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October 1, 2021

Jeff Doolittle, P.E.
Town Engineer
1540 Sullivan Avenue
South Windsor, CT

Re: App 21-36P – 25 Talbot Lane SP

Dear Mr. Doolittle,

This letter is written to address your review comments dated August 27, 2021. The accompanying plan set incorporates our responses to these comments. For ease of your review, your initial comment is in *italics*, followed by our response in **bold**.

Engineering has completed its review of the subject project, and has the following comments and recommendations:

1. *Label the missing/broken curb on Talbot Lane along the frontage of this piece. Show the TF and Inv elevations of the two catch basins and manhole at the intersection of Talbot Lane and Governors Highway. Also show the fire hydrant that is on Governors Highway by the northeast corner of this property, and the concrete barrier curb along Governors Highway in front of this property. Show the invert and TF elevations of the existing drainage structures on the east side of the property and the first connecting structure by the back of 20 Baker Lane and 75 Cody Circle.*
The survey plans show the TF and invert elevations for 2 of 3 catchbasins located at the intersection of Talbot Lane and Governors Highway. The third CB, missing curb along the sites Talbot Lane frontage, fire hydrant at the northeast corner of the property, concrete barrier along Governors Highway, and TF / invert elevations of the drainage structures on the east side of the property will be labeled in the next plan set submission.
2. *Replace the bituminous curb along Talbot Lane in front of this property where it is missing or damaged.*
Callouts to replace the bituminous curb along Talbot Lane in front of the property where missing or damaged will be included in the next plan set submission.
3. *The Town Public Works Department wants to keep the concrete barrier curb that is along Governors Highway in front of this parcel. This can be moved to the Town Garage at 157 Burgess Road upon coordination with Public Works staff.*
Callouts for the concrete barrier to be preserved, protected, and removed from the site by coordinating with Public Works staff will be included in the next plan set submission.
4. *The plans show 64 reserve parking spaces in the truck trailer parking areas. Will these areas really be available for car parking if needed or is this a conflict?*
Yes, these spaces will be made available if needed.
5. *The EV installed and ready spaces need to be for Level 2 charging per the PZC regulations.*
All mentions of level one charging provisions will be revised to level two in the next plan set submission.

6. *The S-curve entrance to the car parking spaces on the west side of the building has a short sharp curve off the main driveway. The radius at the beginning of this car drive should be the same as the radius at the other end (35 and 60 feet)*

The radii at the beginning of the S-curve entrance to the car parking area will be revised to be 36 & 60 feet to match the other end in the next plan set submission.

7. *Where is the main entrance into the building?*

There are two main entrances to the building located at its southeastern and southwestern corners, indicated by the concrete accessible pedestrian ramps.

8. *There is an existing low spot on Governors Highway near the northeast corner of this property where there is no catch basin or drainage pipe. The water flows off the road onto the grass and woods on and near this property there. The Town requests a formal right to drain onto this property at the northeast corner and an established drainage swale from the road to the low point in that area of this property near where there are wetlands located. The swale can be stabilized with grass or stone and the Town will maintain it once it is established.*

The grading plan was revised to lower the area at the northeast corner of the site along Governors Highway, allowing surface runoff to drain away from the road. A note granting the Town of South Windsor drainage rights to allow surface runoff from this portion of Governors Highway to sheet flow to the wetlands at the northeast corner of the property will be included in the next plan set submission.

9. *The plans do not show any water going to or from the existing drainage structures on the east side of the property by the back of 20 Baker Lane and 75 Cody Circle. What will be done with these drainage structures and pipes?*

The drainage structures and pipes in this area are proposed to remain.

10. *I have some concerns with the storm drainage system give the site is so flat.*

- a. *How were the underground stormwater chambers sized? Water will be back up into these during most storm events and they do not provide much storage or stormwater treatment. These should be sized to hold and their outlet raised about at least the 2 year storm elevation 71. 78.*

The underground stormwater chambers system was sized to provide conveyance of stormwater collected in the proposed catchment system in the west truck parking area to the water quality basin. Isolation rows within the underground system were sized to treat the water quality flow rate of a 2-yr storm (3.10") instead of 1" as recommended by the 2004 Connecticut Stormwater Quality Manual. This was done instead of elevating the outlet invert from the underground system above the 2-yr storm as recommended due to site grade limitations.

- b. *The Stormwater Report indicates the water level in the large detention basin will be elevation 72. 52 during a 10-year storm. This will result in water backing up in many storm drain pipes on site during most storms and possibly lead to siltation, clogging, freezing and other problems with the storm drain system such that it does not function as designed for the 10-year storm. All the storm drain pipe outlets into the detention basin (except for those from the underground infiltration system) should be raised about the projected 10-year storm elevation and other pipes in the storm drain system raised accordingly.*

The storm sewer analysis for the site was revised to consider pond tailwater conditions for the 10-yr storm. Pipes were upsized to prevent fully submerged conditions and provide greater than or equal to 1.5' of freeboard in catchbasins during a 10-yr storm event. The outlet from the water quality basin was also lowered to bring the 10-yr elevation to 72.13 to assist in relieving submerged pipe conditions. Revised Storm Sewer results are included as an attachment to this response. Updated pre and post condition analysis results to DP#1 based on changes to the pond outlet elevation are shown below:

Reach		2 year	10 year	25 year	50 year	100 year
DP#1 – Existing Stilling Basin	Pre	2.39	8.67	13.43	17.21	21.61
	Post	2.33	8.49	13.14	16.23	20.80

Results indicated that proposed flow are still below existing values. Updated post condition HydroCAD analysis results are also included as an attachment to this response.

- c. *The inlet to the detention basin from the western parking areas and side of the building is very close to the outlet which may lead to water short circuiting the basin and not being retained for as long as needed. This inlet needs to be moved further away from the outlet and a stone check dam installed between this inlet and the outlet to the 2-year elevation 71.78.*

Treatment of stormwater from this area is not dependent on its retention time in the water quality basin. Discharge from the western parking area will be cleaned in the proposed isolation rows within the underground stormwater chamber system sized to treat the 2-yr water quality flow rate from this area. With this it is our professional opinion that a stone check dam would not be needed. We also feel that the check dam would have an adverse impact to pond tailwater conditions.

- d. *The proposed stone check dam at elevation 70.5 can be eliminated.*

The proposed stone check dam was removed from the plan.

11. *Provide the average daily and peak sanitary sewer flows expected from this building.*

The expected sanitary flow for the proposed total building area based on Section 4.B, Table 4 of the Connecticut Public Health Code is 35,964 GPD based on 359,640 SF of proposed industrial building utilizing a rate of 0.1 GPD/ SF of gross floor area.

12. *Provide a monitoring manhole on the sanitary lateral in the lawn area on the south side of Governors Highway with an easement to the Town for access for monitoring and inspection purposes.*

Proposed sanitary manhole SMH-1 will be relocated to the lawn area and easement provided allowing the Town access for monitoring and inspections in the next plan submission set.

13. *The HDPE flared end detail (and concrete flared end details) need to include anchoring the flared end to a concrete or compacted stone cutoff wall that goes down about 3.5 feet so the flared end is securely pinned in place and does not get undermined.*

The HDPE flared end detail will include callouts requiring anchoring of the flared end as requested in the next plan submission set.

14. *WPCA review and approval is needed for this project.*

Noted. The applicant will submit to the WPCA upon receiving approval from PZC.

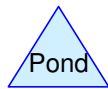
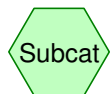
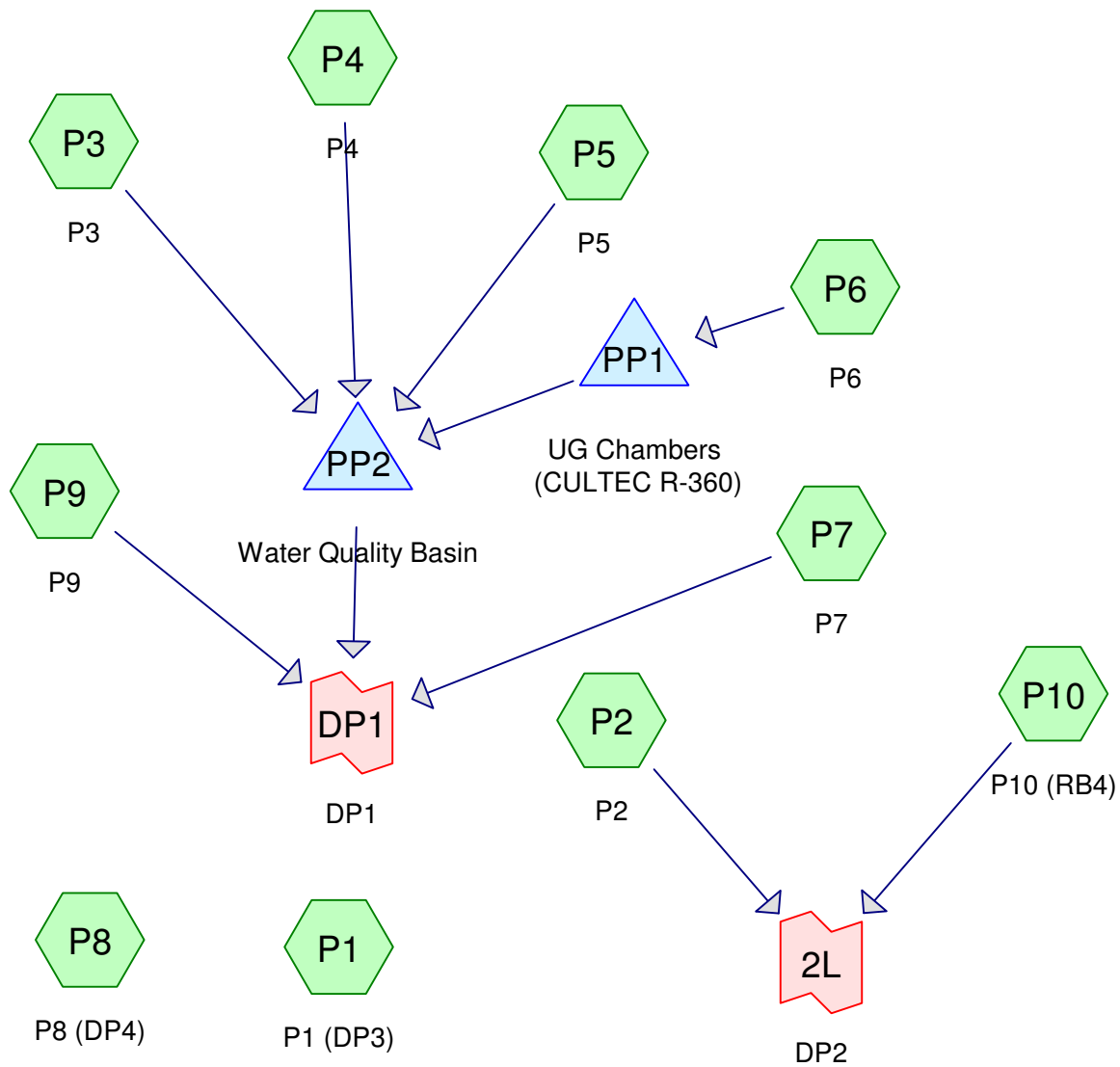
Please contact us with any questions.

Sincerely,



Daniel H. Jameson, PE
Project Manager

Attachment A
Proposed Condition HydroCAD Results



1976.U Hydrocad

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Proposed Conditions

Type III 24-hr 2-yr Rainfall=3.15"

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Page 2

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1: P1 (DP3)Runoff Area=2.430 ac 0.00% Impervious Runoff Depth=0.71"
Flow Length=198' Tc=32.5 min CN=68 Runoff=0.94 cfs 0.143 af**Subcatchment P10: P10 (RB4)**Runoff Area=0.700 ac 100.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=98 Runoff=2.14 cfs 0.170 af**Subcatchment P2: P2**Runoff Area=2.000 ac 0.50% Impervious Runoff Depth=0.85"
Flow Length=514' Tc=30.9 min CN=71 Runoff=1.00 cfs 0.141 af**Subcatchment P3: P3**Runoff Area=9.760 ac 66.80% Impervious Runoff Depth=1.95"
Tc=10.0 min CN=88 Runoff=19.47 cfs 1.588 af**Subcatchment P4: P4**Runoff Area=3.360 ac 100.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=98 Runoff=10.27 cfs 0.817 af**Subcatchment P5: P5**Runoff Area=3.460 ac 100.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=98 Runoff=10.58 cfs 0.841 af**Subcatchment P6: P6**Runoff Area=7.030 ac 68.42% Impervious Runoff Depth=1.95"
Tc=10.0 min CN=88 Runoff=14.03 cfs 1.144 af**Subcatchment P7: P7**Runoff Area=3.120 ac 0.00% Impervious Runoff Depth=0.46"
Flow Length=471' Tc=32.5 min CN=62 Runoff=0.65 cfs 0.120 af**Subcatchment P8: P8 (DP4)**Runoff Area=1.950 ac 0.00% Impervious Runoff Depth=0.71"
Flow Length=490' Tc=41.0 min CN=68 Runoff=0.67 cfs 0.115 af**Subcatchment P9: P9**Runoff Area=0.720 ac 100.00% Impervious Runoff Depth=2.92"
Tc=35.0 min CN=98 Runoff=1.17 cfs 0.175 af**Pond PP1: UG Chambers (CULTEC R-360)**Peak Elev=71.41' Storage=8,418 cf Inflow=14.03 cfs 1.144 af
Outflow=11.82 cfs 1.096 af**Pond PP2: Water Quality Basin**Peak Elev=71.41' Storage=492,457 cf Inflow=47.31 cfs 4.342 af
Outflow=0.68 cfs 2.444 af**Link 2L: DP2**Inflow=2.37 cfs 0.312 af
Primary=2.37 cfs 0.312 af**Link DP1: DP1**Inflow=2.33 cfs 2.739 af
Primary=2.33 cfs 2.739 af

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Proposed Conditions

Type III 24-hr 10-yr Rainfall=4.99"

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Page 3

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1: P1 (DP3)	Runoff Area=2.430 ac 0.00% Impervious Runoff Depth=1.87" Flow Length=198' Tc=32.5 min CN=68 Runoff=2.82 cfs 0.379 af
Subcatchment P10: P10 (RB4)	Runoff Area=0.700 ac 100.00% Impervious Runoff Depth=4.75" Tc=6.0 min CN=98 Runoff=3.42 cfs 0.277 af
Subcatchment P2: P2	Runoff Area=2.000 ac 0.50% Impervious Runoff Depth=2.11" Flow Length=514' Tc=30.9 min CN=71 Runoff=2.71 cfs 0.351 af
Subcatchment P3: P3	Runoff Area=9.760 ac 66.80% Impervious Runoff Depth=3.66" Tc=10.0 min CN=88 Runoff=35.82 cfs 2.976 af
Subcatchment P4: P4	Runoff Area=3.360 ac 100.00% Impervious Runoff Depth=4.75" Tc=6.0 min CN=98 Runoff=16.40 cfs 1.331 af
Subcatchment P5: P5	Runoff Area=3.460 ac 100.00% Impervious Runoff Depth=4.75" Tc=6.0 min CN=98 Runoff=16.89 cfs 1.371 af
Subcatchment P6: P6	Runoff Area=7.030 ac 68.42% Impervious Runoff Depth=3.66" Tc=10.0 min CN=88 Runoff=25.80 cfs 2.144 af
Subcatchment P7: P7	Runoff Area=3.120 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=471' Tc=32.5 min CN=62 Runoff=2.63 cfs 0.372 af
Subcatchment P8: P8 (DP4)	Runoff Area=1.950 ac 0.00% Impervious Runoff Depth=1.87" Flow Length=490' Tc=41.0 min CN=68 Runoff=2.02 cfs 0.304 af
Subcatchment P9: P9	Runoff Area=0.720 ac 100.00% Impervious Runoff Depth=4.75" Tc=35.0 min CN=98 Runoff=1.88 cfs 0.285 af
Pond PP1: UG Chambers (CULTEC R-360)	Peak Elev=72.13' Storage=11,828 cf Inflow=25.80 cfs 2.144 af Outflow=23.14 cfs 2.084 af
Pond PP2: Water Quality Basin	Peak Elev=72.13' Storage=554,652 cf Inflow=85.06 cfs 7.761 af Outflow=5.34 cfs 5.676 af
Link 2L: DP2	Inflow=4.35 cfs 0.629 af Primary=4.35 cfs 0.629 af
Link DP1: DP1	Inflow=8.49 cfs 6.333 af Primary=8.49 cfs 6.333 af

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Type III 24-hr 25-yr Rainfall=6.13"

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Page 4

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1: P1 (DP3)	Runoff Area=2.430 ac 0.00% Impervious Runoff Depth=2.72" Flow Length=198' Tc=32.5 min CN=68 Runoff=4.18 cfs 0.551 af
Subcatchment P10: P10 (RB4)	Runoff Area=0.700 ac 100.00% Impervious Runoff Depth=5.89" Tc=6.0 min CN=98 Runoff=4.21 cfs 0.344 af
Subcatchment P2: P2	Runoff Area=2.000 ac 0.50% Impervious Runoff Depth=3.00" Flow Length=514' Tc=30.9 min CN=71 Runoff=3.91 cfs 0.501 af
Subcatchment P3: P3	Runoff Area=9.760 ac 66.80% Impervious Runoff Depth=4.75" Tc=10.0 min CN=88 Runoff=45.95 cfs 3.864 af
Subcatchment P4: P4	Runoff Area=3.360 ac 100.00% Impervious Runoff Depth=5.89" Tc=6.0 min CN=98 Runoff=20.19 cfs 1.650 af
Subcatchment P5: P5	Runoff Area=3.460 ac 100.00% Impervious Runoff Depth=5.89" Tc=6.0 min CN=98 Runoff=20.79 cfs 1.699 af
Subcatchment P6: P6	Runoff Area=7.030 ac 68.42% Impervious Runoff Depth=4.75" Tc=10.0 min CN=88 Runoff=33.10 cfs 2.783 af
Subcatchment P7: P7	Runoff Area=3.120 ac 0.00% Impervious Runoff Depth=2.18" Flow Length=471' Tc=32.5 min CN=62 Runoff=4.17 cfs 0.567 af
Subcatchment P8: P8 (DP4)	Runoff Area=1.950 ac 0.00% Impervious Runoff Depth=2.72" Flow Length=490' Tc=41.0 min CN=68 Runoff=2.98 cfs 0.442 af
Subcatchment P9: P9	Runoff Area=0.720 ac 100.00% Impervious Runoff Depth=5.89" Tc=35.0 min CN=98 Runoff=2.31 cfs 0.354 af
Pond PP1: UG Chambers (CULTEC R-360)	Peak Elev=72.72' Storage=14,262 cf Inflow=33.10 cfs 2.783 af Outflow=28.63 cfs 2.720 af
Pond PP2: Water Quality Basin	Peak Elev=72.72' Storage=608,465 cf Inflow=108.57 cfs 9.933 af Outflow=7.54 cfs 7.795 af
Link 2L: DP2	Inflow=5.67 cfs 0.844 af Primary=5.67 cfs 0.844 af
Link DP1: DP1	Inflow=13.14 cfs 8.715 af Primary=13.14 cfs 8.715 af

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Type III 24-hr 50-yr Rainfall=6.97"

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Page 5

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1: P1 (DP3)	Runoff Area=2.430 ac 0.00% Impervious Runoff Depth=3.39" Flow Length=198' Tc=32.5 min CN=68 Runoff=5.24 cfs 0.686 af
Subcatchment P10: P10 (RB4)	Runoff Area=0.700 ac 100.00% Impervious Runoff Depth=6.73" Tc=6.0 min CN=98 Runoff=4.79 cfs 0.393 af
Subcatchment P2: P2	Runoff Area=2.000 ac 0.50% Impervious Runoff Depth=3.70" Flow Length=514' Tc=30.9 min CN=71 Runoff=4.83 cfs 0.616 af
Subcatchment P3: P3	Runoff Area=9.760 ac 66.80% Impervious Runoff Depth=5.56" Tc=10.0 min CN=88 Runoff=53.38 cfs 4.526 af
Subcatchment P4: P4	Runoff Area=3.360 ac 100.00% Impervious Runoff Depth=6.73" Tc=6.0 min CN=98 Runoff=22.98 cfs 1.885 af
Subcatchment P5: P5	Runoff Area=3.460 ac 100.00% Impervious Runoff Depth=6.73" Tc=6.0 min CN=98 Runoff=23.66 cfs 1.941 af
Subcatchment P6: P6	Runoff Area=7.030 ac 68.42% Impervious Runoff Depth=5.56" Tc=10.0 min CN=88 Runoff=38.45 cfs 3.260 af
Subcatchment P7: P7	Runoff Area=3.120 ac 0.00% Impervious Runoff Depth=2.78" Flow Length=471' Tc=32.5 min CN=62 Runoff=5.42 cfs 0.723 af
Subcatchment P8: P8 (DP4)	Runoff Area=1.950 ac 0.00% Impervious Runoff Depth=3.39" Flow Length=490' Tc=41.0 min CN=68 Runoff=3.74 cfs 0.550 af
Subcatchment P9: P9	Runoff Area=0.720 ac 100.00% Impervious Runoff Depth=6.73" Tc=35.0 min CN=98 Runoff=2.63 cfs 0.404 af
Pond PP1: UG Chambers (CULTEC R-360)	Peak Elev=73.15' Storage=15,586 cf Inflow=38.45 cfs 3.260 af Outflow=33.37 cfs 3.194 af
Pond PP2: Water Quality Basin	Peak Elev=73.15' Storage=649,322 cf Inflow=125.89 cfs 11.545 af Outflow=9.55 cfs 9.368 af
Link 2L: DP2	Inflow=6.67 cfs 1.009 af Primary=6.67 cfs 1.009 af
Link DP1: DP1	Inflow=16.23 cfs 10.494 af Primary=16.23 cfs 10.494 af

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Type III 24-hr 100-yr Rainfall=7.90"

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Page 6

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1: P1 (DP3)	Runoff Area=2.430 ac 0.00% Impervious Runoff Depth=4.15" Flow Length=198' Tc=32.5 min CN=68 Runoff=6.45 cfs 0.841 af
Subcatchment P10: P10 (RB4)	Runoff Area=0.700 ac 100.00% Impervious Runoff Depth=7.66" Tc=6.0 min CN=98 Runoff=5.43 cfs 0.447 af
Subcatchment P2: P2	Runoff Area=2.000 ac 0.50% Impervious Runoff Depth=4.49" Flow Length=514' Tc=30.9 min CN=71 Runoff=5.87 cfs 0.749 af
Subcatchment P3: P3	Runoff Area=9.760 ac 66.80% Impervious Runoff Depth=6.47" Tc=10.0 min CN=88 Runoff=61.57 cfs 5.263 af
Subcatchment P4: P4	Runoff Area=3.360 ac 100.00% Impervious Runoff Depth=7.66" Tc=6.0 min CN=98 Runoff=26.06 cfs 2.145 af
Subcatchment P5: P5	Runoff Area=3.460 ac 100.00% Impervious Runoff Depth=7.66" Tc=6.0 min CN=98 Runoff=26.83 cfs 2.209 af
Subcatchment P6: P6	Runoff Area=7.030 ac 68.42% Impervious Runoff Depth=6.47" Tc=10.0 min CN=88 Runoff=44.35 cfs 3.791 af
Subcatchment P7: P7	Runoff Area=3.120 ac 0.00% Impervious Runoff Depth=3.48" Flow Length=471' Tc=32.5 min CN=62 Runoff=6.86 cfs 0.905 af
Subcatchment P8: P8 (DP4)	Runoff Area=1.950 ac 0.00% Impervious Runoff Depth=4.15" Flow Length=490' Tc=41.0 min CN=68 Runoff=4.60 cfs 0.675 af
Subcatchment P9: P9	Runoff Area=0.720 ac 100.00% Impervious Runoff Depth=7.66" Tc=35.0 min CN=98 Runoff=2.98 cfs 0.460 af
Pond PP1: UG Chambers (CULTEC R-360)	Peak Elev=73.59' Storage=16,701 cf Inflow=44.35 cfs 3.791 af Outflow=38.67 cfs 3.722 af
Pond PP2: Water Quality Basin	Peak Elev=73.58' Storage=692,388 cf Inflow=144.08 cfs 13.338 af Outflow=12.49 cfs 11.125 af
Link 2L: DP2	Inflow=7.80 cfs 1.196 af Primary=7.80 cfs 1.196 af
Link DP1: DP1	Inflow=20.80 cfs 12.490 af Primary=20.80 cfs 12.490 af

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Proposed Conditions

Type III 24-hr 2-yr Rainfall=3.15"

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Page 7

Summary for Subcatchment P1: P1 (DP3)

Runoff = 0.94 cfs @ 12.53 hrs, Volume= 0.143 af, Depth= 0.71"

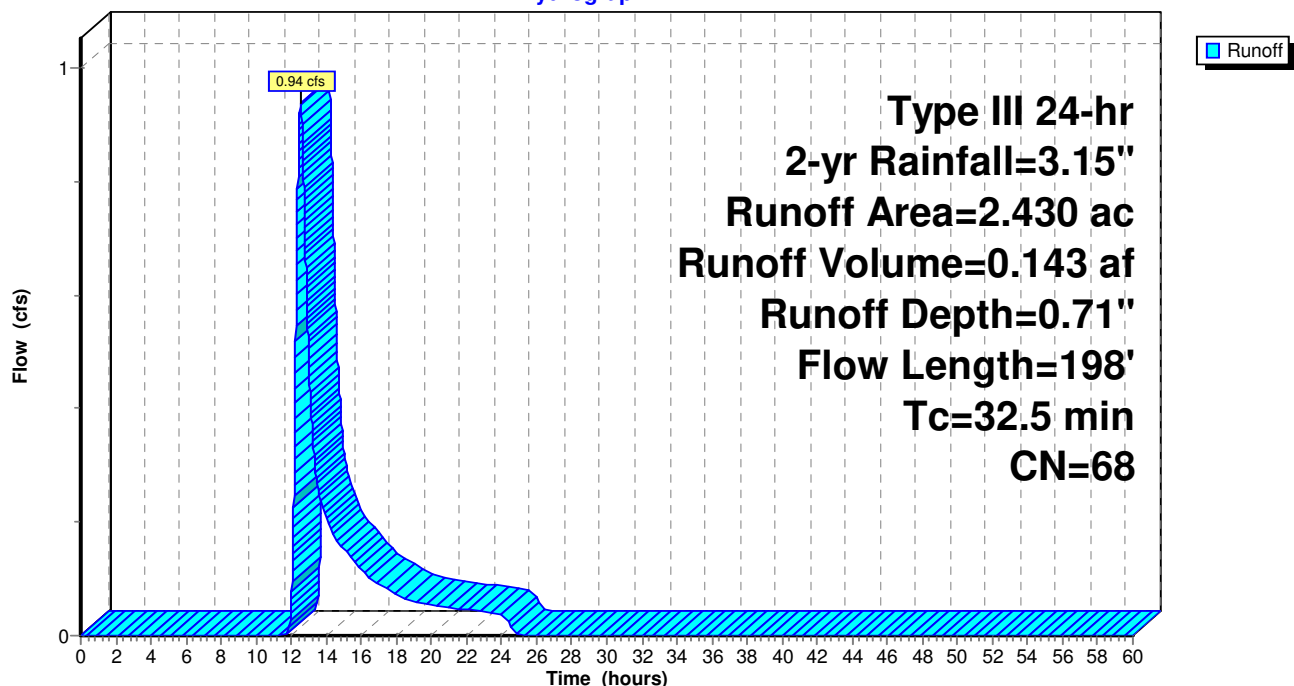
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 0.420	71	>75% Grass cover, Good, HSG B/D
0.160	74	>75% Grass cover, Good, HSG C
* 1.220	66	Woods, Good, HSG B/D
0.630	70	Woods, Good, HSG C
2.430	68	Weighted Average
2.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	28	0.2100	0.15		Sheet Flow, Woodland SF
					Woods: Light underbrush n= 0.400 P2= 3.22"
25.5	72	0.0067	0.05		Sheet Flow, Woodland SF
					Woods: Light underbrush n= 0.400 P2= 3.22"
4.0	98	0.0067	0.41		Shallow Concentrated Flow, Woodland SCF
					Woodland Kv= 5.0 fps
32.5	198	Total			

Subcatchment P1: P1 (DP3)

Hydrograph



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Proposed Conditions
Type III 24-hr 2-yr Rainfall=3.15"

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Page 8

Summary for Subcatchment P10: P10 (RB4)

Runoff = 2.14 cfs @ 12.08 hrs, Volume= 0.170 af, Depth= 2.92"

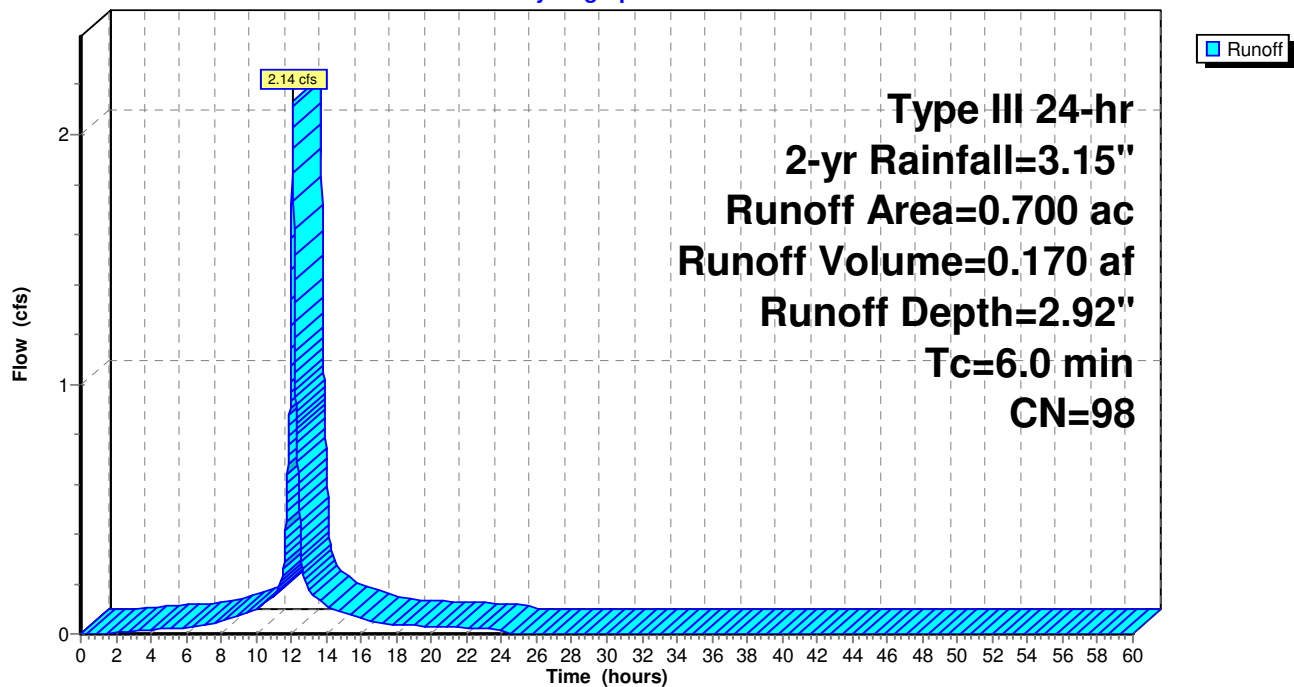
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 0.700	98	IMPERVIOUS
0.700		100.00% Impervious Area

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

Subcatchment P10: P10 (RB4)

Hydrograph



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Proposed Conditions

Type III 24-hr 2-yr Rainfall=3.15"

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Page 9

Summary for Subcatchment P2: P2

Runoff = 1.00 cfs @ 12.47 hrs, Volume= 0.141 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 0.280	71	>75% Grass cover, Good, HSG B/D
0.520	74	>75% Grass cover, Good, HSG C
* 0.010	98	IMPERVIOUS
* 0.380	66	Woods, Good, HSG B/D
0.810	70	Woods, Good, HSG C
2.000	71	Weighted Average
1.990		99.50% Pervious Area
0.010		0.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0084	0.08		Sheet Flow, Grass SF Grass: Dense n= 0.240 P2= 3.22"
2.6	100	0.0084	0.64		Shallow Concentrated Flow, Grass SCF Short Grass Pasture Kv= 7.0 fps
6.9	190	0.0084	0.46		Shallow Concentrated Flow, Woodland SCF Woodland Kv= 5.0 fps
1.3	124	0.0050	1.58	57.03	Channel Flow, Channel Flow Area= 36.0 sf Perim= 55.0' r= 0.65' n= 0.050
30.9	514	Total			

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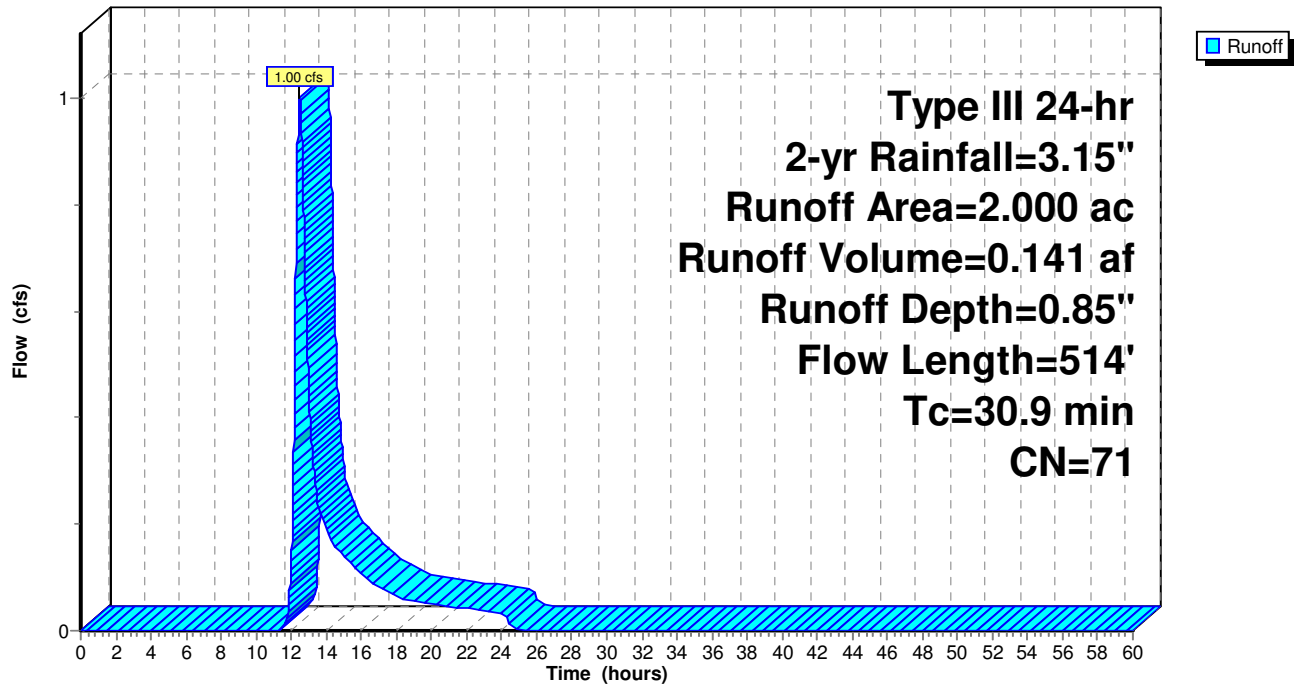
Type III 24-hr 2-yr Rainfall=3.15"

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Subcatchment P2: P2

Hydrograph



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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P3: P3

Runoff = 19.47 cfs @ 12.14 hrs, Volume= 1.588 af, Depth= 1.95"

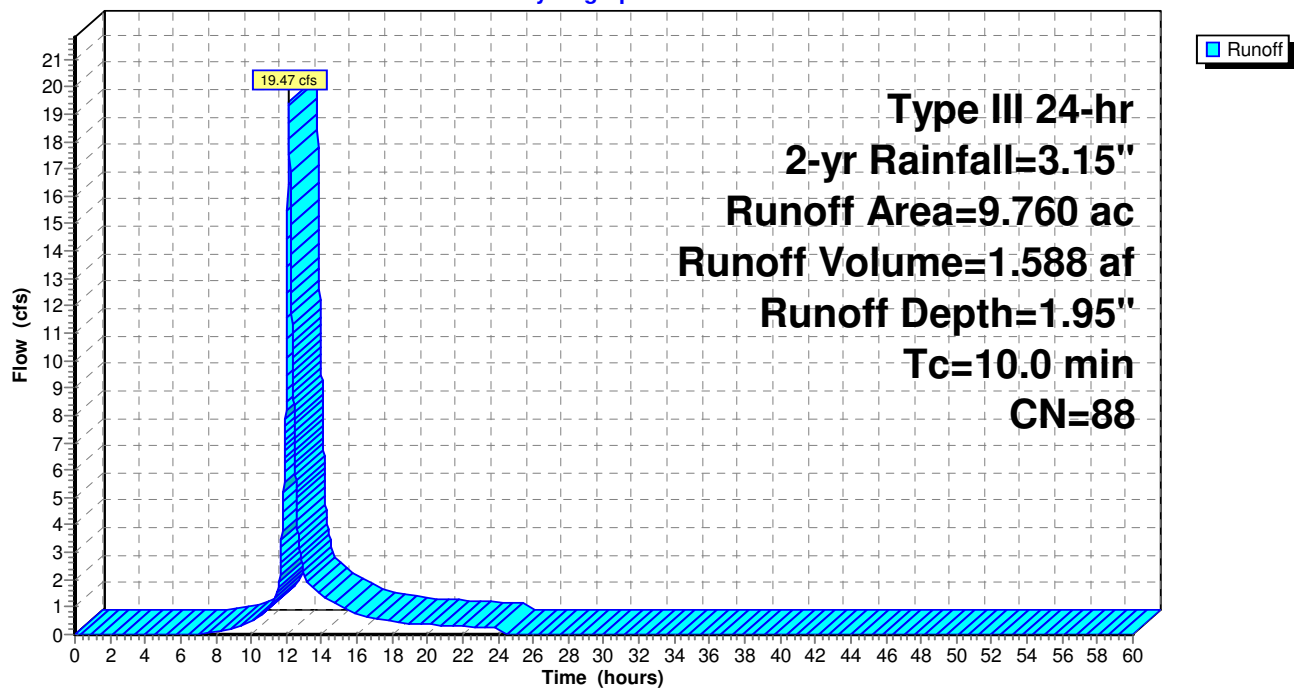
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
0.290	39	>75% Grass cover, Good, HSG A
* 0.030	60	>75% Grass cover, Good, HSG A/D
* 1.800	71	>75% Grass cover, Good, HSG B/D
1.120	74	>75% Grass cover, Good, HSG C
* 6.520	98	IMPERVIOUS
9.760	88	Weighted Average
3.240		33.20% Pervious Area
6.520		66.80% Impervious Area

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

Subcatchment P3: P3

Hydrograph



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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P4: P4

Runoff = 10.27 cfs @ 12.08 hrs, Volume= 0.817 af, Depth= 2.92"

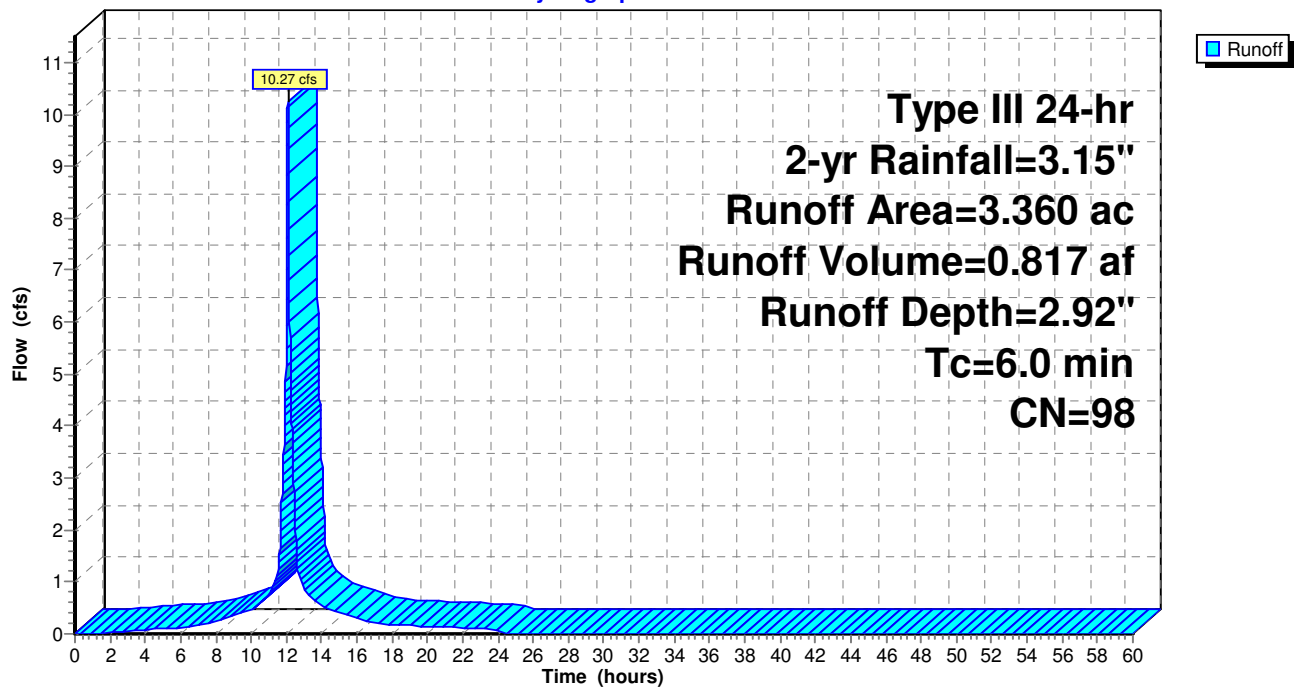
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 3.360	98	IMPERVIOUS
3.360		100.00% Impervious Area

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

Subcatchment P4: P4

Hydrograph



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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P5: P5

Runoff = 10.58 cfs @ 12.08 hrs, Volume= 0.841 af, Depth= 2.92"

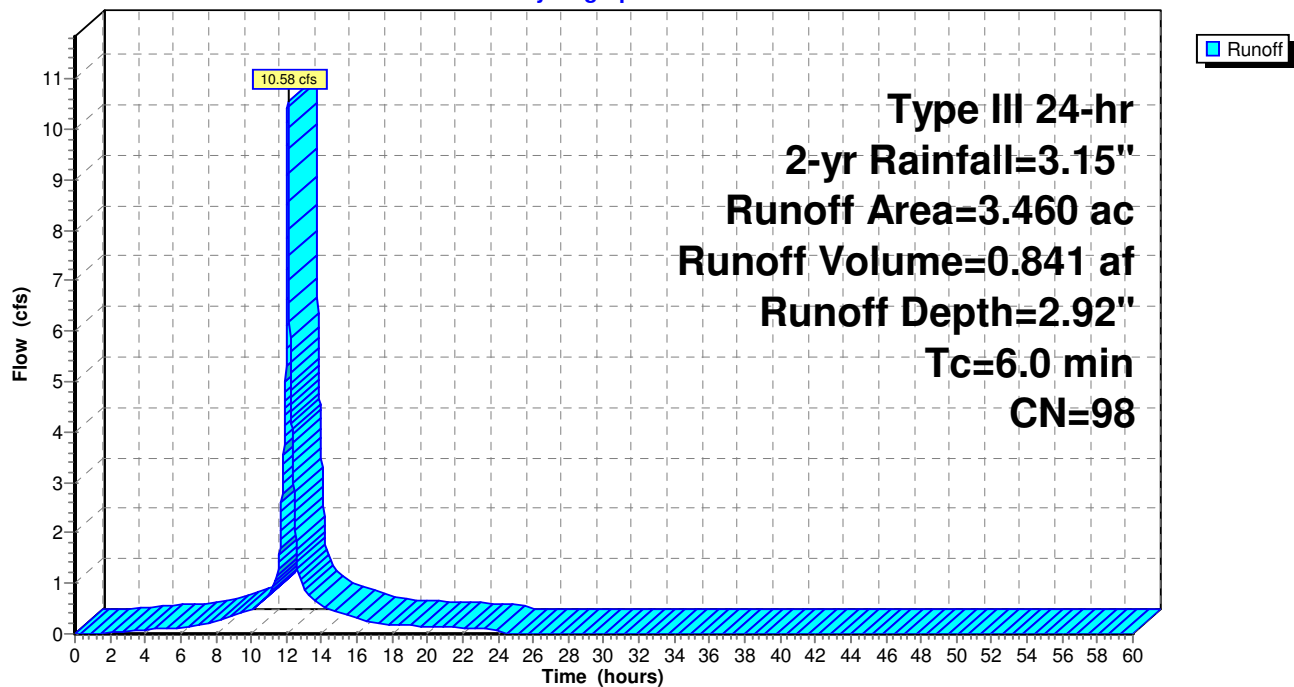
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 3.460	98	IMPERVIOUS
3.460		100.00% Impervious Area

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

Subcatchment P5: P5

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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P6: P6

Runoff = 14.03 cfs @ 12.14 hrs, Volume= 1.144 af, Depth= 1.95"

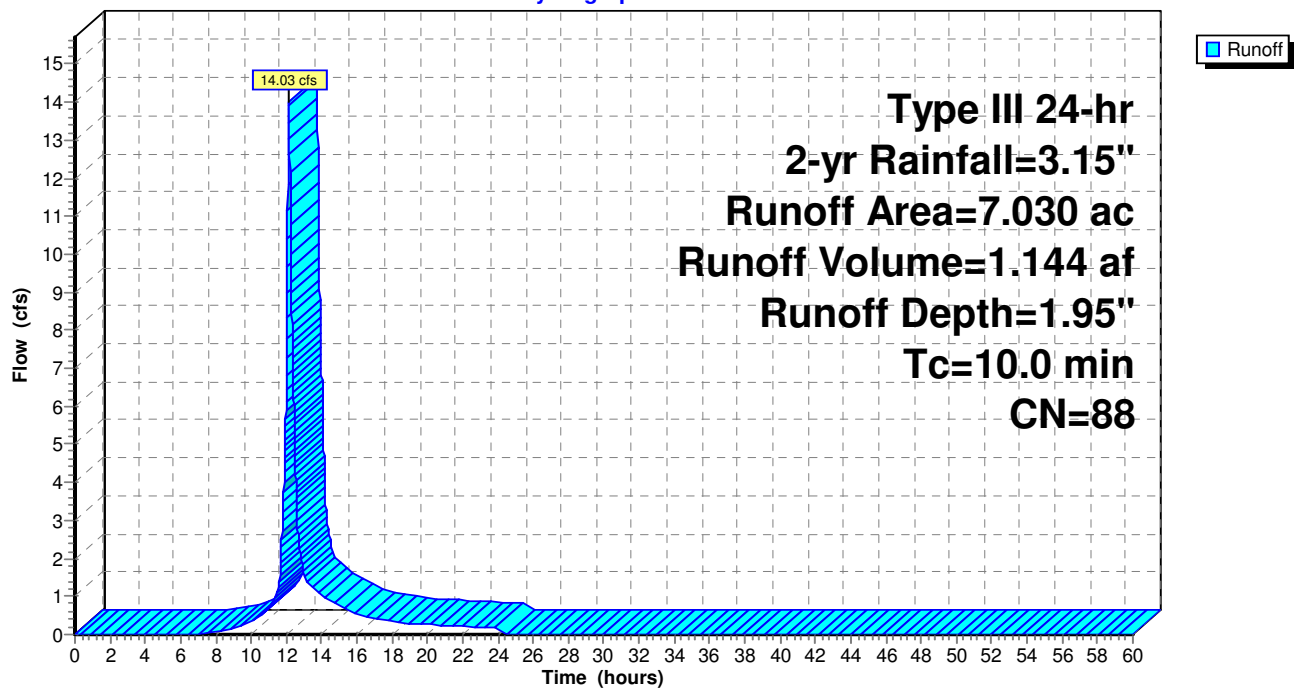
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
0.320	39	>75% Grass cover, Good, HSG A
* 0.060	60	>75% Grass cover, Good, HSG A/D
* 1.170	71	>75% Grass cover, Good, HSG B/D
0.670	74	>75% Grass cover, Good, HSG C
* 4.810	98	IMPERVIOUS
7.030	88	Weighted Average
2.220		31.58% Pervious Area
4.810		68.42% Impervious Area

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

Subcatchment P6: P6

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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P7: P7

Runoff = 0.65 cfs @ 12.60 hrs, Volume= 0.120 af, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 0.560	60	>75% Grass cover, Good, HSG A/D
* 0.200	71	>75% Grass cover, Good, HSG B/D
0.310	74	>75% Grass cover, Good, HSG C
* 1.200	54	Woods, Good, HSG A/D
* 0.250	66	Woods, Good, HSG B/D
0.600	70	Woods, Good, HSG C
3.120	62	Weighted Average
3.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	12	0.2600	0.21		Sheet Flow, Grass SF Grass: Dense n= 0.240 P2= 3.22"
21.6	88	0.0152	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.22"
10.0	371	0.0152	0.62		Shallow Concentrated Flow, Woodland SCF Woodland Kv= 5.0 fps
32.5	471	Total			

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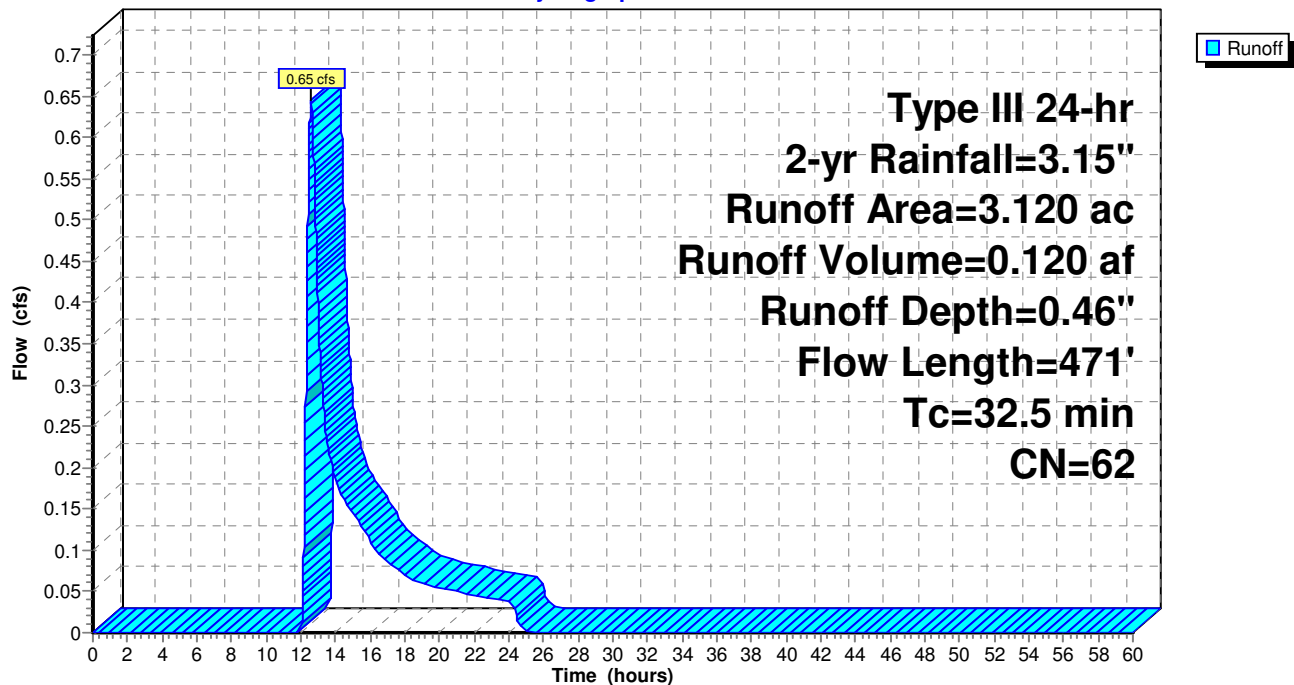
Type III 24-hr 2-yr Rainfall=3.15"

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Subcatchment P7: P7

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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P8: P8 (DP4)

Runoff = 0.67 cfs @ 12.66 hrs, Volume= 0.115 af, Depth= 0.71"

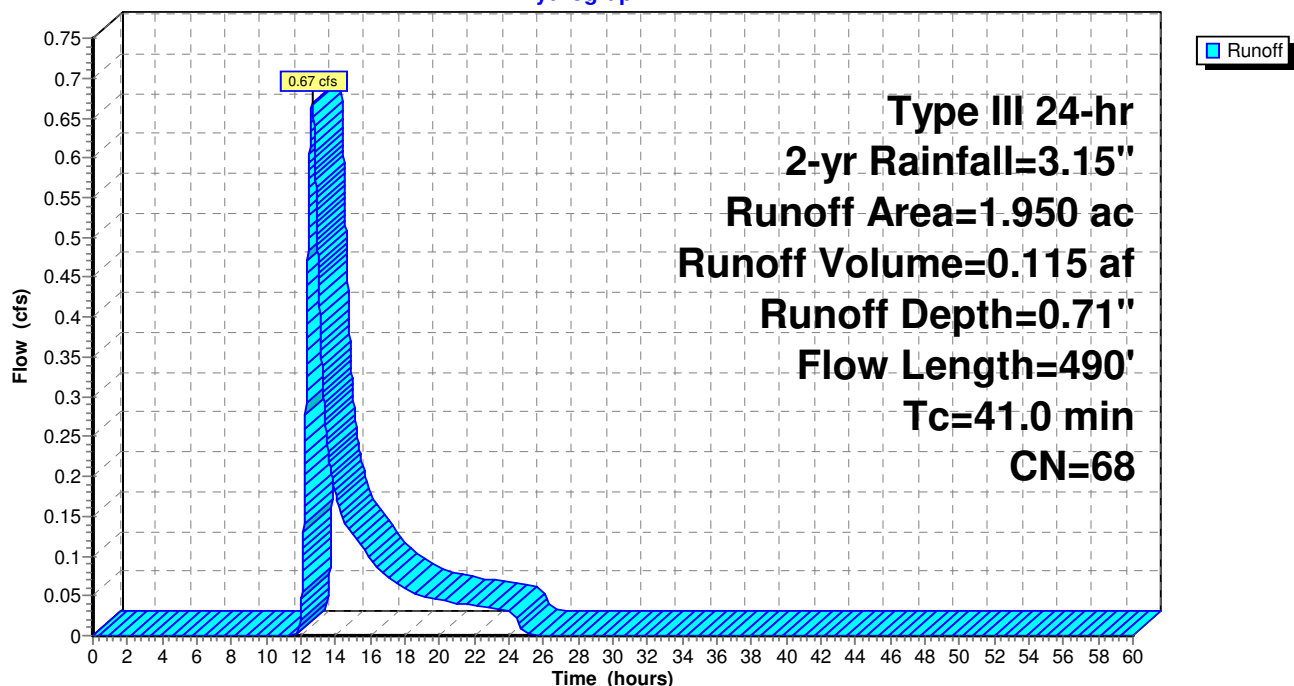
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 0.570	71	>75% Grass cover, Good, HSG B/D
0.050	74	>75% Grass cover, Good, HSG C
* 1.210	66	Woods, Good, HSG B/D
0.120	70	Woods, Good, HSG C
1.950	68	Weighted Average
1.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	16	0.2800	0.23		Sheet Flow, Grass SF Grass: Dense n= 0.240 P2= 3.22"
25.7	84	0.0089	0.05		Sheet Flow, Woodland SF Woods: Light underbrush n= 0.400 P2= 3.22"
14.2	390	0.0084	0.46		Shallow Concentrated Flow, Woodland SCF Woodland Kv= 5.0 fps
41.0	490	Total			

Subcatchment P8: P8 (DP4)

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Type III 24-hr 2-yr Rainfall=3.15"

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Summary for Subcatchment P9: P9

Runoff = 1.17 cfs @ 12.48 hrs, Volume= 0.175 af, Depth= 2.92"

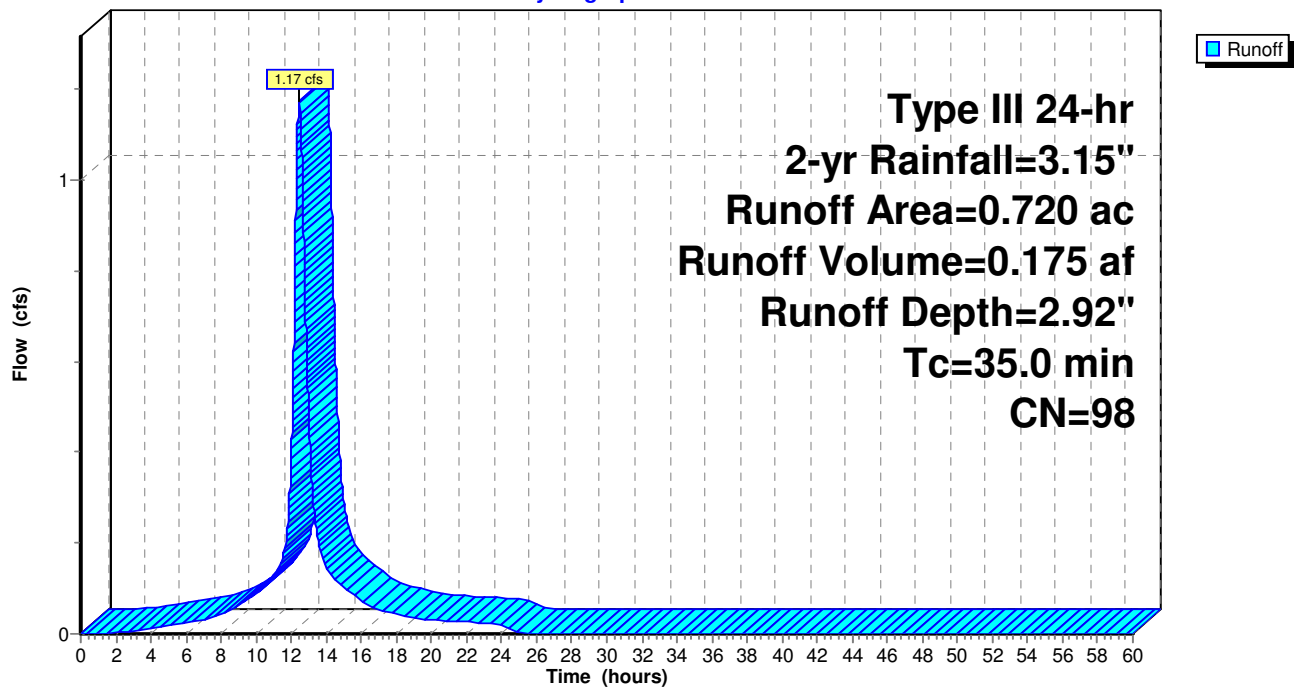
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.15"

Area (ac)	CN	Description
* 0.720	98	IMPERVIOUS
0.720		100.00% Impervious Area

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

Subcatchment P9: P9

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Summary for Pond PP1: UG Chambers (CULTEC R-360)

Inflow Area = 7.030 ac, 68.42% Impervious, Inflow Depth = 1.95" for 2-yr event
 Inflow = 14.03 cfs @ 12.14 hrs, Volume= 1.144 af
 Outflow = 11.82 cfs @ 12.21 hrs, Volume= 1.096 af, Atten= 16%, Lag= 4.1 min
 Primary = 11.82 cfs @ 12.21 hrs, Volume= 1.096 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 3

Starting Elev= 70.15' Surf.Area= 6,813 sf Storage= 1,846 cf

Peak Elev= 71.41' @ 22.94 hrs Surf.Area= 6,813 sf Storage= 8,418 cf (6,571 cf above start)

Plug-Flow detention time= 223.9 min calculated for 1.054 af (92% of inflow)

Center-of-Mass det. time= 168.5 min (988.0 - 819.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	69.56'	3,505 cf	7.00'W x 484.83'L x 4.00'H Field A 13,575 cf Overall - 4,813 cf Embedded = 8,762 cf x 40.0% Voids
#2A	70.06'	4,813 cf	Cultec R-360HD x 131 Inside #1 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap Cap Storage= +6.5 cf x 2 x 1 rows = 12.9 cf
#3B	69.56'	3,531 cf	7.00'W x 488.50'L x 4.00'H Field B 13,678 cf Overall - 4,850 cf Embedded = 8,828 cf x 40.0% Voids
#4B	70.06'	4,850 cf	Cultec R-360HD x 132 Inside #3 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap Cap Storage= +6.5 cf x 2 x 1 rows = 12.9 cf
#5	73.56'	45 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
#6	74.50'	1,908 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		18,652 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Storage Group B created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.56	48	0	0
74.50	48	45	45

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
74.50	5	0	0
75.00	422	107	107
76.00	3,180	1,801	1,908

Device	Routing	Invert	Outlet Devices
#1	Primary	70.15'	30.0" Round Culvert L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 70.15' / 70.11' S= 0.0080 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf

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Type III 24-hr 2-yr Rainfall=3.15"

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#2 Primary

70.15' 30.0" Round Culvert

L= 40.0' CPP, square edge headwall, $K_e = 0.500$

Inlet / Outlet Invert= 70.15' / 70.00' S= 0.0038 '/' Cc= 0.900

n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf

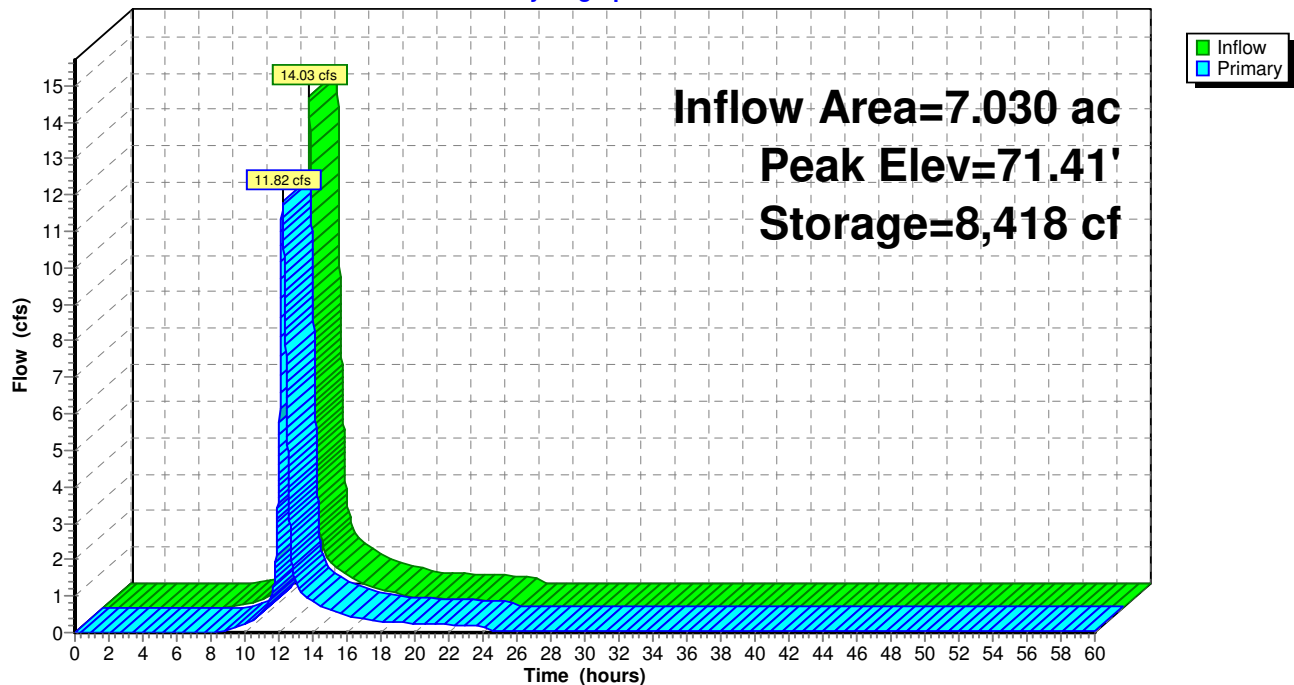
Primary OutFlow Max=11.81 cfs @ 12.21 hrs HW=71.33' TW=70.45' (Dynamic Tailwater)

1=Culvert (Barrel Controls 5.81 cfs @ 3.73 fps)

2=Culvert (Barrel Controls 6.00 cfs @ 3.85 fps)

Pond PP1: UG Chambers (CULTEC R-360)

Hydrograph



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Summary for Pond PP2: Water Quality Basin

Inflow Area = 23.610 ac, 76.87% Impervious, Inflow Depth > 2.21" for 2-yr event
 Inflow = 47.31 cfs @ 12.12 hrs, Volume= 4.342 af
 Outflow = 0.68 cfs @ 22.94 hrs, Volume= 2.444 af, Atten= 99%, Lag= 649.4 min
 Primary = 0.68 cfs @ 22.94 hrs, Volume= 2.444 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 3

Starting Elev= 69.40' Surf.Area= 66,610 sf Storage= 338,956 cf

Peak Elev= 71.41' @ 22.94 hrs Surf.Area= 83,998 sf Storage= 492,457 cf (153,500 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= 1,213.8 min (2,051.8 - 838.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	61.00'	956,853 cf	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	21,077	0	0	21,077
62.00	24,085	22,564	22,564	24,132
63.00	27,233	25,643	48,207	27,331
64.00	36,998	31,991	80,198	37,116
65.00	40,596	38,783	118,981	40,781
66.00	44,283	42,426	161,407	44,540
67.00	48,018	46,138	207,545	48,352
68.00	50,712	49,359	256,904	51,158
69.00	62,108	56,314	313,218	62,585
70.00	73,658	67,801	381,019	74,172
72.00	88,475	161,907	542,926	89,126
74.00	103,518	191,796	734,722	104,328
76.00	118,788	222,131	956,853	119,780

Device	Routing	Invert	Outlet Devices
#1	Primary	69.32'	30.0" Round Culvert L= 66.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.32' / 69.25' S= 0.0011 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Device 1	69.32'	7.0" W x 2.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	71.40'	38.0" W x 5.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	72.80'	14.0" W x 11.0" H Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.68 cfs @ 22.94 hrs HW=71.41' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.68 cfs of 14.42 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.66 cfs @ 6.83 fps)
 3=Orifice/Grate (Orifice Controls 0.02 cfs @ 0.39 fps)
 4=Orifice/Grate (Controls 0.00 cfs)

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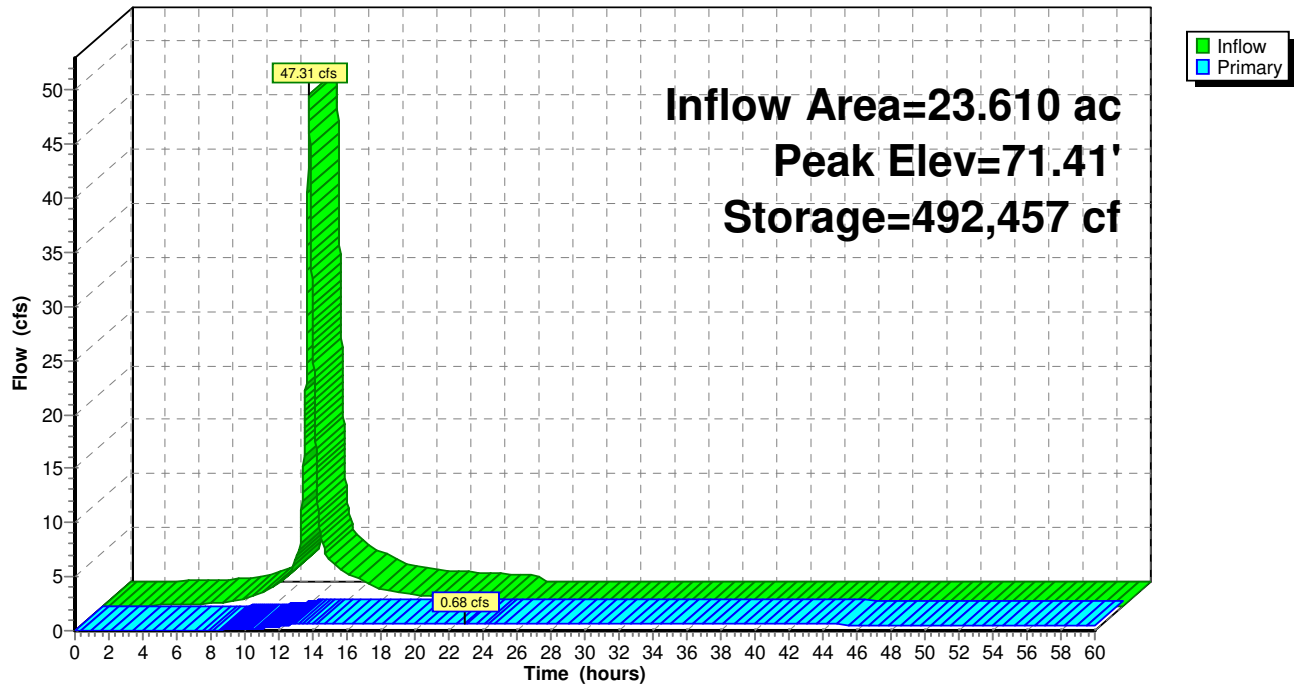
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Type III 24-hr 2-yr Rainfall=3.15"

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Pond PP2: Water Quality Basin

Hydrograph



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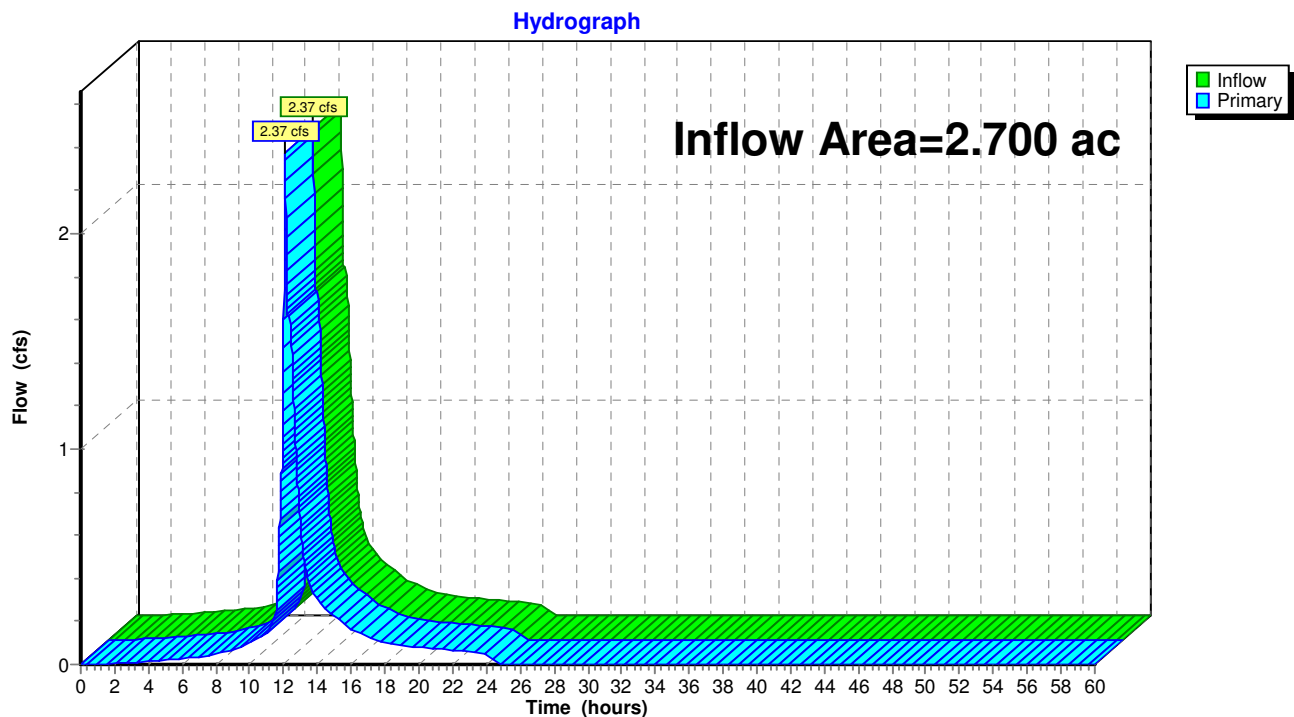
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Summary for Link 2L: DP2

Inflow Area = 2.700 ac, 26.30% Impervious, Inflow Depth = 1.38" for 2-yr event
Inflow = 2.37 cfs @ 12.09 hrs, Volume= 0.312 af
Primary = 2.37 cfs @ 12.09 hrs, Volume= 0.312 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link 2L: DP2



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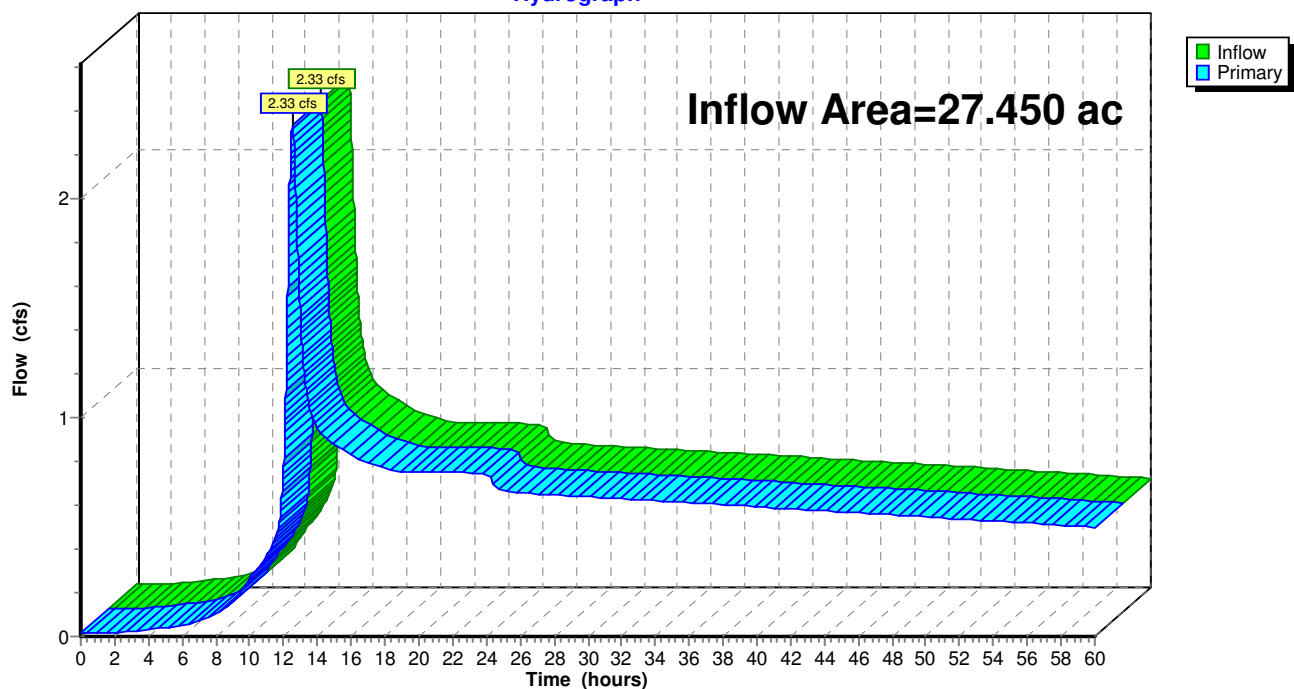
Summary for Link DP1: DP1

Inflow Area = 27.450 ac, 68.74% Impervious, Inflow Depth > 1.20" for 2-yr event
Inflow = 2.33 cfs @ 12.52 hrs, Volume= 2.739 af
Primary = 2.33 cfs @ 12.52 hrs, Volume= 2.739 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Link DP1: DP1

Hydrograph



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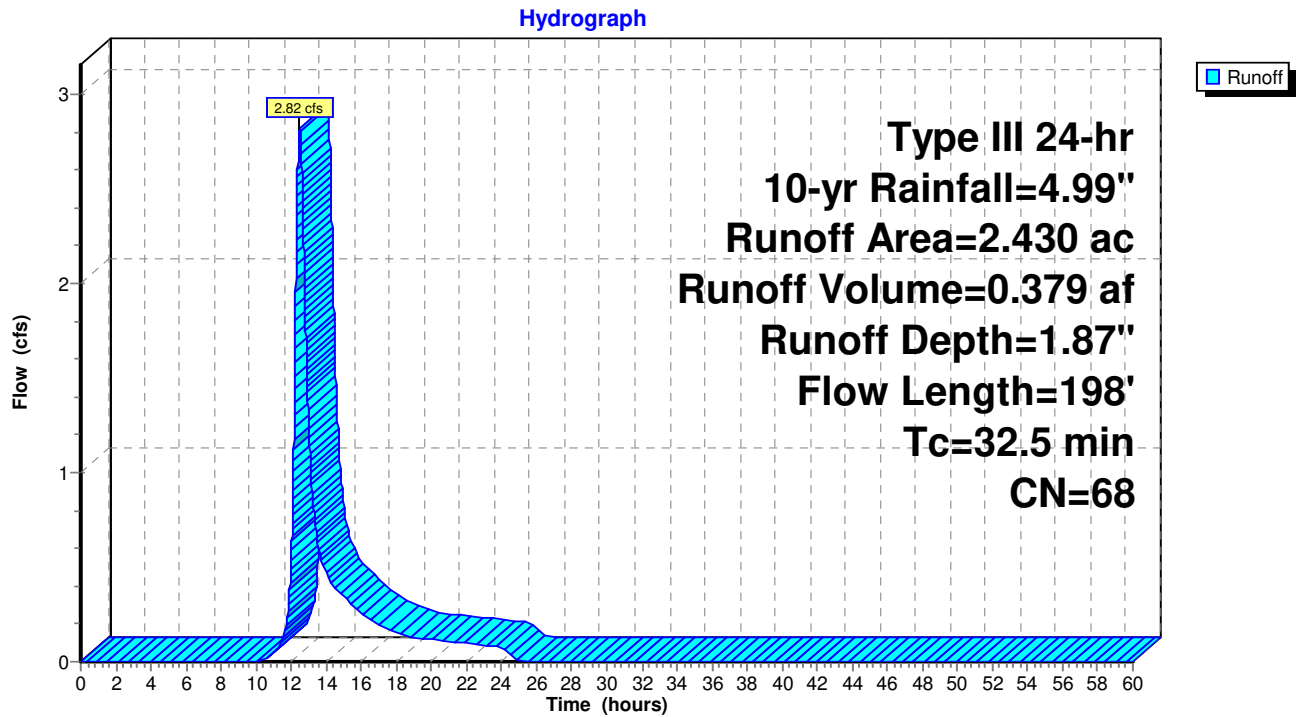
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Type III 24-hr 10-yr Rainfall=4.99"

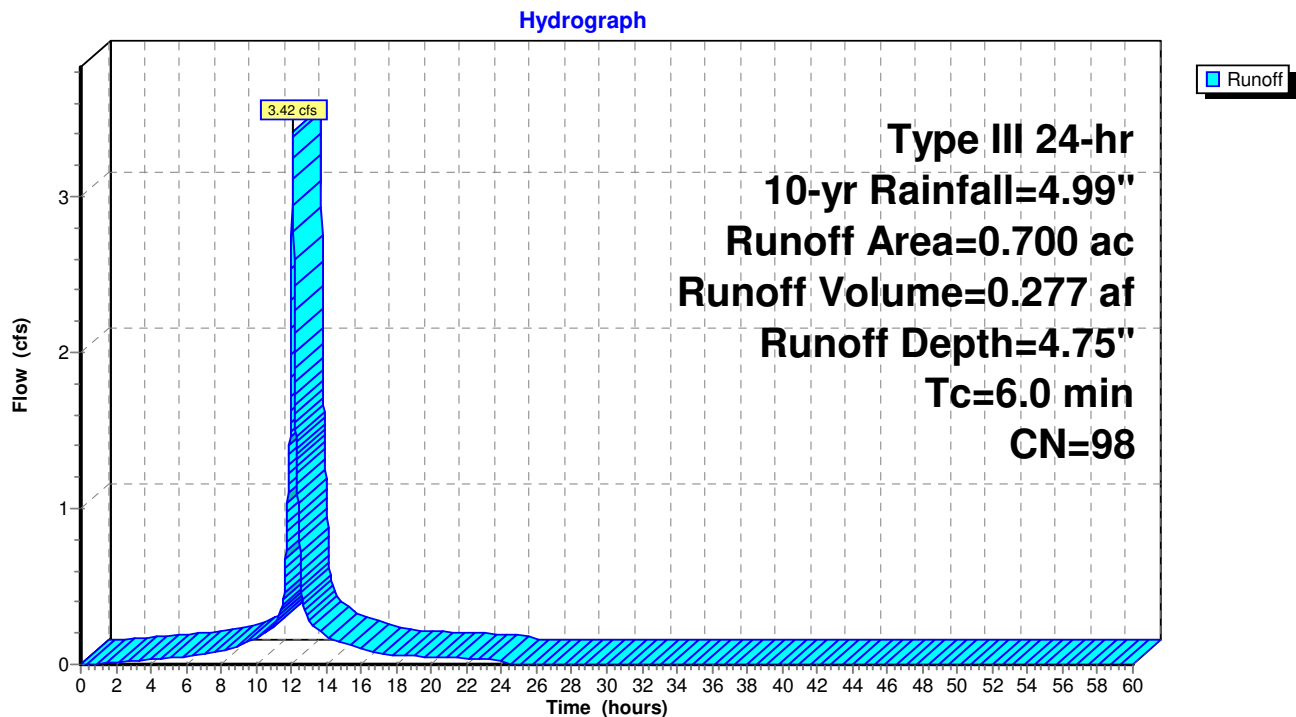
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Subcatchment P1: P1 (DP3)



Subcatchment P10: P10 (RB4)



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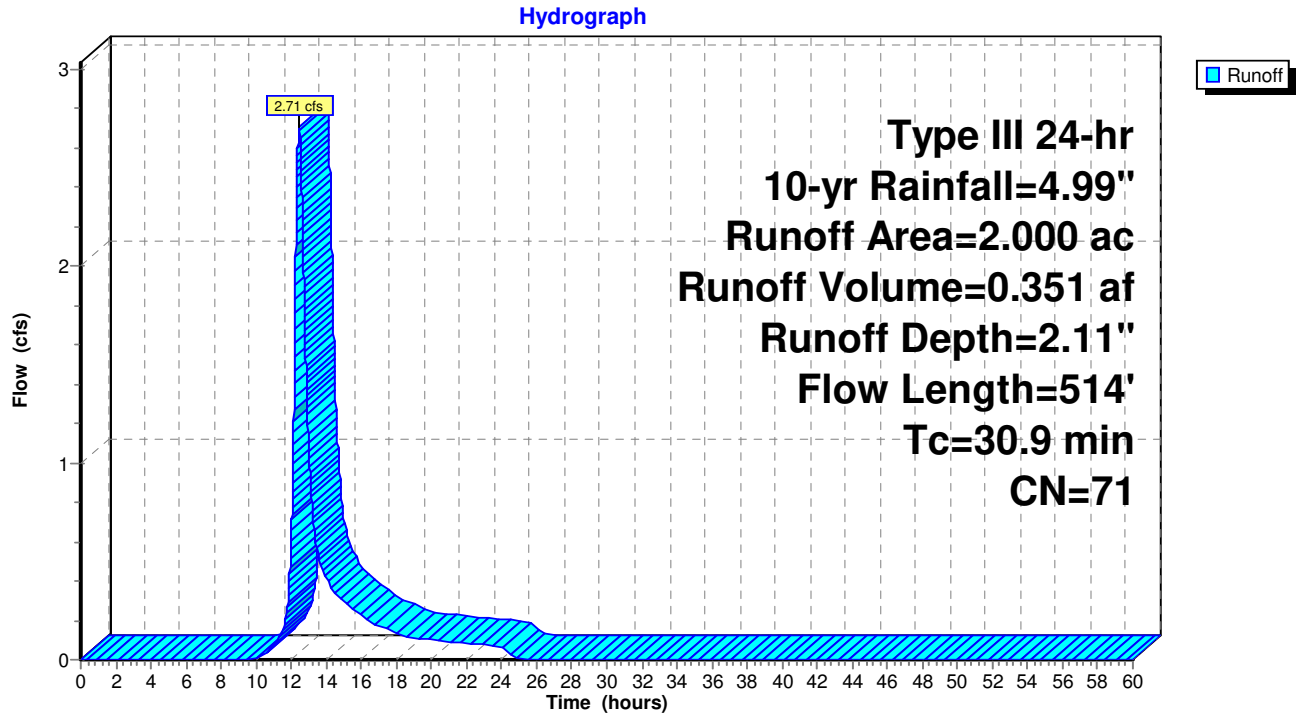
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Proposed Conditions
Type III 24-hr 10-yr Rainfall=4.99"

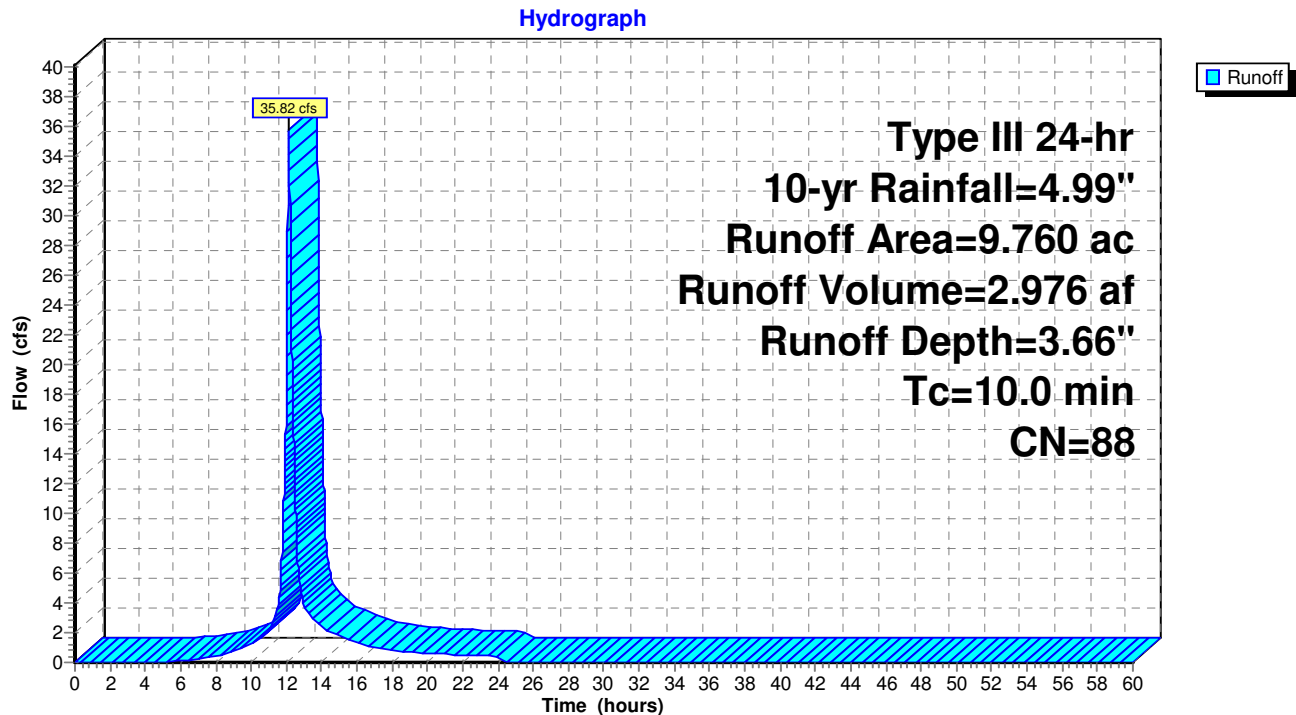
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Subcatchment P2: P2



Subcatchment P3: P3



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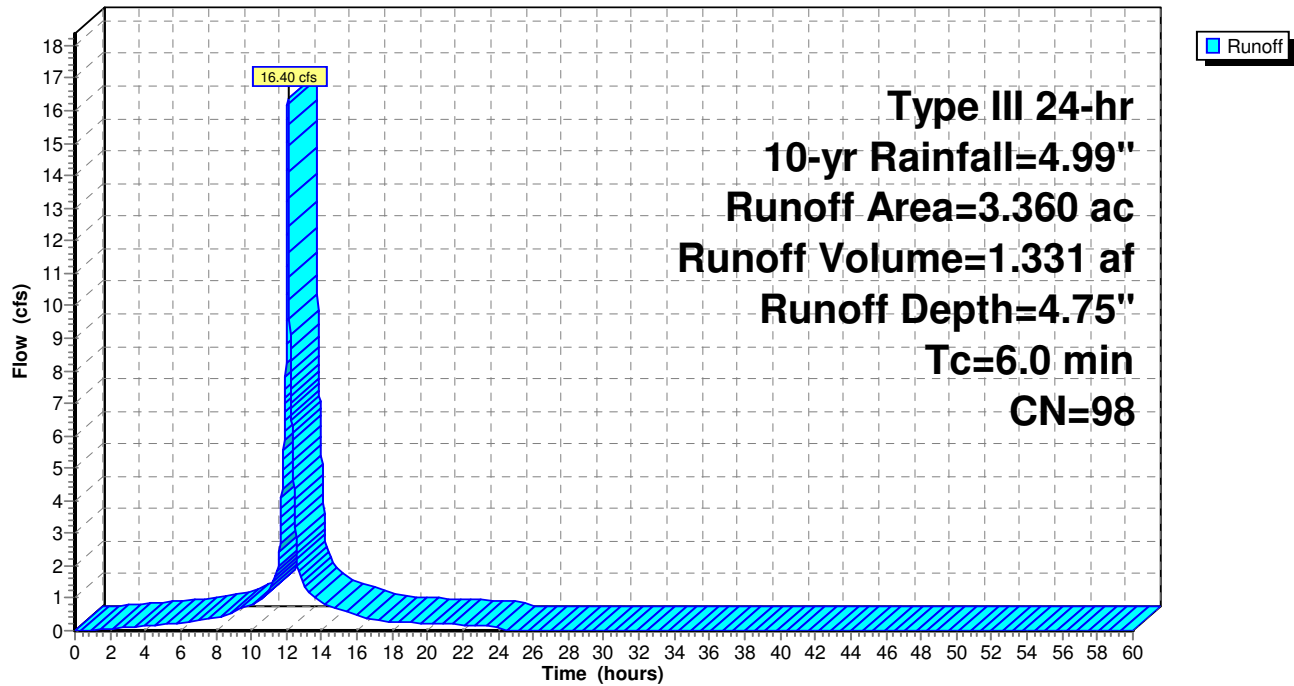
Type III 24-hr 10-yr Rainfall=4.99"

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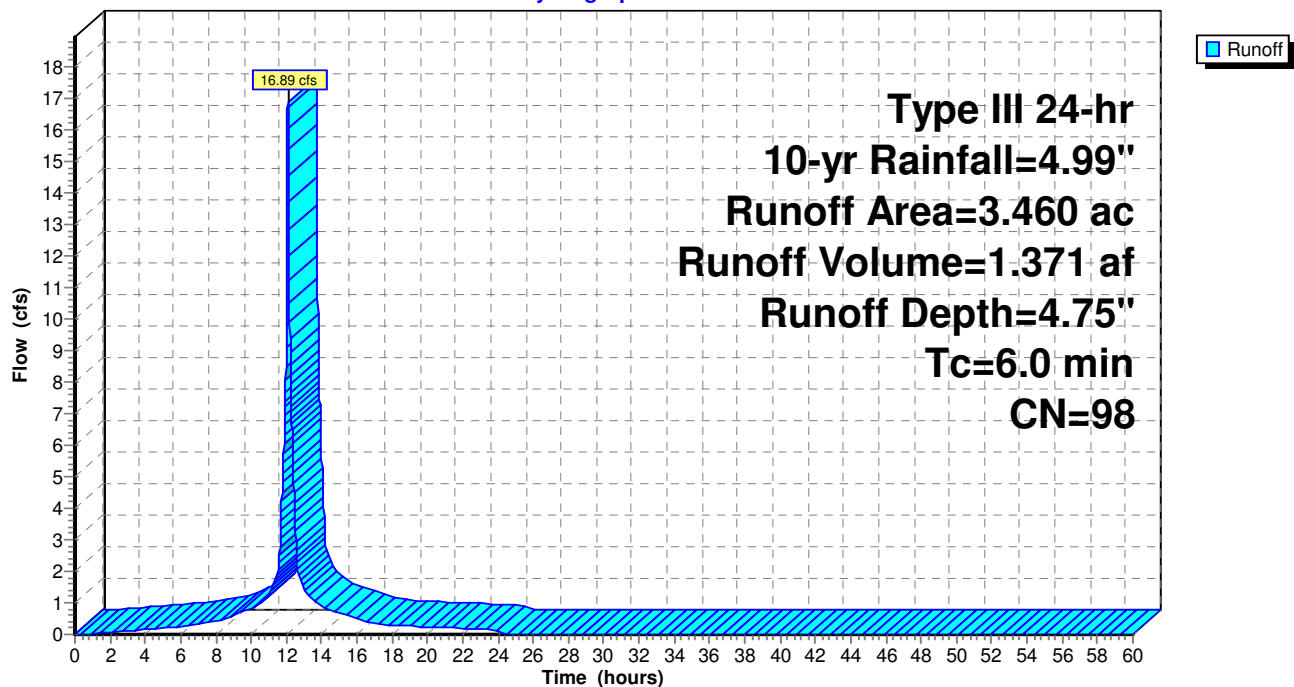
Subcatchment P4: P4

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Subcatchment P5: P5

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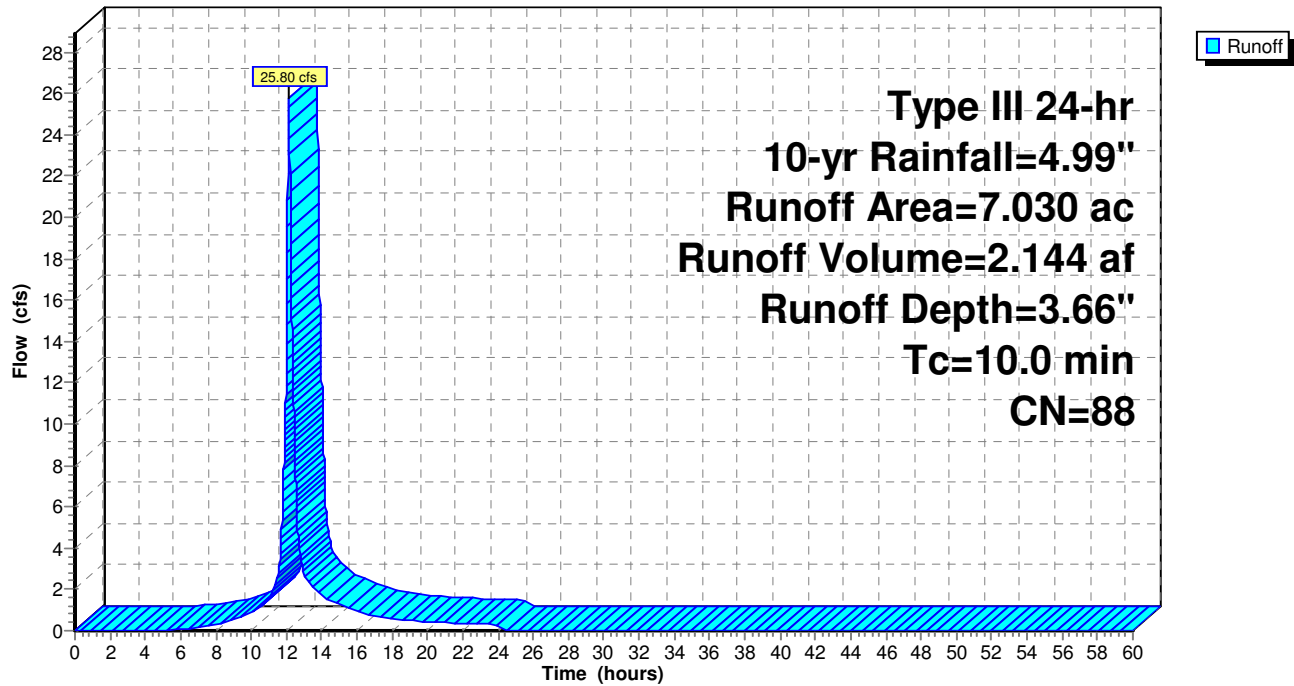
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Type III 24-hr 10-yr Rainfall=4.99"

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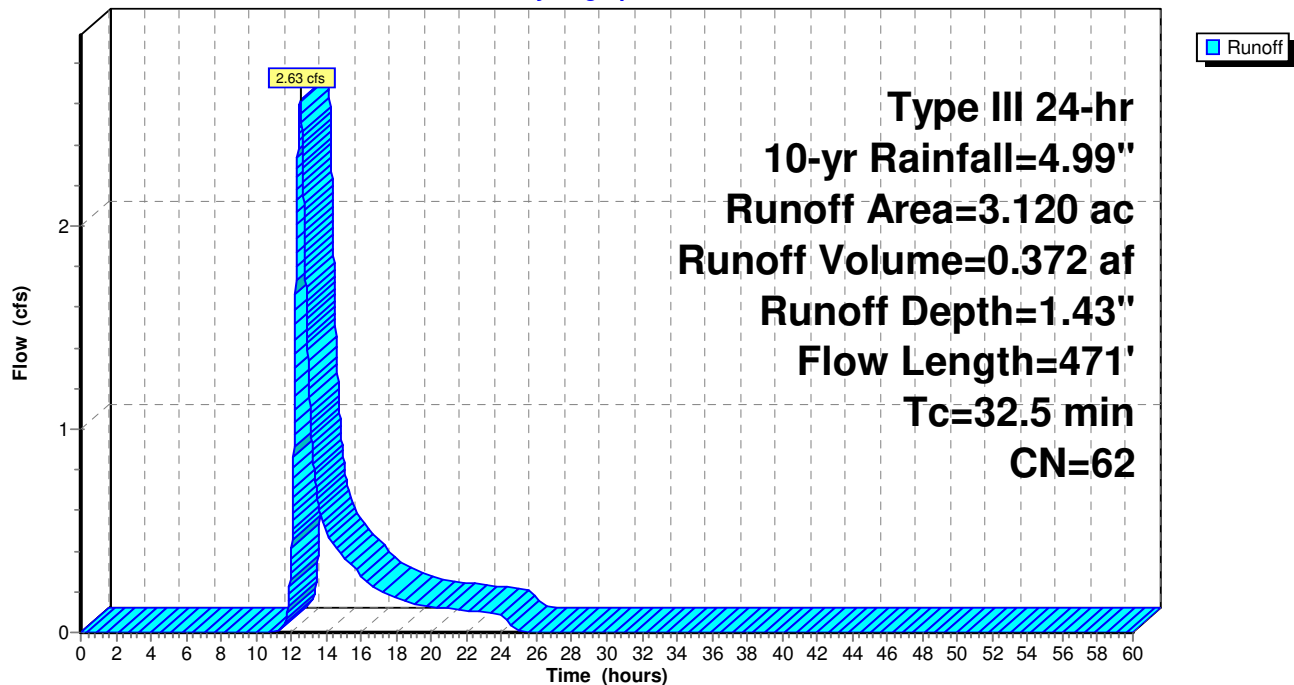
Subcatchment P6: P6

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Subcatchment P7: P7

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Proposed Conditions

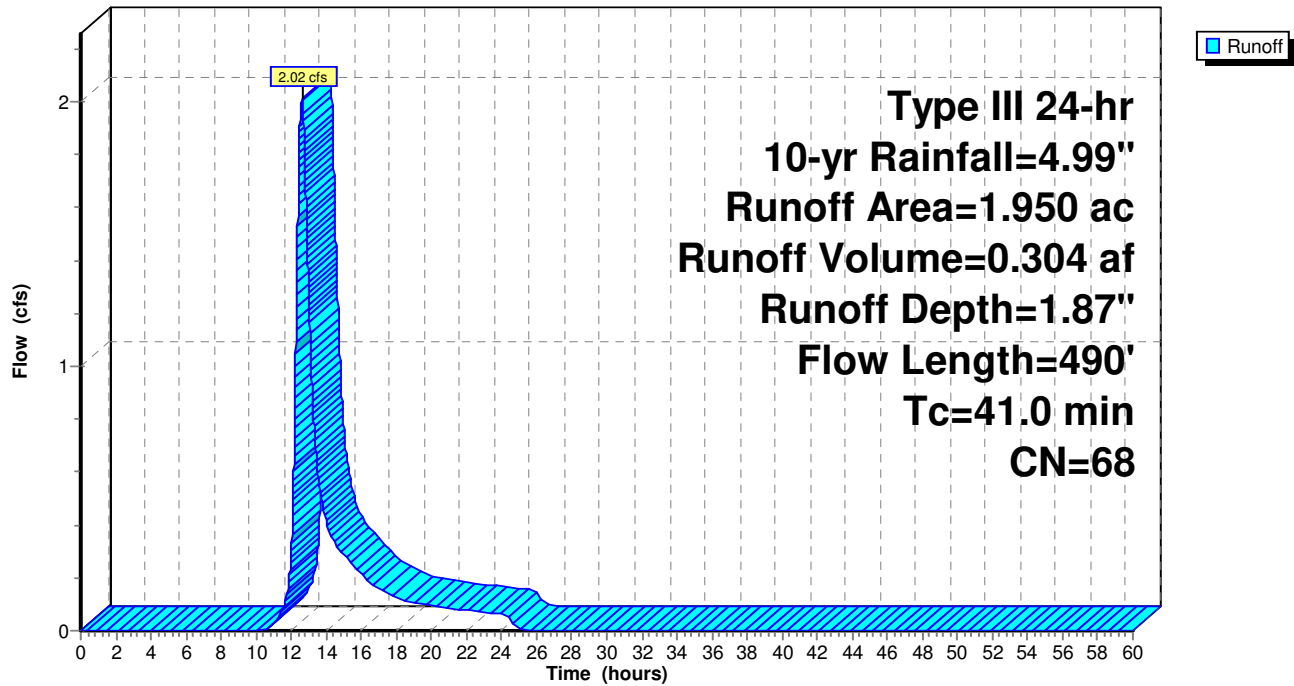
Type III 24-hr 10-yr Rainfall=4.99"

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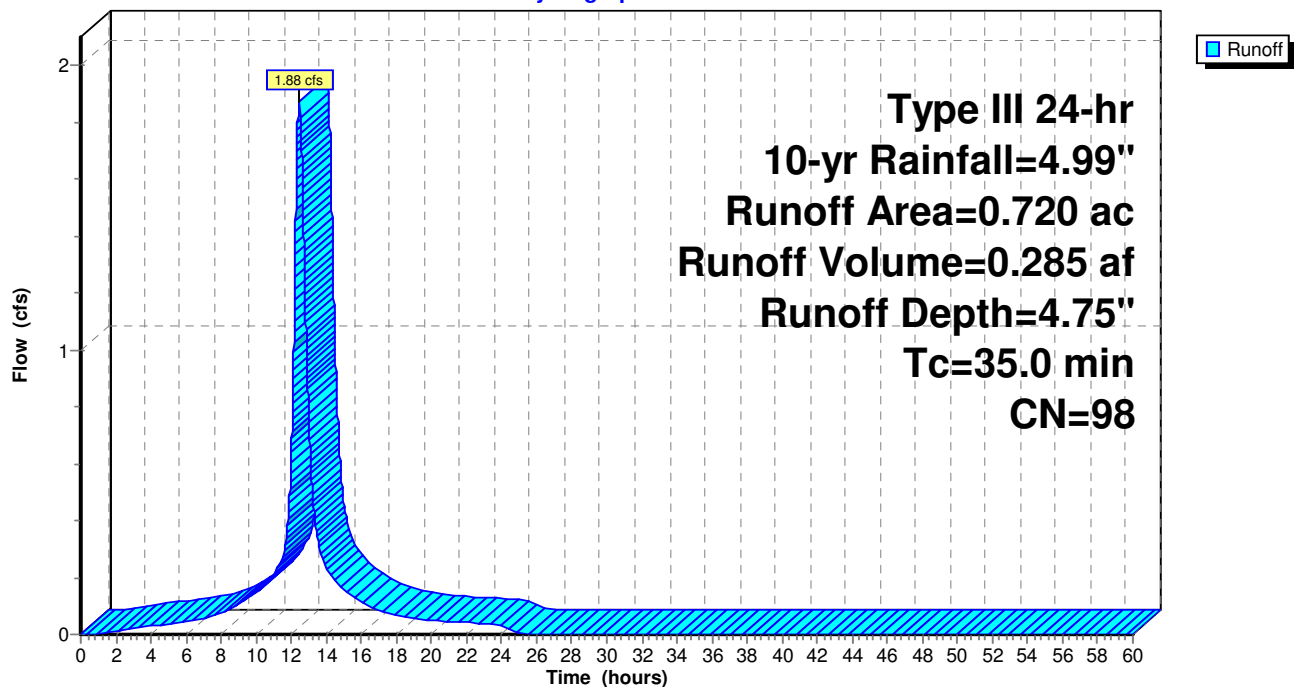
Subcatchment P8: P8 (DP4)

Hydrograph

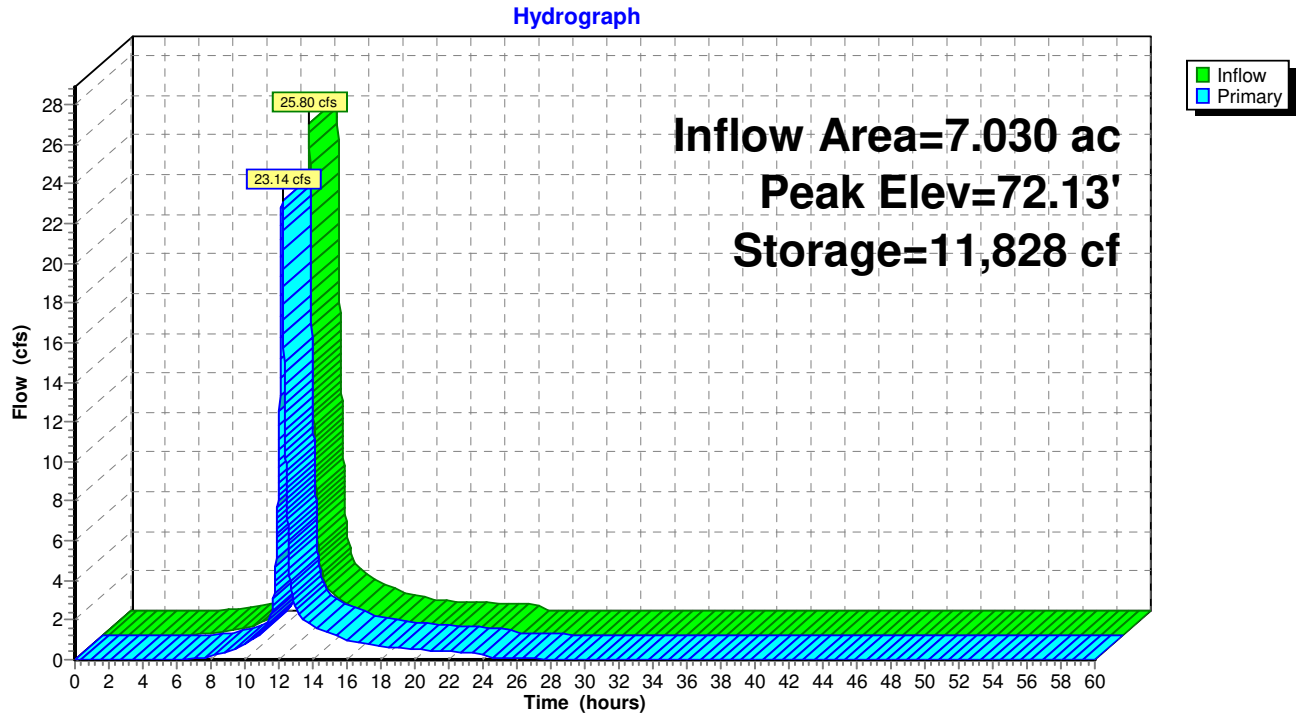


Subcatchment P9: P9

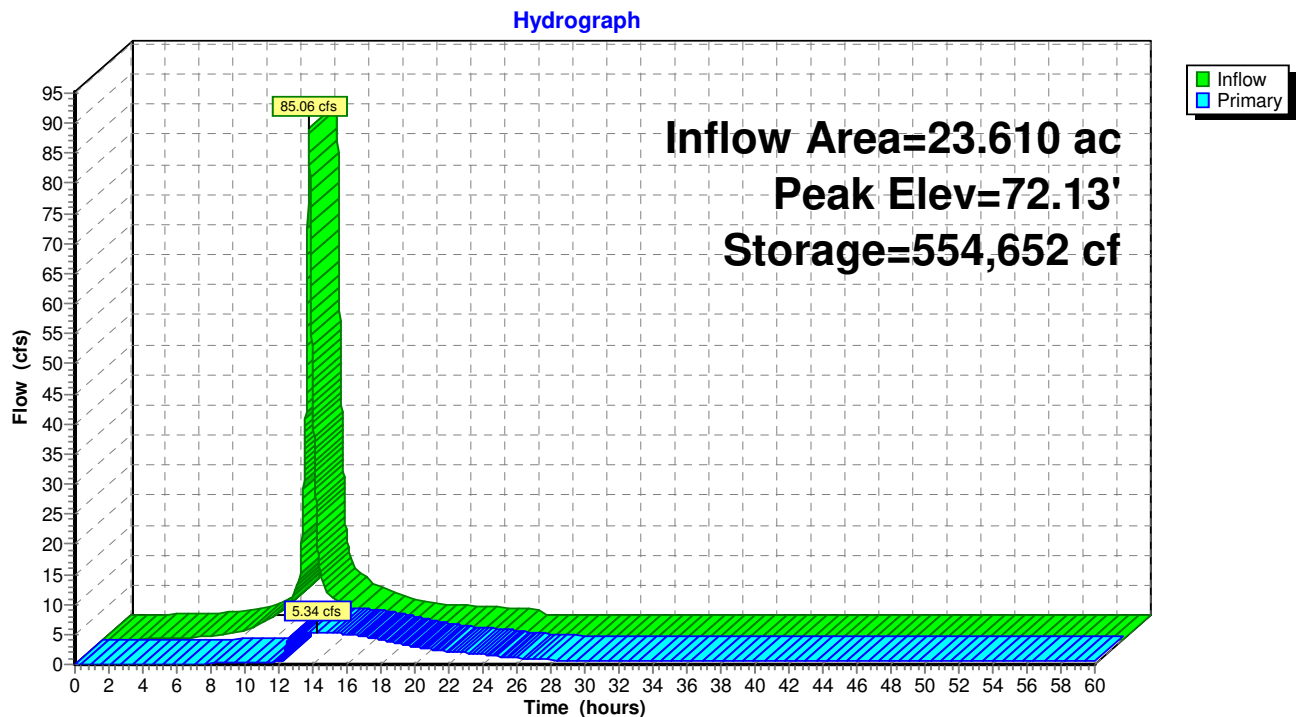
Hydrograph



Pond PP1: UG Chambers (CULTEC R-360)

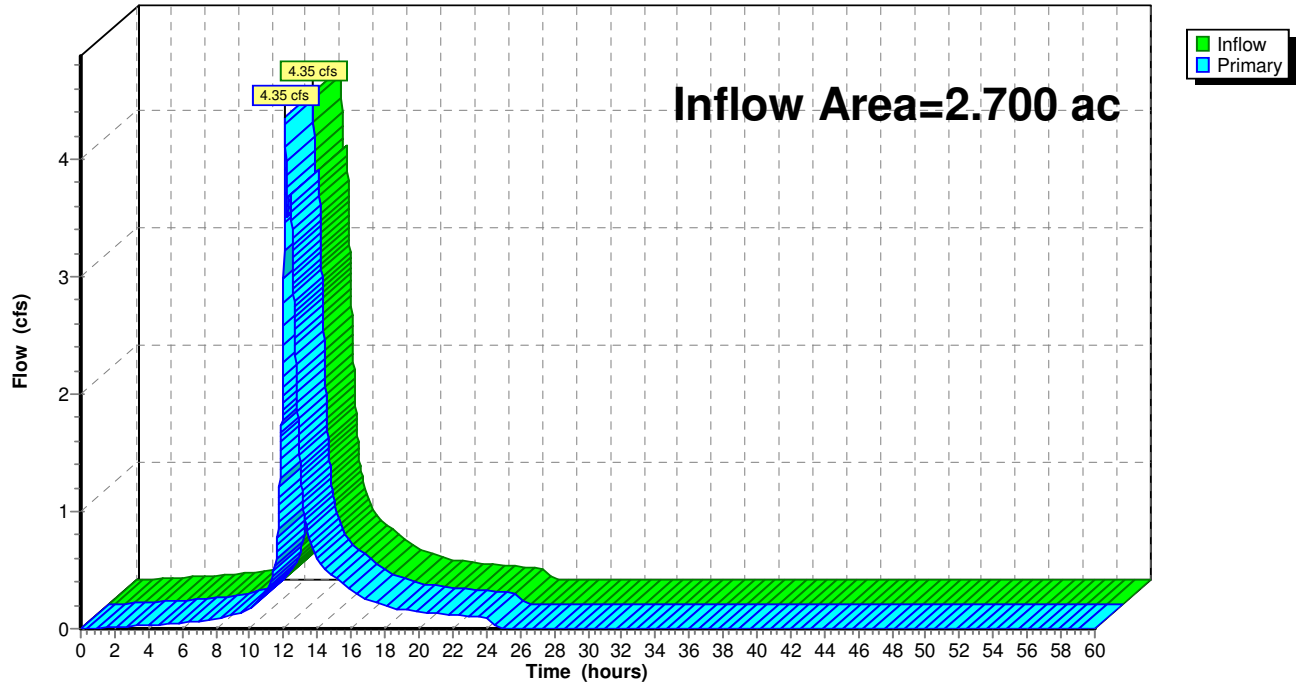


Pond PP2: Water Quality Basin



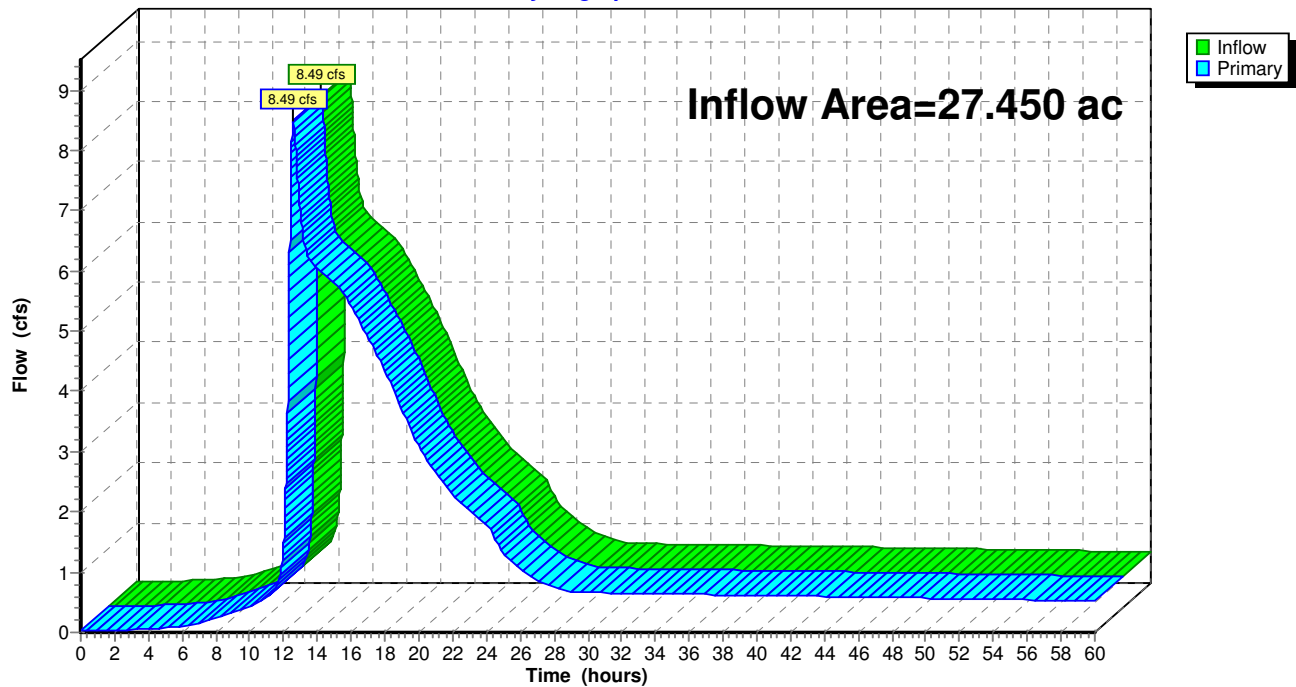
Link 2L: DP2

Hydrograph



Link DP1: DP1

Hydrograph



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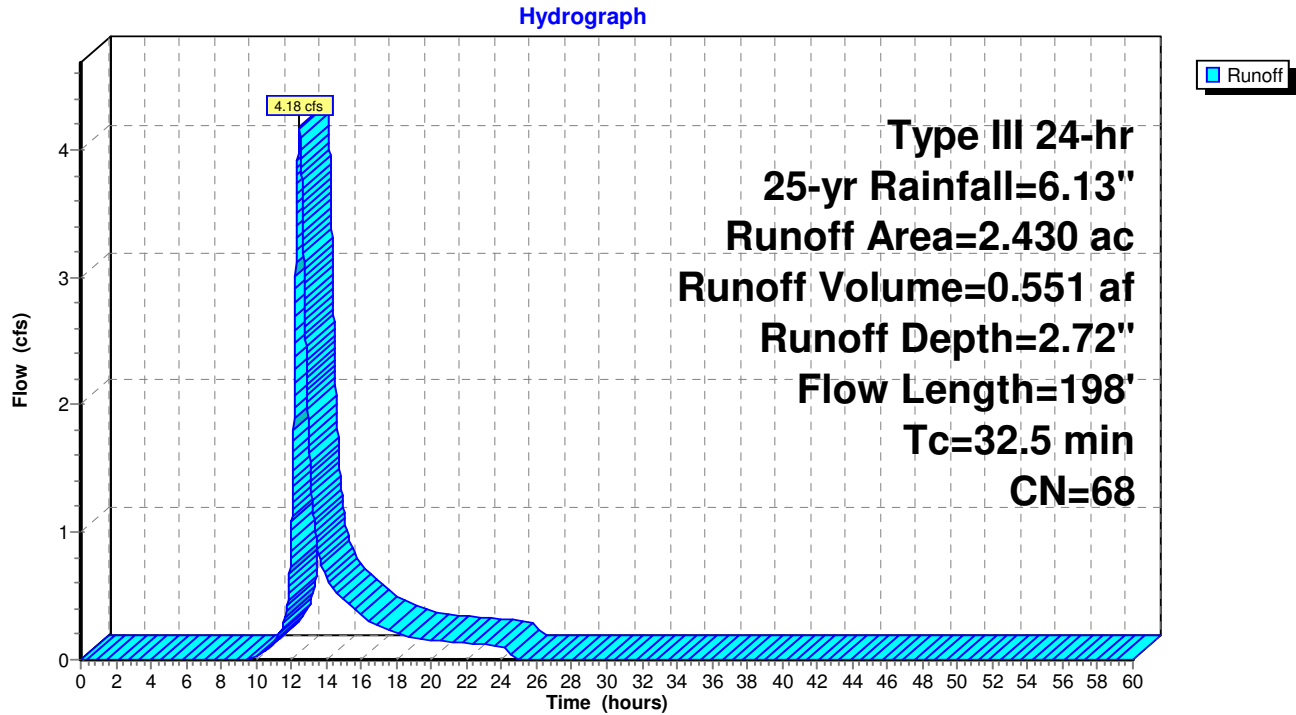
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Proposed Conditions
Type III 24-hr 25-yr Rainfall=6.13"

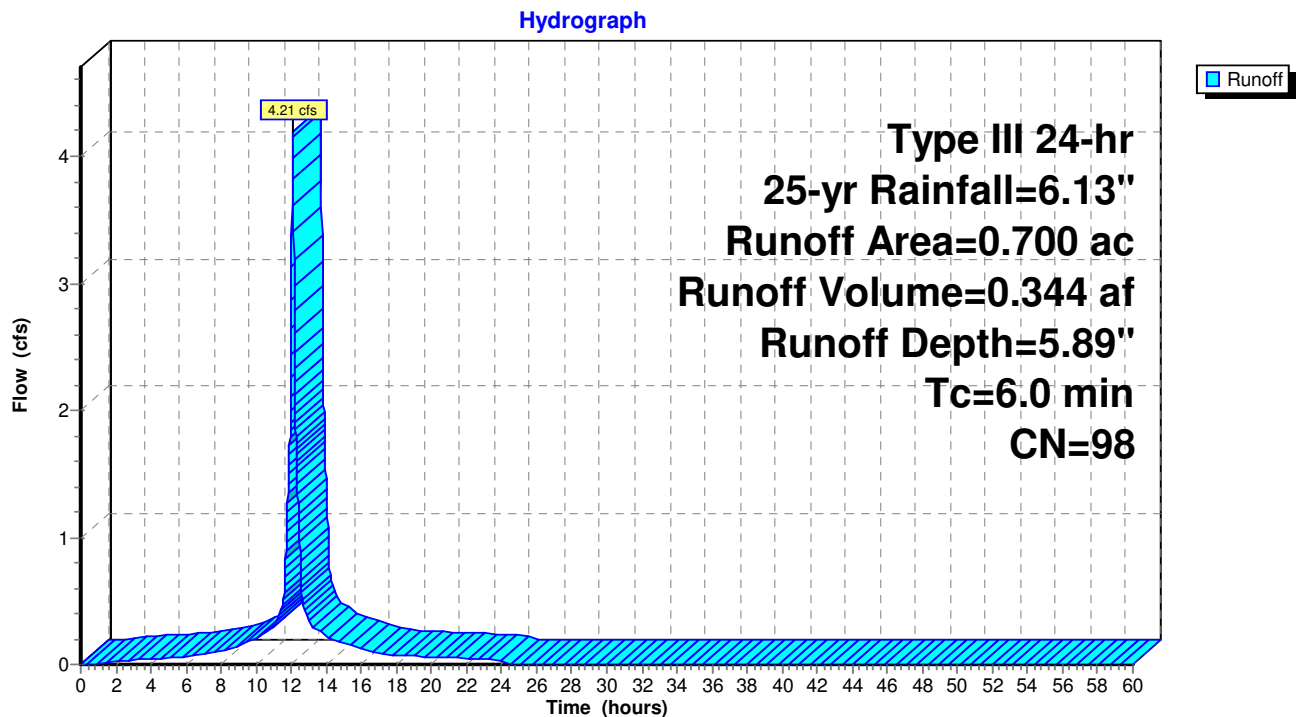
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Subcatchment P1: P1 (DP3)



Subcatchment P10: P10 (RB4)



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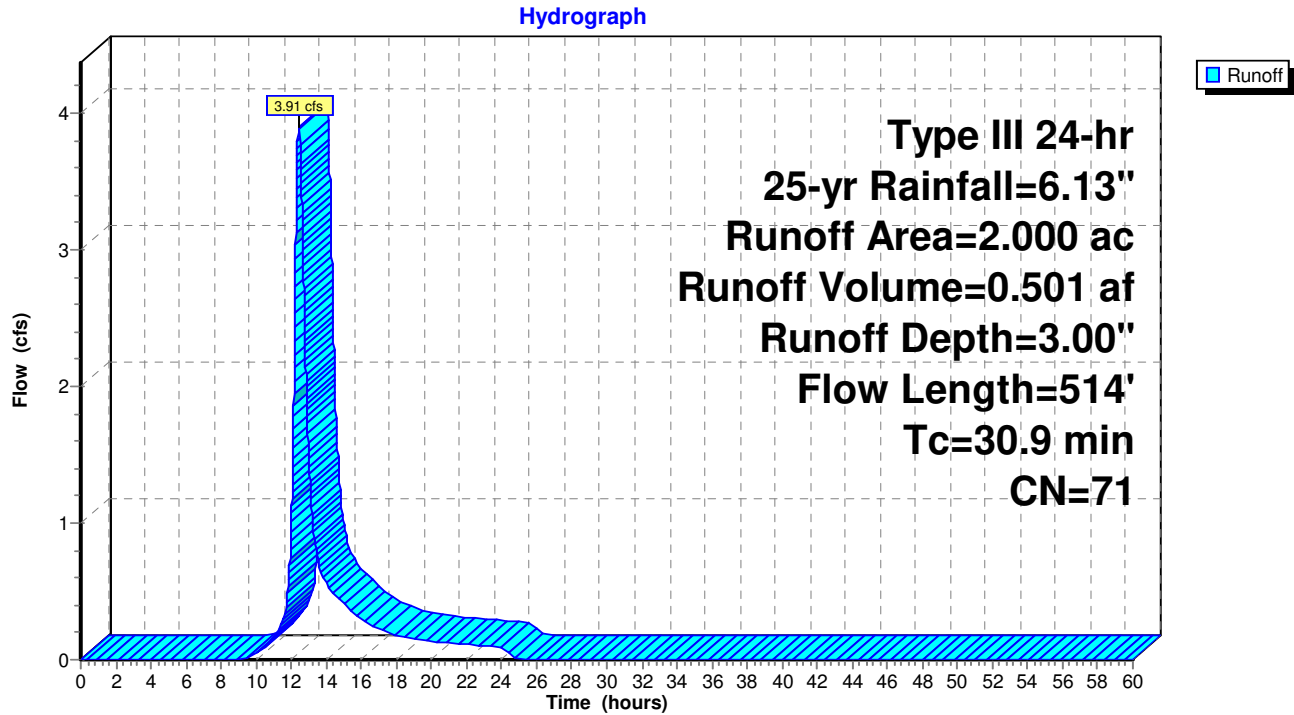
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Proposed Conditions
Type III 24-hr 25-yr Rainfall=6.13"

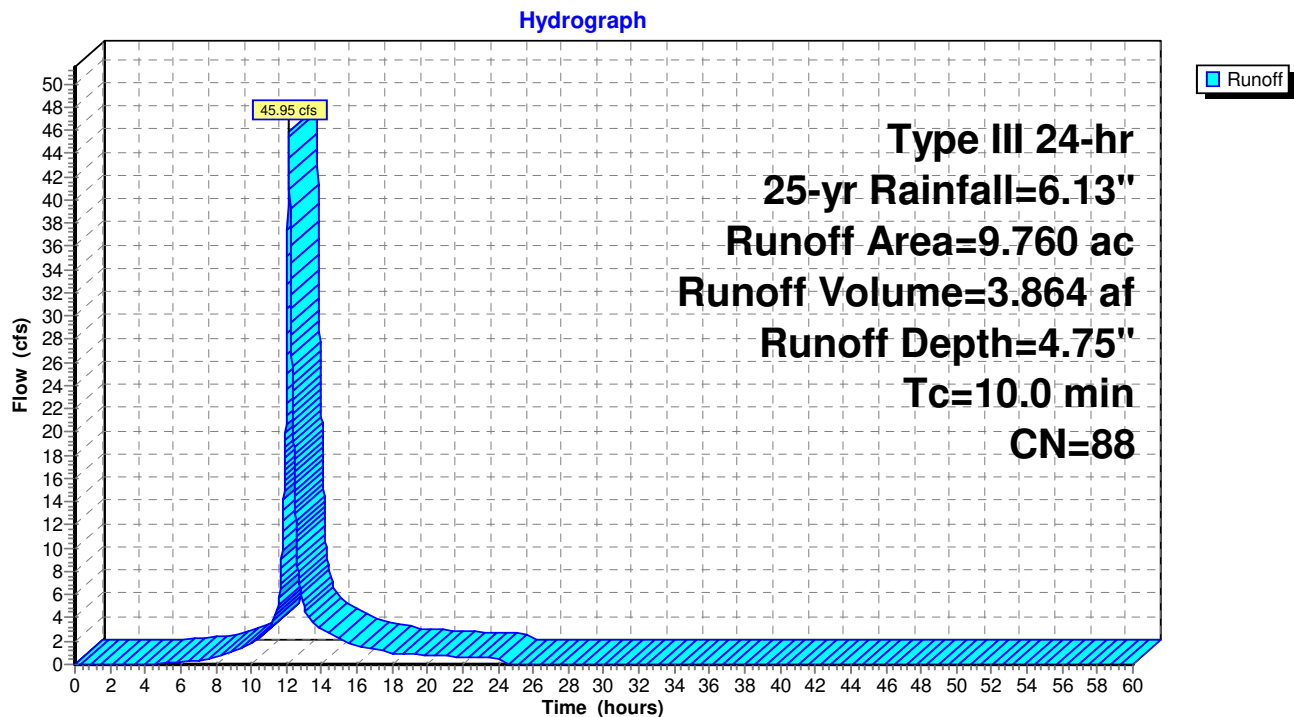
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Subcatchment P2: P2



Subcatchment P3: P3



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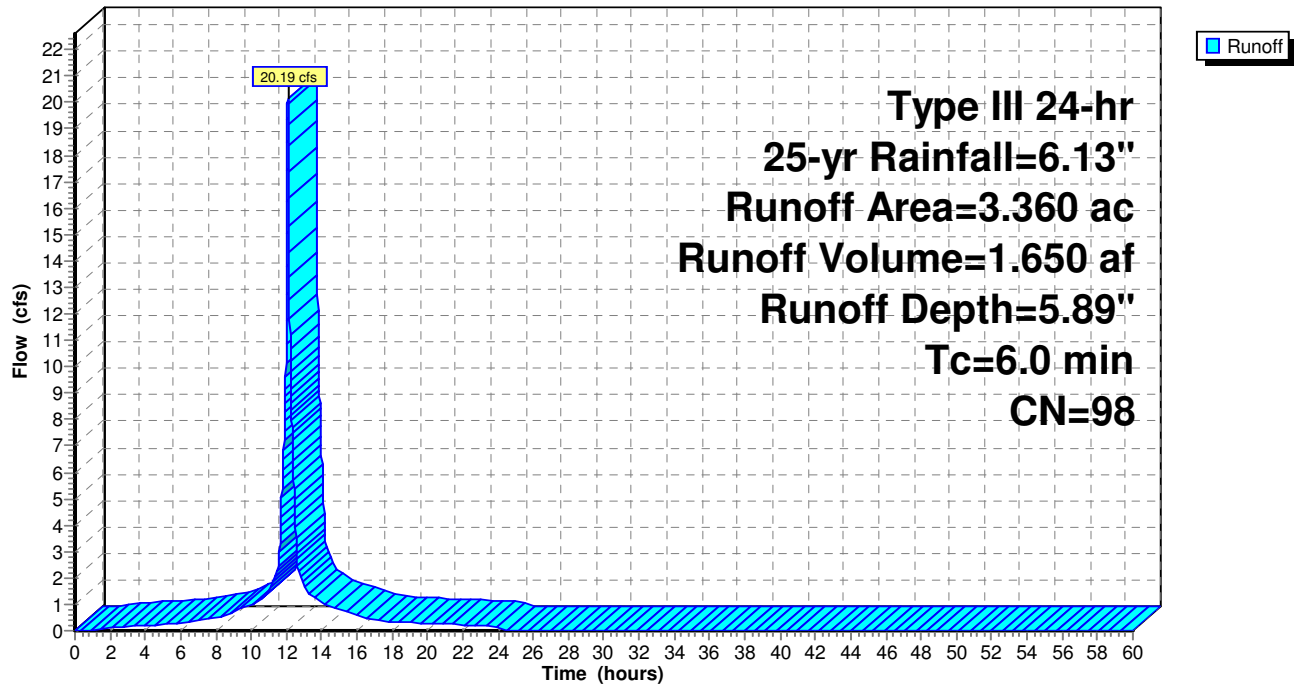
Type III 24-hr 25-yr Rainfall=6.13"

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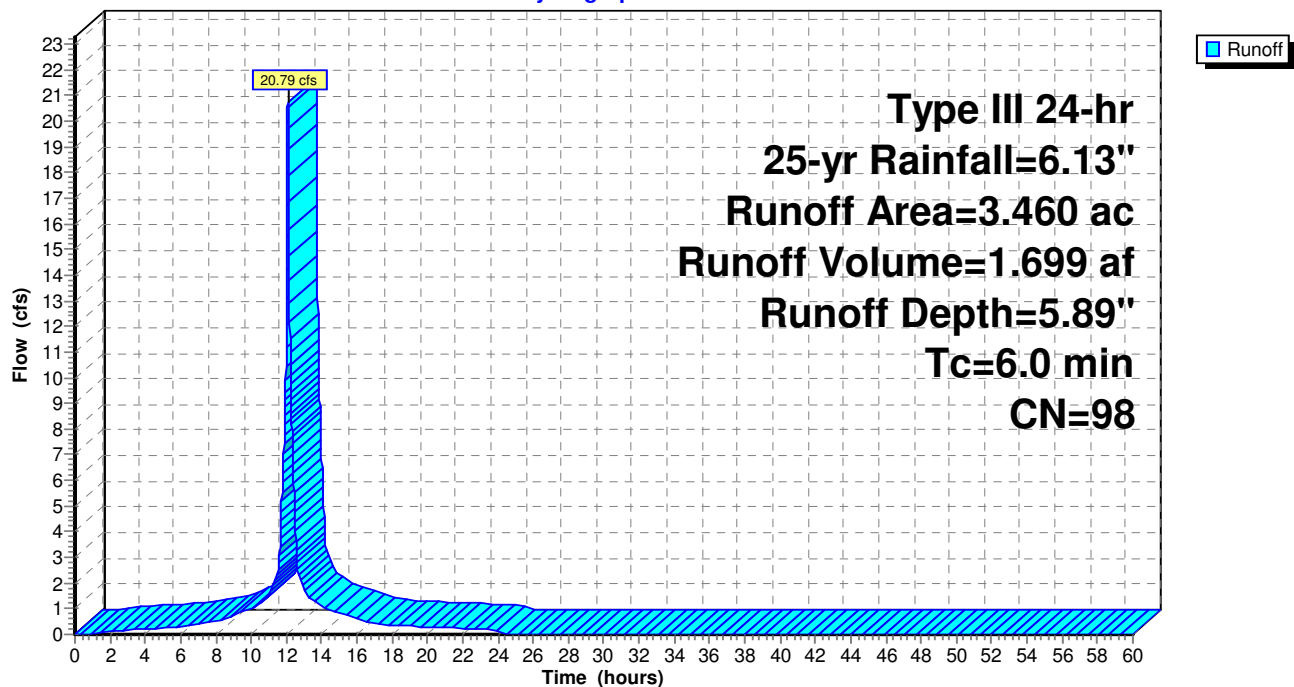
Subcatchment P4: P4

Hydrograph



Subcatchment P5: P5

Hydrograph



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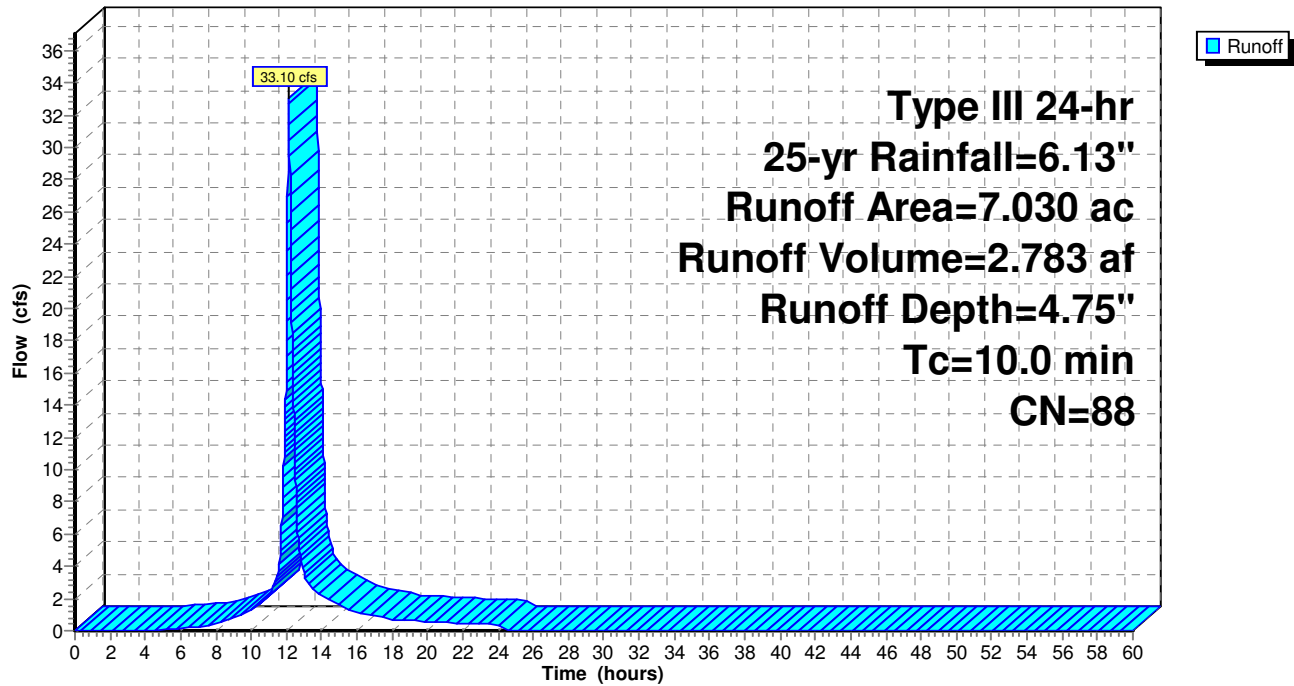
Type III 24-hr 25-yr Rainfall=6.13"

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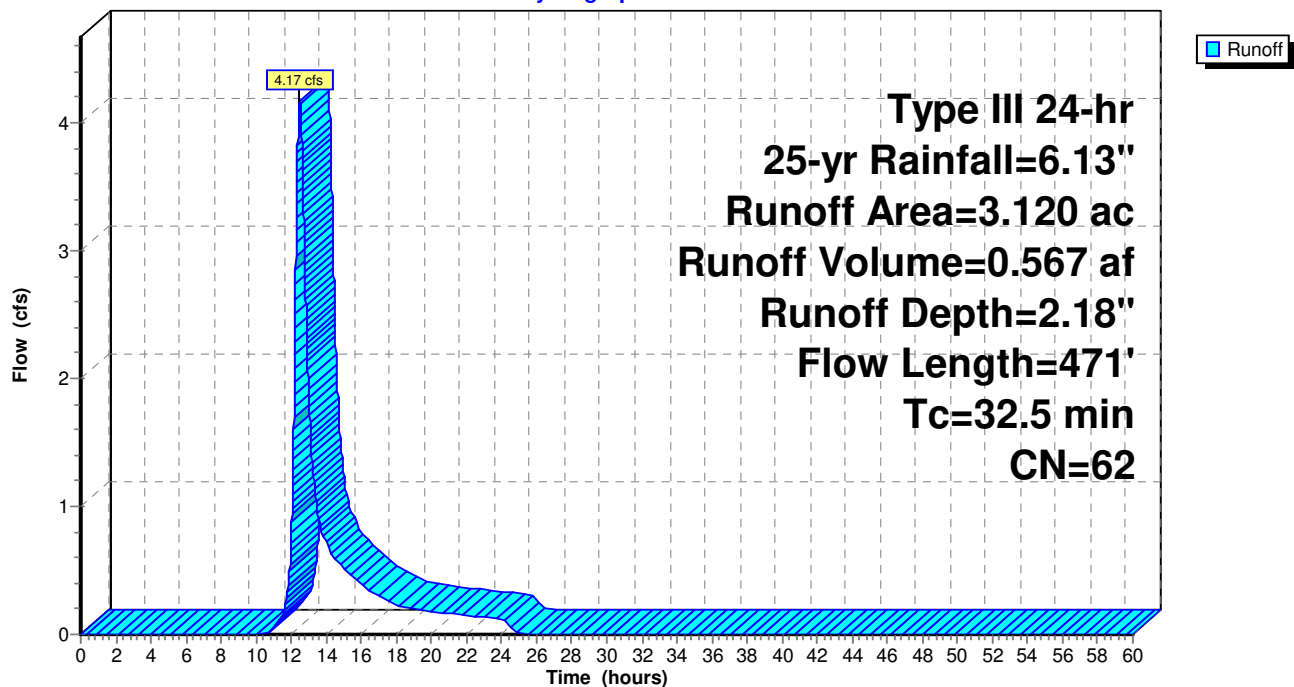
Subcatchment P6: P6

Hydrograph



Subcatchment P7: P7

Hydrograph



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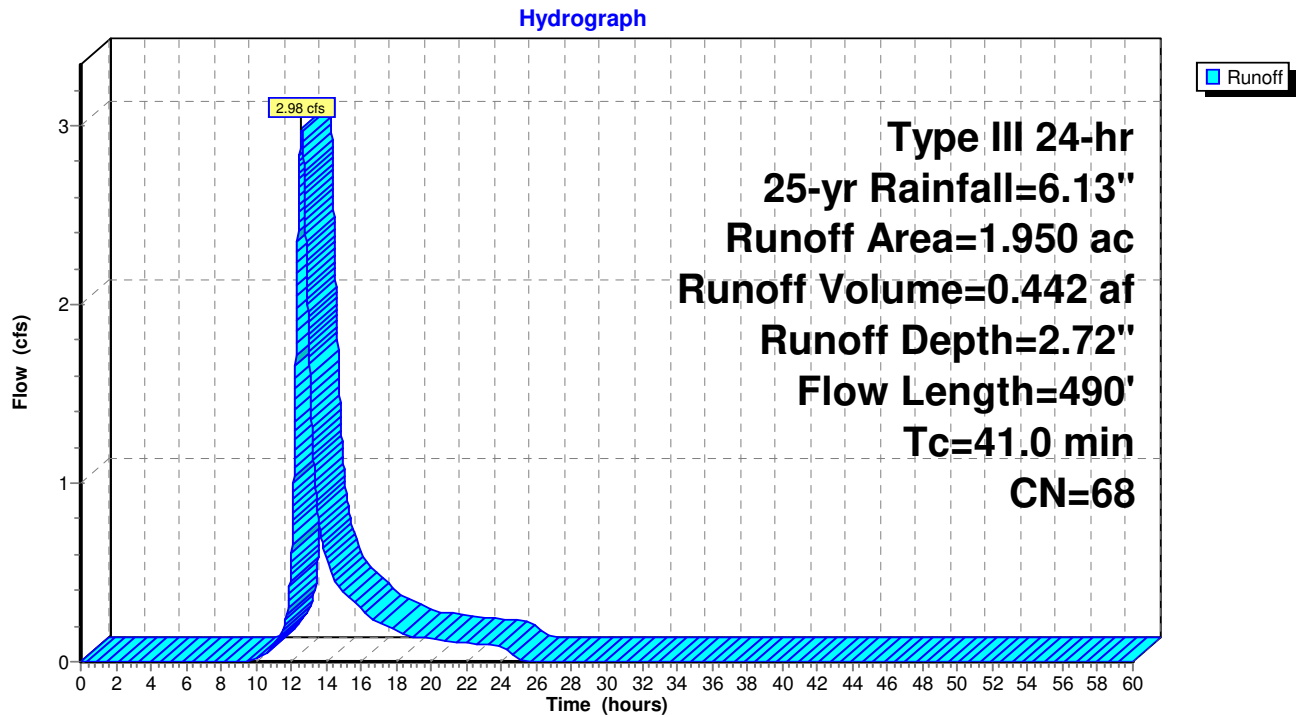
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Proposed Conditions
Type III 24-hr 25-yr Rainfall=6.13"

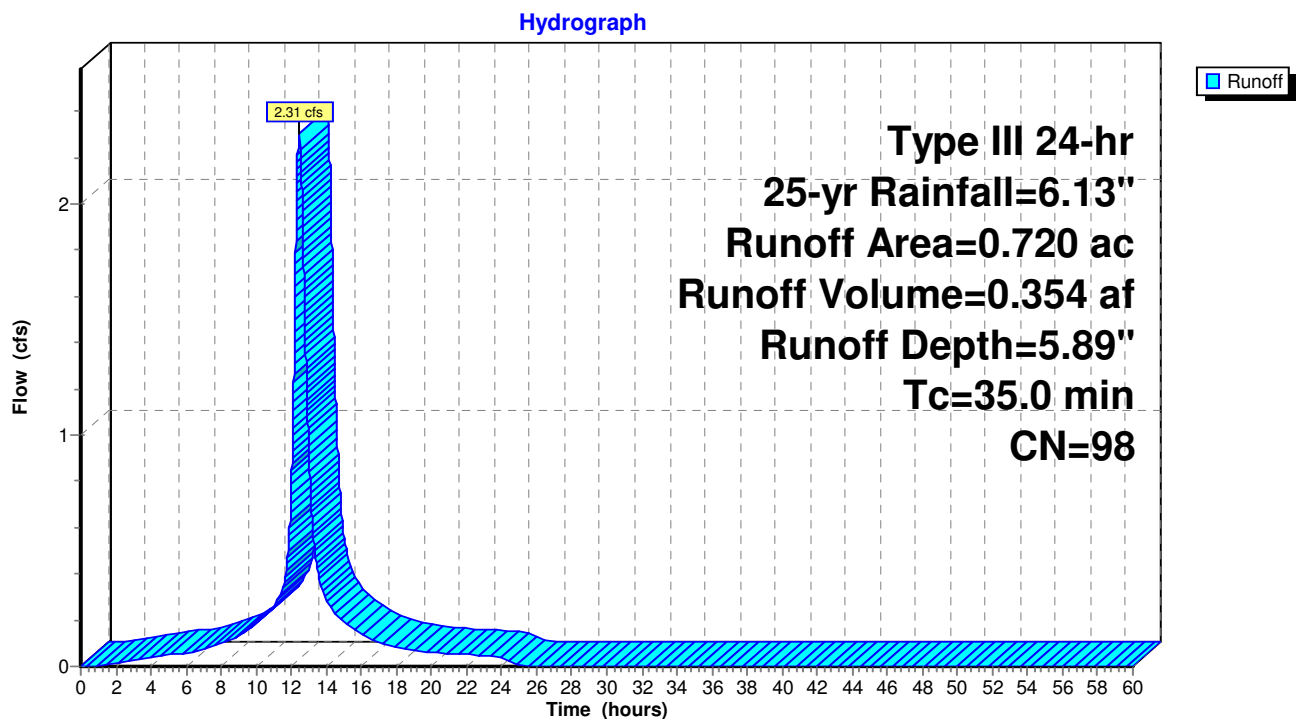
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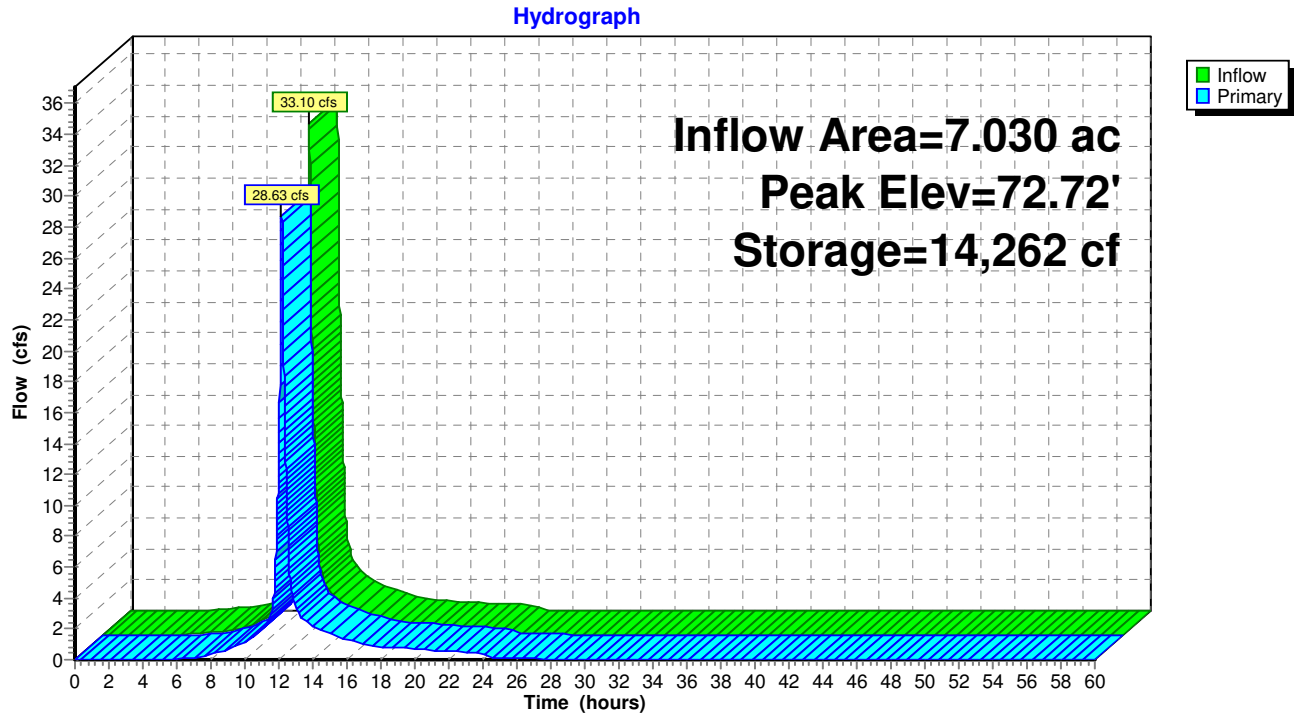
Subcatchment P8: P8 (DP4)



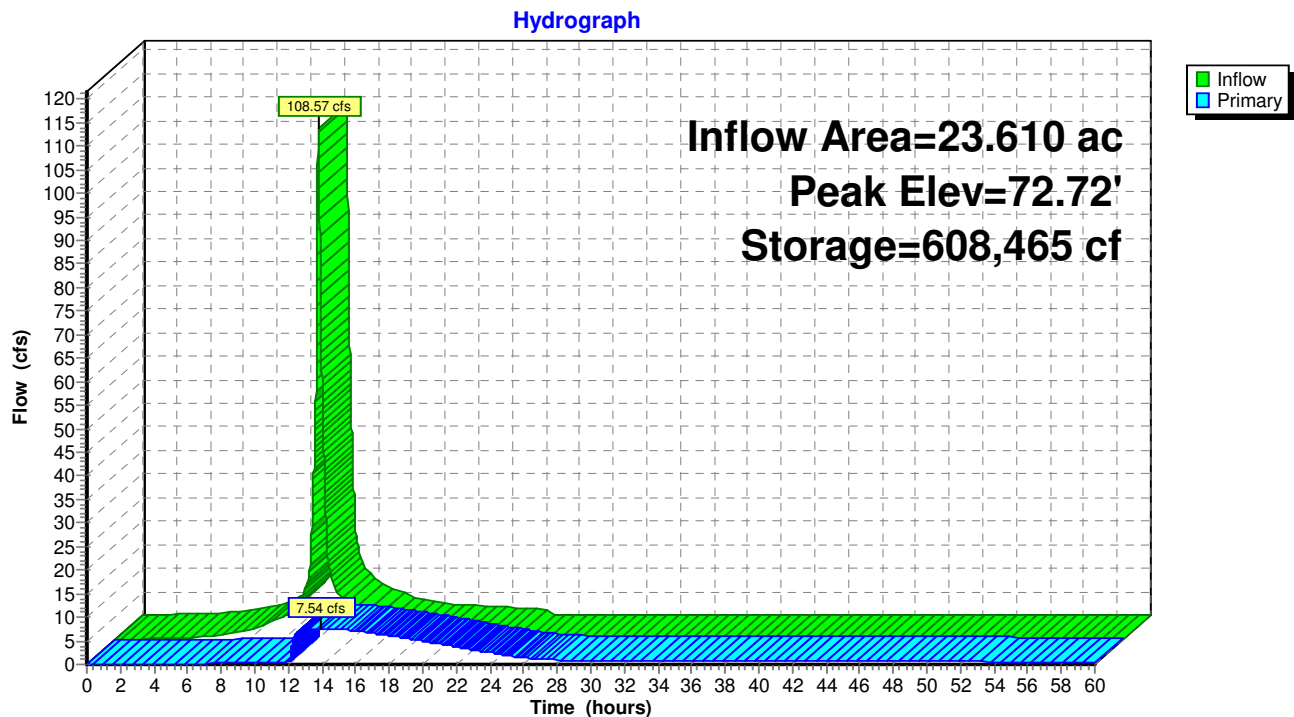
Subcatchment P9: P9



Pond PP1: UG Chambers (CULTEC R-360)



Pond PP2: Water Quality Basin



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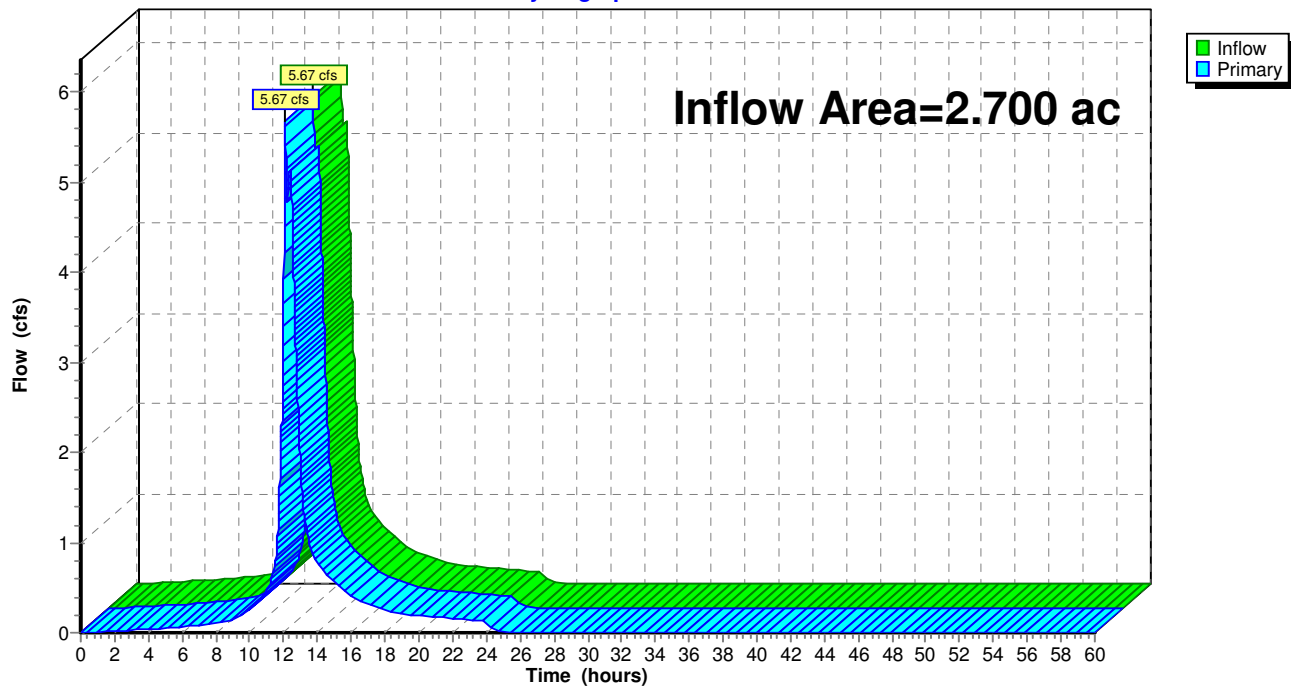
Proposed Conditions
Type III 24-hr 25-yr Rainfall=6.13"

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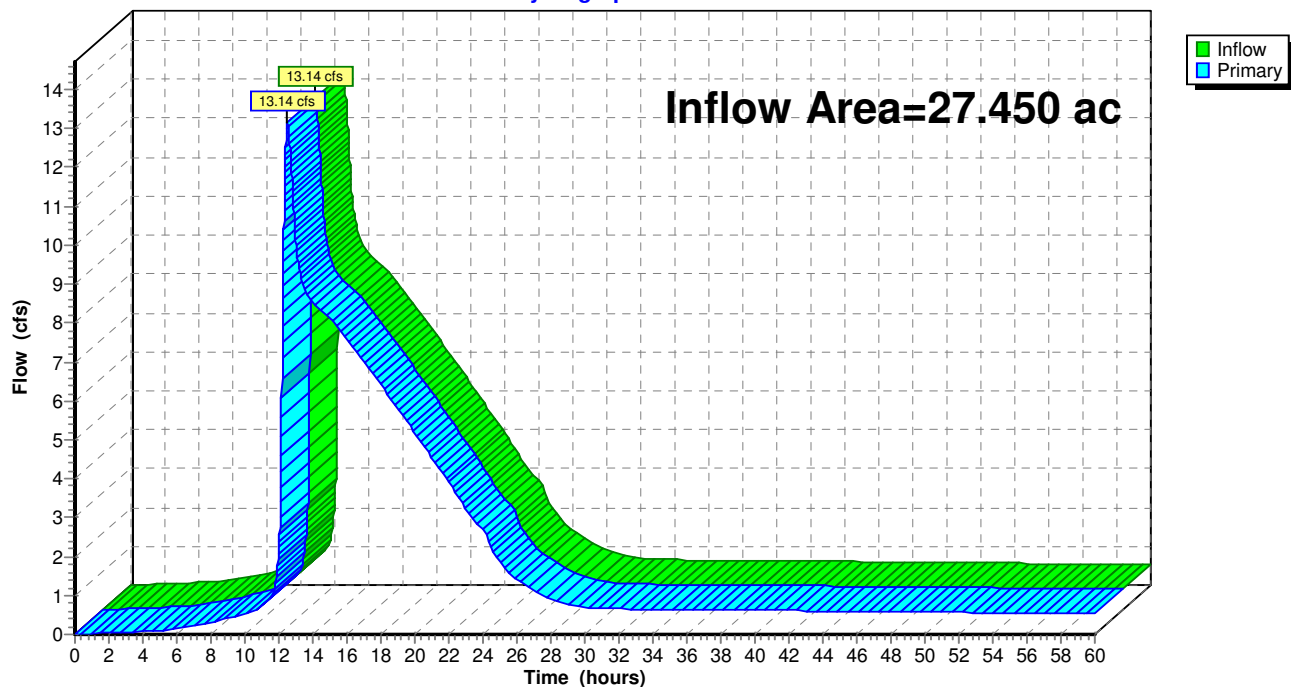
Link 2L: DP2

Hydrograph



Link DP1: DP1

Hydrograph



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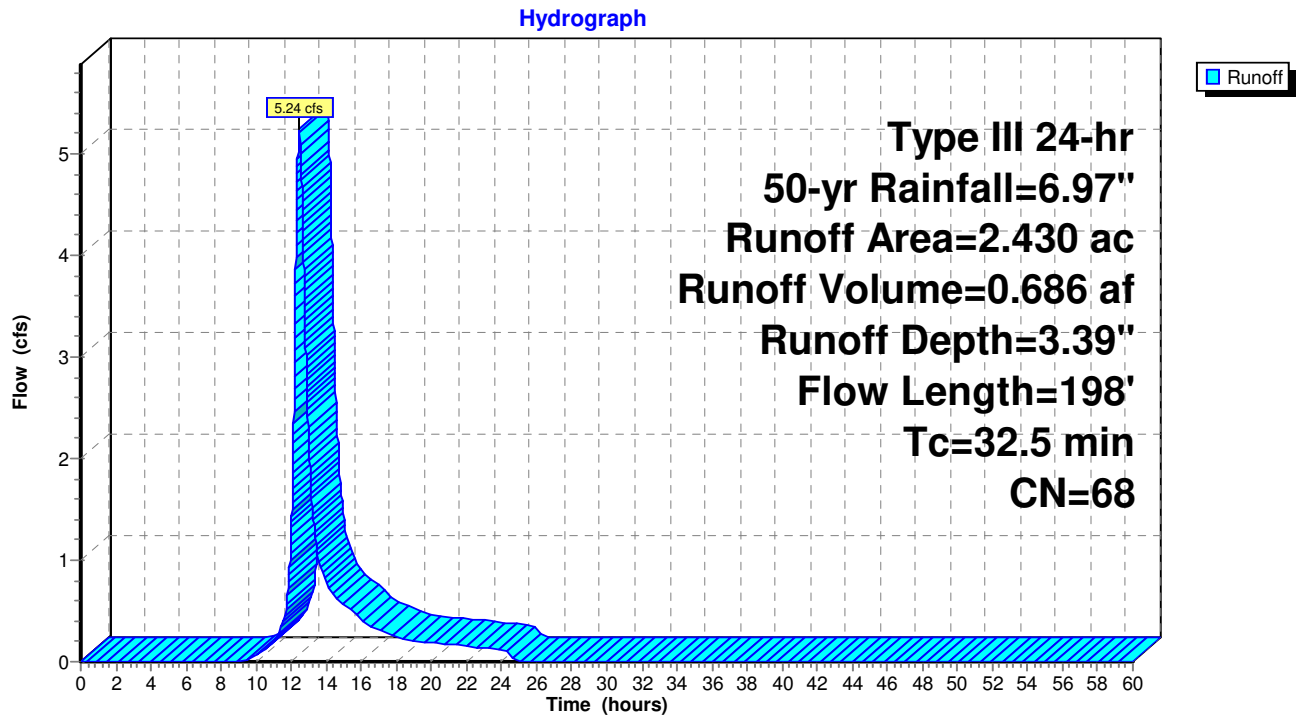
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Proposed Conditions
Type III 24-hr 50-yr Rainfall=6.97"

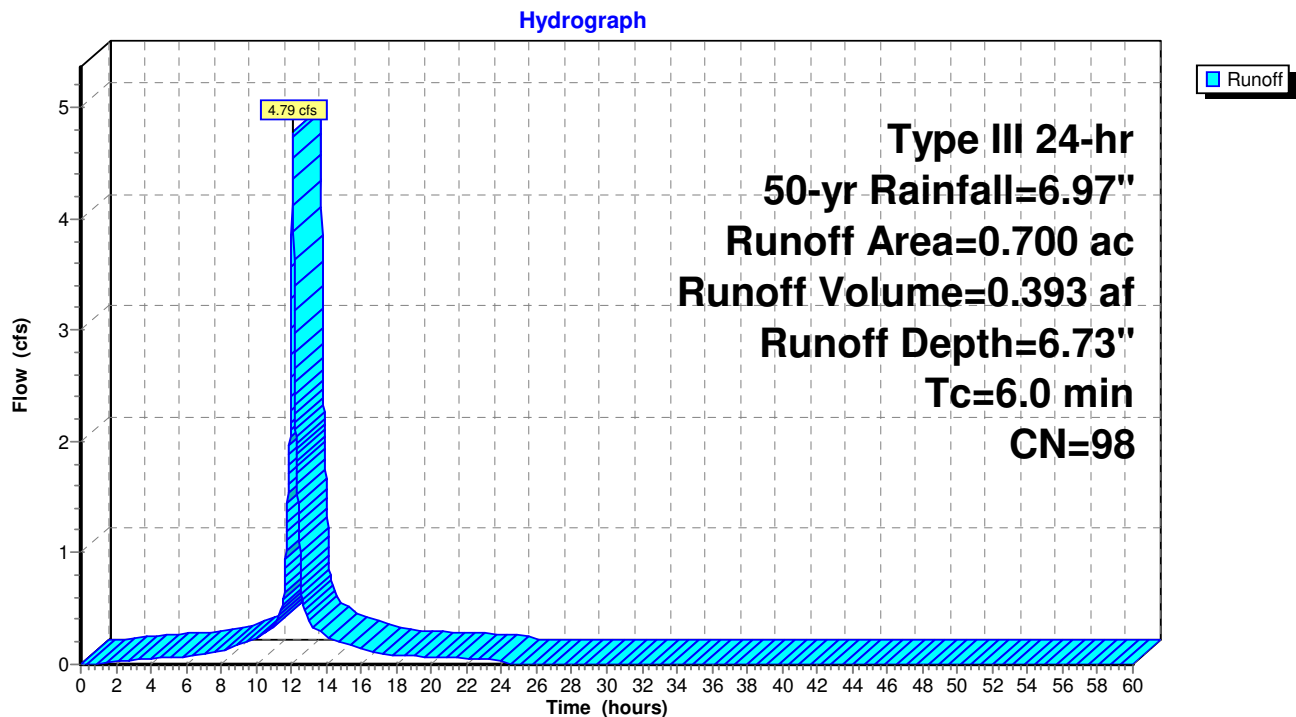
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Subcatchment P1: P1 (DP3)



Subcatchment P10: P10 (RB4)



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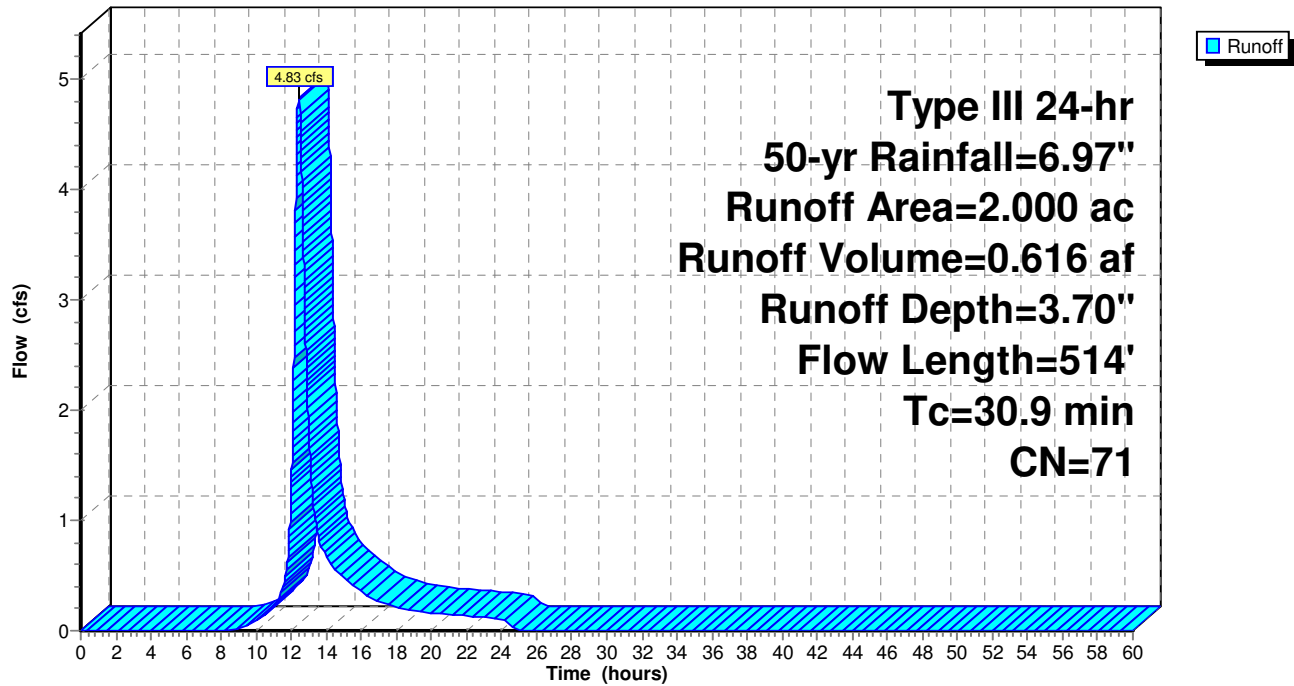
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Type III 24-hr 50-yr Rainfall=6.97"

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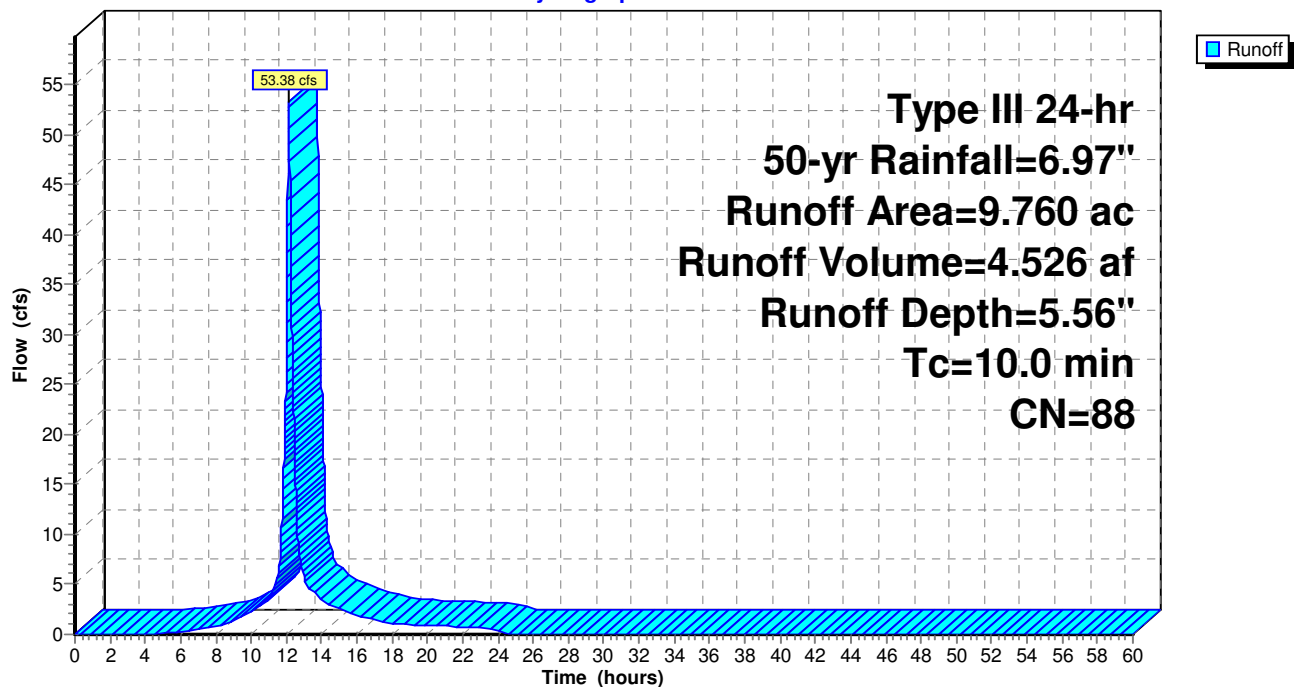
Subcatchment P2: P2

Hydrograph



Subcatchment P3: P3

Hydrograph



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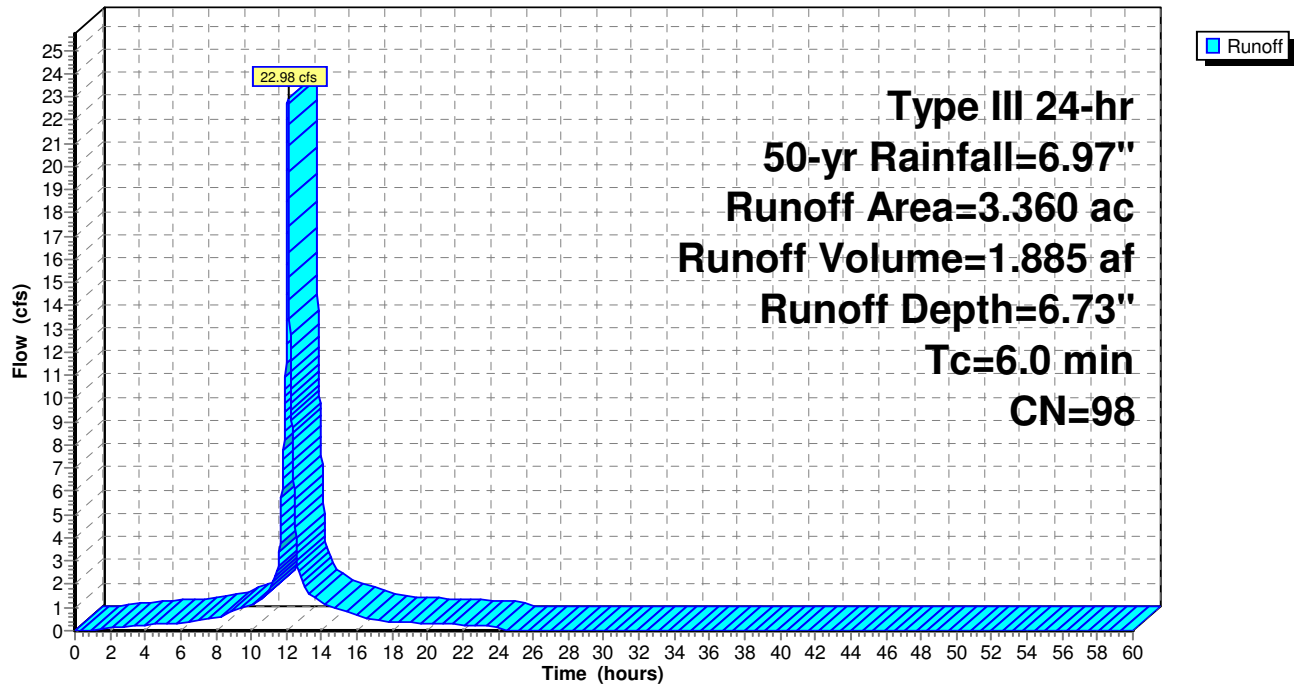
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Type III 24-hr 50-yr Rainfall=6.97"

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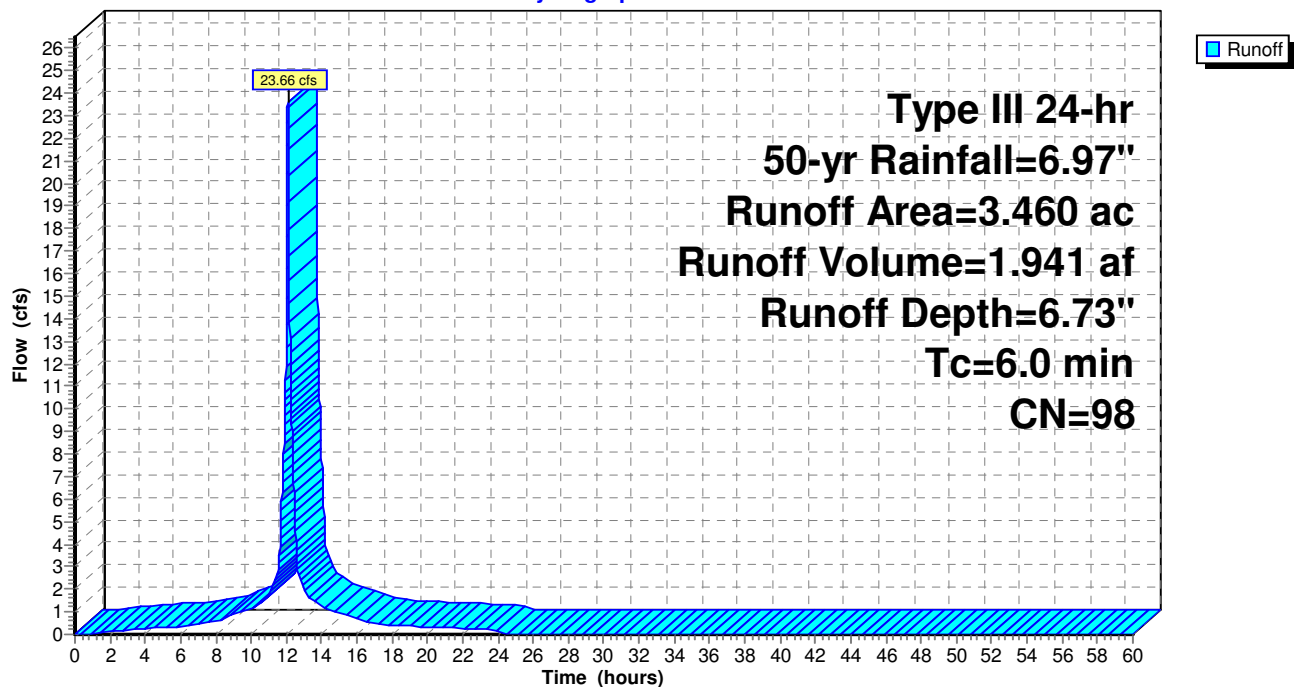
Subcatchment P4: P4

Hydrograph



Subcatchment P5: P5

Hydrograph



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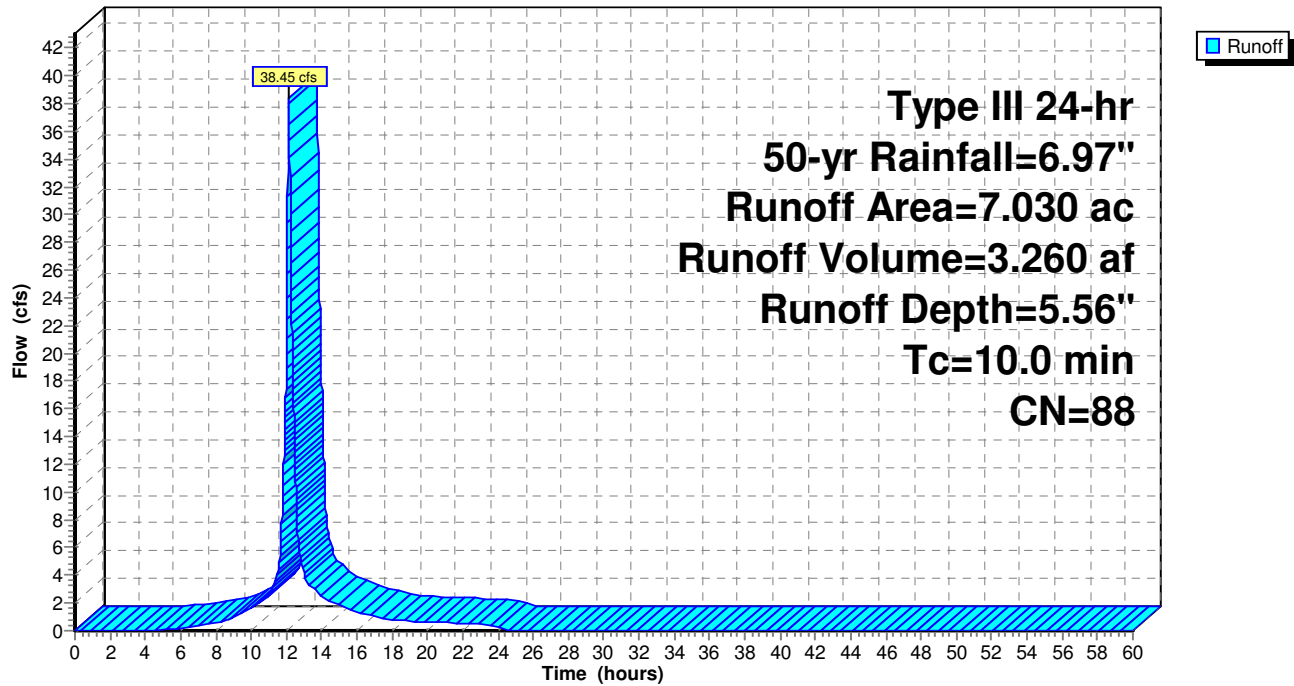
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Type III 24-hr 50-yr Rainfall=6.97"

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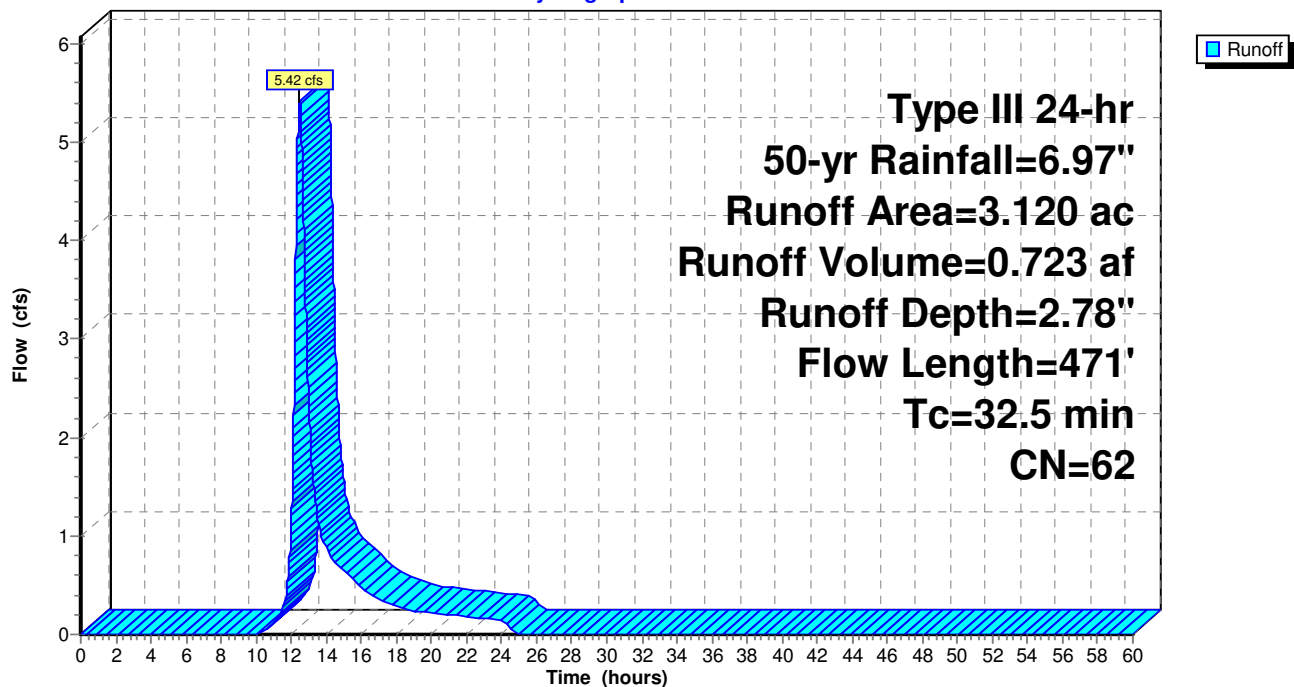
Subcatchment P6: P6

Hydrograph



Subcatchment P7: P7

Hydrograph



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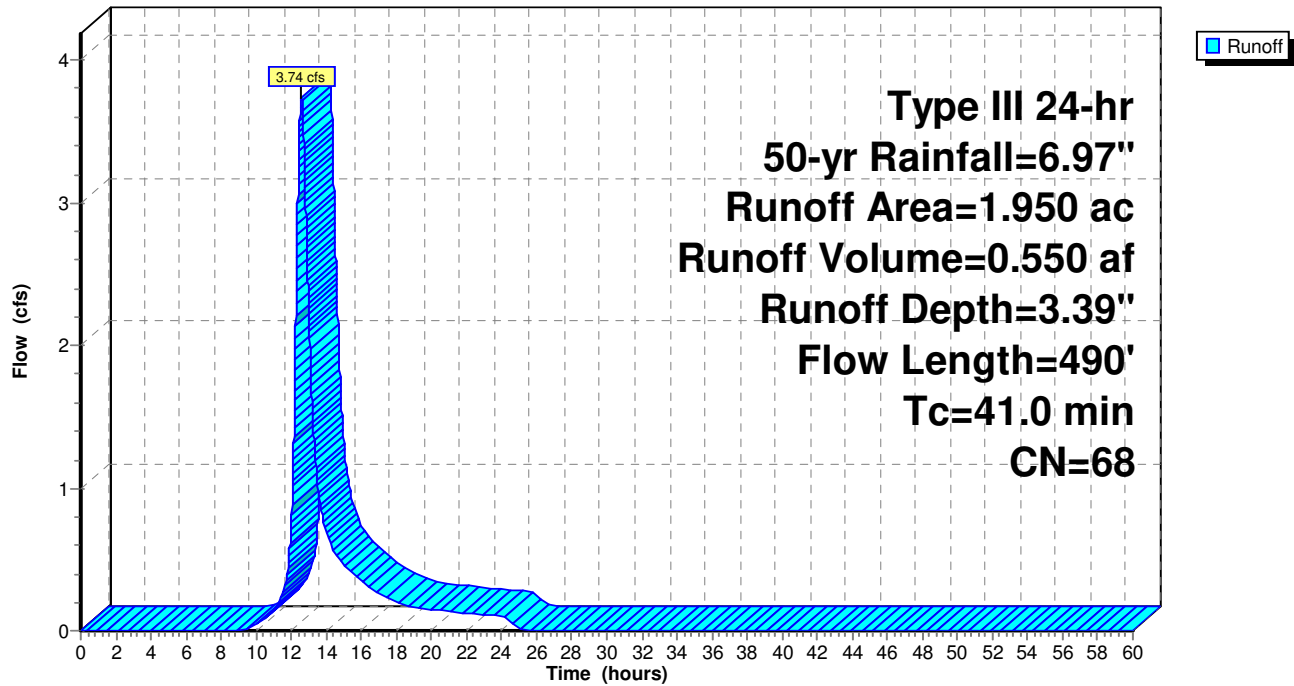
Proposed Conditions
Type III 24-hr 50-yr Rainfall=6.97"

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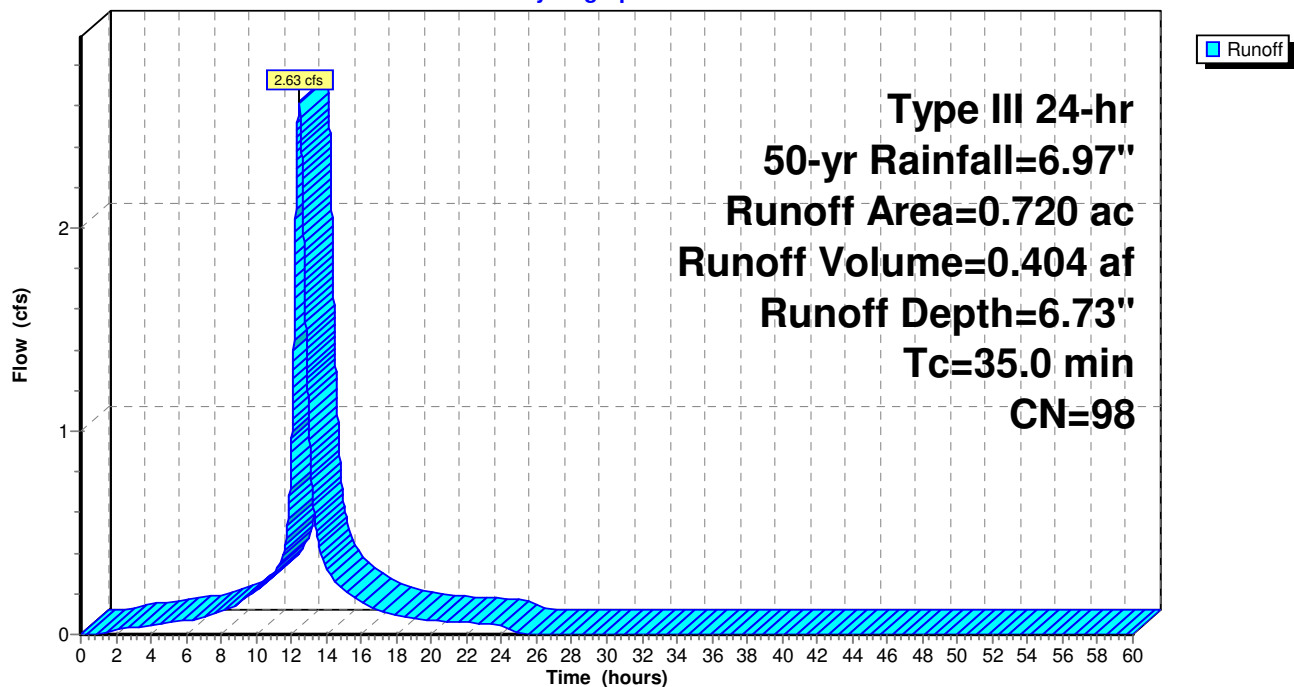
Subcatchment P8: P8 (DP4)

Hydrograph



Subcatchment P9: P9

Hydrograph



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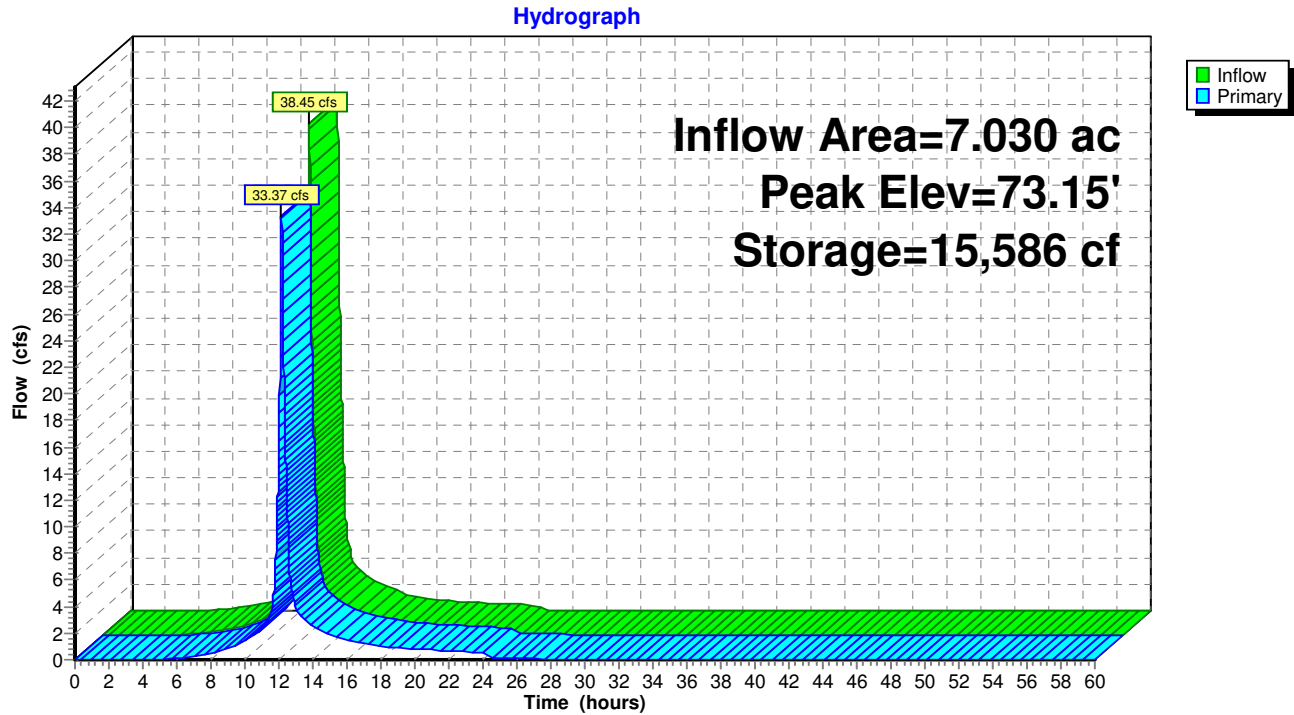
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Proposed Conditions
Type III 24-hr 50-yr Rainfall=6.97"

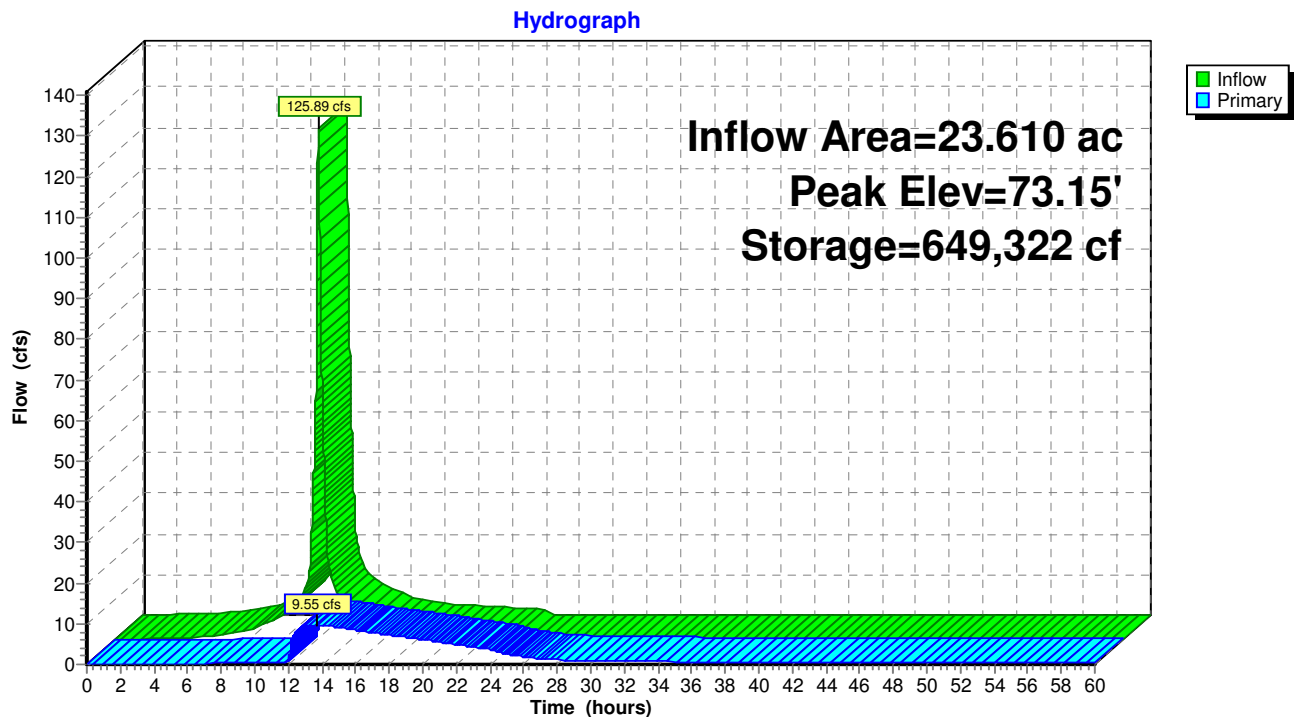
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Pond PP1: UG Chambers (CULTEC R-360)



Pond PP2: Water Quality Basin



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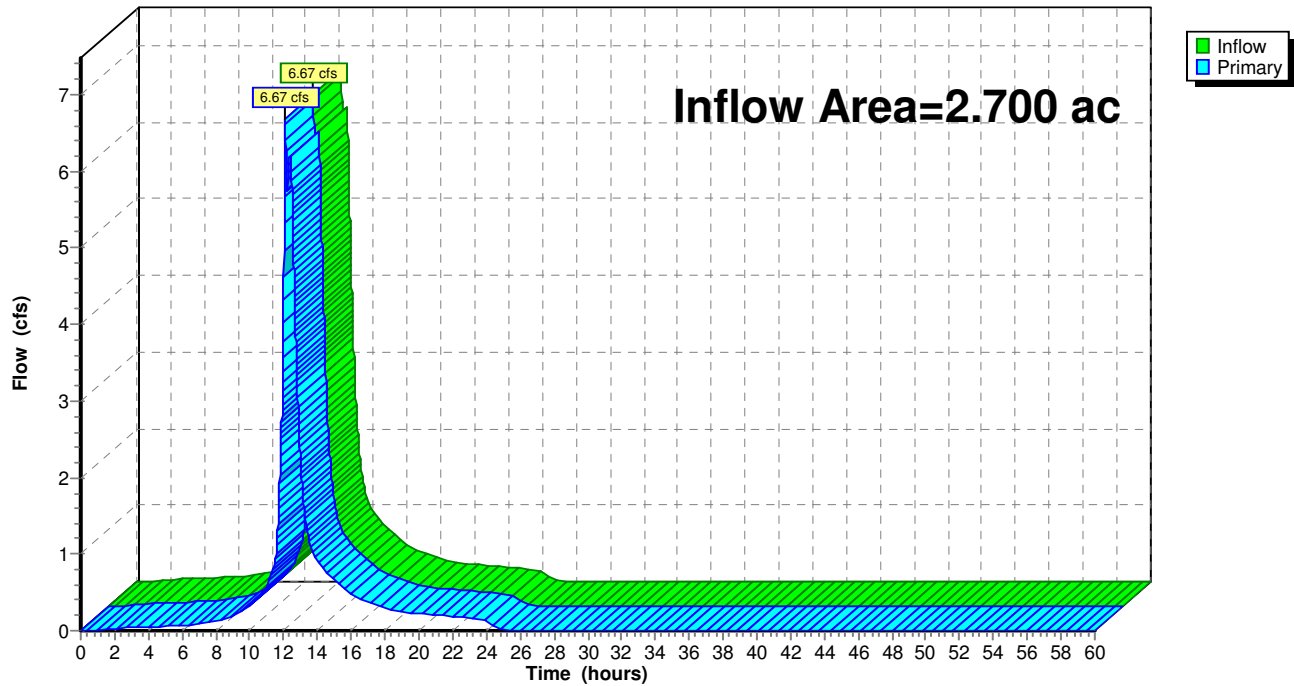
Type III 24-hr 50-yr Rainfall=6.97"

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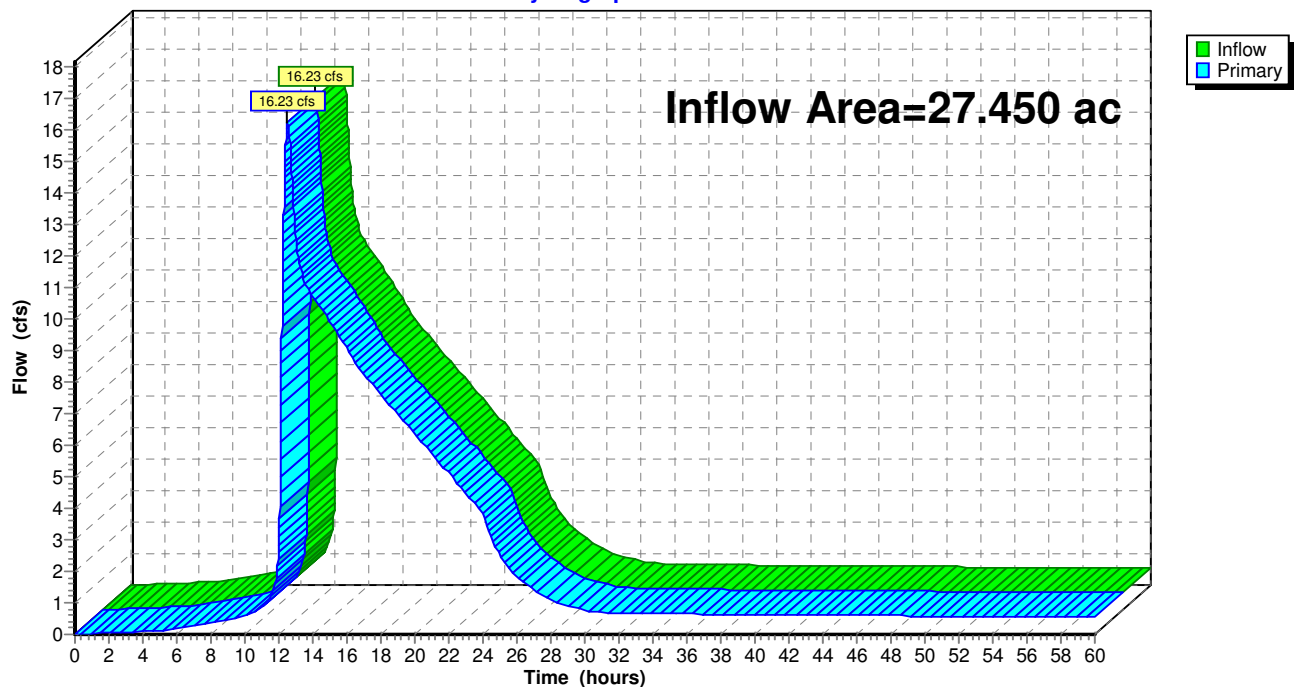
Link 2L: DP2

Hydrograph



Link DP1: DP1

Hydrograph



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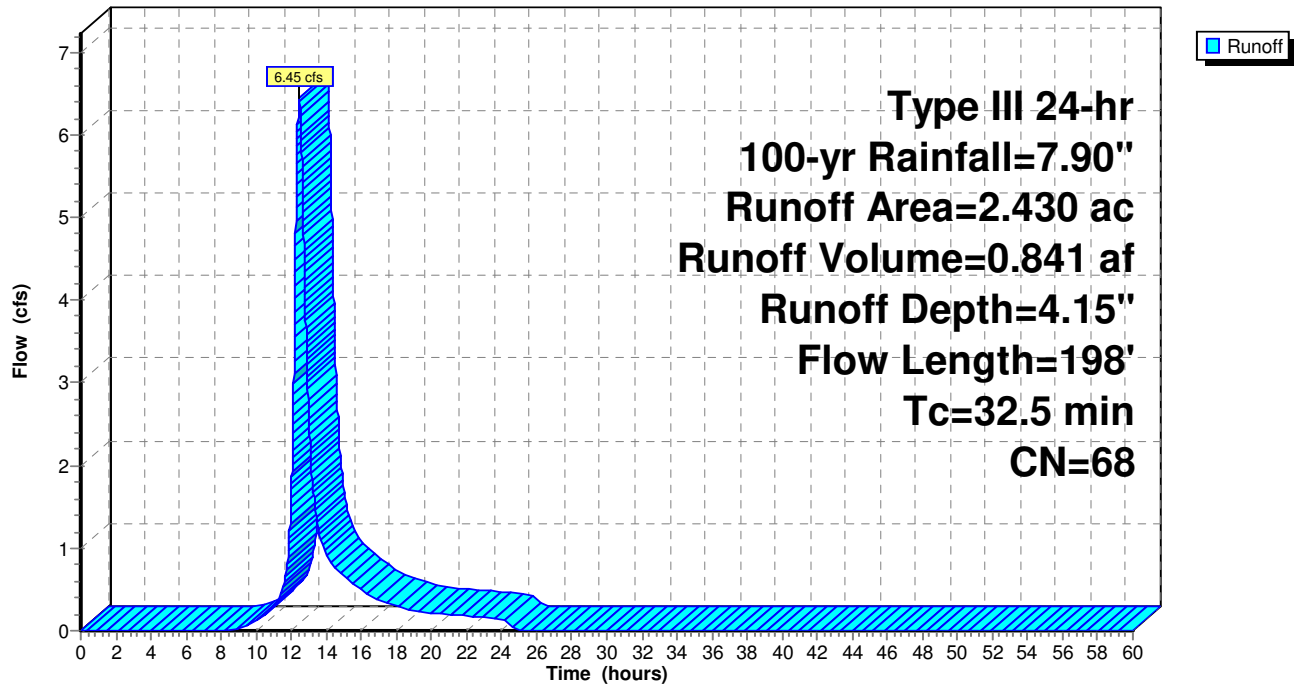
Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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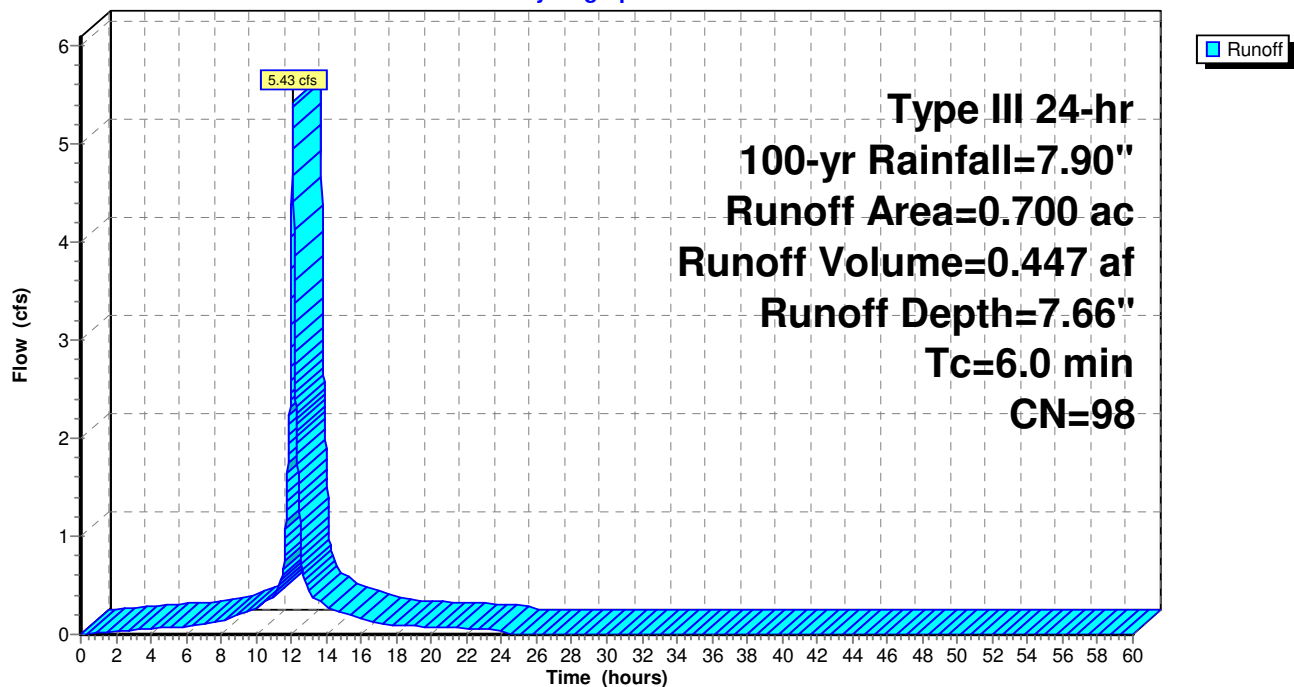
Subcatchment P1: P1 (DP3)

Hydrograph



Subcatchment P10: P10 (RB4)

Hydrograph



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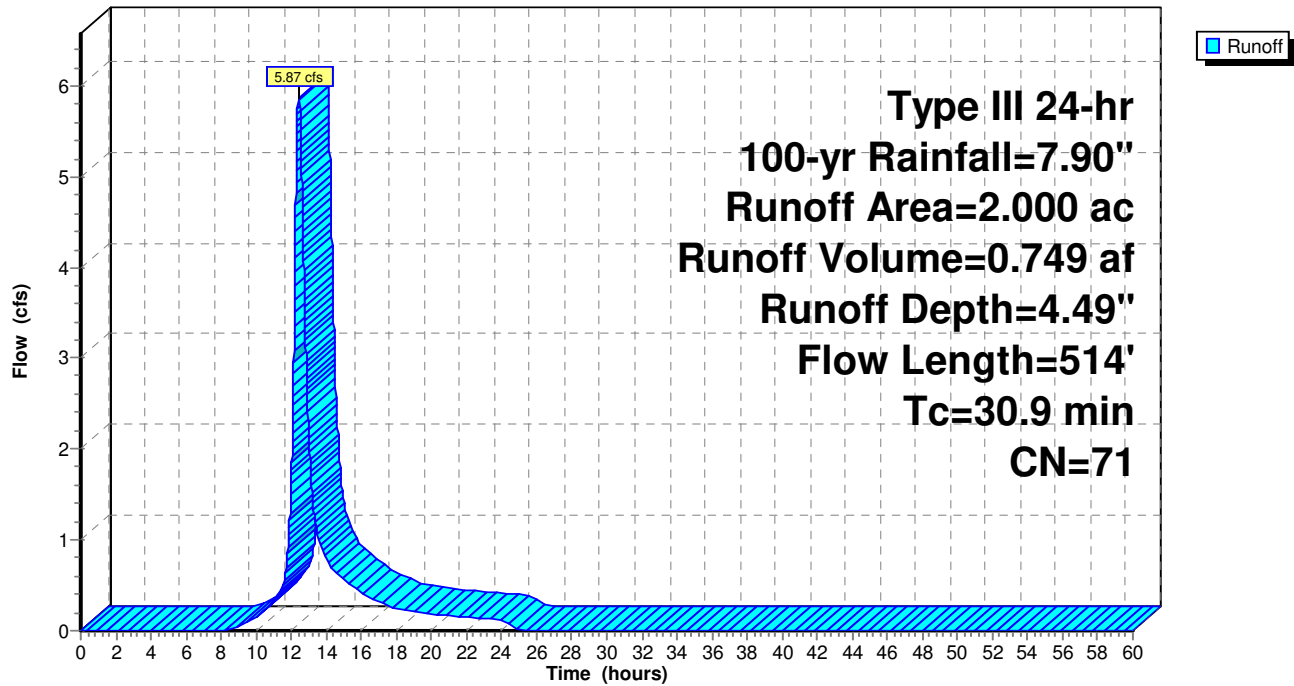
Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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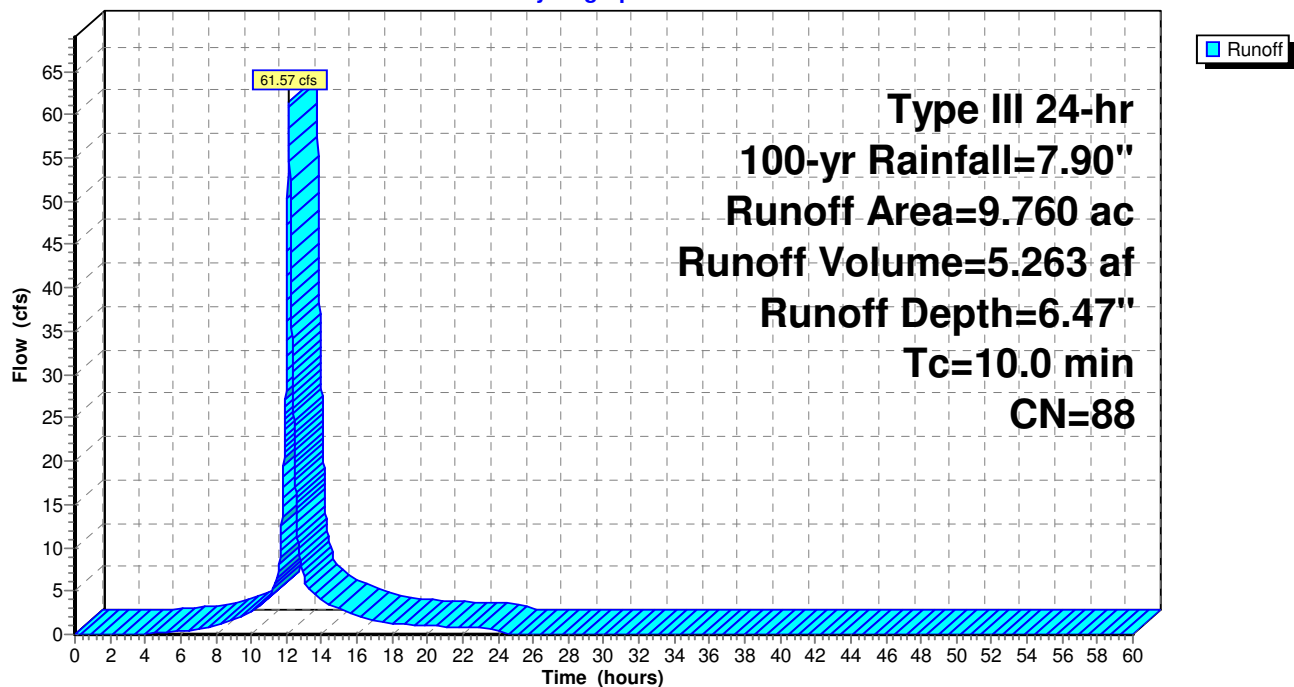
Subcatchment P2: P2

Hydrograph



Subcatchment P3: P3

Hydrograph



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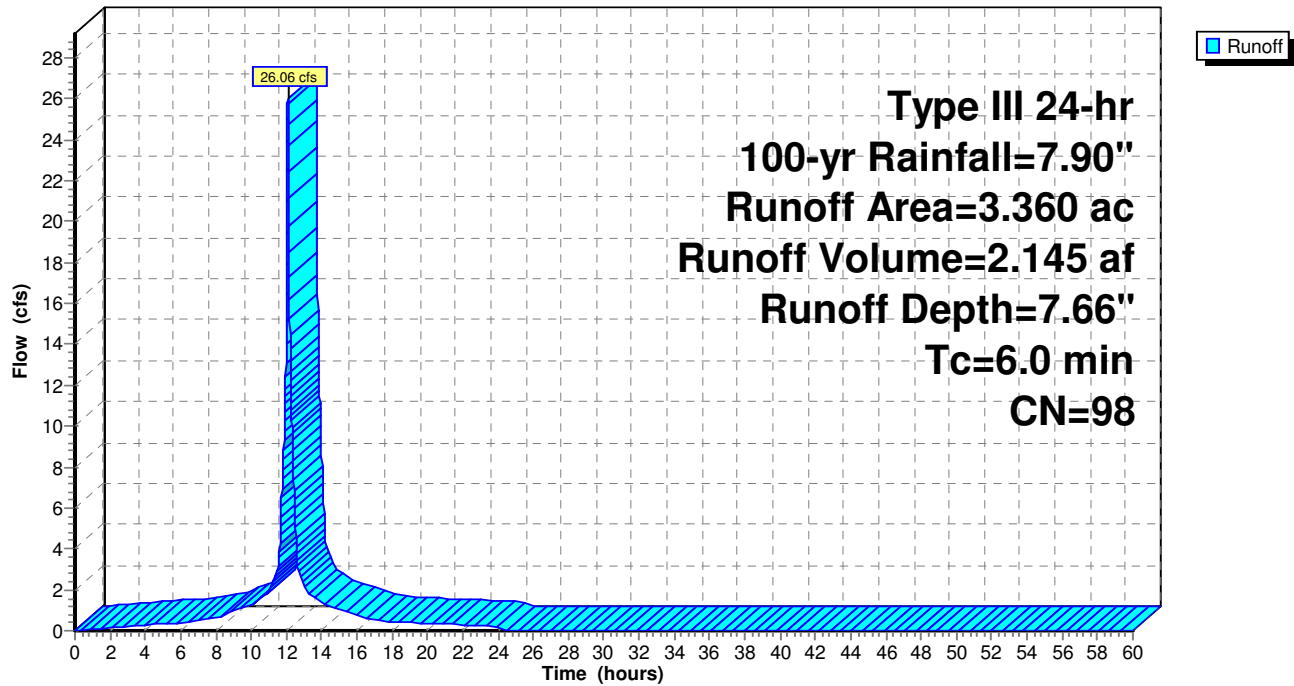
Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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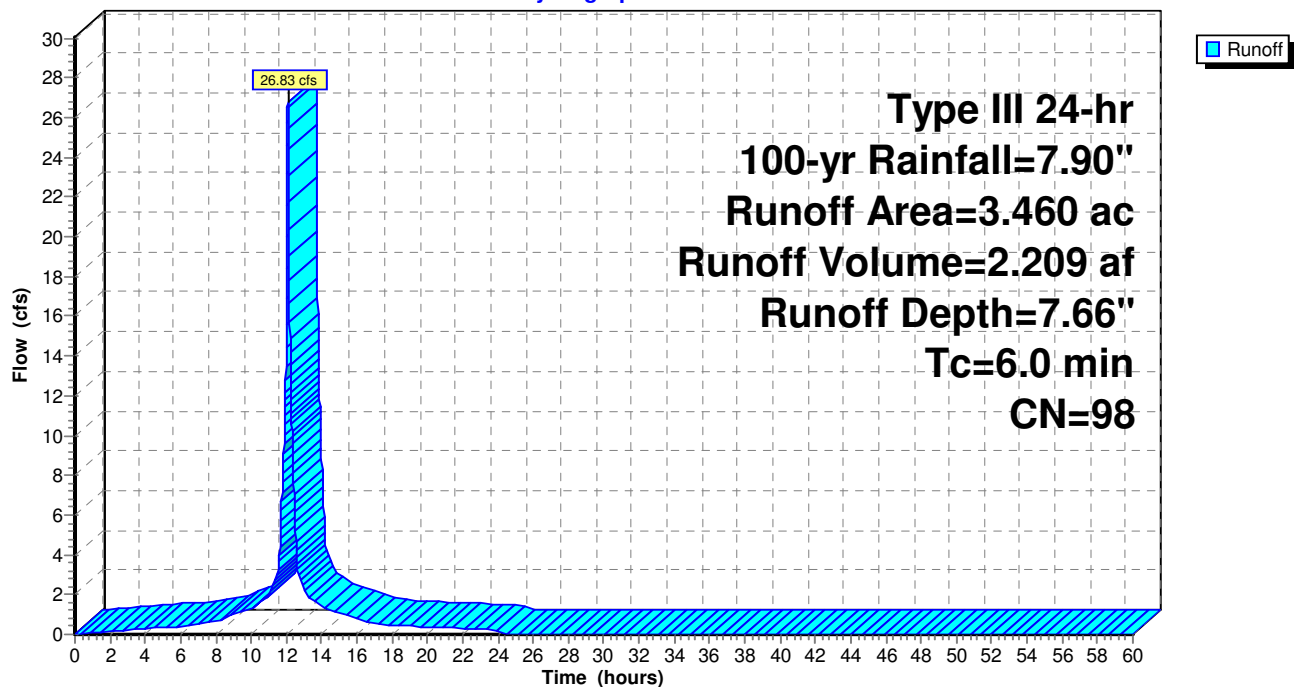
Subcatchment P4: P4

Hydrograph



Subcatchment P5: P5

Hydrograph



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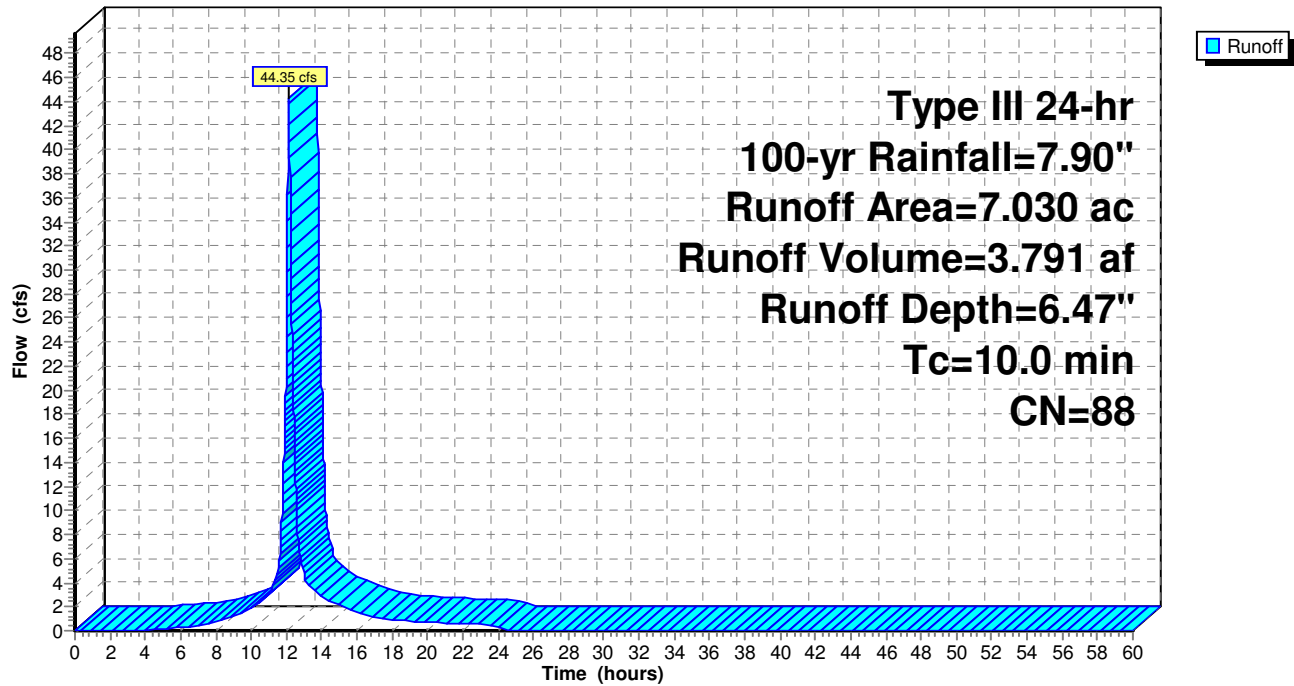
Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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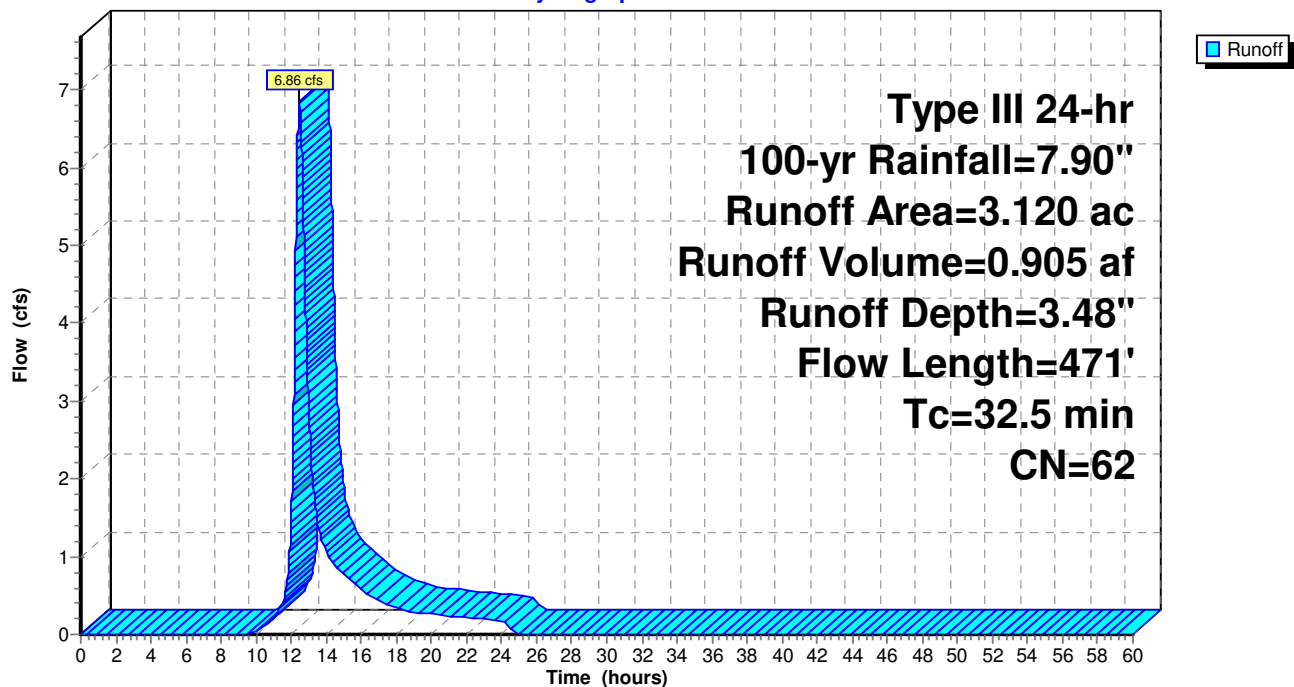
Subcatchment P6: P6

Hydrograph



Subcatchment P7: P7

Hydrograph



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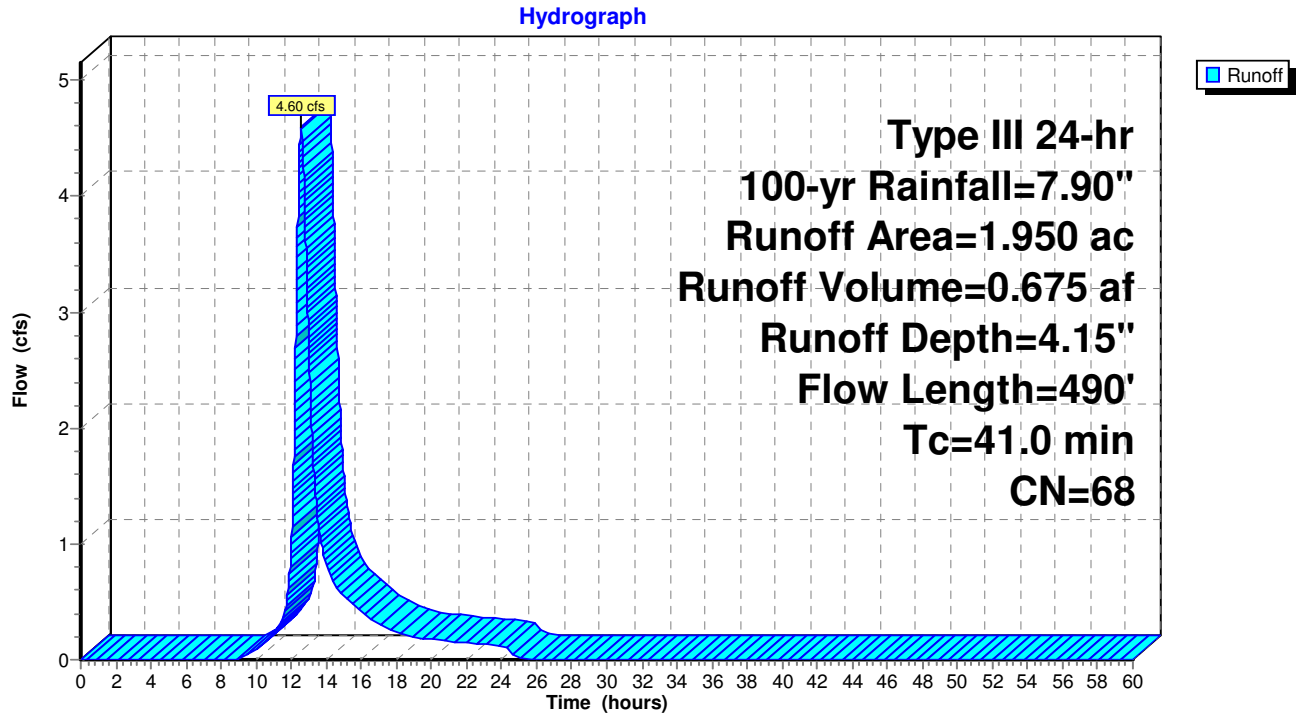
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Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

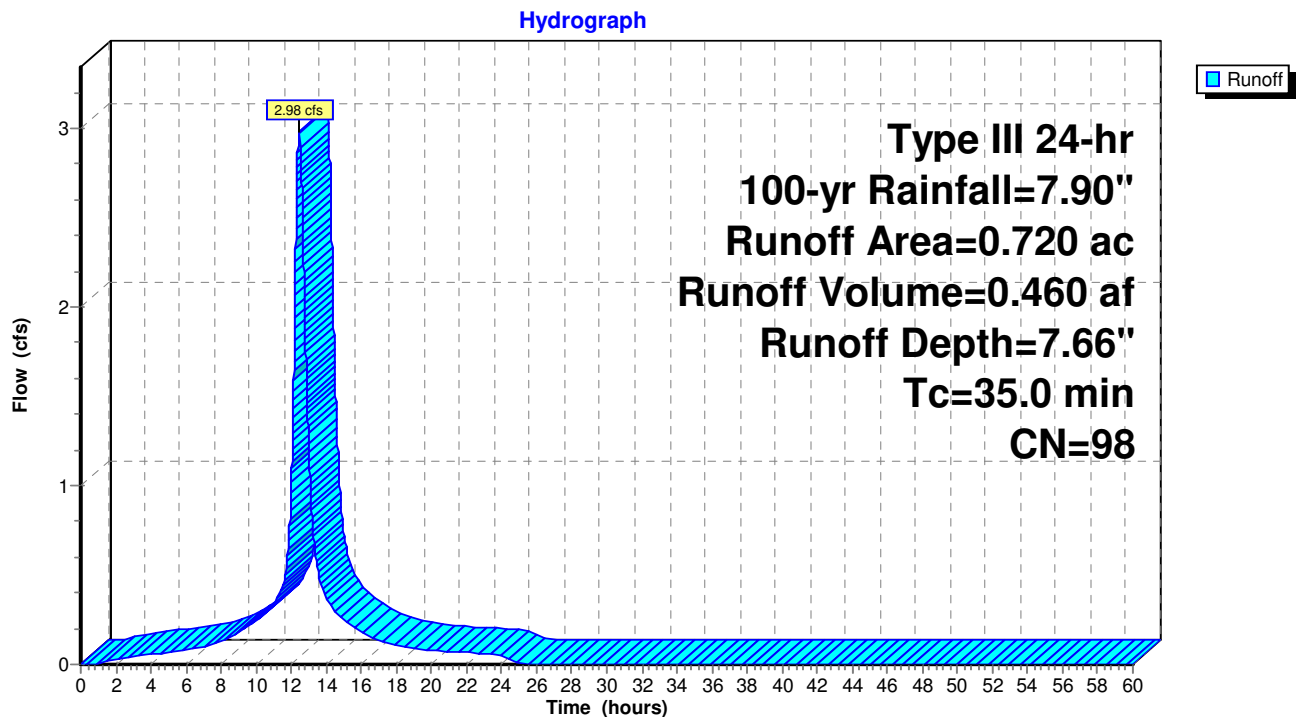
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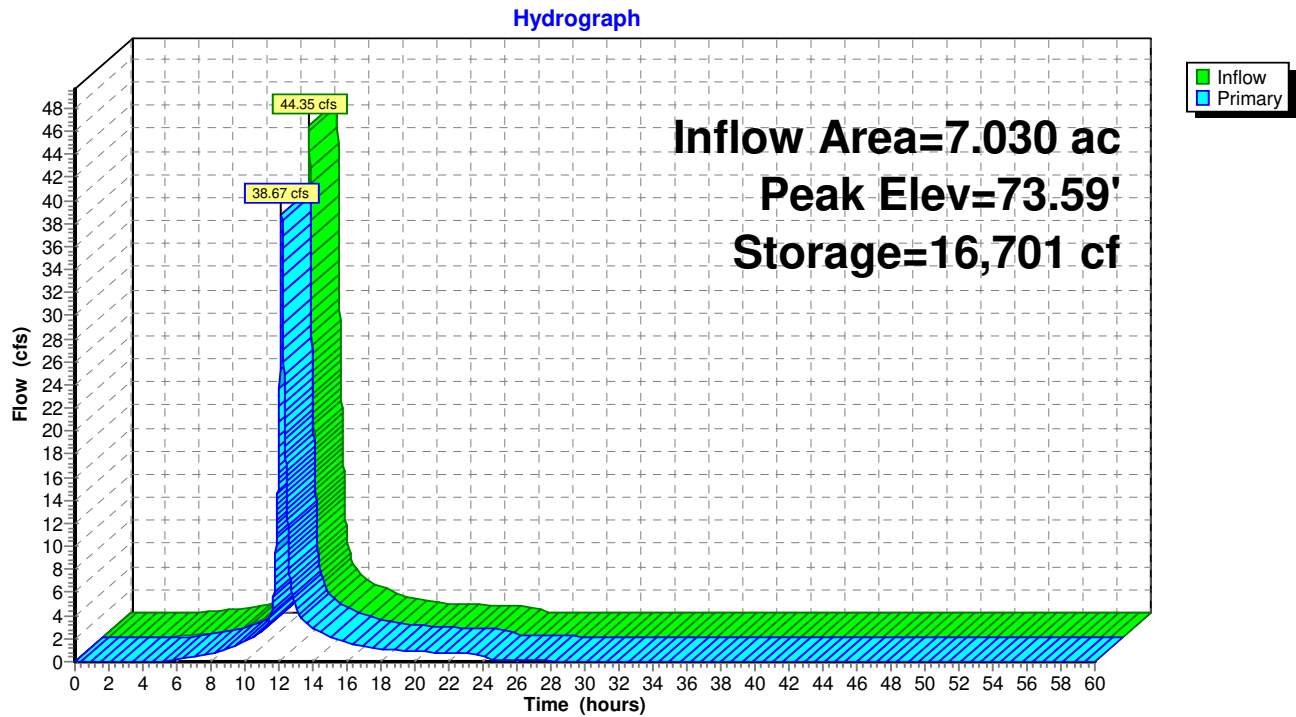
Subcatchment P8: P8 (DP4)



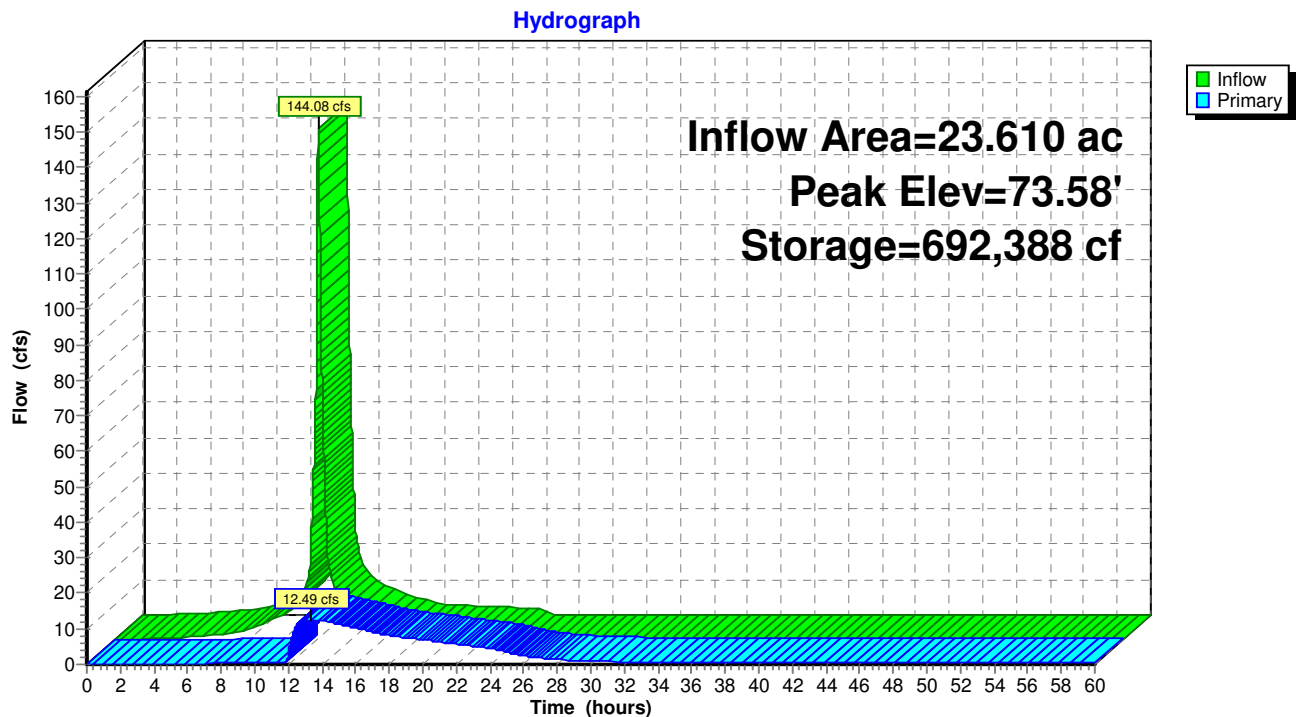
Subcatchment P9: P9



Pond PP1: UG Chambers (CULTEC R-360)



Pond PP2: Water Quality Basin



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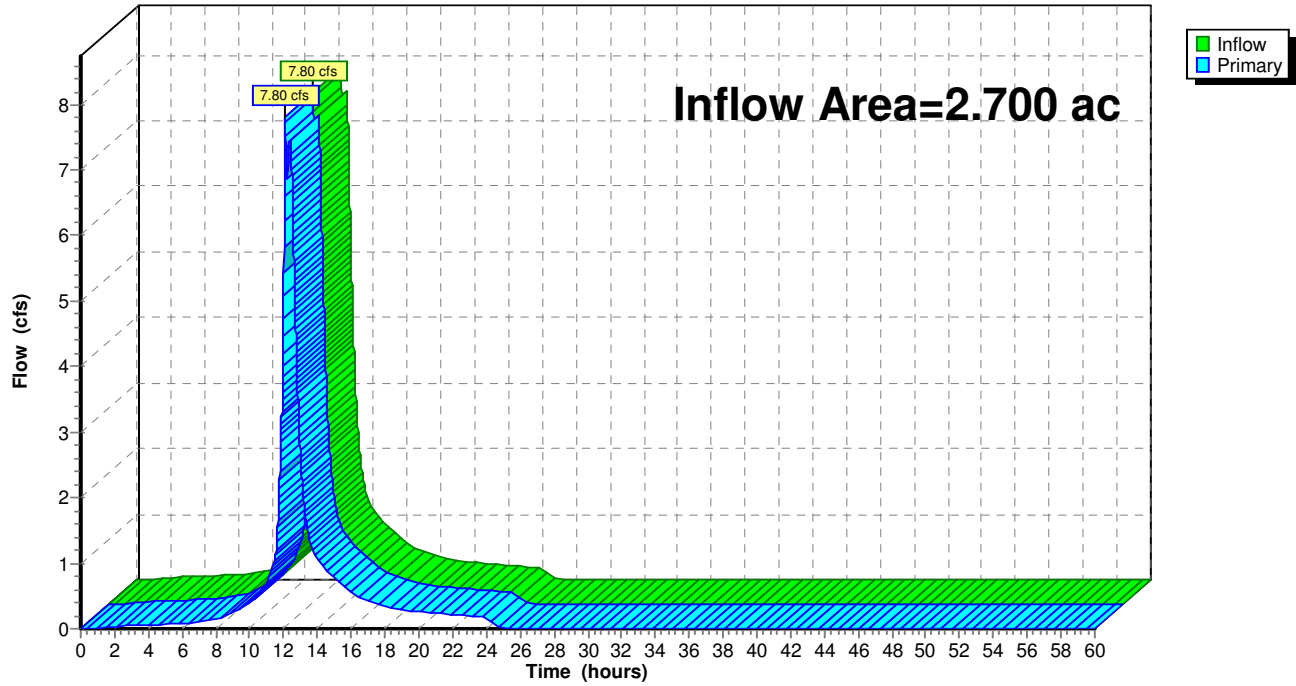
Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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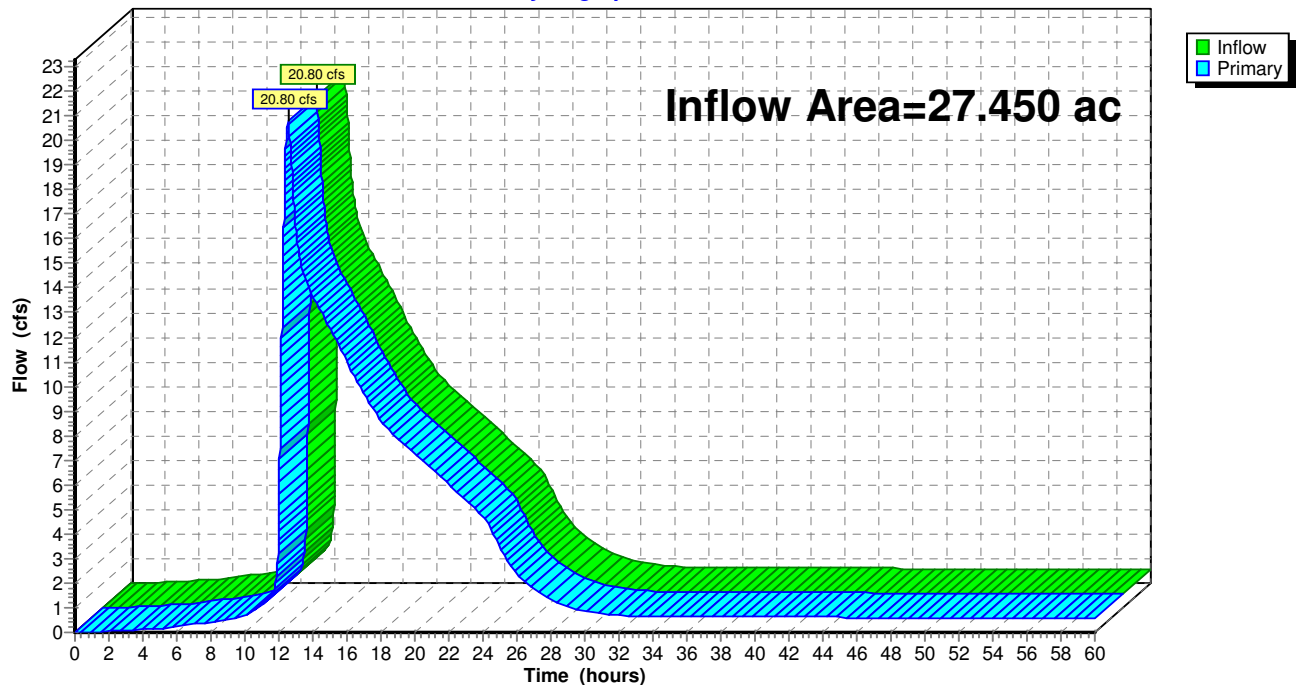
Link 2L: DP2

Hydrograph



Link DP1: DP1

Hydrograph



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Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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Summary for Pond PP1: UG Chambers (CULTEC R-360)

Inflow Area = 7.030 ac, 68.42% Impervious, Inflow Depth = 6.47" for 100-yr event
 Inflow = 44.35 cfs @ 12.14 hrs, Volume= 3.791 af
 Outflow = 38.67 cfs @ 12.17 hrs, Volume= 3.722 af, Atten= 13%, Lag= 1.9 min
 Primary = 38.67 cfs @ 12.17 hrs, Volume= 3.722 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 3

Starting Elev= 70.15' Surf.Area= 6,813 sf Storage= 1,846 cf

Peak Elev= 73.59' @ 13.31 hrs Surf.Area= 6,861 sf Storage= 16,701 cf (14,855 cf above start)

Plug-Flow detention time= 103.4 min calculated for 3.679 af (97% of inflow)

Center-of-Mass det. time= 80.6 min (866.8 - 786.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	69.56'	3,505 cf	7.00'W x 484.83'L x 4.00'H Field A 13,575 cf Overall - 4,813 cf Embedded = 8,762 cf x 40.0% Voids
#2A	70.06'	4,813 cf	Cultec R-360HD x 131 Inside #1 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap Cap Storage= +6.5 cf x 2 x 1 rows = 12.9 cf
#3B	69.56'	3,531 cf	7.00'W x 488.50'L x 4.00'H Field B 13,678 cf Overall - 4,850 cf Embedded = 8,828 cf x 40.0% Voids
#4B	70.06'	4,850 cf	Cultec R-360HD x 132 Inside #3 Effective Size= 54.9"W x 36.0"H => 9.99 sf x 3.67'L = 36.6 cf Overall Size= 60.0"W x 36.0"H x 4.17'L with 0.50' Overlap Cap Storage= +6.5 cf x 2 x 1 rows = 12.9 cf
#5	73.56'	45 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
#6	74.50'	1,908 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		18,652 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Storage Group B created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
73.56	48	0	0
74.50	48	45	45

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
74.50	5	0	0
75.00	422	107	107
76.00	3,180	1,801	1,908

Device	Routing	Invert	Outlet Devices
#1	Primary	70.15'	30.0" Round Culvert L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 70.15' / 70.11' S= 0.0080 '/ Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf

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Proposed Conditions
Type III 24-hr 100-yr Rainfall=7.90"

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#2 Primary 70.15' **30.0" Round Culvert**
 L= 40.0' CPP, square edge headwall, Ke= 0.500
 Inlet / Outlet Invert= 70.15' / 70.00' S= 0.0038 '/' Cc= 0.900
 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=38.63 cfs @ 12.17 hrs HW=73.16' TW=72.50' (Dynamic Tailwater)

1=Culvert (Inlet Controls 19.31 cfs @ 3.93 fps)

2=Culvert (Inlet Controls 19.31 cfs @ 3.93 fps)

Summary for Pond PP2: Water Quality Basin

Inflow Area = 23.610 ac, 76.87% Impervious, Inflow Depth > 6.78" for 100-yr event
 Inflow = 144.08 cfs @ 12.12 hrs, Volume= 13.338 af
 Outflow = 12.49 cfs @ 13.34 hrs, Volume= 11.125 af, Atten= 91%, Lag= 73.3 min
 Primary = 12.49 cfs @ 13.34 hrs, Volume= 11.125 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 3

Starting Elev= 69.40' Surf.Area= 66,610 sf Storage= 338,956 cf

Peak Elev= 73.58' @ 13.34 hrs Surf.Area= 100,296 sf Storage= 692,388 cf (353,432 cf above start)

Plug-Flow detention time= 1,435.7 min calculated for 3.344 af (25% of inflow)

Center-of-Mass det. time= 495.3 min (1,289.4 - 794.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	61.00'	956,853 cf	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
61.00	21,077	0	0	21,077
62.00	24,085	22,564	22,564	24,132
63.00	27,233	25,643	48,207	27,331
64.00	36,998	31,991	80,198	37,116
65.00	40,596	38,783	118,981	40,781
66.00	44,283	42,426	161,407	44,540
67.00	48,018	46,138	207,545	48,352
68.00	50,712	49,359	256,904	51,158
69.00	62,108	56,314	313,218	62,585
70.00	73,658	67,801	381,019	74,172
72.00	88,475	161,907	542,926	89,126
74.00	103,518	191,796	734,722	104,328
76.00	118,788	222,131	956,853	119,780

Device	Routing	Invert	Outlet Devices
#1	Primary	69.32'	30.0" Round Culvert L= 66.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.32' / 69.25' S= 0.0011 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 4.91 sf
#2	Device 1	69.32'	7.0" W x 2.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	71.40'	38.0" W x 5.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	72.80'	14.0" W x 11.0" H Vert. Orifice/Grate C= 0.600

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Proposed Conditions

Type III 24-hr 100-yr Rainfall=7.90"

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Primary OutFlow Max=12.49 cfs @ 13.34 hrs HW=73.58' TW=0.00' (Dynamic Tailwater)

- ↑ 1=Culvert (Passes 12.49 cfs of 37.54 cfs potential flow)
 - ↑ 2=Orifice/Grate (Orifice Controls 0.96 cfs @ 9.85 fps)
 - ↑ 3=Orifice/Grate (Orifice Controls 8.93 cfs @ 6.77 fps)
 - ↑ 4=Orifice/Grate (Orifice Controls 2.60 cfs @ 2.84 fps)

Attachment B
Storm Sewer Analysis Results

Subbasin Summary

Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
Sub-CB-01	0.26	0.7600	0.73	0.56	0.14	1.19	0 00:07:12
Sub-CB-02	0.48	0.7900	0.73	0.58	0.28	2.33	0 00:07:12
Sub-CB-03	0.49	0.7500	0.73	0.55	0.27	2.23	0 00:07:12
Sub-CB-04	0.24	0.8500	0.68	0.57	0.14	1.37	0 00:06:00
Sub-CB-05	0.51	0.9000	0.68	0.61	0.31	3.09	0 00:06:00
Sub-CB-06	0.52	0.9000	0.68	0.61	0.32	3.16	0 00:06:00
Sub-CB-07	0.61	0.7800	0.73	0.57	0.35	2.93	0 00:07:12
Sub-CB-08	0.49	0.5300	0.78	0.42	0.20	1.47	0 00:08:24
Sub-CB-09	0.34	0.6700	0.73	0.49	0.16	1.38	0 00:07:12
Sub-CB-10	0.48	0.8800	0.68	0.59	0.28	2.83	0 00:06:00
Sub-CB-11	0.20	0.9000	0.68	0.61	0.12	1.19	0 00:06:00
Sub-CB-12	0.52	0.9000	0.68	0.61	0.32	3.15	0 00:06:00
Sub-CB-13	0.44	0.4400	0.77	0.34	0.15	1.14	0 00:07:48
Sub-CB-14	0.52	0.5200	0.77	0.40	0.21	1.60	0 00:07:48
Sub-CB-15	0.51	0.8800	0.68	0.59	0.30	3.01	0 00:06:00
Sub-CB-16	0.47	0.8600	0.68	0.58	0.27	2.71	0 00:06:00
Sub-CB-17	0.22	0.9000	0.68	0.61	0.13	1.31	0 00:06:00
Sub-CB-18	0.88	0.6900	0.77	0.53	0.46	3.55	0 00:07:48
Sub-CB-19	0.43	0.6900	0.73	0.51	0.22	1.83	0 00:07:12
Sub-CB-22	0.45	0.7700	0.73	0.56	0.25	2.12	0 00:07:12
Sub-CB-23	0.31	0.5900	0.77	0.45	0.14	1.09	0 00:07:48
Sub-CB-24	0.34	0.5800	0.77	0.44	0.15	1.17	0 00:07:48
Sub-RA1	0.36	0.9000	0.68	0.61	0.22	2.19	0 00:06:00
Sub-RA2	0.74	0.9000	0.68	0.61	0.45	4.48	0 00:06:00
Sub-RA3	0.75	0.9000	0.68	0.61	0.46	4.58	0 00:06:00
Sub-RA4	0.69	0.9000	0.68	0.61	0.42	4.21	0 00:06:00
Sub-RA5	0.69	0.9000	0.68	0.61	0.42	4.19	0 00:06:00
Sub-RA6	0.48	0.9000	0.68	0.61	0.29	2.90	0 00:06:00
Sub-RA7	0.42	0.9000	0.68	0.61	0.26	2.57	0 00:06:00
Sub-RB1	0.34	0.9000	0.68	0.61	0.21	2.08	0 00:06:00
Sub-RB2	0.71	0.9000	0.68	0.61	0.43	4.33	0 00:06:00
Sub-RB3	0.73	0.9000	0.68	0.61	0.44	4.43	0 00:06:00
Sub-RB4	0.70	0.9000	0.68	0.61	0.43	4.26	0 00:06:00
Sub-RB5	0.68	0.9000	0.68	0.61	0.41	4.13	0 00:06:00
Sub-RB6	0.47	0.9000	0.68	0.61	0.29	2.86	0 00:06:00
Sub-RB7	0.42	0.9000	0.68	0.61	0.26	2.57	0 00:06:00
Sub-YD-1	0.07	0.3000	0.85	0.25	0.02	0.11	0 00:09:36
Sub-YD-2	0.05	0.3000	0.85	0.25	0.01	0.08	0 00:09:36
Sub-YD-3	0.05	0.3000	0.85	0.25	0.01	0.08	0 00:09:36
Sub-YD-4	0.05	0.3000	0.85	0.25	0.01	0.08	0 00:09:36
Sub-YD-5	0.05	0.3000	0.85	0.25	0.01	0.08	0 00:09:36
Sub-YD-6	0.05	0.3000	0.85	0.25	0.01	0.08	0 00:09:36
Sub-YD-7	0.05	0.3000	0.85	0.25	0.01	0.08	0 00:09:36
Sub-YD-8	0.05	0.3000	0.86	0.26	0.01	0.08	0 00:10:12
Sub-YD-9	0.41	0.3000	0.86	0.26	0.11	0.63	0 00:10:12

Link Summary

From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow Velocity	Peak Flow Depth
		(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)	(ft/sec)	(ft)
CB-11	CB-10	124.00	73.07	72.45	0.5000	10.000	0.0120	1.02	1.68	2.08	0.77
CB-9	CB-10	146.00	73.18	72.45	0.5000	12.000	0.0120	1.45	2.72	2.52	0.80
RA6	TEE-2	16.00	76.00	71.03	31.0600	12.000	0.0120	2.90	21.51	8.62	0.64
RB4	CLEANOUT	185.00	75.60	75.11	0.2600	12.000	0.0120	3.42	1.99	4.36	1.00
RB6	FE-3	163.00	75.86	73.00	1.7500	12.000	0.0120	2.82	5.11	6.35	0.55
RB3	CB-5	125.00	75.60	73.40	1.7600	12.000	0.0120	4.30	5.12	6.73	0.76
RB5	FE-2	163.00	75.86	73.00	1.7500	12.000	0.0120	4.06	5.11	6.80	0.71
RB2	CB-6	129.00	75.60	73.40	1.7100	12.000	0.0120	4.20	5.04	6.64	0.75
RB1	CB-6	208.00	75.60	73.40	1.0600	12.000	0.0120	1.96	3.97	4.86	0.52
YD-9 (24 NYLOPLAST)	CB-17	27.00	72.75	72.50	0.9300	10.000	0.0120	0.63	2.28	2.92	0.57
RA1	DMH-1	21.00	75.60	75.12	2.2900	12.000	0.0120	2.17	5.84	5.48	0.55
RA7	TEE-3	17.00	76.00	70.74	30.9400	12.000	0.0120	2.56	21.47	4.91	0.63
RB7	FE-4	164.00	75.86	73.00	1.7400	12.000	0.0120	2.53	5.10	6.19	0.52
CLEANOUT	DMH-6 (15 NYLOPLAST)	142.00	75.11	74.73	0.2700	15.000	0.0120	3.25	3.62	3.30	1.04
DMH-6 (15 NYLOPLAST)	DMH-8 (15 NYLOPLAST)	232.00	74.73	74.11	0.2700	15.000	0.0120	3.17	3.62	3.16	1.00
DMH-8 (15 NYLOPLAST)	FE-11	41.00	74.11	74.00	0.2700	15.000	0.0120	3.15	3.62	3.55	0.85
CB-16	CB-15	122.00	71.88	71.27	0.5000	18.000	0.0120	3.61	8.05	2.21	1.37
CB-8 (DOUBLE TYPE II)	CB-7	153.00	75.00	72.89	1.3800	10.000	0.0120	1.59	2.79	3.52	0.64
CB-6	CB-5	104.00	71.90	71.51	0.3800	30.000	0.0130	12.11	25.12	2.68	2.17
CB-5	CB-4	107.00	71.51	71.11	0.3700	30.000	0.0120	18.19	27.07	3.89	2.28
CB-4	CB-1	109.00	71.11	70.70	0.3800	30.000	0.0120	19.13	27.35	4.11	2.28
CB-3	CB-2	139.00	73.00	72.30	0.5000	15.000	0.0120	2.20	4.97	3.43	0.68
CB-2	CB-1	107.00	71.69	71.15	0.5000	24.000	0.0120	4.51	17.41	1.69	1.59
CB-1	FE-1	39.00	70.70	70.50	0.5100	30.000	0.0120	24.62	31.82	5.95	1.96
CB-7	CB-6	128.00	72.89	72.25	0.5000	18.000	0.0130	4.42	7.44	3.61	1.43
CB-10	CB-12	121.00	72.45	71.85	0.5000	18.000	0.0120	4.59	8.03	3.08	1.26
CB-14 (DOUBLE TYPE II)	CB-13	124.00	73.56	72.40	0.9400	10.000	0.0120	1.74	2.30	3.44	0.76
CB-13	CB-12	110.00	72.40	71.85	0.5000	15.000	0.0120	2.91	4.95	2.94	1.19
CB-12	CB-15	117.00	71.85	71.27	0.5000	24.000	0.0120	9.51	17.26	3.61	1.56
CB-15	CB-18 (DOUBLE TYPE II)	192.00	71.27	70.30	0.5100	36.000	0.0120	15.37	35.75	3.72	1.72
CB-17	CB-16	124.00	72.50	71.88	0.5000	15.000	0.0120	1.50	4.95	2.37	0.96
CB-19 (DOUBLE TYPE II)	CB-18 (DOUBLE TYPE II)	217.00	72.90	71.85	0.4800	12.000	0.0120	1.78	2.68	3.25	0.66
CB-18 (DOUBLE TYPE II)	DMH-9 (30 NYLOPLAST)	7.00	70.30	70.23	1.0000	30.000	0.0100	20.48	152.16	5.33	1.83
UG1-OUTLET B	DMH-7	5.00	70.15	70.11	0.8000	30.000	0.0100	13.38	47.69	7.89	2.50
DMH-7	FE-6	36.00	70.11	70.00	0.3100	36.000	0.0120	28.77	39.94	4.97	2.35
UG1-OUTLET A	FE-7	40.00	70.15	70.00	0.3800	30.000	0.0100	18.11	32.65	4.38	2.25
YD-1 (12 NYLOPLAST)	CB-8 (DOUBLE TYPE II)	75.00	76.15	75.00	1.5300	8.000	0.0120	0.18	1.62	1.83	0.29
YD-2 (12 NYLOPLAST)	YD-1 (12 NYLOPLAST)	97.00	76.65	76.15	0.5200	8.000	0.0120	0.07	0.94	1.39	0.14
YD-3 (12 NYLOPLAST)	YD-4 (24 NYLOPLAST)	97.00	76.05	75.55	0.5200	8.000	0.0120	0.08	0.94	1.24	0.16
YD-4 (24 NYLOPLAST)	YD-5 (12 NYLOPLAST)	97.00	75.55	75.05	0.5200	8.000	0.0120	0.15	0.94	1.94	0.18
YD-6 (12 NYLOPLAST)	YD-5 (12 NYLOPLAST)	82.00	74.60	74.10	0.6100	8.000	0.0120	0.08	1.02	1.11	0.17
YD-8 (12 NYLOPLAST)	CB-9	51.00	74.65	73.51	2.2400	8.000	0.0120	0.15	1.96	3.23	0.19
YD-7 (12 NYLOPLAST)	YD-8 (12 NYLOPLAST)	87.00	75.10	74.65	0.5200	8.000	0.0120	0.08	0.94	1.59	0.13
YD-5 (12 NYLOPLAST)	CB-14 (DOUBLE TYPE II)	52.00	74.10	73.56	1.0400	8.000	0.0120	0.29	1.33	2.33	0.43
FE-8	OCS-1	65.00	69.39	69.32	0.1100	30.000	0.0120	16.83	19.87	6.44	1.77
OCS-1	FE-9	75.00	69.32	69.25	0.0900	30.000	0.0120	12.49	19.87	4.32	1.42
CB-23 (DOUBLE TYPE II)	CB-24 (DOUBLE TYPE II)	236.00	72.70	71.49	0.5100	12.000	0.0120	1.04	2.76	2.12	0.60
CB-24 (DOUBLE TYPE II)	FE-5	23.00	71.49	71.30	0.8300	15.000	0.0120	2.16	6.36	2.61	0.80
CB-22	DMH-5	66.00	72.10	71.76	0.5200	12.000	0.0130	2.08	2.56	3.52	0.71
DMH-1	TEE-1	117.00	74.75	74.15	0.5100	18.000	0.0120	2.07	8.15	1.64	1.19
TEE-1	DMH-2	146.00	74.15	73.50	0.4500	18.000	0.0120	6.09	7.59	3.83	1.27
DMH-2	DMH-4	277.00	73.50	71.76	0.6300	24.000	0.0120	10.51	19.41	4.59	1.38
DMH-4	TEE-2	131.00	71.76	71.03	0.5600	30.000	0.0120	13.54	33.25	3.26	1.97
TEE-2	TEE-3	53.00	71.03	70.74	0.5500	30.000	0.0120	15.84	32.87	3.58	2.26
TEE-3	DMH-7	109.00	70.74	70.11	0.5800	30.000	0.0120	17.88	33.78	3.70	2.39
RA2	TEE-1	16.00	75.60	74.15	9.0600	12.000	0.0120	4.45	11.62	7.52	0.90
RA3	DMH-2	14.00	75.60	73.50	15.0000	12.000	0.0120	4.57	14.95	9.33	0.78
RA4	DMH-3	35.00	79.60	78.87	2.0900	12.000	0.0120	4.17	5.57	6.09	0.81
DMH-3	FE-10	132.00	78.87	76.00	2.1700	12.000	0.0120	4.14	5.69	7.36	0.68
RA5	DMH-4	14.00	79.00	76.24	19.7100	12.000	0.0120	4.18	17.14	13.01	0.43

*100-Year Storm Outflow from Water Quality Basin (PP2)

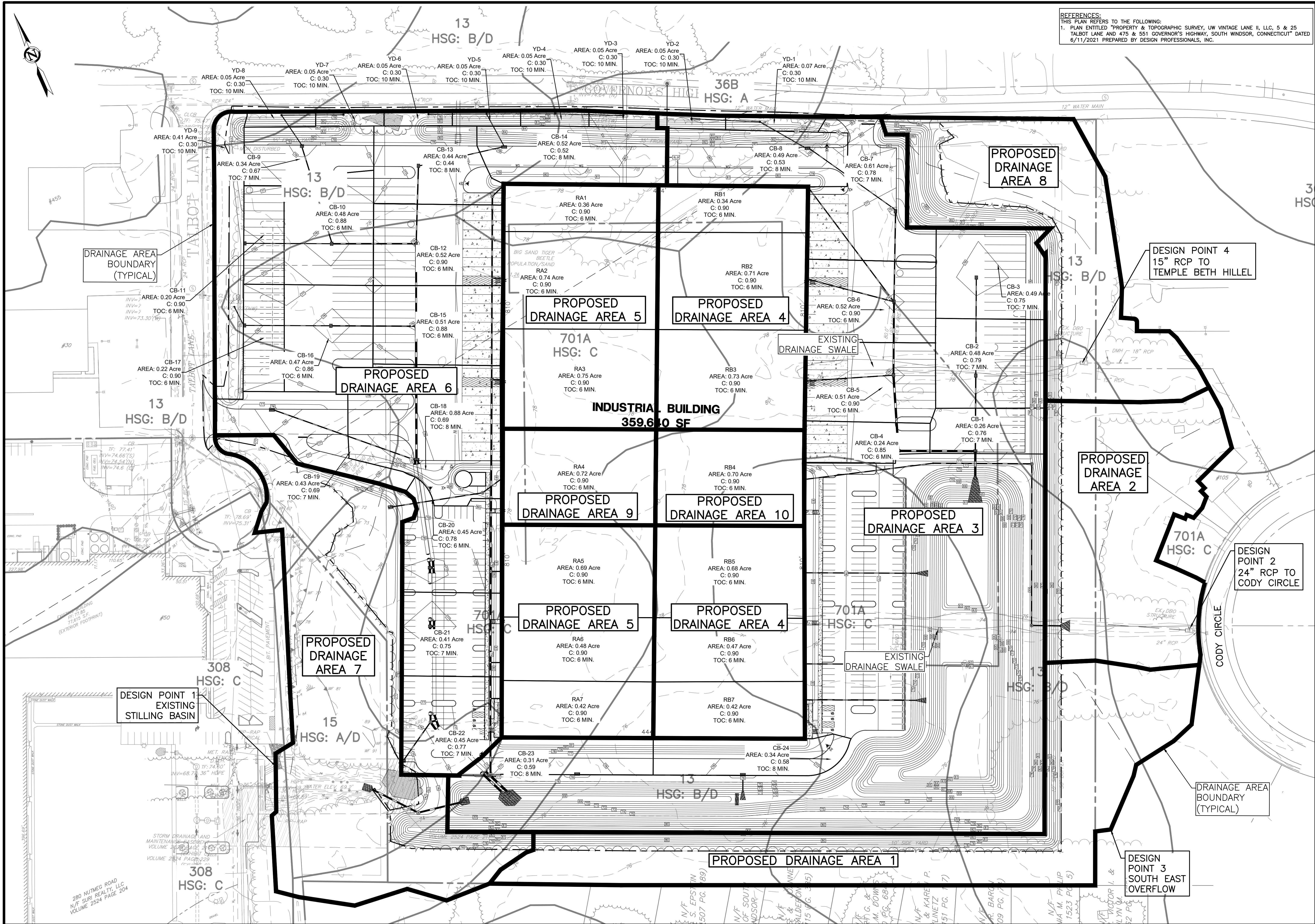
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Junction Input

Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)
CB-1	70.70	75.40
CB-10	72.45	75.40
CB-11	73.07	75.50
CB-12	71.85	75.90
CB-13	72.40	76.00
CB-14 (DOUBLE TYPE II)	73.56	77.70
CB-15	71.27	75.90
CB-16	71.88	75.60
CB-17	72.50	75.50
CB-18 (DOUBLE TYPE II)	70.80	75.10
CB-19 (DOUBLE TYPE II)	72.90	75.30
CB-2	71.69	75.40
CB-22	72.10	74.40
CB-23 (DOUBLE TYPE II)	72.70	75.10
CB-24 (DOUBLE TYPE II)	71.49	75.10
CB-3	73.00	75.40
CB-4	71.11	75.90
CB-5	71.51	75.80
CB-6	71.90	75.80
CB-7	72.89	75.60
CB-8 (DOUBLE TYPE II)	75.00	77.70
CB-9	73.18	75.60
CLEANOUT	75.11	77.80
DMH-1	74.75	77.75
DMH-2	73.50	76.67
DMH-3	78.87	81.20
DMH-4	71.76	78.84
DMH-6 (15 NYLOPLAST)	74.73	78.50
DMH-7	70.11	77.50
DMH-8 (15 NYLOPLAST)	74.11	77.80
FE-8	69.38	69.38
OCS-1	69.32	75.90
RA1	75.60	77.69
RA2	75.60	77.71
RA3	75.60	77.71
RA4	79.60	79.55
RA5	79.00	81.39
RA6	76.00	77.71
RA7	76.00	-0.06
RB1	75.60	77.75
RB2	75.60	77.49
RB3	75.60	77.75
RB4	75.60	77.75
RB5	75.86	77.75
RB6	75.86	77.75
RB7	75.86	0.00
TEE-1	74.15	76.60
TEE-2	71.03	78.70
TEE-3	70.74	78.70
UG1-OUTLET A	70.15	77.00
UG1-OUTLET B	70.15	77.00
YD-1 (12 NYLOPLAST)	76.15	79.80
YD-2 (12 NYLOPLAST)	76.65	78.80
YD-3 (12 NYLOPLAST)	76.05	77.80
YD-4 (24 NYLOPLAST)	75.55	77.26
YD-5 (12 NYLOPLAST)	74.10	77.00
YD-6 (12 NYLOPLAST)	74.60	77.35
YD-7 (12 NYLOPLAST)	75.10	77.35
YD-8 (12 NYLOPLAST)	74.65	77.35
YD-9 (24 NYLOPLAST)	72.75	74.50

Junction Results

Element ID	Peak Inflow	Peak Lateral Inflow	Max HGL Elevation Attained	Min Freeboard Attained	Time of Max HGL Occurrence
	(cfs)	(cfs)	(ft)	(ft)	(days hh:mm)
CB-1	24.71	1.19	72.98	2.42	0 00:07
CB-10	4.98	2.83	73.54	1.86	0 00:07
CB-11	1.19	1.19	73.77	1.73	0 00:07
CB-12	9.57	3.15	73.29	2.61	0 00:07
CB-13	2.80	1.14	73.52	2.48	0 00:08
CB-14 (DOUBLE TYPE II)	1.81	1.60	74.24	3.46	0 00:08
CB-15	15.54	3.01	72.95	2.95	0 00:07
CB-16	4.03	2.71	73.11	2.49	0 00:07
CB-17	1.62	1.31	73.19	2.31	0 00:07
CB-18 (DOUBLE TYPE II)	20.56	3.55	72.55	2.55	0 00:08
CB-19 (DOUBLE TYPE II)	1.83	1.83	73.52	1.78	0 00:07
CB-2	4.49	2.33	73.04	2.36	0 00:07
CB-22	2.12	2.12	72.90	1.50	0 00:07
CB-23 (DOUBLE TYPE II)	1.09	1.09	73.13	1.97	0 00:08
CB-24 (DOUBLE TYPE II)	2.19	1.17	72.26	2.84	0 00:08
CB-3	2.23	2.23	73.63	1.77	0 00:07
CB-4	19.30	1.37	73.40	2.50	0 00:07
CB-5	18.42	3.09	73.78	2.02	0 00:07
CB-6	12.15	3.16	73.96	1.84	0 00:07
CB-7	4.26	2.93	74.25	1.35	0 00:07
CB-8 (DOUBLE TYPE II)	1.62	1.47	75.45	2.25	0 00:08
CB-9	1.48	1.38	73.78	1.82	0 00:07
CLEANOUT	3.42	0.00	76.18	1.62	0 00:07
DMH-1	2.17	0.00	75.68	2.07	0 00:06
DMH-2	10.46	0.00	74.58	2.09	0 00:06
DMH-3	4.17	0.00	79.59	1.61	0 00:06
DMH-4	14.24	0.00	73.48	5.36	0 00:07
DMH-6 (15 NYLOPLAST)	3.25	0.00	75.74	2.76	0 00:07
DMH-7	31.41	0.00	72.68	4.82	0 00:07
DMH-8 (15 NYLOPLAST)	3.17	0.00	75.09	2.71	0 00:08
FE-8	12.49	12.49	71.52	0.37	0 00:00
OCS-1	16.83	0.00	70.98	4.92	0 00:09
RA1	2.18	2.18	76.17	1.52	0 00:06
RA2	4.48	4.48	76.39	1.32	0 00:06
RA3	4.58	4.58	76.16	1.55	0 00:06
RA4	4.21	4.21	80.52	0.08	0 00:06
RA5	4.19	4.19	79.52	1.87	0 00:06
RA6	2.90	2.90	76.29	1.42	0 00:06
RA7	2.56	2.56	76.26	0.74	0 00:06
RB1	2.08	2.08	76.13	1.62	0 00:06
RB2	4.33	4.33	76.41	1.08	0 00:06
RB3	4.43	4.43	76.42	1.33	0 00:06
RB4	4.26	4.26	77.75	0.00	0 00:03
RB5	4.12	4.12	76.62	1.13	0 00:06
RB6	2.86	2.86	76.44	1.31	0 00:06
RB7	2.57	2.57	76.40	0.46	0 00:06
TEE-1	6.22	0.00	75.61	0.98	0 00:06
TEE-2	15.89	0.00	73.26	5.44	0 00:07
TEE-3	17.86	0.00	73.03	5.67	0 00:07
UG1-OUTLET A	18.11	0.00	77.00	0.00	0 00:00
UG1-OUTLET B	10.88	10.88	72.75	4.25	0 00:00
YD-1 (12 NYLOPLAST)	0.18	0.11	76.30	3.50	0 00:10
YD-2 (12 NYLOPLAST)	0.07	0.07	76.77	2.03	0 00:10
YD-3 (12 NYLOPLAST)	0.08	0.08	76.18	1.62	0 00:10
YD-4 (24 NYLOPLAST)	0.16	0.08	75.74	1.53	0 00:10
YD-5 (12 NYLOPLAST)	0.30	0.08	74.31	2.69	0 00:10
YD-6 (12 NYLOPLAST)	0.08	0.08	74.72	2.63	0 00:10
YD-7 (12 NYLOPLAST)	0.08	0.08	75.23	2.12	0 00:10
YD-8 (12 NYLOPLAST)	0.16	0.08	74.78	2.57	0 00:10
YD-9 (24 NYLOPLAST)	0.63	0.63	73.21	1.29	0 00:07



REFERENCES:
THIS PLAN REFERS TO THE FOLLOWING:
1. PLAN ENTITLED "PROPERTY & TOPOGRAPHIC SURVEY, UW VINTAGE LANE II, LLC, 5 & 25 TALBOT LANE AND 475 & 551 GOVERNOR'S HIGHWAY, SOUTH WINDSOR, CONNECTICUT" DATED 6/11/2021 PREPARED BY DESIGN PROFESSIONALS, INC.

PROPOSED DRAINAGE MAP

REVISIONS

NO.	DATE	BY	REVISIONS
1	8/25/2021	DHJ	REVISED PER TOWN COMMENTS

PROPOSED DRAINAGE MAP

1

25 TALBOT LANE
SITE PLAN APPLICATION
5 & 25 TALBOT ROAD &
475 & 551 GOVERNOR'S HIGHWAY
SOUTH WINDSOR, CONNECTICUT
GIS Nos. 88900005, 88900025, 36900475, 36900551

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