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Page 2

# **Rainfall Events Listing**

Event#	Event	Storm Type	Curve	Mode	Duration	B/B	Depth	AMC
	Name				(hours)		(inches)	
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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### Page 3

# Area Listing (all nodes)

CN	Description
	(subcatchment-numbers)
39	>75% Grass cover, Good, HSG A (EX1, EX2, EX3)
61	>75% Grass cover, Good, HSG B (EX1, EX2, EX3)
98	Paved parking, HSG A (EX3)
98	Paved parking, HSG B (EX2, EX3)
98	Roofs, HSG A (EX2, EX3)
98	Roofs, HSG B (EX2)
58	TOTAL AREA
	39 61 98 98 98

Printed 10/2/2020 Page 4

# Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	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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Page 5

# **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" Printed 10/2/2020

Page 6

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

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Type II 24-hr 2Yr Rainfall=3.18" Printed 10/2/2020

Page 7

# **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"

A	rea (sf)	CN	Description		
	10,854	61	>75% Gras	s cover, Go	ood, HSG B
	1,925	39	>75% Gras	s cover, Go	ood, HSG A
	12,779	58	Weighted A	verage	
	12,779		100.00% Pe	ervious Are	a
Тс	Length	Slope	e Velocity	Capacity	Description
(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)	
6.0					Direct Entry, Min Tc

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Page 8

# **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						
	23,1	16	61	>75% Gras	s cover, Go	od, HSG B				
	1,1	36	98	Roofs, HSG	βB					
	1,8	60	98	Paved park	ing, HSG B					
	9,3	87	39	>75% Ġras	s cover, Go	od, HSG A				
	3	90	98	Roofs, HSG	βA					
	35,8	89	59	Weighted A	verage					
	32,5	03		90.57% Pei	vious Area					
	3,386 9.43% Impervious Area									
			٥.							
	Tc Ler	ngth	Slope	,	Capacity	Description				
(n	nin) (fo	eet)	(ft/ft)	(ft/sec)	(cfs)					
	6.0					Direct Entry	min To			

6.0

**Direct Entry, min Tc** 

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Page 9

# **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					
4,5	53 61	>75% Grass cover, Good, HSG B					
1,30	63 98	Paved parking, HSG B					
2,62	28 61	>75% Grass cover, Good, HSG B					
53	32 98	Paved parking, HSG A					
7,69	93 39	>75% Grass cover, Good, HSG A					
1,04	41 98	Roofs, HSG A					
17,8	10 58	Weighted Average					
14,8	74	83.51% Pervious Area					
2,93	36	16.49% Impervious Area					
Tc Len	•						
(min) (fe	eet) (ft.	ft) (ft/sec) (cfs)					
0.0		Discot Fator asia Ta					

6.0

Direct Entry, min Tc

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Type II 24-hr 2Yr Rainfall=3.18" Printed 10/2/2020

Page 10

# Summary for Reach 5R: Total Offsite

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

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

Inflow

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" Printed 10/2/2020

Page 11

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

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Type II 24-hr 10Yr Rainfall=4.90" Printed 10/2/2020

Page 12

# **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% Gras	>75% Grass cover, Good, HSG B					
	1,925	39	>75% Gras	s cover, Go	ood, HSG A				
	12,779	58	Weighted A	verage					
	12,779		100.00% Pe	ervious Are	a				
To	9	Slop	,	Capacity	Description				
(min)	(feet)	(ft/f	t) (ft/sec)	(cfs)					
6.0					Direct Entry, Min Tc				

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Page 13

# **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"

Are	ea (sf)	CN	Description				
2	3,116	61	>75% Gras	s cover, Go	ood, HSG B		
	1,136	98	Roofs, HSG	В			
	1,860	98	Paved park	ng, HSG B			
!	9,387	39	>75% Gras	s cover, Go	ood, HSG A		
	390	98	Roofs, HSG	iΑ			
3	5,889	59 Weighted Average					
3:	2,503		90.57% Per	vious Area			
,	3,386		9.43% Impe	rvious Area	a		
Т- 1	ماديميدا	Clana	\/alaaitu	Canacitu	Decembrish		
	Length	Slope	•	Capacity	Description		
(min)	(feet)	(ft/ft	(ft/sec)	(cfs)			
6.0					Direct Entry, m	in Tc	

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Page 14

# **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 Length	Slop							
(min) (feet)	(ft/	ft) (ft/sec) (cfs)						
6.0		Discot Frates, unio To						

6.0

**Direct Entry, min Tc** 

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Type II 24-hr 10Yr Rainfall=4.90" Printed 10/2/2020

Page 15

# Summary for Reach 5R: Total Offsite

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

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

Inflow

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

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Type II 24-hr 100 Yr Rainfall=9.10" Printed 10/2/2020

Page 16

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

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Type II 24-hr 100 Yr Rainfall=9.10" Printed 10/2/2020

Page 17

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# **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"

	Α	rea (sf)	CN Description					
		10,854 61 >75% Grass cover, Good, HSG B						
		1,925	39	>75% Grass	s cover, Go	od, HSG A		
-	12,779 58 Weighted Average							
		12,779		100.00% Pe	ervious Are	а		
	Tc	Length	Slop	e Velocity	Capacity	Description		
	(min)	(feet)	(ft/f	:) (ft/sec)	(cfs)			
	6.0					Direct Entry Min	To	

Direct Entry, Min Tc

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Page 18

# **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	3,386 9.43% Impervious Area							
Tc Length	Slop	pe Velocity Capacity Description						
(min) (feet)	(ft/	ft) (ft/sec) (cfs)						
6.0		Direct Entry, min To						

6.0

**Direct Entry, min Tc** 

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Page 19

# **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	I Description						
4,	553 61	>75% Grass cover, Good, HSG B						
1,3	363 98	Paved parking, HSG B						
2,0	628 61	>75% Grass cover, Good, HSG B						
	532 98	Paved parking, HSG A						
7,0	39	>75% Grass cover, Good, HSG A						
1,	041 98	Roofs, HSG A						
17,	310 58	Weighted Average						
14,8	14,874 83.51% Pervious Area							
2,9	936	16.49% Impervious Area						
Tc Le	ngth Slo	pe Velocity Capacity Description						
(min)(	feet) (fi	/ft) (ft/sec) (cfs)						
0.0		Discord Fortune series To						

6.0

Direct Entry, min Tc

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Type II 24-hr 100 Yr Rainfall=9.10" Printed 10/2/2020

Page 20

# Summary for Reach 5R: Total Offsite

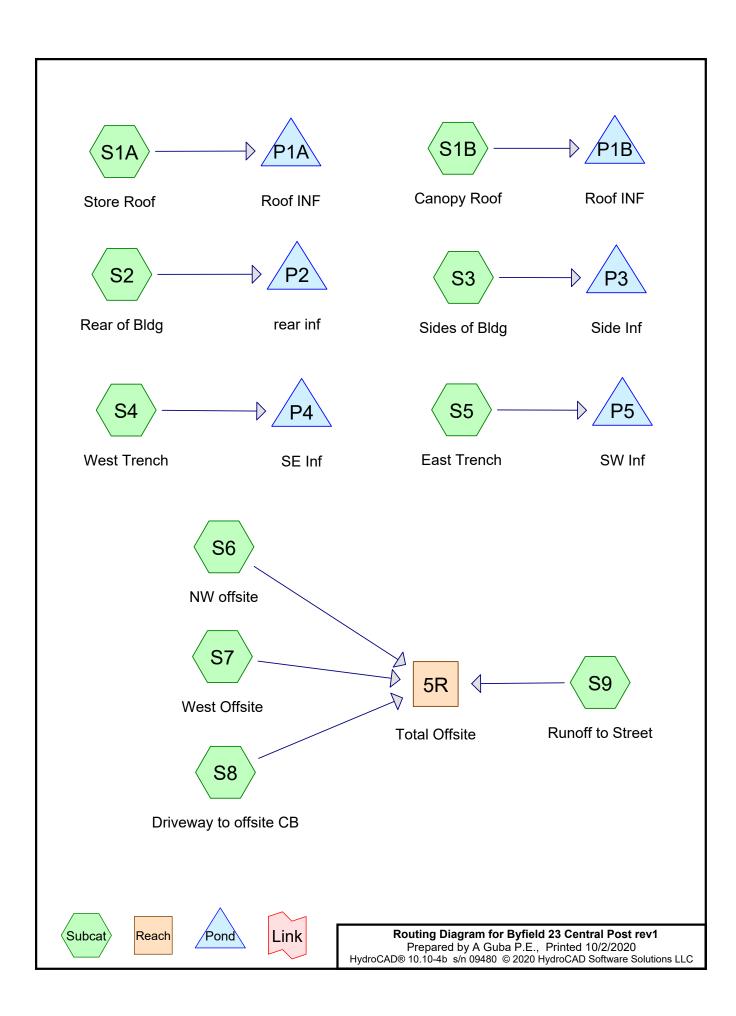
[40] Hint: Not Described (Outflow=Inflow)

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

Inflow

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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# Page 2

# **Rainfall Events Listing**

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

Printed 10/2/2020 Page 3

# Area Listing (all nodes)

Area	CN	Description
(acres)	)	(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

Page 4

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# Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	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

Printed 10/2/2020 Page 5

# **Ground Covers (all nodes)**

HSG-A	HSG-B	HSG-C	HSG-D	Other	Total	Ground	Subcatchm
(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	Cover	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" Printed 10/2/2020

Page 6

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

Reach routing by Stor-ind Tha	ins method - Folid 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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Page 7

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

Page 8

### **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"

_	Α	rea (sf)	CN	Description					
		4,845	98	Roofs, HSG B					
		4,845		100.00% Impervious Area					
	Tc	Length		Velocity (ft/sec)	Capacity (cfs)	Description			
-	(min)	(feet)	(ft/ft)	(II/Sec)	(CIS)	Direct Entry Min To			
_	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"

A	rea (sf)	CN [	Description		
	3,568	98 F	Roofs, HSC	B	
•	3,568	1	00.00% In	npervious A	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 (	surface inf (39% remainder of grass)					
	294	61	>75% Grass	cover, Go	ood, HSG B				
	8,390	97	Weighted Av	/eighted Average					
	294		3.50% Pervi	3.50% Pervious Area					
	8,096		96.50% Impervious Area						
_									
	Γc Length	Slop	,	Capacity	Description				
<u>(mi</u>	n) (feet)	(ft/f	t) (ft/sec)	(cfs)					

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Type II 24-hr 2 Yr Rainfall=3.18" Printed 10/2/2020

Page 9

### **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"

Are	a (sf)	CN	Description				
2	2,414	98	Paved parki	ng, HSG B	В		
3	3,105	98	Paved parki	ng, HSG B	В		
	693	61	>75% Grass	cover, Go	lood, HSG B		
	390	98	Paved parki	ng, HSG B	В		
	9,392	39	>75% Grass	cover, Go	lood, HSG A		
15	5,994	62	Weighted A	verage			
10	0,085		63.05% Per	vious Area	a		
Ę	5,909		36.95% Impervious Area				
To I	onath	Clon	. Volocity	Conneity	Description		
	_ength	Slope	•	Capacity	•		
<u>(min)</u>	(feet)	(ft/ft	) (ft/sec)	(cfs)			
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"

A	rea (sf)	CN	Description				
	6,263		Paved parking, HSG B				
	1,201	61	>75% Gras	s cover, Go	ood, HSG B		
	7,464	92	92 Weighted Average				
	1,201		16.09% Pei	vious Area	l		
	6,263		83.91% lmp	ervious Ar	ea		
Тс	Length	Slope	,	Capacity	Description		
(min)_	(feet)	(ft/ft	(ft/sec)	(cfs)			
6.0					Direct Entry, minimum		

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### **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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Page 10

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 Length	n Slo <sub>l</sub>	pe Velocity Capacity Description				
(min) (feet	) (ft/	/ft) (ft/sec) (cfs)				
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"

A	rea (sf)	CN	Description				
	862	61	>75% Gras	s cover, Go	ood, 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	Length	Slope	,	Capacity	Description		
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
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"

A	rea (sf)	CN E	Description		
	931	61 >	61 >75% Grass cover, Good, HSG B		
	931	1	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" Printed 10/2/2020

Page 11

### 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 F	Paved parking, HSG B		
	1,074	•	100.00% Impervious Area		
To (min	9	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	)				Direct Entry, minimum

### **Summary for Subcatchment S9: Runoff to Street**

0.15 cfs @ 11.97 hrs, Volume= Runoff 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"

 Α	rea (sf)	CN	Description					
	1,381	98	Paved park	Paved parking, HSG B				
	807	61	>75% Gras	75% Grass cover, Good, HSG B				
	2,188	84	Weighted A	Veighted Average				
	807		36.88% Pervious Area					
	1,381		63.12% Impervious Area					
Тс	Length	Slope	e Velocity	Capacity	Description			
 (min)	(feet)	(ft/ft	) (ft/sec)	(cfs)	·			
6.0	·				Direct Entry, minimum			

**Direct Entry, minimum** 

### Summary for Reach 5R: Total Offsite

0.203 ac, 27.80% Impervious, Inflow Depth = 1.05" for 2 Yr event Inflow Area =

0.33 cfs @ 11.98 hrs, Volume= 0.018 af Inflow

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, Volum	e= 0.027 af	

0.025 af, Atten= 97%, Lag= 0.0 min Outflow 0.01 cfs @ 10.52 hrs, Volume=

Discarded = 0.01 cfs @ 10.52 hrs, Volume=

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

Type II 24-hr 2 Yr Rainfall=3.18" Printed 10/2/2020

### **Byfield 23 Central Post rev1**

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Page 12

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 D	escription	
#1	57.00'	235 cf		Stage Data (Prismatic)Listed below (Recald Overall - 2,543 cf Embedded = 587 cf x 40.0	
#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 Avai	lable Storage	
Elevation (feet)	Surf.Aı (sq		c.Store c-feet)	Cum.Store (cubic-feet)	
57.00 62.00	-	526 526	0 3,130	0 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

0.37 cfs @ 11.97 hrs, Volume= Inflow 0.020 af

0.02 cfs @ 11.12 hrs, Volume= Outflow = 0.020 af, Atten= 95%, Lag= 0.0 min

0.02 cfs @ 11.12 hrs, Volume= Discarded = 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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Page 13

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) **T**—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 0.03 cfs @ 10.96 hrs, Volume= 0.046 af, Outflow 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 )

<u>Volume</u>	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	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(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

0.25 cfs @ 11.99 hrs, Volume= 0.014 af Inflow =

0.03 cfs @ 11.98 hrs, Volume= 0.03 cfs @ 11.98 hrs, Volume= Outflow = 0.014 af, Atten= 89%, Lag= 0.0 min

Discarded = 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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Page 14

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

Volume	Invert	Avail.Sto	rage Stora	age Description		
#1	57.25'	2,05		tom Stage Data (Prismatic)Listed below (Recalc) 16 cf Overall - 5,170 cf Embedded = 5,146 cf x 40.0% Voids		
#2	57.75'	4,56	Insid Outs	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		
		6,62	27 cf Total	Available Storage		
Elevatio		ırf.Area (sq-ft)	Inc.Store (cubic-feet)			
57.2	25	1,179	0	0		
66.0	00	1,179	10,316	10,316		
Device	Routing	Invert	Outlet Dev	vices		
#1 Discarded 57.25'		57.25'	1.020 in/h	r 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	Inv	ert Ava	il.Storage	Storage D	escription	
#1	56.4	10'	808 cf			smatic)Listed below (Recalc)
#2	56.6	35'	2,933 cf	•	overall - 3,320 ct c <b>ore3  4</b> x 235  l	FEmbedded = 2,020 cf x 40.0% Voids
π2	50.0	55	2,900 0			=> 4.05 sf x 3.28'L = 13.3 cf
				Outside= 3	39.4"W x 15.7" <mark></mark>	H => 4.31 sf x 3.28'L = 14.1 cf
				3,320 cf O	verall x 94.0%	Voids
			3,741 cf	Total Avai	lable Storage	
Elevation	1	Surf.Area	Inc	:Store	Cum.Store	
(feet		(sq-ft)		c-feet)	(cubic-feet)	
56.40	)	2,136	_	0	0	
58.90	)	2,136		5,340	5,340	
Device	Routing	In	vert Outl	et Devices		

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

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Page 15

**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.Sto	rage	Storage D	escription	
#1	56.80'	1,2	97 cf			matic)Listed below (Recalc)
110	E7 0E1	4.0	04 . £	•	•	Embedded = $3,243$ cf x $40.0\%$ Voids
#2	57.05'	4,3	81 cf		ore3 6 x 234 li	nside #1 :> 6.07 sf x 3.28'L = 19.9 cf
						=> 6.46 sf x 3.28'L = 21.2 cf
				_	verall x 94.0%	
		F 6	70 of			VOIGS
		5,6	78 cf	TOtal Avail	able Storage	
Elevation	Surf.	Area	Inc	:Store	Cum.Store	
(feet)	(	sq-ft)	(cubi	c-feet)	(cubic-feet)	
56.80	2	2,780		0	0	
59.75	2	2,780		8,201	8,201	
Device R	outing	Invert	Outle	et Devices		

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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Page 16

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

redon routing by otor mar ma	ino motiloa i ona roating by otor ma motiloa
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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Page 17

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

6.0

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Page 18

#### **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"

	Α	rea (sf)	CN	Description							
		4,845	98	Roofs, HSG B							
		4,845		100.00% Impervious Area							
,	Tc	Length		Velocity		Description					
(	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)						
	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"

A	rea (sf)	CN [	Description					
	3,568	98 F	Roofs, HSG B					
•	3,568	1	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								
*	8,0	096	98 s	surface inf (39% remainder of grass)								
	4	294	61 >	>75% Grass cover, Good, HSG B								
	8,3	390	97 \	Weighted A	verage							
	2	294	3	3.50% Pervious Area								
	8,0	096	9	96.50% Imp	ervious Ar	Area						
	<b>T</b>	41.	01	V/-1	0	D						
,		ngth	Slope	,	Capacity	, '						
<u>(m</u>	nin) (1	feet)	(ft/ft)	(ft/sec)	(cfs)							

**Direct Entry, Min Tc** 

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Type II 24-hr 10 Yr Rainfall=4.90" Printed 10/2/2020

Page 19

#### **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"

Are	a (sf)	CN	Description								
2	2,414	98	Paved parking, HSG B								
3	3,105	98	Paved parki	ng, HSG B	В						
	693	61	>75% Grass	cover, Go	lood, HSG B						
	390	98	Paved parki	ng, HSG B	В						
	9,392	39	>75% Grass	cover, Go	lood, HSG A						
15	5,994	62	Weighted Average								
10	0,085		63.05% Per	vious Area	a						
Ę	5,909		36.95% Imp	ervious Are	rea						
To I	onath	Clon	. Volocity	Conneity	Description						
	_ength	Slope	•	Capacity							
<u>(min)</u>	(feet)	(ft/ft	) (ft/sec)	(cfs)							
6.0					Direct Entry, minimum						

#### **Summary for Subcatchment S4: West Trench**

1.11 cfs @ 11.97 hrs, Volume= Runoff 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"

A	rea (sf)	CN	Description									
	6,263		Paved parking, HSG B									
	1,201	61	>75% Gras	s cover, Go	ood, HSG B							
	7,464	92	Weighted Average									
	1,201		16.09% Pei	vious Area	l							
	6,263		83.91% lmp	ervious Ar	ea							
Тс	Length	Slope	,	Capacity	Description							
(min)_	(feet)	(ft/ft	(ft/sec)	(cfs)								
6.0					Direct Entry, minimum							

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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Page 20

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 Length	n Slo <sub>l</sub>	pe Velocity Capacity Description								
(min) (feet	) (ft/	/ft) (ft/sec) (cfs)								
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"

A	rea (sf)	CN	Description									
	862	61	>75% Grass cover, Good, HSG B									
	1,851	61	>75% Grass cover, Good, HSG B									
	1,925	61	>75% Gras	s cover, Go	ood, HSG B							
	4,638	61	Weighted Average									
	4,638		100.00% Pe	ervious Are	ea							
Tc (min)	Length (feet)	Slope (ft/ft)	,	Capacity (cfs)	·							
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"

A	rea (sf)	CN E	escription								
	931	61 >	>75% Grass cover, Good, HSG B								
	931	1	100.00% Pervious Area								
Tc (min)	Length (feet)	Slope (ft/ft)									
6.0					Direct Entry, minimum						

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Page 21

#### 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 (s	f) C	N D	escription							
	1,07	4 9	98 P	Paved parking, HSG B							
	1,07	4	1	100.00% Impervious Area							
- (mi	c Leng		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
6	.0					Direct Entry, minimum					

#### **Summary for Subcatchment S9: Runoff to Street**

0.28 cfs @ 11.97 hrs, Volume= Runoff 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"

 Α	rea (sf)	CN	Description										
	1,381	98	Paved parking, HSG B										
	807	61	>75% Gras	>75% Grass cover, Good, HSG B									
	2,188	84	Weighted A	Weighted Average									
	807		36.88% Pei	vious Area	a								
	1,381		63.12% lmp	ervious Ar	rea								
Тс	Length	Slope	e Velocity	Capacity	Description								
 (min)	(feet)	(ft/ft	) (ft/sec)	(cfs)	·								
6.0	·				Direct Entry, minimum								

**Direct Entry, minimum** 

#### Summary for Reach 5R: Total Offsite

0.203 ac, 27.80% Impervious, Inflow Depth = 2.18" for 10 Yr event Inflow Area =

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

9.00 hrs, Volume= Discarded = 0.01 cfs @

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

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Page 22

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.St	orage	Storage D	escription		
#1	57.00'	:	235 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc) 3,130 cf Overall - 2,543 cf Embedded = 587 cf x 40.0% Voids			
#2	57.50'	2,2	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 Avai	lable Storage		
Elevation (feet)		Area sq-ft)		:.Store c-feet)	Cum.Store (cubic-feet)		
57.00 62.00		626 626		0 3,130	0 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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Page 23

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) **T**—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

0.03 cfs @ 10.12 hrs, Volume= Outflow 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)

<u>Volume</u>	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

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

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

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

0.88 cfs @ 11.98 hrs, Volume= Inflow 0.042 af

0.03 cfs @ 11.80 hrs, Volume= 0.03 cfs @ 11.80 hrs, Volume= Outflow 0.038 af, Atten= 97%, Lag= 0.0 min

Discarded = 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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#1

Discarded

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Page 24

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

Volume	Invert A	vail.Storage	Storage D	escription			
#1	57.25'	2,058 cf		tage Data (Prismatic)Listed below (Recalc)			
110		4.500 .5	•	Overall - 5,170 cf Embedded = 5,146 cf x 40	0.0% 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 C	verall x 94.0% Voids			
		6,627 cf	Total Avai	lable Storage			
Elevation	Surf.Are	ea In	c.Store	Cum.Store			
(feet)	(sq-	ft) (cub	ic-feet)	(cubic-feet)			
57.25	1,17	79	0	0			
66.00	1,17		10,316	10,316			
	,		•	•			
Device Ro	outing	Invert Out	let Devices				

**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**

57.25' 1.020 in/hr Exfiltration over Horizontal area

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.Storag	e Storage	Description
#1	56.40'	808		Stage Data (Prismatic)Listed below (Recalc)
#2	56.65'	2,933	•	Overall - 3,320 cf Embedded = 2,020 cf x 40.0% Voids store3 4 x 235 Inside #1
		_,,		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	of Total Ava	railable Storage
Elevation	Surf.A	rea	Inc.Store	Cum.Store
(feet)	(sq	ı-ft) (cı	ubic-feet)	(cubic-feet)
56.40	2,1	136	0	0
58.90	2,1	136	5,340	5,340
Device Ro	outing	Invert O	utlet Devices	S

#1 Discarded 56.40' 1.020 in/hr Exfiltration over Horizontal area

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Page 25

**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.St	orage	Storage D	escription	
#1	56.80'	1,2	297 cf			ismatic)Listed below (Recalc) cf Embedded = 3,243 cf x 40.0% Voids
#2	57.05'	4,;	381 cf	Inside= 39 Outside= 3		=> 6.07 sf x 3.28'L = 19.9 cf 'H => 6.46 sf x 3.28'L = 21.2 cf
		5,0	678 cf	Total Avai	lable Storage	
Elevation (feet)	Su	rf.Area (sq-ft)		:.Store c-feet)	Cum.Store (cubic-feet)	
56.80		2,780		Ó	0	
59.75		2,780		8,201	8,201	
Device R	outing	Invert	Outl	et Devices		

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)

#1

Discarded

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Page 26

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

Reach routing by Stor-ind Tra	ins method - Folia routing by Stor-Ina 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
SubcatchmentS1B: 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
SubcatchmentS2: 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
SubcatchmentS3: 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
SubcatchmentS4: 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
SubcatchmentS5: 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
SubcatchmentS9: 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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Page 27

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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Page 28

#### **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"

A	rea (sf)	CN [	Description		
	4,845	98 F	Roofs, HSG	B	
	4,845	•	100.00% Im	npervious A	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"

A	rea (sf)	CN [	Description				
	3,568	98 F	Roofs, HSG	βB			
	3,568	1	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					
_								
	Γc Length	Slop	,	Capacity	Description			
<u>(mi</u>	n) (feet)	(ft/f	t) (ft/sec)	(cfs)				

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Page 29

#### **Summary for Subcatchment S3: Sides of Bldg**

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

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	4 98	Paved parking, HSG B				
3,105	5 98	Paved parking, HSG B				
693	3 61	>75% Grass cover, Good, HSG B				
390	98	Paved parking, HSG B				
9,392	2 39	>75% Grass cover, Good, HSG A				
15,994	4 62	Weighted Average				
10,085	5	63.05% Pervious Area				
5,909	9	36.95% Impervious Area				
Tc Lengt	th Slo <sub>l</sub>	pe Velocity Capacity Description				
(min) (fee	et) (ft/	/ft) (ft/sec) (cfs)				
6.0		Direct Entry, minimum				

#### **Summary for Subcatchment S4: West Trench**

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

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"

	<u> </u>	rea (sf)	CN	Description						
		6,263	98	Paved parking, HSG B						
		1,201	61	>75% Grass cover, Good, HSG B						
		7,464	92	2 Weighted Average						
		1,201		16.09% Pervious Area						
		6,263	;	83.91% Impervious Area						
	Tc	Length	Slope	,	Capacity	Description				
(r	nin)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	6.0					Direct Entry, minimum				

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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Page 30

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 Lengtl						
(min) (feet	:) (ft/	/ft) (ft/sec) (cfs)				
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"

A	rea (sf)	CN	Description					
	862	61	>75% Gras	s cover, Go	ood, 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)	,	Capacity (cfs)	·			
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"

A	rea (sf)	CN E	Description					
	931	61 >	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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Page 31

#### 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 (s	f) C	N D	escription				
	1,07	4 9	98 P	Paved parking, HSG B				
	1,07	4	100.00% Impervious Area					
- (mi	c Leng		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
6	.0					Direct Entry, minimum		

#### **Summary for Subcatchment S9: Runoff to Street**

0.59 cfs @ 11.97 hrs, Volume= Runoff 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"

 Α	rea (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					
Тс	Length	Slope	e Velocity	Capacity	Description			
 (min)	(feet)	(ft/ft	) (ft/sec)	(cfs)	·			
6.0	·				Direct Entry, minimum			

**Direct Entry, minimum** 

## Summary for Reach 5R: Total Offsite

0.203 ac, 27.80% Impervious, Inflow Depth = 5.56" for 100 Yr event Inflow Area =

1.89 cfs @ 11.97 hrs, Volume= Inflow 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 De	epth = 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

#### Type II 24-hr 100 Yr Rainfall=9.10" Printed 10/2/2020

#### Byfield 23 Central Post rev1

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Page 32

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.Storag	je Stora	ge Description			
#1	57.00'	235	cf Custo	om 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 <b>ISI R</b> a	ainstore3 12 x 60 Inside #1			
			Inside	e= 39.4"W x 47.2"H => 12.14 sf x 3.28'L = 39.8 cf			
			Outsid	de= 39.4"W x 47.2"H => 12.92 sf x 3.28'L = 42.4 cf			
			2,543	s cf Overall x 94.0% Voids			
		2,482	cf Total	Available Storage			
Elevation	Surf.	Area	Inc.Store	Cum.Store			
(feet)	(s	q-ft) (c	ubic-feet)	(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 )

<u>Volume</u>	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	
		4.050 .6	Takal Assallahla Okanana	

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 100 Yr Rainfall=9.10" Printed 10/2/2020

Page 33

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

**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

0.066 af Discarded = 7.32 hrs, Volume= 0.03 cfs @

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 )

<u>Volume</u>	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 (sg-ft)	Inc.Store	Cum.Store
(leet)	(SQ-IL)	(cubic-feet)	(cubic-feet)
58.00	1,396	0	0
61 70	1 396	5 165	5 165

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

**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

2.90 cfs @ 11.97 hrs, Volume= Inflow 0.135 af

Outflow = 0.03 cfs @ 10.84 hrs, Volume= 0.041 af, Atten= 99%, Lag= 0.0 min

0.03 cfs @ 10.84 hrs, Volume= Discarded = 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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Page 34

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

Volume	Invert	Avail.St	orage	Storage D	escription	
#1	57.25'	2,0	058 cf			ismatic)Listed below (Recalc) cf Embedded = 5,146 cf x 40.0% Voids
#2	57.75'	4,5	568 cf	Inside= 39 Outside= 3		=> 12.14 sf x 3.28'L = 39.8 cf H => 12.92 sf x 3.28'L = 42.4 cf
		6,6	627 cf	Total Avai	lable Storage	
Elevation (feet)	Surf. <i>i</i> (s	Area :q-ft)		:.Store c-feet)	Cum.Store (cubic-feet)	
57.25 66.00		,179 ,179	,	0 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 A	Avail.Storage	Storage Description	
#1	56.40'	808 cf	Custom Stage Data (Prismatic)Listed below (Recalc)	
<b>"</b> 0	50.051	0.000 f	5,340 cf Overall - 3,320 cf Embedded = 2,020 cf x 40.0% Voids	
#2	56.65'	2,933 cf		
			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	Surf.Ar	rea Inc	c.Store Cum.Store	
(feet)	(sq-	-ft) (cubi	ic-feet) (cubic-feet)	
56.40	2,1	36	0 0	
58.90	2,1	36	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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Page 35

**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.Sto	rage Stor	rage Description
#1	56.80'	1,29		stom Stage Data (Prismatic)Listed below (Recalc) O1 cf Overall - 4,958 cf Embedded = 3,243 cf x 40.0% Voids
#2	57.05'	4,38	Insid Outs	Rainstore3 6 x 234 Inside #1 de= 39.4"W x 23.6"H => 6.07 sf x 3.28'L = 19.9 cf side= 39.4"W x 23.6"H => 6.46 sf x 3.28'L = 21.2 cf 58 cf Overall x 94.0% Voids
		5,67	78 cf Tota	al Available Storage
Elevatio		rf.Area (sq-ft)	Inc.Store	
56.8	•	2,780	,	0 0
59.7	75	2,780	8,20	1 8,201
Device	Routing	Invert	Outlet De	evices
#1	Discarded	56.80'	1.020 in/h	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)