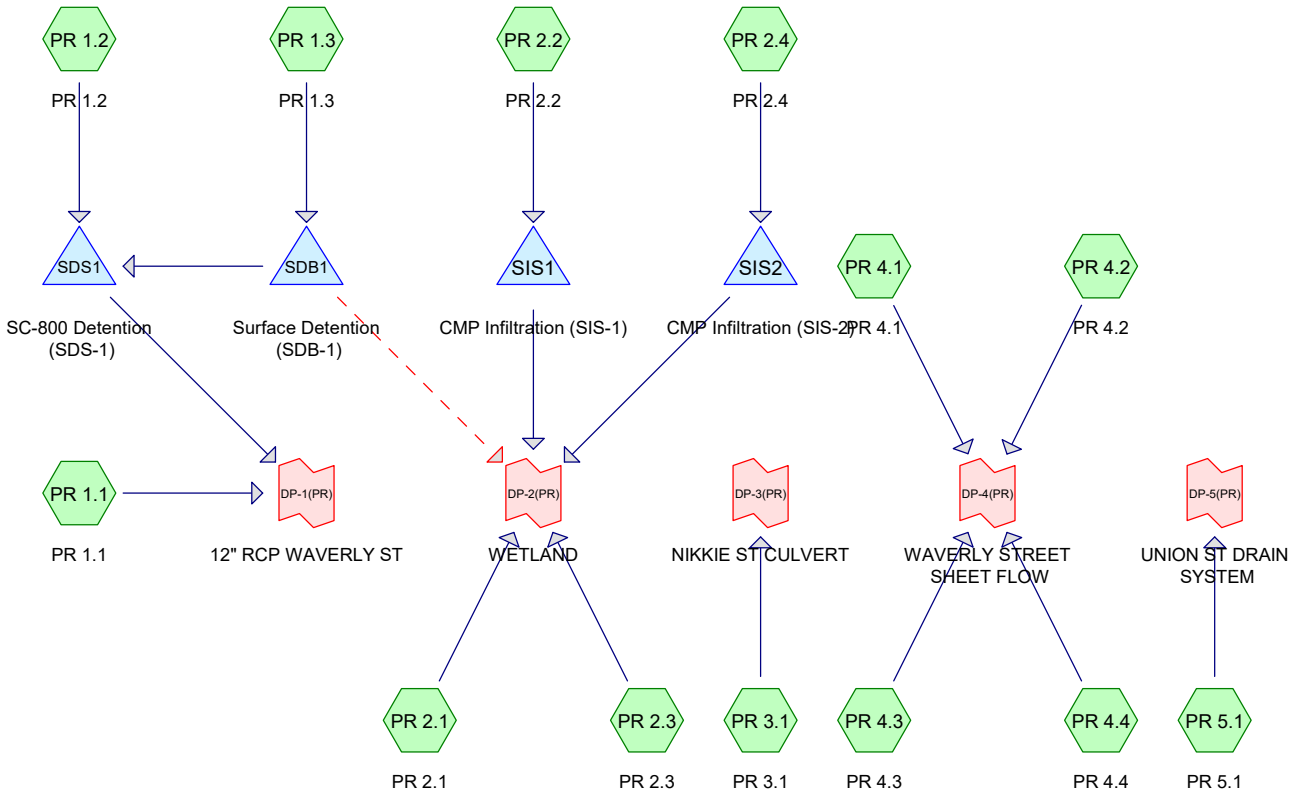

Subcat Reach Pond Link

Routing Diagram for 61 Waverly St Hydrology
Prepared by Symmes, Maini & McKee, Printed 2/6/2026

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.003	39	>75% Grass cover, Good, HSG A (PR 1.2, PR 1.3, PR 2.2, PR 2.4, PR 4.1)
0.100	61	>75% Grass cover, Good, HSG B (PR 1.1, PR 1.2, PR 4.1)
0.819	30	Meadow, non-grazed, HSG A (PR 2.1, PR 2.3, PR 4.2, PR 4.3, PR 4.4, PR 5.1)
0.420	58	Meadow, non-grazed, HSG B (PR 4.2, PR 4.3, PR 4.4)
3.809	98	Paved parking, HSG A (PR 1.1, PR 1.2, PR 1.3, PR 2.2, PR 2.4, PR 4.1, PR 5.1)
0.033	63	Pervious Pavers (PR 4.1)
1.276	98	Roofs, HSG A (PR 1.3, PR 2.2, PR 2.4)
0.218	98	Water Surface, 0% imp, HSG A (PR 1.3)
1.451	30	Woods, Good, HSG A (PR 1.3, PR 2.1, PR 2.3, PR 3.1, PR 4.3, PR 5.1)
10.128	**69**	**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
2.003	0.100	0.000	0.000	0.000	2.103	>75% Grass cover, Good	PR 1.1, PR 1.2, PR 1.3, PR 2.2, PR 2.4, PR 4.1
0.819	0.420	0.000	0.000	0.000	1.239	Meadow, non-grazed	PR 2.1, PR 2.3, PR 4.2, PR 4.3, PR 4.4, PR 5.1
3.809	0.000	0.000	0.000	0.000	3.809	Paved parking	PR 1.1, PR 1.2, PR 1.3, PR 2.2, PR 2.4, PR 4.1, PR 5.1
0.000	0.000	0.000	0.000	0.033	0.033	Pervious Pavers	PR 4.1
1.276	0.000	0.000	0.000	0.000	1.276	Roofs	PR 1.3, PR 2.2, PR 2.4
0.218	0.000	0.000	0.000	0.000	0.218	Water Surface, 0% imp	PR 1.3
1.451	0.000	0.000	0.000	0.000	1.451	Woods, Good	PR 1.3, PR 2.1, PR 2.3, PR 3.1, PR 4.3, PR 5.1
9.574	**0.520**	**0.000**	**0.000**	**0.033**	**10.128**	**TOTAL AREA**	

Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR 1.1: PR 1.1 Runoff Area=2,705 sf 50.28% Impervious Runoff Depth=1.51"
Tc=6.0 min CN=80 Runoff=0.11 cfs 0.008 af

Subcatchment PR 1.2: PR 1.2 Runoff Area=13,738 sf 36.99% Impervious Runoff Depth=0.67"
Tc=6.0 min CN=65 Runoff=0.20 cfs 0.018 af

Subcatchment PR 1.3: PR 1.3 Runoff Area=76,423 sf 61.68% Impervious Runoff Depth=1.72"
Flow Length=306' Tc=6.8 min CN=83 Runoff=3.45 cfs 0.252 af

Subcatchment PR 2.1: PR 2.1 Runoff Area=14,380 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=29' Slope=0.0200 '/' Tc=8.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 2.2: PR 2.2 Runoff Area=133,377 sf 76.23% Impervious Runoff Depth=1.80"
Flow Length=359' Tc=7.2 min CN=84 Runoff=6.20 cfs 0.459 af

Subcatchment PR 2.3: PR 2.3 Runoff Area=17,092 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=112' Tc=6.5 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 2.4: PR 2.4 Runoff Area=91,951 sf 71.48% Impervious Runoff Depth=1.58"
Tc=6.0 min CN=81 Runoff=3.89 cfs 0.278 af

Subcatchment PR 3.1: PR 3.1 Runoff Area=10,100 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 4.1: PR 4.1 Runoff Area=6,286 sf 3.42% Impervious Runoff Depth=0.11"
Tc=6.0 min CN=48 Runoff=0.00 cfs 0.001 af

Subcatchment PR 4.2: PR 4.2 Runoff Area=2,552 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=34 Runoff=0.00 cfs 0.000 af

Subcatchment PR 4.3: PR 4.3 Runoff Area=63,985 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=133' Tc=14.0 min CN=38 Runoff=0.00 cfs 0.000 af

Subcatchment PR 4.4: PR 4.4 Runoff Area=2,700 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 5.1: PR 5.1 Runoff Area=5,871 sf 4.56% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=33 Runoff=0.00 cfs 0.000 af

Pond SDB1: Surface Detention (SDB-1) Peak Elev=227.12' Storage=9,433 cf Inflow=3.45 cfs 0.252 af
Primary=0.04 cfs 0.190 af Secondary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.190 af

Pond SDS1: SC-800 Detention (SDS-1) Peak Elev=216.91' Storage=975 cf Inflow=0.22 cfs 0.208 af
Outflow=0.05 cfs 0.187 af

Pond SIS1: CMP Infiltration (SIS-1) Peak Elev=227.67' Storage=7,206 cf Inflow=6.20 cfs 0.459 af
Discarded=0.66 cfs 0.459 af Primary=0.00 cfs 0.000 af Outflow=0.66 cfs 0.459 af

Pond SIS2: CMP Infiltration (SIS-2) Peak Elev=230.07' Storage=4,186 cf Inflow=3.89 cfs 0.278 af
Discarded=0.44 cfs 0.278 af Primary=0.00 cfs 0.000 af Outflow=0.44 cfs 0.278 af

Link DP-1(PR): 12" RCP WAVERLY ST Inflow=0.11 cfs 0.195 af
Primary=0.11 cfs 0.195 af

Link DP-2(PR): WETLAND Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link DP-3(PR): NIKKIE ST CULVERT Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link DP-4(PR): WAVERLY STREET SHEET FLOW Inflow=0.00 cfs 0.001 af
Primary=0.00 cfs 0.001 af

Link DP-5(PR): UNION ST DRAIN SYSTEM Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 10.128 ac Runoff Volume = 1.016 af Average Runoff Depth = 1.20"
49.80% Pervious = 5.043 ac 50.20% Impervious = 5.084 ac

Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR 1.1: PR 1.1 Runoff Area=2,705 sf 50.28% Impervious Runoff Depth=3.09"
Tc=6.0 min CN=80 Runoff=0.23 cfs 0.016 af

Subcatchment PR 1.2: PR 1.2 Runoff Area=13,738 sf 36.99% Impervious Runoff Depth=1.81"
Tc=6.0 min CN=65 Runoff=0.64 cfs 0.048 af

Subcatchment PR 1.3: PR 1.3 Runoff Area=76,423 sf 61.68% Impervious Runoff Depth=3.38"
Flow Length=306' Tc=6.8 min CN=83 Runoff=6.73 cfs 0.495 af

Subcatchment PR 2.1: PR 2.1 Runoff Area=14,380 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=29' Slope=0.0200 '/' Tc=8.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 2.2: PR 2.2 Runoff Area=133,377 sf 76.23% Impervious Runoff Depth=3.48"
Flow Length=359' Tc=7.2 min CN=84 Runoff=11.89 cfs 0.888 af

Subcatchment PR 2.3: PR 2.3 Runoff Area=17,092 sf 0.00% Impervious Runoff Depth=0.01"
Flow Length=112' Tc=6.5 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 2.4: PR 2.4 Runoff Area=91,951 sf 71.48% Impervious Runoff Depth=3.19"
Tc=6.0 min CN=81 Runoff=7.88 cfs 0.561 af

Subcatchment PR 3.1: PR 3.1 Runoff Area=10,100 sf 0.00% Impervious Runoff Depth=0.01"
Tc=6.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 4.1: PR 4.1 Runoff Area=6,286 sf 3.42% Impervious Runoff Depth=0.68"
Tc=6.0 min CN=48 Runoff=0.07 cfs 0.008 af

Subcatchment PR 4.2: PR 4.2 Runoff Area=2,552 sf 0.00% Impervious Runoff Depth=0.09"
Tc=6.0 min CN=34 Runoff=0.00 cfs 0.000 af

Subcatchment PR 4.3: PR 4.3 Runoff Area=63,985 sf 0.00% Impervious Runoff Depth=0.21"
Flow Length=133' Tc=14.0 min CN=38 Runoff=0.05 cfs 0.026 af

Subcatchment PR 4.4: PR 4.4 Runoff Area=2,700 sf 0.00% Impervious Runoff Depth=0.01"
Tc=6.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment PR 5.1: PR 5.1 Runoff Area=5,871 sf 4.56% Impervious Runoff Depth=0.06"
Tc=6.0 min CN=33 Runoff=0.00 cfs 0.001 af

Pond SDB1: Surface Detention (SDB-1) Peak Elev=228.25' Storage=17,699 cf Inflow=6.73 cfs 0.495 af
Primary=0.09 cfs 0.368 af Secondary=0.00 cfs 0.000 af Outflow=0.09 cfs 0.368 af

Pond SDS1: SC-800 Detention (SDS-1) Peak Elev=217.00' Storage=1,107 cf Inflow=0.67 cfs 0.416 af
Outflow=0.15 cfs 0.394 af

Pond SIS1: CMP Infiltration (SIS-1) Peak Elev=228.87' Storage=18,219 cf Inflow=11.89 cfs 0.888 af
Discarded=0.66 cfs 0.889 af Primary=0.00 cfs 0.000 af Outflow=0.66 cfs 0.889 af

Pond SIS2: CMP Infiltration (SIS-2) Peak Elev=231.29' Storage=11,459 cf Inflow=7.88 cfs 0.561 af
Discarded=0.44 cfs 0.561 af Primary=0.00 cfs 0.000 af Outflow=0.44 cfs 0.561 af

Link DP-1(PR): 12" RCP WAVERLY ST Inflow=0.23 cfs 0.410 af
Primary=0.23 cfs 0.410 af

Link DP-2(PR): WETLAND Inflow=0.00 cfs 0.001 af
Primary=0.00 cfs 0.001 af

Link DP-3(PR): NIKKIE ST CULVERT Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link DP-4(PR): WAVERLY STREET SHEET FLOW Inflow=0.08 cfs 0.035 af
Primary=0.08 cfs 0.035 af

Link DP-5(PR): UNION ST DRAIN SYSTEM Inflow=0.00 cfs 0.001 af
Primary=0.00 cfs 0.001 af

Total Runoff Area = 10.128 ac Runoff Volume = 2.044 af Average Runoff Depth = 2.42"
49.80% Pervious = 5.043 ac 50.20% Impervious = 5.084 ac

Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR 1.1: PR 1.1 Runoff Area=2,705 sf 50.28% Impervious Runoff Depth=5.83"
Tc=6.0 min CN=80 Runoff=0.42 cfs 0.030 af

Subcatchment PR 1.2: PR 1.2 Runoff Area=13,738 sf 36.99% Impervious Runoff Depth=4.07"
Tc=6.0 min CN=65 Runoff=1.50 cfs 0.107 af

Subcatchment PR 1.3: PR 1.3 Runoff Area=76,423 sf 61.68% Impervious Runoff Depth=6.19"
Flow Length=306' Tc=6.8 min CN=83 Runoff=12.03 cfs 0.905 af

Subcatchment PR 2.1: PR 2.1 Runoff Area=14,380 sf 0.00% Impervious Runoff Depth=0.47"
Flow Length=29' Slope=0.0200 '/' Tc=8.0 min CN=30 Runoff=0.05 cfs 0.013 af

Subcatchment PR 2.2: PR 2.2 Runoff Area=133,377 sf 76.23% Impervious Runoff Depth=6.31"
Flow Length=359' Tc=7.2 min CN=84 Runoff=21.02 cfs 1.609 af

Subcatchment PR 2.3: PR 2.3 Runoff Area=17,092 sf 0.00% Impervious Runoff Depth=0.47"
Flow Length=112' Tc=6.5 min CN=30 Runoff=0.06 cfs 0.015 af

Subcatchment PR 2.4: PR 2.4 Runoff Area=91,951 sf 71.48% Impervious Runoff Depth=5.95"
Tc=6.0 min CN=81 Runoff=14.42 cfs 1.047 af

Subcatchment PR 3.1: PR 3.1 Runoff Area=10,100 sf 0.00% Impervious Runoff Depth=0.47"
Tc=6.0 min CN=30 Runoff=0.03 cfs 0.009 af

Subcatchment PR 4.1: PR 4.1 Runoff Area=6,286 sf 3.42% Impervious Runoff Depth=2.17"
Tc=6.0 min CN=48 Runoff=0.33 cfs 0.026 af

Subcatchment PR 4.2: PR 4.2 Runoff Area=2,552 sf 0.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=34 Runoff=0.02 cfs 0.004 af

Subcatchment PR 4.3: PR 4.3 Runoff Area=63,985 sf 0.00% Impervious Runoff Depth=1.16"
Flow Length=133' Tc=14.0 min CN=38 Runoff=0.98 cfs 0.141 af

Subcatchment PR 4.4: PR 4.4 Runoff Area=2,700 sf 0.00% Impervious Runoff Depth=0.47"
Tc=6.0 min CN=30 Runoff=0.01 cfs 0.002 af

Subcatchment PR 5.1: PR 5.1 Runoff Area=5,871 sf 4.56% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=33 Runoff=0.04 cfs 0.008 af

Pond SDB1: Surface Detention (SDB-1) Peak Elev=228.78' Storage=22,125 cf Inflow=12.03 cfs 0.905 af
Primary=2.53 cfs 0.765 af Secondary=0.00 cfs 0.000 af Outflow=2.53 cfs 0.765 af

Pond SDS1: SC-800 Detention (SDS-1) Peak Elev=219.80' Storage=4,433 cf Inflow=2.88 cfs 0.872 af
Outflow=1.53 cfs 0.850 af

Pond SIS1: CMP Infiltration (SIS-1) Peak Elev=231.44' Storage=38,601 cf Inflow=21.02 cfs 1.609 af
Discarded=0.66 cfs 1.439 af Primary=0.21 cfs 0.170 af Outflow=0.87 cfs 1.609 af

Pond SIS2: CMP Infiltration (SIS-2) Peak Elev=233.82' Storage=24,950 cf Inflow=14.42 cfs 1.047 af
Discarded=0.44 cfs 0.908 af Primary=0.16 cfs 0.139 af Outflow=0.60 cfs 1.047 af

Link DP-1(PR): 12" RCP WAVERLY ST Inflow=1.57 cfs 0.880 af
Primary=1.57 cfs 0.880 af

Link DP-2(PR): WETLAND Inflow=0.41 cfs 0.338 af
Primary=0.41 cfs 0.338 af

Link DP-3(PR): NIKKIE ST CULVERT Inflow=0.03 cfs 0.009 af
Primary=0.03 cfs 0.009 af

Link DP-4(PR): WAVERLY STREET SHEET FLOW Inflow=1.20 cfs 0.174 af
Primary=1.20 cfs 0.174 af

Link DP-5(PR): UNION ST DRAIN SYSTEM Inflow=0.04 cfs 0.008 af
Primary=0.04 cfs 0.008 af

Total Runoff Area = 10.128 ac Runoff Volume = 3.917 af Average Runoff Depth = 4.64"
49.80% Pervious = 5.043 ac 50.20% Impervious = 5.084 ac

Summary for Subcatchment PR 1.1: PR 1.1

Runoff = 0.23 cfs @ 12.09 hrs, Volume= 0.016 af, Depth= 3.09"
Routed to Link DP-1(PR) : 12" RCP WAVERLY ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
1,345	61	>75% Grass cover, Good, HSG B
1,360	98	Paved parking, HSG A
2,705	80	Weighted Average
1,345		49.72% Pervious Area
1,360		50.28% Impervious Area

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

Summary for Subcatchment PR 1.2: PR 1.2

Runoff = 0.64 cfs @ 12.09 hrs, Volume= 0.048 af, Depth= 1.81"
Routed to Pond SDS1 : SC-800 Detention (SDS-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
5,081	98	Paved parking, HSG A
6,109	39	>75% Grass cover, Good, HSG A
2,548	61	>75% Grass cover, Good, HSG B
13,738	65	Weighted Average
8,657		63.01% Pervious Area
5,081		36.99% Impervious Area

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

Summary for Subcatchment PR 1.3: PR 1.3

[47] Hint: Peak is 189% of capacity of segment #4

Runoff = 6.73 cfs @ 12.10 hrs, Volume= 0.495 af, Depth= 3.38"
Routed to Pond SDB1 : Surface Detention (SDB-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
10,500	98	Roofs, HSG A
36,641	98	Paved parking, HSG A
19,041	39	>75% Grass cover, Good, HSG A
9,482	98	Water Surface, 0% imp, HSG A
759	30	Woods, Good, HSG A
76,423	83	Weighted Average
29,282		38.32% Pervious Area
47,141		61.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	50	0.0200	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.20"
0.4	56	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	160	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	40	0.0100	4.54	3.56	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
6.8	306	Total			

Summary for Subcatchment PR 2.1: PR 2.1

Runoff = 0.00 cfs @ 22.48 hrs, Volume= 0.000 af, Depth= 0.01"
Routed to Link DP-2(PR) : WETLAND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
9,911	30	Meadow, non-grazed, HSG A
4,469	30	Woods, Good, HSG A
14,380	30	Weighted Average
14,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	29	0.0200	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"

Summary for Subcatchment PR 2.2: PR 2.2

[47] Hint: Peak is 334% of capacity of segment #4

Runoff = 11.89 cfs @ 12.10 hrs, Volume= 0.888 af, Depth= 3.48"
Routed to Pond SIS1 : CMP Infiltration (SIS-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

	Area (sf)	CN	Description
	24,000	98	Roofs, HSG A
*	77,676	98	Paved parking, HSG A
	31,701	39	>75% Grass cover, Good, HSG A
	133,377	84	Weighted Average
	31,701		23.77% Pervious Area
	101,676		76.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	50	0.0200	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.20"
0.4	52	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.6	96	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	161	0.0100	4.54	3.56	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.2	359	Total			

Summary for Subcatchment PR 2.3: PR 2.3

Runoff = 0.00 cfs @ 22.44 hrs, Volume= 0.000 af, Depth= 0.01"
Routed to Link DP-2(PR) : WETLAND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
13,487	30	Woods, Good, HSG A
3,605	30	Meadow, non-grazed, HSG A
17,092	30	Weighted Average
17,092		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.1200	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.5	62	0.1500	1.94		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.5	112	Total			

Summary for Subcatchment PR 2.4: PR 2.4

Runoff = 7.88 cfs @ 12.09 hrs, Volume= 0.561 af, Depth= 3.19"
Routed to Pond SIS2 : CMP Infiltration (SIS-2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
21,062	98	Roofs, HSG A
44,664	98	Paved parking, HSG A
26,225	39	>75% Grass cover, Good, HSG A
91,951	81	Weighted Average
26,225		28.52% Pervious Area
65,726		71.48% Impervious Area

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

Summary for Subcatchment PR 3.1: PR 3.1

Runoff = 0.00 cfs @ 22.46 hrs, Volume= 0.000 af, Depth= 0.01"
Routed to Link DP-3(PR) : NIKKIE ST CULVERT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
10,100	30	Woods, Good, HSG A
10,100		100.00% Pervious Area

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

Summary for Subcatchment PR 4.1: PR 4.1

Runoff = 0.07 cfs @ 12.13 hrs, Volume= 0.008 af, Depth= 0.68"
Routed to Link DP-4(PR) : WAVERLY STREET SHEET FLOW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

	Area (sf)	CN	Description
	215	98	Paved parking, HSG A
*	1,450	63	Pervious Pavers
	4,161	39	>75% Grass cover, Good, HSG A
	460	61	>75% Grass cover, Good, HSG B
	6,286	48	Weighted Average
	6,071		96.58% Pervious Area
	215		3.42% Impervious Area

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

Summary for Subcatchment PR 4.2: PR 4.2

Runoff = 0.00 cfs @ 15.14 hrs, Volume= 0.000 af, Depth= 0.09"
Routed to Link DP-4(PR) : WAVERLY STREET SHEET FLOW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
2,172	30	Meadow, non-grazed, HSG A
380	58	Meadow, non-grazed, HSG B
2,552	34	Weighted Average
2,552		100.00% Pervious Area

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

Summary for Subcatchment PR 4.3: PR 4.3

Runoff = 0.05 cfs @ 12.61 hrs, Volume= 0.026 af, Depth= 0.21"
Routed to Link DP-4(PR) : WAVERLY STREET SHEET FLOW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
13,041	30	Meadow, non-grazed, HSG A
17,899	58	Meadow, non-grazed, HSG B
33,045	30	Woods, Good, HSG A
63,985	38	Weighted Average
63,985		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	50	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.7	83	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
14.0	133	Total			

Summary for Subcatchment PR 4.4: PR 4.4

Runoff = 0.00 cfs @ 22.46 hrs, Volume= 0.000 af, Depth= 0.01"
Routed to Link DP-4(PR) : WAVERLY STREET SHEET FLOW

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
2,682	30	Meadow, non-grazed, HSG A
18	58	Meadow, non-grazed, HSG B
2,700	30	Weighted Average
2,700		100.00% Pervious Area

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

Summary for Subcatchment PR 5.1: PR 5.1

Runoff = 0.00 cfs @ 15.50 hrs, Volume= 0.001 af, Depth= 0.06"
Routed to Link DP-5(PR) : UNION ST DRAIN SYSTEM

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-yr Rainfall=5.23"

Area (sf)	CN	Description
1,338	30	Woods, Good, HSG A
268	98	Paved parking, HSG A
4,265	30	Meadow, non-grazed, HSG A
5,871	33	Weighted Average
5,603		95.44% Pervious Area
268		4.56% Impervious Area

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

Summary for Pond SDB1: Surface Detention (SDB-1)

Inflow Area = 1.754 ac, 61.68% Impervious, Inflow Depth = 3.38" for 10-yr event
Inflow = 6.73 cfs @ 12.10 hrs, Volume= 0.495 af
Outflow = 0.09 cfs @ 21.70 hrs, Volume= 0.368 af, Atten= 99%, Lag= 575.8 min
Primary = 0.09 cfs @ 21.70 hrs, Volume= 0.368 af
Routed to Pond SDS1 : SC-800 Detention (SDS-1)
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link DP-2(PR) : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Peak Elev= 228.25' @ 21.70 hrs Surf.Area= 7,977 sf Storage= 17,699 cf

Plug-Flow detention time= 1,868.7 min calculated for 0.368 af (74% of inflow)
Center-of-Mass det. time= 1,781.5 min (2,593.9 - 812.4)

Volume	Invert	Avail.Storage	Storage Description
#1	225.50'	33,533 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
225.50	4,957	0	0
226.00	5,469	2,607	2,607
228.00	7,674	13,143	15,750
230.00	10,109	17,783	33,533

Device	Routing	Invert	Outlet Devices
#1	Primary	224.50'	**12.0" Round Culvert** L= 179.0' Ke= 0.500 Inlet / Outlet Invert= 224.50' / 215.62' S= 0.0496 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	225.50'	**1.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	227.00'	**1.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	227.50'	**1.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	228.50'	**5.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#6	Secondary	229.00'	**8.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height

Primary OutFlow Max=0.09 cfs @ 21.70 hrs HW=228.25' TW=216.97' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.09 cfs of 6.82 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.04 cfs @ 7.92 fps)
  ├**3=Orifice/Grate** (Orifice Controls 0.03 cfs @ 5.29 fps)
  ├**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 4.05 fps)
  └**5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=225.50' TW=0.00' (Dynamic Tailwater)
└**6=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond SDB1: Surface Detention (SDB-1)

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
225.50	0.00	0.00	0.00
225.55	0.00	0.00	0.00
225.60	0.01	0.01	0.00
225.65	0.01	0.01	0.00
225.70	0.01	0.01	0.00
225.75	0.01	0.01	0.00
225.80	0.01	0.01	0.00
225.85	0.01	0.01	0.00
225.90	0.02	0.02	0.00
225.95	0.02	0.02	0.00
226.00	0.02	0.02	0.00
226.05	0.02	0.02	0.00
226.10	0.02	0.02	0.00
226.15	0.02	0.02	0.00
226.20	0.02	0.02	0.00
226.25	0.02	0.02	0.00
226.30	0.02	0.02	0.00
226.35	0.02	0.02	0.00
226.40	0.02	0.02	0.00
226.45	0.03	0.03	0.00
226.50	0.03	0.03	0.00
226.55	0.03	0.03	0.00
226.60	0.03	0.03	0.00
226.65	0.03	0.03	0.00
226.70	0.03	0.03	0.00
226.75	0.03	0.03	0.00
226.80	0.03	0.03	0.00
226.85	0.03	0.03	0.00
226.90	0.03	0.03	0.00
226.95	0.03	0.03	0.00
227.00	0.03	0.03	0.00
227.05	0.03	0.03	0.00
227.10	0.04	0.04	0.00
227.15	0.04	0.04	0.00
227.20	0.04	0.04	0.00
227.25	0.05	0.05	0.00
227.30	0.05	0.05	0.00
227.35	0.05	0.05	0.00
227.40	0.05	0.05	0.00
227.45	0.05	0.05	0.00
227.50	0.05	0.05	0.00
227.55	0.06	0.06	0.00
227.60	0.06	0.06	0.00
227.65	0.07	0.07	0.00
227.70	0.07	0.07	0.00
227.75	0.07	0.07	0.00
227.80	0.08	0.08	0.00
227.85	0.08	0.08	0.00
227.90	0.08	0.08	0.00
227.95	0.08	0.08	0.00
228.00	0.08	0.08	0.00
228.05	0.09	0.09	0.00
228.10	0.09	0.09	0.00
228.15	0.09	0.09	0.00
228.20	0.09	0.09	0.00
228.25	0.09	0.09	0.00
228.30	0.10	0.10	0.00
228.35	0.10	0.10	0.00
228.40	0.10	0.10	0.00
228.45	0.10	0.10	0.00
228.50	0.10	0.10	0.00
228.55	0.29	0.29	0.00
228.60	0.62	0.62	0.00
228.65	1.05	1.05	0.00
228.70	1.56	1.56	0.00
228.75	2.13	2.13	0.00
228.80	2.77	2.77	0.00
228.85	3.45	3.45	0.00
228.90	4.18	4.18	0.00
228.95	4.96	4.96	0.00
229.00	5.78	5.78	0.00
229.05	6.94	6.64	0.30
229.10	8.38	7.54	0.85
229.15	9.27	7.70	1.57
229.20	10.19	7.75	2.44
229.25	11.24	7.80	3.45
229.30	12.42	7.84	4.58
229.35	13.72	7.89	5.83
229.40	15.13	7.93	7.19
229.45	16.65	7.98	8.67
229.50	18.27	8.02	10.25
229.55	20.01	8.07	11.94
229.60	21.84	8.11	13.73
229.65	23.79	8.15	15.63
229.70	25.83	8.20	17.63
229.75	27.97	8.24	19.73
229.80	30.22	8.29	21.93
229.85	32.57	8.33	24.24
229.90	35.01	8.37	26.64
229.95	37.56	8.41	29.14
230.00	**40.20**	**8.46**	**31.75**

Stage-Area-Storage for Pond SDB1: Surface Detention (SDB-1)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
225.50	4,957	0
225.55	5,008	249
225.60	5,059	501
225.65	5,111	755
225.70	5,162	1,012
225.75	5,213	1,271
225.80	5,264	1,533
225.85	5,315	1,798
225.90	5,367	2,065
225.95	5,418	2,334
226.00	5,469	2,607
226.05	5,524	2,881
226.10	5,579	3,159
226.15	5,634	3,439
226.20	5,689	3,722
226.25	5,745	4,008
226.30	5,800	4,297
226.35	5,855	4,588
226.40	5,910	4,882
226.45	5,965	5,179
226.50	6,020	5,479
226.55	6,075	5,781
226.60	6,130	6,086
226.65	6,186	6,394
226.70	6,241	6,705
226.75	6,296	7,018
226.80	6,351	7,335
226.85	6,406	7,653
226.90	6,461	7,975
226.95	6,516	8,300
227.00	6,572	8,627
227.05	6,627	8,957
227.10	6,682	9,289
227.15	6,737	9,625
227.20	6,792	9,963
227.25	6,847	10,304
227.30	6,902	10,648
227.35	6,957	10,994
227.40	7,013	11,344
227.45	7,068	11,696
227.50	7,123	12,050
227.55	7,178	12,408
227.60	7,233	12,768
227.65	7,288	13,131
227.70	7,343	13,497
227.75	7,398	13,865
227.80	7,454	14,237
227.85	7,509	14,611
227.90	7,564	14,988
227.95	7,619	15,367
228.00	7,674	15,750
228.05	7,735	16,135
228.10	7,796	16,523
228.15	7,857	16,914
228.20	7,917	17,309
228.25	7,978	17,706
228.30	8,039	18,106
228.35	8,100	18,510
228.40	8,161	18,917
228.45	8,222	19,326
228.50	8,283	19,739
228.55	8,344	20,154
228.60	8,404	20,573
228.65	8,465	20,995
228.70	8,526	21,420
228.75	8,587	21,847
228.80	8,648	22,278
228.85	8,709	22,712
228.90	8,770	23,149
228.95	8,831	23,589
229.00	8,892	24,032
229.05	8,952	24,478
229.10	9,013	24,927
229.15	9,074	25,380
229.20	9,135	25,835
229.25	9,196	26,293
229.30	9,257	26,754
229.35	9,318	27,219
229.40	9,379	27,686
229.45	9,439	28,157
229.50	9,500	28,630
229.55	9,561	29,107
229.60	9,622	29,586
229.65	9,683	30,069
229.70	9,744	30,555
229.75	9,805	31,043
229.80	9,866	31,535
229.85	9,926	32,030
229.90	9,987	32,528
229.95	10,048	33,029
230.00	**10,109**	**33,533**

Summary for Pond SDS1: SC-800 Detention (SDS-1)

Inflow Area = 2.070 ac, 57.92% Impervious, Inflow Depth > 2.41" for 10-yr event
Inflow = 0.67 cfs @ 12.10 hrs, Volume= 0.416 af
Outflow = 0.15 cfs @ 12.96 hrs, Volume= 0.394 af, Atten= 78%, Lag= 52.0 min
Primary = 0.15 cfs @ 12.96 hrs, Volume= 0.394 af
Routed to Link DP-1(PR) : 12" RCP WAVERLY ST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Peak Elev= 217.00' @ 12.96 hrs Surf.Area= 1,821 sf Storage= 1,107 cf
Flood Elev= 393.58' Surf.Area= 1,821 sf Storage= 4,577 cf

Plug-Flow detention time= 273.9 min calculated for 0.394 af (95% of inflow)
Center-of-Mass det. time= 106.3 min (2,501.8 - 2,395.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	215.75'	2,108 cf	**30.00'W x 60.70'L x 4.25'H Field A** 7,739 cf Overall - 2,469 cf Embedded = 5,270 cf x 40.0% Voids
#2A	216.75'	2,469 cf	**ADS_StormTech SC-800 +Cap** x 48 Inside #1 Effective Size= 45.0"W x 33.0"H => 7.11 sf x 7.12'L = 50.6 cf Overall Size= 51.0"W x 33.0"H x 7.55'L with 0.43' Overlap 48 Chambers in 6 Rows Cap Storage= 3.4 cf x 2 x 6 rows = 41.0 cf
		4,577 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	215.75'	**12.0" Round Culvert** L= 27.0' Ke= 0.500 Inlet / Outlet Invert= 215.75' / 215.62' S= 0.0048 '/' Cc= 0.900 n= 0.013 Cast iron, coated, Flow Area= 0.79 sf
#2	Device 1	215.75'	**0.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	216.85'	**3.0" W x 3.0" H Vert. Orifice/Grate X 3.00** C= 0.600 Limited to weir flow at low heads
#4	Primary	219.80'	**4.5' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.15 cfs @ 12.96 hrs HW=217.00' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.15 cfs of 2.76 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.01 cfs @ 5.34 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.14 cfs @ 1.25 fps)
- **4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond SDS1: SC-800 Detention (SDS-1)

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
215.75	0.00	267.75	151.77	319.75	219.55	371.75	270.88
216.75	0.01	268.75	153.35	320.75	220.65	372.75	271.77
217.75	0.80	269.75	154.92	321.75	221.75	373.75	272.66
218.75	1.21	270.75	156.48	322.75	222.84	374.75	273.54
219.75	1.52	271.75	158.02	323.75	223.92	375.75	274.43
220.75	14.82	272.75	159.54	324.75	225.00	376.75	275.31
221.75	27.26	273.75	161.05	325.75	226.07	377.75	276.18
222.75	35.14	274.75	162.55	326.75	227.14	378.75	277.06
223.75	41.51	275.75	164.03	327.75	228.20	379.75	277.93
224.75	47.01	276.75	165.50	328.75	229.26	380.75	278.80
225.75	51.92	277.75	166.95	329.75	230.31	381.75	279.67
226.75	56.40	278.75	168.40	330.75	231.36	382.75	280.53
227.75	60.54	279.75	169.83	331.75	232.41	383.75	281.39
228.75	64.42	280.75	171.25	332.75	233.44	384.75	282.25
229.75	68.08	281.75	172.66	333.75	234.48	385.75	283.11
230.75	71.55	282.75	174.05	334.75	235.51	386.75	283.96
231.75	74.86	283.75	175.44	335.75	236.53	387.75	284.81
232.75	78.03	284.75	176.81	336.75	237.56	388.75	285.66
233.75	81.07	285.75	178.17	337.75	238.57	389.75	286.51
234.75	84.01	286.75	179.53	338.75	239.58	390.75	287.35
235.75	86.84	287.75	180.87	339.75	240.59	391.75	288.19
236.75	89.59	288.75	182.20	340.75	241.60	392.75	**289.03**
237.75	92.25	289.75	183.53	341.75	242.60		
238.75	94.84	290.75	184.84	342.75	243.59		
239.75	97.36	291.75	186.15	343.75	244.58		
240.75	99.81	292.75	187.44	344.75	245.57		
241.75	102.21	293.75	188.73	345.75	246.55		
242.75	104.55	294.75	190.01	346.75	247.53		
243.75	106.84	295.75	191.28	347.75	248.51		
244.75	109.08	296.75	192.54	348.75	249.48		
245.75	111.28	297.75	193.79	349.75	250.45		
246.75	113.43	298.75	195.04	350.75	251.41		
247.75	115.55	299.75	196.27	351.75	252.37		
248.75	117.62	300.75	197.50	352.75	253.33		
249.75	119.66	301.75	198.72	353.75	254.29		
250.75	121.67	302.75	199.94	354.75	255.24		
251.75	123.64	303.75	201.14	355.75	256.18		
252.75	125.59	304.75	202.34	356.75	257.13		
253.75	127.50	305.75	203.54	357.75	258.06		
254.75	129.38	306.75	204.72	358.75	259.00		
255.75	131.24	307.75	205.90	359.75	259.93		
256.75	133.07	308.75	207.07	360.75	260.86		
257.75	134.88	309.75	208.24	361.75	261.79		
258.75	136.66	310.75	209.40	362.75	262.71		
259.75	138.42	311.75	210.55	363.75	263.63		
260.75	140.16	312.75	211.70	364.75	264.55		
261.75	141.88	313.75	212.84	365.75	265.46		
262.75	143.57	314.75	213.97	366.75	266.37		
263.75	145.25	315.75	215.10	367.75	267.28		
264.75	146.90	316.75	216.22	368.75	268.18		
265.75	148.54	317.75	217.34	369.75	269.08		
266.75	150.16	318.75	218.45	370.75	269.98		

Stage-Area-Storage for Pond SDS1: SC-800 Detention (SDS-1)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
215.75	0	319.75	4,577
217.75	2,190	321.75	4,577
219.75	**4,395**	323.75	4,577
221.75	**4,577**	325.75	4,577
223.75	4,577	327.75	4,577
225.75	4,577	329.75	4,577
227.75	4,577	331.75	4,577
229.75	4,577	333.75	4,577
231.75	4,577	335.75	4,577
233.75	4,577	337.75	4,577
235.75	4,577	339.75	4,577
237.75	4,577	341.75	4,577
239.75	4,577	343.75	4,577
241.75	4,577	345.75	4,577
243.75	4,577	347.75	4,577
245.75	4,577	349.75	4,577
247.75	4,577	351.75	4,577
249.75	4,577	353.75	4,577
251.75	4,577	355.75	4,577
253.75	4,577	357.75	4,577
255.75	4,577	359.75	4,577
257.75	4,577	361.75	4,577
259.75	4,577	363.75	4,577
261.75	4,577	365.75	4,577
263.75	4,577	367.75	4,577
265.75	4,577	369.75	4,577
267.75	4,577	371.75	4,577
269.75	4,577	373.75	4,577
271.75	4,577	375.75	4,577
273.75	4,577	377.75	4,577
275.75	4,577	379.75	4,577
277.75	4,577	381.75	4,577
279.75	4,577	383.75	4,577
281.75	4,577	385.75	4,577
283.75	4,577	387.75	4,577
285.75	4,577	389.75	4,577
287.75	4,577	391.75	4,577
289.75	4,577		
291.75	4,577		
293.75	4,577		
295.75	4,577		
297.75	4,577		
299.75	4,577		
301.75	4,577		
303.75	4,577		
305.75	4,577		
307.75	4,577		
309.75	4,577		
311.75	4,577		
313.75	4,577		
315.75	4,577		
317.75	4,577		

Summary for Pond SIS1: CMP Infiltration (SIS-1)

Inflow Area = 3.062 ac, 76.23% Impervious, Inflow Depth = 3.48" for 10-yr event
Inflow = 11.89 cfs @ 12.10 hrs, Volume= 0.888 af
Outflow = 0.66 cfs @ 11.55 hrs, Volume= 0.889 af, Atten= 94%, Lag= 0.0 min
Discarded = 0.66 cfs @ 11.55 hrs, Volume= 0.889 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link DP-2(PR) : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Peak Elev= 228.87' @ 14.37 hrs Surf.Area= 11,886 sf Storage= 18,219 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 255.8 min (1,065.7 - 809.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	226.50'	12,571 cf	**84.00'W x 130.00'L x 5.00'H Field A** 54,600 cf Overall - 23,172 cf Embedded = 31,428 cf x 40.0% Voids
#2A	227.00'	23,172 cf	**CMP Round 48** x 84 Inside #1 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L 84 Chambers in 14 Rows 82.00' Header x 12.57 sf x 2 = 2,060.9 cf Inside
#3B	226.50'	1,123 cf	**42.00'W x 23.00'L x 5.00'H Field B** 4,830 cf Overall - 2,023 cf Embedded = 2,807 cf x 40.0% Voids
#4B	227.00'	2,023 cf	**CMP Round 48** x 7 Inside #3 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L Row Length Adjustment= +3.00' x 12.57 sf x 7 rows
		38,889 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	226.50'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	228.95'	**12.0" Round Culvert** L= 158.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 228.95' / 228.00' S= 0.0060 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.79 sf
#3	Device 2	229.00'	**2.0" W x 2.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	231.45'	**4.5' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.66 cfs @ 11.55 hrs HW=226.57' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.66 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=226.50' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)
  ├**3=Orifice/Grate** (Controls 0.00 cfs)
  └**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond SIS1: CMP Infiltration (SIS-1)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
226.50	0.00	**0.00**	0.00
226.60	0.66	**0.66**	0.00
226.70	0.66	0.66	0.00
226.80	0.66	0.66	0.00
226.90	0.66	0.66	0.00
227.00	0.66	0.66	0.00
227.10	0.66	0.66	0.00
227.20	0.66	0.66	0.00
227.30	0.66	0.66	0.00
227.40	0.66	0.66	0.00
227.50	0.66	0.66	0.00
227.60	0.66	0.66	0.00
227.70	0.66	0.66	0.00
227.80	0.66	0.66	0.00
227.90	0.66	0.66	0.00
228.00	0.66	0.66	0.00
228.10	0.66	0.66	0.00
228.20	0.66	0.66	0.00
228.30	0.66	0.66	0.00
228.40	0.66	0.66	0.00
228.50	0.66	0.66	0.00
228.60	0.66	0.66	0.00
228.70	0.66	0.66	0.00
228.80	0.66	0.66	0.00
228.90	0.66	0.66	0.00
229.00	0.66	0.66	0.00
229.10	0.68	0.66	0.02
229.20	0.71	0.66	0.04
229.30	0.72	0.66	0.06
229.40	0.74	0.66	0.08
229.50	0.75	0.66	0.09
229.60	0.76	0.66	0.10
229.70	0.77	0.66	0.10
229.80	0.78	0.66	0.11
229.90	0.78	0.66	0.12
230.00	0.79	0.66	0.13
230.10	0.80	0.66	0.13
230.20	0.80	0.66	0.14
230.30	0.81	0.66	0.15
230.40	0.82	0.66	0.15
230.50	0.82	0.66	0.16
230.60	0.83	0.66	0.16
230.70	0.83	0.66	0.17
230.80	0.84	0.66	0.18
230.90	0.84	0.66	0.18
231.00	0.85	0.66	0.19
231.10	0.85	0.66	0.19
231.20	0.86	0.66	0.19
231.30	0.86	0.66	0.20
231.40	0.87	0.66	0.20
231.50	1.04	0.66	0.37
231.60	1.72	0.66	1.06
231.70	2.70	0.66	2.04
231.80	3.88	0.66	3.22
231.90	4.89	0.66	4.22
232.00	4.96	0.66	4.29
232.10	5.03	0.66	4.37
232.20	5.10	0.66	4.44
232.30	5.17	0.66	4.50
232.40	5.24	0.66	4.57
232.50	5.30	0.66	4.64
232.60	5.37	0.66	4.70
232.70	5.43	0.66	4.77
232.80	5.50	0.66	4.83
232.90	5.56	0.66	4.90
233.00	5.62	0.66	4.96
233.10	5.68	0.66	5.02
233.20	5.74	0.66	5.08
233.30	5.80	0.66	5.14
233.40	**5.86**	0.66	**5.20**

Stage-Area-Storage for Pond SIS1: CMP Infiltration (SIS-1)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
226.50	**11,886**	0
226.60	11,886	475
226.70	11,886	951
226.80	11,886	1,426
226.90	11,886	1,902
227.00	11,886	2,377
227.10	11,886	2,953
227.20	11,886	3,611
227.30	11,886	4,319
227.40	11,886	5,066
227.50	11,886	5,845
227.60	11,886	6,652
227.70	11,886	7,482
227.80	11,886	8,333
227.90	11,886	9,202
228.00	11,886	10,087
228.10	11,886	10,986
228.20	11,886	11,897
228.30	11,886	12,818
228.40	11,886	13,749
228.50	11,886	14,687
228.60	11,886	15,631
228.70	11,886	16,580
228.80	11,886	17,533
228.90	11,886	18,488
229.00	11,886	19,445
229.10	11,886	20,401
229.20	11,886	21,356
229.30	11,886	22,309
229.40	11,886	23,258
229.50	11,886	24,203
229.60	11,886	25,141
229.70	11,886	26,071
229.80	11,886	26,993
229.90	11,886	27,903
230.00	11,886	28,802
230.10	11,886	29,687
230.20	11,886	30,556
230.30	11,886	31,407
230.40	11,886	32,238
230.50	11,886	33,044
230.60	11,886	33,824
230.70	11,886	34,571
230.80	11,886	35,279
230.90	11,886	35,936
231.00	11,886	36,512
231.10	11,886	36,988
231.20	11,886	37,463
231.30	11,886	37,938
231.40	11,886	38,414
231.50	11,886	**38,889**
231.60	11,886	38,889
231.70	11,886	38,889
231.80	11,886	38,889
231.90	11,886	38,889
232.00	11,886	38,889
232.10	11,886	38,889
232.20	11,886	38,889
232.30	11,886	38,889
232.40	11,886	38,889
232.50	11,886	38,889
232.60	11,886	38,889
232.70	11,886	38,889
232.80	11,886	38,889
232.90	11,886	38,889
233.00	11,886	38,889
233.10	11,886	38,889
233.20	11,886	38,889
233.30	11,886	38,889
233.40	11,886	38,889

Summary for Pond SIS2: CMP Infiltration (SIS-2)

Inflow Area = 2.111 ac, 71.48% Impervious, Inflow Depth = 3.19" for 10-yr event
Inflow = 7.88 cfs @ 12.09 hrs, Volume= 0.561 af
Outflow = 0.44 cfs @ 14.38 hrs, Volume= 0.561 af, Atten= 94%, Lag= 137.8 min
Discarded = 0.44 cfs @ 11.62 hrs, Volume= 0.561 af
Primary = 0.00 cfs @ 14.38 hrs, Volume= 0.000 af
Routed to Link DP-2(PR) : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs
Peak Elev= 231.29' @ 14.38 hrs Surf.Area= 7,800 sf Storage= 11,459 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 250.1 min (1,067.2 - 817.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	229.00'	8,985 cf	**60.00'W x 130.00'L x 5.00'H Field A** 39,000 cf Overall - 16,537 cf Embedded = 22,463 cf x 40.0% Voids
#2A	229.50'	16,537 cf	**CMP Round 48** x 60 Inside #1 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L 60 Chambers in 10 Rows 58.00' Header x 12.57 sf x 2 = 1,457.7 cf Inside
		25,522 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	229.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	231.25'	**12.0" Round Culvert** L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 231.25' / 231.00' S= 0.0050 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.79 sf
#3	Device 2	231.29'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	233.95'	**4.5' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.44 cfs @ 11.62 hrs HW=229.07' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.44 cfs)

Primary OutFlow Max=0.00 cfs @ 14.38 hrs HW=231.29' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.00 cfs of 0.00 cfs potential flow)
  ├**3=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.17 fps)
  └**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond SIS2: CMP Infiltration (SIS-2)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
229.00	0.00	**0.00**	0.00
229.10	0.44	**0.44**	0.00
229.20	0.44	0.44	0.00
229.30	0.44	0.44	0.00
229.40	0.44	0.44	0.00
229.50	0.44	0.44	0.00
229.60	0.44	0.44	0.00
229.70	0.44	0.44	0.00
229.80	0.44	0.44	0.00
229.90	0.44	0.44	0.00
230.00	0.44	0.44	0.00
230.10	0.44	0.44	0.00
230.20	0.44	0.44	0.00
230.30	0.44	0.44	0.00
230.40	0.44	0.44	0.00
230.50	0.44	0.44	0.00
230.60	0.44	0.44	0.00
230.70	0.44	0.44	0.00
230.80	0.44	0.44	0.00
230.90	0.44	0.44	0.00
231.00	0.44	0.44	0.00
231.10	0.44	0.44	0.00
231.20	0.44	0.44	0.00
231.30	0.44	0.44	0.00
231.40	0.45	0.44	0.02
231.50	0.47	0.44	0.04
231.60	0.49	0.44	0.05
231.70	0.50	0.44	0.06
231.80	0.50	0.44	0.07
231.90	0.51	0.44	0.08
232.00	0.52	0.44	0.08
232.10	0.52	0.44	0.09
232.20	0.53	0.44	0.10
232.30	0.54	0.44	0.10
232.40	0.54	0.44	0.11
232.50	0.55	0.44	0.11
232.60	0.55	0.44	0.12
232.70	0.56	0.44	0.12
232.80	0.56	0.44	0.13
232.90	0.56	0.44	0.13
233.00	0.57	0.44	0.13
233.10	0.57	0.44	0.14
233.20	0.58	0.44	0.14
233.30	0.58	0.44	0.15
233.40	0.58	0.44	0.15
233.50	0.59	0.44	0.15
233.60	0.59	0.44	0.16
233.70	0.60	0.44	0.16
233.80	0.60	0.44	0.16
233.90	0.60	0.44	0.17
234.00	0.77	0.44	0.33
234.10	1.46	0.44	1.02
234.20	2.43	0.44	2.00
234.30	3.61	0.44	3.18
234.40	4.97	0.44	4.54
234.50	6.12	0.44	5.69
234.60	6.24	0.44	5.80
234.70	6.35	0.44	5.91
234.80	6.45	0.44	6.02
234.90	6.56	0.44	6.13
235.00	6.67	0.44	6.23
235.10	6.77	0.44	6.33
235.20	6.87	0.44	6.43
235.30	6.97	0.44	6.53
235.40	7.07	0.44	6.63
235.50	7.17	0.44	6.73
235.60	7.26	0.44	6.83
235.70	7.35	0.44	6.92
235.80	7.45	0.44	7.01
235.90	**7.54**	0.44	**7.10**

Stage-Area-Storage for Pond SIS2: CMP Infiltration (SIS-2)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
229.00	**7,800**	0
229.10	7,800	312
229.20	7,800	624
229.30	7,800	936
229.40	7,800	1,248
229.50	7,800	1,560
229.60	7,800	1,938
229.70	7,800	2,369
229.80	7,800	2,834
229.90	7,800	3,324
230.00	7,800	3,836
230.10	7,800	4,365
230.20	7,800	4,910
230.30	7,800	5,469
230.40	7,800	6,039
230.50	7,800	6,620
230.60	7,800	7,210
230.70	7,800	7,808
230.80	7,800	8,412
230.90	7,800	9,023
231.00	7,800	9,639
231.10	7,800	10,258
231.20	7,800	10,881
231.30	7,800	11,507
231.40	7,800	12,133
231.50	7,800	12,761
231.60	7,800	13,389
231.70	7,800	14,016
231.80	7,800	14,641
231.90	7,800	15,264
232.00	7,800	15,884
232.10	7,800	16,499
232.20	7,800	17,110
232.30	7,800	17,715
232.40	7,800	18,313
232.50	7,800	18,903
232.60	7,800	19,483
232.70	7,800	20,054
232.80	7,800	20,612
232.90	7,800	21,157
233.00	7,800	21,687
233.10	7,800	22,198
233.20	7,800	22,688
233.30	7,800	23,153
233.40	7,800	23,584
233.50	7,800	23,962
233.60	7,800	24,274
233.70	7,800	24,586
233.80	7,800	24,898
233.90	7,800	25,210
234.00	7,800	**25,522**
234.10	7,800	25,522
234.20	7,800	25,522
234.30	7,800	25,522
234.40	7,800	25,522
234.50	7,800	25,522
234.60	7,800	25,522
234.70	7,800	25,522
234.80	7,800	25,522
234.90	7,800	25,522
235.00	7,800	25,522
235.10	7,800	25,522
235.20	7,800	25,522
235.30	7,800	25,522
235.40	7,800	25,522
235.50	7,800	25,522
235.60	7,800	25,522
235.70	7,800	25,522
235.80	7,800	25,522
235.90	7,800	25,522

Summary for Link DP-1(PR): 12" RCP WAVERLY ST

Inflow Area = 2.132 ac, 57.70% Impervious, Inflow Depth > 2.31" for 10-yr event
Inflow = 0.23 cfs @ 12.09 hrs, Volume= 0.410 af
Primary = 0.23 cfs @ 12.09 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

Summary for Link DP-2(PR): WETLAND

Inflow Area = 5.895 ac, 65.19% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.00 cfs @ 22.41 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 22.41 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

Summary for Link DP-3(PR): NIKKIE ST CULVERT

Inflow Area = 0.232 ac, 0.00% Impervious, Inflow Depth = 0.01" for 10-yr event
Inflow = 0.00 cfs @ 22.46 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 22.46 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

Summary for Link DP-4(PR): WAVERLY STREET SHEET FLOW

Inflow Area = 1.734 ac, 0.28% Impervious, Inflow Depth = 0.24" for 10-yr event
Inflow = 0.08 cfs @ 12.53 hrs, Volume= 0.035 af
Primary = 0.08 cfs @ 12.53 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs

Summary for Link DP-5(PR): UNION ST DRAIN SYSTEM

Inflow Area = 0.135 ac, 4.56% Impervious, Inflow Depth = 0.06" for 10-yr event
Inflow = 0.00 cfs @ 15.50 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 15.50 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-96.00 hrs, dt= 0.01 hrs