



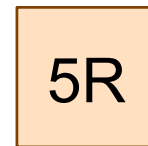
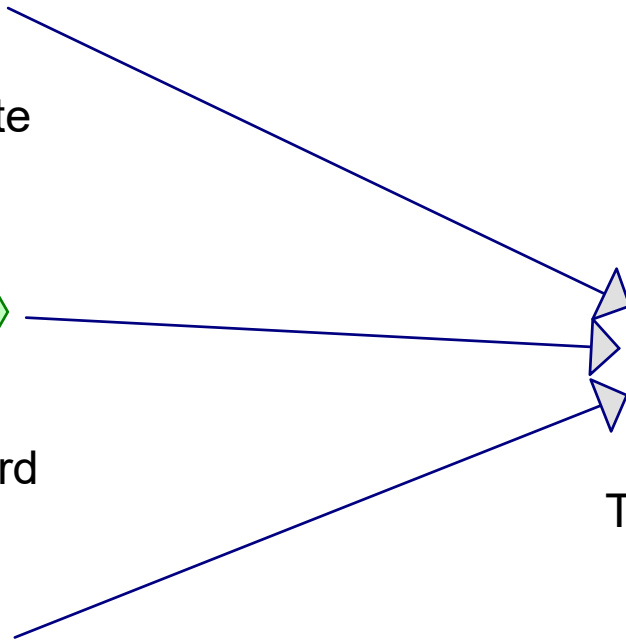
Rear Offsite



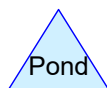
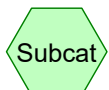
Middle Yard



Front to ROW



Total Offsite



Routing Diagram for Byfield 23 Central Pre rev1

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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

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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

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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

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.436	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	

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Type II 24-hr 2Yr Rainfall=3.18"

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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 OffsiteRunoff 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

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Type II 24-hr 2Yr Rainfall=3.18"

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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

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

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Type II 24-hr 2Yr Rainfall=3.18"

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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

Summary for Reach 5R: Total Offsite

[40] Hint: Not Described (Outflow=Inflow)

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

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Type II 24-hr 10Yr Rainfall=4.90"

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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

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

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Type II 24-hr 10Yr Rainfall=4.90"

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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

Summary for Reach 5R: Total Offsite

[40] Hint: Not Described (Outflow=Inflow)

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

Byfield 23 Central Pre rev1*Type II 24-hr 100 Yr Rainfall=9.10"*

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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 OffsiteRunoff 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

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

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

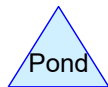
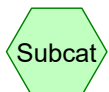
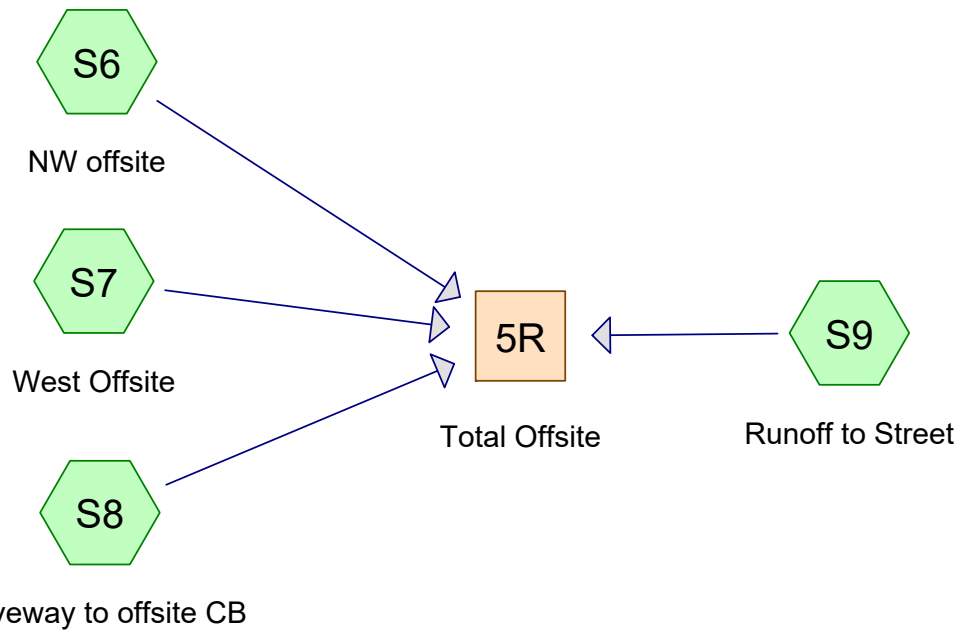
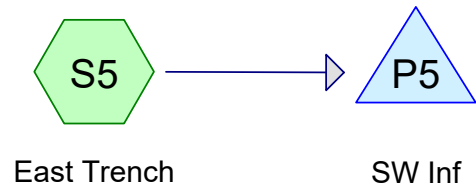
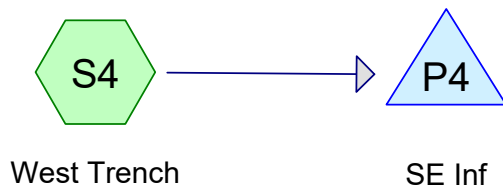
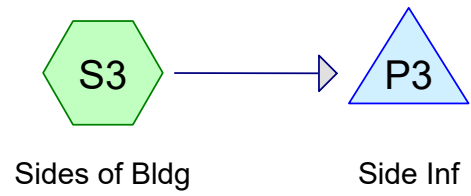
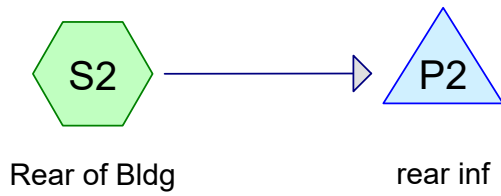
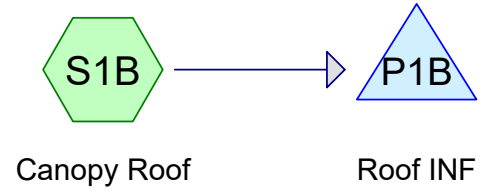
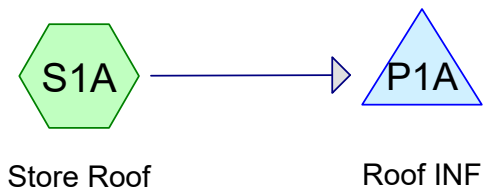
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, min Tc

Summary for Reach 5R: Total Offsite

[40] Hint: Not Described (Outflow=Inflow)

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



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Rainfall Events Listing

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	3.18	2
2	10 Yr	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

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.392	39	>75% Grass cover, Good, HSG A (S3, S5)
0.208	61	>75% Grass cover, Good, HSG B (S2, S3, S4, S5, S6, S7, S9)
0.524	98	Paved parking, HSG B (S3, S4, S5, S8, S9)
0.193	98	Roofs, HSG B (S1A, S1B)
0.024	98	Unconnected roofs, HSG B (S5)
0.186	98	surface inf (39% remainder of grass) (S2)
1.526	78	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.392	HSG A	S3, S5
0.948	HSG B	S1A, S1B, S2, S3, S4, S5, S6, S7, S8, S9
0.000	HSG C	
0.000	HSG D	
0.186	Other	S2
1.526		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.392	0.208	0.000	0.000	0.000	0.600	>75% Grass cover, Good	
0.000	0.524	0.000	0.000	0.000	0.524	Paved parking	
0.000	0.193	0.000	0.000	0.000	0.193	Roofs	
0.000	0.024	0.000	0.000	0.000	0.024	Unconnected roofs	
0.000	0.000	0.000	0.000	0.186	0.186	surface inf (39% remainder of grass)	
0.392	0.948	0.000	0.000	0.186	1.526	TOTAL AREA	

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Type II 24-hr 2 Yr Rainfall=3.18"

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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 S1A: Store Roof	Runoff Area=4,845 sf 100.00% Impervious Runoff Depth=2.95" Tc=6.0 min CN=98 Runoff=0.50 cfs 0.027 af
Subcatchment S1B: Canopy Roof	Runoff Area=3,568 sf 100.00% Impervious Runoff Depth=2.95" Tc=6.0 min CN=98 Runoff=0.37 cfs 0.020 af
Subcatchment S2: Rear of Bldg	Runoff Area=8,390 sf 96.50% Impervious Runoff Depth=2.84" Tc=6.0 min CN=97 Runoff=0.85 cfs 0.046 af
Subcatchment S3: Sides of Bldg	Runoff Area=15,994 sf 36.95% Impervious Runoff Depth=0.47" Tc=6.0 min CN=62 Runoff=0.25 cfs 0.014 af
Subcatchment S4: West Trench	Runoff Area=7,464 sf 83.91% Impervious Runoff Depth=2.33" Tc=6.0 min CN=92 Runoff=0.67 cfs 0.033 af
Subcatchment S5: East Trench	Runoff Area=17,395 sf 53.03% Impervious Runoff Depth=0.87" Tc=6.0 min CN=71 Runoff=0.60 cfs 0.029 af
Subcatchment S6: NW offsite	Runoff Area=4,638 sf 0.00% Impervious Runoff Depth=0.44" Tc=6.0 min CN=61 Runoff=0.07 cfs 0.004 af
Subcatchment S7: West Offsite	Runoff Area=931 sf 0.00% Impervious Runoff Depth=0.44" Tc=6.0 min CN=61 Runoff=0.01 cfs 0.001 af
Subcatchment S8: Driveway to offsite CB	Runoff Area=1,074 sf 100.00% Impervious Runoff Depth=2.95" Tc=6.0 min CN=98 Runoff=0.11 cfs 0.006 af
Subcatchment S9: Runoff to Street	Runoff Area=2,188 sf 63.12% Impervious Runoff Depth=1.67" Tc=6.0 min CN=84 Runoff=0.15 cfs 0.007 af
Reach 5R: Total Offsite	Inflow=0.33 cfs 0.018 af Outflow=0.33 cfs 0.018 af
Pond P1A: Roof INF	Peak Elev=58.35' Storage=604 cf Inflow=0.50 cfs 0.027 af Outflow=0.01 cfs 0.025 af
Pond P1B: Roof INF	Peak Elev=58.88' Storage=388 cf Inflow=0.37 cfs 0.020 af Outflow=0.02 cfs 0.020 af
Pond P2: rear inf	Peak Elev=59.02' Storage=939 cf Inflow=0.85 cfs 0.046 af Outflow=0.03 cfs 0.046 af
Pond P3: Side Inf	Peak Elev=57.59' Storage=160 cf Inflow=0.25 cfs 0.014 af Outflow=0.03 cfs 0.014 af
Pond P4: SE Inf	Peak Elev=56.83' Storage=591 cf Inflow=0.67 cfs 0.033 af Outflow=0.05 cfs 0.033 af

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Type II 24-hr 2 Yr Rainfall=3.18"

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Pond P5: SW Inf

Peak Elev=57.10' Storage=399 cf Inflow=0.60 cfs 0.029 af

Outflow=0.07 cfs 0.029 af

Total Runoff Area = 1.526 ac Runoff Volume = 0.187 af Average Runoff Depth = 1.47"
39.29% Pervious = 0.600 ac 60.71% Impervious = 0.927 ac

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Type II 24-hr 2 Yr Rainfall=3.18"

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Summary for Subcatchment S1A: Store Roof

Runoff = 0.50 cfs @ 11.97 hrs, Volume= 0.027 af, Depth= 2.95"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
4,845	98	Roofs, HSG B
4,845		100.00% Impervious Area

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

Summary for Subcatchment S1B: Canopy Roof

Runoff = 0.37 cfs @ 11.97 hrs, Volume= 0.020 af, Depth= 2.95"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
3,568	98	Roofs, HSG B
3,568		100.00% Impervious Area

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

Summary for Subcatchment S2: Rear of Bldg

Runoff = 0.85 cfs @ 11.97 hrs, Volume= 0.046 af, Depth= 2.84"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
* 8,096	98	surface inf (39% remainder of grass)
294	61	>75% Grass cover, Good, HSG B
8,390	97	Weighted Average
294		3.50% Pervious Area
8,096		96.50% Impervious Area

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

Summary for Subcatchment S3: Sides of Bldg

Runoff = 0.25 cfs @ 11.99 hrs, Volume= 0.014 af, Depth= 0.47"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
2,414	98	Paved parking, HSG B
3,105	98	Paved parking, HSG B
693	61	>75% Grass cover, Good, HSG B
390	98	Paved parking, HSG B
9,392	39	>75% Grass cover, Good, HSG A
15,994	62	Weighted Average
10,085		63.05% Pervious Area
5,909		36.95% Impervious Area

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

Summary for Subcatchment S4: West Trench

Runoff = 0.67 cfs @ 11.97 hrs, Volume= 0.033 af, Depth= 2.33"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
6,263	98	Paved parking, HSG B
1,201	61	>75% Grass cover, Good, HSG B
7,464	92	Weighted Average
1,201		16.09% Pervious Area
6,263		83.91% Impervious Area

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

Summary for Subcatchment S5: East Trench

Runoff = 0.60 cfs @ 11.98 hrs, Volume= 0.029 af, Depth= 0.87"

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 2 Yr Rainfall=3.18"

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Type II 24-hr 2 Yr Rainfall=3.18"

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Area (sf)	CN	Description
8,184	98	Paved parking, HSG B
477	61	>75% Grass cover, Good, HSG B
1,041	98	Unconnected roofs, HSG B
7,693	39	>75% Grass cover, Good, HSG A
17,395	71	Weighted Average
8,170		46.97% Pervious Area
9,225		53.03% Impervious Area
1,041		11.28% Unconnected

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

Summary for Subcatchment S6: NW offsite

Runoff = 0.07 cfs @ 12.00 hrs, Volume= 0.004 af, Depth= 0.44"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
862	61	>75% Grass cover, Good, HSG B
1,851	61	>75% Grass cover, Good, HSG B
1,925	61	>75% Grass cover, Good, HSG B
4,638	61	Weighted Average
4,638		100.00% Pervious Area

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

Summary for Subcatchment S7: West Offsite

Runoff = 0.01 cfs @ 12.00 hrs, Volume= 0.001 af, Depth= 0.44"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
931	61	>75% Grass cover, Good, HSG B
931		100.00% Pervious Area

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

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Type II 24-hr 2 Yr Rainfall=3.18"

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Summary for Subcatchment S8: Driveway to offsite CB

Runoff = 0.11 cfs @ 11.97 hrs, Volume= 0.006 af, Depth= 2.95"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
1,074	98	Paved parking, HSG B
1,074		100.00% Impervious Area

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

Summary for Subcatchment S9: Runoff to Street

Runoff = 0.15 cfs @ 11.97 hrs, Volume= 0.007 af, Depth= 1.67"

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 2 Yr Rainfall=3.18"

Area (sf)	CN	Description
1,381	98	Paved parking, HSG B
807	61	>75% Grass cover, Good, HSG B
2,188	84	Weighted Average
807		36.88% Pervious Area
1,381		63.12% Impervious Area

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

Summary for Reach 5R: Total Offsite

Inflow Area = 0.203 ac, 27.80% Impervious, Inflow Depth = 1.05" for 2 Yr event
 Inflow = 0.33 cfs @ 11.98 hrs, Volume= 0.018 af
 Outflow = 0.33 cfs @ 11.98 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

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

Summary for Pond P1A: Roof INF

Inflow Area = 0.111 ac, 100.00% Impervious, Inflow Depth = 2.95" for 2 Yr event
 Inflow = 0.50 cfs @ 11.97 hrs, Volume= 0.027 af
 Outflow = 0.01 cfs @ 10.52 hrs, Volume= 0.025 af, Atten= 97%, Lag= 0.0 min
 Discarded = 0.01 cfs @ 10.52 hrs, Volume= 0.025 af

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

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Type II 24-hr 2 Yr Rainfall=3.18"

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Peak Elev= 58.35' @ 13.86 hrs Surf.Area= 626 sf Storage= 604 cf

Plug-Flow detention time= 341.3 min calculated for 0.025 af (92% of inflow)

Center-of-Mass det. time= 297.9 min (1,050.5 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	235 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,130 cf Overall - 2,543 cf Embedded = 587 cf x 40.0% Voids
#2	57.50'	2,247 cf	ISI Rainstore3 12 x 60 Inside #1 Inside= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf Outside= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf 2,543 cf Overall x 94.0% Voids
		2,482 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.00	626	0	0
62.00	626	3,130	3,130

Device	Routing	Invert	Outlet Devices
#1	Discarded	57.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.01 cfs @ 10.52 hrs HW=57.05' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)**Summary for Pond P1B: Roof INF**

Inflow Area = 0.082 ac, 100.00% Impervious, Inflow Depth = 2.95" for 2 Yr event
 Inflow = 0.37 cfs @ 11.97 hrs, Volume= 0.020 af
 Outflow = 0.02 cfs @ 11.12 hrs, Volume= 0.020 af, Atten= 95%, Lag= 0.0 min
 Discarded = 0.02 cfs @ 11.12 hrs, Volume= 0.020 af

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

Peak Elev= 58.88' @ 13.04 hrs Surf.Area= 704 sf Storage= 388 cf

Plug-Flow detention time= 182.3 min calculated for 0.020 af (100% of inflow)

Center-of-Mass det. time= 182.3 min (934.9 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	305 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 2,288 cf Overall - 1,526 cf Embedded = 762 cf x 40.0% Voids
#2	58.50'	1,348 cf	ISI Rainstore3 6 x 72 Inside #1 Inside= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf Outside= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 1,526 cf Overall x 94.0% Voids
		1,653 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	704	0	0
61.25	704	2,288	2,288

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Type II 24-hr 2 Yr Rainfall=3.18"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	58.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.02 cfs @ 11.12 hrs HW=58.03' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Summary for Pond P2: rear inf**

Inflow Area = 0.193 ac, 96.50% Impervious, Inflow Depth = 2.84" for 2 Yr event
 Inflow = 0.85 cfs @ 11.97 hrs, Volume= 0.046 af
 Outflow = 0.03 cfs @ 10.96 hrs, Volume= 0.046 af, Atten= 96%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.96 hrs, Volume= 0.046 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 59.02' @ 13.34 hrs Surf.Area= 1,396 sf Storage= 939 cf

Plug-Flow detention time= 237.9 min calculated for 0.045 af (100% of inflow)
 Center-of-Mass det. time= 237.8 min (1,000.3 - 762.5)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	507 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 5,165 cf Overall - 3,899 cf Embedded = 1,266 cf x 40.0% Voids
#2	58.50'	3,445 cf	
			ISI Rainstore3 8 x 138 Inside #1 Inside= 39.4"W x 31.5"H => 8.09 sf x 3.28'L = 26.6 cf Outside= 39.4"W x 31.5"H => 8.61 sf x 3.28'L = 28.3 cf 3,899 cf Overall x 94.0% Voids
		3,952 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	1,396	0	0
61.70	1,396	5,165	5,165

Device	Routing	Invert	Outlet Devices
#1	Discarded	58.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.03 cfs @ 10.96 hrs HW=58.04' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Summary for Pond P3: Side Inf**

Inflow Area = 0.367 ac, 36.95% Impervious, Inflow Depth = 0.47" for 2 Yr event
 Inflow = 0.25 cfs @ 11.99 hrs, Volume= 0.014 af
 Outflow = 0.03 cfs @ 11.98 hrs, Volume= 0.014 af, Atten= 89%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.98 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 57.59' @ 12.70 hrs Surf.Area= 1,179 sf Storage= 160 cf

Plug-Flow detention time= 51.3 min calculated for 0.014 af (100% of inflow)

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Type II 24-hr 2 Yr Rainfall=3.18"

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Center-of-Mass det. time= 51.3 min (959.9 - 908.6)

Volume	Invert	Avail.Storage	Storage Description
#1	57.25'	2,058 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 10,316 cf Overall - 5,170 cf Embedded = 5,146 cf x 40.0% Voids
#2	57.75'	4,568 cf	ISI Rainstore3 12 x 122 Inside #1 Inside= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf Outside= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf 5,170 cf Overall x 94.0% Voids
		6,627 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.25	1,179	0	0
66.00	1,179	10,316	10,316

Device	Routing	Invert	Outlet Devices
#1	Discarded	57.25'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 11.98 hrs HW=57.37' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Summary for Pond P4: SE Inf**

Inflow Area = 0.171 ac, 83.91% Impervious, Inflow Depth = 2.33" for 2 Yr event
 Inflow = 0.67 cfs @ 11.97 hrs, Volume= 0.033 af
 Outflow = 0.05 cfs @ 11.64 hrs, Volume= 0.033 af, Atten= 93%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 11.64 hrs, Volume= 0.033 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 56.83' @ 12.54 hrs Surf.Area= 2,136 sf Storage= 591 cf

Plug-Flow detention time= 87.8 min calculated for 0.033 af (100% of inflow)
 Center-of-Mass det. time= 87.8 min (882.6 - 794.8)

Volume	Invert	Avail.Storage	Storage Description
#1	56.40'	808 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 5,340 cf Overall - 3,320 cf Embedded = 2,020 cf x 40.0% Voids
#2	56.65'	2,933 cf	ISI Rainstore3 4 x 235 Inside #1 Inside= 39.4"W x 15.7"H => 4.05 sf x 3.28'L = 13.3 cf Outside= 39.4"W x 15.7"H => 4.31 sf x 3.28'L = 14.1 cf 3,320 cf Overall x 94.0% Voids
		3,741 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.40	2,136	0	0
58.90	2,136	5,340	5,340

Device	Routing	Invert	Outlet Devices
#1	Discarded	56.40'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.05 cfs @ 11.64 hrs HW=56.43' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Summary for Pond P5: SW Inf

Inflow Area = 0.399 ac, 53.03% Impervious, Inflow Depth = 0.87" for 2 Yr event
 Inflow = 0.60 cfs @ 11.98 hrs, Volume= 0.029 af
 Outflow = 0.07 cfs @ 11.84 hrs, Volume= 0.029 af, Atten= 89%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 11.84 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 57.10' @ 12.49 hrs Surf.Area= 2,780 sf Storage= 399 cf

Plug-Flow detention time= 46.4 min calculated for 0.029 af (100% of inflow)

Center-of-Mass det. time= 46.3 min (915.8 - 869.5)

Volume	Invert	Avail.Storage	Storage Description
#1	56.80'	1,297 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 8,201 cf Overall - 4,958 cf Embedded = 3,243 cf x 40.0% Voids
#2	57.05'	4,381 cf	ISI Rainstore3 6 x 234 Inside #1 Inside= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf Outside= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 4,958 cf Overall x 94.0% Voids
		5,678 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.80	2,780	0	0
59.75	2,780	8,201	8,201

Device	Routing	Invert	Outlet Devices
#1	Discarded	56.80'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.07 cfs @ 11.84 hrs HW=56.83' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.07 cfs)

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Type II 24-hr 10 Yr Rainfall=4.90"

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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 S1A: Store Roof	Runoff Area=4,845 sf 100.00% Impervious Runoff Depth=4.66" Tc=6.0 min CN=98 Runoff=0.77 cfs 0.043 af
Subcatchment S1B: Canopy Roof	Runoff Area=3,568 sf 100.00% Impervious Runoff Depth=4.66" Tc=6.0 min CN=98 Runoff=0.57 cfs 0.032 af
Subcatchment S2: Rear of Bldg	Runoff Area=8,390 sf 96.50% Impervious Runoff Depth=4.55" Tc=6.0 min CN=97 Runoff=1.33 cfs 0.073 af
Subcatchment S3: Sides of Bldg	Runoff Area=15,994 sf 36.95% Impervious Runoff Depth=1.38" Tc=6.0 min CN=62 Runoff=0.88 cfs 0.042 af
Subcatchment S4: West Trench	Runoff Area=7,464 sf 83.91% Impervious Runoff Depth=3.99" Tc=6.0 min CN=92 Runoff=1.11 cfs 0.057 af
Subcatchment S5: East Trench	Runoff Area=17,395 sf 53.03% Impervious Runoff Depth=2.04" Tc=6.0 min CN=71 Runoff=1.46 cfs 0.068 af
Subcatchment S6: NW offsite	Runoff Area=4,638 sf 0.00% Impervious Runoff Depth=1.31" Tc=6.0 min CN=61 Runoff=0.24 cfs 0.012 af
Subcatchment S7: West Offsite	Runoff Area=931 sf 0.00% Impervious Runoff Depth=1.31" Tc=6.0 min CN=61 Runoff=0.05 cfs 0.002 af
Subcatchment S8: Driveway to offsite CB	Runoff Area=1,074 sf 100.00% Impervious Runoff Depth=4.66" Tc=6.0 min CN=98 Runoff=0.17 cfs 0.010 af
Subcatchment S9: Runoff to Street	Runoff Area=2,188 sf 63.12% Impervious Runoff Depth=3.18" Tc=6.0 min CN=84 Runoff=0.28 cfs 0.013 af
Reach 5R: Total Offsite	Inflow=0.74 cfs 0.037 af Outflow=0.74 cfs 0.037 af
Pond P1A: Roof INF	Peak Elev=59.19' Storage=1,078 cf Inflow=0.77 cfs 0.043 af Outflow=0.01 cfs 0.028 af
Pond P1B: Roof INF	Peak Elev=59.34' Storage=692 cf Inflow=0.57 cfs 0.032 af Outflow=0.02 cfs 0.029 af
Pond P2: rear inf	Peak Elev=59.61' Storage=1,693 cf Inflow=1.33 cfs 0.073 af Outflow=0.03 cfs 0.058 af
Pond P3: Side Inf	Peak Elev=58.39' Storage=942 cf Inflow=0.88 cfs 0.042 af Outflow=0.03 cfs 0.038 af
Pond P4: SE Inf	Peak Elev=57.10' Storage=1,144 cf Inflow=1.11 cfs 0.057 af Outflow=0.05 cfs 0.057 af

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Type II 24-hr 10 Yr Rainfall=4.90"

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Pond P5: SW Inf

Peak Elev=57.53' Storage=1,388 cf Inflow=1.46 cfs 0.068 af

Outflow=0.07 cfs 0.068 af

Total Runoff Area = 1.526 ac Runoff Volume = 0.352 af Average Runoff Depth = 2.77"
39.29% Pervious = 0.600 ac 60.71% Impervious = 0.927 ac

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Type II 24-hr 10 Yr Rainfall=4.90"

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Summary for Subcatchment S1A: Store Roof

Runoff = 0.77 cfs @ 11.97 hrs, Volume= 0.043 af, Depth= 4.66"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
4,845	98	Roofs, HSG B
4,845		100.00% Impervious Area

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

Summary for Subcatchment S1B: Canopy Roof

Runoff = 0.57 cfs @ 11.97 hrs, Volume= 0.032 af, Depth= 4.66"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
3,568	98	Roofs, HSG B
3,568		100.00% Impervious Area

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

Summary for Subcatchment S2: Rear of Bldg

Runoff = 1.33 cfs @ 11.97 hrs, Volume= 0.073 af, Depth= 4.55"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
* 8,096	98	surface inf (39% remainder of grass)
294	61	>75% Grass cover, Good, HSG B
8,390	97	Weighted Average
294		3.50% Pervious Area
8,096		96.50% Impervious Area

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

Summary for Subcatchment S3: Sides of Bldg

Runoff = 0.88 cfs @ 11.98 hrs, Volume= 0.042 af, Depth= 1.38"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
2,414	98	Paved parking, HSG B
3,105	98	Paved parking, HSG B
693	61	>75% Grass cover, Good, HSG B
390	98	Paved parking, HSG B
9,392	39	>75% Grass cover, Good, HSG A
15,994	62	Weighted Average
10,085		63.05% Pervious Area
5,909		36.95% Impervious Area

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

Summary for Subcatchment S4: West Trench

Runoff = 1.11 cfs @ 11.97 hrs, Volume= 0.057 af, Depth= 3.99"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
6,263	98	Paved parking, HSG B
1,201	61	>75% Grass cover, Good, HSG B
7,464	92	Weighted Average
1,201		16.09% Pervious Area
6,263		83.91% Impervious Area

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

Summary for Subcatchment S5: East Trench

Runoff = 1.46 cfs @ 11.98 hrs, Volume= 0.068 af, Depth= 2.04"

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 10 Yr Rainfall=4.90"

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Type II 24-hr 10 Yr Rainfall=4.90"

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Area (sf)	CN	Description
8,184	98	Paved parking, HSG B
477	61	>75% Grass cover, Good, HSG B
1,041	98	Unconnected roofs, HSG B
7,693	39	>75% Grass cover, Good, HSG A
17,395	71	Weighted Average
8,170		46.97% Pervious Area
9,225		53.03% Impervious Area
1,041		11.28% Unconnected

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

Summary for Subcatchment S6: NW offsite

Runoff = 0.24 cfs @ 11.98 hrs, Volume= 0.012 af, Depth= 1.31"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
862	61	>75% Grass cover, Good, HSG B
1,851	61	>75% Grass cover, Good, HSG B
1,925	61	>75% Grass cover, Good, HSG B
4,638	61	Weighted Average
4,638		100.00% Pervious Area

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

Summary for Subcatchment S7: West Offsite

Runoff = 0.05 cfs @ 11.98 hrs, Volume= 0.002 af, Depth= 1.31"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
931	61	>75% Grass cover, Good, HSG B
931		100.00% Pervious Area

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

Summary for Subcatchment S8: Driveway to offsite CB

Runoff = 0.17 cfs @ 11.97 hrs, Volume= 0.010 af, Depth= 4.66"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
1,074	98	Paved parking, HSG B
1,074		100.00% Impervious Area

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

Summary for Subcatchment S9: Runoff to Street

Runoff = 0.28 cfs @ 11.97 hrs, Volume= 0.013 af, Depth= 3.18"

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 10 Yr Rainfall=4.90"

Area (sf)	CN	Description
1,381	98	Paved parking, HSG B
807	61	>75% Grass cover, Good, HSG B
2,188	84	Weighted Average
807		36.88% Pervious Area
1,381		63.12% Impervious Area

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

Summary for Reach 5R: Total Offsite

Inflow Area = 0.203 ac, 27.80% Impervious, Inflow Depth = 2.18" for 10 Yr event
Inflow = 0.74 cfs @ 11.98 hrs, Volume= 0.037 af
Outflow = 0.74 cfs @ 11.98 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min

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

Summary for Pond P1A: Roof INF

Inflow Area = 0.111 ac, 100.00% Impervious, Inflow Depth = 4.66" for 10 Yr event
Inflow = 0.77 cfs @ 11.97 hrs, Volume= 0.043 af
Outflow = 0.01 cfs @ 9.00 hrs, Volume= 0.028 af, Atten= 98%, Lag= 0.0 min
Discarded = 0.01 cfs @ 9.00 hrs, Volume= 0.028 af

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

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Peak Elev= 59.19' @ 15.53 hrs Surf.Area= 626 sf Storage= 1,078 cf

Plug-Flow detention time= 354.0 min calculated for 0.028 af (64% of inflow)

Center-of-Mass det. time= 248.0 min (992.2 - 744.3)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	235 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,130 cf Overall - 2,543 cf Embedded = 587 cf x 40.0% Voids
#2	57.50'	2,247 cf	ISI Rainstore3 12 x 60 Inside #1 Inside= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf Outside= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf 2,543 cf Overall x 94.0% Voids
		2,482 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.00	626	0	0
62.00	626	3,130	3,130

Device	Routing	Invert	Outlet Devices
#1	Discarded	57.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.01 cfs @ 9.00 hrs HW=57.05' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)**Summary for Pond P1B: Roof INF**

Inflow Area = 0.082 ac, 100.00% Impervious, Inflow Depth = 4.66" for 10 Yr event
 Inflow = 0.57 cfs @ 11.97 hrs, Volume= 0.032 af
 Outflow = 0.02 cfs @ 10.36 hrs, Volume= 0.029 af, Atten= 97%, Lag= 0.0 min
 Discarded = 0.02 cfs @ 10.36 hrs, Volume= 0.029 af

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

Peak Elev= 59.34' @ 13.88 hrs Surf.Area= 704 sf Storage= 692 cf

Plug-Flow detention time= 336.1 min calculated for 0.029 af (91% of inflow)

Center-of-Mass det. time= 288.6 min (1,032.8 - 744.3)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	305 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 2,288 cf Overall - 1,526 cf Embedded = 762 cf x 40.0% Voids
#2	58.50'	1,348 cf	ISI Rainstore3 6 x 72 Inside #1 Inside= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf Outside= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 1,526 cf Overall x 94.0% Voids
		1,653 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	704	0	0
61.25	704	2,288	2,288

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Type II 24-hr 10 Yr Rainfall=4.90"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	58.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.02 cfs @ 10.36 hrs HW=58.03' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Summary for Pond P2: rear inf**

Inflow Area = 0.193 ac, 96.50% Impervious, Inflow Depth = 4.55" for 10 Yr event
 Inflow = 1.33 cfs @ 11.97 hrs, Volume= 0.073 af
 Outflow = 0.03 cfs @ 10.12 hrs, Volume= 0.058 af, Atten= 98%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.12 hrs, Volume= 0.058 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 59.61' @ 14.40 hrs Surf.Area= 1,396 sf Storage= 1,693 cf

Plug-Flow detention time= 360.9 min calculated for 0.058 af (79% of inflow)
 Center-of-Mass det. time= 279.5 min (1,031.8 - 752.3)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	507 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 5,165 cf Overall - 3,899 cf Embedded = 1,266 cf x 40.0% Voids
#2	58.50'	3,445 cf	
			ISI Rainstore3 8 x 138 Inside #1 Inside= 39.4"W x 31.5"H => 8.09 sf x 3.28'L = 26.6 cf Outside= 39.4"W x 31.5"H => 8.61 sf x 3.28'L = 28.3 cf 3,899 cf Overall x 94.0% Voids
		3,952 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	1,396	0	0
61.70	1,396	5,165	5,165

Device	Routing	Invert	Outlet Devices
#1	Discarded	58.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.03 cfs @ 10.12 hrs HW=58.04' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Summary for Pond P3: Side Inf**

Inflow Area = 0.367 ac, 36.95% Impervious, Inflow Depth = 1.38" for 10 Yr event
 Inflow = 0.88 cfs @ 11.98 hrs, Volume= 0.042 af
 Outflow = 0.03 cfs @ 11.80 hrs, Volume= 0.038 af, Atten= 97%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.80 hrs, Volume= 0.038 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 58.39' @ 15.39 hrs Surf.Area= 1,179 sf Storage= 942 cf

Plug-Flow detention time= 378.2 min calculated for 0.038 af (89% of inflow)

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Type II 24-hr 10 Yr Rainfall=4.90"

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Center-of-Mass det. time= 323.5 min (1,191.0 - 867.5)

Volume	Invert	Avail.Storage	Storage Description
#1	57.25'	2,058 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 10,316 cf Overall - 5,170 cf Embedded = 5,146 cf x 40.0% Voids
#2	57.75'	4,568 cf	ISI Rainstore3 12 x 122 Inside #1 Inside= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf Outside= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf 5,170 cf Overall x 94.0% Voids
		6,627 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.25	1,179	0	0
66.00	1,179	10,316	10,316

Device	Routing	Invert	Outlet Devices
#1	Discarded	57.25'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 11.80 hrs HW=57.36' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Summary for Pond P4: SE Inf**

Inflow Area = 0.171 ac, 83.91% Impervious, Inflow Depth = 3.99" for 10 Yr event
 Inflow = 1.11 cfs @ 11.97 hrs, Volume= 0.057 af
 Outflow = 0.05 cfs @ 11.24 hrs, Volume= 0.057 af, Atten= 95%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 11.24 hrs, Volume= 0.057 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 57.10' @ 13.08 hrs Surf.Area= 2,136 sf Storage= 1,144 cf

Plug-Flow detention time= 188.0 min calculated for 0.057 af (100% of inflow)
 Center-of-Mass det. time= 187.9 min (967.9 - 780.0)

Volume	Invert	Avail.Storage	Storage Description
#1	56.40'	808 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 5,340 cf Overall - 3,320 cf Embedded = 2,020 cf x 40.0% Voids
#2	56.65'	2,933 cf	ISI Rainstore3 4 x 235 Inside #1 Inside= 39.4"W x 15.7"H => 4.05 sf x 3.28'L = 13.3 cf Outside= 39.4"W x 15.7"H => 4.31 sf x 3.28'L = 14.1 cf 3,320 cf Overall x 94.0% Voids
		3,741 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.40	2,136	0	0
58.90	2,136	5,340	5,340

Device	Routing	Invert	Outlet Devices
#1	Discarded	56.40'	1.020 in/hr Exfiltration over Horizontal area

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Discarded OutFlow Max=0.05 cfs @ 11.24 hrs HW=56.43' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)**Summary for Pond P5: SW Inf**

Inflow Area = 0.399 ac, 53.03% Impervious, Inflow Depth = 2.04" for 10 Yr event
 Inflow = 1.46 cfs @ 11.98 hrs, Volume= 0.068 af
 Outflow = 0.07 cfs @ 11.66 hrs, Volume= 0.068 af, Atten= 95%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 11.66 hrs, Volume= 0.068 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 57.53' @ 13.51 hrs Surf.Area= 2,780 sf Storage= 1,388 cf

Plug-Flow detention time= 208.6 min calculated for 0.068 af (100% of inflow)

Center-of-Mass det. time= 208.5 min (1,051.3 - 842.8)

Volume	Invert	Avail.Storage	Storage Description
#1	56.80'	1,297 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 8,201 cf Overall - 4,958 cf Embedded = 3,243 cf x 40.0% Voids
#2	57.05'	4,381 cf	ISI Rainstore3 6 x 234 Inside #1 Inside= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf Outside= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 4,958 cf Overall x 94.0% Voids
		5,678 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.80	2,780	0	0
59.75	2,780	8,201	8,201

Device	Routing	Invert	Outlet Devices
#1	Discarded	56.80'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.07 cfs @ 11.66 hrs HW=56.83' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.07 cfs)

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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 S1A: Store Roof	Runoff Area=4,845 sf 100.00% Impervious Runoff Depth=8.86" Tc=6.0 min CN=98 Runoff=1.44 cfs 0.082 af
Subcatchment S1B: Canopy Roof	Runoff Area=3,568 sf 100.00% Impervious Runoff Depth=8.86" Tc=6.0 min CN=98 Runoff=1.06 cfs 0.060 af
Subcatchment S2: Rear of Bldg	Runoff Area=8,390 sf 96.50% Impervious Runoff Depth=8.74" Tc=6.0 min CN=97 Runoff=2.49 cfs 0.140 af
Subcatchment S3: Sides of Bldg	Runoff Area=15,994 sf 36.95% Impervious Runoff Depth=4.43" Tc=6.0 min CN=62 Runoff=2.90 cfs 0.135 af
Subcatchment S4: West Trench	Runoff Area=7,464 sf 83.91% Impervious Runoff Depth=8.13" Tc=6.0 min CN=92 Runoff=2.17 cfs 0.116 af
Subcatchment S5: East Trench	Runoff Area=17,395 sf 53.03% Impervious Runoff Depth=5.55" Tc=6.0 min CN=71 Runoff=3.88 cfs 0.185 af
Subcatchment S6: NW offsite	Runoff Area=4,638 sf 0.00% Impervious Runoff Depth=4.30" Tc=6.0 min CN=61 Runoff=0.82 cfs 0.038 af
Subcatchment S7: West Offsite	Runoff Area=931 sf 0.00% Impervious Runoff Depth=4.30" Tc=6.0 min CN=61 Runoff=0.16 cfs 0.008 af
Subcatchment S8: Driveway to offsite CB	Runoff Area=1,074 sf 100.00% Impervious Runoff Depth=8.86" Tc=6.0 min CN=98 Runoff=0.32 cfs 0.018 af
Subcatchment S9: Runoff to Street	Runoff Area=2,188 sf 63.12% Impervious Runoff Depth=7.16" Tc=6.0 min CN=84 Runoff=0.59 cfs 0.030 af
Reach 5R: Total Offsite	Inflow=1.89 cfs 0.094 af Outflow=1.89 cfs 0.094 af
Pond P1A: Roof INF	Peak Elev=61.92' Storage=2,461 cf Inflow=1.44 cfs 0.082 af Outflow=0.01 cfs 0.031 af
Pond P1B: Roof INF	Peak Elev=60.99' Storage=1,579 cf Inflow=1.06 cfs 0.060 af Outflow=0.02 cfs 0.033 af
Pond P2: rear inf	Peak Elev=61.60' Storage=3,895 cf Inflow=2.49 cfs 0.140 af Outflow=0.03 cfs 0.066 af
Pond P3: Side Inf	Peak Elev=61.61' Storage=4,503 cf Inflow=2.90 cfs 0.135 af Outflow=0.03 cfs 0.041 af
Pond P4: SE Inf	Peak Elev=57.88' Storage=2,778 cf Inflow=2.17 cfs 0.116 af Outflow=0.05 cfs 0.087 af

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Pond P5: SW Inf

Peak Elev=59.22' Storage=5,088 cf Inflow=3.88 cfs 0.185 af

Outflow=0.07 cfs 0.101 af

Total Runoff Area = 1.526 ac Runoff Volume = 0.813 af Average Runoff Depth = 6.39"
39.29% Pervious = 0.600 ac 60.71% Impervious = 0.927 ac

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Summary for Subcatchment S1A: Store Roof

Runoff = 1.44 cfs @ 11.97 hrs, Volume= 0.082 af, Depth= 8.86"

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
4,845	98	Roofs, HSG B
4,845		100.00% Impervious Area

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

Summary for Subcatchment S1B: Canopy Roof

Runoff = 1.06 cfs @ 11.97 hrs, Volume= 0.060 af, Depth= 8.86"

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
3,568	98	Roofs, HSG B
3,568		100.00% Impervious Area

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

Summary for Subcatchment S2: Rear of Bldg

Runoff = 2.49 cfs @ 11.97 hrs, Volume= 0.140 af, Depth= 8.74"

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
* 8,096	98	surface inf (39% remainder of grass)
294	61	>75% Grass cover, Good, HSG B
8,390	97	Weighted Average
294		3.50% Pervious Area
8,096		96.50% Impervious Area

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

Summary for Subcatchment S3: Sides of Bldg

Runoff = 2.90 cfs @ 11.97 hrs, Volume= 0.135 af, Depth= 4.43"

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
2,414	98	Paved parking, HSG B
3,105	98	Paved parking, HSG B
693	61	>75% Grass cover, Good, HSG B
390	98	Paved parking, HSG B
9,392	39	>75% Grass cover, Good, HSG A
15,994	62	Weighted Average
10,085		63.05% Pervious Area
5,909		36.95% Impervious Area

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

Summary for Subcatchment S4: West Trench

Runoff = 2.17 cfs @ 11.97 hrs, Volume= 0.116 af, Depth= 8.13"

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
6,263	98	Paved parking, HSG B
1,201	61	>75% Grass cover, Good, HSG B
7,464	92	Weighted Average
1,201		16.09% Pervious Area
6,263		83.91% Impervious Area

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

Summary for Subcatchment S5: East Trench

Runoff = 3.88 cfs @ 11.97 hrs, Volume= 0.185 af, Depth= 5.55"

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"

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Area (sf)	CN	Description
8,184	98	Paved parking, HSG B
477	61	>75% Grass cover, Good, HSG B
1,041	98	Unconnected roofs, HSG B
7,693	39	>75% Grass cover, Good, HSG A
17,395	71	Weighted Average
8,170		46.97% Pervious Area
9,225		53.03% Impervious Area
1,041		11.28% Unconnected

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

Summary for Subcatchment S6: NW offsite

Runoff = 0.82 cfs @ 11.97 hrs, Volume= 0.038 af, Depth= 4.30"

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
862	61	>75% Grass cover, Good, HSG B
1,851	61	>75% Grass cover, Good, HSG B
1,925	61	>75% Grass cover, Good, HSG B
4,638	61	Weighted Average
4,638		100.00% Pervious Area

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

Summary for Subcatchment S7: West Offsite

Runoff = 0.16 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 4.30"

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
931	61	>75% Grass cover, Good, HSG B
931		100.00% Pervious Area

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

Summary for Subcatchment S8: Driveway to offsite CB

Runoff = 0.32 cfs @ 11.97 hrs, Volume= 0.018 af, Depth= 8.86"

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
1,074	98	Paved parking, HSG B
1,074		100.00% Impervious Area

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

Summary for Subcatchment S9: Runoff to Street

Runoff = 0.59 cfs @ 11.97 hrs, Volume= 0.030 af, Depth= 7.16"

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
1,381	98	Paved parking, HSG B
807	61	>75% Grass cover, Good, HSG B
2,188	84	Weighted Average
807		36.88% Pervious Area
1,381		63.12% Impervious Area

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

Summary for Reach 5R: Total Offsite

Inflow Area = 0.203 ac, 27.80% Impervious, Inflow Depth = 5.56" for 100 Yr event
Inflow = 1.89 cfs @ 11.97 hrs, Volume= 0.094 af
Outflow = 1.89 cfs @ 11.97 hrs, Volume= 0.094 af, Atten= 0%, Lag= 0.0 min

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

Summary for Pond P1A: Roof INF

Inflow Area = 0.111 ac, 100.00% Impervious, Inflow Depth = 8.86" for 100 Yr event
Inflow = 1.44 cfs @ 11.97 hrs, Volume= 0.082 af
Outflow = 0.01 cfs @ 5.22 hrs, Volume= 0.031 af, Atten= 99%, Lag= 0.0 min
Discarded = 0.01 cfs @ 5.22 hrs, Volume= 0.031 af

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

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Peak Elev= 61.92' @ 19.50 hrs Surf.Area= 626 sf Storage= 2,461 cf

Plug-Flow detention time= 345.0 min calculated for 0.031 af (38% of inflow)

Center-of-Mass det. time= 174.9 min (910.3 - 735.4)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	235 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,130 cf Overall - 2,543 cf Embedded = 587 cf x 40.0% Voids
#2	57.50'	2,247 cf	ISI Rainstore3 12 x 60 Inside #1 Inside= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf Outside= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf 2,543 cf Overall x 94.0% Voids
		2,482 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.00	626	0	0
62.00	626	3,130	3,130

Device	Routing	Invert	Outlet Devices
#1	Discarded	57.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.01 cfs @ 5.22 hrs HW=57.05' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)**Summary for Pond P1B: Roof INF**

Inflow Area = 0.082 ac, 100.00% Impervious, Inflow Depth = 8.86" for 100 Yr event
 Inflow = 1.06 cfs @ 11.97 hrs, Volume= 0.060 af
 Outflow = 0.02 cfs @ 8.28 hrs, Volume= 0.033 af, Atten= 98%, Lag= 0.0 min
 Discarded = 0.02 cfs @ 8.28 hrs, Volume= 0.033 af

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

Peak Elev= 60.99' @ 16.44 hrs Surf.Area= 704 sf Storage= 1,579 cf

Plug-Flow detention time= 337.3 min calculated for 0.033 af (55% of inflow)

Center-of-Mass det. time= 213.5 min (948.9 - 735.4)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	305 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 2,288 cf Overall - 1,526 cf Embedded = 762 cf x 40.0% Voids
#2	58.50'	1,348 cf	ISI Rainstore3 6 x 72 Inside #1 Inside= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf Outside= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 1,526 cf Overall x 94.0% Voids
		1,653 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	704	0	0
61.25	704	2,288	2,288

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Device	Routing	Invert	Outlet Devices
#1	Discarded	58.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.02 cfs @ 8.28 hrs HW=58.03' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Summary for Pond P2: rear inf**

Inflow Area = 0.193 ac, 96.50% Impervious, Inflow Depth = 8.74" for 100 Yr event
 Inflow = 2.49 cfs @ 11.97 hrs, Volume= 0.140 af
 Outflow = 0.03 cfs @ 7.32 hrs, Volume= 0.066 af, Atten= 99%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 7.32 hrs, Volume= 0.066 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 61.60' @ 17.82 hrs Surf.Area= 1,396 sf Storage= 3,895 cf

Plug-Flow detention time= 341.4 min calculated for 0.066 af (47% of inflow)
 Center-of-Mass det. time= 204.2 min (945.2 - 741.0)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	507 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 5,165 cf Overall - 3,899 cf Embedded = 1,266 cf x 40.0% Voids
#2	58.50'	3,445 cf	
			ISI Rainstore3 8 x 138 Inside #1 Inside= 39.4"W x 31.5"H => 8.09 sf x 3.28'L = 26.6 cf Outside= 39.4"W x 31.5"H => 8.61 sf x 3.28'L = 28.3 cf 3,899 cf Overall x 94.0% Voids
		3,952 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	1,396	0	0
61.70	1,396	5,165	5,165

Device	Routing	Invert	Outlet Devices
#1	Discarded	58.00'	1.020 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.03 cfs @ 7.32 hrs HW=58.04' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Summary for Pond P3: Side Inf**

Inflow Area = 0.367 ac, 36.95% Impervious, Inflow Depth = 4.43" for 100 Yr event
 Inflow = 2.90 cfs @ 11.97 hrs, Volume= 0.135 af
 Outflow = 0.03 cfs @ 10.84 hrs, Volume= 0.041 af, Atten= 99%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.84 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 61.61' @ 24.04 hrs Surf.Area= 1,179 sf Storage= 4,503 cf

Plug-Flow detention time= 443.1 min calculated for 0.041 af (30% of inflow)

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Center-of-Mass det. time= 312.1 min (1,144.2 - 832.2)

Volume	Invert	Avail.Storage	Storage Description
#1	57.25'	2,058 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 10,316 cf Overall - 5,170 cf Embedded = 5,146 cf x 40.0% Voids
#2	57.75'	4,568 cf	ISI Rainstore3 12 x 122 Inside #1 Inside= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf Outside= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf 5,170 cf Overall x 94.0% Voids
		6,627 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.25	1,179	0	0
66.00	1,179	10,316	10,316

Device	Routing	Invert	Outlet Devices
#1	Discarded	57.25'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.03 cfs @ 10.84 hrs HW=57.34' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)**Summary for Pond P4: SE Inf**

Inflow Area = 0.171 ac, 83.91% Impervious, Inflow Depth = 8.13" for 100 Yr event
 Inflow = 2.17 cfs @ 11.97 hrs, Volume= 0.116 af
 Outflow = 0.05 cfs @ 10.06 hrs, Volume= 0.087 af, Atten= 98%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 10.06 hrs, Volume= 0.087 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 57.88' @ 14.75 hrs Surf.Area= 2,136 sf Storage= 2,778 cf

Plug-Flow detention time= 369.4 min calculated for 0.087 af (75% of inflow)
 Center-of-Mass det. time= 281.0 min (1,043.0 - 762.1)

Volume	Invert	Avail.Storage	Storage Description
#1	56.40'	808 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 5,340 cf Overall - 3,320 cf Embedded = 2,020 cf x 40.0% Voids
#2	56.65'	2,933 cf	ISI Rainstore3 4 x 235 Inside #1 Inside= 39.4"W x 15.7"H => 4.05 sf x 3.28'L = 13.3 cf Outside= 39.4"W x 15.7"H => 4.31 sf x 3.28'L = 14.1 cf 3,320 cf Overall x 94.0% Voids
		3,741 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.40	2,136	0	0
58.90	2,136	5,340	5,340

Device	Routing	Invert	Outlet Devices
#1	Discarded	56.40'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.05 cfs @ 10.06 hrs HW=56.43' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Summary for Pond P5: SW Inf

Inflow Area = 0.399 ac, 53.03% Impervious, Inflow Depth = 5.55" for 100 Yr event
 Inflow = 3.88 cfs @ 11.97 hrs, Volume= 0.185 af
 Outflow = 0.07 cfs @ 10.66 hrs, Volume= 0.101 af, Atten= 98%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 10.66 hrs, Volume= 0.101 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs
 Peak Elev= 59.22' @ 17.09 hrs Surf.Area= 2,780 sf Storage= 5,088 cf

Plug-Flow detention time= 420.6 min calculated for 0.101 af (55% of inflow)

Center-of-Mass det. time= 307.3 min (1,121.5 - 814.1)

Volume	Invert	Avail.Storage	Storage Description
#1	56.80'	1,297 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 8,201 cf Overall - 4,958 cf Embedded = 3,243 cf x 40.0% Voids
#2	57.05'	4,381 cf	ISI Rainstore3 6 x 234 Inside #1 Inside= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf Outside= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 4,958 cf Overall x 94.0% Voids
		5,678 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.80	2,780	0	0
59.75	2,780	8,201	8,201

Device	Routing	Invert	Outlet Devices
#1	Discarded	56.80'	1.020 in/hr Exfiltration over Horizontal area

Discarded OutFlow Max=0.07 cfs @ 10.66 hrs HW=56.83' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.07 cfs)