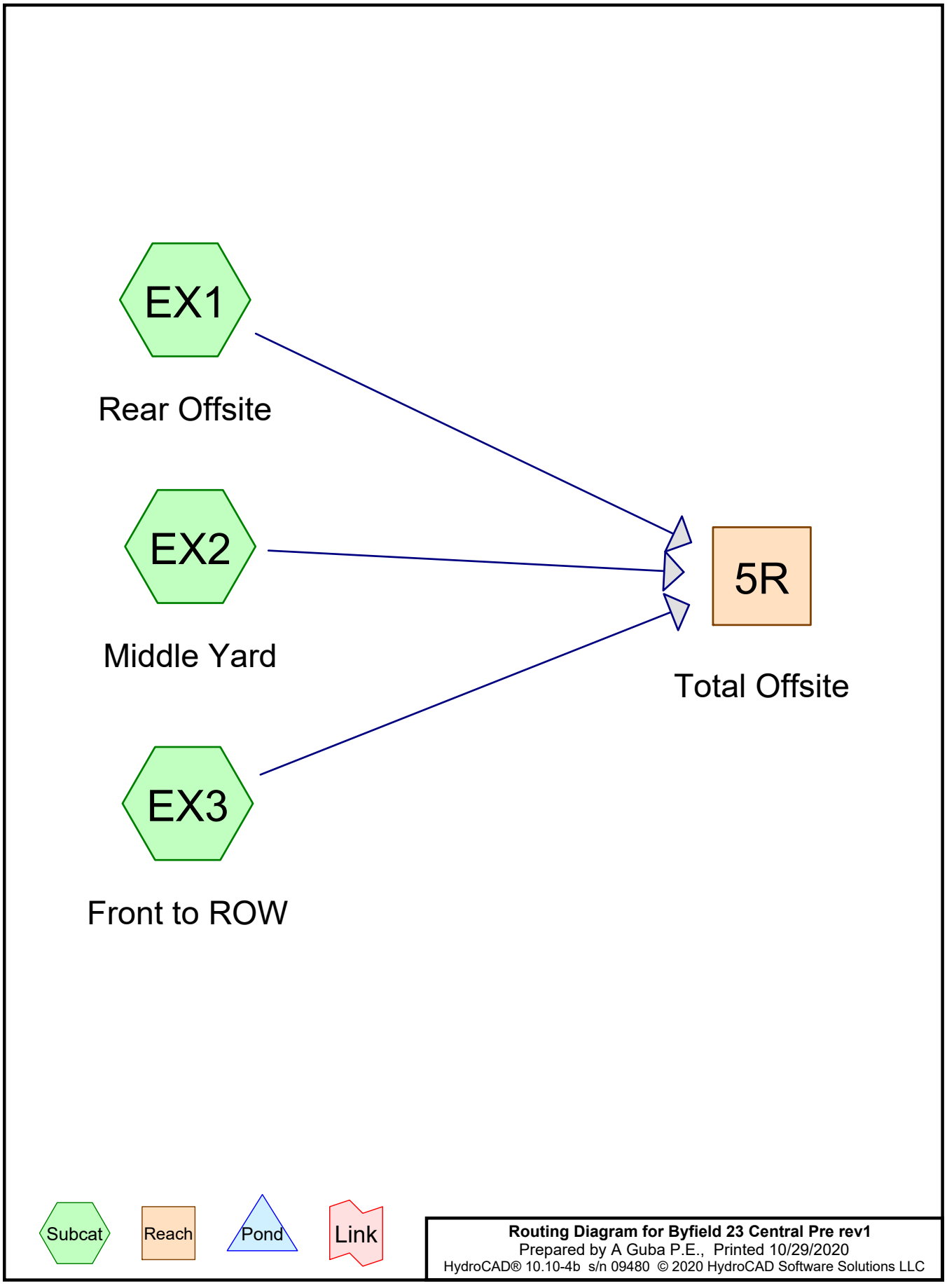


Routing Diagram for Byfield 23 Central Pre rev1
Prepared by A Guba P.E., Printed 10/29/2020

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2Yr	Type II 24-hr		Default	24.00	1	3.18	2
2	10Yr	Type II 24-hr		Default	24.00	1	4.90	2
3	100 Yr	Type II 24-hr		Default	24.00	1	9.10	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.436	39	>75% Grass cover, Good, HSG A (EX1, EX2, EX3)
0.945	61	>75% Grass cover, Good, HSG B (EX1, EX2, EX3)
0.012	98	Paved parking, HSG A (EX3)
0.074	98	Paved parking, HSG B (EX2, EX3)
0.033	98	Roofs, HSG A (EX2, EX3)
0.026	98	Roofs, HSG B (EX2)
1.526	**58**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.481	HSG A	EX1, EX2, EX3
1.045	HSG B	EX1, EX2, EX3
0.000	HSG C	
0.000	HSG D	
0.000	Other	
1.526		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.436	0.945	0.000	0.000	0.000	1.381	>75% Grass cover, Good	EX1, EX2, EX3
0.012	0.074	0.000	0.000	0.000	0.086	Paved parking	EX2, EX3
0.033	0.026	0.000	0.000	0.000	0.059	Roofs	EX2, EX3
0.481	**1.045**	**0.000**	**0.000**	**0.000**	**1.526**	**TOTAL AREA**	

Time span=0.00-28.00 hrs, dt=0.02 hrs, 1401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: Rear Offsite Runoff Area=12,779 sf 0.00% Impervious Runoff Depth=0.33"
Tc=6.0 min CN=58 Runoff=0.12 cfs 0.008 af

Subcatchment EX2: Middle Yard Runoff Area=35,889 sf 9.43% Impervious Runoff Depth=0.37"
Tc=6.0 min CN=59 Runoff=0.38 cfs 0.025 af

Subcatchment EX3: Front to ROW Runoff Area=17,810 sf 16.49% Impervious Runoff Depth=0.33"
Tc=6.0 min CN=58 Runoff=0.16 cfs 0.011 af

Reach 5R: Total Offsite Inflow=0.66 cfs 0.045 af
Outflow=0.66 cfs 0.045 af

Total Runoff Area = 1.526 ac Runoff Volume = 0.045 af Average Runoff Depth = 0.35"
90.49% Pervious = 1.381 ac 9.51% Impervious = 0.145 ac

Summary for Subcatchment EX1: Rear Offsite

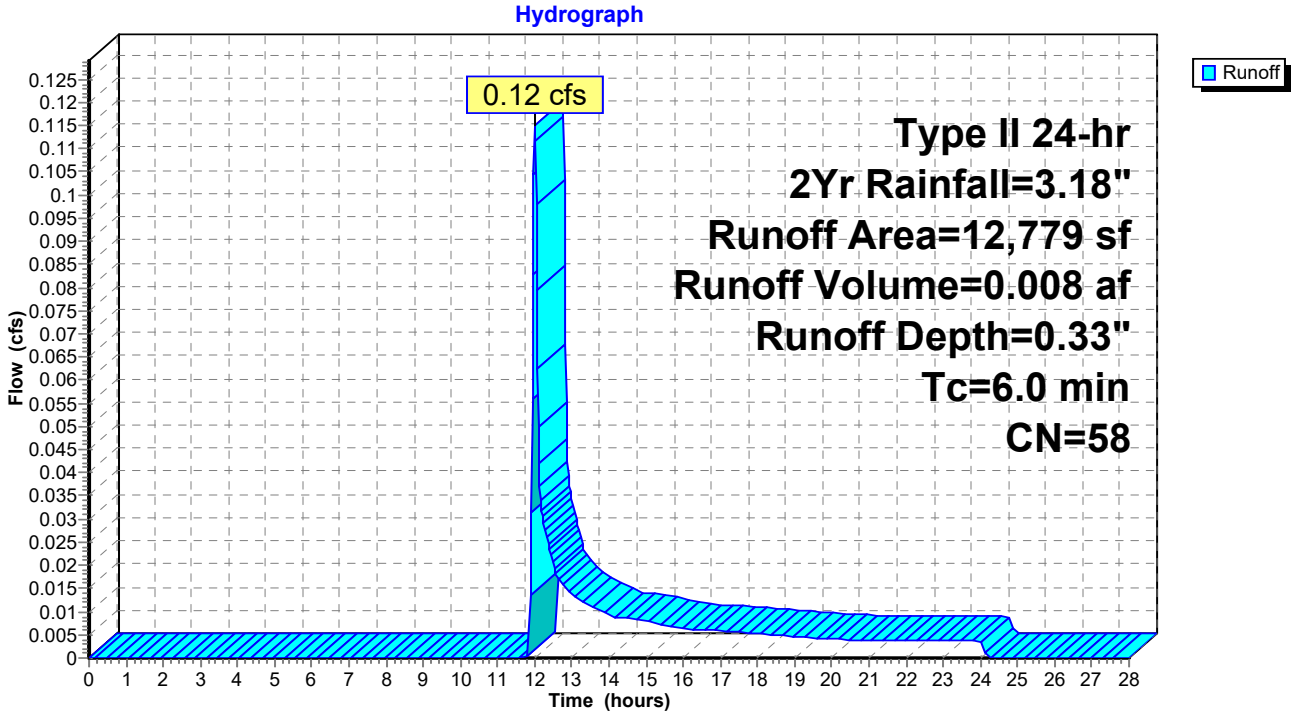
Runoff = 0.12 cfs @ 12.01 hrs, Volume= 0.008 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 2Yr Rainfall=3.18"

Area (sf)	CN	Description
10,854	61	>75% Grass cover, Good, HSG B
1,925	39	>75% Grass cover, Good, HSG A
12,779	58	Weighted Average
12,779		100.00% Pervious Area

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

Subcatchment EX1: Rear Offsite



Summary for Subcatchment EX2: Middle Yard

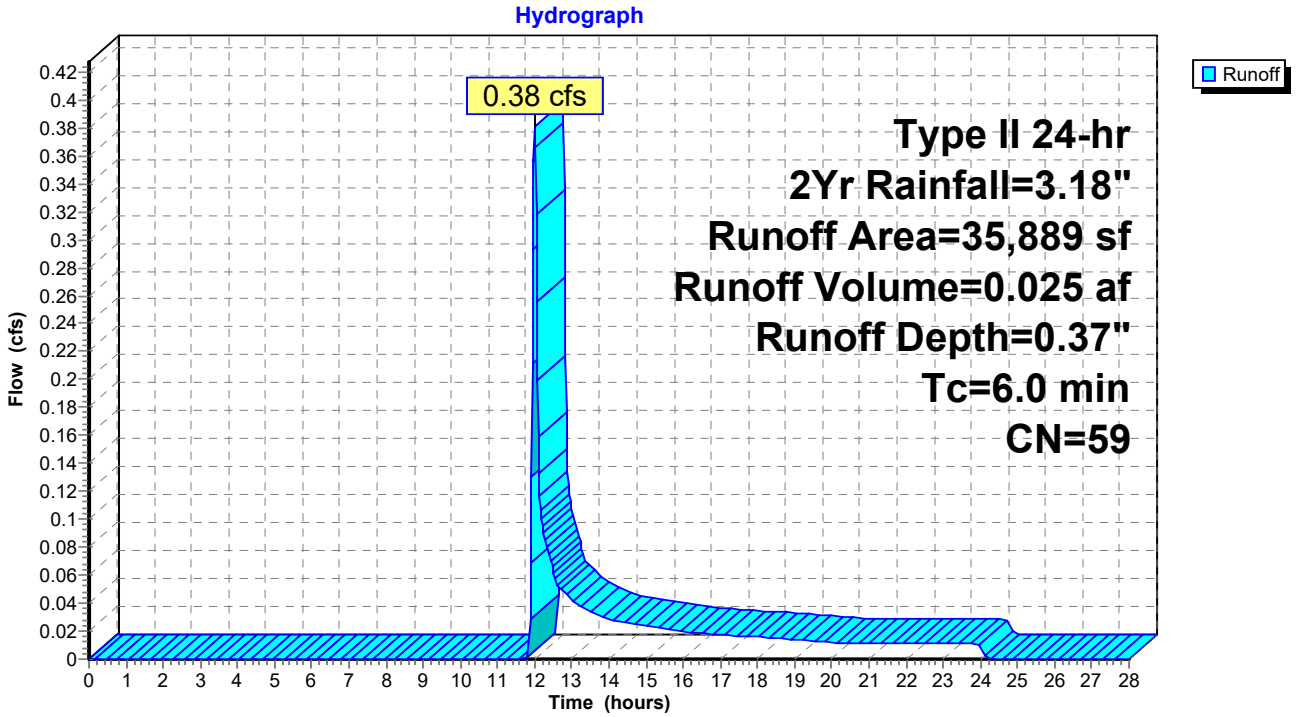
Runoff = 0.38 cfs @ 12.00 hrs, Volume= 0.025 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 2Yr Rainfall=3.18"

Area (sf)	CN	Description
23,116	61	>75% Grass cover, Good, HSG B
1,136	98	Roofs, HSG B
1,860	98	Paved parking, HSG B
9,387	39	>75% Grass cover, Good, HSG A
390	98	Roofs, HSG A
35,889	59	Weighted Average
32,503		90.57% Pervious Area
3,386		9.43% Impervious Area

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

Subcatchment EX2: Middle Yard



Summary for Subcatchment EX3: Front to ROW

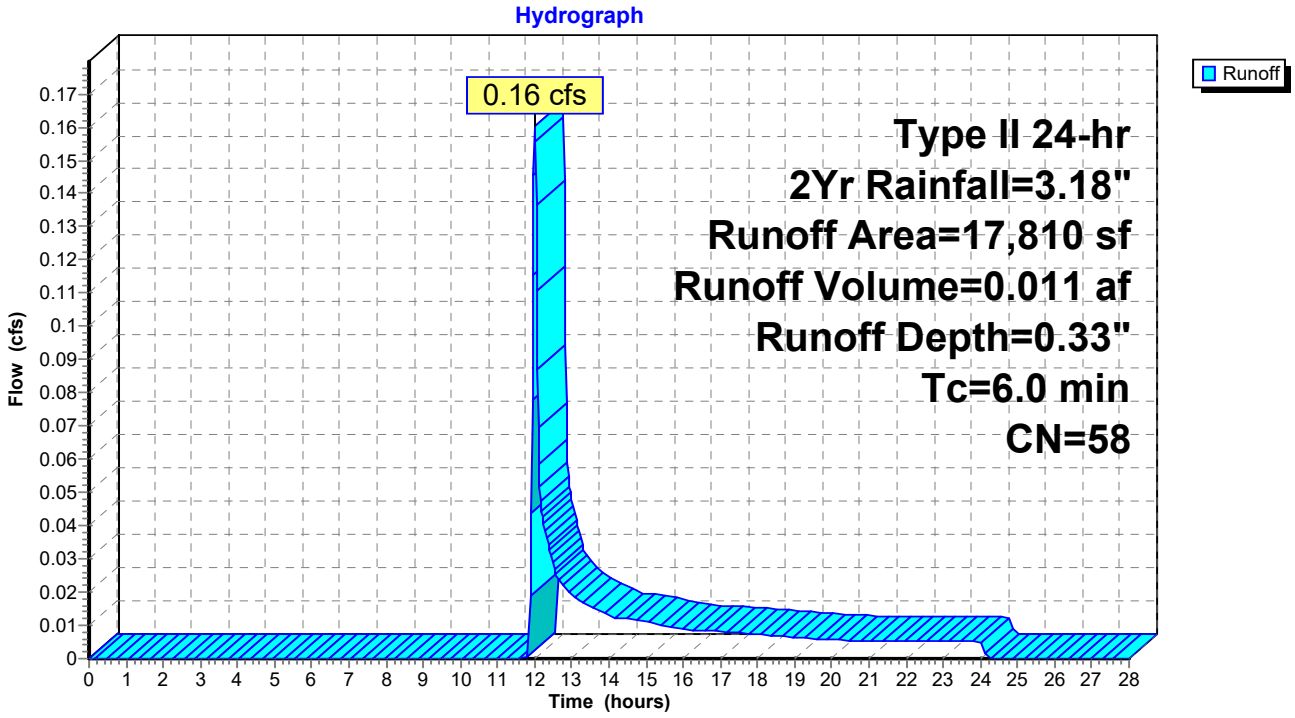
Runoff = 0.16 cfs @ 12.01 hrs, Volume= 0.011 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 2Yr Rainfall=3.18"

Area (sf)	CN	Description
4,553	61	>75% Grass cover, Good, HSG B
1,363	98	Paved parking, HSG B
2,628	61	>75% Grass cover, Good, HSG B
532	98	Paved parking, HSG A
7,693	39	>75% Grass cover, Good, HSG A
1,041	98	Roofs, HSG A
17,810	58	Weighted Average
14,874		83.51% Pervious Area
2,936		16.49% Impervious Area

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

Subcatchment EX3: Front to ROW

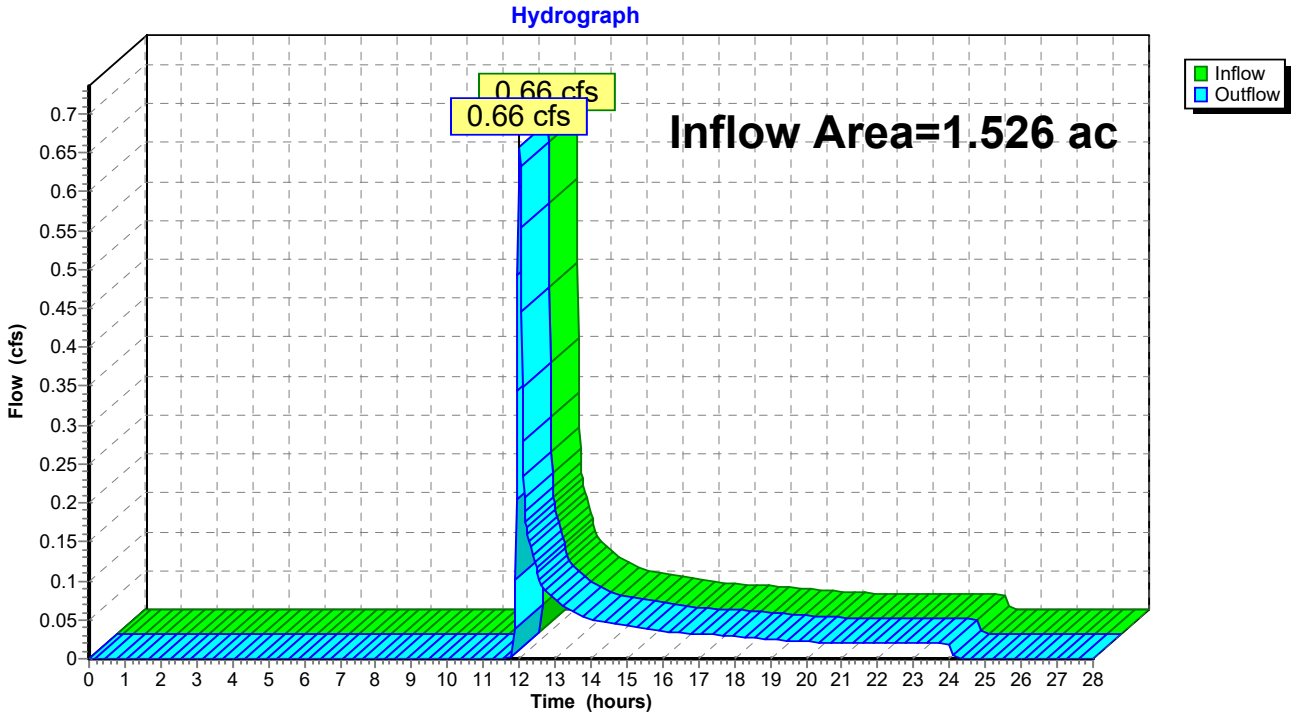


Summary for Reach 5R: Total Offsite

Inflow Area = 1.526 ac, 9.51% Impervious, Inflow Depth = 0.35" for 2Yr event
Inflow = 0.66 cfs @ 12.00 hrs, Volume= 0.045 af
Outflow = 0.66 cfs @ 12.00 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs

Reach 5R: Total Offsite



Time span=0.00-28.00 hrs, dt=0.02 hrs, 1401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: Rear Offsite Runoff Area=12,779 sf 0.00% Impervious Runoff Depth=1.11"
Tc=6.0 min CN=58 Runoff=0.55 cfs 0.027 af

Subcatchment EX2: Middle Yard Runoff Area=35,889 sf 9.43% Impervious Runoff Depth=1.18"
Tc=6.0 min CN=59 Runoff=1.65 cfs 0.081 af

Subcatchment EX3: Front to ROW Runoff Area=17,810 sf 16.49% Impervious Runoff Depth=1.11"
Tc=6.0 min CN=58 Runoff=0.77 cfs 0.038 af

Reach 5R: Total Offsite Inflow=2.97 cfs 0.146 af
Outflow=2.97 cfs 0.146 af

Total Runoff Area = 1.526 ac Runoff Volume = 0.146 af Average Runoff Depth = 1.15"
90.49% Pervious = 1.381 ac 9.51% Impervious = 0.145 ac

Summary for Subcatchment EX1: Rear Offsite

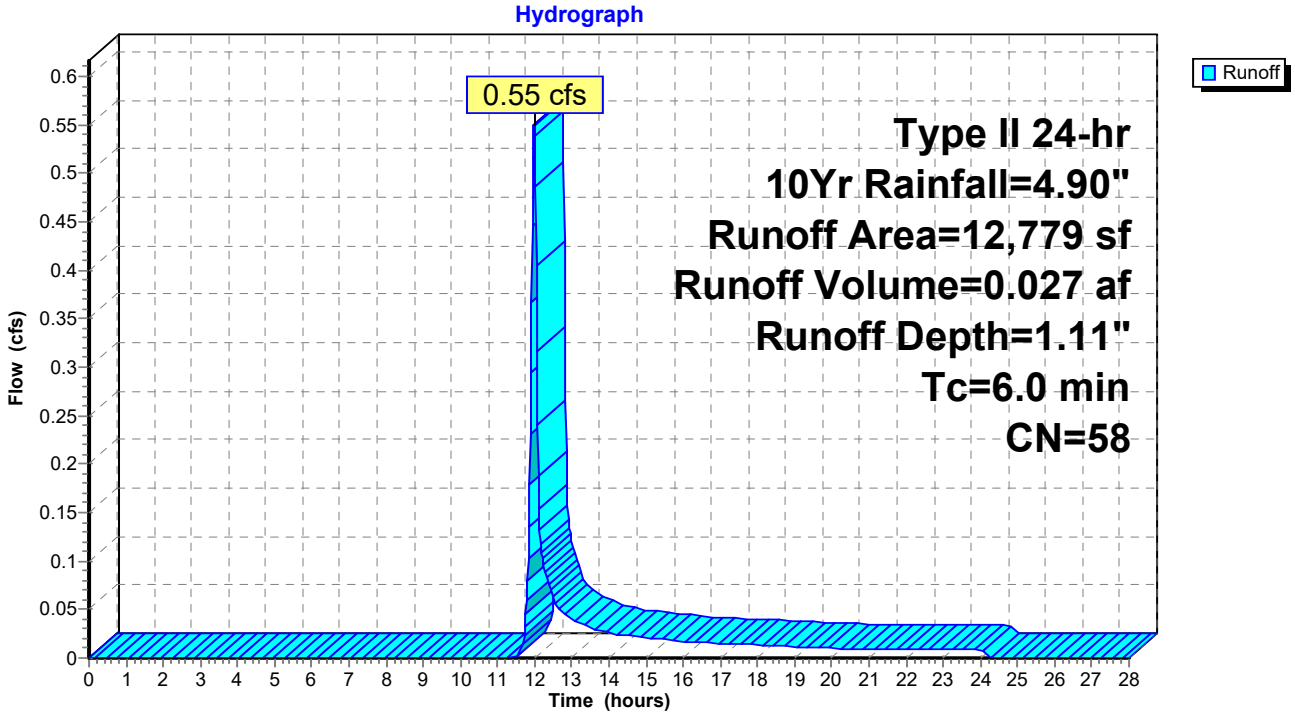
Runoff = 0.55 cfs @ 11.99 hrs, Volume= 0.027 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 10Yr Rainfall=4.90"

Area (sf)	CN	Description
10,854	61	>75% Grass cover, Good, HSG B
1,925	39	>75% Grass cover, Good, HSG A
12,779	58	Weighted Average
12,779		100.00% Pervious Area

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

Subcatchment EX1: Rear Offsite



Summary for Subcatchment EX2: Middle Yard

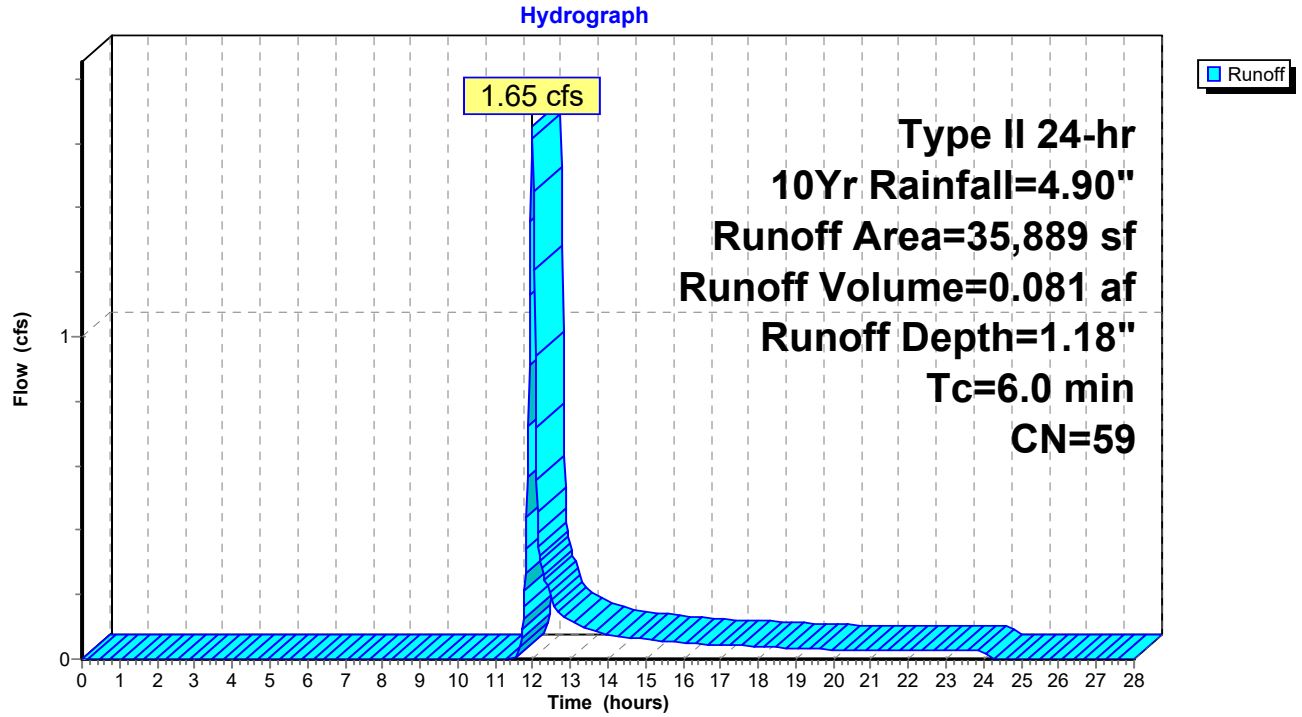
Runoff = 1.65 cfs @ 11.98 hrs, Volume= 0.081 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 10Yr Rainfall=4.90"

Area (sf)	CN	Description
23,116	61	>75% Grass cover, Good, HSG B
1,136	98	Roofs, HSG B
1,860	98	Paved parking, HSG B
9,387	39	>75% Grass cover, Good, HSG A
390	98	Roofs, HSG A
35,889	59	Weighted Average
32,503		90.57% Pervious Area
3,386		9.43% Impervious Area

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

Subcatchment EX2: Middle Yard



Summary for Subcatchment EX3: Front to ROW

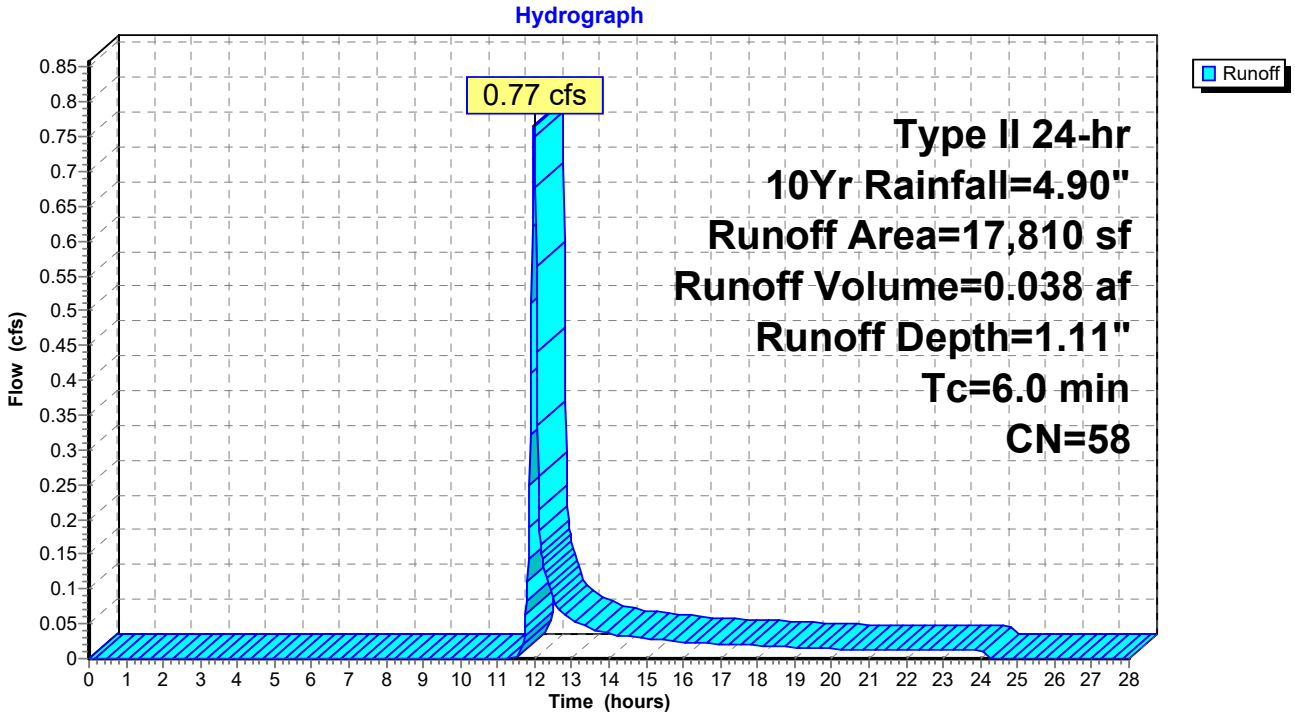
Runoff = 0.77 cfs @ 11.99 hrs, Volume= 0.038 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 10Yr Rainfall=4.90"

Area (sf)	CN	Description
4,553	61	>75% Grass cover, Good, HSG B
1,363	98	Paved parking, HSG B
2,628	61	>75% Grass cover, Good, HSG B
532	98	Paved parking, HSG A
7,693	39	>75% Grass cover, Good, HSG A
1,041	98	Roofs, HSG A
17,810	58	Weighted Average
14,874		83.51% Pervious Area
2,936		16.49% Impervious Area

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

Subcatchment EX3: Front to ROW

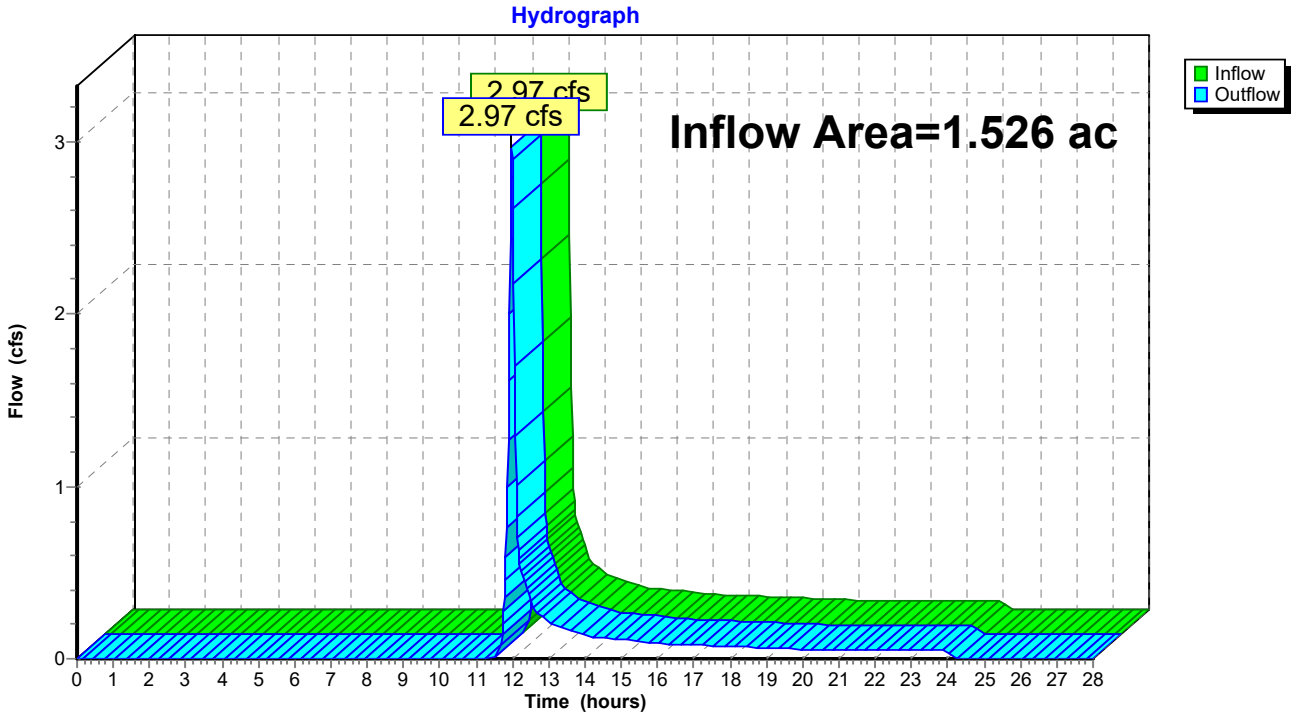


Summary for Reach 5R: Total Offsite

Inflow Area = 1.526 ac, 9.51% Impervious, Inflow Depth = 1.15" for 10Yr event
Inflow = 2.97 cfs @ 11.98 hrs, Volume= 0.146 af
Outflow = 2.97 cfs @ 11.98 hrs, Volume= 0.146 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs

Reach 5R: Total Offsite



Time span=0.00-28.00 hrs, dt=0.02 hrs, 1401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX1: Rear Offsite Runoff Area=12,779 sf 0.00% Impervious Runoff Depth=3.93"
Tc=6.0 min CN=58 Runoff=2.06 cfs 0.096 af

Subcatchment EX2: Middle Yard Runoff Area=35,889 sf 9.43% Impervious Runoff Depth=4.06"
Tc=6.0 min CN=59 Runoff=5.97 cfs 0.278 af

Subcatchment EX3: Front to ROW Runoff Area=17,810 sf 16.49% Impervious Runoff Depth=3.93"
Tc=6.0 min CN=58 Runoff=2.88 cfs 0.134 af

Reach 5R: Total Offsite Inflow=10.91 cfs 0.508 af
Outflow=10.91 cfs 0.508 af

Total Runoff Area = 1.526 ac Runoff Volume = 0.508 af Average Runoff Depth = 4.00"
90.49% Pervious = 1.381 ac 9.51% Impervious = 0.145 ac

Summary for Subcatchment EX1: Rear Offsite

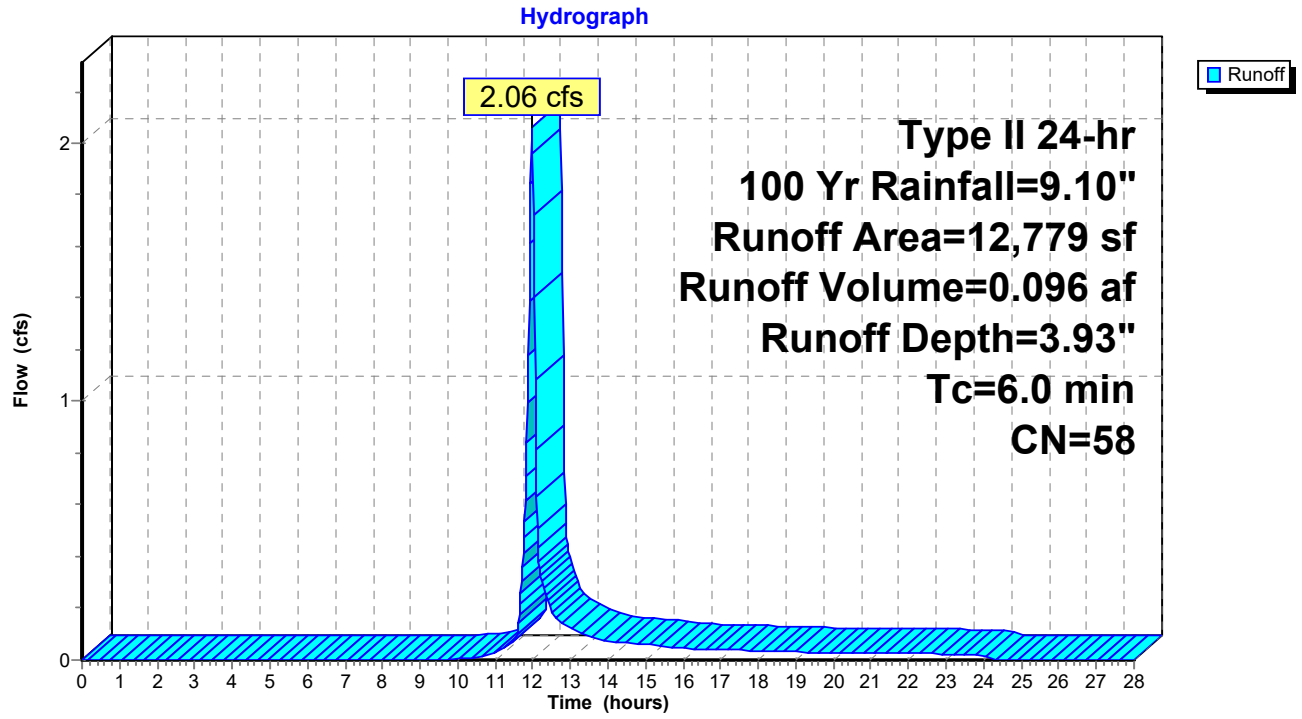
Runoff = 2.06 cfs @ 11.98 hrs, Volume= 0.096 af, Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 100 Yr Rainfall=9.10"

Area (sf)	CN	Description
10,854	61	>75% Grass cover, Good, HSG B
1,925	39	>75% Grass cover, Good, HSG A
12,779	58	Weighted Average
12,779		100.00% Pervious Area

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

Subcatchment EX1: Rear Offsite



Summary for Subcatchment EX2: Middle Yard

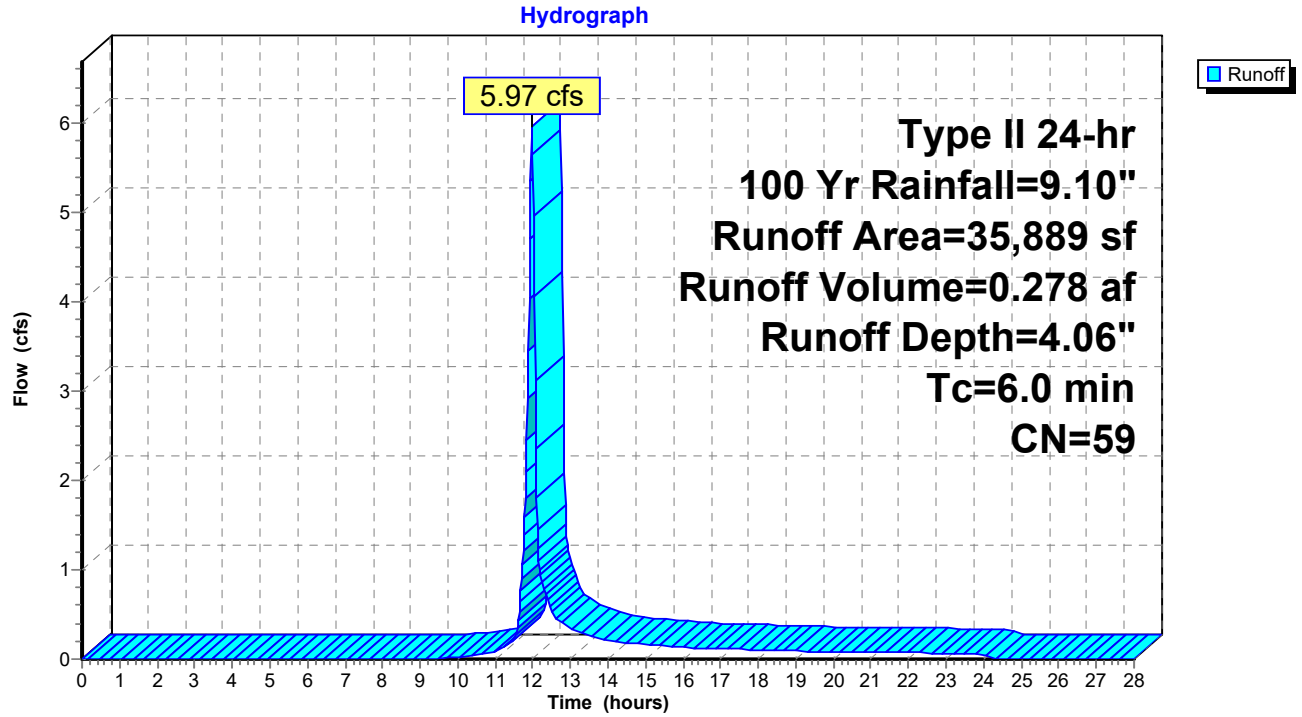
Runoff = 5.97 cfs @ 11.98 hrs, Volume= 0.278 af, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 100 Yr Rainfall=9.10"

Area (sf)	CN	Description
23,116	61	>75% Grass cover, Good, HSG B
1,136	98	Roofs, HSG B
1,860	98	Paved parking, HSG B
9,387	39	>75% Grass cover, Good, HSG A
390	98	Roofs, HSG A
35,889	59	Weighted Average
32,503		90.57% Pervious Area
3,386		9.43% Impervious Area

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

Subcatchment EX2: Middle Yard



Summary for Subcatchment EX3: Front to ROW

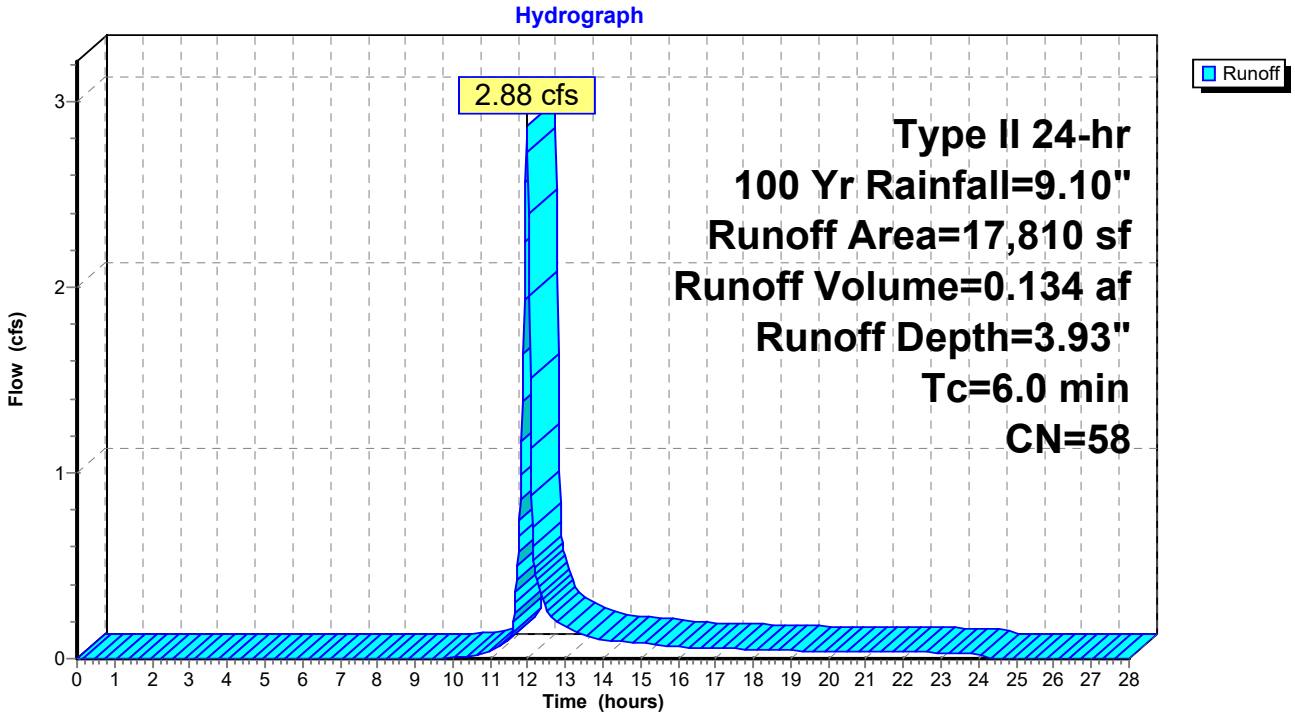
Runoff = 2.88 cfs @ 11.98 hrs, Volume= 0.134 af, Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
Type II 24-hr 100 Yr Rainfall=9.10"

Area (sf)	CN	Description
4,553	61	>75% Grass cover, Good, HSG B
1,363	98	Paved parking, HSG B
2,628	61	>75% Grass cover, Good, HSG B
532	98	Paved parking, HSG A
7,693	39	>75% Grass cover, Good, HSG A
1,041	98	Roofs, HSG A
17,810	58	Weighted Average
14,874		83.51% Pervious Area
2,936		16.49% Impervious Area

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

Subcatchment EX3: Front to ROW



Summary for Reach 5R: Total Offsite

Inflow Area = 1.526 ac, 9.51% Impervious, Inflow Depth = 4.00" for 100 Yr event
Inflow = 10.91 cfs @ 11.98 hrs, Volume= 0.508 af
Outflow = 10.91 cfs @ 11.98 hrs, Volume= 0.508 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs

Reach 5R: Total Offsite