FERTILIZER AND LIME AMENDMENTS SHALL BE INCORPORATED INTO THE TOP 3"–5" OF THE SOIL BY DISKING OR OTHER SUITABLE MEANS. MULCHING SHALL BE ACCOMPLISHED AS DISCUSSED IN ITEM #6 OF THESE SPECIFICATIONS.

Seed Mixture (For Hazard Zone 7a) (From Table 25)					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths	N	P205	K20	
7	CREEPING RED FESCUE KENTUCKY BLUEGRASS	60 lbs 15 lbs	3/1-5/15 8/15-10/15	1/4" to 1/2"	45 lb/ac 1 lb/ 1000 sf	90 lb/ac 2 lb/ 1000 sf	90 lb/ac 2 lb/ 1000 sf	2 tons/ac 100 lb/ 1000 sf
8	TALL FESCUE	100 lbs	3/1-5/15 8/15-10/15	1/4" to 1/2"				
9	TALL FESCUE KENTUCKY BLUEGRASS PERRENIAL RYEGRASS	60 lbs 40 lbs 20 lbs	3/1-5/15 8/15-10/15	1/4" to 1/2"				

8.) ANY SPOIL OR BORROW WILL BE PLACED AT A SITE APPROVED BY THE SOIL CONSERVATION DISTRICT.

9.) ALL AREAS REMAINING OR INTENDED TO REMAIN DISTURBED FOR LONGER THAN SEVEN (7) DAYS SHALL BE STABILIZED IN ACCORDANCE WITH THE USDA, NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS FOR CRITICAL AREA STABILIZATION.

10.) IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY OF SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.

THE FOLLOWING ITEMS HAVE BEEN ADDRESSED TO MEET THE REQUIREMENTS OF THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY (NPDES NUMBER MDR10, STATE DISCHARGE PERMIT NUMBER 09GP).

1. UTILIZATION OF ENVIRONMENTAL SITE DESIGN
2. MAINTENANCE OF LIMITS OF DISTURBANCE TO PROTECT NATURAL AREAS
3. CONTROL OF CONSTRUCTION EQUIPMENT AND VEHICLES
4. EVALUATION AND APPROPRIATE LIMITATION OF SITE CLEARING
5. EVALUATION AND DESIGNATION OF SITE AREA FOR PHASING OR SEQUENCING
6. IDENTIFICATION OF SOILS AT HIGH RISK FOR EROSION AND ADVANCED STABILIZATION TECHNIQUES TO BE USED
7. IDENTIFICATION OF STEEP SLOPES AND DESIGNATION OF LIMITATIONS ON CLEARING THEM
8. EVALUATION AND DESIGNATION OF STABILIZATION REQUIREMENTS AND TIME LIMITS AND PROTECTION MEASURES FOR DISCHARGES TO THE CHESAPEAKE BAY, IMPAIRED WATERS OR WATERS WITH AN ESTABLISHED TOTAL MAXIMUM DAILY LOAD (TMDL).

"The Soil Conservation District makes no representation as to the existence or Non-existence of any utilities at the construction site. Shown on these construction drawings are those utilities which have been identified. It is the responsibility of the landowners or operators and contractors to assure themselves that no hazard exists or damage will occur to utilities."

UNDERGROUND UTILITY WARNING:

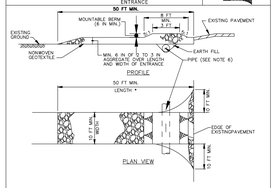
NO INVESTIGATION AS TO THE EXISTENCE OF ANY UNDERGROUND UTILITIES WAS CONDUCTED IN THE PREPARATION OF THIS PLAT. IT IS THE RESPONSIBILITY OF THE OWNER, SUCCESSORS, OR ASSIGNS, AND/OR ANY CONTRACTOR TO COMPLY WITH THE UNDERGROUND FACILITIES DAMAGE PREVENTION LAW AND THE REQUISITE PERMITS ARISING THEREFROM.

FINK, WHITTEN & ASSOCIATES, LLC.
LAND SURVEYING LAND PLANNING
ENVIRONMENTAL CONSULTING
PERMITTING
EASTON 410-822-8484 113 E. Dover St., Unit C Easton, Maryland 21601
CAMBRIDGE 410-228-8885 504 Maryland Avenue Cambridge, Maryland 21613
www.FINKWHITTEN.com

SEDIMENT AND EROSION CONTROL PLAN
ON THE LAND OF
CANVASBACK PROPERTIES, LLC
TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

DRAWN	CHECKED
B.S.F.	S.W.
DATE	
05/05/2022	
SCALE	
AS SHOWN	
JOB NO.	
T-109-EA-4582-16	
SHEET NO.	
2 of 5	

DETAIL B-1 — STABILIZED CONSTRUCTION ENTRANCE — STANDARD SYMBOL: SCE



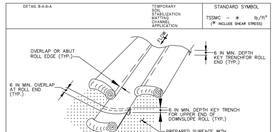
CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*50 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAIN A MINIMUM 6 INCH HIGH EARTH FILL MOUNTABLE BERM WITH 5:1 SLOPES TO PASS FLOWS BELOW WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO RUNOFF TO CONVEY, PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION 11-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT AND STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING SHALL BE USED ONLY AFTER MATERIAL IS REMOVED. WASHING IS NOT ACCEPTABLE UNLESS RUNOFF WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-b-4 — TEMPORARY STABILIZATION LINING CHANNEL APPLICATION — STANDARD SYMBOL: TSTONE



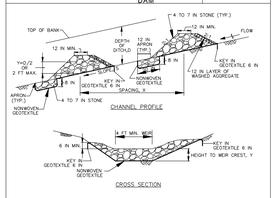
CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) TWINE WITH A UNIFORM MESH OPENING NO GREATER THAN 1 INCH BY 1 INCH AND A MINIMUM 70% OPEN AREA DISTRIBUTION OF FIBERS THROUGHOUT AND BE UV STABILIZED RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND SUSTAINABILITY. THE MAT MUST BE CAPABLE OF WITHSTANDING 175 LBS. PER FOOT FLOW WITH A MAXIMUM NEW GROWING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "I" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1.70 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "I" SHAPED STAPLES MUST BE A MINIMUM OF 8 INCHES LONG WITH A 1 INCH CROSS SECTION HIGH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE CHANNEL. PLACE THE END OF THE ROLL IN THE TRENCH, BACKFILL AND TAMP THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE STABILIZATION ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL D-2 — STONE CHECK DAM — STANDARD SYMBOL: SCD



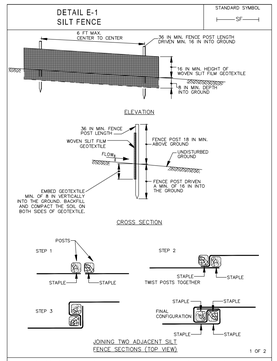
CONSTRUCTION SPECIFICATIONS

1. PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION C-5, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION 11-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE SWALE. PLACE GEOTEXTILE IN 6 INCH DEEP KEY TRENCH AT THE UPSTREAM END, WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR CREST SO THAT THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE DOWNSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (2 TO 15 INCH).
3. SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH, TO AVOID SCOUR. THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.5 FEET.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE — STANDARD SYMBOL: SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE — STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ x 1¾ in INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "L" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN, OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES HALF THE FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

N O R T H

MD COORDINATE SYSTEM
NAD 83

CONSTRUCTION SPECIFICATIONS

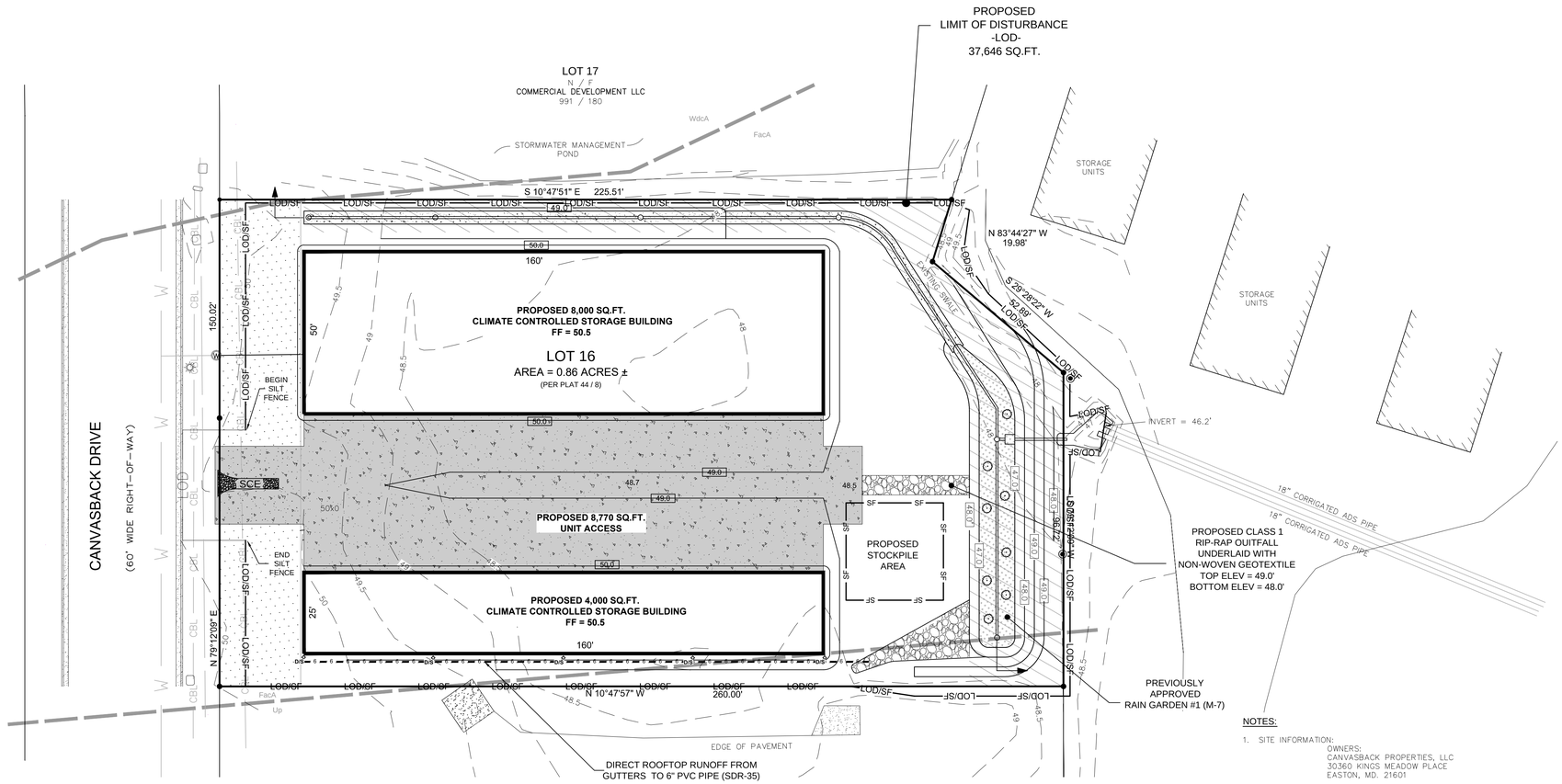
(MAXIMUM) SLOPE STEEPNESS LENGTH	(MAXIMUM) SLOPE LENGTH	SILT FENCE
FLATTER THAN 50:1	UNLIMITED	UNLIMITED
50:1 TO 10:1	125 FEET	1,000 FEET
10:1 TO 5:1	100 FEET	750 FEET
5:1 TO 3:1	60 FEET	500 FEET
3:1 TO 2:1	40 FEET	250 FEET
2:1 AND STEEPER	20 FEET	125 FEET

NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA FEDERAL CLASSIFICATION SYSTEM, SOIL CLASS A), MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE UNLIMITED. IN THESE AREAS, A SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED.

SOILS LEGEND:

PER USDA SOILS MAP:

FacA = FALLSINGTON SANDY LOAMS, 0 TO 2% SLOPES, MID-ATLANTIC COASTAL PLAIN



TALBOT COUNTY SCD:

REVIEWED FOR THE TALBOT SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

APPROVED:

TALBOT SOIL CONSERVATION DISTRICT DATE

NOTE: THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPERS CERTIFICATION

I, KEITH PRETTYMAN, HEREBY CERTIFY THAT ALL THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE ACCORDING TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

Keith Prettyman 09 / 28 / 2022
KEITH PRETTYMAN DATE

1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.

2. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

09 / 28 / 2022 Steve W Whitten
DATE DESIGNER'S SIGNATURE

MD. REGISTRATION NO: 21326 STEVEN W. WHITTEN, PROFESSIONAL LAND SURVEYOR

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21326, RENEWAL/EXPIRATION DATE: 1 / 8 / 2023

STATE OF MARYLAND · STEVEN W. WHITTEN · PROFESSIONAL LAND SURVEYOR · NO. 21326

NOTES:

1. SITE INFORMATION:
   OWNERS:
   CANVASBACK PROPERTIES, LLC
   30360 KINGS MEADOW PLACE
   EASTON, MD. 21601

   TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
   TAX ACCOUNT No.: 01-072080

2. DEED REFERENCE: 2690 / 005
   PLAT REFERENCE: PC 1 / 18A

3. ZONING: CG – COMMERCIAL GENERAL
4. BUILDING SETBACKS: FRONT 25'
   SIDE 10'
   REAR 30'

5. THE ENTIRE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE COASTAL FLOOD PLAIN ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 24041C0193C FOR TALBOT COUNTY, MARYLAND DATED AUGUST 5, 2013.

6. THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA.

7. THE PROPERTY LINES SHOWN HEREON ARE PER PLAT 1 / 18A.

8. ALL PROPOSED SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TOWN OF EASTON & EASTON UTILITIES CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR WATER, SEWER AND STREETS ISSUED APRIL 12, 2011.

9. THE CONTRACTOR SHALL NOTIFY THE TOWN OF EASTON ENGINEERING DEPARTMENT AT 410-820-8822 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING.

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DATE	REVISION

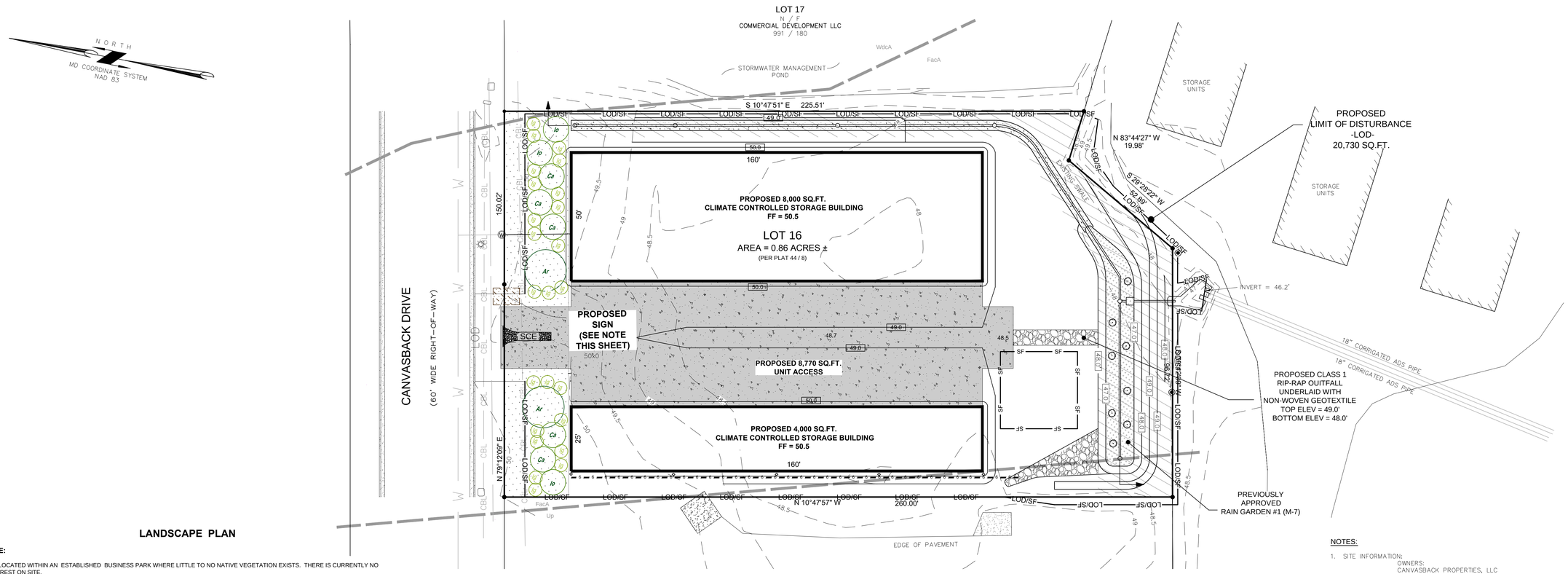
SEDIMENT AND EROSION CONTROL PLAN

ON THE LAND OF

CANVASBACK PROPERTIES, LLC

TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

DRAWN	CHECKED
B.S.F.	S.W.W.
DATE	
05/05/2022	
SCALE	
1" = 20'	
JOB NO.	
T-109-EA-4582-16	
SHEET NO.	
3 of 5	



LANDSCAPE PLAN

NARRATIVE:

THIS SITE IS LOCATED WITHIN AN ESTABLISHED BUSINESS PARK WHERE LITTLE TO NO NATIVE VEGETATION EXISTS. THERE IS CURRENTLY NO EXISTING FOREST ON SITE.

PER SECTION 28-1014.6 OF THE TOWN OF EASTON ZONING ORDINANCE, THE FOLLOWING LANDSCAPE PLANTINGS ARE REQUIRED IN THIS SECTION:

ONE (1) TREE PER 3,000 SF OF DISTURBED AREA PER SECTION 2-1017.6F
RESPONSE: DISTURBED AREA = 20,770 SQ.FT. (BUILDING AND PAVEMENT AREA). THUS 7 TREES REQUIRED. DUE TO SITE CONSTRAINTS, 6 TREES ARE PROPOSED AND THEREFORE, WE RESPECTFULLY REQUEST A WAIVER OF THE REMAINING TREE REQUIRED BY CODE.

ONE (1) INTERIOR PARKING LOT TREE PER SECTION 28-1014.6F(2)(a)
RESPONSE: RESPECTFULLY REQUEST A WAIVER OF THIS REQUIREMENT AS NO OTHER BUSINESS WITHIN THE INDUSTRIAL PARK HAS A TREE LOCATED WITHIN THE PARKING AREA. ONE TREE WITHIN THE PARKING AREA WILL SERVE NO PURPOSE, NOT BE CONSISTENT WITH THE OTHER BUSINESSES AND WILL LOOK OUT OF PLACE.

PARKING LOT SCREENING WITH AN EVERGREEN SHRUB HEDGE WHICH WILL GROW TO A MINIMUM OF 42" HEIGHT WITHIN 5 YEARS ALONG ALL STREET FRONTAGES, AND ALONG ALL, OR PORTIONS OF SIDES VISIBLE FROM A STREET, EXCLUDING THE BUILDING OR FACILITY ACCESS SIDES PER SECTION 28-1014.6F(2)(b)
RESPONSE: THE PLANTINGS WITHIN THE BIORETENTION AREAS, ADJACENT TO THE LOADING AREA AND ADJACENT TO THE FRONT PERIMETER OF THE BUILDING SATISFY THIS REQUIREMENT.

ONE (1) DECIDUOUS SHADE / CANOPY TREE PER EVERY 20' OF BUILDING FACADE PERIMETER VISIBLE FROM STREET PER SECTION 28-1016.F(2)(C).
RESPONSE: BUILDING FACADE PERIMETER = 250 LINEAR FEET, THUS 13 TREES REQUIRED. DUE TO SITE CONSTRAINTS, 6 TREES ARE PROPOSED AND THEREFORE, WE RESPECTFULLY REQUEST A WAIVER OF THE REMAINING 7 TREES REQUIRED BY CODE.

1.) LANDSCAPE INSTALLER SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. INSTALLER SHALL INSURE THAT FINAL GRADES HAVE BEEN ESTABLISHED AND THE SITE IS READY FOR LANDSCAPE INSTALLATION.

2.) LANDSCAPE INSTALLER SHALL MAINTAIN THE LANDSCAPE IMPROVEMENT AREAS IN A CLEAN CONDITION, REMOVING DEBRIS DAILY AND AT THE COMPLETION OF THE INSTALLATION.

3.) INSTALLER SHALL LAYOUT ALL BEDS AND POSITION PLANTS PER THE PLANS. ADJUST AS REQUIRED FOR FIELD CONDITIONS. REPORT SIGNIFICANT ADJUSTMENTS TO THE OWNER FOR APPROVAL PRIOR TO PLANT INSTALLATION. ALL BED AREAS SHALL BE SPRAYED WITH HERBICIDE AS NEEDED TO KILL AND/OR REMOVE ALL WEED OR GRASS VEGETATION.

4.) EXCEPT FOR TREE SPADE INSTALLATIONS, ALL TREE PITS SHALL BE EXCAVATED TO A DEPTH SO THAT THE ROOT BALL WILL REST ON SOLID S OIL AT THE PROPER HEIGHT. STREET TREES PLANTING PITS SHALL BE EXCAVATED AND WORKED IN A RECTANGULAR FORM WITH THE SMALL DIMENSION TWICE THE DIAMETER OF THE ROOT BALL AND THE LARGE DIMENSION AT LEAST THREE TIMES THE DIAMETER OF THE ROOT BALL. OPEN AREA TREE PITS SHALL BE EXCAVATED TO A MINIMUM DIMENSION OF TWICE THE ROOTBALL WIDTH. TREES PLANTED ON SLOPES OR SIDE SWALES SHALL BE INSTALLED AT A HEIGHT RELATING TO THE UP HILL SIDE OF THE PIT, AND MOUNDED WITH SOIL AROUND THE LOWER SIDE. ALL SIDES AND BOTTOM OF TREE PLANTING PITS SHALL BE SCARIFIED OR LOOSENED TO PERMIT ROOT GROWTH. EXCAVATED SOILS THAT HAVE BEEN PREVIOUSLY UNDISTURBED SHALL BE LOOSENED AND UTILIZED FOR BACKFILL. COMPACTED SOILS THAT CANNOT BE RESTORED TO A REASONABLE PLANTING SOIL SHALL BE REMOVED AND REPLACED WITH FRIABLE NATIVE SOILS FROM THE REGION.

5.) ALL SHRUB PLANTING PITS, LANDSCAPE BEDS AND PLANTING MASS AREAS SHALL BE WORKED TO A DEPTH OF 12" (OR RAISED SLIGHTLY TO ACHIEVE A 12" FRIABLE SOIL DEPTH). SHRUB PLANTING AREAS SHALL BE WORKED TO 12" MINIMUM OUTSIDE THE ROOT BALL.

6.) ALL LANDSCAPE BEDS SHALL BE V EDGED AND MULCHED WITH MINIMUM 3" DOUBLE SHREDDED HARDWOOD BARK MULCH, OR APPROVED EQUAL. MULCH TO FENCE LINES OR BACK OF CURBS WHERE APPROPRIATE TO ELIMINATE NARROW GRASS AREAS. AVOID MULCH PILED AGAINST TREE TRUNKS, ETC.

7.) ALL TREES TO BE STAKED AND GUYED WITH HARDWOOD STAKES, MINIMUM OF TWO (2) – 5' LONG, OR OTHER APPROVED GUYING SYSTEM. STAKES SHALL BE DRIVEN INTO STABLE SOILS. PROVIDE WIRE GUYS WITH RUBBER PROTECTANT OR OTHER APPROVED INDUSTRY PRACTICE.

8.) LANDSCAPE INSTALLER SHALL MAINTAIN ALL PLANT MATERIALS THROUGH THE COMPLETION OF THE LANDSCAPE INSTALLATION, AND THEN AS REQUIRED BY THE OWNER.

9.) AT THE COMPLETION OF THE LANDSCAPE INSTALLATION (OR BY PHASED COMPLETION IF PROVIDED FOR ON THE PLAN), THE OWNER, OR HIS DESIGNATED REPRESENTATIVE SHALL REQUEST AN INSPECTION BY TOWN OF EASTON.

LANDSCAPE STOCK LEGEND - SITE LANDSCAPING

PROPOSED LANSCAPE PLANTING:

CANOPY/SHADE TREES:

Ar = 2 – "RED SUNSET MAPLE" (*Acer rubrum 'RED SUNSET'*): 2" CALIPER MIN.

UNDERSTORY TREES:

Io = 3 – AMERICAN HOLLY (Ilex opaca)

Ca = 5 – PAGODA DOGWOOD (Cornus alternifiora)

UPRIGHT SHRUBS:

Ig = 20 – COMPACT INKBERRY (*Ilex glabra 'COMPACTA'*): 18" HEIGHT MIN.

PROPOSED PLANTINGS AT SIGN BASE:

= MULCHED LANDSCAPE BED

SIGN TO BE MULCHED AND LANDSCAPED AT ITS BASE, TO INCLUDE A MIX OF:

LILYTURF (*Liriope spicata*): 12" SPREAD MIN.

"PARDON ME" DAYLILLY (*Hemerocallis 'PARDON ME'*): 12" SPREAD MIN.

= PROPOSED BIO-RETENTION AREAS

NOTES:

1. SITE INFORMATION:
   OWNERS:
   CANVASBACK PROPERTIES, LLC
   30360 KINGS MEADOW PLACE
   EASTON, MD. 21601

   TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
   TAX ACCOUNT No.: 01-072080
2. DEED REFERENCE: 2690 / 005
   PLAT REFERENCE: PC 1 / 18A
3. ZONING: CG – COMMERCIAL GENERAL
4. BUILDING SETBACKS: FRONT 25'
   SIDE 10'
   REAR 30'
5. THE ENTIRE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE COASTAL FLOOD PLAIN ZONE "X" AS SHOWN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 24041C0193C FOR TALBOT COUNTY, MARYLAND DATED AUGUST 5, 2013.
6. THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA.
7. THE PROPERTY LINES SHOWN HEREON ARE PER PLAT 1 / 18A.
8. ALL PROPOSED SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TOWN OF EASTON & EASTON UTILITIES CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR WATER, SEWER AND STREETS ISSUED APRIL 12, 2011.
9. THE CONTRACTOR SHALL NOTIFY THE TOWN OF EASTON ENGINEERING DEPARTMENT AT 410-820-8822 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING.

APPROVED:

TOWN OF EASTON – PLANNING & ZONING DATE

APPROVED:

TOWN OF EASTON – TOWN PLANNER DATE

APPROVED:

EASTON UTILITIES – MANAGER OF ENGINEERING DATE

FINK, WHITTEN & ASSOCIATES, LLC.
LAND SURVEYING LAND PLANNING
ENVIRONMENTAL CONSULTING
PERMITTING
EASTON
410-822-8484
113 E. Dover St., Unit C
Easton, Maryland 21601
CAMBRIDGE
410-228-8885
504 Maryland Avenue
Cambridge, Maryland 21613
www.FINKWHITTEN.com

DATE	REVISION

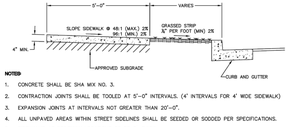
SITE LANDSCAPE PLAN
ON THE LAND OF

CANVASBACK PROPERTIES, LLC

TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

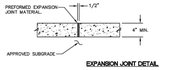
DRAWN	CHECKED
B.S.F.	S.W.W.

DATE: 05/05/2022
SCALE: 1" = 20'
JOB NO.: T-109-EA-4582-16
SHEET NO.: 4 of 5



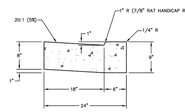
NOTES:

1. CONCRETE SHALL BE SHA MIX NO. 3.
2. CONTRACTION JOINTS SHALL BE TOOLED AT 5'-0" INTERVALS. (4" INTERVALS FOR 4' WIDE SIDEWALK)
3. EXPANSION JOINTS AT INTERVALS NOT GREATER THAN 20'-0".
4. ALL UNPAVED AREAS WITHIN STREET SIDELINES SHALL BE SEEDED OR SODDED PER SPECIFICATIONS.
5. SIDEWALKS AT DRIVEWAY LOCATIONS TO BE 8" THICK.
6. WHERE CONTINUOUS WIDTH OF TRAVEL IS LESS THAN 5'-0", PROVIDE PASSING ZONES AT AN INTERVAL NOT TO EXCEED 200' CENTER TO CENTER. ENTRANCES SHALL BE ACCEPTABLE PASSING ZONES PROVIDED PAVING WIDTH OF 5'-0" IS MAINTAINED AT 48:1 SLOPE.
7. GRASS STRIPS SHALL BE SLOPED AS TO PROVIDE POSITIVE DRAINAGE TOWARD STORMWATER FEATURES.
8. WHERE REVERSE SLOPES OF GRASS STRIPS AND SIDEWALKS ARE REQUIRED TO PROVIDE POSITIVE DRAINAGE TOWARDS A STORMWATER FEATURE, SPOT ELEVATIONS SHALL BE PROVIDED ON FRONT AND BACK OF SIDEWALK. (REVERSE SLOPES MUST BE APPROVED BY THE TOWN PRIOR TO CONSTRUCTION)
9. MAXIMUM SLOPE IN THE DIRECTION OF TRAVEL SHALL BE 5% IN LOCATIONS WITHOUT HANDICAPPED RAMPS.
10. SIDEWALKS SHALL COMPLY WITH ADA REQUIREMENTS PER THE MOST UP TO DATE DEPARTMENT OF JUSTICE REGULATION 28CFR PART 36.



EXPANSION JOINT DETAIL

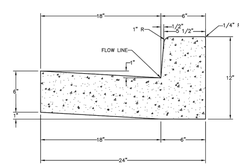
TOWN OF EASTON MARYLAND INCORPORATED 1710	APPROVAL TOWN ENGINEER DATE 1/2020	TOWN OF EASTON STANDARD DETAILS CONCRETE SIDEWALK
ISSUED: JANUARY 2020	STANDARD NO.:	TOE-R-7.01



NOTES:

1. ALL CONCRETE USED FOR CURB AND GUTTER SHALL BE SHA MIX NO. 7.
2. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 40'-0". EXTRUDED CONCRETE CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 100'-0".
3. MAXIMUM GUTTER SLOPE ON CURB RETURNS SHALL BE 2% WHERE HANDICAPPED RAMPS ARE REQUIRED.

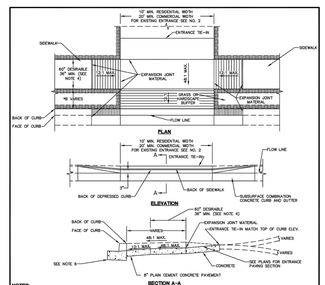
TOWN OF EASTON MARYLAND INCORPORATED 1710	APPROVAL TOWN ENGINEER DATE 1/2020	TOWN OF EASTON STANDARD DETAILS STANDARD DEPRESSED CURB AND GUTTER FOR SIDEWALK RAMPS
ISSUED: JANUARY 2020	STANDARD NO.:	TOE-R-6.03



NOTES:

1. ALL CONCRETE USED FOR CURB AND GUTTER SHALL BE SHA MIX NO. 7.
2. CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 40'-0". EXTRUDED CONCRETE CURB AND GUTTER SHALL HAVE CONTRACTION JOINTS EVERY 10'-0", AND EXPANSION JOINTS EVERY 100'-0".
3. DEPRESSED CURB AND GUTTER SHALL BE UTILIZED AT HANDICAPPED RAMPS WHEN TRANSITIONING FROM STANDARD CURB AND GUTTER.
4. MAXIMUM GUTTER AND SLOPE ON CURB RETURNS SHALL BE 2% WHERE HANDICAPPED RAMPS ARE REQUIRED.

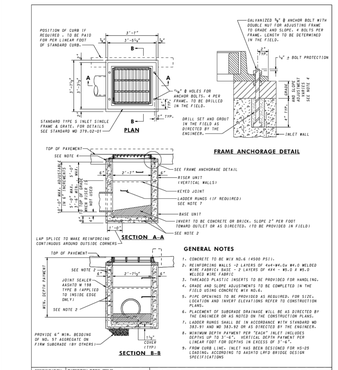
TOWN OF EASTON MARYLAND INCORPORATED 1710	APPROVAL TOWN ENGINEER DATE 1/2020	TOWN OF EASTON STANDARD DETAILS STANDARD CURB AND GUTTER
ISSUED: JANUARY 2020	STANDARD NO.:	TOE-R-6.01



NOTES:

1. FOR USE IN AREAS WHERE THERE IS SIDEWALK SEPARATED FROM THE BACK OF CURB BY 24" OR MORE, OR WHERE IT IS EXPECTED THAT SIDEWALK WILL BE ADDED IN THE FUTURE.
2. WHEN AN EXISTING ENTRANCE IS LESS THAN 20' IN WIDTH A UNIFORM TAPER SHALL BE CONSTRUCTED TO TIE INTO THE EXISTING ENTRANCE AS DIRECTED BY TOWN THE ENGINEER.
3. EXPANSION JOINT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH TOE-R-6.01.
4. WHERE 60" SIDEWALK CANNOT BE PROVIDED, 30" MIN. MAY BE USED AS LONG AS PASSING ZONES ARE PROVIDED.
5. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.
6. MEDIAN CURB AND GUTTER IN ACCORDANCE WITH TOE-R-6.04.

TOWN OF EASTON MARYLAND INCORPORATED 1710	APPROVAL TOWN ENGINEER DATE 1/2020	TOWN OF EASTON STANDARD DETAILS RESIDENTIAL AND COMMERCIAL ENTRANCE #2
ISSUED: JANUARY 2020	STANDARD NO.:	TOE-R-4.02



SPECIFICATION 385	CARD/DGN/V CODE ITEMS		
APPROVED	DIRECTOR - OFFICE OF DEVELOPMENT		
SHA	APPROVAL + DGN	APPROVAL + VISUAL	
	APPROVAL 4.22.87	APPROVAL 4.22.87	
	REVISED 8.15.18	REVISED 2.26.19	
	REVISED 10.7.19	REVISED 4.29.19	
	REVISED	REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PRECAST STANDARD
TYPE S INLET SINGLE GRATE

STANDARD NO. MD 374.73

FINK, WHITTEN & ASSOCIATES, LLC.
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DETAILS
FOR PROPOSED IMPROVEMENTS TO THE LAND OF

CANVASBACK PROPERTIES, LLC

TAX MAP 109, GRID EA, PARCEL 4582, LOT 16
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

DRAWN	CHECKED
B.S.F.	S.W.W.
DATE	
05/05/2022	
SCALE	
AS SHOWN	
JOB NO.	
T-109-EA-4582-16	
SHEET NO.	
5 of 5	

TALBOT COUNTY CIRCUIT COURT (Plat Book) Plat Cabinet MAS 1, p. 18A, MSA_C2399_8278. Date available 1988/10/26. Printed 02/07/2024.

NOTES:

1. A UTILITIES RIGHT-OF-WAY AND EASEMENT SHALL BE PROVIDED IN AND OVER STRIPS OF LAND TEN (10) FEET IN WIDTH ALONG THOSE BOUNDARY LINES CONTIGUOUS TO ANY STREET OR ALLEY AND FIVE (5) FEET IN WIDTH ON EACH SIDE OF SIDE AND REAR LOT LINES.
2. THE STREETS AND ROADWAYS SHOWN HEREON ARE HEREBY DEDICATED TO THE PUBLIC USE AND MAY NOT BE CLOSED EXCEPT BY THE FORMAL CONSENT OF THE OWNERS OF EACH AND ALL OF THE SEPARATE PARCELS SHOWN.

LEGEND

TOWN BOUNDARY LINE

ZONE LINE

PLAT NORTH
TOWN OF EASTON
AZIMUTH

Oct. 26th
A 88 10:55
Plat MAS 18-A
Mary Ann Shotwell

DATE

DATE

DATE

DATE

5-27-88
DATE

SEAL

MCCRONE
ENGINEERS ■ PLANNERS ■ SURVEYORS
ANNAPOLIS, MARYLAND
CENTREVILLE – CHESTERTOWN – DENTON – EASTON – ELKTON – LEONARDTOWN – PRINCE FREDERICK

DATE	APRIL 1988
SCALE	1" = 50'
JOB NO.	5120-3080
DRAWN BY	JM/SS/MJ/AA
FOLDER REF.	2906
APPROVED	RAD

REVISION	DATE
TO CHANGE GRADE	5-25-88
By Town of Easton	
REQUEST.	

FINAL OF CARLTON BUSINESS PARK

A SUBDIVISION

IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

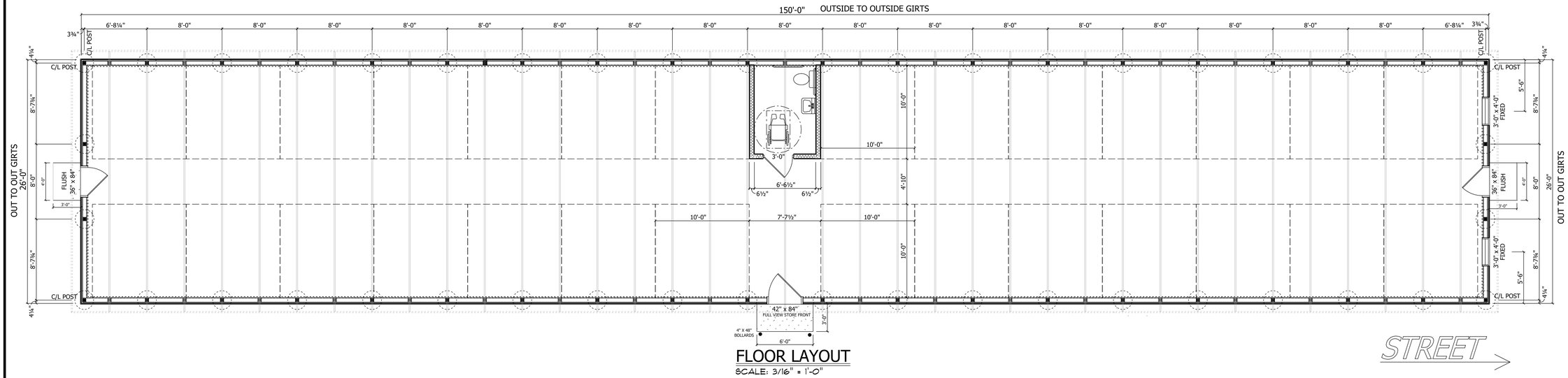
SHEET NO. 3 OF 6

FILE NO. 2906

p7264

MSA CSU 2399-8278

SIDING, ROOF,
AND BRICK COLORS / TYPE
TO BE DETERMINED



FLOOR LAYOUT
SCALE: 3/16" = 1'-0"

The drawings herein are representative of the design intent as expressed and reviewed by the owner/owners representative. The end user is responsible for reviewing and verifying dimensions, code compliance, job site safety and the structural elements for the project. The end user should become familiar with all aspects of the project prior to commencement of the project and notify the designer with any discrepancies.

SOFTPLAN V 2022 FILE: CANVASBACK PROPERTIES LLC. 1/2023

PLANS BY MIKE ADAMS
410 330 6711

APPROVED

CANVASBACK PROPERTIES LLC.
29501 CANVASBACK DR.
EASTON, MD. 21601

USE
REVIEW ONLY
NOT FOR
CONSTRUCTION

SCALE
1/4" = 1'-0"
UNO

DATE
2/5/2024

R-1

This instrument has been prepared by Ewing, Dietz, Fountain & Kaludis, P.A. using information furnished by the parties and it makes no representation or warranty whatsoever as to the title of the property herein conveyed.

THIS DEED, made on this 13 day of March, 2020, by and between **KEITH B. PRETTYMAN** and **CAROL E. PRETTYMAN**, his wife (the "Grantors"); and **CANVASBACK PROPERTIES, LLC**, a Maryland limited liability company (the "Grantee").

WHEREAS, the Grantors have owned and operated the hereinafter described property as a real estate enterprise as tenants by the entirety; and

WHEREAS, the Grantors desire to transfer the hereinafter described property to the Grantee and said transfer is exempt from the payment of recordation and transfer taxes pursuant to Sections 12-108(bb) and 13-207(a)(18) of the Tax-Property Article of the Annotated Code of Maryland as (i) the transfer is for no consideration other than the issuance of membership interests to the Grantors in the Grantee; (ii) the members of the Grantee are identical to the partners of the real estate enterprise; (iii) each member's allocation of the profits and losses of the Grantee are identical to that member's allocation of the profits and losses of the real estate enterprise; (iv) the transfer is part of a discontinuation of the real estate enterprise; and (v) all real property owned by the individuals and used in the conduct of the real estate enterprise are being conveyed to the Grantee.

NOW, THEREFORE, WITNESSETH, that for **NO CONSIDERATION**, the Grantors do hereby grant and convey to the Grantee, its successors and assigns, in fee simple, all the hereinafter described property:

ALL that lot, piece or parcel of ground situate, lying and being in the Town of Easton, First Election District of Talbot County, State of Maryland and more particularly described as follows, that is to say:

ALL that lot, tract or parcel of land situate, lying and being in the Town of Easton, Talbot County, Maryland, and more particularly shown and designated as Lot No. 16 on a certain plat entitled "FINAL OF CARLTON BUSINESS PARK, A SUBDIVISION IN THE TOWN OF EASTON, TALBOT COUNTY, MARYLAND", dated April, 1988 and revised September 19, 1988, as prepared by McCrone, and recorded among the Plat Records of Talbot County in Plat Cabinet M.A.S. No. 1, Plat No. 17A through 19AA inclusive; reference being hereby made to said Plat for a more particular description of said lot by metes and bounds, courses and distances. Said lot or parcel containing 37,597 square feet of land, more or less, and lying on the southerly side of Canvasback Drive.

TOGETHER with a right-of-way for ingress and egress, to be used in common with others legally entitled thereto, over all roadways shown and designated as Teal Drive, Pintail Drive, Brant Court and Canvasback Drive on the aforementioned plats. SUBJECT TO provisions as to roadways and easements contained in a Quit Claim Deed dated January 7, 1991 and recorded among the Land Records of Talbot County, Maryland in Liber No. 698, folio 469.

BEING the same property conveyed unto Keith B. Prettyman and Carol E. Prettyman, by Choptank Investments, LLC, a Maryland limited liability company, by Deed dated May 13, 2016, and recorded among the Land Records of Talbot County, Maryland in Liber 2351, folio 514.

TALBOT COUNTY FINANCE OFFICE
RECORDATION TAX
AMT: $0
DATE: 3/17/2020
INITIALS: SRH
Prop ID: 01-072080

CERTIFICATION IS MADE THAT ALL TAXES DUE ON THE PROPERTY INDICATED IN THIS DEED HAVE BEEN PAID.
FINANCE OFFICER OF TALBOT COUNTY
RANDREW HOLLIS, FIN. OFFICER
DATE 3/17/2020

EWING, DIETZ, FOUNTAIN & KALUDIS, P.A. • 16 S. WASHINGTON STREET, EASTON, MD 21601 • (410) 822-1988

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2690, p. 0005, MSA_CE91_2629. Date available 03/25/2020. Printed 02/07/2024.

TOGETHER WITH the buildings and improvements thereon erected, made or being; and all and every the rights, alleys, ways, waters, privileges, appurtenances and advantages, to the same belonging, or in anywise appertaining.

TO HAVE AND TO HOLD said tract or parcel of ground and premises above described and mentioned, and hereby intended to be conveyed; together with the rights, privileges, appurtenances and advantages thereto belonging or appertaining unto and to the proper use and benefit of the Grantee, its successors and assigns, in fee simple.

AND the Grantors do hereby covenant that they have not done or suffered to be done any act, matter or thing whatsoever, to encumber the property hereby conveyed, that they will warrant specially the property granted, and that they will execute such further assurance of the same as may be requisite.

IN WITNESS WHEREOF, the Grantors have signed and sealed this Deed as of the day and year first above written.

WITNESS:

_____ _____ (SEAL)
Keith B. Prettyman

_____ _____ (SEAL)
Carol E. Prettyman

STATE OF MARYLAND, COUNTY OF TALBOT, to wit:

I HEREBY CERTIFY, that on this 13th day of March, 2020, before me, the subscriber, a Notary Public of the foregoing State and County, personally appeared **KEITH B. PRETTYMAN** known to me (or satisfactorily proven) to be one of the persons whose name is subscribed to the within instrument and acknowledged that he executed the same for the purposes therein contained, and further acknowledged said instrument to be his act, giving oath under penalties of perjury that the information contained herein is true and correct and that the consideration recited is correct.

IN WITNESS WHEREOF, I hereunto set my hand and official seal as of the day and year first above written.

_____
Notary Public

My Commission Expires: 9/24/2020

MELINDA D. STAFFORD NOTARY PUBLIC MY COMMISSION EXPIRES 9/24/2020 CAROLINE COUNTY, MD

STATE OF MARYLAND, COUNTY OF TALBOT, to wit:

I HEREBY CERTIFY, that on this 13th day of March, 2020, before me, the subscriber, a Notary Public of the foregoing State and County, personally appeared **CAROL E. PRETTYMAN** known to me (or satisfactorily proven) to be one of the persons whose name is subscribed to the within instrument and acknowledged that she executed the same for the purposes

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2690, p. 0006, MSA_CE91_2629. Date available 03/25/2020. Printed 02/07/2024.

therein contained, and further acknowledged said instrument to be her act, giving oath under penalties of perjury that the information contained herein is true and correct and that the consideration recited is correct.

IN WITNESS WHEREOF, I hereunto set my hand and official seal as of the day and year first above written.

Notary Public

MELINDA D. STAFFORD NOTARY PUBLIC MY COMMISSION EXPIRES 9/24/2020 CAROLINE COUNTY, MD

My Commission Expires: 9/24/2020

This is to certify that the foregoing instrument was prepared by, or under the supervision of the undersigned, an attorney duly admitted to practice before the Court of Appeals in Maryland.

John M. Egleder, Esquire

Y:\JME\CLIENTS M-R\Prettyman, Carol E. & Keith B\Deed to LLC.wpd

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2690, p. 0007, MSA_CE91_2629. Date available 03/25/2020. Printed 02/07/2024.

FINK, WHITTEN & ASSOCIATES, LLC

Land Surveying • Land Planning • Environmental Consulting • Permitting
www.finkwhitten.com

504 Maryland Avenue
Cambridge, MD 21613
410-228-8885 phone
410-228-8845 fax

113 East Dover Street
Unit C, 1st Floor
Easton, MD 21601
410-822-8484

February 7, 2024

Mr. Lynn Thomas, Town Planner
Town of Easton Planning & Zoning
16 S. Harrison Street
Easton, MD 21601

RE: Minor Subdivision - Pamela Into
220 South Street, Easton
Map 104, Parcel 1902 – Zoned R-10A

Dear Lynn:

Please find enclosed four (4) copies of the Minor Subdivision Plat on the Lands of Pamela Into, as well as the subdivision application and review fee, deeds and plats of record.

As such, please place on the ESDR agenda for February 28, 2024. Please note that Ms. Into started this subdivision several years ago with a different firm and we are finalizing it.

Sincerely,
Fink, Whitten & Associates, LLC

Elizabeth

Elizabeth Fink
Co-owner, Planner

RECEIVED
FEB 07 2024
TOWN OF EASTON

Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

Easton Staff Development Review

Property Information

Address	220 South Street						
Tax Map	104	Grid	EA	Parcel	1902	Lot	—
Deed Refernce:	Liber	2615	Folio	306			
Plat Reference:	Liber	4	Folio	50 HH			
Base Zoning District	R-10A	Historic District Y ☒ N ☐		Planning Redevelopment Y ☐ N ☒			

Purpose of Application / Description of Work:

Subdivision of existing parcel 1902 to create Revised Parcel 1902 (house lot) and new Lot 1

Owner

Name	Pamela Into
Mailing Address	220 South Street
Telephone No.	530 306 5032
Email	pamelainto@yahoo.com

Applicant / (Agent)

Name	Elizabeth Fink, Fink Whitten + Assoc, LLC
Mailing Address	113 E Dover st Unit C Easton 21601
Telephone No.	410 822 8484
Email	efink@finkwhitten.com

Surveyor / Engineer

Name	Steve Whitten	License No.	21326	Expiration Date	1-8-25
Mailing Address	504 Maryland Ave Cambridge md 21613				
Telephone No.	410 228 8885	Email	stevewhitten.ls@gmail.com		

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent: Elizabeth Fink, FWA

Date: 2-7-24

Printed Name of Applicant or Agent: Elizabeth Fink

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

Easton Staff Development Review Meeting Date 02/28/2024 **2024-1130/ ESDR 24-05**

Completeness Check Date

Revisions/Resubmissions Required Y ☐ N ☐

Resubmission Date Documents Received Y ☐ N ☐

Staff Determination

Planning Commission Requir Y ☐ N ☐

BOZA Required Y ☐ N ☐

Historic District Commission Required Y ☐ N ☐

Resubmission for ESDR Required Y ☐ N ☐

Staff Signature Date

Revised 02-2019

RECEIVED
FEB 07 2024
TOWN OF EASTON

Town of Easton
Engineering, Planning and Zoning
13 South Harrison Street, Easton, MD 21601

Subdivision & Property Line Adjustment Application

Application Type

Subdivision ☐ Minor Subdivision ☒ Lot Line Revision ☐

Subdivision Information

Name: Pamela Into
Property Size: Acres .496 Square Feet 21,622 SF
Number of Lots Proposed: 2

Property Information

Address: 220 South Street
Tax Map: 104 Grid: EA Parcel: 1902 Lot:
Deed Refernce: Liber 2615 Folio 306
Plat Reference: Liber 4 Folio 50HH
Zoning District: R-10A Planned Redevelopment Y ☐ N ☒ Historic District Y ☒ N ☐
Source of Electricity: Easton Utilities

Owner

Name: Pamela Into
Mailing Address: 220 South Street Easton md 21601
Telephone No.: 530-306-5032 Email: pamelainto@yahoo.com

Surveyor / Engineer

Name: Steve Whitten License No. 21326 Expiration Date 1-8-25
Mailing Address: 504 maryland Avenue Cambridge md 21613
Telephone No.: 410 228 8885 Email: stevewhitten.ls@gmail.com

Applicant or Agent

Name: Elizabeth Fink, Fink Whitten + Assoc
Mailing Address: 113 E Dover St Unit C Easton md 21601
Telephone No.: 410 822 8484 Email: efink@finkwhitten.com

Additional Comments:

Subdivision of existing parcel 1902 to create revised parcel 1902 (House lot) and new Lot 1

Minimum Lot Size	10,000 | 7,000	Minimum Lot Frontage	30'
Minimum Lot Envelope	55'D x 30'W	Existing Lot Coverage	
		Proposed Lot Coverage	0

→ 28.-303.2; we may need a variance for this

- ☐ ESDR Letter
- ☐ $200 Per Subdivided Lot Fee
- ☐ $500 Lot Line Revision Fee

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Subdivision Regulations Article 4, Procedures and Requirements and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent: Elizabeth Fink

Date: 2/7/24

Printed Name of Applicant or Agent: Elizabeth Fink, FWA

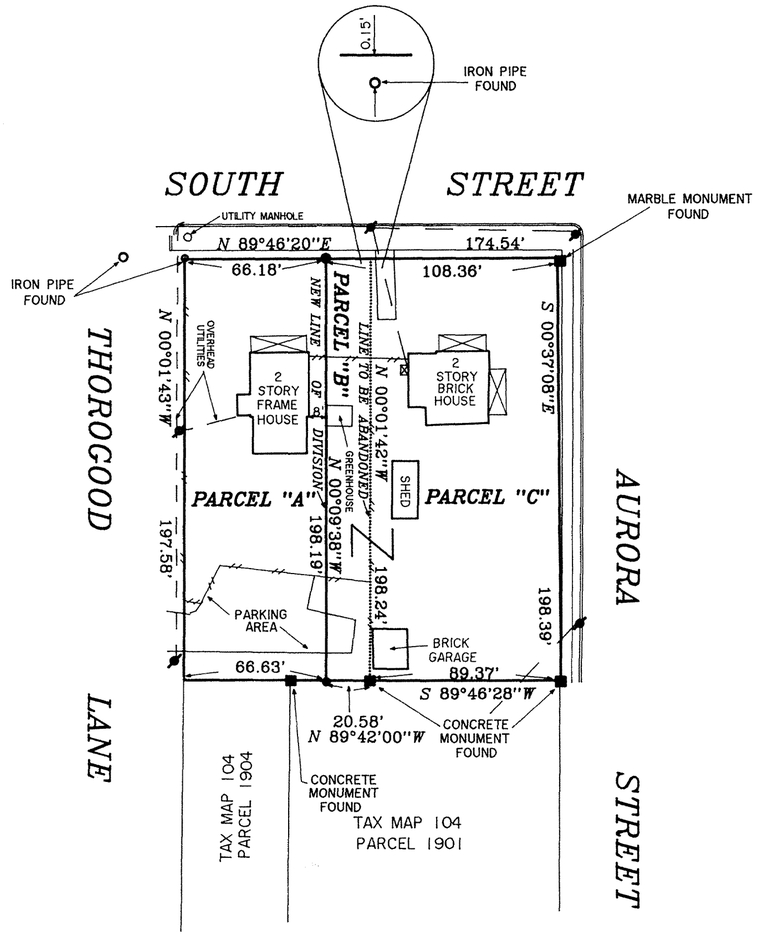
For Office Use Only

Planning Commission Y ☐ N ☐			
Planning Commission Meeting Date		TBD	
PC Approval Date		Subdivision No.	
Conditions? Y / N		Application No.	2024 -1130
Recordation Date		Fee Amount	$600.00
ESDR Y / N Date	02/28/2024	Review Fee Paid	02/07/2024
			Revised 02-2019

ESDR 24-05

TALBOT COUNTY CIRCUIT COURT (Subdivision Plats, TA) Plat Cabinet MSA 4, p. 50HH, MSA_S1254_1852. Date available 1997/12/09. Printed 12/05/2023.
Maryland State Archives

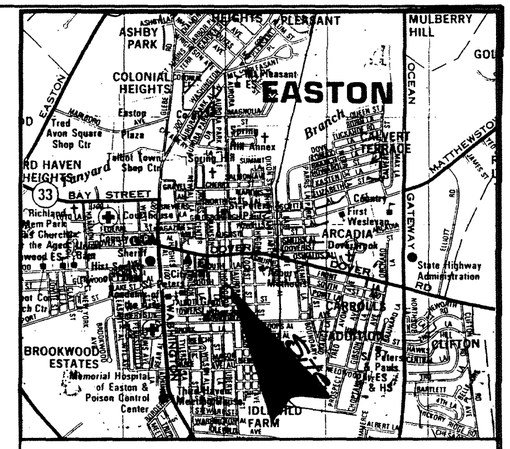
PLAT 42/4



State of Maryland
Talbot County, To Wit
Recorded in the Plat Records
of Talbot County MAS PC4/50HH

Mary Ann Sportall

Mary Ann Sportall, Clerk



VICINITY MAP
SCALE : 1" = 2,000'
COPYRIGHT ADC, THE MAP PEOPLE
PERMITTED USE NO. 20396402

NOTES AND APPROVALS

HEALTH DEPARTMENT
THIS LOT LINE REVISION IS APPROVED FOR COMMUNITY WATER SUPPLY AND COMMUNITY SEWAGE AND THEIR USE IS IN ACCORDANCE WITH THE TALBOT COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN AND MDE REGULATION 26.04.03.

John M. Ryan, MD — 17 Sept 97
TALBOT COUNTY APPROVING AUTHORITY — DATE

DEPARTMENT OF PUBLIC WORKS

10/8/97
TOWN OF EASTON ENGINEER — DATE

PLANNING AND ZONING

10/06/97
CHAIRMAN, TOWN OF EASTON PLANNING AND ZONING — DATE

NOTES: (1) PARCEL "B" IS TO BECOME PART OF PARCEL "C" AND PARCEL "B" IS NOT APPROVED AS A SEPARATE LOT FOR BUILDING PURPOSES.

PLAT CHECKED
DATE
INDEX TABLE
MAS 7416
Rec'd Oct 29, 1997
10/9/97 9:36

LOT AREAS		
	BEFORE REVISION	AFTER REVISION
PARCEL "A"	17,266 SQ.FT.	13,140 SQ.FT.
PARCEL "C"	17,527 SQ.FT.	21,653 SQ.FT.

50 0 50 100 150
GRAPHIC SCALE - FEET

COMPUTER FILE:
COORD.: DELRNTAS
SCREEN: DELRNTAS

OWNER'S CERTIFICATE:
I, JOYCE M. DeLAURENTIS, OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADOPT THIS PLAN.

Joyce M. DeLaurentis — 10/3/97
JOYCE M. DeLAURENTIS — DATE

SURVEYOR'S CERTIFICATE:
I CERTIFY TO JOYCE M. DeLAURENTIS THAT THIS PLAT WAS MADE FROM NOTES OF A PRECISE FIELD SURVEY, WITHOUT REVIEW OF AN ABSTRACT OF TITLE, AND IS ACCURATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

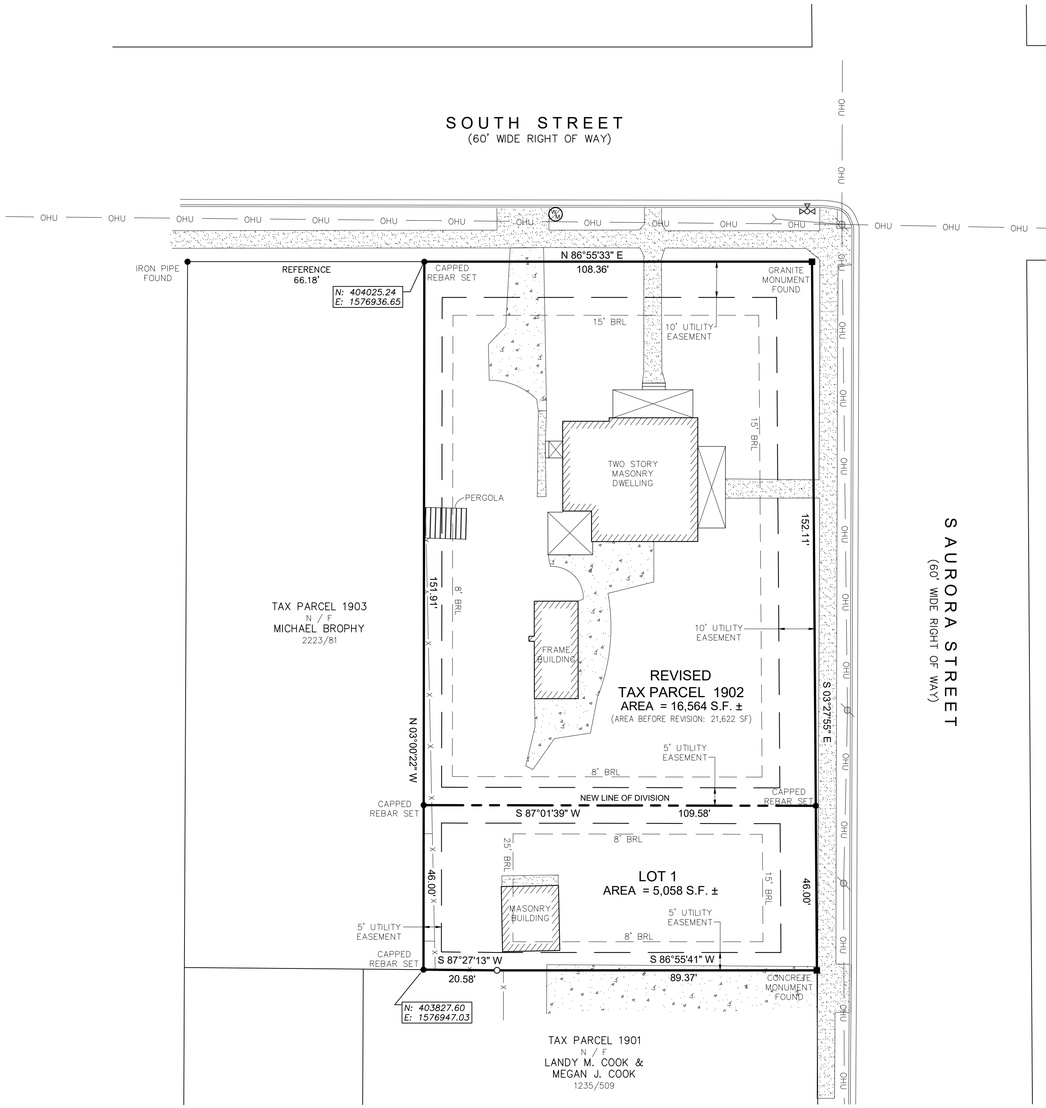
8/7/97
WILLIAM C. CRAIG — DATE

LOT LINE REVISION
LAND OF
JOYCE M. DeLAURENTIS
TOWN OF EASTON
TALBOT COUNTY, MARYLAND

WILLIAM C. CRAIG & COMPANY
LICENSED SURVEYOR
300 Academy Street, Suite 202
Cambridge, Maryland 21613
(410) 228-2295
Facsimile (410) 228-3238

DATE: 6/24/97
SCALE: 1" = 50'
JOB NO.: 104/ /1903-97
SHEET
1 OF 1

MSA SSU 1254-1852

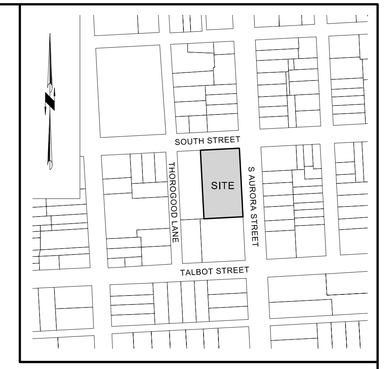


0' 20' 40' 60'

SCALE: 1" = 20'

LEGEND:

- = CONCRETE SURFACE
- = GRAVEL SURFACE
- x — = FENCE
- BRL = BUILDING RESTRICTION LINE
- = COMPUTED POINT
- = WATER METER
- OHU — = OVERHEAD UTILITY LINES
- = UTILITY POLE
- = GUY WIRE
- = FIRE HYDRANT



VICINITY MAP
SCALE: 1" = 200'

GENERAL NOTES:

1. OWNER: PAMELA INTO
220 SOUTH STREET
EASTON, MD 21601
PHONE: 530-306-5032

TAX MAP 104 GRID EA PARCEL 1902

DEED REF.: 2615 / 306
PLAT REF.: 4 / 50HH

2. SITE ADDRESS: 220 SOUTH STREET
EASTON, MARYLAND 21601

3. CURRENT ZONING INFORMATION:
DISTRICT: R-7A – RESIDENTIAL DISTRICT

MINIMUM LOT SIZE: 5,000 SQ.FT.
MINIMUM FRONTAGE: 30'
MAXIMUM LOT COVERAGE: 100% OF BUILDING ENVELOPE
MINIMUM SETBACKS:
FRONT 15'
SIDE 8'
REAR 25'

4. THE PROPERTY SHOWN HEREON IS LOCATED WITH THE HISTORIC DISTRICT OVERLAY.

5. THE PROPERTY SHOWN HEREON IS NOT LOCATED WITHIN THE COASTAL FLOOD PLAIN AS SHOWN ON THE FEDERAL FLOOD INSURANCE RATE MAPS COMMUNITY PANEL NO. 24041C0187C FOR TALBOT COUNTY, MARYLAND DATED JULY 20, 2016.

6. THE PROPERTY SHOWN HEREON IS LOCATED ENTIRELY OUTSIDE OF THE CHESAPEAKE BAY CRITICAL AREA.

7. SETBACK DIMENSIONS SHOWN HEREON ARE ROUNDED TO THE NEAREST 0.1'.

8 WATER SUPPLY & SEWAGE DISPOSAL: TOWN OF EASTON

9 ALL STREETS AND STREET WIDENINGS, PARKS AND OTHER LANDS INTENDED FOR PUBLIC USE ARE RESERVED BY THE OWNER FOR FUTURE CONVEYANCE TO THE TOWN OF EASTON.

10. ALL EASEMENTS SHOWN HEREBY DEDICATED FOR PUBLIC USE.

11 A UTILITIES DISTRIBUTION RIGHT-OF-WAY AND EASEMENT IS HEREBY DEDICATED TO THE TOWN OF EASTON IN AND OVER STRIPS OF LAND TEN (10) FEET IN WIDTH ALONG THOSE BOUNDARY LINES CONTIGUOUS TO ANY STREET OR ALLEY AND FIVE (5) FEET IN WIDTH IN EACH SIDE OF SIDE LOT LINES.

12 THE PLANNING AND ZONING COMMISSION MAY WAIVE OR TERMINATE, UPON RESUBDIVISION, SUCH UTILITY EASEMENT WHICH HAS NOT BEEN ACCEPTED BY USE THEREOF, UPON RECEIVING APPROVAL FROM THE TOWN ENGINEER.

13 BUILDING PERMITS SHALL BE ISSUED ONLY IF SUFFICIENT CAPACITY IS AVAILABLE IN THE COMMUNITY WATER SUPPLY SYSTEM, SEWERAGE SYSTEM, AND SOLID WASTE ACCEPTANCE FACILITY SERVING THE SUBDIVISION.

14 LAND SHOWN UPON THIS PLAT MAY CONTAIN NONTIDAL WETLANDS REGULATED UNDER COMAR 08.05.04; THE FEDERAL WATER POLLUTION ACT SECTION 404; OR THE RIVERS HARBOR ACT SECTION 10. DEVELOPMENT AND CONSTRUCTION WITHIN WETLANDS ARE SUBJECT TO FEDERAL AND STATE REGULATIONS AND MAY BE PROHIBITED OR RESTRICTED BY SUCH REGULATIONS.

15. THE PURPOSE OF THIS PLAT IS TO SUBDIVIDE TAX PARCEL 1902 TO CREATE NEW LOT 1 AND REVISED TAX PARCEL 1902.

OWNER CERTIFICATION:

PAMELA INTO, OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADOPTS THIS PLAN OF SUBDIVISION.

PAMELA INTO DATE

THE OWNER HAS SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 2024.

NOTARY

APPROVALS:

THIS MINOR SUBDIVISION PLAT IS APPROVED BY THE TALBOT COUNTY HEALTH DEPARTMENT.

REVISED TAX PARCEL 1902 AND LOT 1 AS SHOWN HEREON ARE APPROVED FOR COMMUNITY WATER SUPPLY AND COMMUNITY SEWAGE AND THEIR USE IS IN ACCORDANCE WITH TALBOT COUNTY COMPREHENSIVE WATER AND SEWERAGE PLAN AND MDE REGULATION 26.04.03.

TALBOT COUNTY APPROVING AUTHORITY DATE

APPROVED:

CHAIRMAN OF PLANNING AND ZONING COMMISSION DATE

THE TOWN PLANNER DATE

UNDERGROUND UTILITY WARNING:

NO INVESTIGATION AS TO THE EXISTENCE OF ANY UNDERGROUND UTILITIES WAS CONDUCTED IN THE PREPARATION OF THIS PLAT. IT IS THE RESPONSIBILITY OF THE OWNER, SUCCESSORS, OR ASSIGNS, AND/OR ANY CONTRACTOR TO COMPLY WITH THE UNDERGROUND FACILITIES DAMAGE PREVENTION LAW AND THE REQUISITE PERMITS ARISING THEREFROM.

SURVEYOR'S CERTIFICATE:

I, STEVEN W. WHITTEN, HEREBY CERTIFY THAT THE FINAL PLAT HEREON IS CORRECT; THAT IT IS A SUBDIVISION OF THE LANDS CONVEYED BY JOHN N. INTO, TRUSTEE OF THE ELLEN C. INTO LIVING TRUST, DATED JULY 20, 1998, AS RESTATED IN FULL MAY 1, 2006 BY DEED DATED MAY 28, 2019 AND RECORDED AMONG THE LAND RECORDS OF TALBOT COUNTY, MARYLAND IN LIBER 2615, FOLIO 306, AND THAT THE REQUIREMENTS OF THE TOWN OF EASTON SUBDIVISION REQUIREMENTS IN SO FAR AS THEY MAY CONCERN THE MAKING OF THIS PLAT AND THE SETTING OF MONUMENTS AND MARKERS HAVE BEEN COMPLIED WITH. I ALSO CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECT SUPERVISION AND COMPLIES WITH SECTION 09.13.06.12 OF THE ANNOTATED CODE OF MARYLAND TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF. THIS PLAT WAS PREPARED WITHOUT BENEFIT OF THE SEARCH OF AN ABSTRACT OF TITLE.

Steve Whitten 2/7/2024

STEVEN W. WHITTEN DATE
PROFESSIONAL LAND SURVEYOR MD. NO. 21326
(CURRENT LICENSE EXPIRES/ RENEWS: 1 / 8 / 2025)

STATE OF MARYLAND · STEVEN W. WHITTEN · NO.21326 · PROFESSIONAL LAND SURVEYOR

FINK, WHITTEN & ASSOCIATES, LLC.
LAND SURVEYING LAND PLANNING
CIVIL ENGINEERING PERMITTING
ENVIRONMENTAL CONSULTING
EASTON
410-822-8484
8626 Brooks Drive Unit 103
Easton, Maryland 21601
CAMBRIDGE
410-228-8885
108 Dorchester Avenue
Cambridge, Maryland 21613
www.FINKWHITTEN.com

DATE	REVISION

MINOR SUBDIVISION
OF THE LANDS OF
PAMELA INTO
TAX MAP 104, GRID EA, PARCEL 1920
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

DRAWN	CHECKED
B.S.F.	S.W.W.

DATE 2/5/2024
SCALE 1" = 20'
JOB NO. T-104-EA-1902

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2615, p. 0306, MSA_CE91_2554. Date available 06/06/2019. Printed 12/05/2023.

Hopen, Collison, LLP, PO Box 1028, Easton, MD 21601; 410-822-3900

NO CONSIDERATION

NO TITLE EXAMINATION

THIS DEED, made this 28 day of May, in the year two thousand nineteen, by **JOHN N. INTO, TRUSTEE OF THE ELLEN C. INTO LIVING TRUST DATED JULY 20, 1998, AS RESTATED IN FULL, MAY 1, 2006**, Grantor, and **PAMELA INTO**, Grantee.

WHEREAS, this transfer is exempt under Estates and Trusts Article, Section 14.5-1001(b)(2).

WITNESSETH that for no cash consideration, but to distribute a trust to the beneficiaries, said Grantor does hereby grant, convey, release unto Grantee, as sole owner, her personal representatives and assigns, in fee simple, the following described property:

ALL that lot or parcel of ground situate, lying and being in the Town of Easton, Talbot County, Maryland and designated as Parcel "A" & "B", as shown on a plat entitled: "Lot Line Revision lands of Joyce M. DeLaurentis, dated 6/24/1997, prepared by William C. Craig & Company, Licensed Surveyor, and recorded among the Plat Records of Talbot County in Plat Cabinet 4, Plat 50HH, to which plat reference is hereby made for a more complete description by metes and bounds, courses and distances.

BEING the property conveyed unto The Ellen C. Into Living Trust Dated July 20, 1998, As Restated In Full, May 1, 2006, by deed dated April 29, 2019, from John N. Into,

Personal Representative of the Estate of Ellen C. Into, and recorded among the Land Records of Talbot County, in Liber 2612, folio 102.

SUBJECT TO all Restrictions, Agreements, Easements, Rights of Way, Utility Rights of Way of record.

TOGETHER with the buildings and improvements thereupon erected, made or being; and all and every, the rights, alleys, ways, waters, privileges, appurtenances and advantages to the same belonging and in any wise appertaining.

TO HAVE AND TO HOLD said lots or parcels of ground and premises above described and mentioned and hereby intended to be conveyed, together with the rights, privileges, appurtenances and advantages to the same belonging or appertaining to and to the proper use and benefit of said Grantee, as sole owner, her personal representatives and assigns, in fee simple.

AS WITNESS the hands and seals of said Grantor.

WITNESS:

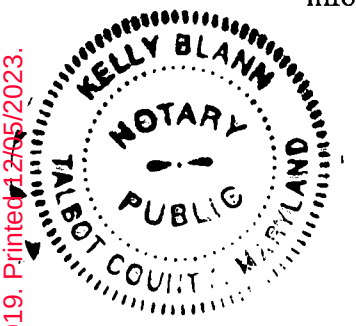
_____ _____(SEAL)
JOHN N. INTO, TRUSTEE OF THE ELLEN C. INTO LIVING TRUST DATED JULY 20, 1998, AS RESTATED IN FULL, MAY 1, 2006

STATE OF MARYLAND, COUNTY OF TALBOT **TO WIT:**

I HEREBY CERTIFY that on this 28th day of May, 2019, before me, the subscriber, a Notary Public of the aforesaid State and County, personally appeared **JOHN N. INTO, TRUSTEE OF THE ELLEN C. INTO LIVING TRUST DATED JULY 20, 1998, AS RESTATED IN FULL, MAY 1, 2006**, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within Instrument, and he acknowledged that, as Personal Representative, he executed the same for the purposes therein

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2615, p. 0307, MSA_CE91_2554. Date available 06/06/2019. Printed 12/05/2023.

contained, and further affirmed under the penalties of perjury that the matters, facts, and consideration recited in the above instrument are true and correct to the best of his knowledge, information and belief, and in my presence signed and sealed the same.



AS WITNESS my hand and Notarial Seal.

Kelly Blann
Notary Public
My Commission Expires: 6-27-2023

AFFIDAVIT OF NO CONSIDERATION

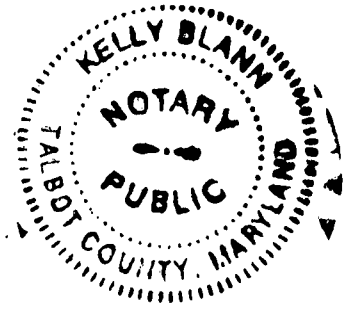
THE UNDERSIGNED HEREBY CERTIFIES, under penalty of perjury, that no cash consideration has been paid or will be paid for the foregoing conveyance.

WITNESS the hand and seal of Grantor, this 28th day of May, 2019.

WITNESS:

Douglas A. Collison

John N. Into (SEAL)
JOHN N. INTO, TRUSTEE OF THE ELLEN C. INTO LIVING TRUST DATED JULY 20, 1998, AS RESTATED IN FULL, MAY 1, 2006



Sworn and subscribed to before me on this 28th day of May, 2019.

Kelly Blann
Notary Public
My Commission Expires: 6-27-2023

CERTIFICATION

I hereby certify that I am an attorney admitted to practice before the Court of Appeals of the State of Maryland and that the foregoing Instrument was prepared by me or under my supervision.

Douglas A. Collison

TALBOT COUNTY FINANCE OFFICE
RECORDATION TAX
AMT: $0
DATE: 5/29/2019
INITIALS: SRH
Prop ID: 01-001922

3

CERTIFICATION IS MADE THAT ALL TAXES DUE ON THE PROPERTY INDICATED IN THIS DEED HAVE BEEN PAID.
FINANCE OFFICER OF TALBOT COUNTY
R ANDREW HOLLIS, FIN. OFFICER
DATE 5/29/2019

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2615, p. 0308, MSA_CE91_2554. Date available 06/06/2019. Printed 12/05/2023.

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2615, p. 0309, MSA_CE91_2554. Date available 06/06/2019. Printed 12/05/2023.

LR - Deed (No-Taxes)
Recording Fee 20.00
Name: Into/Into
Ref:
LR - Deed (No-Taxes)
Surcharge 40.00
==========
SubTotal: 60.00
==========
Total: 120.00
05/29/2019 10:24
CC20-MG
#12196486 CC0205 - Talbot
County/CC02.05.02 - Register 02

Kathleen M. Duvall, Clerk

Circuit Court for Talbot County

11 N. Washington St., Suite 16

Easton, Maryland 21601

License and Recording

410-822-2611 Ext. 4

DOCUMENT VALIDATION
(excluded from page count)

State of Maryland Land Instrument Intake Sheet

☐ Baltimore City ☑ County: Talbot

Information provided is for the use of the Clerk's Office, State Department of Assessments and Taxation, and County Finance Office Only.

(Type or Print in Black Ink Only—All Copies Must Be Legible)

Space Reserved for Circuit Court Clerk Recording Validation

1 Type(s) of Instruments (☐ Check Box if addendum Intake Form is Attached.)

1 Deed / Deed of Trust	☐ Mortgage / Lease	☐ Other	☐ Other

2 Conveyance Type Check Box

☐ Improved Sale Arms-Length *[1]*	☐ Unimproved Sale Arms-Length *[2]*	☐ Multiple Accounts Arms-Length *[3]*	☐ Not an Arms-Length Sale *[9]*

3 Tax Exemptions (if applicable) Cite or Explain Authority

Recordation	
State Transfer	
County Transfer	

4 Consideration and Tax Calculations

Consideration Amount	
Purchase Price/Consideration	$ 0.00
Any New Mortgage	$
Balance of Existing Mortgage	$
Other:	$
Other:	$
Full Cash Value:	$

Finance Office Use Only Transfer and Recordation Tax Consideration	
Transfer Tax Consideration	$
X ( )% =	$
Less Exemption Amount −	$
Total Transfer Tax =	$
Recordation Tax Consideration	$
X ( ) per $500 =	$
TOTAL DUE	$

5 Fees

Amount of Fees	Doc. 1	Doc. 2
Recording Charge	$ 20.00	$
Surcharge	$ 40.00	$
State Recordation Tax	$	$
State Transfer Tax	$	$
County Transfer Tax	$	$
Other	$	$
Other	$	$

Agent:

Tax Bill:

C.B. Credit:

Ag. Tax/Other:

6 Description of Property SDAT requires submission of all applicable information. A maximum of 40 characters will be indexed in accordance with the priority cited in Real Property Article Section 3-104(g)(3)(i).

District	Property Tax ID No. (1)	Grantor Liber/Folio	Map	Parcel No.	Var. LOG
01	001922	2612 / 102	0104	1902	(5)

Subdivision Name	Lot (3a)	Block (3b)	Sect/AR (3c)	Plat Ref.	SqFt/Acreage (4)

Location/Address of Property Being Conveyed (2)

220 South Street, Easton, Maryland 21601

Other Property Identifiers (if applicable) | Water Meter Account No.

Residential ☑ or Non-Residential ☐ | Fee Simple ☑ or Ground Rent ☐ Amount:

Partial Conveyance? ☐ Yes ☑ No | Description/Amt. of SqFt/Acreage Transferred:

If Partial Conveyance, List Improvements Conveyed:

7 Transferred From

Doc. 1 – Grantor(s) Name(s)	Doc. 2 – Grantor(s) Name(s)
John N. Into, Trustee of the Ellen C. Into Living Trust Dated July 20, 1998	
Doc. 1 – Owner(s) of Record, if Different from Grantor(s)	**Doc. 2 – Owner(s) of Record, if Different from Grantor(s)**

8 Transferred To

Doc. 1 – Grantee(s) Name(s)	Doc. 2 – Grantee(s) Name(s)
Pamela Into	

New Owner's (Grantee) Mailing Address

220 South Street, Easton, Maryland 21601

9 Other Names to Be Indexed

Doc. 1 – Additional Names to be Indexed (Optional)	Doc. 2 – Additional Names to be Indexed (Optional)

10 Contact/Mail Information

Instrument Submitted By or Contact Person

Name:

Firm Kopen & Collison, LLP

Address: PO Box 1028, Easton, Maryland 21601

Phone: (410) 822-3900

☐ Return to Contact Person

☑ Hold for Pickup

☐ Return Address Provided

11 Assessment Information

IMPORTANT: *BOTH* THE ORIGINAL DEED *AND* A PHOTOCOPY MUST ACCOMPANY EACH TRANSFER

☑ Yes ☐ No Will the property being conveyed be the grantee's principal residence?

☐ Yes ☑ No Does transfer include personal property? If yes, identify:

☐ Yes ☑ No Was property surveyed? If yes, attach copy of survey (if recorded, no copy required).

Space Reserved for County Validation

Assessment Use Only – Do Not Write Below This Line

Terminal Verification | Agricultural Verification | Whole | Part | Tran. Process Verification

Transfer Number | Date Received: | Deed Reference: | Assigned Property No.:

Year	20	20	Geo.	Map	Sub	Block
Land			Zoning	Grid	Plat	Lot
Buildings			Use	Parcel	Section	Occ. Cd.
Total			Town Cd.	Ex. St.	Ex. Cd.	

REMARKS:

Distribution: *White – Clerk's Office* *Pink – Office of Finance* *Canary – SDAT* *Goldenrod – Preparer* *AOC-CC-300 (5/2007)*

TALBOT COUNTY CIRCUIT COURT (Land Records) KMD 2615, p. 0310, MSA_CE91_2554. Date available 06/06/2019. Printed 12/05/2023.

Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
FEB 07 2024
TOWN OF EASTON

Easton Staff Development Review

Property Information

Address	7872 Ocean Gateway, Easton, MD 21601						
Tax Map	105	Grid	0	Parcel	2990	Lot	
Deed Refernce:	Liber	2412	Folio	282			
Plat Reference:	Liber	84	Folio	461			
Base Zoning District	CG	Historic District Y ☐ N ☒		Planning Redevelopment Y ☐ N ☒			

Purpose of Application / Description of Work:

Proposed minor subdivision to create Lot 1 (1.74 ac ±) and Lot 2 (2.30 ac ±). Redevelopement of site to include a two-story medical clinic on Lot 1 and a one-story retail store with mezzanine office space on Lot 2. See site plan for full scope.

Owner

Name	In Town Properties, LLC c/o Steve Hershey		
Mailing Address	8845 Mistletoe Drive, Easton, MD 21601		
Telephone No.	410-200-3057	Email	intownsteve@verizon.net

Applicant / Agent

Name	Brett Ewing, AICP, Lane Engineering, LLC		
Mailing Address	117 Bay Street, Easton, MD 21601		
Telephone No.	410-822-8003	Email	bewing@leinc.com

Surveyor / Engineer

Name	Timothy Glass, P.E.	License No.	23152	Expiration Date	7/5/2025
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.	410-822-8003	Email	tglass@leinc.com		

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 2/7/2024

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

2024-1129 / ESDR 24-04

Easton Staff Development Review Meeting Date 02/28/2024

Completeness Check Date

Revisions/Resubmissions Required Y ☐ N ☐

Resubmission Date

Documents Received Y ☐ N ☐

Staff Determination

Planning Commission Requir(Y ☐ N ☐

BOZA Required Y ☐ N ☐

Historic District Commission Required Y ☐ N ☐

Resubmission for ESDR Required Y ☐ N ☐

Staff Signature Date

Revised 02-2019

Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
FEB 07 2024
TOWN OF EASTON

Site Plan, PUD, Planned Healthcare Application

Application Type

Planned Unit Development ☐ Amendment ☐ Health Care (HC) ☐ Site Plan ☒

Subdivision Information

Name	In Town Properties, LLC				
Original Property Size	Acres	4.043	Square Feet	176,113	
Telephone No.	410-200-3057	Email	intownsteve@verizon.net		

Site Plan Information

Property Size	Acres	4.043	Square Feet	176,113 sf	
Structure's Floor Area	14,999 sf		Structure's Square Feet	26,999 sf	
Area of Disturbance	+/- 4 ac		Number of Dwelling Units	0	

Property Information

Address	7872 Ocean Gateway, Easton, MD 21601						
Tax Map	105	Grid	0	Parcel	2990	Lot	
Deed Refernce:	Liber	2412	Folio	282			
Plat Reference:	Liber	84	Folio	461			
Base Zoning District		CG	Historic Y ☐ N ☒		Planned Redevelopment Y ☐ N ☒		
Source of Electricity		Easton Utilities					

Owner

Name	In Town Properties, LLC c/o Steve Hershey		
Mailing Address	8845 Mistletoe Drive, Easton, MD 21601		
Telephone No.	410-200-3057	Email	intownsteve@verizon.net

Applicant or Agent

Name	Brett Ewing, AICP, Lane Engineering, LLC		
Mailing Address	117 Bay Street, Easton, MD 21601		
Telephone No.	410-822-8003	Email	bewing@leinc.com

Surveyor / Engineer

Name	Timothy Glass, P.E.	License No.	23152	Expiration Date	7/5/2025
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.	410-822-8003	Email	tglass@leinc.com		

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Development Standards and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 2/7/2024

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Planning Commission Required	Y ☐ N ☐		
Planning Commission Meeting Date	TBD		
Sketch Approval Date		Project No.	ESDR 24-04
Prelim/Dev. Approval Date		Application No.	2024-1129
Final Approval Date		Sketch Fee Paid	$2700
Recordation Date		Develop. Fee Paid	

Revised 02-2019

Town of Easton
Engineering, Planning and Zoning
13 South Harrison Street, Easton, MD 21601

RECEIVED
FEB 07 2024
TOWN OF EASTON

Subdivision & Property Line Adjustment Application

Application Type

Subdivision ☐ Minor Subdivision ☒ Lot Line Revision ☐

Subdivision Information

Name	In Town Properties, LLC				
Property Size	Acres	4.043	Square Feet	176,113	
Number of Lots Proposed	2 total				

Property Information

Address	7872 Ocean Gateway, Easton, MD 21601						
Tax Map	105	Grid	0	Parcel	2990	Lot	
Deed Refernce:	Liber	2412	Folio	282			
Plat Reference:	Liber	84	Folio	461			
Zoning District	CG	Planned Redevelopment Y ☐ N ☒		Historic District Y ☐ N ☒			
Source of Electricity	Easton Utilities						

Owner

Name	In Town Properties, LLC c/o Steve Hershey		
Mailing Address	8845 Mistletoe Drive, Easton, MD 21601		
Telephone No.	410-200-3057	Email	intownsteve@verizon.net

Surveyor / Engineer

Name	Timothy Glass, P.E.	License No.	23152	Expiration Date	7/5/2025
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.	410-822-8003	Email	tglass@leinc.com		

Applicant or Agent

Name	Brett Ewing, AICP, Lane Engineering, LLC		
Mailing Address	117 Bay Street, Easton, MD 21601		
Telephone No.	410-822-8003	Email	bewing@leinc.com

Additional Comments:

Proposed minor subdivision to create Lots 1 and 2; redevelop site to include a medical clinic on Lot 1 and a retail store with mezzanine office space on Lot 2. See site plan for full scope.

Minimum Lot Size	20,000 sf	Minimum Lot Frontage	60'
Minimum Lot Envelope	20'x30'	Existing Lot Coverage	35% ±
		Proposed Lot Coverage	Lot 1: 16%, Lot 2: 17.8%

☐ ESDR Letter
☐ $200 Per Subdivided Lot Fee
☐ $500 Lot Line Revision Fee

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Subdivision Regulations Article 4, Procedures and Requirements and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 2/7/2024

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Planning Commission Y ☐ N ☐			
Planning Commission Meeting Date		TBD	
PC Approval Date		Subdivision No.	
Conditions? Y / N		Application No.	2024-1129
Recordation Date		Fee Amount	$2,700.00
ESDR Y / N Date		Review Fee Paid	
			Revised 02-2019

OWNER TAX PARCEL 2990
7872 OCEAN GATEWAY, LLC
48 LOCHLEVEN DRIVE
SEVERNA PARK, MD. 21146
(410) 889-1311
DEED REFERENCE: LIBER 1162/668

OWNER TAX PARCEL 2991
VERIZON OF MARYLAND, INC.
C/O MANAGER-PROPERTY TAXES
1 E. PRATT ST. ROOM 8N-20
BALTIMORE, MD. 21202-1002
DEED REFERENCE: LIBER 335/430

SURVEYOR: THOMAS D. LANE
LANE ENGINEERING, INC.
117 BAY STREET
P.O. BOX 1767
EASTON, MARYLAND, 21601
(410)-822-8003

ZONING CLASSIFICATION: CG = GENERAL COMMERCIAL
BUILDING RESTRICTION LINES:

FRONT 25'
SIDE 0' & 20' OR BOTH 15'
REAR 15'
MAJOR ROADS 40'

WATER SUPPLY: TOWN OF EASTON
SEWAGE DISPOSAL: TOWN OF EASTON

SITE STATISTICS
TAX PARCEL 2990: 2.916 ACRES (BEFORE STREET CONVEYANCE) DEED PARCEL ONE
TAX PARCEL 2990: 2.366 ACRES (AFTER STREET CONVEYANCE) DEED PARCEL ONE
TAX PARCEL 2990: 2.275 ACRES (BEFORE REVISION) DEED PARCEL TWO
TAX PARCEL 2990: 4.043 ACRES (AFTER REVISION) DEED PARCEL TWO
TAX PARCEL 2991: 4.673 ACRES (BEFORE REVISION)
TAX PARCEL 2991: 3.176 ACRES (AFTER REVISION)

ALL STREETS AND STREET WIDENINGS, PARKS AND OTHER LANDS INTENDED FOR PUBLIC USE, ARE RESERVED BY THE OWNER FOR FUTURE CONVEYANCE TO THE TOWN OF EASTON.

ALL EASEMENTS SHOWN ARE HEREBY DEDICATED FOR PUBLIC USE.

A UTILITIES DISTRIBUTION RIGHT-OF-WAY AND EASEMENT IS HEREBY DEDICATED TO THE TOWN OF EASTON IN AND OVER STRIPS OF LAND TEN (10) FEET IN WIDTH ALONG THOSE BOUNDARY LINES CONTIGUOUS TO ANY STREET OR ALLEY AND FIVE (5) FEET IN WIDTH ON EACH SIDE OF SIDE LOT LINES, UNLESS OTHERWISE SHOWN HEREON. THE PLANNING AND ZONING COMMISSION MAY WAIVE OR TERMINATE, UPON RESUBDIVISION, SUCH UTILITY EASEMENT WHICH HAS NOT BEEN ACCEPTED BY USE THEREOF, UPON RECEIVING APPROVAL FROM THE TOWN ENGINEER.

BUILDING PERMITS SHALL BE ISSUED ONLY IF SUFFICIENT CAPACITY IS AVAILABLE IN THE COMMUNITY WATER SUPPLY SYSTEM, SEWERAGE SYSTEM, AND SOLID WASTE ACCEPTANCE FACILITY SERVING THE SUBDIVISION.

LAND SHOWN UPON THIS PLAT MAY CONTAIN NON-TIDAL WETLANDS REGULATED UNDER COMAR 08.0504; THE FEDERAL WATER POLLUTION ACT SECTION 404; OR THE RIVERS HARBOR ACT SECTION 10. DEVELOPMENT AND CONSTRUCTION WITHIN WETLANDS ARE SUBJECT TO FEDERAL AND STATE REGULATIONS AND MAY BE PROHIBITED OR RESTRICTED BY SUCH REGULATIONS.

SURVEYOR'S CERTIFICATE

THE OWNERS OF THE LAND OF WHICH THIS LINE REVISION IS COMPRISED ARE 7872 OCEAN GATEWAY, LLC(P.2990), AND VERIZON OF MARYLAND, INC. (P.2991). THIS PLAT WAS PREPARED FOR AND WILL BE RECORDED AT THEIR REQUEST.

I, THOMAS D. LANE HEREBY CERTIFY THAT THE LOT LINE REVISION SHOWN HEREON IS CORRECT; THAT IT IS A LINE REVISION OF THE LANDS CONVEYED BY SOUTHERN STATES COOPERATIVE, INCORPORATED TO 7872 OCEAN GATEWAY, LLC BY DEED DATED JUNE 25, 2003 AND RECORDED AMONG THE LAND RECORDS OF TALBOT COUNTY, MARYLAND IN LIBER 1162, FOLIO 668,(P.2990) AND THE LANDS CONVEYED BY A. RAYMOND MARVEL & LULA M. MARVEL TO THE CHESAPEAKE AND POTOMAC TELEPHONE COMPANY OF MARYLAND BY DEED DATED NOVEMBER 21, 1956 AND RECORDED AMONG THE LAND RECORDS OF TALBOT COUNTY, MARYLAND IN LIBER 335, FOLIO 430,(P.2991) AND THAT ALL MONUMENTS ARE IN PLACE.

THOMAS D. LANE
PROPERTY LINE SURVEYOR
117 BAY STREET
P.O. BOX 1767
EASTON, MARYLAND 21601

PROPERTY OWNER'S DECLARATION

WE, 7872 OCEAN GATEWAY, LLC(P.2990) & VERIZON OF MARYLAND, INC. (P.2991), OWNERS OF THE PROPERTY SHOWN AND DESCRIBED HEREON, HEREBY ADOPT THIS PLAN OF LINE REVISION.

7872 OCEAN GATEWAY, LLC — DATE 8-17-04

THE OWNER HAS SWORN TO AND SUBSCRIBED BEFORE ME THIS 17th DAY OF August, 2004.

NOTARY

VERIZON OF MARYLAND, INC. — DATE 8-9-2004

THE OWNER HAS SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 2004.

NOTARY

THIS LOT LINE REVISION PLAT HAS BEED APPROVED BY THE TALBOT COUNTY HEALTH DEPARTMENT.

TALBOT COUNTY HEALTH OFFICER — DATE

APPROVED:

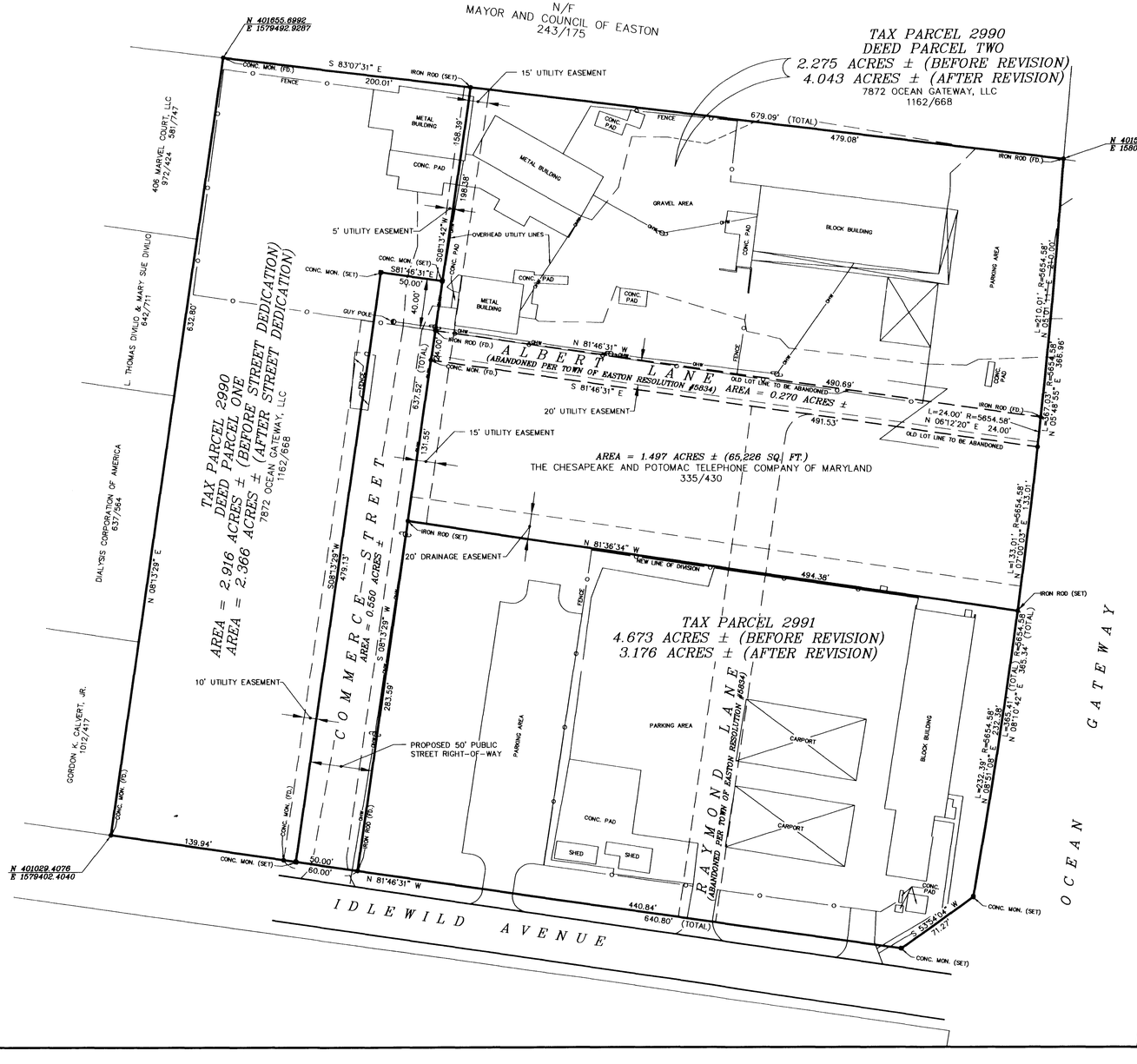
CHAIRMAN, TOWN OF EASTON PLANNING COMMISSION — DATE 9.8.04

TOWN OF EASTON ENGINEER — DATE 9.9.04

PLAT — MHSS 81/162

NAD 83 (1991)

VICINITY MAP
SCALE: 1" = 2000'
Copyright of the ADC Map People
Permitted Use No. 20992180



No.	BY	REVISION	APPROVED	DATE

SEAL

Lane Engineering, Inc.
Civil Engineers - Land Planning - Land Surveyors
117 Bay St. Easton, MD 21601 (410) 822-8003 FAX (410) 822-2024
E-mail: mail @ lanc.com
15 Washington St. Cambridge, MD 21613 (410) 221-0818 FAX (410) 476-9942
114B West Water St. Centreville, MD 21617 (410) 758-2095 FAX (410) 758-4422

REVISION OF LOT LINES BETWEEN
7872 OCEAN GATEWAY, LLC AND
VERIZON OF MARYLAND, INC.
TOWN OF EASTON — TALBOT COUNTY, MARYLAND
TAX MAP 105 — GRID 17 — PARCEL 2990 & 2991

DATE 8-16-04
SCALE 1" = 50'
JOB NO. 040314
DRAWN BY M.S.R./S.M.C.
DWG. NAME 040314SPP1
APPROVED T.D.L.

SHEET No. 1 OF 1
FILE No. 1026

MSA SS4 1254 3876

Maryland State Archives

APPENDIX B

SKETCH PLAN
SUBMITTAL CHECKLIST

NOTE: THIS CHECKLIST REPRESENTS THE MINIMUM INFORMATION TO BE SUBMITTED ON A SITE PLAN. ADDITIONAL INFORMATION MAY BE REQUIRED FOR UNIQUE SITUATIONS.

COMPLETE THE CHECKLIST AND SUBMIT IT WITH THE PLAN. IF AN ITEM IS NOT APPLICABLE, ENTER "N/A".

1. Location map,	X
2. Boundary,	X
3. Topography,	X
4. General proposed land uses drawn to scale, and	X
5. The Forest Stand Delineation as detailed in the Town of Easton's Forest Conservation Ordinance.	N/A
6. The location of any easements, rights-of-way or any other encumbrances which pertain to the property subject to the site plan review.	X
7. Conditions of concern, for example, water courses, wetlands, floodplains, or other environmentally sensitive features.	X
8. Location of refuse collection, exterior lighting, fencing, and all pedestrian walkways and sidewalks.	X
9. General location and description (r.e. intended function, proposed species, etc.) of proposed landscaping.	X
10. Location of parking including layout and landscaping.	X
11. Conceptual building elevations or renderings illustrating the character, scale, and materials of all proposed structures. Such elevations or renderings shall be sealed by a licensed professional as described above.	X
12. A statement describing the extent to which the application complies with the Recommended Design Principles for Easton set forth on pages 29-31 of the Comprehensive Plan.	X

SKETCH SITE PLAN
FOR
IN TOWN PROPERTIES, LLC
IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND

PROJECT DATA

PROPERTY: TAX MAP 105, PARCEL 2990
7872 OCEAN GATEWAY
EASTON, MARYLAND 21601

OWNER/DEVELOPER: IN TOWN PROPERTIES, LLC
C/O STEVE HERSHEY
8845 MISTLETOE DRIVE
EASTON, MARYLAND 21601
(410) 200-3057

DEED REFERENCE: 2412/282

PLAT REFERENCE: 84/461

ZONING CLASSIFICATION: CG – COMMERCIAL GENERAL

TOTAL SITE AREA: 4.043 ACRES±
LOT 1: 1.74 ACRES±
LOT 2: 2.30 ACRES±

BUILDING SETBACKS:		MEDICAL CLINIC	RETAIL BUILDING
FRONT –	25'; 40' (STATE HIGHWAY)	161'±	40.3'±
SIDE –	10'	11'± / 49'±	20'± / 69'±
REAR –	15'	144'±	270'±

EXISTING CONDITIONS: AN UNUSED COMMERCIAL PROPERTY, SITUATED BETWEEN PURDY STREET AND US ROUTE 50, THAT PREVIOUSLY HOSTED A FARM SUPPLY COMPANY (SOUTHERN STATES).

PROPOSED DEVELOPMENT: THE PROPOSED PROJECT IS TO SUBDIVIDE THE PARCEL INTO TWO LOTS, REDEVELOP THE SITE AND CONSTRUCT A 2-STORY 12,000 SF (24,000 GFA) MEDICAL CLINIC AND A 1-STORY 18,000 SF RETAIL BUILDING WITH OUTDOOR DISPLAY AND AN INTERIOR MEZZANINE WITH OFFICE SPACE, SIDEWALKS, PARKING AND STORMWATER MANAGEMENT AREA.

LOT COVERAGE (BUILDINGS): ALLOWED = 50%
PROPOSED = LOT 1= 16%±; LOT 2 = 17.8%

STORMWATER MANAGEMENT: STORMWATER QUANTITY/ QUALITY CONTROL WILL BE ADDRESSED THROUGH ESD FEATURE (SUBMERGED GRAVEL WETLAND, MICRO-BIORETENTOIN & PERVIOUS PAVERS) AS REQUIRED AND DETAILED IN THE CONCEPT SWM REPORT INCLUDED WITH THIS SKETCH SITE PLAN.

FOREST CONSERVATION: IS EXEMPT PER §31-3.2.O: AN ACTIVITY ON A PREVIOUSLY DEVELOPED AREA COVERED BY IMPERVIOUS SURFACE AND LOCATED IN THE PRIORITY FUNDING AREA.

SPECIAL EXCEPTIONS/VARIANCES: NONE.

REFUSE/TRASH: PROVIDED AS SHOWN.

SITE LIGHTING: POLE HEIGHT TO BE DETERMINED FOR EFFICIENT LIGHT COVERAGE, BUT HEIGHTS IN RANGE OF 18'-20'±. PHOTOMETRIC ANALYSIS WILL BE PROVIDED PRIOR TO FINAL APPROVAL.

BUILDING HEIGHTS: ALLOWED = 50'; PROPOSED = LESS THAN 50'

PUBLIC SIDEWALKS: PROVIDED ALONG ALONG PURDY STREET.

PARKING CALCULATIONS

PARKING REQUIRED: 2-STORY MEDICAL CLINIC @1/400 SF GFA: 24,000 SF/400	= 60 SPACES MINIMUM
2-STORY MEDICAL CLINIC @1/100 SF GFA: 24,000 SF/100	= 240 SPACES MAXIMUM
RETAIL BUILDING W/OUTDOOR DISPLAY @1/300 SF GFA: 19,250 SF/300	= 64 SPACES MINIMUM
RETAIL BUILDING W/OUTDOOR DISPLAY @1/200 SF GFA: 19,250 SF/200	= 96 SPACES MAXIMUM
MEZZANINE W/ OFFICE SPACE @1/250 SF GFA: 2,999 SF/250	= 12 SPACES MINIMUM
MEZZANINE W/ OFFICE SPACE @1/140 SF GFA: 2,999 SF/140	= 21 SPACES MAXIMUM
TOTAL SPACES REQUIRED	= 136 SPACES MINIMUM; 357 SPACES MAXIMUM
TOTAL SPACES PROVIDED	= 155 SPACES INCLUDING 6 ADA SPACES

BIKE RACKS REQUIRED: MEDICAL – 1 BIKE SPACE/ 20 VEHICLE SPACES; 3 BIKE SPACES REQUIRED
RETAIL – 1 BIKE SPACE/ 10 VEHICLE SPACES; 6 BIKE SPACES REQUIRED
MEZZANINE W/ OFFICE SPACE/ 10 VEHICLE SPACES; 1 BIKE SPACE REQUIRED

PROJECT NOTES

1. PROPERTY BOUNDARY AND EXISTING CONDITIONS SURVEYED BY LANE ENGINEERING, LLC ON 01/11/2022.
2. SITE TOPOGRAPHY AS SHOWN HEREIN WAS DERIVED FROM A FIELD SURVEY BY LANE ENGINEERING, LLC DATED 01/11/2022.
3. ALL UNDERGROUND UTILITIES ARE SHOWN PER SURVEY WORK CONDUCTED ON 1/31/2024 BY LANE ENGINEERING, IN CONJUNCTION WITH UTILITY TEST PITTING, AND SUPPLEMENTING WITH BEST AVAILABLE RECORDS.
4. THE ELEVATIONS SHOWN HEREON ARE NAVD 1988 DATUM.
5. THE COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM NAD83 (2011).
6. THE SITE IS LOCATED ENTIRELY OUTSIDE OF THE CHESAPEAKE BAY CRITICAL AREA.
7. THE PROPERTY SHOWN HEREON IS NOT LOCATED IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SPECIAL FLOOD HAZARD AREA (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. THE PROPERTY IS MAPPED IN THE X FLOOD ZONE(S) AS SHOWN ON THE FEDERAL INSURANCE RATE MAPS FOR COMMUNITY NO. 240067, MAP NO. 24041C0193C FOR THE TOWN OF EASTON, MARYLAND. THE 1% ANNUAL CHANCE FLOOD (100-YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR. THE SFHA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. THE SFHA INCLUDE ZONES A, AE, AH, AO, AR, A99, V & VE. THE BASE FLOOD ELEVATION (BFE) IS THE WATER SURFACE ELEVATION OF THE 1% ANNUAL CHANCE FLOOD. FLOOD INSURANCE MAY BE REQUIRED FOR STRUCTURES LOCATED IN THE SPECIAL FLOOD HAZARD AREA.

   FLOOD ZONE LEGEND
   ZONES A, AE, AH, AO, AR, A99, V & VE – 1% ANNUAL CHANCE FLOOD
   ZONE X (SHADED) – 0.2% ANNUAL CHANCE FLOOD
   ZONE X – AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD

   THE FLOOD DATA SHOWN HEREON IS BASED ON AVAILABLE MAPPED AND/OR DIGITAL INFORMATION AND IS DEPICTED AS DIRECTED AND REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS. IT IS SUBJECT TO DATA INACCURACIES AND REGULATORY CHANGE AND SHOULD BE VERIFIED PRIOR TO FINALIZING DEVELOPMENT OR IMPROVEMENT PLANS FOR THE SUBJECT LANDS.
8. NO ABSTRACT OF TITLE, TITLE COMMITMENT, NOR RESULTS OF A TITLE SEARCH HAVE BEEN FURNISHED TO LANE ENGINEERING, LLC. THE BUILDING RESTRICTION LINES AS SHOWN HEREON ARE BASED SOLELY ON THE CURRENT TOWN OF EASTON ZONING ORDINANCE APPLICABLE TO THE PROPERTY SHOWN HEREON AND ARE SUBJECT TO CHANGE WITH THE REVISION OF ZONING LAWS. OTHER DOCUMENTS OF RECORD MAY EXIST THAT MAY AFFECT THE SURVEYED PROPERTY REFLECTED HEREON, INCLUDING BUT NOT LIMITED TO EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, PLAT RESTRICTIONS OR ANY OTHER FACTS THAT AN ACCURATE, COMPLETE AND CURRENT TITLE SEARCH MAY DISCLOSE.
9. THERE ARE NO KNOWN HISTORIC STRUCTURES OR ARCHEOLOGICALLY SIGNIFICANT RESOURCES, STEEP SLOPES APPROACHING 15%, STREAMS, TIDAL WETLANDS/NON-TIDAL WETLANDS OR KNOWN HABITAT PROTECTION AREAS IN PROXIMITY TO THE PROPOSED SITE IMPROVEMENTS. NON-TIDAL WETLANDS ARE PRESENT ON SITE AND HAVE BEEN FIELD LOCATED BY LANE ENGINEERING, LLC. ANY DISTURBANCE TO VALIDATED WETLAND OR BUFFER AREAS WILL REQUIRE APPROVAL BY MARYLAND DEPARTMENT OF THE ENVIRONMENT/U.S. ARMY CORP OF ENGINEERS.
10. PUBLIC WATER AND SEWER SERVICES ARE PROVIDED BY THE TOWN OF EASTON.

VICINITY MAP

400' 200' 0' 200' 400' 800'
SCALE IN FEET

SHEET No.	TITLE
1 OF 2	TITLE SHEET
2 OF 2	SKETCH SITE PLAN

LANDSCAPE REQUIREMENTS SUMMARY PER ZONING ORDINANCE:

SECTION 1014.6.C.:

STREET TREES @ 1 TREE/70' OF STREET FRONTAGES = NOT APPLICABLE; NONE PROVIDED

SECTION 1014.6.E.:

1. OVERALL TREES: 1 TREE/1500 SQ FT DISTURBED AREA; 156,045 SF SQ FT/1500 = 104 TREES REQUIRED; 104 PROVIDED

2.B. INTERIOR PARKING LOT PLANTINGS: 159 SPACES / 7.5 = 21 TREES REQUIRED; 21 TREES PROVIDED

2.C. PARKING LOT HEDGE: AS SHOWN

2.D.I. BUILDING FAÇADE PLANTINGS: ONE TREE/50' OF APPLICABLE ENTRANCE FAÇADE ALONG US ROUTE NO. 50; FRONTAGE 170'/50 = 3 TREES REQUIRED; 3 TREES PROVIDED

2.D.II. FAÇADE LANDSCAPE BEDS: 25% OF APPLICABLE FAÇADE = LANDSCAPE BEDS PROVIDED

2.E. SERVICE LOADING AREA SCREENING: PROVIDED AS SHOWN

2.F. SHRUB/GROUNDCOVER PLANTINGS: PROVIDED AS SHOWN

SECTION 1014.7.E.:

25' WIDE LANDSCAPE BUFFERYARD 'B' (ALONG US ROUTE 50)
367 LF LESS ACCESS DRIVE & UTILITY EASEMENT (67 LF)= 300 LF / 50' = 6 PLANT UNITS (PU)
2 SHADE/ CANOPY TREES X 6 PU= 12 SHADE/ CANOPY TREES REQUIRED
1 EVERGREEN TREES X 6 PU= 6 EVERGREEN TREES REQUIRED

COMPREHENSIVE PLAN DESIGN PRINCIPLES RESPONSE NARRATIVE

PRINCIPLE #1– INTEGRATED USES ARE DESIRABLE– THIS DEVELOPMENT PROPOSAL PROVIDES A MEDICAL CLINIC AND RETAIL STORE ON A COMMERCIALLY ZONED PROPERTY IN THE ROUTE 50 CORRIDOR.

PRINCIPLE #2– NATURAL FEATURES SHOULD DETERMINE DESIGN– NO COMPELLING NATURAL FEATURES; SITE LAYOUT ORIENTED TO TAKE ADVANTAGE OF NATURAL DRAINAGE PATTERNS.

PRINCIPLE #3– AUTOMOBILES SHOULD NOT DETERMINE DESIGN– PARKING FOR MEDICAL CLINIC & RETAIL USERS PROVIDED, BUILDING ORIENTATION TO COMPLIMENT EXISTING SITE IS THE PRIMARY DESIGN FOR THIS LAYOUT. PARKING IS LOCATED MAINLY TO THE REAR OF THE RETAIL.

PRINCIPLE #4– AMPLE OPEN SPACES SHOULD BE PROVIDED WITHIN & AROUND NEIGHBORHOODS– USABLE OPEN SPACE NOT APPLICABLE HERE.

PRINCIPLE #5– ARCHITECTURE SHOULD RESPECT EASTON'S HISTORICAL DEVELOPMENT– THIS APPLICATION PROPOSES ARCHITECTURE COMPATIBLE WITH THE TOWN OF EASTON'S ARCHITECTURAL PALETTE AND CONSISTENT WITH COMMERCIAL BUILDINGS IN THE ROUTE 50 CORRIDOR.

PRINCIPLE #6– SIGNS SHOULD INFORM BUT NOT DOMINATE– SIGNAGE, SIMPLE AND PER CODE.

PRINCIPLE #7– NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES– NOT APPLICABLE TO THIS APPLICATION

PRINCIPLE #8– RESIDENTIAL NEIGHBORHOODS SHOULD BE INTERESTING PLACES– NOT APPLICABLE TO THIS APPLICATION

PRINCIPLE #9– NEIGHBORHOODS SHOULD CONNECT– NOT APPLICABLE TO THIS APPLICATION.

SITE ADDRESS

7872 OCEAN GATEWAY
EASTON, MD 21601

DEVELOPER

IN TOWN PROPERTIES, LLC
8845 MISTLETOE DRIVE
EASTON, MD 21601

CIVIL ENGINEER

LANE ENGINEERING, LLC
C/O TIMOTHY W. GLASS, P.E.
117 BAY STREET
EASTON, MD 21601
(410) 822-8003

PLANS ARE ISSUED FOR REVIEW ONLY

PLANS ARE NOT APPROVED FOR CONSTRUCTION

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

WARNING!!

THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE QUANTITIES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL TEST PIT AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF ANY WORK ON-SITE. THE CONTRACTOR SHALL NOTIFY DEPT. OF PUBLIC WORKS OF ANY POSSIBLE CONFLICT AND REQUEST THE RELOCATION OF THE EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING ANY WORK ON-SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RELOCATION EXPENSE.

MISS UTILITY
DIG WITH CARE
BEFORE YOU DIG CALL 1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lane-eng.com
117 Bay St. Easton, MD 21601 (410) 822-8003
15 Washington St. Cambridge, MD 21613 (410) 221-0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758-2095

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 23152 , Expiration Date: 7/5/2025.

SEAL

STATE OF MARYLAND
TIMOTHY W. GLASS
23152
PROFESSIONAL ENGINEER

2.7.24
DATE

TITLE SHEET

IN TOWN PROPERTIES, LLC
7872 OCEAN GATEWAY

IN THE TOWN OF EASTON, ELECTION WARD 1
TALBOT COUNTY, MARYLAND
TAX MAP 105 GRID 17 PARCEL 2990

ISSUED/REVISED FOR:	DATE:	BY:
ESDR SUBMITTAL	2/7/2024	BCE

SHEET No. 1 OF 2
SCALE: AS NOTED
JOB No. 240020
FILE No. 1026

Date: 02/07/2024 - 11:15am User: wbarnhart Project Manager: BCE
Drawing Path: J:\2024\0000\240020\Civil3D-240020\Dwg\Plots\PSK-PLTS-240020.dwg | 1-Cover
XREF File(s): VSF-BASE-240020/MLD-BASE-240020/RLD-BASE-210686/RBS-BASE-24X36-240020/RSK-BASE-240020/SHA-CSP-BASE-REV-210686/RAR-BASE-240020/RLD-EUC-BASE-240020/CLP-BASE-240020/CSD-BASE-240020/CUP-BASE-240020

LANDSCAPE LEGEND

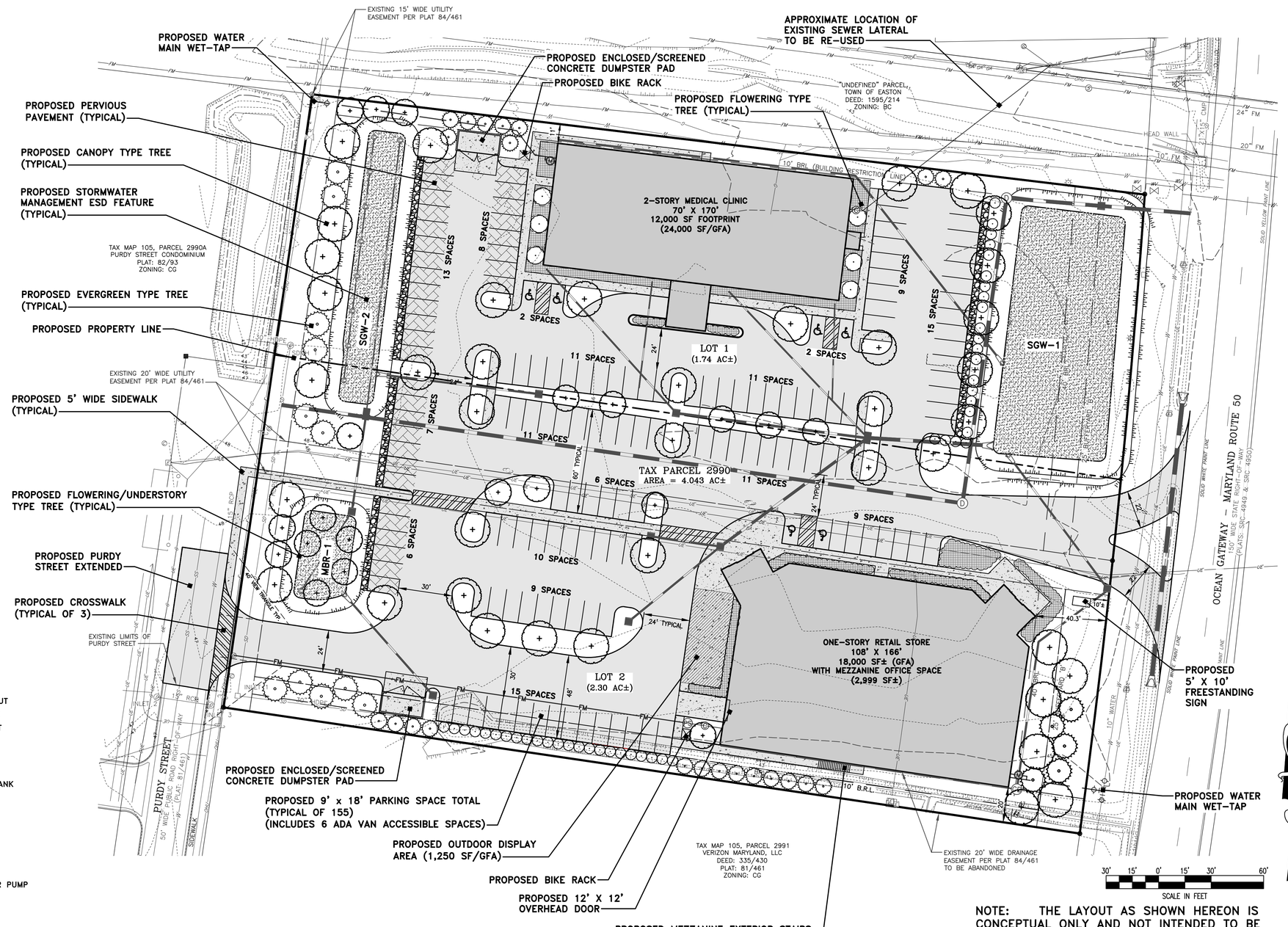
- 2" CALIPER MINIMUM CANOPY OR STREET TREES (OAK, ELM, MAPLE, ZELKOVA)
- 1.25" CALIPER OR 7' HEIGHT MINIMUM FLOWERING TREES (CHERRY, MAGNOLIA, RED BUD)
- 7' HEIGHT MINIMUM EVERGREEN TREES (WHITE PINE, SPRUCE, HOLLY, AMERICAN ARBORVITAE)
- LANDSCAPING MASS–PERENNIAL MIX WITH SHRUBS, GRASSES
- STORMWATER MANAGEMENT ESD LANDSCAPING MASS – PERENNIAL MIX WITH SHRUBS, GRASSES

SWM QUANTITY SUMMARY CHART

POI	DA (ACRES)	POST DEVELOPMENTI MPERVIOUS (ACRES)	RCN	Tc (MINUTES)	PRE 2 YEAR	POST 2 YEAR	WSE	PRE 10 YEAR	POST 10 YEAR	WSE	PRE 100 YEAR	POST 100 YEAR	WSE
1	11.69	7.68	--	--	12.41	11.04	--	24.74	21.99	--	51.88	42.53	--

ESD SUMMARY CHART

DRAINAGE AREA	TYPE OF ESD PRACTICE	TYPE OF ESD PRACTICE (STRUCTURE NAME)	ON–SITE OR OFF–SITE STRUCTURE	RUNOFF CURVE NUMBER (RCN) WEIGHTED	MARYLAND GRID COORDINATE NAD 83 METERS NORTHING	MARYLAND GRID COORDINATE NAD 83 METERS EASTING	ESD PRACTICE TOTAL DRAINAGE AREA (ACRES)	ESD PRACTICE IMPERVIOUS DRAINAGE AREA (ACRES)	SURFACE AREA OF ESD PRACTICE (ACRES)	TARGET PE (IN)	ACTUAL PE (IN)	TARGET ESDv (FT³)	ACTUAL ESDv (FT³)
GREEN (SGW#1)	M–2	SUBMERGED GRAVEL WETLAND	ON–SITE	94	401492.7738'	1580118.8427'	2.33	1.73	0.17	2	2	12157	12536
BLUE (SGW#2)	M–2	SUBMERGED GRAVEL WETLAND	ON–SITE	94	401537.4268'	1579725.9363'	0.93	0.47	0.04	2	2	3425	4334
YELLOW (MBR#1)	M–6	MICRO–BIORETENTION	ON–SITE	94	401369.0797'	1579697.1745'	0.45	0.30	0.03	2	2	2151	2911
TOTAL	--	--	ON–SITE	94	--	--	3.71	2.51	0.24	2	2	17854	19780



LEGEND

- IRON ROD FOUND
- COMPUTED POINT
- ELECTRIC TRANSFORMER
- ELECTRIC METER
- ELECTRIC HANDHOLE
- UTILITY POLE
- GAS SHUTOFF VALVE
- GUY WIRE ANCHOR
- LAMP POLE
- OHU — OVER HEAD UTILITY LINES
- SANITARY SEWER CLEAN OUT
- SANITARY SEWER MANHOLE
- ROUND STORM DRAIN INLET
- STORM DRAIN MANHOLE
- SD — STORM DRAIN LINE
- TELEPHONE PEDESTAL
- UNDERGROUND PROPANE TANK
- UGT — UNDERGROUND GAS TANK
- FIRE HYDRANT
- WATER METER
- WATER VALVE
- MAJOR CONTOUR
- MINOR CONTOUR
- CEG — PROPOSED E–ONE GRINDER PUMP
- PROPOSED WATER METER
- FM — PROPOSED FORCE MAIN

NOTE: THE LAYOUT AS SHOWN HEREON IS CONCEPTUAL ONLY AND NOT INTENDED TO BE UTILIZED FOR DESIGN OR CONSTRUCTION PURPOSES.

PLANS ARE ISSUED FOR REVIEW ONLY

PLANS ARE NOT APPROVED FOR CONSTRUCTION

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

WARNING!!

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117 Bay St. Easton, MD 21601 (410) 822–8003
15 Washington St. Cambridge, MD 21613 (410) 221–0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758–2095

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 23152 , Expiration Date: 7/8/2025.

SEAL

STATE OF MARYLAND — TIMOTHY W. BURNETT — 23152 — ENGINEER

2.7.24
DATE

SKETCH SITE PLAN

IN TOWN PROPERTIES, LLC
7872 OCEAN GATEWAY

IN THE TOWN OF EASTON, ELECTION WARD 1
TALBOT COUNTY, MARYLAND
TAX MAP 105 GRID 17 PARCEL 2990

ISSUED/REVISED FOR:	DATE:	BY:
ESDR SUBMITTAL	2/7/2024	BCE

SHEET No. 2 OF 2
SCALE: AS NOTED
JOB No. 240020
FILE No. 1026

Date: 02/07/2024 – 11:20am User: wbarnhart Project Manager: BCE
Drawing Path: J:\2024\0000\240020\Civil\30–240020\Dwg\Plats\RSK–PLTS–240020.dwg | 2–Sketch Site Plan
XREF File(s): XSF–BASE–240020/XLD–BASE–240020/RLD–BASE–210866/RBS–BASE–240020/XSH–BASE–240020/XSK–BASE–240020/SHA–CSP–BASE–REV–210866/RAR–BASE–240020/RLD–EUC–BASE–240020/XRN–BASE–240020/CUP–BASE–240020

LANDSCAPE LEGEND

- 2" CALIPER MINIMUM CANOPY OR STREET TREES (OAK, ELM, MAPLE, ZELKOVA)
- 1.25" CALIPER OR 7' HEIGHT MINIMUM FLOWERING TREES (CHERRY, MAGNOLIA, RED BUD)
- 7' HEIGHT MINIMUM EVERGREEN TREES (WHITE PINE, SPRUCE, HOLLY, AMERICAN ARBORVITAE)
- LANDSCAPING MASS–PERENNIAL MIX WITH SHRUBS, GRASSES
- STORMWATER MANAGEMENT ESD LANDSCAPING MASS – PERENNIAL MIX WITH SHRUBS, GRASSES

LEGEND

- IRON ROD FOUND
- COMPUTED POINT
- ELECTRIC TRANSFORMER
- ELECTRIC METER
- ELECTRIC HANDHOLE
- UTILITY POLE
- GAS SHUTOFF VALVE
- GUY WIRE ANCHOR
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- WATER METER
- WATER VALVE
- MAJOR CONTOUR
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REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

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SEAL

DATE

ILLUSTRATIVE PLAN

IN TOWN PROPERTIES, LLC
7872 OCEAN GATEWAY

IN THE TOWN OF EASTON, ELECTION WARD 1
TALBOT COUNTY, MARYLAND
TAX MAP 105 GRID 17 PARCEL 2990

ISSUED/REVISED FOR: DATE: BY:
ESDR SUBMITTAL 2/7/2024 BCE

SHEET No. 1 OF 1
SCALE: AS NOTED
JOB No. 240020
FILE No. 1026

Date: 02/07/2024 - 11:14am User: wbarnhart Project Manager: BCE
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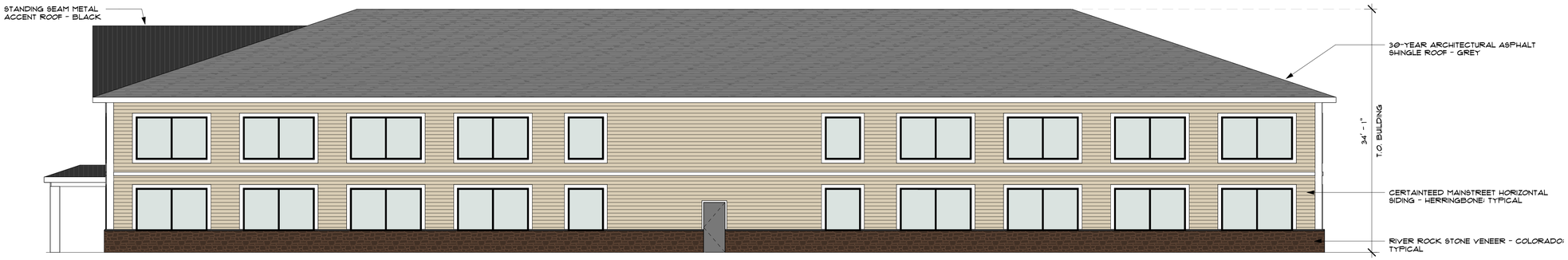
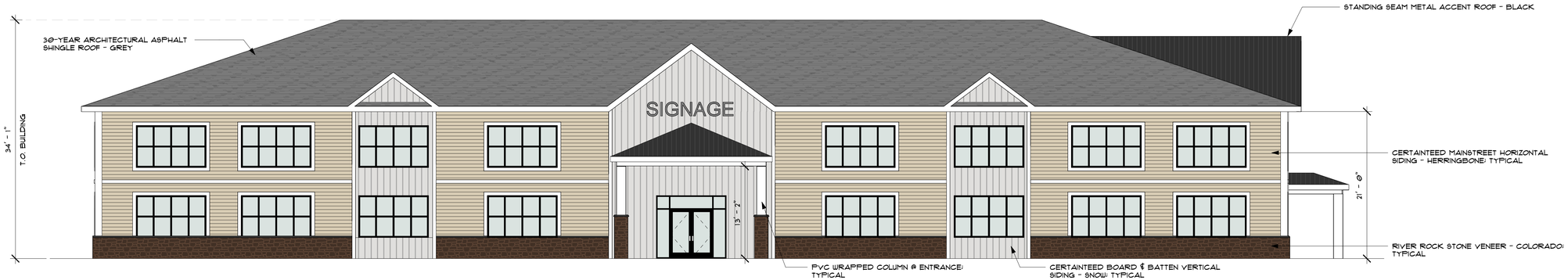
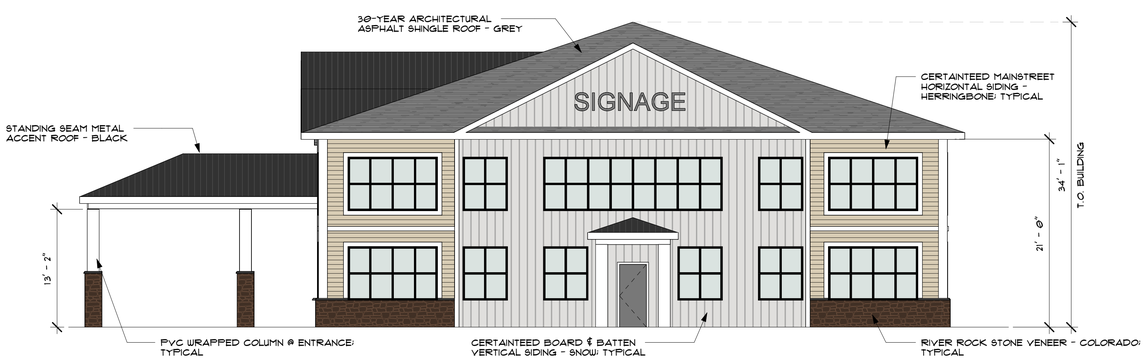


1 REAR/NORTH ELEVATION
1/8" = 1'-0"



2 FRONT/SOUTH ELEVATION
1/8" = 1'-0"



3 RIGHT ELEVATION - ROUTE 50
1/8" = 1'-0"

4 LEFT ELEVATION - INTERIOR PARKING LOT
1/8" = 1'-0"

FISHER ARCHITECTURE
Fisher Architecture, LLC
542 Riverside Drive
Salisbury, MD 21801
(410) 742-0238

SEAL:

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CONSULTANTS:

MEDICAL CLINIC

EASTON, MD

SHEET INFO:

ELEVATIONS

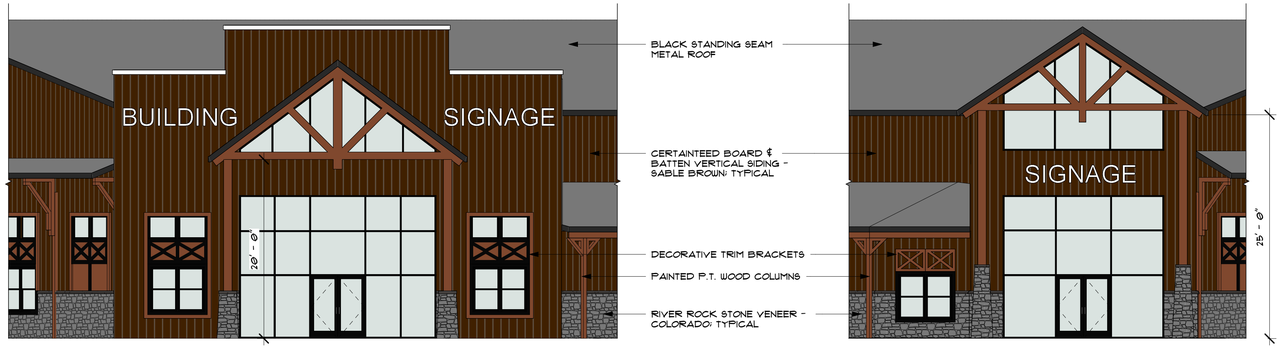
REV	REV DATE	DESCRIPTION
DATE:		2022.XX.XX
PROJECT NO.		2023015
SCALE:		1/8" = 1'-0"
PROJ MGR:		Designer
DRAWN BY:		Author

SHEET NUMBER:

A-201

FISHER
ARCHITECTURE

1 FRONT/NORTH ELEVATION
1/8" = 1'-0"



2 ENTRANCE TOWER - CORNER (ROUTE 50)
1/8" = 1'-0"

3 ENTRANCE TOWER - CORNER (INTERIOR PARKING LOT)
1/8" = 1'-0"

4 REAR/SOUTH ELEVATION
1/8" = 1'-0"

5 RIGHT ELEVATION - INTERIOR PARKING LOT
1/8" = 1'-0"

6 LEFT ELEVATION - ROUTE 50
1/8" = 1'-0"

FISHER
ARCHITECTURE
Fisher Architecture, LLC
542 Riverside Drive
Salisbury, MD 21801
(410) 742-0238

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CONSULTANTS:

RETAIL STORE
EASTON, MD

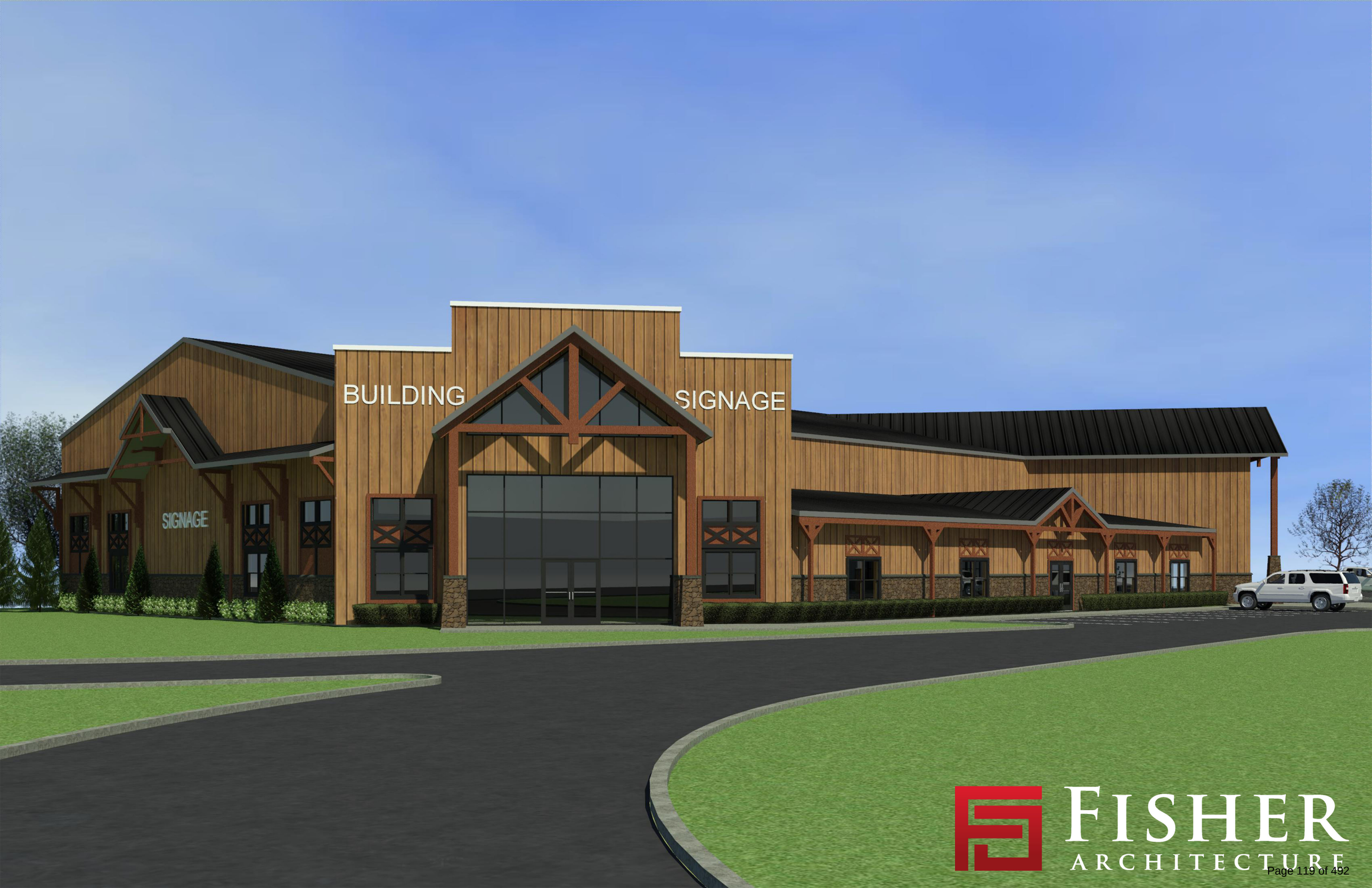
SHEET INFO:

ELEVATIONS

REV	REV DATE	DESCRIPTION
DATE:		2023.XX.XX
PROJECT NO.		2023XXX
SCALE:		1/8" = 1'-0"
PROJ MGR:		Designer
DRAWN BY:		Author

SHEET NUMBER:

A-201



FISHER ARCHITECTURE

APPENDIX B-2

SKETCH STORMWATER MANAGEMENT PLAN
SUBMITTAL CHECKLIST

EFFECTIVE MAY 4, 2010

NOTE: THE FOLLOWING CHECKLIST REPRESENTS THE MINIMUM INFORMATION TO BE SUBMITTED FOR SUPPORT OF A STORMWATER MANAGEMENT CONCEPT PLAN, SITE DEVELOPMENT PLAN, AND/OR FINAL DESIGN PLAN. THE TOWN MAY REQUEST ADDITIONAL INFORMATION AS DEEMED NECESSARY.

COMPLETE THE APPROPRIATE CHECKLIST AND SUBMIT IT WITH THE PLANS, APPLICATION FORM, NARRATIVE OR REPORT, AND FEE. ITEMS IN BOLD ARE REQUIRED FOR CONCEPT AND/OR SITE DEVELOPMENT PHASE REVIEW.

I. Sketch Plan Submittal

A. Site and Resource Map

Natural Resources Identified on Plan, including, but not limited to:
Please use these responses for the following:
(Provided = P; Not Provided = NP; Not Applicable = N/A)

Tidal and Non-Tidal Wetland Boundaries	N/A
Wetland Buffers	N/A
Floodplain Boundaries and Elevations	N/A
Streams and other Waterways	↓
Stream Buffers	↓
Forest Boundaries	N/A
Forest Buffers	N/A
Critical Areas	↓
Steep Slopes (>25%)	↓
Erodible Soils	↓
Areas of High Recharge	↓
Springs	N/A
Soil Types and Hydrologic Soil Groups	P
Bedrock and/or other Geologic Features	
Vegetative Cover	P
Existing Drainage Areas and Flow Patterns	P
Existing Stormwater Outfalls	P
Site and Resource Map field verified by a properly licensed design professional.	P

Existing contours (1' max intervals) and utilities shown. P

Large tracts of contiguous open spaces, forested areas and other important resources protected by conservation easements. N/A

Opportunities for afforestation identified. N/A

Wetland, stream and forest buffers enhanced and/or

expanded. N/A

B. Site Fingerprinting and Development Layout

Locations of proposed impervious areas provided. P

Proposed contours (1' max intervals) and utilities shown. P

Preliminary locations of proposed Environmental Site Design (ESD) practices provided. P

Locations of stormwater outfalls and conveyance provided with offsite storm drains, culverts and grass channels with size and slope. P

Limit of disturbance and extent of clearing & grading. P

Site natural resources protected during construction. If site natural resources must be disturbed during construction, please include an explanation in the stormwater narrative. N/A

Better Site Design Techniques incorporated, including:

Sheetflow and overland flow provided wherever possible P
Building footprint and site layout designed to protect conservation areas N/A
Proposed streets, rights of way, and/or sidewalks with modifications to reduce impervious area P
Landscaped medians and/or cul-de-sacs P
Stormwater management features in medians or cul-de-sacs N/A
Private open road section with grass channels and/or biofilters N/A

Minimize numbers of parking spaces and sizes N/A
Narrow frontages to reduce road length N/A
Site graded to encourage runoff from impervious areas to pervious areas or other natural conveyance systems N/A

C. Stormwater Narrative

Title Page includes:

Job Name P
Owner/Developer P
Design Professional P
Date Prepared P
Seal and Signature (properly licensed Design Professional) P

Project is identified as new development or redevelopment. (Redevelopment projects have ≥40% total site imperviousness) N/A

Project and streets designed for 2-year and 10-year quantitative management. P

Project is identified as being within the Tanyard Branch Watershed. (Projects within this watershed must manage proposed 10-year storm flows to the existing 2-year storm discharge rate.) N/A

A narrative that supports the concept and describes how the design will achieve:

Natural resource protection and enhancement P
Maintenance of natural flow patterns P
Reduction of impervious areas through better site design, alternative surfaces, and non-structural practices P
Implementation of ESD planning techniques and practices to the Maximum Extent Practicable (MEP) P
Preliminary ESD sizing calculations provided P
Integration of erosion and sediment controls (ESC) into the stormwater strategy P

D. Sketch Plan Meeting

Following the Sketch Plan submittal, a meeting will be scheduled between the Town of Easton Planning & Zoning, Town Engineer, the Talbot County Soil Conservation District (SCD) ESC reviewer, the owner/developer, the SWM and ESC designer(s), and any other reviewers deemed necessary by the Town of Easton and/or the Talbot County SCD. Official Minutes from the Sketch Plan Meeting must be submitted for review and acceptance by all parties. These minutes must accompany all future submittals. Ok

This checklist completed by Mc F Cross Date 2-7-24

CONCEPT STORMWATER MANAGEMENT REPORT

For

7872 Ocean Gateway
Easton, Maryland

Developer

In Town Propties, LLC
c/o Steve Hershey
8845 Mistletoe Drive
Easton, MD 21601

Design Professional

Lane Engineering, LLC
117 Bay Street
Easton, Maryland 21601
410-822-8003

Date Prepared

February 7, 2024

Date Revised

N/A

Prepared by

Alec F. Chosta, E.I.T
Civil Engineer

Timothy W. Glass, P.E.

PROFESSIONAL CERTIFICATION: I hereby certify that this document was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 23152, Expiration Date: 7/5/25

TABLE OF CONTENTS

SECTIONS LIST

1. Introduction
2. General Site Information
3. Proposed Project
4. Environmental Site Design (ESD)
   - 4.1 Quantity
   - 4.2 Quality
     - 4.2.1 ESD Practices
5. Conclusion

APPENDIX LIST

APPENDIX A – Maryland Environmental Site Design (ESD) Calculations
APPENDIX B – HydroCAD Quantity Analysis
APPENDIX C – Drainage Area Maps
APPENDIX D – Existing G-2 & Purdy St. Improvement Plans & Drainage Maps

ATTACHMENT LIST

Stormwater Management Submittal Checklist

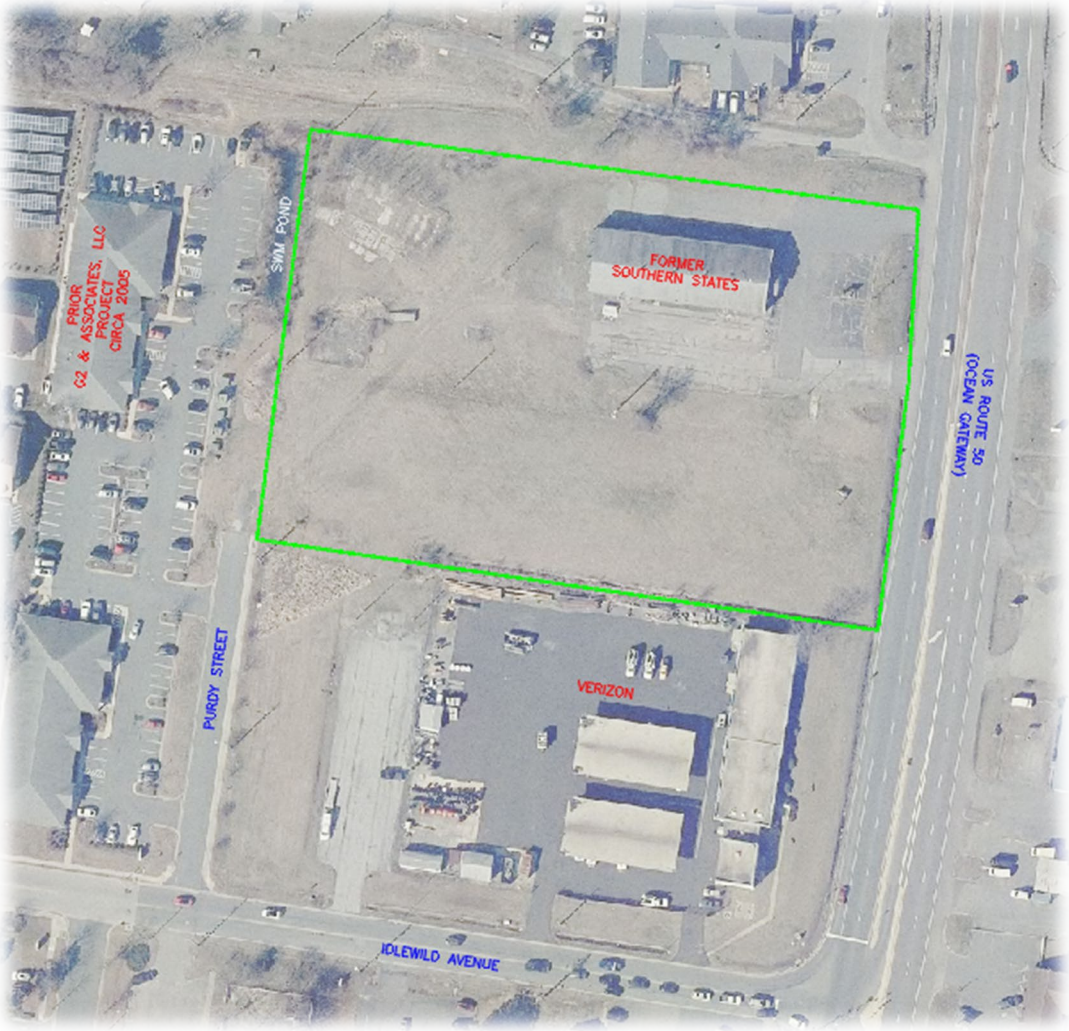
7872 Ocean Gateway
STORMWATER MANAGEMENT REPORT

1. INTRODUCTION

This report addresses stormwater management for development of the vacant property at 7872 Ocean Gateway. The stormwater management plan incorporates the requirements of the *2000 Maryland Stormwater Design Manual Volumes I and II* (Manual) as currently updated. Stormwater projects are required to be reviewed during the concept, preliminary site development and final design stages. This narrative addresses the requirements pertaining to the concept design stage and meets the intent of the guidelines and methodologies presented in the MDE document *Environmental Site Design (ESD) Process & Computations* dated July 2010.

2. GENERAL SITE INFORMATION

The vacant lot predominantly consists of a derelict building, formerly housing Southern States, surrounded by grassed lawn interspersed with the remains of prior buildings, works yards, and other debris. The property is entirely outside the Critical Area with no environmental features of note.



Onsite drainage patterns split between a small portion discharging to an existing, neighboring, stormwater pond, two drainage areas that span the property before discharging to an SHA swale adjacent US 50 and a portion of the property draining to a lot-side swale adjacent to a Verizon service yard. The lot-side swale between the current project and Verizon also serves as a discharge point for the existing stormwater pond on neighboring property.

The existing stormwater pond treats and attenuates the neighboring G2 & Associates site runoff as well as the Town-owned Purdy Street runoff. This project was also designed by Lane Engineering in 2005 with construction taking place between 2007 and 2008. A copy of the original design drawings and associated stormwater documentation is included in Appendix D. Items of note from the prior project include SHA approval of the discharge from the stormwater pond ultimately entering their ditch system (under Hydraulics File No. 04-AP-TA-004), the sizing of the pond anticipated full buildout of Purdy Street (including portions yet to be constructed), and the nature of the stormwater feature that was a combination of a wet pond used in conjunction with underground storage under the 2000 design manual.

According to the USDA soil maps, site soils are predominantly mapped as Hambrook-Sassafras complex – acting as a Hydrologic Group "B" soil. There is a small portion of Woodstown loam in the northeast corner of the project that will act as a Hydrologic Group "C" soil. As the more conservative condition and to simplify calculations, it is assumed that the entirety of the site acts as Group "B" soil as an existing condition.

As of the writing of this report various utility test pitting across the site has also indicated that soils are granular in nature and may allow for stormwater infiltration practices pending additional geotechnical investigation. As such, the sketch site plan depicts locations where such practices may be implemented (i.e. permeable pavers in parking spaces), however, pavers are not required to meet quantity or quality targets and are not quantified in this report at this time.

3. PROPOSED PROJECT

The property is to be redeveloped into a blend of commercial & retail use with a proposed Medical/Office building sharing the property with an incoming retailer.

Development of the parcel will require design and management of three different sources of runoff: those created onsite, those draining from the adjacent stormwater pond from Purdy Street/G2 Associates, and runoff from the Verizon yard also using the lot-side swale to drain. Evaluation and accommodation of State Highway drainage conditions will also occur as a result of entrance improvements.

4. ENVIRONMENTAL SITE DESIGN (ESD)

ESD requirements must be addressed for the project's on-lot limits of disturbance (LOD), which is assumed to consist of the entire property (176,186 SF).

Any additional ESD targets imposed for MDOT SHA improvements are anticipated to be addressed to the Maximum Extent Practicable standard (MEP) balancing functionality and safety with water quality. The removal of the two existing SHA entrances and the creation of a new right-in-right-out entrance results in a decrease in impervious coverage in the SHA right of way (2,237 SF versus 2,048 SF post development). As a result, it is anticipated that non-rooftop disconnection in conjunction with potential swale improvements can satisfy any water quality targets in future submittals to SHA.

The proposed buildings, parking, and loading area result in approximately 109,239 SF (2.51 acres) of impervious cover (62%). Utilizing table 5.3 and onsite soil conditions, a target P_E of 2.0" results in an ESD target volume of **17,854 cf.**

In accordance with the Manual, available ESD techniques i.e. Alternative Surfaces, Non-Structural and Micro-Scale Practices were evaluated for use at the site. Considering the proposed site conditions, i.e. location, topography, facility orientation, soil properties, ground water elevation, traffic, economics, use of facility, construction constraints, neighboring properties and available stormwater discharge locations, the following ESD practices are proposed for the site:

- Micro-BioRetention (MBR)
- Submerged Gravel Wetlands (SGW)

See Appendix A for calculations.

4.1 STORMWATER QUANTITY

The existing site, now vacant and previously hosting industrial activities, breaks into four separate onsite drainage areas and one study point adjacent to US 50. In addition, there is a lot-side swale on the southern property boundary that conveys water from the Purdy Street stormwater outfall while also picking up sheetflow runoff from Verizon to the south. This offsite water will be re-routed through a new stormdrain system to be built onsite, combined with onsite discharges from proposed stormwater features, and ultimately discharged into State Highway drainage channels.

Analysis verifies that management of the 2 and 10-year storms for onsite runoff is achieved in the proposed stormwater features. These consist of a combination of a micro-bioretention and two Submerged Gravel Wetlands. Furthermore, in anticipation of SHA requirements, even the 100-year storm discharge is a reduction post development.

	2 Year Storm (cfs)		**10 Year Storm (cfs)**		**100 Year Storm (cfs)**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
Study Point 1	12.41	11.04	24.74	21.99	51.88	42.53
NET REDUCTION	**1.37**		**2.75**		**9.35**	

Please see Appendix B for HydroCAD calculations and Appendix C for Drainage Area Maps.

4.2 STORMWATER QUALITY

The project is broken into 3 primary drainage areas (color-coded yellow, blue, and green on drainage maps and in the ESD calculations) to be treated with downstream ESD practices and several residual drainage areas but with minimal impervious surface, therefore no individual drainage area ESD targets are assessed in these locations. See appendix A for ESD calculations and Appendix B for HydroCAD diagram and analysis.

Due to the size of the drainage areas created by onsite impervious and grading requirements, two submerged gravel wetlands are to be created. SGW #1 (Green Drainage Areas) will be constructed adjacent to US 50 at an elevation low enough to maintain saturated conditions based on contributing drainage and proximity to ground water.

SGW #2 (Blue Drainage Area) will likely require a liner as onsite soils appear to indicate granular materials more suited to infiltration practices – but due to the MDE restrictions on allowable drainage area to infiltration-based practices, only a submerged gravel wetland is permissible for the 40,553 SF drainage area under current regulations.

Finally, a micro-bioretention (MBR #1) is feasible for the yellow drainage area because onsite soils appear to support the practice, an underdrain can be provided, and the contributing drainage area to the feature is compliant with the MDE restriction of 20,000 sf.

Should the State and/or Town Engineer elect to modify drainage area restrictions for infiltration practices, such features would be better suited to facilitate groundwater discharge while minimizing runoff from this site. While the current scheme of stormwater features fully meets quantity and quality targets, such practices do not as readily exploit soils conditions apparent onsite. Pending additional infiltration testing and geotechnical reports, implementing such practices may become an item of further discussion as the project develops.

4.2.1 ESD PRACTICES

ESD practices were evaluated for applicability to the site:

Alternative Surfaces

- Green Rooftops – the project economics do not readily allow for the use of green roofs; green roofs on multi-story structures may prove more difficult to access and maintain.
- Permeable Pavements – Alternative surfaces are ideal for in-town redevelopment scenarios or similar projects; however, at an industry quoted $25 per square foot of install, they do not represent the most cost-effective form of treatment for projects where there is sufficient room to construct other practices. Pending additional geotechnical infiltration testing, there may be opportunity to implement this practice to reduce the footprint of other stormwater facilities.
- Reinforced Turf - Reinforced turf areas are commonly used for emergency equipment access or for areas that receive minimal vehicular use. Emergency equipment can service the building using the paved surfaces designed for the site needs, and additional access areas are not necessary.

Nonstructural practices

- Disconnection of Rooftop Runoff – Due to the spatial limitations of the property, disconnection of rooftop runoff is not feasible.
- Disconnection of Non-Rooftop Runoff – As an in-town property with relatively high density, there is limited opportunity and space to implement this practice.
- Sheetflow to Conservation Area – There are no open space or conservation areas adjacent to the site outside of various buffer yards that do not meet the necessary criteria.

Micro-scale practices

- Rainwater Harvesting – Opportunities for on-site reuse of harvested rainwater is limited. Irrigation is not proposed for the site. Operations and maintenance, especially during cold-weather periods, is also a concern.
- **Submerged Gravel Wetlands –** This practice is best suited for sites with a high groundwater table and large drainage areas. Depending on future soil testing, a liner may be required.

The submerged gravel wetland adjacent to US 50 should be low enough to intercept local groundwater table.

- Landscape Infiltration – the soils on-site are predominantly mapped as group B at the surface level. Conceptual discussions with the Town Engineer indicated that a Chapter 3 landscape infiltration practice in conjunction with permeable pavers could be entertained if soil testing confirms suitable soils.
- Infiltration Berms – onsite soils may support the use of this practice, however, the opportunity for successful implementation is limited due to the proposed density of the project.
- Dry Wells – the proposed drainage areas exceed the 1,000 sf limit for dry wells.
- **Micro Bio-Retention** – This practice can be easily configured to fit the spatial constraints of the site, provides excellent water quality treatment, and quantity reduction.
- Rain Gardens – Given the extensive impervious surfaces, this practice's drainage area restrictions (10,000 sf max) prevent effective implementation.
- Grass & Bio-Swales – Given the density of the proposed project, the opportunity to implement such practices is limited.

A combination of practices centered around the dominant use of Submerged Gravel Wetlands and a Micro-Bioretention required for this site. The total ESD volume provided is **19,780 CF.**

5. CONCLUSION

This stormwater management analysis indicates that the proposed design will successfully meet stormwater quality and quantity requirements. Referring to the attached water quality calculations, the computed ESDv provided is greater than the ESDv required. Planning and design analysis indicates that stormwater quality and quantity management can be accomplished as described.

APPENDIX A

MARYLAND ENVIRONMENTAL SITE DESIGN (ESD) CALCULATIONS

Maryland Environmental Site Design (ESD) Computations

Project	7872 Medical & Retail	By	AFC	Job #	210666
Location	7872 Ocean Gateway	Date	1/12/2024	File #	1026

Determine if the Project is subject to Redevelopment Requirements:

Site Area =	4.0	ac
Net Site Area =	4.0	ac
Existing Imp. Area =	1.27	ac
Percent Impervious (I) =	31.64	%

I <40%. Project Not subject to Redevelopment requirements.

Step 1 - Determine Stormwater Management Requirements

Initial Site Assessment (Site Data):

Existing Conditions

Total Disturbance Area: 176,186 sf

Soil Types:

HSG	A	B	C	D
Area		176,186		
Percent		100.0		

Proposed Layout

Impervious Cover: 109,239 sf

Percent Impervious (I) 62 %

Determine RCNs for Wooded Conditions:

HSG	A	B	C	D
Area		176,186		
Percent		100.0		
RCN	38	55	70	77

Weighted RCN: **55**

Determine ESD Targets:

Rv = 0.05 +0.009(I)
= 0.61

From Table 5.3 and
%I = 62

HSG	A	B	C	D
Area		176,186		
Target P_E		2.0		

Composite Target P_E (in.): **2.00**

$$ESDv = \frac{(P_E)(Rv)(A)}{12}$$

= **17,854** **cf**

Step 2 - Preliminary ESD Options

Please refer to the Stormwater Management Report

Step 3 - ESD Design

Evaluation of specific ESD treatment practices for the project on the following sheets.

Yellow Drainage Area MBR-1

Total Area	19,689	sf	Target ESDv =	$\frac{(P_E)(Rv)(A)}{12}$
Impervious Area	13,245	sf		
Percent Impervious (I)	67	%	=	2,151 cf
Rv = 0.05 +0.009(I)	0.66		75% of target=	1,613 cf

Site Development Design - Micro-Bioretention (M-6)

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

$$V = \frac{(P)(Rv)(A)}{12} = \textbf{3,011 cf}$$

The computed ESDv provided is:

ESDv = (Ponding storage) + (Storage in media)
= **2,911 cf**

Surface Area=	1,437	sf	Media Depth=	2 ft
Ponding Area=	2,085	sf		
Ponding depth=	1	ft	Porosity=	0.4

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this micro-bioretention practice is **2,911 cf.**

Now check for compliance with design criteria:

Micro-Bioretention Design Criteria:	**Provided**
_ Runoff shall enter, flowthrough, and exit in safe and non-erosive manner	✓
_ Drainage area to any individual practice shall be approximately 20,000 sf	✓
_ Micro-Boretention practices shall capture and store at least 75% of the ESDv.	135%
_ The surface area of the practice shall be at least 2% of the contributing drainage area	7.3%
_ Filter beds shall be between 24 and 48 inches deep	24"
_ Filter beds shall not intercept groundwater	✓
_ Planting soil, mulch and underdrain systems shall conform to specs in Manual Appendix B.4	✓
_ Locate at least 30' from water supply wells and 25' from septic systems	✓
_ Any trees planted in practice shall be located to avoid future problems with overhead lines	✓
_ Size and locate practices to meet minimum local requirements for clearance from utilities	✓

Blue Drainage Area SGW #2

Total Area	40,567	sf	Target ESDv =	$\frac{(P_E)(Rv)(A)}{12}$
Impervious Area	20,581	sf		
Percent Impervious (I)	51	%	=	3,425 cf
Rv = 0.05 +0.009(I)	0.51		75% of target=	2,569 cf

Site Development Design - Submerged Gravel Wetland (M-2)

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

$$V = \frac{(P)(Rv)(A)}{12} = \mathbf{4{,}795\ cf}$$

The computed ESDv provided is:

ESDv = (Ponding storage) + (Storage in media)
= **4,334 cf**

Surface Area=	1,891	sf	Media Depth=	0 ft
Ponding Area=	3,888	sf		
Ponding depth=	1.5	ft	Porosity=	0.4

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **4,334 cf.**

Green Drainage Area SGW #1

Total Area	101,375	sf	Target ESDv =	$\frac{(P_E)(Rv)(A)}{12}$
Impervious Area	75,413	sf		
Percent Impervious (I)	74	%	=	12,157 cf
Rv = 0.05 +0.009(I)	0.72		75% of target=	9,118 cf

Site Development Design - Submerged Gravel Wetland (M-2)

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

$$V = \frac{(P)(Rv)(A)}{12} = \mathbf{17,019\ cf}$$

The computed ESDv provided is:

ESDv = (Ponding storage) + (Storage in media)
= **12,536 cf**

Surface Area=	7,196	sf	Media Depth=	0 ft
Ponding Area=	9,518	sf		
Ponding depth=	1.5	ft	Porosity=	0.4

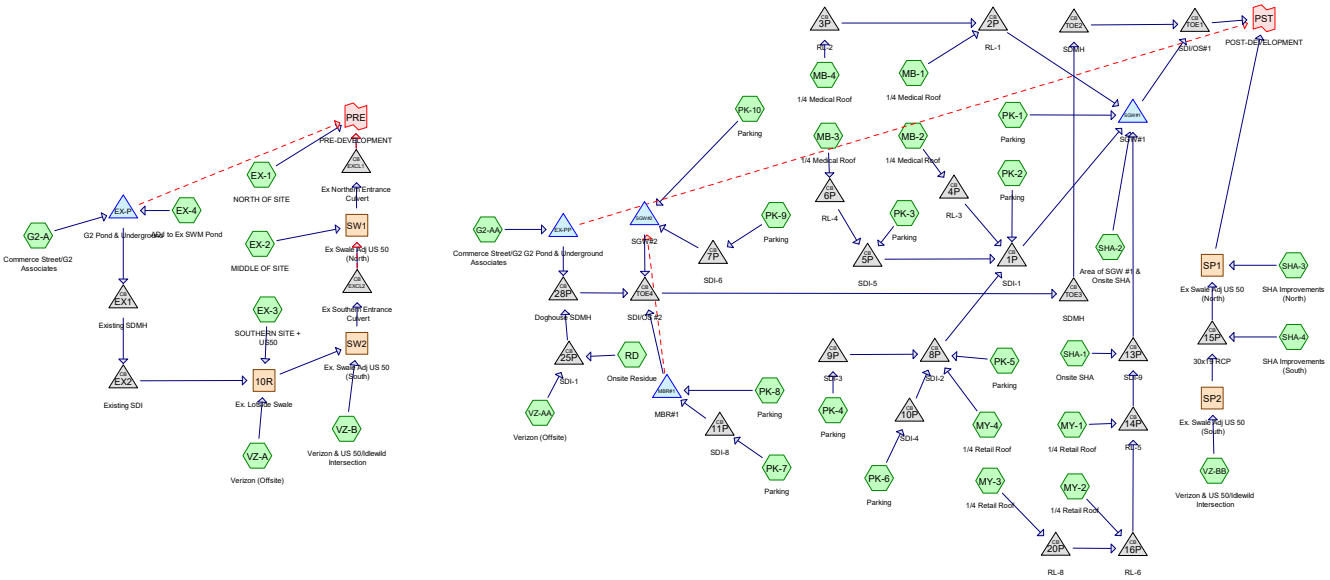
Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this submerged gravel wetland practice is **12,536 cf.**

Feature #	Drainage Area (DA)	DA Target	DA Provided	Exceeded by
1	Yellow Drainage Area MBR-1	2,151	2911	760
2	Blue Drainage Area SGW #2	3,425	4334	909
3	Green Drainage Area SGW #1	12,157	12536	379
		Total Provided	**19,780**	
		Site Target	17,854	

drainage area		impervious		surface	
19689	0.45	13245	0.30	1437	0.03
40567	0.93	20581	0.47	1891	0.04
101374.6	2.33	75412.54	1.73	7196	0.17
	3.71		2.51		0.24

APPENDIX B

HydroCAD Quantity Analysis



Subcat Reach Pond Link

Routing Diagram for 240020-Southern States Parcel
Prepared by Lane Engineering, LLC, Printed 2/7/2024
HydroCAD® 10.00-17 s/n 03788 © 2016 HydroCAD Software Solutions LLC

Summary for Subcatchment EX-1: NORTH OF SITE

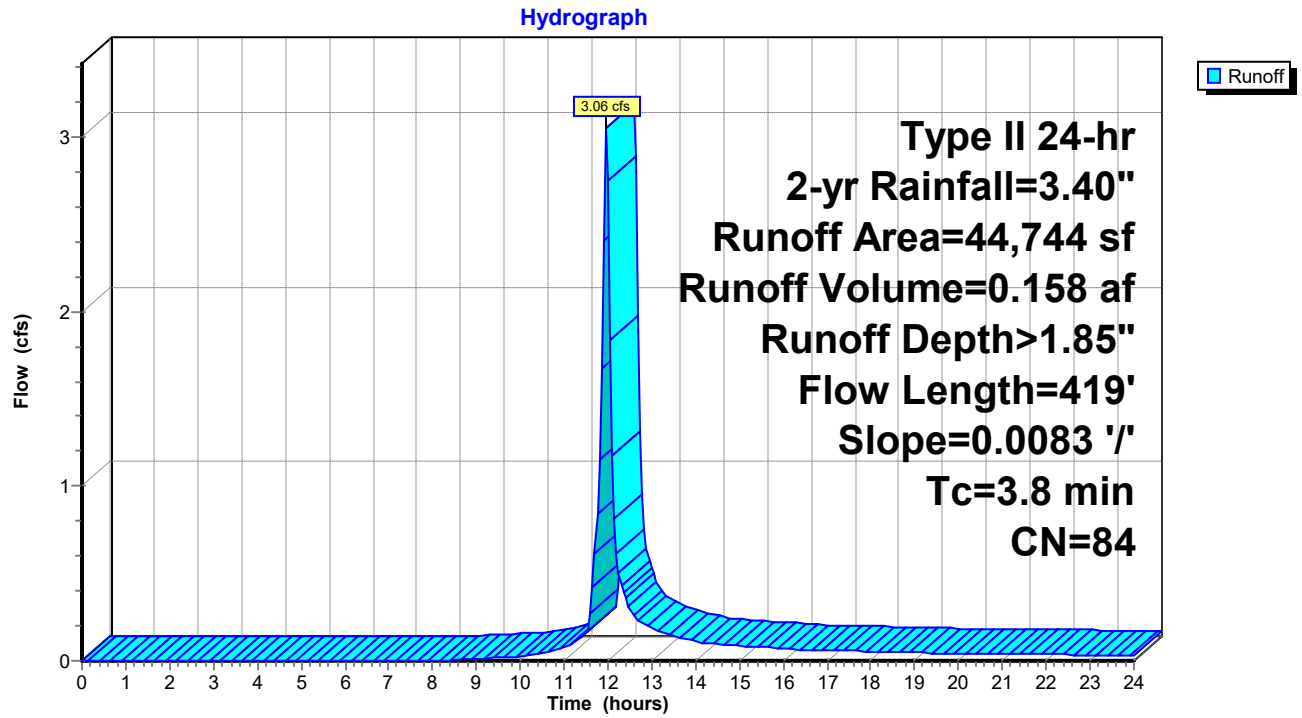
Runoff = 3.06 cfs @ 11.96 hrs, Volume= 0.158 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	19,542	98	Gravel Driveway; Bldg; Old foundations
	25,202	74	>75% Grass cover, Good, HSG C
	44,744	84	Weighted Average
	25,202		56.32% Pervious Area
	19,542		43.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	419	0.0083	1.85		**Shallow Concentrated Flow, Compacted Gravel Driveway** Paved Kv= 20.3 fps

Subcatchment EX-1: NORTH OF SITE



Summary for Subcatchment EX-2: MIDDLE OF SITE

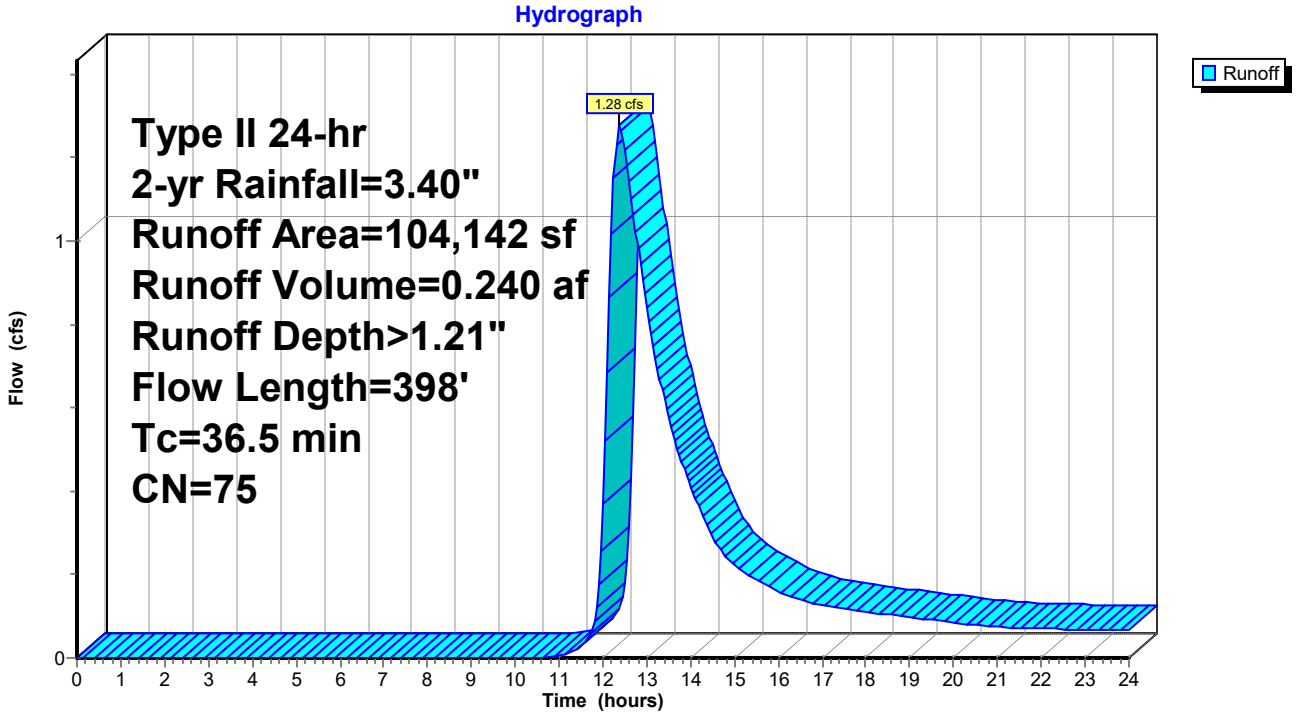
Runoff = 1.28 cfs @ 12.38 hrs, Volume= 0.240 af, Depth> 1.21"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	40,056	98	Ex Bldg; Front Parking; US 50
	64,086	61	>75% Grass cover, Good, HSG B
	104,142	75	Weighted Average
	64,086		61.54% Pervious Area
	40,056		38.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.4	150	0.0018	0.07		**Sheet Flow, Vacant Grassed Lot** Grass: Short n= 0.150 P2= 3.40"
1.1	137	0.0189	2.06		**Shallow Concentrated Flow, Grassed Lot** Grassed Waterway Kv= 15.0 fps
0.1	31	0.0070	4.49	3.52	**Pipe Channel, 12" RCP** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
0.6	10	0.0001	0.28	0.02	**Pipe Channel, 4" PVC Culverts** 4.0" Round Area= 0.1 sf Perim= 1.0' r= 0.08' n= 0.010 PVC, smooth interior
0.3	70	0.0800	4.24		**Shallow Concentrated Flow, Grassed Lot** Grassed Waterway Kv= 15.0 fps
36.5	398	Total			

Subcatchment EX-2: MIDDLE OF SITE



Summary for Subcatchment EX-3: SOUTHERN SITE + US50

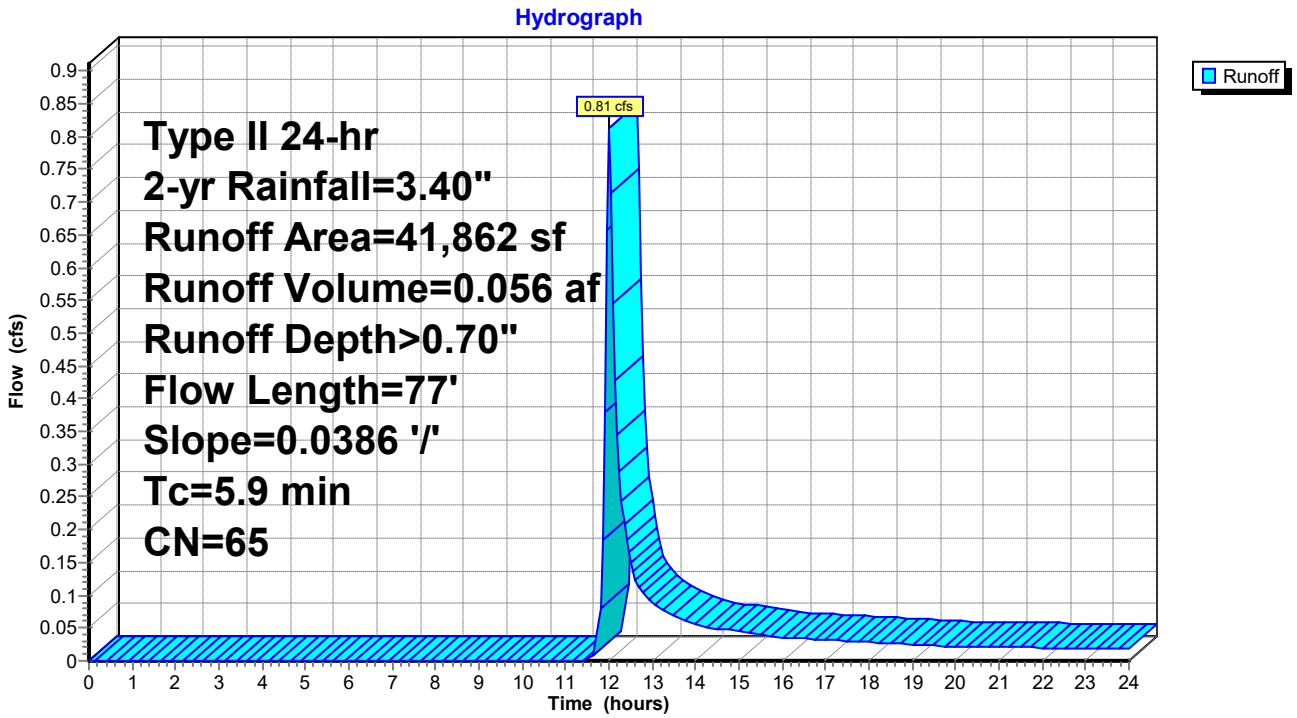
Runoff = 0.81 cfs @ 12.01 hrs, Volume= 0.056 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	37,243	61	>75% Grass cover, Good, HSG B
*	4,619	98	SHA/Route 50
	41,862	65	Weighted Average
	37,243		88.97% Pervious Area
	4,619		11.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	77	0.0386	0.22		**Sheet Flow, Vacant Grassed Lot** Grass: Short n= 0.150 P2= 3.40"

Subcatchment EX-3: SOUTHERN SITE + US50



Summary for Subcatchment EX-4: ADJ to Ex SWM Pond

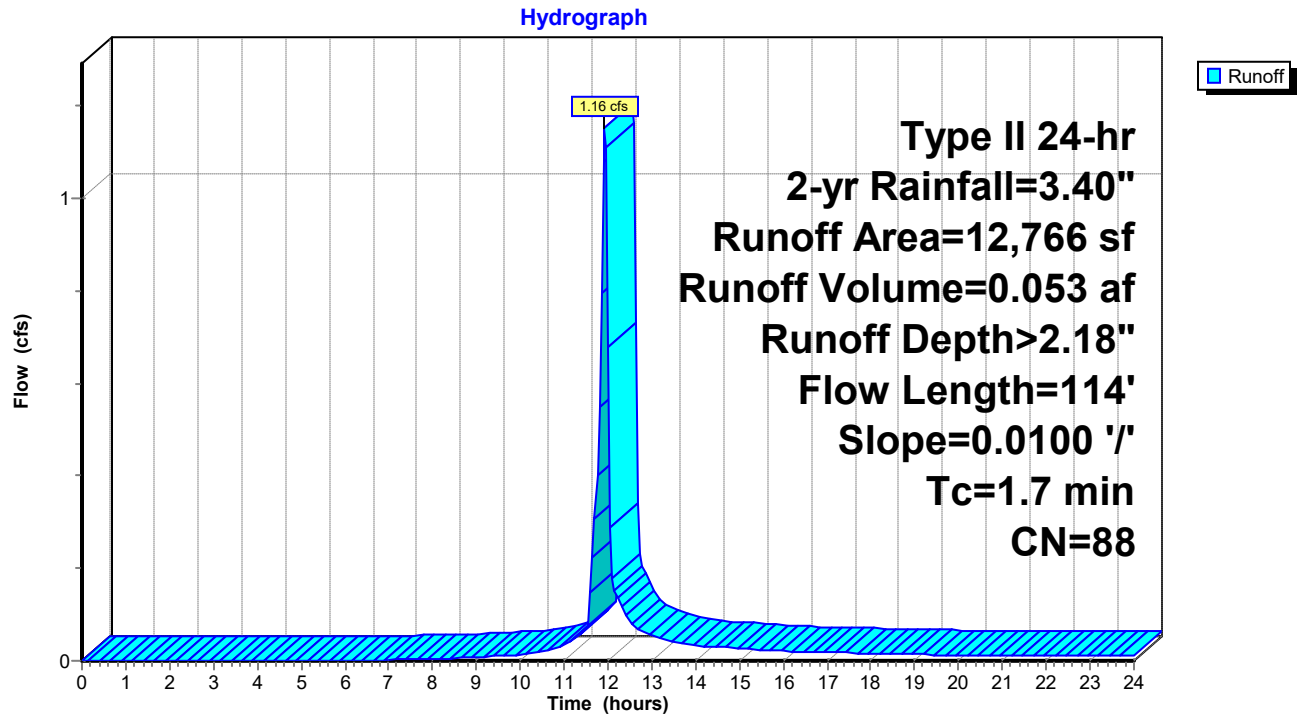
Runoff = 1.16 cfs @ 11.93 hrs, Volume= 0.053 af, Depth> 2.18"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	7,479	98	Old foundations
	5,287	74	>75% Grass cover, Good, HSG C
	12,766	88	Weighted Average
	5,287		41.41% Pervious Area
	7,479		58.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	114	0.0100	1.10		**Sheet Flow, Concrete Foundation** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment EX-4: ADJ to Ex SWM Pond



Summary for Subcatchment G2-A: Commerce Street/G2 Associates

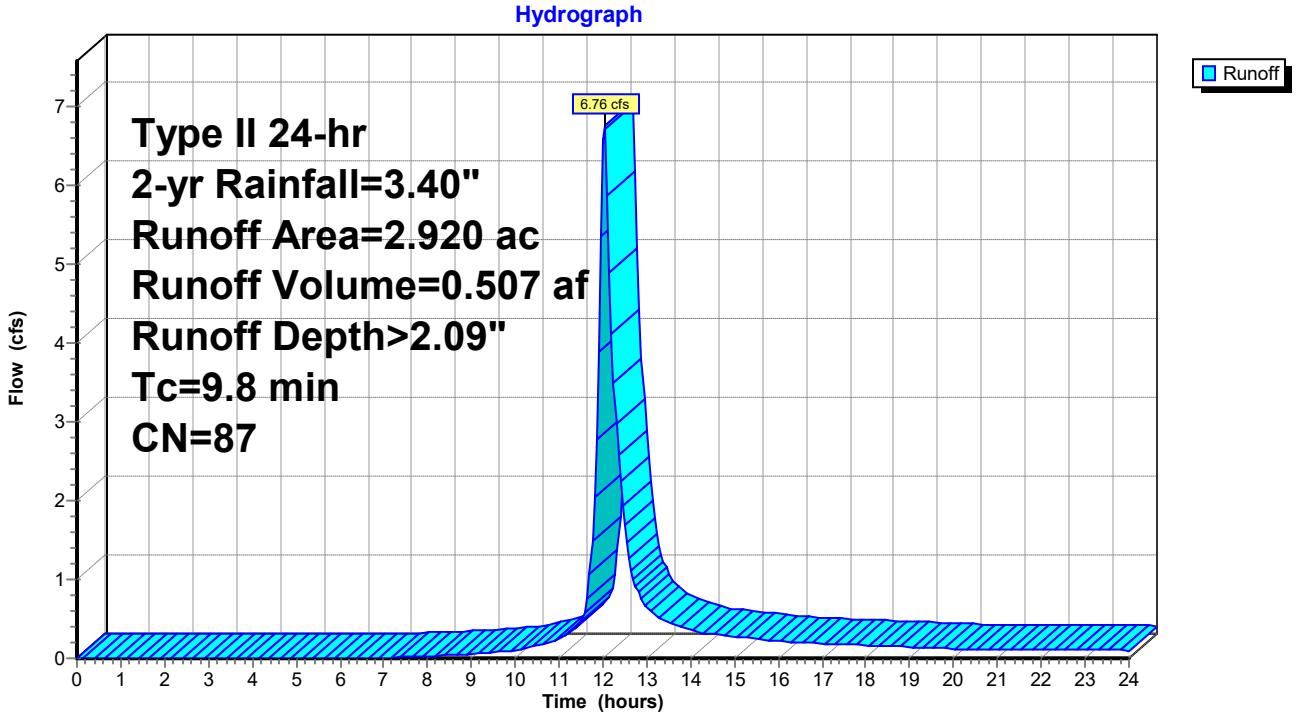
Runoff = 6.76 cfs @ 12.03 hrs, Volume= 0.507 af, Depth> 2.09"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (ac)	CN	Description
*	2.080	98	G2 Development circa 2005
*	0.840	61	>75% Grass cover, Good, HSG C
	2.920	87	Weighted Average
	0.840		28.77% Pervious Area
	2.080		71.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					**Direct Entry, Tcon from TR-55 Report circa 2005**

Subcatchment G2-A: Commerce Street/G2 Associates



Summary for Subcatchment G2-AA: Commerce Street/G2 Associates

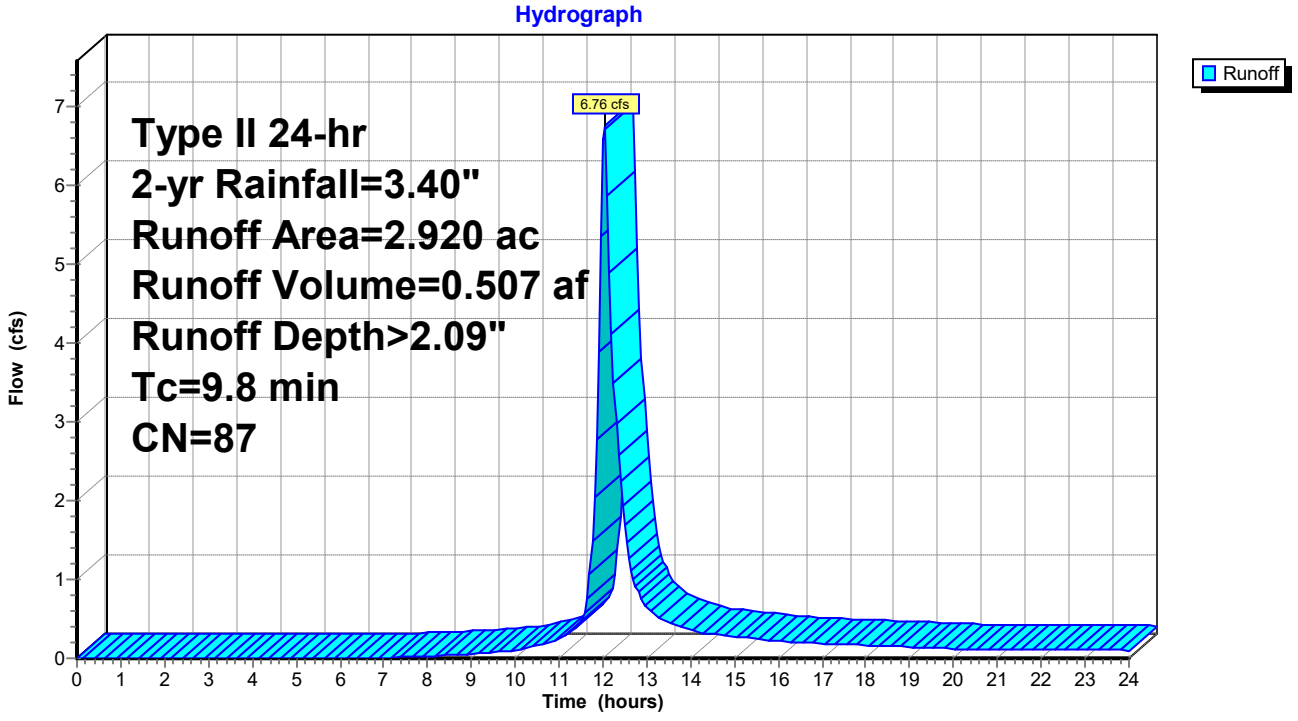
Runoff = 6.76 cfs @ 12.03 hrs, Volume= 0.507 af, Depth> 2.09"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (ac)	CN	Description
*	2.080	98	G2 Development circa 2005
*	0.840	61	>75% Grass cover, Good, HSG C
	2.920	87	Weighted Average
	0.840		28.77% Pervious Area
	2.080		71.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					**Direct Entry, Tcon from TR-55 Report circa 2005**

Subcatchment G2-AA: Commerce Street/G2 Associates



Summary for Subcatchment MB-1: 1/4 Medical Roof

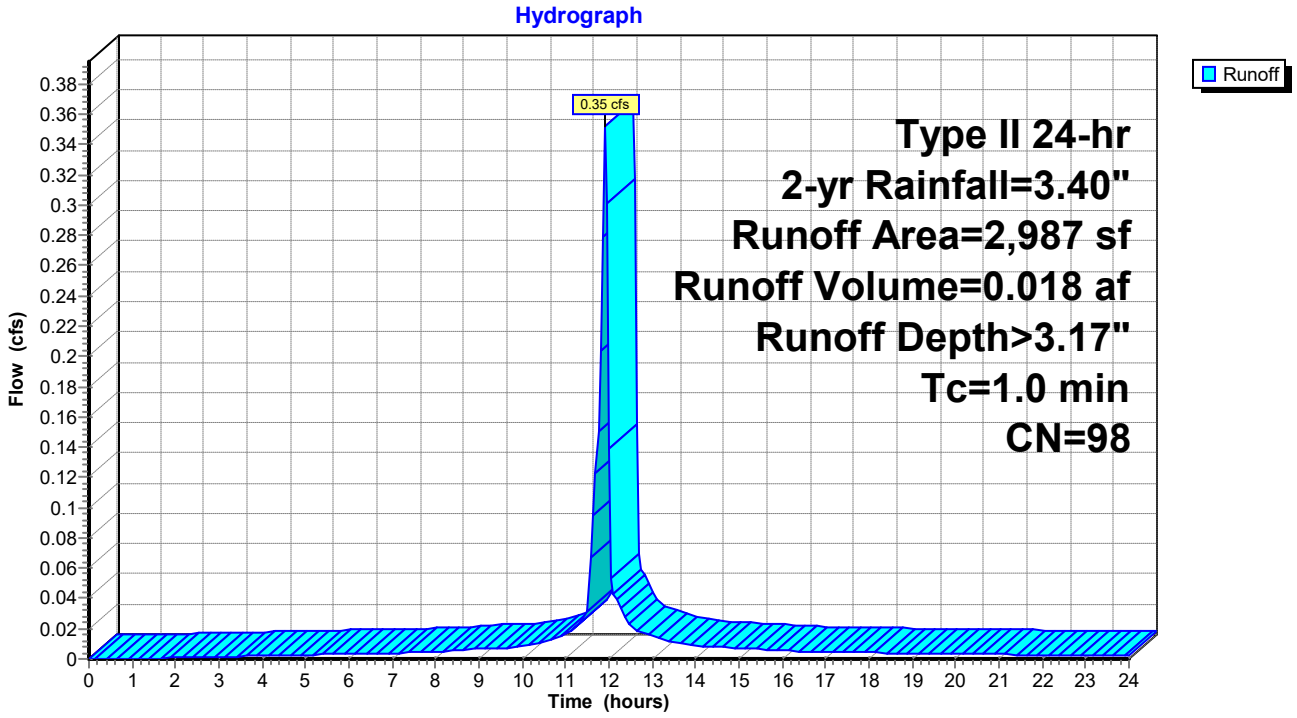
Runoff = 0.35 cfs @ 11.90 hrs, Volume= 0.018 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	2,987	98	Rear Med. Building Roof
	2,987		100.00% Impervious Area

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

Subcatchment MB-1: 1/4 Medical Roof



Summary for Subcatchment MB-2: 1/4 Medical Roof

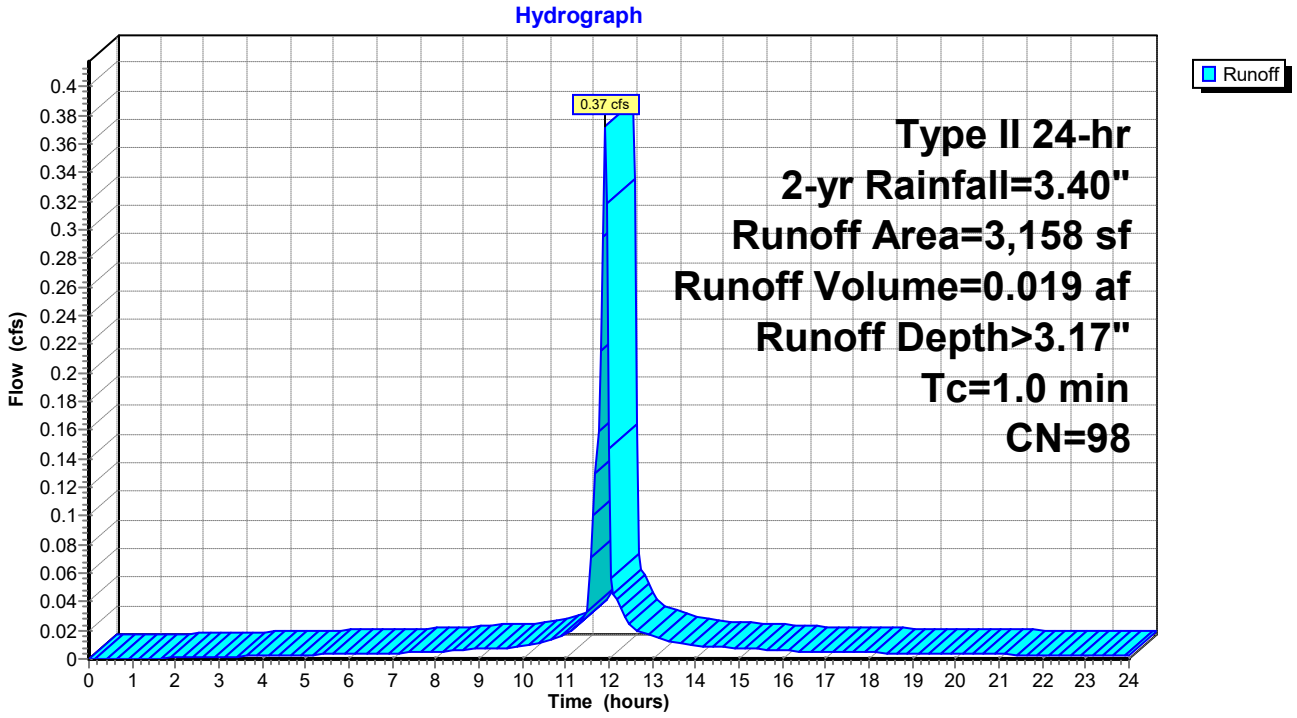
Runoff = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	3,158	98	Rear Med. Building Roof
	3,158		100.00% Impervious Area

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

Subcatchment MB-2: 1/4 Medical Roof



Summary for Subcatchment MB-3: 1/4 Medical Roof

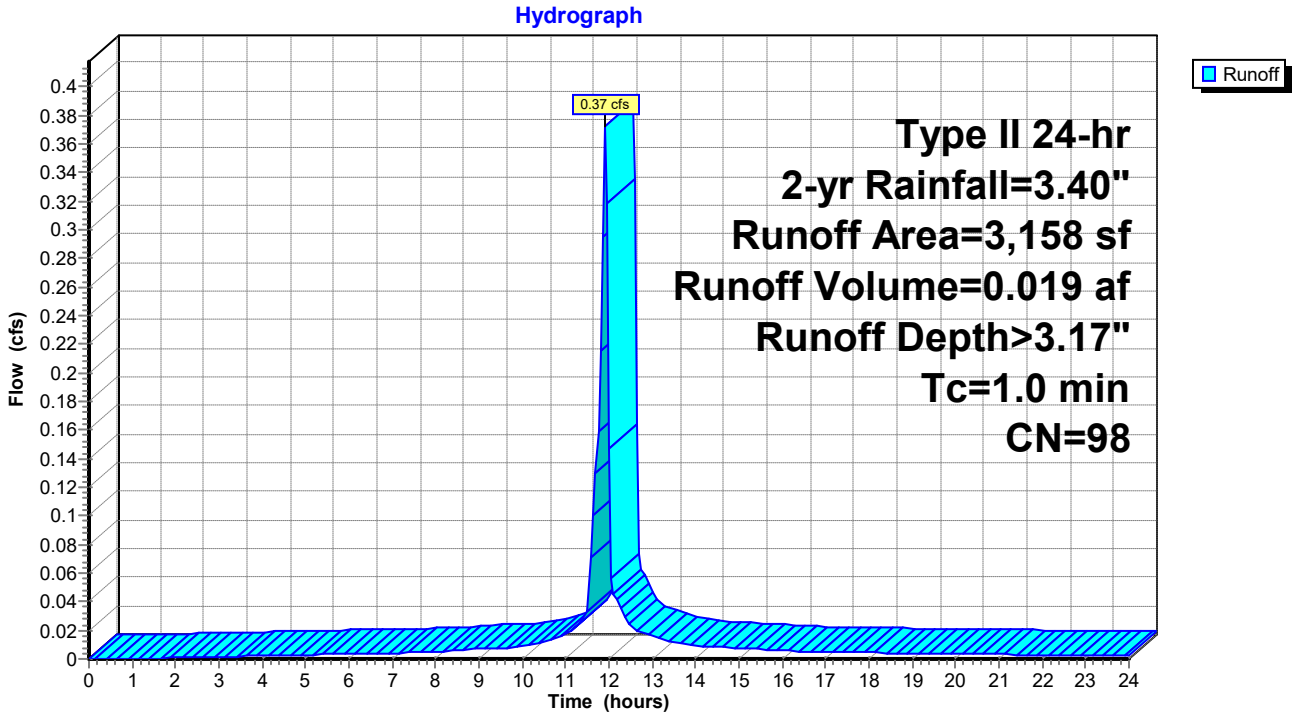
Runoff = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	3,158	98	Rear Med. Building Roof
	3,158		100.00% Impervious Area

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

Subcatchment MB-3: 1/4 Medical Roof



Summary for Subcatchment MB-4: 1/4 Medical Roof

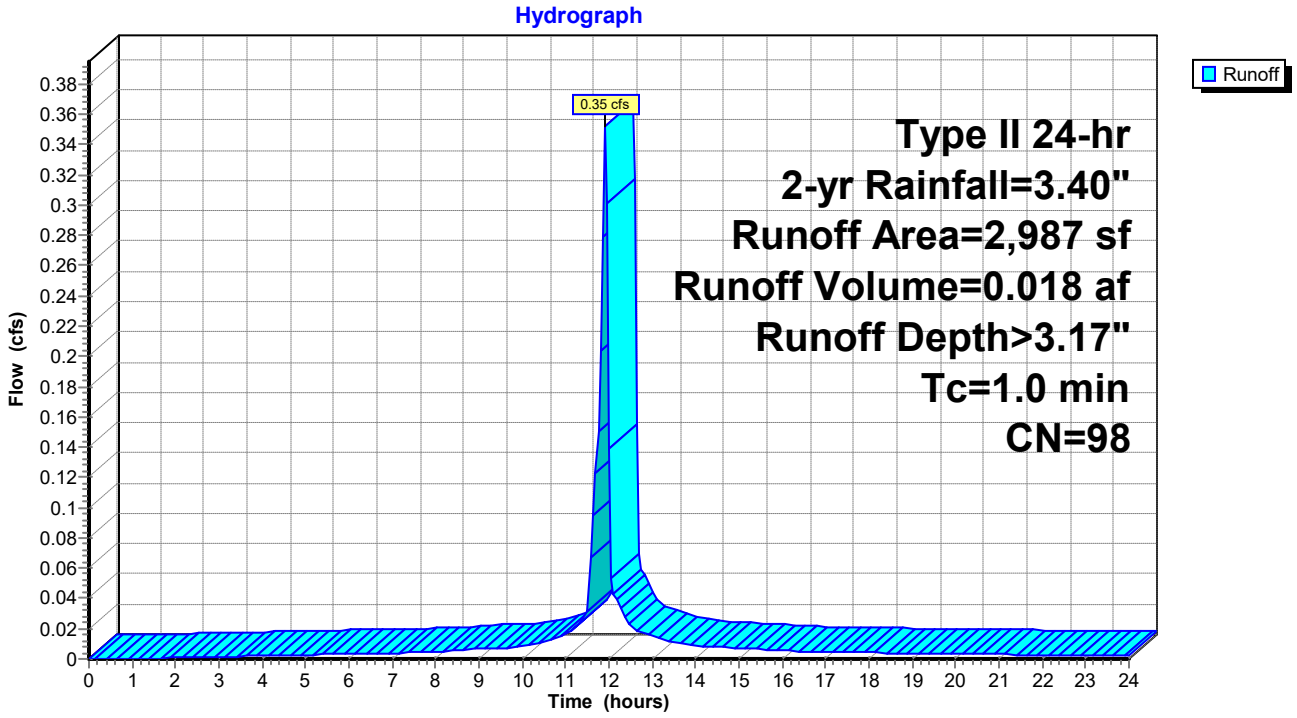
Runoff = 0.35 cfs @ 11.90 hrs, Volume= 0.018 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	2,987	98	Rear Med. Building Roof
	2,987		100.00% Impervious Area

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

Subcatchment MB-4: 1/4 Medical Roof



Summary for Subcatchment MY-1: 1/4 Retail Roof

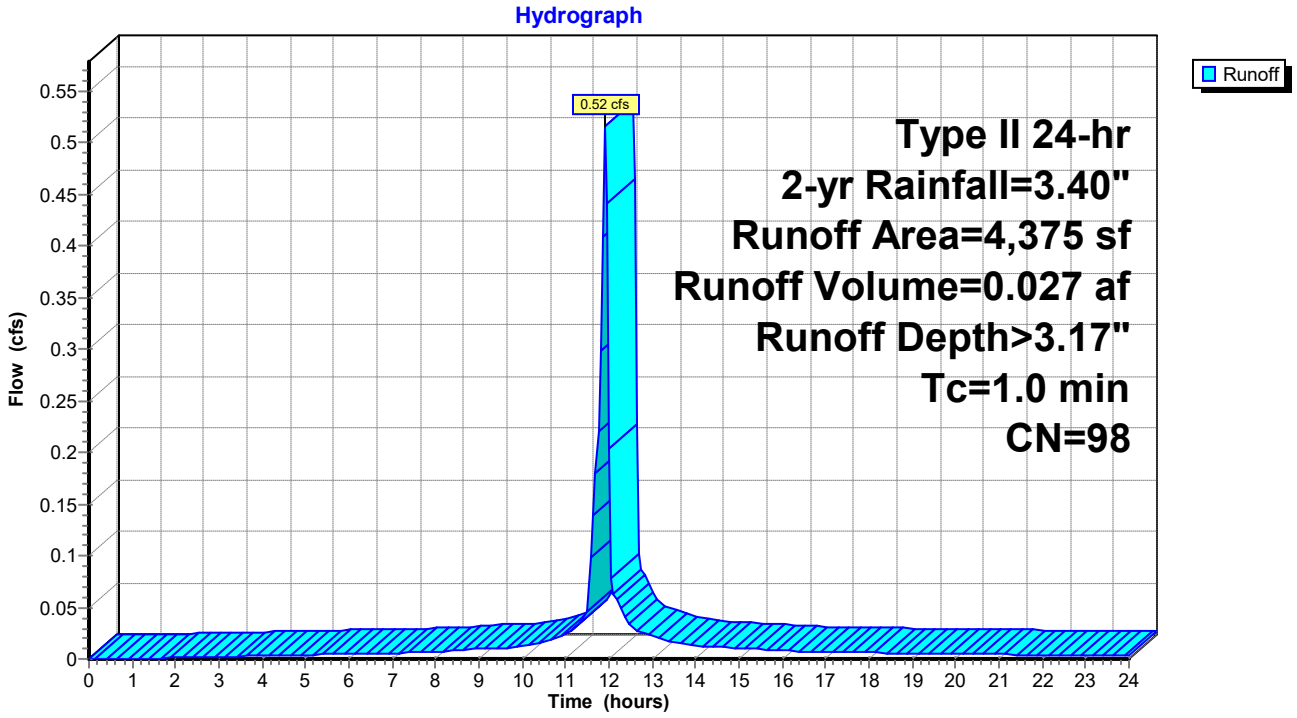
Runoff = 0.52 cfs @ 11.90 hrs, Volume= 0.027 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,375	98	Building Roof
	4,375		100.00% Impervious Area

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

Subcatchment MY-1: 1/4 Retail Roof



Summary for Subcatchment MY-2: 1/4 Retail Roof

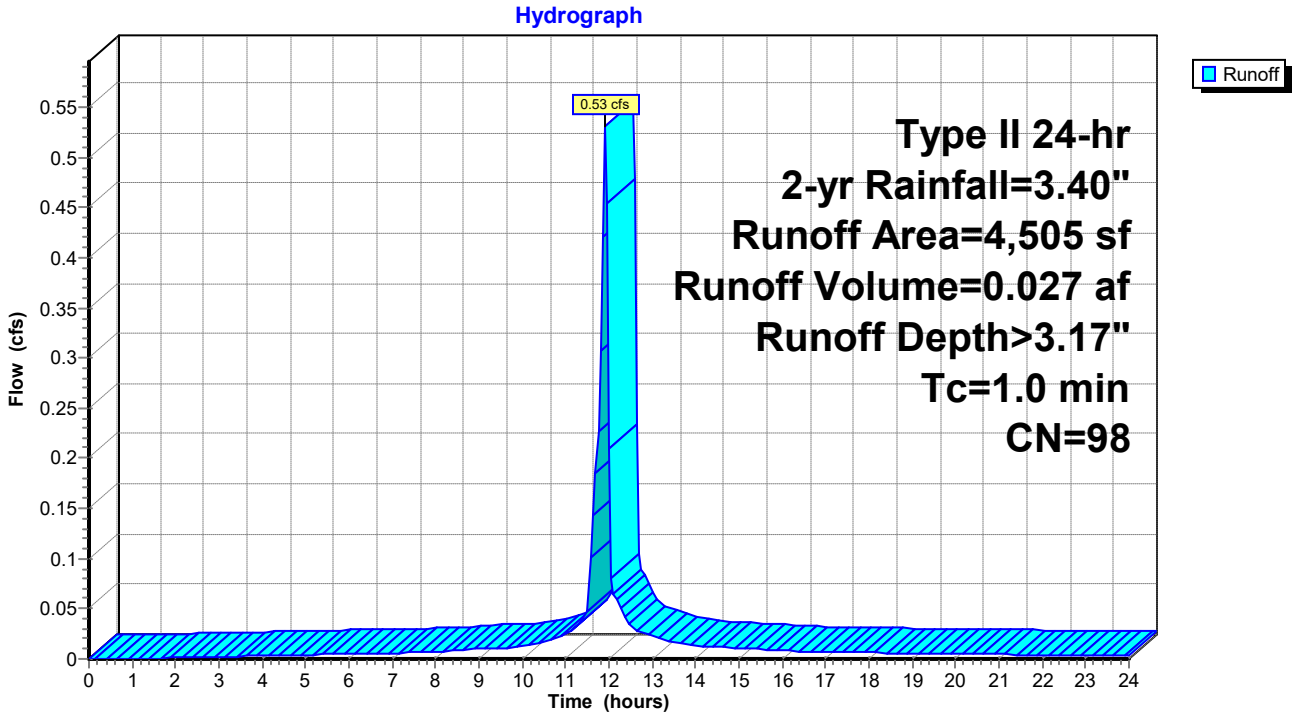
Runoff = 0.53 cfs @ 11.90 hrs, Volume= 0.027 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,505	98	Rear Building Roof
	4,505		100.00% Impervious Area

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

Subcatchment MY-2: 1/4 Retail Roof



Summary for Subcatchment MY-3: 1/4 Retail Roof

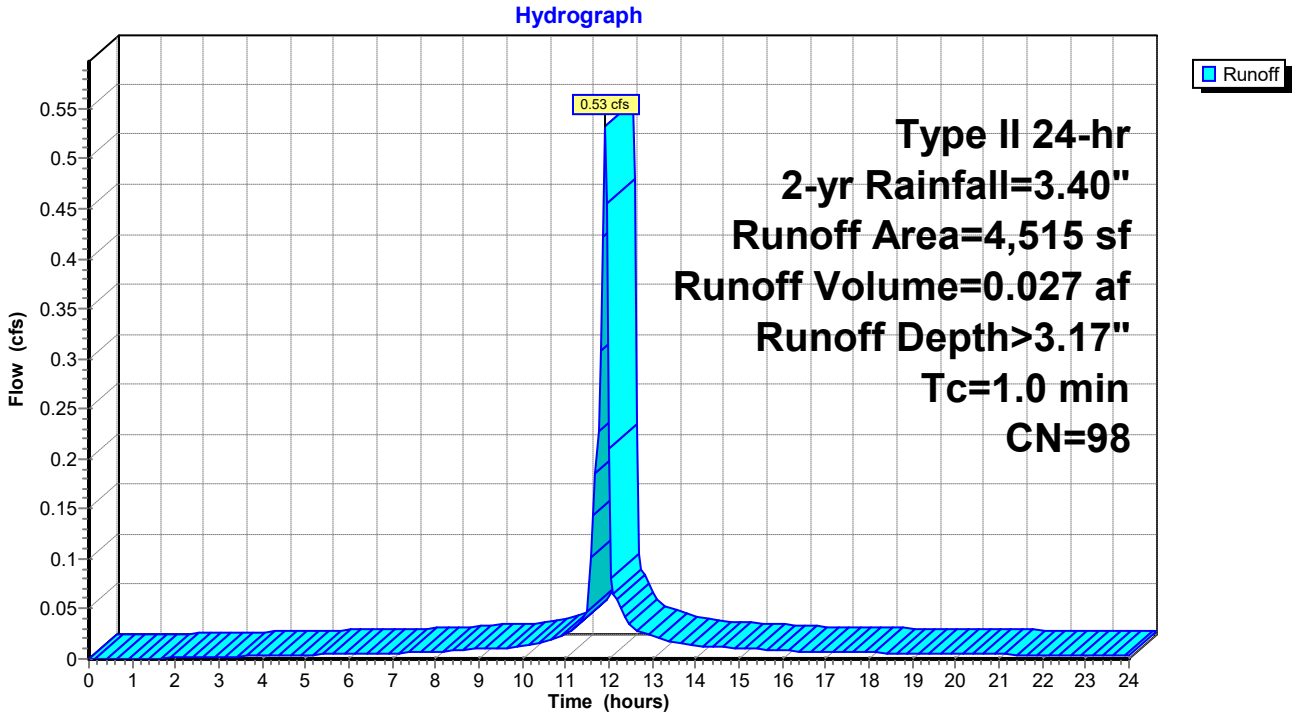
Runoff = 0.53 cfs @ 11.90 hrs, Volume= 0.027 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,515	98	Rear Building Roof
	4,515		100.00% Impervious Area

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

Subcatchment MY-3: 1/4 Retail Roof



Summary for Subcatchment MY-4: 1/4 Retail Roof

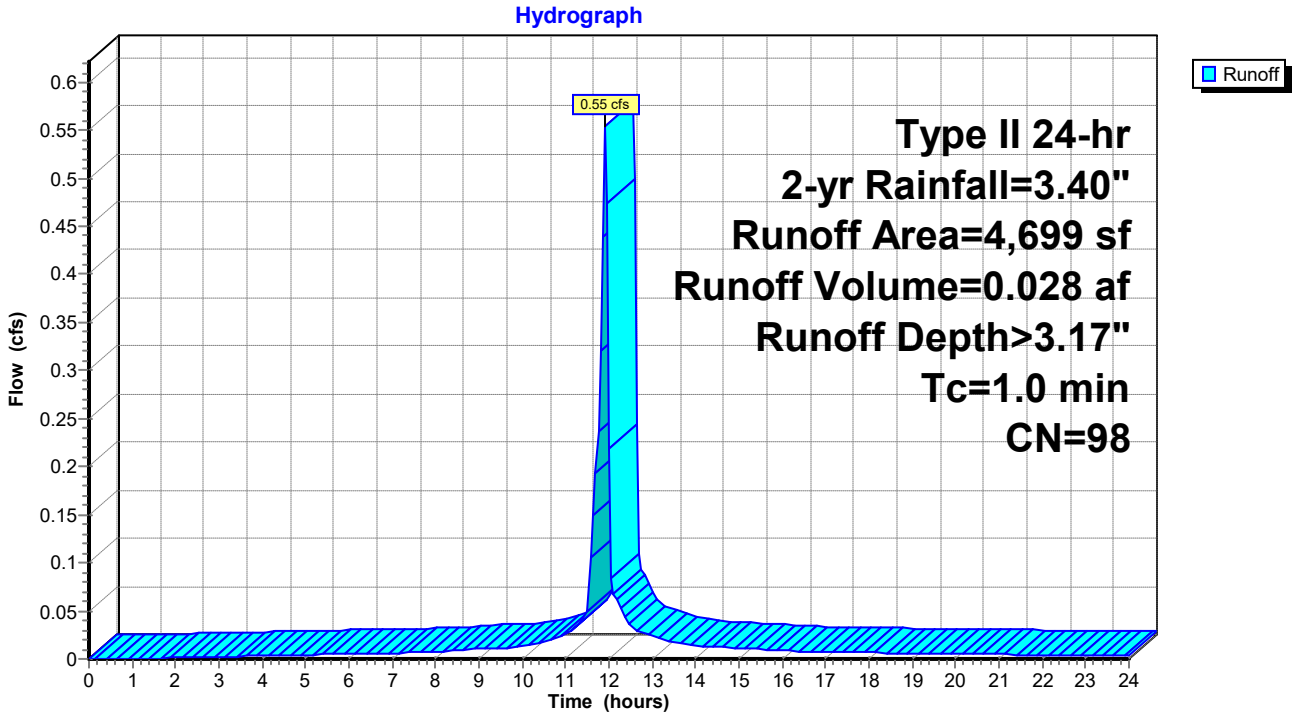
Runoff = 0.55 cfs @ 11.90 hrs, Volume= 0.028 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,699	98	Building Roof
	4,699		100.00% Impervious Area

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

Subcatchment MY-4: 1/4 Retail Roof



Summary for Subcatchment PK-1: Parking

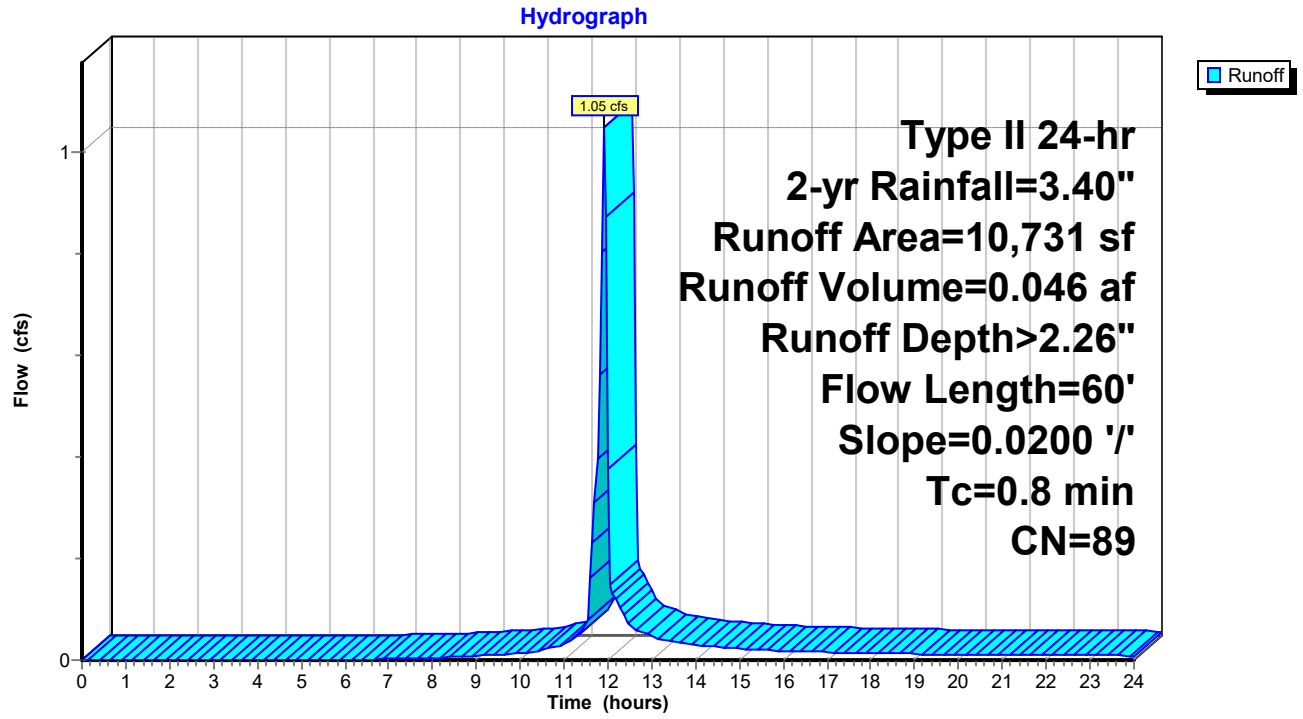
Runoff = 1.05 cfs @ 11.90 hrs, Volume= 0.046 af, Depth> 2.26"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,140	98	Parking Area
	2,703	61	>75% Grass cover, Good, HSG B
*	3,888	98	Parking Spaces
	10,731	89	Weighted Average
	2,703		25.19% Pervious Area
	8,028		74.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-1: Parking



Summary for Subcatchment PK-10: Parking

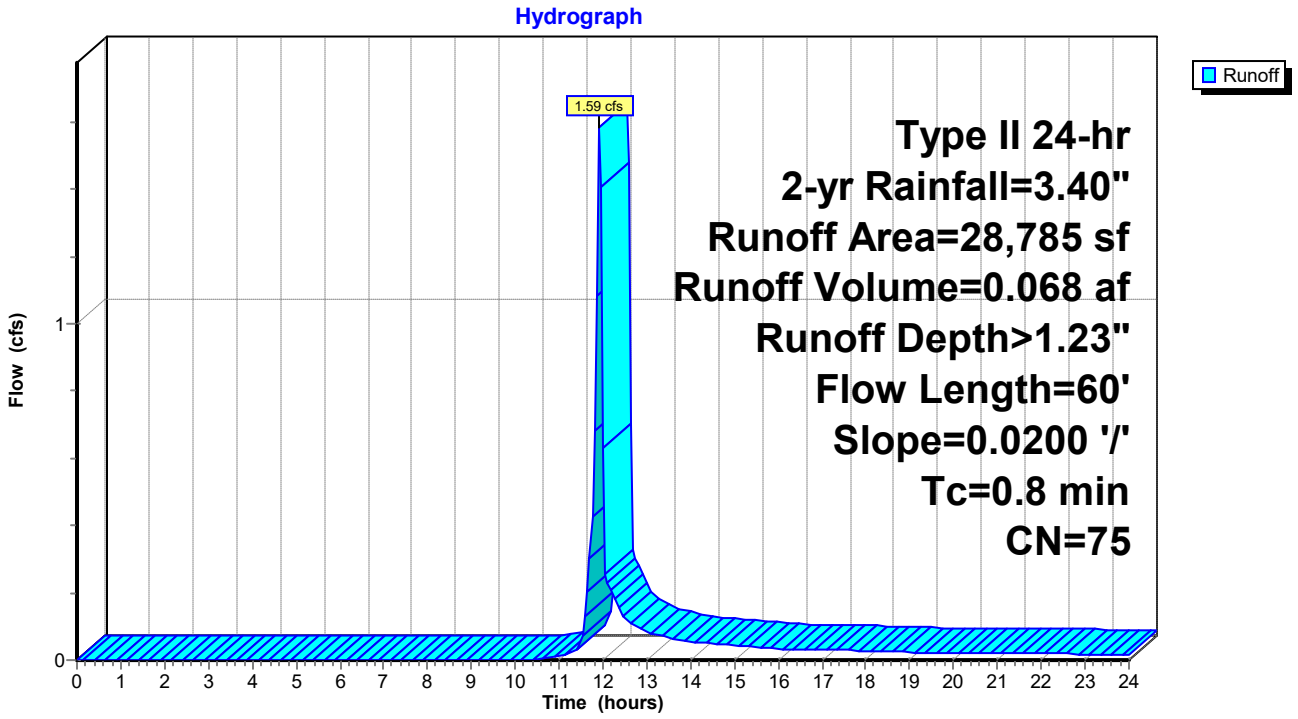
Runoff = 1.59 cfs @ 11.91 hrs, Volume= 0.068 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	6,254	98	Asphalt
	18,135	61	>75% Grass cover, Good, HSG B
*	4,396	98	Parking Spaces
	28,785	75	Weighted Average
	18,135		63.00% Pervious Area
	10,650		37.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-10: Parking



Summary for Subcatchment PK-2: Parking

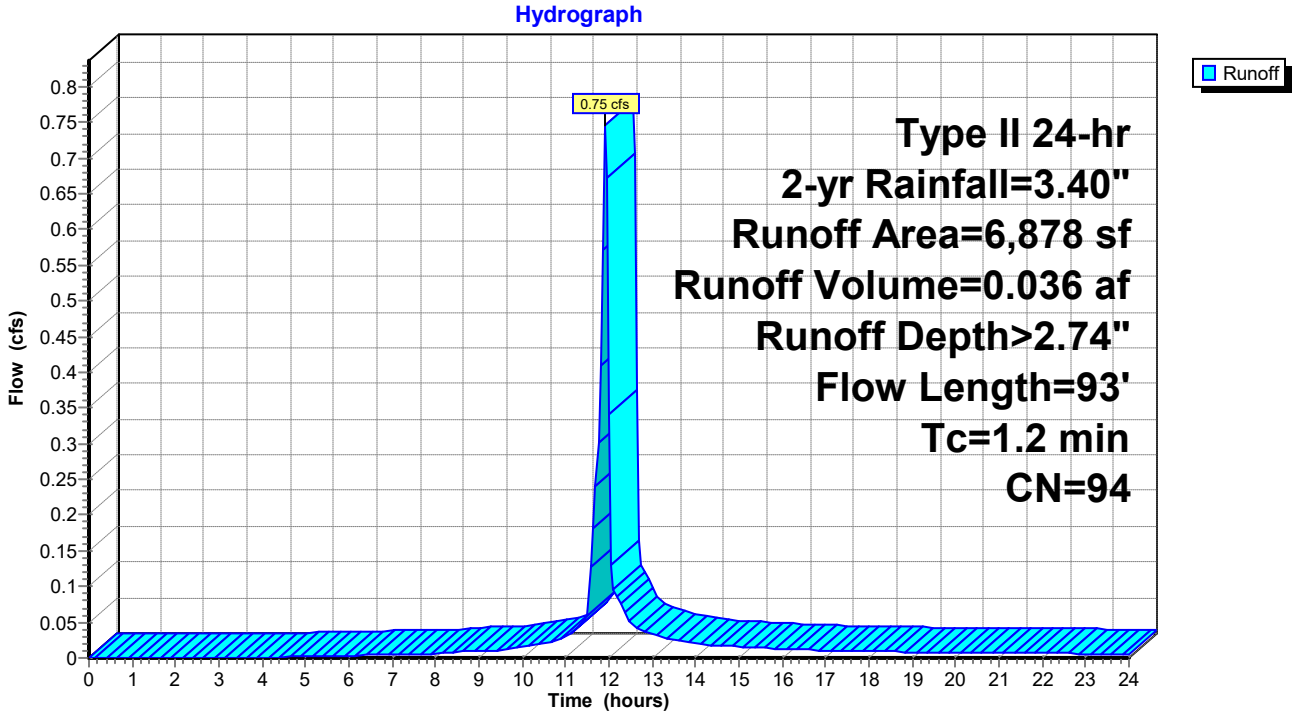
Runoff = 0.75 cfs @ 11.91 hrs, Volume= 0.036 af, Depth> 2.74"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,272	98	Parking Area
	801	61	>75% Grass cover, Good, HSG B
*	1,805	98	Parking Spaces
	6,878	94	Weighted Average
	801		11.65% Pervious Area
	6,077		88.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking lot** Smooth surfaces n= 0.011 P2= 3.40"
0.4	33	0.0050	1.44		**Shallow Concentrated Flow, Curb** Paved Kv= 20.3 fps
1.2	93	Total			

Subcatchment PK-2: Parking



Summary for Subcatchment PK-3: Parking

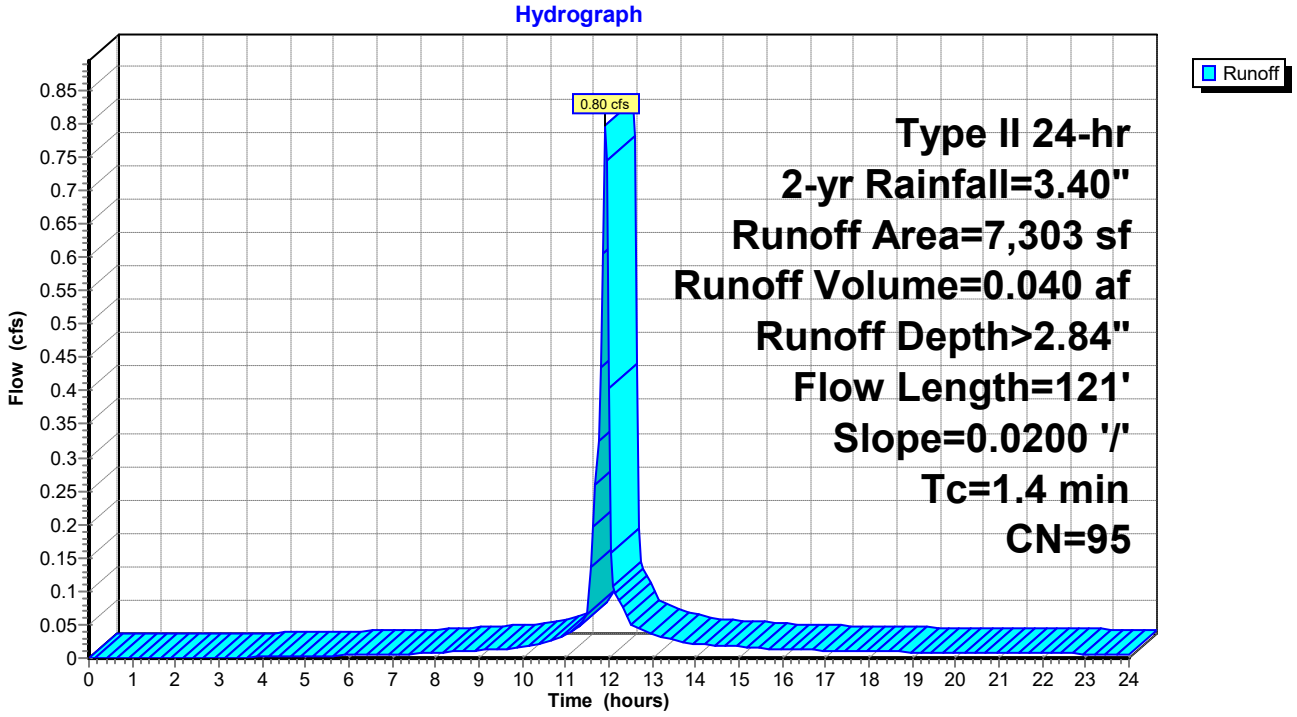
Runoff = 0.80 cfs @ 11.92 hrs, Volume= 0.040 af, Depth> 2.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,424	98	Parking Area
	559	61	>75% Grass cover, Good, HSG B
*	2,320	98	Parking Spaces
	7,303	95	Weighted Average
	559		7.65% Pervious Area
	6,744		92.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	121	0.0200	1.47		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-3: Parking



Summary for Subcatchment PK-4: Parking

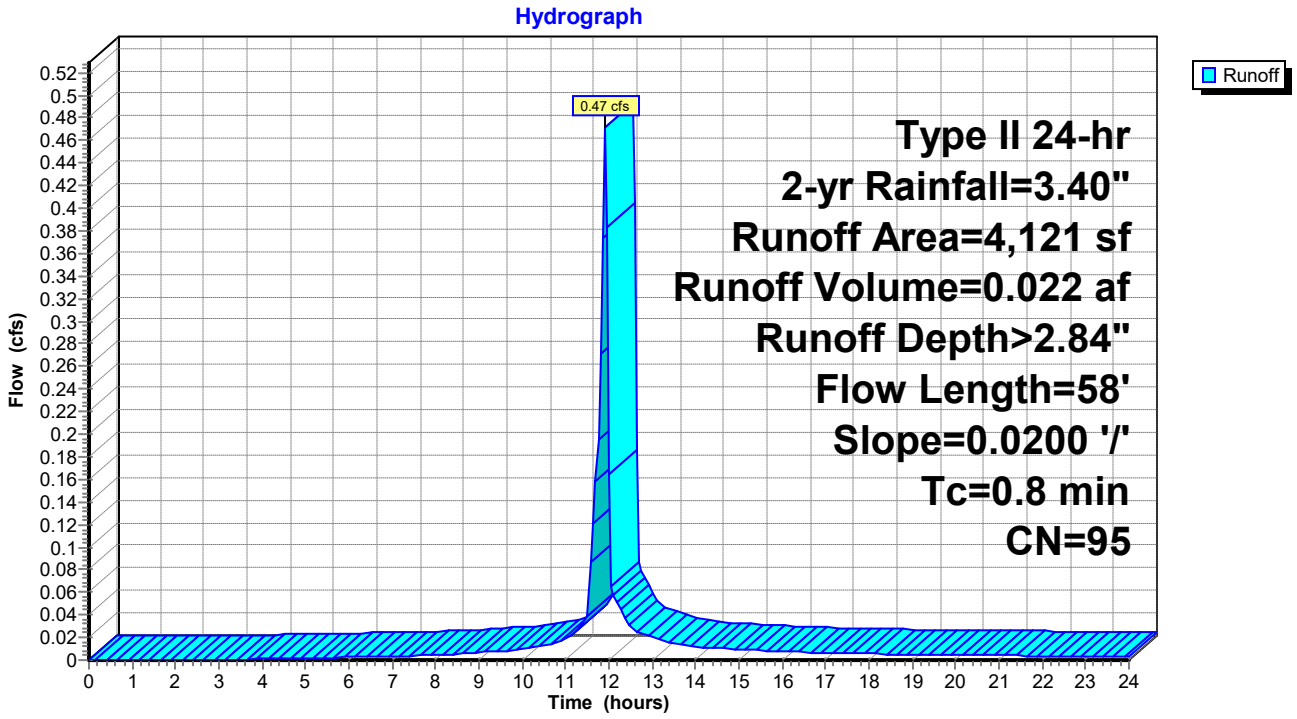
Runoff = 0.47 cfs @ 11.90 hrs, Volume= 0.022 af, Depth> 2.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	2,405	98	Asphalt
	337	61	>75% Grass cover, Good, HSG B
*	1,379	98	Parking Spaces
	4,121	95	Weighted Average
	337		8.18% Pervious Area
	3,784		91.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	58	0.0200	1.27		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-4: Parking



Summary for Subcatchment PK-5: Parking

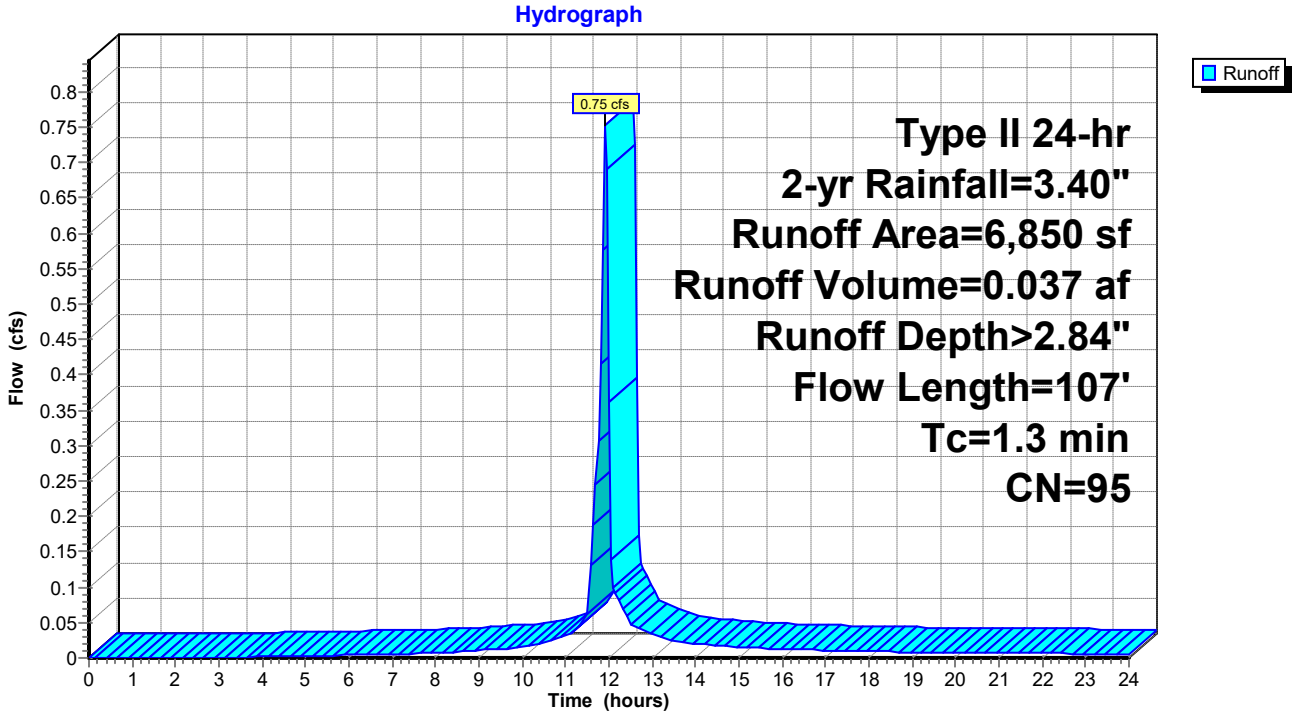
Runoff = 0.75 cfs @ 11.91 hrs, Volume= 0.037 af, Depth> 2.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,714	98	Asphalt
	516	61	>75% Grass cover, Good, HSG B
*	1,620	98	Parking Spaces
	6,850	95	Weighted Average
	516		7.53% Pervious Area
	6,334		92.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.01		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"
1.0	89	0.0050	1.44		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
1.3	107	Total			

Subcatchment PK-5: Parking



Summary for Subcatchment PK-6: Parking

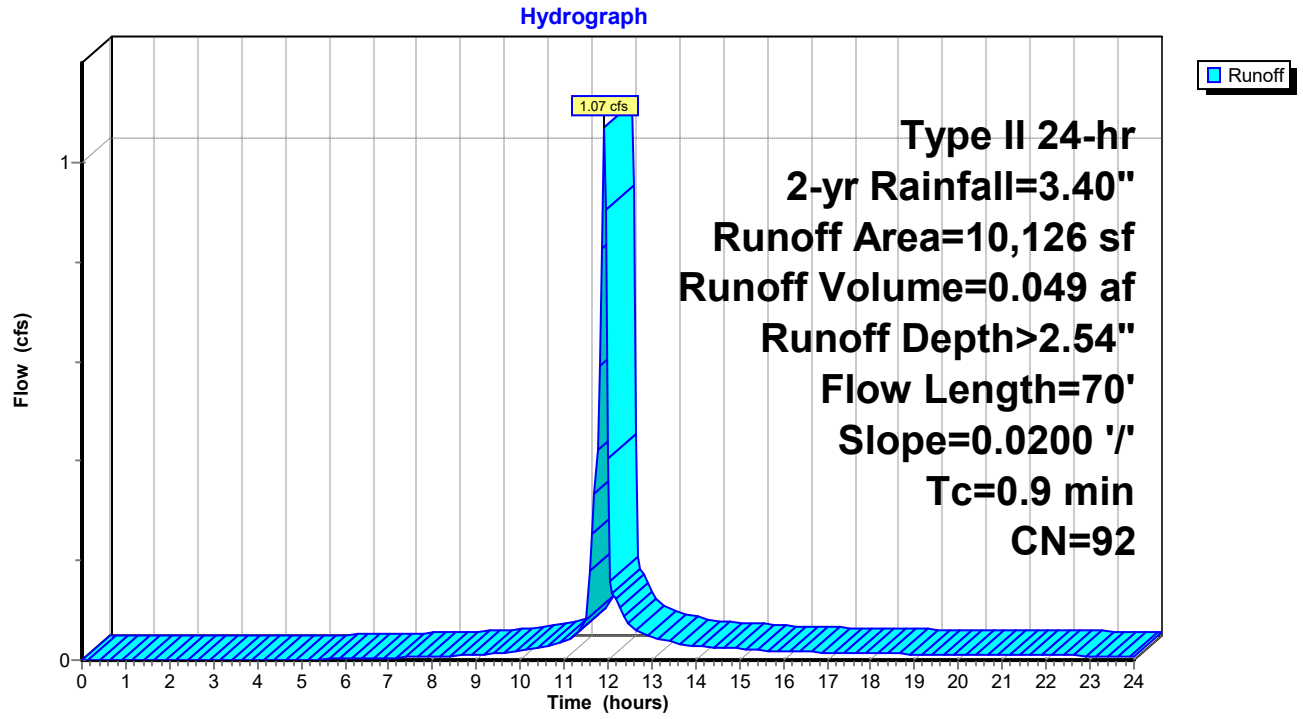
Runoff = 1.07 cfs @ 11.90 hrs, Volume= 0.049 af, Depth> 2.54"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	6,357	98	Asphalt
	1,534	61	>75% Grass cover, Good, HSG B
*	2,235	98	Parking Spaces
	10,126	92	Weighted Average
	1,534		15.15% Pervious Area
	8,592		84.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.32		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-6: Parking



Summary for Subcatchment PK-7: Parking

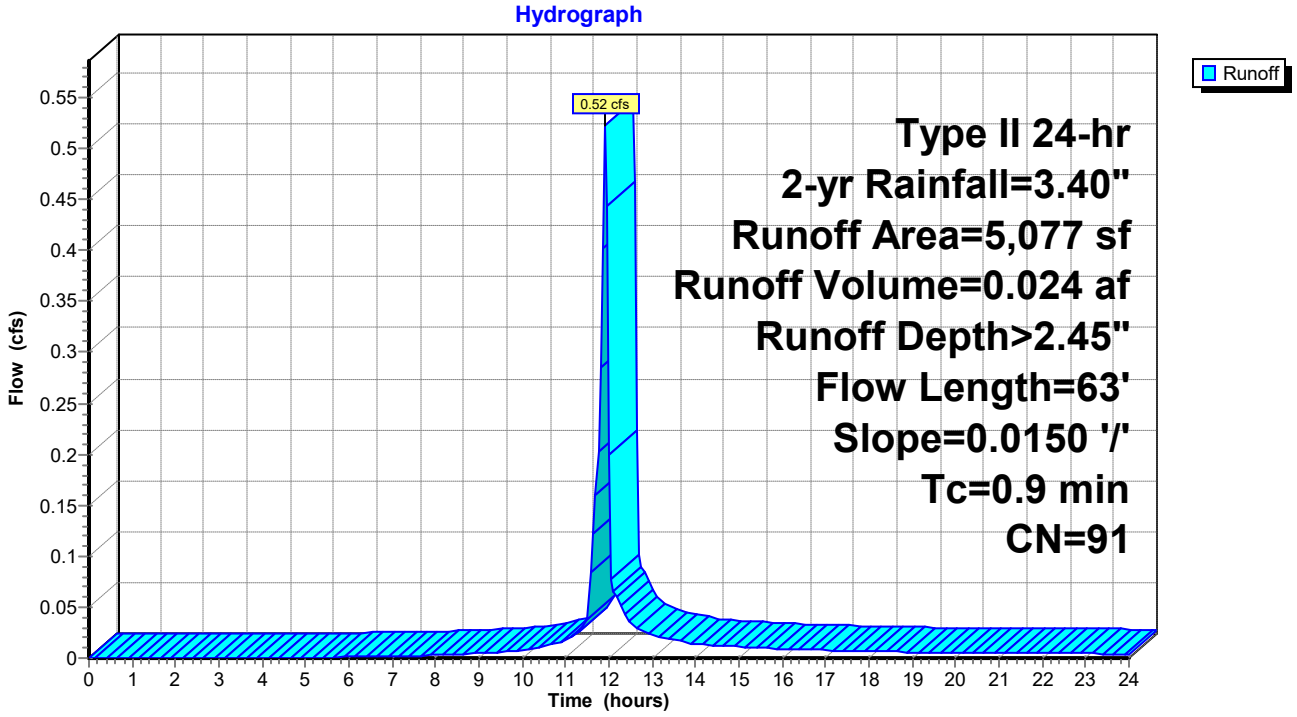
Runoff = 0.52 cfs @ 11.91 hrs, Volume= 0.024 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	3,258	98	Asphalt
	896	61	>75% Grass cover, Good, HSG B
*	923	98	Parking Spaces
	5,077	91	Weighted Average
	896		17.65% Pervious Area
	4,181		82.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	63	0.0150	1.15		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-7: Parking



Summary for Subcatchment PK-8: Parking

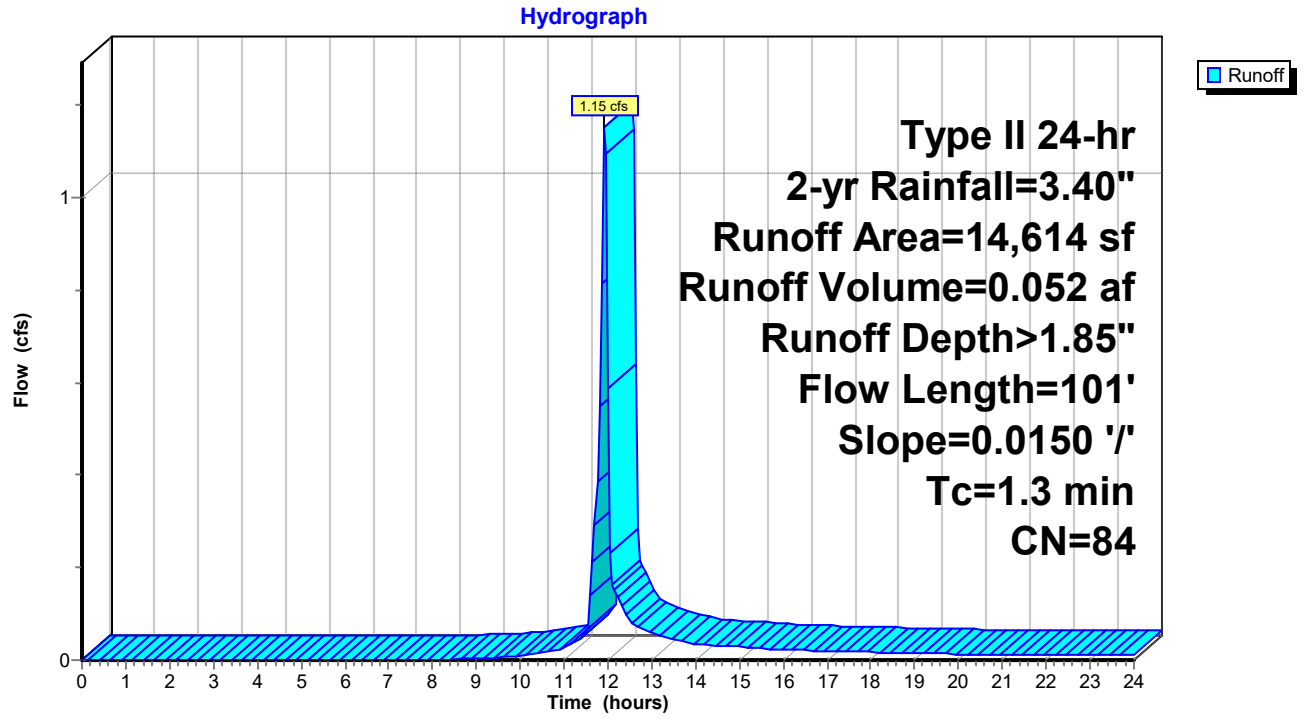
Runoff = 1.15 cfs @ 11.92 hrs, Volume= 0.052 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	6,414	98	Asphalt Drive Aisles & Sidewalk
*	2,660	98	Parking Spaces
	5,540	61	>75% Grass cover, Good, HSG B
	14,614	84	Weighted Average
	5,540		37.91% Pervious Area
	9,074		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	101	0.0150	1.27		**Sheet Flow, Asphalt** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-8: Parking



Summary for Subcatchment PK-9: Parking

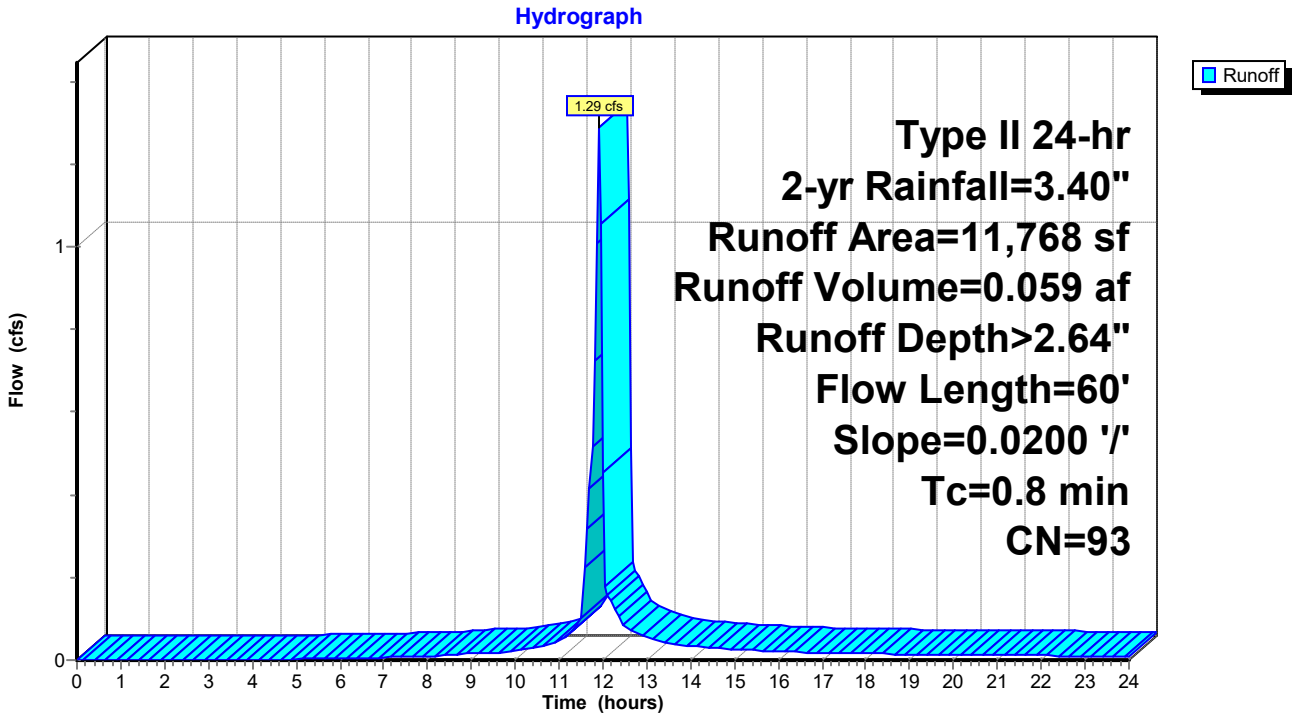
Runoff = 1.29 cfs @ 11.90 hrs, Volume= 0.059 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	7,036	98	Asphalt
	1,729	61	>75% Grass cover, Good, HSG B
*	3,003	98	Parking Spaces
	11,768	93	Weighted Average
	1,729		14.69% Pervious Area
	10,039		85.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-9: Parking



Summary for Subcatchment RD: Onsite Residue

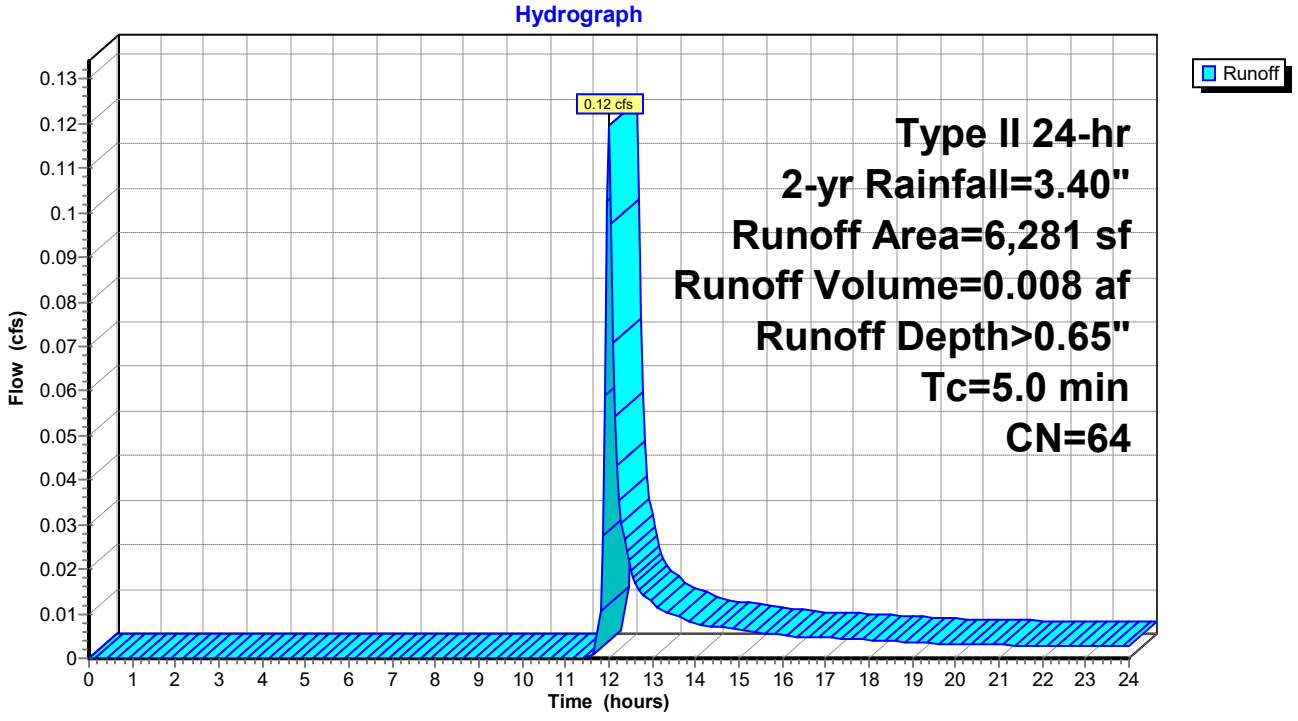
Runoff = 0.12 cfs @ 12.00 hrs, Volume= 0.008 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	5,797	61	>75% Grass cover, Good, HSG B
*	484	98	Sidewalk & Portion Entrance
	6,281	64	Weighted Average
	5,797		92.29% Pervious Area
	484		7.71% Impervious Area

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

Subcatchment RD: Onsite Residue



Summary for Subcatchment SHA-1: Onsite SHA

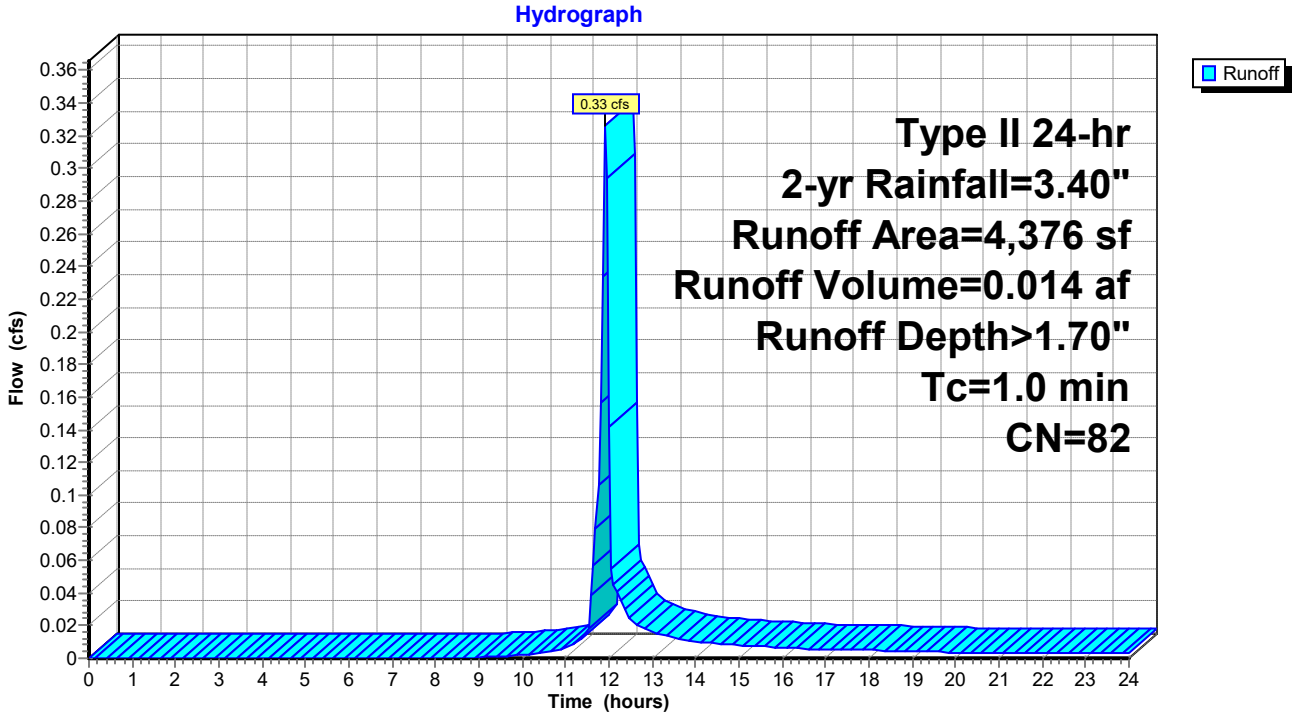
Runoff = 0.33 cfs @ 11.91 hrs, Volume= 0.014 af, Depth> 1.70"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	1,908	61	>75% Grass cover, Good, HSG B
*	2,468	98	Pavement & Sidewalk
	4,376	82	Weighted Average
	1,908		43.60% Pervious Area
	2,468		56.40% Impervious Area

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

Subcatchment SHA-1: Onsite SHA



Summary for Subcatchment SHA-2: Area of SGW #1 & Onsite SHA

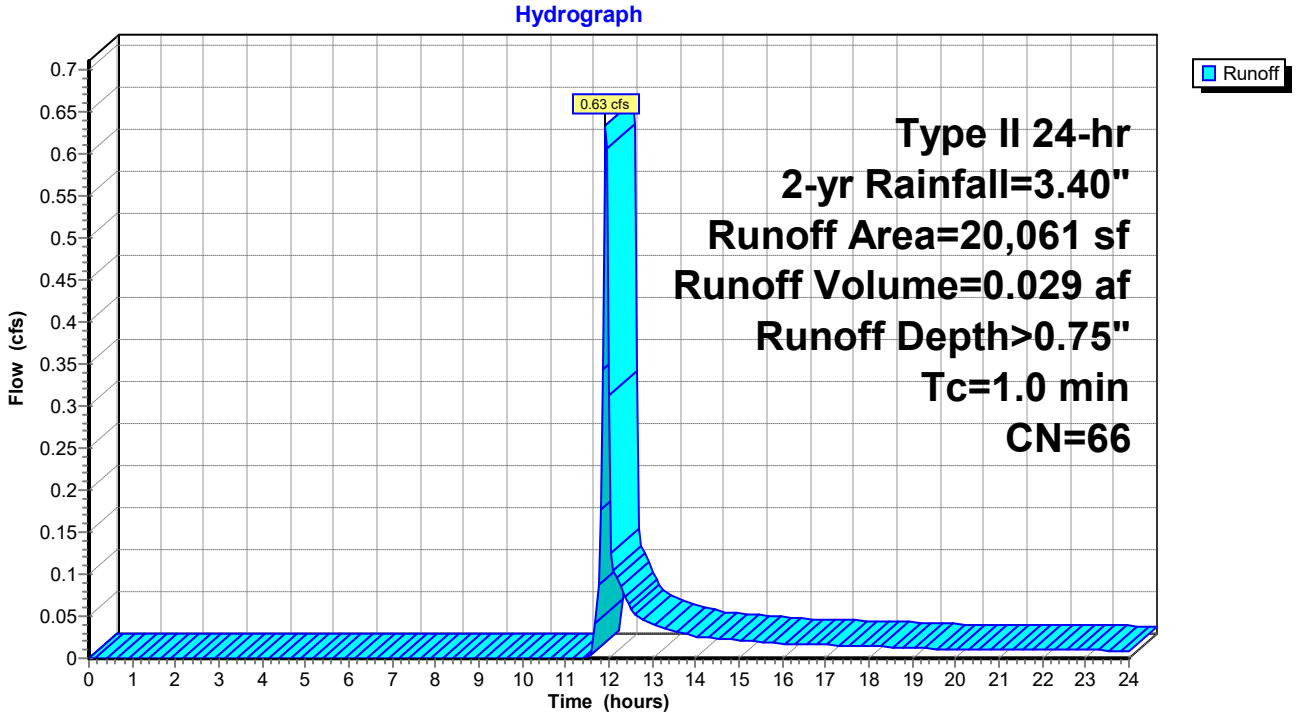
Runoff = 0.63 cfs @ 11.93 hrs, Volume= 0.029 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	17,507	61	>75% Grass cover, Good, HSG B
*	2,554	98	SHA Entrance Pavement
	20,061	66	Weighted Average
	17,507		87.27% Pervious Area
	2,554		12.73% Impervious Area

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

Subcatchment SHA-2: Area of SGW #1 & Onsite SHA



Summary for Subcatchment SHA-3: SHA Improvements (North)

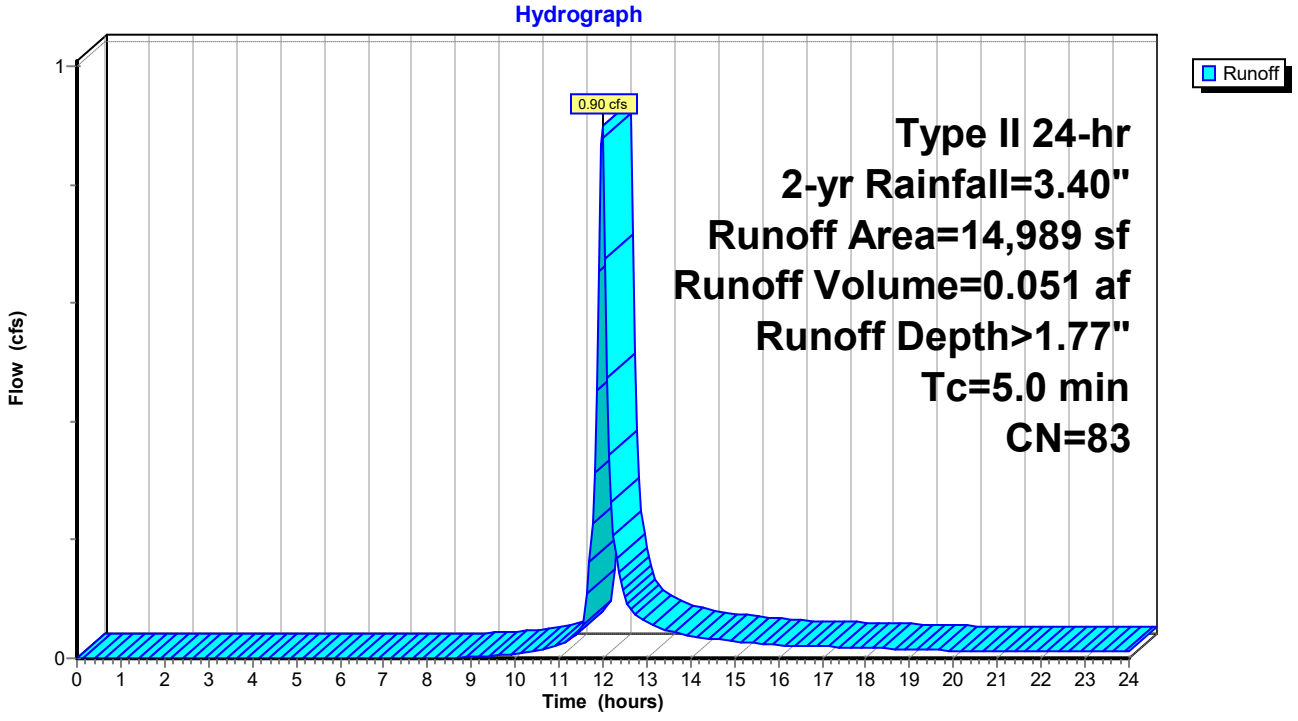
Runoff = 0.90 cfs @ 11.98 hrs, Volume= 0.051 af, Depth> 1.77"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	8,750	98	SHA Pavement & Entrance
	6,239	61	>75% Grass cover, Good, HSG B
	14,989	83	Weighted Average
	6,239		41.62% Pervious Area
	8,750		58.38% Impervious Area

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

Subcatchment SHA-3: SHA Improvements (North)



Summary for Subcatchment SHA-4: SHA Improvements (South)

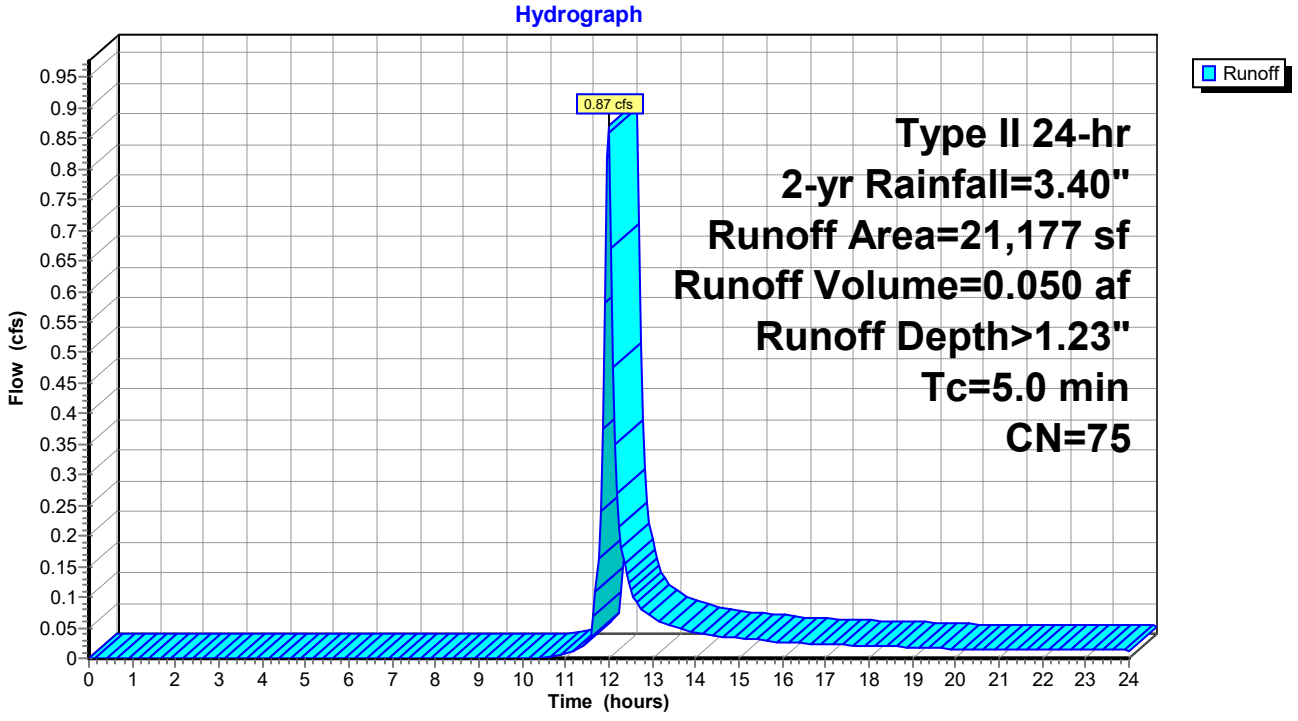
Runoff = 0.87 cfs @ 11.98 hrs, Volume= 0.050 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	8,053	98	US 50 & SHA Entrance
	13,124	61	>75% Grass cover, Good, HSG B
	21,177	75	Weighted Average
	13,124		61.97% Pervious Area
	8,053		38.03% Impervious Area

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

Subcatchment SHA-4: SHA Improvements (South)



Summary for Subcatchment VZ-A: Verizon (Offsite)

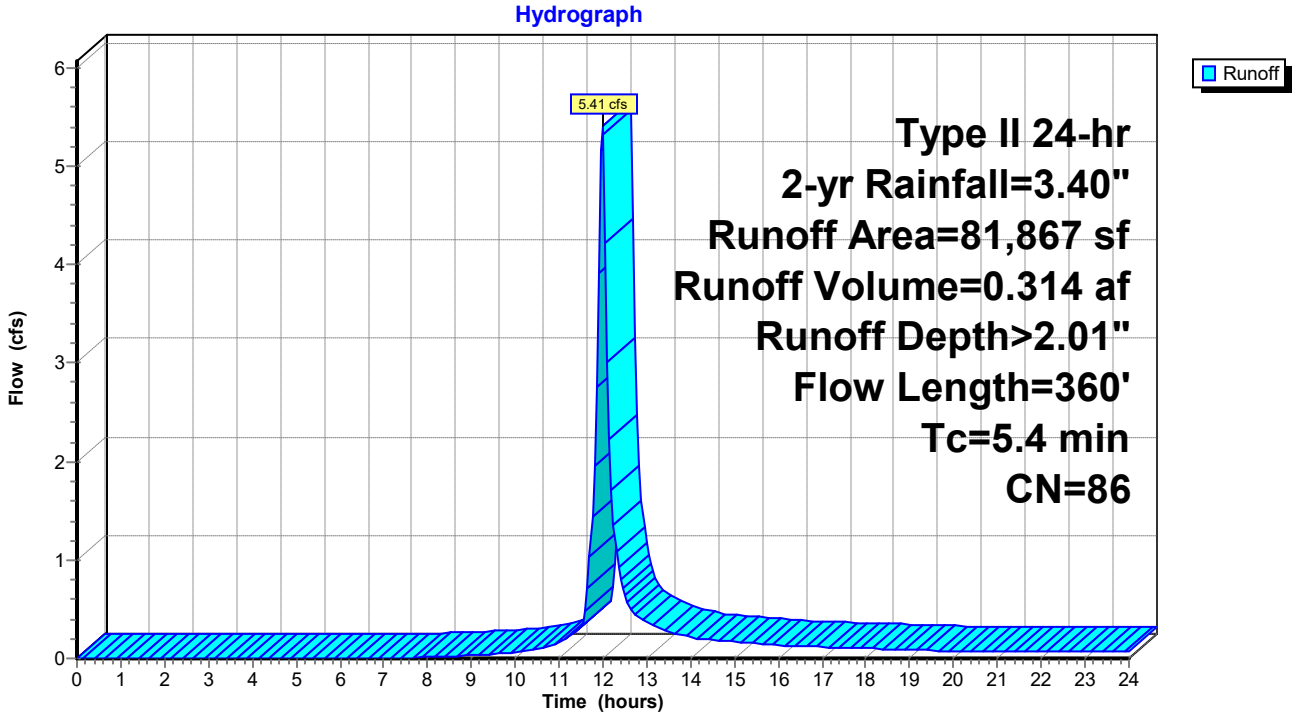
Runoff = 5.41 cfs @ 11.98 hrs, Volume= 0.314 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	56,382	98	Verizon Storage Yard
	25,485	61	>75% Grass cover, Good, HSG B
	81,867	86	Weighted Average
	25,485		31.13% Pervious Area
	56,382		68.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	80	0.0100	1.03		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"
4.1	280	0.0050	1.14		**Shallow Concentrated Flow, Shallow Grass Channel** Unpaved Kv= 16.1 fps
5.4	360	Total			

Subcatchment VZ-A: Verizon (Offsite)



Summary for Subcatchment VZ-AA: Verizon (Offsite)

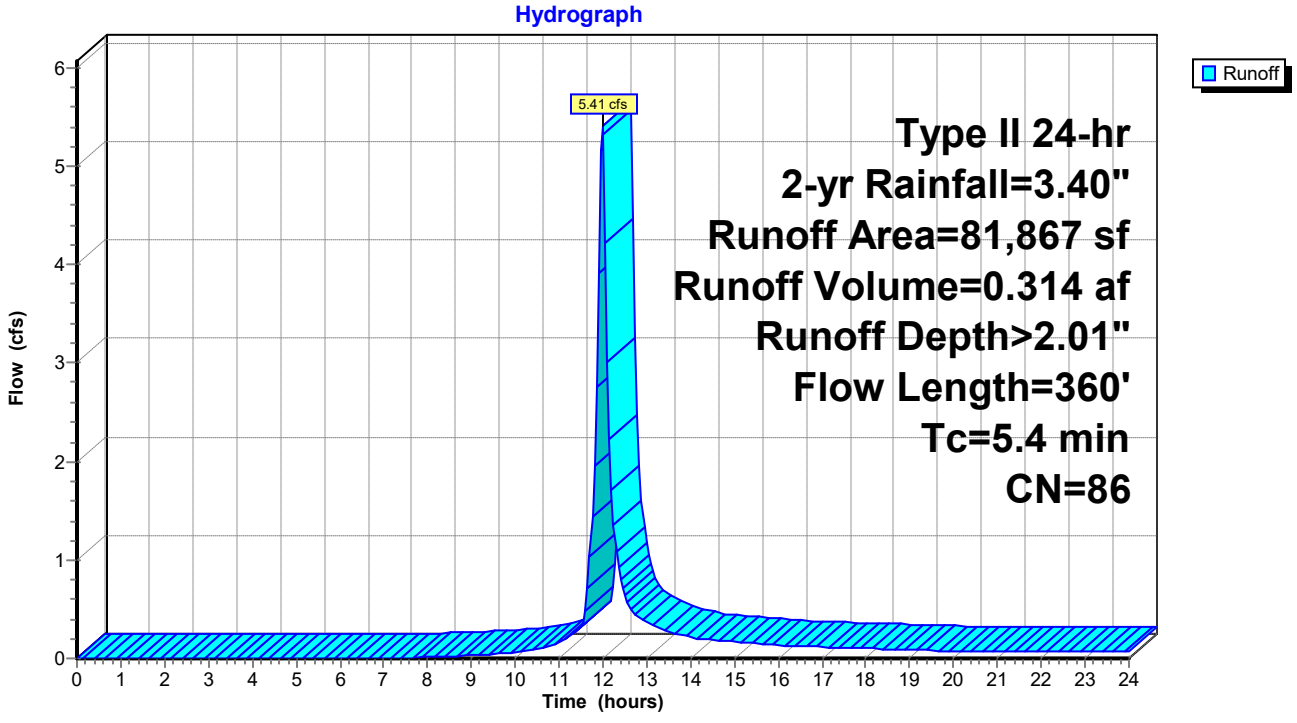
Runoff = 5.41 cfs @ 11.98 hrs, Volume= 0.314 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	56,382	98	Verizon Storage Yard
	25,485	61	>75% Grass cover, Good, HSG B
	81,867	86	Weighted Average
	25,485		31.13% Pervious Area
	56,382		68.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	80	0.0100	1.03		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"
4.1	280	0.0050	1.14		**Shallow Concentrated Flow, Shallow Grass Channel** Unpaved Kv= 16.1 fps
5.4	360	Total			

Subcatchment VZ-AA: Verizon (Offsite)



Summary for Subcatchment VZ-B: Verizon & US 50/Idlewild Intersection

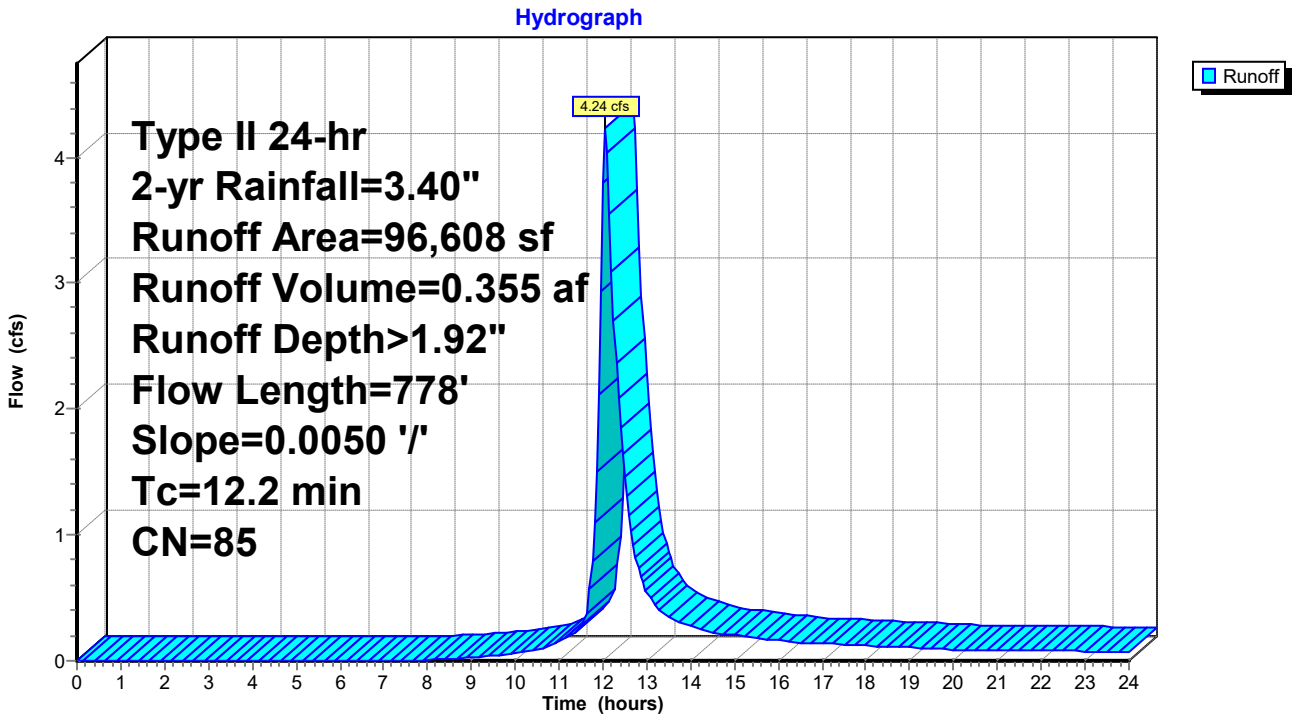
Runoff = 4.24 cfs @ 12.06 hrs, Volume= 0.355 af, Depth> 1.92"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	35,081	61	>75% Grass cover, Good, HSG B
*	61,527	98	Roads & Verizon Yard
	96,608	85	Weighted Average
	35,081		36.31% Pervious Area
	61,527		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	778	0.0050	1.06		**Shallow Concentrated Flow, Road Adjacent Swale** Grassed Waterway Kv= 15.0 fps

Subcatchment VZ-B: Verizon & US 50/Idlewild Intersection



Summary for Subcatchment VZ-BB: Verizon & US 50/Idlewild Intersection

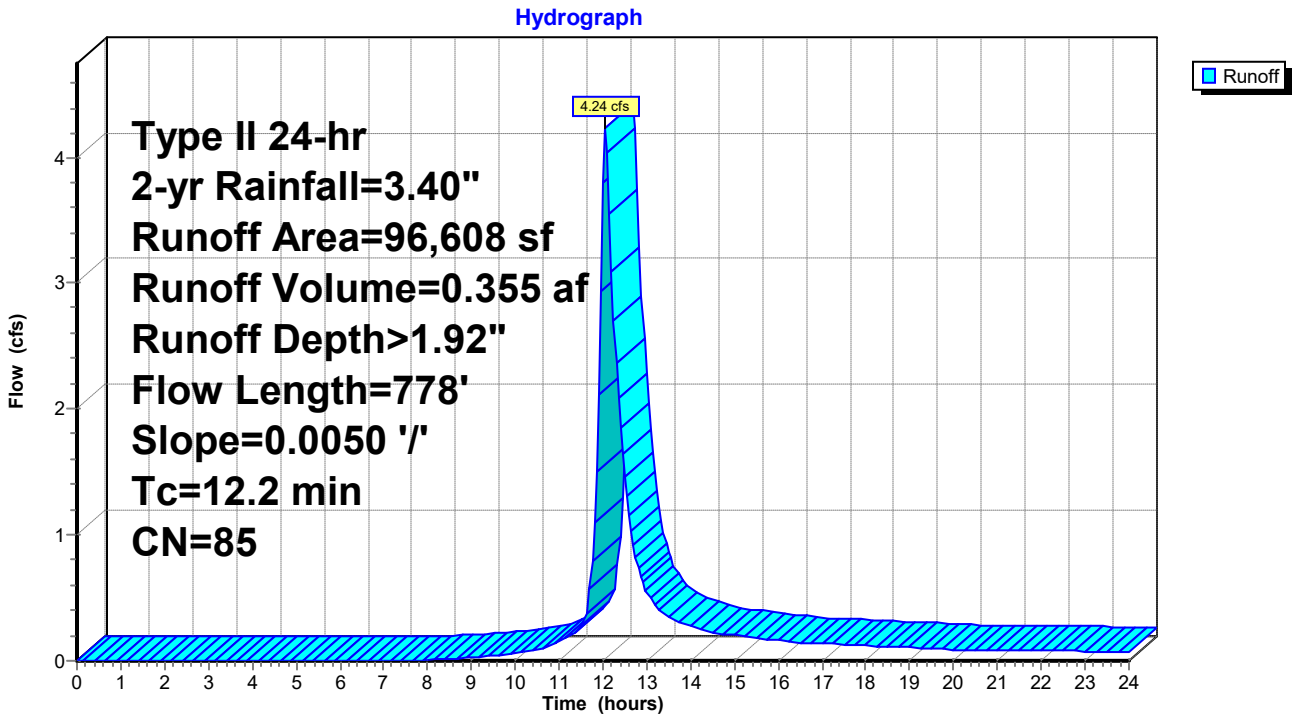
Runoff = 4.24 cfs @ 12.06 hrs, Volume= 0.355 af, Depth> 1.92"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	35,081	61	>75% Grass cover, Good, HSG B
*	61,527	98	Roads & Verizon Yard
	96,608	85	Weighted Average
	35,081		36.31% Pervious Area
	61,527		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	778	0.0050	1.06		**Shallow Concentrated Flow, Road Adjacent Swale** Grassed Waterway Kv= 15.0 fps

Subcatchment VZ-BB: Verizon & US 50/Idlewild Intersection



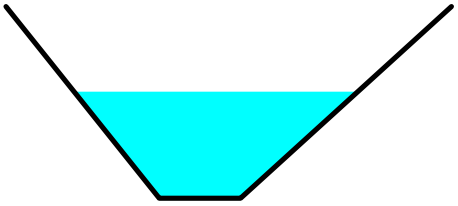
Summary for Reach 10R: Ex. Lotside Swale

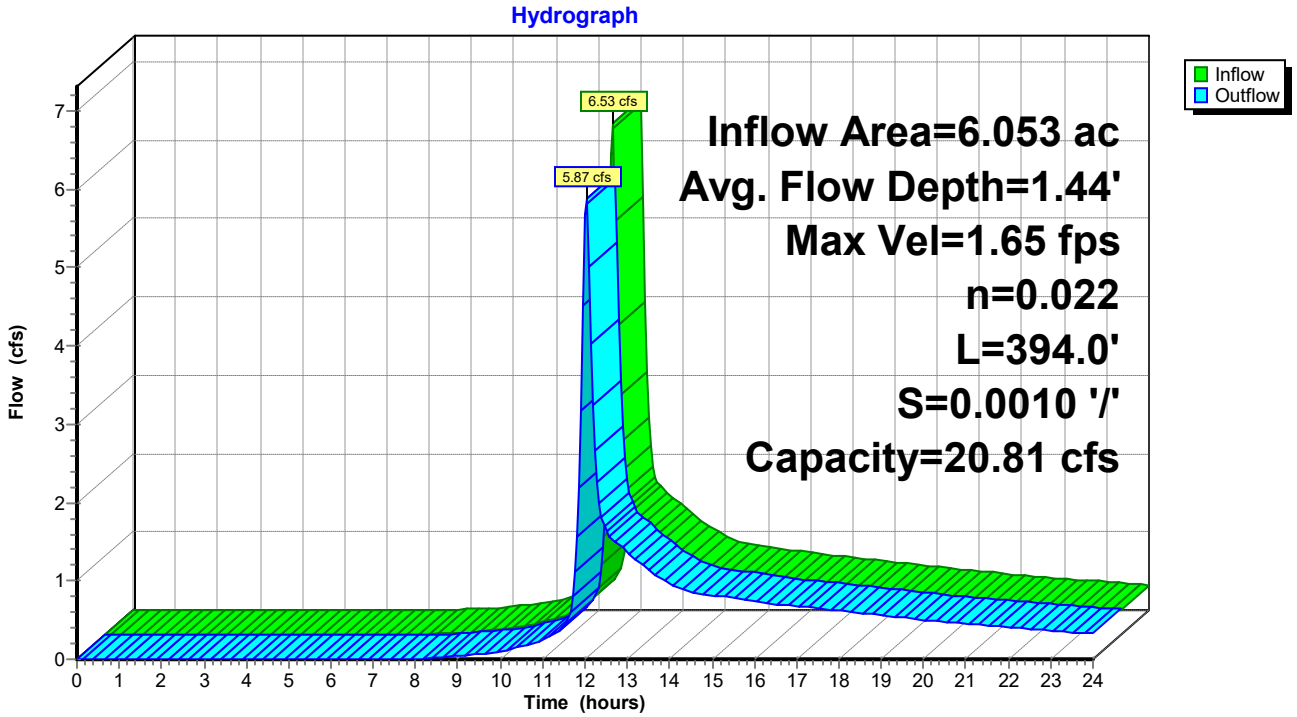
Inflow Area = 6.053 ac, 60.33% Impervious, Inflow Depth > 1.74" for 2-yr event
Inflow = 6.53 cfs @ 11.99 hrs, Volume= 0.880 af
Outflow = 5.87 cfs @ 12.03 hrs, Volume= 0.876 af, Atten= 10%, Lag= 2.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.65 fps, Min. Travel Time= 4.0 min
Avg. Velocity = 0.81 fps, Avg. Travel Time= 8.1 min

Peak Storage= 1,400 cf @ 12.03 hrs
Average Depth at Peak Storage= 1.44'
Bank-Full Depth= 2.59' Flow Area= 9.2 sf, Capacity= 20.81 cfs

1.10' x 2.59' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 0.8 1.1 '/' Top Width= 6.02'
Length= 394.0' Slope= 0.0010 '/'
Inlet Invert= 42.00', Outlet Invert= 41.62'





Stage-Area-Storage for Reach 10R: Ex. Lotside Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
42.00	0.0	0
42.05	0.1	23
42.10	0.1	47
42.15	0.2	73
42.20	0.3	102
42.25	0.3	132
42.30	0.4	164
42.35	0.5	198
42.40	0.6	233
42.45	0.7	271
42.50	0.8	310
42.55	0.9	352
42.60	1.0	395
42.65	1.1	440
42.70	1.2	487
42.75	1.4	536
42.80	1.5	586
42.85	1.6	639
42.90	1.8	693
42.95	1.9	750
43.00	2.1	808
43.05	2.2	868
43.10	2.4	930
43.15	2.5	993
43.20	2.7	1,059
43.25	2.9	1,127
43.30	3.0	1,196
43.35	3.2	1,267
43.40	3.4	1,340
43.45	3.6	1,415
43.50	3.8	1,492
43.55	4.0	1,571
43.60	4.2	1,652
43.65	4.4	1,734
43.70	4.6	1,819
43.75	4.8	1,905
43.80	5.1	1,993
43.85	5.3	2,083
43.90	5.5	2,175
43.95	5.8	2,268
44.00	6.0	2,364
44.05	6.2	2,461
44.10	6.5	2,561
44.15	6.8	2,662
44.20	7.0	2,765
44.25	7.3	2,870
44.30	7.6	2,977
44.35	7.8	3,086
44.40	8.1	3,196
44.45	8.4	3,309
44.50	8.7	3,423
44.55	**9.0**	**3,539**

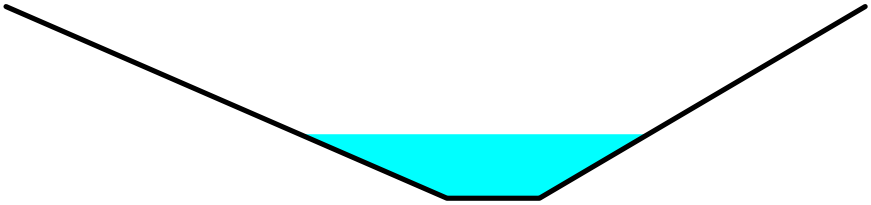
Summary for Reach SP1: Ex Swale Adj US 50 (North)

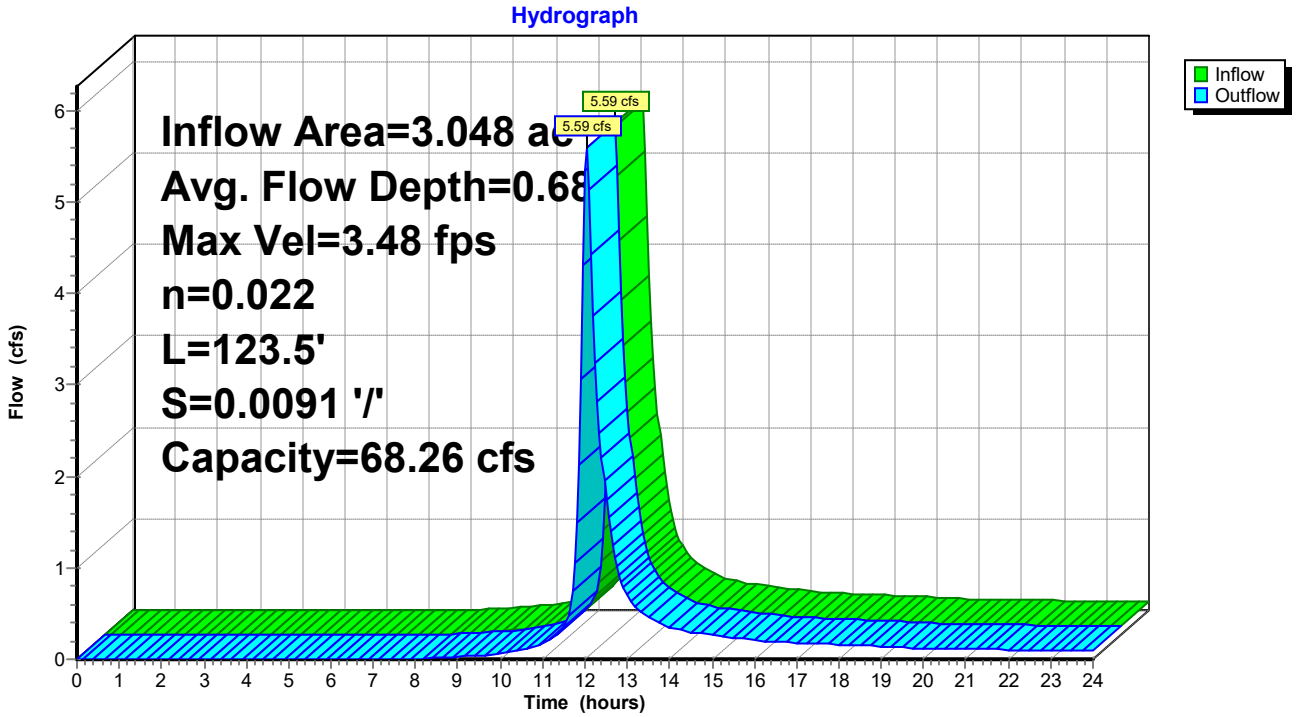
Inflow Area = 3.048 ac, 58.99% Impervious, Inflow Depth > 1.79" for 2-yr event
Inflow = 5.59 cfs @ 12.03 hrs, Volume= 0.455 af
Outflow = 5.59 cfs @ 12.04 hrs, Volume= 0.455 af, Atten= 0%, Lag= 0.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.48 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.29 fps, Avg. Travel Time= 1.6 min

Peak Storage= 199 cf @ 12.04 hrs
Average Depth at Peak Storage= 0.68'
Bank-Full Depth= 2.05' Flow Area= 10.4 sf, Capacity= 68.26 cfs

0.99' x 2.05' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.3 1.7 '/' Top Width= 9.19'
Length= 123.5' Slope= 0.0091 '/'
Inlet Invert= 38.72', Outlet Invert= 37.60'





Stage-Area-Storage for Reach SP1: Ex Swale Adj US 50 (North)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
38.72	0.0	0
38.77	0.1	7
38.82	0.1	15
38.87	0.2	24
38.92	0.3	34
38.97	0.4	46
39.02	0.5	59
39.07	0.6	73
39.12	0.7	88
39.17	0.9	105
39.22	1.0	123
39.27	1.1	142
39.32	1.3	162
39.37	1.5	184
39.42	1.7	207
39.47	1.9	231
39.52	2.1	256
39.57	2.3	282
39.62	2.5	310
39.67	2.7	339
39.72	3.0	369
39.77	3.2	401
39.82	3.5	433
39.87	3.8	467
39.92	4.1	502
39.97	4.4	539
40.02	4.7	576
40.07	5.0	615
40.12	5.3	655
40.17	5.6	697
40.22	6.0	739
40.27	6.3	783
40.32	6.7	828
40.37	7.1	874
40.42	7.5	922
40.47	7.9	970
40.52	8.3	1,020
40.57	8.7	1,072
40.62	9.1	1,124
40.67	9.5	1,178
40.72	10.0	1,233
40.77	**10.4**	**1,289**

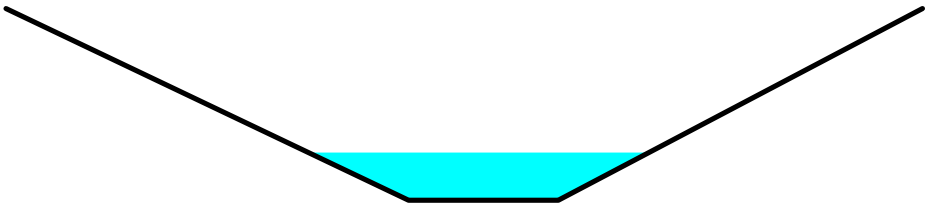
Summary for Reach SP2: Ex. Swale Adj US 50 (South)

Inflow Area = 2.218 ac, 63.69% Impervious, Inflow Depth > 1.92" for 2-yr event
Inflow = 4.24 cfs @ 12.06 hrs, Volume= 0.355 af
Outflow = 4.23 cfs @ 12.06 hrs, Volume= 0.355 af, Atten= 0%, Lag= 0.3 min

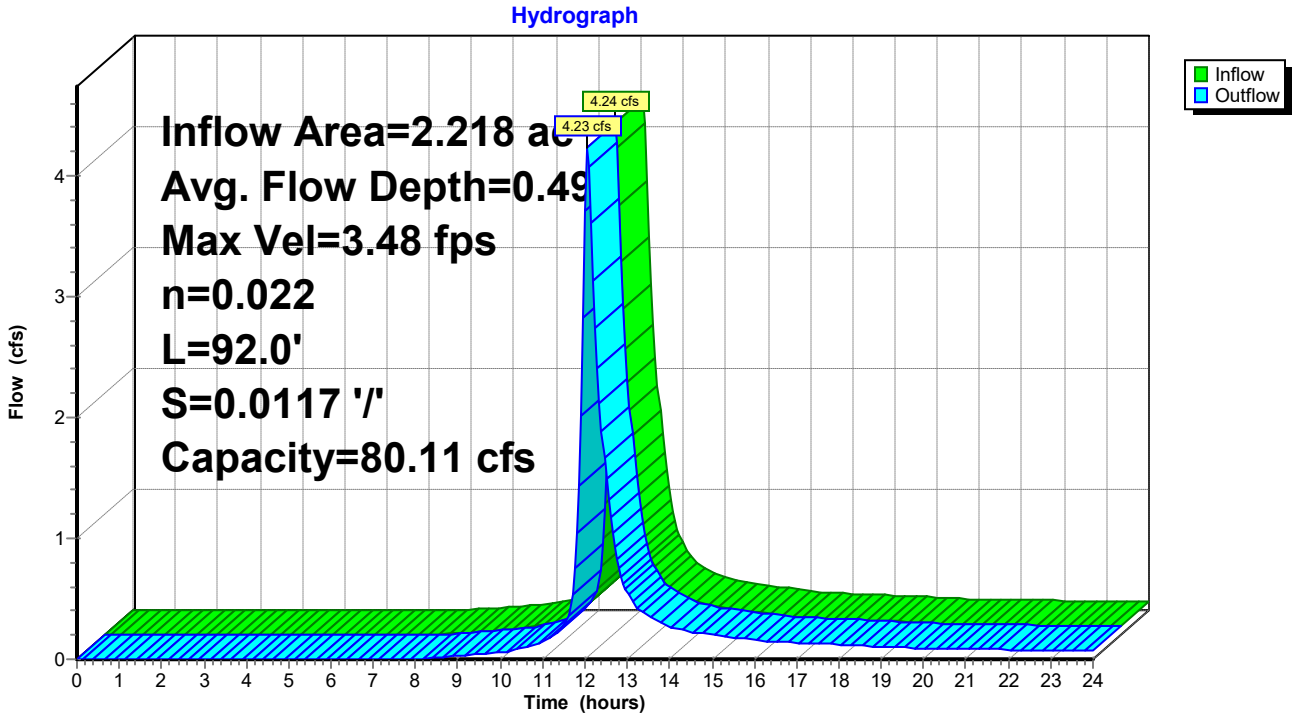
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.48 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.19 fps, Avg. Travel Time= 1.3 min

Peak Storage= 112 cf @ 12.06 hrs
Average Depth at Peak Storage= 0.49'
Bank-Full Depth= 1.96' Flow Area= 10.7 sf, Capacity= 80.11 cfs

1.53' x 1.96' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.1 1.9 '/' Top Width= 9.37'
Length= 92.0' Slope= 0.0117 '/'
Inlet Invert= 41.58', Outlet Invert= 40.50'



Reach SP2: Ex. Swale Adj US 50 (South)



Stage-Area-Storage for Reach SP2: Ex. Swale Adj US 50 (South)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
41.58	0.0	0	42.60	3.6	335
41.60	0.0	3	42.62	3.8	345
41.62	0.1	6	42.64	3.9	356
41.64	0.1	9	42.66	4.0	367
41.66	0.1	12	42.68	4.1	377
41.68	0.2	16	42.70	4.2	388
41.70	0.2	20	42.72	4.3	400
41.72	0.3	23	42.74	4.5	411
41.74	0.3	27	42.76	4.6	422
41.76	0.3	31	42.78	4.7	434
41.78	0.4	36	42.80	4.8	446
41.80	0.4	40	42.82	5.0	457
41.82	0.5	44	42.84	5.1	469
41.84	0.5	49	42.86	5.2	482
41.86	0.6	54	42.88	5.4	494
41.88	0.6	59	42.90	5.5	506
41.90	0.7	64	42.92	5.6	519
41.92	0.8	69	42.94	5.8	532
41.94	0.8	75	42.96	5.9	545
41.96	0.9	80	42.98	6.1	558
41.98	0.9	86	43.00	6.2	571
42.00	1.0	92	43.02	6.4	584
42.02	1.1	98	43.04	6.5	598
42.04	1.1	104	43.06	6.6	611
42.06	1.2	110	43.08	6.8	625
42.08	1.3	116	43.10	6.9	639
42.10	1.3	123	43.12	7.1	653
42.12	1.4	130	43.14	7.3	667
42.14	1.5	137	43.16	7.4	682
42.16	1.6	144	43.18	7.6	696
42.18	1.6	151	43.20	7.7	711
42.20	1.7	158	43.22	7.9	726
42.22	1.8	165	43.24	8.1	741
42.24	1.9	173	43.26	8.2	756
42.26	2.0	181	43.28	8.4	771
42.28	2.1	189	43.30	8.5	786
42.30	2.1	197	43.32	8.7	802
42.32	2.2	205	43.34	8.9	818
42.34	2.3	213	43.36	9.1	834
42.36	2.4	222	43.38	9.2	850
42.38	2.5	230	43.40	9.4	866
42.40	2.6	239	43.42	9.6	882
42.42	2.7	248	43.44	9.8	898
42.44	2.8	257	43.46	9.9	915
42.46	2.9	266	43.48	10.1	932
42.48	3.0	276	43.50	10.3	949
42.50	3.1	285	43.52	10.5	966
42.52	3.2	295	43.54	**10.7**	**983**
42.54	3.3	305			
42.56	3.4	315			
42.58	3.5	325			

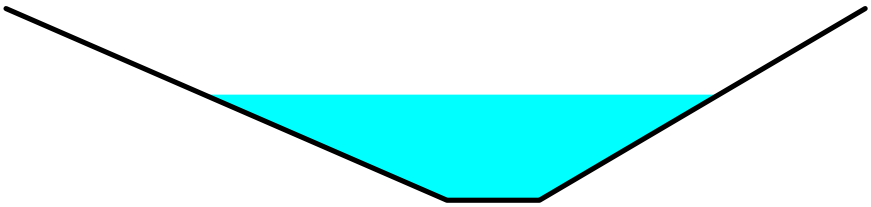
Summary for Reach SW1: Ex Swale Adj US 50 (North)

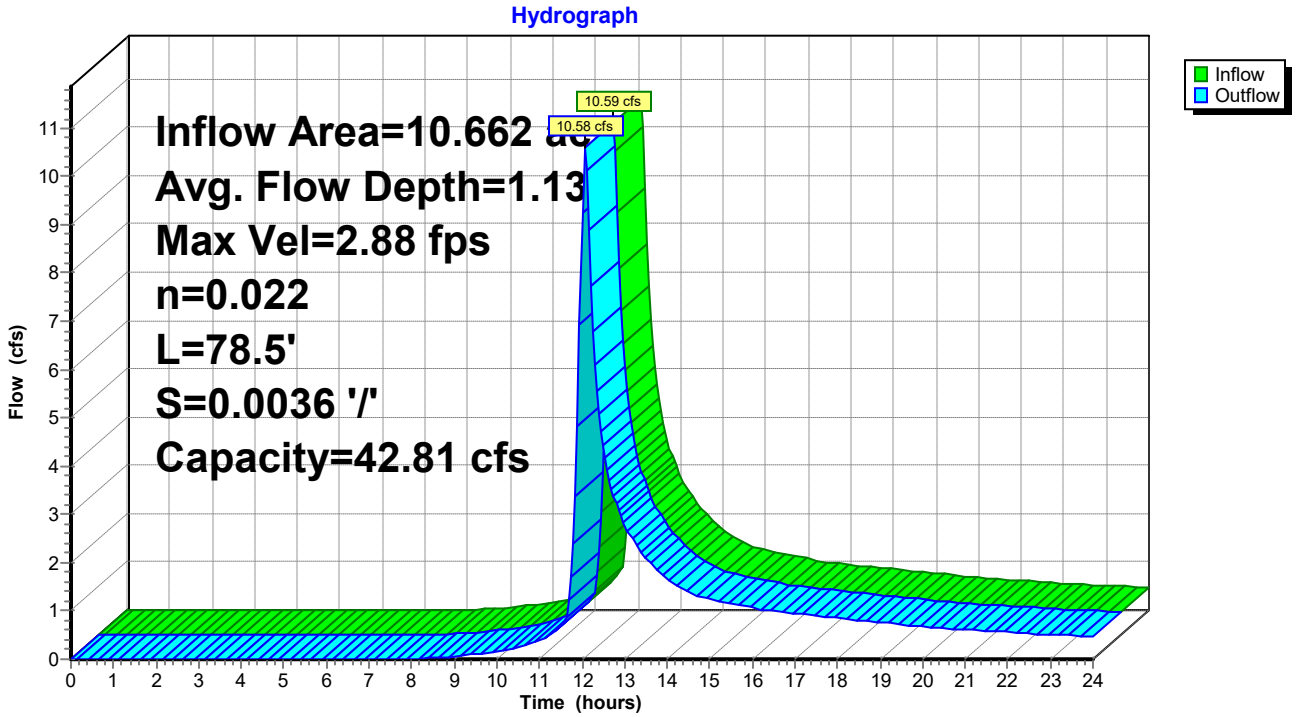
Inflow Area = 10.662 ac, 56.13% Impervious, Inflow Depth > 1.65" for 2-yr event
Inflow = 10.59 cfs @ 12.06 hrs, Volume= 1.470 af
Outflow = 10.58 cfs @ 12.06 hrs, Volume= 1.470 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.88 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.37 fps, Avg. Travel Time= 1.0 min

Peak Storage= 288 cf @ 12.06 hrs
Average Depth at Peak Storage= 1.13'
Bank-Full Depth= 2.05' Flow Area= 10.4 sf, Capacity= 42.81 cfs

0.99' x 2.05' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.3 1.7 '/' Top Width= 9.19'
Length= 78.5' Slope= 0.0036 '/'
Inlet Invert= 38.72', Outlet Invert= 38.44'





Stage-Area-Storage for Reach SW1: Ex Swale Adj US 50 (North)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
38.72	0.0	0
38.77	0.1	4
38.82	0.1	9
38.87	0.2	15
38.92	0.3	22
38.97	0.4	29
39.02	0.5	37
39.07	0.6	46
39.12	0.7	56
39.17	0.9	67
39.22	1.0	78
39.27	1.1	90
39.32	1.3	103
39.37	1.5	117
39.42	1.7	131
39.47	1.9	147
39.52	2.1	163
39.57	2.3	180
39.62	2.5	197
39.67	2.7	216
39.72	3.0	235
39.77	3.2	255
39.82	3.5	275
39.87	3.8	297
39.92	4.1	319
39.97	4.4	342
40.02	4.7	366
40.07	5.0	391
40.12	5.3	417
40.17	5.6	443
40.22	6.0	470
40.27	6.3	498
40.32	6.7	526
40.37	7.1	556
40.42	7.5	586
40.47	7.9	617
40.52	8.3	649
40.57	8.7	681
40.62	9.1	714
40.67	9.5	749
40.72	10.0	783
40.77	**10.4**	**819**

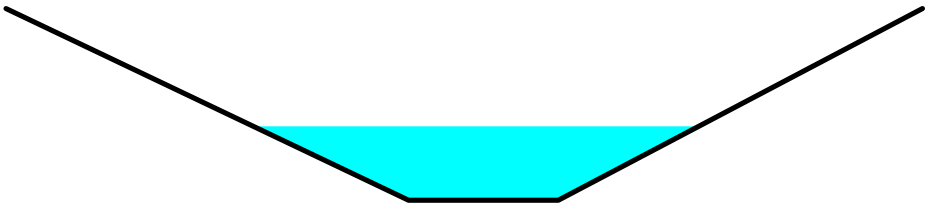
Summary for Reach SW2: Ex. Swale Adj US 50 (South)

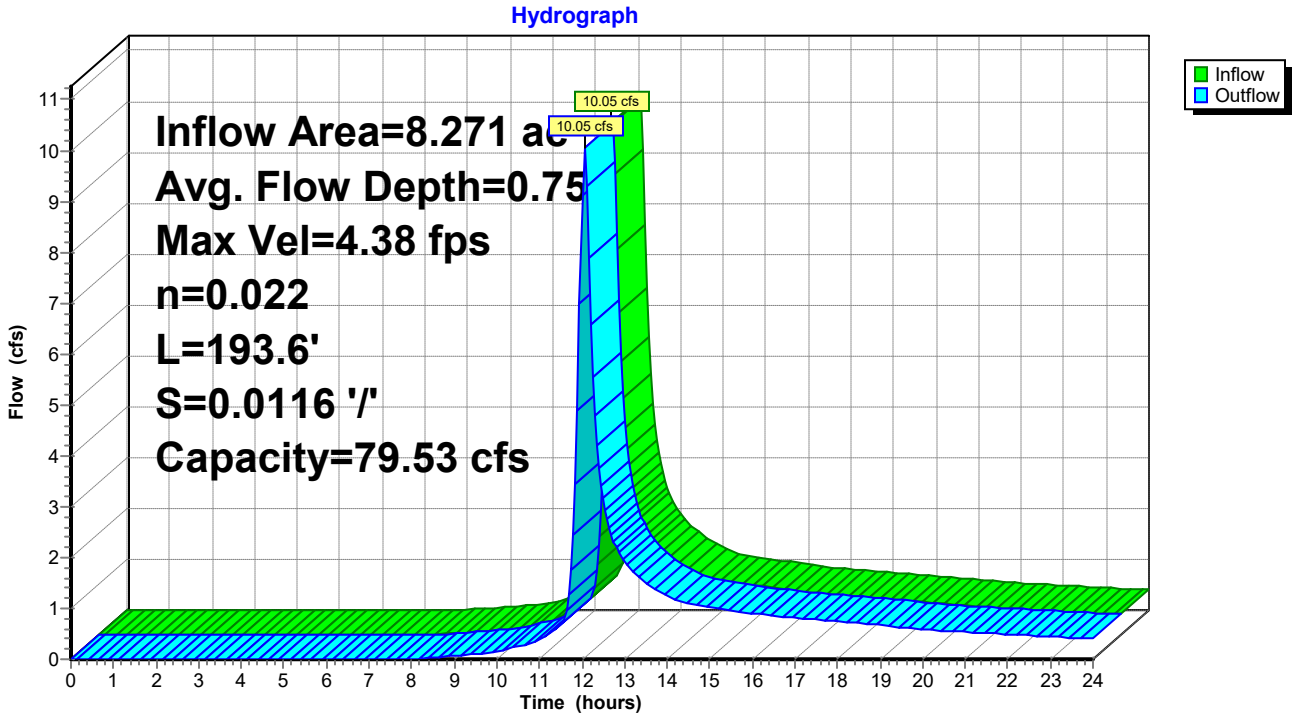
Inflow Area = 8.271 ac, 61.23% Impervious, Inflow Depth > 1.79" for 2-yr event
Inflow = 10.05 cfs @ 12.04 hrs, Volume= 1.231 af
Outflow = 10.05 cfs @ 12.05 hrs, Volume= 1.230 af, Atten= 0%, Lag= 0.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.38 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 1.7 min

Peak Storage= 444 cf @ 12.05 hrs
Average Depth at Peak Storage= 0.75'
Bank-Full Depth= 1.96' Flow Area= 10.7 sf, Capacity= 79.53 cfs

1.53' x 1.96' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.1 1.9 '/' Top Width= 9.37'
Length= 193.6' Slope= 0.0116 '/'
Inlet Invert= 41.58', Outlet Invert= 39.34'





Stage-Area-Storage for Reach SW2: Ex. Swale Adj US 50 (South)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
41.58	0.0	0	42.60	3.6	705
41.60	0.0	6	42.62	3.8	727
41.62	0.1	12	42.64	3.9	749
41.64	0.1	19	42.66	4.0	772
41.66	0.1	26	42.68	4.1	794
41.68	0.2	34	42.70	4.2	817
41.70	0.2	41	42.72	4.3	841
41.72	0.3	49	42.74	4.5	865
41.74	0.3	57	42.76	4.6	889
41.76	0.3	66	42.78	4.7	913
41.78	0.4	75	42.80	4.8	938
41.80	0.4	84	42.82	5.0	963
41.82	0.5	93	42.84	5.1	988
41.84	0.5	103	42.86	5.2	1,014
41.86	0.6	113	42.88	5.4	1,039
41.88	0.6	124	42.90	5.5	1,066
41.90	0.7	134	42.92	5.6	1,092
41.92	0.8	146	42.94	5.8	1,119
41.94	0.8	157	42.96	5.9	1,146
41.96	0.9	169	42.98	6.1	1,174
41.98	0.9	180	43.00	6.2	1,201
42.00	1.0	193	43.02	6.4	1,229
42.02	1.1	205	43.04	6.5	1,258
42.04	1.1	218	43.06	6.6	1,287
42.06	1.2	231	43.08	6.8	1,316
42.08	1.3	245	43.10	6.9	1,345
42.10	1.3	259	43.12	7.1	1,374
42.12	1.4	273	43.14	7.3	1,404
42.14	1.5	287	43.16	7.4	1,435
42.16	1.6	302	43.18	7.6	1,465
42.18	1.6	317	43.20	7.7	1,496
42.20	1.7	333	43.22	7.9	1,527
42.22	1.8	348	43.24	8.1	1,559
42.24	1.9	364	43.26	8.2	1,590
42.26	2.0	380	43.28	8.4	1,623
42.28	2.1	397	43.30	8.5	1,655
42.30	2.1	414	43.32	8.7	1,688
42.32	2.2	431	43.34	8.9	1,721
42.34	2.3	449	43.36	9.1	1,754
42.36	2.4	467	43.38	9.2	1,788
42.38	2.5	485	43.40	9.4	1,822
42.40	2.6	503	43.42	9.6	1,856
42.42	2.7	522	43.44	9.8	1,891
42.44	2.8	541	43.46	9.9	1,925
42.46	2.9	561	43.48	10.1	1,961
42.48	3.0	580	43.50	10.3	1,996
42.50	3.1	600	43.52	10.5	2,032
42.52	3.2	621	43.54	**10.7**	**2,068**
42.54	3.3	641			
42.56	3.4	662			
42.58	3.5	683			

Summary for Pond 1P: SDI-1

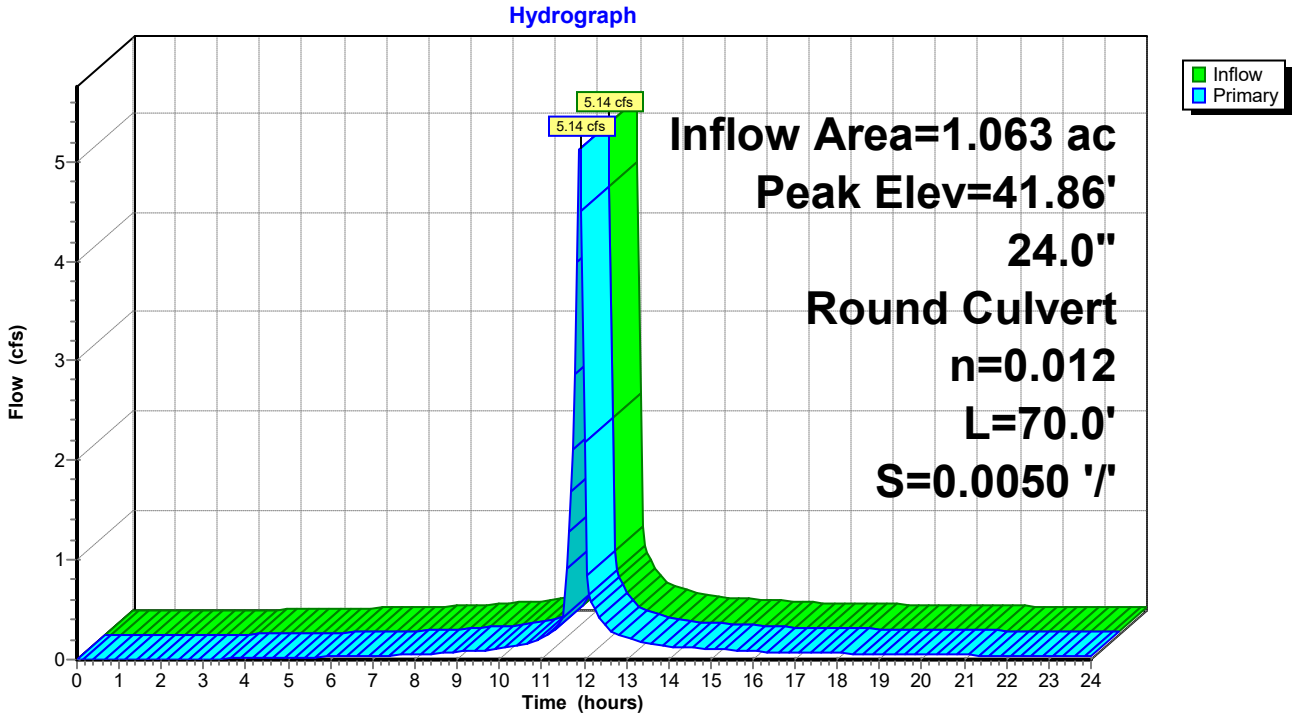
Inflow Area = 1.063 ac, 91.91% Impervious, Inflow Depth > 2.84" for 2-yr event
Inflow = 5.14 cfs @ 11.91 hrs, Volume= 0.251 af
Outflow = 5.14 cfs @ 11.91 hrs, Volume= 0.251 af, Atten= 0%, Lag= 0.0 min
Primary = 5.14 cfs @ 11.91 hrs, Volume= 0.251 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.86' @ 11.91 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.75'	**24.0" Round 24" HDPE** L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 40.75' / 40.40' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.02 cfs @ 11.91 hrs HW=41.85' TW=40.50' (Dynamic Tailwater)
1=24" HDPE (Barrel Controls 5.02 cfs @ 4.11 fps)

Pond 1P: SDI-1



Stage-Area-Storage for Pond 1P: SDI-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.75	**0**	42.79	0	44.83	0
40.79	0	42.83	0	44.87	0
40.83	0	42.87	0	44.91	0
40.87	0	42.91	0	44.95	0
40.91	0	42.95	0	44.99	0
40.95	0	42.99	0	45.03	0
40.99	0	43.03	0	45.07	0
41.03	0	43.07	0	45.11	0
41.07	0	43.11	0	45.15	0
41.11	0	43.15	0	45.19	0
41.15	0	43.19	0	45.23	0
41.19	0	43.23	0	45.27	0
41.23	0	43.27	0	45.31	0
41.27	0	43.31	0	45.35	0
41.31	0	43.35	0	45.39	0
41.35	0	43.39	0	45.43	0
41.39	0	43.43	0	45.47	0
41.43	0	43.47	0	45.51	0
41.47	0	43.51	0	45.55	0
41.51	0	43.55	0	45.59	0
41.55	0	43.59	0	45.63	0
41.59	0	43.63	0	45.67	0
41.63	0	43.67	0	45.71	0
41.67	0	43.71	0	45.75	0
41.71	0	43.75	0	45.79	0
41.75	0	43.79	0	45.83	0
41.79	0	43.83	0	45.87	0
41.83	0	43.87	0		
41.87	0	43.91	0		
41.91	0	43.95	0		
41.95	0	43.99	0		
41.99	0	44.03	0		
42.03	0	44.07	0		
42.07	0	44.11	0		
42.11	0	44.15	0		
42.15	0	44.19	0		
42.19	0	44.23	0		
42.23	0	44.27	0		
42.27	0	44.31	0		
42.31	0	44.35	0		
42.35	0	44.39	0		
42.39	0	44.43	0		
42.43	0	44.47	0		
42.47	0	44.51	0		
42.51	0	44.55	0		
42.55	0	44.59	0		
42.59	0	44.63	0		
42.63	0	44.67	0		
42.67	0	44.71	0		
42.71	0	44.75	0		
42.75	0	44.79	0		

Summary for Pond 2P: RL-1

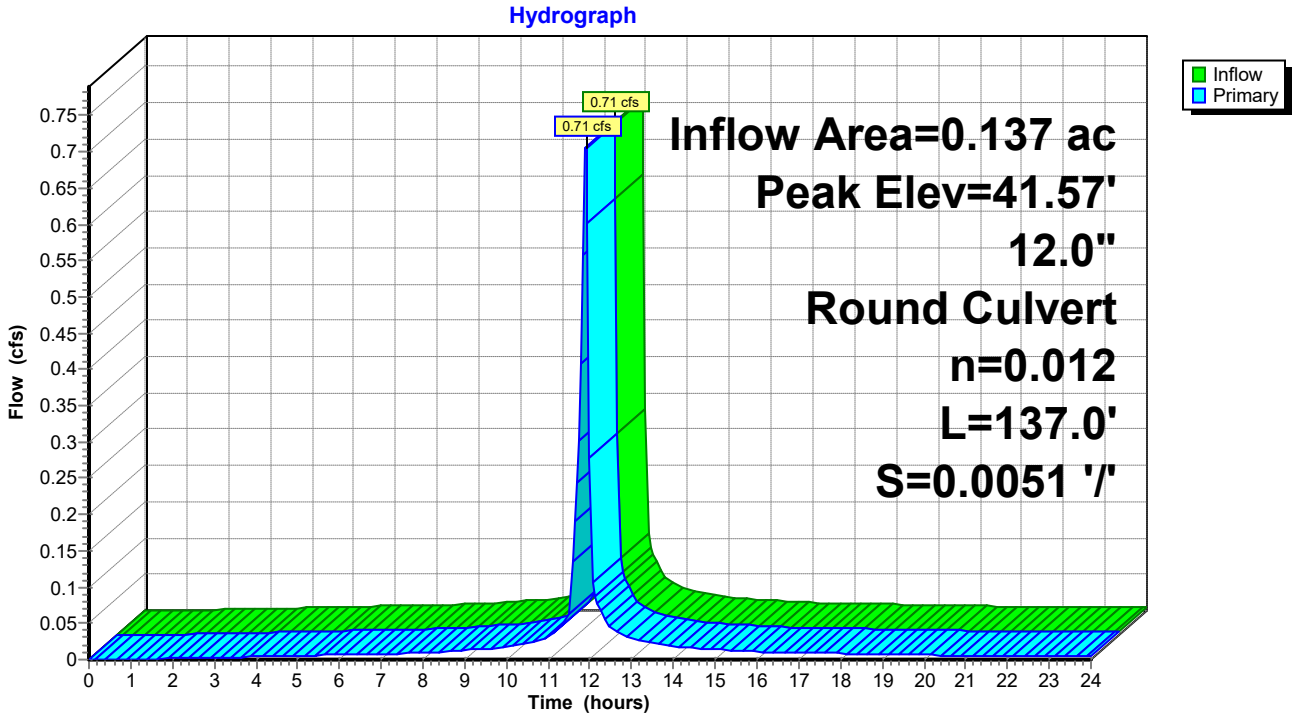
Inflow Area = 0.137 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 0.71 cfs @ 11.90 hrs, Volume= 0.036 af
Outflow = 0.71 cfs @ 11.90 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
Primary = 0.71 cfs @ 11.90 hrs, Volume= 0.036 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.57' @ 11.90 hrs
Flood Elev= 46.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	**12.0" Round 12" HDPE** L= 137.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.40' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.69 cfs @ 11.90 hrs HW=41.57' TW=40.49' (Dynamic Tailwater)
↑**1=12" HDPE** (Barrel Controls 0.69 cfs @ 2.82 fps)

Pond 2P: RL-1



Stage-Area-Storage for Pond 2P: RL-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.10	**0**	43.14	0	45.18	0
41.14	0	43.18	0	45.22	0
41.18	0	43.22	0	45.26	0
41.22	0	43.26	0	45.30	0
41.26	0	43.30	0	45.34	0
41.30	0	43.34	0	45.38	0
41.34	0	43.38	0	45.42	0
41.38	0	43.42	0	45.46	0
41.42	0	43.46	0	45.50	0
41.46	0	43.50	0	45.54	0
41.50	0	43.54	0	45.58	0
41.54	0	43.58	0	45.62	0
41.58	0	43.62	0	45.66	0
41.62	0	43.66	0	45.70	0
41.66	0	43.70	0	45.74	0
41.70	0	43.74	0	45.78	0
41.74	0	43.78	0	45.82	0
41.78	0	43.82	0	45.86	0
41.82	0	43.86	0	45.90	0
41.86	0	43.90	0	45.94	0
41.90	0	43.94	0	45.98	0
41.94	0	43.98	0	46.02	0
41.98	0	44.02	0	46.06	0
42.02	0	44.06	0	46.10	0
42.06	0	44.10	0	46.14	0
42.10	0	44.14	0	46.18	0
42.14	0	44.18	0	46.22	0
42.18	0	44.22	0	46.26	0
42.22	0	44.26	0	46.30	0
42.26	0	44.30	0	46.34	0
42.30	0	44.34	0		
42.34	0	44.38	0		
42.38	0	44.42	0		
42.42	0	44.46	0		
42.46	0	44.50	0		
42.50	0	44.54	0		
42.54	0	44.58	0		
42.58	0	44.62	0		
42.62	0	44.66	0		
42.66	0	44.70	0		
42.70	0	44.74	0		
42.74	0	44.78	0		
42.78	0	44.82	0		
42.82	0	44.86	0		
42.86	0	44.90	0		
42.90	0	44.94	0		
42.94	0	44.98	0		
42.98	0	45.02	0		
43.02	0	45.06	0		
43.06	0	45.10	0		
43.10	0	45.14	0		

Summary for Pond 3P: RL-2

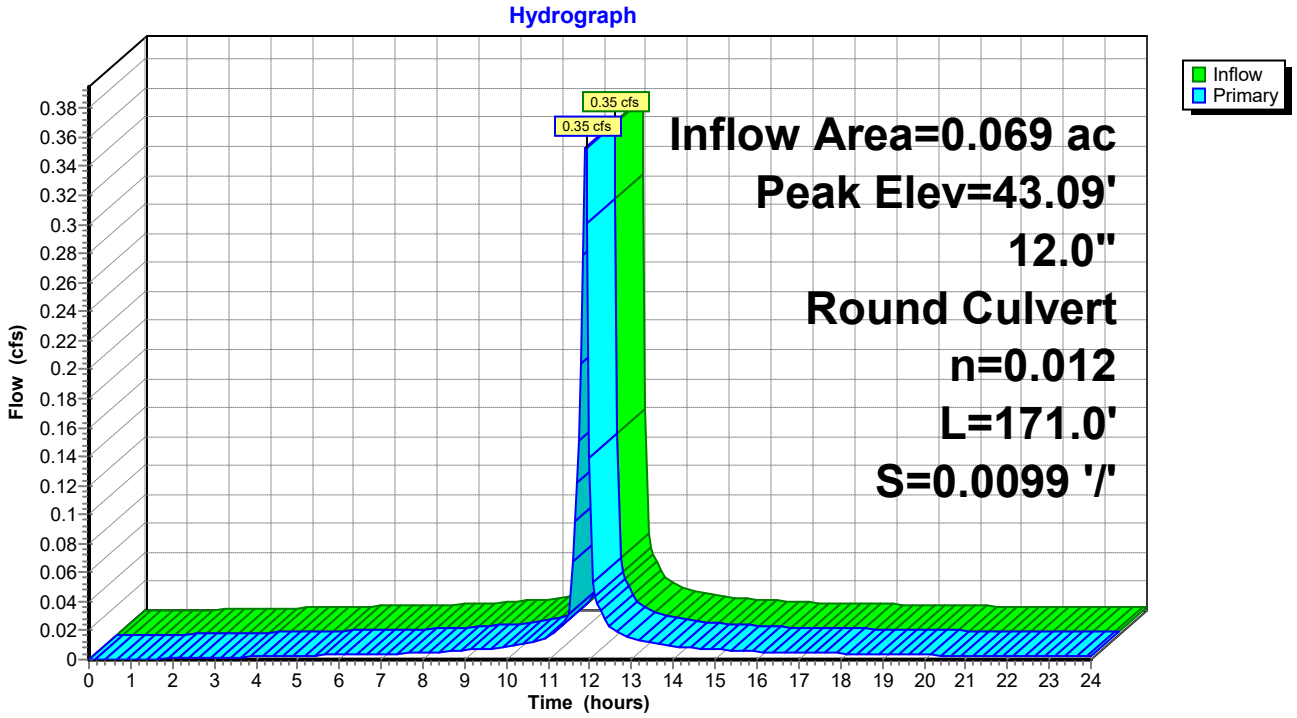
Inflow Area = 0.069 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 0.35 cfs @ 11.90 hrs, Volume= 0.018 af
Outflow = 0.35 cfs @ 11.90 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min
Primary = 0.35 cfs @ 11.90 hrs, Volume= 0.018 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.09' @ 11.90 hrs
Flood Elev= 46.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.80'	**12.0" Round 12" HPDE** L= 171.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 42.80' / 41.10' S= 0.0099 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.35 cfs @ 11.90 hrs HW=43.09' TW=41.57' (Dynamic Tailwater)
1=12" HPDE (Inlet Controls 0.35 cfs @ 1.83 fps)

Pond 3P: RL-2



Stage-Area-Storage for Pond 3P: RL-2

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.80	**0**	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0	46.55	0
44.05	0	46.60	0
44.10	0	46.65	0
44.15	0	46.70	0
44.20	0	46.75	0
44.25	0	46.80	0
44.30	0	46.85	0
44.35	0	46.90	0
44.40	0		
44.45	0		
44.50	0		
44.55	0		
44.60	0		
44.65	0		
44.70	0		
44.75	0		
44.80	0		
44.85	0		
44.90	0		
44.95	0		
45.00	0		
45.05	0		
45.10	0		
45.15	0		
45.20	0		
45.25	0		
45.30	0		

Summary for Pond 4P: RL-3

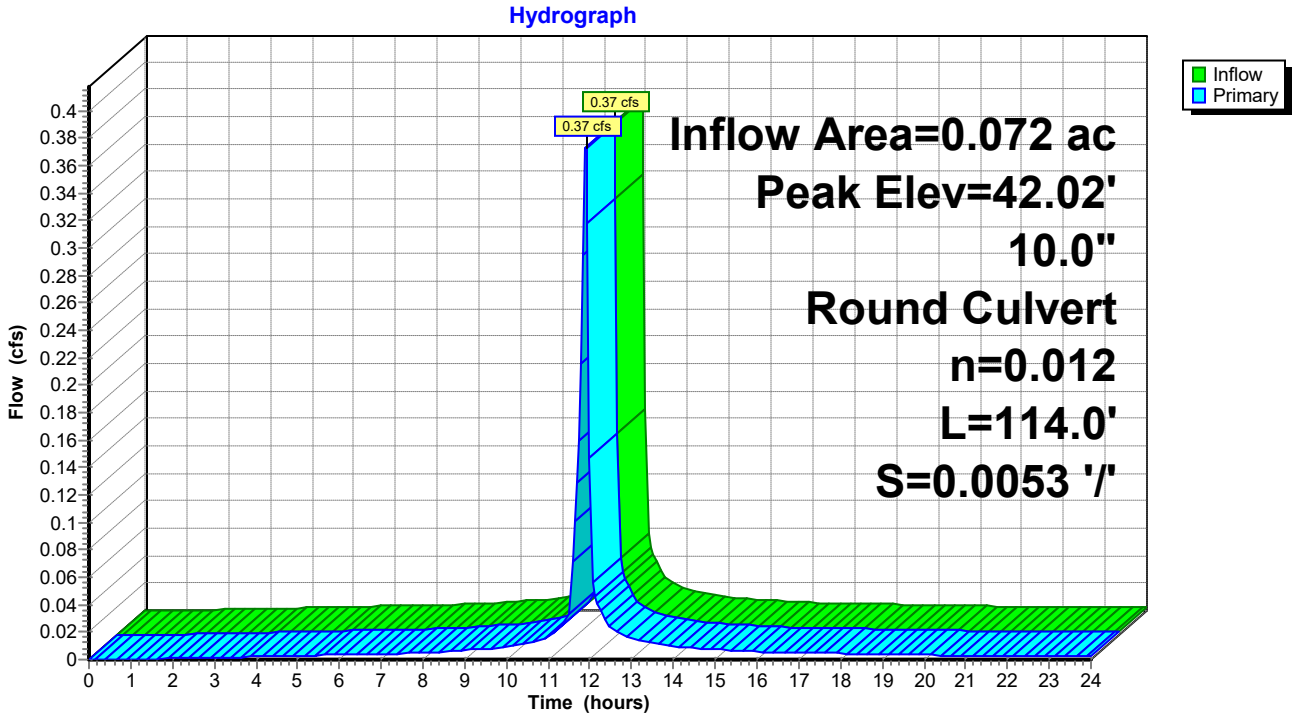
Inflow Area = 0.072 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af
Outflow = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min
Primary = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.02' @ 11.94 hrs
Flood Elev= 47.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**10.0" Round 10" HDPE** L= 114.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.50' / 40.90' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.26 cfs @ 11.90 hrs HW=41.98' TW=41.86' (Dynamic Tailwater)
1=10" HDPE (Outlet Controls 0.26 cfs @ 1.15 fps)

Pond 4P: RL-3



Stage-Area-Storage for Pond 4P: RL-3

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.50	**0**	43.54	0	45.58	0
41.54	0	43.58	0	45.62	0
41.58	0	43.62	0	45.66	0
41.62	0	43.66	0	45.70	0
41.66	0	43.70	0	45.74	0
41.70	0	43.74	0	45.78	0
41.74	0	43.78	0	45.82	0
41.78	0	43.82	0	45.86	0
41.82	0	43.86	0	45.90	0
41.86	0	43.90	0	45.94	0
41.90	0	43.94	0	45.98	0
41.94	0	43.98	0	46.02	0
41.98	0	44.02	0	46.06	0
42.02	0	44.06	0	46.10	0
42.06	0	44.10	0	46.14	0
42.10	0	44.14	0	46.18	0
42.14	0	44.18	0	46.22	0
42.18	0	44.22	0	46.26	0
42.22	0	44.26	0	46.30	0
42.26	0	44.30	0	46.34	0
42.30	0	44.34	0	46.38	0
42.34	0	44.38	0	46.42	0
42.38	0	44.42	0	46.46	0
42.42	0	44.46	0	46.50	0
42.46	0	44.50	0	46.54	0
42.50	0	44.54	0	46.58	0
42.54	0	44.58	0	46.62	0
42.58	0	44.62	0	46.66	0
42.62	0	44.66	0	46.70	0
42.66	0	44.70	0	46.74	0
42.70	0	44.74	0	46.78	0
42.74	0	44.78	0	46.82	0
42.78	0	44.82	0	46.86	0
42.82	0	44.86	0	46.90	0
42.86	0	44.90	0	46.94	0
42.90	0	44.94	0	46.98	0
42.94	0	44.98	0	47.02	0
42.98	0	45.02	0	47.06	0
43.02	0	45.06	0	47.10	0
43.06	0	45.10	0	47.14	0
43.10	0	45.14	0	47.18	0
43.14	0	45.18	0	47.22	0
43.18	0	45.22	0		
43.22	0	45.26	0		
43.26	0	45.30	0		
43.30	0	45.34	0		
43.34	0	45.38	0		
43.38	0	45.42	0		
43.42	0	45.46	0		
43.46	0	45.50	0		
43.50	0	45.54	0		

Summary for Pond 5P: SDI-5

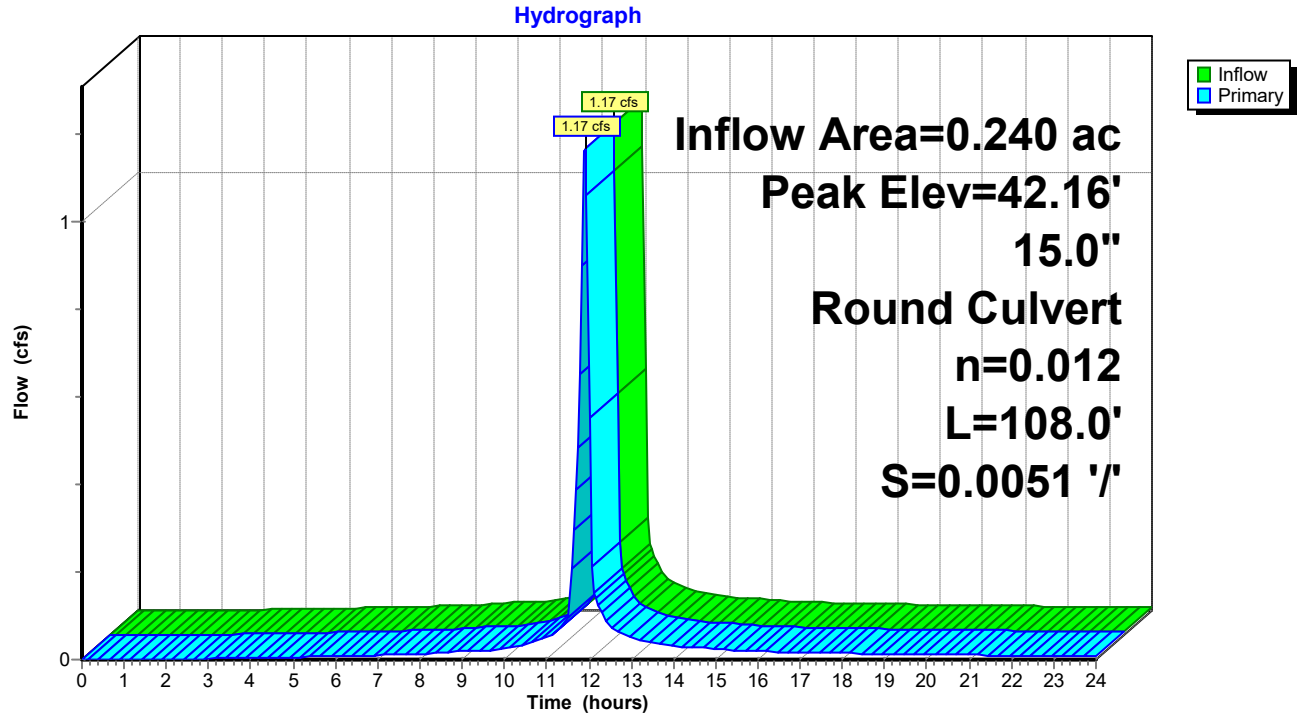
Inflow Area = 0.240 ac, 94.66% Impervious, Inflow Depth > 2.94" for 2-yr event
Inflow = 1.17 cfs @ 11.91 hrs, Volume= 0.059 af
Outflow = 1.17 cfs @ 11.91 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min
Primary = 1.17 cfs @ 11.91 hrs, Volume= 0.059 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.16' @ 11.93 hrs
Flood Elev= 46.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.45'	**15.0" Round 15" HDPE** L= 108.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.45' / 40.90' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.99 cfs @ 11.91 hrs HW=42.13' TW=41.84' (Dynamic Tailwater)
↑**1=15" HDPE** (Outlet Controls 0.99 cfs @ 2.11 fps)

Pond 5P: SDI-5



Stage-Area-Storage for Pond 5P: SDI-5

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.45	**0**	43.49	0	45.53	0
41.49	0	43.53	0	45.57	0
41.53	0	43.57	0	45.61	0
41.57	0	43.61	0	45.65	0
41.61	0	43.65	0	45.69	0
41.65	0	43.69	0	45.73	0
41.69	0	43.73	0	45.77	0
41.73	0	43.77	0	45.81	0
41.77	0	43.81	0	45.85	0
41.81	0	43.85	0	45.89	0
41.85	0	43.89	0	45.93	0
41.89	0	43.93	0	45.97	0
41.93	0	43.97	0	46.01	0
41.97	0	44.01	0	46.05	0
42.01	0	44.05	0	46.09	0
42.05	0	44.09	0	46.13	0
42.09	0	44.13	0	46.17	0
42.13	0	44.17	0	46.21	0
42.17	0	44.21	0	46.25	0
42.21	0	44.25	0	46.29	0
42.25	0	44.29	0	46.33	0
42.29	0	44.33	0	46.37	0
42.33	0	44.37	0	46.41	0
42.37	0	44.41	0	46.45	0
42.41	0	44.45	0	46.49	0
42.45	0	44.49	0	46.53	0
42.49	0	44.53	0	46.57	0
42.53	0	44.57	0	46.61	0
42.57	0	44.61	0	46.65	0
42.61	0	44.65	0	46.69	0
42.65	0	44.69	0	46.73	0
42.69	0	44.73	0		
42.73	0	44.77	0		
42.77	0	44.81	0		
42.81	0	44.85	0		
42.85	0	44.89	0		
42.89	0	44.93	0		
42.93	0	44.97	0		
42.97	0	45.01	0		
43.01	0	45.05	0		
43.05	0	45.09	0		
43.09	0	45.13	0		
43.13	0	45.17	0		
43.17	0	45.21	0		
43.21	0	45.25	0		
43.25	0	45.29	0		
43.29	0	45.33	0		
43.33	0	45.37	0		
43.37	0	45.41	0		
43.41	0	45.45	0		
43.45	0	45.49	0		

Summary for Pond 6P: RL-4

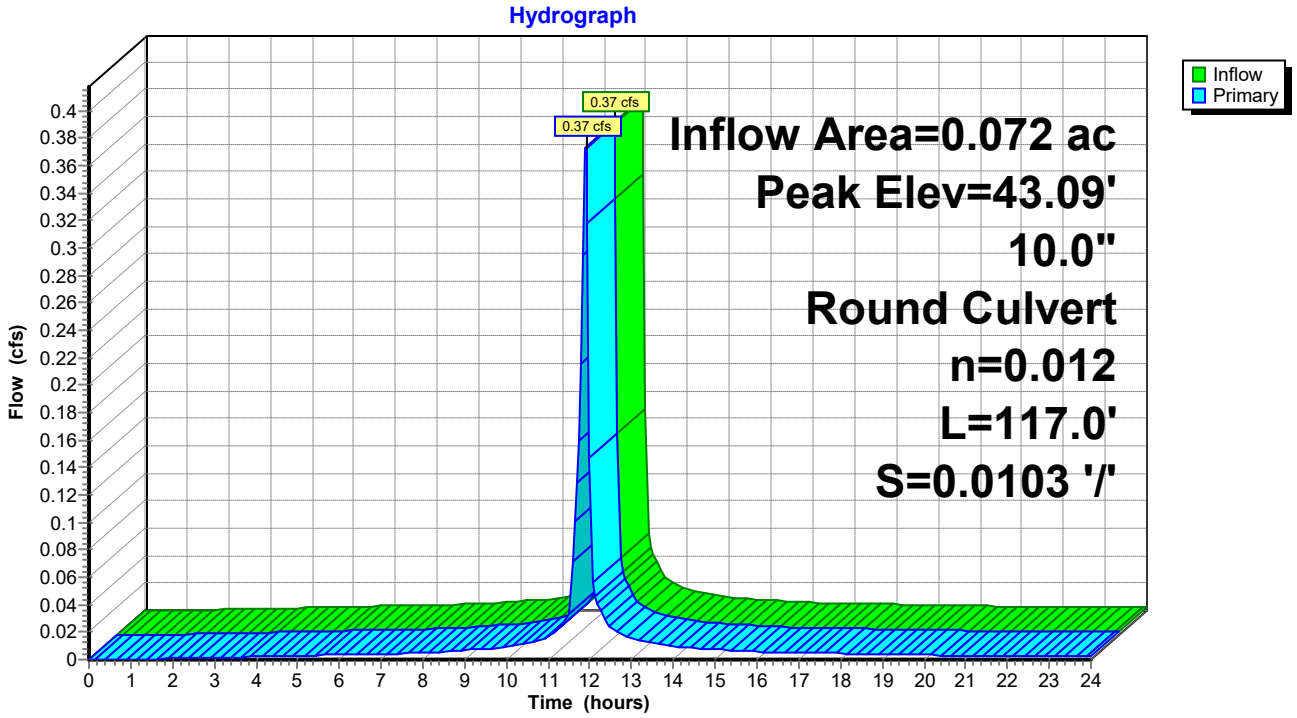
Inflow Area = 0.072 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af
Outflow = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min
Primary = 0.37 cfs @ 11.90 hrs, Volume= 0.019 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.09' @ 11.90 hrs
Flood Elev= 47.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.75'	**10.0" Round 10" HDPE** L= 117.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 42.75' / 41.55' S= 0.0103 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.37 cfs @ 11.90 hrs HW=43.09' TW=42.12' (Dynamic Tailwater)
1=10" HDPE (Inlet Controls 0.37 cfs @ 1.75 fps)

Pond 6P: RL-4



Stage-Area-Storage for Pond 6P: RL-4

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.75	**0**	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0	46.55	0
44.05	0	46.60	0
44.10	0	46.65	0
44.15	0	46.70	0
44.20	0	46.75	0
44.25	0	46.80	0
44.30	0	46.85	0
44.35	0	46.90	0
44.40	0	46.95	0
44.45	0	47.00	0
44.50	0	47.05	0
44.55	0	47.10	0
44.60	0	47.15	0
44.65	0	47.20	0
44.70	0		
44.75	0		
44.80	0		
44.85	0		
44.90	0		
44.95	0		
45.00	0		
45.05	0		
45.10	0		
45.15	0		
45.20	0		
45.25	0		

Summary for Pond 7P: SDI-6

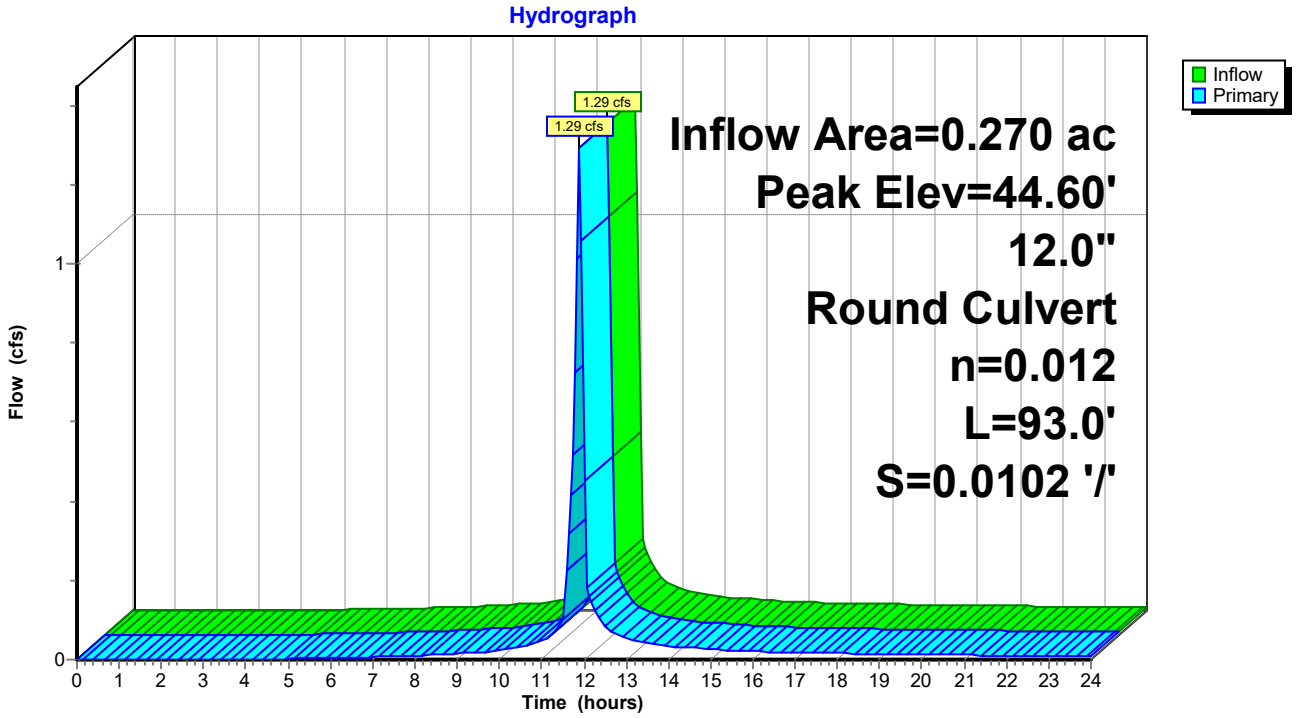
Inflow Area = 0.270 ac, 85.31% Impervious, Inflow Depth > 2.64" for 2-yr event
Inflow = 1.29 cfs @ 11.90 hrs, Volume= 0.059 af
Outflow = 1.29 cfs @ 11.90 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min
Primary = 1.29 cfs @ 11.90 hrs, Volume= 0.059 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.60' @ 11.90 hrs
Flood Elev= 46.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**12.0" Round Culvert** L= 93.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 44.00' / 43.05' S= 0.0102 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.28 cfs @ 11.90 hrs HW=44.59' TW=42.78' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.28 cfs @ 2.63 fps)

Pond 7P: SDI-6



Stage-Area-Storage for Pond 7P: SDI-6

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
44.00	**0**	45.02	0	46.04	0
44.02	0	45.04	0	46.06	0
44.04	0	45.06	0	46.08	0
44.06	0	45.08	0	46.10	0
44.08	0	45.10	0	46.12	0
44.10	0	45.12	0	46.14	0
44.12	0	45.14	0	46.16	0
44.14	0	45.16	0	46.18	0
44.16	0	45.18	0	46.20	0
44.18	0	45.20	0	46.22	0
44.20	0	45.22	0	46.24	0
44.22	0	45.24	0	46.26	0
44.24	0	45.26	0	46.28	0
44.26	0	45.28	0	46.30	0
44.28	0	45.30	0	46.32	0
44.30	0	45.32	0	46.34	0
44.32	0	45.34	0	46.36	0
44.34	0	45.36	0	46.38	0
44.36	0	45.38	0	46.40	0
44.38	0	45.40	0		
44.40	0	45.42	0		
44.42	0	45.44	0		
44.44	0	45.46	0		
44.46	0	45.48	0		
44.48	0	45.50	0		
44.50	0	45.52	0		
44.52	0	45.54	0		
44.54	0	45.56	0		
44.56	0	45.58	0		
44.58	0	45.60	0		
44.60	0	45.62	0		
44.62	0	45.64	0		
44.64	0	45.66	0		
44.66	0	45.68	0		
44.68	0	45.70	0		
44.70	0	45.72	0		
44.72	0	45.74	0		
44.74	0	45.76	0		
44.76	0	45.78	0		
44.78	0	45.80	0		
44.80	0	45.82	0		
44.82	0	45.84	0		
44.84	0	45.86	0		
44.86	0	45.88	0		
44.88	0	45.90	0		
44.90	0	45.92	0		
44.92	0	45.94	0		
44.94	0	45.96	0		
44.96	0	45.98	0		
44.98	0	46.00	0		
45.00	0	46.02	0		

Summary for Pond 8P: SDI-2

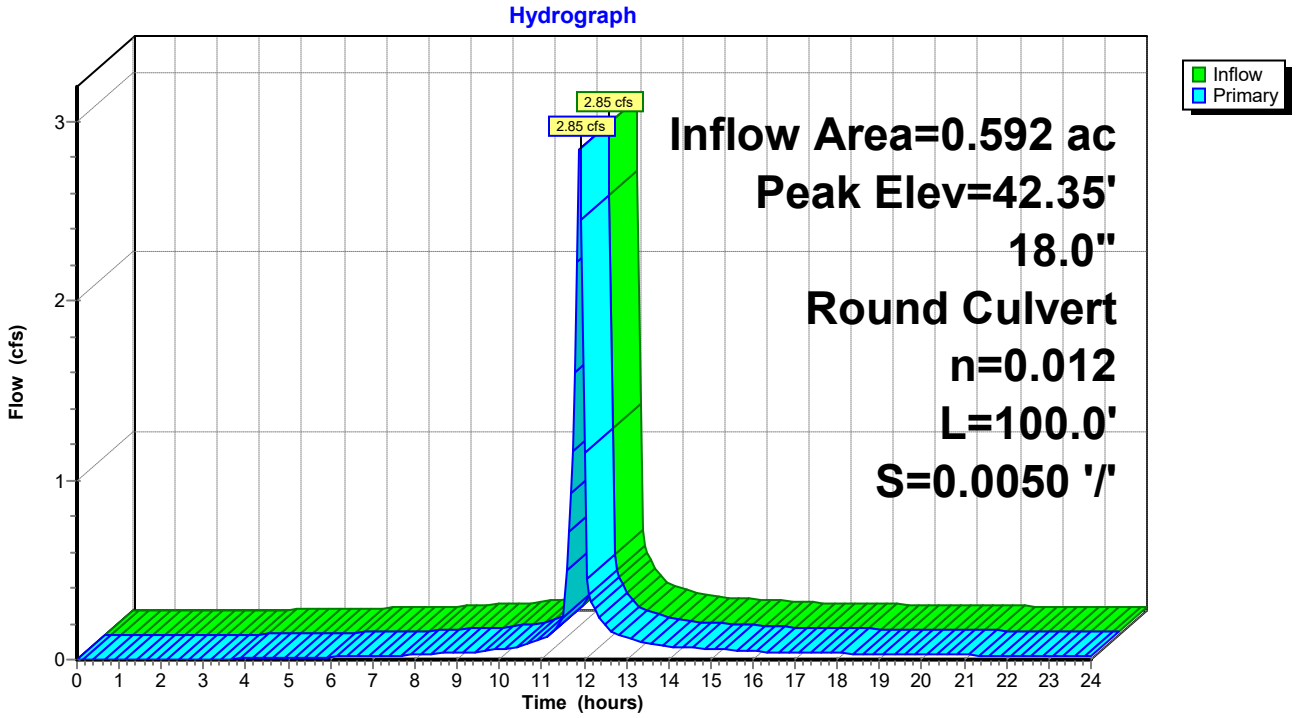
Inflow Area = 0.592 ac, 90.75% Impervious, Inflow Depth > 2.78" for 2-yr event
Inflow = 2.85 cfs @ 11.91 hrs, Volume= 0.137 af
Outflow = 2.85 cfs @ 11.91 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min
Primary = 2.85 cfs @ 11.91 hrs, Volume= 0.137 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.35' @ 11.92 hrs
Flood Elev= 46.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.40'	**18.0" Round 18" HDPE** L= 100.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.40' / 40.90' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=2.50 cfs @ 11.91 hrs HW=42.33' TW=41.85' (Dynamic Tailwater)
↑**1=18" HDPE** (Outlet Controls 2.50 cfs @ 3.11 fps)

Pond 8P: SDI-2



Stage-Area-Storage for Pond 8P: SDI-2

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.40	**0**	43.44	0	45.48	0
41.44	0	43.48	0	45.52	0
41.48	0	43.52	0	45.56	0
41.52	0	43.56	0	45.60	0
41.56	0	43.60	0	45.64	0
41.60	0	43.64	0	45.68	0
41.64	0	43.68	0	45.72	0
41.68	0	43.72	0	45.76	0
41.72	0	43.76	0	45.80	0
41.76	0	43.80	0	45.84	0
41.80	0	43.84	0	45.88	0
41.84	0	43.88	0	45.92	0
41.88	0	43.92	0	45.96	0
41.92	0	43.96	0	46.00	0
41.96	0	44.00	0	46.04	0
42.00	0	44.04	0	46.08	0
42.04	0	44.08	0	46.12	0
42.08	0	44.12	0	46.16	0
42.12	0	44.16	0	46.20	0
42.16	0	44.20	0	46.24	0
42.20	0	44.24	0	46.28	0
42.24	0	44.28	0	46.32	0
42.28	0	44.32	0	46.36	0
42.32	0	44.36	0	46.40	0
42.36	0	44.40	0	46.44	0
42.40	0	44.44	0	46.48	0
42.44	0	44.48	0	46.52	0
42.48	0	44.52	0	46.56	0
42.52	0	44.56	0	46.60	0
42.56	0	44.60	0		
42.60	0	44.64	0		
42.64	0	44.68	0		
42.68	0	44.72	0		
42.72	0	44.76	0		
42.76	0	44.80	0		
42.80	0	44.84	0		
42.84	0	44.88	0		
42.88	0	44.92	0		
42.92	0	44.96	0		
42.96	0	45.00	0		
43.00	0	45.04	0		
43.04	0	45.08	0		
43.08	0	45.12	0		
43.12	0	45.16	0		
43.16	0	45.20	0		
43.20	0	45.24	0		
43.24	0	45.28	0		
43.28	0	45.32	0		
43.32	0	45.36	0		
43.36	0	45.40	0		
43.40	0	45.44	0		

Summary for Pond 9P: SDI-3

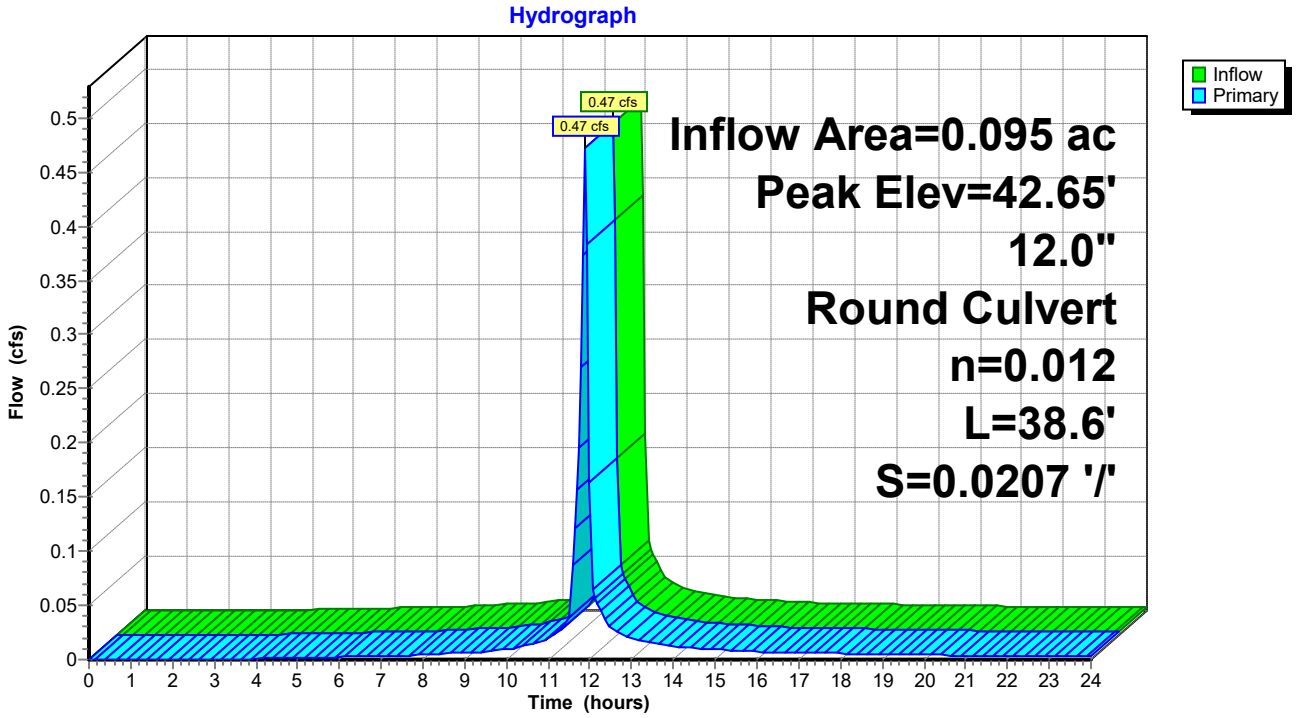
Inflow Area = 0.095 ac, 91.82% Impervious, Inflow Depth > 2.84" for 2-yr event
Inflow = 0.47 cfs @ 11.90 hrs, Volume= 0.022 af
Outflow = 0.47 cfs @ 11.90 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min
Primary = 0.47 cfs @ 11.90 hrs, Volume= 0.022 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.65' @ 11.92 hrs
Flood Elev= 46.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.30'	**12.0" Round 12" HDPE** L= 38.6' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 42.30' / 41.50' S= 0.0207 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.39 cfs @ 11.90 hrs HW=42.65' TW=42.33' (Dynamic Tailwater)
↑**1=12" HDPE** (Outlet Controls 0.39 cfs @ 2.42 fps)

Pond 9P: SDI-3



Stage-Area-Storage for Pond 9P: SDI-3

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.30	**0**	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0	45.10	0
42.60	0	45.15	0
42.65	0	45.20	0
42.70	0	45.25	0
42.75	0	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0		
43.80	0		
43.85	0		
43.90	0		
43.95	0		
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		
44.25	0		
44.30	0		
44.35	0		
44.40	0		
44.45	0		
44.50	0		
44.55	0		
44.60	0		
44.65	0		
44.70	0		
44.75	0		
44.80	0		

Summary for Pond 10P: SDI-4

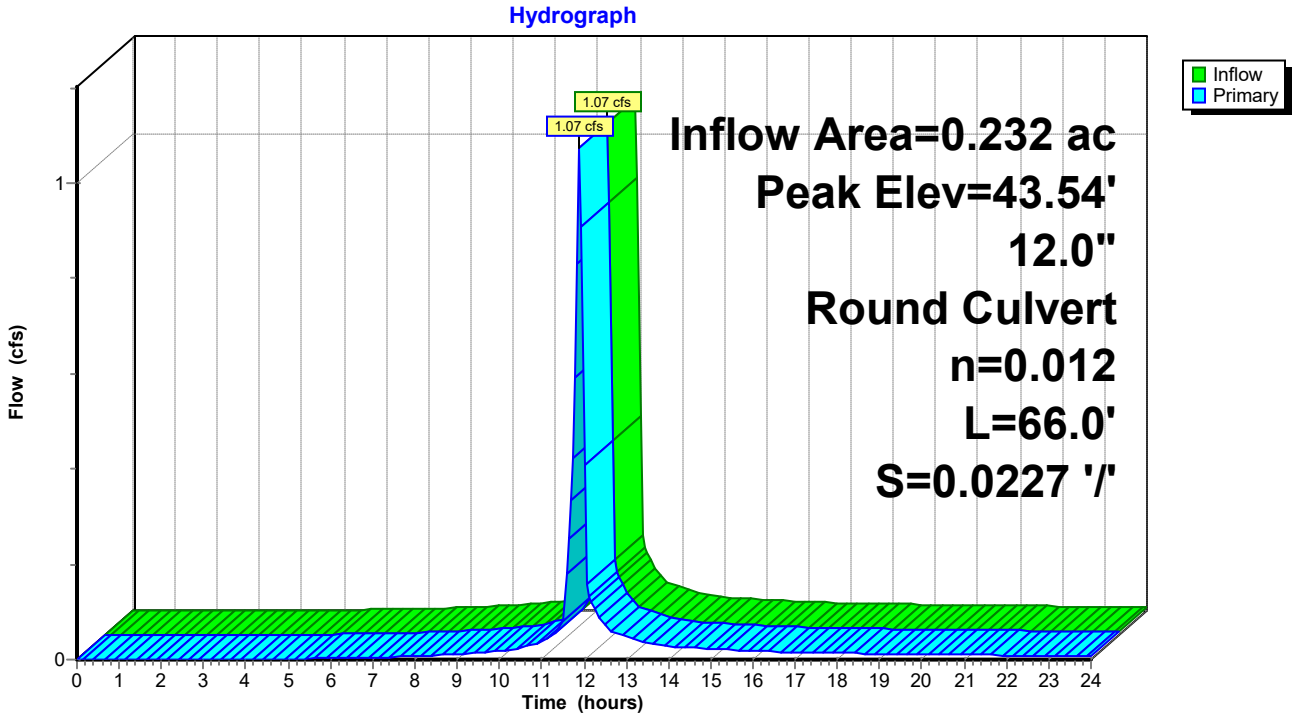
Inflow Area = 0.232 ac, 84.85% Impervious, Inflow Depth > 2.54" for 2-yr event
Inflow = 1.07 cfs @ 11.90 hrs, Volume= 0.049 af
Outflow = 1.07 cfs @ 11.90 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min
Primary = 1.07 cfs @ 11.90 hrs, Volume= 0.049 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.54' @ 11.90 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.00'	**12.0" Round 12" HDPE** L= 66.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 43.00' / 41.50' S= 0.0227 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.05 cfs @ 11.90 hrs HW=43.53' TW=42.33' (Dynamic Tailwater)
↑**1=12" HDPE** (Inlet Controls 1.05 cfs @ 2.48 fps)

Pond 10P: SDI-4



Stage-Area-Storage for Pond 10P: SDI-4

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
43.00	**0**	44.02	0	45.04	0
43.02	0	44.04	0	45.06	0
43.04	0	44.06	0	45.08	0
43.06	0	44.08	0	45.10	0
43.08	0	44.10	0	45.12	0
43.10	0	44.12	0	45.14	0
43.12	0	44.14	0	45.16	0
43.14	0	44.16	0	45.18	0
43.16	0	44.18	0	45.20	0
43.18	0	44.20	0	45.22	0
43.20	0	44.22	0	45.24	0
43.22	0	44.24	0	45.26	0
43.24	0	44.26	0	45.28	0
43.26	0	44.28	0	45.30	0
43.28	0	44.30	0	45.32	0
43.30	0	44.32	0	45.34	0
43.32	0	44.34	0	45.36	0
43.34	0	44.36	0	45.38	0
43.36	0	44.38	0	45.40	0
43.38	0	44.40	0	45.42	0
43.40	0	44.42	0	45.44	0
43.42	0	44.44	0	45.46	0
43.44	0	44.46	0	45.48	0
43.46	0	44.48	0	45.50	0
43.48	0	44.50	0	45.52	0
43.50	0	44.52	0	45.54	0
43.52	0	44.54	0	45.56	0
43.54	0	44.56	0	45.58	0
43.56	0	44.58	0	45.60	0
43.58	0	44.60	0	45.62	0
43.60	0	44.62	0	45.64	0
43.62	0	44.64	0	45.66	0
43.64	0	44.66	0	45.68	0
43.66	0	44.68	0	45.70	0
43.68	0	44.70	0	45.72	0
43.70	0	44.72	0	45.74	0
43.72	0	44.74	0	45.76	0
43.74	0	44.76	0	45.78	0
43.76	0	44.78	0	45.80	0
43.78	0	44.80	0	45.82	0
43.80	0	44.82	0	45.84	0
43.82	0	44.84	0	45.86	0
43.84	0	44.86	0	45.88	0
43.86	0	44.88	0	45.90	0
43.88	0	44.90	0		
43.90	0	44.92	0		
43.92	0	44.94	0		
43.94	0	44.96	0		
43.96	0	44.98	0		
43.98	0	45.00	0		
44.00	0	45.02	0		

Summary for Pond 11P: SDI-8

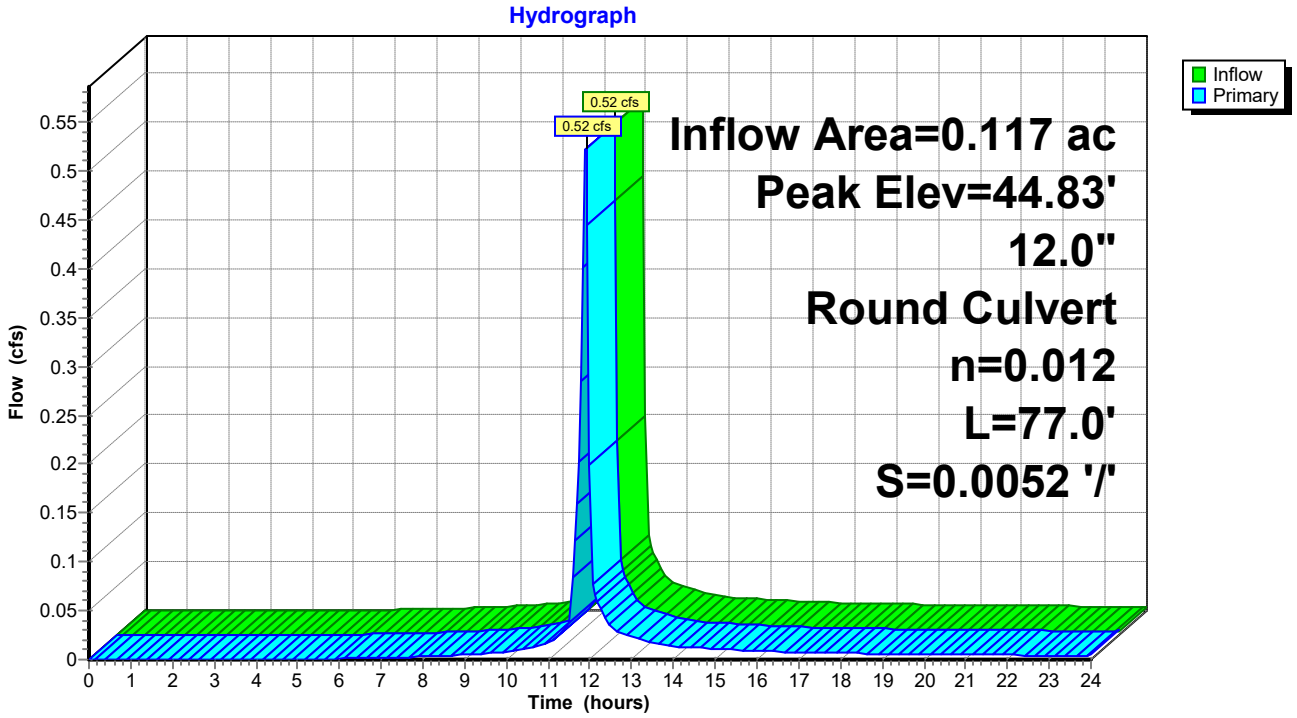
Inflow Area = 0.117 ac, 82.35% Impervious, Inflow Depth > 2.45" for 2-yr event
Inflow = 0.52 cfs @ 11.91 hrs, Volume= 0.024 af
Outflow = 0.52 cfs @ 11.91 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min
Primary = 0.52 cfs @ 11.91 hrs, Volume= 0.024 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.83' @ 20.17 hrs
Flood Elev= 45.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.20'	**12.0" Round 12" HDPE** L= 77.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 44.20' / 43.80' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.51 cfs @ 11.91 hrs HW=44.60' TW=43.79' (Dynamic Tailwater)
1=12" HDPE (Barrel Controls 0.51 cfs @ 2.57 fps)

Pond 11P: SDI-8



Stage-Area-Storage for Pond 11P: SDI-8

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
44.20	**0**	44.71	0	45.22	0
44.21	0	44.72	0	45.23	0
44.22	0	44.73	0	45.24	0
44.23	0	44.74	0	45.25	0
44.24	0	44.75	0		
44.25	0	44.76	0		
44.26	0	44.77	0		
44.27	0	44.78	0		
44.28	0	44.79	0		
44.29	0	44.80	0		
44.30	0	44.81	0		
44.31	0	44.82	0		
44.32	0	44.83	0		
44.33	0	44.84	0		
44.34	0	44.85	0		
44.35	0	44.86	0		
44.36	0	44.87	0		
44.37	0	44.88	0		
44.38	0	44.89	0		
44.39	0	44.90	0		
44.40	0	44.91	0		
44.41	0	44.92	0		
44.42	0	44.93	0		
44.43	0	44.94	0		
44.44	0	44.95	0		
44.45	0	44.96	0		
44.46	0	44.97	0		
44.47	0	44.98	0		
44.48	0	44.99	0		
44.49	0	45.00	0		
44.50	0	45.01	0		
44.51	0	45.02	0		
44.52	0	45.03	0		
44.53	0	45.04	0		
44.54	0	45.05	0		
44.55	0	45.06	0		
44.56	0	45.07	0		
44.57	0	45.08	0		
44.58	0	45.09	0		
44.59	0	45.10	0		
44.60	0	45.11	0		
44.61	0	45.12	0		
44.62	0	45.13	0		
44.63	0	45.14	0		
44.64	0	45.15	0		
44.65	0	45.16	0		
44.66	0	45.17	0		
44.67	0	45.18	0		
44.68	0	45.19	0		
44.69	0	45.20	0		
44.70	0	45.21	0		

Summary for Pond 13P: SDI-9

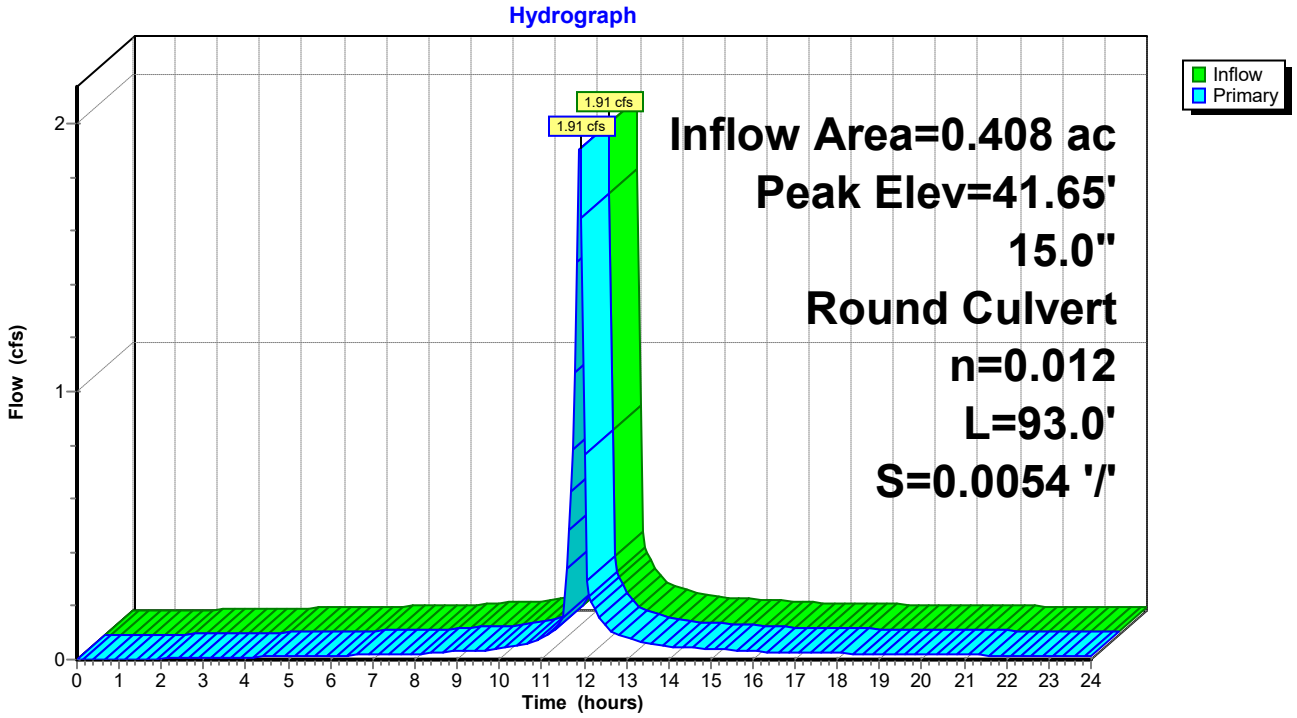
Inflow Area = 0.408 ac, 89.26% Impervious, Inflow Depth > 2.81" for 2-yr event
Inflow = 1.91 cfs @ 11.91 hrs, Volume= 0.095 af
Outflow = 1.91 cfs @ 11.91 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min
Primary = 1.91 cfs @ 11.91 hrs, Volume= 0.095 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.65' @ 11.91 hrs
Flood Elev= 43.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.90'	**15.0" Round 15" HDPE** L= 93.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 40.90' / 40.40' S= 0.0054 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.87 cfs @ 11.91 hrs HW=41.64' TW=40.50' (Dynamic Tailwater)
1=15" HDPE (Barrel Controls 1.87 cfs @ 3.53 fps)

Pond 13P: SDI-9



Stage-Area-Storage for Pond 13P: SDI-9

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.90	**0**	41.92	0	42.94	0
40.92	0	41.94	0	42.96	0
40.94	0	41.96	0	42.98	0
40.96	0	41.98	0	43.00	0
40.98	0	42.00	0		
41.00	0	42.02	0		
41.02	0	42.04	0		
41.04	0	42.06	0		
41.06	0	42.08	0		
41.08	0	42.10	0		
41.10	0	42.12	0		
41.12	0	42.14	0		
41.14	0	42.16	0		
41.16	0	42.18	0		
41.18	0	42.20	0		
41.20	0	42.22	0		
41.22	0	42.24	0		
41.24	0	42.26	0		
41.26	0	42.28	0		
41.28	0	42.30	0		
41.30	0	42.32	0		
41.32	0	42.34	0		
41.34	0	42.36	0		
41.36	0	42.38	0		
41.38	0	42.40	0		
41.40	0	42.42	0		
41.42	0	42.44	0		
41.44	0	42.46	0		
41.46	0	42.48	0		
41.48	0	42.50	0		
41.50	0	42.52	0		
41.52	0	42.54	0		
41.54	0	42.56	0		
41.56	0	42.58	0		
41.58	0	42.60	0		
41.60	0	42.62	0		
41.62	0	42.64	0		
41.64	0	42.66	0		
41.66	0	42.68	0		
41.68	0	42.70	0		
41.70	0	42.72	0		
41.72	0	42.74	0		
41.74	0	42.76	0		
41.76	0	42.78	0		
41.78	0	42.80	0		
41.80	0	42.82	0		
41.82	0	42.84	0		
41.84	0	42.86	0		
41.86	0	42.88	0		
41.88	0	42.90	0		
41.90	0	42.92	0		

Summary for Pond 14P: RL-5

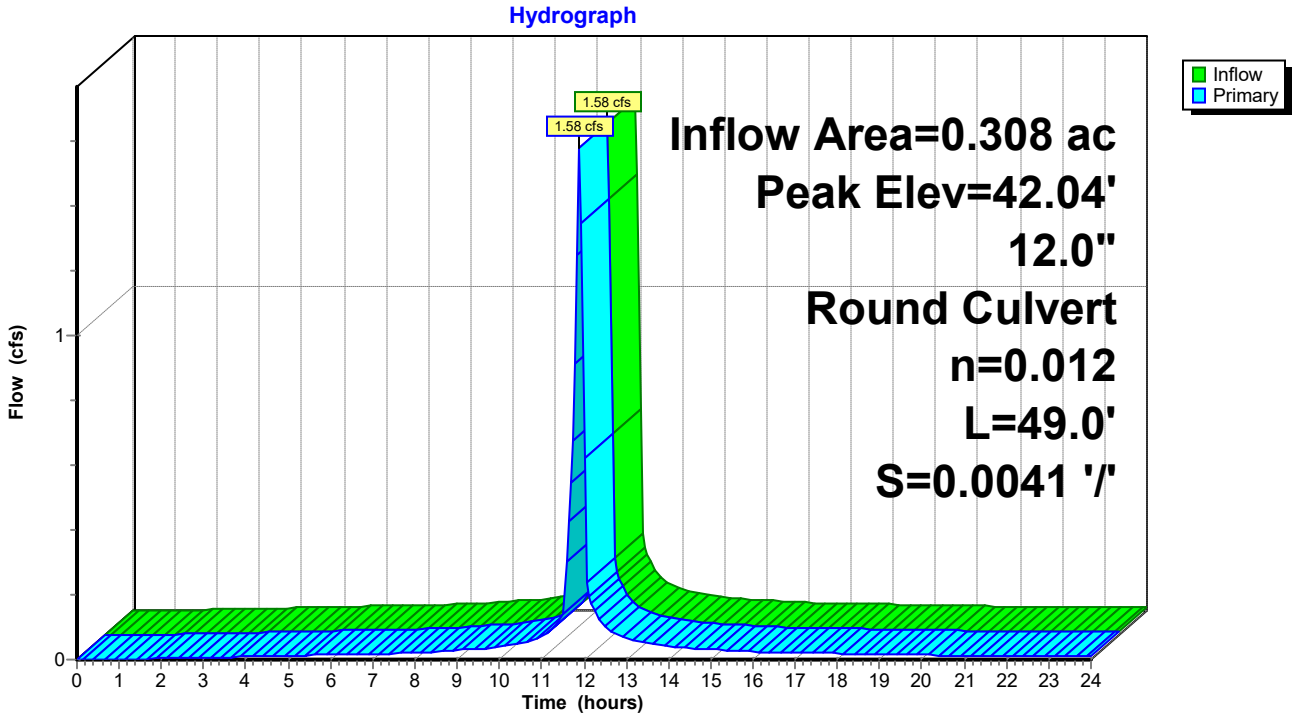
Inflow Area = 0.308 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 1.58 cfs @ 11.90 hrs, Volume= 0.081 af
Outflow = 1.58 cfs @ 11.90 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min
Primary = 1.58 cfs @ 11.90 hrs, Volume= 0.081 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.04' @ 11.91 hrs
Flood Elev= 46.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.20'	**12.0" Round 12" HDPE** L= 49.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.20' / 41.00' S= 0.0041 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.52 cfs @ 11.90 hrs HW=42.03' TW=41.65' (Dynamic Tailwater)
1=12" HDPE (Outlet Controls 1.52 cfs @ 2.96 fps)

Pond 14P: RL-5



Stage-Area-Storage for Pond 14P: RL-5

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.20	**0**	43.24	0	45.28	0
41.24	0	43.28	0	45.32	0
41.28	0	43.32	0	45.36	0
41.32	0	43.36	0	45.40	0
41.36	0	43.40	0	45.44	0
41.40	0	43.44	0	45.48	0
41.44	0	43.48	0	45.52	0
41.48	0	43.52	0	45.56	0
41.52	0	43.56	0	45.60	0
41.56	0	43.60	0	45.64	0
41.60	0	43.64	0	45.68	0
41.64	0	43.68	0	45.72	0
41.68	0	43.72	0	45.76	0
41.72	0	43.76	0	45.80	0
41.76	0	43.80	0	45.84	0
41.80	0	43.84	0	45.88	0
41.84	0	43.88	0	45.92	0
41.88	0	43.92	0	45.96	0
41.92	0	43.96	0	46.00	0
41.96	0	44.00	0	46.04	0
42.00	0	44.04	0	46.08	0
42.04	0	44.08	0	46.12	0
42.08	0	44.12	0	46.16	0
42.12	0	44.16	0	46.20	0
42.16	0	44.20	0	46.24	0
42.20	0	44.24	0	46.28	0
42.24	0	44.28	0	46.32	0
42.28	0	44.32	0	46.36	0
42.32	0	44.36	0	46.40	0
42.36	0	44.40	0	46.44	0
42.40	0	44.44	0	46.48	0
42.44	0	44.48	0		
42.48	0	44.52	0		
42.52	0	44.56	0		
42.56	0	44.60	0		
42.60	0	44.64	0		
42.64	0	44.68	0		
42.68	0	44.72	0		
42.72	0	44.76	0		
42.76	0	44.80	0		
42.80	0	44.84	0		
42.84	0	44.88	0		
42.88	0	44.92	0		
42.92	0	44.96	0		
42.96	0	45.00	0		
43.00	0	45.04	0		
43.04	0	45.08	0		
43.08	0	45.12	0		
43.12	0	45.16	0		
43.16	0	45.20	0		
43.20	0	45.24	0		

Summary for Pond 15P: 30x19 RCP

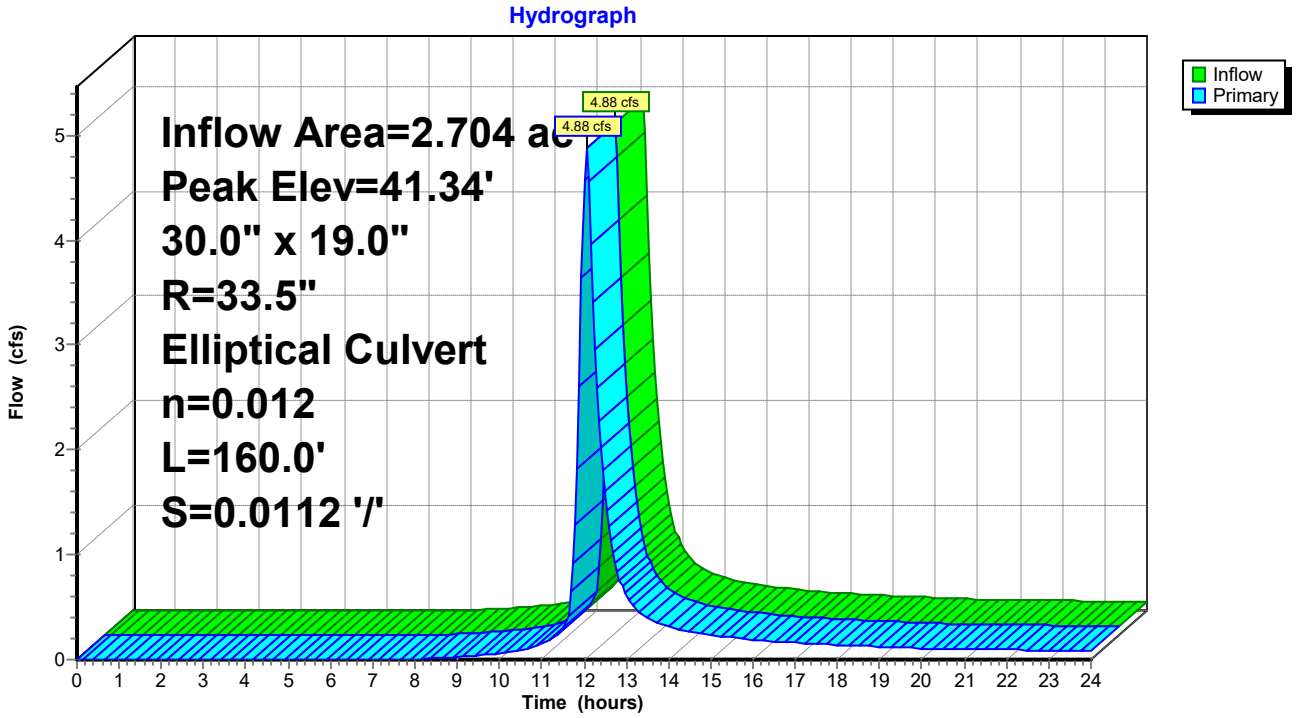
Inflow Area = 2.704 ac, 59.07% Impervious, Inflow Depth > 1.80" for 2-yr event
Inflow = 4.88 cfs @ 12.05 hrs, Volume= 0.404 af
Outflow = 4.88 cfs @ 12.05 hrs, Volume= 0.404 af, Atten= 0%, Lag= 0.0 min
Primary = 4.88 cfs @ 12.05 hrs, Volume= 0.404 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.34' @ 12.05 hrs
Flood Elev= 42.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	**30.0" W x 19.0" H, R=33.5" Elliptical RCP_Elliptical 30x19** L= 160.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 38.70' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.28 sf

Primary OutFlow Max=4.87 cfs @ 12.05 hrs HW=41.34' TW=39.40' (Dynamic Tailwater)
1=RCP_Elliptical 30x19 (Inlet Controls 4.87 cfs @ 2.76 fps)

Pond 15P: 30x19 RCP



Stage-Area-Storage for Pond 15P: 30x19 RCP

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.50	**0**	41.52	0
40.52	0	41.54	0
40.54	0	41.56	0
40.56	0	41.58	0
40.58	0	41.60	0
40.60	0	41.62	0
40.62	0	41.64	0
40.64	0	41.66	0
40.66	0	41.68	0
40.68	0	41.70	0
40.70	0	41.72	0
40.72	0	41.74	0
40.74	0	41.76	0
40.76	0	41.78	0
40.78	0	41.80	0
40.80	0	41.82	0
40.82	0	41.84	0
40.84	0	41.86	0
40.86	0	41.88	0
40.88	0	41.90	0
40.90	0	41.92	0
40.92	0	41.94	0
40.94	0	41.96	0
40.96	0	41.98	0
40.98	0	42.00	0
41.00	0	42.02	0
41.02	0	42.04	0
41.04	0	42.06	0
41.06	0	42.08	0
41.08	0		
41.10	0		
41.12	0		
41.14	0		
41.16	0		
41.18	0		
41.20	0		
41.22	0		
41.24	0		
41.26	0		
41.28	0		
41.30	0		
41.32	0		
41.34	0		
41.36	0		
41.38	0		
41.40	0		
41.42	0		
41.44	0		
41.46	0		
41.48	0		
41.50	0		

Summary for Pond 16P: RL-6

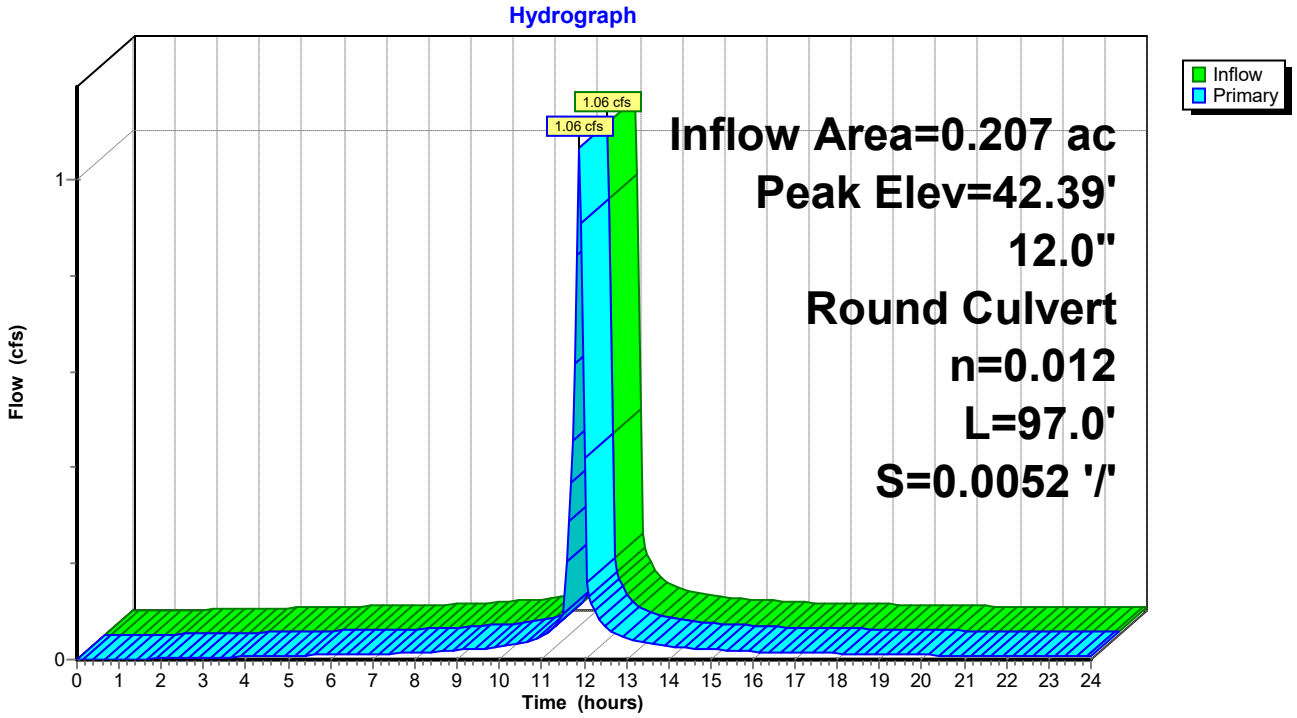
Inflow Area = 0.207 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 1.06 cfs @ 11.90 hrs, Volume= 0.055 af
Outflow = 1.06 cfs @ 11.90 hrs, Volume= 0.055 af, Atten= 0%, Lag= 0.0 min
Primary = 1.06 cfs @ 11.90 hrs, Volume= 0.055 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.39' @ 11.92 hrs
Flood Elev= 46.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.70'	**12.0" Round 12" HDPE** L= 97.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.70' / 41.20' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.93 cfs @ 11.90 hrs HW=42.38' TW=42.03' (Dynamic Tailwater)
1=12" HDPE (Outlet Controls 0.93 cfs @ 2.30 fps)

Pond 16P: RL-6



Stage-Area-Storage for Pond 16P: RL-6

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.70	**0**	44.25	0
41.75	0	44.30	0
41.80	0	44.35	0
41.85	0	44.40	0
41.90	0	44.45	0
41.95	0	44.50	0
42.00	0	44.55	0
42.05	0	44.60	0
42.10	0	44.65	0
42.15	0	44.70	0
42.20	0	44.75	0
42.25	0	44.80	0
42.30	0	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0	45.10	0
42.60	0	45.15	0
42.65	0	45.20	0
42.70	0	45.25	0
42.75	0	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		

Summary for Pond 20P: RL-8

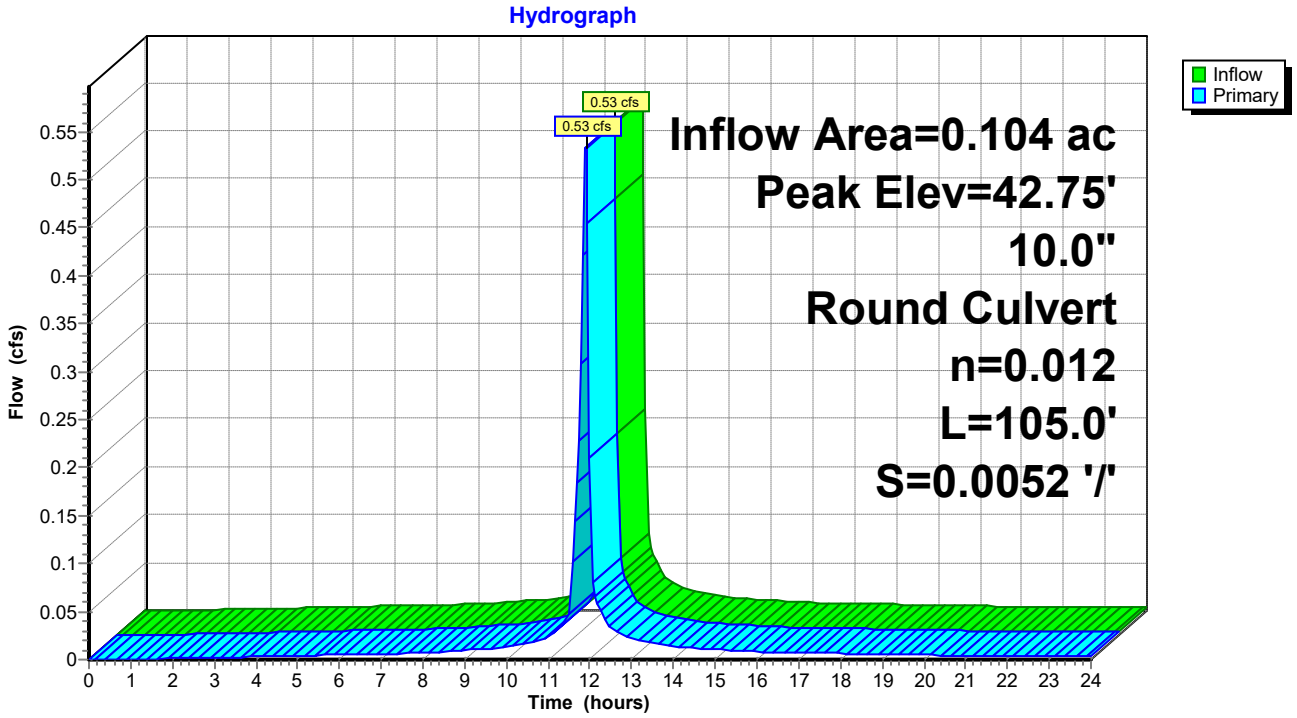
Inflow Area = 0.104 ac,100.00% Impervious, Inflow Depth > 3.17" for 2-yr event
Inflow = 0.53 cfs @ 11.90 hrs, Volume= 0.027 af
Outflow = 0.53 cfs @ 11.90 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min
Primary = 0.53 cfs @ 11.90 hrs, Volume= 0.027 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.75' @ 11.92 hrs
Flood Elev= 45.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.25'	**10.0" Round 10" HDPE** L= 105.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 42.25' / 41.70' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.47 cfs @ 11.90 hrs HW=42.74' TW=42.38' (Dynamic Tailwater)
1=10" HDPE (Outlet Controls 0.47 cfs @ 2.02 fps)

Pond 20P: RL-8



Stage-Area-Storage for Pond 20P: RL-8

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.25	**0**	43.27	0	44.29	0
42.27	0	43.29	0	44.31	0
42.29	0	43.31	0	44.33	0
42.31	0	43.33	0	44.35	0
42.33	0	43.35	0	44.37	0
42.35	0	43.37	0	44.39	0
42.37	0	43.39	0	44.41	0
42.39	0	43.41	0	44.43	0
42.41	0	43.43	0	44.45	0
42.43	0	43.45	0	44.47	0
42.45	0	43.47	0	44.49	0
42.47	0	43.49	0	44.51	0
42.49	0	43.51	0	44.53	0
42.51	0	43.53	0	44.55	0
42.53	0	43.55	0	44.57	0
42.55	0	43.57	0	44.59	0
42.57	0	43.59	0	44.61	0
42.59	0	43.61	0	44.63	0
42.61	0	43.63	0	44.65	0
42.63	0	43.65	0	44.67	0
42.65	0	43.67	0	44.69	0
42.67	0	43.69	0	44.71	0
42.69	0	43.71	0	44.73	0
42.71	0	43.73	0	44.75	0
42.73	0	43.75	0	44.77	0
42.75	0	43.77	0	44.79	0
42.77	0	43.79	0	44.81	0
42.79	0	43.81	0	44.83	0
42.81	0	43.83	0	44.85	0
42.83	0	43.85	0	44.87	0
42.85	0	43.87	0	44.89	0
42.87	0	43.89	0	44.91	0
42.89	0	43.91	0	44.93	0
42.91	0	43.93	0	44.95	0
42.93	0	43.95	0	44.97	0
42.95	0	43.97	0	44.99	0
42.97	0	43.99	0	45.01	0
42.99	0	44.01	0	45.03	0
43.01	0	44.03	0	45.05	0
43.03	0	44.05	0	45.07	0
43.05	0	44.07	0	45.09	0
43.07	0	44.09	0	45.11	0
43.09	0	44.11	0	45.13	0
43.11	0	44.13	0	45.15	0
43.13	0	44.15	0	45.17	0
43.15	0	44.17	0	45.19	0
43.17	0	44.19	0	45.21	0
43.19	0	44.21	0	45.23	0
43.21	0	44.23	0	45.25	0
43.23	0	44.25	0		
43.25	0	44.27	0		

Summary for Pond 25P: SDI-1

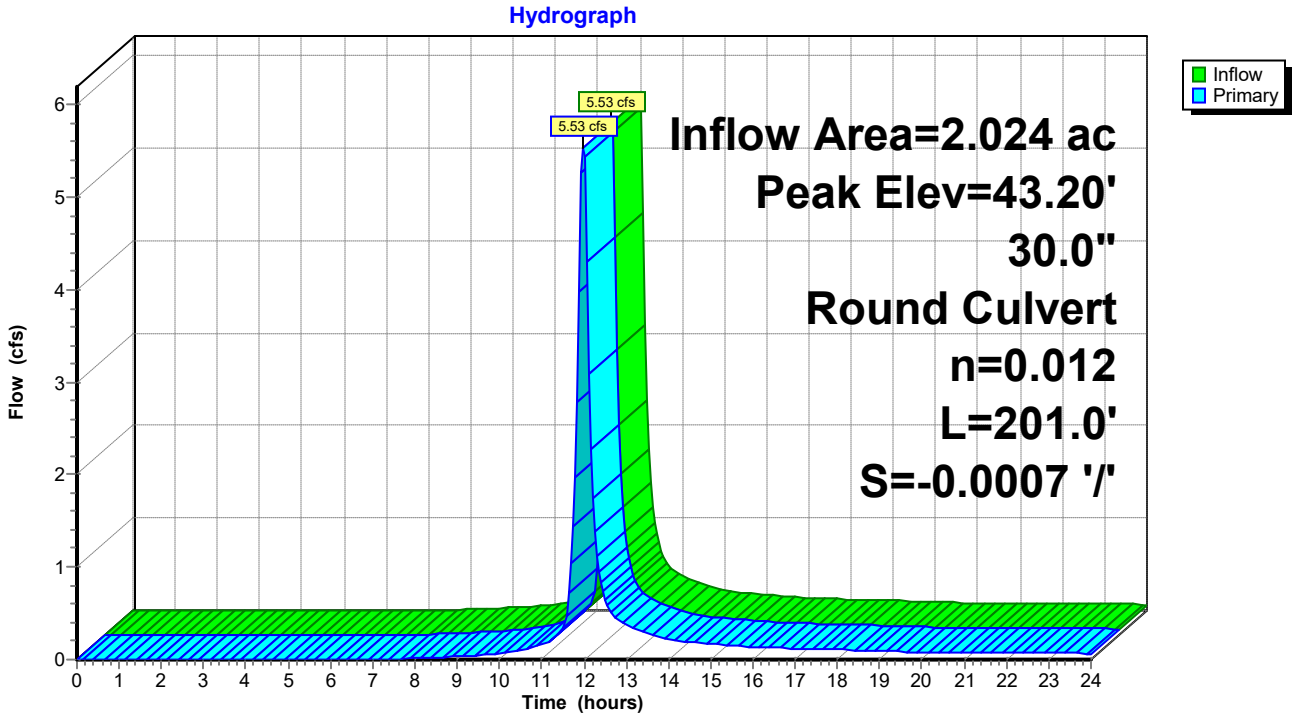
Inflow Area = 2.024 ac, 64.51% Impervious, Inflow Depth > 1.91" for 2-yr event
Inflow = 5.53 cfs @ 11.98 hrs, Volume= 0.322 af
Outflow = 5.53 cfs @ 11.98 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min
Primary = 5.53 cfs @ 11.98 hrs, Volume= 0.322 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.20' @ 12.02 hrs
Flood Elev= 46.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.84'	**30.0" Round 30" PERF. HDPE** L= 201.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.69' / 41.84' S= -0.0007 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=4.34 cfs @ 11.98 hrs HW=43.15' TW=42.95' (Dynamic Tailwater)
1=30" PERF. HDPE (Outlet Controls 4.34 cfs @ 2.10 fps)

Pond 25P: SDI-1



Stage-Area-Storage for Pond 25P: SDI-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.84	**0**	44.39	0
41.89	0	44.44	0
41.94	0	44.49	0
41.99	0	44.54	0
42.04	0	44.59	0
42.09	0	44.64	0
42.14	0	44.69	0
42.19	0	44.74	0
42.24	0	44.79	0
42.29	0	44.84	0
42.34	0	44.89	0
42.39	0	44.94	0
42.44	0	44.99	0
42.49	0	45.04	0
42.54	0	45.09	0
42.59	0	45.14	0
42.64	0	45.19	0
42.69	0	45.24	0
42.74	0	45.29	0
42.79	0	45.34	0
42.84	0	45.39	0
42.89	0	45.44	0
42.94	0	45.49	0
42.99	0	45.54	0
43.04	0	45.59	0
43.09	0	45.64	0
43.14	0	45.69	0
43.19	0	45.74	0
43.24	0	45.79	0
43.29	0	45.84	0
43.34	0	45.89	0
43.39	0	45.94	0
43.44	0	45.99	0
43.49	0		
43.54	0		
43.59	0		
43.64	0		
43.69	0		
43.74	0		
43.79	0		
43.84	0		
43.89	0		
43.94	0		
43.99	0		
44.04	0		
44.09	0		
44.14	0		
44.19	0		
44.24	0		
44.29	0		
44.34	0		

Summary for Pond 28P: Doghouse SDMH

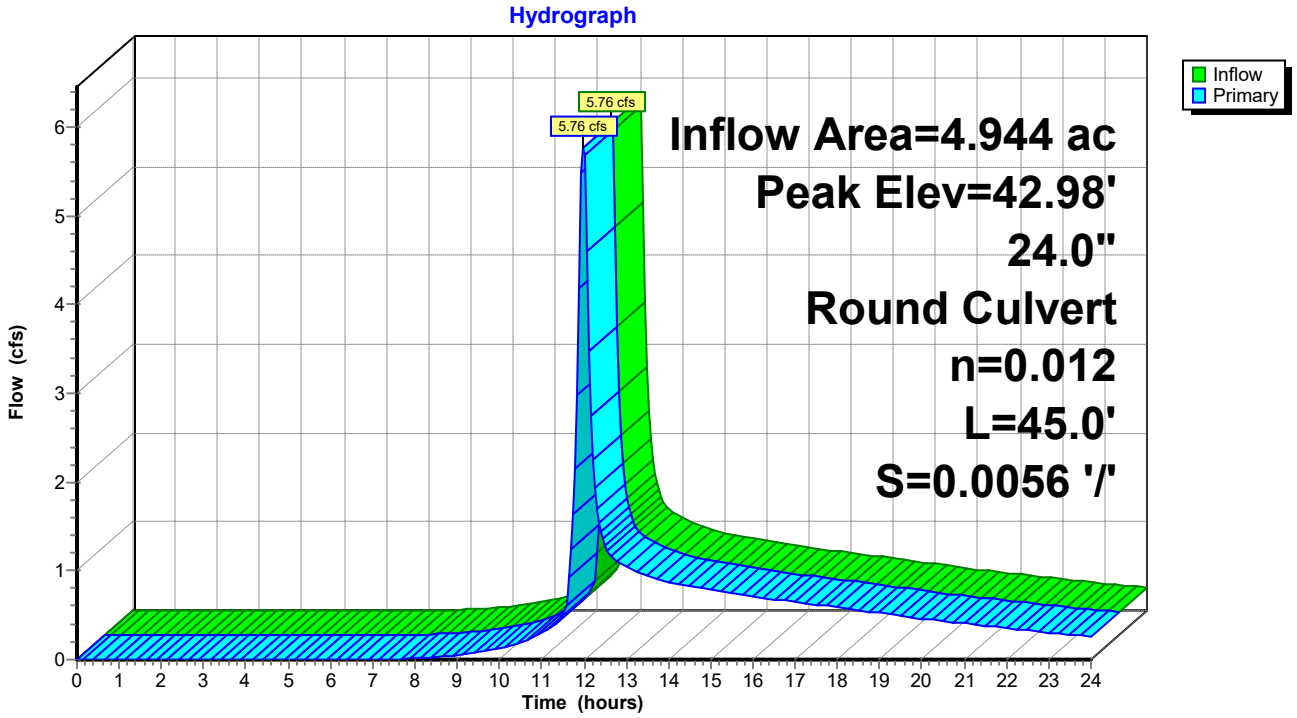
Inflow Area = 4.944 ac, 68.48% Impervious, Inflow Depth > 1.96" for 2-yr event
Inflow = 5.76 cfs @ 11.98 hrs, Volume= 0.806 af
Outflow = 5.76 cfs @ 11.98 hrs, Volume= 0.806 af, Atten= 0%, Lag= 0.0 min
Primary = 5.76 cfs @ 11.98 hrs, Volume= 0.806 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.98' @ 12.00 hrs
Flood Elev= 48.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.65'	**24.0" Round Culvert** L= 45.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.65' / 41.40' S= 0.0056 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.18 cfs @ 11.98 hrs HW=42.95' TW=42.64' (Dynamic Tailwater)
1=Culvert (Outlet Controls 5.18 cfs @ 3.41 fps)

Pond 28P: Doghouse SDMH



Stage-Area-Storage for Pond 28P: Doghouse SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.65	**0**	46.75	0
41.75	0	46.85	0
41.85	0	46.95	0
41.95	0	47.05	0
42.05	0	47.15	0
42.15	0	47.25	0
42.25	0	47.35	0
42.35	0	47.45	0
42.45	0	47.55	0
42.55	0	47.65	0
42.65	0	47.75	0
42.75	0	47.85	0
42.85	0	47.95	0
42.95	0		
43.05	0		
43.15	0		
43.25	0		
43.35	0		
43.45	0		
43.55	0		
43.65	0		
43.75	0		
43.85	0		
43.95	0		
44.05	0		
44.15	0		
44.25	0		
44.35	0		
44.45	0		
44.55	0		
44.65	0		
44.75	0		
44.85	0		
44.95	0		
45.05	0		
45.15	0		
45.25	0		
45.35	0		
45.45	0		
45.55	0		
45.65	0		
45.75	0		
45.85	0		
45.95	0		
46.05	0		
46.15	0		
46.25	0		
46.35	0		
46.45	0		
46.55	0		
46.65	0		

Summary for Pond EX-P: G2 Pond & Underground

Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 2.09" for 2-yr event
Inflow = 7.29 cfs @ 12.01 hrs, Volume= 0.561 af
Outflow = 0.90 cfs @ 12.81 hrs, Volume= 0.510 af, Atten= 88%, Lag= 48.1 min
Primary = 0.90 cfs @ 12.81 hrs, Volume= 0.510 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.01' @ 12.80 hrs Surf.Area= 0 sf Storage= 12,595 cf
Flood Elev= 47.00' Surf.Area= 0 sf Storage= 23,400 cf

Plug-Flow detention time= 227.1 min calculated for 0.509 af (91% of inflow)
Center-of-Mass det. time= 181.0 min (1,000.1 - 819.1)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	23,400 cf	**Custom Stage Data** Listed below

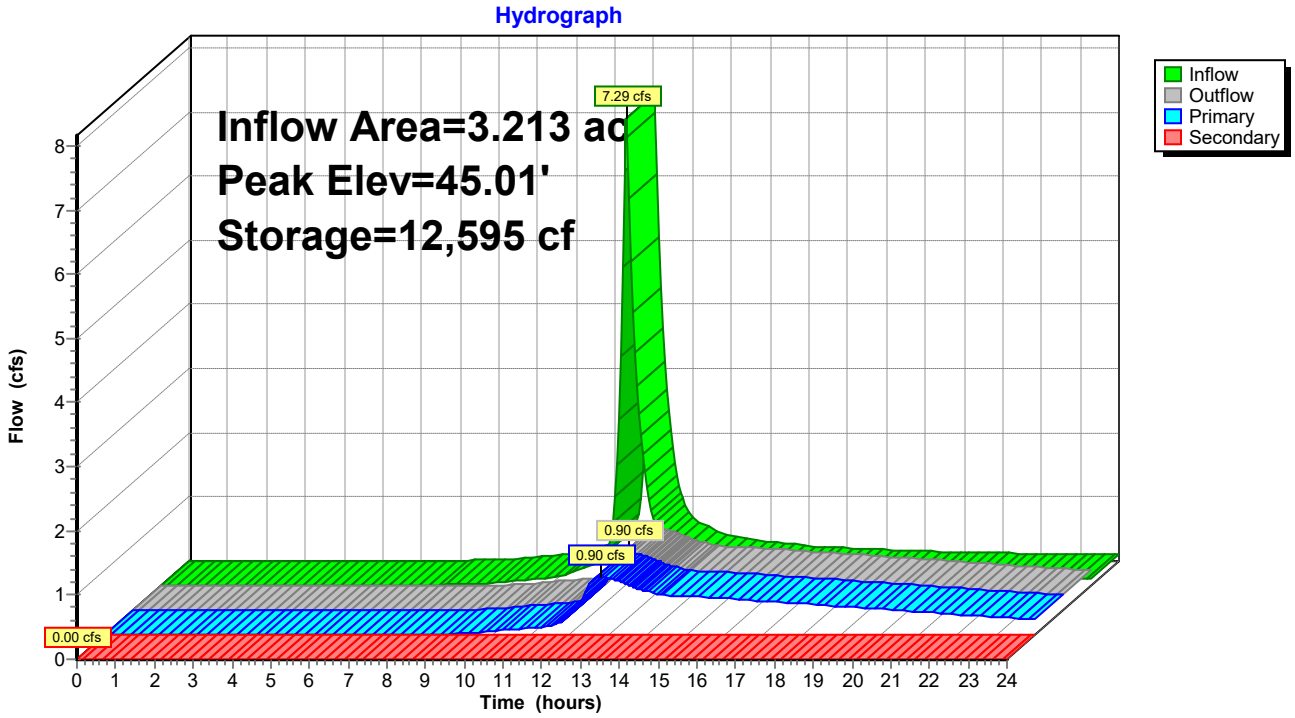
Elevation (feet)	Cum.Store (cubic-feet)
42.00	0
42.25	523
42.50	1,508
42.75	2,524
43.00	3,566
43.25	4,630
43.50	5,712
43.75	6,809
44.00	7,911
44.25	9,006
44.50	10,072
45.00	12,544
46.00	17,789
47.00	23,400

Device	Routing	Invert	Outlet Devices
#1	Primary	42.00'	**30.0" Round 30" PERF HDPE** L= 12.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 42.00' / 41.84' S= 0.0133 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	42.00'	**4.0" Vert. 4" hole in S-2 weir from 2005 G2 Plans** C= 0.600
#3	Device 1	44.70'	**6.0" W x 16.8" H Vert. 4" notched wieir from G2 plans** C= 0.600
#4	Device 1	46.10'	**4.0' long Top of Weir in S-2 outlet box** Cv= 2.62 (C= 3.28)
#5	Secondary	46.50'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.91 cfs @ 12.81 hrs HW=45.01' TW=42.77' (Dynamic Tailwater)
└─**1=30" PERF HDPE** (Passes 0.91 cfs of 31.66 cfs potential flow)
  ├─**2=4" hole in S-2 weir from 2005 G2 Plans** (Orifice Controls 0.63 cfs @ 7.21 fps)
  ├─**3=4" notched wieir from G2 plans** (Orifice Controls 0.28 cfs @ 1.79 fps)
  └─**4=Top of Weir in S-2 outlet box** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond EX-P: G2 Pond & Underground



Stage-Area-Storage for Pond EX-P: G2 Pond & Underground

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.00	0	44.55	10,319
42.05	105	44.60	10,566
42.10	209	44.65	10,814
42.15	314	44.70	11,061
42.20	418	44.75	11,308
42.25	523	44.80	11,555
42.30	720	44.85	11,802
42.35	917	44.90	12,050
42.40	1,114	44.95	12,297
42.45	1,311	45.00	12,544
42.50	1,508	45.05	12,806
42.55	1,711	45.10	13,069
42.60	1,914	45.15	13,331
42.65	2,118	45.20	13,593
42.70	2,321	45.25	13,855
42.75	2,524	45.30	14,117
42.80	2,732	45.35	14,380
42.85	2,941	45.40	14,642
42.90	3,149	45.45	14,904
42.95	3,358	45.50	15,167
43.00	3,566	45.55	15,429
43.05	3,779	45.60	15,691
43.10	3,992	45.65	15,953
43.15	4,204	45.70	16,216
43.20	4,417	45.75	16,478
43.25	4,630	45.80	16,740
43.30	4,846	45.85	17,002
43.35	5,063	45.90	17,264
43.40	5,279	45.95	17,527
43.45	5,496	46.00	17,789
43.50	5,712	46.05	18,070
43.55	5,931	46.10	18,350
43.60	6,151	46.15	18,631
43.65	6,370	46.20	18,911
43.70	6,590	46.25	19,192
43.75	6,809	46.30	19,472
43.80	7,029	46.35	19,753
43.85	7,250	46.40	20,033
43.90	7,470	46.45	20,314
43.95	7,691	46.50	20,595
44.00	7,911	46.55	20,875
44.05	8,130	46.60	21,156
44.10	8,349	46.65	21,436
44.15	8,568	46.70	21,717
44.20	8,787	46.75	21,997
44.25	9,006	46.80	22,278
44.30	9,219	46.85	22,558
44.35	9,432	46.90	22,839
44.40	9,646	46.95	23,119
44.45	9,859	47.00	**23,400**
44.50	10,072		

Summary for Pond EX-PP: G2 Pond & Underground

Inflow Area = 2.920 ac, 71.23% Impervious, Inflow Depth > 2.09" for 2-yr event
Inflow = 6.76 cfs @ 12.03 hrs, Volume= 0.507 af
Outflow = 0.67 cfs @ 13.00 hrs, Volume= 0.484 af, Atten= 90%, Lag= 57.9 min
Primary = 0.67 cfs @ 13.00 hrs, Volume= 0.484 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.74' @ 12.97 hrs Surf.Area= 0 sf Storage= 11,235 cf
Flood Elev= 47.00' Surf.Area= 0 sf Storage= 23,400 cf

Plug-Flow detention time= 203.1 min calculated for 0.484 af (95% of inflow)
Center-of-Mass det. time= 177.2 min (997.6 - 820.5)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	23,400 cf	**Custom Stage Data** Listed below

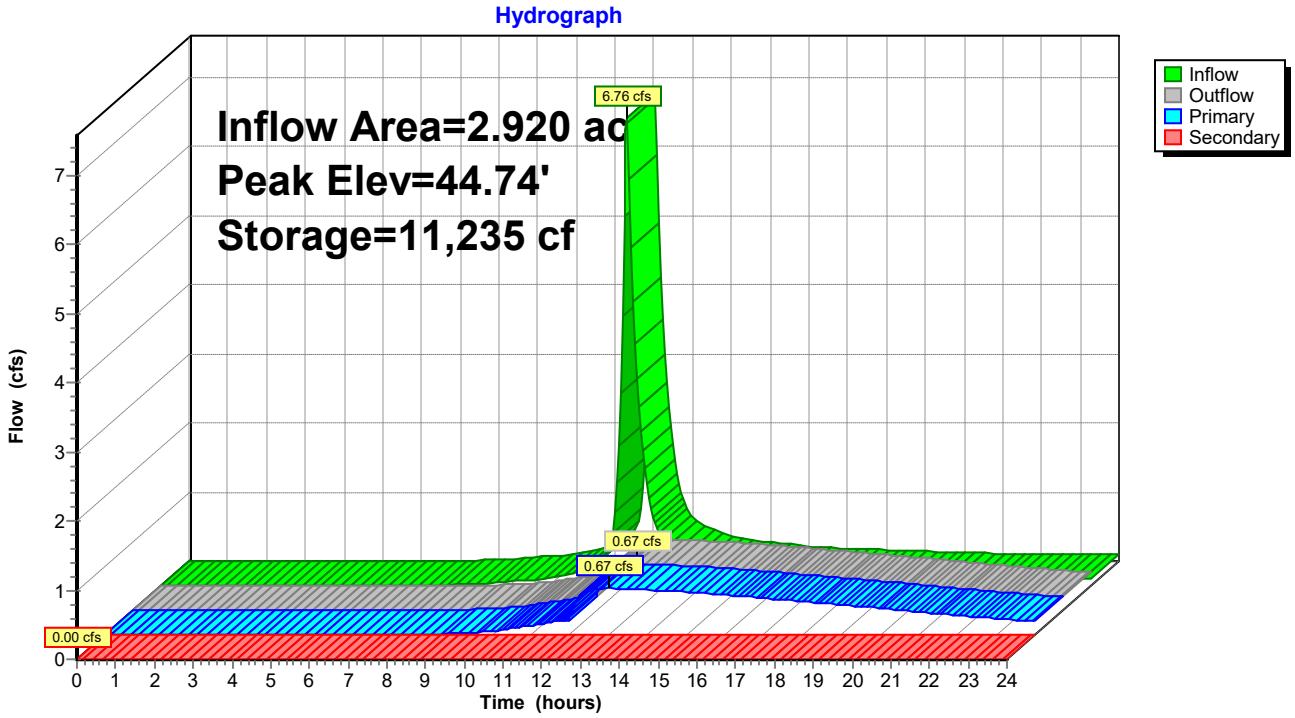
Elevation (feet)	Cum.Store (cubic-feet)
42.00	0
42.25	523
42.50	1,508
42.75	2,524
43.00	3,566
43.25	4,630
43.50	5,712
43.75	6,809
44.00	7,911
44.25	9,006
44.50	10,072
45.00	12,544
46.00	17,789
47.00	23,400

Device	Routing	Invert	Outlet Devices
#1	Primary	42.00'	**30.0" Round 30" PERF HDPE** L= 12.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 42.00' / 41.84' S= 0.0133 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	42.00'	**4.0" Vert. 4" hole in S-2 weir from 2005 G2 Plans** C= 0.600
#3	Device 1	44.70'	**6.0" W x 16.8" H Vert. 4" notched wieir from G2 plans** C= 0.600
#4	Device 1	46.10'	**4.0' long Top of Weir in S-2 outlet box** Cv= 2.62 (C= 3.28)
#5	Secondary	46.50'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.67 cfs @ 13.00 hrs HW=44.74' TW=42.24' (Dynamic Tailwater)
└─**1=30" PERF HDPE** (Passes 0.67 cfs of 28.16 cfs potential flow)
  ├─**2=4" hole in S-2 weir from 2005 G2 Plans** (Orifice Controls 0.66 cfs @ 7.60 fps)
  ├─**3=4" notched wieir from G2 plans** (Orifice Controls 0.01 cfs @ 0.60 fps)
  └─**4=Top of Weir in S-2 outlet box** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond EX-PP: G2 Pond & Underground



Stage-Area-Storage for Pond EX-PP: G2 Pond & Underground

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.00	0	44.55	10,319
42.05	105	44.60	10,566
42.10	209	44.65	10,814
42.15	314	44.70	11,061
42.20	418	44.75	11,308
42.25	523	44.80	11,555
42.30	720	44.85	11,802
42.35	917	44.90	12,050
42.40	1,114	44.95	12,297
42.45	1,311	45.00	12,544
42.50	1,508	45.05	12,806
42.55	1,711	45.10	13,069
42.60	1,914	45.15	13,331
42.65	2,118	45.20	13,593
42.70	2,321	45.25	13,855
42.75	2,524	45.30	14,117
42.80	2,732	45.35	14,380
42.85	2,941	45.40	14,642
42.90	3,149	45.45	14,904
42.95	3,358	45.50	15,167
43.00	3,566	45.55	15,429
43.05	3,779	45.60	15,691
43.10	3,992	45.65	15,953
43.15	4,204	45.70	16,216
43.20	4,417	45.75	16,478
43.25	4,630	45.80	16,740
43.30	4,846	45.85	17,002
43.35	5,063	45.90	17,264
43.40	5,279	45.95	17,527
43.45	5,496	46.00	17,789
43.50	5,712	46.05	18,070
43.55	5,931	46.10	18,350
43.60	6,151	46.15	18,631
43.65	6,370	46.20	18,911
43.70	6,590	46.25	19,192
43.75	6,809	46.30	19,472
43.80	7,029	46.35	19,753
43.85	7,250	46.40	20,033
43.90	7,470	46.45	20,314
43.95	7,691	46.50	20,595
44.00	7,911	46.55	20,875
44.05	8,130	46.60	21,156
44.10	8,349	46.65	21,436
44.15	8,568	46.70	21,717
44.20	8,787	46.75	21,997
44.25	9,006	46.80	22,278
44.30	9,219	46.85	22,558
44.35	9,432	46.90	22,839
44.40	9,646	46.95	23,119
44.45	9,859	47.00	**23,400**
44.50	10,072		

Summary for Pond EX1: Existing SDMH

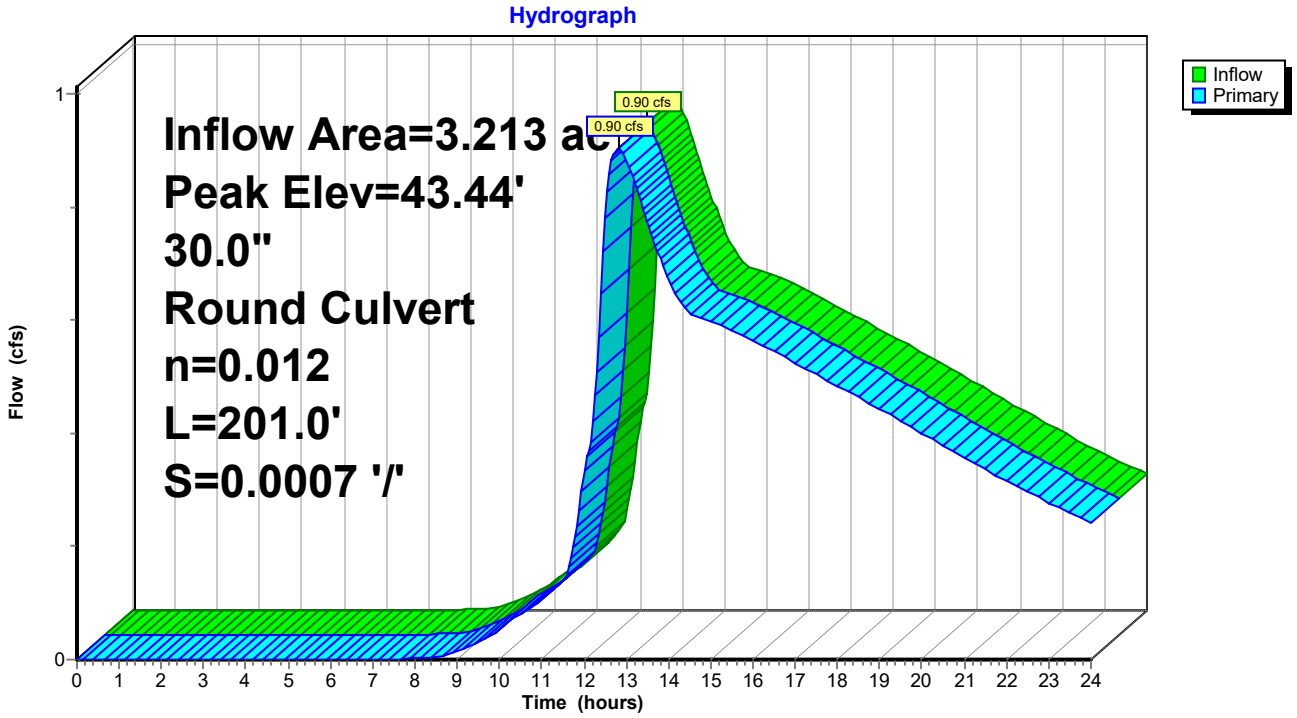
Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 1.90" for 2-yr event
Inflow = 0.90 cfs @ 12.81 hrs, Volume= 0.510 af
Outflow = 0.90 cfs @ 12.83 hrs, Volume= 0.510 af, Atten= 0%, Lag= 0.9 min
Primary = 0.90 cfs @ 12.83 hrs, Volume= 0.510 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.44' @ 12.13 hrs
Flood Elev= 48.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.84'	**30.0" Round 30" PERF. HDPE** L= 201.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.84' / 41.69' S= 0.0007 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=0.96 cfs @ 12.83 hrs HW=42.77' TW=42.72' (Dynamic Tailwater)
1=30" PERF. HDPE (Outlet Controls 0.96 cfs @ 0.86 fps)

Pond EX1: Existing SDMH



Stage-Area-Storage for Pond EX1: Existing SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.84	**0**	46.94	0
41.94	0	47.04	0
42.04	0	47.14	0
42.14	0	47.24	0
42.24	0	47.34	0
42.34	0	47.44	0
42.44	0	47.54	0
42.54	0	47.64	0
42.64	0	47.74	0
42.74	0	47.84	0
42.84	0	47.94	0
42.94	0	48.04	0
43.04	0		
43.14	0		
43.24	0		
43.34	0		
43.44	0		
43.54	0		
43.64	0		
43.74	0		
43.84	0		
43.94	0		
44.04	0		
44.14	0		
44.24	0		
44.34	0		
44.44	0		
44.54	0		
44.64	0		
44.74	0		
44.84	0		
44.94	0		
45.04	0		
45.14	0		
45.24	0		
45.34	0		
45.44	0		
45.54	0		
45.64	0		
45.74	0		
45.84	0		
45.94	0		
46.04	0		
46.14	0		
46.24	0		
46.34	0		
46.44	0		
46.54	0		
46.64	0		
46.74	0		
46.84	0		

Summary for Pond EX2: Existing SDI

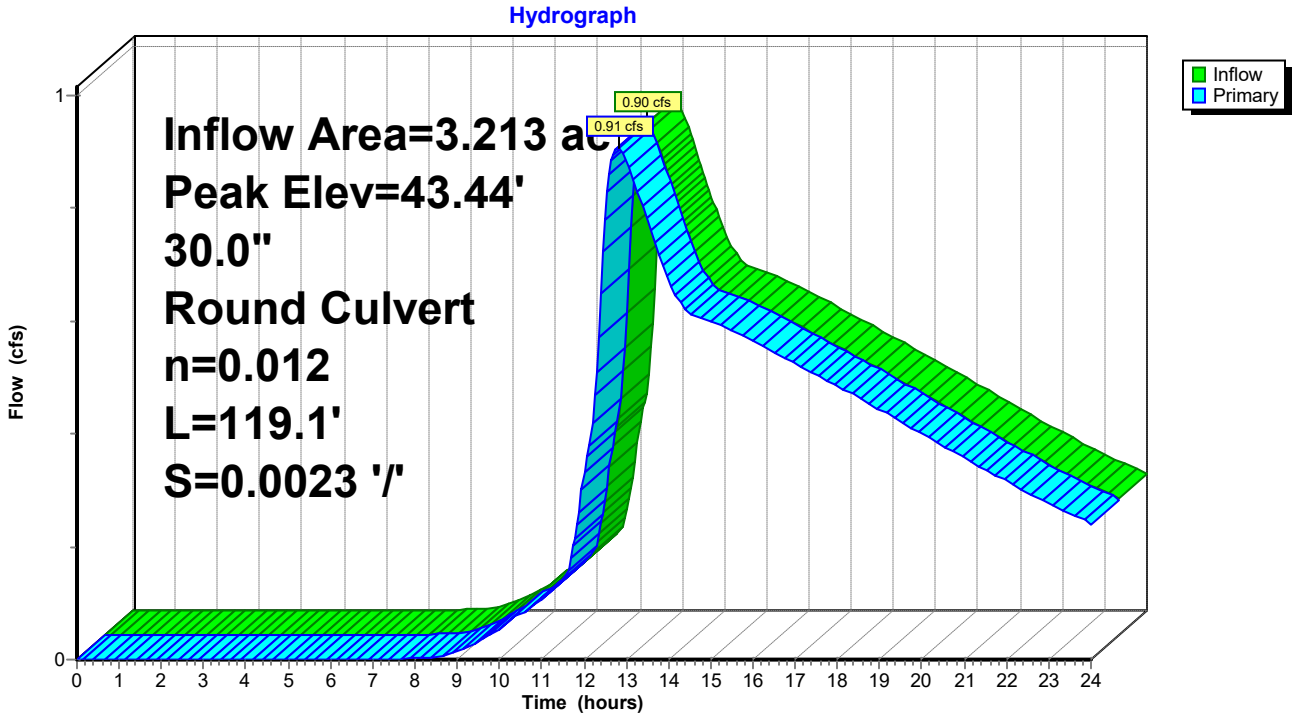
Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 1.90" for 2-yr event
Inflow = 0.90 cfs @ 12.83 hrs, Volume= 0.510 af
Outflow = 0.91 cfs @ 12.84 hrs, Volume= 0.510 af, Atten= 0%, Lag= 0.5 min
Primary = 0.91 cfs @ 12.84 hrs, Volume= 0.510 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.44' @ 12.08 hrs
Flood Elev= 47.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.49'	**30.0" Round 30" HDPE** L= 119.1' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.49' / 41.22' S= 0.0023 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=1.07 cfs @ 12.84 hrs HW=42.72' TW=42.70' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 1.07 cfs @ 0.65 fps)

Pond EX2: Existing SDI



Stage-Area-Storage for Pond EX2: Existing SDI

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.49	**0**	43.53	0	45.57	0
41.53	0	43.57	0	45.61	0
41.57	0	43.61	0	45.65	0
41.61	0	43.65	0	45.69	0
41.65	0	43.69	0	45.73	0
41.69	0	43.73	0	45.77	0
41.73	0	43.77	0	45.81	0
41.77	0	43.81	0	45.85	0
41.81	0	43.85	0	45.89	0
41.85	0	43.89	0	45.93	0
41.89	0	43.93	0	45.97	0
41.93	0	43.97	0	46.01	0
41.97	0	44.01	0	46.05	0
42.01	0	44.05	0	46.09	0
42.05	0	44.09	0	46.13	0
42.09	0	44.13	0	46.17	0
42.13	0	44.17	0	46.21	0
42.17	0	44.21	0	46.25	0
42.21	0	44.25	0	46.29	0
42.25	0	44.29	0	46.33	0
42.29	0	44.33	0	46.37	0
42.33	0	44.37	0	46.41	0
42.37	0	44.41	0	46.45	0
42.41	0	44.45	0	46.49	0
42.45	0	44.49	0	46.53	0
42.49	0	44.53	0	46.57	0
42.53	0	44.57	0	46.61	0
42.57	0	44.61	0	46.65	0
42.61	0	44.65	0	46.69	0
42.65	0	44.69	0	46.73	0
42.69	0	44.73	0	46.77	0
42.73	0	44.77	0	46.81	0
42.77	0	44.81	0	46.85	0
42.81	0	44.85	0	46.89	0
42.85	0	44.89	0	46.93	0
42.89	0	44.93	0	46.97	0
42.93	0	44.97	0	47.01	0
42.97	0	45.01	0	47.05	0
43.01	0	45.05	0		
43.05	0	45.09	0		
43.09	0	45.13	0		
43.13	0	45.17	0		
43.17	0	45.21	0		
43.21	0	45.25	0		
43.25	0	45.29	0		
43.29	0	45.33	0		
43.33	0	45.37	0		
43.37	0	45.41	0		
43.41	0	45.45	0		
43.45	0	45.49	0		
43.49	0	45.53	0		

Summary for Pond EXCL1: Ex Northern Entrance Culvert

Inflow Area = 10.662 ac, 56.13% Impervious, Inflow Depth > 1.65" for 2-yr event
Inflow = 10.58 cfs @ 12.06 hrs, Volume= 1.470 af
Outflow = 10.58 cfs @ 12.06 hrs, Volume= 1.470 af, Atten= 0%, Lag= 0.0 min
Primary = 8.85 cfs @ 12.06 hrs, Volume= 1.448 af
Secondary = 1.73 cfs @ 12.06 hrs, Volume= 0.021 af

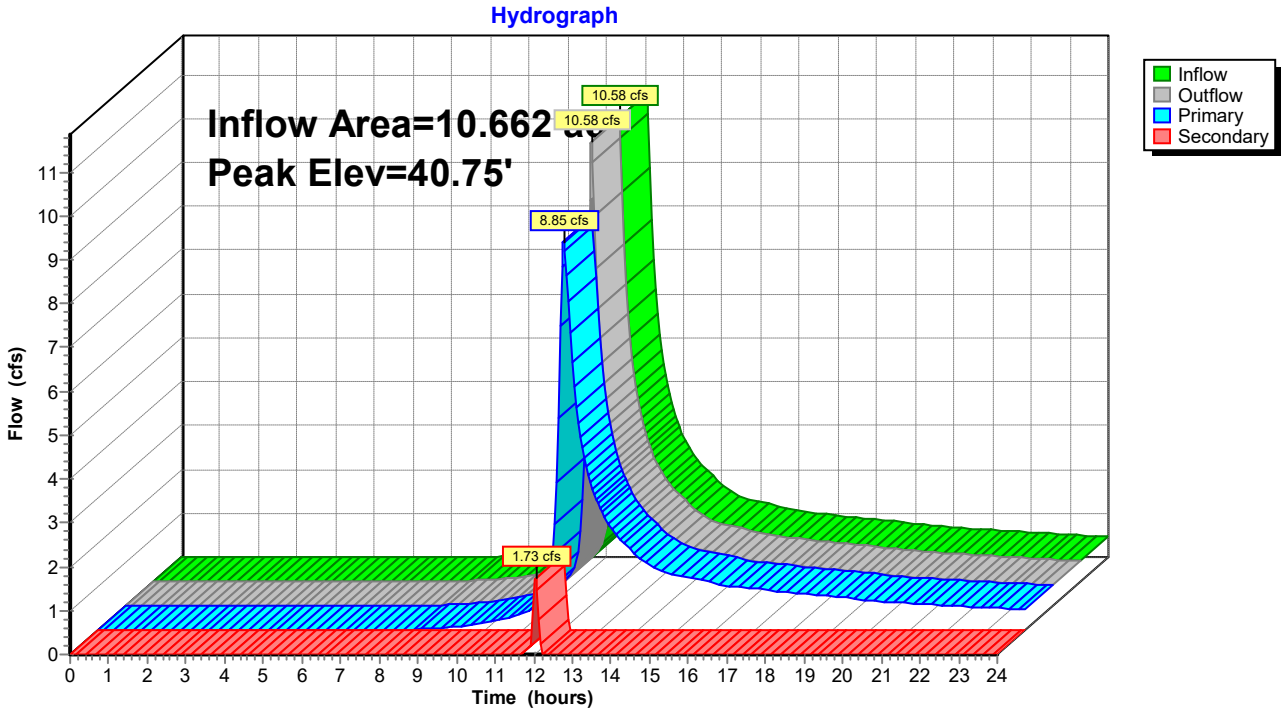
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 40.75' @ 12.06 hrs
Flood Elev= 40.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.52'	**21.0" W x 15.0" H, R=10.8"/33.1" Pipe Arch CMP_Arch_1/2 21x15** L= 44.7' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 38.52' / 37.56' S= 0.0215 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.74 sf
#2	Secondary	40.00'	**1.0' long x 42.0' breadth Over top of entrance pavement** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=8.78 cfs @ 12.06 hrs HW=40.72' TW=0.00' (Dynamic Tailwater)
└**1=CMP_Arch_1/2 21x15** (Barrel Controls 8.78 cfs @ 5.04 fps)

Secondary OutFlow Max=1.64 cfs @ 12.06 hrs HW=40.72' TW=0.00' (Dynamic Tailwater)
└**2=Over top of entrance pavement** (Weir Controls 1.64 cfs @ 2.27 fps)

Pond EXCL1: Ex Northern Entrance Culvert



Stage-Area-Storage for Pond EXCL1: Ex Northern Entrance Culvert

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.52	**0**	39.54	0	40.56	0
38.54	0	39.56	0	40.58	0
38.56	0	39.58	0	40.60	0
38.58	0	39.60	0	40.62	0
38.60	0	39.62	0	40.64	0
38.62	0	39.64	0	40.66	0
38.64	0	39.66	0	40.68	0
38.66	0	39.68	0	40.70	0
38.68	0	39.70	0	40.72	0
38.70	0	39.72	0	40.74	0
38.72	0	39.74	0		
38.74	0	39.76	0		
38.76	0	39.78	0		
38.78	0	39.80	0		
38.80	0	39.82	0		
38.82	0	39.84	0		
38.84	0	39.86	0		
38.86	0	39.88	0		
38.88	0	39.90	0		
38.90	0	39.92	0		
38.92	0	39.94	0		
38.94	0	39.96	0		
38.96	0	39.98	0		
38.98	0	40.00	0		
39.00	0	40.02	0		
39.02	0	40.04	0		
39.04	0	40.06	0		
39.06	0	40.08	0		
39.08	0	40.10	0		
39.10	0	40.12	0		
39.12	0	40.14	0		
39.14	0	40.16	0		
39.16	0	40.18	0		
39.18	0	40.20	0		
39.20	0	40.22	0		
39.22	0	40.24	0		
39.24	0	40.26	0		
39.26	0	40.28	0		
39.28	0	40.30	0		
39.30	0	40.32	0		
39.32	0	40.34	0		
39.34	0	40.36	0		
39.36	0	40.38	0		
39.38	0	40.40	0		
39.40	0	40.42	0		
39.42	0	40.44	0		
39.44	0	40.46	0		
39.46	0	40.48	0		
39.48	0	40.50	0		
39.50	0	40.52	0		
39.52	0	40.54	0		

Summary for Pond EXCL2: Ex Southern Entrance Culvert

Inflow Area = 8.271 ac, 61.23% Impervious, Inflow Depth > 1.78" for 2-yr event
Inflow = 10.05 cfs @ 12.05 hrs, Volume= 1.230 af
Outflow = 10.05 cfs @ 12.05 hrs, Volume= 1.230 af, Atten= 0%, Lag= 0.0 min
Primary = 8.78 cfs @ 12.05 hrs, Volume= 1.217 af
Secondary = 1.27 cfs @ 12.05 hrs, Volume= 0.013 af

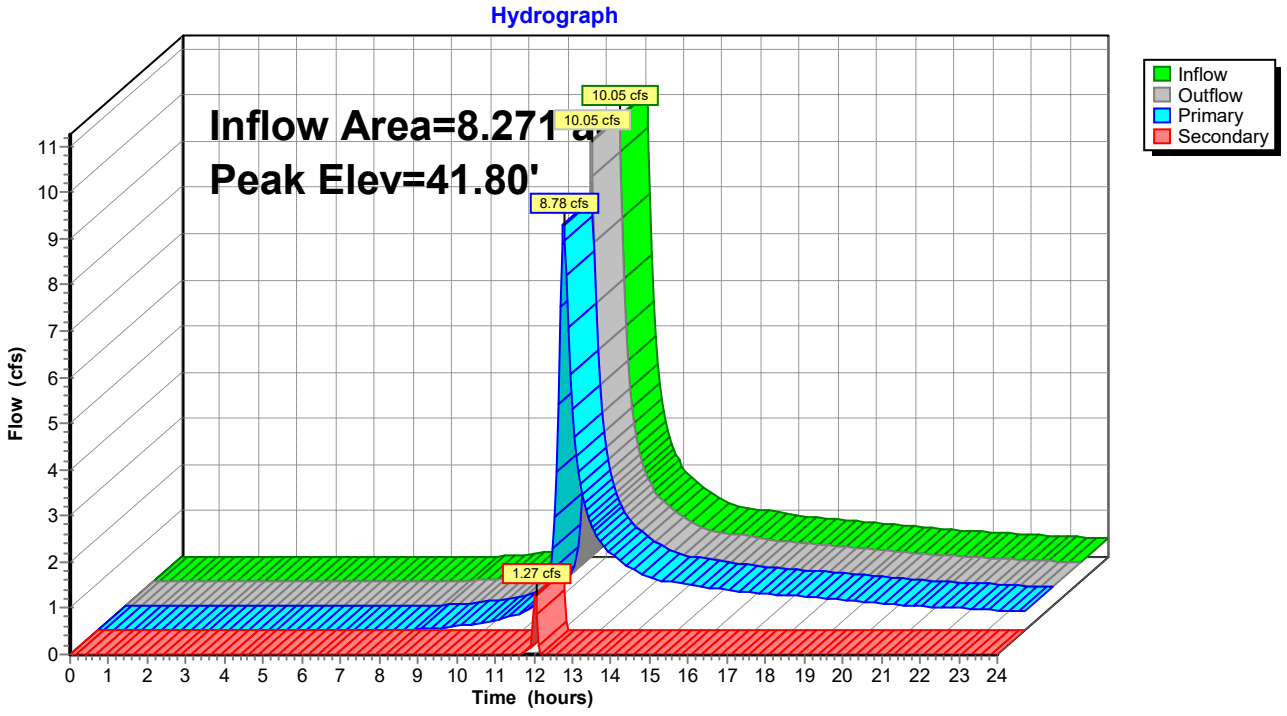
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.80' @ 12.05 hrs
Flood Elev= 41.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.94'	**18.0" Round 18" CMP** L= 46.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 38.94' / 38.46' S= 0.0104 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	41.20'	**1.0' long x 45.0' breadth Over top of entrance pavement** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=8.76 cfs @ 12.05 hrs HW=41.80' TW=39.84' (Dynamic Tailwater)
└**1=18" CMP** (Barrel Controls 8.76 cfs @ 4.96 fps)

Secondary OutFlow Max=1.25 cfs @ 12.05 hrs HW=41.80' TW=39.84' (Dynamic Tailwater)
└**2=Over top of entrance pavement** (Weir Controls 1.25 cfs @ 2.09 fps)

Pond EXCL2: Ex Southern Entrance Culvert



Stage-Area-Storage for Pond EXCL2: Ex Southern Entrance Culvert

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.94	**0**	39.96	0	40.98	0
38.96	0	39.98	0	41.00	0
38.98	0	40.00	0	41.02	0
39.00	0	40.02	0	41.04	0
39.02	0	40.04	0	41.06	0
39.04	0	40.06	0	41.08	0
39.06	0	40.08	0	41.10	0
39.08	0	40.10	0	41.12	0
39.10	0	40.12	0	41.14	0
39.12	0	40.14	0	41.16	0
39.14	0	40.16	0	41.18	0
39.16	0	40.18	0	41.20	0
39.18	0	40.20	0	41.22	0
39.20	0	40.22	0	41.24	0
39.22	0	40.24	0	41.26	0
39.24	0	40.26	0	41.28	0
39.26	0	40.28	0	41.30	0
39.28	0	40.30	0	41.32	0
39.30	0	40.32	0	41.34	0
39.32	0	40.34	0	41.36	0
39.34	0	40.36	0	41.38	0
39.36	0	40.38	0	41.40	0
39.38	0	40.40	0	41.42	0
39.40	0	40.42	0	41.44	0
39.42	0	40.44	0	41.46	0
39.44	0	40.46	0	41.48	0
39.46	0	40.48	0	41.50	0
39.48	0	40.50	0	41.52	0
39.50	0	40.52	0	41.54	0
39.52	0	40.54	0	41.56	0
39.54	0	40.56	0	41.58	0
39.56	0	40.58	0	41.60	0
39.58	0	40.60	0	41.62	0
39.60	0	40.62	0	41.64	0
39.62	0	40.64	0	41.66	0
39.64	0	40.66	0	41.68	0
39.66	0	40.68	0	41.70	0
39.68	0	40.70	0	41.72	0
39.70	0	40.72	0	41.74	0
39.72	0	40.74	0	41.76	0
39.74	0	40.76	0	41.78	0
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39.80	0	40.82	0		
39.82	0	40.84	0		
39.84	0	40.86	0		
39.86	0	40.88	0		
39.88	0	40.90	0		
39.90	0	40.92	0		
39.92	0	40.94	0		
39.94	0	40.96	0		

Summary for Pond MBR#1: MBR#1

Inflow Area = 0.452 ac, 67.32% Impervious, Inflow Depth > 2.00" for 2-yr event
Inflow = 1.67 cfs @ 11.91 hrs, Volume= 0.076 af
Outflow = 0.02 cfs @ 20.12 hrs, Volume= 0.007 af, Atten= 99%, Lag= 492.1 min
Primary = 0.02 cfs @ 20.12 hrs, Volume= 0.007 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.83' @ 20.12 hrs Surf.Area= 2,098 sf Storage= 2,975 cf

Plug-Flow detention time= 651.1 min calculated for 0.007 af (10% of inflow)
Center-of-Mass det. time= 466.8 min (1,278.3 - 811.5)

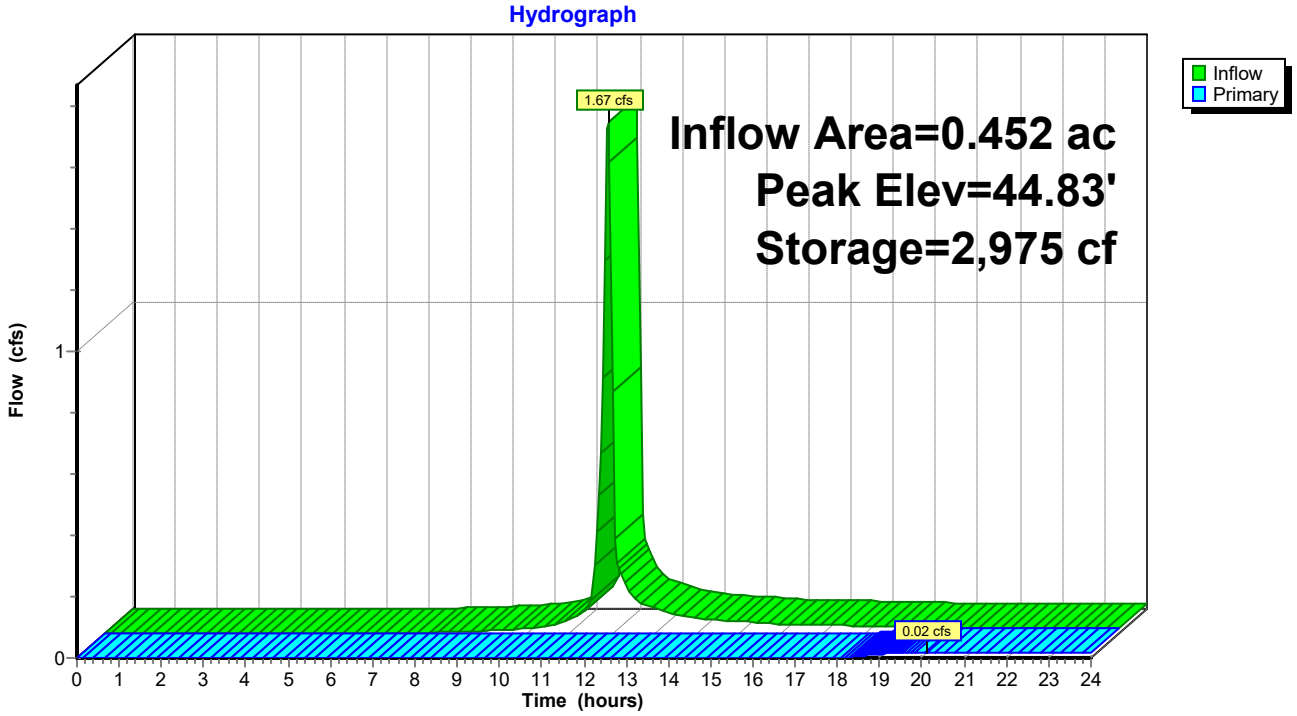
Volume	Invert	Avail.Storage	Storage Description
#1	41.79'	5,356 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.79	1,437	149.0	0.0	0	0	1,437
41.80	1,437	149.0	40.0	6	6	1,438
43.79	1,437	149.0	40.0	1,144	1,150	1,735
43.80	1,437	149.0	100.0	14	1,164	1,736
45.80	2,833	200.0	100.0	4,192	5,356	3,195

Device	Routing	Invert	Outlet Devices
#1	Primary	41.79'	**12.0" Round 12" HDPE** L= 43.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.79' / 41.70' S= 0.0021 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	44.80'	**12.0" W x 6.0" H Vert. 12" notch in box** C= 0.600
#3	Device 1	45.30'	**10.7' long Rim SHA 374.23** 0 End Contraction(s)

Primary OutFlow Max=0.02 cfs @ 20.12 hrs HW=44.83' TW=41.97' (Dynamic Tailwater)
└─**1=12" HDPE** (Passes 0.02 cfs of 5.65 cfs potential flow)
  ├─**2=12" notch in box** (Orifice Controls 0.02 cfs @ 0.56 fps)
  └─**3=Rim SHA 374.23** (Controls 0.00 cfs)

Pond MBR#1: MBR#1



Stage-Area-Storage for Pond MBR#1: MBR#1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
41.79	1,437	0
41.84	1,437	29
41.89	1,437	57
41.94	1,437	86
41.99	1,437	115
42.04	1,437	144
42.09	1,437	172
42.14	1,437	201
42.19	1,437	230
42.24	1,437	259
42.29	1,437	287
42.34	1,437	316
42.39	1,437	345
42.44	1,437	374
42.49	1,437	402
42.54	1,437	431
42.59	1,437	460
42.64	1,437	489
42.69	1,437	517
42.74	1,437	546
42.79	1,437	575
42.84	1,437	604
42.89	1,437	632
42.94	1,437	661
42.99	1,437	690
43.04	1,437	719
43.09	1,437	747
43.14	1,437	776
43.19	1,437	805
43.24	1,437	833
43.29	1,437	862
43.34	1,437	891
43.39	1,437	920
43.44	1,437	948
43.49	1,437	977
43.54	1,437	1,006
43.59	1,437	1,035
43.64	1,437	1,063
43.69	1,437	1,092
43.74	1,437	1,121
43.79	1,437	1,150
43.84	1,460	1,222
43.89	1,490	1,296
43.94	1,519	1,371
43.99	1,549	1,448
44.04	1,580	1,526
44.09	1,610	1,606
44.14	1,641	1,687
44.19	1,672	1,770
44.24	1,704	1,854
44.29	1,736	1,940
44.34	1,768	2,028
44.39	1,800	2,117
44.44	1,833	2,208
44.49	1,866	2,300
44.54	1,899	2,394
44.59	1,932	2,490
44.64	1,966	2,588
44.69	2,000	2,687
44.74	2,035	2,788
44.79	2,069	2,890
44.84	2,104	2,994
44.89	2,140	3,101
44.94	2,175	3,208
44.99	2,211	3,318
45.04	2,247	3,430
45.09	2,284	3,543
45.14	2,320	3,658
45.19	2,357	3,775
45.24	2,395	3,894
45.29	2,432	4,014
45.34	2,470	4,137
45.39	2,509	4,261
45.44	2,547	4,388
45.49	2,586	4,516
45.54	2,625	4,646
45.59	2,664	4,779
45.64	2,704	4,913
45.69	2,744	5,049
45.74	2,784	5,187
45.79	**2,825**	**5,327**

Summary for Pond SGW#1: SGW#1

Inflow Area = 2.315 ac, 74.35% Impervious, Inflow Depth > 2.37" for 2-yr event
Inflow = 9.40 cfs @ 11.91 hrs, Volume= 0.458 af
Outflow = 0.16 cfs @ 15.89 hrs, Volume= 0.125 af, Atten= 98%, Lag= 239.0 min
Primary = 0.16 cfs @ 15.89 hrs, Volume= 0.125 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.19' @ 15.89 hrs Surf.Area= 10,024 sf Storage= 15,344 cf

Plug-Flow detention time= 482.3 min calculated for 0.125 af (27% of inflow)
Center-of-Mass det. time= 312.0 min (1,087.6 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1	39.40'	35,078 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

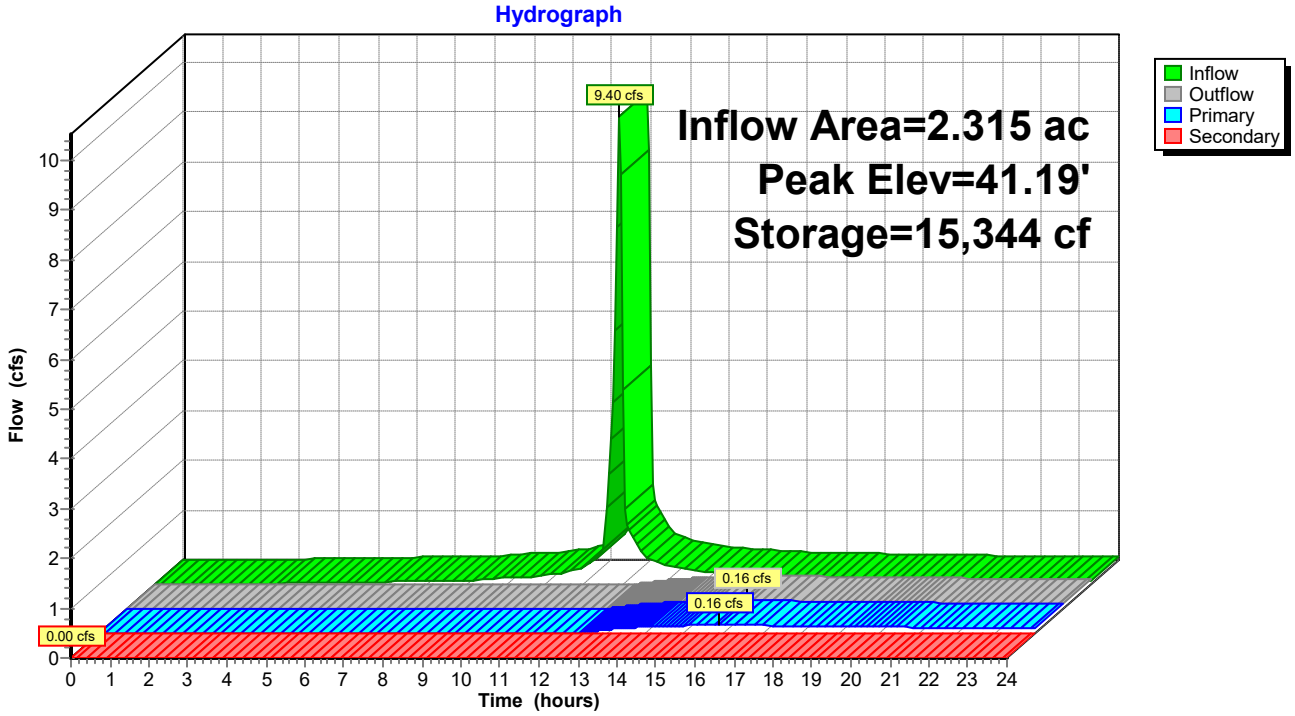
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.40	7,196	368.0	0	0	7,196
40.40	8,760	400.0	7,965	7,965	9,189
42.90	13,074	463.0	27,113	35,078	13,648

Device	Routing	Invert	Outlet Devices
#1	Primary	38.00'	**12.0" Round Culvert** L= 52.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 38.00' / 37.70' S= 0.0058 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	40.90'	**4.0" W x 6.0" H Vert. 4" Notch in 374.23** C= 0.600
#3	Device 1	41.40'	**6.0" W x 12.0" H Vert. 6" Notch in 374.23** C= 0.600
#4	Device 1	42.40'	**10.7' long Rim SHA 374.23** 0 End Contraction(s)
#5	Secondary	42.70'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.16 cfs @ 15.89 hrs HW=41.19' TW=38.24' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.16 cfs of 5.84 cfs potential flow)
  ├**2=4" Notch in 374.23** (Orifice Controls 0.16 cfs @ 1.72 fps)
  ├**3=6" Notch in 374.23** (Controls 0.00 cfs)
  └**4=Rim SHA 374.23** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.40' (Free Discharge)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond SGW#1: SGW#1



Stage-Area-Storage for Pond SGW#1: SGW#1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
39.40	7,196	0
39.45	7,271	362
39.50	7,345	727
39.55	7,421	1,096
39.60	7,497	1,469
39.65	7,573	1,846
39.70	7,649	2,226
39.75	7,726	2,611
39.80	7,803	2,999
39.85	7,881	3,391
39.90	7,959	3,787
39.95	8,037	4,187
40.00	8,116	4,591
40.05	8,195	4,999
40.10	8,275	5,410
40.15	8,355	5,826
40.20	8,435	6,246
40.25	8,516	6,670
40.30	8,597	7,097
40.35	8,678	7,529
40.40	8,760	7,965
40.45	8,838	8,405
40.50	8,916	8,849
40.55	8,995	9,297
40.60	9,073	9,748
40.65	9,153	10,204
40.70	9,232	10,664
40.75	9,312	11,127
40.80	9,392	11,595
40.85	9,473	12,067
40.90	9,554	12,542
40.95	9,635	13,022
41.00	9,717	13,506
41.05	9,799	13,994
41.10	9,881	14,486
41.15	9,964	14,982
41.20	10,047	15,482
41.25	10,130	15,986
41.30	10,214	16,495
41.35	10,298	17,008
41.40	10,382	17,525
41.45	10,467	18,046
41.50	10,552	18,572
41.55	10,638	19,101
41.60	10,723	19,635
41.65	10,809	20,174
41.70	10,896	20,716
41.75	10,983	21,263
41.80	11,070	21,815
41.85	11,157	22,370
41.90	11,245	22,930
41.95	11,333	23,495
42.00	11,422	24,064
42.05	11,511	24,637
42.10	11,600	25,215
42.15	11,689	25,797
42.20	11,779	26,384
42.25	11,870	26,975
42.30	11,960	27,571
42.35	12,051	28,171
42.40	12,142	28,776
42.45	12,234	29,385
42.50	12,326	29,999
42.55	12,418	30,618
42.60	12,511	31,241
42.65	12,604	31,869
42.70	12,697	32,501
42.75	12,791	33,139
42.80	12,885	33,780
42.85	12,979	34,427
42.90	**13,074**	**35,078**

Summary for Pond SGW#2: SGW#2

Inflow Area = 0.931 ac, 51.02% Impervious, Inflow Depth > 1.64" for 2-yr event
Inflow = 2.87 cfs @ 11.91 hrs, Volume= 0.127 af
Outflow = 0.02 cfs @ 24.00 hrs, Volume= 0.004 af, Atten= 99%, Lag= 725.5 min
Primary = 0.02 cfs @ 24.00 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.65' @ 24.00 hrs Surf.Area= 4,528 sf Storage= 5,358 cf

Plug-Flow detention time= 830.0 min calculated for 0.004 af (3% of inflow)
Center-of-Mass det. time= 512.9 min (1,330.3 - 817.4)

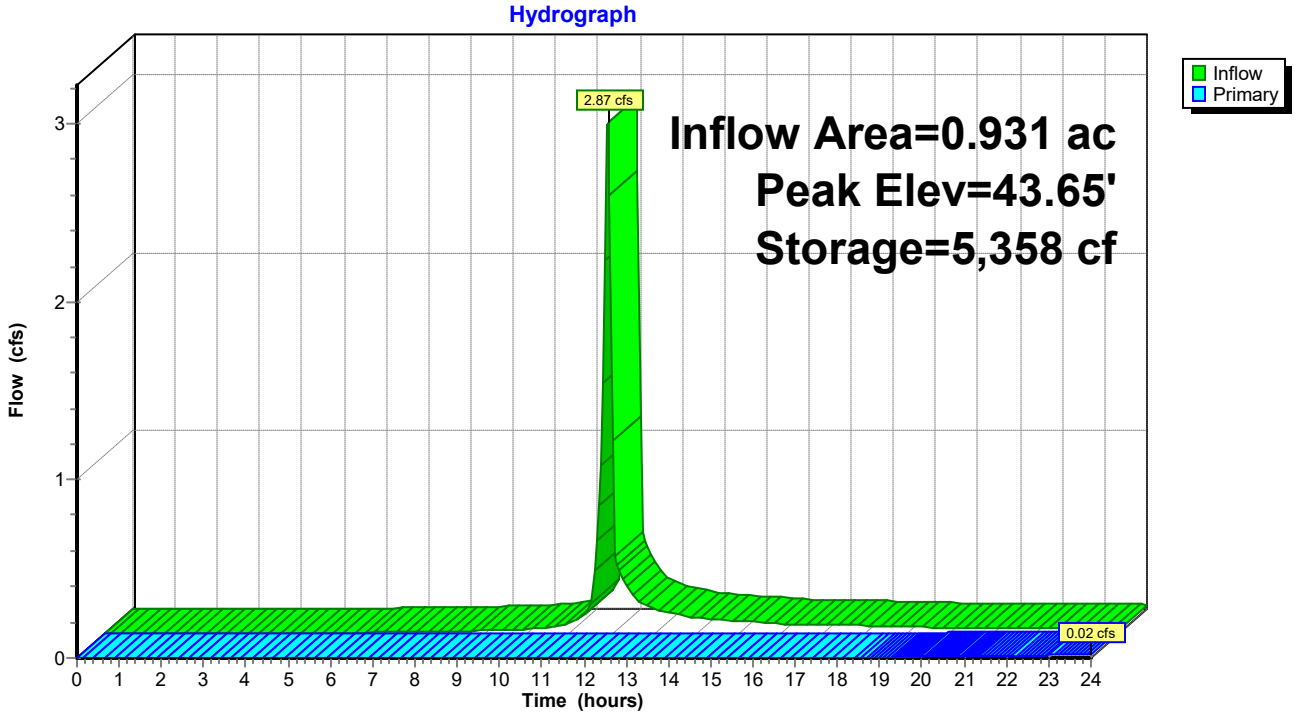
Volume	Invert	Avail.Storage	Storage Description
#1	42.05'	12,835 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
42.05	1,891	314.0	0	0	1,891
43.05	3,888	346.0	2,830	2,830	3,604
45.05	6,207	396.0	10,005	12,835	6,648

Device	Routing	Invert	Outlet Devices
#1	Primary	43.55'	**2.0" W x 12.0" H Vert. 2" Notch in box** C= 0.600
#2	Primary	44.55'	**16.3' long Rim SHA 374.70** 0 End Contraction(s)

Primary OutFlow Max=0.02 cfs @ 24.00 hrs HW=43.65' TW=0.00' (Dynamic Tailwater)
1=2" Notch in box (Orifice Controls 0.02 cfs @ 1.02 fps)
2=Rim SHA 374.70 (Controls 0.00 cfs)

Pond SGW#2: SGW#2



Stage-Area-Storage for Pond SGW#2: SGW#2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
42.05	1,891	0
42.10	1,974	97
42.15	2,059	197
42.20	2,145	303
42.25	2,233	412
42.30	2,323	526
42.35	2,415	644
42.40	2,509	767
42.45	2,604	895
42.50	2,702	1,028
42.55	2,800	1,165
42.60	2,901	1,308
42.65	3,004	1,456
42.70	3,108	1,608
42.75	3,214	1,766
42.80	3,322	1,930
42.85	3,432	2,099
42.90	3,543	2,273
42.95	3,656	2,453
43.00	3,771	2,639
43.05	3,888	2,830
43.10	3,939	3,026
43.15	3,991	3,224
43.20	4,043	3,425
43.25	4,096	3,628
43.30	4,148	3,835
43.35	4,201	4,043
43.40	4,255	4,255
43.45	4,309	4,469
43.50	4,363	4,686
43.55	4,417	4,905
43.60	4,472	5,127
43.65	4,527	5,352
43.70	4,582	5,580
43.75	4,638	5,810
43.80	4,694	6,044
43.85	4,751	6,280
43.90	4,808	6,519
43.95	4,865	6,761
44.00	4,922	7,005
44.05	4,980	7,253
44.10	5,038	7,503
44.15	5,097	7,757
44.20	5,155	8,013
44.25	5,215	8,272
44.30	5,274	8,535
44.35	5,334	8,800
44.40	5,394	9,068
44.45	5,455	9,339
44.50	5,515	9,613
44.55	5,577	9,891
44.60	5,638	10,171
44.65	5,700	10,454
44.70	5,762	10,741
44.75	5,825	11,031
44.80	5,888	11,324
44.85	5,951	11,619
44.90	6,014	11,919
44.95	6,078	12,221
45.00	6,142	12,526
45.05	**6,207**	**12,835**

Summary for Pond TOE1: SDI/OS#1

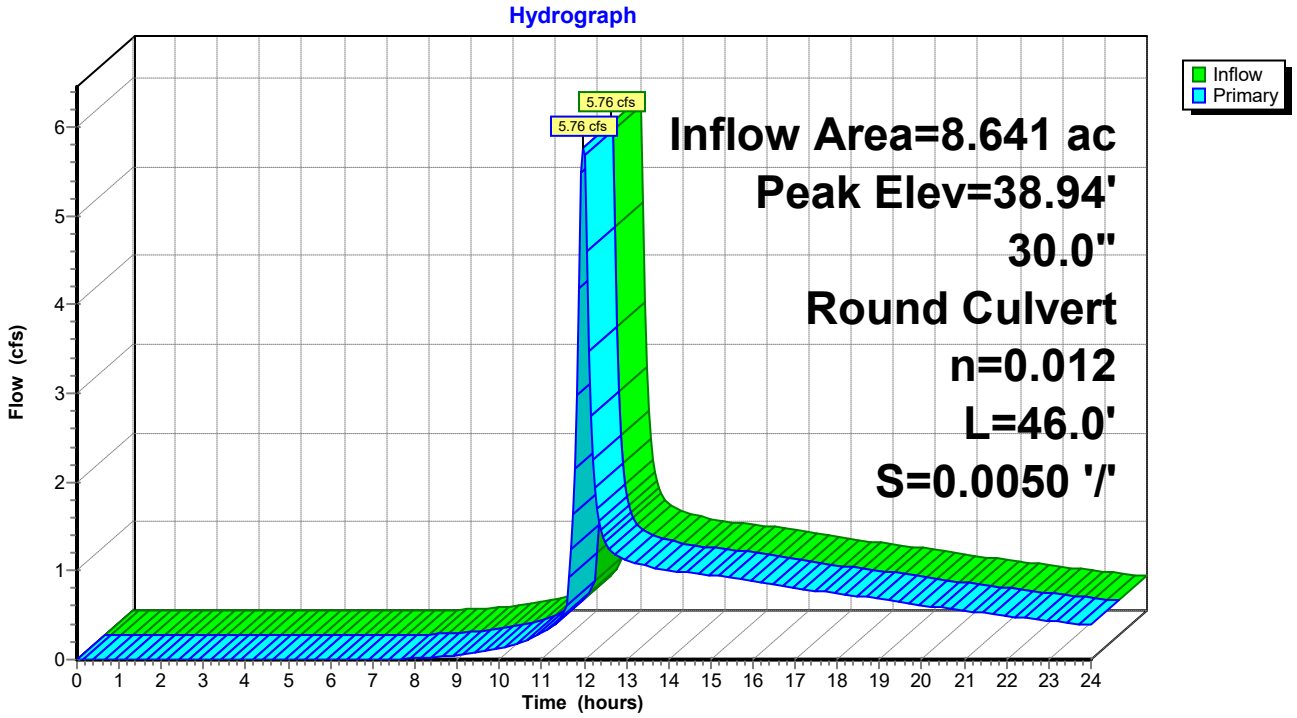
Inflow Area = 8.641 ac, 68.11% Impervious, Inflow Depth > 1.31" for 2-yr event
Inflow = 5.76 cfs @ 11.98 hrs, Volume= 0.942 af
Outflow = 5.76 cfs @ 11.98 hrs, Volume= 0.942 af, Atten= 0%, Lag= 0.0 min
Primary = 5.76 cfs @ 11.98 hrs, Volume= 0.942 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 38.94' @ 11.98 hrs
Flood Elev= 42.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	37.83'	**30.0" Round 30" HDPE** L= 46.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 37.83' / 37.60' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=5.62 cfs @ 11.98 hrs HW=38.93' TW=0.00' (Dynamic Tailwater)
1=30" HDPE (Barrel Controls 5.62 cfs @ 3.99 fps)

Pond TOE1: SDI/OS#1



Stage-Area-Storage for Pond TOE1: SDI/OS#1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
37.83	**0**	40.38	0
37.88	0	40.43	0
37.93	0	40.48	0
37.98	0	40.53	0
38.03	0	40.58	0
38.08	0	40.63	0
38.13	0	40.68	0
38.18	0	40.73	0
38.23	0	40.78	0
38.28	0	40.83	0
38.33	0	40.88	0
38.38	0	40.93	0
38.43	0	40.98	0
38.48	0	41.03	0
38.53	0	41.08	0
38.58	0	41.13	0
38.63	0	41.18	0
38.68	0	41.23	0
38.73	0	41.28	0
38.78	0	41.33	0
38.83	0	41.38	0
38.88	0	41.43	0
38.93	0	41.48	0
38.98	0	41.53	0
39.03	0	41.58	0
39.08	0	41.63	0
39.13	0	41.68	0
39.18	0	41.73	0
39.23	0	41.78	0
39.28	0	41.83	0
39.33	0	41.88	0
39.38	0	41.93	0
39.43	0	41.98	0
39.48	0	42.03	0
39.53	0	42.08	0
39.58	0	42.13	0
39.63	0	42.18	0
39.68	0	42.23	0
39.73	0	42.28	0
39.78	0	42.33	0
39.83	0	42.38	0
39.88	0	42.43	0
39.93	0	42.48	0
39.98	0		
40.03	0		
40.08	0		
40.13	0		
40.18	0		
40.23	0		
40.28	0		
40.33	0		

Summary for Pond TOE2: SDMH

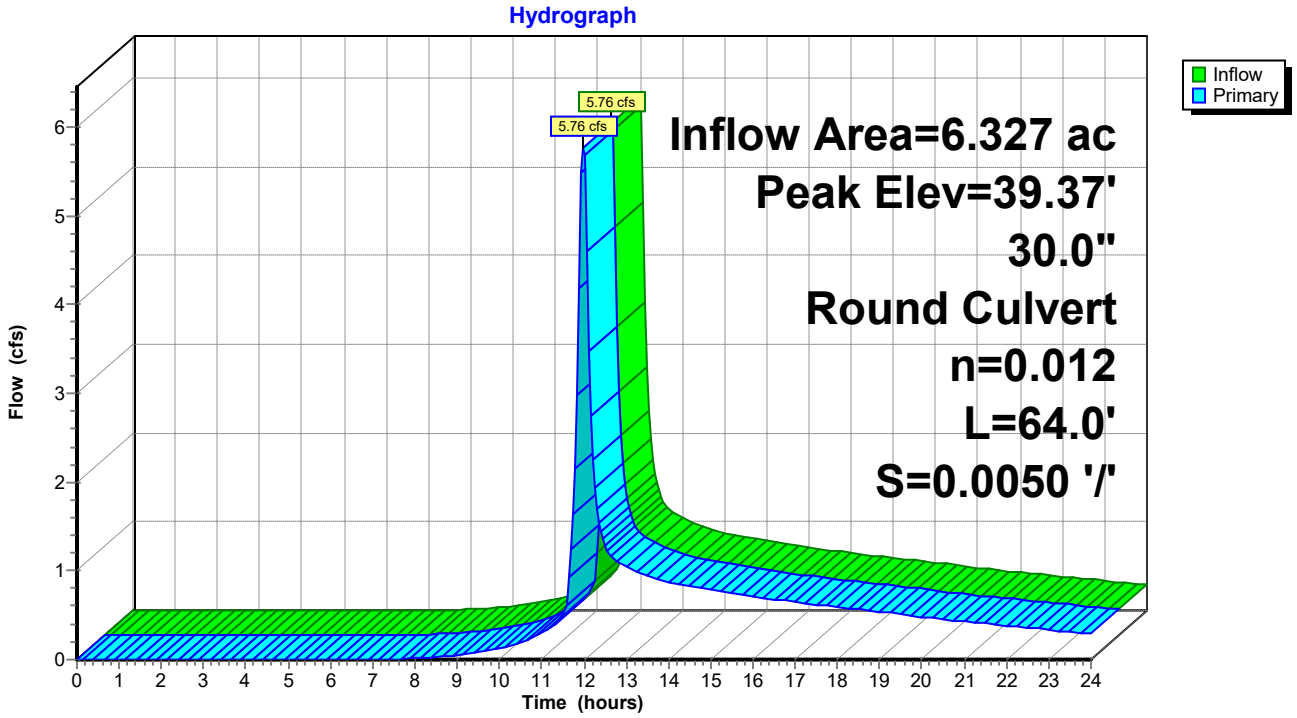
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 1.55" for 2-yr event
Inflow = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af
Outflow = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af, Atten= 0%, Lag= 0.0 min
Primary = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 39.37' @ 12.00 hrs
Flood Elev= 43.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.25'	**30.0" Round 30" HDPE** L= 64.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 38.25' / 37.93' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=5.23 cfs @ 11.98 hrs HW=39.35' TW=38.93' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 5.23 cfs @ 3.72 fps)

Pond TOE2: SDMH



Stage-Area-Storage for Pond TOE2: SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.25	**0**	40.29	0	42.33	0
38.29	0	40.33	0	42.37	0
38.33	0	40.37	0	42.41	0
38.37	0	40.41	0	42.45	0
38.41	0	40.45	0	42.49	0
38.45	0	40.49	0	42.53	0
38.49	0	40.53	0	42.57	0
38.53	0	40.57	0	42.61	0
38.57	0	40.61	0	42.65	0
38.61	0	40.65	0	42.69	0
38.65	0	40.69	0	42.73	0
38.69	0	40.73	0	42.77	0
38.73	0	40.77	0	42.81	0
38.77	0	40.81	0	42.85	0
38.81	0	40.85	0	42.89	0
38.85	0	40.89	0	42.93	0
38.89	0	40.93	0	42.97	0
38.93	0	40.97	0	43.01	0
38.97	0	41.01	0	43.05	0
39.01	0	41.05	0	43.09	0
39.05	0	41.09	0	43.13	0
39.09	0	41.13	0	43.17	0
39.13	0	41.17	0	43.21	0
39.17	0	41.21	0	43.25	0
39.21	0	41.25	0	43.29	0
39.25	0	41.29	0		
39.29	0	41.33	0		
39.33	0	41.37	0		
39.37	0	41.41	0		
39.41	0	41.45	0		
39.45	0	41.49	0		
39.49	0	41.53	0		
39.53	0	41.57	0		
39.57	0	41.61	0		
39.61	0	41.65	0		
39.65	0	41.69	0		
39.69	0	41.73	0		
39.73	0	41.77	0		
39.77	0	41.81	0		
39.81	0	41.85	0		
39.85	0	41.89	0		
39.89	0	41.93	0		
39.93	0	41.97	0		
39.97	0	42.01	0		
40.01	0	42.05	0		
40.05	0	42.09	0		
40.09	0	42.13	0		
40.13	0	42.17	0		
40.17	0	42.21	0		
40.21	0	42.25	0		
40.25	0	42.29	0		

Summary for Pond TOE3: SDMH

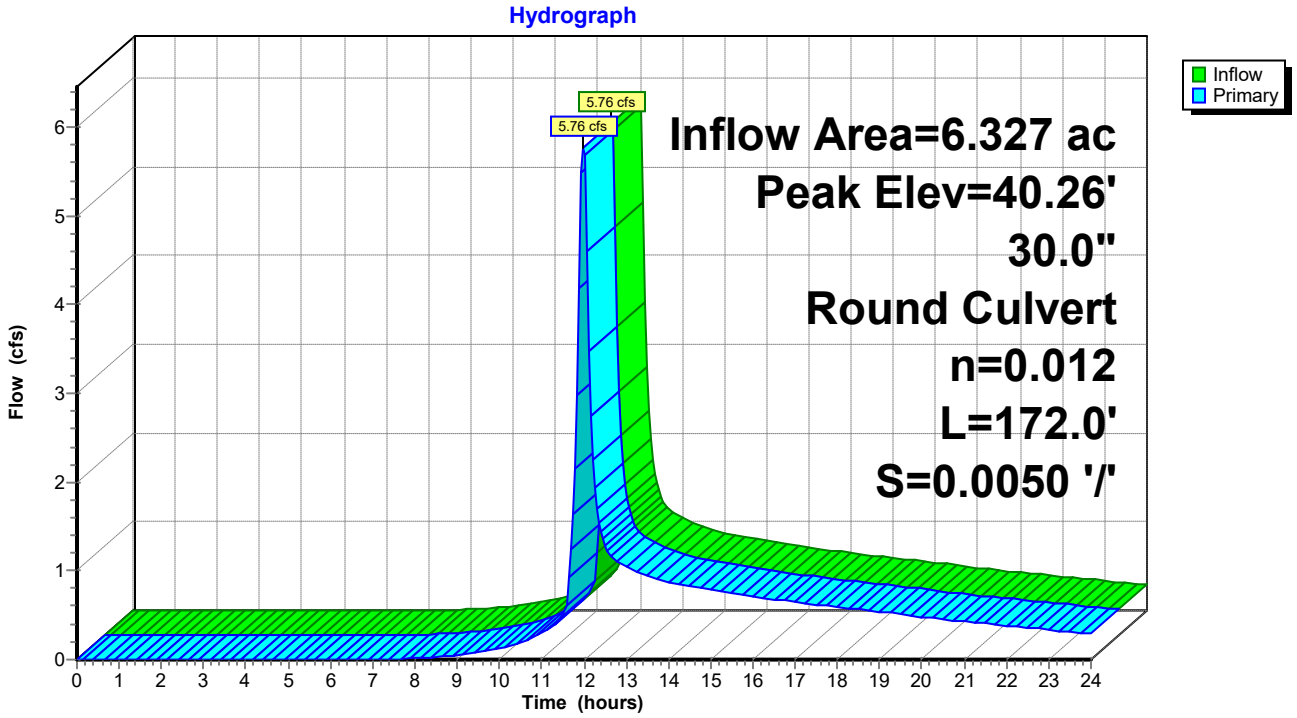
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 1.55" for 2-yr event
Inflow = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af
Outflow = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af, Atten= 0%, Lag= 0.0 min
Primary = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 40.26' @ 12.00 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.21'	**30.0" Round 30" HDPE** L= 172.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 39.21' / 38.35' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=5.32 cfs @ 11.98 hrs HW=40.24' TW=39.35' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 5.32 cfs @ 4.12 fps)

Pond TOE3: SDMH



Stage-Area-Storage for Pond TOE3: SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
39.21	**0**	44.31	0
39.31	0	44.41	0
39.41	0	44.51	0
39.51	0	44.61	0
39.61	0	44.71	0
39.71	0	44.81	0
39.81	0	44.91	0
39.91	0	45.01	0
40.01	0	45.11	0
40.11	0	45.21	0
40.21	0	45.31	0
40.31	0	45.41	0
40.41	0	45.51	0
40.51	0	45.61	0
40.61	0	45.71	0
40.71	0	45.81	0
40.81	0		
40.91	0		
41.01	0		
41.11	0		
41.21	0		
41.31	0		
41.41	0		
41.51	0		
41.61	0		
41.71	0		
41.81	0		
41.91	0		
42.01	0		
42.11	0		
42.21	0		
42.31	0		
42.41	0		
42.51	0		
42.61	0		
42.71	0		
42.81	0		
42.91	0		
43.01	0		
43.11	0		
43.21	0		
43.31	0		
43.41	0		
43.51	0		
43.61	0		
43.71	0		
43.81	0		
43.91	0		
44.01	0		
44.11	0		
44.21	0		

Summary for Pond TOE4: SDI/OS #2

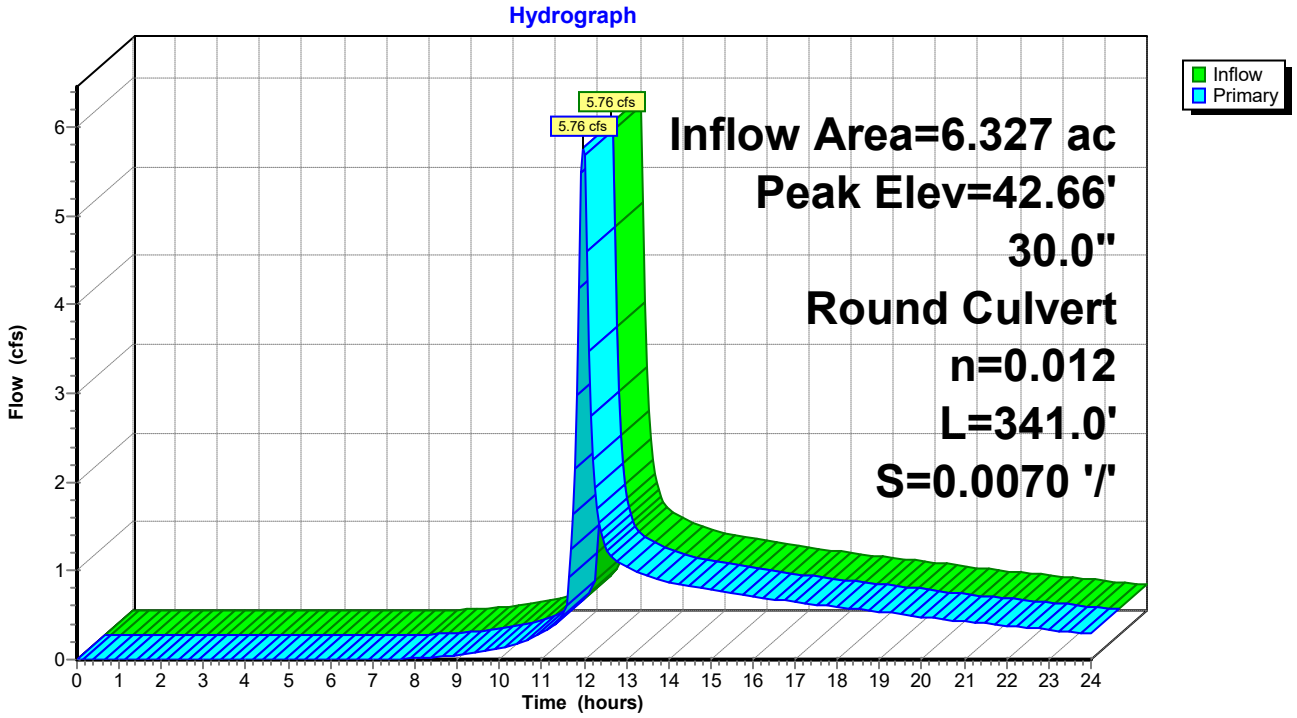
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 1.55" for 2-yr event
Inflow = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af
Outflow = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af, Atten= 0%, Lag= 0.0 min
Primary = 5.76 cfs @ 11.98 hrs, Volume= 0.818 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.66' @ 11.98 hrs
Flood Elev= 45.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.70'	**30.0" Round 30" HPDE** L= 341.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.70' / 39.31' S= 0.0070 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=5.62 cfs @ 11.98 hrs HW=42.64' TW=40.24' (Dynamic Tailwater)
↑**1=30" HPDE** (Inlet Controls 5.62 cfs @ 3.31 fps)

Pond TOE4: SDI/OS #2



Stage-Area-Storage for Pond TOE4: SDI/OS #2

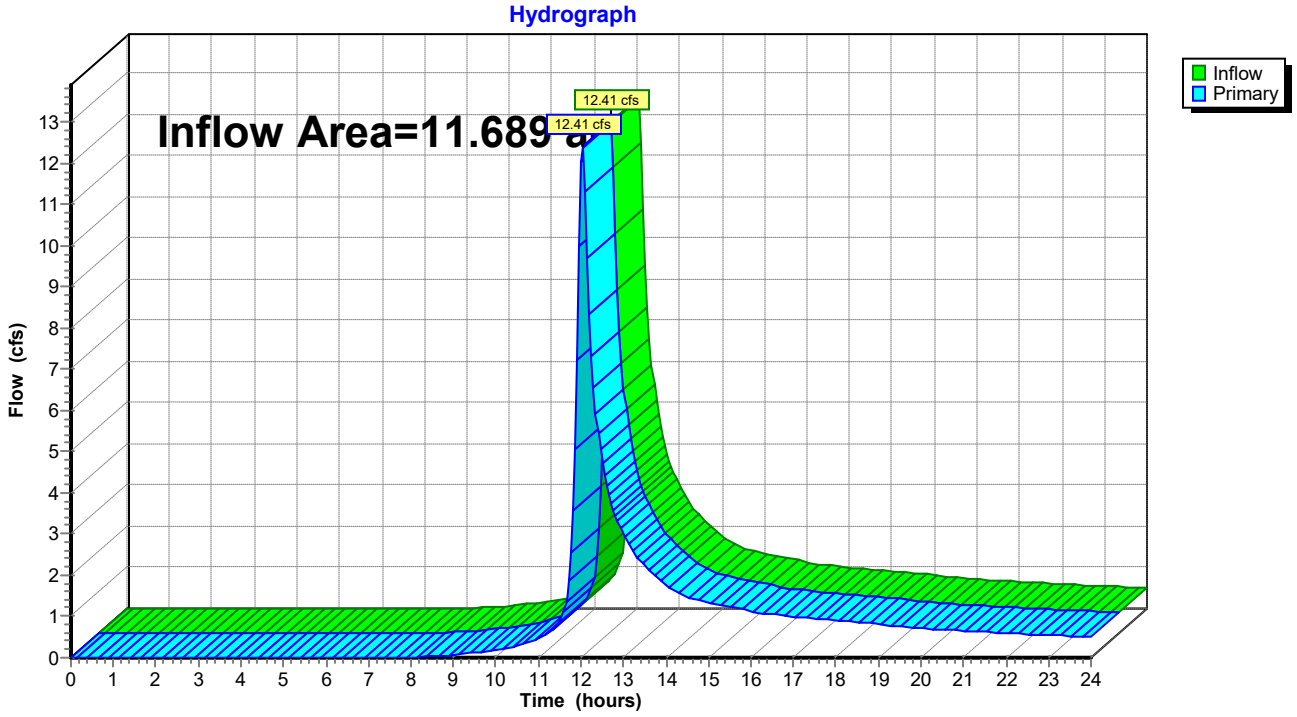
Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.70	**0**	44.25	0
41.75	0	44.30	0
41.80	0	44.35	0
41.85	0	44.40	0
41.90	0	44.45	0
41.95	0	44.50	0
42.00	0	44.55	0
42.05	0	44.60	0
42.10	0	44.65	0
42.15	0	44.70	0
42.20	0	44.75	0
42.25	0	44.80	0
42.30	0	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0		
42.60	0		
42.65	0		
42.70	0		
42.75	0		
42.80	0		
42.85	0		
42.90	0		
42.95	0		
43.00	0		
43.05	0		
43.10	0		
43.15	0		
43.20	0		
43.25	0		
43.30	0		
43.35	0		
43.40	0		
43.45	0		
43.50	0		
43.55	0		
43.60	0		
43.65	0		
43.70	0		
43.75	0		
43.80	0		
43.85	0		
43.90	0		
43.95	0		
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		

Summary for Link PRE: PRE-DEVELOPMENT

Inflow Area = 11.689 ac, 55.03% Impervious, Inflow Depth > 1.67" for 2-yr event
Inflow = 12.41 cfs @ 12.04 hrs, Volume= 1.628 af
Primary = 12.41 cfs @ 12.04 hrs, Volume= 1.628 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link PRE: PRE-DEVELOPMENT

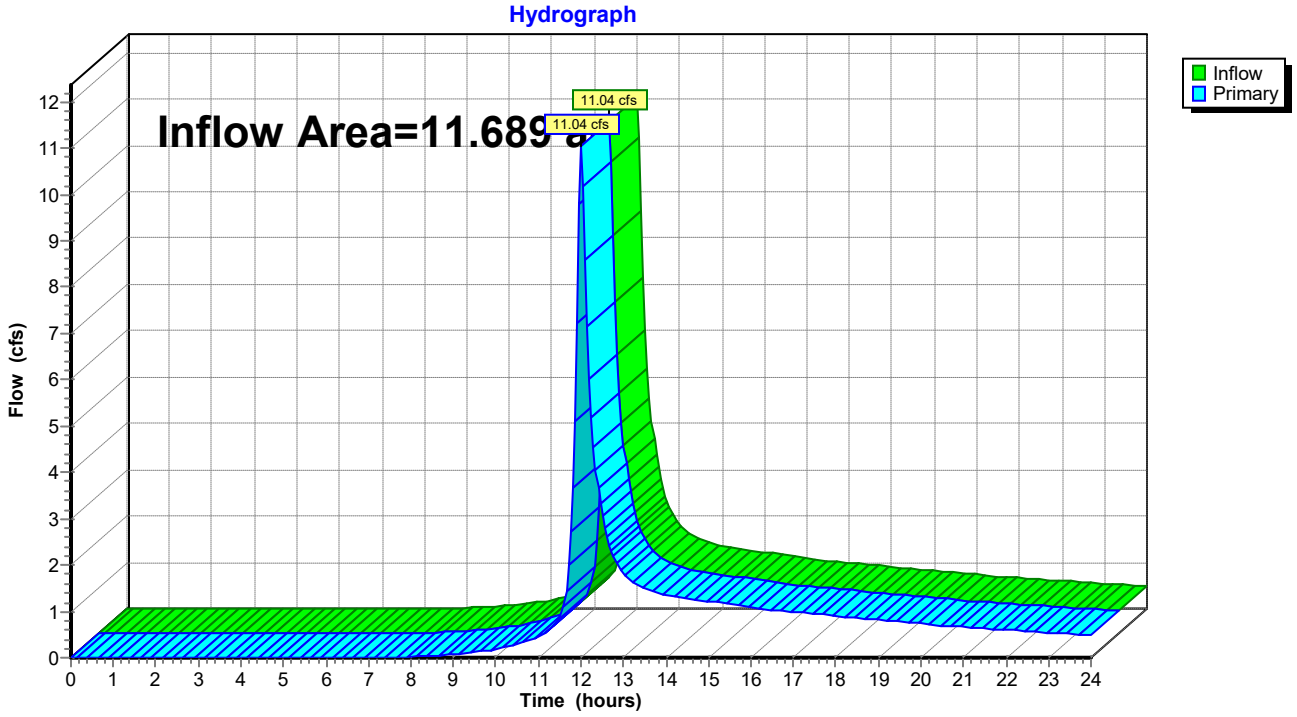


Summary for Link PST: POST-DEVELOPMENT

Inflow Area = 11.689 ac, 65.73% Impervious, Inflow Depth > 1.43" for 2-yr event
Inflow = 11.04 cfs @ 12.00 hrs, Volume= 1.397 af
Primary = 11.04 cfs @ 12.00 hrs, Volume= 1.397 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link PST: POST-DEVELOPMENT



Summary for Subcatchment EX-1: NORTH OF SITE

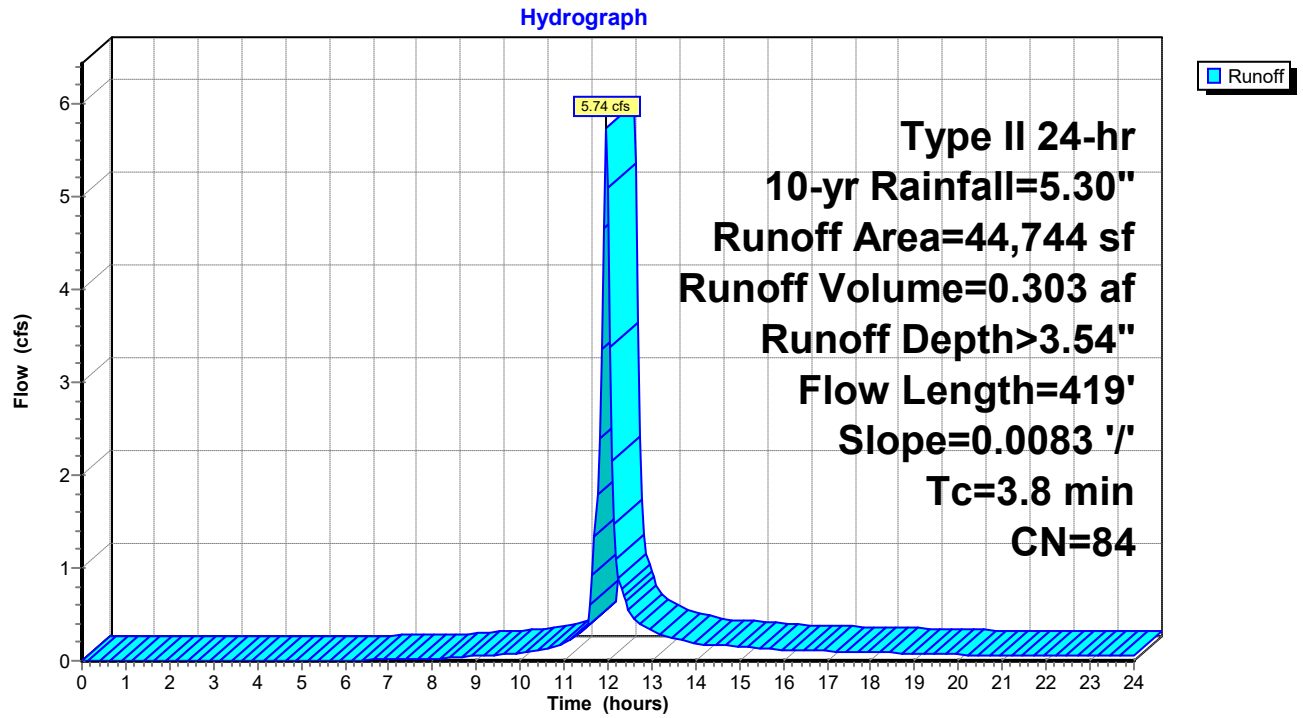
Runoff = 5.74 cfs @ 11.96 hrs, Volume= 0.303 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	19,542	98	Gravel Driveway; Bldg; Old foundations
	25,202	74	>75% Grass cover, Good, HSG C
	44,744	84	Weighted Average
	25,202		56.32% Pervious Area
	19,542		43.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	419	0.0083	1.85		**Shallow Concentrated Flow, Compacted Gravel Driveway** Paved Kv= 20.3 fps

Subcatchment EX-1: NORTH OF SITE



Summary for Subcatchment EX-2: MIDDLE OF SITE

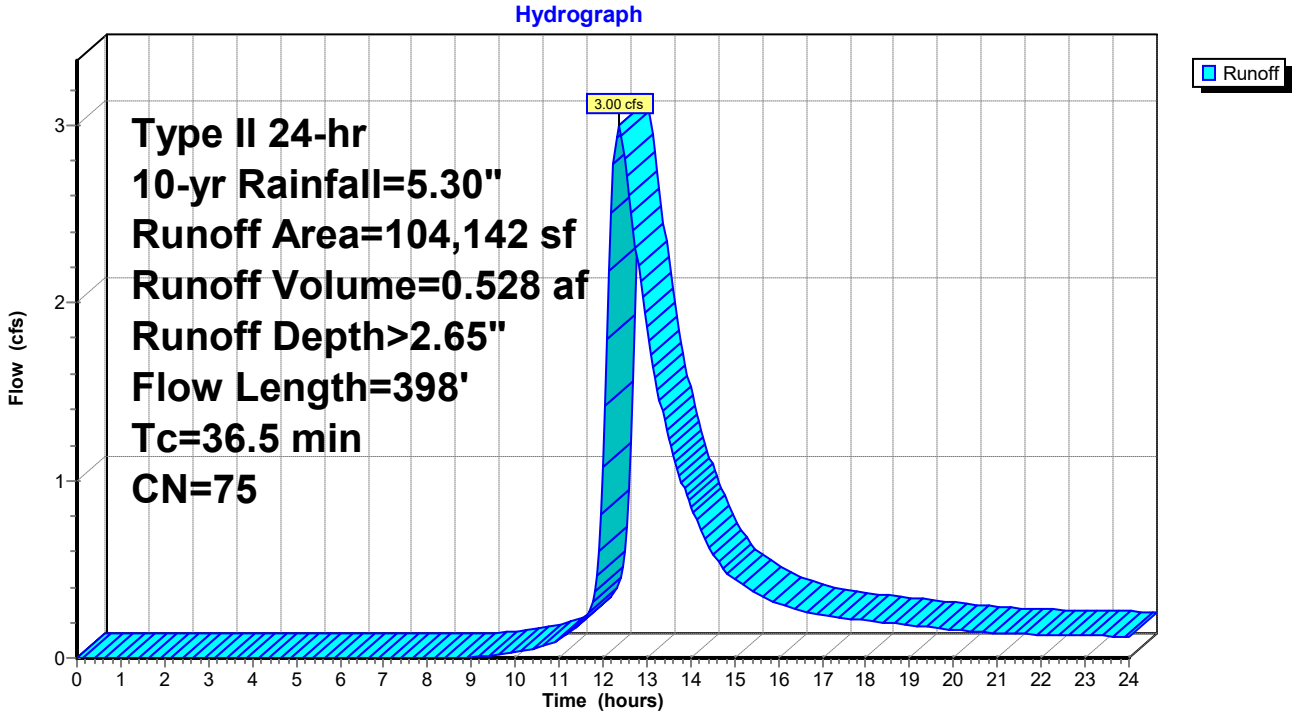
Runoff = 3.00 cfs @ 12.36 hrs, Volume= 0.528 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	40,056	98	Ex Bldg; Front Parking; US 50
	64,086	61	>75% Grass cover, Good, HSG B
	104,142	75	Weighted Average
	64,086		61.54% Pervious Area
	40,056		38.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.4	150	0.0018	0.07		**Sheet Flow, Vacant Grassed Lot** Grass: Short n= 0.150 P2= 3.40"
1.1	137	0.0189	2.06		**Shallow Concentrated Flow, Grassed Lot** Grassed Waterway Kv= 15.0 fps
0.1	31	0.0070	4.49	3.52	**Pipe Channel, 12" RCP** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
0.6	10	0.0001	0.28	0.02	**Pipe Channel, 4" PVC Culverts** 4.0" Round Area= 0.1 sf Perim= 1.0' r= 0.08' n= 0.010 PVC, smooth interior
0.3	70	0.0800	4.24		**Shallow Concentrated Flow, Grassed Lot** Grassed Waterway Kv= 15.0 fps
36.5	398	Total			

Subcatchment EX-2: MIDDLE OF SITE



Summary for Subcatchment EX-3: SOUTHERN SITE + US50

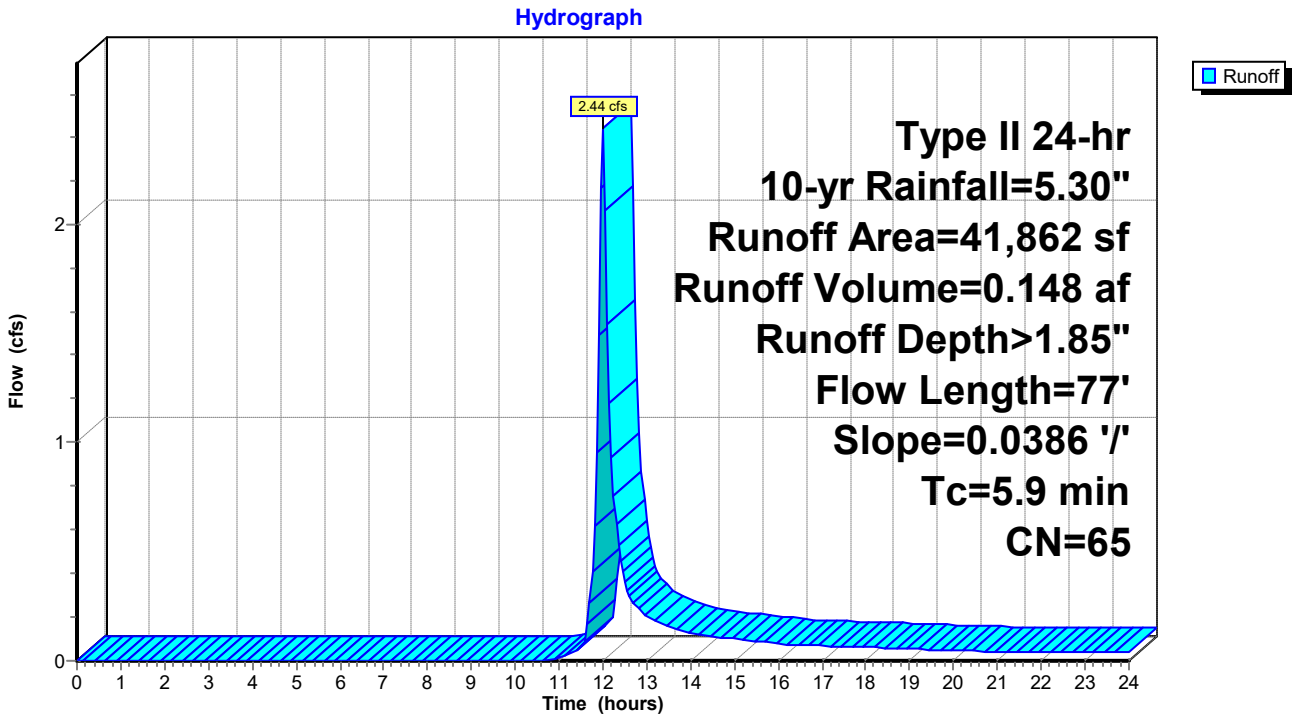
Runoff = 2.44 cfs @ 12.00 hrs, Volume= 0.148 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	37,243	61	>75% Grass cover, Good, HSG B
*	4,619	98	SHA/Route 50
	41,862	65	Weighted Average
	37,243		88.97% Pervious Area
	4,619		11.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	77	0.0386	0.22		**Sheet Flow, Vacant Grassed Lot** Grass: Short n= 0.150 P2= 3.40"

Subcatchment EX-3: SOUTHERN SITE + US50



Summary for Subcatchment EX-4: ADJ to Ex SWM Pond

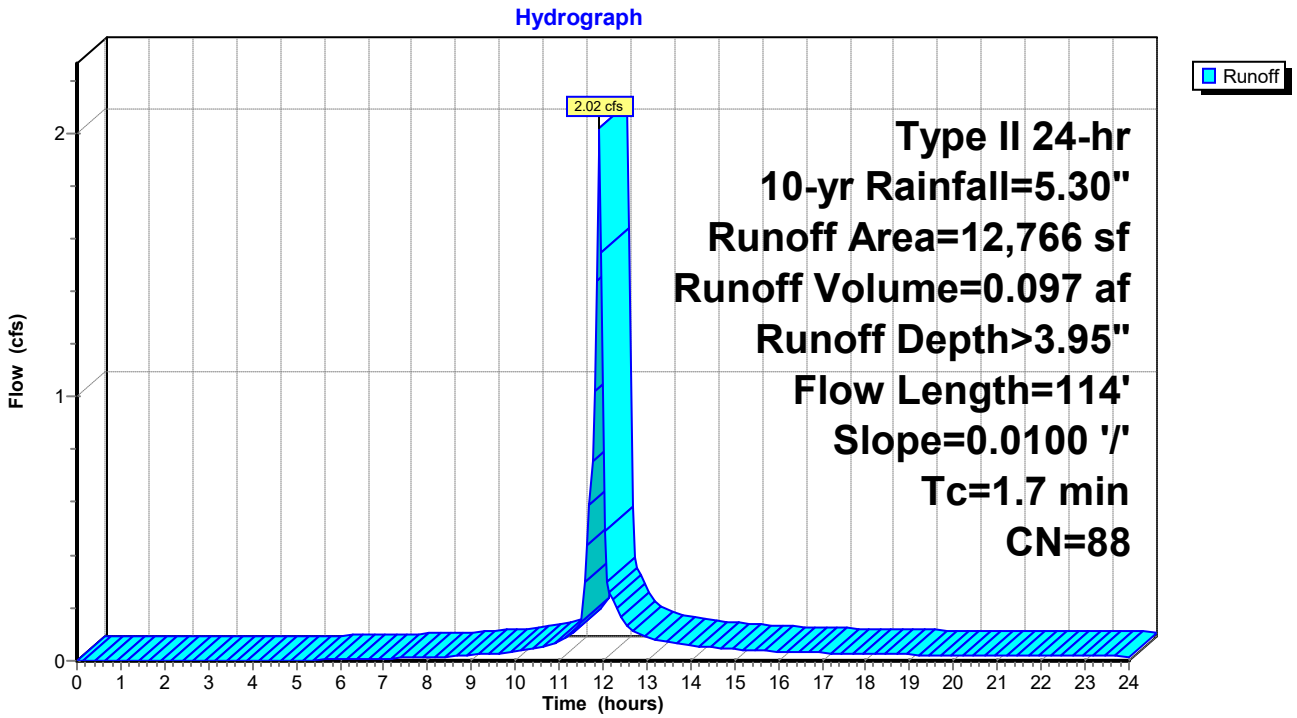
Runoff = 2.02 cfs @ 11.93 hrs, Volume= 0.097 af, Depth> 3.95"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	7,479	98	Old foundations
	5,287	74	>75% Grass cover, Good, HSG C
	12,766	88	Weighted Average
	5,287		41.41% Pervious Area
	7,479		58.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	114	0.0100	1.10		**Sheet Flow, Concrete Foundation** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment EX-4: ADJ to Ex SWM Pond



Summary for Subcatchment G2-A: Commerce Street/G2 Associates

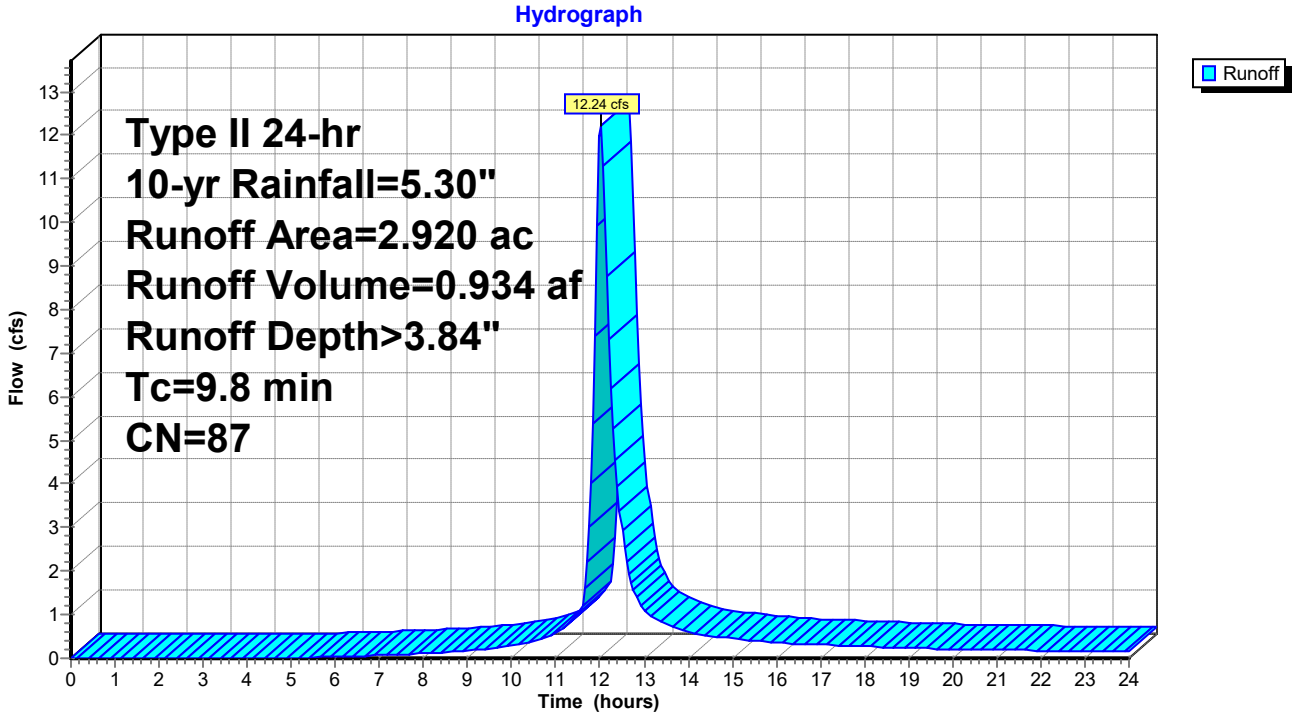
Runoff = 12.24 cfs @ 12.03 hrs, Volume= 0.934 af, Depth> 3.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (ac)	CN	Description
*	2.080	98	G2 Development circa 2005
*	0.840	61	>75% Grass cover, Good, HSG C
	2.920	87	Weighted Average
	0.840		28.77% Pervious Area
	2.080		71.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					**Direct Entry, Tcon from TR-55 Report circa 2005**

Subcatchment G2-A: Commerce Street/G2 Associates



Summary for Subcatchment G2-AA: Commerce Street/G2 Associates

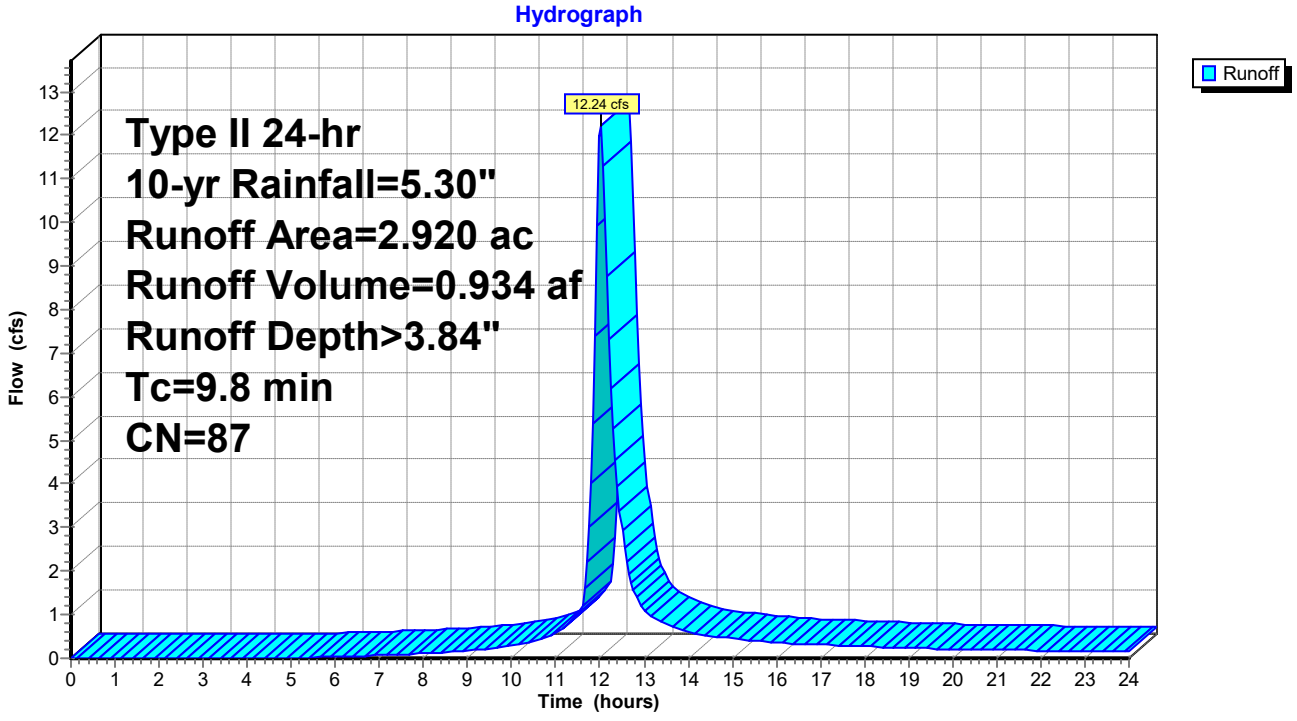
Runoff = 12.24 cfs @ 12.03 hrs, Volume= 0.934 af, Depth> 3.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (ac)	CN	Description
*	2.080	98	G2 Development circa 2005
*	0.840	61	>75% Grass cover, Good, HSG C
	2.920	87	Weighted Average
	0.840		28.77% Pervious Area
	2.080		71.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					**Direct Entry, Tcon from TR-55 Report circa 2005**

Subcatchment G2-AA: Commerce Street/G2 Associates



Summary for Subcatchment MB-1: 1/4 Medical Roof

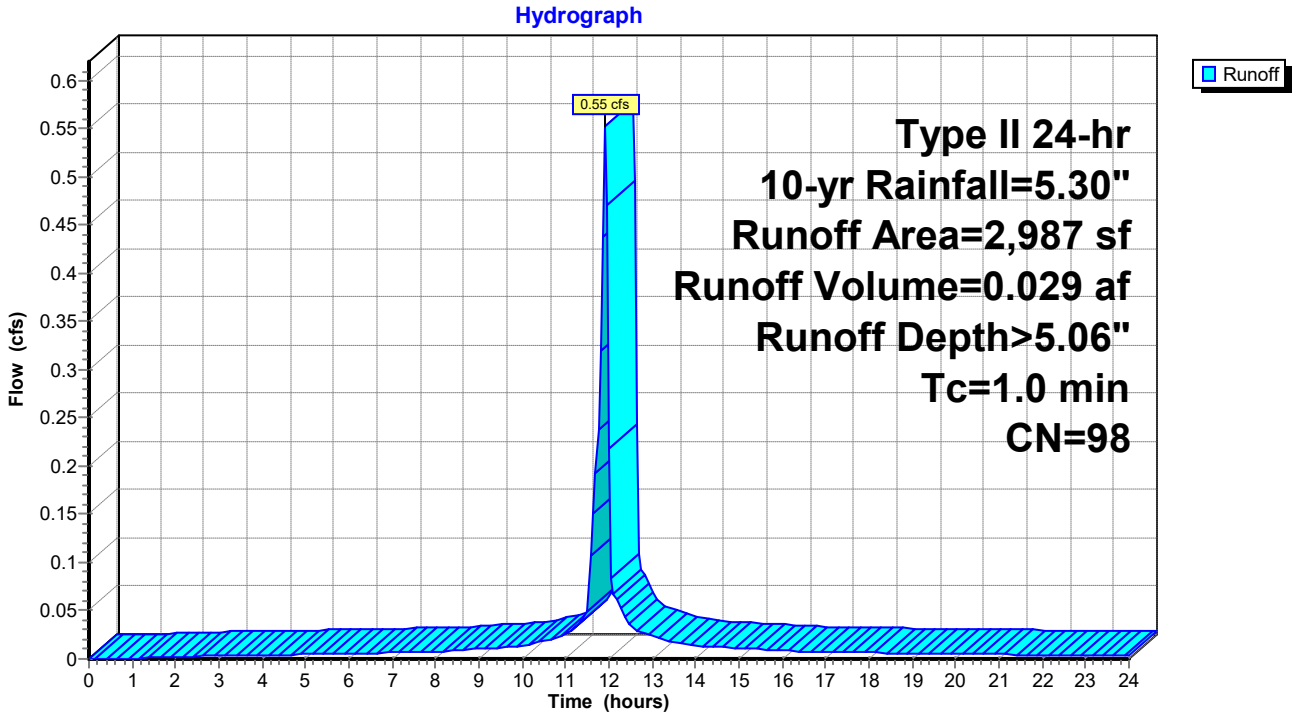
Runoff = 0.55 cfs @ 11.90 hrs, Volume= 0.029 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	2,987	98	Rear Med. Building Roof
	2,987		100.00% Impervious Area

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

Subcatchment MB-1: 1/4 Medical Roof



Summary for Subcatchment MB-2: 1/4 Medical Roof

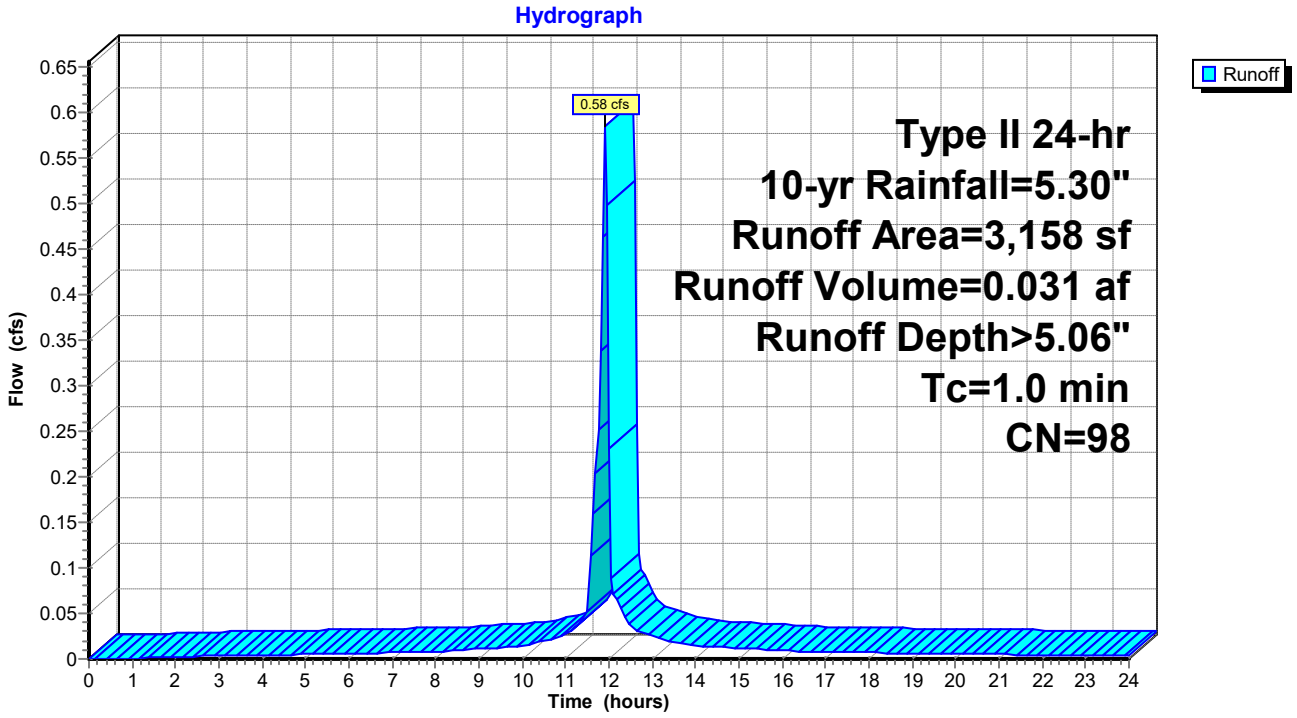
Runoff = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	3,158	98	Rear Med. Building Roof
	3,158		100.00% Impervious Area

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

Subcatchment MB-2: 1/4 Medical Roof



Summary for Subcatchment MB-3: 1/4 Medical Roof

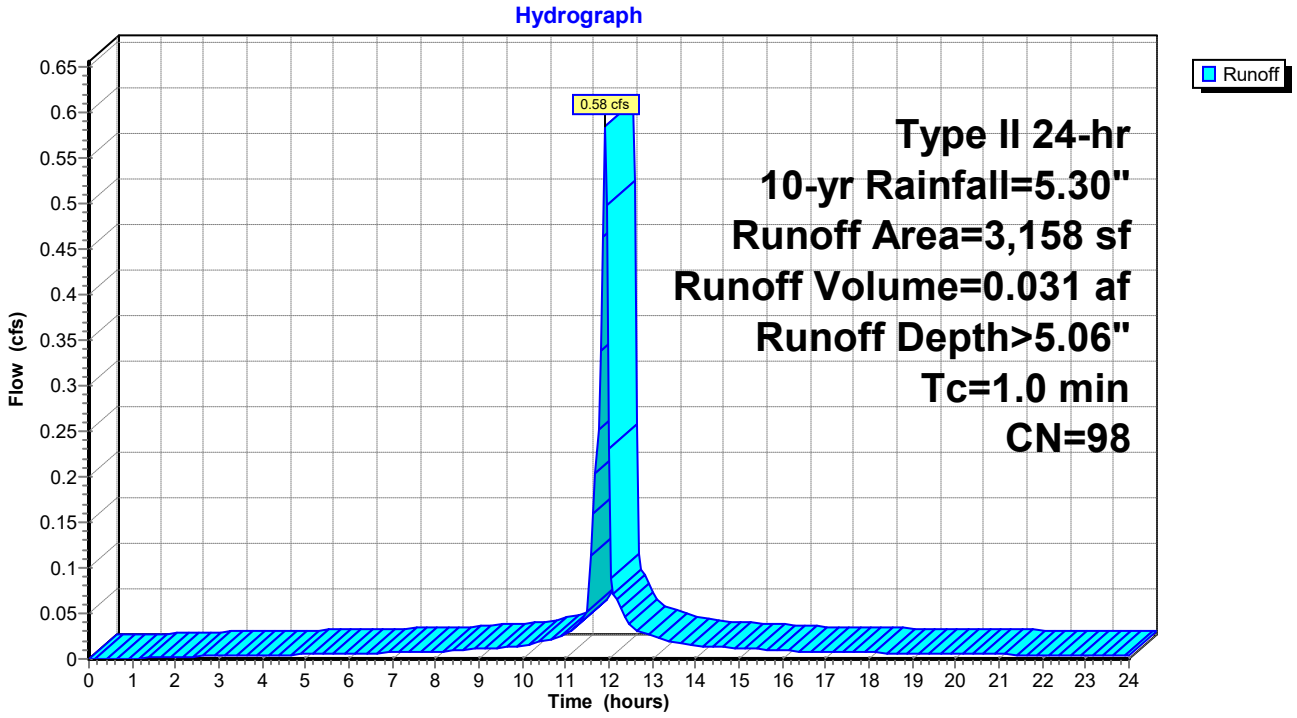
Runoff = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	3,158	98	Rear Med. Building Roof
	3,158		100.00% Impervious Area

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

Subcatchment MB-3: 1/4 Medical Roof



Summary for Subcatchment MB-4: 1/4 Medical Roof

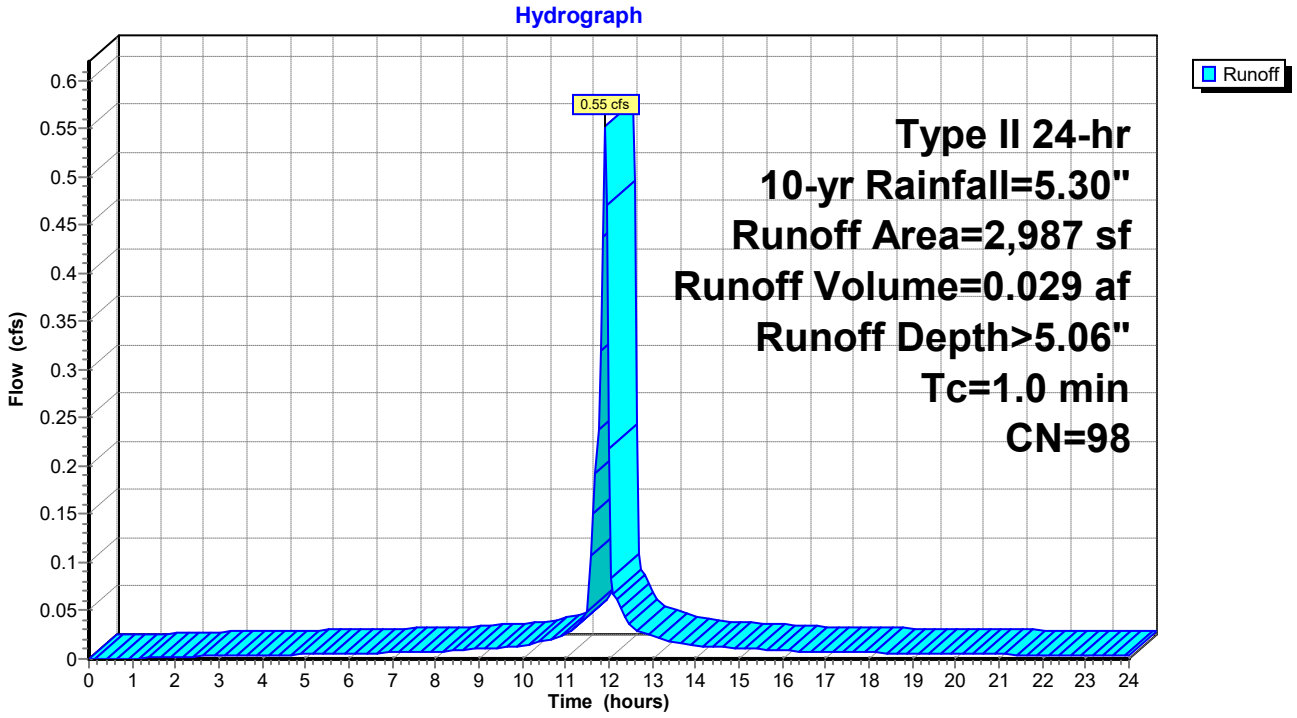
Runoff = 0.55 cfs @ 11.90 hrs, Volume= 0.029 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	2,987	98	Rear Med. Building Roof
	2,987		100.00% Impervious Area

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

Subcatchment MB-4: 1/4 Medical Roof



Summary for Subcatchment MY-1: 1/4 Retail Roof

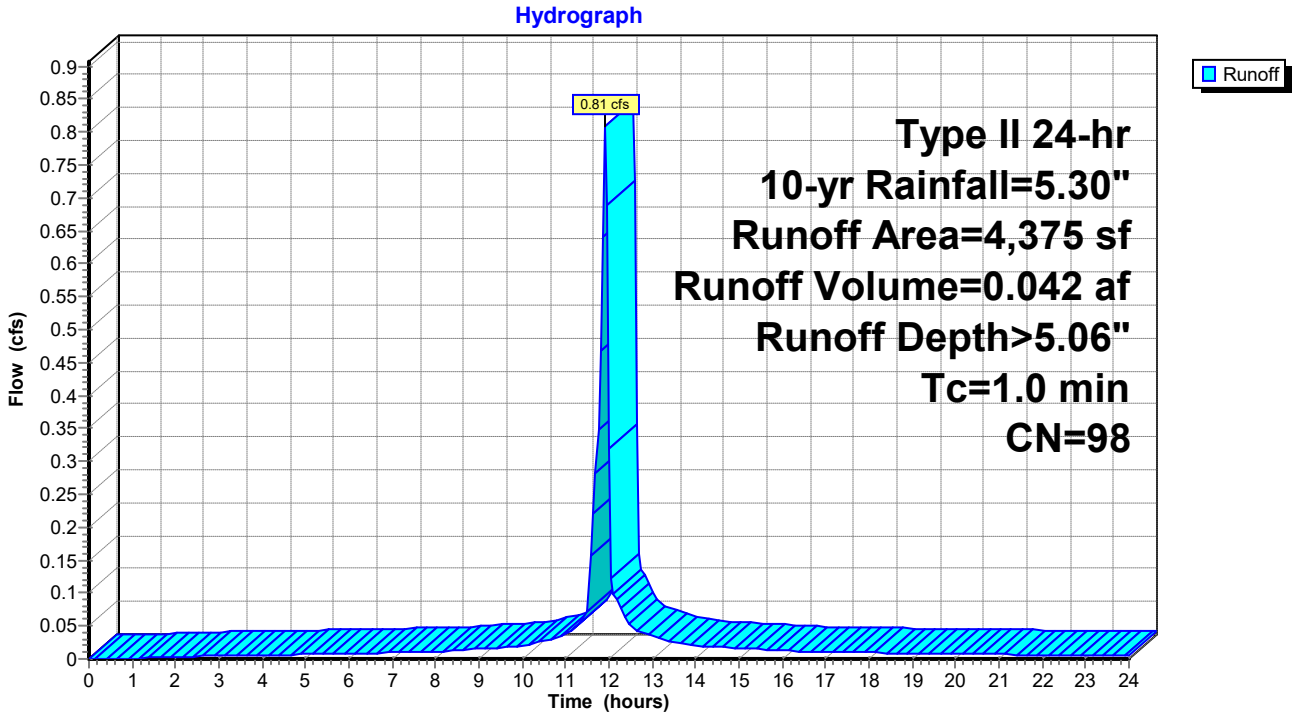
Runoff = 0.81 cfs @ 11.90 hrs, Volume= 0.042 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,375	98	Building Roof
	4,375		100.00% Impervious Area

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

Subcatchment MY-1: 1/4 Retail Roof



Summary for Subcatchment MY-2: 1/4 Retail Roof

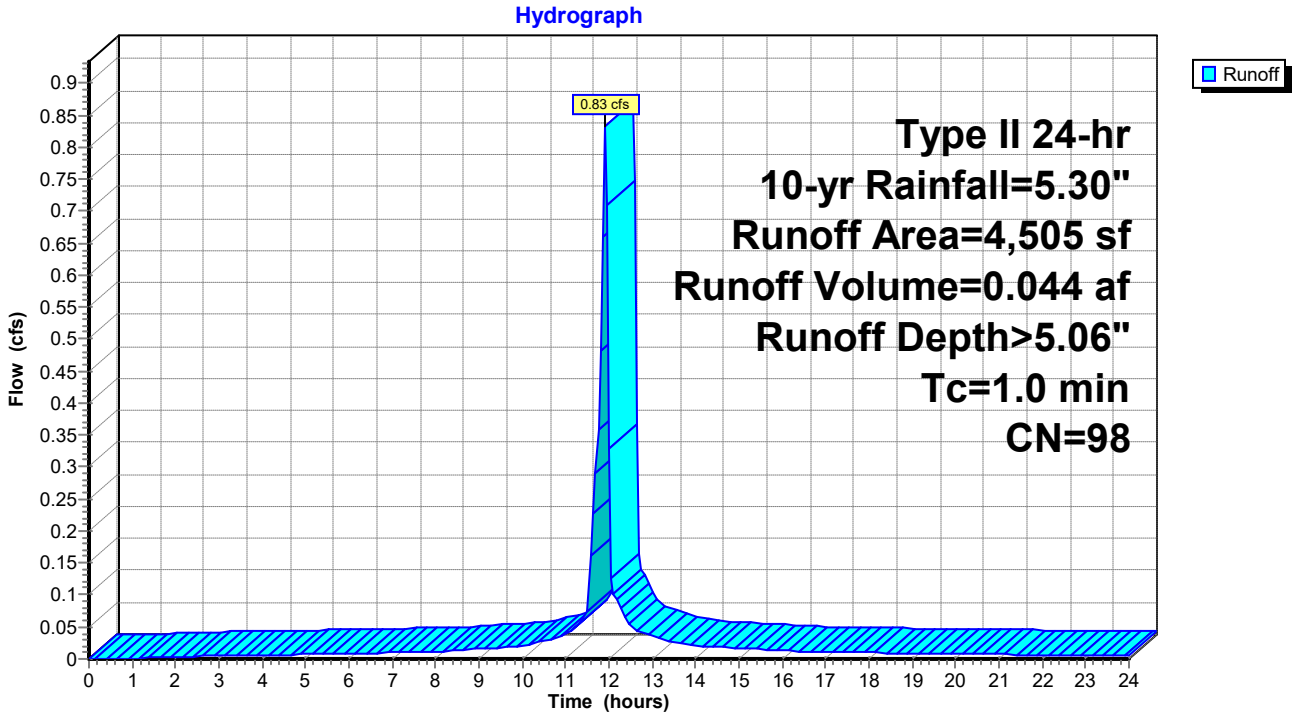
Runoff = 0.83 cfs @ 11.90 hrs, Volume= 0.044 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,505	98	Rear Building Roof
	4,505		100.00% Impervious Area

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

Subcatchment MY-2: 1/4 Retail Roof



Summary for Subcatchment MY-3: 1/4 Retail Roof

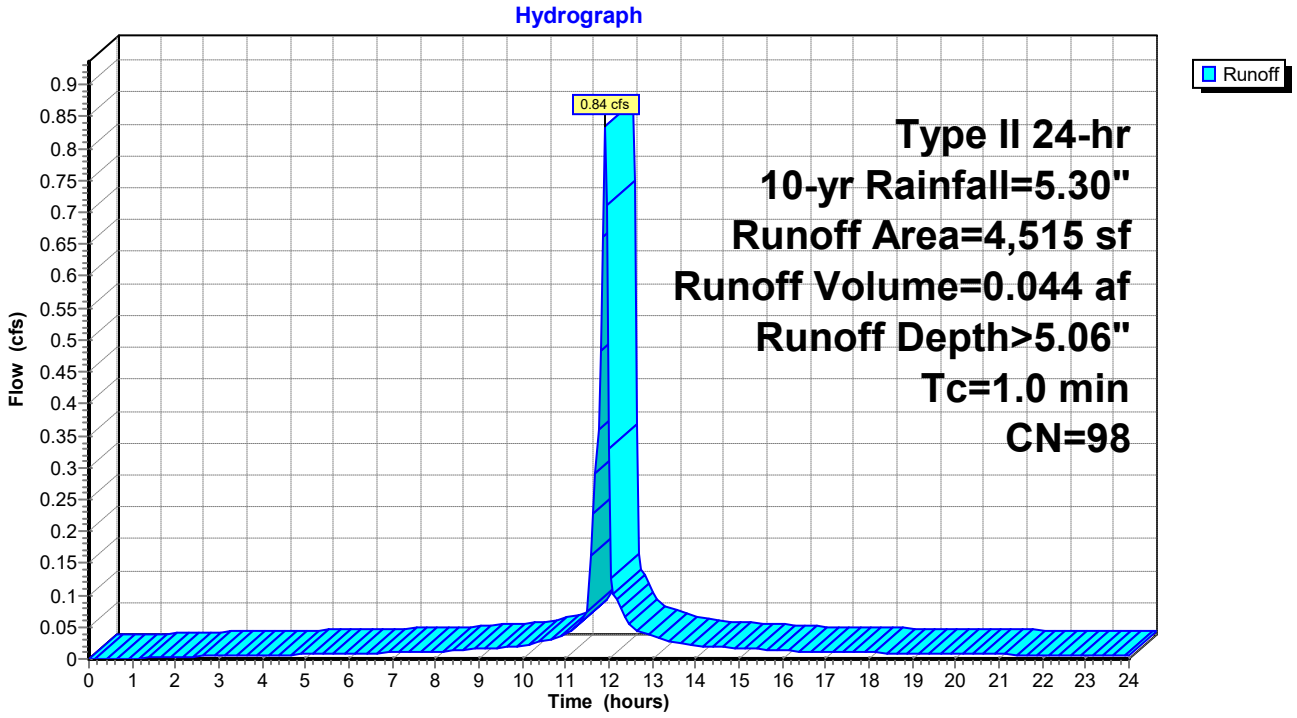
Runoff = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,515	98	Rear Building Roof
	4,515		100.00% Impervious Area

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

Subcatchment MY-3: 1/4 Retail Roof



Summary for Subcatchment MY-4: 1/4 Retail Roof

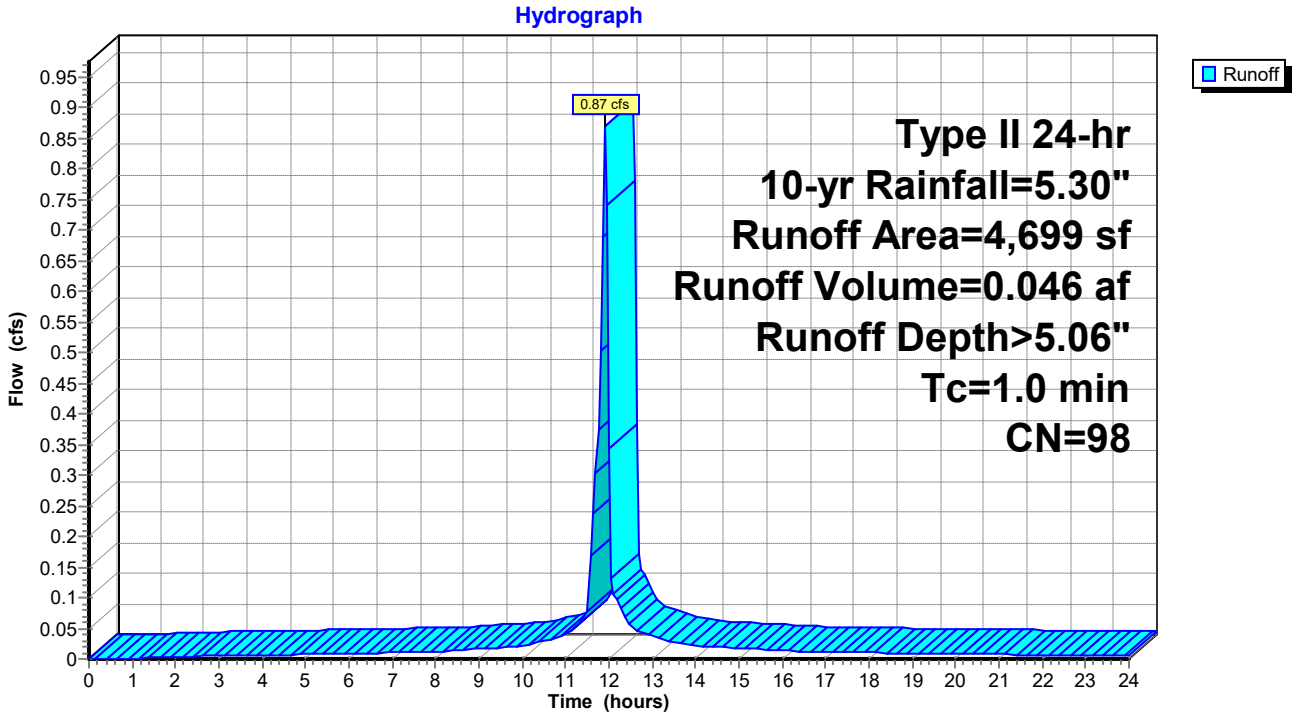
Runoff = 0.87 cfs @ 11.90 hrs, Volume= 0.046 af, Depth> 5.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,699	98	Building Roof
	4,699		100.00% Impervious Area

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

Subcatchment MY-4: 1/4 Retail Roof



Summary for Subcatchment PK-1: Parking

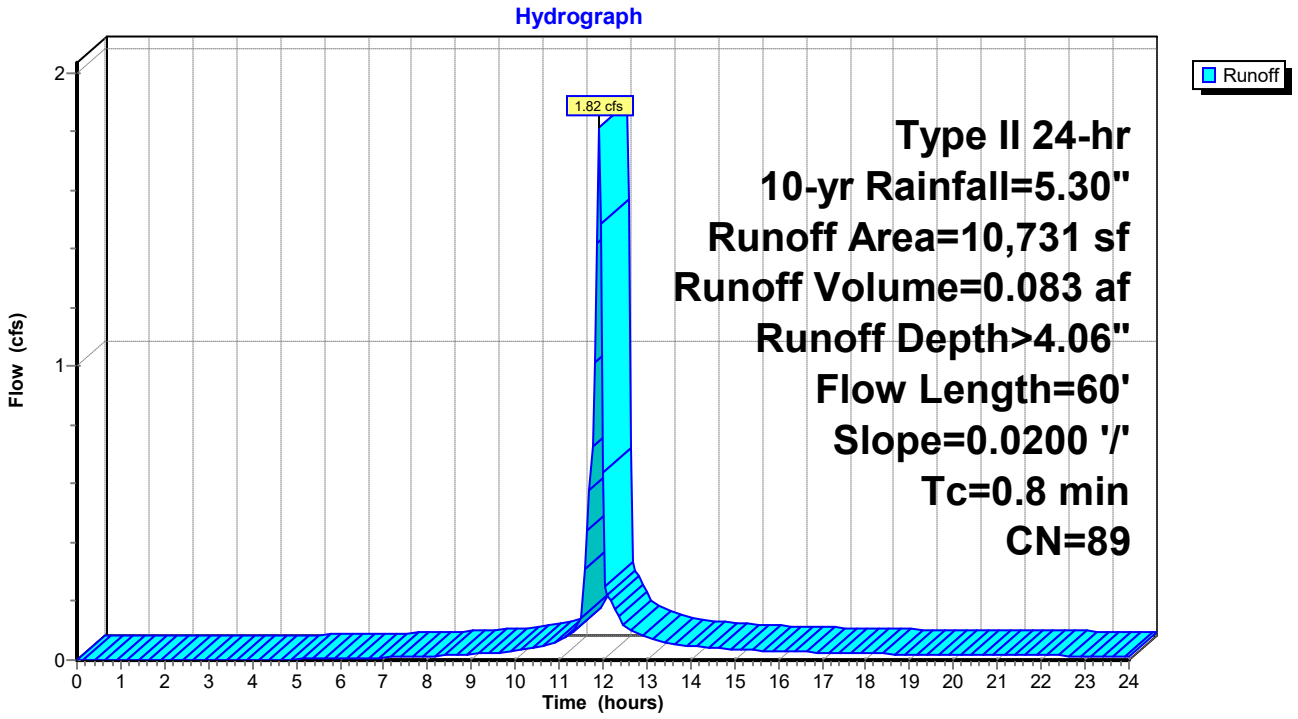
Runoff = 1.82 cfs @ 11.90 hrs, Volume= 0.083 af, Depth> 4.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,140	98	Parking Area
	2,703	61	>75% Grass cover, Good, HSG B
*	3,888	98	Parking Spaces
	10,731	89	Weighted Average
	2,703		25.19% Pervious Area
	8,028		74.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-1: Parking



Summary for Subcatchment PK-10: Parking

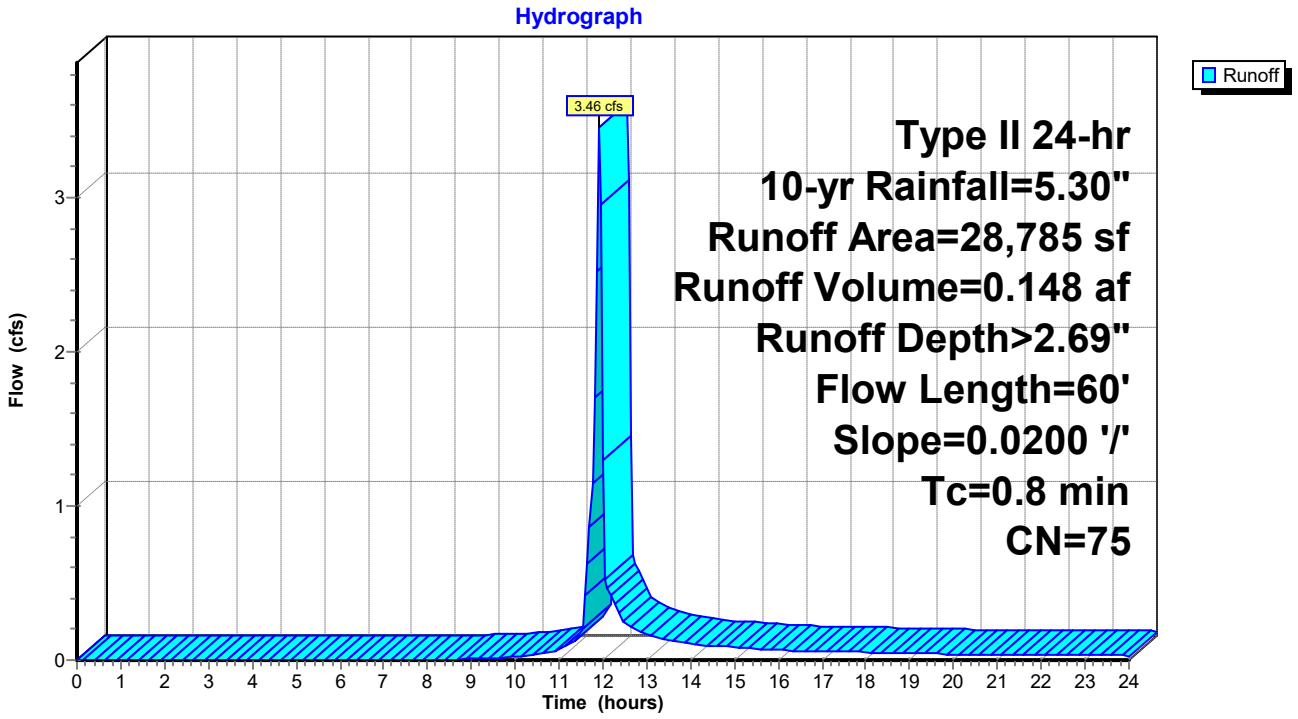
Runoff = 3.46 cfs @ 11.91 hrs, Volume= 0.148 af, Depth> 2.69"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	6,254	98	Asphalt
	18,135	61	>75% Grass cover, Good, HSG B
*	4,396	98	Parking Spaces
	28,785	75	Weighted Average
	18,135		63.00% Pervious Area
	10,650		37.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-10: Parking



Summary for Subcatchment PK-2: Parking

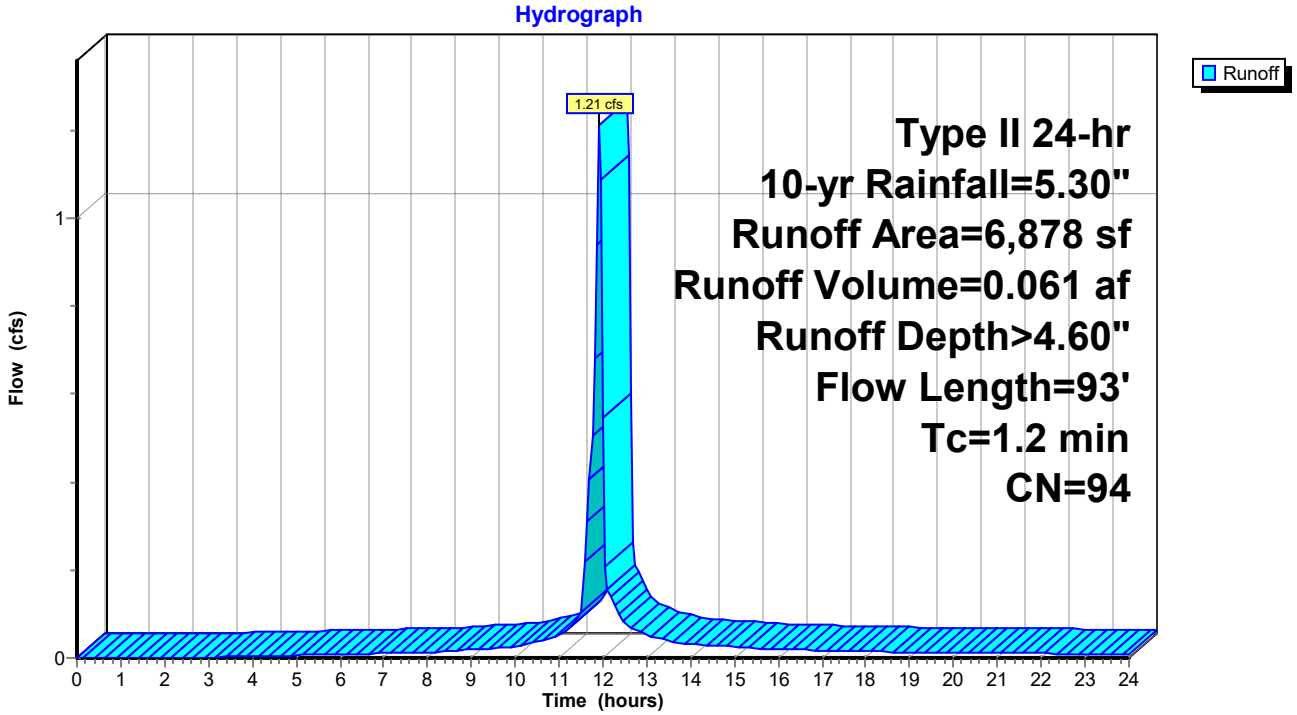
Runoff = 1.21 cfs @ 11.91 hrs, Volume= 0.061 af, Depth> 4.60"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,272	98	Parking Area
	801	61	>75% Grass cover, Good, HSG B
*	1,805	98	Parking Spaces
	6,878	94	Weighted Average
	801		11.65% Pervious Area
	6,077		88.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking lot** Smooth surfaces n= 0.011 P2= 3.40"
0.4	33	0.0050	1.44		**Shallow Concentrated Flow, Curb** Paved Kv= 20.3 fps
1.2	93	Total			

Subcatchment PK-2: Parking



Summary for Subcatchment PK-3: Parking

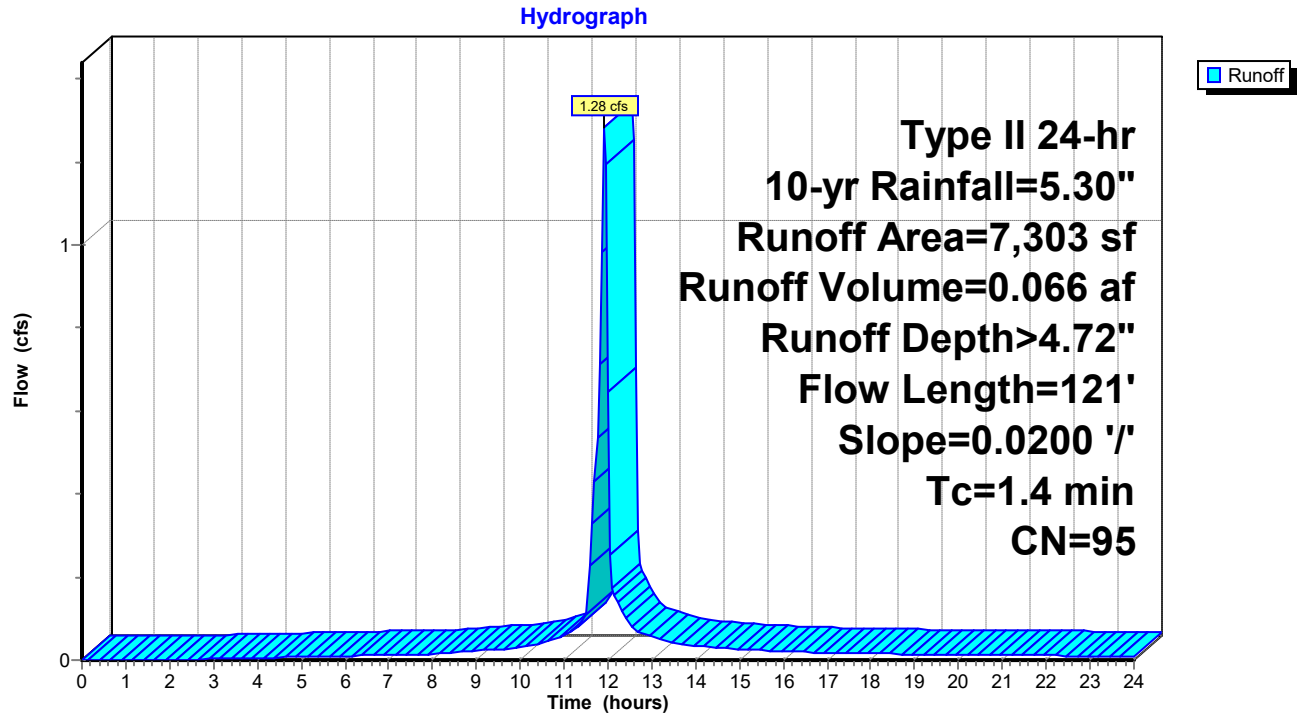
Runoff = 1.28 cfs @ 11.91 hrs, Volume= 0.066 af, Depth> 4.72"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,424	98	Parking Area
	559	61	>75% Grass cover, Good, HSG B
*	2,320	98	Parking Spaces
	7,303	95	Weighted Average
	559		7.65% Pervious Area
	6,744		92.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	121	0.0200	1.47		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-3: Parking



Summary for Subcatchment PK-4: Parking

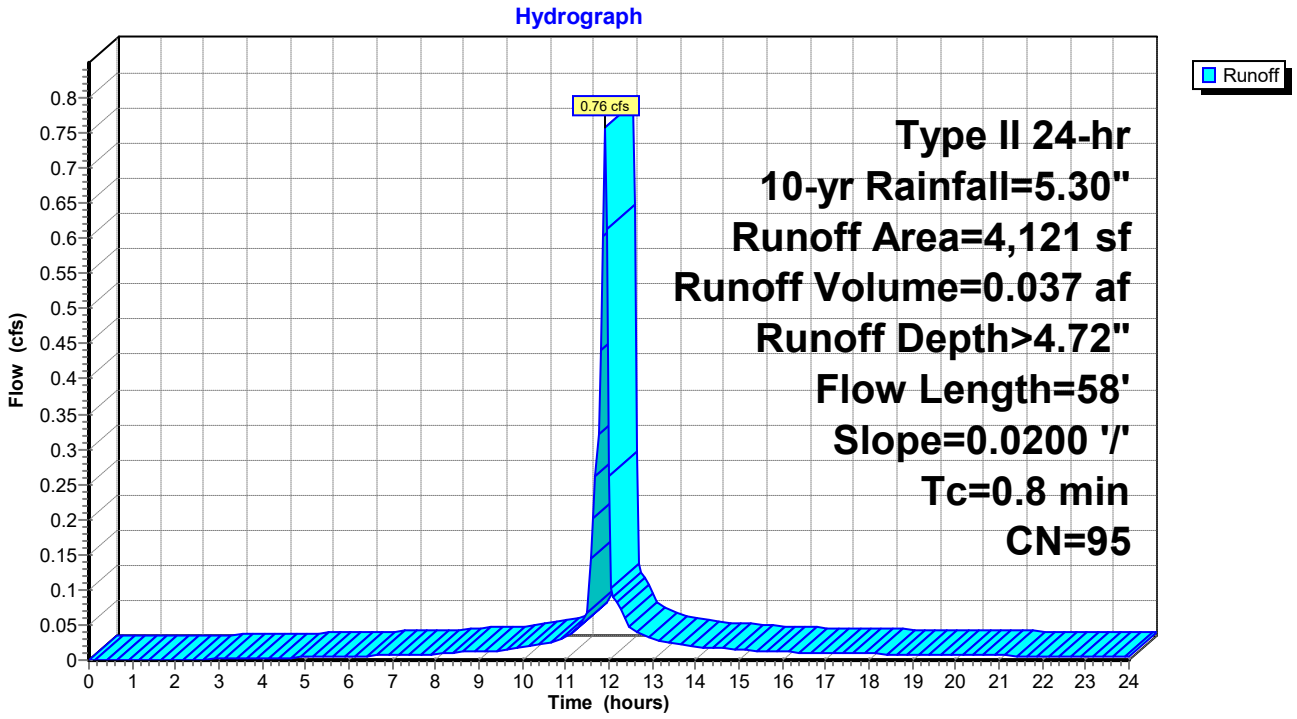
Runoff = 0.76 cfs @ 11.90 hrs, Volume= 0.037 af, Depth> 4.72"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	2,405	98	Asphalt
	337	61	>75% Grass cover, Good, HSG B
*	1,379	98	Parking Spaces
	4,121	95	Weighted Average
	337		8.18% Pervious Area
	3,784		91.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	58	0.0200	1.27		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-4: Parking



Summary for Subcatchment PK-5: Parking

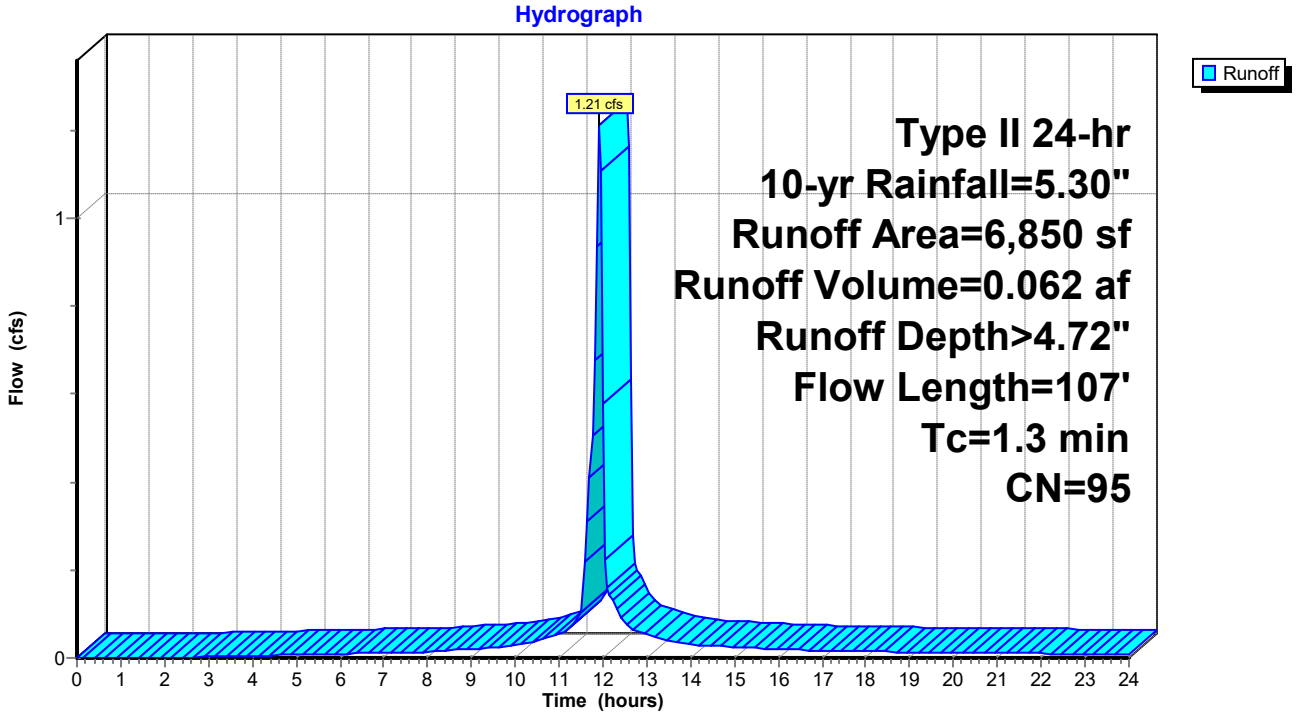
Runoff = 1.21 cfs @ 11.91 hrs, Volume= 0.062 af, Depth> 4.72"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,714	98	Asphalt
	516	61	>75% Grass cover, Good, HSG B
*	1,620	98	Parking Spaces
	6,850	95	Weighted Average
	516		7.53% Pervious Area
	6,334		92.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.01		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"
1.0	89	0.0050	1.44		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
1.3	107	Total			

Subcatchment PK-5: Parking



Summary for Subcatchment PK-6: Parking

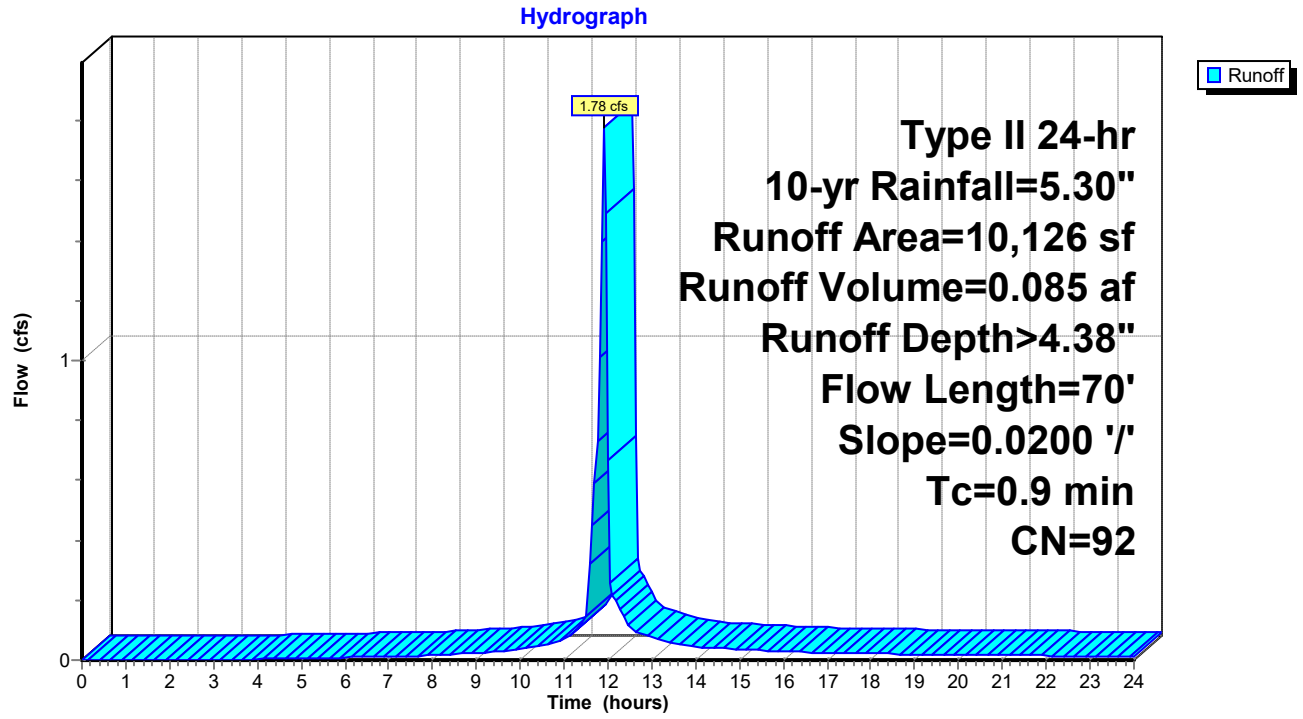
Runoff = 1.78 cfs @ 11.90 hrs, Volume= 0.085 af, Depth> 4.38"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	6,357	98	Asphalt
	1,534	61	>75% Grass cover, Good, HSG B
*	2,235	98	Parking Spaces
	10,126	92	Weighted Average
	1,534		15.15% Pervious Area
	8,592		84.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.32		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-6: Parking



Summary for Subcatchment PK-7: Parking

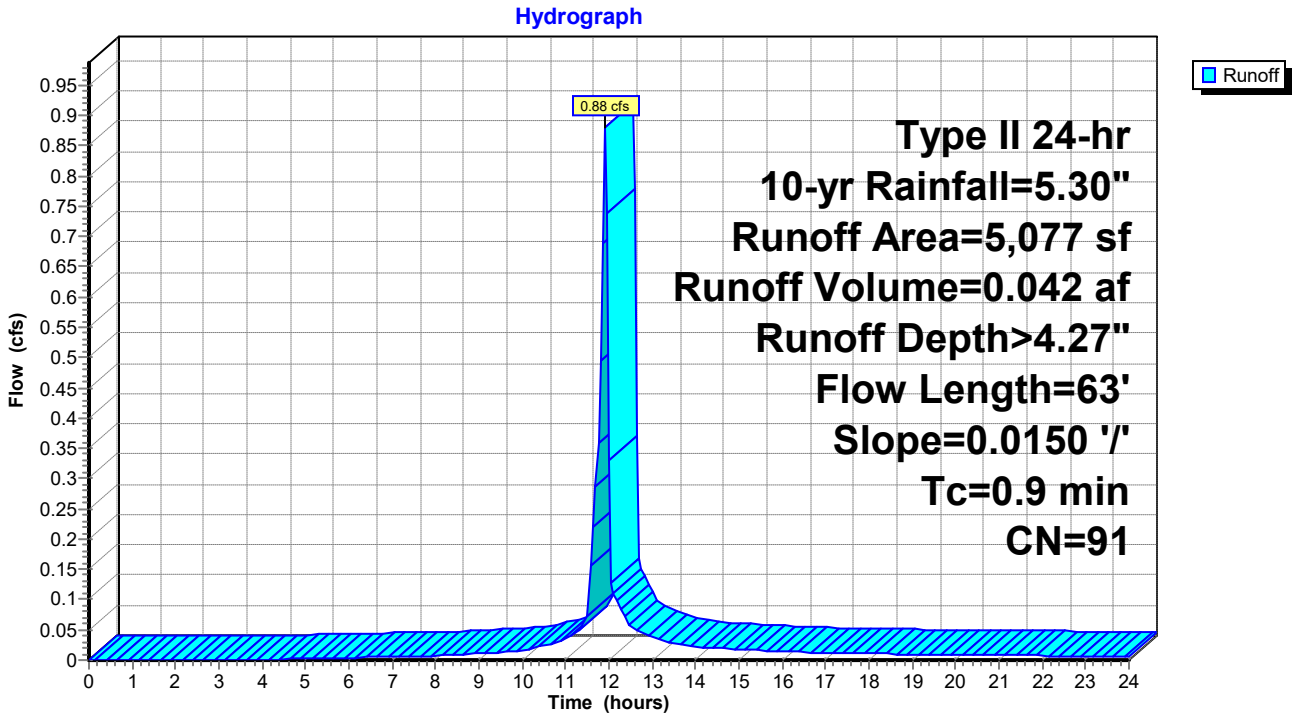
Runoff = 0.88 cfs @ 11.90 hrs, Volume= 0.042 af, Depth> 4.27"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	3,258	98	Asphalt
	896	61	>75% Grass cover, Good, HSG B
*	923	98	Parking Spaces
	5,077	91	Weighted Average
	896		17.65% Pervious Area
	4,181		82.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	63	0.0150	1.15		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-7: Parking



Summary for Subcatchment PK-8: Parking

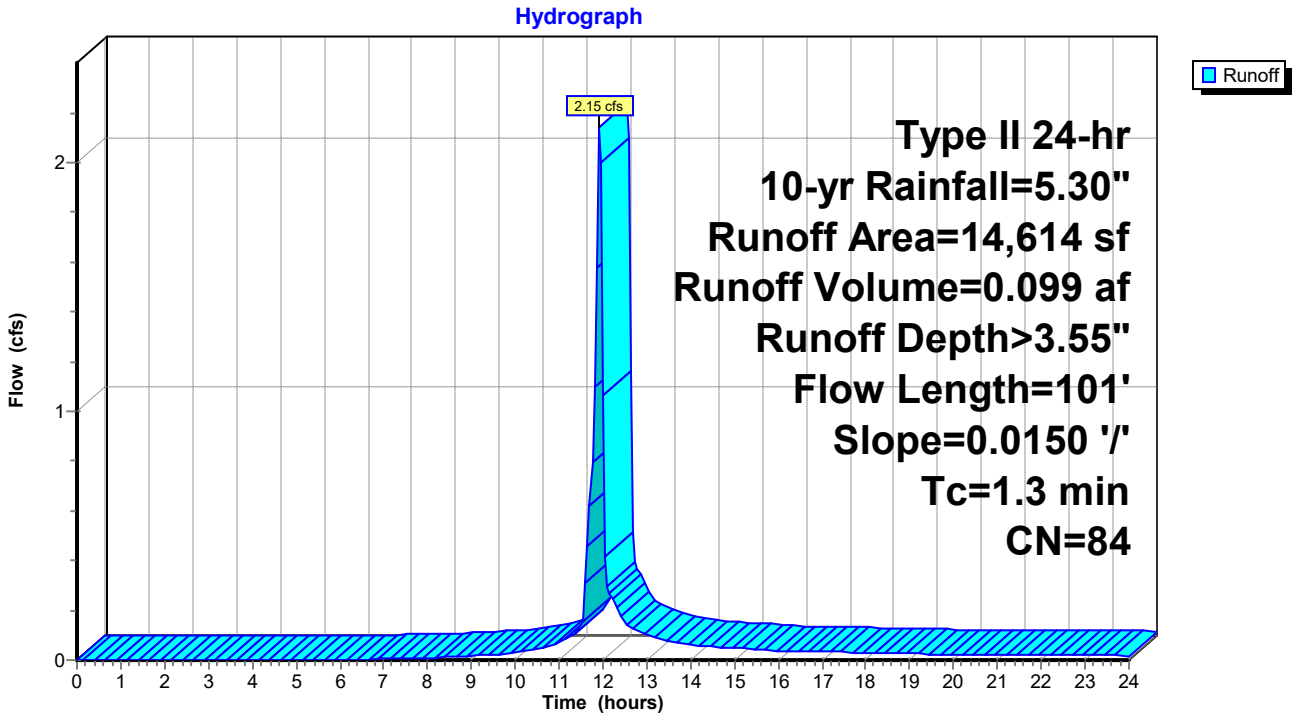
Runoff = 2.15 cfs @ 11.92 hrs, Volume= 0.099 af, Depth> 3.55"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	6,414	98	Asphalt Drive Aisles & Sidewalk
*	2,660	98	Parking Spaces
	5,540	61	>75% Grass cover, Good, HSG B
	14,614	84	Weighted Average
	5,540		37.91% Pervious Area
	9,074		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	101	0.0150	1.27		**Sheet Flow, Asphalt** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-8: Parking



Summary for Subcatchment PK-9: Parking

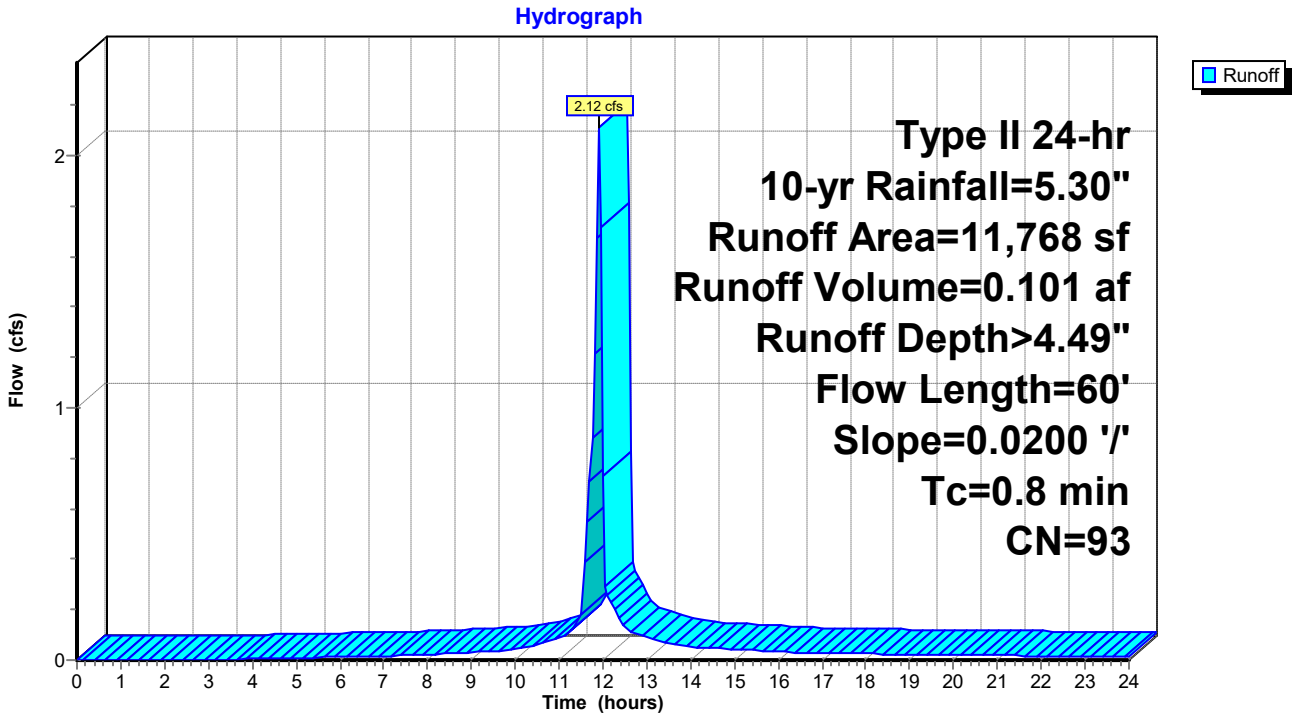
Runoff = 2.12 cfs @ 11.90 hrs, Volume= 0.101 af, Depth> 4.49"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	7,036	98	Asphalt
	1,729	61	>75% Grass cover, Good, HSG B
*	3,003	98	Parking Spaces
	11,768	93	Weighted Average
	1,729		14.69% Pervious Area
	10,039		85.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-9: Parking



Summary for Subcatchment RD: Onsite Residue

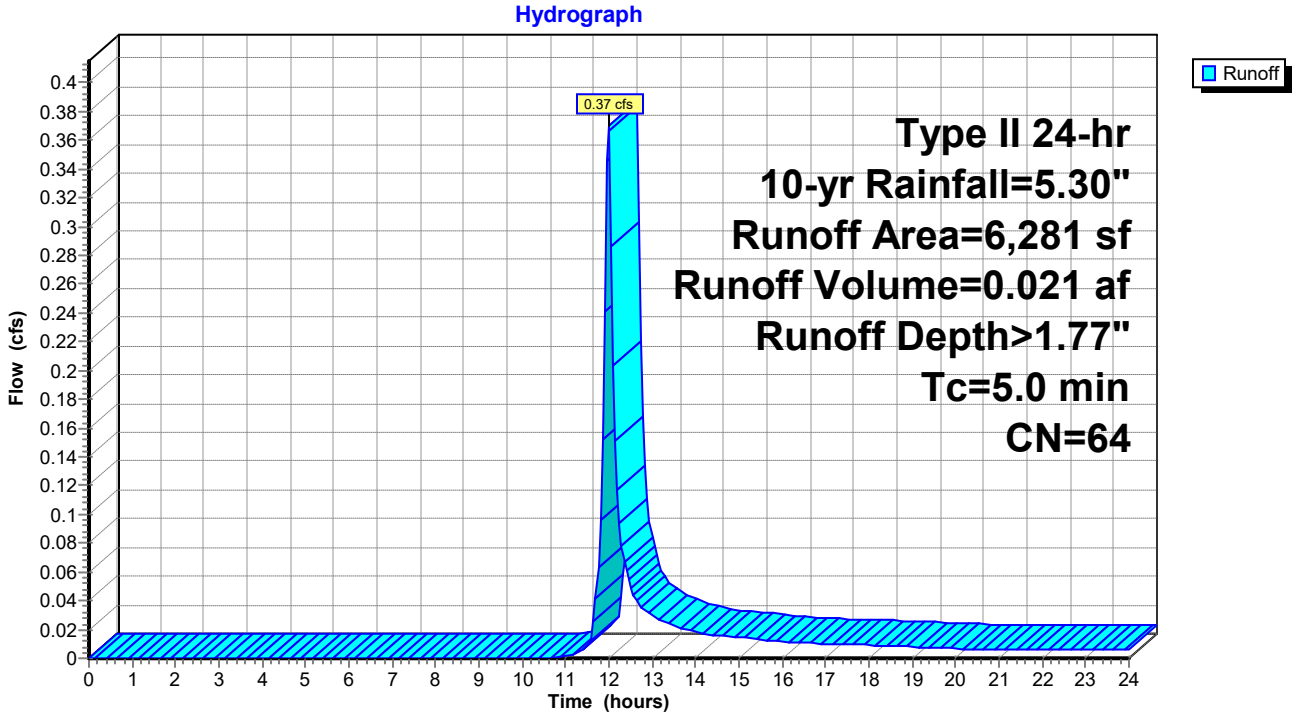
Runoff = 0.37 cfs @ 11.99 hrs, Volume= 0.021 af, Depth> 1.77"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	5,797	61	>75% Grass cover, Good, HSG B
*	484	98	Sidewalk & Portion Entrance
	6,281	64	Weighted Average
	5,797		92.29% Pervious Area
	484		7.71% Impervious Area

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

Subcatchment RD: Onsite Residue



Summary for Subcatchment SHA-1: Onsite SHA

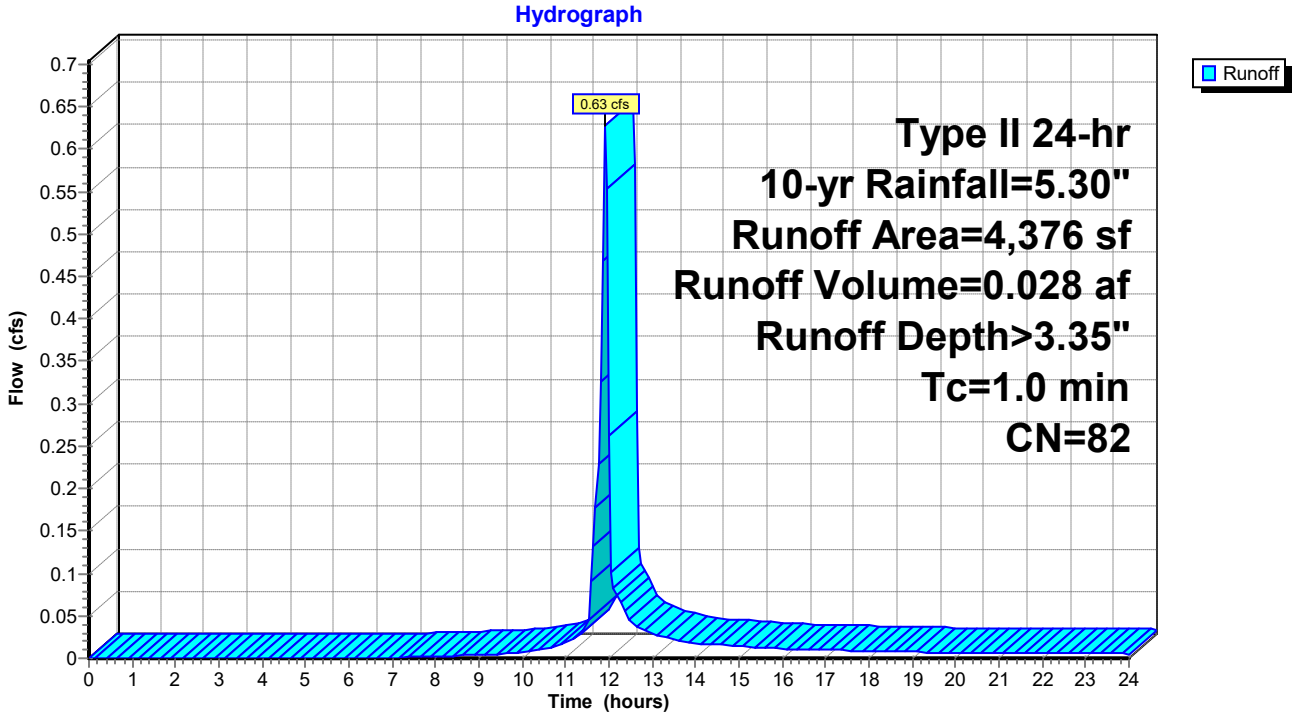
Runoff = 0.63 cfs @ 11.91 hrs, Volume= 0.028 af, Depth> 3.35"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	1,908	61	>75% Grass cover, Good, HSG B
*	2,468	98	Pavement & Sidewalk
	4,376	82	Weighted Average
	1,908		43.60% Pervious Area
	2,468		56.40% Impervious Area

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

Subcatchment SHA-1: Onsite SHA



Summary for Subcatchment SHA-2: Area of SGW #1 & Onsite SHA

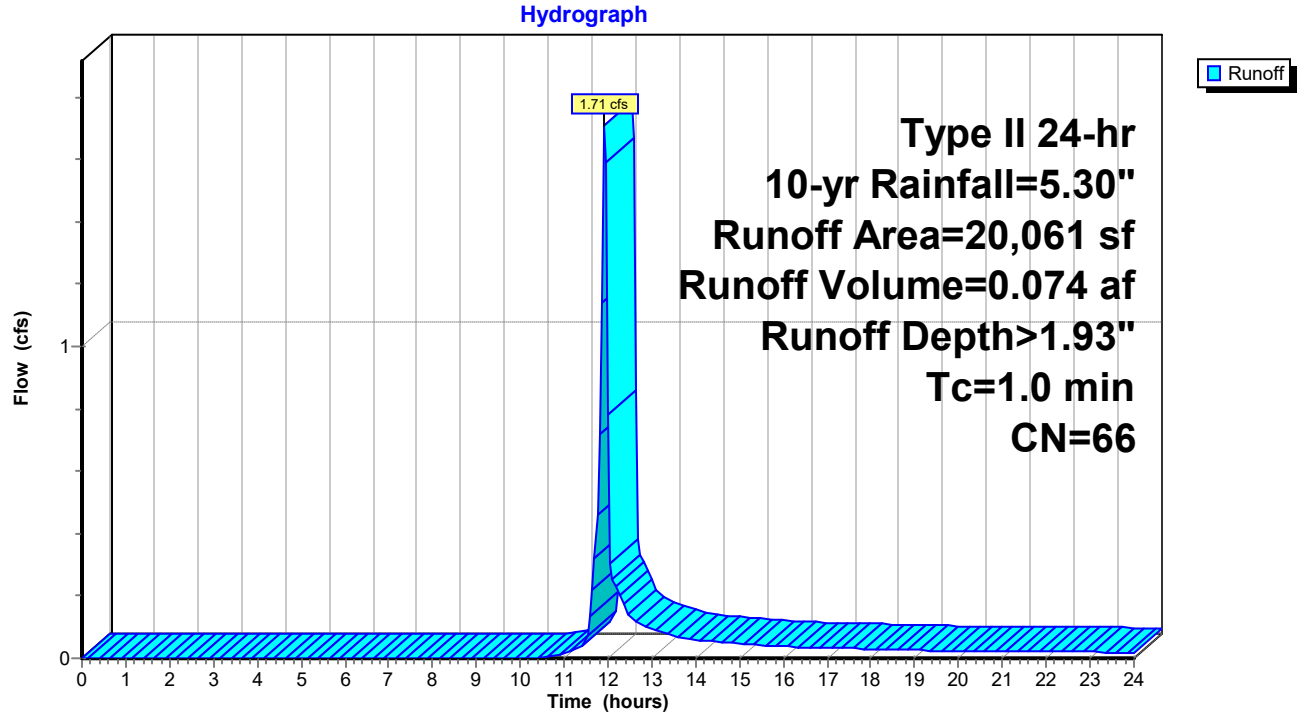
Runoff = 1.71 cfs @ 11.92 hrs, Volume= 0.074 af, Depth> 1.93"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	17,507	61	>75% Grass cover, Good, HSG B
*	2,554	98	SHA Entrance Pavement
	20,061	66	Weighted Average
	17,507		87.27% Pervious Area
	2,554		12.73% Impervious Area

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

Subcatchment SHA-2: Area of SGW #1 & Onsite SHA



Summary for Subcatchment SHA-3: SHA Improvements (North)

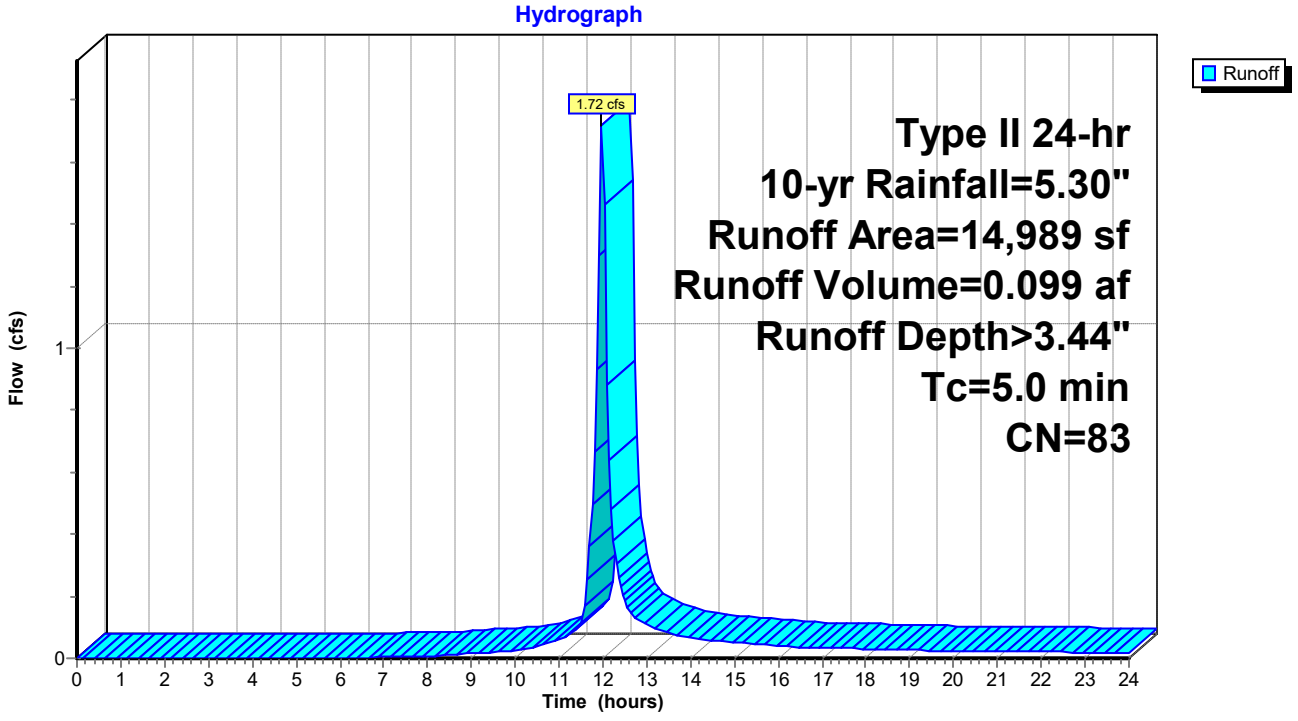
Runoff = 1.72 cfs @ 11.97 hrs, Volume= 0.099 af, Depth> 3.44"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	8,750	98	SHA Pavement & Entrance
	6,239	61	>75% Grass cover, Good, HSG B
	14,989	83	Weighted Average
	6,239		41.62% Pervious Area
	8,750		58.38% Impervious Area

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

Subcatchment SHA-3: SHA Improvements (North)



Summary for Subcatchment SHA-4: SHA Improvements (South)

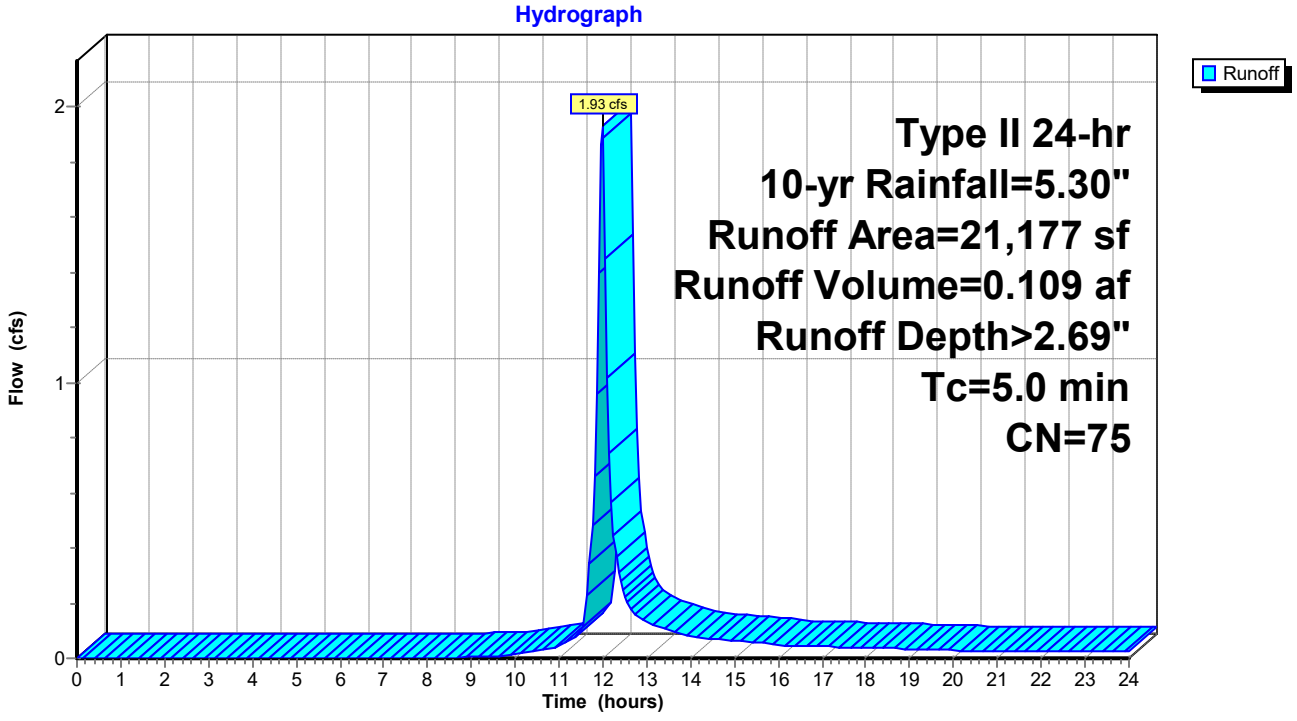
Runoff = 1.93 cfs @ 11.98 hrs, Volume= 0.109 af, Depth> 2.69"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	8,053	98	US 50 & SHA Entrance
	13,124	61	>75% Grass cover, Good, HSG B
	21,177	75	Weighted Average
	13,124		61.97% Pervious Area
	8,053		38.03% Impervious Area

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

Subcatchment SHA-4: SHA Improvements (South)



Summary for Subcatchment VZ-A: Verizon (Offsite)

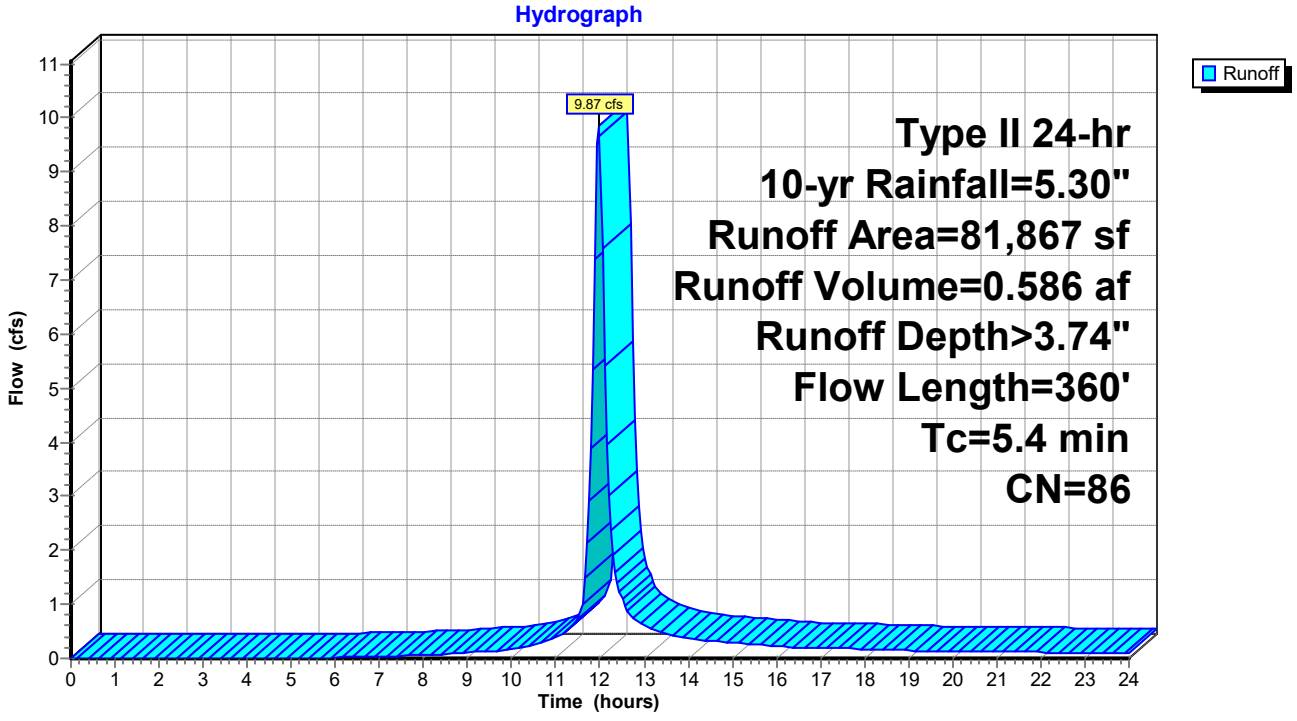
Runoff = 9.87 cfs @ 11.98 hrs, Volume= 0.586 af, Depth> 3.74"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	56,382	98	Verizon Storage Yard
	25,485	61	>75% Grass cover, Good, HSG B
	81,867	86	Weighted Average
	25,485		31.13% Pervious Area
	56,382		68.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	80	0.0100	1.03		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"
4.1	280	0.0050	1.14		**Shallow Concentrated Flow, Shallow Grass Channel** Unpaved Kv= 16.1 fps
5.4	360	Total			

Subcatchment VZ-A: Verizon (Offsite)



Summary for Subcatchment VZ-AA: Verizon (Offsite)

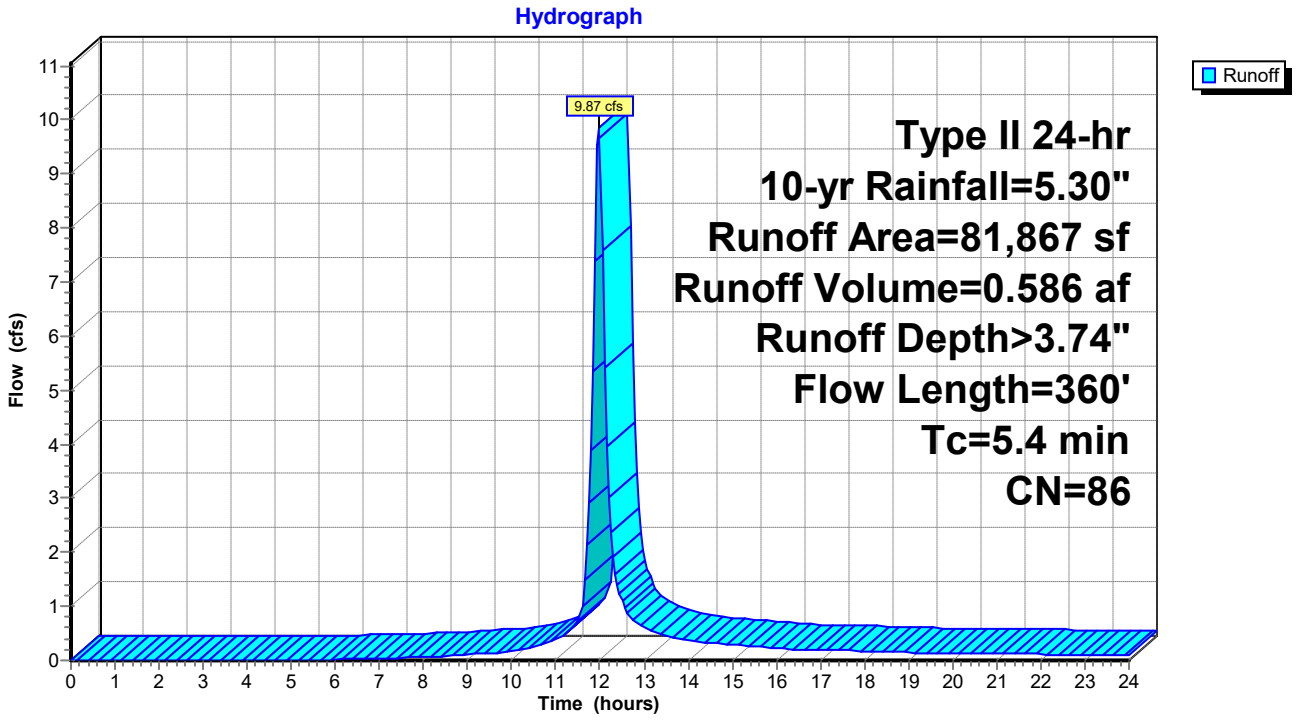
Runoff = 9.87 cfs @ 11.98 hrs, Volume= 0.586 af, Depth> 3.74"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	56,382	98	Verizon Storage Yard
	25,485	61	>75% Grass cover, Good, HSG B
	81,867	86	Weighted Average
	25,485		31.13% Pervious Area
	56,382		68.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	80	0.0100	1.03		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"
4.1	280	0.0050	1.14		**Shallow Concentrated Flow, Shallow Grass Channel** Unpaved Kv= 16.1 fps
5.4	360	Total			

Subcatchment VZ-AA: Verizon (Offsite)



Summary for Subcatchment VZ-B: Verizon & US 50/Idlewild Intersection

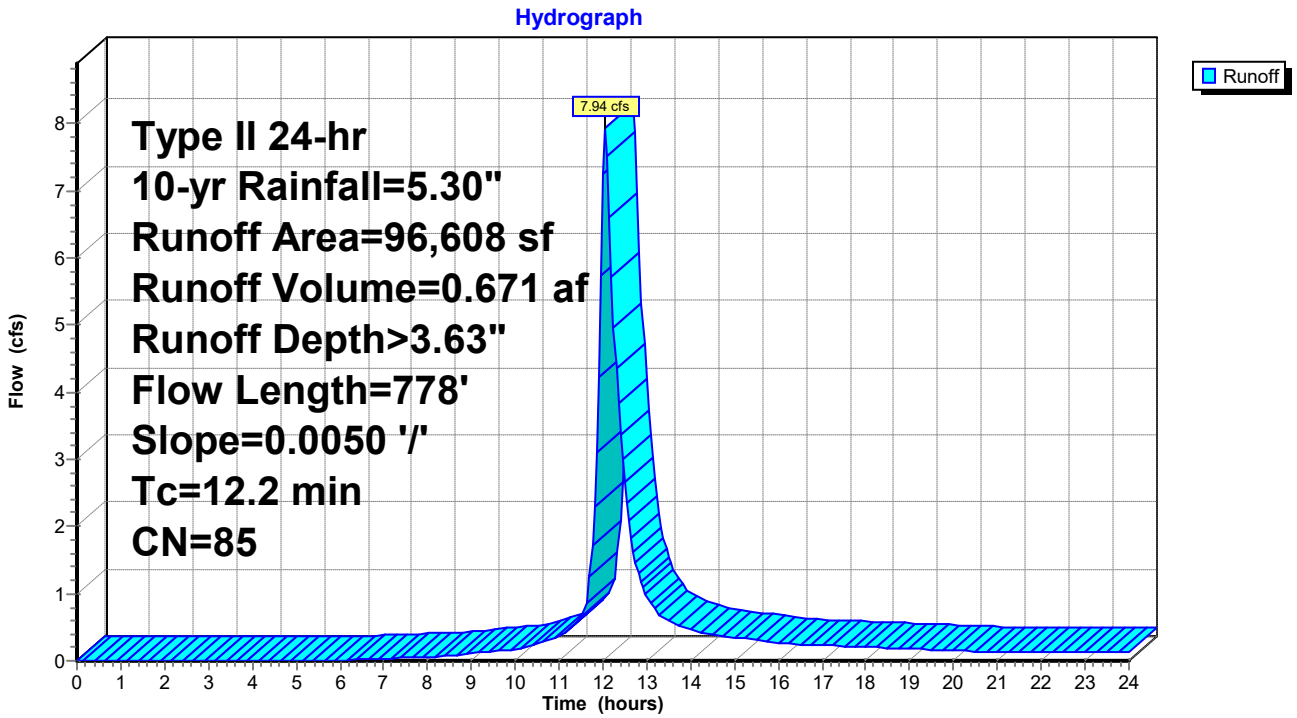
Runoff = 7.94 cfs @ 12.06 hrs, Volume= 0.671 af, Depth> 3.63"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	35,081	61	>75% Grass cover, Good, HSG B
*	61,527	98	Roads & Verizon Yard
	96,608	85	Weighted Average
	35,081		36.31% Pervious Area
	61,527		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	778	0.0050	1.06		**Shallow Concentrated Flow, Road Adjacent Swale** Grassed Waterway Kv= 15.0 fps

Subcatchment VZ-B: Verizon & US 50/Idlewild Intersection



Summary for Subcatchment VZ-BB: Verizon & US 50/Idlewild Intersection

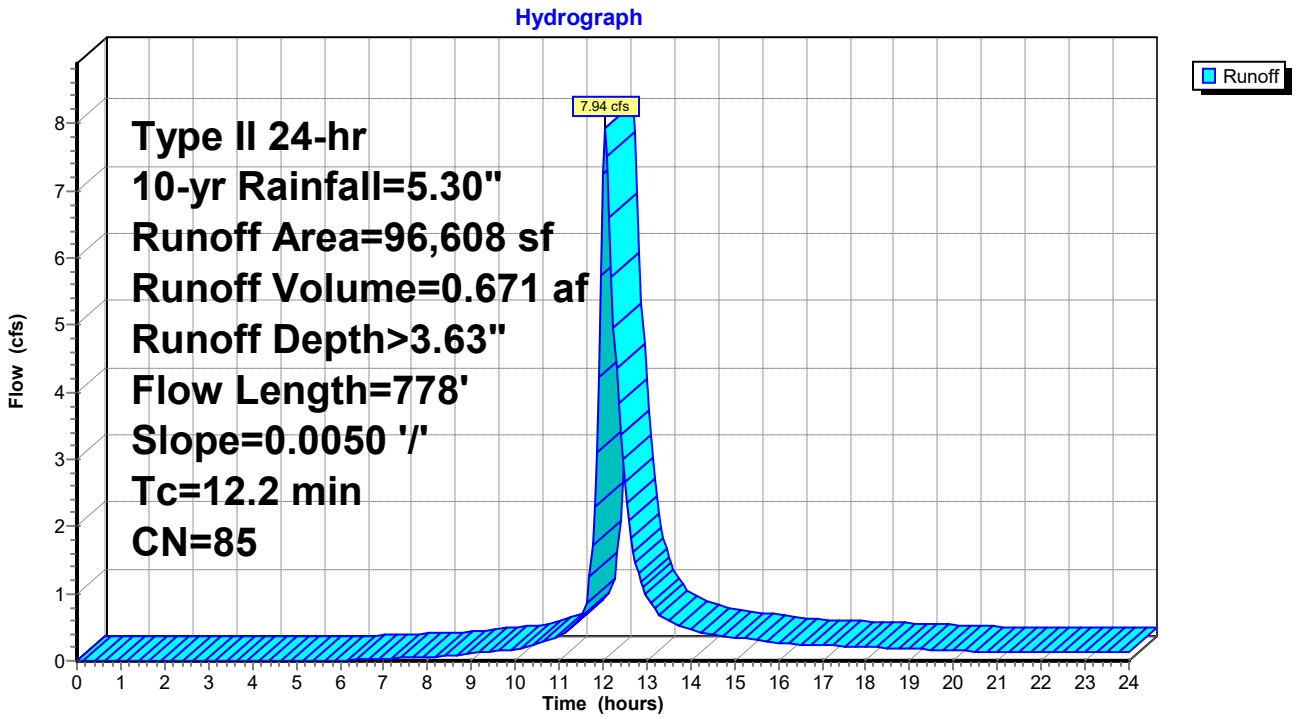
Runoff = 7.94 cfs @ 12.06 hrs, Volume= 0.671 af, Depth> 3.63"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	35,081	61	>75% Grass cover, Good, HSG B
*	61,527	98	Roads & Verizon Yard
	96,608	85	Weighted Average
	35,081		36.31% Pervious Area
	61,527		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	778	0.0050	1.06		**Shallow Concentrated Flow, Road Adjacent Swale** Grassed Waterway Kv= 15.0 fps

Subcatchment VZ-BB: Verizon & US 50/Idlewild Intersection



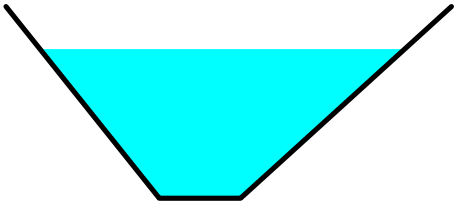
Summary for Reach 10R: Ex. Lotside Swale

Inflow Area = 6.053 ac, 60.33% Impervious, Inflow Depth > 3.31" for 10-yr event
Inflow = 12.81 cfs @ 11.99 hrs, Volume= 1.668 af
Outflow = 11.93 cfs @ 12.03 hrs, Volume= 1.663 af, Atten= 7%, Lag= 2.5 min

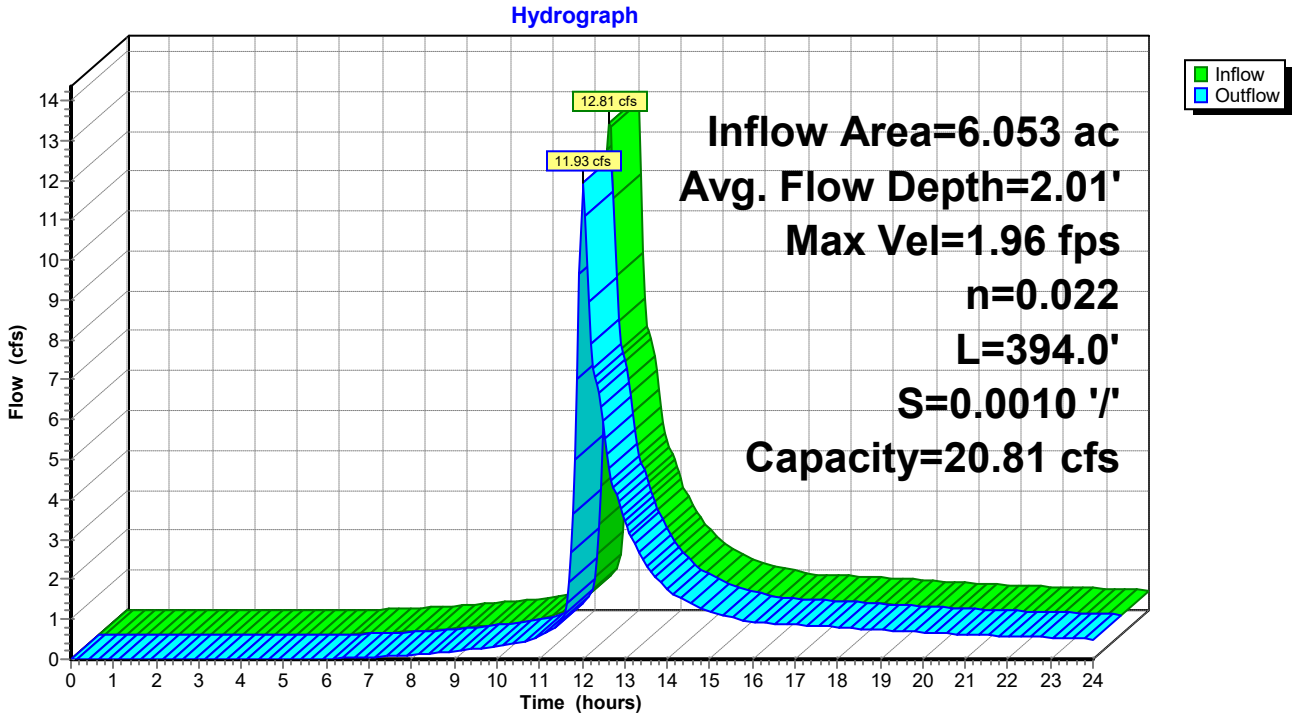
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.96 fps, Min. Travel Time= 3.3 min
Avg. Velocity = 0.90 fps, Avg. Travel Time= 7.3 min

Peak Storage= 2,389 cf @ 12.03 hrs
Average Depth at Peak Storage= 2.01'
Bank-Full Depth= 2.59' Flow Area= 9.2 sf, Capacity= 20.81 cfs

1.10' x 2.59' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 0.8 1.1 '/' Top Width= 6.02'
Length= 394.0' Slope= 0.0010 '/'
Inlet Invert= 42.00', Outlet Invert= 41.62'



Reach 10R: Ex. Lotside Swale



Stage-Area-Storage for Reach 10R: Ex. Lotside Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
42.00	0.0	0
42.05	0.1	23
42.10	0.1	47
42.15	0.2	73
42.20	0.3	102
42.25	0.3	132
42.30	0.4	164
42.35	0.5	198
42.40	0.6	233
42.45	0.7	271
42.50	0.8	310
42.55	0.9	352
42.60	1.0	395
42.65	1.1	440
42.70	1.2	487
42.75	1.4	536
42.80	1.5	586
42.85	1.6	639
42.90	1.8	693
42.95	1.9	750
43.00	2.1	808
43.05	2.2	868
43.10	2.4	930
43.15	2.5	993
43.20	2.7	1,059
43.25	2.9	1,127
43.30	3.0	1,196
43.35	3.2	1,267
43.40	3.4	1,340
43.45	3.6	1,415
43.50	3.8	1,492
43.55	4.0	1,571
43.60	4.2	1,652
43.65	4.4	1,734
43.70	4.6	1,819
43.75	4.8	1,905
43.80	5.1	1,993
43.85	5.3	2,083
43.90	5.5	2,175
43.95	5.8	2,268
44.00	6.0	2,364
44.05	6.2	2,461
44.10	6.5	2,561
44.15	6.8	2,662
44.20	7.0	2,765
44.25	7.3	2,870
44.30	7.6	2,977
44.35	7.8	3,086
44.40	8.1	3,196
44.45	8.4	3,309
44.50	8.7	3,423
44.55	**9.0**	**3,539**

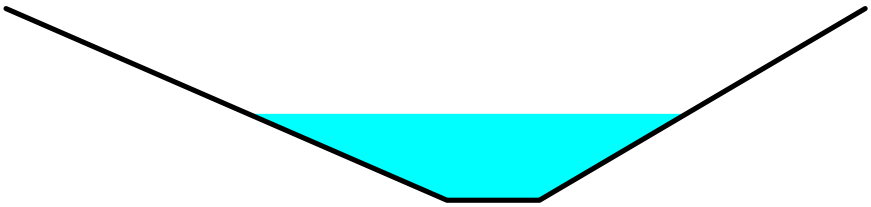
Summary for Reach SP1: Ex Swale Adj US 50 (North)

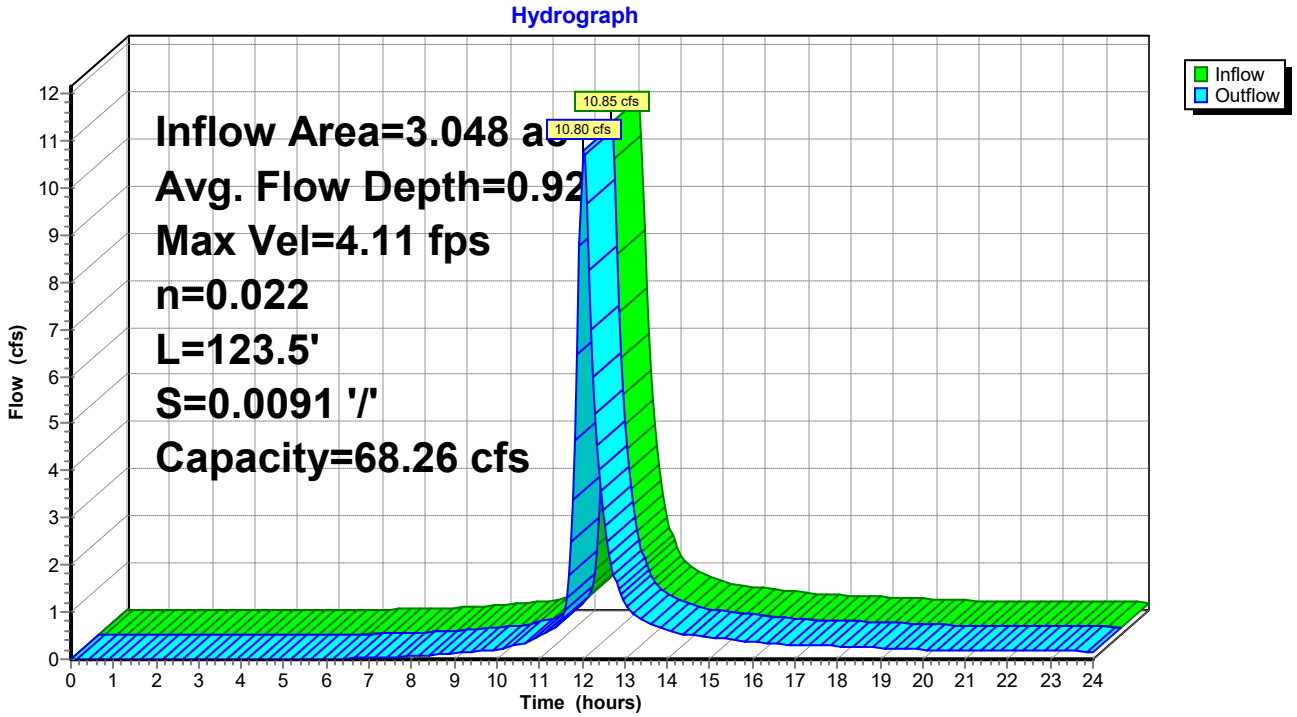
Inflow Area = 3.048 ac, 58.99% Impervious, Inflow Depth > 3.46" for 10-yr event
Inflow = 10.85 cfs @ 12.02 hrs, Volume= 0.878 af
Outflow = 10.80 cfs @ 12.03 hrs, Volume= 0.878 af, Atten= 1%, Lag= 0.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.11 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.50 fps, Avg. Travel Time= 1.4 min

Peak Storage= 324 cf @ 12.03 hrs
Average Depth at Peak Storage= 0.92'
Bank-Full Depth= 2.05' Flow Area= 10.4 sf, Capacity= 68.26 cfs

0.99' x 2.05' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.3 1.7 '/' Top Width= 9.19'
Length= 123.5' Slope= 0.0091 '/'
Inlet Invert= 38.72', Outlet Invert= 37.60'





Stage-Area-Storage for Reach SP1: Ex Swale Adj US 50 (North)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
38.72	0.0	0
38.77	0.1	7
38.82	0.1	15
38.87	0.2	24
38.92	0.3	34
38.97	0.4	46
39.02	0.5	59
39.07	0.6	73
39.12	0.7	88
39.17	0.9	105
39.22	1.0	123
39.27	1.1	142
39.32	1.3	162
39.37	1.5	184
39.42	1.7	207
39.47	1.9	231
39.52	2.1	256
39.57	2.3	282
39.62	2.5	310
39.67	2.7	339
39.72	3.0	369
39.77	3.2	401
39.82	3.5	433
39.87	3.8	467
39.92	4.1	502
39.97	4.4	539
40.02	4.7	576
40.07	5.0	615
40.12	5.3	655
40.17	5.6	697
40.22	6.0	739
40.27	6.3	783
40.32	6.7	828
40.37	7.1	874
40.42	7.5	922
40.47	7.9	970
40.52	8.3	1,020
40.57	8.7	1,072
40.62	9.1	1,124
40.67	9.5	1,178
40.72	10.0	1,233
40.77	**10.4**	**1,289**

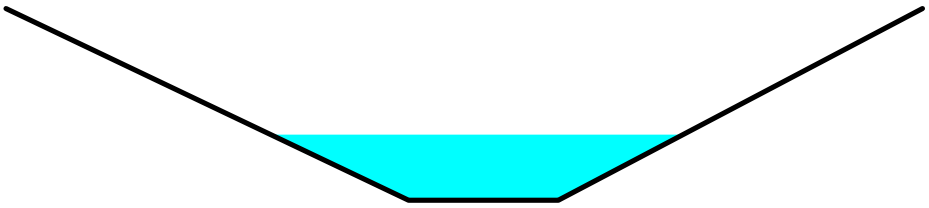
Summary for Reach SP2: Ex. Swale Adj US 50 (South)

Inflow Area = 2.218 ac, 63.69% Impervious, Inflow Depth > 3.63" for 10-yr event
Inflow = 7.94 cfs @ 12.06 hrs, Volume= 0.671 af
Outflow = 7.94 cfs @ 12.06 hrs, Volume= 0.671 af, Atten= 0%, Lag= 0.3 min

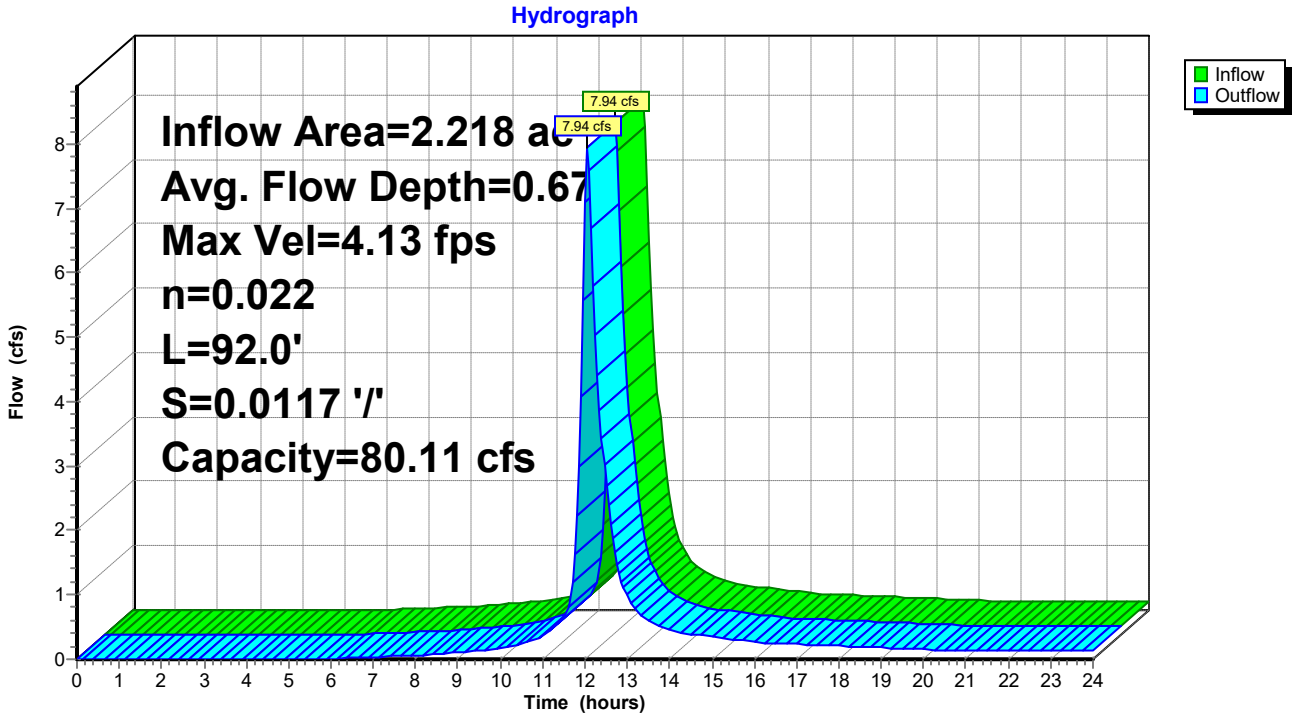
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.13 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.39 fps, Avg. Travel Time= 1.1 min

Peak Storage= 177 cf @ 12.06 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 1.96' Flow Area= 10.7 sf, Capacity= 80.11 cfs

1.53' x 1.96' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.1 1.9 '/' Top Width= 9.37'
Length= 92.0' Slope= 0.0117 '/'
Inlet Invert= 41.58', Outlet Invert= 40.50'



Reach SP2: Ex. Swale Adj US 50 (South)



Stage-Area-Storage for Reach SP2: Ex. Swale Adj US 50 (South)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
41.58	0.0	0	42.60	3.6	335
41.60	0.0	3	42.62	3.8	345
41.62	0.1	6	42.64	3.9	356
41.64	0.1	9	42.66	4.0	367
41.66	0.1	12	42.68	4.1	377
41.68	0.2	16	42.70	4.2	388
41.70	0.2	20	42.72	4.3	400
41.72	0.3	23	42.74	4.5	411
41.74	0.3	27	42.76	4.6	422
41.76	0.3	31	42.78	4.7	434
41.78	0.4	36	42.80	4.8	446
41.80	0.4	40	42.82	5.0	457
41.82	0.5	44	42.84	5.1	469
41.84	0.5	49	42.86	5.2	482
41.86	0.6	54	42.88	5.4	494
41.88	0.6	59	42.90	5.5	506
41.90	0.7	64	42.92	5.6	519
41.92	0.8	69	42.94	5.8	532
41.94	0.8	75	42.96	5.9	545
41.96	0.9	80	42.98	6.1	558
41.98	0.9	86	43.00	6.2	571
42.00	1.0	92	43.02	6.4	584
42.02	1.1	98	43.04	6.5	598
42.04	1.1	104	43.06	6.6	611
42.06	1.2	110	43.08	6.8	625
42.08	1.3	116	43.10	6.9	639
42.10	1.3	123	43.12	7.1	653
42.12	1.4	130	43.14	7.3	667
42.14	1.5	137	43.16	7.4	682
42.16	1.6	144	43.18	7.6	696
42.18	1.6	151	43.20	7.7	711
42.20	1.7	158	43.22	7.9	726
42.22	1.8	165	43.24	8.1	741
42.24	1.9	173	43.26	8.2	756
42.26	2.0	181	43.28	8.4	771
42.28	2.1	189	43.30	8.5	786
42.30	2.1	197	43.32	8.7	802
42.32	2.2	205	43.34	8.9	818
42.34	2.3	213	43.36	9.1	834
42.36	2.4	222	43.38	9.2	850
42.38	2.5	230	43.40	9.4	866
42.40	2.6	239	43.42	9.6	882
42.42	2.7	248	43.44	9.8	898
42.44	2.8	257	43.46	9.9	915
42.46	2.9	266	43.48	10.1	932
42.48	3.0	276	43.50	10.3	949
42.50	3.1	285	43.52	10.5	966
42.52	3.2	295	43.54	**10.7**	**983**
42.54	3.3	305			
42.56	3.4	315			
42.58	3.5	325			

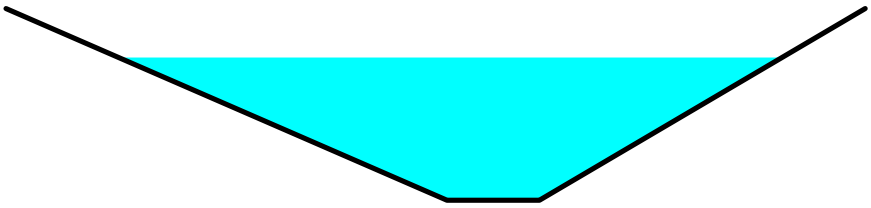
Summary for Reach SW1: Ex Swale Adj US 50 (North)

Inflow Area = 10.662 ac, 56.13% Impervious, Inflow Depth > 3.22" for 10-yr event
Inflow = 21.24 cfs @ 12.06 hrs, Volume= 2.860 af
Outflow = 21.25 cfs @ 12.06 hrs, Volume= 2.859 af, Atten= 0%, Lag= 0.3 min

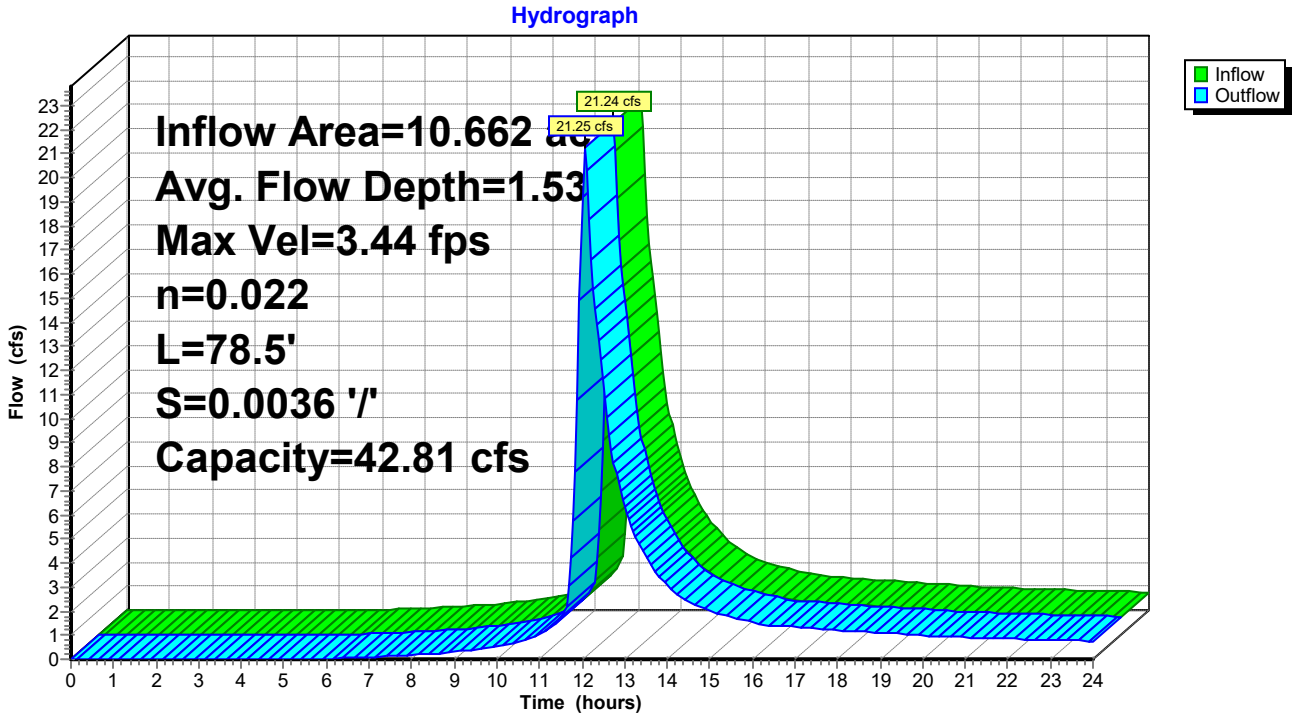
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.44 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 0.8 min

Peak Storage= 485 cf @ 12.06 hrs
Average Depth at Peak Storage= 1.53'
Bank-Full Depth= 2.05' Flow Area= 10.4 sf, Capacity= 42.81 cfs

0.99' x 2.05' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.3 1.7 '/' Top Width= 9.19'
Length= 78.5' Slope= 0.0036 '/'
Inlet Invert= 38.72', Outlet Invert= 38.44'



Reach SW1: Ex Swale Adj US 50 (North)



Stage-Area-Storage for Reach SW1: Ex Swale Adj US 50 (North)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
38.72	0.0	0
38.77	0.1	4
38.82	0.1	9
38.87	0.2	15
38.92	0.3	22
38.97	0.4	29
39.02	0.5	37
39.07	0.6	46
39.12	0.7	56
39.17	0.9	67
39.22	1.0	78
39.27	1.1	90
39.32	1.3	103
39.37	1.5	117
39.42	1.7	131
39.47	1.9	147
39.52	2.1	163
39.57	2.3	180
39.62	2.5	197
39.67	2.7	216
39.72	3.0	235
39.77	3.2	255
39.82	3.5	275
39.87	3.8	297
39.92	4.1	319
39.97	4.4	342
40.02	4.7	366
40.07	5.0	391
40.12	5.3	417
40.17	5.6	443
40.22	6.0	470
40.27	6.3	498
40.32	6.7	526
40.37	7.1	556
40.42	7.5	586
40.47	7.9	617
40.52	8.3	649
40.57	8.7	681
40.62	9.1	714
40.67	9.5	749
40.72	10.0	783
40.77	**10.4**	**819**

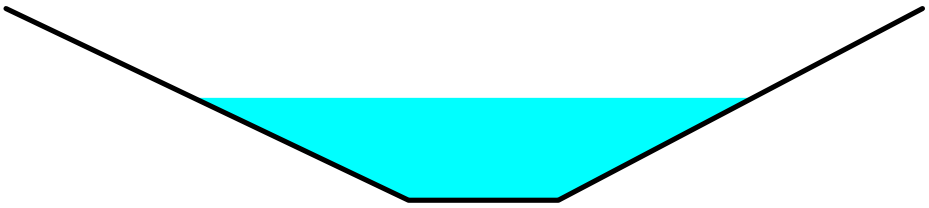
Summary for Reach SW2: Ex. Swale Adj US 50 (South)

Inflow Area = 8.271 ac, 61.23% Impervious, Inflow Depth > 3.39" for 10-yr event
Inflow = 19.78 cfs @ 12.04 hrs, Volume= 2.334 af
Outflow = 19.80 cfs @ 12.05 hrs, Volume= 2.332 af, Atten= 0%, Lag= 0.5 min

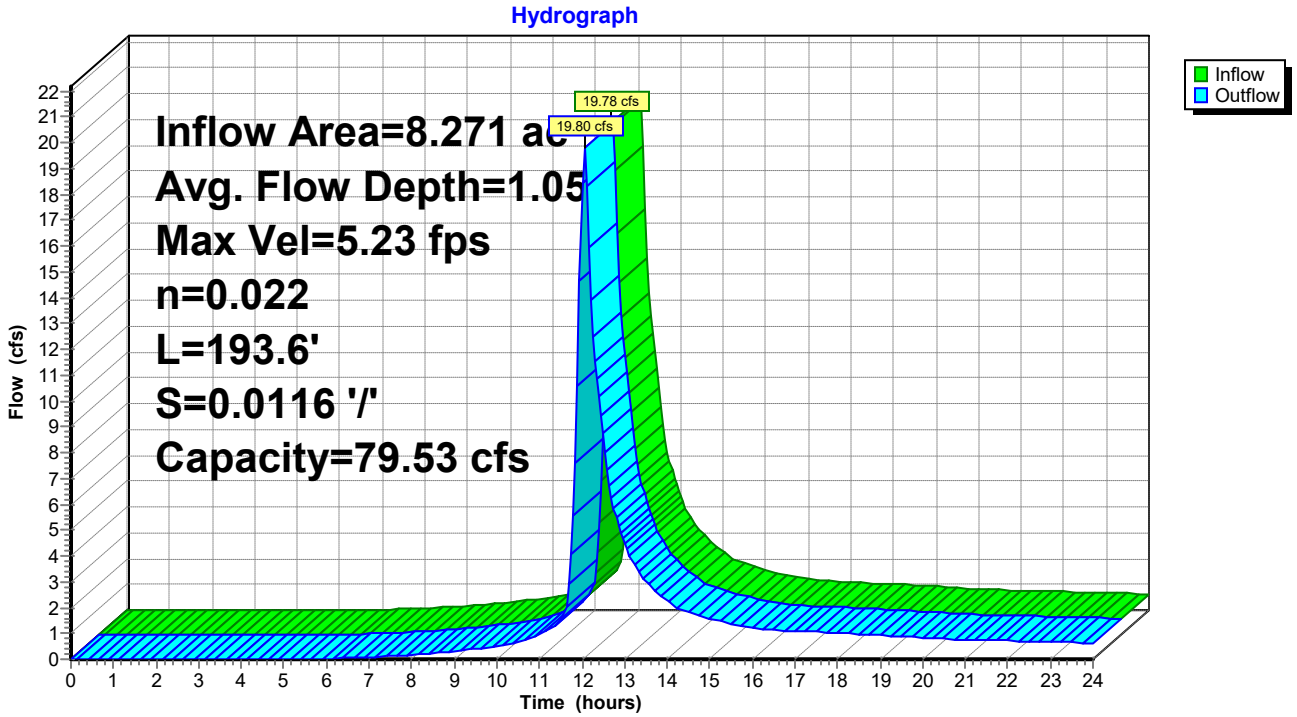
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.23 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.14 fps, Avg. Travel Time= 1.5 min

Peak Storage= 733 cf @ 12.05 hrs
Average Depth at Peak Storage= 1.05'
Bank-Full Depth= 1.96' Flow Area= 10.7 sf, Capacity= 79.53 cfs

1.53' x 1.96' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.1 1.9 '/' Top Width= 9.37'
Length= 193.6' Slope= 0.0116 '/'
Inlet Invert= 41.58', Outlet Invert= 39.34'



Reach SW2: Ex. Swale Adj US 50 (South)



Stage-Area-Storage for Reach SW2: Ex. Swale Adj US 50 (South)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
41.58	0.0	0	42.60	3.6	705
41.60	0.0	6	42.62	3.8	727
41.62	0.1	12	42.64	3.9	749
41.64	0.1	19	42.66	4.0	772
41.66	0.1	26	42.68	4.1	794
41.68	0.2	34	42.70	4.2	817
41.70	0.2	41	42.72	4.3	841
41.72	0.3	49	42.74	4.5	865
41.74	0.3	57	42.76	4.6	889
41.76	0.3	66	42.78	4.7	913
41.78	0.4	75	42.80	4.8	938
41.80	0.4	84	42.82	5.0	963
41.82	0.5	93	42.84	5.1	988
41.84	0.5	103	42.86	5.2	1,014
41.86	0.6	113	42.88	5.4	1,039
41.88	0.6	124	42.90	5.5	1,066
41.90	0.7	134	42.92	5.6	1,092
41.92	0.8	146	42.94	5.8	1,119
41.94	0.8	157	42.96	5.9	1,146
41.96	0.9	169	42.98	6.1	1,174
41.98	0.9	180	43.00	6.2	1,201
42.00	1.0	193	43.02	6.4	1,229
42.02	1.1	205	43.04	6.5	1,258
42.04	1.1	218	43.06	6.6	1,287
42.06	1.2	231	43.08	6.8	1,316
42.08	1.3	245	43.10	6.9	1,345
42.10	1.3	259	43.12	7.1	1,374
42.12	1.4	273	43.14	7.3	1,404
42.14	1.5	287	43.16	7.4	1,435
42.16	1.6	302	43.18	7.6	1,465
42.18	1.6	317	43.20	7.7	1,496
42.20	1.7	333	43.22	7.9	1,527
42.22	1.8	348	43.24	8.1	1,559
42.24	1.9	364	43.26	8.2	1,590
42.26	2.0	380	43.28	8.4	1,623
42.28	2.1	397	43.30	8.5	1,655
42.30	2.1	414	43.32	8.7	1,688
42.32	2.2	431	43.34	8.9	1,721
42.34	2.3	449	43.36	9.1	1,754
42.36	2.4	467	43.38	9.2	1,788
42.38	2.5	485	43.40	9.4	1,822
42.40	2.6	503	43.42	9.6	1,856
42.42	2.7	522	43.44	9.8	1,891
42.44	2.8	541	43.46	9.9	1,925
42.46	2.9	561	43.48	10.1	1,961
42.48	3.0	580	43.50	10.3	1,996
42.50	3.1	600	43.52	10.5	2,032
42.52	3.2	621	43.54	**10.7**	**2,068**
42.54	3.3	641			
42.56	3.4	662			
42.58	3.5	683			

Summary for Pond 1P: SDI-1

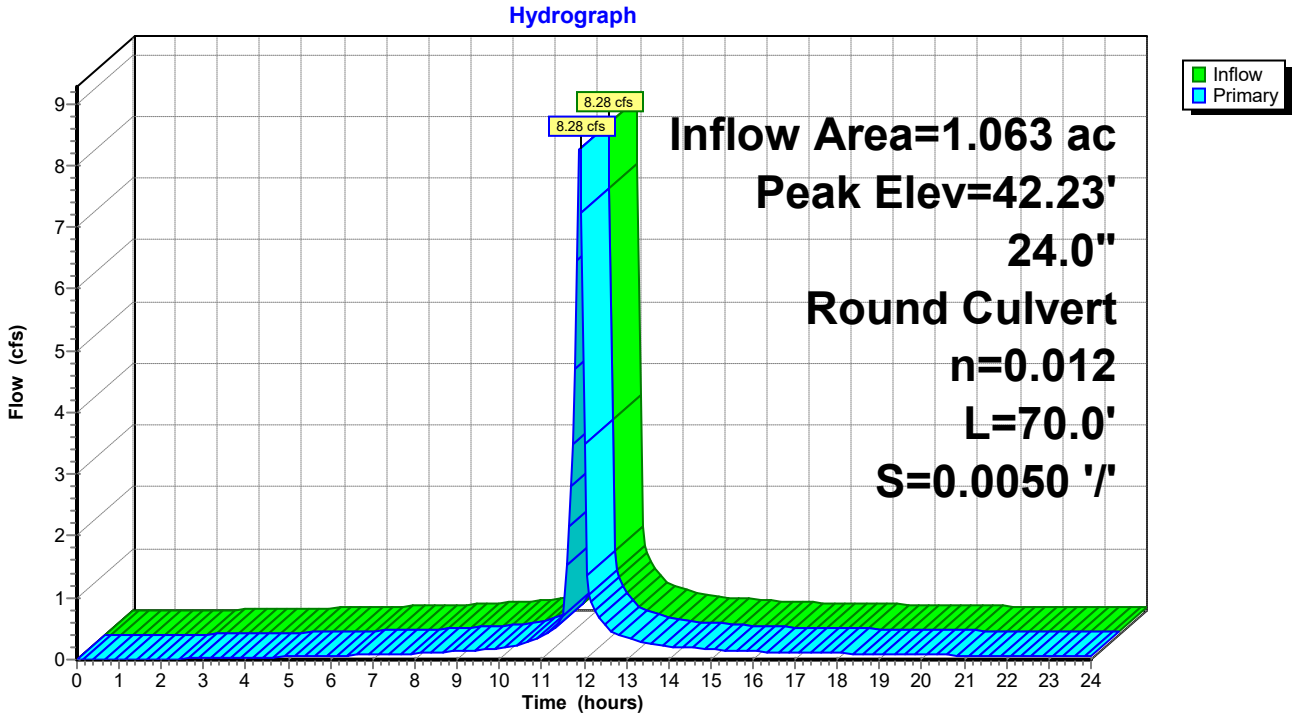
Inflow Area = 1.063 ac, 91.91% Impervious, Inflow Depth > 4.71" for 10-yr event
Inflow = 8.28 cfs @ 11.91 hrs, Volume= 0.417 af
Outflow = 8.28 cfs @ 11.91 hrs, Volume= 0.417 af, Atten= 0%, Lag= 0.0 min
Primary = 8.28 cfs @ 11.91 hrs, Volume= 0.417 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.23' @ 11.91 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.75'	**24.0" Round 24" HDPE** L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 40.75' / 40.40' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=8.11 cfs @ 11.91 hrs HW=42.21' TW=41.24' (Dynamic Tailwater)
1=24" HDPE (Barrel Controls 8.11 cfs @ 4.59 fps)

Pond 1P: SDI-1



Stage-Area-Storage for Pond 1P: SDI-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.75	**0**	42.79	0	44.83	0
40.79	0	42.83	0	44.87	0
40.83	0	42.87	0	44.91	0
40.87	0	42.91	0	44.95	0
40.91	0	42.95	0	44.99	0
40.95	0	42.99	0	45.03	0
40.99	0	43.03	0	45.07	0
41.03	0	43.07	0	45.11	0
41.07	0	43.11	0	45.15	0
41.11	0	43.15	0	45.19	0
41.15	0	43.19	0	45.23	0
41.19	0	43.23	0	45.27	0
41.23	0	43.27	0	45.31	0
41.27	0	43.31	0	45.35	0
41.31	0	43.35	0	45.39	0
41.35	0	43.39	0	45.43	0
41.39	0	43.43	0	45.47	0
41.43	0	43.47	0	45.51	0
41.47	0	43.51	0	45.55	0
41.51	0	43.55	0	45.59	0
41.55	0	43.59	0	45.63	0
41.59	0	43.63	0	45.67	0
41.63	0	43.67	0	45.71	0
41.67	0	43.71	0	45.75	0
41.71	0	43.75	0	45.79	0
41.75	0	43.79	0	45.83	0
41.79	0	43.83	0	45.87	0
41.83	0	43.87	0		
41.87	0	43.91	0		
41.91	0	43.95	0		
41.95	0	43.99	0		
41.99	0	44.03	0		
42.03	0	44.07	0		
42.07	0	44.11	0		
42.11	0	44.15	0		
42.15	0	44.19	0		
42.19	0	44.23	0		
42.23	0	44.27	0		
42.27	0	44.31	0		
42.31	0	44.35	0		
42.35	0	44.39	0		
42.39	0	44.43	0		
42.43	0	44.47	0		
42.47	0	44.51	0		
42.51	0	44.55	0		
42.55	0	44.59	0		
42.59	0	44.63	0		
42.63	0	44.67	0		
42.67	0	44.71	0		
42.71	0	44.75	0		
42.75	0	44.79	0		

Summary for Pond 2P: RL-1

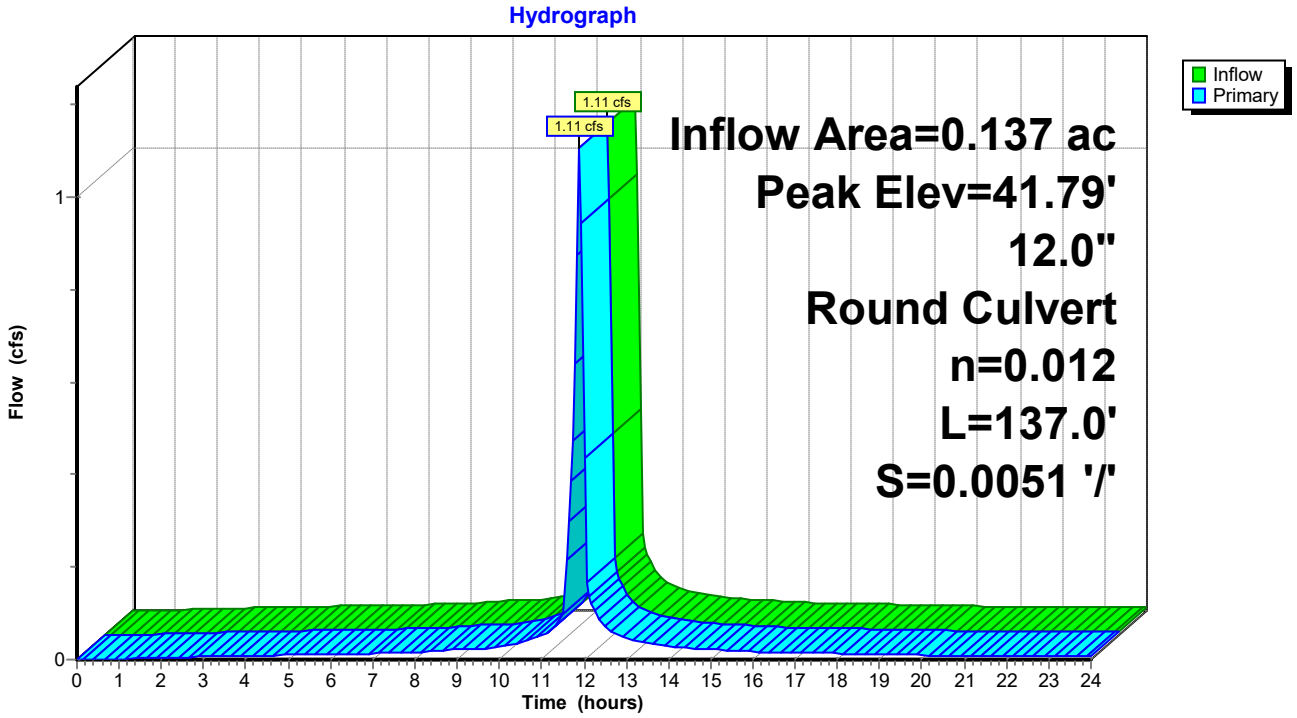
Inflow Area = 0.137 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 1.11 cfs @ 11.90 hrs, Volume= 0.058 af
Outflow = 1.11 cfs @ 11.90 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min
Primary = 1.11 cfs @ 11.90 hrs, Volume= 0.058 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.79' @ 12.55 hrs
Flood Elev= 46.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	**12.0" Round 12" HDPE** L= 137.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.40' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.89 cfs @ 11.90 hrs HW=41.73' TW=41.23' (Dynamic Tailwater)
↑—**1=12" HDPE** (Outlet Controls 0.89 cfs @ 2.44 fps)

Pond 2P: RL-1



Stage-Area-Storage for Pond 2P: RL-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.10	**0**	43.14	0	45.18	0
41.14	0	43.18	0	45.22	0
41.18	0	43.22	0	45.26	0
41.22	0	43.26	0	45.30	0
41.26	0	43.30	0	45.34	0
41.30	0	43.34	0	45.38	0
41.34	0	43.38	0	45.42	0
41.38	0	43.42	0	45.46	0
41.42	0	43.46	0	45.50	0
41.46	0	43.50	0	45.54	0
41.50	0	43.54	0	45.58	0
41.54	0	43.58	0	45.62	0
41.58	0	43.62	0	45.66	0
41.62	0	43.66	0	45.70	0
41.66	0	43.70	0	45.74	0
41.70	0	43.74	0	45.78	0
41.74	0	43.78	0	45.82	0
41.78	0	43.82	0	45.86	0
41.82	0	43.86	0	45.90	0
41.86	0	43.90	0	45.94	0
41.90	0	43.94	0	45.98	0
41.94	0	43.98	0	46.02	0
41.98	0	44.02	0	46.06	0
42.02	0	44.06	0	46.10	0
42.06	0	44.10	0	46.14	0
42.10	0	44.14	0	46.18	0
42.14	0	44.18	0	46.22	0
42.18	0	44.22	0	46.26	0
42.22	0	44.26	0	46.30	0
42.26	0	44.30	0	46.34	0
42.30	0	44.34	0		
42.34	0	44.38	0		
42.38	0	44.42	0		
42.42	0	44.46	0		
42.46	0	44.50	0		
42.50	0	44.54	0		
42.54	0	44.58	0		
42.58	0	44.62	0		
42.62	0	44.66	0		
42.66	0	44.70	0		
42.70	0	44.74	0		
42.74	0	44.78	0		
42.78	0	44.82	0		
42.82	0	44.86	0		
42.86	0	44.90	0		
42.90	0	44.94	0		
42.94	0	44.98	0		
42.98	0	45.02	0		
43.02	0	45.06	0		
43.06	0	45.10	0		
43.10	0	45.14	0		

Summary for Pond 3P: RL-2

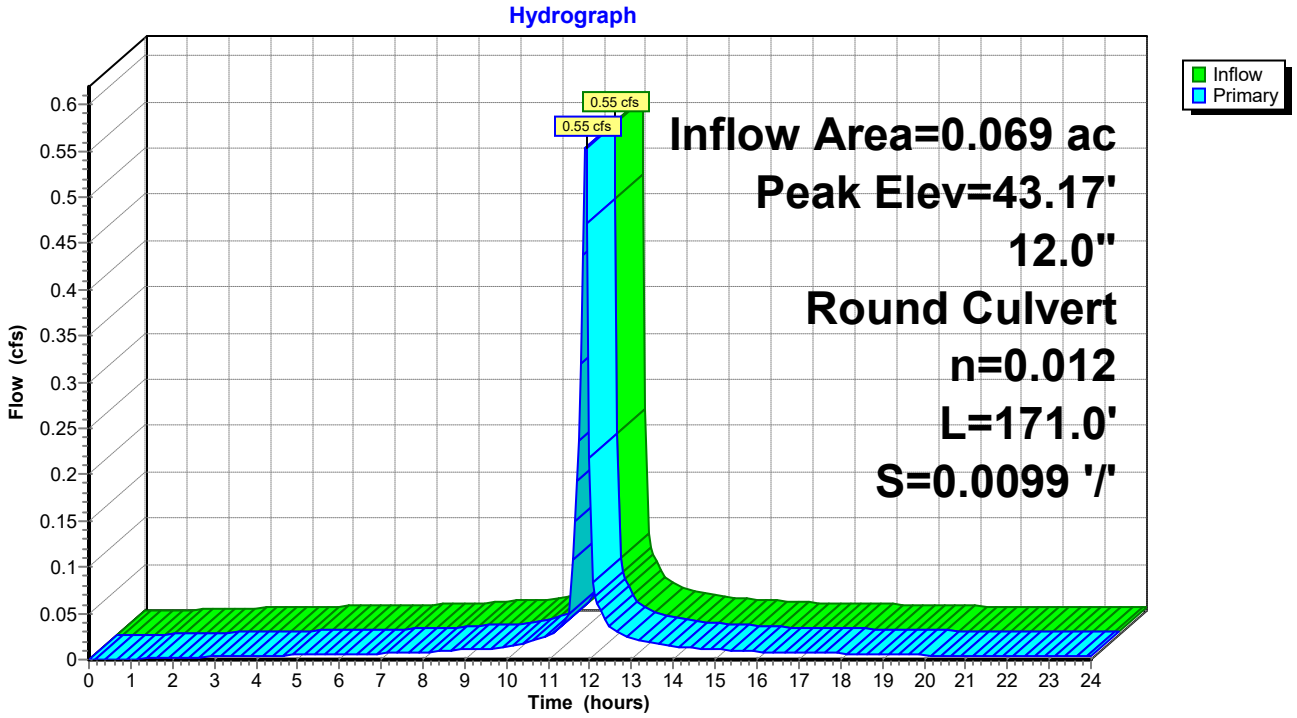
Inflow Area = 0.069 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 0.55 cfs @ 11.90 hrs, Volume= 0.029 af
Outflow = 0.55 cfs @ 11.90 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min
Primary = 0.55 cfs @ 11.90 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.17' @ 11.91 hrs
Flood Elev= 46.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.80'	**12.0" Round 12" HPDE** L= 171.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 42.80' / 41.10' S= 0.0099 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.55 cfs @ 11.90 hrs HW=43.17' TW=41.73' (Dynamic Tailwater)
1=12" HPDE (Inlet Controls 0.55 cfs @ 2.07 fps)

Pond 3P: RL-2



Stage-Area-Storage for Pond 3P: RL-2

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.80	**0**	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0	46.55	0
44.05	0	46.60	0
44.10	0	46.65	0
44.15	0	46.70	0
44.20	0	46.75	0
44.25	0	46.80	0
44.30	0	46.85	0
44.35	0	46.90	0
44.40	0		
44.45	0		
44.50	0		
44.55	0		
44.60	0		
44.65	0		
44.70	0		
44.75	0		
44.80	0		
44.85	0		
44.90	0		
44.95	0		
45.00	0		
45.05	0		
45.10	0		
45.15	0		
45.20	0		
45.25	0		
45.30	0		

Summary for Pond 4P: RL-3

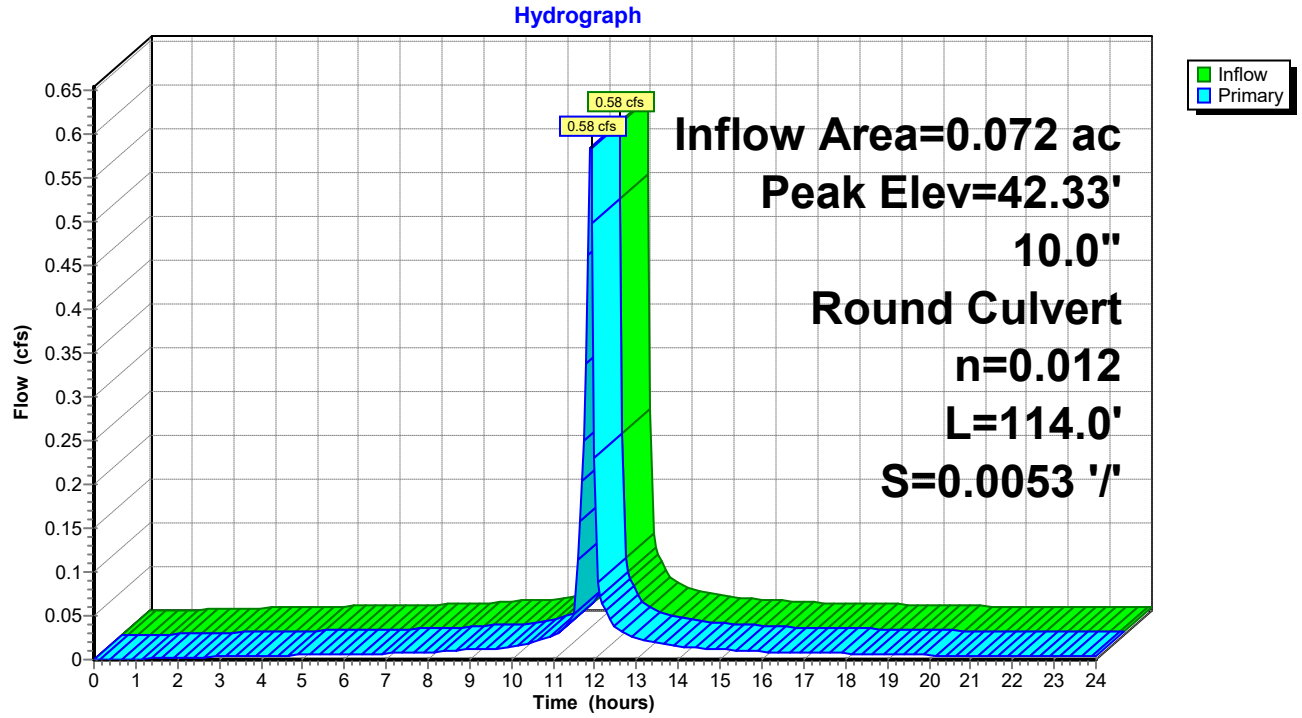
Inflow Area = 0.072 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af
Outflow = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.33' @ 11.94 hrs
Flood Elev= 47.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**10.0" Round 10" HDPE** L= 114.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.50' / 40.90' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.10 cfs @ 11.90 hrs HW=42.23' TW=42.22' (Dynamic Tailwater)
↑—**1=10" HDPE** (Outlet Controls 0.10 cfs @ 0.26 fps)

Pond 4P: RL-3



Stage-Area-Storage for Pond 4P: RL-3

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.50	**0**	43.54	0	45.58	0
41.54	0	43.58	0	45.62	0
41.58	0	43.62	0	45.66	0
41.62	0	43.66	0	45.70	0
41.66	0	43.70	0	45.74	0
41.70	0	43.74	0	45.78	0
41.74	0	43.78	0	45.82	0
41.78	0	43.82	0	45.86	0
41.82	0	43.86	0	45.90	0
41.86	0	43.90	0	45.94	0
41.90	0	43.94	0	45.98	0
41.94	0	43.98	0	46.02	0
41.98	0	44.02	0	46.06	0
42.02	0	44.06	0	46.10	0
42.06	0	44.10	0	46.14	0
42.10	0	44.14	0	46.18	0
42.14	0	44.18	0	46.22	0
42.18	0	44.22	0	46.26	0
42.22	0	44.26	0	46.30	0
42.26	0	44.30	0	46.34	0
42.30	0	44.34	0	46.38	0
42.34	0	44.38	0	46.42	0
42.38	0	44.42	0	46.46	0
42.42	0	44.46	0	46.50	0
42.46	0	44.50	0	46.54	0
42.50	0	44.54	0	46.58	0
42.54	0	44.58	0	46.62	0
42.58	0	44.62	0	46.66	0
42.62	0	44.66	0	46.70	0
42.66	0	44.70	0	46.74	0
42.70	0	44.74	0	46.78	0
42.74	0	44.78	0	46.82	0
42.78	0	44.82	0	46.86	0
42.82	0	44.86	0	46.90	0
42.86	0	44.90	0	46.94	0
42.90	0	44.94	0	46.98	0
42.94	0	44.98	0	47.02	0
42.98	0	45.02	0	47.06	0
43.02	0	45.06	0	47.10	0
43.06	0	45.10	0	47.14	0
43.10	0	45.14	0	47.18	0
43.14	0	45.18	0	47.22	0
43.18	0	45.22	0		
43.22	0	45.26	0		
43.26	0	45.30	0		
43.30	0	45.34	0		
43.34	0	45.38	0		
43.38	0	45.42	0		
43.42	0	45.46	0		
43.46	0	45.50	0		
43.50	0	45.54	0		

Summary for Pond 5P: SDI-5

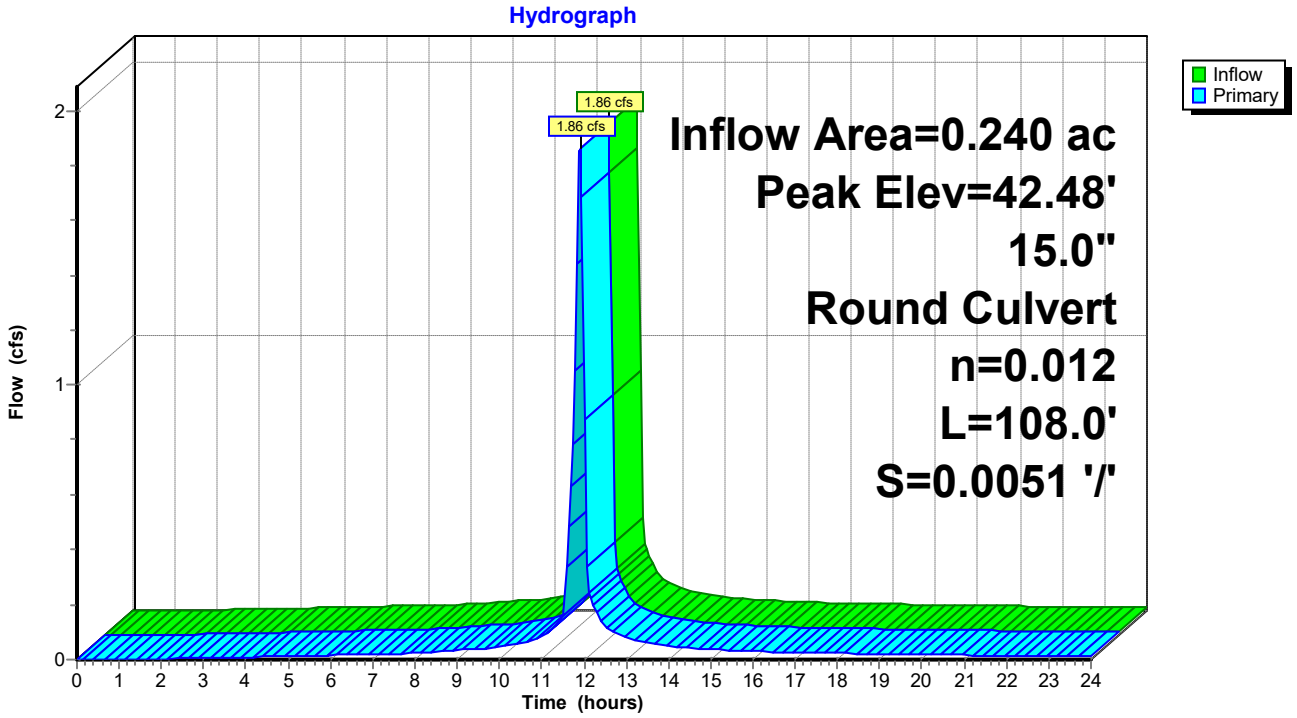
Inflow Area = 0.240 ac, 94.66% Impervious, Inflow Depth > 4.82" for 10-yr event
Inflow = 1.86 cfs @ 11.91 hrs, Volume= 0.096 af
Outflow = 1.86 cfs @ 11.91 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 11.91 hrs, Volume= 0.096 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.48' @ 11.94 hrs
Flood Elev= 46.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.45'	**15.0" Round 15" HDPE** L= 108.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.45' / 40.90' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.41 cfs @ 11.91 hrs HW=42.41' TW=42.21' (Dynamic Tailwater)
↑**1=15" HDPE** (Outlet Controls 1.41 cfs @ 1.94 fps)

Pond 5P: SDI-5



Stage-Area-Storage for Pond 5P: SDI-5

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.45	**0**	43.49	0	45.53	0
41.49	0	43.53	0	45.57	0
41.53	0	43.57	0	45.61	0
41.57	0	43.61	0	45.65	0
41.61	0	43.65	0	45.69	0
41.65	0	43.69	0	45.73	0
41.69	0	43.73	0	45.77	0
41.73	0	43.77	0	45.81	0
41.77	0	43.81	0	45.85	0
41.81	0	43.85	0	45.89	0
41.85	0	43.89	0	45.93	0
41.89	0	43.93	0	45.97	0
41.93	0	43.97	0	46.01	0
41.97	0	44.01	0	46.05	0
42.01	0	44.05	0	46.09	0
42.05	0	44.09	0	46.13	0
42.09	0	44.13	0	46.17	0
42.13	0	44.17	0	46.21	0
42.17	0	44.21	0	46.25	0
42.21	0	44.25	0	46.29	0
42.25	0	44.29	0	46.33	0
42.29	0	44.33	0	46.37	0
42.33	0	44.37	0	46.41	0
42.37	0	44.41	0	46.45	0
42.41	0	44.45	0	46.49	0
42.45	0	44.49	0	46.53	0
42.49	0	44.53	0	46.57	0
42.53	0	44.57	0	46.61	0
42.57	0	44.61	0	46.65	0
42.61	0	44.65	0	46.69	0
42.65	0	44.69	0	46.73	0
42.69	0	44.73	0		
42.73	0	44.77	0		
42.77	0	44.81	0		
42.81	0	44.85	0		
42.85	0	44.89	0		
42.89	0	44.93	0		
42.93	0	44.97	0		
42.97	0	45.01	0		
43.01	0	45.05	0		
43.05	0	45.09	0		
43.09	0	45.13	0		
43.13	0	45.17	0		
43.17	0	45.21	0		
43.21	0	45.25	0		
43.25	0	45.29	0		
43.29	0	45.33	0		
43.33	0	45.37	0		
43.37	0	45.41	0		
43.41	0	45.45	0		
43.45	0	45.49	0		

Summary for Pond 6P: RL-4

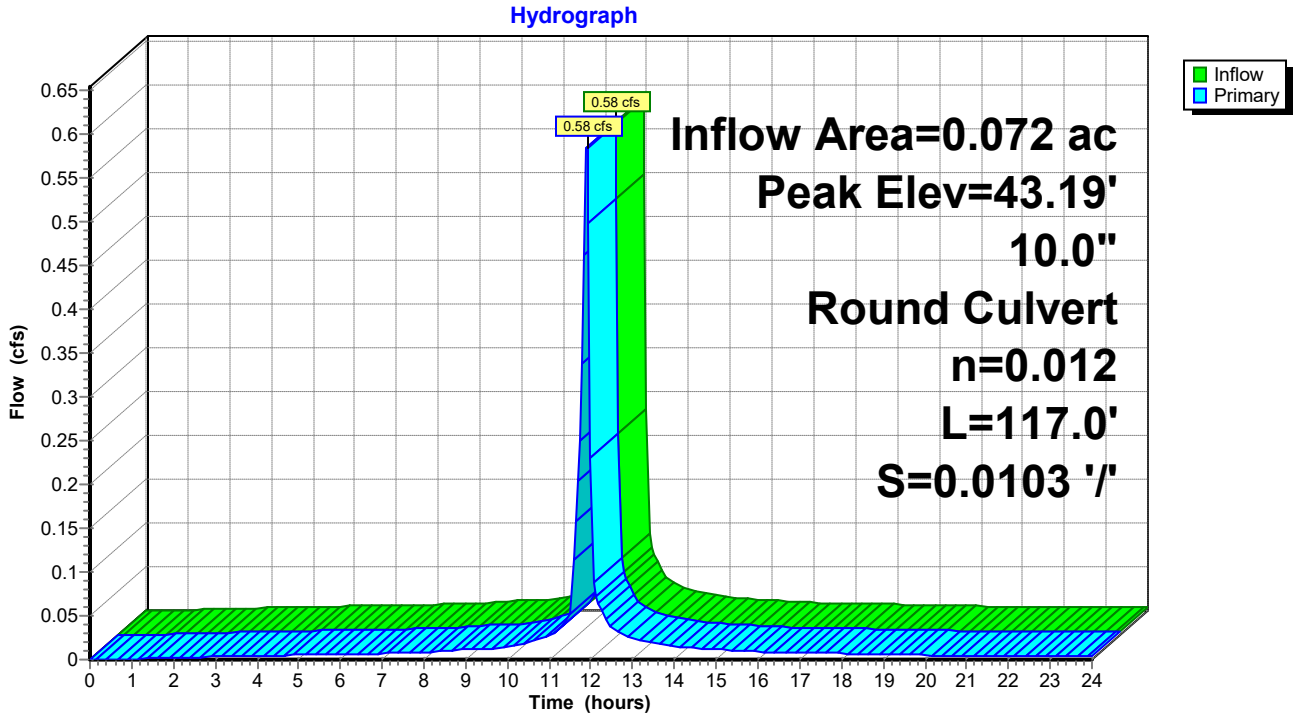
Inflow Area = 0.072 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af
Outflow = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 11.90 hrs, Volume= 0.031 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.19' @ 11.91 hrs
Flood Elev= 47.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.75'	**10.0" Round 10" HDPE** L= 117.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 42.75' / 41.55' S= 0.0103 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.55 cfs @ 11.90 hrs HW=43.19' TW=42.40' (Dynamic Tailwater)
↑**1=10" HDPE** (Outlet Controls 0.55 cfs @ 2.77 fps)

Pond 6P: RL-4



Stage-Area-Storage for Pond 6P: RL-4

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.75	**0**	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0	46.55	0
44.05	0	46.60	0
44.10	0	46.65	0
44.15	0	46.70	0
44.20	0	46.75	0
44.25	0	46.80	0
44.30	0	46.85	0
44.35	0	46.90	0
44.40	0	46.95	0
44.45	0	47.00	0
44.50	0	47.05	0
44.55	0	47.10	0
44.60	0	47.15	0
44.65	0	47.20	0
44.70	0		
44.75	0		
44.80	0		
44.85	0		
44.90	0		
44.95	0		
45.00	0		
45.05	0		
45.10	0		
45.15	0		
45.20	0		
45.25	0		

Summary for Pond 7P: SDI-6

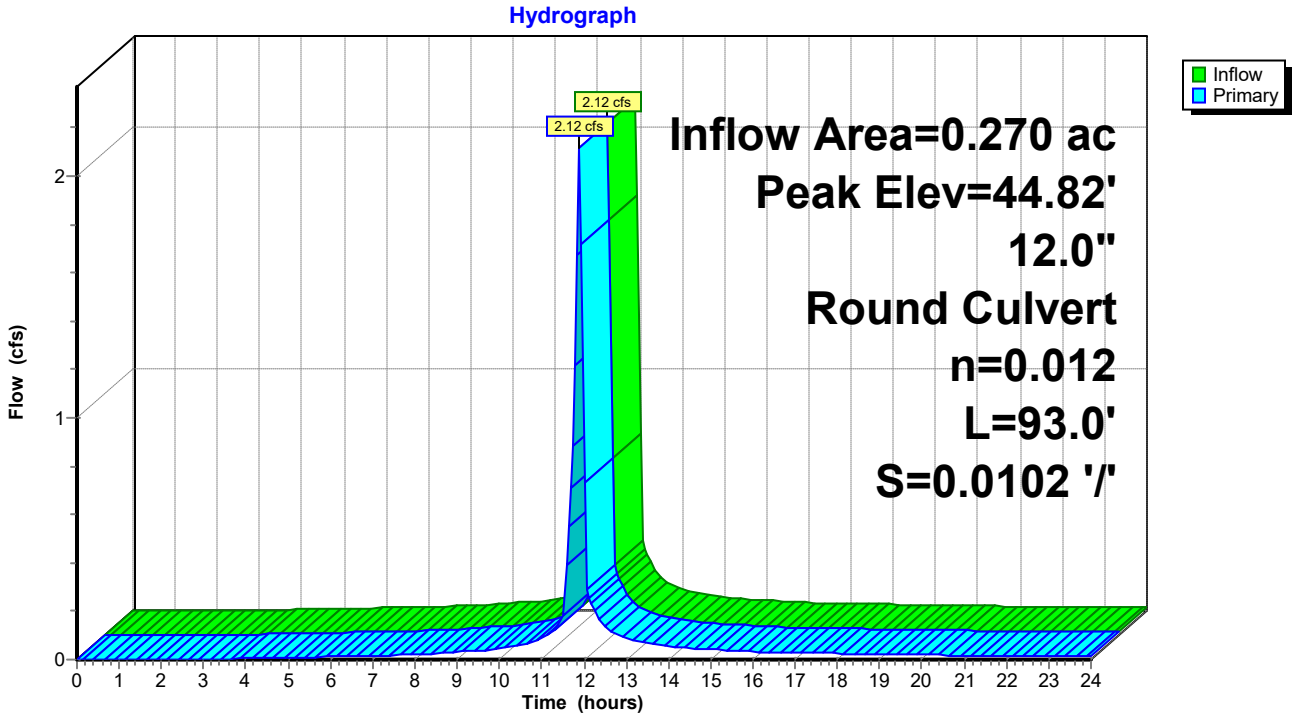
Inflow Area = 0.270 ac, 85.31% Impervious, Inflow Depth > 4.49" for 10-yr event
Inflow = 2.12 cfs @ 11.90 hrs, Volume= 0.101 af
Outflow = 2.12 cfs @ 11.90 hrs, Volume= 0.101 af, Atten= 0%, Lag= 0.0 min
Primary = 2.12 cfs @ 11.90 hrs, Volume= 0.101 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.82' @ 11.90 hrs
Flood Elev= 46.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**12.0" Round Culvert** L= 93.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 44.00' / 43.05' S= 0.0102 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.11 cfs @ 11.90 hrs HW=44.82' TW=43.38' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.11 cfs @ 3.07 fps)

Pond 7P: SDI-6



Stage-Area-Storage for Pond 7P: SDI-6

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
44.00	**0**	45.02	0	46.04	0
44.02	0	45.04	0	46.06	0
44.04	0	45.06	0	46.08	0
44.06	0	45.08	0	46.10	0
44.08	0	45.10	0	46.12	0
44.10	0	45.12	0	46.14	0
44.12	0	45.14	0	46.16	0
44.14	0	45.16	0	46.18	0
44.16	0	45.18	0	46.20	0
44.18	0	45.20	0	46.22	0
44.20	0	45.22	0	46.24	0
44.22	0	45.24	0	46.26	0
44.24	0	45.26	0	46.28	0
44.26	0	45.28	0	46.30	0
44.28	0	45.30	0	46.32	0
44.30	0	45.32	0	46.34	0
44.32	0	45.34	0	46.36	0
44.34	0	45.36	0	46.38	0
44.36	0	45.38	0	46.40	0
44.38	0	45.40	0		
44.40	0	45.42	0		
44.42	0	45.44	0		
44.44	0	45.46	0		
44.46	0	45.48	0		
44.48	0	45.50	0		
44.50	0	45.52	0		
44.52	0	45.54	0		
44.54	0	45.56	0		
44.56	0	45.58	0		
44.58	0	45.60	0		
44.60	0	45.62	0		
44.62	0	45.64	0		
44.64	0	45.66	0		
44.66	0	45.68	0		
44.68	0	45.70	0		
44.70	0	45.72	0		
44.72	0	45.74	0		
44.74	0	45.76	0		
44.76	0	45.78	0		
44.78	0	45.80	0		
44.80	0	45.82	0		
44.82	0	45.84	0		
44.84	0	45.86	0		
44.86	0	45.88	0		
44.88	0	45.90	0		
44.90	0	45.92	0		
44.92	0	45.94	0		
44.94	0	45.96	0		
44.96	0	45.98	0		
44.98	0	46.00	0		
45.00	0	46.02	0		

Summary for Pond 8P: SDI-2

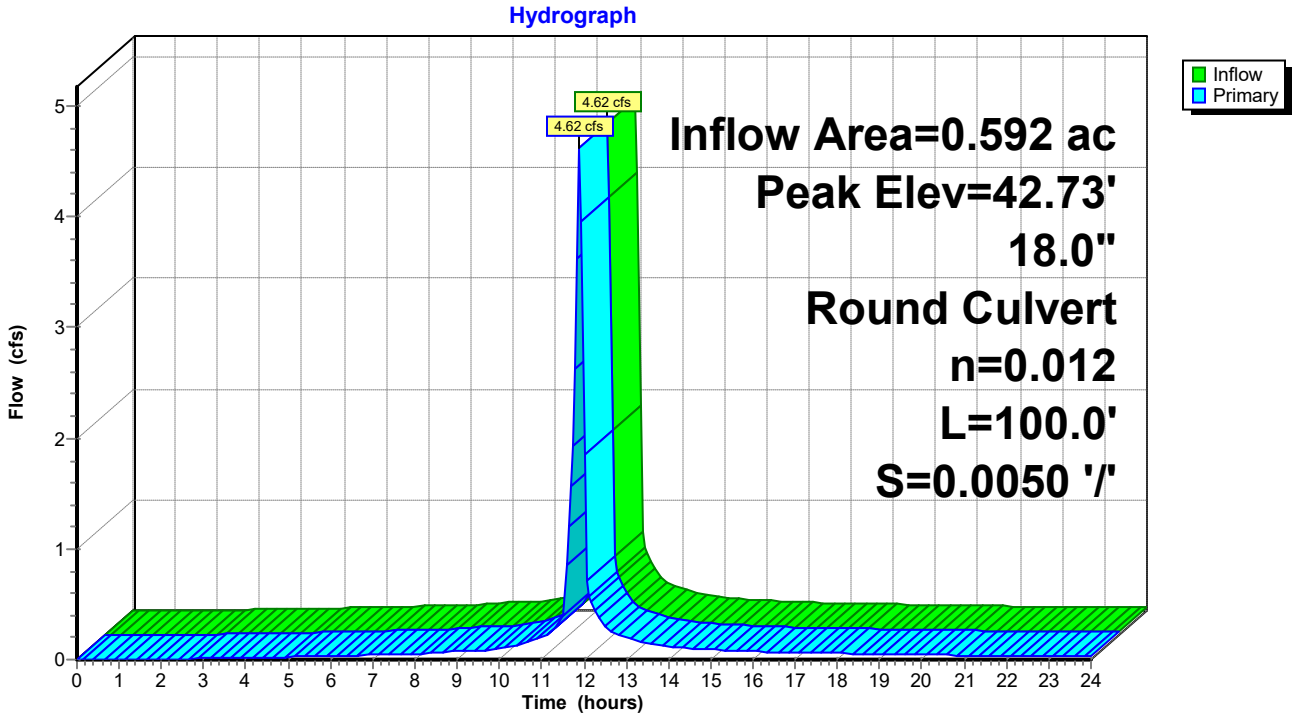
Inflow Area = 0.592 ac, 90.75% Impervious, Inflow Depth > 4.65" for 10-yr event
Inflow = 4.62 cfs @ 11.90 hrs, Volume= 0.229 af
Outflow = 4.62 cfs @ 11.90 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.0 min
Primary = 4.62 cfs @ 11.90 hrs, Volume= 0.229 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.73' @ 11.93 hrs
Flood Elev= 46.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.40'	**18.0" Round 18" HDPE** L= 100.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.40' / 40.90' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=3.89 cfs @ 11.90 hrs HW=42.68' TW=42.22' (Dynamic Tailwater)
1=18" HDPE (Outlet Controls 3.89 cfs @ 3.25 fps)

Pond 8P: SDI-2



Stage-Area-Storage for Pond 8P: SDI-2

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.40	**0**	43.44	0	45.48	0
41.44	0	43.48	0	45.52	0
41.48	0	43.52	0	45.56	0
41.52	0	43.56	0	45.60	0
41.56	0	43.60	0	45.64	0
41.60	0	43.64	0	45.68	0
41.64	0	43.68	0	45.72	0
41.68	0	43.72	0	45.76	0
41.72	0	43.76	0	45.80	0
41.76	0	43.80	0	45.84	0
41.80	0	43.84	0	45.88	0
41.84	0	43.88	0	45.92	0
41.88	0	43.92	0	45.96	0
41.92	0	43.96	0	46.00	0
41.96	0	44.00	0	46.04	0
42.00	0	44.04	0	46.08	0
42.04	0	44.08	0	46.12	0
42.08	0	44.12	0	46.16	0
42.12	0	44.16	0	46.20	0
42.16	0	44.20	0	46.24	0
42.20	0	44.24	0	46.28	0
42.24	0	44.28	0	46.32	0
42.28	0	44.32	0	46.36	0
42.32	0	44.36	0	46.40	0
42.36	0	44.40	0	46.44	0
42.40	0	44.44	0	46.48	0
42.44	0	44.48	0	46.52	0
42.48	0	44.52	0	46.56	0
42.52	0	44.56	0	46.60	0
42.56	0	44.60	0		
42.60	0	44.64	0		
42.64	0	44.68	0		
42.68	0	44.72	0		
42.72	0	44.76	0		
42.76	0	44.80	0		
42.80	0	44.84	0		
42.84	0	44.88	0		
42.88	0	44.92	0		
42.92	0	44.96	0		
42.96	0	45.00	0		
43.00	0	45.04	0		
43.04	0	45.08	0		
43.08	0	45.12	0		
43.12	0	45.16	0		
43.16	0	45.20	0		
43.20	0	45.24	0		
43.24	0	45.28	0		
43.28	0	45.32	0		
43.32	0	45.36	0		
43.36	0	45.40	0		
43.40	0	45.44	0		

Summary for Pond 9P: SDI-3

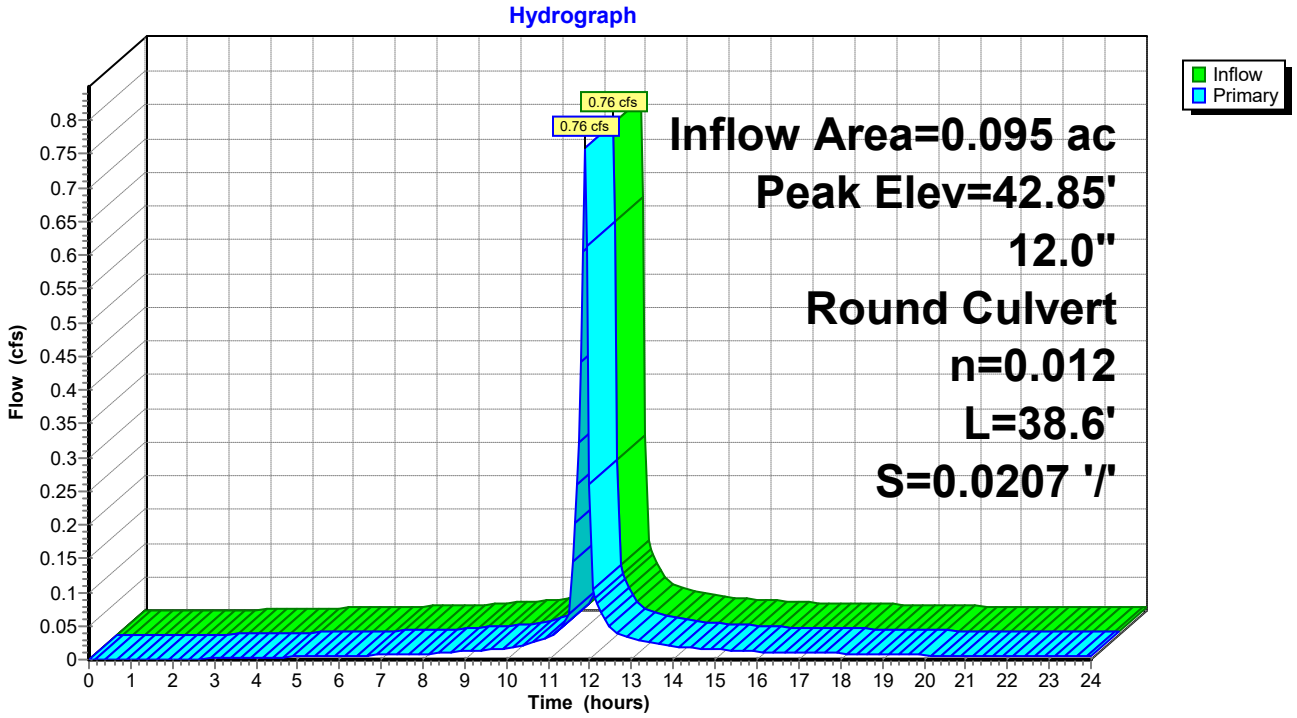
Inflow Area = 0.095 ac, 91.82% Impervious, Inflow Depth > 4.72" for 10-yr event
Inflow = 0.76 cfs @ 11.90 hrs, Volume= 0.037 af
Outflow = 0.76 cfs @ 11.90 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min
Primary = 0.76 cfs @ 11.90 hrs, Volume= 0.037 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.85' @ 11.94 hrs
Flood Elev= 46.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.30'	**12.0" Round 12" HDPE** L= 38.6' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 42.30' / 41.50' S= 0.0207 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.47 cfs @ 11.90 hrs HW=42.81' TW=42.68' (Dynamic Tailwater)
1=12" HDPE (Outlet Controls 0.47 cfs @ 1.71 fps)

Pond 9P: SDI-3



Stage-Area-Storage for Pond 9P: SDI-3

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.30	**0**	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0	45.10	0
42.60	0	45.15	0
42.65	0	45.20	0
42.70	0	45.25	0
42.75	0	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0		
43.80	0		
43.85	0		
43.90	0		
43.95	0		
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		
44.25	0		
44.30	0		
44.35	0		
44.40	0		
44.45	0		
44.50	0		
44.55	0		
44.60	0		
44.65	0		
44.70	0		
44.75	0		
44.80	0		

Summary for Pond 10P: SDI-4

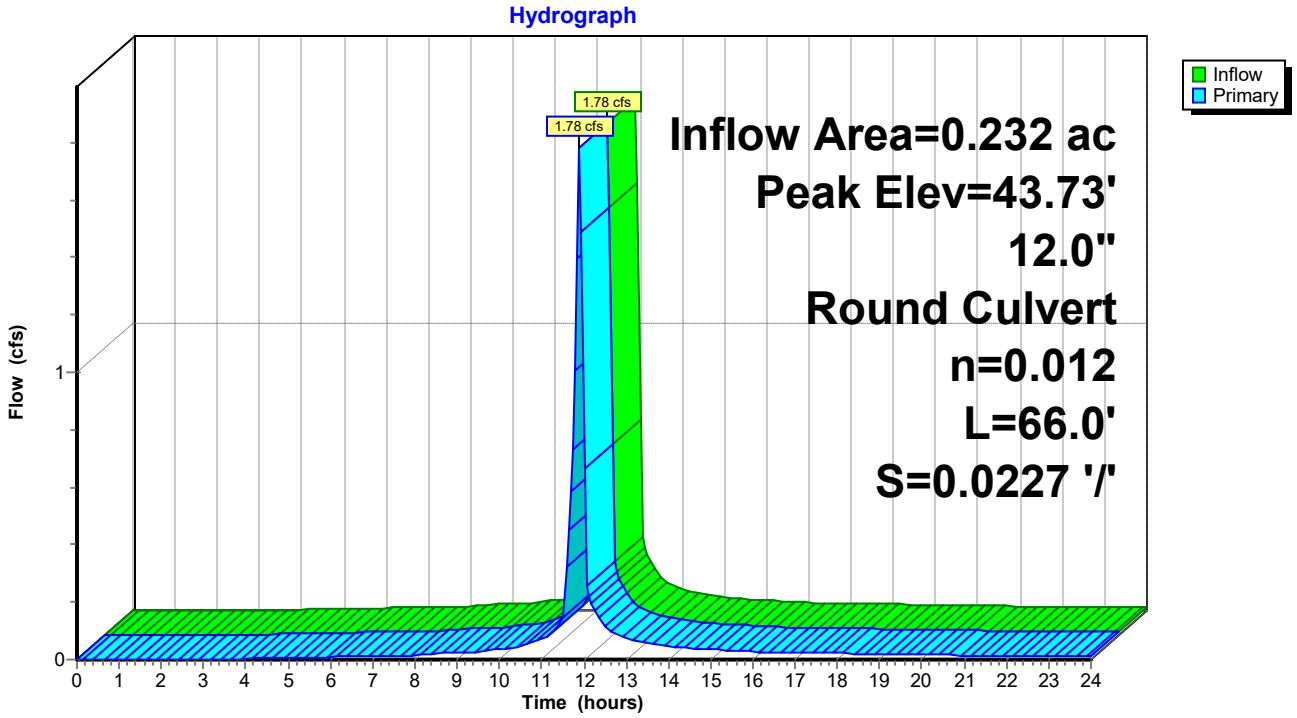
Inflow Area = 0.232 ac, 84.85% Impervious, Inflow Depth > 4.38" for 10-yr event
Inflow = 1.78 cfs @ 11.90 hrs, Volume= 0.085 af
Outflow = 1.78 cfs @ 11.90 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min
Primary = 1.78 cfs @ 11.90 hrs, Volume= 0.085 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.73' @ 11.90 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.00'	**12.0" Round 12" HDPE** L= 66.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 43.00' / 41.50' S= 0.0227 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.76 cfs @ 11.90 hrs HW=43.72' TW=42.68' (Dynamic Tailwater)
1=12" HDPE (Inlet Controls 1.76 cfs @ 2.90 fps)

Pond 10P: SDI-4



Stage-Area-Storage for Pond 10P: SDI-4

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
43.00	**0**	44.02	0	45.04	0
43.02	0	44.04	0	45.06	0
43.04	0	44.06	0	45.08	0
43.06	0	44.08	0	45.10	0
43.08	0	44.10	0	45.12	0
43.10	0	44.12	0	45.14	0
43.12	0	44.14	0	45.16	0
43.14	0	44.16	0	45.18	0
43.16	0	44.18	0	45.20	0
43.18	0	44.20	0	45.22	0
43.20	0	44.22	0	45.24	0
43.22	0	44.24	0	45.26	0
43.24	0	44.26	0	45.28	0
43.26	0	44.28	0	45.30	0
43.28	0	44.30	0	45.32	0
43.30	0	44.32	0	45.34	0
43.32	0	44.34	0	45.36	0
43.34	0	44.36	0	45.38	0
43.36	0	44.38	0	45.40	0
43.38	0	44.40	0	45.42	0
43.40	0	44.42	0	45.44	0
43.42	0	44.44	0	45.46	0
43.44	0	44.46	0	45.48	0
43.46	0	44.48	0	45.50	0
43.48	0	44.50	0	45.52	0
43.50	0	44.52	0	45.54	0
43.52	0	44.54	0	45.56	0
43.54	0	44.56	0	45.58	0
43.56	0	44.58	0	45.60	0
43.58	0	44.60	0	45.62	0
43.60	0	44.62	0	45.64	0
43.62	0	44.64	0	45.66	0
43.64	0	44.66	0	45.68	0
43.66	0	44.68	0	45.70	0
43.68	0	44.70	0	45.72	0
43.70	0	44.72	0	45.74	0
43.72	0	44.74	0	45.76	0
43.74	0	44.76	0	45.78	0
43.76	0	44.78	0	45.80	0
43.78	0	44.80	0	45.82	0
43.80	0	44.82	0	45.84	0
43.82	0	44.84	0	45.86	0
43.84	0	44.86	0	45.88	0
43.86	0	44.88	0	45.90	0
43.88	0	44.90	0		
43.90	0	44.92	0		
43.92	0	44.94	0		
43.94	0	44.96	0		
43.96	0	44.98	0		
43.98	0	45.00	0		
44.00	0	45.02	0		

Summary for Pond 11P: SDI-8

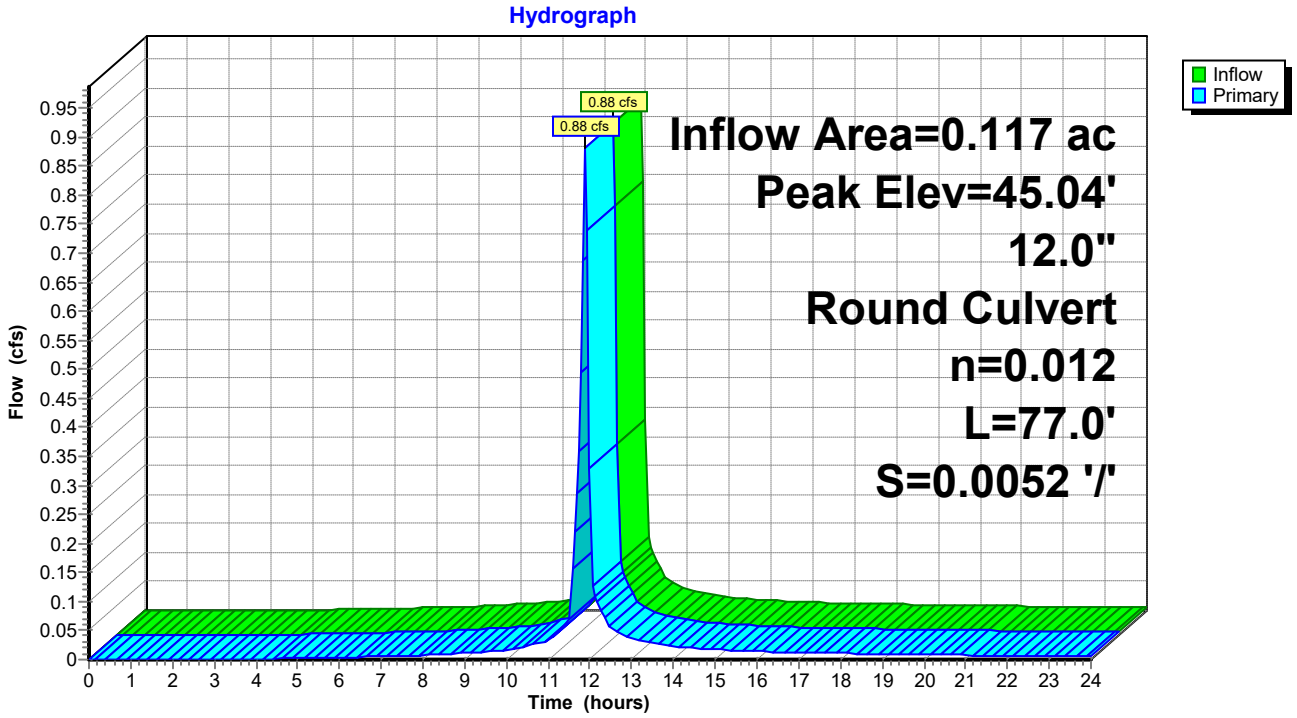
Inflow Area = 0.117 ac, 82.35% Impervious, Inflow Depth > 4.27" for 10-yr event
Inflow = 0.88 cfs @ 11.90 hrs, Volume= 0.042 af
Outflow = 0.88 cfs @ 11.90 hrs, Volume= 0.042 af, Atten= 0%, Lag= 0.0 min
Primary = 0.88 cfs @ 11.90 hrs, Volume= 0.042 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.04' @ 12.20 hrs
Flood Elev= 45.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.20'	**12.0" Round 12" HDPE** L= 77.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 44.20' / 43.80' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.57 cfs @ 11.90 hrs HW=44.77' TW=44.57' (Dynamic Tailwater)
↑**1=12" HDPE** (Outlet Controls 0.57 cfs @ 1.81 fps)

Pond 11P: SDI-8



Stage-Area-Storage for Pond 11P: SDI-8

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
44.20	**0**	44.71	0	45.22	0
44.21	0	44.72	0	45.23	0
44.22	0	44.73	0	45.24	0
44.23	0	44.74	0	45.25	0
44.24	0	44.75	0		
44.25	0	44.76	0		
44.26	0	44.77	0		
44.27	0	44.78	0		
44.28	0	44.79	0		
44.29	0	44.80	0		
44.30	0	44.81	0		
44.31	0	44.82	0		
44.32	0	44.83	0		
44.33	0	44.84	0		
44.34	0	44.85	0		
44.35	0	44.86	0		
44.36	0	44.87	0		
44.37	0	44.88	0		
44.38	0	44.89	0		
44.39	0	44.90	0		
44.40	0	44.91	0		
44.41	0	44.92	0		
44.42	0	44.93	0		
44.43	0	44.94	0		
44.44	0	44.95	0		
44.45	0	44.96	0		
44.46	0	44.97	0		
44.47	0	44.98	0		
44.48	0	44.99	0		
44.49	0	45.00	0		
44.50	0	45.01	0		
44.51	0	45.02	0		
44.52	0	45.03	0		
44.53	0	45.04	0		
44.54	0	45.05	0		
44.55	0	45.06	0		
44.56	0	45.07	0		
44.57	0	45.08	0		
44.58	0	45.09	0		
44.59	0	45.10	0		
44.60	0	45.11	0		
44.61	0	45.12	0		
44.62	0	45.13	0		
44.63	0	45.14	0		
44.64	0	45.15	0		
44.65	0	45.16	0		
44.66	0	45.17	0		
44.67	0	45.18	0		
44.68	0	45.19	0		
44.69	0	45.20	0		
44.70	0	45.21	0		

Summary for Pond 13P: SDI-9

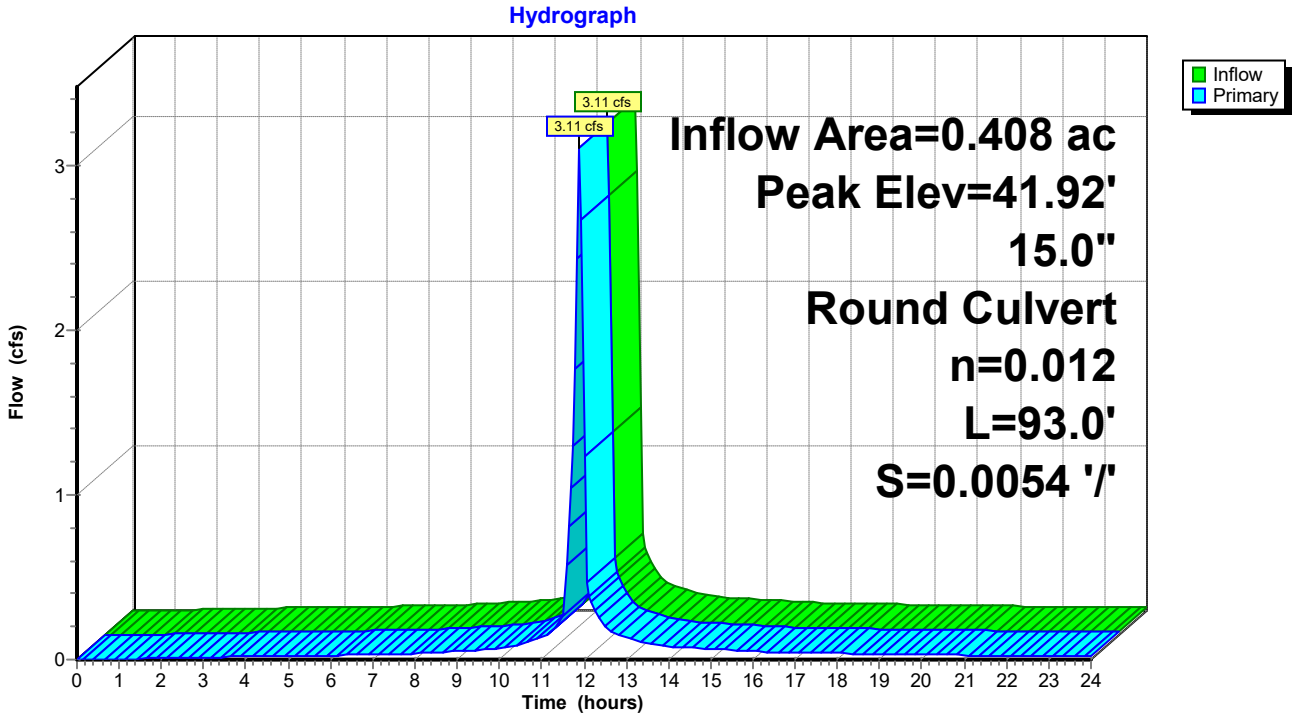
Inflow Area = 0.408 ac, 89.26% Impervious, Inflow Depth > 4.64" for 10-yr event
Inflow = 3.11 cfs @ 11.91 hrs, Volume= 0.158 af
Outflow = 3.11 cfs @ 11.91 hrs, Volume= 0.158 af, Atten= 0%, Lag= 0.0 min
Primary = 3.11 cfs @ 11.91 hrs, Volume= 0.158 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.92' @ 11.91 hrs
Flood Elev= 43.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.90'	**15.0" Round 15" HDPE** L= 93.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 40.90' / 40.40' S= 0.0054 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.91 cfs @ 11.91 hrs HW=41.91' TW=41.24' (Dynamic Tailwater)
1=15" HDPE (Outlet Controls 2.91 cfs @ 3.74 fps)

Pond 13P: SDI-9



Stage-Area-Storage for Pond 13P: SDI-9

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.90	**0**	41.92	0	42.94	0
40.92	0	41.94	0	42.96	0
40.94	0	41.96	0	42.98	0
40.96	0	41.98	0	43.00	0
40.98	0	42.00	0		
41.00	0	42.02	0		
41.02	0	42.04	0		
41.04	0	42.06	0		
41.06	0	42.08	0		
41.08	0	42.10	0		
41.10	0	42.12	0		
41.12	0	42.14	0		
41.14	0	42.16	0		
41.16	0	42.18	0		
41.18	0	42.20	0		
41.20	0	42.22	0		
41.22	0	42.24	0		
41.24	0	42.26	0		
41.26	0	42.28	0		
41.28	0	42.30	0		
41.30	0	42.32	0		
41.32	0	42.34	0		
41.34	0	42.36	0		
41.36	0	42.38	0		
41.38	0	42.40	0		
41.40	0	42.42	0		
41.42	0	42.44	0		
41.44	0	42.46	0		
41.46	0	42.48	0		
41.48	0	42.50	0		
41.50	0	42.52	0		
41.52	0	42.54	0		
41.54	0	42.56	0		
41.56	0	42.58	0		
41.58	0	42.60	0		
41.60	0	42.62	0		
41.62	0	42.64	0		
41.64	0	42.66	0		
41.66	0	42.68	0		
41.68	0	42.70	0		
41.70	0	42.72	0		
41.72	0	42.74	0		
41.74	0	42.76	0		
41.76	0	42.78	0		
41.78	0	42.80	0		
41.80	0	42.82	0		
41.82	0	42.84	0		
41.84	0	42.86	0		
41.86	0	42.88	0		
41.88	0	42.90	0		
41.90	0	42.92	0		

Summary for Pond 14P: RL-5

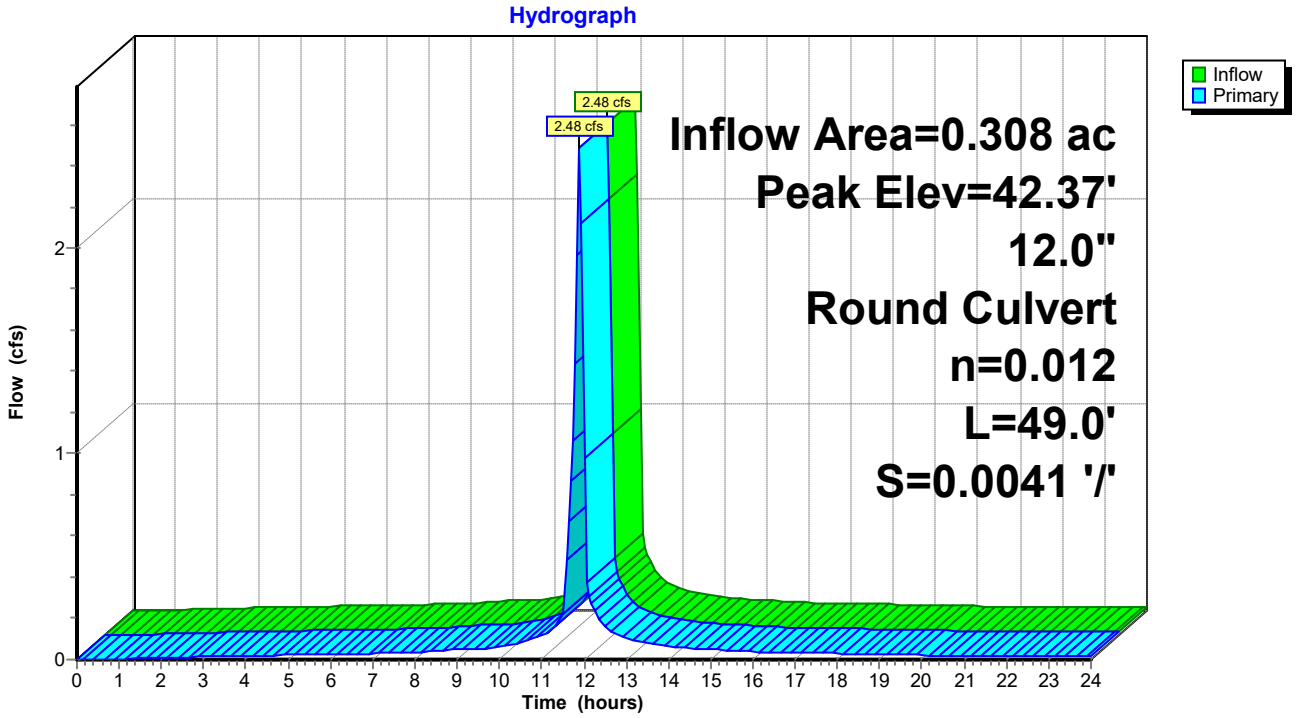
Inflow Area = 0.308 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 2.48 cfs @ 11.90 hrs, Volume= 0.130 af
Outflow = 2.48 cfs @ 11.90 hrs, Volume= 0.130 af, Atten= 0%, Lag= 0.0 min
Primary = 2.48 cfs @ 11.90 hrs, Volume= 0.130 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.37' @ 11.92 hrs
Flood Elev= 46.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.20'	**12.0" Round 12" HDPE** L= 49.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.20' / 41.00' S= 0.0041 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.23 cfs @ 11.90 hrs HW=42.36' TW=41.91' (Dynamic Tailwater)
↑**1=12" HDPE** (Inlet Controls 2.23 cfs @ 2.84 fps)

Pond 14P: RL-5



Stage-Area-Storage for Pond 14P: RL-5

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.20	**0**	43.24	0	45.28	0
41.24	0	43.28	0	45.32	0
41.28	0	43.32	0	45.36	0
41.32	0	43.36	0	45.40	0
41.36	0	43.40	0	45.44	0
41.40	0	43.44	0	45.48	0
41.44	0	43.48	0	45.52	0
41.48	0	43.52	0	45.56	0
41.52	0	43.56	0	45.60	0
41.56	0	43.60	0	45.64	0
41.60	0	43.64	0	45.68	0
41.64	0	43.68	0	45.72	0
41.68	0	43.72	0	45.76	0
41.72	0	43.76	0	45.80	0
41.76	0	43.80	0	45.84	0
41.80	0	43.84	0	45.88	0
41.84	0	43.88	0	45.92	0
41.88	0	43.92	0	45.96	0
41.92	0	43.96	0	46.00	0
41.96	0	44.00	0	46.04	0
42.00	0	44.04	0	46.08	0
42.04	0	44.08	0	46.12	0
42.08	0	44.12	0	46.16	0
42.12	0	44.16	0	46.20	0
42.16	0	44.20	0	46.24	0
42.20	0	44.24	0	46.28	0
42.24	0	44.28	0	46.32	0
42.28	0	44.32	0	46.36	0
42.32	0	44.36	0	46.40	0
42.36	0	44.40	0	46.44	0
42.40	0	44.44	0	46.48	0
42.44	0	44.48	0		
42.48	0	44.52	0		
42.52	0	44.56	0		
42.56	0	44.60	0		
42.60	0	44.64	0		
42.64	0	44.68	0		
42.68	0	44.72	0		
42.72	0	44.76	0		
42.76	0	44.80	0		
42.80	0	44.84	0		
42.84	0	44.88	0		
42.88	0	44.92	0		
42.92	0	44.96	0		
42.96	0	45.00	0		
43.00	0	45.04	0		
43.04	0	45.08	0		
43.08	0	45.12	0		
43.12	0	45.16	0		
43.16	0	45.20	0		
43.20	0	45.24	0		

Summary for Pond 15P: 30x19 RCP

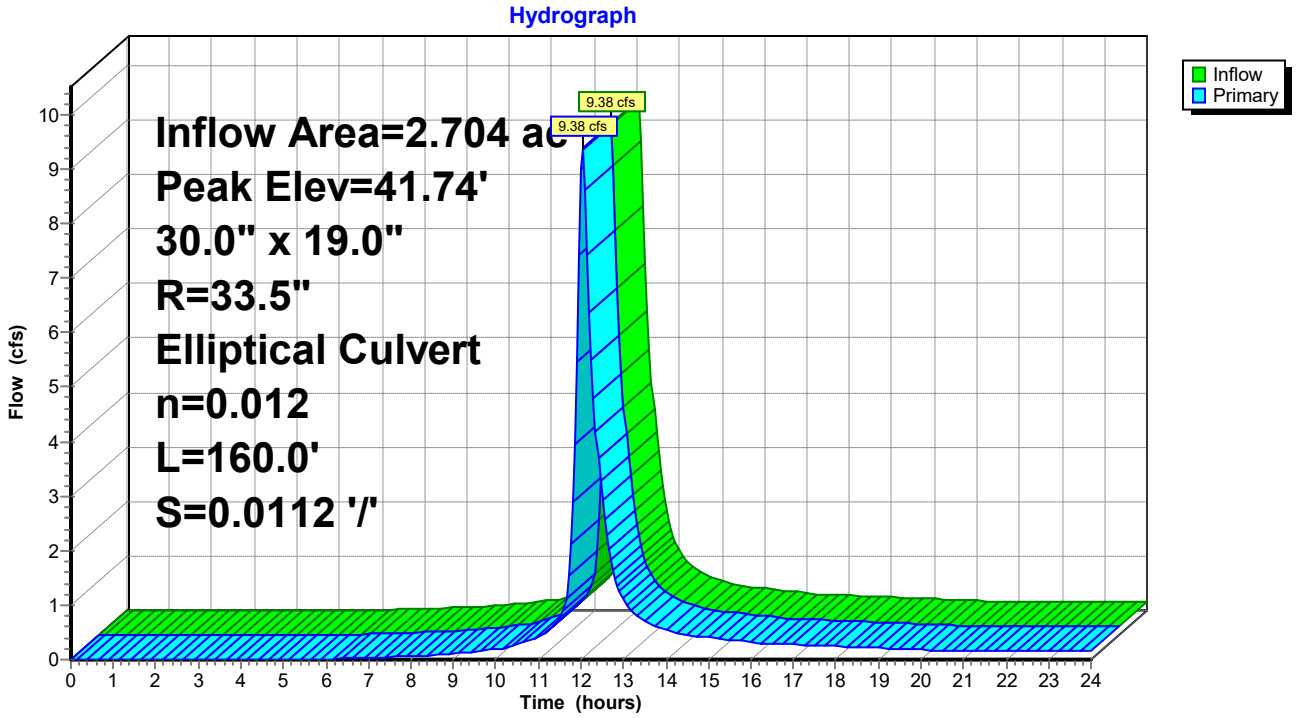
Inflow Area = 2.704 ac, 59.07% Impervious, Inflow Depth > 3.46" for 10-yr event
Inflow = 9.38 cfs @ 12.04 hrs, Volume= 0.780 af
Outflow = 9.38 cfs @ 12.04 hrs, Volume= 0.780 af, Atten= 0%, Lag= 0.0 min
Primary = 9.38 cfs @ 12.04 hrs, Volume= 0.780 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.74' @ 12.04 hrs
Flood Elev= 42.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	**30.0" W x 19.0" H, R=33.5" Elliptical RCP_Elliptical 30x19** L= 160.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 38.70' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.28 sf

Primary OutFlow Max=9.30 cfs @ 12.04 hrs HW=41.74' TW=39.64' (Dynamic Tailwater)
↑**1=RCP_Elliptical 30x19** (Inlet Controls 9.30 cfs @ 3.43 fps)

Pond 15P: 30x19 RCP



Stage-Area-Storage for Pond 15P: 30x19 RCP

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.50	**0**	41.52	0
40.52	0	41.54	0
40.54	0	41.56	0
40.56	0	41.58	0
40.58	0	41.60	0
40.60	0	41.62	0
40.62	0	41.64	0
40.64	0	41.66	0
40.66	0	41.68	0
40.68	0	41.70	0
40.70	0	41.72	0
40.72	0	41.74	0
40.74	0	41.76	0
40.76	0	41.78	0
40.78	0	41.80	0
40.80	0	41.82	0
40.82	0	41.84	0
40.84	0	41.86	0
40.86	0	41.88	0
40.88	0	41.90	0
40.90	0	41.92	0
40.92	0	41.94	0
40.94	0	41.96	0
40.96	0	41.98	0
40.98	0	42.00	0
41.00	0	42.02	0
41.02	0	42.04	0
41.04	0	42.06	0
41.06	0	42.08	0
41.08	0		
41.10	0		
41.12	0		
41.14	0		
41.16	0		
41.18	0		
41.20	0		
41.22	0		
41.24	0		
41.26	0		
41.28	0		
41.30	0		
41.32	0		
41.34	0		
41.36	0		
41.38	0		
41.40	0		
41.42	0		
41.44	0		
41.46	0		
41.48	0		
41.50	0		

Summary for Pond 16P: RL-6

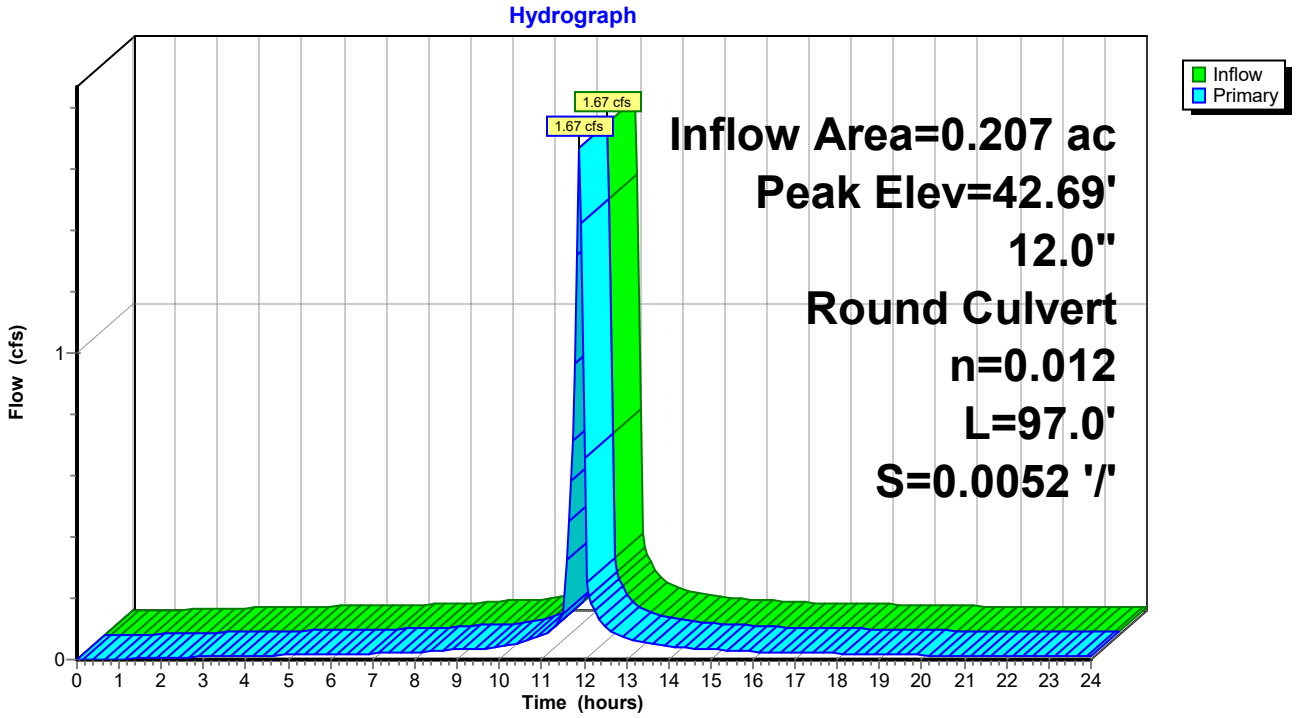
Inflow Area = 0.207 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 1.67 cfs @ 11.90 hrs, Volume= 0.087 af
Outflow = 1.67 cfs @ 11.90 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.0 min
Primary = 1.67 cfs @ 11.90 hrs, Volume= 0.087 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.69' @ 11.93 hrs
Flood Elev= 46.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.70'	**12.0" Round 12" HDPE** L= 97.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.70' / 41.20' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.29 cfs @ 11.90 hrs HW=42.64' TW=42.36' (Dynamic Tailwater)
1=12" HDPE (Outlet Controls 1.29 cfs @ 2.19 fps)

Pond 16P: RL-6



Stage-Area-Storage for Pond 16P: RL-6

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.70	**0**	44.25	0
41.75	0	44.30	0
41.80	0	44.35	0
41.85	0	44.40	0
41.90	0	44.45	0
41.95	0	44.50	0
42.00	0	44.55	0
42.05	0	44.60	0
42.10	0	44.65	0
42.15	0	44.70	0
42.20	0	44.75	0
42.25	0	44.80	0
42.30	0	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0	45.10	0
42.60	0	45.15	0
42.65	0	45.20	0
42.70	0	45.25	0
42.75	0	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		

Summary for Pond 20P: RL-8

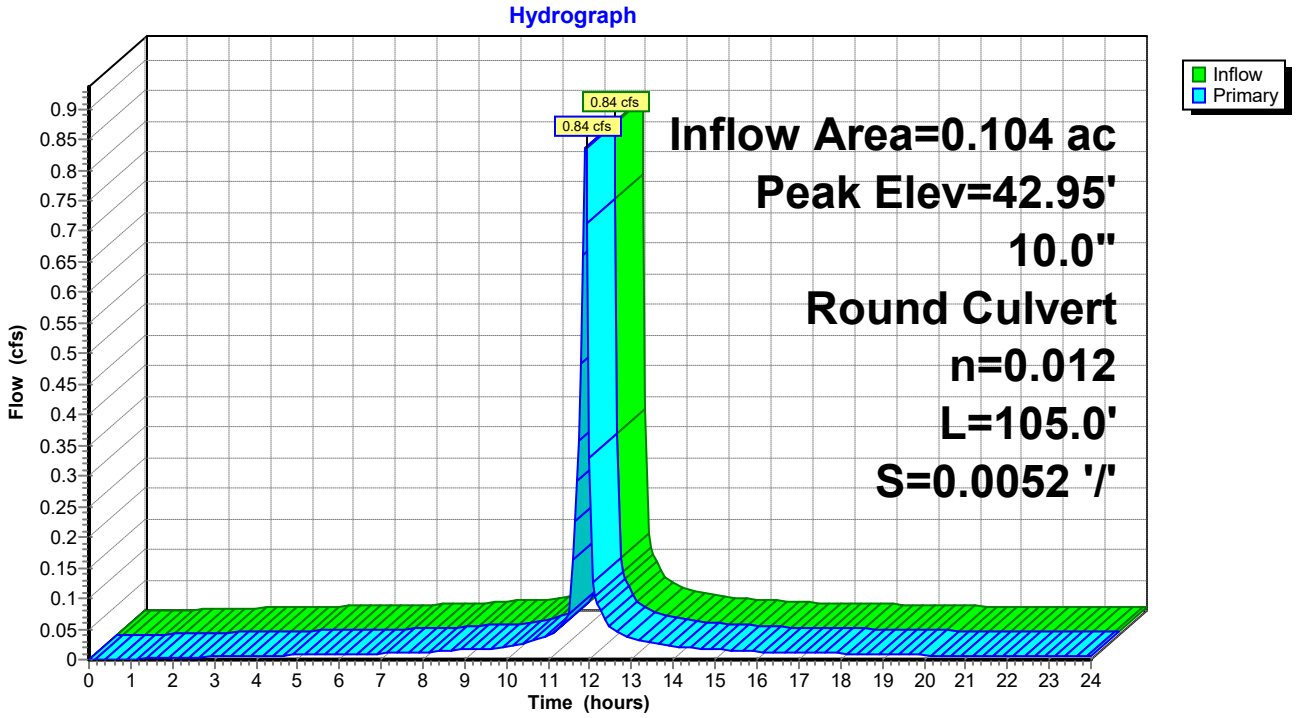
Inflow Area = 0.104 ac,100.00% Impervious, Inflow Depth > 5.06" for 10-yr event
Inflow = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af
Outflow = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min
Primary = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.95' @ 11.93 hrs
Flood Elev= 45.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.25'	**10.0" Round 10" HDPE** L= 105.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 42.25' / 41.70' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.67 cfs @ 11.90 hrs HW=42.92' TW=42.64' (Dynamic Tailwater)
1=10" HDPE (Outlet Controls 0.67 cfs @ 1.94 fps)

Pond 20P: RL-8



Stage-Area-Storage for Pond 20P: RL-8

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.25	**0**	43.27	0	44.29	0
42.27	0	43.29	0	44.31	0
42.29	0	43.31	0	44.33	0
42.31	0	43.33	0	44.35	0
42.33	0	43.35	0	44.37	0
42.35	0	43.37	0	44.39	0
42.37	0	43.39	0	44.41	0
42.39	0	43.41	0	44.43	0
42.41	0	43.43	0	44.45	0
42.43	0	43.45	0	44.47	0
42.45	0	43.47	0	44.49	0
42.47	0	43.49	0	44.51	0
42.49	0	43.51	0	44.53	0
42.51	0	43.53	0	44.55	0
42.53	0	43.55	0	44.57	0
42.55	0	43.57	0	44.59	0
42.57	0	43.59	0	44.61	0
42.59	0	43.61	0	44.63	0
42.61	0	43.63	0	44.65	0
42.63	0	43.65	0	44.67	0
42.65	0	43.67	0	44.69	0
42.67	0	43.69	0	44.71	0
42.69	0	43.71	0	44.73	0
42.71	0	43.73	0	44.75	0
42.73	0	43.75	0	44.77	0
42.75	0	43.77	0	44.79	0
42.77	0	43.79	0	44.81	0
42.79	0	43.81	0	44.83	0
42.81	0	43.83	0	44.85	0
42.83	0	43.85	0	44.87	0
42.85	0	43.87	0	44.89	0
42.87	0	43.89	0	44.91	0
42.89	0	43.91	0	44.93	0
42.91	0	43.93	0	44.95	0
42.93	0	43.95	0	44.97	0
42.95	0	43.97	0	44.99	0
42.97	0	43.99	0	45.01	0
42.99	0	44.01	0	45.03	0
43.01	0	44.03	0	45.05	0
43.03	0	44.05	0	45.07	0
43.05	0	44.07	0	45.09	0
43.07	0	44.09	0	45.11	0
43.09	0	44.11	0	45.13	0
43.11	0	44.13	0	45.15	0
43.13	0	44.15	0	45.17	0
43.15	0	44.17	0	45.19	0
43.17	0	44.19	0	45.21	0
43.19	0	44.21	0	45.23	0
43.21	0	44.23	0	45.25	0
43.23	0	44.25	0		
43.25	0	44.27	0		

Summary for Pond 25P: SDI-1

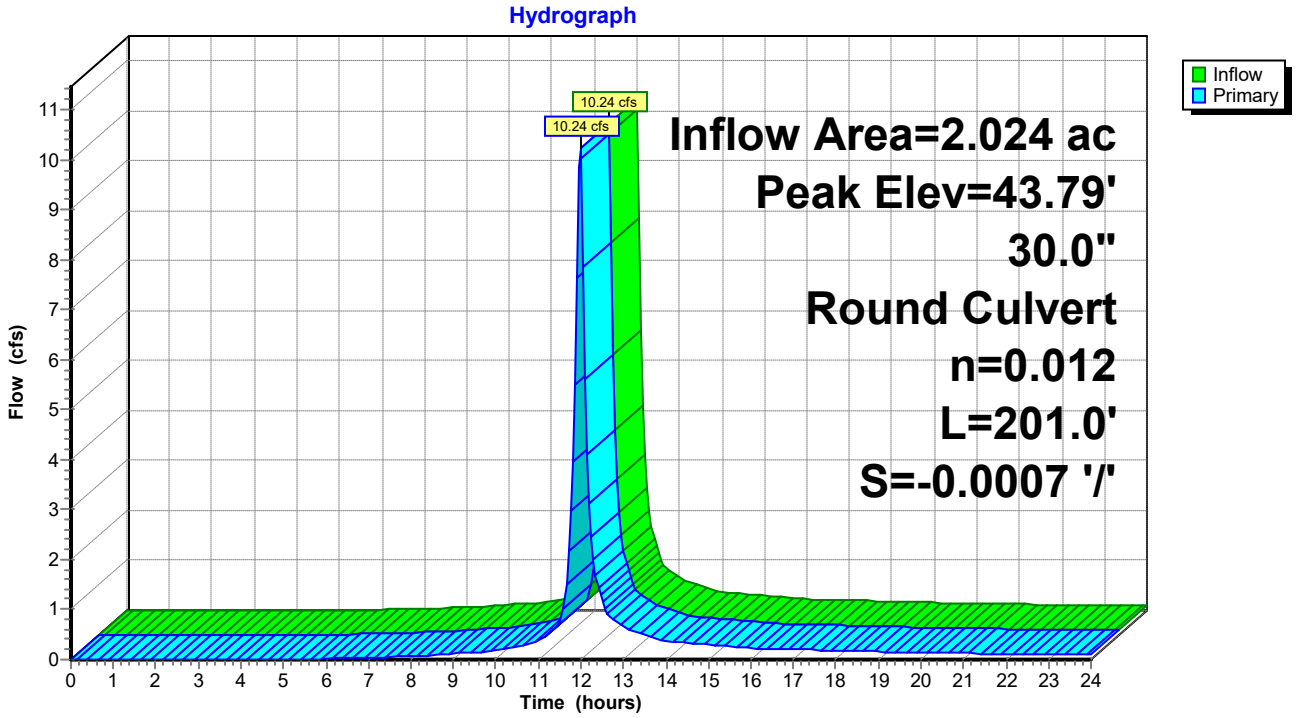
Inflow Area = 2.024 ac, 64.51% Impervious, Inflow Depth > 3.60" for 10-yr event
Inflow = 10.24 cfs @ 11.98 hrs, Volume= 0.607 af
Outflow = 10.24 cfs @ 11.98 hrs, Volume= 0.607 af, Atten= 0%, Lag= 0.0 min
Primary = 10.24 cfs @ 11.98 hrs, Volume= 0.607 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.79' @ 12.02 hrs
Flood Elev= 46.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.84'	**30.0" Round 30" PERF. HDPE** L= 201.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.69' / 41.84' S= -0.0007 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=7.69 cfs @ 11.98 hrs HW=43.70' TW=43.46' (Dynamic Tailwater)
1=30" PERF. HDPE (Outlet Controls 7.69 cfs @ 2.48 fps)

Pond 25P: SDI-1



Stage-Area-Storage for Pond 25P: SDI-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.84	**0**	44.39	0
41.89	0	44.44	0
41.94	0	44.49	0
41.99	0	44.54	0
42.04	0	44.59	0
42.09	0	44.64	0
42.14	0	44.69	0
42.19	0	44.74	0
42.24	0	44.79	0
42.29	0	44.84	0
42.34	0	44.89	0
42.39	0	44.94	0
42.44	0	44.99	0
42.49	0	45.04	0
42.54	0	45.09	0
42.59	0	45.14	0
42.64	0	45.19	0
42.69	0	45.24	0
42.74	0	45.29	0
42.79	0	45.34	0
42.84	0	45.39	0
42.89	0	45.44	0
42.94	0	45.49	0
42.99	0	45.54	0
43.04	0	45.59	0
43.09	0	45.64	0
43.14	0	45.69	0
43.19	0	45.74	0
43.24	0	45.79	0
43.29	0	45.84	0
43.34	0	45.89	0
43.39	0	45.94	0
43.44	0	45.99	0
43.49	0		
43.54	0		
43.59	0		
43.64	0		
43.69	0		
43.74	0		
43.79	0		
43.84	0		
43.89	0		
43.94	0		
43.99	0		
44.04	0		
44.09	0		
44.14	0		
44.19	0		
44.24	0		
44.29	0		
44.34	0		

Summary for Pond 28P: Doghouse SDMH

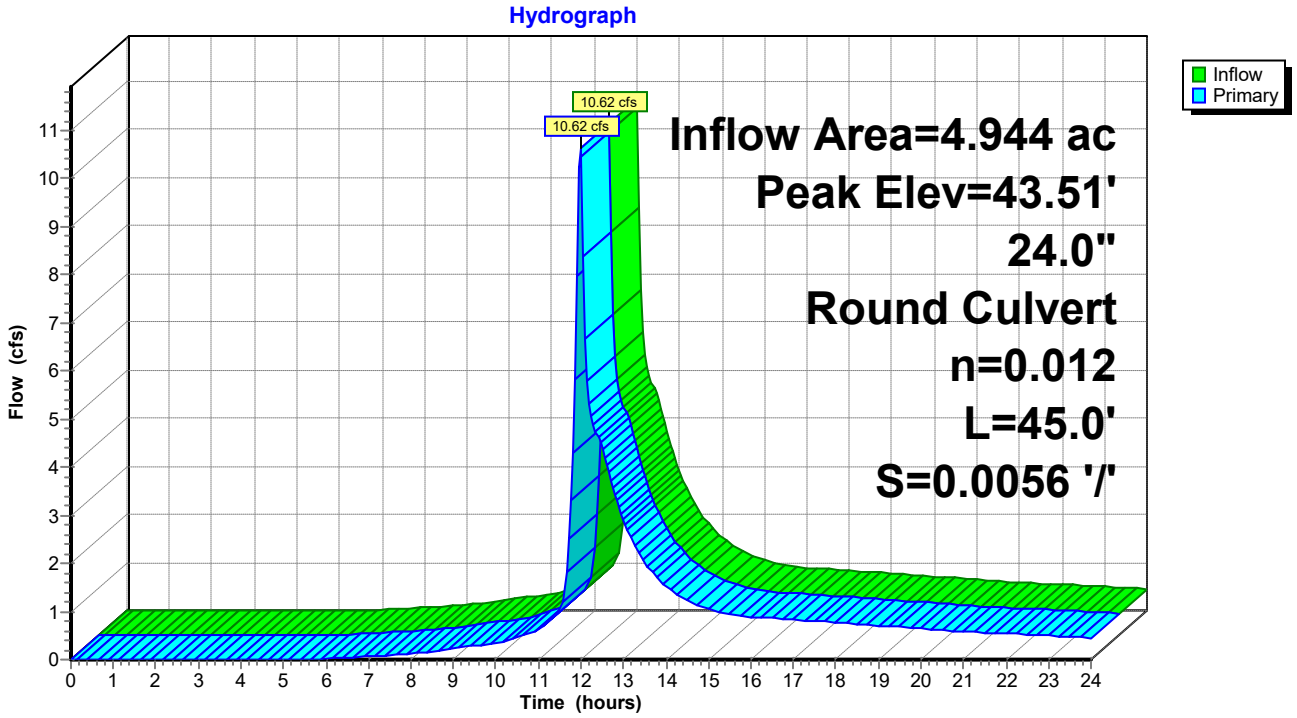
Inflow Area = 4.944 ac, 68.48% Impervious, Inflow Depth > 3.59" for 10-yr event
Inflow = 10.62 cfs @ 11.98 hrs, Volume= 1.478 af
Outflow = 10.62 cfs @ 11.98 hrs, Volume= 1.478 af, Atten= 0%, Lag= 0.0 min
Primary = 10.62 cfs @ 11.98 hrs, Volume= 1.478 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.51' @ 12.00 hrs
Flood Elev= 48.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.65'	**24.0" Round Culvert** L= 45.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.65' / 41.40' S= 0.0056 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=9.39 cfs @ 11.98 hrs HW=43.46' TW=43.04' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.39 cfs @ 4.14 fps)

Pond 28P: Doghouse SDMH



Stage-Area-Storage for Pond 28P: Doghouse SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.65	**0**	46.75	0
41.75	0	46.85	0
41.85	0	46.95	0
41.95	0	47.05	0
42.05	0	47.15	0
42.15	0	47.25	0
42.25	0	47.35	0
42.35	0	47.45	0
42.45	0	47.55	0
42.55	0	47.65	0
42.65	0	47.75	0
42.75	0	47.85	0
42.85	0	47.95	0
42.95	0		
43.05	0		
43.15	0		
43.25	0		
43.35	0		
43.45	0		
43.55	0		
43.65	0		
43.75	0		
43.85	0		
43.95	0		
44.05	0		
44.15	0		
44.25	0		
44.35	0		
44.45	0		
44.55	0		
44.65	0		
44.75	0		
44.85	0		
44.95	0		
45.05	0		
45.15	0		
45.25	0		
45.35	0		
45.45	0		
45.55	0		
45.65	0		
45.75	0		
45.85	0		
45.95	0		
46.05	0		
46.15	0		
46.25	0		
46.35	0		
46.45	0		
46.55	0		
46.65	0		

Summary for Pond EX-P: G2 Pond & Underground

Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 3.85" for 10-yr event
Inflow = 13.18 cfs @ 12.01 hrs, Volume= 1.030 af
Outflow = 4.60 cfs @ 12.37 hrs, Volume= 0.934 af, Atten= 65%, Lag= 21.4 min
Primary = 4.60 cfs @ 12.37 hrs, Volume= 0.934 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 46.27' @ 12.37 hrs Surf.Area= 0 sf Storage= 19,288 cf
Flood Elev= 47.00' Surf.Area= 0 sf Storage= 23,400 cf

Plug-Flow detention time= 167.0 min calculated for 0.932 af (90% of inflow)
Center-of-Mass det. time= 119.5 min (921.5 - 802.0)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	23,400 cf	**Custom Stage Data** Listed below

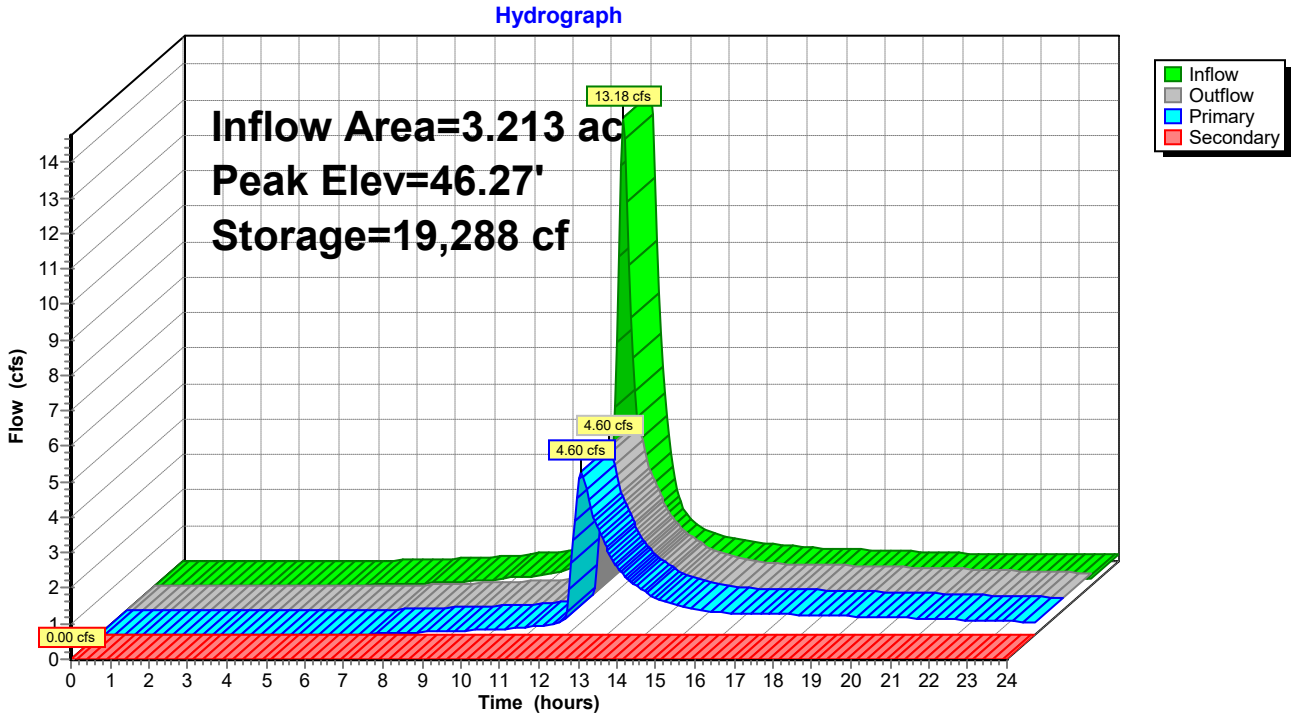
Elevation (feet)	Cum.Store (cubic-feet)
42.00	0
42.25	523
42.50	1,508
42.75	2,524
43.00	3,566
43.25	4,630
43.50	5,712
43.75	6,809
44.00	7,911
44.25	9,006
44.50	10,072
45.00	12,544
46.00	17,789
47.00	23,400

Device	Routing	Invert	Outlet Devices
#1	Primary	42.00'	**30.0" Round 30" PERF HDPE** L= 12.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 42.00' / 41.84' S= 0.0133 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	42.00'	**4.0" Vert. 4" hole in S-2 weir from 2005 G2 Plans** C= 0.600
#3	Device 1	44.70'	**6.0" W x 16.8" H Vert. 4" notched wieir from G2 plans** C= 0.600
#4	Device 1	46.10'	**4.0' long Top of Weir in S-2 outlet box** Cv= 2.62 (C= 3.28)
#5	Secondary	46.50'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.57 cfs @ 12.37 hrs HW=46.26' TW=43.75' (Dynamic Tailwater)
└─**1=30" PERF HDPE** (Passes 4.57 cfs of 46.83 cfs potential flow)
  ├─**2=4" hole in S-2 weir from 2005 G2 Plans** (Orifice Controls 0.67 cfs @ 7.63 fps)
  ├─**3=4" notched wieir from G2 plans** (Orifice Controls 3.03 cfs @ 4.33 fps)
  └─**4=Top of Weir in S-2 outlet box** (Weir Controls 0.87 cfs @ 1.33 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond EX-P: G2 Pond & Underground



Stage-Area-Storage for Pond EX-P: G2 Pond & Underground

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.00	0	44.55	10,319
42.05	105	44.60	10,566
42.10	209	44.65	10,814
42.15	314	44.70	11,061
42.20	418	44.75	11,308
42.25	523	44.80	11,555
42.30	720	44.85	11,802
42.35	917	44.90	12,050
42.40	1,114	44.95	12,297
42.45	1,311	45.00	12,544
42.50	1,508	45.05	12,806
42.55	1,711	45.10	13,069
42.60	1,914	45.15	13,331
42.65	2,118	45.20	13,593
42.70	2,321	45.25	13,855
42.75	2,524	45.30	14,117
42.80	2,732	45.35	14,380
42.85	2,941	45.40	14,642
42.90	3,149	45.45	14,904
42.95	3,358	45.50	15,167
43.00	3,566	45.55	15,429
43.05	3,779	45.60	15,691
43.10	3,992	45.65	15,953
43.15	4,204	45.70	16,216
43.20	4,417	45.75	16,478
43.25	4,630	45.80	16,740
43.30	4,846	45.85	17,002
43.35	5,063	45.90	17,264
43.40	5,279	45.95	17,527
43.45	5,496	46.00	17,789
43.50	5,712	46.05	18,070
43.55	5,931	46.10	18,350
43.60	6,151	46.15	18,631
43.65	6,370	46.20	18,911
43.70	6,590	46.25	19,192
43.75	6,809	46.30	19,472
43.80	7,029	46.35	19,753
43.85	7,250	46.40	20,033
43.90	7,470	46.45	20,314
43.95	7,691	46.50	20,595
44.00	7,911	46.55	20,875
44.05	8,130	46.60	21,156
44.10	8,349	46.65	21,436
44.15	8,568	46.70	21,717
44.20	8,787	46.75	21,997
44.25	9,006	46.80	22,278
44.30	9,219	46.85	22,558
44.35	9,432	46.90	22,839
44.40	9,646	46.95	23,119
44.45	9,859	47.00	**23,400**
44.50	10,072		

Summary for Pond EX-PP: G2 Pond & Underground

Inflow Area = 2.920 ac, 71.23% Impervious, Inflow Depth > 3.84" for 10-yr event
Inflow = 12.24 cfs @ 12.03 hrs, Volume= 0.934 af
Outflow = 3.22 cfs @ 12.47 hrs, Volume= 0.870 af, Atten= 74%, Lag= 26.6 min
Primary = 3.22 cfs @ 12.47 hrs, Volume= 0.870 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 46.04' @ 12.47 hrs Surf.Area= 0 sf Storage= 17,987 cf
Flood Elev= 47.00' Surf.Area= 0 sf Storage= 23,400 cf

Plug-Flow detention time= 167.3 min calculated for 0.869 af (93% of inflow)
Center-of-Mass det. time= 130.6 min (933.9 - 803.3)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	23,400 cf	**Custom Stage Data** Listed below

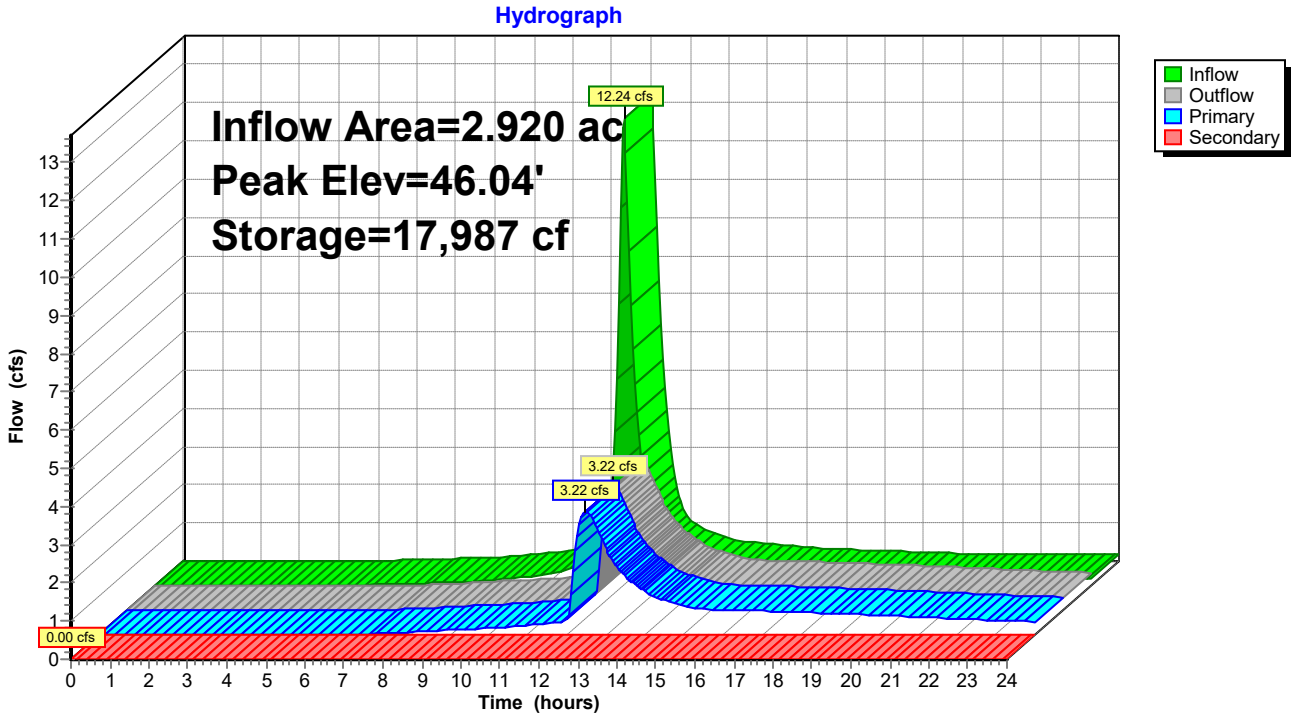
Elevation (feet)	Cum.Store (cubic-feet)
42.00	0
42.25	523
42.50	1,508
42.75	2,524
43.00	3,566
43.25	4,630
43.50	5,712
43.75	6,809
44.00	7,911
44.25	9,006
44.50	10,072
45.00	12,544
46.00	17,789
47.00	23,400

Device	Routing	Invert	Outlet Devices
#1	Primary	42.00'	**30.0" Round 30" PERF HDPE** L= 12.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 42.00' / 41.84' S= 0.0133 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	42.00'	**4.0" Vert. 4" hole in S-2 weir from 2005 G2 Plans** C= 0.600
#3	Device 1	44.70'	**6.0" W x 16.8" H Vert. 4" notched wieir from G2 plans** C= 0.600
#4	Device 1	46.10'	**4.0' long Top of Weir in S-2 outlet box** Cv= 2.62 (C= 3.28)
#5	Secondary	46.50'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=3.22 cfs @ 12.47 hrs HW=46.03' TW=42.86' (Dynamic Tailwater)
└─**1=30" PERF HDPE** (Passes 3.22 cfs of 45.05 cfs potential flow)
  ├─**2=4" hole in S-2 weir from 2005 G2 Plans** (Orifice Controls 0.75 cfs @ 8.58 fps)
  ├─**3=4" notched wieir from G2 plans** (Orifice Controls 2.47 cfs @ 3.71 fps)
  └─**4=Top of Weir in S-2 outlet box** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=42.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond EX-PP: G2 Pond & Underground



Stage-Area-Storage for Pond EX-PP: G2 Pond & Underground

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.00	0	44.55	10,319
42.05	105	44.60	10,566
42.10	209	44.65	10,814
42.15	314	44.70	11,061
42.20	418	44.75	11,308
42.25	523	44.80	11,555
42.30	720	44.85	11,802
42.35	917	44.90	12,050
42.40	1,114	44.95	12,297
42.45	1,311	45.00	12,544
42.50	1,508	45.05	12,806
42.55	1,711	45.10	13,069
42.60	1,914	45.15	13,331
42.65	2,118	45.20	13,593
42.70	2,321	45.25	13,855
42.75	2,524	45.30	14,117
42.80	2,732	45.35	14,380
42.85	2,941	45.40	14,642
42.90	3,149	45.45	14,904
42.95	3,358	45.50	15,167
43.00	3,566	45.55	15,429
43.05	3,779	45.60	15,691
43.10	3,992	45.65	15,953
43.15	4,204	45.70	16,216
43.20	4,417	45.75	16,478
43.25	4,630	45.80	16,740
43.30	4,846	45.85	17,002
43.35	5,063	45.90	17,264
43.40	5,279	45.95	17,527
43.45	5,496	46.00	17,789
43.50	5,712	46.05	18,070
43.55	5,931	46.10	18,350
43.60	6,151	46.15	18,631
43.65	6,370	46.20	18,911
43.70	6,590	46.25	19,192
43.75	6,809	46.30	19,472
43.80	7,029	46.35	19,753
43.85	7,250	46.40	20,033
43.90	7,470	46.45	20,314
43.95	7,691	46.50	20,595
44.00	7,911	46.55	20,875
44.05	8,130	46.60	21,156
44.10	8,349	46.65	21,436
44.15	8,568	46.70	21,717
44.20	8,787	46.75	21,997
44.25	9,006	46.80	22,278
44.30	9,219	46.85	22,558
44.35	9,432	46.90	22,839
44.40	9,646	46.95	23,119
44.45	9,859	47.00	**23,400**
44.50	10,072		

Summary for Pond EX1: Existing SDMH

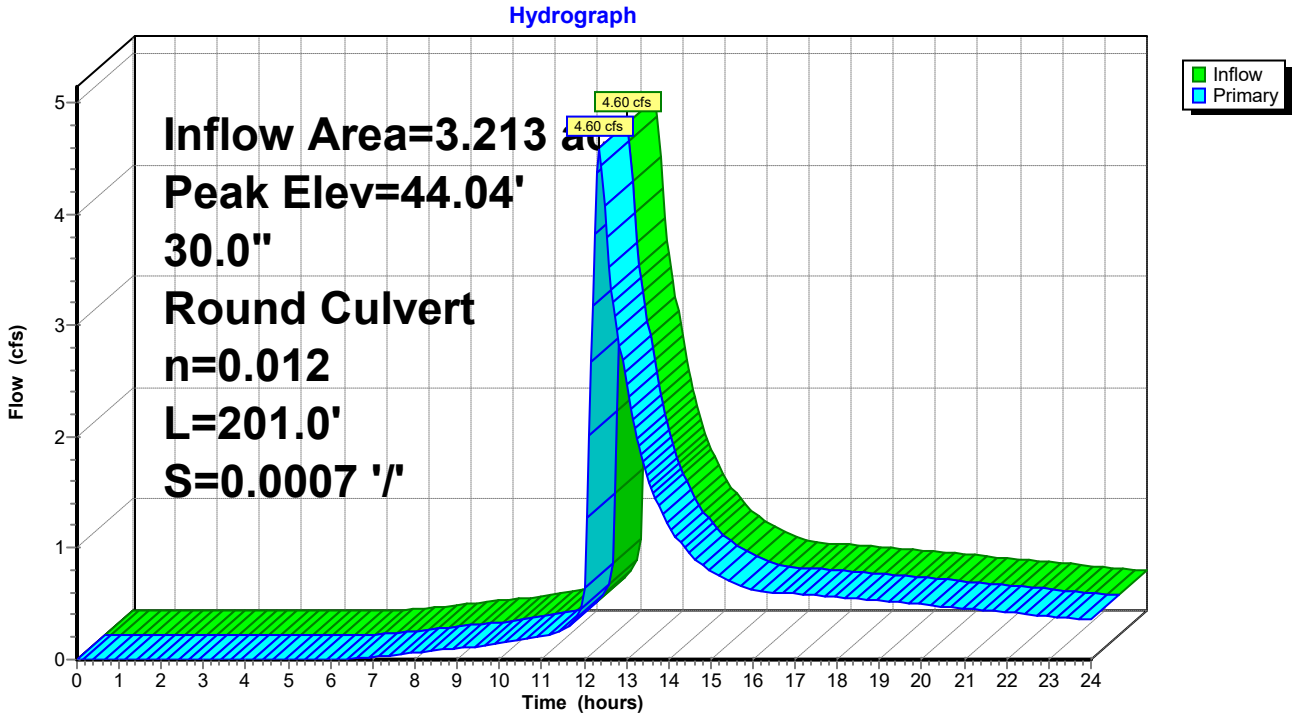
Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 3.49" for 10-yr event
Inflow = 4.60 cfs @ 12.37 hrs, Volume= 0.934 af
Outflow = 4.60 cfs @ 12.37 hrs, Volume= 0.934 af, Atten= 0%, Lag= 0.0 min
Primary = 4.60 cfs @ 12.37 hrs, Volume= 0.934 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.04' @ 12.13 hrs
Flood Elev= 48.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.84'	**30.0" Round 30" PERF. HDPE** L= 201.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.84' / 41.69' S= 0.0007 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=4.99 cfs @ 12.37 hrs HW=43.75' TW=43.63' (Dynamic Tailwater)
1=30" PERF. HDPE (Outlet Controls 4.99 cfs @ 1.71 fps)

Pond EX1: Existing SDMH



Stage-Area-Storage for Pond EX1: Existing SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.84	**0**	46.94	0
41.94	0	47.04	0
42.04	0	47.14	0
42.14	0	47.24	0
42.24	0	47.34	0
42.34	0	47.44	0
42.44	0	47.54	0
42.54	0	47.64	0
42.64	0	47.74	0
42.74	0	47.84	0
42.84	0	47.94	0
42.94	0	48.04	0
43.04	0		
43.14	0		
43.24	0		
43.34	0		
43.44	0		
43.54	0		
43.64	0		
43.74	0		
43.84	0		
43.94	0		
44.04	0		
44.14	0		
44.24	0		
44.34	0		
44.44	0		
44.54	0		
44.64	0		
44.74	0		
44.84	0		
44.94	0		
45.04	0		
45.14	0		
45.24	0		
45.34	0		
45.44	0		
45.54	0		
45.64	0		
45.74	0		
45.84	0		
45.94	0		
46.04	0		
46.14	0		
46.24	0		
46.34	0		
46.44	0		
46.54	0		
46.64	0		
46.74	0		
46.84	0		

Summary for Pond EX2: Existing SDI

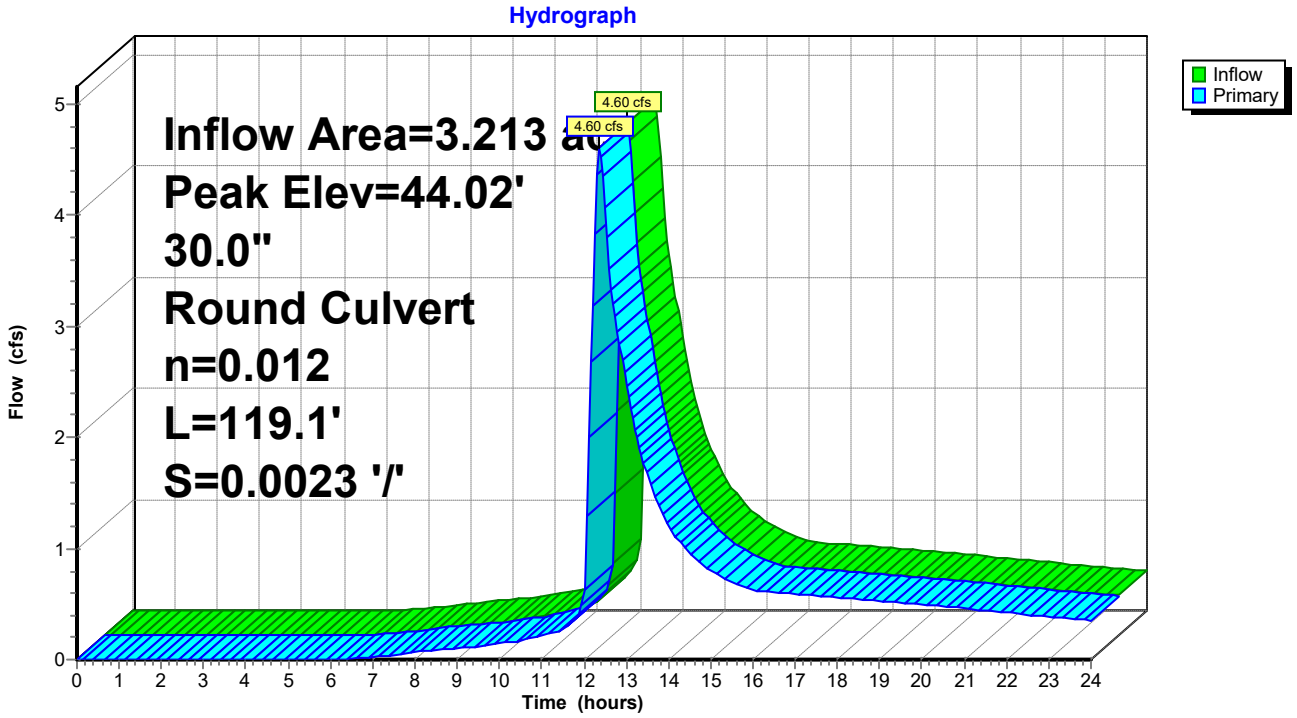
Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 3.49" for 10-yr event
Inflow = 4.60 cfs @ 12.37 hrs, Volume= 0.934 af
Outflow = 4.60 cfs @ 12.36 hrs, Volume= 0.933 af, Atten= 0%, Lag= 0.0 min
Primary = 4.60 cfs @ 12.36 hrs, Volume= 0.933 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.02' @ 12.08 hrs
Flood Elev= 47.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.49'	**30.0" Round 30" HDPE** L= 119.1' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.49' / 41.22' S= 0.0023 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=5.20 cfs @ 12.36 hrs HW=43.63' TW=43.55' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 5.20 cfs @ 1.56 fps)

Pond EX2: Existing SDI



Stage-Area-Storage for Pond EX2: Existing SDI

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.49	**0**	43.53	0	45.57	0
41.53	0	43.57	0	45.61	0
41.57	0	43.61	0	45.65	0
41.61	0	43.65	0	45.69	0
41.65	0	43.69	0	45.73	0
41.69	0	43.73	0	45.77	0
41.73	0	43.77	0	45.81	0
41.77	0	43.81	0	45.85	0
41.81	0	43.85	0	45.89	0
41.85	0	43.89	0	45.93	0
41.89	0	43.93	0	45.97	0
41.93	0	43.97	0	46.01	0
41.97	0	44.01	0	46.05	0
42.01	0	44.05	0	46.09	0
42.05	0	44.09	0	46.13	0
42.09	0	44.13	0	46.17	0
42.13	0	44.17	0	46.21	0
42.17	0	44.21	0	46.25	0
42.21	0	44.25	0	46.29	0
42.25	0	44.29	0	46.33	0
42.29	0	44.33	0	46.37	0
42.33	0	44.37	0	46.41	0
42.37	0	44.41	0	46.45	0
42.41	0	44.45	0	46.49	0
42.45	0	44.49	0	46.53	0
42.49	0	44.53	0	46.57	0
42.53	0	44.57	0	46.61	0
42.57	0	44.61	0	46.65	0
42.61	0	44.65	0	46.69	0
42.65	0	44.69	0	46.73	0
42.69	0	44.73	0	46.77	0
42.73	0	44.77	0	46.81	0
42.77	0	44.81	0	46.85	0
42.81	0	44.85	0	46.89	0
42.85	0	44.89	0	46.93	0
42.89	0	44.93	0	46.97	0
42.93	0	44.97	0	47.01	0
42.97	0	45.01	0	47.05	0
43.01	0	45.05	0		
43.05	0	45.09	0		
43.09	0	45.13	0		
43.13	0	45.17	0		
43.17	0	45.21	0		
43.21	0	45.25	0		
43.25	0	45.29	0		
43.29	0	45.33	0		
43.33	0	45.37	0		
43.37	0	45.41	0		
43.41	0	45.45	0		
43.45	0	45.49	0		
43.49	0	45.53	0		

Summary for Pond EXCL1: Ex Northern Entrance Culvert

Inflow Area = 10.662 ac, 56.13% Impervious, Inflow Depth > 3.22" for 10-yr event
Inflow = 21.25 cfs @ 12.06 hrs, Volume= 2.859 af
Outflow = 21.25 cfs @ 12.06 hrs, Volume= 2.859 af, Atten= 0%, Lag= 0.0 min
Primary = 11.91 cfs @ 12.06 hrs, Volume= 2.558 af
Secondary = 9.34 cfs @ 12.06 hrs, Volume= 0.301 af

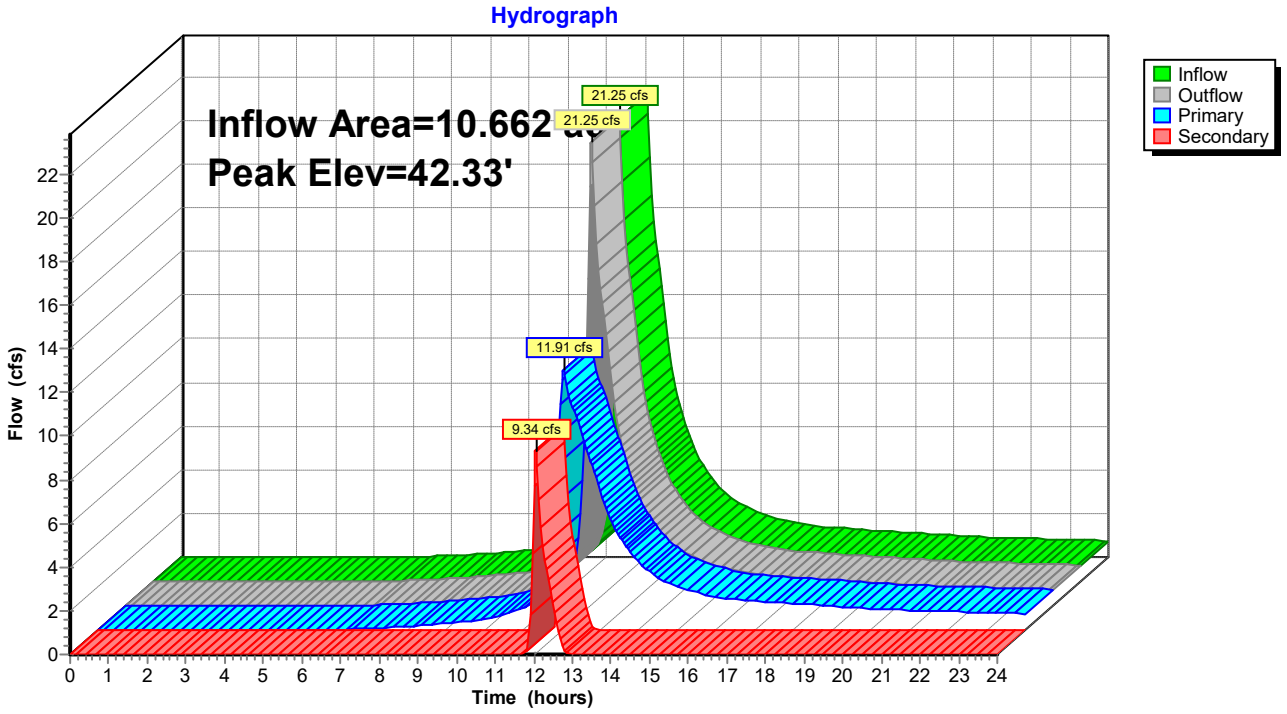
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.33' @ 12.06 hrs
Flood Elev= 40.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.52'	**21.0" W x 15.0" H, R=10.8"/33.1" Pipe Arch CMP_Arch_1/2 21x15** L= 44.7' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 38.52' / 37.56' S= 0.0215 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.74 sf
#2	Secondary	40.00'	**1.0' long x 42.0' breadth Over top of entrance pavement** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.86 cfs @ 12.06 hrs HW=42.30' TW=0.00' (Dynamic Tailwater)
└**1=CMP_Arch_1/2 21x15** (Barrel Controls 11.86 cfs @ 6.80 fps)

Secondary OutFlow Max=9.17 cfs @ 12.06 hrs HW=42.30' TW=0.00' (Dynamic Tailwater)
└**2=Over top of entrance pavement** (Weir Controls 9.17 cfs @ 3.99 fps)

Pond EXCL1: Ex Northern Entrance Culvert



Stage-Area-Storage for Pond EXCL1: Ex Northern Entrance Culvert

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.52	**0**	41.07	0
38.57	0	41.12	0
38.62	0	41.17	0
38.67	0	41.22	0
38.72	0	41.27	0
38.77	0	41.32	0
38.82	0	41.37	0
38.87	0	41.42	0
38.92	0	41.47	0
38.97	0	41.52	0
39.02	0	41.57	0
39.07	0	41.62	0
39.12	0	41.67	0
39.17	0	41.72	0
39.22	0	41.77	0
39.27	0	41.82	0
39.32	0	41.87	0
39.37	0	41.92	0
39.42	0	41.97	0
39.47	0	42.02	0
39.52	0	42.07	0
39.57	0	42.12	0
39.62	0	42.17	0
39.67	0	42.22	0
39.72	0	42.27	0
39.77	0	42.32	0
39.82	0		
39.87	0		
39.92	0		
39.97	0		
40.02	0		
40.07	0		
40.12	0		
40.17	0		
40.22	0		
40.27	0		
40.32	0		
40.37	0		
40.42	0		
40.47	0		
40.52	0		
40.57	0		
40.62	0		
40.67	0		
40.72	0		
40.77	0		
40.82	0		
40.87	0		
40.92	0		
40.97	0		
41.02	0		

Summary for Pond EXCL2: Ex Southern Entrance Culvert

Inflow Area = 8.271 ac, 61.23% Impervious, Inflow Depth > 3.38" for 10-yr event
Inflow = 19.80 cfs @ 12.05 hrs, Volume= 2.332 af
Outflow = 19.80 cfs @ 12.05 hrs, Volume= 2.332 af, Atten= 0%, Lag= 0.0 min
Primary = 11.53 cfs @ 12.04 hrs, Volume= 2.133 af
Secondary = 8.29 cfs @ 12.05 hrs, Volume= 0.199 af

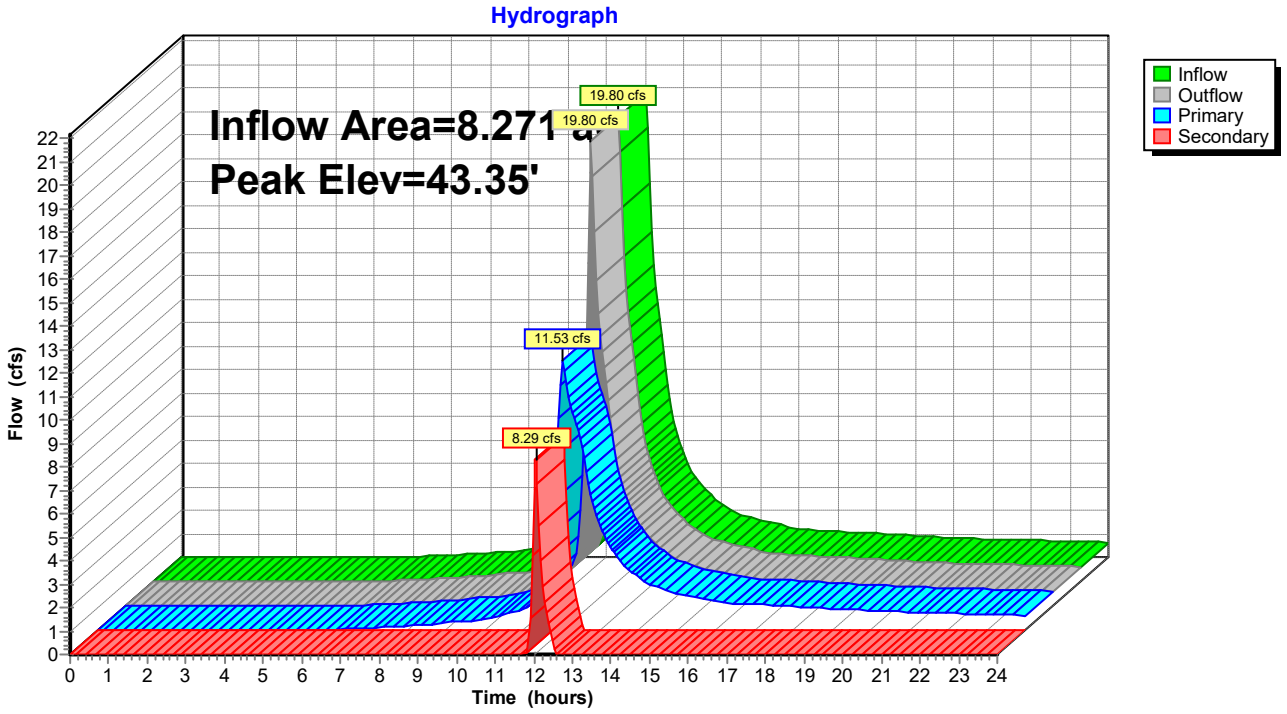
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.35' @ 12.05 hrs
Flood Elev= 41.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.94'	**18.0" Round 18" CMP** L= 46.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 38.94' / 38.46' S= 0.0104 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	41.20'	**1.0' long x 45.0' breadth Over top of entrance pavement** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.31 cfs @ 12.04 hrs HW=43.29' TW=40.23' (Dynamic Tailwater)
└**1=18" CMP** (Outlet Controls 11.31 cfs @ 6.40 fps)

Secondary OutFlow Max=8.25 cfs @ 12.05 hrs HW=43.34' TW=40.24' (Dynamic Tailwater)
└**2=Over top of entrance pavement** (Weir Controls 8.25 cfs @ 3.85 fps)

Pond EXCL2: Ex Southern Entrance Culvert



Stage-Area-Storage for Pond EXCL2: Ex Southern Entrance Culvert

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.94	**0**	41.49	0
38.99	0	41.54	0
39.04	0	41.59	0
39.09	0	41.64	0
39.14	0	41.69	0
39.19	0	41.74	0
39.24	0	41.79	0
39.29	0	41.84	0
39.34	0	41.89	0
39.39	0	41.94	0
39.44	0	41.99	0
39.49	0	42.04	0
39.54	0	42.09	0
39.59	0	42.14	0
39.64	0	42.19	0
39.69	0	42.24	0
39.74	0	42.29	0
39.79	0	42.34	0
39.84	0	42.39	0
39.89	0	42.44	0
39.94	0	42.49	0
39.99	0	42.54	0
40.04	0	42.59	0
40.09	0	42.64	0
40.14	0	42.69	0
40.19	0	42.74	0
40.24	0	42.79	0
40.29	0	42.84	0
40.34	0	42.89	0
40.39	0	42.94	0
40.44	0	42.99	0
40.49	0	43.04	0
40.54	0	43.09	0
40.59	0	43.14	0
40.64	0	43.19	0
40.69	0	43.24	0
40.74	0	43.29	0
40.79	0	43.34	0
40.84	0		
40.89	0		
40.94	0		
40.99	0		
41.04	0		
41.09	0		
41.14	0		
41.19	0		
41.24	0		
41.29	0		
41.34	0		
41.39	0		
41.44	0		

Summary for Pond MBR#1: MBR#1

Inflow Area = 0.452 ac, 67.32% Impervious, Inflow Depth > 3.73" for 10-yr event
Inflow = 3.02 cfs @ 11.91 hrs, Volume= 0.141 af
Outflow = 0.37 cfs @ 12.16 hrs, Volume= 0.072 af, Atten= 88%, Lag= 14.8 min
Primary = 0.37 cfs @ 12.16 hrs, Volume= 0.072 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.04' @ 12.16 hrs Surf.Area= 2,245 sf Storage= 3,422 cf

Plug-Flow detention time= 237.7 min calculated for 0.072 af (51% of inflow)
Center-of-Mass det. time= 126.4 min (920.7 - 794.4)

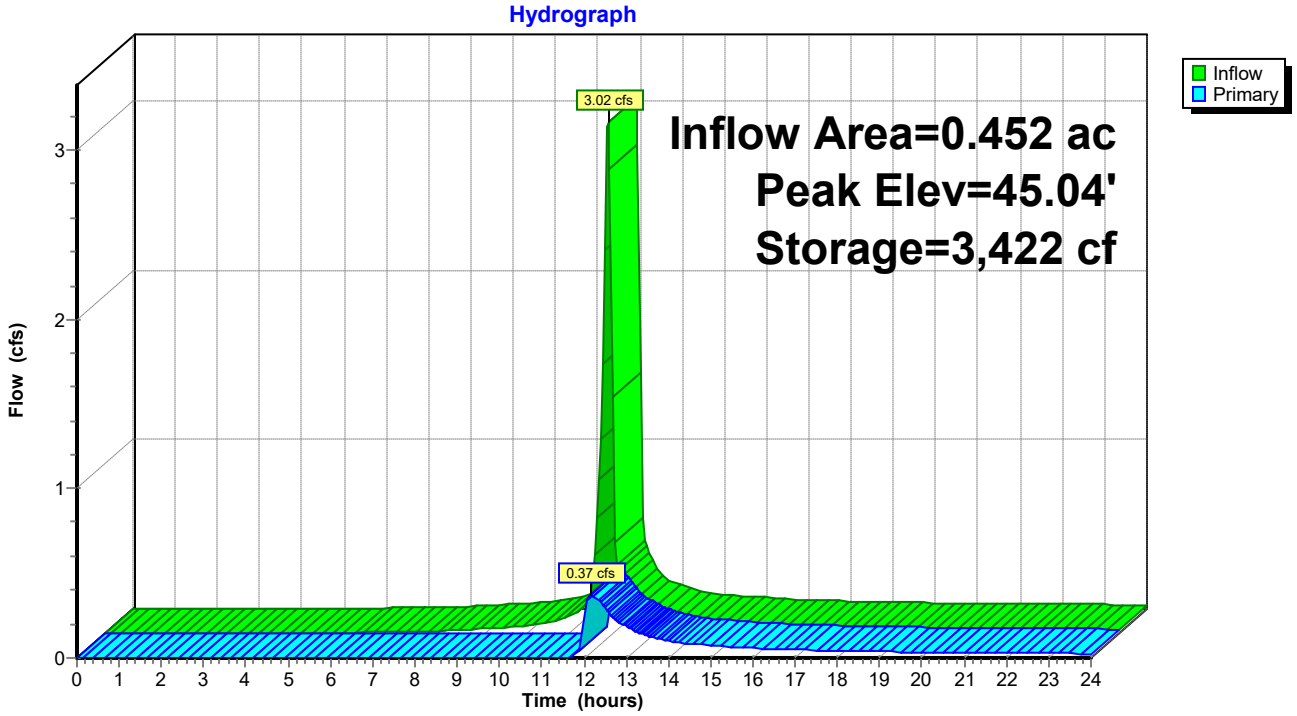
Volume	Invert	Avail.Storage	Storage Description
#1	41.79'	5,356 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.79	1,437	149.0	0.0	0	0	1,437
41.80	1,437	149.0	40.0	6	6	1,438
43.79	1,437	149.0	40.0	1,144	1,150	1,735
43.80	1,437	149.0	100.0	14	1,164	1,736
45.80	2,833	200.0	100.0	4,192	5,356	3,195

Device	Routing	Invert	Outlet Devices
#1	Primary	41.79'	**12.0" Round 12" HDPE** L= 43.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.79' / 41.70' S= 0.0021 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	44.80'	**12.0" W x 6.0" H Vert. 12" notch in box** C= 0.600
#3	Device 1	45.30'	**10.7' long Rim SHA 374.23** 0 End Contraction(s)

Primary OutFlow Max=0.37 cfs @ 12.16 hrs HW=45.04' TW=42.71' (Dynamic Tailwater)
└─**1=12" HDPE** (Passes 0.37 cfs of 5.77 cfs potential flow)
  ├─**2=12" notch in box** (Orifice Controls 0.37 cfs @ 1.56 fps)
  └─**3=Rim SHA 374.23** (Controls 0.00 cfs)

Pond MBR#1: MBR#1



Stage-Area-Storage for Pond MBR#1: MBR#1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
41.79	1,437	0
41.84	1,437	29
41.89	1,437	57
41.94	1,437	86
41.99	1,437	115
42.04	1,437	144
42.09	1,437	172
42.14	1,437	201
42.19	1,437	230
42.24	1,437	259
42.29	1,437	287
42.34	1,437	316
42.39	1,437	345
42.44	1,437	374
42.49	1,437	402
42.54	1,437	431
42.59	1,437	460
42.64	1,437	489
42.69	1,437	517
42.74	1,437	546
42.79	1,437	575
42.84	1,437	604
42.89	1,437	632
42.94	1,437	661
42.99	1,437	690
43.04	1,437	719
43.09	1,437	747
43.14	1,437	776
43.19	1,437	805
43.24	1,437	833
43.29	1,437	862
43.34	1,437	891
43.39	1,437	920
43.44	1,437	948
43.49	1,437	977
43.54	1,437	1,006
43.59	1,437	1,035
43.64	1,437	1,063
43.69	1,437	1,092
43.74	1,437	1,121
43.79	1,437	1,150
43.84	1,460	1,222
43.89	1,490	1,296
43.94	1,519	1,371
43.99	1,549	1,448
44.04	1,580	1,526
44.09	1,610	1,606
44.14	1,641	1,687
44.19	1,672	1,770
44.24	1,704	1,854
44.29	1,736	1,940
44.34	1,768	2,028
44.39	1,800	2,117
44.44	1,833	2,208
44.49	1,866	2,300
44.54	1,899	2,394
44.59	1,932	2,490
44.64	1,966	2,588
44.69	2,000	2,687
44.74	2,035	2,788
44.79	2,069	2,890
44.84	2,104	2,994
44.89	2,140	3,101
44.94	2,175	3,208
44.99	2,211	3,318
45.04	2,247	3,430
45.09	2,284	3,543
45.14	2,320	3,658
45.19	2,357	3,775
45.24	2,395	3,894
45.29	2,432	4,014
45.34	2,470	4,137
45.39	2,509	4,261
45.44	2,547	4,388
45.49	2,586	4,516
45.54	2,625	4,646
45.59	2,664	4,779
45.64	2,704	4,913
45.69	2,744	5,049
45.74	2,784	5,187
45.79	**2,825**	**5,327**

Summary for Pond SGW#1: SGW#1

Inflow Area = 2.315 ac, 74.35% Impervious, Inflow Depth > 4.10" for 10-yr event
Inflow = 15.99 cfs @ 11.91 hrs, Volume= 0.790 af
Outflow = 1.02 cfs @ 12.51 hrs, Volume= 0.437 af, Atten= 94%, Lag= 36.2 min
Primary = 1.02 cfs @ 12.51 hrs, Volume= 0.437 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.79' @ 12.51 hrs Surf.Area= 11,047 sf Storage= 21,669 cf

Plug-Flow detention time= 310.1 min calculated for 0.436 af (55% of inflow)
Center-of-Mass det. time= 195.3 min (961.5 - 766.2)

Volume	Invert	Avail.Storage	Storage Description
#1	39.40'	35,078 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

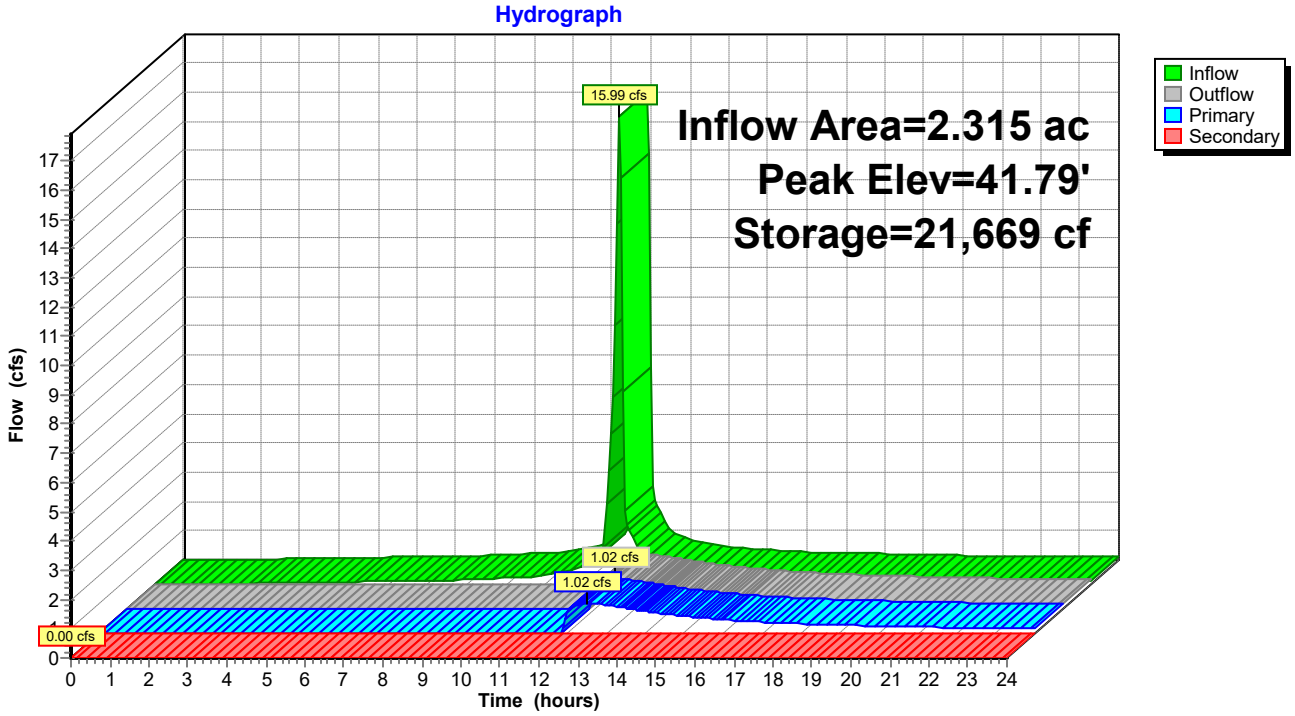
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.40	7,196	368.0	0	0	7,196
40.40	8,760	400.0	7,965	7,965	9,189
42.90	13,074	463.0	27,113	35,078	13,648

Device	Routing	Invert	Outlet Devices
#1	Primary	38.00'	**12.0" Round Culvert** L= 52.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 38.00' / 37.70' S= 0.0058 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	40.90'	**4.0" W x 6.0" H Vert. 4" Notch in 374.23** C= 0.600
#3	Device 1	41.40'	**6.0" W x 12.0" H Vert. 6" Notch in 374.23** C= 0.600
#4	Device 1	42.40'	**10.7' long Rim SHA 374.23** 0 End Contraction(s)
#5	Secondary	42.70'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=1.02 cfs @ 12.51 hrs HW=41.79' TW=38.94' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.02 cfs of 6.25 cfs potential flow)
  ├**2=4" Notch in 374.23** (Orifice Controls 0.64 cfs @ 3.82 fps)
  ├**3=6" Notch in 374.23** (Orifice Controls 0.39 cfs @ 2.00 fps)
  └**4=Rim SHA 374.23** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.40' (Free Discharge)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond SGW#1: SGW#1



Stage-Area-Storage for Pond SGW#1: SGW#1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
39.40	7,196	0
39.45	7,271	362
39.50	7,345	727
39.55	7,421	1,096
39.60	7,497	1,469
39.65	7,573	1,846
39.70	7,649	2,226
39.75	7,726	2,611
39.80	7,803	2,999
39.85	7,881	3,391
39.90	7,959	3,787
39.95	8,037	4,187
40.00	8,116	4,591
40.05	8,195	4,999
40.10	8,275	5,410
40.15	8,355	5,826
40.20	8,435	6,246
40.25	8,516	6,670
40.30	8,597	7,097
40.35	8,678	7,529
40.40	8,760	7,965
40.45	8,838	8,405
40.50	8,916	8,849
40.55	8,995	9,297
40.60	9,073	9,748
40.65	9,153	10,204
40.70	9,232	10,664
40.75	9,312	11,127
40.80	9,392	11,595
40.85	9,473	12,067
40.90	9,554	12,542
40.95	9,635	13,022
41.00	9,717	13,506
41.05	9,799	13,994
41.10	9,881	14,486
41.15	9,964	14,982
41.20	10,047	15,482
41.25	10,130	15,986
41.30	10,214	16,495
41.35	10,298	17,008
41.40	10,382	17,525
41.45	10,467	18,046
41.50	10,552	18,572
41.55	10,638	19,101
41.60	10,723	19,635
41.65	10,809	20,174
41.70	10,896	20,716
41.75	10,983	21,263
41.80	11,070	21,815
41.85	11,157	22,370
41.90	11,245	22,930
41.95	11,333	23,495
42.00	11,422	24,064
42.05	11,511	24,637
42.10	11,600	25,215
42.15	11,689	25,797
42.20	11,779	26,384
42.25	11,870	26,975
42.30	11,960	27,571
42.35	12,051	28,171
42.40	12,142	28,776
42.45	12,234	29,385
42.50	12,326	29,999
42.55	12,418	30,618
42.60	12,511	31,241
42.65	12,604	31,869
42.70	12,697	32,501
42.75	12,791	33,139
42.80	12,885	33,780
42.85	12,979	34,427
42.90	**13,074**	**35,078**

Summary for Pond SGW#2: SGW#2

Inflow Area = 0.931 ac, 51.02% Impervious, Inflow Depth > 3.22" for 10-yr event
Inflow = 5.58 cfs @ 11.91 hrs, Volume= 0.250 af
Outflow = 0.17 cfs @ 13.81 hrs, Volume= 0.112 af, Atten= 97%, Lag= 114.3 min
Primary = 0.17 cfs @ 13.81 hrs, Volume= 0.112 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.02' @ 13.81 hrs Surf.Area= 4,941 sf Storage= 7,086 cf

Plug-Flow detention time= 344.3 min calculated for 0.112 af (45% of inflow)
Center-of-Mass det. time= 221.6 min (1,023.6 - 801.9)

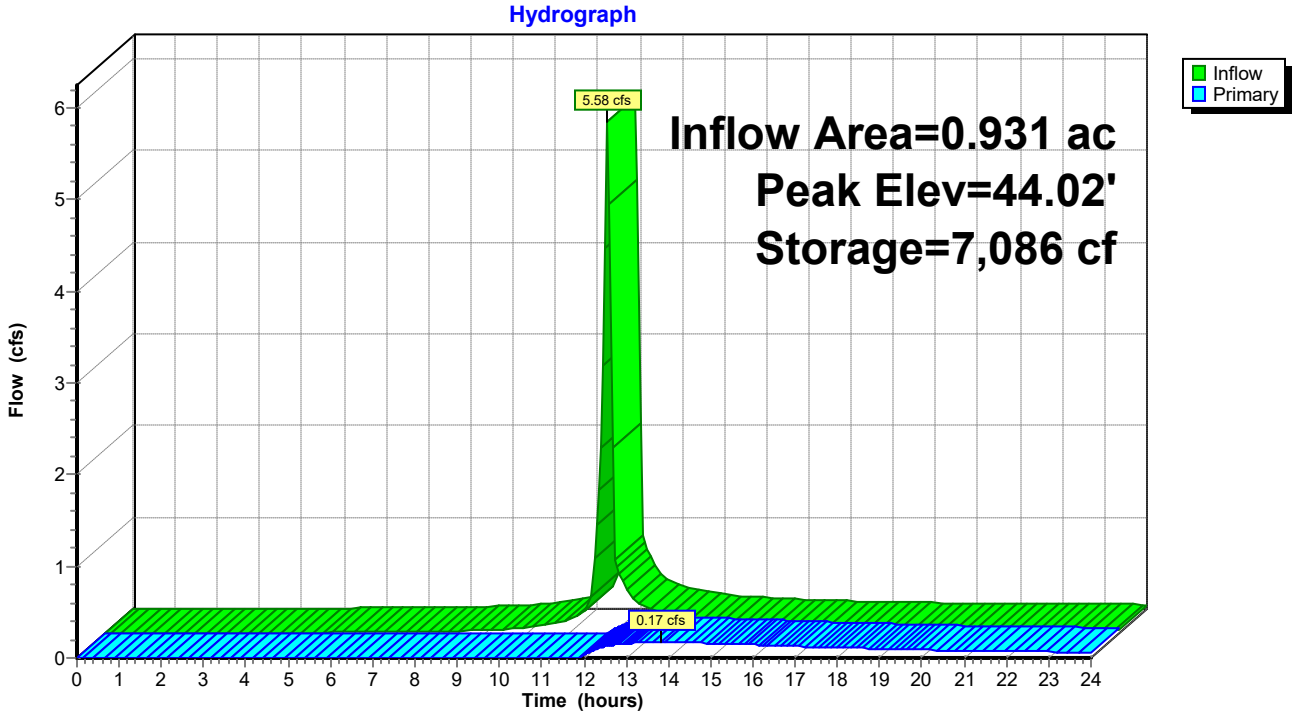
Volume	Invert	Avail.Storage	Storage Description
#1	42.05'	12,835 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
42.05	1,891	314.0	0	0	1,891
43.05	3,888	346.0	2,830	2,830	3,604
45.05	6,207	396.0	10,005	12,835	6,648

Device	Routing	Invert	Outlet Devices
#1	Primary	43.55'	**2.0" W x 12.0" H Vert. 2" Notch in box** C= 0.600
#2	Primary	44.55'	**16.3' long Rim SHA 374.70** 0 End Contraction(s)

Primary OutFlow Max=0.17 cfs @ 13.81 hrs HW=44.02' TW=42.24' (Dynamic Tailwater)
1=2" Notch in box (Orifice Controls 0.17 cfs @ 2.19 fps)
2=Rim SHA 374.70 (Controls 0.00 cfs)

Pond SGW#2: SGW#2



Stage-Area-Storage for Pond SGW#2: SGW#2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
42.05	1,891	0
42.10	1,974	97
42.15	2,059	197
42.20	2,145	303
42.25	2,233	412
42.30	2,323	526
42.35	2,415	644
42.40	2,509	767
42.45	2,604	895
42.50	2,702	1,028
42.55	2,800	1,165
42.60	2,901	1,308
42.65	3,004	1,456
42.70	3,108	1,608
42.75	3,214	1,766
42.80	3,322	1,930
42.85	3,432	2,099
42.90	3,543	2,273
42.95	3,656	2,453
43.00	3,771	2,639
43.05	3,888	2,830
43.10	3,939	3,026
43.15	3,991	3,224
43.20	4,043	3,425
43.25	4,096	3,628
43.30	4,148	3,835
43.35	4,201	4,043
43.40	4,255	4,255
43.45	4,309	4,469
43.50	4,363	4,686
43.55	4,417	4,905
43.60	4,472	5,127
43.65	4,527	5,352
43.70	4,582	5,580
43.75	4,638	5,810
43.80	4,694	6,044
43.85	4,751	6,280
43.90	4,808	6,519
43.95	4,865	6,761
44.00	4,922	7,005
44.05	4,980	7,253
44.10	5,038	7,503
44.15	5,097	7,757
44.20	5,155	8,013
44.25	5,215	8,272
44.30	5,274	8,535
44.35	5,334	8,800
44.40	5,394	9,068
44.45	5,455	9,339
44.50	5,515	9,613
44.55	5,577	9,891
44.60	5,638	10,171
44.65	5,700	10,454
44.70	5,762	10,741
44.75	5,825	11,031
44.80	5,888	11,324
44.85	5,951	11,619
44.90	6,014	11,919
44.95	6,078	12,221
45.00	6,142	12,526
45.05	**6,207**	**12,835**

Summary for Pond TOE1: SDI/OS#1

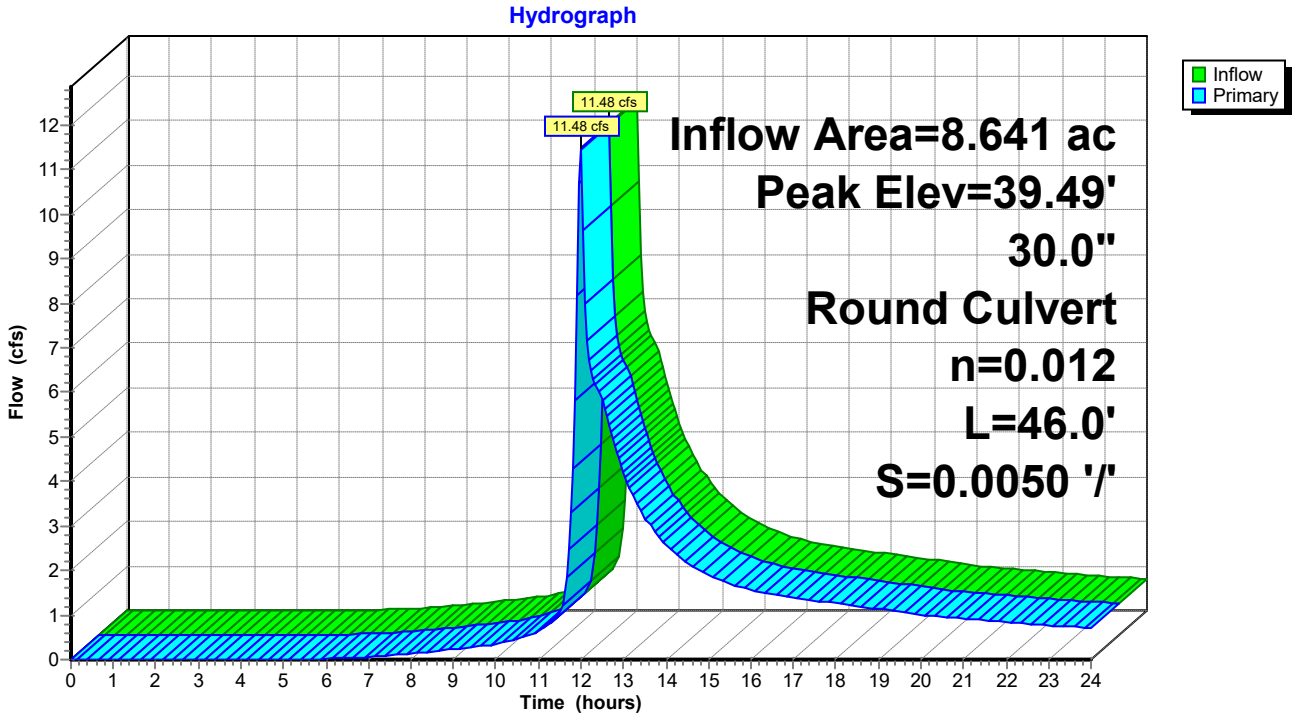
Inflow Area = 8.641 ac, 68.11% Impervious, Inflow Depth > 2.91" for 10-yr event
Inflow = 11.48 cfs @ 11.99 hrs, Volume= 2.099 af
Outflow = 11.48 cfs @ 11.99 hrs, Volume= 2.099 af, Atten= 0%, Lag= 0.0 min
Primary = 11.48 cfs @ 11.99 hrs, Volume= 2.099 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 39.49' @ 11.99 hrs
Flood Elev= 42.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	37.83'	**30.0" Round 30" HDPE** L= 46.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 37.83' / 37.60' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=11.27 cfs @ 11.99 hrs HW=39.47' TW=0.00' (Dynamic Tailwater)
1=30" HDPE (Barrel Controls 11.27 cfs @ 4.69 fps)

Pond TOE1: SDI/OS#1



Stage-Area-Storage for Pond TOE1: SDI/OS#1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
37.83	**0**	40.38	0
37.88	0	40.43	0
37.93	0	40.48	0
37.98	0	40.53	0
38.03	0	40.58	0
38.08	0	40.63	0
38.13	0	40.68	0
38.18	0	40.73	0
38.23	0	40.78	0
38.28	0	40.83	0
38.33	0	40.88	0
38.38	0	40.93	0
38.43	0	40.98	0
38.48	0	41.03	0
38.53	0	41.08	0
38.58	0	41.13	0
38.63	0	41.18	0
38.68	0	41.23	0
38.73	0	41.28	0
38.78	0	41.33	0
38.83	0	41.38	0
38.88	0	41.43	0
38.93	0	41.48	0
38.98	0	41.53	0
39.03	0	41.58	0
39.08	0	41.63	0
39.13	0	41.68	0
39.18	0	41.73	0
39.23	0	41.78	0
39.28	0	41.83	0
39.33	0	41.88	0
39.38	0	41.93	0
39.43	0	41.98	0
39.48	0	42.03	0
39.53	0	42.08	0
39.58	0	42.13	0
39.63	0	42.18	0
39.68	0	42.23	0
39.73	0	42.28	0
39.78	0	42.33	0
39.83	0	42.38	0
39.88	0	42.43	0
39.93	0	42.48	0
39.98	0		
40.03	0		
40.08	0		
40.13	0		
40.18	0		
40.23	0		
40.28	0		
40.33	0		

Summary for Pond TOE2: SDMH

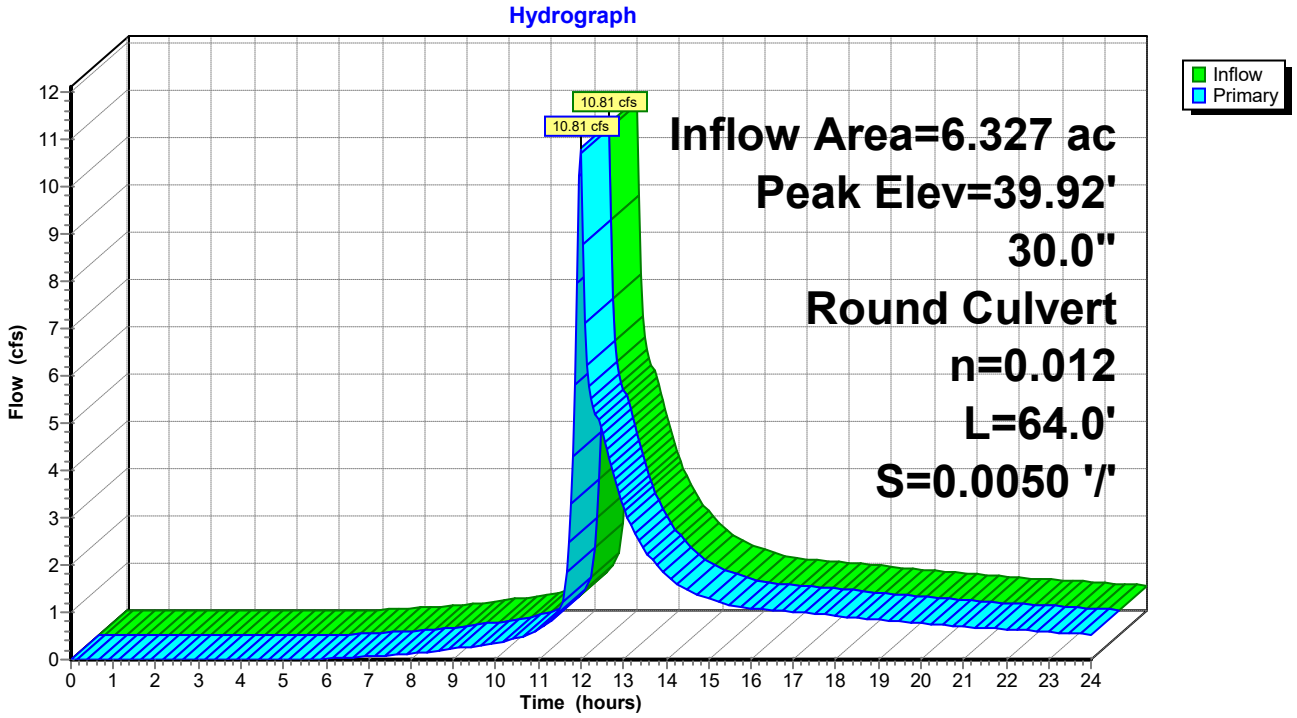
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 3.15" for 10-yr event
Inflow = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af
Outflow = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af, Atten= 0%, Lag= 0.0 min
Primary = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 39.92' @ 12.01 hrs
Flood Elev= 43.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.25'	**30.0" Round 30" HDPE** L= 64.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 38.25' / 37.93' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=9.37 cfs @ 11.98 hrs HW=39.88' TW=39.46' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 9.37 cfs @ 3.94 fps)

Pond TOE2: SDMH



Stage-Area-Storage for Pond TOE2: SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.25	**0**	40.29	0	42.33	0
38.29	0	40.33	0	42.37	0
38.33	0	40.37	0	42.41	0
38.37	0	40.41	0	42.45	0
38.41	0	40.45	0	42.49	0
38.45	0	40.49	0	42.53	0
38.49	0	40.53	0	42.57	0
38.53	0	40.57	0	42.61	0
38.57	0	40.61	0	42.65	0
38.61	0	40.65	0	42.69	0
38.65	0	40.69	0	42.73	0
38.69	0	40.73	0	42.77	0
38.73	0	40.77	0	42.81	0
38.77	0	40.81	0	42.85	0
38.81	0	40.85	0	42.89	0
38.85	0	40.89	0	42.93	0
38.89	0	40.93	0	42.97	0
38.93	0	40.97	0	43.01	0
38.97	0	41.01	0	43.05	0
39.01	0	41.05	0	43.09	0
39.05	0	41.09	0	43.13	0
39.09	0	41.13	0	43.17	0
39.13	0	41.17	0	43.21	0
39.17	0	41.21	0	43.25	0
39.21	0	41.25	0	43.29	0
39.25	0	41.29	0		
39.29	0	41.33	0		
39.33	0	41.37	0		
39.37	0	41.41	0		
39.41	0	41.45	0		
39.45	0	41.49	0		
39.49	0	41.53	0		
39.53	0	41.57	0		
39.57	0	41.61	0		
39.61	0	41.65	0		
39.65	0	41.69	0		
39.69	0	41.73	0		
39.73	0	41.77	0		
39.77	0	41.81	0		
39.81	0	41.85	0		
39.85	0	41.89	0		
39.89	0	41.93	0		
39.93	0	41.97	0		
39.97	0	42.01	0		
40.01	0	42.05	0		
40.05	0	42.09	0		
40.09	0	42.13	0		
40.13	0	42.17	0		
40.17	0	42.21	0		
40.21	0	42.25	0		
40.25	0	42.29	0		

Summary for Pond TOE3: SDMH

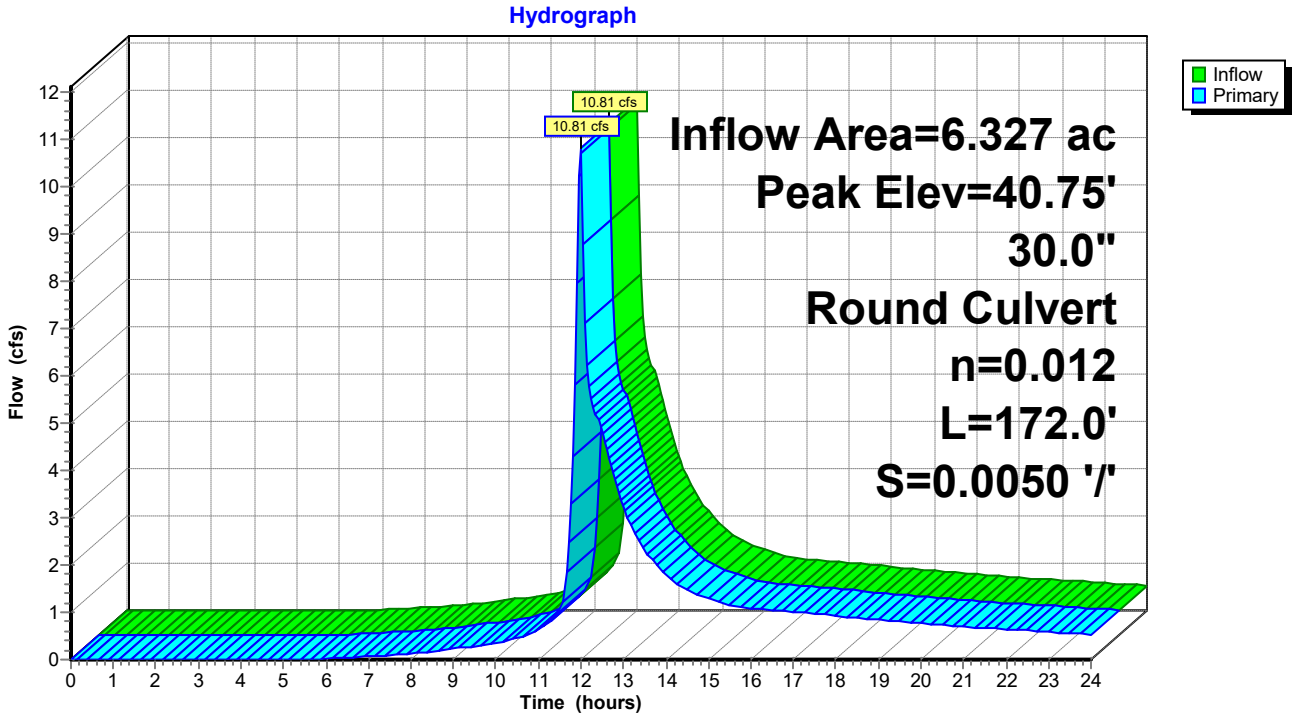
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 3.15" for 10-yr event
Inflow = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af
Outflow = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af, Atten= 0%, Lag= 0.0 min
Primary = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 40.75' @ 12.00 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.21'	**30.0" Round 30" HDPE** L= 172.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 39.21' / 38.35' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=9.64 cfs @ 11.98 hrs HW=40.71' TW=39.88' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 9.64 cfs @ 4.48 fps)

Pond TOE3: SDMH



Stage-Area-Storage for Pond TOE3: SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
39.21	**0**	44.31	0
39.31	0	44.41	0
39.41	0	44.51	0
39.51	0	44.61	0
39.61	0	44.71	0
39.71	0	44.81	0
39.81	0	44.91	0
39.91	0	45.01	0
40.01	0	45.11	0
40.11	0	45.21	0
40.21	0	45.31	0
40.31	0	45.41	0
40.41	0	45.51	0
40.51	0	45.61	0
40.61	0	45.71	0
40.71	0	45.81	0
40.81	0		
40.91	0		
41.01	0		
41.11	0		
41.21	0		
41.31	0		
41.41	0		
41.51	0		
41.61	0		
41.71	0		
41.81	0		
41.91	0		
42.01	0		
42.11	0		
42.21	0		
42.31	0		
42.41	0		
42.51	0		
42.61	0		
42.71	0		
42.81	0		
42.91	0		
43.01	0		
43.11	0		
43.21	0		
43.31	0		
43.41	0		
43.51	0		
43.61	0		
43.71	0		
43.81	0		
43.91	0		
44.01	0		
44.11	0		
44.21	0		

Summary for Pond TOE4: SDI/OS #2

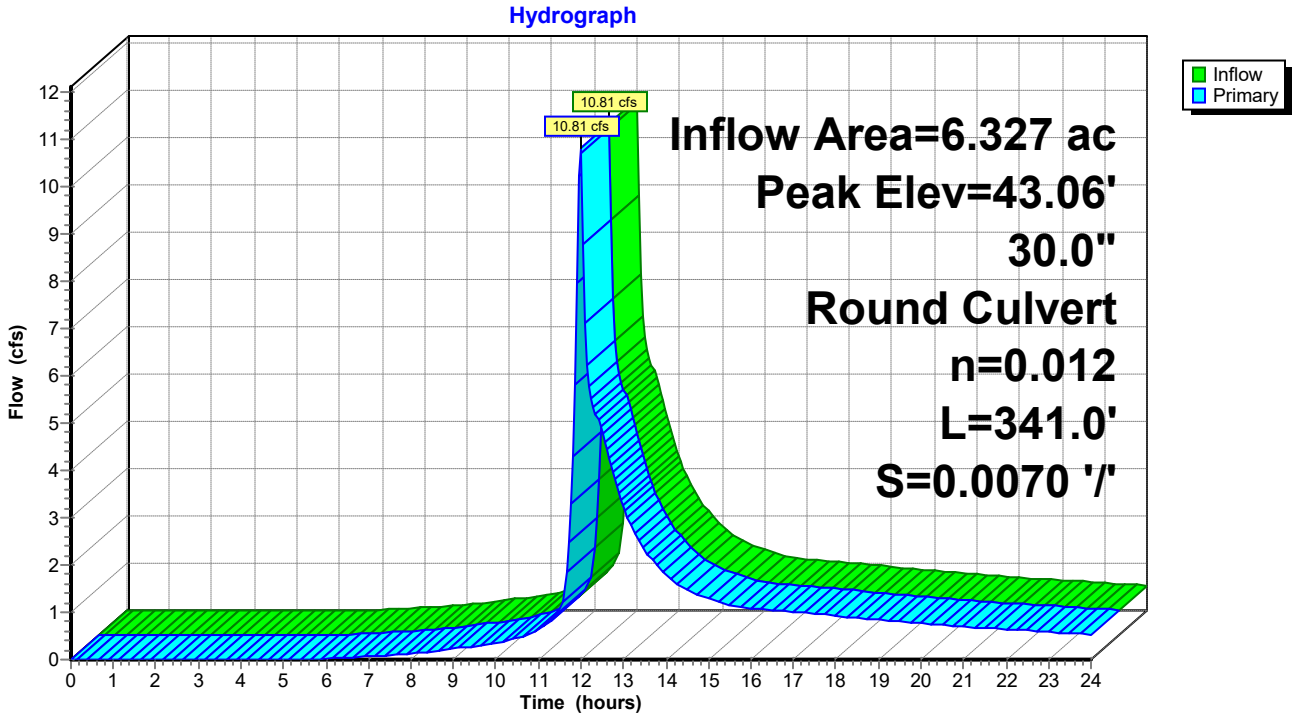
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 3.15" for 10-yr event
Inflow = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af
Outflow = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af, Atten= 0%, Lag= 0.0 min
Primary = 10.81 cfs @ 11.98 hrs, Volume= 1.662 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.06' @ 11.99 hrs
Flood Elev= 45.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.70'	**30.0" Round 30" HPDE** L= 341.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.70' / 39.31' S= 0.0070 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=10.36 cfs @ 11.98 hrs HW=43.04' TW=40.71' (Dynamic Tailwater)
1=30" HPDE (Outlet Controls 10.36 cfs @ 5.60 fps)

Pond TOE4: SDI/OS #2



Stage-Area-Storage for Pond TOE4: SDI/OS #2

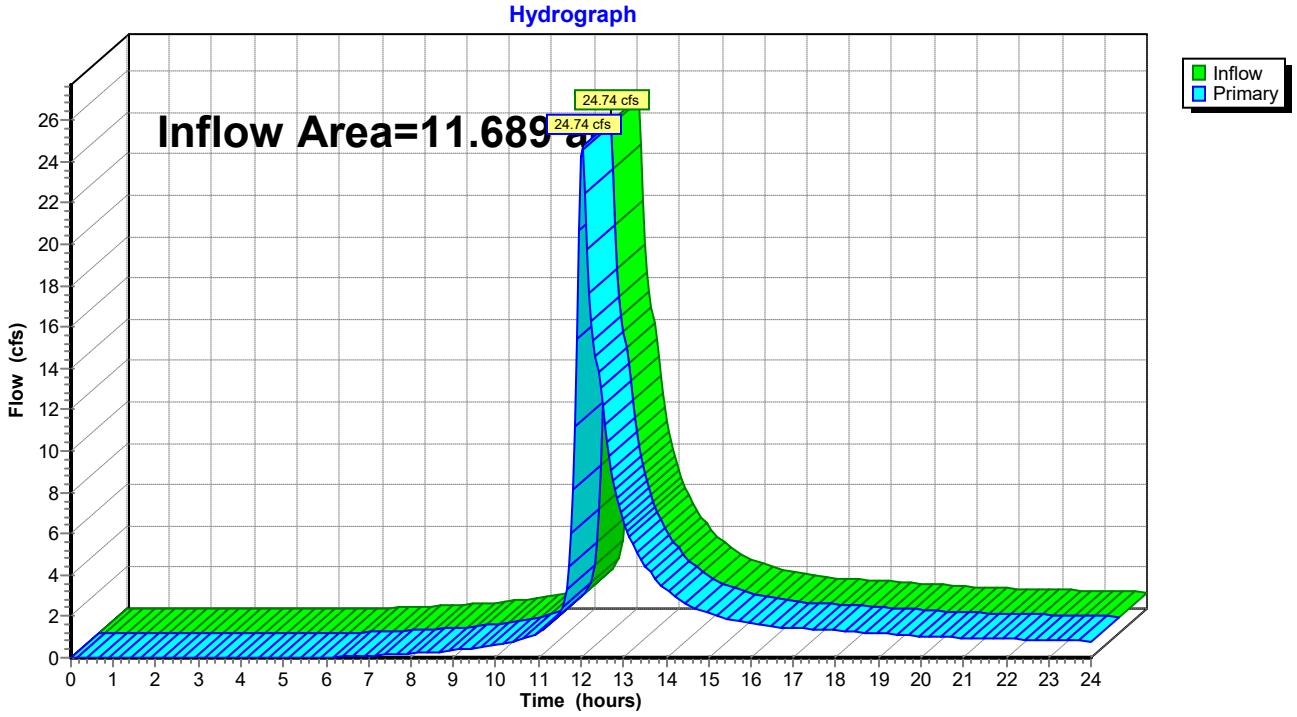
Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.70	**0**	44.25	0
41.75	0	44.30	0
41.80	0	44.35	0
41.85	0	44.40	0
41.90	0	44.45	0
41.95	0	44.50	0
42.00	0	44.55	0
42.05	0	44.60	0
42.10	0	44.65	0
42.15	0	44.70	0
42.20	0	44.75	0
42.25	0	44.80	0
42.30	0	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0		
42.60	0		
42.65	0		
42.70	0		
42.75	0		
42.80	0		
42.85	0		
42.90	0		
42.95	0		
43.00	0		
43.05	0		
43.10	0		
43.15	0		
43.20	0		
43.25	0		
43.30	0		
43.35	0		
43.40	0		
43.45	0		
43.50	0		
43.55	0		
43.60	0		
43.65	0		
43.70	0		
43.75	0		
43.80	0		
43.85	0		
43.90	0		
43.95	0		
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		

Summary for Link PRE: PRE-DEVELOPMENT

Inflow Area = 11.689 ac, 55.03% Impervious, Inflow Depth > 3.25" for 10-yr event
Inflow = 24.74 cfs @ 12.03 hrs, Volume= 3.162 af
Primary = 24.74 cfs @ 12.03 hrs, Volume= 3.162 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link PRE: PRE-DEVELOPMENT

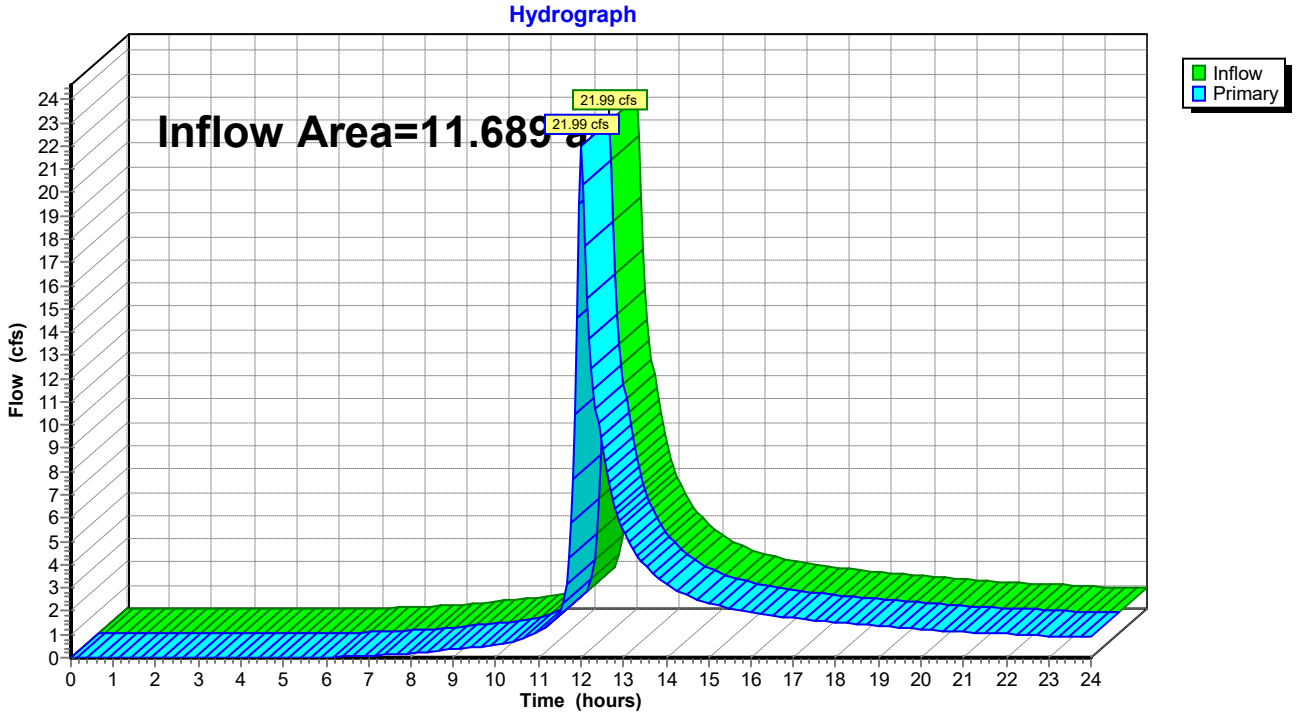


Summary for Link PST: POST-DEVELOPMENT

Inflow Area = 11.689 ac, 65.73% Impervious, Inflow Depth > 3.06" for 10-yr event
Inflow = 21.99 cfs @ 12.01 hrs, Volume= 2.977 af
Primary = 21.99 cfs @ 12.01 hrs, Volume= 2.977 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link PST: POST-DEVELOPMENT



Summary for Subcatchment EX-1: NORTH OF SITE

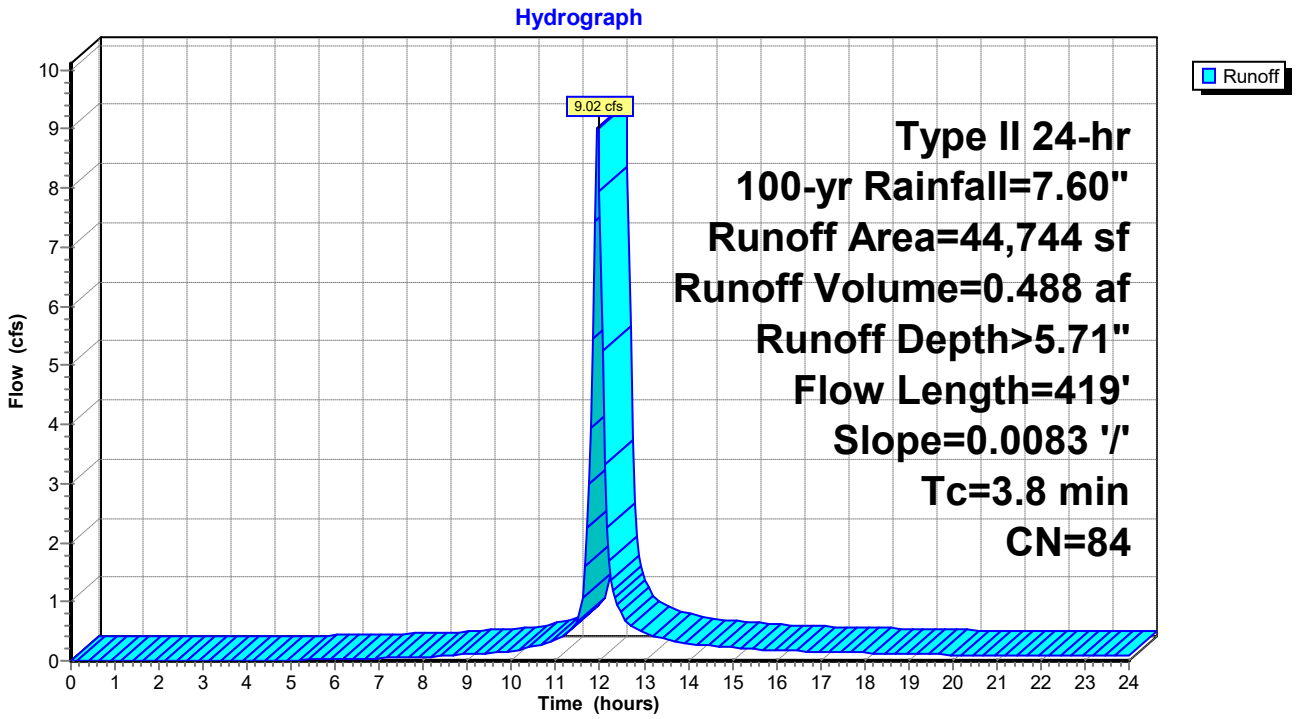
Runoff = 9.02 cfs @ 11.95 hrs, Volume= 0.488 af, Depth> 5.71"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	19,542	98	Gravel Driveway; Bldg; Old foundations
	25,202	74	>75% Grass cover, Good, HSG C
	44,744	84	Weighted Average
	25,202		56.32% Pervious Area
	19,542		43.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	419	0.0083	1.85		**Shallow Concentrated Flow, Compacted Gravel Driveway** Paved Kv= 20.3 fps

Subcatchment EX-1: NORTH OF SITE



Summary for Subcatchment EX-2: MIDDLE OF SITE

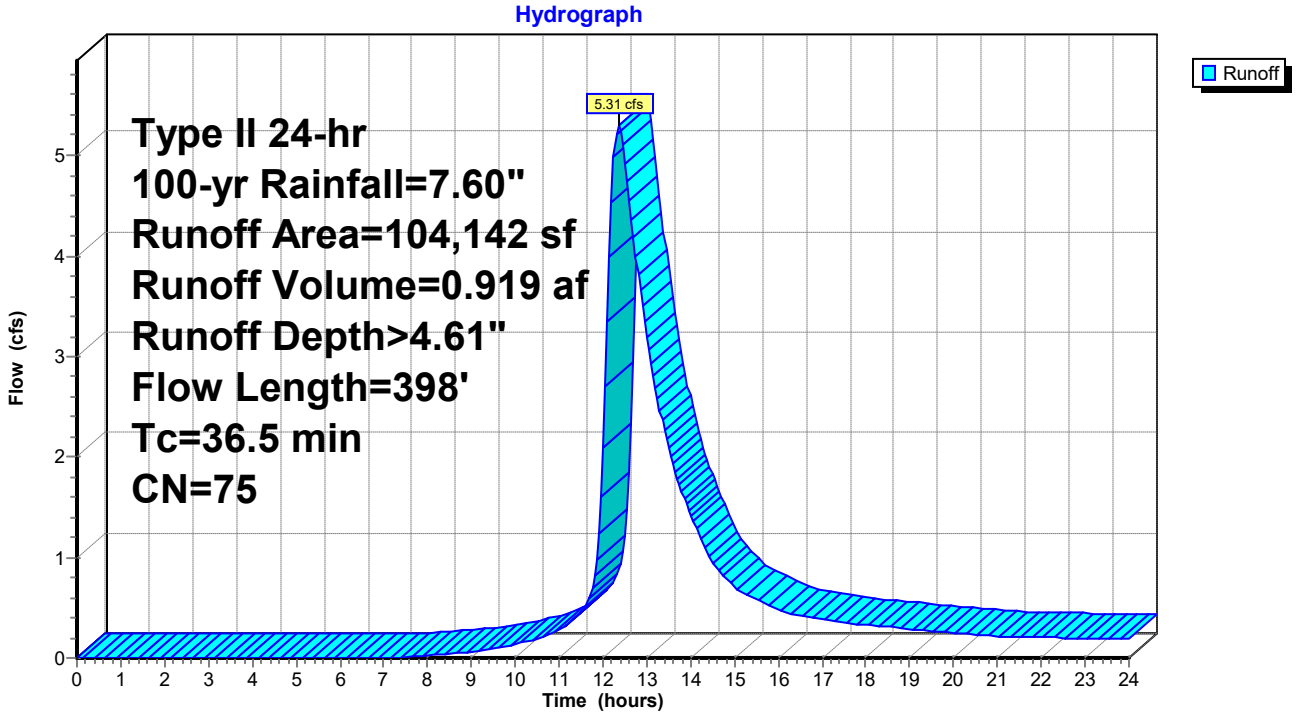
Runoff = 5.31 cfs @ 12.36 hrs, Volume= 0.919 af, Depth> 4.61"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	40,056	98	Ex Bldg; Front Parking; US 50
	64,086	61	>75% Grass cover, Good, HSG B
	104,142	75	Weighted Average
	64,086		61.54% Pervious Area
	40,056		38.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.4	150	0.0018	0.07		**Sheet Flow, Vacant Grassed Lot** Grass: Short n= 0.150 P2= 3.40"
1.1	137	0.0189	2.06		**Shallow Concentrated Flow, Grassed Lot** Grassed Waterway Kv= 15.0 fps
0.1	31	0.0070	4.49	3.52	**Pipe Channel, 12" RCP** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
0.6	10	0.0001	0.28	0.02	**Pipe Channel, 4" PVC Culverts** 4.0" Round Area= 0.1 sf Perim= 1.0' r= 0.08' n= 0.010 PVC, smooth interior
0.3	70	0.0800	4.24		**Shallow Concentrated Flow, Grassed Lot** Grassed Waterway Kv= 15.0 fps
36.5	398	Total			

Subcatchment EX-2: MIDDLE OF SITE



Summary for Subcatchment EX-3: SOUTHERN SITE + US50

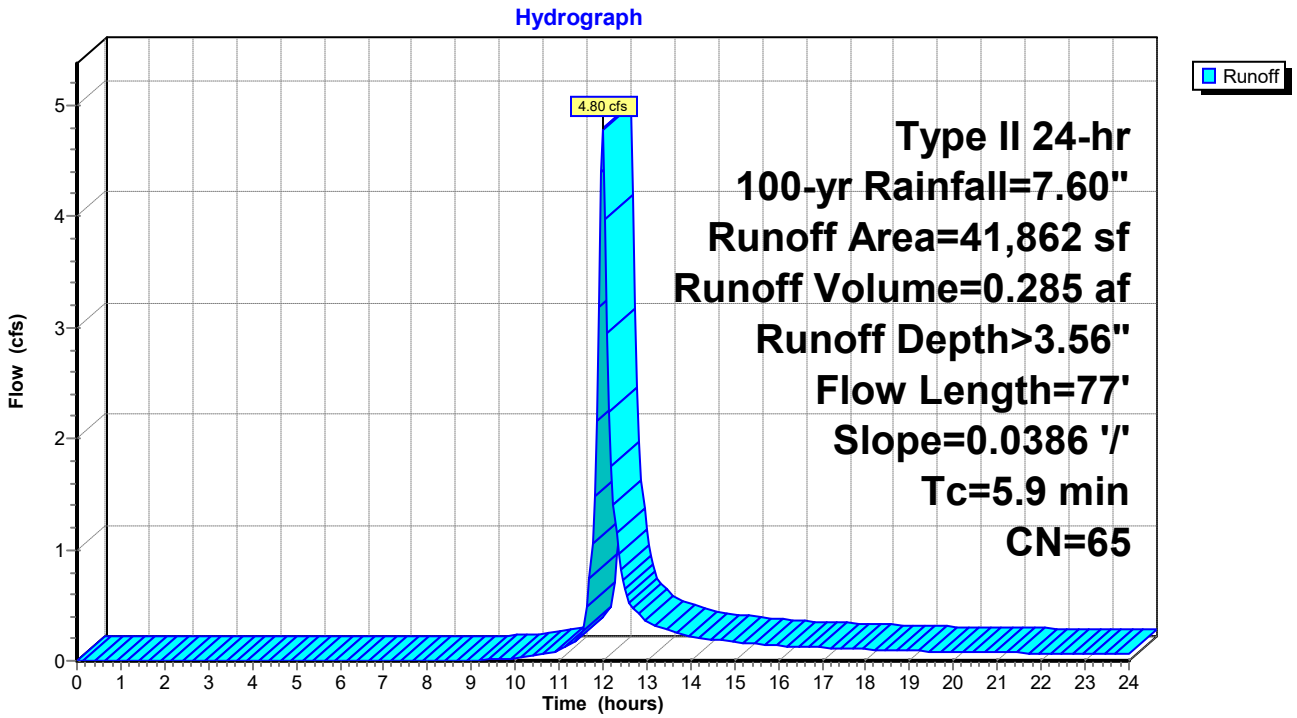
Runoff = 4.80 cfs @ 11.99 hrs, Volume= 0.285 af, Depth> 3.56"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	37,243	61	>75% Grass cover, Good, HSG B
*	4,619	98	SHA/Route 50
	41,862	65	Weighted Average
	37,243		88.97% Pervious Area
	4,619		11.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	77	0.0386	0.22		**Sheet Flow, Vacant Grassed Lot** Grass: Short n= 0.150 P2= 3.40"

Subcatchment EX-3: SOUTHERN SITE + US50



Summary for Subcatchment EX-4: ADJ to Ex SWM Pond

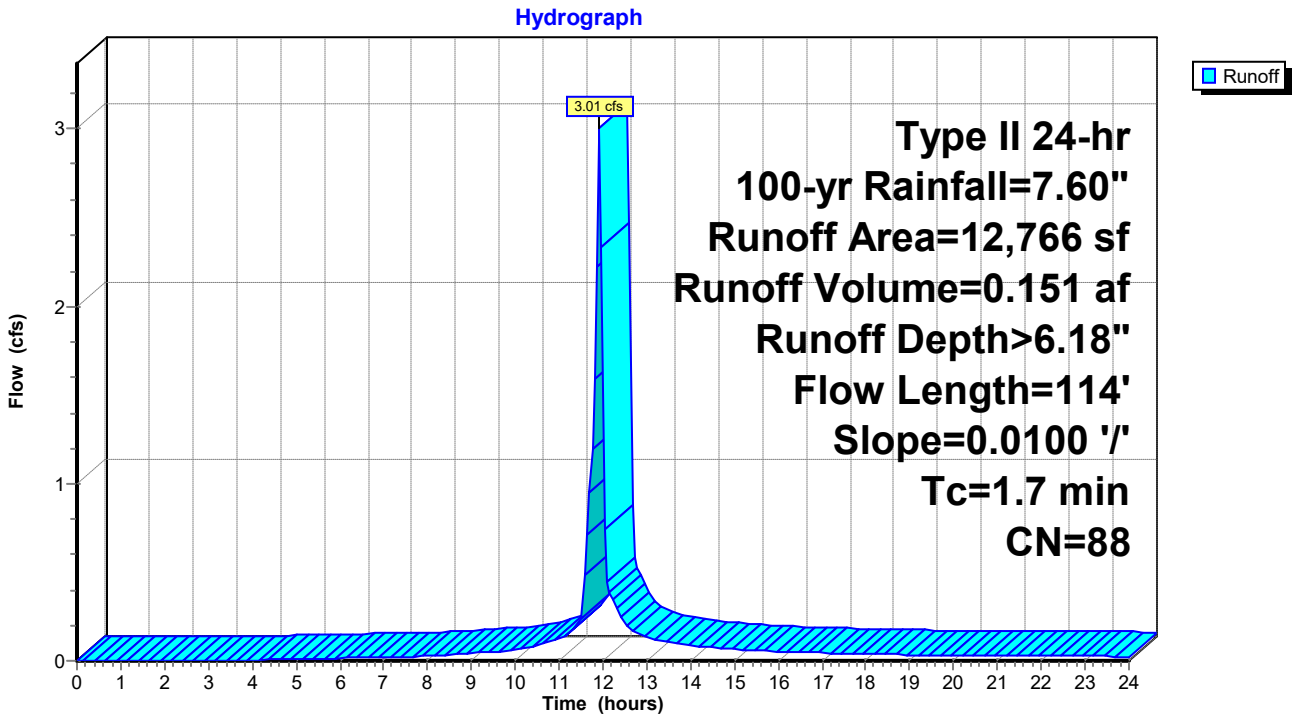
Runoff = 3.01 cfs @ 11.92 hrs, Volume= 0.151 af, Depth> 6.18"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	7,479	98	Old foundations
	5,287	74	>75% Grass cover, Good, HSG C
	12,766	88	Weighted Average
	5,287		41.41% Pervious Area
	7,479		58.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	114	0.0100	1.10		**Sheet Flow, Concrete Foundation** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment EX-4: ADJ to Ex SWM Pond



Summary for Subcatchment G2-A: Commerce Street/G2 Associates

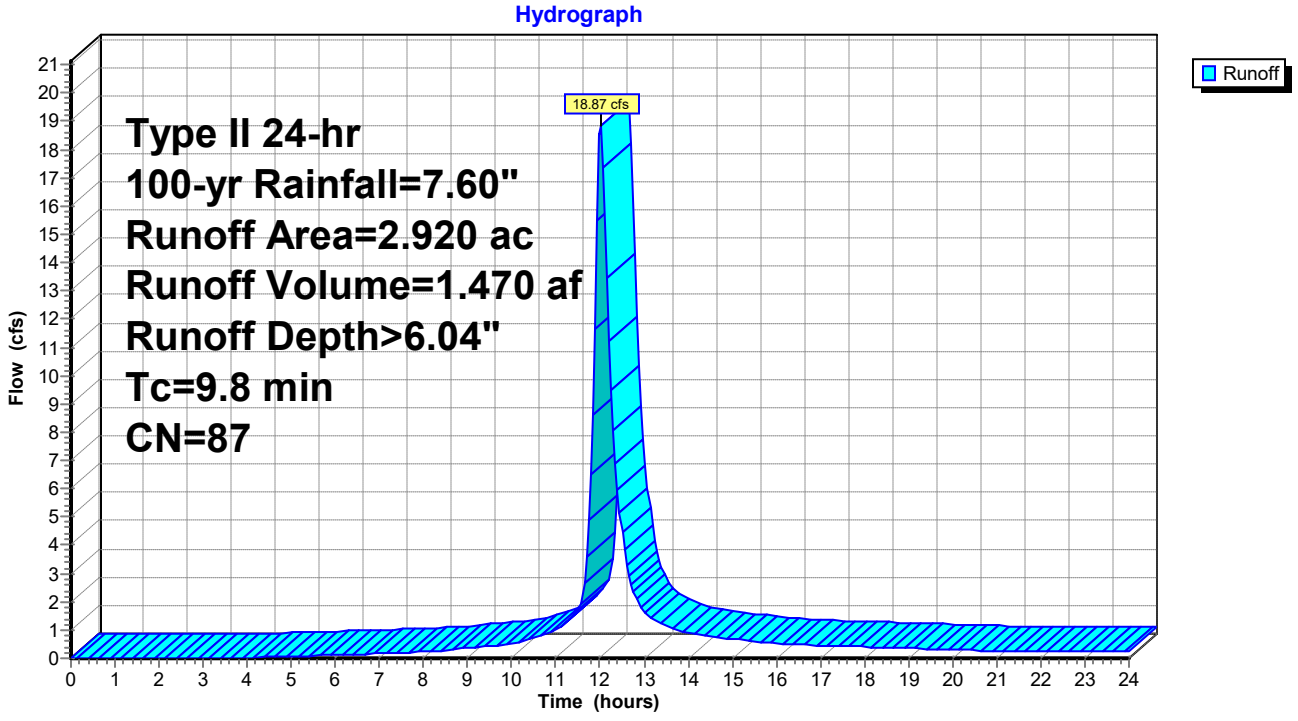
Runoff = 18.87 cfs @ 12.03 hrs, Volume= 1.470 af, Depth> 6.04"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (ac)	CN	Description
*	2.080	98	G2 Development circa 2005
*	0.840	61	>75% Grass cover, Good, HSG C
	2.920	87	Weighted Average
	0.840		28.77% Pervious Area
	2.080		71.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					**Direct Entry, Tcon from TR-55 Report circa 2005**

Subcatchment G2-A: Commerce Street/G2 Associates



Summary for Subcatchment G2-AA: Commerce Street/G2 Associates

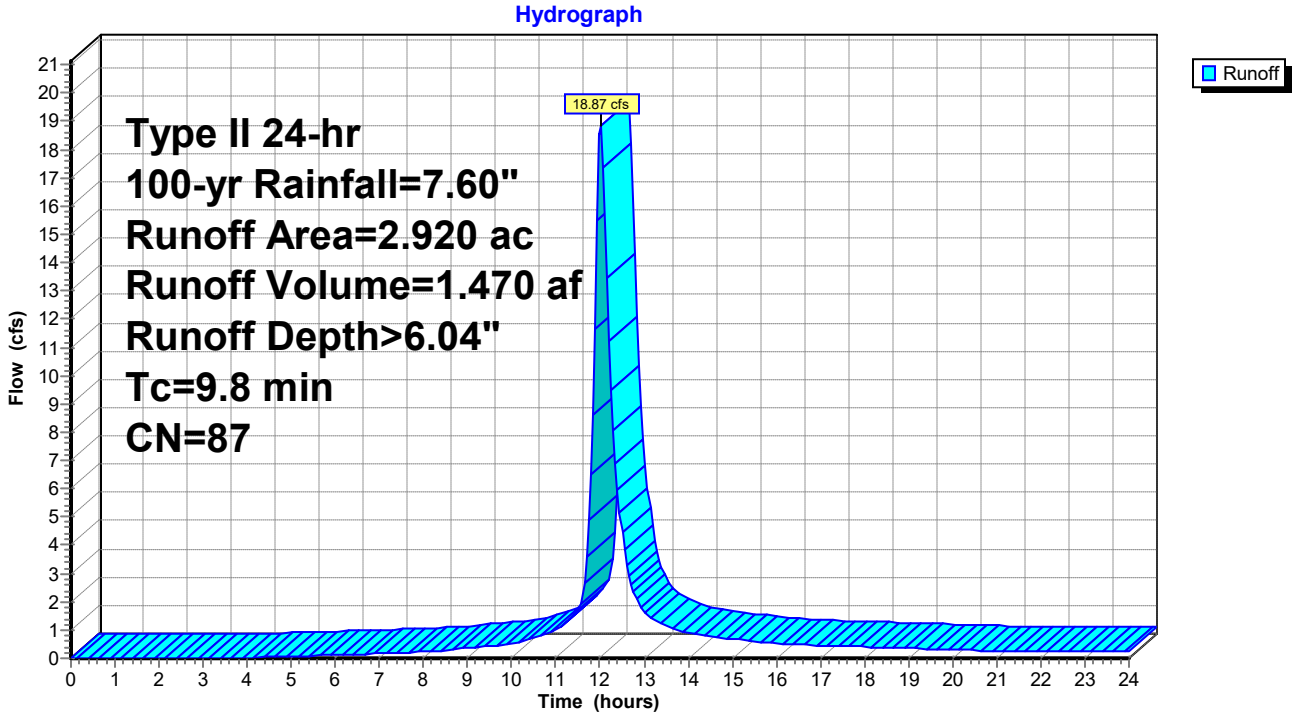
Runoff = 18.87 cfs @ 12.03 hrs, Volume= 1.470 af, Depth> 6.04"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (ac)	CN	Description
*	2.080	98	G2 Development circa 2005
*	0.840	61	>75% Grass cover, Good, HSG C
	2.920	87	Weighted Average
	0.840		28.77% Pervious Area
	2.080		71.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					**Direct Entry, Tcon from TR-55 Report circa 2005**

Subcatchment G2-AA: Commerce Street/G2 Associates



Summary for Subcatchment MB-1: 1/4 Medical Roof

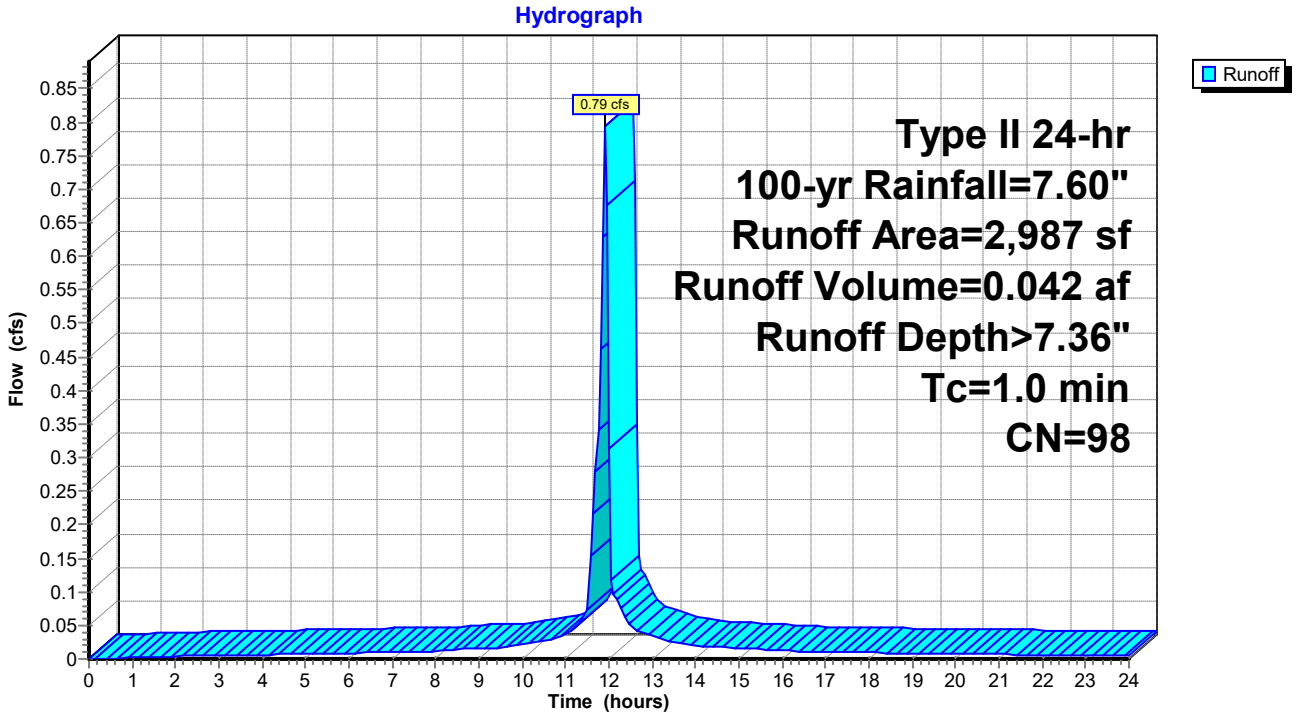
Runoff = 0.79 cfs @ 11.90 hrs, Volume= 0.042 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	2,987	98	Rear Med. Building Roof
	2,987		100.00% Impervious Area

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

Subcatchment MB-1: 1/4 Medical Roof



Summary for Subcatchment MB-2: 1/4 Medical Roof

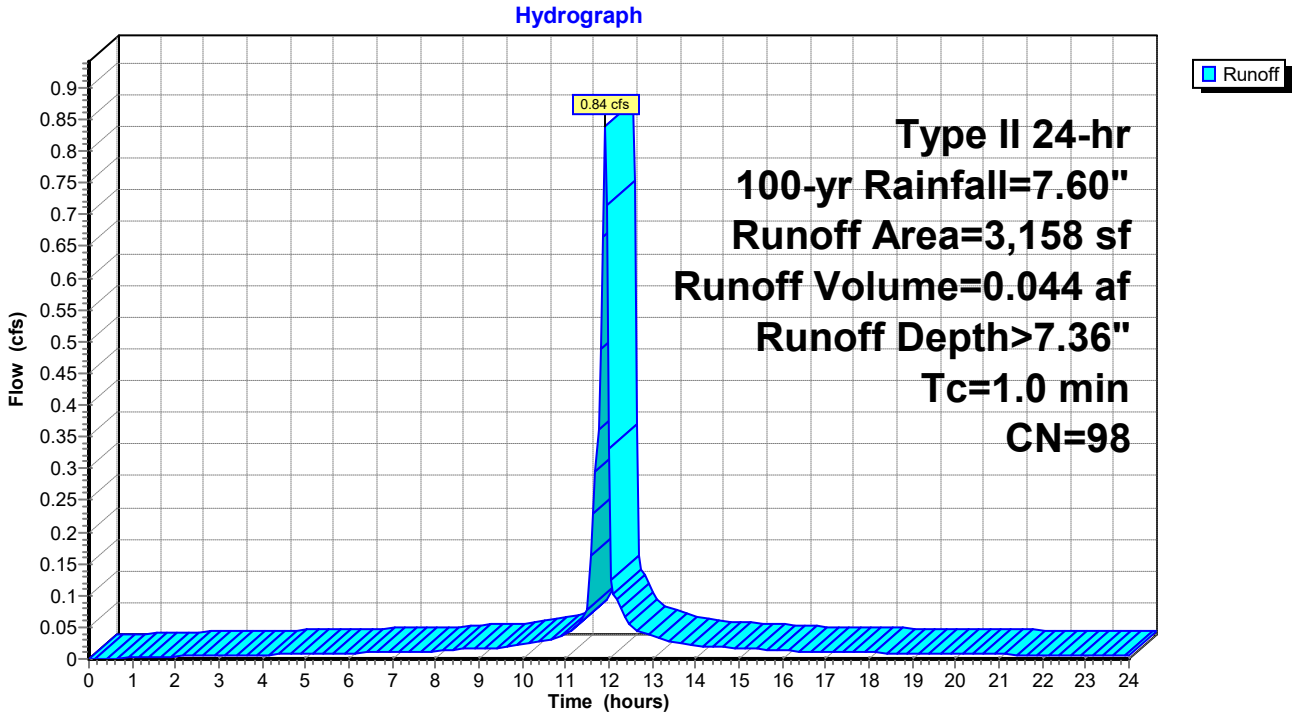
Runoff = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	3,158	98	Rear Med. Building Roof
	3,158		100.00% Impervious Area

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

Subcatchment MB-2: 1/4 Medical Roof



Summary for Subcatchment MB-3: 1/4 Medical Roof

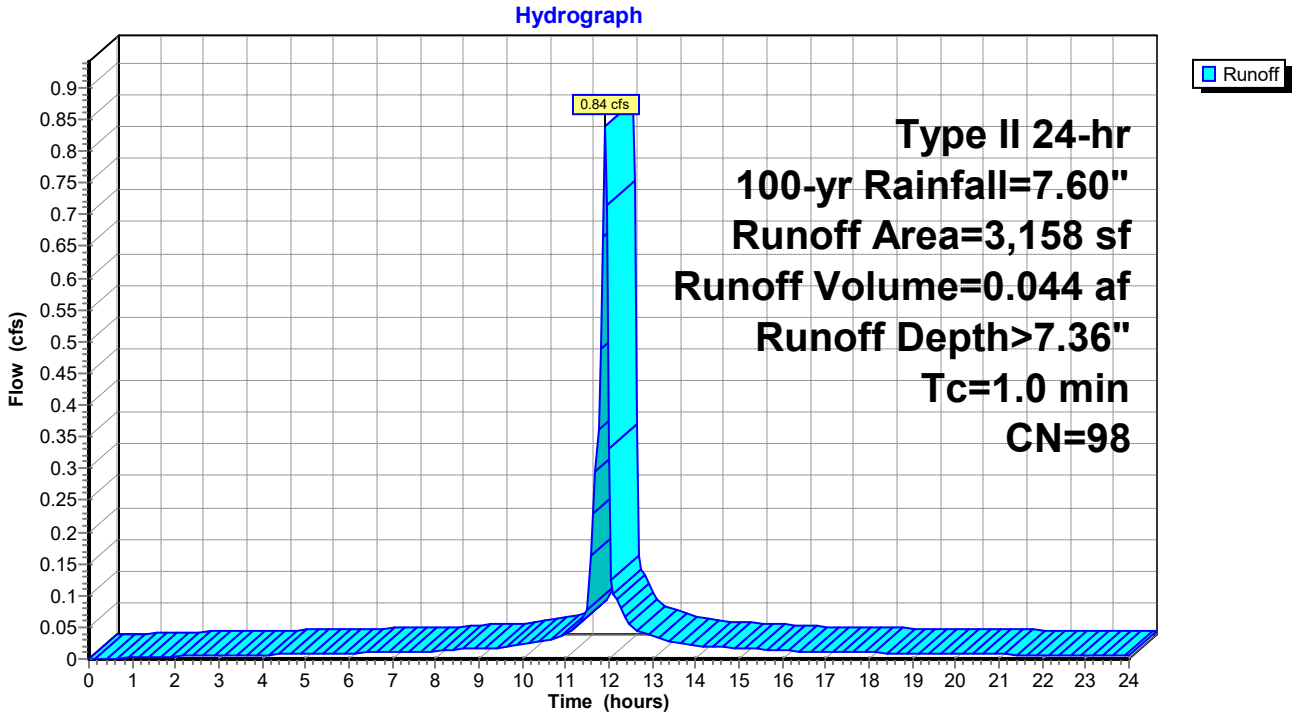
Runoff = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	3,158	98	Rear Med. Building Roof
	3,158		100.00% Impervious Area

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

Subcatchment MB-3: 1/4 Medical Roof



Summary for Subcatchment MB-4: 1/4 Medical Roof

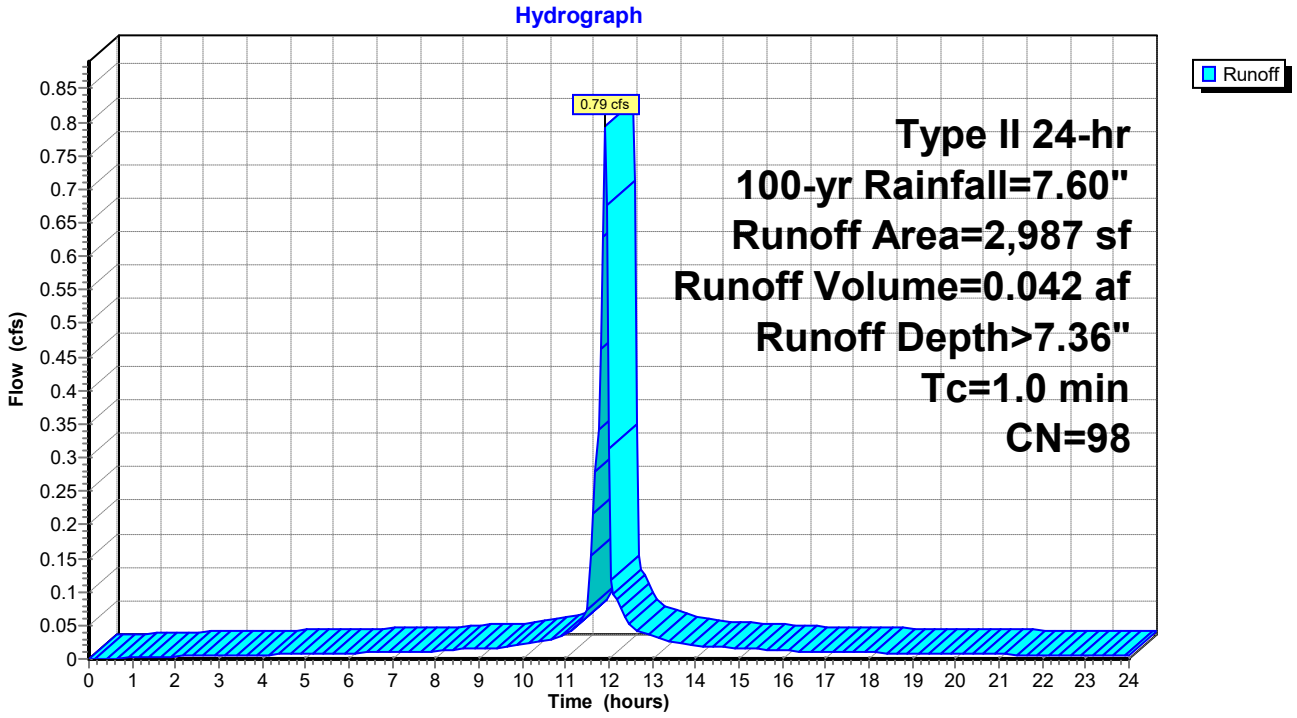
Runoff = 0.79 cfs @ 11.90 hrs, Volume= 0.042 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	2,987	98	Rear Med. Building Roof
	2,987		100.00% Impervious Area

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

Subcatchment MB-4: 1/4 Medical Roof



Summary for Subcatchment MY-1: 1/4 Retail Roof

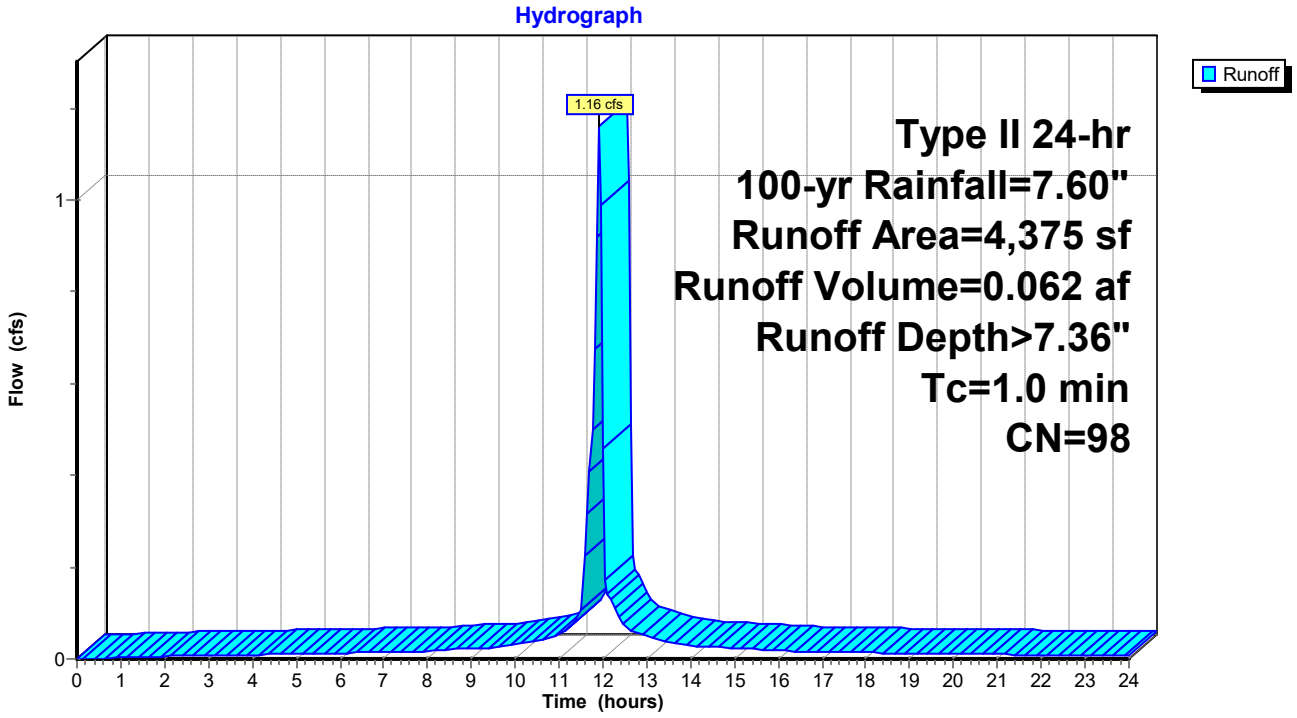
Runoff = 1.16 cfs @ 11.90 hrs, Volume= 0.062 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,375	98	Building Roof
	4,375		100.00% Impervious Area

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

Subcatchment MY-1: 1/4 Retail Roof



Summary for Subcatchment MY-2: 1/4 Retail Roof

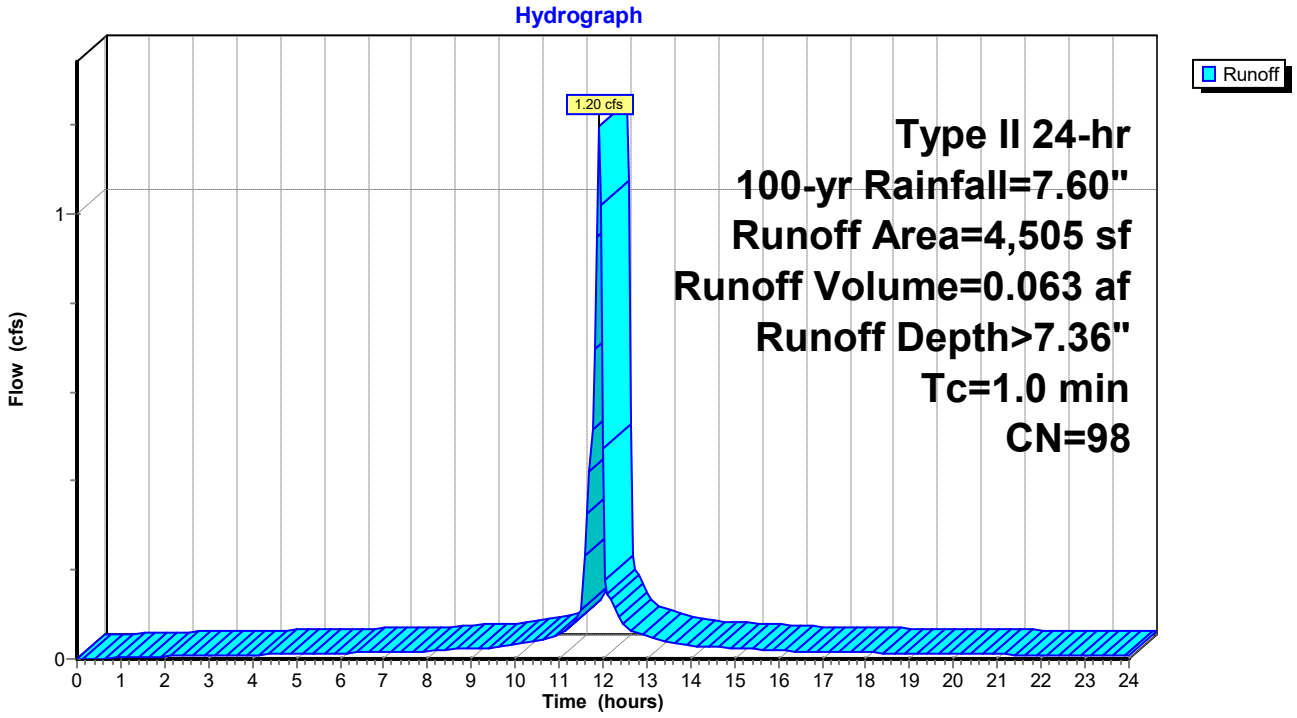
Runoff = 1.20 cfs @ 11.90 hrs, Volume= 0.063 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,505	98	Rear Building Roof
	4,505		100.00% Impervious Area

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

Subcatchment MY-2: 1/4 Retail Roof



Summary for Subcatchment MY-3: 1/4 Retail Roof

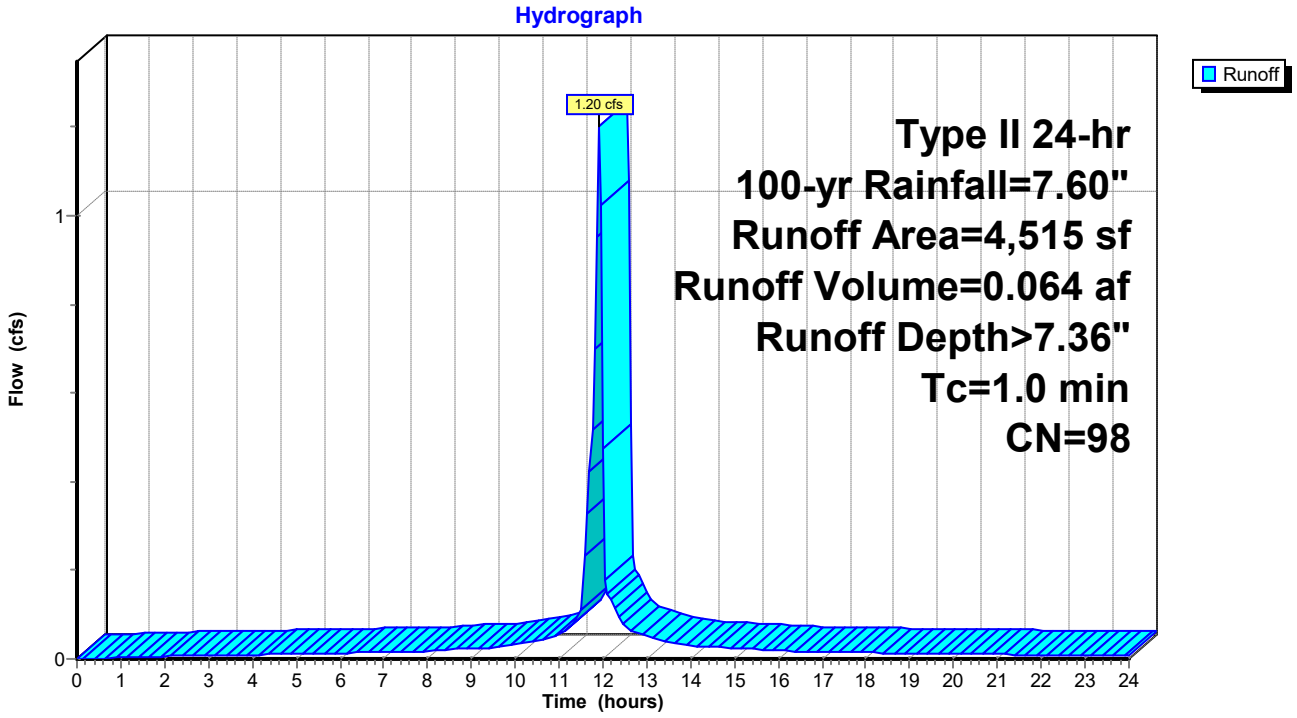
Runoff = 1.20 cfs @ 11.90 hrs, Volume= 0.064 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,515	98	Rear Building Roof
	4,515		100.00% Impervious Area

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

Subcatchment MY-3: 1/4 Retail Roof



Summary for Subcatchment MY-4: 1/4 Retail Roof

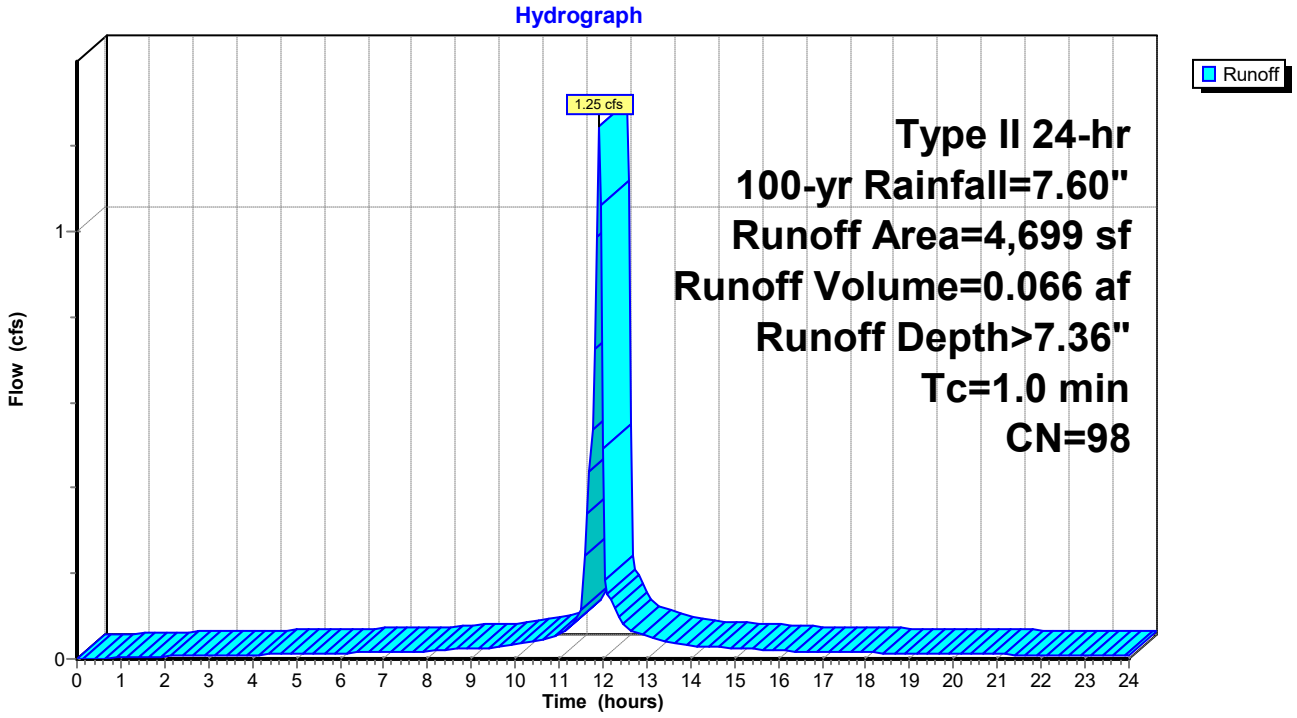
Runoff = 1.25 cfs @ 11.90 hrs, Volume= 0.066 af, Depth> 7.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,699	98	Building Roof
	4,699		100.00% Impervious Area

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

Subcatchment MY-4: 1/4 Retail Roof



Summary for Subcatchment PK-1: Parking

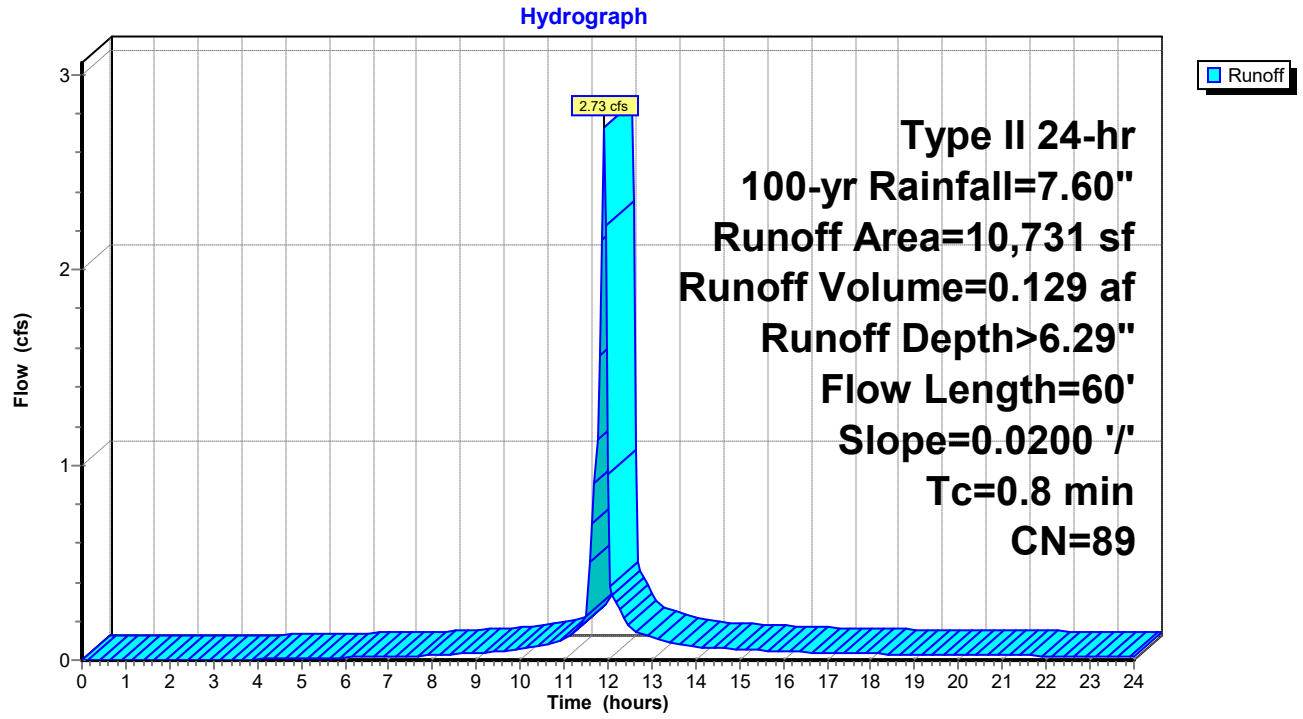
Runoff = 2.73 cfs @ 11.90 hrs, Volume= 0.129 af, Depth> 6.29"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,140	98	Parking Area
	2,703	61	>75% Grass cover, Good, HSG B
*	3,888	98	Parking Spaces
	10,731	89	Weighted Average
	2,703		25.19% Pervious Area
	8,028		74.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-1: Parking



Summary for Subcatchment PK-10: Parking

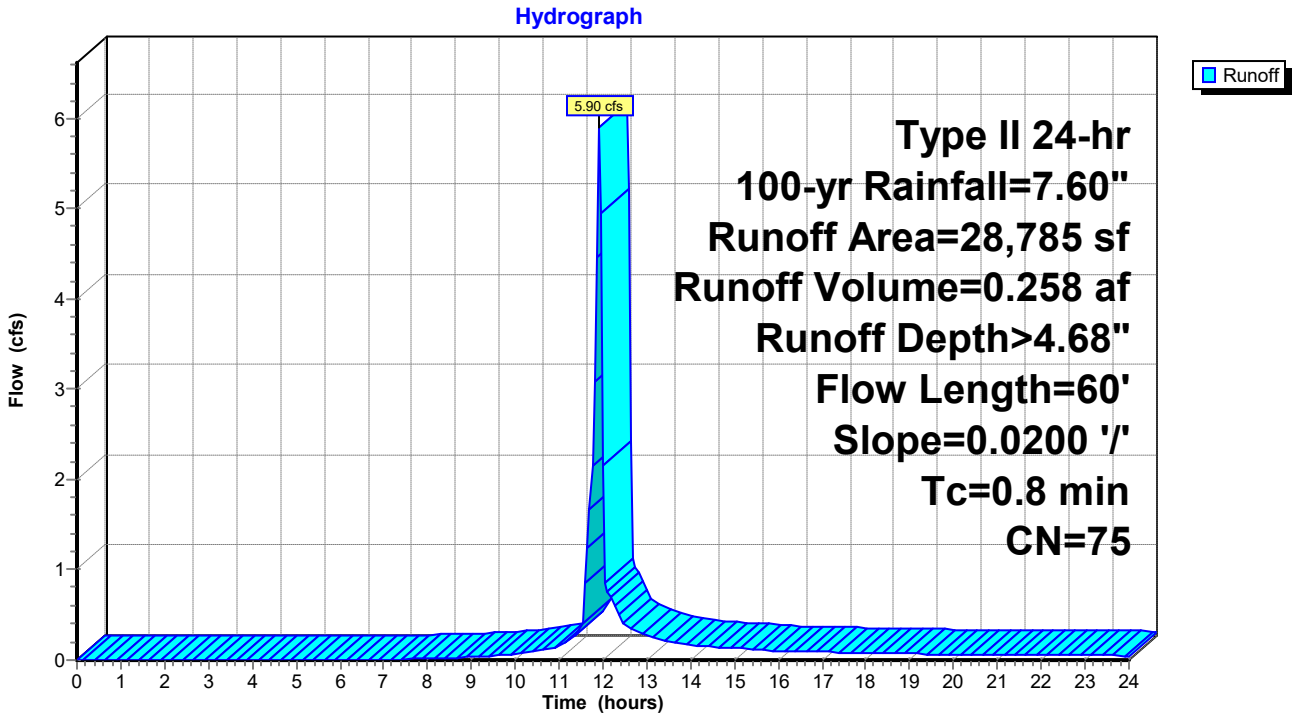
Runoff = 5.90 cfs @ 11.91 hrs, Volume= 0.258 af, Depth> 4.68"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	6,254	98	Asphalt
	18,135	61	>75% Grass cover, Good, HSG B
*	4,396	98	Parking Spaces
	28,785	75	Weighted Average
	18,135		63.00% Pervious Area
	10,650		37.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-10: Parking



Summary for Subcatchment PK-2: Parking

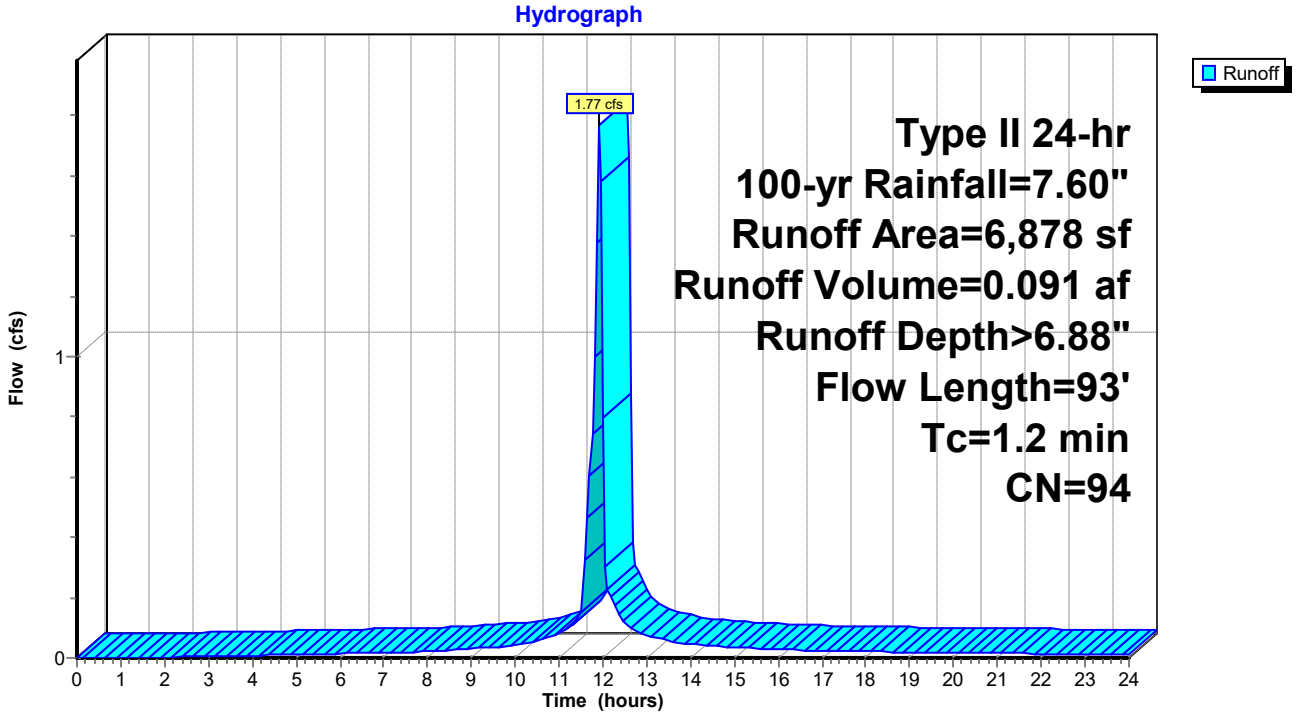
Runoff = 1.77 cfs @ 11.91 hrs, Volume= 0.091 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,272	98	Parking Area
	801	61	>75% Grass cover, Good, HSG B
*	1,805	98	Parking Spaces
	6,878	94	Weighted Average
	801		11.65% Pervious Area
	6,077		88.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking lot** Smooth surfaces n= 0.011 P2= 3.40"
0.4	33	0.0050	1.44		**Shallow Concentrated Flow, Curb** Paved Kv= 20.3 fps
1.2	93	Total			

Subcatchment PK-2: Parking



Summary for Subcatchment PK-3: Parking

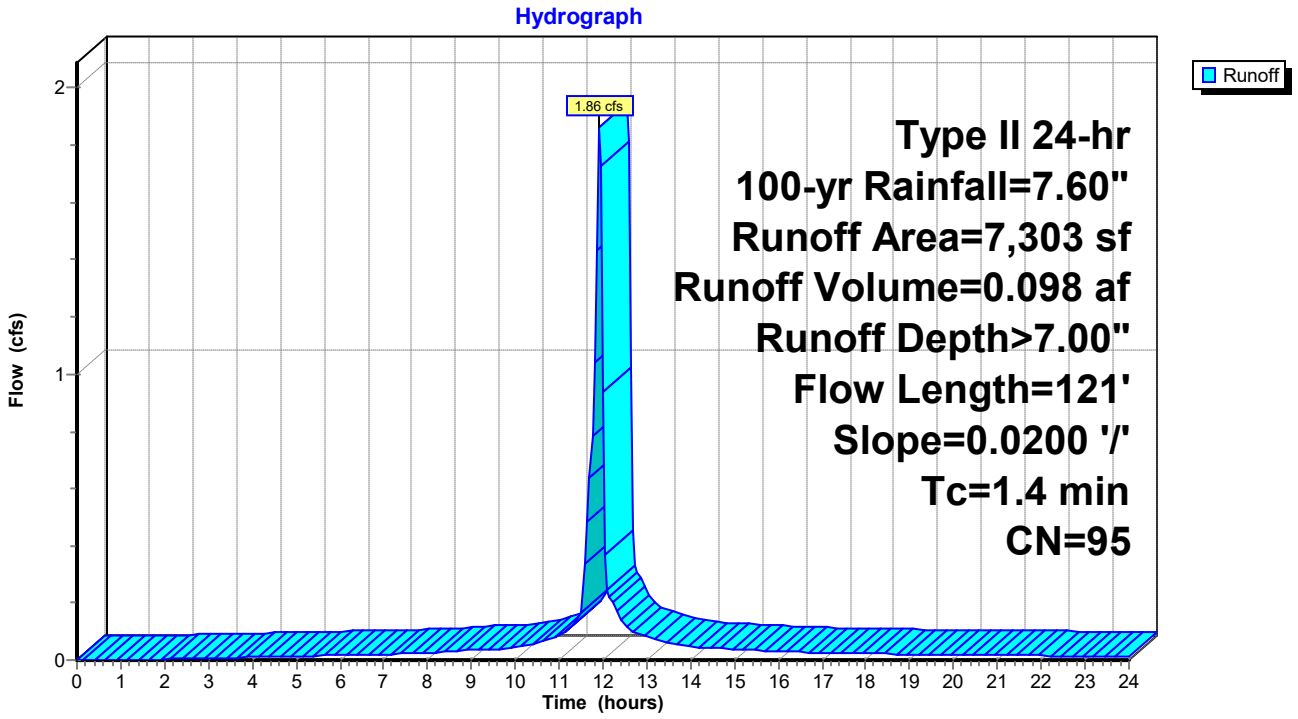
Runoff = 1.86 cfs @ 11.91 hrs, Volume= 0.098 af, Depth> 7.00"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,424	98	Parking Area
	559	61	>75% Grass cover, Good, HSG B
*	2,320	98	Parking Spaces
	7,303	95	Weighted Average
	559		7.65% Pervious Area
	6,744		92.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	121	0.0200	1.47		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-3: Parking



Summary for Subcatchment PK-4: Parking

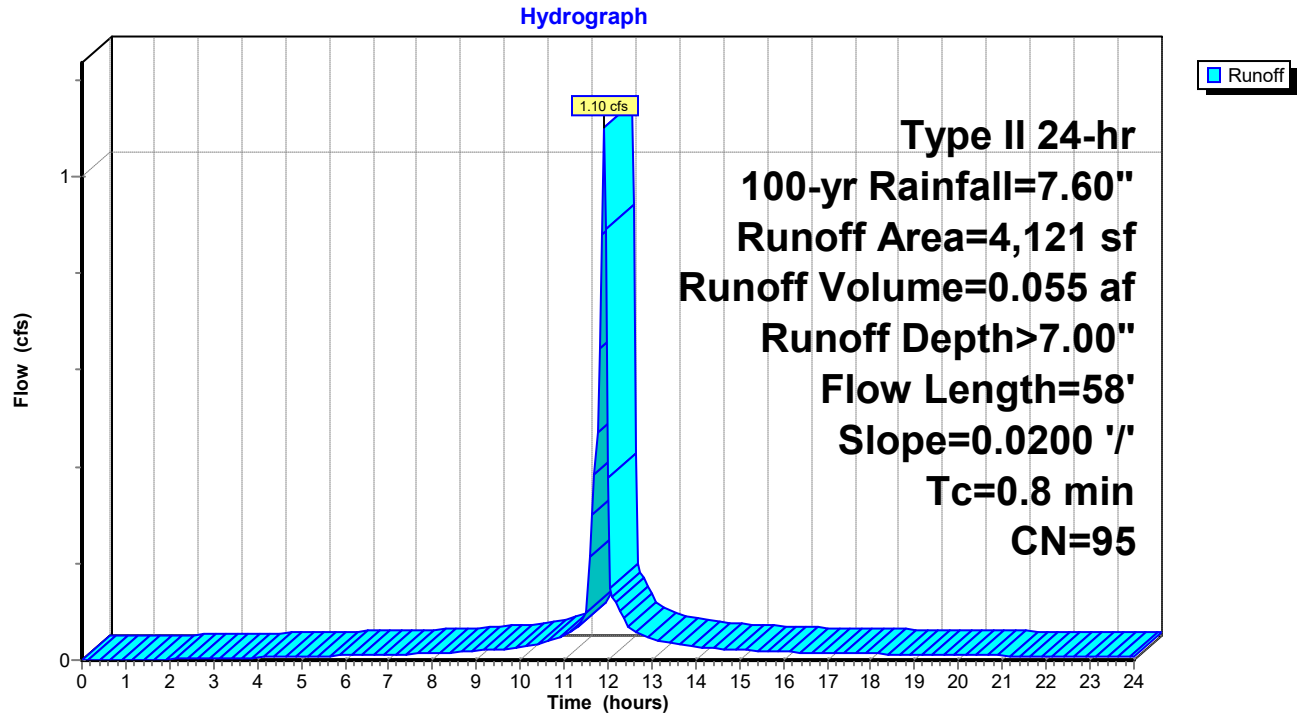
Runoff = 1.10 cfs @ 11.90 hrs, Volume= 0.055 af, Depth> 7.00"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	2,405	98	Asphalt
	337	61	>75% Grass cover, Good, HSG B
*	1,379	98	Parking Spaces
	4,121	95	Weighted Average
	337		8.18% Pervious Area
	3,784		91.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	58	0.0200	1.27		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-4: Parking



Summary for Subcatchment PK-5: Parking

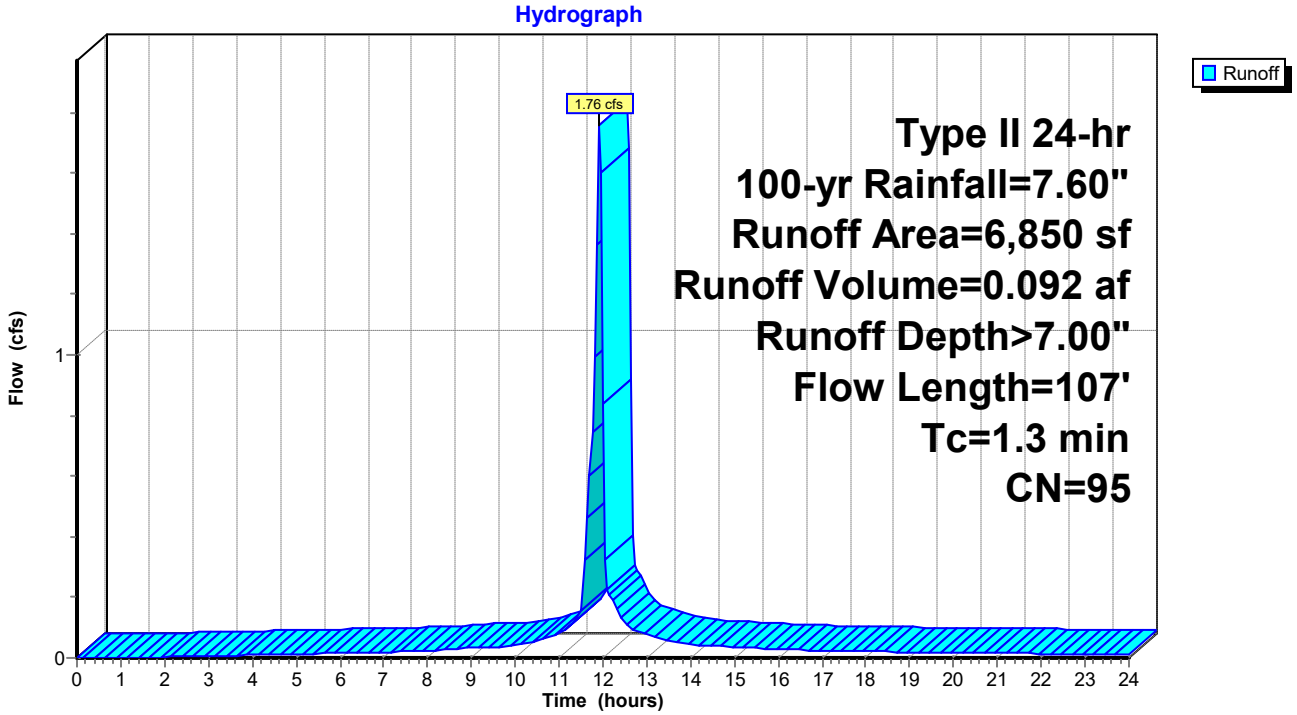
Runoff = 1.76 cfs @ 11.91 hrs, Volume= 0.092 af, Depth> 7.00"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,714	98	Asphalt
	516	61	>75% Grass cover, Good, HSG B
*	1,620	98	Parking Spaces
	6,850	95	Weighted Average
	516		7.53% Pervious Area
	6,334		92.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	1.01		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"
1.0	89	0.0050	1.44		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
1.3	107	Total			

Subcatchment PK-5: Parking



Summary for Subcatchment PK-6: Parking

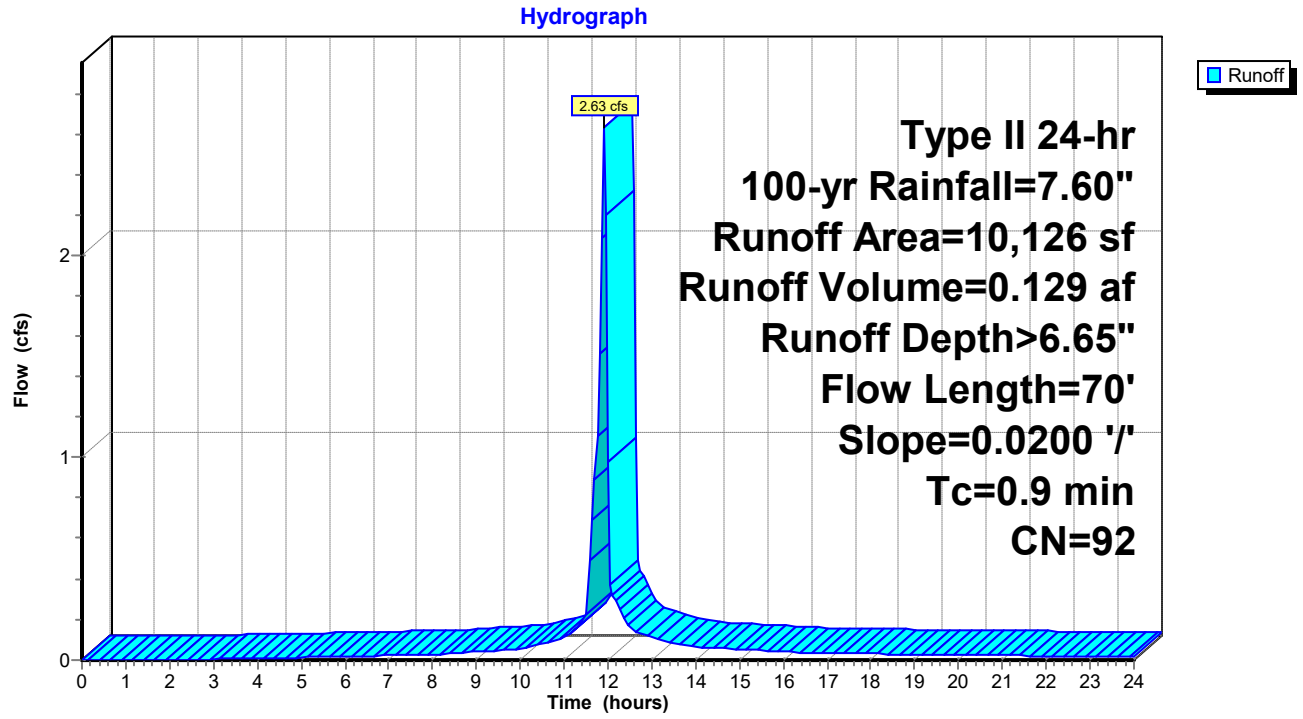
Runoff = 2.63 cfs @ 11.90 hrs, Volume= 0.129 af, Depth> 6.65"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	6,357	98	Asphalt
	1,534	61	>75% Grass cover, Good, HSG B
*	2,235	98	Parking Spaces
	10,126	92	Weighted Average
	1,534		15.15% Pervious Area
	8,592		84.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	70	0.0200	1.32		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-6: Parking



Summary for Subcatchment PK-7: Parking

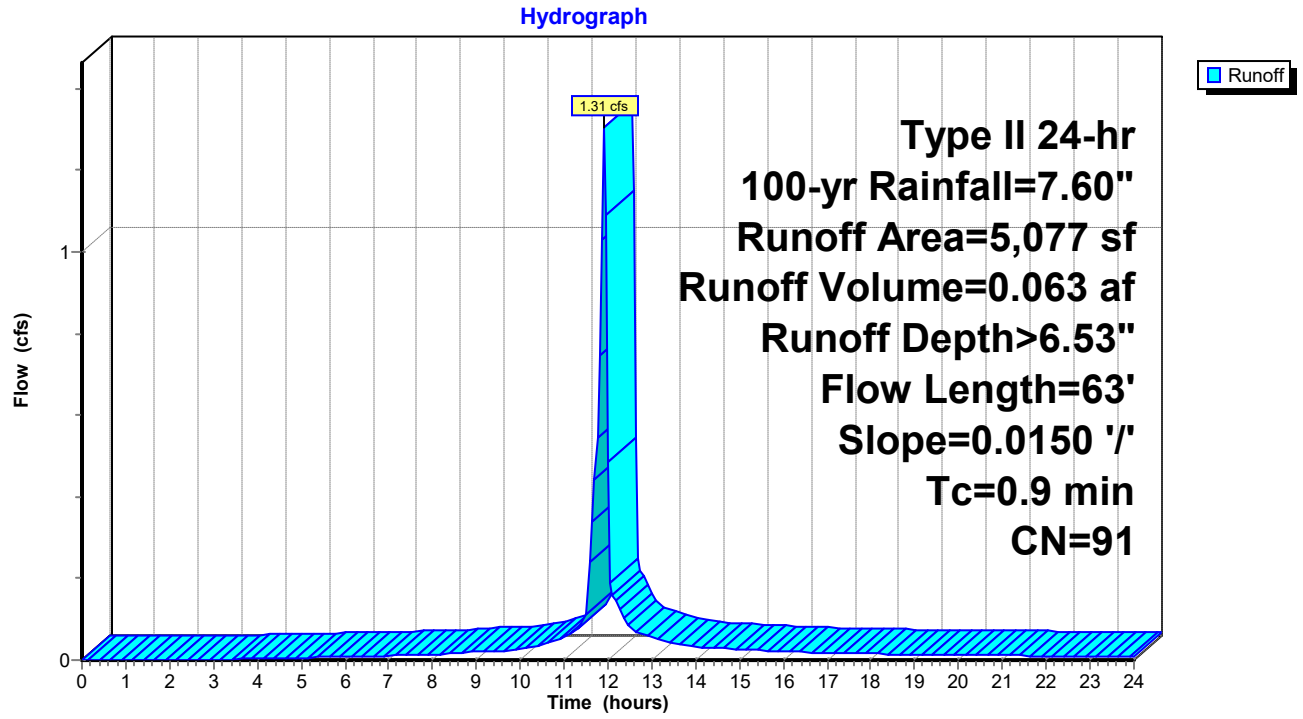
Runoff = 1.31 cfs @ 11.90 hrs, Volume= 0.063 af, Depth> 6.53"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	3,258	98	Asphalt
	896	61	>75% Grass cover, Good, HSG B
*	923	98	Parking Spaces
	5,077	91	Weighted Average
	896		17.65% Pervious Area
	4,181		82.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	63	0.0150	1.15		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-7: Parking



Summary for Subcatchment PK-8: Parking

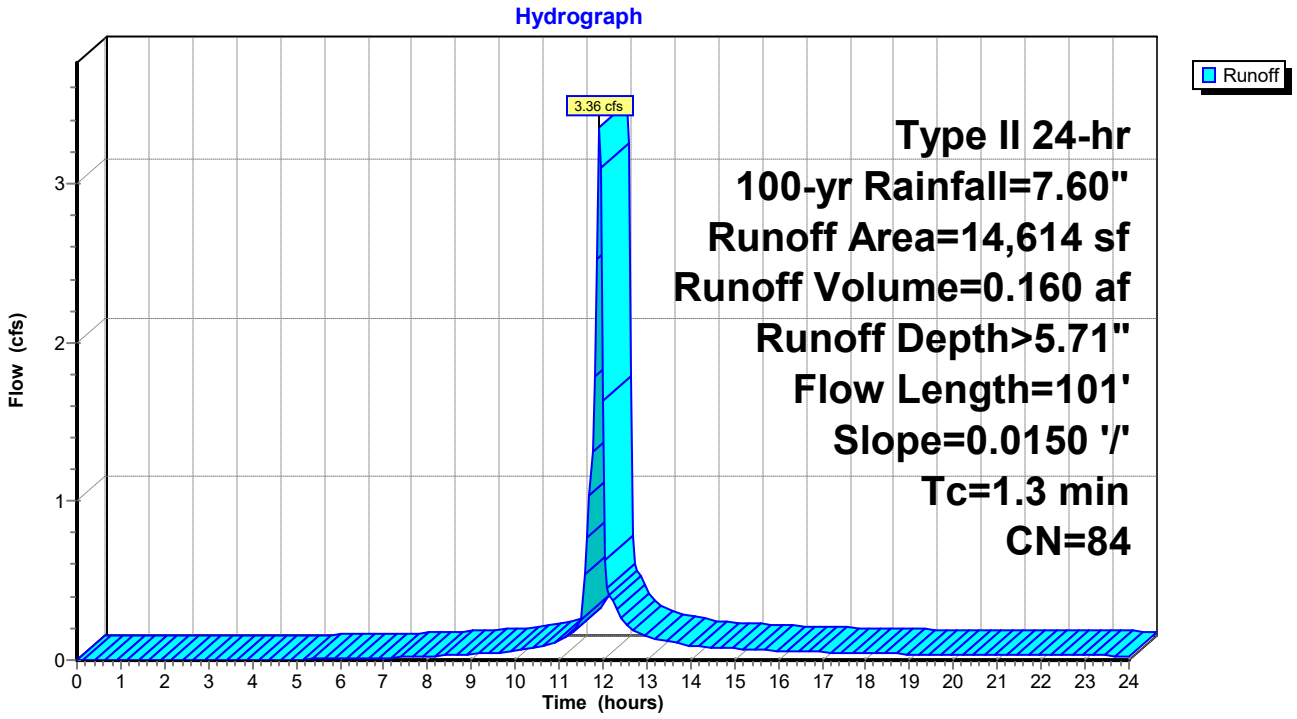
Runoff = 3.36 cfs @ 11.91 hrs, Volume= 0.160 af, Depth> 5.71"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	6,414	98	Asphalt Drive Aisles & Sidewalk
*	2,660	98	Parking Spaces
	5,540	61	>75% Grass cover, Good, HSG B
	14,614	84	Weighted Average
	5,540		37.91% Pervious Area
	9,074		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	101	0.0150	1.27		**Sheet Flow, Asphalt** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-8: Parking



Summary for Subcatchment PK-9: Parking

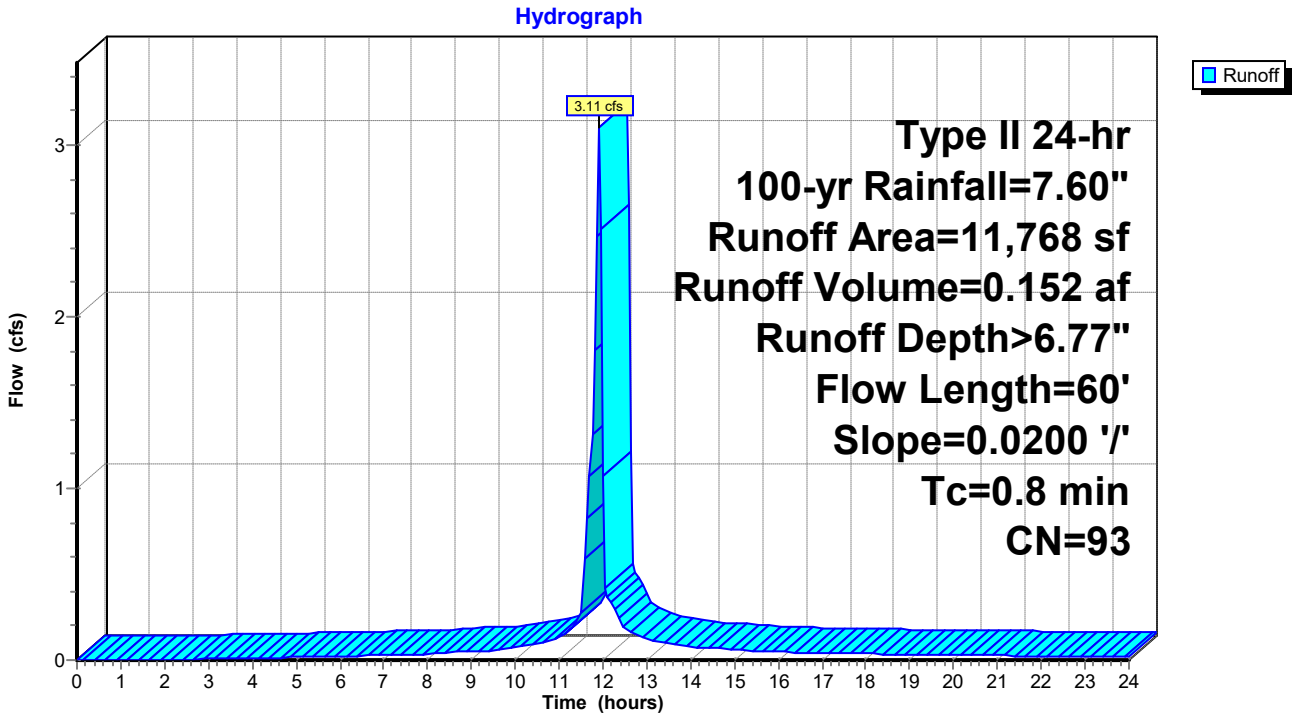
Runoff = 3.11 cfs @ 11.90 hrs, Volume= 0.152 af, Depth> 6.77"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	7,036	98	Asphalt
	1,729	61	>75% Grass cover, Good, HSG B
*	3,003	98	Parking Spaces
	11,768	93	Weighted Average
	1,729		14.69% Pervious Area
	10,039		85.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	60	0.0200	1.28		**Sheet Flow, Parking Lot** Smooth surfaces n= 0.011 P2= 3.40"

Subcatchment PK-9: Parking



Summary for Subcatchment RD: Onsite Residue

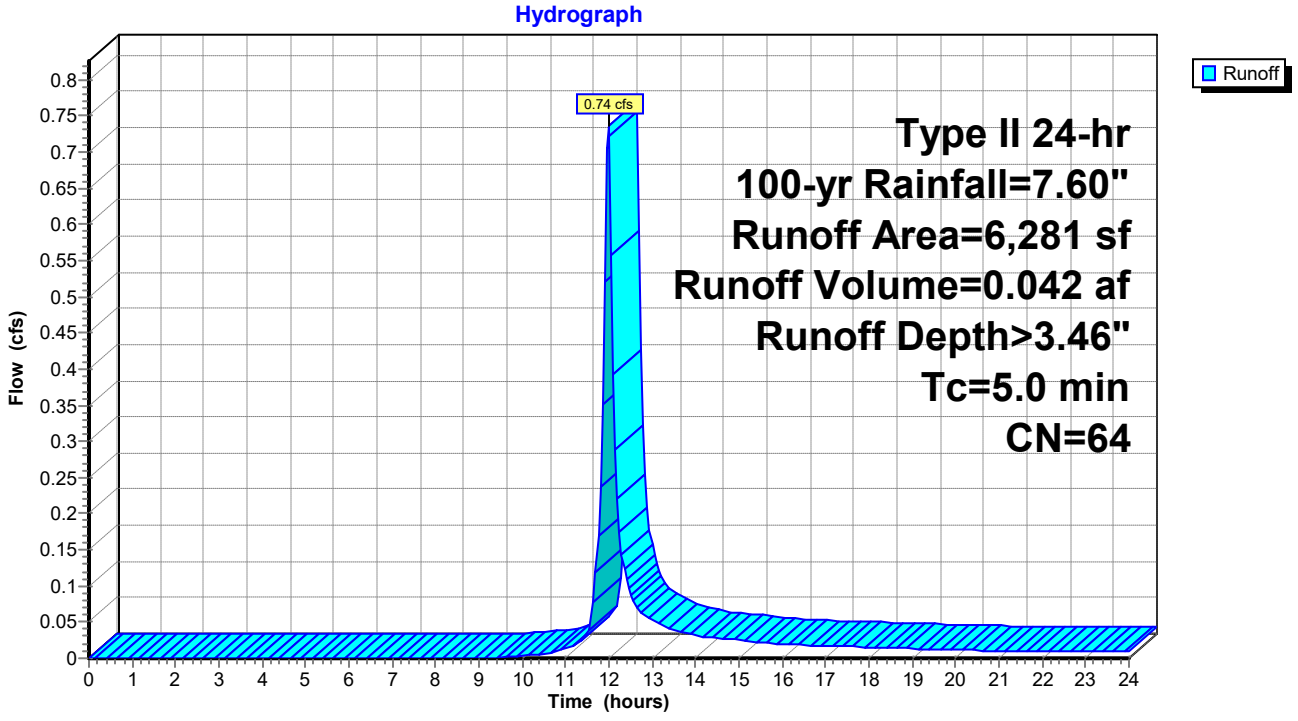
Runoff = 0.74 cfs @ 11.98 hrs, Volume= 0.042 af, Depth> 3.46"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	5,797	61	>75% Grass cover, Good, HSG B
*	484	98	Sidewalk & Portion Entrance
	6,281	64	Weighted Average
	5,797		92.29% Pervious Area
	484		7.71% Impervious Area

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

Subcatchment RD: Onsite Residue



Summary for Subcatchment SHA-1: Onsite SHA

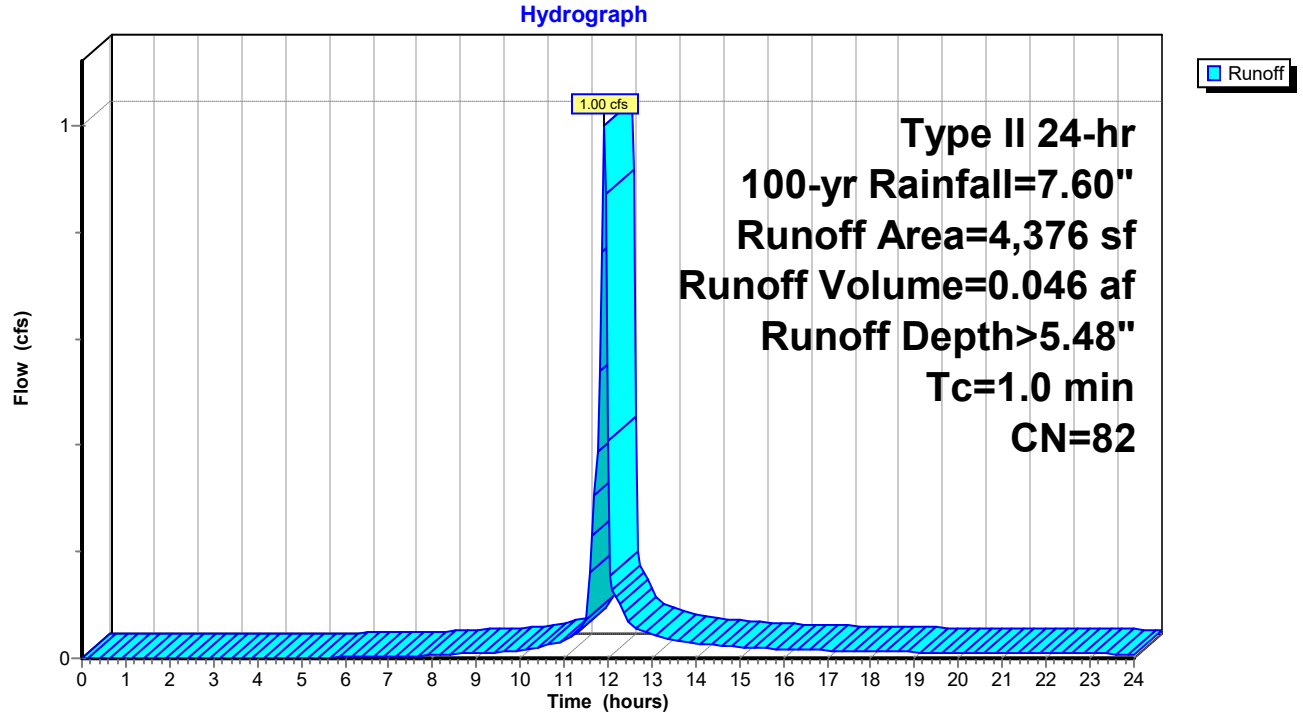
Runoff = 1.00 cfs @ 11.91 hrs, Volume= 0.046 af, Depth> 5.48"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	1,908	61	>75% Grass cover, Good, HSG B
*	2,468	98	Pavement & Sidewalk
	4,376	82	Weighted Average
	1,908		43.60% Pervious Area
	2,468		56.40% Impervious Area

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

Subcatchment SHA-1: Onsite SHA



Summary for Subcatchment SHA-2: Area of SGW #1 & Onsite SHA

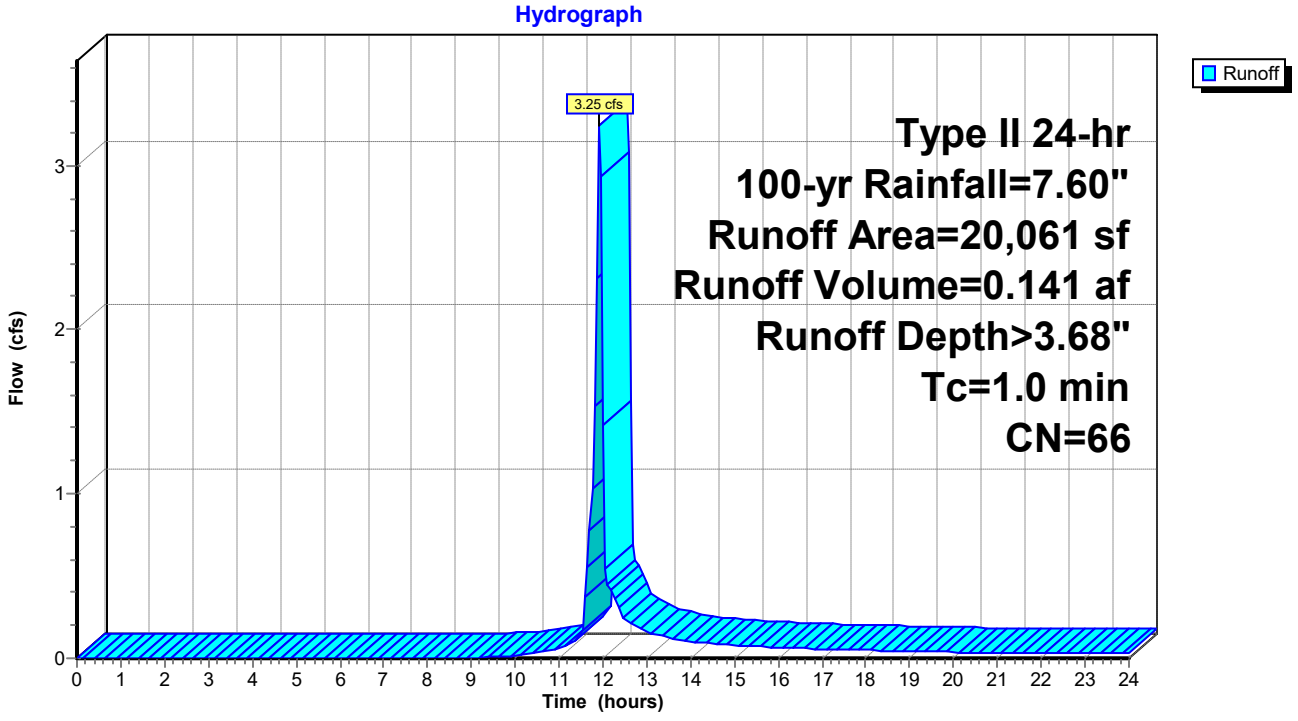
Runoff = 3.25 cfs @ 11.91 hrs, Volume= 0.141 af, Depth> 3.68"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	17,507	61	>75% Grass cover, Good, HSG B
*	2,554	98	SHA Entrance Pavement
	20,061	66	Weighted Average
	17,507		87.27% Pervious Area
	2,554		12.73% Impervious Area

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

Subcatchment SHA-2: Area of SGW #1 & Onsite SHA



Summary for Subcatchment SHA-3: SHA Improvements (North)

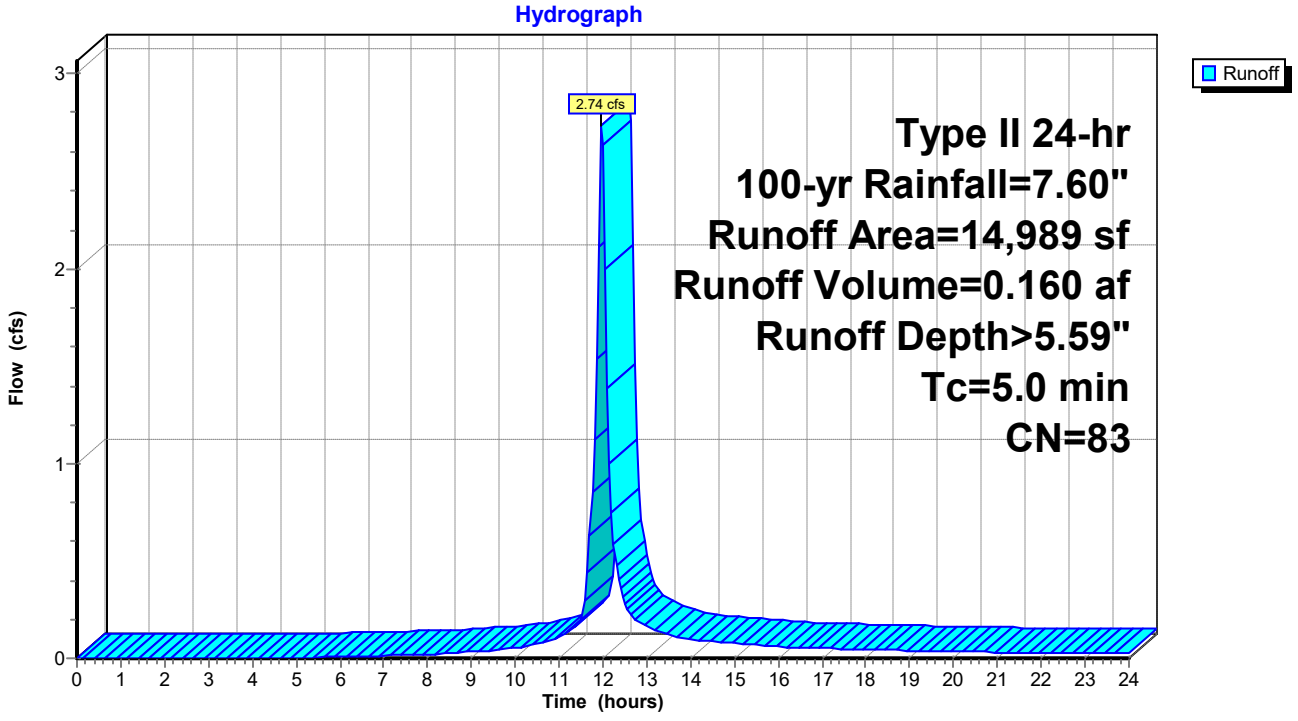
Runoff = 2.74 cfs @ 11.97 hrs, Volume= 0.160 af, Depth> 5.59"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	8,750	98	SHA Pavement & Entrance
	6,239	61	>75% Grass cover, Good, HSG B
	14,989	83	Weighted Average
	6,239		41.62% Pervious Area
	8,750		58.38% Impervious Area

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

Subcatchment SHA-3: SHA Improvements (North)



Summary for Subcatchment SHA-4: SHA Improvements (South)

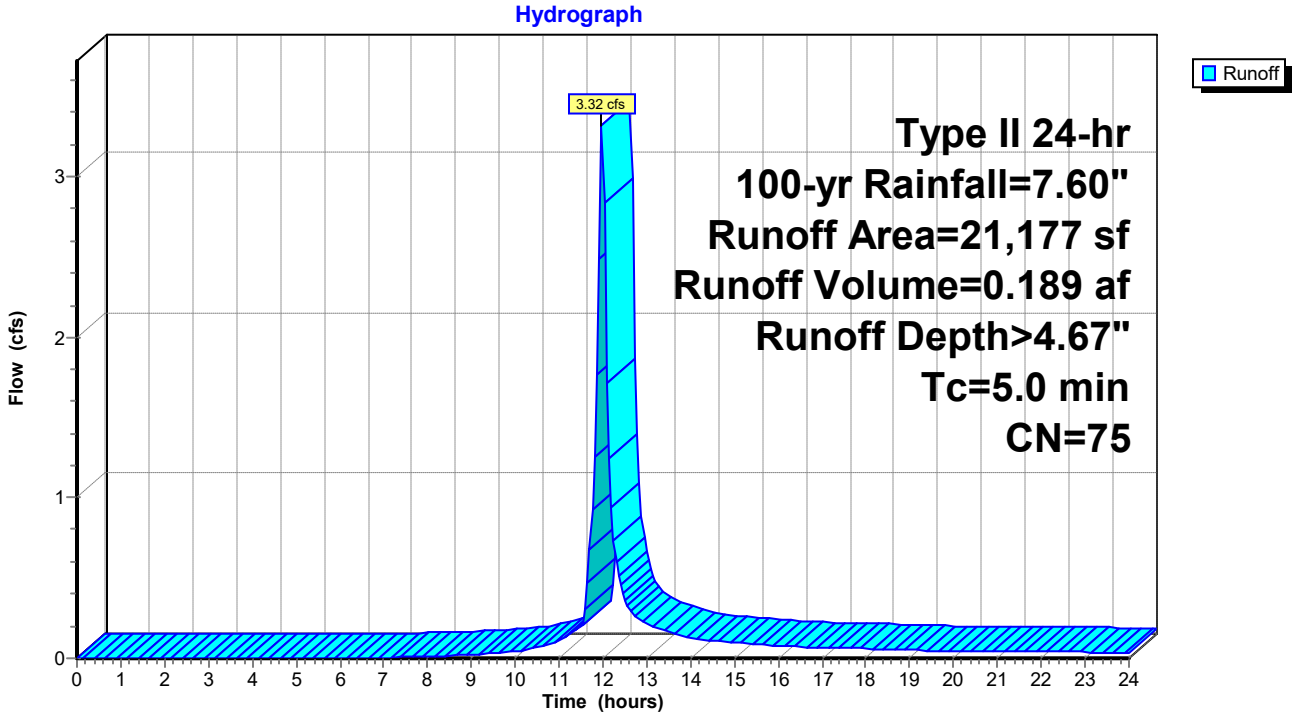
Runoff = 3.32 cfs @ 11.97 hrs, Volume= 0.189 af, Depth> 4.67"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	8,053	98	US 50 & SHA Entrance
	13,124	61	>75% Grass cover, Good, HSG B
	21,177	75	Weighted Average
	13,124		61.97% Pervious Area
	8,053		38.03% Impervious Area

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

Subcatchment SHA-4: SHA Improvements (South)



Summary for Subcatchment VZ-A: Verizon (Offsite)

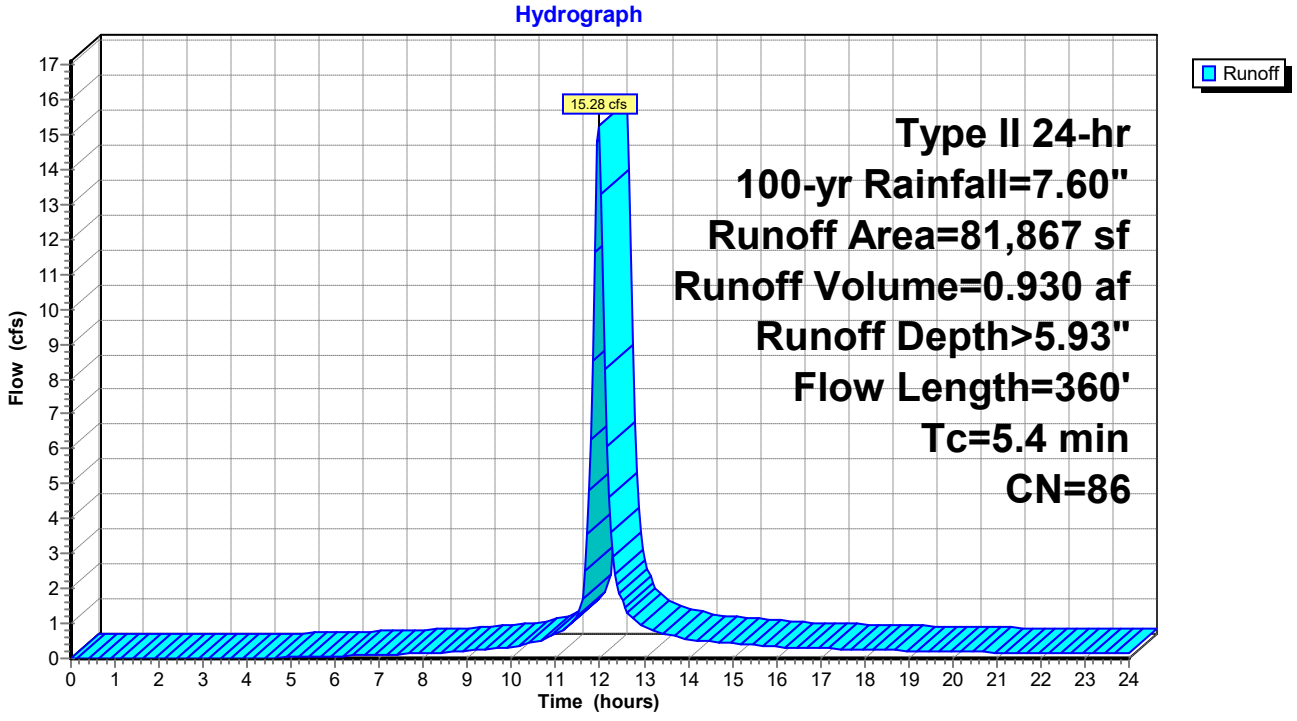
Runoff = 15.28 cfs @ 11.98 hrs, Volume= 0.930 af, Depth> 5.93"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	56,382	98	Verizon Storage Yard
	25,485	61	>75% Grass cover, Good, HSG B
	81,867	86	Weighted Average
	25,485		31.13% Pervious Area
	56,382		68.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	80	0.0100	1.03		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"
4.1	280	0.0050	1.14		**Shallow Concentrated Flow, Shallow Grass Channel** Unpaved Kv= 16.1 fps
5.4	360	Total			

Subcatchment VZ-A: Verizon (Offsite)



Summary for Subcatchment VZ-AA: Verizon (Offsite)

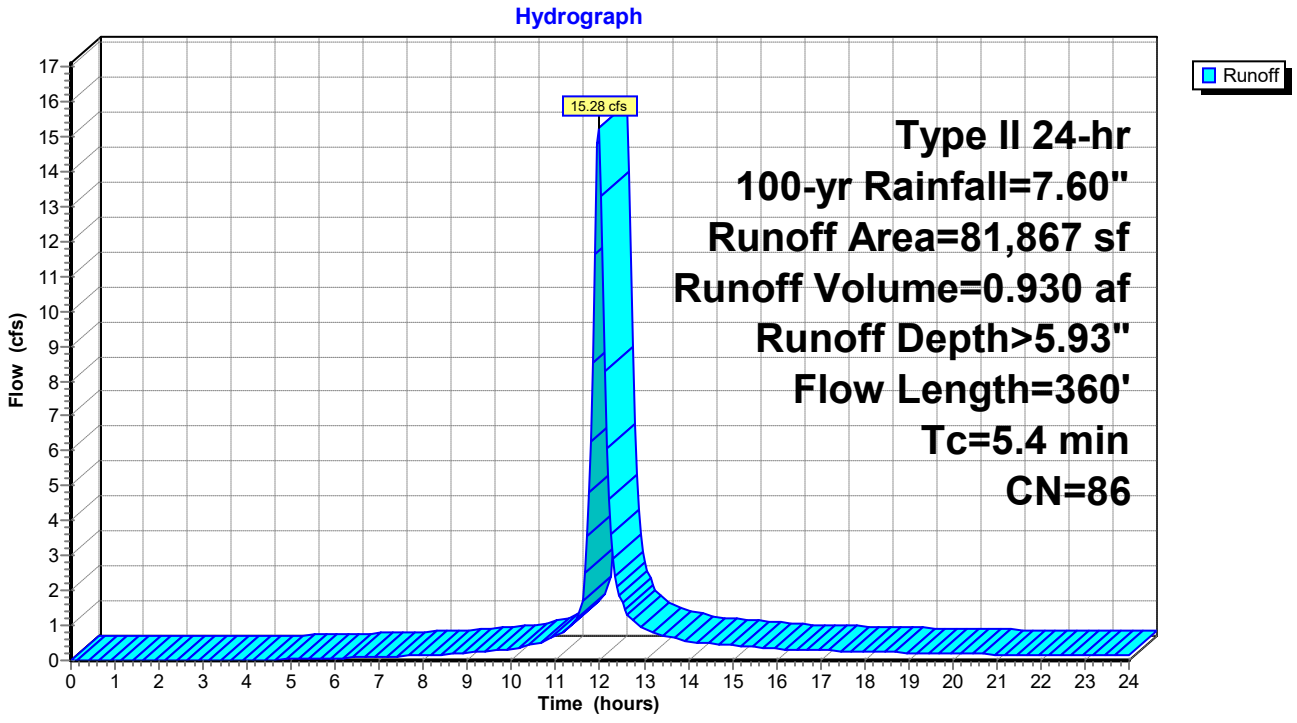
Runoff = 15.28 cfs @ 11.98 hrs, Volume= 0.930 af, Depth> 5.93"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	56,382	98	Verizon Storage Yard
	25,485	61	>75% Grass cover, Good, HSG B
	81,867	86	Weighted Average
	25,485		31.13% Pervious Area
	56,382		68.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	80	0.0100	1.03		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.40"
4.1	280	0.0050	1.14		**Shallow Concentrated Flow, Shallow Grass Channel** Unpaved Kv= 16.1 fps
5.4	360	Total			

Subcatchment VZ-AA: Verizon (Offsite)



Summary for Subcatchment VZ-B: Verizon & US 50/Idlewild Intersection

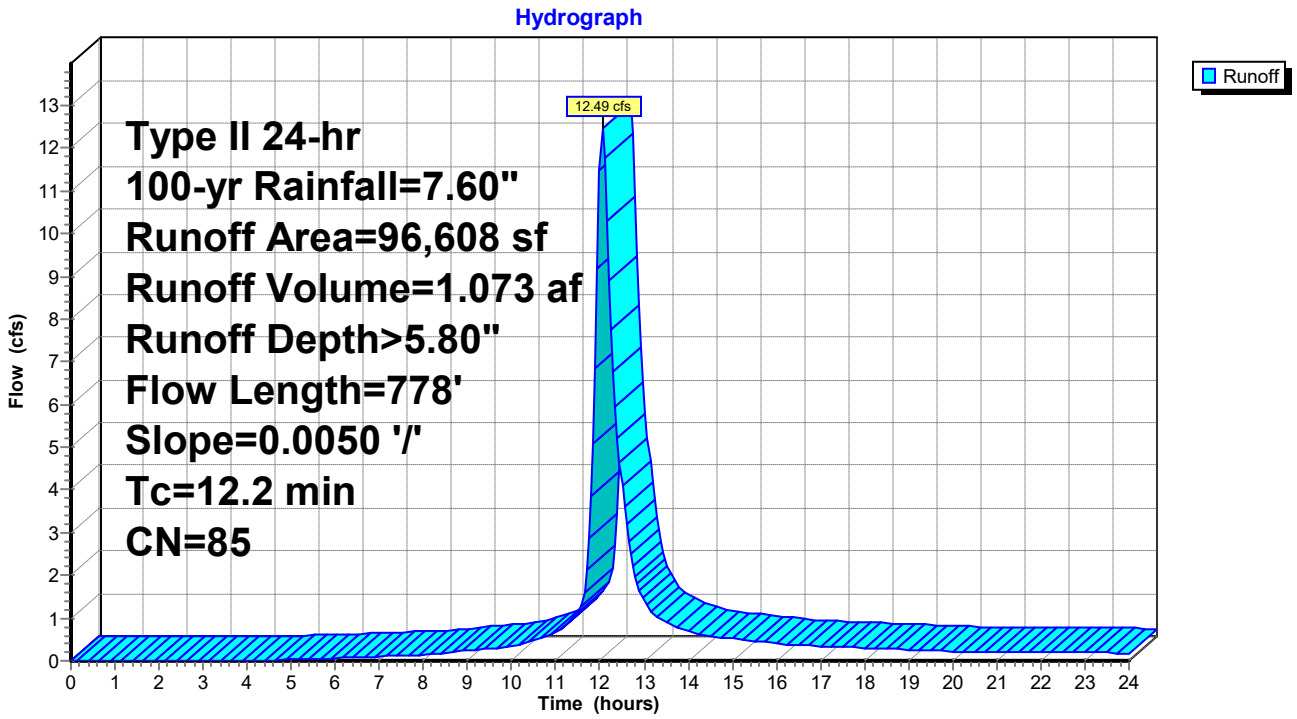
Runoff = 12.49 cfs @ 12.05 hrs, Volume= 1.073 af, Depth> 5.80"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	35,081	61	>75% Grass cover, Good, HSG B
*	61,527	98	Roads & Verizon Yard
	96,608	85	Weighted Average
	35,081		36.31% Pervious Area
	61,527		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	778	0.0050	1.06		**Shallow Concentrated Flow, Road Adjacent Swale** Grassed Waterway Kv= 15.0 fps

Subcatchment VZ-B: Verizon & US 50/Idlewild Intersection



Summary for Subcatchment VZ-BB: Verizon & US 50/Idlewild Intersection

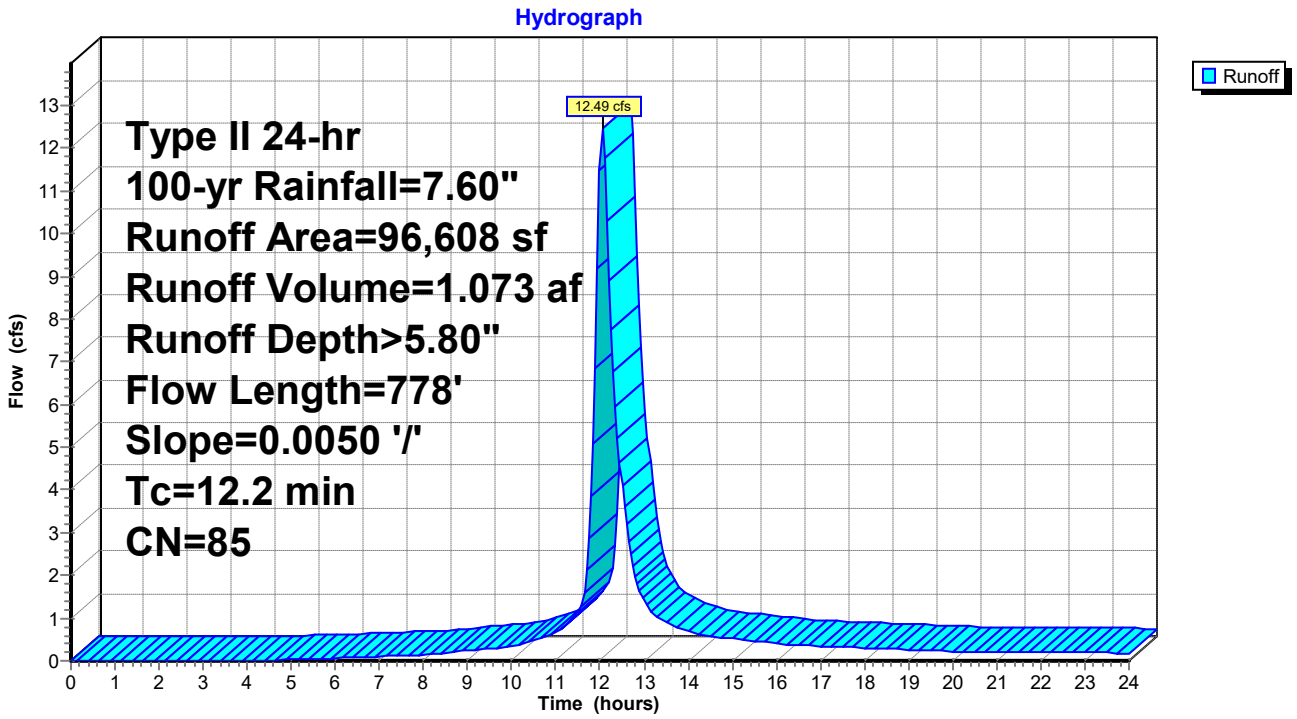
Runoff = 12.49 cfs @ 12.05 hrs, Volume= 1.073 af, Depth> 5.80"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	35,081	61	>75% Grass cover, Good, HSG B
*	61,527	98	Roads & Verizon Yard
	96,608	85	Weighted Average
	35,081		36.31% Pervious Area
	61,527		63.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	778	0.0050	1.06		**Shallow Concentrated Flow, Road Adjacent Swale** Grassed Waterway Kv= 15.0 fps

Subcatchment VZ-BB: Verizon & US 50/Idlewild Intersection



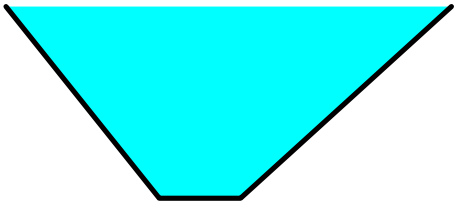
Summary for Reach 10R: Ex. Lotside Swale

Inflow Area = 6.053 ac, 60.33% Impervious, Inflow Depth > 5.10" for 100-yr event
Inflow = 25.12 cfs @ 12.03 hrs, Volume= 2.573 af
Outflow = 24.16 cfs @ 12.06 hrs, Volume= 2.567 af, Atten= 4%, Lag= 1.9 min

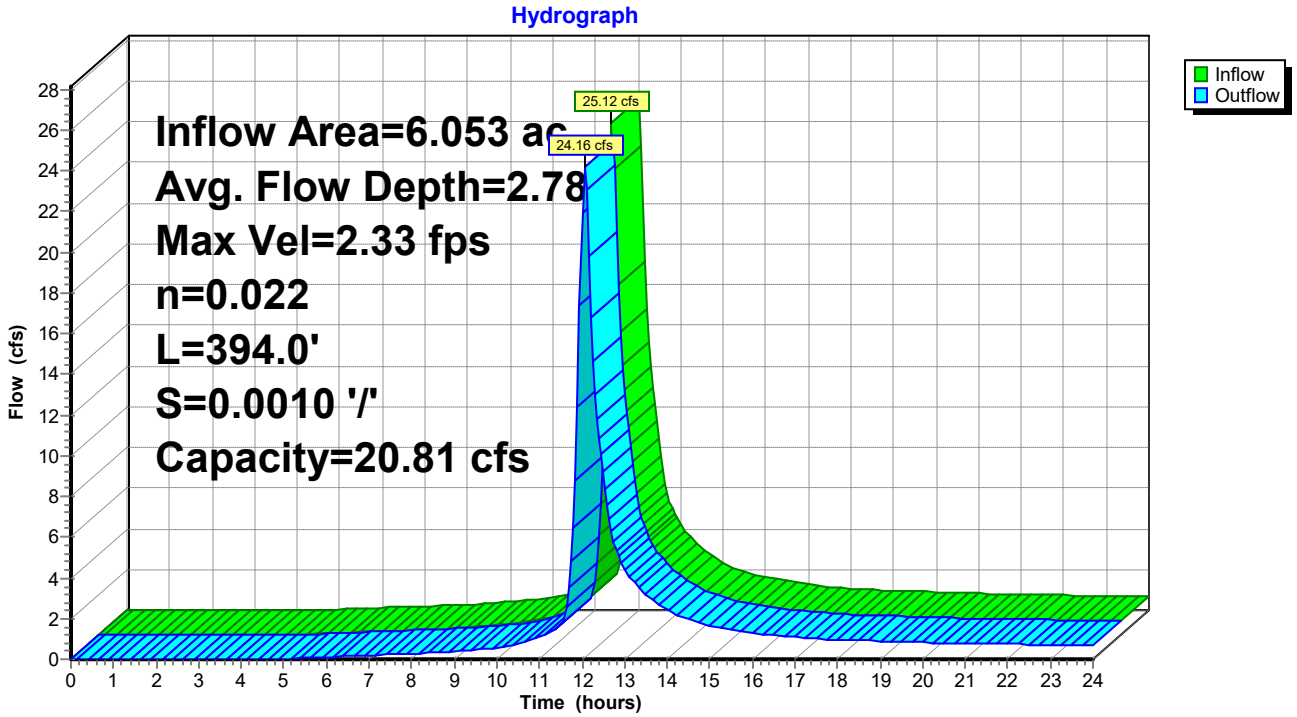
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.33 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.98 fps, Avg. Travel Time= 6.7 min

Peak Storage= 4,077 cf @ 12.06 hrs
Average Depth at Peak Storage= 2.78'
Bank-Full Depth= 2.59' Flow Area= 9.2 sf, Capacity= 20.81 cfs

1.10' x 2.59' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 0.8 1.1 '/' Top Width= 6.02'
Length= 394.0' Slope= 0.0010 '/'
Inlet Invert= 42.00', Outlet Invert= 41.62'



Reach 10R: Ex. Lotside Swale



Stage-Area-Storage for Reach 10R: Ex. Lotside Swale

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
42.00	0.0	0
42.05	0.1	23
42.10	0.1	47
42.15	0.2	73
42.20	0.3	102
42.25	0.3	132
42.30	0.4	164
42.35	0.5	198
42.40	0.6	233
42.45	0.7	271
42.50	0.8	310
42.55	0.9	352
42.60	1.0	395
42.65	1.1	440
42.70	1.2	487
42.75	1.4	536
42.80	1.5	586
42.85	1.6	639
42.90	1.8	693
42.95	1.9	750
43.00	2.1	808
43.05	2.2	868
43.10	2.4	930
43.15	2.5	993
43.20	2.7	1,059
43.25	2.9	1,127
43.30	3.0	1,196
43.35	3.2	1,267
43.40	3.4	1,340
43.45	3.6	1,415
43.50	3.8	1,492
43.55	4.0	1,571
43.60	4.2	1,652
43.65	4.4	1,734
43.70	4.6	1,819
43.75	4.8	1,905
43.80	5.1	1,993
43.85	5.3	2,083
43.90	5.5	2,175
43.95	5.8	2,268
44.00	6.0	2,364
44.05	6.2	2,461
44.10	6.5	2,561
44.15	6.8	2,662
44.20	7.0	2,765
44.25	7.3	2,870
44.30	7.6	2,977
44.35	7.8	3,086
44.40	8.1	3,196
44.45	8.4	3,309
44.50	8.7	3,423
44.55	**9.0**	**3,539**

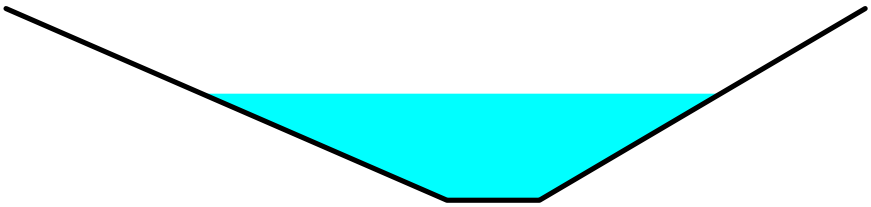
Summary for Reach SP1: Ex Swale Adj US 50 (North)

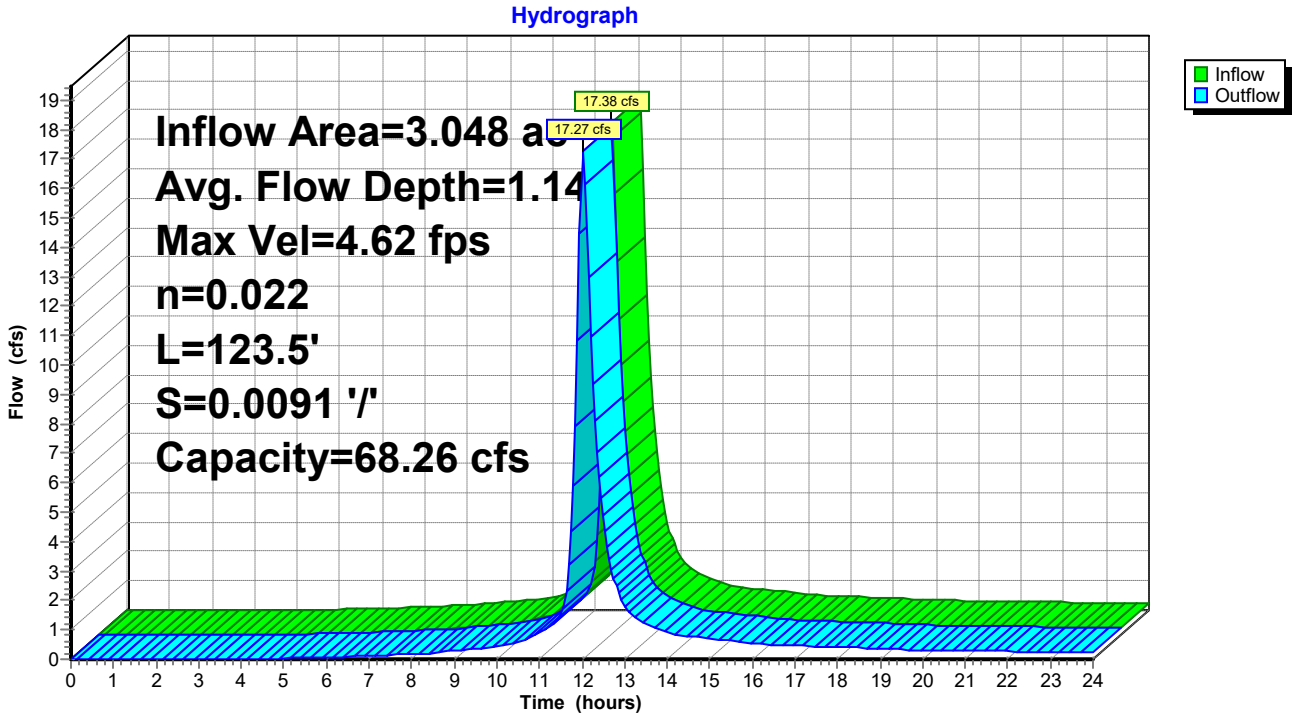
Inflow Area = 3.048 ac, 58.99% Impervious, Inflow Depth > 5.60" for 100-yr event
Inflow = 17.38 cfs @ 12.02 hrs, Volume= 1.422 af
Outflow = 17.27 cfs @ 12.03 hrs, Volume= 1.422 af, Atten= 1%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.62 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.69 fps, Avg. Travel Time= 1.2 min

Peak Storage= 460 cf @ 12.03 hrs
Average Depth at Peak Storage= 1.14'
Bank-Full Depth= 2.05' Flow Area= 10.4 sf, Capacity= 68.26 cfs

0.99' x 2.05' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.3 1.7 '/' Top Width= 9.19'
Length= 123.5' Slope= 0.0091 '/'
Inlet Invert= 38.72', Outlet Invert= 37.60'





Stage-Area-Storage for Reach SP1: Ex Swale Adj US 50 (North)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
38.72	0.0	0
38.77	0.1	7
38.82	0.1	15
38.87	0.2	24
38.92	0.3	34
38.97	0.4	46
39.02	0.5	59
39.07	0.6	73
39.12	0.7	88
39.17	0.9	105
39.22	1.0	123
39.27	1.1	142
39.32	1.3	162
39.37	1.5	184
39.42	1.7	207
39.47	1.9	231
39.52	2.1	256
39.57	2.3	282
39.62	2.5	310
39.67	2.7	339
39.72	3.0	369
39.77	3.2	401
39.82	3.5	433
39.87	3.8	467
39.92	4.1	502
39.97	4.4	539
40.02	4.7	576
40.07	5.0	615
40.12	5.3	655
40.17	5.6	697
40.22	6.0	739
40.27	6.3	783
40.32	6.7	828
40.37	7.1	874
40.42	7.5	922
40.47	7.9	970
40.52	8.3	1,020
40.57	8.7	1,072
40.62	9.1	1,124
40.67	9.5	1,178
40.72	10.0	1,233
40.77	**10.4**	**1,289**

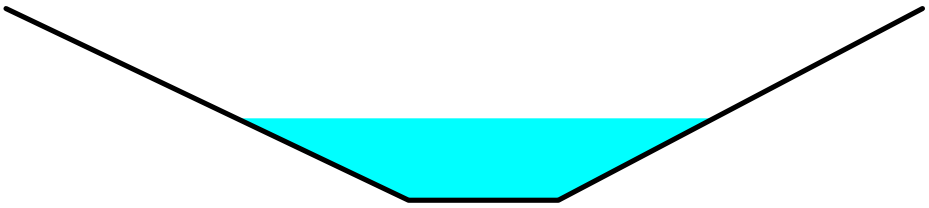
Summary for Reach SP2: Ex. Swale Adj US 50 (South)

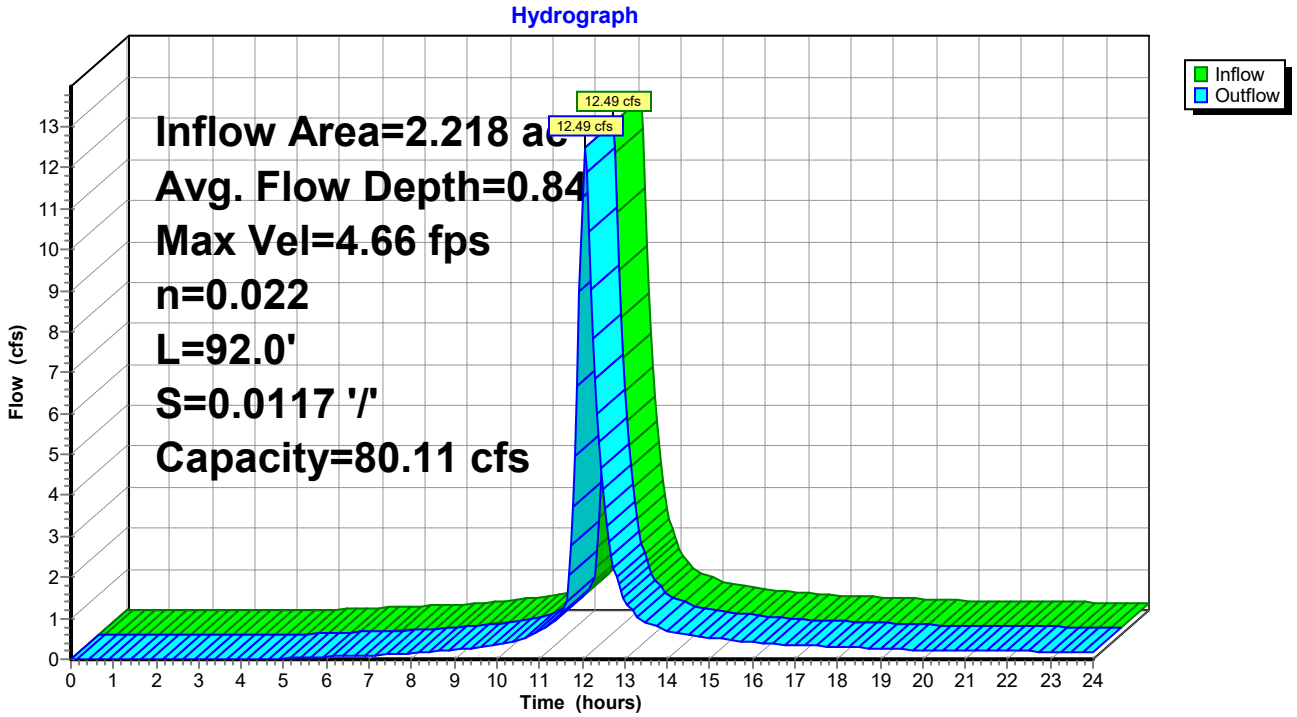
Inflow Area = 2.218 ac, 63.69% Impervious, Inflow Depth > 5.80" for 100-yr event
Inflow = 12.49 cfs @ 12.05 hrs, Volume= 1.073 af
Outflow = 12.49 cfs @ 12.06 hrs, Volume= 1.072 af, Atten= 0%, Lag= 0.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.66 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 1.0 min

Peak Storage= 247 cf @ 12.06 hrs
Average Depth at Peak Storage= 0.84'
Bank-Full Depth= 1.96' Flow Area= 10.7 sf, Capacity= 80.11 cfs

1.53' x 1.96' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.1 1.9 '/' Top Width= 9.37'
Length= 92.0' Slope= 0.0117 '/'
Inlet Invert= 41.58', Outlet Invert= 40.50'





Stage-Area-Storage for Reach SP2: Ex. Swale Adj US 50 (South)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
41.58	0.0	0	42.60	3.6	335
41.60	0.0	3	42.62	3.8	345
41.62	0.1	6	42.64	3.9	356
41.64	0.1	9	42.66	4.0	367
41.66	0.1	12	42.68	4.1	377
41.68	0.2	16	42.70	4.2	388
41.70	0.2	20	42.72	4.3	400
41.72	0.3	23	42.74	4.5	411
41.74	0.3	27	42.76	4.6	422
41.76	0.3	31	42.78	4.7	434
41.78	0.4	36	42.80	4.8	446
41.80	0.4	40	42.82	5.0	457
41.82	0.5	44	42.84	5.1	469
41.84	0.5	49	42.86	5.2	482
41.86	0.6	54	42.88	5.4	494
41.88	0.6	59	42.90	5.5	506
41.90	0.7	64	42.92	5.6	519
41.92	0.8	69	42.94	5.8	532
41.94	0.8	75	42.96	5.9	545
41.96	0.9	80	42.98	6.1	558
41.98	0.9	86	43.00	6.2	571
42.00	1.0	92	43.02	6.4	584
42.02	1.1	98	43.04	6.5	598
42.04	1.1	104	43.06	6.6	611
42.06	1.2	110	43.08	6.8	625
42.08	1.3	116	43.10	6.9	639
42.10	1.3	123	43.12	7.1	653
42.12	1.4	130	43.14	7.3	667
42.14	1.5	137	43.16	7.4	682
42.16	1.6	144	43.18	7.6	696
42.18	1.6	151	43.20	7.7	711
42.20	1.7	158	43.22	7.9	726
42.22	1.8	165	43.24	8.1	741
42.24	1.9	173	43.26	8.2	756
42.26	2.0	181	43.28	8.4	771
42.28	2.1	189	43.30	8.5	786
42.30	2.1	197	43.32	8.7	802
42.32	2.2	205	43.34	8.9	818
42.34	2.3	213	43.36	9.1	834
42.36	2.4	222	43.38	9.2	850
42.38	2.5	230	43.40	9.4	866
42.40	2.6	239	43.42	9.6	882
42.42	2.7	248	43.44	9.8	898
42.44	2.8	257	43.46	9.9	915
42.46	2.9	266	43.48	10.1	932
42.48	3.0	276	43.50	10.3	949
42.50	3.1	285	43.52	10.5	966
42.52	3.2	295	43.54	**10.7**	**983**
42.54	3.3	305			
42.56	3.4	315			
42.58	3.5	325			

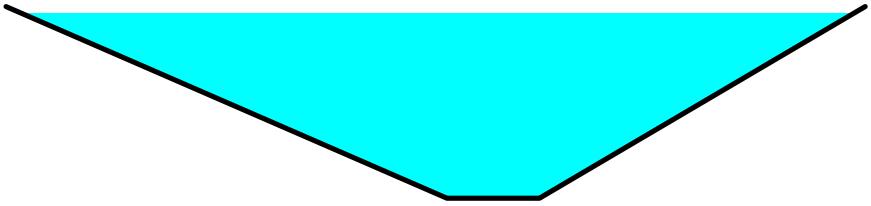
Summary for Reach SW1: Ex Swale Adj US 50 (North)

Inflow Area = 10.662 ac, 56.13% Impervious, Inflow Depth > 5.13" for 100-yr event
Inflow = 39.52 cfs @ 12.07 hrs, Volume= 4.557 af
Outflow = 39.50 cfs @ 12.07 hrs, Volume= 4.556 af, Atten= 0%, Lag= 0.3 min

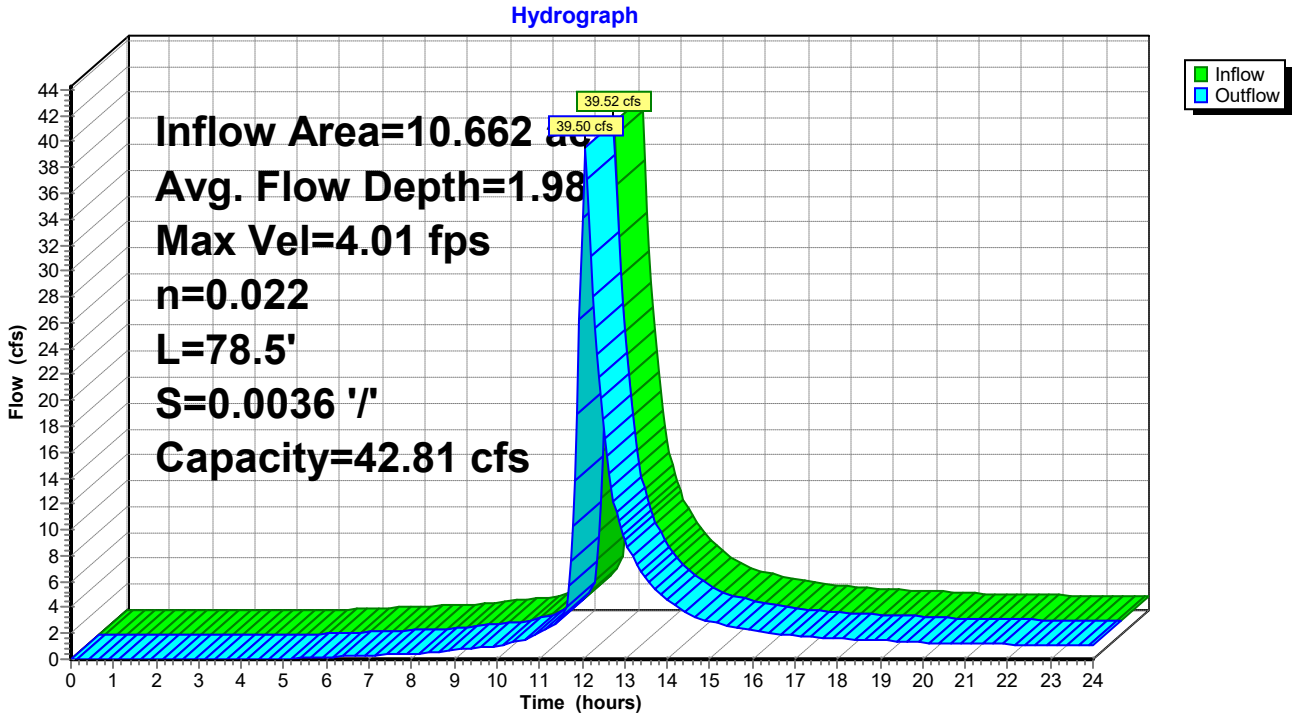
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.01 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.69 fps, Avg. Travel Time= 0.8 min

Peak Storage= 771 cf @ 12.07 hrs
Average Depth at Peak Storage= 1.98'
Bank-Full Depth= 2.05' Flow Area= 10.4 sf, Capacity= 42.81 cfs

0.99' x 2.05' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.3 1.7 '/' Top Width= 9.19'
Length= 78.5' Slope= 0.0036 '/'
Inlet Invert= 38.72', Outlet Invert= 38.44'



Reach SW1: Ex Swale Adj US 50 (North)



Stage-Area-Storage for Reach SW1: Ex Swale Adj US 50 (North)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
38.72	0.0	0
38.77	0.1	4
38.82	0.1	9
38.87	0.2	15
38.92	0.3	22
38.97	0.4	29
39.02	0.5	37
39.07	0.6	46
39.12	0.7	56
39.17	0.9	67
39.22	1.0	78
39.27	1.1	90
39.32	1.3	103
39.37	1.5	117
39.42	1.7	131
39.47	1.9	147
39.52	2.1	163
39.57	2.3	180
39.62	2.5	197
39.67	2.7	216
39.72	3.0	235
39.77	3.2	255
39.82	3.5	275
39.87	3.8	297
39.92	4.1	319
39.97	4.4	342
40.02	4.7	366
40.07	5.0	391
40.12	5.3	417
40.17	5.6	443
40.22	6.0	470
40.27	6.3	498
40.32	6.7	526
40.37	7.1	556
40.42	7.5	586
40.47	7.9	617
40.52	8.3	649
40.57	8.7	681
40.62	9.1	714
40.67	9.5	749
40.72	10.0	783
40.77	**10.4**	**819**

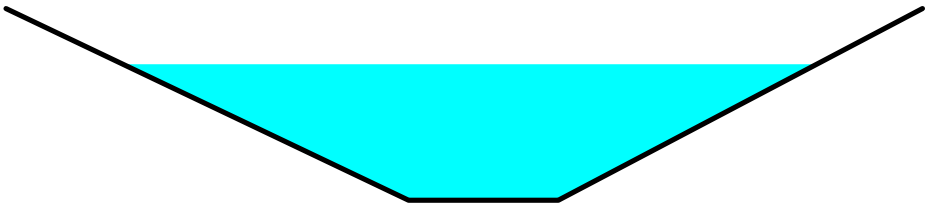
Summary for Reach SW2: Ex. Swale Adj US 50 (South)

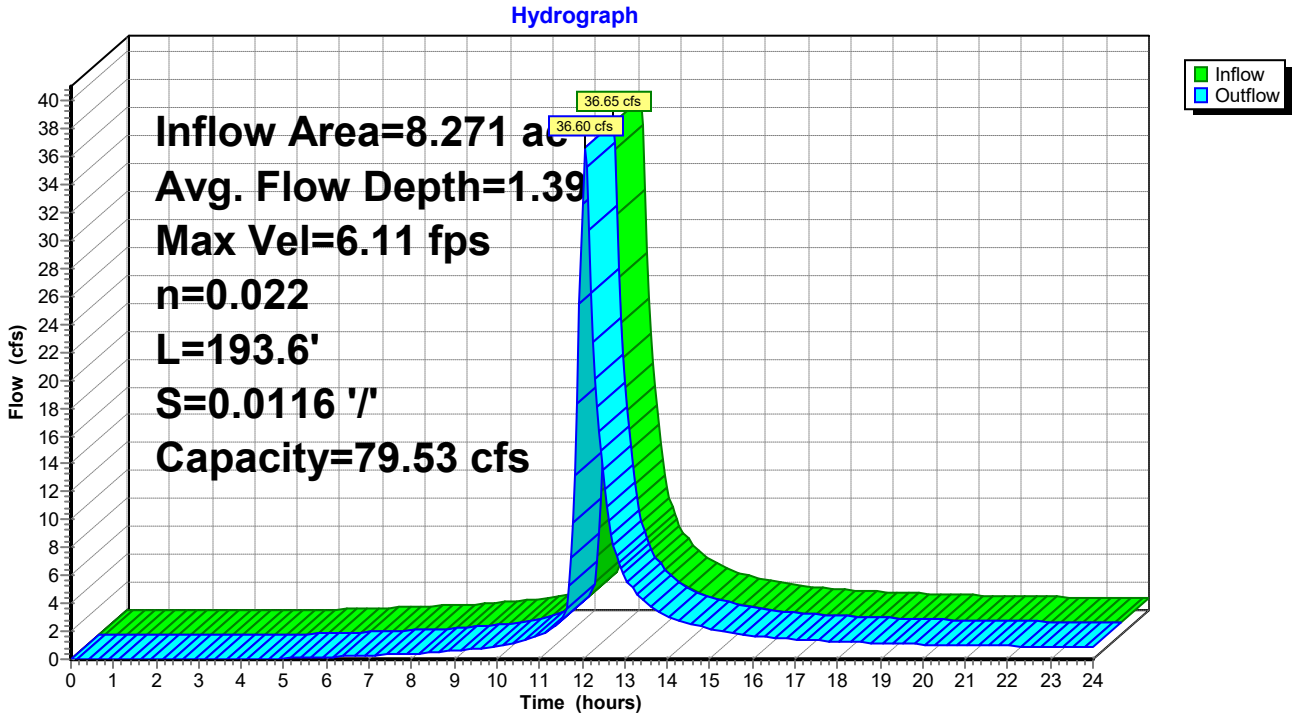
Inflow Area = 8.271 ac, 61.23% Impervious, Inflow Depth > 5.28" for 100-yr event
Inflow = 36.65 cfs @ 12.06 hrs, Volume= 3.640 af
Outflow = 36.60 cfs @ 12.06 hrs, Volume= 3.638 af, Atten= 0%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.11 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.35 fps, Avg. Travel Time= 1.4 min

Peak Storage= 1,158 cf @ 12.06 hrs
Average Depth at Peak Storage= 1.39'
Bank-Full Depth= 1.96' Flow Area= 10.7 sf, Capacity= 79.53 cfs

1.53' x 1.96' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 2.1 1.9 '/' Top Width= 9.37'
Length= 193.6' Slope= 0.0116 '/'
Inlet Invert= 41.58', Outlet Invert= 39.34'





Stage-Area-Storage for Reach SW2: Ex. Swale Adj US 50 (South)

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
41.58	0.0	0	42.60	3.6	705
41.60	0.0	6	42.62	3.8	727
41.62	0.1	12	42.64	3.9	749
41.64	0.1	19	42.66	4.0	772
41.66	0.1	26	42.68	4.1	794
41.68	0.2	34	42.70	4.2	817
41.70	0.2	41	42.72	4.3	841
41.72	0.3	49	42.74	4.5	865
41.74	0.3	57	42.76	4.6	889
41.76	0.3	66	42.78	4.7	913
41.78	0.4	75	42.80	4.8	938
41.80	0.4	84	42.82	5.0	963
41.82	0.5	93	42.84	5.1	988
41.84	0.5	103	42.86	5.2	1,014
41.86	0.6	113	42.88	5.4	1,039
41.88	0.6	124	42.90	5.5	1,066
41.90	0.7	134	42.92	5.6	1,092
41.92	0.8	146	42.94	5.8	1,119
41.94	0.8	157	42.96	5.9	1,146
41.96	0.9	169	42.98	6.1	1,174
41.98	0.9	180	43.00	6.2	1,201
42.00	1.0	193	43.02	6.4	1,229
42.02	1.1	205	43.04	6.5	1,258
42.04	1.1	218	43.06	6.6	1,287
42.06	1.2	231	43.08	6.8	1,316
42.08	1.3	245	43.10	6.9	1,345
42.10	1.3	259	43.12	7.1	1,374
42.12	1.4	273	43.14	7.3	1,404
42.14	1.5	287	43.16	7.4	1,435
42.16	1.6	302	43.18	7.6	1,465
42.18	1.6	317	43.20	7.7	1,496
42.20	1.7	333	43.22	7.9	1,527
42.22	1.8	348	43.24	8.1	1,559
42.24	1.9	364	43.26	8.2	1,590
42.26	2.0	380	43.28	8.4	1,623
42.28	2.1	397	43.30	8.5	1,655
42.30	2.1	414	43.32	8.7	1,688
42.32	2.2	431	43.34	8.9	1,721
42.34	2.3	449	43.36	9.1	1,754
42.36	2.4	467	43.38	9.2	1,788
42.38	2.5	485	43.40	9.4	1,822
42.40	2.6	503	43.42	9.6	1,856
42.42	2.7	522	43.44	9.8	1,891
42.44	2.8	541	43.46	9.9	1,925
42.46	2.9	561	43.48	10.1	1,961
42.48	3.0	580	43.50	10.3	1,996
42.50	3.1	600	43.52	10.5	2,032
42.52	3.2	621	43.54	**10.7**	**2,068**
42.54	3.3	641			
42.56	3.4	662			
42.58	3.5	683			

Summary for Pond 1P: SDI-1

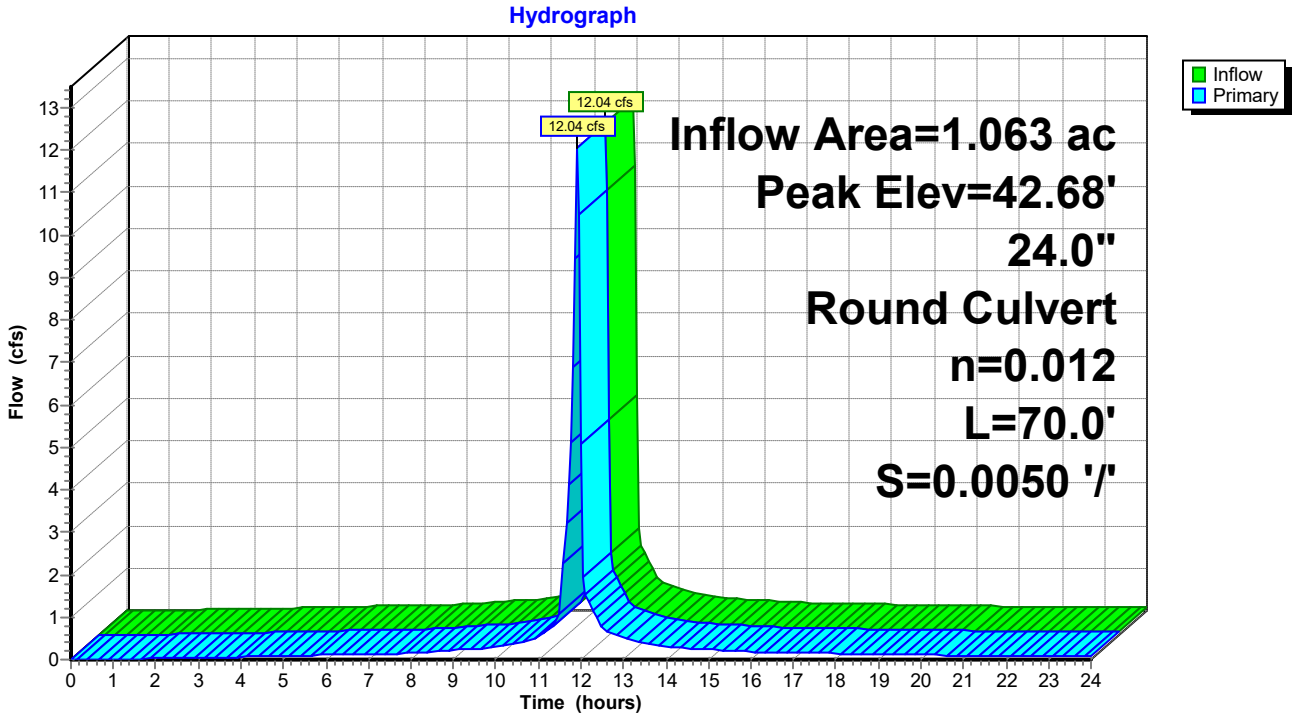
Inflow Area = 1.063 ac, 91.91% Impervious, Inflow Depth > 6.99" for 100-yr event
Inflow = 12.04 cfs @ 11.91 hrs, Volume= 0.619 af
Outflow = 12.04 cfs @ 11.91 hrs, Volume= 0.619 af, Atten= 0%, Lag= 0.0 min
Primary = 12.04 cfs @ 11.91 hrs, Volume= 0.619 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.68' @ 11.92 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.75'	**24.0" Round 24" HDPE** L= 70.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 40.75' / 40.40' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=10.20 cfs @ 11.91 hrs HW=42.64' TW=42.05' (Dynamic Tailwater)
1=24" HDPE (Outlet Controls 10.20 cfs @ 4.28 fps)

Pond 1P: SDI-1



Stage-Area-Storage for Pond 1P: SDI-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.75	**0**	42.79	0	44.83	0
40.79	0	42.83	0	44.87	0
40.83	0	42.87	0	44.91	0
40.87	0	42.91	0	44.95	0
40.91	0	42.95	0	44.99	0
40.95	0	42.99	0	45.03	0
40.99	0	43.03	0	45.07	0
41.03	0	43.07	0	45.11	0
41.07	0	43.11	0	45.15	0
41.11	0	43.15	0	45.19	0
41.15	0	43.19	0	45.23	0
41.19	0	43.23	0	45.27	0
41.23	0	43.27	0	45.31	0
41.27	0	43.31	0	45.35	0
41.31	0	43.35	0	45.39	0
41.35	0	43.39	0	45.43	0
41.39	0	43.43	0	45.47	0
41.43	0	43.47	0	45.51	0
41.47	0	43.51	0	45.55	0
41.51	0	43.55	0	45.59	0
41.55	0	43.59	0	45.63	0
41.59	0	43.63	0	45.67	0
41.63	0	43.67	0	45.71	0
41.67	0	43.71	0	45.75	0
41.71	0	43.75	0	45.79	0
41.75	0	43.79	0	45.83	0
41.79	0	43.83	0	45.87	0
41.83	0	43.87	0		
41.87	0	43.91	0		
41.91	0	43.95	0		
41.95	0	43.99	0		
41.99	0	44.03	0		
42.03	0	44.07	0		
42.07	0	44.11	0		
42.11	0	44.15	0		
42.15	0	44.19	0		
42.19	0	44.23	0		
42.23	0	44.27	0		
42.27	0	44.31	0		
42.31	0	44.35	0		
42.35	0	44.39	0		
42.39	0	44.43	0		
42.43	0	44.47	0		
42.47	0	44.51	0		
42.51	0	44.55	0		
42.55	0	44.59	0		
42.59	0	44.63	0		
42.63	0	44.67	0		
42.67	0	44.71	0		
42.71	0	44.75	0		
42.75	0	44.79	0		

Summary for Pond 2P: RL-1

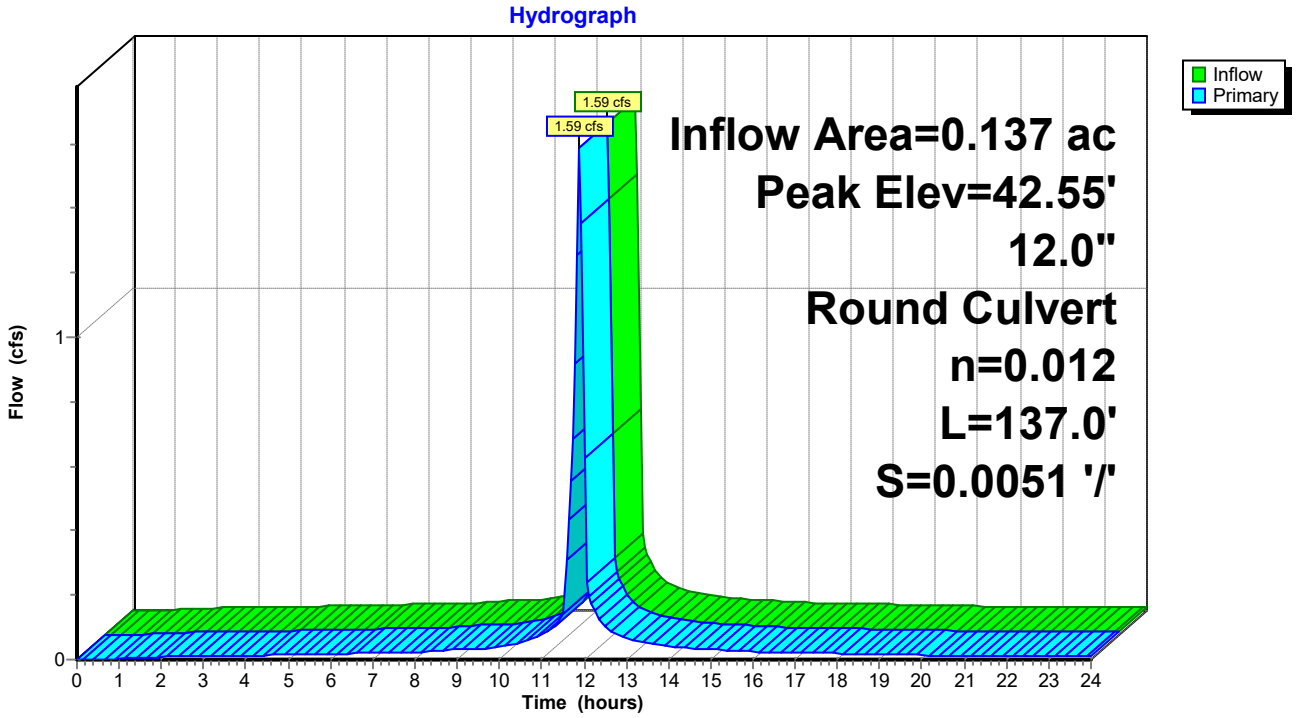
Inflow Area = 0.137 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 1.59 cfs @ 11.90 hrs, Volume= 0.084 af
Outflow = 1.59 cfs @ 11.90 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.0 min
Primary = 1.59 cfs @ 11.90 hrs, Volume= 0.084 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.55' @ 12.11 hrs
Flood Elev= 46.35'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.10'	**12.0" Round 12" HDPE** L= 137.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.10' / 40.40' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.71 cfs @ 11.90 hrs HW=42.12' TW=42.03' (Dynamic Tailwater)
1=12" HDPE (Outlet Controls 0.71 cfs @ 1.10 fps)

Pond 2P: RL-1



Stage-Area-Storage for Pond 2P: RL-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.10	**0**	43.14	0	45.18	0
41.14	0	43.18	0	45.22	0
41.18	0	43.22	0	45.26	0
41.22	0	43.26	0	45.30	0
41.26	0	43.30	0	45.34	0
41.30	0	43.34	0	45.38	0
41.34	0	43.38	0	45.42	0
41.38	0	43.42	0	45.46	0
41.42	0	43.46	0	45.50	0
41.46	0	43.50	0	45.54	0
41.50	0	43.54	0	45.58	0
41.54	0	43.58	0	45.62	0
41.58	0	43.62	0	45.66	0
41.62	0	43.66	0	45.70	0
41.66	0	43.70	0	45.74	0
41.70	0	43.74	0	45.78	0
41.74	0	43.78	0	45.82	0
41.78	0	43.82	0	45.86	0
41.82	0	43.86	0	45.90	0
41.86	0	43.90	0	45.94	0
41.90	0	43.94	0	45.98	0
41.94	0	43.98	0	46.02	0
41.98	0	44.02	0	46.06	0
42.02	0	44.06	0	46.10	0
42.06	0	44.10	0	46.14	0
42.10	0	44.14	0	46.18	0
42.14	0	44.18	0	46.22	0
42.18	0	44.22	0	46.26	0
42.22	0	44.26	0	46.30	0
42.26	0	44.30	0	46.34	0
42.30	0	44.34	0		
42.34	0	44.38	0		
42.38	0	44.42	0		
42.42	0	44.46	0		
42.46	0	44.50	0		
42.50	0	44.54	0		
42.54	0	44.58	0		
42.58	0	44.62	0		
42.62	0	44.66	0		
42.66	0	44.70	0		
42.70	0	44.74	0		
42.74	0	44.78	0		
42.78	0	44.82	0		
42.82	0	44.86	0		
42.86	0	44.90	0		
42.90	0	44.94	0		
42.94	0	44.98	0		
42.98	0	45.02	0		
43.02	0	45.06	0		
43.06	0	45.10	0		
43.10	0	45.14	0		

Summary for Pond 3P: RL-2

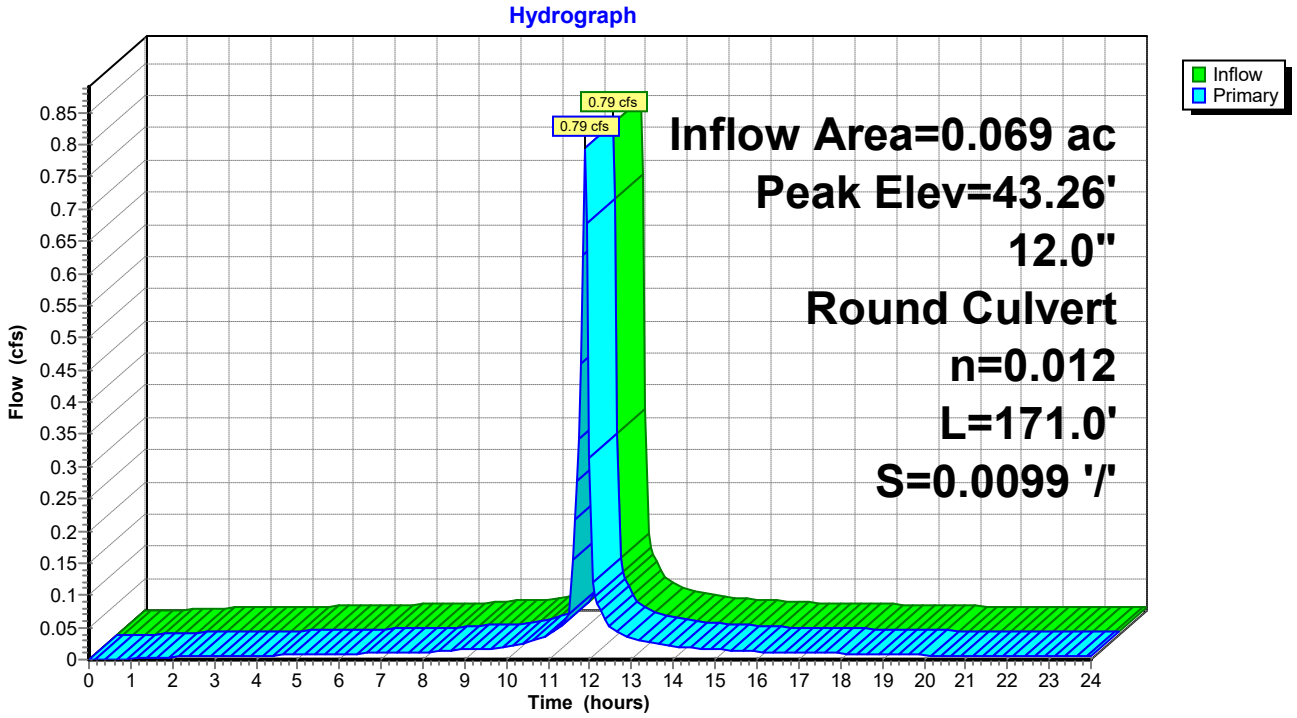
Inflow Area = 0.069 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 0.79 cfs @ 11.90 hrs, Volume= 0.042 af
Outflow = 0.79 cfs @ 11.90 hrs, Volume= 0.042 af, Atten= 0%, Lag= 0.0 min
Primary = 0.79 cfs @ 11.90 hrs, Volume= 0.042 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.26' @ 11.91 hrs
Flood Elev= 46.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.80'	**12.0" Round 12" HPDE** L= 171.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 42.80' / 41.10' S= 0.0099 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.72 cfs @ 11.90 hrs HW=43.26' TW=42.12' (Dynamic Tailwater)
1=12" HPDE (Outlet Controls 0.72 cfs @ 3.02 fps)

Pond 3P: RL-2



Stage-Area-Storage for Pond 3P: RL-2

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.80	**0**	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0	46.55	0
44.05	0	46.60	0
44.10	0	46.65	0
44.15	0	46.70	0
44.20	0	46.75	0
44.25	0	46.80	0
44.30	0	46.85	0
44.35	0	46.90	0
44.40	0		
44.45	0		
44.50	0		
44.55	0		
44.60	0		
44.65	0		
44.70	0		
44.75	0		
44.80	0		
44.85	0		
44.90	0		
44.95	0		
45.00	0		
45.05	0		
45.10	0		
45.15	0		
45.20	0		
45.25	0		
45.30	0		

Summary for Pond 4P: RL-3

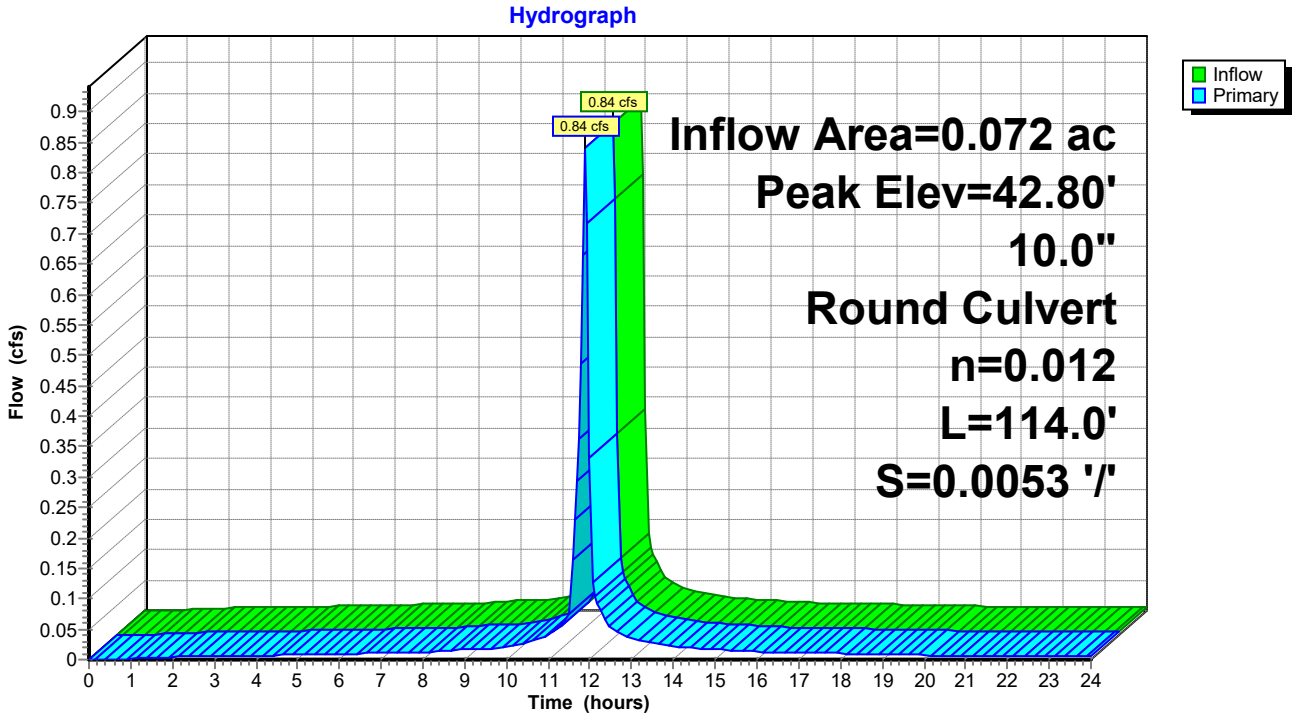
Inflow Area = 0.072 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af
Outflow = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min
Primary = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.80' @ 11.96 hrs
Flood Elev= 47.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**10.0" Round 10" HDPE** L= 114.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.50' / 40.90' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.00 cfs @ 11.90 hrs HW=42.57' TW=42.64' (Dynamic Tailwater)
1=10" HDPE (Controls 0.00 cfs)

Pond 4P: RL-3



Stage-Area-Storage for Pond 4P: RL-3

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.50	**0**	43.54	0	45.58	0
41.54	0	43.58	0	45.62	0
41.58	0	43.62	0	45.66	0
41.62	0	43.66	0	45.70	0
41.66	0	43.70	0	45.74	0
41.70	0	43.74	0	45.78	0
41.74	0	43.78	0	45.82	0
41.78	0	43.82	0	45.86	0
41.82	0	43.86	0	45.90	0
41.86	0	43.90	0	45.94	0
41.90	0	43.94	0	45.98	0
41.94	0	43.98	0	46.02	0
41.98	0	44.02	0	46.06	0
42.02	0	44.06	0	46.10	0
42.06	0	44.10	0	46.14	0
42.10	0	44.14	0	46.18	0
42.14	0	44.18	0	46.22	0
42.18	0	44.22	0	46.26	0
42.22	0	44.26	0	46.30	0
42.26	0	44.30	0	46.34	0
42.30	0	44.34	0	46.38	0
42.34	0	44.38	0	46.42	0
42.38	0	44.42	0	46.46	0
42.42	0	44.46	0	46.50	0
42.46	0	44.50	0	46.54	0
42.50	0	44.54	0	46.58	0
42.54	0	44.58	0	46.62	0
42.58	0	44.62	0	46.66	0
42.62	0	44.66	0	46.70	0
42.66	0	44.70	0	46.74	0
42.70	0	44.74	0	46.78	0
42.74	0	44.78	0	46.82	0
42.78	0	44.82	0	46.86	0
42.82	0	44.86	0	46.90	0
42.86	0	44.90	0	46.94	0
42.90	0	44.94	0	46.98	0
42.94	0	44.98	0	47.02	0
42.98	0	45.02	0	47.06	0
43.02	0	45.06	0	47.10	0
43.06	0	45.10	0	47.14	0
43.10	0	45.14	0	47.18	0
43.14	0	45.18	0	47.22	0
43.18	0	45.22	0		
43.22	0	45.26	0		
43.26	0	45.30	0		
43.30	0	45.34	0		
43.34	0	45.38	0		
43.38	0	45.42	0		
43.42	0	45.46	0		
43.46	0	45.50	0		
43.50	0	45.54	0		

Summary for Pond 5P: SDI-5

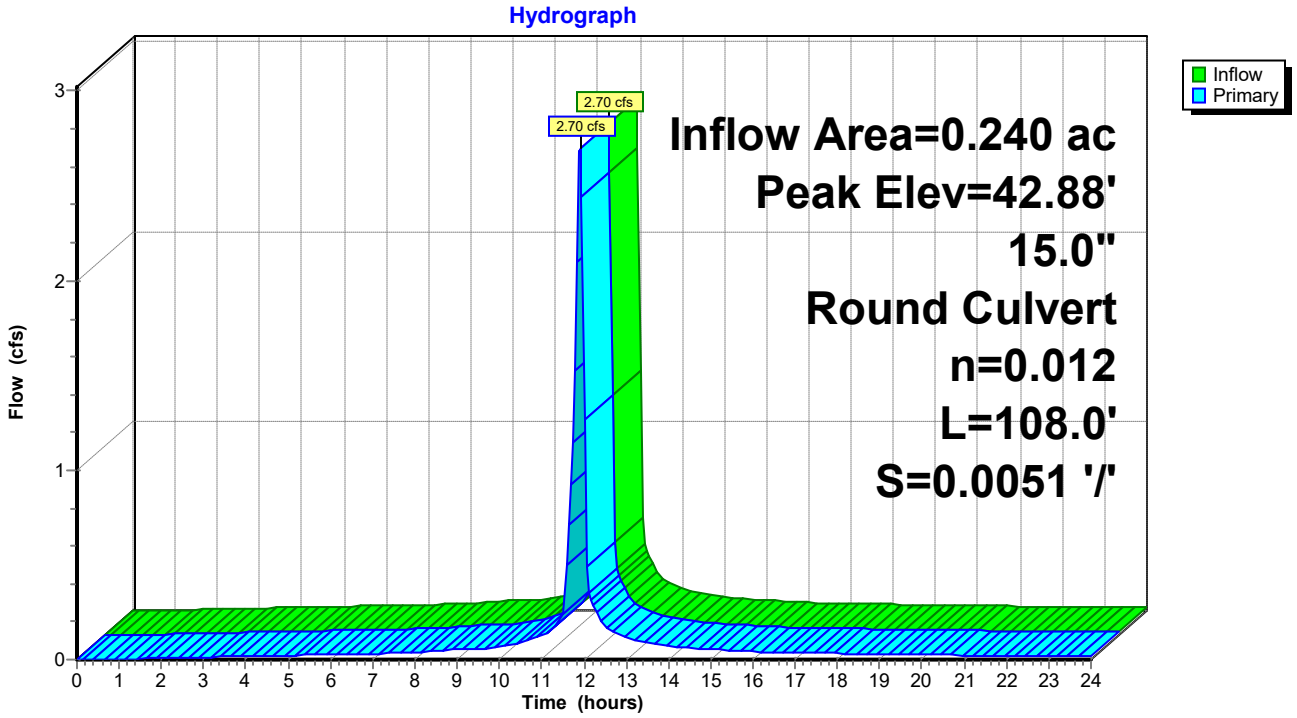
Inflow Area = 0.240 ac, 94.66% Impervious, Inflow Depth > 7.11" for 100-yr event
Inflow = 2.70 cfs @ 11.91 hrs, Volume= 0.142 af
Outflow = 2.70 cfs @ 11.91 hrs, Volume= 0.142 af, Atten= 0%, Lag= 0.0 min
Primary = 2.70 cfs @ 11.91 hrs, Volume= 0.142 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.88' @ 11.95 hrs
Flood Elev= 46.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.45'	**15.0" Round 15" HDPE** L= 108.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.45' / 40.90' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.52 cfs @ 11.91 hrs HW=42.75' TW=42.64' (Dynamic Tailwater)
↑**1=15" HDPE** (Outlet Controls 1.52 cfs @ 1.48 fps)

Pond 5P: SDI-5



Stage-Area-Storage for Pond 5P: SDI-5

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.45	**0**	43.49	0	45.53	0
41.49	0	43.53	0	45.57	0
41.53	0	43.57	0	45.61	0
41.57	0	43.61	0	45.65	0
41.61	0	43.65	0	45.69	0
41.65	0	43.69	0	45.73	0
41.69	0	43.73	0	45.77	0
41.73	0	43.77	0	45.81	0
41.77	0	43.81	0	45.85	0
41.81	0	43.85	0	45.89	0
41.85	0	43.89	0	45.93	0
41.89	0	43.93	0	45.97	0
41.93	0	43.97	0	46.01	0
41.97	0	44.01	0	46.05	0
42.01	0	44.05	0	46.09	0
42.05	0	44.09	0	46.13	0
42.09	0	44.13	0	46.17	0
42.13	0	44.17	0	46.21	0
42.17	0	44.21	0	46.25	0
42.21	0	44.25	0	46.29	0
42.25	0	44.29	0	46.33	0
42.29	0	44.33	0	46.37	0
42.33	0	44.37	0	46.41	0
42.37	0	44.41	0	46.45	0
42.41	0	44.45	0	46.49	0
42.45	0	44.49	0	46.53	0
42.49	0	44.53	0	46.57	0
42.53	0	44.57	0	46.61	0
42.57	0	44.61	0	46.65	0
42.61	0	44.65	0	46.69	0
42.65	0	44.69	0	46.73	0
42.69	0	44.73	0		
42.73	0	44.77	0		
42.77	0	44.81	0		
42.81	0	44.85	0		
42.85	0	44.89	0		
42.89	0	44.93	0		
42.93	0	44.97	0		
42.97	0	45.01	0		
43.01	0	45.05	0		
43.05	0	45.09	0		
43.09	0	45.13	0		
43.13	0	45.17	0		
43.17	0	45.21	0		
43.21	0	45.25	0		
43.25	0	45.29	0		
43.29	0	45.33	0		
43.33	0	45.37	0		
43.37	0	45.41	0		
43.41	0	45.45	0		
43.45	0	45.49	0		

Summary for Pond 6P: RL-4

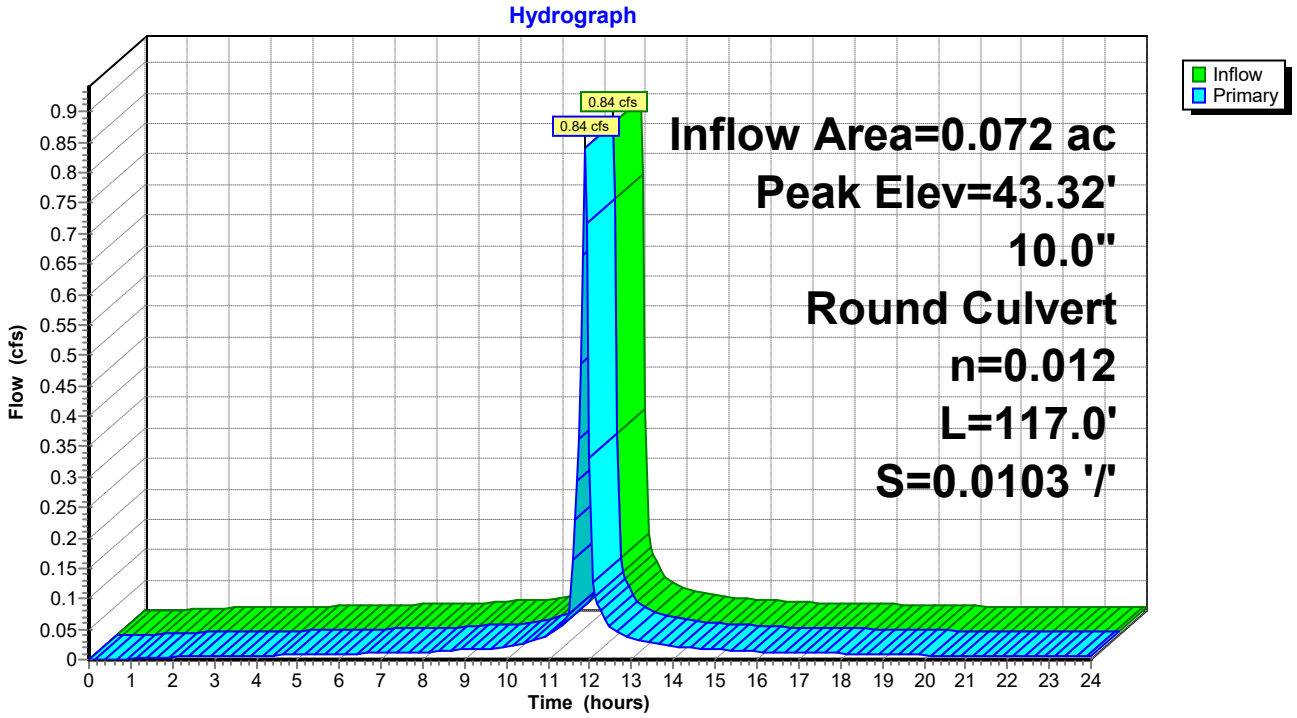
Inflow Area = 0.072 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af
Outflow = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min
Primary = 0.84 cfs @ 11.90 hrs, Volume= 0.044 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.32' @ 11.93 hrs
Flood Elev= 47.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.75'	**10.0" Round 10" HDPE** L= 117.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 42.75' / 41.55' S= 0.0103 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.69 cfs @ 11.90 hrs HW=43.30' TW=42.73' (Dynamic Tailwater)
1=10" HDPE (Outlet Controls 0.69 cfs @ 2.55 fps)

Pond 6P: RL-4



Stage-Area-Storage for Pond 6P: RL-4

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.75	**0**	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0	46.55	0
44.05	0	46.60	0
44.10	0	46.65	0
44.15	0	46.70	0
44.20	0	46.75	0
44.25	0	46.80	0
44.30	0	46.85	0
44.35	0	46.90	0
44.40	0	46.95	0
44.45	0	47.00	0
44.50	0	47.05	0
44.55	0	47.10	0
44.60	0	47.15	0
44.65	0	47.20	0
44.70	0		
44.75	0		
44.80	0		
44.85	0		
44.90	0		
44.95	0		
45.00	0		
45.05	0		
45.10	0		
45.15	0		
45.20	0		
45.25	0		

Summary for Pond 7P: SDI-6

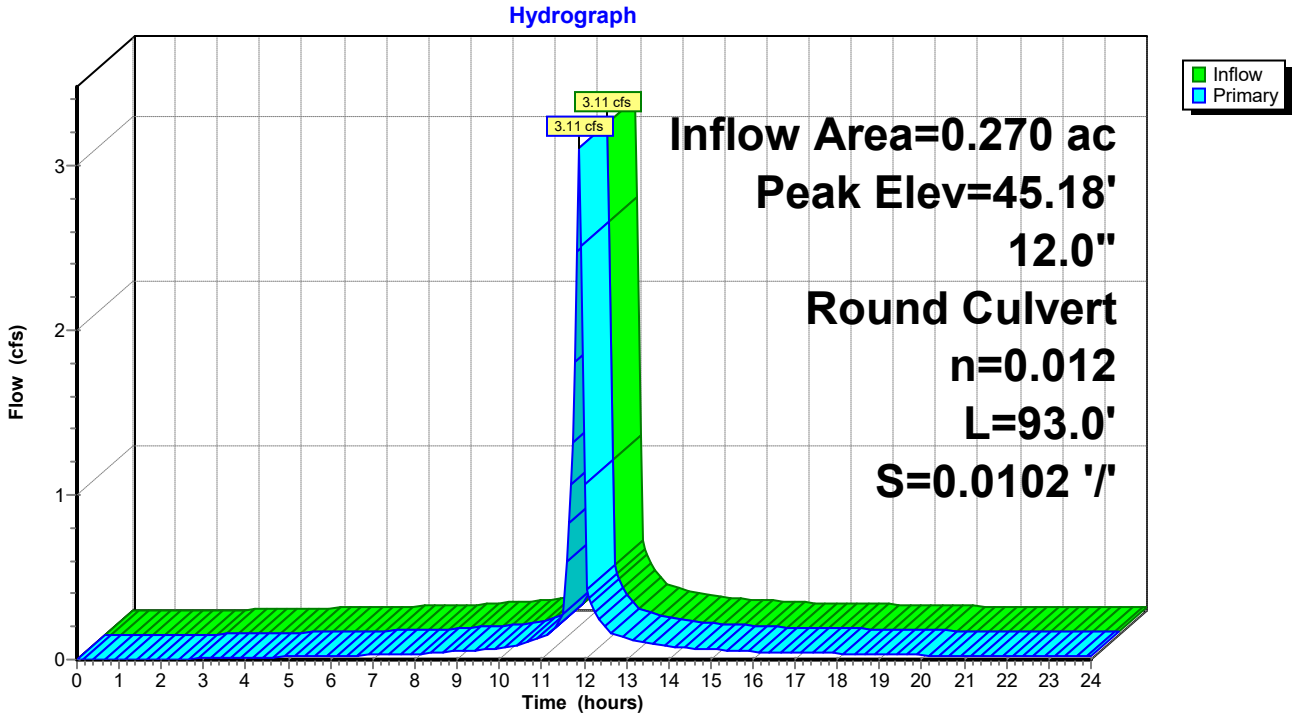
Inflow Area = 0.270 ac, 85.31% Impervious, Inflow Depth > 6.77" for 100-yr event
Inflow = 3.11 cfs @ 11.90 hrs, Volume= 0.152 af
Outflow = 3.11 cfs @ 11.90 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.0 min
Primary = 3.11 cfs @ 11.90 hrs, Volume= 0.152 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.18' @ 11.90 hrs
Flood Elev= 46.40'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.00'	**12.0" Round Culvert** L= 93.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 44.00' / 43.05' S= 0.0102 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=3.10 cfs @ 11.90 hrs HW=45.17' TW=44.07' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.10 cfs @ 3.95 fps)

Pond 7P: SDI-6



Stage-Area-Storage for Pond 7P: SDI-6

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
44.00	**0**	45.02	0	46.04	0
44.02	0	45.04	0	46.06	0
44.04	0	45.06	0	46.08	0
44.06	0	45.08	0	46.10	0
44.08	0	45.10	0	46.12	0
44.10	0	45.12	0	46.14	0
44.12	0	45.14	0	46.16	0
44.14	0	45.16	0	46.18	0
44.16	0	45.18	0	46.20	0
44.18	0	45.20	0	46.22	0
44.20	0	45.22	0	46.24	0
44.22	0	45.24	0	46.26	0
44.24	0	45.26	0	46.28	0
44.26	0	45.28	0	46.30	0
44.28	0	45.30	0	46.32	0
44.30	0	45.32	0	46.34	0
44.32	0	45.34	0	46.36	0
44.34	0	45.36	0	46.38	0
44.36	0	45.38	0	46.40	0
44.38	0	45.40	0		
44.40	0	45.42	0		
44.42	0	45.44	0		
44.44	0	45.46	0		
44.46	0	45.48	0		
44.48	0	45.50	0		
44.50	0	45.52	0		
44.52	0	45.54	0		
44.54	0	45.56	0		
44.56	0	45.58	0		
44.58	0	45.60	0		
44.60	0	45.62	0		
44.62	0	45.64	0		
44.64	0	45.66	0		
44.66	0	45.68	0		
44.68	0	45.70	0		
44.70	0	45.72	0		
44.72	0	45.74	0		
44.74	0	45.76	0		
44.76	0	45.78	0		
44.78	0	45.80	0		
44.80	0	45.82	0		
44.82	0	45.84	0		
44.84	0	45.86	0		
44.86	0	45.88	0		
44.88	0	45.90	0		
44.90	0	45.92	0		
44.92	0	45.94	0		
44.94	0	45.96	0		
44.96	0	45.98	0		
44.98	0	46.00	0		
45.00	0	46.02	0		

Summary for Pond 8P: SDI-2

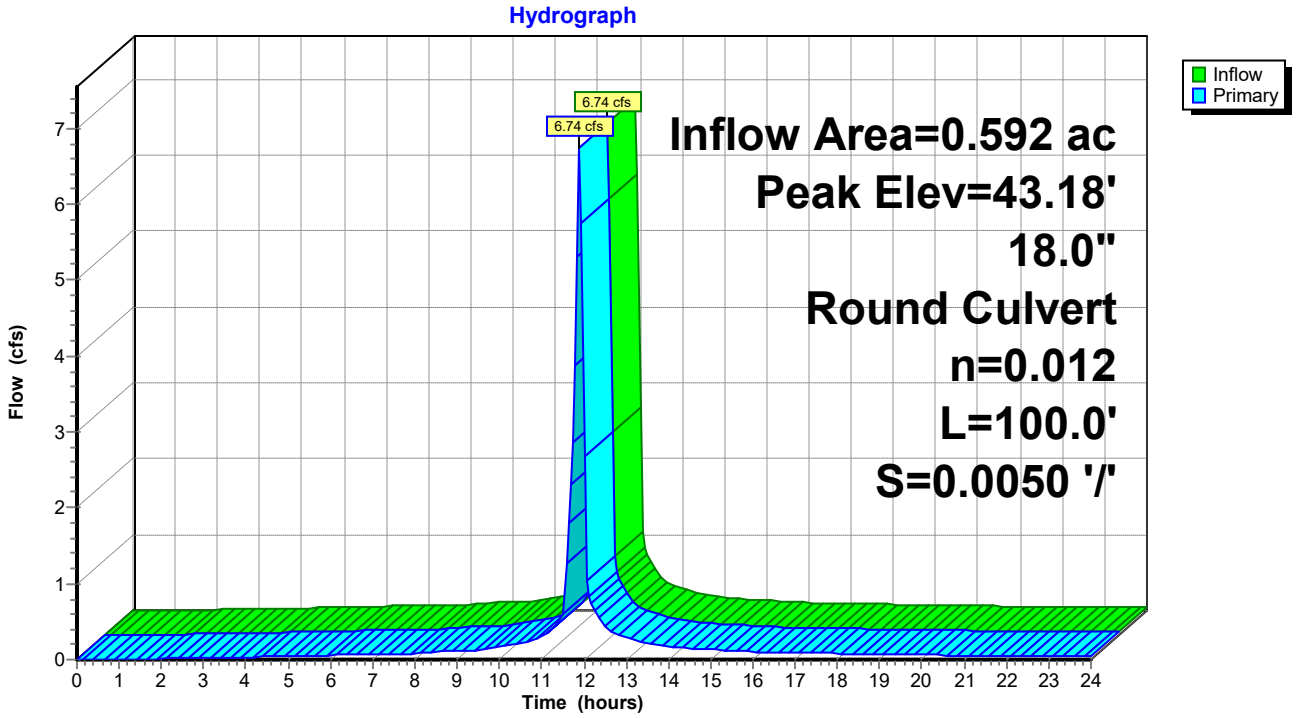
Inflow Area = 0.592 ac, 90.75% Impervious, Inflow Depth > 6.93" for 100-yr event
Inflow = 6.74 cfs @ 11.90 hrs, Volume= 0.342 af
Outflow = 6.74 cfs @ 11.90 hrs, Volume= 0.342 af, Atten= 0%, Lag= 0.0 min
Primary = 6.74 cfs @ 11.90 hrs, Volume= 0.342 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.18' @ 11.93 hrs
Flood Elev= 46.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.40'	**18.0" Round 18" HDPE** L= 100.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.40' / 40.90' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.35 cfs @ 11.90 hrs HW=43.11' TW=42.64' (Dynamic Tailwater)
1=18" HDPE (Outlet Controls 5.35 cfs @ 3.33 fps)

Pond 8P: SDI-2



Stage-Area-Storage for Pond 8P: SDI-2

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.40	**0**	43.44	0	45.48	0
41.44	0	43.48	0	45.52	0
41.48	0	43.52	0	45.56	0
41.52	0	43.56	0	45.60	0
41.56	0	43.60	0	45.64	0
41.60	0	43.64	0	45.68	0
41.64	0	43.68	0	45.72	0
41.68	0	43.72	0	45.76	0
41.72	0	43.76	0	45.80	0
41.76	0	43.80	0	45.84	0
41.80	0	43.84	0	45.88	0
41.84	0	43.88	0	45.92	0
41.88	0	43.92	0	45.96	0
41.92	0	43.96	0	46.00	0
41.96	0	44.00	0	46.04	0
42.00	0	44.04	0	46.08	0
42.04	0	44.08	0	46.12	0
42.08	0	44.12	0	46.16	0
42.12	0	44.16	0	46.20	0
42.16	0	44.20	0	46.24	0
42.20	0	44.24	0	46.28	0
42.24	0	44.28	0	46.32	0
42.28	0	44.32	0	46.36	0
42.32	0	44.36	0	46.40	0
42.36	0	44.40	0	46.44	0
42.40	0	44.44	0	46.48	0
42.44	0	44.48	0	46.52	0
42.48	0	44.52	0	46.56	0
42.52	0	44.56	0	46.60	0
42.56	0	44.60	0		
42.60	0	44.64	0		
42.64	0	44.68	0		
42.68	0	44.72	0		
42.72	0	44.76	0		
42.76	0	44.80	0		
42.80	0	44.84	0		
42.84	0	44.88	0		
42.88	0	44.92	0		
42.92	0	44.96	0		
42.96	0	45.00	0		
43.00	0	45.04	0		
43.04	0	45.08	0		
43.08	0	45.12	0		
43.12	0	45.16	0		
43.16	0	45.20	0		
43.20	0	45.24	0		
43.24	0	45.28	0		
43.28	0	45.32	0		
43.32	0	45.36	0		
43.36	0	45.40	0		
43.40	0	45.44	0		

Summary for Pond 9P: SDI-3

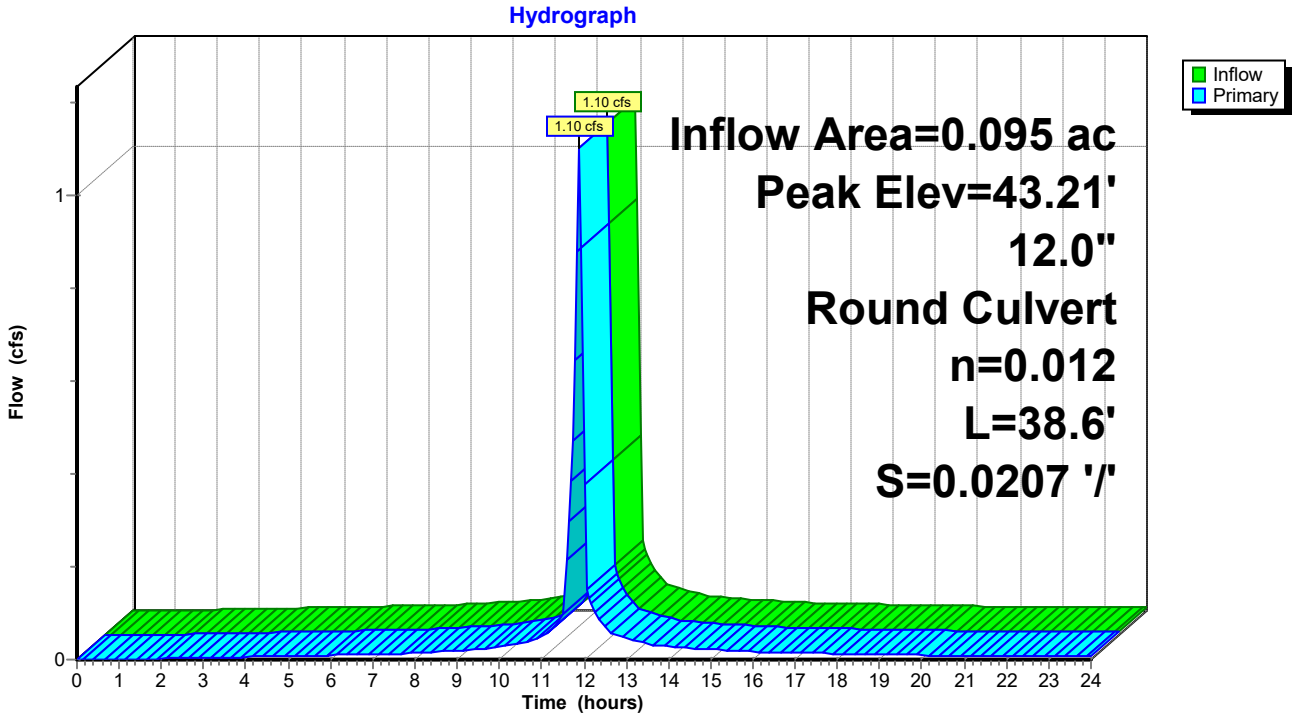
Inflow Area = 0.095 ac, 91.82% Impervious, Inflow Depth > 7.00" for 100-yr event
Inflow = 1.10 cfs @ 11.90 hrs, Volume= 0.055 af
Outflow = 1.10 cfs @ 11.90 hrs, Volume= 0.055 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 11.90 hrs, Volume= 0.055 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.21' @ 11.97 hrs
Flood Elev= 46.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.30'	**12.0" Round 12" HDPE** L= 38.6' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 42.30' / 41.50' S= 0.0207 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 11.90 hrs HW=43.03' TW=43.10' (Dynamic Tailwater)
↑**1=12" HDPE** (Controls 0.00 cfs)

Pond 9P: SDI-3



Stage-Area-Storage for Pond 9P: SDI-3

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.30	**0**	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0	45.10	0
42.60	0	45.15	0
42.65	0	45.20	0
42.70	0	45.25	0
42.75	0	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0		
43.80	0		
43.85	0		
43.90	0		
43.95	0		
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		
44.25	0		
44.30	0		
44.35	0		
44.40	0		
44.45	0		
44.50	0		
44.55	0		
44.60	0		
44.65	0		
44.70	0		
44.75	0		
44.80	0		

Summary for Pond 10P: SDI-4

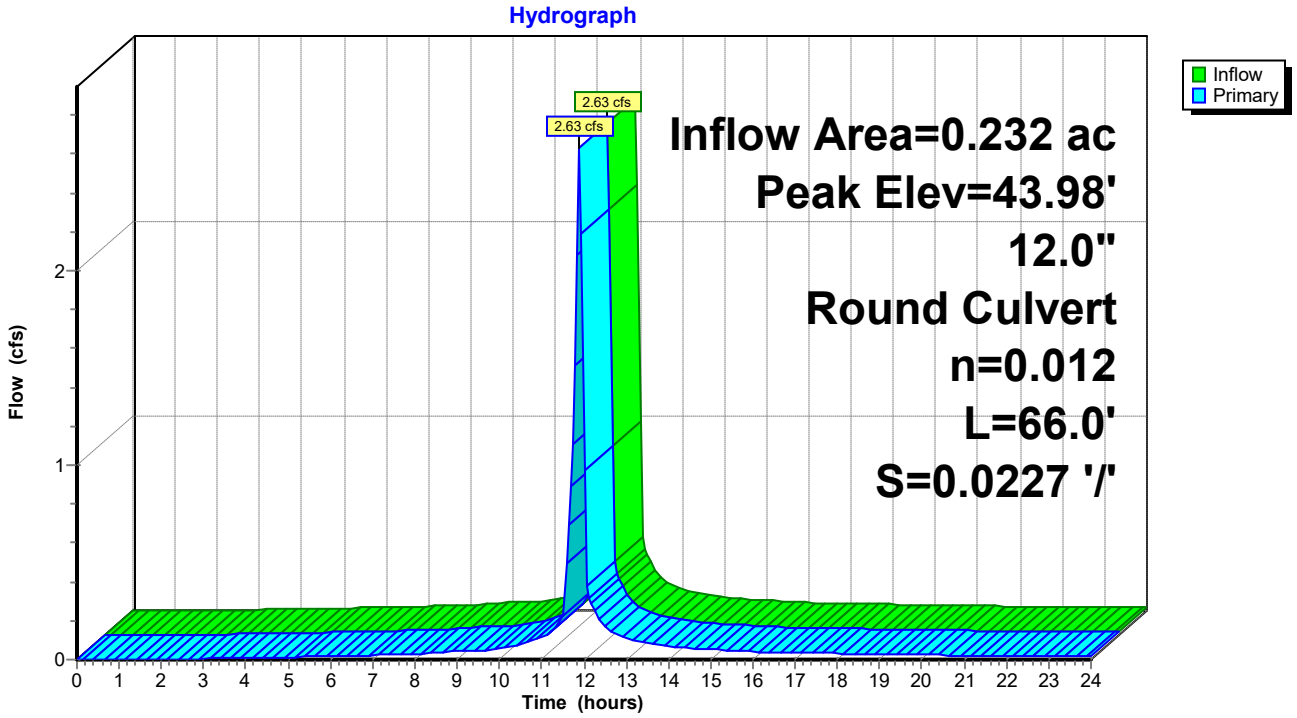
Inflow Area = 0.232 ac, 84.85% Impervious, Inflow Depth > 6.65" for 100-yr event
Inflow = 2.63 cfs @ 11.90 hrs, Volume= 0.129 af
Outflow = 2.63 cfs @ 11.90 hrs, Volume= 0.129 af, Atten= 0%, Lag= 0.0 min
Primary = 2.63 cfs @ 11.90 hrs, Volume= 0.129 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.98' @ 11.91 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.00'	**12.0" Round 12" HDPE** L= 66.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 43.00' / 41.50' S= 0.0227 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.61 cfs @ 11.90 hrs HW=43.97' TW=43.11' (Dynamic Tailwater)
1=12" HDPE (Inlet Controls 2.61 cfs @ 3.36 fps)

Pond 10P: SDI-4



Stage-Area-Storage for Pond 10P: SDI-4

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
43.00	**0**	44.02	0	45.04	0
43.02	0	44.04	0	45.06	0
43.04	0	44.06	0	45.08	0
43.06	0	44.08	0	45.10	0
43.08	0	44.10	0	45.12	0
43.10	0	44.12	0	45.14	0
43.12	0	44.14	0	45.16	0
43.14	0	44.16	0	45.18	0
43.16	0	44.18	0	45.20	0
43.18	0	44.20	0	45.22	0
43.20	0	44.22	0	45.24	0
43.22	0	44.24	0	45.26	0
43.24	0	44.26	0	45.28	0
43.26	0	44.28	0	45.30	0
43.28	0	44.30	0	45.32	0
43.30	0	44.32	0	45.34	0
43.32	0	44.34	0	45.36	0
43.34	0	44.36	0	45.38	0
43.36	0	44.38	0	45.40	0
43.38	0	44.40	0	45.42	0
43.40	0	44.42	0	45.44	0
43.42	0	44.44	0	45.46	0
43.44	0	44.46	0	45.48	0
43.46	0	44.48	0	45.50	0
43.48	0	44.50	0	45.52	0
43.50	0	44.52	0	45.54	0
43.52	0	44.54	0	45.56	0
43.54	0	44.56	0	45.58	0
43.56	0	44.58	0	45.60	0
43.58	0	44.60	0	45.62	0
43.60	0	44.62	0	45.64	0
43.62	0	44.64	0	45.66	0
43.64	0	44.66	0	45.68	0
43.66	0	44.68	0	45.70	0
43.68	0	44.70	0	45.72	0
43.70	0	44.72	0	45.74	0
43.72	0	44.74	0	45.76	0
43.74	0	44.76	0	45.78	0
43.76	0	44.78	0	45.80	0
43.78	0	44.80	0	45.82	0
43.80	0	44.82	0	45.84	0
43.82	0	44.84	0	45.86	0
43.84	0	44.86	0	45.88	0
43.86	0	44.88	0	45.90	0
43.88	0	44.90	0		
43.90	0	44.92	0		
43.92	0	44.94	0		
43.94	0	44.96	0		
43.96	0	44.98	0		
43.98	0	45.00	0		
44.00	0	45.02	0		

Summary for Pond 11P: SDI-8

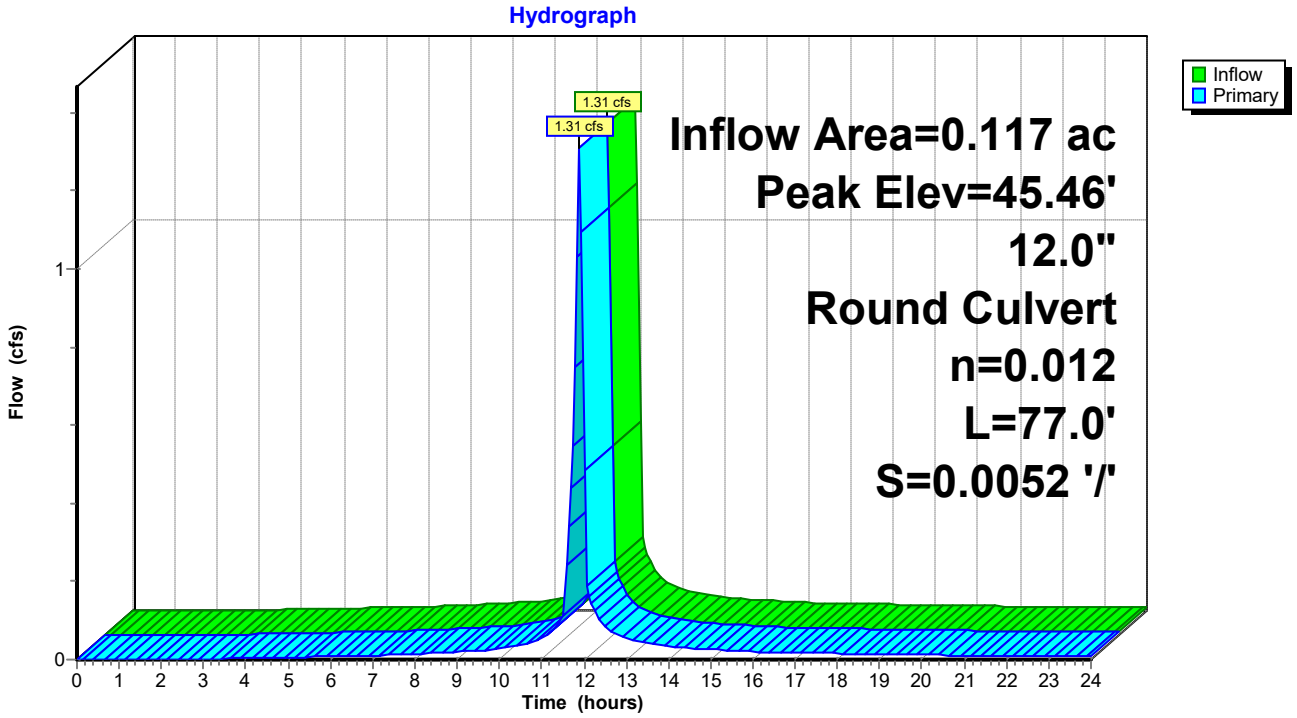
Inflow Area = 0.117 ac, 82.35% Impervious, Inflow Depth > 6.53" for 100-yr event
Inflow = 1.31 cfs @ 11.90 hrs, Volume= 0.063 af
Outflow = 1.31 cfs @ 11.90 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min
Primary = 1.31 cfs @ 11.90 hrs, Volume= 0.063 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.46' @ 12.01 hrs
Flood Elev= 45.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	44.20'	**12.0" Round 12" HDPE** L= 77.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 44.20' / 43.80' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 11.90 hrs HW=45.22' TW=45.28' (Dynamic Tailwater)
↑**1=12" HDPE** (Controls 0.00 cfs)

Pond 11P: SDI-8



Stage-Area-Storage for Pond 11P: SDI-8

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
44.20	**0**	44.71	0	45.22	0
44.21	0	44.72	0	45.23	0
44.22	0	44.73	0	45.24	0
44.23	0	44.74	0	45.25	0
44.24	0	44.75	0	45.26	0
44.25	0	44.76	0	45.27	0
44.26	0	44.77	0	45.28	0
44.27	0	44.78	0	45.29	0
44.28	0	44.79	0	45.30	0
44.29	0	44.80	0	45.31	0
44.30	0	44.81	0	45.32	0
44.31	0	44.82	0	45.33	0
44.32	0	44.83	0	45.34	0
44.33	0	44.84	0	45.35	0
44.34	0	44.85	0	45.36	0
44.35	0	44.86	0	45.37	0
44.36	0	44.87	0	45.38	0
44.37	0	44.88	0	45.39	0
44.38	0	44.89	0	45.40	0
44.39	0	44.90	0	45.41	0
44.40	0	44.91	0	45.42	0
44.41	0	44.92	0	45.43	0
44.42	0	44.93	0	45.44	0
44.43	0	44.94	0	45.45	0
44.44	0	44.95	0	45.46	0
44.45	0	44.96	0		
44.46	0	44.97	0		
44.47	0	44.98	0		
44.48	0	44.99	0		
44.49	0	45.00	0		
44.50	0	45.01	0		
44.51	0	45.02	0		
44.52	0	45.03	0		
44.53	0	45.04	0		
44.54	0	45.05	0		
44.55	0	45.06	0		
44.56	0	45.07	0		
44.57	0	45.08	0		
44.58	0	45.09	0		
44.59	0	45.10	0		
44.60	0	45.11	0		
44.61	0	45.12	0		
44.62	0	45.13	0		
44.63	0	45.14	0		
44.64	0	45.15	0		
44.65	0	45.16	0		
44.66	0	45.17	0		
44.67	0	45.18	0		
44.68	0	45.19	0		
44.69	0	45.20	0		
44.70	0	45.21	0		

Summary for Pond 13P: SDI-9

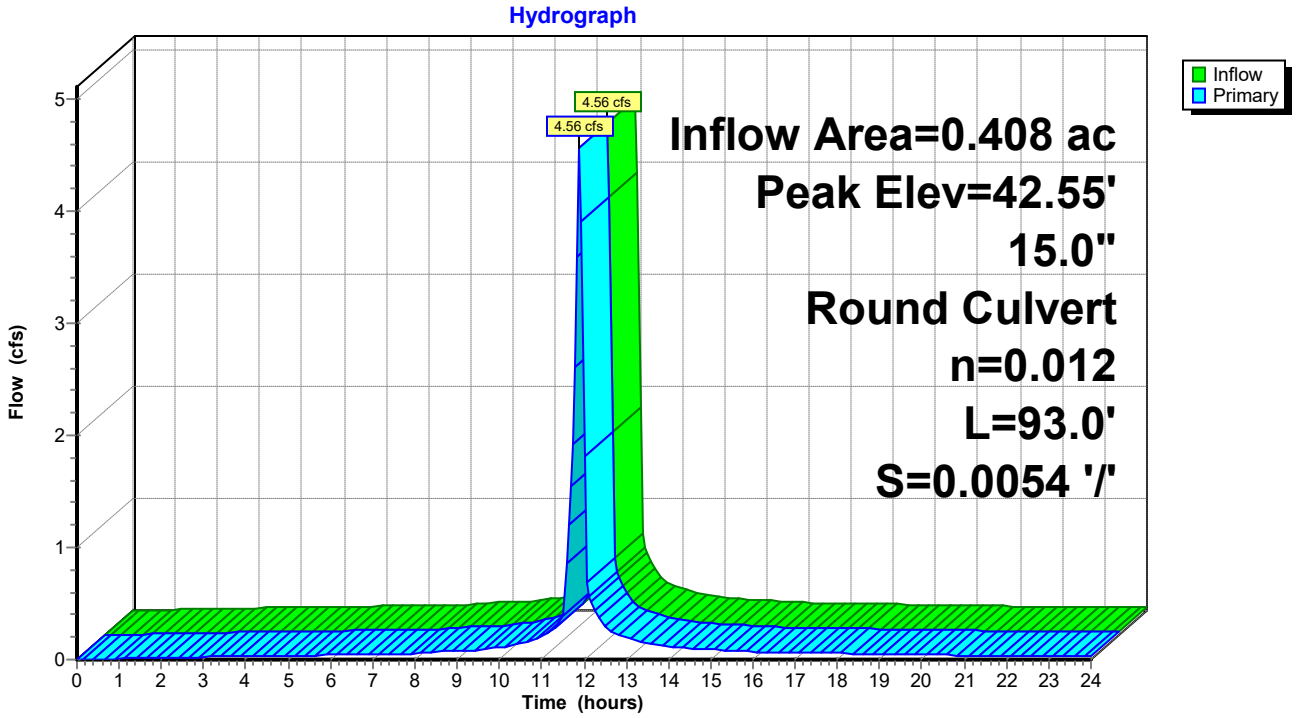
Inflow Area = 0.408 ac, 89.26% Impervious, Inflow Depth > 6.90" for 100-yr event
Inflow = 4.56 cfs @ 11.90 hrs, Volume= 0.234 af
Outflow = 4.56 cfs @ 11.90 hrs, Volume= 0.234 af, Atten= 0%, Lag= 0.0 min
Primary = 4.56 cfs @ 11.90 hrs, Volume= 0.234 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.55' @ 12.11 hrs
Flood Elev= 43.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.90'	**15.0" Round 15" HDPE** L= 93.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 40.90' / 40.40' S= 0.0054 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=3.27 cfs @ 11.90 hrs HW=42.40' TW=42.04' (Dynamic Tailwater)
1=15" HDPE (Outlet Controls 3.27 cfs @ 2.81 fps)

Pond 13P: SDI-9



Stage-Area-Storage for Pond 13P: SDI-9

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.90	**0**	41.92	0	42.94	0
40.92	0	41.94	0	42.96	0
40.94	0	41.96	0	42.98	0
40.96	0	41.98	0	43.00	0
40.98	0	42.00	0		
41.00	0	42.02	0		
41.02	0	42.04	0		
41.04	0	42.06	0		
41.06	0	42.08	0		
41.08	0	42.10	0		
41.10	0	42.12	0		
41.12	0	42.14	0		
41.14	0	42.16	0		
41.16	0	42.18	0		
41.18	0	42.20	0		
41.20	0	42.22	0		
41.22	0	42.24	0		
41.24	0	42.26	0		
41.26	0	42.28	0		
41.28	0	42.30	0		
41.30	0	42.32	0		
41.32	0	42.34	0		
41.34	0	42.36	0		
41.36	0	42.38	0		
41.38	0	42.40	0		
41.40	0	42.42	0		
41.42	0	42.44	0		
41.44	0	42.46	0		
41.46	0	42.48	0		
41.48	0	42.50	0		
41.50	0	42.52	0		
41.52	0	42.54	0		
41.54	0	42.56	0		
41.56	0	42.58	0		
41.58	0	42.60	0		
41.60	0	42.62	0		
41.62	0	42.64	0		
41.64	0	42.66	0		
41.66	0	42.68	0		
41.68	0	42.70	0		
41.70	0	42.72	0		
41.72	0	42.74	0		
41.74	0	42.76	0		
41.76	0	42.78	0		
41.78	0	42.80	0		
41.80	0	42.82	0		
41.82	0	42.84	0		
41.84	0	42.86	0		
41.86	0	42.88	0		
41.88	0	42.90	0		
41.90	0	42.92	0		

Summary for Pond 14P: RL-5

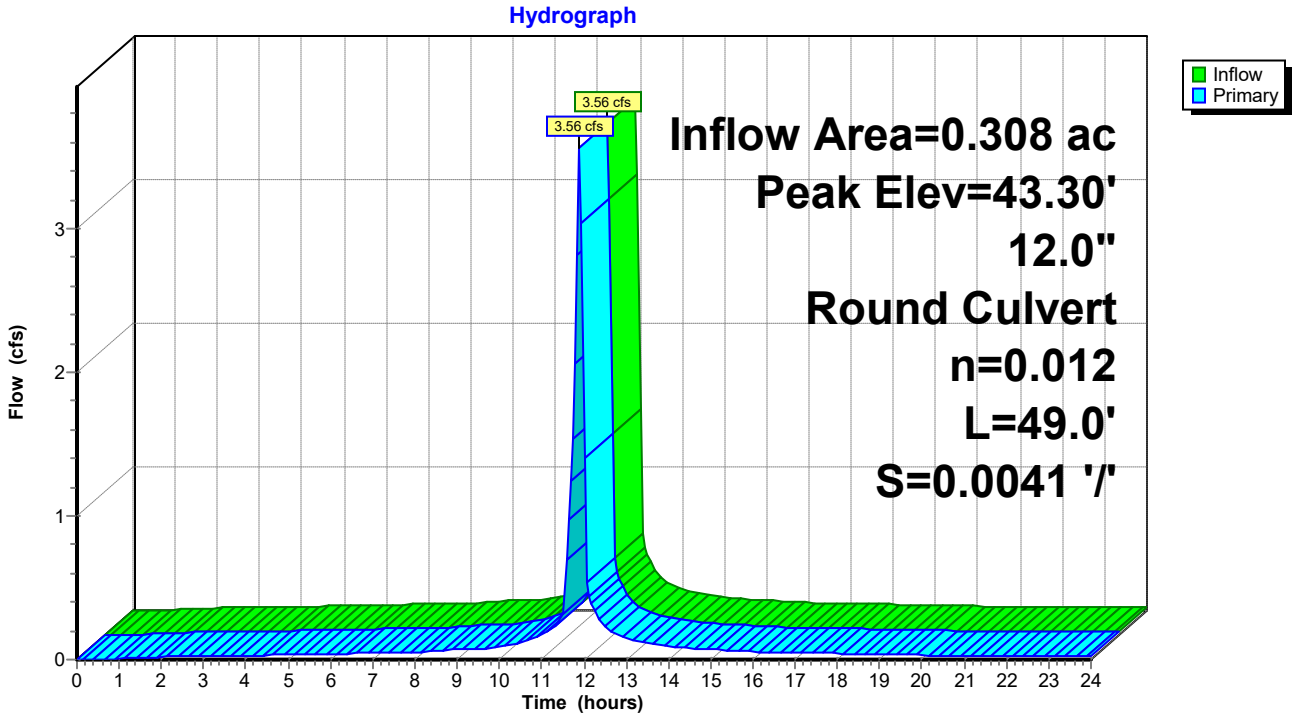
Inflow Area = 0.308 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 3.56 cfs @ 11.90 hrs, Volume= 0.189 af
Outflow = 3.56 cfs @ 11.90 hrs, Volume= 0.189 af, Atten= 0%, Lag= 0.0 min
Primary = 3.56 cfs @ 11.90 hrs, Volume= 0.189 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.30' @ 11.92 hrs
Flood Elev= 46.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.20'	**12.0" Round 12" HDPE** L= 49.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.20' / 41.00' S= 0.0041 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=3.04 cfs @ 11.90 hrs HW=43.23' TW=42.40' (Dynamic Tailwater)
1=12" HDPE (Inlet Controls 3.04 cfs @ 3.86 fps)

Pond 14P: RL-5



Stage-Area-Storage for Pond 14P: RL-5

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.20	**0**	43.24	0	45.28	0
41.24	0	43.28	0	45.32	0
41.28	0	43.32	0	45.36	0
41.32	0	43.36	0	45.40	0
41.36	0	43.40	0	45.44	0
41.40	0	43.44	0	45.48	0
41.44	0	43.48	0	45.52	0
41.48	0	43.52	0	45.56	0
41.52	0	43.56	0	45.60	0
41.56	0	43.60	0	45.64	0
41.60	0	43.64	0	45.68	0
41.64	0	43.68	0	45.72	0
41.68	0	43.72	0	45.76	0
41.72	0	43.76	0	45.80	0
41.76	0	43.80	0	45.84	0
41.80	0	43.84	0	45.88	0
41.84	0	43.88	0	45.92	0
41.88	0	43.92	0	45.96	0
41.92	0	43.96	0	46.00	0
41.96	0	44.00	0	46.04	0
42.00	0	44.04	0	46.08	0
42.04	0	44.08	0	46.12	0
42.08	0	44.12	0	46.16	0
42.12	0	44.16	0	46.20	0
42.16	0	44.20	0	46.24	0
42.20	0	44.24	0	46.28	0
42.24	0	44.28	0	46.32	0
42.28	0	44.32	0	46.36	0
42.32	0	44.36	0	46.40	0
42.36	0	44.40	0	46.44	0
42.40	0	44.44	0	46.48	0
42.44	0	44.48	0		
42.48	0	44.52	0		
42.52	0	44.56	0		
42.56	0	44.60	0		
42.60	0	44.64	0		
42.64	0	44.68	0		
42.68	0	44.72	0		
42.72	0	44.76	0		
42.76	0	44.80	0		
42.80	0	44.84	0		
42.84	0	44.88	0		
42.88	0	44.92	0		
42.92	0	44.96	0		
42.96	0	45.00	0		
43.00	0	45.04	0		
43.04	0	45.08	0		
43.08	0	45.12	0		
43.12	0	45.16	0		
43.16	0	45.20	0		
43.20	0	45.24	0		

Summary for Pond 15P: 30x19 RCP

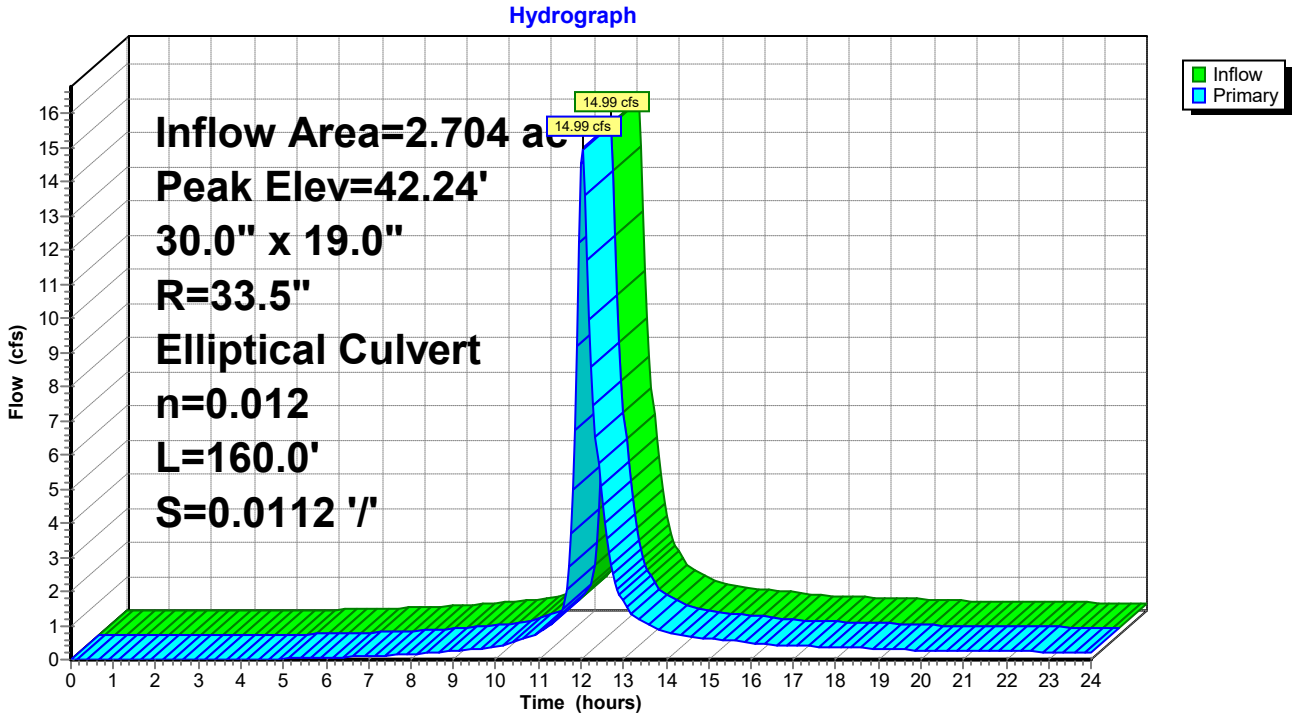
Inflow Area = 2.704 ac, 59.07% Impervious, Inflow Depth > 5.60" for 100-yr event
Inflow = 14.99 cfs @ 12.04 hrs, Volume= 1.262 af
Outflow = 14.99 cfs @ 12.04 hrs, Volume= 1.262 af, Atten= 0%, Lag= 0.0 min
Primary = 14.99 cfs @ 12.04 hrs, Volume= 1.262 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.24' @ 12.04 hrs
Flood Elev= 42.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	40.50'	**30.0" W x 19.0" H, R=33.5" Elliptical RCP_Elliptical 30x19** L= 160.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 40.50' / 38.70' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.28 sf

Primary OutFlow Max=14.82 cfs @ 12.04 hrs HW=42.22' TW=39.85' (Dynamic Tailwater)
1=RCP_Elliptical 30x19 (Inlet Controls 14.82 cfs @ 4.52 fps)

Pond 15P: 30x19 RCP



Stage-Area-Storage for Pond 15P: 30x19 RCP

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
40.50	**0**	41.52	0
40.52	0	41.54	0
40.54	0	41.56	0
40.56	0	41.58	0
40.58	0	41.60	0
40.60	0	41.62	0
40.62	0	41.64	0
40.64	0	41.66	0
40.66	0	41.68	0
40.68	0	41.70	0
40.70	0	41.72	0
40.72	0	41.74	0
40.74	0	41.76	0
40.76	0	41.78	0
40.78	0	41.80	0
40.80	0	41.82	0
40.82	0	41.84	0
40.84	0	41.86	0
40.86	0	41.88	0
40.88	0	41.90	0
40.90	0	41.92	0
40.92	0	41.94	0
40.94	0	41.96	0
40.96	0	41.98	0
40.98	0	42.00	0
41.00	0	42.02	0
41.02	0	42.04	0
41.04	0	42.06	0
41.06	0	42.08	0
41.08	0	42.10	0
41.10	0	42.12	0
41.12	0	42.14	0
41.14	0	42.16	0
41.16	0	42.18	0
41.18	0	42.20	0
41.20	0	42.22	0
41.22	0	42.24	0
41.24	0		
41.26	0		
41.28	0		
41.30	0		
41.32	0		
41.34	0		
41.36	0		
41.38	0		
41.40	0		
41.42	0		
41.44	0		
41.46	0		
41.48	0		
41.50	0		

Summary for Pond 16P: RL-6

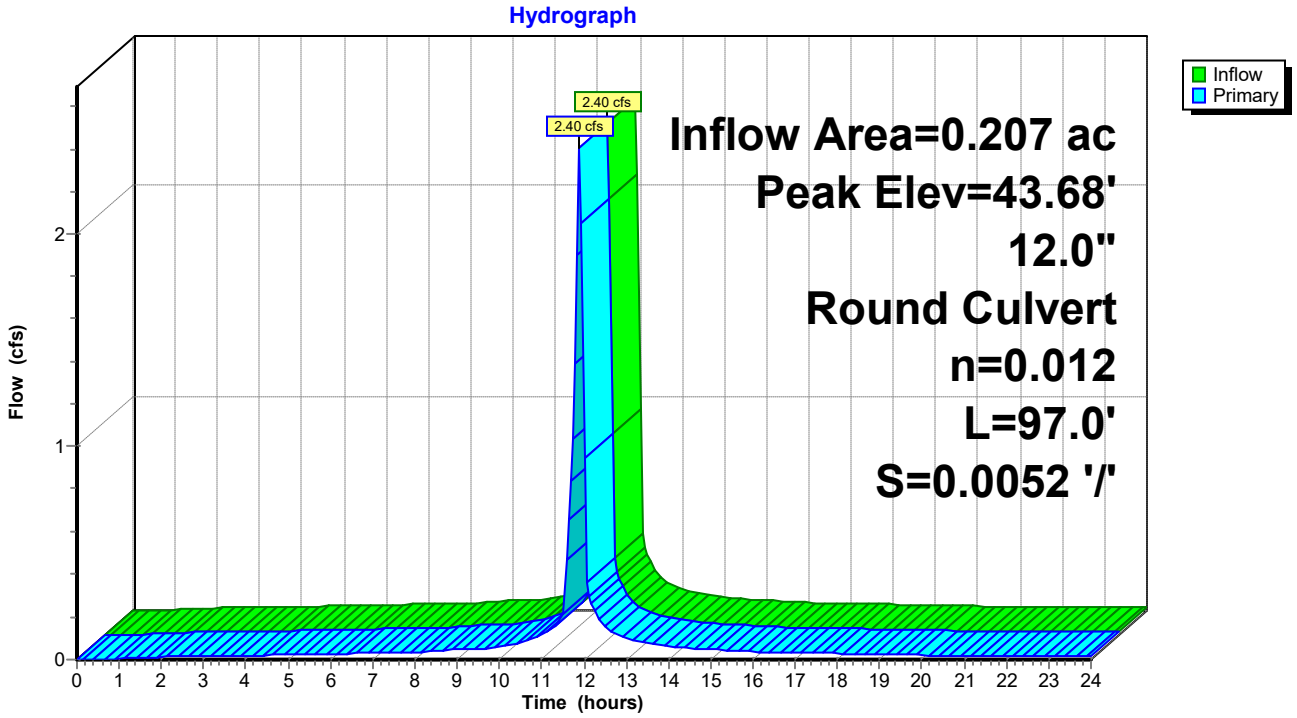
Inflow Area = 0.207 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 2.40 cfs @ 11.90 hrs, Volume= 0.127 af
Outflow = 2.40 cfs @ 11.90 hrs, Volume= 0.127 af, Atten= 0%, Lag= 0.0 min
Primary = 2.40 cfs @ 11.90 hrs, Volume= 0.127 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.68' @ 11.95 hrs
Flood Elev= 46.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.70'	**12.0" Round 12" HDPE** L= 97.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 41.70' / 41.20' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.57 cfs @ 11.90 hrs HW=43.26' TW=43.23' (Dynamic Tailwater)
1=12" HDPE (Outlet Controls 0.57 cfs @ 0.73 fps)

Pond 16P: RL-6



Stage-Area-Storage for Pond 16P: RL-6

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.70	**0**	44.25	0
41.75	0	44.30	0
41.80	0	44.35	0
41.85	0	44.40	0
41.90	0	44.45	0
41.95	0	44.50	0
42.00	0	44.55	0
42.05	0	44.60	0
42.10	0	44.65	0
42.15	0	44.70	0
42.20	0	44.75	0
42.25	0	44.80	0
42.30	0	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0	45.10	0
42.60	0	45.15	0
42.65	0	45.20	0
42.70	0	45.25	0
42.75	0	45.30	0
42.80	0	45.35	0
42.85	0	45.40	0
42.90	0	45.45	0
42.95	0	45.50	0
43.00	0	45.55	0
43.05	0	45.60	0
43.10	0	45.65	0
43.15	0	45.70	0
43.20	0	45.75	0
43.25	0	45.80	0
43.30	0	45.85	0
43.35	0	45.90	0
43.40	0	45.95	0
43.45	0	46.00	0
43.50	0	46.05	0
43.55	0	46.10	0
43.60	0	46.15	0
43.65	0	46.20	0
43.70	0	46.25	0
43.75	0	46.30	0
43.80	0	46.35	0
43.85	0	46.40	0
43.90	0	46.45	0
43.95	0	46.50	0
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		

Summary for Pond 20P: RL-8

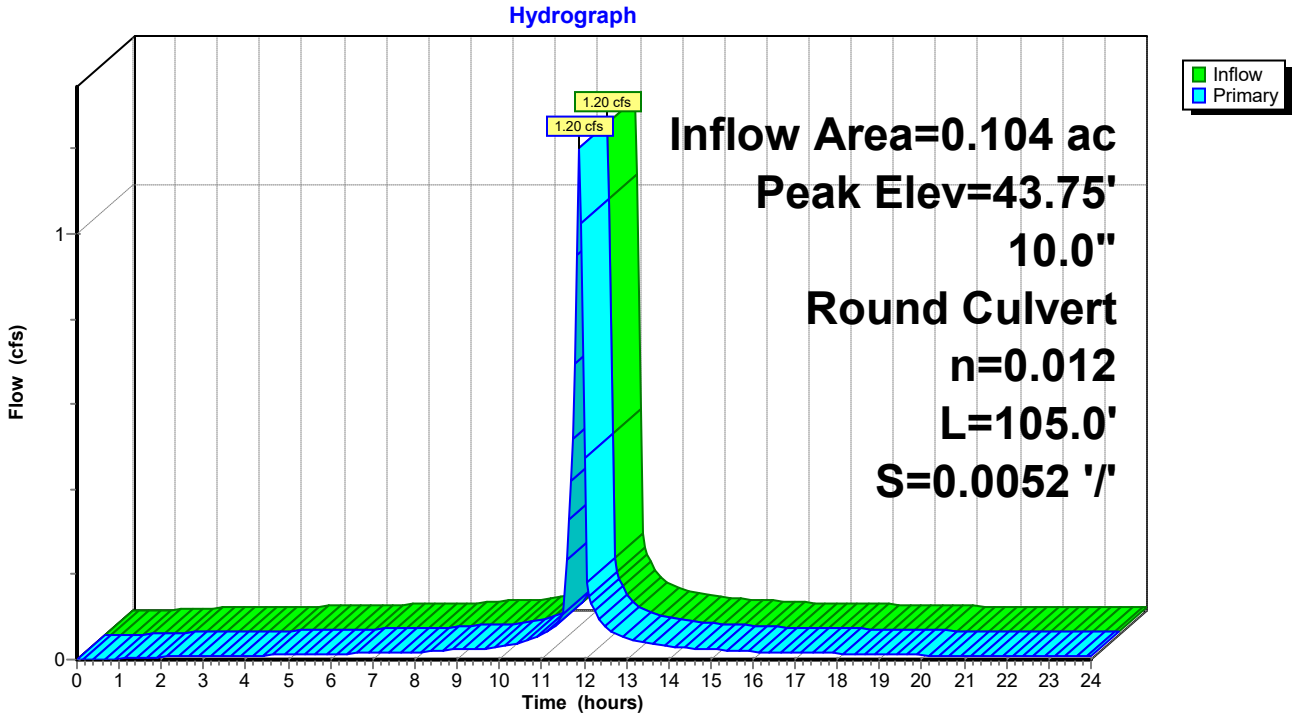
Inflow Area = 0.104 ac,100.00% Impervious, Inflow Depth > 7.36" for 100-yr event
Inflow = 1.20 cfs @ 11.90 hrs, Volume= 0.064 af
Outflow = 1.20 cfs @ 11.90 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min
Primary = 1.20 cfs @ 11.90 hrs, Volume= 0.064 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.75' @ 11.99 hrs
Flood Elev= 45.25'

Device	Routing	Invert	Outlet Devices
#1	Primary	42.25'	**10.0" Round 10" HDPE** L= 105.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 42.25' / 41.70' S= 0.0052 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=0.00 cfs @ 11.90 hrs HW=43.18' TW=43.26' (Dynamic Tailwater)
1=10" HDPE (Controls 0.00 cfs)

Pond 20P: RL-8



Stage-Area-Storage for Pond 20P: RL-8

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.25	**0**	43.27	0	44.29	0
42.27	0	43.29	0	44.31	0
42.29	0	43.31	0	44.33	0
42.31	0	43.33	0	44.35	0
42.33	0	43.35	0	44.37	0
42.35	0	43.37	0	44.39	0
42.37	0	43.39	0	44.41	0
42.39	0	43.41	0	44.43	0
42.41	0	43.43	0	44.45	0
42.43	0	43.45	0	44.47	0
42.45	0	43.47	0	44.49	0
42.47	0	43.49	0	44.51	0
42.49	0	43.51	0	44.53	0
42.51	0	43.53	0	44.55	0
42.53	0	43.55	0	44.57	0
42.55	0	43.57	0	44.59	0
42.57	0	43.59	0	44.61	0
42.59	0	43.61	0	44.63	0
42.61	0	43.63	0	44.65	0
42.63	0	43.65	0	44.67	0
42.65	0	43.67	0	44.69	0
42.67	0	43.69	0	44.71	0
42.69	0	43.71	0	44.73	0
42.71	0	43.73	0	44.75	0
42.73	0	43.75	0	44.77	0
42.75	0	43.77	0	44.79	0
42.77	0	43.79	0	44.81	0
42.79	0	43.81	0	44.83	0
42.81	0	43.83	0	44.85	0
42.83	0	43.85	0	44.87	0
42.85	0	43.87	0	44.89	0
42.87	0	43.89	0	44.91	0
42.89	0	43.91	0	44.93	0
42.91	0	43.93	0	44.95	0
42.93	0	43.95	0	44.97	0
42.95	0	43.97	0	44.99	0
42.97	0	43.99	0	45.01	0
42.99	0	44.01	0	45.03	0
43.01	0	44.03	0	45.05	0
43.03	0	44.05	0	45.07	0
43.05	0	44.07	0	45.09	0
43.07	0	44.09	0	45.11	0
43.09	0	44.11	0	45.13	0
43.11	0	44.13	0	45.15	0
43.13	0	44.15	0	45.17	0
43.15	0	44.17	0	45.19	0
43.17	0	44.19	0	45.21	0
43.19	0	44.21	0	45.23	0
43.21	0	44.23	0	45.25	0
43.23	0	44.25	0		
43.25	0	44.27	0		

Summary for Pond 25P: SDI-1

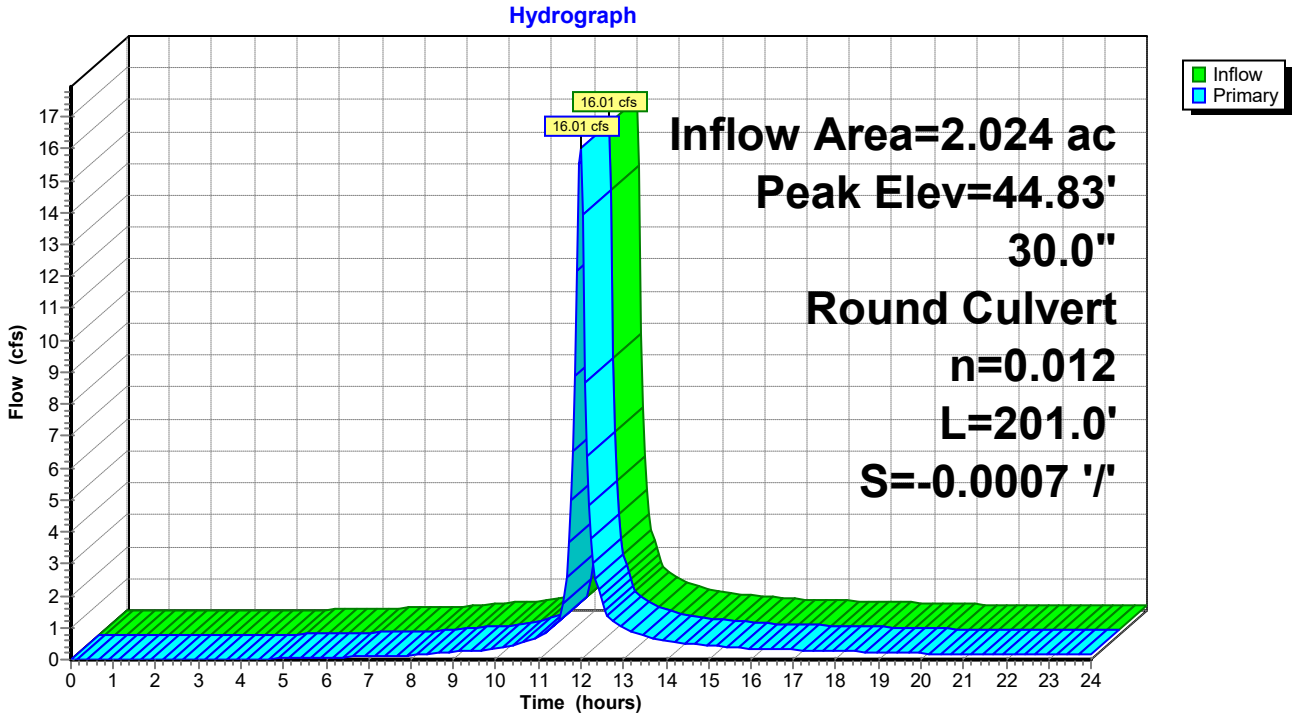
Inflow Area = 2.024 ac, 64.51% Impervious, Inflow Depth > 5.76" for 100-yr event
Inflow = 16.01 cfs @ 11.98 hrs, Volume= 0.971 af
Outflow = 16.01 cfs @ 11.98 hrs, Volume= 0.971 af, Atten= 0%, Lag= 0.0 min
Primary = 16.01 cfs @ 11.98 hrs, Volume= 0.971 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.83' @ 12.06 hrs
Flood Elev= 46.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.84'	**30.0" Round 30" PERF. HDPE** L= 201.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.69' / 41.84' S= -0.0007 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=4.44 cfs @ 11.98 hrs HW=44.36' TW=44.32' (Dynamic Tailwater)
1=30" PERF. HDPE (Outlet Controls 4.44 cfs @ 1.05 fps)

Pond 25P: SDI-1



Stage-Area-Storage for Pond 25P: SDI-1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.84	**0**	44.39	0
41.89	0	44.44	0
41.94	0	44.49	0
41.99	0	44.54	0
42.04	0	44.59	0
42.09	0	44.64	0
42.14	0	44.69	0
42.19	0	44.74	0
42.24	0	44.79	0
42.29	0	44.84	0
42.34	0	44.89	0
42.39	0	44.94	0
42.44	0	44.99	0
42.49	0	45.04	0
42.54	0	45.09	0
42.59	0	45.14	0
42.64	0	45.19	0
42.69	0	45.24	0
42.74	0	45.29	0
42.79	0	45.34	0
42.84	0	45.39	0
42.89	0	45.44	0
42.94	0	45.49	0
42.99	0	45.54	0
43.04	0	45.59	0
43.09	0	45.64	0
43.14	0	45.69	0
43.19	0	45.74	0
43.24	0	45.79	0
43.29	0	45.84	0
43.34	0	45.89	0
43.39	0	45.94	0
43.44	0	45.99	0
43.49	0		
43.54	0		
43.59	0		
43.64	0		
43.69	0		
43.74	0		
43.79	0		
43.84	0		
43.89	0		
43.94	0		
43.99	0		
44.04	0		
44.09	0		
44.14	0		
44.19	0		
44.24	0		
44.29	0		
44.34	0		

Summary for Pond 28P: Doghouse SDMH

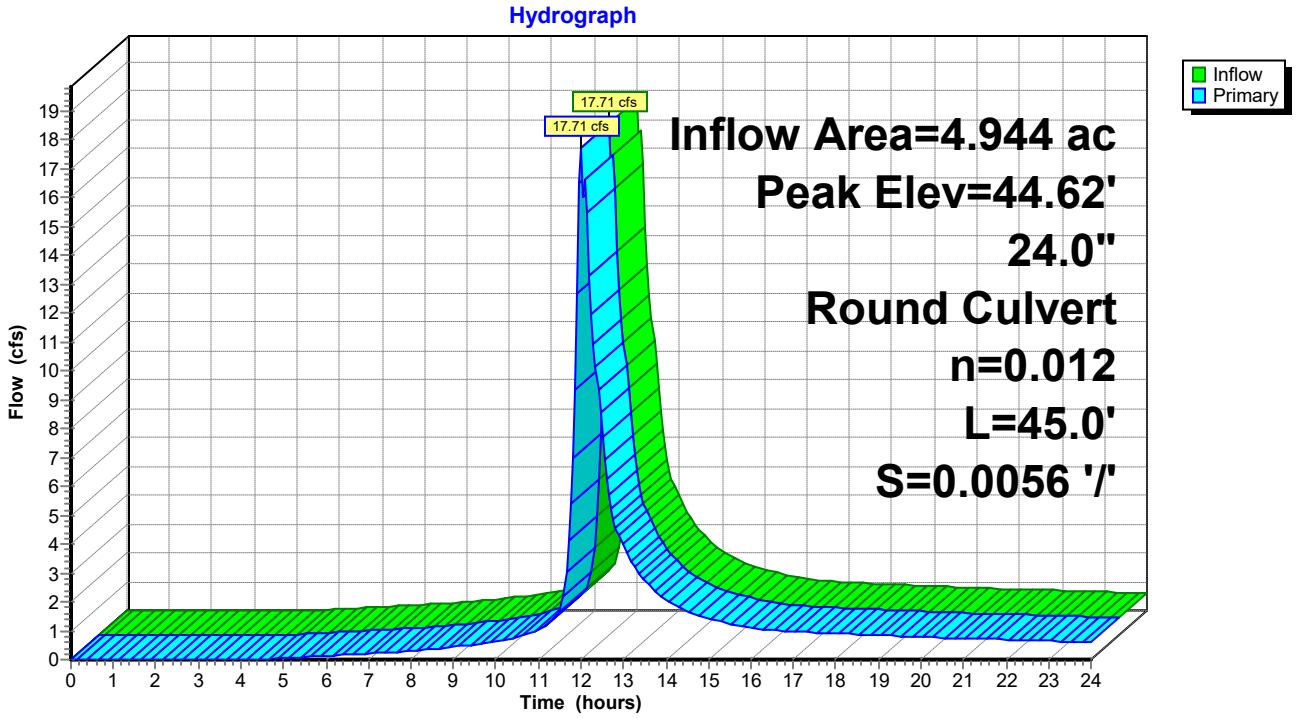
Inflow Area = 4.944 ac, 68.48% Impervious, Inflow Depth > 5.52" for 100-yr event
Inflow = 17.71 cfs @ 12.00 hrs, Volume= 2.274 af
Outflow = 17.71 cfs @ 12.00 hrs, Volume= 2.274 af, Atten= 0%, Lag= 0.0 min
Primary = 17.71 cfs @ 12.00 hrs, Volume= 2.274 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.62' @ 12.02 hrs
Flood Elev= 48.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.65'	**24.0" Round Culvert** L= 45.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.65' / 41.40' S= 0.0056 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=15.96 cfs @ 12.00 hrs HW=44.52' TW=43.81' (Dynamic Tailwater)
1=Culvert (Inlet Controls 15.96 cfs @ 5.08 fps)

Pond 28P: Doghouse SDMH



Stage-Area-Storage for Pond 28P: Doghouse SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.65	**0**	46.75	0
41.75	0	46.85	0
41.85	0	46.95	0
41.95	0	47.05	0
42.05	0	47.15	0
42.15	0	47.25	0
42.25	0	47.35	0
42.35	0	47.45	0
42.45	0	47.55	0
42.55	0	47.65	0
42.65	0	47.75	0
42.75	0	47.85	0
42.85	0	47.95	0
42.95	0		
43.05	0		
43.15	0		
43.25	0		
43.35	0		
43.45	0		
43.55	0		
43.65	0		
43.75	0		
43.85	0		
43.95	0		
44.05	0		
44.15	0		
44.25	0		
44.35	0		
44.45	0		
44.55	0		
44.65	0		
44.75	0		
44.85	0		
44.95	0		
45.05	0		
45.15	0		
45.25	0		
45.35	0		
45.45	0		
45.55	0		
45.65	0		
45.75	0		
45.85	0		
45.95	0		
46.05	0		
46.15	0		
46.25	0		
46.35	0		
46.45	0		
46.55	0		
46.65	0		

Summary for Pond EX-P: G2 Pond & Underground

Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 6.05" for 100-yr event
Inflow = 20.33 cfs @ 12.01 hrs, Volume= 1.621 af
Outflow = 18.68 cfs @ 12.10 hrs, Volume= 1.474 af, Atten= 8%, Lag= 5.4 min
Primary = 9.62 cfs @ 12.10 hrs, Volume= 1.358 af
Secondary = 9.07 cfs @ 12.10 hrs, Volume= 0.116 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 46.65' @ 12.10 hrs Surf.Area= 0 sf Storage= 21,420 cf
Flood Elev= 47.00' Surf.Area= 0 sf Storage= 23,400 cf

Plug-Flow detention time= 125.8 min calculated for 1.474 af (91% of inflow)
Center-of-Mass det. time= 79.1 min (868.7 - 789.6)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	23,400 cf	**Custom Stage Data** Listed below

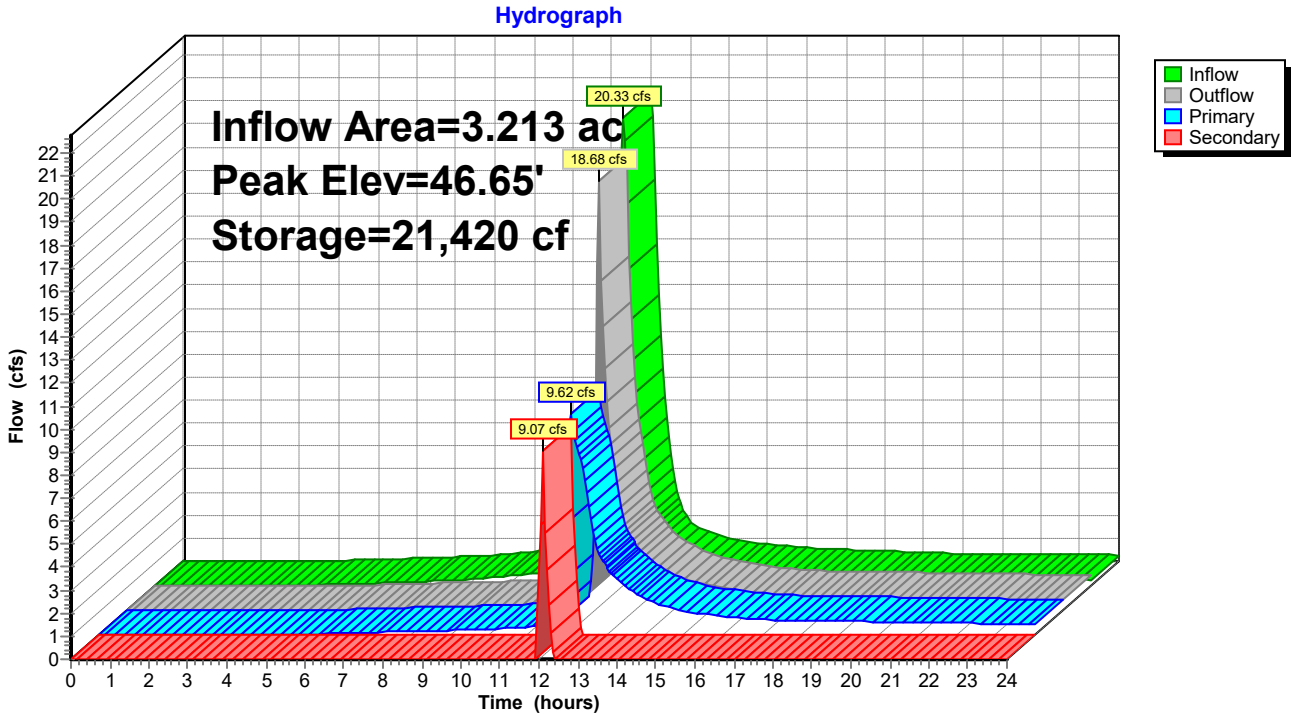
Elevation (feet)	Cum.Store (cubic-feet)
42.00	0
42.25	523
42.50	1,508
42.75	2,524
43.00	3,566
43.25	4,630
43.50	5,712
43.75	6,809
44.00	7,911
44.25	9,006
44.50	10,072
45.00	12,544
46.00	17,789
47.00	23,400

Device	Routing	Invert	Outlet Devices
#1	Primary	42.00'	**30.0" Round 30" PERF HDPE** L= 12.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 42.00' / 41.84' S= 0.0133 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	42.00'	**4.0" Vert. 4" hole in S-2 weir from 2005 G2 Plans** C= 0.600
#3	Device 1	44.70'	**6.0" W x 16.8" H Vert. 4" notched wieir from G2 plans** C= 0.600
#4	Device 1	46.10'	**4.0' long Top of Weir in S-2 outlet box** Cv= 2.62 (C= 3.28)
#5	Secondary	46.50'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=9.49 cfs @ 12.10 hrs HW=46.64' TW=44.93' (Dynamic Tailwater)
└─**1=30" PERF HDPE** (Passes 9.49 cfs of 38.71 cfs potential flow)
  ├─**2=4" hole in S-2 weir from 2005 G2 Plans** (Orifice Controls 0.55 cfs @ 6.31 fps)
  ├─**3=4" notched wieir from G2 plans** (Orifice Controls 3.68 cfs @ 5.26 fps)
  └─**4=Top of Weir in S-2 outlet box** (Weir Controls 5.25 cfs @ 2.42 fps)

Secondary OutFlow Max=8.97 cfs @ 12.10 hrs HW=46.65' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Weir Controls 8.97 cfs @ 1.02 fps)

Pond EX-P: G2 Pond & Underground



Stage-Area-Storage for Pond EX-P: G2 Pond & Underground

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.00	0	44.55	10,319
42.05	105	44.60	10,566
42.10	209	44.65	10,814
42.15	314	44.70	11,061
42.20	418	44.75	11,308
42.25	523	44.80	11,555
42.30	720	44.85	11,802
42.35	917	44.90	12,050
42.40	1,114	44.95	12,297
42.45	1,311	45.00	12,544
42.50	1,508	45.05	12,806
42.55	1,711	45.10	13,069
42.60	1,914	45.15	13,331
42.65	2,118	45.20	13,593
42.70	2,321	45.25	13,855
42.75	2,524	45.30	14,117
42.80	2,732	45.35	14,380
42.85	2,941	45.40	14,642
42.90	3,149	45.45	14,904
42.95	3,358	45.50	15,167
43.00	3,566	45.55	15,429
43.05	3,779	45.60	15,691
43.10	3,992	45.65	15,953
43.15	4,204	45.70	16,216
43.20	4,417	45.75	16,478
43.25	4,630	45.80	16,740
43.30	4,846	45.85	17,002
43.35	5,063	45.90	17,264
43.40	5,279	45.95	17,527
43.45	5,496	46.00	17,789
43.50	5,712	46.05	18,070
43.55	5,931	46.10	18,350
43.60	6,151	46.15	18,631
43.65	6,370	46.20	18,911
43.70	6,590	46.25	19,192
43.75	6,809	46.30	19,472
43.80	7,029	46.35	19,753
43.85	7,250	46.40	20,033
43.90	7,470	46.45	20,314
43.95	7,691	46.50	20,595
44.00	7,911	46.55	20,875
44.05	8,130	46.60	21,156
44.10	8,349	46.65	21,436
44.15	8,568	46.70	21,717
44.20	8,787	46.75	21,997
44.25	9,006	46.80	22,278
44.30	9,219	46.85	22,558
44.35	9,432	46.90	22,839
44.40	9,646	46.95	23,119
44.45	9,859	47.00	**23,400**
44.50	10,072		

Summary for Pond EX-PP: G2 Pond & Underground

Inflow Area = 2.920 ac, 71.23% Impervious, Inflow Depth > 6.04" for 100-yr event
Inflow = 18.87 cfs @ 12.03 hrs, Volume= 1.470 af
Outflow = 15.63 cfs @ 12.16 hrs, Volume= 1.361 af, Atten= 17%, Lag= 7.8 min
Primary = 9.16 cfs @ 12.16 hrs, Volume= 1.303 af
Secondary = 6.47 cfs @ 12.16 hrs, Volume= 0.058 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 46.62' @ 12.16 hrs Surf.Area= 0 sf Storage= 21,256 cf
Flood Elev= 47.00' Surf.Area= 0 sf Storage= 23,400 cf

Plug-Flow detention time= 129.1 min calculated for 1.361 af (93% of inflow)
Center-of-Mass det. time= 89.2 min (880.0 - 790.8)

Volume	Invert	Avail.Storage	Storage Description
#1	42.00'	23,400 cf	**Custom Stage Data** Listed below

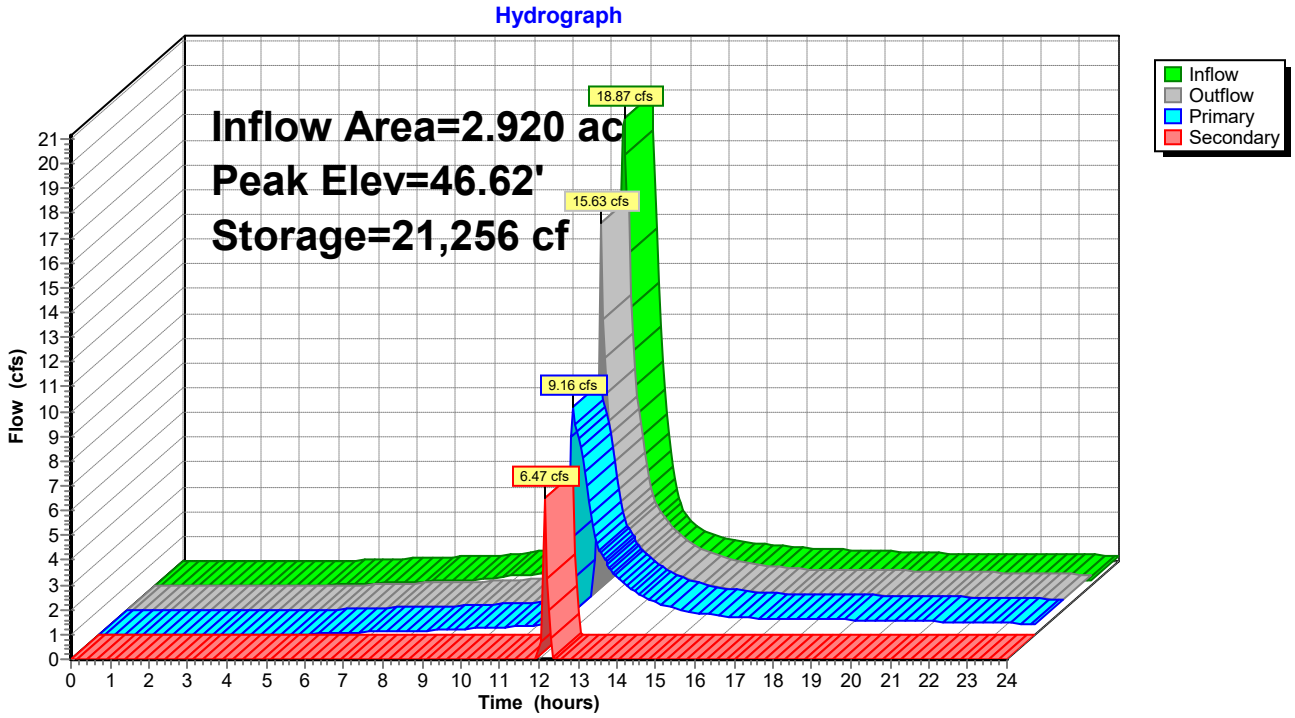
Elevation (feet)	Cum.Store (cubic-feet)
42.00	0
42.25	523
42.50	1,508
42.75	2,524
43.00	3,566
43.25	4,630
43.50	5,712
43.75	6,809
44.00	7,911
44.25	9,006
44.50	10,072
45.00	12,544
46.00	17,789
47.00	23,400

Device	Routing	Invert	Outlet Devices
#1	Primary	42.00'	**30.0" Round 30" PERF HDPE** L= 12.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 42.00' / 41.84' S= 0.0133 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	42.00'	**4.0" Vert. 4" hole in S-2 weir from 2005 G2 Plans** C= 0.600
#3	Device 1	44.70'	**6.0" W x 16.8" H Vert. 4" notched wieir from G2 plans** C= 0.600
#4	Device 1	46.10'	**4.0' long Top of Weir in S-2 outlet box** Cv= 2.62 (C= 3.28)
#5	Secondary	46.50'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=9.06 cfs @ 12.16 hrs HW=46.61' TW=44.39' (Dynamic Tailwater)
└─**1=30" PERF HDPE** (Passes 9.06 cfs of 43.99 cfs potential flow)
  ├─**2=4" hole in S-2 weir from 2005 G2 Plans** (Orifice Controls 0.63 cfs @ 7.17 fps)
  ├─**3=4" notched wieir from G2 plans** (Orifice Controls 3.65 cfs @ 5.22 fps)
  └─**4=Top of Weir in S-2 outlet box** (Weir Controls 4.78 cfs @ 2.34 fps)

Secondary OutFlow Max=6.01 cfs @ 12.16 hrs HW=46.61' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Weir Controls 6.01 cfs @ 0.90 fps)

Pond EX-PP: G2 Pond & Underground



Stage-Area-Storage for Pond EX-PP: G2 Pond & Underground

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
42.00	0	44.55	10,319
42.05	105	44.60	10,566
42.10	209	44.65	10,814
42.15	314	44.70	11,061
42.20	418	44.75	11,308
42.25	523	44.80	11,555
42.30	720	44.85	11,802
42.35	917	44.90	12,050
42.40	1,114	44.95	12,297
42.45	1,311	45.00	12,544
42.50	1,508	45.05	12,806
42.55	1,711	45.10	13,069
42.60	1,914	45.15	13,331
42.65	2,118	45.20	13,593
42.70	2,321	45.25	13,855
42.75	2,524	45.30	14,117
42.80	2,732	45.35	14,380
42.85	2,941	45.40	14,642
42.90	3,149	45.45	14,904
42.95	3,358	45.50	15,167
43.00	3,566	45.55	15,429
43.05	3,779	45.60	15,691
43.10	3,992	45.65	15,953
43.15	4,204	45.70	16,216
43.20	4,417	45.75	16,478
43.25	4,630	45.80	16,740
43.30	4,846	45.85	17,002
43.35	5,063	45.90	17,264
43.40	5,279	45.95	17,527
43.45	5,496	46.00	17,789
43.50	5,712	46.05	18,070
43.55	5,931	46.10	18,350
43.60	6,151	46.15	18,631
43.65	6,370	46.20	18,911
43.70	6,590	46.25	19,192
43.75	6,809	46.30	19,472
43.80	7,029	46.35	19,753
43.85	7,250	46.40	20,033
43.90	7,470	46.45	20,314
43.95	7,691	46.50	20,595
44.00	7,911	46.55	20,875
44.05	8,130	46.60	21,156
44.10	8,349	46.65	21,436
44.15	8,568	46.70	21,717
44.20	8,787	46.75	21,997
44.25	9,006	46.80	22,278
44.30	9,219	46.85	22,558
44.35	9,432	46.90	22,839
44.40	9,646	46.95	23,119
44.45	9,859	47.00	**23,400**
44.50	10,072		

Summary for Pond EX1: Existing SDMH

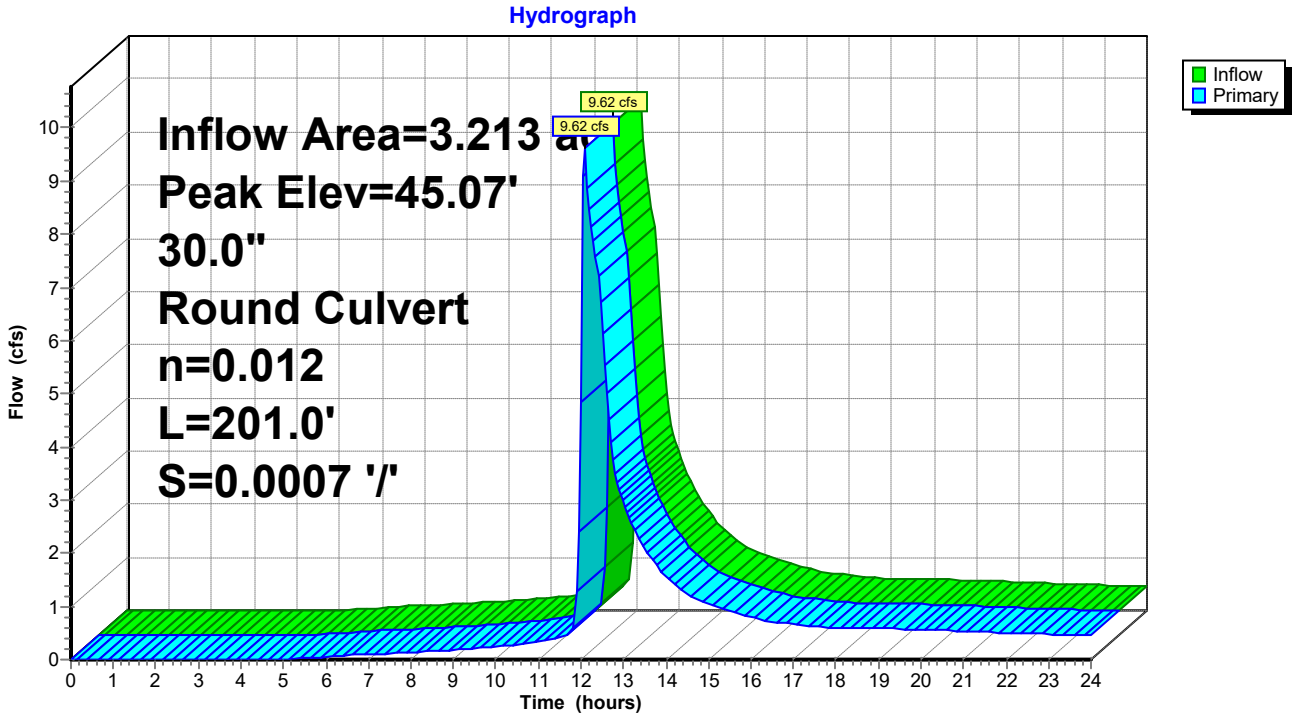
Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 5.07" for 100-yr event
Inflow = 9.62 cfs @ 12.10 hrs, Volume= 1.358 af
Outflow = 9.62 cfs @ 12.10 hrs, Volume= 1.358 af, Atten= 0%, Lag= 0.0 min
Primary = 9.62 cfs @ 12.10 hrs, Volume= 1.358 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.07' @ 12.15 hrs
Flood Elev= 48.04'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.84'	**30.0" Round 30" PERF. HDPE** L= 201.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 41.84' / 41.69' S= 0.0007 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=0.00 cfs @ 12.10 hrs HW=44.93' TW=44.93' (Dynamic Tailwater)
1=30" PERF. HDPE (Controls 0.00 cfs)

Pond EX1: Existing SDMH



Stage-Area-Storage for Pond EX1: Existing SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.84	**0**	46.94	0
41.94	0	47.04	0
42.04	0	47.14	0
42.14	0	47.24	0
42.24	0	47.34	0
42.34	0	47.44	0
42.44	0	47.54	0
42.54	0	47.64	0
42.64	0	47.74	0
42.74	0	47.84	0
42.84	0	47.94	0
42.94	0	48.04	0
43.04	0		
43.14	0		
43.24	0		
43.34	0		
43.44	0		
43.54	0		
43.64	0		
43.74	0		
43.84	0		
43.94	0		
44.04	0		
44.14	0		
44.24	0		
44.34	0		
44.44	0		
44.54	0		
44.64	0		
44.74	0		
44.84	0		
44.94	0		
45.04	0		
45.14	0		
45.24	0		
45.34	0		
45.44	0		
45.54	0		
45.64	0		
45.74	0		
45.84	0		
45.94	0		
46.04	0		
46.14	0		
46.24	0		
46.34	0		
46.44	0		
46.54	0		
46.64	0		
46.74	0		
46.84	0		

Summary for Pond EX2: Existing SDI

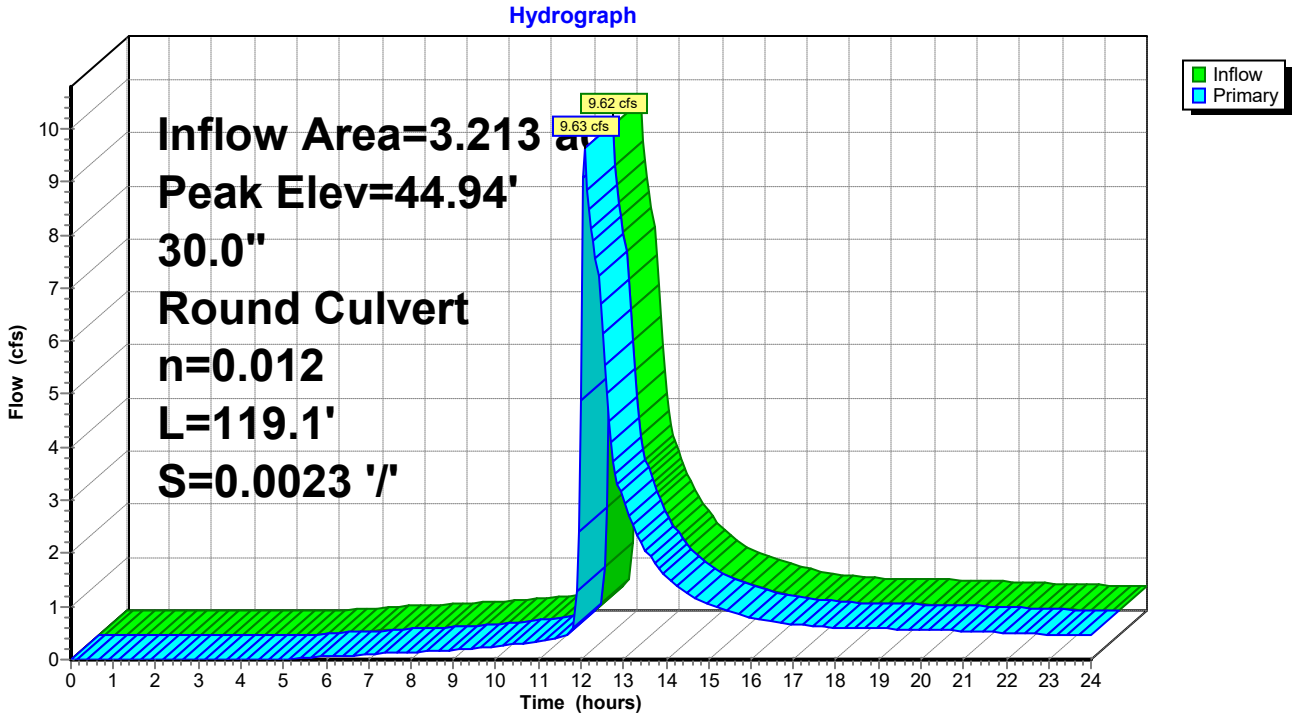
Inflow Area = 3.213 ac, 70.08% Impervious, Inflow Depth > 5.07" for 100-yr event
Inflow = 9.62 cfs @ 12.10 hrs, Volume= 1.358 af
Outflow = 9.63 cfs @ 12.10 hrs, Volume= 1.358 af, Atten= 0%, Lag= 0.0 min
Primary = 9.63 cfs @ 12.10 hrs, Volume= 1.358 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.94' @ 12.11 hrs
Flood Elev= 47.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.49'	**30.0" Round 30" HDPE** L= 119.1' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.49' / 41.22' S= 0.0023 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=10.84 cfs @ 12.10 hrs HW=44.93' TW=44.72' (Dynamic Tailwater)
1=30" HDPE (Inlet Controls 10.84 cfs @ 2.21 fps)

Pond EX2: Existing SDI



Stage-Area-Storage for Pond EX2: Existing SDI

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.49	**0**	43.53	0	45.57	0
41.53	0	43.57	0	45.61	0
41.57	0	43.61	0	45.65	0
41.61	0	43.65	0	45.69	0
41.65	0	43.69	0	45.73	0
41.69	0	43.73	0	45.77	0
41.73	0	43.77	0	45.81	0
41.77	0	43.81	0	45.85	0
41.81	0	43.85	0	45.89	0
41.85	0	43.89	0	45.93	0
41.89	0	43.93	0	45.97	0
41.93	0	43.97	0	46.01	0
41.97	0	44.01	0	46.05	0
42.01	0	44.05	0	46.09	0
42.05	0	44.09	0	46.13	0
42.09	0	44.13	0	46.17	0
42.13	0	44.17	0	46.21	0
42.17	0	44.21	0	46.25	0
42.21	0	44.25	0	46.29	0
42.25	0	44.29	0	46.33	0
42.29	0	44.33	0	46.37	0
42.33	0	44.37	0	46.41	0
42.37	0	44.41	0	46.45	0
42.41	0	44.45	0	46.49	0
42.45	0	44.49	0	46.53	0
42.49	0	44.53	0	46.57	0
42.53	0	44.57	0	46.61	0
42.57	0	44.61	0	46.65	0
42.61	0	44.65	0	46.69	0
42.65	0	44.69	0	46.73	0
42.69	0	44.73	0	46.77	0
42.73	0	44.77	0	46.81	0
42.77	0	44.81	0	46.85	0
42.81	0	44.85	0	46.89	0
42.85	0	44.89	0	46.93	0
42.89	0	44.93	0	46.97	0
42.93	0	44.97	0	47.01	0
42.97	0	45.01	0	47.05	0
43.01	0	45.05	0		
43.05	0	45.09	0		
43.09	0	45.13	0		
43.13	0	45.17	0		
43.17	0	45.21	0		
43.21	0	45.25	0		
43.25	0	45.29	0		
43.29	0	45.33	0		
43.33	0	45.37	0		
43.37	0	45.41	0		
43.41	0	45.45	0		
43.45	0	45.49	0		
43.49	0	45.53	0		

Summary for Pond EXCL1: Ex Northern Entrance Culvert

Inflow Area = 10.662 ac, 56.13% Impervious, Inflow Depth > 5.13" for 100-yr event
Inflow = 39.50 cfs @ 12.07 hrs, Volume= 4.556 af
Outflow = 39.50 cfs @ 12.07 hrs, Volume= 4.556 af, Atten= 0%, Lag= 0.0 min
Primary = 15.04 cfs @ 12.07 hrs, Volume= 3.615 af
Secondary = 24.45 cfs @ 12.07 hrs, Volume= 0.941 af

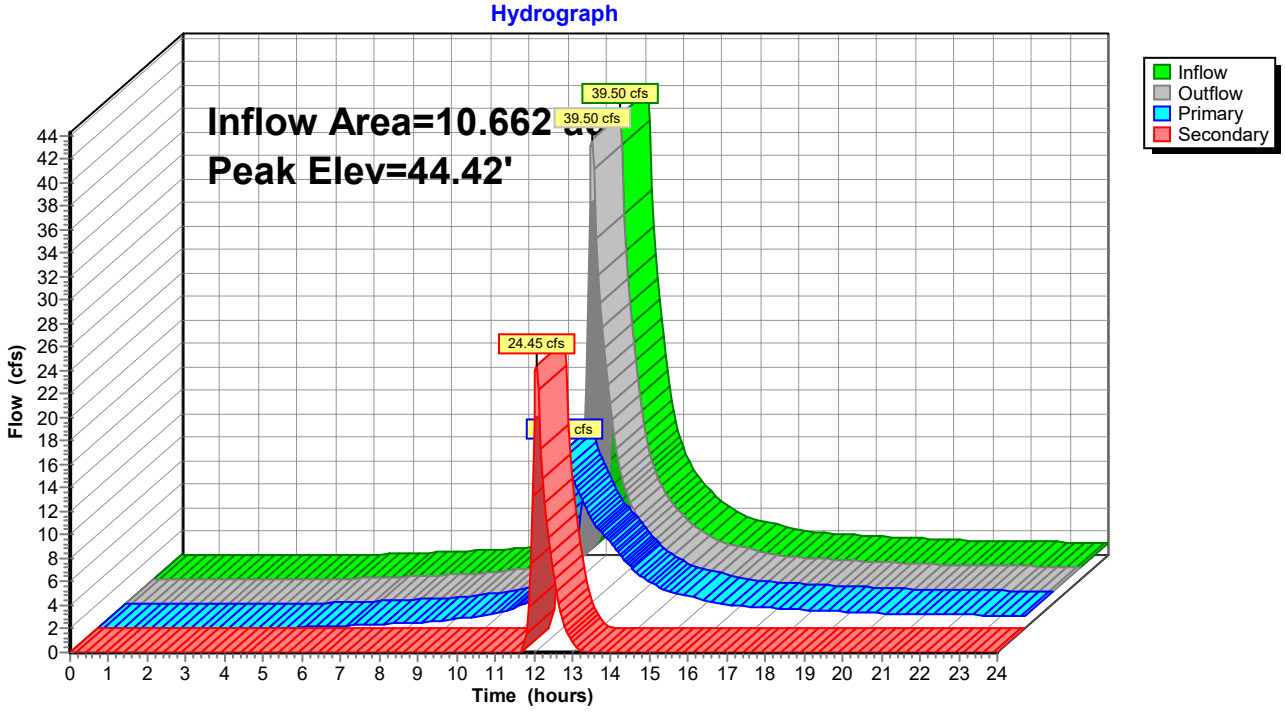
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.42' @ 12.07 hrs
Flood Elev= 40.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.52'	**21.0" W x 15.0" H, R=10.8"/33.1" Pipe Arch CMP_Arch_1/2 21x15** L= 44.7' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 38.52' / 37.56' S= 0.0215 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.74 sf
#2	Secondary	40.00'	**1.0' long x 42.0' breadth Over top of entrance pavement** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=14.95 cfs @ 12.07 hrs HW=44.36' TW=0.00' (Dynamic Tailwater)
└**1=CMP_Arch_1/2 21x15** (Barrel Controls 14.95 cfs @ 8.57 fps)

Secondary OutFlow Max=23.93 cfs @ 12.07 hrs HW=44.36' TW=0.00' (Dynamic Tailwater)
└**2=Over top of entrance pavement** (Weir Controls 23.93 cfs @ 5.49 fps)

Pond EXCL1: Ex Northern Entrance Culvert



Stage-Area-Storage for Pond EXCL1: Ex Northern Entrance Culvert

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.52	**0**	40.56	0	42.60	0
38.56	0	40.60	0	42.64	0
38.60	0	40.64	0	42.68	0
38.64	0	40.68	0	42.72	0
38.68	0	40.72	0	42.76	0
38.72	0	40.76	0	42.80	0
38.76	0	40.80	0	42.84	0
38.80	0	40.84	0	42.88	0
38.84	0	40.88	0	42.92	0
38.88	0	40.92	0	42.96	0
38.92	0	40.96	0	43.00	0
38.96	0	41.00	0	43.04	0
39.00	0	41.04	0	43.08	0
39.04	0	41.08	0	43.12	0
39.08	0	41.12	0	43.16	0
39.12	0	41.16	0	43.20	0
39.16	0	41.20	0	43.24	0
39.20	0	41.24	0	43.28	0
39.24	0	41.28	0	43.32	0
39.28	0	41.32	0	43.36	0
39.32	0	41.36	0	43.40	0
39.36	0	41.40	0	43.44	0
39.40	0	41.44	0	43.48	0
39.44	0	41.48	0	43.52	0
39.48	0	41.52	0	43.56	0
39.52	0	41.56	0	43.60	0
39.56	0	41.60	0	43.64	0
39.60	0	41.64	0	43.68	0
39.64	0	41.68	0	43.72	0
39.68	0	41.72	0	43.76	0
39.72	0	41.76	0	43.80	0
39.76	0	41.80	0	43.84	0
39.80	0	41.84	0	43.88	0
39.84	0	41.88	0	43.92	0
39.88	0	41.92	0	43.96	0
39.92	0	41.96	0	44.00	0
39.96	0	42.00	0	44.04	0
40.00	0	42.04	0	44.08	0
40.04	0	42.08	0	44.12	0
40.08	0	42.12	0	44.16	0
40.12	0	42.16	0	44.20	0
40.16	0	42.20	0	44.24	0
40.20	0	42.24	0	44.28	0
40.24	0	42.28	0	44.32	0
40.28	0	42.32	0	44.36	0
40.32	0	42.36	0		
40.36	0	42.40	0		
40.40	0	42.44	0		
40.44	0	42.48	0		
40.48	0	42.52	0		
40.52	0	42.56	0		

Summary for Pond EXCL2: Ex Southern Entrance Culvert

Inflow Area = 8.271 ac, 61.23% Impervious, Inflow Depth > 5.28" for 100-yr event
Inflow = 36.60 cfs @ 12.06 hrs, Volume= 3.638 af
Outflow = 36.60 cfs @ 12.06 hrs, Volume= 3.638 af, Atten= 0%, Lag= 0.0 min
Primary = 14.13 cfs @ 12.05 hrs, Volume= 2.947 af
Secondary = 22.50 cfs @ 12.07 hrs, Volume= 0.691 af

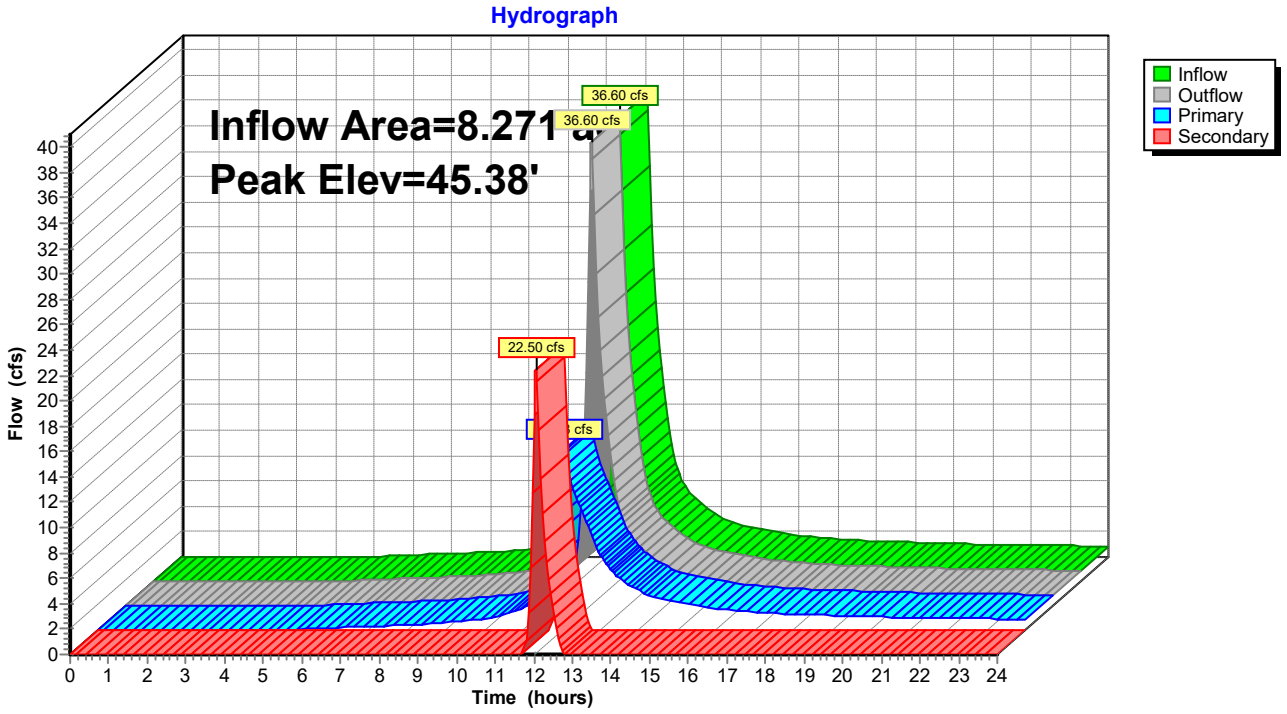
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.38' @ 12.07 hrs
Flood Elev= 41.33'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.94'	**18.0" Round 18" CMP** L= 46.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 38.94' / 38.46' S= 0.0104 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Secondary	41.20'	**1.0' long x 45.0' breadth Over top of entrance pavement** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=13.96 cfs @ 12.05 hrs HW=45.35' TW=40.69' (Dynamic Tailwater)
└**1=18" CMP** (Outlet Controls 13.96 cfs @ 7.90 fps)

Secondary OutFlow Max=22.04 cfs @ 12.07 hrs HW=45.33' TW=40.69' (Dynamic Tailwater)
└**2=Over top of entrance pavement** (Weir Controls 22.04 cfs @ 5.34 fps)

Pond EXCL2: Ex Southern Entrance Culvert



Stage-Area-Storage for Pond EXCL2: Ex Southern Entrance Culvert

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.94	**0**	44.04	0
39.04	0	44.14	0
39.14	0	44.24	0
39.24	0	44.34	0
39.34	0	44.44	0
39.44	0	44.54	0
39.54	0	44.64	0
39.64	0	44.74	0
39.74	0	44.84	0
39.84	0	44.94	0
39.94	0	45.04	0
40.04	0	45.14	0
40.14	0	45.24	0
40.24	0	45.34	0
40.34	0		
40.44	0		
40.54	0		
40.64	0		
40.74	0		
40.84	0		
40.94	0		
41.04	0		
41.14	0		
41.24	0		
41.34	0		
41.44	0		
41.54	0		
41.64	0		
41.74	0		
41.84	0		
41.94	0		
42.04	0		
42.14	0		
42.24	0		
42.34	0		
42.44	0		
42.54	0		
42.64	0		
42.74	0		
42.84	0		
42.94	0		
43.04	0		
43.14	0		
43.24	0		
43.34	0		
43.44	0		
43.54	0		
43.64	0		
43.74	0		
43.84	0		
43.94	0		

Summary for Pond MBR#1: MBR#1

Inflow Area = 0.452 ac, 67.32% Impervious, Inflow Depth > 5.92" for 100-yr event
Inflow = 4.66 cfs @ 11.91 hrs, Volume= 0.223 af
Outflow = 3.50 cfs @ 11.97 hrs, Volume= 0.154 af, Atten= 25%, Lag= 3.8 min
Primary = 3.50 cfs @ 11.97 hrs, Volume= 0.154 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 45.46' @ 11.97 hrs Surf.Area= 2,560 sf Storage= 4,430 cf

Plug-Flow detention time= 173.8 min calculated for 0.154 af (69% of inflow)
Center-of-Mass det. time= 77.1 min (858.9 - 781.8)

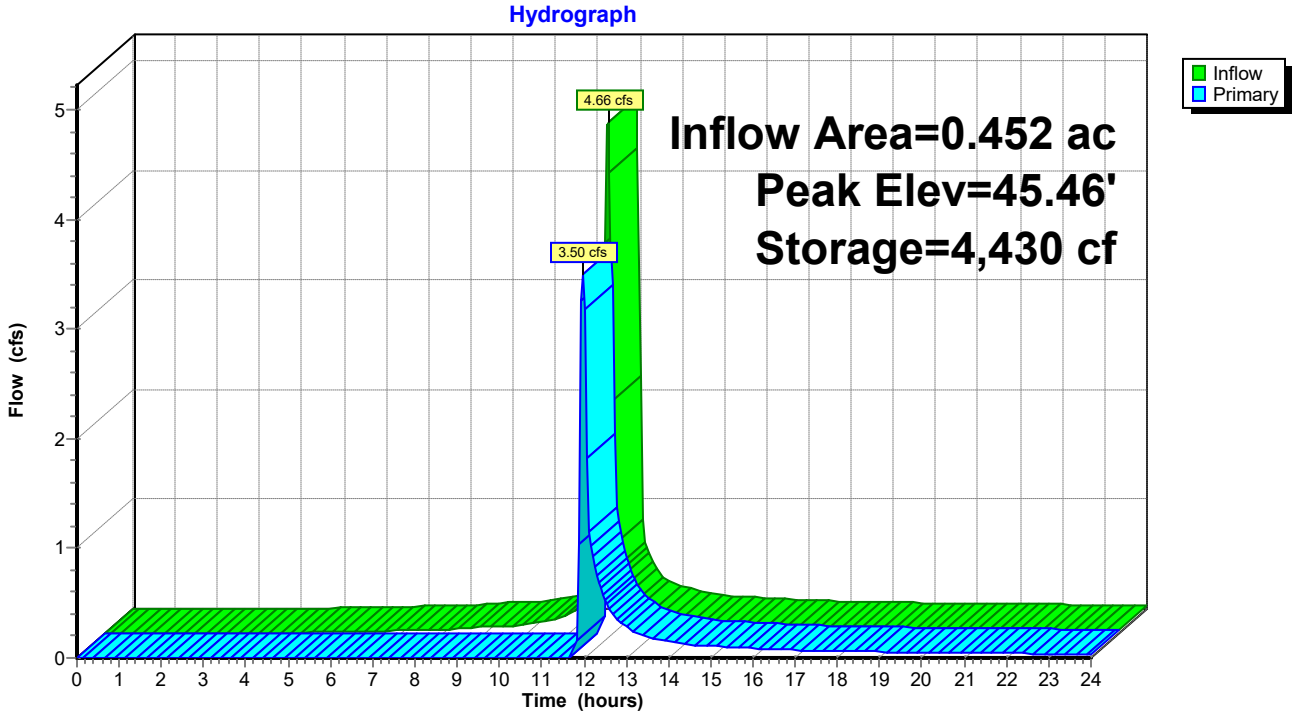
Volume	Invert	Avail.Storage	Storage Description
#1	41.79'	5,356 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.79	1,437	149.0	0.0	0	0	1,437
41.80	1,437	149.0	40.0	6	6	1,438
43.79	1,437	149.0	40.0	1,144	1,150	1,735
43.80	1,437	149.0	100.0	14	1,164	1,736
45.80	2,833	200.0	100.0	4,192	5,356	3,195

Device	Routing	Invert	Outlet Devices
#1	Primary	41.79'	**12.0" Round 12" HDPE** L= 43.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.79' / 41.70' S= 0.0021 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	44.80'	**12.0" W x 6.0" H Vert. 12" notch in box** C= 0.600
#3	Device 1	45.30'	**10.7' long Rim SHA 374.23** 0 End Contraction(s)

Primary OutFlow Max=3.22 cfs @ 11.97 hrs HW=45.44' TW=43.75' (Dynamic Tailwater)
└─**1=12" HDPE** (Passes 3.22 cfs of 4.91 cfs potential flow)
  ├─**2=12" notch in box** (Orifice Controls 1.47 cfs @ 2.93 fps)
  └─**3=Rim SHA 374.23** (Weir Controls 1.75 cfs @ 1.20 fps)

Pond MBR#1: MBR#1



Stage-Area-Storage for Pond MBR#1: MBR#1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
41.79	1,437	0
41.84	1,437	29
41.89	1,437	57
41.94	1,437	86
41.99	1,437	115
42.04	1,437	144
42.09	1,437	172
42.14	1,437	201
42.19	1,437	230
42.24	1,437	259
42.29	1,437	287
42.34	1,437	316
42.39	1,437	345
42.44	1,437	374
42.49	1,437	402
42.54	1,437	431
42.59	1,437	460
42.64	1,437	489
42.69	1,437	517
42.74	1,437	546
42.79	1,437	575
42.84	1,437	604
42.89	1,437	632
42.94	1,437	661
42.99	1,437	690
43.04	1,437	719
43.09	1,437	747
43.14	1,437	776
43.19	1,437	805
43.24	1,437	833
43.29	1,437	862
43.34	1,437	891
43.39	1,437	920
43.44	1,437	948
43.49	1,437	977
43.54	1,437	1,006
43.59	1,437	1,035
43.64	1,437	1,063
43.69	1,437	1,092
43.74	1,437	1,121
43.79	1,437	1,150
43.84	1,460	1,222
43.89	1,490	1,296
43.94	1,519	1,371
43.99	1,549	1,448
44.04	1,580	1,526
44.09	1,610	1,606
44.14	1,641	1,687
44.19	1,672	1,770
44.24	1,704	1,854
44.29	1,736	1,940
44.34	1,768	2,028
44.39	1,800	2,117
44.44	1,833	2,208
44.49	1,866	2,300
44.54	1,899	2,394
44.59	1,932	2,490
44.64	1,966	2,588
44.69	2,000	2,687
44.74	2,035	2,788
44.79	2,069	2,890
44.84	2,104	2,994
44.89	2,140	3,101
44.94	2,175	3,208
44.99	2,211	3,318
45.04	2,247	3,430
45.09	2,284	3,543
45.14	2,320	3,658
45.19	2,357	3,775
45.24	2,395	3,894
45.29	2,432	4,014
45.34	2,470	4,137
45.39	2,509	4,261
45.44	2,547	4,388
45.49	2,586	4,516
45.54	2,625	4,646
45.59	2,664	4,779
45.64	2,704	4,913
45.69	2,744	5,049
45.74	2,784	5,187
45.79	**2,825**	**5,327**

Summary for Pond SGW#1: SGW#1

Inflow Area = 2.315 ac, 74.35% Impervious, Inflow Depth > 6.26" for 100-yr event
Inflow = 24.16 cfs @ 11.91 hrs, Volume= 1.208 af
Outflow = 4.72 cfs @ 12.06 hrs, Volume= 0.838 af, Atten= 80%, Lag= 9.2 min
Primary = 4.72 cfs @ 12.06 hrs, Volume= 0.838 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 42.54' @ 12.06 hrs Surf.Area= 12,406 sf Storage= 30,536 cf

Plug-Flow detention time= 250.3 min calculated for 0.838 af (69% of inflow)
Center-of-Mass det. time= 151.2 min (910.5 - 759.2)

Volume	Invert	Avail.Storage	Storage Description
#1	39.40'	35,078 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

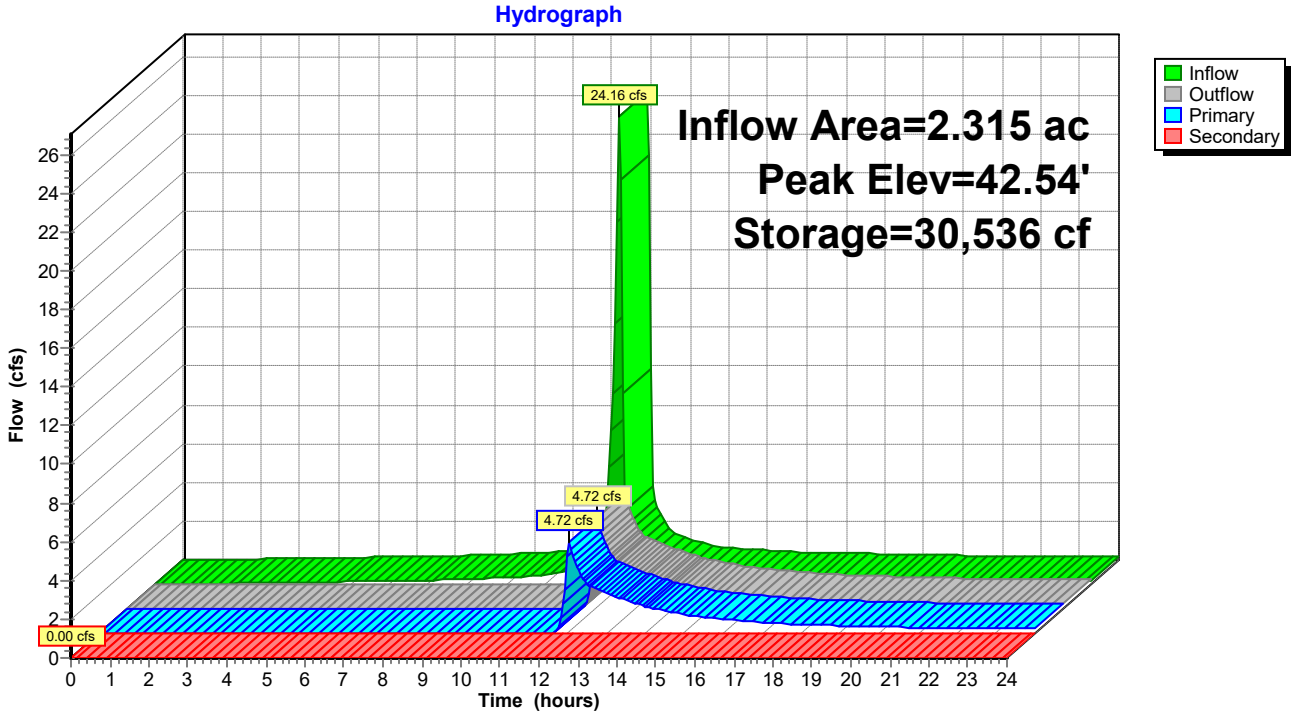
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.40	7,196	368.0	0	0	7,196
40.40	8,760	400.0	7,965	7,965	9,189
42.90	13,074	463.0	27,113	35,078	13,648

Device	Routing	Invert	Outlet Devices
#1	Primary	38.00'	**12.0" Round Culvert** L= 52.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 38.00' / 37.70' S= 0.0058 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	40.90'	**4.0" W x 6.0" H Vert. 4" Notch in 374.23** C= 0.600
#3	Device 1	41.40'	**6.0" W x 12.0" H Vert. 6" Notch in 374.23** C= 0.600
#4	Device 1	42.40'	**10.7' long Rim SHA 374.23** 0 End Contraction(s)
#5	Secondary	42.70'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=4.64 cfs @ 12.06 hrs HW=42.54' TW=40.42' (Dynamic Tailwater)
└**1=Culvert** (Passes 4.64 cfs of 5.39 cfs potential flow)
  ├**2=4" Notch in 374.23** (Orifice Controls 0.94 cfs @ 5.67 fps)
  ├**3=6" Notch in 374.23** (Orifice Controls 1.87 cfs @ 3.74 fps)
  └**4=Rim SHA 374.23** (Weir Controls 1.82 cfs @ 1.22 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.40' (Free Discharge)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond SGW#1: SGW#1



Stage-Area-Storage for Pond SGW#1: SGW#1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
39.40	7,196	0
39.45	7,271	362
39.50	7,345	727
39.55	7,421	1,096
39.60	7,497	1,469
39.65	7,573	1,846
39.70	7,649	2,226
39.75	7,726	2,611
39.80	7,803	2,999
39.85	7,881	3,391
39.90	7,959	3,787
39.95	8,037	4,187
40.00	8,116	4,591
40.05	8,195	4,999
40.10	8,275	5,410
40.15	8,355	5,826
40.20	8,435	6,246
40.25	8,516	6,670
40.30	8,597	7,097
40.35	8,678	7,529
40.40	8,760	7,965
40.45	8,838	8,405
40.50	8,916	8,849
40.55	8,995	9,297
40.60	9,073	9,748
40.65	9,153	10,204
40.70	9,232	10,664
40.75	9,312	11,127
40.80	9,392	11,595
40.85	9,473	12,067
40.90	9,554	12,542
40.95	9,635	13,022
41.00	9,717	13,506
41.05	9,799	13,994
41.10	9,881	14,486
41.15	9,964	14,982
41.20	10,047	15,482
41.25	10,130	15,986
41.30	10,214	16,495
41.35	10,298	17,008
41.40	10,382	17,525
41.45	10,467	18,046
41.50	10,552	18,572
41.55	10,638	19,101
41.60	10,723	19,635
41.65	10,809	20,174
41.70	10,896	20,716
41.75	10,983	21,263
41.80	11,070	21,815
41.85	11,157	22,370
41.90	11,245	22,930
41.95	11,333	23,495
42.00	11,422	24,064
42.05	11,511	24,637
42.10	11,600	25,215
42.15	11,689	25,797
42.20	11,779	26,384
42.25	11,870	26,975
42.30	11,960	27,571
42.35	12,051	28,171
42.40	12,142	28,776
42.45	12,234	29,385
42.50	12,326	29,999
42.55	12,418	30,618
42.60	12,511	31,241
42.65	12,604	31,869
42.70	12,697	32,501
42.75	12,791	33,139
42.80	12,885	33,780
42.85	12,979	34,427
42.90	**13,074**	**35,078**

Summary for Pond SGW#2: SGW#2

Inflow Area = 0.931 ac, 51.02% Impervious, Inflow Depth > 5.29" for 100-yr event
Inflow = 9.01 cfs @ 11.90 hrs, Volume= 0.410 af
Outflow = 0.98 cfs @ 12.22 hrs, Volume= 0.265 af, Atten= 89%, Lag= 19.3 min
Primary = 0.98 cfs @ 12.22 hrs, Volume= 0.265 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 44.59' @ 12.22 hrs Surf.Area= 5,625 sf Storage= 10,111 cf

Plug-Flow detention time= 263.8 min calculated for 0.265 af (65% of inflow)
Center-of-Mass det. time= 159.4 min (949.6 - 790.2)

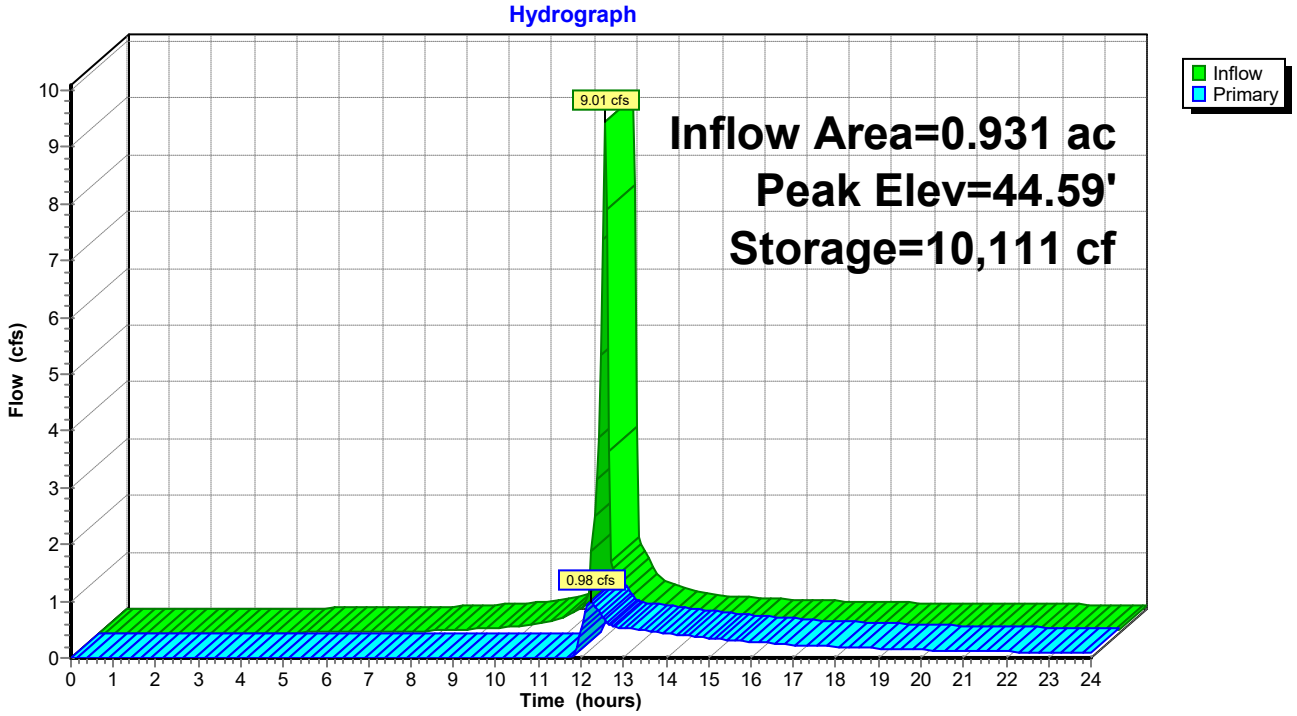
Volume	Invert	Avail.Storage	Storage Description
#1	42.05'	12,835 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
42.05	1,891	314.0	0	0	1,891
43.05	3,888	346.0	2,830	2,830	3,604
45.05	6,207	396.0	10,005	12,835	6,648

Device	Routing	Invert	Outlet Devices
#1	Primary	43.55'	**2.0" W x 12.0" H Vert. 2" Notch in box** C= 0.600
#2	Primary	44.55'	**16.3' long Rim SHA 374.70** 0 End Contraction(s)

Primary OutFlow Max=0.97 cfs @ 12.22 hrs HW=44.59' TW=43.47' (Dynamic Tailwater)
1=2" Notch in box (Orifice Controls 0.56 cfs @ 3.37 fps)
2=Rim SHA 374.70 (Weir Controls 0.41 cfs @ 0.65 fps)

Pond SGW#2: SGW#2



Stage-Area-Storage for Pond SGW#2: SGW#2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
42.05	1,891	0
42.10	1,974	97
42.15	2,059	197
42.20	2,145	303
42.25	2,233	412
42.30	2,323	526
42.35	2,415	644
42.40	2,509	767
42.45	2,604	895
42.50	2,702	1,028
42.55	2,800	1,165
42.60	2,901	1,308
42.65	3,004	1,456
42.70	3,108	1,608
42.75	3,214	1,766
42.80	3,322	1,930
42.85	3,432	2,099
42.90	3,543	2,273
42.95	3,656	2,453
43.00	3,771	2,639
43.05	3,888	2,830
43.10	3,939	3,026
43.15	3,991	3,224
43.20	4,043	3,425
43.25	4,096	3,628
43.30	4,148	3,835
43.35	4,201	4,043
43.40	4,255	4,255
43.45	4,309	4,469
43.50	4,363	4,686
43.55	4,417	4,905
43.60	4,472	5,127
43.65	4,527	5,352
43.70	4,582	5,580
43.75	4,638	5,810
43.80	4,694	6,044
43.85	4,751	6,280
43.90	4,808	6,519
43.95	4,865	6,761
44.00	4,922	7,005
44.05	4,980	7,253
44.10	5,038	7,503
44.15	5,097	7,757
44.20	5,155	8,013
44.25	5,215	8,272
44.30	5,274	8,535
44.35	5,334	8,800
44.40	5,394	9,068
44.45	5,455	9,339
44.50	5,515	9,613
44.55	5,577	9,891
44.60	5,638	10,171
44.65	5,700	10,454
44.70	5,762	10,741
44.75	5,825	11,031
44.80	5,888	11,324
44.85	5,951	11,619
44.90	6,014	11,919
44.95	6,078	12,221
45.00	6,142	12,526
45.05	**6,207**	**12,835**

Summary for Pond TOE1: SDI/OS#1

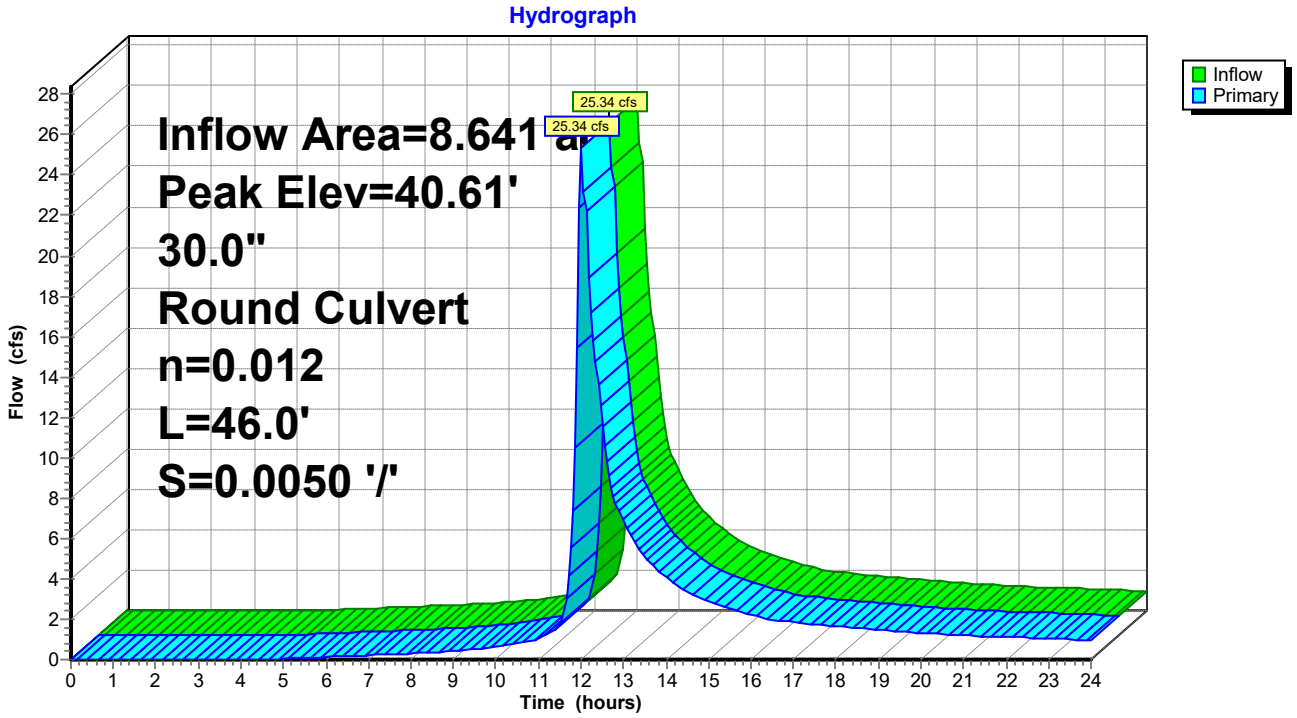
Inflow Area = 8.641 ac, 68.11% Impervious, Inflow Depth > 4.90" for 100-yr event
Inflow = 25.34 cfs @ 12.00 hrs, Volume= 3.531 af
Outflow = 25.34 cfs @ 12.00 hrs, Volume= 3.531 af, Atten= 0%, Lag= 0.0 min
Primary = 25.34 cfs @ 12.00 hrs, Volume= 3.531 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 40.61' @ 12.00 hrs
Flood Elev= 42.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	37.83'	**30.0" Round 30" HDPE** L= 46.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 37.83' / 37.60' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=25.18 cfs @ 12.00 hrs HW=40.60' TW=0.00' (Dynamic Tailwater)
1=30" HDPE (Barrel Controls 25.18 cfs @ 5.78 fps)

Pond TOE1: SDI/OS#1



Stage-Area-Storage for Pond TOE1: SDI/OS#1

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
37.83	**0**	40.38	0
37.88	0	40.43	0
37.93	0	40.48	0
37.98	0	40.53	0
38.03	0	40.58	0
38.08	0	40.63	0
38.13	0	40.68	0
38.18	0	40.73	0
38.23	0	40.78	0
38.28	0	40.83	0
38.33	0	40.88	0
38.38	0	40.93	0
38.43	0	40.98	0
38.48	0	41.03	0
38.53	0	41.08	0
38.58	0	41.13	0
38.63	0	41.18	0
38.68	0	41.23	0
38.73	0	41.28	0
38.78	0	41.33	0
38.83	0	41.38	0
38.88	0	41.43	0
38.93	0	41.48	0
38.98	0	41.53	0
39.03	0	41.58	0
39.08	0	41.63	0
39.13	0	41.68	0
39.18	0	41.73	0
39.23	0	41.78	0
39.28	0	41.83	0
39.33	0	41.88	0
39.38	0	41.93	0
39.43	0	41.98	0
39.48	0	42.03	0
39.53	0	42.08	0
39.58	0	42.13	0
39.63	0	42.18	0
39.68	0	42.23	0
39.73	0	42.28	0
39.78	0	42.33	0
39.83	0	42.38	0
39.88	0	42.43	0
39.93	0	42.48	0
39.98	0		
40.03	0		
40.08	0		
40.13	0		
40.18	0		
40.23	0		
40.28	0		
40.33	0		

Summary for Pond TOE2: SDMH

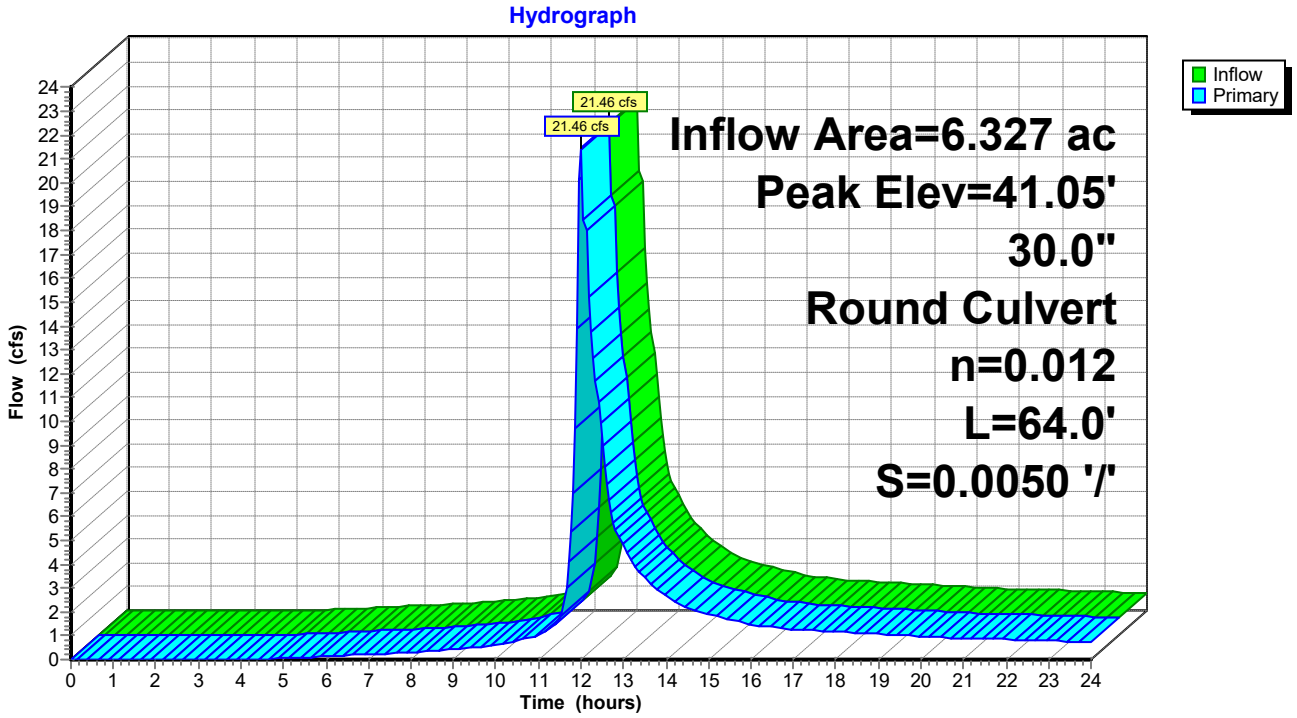
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 5.11" for 100-yr event
Inflow = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af
Outflow = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af, Atten= 0%, Lag= 0.0 min
Primary = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.05' @ 12.04 hrs
Flood Elev= 43.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	38.25'	**30.0" Round 30" HDPE** L= 64.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 38.25' / 37.93' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=15.35 cfs @ 11.99 hrs HW=40.90' TW=40.56' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 15.35 cfs @ 3.67 fps)

Pond TOE2: SDMH



Stage-Area-Storage for Pond TOE2: SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.25	**0**	40.29	0	42.33	0
38.29	0	40.33	0	42.37	0
38.33	0	40.37	0	42.41	0
38.37	0	40.41	0	42.45	0
38.41	0	40.45	0	42.49	0
38.45	0	40.49	0	42.53	0
38.49	0	40.53	0	42.57	0
38.53	0	40.57	0	42.61	0
38.57	0	40.61	0	42.65	0
38.61	0	40.65	0	42.69	0
38.65	0	40.69	0	42.73	0
38.69	0	40.73	0	42.77	0
38.73	0	40.77	0	42.81	0
38.77	0	40.81	0	42.85	0
38.81	0	40.85	0	42.89	0
38.85	0	40.89	0	42.93	0
38.89	0	40.93	0	42.97	0
38.93	0	40.97	0	43.01	0
38.97	0	41.01	0	43.05	0
39.01	0	41.05	0	43.09	0
39.05	0	41.09	0	43.13	0
39.09	0	41.13	0	43.17	0
39.13	0	41.17	0	43.21	0
39.17	0	41.21	0	43.25	0
39.21	0	41.25	0	43.29	0
39.25	0	41.29	0		
39.29	0	41.33	0		
39.33	0	41.37	0		
39.37	0	41.41	0		
39.41	0	41.45	0		
39.45	0	41.49	0		
39.49	0	41.53	0		
39.53	0	41.57	0		
39.57	0	41.61	0		
39.61	0	41.65	0		
39.65	0	41.69	0		
39.69	0	41.73	0		
39.73	0	41.77	0		
39.77	0	41.81	0		
39.81	0	41.85	0		
39.85	0	41.89	0		
39.89	0	41.93	0		
39.93	0	41.97	0		
39.97	0	42.01	0		
40.01	0	42.05	0		
40.05	0	42.09	0		
40.09	0	42.13	0		
40.13	0	42.17	0		
40.17	0	42.21	0		
40.21	0	42.25	0		
40.25	0	42.29	0		

Summary for Pond TOE3: SDMH

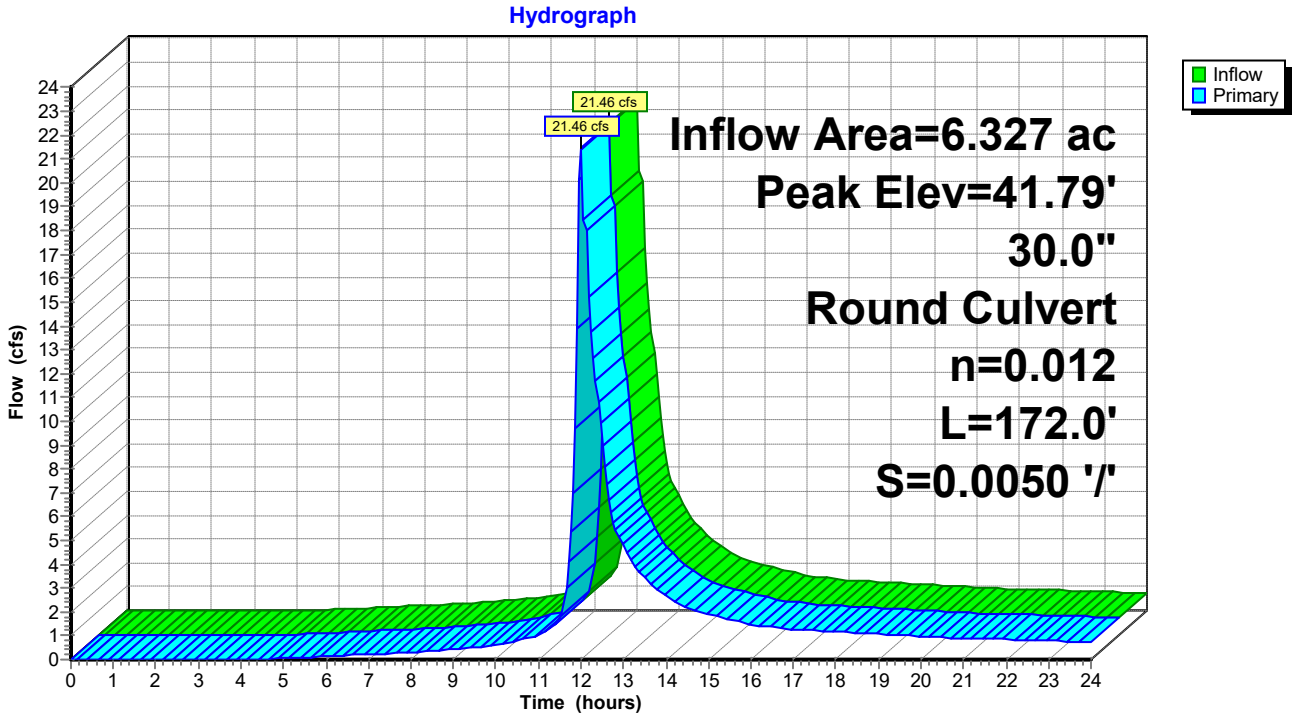
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 5.11" for 100-yr event
Inflow = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af
Outflow = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af, Atten= 0%, Lag= 0.0 min
Primary = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 41.79' @ 12.09 hrs
Flood Elev= 45.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.21'	**30.0" Round 30" HDPE** L= 172.0' Box, headwall w/3 rounded edges, Ke= 0.200 Inlet / Outlet Invert= 39.21' / 38.35' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=16.71 cfs @ 11.99 hrs HW=41.59' TW=40.90' (Dynamic Tailwater)
1=30" HDPE (Outlet Controls 16.71 cfs @ 4.45 fps)

Pond TOE3: SDMH



Stage-Area-Storage for Pond TOE3: SDMH

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
39.21	**0**	44.31	0
39.31	0	44.41	0
39.41	0	44.51	0
39.51	0	44.61	0
39.61	0	44.71	0
39.71	0	44.81	0
39.81	0	44.91	0
39.91	0	45.01	0
40.01	0	45.11	0
40.11	0	45.21	0
40.21	0	45.31	0
40.31	0	45.41	0
40.41	0	45.51	0
40.51	0	45.61	0
40.61	0	45.71	0
40.71	0	45.81	0
40.81	0		
40.91	0		
41.01	0		
41.11	0		
41.21	0		
41.31	0		
41.41	0		
41.51	0		
41.61	0		
41.71	0		
41.81	0		
41.91	0		
42.01	0		
42.11	0		
42.21	0		
42.31	0		
42.41	0		
42.51	0		
42.61	0		
42.71	0		
42.81	0		
42.91	0		
43.01	0		
43.11	0		
43.21	0		
43.31	0		
43.41	0		
43.51	0		
43.61	0		
43.71	0		
43.81	0		
43.91	0		
44.01	0		
44.11	0		
44.21	0		

Summary for Pond TOE4: SDI/OS #2

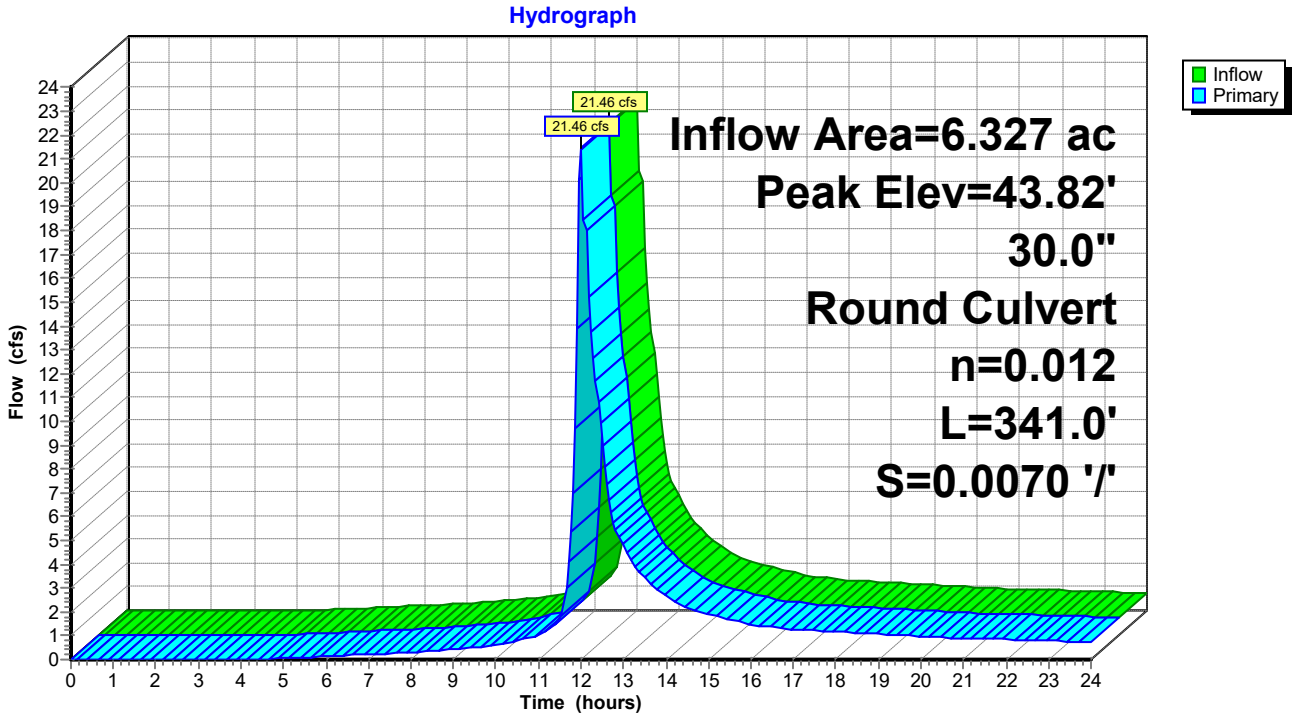
Inflow Area = 6.327 ac, 65.83% Impervious, Inflow Depth > 5.11" for 100-yr event
Inflow = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af
Outflow = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af, Atten= 0%, Lag= 0.0 min
Primary = 21.46 cfs @ 11.99 hrs, Volume= 2.693 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 43.82' @ 12.00 hrs
Flood Elev= 45.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	41.70'	**30.0" Round 30" HPDE** L= 341.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 41.70' / 39.31' S= 0.0070 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=19.90 cfs @ 11.99 hrs HW=43.79' TW=41.59' (Dynamic Tailwater)
1=30" HPDE (Outlet Controls 19.90 cfs @ 6.13 fps)

Pond TOE4: SDI/OS #2



Stage-Area-Storage for Pond TOE4: SDI/OS #2

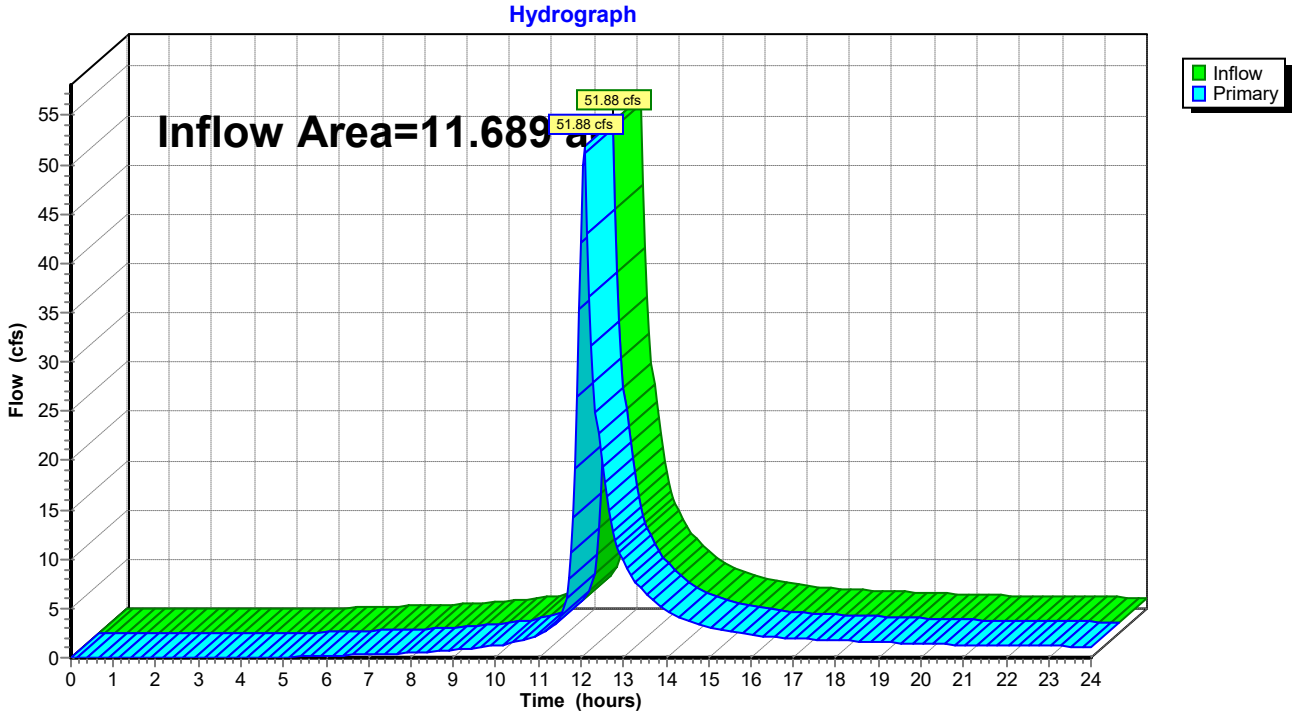
Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
41.70	**0**	44.25	0
41.75	0	44.30	0
41.80	0	44.35	0
41.85	0	44.40	0
41.90	0	44.45	0
41.95	0	44.50	0
42.00	0	44.55	0
42.05	0	44.60	0
42.10	0	44.65	0
42.15	0	44.70	0
42.20	0	44.75	0
42.25	0	44.80	0
42.30	0	44.85	0
42.35	0	44.90	0
42.40	0	44.95	0
42.45	0	45.00	0
42.50	0	45.05	0
42.55	0		
42.60	0		
42.65	0		
42.70	0		
42.75	0		
42.80	0		
42.85	0		
42.90	0		
42.95	0		
43.00	0		
43.05	0		
43.10	0		
43.15	0		
43.20	0		
43.25	0		
43.30	0		
43.35	0		
43.40	0		
43.45	0		
43.50	0		
43.55	0		
43.60	0		
43.65	0		
43.70	0		
43.75	0		
43.80	0		
43.85	0		
43.90	0		
43.95	0		
44.00	0		
44.05	0		
44.10	0		
44.15	0		
44.20	0		

Summary for Link PRE: PRE-DEVELOPMENT

Inflow Area = 11.689 ac, 55.03% Impervious, Inflow Depth > 5.30" for 100-yr event
Inflow = 51.88 cfs @ 12.08 hrs, Volume= 5.160 af
Primary = 51.88 cfs @ 12.08 hrs, Volume= 5.160 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link PRE: PRE-DEVELOPMENT

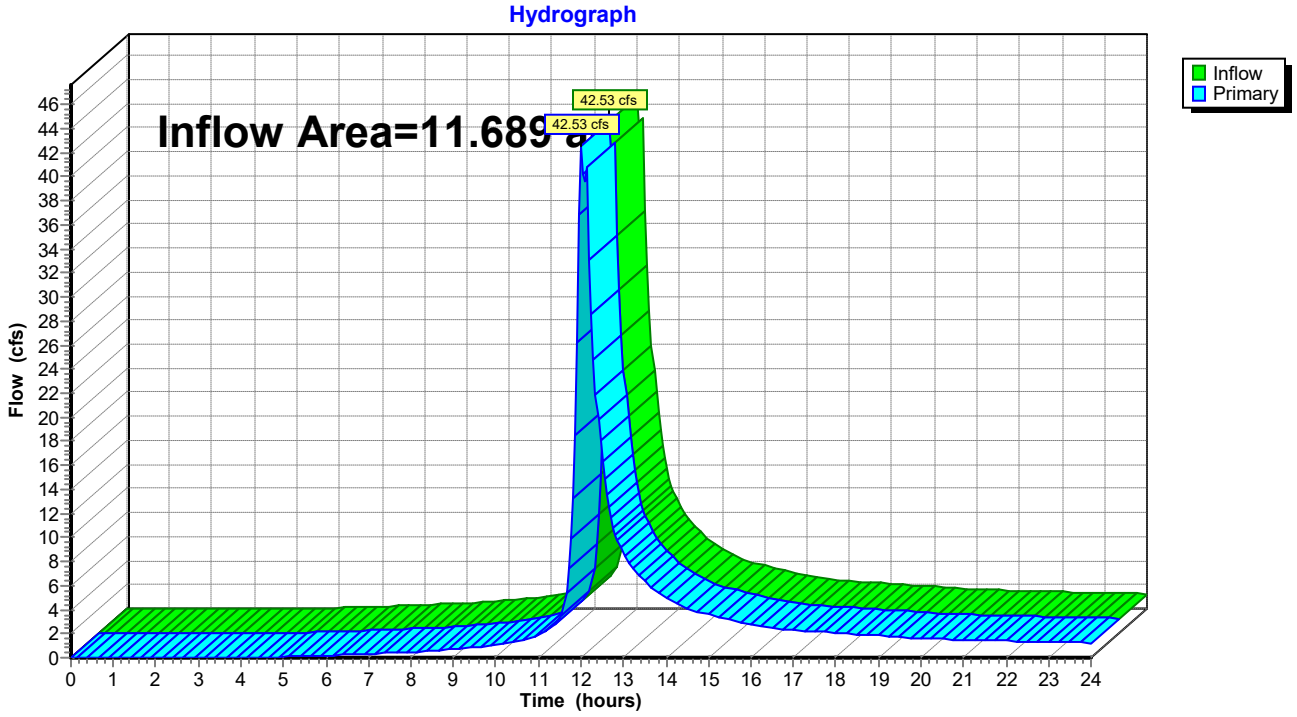


Summary for Link PST: POST-DEVELOPMENT

Inflow Area = 11.689 ac, 65.73% Impervious, Inflow Depth > 5.14" for 100-yr event
Inflow = 42.53 cfs @ 12.01 hrs, Volume= 5.011 af
Primary = 42.53 cfs @ 12.01 hrs, Volume= 5.011 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link PST: POST-DEVELOPMENT



APPENDIX C

Drainage Area Maps

SWM PRE-DEVELOPMENT DISCHARGES (CFS)			
STUDY POINT	Q_2	Q_{10}	Q_{100}
1	12.41	24.74	51.88

STORMWATER MANAGEMENT DRAINAGE AREA TABLE

AREA #	AREA (SF)	TOTAL Tc (MINUTES)	IMPERVIOUS (%)	DESCRIPTION
GS-A	127,195	9.80	71.23	COMMERCE STREET/G2 ASSOCIATES
VZ-A	81,867	5.40	68.87	ADJ. VERIZON STORAGE YARD
VZ-B	96,608	12.20	63.69	ADJ. VERIZON BUILDING, HALF IDLEWLD, & PORTION US 50
EX-1	44,744	3.80	43.68	HALF EX BLDG & PARKING
EX-2	104,142	36.50	38.46	HALF EX BLDG & PARKING/STORAGE & SHA
EX-3	41,682	5.90	11.03	VACANT FIELD & SHA
EX-4	12,766	1.70	58.59	REMNANT FOUNDATIONS

APPROVED:
PLANS ARE ISSUED FOR REVIEW ONLY
TOWN OF EASTON – PLANNING & ZONING DATE

APPROVED:
PLANS ARE NOT APPROVED FOR CONSTRUCTION
TOWN OF EASTON – TOWN ENGINEER DATE

EASTON UTILITIES – MANAGER OF ENGINEERING DATE

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

WARNING!!

THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE QUANTITIES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL TEST PIT AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF ANY WORK ON-SITE. THE CONTRACTOR SHALL NOTIFY DEPT. OF PUBLIC WORKS OF ANY POSSIBLE CONFLICT AND REQUEST THE RELOCATION OF THE EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING ANY WORK ON-SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RELOCATION EXPENSE.

MISS UTILITY
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BEFORE YOU DIG CALL
1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE
TWO WORKING DAYS NOTICE

Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lanei.com
117 Bay St. Easton, MD 21601 (410) 822-8003
15 Washington St. Cambridge, MD 21613 (410) 221-0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758-2095

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 23152 , Expiration Date: 7/5/2025.

SEAL
STATE OF MARYLAND · TIMOTHY C. ADAMS · 23152 · REGISTERED PROFESSIONAL ENGINEER
DATE

PRE-DEVELOPMENT DRAINAGE AREA MAP

IN TOWN PROPERTIES, LLC
7872 OCEAN GATEWAY

IN THE TOWN OF EASTON, ELECTION WARD 1
TALBOT COUNTY, MARYLAND
TAX MAP 105 GRID 17 PARCEL 2990

ISSUED/REVISED FOR:	DATE:	BY:
ESDR SUBMITTAL	2/7/2024	BCE

SHEET No. 1 OF 2
SCALE: AS NOTED
JOB No. 240020
FILE No. 1026

Date: 02/07/2024 - 7:46am User: achosta Project Manager: BCE
Drawing Path: J:\2024\0000\240020\Civil3D-240020\Dwg\Plots\CDA-PLTS-240020.dwg | 1 OF 2
XREF File(s): VSF-BASE-210686/RLD-BASE-210686/VSF-HSF-SRCE-210686/RLD-BASE-210686-VERIZON/CDA-BASE-240020/RBS-BASE-24X36-240020/VLD-BASE-240020/CSD-BASE-240020/CSD-BASE-240020

SWM POST-DEVELOPMENT DISCHARGES (CFS)			
STUDY POINT	Q_2	Q_{10}	Q_{100}
1	11.04	21.99	42.53

STORMWATER MANAGEMENT DRAINAGE AREA TABLE

AREA #	AREA (SF)	TOTAL Tc (MINUTES)	IMPERVIOUS (%)	DESCRIPTION
GS-AA	127,195	9.80	71.23	COMMERCE STREET/G2 ASSOCIATES
VZ-AA	81,867	5.40	68.87	ADJ. VERIZON STORAGE YARD
VZ-BB	96,608	12.20	63.69	ADJ. VERIZON BUILDING, HALF IDLEWILD, & PORTION US 50
MB-1	2,987	1.00	100.00	REAR MEDICAL BUILDING ROOF
MB-2	3,158	1.00	100.00	FRONT MEDICAL BUILDING ROOF
MB-3	3,158	1.00	100.00	FRONT MEDICAL BUILDING ROOF
MB-4	2,987	1.00	100.00	REAR MEDICAL BUILDING ROOF
PK-1	10,731	0.80	74.81	ONSITE PARKING
PK-2	6,878	1.20	88.35	ONSITE PARKING
PK-3	7,303	1.40	92.35	ONSITE PARKING
PK-4	4,121	0.80	91.82	ONSITE PARKING
PK-5	6,850	1.30	92.47	ONSITE PARKING
PK-6	10,126	0.90	84.85	ONSITE PARKING
PK-7	5,077	0.90	82.35	ONSITE PARKING
PK-8	14,614	1.30	62.09	ONSITE PARKING
PK-9	11,768	0.80	85.31	ONSITE PARKING
PK-10	28,785	0.80	37.00	ONSITE PARKING
SHA-1	4,376	1.00	56.40	ONSITE PORTION SHA ENTRANCE
SHA-2	20,061	1.00	12.73	ONSITE PORTION SHA ENTRANCE & FOOTPRINT OF SGW#1
SHA-3	14,989	5.00	58.38	HALF US 50 & SHA ROW
SHA-4	21,177	5.00	38.03	HALF US 50 & SHA ROW
RD-1	6281	5.00	7.71	PURDY STREET ENTRANCE

APPROVED:
PLANS ARE ISSUED FOR REVIEW ONLY
TOWN OF EASTON – PLANNING & ZONING DATE
APPROVED:
TOWN OF EASTON – TOWN ENGINEER DATE
APPROVED:
PLANS ARE NOT APPROVED FOR CONSTRUCTION
EASTON UTILITIES MANAGER OF ENGINEERING DATE

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

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BEFORE YOU DIG CALL 1-800-441-8355 OR 811
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354 Pennsylvania Ave. Centreville, MD 21617 (410) 758-2095

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 23152, Expiration Date: 7/5/2025.

SEAL
STATE OF MARYLAND
TIMOTHY C. BOSTAN
PROFESSIONAL ENGINEER
DATE

POST-DEVELOPMENT DRAINAGE AREA MAP

IN TOWN PROPERTIES, LLC
7872 OCEAN GATEWAY

IN THE TOWN OF EASTON, ELECTION WARD 1
TALBOT COUNTY, MARYLAND
TAX MAP 105 GRID 17 PARCEL 2990

ISSUED/REVISED FOR: DATE: BY:
ESDR SUBMITTAL 2/7/2024 BCE

SHEET No. 2 OF 2
SCALE: AS NOTED
JOB No. 240020
FILE No. 1026

Date: 02/07/2024 - 7:46am User: achasta Project Manager: BCE
Drawing Path: J:\2024\0000\240020\Civil3D-240020\Dwg\Plots\CDA-PLTS-240020.dwg | 2 OF 2
XREF File(s): VSF-BASE-210686/RLD-BASE-210686/VSF-HSF-SRCE-210686/RLD-BASE-210686/VSF-HSF-SRCE-210686/RLD-BASE-240320/CDA-BASE-240020/RBS-BASE-24X36-240020/VLD-BASE-240020/CSD-BASE-240020/YSK-BASE-240020

APPENDIX D

Existing G-2 & Purdy St. Improvements

O-1		
	PROPOSED	AS-BUILT
24" HDPE	42.00'	41.79

S-1		
	PROPOSED	AS-BUILT
LID	47.50'	47.44'
24" HDPE IN	42.25'	42.36'
24" HDPE OUT	42.25'	42.24'

I-11		
	PROPOSED	AS-BUILT
GRATE	47.00'	47.03'
24" HDPE IN	42.25'	42.35'
24" HDPE OUT	42.25'	42.55'

I-10		
	PROPOSED	AS-BUILT
GRATE	47.00'	47.08'
24" HDPE IN	42.25'	42.56'
24" HDPE OUT	42.25'	42.38'

S-2		
	PROPOSED	AS-BUILT
LID	47.27'	47.84'
30" PERF. HDPE IN	42.00'	42.17'
30" PERF. HDPE OUT	42.00'	42.21'

O-2		
	PROPOSED	
30" PERF. HDPE	42.00'	42.37'
15" RCP	40.00'	40.11'

I-3		
	PROPOSED	AS-BUILT
GRATE	47.00'	46.97'
24" HDPE IN	42.64'	42.72'
24" HDPE OUT	42.64'	42.93'

I-12		
	PROPOSED	AS-BUILT
GRATE	47.29'	47.39'
30" PERF. HDPE IN	41.80'	41.99'
30" PERF. HDPE OUT	41.80'	41.83'

I-6		
	PROPOSED	AS-BUILT
GRATE	47.10'	47.03'
18" HDPE IN	44.24'	44.36'
18" HDPE OUT	44.24'	44.37'

I-7		
	PROPOSED	AS-BUILT
GRATE	49.00'	47.82

I-2		
	PROPOSED	AS-BUILT
GRATE	47.31'	47.30'
15" RCP IN	44.22'	44.38'
15" RCP OUT	42.04'	42.14'

I-1		
	PROPOSED	AS-BUILT
GRATE	47.31'	47.27'
15" RCP OUT	44.37'	44.62'

I-4		
	PROPOSED	AS-BUILT
GRATE	47.00'	46.98'
18" HDPE IN	43.39'	43.69'
24" HDPE OUT	43.39'	43.57'
18" HDPE IN	43.89'	44.09'

I-5		
	PROPOSED	AS-BUILT
GRATE	47.00'	47.27
18" HDPE OUT	43.77'	43.92

O-3		
	PROPOSED	AS-BUILT
30" HDPE	41.66'	41.54

No.	BY	REVISION	APPROVED	DATE

SEAL

DATE

Lane Engineering, Inc.

Civil Engineers – Land Planning – Land Surveyors

E-mail: mail@laneinc.com

117 Boy St. Easton, MD 21601 (410) 822-8003 FAX (410) 822-2024
15 Washington St. Cambridge, MD 21613 (410) 221-0818 FAX (410) 476-9942
1148 West Water St. Centreville, MD 21617 (410) 758-2095 FAX (410) 758-4422

STORM DRAIN SYSTEM AS-BUILT

FOR

G 2 ASSOCIATES, LLC

TOWN OF EASTON

TALBOT COUNTY, MARYLAND

MAP 105 GRID 17 PARCEL 2990A

DATE	9-18-06
SCALE	1"=30'
JOB NO.	030865
DRAWN BY	KDT
DWG. NAME	030865SSD
APPROVED	R.L.H.

SHEET No.
1 OF 1

FILE No. 1026

No.	BY	REVISION	APPROVED	DATE

SEAL

DATE

Lane Engineering, Inc.

Civil Engineers – Land Planning – Land Surveyors

E-mail: mail @ lehc.com
117 Bay St. Easton, MD 21601 (410) 822-8003 FAX (410) 822-2024
15 Washington St. Cambridge, MD 21613 (410) 221-0818 FAX (410) 476-9942
1149 West Water St. Centreville, MD 21617 (410) 758-2095 FAX (410) 758-4422

STORMWATER ASBUILT

FOR

G 2 ASSOCIATES, LLC

TOWN OF EASTON

TALBOT COUNTY, MARYLAND

MAP 105 GRID 17 PARCEL 2990A

DATE	06-05-06
SCALE	1"=30'
JOB NO.	030865
DRAWN BY	S.A.M.
DWG. NAME	030865SSD
APPROVED	

SHEET No.
1 OF 1

FILE No. 1026

IMPERVIOUS AREA =	0.38 ACRES
PERVIOUS AREA =	2.54 ACRES
TOTAL AREA =	2.92 ACRES

No.	BY	REVISION	APPROVED	DATE

SEAL

DATE _____

Lane Engineering, Inc.

Civil Engineers – Land Planning – Land Surveyors

E-mail: mail @ lei-inc.com

117 Bay St. Easton, MD 21601 (410) 820-2024 FAX (410) 820-2033
15 Washington St. Cambridge, MD 21613 (410) 221-0818 FAX (410) 476-9842
114B West Water St. Centreville, MD 21617 (410) 758-2095 FAX (410) 758-4422

DA MAP – EXISTING CONDITIONS

FOR

G2 ASSOCIATES, LLC

IN THE TOWN OF EASTON

TALBOT COUNTY, MARYLAND

TAX MAP 105 GRID 17 PARCEL 2990, DEED PARCEL ONE

DATE	6/23/04
SCALE	1" = 40'
JOB NO.	03D865
DRAWN BY	J.E.P.
DWG. NAME	03D865ESP2
APPROVED	B. STAGG

SHEET No. 1 OF 3

FILE No. 1026

IMPERVIOUS AREA =	2.06 ACRES
PERVIOUS AREA =	0.86 ACRES
TOTAL AREA =	2.92 ACRES

DATE	No.	BY	REVISION	APPROVED	DATE

SEAL

DATE

Lane Engineering, Inc.

Civil Engineers – Land Planning – Land Surveyors

E-mail: mail @ lanc.com

117 Bay St. Easton, MD 21601 (410) 822-8003 FAX (410) 822-2024
15 Washington St. Cambridge, MD 21613 (410) 221-0818 FAX (410) 476-9942
114B West Water St. Centreville, MD 21617 (410) 758-2095 FAX (410) 758-4422

DA MAP – PROPOSED CONDITIONS

FOR

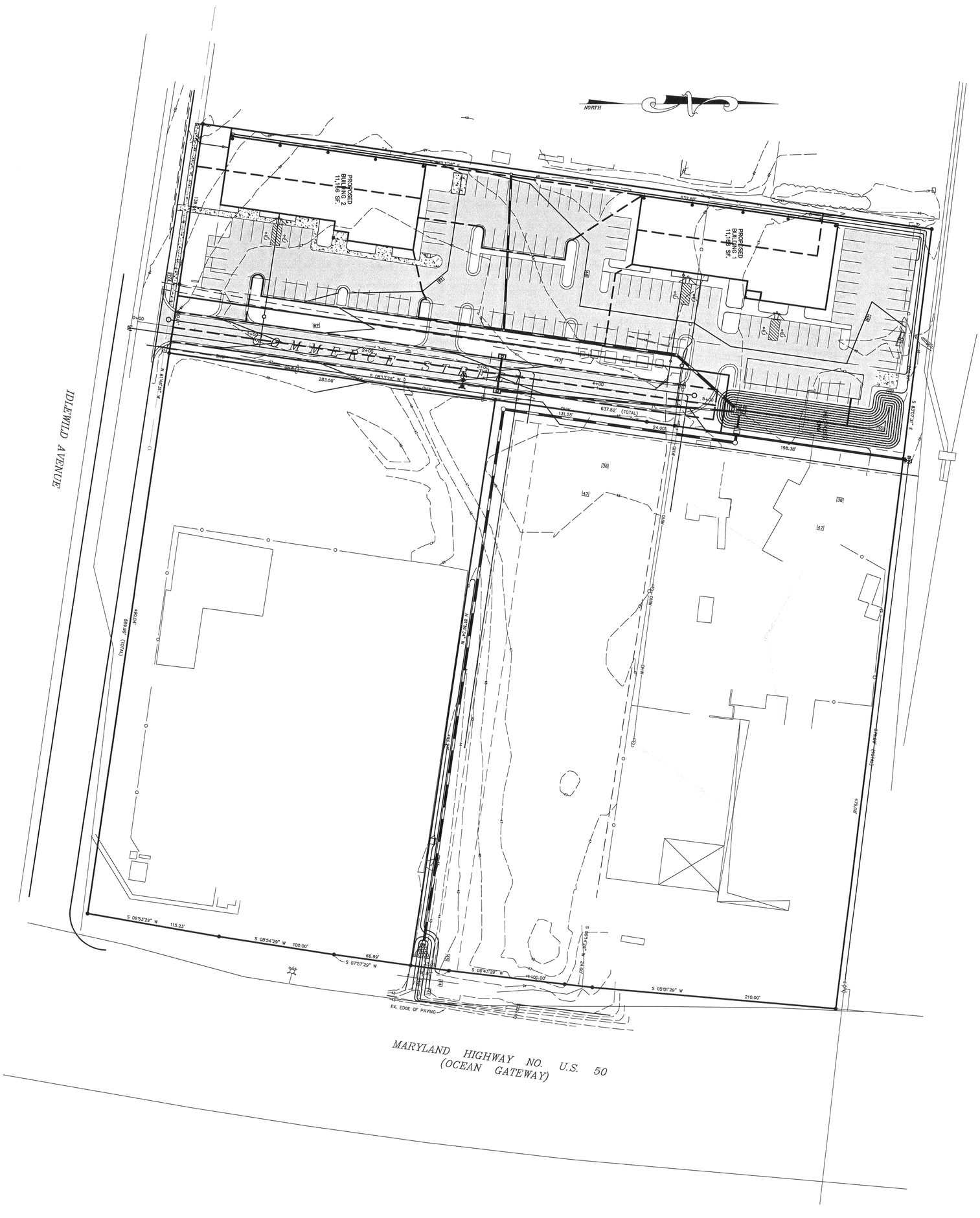
G2 ASSOCIATES, LLC

IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND
TAX MAP 105 GRID 17 PARCEL 2990, DEED PARCEL ONE

DATE	6/23/04
SCALE	1"=40'
JOB NO.	030865
DRAWN BY	J.E.P.
DWG. NAME	030865SP2
APPROVED	B. STAGG

SHEET No. 2 OF 3

FILE No. 1026



FILE No. 1026	SHEET No. 3 OF 3	DA MAP – INLETS	DATE 6/23/04	Lane Engineering, Inc.	SEAL				
		FOR	SCALE 1"=40'	Civil Engineers – Land Planning – Land Surveyors					
		G2 ASSOCIATES, LLC	JOB NO. 030865						
		IN THE TOWN OF EASTON	DRAWN BY J.E.P.	E-mail: mail @ leinc.com 117 Bay St. Easton, MD 21601 (410) 822-8003 FAX (410) 822-2024 15 Washington St. Cambridge, MD 21613 (410) 221-0818 FAX (410) 476-9942 1148 West Water St. Centreville, MD 21617 (410) 758-2095 FAX (410) 758-4422	DATE	No.	BY	REVISION	APPROVED	DATE
		TALBOT COUNTY, MARYLAND	DWG. NAME 030865ESP2						
		TAX MAP 105 GRID 17 PARCEL 2990, DEED PARCEL ONE	APPROVED B. STAGG						

TALBOT COUNTY CIRCUIT COURT (Land Records) MAS 2412, 0282, 0051, 0035 - Data available 12/30/2016. Printed 12/10/2021.

THIS DEED, made this 23rd day of December, 2016, by and between **SIMPLY STORAGE OF EASTON, LLC**, a Maryland limited liability company, party of the first part, Grantor; and **IN-TOWN PROPERTIES, LLC**, a Maryland limited liability company, party of the second part, Grantee.

- WITNESSETH -

That in Consideration of the sum of **One Million Five Hundred Thousand and 00/100 Dollars ($1,500,000.00)**, and other good, valuable and sufficient consideration, in hand paid, the receipt and sufficiency of which are hereby acknowledged, the said Grantor does grant and convey unto the said **IN-TOWN PROPERTIES, LLC**, a Maryland limited liability company, its successors and assigns, in fee simple, all the hereinafter described property:

All that parcel of land located in the 1st District of Talbot County, Maryland and designated on a plat titled "Revision of Lot Lines Between 7872 Ocean Gateway, LLC and Verizon of Maryland, Inc.", prepared by Lane Engineering, Inc., dated August 16, 2004 and recorded among the Plat Records of Talbot County in Plat Book MAS 81, at page 461 as being bounded on the South by "New Line of Division"; on the East by "Ocean Gateway"; on the North by the line designated "S 83 degrees 07 minutes 31 seconds E 679.09'" (the northern boundary being comprised of the 479.08' segment of said line); and on the West by the most easterly line of Commerce Street as shown on said plat, extended northerly to intersect the northerly boundary of this parcel; said parcel being assessed under tax account no. 01-043404 as Parcel 2990, Tax Map 105.

BEING the same parcel conveyed unto Simply Storage of Easton, LLC, a Maryland limited liability company, by Deed dated October 27, 2004 and recorded among the Land Records of Talbot County, Maryland at Liber MAS 1285, folio 804 and by Confirmatory Deed dated November 1, 2007 and recorded among the Land Records of Talbot County, Maryland at Liber MAS 1582, folio 191.

CERTIFICATION IS MADE THAT ALL TAXES DUE ON THE PROPERTY INDICATED IN THIS DEED HAVE BEEN PAID.
FINANCE OFFICER OF TALBOT COUNTY
R ANDREW HOLLIS, FIN. OFFICER
DATE 12/27/2016 KB

TALBOT COUNTY FINANCE OFFICE
RECORDATION TAX
AMT: $18,000.00
DATE: 12/27/2016
INITIALS: KB
Prop ID: 01-043404

TOGETHER WITH the buildings and improvements thereon erected, made or being; and all and every, the rights, alleys, ways, waters, privileges, appurtenances, and advantages thereto belonging, or in anywise appertaining.

SUBJECT, HOWEVER, to any covenants, conditions, restrictions and easements of record.

TO HAVE AND TO HOLD the said tract of ground and premises above described and mentioned, and hereby intended to be conveyed, together with the rights, privileges, appurtenances and advantages thereto belonging or appertaining unto and to the proper use and benefit of the said **SIMPLY STORAGE OF EASTON, LLC**, a Maryland limited liability company, in fee simple, forever.

AND the said party of the first part hereby covenants that it has not done or suffered to be done any act, matter or thing whatsoever, to encumber the property hereby conveyed; that it warrants specially the property hereby granted; and that it will execute such further assurances of the same as may be requisite.

IN WITNESS WHEREOF, the Grantor has caused this Deed to be properly executed and sealed on the day and year first above written.

ATTEST:

SIMPLY STORAGE OF EASTON, LLC, a Maryland limited liability company

By: _____ (SEAL)
Gary R. Middleton, Managing Member

STATE OF MARYLAND, COUNTY OF Anne Arundel, TO WIT:

On this 22nd day of December, 2016, before me personally appeared *Gary R. Middleton*, who acknowledged himself to be the Managing Member of SIMPLY STORAGE OF EASTON, LLC and as such he, being authorized to do so, acknowledged and executed the aforegoing Deed for the purposes therein contained, and further acknowledged said instrument to be his act.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public

My commission expires: 8/9/2020

JILL ELIZABETH O'DONNELL WEEKS
Notary Public
State of Maryland
Anne Arundel County
My commission exp. August 9, 2020

THIS IS TO CERTIFY that the within Deed was prepared by, or under the supervision of the undersigned, an Attorney duly admitted to practice before the Court of Appeals of Maryland.

_____
Ryan D. Showalter, Attorney

AFTER RECORDING, PLEASE RETURN TO:
Ryan D. Showalter
McAllister, DeTar, Showalter & Walker LLC
100 N. West Street
Easton, MD 21601

4810-9687-0974, v. 2

TALBOT COUNTY CIRCUIT COURT (Land Records) MAS 2412, p. 0283, MSA_CE91_2351. Date available 12/30/2016. Printed 12/10/2021.

MARYLAND FORM
WH-AR

Certification of Exemption from Withholding Upon Disposition of Maryland Real Estate Affidavit of Residence or Principal Residence

2016

Based on the certification below, Transferor claims exemption from the tax withholding requirements of §10-912 of the Tax-General Article, Annotated Code of Maryland. Section 10-912 provides that certain tax payments must be withheld and paid when a deed or other instrument that effects a change in ownership of real property is presented for recordation. The requirements of §10-912 do not apply when a transferor provides a certification of Maryland residence or certification that the transferred property is the transferor's principal residence.

1. Transferor Information

Name of Transferor Simply Storage of Easton, LLC

2. Reasons for Exemption

Resident Status

☐ I, Transferor, am a resident of the State of Maryland.

☑ Transferor is a resident entity as defined in Code of Maryland Regulations (COMAR)03.04.12.02B(11), I am an agent of Transferor, and I have authority to sign this document on Transferor's behalf.

Principal Residence

☐ Although I am no longer a resident of the State of Maryland, the Property is my principal residence as defined in IRC 121 (principal residence for 2 (two) of the last 5 (five) years) and is currently recorded as such with the State Department of Assessments and Taxation.

Under penalty of perjury, I certify that I have examined this declaration and that, to the best of my knowledge, it is true, correct, and complete.

3a. Individual Transferors

Witness

Name

Signature

3b. Entity Transferors

Witness/Attest

Simply Storage of Easton, LLC
Name of Entity

By

Gary R. Middleton
Name

Managing Member
Title

16-49

LIBER2412 FOLIO284

TALBOT COUNTY CIRCUIT COURT (Land Records) MAS 2412, p. 0284, MSA_CE91_2351. Date available 12/30/2016. Printed 12/10/2021.

TALBOT COUNTY CIRCUIT COURT (Land Records) MAS 2412, p. 0285, MSA_CE91_2351. Date available 12/30/2016. Printed 12/10/2021.

Mary Ann Shortall, Clerk
Circuit Court For Talbot County
11 N. Washington St., Suite 16
Easton, Maryland 21601

License and Recording
(410) 822-2611 Ext. 4

```
LR - Deed (w Taxes)
Recording Fee no RT
                    20.00
Name:
SimplyStorage/InTownPr
operties
Ref: 2412/282
LR - Deed (with Taxes)
Surcharge           40.00
LR - Deed State
Transfer Tax     7,500.00
LR - County Transfer
Tax - linked    15,000.00
LR - NR Tax - lkd    0.00
=====================
SubTotal:       22,560.00
=====================
Total:          22,560.00
12/27/2016  03:34
                    CC20-LL
#7521357 CC0205 -
Talbot
County/CC02.05.02 -
Register 02
```

DOCUMENT VALIDATION
(excluded from page count)

State of Maryland Land Instrument Intake Sheet

[ ] City [X] County: Talbot

Information provided is for the use of the Clerk's Office and State Department of Assessments and Taxation, and the County Finance Office only.

(Type or Print in Black Ink Only All Copies Must Be Legible)

1 Type(s) of Instruments ([ ] Check Box if Addendum Intake Form is Attached.)

X	Deed		Mortgage		Other		Other Easement
X	Deed of Trust		Lease				

2 Conveyance Check Box

	Improved Sale Arms-Length *[1]*		Unimproved Sale Arms-Length *[2]*		Multiple Arms Length *[3]*		Not an Arms-Length Sale *[9]*

3 Tax Exemptions (if Applicable) Cite or Explain Authority

Recordation	
State Transfer	
County Transfer	

4 Consideration and Tax Calculations

Consideration Amount		Finance Office Use Only — Transfer and Recordation Tax Consideration	
Purchase Price/Consideration	$ 1,500,000.00		
Any New Mortgage	$ 1,275,000.00	Transfer Tax Consideration	$
Balance of Existing Mortgage	$	x ( ) % =	$
Other:	$	Less Exemption Amount -	$
		Total Transfer Tax =	$
Other:	$	Recordation Tax Consideration	$
		x ( ) per $500 =	$
Full Cash Value	$	TOTAL DUE	$

5 Fees

Amount of Fees	Doc. 1	Doc. 2	
Recording Charge	$ 20.00	$ 75.00	Agent:
Surcharge	$ 40.00	$ 40.00	Tax Bill:
State Recordation Tax	$ 18,000.00	$	
State Transfer Tax	$ 7,500.00	$	C.B. Credit:
County Transfer Tax	$ 15,000.00	$	
Other – County Transfer Fee	$	$	Ag. Tax/Other:
Other	$	$	

6 Description of Property

SDAT requires submission of all applicable information. A maximum of 40 characters will be indexed in accordance with the priority cited in Real Property Article Section 3-104(g)(3)(i).

District	Property Tax ID No.(1)	Grantor	Map	Parcel No.	Var. LOG
01	01-043404	1582/191	0105	2990	

Subdivision Name	Lot (3a)	Block (3b)	Sect/AR(3c)	Plat Ref.	SqFt/Acreage (4)
				MAS81/461	4.04 AC

Location/Address of Property Being Conveyed (2): 7872 Ocean Gateway, Easton, Maryland 21601

Other Property Identifiers (if applicable): Lot 4.043 AC, W/S RT 50, E/Easton

Residential [ ] or Non-Residential [X] | Fee Simple [X] or Ground Rent [ ] Amount:

Partial Conveyance? [ ] Yes [X] No | Description/Amt. of SqFt/Acreage Transferred:

If Partial Conveyance, List Improvements Conveyed:

7 Transferred From & To

Doc. 1 – Grantor(s) Name(s)	Doc. 2 – Grantor(s) Name(s)
Simply Storage of Easton, LLC	In-Town Properties, LLC
Doc. 1 - Owner(s) of Record, if Different from Grantor(s)	Doc. 2 – Owner(s) of Record, if Different from Grantor(s)

8 Transferred To & From

Doc. 1 – Grantee(s) Name(s)	Doc. 2 – Grantee(s) Name(s)
In-Town Properties, LLC	Shore United Bank

New Owner's (Grantee) Mailing Address: 29039 Cherry Hill Lane, Easton, MD 21601

9 Other Names to Be Indexed

Doc. 1 – Additional Names to be Indexed (Optional)	Doc. 2 - Additional Names to be Indexed (Optional)
	Charles E. Ruch, Trustee
	Kathleen Kurtz, Trustee

10 Contact/Mail Information

Instrument Submitted By or Contact Person

Name: Ryan D. Showalter
Firm: McAllister, DeTar, Showalter & Walker LLC
Address: 100 N. West Street, Easton, Maryland 21601
Phone: 410-820-0259

[X] Return to Contact Person
[ ] Hold for Pickup
[ ] Return Address Provided

11 IMPORTANT: *BOTH* THE ORIGINAL DEED *AND* A PHOTOCOPY MUST ACCOMPANY EACH TRANSFER

Assessment Information

[ ] Yes [X] No Will the property being conveyed be the grantee's principal residence?
[ ] Yes [X] No Does transfer include personal property? If yes, identify: _____
[ ] Yes [X] No Was property surveyed? If yes, attach copy of survey (if recorded, no copy required)

Assessment Use Only - Do Not Write Below This Line

[ ] Terminal Verification [ ] Agricultural Verification [ ] Whole [ ] Part [ ] Tran. Process Verification

Transfer Number: Date Received: Deed Reference: Assigned Property No.:

Year			Geo.	Map	Sub	Block
Land			Zoning	Grid	Plat	Lot
Buildings			Use	Parcel	Section	Occ. Cd.
Total			Town Cd.	Ex. St.	Ex. Cd.	

REMARKS:

LIBER2412 FOLIO286

4845-5926-3260

TALBOT COUNTY CIRCUIT COURT (Land Records) MAS 2412, p. 0286, MSA_CE91_2351. Date available 12/30/2016. Printed 12/10/2021.