JONES & BEACH ENGINEERS INC.

DRAINAGE ANALYSIS

EROSION AND SEDIMENT CONTROL PLAN

New London Place
Tax Map 72, Lot 17
County Road & Parkside Road
New London, NH 03257

Prepared for:

New London Hospital Association
273 County Road
New London, NH 03257

STATE OF NEW HAMPSHIRE
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1. EXECUTIVE SUMMARY

This project proposes a 50,703 SF continuing care facility with 33 condominium units in the Town of New London Tax Map 72, Lot 17. The uses will be serviced by an extension to the municipal sewer & water systems and underground electric. Two models were compiled, one for the area in its existing (pre-development) condition, and a second for its proposed (post-development) condition. The analysis was conducted using the USDA SCS TR-20 method within the HydroCAD Stormwater Modeling System environment. A summary of the existing and proposed conditions peak rates of runoff is as follows:

EXECUTIVE SUMMARY TABLE								
Analysis Point	2-Year		10-Year		25-Year		50-Year	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Analysis Point #1	0.01	0.00	0.11	0.04	0.26	0.10	0.44	0.17
Analysis Point #2	0.03	0.03	0.42	0.42	1.01	1.01	1.70	1.61
Analysis Point #3	0.04	0.04	0.35	0.29	0.78	0.61	1.27	0.95
Analysis Point #4	7.91	10.16	15.59	18.75	22.11	25.90	28.37	32.59
Analysis Point #5	14.84	10.69	31.05	23.69	45.06	35.10	58.58	45.49
Analysis Point #6	4.79	4.79	10.67	10.67	15.65	15.66	20.40	20.41
Total	27.62	25.71	58.19	53.86	84.87	78.38	110.76	101.22

The drainage design intent for this site is to maintain the post-development peak flow to the pre-development peak flow conditions to the extent practicable and to effectively treat stormwater from the development of this project. This has been accomplished through the use of three (3)wet detention ponds, drip edge infiltration trenches, and six (6) infiltration basins to maintain the peak discharge and infiltrate stormwater.

In addition, the potential for increased erosion and sedimentation is handled by way of erosion control blankets, vegetated treatment swales, sedimentation sumps, grease hoods, and riprap inlet and outlet protection aprons. The use of Best Management Practices per the NHDES Stormwater Manual have been applied to the design of this drainage system and will be observed during all stages of construction. Existing wetlands and abutting property owners will suffer minimal impact resultant from this development.

14. DRAINAGE ANALYSIS

14.1 INTRODUCTION

This project proposes a 50,703 SF continuing care facility with 33 condominium units in the Town of New London Tax Map 72, Lot 17. The uses will be serviced by an extension to the municipal sewer & water systems and underground electric.

14.2 METHODOLOGY

The existing and proposed watersheds were modeled utilizing HydroCad stormwater software, version 9.10. The watersheds were analyzed utilizing the SCS TR-20 methodology for hydrograph development and the TR-55 methodology for Time of Concentration (Tc) determination. The Dynamic-Storage-Indicating method for reach and pond routing was utilized. Type III, 24-hour hydrographs were developed for the 2-year, 10-year, 25-year, and 50-year, corresponding to rainfall events of 2.63", 3.83", 4.74", and 5.57 " respectively.

Existing topography and site features were obtained through on-ground topography completed by Jones & Beach Engineers. Existing soil conditions were derived from a combination of a Site Specific Soil Survey conducted by Gove Environmental and soils information obtained from the NRCS Web Soil Survey.

14.3 EXISTING CONDITIONS ANALYSIS

The study area consists of the subject property and upstream contributing area. The study area consists of 69.5± acres including offsite contributing areas. The existing site is currently undeveloped and primarily covered by wooded terrain. The entire site drains south across the site through an existing wetland system, towards Parkside Road.

The majority of the soils for this site are described as Hydrological Soils "C". A small section of soils in the western corner of the site are described as Hydrological Soils "B".

Six (6) Analysis Points (AP's) were defined for this project. Analysis Points are described as below:

Analysis Point #1 is defined as a section of the west corner property line. This analysis point receives runoff from a portion of the abutting property and on site woodland area.

Analysis Point #2 is defined as a section of the southwest corner property line. This analysis point receives runoff from a portion of the abutting property and on site woodland area.

Analysis Point #3 is defined as a section of the southwest corner property line. This analysis point receives runoff from a woodland area of the site.

Analysis Point #4 is defined as a 15" corrugated metal pipe located under Parkside Road. The contributing watershed is a section on the western side of the site which includes a large portion of the existing New London Hospital. This analysis point receives runoff from the existing hospital, sections

of County Road, sections of Newport Road, as well as from woodland areas on site. This runoff then enters a wetland area on site and discharges to AP #4.

Analysis Point #5 is defined as a 30" corrugated plastic pipe located under Parkside Road. The contributing watershed is a large section of in the center of the site. which includes a large portion of the existing New London Hospital. This analysis point receives runoff from the existing hospital, sections of Newport Road, as well as from woodland areas on site. This runoff then enters a wetland area on site and discharges to AP #5.

Analysis Point #6 is defined as a 15" corrugated metal pipe located under Parkside Road. The contributing watershed is a large section on the eastern side of the site. This analysis point receives runoff from sections of Newport Road, sections of the residential area off of Everett Park, as well as from woodland areas on site. This runoff then enters a wetland area on site and discharges to AP #6.

14.4 PROPOSED CONDITIONS ANALYSIS

This project proposes a 50,703 SF continuing care facility with 33 condominium units in the Town of New London Tax Map 72, Lot 17. The uses will be serviced by an extension to the municipal sewer & water systems and underground electric.

The addition of the proposed impervious paved areas and buildings causes an increase in the curve number (C_n) and a decrease in the time of concentration (T_c), the net result being a potential increase in peak rates of runoff from the site. To mitigate the potential increase in the peak rate of runoff and to effectively treat the subsequent stormwater runoff the following Best Management Practices (BMP's) have been employed at the Analysis Points as follows:

Analysis Point #1 has been reduced in size, and has no proposed impervious area included in it.

Analysis Point #2 receives runoff from existing woodland terrain, proposed grassed areas, proposed paved parking and roadway surfaces, and a section of the proposed main building. All proposed paved areas are treated prior to discharge to AP #2. Runoff from the north side parking lot of the main building is collected in a closed drainage system, and discharged into a proposed isolation row located within a underground infiltration system (Pond #8) for pretreatment. This runoff then discharges to the infiltration system via a internal weir. The stormwater is then treated via infiltration and discharges to AP #2.

Analysis Point #3 has been reduced in size, and has no proposed impervious area included in it.

Analysis Point #4 receives runoff from existing woodland terrain, proposed grassed areas, proposed paved parking & roadway surfaces, and future building areas. All proposed paved areas are treated prior to discharge to AP #4. The following treatment trains are included within the Analysis Point #4 watershed system.

A large section of the existing New London Hospital discharges south towards the site, and enters the existing wetland network. This runoff flows through the site and passes through several culvert crossings. This runoff then discharges to AP #4. No treatment is provided for offsite runoff.

Wet Pond #2 (Node 2P) receives runoff via sheet flow from the rear of the main building, which then discharges to Forebay #2 (Node 2F) through a riprap curb break. The storm water then discharges to Wet Pond #2 for treatment and discharges to the existing wetland network on site. The stormwater then channels flows to AP#4. A portion of the main building's roof runoff also discharges directly to Wet Pond #2 via a roof drain.

Wet Pond #3 (Node 3P) receives runoff via sheet flow from a section of Hope Stryker Drive and Clough Circle, which then enters a closed drainage system and discharges for Forebay #3 (Node 3F). The storm water then discharges to Wet Pond #3 (Node 3P) for treatment and discharges to the existing wetland network on site. The stormwater then channels flows to AP#4.

Underground Infiltration System (Pond #7) receives runoff via sheet flow from the south side of the main building ,and channel flow from the proposed swale along Hope Stryker Drive. The runoff then enters a closed drainage system and discharges into a isolation row within Pond #7 for pretreatment. The stormwater then discharges internally via a weir into Pond #7. The storm water then discharges to Infiltration Basin (Pond #6), and discharges to the existing wetland network on site. The stormwater then channels flows to AP#4.

Underground Infiltration System (Pond #28) receives runoff via sheet flow from the south side of the main building, and roof runoff via a roof drain. Due to Pond #28 receiving only stormwater from the roof and yard with no impervious area included, no pretreatment is provided. The storm water then discharges to a plunge pool (Pond #9), and into Pond #7. It then flows into Pond #6, and discharges to the existing wetland network on site. The stormwater then channels flows to AP#4.

Infiltration Basin (Pond #6) receives runoff via sheet flow from the southeast corner of the main building, and roof runoff via a roof drain. The runoff then enters a closed drainage system and discharges into Forebay #7 . The storm water then discharges to Infiltration Basin (Pond #6) for treatment and discharges to the existing wetland network on site. The stormwater then channels flows to AP#4.

Several Roof Drip Edge Infiltration systems are also included within the Analysis Point #4 watershed. These treat small sections of the condominium roof areas only. Runoff from the roofs discharges directly to the drip edges and infiltrates. Excess storm water in high rainfall events discharges from the drip edge systems and into the existing wetland network. The stormwater then channel flows to AP #4.

Analysis Point #5 receives runoff from existing woodland terrain, proposed grassed areas, proposed paved parking & roadway surfaces, and future building areas. All proposed paved areas are treated prior to discharge to AP #5. The following treatment trains are included within the Analysis Point #5 watershed system.

A large section of the existing New London Hospital discharges south towards the site, and enters the existing wetland network. This runoff flows through the site and passes through several culvert crossings. This runoff then discharges to AP #5. No treatment is provided for offsite runoff.

Infiltration Basin (Pond #1) recieves runoff via sheet flow from Clough Circle and the surrounding condominiums. The runoff then enters a closed drainage system and discharges into Forebay #1. The storm water then discharges to Infiltration Basin (Pond #1) for treatment and discharges to the existing wetland network on site. The stormwater then channels flows to AP#5.

Infiltration Basin (Pond #4) receives runoff via sheet flow from Griffin Way and the surrounding condominiums. The runoff then enters Forebay #4 via a riprap curb break. The storm water then discharges to Infiltration Basin (Pond #4) for treatment and discharges to the existing wetland network on site. The stormwater then channels flows to AP#5.

Wet Pond #5 receives runoff via sheet flow from a section of Hope Stryker Drive, Griffin Way and the surrounding condominiums. The runoff then enters Forebay #5 and Forebay #6 via a closed drainage system. The storm water then discharges to We Pond #5 for treatment and discharges to the existing wetland network on site. The stormwater then channels flows to AP#5.

Several Roof Drip Edge Infiltration systems are also included within the Analysis Point #4 watershed. These treat small sections of the condominium roof areas only. Runoff from the roofs discharges directly to the drip edges and infiltrates. Excess storm water in high rainfall events discharges from the drip edge systems and into the existing wetland network. The stormwater then channel flows to AP #5.

Analysis Point #6 has not been disturbed, and no development is proposed within the Analysis Point #6 watershed.

14.5 CONCLUSION

The proposed site development will have minimal adverse effect on abutting infrastructures or properties by way of stormwater runoff or siltation if properly constructed in accordance with this Drainage Analysis and approved project plan set. The post-construction peak rates of runoff for the site will be lower than the existing conditions for all analyzed storm events. Appropriate steps will be taken to control erosion and sedimentation; these will be accomplished through the construction of a drainage system consisting of site grading, curbing, catch basins with sedimentation sumps, jute matting, vegetated swales, vegetated pre-treatment swales, and riprap outlet protection aprons. The use of Best Management Practices developed by the State of New Hampshire have been utilized in the design of this system and their application will be enforced with regular inspections throughout the construction process.

An NHDES Alteration of Terrain Permit (RSA 485:A-17) is required for this site plan due to the area of disturbance being greater than 100,000 square-feet.

Respectfully Submitted,
JONES & BEACH ENGINEERS, INC.

Barry W. Gier

Barry Gier, P.E.
Vice President

14.6 DRAINAGE CALCUALTIONS

PRE-DEVELOPMENT CONDITIONS ANALYSIS

14.6.1 2-Year 24-Hour Summary Analysis
14.6.2 10-Year 24-Hour Complete Analysis
14.6.3 25-Year 24-Hour Summary Analysis
14.6.4 50-Year 24-Hour Summary Analysis

14.6 DRAINAGE CALCUALTIONS

PRE-DEVELOPMENT CONDITIONS ANALYSIS

14.6.1 2-Year 24-Hour Summary Analysis
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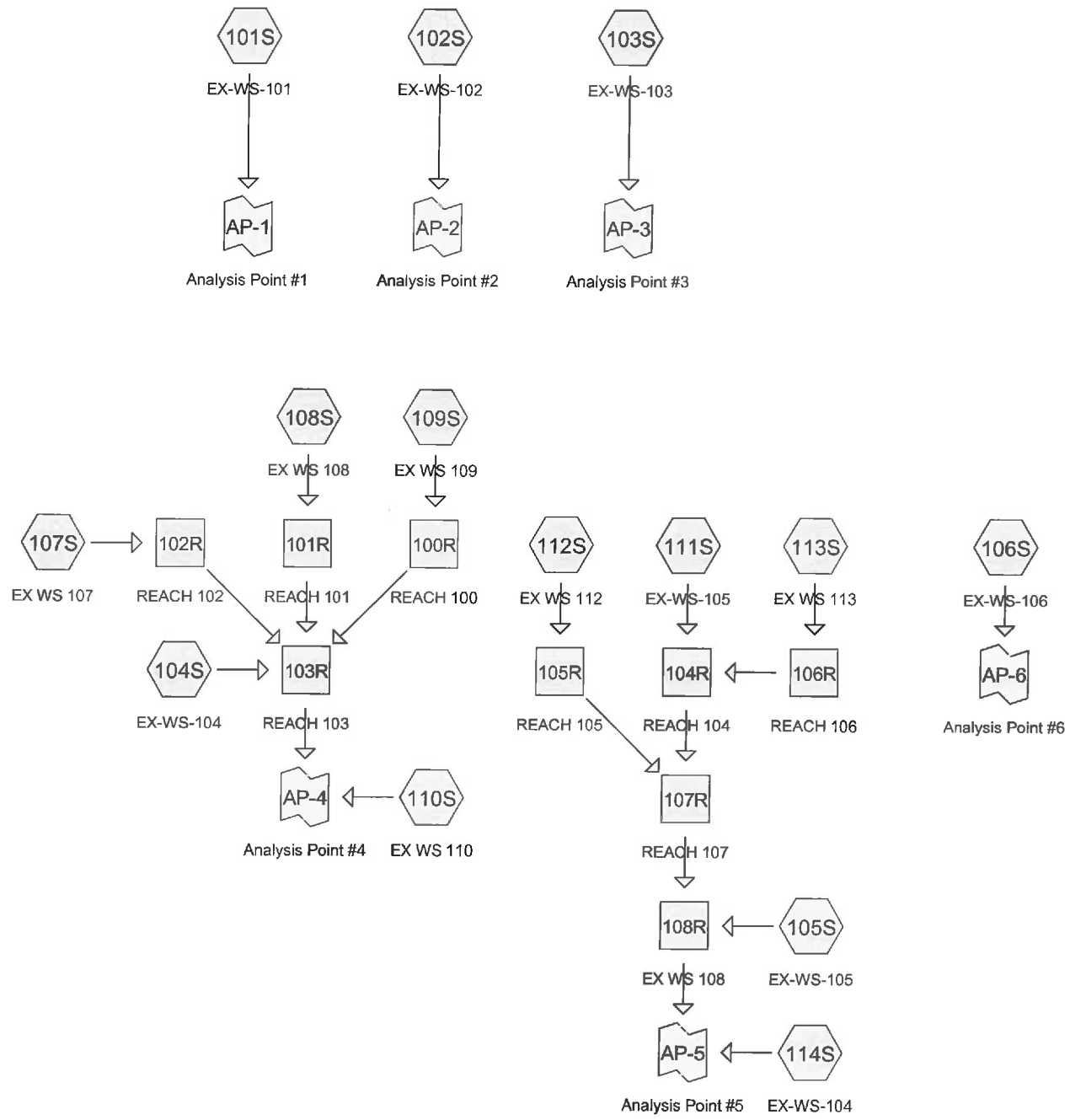
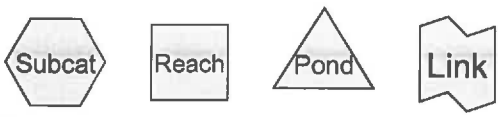
14.6.3 25-Year 24-Hour Summary Analysis
14.6.4 50-Year 24-Hour Summary Analysis





Routing Diagram for 17190-EXISTING
Prepared by Jones & Beach Engineers, Printed 7/2/2018
HydroCAD® 10.00-20 s/n 03433 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.922	80	1/2 acre lots, 25% imp, HSG C (106S)
0.739	61	>75% Grass cover, Good, HSG B (104S, 105S, 111S)
5.151	74	>75% Grass cover, Good, HSG C (104S, 105S, 106S, 110S, 111S, 114S)
0.043	85	Gravel roads, HSG B (105S)
0.272	98	Paved parking, HSG B (104S)
1.321	98	Paved parking, HSG C (104S, 105S, 106S, 110S, 111S, 113S, 114S)
0.043	98	Roofs, HSG C (106S)
13.111	94	Urban commercial, 85% imp, HSG C (104S, 105S, 106S, 107S, 108S, 109S, 111S, 112S, 113S)
6.657	55	Woods, Good, HSG B (101S, 102S, 103S, 104S, 105S, 111S)
35.237	70	Woods, Good, HSG C (103S, 104S, 105S, 106S, 110S, 111S, 114S)
69.496	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
7.712	HSG B	101S, 102S, 103S, 104S, 105S, 111S
61.784	HSG C	103S, 104S, 105S, 106S, 107S, 108S, 109S, 110S, 111S, 112S, 113S, 114S
0.000	HSG D	
0.000	Other	
69.496		**TOTAL AREA**

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: EX-WS-101 Runoff Area=19,765 sf 0.00% Impervious Runoff Depth=0.11"
Flow Length=263' Slope=0.0600 '/' Tc=14.7 min CN=55 Runoff=0.01 cfs 0.004 af

Subcatchment 102S: EX-WS-102 Runoff Area=77,021 sf 0.00% Impervious Runoff Depth=0.11"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=55 Runoff=0.03 cfs 0.016 af

Subcatchment 103S: EX-WS-103 Runoff Area=44,627 sf 0.00% Impervious Runoff Depth=0.15"
Flow Length=174' Slope=0.1000 '/' Tc=10.9 min CN=57 Runoff=0.04 cfs 0.012 af

Subcatchment 104S: EX-WS-104 Runoff Area=397,309 sf 9.56% Impervious Runoff Depth=0.45"
Flow Length=855' Tc=25.9 min CN=68 Runoff=2.17 cfs 0.339 af

Subcatchment 105S: EX-WS-105 Runoff Area=378,473 sf 7.58% Impervious Runoff Depth=0.60"
Flow Length=780' Tc=38.2 min CN=72 Runoff=2.63 cfs 0.433 af

Subcatchment 106S: EX-WS-106 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=0.77"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=4.79 cfs 1.125 af

Subcatchment 107S: EX WS 107 Runoff Area=37,307 sf 85.00% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=1.95 cfs 0.142 af

Subcatchment 108S: EX WS 108 Runoff Area=37,996 sf 85.00% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=1.99 cfs 0.145 af

Subcatchment 109S: EX WS 109 Runoff Area=109,779 sf 85.00% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=5.75 cfs 0.419 af

Subcatchment 110S: EX WS 110 Runoff Area=58,995 sf 6.66% Impervious Runoff Depth=0.60"
Flow Length=689' Tc=19.7 min CN=72 Runoff=0.55 cfs 0.067 af

Subcatchment 111S: EX-WS-105 Runoff Area=525,152 sf 5.85% Impervious Runoff Depth=0.60"
Flow Length=1,342' Tc=28.7 min CN=72 Runoff=4.18 cfs 0.600 af

Subcatchment 112S: EX WS 112 Runoff Area=38,010 sf 85.00% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=1.99 cfs 0.145 af

Subcatchment 113S: EX WS 113 Runoff Area=248,253 sf 85.80% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=13.00 cfs 0.947 af

Subcatchment 114S: EX-WS-104 Runoff Area=295,484 sf 1.79% Impervious Runoff Depth=0.56"
Flow Length=793' Tc=28.1 min CN=71 Runoff=2.16 cfs 0.315 af

Reach 100R: REACH 100 Avg. Flow Depth=0.23' Max Vel=1.76 fps Inflow=5.75 cfs 0.419 af
n=0.050 L=768.0' S=0.0430 '/' Capacity=496.13 cfs Outflow=4.54 cfs 0.419 af

Reach 101R: REACH 101 Avg. Flow Depth=0.15' Max Vel=1.22 fps Inflow=1.99 cfs 0.145 af
n=0.050 L=453.0' S=0.0375 '/' Capacity=463.66 cfs Outflow=1.63 cfs 0.145 af

Reach 102R: REACH 102 Avg. Flow Depth=0.14' Max Vel=1.31 fps Inflow=1.95 cfs 0.142 af
n=0.050 L=509.0' S=0.0472 '/' Capacity=519.72 cfs Outflow=1.58 cfs 0.142 af

Reach 103R: REACH 103 Avg. Flow Depth=0.28' Max Vel=2.09 fps Inflow=8.30 cfs 1.045 af
n=0.050 L=808.0' S=0.0458 '/' Capacity=512.17 cfs Outflow=7.40 cfs 1.045 af

Reach 104R: REACH 104 Avg. Flow Depth=0.37' Max Vel=2.17 fps Inflow=11.77 cfs 1.547 af
n=0.050 L=146.0' S=0.0342 '/' Capacity=442.93 cfs Outflow=11.78 cfs 1.547 af

Reach 105R: REACH 105 Avg. Flow Depth=0.13' Max Vel=1.24 fps Inflow=1.99 cfs 0.145 af
n=0.050 L=774.0' S=0.0439 '/' Capacity=501.64 cfs Outflow=1.43 cfs 0.145 af

Reach 106R: REACH 106 Avg. Flow Depth=0.35' Max Vel=2.12 fps Inflow=13.00 cfs 0.947 af
n=0.050 L=877.0' S=0.0353 '/' Capacity=449.99 cfs Outflow=10.40 cfs 0.947 af

Reach 107R: REACH 107 Avg. Flow Depth=0.35' Max Vel=2.63 fps Inflow=13.20 cfs 1.692 af
n=0.050 L=240.0' S=0.0542 '/' Capacity=557.04 cfs Outflow=13.02 cfs 1.692 af

Reach 108R: EX WS 108 Avg. Flow Depth=0.40' Max Vel=2.28 fps Inflow=13.76 cfs 2.125 af
n=0.050 L=404.0' S=0.0347 '/' Capacity=445.55 cfs Outflow=13.46 cfs 2.125 af

Link AP-1: Analysis Point #1 Inflow=0.01 cfs 0.004 af
Primary=0.01 cfs 0.004 af

Link AP-2: Analysis Point #2 Inflow=0.03 cfs 0.016 af
Primary=0.03 cfs 0.016 af

Link AP-3: Analysis Point #3 Inflow=0.04 cfs 0.012 af
Primary=0.04 cfs 0.012 af

Link AP-4: Analysis Point #4 Inflow=7.91 cfs 1.112 af
Primary=7.91 cfs 1.112 af

Link AP-5: Analysis Point #5 Inflow=14.84 cfs 2.440 af
Primary=14.84 cfs 2.440 af

Link AP-6: Analysis Point #6 Inflow=4.79 cfs 1.125 af
Primary=4.79 cfs 1.125 af

Total Runoff Area = 69.496 ac Runoff Volume = 4.709 af Average Runoff Depth = 0.81"
79.12% Pervious = 54.985 ac 20.88% Impervious = 14.511 ac

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: EX-WS-101 Runoff Area=19,765 sf 0.00% Impervious Runoff Depth=0.85"
Flow Length=263' Slope=0.0600 '/' Tc=14.7 min CN=55 Runoff=0.26 cfs 0.032 af

Subcatchment 102S: EX-WS-102 Runoff Area=77,021 sf 0.00% Impervious Runoff Depth=0.85"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=55 Runoff=1.01 cfs 0.126 af

Subcatchment 103S: EX-WS-103 Runoff Area=44,627 sf 0.00% Impervious Runoff Depth=0.97"
Flow Length=174' Slope=0.1000 '/' Tc=10.9 min CN=57 Runoff=0.78 cfs 0.083 af

Subcatchment 104S: EX-WS-104 Runoff Area=397,309 sf 9.56% Impervious Runoff Depth=1.70"
Flow Length=855' Tc=25.9 min CN=68 Runoff=10.50 cfs 1.290 af

Subcatchment 105S: EX-WS-105 Runoff Area=378,473 sf 7.58% Impervious Runoff Depth=2.00"
Flow Length=780' Tc=38.2 min CN=72 Runoff=10.08 cfs 1.448 af

Subcatchment 106S: EX-WS-106 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=2.32"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=15.65 cfs 3.373 af

Subcatchment 107S: EX WS 107 Runoff Area=37,307 sf 85.00% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=3.82 cfs 0.289 af

Subcatchment 108S: EX WS 108 Runoff Area=37,996 sf 85.00% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=3.89 cfs 0.295 af

Subcatchment 109S: EX WS 109 Runoff Area=109,779 sf 85.00% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=11.24 cfs 0.851 af

Subcatchment 110S: EX WS 110 Runoff Area=58,995 sf 6.66% Impervious Runoff Depth=2.00"
Flow Length=689' Tc=19.7 min CN=72 Runoff=2.11 cfs 0.226 af

Subcatchment 111S: EX-WS-105 Runoff Area=525,152 sf 5.85% Impervious Runoff Depth=2.00"
Flow Length=1,342' Tc=28.7 min CN=72 Runoff=16.01 cfs 2.009 af

Subcatchment 112S: EX WS 112 Runoff Area=38,010 sf 85.00% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=3.89 cfs 0.295 af

Subcatchment 113S: EX WS 113 Runoff Area=248,253 sf 85.80% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=25.41 cfs 1.924 af

Subcatchment 114S: EX-WS-104 Runoff Area=295,484 sf 1.79% Impervious Runoff Depth=1.92"
Flow Length=793' Tc=28.1 min CN=71 Runoff=8.70 cfs 1.086 af

Reach 100R: REACH 100 Avg. Flow Depth=0.32' Max Vel=2.19 fps Inflow=11.24 cfs 0.851 af
n=0.050 L=768.0' S=0.0430 '/' Capacity=496.13 cfs Outflow=9.33 cfs 0.851 af

Reach 101R: REACH 101 Avg. Flow Depth=0.21' Max Vel=1.52 fps Inflow=3.89 cfs 0.295 af
n=0.050 L=453.0' S=0.0375 '/' Capacity=463.66 cfs Outflow=3.36 cfs 0.295 af

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: EX-WS-101 Runoff Area=19,765 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=263' Slope=0.0600 '/' Tc=14.7 min CN=55 Runoff=0.11 cfs 0.018 af

Subcatchment 102S: EX-WS-102 Runoff Area=77,021 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=55 Runoff=0.42 cfs 0.068 af

Subcatchment 103S: EX-WS-103 Runoff Area=44,627 sf 0.00% Impervious Runoff Depth=0.55"
Flow Length=174' Slope=0.1000 '/' Tc=10.9 min CN=57 Runoff=0.35 cfs 0.047 af

Subcatchment 104S: EX-WS-104 Runoff Area=397,309 sf 9.56% Impervious Runoff Depth=1.10"
Flow Length=855' Tc=25.9 min CN=68 Runoff=6.50 cfs 0.835 af

Subcatchment 105S: EX-WS-105 Runoff Area=378,473 sf 7.58% Impervious Runoff Depth=1.34"
Flow Length=780' Tc=38.2 min CN=72 Runoff=6.60 cfs 0.972 af

Subcatchment 106S: EX-WS-106 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=1.61"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=10.67 cfs 2.337 af

Subcatchment 107S: EX WS 107 Runoff Area=37,307 sf 85.00% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=3.02 cfs 0.225 af

Subcatchment 108S: EX WS 108 Runoff Area=37,996 sf 85.00% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=3.07 cfs 0.230 af

Subcatchment 109S: EX WS 109 Runoff Area=109,779 sf 85.00% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=8.88 cfs 0.663 af

Subcatchment 110S: EX WS 110 Runoff Area=58,995 sf 6.66% Impervious Runoff Depth=1.34"
Flow Length=689' Tc=19.7 min CN=72 Runoff=1.38 cfs 0.151 af

Subcatchment 111S: EX-WS-105 Runoff Area=525,152 sf 5.85% Impervious Runoff Depth=1.34"
Flow Length=1,342' Tc=28.7 min CN=72 Runoff=10.47 cfs 1.348 af

Subcatchment 112S: EX WS 112 Runoff Area=38,010 sf 85.00% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=3.08 cfs 0.230 af

Subcatchment 113S: EX WS 113 Runoff Area=248,253 sf 85.80% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=20.09 cfs 1.500 af

Subcatchment 114S: EX-WS-104 Runoff Area=295,484 sf 1.79% Impervious Runoff Depth=1.28"
Flow Length=793' Tc=28.1 min CN=71 Runoff=5.62 cfs 0.723 af

Reach 100R: REACH 100 Avg. Flow Depth=0.28' Max Vel=2.03 fps Inflow=8.88 cfs 0.663 af
n=0.050 L=768.0' S=0.0430 '/' Capacity=496.13 cfs Outflow=7.26 cfs 0.663 af

Reach 101R: REACH 101 Avg. Flow Depth=0.18' Max Vel=1.41 fps Inflow=3.07 cfs 0.230 af
n=0.050 L=453.0' S=0.0375 '/' Capacity=463.66 cfs Outflow=2.61 cfs 0.230 af

Reach 102R: REACH 102 Avg. Flow Depth=0.17' Max Vel=1.51 fps Inflow=3.02 cfs 0.225 af
n=0.050 L=509.0' S=0.0472 '/' Capacity=519.72 cfs Outflow=2.53 cfs 0.225 af

Reach 103R: REACH 103 Avg. Flow Depth=0.38' Max Vel=2.56 fps Inflow=15.35 cfs 1.953 af
n=0.050 L=808.0' S=0.0458 '/' Capacity=512.17 cfs Outflow=14.25 cfs 1.953 af

Reach 104R: REACH 104 Avg. Flow Depth=0.49' Max Vel=2.61 fps Inflow=21.33 cfs 2.848 af
n=0.050 L=146.0' S=0.0342 '/' Capacity=442.93 cfs Outflow=21.39 cfs 2.848 af

Reach 105R: REACH 105 Avg. Flow Depth=0.17' Max Vel=1.44 fps Inflow=3.08 cfs 0.230 af
n=0.050 L=774.0' S=0.0439 '/' Capacity=501.64 cfs Outflow=2.31 cfs 0.230 af

Reach 106R: REACH 106 Avg. Flow Depth=0.44' Max Vel=2.44 fps Inflow=20.09 cfs 1.500 af
n=0.050 L=877.0' S=0.0353 '/' Capacity=449.99 cfs Outflow=16.59 cfs 1.500 af

Reach 107R: REACH 107 Avg. Flow Depth=0.46' Max Vel=3.15 fps Inflow=23.68 cfs 3.078 af
n=0.050 L=240.0' S=0.0542 '/' Capacity=557.04 cfs Outflow=23.37 cfs 3.078 af

Reach 108R: EX WS 108 Avg. Flow Depth=0.54' Max Vel=2.79 fps Inflow=26.08 cfs 4.050 af
n=0.050 L=404.0' S=0.0347 '/' Capacity=445.55 cfs Outflow=25.81 cfs 4.050 af

Link AP-1: Analysis Point #1 Inflow=0.11 cfs 0.018 af
Primary=0.11 cfs 0.018 af

Link AP-2: Analysis Point #2 Inflow=0.42 cfs 0.068 af
Primary=0.42 cfs 0.068 af

Link AP-3: Analysis Point #3 Inflow=0.35 cfs 0.047 af
Primary=0.35 cfs 0.047 af

Link AP-4: Analysis Point #4 Inflow=15.59 cfs 2.105 af
Primary=15.59 cfs 2.105 af

Link AP-5: Analysis Point #5 Inflow=31.05 cfs 4.773 af
Primary=31.05 cfs 4.773 af

Link AP-6: Analysis Point #6 Inflow=10.67 cfs 2.337 af
Primary=10.67 cfs 2.337 af

Total Runoff Area = 69.496 ac Runoff Volume = 9.347 af Average Runoff Depth = 1.61"
79.12% Pervious = 54.985 ac 20.88% Impervious = 14.511 ac

Summary for Subcatchment 101S: EX-WS-101

Runoff = 0.11 cfs @ 12.34 hrs, Volume= 0.018 af, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
19,765	55	Woods, Good, HSG B
19,765		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	75	0.0600	0.10		**Sheet Flow, THROUGH WOODS** Woods: Light underbrush n= 0.400 P2= 2.63"
2.6	188	0.0600	1.22		**Shallow Concentrated Flow, THROUGH WOODS** Woodland Kv= 5.0 fps
14.7	263	Total			

Summary for Subcatchment 102S: EX-WS-102

Runoff = 0.42 cfs @ 12.34 hrs, Volume= 0.068 af, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
77,021	55	Woods, Good, HSG B
77,021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	75	0.0700	0.11		**Sheet Flow, THROUGH WOODS** Woods: Light underbrush n= 0.400 P2= 2.63"
3.2	254	0.0700	1.32		**Shallow Concentrated Flow, THROUGH WOODS** Woodland Kv= 5.0 fps
14.6	329	Total			

Summary for Subcatchment 103S: EX-WS-103

Runoff = 0.35 cfs @ 12.21 hrs, Volume= 0.047 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
40,057	55	Woods, Good, HSG B
4,570	70	Woods, Good, HSG C
44,627	57	Weighted Average
44,627		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	75	0.1000	0.13		**Sheet Flow, THROUGH WOODS** Woods: Light underbrush n= 0.400 P2= 2.63"
1.0	99	0.1000	1.58		**Shallow Concentrated Flow, THROUGH WOODS** Woodland Kv= 5.0 fps
10.9	174	Total			

Summary for Subcatchment 104S: EX-WS-104

Runoff = 6.50 cfs @ 12.40 hrs, Volume= 0.835 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
11,853	98	Paved parking, HSG B
14,767	98	Paved parking, HSG C
16,704	61	>75% Grass cover, Good, HSG B
13,036	74	>75% Grass cover, Good, HSG C
129,327	55	Woods, Good, HSG B
198,233	70	Woods, Good, HSG C
13,389	94	Urban commercial, 85% imp, HSG C
397,309	68	Weighted Average
359,308		90.44% Pervious Area
38,001		9.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	15	0.0200	0.85		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
2.0	29	0.1200	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
4.5	31	0.1200	0.11		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
5.2	327	0.0440	1.05		**Shallow Concentrated Flow, THROUGH WOODS** Woodland Kv= 5.0 fps
13.9	453	0.0470	0.54		**Shallow Concentrated Flow, THROUGH WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
25.9	855	Total			

Summary for Subcatchment 105S: EX-WS-105

Runoff = 6.60 cfs @ 12.57 hrs, Volume= 0.972 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
4,220	98	Paved parking, HSG C
9,883	61	>75% Grass cover, Good, HSG B
17,745	74	>75% Grass cover, Good, HSG C
6,875	55	Woods, Good, HSG B
309,102	70	Woods, Good, HSG C
1,872	85	Gravel roads, HSG B
28,776	94	Urban commercial, 85% imp, HSG C
378,473	72	Weighted Average
349,793		92.42% Pervious Area
28,680		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	75	0.1000	0.07		**Sheet Flow, WOODLAND** Woods: Dense underbrush n= 0.800 P2= 2.63"
1.1	91	0.0800	1.41		**Shallow Concentrated Flow, WOODLAND** Woodland Kv= 5.0 fps
19.9	614	0.0423	0.51		**Shallow Concentrated Flow, THROUGH WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
38.2	780	Total			

Summary for Subcatchment 106S: EX-WS-106

Runoff = 10.67 cfs @ 13.09 hrs, Volume= 2.337 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,353	98	Paved parking, HSG C
1,858	98	Roofs, HSG C
76,670	74	>75% Grass cover, Good, HSG C
325,831	70	Woods, Good, HSG C
301,513	80	1/2 acre lots, 25% imp, HSG C
50,832	94	Urban commercial, 85% imp, HSG C
759,057	76	Weighted Average
636,261		83.82% Pervious Area
122,796		16.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	75	0.0400	0.09		**Sheet Flow, THROUGH WETLAND** Woods: Light underbrush n= 0.400 P2= 2.63"
64.7	1,942	0.0400	0.50		**Shallow Concentrated Flow, THROUGH WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
79.0	2,017	Total			

Summary for Subcatchment 107S: EX WS 107

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.02 cfs @ 12.07 hrs, Volume= 0.225 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
37,307	94	Urban commercial, 85% imp, HSG C
5,596		15.00% Pervious Area
31,711		85.00% Impervious Area

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

Summary for Subcatchment 108S: EX WS 108

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.07 cfs @ 12.07 hrs, Volume= 0.230 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
37,996	94	Urban commercial, 85% imp, HSG C
5,699		15.00% Pervious Area
32,297		85.00% Impervious Area

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

Summary for Subcatchment 109S: EX WS 109

[49] Hint: Tc<2dt may require smaller dt

Runoff = 8.88 cfs @ 12.07 hrs, Volume= 0.663 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
109,779	94	Urban commercial, 85% imp, HSG C
16,467		15.00% Pervious Area
93,312		85.00% Impervious Area

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

Summary for Subcatchment 110S: EX WS 110

Runoff = 1.38 cfs @ 12.29 hrs, Volume= 0.151 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
3,932	98	Paved parking, HSG C
4,886	74	>75% Grass cover, Good, HSG C
50,177	70	Woods, Good, HSG C
58,995	72	Weighted Average
55,063		93.34% Pervious Area
3,932		6.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	75	0.0930	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
6.6	531	0.0716	1.34		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.9	83	0.0361	0.47		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
19.7	689	Total			

Summary for Subcatchment 111S: EX-WS-105

Runoff = 10.47 cfs @ 12.43 hrs, Volume= 1.348 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
13,731	98	Paved parking, HSG C
5,620	61	>75% Grass cover, Good, HSG B
101,521	74	>75% Grass cover, Good, HSG C
16,955	55	Woods, Good, HSG B
367,309	70	Woods, Good, HSG C
20,016	94	Urban commercial, 85% imp, HSG C
525,152	72	Weighted Average
494,407		94.15% Pervious Area
30,745		5.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	75	0.1400	0.14		**Sheet Flow, WOODLAND** Woods: Light underbrush n= 0.400 P2= 2.63"
7.8	559	0.0570	1.19		**Shallow Concentrated Flow, WOODLAND** Woodland Kv= 5.0 fps
6.2	524	0.0400	1.40		**Shallow Concentrated Flow, GRASS** Short Grass Pasture Kv= 7.0 fps
6.1	184	0.0400	0.50		**Shallow Concentrated Flow, THROUGH WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
28.7	1,342	Total			

Summary for Subcatchment 112S: EX WS 112

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.08 cfs @ 12.07 hrs, Volume= 0.230 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
38,010	94	Urban commercial, 85% imp, HSG C
5,702		15.00% Pervious Area
32,309		85.00% Impervious Area

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

Summary for Subcatchment 113S: EX WS 113

[49] Hint: Tc<2dt may require smaller dt

Runoff = 20.09 cfs @ 12.07 hrs, Volume= 1.500 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
234,994	94	Urban commercial, 85% imp, HSG C
13,259	98	Paved parking, HSG C
248,253	94	Weighted Average
35,249		14.20% Pervious Area
213,004		85.80% Impervious Area

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

Summary for Subcatchment 114S: EX-WS-104

Runoff = 5.62 cfs @ 12.42 hrs, Volume= 0.723 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
5,300	98	Paved parking, HSG C
10,500	74	>75% Grass cover, Good, HSG C
279,684	70	Woods, Good, HSG C
295,484	71	Weighted Average
290,184		98.21% Pervious Area
5,300		1.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	75	0.1400	0.08		**Sheet Flow, WOODLAND** Woods: Dense underbrush n= 0.800 P2= 2.63"
7.8	559	0.0570	1.19		**Shallow Concentrated Flow, WOODLAND** Woodland Kv= 5.0 fps
5.3	159	0.0400	0.50		**Shallow Concentrated Flow, THROUGH WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
28.1	793	Total			

Summary for Reach 100R: REACH 100

Inflow Area = 2.520 ac, 85.00% Impervious, Inflow Depth = 3.16" for 10-YR event
Inflow = 8.88 cfs @ 12.07 hrs, Volume= 0.663 af
Outflow = 7.26 cfs @ 12.13 hrs, Volume= 0.663 af, Atten= 18%, Lag= 3.6 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.03 fps, Min. Travel Time= 6.3 min
Avg. Velocity = 0.63 fps, Avg. Travel Time= 20.2 min

Peak Storage= 2,743 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 496.13 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 768.0' Slope= 0.0430 '/'
Inlet Invert= 564.00', Outlet Invert= 531.00'

‡

Summary for Reach 101R: REACH 101

Inflow Area = 0.872 ac, 85.00% Impervious, Inflow Depth = 3.16" for 10-YR event
Inflow = 3.07 cfs @ 12.07 hrs, Volume= 0.230 af
Outflow = 2.61 cfs @ 12.12 hrs, Volume= 0.230 af, Atten= 15%, Lag= 3.1 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 1.41 fps, Min. Travel Time= 5.4 min
Avg. Velocity = 0.48 fps, Avg. Travel Time= 15.9 min

Peak Storage= 836 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 463.66 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 453.0' Slope= 0.0375 '/'
Inlet Invert= 548.00', Outlet Invert= 531.00'

‡

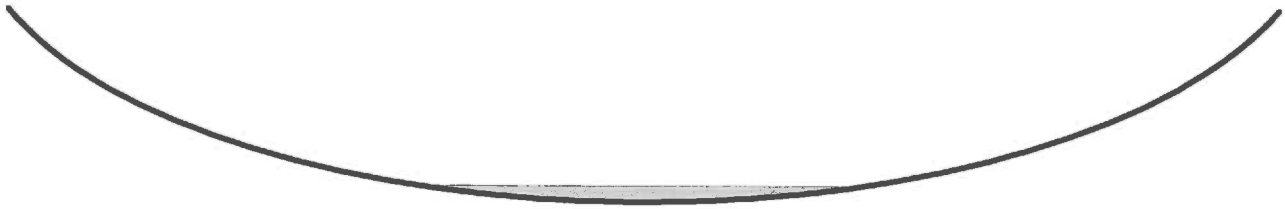
Summary for Reach 102R: REACH 102

Inflow Area = 0.856 ac, 85.00% Impervious, Inflow Depth = 3.16" for 10-YR event
Inflow = 3.02 cfs @ 12.07 hrs, Volume= 0.225 af
Outflow = 2.53 cfs @ 12.13 hrs, Volume= 0.225 af, Atten= 16%, Lag= 3.2 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 1.51 fps, Min. Travel Time= 5.6 min
Avg. Velocity = 0.52 fps, Avg. Travel Time= 16.4 min

Peak Storage= 846 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 519.72 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 509.0' Slope= 0.0472 '/'
Inlet Invert= 555.00', Outlet Invert= 531.00'



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Summary for Reach 103R: REACH 103

[62] Hint: Exceeded Reach 100R OUTLET depth by 0.17' @ 12.50 hrs
[62] Hint: Exceeded Reach 101R OUTLET depth by 0.24' @ 12.40 hrs
[62] Hint: Exceeded Reach 102R OUTLET depth by 0.25' @ 12.40 hrs

Inflow Area = 13.370 ac, 33.54% Impervious, Inflow Depth = 1.75" for 10-YR event
Inflow = 15.35 cfs @ 12.16 hrs, Volume= 1.953 af
Outflow = 14.25 cfs @ 12.24 hrs, Volume= 1.953 af, Atten= 7%, Lag= 5.1 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.56 fps, Min. Travel Time= 5.3 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 16.0 min

Peak Storage= 4,505 cf @ 12.24 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 512.17 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 808.0' Slope= 0.0458 '/'
Inlet Invert= 531.00', Outlet Invert= 494.00'

‡

Summary for Reach 104R: REACH 104

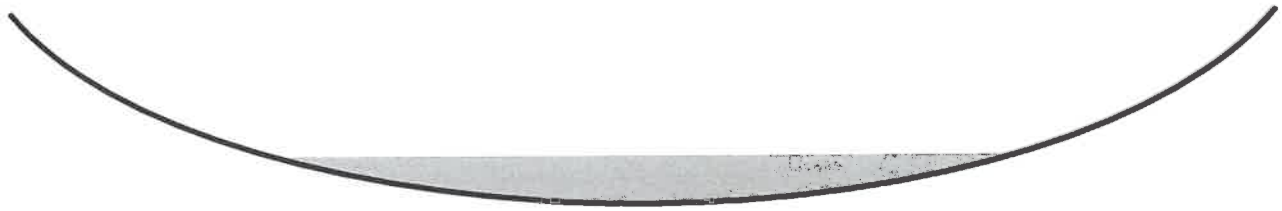
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[62] Hint: Exceeded Reach 106R OUTLET depth by 0.17' @ 12.55 hrs

Inflow Area = 17.755 ac, 31.52% Impervious, Inflow Depth = 1.92" for 10-YR event
Inflow = 21.33 cfs @ 12.16 hrs, Volume= 2.848 af
Outflow = 21.39 cfs @ 12.17 hrs, Volume= 2.848 af, Atten= 0%, Lag= 0.6 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.61 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 2.9 min

Peak Storage= 1,192 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.49'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 442.93 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 146.0' Slope= 0.0342 '/'
Inlet Invert= 517.00', Outlet Invert= 512.00'



‡

Summary for Reach 105R: REACH 105

Inflow Area =	0.873 ac, 85.00% Impervious, Inflow Depth = 3.16" for 10-YR event			
Inflow =	3.08 cfs @ 12.07 hrs, Volume=	0.230 af		
Outflow =	2.31 cfs @ 12.15 hrs, Volume=	0.230 af, Atten= 25%, Lag= 4.6 min		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 1.44 fps, Min. Travel Time= 8.9 min
Avg. Velocity = 0.50 fps, Avg. Travel Time= 26.0 min

Peak Storage= 1,240 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 501.64 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 774.0' Slope= 0.0439 '/'
Inlet Invert= 546.00', Outlet Invert= 512.00'

‡

Summary for Reach 106R: REACH 106

Inflow Area =	5.699 ac, 85.80% Impervious, Inflow Depth = 3.16" for 10-YR event			
Inflow =	20.09 cfs @ 12.07 hrs, Volume=	1.500 af		
Outflow =	16.59 cfs @ 12.13 hrs, Volume=	1.500 af, Atten= 17%, Lag= 3.4 min		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.44 fps, Min. Travel Time= 6.0 min
Avg. Velocity = 0.71 fps, Avg. Travel Time= 20.5 min

Peak Storage= 5,942 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 449.99 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 877.0' Slope= 0.0353 '/'
Inlet Invert= 548.00', Outlet Invert= 517.00'

‡

Summary for Reach 107R: REACH 107

[62] Hint: Exceeded Reach 104R OUTLET depth by 1.00' @ 24.80 hrs
[62] Hint: Exceeded Reach 105R OUTLET depth by 1.30' @ 12.20 hrs

Inflow Area =	18.628 ac, 34.02% Impervious, Inflow Depth = 1.98" for 10-YR event				
Inflow =	23.68 cfs @ 12.16 hrs, Volume=	3.078 af			
Outflow =	23.37 cfs @ 12.18 hrs, Volume=	3.078 af, Atten= 1%, Lag= 1.1 min			

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 3.15 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.01 fps, Avg. Travel Time= 4.0 min

Peak Storage= 1,778 cf @ 12.18 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 557.04 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 240.0' Slope= 0.0542 '/'
Inlet Invert= 513.00', Outlet Invert= 500.00'

‡

Summary for Reach 108R: EX WS 108

[62] Hint: Exceeded Reach 107R OUTLET depth by 0.13' @ 12.65 hrs

Inflow Area = 27.316 ac, 25.61% Impervious, Inflow Depth = 1.78" for 10-YR event
Inflow = 26.08 cfs @ 12.21 hrs, Volume= 4.050 af
Outflow = 25.81 cfs @ 12.25 hrs, Volume= 4.050 af, Atten= 1%, Lag= 2.8 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.79 fps, Min. Travel Time= 2.4 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 7.4 min

Peak Storage= 3,743 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.54'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 445.55 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 404.0' Slope= 0.0347 '/'
Inlet Invert= 500.00', Outlet Invert= 486.00'

‡

Summary for Link AP-1: Analysis Point #1

Inflow Area = 0.454 ac, 0.00% Impervious, Inflow Depth = 0.46" for 10-YR event
Inflow = 0.11 cfs @ 12.34 hrs, Volume= 0.018 af
Primary = 0.11 cfs @ 12.34 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: Analysis Point #2

Inflow Area = 1.768 ac, 0.00% Impervious, Inflow Depth = 0.46" for 10-YR event
Inflow = 0.42 cfs @ 12.34 hrs, Volume= 0.068 af
Primary = 0.42 cfs @ 12.34 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-3: Analysis Point #3

Inflow Area = 1.024 ac, 0.00% Impervious, Inflow Depth = 0.55" for 10-YR event
Inflow = 0.35 cfs @ 12.21 hrs, Volume= 0.047 af
Primary = 0.35 cfs @ 12.21 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-4: Analysis Point #4

Inflow Area = 14.724 ac, 31.07% Impervious, Inflow Depth = 1.72" for 10-YR event
Inflow = 15.59 cfs @ 12.25 hrs, Volume= 2.105 af
Primary = 15.59 cfs @ 12.25 hrs, Volume= 2.105 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-5: Analysis Point #5

Inflow Area = 34.099 ac, 20.87% Impervious, Inflow Depth = 1.68" for 10-YR event
Inflow = 31.05 cfs @ 12.39 hrs, Volume= 4.773 af
Primary = 31.05 cfs @ 12.39 hrs, Volume= 4.773 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-6: Analysis Point #6

Inflow Area = 17.426 ac, 16.18% Impervious, Inflow Depth = 1.61" for 10-YR event
Inflow = 10.67 cfs @ 13.09 hrs, Volume= 2.337 af
Primary = 10.67 cfs @ 13.09 hrs, Volume= 2.337 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Reach 102R: REACH 102 Avg. Flow Depth=0.19' Max Vel=1.63 fps Inflow=3.82 cfs 0.289 af
n=0.050 L=509.0' S=0.0472 '/' Capacity=519.72 cfs Outflow=3.27 cfs 0.289 af

Reach 103R: REACH 103 Avg. Flow Depth=0.45' Max Vel=2.84 fps Inflow=21.23 cfs 2.724 af
n=0.050 L=808.0' S=0.0458 '/' Capacity=512.17 cfs Outflow=20.05 cfs 2.724 af

Reach 104R: REACH 104 Avg. Flow Depth=0.57' Max Vel=2.88 fps Inflow=29.10 cfs 3.933 af
n=0.050 L=146.0' S=0.0342 '/' Capacity=442.93 cfs Outflow=29.20 cfs 3.933 af

Reach 105R: REACH 105 Avg. Flow Depth=0.19' Max Vel=1.56 fps Inflow=3.89 cfs 0.295 af
n=0.050 L=774.0' S=0.0439 '/' Capacity=501.64 cfs Outflow=2.99 cfs 0.295 af

Reach 106R: REACH 106 Avg. Flow Depth=0.49' Max Vel=2.63 fps Inflow=25.41 cfs 1.924 af
n=0.050 L=877.0' S=0.0353 '/' Capacity=449.99 cfs Outflow=21.46 cfs 1.924 af

Reach 107R: REACH 107 Avg. Flow Depth=0.53' Max Vel=3.46 fps Inflow=32.15 cfs 4.228 af
n=0.050 L=240.0' S=0.0542 '/' Capacity=557.04 cfs Outflow=31.75 cfs 4.228 af

Reach 108R: EX WS 108 Avg. Flow Depth=0.63' Max Vel=3.10 fps Inflow=36.42 cfs 5.676 af
n=0.050 L=404.0' S=0.0347 '/' Capacity=445.55 cfs Outflow=36.37 cfs 5.676 af

Link AP-1: Analysis Point #1 Inflow=0.26 cfs 0.032 af
Primary=0.26 cfs 0.032 af

Link AP-2: Analysis Point #2 Inflow=1.01 cfs 0.126 af
Primary=1.01 cfs 0.126 af

Link AP-3: Analysis Point #3 Inflow=0.78 cfs 0.083 af
Primary=0.78 cfs 0.083 af

Link AP-4: Analysis Point #4 Inflow=22.11 cfs 2.950 af
Primary=22.11 cfs 2.950 af

Link AP-5: Analysis Point #5 Inflow=45.06 cfs 6.762 af
Primary=45.06 cfs 6.762 af

Link AP-6: Analysis Point #6 Inflow=15.65 cfs 3.373 af
Primary=15.65 cfs 3.373 af

Total Runoff Area = 69.496 ac Runoff Volume = 13.326 af Average Runoff Depth = 2.30"
79.12% Pervious = 54.985 ac 20.88% Impervious = 14.511 ac

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 101S: EX-WS-101 Runoff Area=19,765 sf 0.00% Impervious Runoff Depth=1.28"
Flow Length=263' Slope=0.0600 '/' Tc=14.7 min CN=55 Runoff=0.44 cfs 0.048 af

Subcatchment 102S: EX-WS-102 Runoff Area=77,021 sf 0.00% Impervious Runoff Depth=1.28"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=55 Runoff=1.70 cfs 0.188 af

Subcatchment 103S: EX-WS-103 Runoff Area=44,627 sf 0.00% Impervious Runoff Depth=1.42"
Flow Length=174' Slope=0.1000 '/' Tc=10.9 min CN=57 Runoff=1.27 cfs 0.121 af

Subcatchment 104S: EX-WS-104 Runoff Area=397,309 sf 9.56% Impervious Runoff Depth=2.30"
Flow Length=855' Tc=25.9 min CN=68 Runoff=14.49 cfs 1.745 af

Subcatchment 105S: EX-WS-105 Runoff Area=378,473 sf 7.58% Impervious Runoff Depth=2.65"
Flow Length=780' Tc=38.2 min CN=72 Runoff=13.47 cfs 1.915 af

Subcatchment 106S: EX-WS-106 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=3.01"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=20.40 cfs 4.374 af

Subcatchment 107S: EX WS 107 Runoff Area=37,307 sf 85.00% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=4.54 cfs 0.348 af

Subcatchment 108S: EX WS 108 Runoff Area=37,996 sf 85.00% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=4.63 cfs 0.354 af

Subcatchment 109S: EX WS 109 Runoff Area=109,779 sf 85.00% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=13.37 cfs 1.023 af

Subcatchment 110S: EX WS 110 Runoff Area=58,995 sf 6.66% Impervious Runoff Depth=2.65"
Flow Length=689' Tc=19.7 min CN=72 Runoff=2.82 cfs 0.299 af

Subcatchment 111S: EX-WS-105 Runoff Area=525,152 sf 5.85% Impervious Runoff Depth=2.65"
Flow Length=1,342' Tc=28.7 min CN=72 Runoff=21.40 cfs 2.658 af

Subcatchment 112S: EX WS 112 Runoff Area=38,010 sf 85.00% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=4.63 cfs 0.354 af

Subcatchment 113S: EX WS 113 Runoff Area=248,253 sf 85.80% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=30.24 cfs 2.313 af

Subcatchment 114S: EX-WS-104 Runoff Area=295,484 sf 1.79% Impervious Runoff Depth=2.56"
Flow Length=793' Tc=28.1 min CN=71 Runoff=11.72 cfs 1.445 af

Reach 100R: REACH 100 Avg. Flow Depth=0.35' Max Vel=2.31 fps Inflow=13.37 cfs 1.023 af
n=0.050 L=768.0' S=0.0430 '/' Capacity=496.13 cfs Outflow=11.30 cfs 1.023 af

Reach 101R: REACH 101 Avg. Flow Depth=0.22' Max Vel=1.61 fps Inflow=4.63 cfs 0.354 af
n=0.050 L=453.0' S=0.0375 '/' Capacity=463.66 cfs Outflow=4.04 cfs 0.354 af

Reach 102R: REACH 102 Avg. Flow Depth=0.21' Max Vel=1.73 fps Inflow=4.54 cfs 0.348 af
n=0.050 L=509.0' S=0.0472 '/' Capacity=519.72 cfs Outflow=3.93 cfs 0.348 af

Reach 103R: REACH 103 Avg. Flow Depth=0.50' Max Vel=3.06 fps Inflow=26.86 cfs 3.469 af
n=0.050 L=808.0' S=0.0458 '/' Capacity=512.17 cfs Outflow=25.60 cfs 3.469 af

Reach 104R: REACH 104 Avg. Flow Depth=0.63' Max Vel=3.08 fps Inflow=36.44 cfs 4.971 af
n=0.050 L=146.0' S=0.0342 '/' Capacity=442.93 cfs Outflow=36.57 cfs 4.971 af

Reach 105R: REACH 105 Avg. Flow Depth=0.20' Max Vel=1.65 fps Inflow=4.63 cfs 0.354 af
n=0.050 L=774.0' S=0.0439 '/' Capacity=501.64 cfs Outflow=3.61 cfs 0.354 af

Reach 106R: REACH 106 Avg. Flow Depth=0.53' Max Vel=2.79 fps Inflow=30.24 cfs 2.313 af
n=0.050 L=877.0' S=0.0353 '/' Capacity=449.99 cfs Outflow=25.84 cfs 2.313 af

Reach 107R: REACH 107 Avg. Flow Depth=0.59' Max Vel=3.71 fps Inflow=40.12 cfs 5.325 af
n=0.050 L=240.0' S=0.0542 '/' Capacity=557.04 cfs Outflow=40.11 cfs 5.325 af

Reach 108R: EX WS 108 Avg. Flow Depth=0.71' Max Vel=3.35 fps Inflow=46.96 cfs 7.241 af
n=0.050 L=404.0' S=0.0347 '/' Capacity=445.55 cfs Outflow=46.87 cfs 7.241 af

Link AP-1: Analysis Point #1 Inflow=0.44 cfs 0.048 af
Primary=0.44 cfs 0.048 af

Link AP-2: Analysis Point #2 Inflow=1.70 cfs 0.188 af
Primary=1.70 cfs 0.188 af

Link AP-3: Analysis Point #3 Inflow=1.27 cfs 0.121 af
Primary=1.27 cfs 0.121 af

Link AP-4: Analysis Point #4 Inflow=28.37 cfs 3.768 af
Primary=28.37 cfs 3.768 af

Link AP-5: Analysis Point #5 Inflow=58.58 cfs 8.686 af
Primary=58.58 cfs 8.686 af

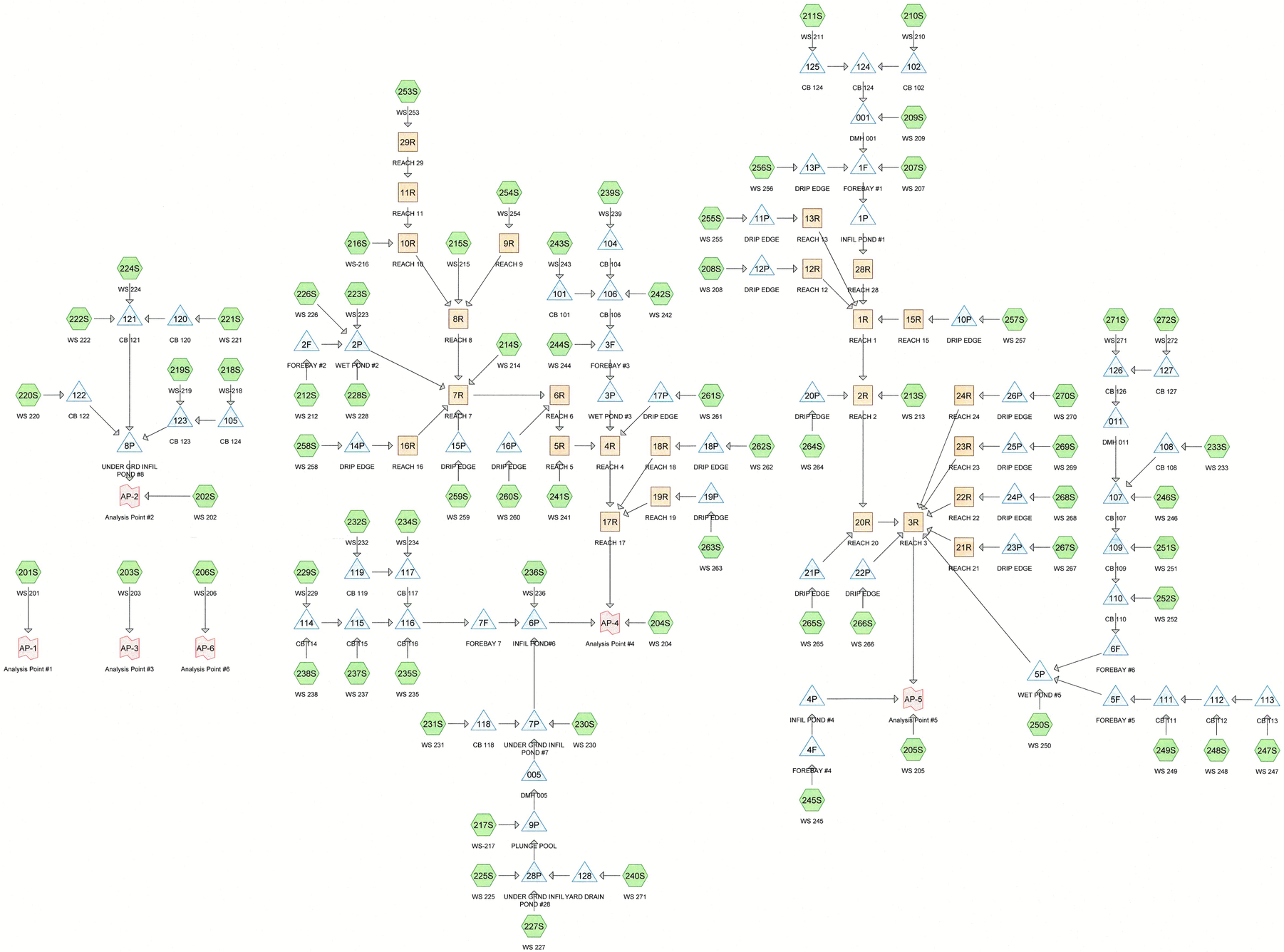
Link AP-6: Analysis Point #6 Inflow=20.40 cfs 4.374 af
Primary=20.40 cfs 4.374 af

Total Runoff Area = 69.496 ac Runoff Volume = 17.186 af Average Runoff Depth = 2.97"
79.12% Pervious = 54.985 ac 20.88% Impervious = 14.511 ac

14.7 APPENDIX II

POST-DEVELOPMENT CONDITIONS ANALYSIS

14.7.1 2-Year 24-Hour Summary Analysis
14.7.2 10-Year 24-Hour Complete Analysis
14.7.3 25-Year 24-Hour Summary Analysis
14.7.4 50-Year 24-Hour Summary Analysis



Subcat Reach Pond Link

Routing Diagram for 17190-PROPOSED

Prepared by Jones & Beach Engineers, Printed 7/2/2018

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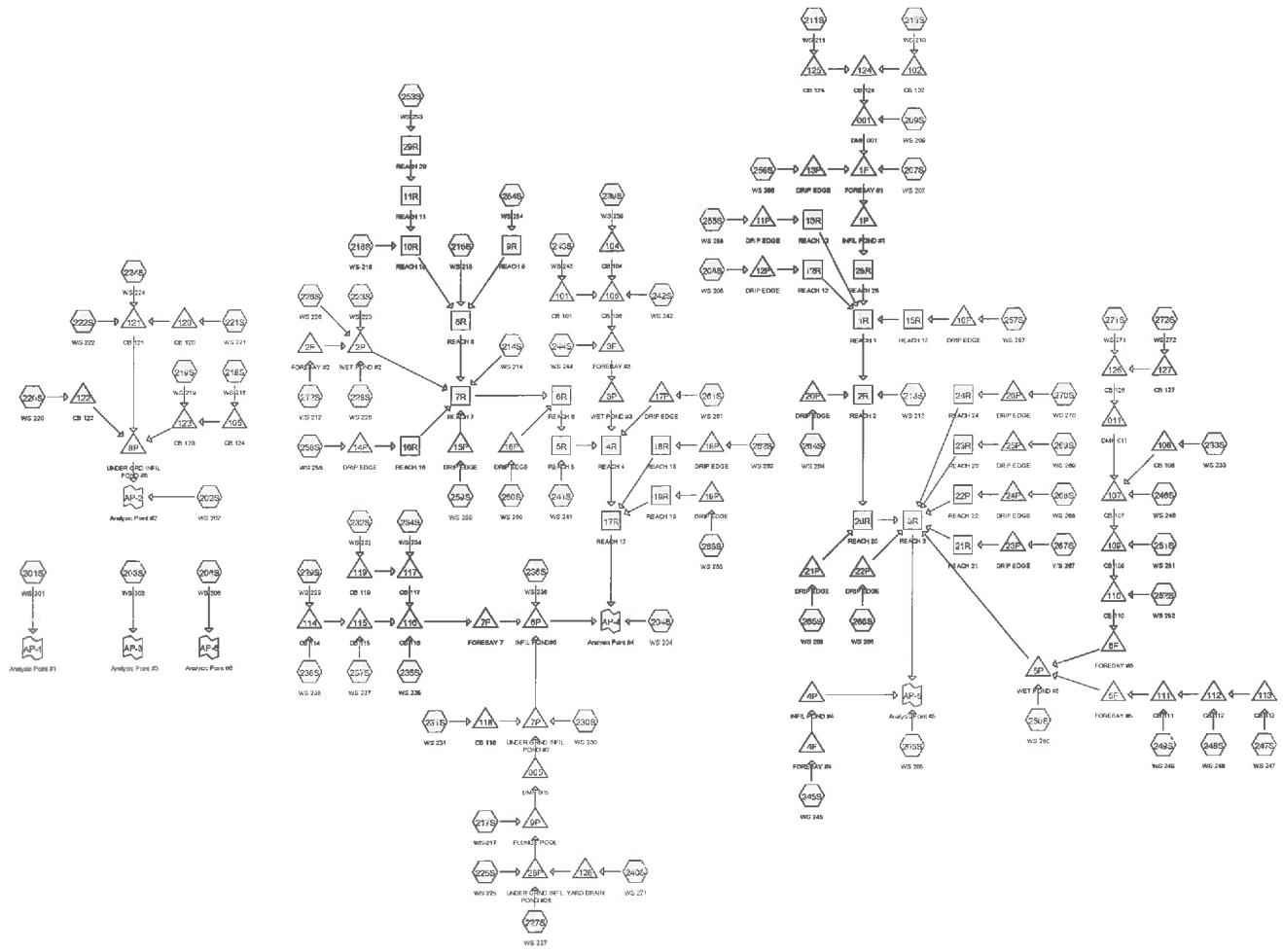

Subcat Reach Pond Link

Routing Diagram for 17190-PROPOSED
Prepared by Jones & Beach Engineers, Printed 7/2/2018
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.922	80	1/2 acre lots, 25% imp, HSG C (206S)
2.550	61	>75% Grass cover, Good, HSG B (202S, 203S, 205S, 211S, 212S, 213S, 214S, 216S, 217S, 220S, 221S, 222S, 231S, 232S, 238S, 240S, 241S)
13.429	74	>75% Grass cover, Good, HSG C (203S, 204S, 205S, 206S, 207S, 209S, 210S, 211S, 212S, 213S, 214S, 215S, 216S, 231S, 232S, 233S, 234S, 235S, 236S, 237S, 238S, 239S, 241S, 242S, 243S, 244S, 245S, 246S, 247S, 248S, 249S, 250S, 251S, 254S, 271S, 272S)
0.043	96	Gravel surface, HSG B (213S)
0.107	96	Gravel surface, HSG C (208S, 247S, 255S, 256S, 257S, 258S, 259S, 260S, 261S, 262S, 263S, 264S, 265S, 266S, 267S, 268S, 269S, 270S)
1.521	98	Paved parking, HSG B (211S, 212S, 217S, 218S, 219S, 220S, 221S, 222S, 231S, 238S, 240S)
4.234	98	Paved parking, HSG C (204S, 205S, 206S, 209S, 210S, 211S, 212S, 215S, 218S, 219S, 231S, 232S, 233S, 234S, 235S, 237S, 238S, 239S, 241S, 242S, 243S, 245S, 246S, 247S, 248S, 249S, 251S, 252S, 271S, 272S)
0.847	98	Roofs, HSG B (223S, 224S, 225S, 226S, 227S, 228S, 229S, 230S)
1.768	98	Roofs, HSG C (206S, 207S, 208S, 209S, 210S, 211S, 227S, 229S, 230S, 233S, 245S, 246S, 247S, 248S, 251S, 255S, 256S, 257S, 258S, 259S, 260S, 261S, 262S, 263S, 264S, 265S, 266S, 267S, 268S, 269S, 270S, 271S)
0.440	92	Urban commercial, 85% imp, HSG B (216S, 253S)
12.063	94	Urban commercial, 85% imp, HSG C (205S, 206S, 213S, 216S, 253S, 254S)
2.311	55	Woods, Good, HSG B (201S, 202S, 203S, 205S, 213S, 214S, 216S, 217S)
23.262	70	Woods, Good, HSG C (203S, 204S, 205S, 206S, 213S, 214S, 216S, 241S, 245S, 246S, 247S, 254S)
69.496	**79**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
7.712	HSG B	201S, 202S, 203S, 205S, 211S, 212S, 213S, 214S, 216S, 217S, 218S, 219S, 220S, 221S, 222S, 223S, 224S, 225S, 226S, 227S, 228S, 229S, 230S, 231S, 232S, 238S, 240S, 241S, 253S
61.784	HSG C	203S, 204S, 205S, 206S, 207S, 208S, 209S, 210S, 211S, 212S, 213S, 214S, 215S, 216S, 218S, 219S, 227S, 229S, 230S, 231S, 232S, 233S, 234S, 235S, 236S, 237S, 238S, 239S, 241S, 242S, 243S, 244S, 245S, 246S, 247S, 248S, 249S, 250S, 251S, 252S, 253S, 254S, 255S, 256S, 257S, 258S, 259S, 260S, 261S, 262S, 263S, 264S, 265S, 266S, 267S, 268S, 269S, 270S, 271S, 272S
0.000	HSG D	
0.000	Other	
69.496		**TOTAL AREA**

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: WS 201 Runoff Area=8,114 sf 0.00% Impervious Runoff Depth=0.11"
Flow Length=193' Tc=16.6 min CN=55 Runoff=0.00 cfs 0.002 af

Subcatchment 202S: WS 202 Runoff Area=28,333 sf 0.00% Impervious Runoff Depth=0.13"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=56 Runoff=0.02 cfs 0.007 af

Subcatchment 203S: WS 203 Runoff Area=29,560 sf 0.00% Impervious Runoff Depth=0.17"
Flow Length=75' Slope=0.1300 '/' Tc=8.9 min CN=58 Runoff=0.04 cfs 0.009 af

Subcatchment 204S: WS 204 Runoff Area=82,662 sf 10.46% Impervious Runoff Depth=0.73"
Flow Length=499' Tc=29.7 min CN=75 Runoff=0.84 cfs 0.115 af

Subcatchment 205S: WS 205 Runoff Area=919,977 sf 27.03% Impervious Runoff Depth=0.87"
Flow Length=2,082' Tc=60.6 min CN=78 Runoff=7.98 cfs 1.537 af

Subcatchment 206S: WS 206 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=0.77"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=4.79 cfs 1.125 af

Subcatchment 207S: WS 207 Runoff Area=13,565 sf 9.83% Impervious Runoff Depth=0.77"
Flow Length=42' Slope=0.0100 '/' Tc=10.4 min CN=76 Runoff=0.22 cfs 0.020 af

Subcatchment 208S: WS 208 Runoff Area=2,760 sf 88.44% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.16 cfs 0.013 af

Subcatchment 209S: WS 209 Runoff Area=21,404 sf 50.80% Impervious Runoff Depth=1.35"
Flow Length=107' Tc=9.6 min CN=86 Runoff=0.68 cfs 0.055 af

Subcatchment 210S: WS 210 Runoff Area=19,716 sf 16.28% Impervious Runoff Depth=0.87"
Flow Length=212' Slope=0.0100 '/' Tc=15.8 min CN=78 Runoff=0.32 cfs 0.033 af

Subcatchment 211S: WS 211 Runoff Area=27,543 sf 32.80% Impervious Runoff Depth=1.04"
Flow Length=323' Tc=13.4 min CN=81 Runoff=0.59 cfs 0.055 af

Subcatchment 212S: WS 212 Runoff Area=15,675 sf 33.66% Impervious Runoff Depth=0.68"
Flow Length=173' Slope=0.0100 '/' Tc=12.8 min CN=74 Runoff=0.20 cfs 0.020 af

Subcatchment 213S: WS 213 Runoff Area=251,079 sf 12.80% Impervious Runoff Depth=0.68"
Flow Length=1,113' Tc=47.5 min CN=74 Runoff=1.85 cfs 0.328 af

Subcatchment 214S: WS 214 Runoff Area=44,819 sf 0.00% Impervious Runoff Depth=0.52"
Flow Length=281' Tc=13.3 min CN=70 Runoff=0.39 cfs 0.044 af

Subcatchment 215S: WS 215 Runoff Area=35,320 sf 97.47% Impervious Runoff Depth=2.29"
Tc=5.0 min CN=97 Runoff=2.03 cfs 0.155 af

Subcatchment 216S: WS-216 Runoff Area=72,557 sf 40.93% Impervious Runoff Depth=0.93"
Flow Length=429' Tc=18.2 min CN=79 Runoff=1.21 cfs 0.128 af

Subcatchment 217S: WS-217 Runoff Area=74,085 sf 38.40% Impervious Runoff Depth=0.68"
Flow Length=830' Tc=13.4 min CN=74 Runoff=0.95 cfs 0.097 af

Subcatchment 218S: WS-218 Runoff Area=4,614 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.27 cfs 0.021 af

Subcatchment 219S: WS-219 Runoff Area=1,988 sf 100.00% Impervious Runoff Depth>2.40"
Tc=0.0 min CN=98 Runoff=0.13 cfs 0.009 af

Subcatchment 220S: WS 220 Runoff Area=6,274 sf 77.65% Impervious Runoff Depth=1.65"
Tc=5.0 min CN=90 Runoff=0.28 cfs 0.020 af

Subcatchment 221S: WS 221 Runoff Area=6,159 sf 69.49% Impervious Runoff Depth=1.42"
Tc=5.0 min CN=87 Runoff=0.24 cfs 0.017 af

Subcatchment 222S: WS 222 Runoff Area=3,078 sf 55.49% Impervious Runoff Depth=1.09"
Tc=5.0 min CN=82 Runoff=0.09 cfs 0.006 af

Subcatchment 223S: WS 223 Runoff Area=7,000 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.41 cfs 0.032 af

Subcatchment 224S: WS 224 Runoff Area=6,564 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.38 cfs 0.030 af

Subcatchment 225S: WS 225 Runoff Area=12,069 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.71 cfs 0.055 af

Subcatchment 226S: WS 226 Runoff Area=2,790 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.16 cfs 0.013 af

Subcatchment 227S: WS 227 Runoff Area=3,036 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.014 af

Subcatchment 228S: WS 228 Runoff Area=2,886 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af

Subcatchment 229S: WS 229 Runoff Area=9,144 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.54 cfs 0.042 af

Subcatchment 230S: WS 230 Runoff Area=6,309 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.37 cfs 0.029 af

Subcatchment 231S: WS 231 Runoff Area=20,203 sf 74.70% Impervious Runoff Depth=1.57"
Flow Length=249' Tc=5.7 min CN=89 Runoff=0.84 cfs 0.061 af

Subcatchment 232S: WS 232 Runoff Area=6,474 sf 23.23% Impervious Runoff Depth=0.98"
Flow Length=158' Tc=6.8 min CN=80 Runoff=0.16 cfs 0.012 af

Subcatchment 233S: WS 233 Runoff Area=15,995 sf 70.05% Impervious Runoff Depth=1.73"
Flow Length=312' Tc=9.1 min CN=91 Runoff=0.65 cfs 0.053 af

Subcatchment 234S: WS 234 Runoff Area=10,284 sf 81.41% Impervious Runoff Depth=1.99"
Flow Length=292' Tc=7.4 min CN=94 Runoff=0.50 cfs 0.039 af

Subcatchment 235S: WS 235 Runoff Area=6,761 sf 89.71% Impervious Runoff Depth=2.19"
Tc=5.0 min CN=96 Runoff=0.38 cfs 0.028 af

Subcatchment 236S: WS 236 Runoff Area=10,261 sf 0.00% Impervious Runoff Depth=0.68"
Tc=5.0 min CN=74 Runoff=0.17 cfs 0.013 af

Subcatchment 237S: WS 237 Runoff Area=9,258 sf 54.60% Impervious Runoff Depth=1.42"
Flow Length=170' Tc=8.2 min CN=87 Runoff=0.32 cfs 0.025 af

Subcatchment 238S: WS 238 Runoff Area=2,487 sf 29.03% Impervious Runoff Depth=0.73"
Tc=5.0 min CN=75 Runoff=0.04 cfs 0.003 af

Subcatchment 239S: WS 239 Runoff Area=2,027 sf 73.95% Impervious Runoff Depth=1.81"
Tc=5.0 min CN=92 Runoff=0.10 cfs 0.007 af

Subcatchment 240S: WS 271 Runoff Area=14,636 sf 13.86% Impervious Runoff Depth=0.38"
Flow Length=98' Slope=0.0100 '/' Tc=11.8 min CN=66 Runoff=0.08 cfs 0.011 af

Subcatchment 241S: WS 241 Runoff Area=36,744 sf 8.08% Impervious Runoff Depth=0.68"
Flow Length=335' Tc=39.8 min CN=74 Runoff=0.30 cfs 0.048 af

Subcatchment 242S: WS 242 Runoff Area=7,261 sf 94.20% Impervious Runoff Depth=2.29"
Tc=5.0 min CN=97 Runoff=0.42 cfs 0.032 af

Subcatchment 243S: WS 243 Runoff Area=3,870 sf 84.50% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=0.20 cfs 0.015 af

Subcatchment 244S: WS 244 Runoff Area=2,929 sf 0.00% Impervious Runoff Depth=0.68"
Tc=5.0 min CN=74 Runoff=0.05 cfs 0.004 af

Subcatchment 245S: WS 245 Runoff Area=92,391 sf 38.82% Impervious Runoff Depth=1.15"
Flow Length=322' Tc=7.5 min CN=83 Runoff=2.66 cfs 0.204 af

Subcatchment 246S: WS 246 Runoff Area=14,444 sf 34.40% Impervious Runoff Depth=1.09"
Flow Length=351' Slope=0.0320 '/' Tc=10.5 min CN=82 Runoff=0.36 cfs 0.030 af

Subcatchment 247S: WS 247 Runoff Area=28,201 sf 23.60% Impervious Runoff Depth=0.93"
Flow Length=234' Slope=0.0430 '/' Tc=11.4 min CN=79 Runoff=0.56 cfs 0.050 af

Subcatchment 248S: WS 248 Runoff Area=6,298 sf 62.62% Impervious Runoff Depth=1.57"
Flow Length=208' Tc=5.5 min CN=89 Runoff=0.26 cfs 0.019 af

Subcatchment 249S: WS 249 Runoff Area=2,657 sf 85.40% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=0.14 cfs 0.010 af

Subcatchment 250S: WS 250 Runoff Area=13,455 sf 0.00% Impervious Runoff Depth=0.68"
Tc=5.0 min CN=74 Runoff=0.22 cfs 0.018 af

Subcatchment 251S: WS 251 Runoff Area=4,230 sf 76.17% Impervious Runoff Depth=1.81"
Tc=5.0 min CN=92 Runoff=0.20 cfs 0.015 af

Subcatchment 252S: WS 252 Runoff Area=3,060 sf 100.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.014 af

Subcatchment 253S: WS 253 Runoff Area=116,031 sf 85.00% Impervious Runoff Depth=1.99"
Flow Length=673' Slope=0.0100 '/' Tc=7.8 min CN=94 Runoff=5.61 cfs 0.443 af

Subcatchment 254S: WS 254 Runoff Area=80,647 sf 53.25% Impervious Runoff Depth=1.35"
Flow Length=396' Tc=21.4 min CN=86 Runoff=1.91 cfs 0.208 af

Subcatchment 255S: WS 255 Runoff Area=725 sf 85.38% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment 256S: WS 256 Runoff Area=710 sf 85.07% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment 257S: WS 257 Runoff Area=725 sf 85.38% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.04 cfs 0.003 af

Subcatchment 258S: WS 258 Runoff Area=962 sf 90.96% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.004 af

Subcatchment 259S: WS 259 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment 260S: WS 260 Runoff Area=1,634 sf 88.00% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment 261S: WS 261 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment 262S: WS 262 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af

Subcatchment 263S: WS 263 Runoff Area=2,223 sf 90.42% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.13 cfs 0.010 af

Subcatchment 264S: WS 264 Runoff Area=2,611 sf 89.81% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 265S: WS 265 Runoff Area=1,439 sf 89.09% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.08 cfs 0.007 af

Subcatchment 266S: WS 266 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af

Subcatchment 267S: WS 267 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af

Subcatchment 268S: WS 268 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment 269S: WS 269 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af

Subcatchment 270S: WS 270 Runoff Area=2,166 sf 90.17% Impervious Runoff Depth>2.40"
Tc=5.0 min CN=98 Runoff=0.13 cfs 0.010 af

Subcatchment 271S: WS 271 Runoff Area=6,211 sf 63.11% Impervious Runoff Depth=1.57"
Flow Length=139' Tc=6.4 min CN=89 Runoff=0.25 cfs 0.019 af

Subcatchment 272S: WS 272 Runoff Area=2,532 sf 83.57% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=94 Runoff=0.13 cfs 0.010 af

Reach 1R: REACH 1 Avg. Flow Depth=0.04' Max Vel=0.66 fps Inflow=0.11 cfs 0.048 af
n=0.050 L=152.0' S=0.0658 '/' Capacity=613.90 cfs Outflow=0.11 cfs 0.048 af

Reach 2R: REACH 2 Avg. Flow Depth=0.21' Max Vel=4.24 fps Inflow=1.85 cfs 0.376 af
18.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0213 '/' Capacity=45.97 cfs Outflow=1.85 cfs 0.376 af

Reach 3R: REACH 3 Avg. Flow Depth=0.15' Max Vel=1.59 fps Inflow=2.14 cfs 0.561 af
n=0.050 L=90.0' S=0.0623 '/' Capacity=597.56 cfs Outflow=2.14 cfs 0.561 af

Reach 4R: REACH 4 Avg. Flow Depth=0.31' Max Vel=2.38 fps Inflow=9.57 cfs 1.158 af
n=0.050 L=261.0' S=0.0536 '/' Capacity=554.33 cfs Outflow=9.52 cfs 1.158 af

Reach 5R: REACH 5 Avg. Flow Depth=0.43' Max Vel=11.24 fps Inflow=9.40 cfs 1.102 af
18.0" Round Pipe x 2.00 n=0.013 L=64.0' S=0.0625 '/' Capacity=52.52 cfs Outflow=9.41 cfs 1.102 af

Reach 6R: REACH 6 Avg. Flow Depth=0.17' Max Vel=5.78 fps Inflow=9.30 cfs 1.054 af
n=0.013 L=242.0' S=0.0475 '/' Capacity=2,006.73 cfs Outflow=9.32 cfs 1.054 af

Reach 7R: REACH 7 Avg. Flow Depth=0.52' Max Vel=4.31 fps Inflow=9.30 cfs 1.054 af
18.0" Round Pipe x 4.00 n=0.013 L=33.0' S=0.0076 '/' Capacity=36.57 cfs Outflow=9.30 cfs 1.054 af

Reach 8R: REACH 8 Avg. Flow Depth=0.32' Max Vel=2.10 fps Inflow=9.01 cfs 0.934 af
n=0.050 L=252.0' S=0.0397 '/' Capacity=476.78 cfs Outflow=8.91 cfs 0.934 af

Reach 9R: REACH 9 Avg. Flow Depth=0.22' Max Vel=9.85 fps Inflow=1.91 cfs 0.208 af
24.0" Round Pipe n=0.013 L=40.0' S=0.1000 '/' Capacity=71.54 cfs Outflow=1.91 cfs 0.208 af

Reach 10R: REACH 10 Avg. Flow Depth=0.31' Max Vel=9.86 fps Inflow=6.26 cfs 0.571 af
12.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0745 '/' Capacity=29.17 cfs Outflow=6.26 cfs 0.571 af

Reach 11R: REACH 11 Avg. Flow Depth=0.23' Max Vel=2.01 fps Inflow=5.61 cfs 0.443 af
n=0.050 L=309.0' S=0.0550 '/' Capacity=561.39 cfs Outflow=5.34 cfs 0.443 af

Reach 12R: REACH 12 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=516.0' S=0.0368 '/' Capacity=459.28 cfs Outflow=0.00 cfs 0.000 af

Reach 13R: REACH 13 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=668.0' S=0.0359 '/' Capacity=453.67 cfs Outflow=0.00 cfs 0.000 af

Reach 15R: REACH 15 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=355.0' S=0.0366 '/' Capacity=458.01 cfs Outflow=0.00 cfs 0.000 af

Reach 16R: REACH 16 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=247.0' S=0.0121 '/' Capacity=263.78 cfs Outflow=0.00 cfs 0.000 af

Reach 17R: REACH 17 Avg. Flow Depth=0.35' Max Vel=1.91 fps Inflow=9.52 cfs 1.160 af
n=0.050 L=69.0' S=0.0286 '/' Capacity=404.42 cfs Outflow=9.52 cfs 1.160 af

Reach 18R: REACH 18 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=165.0' S=0.0485 '/' Capacity=527.02 cfs Outflow=0.00 cfs 0.000 af

Reach 19R: REACH 19 Avg. Flow Depth=0.01' Max Vel=0.35 fps Inflow=0.02 cfs 0.001 af
n=0.050 L=134.0' S=0.0448 '/' Capacity=506.46 cfs Outflow=0.01 cfs 0.001 af

Reach 20R: REACH 20 Avg. Flow Depth=0.16' Max Vel=1.24 fps Inflow=1.85 cfs 0.376 af
n=0.050 L=258.0' S=0.0349 '/' Capacity=447.03 cfs Outflow=1.84 cfs 0.376 af

Reach 21R: REACH 21 Avg. Flow Depth=0.00' Max Vel=0.45 fps Inflow=0.01 cfs 0.001 af
n=0.050 L=149.0' S=0.0738 '/' Capacity=650.32 cfs Outflow=0.00 cfs 0.001 af

Reach 22R: REACH 22 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=357.0' S=0.0336 '/' Capacity=438.81 cfs Outflow=0.00 cfs 0.000 af

Reach 23R: REACH 23 Avg. Flow Depth=0.00' Max Vel=0.26 fps Inflow=0.01 cfs 0.000 af
n=0.050 L=481.0' S=0.0249 '/' Capacity=378.04 cfs Outflow=0.00 cfs 0.000 af

Reach 24R: REACH 24 Avg. Flow Depth=0.01' Max Vel=0.30 fps Inflow=0.01 cfs 0.001 af
n=0.050 L=600.0' S=0.0317 '/' Capacity=425.92 cfs Outflow=0.00 cfs 0.001 af

Reach 28R: REACH 28 Avg. Flow Depth=0.04' Max Vel=0.58 fps Inflow=0.11 cfs 0.048 af
n=0.050 L=205.0' S=0.0463 '/' Capacity=515.24 cfs Outflow=0.11 cfs 0.048 af

Reach 29R: REACH 29 Avg. Flow Depth=0.65' Max Vel=6.33 fps Inflow=5.61 cfs 0.443 af
24.0" Round Pipe n=0.014 L=73.0' S=0.0137 '/' Capacity=24.59 cfs Outflow=5.61 cfs 0.443 af

Pond 001: DMH 001 Peak Elev=523.04' Storage=0.000 af Inflow=1.52 cfs 0.143 af
18.0" Round Culvert n=0.013 L=86.0' S=0.0099 '/' Outflow=1.52 cfs 0.143 af

Pond 1F: FOREBAY #1 Peak Elev=522.69' Storage=495 cf Inflow=1.74 cfs 0.163 af
Outflow=1.73 cfs 0.154 af

Pond 1P: INFIL POND #1 Peak Elev=521.90' Storage=3,619 cf Inflow=1.73 cfs 0.154 af
Discarded=0.04 cfs 0.106 af Primary=0.11 cfs 0.048 af Outflow=0.15 cfs 0.154 af

Pond 2F: FOREBAY #2 Peak Elev=531.80' Storage=170 cf Inflow=0.20 cfs 0.020 af
Outflow=0.23 cfs 0.017 af

Pond 2P: WET POND #2 Peak Elev=531.00' Storage=3,420 cf Inflow=0.74 cfs 0.075 af
Outflow=0.10 cfs 0.075 af

Pond 3F: FOREBAY #3 Peak Elev=514.86' Storage=126 cf Inflow=0.77 cfs 0.062 af
Outflow=0.76 cfs 0.060 af

Pond 3P: WET POND #3 Peak Elev=513.87' Storage=3,517 cf Inflow=0.76 cfs 0.060 af
Outflow=0.20 cfs 0.057 af

Pond 4F: FOREBAY #4 Peak Elev=502.76' Storage=510 cf Inflow=2.66 cfs 0.204 af
Outflow=2.64 cfs 0.195 af

Pond 4P: INFIL POND #4 Peak Elev=501.85' Storage=3,182 cf Inflow=2.64 cfs 0.195 af
Discarded=0.03 cfs 0.069 af Primary=0.68 cfs 0.126 af Outflow=0.71 cfs 0.195 af

Pond 005: DMH 005 Peak Elev=527.73' Storage=5 cf Inflow=0.95 cfs 0.111 af
18.0" Round Culvert n=0.013 L=115.0' S=0.0548 '/' Outflow=0.95 cfs 0.111 af

Pond 5F: FOREBAY #5 Peak Elev=493.62' Storage=305 cf Inflow=0.86 cfs 0.078 af
Outflow=0.86 cfs 0.072 af

Pond 5P: WET POND #5 Peak Elev=492.46' Storage=14,029 cf Inflow=2.76 cfs 0.223 af
Outflow=0.32 cfs 0.183 af

Pond 6F: FOREBAY #6 Peak Elev=493.69' Storage=344 cf Inflow=1.70 cfs 0.140 af
Outflow=1.69 cfs 0.134 af

Pond 6P: INFIL POND#6 Peak Elev=508.61' Storage=3,308 cf Inflow=2.07 cfs 0.194 af
Discarded=0.02 cfs 0.068 af Primary=0.29 cfs 0.126 af Outflow=0.31 cfs 0.194 af

Pond 7F: FOREBAY 7 Peak Elev=508.71' Storage=431 cf Inflow=1.90 cfs 0.150 af
Outflow=1.90 cfs 0.142 af

Pond 7P: UNDER GRND INFIL POND #7 Peak Elev=521.70' Storage=5,091 cf Inflow=1.74 cfs 0.200 af
Discarded=0.06 cfs 0.161 af Primary=0.05 cfs 0.039 af Outflow=0.11 cfs 0.200 af

Pond 8P: UNDER GRD INFIL POND #8 Peak Elev=542.82' Storage=2,545 cf Inflow=1.34 cfs 0.103 af
Discarded=0.04 cfs 0.091 af Primary=0.02 cfs 0.013 af Outflow=0.05 cfs 0.103 af

Pond 9P: PLUNGE POOL Peak Elev=528.43' Storage=100 cf Inflow=0.96 cfs 0.111 af
18.0" Round Culvert n=0.013 L=9.0' S=0.0667 '/' Outflow=0.95 cfs 0.111 af

Pond 10P: DRIP EDGE Peak Elev=521.67' Storage=72 cf Inflow=0.04 cfs 0.003 af
Discarded=0.00 cfs 0.003 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.003 af

Pond 011: DMH 011 Peak Elev=504.05' Storage=4 cf Inflow=0.38 cfs 0.028 af
12.0" Round Culvert n=0.013 L=127.0' S=0.0350 '/' Outflow=0.38 cfs 0.028 af

Pond 11P: DRIP EDGE Peak Elev=531.99' Storage=64 cf Inflow=0.04 cfs 0.003 af
Discarded=0.01 cfs 0.003 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.003 af

Pond 12P: DRIP EDGE Peak Elev=528.54' Storage=304 cf Inflow=0.16 cfs 0.013 af
Discarded=0.01 cfs 0.013 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.013 af

Pond 13P: DRIP EDGE Peak Elev=526.03' Storage=87 cf Inflow=0.04 cfs 0.003 af
Discarded=0.00 cfs 0.003 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.003 af

Pond 14P: DRIP EDGE Peak Elev=530.55' Storage=89 cf Inflow=0.06 cfs 0.004 af
Discarded=0.01 cfs 0.004 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.004 af

Pond 15P: DRIP EDGE Peak Elev=530.40' Storage=185 cf Inflow=0.10 cfs 0.008 af
Discarded=0.01 cfs 0.008 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.008 af

Pond 16P: DRIP EDGE Peak Elev=523.39' Storage=150 cf Inflow=0.10 cfs 0.008 af
Discarded=0.01 cfs 0.008 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.008 af

Pond 17P: DRIP EDGE Peak Elev=507.40' Storage=205 cf Inflow=0.10 cfs 0.008 af
Discarded=0.00 cfs 0.008 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.008 af

Pond 18P: DRIP EDGE Peak Elev=504.72' Storage=350 cf Inflow=0.17 cfs 0.013 af
Discarded=0.01 cfs 0.013 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.013 af

Pond 19P: DRIP EDGE Peak Elev=505.00' Storage=254 cf Inflow=0.13 cfs 0.010 af
Discarded=0.00 cfs 0.009 af Primary=0.02 cfs 0.001 af Outflow=0.02 cfs 0.010 af

Pond 20P: DRIP EDGE Peak Elev=505.53' Storage=271 cf Inflow=0.15 cfs 0.012 af
Discarded=0.01 cfs 0.012 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.012 af

Pond 21P: DRIP EDGE Peak Elev=498.08' Storage=188 cf Inflow=0.08 cfs 0.007 af
Discarded=0.00 cfs 0.006 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.007 af

Pond 22P: DRIP EDGE Peak Elev=498.00' Storage=383 cf Inflow=0.17 cfs 0.013 af
Discarded=0.00 cfs 0.013 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.013 af

Pond 23P: DRIP EDGE Peak Elev=501.00' Storage=383 cf Inflow=0.17 cfs 0.013 af
Discarded=0.00 cfs 0.013 af Primary=0.01 cfs 0.001 af Outflow=0.01 cfs 0.013 af

Pond 24P: DRIP EDGE Peak Elev=500.97' Storage=231 cf Inflow=0.10 cfs 0.008 af
Discarded=0.00 cfs 0.008 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.008 af

Pond 25P: DRIP EDGE Peak Elev=501.00' Storage=385 cf Inflow=0.17 cfs 0.013 af
Discarded=0.00 cfs 0.013 af Primary=0.01 cfs 0.000 af Outflow=0.01 cfs 0.013 af

Pond 26P: DRIP EDGE Peak Elev=509.00' Storage=257 cf Inflow=0.13 cfs 0.010 af
Discarded=0.00 cfs 0.009 af Primary=0.01 cfs 0.001 af Outflow=0.01 cfs 0.010 af

Pond 28P: UNDER GRND INFIL POND #28 Peak Elev=530.40' Storage=1,633 cf Inflow=0.91 cfs 0.080 af
Discarded=0.04 cfs 0.066 af Primary=0.03 cfs 0.014 af Outflow=0.07 cfs 0.080 af

Pond 101: CB 101 Peak Elev=514.90' Storage=18 cf Inflow=0.20 cfs 0.015 af
12.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=0.21 cfs 0.014 af

Pond 102: CB 102 Peak Elev=524.08' Storage=0.000 af Inflow=0.32 cfs 0.033 af
18.0" Round Culvert n=0.013 L=43.0' S=0.0093 '/' Outflow=0.32 cfs 0.033 af

Pond 104: CB 104 Peak Elev=514.90' Storage=18 cf Inflow=0.10 cfs 0.007 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0050 '/' Outflow=0.10 cfs 0.007 af

Pond 105: CB 124 Peak Elev=543.17' Storage=0.000 af Inflow=0.27 cfs 0.021 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0050 '/' Outflow=0.27 cfs 0.021 af

Pond 106: CB 106 Peak Elev=514.90' Storage=21 cf Inflow=0.72 cfs 0.059 af
12.0" Round Culvert n=0.013 L=11.0' S=0.0045 '/' Outflow=0.72 cfs 0.058 af

Pond 107: CB 107 Peak Elev=499.82' Storage=8 cf Inflow=1.35 cfs 0.111 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0302 '/' Outflow=1.36 cfs 0.111 af

Pond 108: CB 108 Peak Elev=500.18' Storage=5 cf Inflow=0.65 cfs 0.053 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0205 '/' Outflow=0.65 cfs 0.053 af

Pond 109: CB 109 Peak Elev=497.87' Storage=8 cf Inflow=1.54 cfs 0.126 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0318 '/' Outflow=1.54 cfs 0.126 af

Pond 110: CB 110 Peak Elev=496.99' Storage=7 cf Inflow=1.70 cfs 0.140 af
18.0" Round Culvert n=0.013 L=29.0' S=0.0483 '/' Outflow=1.70 cfs 0.140 af

Pond 111: CB 111 Peak Elev=493.64' Storage=15 cf Inflow=0.86 cfs 0.079 af
18.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=0.86 cfs 0.078 af

Pond 112: CB 112 Peak Elev=493.69' Storage=12 cf Inflow=0.75 cfs 0.069 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0100 '/' Outflow=0.75 cfs 0.069 af

Pond 113: CB 113 Peak Elev=493.74' Storage=9 cf Inflow=0.56 cfs 0.050 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0117 '/' Outflow=0.56 cfs 0.050 af

Pond 114: CB 114 Peak Elev=517.58' Storage=0.000 af Inflow=0.58 cfs 0.045 af
12.0" Round Culvert n=0.013 L=184.0' S=0.0200 '/' Outflow=0.58 cfs 0.045 af

Pond 115: CB 115 Peak Elev=513.90' Storage=6 cf Inflow=0.88 cfs 0.071 af
12.0" Round Culvert n=0.013 L=73.0' S=0.0300 '/' Outflow=0.88 cfs 0.071 af

Pond 116: CB 116 Peak Elev=511.89' Storage=10 cf Inflow=1.90 cfs 0.150 af
12.0" Round Culvert n=0.013 L=61.0' S=0.0513 '/' Outflow=1.90 cfs 0.150 af

Pond 117: CB 117 Peak Elev=513.89' Storage=0.000 af Inflow=0.66 cfs 0.051 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0163 '/' Outflow=0.66 cfs 0.051 af

Pond 118: CB 118 Peak Elev=521.72' Storage=6 cf Inflow=0.84 cfs 0.061 af
12.0" Round Culvert n=0.013 L=8.0' S=0.0313 '/' Outflow=0.84 cfs 0.061 af

Pond 119: CB 119 Peak Elev=517.49' Storage=0.000 af Inflow=0.16 cfs 0.012 af
12.0" Round Culvert n=0.013 L=186.0' S=0.0200 '/' Outflow=0.16 cfs 0.012 af

Pond 120: CB 120 Peak Elev=542.93' Storage=0.000 af Inflow=0.24 cfs 0.017 af
12.0" Round Culvert n=0.013 L=23.0' S=0.0052 '/' Outflow=0.24 cfs 0.017 af

Pond 121: CB 121 Peak Elev=542.86' Storage=0.000 af Inflow=0.71 cfs 0.053 af
12.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=0.71 cfs 0.053 af

Pond 122: CB 122 Peak Elev=542.82' Storage=0.000 af Inflow=0.28 cfs 0.020 af
12.0" Round Culvert n=0.013 L=44.0' S=0.0050 '/' Outflow=0.28 cfs 0.020 af

Pond 123: CB 123 Peak Elev=543.00' Storage=0.000 af Inflow=0.36 cfs 0.030 af
12.0" Round Culvert n=0.013 L=79.0' S=0.0051 '/' Outflow=0.36 cfs 0.030 af

Pond 124: CB 124 Peak Elev=523.77' Storage=6 cf Inflow=0.90 cfs 0.088 af
18.0" Round Culvert n=0.013 L=107.0' S=0.0084 '/' Outflow=0.90 cfs 0.088 af

Pond 125: CB 124 Peak Elev=524.38' Storage=5 cf Inflow=0.59 cfs 0.055 af
18.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=0.59 cfs 0.055 af

Pond 126: CB 126 Peak Elev=507.15' Storage=4 cf Inflow=0.38 cfs 0.028 af
12.0" Round Culvert n=0.013 L=100.0' S=0.0300 '/' Outflow=0.38 cfs 0.028 af

Pond 127: CB 127 Peak Elev=507.39' Storage=21 cf Inflow=0.13 cfs 0.010 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0114 '/' Outflow=0.13 cfs 0.010 af

Pond 128: YARD DRAIN Peak Elev=530.40' Storage=0 cf Inflow=0.08 cfs 0.011 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0125 '/' Outflow=0.08 cfs 0.011 af

Link AP-1: Analysis Point #1 Inflow=0.00 cfs 0.002 af
Primary=0.00 cfs 0.002 af

Link AP-2: Analysis Point #2 Inflow=0.03 cfs 0.020 af
Primary=0.03 cfs 0.020 af

Link AP-3: Analysis Point #3 Inflow=0.04 cfs 0.009 af
Primary=0.04 cfs 0.009 af

Link AP-4: Analysis Point #4 Inflow=10.16 cfs 1.401 af
Primary=10.16 cfs 1.401 af

Link AP-5: Analysis Point #5 Inflow=10.69 cfs 2.224 af
Primary=10.69 cfs 2.224 af

Link AP-6: Analysis Point #6 Inflow=4.79 cfs 1.125 af
Primary=4.79 cfs 1.125 af

Total Runoff Area = 69.496 ac Runoff Volume = 5.572 af Average Runoff Depth = 0.96"
70.17% Pervious = 48.768 ac 29.83% Impervious = 20.728 ac

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: WS 201 Runoff Area=8,114 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=193' Tc=16.6 min CN=55 Runoff=0.04 cfs 0.007 af

Subcatchment 202S: WS 202 Runoff Area=28,333 sf 0.00% Impervious Runoff Depth=0.50"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=56 Runoff=0.18 cfs 0.027 af

Subcatchment 203S: WS 203 Runoff Area=29,560 sf 0.00% Impervious Runoff Depth=0.59"
Flow Length=75' Slope=0.1300 '/' Tc=8.9 min CN=58 Runoff=0.29 cfs 0.033 af

Subcatchment 204S: WS 204 Runoff Area=82,662 sf 10.46% Impervious Runoff Depth=1.54"
Flow Length=499' Tc=29.7 min CN=75 Runoff=1.90 cfs 0.244 af

Subcatchment 205S: WS 205 Runoff Area=919,977 sf 27.03% Impervious Runoff Depth=1.75"
Flow Length=2,082' Tc=60.6 min CN=78 Runoff=16.78 cfs 3.084 af

Subcatchment 206S: WS 206 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=1.61"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=10.67 cfs 2.337 af

Subcatchment 207S: WS 207 Runoff Area=13,565 sf 9.83% Impervious Runoff Depth=1.61"
Flow Length=42' Slope=0.0100 '/' Tc=10.4 min CN=76 Runoff=0.49 cfs 0.042 af

Subcatchment 208S: WS 208 Runoff Area=2,760 sf 88.44% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment 209S: WS 209 Runoff Area=21,404 sf 50.80% Impervious Runoff Depth=2.39"
Flow Length=107' Tc=9.6 min CN=86 Runoff=1.20 cfs 0.098 af

Subcatchment 210S: WS 210 Runoff Area=19,716 sf 16.28% Impervious Runoff Depth=1.75"
Flow Length=212' Slope=0.0100 '/' Tc=15.8 min CN=78 Runoff=0.68 cfs 0.066 af

Subcatchment 211S: WS 211 Runoff Area=27,543 sf 32.80% Impervious Runoff Depth=1.98"
Flow Length=323' Tc=13.4 min CN=81 Runoff=1.15 cfs 0.104 af

Subcatchment 212S: WS 212 Runoff Area=15,675 sf 33.66% Impervious Runoff Depth=1.47"
Flow Length=173' Slope=0.0100 '/' Tc=12.8 min CN=74 Runoff=0.48 cfs 0.044 af

Subcatchment 213S: WS 213 Runoff Area=251,079 sf 12.80% Impervious Runoff Depth=1.47"
Flow Length=1,113' Tc=47.5 min CN=74 Runoff=4.34 cfs 0.707 af

Subcatchment 214S: WS 214 Runoff Area=44,819 sf 0.00% Impervious Runoff Depth=1.22"
Flow Length=281' Tc=13.3 min CN=70 Runoff=1.08 cfs 0.104 af

Subcatchment 215S: WS 215 Runoff Area=35,320 sf 97.47% Impervious Runoff Depth>3.48"
Tc=5.0 min CN=97 Runoff=3.01 cfs 0.235 af

Subcatchment 216S: WS-216 Runoff Area=72,557 sf 40.93% Impervious Runoff Depth=1.83"
Flow Length=429' Tc=18.2 min CN=79 Runoff=2.48 cfs 0.254 af

Subcatchment 217S: WS-217 Runoff Area=74,085 sf 38.40% Impervious Runoff Depth=1.47"
Flow Length=830' Tc=13.4 min CN=74 Runoff=2.23 cfs 0.209 af

Subcatchment 218S: WS-218 Runoff Area=4,614 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.40 cfs 0.032 af

Subcatchment 219S: WS-219 Runoff Area=1,988 sf 100.00% Impervious Runoff Depth>3.59"
Tc=0.0 min CN=98 Runoff=0.19 cfs 0.014 af

Subcatchment 220S: WS 220 Runoff Area=6,274 sf 77.65% Impervious Runoff Depth=2.76"
Tc=5.0 min CN=90 Runoff=0.46 cfs 0.033 af

Subcatchment 221S: WS 221 Runoff Area=6,159 sf 69.49% Impervious Runoff Depth=2.48"
Tc=5.0 min CN=87 Runoff=0.41 cfs 0.029 af

Subcatchment 222S: WS 222 Runoff Area=3,078 sf 55.49% Impervious Runoff Depth=2.06"
Tc=5.0 min CN=82 Runoff=0.17 cfs 0.012 af

Subcatchment 223S: WS 223 Runoff Area=7,000 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.60 cfs 0.048 af

Subcatchment 224S: WS 224 Runoff Area=6,564 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.57 cfs 0.045 af

Subcatchment 225S: WS 225 Runoff Area=12,069 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=1.04 cfs 0.083 af

Subcatchment 226S: WS 226 Runoff Area=2,790 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment 227S: WS 227 Runoff Area=3,036 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.021 af

Subcatchment 228S: WS 228 Runoff Area=2,886 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 229S: WS 229 Runoff Area=9,144 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.79 cfs 0.063 af

Subcatchment 230S: WS 230 Runoff Area=6,309 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.54 cfs 0.043 af

Subcatchment 231S: WS 231 Runoff Area=20,203 sf 74.70% Impervious Runoff Depth=2.66"
Flow Length=249' Tc=5.7 min CN=89 Runoff=1.41 cfs 0.103 af

Subcatchment 232S: WS 232 Runoff Area=6,474 sf 23.23% Impervious Runoff Depth=1.90"
Flow Length=158' Tc=6.8 min CN=80 Runoff=0.32 cfs 0.024 af

Subcatchment 233S: WS 233 Runoff Area=15,995 sf 70.05% Impervious Runoff Depth=2.85"
Flow Length=312' Tc=9.1 min CN=91 Runoff=1.06 cfs 0.087 af

Subcatchment 234S: WS 234 Runoff Area=10,284 sf 81.41% Impervious Runoff Depth=3.16"
Flow Length=292' Tc=7.4 min CN=94 Runoff=0.78 cfs 0.062 af

Subcatchment 235S: WS 235 Runoff Area=6,761 sf 89.71% Impervious Runoff Depth=3.37"
Tc=5.0 min CN=96 Runoff=0.57 cfs 0.044 af

Subcatchment 236S: WS 236 Runoff Area=10,261 sf 0.00% Impervious Runoff Depth=1.47"
Tc=5.0 min CN=74 Runoff=0.40 cfs 0.029 af

Subcatchment 237S: WS 237 Runoff Area=9,258 sf 54.60% Impervious Runoff Depth=2.48"
Flow Length=170' Tc=8.2 min CN=87 Runoff=0.56 cfs 0.044 af

Subcatchment 238S: WS 238 Runoff Area=2,487 sf 29.03% Impervious Runoff Depth=1.54"
Tc=5.0 min CN=75 Runoff=0.10 cfs 0.007 af

Subcatchment 239S: WS 239 Runoff Area=2,027 sf 73.95% Impervious Runoff Depth=2.95"
Tc=5.0 min CN=92 Runoff=0.16 cfs 0.011 af

Subcatchment 240S: WS 271 Runoff Area=14,636 sf 13.86% Impervious Runoff Depth=0.99"
Flow Length=98' Slope=0.0100 '/' Tc=11.8 min CN=66 Runoff=0.28 cfs 0.028 af

Subcatchment 241S: WS 241 Runoff Area=36,744 sf 8.08% Impervious Runoff Depth=1.47"
Flow Length=335' Tc=39.8 min CN=74 Runoff=0.70 cfs 0.104 af

Subcatchment 242S: WS 242 Runoff Area=7,261 sf 94.20% Impervious Runoff Depth>3.48"
Tc=5.0 min CN=97 Runoff=0.62 cfs 0.048 af

Subcatchment 243S: WS 243 Runoff Area=3,870 sf 84.50% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=0.31 cfs 0.023 af

Subcatchment 244S: WS 244 Runoff Area=2,929 sf 0.00% Impervious Runoff Depth=1.47"
Tc=5.0 min CN=74 Runoff=0.11 cfs 0.008 af

Subcatchment 245S: WS 245 Runoff Area=92,391 sf 38.82% Impervious Runoff Depth=2.14"
Flow Length=322' Tc=7.5 min CN=83 Runoff=4.99 cfs 0.378 af

Subcatchment 246S: WS 246 Runoff Area=14,444 sf 34.40% Impervious Runoff Depth=2.06"
Flow Length=351' Slope=0.0320 '/' Tc=10.5 min CN=82 Runoff=0.68 cfs 0.057 af

Subcatchment 247S: WS 247 Runoff Area=28,201 sf 23.60% Impervious Runoff Depth=1.83"
Flow Length=234' Slope=0.0430 '/' Tc=11.4 min CN=79 Runoff=1.15 cfs 0.099 af

Subcatchment 248S: WS 248 Runoff Area=6,298 sf 62.62% Impervious Runoff Depth=2.66"
Flow Length=208' Tc=5.5 min CN=89 Runoff=0.44 cfs 0.032 af

Subcatchment 249S: WS 249 Runoff Area=2,657 sf 85.40% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=0.22 cfs 0.016 af

Subcatchment 250S: WS 250 Runoff Area=13,455 sf 0.00% Impervious Runoff Depth=1.47"
Tc=5.0 min CN=74 Runoff=0.52 cfs 0.038 af

Subcatchment 251S: WS 251 Runoff Area=4,230 sf 76.17% Impervious Runoff Depth=2.95"
Tc=5.0 min CN=92 Runoff=0.33 cfs 0.024 af

Subcatchment 252S: WS 252 Runoff Area=3,060 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.021 af

Subcatchment 253S: WS 253 Runoff Area=116,031 sf 85.00% Impervious Runoff Depth=3.16"
Flow Length=673' Slope=0.0100 '/' Tc=7.8 min CN=94 Runoff=8.68 cfs 0.701 af

Subcatchment 254S: WS 254 Runoff Area=80,647 sf 53.25% Impervious Runoff Depth=2.39"
Flow Length=396' Tc=21.4 min CN=86 Runoff=3.39 cfs 0.369 af

Subcatchment 255S: WS 255 Runoff Area=725 sf 85.38% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 256S: WS 256 Runoff Area=710 sf 85.07% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 257S: WS 257 Runoff Area=725 sf 85.38% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 258S: WS 258 Runoff Area=962 sf 90.96% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.08 cfs 0.007 af

Subcatchment 259S: WS 259 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 260S: WS 260 Runoff Area=1,634 sf 88.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.14 cfs 0.011 af

Subcatchment 261S: WS 261 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 262S: WS 262 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 263S: WS 263 Runoff Area=2,223 sf 90.42% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af

Subcatchment 264S: WS 264 Runoff Area=2,611 sf 89.81% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.23 cfs 0.018 af

Subcatchment 265S: WS 265 Runoff Area=1,439 sf 89.09% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.12 cfs 0.010 af

Subcatchment 266S: WS 266 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 267S: WS 267 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 268S: WS 268 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 269S: WS 269 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 270S: WS 270 Runoff Area=2,166 sf 90.17% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af

Subcatchment 271S: WS 271 Runoff Area=6,211 sf 63.11% Impervious Runoff Depth=2.66"
Flow Length=139' Tc=6.4 min CN=89 Runoff=0.43 cfs 0.032 af

Subcatchment 272S: WS 272 Runoff Area=2,532 sf 83.57% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=0.20 cfs 0.015 af

Reach 1R: REACH 1 Avg. Flow Depth=0.09' Max Vel=1.20 fps Inflow=0.79 cfs 0.190 af
n=0.050 L=152.0' S=0.0658 '/' Capacity=613.90 cfs Outflow=0.79 cfs 0.190 af

Reach 2R: REACH 2 Avg. Flow Depth=0.34' Max Vel=5.72 fps Inflow=5.13 cfs 0.900 af
18.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0213 '/' Capacity=45.97 cfs Outflow=5.12 cfs 0.900 af

Reach 3R: REACH 3 Avg. Flow Depth=0.24' Max Vel=2.17 fps Inflow=5.98 cfs 1.298 af
n=0.050 L=90.0' S=0.0623 '/' Capacity=597.56 cfs Outflow=5.96 cfs 1.298 af

Reach 4R: REACH 4 Avg. Flow Depth=0.40' Max Vel=2.83 fps Inflow=16.54 cfs 1.993 af
n=0.050 L=261.0' S=0.0536 '/' Capacity=554.33 cfs Outflow=16.59 cfs 1.993 af

Reach 5R: REACH 5 Avg. Flow Depth=0.57' Max Vel=13.06 fps Inflow=16.12 cfs 1.897 af
18.0" Round Pipe x 2.00 n=0.013 L=64.0' S=0.0625 '/' Capacity=52.52 cfs Outflow=16.12 cfs 1.897 af

Reach 6R: REACH 6 Avg. Flow Depth=0.21' Max Vel=6.80 fps Inflow=15.94 cfs 1.794 af
n=0.013 L=242.0' S=0.0475 '/' Capacity=2,006.73 cfs Outflow=15.85 cfs 1.794 af

Reach 7R: REACH 7 Avg. Flow Depth=0.69' Max Vel=4.98 fps Inflow=15.92 cfs 1.793 af
18.0" Round Pipe x 4.00 n=0.013 L=33.0' S=0.0076 '/' Capacity=36.57 cfs Outflow=15.92 cfs 1.793 af

Reach 8R: REACH 8 Avg. Flow Depth=0.40' Max Vel=2.45 fps Inflow=14.84 cfs 1.559 af
n=0.050 L=252.0' S=0.0397 '/' Capacity=476.78 cfs Outflow=14.75 cfs 1.559 af

Reach 9R: REACH 9 Avg. Flow Depth=0.30' Max Vel=11.68 fps Inflow=3.39 cfs 0.369 af
24.0" Round Pipe n=0.013 L=40.0' S=0.1000 '/' Capacity=71.54 cfs Outflow=3.39 cfs 0.369 af

Reach 10R: REACH 10 Avg. Flow Depth=0.41' Max Vel=11.30 fps Inflow=10.27 cfs 0.954 af
12.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0745 '/' Capacity=29.17 cfs Outflow=10.27 cfs 0.954 af

Reach 11R: REACH 11 Avg. Flow Depth=0.29' Max Vel=2.31 fps Inflow=8.67 cfs 0.701 af
n=0.050 L=309.0' S=0.0550 '/' Capacity=561.39 cfs Outflow=8.31 cfs 0.701 af

Reach 12R: REACH 12 Avg. Flow Depth=0.03' Max Vel=0.41 fps Inflow=0.11 cfs 0.003 af
n=0.050 L=516.0' S=0.0368 '/' Capacity=459.28 cfs Outflow=0.04 cfs 0.003 af

Reach 13R: REACH 13 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=668.0' S=0.0359 '/' Capacity=453.67 cfs Outflow=0.00 cfs 0.000 af

Reach 15R: REACH 15 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=355.0' S=0.0366 '/' Capacity=458.01 cfs Outflow=0.00 cfs 0.000 af

Reach 16R: REACH 16 Avg. Flow Depth=0.02' Max Vel=0.20 fps Inflow=0.05 cfs 0.001 af
n=0.050 L=247.0' S=0.0121 '/' Capacity=263.78 cfs Outflow=0.02 cfs 0.001 af

Reach 17R: REACH 17 Avg. Flow Depth=0.46' Max Vel=2.28 fps Inflow=16.73 cfs 2.004 af
n=0.050 L=69.0' S=0.0286 '/' Capacity=404.42 cfs Outflow=16.76 cfs 2.004 af

Reach 18R: REACH 18 Avg. Flow Depth=0.03' Max Vel=0.55 fps Inflow=0.13 cfs 0.004 af
n=0.050 L=165.0' S=0.0485 '/' Capacity=527.02 cfs Outflow=0.08 cfs 0.004 af

Reach 19R: REACH 19 Avg. Flow Depth=0.04' Max Vel=0.59 fps Inflow=0.22 cfs 0.006 af
n=0.050 L=134.0' S=0.0448 '/' Capacity=506.46 cfs Outflow=0.13 cfs 0.006 af

Reach 20R: REACH 20 Avg. Flow Depth=0.25' Max Vel=1.70 fps Inflow=5.13 cfs 0.903 af
n=0.050 L=258.0' S=0.0349 '/' Capacity=447.03 cfs Outflow=5.13 cfs 0.903 af

Reach 21R: REACH 21 Avg. Flow Depth=0.04' Max Vel=0.71 fps Inflow=0.27 cfs 0.007 af
n=0.050 L=149.0' S=0.0738 '/' Capacity=650.32 cfs Outflow=0.12 cfs 0.007 af

Reach 22R: REACH 22 Avg. Flow Depth=0.02' Max Vel=0.37 fps Inflow=0.07 cfs 0.003 af
n=0.050 L=357.0' S=0.0336 '/' Capacity=438.81 cfs Outflow=0.03 cfs 0.003 af

Reach 23R: REACH 23 Avg. Flow Depth=0.03' Max Vel=0.39 fps Inflow=0.26 cfs 0.006 af
n=0.050 L=481.0' S=0.0249 '/' Capacity=378.04 cfs Outflow=0.05 cfs 0.006 af

Reach 24R: REACH 24 Avg. Flow Depth=0.03' Max Vel=0.41 fps Inflow=0.20 cfs 0.006 af
n=0.050 L=600.0' S=0.0317 '/' Capacity=425.92 cfs Outflow=0.05 cfs 0.006 af

Reach 28R: REACH 28 Avg. Flow Depth=0.10' Max Vel=1.05 fps Inflow=0.77 cfs 0.187 af
n=0.050 L=205.0' S=0.0463 '/' Capacity=515.24 cfs Outflow=0.77 cfs 0.187 af

Reach 29R: REACH 29 Avg. Flow Depth=0.82' Max Vel=7.14 fps Inflow=8.68 cfs 0.701 af
24.0" Round Pipe n=0.014 L=73.0' S=0.0137 '/' Capacity=24.59 cfs Outflow=8.67 cfs 0.701 af

Pond 001: DMH 001 Peak Elev=523.31' Storage=0.000 af Inflow=2.92 cfs 0.268 af
18.0" Round Culvert n=0.013 L=86.0' S=0.0099 '/' Outflow=2.92 cfs 0.268 af

Pond 1F: FOREBAY #1 Peak Elev=522.80' Storage=561 cf Inflow=3.40 cfs 0.310 af
Outflow=3.37 cfs 0.301 af

Pond 1P: INFIL POND #1 Peak Elev=522.34' Storage=5,710 cf Inflow=3.37 cfs 0.301 af
Discarded=0.05 cfs 0.114 af Primary=0.77 cfs 0.187 af Outflow=0.82 cfs 0.301 af

Pond 2F: FOREBAY #2 Peak Elev=531.83' Storage=178 cf Inflow=0.48 cfs 0.044 af
Outflow=0.48 cfs 0.041 af

Pond 2P: WET POND #2 Peak Elev=531.70' Storage=4,624 cf Inflow=1.38 cfs 0.128 af
Outflow=0.14 cfs 0.128 af

Pond 3F: FOREBAY #3 Peak Elev=514.90' Storage=133 cf Inflow=1.19 cfs 0.100 af
Outflow=1.20 cfs 0.097 af

Pond 3P: WET POND #3 Peak Elev=514.13' Storage=3,959 cf Inflow=1.20 cfs 0.097 af
Outflow=0.44 cfs 0.094 af

Pond 4F: FOREBAY #4 Peak Elev=502.88' Storage=580 cf Inflow=4.99 cfs 0.378 af
Outflow=4.96 cfs 0.369 af

Pond 4P: INFIL POND #4 Peak Elev=502.44' Storage=4,982 cf Inflow=4.96 cfs 0.369 af
Discarded=0.03 cfs 0.073 af Primary=2.45 cfs 0.297 af Outflow=2.49 cfs 0.369 af

Pond 005: DMH 005 Peak Elev=528.00' Storage=9 cf Inflow=2.28 cfs 0.258 af
18.0" Round Culvert n=0.013 L=115.0' S=0.0548 '/' Outflow=2.28 cfs 0.258 af

Pond 5F: FOREBAY #5 Peak Elev=493.69' Storage=327 cf Inflow=1.64 cfs 0.146 af
Outflow=1.64 cfs 0.140 af

Pond 5P: WET POND #5 Peak Elev=493.28' Storage=17,995 cf Inflow=4.94 cfs 0.408 af
Outflow=0.69 cfs 0.367 af

Pond 6F: FOREBAY #6 Peak Elev=493.77' Storage=374 cf Inflow=2.84 cfs 0.236 af
Outflow=2.83 cfs 0.230 af

Pond 6P: INFIL POND#6 Peak Elev=509.27' Storage=5,140 cf Inflow=3.20 cfs 0.481 af
Discarded=0.03 cfs 0.078 af Primary=0.94 cfs 0.404 af Outflow=0.97 cfs 0.481 af

Pond 7F: FOREBAY 7 Peak Elev=509.27' Storage=577 cf Inflow=3.05 cfs 0.243 af
Outflow=2.80 cfs 0.235 af

Pond 7P: UNDER GRND INFIL POND #7 Peak Elev=522.39' Storage=7,744 cf Inflow=3.49 cfs 0.404 af
Discarded=0.07 cfs 0.188 af Primary=0.51 cfs 0.217 af Outflow=0.58 cfs 0.404 af

Pond 8P: UNDER GRD INFIL POND #8 Peak Elev=543.18' Storage=3,507 cf Inflow=2.12 cfs 0.165 af
Discarded=0.04 cfs 0.106 af Primary=0.27 cfs 0.059 af Outflow=0.32 cfs 0.165 af

Pond 9P: PLUNGE POOL Peak Elev=528.70' Storage=173 cf Inflow=2.28 cfs 0.258 af
18.0" Round Culvert n=0.013 L=9.0' S=0.0667 '/' Outflow=2.28 cfs 0.258 af

Pond 10P: DRIP EDGE Peak Elev=522.62' Storage=112 cf Inflow=0.06 cfs 0.005 af
Discarded=0.00 cfs 0.005 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.005 af

Pond 011: DMH 011 Peak Elev=504.15' Storage=5 cf Inflow=0.62 cfs 0.047 af
12.0" Round Culvert n=0.013 L=127.0' S=0.0350 '/' Outflow=0.62 cfs 0.047 af

Pond 11P: DRIP EDGE Peak Elev=532.80' Storage=98 cf Inflow=0.06 cfs 0.005 af
Discarded=0.01 cfs 0.005 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.005 af

Pond 12P: DRIP EDGE Peak Elev=529.00' Storage=360 cf Inflow=0.24 cfs 0.019 af
Discarded=0.01 cfs 0.016 af Primary=0.11 cfs 0.003 af Outflow=0.13 cfs 0.019 af

Pond 13P: DRIP EDGE Peak Elev=527.00' Storage=128 cf Inflow=0.06 cfs 0.005 af
Discarded=0.00 cfs 0.005 af Primary=0.01 cfs 0.000 af Outflow=0.01 cfs 0.005 af

Pond 14P: DRIP EDGE Peak Elev=531.02' Storage=104 cf Inflow=0.08 cfs 0.007 af
Discarded=0.01 cfs 0.006 af Primary=0.05 cfs 0.001 af Outflow=0.06 cfs 0.007 af

Pond 15P: DRIP EDGE Peak Elev=531.00' Storage=232 cf Inflow=0.15 cfs 0.012 af
Discarded=0.01 cfs 0.010 af Primary=0.07 cfs 0.001 af Outflow=0.07 cfs 0.012 af

Pond 16P: DRIP EDGE Peak Elev=526.71' Storage=188 cf Inflow=0.14 cfs 0.011 af
Discarded=0.03 cfs 0.011 af Primary=0.05 cfs 0.001 af Outflow=0.08 cfs 0.011 af

Pond 17P: DRIP EDGE Peak Elev=510.37' Storage=205 cf Inflow=0.15 cfs 0.012 af
Discarded=0.01 cfs 0.009 af Primary=0.16 cfs 0.003 af Outflow=0.17 cfs 0.012 af

Pond 18P: DRIP EDGE Peak Elev=505.01' Storage=385 cf Inflow=0.25 cfs 0.020 af
Discarded=0.01 cfs 0.015 af Primary=0.13 cfs 0.004 af Outflow=0.14 cfs 0.020 af

Pond 19P: DRIP EDGE Peak Elev=505.01' Storage=254 cf Inflow=0.19 cfs 0.015 af
Discarded=0.00 cfs 0.009 af Primary=0.22 cfs 0.006 af Outflow=0.22 cfs 0.015 af

Pond 20P: DRIP EDGE Peak Elev=506.01' Storage=322 cf Inflow=0.23 cfs 0.018 af
Discarded=0.01 cfs 0.015 af Primary=0.19 cfs 0.003 af Outflow=0.20 cfs 0.018 af

Pond 21P: DRIP EDGE Peak Elev=498.24' Storage=188 cf Inflow=0.12 cfs 0.010 af
Discarded=0.00 cfs 0.007 af Primary=0.12 cfs 0.003 af Outflow=0.12 cfs 0.010 af

Pond 22P: DRIP EDGE Peak Elev=498.02' Storage=383 cf Inflow=0.25 cfs 0.020 af
Discarded=0.00 cfs 0.014 af Primary=0.28 cfs 0.006 af Outflow=0.28 cfs 0.020 af

Pond 23P: DRIP EDGE Peak Elev=501.02' Storage=383 cf Inflow=0.25 cfs 0.020 af
Discarded=0.00 cfs 0.013 af Primary=0.27 cfs 0.007 af Outflow=0.27 cfs 0.020 af

Pond 24P: DRIP EDGE Peak Elev=501.02' Storage=233 cf Inflow=0.15 cfs 0.012 af
Discarded=0.00 cfs 0.008 af Primary=0.07 cfs 0.003 af Outflow=0.08 cfs 0.012 af

Pond 25P: DRIP EDGE Peak Elev=501.03' Storage=385 cf Inflow=0.25 cfs 0.020 af
Discarded=0.00 cfs 0.014 af Primary=0.26 cfs 0.006 af Outflow=0.26 cfs 0.020 af

Pond 26P: DRIP EDGE Peak Elev=509.01' Storage=257 cf Inflow=0.19 cfs 0.015 af
Discarded=0.00 cfs 0.009 af Primary=0.20 cfs 0.006 af Outflow=0.20 cfs 0.015 af

Pond 28P: UNDER GRND INFIL POND #28 Peak Elev=530.79' Storage=2,610 cf Inflow=1.47 cfs 0.131 af
Discarded=0.05 cfs 0.082 af Primary=0.15 cfs 0.049 af Outflow=0.20 cfs 0.131 af

Pond 101: CB 101 Peak Elev=514.99' Storage=19 cf Inflow=0.31 cfs 0.023 af
12.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=0.31 cfs 0.023 af

Pond 102: CB 102 Peak Elev=524.26' Storage=0.000 af Inflow=0.68 cfs 0.066 af
18.0" Round Culvert n=0.013 L=43.0' S=0.0093 '/' Outflow=0.68 cfs 0.066 af

Pond 104: CB 104 Peak Elev=514.99' Storage=19 cf Inflow=0.16 cfs 0.011 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0050 '/' Outflow=0.16 cfs 0.011 af

Pond 105: CB 124 Peak Elev=543.26' Storage=0.000 af Inflow=0.40 cfs 0.032 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0050 '/' Outflow=0.40 cfs 0.032 af

Pond 106: CB 106 Peak Elev=514.98' Storage=22 cf Inflow=1.09 cfs 0.092 af
12.0" Round Culvert n=0.013 L=11.0' S=0.0045 '/' Outflow=1.09 cfs 0.091 af

Pond 107: CB 107 Peak Elev=500.07' Storage=11 cf Inflow=2.32 cfs 0.191 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0302 '/' Outflow=2.32 cfs 0.191 af

Pond 108: CB 108 Peak Elev=500.37' Storage=8 cf Inflow=1.06 cfs 0.087 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0205 '/' Outflow=1.06 cfs 0.087 af

Pond 109: CB 109 Peak Elev=498.16' Storage=12 cf Inflow=2.61 cfs 0.215 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0318 '/' Outflow=2.60 cfs 0.215 af

Pond 110: CB 110 Peak Elev=497.19' Storage=10 cf Inflow=2.84 cfs 0.236 af
18.0" Round Culvert n=0.013 L=29.0' S=0.0483 '/' Outflow=2.84 cfs 0.236 af

Pond 111: CB 111 Peak Elev=493.75' Storage=16 cf Inflow=1.64 cfs 0.146 af
18.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=1.64 cfs 0.146 af

Pond 112: CB 112 Peak Elev=493.90' Storage=14 cf Inflow=1.47 cfs 0.131 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0100 '/' Outflow=1.47 cfs 0.130 af

Pond 113: CB 113 Peak Elev=493.99' Storage=12 cf Inflow=1.15 cfs 0.099 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0117 '/' Outflow=1.15 cfs 0.098 af

Pond 114: CB 114 Peak Elev=517.68' Storage=0.000 af Inflow=0.89 cfs 0.070 af
12.0" Round Culvert n=0.013 L=184.0' S=0.0200 '/' Outflow=0.89 cfs 0.070 af

Pond 115: CB 115 Peak Elev=514.05' Storage=8 cf Inflow=1.41 cfs 0.114 af
12.0" Round Culvert n=0.013 L=73.0' S=0.0300 '/' Outflow=1.42 cfs 0.114 af

Pond 116: CB 116 Peak Elev=512.28' Storage=14 cf Inflow=3.05 cfs 0.243 af
12.0" Round Culvert n=0.013 L=61.0' S=0.0513 '/' Outflow=3.05 cfs 0.243 af

Pond 117: CB 117 Peak Elev=514.02' Storage=0.000 af Inflow=1.10 cfs 0.086 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0163 '/' Outflow=1.10 cfs 0.086 af

Pond 118: CB 118 Peak Elev=522.39' Storage=14 cf Inflow=1.41 cfs 0.103 af
12.0" Round Culvert n=0.013 L=8.0' S=0.0313 '/' Outflow=1.41 cfs 0.103 af

Pond 119: CB 119 Peak Elev=517.58' Storage=0.000 af Inflow=0.32 cfs 0.024 af
12.0" Round Culvert n=0.013 L=186.0' S=0.0200 '/' Outflow=0.32 cfs 0.024 af

Pond 120: CB 120 Peak Elev=543.19' Storage=0.000 af Inflow=0.41 cfs 0.029 af
12.0" Round Culvert n=0.013 L=23.0' S=0.0052 '/' Outflow=0.41 cfs 0.029 af

Pond 121: CB 121 Peak Elev=543.19' Storage=0.000 af Inflow=1.15 cfs 0.086 af
12.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=1.14 cfs 0.086 af

Pond 122: CB 122 Peak Elev=543.18' Storage=0.000 af Inflow=0.46 cfs 0.033 af
12.0" Round Culvert n=0.013 L=44.0' S=0.0050 '/' Outflow=0.45 cfs 0.033 af

Pond 123: CB 123 Peak Elev=543.19' Storage=0.000 af Inflow=0.53 cfs 0.045 af
12.0" Round Culvert n=0.013 L=79.0' S=0.0051 '/' Outflow=0.53 cfs 0.045 af

Pond 124: CB 124 Peak Elev=524.00' Storage=9 cf Inflow=1.82 cfs 0.170 af
18.0" Round Culvert n=0.013 L=107.0' S=0.0084 '/' Outflow=1.82 cfs 0.170 af

Pond 125: CB 124 Peak Elev=524.56' Storage=7 cf Inflow=1.15 cfs 0.104 af
18.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=1.15 cfs 0.104 af

Pond 126: CB 126 Peak Elev=507.25' Storage=5 cf Inflow=0.62 cfs 0.047 af
12.0" Round Culvert n=0.013 L=100.0' S=0.0300 '/' Outflow=0.62 cfs 0.047 af

Pond 127: CB 127 Peak Elev=507.45' Storage=28 cf Inflow=0.20 cfs 0.015 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0114 '/' Outflow=0.20 cfs 0.015 af

Pond 128: YARD DRAIN Peak Elev=530.79' Storage=1 cf Inflow=0.28 cfs 0.028 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0125 '/' Outflow=0.28 cfs 0.028 af

Link AP-1: Analysis Point #1 Inflow=0.04 cfs 0.007 af
Primary=0.04 cfs 0.007 af

Link AP-2: Analysis Point #2 Inflow=0.42 cfs 0.086 af
Primary=0.42 cfs 0.086 af

Link AP-3: Analysis Point #3 Inflow=0.29 cfs 0.033 af
Primary=0.29 cfs 0.033 af

Link AP-4: Analysis Point #4 Inflow=18.75 cfs 2.651 af
Primary=18.75 cfs 2.651 af

Link AP-5: Analysis Point #5 Inflow=23.69 cfs 4.679 af
Primary=23.69 cfs 4.679 af

Link AP-6: Analysis Point #6 Inflow=10.67 cfs 2.337 af
Primary=10.67 cfs 2.337 af

Total Runoff Area = 69.496 ac Runoff Volume = 10.686 af Average Runoff Depth = 1.85"
70.17% Pervious = 48.768 ac 29.83% Impervious = 20.728 ac

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: WS 201 Runoff Area=8,114 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=193' Tc=16.6 min CN=55 Runoff=0.04 cfs 0.007 af

Subcatchment 202S: WS 202 Runoff Area=28,333 sf 0.00% Impervious Runoff Depth=0.50"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=56 Runoff=0.18 cfs 0.027 af

Subcatchment 203S: WS 203 Runoff Area=29,560 sf 0.00% Impervious Runoff Depth=0.59"
Flow Length=75' Slope=0.1300 '/' Tc=8.9 min CN=58 Runoff=0.29 cfs 0.033 af

Subcatchment 204S: WS 204 Runoff Area=82,662 sf 10.46% Impervious Runoff Depth=1.54"
Flow Length=499' Tc=29.7 min CN=75 Runoff=1.90 cfs 0.244 af

Subcatchment 205S: WS 205 Runoff Area=919,977 sf 27.03% Impervious Runoff Depth=1.75"
Flow Length=2,082' Tc=60.6 min CN=78 Runoff=16.78 cfs 3.084 af

Subcatchment 206S: WS 206 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=1.61"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=10.67 cfs 2.337 af

Subcatchment 207S: WS 207 Runoff Area=13,565 sf 9.83% Impervious Runoff Depth=1.61"
Flow Length=42' Slope=0.0100 '/' Tc=10.4 min CN=76 Runoff=0.49 cfs 0.042 af

Subcatchment 208S: WS 208 Runoff Area=2,760 sf 88.44% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment 209S: WS 209 Runoff Area=21,404 sf 50.80% Impervious Runoff Depth=2.39"
Flow Length=107' Tc=9.6 min CN=86 Runoff=1.20 cfs 0.098 af

Subcatchment 210S: WS 210 Runoff Area=19,716 sf 16.28% Impervious Runoff Depth=1.75"
Flow Length=212' Slope=0.0100 '/' Tc=15.8 min CN=78 Runoff=0.68 cfs 0.066 af

Subcatchment 211S: WS 211 Runoff Area=27,543 sf 32.80% Impervious Runoff Depth=1.98"
Flow Length=323' Tc=13.4 min CN=81 Runoff=1.15 cfs 0.104 af

Subcatchment 212S: WS 212 Runoff Area=15,675 sf 33.66% Impervious Runoff Depth=1.47"
Flow Length=173' Slope=0.0100 '/' Tc=12.8 min CN=74 Runoff=0.48 cfs 0.044 af

Subcatchment 213S: WS 213 Runoff Area=251,079 sf 12.80% Impervious Runoff Depth=1.47"
Flow Length=1,113' Tc=47.5 min CN=74 Runoff=4.34 cfs 0.707 af

Subcatchment 214S: WS 214 Runoff Area=44,819 sf 0.00% Impervious Runoff Depth=1.22"
Flow Length=281' Tc=13.3 min CN=70 Runoff=1.08 cfs 0.104 af

Subcatchment 215S: WS 215 Runoff Area=35,320 sf 97.47% Impervious Runoff Depth>3.48"
Tc=5.0 min CN=97 Runoff=3.01 cfs 0.235 af

Subcatchment 216S: WS-216 Runoff Area=72,557 sf 40.93% Impervious Runoff Depth=1.83"
Flow Length=429' Tc=18.2 min CN=79 Runoff=2.48 cfs 0.254 af

Subcatchment 217S: WS-217 Runoff Area=74,085 sf 38.40% Impervious Runoff Depth=1.47"
Flow Length=830' Tc=13.4 min CN=74 Runoff=2.23 cfs 0.209 af

Subcatchment 218S: WS-218 Runoff Area=4,614 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.40 cfs 0.032 af

Subcatchment 219S: WS-219 Runoff Area=1,988 sf 100.00% Impervious Runoff Depth>3.59"
Tc=0.0 min CN=98 Runoff=0.19 cfs 0.014 af

Subcatchment 220S: WS 220 Runoff Area=6,274 sf 77.65% Impervious Runoff Depth=2.76"
Tc=5.0 min CN=90 Runoff=0.46 cfs 0.033 af

Subcatchment 221S: WS 221 Runoff Area=6,159 sf 69.49% Impervious Runoff Depth=2.48"
Tc=5.0 min CN=87 Runoff=0.41 cfs 0.029 af

Subcatchment 222S: WS 222 Runoff Area=3,078 sf 55.49% Impervious Runoff Depth=2.06"
Tc=5.0 min CN=82 Runoff=0.17 cfs 0.012 af

Subcatchment 223S: WS 223 Runoff Area=7,000 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.60 cfs 0.048 af

Subcatchment 224S: WS 224 Runoff Area=6,564 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.57 cfs 0.045 af

Subcatchment 225S: WS 225 Runoff Area=12,069 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=1.04 cfs 0.083 af

Subcatchment 226S: WS 226 Runoff Area=2,790 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment 227S: WS 227 Runoff Area=3,036 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.021 af

Subcatchment 228S: WS 228 Runoff Area=2,886 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 229S: WS 229 Runoff Area=9,144 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.79 cfs 0.063 af

Subcatchment 230S: WS 230 Runoff Area=6,309 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.54 cfs 0.043 af

Subcatchment 231S: WS 231 Runoff Area=20,203 sf 74.70% Impervious Runoff Depth=2.66"
Flow Length=249' Tc=5.7 min CN=89 Runoff=1.41 cfs 0.103 af

Subcatchment 232S: WS 232 Runoff Area=6,474 sf 23.23% Impervious Runoff Depth=1.90"
Flow Length=158' Tc=6.8 min CN=80 Runoff=0.32 cfs 0.024 af

Subcatchment 233S: WS 233 Runoff Area=15,995 sf 70.05% Impervious Runoff Depth=2.85"
Flow Length=312' Tc=9.1 min CN=91 Runoff=1.06 cfs 0.087 af

Subcatchment 234S: WS 234 Runoff Area=10,284 sf 81.41% Impervious Runoff Depth=3.16"
Flow Length=292' Tc=7.4 min CN=94 Runoff=0.78 cfs 0.062 af

Subcatchment 235S: WS 235 Runoff Area=6,761 sf 89.71% Impervious Runoff Depth=3.37"
Tc=5.0 min CN=96 Runoff=0.57 cfs 0.044 af

Subcatchment 236S: WS 236 Runoff Area=10,261 sf 0.00% Impervious Runoff Depth=1.47"
Tc=5.0 min CN=74 Runoff=0.40 cfs 0.029 af

Subcatchment 237S: WS 237 Runoff Area=9,258 sf 54.60% Impervious Runoff Depth=2.48"
Flow Length=170' Tc=8.2 min CN=87 Runoff=0.56 cfs 0.044 af

Subcatchment 238S: WS 238 Runoff Area=2,487 sf 29.03% Impervious Runoff Depth=1.54"
Tc=5.0 min CN=75 Runoff=0.10 cfs 0.007 af

Subcatchment 239S: WS 239 Runoff Area=2,027 sf 73.95% Impervious Runoff Depth=2.95"
Tc=5.0 min CN=92 Runoff=0.16 cfs 0.011 af

Subcatchment 240S: WS 271 Runoff Area=14,636 sf 13.86% Impervious Runoff Depth=0.99"
Flow Length=98' Slope=0.0100 '/' Tc=11.8 min CN=66 Runoff=0.28 cfs 0.028 af

Subcatchment 241S: WS 241 Runoff Area=36,744 sf 8.08% Impervious Runoff Depth=1.47"
Flow Length=335' Tc=39.8 min CN=74 Runoff=0.70 cfs 0.104 af

Subcatchment 242S: WS 242 Runoff Area=7,261 sf 94.20% Impervious Runoff Depth>3.48"
Tc=5.0 min CN=97 Runoff=0.62 cfs 0.048 af

Subcatchment 243S: WS 243 Runoff Area=3,870 sf 84.50% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=0.31 cfs 0.023 af

Subcatchment 244S: WS 244 Runoff Area=2,929 sf 0.00% Impervious Runoff Depth=1.47"
Tc=5.0 min CN=74 Runoff=0.11 cfs 0.008 af

Subcatchment 245S: WS 245 Runoff Area=92,391 sf 38.82% Impervious Runoff Depth=2.14"
Flow Length=322' Tc=7.5 min CN=83 Runoff=4.99 cfs 0.378 af

Subcatchment 246S: WS 246 Runoff Area=14,444 sf 34.40% Impervious Runoff Depth=2.06"
Flow Length=351' Slope=0.0320 '/' Tc=10.5 min CN=82 Runoff=0.68 cfs 0.057 af

Subcatchment 247S: WS 247 Runoff Area=28,201 sf 23.60% Impervious Runoff Depth=1.83"
Flow Length=234' Slope=0.0430 '/' Tc=11.4 min CN=79 Runoff=1.15 cfs 0.099 af

Subcatchment 248S: WS 248 Runoff Area=6,298 sf 62.62% Impervious Runoff Depth=2.66"
Flow Length=208' Tc=5.5 min CN=89 Runoff=0.44 cfs 0.032 af

Subcatchment 249S: WS 249 Runoff Area=2,657 sf 85.40% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=0.22 cfs 0.016 af

Subcatchment 250S: WS 250 Runoff Area=13,455 sf 0.00% Impervious Runoff Depth=1.47"
Tc=5.0 min CN=74 Runoff=0.52 cfs 0.038 af

Subcatchment 251S: WS 251 Runoff Area=4,230 sf 76.17% Impervious Runoff Depth=2.95"
Tc=5.0 min CN=92 Runoff=0.33 cfs 0.024 af

Subcatchment 252S: WS 252 Runoff Area=3,060 sf 100.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.021 af

Subcatchment 253S: WS 253 Runoff Area=116,031 sf 85.00% Impervious Runoff Depth=3.16"
Flow Length=673' Slope=0.0100 '/' Tc=7.8 min CN=94 Runoff=8.68 cfs 0.701 af

Subcatchment 254S: WS 254 Runoff Area=80,647 sf 53.25% Impervious Runoff Depth=2.39"
Flow Length=396' Tc=21.4 min CN=86 Runoff=3.39 cfs 0.369 af

Subcatchment 255S: WS 255 Runoff Area=725 sf 85.38% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 256S: WS 256 Runoff Area=710 sf 85.07% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 257S: WS 257 Runoff Area=725 sf 85.38% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.06 cfs 0.005 af

Subcatchment 258S: WS 258 Runoff Area=962 sf 90.96% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.08 cfs 0.007 af

Subcatchment 259S: WS 259 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 260S: WS 260 Runoff Area=1,634 sf 88.00% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.14 cfs 0.011 af

Subcatchment 261S: WS 261 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 262S: WS 262 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 263S: WS 263 Runoff Area=2,223 sf 90.42% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af

Subcatchment 264S: WS 264 Runoff Area=2,611 sf 89.81% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.23 cfs 0.018 af

Subcatchment 265S: WS 265 Runoff Area=1,439 sf 89.09% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.12 cfs 0.010 af

Subcatchment 266S: WS 266 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 267S: WS 267 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 268S: WS 268 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 269S: WS 269 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.25 cfs 0.020 af

Subcatchment 270S: WS 270 Runoff Area=2,166 sf 90.17% Impervious Runoff Depth>3.59"
Tc=5.0 min CN=98 Runoff=0.19 cfs 0.015 af

Subcatchment 271S: WS 271 Runoff Area=6,211 sf 63.11% Impervious Runoff Depth=2.66"
Flow Length=139' Tc=6.4 min CN=89 Runoff=0.43 cfs 0.032 af

Subcatchment 272S: WS 272 Runoff Area=2,532 sf 83.57% Impervious Runoff Depth=3.16"
Tc=5.0 min CN=94 Runoff=0.20 cfs 0.015 af

Reach 1R: REACH 1 Avg. Flow Depth=0.09' Max Vel=1.20 fps Inflow=0.79 cfs 0.190 af
n=0.050 L=152.0' S=0.0658 '/' Capacity=613.90 cfs Outflow=0.79 cfs 0.190 af

Reach 2R: REACH 2 Avg. Flow Depth=0.34' Max Vel=5.72 fps Inflow=5.13 cfs 0.900 af
18.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0213 '/' Capacity=45.97 cfs Outflow=5.12 cfs 0.900 af

Reach 3R: REACH 3 Avg. Flow Depth=0.24' Max Vel=2.17 fps Inflow=5.98 cfs 1.298 af
n=0.050 L=90.0' S=0.0623 '/' Capacity=597.56 cfs Outflow=5.96 cfs 1.298 af

Reach 4R: REACH 4 Avg. Flow Depth=0.40' Max Vel=2.83 fps Inflow=16.54 cfs 1.993 af
n=0.050 L=261.0' S=0.0536 '/' Capacity=554.33 cfs Outflow=16.59 cfs 1.993 af

Reach 5R: REACH 5 Avg. Flow Depth=0.57' Max Vel=13.06 fps Inflow=16.12 cfs 1.897 af
18.0" Round Pipe x 2.00 n=0.013 L=64.0' S=0.0625 '/' Capacity=52.52 cfs Outflow=16.12 cfs 1.897 af

Reach 6R: REACH 6 Avg. Flow Depth=0.21' Max Vel=6.80 fps Inflow=15.94 cfs 1.794 af
n=0.013 L=242.0' S=0.0475 '/' Capacity=2,006.73 cfs Outflow=15.85 cfs 1.794 af

Reach 7R: REACH 7 Avg. Flow Depth=0.69' Max Vel=4.98 fps Inflow=15.92 cfs 1.793 af
18.0" Round Pipe x 4.00 n=0.013 L=33.0' S=0.0076 '/' Capacity=36.57 cfs Outflow=15.92 cfs 1.793 af

Reach 8R: REACH 8 Avg. Flow Depth=0.40' Max Vel=2.45 fps Inflow=14.84 cfs 1.559 af
n=0.050 L=252.0' S=0.0397 '/' Capacity=476.78 cfs Outflow=14.75 cfs 1.559 af

Reach 9R: REACH 9 Avg. Flow Depth=0.30' Max Vel=11.68 fps Inflow=3.39 cfs 0.369 af
24.0" Round Pipe n=0.013 L=40.0' S=0.1000 '/' Capacity=71.54 cfs Outflow=3.39 cfs 0.369 af

Reach 10R: REACH 10 Avg. Flow Depth=0.41' Max Vel=11.30 fps Inflow=10.27 cfs 0.954 af
12.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0745 '/' Capacity=29.17 cfs Outflow=10.27 cfs 0.954 af

Reach 11R: REACH 11 Avg. Flow Depth=0.29' Max Vel=2.31 fps Inflow=8.67 cfs 0.701 af
n=0.050 L=309.0' S=0.0550 '/' Capacity=561.39 cfs Outflow=8.31 cfs 0.701 af

Reach 12R: REACH 12 Avg. Flow Depth=0.03' Max Vel=0.41 fps Inflow=0.11 cfs 0.003 af
n=0.050 L=516.0' S=0.0368 '/' Capacity=459.28 cfs Outflow=0.04 cfs 0.003 af

Reach 13R: REACH 13 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=668.0' S=0.0359 '/' Capacity=453.67 cfs Outflow=0.00 cfs 0.000 af

Reach 15R: REACH 15 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.050 L=355.0' S=0.0366 '/' Capacity=458.01 cfs Outflow=0.00 cfs 0.000 af

Reach 16R: REACH 16 Avg. Flow Depth=0.02' Max Vel=0.20 fps Inflow=0.05 cfs 0.001 af
n=0.050 L=247.0' S=0.0121 '/' Capacity=263.78 cfs Outflow=0.02 cfs 0.001 af

Reach 17R: REACH 17 Avg. Flow Depth=0.46' Max Vel=2.28 fps Inflow=16.73 cfs 2.004 af
n=0.050 L=69.0' S=0.0286 '/' Capacity=404.42 cfs Outflow=16.76 cfs 2.004 af

Reach 18R: REACH 18 Avg. Flow Depth=0.03' Max Vel=0.55 fps Inflow=0.13 cfs 0.004 af
n=0.050 L=165.0' S=0.0485 '/' Capacity=527.02 cfs Outflow=0.08 cfs 0.004 af

Reach 19R: REACH 19 Avg. Flow Depth=0.04' Max Vel=0.59 fps Inflow=0.22 cfs 0.006 af
n=0.050 L=134.0' S=0.0448 '/' Capacity=506.46 cfs Outflow=0.13 cfs 0.006 af

Reach 20R: REACH 20 Avg. Flow Depth=0.25' Max Vel=1.70 fps Inflow=5.13 cfs 0.903 af
n=0.050 L=258.0' S=0.0349 '/' Capacity=447.03 cfs Outflow=5.13 cfs 0.903 af

Reach 21R: REACH 21 Avg. Flow Depth=0.04' Max Vel=0.71 fps Inflow=0.27 cfs 0.007 af
n=0.050 L=149.0' S=0.0738 '/' Capacity=650.32 cfs Outflow=0.12 cfs 0.007 af

Reach 22R: REACH 22 Avg. Flow Depth=0.02' Max Vel=0.37 fps Inflow=0.07 cfs 0.003 af
n=0.050 L=357.0' S=0.0336 '/' Capacity=438.81 cfs Outflow=0.03 cfs 0.003 af

Reach 23R: REACH 23 Avg. Flow Depth=0.03' Max Vel=0.39 fps Inflow=0.26 cfs 0.006 af
n=0.050 L=481.0' S=0.0249 '/' Capacity=378.04 cfs Outflow=0.05 cfs 0.006 af

Reach 24R: REACH 24 Avg. Flow Depth=0.03' Max Vel=0.41 fps Inflow=0.20 cfs 0.006 af
n=0.050 L=600.0' S=0.0317 '/' Capacity=425.92 cfs Outflow=0.05 cfs 0.006 af

Reach 28R: REACH 28 Avg. Flow Depth=0.10' Max Vel=1.05 fps Inflow=0.77 cfs 0.187 af
n=0.050 L=205.0' S=0.0463 '/' Capacity=515.24 cfs Outflow=0.77 cfs 0.187 af

Reach 29R: REACH 29 Avg. Flow Depth=0.82' Max Vel=7.14 fps Inflow=8.68 cfs 0.701 af
24.0" Round Pipe n=0.014 L=73.0' S=0.0137 '/' Capacity=24.59 cfs Outflow=8.67 cfs 0.701 af

Pond 001: DMH 001 Peak Elev=523.31' Storage=0.000 af Inflow=2.92 cfs 0.268 af
18.0" Round Culvert n=0.013 L=86.0' S=0.0099 '/' Outflow=2.92 cfs 0.268 af

Pond 1F: FOREBAY #1 Peak Elev=522.80' Storage=561 cf Inflow=3.40 cfs 0.310 af
Outflow=3.37 cfs 0.301 af

Pond 1P: INFIL POND #1 Peak Elev=522.34' Storage=5,710 cf Inflow=3.37 cfs 0.301 af
Discarded=0.05 cfs 0.114 af Primary=0.77 cfs 0.187 af Outflow=0.82 cfs 0.301 af

Pond 2F: FOREBAY #2 Peak Elev=531.83' Storage=178 cf Inflow=0.48 cfs 0.044 af
Outflow=0.48 cfs 0.041 af

Pond 2P: WET POND #2 Peak Elev=531.70' Storage=4,624 cf Inflow=1.38 cfs 0.128 af
Outflow=0.14 cfs 0.128 af

Pond 3F: FOREBAY #3 Peak Elev=514.90' Storage=133 cf Inflow=1.19 cfs 0.100 af
Outflow=1.20 cfs 0.097 af

Pond 3P: WET POND #3 Peak Elev=514.13' Storage=3,959 cf Inflow=1.20 cfs 0.097 af
Outflow=0.44 cfs 0.094 af

Pond 4F: FOREBAY #4 Peak Elev=502.88' Storage=580 cf Inflow=4.99 cfs 0.378 af
Outflow=4.96 cfs 0.369 af

Pond 4P: INFIL POND #4 Peak Elev=502.44' Storage=4,982 cf Inflow=4.96 cfs 0.369 af
Discarded=0.03 cfs 0.073 af Primary=2.45 cfs 0.297 af Outflow=2.49 cfs 0.369 af

Pond 005: DMH 005 Peak Elev=528.00' Storage=9 cf Inflow=2.28 cfs 0.258 af
18.0" Round Culvert n=0.013 L=115.0' S=0.0548 '/' Outflow=2.28 cfs 0.258 af

Pond 5F: FOREBAY #5 Peak Elev=493.69' Storage=327 cf Inflow=1.64 cfs 0.146 af
Outflow=1.64 cfs 0.140 af

Pond 5P: WET POND #5 Peak Elev=493.28' Storage=17,995 cf Inflow=4.94 cfs 0.408 af
Outflow=0.69 cfs 0.367 af

Pond 6F: FOREBAY #6 Peak Elev=493.77' Storage=374 cf Inflow=2.84 cfs 0.236 af
Outflow=2.83 cfs 0.230 af

Pond 6P: INFIL POND#6 Peak Elev=509.27' Storage=5,140 cf Inflow=3.20 cfs 0.481 af
Discarded=0.03 cfs 0.078 af Primary=0.94 cfs 0.404 af Outflow=0.97 cfs 0.481 af

Pond 7F: FOREBAY 7 Peak Elev=509.27' Storage=577 cf Inflow=3.05 cfs 0.243 af
Outflow=2.80 cfs 0.235 af

Pond 7P: UNDER GRND INFIL POND #7 Peak Elev=522.39' Storage=7,744 cf Inflow=3.49 cfs 0.404 af
Discarded=0.07 cfs 0.188 af Primary=0.51 cfs 0.217 af Outflow=0.58 cfs 0.404 af

Pond 8P: UNDER GRD INFIL POND #8 Peak Elev=543.18' Storage=3,507 cf Inflow=2.12 cfs 0.165 af
Discarded=0.04 cfs 0.106 af Primary=0.27 cfs 0.059 af Outflow=0.32 cfs 0.165 af

Pond 9P: PLUNGE POOL Peak Elev=528.70' Storage=173 cf Inflow=2.28 cfs 0.258 af
18.0" Round Culvert n=0.013 L=9.0' S=0.0667 '/' Outflow=2.28 cfs 0.258 af

Pond 10P: DRIP EDGE Peak Elev=522.62' Storage=112 cf Inflow=0.06 cfs 0.005 af
Discarded=0.00 cfs 0.005 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.005 af

Pond 011: DMH 011 Peak Elev=504.15' Storage=5 cf Inflow=0.62 cfs 0.047 af
12.0" Round Culvert n=0.013 L=127.0' S=0.0350 '/' Outflow=0.62 cfs 0.047 af

Pond 11P: DRIP EDGE Peak Elev=532.80' Storage=98 cf Inflow=0.06 cfs 0.005 af
Discarded=0.01 cfs 0.005 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.005 af

Pond 12P: DRIP EDGE Peak Elev=529.00' Storage=360 cf Inflow=0.24 cfs 0.019 af
Discarded=0.01 cfs 0.016 af Primary=0.11 cfs 0.003 af Outflow=0.13 cfs 0.019 af

Pond 13P: DRIP EDGE Peak Elev=527.00' Storage=128 cf Inflow=0.06 cfs 0.005 af
Discarded=0.00 cfs 0.005 af Primary=0.01 cfs 0.000 af Outflow=0.01 cfs 0.005 af

Pond 14P: DRIP EDGE Peak Elev=531.02' Storage=104 cf Inflow=0.08 cfs 0.007 af
Discarded=0.01 cfs 0.006 af Primary=0.05 cfs 0.001 af Outflow=0.06 cfs 0.007 af

Pond 15P: DRIP EDGE Peak Elev=531.00' Storage=232 cf Inflow=0.15 cfs 0.012 af
Discarded=0.01 cfs 0.010 af Primary=0.07 cfs 0.001 af Outflow=0.07 cfs 0.012 af

Pond 16P: DRIP EDGE Peak Elev=526.71' Storage=188 cf Inflow=0.14 cfs 0.011 af
Discarded=0.03 cfs 0.011 af Primary=0.05 cfs 0.001 af Outflow=0.08 cfs 0.011 af

Pond 17P: DRIP EDGE Peak Elev=510.37' Storage=205 cf Inflow=0.15 cfs 0.012 af
Discarded=0.01 cfs 0.009 af Primary=0.16 cfs 0.003 af Outflow=0.17 cfs 0.012 af

Pond 18P: DRIP EDGE Peak Elev=505.01' Storage=385 cf Inflow=0.25 cfs 0.020 af
Discarded=0.01 cfs 0.015 af Primary=0.13 cfs 0.004 af Outflow=0.14 cfs 0.020 af

Pond 19P: DRIP EDGE Peak Elev=505.01' Storage=254 cf Inflow=0.19 cfs 0.015 af
Discarded=0.00 cfs 0.009 af Primary=0.22 cfs 0.006 af Outflow=0.22 cfs 0.015 af

Pond 20P: DRIP EDGE Peak Elev=506.01' Storage=322 cf Inflow=0.23 cfs 0.018 af
Discarded=0.01 cfs 0.015 af Primary=0.19 cfs 0.003 af Outflow=0.20 cfs 0.018 af

Pond 21P: DRIP EDGE Peak Elev=498.24' Storage=188 cf Inflow=0.12 cfs 0.010 af
Discarded=0.00 cfs 0.007 af Primary=0.12 cfs 0.003 af Outflow=0.12 cfs 0.010 af

Pond 22P: DRIP EDGE Peak Elev=498.02' Storage=383 cf Inflow=0.25 cfs 0.020 af
Discarded=0.00 cfs 0.014 af Primary=0.28 cfs 0.006 af Outflow=0.28 cfs 0.020 af

Pond 23P: DRIP EDGE Peak Elev=501.02' Storage=383 cf Inflow=0.25 cfs 0.020 af
Discarded=0.00 cfs 0.013 af Primary=0.27 cfs 0.007 af Outflow=0.27 cfs 0.020 af

Pond 24P: DRIP EDGE Peak Elev=501.02' Storage=233 cf Inflow=0.15 cfs 0.012 af
Discarded=0.00 cfs 0.008 af Primary=0.07 cfs 0.003 af Outflow=0.08 cfs 0.012 af

Pond 25P: DRIP EDGE Peak Elev=501.03' Storage=385 cf Inflow=0.25 cfs 0.020 af
Discarded=0.00 cfs 0.014 af Primary=0.26 cfs 0.006 af Outflow=0.26 cfs 0.020 af

Pond 26P: DRIP EDGE Peak Elev=509.01' Storage=257 cf Inflow=0.19 cfs 0.015 af
Discarded=0.00 cfs 0.009 af Primary=0.20 cfs 0.006 af Outflow=0.20 cfs 0.015 af

Pond 28P: UNDER GRND INFIL POND #28 Peak Elev=530.79' Storage=2,610 cf Inflow=1.47 cfs 0.131 af
Discarded=0.05 cfs 0.082 af Primary=0.15 cfs 0.049 af Outflow=0.20 cfs 0.131 af

Pond 101: CB 101 Peak Elev=514.99' Storage=19 cf Inflow=0.31 cfs 0.023 af
12.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=0.31 cfs 0.023 af

Pond 102: CB 102 Peak Elev=524.26' Storage=0.000 af Inflow=0.68 cfs 0.066 af
18.0" Round Culvert n=0.013 L=43.0' S=0.0093 '/' Outflow=0.68 cfs 0.066 af

Pond 104: CB 104 Peak Elev=514.99' Storage=19 cf Inflow=0.16 cfs 0.011 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0050 '/' Outflow=0.16 cfs 0.011 af

Pond 105: CB 124 Peak Elev=543.26' Storage=0.000 af Inflow=0.40 cfs 0.032 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0050 '/' Outflow=0.40 cfs 0.032 af

Pond 106: CB 106 Peak Elev=514.98' Storage=22 cf Inflow=1.09 cfs 0.092 af
12.0" Round Culvert n=0.013 L=11.0' S=0.0045 '/' Outflow=1.09 cfs 0.091 af

Pond 107: CB 107 Peak Elev=500.07' Storage=11 cf Inflow=2.32 cfs 0.191 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0302 '/' Outflow=2.32 cfs 0.191 af

Pond 108: CB 108 Peak Elev=500.37' Storage=8 cf Inflow=1.06 cfs 0.087 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0205 '/' Outflow=1.06 cfs 0.087 af

Pond 109: CB 109 Peak Elev=498.16' Storage=12 cf Inflow=2.61 cfs 0.215 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0318 '/' Outflow=2.60 cfs 0.215 af

Pond 110: CB 110 Peak Elev=497.19' Storage=10 cf Inflow=2.84 cfs 0.236 af
18.0" Round Culvert n=0.013 L=29.0' S=0.0483 '/' Outflow=2.84 cfs 0.236 af

Pond 111: CB 111 Peak Elev=493.75' Storage=16 cf Inflow=1.64 cfs 0.146 af
18.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=1.64 cfs 0.146 af

Pond 112: CB 112 Peak Elev=493.90' Storage=14 cf Inflow=1.47 cfs 0.131 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0100 '/' Outflow=1.47 cfs 0.130 af

Pond 113: CB 113 Peak Elev=493.99' Storage=12 cf Inflow=1.15 cfs 0.099 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0117 '/' Outflow=1.15 cfs 0.098 af

Pond 114: CB 114 Peak Elev=517.68' Storage=0.000 af Inflow=0.89 cfs 0.070 af
12.0" Round Culvert n=0.013 L=184.0' S=0.0200 '/' Outflow=0.89 cfs 0.070 af

Pond 115: CB 115 Peak Elev=514.05' Storage=8 cf Inflow=1.41 cfs 0.114 af
12.0" Round Culvert n=0.013 L=73.0' S=0.0300 '/' Outflow=1.42 cfs 0.114 af

Pond 116: CB 116 Peak Elev=512.28' Storage=14 cf Inflow=3.05 cfs 0.243 af
12.0" Round Culvert n=0.013 L=61.0' S=0.0513 '/' Outflow=3.05 cfs 0.243 af

Pond 117: CB 117 Peak Elev=514.02' Storage=0.000 af Inflow=1.10 cfs 0.086 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0163 '/' Outflow=1.10 cfs 0.086 af

Pond 118: CB 118 Peak Elev=522.39' Storage=14 cf Inflow=1.41 cfs 0.103 af
12.0" Round Culvert n=0.013 L=8.0' S=0.0313 '/' Outflow=1.41 cfs 0.103 af

Pond 119: CB 119 Peak Elev=517.58' Storage=0.000 af Inflow=0.32 cfs 0.024 af
12.0" Round Culvert n=0.013 L=186.0' S=0.0200 '/' Outflow=0.32 cfs 0.024 af

Pond 120: CB 120 Peak Elev=543.19' Storage=0.000 af Inflow=0.41 cfs 0.029 af
12.0" Round Culvert n=0.013 L=23.0' S=0.0052 '/' Outflow=0.41 cfs 0.029 af

Pond 121: CB 121 Peak Elev=543.19' Storage=0.000 af Inflow=1.15 cfs 0.086 af
12.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=1.14 cfs 0.086 af

Pond 122: CB 122 Peak Elev=543.18' Storage=0.000 af Inflow=0.46 cfs 0.033 af
12.0" Round Culvert n=0.013 L=44.0' S=0.0050 '/' Outflow=0.45 cfs 0.033 af

Pond 123: CB 123 Peak Elev=543.19' Storage=0.000 af Inflow=0.53 cfs 0.045 af
12.0" Round Culvert n=0.013 L=79.0' S=0.0051 '/' Outflow=0.53 cfs 0.045 af

Pond 124: CB 124 Peak Elev=524.00' Storage=9 cf Inflow=1.82 cfs 0.170 af
18.0" Round Culvert n=0.013 L=107.0' S=0.0084 '/' Outflow=1.82 cfs 0.170 af

Pond 125: CB 124 Peak Elev=524.56' Storage=7 cf Inflow=1.15 cfs 0.104 af
18.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=1.15 cfs 0.104 af

Pond 126: CB 126 Peak Elev=507.25' Storage=5 cf Inflow=0.62 cfs 0.047 af
12.0" Round Culvert n=0.013 L=100.0' S=0.0300 '/' Outflow=0.62 cfs 0.047 af

Pond 127: CB 127 Peak Elev=507.45' Storage=28 cf Inflow=0.20 cfs 0.015 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0114 '/' Outflow=0.20 cfs 0.015 af

Pond 128: YARD DRAIN Peak Elev=530.79' Storage=1 cf Inflow=0.28 cfs 0.028 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0125 '/' Outflow=0.28 cfs 0.028 af

Link AP-1: Analysis Point #1 Inflow=0.04 cfs 0.007 af
Primary=0.04 cfs 0.007 af

Link AP-2: Analysis Point #2 Inflow=0.42 cfs 0.086 af
Primary=0.42 cfs 0.086 af

Link AP-3: Analysis Point #3 Inflow=0.29 cfs 0.033 af
Primary=0.29 cfs 0.033 af

Link AP-4: Analysis Point #4 Inflow=18.75 cfs 2.651 af
Primary=18.75 cfs 2.651 af

Link AP-5: Analysis Point #5 Inflow=23.69 cfs 4.679 af
Primary=23.69 cfs 4.679 af

Link AP-6: Analysis Point #6 Inflow=10.67 cfs 2.337 af
Primary=10.67 cfs 2.337 af

Total Runoff Area = 69.496 ac Runoff Volume = 10.686 af Average Runoff Depth = 1.85"
70.17% Pervious = 48.768 ac 29.83% Impervious = 20.728 ac

Summary for Subcatchment 201S: WS 201

Runoff = 0.04 cfs @ 12.38 hrs, Volume= 0.007 af, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
8,114	55	Woods, Good, HSG B
8,114		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	75	0.0330	0.08		**Sheet Flow, WOODS** Woods: Light underbrush n= 0.400 P2= 2.63"
1.2	118	0.1000	1.58		**Shallow Concentrated Flow, WOODS** Woodland Kv= 5.0 fps
16.6	193	Total			

Summary for Subcatchment 202S: WS 202

Runoff = 0.18 cfs @ 12.31 hrs, Volume= 0.027 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
25,012	55	Woods, Good, HSG B
3,321	61	>75% Grass cover, Good, HSG B
28,333	56	Weighted Average
28,333		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	75	0.0700	0.11		**Sheet Flow, WOODS** Woods: Light underbrush n= 0.400 P2= 2.63"
3.2	254	0.0700	1.32		**Shallow Concentrated Flow, WOODS** Woodland Kv= 5.0 fps
14.6	329	Total			

Summary for Subcatchment 203S: WS 203

Runoff = 0.29 cfs @ 12.17 hrs, Volume= 0.033 af, Depth= 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
19,099	55	Woods, Good, HSG B
1,868	70	Woods, Good, HSG C
1,198	74	>75% Grass cover, Good, HSG C
7,395	61	>75% Grass cover, Good, HSG B
29,560	58	Weighted Average
29,560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	75	0.1300	0.14		**Sheet Flow, WOODS** Woods: Light underbrush n= 0.400 P2= 2.63"

Summary for Subcatchment 204S: WS 204

Runoff = 1.90 cfs @ 12.44 hrs, Volume= 0.244 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
8,644	98	Paved parking, HSG C
37,554	74	>75% Grass cover, Good, HSG C
36,464	70	Woods, Good, HSG C
82,662	75	Weighted Average
74,018		89.54% Pervious Area
8,644		10.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	50	0.1200	0.27		**Sheet Flow, GRASS** Grass: Short n= 0.150 P2= 2.63"
10.2	35	0.0800	0.06		**Sheet Flow, WETLAND** Woods: Dense underbrush n= 0.800 P2= 2.63"
16.5	414	0.0280	0.42		**Shallow Concentrated Flow, WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
29.7	499	Total			

Summary for Subcatchment 205S: WS 205

Runoff = 16.78 cfs @ 12.85 hrs, Volume= 3.084 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
32,291	98	Paved parking, HSG C
6,029	61	>75% Grass cover, Good, HSG B
167,460	74	>75% Grass cover, Good, HSG C
16,546	55	Woods, Good, HSG B
443,120	70	Woods, Good, HSG C
254,531	94	Urban commercial, 85% imp, HSG C
919,977	78	Weighted Average
671,335		72.97% Pervious Area
248,642		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	75	0.1400	0.08		**Sheet Flow, WOODLAND** Woods: Dense underbrush n= 0.800 P2= 2.63"
7.8	559	0.0570	1.19		**Shallow Concentrated Flow, WOODLAND** Woodland Kv= 5.0 fps
6.2	524	0.0400	1.40		**Shallow Concentrated Flow, GRASS** Short Grass Pasture Kv= 7.0 fps
31.6	924	0.0380	0.49		**Shallow Concentrated Flow, THROUGH WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
60.6	2,082	Total			

Summary for Subcatchment 206S: WS 206

Runoff = 10.67 cfs @ 13.09 hrs, Volume= 2.337 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,353	98	Paved parking, HSG C
1,858	98	Roofs, HSG C
76,670	74	>75% Grass cover, Good, HSG C
325,831	70	Woods, Good, HSG C
50,832	94	Urban commercial, 85% imp, HSG C
301,513	80	1/2 acre lots, 25% imp, HSG C
759,057	76	Weighted Average
636,261		83.82% Pervious Area
122,796		16.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	75	0.0400	0.09		**Sheet Flow, WETLAND** Woods: Light underbrush n= 0.400 P2= 2.63"
64.7	1,942	0.0400	0.50		**Shallow Concentrated Flow, WETLAND** Forest w/Heavy Litter Kv= 2.5 fps
79.0	2,017	Total			

Summary for Subcatchment 207S: WS 207

Runoff = 0.49 cfs @ 12.15 hrs, Volume= 0.042 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
12,232	74	>75% Grass cover, Good, HSG C
1,333	98	Roofs, HSG C
13,565	76	Weighted Average
12,232		90.17% Pervious Area
1,333		9.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	42	0.0100	0.07		**Sheet Flow, THROUGH GRASS** Grass: Dense n= 0.240 P2= 2.63"

Summary for Subcatchment 208S: WS 208

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 0.019 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,441	98	Roofs, HSG C
319	96	Gravel surface, HSG C
2,760	98	Weighted Average
319		11.56% Pervious Area
2,441		88.44% Impervious Area

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

Summary for Subcatchment 209S: WS 209

Runoff = 1.20 cfs @ 12.14 hrs, Volume= 0.098 af, Depth= 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
7,587	98	Paved parking, HSG C
3,286	98	Roofs, HSG C
10,531	74	>75% Grass cover, Good, HSG C
21,404	86	Weighted Average
10,531		49.20% Pervious Area
10,873		50.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	58	0.0100	0.10		**Sheet Flow, THROUGH GRASS** Grass: Short n= 0.150 P2= 2.63"
0.1	20	0.0200	2.87		**Shallow Concentrated Flow, OVER PAVEMENT** Paved Kv= 20.3 fps
0.3	29	0.0500	1.57		**Shallow Concentrated Flow, GRASS** Short Grass Pasture Kv= 7.0 fps
9.6	107	Total			

Summary for Subcatchment 210S: WS 210

Runoff = 0.68 cfs @ 12.22 hrs, Volume= 0.066 af, Depth= 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
63	98	Paved parking, HSG C
3,146	98	Roofs, HSG C
16,507	74	>75% Grass cover, Good, HSG C
19,716	78	Weighted Average
16,507		83.72% Pervious Area
3,209		16.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0100	0.07		**Sheet Flow, THROUGH GRASS** Grass: Dense n= 0.240 P2= 2.63"
3.9	162	0.0100	0.70		**Shallow Concentrated Flow, THROUGH GRASS** Short Grass Pasture Kv= 7.0 fps
15.8	212	Total			

Summary for Subcatchment 211S: WS 211

Runoff = 1.15 cfs @ 12.19 hrs, Volume= 0.104 af, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
833	98	Paved parking, HSG B
5,549	98	Paved parking, HSG C
1,765	61	>75% Grass cover, Good, HSG B
16,745	74	>75% Grass cover, Good, HSG C
2,651	98	Roofs, HSG C
27,543	81	Weighted Average
18,510		67.20% Pervious Area
9,033		32.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	75	0.0100	0.11		**Sheet Flow, THROUGH GRASS** Grass: Short n= 0.150 P2= 2.63"
1.0	41	0.0100	0.70		**Shallow Concentrated Flow, THROUGH GRASS** Short Grass Pasture Kv= 7.0 fps
1.1	207	0.0220	3.01		**Shallow Concentrated Flow, PAVE** Paved Kv= 20.3 fps
13.4	323	Total			

Summary for Subcatchment 212S: WS 212

Runoff = 0.48 cfs @ 12.19 hrs, Volume= 0.044 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
67	74	>75% Grass cover, Good, HSG C
27	98	Paved parking, HSG C
5,249	98	Paved parking, HSG B
10,332	61	>75% Grass cover, Good, HSG B
15,675	74	Weighted Average
10,399		66.34% Pervious Area
5,276		33.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	75	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
1.0	40	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.5	58	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
12.8	173	Total			

Summary for Subcatchment 213S: WS 213

Runoff = 4.34 cfs @ 12.69 hrs, Volume= 0.707 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
6,874	55	Woods, Good, HSG B
37,805	94	Urban commercial, 85% imp, HSG C
1,871	96	Gravel surface, HSG B
9,884	61	>75% Grass cover, Good, HSG B
133,288	70	Woods, Good, HSG C
61,357	74	>75% Grass cover, Good, HSG C
251,079	74	Weighted Average
218,945		87.20% Pervious Area
32,134		12.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	67	0.0100	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
0.6	35	0.0200	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
31.8	1,011	0.0450	0.53		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
47.5	1,113	Total			

Summary for Subcatchment 214S: WS 214

Runoff = 1.08 cfs @ 12.20 hrs, Volume= 0.104 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,747	55	Woods, Good, HSG B
4,618	61	>75% Grass cover, Good, HSG B
23,234	70	Woods, Good, HSG C
15,220	74	>75% Grass cover, Good, HSG C
44,819	70	Weighted Average
44,819		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	75	0.1800	0.24		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
8.1	206	0.0290	0.43		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
13.3	281	Total			

Summary for Subcatchment 215S: WS 215

[49] Hint: Tc<2dt may require smaller dt

Runoff = 3.01 cfs @ 12.07 hrs, Volume= 0.235 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
34,428	98	Paved parking, HSG C
892	74	>75% Grass cover, Good, HSG C
35,320	97	Weighted Average
892		2.53% Pervious Area
34,428		97.47% Impervious Area

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

Summary for Subcatchment 216S: WS-216

Runoff = 2.48 cfs @ 12.26 hrs, Volume= 0.254 af, Depth= 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
5,410	92	Urban commercial, 85% imp, HSG B
29,532	94	Urban commercial, 85% imp, HSG C
9,609	55	Woods, Good, HSG B
8,582	61	>75% Grass cover, Good, HSG B
13,419	70	Woods, Good, HSG C
6,005	74	>75% Grass cover, Good, HSG C
72,557	79	Weighted Average
42,856		59.07% Pervious Area
29,701		40.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	75	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.1	5	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	107	0.0100	5.94	10.50	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
6.5	242	0.0620	0.62		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
18.2	429	Total			

Summary for Subcatchment 217S: WS-217

Runoff = 2.23 cfs @ 12.20 hrs, Volume= 0.209 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
28,450	98	Paved parking, HSG B
13,663	55	Woods, Good, HSG B
31,972	61	>75% Grass cover, Good, HSG B
74,085	74	Weighted Average
45,635		61.60% Pervious Area
28,450		38.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	75	0.0900	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
2.4	127	0.0310	0.88		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.7	628	0.0490	13.99	167.89	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=2.00' Z= 2.0 '/' Top.W=10.00' n= 0.025 Earth, clean & winding
13.4	830	Total			

Summary for Subcatchment 218S: WS-218

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.40 cfs @ 12.07 hrs, Volume= 0.032 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
620	98	Paved parking, HSG C
3,994	98	Paved parking, HSG B
4,614	98	Weighted Average
4,614		100.00% Impervious Area

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

Summary for Subcatchment 219S: WS-219

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.19 cfs @ 12.00 hrs, Volume= 0.014 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
623	98	Paved parking, HSG C
1,365	98	Paved parking, HSG B
1,988	98	Weighted Average
1,988		100.00% Impervious Area

Summary for Subcatchment 220S: WS 220

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.46 cfs @ 12.07 hrs, Volume= 0.033 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,402	61	>75% Grass cover, Good, HSG B
4,872	98	Paved parking, HSG B
6,274	90	Weighted Average
1,402		22.35% Pervious Area
4,872		77.65% Impervious Area

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

Summary for Subcatchment 221S: WS 221

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.41 cfs @ 12.07 hrs, Volume= 0.029 af, Depth= 2.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,879	61	>75% Grass cover, Good, HSG B
4,280	98	Paved parking, HSG B
6,159	87	Weighted Average
1,879		30.51% Pervious Area
4,280		69.49% Impervious Area

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

Summary for Subcatchment 222S: WS 222

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.17 cfs @ 12.08 hrs, Volume= 0.012 af, Depth= 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,370	61	>75% Grass cover, Good, HSG B
1,708	98	Paved parking, HSG B
3,078	82	Weighted Average
1,370		44.51% Pervious Area
1,708		55.49% Impervious Area

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

Summary for Subcatchment 223S: WS 223

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.60 cfs @ 12.07 hrs, Volume= 0.048 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
7,000	98	Roofs, HSG B
7,000		100.00% Impervious Area

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

Summary for Subcatchment 224S: WS 224

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.57 cfs @ 12.07 hrs, Volume= 0.045 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
6,564	98	Roofs, HSG B
6,564		100.00% Impervious Area

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

Summary for Subcatchment 225S: WS 225

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.04 cfs @ 12.07 hrs, Volume= 0.083 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
12,069	98	Roofs, HSG B
12,069		100.00% Impervious Area

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

Summary for Subcatchment 226S: WS 226

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 0.019 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,790	98	Roofs, HSG B
2,790		100.00% Impervious Area

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

Summary for Subcatchment 227S: WS 227

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.26 cfs @ 12.07 hrs, Volume= 0.021 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
283	98	Roofs, HSG C
2,753	98	Roofs, HSG B
3,036	98	Weighted Average
3,036		100.00% Impervious Area

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

Summary for Subcatchment 228S: WS 228

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,886	98	Roofs, HSG B
2,886		100.00% Impervious Area

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

Summary for Subcatchment 229S: WS 229

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.79 cfs @ 12.07 hrs, Volume= 0.063 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,798	98	Roofs, HSG B
6,346	98	Roofs, HSG C
9,144	98	Weighted Average
9,144		100.00% Impervious Area

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

Summary for Subcatchment 230S: WS 230

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.54 cfs @ 12.07 hrs, Volume= 0.043 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
17	98	Roofs, HSG B
6,292	98	Roofs, HSG C
6,309	98	Weighted Average
6,309		100.00% Impervious Area

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

Summary for Subcatchment 231S: WS 231

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.41 cfs @ 12.09 hrs, Volume= 0.103 af, Depth= 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
817	74	>75% Grass cover, Good, HSG C
1,700	98	Paved parking, HSG C
4,294	61	>75% Grass cover, Good, HSG B
13,392	98	Paved parking, HSG B
20,203	89	Weighted Average
5,111		25.30% Pervious Area
15,092		74.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	14	0.0200	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
4.2	48	0.0500	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.3	13	0.0200	0.83		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
0.9	174	0.0240	3.14		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.7	249	Total			

Summary for Subcatchment 232S: WS 232

Runoff = 0.32 cfs @ 12.10 hrs, Volume= 0.024 af, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
14	61	>75% Grass cover, Good, HSG B
4,956	74	>75% Grass cover, Good, HSG C
1,504	98	Paved parking, HSG C
6,474	80	Weighted Average
4,970		76.77% Pervious Area
1,504		23.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	75	0.0430	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.4	55	0.0860	2.05		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	28	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.8	158	Total			

Summary for Subcatchment 233S: WS 233

Runoff = 1.06 cfs @ 12.13 hrs, Volume= 0.087 af, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
3,333	98	Roofs, HSG C
4,791	74	>75% Grass cover, Good, HSG C
7,871	98	Paved parking, HSG C
15,995	91	Weighted Average
4,791		29.95% Pervious Area
11,204		70.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	68	0.0200	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.1	7	0.0290	0.85		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
1.1	237	0.0290	3.46		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.1	312	Total			

Summary for Subcatchment 234S: WS 234

Runoff = 0.78 cfs @ 12.10 hrs, Volume= 0.062 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,912	74	>75% Grass cover, Good, HSG C
8,372	98	Paved parking, HSG C
10,284	94	Weighted Average
1,912		18.59% Pervious Area
8,372		81.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	75	0.0460	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
1.2	217	0.0210	2.94		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
7.4	292	Total			

Summary for Subcatchment 235S: WS 235

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.57 cfs @ 12.07 hrs, Volume= 0.044 af, Depth= 3.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
6,065	98	Paved parking, HSG C
696	74	>75% Grass cover, Good, HSG C
6,761	96	Weighted Average
696		10.29% Pervious Area
6,065		89.71% Impervious Area

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

Summary for Subcatchment 236S: WS 236

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.40 cfs @ 12.08 hrs, Volume= 0.029 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
10,261	74	>75% Grass cover, Good, HSG C
10,261		100.00% Pervious Area

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

Summary for Subcatchment 237S: WS 237

Runoff = 0.56 cfs @ 12.12 hrs, Volume= 0.044 af, Depth= 2.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
4,203	74	>75% Grass cover, Good, HSG C
5,055	98	Paved parking, HSG C
9,258	87	Weighted Average
4,203		45.40% Pervious Area
5,055		54.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.7	75	0.0266	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.5	95	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.2	170	Total			

Summary for Subcatchment 238S: WS 238

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.10 cfs @ 12.08 hrs, Volume= 0.007 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,185	61	>75% Grass cover, Good, HSG B
580	74	>75% Grass cover, Good, HSG C
79	98	Paved parking, HSG B
643	98	Paved parking, HSG C
2,487	75	Weighted Average
1,765		70.97% Pervious Area
722		29.03% Impervious Area

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

Summary for Subcatchment 239S: WS 239

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 0.011 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,499	98	Paved parking, HSG C
528	74	>75% Grass cover, Good, HSG C
2,027	92	Weighted Average
528		26.05% Pervious Area
1,499		73.95% Impervious Area

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

Summary for Subcatchment 240S: WS 271

Runoff = 0.28 cfs @ 12.19 hrs, Volume= 0.028 af, Depth= 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,028	98	Paved parking, HSG B
12,608	61	>75% Grass cover, Good, HSG B
14,636	66	Weighted Average
12,608		86.14% Pervious Area
2,028		13.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	75	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.5	23	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.8	98	Total			

Summary for Subcatchment 241S: WS 241

Runoff = 0.70 cfs @ 12.58 hrs, Volume= 0.104 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
4,429	61	>75% Grass cover, Good, HSG B
7,641	70	Woods, Good, HSG C
2,970	98	Paved parking, HSG C
21,704	74	>75% Grass cover, Good, HSG C
36,744	74	Weighted Average
33,774		91.92% Pervious Area
2,970		8.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	27	0.1500	0.18		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
28.5	58	0.0170	0.03		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.63"
8.8	250	0.0360	0.47		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
39.8	335	Total			

Summary for Subcatchment 242S: WS 242

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.62 cfs @ 12.07 hrs, Volume= 0.048 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
6,840	98	Paved parking, HSG C
421	74	>75% Grass cover, Good, HSG C
7,261	97	Weighted Average
421		5.80% Pervious Area
6,840		94.20% Impervious Area

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

Summary for Subcatchment 243S: WS 243

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.31 cfs @ 12.07 hrs, Volume= 0.023 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
3,270	98	Paved parking, HSG C
600	74	>75% Grass cover, Good, HSG C
3,870	94	Weighted Average
600		15.50% Pervious Area
3,270		84.50% Impervious Area

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

Summary for Subcatchment 244S: WS 244

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.11 cfs @ 12.08 hrs, Volume= 0.008 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,929	74	>75% Grass cover, Good, HSG C
2,929		100.00% Pervious Area

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

Summary for Subcatchment 245S: WS 245

Runoff = 4.99 cfs @ 12.11 hrs, Volume= 0.378 af, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
14,075	98	Roofs, HSG C
21,793	98	Paved parking, HSG C
51,955	74	>75% Grass cover, Good, HSG C
4,568	70	Woods, Good, HSG C
92,391	83	Weighted Average
56,523		61.18% Pervious Area
35,868		38.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.5	75	0.1000	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
2.5	131	0.0150	0.86		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.5	116	0.0380	3.96		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
7.5	322	Total			

Summary for Subcatchment 246S: WS 246

Runoff = 0.68 cfs @ 12.15 hrs, Volume= 0.057 af, Depth= 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
1,393	70	Woods, Good, HSG C
8,082	74	>75% Grass cover, Good, HSG C
1,012	98	Roofs, HSG C
3,957	98	Paved parking, HSG C
14,444	82	Weighted Average
9,475		65.60% Pervious Area
4,969		34.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	75	0.0320	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
3.2	237	0.0320	1.25		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	39	0.0320	3.63		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
10.5	351	Total			

Summary for Subcatchment 247S: WS 247

Runoff = 1.15 cfs @ 12.16 hrs, Volume= 0.099 af, Depth= 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,947	98	Roofs, HSG C
9,615	70	Woods, Good, HSG C
1,030	96	Gravel surface, HSG C
3,709	98	Paved parking, HSG C
10,900	74	>75% Grass cover, Good, HSG C
28,201	79	Weighted Average
21,545		76.40% Pervious Area
6,656		23.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.3	75	0.0430	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
5.1	159	0.0430	0.52		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
11.4	234	Total			

Summary for Subcatchment 248S: WS 248

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.44 cfs @ 12.08 hrs, Volume= 0.032 af, Depth= 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
367	98	Roofs, HSG C
2,354	74	>75% Grass cover, Good, HSG C
3,577	98	Paved parking, HSG C
6,298	89	Weighted Average
2,354		37.38% Pervious Area
3,944		62.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.5	44	0.0350	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.4	31	0.0390	1.29		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
0.6	133	0.0390	4.01		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.5	208	Total			

Summary for Subcatchment 249S: WS 249

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.22 cfs @ 12.07 hrs, Volume= 0.016 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,269	98	Paved parking, HSG C
388	74	>75% Grass cover, Good, HSG C
2,657	94	Weighted Average
388		14.60% Pervious Area
2,269		85.40% Impervious Area

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

Summary for Subcatchment 250S: WS 250

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.52 cfs @ 12.08 hrs, Volume= 0.038 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
13,455	74	>75% Grass cover, Good, HSG C
13,455		100.00% Pervious Area

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

Summary for Subcatchment 251S: WS 251

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.33 cfs @ 12.07 hrs, Volume= 0.024 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
361	98	Roofs, HSG C
2,861	98	Paved parking, HSG C
1,008	74	>75% Grass cover, Good, HSG C
4,230	92	Weighted Average
1,008		23.83% Pervious Area
3,222		76.17% Impervious Area

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

Summary for Subcatchment 252S: WS 252

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.26 cfs @ 12.07 hrs, Volume= 0.021 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
3,060	98	Paved parking, HSG C
3,060		100.00% Impervious Area

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

Summary for Subcatchment 253S: WS 253

Runoff = 8.68 cfs @ 12.11 hrs, Volume= 0.701 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
102,257	94	Urban commercial, 85% imp, HSG C
13,774	92	Urban commercial, 85% imp, HSG B
116,031	94	Weighted Average
17,405		15.00% Pervious Area
98,626		85.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	78	0.0100	0.90		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
6.4	595	0.0100	1.55	2.73	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.050
7.8	673	Total			

Summary for Subcatchment 254S: WS 254

Runoff = 3.39 cfs @ 12.29 hrs, Volume= 0.369 af, Depth= 2.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
50,521	94	Urban commercial, 85% imp, HSG C
12,841	70	Woods, Good, HSG C
17,285	74	>75% Grass cover, Good, HSG C
80,647	86	Weighted Average
37,704		46.75% Pervious Area
42,943		53.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	75	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.4	16	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	70	0.0100	5.94	10.50	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
9.5	235	0.0270	0.41		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
21.4	396	Total			

Summary for Subcatchment 255S: WS 255

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 0.005 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
106	96	Gravel surface, HSG C
619	98	Roofs, HSG C
725	98	Weighted Average
106		14.62% Pervious Area
619		85.38% Impervious Area

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

Summary for Subcatchment 256S: WS 256

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 0.005 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
106	96	Gravel surface, HSG C
604	98	Roofs, HSG C
710	98	Weighted Average
106		14.93% Pervious Area
604		85.07% Impervious Area

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

Summary for Subcatchment 257S: WS 257

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 0.005 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
106	96	Gravel surface, HSG C
619	98	Roofs, HSG C
725	98	Weighted Average
106		14.62% Pervious Area
619		85.38% Impervious Area

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

Summary for Subcatchment 258S: WS 258

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.08 cfs @ 12.07 hrs, Volume= 0.007 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
875	98	Roofs, HSG C
87	96	Gravel surface, HSG C
962	98	Weighted Average
87		9.04% Pervious Area
875		90.96% Impervious Area

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

Summary for Subcatchment 259S: WS 259

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.15 cfs @ 12.07 hrs, Volume= 0.012 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
193	96	Gravel surface, HSG C
1,497	98	Roofs, HSG C
1,690	98	Weighted Average
193		11.42% Pervious Area
1,497		88.58% Impervious Area

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

Summary for Subcatchment 260S: WS 260

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.14 cfs @ 12.07 hrs, Volume= 0.011 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
196	96	Gravel surface, HSG C
1,438	98	Roofs, HSG C
1,634	98	Weighted Average
196		12.00% Pervious Area
1,438		88.00% Impervious Area

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

Summary for Subcatchment 261S: WS 261

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.15 cfs @ 12.07 hrs, Volume= 0.012 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
193	96	Gravel surface, HSG C
1,497	98	Roofs, HSG C
1,690	98	Weighted Average
193		11.42% Pervious Area
1,497		88.58% Impervious Area

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

Summary for Subcatchment 262S: WS 262

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
319	96	Gravel surface, HSG C
2,557	98	Roofs, HSG C
2,876	98	Weighted Average
319		11.09% Pervious Area
2,557		88.91% Impervious Area

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

Summary for Subcatchment 263S: WS 263

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 0.015 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
213	96	Gravel surface, HSG C
2,010	98	Roofs, HSG C
2,223	98	Weighted Average
213		9.58% Pervious Area
2,010		90.42% Impervious Area

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

Summary for Subcatchment 264S: WS 264

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 0.018 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,345	98	Roofs, HSG C
266	96	Gravel surface, HSG C
2,611	98	Weighted Average
266		10.19% Pervious Area
2,345		89.81% Impervious Area

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

Summary for Subcatchment 265S: WS 265

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.12 cfs @ 12.07 hrs, Volume= 0.010 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
157	96	Gravel surface, HSG C
1,282	98	Roofs, HSG C
1,439	98	Weighted Average
157		10.91% Pervious Area
1,282		89.09% Impervious Area

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

Summary for Subcatchment 266S: WS 266

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
319	96	Gravel surface, HSG C
2,557	98	Roofs, HSG C
2,876	98	Weighted Average
319		11.09% Pervious Area
2,557		88.91% Impervious Area

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

Summary for Subcatchment 267S: WS 267

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
319	96	Gravel surface, HSG C
2,557	98	Roofs, HSG C
2,876	98	Weighted Average
319		11.09% Pervious Area
2,557		88.91% Impervious Area

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

Summary for Subcatchment 268S: WS 268

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.15 cfs @ 12.07 hrs, Volume= 0.012 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
193	96	Gravel surface, HSG C
1,497	98	Roofs, HSG C
1,690	98	Weighted Average
193		11.42% Pervious Area
1,497		88.58% Impervious Area

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

Summary for Subcatchment 269S: WS 269

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
319	96	Gravel surface, HSG C
2,557	98	Roofs, HSG C
2,876	98	Weighted Average
319		11.09% Pervious Area
2,557		88.91% Impervious Area

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

Summary for Subcatchment 270S: WS 270

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 0.015 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
213	96	Gravel surface, HSG C
1,953	98	Roofs, HSG C
2,166	98	Weighted Average
213		9.83% Pervious Area
1,953		90.17% Impervious Area

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

Summary for Subcatchment 271S: WS 271

Runoff = 0.43 cfs @ 12.09 hrs, Volume= 0.032 af, Depth= 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
3,120	98	Paved parking, HSG C
800	98	Roofs, HSG C
2,291	74	>75% Grass cover, Good, HSG C
6,211	89	Weighted Average
2,291		36.89% Pervious Area
3,920		63.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	37	0.0150	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.63"
0.6	38	0.0250	1.12		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.63"
0.3	64	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.4	139	Total			

Summary for Subcatchment 272S: WS 272

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.20 cfs @ 12.07 hrs, Volume= 0.015 af, Depth= 3.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR Rainfall=3.83"

Area (sf)	CN	Description
2,116	98	Paved parking, HSG C
416	74	>75% Grass cover, Good, HSG C
2,532	94	Weighted Average
416		16.43% Pervious Area
2,116		83.57% Impervious Area

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

Summary for Reach 1R: REACH 1

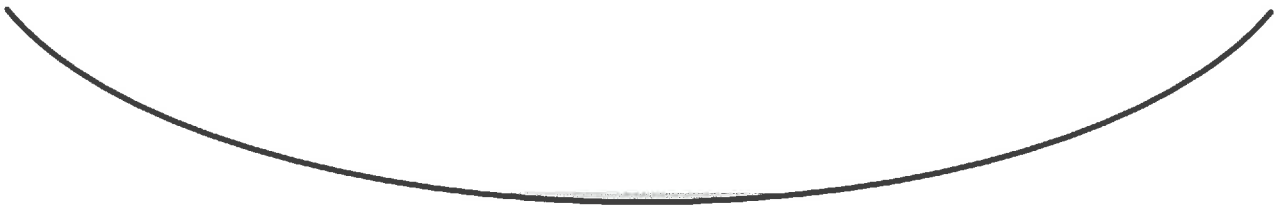
[62] Hint: Exceeded Reach 12R OUTLET depth by 0.07' @ 13.05 hrs
[62] Hint: Exceeded Reach 13R OUTLET depth by 0.09' @ 12.75 hrs
[62] Hint: Exceeded Reach 15R OUTLET depth by 0.09' @ 12.75 hrs
[61] Hint: Exceeded Reach 28R outlet invert by 0.09' @ 12.75 hrs

Inflow Area = 2.001 ac, 32.97% Impervious, Inflow Depth = 1.14" for 10-YR event
Inflow = 0.79 cfs @ 12.73 hrs, Volume= 0.190 af
Outflow = 0.79 cfs @ 12.76 hrs, Volume= 0.190 af, Atten= 0%, Lag= 1.7 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 1.20 fps, Min. Travel Time= 2.1 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 3.9 min

Peak Storage= 101 cf @ 12.76 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 613.90 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050 Scattered brush, heavy weeds
Length= 152.0' Slope= 0.0658 '/'
Inlet Invert= 509.00', Outlet Invert= 499.00'



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Summary for Reach 2R: REACH 2

[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 1R OUTLET depth by 0.25' @ 12.65 hrs

Inflow Area =	7.825 ac,	18.55% Impervious,	Inflow Depth =	1.38"	for 10-YR event
Inflow =	5.13 cfs @	12.70 hrs,	Volume=	0.900 af	
Outflow =	5.12 cfs @	12.65 hrs,	Volume=	0.900 af,	Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 5.72 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.53 fps, Avg. Travel Time= 0.3 min

Peak Storage= 42 cf @ 12.65 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.50' Flow Area= 5.3 sf, Capacity= 45.97 cfs

A factor of 3.00 has been applied to the storage and discharge capacity
18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 47.0' Slope= 0.0213 '/'
Inlet Invert= 499.00', Outlet Invert= 498.00'

Summary for Reach 3R: REACH 3

[62] Hint: Exceeded Reach 20R OUTLET depth by 0.02' @ 26.55 hrs
[62] Hint: Exceeded Reach 21R OUTLET depth by 0.22' @ 12.75 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.22' @ 12.75 hrs
[62] Hint: Exceeded Reach 23R OUTLET depth by 0.21' @ 12.75 hrs
[62] Hint: Exceeded Reach 24R OUTLET depth by 0.21' @ 12.75 hrs

Inflow Area = 10.373 ac, 25.89% Impervious, Inflow Depth = 1.50" for 10-YR event
Inflow = 5.98 cfs @ 12.71 hrs, Volume= 1.298 af
Outflow = 5.96 cfs @ 12.73 hrs, Volume= 1.298 af, Atten= 0%, Lag= 1.2 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.17 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 0.59 fps, Avg. Travel Time= 2.5 min

Peak Storage= 246 cf @ 12.73 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 597.56 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 90.0' Slope= 0.0623 '/'
Inlet Invert= 489.00', Outlet Invert= 483.39'

‡

Summary for Reach 4R: REACH 4

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[61] Hint: Exceeded Reach 5R outlet invert by 0.40' @ 12.20 hrs
[80] Warning: Exceeded Pond 17P by 6.02' @ 4.50 hrs (1,045.89 cfs 5,932.116 af)

Inflow Area = 10.021 ac, 55.79% Impervious, Inflow Depth > 2.39" for 10-YR event
Inflow = 16.54 cfs @ 12.19 hrs, Volume= 1.993 af
Outflow = 16.59 cfs @ 12.21 hrs, Volume= 1.993 af, Atten= 0%, Lag= 1.4 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.83 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 0.59 fps, Avg. Travel Time= 7.4 min

Peak Storage= 1,530 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 554.33 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 261.0' Slope= 0.0536 '/'
Inlet Invert= 510.00', Outlet Invert= 496.00'

‡

Summary for Reach 5R: REACH 5

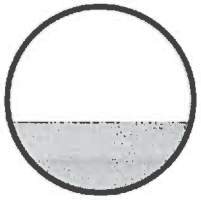
[52] Hint: Inlet/Outlet conditions not evaluated
[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 9.613 ac, 55.03% Impervious, Inflow Depth = 2.37" for 10-YR event
Inflow = 16.12 cfs @ 12.19 hrs, Volume= 1.897 af
Outflow = 16.12 cfs @ 12.19 hrs, Volume= 1.897 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 13.06 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.12 fps, Avg. Travel Time= 0.3 min

Peak Storage= 79 cf @ 12.19 hrs
Average Depth at Peak Storage= 0.57'
Bank-Full Depth= 1.50' Flow Area= 3.5 sf, Capacity= 52.52 cfs

A factor of 2.00 has been applied to the storage and discharge capacity
18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 64.0' Slope= 0.0625 '/'
Inlet Invert= 514.00', Outlet Invert= 510.00'



Summary for Reach 6R: REACH 6

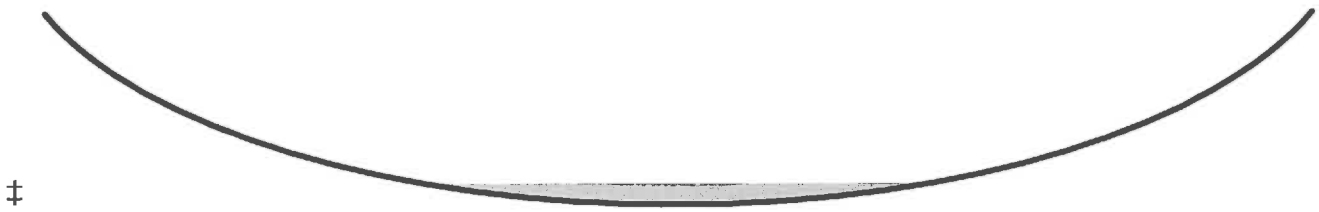
[80] Warning: Exceeded Pond 16P by 5.50' @ 4.30 hrs (629.34 cfs 3,640.053 af)

Inflow Area = 8.770 ac, 59.54% Impervious, Inflow Depth = 2.45" for 10-YR event
Inflow = 15.94 cfs @ 12.17 hrs, Volume= 1.794 af
Outflow = 15.85 cfs @ 12.18 hrs, Volume= 1.794 af, Atten= 1%, Lag= 0.6 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 6.80 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 2.1 min

Peak Storage= 564 cf @ 12.18 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 2,006.73 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.013 Corrugated PE, smooth interior
Length= 242.0' Slope= 0.0475 '/'
Inlet Invert= 526.50', Outlet Invert= 515.00'



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Summary for Reach 7R: REACH 7

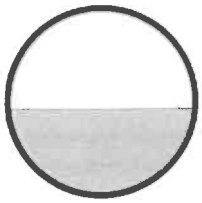
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 8R OUTLET depth by 0.29' @ 12.20 hrs
[62] Hint: Exceeded Reach 16R OUTLET depth by 0.68' @ 12.15 hrs

Inflow Area =	8.732 ac, 59.42% Impervious, Inflow Depth = 2.46" for 10-YR event				
Inflow =	15.92 cfs @ 12.17 hrs, Volume=	1.793 af			
Outflow =	15.92 cfs @ 12.17 hrs, Volume=	1.793 af, Atten= 0%, Lag= 0.1 min			

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 4.98 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.00 fps, Avg. Travel Time= 0.6 min

Peak Storage= 105 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.69'
Bank-Full Depth= 1.50' Flow Area= 7.1 sf, Capacity= 36.57 cfs

A factor of 4.00 has been applied to the storage and discharge capacity
18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 33.0' Slope= 0.0076 '/'
Inlet Invert= 528.00', Outlet Invert= 527.75'



Summary for Reach 8R: REACH 8

[62] Hint: Exceeded Reach 9R OUTLET depth by 0.65' @ 12.10 hrs

Inflow Area = 6.992 ac, 67.54% Impervious, Inflow Depth > 2.68" for 10-YR event
Inflow = 14.84 cfs @ 12.15 hrs, Volume= 1.559 af
Outflow = 14.75 cfs @ 12.17 hrs, Volume= 1.559 af, Atten= 1%, Lag= 1.2 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.45 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 5.3 min

Peak Storage= 1,512 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 476.78 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 252.0' Slope= 0.0397 '/'
Inlet Invert= 538.00', Outlet Invert= 528.00'

‡

Summary for Reach 9R: REACH 9

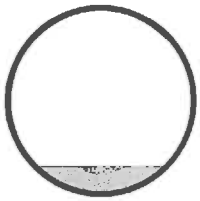
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 1.851 ac, 53.25% Impervious, Inflow Depth = 2.39" for 10-YR event
Inflow = 3.39 cfs @ 12.29 hrs, Volume= 0.369 af
Outflow = 3.39 cfs @ 12.29 hrs, Volume= 0.369 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 11.68 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.46 fps, Avg. Travel Time= 0.1 min

Peak Storage= 12 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 71.54 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 40.0' Slope= 0.1000 '/'
Inlet Invert= 541.50', Outlet Invert= 537.50'



Summary for Reach 10R: REACH 10

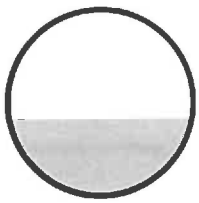
[52] Hint: Inlet/Outlet conditions not evaluated
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[62] Hint: Exceeded Reach 11R OUTLET depth by 0.13' @ 12.20 hrs

Inflow Area = 4.329 ac, 68.05% Impervious, Inflow Depth = 2.65" for 10-YR event
Inflow = 10.27 cfs @ 12.15 hrs, Volume= 0.954 af
Outflow = 10.27 cfs @ 12.15 hrs, Volume= 0.954 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 11.30 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.82 fps, Avg. Travel Time= 0.2 min

Peak Storage= 43 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.41'
Bank-Full Depth= 1.00' Flow Area= 2.4 sf, Capacity= 29.17 cfs

A factor of 3.00 has been applied to the storage and discharge capacity
12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 47.0' Slope= 0.0745 '/'
Inlet Invert= 544.00', Outlet Invert= 540.50'



Summary for Reach 11R: REACH 11

[62] Hint: Exceeded Reach 29R OUTLET depth by 0.01' @ 24.40 hrs

Inflow Area = 2.664 ac, 85.00% Impervious, Inflow Depth = 3.16" for 10-YR event
Inflow = 8.67 cfs @ 12.11 hrs, Volume= 0.701 af
Outflow = 8.31 cfs @ 12.14 hrs, Volume= 0.701 af, Atten= 4%, Lag= 1.8 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.31 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 0.74 fps, Avg. Travel Time= 6.9 min

Peak Storage= 1,113 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 561.39 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 309.0' Slope= 0.0550 '/'
Inlet Invert= 561.00', Outlet Invert= 544.00'

‡

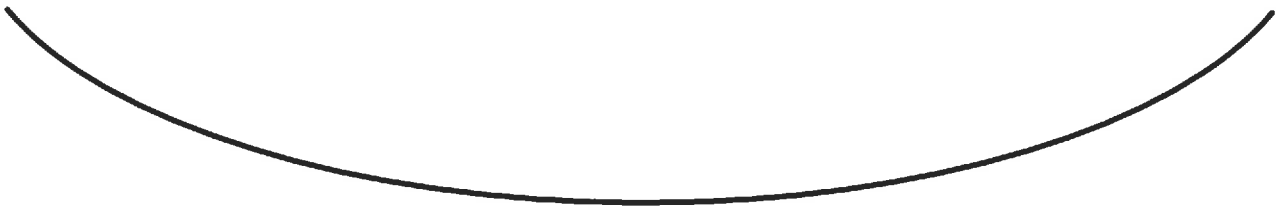
Summary for Reach 12R: REACH 12

Inflow Area = 0.063 ac, 88.44% Impervious, Inflow Depth = 0.57" for 10-YR event
Inflow = 0.11 cfs @ 12.24 hrs, Volume= 0.003 af
Outflow = 0.04 cfs @ 12.47 hrs, Volume= 0.003 af, Atten= 64%, Lag= 14.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.41 fps, Min. Travel Time= 20.8 min
Avg. Velocity = 0.33 fps, Avg. Travel Time= 26.2 min

Peak Storage= 51 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 459.28 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 516.0' Slope= 0.0368 '/'
Inlet Invert= 528.00', Outlet Invert= 509.00'



‡

Summary for Reach 13R: REACH 13

Inflow Area = 0.017 ac, 85.38% Impervious, Inflow Depth = 0.00" for 10-YR event
Inflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 2.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 453.67 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 668.0' Slope= 0.0359 '/'
Inlet Invert= 533.00', Outlet Invert= 509.00'

‡

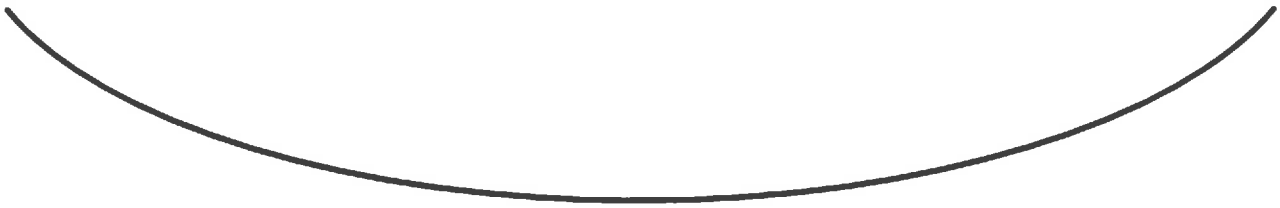
Summary for Reach 15R: REACH 15

Inflow Area = 0.017 ac, 85.38% Impervious, Inflow Depth = 0.00" for 10-YR event
Inflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 2.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 458.01 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050 Scattered brush, heavy weeds
Length= 355.0' Slope= 0.0366 '/'
Inlet Invert= 522.00', Outlet Invert= 509.00'



‡

Summary for Reach 16R: REACH 16

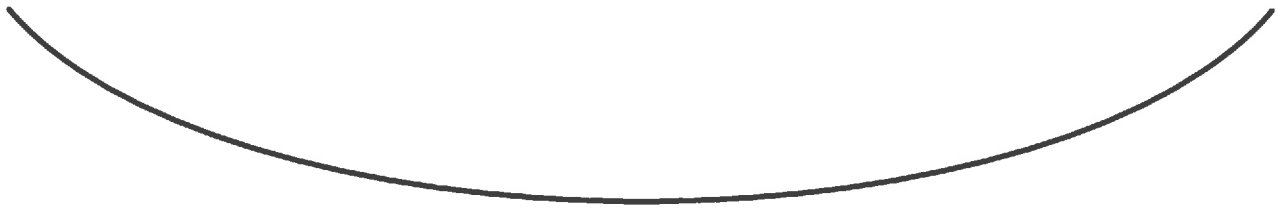
[80] Warning: Exceeded Pond 14P by 2.39' @ 22.45 hrs (0.00 cfs 0.006 af)

Inflow Area = 0.022 ac, 90.96% Impervious, Inflow Depth = 0.43" for 10-YR event
Inflow = 0.05 cfs @ 12.19 hrs, Volume= 0.001 af
Outflow = 0.02 cfs @ 12.43 hrs, Volume= 0.001 af, Atten= 71%, Lag= 14.6 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.20 fps, Min. Travel Time= 20.4 min
Avg. Velocity = 0.18 fps, Avg. Travel Time= 22.3 min

Peak Storage= 18 cf @ 12.43 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 263.78 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 247.0' Slope= 0.0121 '/'
Inlet Invert= 531.00', Outlet Invert= 528.00'



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Summary for Reach 17R: REACH 17

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[62] Hint: Exceeded Reach 4R OUTLET depth by 0.06' @ 12.25 hrs
[62] Hint: Exceeded Reach 18R OUTLET depth by 0.44' @ 12.20 hrs
[62] Hint: Exceeded Reach 19R OUTLET depth by 0.42' @ 12.20 hrs

Inflow Area = 10.138 ac, 56.18% Impervious, Inflow Depth > 2.37" for 10-YR event
Inflow = 16.73 cfs @ 12.21 hrs, Volume= 2.004 af
Outflow = 16.76 cfs @ 12.21 hrs, Volume= 2.004 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.28 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.45 fps, Avg. Travel Time= 2.6 min

Peak Storage= 507 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 404.42 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 69.0' Slope= 0.0286 '/'
Inlet Invert= 496.00', Outlet Invert= 494.03'

‡

Summary for Reach 18R: REACH 18

Inflow Area = 0.066 ac, 88.91% Impervious, Inflow Depth = 0.78" for 10-YR event
Inflow = 0.13 cfs @ 12.21 hrs, Volume= 0.004 af
Outflow = 0.08 cfs @ 12.32 hrs, Volume= 0.004 af, Atten= 37%, Lag= 6.5 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.55 fps, Min. Travel Time= 5.0 min
Avg. Velocity = 0.38 fps, Avg. Travel Time= 7.2 min

Peak Storage= 25 cf @ 12.32 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 527.02 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 165.0' Slope= 0.0485 '/'
Inlet Invert= 504.00', Outlet Invert= 496.00'

‡

Summary for Reach 19R: REACH 19

Inflow Area = 0.051 ac, 90.42% Impervious, Inflow Depth = 1.40" for 10-YR event
Inflow = 0.22 cfs @ 12.11 hrs, Volume= 0.006 af
Outflow = 0.13 cfs @ 12.17 hrs, Volume= 0.006 af, Atten= 43%, Lag= 3.9 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.59 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.36 fps, Avg. Travel Time= 6.2 min

Peak Storage= 28 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 506.46 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 134.0' Slope= 0.0448 '/'
Inlet Invert= 502.00', Outlet Invert= 496.00'

‡

Summary for Reach 20R: REACH 20

[61] Hint: Exceeded Reach 2R outlet invert by 0.25' @ 12.75 hrs
[80] Warning: Exceeded Pond 21P by 2.52' @ 9.90 hrs (0.00 cfs 1.506 af)

Inflow Area = 7.858 ac, 18.84% Impervious, Inflow Depth = 1.38" for 10-YR event
Inflow = 5.13 cfs @ 12.69 hrs, Volume= 0.903 af
Outflow = 5.13 cfs @ 12.73 hrs, Volume= 0.903 af, Atten= 0%, Lag= 2.4 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 1.70 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.73 fps, Avg. Travel Time= 5.9 min

Peak Storage= 778 cf @ 12.73 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 447.03 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 258.0' Slope= 0.0349 '/'
Inlet Invert= 498.00', Outlet Invert= 489.00'

‡

Summary for Reach 21R: REACH 21

Inflow Area = 0.066 ac, 88.91% Impervious, Inflow Depth = 1.19" for 10-YR event
Inflow = 0.27 cfs @ 12.20 hrs, Volume= 0.007 af
Outflow = 0.12 cfs @ 12.25 hrs, Volume= 0.007 af, Atten= 56%, Lag= 3.1 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.71 fps, Min. Travel Time= 3.5 min
Avg. Velocity = 0.46 fps, Avg. Travel Time= 5.4 min

Peak Storage= 25 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 650.32 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 149.0' Slope= 0.0738 '/'
Inlet Invert= 500.00', Outlet Invert= 489.00'

‡

Summary for Reach 22R: REACH 22

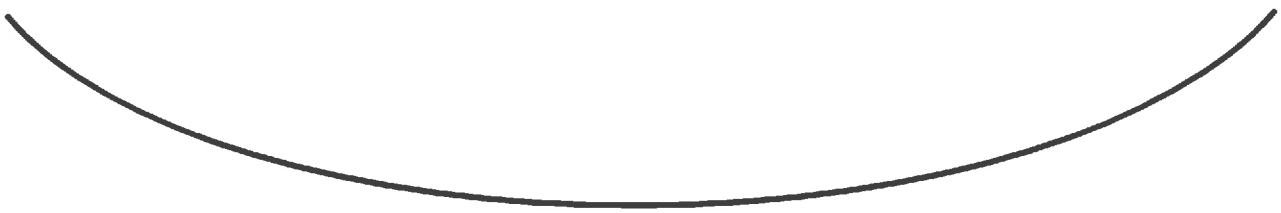
[80] Warning: Exceeded Pond 24P by 0.32' @ 26.70 hrs (0.00 cfs 0.009 af)

Inflow Area = 0.039 ac, 88.58% Impervious, Inflow Depth = 1.03" for 10-YR event
Inflow = 0.07 cfs @ 12.22 hrs, Volume= 0.003 af
Outflow = 0.03 cfs @ 12.46 hrs, Volume= 0.003 af, Atten= 57%, Lag= 14.0 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.37 fps, Min. Travel Time= 16.1 min
Avg. Velocity = 0.31 fps, Avg. Travel Time= 19.3 min

Peak Storage= 31 cf @ 12.46 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 438.81 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 357.0' Slope= 0.0336 '/'
Inlet Invert= 501.00', Outlet Invert= 489.00'



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Summary for Reach 23R: REACH 23

[80] Warning: Exceeded Pond 25P by 0.73' @ 31.50 hrs (0.00 cfs 0.046 af)

Inflow Area = 0.066 ac, 88.91% Impervious, Inflow Depth = 1.09" for 10-YR event
Inflow = 0.26 cfs @ 12.20 hrs, Volume= 0.006 af
Outflow = 0.05 cfs @ 12.46 hrs, Volume= 0.006 af, Atten= 79%, Lag= 15.4 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.39 fps, Min. Travel Time= 20.7 min
Avg. Velocity = 0.27 fps, Avg. Travel Time= 29.4 min

Peak Storage= 66 cf @ 12.46 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 378.04 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 481.0' Slope= 0.0249 '/'
Inlet Invert= 501.00', Outlet Invert= 489.00'

‡

Summary for Reach 24R: REACH 24

Inflow Area = 0.050 ac, 90.17% Impervious, Inflow Depth = 1.36" for 10-YR event
Inflow = 0.20 cfs @ 12.14 hrs, Volume= 0.006 af
Outflow = 0.05 cfs @ 12.41 hrs, Volume= 0.006 af, Atten= 76%, Lag= 15.8 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.41 fps, Min. Travel Time= 24.2 min
Avg. Velocity = 0.30 fps, Avg. Travel Time= 32.9 min

Peak Storage= 70 cf @ 12.41 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 425.92 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 600.0' Slope= 0.0317 '/'
Inlet Invert= 508.00', Outlet Invert= 489.00'

‡

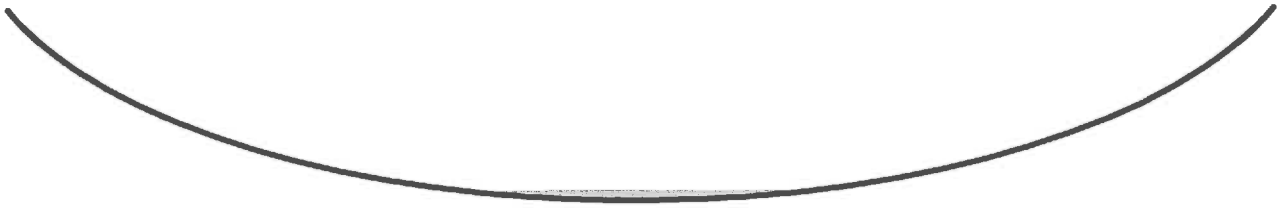
Summary for Reach 28R: REACH 28

Inflow Area = 1.904 ac, 30.21% Impervious, Inflow Depth = 1.18" for 10-YR event
Inflow = 0.77 cfs @ 12.70 hrs, Volume= 0.187 af
Outflow = 0.77 cfs @ 12.75 hrs, Volume= 0.187 af, Atten= 0%, Lag= 2.8 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 1.05 fps, Min. Travel Time= 3.3 min
Avg. Velocity = 0.57 fps, Avg. Travel Time= 6.0 min

Peak Storage= 150 cf @ 12.75 hrs
Average Depth at Peak Storage= 0.10'
Bank-Full Depth= 2.00' Flow Area= 66.7 sf, Capacity= 515.24 cfs

50.00' x 2.00' deep Parabolic Channel, n= 0.050
Length= 205.0' Slope= 0.0463 '/'
Inlet Invert= 518.50', Outlet Invert= 509.00'



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Summary for Reach 29R: REACH 29

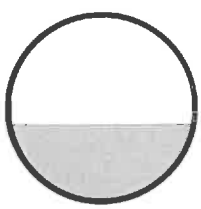
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 2.664 ac, 85.00% Impervious, Inflow Depth = 3.16" for 10-YR event
Inflow = 8.68 cfs @ 12.11 hrs, Volume= 0.701 af
Outflow = 8.67 cfs @ 12.11 hrs, Volume= 0.701 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 7.14 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.40 fps, Avg. Travel Time= 0.5 min

Peak Storage= 89 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.82'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 24.59 cfs

24.0" Round Pipe
n= 0.014
Length= 73.0' Slope= 0.0137 '/'
Inlet Invert= 562.00', Outlet Invert= 561.00'



Summary for Pond 001: DMH 001

Inflow Area = 1.576 ac, 33.66% Impervious, Inflow Depth = 2.04" for 10-YR event
Inflow = 2.92 cfs @ 12.17 hrs, Volume= 0.268 af
Outflow = 2.92 cfs @ 12.17 hrs, Volume= 0.268 af, Atten= 0%, Lag= 0.0 min
Primary = 2.92 cfs @ 12.17 hrs, Volume= 0.268 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 523.31' @ 12.17 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 531.25' Surf.Area= 0.000 ac Storage= 0.003 af

Plug-Flow detention time= 0.3 min calculated for 0.268 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (833.9 - 833.7)

Volume	Invert	Avail.Storage	Storage Description
#1	522.30'	0.003 af	**4.00'D x 8.95'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	522.30'	**18.0" Round Culvert** L= 86.0' Ke= 0.500 Inlet / Outlet Invert= 522.30' / 521.45' S= 0.0099 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=2.86 cfs @ 12.17 hrs HW=523.30' TW=522.80' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 2.86 cfs @ 3.24 fps)

Summary for Pond 1F: FOREBAY #1

[80] Warning: Exceeded Pond 001 by 0.02' @ 71.95 hrs (0.03 cfs 0.122 af)

Inflow Area =	1.904 ac, 30.21% Impervious, Inflow Depth = 1.96" for 10-YR event				
Inflow =	3.40 cfs @	12.17 hrs,	Volume=	0.310 af	
Outflow =	3.37 cfs @	12.18 hrs,	Volume=	0.301 af,	Atten= 1%, Lag= 0.8 min
Primary =	3.37 cfs @	12.18 hrs,	Volume=	0.301 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 522.80' @ 12.18 hrs Surf.Area= 647 sf Storage= 561 cf
Flood Elev= 523.00' Surf.Area= 748 sf Storage= 700 cf

Plug-Flow detention time= 25.0 min calculated for 0.301 af (97% of inflow)
Center-of-Mass det. time= 8.7 min (844.7 - 836.0)

Volume	Invert	Avail.Storage	Storage Description
#1	521.00'	700 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
521.00	78	41.0	0	0	78
522.00	316	93.0	184	184	637
523.00	748	156.0	517	700	1,891

Device	Routing	Invert	Outlet Devices
#1	Primary	522.50'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=3.33 cfs @ 12.18 hrs HW=522.80' TW=521.79' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 3.33 cfs @ 1.40 fps)

Summary for Pond 1P: INFIL POND #1

Inflow Area =	1.904 ac, 30.21% Impervious, Inflow Depth = 1.90" for 10-YR event				
Inflow =	3.37 cfs @	12.18 hrs,	Volume=	0.301 af	
Outflow =	0.82 cfs @	12.70 hrs,	Volume=	0.301 af,	Atten= 76%, Lag= 31.3 min
Discarded =	0.05 cfs @	12.70 hrs,	Volume=	0.114 af	
Primary =	0.77 cfs @	12.70 hrs,	Volume=	0.187 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 522.34' @ 12.70 hrs Surf.Area= 5,075 sf Storage= 5,710 cf
Flood Elev= 523.00' Surf.Area= 5,912 sf Storage= 9,350 cf

Plug-Flow detention time= 397.0 min calculated for 0.301 af (100% of inflow)
Center-of-Mass det. time= 397.9 min (1,242.6 - 844.7)

Volume	Invert	Avail.Storage	Storage Description
#1	521.00'	9,350 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
521.00	3,492	385.0	0	0	3,492
522.00	4,674	404.0	4,069	4,069	4,748
523.00	5,912	423.0	5,281	9,350	6,065

Device	Routing	Invert	Outlet Devices
#1	Primary	521.70'	**61.0 deg x 0.80' rise Sharp-Crested Vee/Trap Weir** Cv= 2.53 (C= 3.16)
#2	Primary	521.70'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Primary	522.50'	**6.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Discarded	521.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 518.00'
#5	Primary	522.75'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.05 cfs @ 12.70 hrs HW=522.34' (Free Discharge)
└─**4=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.77 cfs @ 12.70 hrs HW=522.34' TW=518.60' (Dynamic Tailwater)
├─**1=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.48 cfs @ 2.02 fps)
├─**2=Orifice/Grate** (Orifice Controls 0.29 cfs @ 3.30 fps)
├─**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2F: FOREBAY #2

Inflow Area = 0.360 ac, 33.66% Impervious, Inflow Depth = 1.47" for 10-YR event
Inflow = 0.48 cfs @ 12.19 hrs, Volume= 0.044 af
Outflow = 0.48 cfs @ 12.20 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.4 min
Primary = 0.48 cfs @ 12.20 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 531.83' @ 12.20 hrs Surf.Area= 249 sf Storage= 178 cf

Plug-Flow detention time= 57.3 min calculated for 0.041 af (92% of inflow)
Center-of-Mass det. time= 15.7 min (873.4 - 857.7)

Volume	Invert	Avail.Storage	Storage Description
#1	530.50'	223 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
530.50	40	27.0	0	0	40
531.00	105	48.0	35	35	167
532.00	286	70.0	188	223	382

Device	Routing	Invert	Outlet Devices
#1	Primary	531.75'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.48 cfs @ 12.20 hrs HW=531.83' TW=531.20' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 0.48 cfs @ 0.73 fps)

Summary for Pond 2P: WET POND #2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.651 ac, 63.32% Impervious, Inflow Depth > 2.35" for 10-YR event
Inflow = 1.38 cfs @ 12.08 hrs, Volume= 0.128 af
Outflow = 0.14 cfs @ 13.23 hrs, Volume= 0.128 af, Atten= 90%, Lag= 69.0 min
Primary = 0.14 cfs @ 13.23 hrs, Volume= 0.128 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 530.00' Surf.Area= 1,125 sf Storage= 2,093 cf
Peak Elev= 531.70' @ 13.23 hrs Surf.Area= 1,891 sf Storage= 4,624 cf (2,531 cf above start)
Flood Elev= 533.00' Surf.Area= 3,088 sf Storage= 7,772 cf (5,678 cf above start)

Plug-Flow detention time= 508.1 min calculated for 0.079 af (62% of inflow)
Center-of-Mass det. time= 225.7 min (1,016.7 - 791.0)

Volume	Invert	Avail.Storage	Storage Description
#1	525.00'	7,772 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
525.00	5	12.0	0	0	5
526.00	87	38.0	38	38	111
527.00	243	62.0	158	196	309
528.00	468	85.0	349	545	588
529.00	763	107.0	610	1,155	937
530.00	1,125	129.0	938	2,093	1,367
531.00	1,553	150.0	1,333	3,426	1,854
532.00	2,048	172.0	1,795	5,221	2,440
533.00	3,088	231.0	2,550	7,772	4,343

Device	Routing	Invert	Outlet Devices
#1	Primary	530.00'	**2.0" Vert. Orifice/Grate** C= 0.600
#2	Primary	531.50'	**20.0 deg x 1.00' rise Sharp-Crested Vee/Trap Weir** Cv= 2.69 (C= 3.36)
#3	Primary	532.50'	**6.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)
#4	Primary	532.50'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.14 cfs @ 13.23 hrs HW=531.70' TW=528.25' (Dynamic Tailwater)
- **1=Orifice/Grate** (Orifice Controls 0.13 cfs @ 6.12 fps)
- **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.01 cfs @ 1.19 fps)
- **3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3F: FOREBAY #3

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[80] Warning: Exceeded Pond 106 by 0.04' @ 5.05 hrs (0.55 cfs 1.100 af)

Inflow Area =	0.369 ac,	72.16% Impervious,	Inflow Depth >	3.24"	for 10-YR event
Inflow =	1.19 cfs @	12.08 hrs,	Volume=	0.100 af	
Outflow =	1.20 cfs @	12.08 hrs,	Volume=	0.097 af,	Atten= 0%, Lag= 0.5 min
Primary =	1.20 cfs @	12.08 hrs,	Volume=	0.097 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 514.90' @ 12.08 hrs Surf.Area= 185 sf Storage= 133 cf

Plug-Flow detention time= 90.5 min calculated for 0.097 af (97% of inflow)
Center-of-Mass det. time= 16.0 min (997.3 - 981.3)

Volume	Invert	Avail.Storage	Storage Description
#1	513.16'	152 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
513.16	4	9.0	0	0	4
514.00	66	32.0	24	24	81
515.00	202	55.0	128	152	246

Device	Routing	Invert	Outlet Devices
#1	Primary	514.75'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=1.16 cfs @ 12.08 hrs HW=514.90' TW=513.96' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 1.16 cfs @ 0.98 fps)

Summary for Pond 3P: WET POND #3

Inflow Area = 0.369 ac, 72.16% Impervious, Inflow Depth > 3.16" for 10-YR event
Inflow = 1.20 cfs @ 12.08 hrs, Volume= 0.097 af
Outflow = 0.44 cfs @ 12.33 hrs, Volume= 0.094 af, Atten= 63%, Lag= 14.8 min
Primary = 0.44 cfs @ 12.33 hrs, Volume= 0.094 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 513.16' Surf.Area= 1,307 sf Storage= 2,474 cf
Peak Elev= 514.13' @ 12.33 hrs Surf.Area= 1,764 sf Storage= 3,959 cf (1,485 cf above start)
Flood Elev= 515.00' Surf.Area= 2,218 sf Storage= 5,687 cf (3,213 cf above start)

Plug-Flow detention time= 962.4 min calculated for 0.037 af (38% of inflow)
Center-of-Mass det. time= 118.8 min (1,116.1 - 997.3)

Volume	Invert	Avail.Storage	Storage Description
#1	508.25'	5,687 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
508.25	1	3.0	0	0	1
509.00	73	47.0	21	21	177
510.00	262	74.0	158	178	444
511.00	518	95.0	383	561	739
512.00	844	117.0	674	1,236	1,125
513.00	1,238	140.0	1,035	2,270	1,612
514.00	1,700	163.0	1,463	3,733	2,187
515.00	2,218	182.0	1,953	5,687	2,737

Device	Routing	Invert	Outlet Devices
#1	Primary	513.16'	**20.0 deg x 1.34' rise Sharp-Crested Vee/Trap Weir** Cv= 2.69 (C= 3.36)

#2 Primary 514.50' **6.0' long Sharp-Crested Vee/Trap Weir** Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.44 cfs @ 12.33 hrs HW=514.13' TW=510.37' (Dynamic Tailwater)
└─**1=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.44 cfs @ 2.65 fps)
└─**2=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

Summary for Pond 4F: FOREBAY #4

Inflow Area = 2.121 ac, 38.82% Impervious, Inflow Depth = 2.14" for 10-YR event
Inflow = 4.99 cfs @ 12.11 hrs, Volume= 0.378 af
Outflow = 4.96 cfs @ 12.12 hrs, Volume= 0.369 af, Atten= 1%, Lag= 0.5 min
Primary = 4.96 cfs @ 12.12 hrs, Volume= 0.369 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 502.88' @ 12.12 hrs Surf.Area= 565 sf Storage= 580 cf

Plug-Flow detention time= 20.9 min calculated for 0.369 af (98% of inflow)
Center-of-Mass det. time= 7.3 min (833.4 - 826.1)

Volume	Invert	Avail.Storage	Storage Description
#1	501.00'	647 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
501.00	99	50.0	0	0	99
502.00	314	82.0	196	196	442
503.00	603	105.0	451	647	796

Device	Routing	Invert	Outlet Devices
#1	Primary	502.50'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=4.81 cfs @ 12.12 hrs HW=502.88' TW=502.11' (Dynamic Tailwater)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 4.81 cfs @ 1.60 fps)

Summary for Pond 4P: INFIL POND #4

Inflow Area = 2.121 ac, 38.82% Impervious, Inflow Depth = 2.09" for 10-YR event
Inflow = 4.96 cfs @ 12.12 hrs, Volume= 0.369 af
Outflow = 2.49 cfs @ 12.32 hrs, Volume= 0.369 af, Atten= 50%, Lag= 11.9 min
Discarded = 0.03 cfs @ 12.32 hrs, Volume= 0.073 af
Primary = 2.45 cfs @ 12.32 hrs, Volume= 0.297 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 502.44' @ 12.32 hrs Surf.Area= 3,299 sf Storage= 4,982 cf
Flood Elev= 503.70' Surf.Area= 6,436 sf Storage= 10,492 cf

Plug-Flow detention time= 233.4 min calculated for 0.369 af (100% of inflow)

Center-of-Mass det. time= 234.7 min (1,068.1 - 833.4)

Volume	Invert	Avail.Storage	Storage Description
#1	500.50'	10,492 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
500.50	1,756	163.0	0	0	1,756
501.00	2,271	181.0	1,004	1,004	2,256
502.00	2,971	207.0	2,613	3,617	3,082
503.00	3,749	230.0	3,352	6,970	3,911
503.70	6,436	288.0	3,523	10,492	6,309

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.50'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.75'
#2	Primary	501.30'	**18.0" Round Culvert** L= 145.0' Ke= 0.500 Inlet / Outlet Invert= 501.30' / 500.27' S= 0.0071 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	501.40'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600
#4	Device 2	501.95'	**17.5" W x 4.0" H Vert. Orifice/Grate** C= 0.600
#5	Device 2	503.20'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 12.32 hrs HW=502.43' (Free Discharge)
└─**1=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=2.45 cfs @ 12.32 hrs HW=502.43' TW=0.00' (Dynamic Tailwater)
└─**2=Culvert** (Passes 2.45 cfs of 4.81 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 1.15 cfs @ 4.58 fps)
  ├─**4=Orifice/Grate** (Orifice Controls 1.30 cfs @ 2.68 fps)
  └─**5=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 005: DMH 005

Inflow Area =	2.384 ac, 43.90% Impervious, Inflow Depth = 1.30" for 10-YR event			
Inflow =	2.28 cfs @ 12.22 hrs, Volume=	0.258 af		
Outflow =	2.28 cfs @ 12.22 hrs, Volume=	0.258 af, Atten= 0%, Lag= 0.0 min		
Primary =	2.28 cfs @ 12.22 hrs, Volume=	0.258 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 528.00' @ 12.22 hrs Surf.Area= 13 sf Storage= 9 cf
Flood Elev= 530.60' Surf.Area= 13 sf Storage= 41 cf

Plug-Flow detention time= 0.2 min calculated for 0.258 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (874.3 - 874.2)

Volume	Invert	Avail.Storage	Storage Description
#1	527.30'	41 cf	**4.00'D x 3.30'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	527.30'	**18.0" Round Culvert** L= 115.0' Ke= 0.500 Inlet / Outlet Invert= 527.30' / 521.00' S= 0.0548 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.25 cfs @ 12.22 hrs HW=527.99' TW=521.53' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.25 cfs @ 2.83 fps)

Summary for Pond 5F: FOREBAY #5

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[80] Warning: Exceeded Pond 111 by 0.02' @ 24.40 hrs (0.76 cfs 2.901 af)

Inflow Area =	0.853 ac,	34.64% Impervious,	Inflow Depth =	2.05"	for 10-YR event
Inflow =	1.64 cfs @	12.13 hrs,	Volume=	0.146 af	
Outflow =	1.64 cfs @	12.14 hrs,	Volume=	0.140 af,	Atten= 0%, Lag= 0.6 min
Primary =	1.64 cfs @	12.14 hrs,	Volume=	0.140 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 493.69' @ 12.14 hrs Surf.Area= 344 sf Storage= 327 cf

Plug-Flow detention time= 35.5 min calculated for 0.140 af (96% of inflow)
Center-of-Mass det. time= 12.3 min (840.3 - 828.0)

Volume	Invert	Avail.Storage	Storage Description
#1	492.00'	445 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
492.00	76	33.0	0	0	76
493.00	211	52.0	138	138	211
494.00	415	74.0	307	445	441

Device	Routing	Invert	Outlet Devices
#1	Primary	493.50'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=1.62 cfs @ 12.14 hrs HW=493.69' TW=492.58' (Dynamic Tailwater)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 1.62 cfs @ 1.09 fps)

Summary for Pond 5P: WET POND #5

Inflow Area =	2.229 ac,	42.60% Impervious,	Inflow Depth =	2.19"	for 10-YR event
Inflow =	4.94 cfs @	12.12 hrs,	Volume=	0.408 af	
Outflow =	0.69 cfs @	12.85 hrs,	Volume=	0.367 af,	Atten= 86%, Lag= 43.9 min
Primary =	0.69 cfs @	12.85 hrs,	Volume=	0.367 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3

Starting Elev= 491.25' Surf.Area= 3,471 sf Storage= 9,191 cf
Peak Elev= 493.28' @ 12.85 hrs Surf.Area= 5,259 sf Storage= 17,995 cf (8,804 cf above start)
Flood Elev= 496.00' Surf.Area= 9,595 sf Storage= 38,088 cf (28,897 cf above start)

Plug-Flow detention time= 539.8 min calculated for 0.156 af (38% of inflow)
Center-of-Mass det. time= 187.5 min (1,013.9 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	485.00'	38,088 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
485.00	165	66.0	0	0	165
486.00	418	94.0	282	282	530
487.00	758	119.0	580	862	967
488.00	1,226	159.0	983	1,844	1,863
489.00	1,797	199.0	1,502	3,347	3,017
490.00	2,486	246.0	2,132	5,479	4,696
491.00	3,271	269.0	2,870	8,348	5,673
492.00	4,107	288.0	3,681	12,029	6,560
493.00	5,000	307.0	4,546	16,576	7,507
494.00	5,967	327.0	5,476	22,052	8,565
495.00	8,295	417.0	7,099	29,151	13,907
496.00	9,595	438.0	8,937	38,088	15,398

Device	Routing	Invert	Outlet Devices
#1	Primary	491.72'	**18.0" Round Culvert** L= 44.0' Ke= 0.500 Inlet / Outlet Invert= 491.72' / 491.50' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	495.50'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#3	Device 1	491.25'	**3.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	492.22'	**4.0" Vert. Orifice/Grate** C= 0.600
#5	Device 1	494.50'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#6	Device 1	495.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.69 cfs @ 12.85 hrs HW=493.28' TW=489.23' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.69 cfs of 6.35 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.29 cfs @ 6.01 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.40 cfs @ 4.54 fps)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  - **6=Orifice/Grate** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6F: FOREBAY #6

Inflow Area = 1.067 ac, 61.31% Impervious, Inflow Depth > 2.66" for 10-YR event
Inflow = 2.84 cfs @ 12.11 hrs, Volume= 0.236 af
Outflow = 2.83 cfs @ 12.12 hrs, Volume= 0.230 af, Atten= 0%, Lag= 0.5 min
Primary = 2.83 cfs @ 12.12 hrs, Volume= 0.230 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 493.77' @ 12.12 hrs Surf.Area= 408 sf Storage= 374 cf

Plug-Flow detention time= 28.1 min calculated for 0.230 af (97% of inflow)
Center-of-Mass det. time= 11.1 min (814.0 - 802.9)

Volume	Invert	Avail.Storage	Storage Description
#1	492.00'	477 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
492.00	54	34.0	0	0	54
493.00	231	97.0	132	132	714
494.00	472	88.0	344	477	876

Device	Routing	Invert	Outlet Devices
#1	Primary	493.50'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=2.75 cfs @ 12.12 hrs HW=493.76' TW=492.51' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 2.75 cfs @ 1.31 fps)

Summary for Pond 6P: INFIL POND#6

[80] Warning: Exceeded Pond 7F by 0.01' @ 14.60 hrs (1.75 cfs 0.041 af)

Inflow Area = 4.247 ac, 52.89% Impervious, Inflow Depth = 1.36" for 10-YR event
Inflow = 3.20 cfs @ 12.09 hrs, Volume= 0.481 af
Outflow = 0.97 cfs @ 12.59 hrs, Volume= 0.481 af, Atten= 70%, Lag= 30.1 min
Discarded = 0.03 cfs @ 12.59 hrs, Volume= 0.078 af
Primary = 0.94 cfs @ 12.59 hrs, Volume= 0.404 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 509.27' @ 12.59 hrs Surf.Area= 3,142 sf Storage= 5,140 cf
Flood Elev= 512.00' Surf.Area= 6,042 sf Storage= 18,087 cf

Plug-Flow detention time= 247.1 min calculated for 0.481 af (100% of inflow)
Center-of-Mass det. time= 248.5 min (1,138.6 - 890.1)

Volume	Invert	Avail.Storage	Storage Description
#1	507.00'	18,087 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
507.00	1,623	168.0	0	0	1,623
508.00	2,163	188.0	1,887	1,887	2,217
509.00	2,782	212.0	2,466	4,353	3,007
510.00	4,248	274.0	3,489	7,842	5,417
511.00	5,113	295.0	4,674	12,516	6,409
512.00	6,042	316.0	5,571	18,087	7,475

Device	Routing	Invert	Outlet Devices
#1	Primary	507.00'	**18.0" Round Culvert** L= 49.0' Ke= 0.500 Inlet / Outlet Invert= 507.00' / 500.00' S= 0.1429 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	507.97'	**4.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	508.60'	**5.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	509.18'	**7.5" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#5	Device 1	511.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Device 1	510.50'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#7	Primary	511.50'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#8	Discarded	507.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 501.60'

Discarded OutFlow Max=0.03 cfs @ 12.59 hrs HW=509.27' (Free Discharge)
└─**8=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.94 cfs @ 12.59 hrs HW=509.27' TW=0.00' (Dynamic Tailwater)
├─**1=Culvert** (Passes 0.94 cfs of 10.48 cfs potential flow)
│ ├─**2=Orifice/Grate** (Orifice Controls 0.45 cfs @ 5.12 fps)
│ ├─**3=Orifice/Grate** (Orifice Controls 0.44 cfs @ 3.26 fps)
│ ├─**4=Orifice/Grate** (Orifice Controls 0.05 cfs @ 0.94 fps)
│ ├─**5=Orifice/Grate** (Controls 0.00 cfs)
│ └─**6=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└─**7=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 7F: FOREBAY 7

[93] Warning: Storage range exceeded by 0.27'
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=61)

Inflow Area =	1.019 ac, 69.50% Impervious, Inflow Depth > 2.86" for 10-YR event			
Inflow =	3.05 cfs @ 12.09 hrs, Volume=	0.243 af		
Outflow =	2.80 cfs @ 12.09 hrs, Volume=	0.235 af, Atten= 8%, Lag= 0.0 min		
Primary =	2.80 cfs @ 12.09 hrs, Volume=	0.235 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 509.27' @ 12.59 hrs Surf.Area= 540 sf Storage= 577 cf

Plug-Flow detention time= 40.5 min calculated for 0.235 af (97% of inflow)
Center-of-Mass det. time= 21.1 min (806.7 - 785.6)

Volume	Invert	Avail.Storage	Storage Description
#1	507.00'	577 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
507.00	104	43.0	0	0	104
508.00	269	64.0	180	180	291
509.00	540	93.0	397	577	661

Device	Routing	Invert	Outlet Devices
#1	Primary	508.50'	**8.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=2.83 cfs @ 12.09 hrs HW=508.83' TW=508.72' (Dynamic Tailwater)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 2.83 cfs @ 1.09 fps)

Summary for Pond 7P: UNDER GRND INFIL POND #7

[80] Warning: Exceeded Pond 118 by 0.03' @ 24.35 hrs (0.27 cfs 0.036 af)

Inflow Area =	2.992 ac, 51.39% Impervious, Inflow Depth > 1.62" for 10-YR event				
Inflow =	3.49 cfs @	12.14 hrs,	Volume=	0.404 af	
Outflow =	0.58 cfs @	13.35 hrs,	Volume=	0.404 af,	Atten= 83%, Lag= 72.4 min
Discarded =	0.07 cfs @	13.35 hrs,	Volume=	0.188 af	
Primary =	0.51 cfs @	13.35 hrs,	Volume=	0.217 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 522.39' @ 13.35 hrs Surf.Area= 5,235 sf Storage= 7,744 cf
Flood Elev= 523.75' Surf.Area= 5,235 sf Storage= 11,298 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 477.5 min (1,321.3 - 843.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	520.25'	4,683 cf	**30.00'W x 174.50'L x 3.50'H Field A** 18,322 cf Overall - 6,615 cf Embedded = 11,707 cf x 40.0% Voids
#2A	520.75'	6,615 cf	**ADS_StormTech SC-740 +Cap** x 144 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Rows of 24 Chambers
		11,298 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	520.65'	**18.0" Round Culvert** L= 145.0' Ke= 0.500 Inlet / Outlet Invert= 520.65' / 519.00' S= 0.0114 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Discarded	520.25'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 517.75'
#3	Device 1	521.36'	**2.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	521.80'	**5.0" Vert. Orifice/Grate** C= 0.600
#5	Device 1	522.51'	**20.0" W x 3.5" H Vert. Orifice/Grate** C= 0.600
#6	Device 1	523.55'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.07 cfs @ 13.35 hrs HW=522.39' (Free Discharge)
└─**2=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.51 cfs @ 13.35 hrs HW=522.39' TW=509.20' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.51 cfs of 8.47 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.10 cfs @ 4.69 fps)
  ├─**4=Orifice/Grate** (Orifice Controls 0.41 cfs @ 2.98 fps)
  ├─**5=Orifice/Grate** (Controls 0.00 cfs)
  └─**6=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8P: UNDER GRD INFIL POND #8

[80] Warning: Exceeded Pond 121 by 0.01' @ 24.65 hrs (0.08 cfs 0.011 af)

Inflow Area =	0.658 ac, 83.78% Impervious, Inflow Depth > 3.01" for 10-YR event				
Inflow =	2.12 cfs @	12.07 hrs,	Volume=	0.165 af	
Outflow =	0.32 cfs @	12.57 hrs,	Volume=	0.165 af,	Atten= 85%, Lag= 30.1 min
Discarded =	0.04 cfs @	12.57 hrs,	Volume=	0.106 af	
Primary =	0.27 cfs @	12.57 hrs,	Volume=	0.059 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 543.18' @ 12.57 hrs Surf.Area= 3,974 sf Storage= 3,507 cf
Flood Elev= 544.08' Surf.Area= 3,974 sf Storage= 5,084 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 446.0 min (1,226.2 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	541.75'	2,789 cf	**41.50'W x 95.76'L x 2.33'H Field A** 9,273 cf Overall - 2,300 cf Embedded = 6,973 cf x 40.0% Voids
#2A	542.25'	2,300 cf	**ADS_StormTech SC-310 +Cap** x 156 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 12 Rows of 13 Chambers
		5,089 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	542.25'	**12.0" Round Culvert** L= 110.0' Ke= 0.500 Inlet / Outlet Invert= 542.25' / 537.00' S= 0.0477 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	541.75'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 539.25'
#3	Device 1	542.45'	**1.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	542.90'	**6.5" W x 3.0" H Vert. Orifice/Grate** C= 0.600
#5	Device 1	543.35'	**14.5" W x 1.0" H Vert. Orifice/Grate** C= 0.600
#6	Device 1	543.98'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.04 cfs @ 12.57 hrs HW=543.18' (Free Discharge)
└─**2=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=0.27 cfs @ 12.57 hrs HW=543.18' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.27 cfs of 2.50 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.02 cfs @ 4.00 fps)
  ├─**4=Orifice/Grate** (Orifice Controls 0.25 cfs @ 1.84 fps)
  ├─**5=Orifice/Grate** (Controls 0.00 cfs)
  └─**6=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: PLUNGE POOL

Inflow Area =	2.384 ac, 43.90% Impervious, Inflow Depth = 1.30" for 10-YR event				
Inflow =	2.28 cfs @ 12.20 hrs, Volume=	0.258 af			
Outflow =	2.28 cfs @ 12.22 hrs, Volume=	0.258 af, Atten= 0%, Lag= 0.8 min			
Primary =	2.28 cfs @ 12.22 hrs, Volume=	0.258 af			

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 528.70' @ 12.22 hrs Surf.Area= 296 sf Storage= 173 cf
Flood Elev= 530.50' Surf.Area= 1,039 sf Storage= 1,234 cf

Plug-Flow detention time= 2.9 min calculated for 0.258 af (100% of inflow)
Center-of-Mass det. time= 2.9 min (874.2 - 871.2)

Volume	Invert	Avail.Storage	Storage Description
#1	528.00'	1,234 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
528.00	204	62.0	0	0	204
529.00	341	70.0	270	270	311
530.00	731	146.0	524	793	1,622
530.50	1,039	161.0	440	1,234	1,996

Device	Routing	Invert	Outlet Devices
#1	Primary	528.00'	**18.0" Round Culvert** L= 9.0' Ke= 0.500 Inlet / Outlet Invert= 528.00' / 527.40' S= 0.0667 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.25 cfs @ 12.22 hrs HW=528.69' TW=527.99' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.25 cfs @ 2.83 fps)

Summary for Pond 10P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span

Inflow Area =	0.017 ac, 85.38% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.06 cfs @	12.07 hrs,	Volume=	0.005 af	
Outflow =	0.00 cfs @	13.12 hrs,	Volume=	0.005 af,	Atten= 93%, Lag= 62.8 min
Discarded =	0.00 cfs @	13.12 hrs,	Volume=	0.005 af	
Primary =	0.00 cfs @	2.00 hrs,	Volume=	0.000 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 522.62' @ 13.12 hrs Surf.Area= 107 sf Storage= 112 cf
Flood Elev= 533.00' Surf.Area= 107 sf Storage= 128 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 310.1 min (1,062.7 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	520.00'	128 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
520.00	107	77.0	0.0	0	0	107
521.00	107	77.0	40.0	43	43	184
522.00	107	77.0	40.0	43	86	261
523.00	107	77.0	40.0	43	128	338
523.50	107	77.0	0.0	0	128	377

Device	Routing	Invert	Outlet Devices
#1	Primary	523.00'	**35.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	520.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 519.50'

Discarded OutFlow Max=0.00 cfs @ 13.12 hrs HW=522.62' (Free Discharge)
└─**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 2.00 hrs HW=520.00' TW=522.00' (Dynamic Tailwater)
└─**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 011: DMH 011

Inflow Area =	0.201 ac, 69.04% Impervious, Inflow Depth = 2.81" for 10-YR event				
Inflow =	0.62 cfs @	12.10 hrs,	Volume=	0.047 af	
Outflow =	0.62 cfs @	12.10 hrs,	Volume=	0.047 af,	Atten= 0%, Lag= 0.1 min
Primary =	0.62 cfs @	12.10 hrs,	Volume=	0.047 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 504.15' @ 12.10 hrs Surf.Area= 13 sf Storage= 5 cf
Flood Elev= 508.20' Surf.Area= 13 sf Storage= 56 cf

Plug-Flow detention time= 0.5 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (800.4 - 799.9)

Volume	Invert	Avail.Storage	Storage Description
#1	503.75'	56 cf	**4.00'D x 4.45'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	503.75'	**12.0" Round Culvert** L= 127.0' Ke= 0.500 Inlet / Outlet Invert= 503.75' / 499.30' S= 0.0350 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.62 cfs @ 12.10 hrs HW=504.15' TW=500.06' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.62 cfs @ 2.14 fps)

Summary for Pond 11P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span

Inflow Area =	0.017 ac,	85.38% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.06 cfs @	12.07 hrs,	Volume=	0.005 af	
Outflow =	0.01 cfs @	12.62 hrs,	Volume=	0.005 af,	Atten= 88%, Lag= 33.3 min
Discarded =	0.01 cfs @	12.62 hrs,	Volume=	0.005 af	
Primary =	0.00 cfs @	2.00 hrs,	Volume=	0.000 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 532.80' @ 12.62 hrs Surf.Area= 107 sf Storage= 98 cf
Flood Elev= 533.00' Surf.Area= 107 sf Storage= 107 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 171.8 min (924.4 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	530.50'	107 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
530.50	107	77.0	0.0	0	0	107
531.00	107	77.0	40.0	21	21	146
532.00	107	77.0	40.0	43	64	223
533.00	107	77.0	40.0	43	107	300
533.50	107	77.0	0.0	0	107	338

Device	Routing	Invert	Outlet Devices
#1	Primary	533.00'	**35.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	530.50'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 530.25'

Discarded OutFlow Max=0.01 cfs @ 12.62 hrs HW=532.80' (Free Discharge)
└─**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 2.00 hrs HW=530.50' TW=533.00' (Dynamic Tailwater)
└─**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 12P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=20)

Inflow Area =	0.063 ac, 88.44% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.24 cfs @	12.07 hrs,	Volume=	0.019 af	
Outflow =	0.13 cfs @	12.24 hrs,	Volume=	0.019 af,	Atten= 47%, Lag= 10.2 min
Discarded =	0.01 cfs @	12.25 hrs,	Volume=	0.016 af	
Primary =	0.11 cfs @	12.24 hrs,	Volume=	0.003 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 529.00' @ 12.25 hrs Surf.Area= 300 sf Storage= 360 cf

Plug-Flow detention time= 373.2 min calculated for 0.019 af (100% of inflow)
Center-of-Mass det. time= 373.6 min (1,126.2 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	526.00'	360 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
526.00	300	206.0	0.0	0	0	300
527.00	300	206.0	40.0	120	120	506
528.00	300	206.0	40.0	120	240	712
529.00	300	206.0	40.0	120	360	918
529.50	300	206.0	0.0	0	360	1,021

Device	Routing	Invert	Outlet Devices
#1	Primary	529.00'	**100.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	526.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 525.25'

Discarded OutFlow Max=0.01 cfs @ 12.25 hrs HW=529.00' (Free Discharge)
└─**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.11 cfs @ 12.24 hrs HW=529.00' TW=528.01' (Dynamic Tailwater)
└─**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.11 cfs @ 0.23 fps)

Summary for Pond 13P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=28)

Inflow Area =	0.016 ac,	85.07% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.06 cfs @	12.07 hrs,	Volume=	0.005 af	
Outflow =	0.01 cfs @	13.35 hrs,	Volume=	0.005 af,	Atten= 89%, Lag= 76.8 min
Discarded =	0.00 cfs @	13.35 hrs,	Volume=	0.005 af	
Primary =	0.01 cfs @	13.35 hrs,	Volume=	0.000 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 527.00' @ 13.35 hrs Surf.Area= 107 sf Storage= 128 cf
Flood Elev= 527.00' Surf.Area= 107 sf Storage= 128 cf

Plug-Flow detention time= 847.8 min calculated for 0.005 af (100% of inflow)
Center-of-Mass det. time= 848.5 min (1,601.1 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	524.00'	128 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
524.00	107	77.0	0.0	0	0	107
525.00	107	77.0	40.0	43	43	184
526.00	107	77.0	40.0	43	86	261
527.00	107	77.0	40.0	43	128	338
527.50	107	77.0	0.0	0	128	377

Device	Routing	Invert	Outlet Devices
#1	Primary	527.00'	**35.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	524.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 521.17'

Discarded OutFlow Max=0.00 cfs @ 13.35 hrs HW=527.00' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.01 cfs @ 13.35 hrs HW=527.00' TW=522.57' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.01 cfs @ 0.12 fps)

Summary for Pond 14P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[58] Hint: Peaked 0.02' above defined flood level
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area =	0.022 ac,	90.96% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.08 cfs @	12.07 hrs,	Volume=	0.007 af	
Outflow =	0.06 cfs @	12.19 hrs,	Volume=	0.007 af,	Atten= 27%, Lag= 7.3 min
Discarded =	0.01 cfs @	12.38 hrs,	Volume=	0.006 af	
Primary =	0.05 cfs @	12.19 hrs,	Volume=	0.001 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 531.02' @ 12.38 hrs Surf.Area= 87 sf Storage= 104 cf
Flood Elev= 531.00' Surf.Area= 87 sf Storage= 104 cf

Plug-Flow detention time= 165.7 min calculated for 0.007 af (100% of inflow)
Center-of-Mass det. time= 165.2 min (917.8 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	528.00'	104 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
528.00	87	64.0	0.0	0	0	87
529.00	87	64.0	40.0	35	35	151
530.00	87	64.0	40.0	35	70	215
531.00	87	64.0	40.0	35	104	279
531.50	87	64.0	0.0	0	104	311

Device	Routing	Invert	Outlet Devices
#1	Primary	531.00'	**26.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	528.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 527.75'

Discarded OutFlow Max=0.01 cfs @ 12.38 hrs HW=531.02' (Free Discharge)
└**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.05 cfs @ 12.19 hrs HW=531.01' TW=531.01' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.05 cfs @ 0.17 fps)

Summary for Pond 15P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=18)

Inflow Area =	0.039 ac, 88.58% Impervious, Inflow Depth > 3.59" for 10-YR event			
Inflow =	0.15 cfs @	12.07 hrs, Volume=	0.012 af	
Outflow =	0.07 cfs @	12.29 hrs, Volume=	0.012 af, Atten= 50%, Lag= 13.5 min	
Discarded =	0.01 cfs @	12.30 hrs, Volume=	0.010 af	
Primary =	0.07 cfs @	12.29 hrs, Volume=	0.001 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 531.00' @ 12.30 hrs Surf.Area= 193 sf Storage= 232 cf
Flood Elev= 531.00' Surf.Area= 193 sf Storage= 232 cf

Plug-Flow detention time= 384.8 min calculated for 0.012 af (100% of inflow)
Center-of-Mass det. time= 385.2 min (1,137.8 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	528.00'	232 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
528.00	193	134.0	0.0	0	0	193
529.00	193	134.0	40.0	77	77	327
530.00	193	134.0	40.0	77	154	461
531.00	193	134.0	40.0	77	232	595
531.50	193	134.0	0.0	0	232	662

Device	Routing	Invert	Outlet Devices
#1	Primary	531.00'	**64.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	528.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 527.25'

Discarded OutFlow Max=0.01 cfs @ 12.30 hrs HW=531.00' (Free Discharge)
└**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.06 cfs @ 12.29 hrs HW=531.00' TW=528.63' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.06 cfs @ 0.22 fps)

Summary for Pond 16P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[93] Warning: Storage range exceeded by 2.21'
[58] Hint: Peaked 2.71' above defined flood level
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=3)

Inflow Area =	0.038 ac,	88.00% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.14 cfs @	12.07 hrs,	Volume=	0.011 af	
Outflow =	0.08 cfs @	12.21 hrs,	Volume=	0.011 af,	Atten= 44%, Lag= 8.5 min
Discarded =	0.03 cfs @	12.20 hrs,	Volume=	0.011 af	
Primary =	0.05 cfs @	12.21 hrs,	Volume=	0.001 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 526.71' @ 12.20 hrs Surf.Area= 157 sf Storage= 188 cf
Flood Elev= 524.00' Surf.Area= 157 sf Storage= 188 cf

Plug-Flow detention time= 169.3 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 169.4 min (922.0 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	521.00'	188 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
521.00	157	104.0	0.0	0	0	157
522.00	157	104.0	40.0	63	63	261
523.00	157	104.0	40.0	63	126	365
524.00	157	104.0	40.0	63	188	469
524.50	157	104.0	0.0	0	188	521

Device	Routing	Invert	Outlet Devices
#1	Primary	524.00'	**49.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	521.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 520.75'

Discarded OutFlow Max=0.03 cfs @ 12.20 hrs HW=526.71' (Free Discharge)
└**2=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 12.21 hrs HW=526.71' TW=526.71' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 17P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[93] Warning: Storage range exceeded by 2.87'
[58] Hint: Peaked 3.37' above defined flood level
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=35)

Inflow Area =	0.039 ac, 88.58% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.15 cfs @	12.07 hrs,	Volume=	0.012 af	
Outflow =	0.17 cfs @	12.15 hrs,	Volume=	0.012 af,	Atten= 0%, Lag= 4.8 min
Discarded =	0.01 cfs @	12.15 hrs,	Volume=	0.009 af	
Primary =	0.16 cfs @	12.15 hrs,	Volume=	0.003 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 510.37' @ 12.15 hrs Surf.Area= 171 sf Storage= 205 cf
Flood Elev= 507.00' Surf.Area= 171 sf Storage= 205 cf

Plug-Flow detention time= 474.9 min calculated for 0.012 af (100% of inflow)
Center-of-Mass det. time= 475.5 min (1,228.1 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	504.00'	205 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
504.00	171	129.0	0.0	0	0	171
505.00	171	129.0	40.0	68	68	300
506.00	171	129.0	40.0	68	137	429
507.00	171	129.0	40.0	68	205	558
507.50	171	129.0	0.0	0	205	623

Device	Routing	Invert	Outlet Devices
#1	Primary	507.00'	**61.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	504.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 502.66'

Discarded OutFlow Max=0.01 cfs @ 12.15 hrs HW=510.37' (Free Discharge)
└**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 12.15 hrs HW=510.37' TW=510.38' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 18P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[58] Hint: Peaked 0.01' above defined flood level
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=34)

Inflow Area =	0.066 ac,	88.91% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.25 cfs @	12.07 hrs,	Volume=	0.020 af	
Outflow =	0.14 cfs @	12.21 hrs,	Volume=	0.020 af,	Atten= 44%, Lag= 8.7 min
Discarded =	0.01 cfs @	12.20 hrs,	Volume=	0.015 af	
Primary =	0.13 cfs @	12.21 hrs,	Volume=	0.004 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 505.01' @ 12.20 hrs Surf.Area= 321 sf Storage= 385 cf
Flood Elev= 505.00' Surf.Area= 321 sf Storage= 385 cf

Plug-Flow detention time= 534.3 min calculated for 0.020 af (100% of inflow)
Center-of-Mass det. time= 535.0 min (1,287.6 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	502.00'	385 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
502.00	321	210.0	0.0	0	0	321
503.00	321	210.0	40.0	128	128	531
504.00	321	210.0	40.0	128	257	741
505.00	321	210.0	40.0	128	385	951
505.50	321	210.0	0.0	0	385	1,056

Device	Routing	Invert	Outlet Devices
#1	Primary	505.00'	**41.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	502.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 500.50'

Discarded OutFlow Max=0.01 cfs @ 12.20 hrs HW=505.01' (Free Discharge)
└**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.12 cfs @ 12.21 hrs HW=505.01' TW=504.02' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.12 cfs @ 0.31 fps)

Summary for Pond 19P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=66)

Inflow Area =	0.051 ac, 90.42% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.19 cfs @	12.07 hrs,	Volume=	0.015 af	
Outflow =	0.22 cfs @	12.11 hrs,	Volume=	0.015 af,	Atten= 0%, Lag= 2.2 min
Discarded =	0.00 cfs @	12.10 hrs,	Volume=	0.009 af	
Primary =	0.22 cfs @	12.11 hrs,	Volume=	0.006 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 505.01' @ 12.10 hrs Surf.Area= 212 sf Storage= 254 cf

Plug-Flow detention time= 692.9 min calculated for 0.015 af (100% of inflow)
Center-of-Mass det. time= 694.1 min (1,446.7 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	502.00'	254 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
502.00	212	146.0	0.0	0	0	212
503.00	212	146.0	40.0	85	85	358
504.00	212	146.0	40.0	85	170	504
505.00	212	146.0	40.0	85	254	650
505.50	212	146.0	0.0	0	254	723

Device	Routing	Invert	Outlet Devices
#1	Primary	505.00'	**38.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	502.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.83'

Discarded OutFlow Max=0.00 cfs @ 12.10 hrs HW=505.01' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.20 cfs @ 12.11 hrs HW=505.01' TW=502.03' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.20 cfs @ 0.38 fps)

Summary for Pond 20P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=12)

Inflow Area =	0.060 ac, 89.81% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.23 cfs @	12.07 hrs,	Volume=	0.018 af	
Outflow =	0.20 cfs @	12.20 hrs,	Volume=	0.018 af,	Atten= 12%, Lag= 7.8 min
Discarded =	0.01 cfs @	12.20 hrs,	Volume=	0.015 af	
Primary =	0.19 cfs @	12.20 hrs,	Volume=	0.003 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 506.01' @ 12.20 hrs Surf.Area= 268 sf Storage= 322 cf

Plug-Flow detention time= 283.2 min calculated for 0.018 af (100% of inflow)
Center-of-Mass det. time= 283.4 min (1,036.1 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	503.00'	322 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
503.00	268	168.0	0.0	0	0	268
504.00	268	168.0	40.0	107	107	436
505.00	268	168.0	40.0	107	214	604
506.00	268	168.0	40.0	107	322	772
506.50	268	168.0	0.0	0	322	856

Device	Routing	Invert	Outlet Devices
#1	Primary	506.00'	**81.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	503.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 502.50'

Discarded OutFlow Max=0.01 cfs @ 12.20 hrs HW=506.01' (Free Discharge)
└**2=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.19 cfs @ 12.20 hrs HW=506.01' TW=499.19' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.19 cfs @ 0.29 fps)

Summary for Pond 21P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=56)

Inflow Area =	0.033 ac,	89.09% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.12 cfs @	12.07 hrs,	Volume=	0.010 af	
Outflow =	0.12 cfs @	12.20 hrs,	Volume=	0.010 af,	Atten= 0%, Lag= 7.6 min
Discarded =	0.00 cfs @	12.70 hrs,	Volume=	0.007 af	
Primary =	0.12 cfs @	12.20 hrs,	Volume=	0.003 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 498.24' @ 12.70 hrs Surf.Area= 157 sf Storage= 188 cf

Plug-Flow detention time= 775.1 min calculated for 0.010 af (100% of inflow)
Center-of-Mass det. time= 773.5 min (1,526.1 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	495.00'	188 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
495.00	157	104.0	0.0	0	0	157
496.00	157	104.0	40.0	63	63	261
497.00	157	104.0	40.0	63	126	365
498.00	157	104.0	40.0	63	188	469
498.50	157	104.0	0.0	0	188	521

Device	Routing	Invert	Outlet Devices
#1	Primary	498.00'	**17.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	495.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 490.00'

Discarded OutFlow Max=0.00 cfs @ 12.70 hrs HW=498.24' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.14 cfs @ 12.20 hrs HW=498.13' TW=498.13' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.06 fps)

Summary for Pond 22P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=55)

Inflow Area =	0.066 ac, 88.91% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.25 cfs @	12.07 hrs,	Volume=	0.020 af	
Outflow =	0.28 cfs @	12.20 hrs,	Volume=	0.020 af,	Atten= 0%, Lag= 7.8 min
Discarded =	0.00 cfs @	12.20 hrs,	Volume=	0.014 af	
Primary =	0.28 cfs @	12.20 hrs,	Volume=	0.006 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 498.02' @ 12.20 hrs Surf.Area= 319 sf Storage= 383 cf

Plug-Flow detention time= 781.0 min calculated for 0.020 af (100% of inflow)
Center-of-Mass det. time= 782.1 min (1,534.8 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	495.00'	383 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
495.00	319	204.0	0.0	0	0	319
496.00	319	204.0	40.0	128	128	523
497.00	319	204.0	40.0	128	255	727
498.00	319	204.0	40.0	128	383	931
498.50	319	204.0	0.0	0	383	1,033

Device	Routing	Invert	Outlet Devices
#1	Primary	498.00'	**35.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	495.00'	**0.300 in/hr Exfiltration over Surface area**

Conductivity to Groundwater Elevation = 490.00'

Discarded OutFlow Max=0.00 cfs @ 12.20 hrs HW=498.02' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.28 cfs @ 12.20 hrs HW=498.02' TW=489.14' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.28 cfs @ 0.44 fps)

Summary for Pond 23P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=72)

Inflow Area =	0.066 ac, 88.91% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.25 cfs @	12.07 hrs,	Volume=	0.020 af	
Outflow =	0.27 cfs @	12.20 hrs,	Volume=	0.020 af,	Atten= 0%, Lag= 7.7 min
Discarded =	0.00 cfs @	12.20 hrs,	Volume=	0.013 af	
Primary =	0.27 cfs @	12.20 hrs,	Volume=	0.007 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 501.02' @ 12.20 hrs Surf.Area= 319 sf Storage= 383 cf

Plug-Flow detention time= 888.2 min calculated for 0.020 af (100% of inflow)
Center-of-Mass det. time= 889.5 min (1,642.1 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	498.00'	383 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
498.00	319	210.0	0.0	0	0	319
499.00	319	210.0	40.0	128	128	529
500.00	319	210.0	40.0	128	255	739
501.00	319	210.0	40.0	128	383	949
501.50	319	210.0	0.0	0	383	1,054

Device	Routing	Invert	Outlet Devices
#1	Primary	501.00'	**38.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	498.00'	**0.300 in/hr Exfiltration over Surface area**
			Conductivity to Groundwater Elevation = 486.00'

Discarded OutFlow Max=0.00 cfs @ 12.20 hrs HW=501.02' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.27 cfs @ 12.20 hrs HW=501.02' TW=500.03' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.27 cfs @ 0.42 fps)

Summary for Pond 24P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=64)

Inflow Area =	0.039 ac, 88.58% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.15 cfs @	12.07 hrs,	Volume=	0.012 af	
Outflow =	0.08 cfs @	12.22 hrs,	Volume=	0.012 af,	Atten= 47%, Lag= 9.1 min
Discarded =	0.00 cfs @	12.46 hrs,	Volume=	0.008 af	
Primary =	0.07 cfs @	12.22 hrs,	Volume=	0.003 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 501.02' @ 12.46 hrs Surf.Area= 194 sf Storage= 233 cf

Plug-Flow detention time= 832.6 min calculated for 0.012 af (100% of inflow)
Center-of-Mass det. time= 833.6 min (1,586.2 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	498.00'	233 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
498.00	194	172.0	0.0	0	0	194
499.00	194	172.0	40.0	78	78	366
500.00	194	172.0	40.0	78	155	538
501.00	194	172.0	40.0	78	233	710
501.50	194	172.0	0.0	0	233	796

Device	Routing	Invert	Outlet Devices
#1	Primary	501.00'	**44.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	498.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 492.00'

Discarded OutFlow Max=0.00 cfs @ 12.46 hrs HW=501.02' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.08 cfs @ 12.22 hrs HW=501.01' TW=501.01' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.08 cfs @ 0.18 fps)

Summary for Pond 25P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=58)

Inflow Area =	0.066 ac, 88.91% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.25 cfs @	12.07 hrs,	Volume=	0.020 af	
Outflow =	0.26 cfs @	12.20 hrs,	Volume=	0.020 af,	Atten= 0%, Lag= 7.8 min
Discarded =	0.00 cfs @	12.50 hrs,	Volume=	0.014 af	
Primary =	0.26 cfs @	12.20 hrs,	Volume=	0.006 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 501.03' @ 12.50 hrs Surf.Area= 321 sf Storage= 385 cf

Plug-Flow detention time= 813.1 min calculated for 0.020 af (100% of inflow)
Center-of-Mass det. time= 814.2 min (1,566.8 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	498.00'	385 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
498.00	321	216.0	0.0	0	0	321
499.00	321	216.0	40.0	128	128	537
500.00	321	216.0	40.0	128	257	753
501.00	321	216.0	40.0	128	385	969
501.50	321	216.0	0.0	0	385	1,077

Device	Routing	Invert	Outlet Devices
#1	Primary	501.00'	**41.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	498.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 492.00'

Discarded OutFlow Max=0.00 cfs @ 12.50 hrs HW=501.03' (Free Discharge)
↑—**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.26 cfs @ 12.20 hrs HW=501.02' TW=501.01' (Dynamic Tailwater)
↑—**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.26 cfs @ 0.32 fps)

Summary for Pond 26P: DRIP EDGE

[82] Warning: Early inflow requires earlier time span
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=68)

Inflow Area =	0.050 ac,	90.17% Impervious,	Inflow Depth >	3.59"	for 10-YR event
Inflow =	0.19 cfs @	12.07 hrs,	Volume=	0.015 af	
Outflow =	0.20 cfs @	12.14 hrs,	Volume=	0.015 af,	Atten= 0%, Lag= 4.3 min
Discarded =	0.00 cfs @	12.15 hrs,	Volume=	0.009 af	
Primary =	0.20 cfs @	12.14 hrs,	Volume=	0.006 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 509.01' @ 12.15 hrs Surf.Area= 214 sf Storage= 257 cf

Plug-Flow detention time= 733.1 min calculated for 0.015 af (100% of inflow)
Center-of-Mass det. time= 734.3 min (1,486.9 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	506.00'	257 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
506.00	214	146.0	0.0	0	0	214
507.00	214	146.0	40.0	86	86	360
508.00	214	146.0	40.0	86	171	506
509.00	214	146.0	40.0	86	257	652
509.50	214	146.0	0.0	0	257	725

Device	Routing	Invert	Outlet Devices
#1	Primary	509.00'	**35.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#2	Discarded	506.00'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 500.00'

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=509.01' (Free Discharge)
└**2=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.18 cfs @ 12.14 hrs HW=509.01' TW=508.02' (Dynamic Tailwater)
└**1=Sharp-Crested Rectangular Weir** (Weir Controls 0.18 cfs @ 0.38 fps)

Summary for Pond 28P: UNDER GRND INFIL POND #28

[82] Warning: Early inflow requires earlier time span

Inflow Area =	0.683 ac, 57.61% Impervious, Inflow Depth > 2.31" for 10-YR event			
Inflow =	1.47 cfs @ 12.08 hrs, Volume=	0.131 af		
Outflow =	0.20 cfs @ 12.77 hrs, Volume=	0.131 af, Atten= 86%, Lag= 41.2 min		
Discarded =	0.05 cfs @ 12.77 hrs, Volume=	0.082 af		
Primary =	0.15 cfs @ 12.77 hrs, Volume=	0.049 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 530.79' @ 12.77 hrs Surf.Area= 3,099 sf Storage= 2,610 cf
Flood Elev= 533.00' Surf.Area= 3,099 sf Storage= 6,654 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 277.4 min (1,057.1 - 779.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	529.50'	2,795 cf	**30.00'W x 103.30'L x 3.50'H Field A** 10,846 cf Overall - 3,859 cf Embedded = 6,987 cf x 40.0% Voids
#2A	530.00'	3,859 cf	**ADS_StormTech SC-740 +Cap** x 84 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Rows of 14 Chambers
		6,654 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	529.50'	**12.0" Round Culvert** L= 56.0' Ke= 0.500 Inlet / Outlet Invert= 529.50' / 528.00' S= 0.0268 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	529.50'	**0.300 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 528.58'
#3	Device 1	530.10'	**1.5" Vert. Orifice/Grate** C= 0.600
#4	Device 1	530.47'	**3.0" Vert. Orifice/Grate** C= 0.600
#5	Device 1	531.00'	**4.0" Vert. Orifice/Grate** C= 0.600
#6	Device 1	532.50'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.05 cfs @ 12.77 hrs HW=530.79' (Free Discharge)
└─**2=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.15 cfs @ 12.77 hrs HW=530.79' TW=528.36' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.15 cfs of 3.36 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.05 cfs @ 3.81 fps)
  ├─**4=Orifice/Grate** (Orifice Controls 0.10 cfs @ 2.13 fps)
  ├─**5=Orifice/Grate** (Controls 0.00 cfs)
  └─**6=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 101: CB 101

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=69)

Inflow Area =	0.089 ac, 84.50% Impervious, Inflow Depth = 3.16" for 10-YR event			
Inflow =	0.31 cfs @ 12.07 hrs, Volume=	0.023 af		
Outflow =	0.31 cfs @ 12.07 hrs, Volume=	0.023 af, Atten= 0%, Lag= 0.0 min		
Primary =	0.31 cfs @ 12.07 hrs, Volume=	0.026 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 514.99' @ 12.08 hrs Surf.Area= 13 sf Storage= 19 cf
Flood Elev= 515.50' Surf.Area= 13 sf Storage= 26 cf

Plug-Flow detention time= 17.6 min calculated for 0.023 af (98% of inflow)
Center-of-Mass det. time= 7.5 min (787.9 - 780.5)

Volume	Invert	Avail.Storage	Storage Description
#1	513.46'	26 cf	**4.00'D x 2.04'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	513.46'	**12.0" Round Culvert** L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 513.46' / 513.31' S= 0.0048 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf

Primary OutFlow Max=0.33 cfs @ 12.07 hrs HW=514.98' TW=514.97' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.33 cfs @ 0.43 fps)

Summary for Pond 102: CB 102

Inflow Area = 0.453 ac, 16.28% Impervious, Inflow Depth = 1.75" for 10-YR event
Inflow = 0.68 cfs @ 12.22 hrs, Volume= 0.066 af
Outflow = 0.68 cfs @ 12.23 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.1 min
Primary = 0.68 cfs @ 12.23 hrs, Volume= 0.066 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 524.26' @ 12.21 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 531.75' Surf.Area= 0.000 ac Storage= 0.002 af

Plug-Flow detention time= 0.4 min calculated for 0.066 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (849.2 - 848.8)

Volume	Invert	Avail.Storage	Storage Description
#1	523.80'	0.002 af	**4.00'D x 7.95'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	523.80'	**18.0" Round Culvert** L= 43.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 523.80' / 523.40' S= 0.0093 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=0.67 cfs @ 12.23 hrs HW=524.25' TW=523.99' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.67 cfs @ 2.25 fps)

Summary for Pond 104: CB 104

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=13)

Inflow Area = 0.047 ac, 73.95% Impervious, Inflow Depth = 2.95" for 10-YR event
Inflow = 0.16 cfs @ 12.07 hrs, Volume= 0.011 af
Outflow = 0.16 cfs @ 12.08 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.7 min
Primary = 0.16 cfs @ 12.08 hrs, Volume= 0.018 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 514.99' @ 12.08 hrs Surf.Area= 13 sf Storage= 19 cf
Flood Elev= 516.70' Surf.Area= 13 sf Storage= 40 cf

Plug-Flow detention time= 29.8 min calculated for 0.011 af (97% of inflow)
Center-of-Mass det. time= 11.8 min (802.4 - 790.5)

Volume	Invert	Avail.Storage	Storage Description
#1	513.49'	40 cf	**4.00'D x 3.21'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	513.49'	**12.0" Round Culvert** L= 36.0' Ke= 0.500 Inlet / Outlet Invert= 513.49' / 513.31' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.19 cfs @ 12.08 hrs HW=514.98' TW=514.98' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.19 cfs @ 0.24 fps)

Summary for Pond 105: CB 124

[82] Warning: Early inflow requires earlier time span

Inflow Area =	0.106 ac,100.00% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.40 cfs @	12.07 hrs,	Volume=	0.032 af	
Outflow =	0.40 cfs @	12.07 hrs,	Volume=	0.032 af,	Atten= 0%, Lag= 0.1 min
Primary =	0.40 cfs @	12.07 hrs,	Volume=	0.032 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 543.26' @ 12.08 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 545.60' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 2.2 min calculated for 0.032 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (753.7 - 752.6)

Volume	Invert	Avail.Storage	Storage Description
#1	542.86'	0.001 af	**4.00'D x 2.74'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	542.86'	**12.0" Round Culvert** L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 542.86' / 542.75' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.38 cfs @ 12.07 hrs HW=543.26' TW=543.10' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 0.38 cfs @ 1.96 fps)

Summary for Pond 106: CB 106

[80] Warning: Exceeded Pond 101 by 0.24' @ 4.75 hrs (0.49 cfs 1.813 af)
[80] Warning: Exceeded Pond 104 by 0.63' @ 7.00 hrs (2.14 cfs 2.085 af)

Inflow Area =	0.302 ac, 88.23% Impervious, Inflow Depth > 3.65" for 10-YR event				
Inflow =	1.09 cfs @	12.07 hrs,	Volume=	0.092 af	
Outflow =	1.09 cfs @	12.07 hrs,	Volume=	0.091 af,	Atten= 0%, Lag= 0.1 min
Primary =	1.09 cfs @	12.07 hrs,	Volume=	0.091 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 514.98' @ 12.08 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 515.90' Surf.Area= 13 sf Storage= 34 cf

Plug-Flow detention time= 20.2 min calculated for 0.091 af (100% of inflow)
Center-of-Mass det. time= 4.3 min (993.2 - 988.9)

Volume	Invert	Avail.Storage	Storage Description
#1	513.21'	34 cf	**4.00'D x 2.69'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	513.21'	**12.0" Round Culvert** L= 11.0' Ke= 0.500 Inlet / Outlet Invert= 513.21' / 513.16' S= 0.0045 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.05 cfs @ 12.07 hrs HW=514.97' TW=514.90' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.05 cfs @ 1.34 fps)

Summary for Pond 107: CB 107

Inflow Area = 0.899 ac, 56.68% Impervious, Inflow Depth = 2.55" for 10-YR event
Inflow = 2.32 cfs @ 12.12 hrs, Volume= 0.191 af
Outflow = 2.32 cfs @ 12.12 hrs, Volume= 0.191 af, Atten= 0%, Lag= 0.1 min
Primary = 2.32 cfs @ 12.12 hrs, Volume= 0.191 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 500.07' @ 12.12 hrs Surf.Area= 13 sf Storage= 11 cf
Flood Elev= 504.25' Surf.Area= 13 sf Storage= 63 cf

Plug-Flow detention time= 0.3 min calculated for 0.191 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (809.5 - 809.2)

Volume	Invert	Avail.Storage	Storage Description
#1	499.20'	63 cf	**4.00'D x 5.05'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	499.20'	**12.0" Round Culvert** L= 63.0' Ke= 0.500 Inlet / Outlet Invert= 499.20' / 497.30' S= 0.0302 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.26 cfs @ 12.12 hrs HW=500.06' TW=498.14' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.26 cfs @ 3.15 fps)

Summary for Pond 108: CB 108

Inflow Area = 0.367 ac, 70.05% Impervious, Inflow Depth = 2.85" for 10-YR event
Inflow = 1.06 cfs @ 12.13 hrs, Volume= 0.087 af
Outflow = 1.06 cfs @ 12.13 hrs, Volume= 0.087 af, Atten= 0%, Lag= 0.2 min
Primary = 1.06 cfs @ 12.13 hrs, Volume= 0.087 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 500.37' @ 12.13 hrs Surf.Area= 13 sf Storage= 8 cf
Flood Elev= 504.25' Surf.Area= 13 sf Storage= 57 cf

Plug-Flow detention time= 0.3 min calculated for 0.087 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (799.2 - 798.8)

Volume	Invert	Avail.Storage	Storage Description
#1	499.75'	57 cf	**4.00'D x 4.50'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	499.75'	**12.0" Round Culvert** L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 499.75' / 499.30' S= 0.0205 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.04 cfs @ 12.13 hrs HW=500.36' TW=500.06' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.04 cfs @ 2.95 fps)

Summary for Pond 109: CB 109

Inflow Area = 0.997 ac, 58.58% Impervious, Inflow Depth = 2.59" for 10-YR event
Inflow = 2.61 cfs @ 12.12 hrs, Volume= 0.215 af
Outflow = 2.60 cfs @ 12.12 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.1 min
Primary = 2.60 cfs @ 12.12 hrs, Volume= 0.215 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 498.16' @ 12.12 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 502.40' Surf.Area= 13 sf Storage= 65 cf

Plug-Flow detention time= 0.3 min calculated for 0.215 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (807.6 - 807.4)

Volume	Invert	Avail.Storage	Storage Description
#1	497.20'	65 cf	**4.00'D x 5.20'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	497.20'	**12.0" Round Culvert** L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 497.20' / 496.50' S= 0.0318 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.54 cfs @ 12.12 hrs HW=498.14' TW=497.18' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.54 cfs @ 3.31 fps)

Summary for Pond 110: CB 110

Inflow Area = 1.067 ac, 61.31% Impervious, Inflow Depth > 2.66" for 10-YR event
Inflow = 2.84 cfs @ 12.11 hrs, Volume= 0.236 af
Outflow = 2.84 cfs @ 12.11 hrs, Volume= 0.236 af, Atten= 0%, Lag= 0.0 min
Primary = 2.84 cfs @ 12.11 hrs, Volume= 0.236 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 497.19' @ 12.11 hrs Surf.Area= 13 sf Storage= 10 cf
Flood Elev= 502.40' Surf.Area= 13 sf Storage= 75 cf

Plug-Flow detention time= 0.8 min calculated for 0.236 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (802.9 - 802.7)

Volume	Invert	Avail.Storage	Storage Description
#1	496.40'	75 cf	**4.00'D x 6.00'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	496.40'	**18.0" Round Culvert** L= 29.0' Ke= 0.500 Inlet / Outlet Invert= 496.40' / 495.00' S= 0.0483 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.77 cfs @ 12.11 hrs HW=497.18' TW=493.76' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.77 cfs @ 3.00 fps)

Summary for Pond 111: CB 111

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)
[80] Warning: Exceeded Pond 112 by 0.01' @ 24.25 hrs (0.25 cfs 0.865 af)

Inflow Area =	0.853 ac, 34.64% Impervious, Inflow Depth = 2.06" for 10-YR event				
Inflow	=	1.64 cfs @	12.13 hrs, Volume=	0.146 af	
Outflow	=	1.64 cfs @	12.13 hrs, Volume=	0.146 af, Atten= 0%, Lag= 0.0 min	
Primary	=	1.64 cfs @	12.13 hrs, Volume=	0.146 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 493.75' @ 12.14 hrs Surf.Area= 13 sf Storage= 16 cf
Flood Elev= 496.70' Surf.Area= 13 sf Storage= 53 cf

Plug-Flow detention time= 1.8 min calculated for 0.146 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (828.0 - 827.5)

Volume	Invert	Avail.Storage	Storage Description
#1	492.46'	53 cf	**4.00'D x 4.24'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	492.46'	**18.0" Round Culvert** L= 46.0' Ke= 0.500 Inlet / Outlet Invert= 492.46' / 492.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.62 cfs @ 12.13 hrs HW=493.75' TW=493.68' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 1.62 cfs @ 1.35 fps)

Summary for Pond 112: CB 112

[80] Warning: Exceeded Pond 113 by 0.04' @ 10.80 hrs (0.28 cfs 0.769 af)

Inflow Area =	0.792 ac, 30.73% Impervious, Inflow Depth = 1.98" for 10-YR event				
Inflow	=	1.47 cfs @	12.14 hrs, Volume=	0.131 af	
Outflow	=	1.47 cfs @	12.14 hrs, Volume=	0.130 af, Atten= 0%, Lag= 0.1 min	
Primary	=	1.47 cfs @	12.14 hrs, Volume=	0.130 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 493.90' @ 12.14 hrs Surf.Area= 13 sf Storage= 14 cf
Flood Elev= 496.70' Surf.Area= 13 sf Storage= 50 cf

Plug-Flow detention time= 1.4 min calculated for 0.130 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (833.3 - 832.8)

Volume	Invert	Avail.Storage	Storage Description
#1	492.76'	50 cf	**4.00'D x 3.94'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	492.76'	**12.0" Round Culvert** L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 492.76' / 492.56' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.46 cfs @ 12.14 hrs HW=493.90' TW=493.75' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.46 cfs @ 1.87 fps)

Summary for Pond 113: CB 113

Inflow Area =	0.647 ac, 23.60% Impervious, Inflow Depth = 1.83" for 10-YR event			
Inflow =	1.15 cfs @ 12.16 hrs, Volume=	0.099 af		
Outflow =	1.15 cfs @ 12.16 hrs, Volume=	0.098 af, Atten= 0%, Lag= 0.1 min		
Primary =	1.15 cfs @ 12.16 hrs, Volume=	0.098 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 493.99' @ 12.16 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 496.00' Surf.Area= 13 sf Storage= 38 cf

Plug-Flow detention time= 1.3 min calculated for 0.098 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (842.3 - 841.8)

Volume	Invert	Avail.Storage	Storage Description
#1	493.00'	38 cf	**4.00'D x 3.00'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	493.00'	**12.0" Round Culvert** L= 12.0' Ke= 0.500 Inlet / Outlet Invert= 493.00' / 492.86' S= 0.0117 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.12 cfs @ 12.16 hrs HW=493.98' TW=493.89' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.12 cfs @ 1.82 fps)

Summary for Pond 114: CB 114

[82] Warning: Early inflow requires earlier time span

Inflow Area =	0.267 ac, 84.83% Impervious, Inflow Depth > 3.15" for 10-YR event			
Inflow =	0.89 cfs @ 12.07 hrs, Volume=	0.070 af		
Outflow =	0.89 cfs @ 12.07 hrs, Volume=	0.070 af, Atten= 0%, Lag= 0.1 min		
Primary =	0.89 cfs @ 12.07 hrs, Volume=	0.070 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 517.68' @ 12.07 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 521.80' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 0.5 min calculated for 0.070 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (763.0 - 762.6)

Volume	Invert	Avail.Storage	Storage Description
#1	517.20'	0.001 af	**4.00'D x 4.60'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	517.20'	**12.0" Round Culvert** L= 184.0' Ke= 0.500 Inlet / Outlet Invert= 517.20' / 513.52' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.86 cfs @ 12.07 hrs HW=517.67' TW=514.03' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.86 cfs @ 2.34 fps)

Summary for Pond 115: CB 115

Inflow Area =	0.480 ac, 71.43% Impervious, Inflow Depth > 2.86" for 10-YR event			
Inflow =	1.41 cfs @ 12.09 hrs, Volume=	0.114 af		
Outflow =	1.42 cfs @ 12.09 hrs, Volume=	0.114 af, Atten= 0%, Lag= 0.1 min		
Primary =	1.42 cfs @ 12.09 hrs, Volume=	0.114 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 514.05' @ 12.09 hrs Surf.Area= 13 sf Storage= 8 cf
Flood Elev= 519.80' Surf.Area= 13 sf Storage= 80 cf

Plug-Flow detention time= 1.4 min calculated for 0.114 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (782.8 - 782.4)

Volume	Invert	Avail.Storage	Storage Description
#1	513.42'	80 cf	**4.00'D x 6.38'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	513.42'	**12.0" Round Culvert** L= 73.0' Ke= 0.500 Inlet / Outlet Invert= 513.42' / 511.23' S= 0.0300 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.39 cfs @ 12.09 hrs HW=514.04' TW=512.26' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.39 cfs @ 2.69 fps)

Summary for Pond 116: CB 116

Inflow Area =	1.019 ac, 69.50% Impervious, Inflow Depth > 2.86" for 10-YR event			
Inflow =	3.05 cfs @ 12.09 hrs, Volume=	0.243 af		
Outflow =	3.05 cfs @ 12.09 hrs, Volume=	0.243 af, Atten= 0%, Lag= 0.1 min		
Primary =	3.05 cfs @ 12.09 hrs, Volume=	0.243 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 512.28' @ 12.09 hrs Surf.Area= 13 sf Storage= 14 cf
Flood Elev= 520.60' Surf.Area= 13 sf Storage= 119 cf

Plug-Flow detention time= 0.2 min calculated for 0.243 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (785.6 - 785.3)

Volume	Invert	Avail.Storage	Storage Description
#1	511.13'	119 cf	**4.00'D x 9.47'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	511.13'	**12.0" Round Culvert** L= 61.0' Ke= 0.500 Inlet / Outlet Invert= 511.13' / 508.00' S= 0.0513 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.01 cfs @ 12.09 hrs HW=512.27' TW=508.83' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 3.01 cfs @ 3.84 fps)

Summary for Pond 117: CB 117

Inflow Area =	0.385 ac, 58.93% Impervious, Inflow Depth = 2.67" for 10-YR event			
Inflow =	1.10 cfs @ 12.10 hrs, Volume=	0.086 af		
Outflow =	1.10 cfs @ 12.11 hrs, Volume=	0.086 af, Atten= 0%, Lag= 0.1 min		
Primary =	1.10 cfs @ 12.11 hrs, Volume=	0.086 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 514.02' @ 12.11 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 522.60' Surf.Area= 0.000 ac Storage= 0.003 af

Plug-Flow detention time= 0.4 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (797.5 - 797.1)

Volume	Invert	Avail.Storage	Storage Description
#1	513.48'	0.003 af	**4.00'D x 9.12'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	513.48'	**12.0" Round Culvert** L= 138.0' Ke= 0.500 Inlet / Outlet Invert= 513.48' / 511.23' S= 0.0163 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.08 cfs @ 12.11 hrs HW=514.02' TW=512.26' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.08 cfs @ 2.50 fps)

Summary for Pond 118: CB 118

Inflow Area =	0.464 ac, 74.70% Impervious, Inflow Depth = 2.66" for 10-YR event			
Inflow =	1.41 cfs @ 12.09 hrs, Volume=	0.103 af		
Outflow =	1.41 cfs @ 12.09 hrs, Volume=	0.103 af, Atten= 0%, Lag= 0.1 min		
Primary =	1.41 cfs @ 12.09 hrs, Volume=	0.103 af		

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 522.39' @ 13.34 hrs Surf.Area= 13 sf Storage= 14 cf
Flood Elev= 526.70' Surf.Area= 13 sf Storage= 68 cf

Plug-Flow detention time= 1.7 min calculated for 0.103 af (100% of inflow)
Center-of-Mass det. time= 1.9 min (805.7 - 803.8)

Volume	Invert	Avail.Storage	Storage Description
#1	521.25'	68 cf	**4.00'D x 5.45'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	521.25'	**12.0" Round Culvert** L= 8.0' Ke= 0.500 Inlet / Outlet Invert= 521.25' / 521.00' S= 0.0313 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.37 cfs @ 12.09 hrs HW=521.87' TW=521.17' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.37 cfs @ 2.68 fps)

Summary for Pond 119: CB 119

Inflow Area = 0.149 ac, 23.23% Impervious, Inflow Depth = 1.90" for 10-YR event
Inflow = 0.32 cfs @ 12.10 hrs, Volume= 0.024 af
Outflow = 0.32 cfs @ 12.11 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.1 min
Primary = 0.32 cfs @ 12.11 hrs, Volume= 0.024 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 517.58' @ 12.11 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 521.80' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 1.6 min calculated for 0.024 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (835.2 - 834.6)

Volume	Invert	Avail.Storage	Storage Description
#1	517.30'	0.001 af	**4.00'D x 4.50'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	517.30'	**12.0" Round Culvert** L= 186.0' Ke= 0.500 Inlet / Outlet Invert= 517.30' / 513.58' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.31 cfs @ 12.11 hrs HW=517.57' TW=514.02' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.31 cfs @ 1.79 fps)

Summary for Pond 120: CB 120

Inflow Area = 0.141 ac, 69.49% Impervious, Inflow Depth = 2.48" for 10-YR event
Inflow = 0.41 cfs @ 12.07 hrs, Volume= 0.029 af
Outflow = 0.41 cfs @ 12.08 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.3 min
Primary = 0.41 cfs @ 12.08 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 543.19' @ 12.55 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 544.90' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 2.8 min calculated for 0.029 af (100% of inflow)
Center-of-Mass det. time= 2.9 min (813.5 - 810.6)

Volume	Invert	Avail.Storage	Storage Description
#1	542.56'	0.001 af	**4.00'D x 2.34'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	542.56'	**12.0" Round Culvert** L= 23.0' Ke= 0.500 Inlet / Outlet Invert= 542.56' / 542.44' S= 0.0052 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.40 cfs @ 12.08 hrs HW=543.08' TW=543.01' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.40 cfs @ 1.38 fps)

Summary for Pond 121: CB 121

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.363 ac, 79.44% Impervious, Inflow Depth > 2.86" for 10-YR event
Inflow = 1.15 cfs @ 12.07 hrs, Volume= 0.086 af
Outflow = 1.14 cfs @ 12.08 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.1 min
Primary = 1.14 cfs @ 12.08 hrs, Volume= 0.086 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 543.19' @ 12.56 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 544.90' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 1.7 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 1.9 min (785.5 - 783.6)

Volume	Invert	Avail.Storage	Storage Description
#1	542.34'	0.001 af	**4.00'D x 2.56'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	542.34'	**12.0" Round Culvert** L= 18.0' Ke= 0.500 Inlet / Outlet Invert= 542.34' / 542.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.12 cfs @ 12.08 hrs HW=543.01' TW=542.72' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.12 cfs @ 2.84 fps)

Summary for Pond 122: CB 122

Inflow Area = 0.144 ac, 77.65% Impervious, Inflow Depth = 2.76" for 10-YR event
Inflow = 0.46 cfs @ 12.07 hrs, Volume= 0.033 af
Outflow = 0.45 cfs @ 12.08 hrs, Volume= 0.033 af, Atten= 1%, Lag= 0.1 min
Primary = 0.45 cfs @ 12.08 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 543.18' @ 12.57 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 545.00' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 3.2 min calculated for 0.033 af (100% of inflow)
Center-of-Mass det. time= 3.4 min (802.6 - 799.2)

Volume	Invert	Avail.Storage	Storage Description
#1	542.47'	0.001 af	**4.00'D x 2.53'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	542.47'	**12.0" Round Culvert** L= 44.0' Ke= 0.500 Inlet / Outlet Invert= 542.47' / 542.25' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.44 cfs @ 12.08 hrs HW=542.92' TW=542.72' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.44 cfs @ 1.91 fps)

Summary for Pond 123: CB 123

[82] Warning: Early inflow requires earlier time span

Inflow Area =	0.152 ac,100.00% Impervious, Inflow Depth > 3.59" for 10-YR event				
Inflow =	0.53 cfs @	12.05 hrs,	Volume=	0.045 af	
Outflow =	0.53 cfs @	12.05 hrs,	Volume=	0.045 af,	Atten= 0%, Lag= 0.1 min
Primary =	0.53 cfs @	12.05 hrs,	Volume=	0.045 af	

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 543.19' @ 12.55 hrs Surf.Area= 0.000 ac Storage= 0.000 af
Flood Elev= 545.60' Surf.Area= 0.000 ac Storage= 0.001 af

Plug-Flow detention time= 2.6 min calculated for 0.045 af (100% of inflow)
Center-of-Mass det. time= 1.6 min (753.6 - 752.1)

Volume	Invert	Avail.Storage	Storage Description
#1	542.65'	0.001 af	**4.00'D x 2.95'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	542.65'	**12.0" Round Culvert** L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 542.65' / 542.25' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.53 cfs @ 12.05 hrs HW=543.09' TW=542.66' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.53 cfs @ 2.32 fps)

Summary for Pond 124: CB 124

Inflow Area =	1.085 ac, 25.90% Impervious, Inflow Depth = 1.88" for 10-YR event				
Inflow =	1.82 cfs @ 12.20 hrs, Volume=	0.170 af			
Outflow =	1.82 cfs @ 12.20 hrs, Volume=	0.170 af, Atten= 0%, Lag= 0.0 min			
Primary =	1.82 cfs @ 12.20 hrs, Volume=	0.170 af			

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 524.00' @ 12.20 hrs Surf.Area= 13 sf Storage= 9 cf
Flood Elev= 528.00' Surf.Area= 13 sf Storage= 59 cf

Plug-Flow detention time= 0.2 min calculated for 0.170 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (842.6 - 842.4)

Volume	Invert	Avail.Storage	Storage Description
#1	523.30'	59 cf	**4.00'D x 4.70'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	523.30'	**18.0" Round Culvert** L= 107.0' Ke= 0.500 Inlet / Outlet Invert= 523.30' / 522.40' S= 0.0084 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.81 cfs @ 12.20 hrs HW=524.00' TW=523.29' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.81 cfs @ 3.28 fps)

Summary for Pond 125: CB 124

Inflow Area =	0.632 ac, 32.80% Impervious, Inflow Depth = 1.98" for 10-YR event				
Inflow =	1.15 cfs @ 12.19 hrs, Volume=	0.104 af			
Outflow =	1.15 cfs @ 12.19 hrs, Volume=	0.104 af, Atten= 0%, Lag= 0.1 min			
Primary =	1.15 cfs @ 12.19 hrs, Volume=	0.104 af			

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 524.56' @ 12.19 hrs Surf.Area= 13 sf Storage= 7 cf
Flood Elev= 528.00' Surf.Area= 13 sf Storage= 50 cf

Plug-Flow detention time= 0.3 min calculated for 0.104 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (838.0 - 837.7)

Volume	Invert	Avail.Storage	Storage Description
#1	524.00'	50 cf	**4.00'D x 4.00'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	524.00'	**18.0" Round Culvert** L= 90.0' Ke= 0.500 Inlet / Outlet Invert= 524.00' / 523.40' S= 0.0067 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.14 cfs @ 12.19 hrs HW=524.56' TW=524.00' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.14 cfs @ 2.83 fps)

Summary for Pond 126: CB 126

Inflow Area = 0.201 ac, 69.04% Impervious, Inflow Depth = 2.81" for 10-YR event
Inflow = 0.62 cfs @ 12.10 hrs, Volume= 0.047 af
Outflow = 0.62 cfs @ 12.10 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.1 min
Primary = 0.62 cfs @ 12.10 hrs, Volume= 0.047 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 507.25' @ 12.10 hrs Surf.Area= 13 sf Storage= 5 cf
Flood Elev= 511.25' Surf.Area= 13 sf Storage= 55 cf

Plug-Flow detention time= 0.5 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (799.9 - 799.4)

Volume	Invert	Avail.Storage	Storage Description
#1	506.85'	55 cf	**4.00'D x 4.40'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	506.85'	**12.0" Round Culvert** L= 100.0' Ke= 0.500 Inlet / Outlet Invert= 506.85' / 503.85' S= 0.0300 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.62 cfs @ 12.10 hrs HW=507.25' TW=504.15' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.62 cfs @ 2.14 fps)

Summary for Pond 127: CB 127

Inflow Area = 0.058 ac, 83.57% Impervious, Inflow Depth = 3.16" for 10-YR event
Inflow = 0.20 cfs @ 12.07 hrs, Volume= 0.015 af
Outflow = 0.20 cfs @ 12.10 hrs, Volume= 0.015 af, Atten= 4%, Lag= 1.8 min
Primary = 0.20 cfs @ 12.10 hrs, Volume= 0.015 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 507.45' @ 12.10 hrs Surf.Area= 113 sf Storage= 28 cf
Flood Elev= 511.25' Surf.Area= 113 sf Storage= 458 cf

Plug-Flow detention time= 8.2 min calculated for 0.015 af (100% of inflow)
Center-of-Mass det. time= 8.5 min (789.0 - 780.5)

Volume	Invert	Avail.Storage	Storage Description
#1	507.20'	458 cf	**12.00'D x 4.05'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	507.20'	**12.0" Round Culvert** L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 507.20' / 506.95' S= 0.0114 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.20 cfs @ 12.10 hrs HW=507.45' TW=507.25' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.20 cfs @ 1.94 fps)

Summary for Pond 128: YARD DRAIN

Inflow Area = 0.336 ac, 13.86% Impervious, Inflow Depth = 0.99" for 10-YR event
Inflow = 0.28 cfs @ 12.19 hrs, Volume= 0.028 af
Outflow = 0.28 cfs @ 12.19 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min
Primary = 0.28 cfs @ 12.19 hrs, Volume= 0.028 af

Routing by Dyn-Stor-Ind method, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 530.79' @ 12.76 hrs Surf.Area= 1 sf Storage= 1 cf
Flood Elev= 533.50' Surf.Area= 1 sf Storage= 3 cf

Plug-Flow detention time= 0.1 min calculated for 0.028 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (881.6 - 881.4)

Volume	Invert	Avail.Storage	Storage Description
#1	530.15'	3 cf	**1.00'D x 3.35'H Vertical Cone/Cylinder**

Device	Routing	Invert	Outlet Devices
#1	Primary	530.15'	**12.0" Round Culvert** L= 12.0' Ke= 0.500 Inlet / Outlet Invert= 530.15' / 530.00' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.28 cfs @ 12.19 hrs HW=530.59' TW=530.54' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.28 cfs @ 1.25 fps)

Summary for Link AP-1: Analysis Point #1

Inflow Area = 0.186 ac, 0.00% Impervious, Inflow Depth = 0.46" for 10-YR event
Inflow = 0.04 cfs @ 12.38 hrs, Volume= 0.007 af
Primary = 0.04 cfs @ 12.38 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-2: Analysis Point #2

Inflow Area = 1.309 ac, 42.14% Impervious, Inflow Depth = 0.79" for 10-YR event
Inflow = 0.42 cfs @ 12.48 hrs, Volume= 0.086 af
Primary = 0.42 cfs @ 12.48 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-3: Analysis Point #3

Inflow Area = 0.679 ac, 0.00% Impervious, Inflow Depth = 0.59" for 10-YR event
Inflow = 0.29 cfs @ 12.17 hrs, Volume= 0.033 af
Primary = 0.29 cfs @ 12.17 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-4: Analysis Point #4

Inflow Area = 16.283 ac, 49.99% Impervious, Inflow Depth > 1.95" for 10-YR event
Inflow = 18.75 cfs @ 12.22 hrs, Volume= 2.651 af
Primary = 18.75 cfs @ 12.22 hrs, Volume= 2.651 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-5: Analysis Point #5

Inflow Area = 33.614 ac, 27.42% Impervious, Inflow Depth = 1.67" for 10-YR event
Inflow = 23.69 cfs @ 12.80 hrs, Volume= 4.679 af
Primary = 23.69 cfs @ 12.80 hrs, Volume= 4.679 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Summary for Link AP-6: Analysis Point #6

Inflow Area = 17.426 ac, 16.18% Impervious, Inflow Depth = 1.61" for 10-YR event
Inflow = 10.67 cfs @ 13.09 hrs, Volume= 2.337 af
Primary = 10.67 cfs @ 13.09 hrs, Volume= 2.337 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-72.00 hrs, dt= 0.05 hrs

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: WS 201 Runoff Area=8,114 sf 0.00% Impervious Runoff Depth=0.85"
Flow Length=193' Tc=16.6 min CN=55 Runoff=0.10 cfs 0.013 af

Subcatchment 202S: WS 202 Runoff Area=28,333 sf 0.00% Impervious Runoff Depth=0.91"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=56 Runoff=0.41 cfs 0.049 af

Subcatchment 203S: WS 203 Runoff Area=29,560 sf 0.00% Impervious Runoff Depth=1.03"
Flow Length=75' Slope=0.1300 '/' Tc=8.9 min CN=58 Runoff=0.61 cfs 0.058 af

Subcatchment 204S: WS 204 Runoff Area=82,662 sf 10.46% Impervious Runoff Depth=2.24"
Flow Length=499' Tc=29.7 min CN=75 Runoff=2.81 cfs 0.354 af

Subcatchment 205S: WS 205 Runoff Area=919,977 sf 27.03% Impervious Runoff Depth=2.49"
Flow Length=2,082' Tc=60.6 min CN=78 Runoff=24.08 cfs 4.387 af

Subcatchment 206S: WS 206 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=2.32"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=15.65 cfs 3.373 af

Subcatchment 207S: WS 207 Runoff Area=13,565 sf 9.83% Impervious Runoff Depth=2.32"
Flow Length=42' Slope=0.0100 '/' Tc=10.4 min CN=76 Runoff=0.72 cfs 0.060 af

Subcatchment 208S: WS 208 Runoff Area=2,760 sf 88.44% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.30 cfs 0.024 af

Subcatchment 209S: WS 209 Runoff Area=21,404 sf 50.80% Impervious Runoff Depth=3.23"
Flow Length=107' Tc=9.6 min CN=86 Runoff=1.60 cfs 0.132 af

Subcatchment 210S: WS 210 Runoff Area=19,716 sf 16.28% Impervious Runoff Depth=2.49"
Flow Length=212' Slope=0.0100 '/' Tc=15.8 min CN=78 Runoff=0.98 cfs 0.094 af

Subcatchment 211S: WS 211 Runoff Area=27,543 sf 32.80% Impervious Runoff Depth=2.76"
Flow Length=323' Tc=13.4 min CN=81 Runoff=1.60 cfs 0.145 af

Subcatchment 212S: WS 212 Runoff Area=15,675 sf 33.66% Impervious Runoff Depth=2.16"
Flow Length=173' Slope=0.0100 '/' Tc=12.8 min CN=74 Runoff=0.72 cfs 0.065 af

Subcatchment 213S: WS 213 Runoff Area=251,079 sf 12.80% Impervious Runoff Depth=2.16"
Flow Length=1,113' Tc=47.5 min CN=74 Runoff=6.48 cfs 1.037 af

Subcatchment 214S: WS 214 Runoff Area=44,819 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=281' Tc=13.3 min CN=70 Runoff=1.70 cfs 0.158 af

Subcatchment 215S: WS 215 Runoff Area=35,320 sf 97.47% Impervious Runoff Depth>4.39"
Tc=5.0 min CN=97 Runoff=3.75 cfs 0.296 af

Subcatchment 216S: WS-216 Runoff Area=72,557 sf 40.93% Impervious Runoff Depth=2.58"
Flow Length=429' Tc=18.2 min CN=79 Runoff=3.52 cfs 0.358 af

Subcatchment 217S: WS-217 Runoff Area=74,085 sf 38.40% Impervious Runoff Depth=2.16"
Flow Length=830' Tc=13.4 min CN=74 Runoff=3.34 cfs 0.306 af

Subcatchment 218S: WS-218 Runoff Area=4,614 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.49 cfs 0.040 af

Subcatchment 219S: WS-219 Runoff Area=1,988 sf 100.00% Impervious Runoff Depth>4.49"
Tc=0.0 min CN=98 Runoff=0.24 cfs 0.017 af

Subcatchment 220S: WS 220 Runoff Area=6,274 sf 77.65% Impervious Runoff Depth=3.63"
Tc=5.0 min CN=90 Runoff=0.60 cfs 0.044 af

Subcatchment 221S: WS 221 Runoff Area=6,159 sf 69.49% Impervious Runoff Depth=3.32"
Tc=5.0 min CN=87 Runoff=0.55 cfs 0.039 af

Subcatchment 222S: WS 222 Runoff Area=3,078 sf 55.49% Impervious Runoff Depth=2.85"
Tc=5.0 min CN=82 Runoff=0.24 cfs 0.017 af

Subcatchment 223S: WS 223 Runoff Area=7,000 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.75 cfs 0.060 af

Subcatchment 224S: WS 224 Runoff Area=6,564 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.70 cfs 0.056 af

Subcatchment 225S: WS 225 Runoff Area=12,069 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=1.29 cfs 0.104 af

Subcatchment 226S: WS 226 Runoff Area=2,790 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.30 cfs 0.024 af

Subcatchment 227S: WS 227 Runoff Area=3,036 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.33 cfs 0.026 af

Subcatchment 228S: WS 228 Runoff Area=2,886 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.31 cfs 0.025 af

Subcatchment 229S: WS 229 Runoff Area=9,144 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.98 cfs 0.079 af

Subcatchment 230S: WS 230 Runoff Area=6,309 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.68 cfs 0.054 af

Subcatchment 231S: WS 231 Runoff Area=20,203 sf 74.70% Impervious Runoff Depth=3.52"
Flow Length=249' Tc=5.7 min CN=89 Runoff=1.84 cfs 0.136 af

Subcatchment 232S: WS 232 Runoff Area=6,474 sf 23.23% Impervious Runoff Depth=2.67"
Flow Length=158' Tc=6.8 min CN=80 Runoff=0.45 cfs 0.033 af

Subcatchment 233S: WS 233 Runoff Area=15,995 sf 70.05% Impervious Runoff Depth=3.73"
Flow Length=312' Tc=9.1 min CN=91 Runoff=1.37 cfs 0.114 af

Subcatchment 234S: WS 234 Runoff Area=10,284 sf 81.41% Impervious Runoff Depth=4.05"
Flow Length=292' Tc=7.4 min CN=94 Runoff=0.99 cfs 0.080 af

Subcatchment 235S: WS 235 Runoff Area=6,761 sf 89.71% Impervious Runoff Depth>4.27"
Tc=5.0 min CN=96 Runoff=0.71 cfs 0.055 af

Subcatchment 236S: WS 236 Runoff Area=10,261 sf 0.00% Impervious Runoff Depth=2.16"
Tc=5.0 min CN=74 Runoff=0.59 cfs 0.042 af

Subcatchment 237S: WS 237 Runoff Area=9,258 sf 54.60% Impervious Runoff Depth=3.32"
Flow Length=170' Tc=8.2 min CN=87 Runoff=0.75 cfs 0.059 af

Subcatchment 238S: WS 238 Runoff Area=2,487 sf 29.03% Impervious Runoff Depth=2.24"
Tc=5.0 min CN=75 Runoff=0.15 cfs 0.011 af

Subcatchment 239S: WS 239 Runoff Area=2,027 sf 73.95% Impervious Runoff Depth=3.84"
Tc=5.0 min CN=92 Runoff=0.20 cfs 0.015 af

Subcatchment 240S: WS 271 Runoff Area=14,636 sf 13.86% Impervious Runoff Depth=1.55"
Flow Length=98' Slope=0.0100 '/' Tc=11.8 min CN=66 Runoff=0.47 cfs 0.043 af

Subcatchment 241S: WS 241 Runoff Area=36,744 sf 8.08% Impervious Runoff Depth=2.16"
Flow Length=335' Tc=39.8 min CN=74 Runoff=1.04 cfs 0.152 af

Subcatchment 242S: WS 242 Runoff Area=7,261 sf 94.20% Impervious Runoff Depth>4.39"
Tc=5.0 min CN=97 Runoff=0.77 cfs 0.061 af

Subcatchment 243S: WS 243 Runoff Area=3,870 sf 84.50% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=0.40 cfs 0.030 af

Subcatchment 244S: WS 244 Runoff Area=2,929 sf 0.00% Impervious Runoff Depth=2.16"
Tc=5.0 min CN=74 Runoff=0.17 cfs 0.012 af

Subcatchment 245S: WS 245 Runoff Area=92,391 sf 38.82% Impervious Runoff Depth=2.94"
Flow Length=322' Tc=7.5 min CN=83 Runoff=6.84 cfs 0.520 af

Subcatchment 246S: WS 246 Runoff Area=14,444 sf 34.40% Impervious Runoff Depth=2.85"
Flow Length=351' Slope=0.0320 '/' Tc=10.5 min CN=82 Runoff=0.94 cfs 0.079 af

Subcatchment 247S: WS 247 Runoff Area=28,201 sf 23.60% Impervious Runoff Depth=2.58"
Flow Length=234' Slope=0.0430 '/' Tc=11.4 min CN=79 Runoff=1.63 cfs 0.139 af

Subcatchment 248S: WS 248 Runoff Area=6,298 sf 62.62% Impervious Runoff Depth=3.52"
Flow Length=208' Tc=5.5 min CN=89 Runoff=0.57 cfs 0.042 af

Subcatchment 249S: WS 249 Runoff Area=2,657 sf 85.40% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=0.27 cfs 0.021 af

Subcatchment 250S: WS 250 Runoff Area=13,455 sf 0.00% Impervious Runoff Depth=2.16"
Tc=5.0 min CN=74 Runoff=0.78 cfs 0.056 af

Subcatchment 251S: WS 251 Runoff Area=4,230 sf 76.17% Impervious Runoff Depth=3.84"
Tc=5.0 min CN=92 Runoff=0.42 cfs 0.031 af

Subcatchment 252S: WS 252 Runoff Area=3,060 sf 100.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.33 cfs 0.026 af

Subcatchment 253S: WS 253 Runoff Area=116,031 sf 85.00% Impervious Runoff Depth=4.05"
Flow Length=673' Slope=0.0100 '/' Tc=7.8 min CN=94 Runoff=10.98 cfs 0.899 af

Subcatchment 254S: WS 254 Runoff Area=80,647 sf 53.25% Impervious Runoff Depth=3.23"
Flow Length=396' Tc=21.4 min CN=86 Runoff=4.54 cfs 0.498 af

Subcatchment 255S: WS 255 Runoff Area=725 sf 85.38% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 256S: WS 256 Runoff Area=710 sf 85.07% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 257S: WS 257 Runoff Area=725 sf 85.38% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.08 cfs 0.006 af

Subcatchment 258S: WS 258 Runoff Area=962 sf 90.96% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment 259S: WS 259 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.015 af

Subcatchment 260S: WS 260 Runoff Area=1,634 sf 88.00% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.014 af

Subcatchment 261S: WS 261 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.015 af

Subcatchment 262S: WS 262 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.31 cfs 0.025 af

Subcatchment 263S: WS 263 Runoff Area=2,223 sf 90.42% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment 264S: WS 264 Runoff Area=2,611 sf 89.81% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.28 cfs 0.022 af

Subcatchment 265S: WS 265 Runoff Area=1,439 sf 89.09% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.012 af

Subcatchment 266S: WS 266 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.31 cfs 0.025 af

Subcatchment 267S: WS 267 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.31 cfs 0.025 af

Subcatchment 268S: WS 268 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.015 af

Subcatchment 269S: WS 269 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.31 cfs 0.025 af

Subcatchment 270S: WS 270 Runoff Area=2,166 sf 90.17% Impervious Runoff Depth>4.49"
Tc=5.0 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment 271S: WS 271 Runoff Area=6,211 sf 63.11% Impervious Runoff Depth=3.52"
Flow Length=139' Tc=6.4 min CN=89 Runoff=0.56 cfs 0.042 af

Subcatchment 272S: WS 272 Runoff Area=2,532 sf 83.57% Impervious Runoff Depth=4.05"
Tc=5.0 min CN=94 Runoff=0.26 cfs 0.020 af

Reach 1R: REACH 1 Avg. Flow Depth=0.15' Max Vel=1.63 fps Inflow=2.17 cfs 0.313 af
n=0.050 L=152.0' S=0.0658 '/' Capacity=613.90 cfs Outflow=2.17 cfs 0.313 af

Reach 2R: REACH 2 Avg. Flow Depth=0.44' Max Vel=6.63 fps Inflow=8.52 cfs 1.355 af
18.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0213 '/' Capacity=45.97 cfs Outflow=8.54 cfs 1.355 af

Reach 3R: REACH 3 Avg. Flow Depth=0.30' Max Vel=2.52 fps Inflow=9.56 cfs 1.925 af
n=0.050 L=90.0' S=0.0623 '/' Capacity=597.56 cfs Outflow=9.59 cfs 1.925 af

Reach 4R: REACH 4 Avg. Flow Depth=0.45' Max Vel=3.10 fps Inflow=22.21 cfs 2.665 af
n=0.050 L=261.0' S=0.0536 '/' Capacity=554.33 cfs Outflow=22.27 cfs 2.665 af

Reach 5R: REACH 5 Avg. Flow Depth=0.67' Max Vel=14.11 fps Inflow=21.56 cfs 2.539 af
18.0" Round Pipe x 2.00 n=0.013 L=64.0' S=0.0625 '/' Capacity=52.52 cfs Outflow=21.55 cfs 2.539 af

Reach 6R: REACH 6 Avg. Flow Depth=0.24' Max Vel=7.41 fps Inflow=21.26 cfs 2.387 af
n=0.013 L=242.0' S=0.0475 '/' Capacity=2,006.73 cfs Outflow=21.12 cfs 2.387 af

Reach 7R: REACH 7 Avg. Flow Depth=0.82' Max Vel=5.35 fps Inflow=21.21 cfs 2.385 af
18.0" Round Pipe x 4.00 n=0.013 L=33.0' S=0.0076 '/' Capacity=36.57 cfs Outflow=21.22 cfs 2.385 af

Reach 8R: REACH 8 Avg. Flow Depth=0.45' Max Vel=2.66 fps Inflow=19.35 cfs 2.051 af
n=0.050 L=252.0' S=0.0397 '/' Capacity=476.78 cfs Outflow=19.27 cfs 2.051 af

Reach 9R: REACH 9 Avg. Flow Depth=0.34' Max Vel=12.73 fps Inflow=4.54 cfs 0.498 af
24.0" Round Pipe n=0.013 L=40.0' S=0.1000 '/' Capacity=71.54 cfs Outflow=4.54 cfs 0.498 af

Reach 10R: REACH 10 Avg. Flow Depth=0.48' Max Vel=12.11 fps Inflow=13.36 cfs 1.257 af
12.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0745 '/' Capacity=29.17 cfs Outflow=13.37 cfs 1.257 af

Reach 11R: REACH 11 Avg. Flow Depth=0.32' Max Vel=2.48 fps Inflow=10.97 cfs 0.899 af
n=0.050 L=309.0' S=0.0550 '/' Capacity=561.39 cfs Outflow=10.55 cfs 0.899 af

Reach 12R: REACH 12 Avg. Flow Depth=0.04' Max Vel=0.52 fps Inflow=0.46 cfs 0.007 af
n=0.050 L=516.0' S=0.0368 '/' Capacity=459.28 cfs Outflow=0.10 cfs 0.007 af

Reach 13R: REACH 13 Avg. Flow Depth=0.01' Max Vel=0.32 fps Inflow=0.04 cfs 0.000 af
n=0.050 L=668.0' S=0.0359 '/' Capacity=453.67 cfs Outflow=0.01 cfs 0.000 af

Reach 15R: REACH 15 Avg. Flow Depth=0.01' Max Vel=0.32 fps Inflow=0.02 cfs 0.000 af
n=0.050 L=355.0' S=0.0366 '/' Capacity=458.01 cfs Outflow=0.01 cfs 0.000 af

Reach 16R: REACH 16 Avg. Flow Depth=0.03' Max Vel=0.27 fps Inflow=0.16 cfs 0.002 af
n=0.050 L=247.0' S=0.0121 '/' Capacity=263.78 cfs Outflow=0.04 cfs 0.002 af

Reach 17R: REACH 17 Avg. Flow Depth=0.53' Max Vel=2.50 fps Inflow=22.59 cfs 2.684 af
n=0.050 L=69.0' S=0.0286 '/' Capacity=404.42 cfs Outflow=22.64 cfs 2.684 af

Reach 18R: REACH 18 Avg. Flow Depth=0.06' Max Vel=0.75 fps Inflow=0.57 cfs 0.008 af
n=0.050 L=165.0' S=0.0485 '/' Capacity=527.02 cfs Outflow=0.24 cfs 0.008 af

Reach 19R: REACH 19 Avg. Flow Depth=0.05' Max Vel=0.70 fps Inflow=0.32 cfs 0.010 af
n=0.050 L=134.0' S=0.0448 '/' Capacity=506.46 cfs Outflow=0.21 cfs 0.010 af

Reach 20R: REACH 20 Avg. Flow Depth=0.32' Max Vel=1.98 fps Inflow=8.54 cfs 1.361 af
n=0.050 L=258.0' S=0.0349 '/' Capacity=447.03 cfs Outflow=8.50 cfs 1.361 af

Reach 21R: REACH 21 Avg. Flow Depth=0.05' Max Vel=0.88 fps Inflow=0.37 cfs 0.011 af
n=0.050 L=149.0' S=0.0738 '/' Capacity=650.32 cfs Outflow=0.25 cfs 0.011 af

Reach 22R: REACH 22 Avg. Flow Depth=0.03' Max Vel=0.47 fps Inflow=0.33 cfs 0.006 af
n=0.050 L=357.0' S=0.0336 '/' Capacity=438.81 cfs Outflow=0.07 cfs 0.006 af

Reach 23R: REACH 23 Avg. Flow Depth=0.05' Max Vel=0.48 fps Inflow=0.43 cfs 0.011 af
n=0.050 L=481.0' S=0.0249 '/' Capacity=378.04 cfs Outflow=0.12 cfs 0.011 af

Reach 24R: REACH 24 Avg. Flow Depth=0.04' Max Vel=0.47 fps Inflow=0.23 cfs 0.009 af
n=0.050 L=600.0' S=0.0317 '/' Capacity=425.92 cfs Outflow=0.09 cfs 0.009 af

Reach 28R: REACH 28 Avg. Flow Depth=0.16' Max Vel=1.42 fps Inflow=2.11 cfs 0.305 af
n=0.050 L=205.0' S=0.0463 '/' Capacity=515.24 cfs Outflow=2.09 cfs 0.305 af

Reach 29R: REACH 29 Avg. Flow Depth=0.94' Max Vel=7.59 fps Inflow=10.98 cfs 0.899 af
24.0" Round Pipe n=0.014 L=73.0' S=0.0137 '/' Capacity=24.59 cfs Outflow=10.97 cfs 0.899 af

Pond 001: DMH 001 Peak Elev=523.49' Storage=0.000 af Inflow=4.03 cfs 0.371 af
18.0" Round Culvert n=0.013 L=86.0' S=0.0099 '/' Outflow=4.03 cfs 0.371 af

Pond 1F: FOREBAY #1 Peak Elev=522.87' Storage=608 cf Inflow=4.75 cfs 0.433 af
Outflow=4.70 cfs 0.424 af

Pond 1P: INFIL POND #1 Peak Elev=522.61' Storage=7,126 cf Inflow=4.70 cfs 0.424 af
Discarded=0.05 cfs 0.119 af Primary=2.11 cfs 0.305 af Outflow=2.16 cfs 0.424 af

Pond 2F: FOREBAY #2 Peak Elev=532.07' Storage=223 cf Inflow=0.72 cfs 0.065 af
Outflow=0.72 cfs 0.061 af

Pond 2P: WET POND #2 Peak Elev=532.07' Storage=5,375 cf Inflow=1.83 cfs 0.170 af
Outflow=0.27 cfs 0.170 af

Pond 3F: FOREBAY #3 Peak Elev=514.93' Storage=138 cf Inflow=1.53 cfs 0.128 af
Outflow=1.53 cfs 0.125 af

Pond 3P: WET POND #3 Peak Elev=514.29' Storage=4,240 cf Inflow=1.53 cfs 0.125 af
Outflow=0.64 cfs 0.122 af

Pond 4F: FOREBAY #4 Peak Elev=502.97' Storage=632 cf Inflow=6.84 cfs 0.520 af
Outflow=6.76 cfs 0.511 af

Pond 4P: INFIL POND #4 Peak Elev=502.85' Storage=6,408 cf Inflow=6.76 cfs 0.511 af
Discarded=0.04 cfs 0.075 af Primary=3.38 cfs 0.436 af Outflow=3.42 cfs 0.511 af

Pond 005: DMH 005 Peak Elev=528.19' Storage=11 cf Inflow=3.50 cfs 0.389 af
18.0" Round Culvert n=0.013 L=115.0' S=0.0548 '/' Outflow=3.50 cfs 0.389 af

Pond 5F: FOREBAY #5 Peak Elev=493.87' Storage=394 cf Inflow=2.26 cfs 0.202 af
Outflow=2.26 cfs 0.195 af

Pond 5P: WET POND #5 Peak Elev=493.87' Storage=21,295 cf Inflow=6.64 cfs 0.556 af
Outflow=0.86 cfs 0.516 af

Pond 6F: FOREBAY #6 Peak Elev=493.87' Storage=419 cf Inflow=3.69 cfs 0.312 af
Outflow=3.68 cfs 0.305 af

Pond 6P: INFIL POND#6 Peak Elev=509.85' Storage=7,207 cf Inflow=4.96 cfs 0.733 af
Discarded=0.04 cfs 0.082 af Primary=2.17 cfs 0.651 af Outflow=2.21 cfs 0.733 af

Pond 7F: FOREBAY 7 Peak Elev=509.85' Storage=577 cf Inflow=3.94 cfs 0.316 af
Outflow=4.33 cfs 0.308 af

Pond 7P: UNDER GRND INFIL POND #7 Peak Elev=522.90' Storage=9,394 cf Inflow=5.02 cfs 0.579 af
Discarded=0.07 cfs 0.197 af Primary=1.87 cfs 0.382 af Outflow=1.95 cfs 0.579 af

Pond 8P: UNDER GRD INFIL POND #8 Peak Elev=543.52' Storage=4,195 cf Inflow=2.70 cfs 0.213 af
Discarded=0.05 cfs 0.112 af Primary=0.66 cfs 0.101 af Outflow=0.71 cfs 0.213 af

Pond 9P: PLUNGE POOL Peak Elev=528.89' Storage=232 cf Inflow=3.50 cfs 0.389 af
18.0" Round Culvert n=0.013 L=9.0' S=0.0667 '/' Outflow=3.50 cfs 0.389 af

Pond 10P: DRIP EDGE Peak Elev=523.00' Storage=128 cf Inflow=0.08 cfs 0.006 af
Discarded=0.01 cfs 0.006 af Primary=0.02 cfs 0.000 af Outflow=0.02 cfs 0.006 af

Pond 011: DMH 011 Inflow=0.81 cfs 0.061 af
Primary=0.81 cfs 0.061 af

Pond 11P: DRIP EDGE Peak Elev=533.01' Storage=107 cf Inflow=0.08 cfs 0.006 af
Discarded=0.01 cfs 0.006 af Primary=0.04 cfs 0.000 af Outflow=0.05 cfs 0.006 af

Pond 12P: DRIP EDGE Peak Elev=529.01' Storage=360 cf Inflow=0.30 cfs 0.024 af
Discarded=0.01 cfs 0.017 af Primary=0.46 cfs 0.007 af Outflow=0.48 cfs 0.024 af

Pond 13P: DRIP EDGE Peak Elev=527.01' Storage=128 cf Inflow=0.08 cfs 0.006 af
Discarded=0.00 cfs 0.005 af Primary=0.04 cfs 0.001 af Outflow=0.04 cfs 0.006 af

Pond 14P: DRIP EDGE Peak Elev=531.03' Storage=104 cf Inflow=0.10 cfs 0.008 af
Discarded=0.01 cfs 0.007 af Primary=0.16 cfs 0.002 af Outflow=0.17 cfs 0.008 af

Pond 15P: DRIP EDGE Peak Elev=531.01' Storage=232 cf Inflow=0.18 cfs 0.015 af
Discarded=0.01 cfs 0.011 af Primary=0.16 cfs 0.004 af Outflow=0.17 cfs 0.015 af

Pond 16P: DRIP EDGE Peak Elev=527.06' Storage=188 cf Inflow=0.17 cfs 0.014 af
Discarded=0.03 cfs 0.012 af Primary=0.20 cfs 0.002 af Outflow=0.23 cfs 0.014 af

Pond 17P: DRIP EDGE Peak Elev=510.44' Storage=205 cf Inflow=0.18 cfs 0.015 af
Discarded=0.01 cfs 0.010 af Primary=0.25 cfs 0.005 af Outflow=0.26 cfs 0.015 af

Pond 18P: DRIP EDGE Peak Elev=505.03' Storage=385 cf Inflow=0.31 cfs 0.025 af
Discarded=0.01 cfs 0.016 af Primary=0.57 cfs 0.008 af Outflow=0.57 cfs 0.025 af

Pond 19P: DRIP EDGE Peak Elev=505.02' Storage=254 cf Inflow=0.24 cfs 0.019 af
Discarded=0.00 cfs 0.009 af Primary=0.32 cfs 0.010 af Outflow=0.33 cfs 0.019 af

Pond 20P: DRIP EDGE Peak Elev=506.02' Storage=322 cf Inflow=0.28 cfs 0.022 af
Discarded=0.01 cfs 0.017 af Primary=0.50 cfs 0.006 af Outflow=0.52 cfs 0.022 af

Pond 21P: DRIP EDGE Peak Elev=498.30' Storage=188 cf Inflow=0.15 cfs 0.012 af
Discarded=0.00 cfs 0.007 af Primary=0.16 cfs 0.005 af Outflow=0.17 cfs 0.012 af

Pond 22P: DRIP EDGE Peak Elev=498.02' Storage=383 cf Inflow=0.31 cfs 0.025 af
Discarded=0.00 cfs 0.014 af Primary=0.41 cfs 0.011 af Outflow=0.41 cfs 0.025 af

Pond 23P: DRIP EDGE Peak Elev=501.02' Storage=383 cf Inflow=0.31 cfs 0.025 af
Discarded=0.00 cfs 0.013 af Primary=0.37 cfs 0.011 af Outflow=0.37 cfs 0.025 af

Pond 24P: DRIP EDGE Peak Elev=501.03' Storage=233 cf Inflow=0.18 cfs 0.015 af
Discarded=0.00 cfs 0.008 af Primary=0.33 cfs 0.006 af Outflow=0.34 cfs 0.015 af

Pond 25P: DRIP EDGE Peak Elev=501.05' Storage=385 cf Inflow=0.31 cfs 0.025 af
Discarded=0.00 cfs 0.014 af Primary=0.43 cfs 0.011 af Outflow=0.43 cfs 0.025 af

Pond 26P: DRIP EDGE Peak Elev=509.02' Storage=257 cf Inflow=0.23 cfs 0.019 af
Discarded=0.00 cfs 0.009 af Primary=0.23 cfs 0.009 af Outflow=0.24 cfs 0.019 af

Pond 28P: UNDER GRND INFIL POND #28 Peak Elev=531.13' Storage=3,421 cf Inflow=1.93 cfs 0.173 af
Discarded=0.06 cfs 0.090 af Primary=0.27 cfs 0.083 af Outflow=0.33 cfs 0.173 af

Pond 101: CB 101 Peak Elev=515.07' Storage=20 cf Inflow=0.40 cfs 0.030 af
12.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=0.40 cfs 0.030 af

Pond 102: CB 102 Peak Elev=524.39' Storage=0.000 af Inflow=0.98 cfs 0.094 af
18.0" Round Culvert n=0.013 L=43.0' S=0.0093 '/' Outflow=0.98 cfs 0.094 af

Pond 104: CB 104 Peak Elev=515.06' Storage=20 cf Inflow=0.20 cfs 0.015 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0050 '/' Outflow=0.20 cfs 0.015 af

Pond 105: CB 124 Peak Elev=543.53' Storage=0.000 af Inflow=0.49 cfs 0.040 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0050 '/' Outflow=0.49 cfs 0.040 af

Pond 106: CB 106 Peak Elev=515.06' Storage=23 cf Inflow=1.36 cfs 0.116 af
12.0" Round Culvert n=0.013 L=11.0' S=0.0045 '/' Outflow=1.36 cfs 0.116 af

Pond 107: CB 107 Peak Elev=500.34' Storage=14 cf Inflow=3.03 cfs 0.254 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0302 '/' Outflow=3.03 cfs 0.254 af

Pond 108: CB 108 Peak Elev=500.57' Storage=10 cf Inflow=1.37 cfs 0.114 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0205 '/' Outflow=1.37 cfs 0.114 af

Pond 109: CB 109 Peak Elev=498.50' Storage=16 cf Inflow=3.40 cfs 0.285 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0318 '/' Outflow=3.40 cfs 0.285 af

Pond 110: CB 110 Peak Elev=497.32' Storage=12 cf Inflow=3.69 cfs 0.312 af
18.0" Round Culvert n=0.013 L=29.0' S=0.0483 '/' Outflow=3.69 cfs 0.312 af

Pond 111: CB 111 Peak Elev=493.87' Storage=18 cf Inflow=2.26 cfs 0.202 af
18.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=2.26 cfs 0.202 af

Pond 112: CB 112 Peak Elev=494.13' Storage=17 cf Inflow=2.06 cfs 0.181 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0100 '/' Outflow=2.06 cfs 0.181 af

Pond 113: CB 113 Peak Elev=494.31' Storage=16 cf Inflow=1.63 cfs 0.139 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0117 '/' Outflow=1.63 cfs 0.139 af

Pond 114: CB 114 Peak Elev=517.75' Storage=0.000 af Inflow=1.13 cfs 0.089 af
12.0" Round Culvert n=0.013 L=184.0' S=0.0200 '/' Outflow=1.13 cfs 0.089 af

Pond 115: CB 115 Peak Elev=514.16' Storage=9 cf Inflow=1.83 cfs 0.148 af
12.0" Round Culvert n=0.013 L=73.0' S=0.0300 '/' Outflow=1.83 cfs 0.148 af

Pond 116: CB 116 Peak Elev=512.72' Storage=20 cf Inflow=3.94 cfs 0.316 af
12.0" Round Culvert n=0.013 L=61.0' S=0.0513 '/' Outflow=3.94 cfs 0.316 af

Pond 117: CB 117 Peak Elev=514.12' Storage=0.000 af Inflow=1.43 cfs 0.113 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0163 '/' Outflow=1.43 cfs 0.113 af

Pond 118: CB 118 Peak Elev=522.90' Storage=21 cf Inflow=1.84 cfs 0.136 af
12.0" Round Culvert n=0.013 L=8.0' S=0.0313 '/' Outflow=1.84 cfs 0.136 af

Pond 119: CB 119 Peak Elev=517.63' Storage=0.000 af Inflow=0.45 cfs 0.033 af
12.0" Round Culvert n=0.013 L=186.0' S=0.0200 '/' Outflow=0.45 cfs 0.033 af

Pond 120: CB 120 Peak Elev=543.54' Storage=0.000 af Inflow=0.55 cfs 0.039 af
12.0" Round Culvert n=0.013 L=23.0' S=0.0052 '/' Outflow=0.54 cfs 0.039 af

Pond 121: CB 121 Peak Elev=543.53' Storage=0.000 af Inflow=1.48 cfs 0.112 af
12.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=1.47 cfs 0.112 af

Pond 122: CB 122 Peak Elev=543.53' Storage=0.000 af Inflow=0.60 cfs 0.044 af
12.0" Round Culvert n=0.013 L=44.0' S=0.0050 '/' Outflow=0.59 cfs 0.044 af

Pond 123: CB 123 Peak Elev=543.53' Storage=0.000 af Inflow=0.66 cfs 0.057 af
12.0" Round Culvert n=0.013 L=79.0' S=0.0051 '/' Outflow=0.66 cfs 0.057 af

Pond 124: CB 124 Peak Elev=524.17' Storage=11 cf Inflow=2.56 cfs 0.239 af
18.0" Round Culvert n=0.013 L=107.0' S=0.0084 '/' Outflow=2.56 cfs 0.239 af

Pond 125: CB 124 Peak Elev=524.69' Storage=9 cf Inflow=1.60 cfs 0.145 af
18.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=1.60 cfs 0.145 af

Pond 126: CB 126 Inflow=0.81 cfs 0.061 af
Primary=0.81 cfs 0.061 af

Pond 127: CB 127 Inflow=0.26 cfs 0.020 af
Primary=0.26 cfs 0.020 af

Pond 128: YARD DRAIN Peak Elev=531.13' Storage=1 cf Inflow=0.47 cfs 0.043 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0125 '/' Outflow=0.47 cfs 0.043 af

Link AP-1: Analysis Point #1 Inflow=0.10 cfs 0.013 af
Primary=0.10 cfs 0.013 af

Link AP-2: Analysis Point #2 Inflow=1.01 cfs 0.150 af
Primary=1.01 cfs 0.150 af

Link AP-3: Analysis Point #3 Inflow=0.61 cfs 0.058 af
Primary=0.61 cfs 0.058 af

Link AP-4: Analysis Point #4 Inflow=25.90 cfs 3.689 af
Primary=25.90 cfs 3.689 af

Link AP-5: Analysis Point #5 Inflow=35.10 cfs 6.747 af
Primary=35.10 cfs 6.747 af

Link AP-6: Analysis Point #6 Inflow=15.65 cfs 3.373 af
Primary=15.65 cfs 3.373 af

Total Runoff Area = 69.496 ac Runoff Volume = 14.966 af Average Runoff Depth = 2.58"
70.17% Pervious = 48.768 ac 29.83% Impervious = 20.728 ac

Time span=2.00-72.00 hrs, dt=0.05 hrs, 1401 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 201S: WS 201 Runoff Area=8,114 sf 0.00% Impervious Runoff Depth=1.28"
Flow Length=193' Tc=16.6 min CN=55 Runoff=0.17 cfs 0.020 af

Subcatchment 202S: WS 202 Runoff Area=28,333 sf 0.00% Impervious Runoff Depth=1.35"
Flow Length=329' Slope=0.0700 '/' Tc=14.6 min CN=56 Runoff=0.67 cfs 0.073 af

Subcatchment 203S: WS 203 Runoff Area=29,560 sf 0.00% Impervious Runoff Depth=1.50"
Flow Length=75' Slope=0.1300 '/' Tc=8.9 min CN=58 Runoff=0.95 cfs 0.085 af

Subcatchment 204S: WS 204 Runoff Area=82,662 sf 10.46% Impervious Runoff Depth=2.92"
Flow Length=499' Tc=29.7 min CN=75 Runoff=3.68 cfs 0.462 af

Subcatchment 205S: WS 205 Runoff Area=919,977 sf 27.03% Impervious Runoff Depth=3.20"
Flow Length=2,082' Tc=60.6 min CN=78 Runoff=31.01 cfs 5.635 af

Subcatchment 206S: WS 206 Runoff Area=759,057 sf 16.18% Impervious Runoff Depth=3.01"
Flow Length=2,017' Slope=0.0400 '/' Tc=79.0 min CN=76 Runoff=20.40 cfs 4.374 af

Subcatchment 207S: WS 207 Runoff Area=13,565 sf 9.83% Impervious Runoff Depth=3.01"
Flow Length=42' Slope=0.0100 '/' Tc=10.4 min CN=76 Runoff=0.94 cfs 0.078 af

Subcatchment 208S: WS 208 Runoff Area=2,760 sf 88.44% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.35 cfs 0.028 af

Subcatchment 209S: WS 209 Runoff Area=21,404 sf 50.80% Impervious Runoff Depth=4.00"
Flow Length=107' Tc=9.6 min CN=86 Runoff=1.97 cfs 0.164 af

Subcatchment 210S: WS 210 Runoff Area=19,716 sf 16.28% Impervious Runoff Depth=3.20"
Flow Length=212' Slope=0.0100 '/' Tc=15.8 min CN=78 Runoff=1.26 cfs 0.121 af

Subcatchment 211S: WS 211 Runoff Area=27,543 sf 32.80% Impervious Runoff Depth=3.49"
Flow Length=323' Tc=13.4 min CN=81 Runoff=2.02 cfs 0.184 af

Subcatchment 212S: WS 212 Runoff Area=15,675 sf 33.66% Impervious Runoff Depth=2.83"
Flow Length=173' Slope=0.0100 '/' Tc=12.8 min CN=74 Runoff=0.94 cfs 0.085 af

Subcatchment 213S: WS 213 Runoff Area=251,079 sf 12.80% Impervious Runoff Depth=2.83"
Flow Length=1,113' Tc=47.5 min CN=74 Runoff=8.55 cfs 1.358 af

Subcatchment 214S: WS 214 Runoff Area=44,819 sf 0.00% Impervious Runoff Depth=2.47"
Flow Length=281' Tc=13.3 min CN=70 Runoff=2.31 cfs 0.212 af

Subcatchment 215S: WS 215 Runoff Area=35,320 sf 97.47% Impervious Runoff Depth>5.21"
Tc=5.0 min CN=97 Runoff=4.43 cfs 0.352 af

Subcatchment 216S: WS-216 Runoff Area=72,557 sf 40.93% Impervious Runoff Depth=3.30"
Flow Length=429' Tc=18.2 min CN=79 Runoff=4.50 cfs 0.458 af

Subcatchment 217S: WS-217 Runoff Area=74,085 sf 38.40% Impervious Runoff Depth=2.83"
Flow Length=830' Tc=13.4 min CN=74 Runoff=4.40 cfs 0.401 af

Subcatchment 218S: WS-218 Runoff Area=4,614 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.58 cfs 0.047 af

Subcatchment 219S: WS-219 Runoff Area=1,988 sf 100.00% Impervious Runoff Depth>5.31"
Tc=0.0 min CN=98 Runoff=0.28 cfs 0.020 af

Subcatchment 220S: WS 220 Runoff Area=6,274 sf 77.65% Impervious Runoff Depth=4.43"
Tc=5.0 min CN=90 Runoff=0.72 cfs 0.053 af

Subcatchment 221S: WS 221 Runoff Area=6,159 sf 69.49% Impervious Runoff Depth=4.11"
Tc=5.0 min CN=87 Runoff=0.67 cfs 0.048 af

Subcatchment 222S: WS 222 Runoff Area=3,078 sf 55.49% Impervious Runoff Depth=3.59"
Tc=5.0 min CN=82 Runoff=0.30 cfs 0.021 af

Subcatchment 223S: WS 223 Runoff Area=7,000 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.88 cfs 0.071 af

Subcatchment 224S: WS 224 Runoff Area=6,564 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.83 cfs 0.067 af

Subcatchment 225S: WS 225 Runoff Area=12,069 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=1.52 cfs 0.123 af

Subcatchment 226S: WS 226 Runoff Area=2,790 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.35 cfs 0.028 af

Subcatchment 227S: WS 227 Runoff Area=3,036 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.38 cfs 0.031 af

Subcatchment 228S: WS 228 Runoff Area=2,886 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.36 cfs 0.029 af

Subcatchment 229S: WS 229 Runoff Area=9,144 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=1.15 cfs 0.093 af

Subcatchment 230S: WS 230 Runoff Area=6,309 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.80 cfs 0.064 af

Subcatchment 231S: WS 231 Runoff Area=20,203 sf 74.70% Impervious Runoff Depth=4.32"
Flow Length=249' Tc=5.7 min CN=89 Runoff=2.23 cfs 0.167 af

Subcatchment 232S: WS 232 Runoff Area=6,474 sf 23.23% Impervious Runoff Depth=3.40"
Flow Length=158' Tc=6.8 min CN=80 Runoff=0.57 cfs 0.042 af

Subcatchment 233S: WS 233 Runoff Area=15,995 sf 70.05% Impervious Runoff Depth=4.54"
Flow Length=312' Tc=9.1 min CN=91 Runoff=1.65 cfs 0.139 af

Subcatchment 234S: WS 234 Runoff Area=10,284 sf 81.41% Impervious Runoff Depth=4.87"
Flow Length=292' Tc=7.4 min CN=94 Runoff=1.17 cfs 0.096 af

Subcatchment 235S: WS 235 Runoff Area=6,761 sf 89.71% Impervious Runoff Depth>5.10"
Tc=5.0 min CN=96 Runoff=0.84 cfs 0.066 af

Subcatchment 236S: WS 236 Runoff Area=10,261 sf 0.00% Impervious Runoff Depth=2.83"
Tc=5.0 min CN=74 Runoff=0.78 cfs 0.055 af

Subcatchment 237S: WS 237 Runoff Area=9,258 sf 54.60% Impervious Runoff Depth=4.11"
Flow Length=170' Tc=8.2 min CN=87 Runoff=0.92 cfs 0.073 af

Subcatchment 238S: WS 238 Runoff Area=2,487 sf 29.03% Impervious Runoff Depth=2.92"
Tc=5.0 min CN=75 Runoff=0.20 cfs 0.014 af

Subcatchment 239S: WS 239 Runoff Area=2,027 sf 73.95% Impervious Runoff Depth=4.65"
Tc=5.0 min CN=92 Runoff=0.24 cfs 0.018 af

Subcatchment 240S: WS 271 Runoff Area=14,636 sf 13.86% Impervious Runoff Depth=2.13"
Flow Length=98' Slope=0.0100 '/' Tc=11.8 min CN=66 Runoff=0.67 cfs 0.060 af

Subcatchment 241S: WS 241 Runoff Area=36,744 sf 8.08% Impervious Runoff Depth=2.83"
Flow Length=335' Tc=39.8 min CN=74 Runoff=1.37 cfs 0.199 af

Subcatchment 242S: WS 242 Runoff Area=7,261 sf 94.20% Impervious Runoff Depth>5.21"
Tc=5.0 min CN=97 Runoff=0.91 cfs 0.072 af

Subcatchment 243S: WS 243 Runoff Area=3,870 sf 84.50% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=0.47 cfs 0.036 af

Subcatchment 244S: WS 244 Runoff Area=2,929 sf 0.00% Impervious Runoff Depth=2.83"
Tc=5.0 min CN=74 Runoff=0.22 cfs 0.016 af

Subcatchment 245S: WS 245 Runoff Area=92,391 sf 38.82% Impervious Runoff Depth=3.69"
Flow Length=322' Tc=7.5 min CN=83 Runoff=8.55 cfs 0.653 af

Subcatchment 246S: WS 246 Runoff Area=14,444 sf 34.40% Impervious Runoff Depth=3.59"
Flow Length=351' Slope=0.0320 '/' Tc=10.5 min CN=82 Runoff=1.18 cfs 0.099 af

Subcatchment 247S: WS 247 Runoff Area=28,201 sf 23.60% Impervious Runoff Depth=3.30"
Flow Length=234' Slope=0.0430 '/' Tc=11.4 min CN=79 Runoff=2.08 cfs 0.178 af

Subcatchment 248S: WS 248 Runoff Area=6,298 sf 62.62% Impervious Runoff Depth=4.32"
Flow Length=208' Tc=5.5 min CN=89 Runoff=0.70 cfs 0.052 af

Subcatchment 249S: WS 249 Runoff Area=2,657 sf 85.40% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=0.32 cfs 0.025 af

Subcatchment 250S: WS 250 Runoff Area=13,455 sf 0.00% Impervious Runoff Depth=2.83"
Tc=5.0 min CN=74 Runoff=1.02 cfs 0.073 af

Subcatchment 251S: WS 251 Runoff Area=4,230 sf 76.17% Impervious Runoff Depth=4.65"
Tc=5.0 min CN=92 Runoff=0.50 cfs 0.038 af

Subcatchment 252S: WS 252 Runoff Area=3,060 sf 100.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.39 cfs 0.031 af

Subcatchment 253S: WS 253 Runoff Area=116,031 sf 85.00% Impervious Runoff Depth=4.87"
Flow Length=673' Slope=0.0100 '/' Tc=7.8 min CN=94 Runoff=13.06 cfs 1.081 af

Subcatchment 254S: WS 254 Runoff Area=80,647 sf 53.25% Impervious Runoff Depth=4.00"
Flow Length=396' Tc=21.4 min CN=86 Runoff=5.59 cfs 0.617 af

Subcatchment 255S: WS 255 Runoff Area=725 sf 85.38% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment 256S: WS 256 Runoff Area=710 sf 85.07% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment 257S: WS 257 Runoff Area=725 sf 85.38% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.09 cfs 0.007 af

Subcatchment 258S: WS 258 Runoff Area=962 sf 90.96% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.12 cfs 0.010 af

Subcatchment 259S: WS 259 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.21 cfs 0.017 af

Subcatchment 260S: WS 260 Runoff Area=1,634 sf 88.00% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.21 cfs 0.017 af

Subcatchment 261S: WS 261 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.21 cfs 0.017 af

Subcatchment 262S: WS 262 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.36 cfs 0.029 af

Subcatchment 263S: WS 263 Runoff Area=2,223 sf 90.42% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.28 cfs 0.023 af

Subcatchment 264S: WS 264 Runoff Area=2,611 sf 89.81% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment 265S: WS 265 Runoff Area=1,439 sf 89.09% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.015 af

Subcatchment 266S: WS 266 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.36 cfs 0.029 af

Subcatchment 267S: WS 267 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.36 cfs 0.029 af

Subcatchment 268S: WS 268 Runoff Area=1,690 sf 88.58% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.21 cfs 0.017 af

Subcatchment 269S: WS 269 Runoff Area=2,876 sf 88.91% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.36 cfs 0.029 af

Subcatchment 270S: WS 270 Runoff Area=2,166 sf 90.17% Impervious Runoff Depth>5.32"
Tc=5.0 min CN=98 Runoff=0.27 cfs 0.022 af

Subcatchment 271S: WS 271 Runoff Area=6,211 sf 63.11% Impervious Runoff Depth=4.32"
Flow Length=139' Tc=6.4 min CN=89 Runoff=0.67 cfs 0.051 af

Subcatchment 272S: WS 272 Runoff Area=2,532 sf 83.57% Impervious Runoff Depth=4.87"
Tc=5.0 min CN=94 Runoff=0.31 cfs 0.024 af

Reach 1R: REACH 1 Avg. Flow Depth=0.19' Max Vel=1.95 fps Inflow=3.95 cfs 0.430 af
n=0.050 L=152.0' S=0.0658 '/' Capacity=613.90 cfs Outflow=3.95 cfs 0.430 af

Reach 2R: REACH 2 Avg. Flow Depth=0.51' Max Vel=7.21 fps Inflow=11.53 cfs 1.797 af
18.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0213 '/' Capacity=45.97 cfs Outflow=11.53 cfs 1.797 af

Reach 3R: REACH 3 Avg. Flow Depth=0.34' Max Vel=2.75 fps Inflow=12.85 cfs 2.527 af
n=0.050 L=90.0' S=0.0623 '/' Capacity=597.56 cfs Outflow=12.83 cfs 2.527 af

Reach 4R: REACH 4 Avg. Flow Depth=0.50' Max Vel=3.30 fps Inflow=27.47 cfs 3.290 af
n=0.050 L=261.0' S=0.0536 '/' Capacity=554.33 cfs Outflow=27.50 cfs 3.290 af

Reach 5R: REACH 5 Avg. Flow Depth=0.76' Max Vel=14.89 fps Inflow=26.58 cfs 3.141 af
18.0" Round Pipe x 2.00 n=0.013 L=64.0' S=0.0625 '/' Capacity=52.52 cfs Outflow=26.60 cfs 3.141 af

Reach 6R: REACH 6 Avg. Flow Depth=0.27' Max Vel=7.90 fps Inflow=26.30 cfs 2.942 af
n=0.013 L=242.0' S=0.0475 '/' Capacity=2,006.73 cfs Outflow=26.17 cfs 2.942 af

Reach 7R: REACH 7 Avg. Flow Depth=0.94' Max Vel=5.61 fps Inflow=26.13 cfs 2.939 af
18.0" Round Pipe x 4.00 n=0.013 L=33.0' S=0.0076 '/' Capacity=36.57 cfs Outflow=26.11 cfs 2.939 af

Reach 8R: REACH 8 Avg. Flow Depth=0.50' Max Vel=2.83 fps Inflow=23.48 cfs 2.509 af
n=0.050 L=252.0' S=0.0397 '/' Capacity=476.78 cfs Outflow=23.41 cfs 2.509 af

Reach 9R: REACH 9 Avg. Flow Depth=0.38' Max Vel=13.54 fps Inflow=5.59 cfs 0.617 af
24.0" Round Pipe n=0.013 L=40.0' S=0.1000 '/' Capacity=71.54 cfs Outflow=5.59 cfs 0.617 af

Reach 10R: REACH 10 Avg. Flow Depth=0.53' Max Vel=12.71 fps Inflow=16.21 cfs 1.539 af
12.0" Round Pipe x 3.00 n=0.013 L=47.0' S=0.0745 '/' Capacity=29.17 cfs Outflow=16.22 cfs 1.539 af

Reach 11R: REACH 11 Avg. Flow Depth=0.35' Max Vel=2.62 fps Inflow=13.05 cfs 1.081 af
n=0.050 L=309.0' S=0.0550 '/' Capacity=561.39 cfs Outflow=12.58 cfs 1.081 af

Reach 12R: REACH 12 Avg. Flow Depth=0.05' Max Vel=0.61 fps Inflow=0.38 cfs 0.010 af
n=0.050 L=516.0' S=0.0368 '/' Capacity=459.28 cfs Outflow=0.16 cfs 0.010 af

Reach 13R: REACH 13 Avg. Flow Depth=0.01' Max Vel=0.32 fps Inflow=0.13 cfs 0.001 af
n=0.050 L=668.0' S=0.0359 '/' Capacity=453.67 cfs Outflow=0.01 cfs 0.001 af

Reach 15R: REACH 15 Avg. Flow Depth=0.02' Max Vel=0.32 fps Inflow=0.07 cfs 0.001 af
n=0.050 L=355.0' S=0.0366 '/' Capacity=458.01 cfs Outflow=0.02 cfs 0.001 af

Reach 16R: REACH 16 Avg. Flow Depth=0.04' Max Vel=0.29 fps Inflow=0.12 cfs 0.003 af
n=0.050 L=247.0' S=0.0121 '/' Capacity=263.78 cfs Outflow=0.05 cfs 0.003 af

Reach 17R: REACH 17 Avg. Flow Depth=0.58' Max Vel=2.67 fps Inflow=27.92 cfs 3.315 af
n=0.050 L=69.0' S=0.0286 '/' Capacity=404.42 cfs Outflow=27.94 cfs 3.315 af

Reach 18R: REACH 18 Avg. Flow Depth=0.06' Max Vel=0.81 fps Inflow=0.42 cfs 0.012 af
n=0.050 L=165.0' S=0.0485 '/' Capacity=527.02 cfs Outflow=0.32 cfs 0.012 af

Reach 19R: REACH 19 Avg. Flow Depth=0.06' Max Vel=0.74 fps Inflow=0.35 cfs 0.013 af
n=0.050 L=134.0' S=0.0448 '/' Capacity=506.46 cfs Outflow=0.26 cfs 0.013 af

Reach 20R: REACH 20 Avg. Flow Depth=0.37' Max Vel=2.18 fps Inflow=11.55 cfs 1.804 af
n=0.050 L=258.0' S=0.0349 '/' Capacity=447.03 cfs Outflow=11.53 cfs 1.804 af

Reach 21R: REACH 21 Avg. Flow Depth=0.06' Max Vel=0.95 fps Inflow=0.38 cfs 0.016 af
n=0.050 L=149.0' S=0.0738 '/' Capacity=650.32 cfs Outflow=0.34 cfs 0.016 af

Reach 22R: REACH 22 Avg. Flow Depth=0.04' Max Vel=0.54 fps Inflow=0.29 cfs 0.009 af
n=0.050 L=357.0' S=0.0336 '/' Capacity=438.81 cfs Outflow=0.12 cfs 0.009 af

Reach 23R: REACH 23 Avg. Flow Depth=0.06' Max Vel=0.54 fps Inflow=0.39 cfs 0.015 af
n=0.050 L=481.0' S=0.0249 '/' Capacity=378.04 cfs Outflow=0.18 cfs 0.015 af

Reach 24R: REACH 24 Avg. Flow Depth=0.05' Max Vel=0.55 fps Inflow=0.27 cfs 0.013 af
n=0.050 L=600.0' S=0.0317 '/' Capacity=425.92 cfs Outflow=0.14 cfs 0.013 af

Reach 28R: REACH 28 Avg. Flow Depth=0.21' Max Vel=1.71 fps Inflow=3.83 cfs 0.418 af
n=0.050 L=205.0' S=0.0463 '/' Capacity=515.24 cfs Outflow=3.79 cfs 0.418 af

Reach 29R: REACH 29 Avg. Flow Depth=1.04' Max Vel=7.93 fps Inflow=13.06 cfs 1.081 af
24.0" Round Pipe n=0.014 L=73.0' S=0.0137 '/' Capacity=24.59 cfs Outflow=13.05 cfs 1.081 af

Pond 001: DMH 001 Peak Elev=523.64' Storage=0.000 af Inflow=5.08 cfs 0.469 af
18.0" Round Culvert n=0.013 L=86.0' S=0.0099 '/' Outflow=5.08 cfs 0.469 af

Pond 1F: FOREBAY #1 Peak Elev=522.94' Storage=654 cf Inflow=6.14 cfs 0.549 af
Outflow=6.08 cfs 0.540 af

Pond 1P: INFIL POND #1 Peak Elev=522.73' Storage=7,813 cf Inflow=6.08 cfs 0.540 af
Discarded=0.06 cfs 0.122 af Primary=3.83 cfs 0.418 af Outflow=3.89 cfs 0.540 af

Pond 2F: FOREBAY #2 Peak Elev=532.36' Storage=223 cf Inflow=0.94 cfs 0.085 af
Outflow=0.90 cfs 0.081 af

Pond 2P: WET POND #2 Peak Elev=532.36' Storage=6,015 cf Inflow=2.24 cfs 0.210 af
Outflow=0.48 cfs 0.210 af

Pond 3F: FOREBAY #3 Peak Elev=514.95' Storage=142 cf Inflow=1.83 cfs 0.147 af
Outflow=1.84 cfs 0.145 af

Pond 3P: WET POND #3 Peak Elev=514.41' Storage=4,473 cf Inflow=1.84 cfs 0.145 af
Outflow=0.83 cfs 0.142 af

Pond 4F: FOREBAY #4 Peak Elev=503.23' Storage=647 cf Inflow=8.55 cfs 0.653 af
Outflow=8.72 cfs 0.644 af

Pond 4P: INFIL POND #4 Peak Elev=503.20' Storage=7,782 cf Inflow=8.72 cfs 0.644 af
Discarded=0.04 cfs 0.077 af Primary=3.99 cfs 0.567 af Outflow=4.03 cfs 0.644 af

Pond 005: DMH 005 Peak Elev=528.36' Storage=13 cf Inflow=4.65 cfs 0.518 af
18.0" Round Culvert n=0.013 L=115.0' S=0.0548 '/' Outflow=4.65 cfs 0.518 af

Pond 5F: FOREBAY #5 Peak Elev=494.39' Storage=445 cf Inflow=2.84 cfs 0.254 af
Outflow=2.86 cfs 0.248 af

Pond 5P: WET POND #5 Peak Elev=494.39' Storage=24,548 cf Inflow=8.23 cfs 0.696 af
Outflow=0.98 cfs 0.656 af

Pond 6F: FOREBAY #6 Peak Elev=494.39' Storage=477 cf Inflow=4.48 cfs 0.382 af
Outflow=4.47 cfs 0.375 af

Pond 6P: INFIL POND#6 Peak Elev=510.52' Storage=10,149 cf Inflow=5.53 cfs 0.976 af
Discarded=0.04 cfs 0.086 af Primary=3.10 cfs 0.890 af Outflow=3.14 cfs 0.976 af

Pond 7F: FOREBAY 7 Peak Elev=510.52' Storage=577 cf Inflow=4.75 cfs 0.383 af
Outflow=4.54 cfs 0.375 af

Pond 7P: UNDER GRND INFIL POND #7 Peak Elev=523.55' Storage=10,882 cf Inflow=6.47 cfs 0.749 af
Discarded=0.08 cfs 0.204 af Primary=3.18 cfs 0.545 af Outflow=3.27 cfs 0.749 af

Pond 8P: UNDER GRD INFIL POND #8 Peak Elev=543.89' Storage=4,777 cf Inflow=3.22 cfs 0.257 af
Discarded=0.05 cfs 0.117 af Primary=0.98 cfs 0.140 af Outflow=1.03 cfs 0.257 af

Pond 9P: PLUNGE POOL Peak Elev=529.06' Storage=289 cf Inflow=4.66 cfs 0.518 af
18.0" Round Culvert n=0.013 L=9.0' S=0.0667 '/' Outflow=4.65 cfs 0.518 af

Pond 10P: DRIP EDGE Peak Elev=523.01' Storage=128 cf Inflow=0.09 cfs 0.007 af
Discarded=0.01 cfs 0.006 af Primary=0.07 cfs 0.001 af Outflow=0.08 cfs 0.007 af

Pond 011: DMH 011 Inflow=0.97 cfs 0.075 af
Primary=0.97 cfs 0.075 af

Pond 11P: DRIP EDGE Peak Elev=533.01' Storage=107 cf Inflow=0.09 cfs 0.007 af
Discarded=0.01 cfs 0.006 af Primary=0.13 cfs 0.001 af Outflow=0.14 cfs 0.007 af

Pond 12P: DRIP EDGE Peak Elev=529.01' Storage=360 cf Inflow=0.35 cfs 0.028 af
Discarded=0.01 cfs 0.018 af Primary=0.38 cfs 0.010 af Outflow=0.39 cfs 0.028 af

Pond 13P: DRIP EDGE Peak Elev=527.01' Storage=128 cf Inflow=0.09 cfs 0.007 af
Discarded=0.00 cfs 0.005 af Primary=0.14 cfs 0.002 af Outflow=0.14 cfs 0.007 af

Pond 14P: DRIP EDGE Peak Elev=531.04' Storage=104 cf Inflow=0.12 cfs 0.010 af
Discarded=0.01 cfs 0.007 af Primary=0.12 cfs 0.003 af Outflow=0.13 cfs 0.010 af

Pond 15P: DRIP EDGE Peak Elev=531.01' Storage=232 cf Inflow=0.21 cfs 0.017 af
Discarded=0.01 cfs 0.011 af Primary=0.32 cfs 0.006 af Outflow=0.33 cfs 0.017 af

Pond 16P: DRIP EDGE Peak Elev=526.74' Storage=188 cf Inflow=0.21 cfs 0.017 af
Discarded=0.03 cfs 0.013 af Primary=0.29 cfs 0.004 af Outflow=0.31 cfs 0.017 af

Pond 17P: DRIP EDGE Peak Elev=510.48' Storage=205 cf Inflow=0.21 cfs 0.017 af
Discarded=0.01 cfs 0.010 af Primary=0.27 cfs 0.007 af Outflow=0.27 cfs 0.017 af

Pond 18P: DRIP EDGE Peak Elev=505.02' Storage=385 cf Inflow=0.36 cfs 0.029 af
Discarded=0.01 cfs 0.017 af Primary=0.42 cfs 0.012 af Outflow=0.43 cfs 0.029 af

Pond 19P: DRIP EDGE Peak Elev=505.02' Storage=254 cf Inflow=0.28 cfs 0.023 af
Discarded=0.00 cfs 0.010 af Primary=0.35 cfs 0.013 af Outflow=0.35 cfs 0.023 af

Pond 20P: DRIP EDGE Peak Elev=506.01' Storage=322 cf Inflow=0.33 cfs 0.027 af
Discarded=0.01 cfs 0.018 af Primary=0.32 cfs 0.009 af Outflow=0.33 cfs 0.027 af

Pond 21P: DRIP EDGE Peak Elev=498.37' Storage=188 cf Inflow=0.18 cfs 0.015 af
Discarded=0.00 cfs 0.007 af Primary=0.20 cfs 0.007 af Outflow=0.20 cfs 0.015 af

Pond 22P: DRIP EDGE Peak Elev=498.02' Storage=383 cf Inflow=0.36 cfs 0.029 af
Discarded=0.00 cfs 0.014 af Primary=0.38 cfs 0.015 af Outflow=0.38 cfs 0.029 af

Pond 23P: DRIP EDGE Peak Elev=501.02' Storage=383 cf Inflow=0.36 cfs 0.029 af
Discarded=0.00 cfs 0.013 af Primary=0.38 cfs 0.016 af Outflow=0.38 cfs 0.029 af

Pond 24P: DRIP EDGE Peak Elev=501.05' Storage=233 cf Inflow=0.21 cfs 0.017 af
Discarded=0.00 cfs 0.009 af Primary=0.29 cfs 0.009 af Outflow=0.29 cfs 0.017 af

Pond 25P: DRIP EDGE Peak Elev=501.06' Storage=385 cf Inflow=0.36 cfs 0.029 af
Discarded=0.00 cfs 0.014 af Primary=0.39 cfs 0.015 af Outflow=0.40 cfs 0.029 af

Pond 26P: DRIP EDGE Peak Elev=509.02' Storage=257 cf Inflow=0.27 cfs 0.022 af
Discarded=0.00 cfs 0.009 af Primary=0.27 cfs 0.013 af Outflow=0.28 cfs 0.022 af

Pond 28P: UNDER GRND INFIL POND #28 Peak Elev=531.41' Storage=4,066 cf Inflow=2.36 cfs 0.213 af
Discarded=0.07 cfs 0.096 af Primary=0.49 cfs 0.117 af Outflow=0.56 cfs 0.213 af

Pond 101: CB 101 Peak Elev=515.15' Storage=21 cf Inflow=0.47 cfs 0.036 af
12.0" Round Culvert n=0.013 L=31.0' S=0.0048 '/' Outflow=0.47 cfs 0.036 af

Pond 102: CB 102 Peak Elev=524.51' Storage=0.000 af Inflow=1.26 cfs 0.121 af
18.0" Round Culvert n=0.013 L=43.0' S=0.0093 '/' Outflow=1.26 cfs 0.121 af

Pond 104: CB 104 Peak Elev=515.14' Storage=21 cf Inflow=0.24 cfs 0.018 af
12.0" Round Culvert n=0.013 L=36.0' S=0.0050 '/' Outflow=0.24 cfs 0.018 af

Pond 105: CB 124 Peak Elev=543.90' Storage=0.000 af Inflow=0.58 cfs 0.047 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0050 '/' Outflow=0.57 cfs 0.047 af

Pond 106: CB 106 Peak Elev=515.13' Storage=24 cf Inflow=1.62 cfs 0.132 af
12.0" Round Culvert n=0.013 L=11.0' S=0.0045 '/' Outflow=1.61 cfs 0.131 af

Pond 107: CB 107 Peak Elev=500.65' Storage=18 cf Inflow=3.70 cfs 0.313 af
12.0" Round Culvert n=0.013 L=63.0' S=0.0302 '/' Outflow=3.70 cfs 0.313 af

Pond 108: CB 108 Peak Elev=500.83' Storage=14 cf Inflow=1.65 cfs 0.139 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0205 '/' Outflow=1.65 cfs 0.139 af

Pond 109: CB 109 Peak Elev=498.89' Storage=21 cf Inflow=4.14 cfs 0.351 af
12.0" Round Culvert n=0.013 L=22.0' S=0.0318 '/' Outflow=4.14 cfs 0.351 af

Pond 110: CB 110 Peak Elev=497.43' Storage=13 cf Inflow=4.48 cfs 0.382 af
18.0" Round Culvert n=0.013 L=29.0' S=0.0483 '/' Outflow=4.48 cfs 0.382 af

Pond 111: CB 111 Peak Elev=494.39' Storage=24 cf Inflow=2.84 cfs 0.254 af
18.0" Round Culvert n=0.013 L=46.0' S=0.0100 '/' Outflow=2.84 cfs 0.254 af

Pond 112: CB 112 Peak Elev=494.40' Storage=21 cf Inflow=2.60 cfs 0.230 af
12.0" Round Culvert n=0.013 L=20.0' S=0.0100 '/' Outflow=2.60 cfs 0.230 af

Pond 113: CB 113 Peak Elev=494.68' Storage=21 cf Inflow=2.08 cfs 0.178 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0117 '/' Outflow=2.08 cfs 0.178 af

Pond 114: CB 114 Peak Elev=517.81' Storage=0.000 af Inflow=1.35 cfs 0.107 af
12.0" Round Culvert n=0.013 L=184.0' S=0.0200 '/' Outflow=1.35 cfs 0.107 af

Pond 115: CB 115 Peak Elev=514.26' Storage=11 cf Inflow=2.21 cfs 0.180 af
12.0" Round Culvert n=0.013 L=73.0' S=0.0300 '/' Outflow=2.21 cfs 0.180 af

Pond 116: CB 116 Peak Elev=513.21' Storage=26 cf Inflow=4.74 cfs 0.383 af
12.0" Round Culvert n=0.013 L=61.0' S=0.0513 '/' Outflow=4.75 cfs 0.383 af

Pond 117: CB 117 Peak Elev=514.27' Storage=0.000 af Inflow=1.74 cfs 0.138 af
12.0" Round Culvert n=0.013 L=138.0' S=0.0163 '/' Outflow=1.74 cfs 0.138 af

Pond 118: CB 118 Peak Elev=523.57' Storage=29 cf Inflow=2.23 cfs 0.167 af
12.0" Round Culvert n=0.013 L=8.0' S=0.0313 '/' Outflow=2.21 cfs 0.167 af

Pond 119: CB 119 Peak Elev=517.68' Storage=0.000 af Inflow=0.57 cfs 0.042 af
12.0" Round Culvert n=0.013 L=186.0' S=0.0200 '/' Outflow=0.57 cfs 0.042 af

Pond 120: CB 120 Peak Elev=543.92' Storage=0.000 af Inflow=0.67 cfs 0.048 af
12.0" Round Culvert n=0.013 L=23.0' S=0.0052 '/' Outflow=0.65 cfs 0.048 af

Pond 121: CB 121 Peak Elev=543.91' Storage=0.000 af Inflow=1.78 cfs 0.136 af
12.0" Round Culvert n=0.013 L=18.0' S=0.0050 '/' Outflow=1.76 cfs 0.136 af

Pond 122: CB 122 Peak Elev=543.89' Storage=0.000 af Inflow=0.72 cfs 0.053 af
12.0" Round Culvert n=0.013 L=44.0' S=0.0050 '/' Outflow=0.71 cfs 0.053 af

Pond 123: CB 123 Peak Elev=543.89' Storage=0.000 af Inflow=0.77 cfs 0.067 af
12.0" Round Culvert n=0.013 L=79.0' S=0.0051 '/' Outflow=0.77 cfs 0.067 af

Pond 124: CB 124 Peak Elev=524.32' Storage=13 cf Inflow=3.26 cfs 0.305 af
18.0" Round Culvert n=0.013 L=107.0' S=0.0084 '/' Outflow=3.26 cfs 0.305 af

Pond 125: CB 124 Peak Elev=524.81' Storage=10 cf Inflow=2.02 cfs 0.184 af
18.0" Round Culvert n=0.013 L=90.0' S=0.0067 '/' Outflow=2.02 cfs 0.184 af

Pond 126: CB 126 Inflow=0.97 cfs 0.075 af
Primary=0.97 cfs 0.075 af

Pond 127: CB 127 Inflow=0.31 cfs 0.024 af
Primary=0.31 cfs 0.024 af

Pond 128: YARD DRAIN Peak Elev=531.42' Storage=1 cf Inflow=0.67 cfs 0.060 af
12.0" Round Culvert n=0.013 L=12.0' S=0.0125 '/' Outflow=0.67 cfs 0.060 af

Link AP-1: Analysis Point #1 Inflow=0.17 cfs 0.020 af
Primary=0.17 cfs 0.020 af

Link AP-2: Analysis Point #2 Inflow=1.61 cfs 0.213 af
Primary=1.61 cfs 0.213 af

Link AP-3: Analysis Point #3 Inflow=0.95 cfs 0.085 af
Primary=0.95 cfs 0.085 af

Link AP-4: Analysis Point #4 Inflow=32.59 cfs 4.667 af
Primary=32.59 cfs 4.667 af

Link AP-5: Analysis Point #5 Inflow=45.49 cfs 8.730 af
Primary=45.49 cfs 8.730 af

Link AP-6: Analysis Point #6 Inflow=20.40 cfs 4.374 af
Primary=20.40 cfs 4.374 af

Total Runoff Area = 69.496 ac Runoff Volume = 19.062 af Average Runoff Depth = 3.29"
70.17% Pervious = 48.768 ac 29.83% Impervious = 20.728 ac

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	71.996 degrees West
Latitude	43.417 degrees North
Elevation	0 feet
Date/Time	Tue, 16 Jan 2018 15:41:55 -0500

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.82	1.02	**1yr**	0.70	0.95	1.17	1.46	1.81	2.24	2.54	**1yr**	1.98	2.44	2.83	3.49	4.03	**1yr**
2yr	0.31	0.48	0.59	0.78	0.99	1.23	**2yr**	0.85	1.12	1.42	1.75	2.15	2.63	2.98	**2yr**	2.33	2.87	3.33	3.98	4.57	**2yr**
5yr	0.37	0.57	0.72	0.97	1.24	1.56	**5yr**	1.07	1.42	1.79	2.20	2.68	3.26	3.73	**5yr**	2.88	3.59	4.16	4.90	5.56	**5yr**
10yr	0.42	0.66	0.83	1.13	1.47	1.86	**10yr**	1.27	1.69	2.14	2.63	3.18	3.83	4.43	**10yr**	3.39	4.26	4.93	5.74	6.46	**10yr**
25yr	0.50	0.79	1.01	1.39	1.84	2.35	**25yr**	1.59	2.15	2.70	3.31	3.99	4.74	5.55	**25yr**	4.19	5.34	6.17	7.08	7.88	**25yr**
50yr	0.57	0.91	1.17	1.63	2.19	2.80	**50yr**	1.89	2.57	3.23	3.94	4.72	5.57	6.59	**50yr**	4.93	6.33	7.31	8.30	9.16	**50yr**
100yr	0.64	1.04	1.35	1.91	2.60	3.35	**100yr**	2.24	3.07	3.87	4.70	5.59	6.56	7.82	**100yr**	5.81	7.52	8.67	9.73	10.64	**100yr**
200yr	0.74	1.21	1.57	2.25	3.09	3.99	**200yr**	2.67	3.68	4.61	5.59	6.63	7.72	9.29	**200yr**	6.84	8.93	10.28	11.42	12.38	**200yr**
500yr	0.90	1.47	1.92	2.78	3.89	5.05	**500yr**	3.36	4.68	5.83	7.04	8.29	9.59	11.68	**500yr**	8.49	11.23	12.89	14.12	15.12	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.21	0.32	0.39	0.53	0.65	0.81	**1yr**	0.56	0.79	0.95	1.27	1.65	1.94	2.27	**1yr**	1.72	2.19	2.54	2.98	3.27	**1yr**
2yr	0.30	0.46	0.57	0.77	0.95	1.12	**2yr**	0.82	1.10	1.29	1.68	2.15	2.55	2.86	**2yr**	2.25	2.75	3.20	3.85	4.41	**2yr**
5yr	0.34	0.52	0.65	0.89	1.14	1.33	**5yr**	0.98	1.30	1.52	1.96	2.48	2.99	3.37	**5yr**	2.65	3.24	3.75	4.47	5.08	**5yr**
10yr	0.37	0.57	0.71	0.99	1.28	1.49	**10yr**	1.11	1.45	1.71	2.20	2.74	3.38	3.80	**10yr**	2.99	3.66	4.21	4.99	5.66	**10yr**
25yr	0.41	0.63	0.78	1.12	1.47	1.69	**25yr**	1.27	1.65	2.01	2.53	3.16	3.95	4.46	**25yr**	3.50	4.29	4.89	5.75	6.50	**25yr**
50yr	0.44	0.66	0.83	1.19	1.60	1.84	**50yr**	1.38	1.80	2.25	2.82	3.48	4.47	5.03	**50yr**	3.96	4.84	5.48	6.35	7.21	**50yr**
100yr	0.46	0.69	0.86	1.24	1.71	2.01	**100yr**	1.47	1.96	2.54	3.24	3.88	5.05	5.66	**100yr**	4.47	5.44	6.10	6.98	7.96	**100yr**
200yr	0.47	0.70	0.89	1.29	1.80	2.17	**200yr**	1.56	2.12	2.86	3.63	4.31	5.74	6.35	**200yr**	5.08	6.10	6.78	7.68	8.80	**200yr**
500yr	0.49	0.73	0.94	1.36	1.94	2.36	**500yr**	1.67	2.31	3.34	4.23	4.95	6.79	7.41	**500yr**	6.01	7.13	7.76	8.64	10.00	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.45	0.55	0.74	0.91	1.08	**1yr**	0.79	1.06	1.21	1.58	1.94	2.50	2.87	**1yr**	2.21	2.76	3.22	3.83	4.45	**1yr**
2yr	0.34	0.53	0.65	0.88	1.08	1.24	**2yr**	0.94	1.21	1.39	1.80	2.29	2.75	3.12	**2yr**	2.43	3.00	3.50	4.16	4.74	**2yr**
5yr	0.41	0.62	0.78	1.06	1.35	1.59	**5yr**	1.17	1.55	1.80	2.28	2.89	3.54	4.12	**5yr**	3.13	3.97	4.61	5.33	6.03	**5yr**
10yr	0.48	0.75	0.92	1.29	1.67	1.96	**10yr**	1.44	1.92	2.22	2.72	3.43	4.29	5.12	**10yr**	3.80	4.92	5.68	6.47	7.28	**10yr**
25yr	0.62	0.95	1.18	1.68	2.21	2.62	**25yr**	1.91	2.56	2.93	3.50	4.36	5.52	6.80	**25yr**	4.89	6.54	7.55	8.38	9.33	**25yr**
50yr	0.75	1.14	1.42	2.04	2.75	3.26	**50yr**	2.38	3.19	3.62	4.23	5.25	6.70	8.44	**50yr**	5.93	8.11	9.38	10.23	11.27	**50yr**
100yr	0.92	1.39	1.74	2.51	3.44	4.08	**100yr**	2.97	3.99	4.48	5.30	6.32	8.13	10.47	**100yr**	7.20	10.07	11.63	12.53	13.62	**100yr**
200yr	1.12	1.68	2.13	3.08	4.30	5.12	**200yr**	3.71	5.01	5.54	6.44	8.05	9.88	13.02	**200yr**	8.74	12.52	14.42	15.36	16.48	**200yr**
500yr	1.46	2.17	2.79	4.06	5.77	6.93	**500yr**	4.98	6.78	7.34	8.35	10.39	12.76	17.41	**500yr**	11.29	16.74	19.25	20.15	21.24	**500yr**

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Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-202 (DMH 001)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 4.03 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 14.45 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 18.95 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.33 ft. 3.92 in.

Use 3" minimum D_{50} ==> D50 = 3.9 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 9.8 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-205 (X3) (CROSSING)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 5.7 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 16.08 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 20.58 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.51 ft. 6.15 in.

Use 3" minimum D_{50} ==> D50 = 6.1 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 15.4 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-206
Pipe Size (Do): 24 in. 2 ft
Q25 (cfs): 10.97 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 20.98 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 26.98 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.90 ft. 10.80 in.

Use 3" minimum D_{50} ==> D50 = 10.8 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 27.0 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 6 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: WS 253
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 10.97 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 21.25 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 25.75 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 1.20 ft. 14.40 in.

Use 3" minimum D_{50} ==> D50 = 14.4 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 36.0 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-207 (X4) (CROSSING)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 5.305 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 15.70 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 20.20 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.47 ft. 5.60 in.

Use 3" minimum D_{50} ==> D50 = 5.6 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 14.0 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-208 (X2) (CROSSING)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 10.775 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 21.06 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 25.56 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 1.17 ft. 14.07 in.

Use 3" minimum D_{50} ==> D50 = 14.1 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 35.2 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-226 (CB 116)
Pipe Size (Do): 12 in. 1 ft
Q25 (cfs): 3.94 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 14.09 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La = offset
2.25

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 17.09 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.48 ft. 5.71 in.

Use 3" minimum D_{50} ==> D50 = 5.7 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 14.3 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 3 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-250 (DMH 002)(POND 7)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 1.87 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 12.33 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La = offset
2.25

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 16.83 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.12 ft. 1.44 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-253 (DMH 006) (POND 28)
Pipe Size (Do): 12 in. 1 ft
Q25 (cfs): 0.27 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 7.49 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 10.49 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.01 ft. 0.18 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 3 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-254 (DMH 008)(POND 8)
Pipe Size (Do): 12 in. 1 ft
Q25 (cfs): 0.66 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 8.19 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 11.19 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.05 ft. 0.56 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 3 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-221 CB 111)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 2.26 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 12.71 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =
OFFSET

Apron Width (W_2) 9.45

TW<Do W_2 = 3Do + La
W_2 = 17.21 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.15 ft. 1.85 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-220 (CB 110)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 3.7 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 14.13 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =
OFFSET

Apron Width (W_2) 9.45

TW<Do W_2 = 3Do + La
W_2 = 18.63 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.29 ft. 3.51 in.

Use 3" minimum D_{50} ==> D50 = 3.5 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 8.8 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-255 (OS 4)(POND 6)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 2.17 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 12.63 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 17.13 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.15 ft. 1.75 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-256 (OS 9)(POND 5)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 0.86 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 11.34 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 15.84 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.04 ft. 0.53 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: RD POND #2
Pipe Size (Do): 12 in. 1 ft
Q25 (cfs): 1.36 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 9.45 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 12.45 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.12 ft. 1.43 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 3 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-257 (OS 10)(POND 4)
Pipe Size (Do): 18 in. 1.5 ft
Q25 (cfs): 3.38 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 13.81 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 18.31 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.26 ft. 3.12 in.

Use 3" minimum D_{50} ==> D50 = 3.1 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.8 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 4.5 ft.

Project Name:	**New London Place**	JBE #:	17190
Town/City:	New London, NH	Date:	6/27/2018

Rip Rap Outlet Protection Calculation

Outlet Designation: P-216 (CB 106)
Pipe Size (Do): 12 in. 1 ft
Q25 (cfs): 1.36 cfs
Tailwater Elevation (TW): 0.25 if TW = 0, assume 3"

Apron Length (La):

TW<Do YES La = 1.8Q/Do^1.5 + 7Do
La = 9.45 ft

TW>Do No La = 3.0Q/Do^1.5 + 7Do
La =

Apron Width (W_2)

TW<Do W_2 = 3Do + La
W_2 = 12.45 ft.

TW>Do W_2 = 3Do + .4La
W_2 = ft.

Rip-Rap Diameter (D_{50}):

D_{50}: D_{50} = 0.02Q^1.3/TW*Do
D_{50} = 0.12 ft. 1.43 in.

Use 3" minimum D_{50} ==> D50 = 3.0 in.

Rip-Rap Thickness (T):

T = 2.5*D_{50}
T = 7.5 in.

Apron Width (W_1):

W_1 = 3*Do
W_1 = 3 ft.

SOIL SURVEY REPORT
Jones and Beach Engineers
Parkside Road, New London, NH

1. MAPPING STANDARDS

Site-Specific Soil Mapping Standards for New Hampshire and Vermont. SSSNNE Special Publication No. 3, Version 4.0, December 2012. This map product is within the technical standards of the National Cooperative Soil Survey. It is a special product, intended for the site specific soil survey. It was produced by a professional soil scientist and is not a product of the USDA Natural Resource Conservation Service.

2. DATE SOIL MAP PRODUCED
October 14, 2017

3. GEOGRAPHIC LOCATION AND SIZE OF SITE
The property consists of approximately 45 acres. The site is covered by mature woodlands, and several wetland areas. The property is bordered by the New London hospital to the north, a condominium complex to the west, power line easement to the east and Parkside Road to the south

4. PURPOSE OF THE SOIL MAP
The preparation of this map was requested by Jones and Beach Engineers. The purpose was to meet the requirements of the NH Alteration of Terrain.

5. SOIL IDENTIFICATION LEGEND

SYMBOL	SOIL TAXONOMIC NAME	Hydrologic Soil Group
142	Monadnock	B
78	Peru	C
99	Tunbridge	C
646/P	Pillsbury Poorly Drained	C

SOIL MAP UNIT DESCRIPTIONS

142 The Monadnock series consists of very deep, well drained soils that formed in loamy over sandy melt-out till on hills and mountains in glaciated uplands. Estimated saturated hydraulic conductivity is moderately high or high in the mineral solum and high or very high in the substratum.

8 Continental Dr Bldg 2 Unit H, Exeter, NH 03833-7526
Ph (603) 778 0644 / *Fax* (603) 778 0654
info@gesinc.biz
www.gesinc.biz

78 The Peru series consists of moderately well drained soils that formed in loamy lodgment till on hills and mountains in glaciated uplands. They are moderately deep to a dense substratum and very deep to bedrock. Estimated saturated hydraulic conductivity is moderately high or high in the solum, and moderately low or moderately high in the dense substratum.

99 The Tunbridge series consists of moderately deep, well drained soils on glaciated uplands. They formed in loamy supraglacial till. Saturated hydraulic conductivity is moderately high or high throughout the mineral soil.

646/P The Tunbridge series consists of moderately deep, well drained soils on glaciated uplands. They formed in loamy supraglacial till. Saturated hydraulic conductivity is moderately high or high throughout the mineral soil.

6. RESPONSIBLE SOIL SCIENTIST

Luke D. Hurley, C.S.S.

7. OTHER DISTINGUISHING FEATURES OF SITE
No distinguishing features were noted.

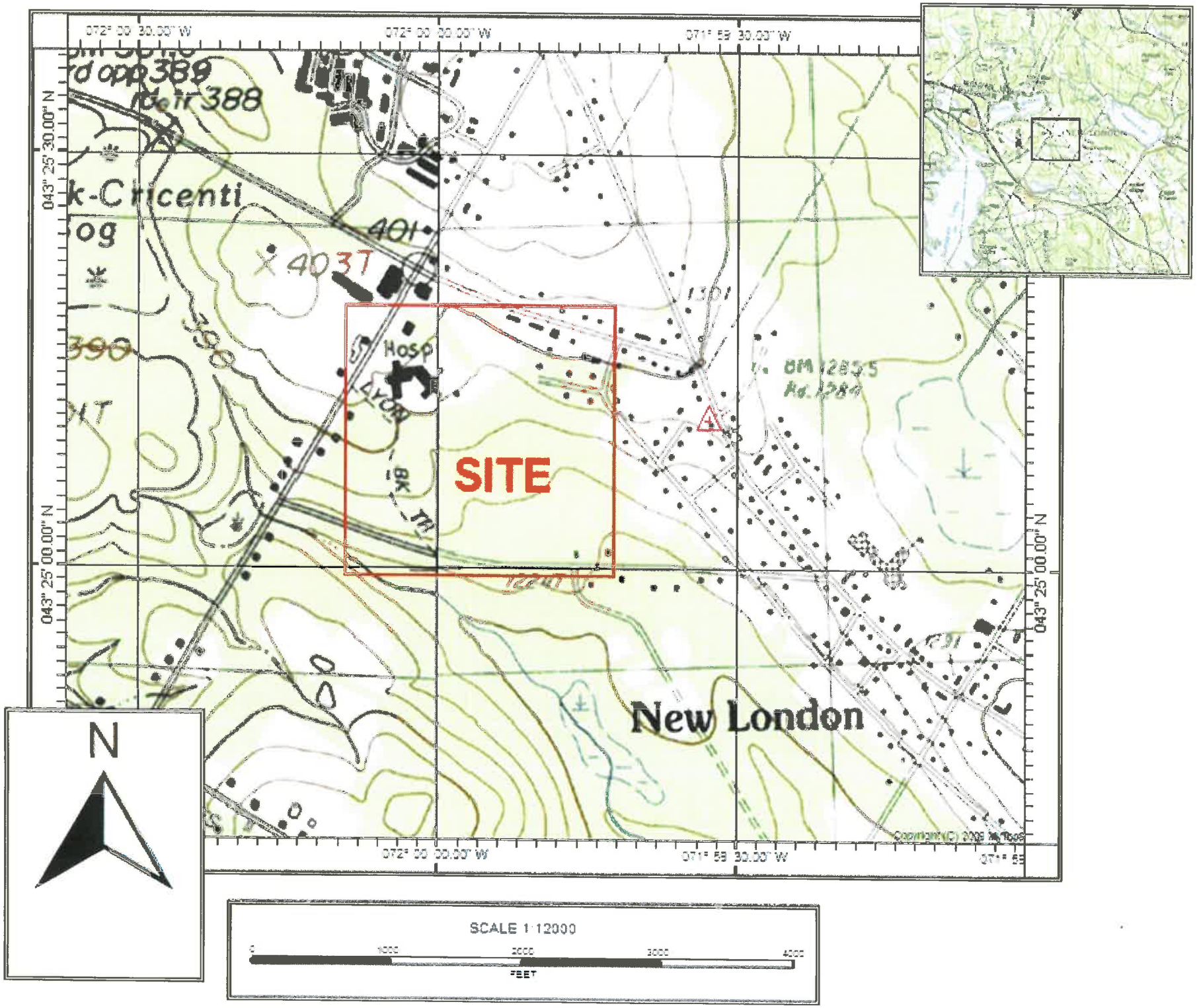
8. MAXIMUM SIZE OF LIMITING INCLUSIONS

No limiting inclusions were mapped

9. SPECIAL FEATURE SYMBOLS

No special feature symbols were used.

STATE OF NEW HAMPSHIRE
LUKE D HURLEY
NO. 0956
CERTIFIED SOIL SCIENTIST
6/28/18


SITE
New London
Hosp
401
388
390
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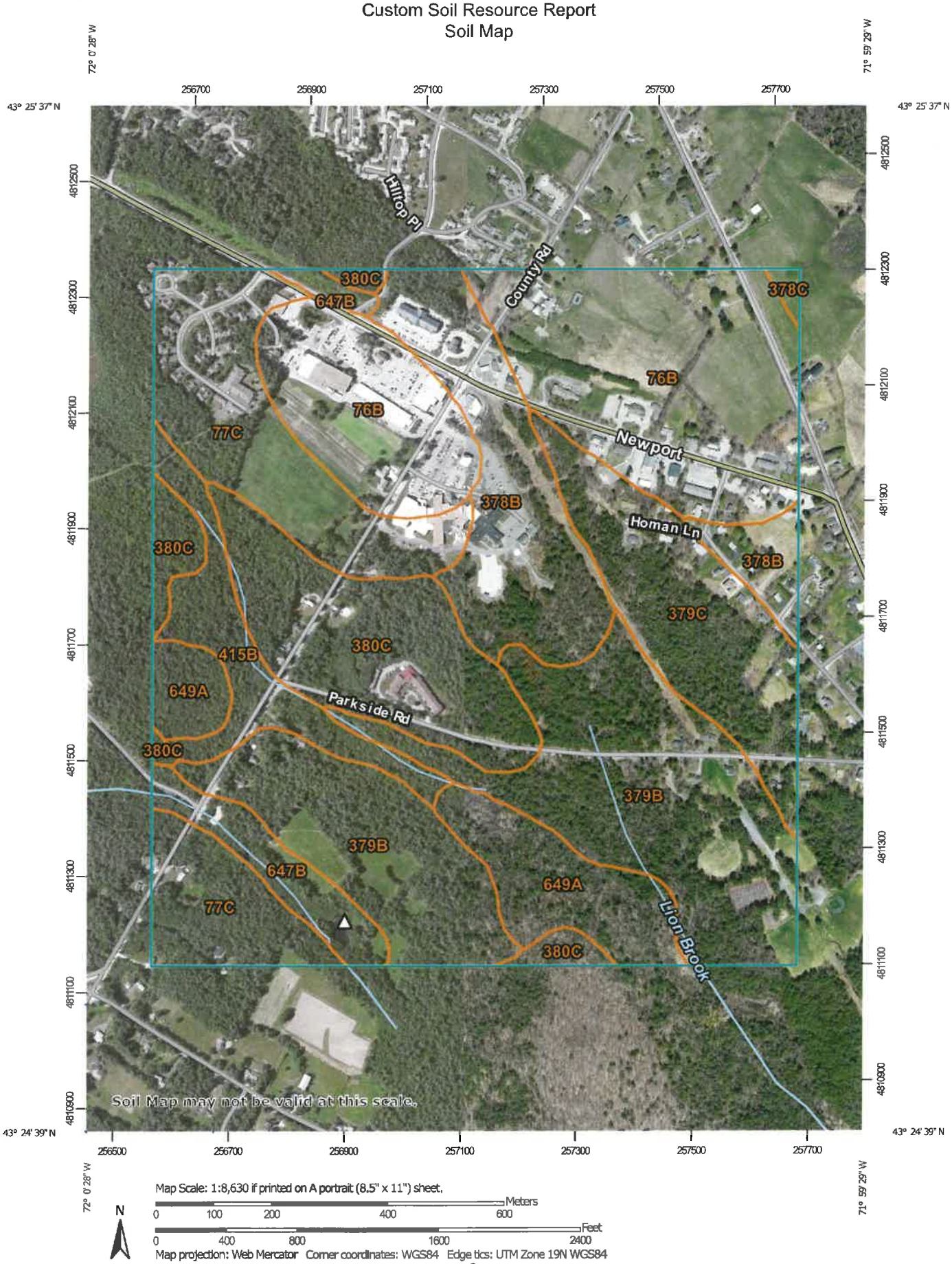
SCALE 1:12000
FEET

Custom Soil Resource Report
Soil Map



Map Scale: 1:8,630 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 400 800 1600 2400

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Merrimack and Belknap Counties, New Hampshire
Survey Area Data: Version 22, Sep 11, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 8, 2011—Oct 8, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
76B	Marlow fine sandy loam, 3 to 8 percent slopes	70.0	21.0%
77C	Marlow fine sandy loam, 8 to 15 percent slopes, very stony	42.8	12.9%
378B	Peru fine sandy loam, 3 to 8 percent slopes	35.0	10.5%
378C	Peru fine sandy loam, 8 to 15 percent slopes	0.8	0.2%
379B	Peru fine sandy loam, 0 to 8 percent slopes, very stony	72.5	21.8%
379C	Peru fine sandy loam, 8 to 15 percent slopes, very stony	27.9	8.4%
380C	Tunbridge-Lyman-Becket complex, 8 to 15 percent slopes, very stony	37.4	11.3%
415B	Moosilauke fine sandy loam, 3 to 8 percent slopes, very stony	15.0	4.5%
647B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	10.6	3.2%
649A	Peacham mucky peat, 0 to 8 percent slopes, very stony	20.6	6.2%
Totals for Area of Interest		**332.6**	**100.0%**

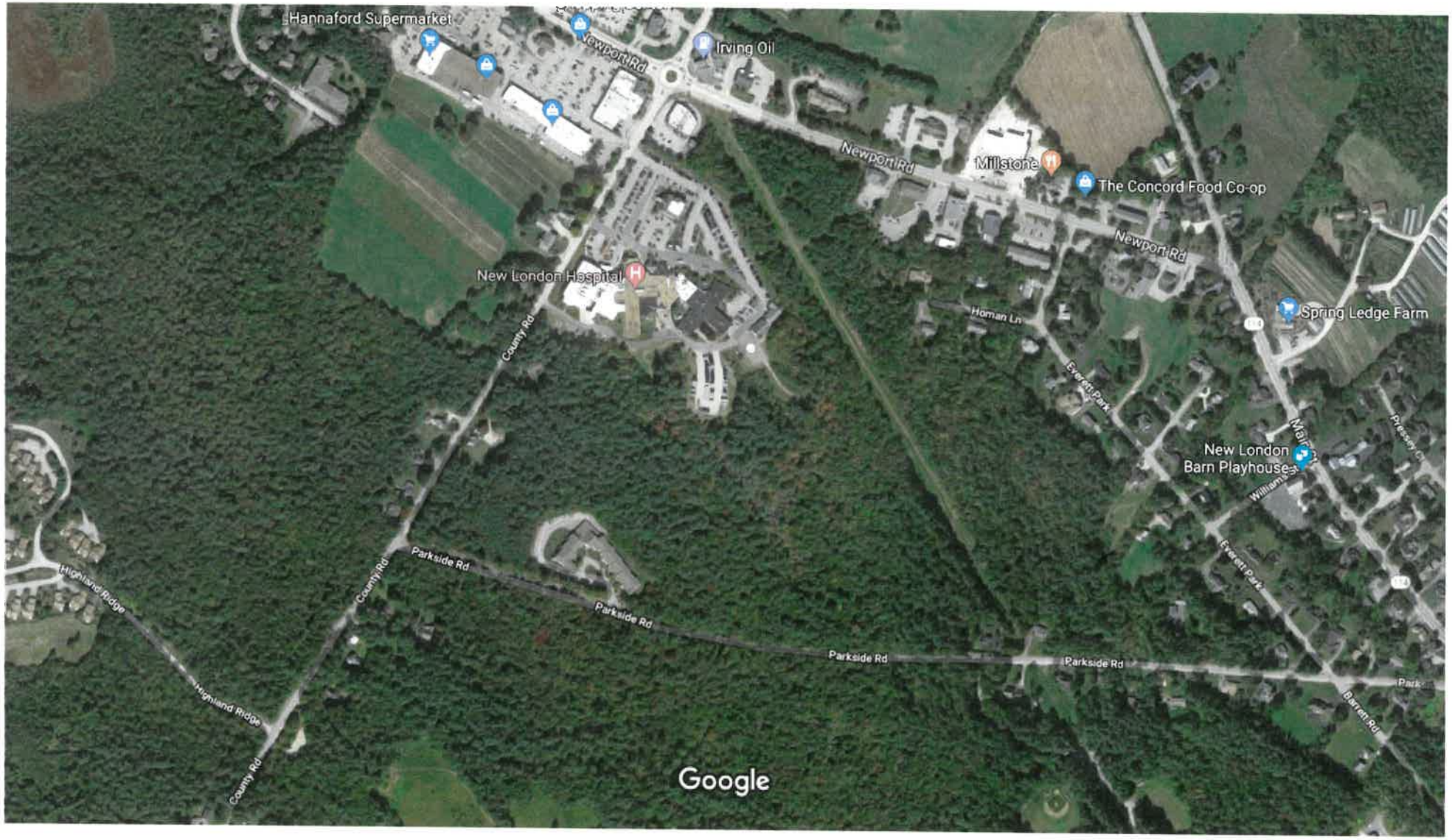
Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a

Google Maps New London



Imagery ©2018 Google, Map data ©2018 Google 200 ft

Photo Log

New London Place
New London, NH
JBE Project No. 17190

Photo 1 – New London Hospital looking towards site

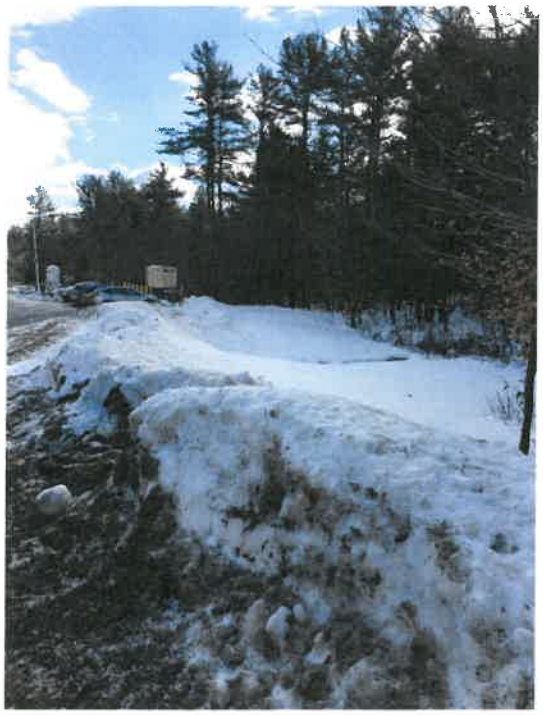


Photo 2 – On site trail system

Photo 3 – Parkside Road

Photo 4 – Corner of Parkside Road and County Road

STORMWATER MANAGEMENT OPERATION AND MAINTENANCE MANUAL

New London Place
Tax Map 72 Lot 17
County Road & Parkside Road
New London, NH 03257

Prepared for:

New London Hospital Association
273 County Road
New London, NH 03257

Prepared by:
Jones & Beach Engineers, Inc.
85 Portsmouth Avenue
P.O. Box 219
Stratham, NH 03885
(603) 772-4746

July 3rd, 2018
JBE Project No. 17190

Inspection and Maintenance of Facilities and Property

A. Maintenance of Common Facilities or Property

1. The Property Owner (New London Hospital Association) is responsible for maintenance of all stormwater infrastructure associated with this site. This includes all temporary and permanent stormwater and erosion control facilities both during and after construction.

B. General Inspection and Maintenance Requirements

1. The Owner shall perform all inspections and maintenance with greater than annual frequency as required by this report.

2. Permanent stormwater and sediment and erosion control facilities to be maintained on the site include, but are not limited to, the following:

   a. Culverts
   b. Erosion
   c. Vegetation and landscaping
   d. Catch basins and drain manholes
   e. Riprap inlet and outlet protection aprons
   f. Wet Detention Pond
   g. Underground Infiltration Basin
   h. In-ground Infiltration Basin
   i. House Roof Drip Edges

2. Maintenance of permanent measures shall follow the following schedule:

   a. **Culverts: Inspection** of culvert inlets and outlets at least **once per month** during the rainy season (March to November). Any debris is to be removed and disposed of properly.

   b. **Erosion: Annual inspection** of the site for erosion, destabilization, settling, and sloughing. Any needed repairs are to be conducted immediately.

   c. **Vegetation and Landscaping: Annual inspection** of site's vegetation and landscaping. Any areas that are bare shall be reseeded and mulched with hay or, if the case is extreme, loamed and seeded or sodded to ensure adequate vegetative cover. Landscape specimens shall be replaced in kind, if they are found to be dead or dying.

   d. **Catch basins and Drain Manholes: Annual inspection** of catch basins and drain manholes to determine if they need to be cleaned. Catch basins are to be cleaned if the depth of deposits is greater than one-third the depth from the basin bottom to the invert of the lowest pipe or opening into or out of the basin. If a catch basin significantly exceeds the one-third depth standard during the inspection, then it should be cleaned more frequently. If woody debris or trash accumulates in a catch basin, then it should be cleaned on a weekly basis. Manholes should be cleaned of any material upon inspection. Catch basins and manholes can be cleaned either manually or by specially designed equipment including, but not limited to, bucket loaders and vacuum pumps. Before any materials can be disposed, it is necessary to perform a detailed chemical analysis to determine if the materials meet the EPA criteria for hazardous waste. This will help determine how the materials should be stored, treated, and disposed.

   e. **Riprap**: Rock riprap should be **inspected annually** and after every major storm event in order to ensure that it has not been displaced, undermined, or otherwise damaged. Displaced rock should be replaced, or additional rock added in order to maintain the structure(s) in their undamaged state. Woody vegetation should not be allowed to become established in riprap areas, and/or any debris removed from the void spaces between the rocks. If the riprap is adjacent to a stream or other waterbody, the water should be kept clear of obstructions, debris, and sediment deposits.

   f. **Wet Detention Basin**:

      <u>First Year Post-Construction</u>: inspection frequency should be after every major storm in the first year following construction.

      - Watering plants as necessary during the first growing season.

- Re-vegetating poorly established areas as necessary.
- Treating diseased vegetation as necessary.
- Quarterly inspection of soil and repairing eroded areas, especially on slopes.
- Checking inlets, outlets, and overflow spillway for blockage, structural integrity, and evidence of erosion.

Post-Construction: inspection frequency should be at least every 6 months thereafter, as per USEPA good house-keeping requirements. Inspection frequency can be reduced to annual following 2 years of monitoring that indicates the rate of sediment accumulation is less than the cleaning criteria listed below. Inspections should focus on:

- Checking inlets, outlets, and overflow spillway for blockage, structural integrity, and evidence of erosion.
- Removal of decaying vegetation, litter, and debris.
- Mow grass areas periodically so that grass does not exceed 4" in height.

Cleaning Criteria for all Sedimentation Forebays: Sediment should be removed from the sedimentation chamber (forebay) when it accumulates to a depth of more than 12 inches (30 cm) or 10 percent of the pretreatment volume. The sedimentation forebay should be cleaned of vegetation if persistent standing water and wetland vegetation becomes dominant. The cleaning interval is once every year. A dry sedimentation forebay is the optimal condition while in practice this condition is rarely achieved. The sedimentation chamber and forebay should be cleaned when drawdown times exceed 60 to 72 hours. Materials can be removed with heavy construction equipment; however this equipment should not track on the wetland surface. Revegetation of disturbed areas as necessary. Removed sediments should be dewatered (if necessary) and disposed of in an acceptable manner.

g. **Underground Infiltration Basin:**

- Removal of debris from inlet and outlet structures.
- Removal of accumulated sediment.
- Inspection and repair of outlet structures and appurtenances.
- Inspection of inflation components at least twice annually, and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted b such inspection.
- Inspection of pretreatment measures at least twice annually, and removal of accumulated sediment as warranted by inspection, but no less than once annually.
- If an inflation system does not drain within 72-hours following a rainfall event, then a qualified professional should assess the condition of the facility to determine measures required to restore inflation

function, including but not limited to removal of accumulated sediments or reconstruction of the inflation trench.

h. **In-ground Infiltration Basin:**

- Removal of debris from inlet and outlet structures
- Removal of accumulated sediment
- Inspection and repair of outlet structures and appurtenances
- Inspection of infiltration components at least twice annually, and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
- Inspection of pretreatment measures at least twice annually, and removal of accumulated sediment as warranted by inspection, but no less than once annually.
- Periodic mowing of embankments
- Removal of woody vegetation from embankments
- Inspection and repair of embankments and spillways
- If an infiltration system does not drain within 72-hours following a rainfall event, then a qualified professional should assess the condition of the facility to determine measures required to restore infiltration function, including but not limited to removal of accumulated sediments or reconstruction of the infiltration trench.

i. House Roof Drip Edges:

The following recommendations will help assure that the roof drip edges are maintained to preserve its effectiveness.

In the spring and fall, visually inspect the area around the edges and repair any erosion. Use small stones to stabilize erosion along drainage paths. Inspect stone area to ensure that it has not been displaced, undermined, or otherwise damaged. Displaced rock should be replaced, or additional rock added in order to maintain the structure(s) in their undamaged state. Woody vegetation should not be allowed to become established in stone areas, and/or any debris removed from the void spaces between the stones. Also inspect the roof collection and piping (if any) and clean and repair as necessary.

D. Invasive Species

An invasive plant is a non-native plant that is able to persist and proliferate outside of cultivation, resulting in ecological and/or economic harm. These plants readily colonize disturbed areas and habitat edges, such as transportation and river corridors. Once established in these areas, invasive plants often continue to spread to adjacent habitats. All invasive plant species are aggressive competitors with the ability to significantly reduce diversity of native plant and animal species.

For additional information refer to the "New Hampshire Department of Transportation: *Best Management Practices for Roadside Invasive Plants*"

1. Invasive Plant Prevention:

Invasive plants spread by a variety of mechanisms, including birds, wind, and water. Human activities are also a major factor in the spread of these plants, from gardening and transport of nursery stock to erosion control and wildlife plantings. Routine maintenance and construction activities along transportation corridors can also play a significant role in the spread of invasive plants by dispersing or introducing seeds and other viable plant materials.

Eliminating or reducing the spread and establishment of invasive plants requires a proactive approach, in which there are two key elements. First, new introductions, especially those that occur due to human activities, must be avoided to the maximum extent possible. Second, there must be an emphasis on early detection and eradication of new populations. Control measures are far more likely to be successful, as well as significantly less expensive, on small, young populations rather than on larger, more established populations, as shown in Figure 1.

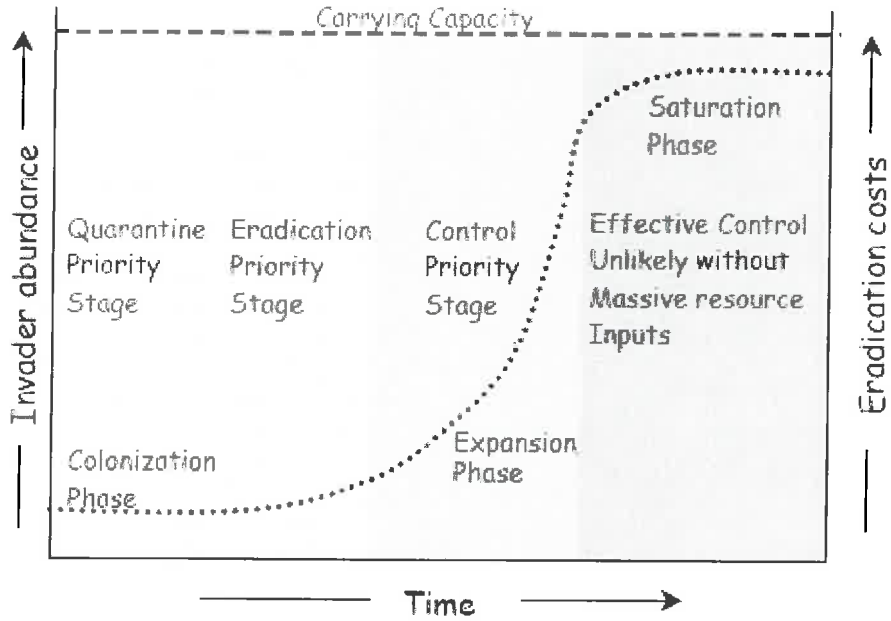


Figure 1. Typical invasive species population curve (from the University of Arizona and USGS Desert Laboratory http://wwwpaztcn.wr.usgs.gov)

2. Best Management Practices

Soil Disturbance and Stabilization:

• BMP #1: Minimize soil disturbance whenever possible. Invasive plants readily colonize areas of disturbed soil. Monitor recent work sites for the emergence of invasive plants for a minimum of two years after project completion.

• BMP #2: Stabilize disturbed soils as soon as possible by seeding and/or using mulch, hay, rip-rap, or gravel that is free of invasive plant material. Seeds of native species should be used whenever possible. Species on the prohibited invasive plant list should never be planted.

• BMP #3: Materials such as fill, loam, mulch, hay, rip-rap, and gravel should not be brought into project areas from sites where invasive plants are known to occur. If the absence of invasive plant parts in these materials cannot be guaranteed, recent work sites should be monitored for the emergence of invasive plants for a minimum of two years after project completion.

Movement and Maintenance of Equipment:

• BMP #4: If work in areas containing invasive plants cannot be avoided, then the movement of maintenance and construction equipment should be

from areas not infested by invasive plants to areas infested by invasive plants whenever possible. This is especially important during ditch cleaning and shoulder scraping activities.

• BMP #5: Locate and use staging areas that are free of invasive plants to avoid spreading seeds and other viable plant parts.

• BMP #6: If equipment must be used in areas where invasive plants occur, all equipment, machinery, and hand tools should be cleaned of all visible soil and plant material before leaving the project site. Equipment should be cleaned at the site of infestation. Acceptable methods of cleaning include, but are not limited to: *f* Portable wash station that contains runoff from washing equipment (containment must be in compliance with wastewater discharge regulations); *f* High pressure air; Brush, broom, or other hand tools (used without water).

• BMP #7: If equipment must be used in areas containing Japanese knotweed, phragmites, or purple loosestrife, aboveground plant material should be cut and properly disposed of (see BMP #11) prior to the start of work. If excavation occurs in these areas, see BMPs #13-16.

Mowing:

• BMP #8: These invasive plants have the ability to sprout from stem and root fragments: purple loosestrife, phragmites, and Japanese knotweed. Mowing these plants should be avoided whenever possible. Staking roadside populations of these plants as "do not mow" is one way to accomplish this. If these plants are cut, all plant material must be rendered nonviable and extra care should be taken to avoid spreading plant fragments (see BMP #11).

• BMP #9: In areas where invasive plants occur and the plants listed in BMP #8 (purple loosestrife, phragmites, and Japanese knotweed) are not present, an attempt should be made to mow the right-of-way prior to seed maturation (approximately August 1st). This could be accomplished by identifying specific roads that are either heavily infested with invasive plants or roads that are in sensitive habitat areas, and making those roads a priority in the mowing schedule.

• BMP #10: Mowing equipment should be cleaned at least daily, as well as prior to transport (see BMP #6). This is particularly important if mowing occurs after seed maturation (after August 1st).

Disposal of Plants:

• BMP #11: When invasive plants are cut or removed for roadside maintenance, construction, or control of plants, the spread of viable plant material must be avoided by rendering plant material nonviable. The following methods can be used to destroy plant material:

- Drying/Liquefying: For large amounts of plant material or for plants with rigid stems, place the material on asphalt, tarps, or heavy plastic, and cover with tarps or heavy plastic to prevent the material from blowing away. For smaller amounts of plant material or for plants with pliable stems, bag the material in heavyduty (3-mil or thicker) garbage bags. Keep plant material covered or bagged for at least one month. Material is nonviable when it is partially decomposed, very slimy, or brittle. Once material is nonviable, it can be disposed of in a landfill or brush pile. Recommended for: Japanese knotweed, purple loosestrife, phragmites.
- Brush Piles: Plant material from most invasive plants can be piled on site to dry out. However, when piling purple loosestrife, phragmites, and Japanese knotweed, care must be taken to pile stems so that cut surfaces are not in contact with the soil. Recommended for: Woody shrubs, trees, and vines; spotted knapweed; large quantities of purple loosestrife, phragmites, and Japanese knotweed. NOT recommended for: any invasive plant with seeds or fruit attached, unless plants can be piled within the limits of the infestation.
- Burying: Plant material from most invasive plants can be buried a minimum of three feet below grade. This method is best used on a job site that already has disturbed soils. Recommended for: any invasive plant. NOT recommended for: Japanese knotweed, unless other options are not feasible and knotweed can be buried at the site of infestation at least five feet below grade. *f*
- Burning: Plant material should be taken to a designated burn pile. (All necessary permits must be obtained before burning.) Recommended for: any invasive plant, especially purple loosestrife, phragmites, Japanese knotweed.
- Herbicide: Herbicide applications must be carried out by a licensed applicator with a permit from the NH Department of Agriculture Division of Pesticide Control. Recommended for: any invasive plant, especially purple loosestrife, phragmites, Japanese knotweed.

• BMP #12: Invasive plant material must be covered during transport.

Excavated Material:

• BMP #13: Excavated material taken from sites that contain invasive plants cannot be used away from the site of infestation until all viable plant material is destroyed. Excavated material from areas containing invasive plants may be reused within the exact limits of the infestation.

• BMP #14: Any excavated material that contains viable plant material and is not reused within the limits of the infestation must be stockpiled on an impervious surface until viable plant material is destroyed OR the material must be disposed of by burying a minimum of three feet below grade. Japanese knotweed must be buried at least five feet below grade.

• BMP #15: Whenever possible, excavation should be avoided in areas containing Japanese knotweed, purple loosestrife, and phragmites. If excavation does occur in these areas, the BMPs described in Section II must be followed.

• BMP #16: Soil and other materials containing invasive plants must be covered during transport.

See attached sample forms as a guideline.

Any inquiries in regards to the design, function, and/or maintenance of any one of the above mentioned facilities or tasks shall be directed to the project engineer:

Jones & Beach Engineers, Inc.
85 Portsmouth Avenue
P.O. Box 219
Stratham, NH 03885

T#: (603) 772-4746
F#: (603) 772-0227

STORM WATER POLLUTION PREVENTION PLAN
INSPECTION PERIOD AND CRITERIA
Tax Map 72 Lots 17
New London Place
New London, NH

Stormwater Component	**Inspection Period**	**Inspection Criteria/Methods**
Culverts	Once per month	Inspect inlet/outlet. Remove debris.
Erosion	Annually	Repair site erosion.
Vegetation	Annually	Repair bare unvegetated areas.
Catch Basins and Drain Manholes	Annually (or more as required)	Remove trash and debris. Inspect for sediment. Remove if sediment greater than 1/3 sump depth.
Riprap	Annually	Relocate displaced rocks, remove woody vegetation and debris.
Wet Pond	Bi-annually	Inspect for sediment/debris collection, inspect inlets/outlets, inspection for erosion.
In-ground Infiltration Basin	Bi-annually	Inspection for sediment/debris, inspect for erosion, inspection for invasives, mow.
Roof Drip Edge	Bi-annually	Inspection for sediment/debris, inspect for erosion, inspection for invasives.
Underground Infiltration Basin	Bi-annually	Inspect for sediment/debris collection, inspect inlets/outlets, inspection for erosion.

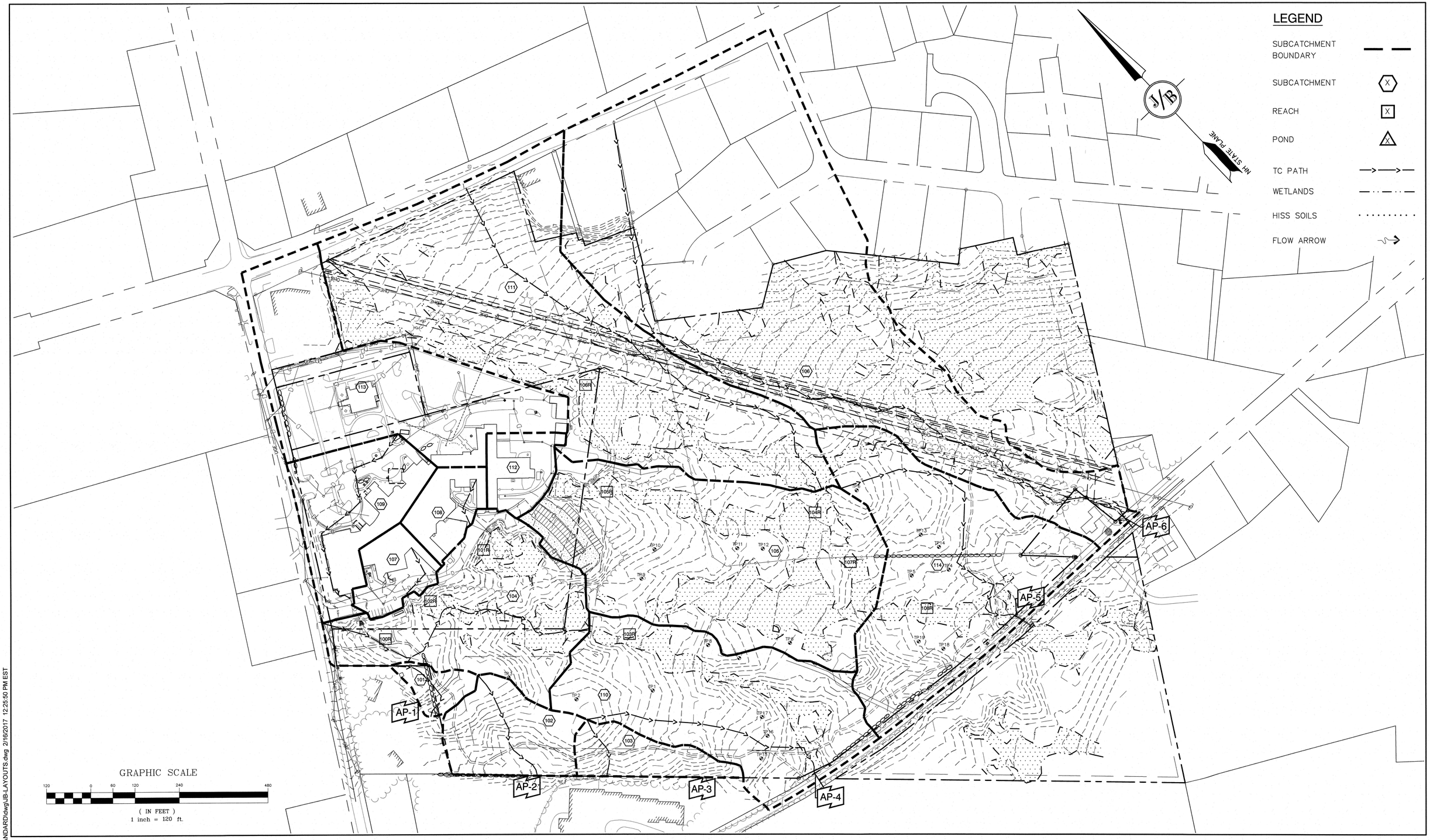
STORM WATER OPERATIONS AND MAINTENANCE PLAN
INSPECTION REPORT

Tax Map 72 Lots 17
New London Place
New London, NH

Yearly Inspection Form			
Inspected Component	**Date of Inspection**	**Inspector**	**Issue Detected / Action Taken**
Culverts			
Erosion			
Vegetation			
Catch Basins and Drain Manholes			
Riprap			
In-ground Infiltration Basin			
Detention Pond			
Wet pond			
Bioretention Pond			
Underground Infiltration Basin			

STORM WATER OPERATIONS AND MAINTENANCE PLAN
INSPECTION REPORT

Tax Map 72 Lots 17
New London Place
New London, NH



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Design: ISM	Draft: ISM	Date: 04/03/18
Checked: BWG	Scale: AS NOTED	Project No.: 17190
Drawing Name: 17190-WATERSHED.DWG		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

REV.	DATE	REVISION	BY
0	7/3/2018	ISSUED FOR REVIEW	EMP

Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: EXISTING WATERSHED PLAN

Project: "NEW LONDON PLACE"
COUNTY RD & PARKSIDE RD, NEW LONDON, NH

Owner of Record: NEW LONDON HOSPITAL ASSOCIATION
273 COUNTY RD, NEW LONDON, NH 03257

DRAWING No.
W1
SHEET 1 OF 6
JBE PROJECT NO. 17190

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Design: ISM	Draft: ISM	Date: 04/03/18
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Designed and Produced in NH
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Civil Engineering Services
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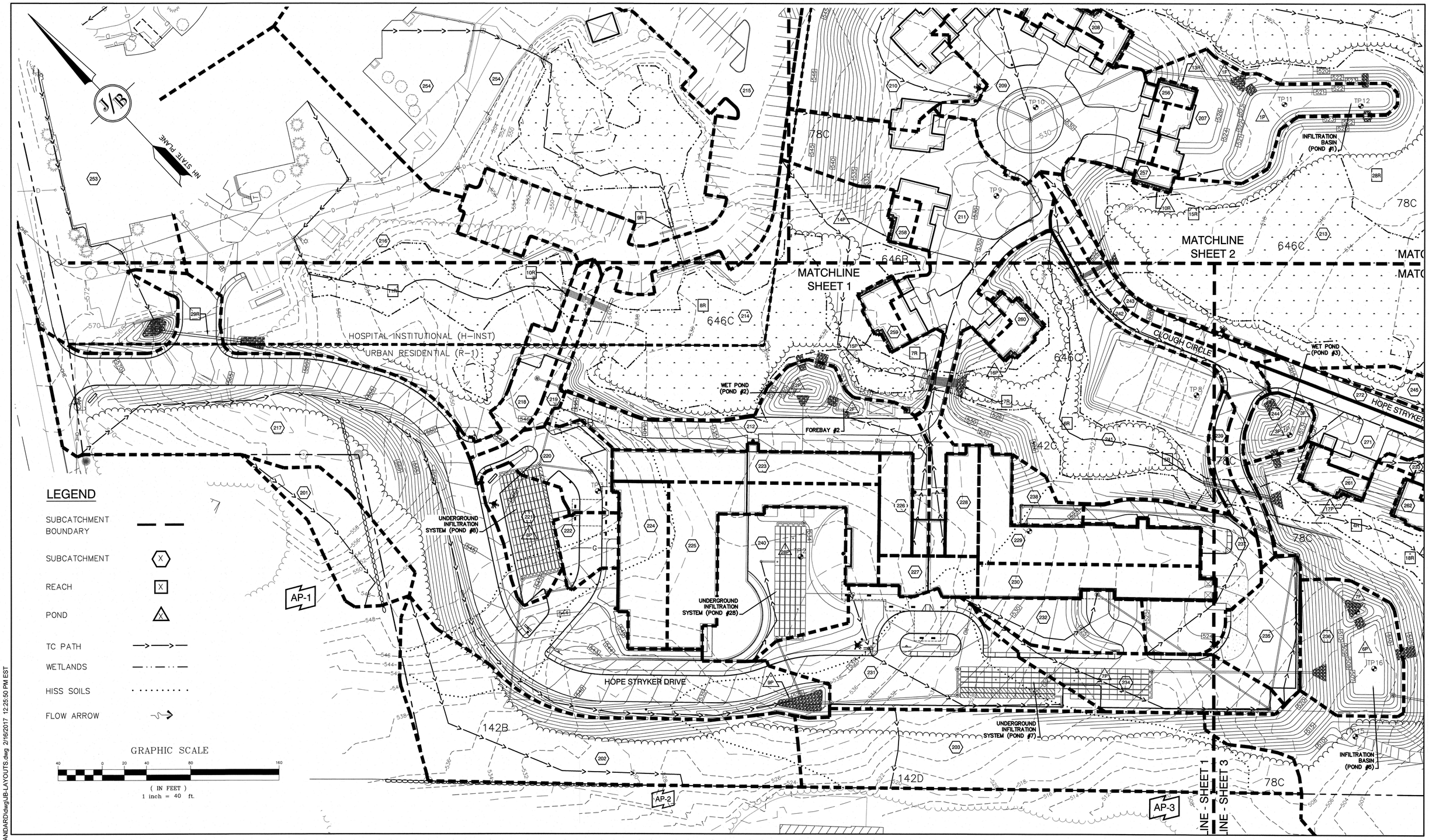
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: OVERALL PROPOSED WATERSHED PLAN

Project: "NEW LONDON PLACE"
COUNTY RD & PARKSIDE RD, NEW LONDON, NH

Owner of Record: NEW LONDON HOSPITAL ASSOCIATION
273 COUNTY RD, NEW LONDON, NH 03257

DRAWING No.
W2
SHEET 2 OF 6
JBE PROJECT NO. 17190



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Design: ISM	Draft: ISM	Date: 04/03/18
Checked: BWG	Scale: AS NOTED	Project No.: 17190
Drawing Name: 17190-WATERSHED.DWG		

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REV.	DATE	REVISION	BY
0	7/3/2018	ISSUED FOR REVIEW	EMP

Designed and Produced in NH

J/B Jones & Beach Engineers, Inc.

Civil Engineering Services

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FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: PROPOSED WATERSHED PLAN #1

Project: "NEW LONDON PLACE"
COUNTY RD & PARKSIDE RD, NEW LONDON, NH

Owner of Record: NEW LONDON HOSPITAL ASSOCIATION
273 COUNTY RD, NEW LONDON, NH 03257

DRAWING No.

W2-1

SHEET 3 OF 6
JBE PROJECT NO. 17190

MATCHLINE - SHEET 2

MATCHLINE - SHEET 3

MATCHLINE - SHEET 1

MATCHLINE - SHEET 3

FOREBAY #3

WET POND (POND #3)

FOREBAY #6

WET POND (POND #5)

FOREBAY #7

INFILTRATION BASIN (POND #8)

NH STATE PLANE

LEGEND

SUBCATCHMENT BOUNDARY	
SUBCATCHMENT	X
REACH	X
POND	X
TC PATH	
WETLANDS	
HISS SOILS	
FLOW ARROW	

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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0	7/3/2018	ISSUED FOR REVIEW	EMP

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85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885

603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: PROPOSED WATERSHED PLAN #2

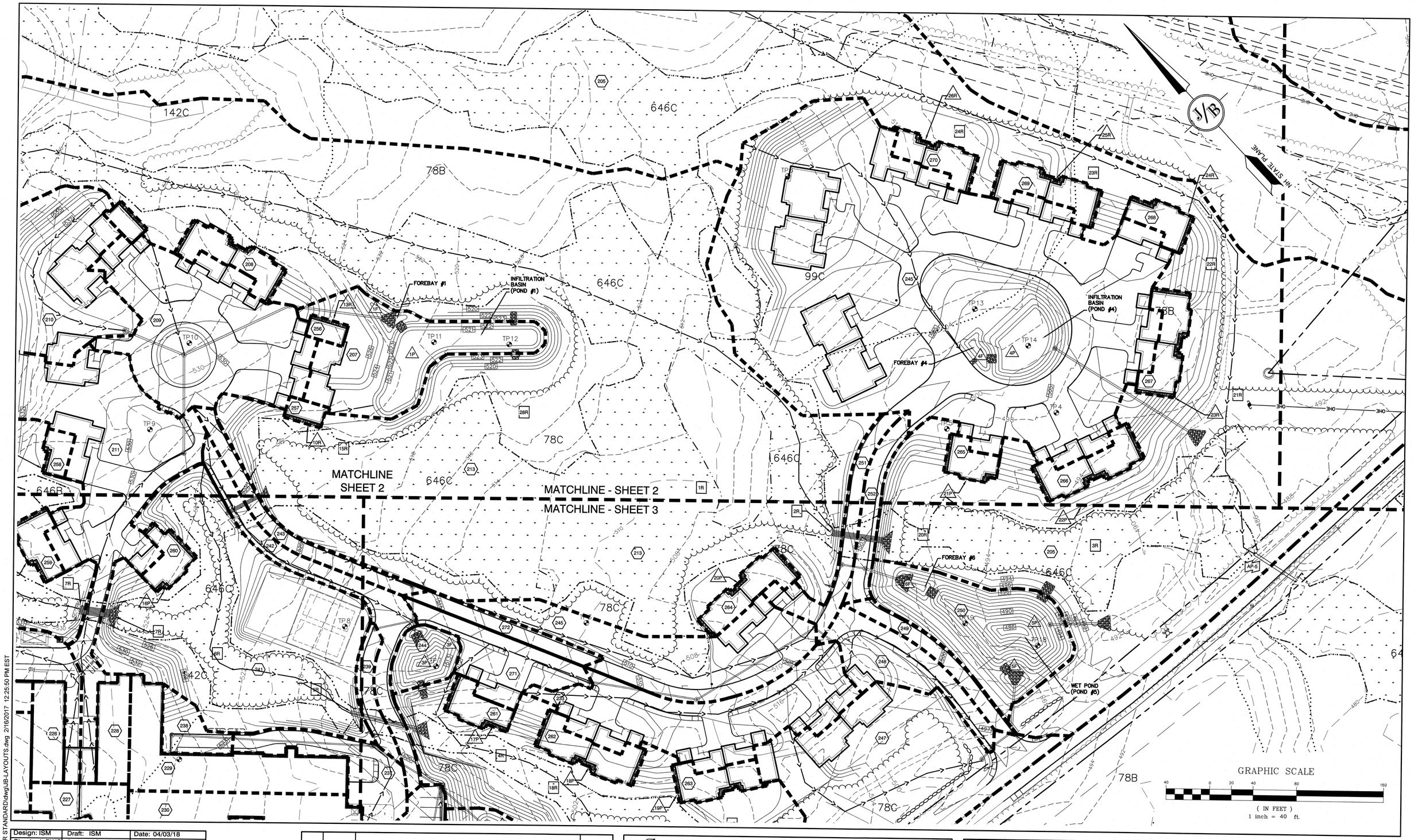
Project: "NEW LONDON PLACE"
COUNTY RD & PARKSIDE RD, NEW LONDON, NH

Owner of Record: NEW LONDON HOSPITAL ASSOCIATION
273 COUNTY RD, NEW LONDON, NH 03257

DRAWING No.

W2-2

SHEET 4 OF 6
JBE PROJECT NO. 17190



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Checked: BWG	Scale: AS NOTED	Project No.: 17190
Drawing Name: 17190-WATERSHED.DWG		

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REV.	DATE	REVISION	BY
0	7/3/2018	ISSUED FOR REVIEW	EMP

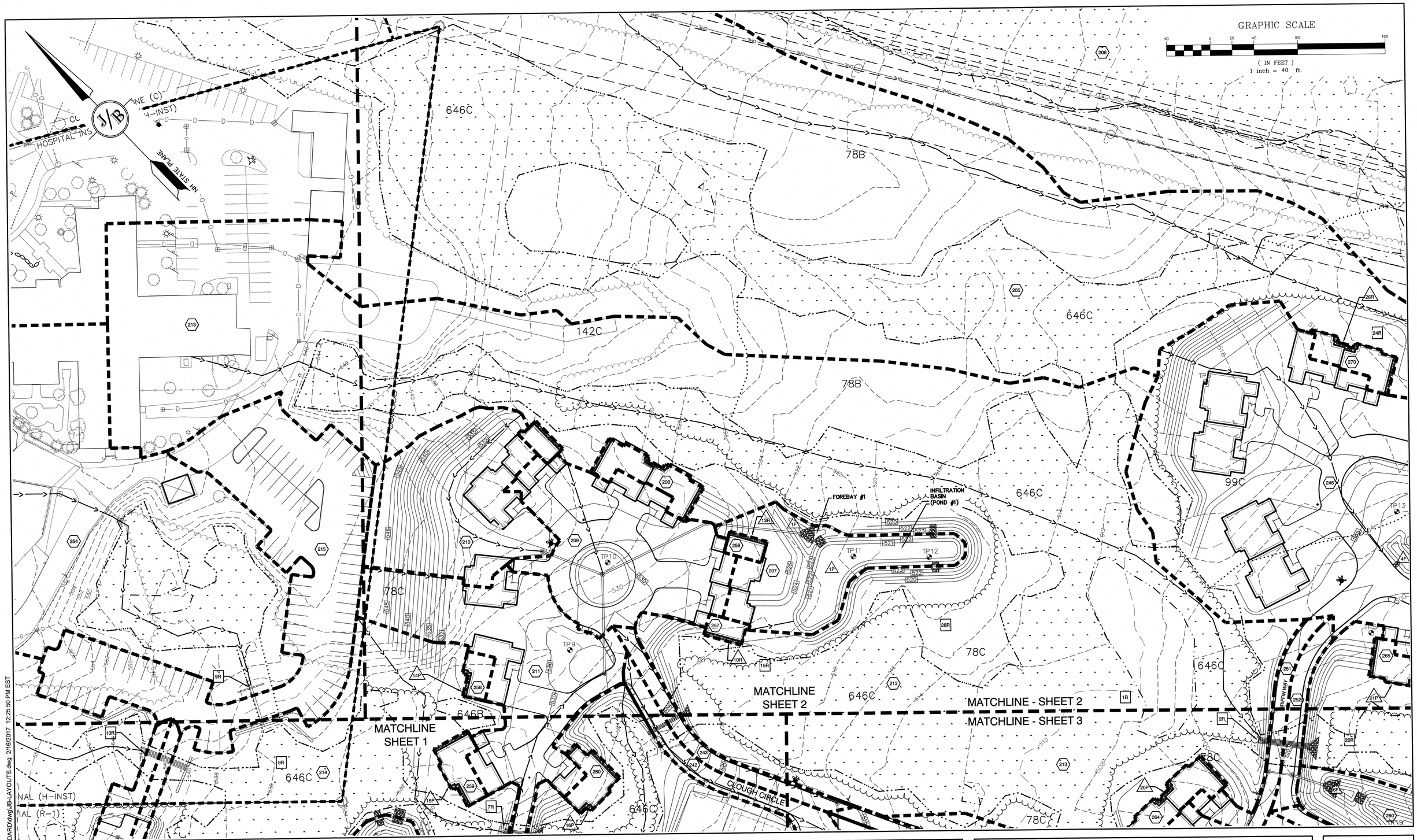
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: PROPOSED WATERSHED PLAN #3

Project: "NEW LONDON PLACE"
COUNTY RD & PARKSIDE RD, NEW LONDON, NH

Owner of Record: NEW LONDON HOSPITAL ASSOCIATION
273 COUNTY RD, NEW LONDON, NH 03257

DRAWING No.
W2-3
SHEET 5 OF 6
JBE PROJECT NO. 17190



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Design: ISM	Draft: ISM	Date: 04/03/18
Checked: BWG	Scale: AS NOTED	Project No.: 17190
Drawing Name: 17190-WATERSHED.DWG		

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REV.	DATE	REVISION	BY
0	7/3/2018	ISSUED FOR REVIEW	EMP

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Plan Name: PROPOSED WATERSHED PLAN #4

Project: "NEW LONDON PLACE"
COUNTY RD & PARKSIDE RD, NEW LONDON, NH

Owner of Record: NEW LONDON HOSPITAL ASSOCIATION
273 COUNTY RD, NEW LONDON, NH 03257

DRAWING No.
W2-4
SHEET 6 OF 6
JBE PROJECT NO. 17190