Stormwater Management Report

Laconia Village

Tax Map 318, Block 538 - Lot 1.1 and Block 155 - Lot 1
Parade Road, NH Route 106
Laconia, NH

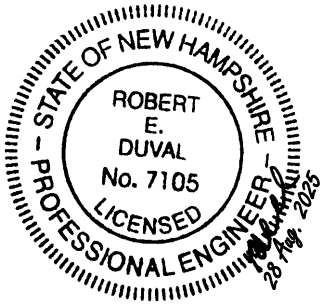
Date:

August 28 2025

Prepared for:

Pillsbury Realty Development, LLC
214 North Main Street
Concord, NH 03301

TFM #: 96126.01



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Laconia Village

Parade Road, NH Route 106, Laconia, NH

Table of Contents

Description of Project

Pillsbury Realty is proposing redevelopment of the existing Laconia State School on tax map Lots 318-538-1.1 and 318-155-1 near the intersection of Parade Road (NH Route 106) and Meridith Center Road in Laconia, NH.

The proposed development is a mixed-use development containing commercial, retail, residential (including multi-family, duplex homes, triplex, quadplex, townhouses, and courtyard cottages), hospitality, and civic uses. The project includes roadways and parking areas, sidewalks, a snowmobile trail, and recreational trails. The proposed development is planned to be built in three phases over several years. A Masterplan of the proposed development was approved by the Laconia Planning Board on 01 July 2025.

The intent of this report is to present a conceptual stormwater management plan for the development to demonstrate that runoff generated by the development can be safely and effectively managed by a combination of collection, treatment, recharge, and flow control best practices.

It is also intended to provide a framework to guide the design of detailed stormwater management plans associated with individual Alteration of Terrain and Site Plan permit applications as the development proceeds.

Storm Water Methodology

Pre-Development Conditions

The existing 217± acre development site was analyzed in the pre-development conditions to identify how stormwater runoff interacts with abutting properties and roadways for various design storms. HydroCad Version 10.20 was used to evaluate the 2, 10, 25, and 50-year storm events for this analysis. HydroCAD is a computer program based on SCS TR-20 methodology commonly used for modeling stormwater runoff.

SCS Soil Survey data for Belknap County was used as the basis for this analysis. A more detailed Site Specific Soils analysis will be used in future for permit applications, including test pits to confirm soil types on this property and determine in-situ infiltration rates in accordance with New Hampshire Alteration of Terrain (AoT) requirements.

Belknap County Soil Survey data shows this site contains the following soils. All these soil groups are rated as Hydraulic Soil Group C or C/D.

- 46B - Henniker fine sandy loam,
- 166B/C Canterbury fine sandy loam,
- 459B - Metacomet fine sandy loam,
- 478B - Gilmanton fine sandy loam,
- 480B/C/D - Millsite-Woodstock-Henniker complex,
- 647B Pillsbury fine sandy loam,
- 680C Henniker-Urban land complex.

The site's overall catchment area was divided into smaller subcatchment areas that split along slight ridgelines to compare pre and post development flows at ten distinct points of analysis (POA). Existing onsite drainage infrastructure is generally in poor condition and will be removed and replaced with new infrastructure as development proceeds.

Three POAs are located adjacent to Ahern State Park and consist of sheet flow and concentrated flow in watercourses crossing the site's property lines.

Seven additional points of analysis are located along the Parade Road frontage. Each of these POAs represent a particular stormwater structure such as a catch basin or culvert that crosses Parade Road. POA "H" is tributary to POA "G", while the others POA's stand alone.

Rainfall Intensity

The NHDES AoT program requires applicants to use rainfall data from the Northeast Regional Climate Center (NRCC) as indicated in the table below ..

24-Hour Rainfall Intensity

	Northeast Regional Climate Center
2-year	2.74 inches
10-year	4.00 inches
25-year	4.98 inches
50-year	5.88 inches

Post-Development Conditions
The project will rely on a combination of NHDES-accepted stormwater Best Management Practices (BMP's) to treat runoff, infiltrate stormwater, and control peak runoff rates. We had initially included Porous Pavement among these practices; however, based on Laconia DPW feedback, we will not include porous pavement due to concern over difficulty of maintenance.

Post-development runoff curve numbers in Section 4 of the report were estimated based on anticipated impervious cover of each subcatchment "block" and the underlying NRCS soils type. As detailed site plans are developed for each phase, Site Specific Soil surveys will be performed to refine soil types for pre vs post development computations.

In this report we are proposing a variety of BMPs including biofiltration basins, infiltration basins, and underground storage/infiltration chambers (e.g. StormTech). Other BMPs (such as wet detention basins, tree filters, gravel wetlands, etc.) will also be considered during site plan preparation where appropriate. The type, size, and configuration of all BMP's will be determined at the Site Plan stage, based on soil surveys, test pits, and infiltration tests at each proposed BMP location.

Stormwater conveyance practices will include normal culverts and catch basins, deep-sump hooded catch basins, and drain manholes, typically connected by HDPE piping, and leading to conventional rip-rap outlet aprons at concentrated discharge points, and over-sized level spreaders at distributed-discharge areas. These level spreaders are shown on the plans near POAs A2 thru A4 that flow towards the East Shore Road neighborhood facing Lake Winnisquam. These POAs are particularly sensitive to stormwater runoff and we propose significant flow reductions here in the post- condition, particularly in the 2-year storm event.

StormTech type RC-750 chambers systems identified in HydroCAD as nodes 11P, 25P, 26P, 27P, and 29P are expected to be broken into 2 or 3 separate StormTech systems in final design. Likewise, Bio-swales represented by node 9P (located on Lots 13, 18, 20 and 26) are expected to be broken into four or more separate basins in final design.

Please refer to the table below for Pre-Development vs. Post-Development peak flow rates.

Conclusion

Peak Flow Rates

The peak rates of runoff will be mitigated at locations where stormwater leaves the project area in post-development conditions to not create an adverse drainage impact adjacent properties.

Peak Flow Rate (cfs)								
POI	2-Yr		10-Yr		25-Yr		50-Yr	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A1	5.3	4.0	6.8	5.2	1.8	1.5	3.7	2.8
A2	27.5	23.4	36.5	31.6	7.6	3.8	18.1	11.1
A3	10.6	9.3	14.5	12.9	2.4	0.8	6.7	5.7
A4	19.9	17.9	27.7	26.5	3.9	1.6	12.1	10.3
A5	7.3	6.8	11.3	10.8	0.6	0.4	3.5	3.1
B	40.3	37.6	55.7	55.6	8.5	6.7	25.0	17.9
C	76.9	74.4	101.0	97.3	23.3	21.4	52.0	49.3
D	36.1	31.0	47.1	39.7	11.4	8.6	24.7	20.3
E	58.3	36.0	75.2	66.9	19.6	6.7	40.5	22.7
F	14.0	12.3	18.0	15.4	4.7	3.9	9.7	7.7
G	39.0	27.9	50.1	39.0	13.4	6.0	27.3	16.7
H	27.1	11.9	34.7	18.8	9.4	3.7	19.0	7.3
I	7.0	5.2	9.1	8.2	2.2	2.1	4.8	3.8
J	0.8	0.0	1.0	0.0	0.2	0.0	0.5	0.0

This report presents a conceptual stormwater management plan for the development to demonstrate that stormwater runoff from the development can be safely and effectively managed by a combination of collection, treatment, recharge, and flow control best practices.

Final design plans and reports at the site plan stage will include soil surveys, test pit logs and measured infiltration rates, detailed calculations of pre- and post-development flow rates and volumes, and configuration of all proposed BMPs and pipe networks.

Map Scale: 1:12,800 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

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 30, Sep 3, 2024

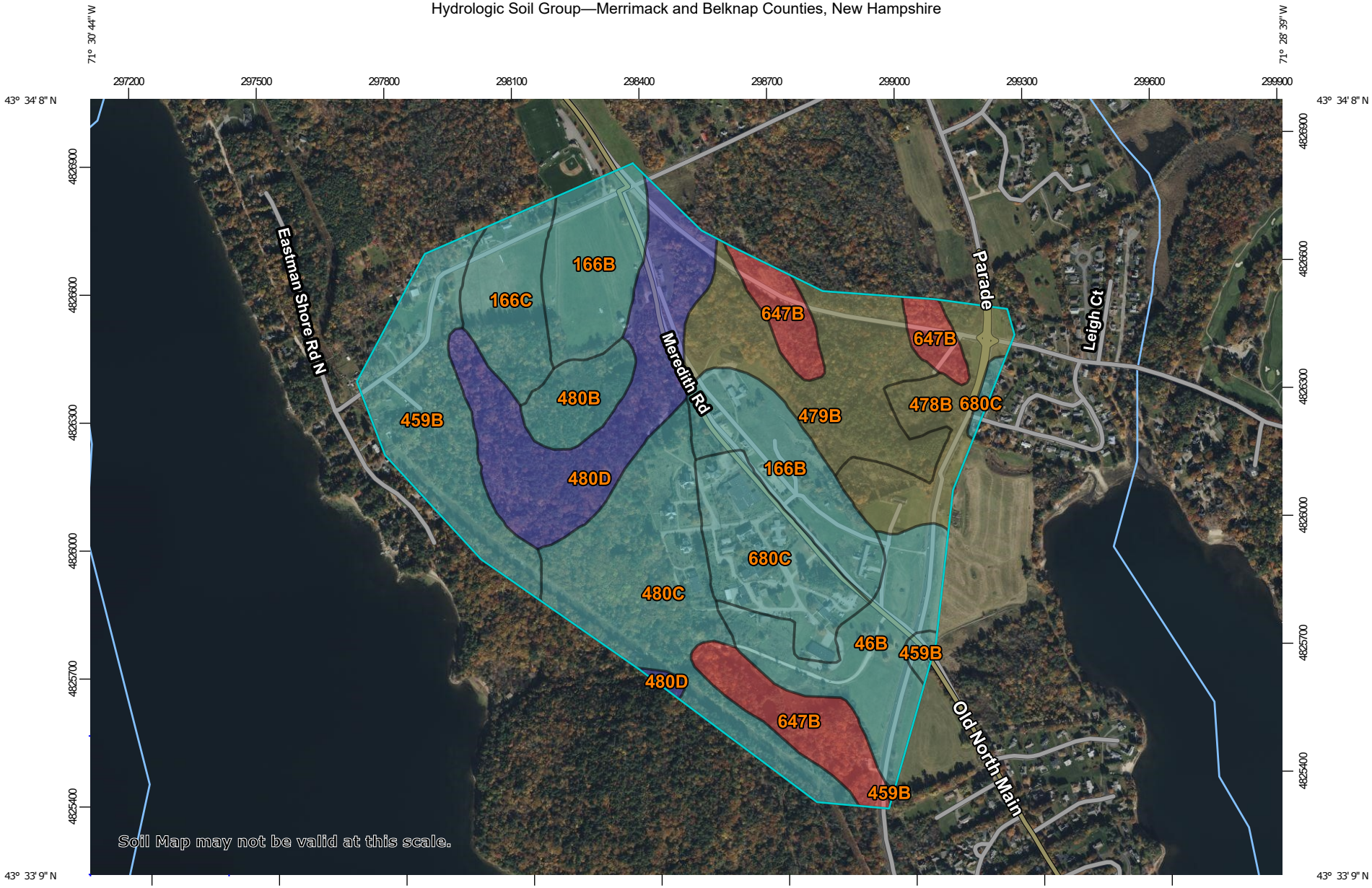
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 6, 2022—Oct 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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
46B	Henniker fine sandy loam, 3 to 8 percent slopes	29.3	8.6%
166B	Canterbury fine sandy loam, 3 to 8 percent slopes	45.4	13.4%
166C	Canterbury fine sandy loam, 8 to 15 percent slopes	17.7	5.2%
459B	Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	35.7	10.5%
478B	Gilmanton fine sandy loam, 3 to 8 percent slopes	20.5	6.1%
479B	Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony	36.8	10.9%
480B	Millsite-Woodstock-Henniker complex, 3 to 8 percent slopes, very stony	10.3	3.0%
480C	Millsite-Woodstock-Henniker complex, 8 to 15 percent slopes, very stony	47.2	13.9%
480D	Millsite-Woodstock-Henniker complex, 15 to 25 percent slopes, very stony	43.0	12.7%
647B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	27.0	8.0%
680C	Henniker-Urban land complex, 0 to 15 percent slopes	26.5	7.8%
Totals for Area of Interest		**339.3**	**100.0%**



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N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

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 Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

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Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

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Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
46B	Henniker fine sandy loam, 3 to 8 percent slopes	C	29.3	8.6%
166B	Canterbury fine sandy loam, 3 to 8 percent slopes	C	45.4	13.4%
166C	Canterbury fine sandy loam, 8 to 15 percent slopes	C	17.7	5.2%
459B	Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	C	35.7	10.5%
478B	Gilmanton fine sandy loam, 3 to 8 percent slopes	C/D	20.5	6.1%
479B	Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony	C/D	36.8	10.9%
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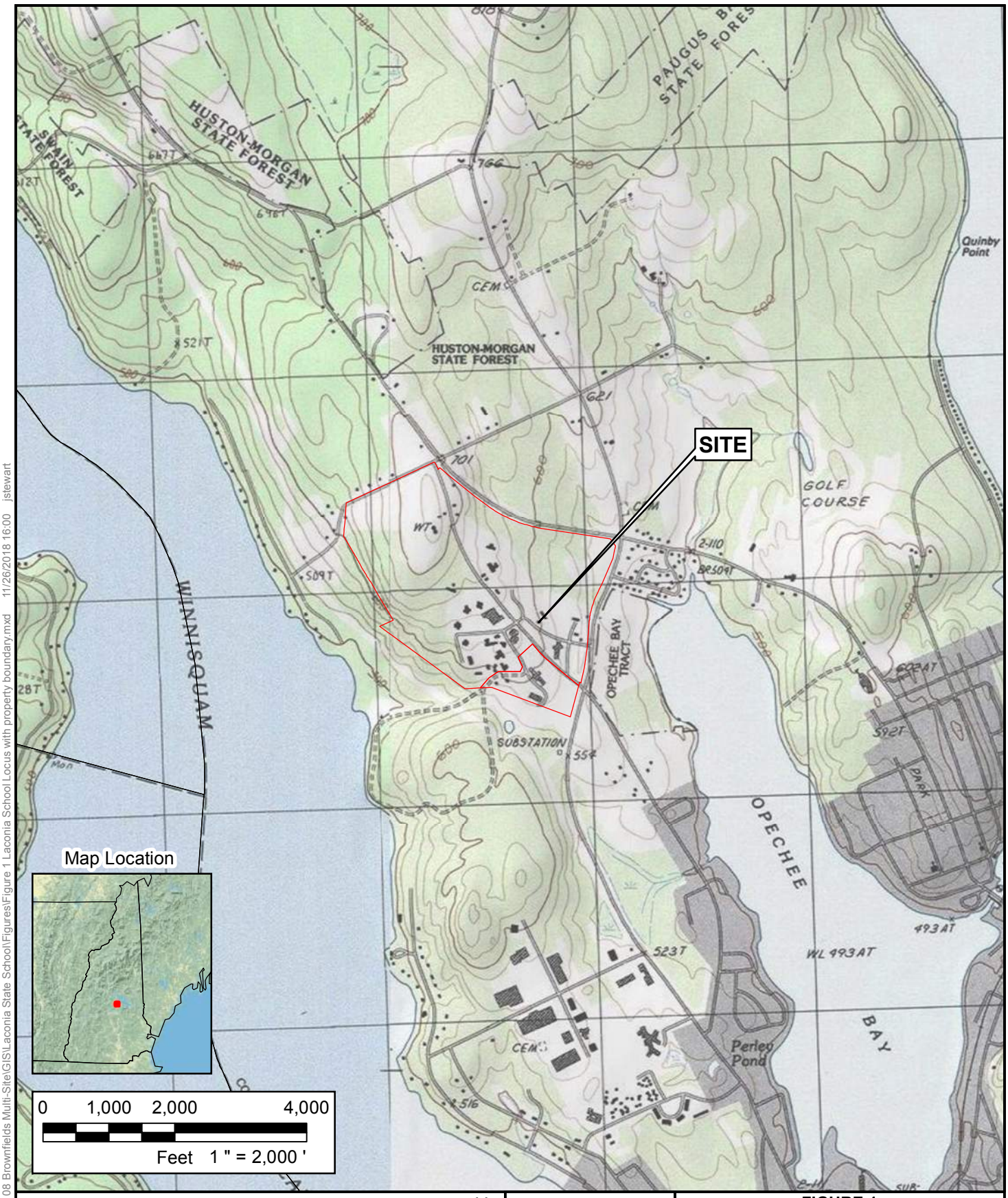
480D	Millsite-Woodstock-Henniker complex, 15 to 25 percent slopes, very stony	B	43.0	12.7%
647B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	D	27.0	8.0%
680C	Henniker-Urban land complex, 0 to 15 percent slopes	C	26.5	7.8%
Totals for Area of Interest			**339.3**	**100.0%**



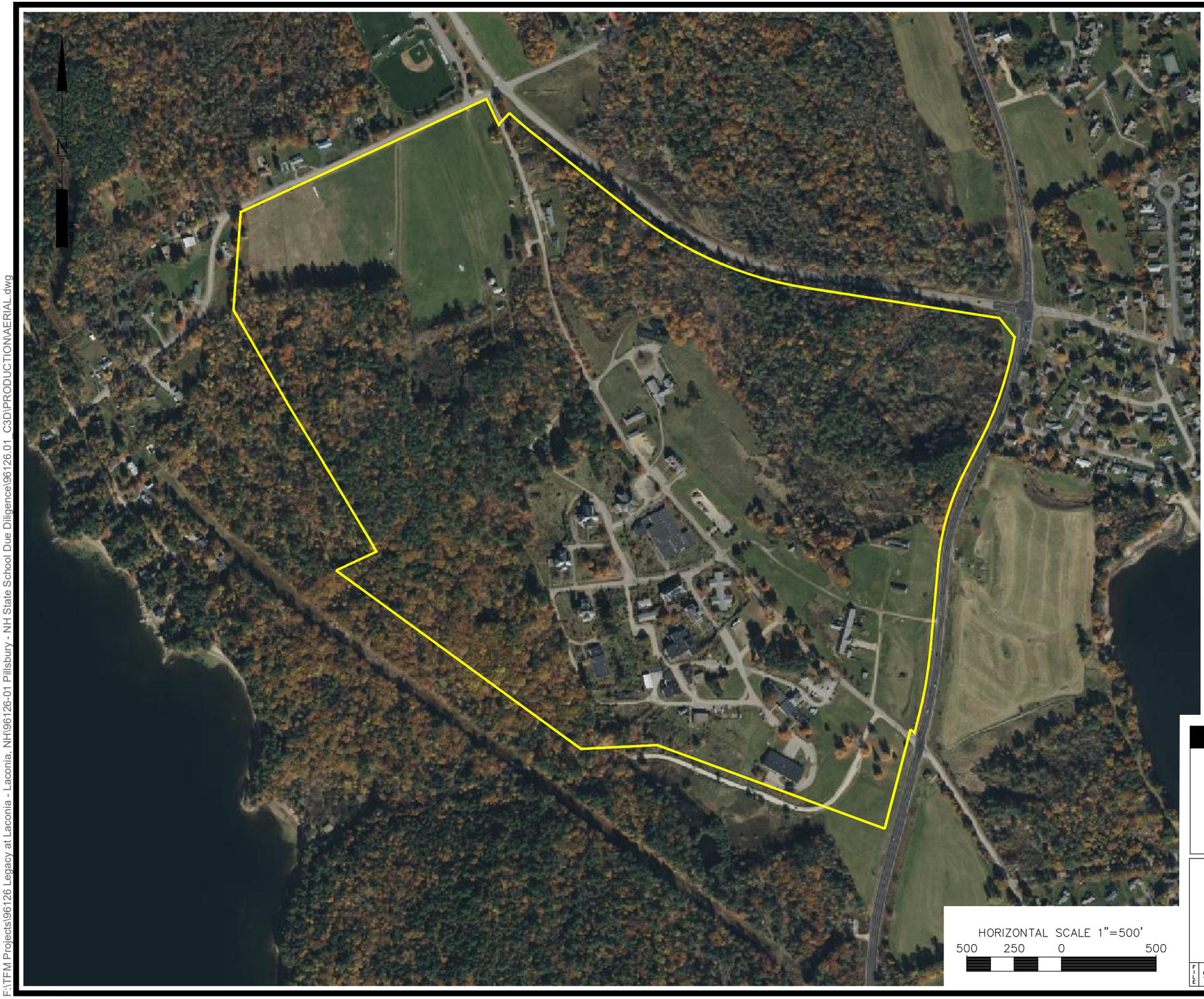
USGS Topographic Map
Laconia, NH
Revised 1987

FIGURE 1

LOCUS MAP
LACONIA STATE SCHOOL TBA
LACONIA, NEW HAMPSHIRE

PREPARED BY: SRP	CHECKED BY: JMR
PROJECT NO. 96126.01	DATE: MARCH 28, 2025

R:\80000 Task Orders\80108 Brownfields Multi-Site\GIS\Laconia State School\Figures\Figure 1 Laconia School Locus with property boundary.mxd 11/26/2018 16:00 jstewart



AERIAL

TAX MAP 318-538-1.1, 318-155-1

AERIAL

LACONIA VILLAGE

PARADE ROAD, NH RTE 106
LACONIA, NEW HAMPSHIRE

PREPARED FOR

PILLSBURY REALTY DEVELOPMENT, LLC

MARCH 28, 2025

TFM
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Bedford, NH 03110
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Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	43.559 degrees North
Longitude	71.493 degrees West
Elevation	180 feet
Date/Time	Wed Jan 22 2025 09:56:59 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.39	0.49	0.64	0.80	1.01	**1yr**	0.69	0.95	1.16	1.46	1.83	2.30	2.58	**1yr**	2.04	2.48	2.89	3.52	4.10	**1yr**
2yr	0.31	0.48	0.60	0.79	0.99	1.25	**2yr**	0.86	1.14	1.44	1.78	2.21	2.74	3.08	**2yr**	2.42	2.96	3.43	4.14	4.72	**2yr**
5yr	0.37	0.58	0.72	0.97	1.24	1.56	**5yr**	1.07	1.44	1.81	2.24	2.76	3.40	3.87	**5yr**	3.01	3.72	4.29	5.08	5.77	**5yr**
10yr	0.42	0.66	0.83	1.13	1.47	1.87	**10yr**	1.27	1.72	2.16	2.68	3.29	4.00	4.59	**10yr**	3.54	4.42	5.09	5.93	6.71	**10yr**
25yr	0.49	0.79	1.00	1.38	1.83	2.35	**25yr**	1.58	2.18	2.72	3.37	4.12	4.98	5.78	**25yr**	4.41	5.55	6.37	7.28	8.21	**25yr**
50yr	0.56	0.90	1.15	1.61	2.17	2.80	**50yr**	1.87	2.61	3.25	4.02	4.89	5.88	6.87	**50yr**	5.20	6.61	7.56	8.51	9.56	**50yr**
100yr	0.64	1.03	1.33	1.89	2.57	3.34	**100yr**	2.22	3.13	3.89	4.79	5.81	6.94	8.17	**100yr**	6.14	7.86	8.98	9.96	11.14	**100yr**
200yr	0.73	1.20	1.55	2.21	3.05	3.97	**200yr**	2.63	3.76	4.63	5.70	6.89	8.20	9.73	**200yr**	7.25	9.36	10.66	11.65	12.98	**200yr**
500yr	0.88	1.44	1.88	2.73	3.83	5.01	**500yr**	3.30	4.79	5.84	7.19	8.64	10.23	12.26	**500yr**	9.05	11.79	13.39	14.36	15.91	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.43	0.58	0.72	0.90	**1yr**	0.62	0.88	0.98	1.28	1.55	2.08	2.27	**1yr**	1.84	2.18	2.44	2.98	3.40	**1yr**
2yr	0.30	0.47	0.57	0.78	0.96	1.14	**2yr**	0.83	1.11	1.29	1.71	2.21	2.63	2.95	**2yr**	2.33	2.84	3.29	4.01	4.59	**2yr**
5yr	0.34	0.53	0.66	0.90	1.15	1.36	**5yr**	0.99	1.33	1.55	2.01	2.59	3.05	3.50	**5yr**	2.70	3.36	3.87	4.70	5.40	**5yr**
10yr	0.38	0.58	0.72	1.00	1.29	1.55	**10yr**	1.12	1.52	1.76	2.25	2.90	3.40	3.97	**10yr**	3.01	3.82	4.37	5.30	6.10	**10yr**
25yr	0.43	0.65	0.81	1.15	1.51	1.84	**25yr**	1.31	1.80	2.09	2.63	3.36	3.91	4.73	**25yr**	3.46	4.55	5.11	6.21	7.14	**25yr**
50yr	0.46	0.71	0.88	1.27	1.70	2.09	**50yr**	1.47	2.04	2.39	2.95	3.74	4.34	5.40	**50yr**	3.84	5.19	5.75	7.01	8.05	**50yr**
100yr	0.51	0.77	0.97	1.40	1.92	2.35	**100yr**	1.66	2.30	2.74	3.49	4.17	4.81	6.18	**100yr**	4.26	5.94	6.45	7.95	9.05	**100yr**
200yr	0.56	0.85	1.07	1.55	2.16	2.66	**200yr**	1.87	2.60	3.13	3.97	4.61	5.31	7.09	**200yr**	4.70	6.82	7.23	9.02	10.19	**200yr**
500yr	0.64	0.95	1.22	1.78	2.53	3.10	**500yr**	2.18	3.03	3.75	4.71	5.26	6.05	8.54	**500yr**	5.36	8.21	8.40	10.69	11.92	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.04	**1yr**	0.75	1.02	1.19	1.56	1.97	2.47	2.80	**1yr**	2.19	2.69	3.12	3.81	4.47	**1yr**
2yr	0.33	0.50	0.62	0.84	1.04	1.22	**2yr**	0.90	1.19	1.38	1.83	2.41	2.89	3.23	**2yr**	2.56	3.11	3.60	4.31	5.04	**2yr**
5yr	0.40	0.61	0.76	1.05	1.33	1.60	**5yr**	1.15	1.57	1.81	2.34	2.98	3.84	4.28	**5yr**	3.40	4.12	4.78	5.53	6.15	**5yr**
10yr	0.48	0.74	0.91	1.27	1.64	1.98	**10yr**	1.42	1.94	2.24	2.79	3.52	4.77	5.31	**10yr**	4.22	5.11	5.92	6.68	7.37	**10yr**
25yr	0.61	0.93	1.16	1.65	2.17	2.65	**25yr**	1.87	2.59	2.95	3.60	4.50	6.37	7.04	**25yr**	5.63	6.77	7.88	8.59	9.38	**25yr**
50yr	0.73	1.11	1.38	1.99	2.68	3.31	**50yr**	2.31	3.23	3.65	4.36	5.44	7.95	8.72	**50yr**	7.03	8.39	9.82	10.39	11.25	**50yr**
100yr	0.89	1.34	1.68	2.42	3.32	4.14	**100yr**	2.87	4.05	4.50	5.61	6.56	9.93	10.80	**100yr**	8.78	10.39	12.24	12.56	13.50	**100yr**
200yr	1.07	1.61	2.04	2.95	4.11	5.20	**200yr**	3.55	5.08	5.57	6.84	8.91	12.42	13.37	**200yr**	10.99	12.86	15.31	15.20	16.23	**200yr**
500yr	1.37	2.04	2.63	3.82	5.43	7.05	**500yr**	4.68	6.89	7.36	8.89	11.70	16.73	17.73	**500yr**	14.80	17.05	20.59	19.56	20.74	**500yr**

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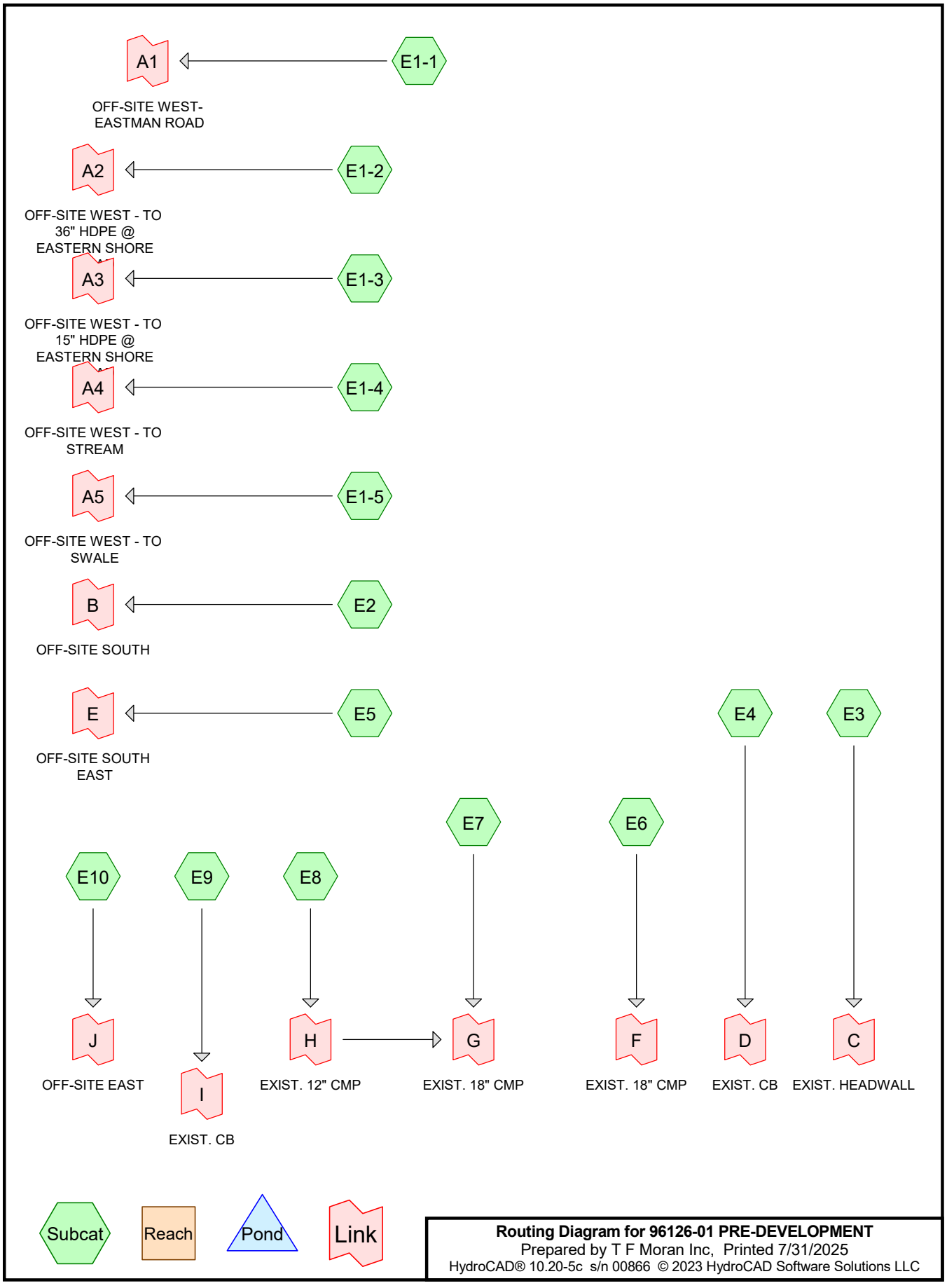


Routing Diagram for 96126-01 PRE-DEVELOPMENT
Prepared by T F Moran Inc, Printed 7/31/2025

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
145,318	61	>75% Grass cover, Good, HSG B (E2, E3, E4, E5)
3,440,426	74	>75% Grass cover, Good, HSG C (E1-1, E1-2, E1-3, E1-4, E1-5, E10, E2, E3, E4, E5, E6, E7, E8, E9)
309,777	80	>75% Grass cover, Good, HSG D (E3, E4, E6, E7)
9,218	96	Gravel surface, HSG B (E3)
55,634	96	Gravel surface, HSG C (E1-1, E2, E3, E5, E6, E7, E8, E9)
9,520	96	Gravel surface, HSG D (E3, E4, E6)
39,417	98	Paved parking, HSG B (E3, E4, E5)
536,911	98	Paved parking, HSG C (E1-1, E2, E3, E4, E5, E6, E7, E8, E9)
61,303	98	Paved parking, HSG D (E3, E4, E6, E7)
7,417	98	Roofs, HSG B (E2, E3, E5)
240,912	98	Roofs, HSG C (E1-3, E1-4, E2, E3, E4, E5, E6, E7, E8)
14,212	98	Roofs, HSG D (E3, E4, E6, E7)
1,282,952	55	Woods, Good, HSG B (E1-2, E1-3, E1-4, E1-5, E2, E3, E4, E5)
1,730,085	70	Woods, Good, HSG C (E1-2, E1-3, E1-4, E1-5, E2, E3, E4, E5, E6, E7, E8)
1,963,610	77	Woods, Good, HSG D (E3, E4, E6)
9,846,712	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
1,484,322	HSG B	E1-2, E1-3, E1-4, E1-5, E2, E3, E4, E5
6,003,968	HSG C	E1-1, E1-2, E1-3, E1-4, E1-5, E10, E2, E3, E4, E5, E6, E7, E8, E9
2,358,422	HSG D	E3, E4, E6, E7
0	Other	
9,846,712		**TOTAL AREA**

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=1.00"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=1.83 cfs 8,798 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=0.70"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=7.62 cfs 41,247 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=0.54"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=2.38 cfs 13,324 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=0.46"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=3.91 cfs 23,400 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=0.20"
Flow Length=926' Tc=16.7 min CN=58 Runoff=0.57 cfs 6,148 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.23 cfs 886 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=0.50"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=8.45 cfs 47,433 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=0.80"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=23.25 cfs 169,847 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=0.84"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=11.35 cfs 73,931 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=0.95"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=19.60 cfs 130,263 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=0.95"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=4.70 cfs 26,977 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=0.95"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=4.01 cfs 20,972 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=1.00"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=9.40 cfs 49,241 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=0.84"
Flow Length=602' Tc=13.4 min CN=76 Runoff=2.19 cfs 9,280 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=1.83 cfs 8,798 cf
Primary=1.83 cfs 8,798 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=7.62 cfs 41,247 cf
Primary=7.62 cfs 41,247 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=2.38 cfs 13,324 cf
Primary=2.38 cfs 13,324 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=3.91 cfs 23,400 cf
Primary=3.91 cfs 23,400 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=0.57 cfs 6,148 cf
Primary=0.57 cfs 6,148 cf

Link B: OFF-SITE SOUTH Inflow=8.45 cfs 47,433 cf
Primary=8.45 cfs 47,433 cf

Link C: EXIST. HEADWALL Inflow=23.25 cfs 169,847 cf
Primary=23.25 cfs 169,847 cf

Link D: EXIST. CB Inflow=11.35 cfs 73,931 cf
Primary=11.35 cfs 73,931 cf

Link E: OFF-SITE SOUTH EAST Inflow=19.60 cfs 130,263 cf
Primary=19.60 cfs 130,263 cf

Link F: EXIST. 18" CMP Inflow=4.70 cfs 26,977 cf
Primary=4.70 cfs 26,977 cf

Link G: EXIST. 18" CMP Inflow=13.40 cfs 70,214 cf
Primary=13.40 cfs 70,214 cf

Link H: EXIST. 12" CMP Inflow=9.40 cfs 49,241 cf
Primary=9.40 cfs 49,241 cf

Link I: EXIST. CB Inflow=2.19 cfs 9,280 cf
Primary=2.19 cfs 9,280 cf

Link J: OFF-SITE EAST Inflow=0.23 cfs 886 cf
Primary=0.23 cfs 886 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 621,748 cf Average Runoff Depth = 0.76"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

Summary for Subcatchment E1-1:

Runoff = 1.83 cfs @ 12.30 hrs, Volume= 8,798 cf, Depth= 1.00"
Routed to Link A1 : OFF-SITE WEST- EASTMAN ROAD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
0	70	Woods, Good, HSG C
83,629	74	>75% Grass cover, Good, HSG C
11,955	98	Paved parking, HSG C
0	98	Roofs, HSG C
9,776	96	Gravel surface, HSG C
105,360	79	Weighted Average
93,405		88.65% Pervious Area
11,955		11.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0275	0.20		**Sheet Flow,** Range n= 0.130 P2= 2.74"
5.2	505	0.0525	1.60		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.6	755	0.0740	1.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
20.1	1,360	Total			

Summary for Subcatchment E1-2:

Runoff = 7.62 cfs @ 12.35 hrs, Volume= 41,247 cf, Depth= 0.70"
Routed to Link A2 : OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
16,162	55	Woods, Good, HSG B
42,952	70	Woods, Good, HSG C
645,888	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
705,002	73	Weighted Average
705,002		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0500	0.25		**Sheet Flow,** Range n= 0.130 P2= 2.74"
5.2	540	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.7	765	0.0750	1.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.7	292	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.1	1,697	Total			

Summary for Subcatchment E1-3:

Runoff = 2.38 cfs @ 12.31 hrs, Volume= 13,324 cf, Depth= 0.54"
Routed to Link A3 : OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
57,303	55	Woods, Good, HSG B
137,214	70	Woods, Good, HSG C
103,472	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
681	98	Roofs, HSG C
0	96	Gravel surface, HSG C
298,670	69	Weighted Average
297,989		99.77% Pervious Area
681		0.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Range n= 0.130 P2= 2.74"
3.5	355	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.6	595	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.0	266	0.1900	2.18		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.2	1,316	Total			

Summary for Subcatchment E1-4:

Runoff = 3.91 cfs @ 12.32 hrs, Volume= 23,400 cf, Depth= 0.46"
Routed to Link A4 : OFF-SITE WEST - TO STREAM

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
160,186	55	Woods, Good, HSG B
313,553	70	Woods, Good, HSG C
133,543	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
1,806	98	Roofs, HSG C
0	96	Gravel surface, HSG C
609,088	67	Weighted Average
607,282		99.70% Pervious Area
1,806		0.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Range n= 0.130 P2= 2.74"
4.5	420	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
4.9	525	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	280	0.1800	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
17.7	1,325	Total			

Summary for Subcatchment E1-5:

Runoff = 0.57 cfs @ 12.52 hrs, Volume= 6,148 cf, Depth= 0.20"
Routed to Link A5 : OFF-SITE WEST - TO SWALE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
302,645	55	Woods, Good, HSG B
72,923	70	Woods, Good, HSG C
1,699	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
377,267	58	Weighted Average
377,267		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0400	0.23		**Sheet Flow,** Range n= 0.130 P2= 2.74"
3.8	280	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.8	480	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	66	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
16.7	926	Total			

Summary for Subcatchment E10:

Runoff = 0.23 cfs @ 12.16 hrs, Volume= 886 cf, Depth= 0.75"
Routed to Link J : OFF-SITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
14,216	74	>75% Grass cover, Good, HSG C
14,216		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0300	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.8	75	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.8	175	Total			

Summary for Subcatchment E2:

Runoff = 8.45 cfs @ 12.29 hrs, Volume= 47,433 cf, Depth= 0.50"
Routed to Link B : OFF-SITE SOUTH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
263,036	55	Woods, Good, HSG B
2,373	61	>75% Grass cover, Good, HSG B
797	98	Roofs, HSG B
667,071	70	Woods, Good, HSG C
172,574	74	>75% Grass cover, Good, HSG C
22,979	98	Paved parking, HSG C
14,837	98	Roofs, HSG C
559	96	Gravel surface, HSG C
1,144,226	68	Weighted Average
1,105,613		96.63% Pervious Area
38,613		3.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	75	0.0600	0.26		**Sheet Flow,** Range n= 0.130 P2= 2.74"
1.8	129	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	303	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	750	0.0500	5.90	29.51	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
2.3	239	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	68	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	628	0.1100	8.76	43.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
16.4	2,192	Total			

Summary for Subcatchment E3:

Runoff = 23.25 cfs @ 12.68 hrs, Volume= 169,847 cf, Depth= 0.80"
Routed to Link C : EXIST. HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
270,481	55	Woods, Good, HSG B
111,692	61	>75% Grass cover, Good, HSG B
24,369	98	Paved parking, HSG B
4,524	98	Roofs, HSG B
9,218	96	Gravel surface, HSG B
39,364	70	Woods, Good, HSG C
261,502	74	>75% Grass cover, Good, HSG C
16,080	98	Paved parking, HSG C
1,256	98	Roofs, HSG C
3,258	96	Gravel surface, HSG C
1,608,454	77	Woods, Good, HSG D
148,959	80	>75% Grass cover, Good, HSG D
50,644	98	Paved parking, HSG D
5,592	98	Roofs, HSG D
8,089	96	Gravel surface, HSG D
2,563,482	75	Weighted Average
2,461,017		96.00% Pervious Area
102,465		4.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0500	0.25		**Sheet Flow,** Range n= 0.130 P2= 2.74"
4.4	259	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	195	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	82	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	111	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	106	0.2500	2.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.3	788	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
10.3	617	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	338	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	151	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	137	0.0400	8.46	338.53	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
0.7	411	0.0500	9.46	378.49	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
2.4	124	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
45.4	3,419	Total			

Summary for Subcatchment E4:

Runoff = 11.35 cfs @ 12.57 hrs, Volume= 73,931 cf, Depth= 0.84"
Routed to Link D : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
63,680	55	Woods, Good, HSG B
16,675	61	>75% Grass cover, Good, HSG B
8,321	98	Paved parking, HSG B
33,265	70	Woods, Good, HSG C
437,723	74	>75% Grass cover, Good, HSG C
58,248	98	Paved parking, HSG C
19,588	98	Roofs, HSG C
330,153	77	Woods, Good, HSG D
67,251	80	>75% Grass cover, Good, HSG D
10,152	98	Paved parking, HSG D
4,796	98	Roofs, HSG D
1,139	96	Gravel surface, HSG D
1,050,991	76	Weighted Average
949,886		90.38% Pervious Area
101,105		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	100	0.0900	0.32		**Sheet Flow,** Range n= 0.130 P2= 2.74"
0.6	68	0.1600	2.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	207	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	89	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	41	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	39	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.2	266	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	209	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	50	0.1600	2.80		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.3	448	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
4.1	458	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	77	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	665	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	176	0.0500	9.44	302.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 8.0 '/' Top.W=32.00' n= 0.035 Earth, dense weeds
0.5	119	0.0200	3.78	56.65	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 15.0 '/' Top.W=30.00' n= 0.035 Earth, dense weeds
1.0	348	0.0500	5.77	17.32	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.035 Earth, dense weeds
37.5	3,378	Total			

Summary for Subcatchment E5:

[47] Hint: Peak is 359% of capacity of segment #8

Runoff = 19.60 cfs @ 12.60 hrs, Volume= 130,263 cf, Depth= 0.95"
Routed to Link E : OFF-SITE SOUTH EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
149,459	55	Woods, Good, HSG B
14,578	61	>75% Grass cover, Good, HSG B
6,727	98	Paved parking, HSG B
2,096	98	Roofs, HSG B
337,777	70	Woods, Good, HSG C
700,009	74	>75% Grass cover, Good, HSG C
273,966	98	Paved parking, HSG C
152,340	98	Roofs, HSG C
12,662	96	Gravel surface, HSG C
1,649,614	78	Weighted Average
1,214,485		73.62% Pervious Area
435,129		26.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0300	0.21		**Sheet Flow,** Range n= 0.130 P2= 2.74"
0.7	71	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	112	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	80	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.4	322	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	70	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.0	312	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	37	0.0200	6.95	5.46	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.0	496	0.0400	8.45	270.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 8.0 '/' Top.W=32.00' n= 0.035 Earth, dense weeds
1.8	74	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	287	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	148	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	114	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	218	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.8	304	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.7	41	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	17	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	54	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	161	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	133	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
40.7	3,151	Total			

Summary for Subcatchment E6:

Runoff = 4.70 cfs @ 12.45 hrs, Volume= 26,977 cf, Depth= 0.95"
Routed to Link F : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
44,696	70	Woods, Good, HSG C
162,323	74	>75% Grass cover, Good, HSG C
24,537	98	Paved parking, HSG C
21,982	98	Roofs, HSG C
4,018	96	Gravel surface, HSG C
25,003	77	Woods, Good, HSG D
56,513	80	>75% Grass cover, Good, HSG D
190	98	Paved parking, HSG D
2,079	98	Roofs, HSG D
292	96	Gravel surface, HSG D
341,633	78	Weighted Average
292,845		85.72% Pervious Area
48,788		14.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	72	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.5	110	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.3	445	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	259	0.0600	3.94		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.6	294	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	121	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	301	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.9	285	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
30.0	1,887	Total			

Summary for Subcatchment E7:

Runoff = 4.01 cfs @ 12.36 hrs, Volume= 20,972 cf, Depth= 0.95"
Routed to Link G : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
27,844	70	Woods, Good, HSG C
159,960	74	>75% Grass cover, Good, HSG C
20,747	98	Paved parking, HSG C
11,636	98	Roofs, HSG C
6,285	96	Gravel surface, HSG C
37,054	80	>75% Grass cover, Good, HSG D
317	98	Paved parking, HSG D
1,745	98	Roofs, HSG D
265,588	78	Weighted Average
231,143		87.03% Pervious Area
34,445		12.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.3	86	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.3	361	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	39	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.7	192	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.9	167	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	102	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	276	0.0600	3.94		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.9	247	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
24.3	1,570	Total			

Summary for Subcatchment E8:

Runoff = 9.40 cfs @ 12.37 hrs, Volume= 49,241 cf, Depth= 1.00"
Routed to Link H : EXIST. 12" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
13,426	70	Woods, Good, HSG C
445,022	74	>75% Grass cover, Good, HSG C
100,748	98	Paved parking, HSG C
16,786	98	Roofs, HSG C
13,671	96	Gravel surface, HSG C
589,653	79	Weighted Average
472,119		80.07% Pervious Area
117,534		19.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0500	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
3.0	254	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	59	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.2	181	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	68	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	102	0.1000	2.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.8	76	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.0	187	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	16	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.4	225	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.9	248	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
24.9	1,516	Total			

Summary for Subcatchment E9:

Runoff = 2.19 cfs @ 12.20 hrs, Volume= 9,280 cf, Depth= 0.84"
Routed to Link I : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
118,866	74	>75% Grass cover, Good, HSG C
7,651	98	Paved parking, HSG C
5,405	96	Gravel surface, HSG C
131,922	76	Weighted Average
124,271		94.20% Pervious Area
7,651		5.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0400	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
1.3	153	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	30	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.8	319	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.4	602	Total			

Summary for Link A1: OFF-SITE WEST- EASTMAN ROAD

Inflow Area = 105,360 sf, 11.35% Impervious, Inflow Depth = 1.00" for 2-YEAR event
Inflow = 1.83 cfs @ 12.30 hrs, Volume= 8,798 cf
Primary = 1.83 cfs @ 12.30 hrs, Volume= 8,798 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD

Inflow Area = 705,002 sf, 0.00% Impervious, Inflow Depth = 0.70" for 2-YEAR event
Inflow = 7.62 cfs @ 12.35 hrs, Volume= 41,247 cf
Primary = 7.62 cfs @ 12.35 hrs, Volume= 41,247 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD

Inflow Area = 298,670 sf, 0.23% Impervious, Inflow Depth = 0.54" for 2-YEAR event
Inflow = 2.38 cfs @ 12.31 hrs, Volume= 13,324 cf
Primary = 2.38 cfs @ 12.31 hrs, Volume= 13,324 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A4: OFF-SITE WEST - TO STREAM

Inflow Area = 609,088 sf, 0.30% Impervious, Inflow Depth = 0.46" for 2-YEAR event
Inflow = 3.91 cfs @ 12.32 hrs, Volume= 23,400 cf
Primary = 3.91 cfs @ 12.32 hrs, Volume= 23,400 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A5: OFF-SITE WEST - TO SWALE

Inflow Area = 377,267 sf, 0.00% Impervious, Inflow Depth = 0.20" for 2-YEAR event
Inflow = 0.57 cfs @ 12.52 hrs, Volume= 6,148 cf
Primary = 0.57 cfs @ 12.52 hrs, Volume= 6,148 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link B: OFF-SITE SOUTH

Inflow Area = 1,144,226 sf, 3.37% Impervious, Inflow Depth = 0.50" for 2-YEAR event
Inflow = 8.45 cfs @ 12.29 hrs, Volume= 47,433 cf
Primary = 8.45 cfs @ 12.29 hrs, Volume= 47,433 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link C: EXIST. HEADWALL

Inflow Area = 2,563,482 sf, 4.00% Impervious, Inflow Depth = 0.80" for 2-YEAR event
Inflow = 23.25 cfs @ 12.68 hrs, Volume= 169,847 cf
Primary = 23.25 cfs @ 12.68 hrs, Volume= 169,847 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link D: EXIST. CB

Inflow Area = 1,050,991 sf, 9.62% Impervious, Inflow Depth = 0.84" for 2-YEAR event
Inflow = 11.35 cfs @ 12.57 hrs, Volume= 73,931 cf
Primary = 11.35 cfs @ 12.57 hrs, Volume= 73,931 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link E: OFF-SITE SOUTH EAST

Inflow Area = 1,649,614 sf, 26.38% Impervious, Inflow Depth = 0.95" for 2-YEAR event
Inflow = 19.60 cfs @ 12.60 hrs, Volume= 130,263 cf
Primary = 19.60 cfs @ 12.60 hrs, Volume= 130,263 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link F: EXIST. 18" CMP

Inflow Area = 341,633 sf, 14.28% Impervious, Inflow Depth = 0.95" for 2-YEAR event
Inflow = 4.70 cfs @ 12.45 hrs, Volume= 26,977 cf
Primary = 4.70 cfs @ 12.45 hrs, Volume= 26,977 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link G: EXIST. 18" CMP

Inflow Area = 855,241 sf, 17.77% Impervious, Inflow Depth = 0.99" for 2-YEAR event
Inflow = 13.40 cfs @ 12.37 hrs, Volume= 70,214 cf
Primary = 13.40 cfs @ 12.37 hrs, Volume= 70,214 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link H: EXIST. 12" CMP

Inflow Area = 589,653 sf, 19.93% Impervious, Inflow Depth = 1.00" for 2-YEAR event
Inflow = 9.40 cfs @ 12.37 hrs, Volume= 49,241 cf
Primary = 9.40 cfs @ 12.37 hrs, Volume= 49,241 cf, Atten= 0%, Lag= 0.0 min
Routed to Link G : EXIST. 18" CMP

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link I: EXIST. CB

Inflow Area = 131,922 sf, 5.80% Impervious, Inflow Depth = 0.84" for 2-YEAR event
Inflow = 2.19 cfs @ 12.20 hrs, Volume= 9,280 cf
Primary = 2.19 cfs @ 12.20 hrs, Volume= 9,280 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link J: OFF-SITE EAST

Inflow Area = 14,216 sf, 0.00% Impervious, Inflow Depth = 0.75" for 2-YEAR event
Inflow = 0.23 cfs @ 12.16 hrs, Volume= 886 cf
Primary = 0.23 cfs @ 12.16 hrs, Volume= 886 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=1.96"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=3.71 cfs 17,239 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=18.14 cfs 89,738 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=1.27"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=6.66 cfs 31,525 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=1.14"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=12.11 cfs 58,105 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=0.66"
Flow Length=926' Tc=16.7 min CN=58 Runoff=3.53 cfs 20,903 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=1.60"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.52 cfs 1,891 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=1.20"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=24.96 cfs 114,899 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=1.67"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=51.95 cfs 356,039 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=1.74"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=24.65 cfs 152,266 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=1.89"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=40.54 cfs 259,392 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=1.89"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=9.72 cfs 53,720 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=1.89"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=8.30 cfs 41,762 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=1.96"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=19.01 cfs 96,481 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=1.74"
Flow Length=602' Tc=13.4 min CN=76 Runoff=4.77 cfs 19,113 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=3.71 cfs 17,239 cf
Primary=3.71 cfs 17,239 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=18.14 cfs 89,738 cf
Primary=18.14 cfs 89,738 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=6.66 cfs 31,525 cf
Primary=6.66 cfs 31,525 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=12.11 cfs 58,105 cf
Primary=12.11 cfs 58,105 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=3.53 cfs 20,903 cf
Primary=3.53 cfs 20,903 cf

Link B: OFF-SITE SOUTH Inflow=24.96 cfs 114,899 cf
Primary=24.96 cfs 114,899 cf

Link C: EXIST. HEADWALL Inflow=51.95 cfs 356,039 cf
Primary=51.95 cfs 356,039 cf

Link D: EXIST. CB Inflow=24.65 cfs 152,266 cf
Primary=24.65 cfs 152,266 cf

Link E: OFF-SITE SOUTH EAST Inflow=40.54 cfs 259,392 cf
Primary=40.54 cfs 259,392 cf

Link F: EXIST. 18" CMP Inflow=9.72 cfs 53,720 cf
Primary=9.72 cfs 53,720 cf

Link G: EXIST. 18" CMP Inflow=27.30 cfs 138,244 cf
Primary=27.30 cfs 138,244 cf

Link H: EXIST. 12" CMP Inflow=19.01 cfs 96,481 cf
Primary=19.01 cfs 96,481 cf

Link I: EXIST. CB Inflow=4.77 cfs 19,113 cf
Primary=4.77 cfs 19,113 cf

Link J: OFF-SITE EAST Inflow=0.52 cfs 1,891 cf
Primary=0.52 cfs 1,891 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 1,313,073 cf Average Runoff Depth = 1.60"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=2.78"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=5.29 cfs 24,447 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=2.26"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=27.45 cfs 133,057 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=1.94"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=10.61 cfs 48,355 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=1.79"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=19.88 cfs 90,811 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=1.16"
Flow Length=926' Tc=16.7 min CN=58 Runoff=7.26 cfs 36,400 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=2.35"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.78 cfs 2,782 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=1.87"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=40.32 cfs 177,867 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=2.43"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=76.91 cfs 519,760 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=2.52"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=36.11 cfs 220,625 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=2.69"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=58.31 cfs 370,438 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=2.69"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=13.98 cfs 76,717 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=2.69"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=11.93 cfs 59,641 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=2.78"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=27.08 cfs 136,821 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=2.52"
Flow Length=602' Tc=13.4 min CN=76 Runoff=6.98 cfs 27,693 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=5.29 cfs 24,447 cf
Primary=5.29 cfs 24,447 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=27.45 cfs 133,057 cf
Primary=27.45 cfs 133,057 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=10.61 cfs 48,355 cf
Primary=10.61 cfs 48,355 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=19.88 cfs 90,811 cf
Primary=19.88 cfs 90,811 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=7.26 cfs 36,400 cf
Primary=7.26 cfs 36,400 cf

Link B: OFF-SITE SOUTH Inflow=40.32 cfs 177,867 cf
Primary=40.32 cfs 177,867 cf

Link C: EXIST. HEADWALL Inflow=76.91 cfs 519,760 cf
Primary=76.91 cfs 519,760 cf

Link D: EXIST. CB Inflow=36.11 cfs 220,625 cf
Primary=36.11 cfs 220,625 cf

Link E: OFF-SITE SOUTH EAST Inflow=58.31 cfs 370,438 cf
Primary=58.31 cfs 370,438 cf

Link F: EXIST. 18" CMP Inflow=13.98 cfs 76,717 cf
Primary=13.98 cfs 76,717 cf

Link G: EXIST. 18" CMP Inflow=39.00 cfs 196,462 cf
Primary=39.00 cfs 196,462 cf

Link H: EXIST. 12" CMP Inflow=27.08 cfs 136,821 cf
Primary=27.08 cfs 136,821 cf

Link I: EXIST. CB Inflow=6.98 cfs 27,693 cf
Primary=6.98 cfs 27,693 cf

Link J: OFF-SITE EAST Inflow=0.78 cfs 2,782 cf
Primary=0.78 cfs 2,782 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 1,925,414 cf Average Runoff Depth = 2.35"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=3.57"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=6.78 cfs 31,368 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=2.99"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=36.51 cfs 175,624 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=2.62"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=14.53 cfs 65,190 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=2.44"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=27.68 cfs 123,842 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=1.68"
Flow Length=926' Tc=16.7 min CN=58 Runoff=11.27 cfs 52,896 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=175' Tc=9.8 min CN=74 Runoff=1.02 cfs 3,654 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=2.53"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=55.65 cfs 241,151 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=3.18"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=100.96 cfs 679,334 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=3.28"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=47.08 cfs 286,992 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=3.47"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=75.19 cfs 477,443 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=3.47"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=18.02 cfs 98,878 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=3.47"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=15.38 cfs 76,868 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=3.57"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=34.72 cfs 175,553 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=3.28"
Flow Length=602' Tc=13.4 min CN=76 Runoff=9.11 cfs 36,024 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=6.78 cfs 31,368 cf
Primary=6.78 cfs 31,368 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=36.51 cfs 175,624 cf
Primary=36.51 cfs 175,624 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=14.53 cfs 65,190 cf
Primary=14.53 cfs 65,190 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=27.68 cfs 123,842 cf
Primary=27.68 cfs 123,842 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=11.27 cfs 52,896 cf
Primary=11.27 cfs 52,896 cf

Link B: OFF-SITE SOUTH Inflow=55.65 cfs 241,151 cf
Primary=55.65 cfs 241,151 cf

Link C: EXIST. HEADWALL Inflow=100.96 cfs 679,334 cf
Primary=100.96 cfs 679,334 cf

Link D: EXIST. CB Inflow=47.08 cfs 286,992 cf
Primary=47.08 cfs 286,992 cf

Link E: OFF-SITE SOUTH EAST Inflow=75.19 cfs 477,443 cf
Primary=75.19 cfs 477,443 cf

Link F: EXIST. 18" CMP Inflow=18.02 cfs 98,878 cf
Primary=18.02 cfs 98,878 cf

Link G: EXIST. 18" CMP Inflow=50.09 cfs 252,421 cf
Primary=50.09 cfs 252,421 cf

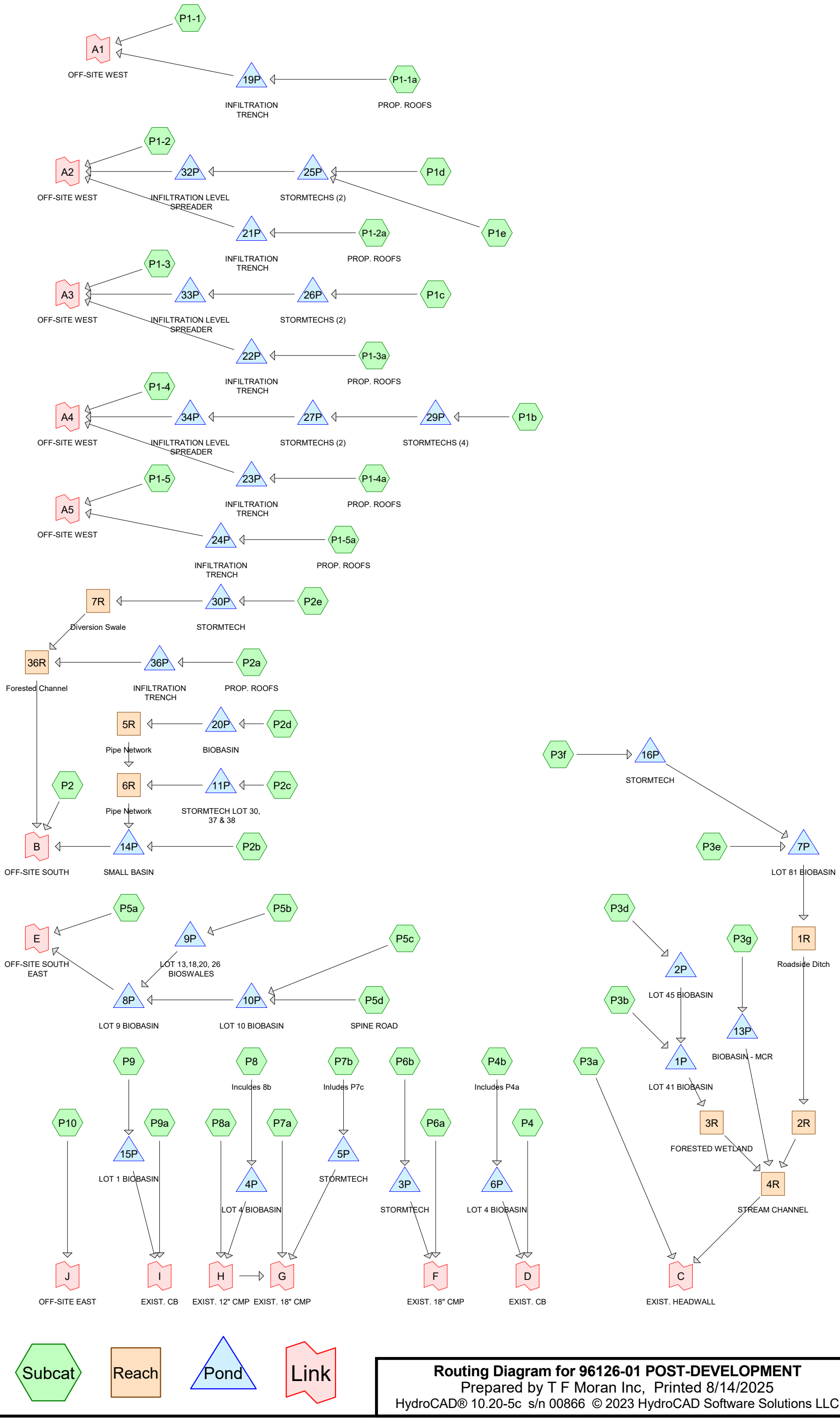
Link H: EXIST. 12" CMP Inflow=34.72 cfs 175,553 cf
Primary=34.72 cfs 175,553 cf

Link I: EXIST. CB Inflow=9.11 cfs 36,024 cf
Primary=9.11 cfs 36,024 cf

Link J: OFF-SITE EAST Inflow=1.02 cfs 3,654 cf
Primary=1.02 cfs 3,654 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 2,524,815 cf Average Runoff Depth = 3.08"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

4



Routing Diagram for 96126-01 POST-DEVELOPMENT

Prepared by T F Moran Inc, Printed 8/14/2025

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-YEAR	Type III 24-hr		Default	24.00	1	2.74	2
2	10-YEAR	Type III 24-hr		Default	24.00	1	4.00	2
3	25-YEAR	Type III 24-hr		Default	24.00	1	4.98	2
4	50-YEAR	Type III 24-hr		Default	24.00	1	5.88	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,153,634	84	(P1b, P1c, P1e, P2e, P5b)
439,124	88	(P1d, P3f, P5c)
507,070	67	(P2)
754,943	86	(P2b, P2d, P3e, P8a)
456,208	85	(P2c)
2,107,972	74	(P3a, P5a, P6a, P7a)
696,324	87	(P3b, P9)
537,094	90	(P3d)
334,343	94	(P3g, P5d, P6b)
423,345	76	(P4)
180,354	77	(P5a)
58,842	83	(P9a)
4,000	61	>75% Grass cover, Good, HSG B (P1-4)
430,650	74	>75% Grass cover, Good, HSG C (P1-1, P1-2, P1-3, P1-4, P1-5, P10)
9,000	96	Gravel surface, HSG C (P1-1)
33,989	74	P4a (P4b)
545,286	88	P6 (P4b)
85,829	94	P7b (P7b)
117,158	84	P7c (P7b)
83,467	90	P8 (P8)
290,000	94	P8b (P8)
10,500	98	Paved parking, HSG C (P1-1)
17,500	98	Roofs, HSG C (P1-1a, P1-2a, P1-3a, P1-4a, P1-5a, P2a)
509,107	55	Woods, Good, HSG B (P1-2, P1-3, P1-4, P1-5)
60,724	70	Woods, Good, HSG C (P1-2, P1-3, P1-4, P1-5)
9,846,463	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
513,107	HSG B	P1-2, P1-3, P1-4, P1-5
528,374	HSG C	P1-1, P1-1a, P1-2, P1-2a, P1-3, P1-3a, P1-4, P1-4a, P1-5, P1-5a, P10, P2a
0	HSG D	
8,804,982	Other	P1b, P1c, P1d, P1e, P2, P2b, P2c, P2d, P2e, P3a, P3b, P3d, P3e, P3f, P3g, P4, P4b, P5a, P5b, P5c, P5d, P6a, P6b, P7a, P7b, P8, P8a, P9, P9a
9,846,463		**TOTAL AREA**

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=1.12"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=1.46 cfs 6,432 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=0.66"
Tc=10.0 min CN=72 Runoff=3.84 cfs 15,824 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=0.33"
Tc=10.0 min CN=63 Runoff=0.41 cfs 2,720 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=0.30"
Flow Length=538' Tc=10.2 min CN=62 Runoff=0.85 cfs 6,177 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=0.17"
Tc=10.0 min CN=57 Runoff=0.42 cfs 4,601 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.09 cfs 314 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.01 cfs 36 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=11.07 cfs 35,070 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=5.42 cfs 17,170 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=1.59"
Tc=6.0 min CN=88 Runoff=1.59 cfs 5,026 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=7.17 cfs 22,714 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=3.33 cfs 19,481 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.47 cfs 1,673 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=86 Runoff=4.62 cfs 14,604 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=1.37"
Tc=10.0 min CN=85 Runoff=14.52 cfs 52,177 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=1.44"
Tc=10.0 min CN=86 Runoff=9.46 cfs 33,930 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=1.07 cfs 3,401 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=17.41 cfs 129,223 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=1.51"
Tc=6.0 min CN=87 Runoff=8.71 cfs 27,499 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=1.75"
Tc=6.0 min CN=90 Runoff=24.60 cfs 78,186 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=86 Runoff=10.68 cfs 33,719 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=1.59"
Tc=6.0 min CN=88 Runoff=3.48 cfs 10,997 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=2.10"
Tc=6.0 min CN=94 Runoff=1.08 cfs 3,522 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=0.84"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=4.57 cfs 29,780 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=1.51"
Tc=10.0 min CN=87 Runoff=20.39 cfs 73,098 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=0.89"
Tc=10.0 min CN=77 Runoff=3.65 cfs 13,827 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=1.31"
Tc=10.0 min CN=84 Runoff=13.08 cfs 47,121 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=1.59"
Tc=10.0 min CN=88 Runoff=11.74 cfs 42,125 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=2.10"
Tc=10.0 min CN=94 Runoff=8.28 cfs 30,653 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=0.75"
Tc=6.0 min CN=74 Runoff=0.14 cfs 488 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=2.10"
Tc=10.0 min CN=94 Runoff=6.57 cfs 24,318 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=0.75"
Tc=6.0 min CN=74 Runoff=0.38 cfs 1,327 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=1.59"
Tc=10.0 min CN=88 Runoff=7.49 cfs 26,879 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=2.01"
Tc=6.0 min CN=93 Runoff=19.27 cfs 62,440 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=86 Runoff=2.68 cfs 8,473 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=1.51"
Tc=10.0 min CN=87 Runoff=16.84 cfs 60,369 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=1.24"
Tc=6.0 min CN=83 Runoff=1.91 cfs 6,082 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.19' Max Vel=3.97 fps Inflow=0.52 cfs 30,048 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=0.52 cfs 29,991 cf

Reach 2R: Avg. Flow Depth=0.22' Max Vel=2.75 fps Inflow=0.52 cfs 29,991 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=0.52 cfs 29,794 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.33' Max Vel=4.76 fps Inflow=3.38 cfs 99,437 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=3.38 cfs 99,377 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.35' Max Vel=3.40 fps Inflow=3.98 cfs 132,625 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=3.98 cfs 132,381 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.13' Max Vel=2.70 fps Inflow=0.19 cfs 9,666 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=0.19 cfs 9,658 cf

Reach 6R: Pipe Network Avg. Flow Depth=0.26' Max Vel=6.57 fps Inflow=1.56 cfs 36,944 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=1.56 cfs 36,937 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.07' Max Vel=0.36 fps Inflow=0.09 cfs 1,740 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=0.09 cfs 1,740 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.03' Max Vel=1.45 fps Inflow=0.09 cfs 1,740 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=0.09 cfs 1,740 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=631.30' Storage=13,325 cf Inflow=10.16 cfs 101,459 cf
Outflow=3.38 cfs 99,437 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=661.81' Storage=41,550 cf Inflow=24.60 cfs 78,186 cf
Outflow=2.05 cfs 73,961 cf

Pond 3P: STORMTECH Peak Elev=566.17' Storage=6,546 cf Inflow=6.57 cfs 24,318 cf
Discarded=0.03 cfs 2,126 cf Primary=3.79 cfs 21,144 cf Outflow=3.82 cfs 23,270 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=567.59' Storage=42,304 cf Inflow=19.27 cfs 62,440 cf
Outflow=1.76 cfs 74,521 cf

Pond 5P: STORMTECH Peak Elev=566.04' Storage=8,584 cf Inflow=7.49 cfs 26,879 cf
Discarded=0.04 cfs 2,632 cf Primary=3.45 cfs 22,720 cf Outflow=3.49 cfs 25,352 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=557.84' Storage=32,268 cf Inflow=20.39 cfs 73,098 cf
Outflow=4.01 cfs 70,720 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=709.69' Storage=27,154 cf Inflow=11.26 cfs 42,317 cf
Outflow=0.52 cfs 30,048 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=586.53' Storage=3,913 cf Inflow=5.67 cfs 112,958 cf
Outflow=5.18 cfs 112,979 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=592.33' Storage=17,106 cf Inflow=13.08 cfs 47,121 cf
Discarded=0.16 cfs 6,946 cf Primary=2.10 cfs 40,177 cf Outflow=2.26 cfs 47,123 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=612.67' Storage=27,459 cf Inflow=20.02 cfs 72,779 cf
Outflow=3.58 cfs 72,781 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=641.58' Storage=23,794 cf Inflow=14.52 cfs 52,177 cf
Discarded=0.35 cfs 22,360 cf Primary=1.37 cfs 27,286 cf Outflow=1.72 cfs 49,646 cf

Pond 13P: BIOBASIN - MCR Peak Elev=612.64' Storage=1,572 cf Inflow=1.08 cfs 3,522 cf
Outflow=0.17 cfs 3,454 cf

Pond 14P: SMALL BASIN Peak Elev=616.74' Storage=2,403 cf Inflow=4.74 cfs 51,541 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=3.52 cfs 51,299 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=571.11' Storage=46,826 cf Inflow=16.84 cfs 60,369 cf
Outflow=0.33 cfs 21,034 cf

Pond 16P: STORMTECH Peak Elev=713.61' Storage=4,011 cf Inflow=3.48 cfs 10,997 cf
Discarded=0.02 cfs 1,564 cf Primary=1.22 cfs 8,598 cf Outflow=1.24 cfs 10,162 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 20P: BIOBASIN Peak Elev=660.50' Storage=18,136 cf Inflow=9.46 cfs 33,930 cf
Discarded=0.36 cfs 22,828 cf Primary=0.19 cfs 9,666 cf Outflow=0.55 cfs 32,494 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=401.25' Storage=136 cf Inflow=0.09 cfs 314 cf
Discarded=0.01 cfs 314 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 314 cf

Pond 25P: STORMTECHS (2) Peak Elev=501.39' Storage=11,700 cf Inflow=8.76 cfs 27,740 cf
Discarded=0.19 cfs 12,307 cf Primary=1.00 cfs 14,951 cf Outflow=1.20 cfs 27,258 cf

Pond 26P: STORMTECHS (2) Peak Elev=501.33' Storage=6,837 cf Inflow=5.42 cfs 17,170 cf
Discarded=0.12 cfs 7,514 cf Primary=0.95 cfs 9,446 cf Outflow=1.07 cfs 16,960 cf

Pond 27P: STORMTECHS (2) Peak Elev=501.20' Storage=2,060 cf Inflow=1.23 cfs 18,270 cf
Discarded=0.04 cfs 2,264 cf Primary=1.12 cfs 16,007 cf Outflow=1.16 cfs 18,271 cf

Pond 29P: STORMTECHS (4) Peak Elev=506.30' Storage=14,675 cf Inflow=11.07 cfs 35,070 cf
Discarded=0.26 cfs 16,398 cf Primary=1.23 cfs 18,270 cf Outflow=1.49 cfs 34,668 cf

Pond 30P: STORMTECH Peak Elev=694.87' Storage=1,499 cf Inflow=1.07 cfs 3,401 cf
Discarded=0.03 cfs 1,644 cf Primary=0.09 cfs 1,740 cf Outflow=0.11 cfs 3,384 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.68' Storage=2,476 cf Inflow=1.00 cfs 14,951 cf
Discarded=0.05 cfs 2,583 cf Primary=0.98 cfs 10,844 cf Outflow=1.02 cfs 13,427 cf

Pond 33P: INFILTRATION LEVEL SPREADER Peak Elev=300.68' Storage=3,083 cf Inflow=0.95 cfs 9,446 cf
Discarded=0.06 cfs 3,007 cf Primary=0.70 cfs 4,686 cf Outflow=0.75 cfs 7,693 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.68' Storage=3,091 cf Inflow=1.12 cfs 16,007 cf
Discarded=0.06 cfs 2,980 cf Primary=1.31 cfs 11,254 cf Outflow=1.37 cfs 14,234 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=400.83' Storage=650 cf Inflow=0.47 cfs 1,673 cf
Discarded=0.04 cfs 1,673 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 1,673 cf

Link A1: OFF-SITE WEST Inflow=1.46 cfs 6,432 cf
Primary=1.46 cfs 6,432 cf

Link A2: OFF-SITE WEST Inflow=3.84 cfs 26,668 cf
Primary=3.84 cfs 26,668 cf

Link A3: OFF-SITE WEST Inflow=0.81 cfs 7,406 cf
Primary=0.81 cfs 7,406 cf

Link A4: OFF-SITE WEST Inflow=1.56 cfs 17,431 cf
Primary=1.56 cfs 17,431 cf

Link A5: OFF-SITE WEST Inflow=0.42 cfs 4,601 cf
Primary=0.42 cfs 4,601 cf

Link B: OFF-SITE SOUTH Inflow=6.73 cfs 72,520 cf
Primary=6.73 cfs 72,520 cf

Link C: EXIST. HEADWALL Inflow=21.38 cfs 261,603 cf
Primary=21.38 cfs 261,603 cf

Link D: EXIST. CB Inflow=8.55 cfs 100,499 cf
Primary=8.55 cfs 100,499 cf

Link E: OFF-SITE SOUTH EAST Inflow=6.67 cfs 126,806 cf
Primary=6.67 cfs 126,806 cf

Link F: EXIST. 18" CMP Inflow=3.86 cfs 21,632 cf
Primary=3.86 cfs 21,632 cf

Link G: EXIST. 18" CMP Inflow=5.98 cfs 107,041 cf
Primary=5.98 cfs 107,041 cf

Link H: EXIST. 12" CMP Inflow=3.68 cfs 82,994 cf
Primary=3.68 cfs 82,994 cf

Link I: EXIST. CB Inflow=2.09 cfs 27,116 cf
Primary=2.09 cfs 27,116 cf

Link J: OFF-SITE EAST Inflow=0.01 cfs 36 cf
Primary=0.01 cfs 36 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 953,146 cf Average Runoff Depth = 1.16"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf

Summary for Subcatchment P1-1:

Runoff = 1.46 cfs @ 12.25 hrs, Volume= 6,432 cf, Depth= 1.12"
Routed to Link A1 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
0	70	Woods, Good, HSG C
49,602	74	>75% Grass cover, Good, HSG C
10,500	98	Paved parking, HSG C
0	98	Roofs, HSG C
9,000	96	Gravel surface, HSG C
69,102	81	Weighted Average
58,602		84.81% Pervious Area
10,500		15.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0275	0.20		**Sheet Flow,** Range n= 0.130 P2= 2.74"
2.1	200	0.0525	1.60		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.6	755	0.0740	1.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
17.0	1,055	Total			

Summary for Subcatchment P1-1a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 19P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-2:

Runoff = 3.84 cfs @ 12.16 hrs, Volume= 15,824 cf, Depth= 0.66"
Routed to Link A2 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
16,162	55	Woods, Good, HSG B
42,952	70	Woods, Good, HSG C
229,450	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
288,564	72	Weighted Average
288,564		100.00% Pervious Area

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

Summary for Subcatchment P1-2a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 21P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-3:

Runoff = 0.41 cfs @ 12.22 hrs, Volume= 2,720 cf, Depth= 0.33"
Routed to Link A3 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
57,303	55	Woods, Good, HSG B
5,080	70	Woods, Good, HSG C
36,700	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
99,083	63	Weighted Average
99,083		100.00% Pervious Area

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

Summary for Subcatchment P1-3a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 22P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-4:

Runoff = 0.85 cfs @ 12.29 hrs, Volume= 6,177 cf, Depth= 0.30"
Routed to Link A4 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
156,186	55	Woods, Good, HSG B
5,000	70	Woods, Good, HSG C
4,000	61	>75% Grass cover, Good, HSG B
81,898	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
247,084	62	Weighted Average
247,084		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0600	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
1.3	178	0.1000	2.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.1	260	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
10.2	538	Total			

Summary for Subcatchment P1-4a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 23P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-5:

Runoff = 0.42 cfs @ 12.44 hrs, Volume= 4,601 cf, Depth= 0.17"
Routed to Link A5 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
279,456	55	Woods, Good, HSG B
7,692	70	Woods, Good, HSG C
0	61	>75% Grass cover, Good, HSG B
32,424	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
319,572	57	Weighted Average
319,572		100.00% Pervious Area

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

Summary for Subcatchment P1-5a: PROP. ROOFS

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 314 cf, Depth= 2.51"
Routed to Pond 24P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
1,500	98	Roofs, HSG C
1,500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P10:

Runoff = 0.01 cfs @ 12.16 hrs, Volume= 36 cf, Depth= 0.75"
Routed to Link J : OFF-SITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
576	74	>75% Grass cover, Good, HSG C
576		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0300	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.8	75	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.8	175	Total			

Summary for Subcatchment P1b:

Runoff = 11.07 cfs @ 12.09 hrs, Volume= 35,070 cf, Depth= 1.31"
Routed to Pond 29P : STORMTECHS (4)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	322,438	84	
	322,438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1c:

Runoff = 5.42 cfs @ 12.09 hrs, Volume= 17,170 cf, Depth= 1.31"
Routed to Pond 26P : STORMTECHS (2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	157,861	84	
	157,861		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1d:

Runoff = 1.59 cfs @ 12.09 hrs, Volume= 5,026 cf, Depth= 1.59"
Routed to Pond 25P : STORMTECHS (2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	37,954	88	
	37,954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1e:

Runoff = 7.17 cfs @ 12.09 hrs, Volume= 22,714 cf, Depth= 1.31"
Routed to Pond 25P : STORMTECHS (2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	208,836	84	
	208,836		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P2:

Runoff = 3.33 cfs @ 12.30 hrs, Volume= 19,481 cf, Depth= 0.46"
Routed to Link B : OFF-SITE SOUTH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	507,070	67	
	507,070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	75	0.0600	0.26		**Sheet Flow,** Range n= 0.130 P2= 2.74"
1.8	129	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	303	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	750	0.0500	5.90	29.51	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
2.3	239	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	68	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	628	0.1100	8.76	43.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
16.4	2,192	Total			

Summary for Subcatchment P2a: PROP. ROOFS

Runoff = 0.47 cfs @ 12.09 hrs, Volume= 1,673 cf, Depth= 2.51"
Routed to Pond 36P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
8,000	98	Roofs, HSG C
8,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P2b:

Runoff = 4.62 cfs @ 12.09 hrs, Volume= 14,604 cf, Depth= 1.44"
Routed to Pond 14P : SMALL BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	121,520	86	
	121,520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P2c:

Runoff = 14.52 cfs @ 12.15 hrs, Volume= 52,177 cf, Depth= 1.37"
Routed to Pond 11P : STORMTECH LOT 30, 37 & 38

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	456,208	85	
	456,208		100.00% Pervious Area

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

Summary for Subcatchment P2d:

Runoff = 9.46 cfs @ 12.15 hrs, Volume= 33,930 cf, Depth= 1.44"
Routed to Pond 20P : BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	282,337	86	
	282,337		100.00% Pervious Area

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

Summary for Subcatchment P2e:

Runoff = 1.07 cfs @ 12.09 hrs, Volume= 3,401 cf, Depth= 1.31"
Routed to Pond 30P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	31,267	84	
	31,267		100.00% Pervious Area

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

Summary for Subcatchment P3a:

Runoff = 17.41 cfs @ 12.69 hrs, Volume= 129,223 cf, Depth= 0.75"
Routed to Link C : EXIST. HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	2,073,802	74	
	2,073,802		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0500	0.25		**Sheet Flow,** Range n= 0.130 P2= 2.74"
4.4	259	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	195	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	82	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	111	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	106	0.2500	2.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.3	788	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
10.3	617	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	338	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	151	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	137	0.0400	8.46	338.53	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
0.7	411	0.0500	9.46	378.49	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
2.4	124	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
45.4	3,419	Total			

Summary for Subcatchment P3b:

Runoff = 8.71 cfs @ 12.09 hrs, Volume= 27,499 cf, Depth= 1.51"
Routed to Pond 1P : LOT 41 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	217,917	87	
	217,917		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3d:

Runoff = 24.60 cfs @ 12.09 hrs, Volume= 78,186 cf, Depth= 1.75"
Routed to Pond 2P : LOT 45 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	537,094	90	
	537,094		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3e:

Runoff = 10.68 cfs @ 12.09 hrs, Volume= 33,719 cf, Depth= 1.44"
Routed to Pond 7P : LOT 81 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	280,581	86	
	280,581		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3f:

Runoff = 3.48 cfs @ 12.09 hrs, Volume= 10,997 cf, Depth= 1.59"
Routed to Pond 16P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	83,048	88	
	83,048		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3g:

Runoff = 1.08 cfs @ 12.09 hrs, Volume= 3,522 cf, Depth= 2.10"
Routed to Pond 13P : BIOBASIN - MCR

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	20,130	94	
	20,130		100.00% Pervious Area

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

Summary for Subcatchment P4:

Runoff = 4.57 cfs @ 12.57 hrs, Volume= 29,780 cf, Depth= 0.84"
Routed to Link D : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	423,345	76	
	423,345		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	100	0.0900	0.32		**Sheet Flow,** Range n= 0.130 P2= 2.74"
0.6	68	0.1600	2.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	207	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	89	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	41	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	39	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.2	266	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	209	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	50	0.1600	2.80		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.3	448	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
4.1	458	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	77	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	665	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	176	0.0500	9.44	302.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 8.0 '/' Top.W=32.00' n= 0.035 Earth, dense weeds
0.5	119	0.0200	3.78	56.65	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 15.0 '/' Top.W=30.00' n= 0.035 Earth, dense weeds
1.0	348	0.0500	5.77	17.32	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.035 Earth, dense weeds
37.5	3,378	Total			

Summary for Subcatchment P4b: Includes P4a

Runoff = 20.39 cfs @ 12.14 hrs, Volume= 73,098 cf, Depth= 1.51"
Routed to Pond 6P : LOT 4 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	545,286	88	P6
*	33,989	74	P4a
	579,275	87	Weighted Average
	579,275		100.00% Pervious Area

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

Summary for Subcatchment P5a:

Runoff = 3.65 cfs @ 12.15 hrs, Volume= 13,827 cf, Depth= 0.89"
Routed to Link E : OFF-SITE SOUTH EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	180,354	77	
*	5,047	74	
	185,401	77	Weighted Average
	185,401		100.00% Pervious Area

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

Summary for Subcatchment P5b:

Runoff = 13.08 cfs @ 12.15 hrs, Volume= 47,121 cf, Depth= 1.31"
Routed to Pond 9P : LOT 13,18,20, 26 BIOSWALES

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	433,232	84	
	433,232		100.00% Pervious Area

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

Summary for Subcatchment P5c:

Runoff = 11.74 cfs @ 12.14 hrs, Volume= 42,125 cf, Depth= 1.59"
Routed to Pond 10P : LOT 10 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	318,122	88	
	318,122		100.00% Pervious Area

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

Summary for Subcatchment P5d: SPINE ROAD

Runoff = 8.28 cfs @ 12.14 hrs, Volume= 30,653 cf, Depth= 2.10"
Routed to Pond 10P : LOT 10 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	175,213	94	
	175,213		100.00% Pervious Area

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

Summary for Subcatchment P6a:

Runoff = 0.14 cfs @ 12.10 hrs, Volume= 488 cf, Depth= 0.75"
Routed to Link F : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	7,832	74	
	7,832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P6b:

LESS 250,000 SF TO P8

Runoff = 6.57 cfs @ 12.14 hrs, Volume= 24,318 cf, Depth= 2.10"
Routed to Pond 3P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	139,000	94	
	139,000		100.00% Pervious Area

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

Summary for Subcatchment P7a:

Runoff = 0.38 cfs @ 12.10 hrs, Volume= 1,327 cf, Depth= 0.75"
Routed to Link G : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
21,291	74	
21,291		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P7b: Inludes P7c

LESS 290,000 SF TO P8

Runoff = 7.49 cfs @ 12.14 hrs, Volume= 26,879 cf, Depth= 1.59"
Routed to Pond 5P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	85,829	94	P7b
*	117,158	84	P7c
	202,987	88	Weighted Average
	202,987		100.00% Pervious Area

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

Summary for Subcatchment P8: Inculdes 8b

Runoff = 19.27 cfs @ 12.09 hrs, Volume= 62,440 cf, Depth= 2.01"
Routed to Pond 4P : LOT 4 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	83,467	90	P8
*	290,000	94	P8b
	373,467	93	Weighted Average
	373,467		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P8a:

Runoff = 2.68 cfs @ 12.09 hrs, Volume= 8,473 cf, Depth= 1.44"
Routed to Link H : EXIST. 12" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	70,505	86	
	70,505		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P9:

Runoff = 16.84 cfs @ 12.14 hrs, Volume= 60,369 cf, Depth= 1.51"
Routed to Pond 15P : LOT 1 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	478,407	87	
	478,407		100.00% Pervious Area

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

Summary for Subcatchment P9a:

Runoff = 1.91 cfs @ 12.10 hrs, Volume= 6,082 cf, Depth= 1.24"
Routed to Link I : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	58,842	83	
	58,842		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

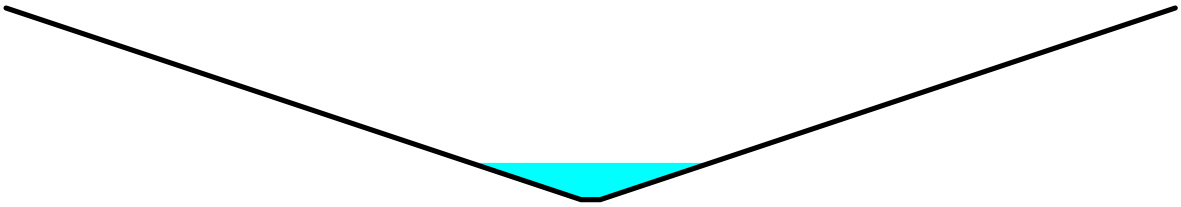
Summary for Reach 1R: Roadside Ditch

Inflow Area = 363,629 sf, 0.00% Impervious, Inflow Depth > 0.99" for 2-YEAR event
Inflow = 0.52 cfs @ 16.06 hrs, Volume= 30,048 cf
Outflow = 0.52 cfs @ 16.09 hrs, Volume= 29,991 cf, Atten= 0%, Lag= 2.0 min
Routed to Reach 2R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.97 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 3.53 fps, Avg. Travel Time= 2.8 min

Peak Storage= 79 cf @ 16.09 hrs
Average Depth at Peak Storage= 0.19' , Surface Width= 1.26'
Bank-Full Depth= 1.00' Flow Area= 3.1 sf, Capacity= 35.30 cfs

0.10' x 1.00' deep channel, n= 0.028 Earth, grassed & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.10'
Length= 600.0' Slope= 0.1217 '/'
Inlet Invert= 705.00', Outlet Invert= 632.00'



Summary for Reach 2R:

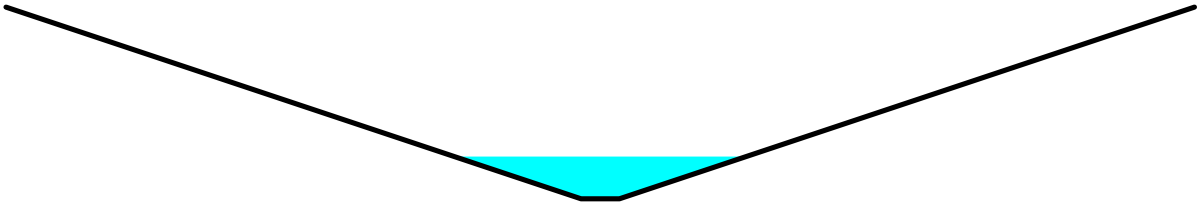
[62] Hint: Exceeded Reach 1R OUTLET depth by 0.03' @ 16.60 hrs

Inflow Area = 363,629 sf, 0.00% Impervious, Inflow Depth > 0.99" for 2-YEAR event
Inflow = 0.52 cfs @ 16.09 hrs, Volume= 29,991 cf
Outflow = 0.52 cfs @ 16.21 hrs, Volume= 29,794 cf, Atten= 0%, Lag= 7.2 min
Routed to Reach 4R : STREAM CHANNEL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.75 fps, Min. Travel Time= 8.6 min
Avg. Velocity = 2.44 fps, Avg. Travel Time= 9.7 min

Peak Storage= 269 cf @ 16.21 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 1.52'
Bank-Full Depth= 1.00' Flow Area= 3.2 sf, Capacity= 22.60 cfs

0.20' x 1.00' deep channel, n= 0.028 Earth, grassed & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.20'
Length= 1,420.0' Slope= 0.0458 '/'
Inlet Invert= 632.00', Outlet Invert= 567.00'



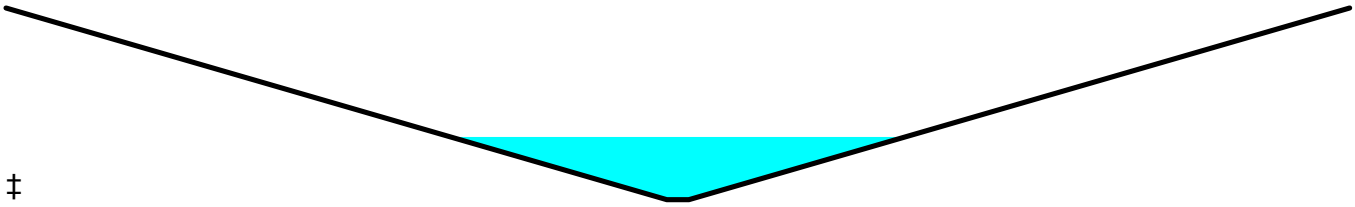
Summary for Reach 3R: FORESTED WETLAND

Inflow Area = 755,011 sf, 0.00% Impervious, Inflow Depth > 1.58" for 2-YEAR event
Inflow = 3.38 cfs @ 12.61 hrs, Volume= 99,437 cf
Outflow = 3.38 cfs @ 12.65 hrs, Volume= 99,377 cf, Atten= 0%, Lag= 2.4 min
Routed to Reach 4R : STREAM CHANNEL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.76 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 3.37 fps, Avg. Travel Time= 3.5 min

Peak Storage= 510 cf @ 12.65 hrs
Average Depth at Peak Storage= 0.33' , Surface Width= 4.13'
Bank-Full Depth= 1.00' Flow Area= 6.2 sf, Capacity= 60.76 cfs

0.20' x 1.00' deep channel, n= 0.025 Earth, clean & winding
Side Slope Z-value= 6.0 '/' Top Width= 12.20'
Length= 718.0' Slope= 0.0682 '/'
Inlet Invert= 616.00', Outlet Invert= 567.00'



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Summary for Reach 4R: STREAM CHANNEL

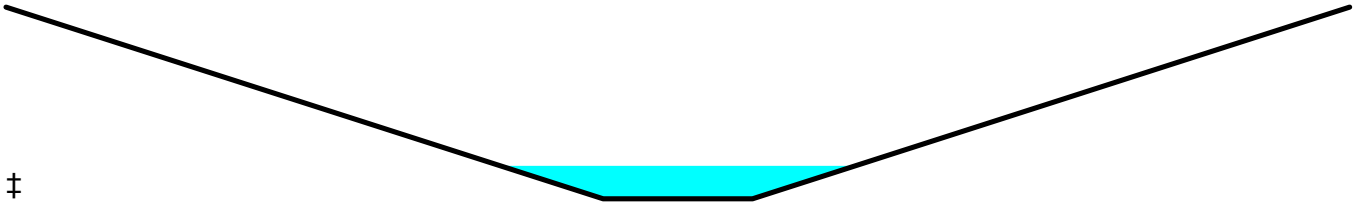
[62] Hint: Exceeded Reach 2R OUTLET depth by 0.14' @ 12.55 hrs
[62] Hint: Exceeded Reach 3R OUTLET depth by 0.02' @ 13.25 hrs

Inflow Area = 1,138,770 sf, 0.00% Impervious, Inflow Depth > 1.40" for 2-YEAR event
Inflow = 3.98 cfs @ 12.73 hrs, Volume= 132,625 cf
Outflow = 3.98 cfs @ 12.80 hrs, Volume= 132,381 cf, Atten= 0%, Lag= 3.9 min
Routed to Link C : EXIST. HEADWALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.40 fps, Min. Travel Time= 4.1 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 6.2 min

Peak Storage= 982 cf @ 12.80 hrs
Average Depth at Peak Storage= 0.35' , Surface Width= 4.76'
Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 185.18 cfs

2.00' x 2.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 4.0 '/' Top Width= 18.00'
Length= 840.0' Slope= 0.0560 '/'
Inlet Invert= 567.00', Outlet Invert= 520.00'



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Summary for Reach 5R: Pipe Network

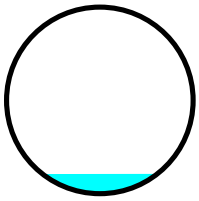
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 282,337 sf, 0.00% Impervious, Inflow Depth > 0.41" for 2-YEAR event
Inflow = 0.19 cfs @ 15.07 hrs, Volume= 9,666 cf
Outflow = 0.19 cfs @ 15.10 hrs, Volume= 9,658 cf, Atten= 0%, Lag= 1.7 min
Routed to Reach 6R : Pipe Network

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.70 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 2.37 fps, Avg. Travel Time= 2.8 min

Peak Storage= 28 cf @ 15.10 hrs
Average Depth at Peak Storage= 0.13' , Surface Width= 0.77'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.91 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 400.0' Slope= 0.0150 '/'
Inlet Invert= 656.00', Outlet Invert= 650.00'



Summary for Reach 6R: Pipe Network

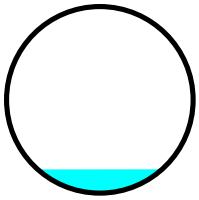
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 738,545 sf, 0.00% Impervious, Inflow Depth > 0.60" for 2-YEAR event
Inflow = 1.56 cfs @ 13.08 hrs, Volume= 36,944 cf
Outflow = 1.56 cfs @ 13.09 hrs, Volume= 36,937 cf, Atten= 0%, Lag= 0.8 min
Routed to Pond 14P : SMALL BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.57 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 4.20 fps, Avg. Travel Time= 1.6 min

Peak Storage= 95 cf @ 13.09 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 1.34'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 43.81 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 400.0' Slope= 0.0375 '/'
Inlet Invert= 638.00', Outlet Invert= 623.00'



Summary for Reach 7R: Diversion Swale

Inflow Area = 31,267 sf, 0.00% Impervious, Inflow Depth = 0.67" for 2-YEAR event
Inflow = 0.09 cfs @ 13.02 hrs, Volume= 1,740 cf
Outflow = 0.09 cfs @ 13.19 hrs, Volume= 1,740 cf, Atten= 0%, Lag= 10.4 min
Routed to Reach 36R : Forested Channel

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.36 fps, Min. Travel Time= 11.5 min
Avg. Velocity = 0.25 fps, Avg. Travel Time= 16.8 min

Peak Storage= 60 cf @ 13.19 hrs
Average Depth at Peak Storage= 0.07' , Surface Width= 3.44'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 42.56 cfs

3.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 3.0 '/' Top Width= 15.00'
Length= 250.0' Slope= 0.0100 '/'
Inlet Invert= 669.50', Outlet Invert= 667.00'

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Summary for Reach 36R: Forested Channel

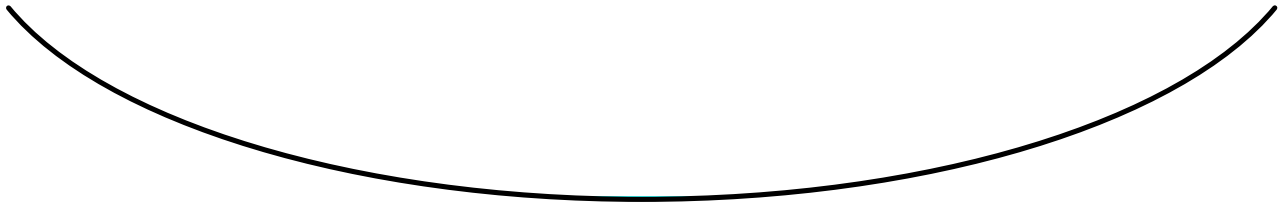
[61] Hint: Exceeded Reach 7R outlet invert by 0.03' @ 13.35 hrs
[80] Warning: Exceeded Pond 36P by 267.01' @ 21.60 hrs (153.18 cfs 16,543,174 cf)

Inflow Area = 39,267 sf, 20.37% Impervious, Inflow Depth = 0.53" for 2-YEAR event
Inflow = 0.09 cfs @ 13.19 hrs, Volume= 1,740 cf
Outflow = 0.09 cfs @ 13.37 hrs, Volume= 1,740 cf, Atten= 0%, Lag= 10.8 min
Routed to Link B : OFF-SITE SOUTH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.45 fps, Min. Travel Time= 9.3 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 11.6 min

Peak Storage= 48 cf @ 13.37 hrs
Average Depth at Peak Storage= 0.03' , Surface Width= 2.59'
Bank-Full Depth= 2.00' Flow Area= 26.7 sf, Capacity= 544.32 cfs

20.00' x 2.00' deep Parabolic Channel, n= 0.030 Stream, clean & straight
Length= 810.0' Slope= 0.1198 '/'
Inlet Invert= 667.00', Outlet Invert= 570.00'



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Summary for Pond 1P: LOT 41 BIOBASIN

Inflow Area = 755,011 sf, 0.00% Impervious, Inflow Depth > 1.61" for 2-YEAR event
Inflow = 10.16 cfs @ 12.10 hrs, Volume= 101,459 cf
Outflow = 3.38 cfs @ 12.61 hrs, Volume= 99,437 cf, Atten= 67%, Lag= 30.9 min
Primary = 3.38 cfs @ 12.61 hrs, Volume= 99,437 cf
Routed to Reach 3R : FORESTED WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 631.30' @ 12.61 hrs Surf.Area= 11,091 sf Storage= 13,325 cf

Plug-Flow detention time= 70.8 min calculated for 99,271 cf (98% of inflow)
Center-of-Mass det. time= 56.8 min (1,056.2 - 999.4)

Volume	Invert	Avail.Storage	Storage Description
#1	630.00'	63,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
630.00	9,400	0	0
635.00	15,900	63,250	63,250

Device	Routing	Invert	Outlet Devices
#1	Primary	629.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 629.00' / 628.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	630.00'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	631.30'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	631.50'	**10.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	633.90'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.38 cfs @ 12.61 hrs HW=631.30' TW=616.33' (Dynamic Tailwater)
↑**1=Culvert** (Passes 3.38 cfs of 17.25 cfs potential flow)
↑**2=Orifice** (Orifice Controls 3.38 cfs @ 4.31 fps)
3=Orifice (Orifice Controls 0.00 cfs @ 0.06 fps)
4=Orifice (Controls 0.00 cfs)
5=Grate (Controls 0.00 cfs)

Summary for Pond 2P: LOT 45 BIOBASIN

Inflow Area = 537,094 sf, 0.00% Impervious, Inflow Depth = 1.75" for 2-YEAR event
Inflow = 24.60 cfs @ 12.09 hrs, Volume= 78,186 cf
Outflow = 2.05 cfs @ 13.23 hrs, Volume= 73,961 cf, Atten= 92%, Lag= 68.2 min
Primary = 2.05 cfs @ 13.23 hrs, Volume= 73,961 cf
Routed to Pond 1P : LOT 41 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 661.81' @ 13.23 hrs Surf.Area= 24,494 sf Storage= 41,550 cf

Plug-Flow detention time= 280.0 min calculated for 73,838 cf (94% of inflow)
Center-of-Mass det. time= 251.0 min (1,064.0 - 813.0)

Volume	Invert	Avail.Storage	Storage Description
#1	660.00'	128,500 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	21,300	0	0
665.00	30,100	128,500	128,500

Device	Routing	Invert	Outlet Devices
#1	Primary	659.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 659.00' / 658.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	660.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	662.00'	**12.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	664.00'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.05 cfs @ 13.23 hrs HW=661.81' TW=631.24' (Dynamic Tailwater)
└─**1=Culvert** (Passes 2.05 cfs of 20.38 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 2.05 cfs @ 5.86 fps)
  ├─**3=Orifice** (Controls 0.00 cfs)
  └─**4=Grate** (Controls 0.00 cfs)

Summary for Pond 3P: STORMTECH

Inflow Area = 139,000 sf, 0.00% Impervious, Inflow Depth = 2.10" for 2-YEAR event
Inflow = 6.57 cfs @ 12.14 hrs, Volume= 24,318 cf
Outflow = 3.82 cfs @ 12.31 hrs, Volume= 23,270 cf, Atten= 42%, Lag= 10.2 min
Discarded = 0.03 cfs @ 12.31 hrs, Volume= 2,126 cf
Primary = 3.79 cfs @ 12.31 hrs, Volume= 21,144 cf
Routed to Link F : EXIST. 18" CMP

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 566.17' @ 12.31 hrs Surf.Area= 4,364 sf Storage= 6,546 cf

Plug-Flow detention time= 88.9 min calculated for 23,270 cf (96% of inflow)

Center-of-Mass det. time= 64.2 min (860.2 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	564.00'	3,890 cf	**49.00'W x 89.06'L x 3.50'H Field A** 15,273 cf Overall - 5,549 cf Embedded = 9,725 cf x 40.0% Voids
#2A	564.50'	5,549 cf	**ADS_StormTech RC-750 +Cap** x 120 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 120 Chambers in 10 Rows
		9,438 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	564.00'	**0.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 560.00'
#2	Primary	563.75'	**18.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 563.75' / 556.00' S= 0.1292 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	564.60'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	565.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	565.50'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	566.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#7	Device 2	566.80'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 12.31 hrs HW=566.16' (Free Discharge)
└**1=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=3.78 cfs @ 12.31 hrs HW=566.16' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 3.78 cfs of 10.97 cfs potential flow)
- **3=Orifice** (Orifice Controls 1.86 cfs @ 5.34 fps)
- **4=Orifice** (Orifice Controls 1.53 cfs @ 4.38 fps)
- **5=Orifice** (Orifice Controls 0.30 cfs @ 3.39 fps)
- **6=Orifice** (Orifice Controls 0.09 cfs @ 1.37 fps)
- **7=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 4P: LOT 4 BIOBASIN

Inflow Area = 373,467 sf, 0.00% Impervious, Inflow Depth = 2.01" for 2-YEAR event
Inflow = 19.27 cfs @ 12.09 hrs, Volume= 62,440 cf
Outflow = 1.76 cfs @ 13.01 hrs, Volume= 74,521 cf, Atten= 91%, Lag= 55.0 min
Primary = 1.76 cfs @ 13.01 hrs, Volume= 74,521 cf
Routed to Link H : EXIST. 12" CMP

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Starting Elev= 566.49' Surf.Area= 16,633 sf Storage= 22,896 cf
Peak Elev= 567.59' @ 13.01 hrs Surf.Area= 18,511 sf Storage= 42,304 cf (19,408 cf above start)

Plug-Flow detention time= 420.4 min calculated for 51,625 cf (83% of inflow)
Center-of-Mass det. time= 123.4 min (921.5 - 798.1)

Volume	Invert	Avail.Storage	Storage Description
#1	565.00'	91,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
565.00	14,100	0	0
570.00	22,600	91,750	91,750

Device	Routing	Invert	Outlet Devices
#1	Primary	564.00'	**18.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 564.00' / 563.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	565.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	567.25'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	567.75'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	568.75'	**48.0" W x 48.0" H Vert. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.76 cfs @ 13.01 hrs HW=567.59' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.76 cfs of 14.35 cfs potential flow)
  - **2=Orifice** (Orifice Controls 1.28 cfs @ 6.54 fps)
  - **3=Orifice** (Orifice Controls 0.48 cfs @ 2.00 fps)
  - **4=Orifice** (Controls 0.00 cfs)
  - **5=Grate** (Controls 0.00 cfs)

Summary for Pond 5P: STORMTECH

Inflow Area = 202,987 sf, 0.00% Impervious, Inflow Depth = 1.59" for 2-YEAR event
Inflow = 7.49 cfs @ 12.14 hrs, Volume= 26,879 cf
Outflow = 3.49 cfs @ 12.40 hrs, Volume= 25,352 cf, Atten= 53%, Lag= 15.6 min
Discarded = 0.04 cfs @ 12.40 hrs, Volume= 2,632 cf
Primary = 3.45 cfs @ 12.40 hrs, Volume= 22,720 cf
Routed to Link G : EXIST. 18" CMP

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 566.04' @ 12.40 hrs Surf.Area= 6,043 sf Storage= 8,584 cf

Plug-Flow detention time= 105.9 min calculated for 25,310 cf (94% of inflow)
Center-of-Mass det. time= 75.9 min (901.2 - 825.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	564.00'	5,353 cf	**58.50'W x 103.30'L x 3.50'H Field A** 21,150 cf Overall - 7,768 cf Embedded = 13,382 cf x 40.0% Voids
#2A	564.50'	7,768 cf	**ADS_StormTech RC-750 +Cap** x 168 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 168 Chambers in 12 Rows
		13,121 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	564.00'	**0.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 560.00'
#2	Primary	563.75'	**18.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 563.75' / 555.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	564.60'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	565.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	565.50'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	566.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#7	Primary	566.80'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 12.40 hrs HW=566.04' (Free Discharge)
└**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=3.44 cfs @ 12.40 hrs HW=566.04' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 3.44 cfs of 10.56 cfs potential flow)
  └**3=Orifice** (Orifice Controls 1.77 cfs @ 5.07 fps)
  └**4=Orifice** (Orifice Controls 1.41 cfs @ 4.05 fps)
  └**5=Orifice** (Orifice Controls 0.26 cfs @ 2.94 fps)
  └**6=Orifice** (Orifice Controls 0.01 cfs @ 0.68 fps)
└**7=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 6P: LOT 4 BIOBASIN

Inflow Area = 579,275 sf, 0.00% Impervious, Inflow Depth = 1.51" for 2-YEAR event
Inflow = 20.39 cfs @ 12.14 hrs, Volume= 73,098 cf
Outflow = 4.01 cfs @ 12.66 hrs, Volume= 70,720 cf, Atten= 80%, Lag= 30.9 min
Primary = 4.01 cfs @ 12.66 hrs, Volume= 70,720 cf
Routed to Link D : EXIST. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 557.84' @ 12.66 hrs Surf.Area= 19,067 sf Storage= 32,268 cf

Plug-Flow detention time= 169.5 min calculated for 70,720 cf (97% of inflow)
Center-of-Mass det. time= 151.0 min (980.3 - 829.3)

Volume	Invert	Avail.Storage	Storage Description
#1	556.00'	126,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
556.00	16,000	0	0
562.00	26,000	126,000	126,000

Device	Routing	Invert	Outlet Devices
#1	Primary	555.50'	**30.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 555.50' / 555.00' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	556.00'	**6.0" W x 24.0" H Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#3	Device 1	558.00'	**18.0" W x 18.0" H Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#4	Primary	560.50'	**12.0' long x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.01 cfs @ 12.66 hrs HW=557.84' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.01 cfs of 22.97 cfs potential flow)
  - **2=SLOT WEIR** (Orifice Controls 4.01 cfs @ 4.35 fps)
  - **3=SLOT WEIR** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 7P: LOT 81 BIOBASIN

Inflow Area = 363,629 sf, 0.00% Impervious, Inflow Depth = 1.40" for 2-YEAR event
Inflow = 11.26 cfs @ 12.10 hrs, Volume= 42,317 cf
Outflow = 0.52 cfs @ 16.06 hrs, Volume= 30,048 cf, Atten= 95%, Lag= 237.8 min
Primary = 0.52 cfs @ 16.06 hrs, Volume= 30,048 cf
Routed to Reach 1R : Roadside Ditch

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 709.69' @ 16.06 hrs Surf.Area= 18,065 sf Storage= 27,154 cf

Plug-Flow detention time= 484.6 min calculated for 29,998 cf (71% of inflow)
Center-of-Mass det. time= 390.9 min (1,229.2 - 838.2)

Volume	Invert	Avail.Storage	Storage Description
#1	708.00'	100,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
708.00	14,000	0	0
713.00	26,000	100,000	100,000

Device	Routing	Invert	Outlet Devices
#1	Primary	707.00'	**18.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 707.00' / 706.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	708.00'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	710.10'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	710.40'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	711.90'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.52 cfs @ 16.06 hrs HW=709.69' TW=705.19' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.52 cfs of 11.86 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.52 cfs @ 5.95 fps)
  ├**3=Orifice** (Controls 0.00 cfs)
  ├**4=Orifice** (Controls 0.00 cfs)
  └**5=Grate** (Controls 0.00 cfs)

Summary for Pond 8P: LOT 9 BIOBASIN

[44] Hint: Outlet device #2 is below defined storage

Inflow Area = 926,567 sf, 0.00% Impervious, Inflow Depth = 1.46" for 2-YEAR event
Inflow = 5.67 cfs @ 12.71 hrs, Volume= 112,958 cf
Outflow = 5.18 cfs @ 13.10 hrs, Volume= 112,979 cf, Atten= 9%, Lag= 23.0 min
Primary = 5.18 cfs @ 13.10 hrs, Volume= 112,979 cf
Routed to Link E : OFF-SITE SOUTH EAST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 586.53' @ 13.10 hrs Surf.Area= 3,275 sf Storage= 3,913 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 9.0 min (912.3 - 903.3)

Volume	Invert	Avail.Storage	Storage Description
#1	585.00'	14,860 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
585.00	1,830	0	0
589.00	5,600	14,860	14,860

Device	Routing	Invert	Outlet Devices
#1	Primary	582.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 582.00' / 581.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	583.25'	**6.0" Round Underdrain** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 583.25' / 583.25' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	585.00'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	587.00'	**40.0" W x 12.0" H Vert. SLOT WIER** C= 0.600 Limited to weir flow at low heads
#5	Device 1	587.75'	**48.0" W x 48.0" H Vert. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.18 cfs @ 13.10 hrs HW=586.53' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 5.18 cfs of 28.43 cfs potential flow)
  ├─**2=Underdrain** (Barrel Controls 1.34 cfs @ 6.80 fps)
  ├─**3=Orifice** (Orifice Controls 3.84 cfs @ 4.89 fps)
  ├─**4=SLOT WIER** (Controls 0.00 cfs)
  └─**5=Grate** (Controls 0.00 cfs)

Summary for Pond 9P: LOT 13,18,20, 26 BIOSWALES

Inflow Area = 433,232 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 13.08 cfs @ 12.15 hrs, Volume= 47,121 cf
Outflow = 2.26 cfs @ 12.74 hrs, Volume= 47,123 cf, Atten= 83%, Lag= 35.7 min
Discarded = 0.16 cfs @ 12.74 hrs, Volume= 6,946 cf
Primary = 2.10 cfs @ 12.74 hrs, Volume= 40,177 cf
Routed to Pond 8P : LOT 9 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 592.33' @ 12.74 hrs Surf.Area= 1,875 sf Storage= 17,106 cf

Plug-Flow detention time= 90.5 min calculated for 47,045 cf (100% of inflow)
Center-of-Mass det. time= 90.6 min (931.2 - 840.6)

Volume	Invert	Avail.Storage	Storage Description
#1	589.00'	750 cf	**25.00'W x 75.00'L x 1.00'H STONE BASE** 1,875 cf Overall x 40.0% Voids
#2	590.00'	6 cf	**25.00'W x 75.00'L x 1.00'H FILTRATION MEDIA** -Impervious 1,875 cf Overall x 0.3% Voids
#3	591.00'	29,720 cf	**SURFACE POND (Prismatic)** Listed below (Recalc) x 4 -Impervious
		30,476 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
591.00	1,830	0	0
593.00	5,600	7,430	7,430

Device	Routing	Invert	Outlet Devices
#1	Discarded	589.00'	**0.500 in/hr Exfiltration X 4.00 over Surface area** Conductivity to Groundwater Elevation = 585.00'
#2	Primary	588.00'	**18.0" Round Culvert X 4.00** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 588.00' / 586.50' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	589.50'	**3.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	592.25'	**24.0" W x 24.0" H Vert. Grate X 4.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.16 cfs @ 12.74 hrs HW=592.33' (Free Discharge)
└**1=Exfiltration** (Controls 0.16 cfs)

Primary OutFlow Max=2.10 cfs @ 12.74 hrs HW=592.33' TW=586.38' (Dynamic Tailwater)
└**2=Culvert** (Passes 2.10 cfs of 61.39 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 1.55 cfs @ 7.91 fps)
  └**4=Grate** (Orifice Controls 0.55 cfs @ 0.89 fps)

Summary for Pond 10P: LOT 10 BIOBASIN

[44] Hint: Outlet device #2 is below defined storage
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=37)

Inflow Area = 493,335 sf, 0.00% Impervious, Inflow Depth = 1.77" for 2-YEAR event
Inflow = 20.02 cfs @ 12.14 hrs, Volume= 72,779 cf
Outflow = 3.58 cfs @ 12.67 hrs, Volume= 72,781 cf, Atten= 82%, Lag= 31.9 min
Primary = 3.58 cfs @ 12.67 hrs, Volume= 72,781 cf
Routed to Pond 8P : LOT 9 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 612.67' @ 12.67 hrs Surf.Area= 18,335 sf Storage= 27,459 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 83.4 min (896.4 - 813.0)

Volume	Invert	Avail.Storage	Storage Description
#1	611.00'	101,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
611.00	14,600	0	0
616.00	25,800	101,000	101,000

Device	Routing	Invert	Outlet Devices
#1	Primary	610.00'	**24.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 610.00' / 593.00' S= 0.0850 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	609.25'	**6.0" Round Underdrain** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 609.25' / 609.25' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	611.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	612.50'	**10.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	614.00'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.57 cfs @ 12.67 hrs HW=612.67' TW=586.31' (Dynamic Tailwater)
└**1=Culvert** (Passes 3.57 cfs of 19.53 cfs potential flow)
  ├**2=Underdrain** (Outlet Controls 1.31 cfs @ 6.66 fps)
  ├**3=Orifice** (Orifice Controls 1.94 cfs @ 5.56 fps)
  ├**4=Orifice** (Orifice Controls 0.32 cfs @ 1.39 fps)
  └**5=Grate** (Controls 0.00 cfs)

Summary for Pond 11P: STORMTECH LOT 30, 37 & 38

Inflow Area = 456,208 sf, 0.00% Impervious, Inflow Depth = 1.37" for 2-YEAR event
Inflow = 14.52 cfs @ 12.15 hrs, Volume= 52,177 cf
Outflow = 1.72 cfs @ 13.07 hrs, Volume= 49,646 cf, Atten= 88%, Lag= 55.6 min
Discarded = 0.35 cfs @ 13.07 hrs, Volume= 22,360 cf
Primary = 1.37 cfs @ 13.07 hrs, Volume= 27,286 cf
Routed to Reach 6R : Pipe Network

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 641.58' @ 13.07 hrs Surf.Area= 21,799 sf Storage= 23,794 cf
Flood Elev= 643.50' Surf.Area= 21,799 sf Storage= 47,831 cf

Plug-Flow detention time= 241.3 min calculated for 49,646 cf (95% of inflow)
Center-of-Mass det. time= 214.8 min (1,051.8 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	640.00'	18,977 cf	**115.50'W x 188.74'L x 3.50'H Field A** 76,297 cf Overall - 28,853 cf Embedded = 47,444 cf x 40.0% Voids
#2A	640.50'	28,853 cf	**ADS_StormTech RC-750 +Cap** x 624 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 624 Chambers in 24 Rows
		47,831 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	640.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 636.00'
#2	Primary	639.75'	**24.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 639.75' / 639.25' S= 0.0083 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	640.60'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	641.50'	**10.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	642.00'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	642.25'	**14.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#7	Device 2	642.50'	**14.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#8	Primary	643.00'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.35 cfs @ 13.07 hrs HW=641.58' (Free Discharge)
└**1=Exfiltration** (Controls 0.35 cfs)

Primary OutFlow Max=1.37 cfs @ 13.07 hrs HW=641.58' TW=638.26' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.37 cfs of 12.42 cfs potential flow)
  └**3=Orifice** (Orifice Controls 1.35 cfs @ 3.86 fps)
  └**4=Orifice** (Orifice Controls 0.02 cfs @ 0.95 fps)
  └**5=Orifice** (Controls 0.00 cfs)
  └**6=Orifice** (Controls 0.00 cfs)
  └**7=Orifice** (Controls 0.00 cfs)
└**8=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 13P: BIOBASIN - MCR

Inflow Area = 20,130 sf, 0.00% Impervious, Inflow Depth = 2.10" for 2-YEAR event
Inflow = 1.08 cfs @ 12.09 hrs, Volume= 3,522 cf
Outflow = 0.17 cfs @ 12.58 hrs, Volume= 3,454 cf, Atten= 84%, Lag= 29.4 min
Primary = 0.17 cfs @ 12.58 hrs, Volume= 3,454 cf
Routed to Reach 4R : STREAM CHANNEL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 612.64' @ 12.58 hrs Surf.Area= 2,693 sf Storage= 1,572 cf

Plug-Flow detention time= 142.2 min calculated for 3,448 cf (98% of inflow)
Center-of-Mass det. time= 131.0 min (923.3 - 792.3)

Volume	Invert	Avail.Storage	Storage Description
#1	612.00'	10,050 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
612.00	2,200	0	0
615.00	4,500	10,050	10,050

Device	Routing	Invert	Outlet Devices
#1	Primary	610.50'	**30.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 610.50' / 610.00' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	612.00'	**3.0" Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#3	Device 1	613.00'	**6.0" Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#4	Primary	613.75'	**8.0' long x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.17 cfs @ 12.58 hrs HW=612.64' TW=567.34' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.17 cfs of 20.25 cfs potential flow)
  └**2=SLOT WEIR** (Orifice Controls 0.17 cfs @ 3.46 fps)
  └**3=SLOT WEIR** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 14P: SMALL BASIN

Inflow Area = 860,065 sf, 0.00% Impervious, Inflow Depth > 0.72" for 2-YEAR event
Inflow = 4.74 cfs @ 12.10 hrs, Volume= 51,541 cf
Outflow = 3.52 cfs @ 12.21 hrs, Volume= 51,299 cf, Atten= 26%, Lag= 6.5 min
Primary = 3.52 cfs @ 12.21 hrs, Volume= 51,299 cf
Routed to Link B : OFF-SITE SOUTH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 616.74' @ 12.21 hrs Surf.Area= 3,584 sf Storage= 2,403 cf

Plug-Flow detention time= 20.1 min calculated for 51,214 cf (99% of inflow)
Center-of-Mass det. time= 16.5 min (972.5 - 956.0)

Volume	Invert	Avail.Storage	Storage Description
#1	616.00'	18,700 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
616.00	2,950	0	0
620.00	6,400	18,700	18,700

Device	Routing	Invert	Outlet Devices
#1	Primary	616.00'	**30.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 616.00' / 615.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=3.51 cfs @ 12.21 hrs HW=616.73' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.51 cfs @ 2.92 fps)

Summary for Pond 15P: LOT 1 BIOBASIN

Inflow Area = 478,407 sf, 0.00% Impervious, Inflow Depth = 1.51" for 2-YEAR event
Inflow = 16.84 cfs @ 12.14 hrs, Volume= 60,369 cf
Outflow = 0.33 cfs @ 20.20 hrs, Volume= 21,034 cf, Atten= 98%, Lag= 483.5 min
Primary = 0.33 cfs @ 20.20 hrs, Volume= 21,034 cf
Routed to Link I : EXIST. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 571.11' @ 20.20 hrs Surf.Area= 23,799 sf Storage= 46,826 cf

Plug-Flow detention time= 554.4 min calculated for 20,999 cf (35% of inflow)
Center-of-Mass det. time= 428.3 min (1,257.6 - 829.3)

Volume	Invert	Avail.Storage	Storage Description
#1	569.00'	136,208 cf	**POND (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
569.00	20,630	0	0
574.50	28,900	136,208	136,208

Device	Routing	Invert	Outlet Devices
#1	Primary	568.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 568.00' / 567.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	569.00'	**3.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	571.20'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	572.20'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	573.80'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.33 cfs @ 20.20 hrs HW=571.11' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.33 cfs of 21.96 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.33 cfs @ 6.78 fps)
  ├─**3=Orifice** (Controls 0.00 cfs)
  ├─**4=Orifice** (Controls 0.00 cfs)
  └─**5=Grate** (Controls 0.00 cfs)

Summary for Pond 16P: STORMTECH

Inflow Area = 83,048 sf, 0.00% Impervious, Inflow Depth = 1.59" for 2-YEAR event
Inflow = 3.48 cfs @ 12.09 hrs, Volume= 10,997 cf
Outflow = 1.24 cfs @ 12.39 hrs, Volume= 10,162 cf, Atten= 64%, Lag= 17.6 min
Discarded = 0.02 cfs @ 12.39 hrs, Volume= 1,564 cf
Primary = 1.22 cfs @ 12.39 hrs, Volume= 8,598 cf
Routed to Pond 7P : LOT 81 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 713.61' @ 12.39 hrs Surf.Area= 3,666 sf Storage= 4,011 cf

Plug-Flow detention time= 132.2 min calculated for 10,162 cf (92% of inflow)
Center-of-Mass det. time= 93.1 min (914.7 - 821.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	712.00'	3,283 cf	**49.00'W x 74.82'L x 3.50'H Field A** 12,831 cf Overall - 4,624 cf Embedded = 8,207 cf x 40.0% Voids
#2A	712.50'	4,624 cf	**ADS_StormTech RC-750 +Cap** x 100 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 100 Chambers in 10 Rows
		7,907 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	712.00'	**0.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 708.00'
#2	Primary	711.75'	**18.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.75' / 703.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	712.60'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	713.25'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	714.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	715.40'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 12.39 hrs HW=713.61' (Free Discharge)
└**1=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.21 cfs @ 12.39 hrs HW=713.61' TW=709.10' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.21 cfs of 8.96 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 0.82 cfs @ 4.19 fps)
  ├**4=Orifice** (Orifice Controls 0.39 cfs @ 2.04 fps)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 19P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A1 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 20P: BIOBASIN

Inflow Area = 282,337 sf, 0.00% Impervious, Inflow Depth = 1.44" for 2-YEAR event
Inflow = 9.46 cfs @ 12.15 hrs, Volume= 33,930 cf
Outflow = 0.55 cfs @ 15.07 hrs, Volume= 32,494 cf, Atten= 94%, Lag= 175.4 min
Discarded = 0.36 cfs @ 15.07 hrs, Volume= 22,828 cf
Primary = 0.19 cfs @ 15.07 hrs, Volume= 9,666 cf
Routed to Reach 5R : Pipe Network

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 660.50' @ 15.07 hrs Surf.Area= 19,200 sf Storage= 18,136 cf

Plug-Flow detention time= 362.0 min calculated for 32,494 cf (96% of inflow)
Center-of-Mass det. time= 338.4 min (1,171.6 - 833.2)

Volume	Invert	Avail.Storage	Storage Description
#1	658.00'	7,680 cf	**80.00'W x 240.00'L x 1.00'H STONE BASE** 19,200 cf Overall x 40.0% Voids
#2	659.00'	58 cf	**80.00'W x 240.00'L x 1.00'H FILTRATION MEDIA** -Impervious 19,200 cf Overall x 0.3% Voids
#3	660.00'	73,251 cf	**SURFACE POND (Prismatic)** Listed below (Recalc) -Impervious
		80,989 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	20,326	0	0
663.00	28,508	73,251	73,251

Device	Routing	Invert	Outlet Devices
#1	Discarded	658.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 654.00'
#2	Primary	657.00'	**18.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 657.00' / 656.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	658.00'	**2.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	659.40'	**1.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	661.35'	**24.0" W x 24.0" H Vert. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.36 cfs @ 15.07 hrs HW=660.50' (Free Discharge)
└**1=Exfiltration** (Controls 0.36 cfs)

Primary OutFlow Max=0.19 cfs @ 15.07 hrs HW=660.50' TW=656.13' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.19 cfs of 14.10 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 0.16 cfs @ 7.48 fps)
  ├**4=Orifice** (Orifice Controls 0.03 cfs @ 4.94 fps)
  └**5=Grate** (Controls 0.00 cfs)

Summary for Pond 21P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A2 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
└**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
└**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 22P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A3 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 23P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A4 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 24P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 1,500 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.09 cfs @ 12.09 hrs, Volume= 314 cf
Outflow = 0.01 cfs @ 13.62 hrs, Volume= 314 cf, Atten= 94%, Lag= 92.1 min
Discarded = 0.01 cfs @ 13.62 hrs, Volume= 314 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A5 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.25' @ 13.62 hrs Surf.Area= 250 sf Storage= 136 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 207.9 min (967.7 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	242 cf	**2.50'W x 100.00'L x 2.50'H Prismatoid** 625 cf Overall - 19 cf Embedded = 606 cf x 40.0% Voids
#2	400.50'	19 cf	**6.0" Round Pipe Storage** Inside #1 L= 96.0'
		261 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.750 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow X 6.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 13.62 hrs HW=401.25' (Free Discharge)
1=Exfiltration (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
2=Grate Overflow (Controls 0.00 cfs)

Summary for Pond 25P: STORMTECHS (2)

Inflow Area = 246,790 sf, 0.00% Impervious, Inflow Depth = 1.35" for 2-YEAR event
Inflow = 8.76 cfs @ 12.09 hrs, Volume= 27,740 cf
Outflow = 1.20 cfs @ 12.73 hrs, Volume= 27,258 cf, Atten= 86%, Lag= 38.2 min
Discarded = 0.19 cfs @ 12.73 hrs, Volume= 12,307 cf
Primary = 1.00 cfs @ 12.73 hrs, Volume= 14,951 cf
Routed to Pond 32P : INFILTRATION LEVEL SPREADER

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 501.39' @ 12.73 hrs Surf.Area= 12,420 sf Storage= 11,700 cf
Flood Elev= 503.50' Surf.Area= 12,420 sf Storage= 27,154 cf

Plug-Flow detention time= 197.3 min calculated for 27,258 cf (98% of inflow)
Center-of-Mass det. time= 187.1 min (1,021.2 - 834.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	500.00'	10,877 cf	**77.50'W x 160.26'L x 3.50'H Field A** 43,470 cf Overall - 16,276 cf Embedded = 27,193 cf x 40.0% Voids
#2A	500.50'	16,276 cf	**ADS_StormTech RC-750 +Cap** x 352 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 352 Chambers in 16 Rows
		27,154 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.00'
#2	Primary	499.75'	**18.0" Round Culvert X 2.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 499.75' / 491.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	500.60'	**5.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	501.40'	**9.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	502.00'	**9.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	503.35'	**24.0" Horiz. STANDPIPE X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.19 cfs @ 12.73 hrs HW=501.39' (Free Discharge)
└**1=Exfiltration** (Controls 0.19 cfs)

Primary OutFlow Max=1.00 cfs @ 12.73 hrs HW=501.39' TW=300.32' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.00 cfs of 16.08 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 1.00 cfs @ 3.68 fps)
  ├**4=Orifice** (Controls 0.00 cfs)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 26P: STORMTECHS (2)

Inflow Area = 157,861 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 5.42 cfs @ 12.09 hrs, Volume= 17,170 cf
Outflow = 1.07 cfs @ 12.56 hrs, Volume= 16,960 cf, Atten= 80%, Lag= 28.1 min
Discarded = 0.12 cfs @ 12.56 hrs, Volume= 7,514 cf
Primary = 0.95 cfs @ 12.56 hrs, Volume= 9,446 cf
Routed to Pond 33P : INFILTRATION LEVEL SPREADER

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 501.33' @ 12.56 hrs Surf.Area= 7,709 sf Storage= 6,837 cf
Flood Elev= 503.50' Surf.Area= 7,709 sf Storage= 16,785 cf

Plug-Flow detention time= 181.4 min calculated for 16,960 cf (99% of inflow)
Center-of-Mass det. time= 174.2 min (1,011.1 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	500.00'	6,797 cf	**58.50'W x 131.78'L x 3.50'H Field A** 26,981 cf Overall - 9,988 cf Embedded = 16,994 cf x 40.0% Voids
#2A	500.50'	9,988 cf	**ADS_StormTech RC-750 +Cap** x 216 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 216 Chambers in 12 Rows
		16,785 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.00'
#2	Primary	499.75'	**18.0" Round Culvert X 2.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 499.75' / 491.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	500.60'	**4.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	501.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	502.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	503.40'	**18.0" Horiz. STANDPIPE X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.12 cfs @ 12.56 hrs HW=501.33' (Free Discharge)
└**1=Exfiltration** (Controls 0.12 cfs)

Primary OutFlow Max=0.94 cfs @ 12.56 hrs HW=501.33' TW=297.22' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.94 cfs of 15.49 cfs potential flow)
- **3=Orifice** (Orifice Controls 0.63 cfs @ 3.61 fps)
- **4=Orifice** (Orifice Controls 0.32 cfs @ 1.63 fps)
- **5=Orifice** (Controls 0.00 cfs)
- **6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 27P: STORMTECHS (2)

Inflow Area = 322,438 sf, 0.00% Impervious, Inflow Depth = 0.68" for 2-YEAR event
Inflow = 1.23 cfs @ 12.76 hrs, Volume= 18,270 cf
Outflow = 1.16 cfs @ 13.48 hrs, Volume= 18,271 cf, Atten= 6%, Lag= 42.9 min
Discarded = 0.04 cfs @ 13.48 hrs, Volume= 2,264 cf
Primary = 1.12 cfs @ 13.48 hrs, Volume= 16,007 cf
Routed to Pond 34P : INFILTRATION LEVEL SPREADER

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 501.20' @ 13.48 hrs Surf.Area= 2,672 sf Storage= 2,060 cf
Flood Elev= 503.50' Surf.Area= 2,672 sf Storage= 5,738 cf

Plug-Flow detention time= 54.5 min calculated for 18,241 cf (100% of inflow)
Center-of-Mass det. time= 55.1 min (942.6 - 887.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	500.00'	2,409 cf	**30.00'W x 89.06'L x 3.50'H Field A** 9,351 cf Overall - 3,329 cf Embedded = 6,022 cf x 40.0% Voids
#2A	500.50'	3,329 cf	**ADS_StormTech RC-750 +Cap** x 72 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 72 Chambers in 6 Rows
		5,738 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.00'
#2	Primary	499.75'	**18.0" Round Culvert X 2.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 499.75' / 491.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	500.60'	**6.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	501.40'	**10.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	502.20'	**10.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	503.35'	**18.0" Horiz. STANDPIPE X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 13.48 hrs HW=501.20' (Free Discharge)
└**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=1.12 cfs @ 13.48 hrs HW=501.20' TW=300.68' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.12 cfs of 14.33 cfs potential flow)
- **3=Orifice** (Orifice Controls 1.12 cfs @ 2.84 fps)
- **4=Orifice** (Controls 0.00 cfs)
- **5=Orifice** (Controls 0.00 cfs)
- **6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 29P: STORMTECHS (4)

Inflow Area = 322,438 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 11.07 cfs @ 12.09 hrs, Volume= 35,070 cf
Outflow = 1.49 cfs @ 12.76 hrs, Volume= 34,668 cf, Atten= 87%, Lag= 40.2 min
Discarded = 0.26 cfs @ 12.76 hrs, Volume= 16,398 cf
Primary = 1.23 cfs @ 12.76 hrs, Volume= 18,270 cf
Routed to Pond 27P : STORMTECHS (2)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 506.30' @ 12.76 hrs Surf.Area= 16,839 sf Storage= 14,675 cf
Flood Elev= 508.50' Surf.Area= 16,839 sf Storage= 36,891 cf

Plug-Flow detention time= 198.1 min calculated for 34,668 cf (99% of inflow)
Center-of-Mass det. time= 191.3 min (1,028.2 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	505.00'	14,697 cf	**96.50'W x 174.50'L x 3.50'H Field A** 58,936 cf Overall - 22,195 cf Embedded = 36,742 cf x 40.0% Voids
#2A	505.50'	22,195 cf	**ADS_StormTech RC-750 +Cap** x 480 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 480 Chambers in 20 Rows
		36,891 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	505.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 501.00'
#2	Primary	504.75'	**18.0" Round Culvert X 4.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 504.75' / 496.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	505.60'	**4.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	506.40'	**7.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	507.20'	**7.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	508.35'	**18.0" Horiz. STANDPIPE X 4.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.26 cfs @ 12.76 hrs HW=506.30' (Free Discharge)
└**1=Exfiltration** (Controls 0.26 cfs)

Primary OutFlow Max=1.23 cfs @ 12.76 hrs HW=506.30' TW=501.07' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.23 cfs of 30.48 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 1.23 cfs @ 3.52 fps)
  ├**4=Orifice** (Controls 0.00 cfs)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 30P: STORMTECH

Inflow Area = 31,267 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 1.07 cfs @ 12.09 hrs, Volume= 3,401 cf
Outflow = 0.11 cfs @ 13.02 hrs, Volume= 3,384 cf, Atten= 89%, Lag= 55.6 min
Discarded = 0.03 cfs @ 13.02 hrs, Volume= 1,644 cf
Primary = 0.09 cfs @ 13.02 hrs, Volume= 1,740 cf
Routed to Reach 7R : Diversion Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 694.87' @ 13.02 hrs Surf.Area= 1,680 sf Storage= 1,499 cf
Flood Elev= 697.00' Surf.Area= 1,680 sf Storage= 3,572 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 212.5 min (1,049.4 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	693.50'	1,538 cf	**20.50'W x 81.94'L x 3.50'H Field A** 5,879 cf Overall - 2,035 cf Embedded = 3,844 cf x 40.0% Voids
#2A	694.00'	2,035 cf	**ADS_StormTech RC-750 +Cap** x 44 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 44 Chambers in 4 Rows
		3,572 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	693.50'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 689.50'
#2	Primary	693.25'	**15.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.25' / 684.50' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Device 2	694.10'	**2.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	695.00'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	695.50'	**5.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	696.80'	**15.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 13.02 hrs HW=694.87' (Free Discharge)
└**1=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.09 cfs @ 13.02 hrs HW=694.87' TW=669.57' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.09 cfs of 5.88 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 0.09 cfs @ 3.98 fps)
  ├**4=Orifice** (Controls 0.00 cfs)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 32P: INFILTRATION LEVEL SPREADER

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 246,790 sf, 0.00% Impervious, Inflow Depth = 0.73" for 2-YEAR event
Inflow = 1.00 cfs @ 12.73 hrs, Volume= 14,951 cf
Outflow = 1.02 cfs @ 12.95 hrs, Volume= 13,427 cf, Atten= 0%, Lag= 13.1 min
Discarded = 0.05 cfs @ 12.95 hrs, Volume= 2,583 cf
Primary = 0.98 cfs @ 12.95 hrs, Volume= 10,844 cf
Routed to Link A2 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 300.68' @ 12.95 hrs Surf.Area= 2,339 sf Storage= 2,476 cf
Flood Elev= 301.50' Surf.Area= 3,513 sf Storage= 4,288 cf

Plug-Flow detention time= 103.3 min calculated for 13,427 cf (90% of inflow)
Center-of-Mass det. time= 71.4 min (963.0 - 891.5)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,331 cf	**3.50'W x 200.00'L x 5.25'H Stone Trench** 3,675 cf Overall - 346 cf Embedded = 3,329 cf x 40.0% Voids
#2	295.50'	346 cf	**18.0" Round Pipe Storage** Inside #1 L= 196.0'
#3	300.00'	2,610 cf	**3.50'W x 200.00'L x 1.50'H Prismatoid Surface Storage Z=3.3**
		4,288 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	294.75'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 292.00'
#2	Primary	300.67'	**204.0' long + 9.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.05 cfs @ 12.95 hrs HW=300.68' (Free Discharge)
└**1=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.98 cfs @ 12.95 hrs HW=300.68' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.98 cfs @ 0.33 fps)

Summary for Pond 33P: INFILTRATION LEVEL SPREADER

Inflow Area = 157,861 sf, 0.00% Impervious, Inflow Depth = 0.72" for 2-YEAR event
Inflow = 0.95 cfs @ 12.56 hrs, Volume= 9,446 cf
Outflow = 0.75 cfs @ 13.32 hrs, Volume= 7,693 cf, Atten= 20%, Lag= 45.3 min
Discarded = 0.06 cfs @ 13.30 hrs, Volume= 3,007 cf
Primary = 0.70 cfs @ 13.32 hrs, Volume= 4,686 cf
Routed to Link A3 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 300.68' @ 13.30 hrs Surf.Area= 2,907 sf Storage= 3,083 cf
Flood Elev= 301.50' Surf.Area= 4,358 sf Storage= 5,342 cf

Plug-Flow detention time= 195.7 min calculated for 7,693 cf (81% of inflow)
Center-of-Mass det. time= 148.5 min (1,021.8 - 873.2)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,664 cf	**3.50'W x 250.00'L x 5.25'H Stone Trench** 4,594 cf Overall - 435 cf Embedded = 4,159 cf x 40.0% Voids
#2	295.50'	435 cf	**18.0" Round Pipe Storage** Inside #1 L= 246.0'
#3	300.00'	3,244 cf	**3.50'W x 250.00'L x 1.50'H Prismatoid Surface Storage Z=3.3**
		5,342 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	294.75'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 292.00'
#2	Primary	300.67'	**254.0' long + 9.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.06 cfs @ 13.30 hrs HW=300.68' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.61 cfs @ 13.32 hrs HW=300.68' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.61 cfs @ 0.27 fps)

Summary for Pond 34P: INFILTRATION LEVEL SPREADER

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area = 322,438 sf, 0.00% Impervious, Inflow Depth = 0.60" for 2-YEAR event
Inflow = 1.12 cfs @ 13.48 hrs, Volume= 16,007 cf
Outflow = 1.37 cfs @ 13.46 hrs, Volume= 14,234 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.06 cfs @ 13.45 hrs, Volume= 2,980 cf
Primary = 1.31 cfs @ 13.46 hrs, Volume= 11,254 cf
Routed to Link A4 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 300.68' @ 13.45 hrs Surf.Area= 2,913 sf Storage= 3,091 cf
Flood Elev= 301.50' Surf.Area= 4,358 sf Storage= 5,342 cf

Plug-Flow detention time= 108.3 min calculated for 14,234 cf (89% of inflow)
Center-of-Mass det. time= 80.7 min (983.0 - 902.3)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,664 cf	**3.50'W x 250.00'L x 5.25'H Stone Trench** 4,594 cf Overall - 435 cf Embedded = 4,159 cf x 40.0% Voids
#2	295.50'	435 cf	**18.0" Round Pipe Storage** Inside #1 L= 246.0'
#3	300.00'	3,244 cf	**3.50'W x 250.00'L x 1.50'H Prismatoid Surface Storage Z=3.3**
		5,342 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	294.75'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 292.00'
#2	Primary	300.67'	**304.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.06 cfs @ 13.45 hrs HW=300.68' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=1.15 cfs @ 13.46 hrs HW=300.68' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 1.15 cfs @ 0.31 fps)

Summary for Pond 36P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=24)

Inflow Area = 8,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.47 cfs @ 12.09 hrs, Volume= 1,673 cf
Outflow = 0.04 cfs @ 13.10 hrs, Volume= 1,673 cf, Atten= 92%, Lag= 61.0 min
Discarded = 0.04 cfs @ 13.10 hrs, Volume= 1,673 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach 36R : Forested Channel

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 400.83' @ 13.10 hrs Surf.Area= 1,775 sf Storage= 650 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 137.2 min (897.0 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	1,720 cf	**2.50'W x 710.00'L x 2.50'H Prismatoid** 4,438 cf Overall - 139 cf Embedded = 4,299 cf x 40.0% Voids
#2	400.50'	139 cf	**6.0" Round Pipe Storage** Inside #1 L= 706.0'
		1,858 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.750 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow X 10.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 13.10 hrs HW=400.83' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=667.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Link A1: OFF-SITE WEST

Inflow Area = 71,102 sf, 17.58% Impervious, Inflow Depth = 1.09" for 2-YEAR event
Inflow = 1.46 cfs @ 12.25 hrs, Volume= 6,432 cf
Primary = 1.46 cfs @ 12.25 hrs, Volume= 6,432 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A2: OFF-SITE WEST

Inflow Area = 537,354 sf, 0.37% Impervious, Inflow Depth = 0.60" for 2-YEAR event
Inflow = 3.84 cfs @ 12.16 hrs, Volume= 26,668 cf
Primary = 3.84 cfs @ 12.16 hrs, Volume= 26,668 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A3: OFF-SITE WEST

Inflow Area = 258,944 sf, 0.77% Impervious, Inflow Depth = 0.34" for 2-YEAR event
Inflow = 0.81 cfs @ 13.32 hrs, Volume= 7,406 cf
Primary = 0.81 cfs @ 13.32 hrs, Volume= 7,406 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A4: OFF-SITE WEST

Inflow Area = 571,522 sf, 0.35% Impervious, Inflow Depth = 0.37" for 2-YEAR event
Inflow = 1.56 cfs @ 13.46 hrs, Volume= 17,431 cf
Primary = 1.56 cfs @ 13.46 hrs, Volume= 17,431 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A5: OFF-SITE WEST

Inflow Area = 321,072 sf, 0.47% Impervious, Inflow Depth = 0.17" for 2-YEAR event
Inflow = 0.42 cfs @ 12.44 hrs, Volume= 4,601 cf
Primary = 0.42 cfs @ 12.44 hrs, Volume= 4,601 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link B: OFF-SITE SOUTH

Inflow Area = 1,406,402 sf, 0.57% Impervious, Inflow Depth > 0.62" for 2-YEAR event
Inflow = 6.73 cfs @ 12.27 hrs, Volume= 72,520 cf
Primary = 6.73 cfs @ 12.27 hrs, Volume= 72,520 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link C: EXIST. HEADWALL

Inflow Area = 3,212,572 sf, 0.00% Impervious, Inflow Depth > 0.98" for 2-YEAR event
Inflow = 21.38 cfs @ 12.69 hrs, Volume= 261,603 cf
Primary = 21.38 cfs @ 12.69 hrs, Volume= 261,603 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link D: EXIST. CB

Inflow Area = 1,002,620 sf, 0.00% Impervious, Inflow Depth > 1.20" for 2-YEAR event
Inflow = 8.55 cfs @ 12.58 hrs, Volume= 100,499 cf
Primary = 8.55 cfs @ 12.58 hrs, Volume= 100,499 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link E: OFF-SITE SOUTH EAST

Inflow Area = 1,111,968 sf, 0.00% Impervious, Inflow Depth = 1.37" for 2-YEAR event
Inflow = 6.67 cfs @ 12.17 hrs, Volume= 126,806 cf
Primary = 6.67 cfs @ 12.17 hrs, Volume= 126,806 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link F: EXIST. 18" CMP

Inflow Area = 146,832 sf, 0.00% Impervious, Inflow Depth = 1.77" for 2-YEAR event
Inflow = 3.86 cfs @ 12.31 hrs, Volume= 21,632 cf
Primary = 3.86 cfs @ 12.31 hrs, Volume= 21,632 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link G: EXIST. 18" CMP

Inflow Area = 668,250 sf, 0.00% Impervious, Inflow Depth > 1.92" for 2-YEAR event
Inflow = 5.98 cfs @ 12.34 hrs, Volume= 107,041 cf
Primary = 5.98 cfs @ 12.34 hrs, Volume= 107,041 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link H: EXIST. 12" CMP

Inflow Area = 443,972 sf, 0.00% Impervious, Inflow Depth > 2.24" for 2-YEAR event
Inflow = 3.68 cfs @ 12.10 hrs, Volume= 82,994 cf
Primary = 3.68 cfs @ 12.10 hrs, Volume= 82,994 cf, Atten= 0%, Lag= 0.0 min
Routed to Link G : EXIST. 18" CMP

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link I: EXIST. CB

Inflow Area = 537,249 sf, 0.00% Impervious, Inflow Depth > 0.61" for 2-YEAR event
Inflow = 2.09 cfs @ 12.10 hrs, Volume= 27,116 cf
Primary = 2.09 cfs @ 12.10 hrs, Volume= 27,116 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link J: OFF-SITE EAST

Inflow Area = 576 sf, 0.00% Impervious, Inflow Depth = 0.75" for 2-YEAR event
Inflow = 0.01 cfs @ 12.16 hrs, Volume= 36 cf
Primary = 0.01 cfs @ 12.16 hrs, Volume= 36 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=2.12"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=2.82 cfs 12,217 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=1.46"
Tc=10.0 min CN=72 Runoff=9.46 cfs 35,110 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=0.92"
Tc=10.0 min CN=63 Runoff=1.81 cfs 7,578 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=0.86"
Flow Length=538' Tc=10.2 min CN=62 Runoff=4.11 cfs 17,799 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=0.62"
Tc=10.0 min CN=57 Runoff=3.10 cfs 16,470 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.13 cfs 471 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=1.60"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.02 cfs 77 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=20.14 cfs 63,711 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=9.86 cfs 31,192 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=2.73"
Tc=6.0 min CN=88 Runoff=2.70 cfs 8,631 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=13.04 cfs 41,264 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=1.14"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=10.37 cfs 48,373 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.70 cfs 2,510 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=86 Runoff=8.11 cfs 25,786 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=2.46"
Tc=10.0 min CN=85 Runoff=26.00 cfs 93,439 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=2.55"
Tc=10.0 min CN=86 Runoff=16.63 cfs 59,910 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=1.95 cfs 6,178 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=1.60"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=40.05 cfs 275,869 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=87 Runoff=15.02 cfs 47,881 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=90 Runoff=40.36 cfs 130,657 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=86 Runoff=18.74 cfs 59,537 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=2.73"
Tc=6.0 min CN=88 Runoff=5.90 cfs 18,886 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=3.32"
Tc=6.0 min CN=94 Runoff=1.66 cfs 5,577 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=1.74"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=9.93 cfs 61,334 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=2.64"
Tc=10.0 min CN=87 Runoff=35.23 cfs 127,279 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=1.81"
Tc=10.0 min CN=77 Runoff=7.74 cfs 27,995 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=2.37"
Tc=10.0 min CN=84 Runoff=23.85 cfs 85,603 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=2.73"
Tc=10.0 min CN=88 Runoff=19.95 cfs 72,343 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=3.32"
Tc=10.0 min CN=94 Runoff=12.79 cfs 48,539 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=74 Runoff=0.32 cfs 1,042 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=3.32"
Tc=10.0 min CN=94 Runoff=10.15 cfs 38,507 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=74 Runoff=0.88 cfs 2,832 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=2.73"
Tc=10.0 min CN=88 Runoff=12.73 cfs 46,161 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=3.22"
Tc=6.0 min CN=93 Runoff=30.18 cfs 100,210 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=86 Runoff=4.71 cfs 14,961 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=2.64"
Tc=10.0 min CN=87 Runoff=29.10 cfs 105,116 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=2.29"
Tc=6.0 min CN=83 Runoff=3.55 cfs 11,210 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.28' Max Vel=4.99 fps Inflow=1.30 cfs 51,944 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=1.30 cfs 51,869 cf

Reach 2R: Avg. Flow Depth=0.32' Max Vel=3.46 fps Inflow=1.30 cfs 51,869 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=1.30 cfs 51,612 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.47' Max Vel=5.98 fps Inflow=8.41 cfs 170,424 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=8.40 cfs 170,339 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.53' Max Vel=4.29 fps Inflow=9.31 cfs 227,453 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=9.30 cfs 227,132 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.14' Max Vel=2.84 fps Inflow=0.23 cfs 14,170 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=0.23 cfs 14,142 cf

Reach 6R: Pipe Network Avg. Flow Depth=0.57' Max Vel=10.53 fps Inflow=7.79 cfs 78,829 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=7.79 cfs 78,807 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.20' Max Vel=0.67 fps Inflow=0.51 cfs 4,257 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=0.49 cfs 4,257 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.08' Max Vel=2.37 fps Inflow=0.49 cfs 4,257 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=0.47 cfs 4,257 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=632.16' Storage=23,310 cf Inflow=17.07 cfs 173,031 cf
Outflow=8.41 cfs 170,424 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=662.75' Storage=65,348 cf Inflow=40.36 cfs 130,657 cf
Outflow=6.38 cfs 125,150 cf

Pond 3P: STORMTECH Peak Elev=566.95' Storage=8,480 cf Inflow=10.15 cfs 38,507 cf
Discarded=0.04 cfs 2,283 cf Primary=7.53 cfs 35,145 cf Outflow=7.57 cfs 37,427 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=568.39' Storage=57,518 cf Inflow=30.18 cfs 100,210 cf
Outflow=5.99 cfs 111,151 cf

Pond 5P: STORMTECH Peak Elev=567.06' Storage=12,052 cf Inflow=12.73 cfs 46,161 cf
Discarded=0.05 cfs 2,875 cf Primary=9.23 cfs 41,700 cf Outflow=9.28 cfs 44,575 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=558.87' Storage=52,699 cf Inflow=35.23 cfs 127,279 cf
Outflow=10.37 cfs 124,497 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=710.73' Storage=47,233 cf Inflow=20.72 cfs 75,850 cf
Outflow=1.30 cfs 51,944 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=588.00' Storage=9,726 cf Inflow=20.37 cfs 198,485 cf
Outflow=19.90 cfs 198,509 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=592.75' Storage=25,050 cf Inflow=23.85 cfs 85,603 cf
Discarded=0.17 cfs 8,030 cf Primary=10.67 cfs 77,579 cf Outflow=10.84 cfs 85,610 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=613.49' Storage=43,219 cf Inflow=32.74 cfs 120,883 cf
Outflow=9.91 cfs 120,905 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=642.59' Storage=39,153 cf Inflow=26.00 cfs 93,439 cf
Discarded=0.42 cfs 24,862 cf Primary=7.58 cfs 64,687 cf Outflow=7.99 cfs 89,549 cf

Pond 13P: BIOBASIN - MCR Peak Elev=612.98' Storage=2,525 cf Inflow=1.66 cfs 5,577 cf
Outflow=0.22 cfs 5,503 cf

Pond 14P: SMALL BASIN Peak Elev=617.24' Storage=4,337 cf Inflow=9.61 cfs 104,593 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=9.26 cfs 104,097 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=571.89' Storage=65,873 cf Inflow=29.10 cfs 105,116 cf
Outflow=2.02 cfs 59,096 cf

Pond 16P: STORMTECH Peak Elev=714.31' Storage=5,841 cf Inflow=5.90 cfs 18,886 cf
Discarded=0.03 cfs 1,700 cf Primary=2.89 cfs 16,313 cf Outflow=2.92 cfs 18,013 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 20P: BIOBASIN Peak Elev=661.34' Storage=37,496 cf Inflow=16.63 cfs 59,910 cf
Discarded=0.41 cfs 28,606 cf Primary=0.23 cfs 14,170 cf Outflow=0.63 cfs 42,776 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=402.20' Storage=231 cf Inflow=0.13 cfs 471 cf
Discarded=0.01 cfs 470 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 470 cf

Pond 25P: STORMTECHS (2) Peak Elev=502.20' Storage=19,203 cf Inflow=15.74 cfs 49,895 cf
Discarded=0.22 cfs 13,552 cf Primary=4.64 cfs 35,246 cf Outflow=4.86 cfs 48,798 cf

Pond 26P: STORMTECHS (2) Peak Elev=502.07' Storage=11,163 cf Inflow=9.86 cfs 31,192 cf
Discarded=0.14 cfs 8,222 cf Primary=3.08 cfs 22,405 cf Outflow=3.22 cfs 30,627 cf

Pond 27P: STORMTECHS (2) Peak Elev=502.12' Storage=3,887 cf Inflow=5.26 cfs 44,371 cf
Discarded=0.05 cfs 2,483 cf Primary=5.01 cfs 41,674 cf Outflow=5.06 cfs 44,157 cf

Pond 29P: STORMTECHS (4) Peak Elev=507.11' Storage=24,960 cf Inflow=20.14 cfs 63,711 cf
Discarded=0.30 cfs 18,094 cf Primary=5.26 cfs 44,371 cf Outflow=5.56 cfs 62,465 cf

Pond 30P: STORMTECH Peak Elev=695.68' Storage=2,484 cf Inflow=1.95 cfs 6,178 cf
Discarded=0.03 cfs 1,825 cf Primary=0.51 cfs 4,257 cf Outflow=0.54 cfs 6,081 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.71' Storage=2,522 cf Inflow=4.64 cfs 35,246 cf
Discarded=0.05 cfs 2,822 cf Primary=4.90 cfs 30,716 cf Outflow=4.95 cfs 33,538 cf

Pond 33P: INFILTRATION LEVEL Peak Elev=300.70' Storage=3,135 cf Inflow=3.08 cfs 22,405 cf
Discarded=0.06 cfs 3,441 cf Primary=4.59 cfs 16,916 cf Outflow=4.64 cfs 20,357 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.72' Storage=3,160 cf Inflow=5.01 cfs 41,674 cf
Discarded=0.06 cfs 3,448 cf Primary=8.56 cfs 36,128 cf Outflow=8.62 cfs 39,576 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=401.45' Storage=1,116 cf Inflow=0.70 cfs 2,510 cf
Discarded=0.04 cfs 2,512 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 2,512 cf

Link A1: OFF-SITE WEST Inflow=2.82 cfs 12,217 cf
Primary=2.82 cfs 12,217 cf

Link A2: OFF-SITE WEST Inflow=11.14 cfs 65,826 cf
Primary=11.14 cfs 65,826 cf

Link A3: OFF-SITE WEST Inflow=5.67 cfs 24,494 cf
Primary=5.67 cfs 24,494 cf

Link A4: OFF-SITE WEST Inflow=10.27 cfs 53,927 cf
Primary=10.27 cfs 53,927 cf

Link A5: OFF-SITE WEST Inflow=3.10 cfs 16,470 cf
Primary=3.10 cfs 16,470 cf

Link B: OFF-SITE SOUTH Inflow=17.89 cfs 156,726 cf
Primary=17.89 cfs 156,726 cf

Link C: EXIST. HEADWALL Inflow=49.26 cfs 503,002 cf
Primary=49.26 cfs 503,002 cf

Link D: EXIST. CB Inflow=20.30 cfs 185,830 cf
Primary=20.30 cfs 185,830 cf

Link E: OFF-SITE SOUTH EAST Inflow=22.68 cfs 226,504 cf
Primary=22.68 cfs 226,504 cf

Link F: EXIST. 18" CMP Inflow=7.71 cfs 36,186 cf
Primary=7.71 cfs 36,186 cf

Link G: EXIST. 18" CMP Inflow=16.71 cfs 170,643 cf
Primary=16.71 cfs 170,643 cf

Link H: EXIST. 12" CMP Inflow=7.30 cfs 126,111 cf
Primary=7.30 cfs 126,111 cf

Link I: EXIST. CB Inflow=3.81 cfs 70,307 cf
Primary=3.81 cfs 70,307 cf

Link J: OFF-SITE EAST Inflow=0.02 cfs 77 cf
Primary=0.02 cfs 77 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 1,754,764 cf Average Runoff Depth = 2.14"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=2.97"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=3.95 cfs 17,089 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=2.18"
Tc=10.0 min CN=72 Runoff=14.47 cfs 52,482 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=1.50"
Tc=10.0 min CN=63 Runoff=3.20 cfs 12,354 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=1.43"
Flow Length=538' Tc=10.2 min CN=62 Runoff=7.48 cfs 29,363 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=1.09"
Tc=10.0 min CN=57 Runoff=6.82 cfs 29,132 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.16 cfs 593 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=2.35"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.03 cfs 113 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=27.43 cfs 87,384 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=13.43 cfs 42,782 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=3.65"
Tc=6.0 min CN=88 Runoff=3.56 cfs 11,544 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=17.77 cfs 56,597 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=1.79"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=17.02 cfs 75,600 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.87 cfs 3,162 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=86 Runoff=10.88 cfs 34,920 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=3.35"
Tc=10.0 min CN=85 Runoff=35.17 cfs 127,342 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=3.45"
Tc=10.0 min CN=86 Runoff=22.33 cfs 81,133 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=2.66 cfs 8,474 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=2.35"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=59.90 cfs 405,828 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=3.55"
Tc=6.0 min CN=87 Runoff=19.99 cfs 64,439 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=3.86"
Tc=6.0 min CN=90 Runoff=52.59 cfs 172,632 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=86 Runoff=25.13 cfs 80,628 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=3.65"
Tc=6.0 min CN=88 Runoff=7.80 cfs 25,260 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=4.29"
Tc=6.0 min CN=94 Runoff=2.11 cfs 7,194 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=2.52"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=14.54 cfs 88,869 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=3.55"
Tc=10.0 min CN=87 Runoff=46.95 cfs 171,294 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=2.61"
Tc=10.0 min CN=77 Runoff=11.22 cfs 40,267 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=3.25"
Tc=10.0 min CN=84 Runoff=32.53 cfs 117,411 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=3.65"
Tc=10.0 min CN=88 Runoff=26.39 cfs 96,760 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=4.29"
Tc=10.0 min CN=94 Runoff=16.27 cfs 62,613 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=74 Runoff=0.48 cfs 1,533 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=4.29"
Tc=10.0 min CN=94 Runoff=12.90 cfs 49,672 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=74 Runoff=1.31 cfs 4,166 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=3.65"
Tc=10.0 min CN=88 Runoff=16.84 cfs 61,741 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=4.18"
Tc=6.0 min CN=93 Runoff=38.58 cfs 130,037 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=86 Runoff=6.31 cfs 20,260 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=3.55"
Tc=10.0 min CN=87 Runoff=38.77 cfs 141,467 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=3.16"
Tc=6.0 min CN=83 Runoff=4.87 cfs 15,475 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.36' Max Vel=5.83 fps Inflow=2.42 cfs 77,078 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=2.42 cfs 77,000 cf

Reach 2R: Avg. Flow Depth=0.41' Max Vel=4.04 fps Inflow=2.42 cfs 77,000 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=2.41 cfs 76,734 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.54' Max Vel=6.58 fps Inflow=12.37 cfs 227,924 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=12.37 cfs 227,824 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.66' Max Vel=4.86 fps Inflow=14.84 cfs 311,674 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=14.84 cfs 311,327 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.35' Max Vel=4.84 fps Inflow=1.38 cfs 29,849 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=1.38 cfs 29,820 cf

Reach 6R: Pipe Network Avg. Flow Depth=0.98' Max Vel=13.77 fps Inflow=20.97 cfs 126,383 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=21.06 cfs 126,361 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.31' Max Vel=0.84 fps Inflow=1.04 cfs 6,412 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=1.02 cfs 6,412 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.11' Max Vel=2.99 fps Inflow=1.02 cfs 6,412 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=1.00 cfs 6,412 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=632.89' Storage=32,546 cf Inflow=24.30 cfs 230,847 cf
Outflow=12.37 cfs 227,924 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=663.40' Storage=82,531 cf Inflow=52.59 cfs 172,632 cf
Outflow=10.11 cfs 166,408 cf

Pond 3P: STORMTECH Peak Elev=567.19' Storage=8,905 cf Inflow=12.90 cfs 49,672 cf
Discarded=0.04 cfs 2,364 cf Primary=11.98 cfs 46,212 cf Outflow=12.02 cfs 48,577 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=568.94' Storage=68,704 cf Inflow=38.58 cfs 130,037 cf
Outflow=9.99 cfs 140,135 cf

Pond 5P: STORMTECH Peak Elev=567.35' Storage=12,752 cf Inflow=16.84 cfs 61,741 cf
Discarded=0.05 cfs 3,022 cf Primary=15.55 cfs 57,106 cf Outflow=15.60 cfs 60,128 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=559.52' Storage=66,553 cf Inflow=46.95 cfs 171,294 cf
Outflow=16.56 cfs 168,268 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=711.29' Storage=58,953 cf Inflow=28.35 cfs 103,213 cf
Outflow=2.42 cfs 77,078 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=588.45' Storage=11,912 cf Inflow=31.59 cfs 268,080 cf
Outflow=31.15 cfs 268,112 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=593.02' Storage=30,476 cf Inflow=32.53 cfs 117,411 cf
Discarded=0.17 cfs 8,725 cf Primary=19.14 cfs 108,686 cf Outflow=19.32 cfs 117,411 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=614.10' Storage=56,076 cf Inflow=42.65 cfs 159,373 cf
Outflow=14.71 cfs 159,394 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=643.10' Storage=44,328 cf Inflow=35.17 cfs 127,342 cf
Discarded=0.45 cfs 26,263 cf Primary=20.75 cfs 96,563 cf Outflow=21.20 cfs 122,826 cf

Pond 13P: BIOBASIN - MCR Peak Elev=613.20' Storage=3,193 cf Inflow=2.11 cfs 7,194 cf
Outflow=0.36 cfs 7,116 cf

Pond 14P: SMALL BASIN Peak Elev=618.16' Storage=8,375 cf Inflow=25.53 cfs 161,281 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=22.53 cfs 160,774 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=572.50' Storage=81,541 cf Inflow=38.77 cfs 141,467 cf
Outflow=4.21 cfs 94,627 cf

Pond 16P: STORMTECH Peak Elev=714.85' Storage=6,942 cf Inflow=7.80 cfs 25,260 cf
Discarded=0.03 cfs 1,785 cf Primary=4.44 cfs 22,585 cf Outflow=4.47 cfs 24,370 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 20P: BIOBASIN Peak Elev=661.67' Storage=45,377 cf Inflow=22.33 cfs 81,133 cf
Discarded=0.43 cfs 30,265 cf Primary=1.38 cfs 29,849 cf Outflow=1.80 cfs 60,113 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=404.52' Storage=261 cf Inflow=0.16 cfs 593 cf
Discarded=0.01 cfs 519 cf Primary=0.07 cfs 43 cf Outflow=0.08 cfs 562 cf

Pond 25P: STORMTECHS (2) Peak Elev=502.79' Storage=23,572 cf Inflow=21.33 cfs 68,141 cf
Discarded=0.24 cfs 14,306 cf Primary=8.90 cfs 52,477 cf Outflow=9.14 cfs 66,783 cf

Pond 26P: STORMTECHS (2) Peak Elev=502.70' Storage=14,196 cf Inflow=13.43 cfs 42,782 cf
Discarded=0.15 cfs 8,676 cf Primary=5.53 cfs 33,399 cf Outflow=5.68 cfs 42,075 cf

Pond 27P: STORMTECHS (2) Peak Elev=502.79' Storage=4,964 cf Inflow=10.18 cfs 66,685 cf
Discarded=0.05 cfs 2,594 cf Primary=9.98 cfs 63,812 cf Outflow=10.04 cfs 66,406 cf

Pond 29P: STORMTECHS (4) Peak Elev=507.74' Storage=31,558 cf Inflow=27.43 cfs 87,384 cf
Discarded=0.33 cfs 19,117 cf Primary=10.18 cfs 66,685 cf Outflow=10.51 cfs 85,802 cf

Pond 30P: STORMTECH Peak Elev=696.21' Storage=3,019 cf Inflow=2.66 cfs 8,474 cf
Discarded=0.03 cfs 1,928 cf Primary=1.04 cfs 6,412 cf Outflow=1.08 cfs 8,340 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.74' Storage=2,564 cf Inflow=8.90 cfs 52,477 cf
Discarded=0.05 cfs 2,887 cf Primary=9.95 cfs 47,825 cf Outflow=10.00 cfs 50,713 cf

Pond 33P: INFILTRATION LEVEL Peak Elev=300.71' Storage=3,157 cf Inflow=5.53 cfs 33,399 cf
Discarded=0.06 cfs 3,554 cf Primary=6.78 cfs 27,718 cf Outflow=6.84 cfs 31,272 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.73' Storage=3,192 cf Inflow=9.98 cfs 63,812 cf
Discarded=0.06 cfs 3,531 cf Primary=13.16 cfs 58,081 cf Outflow=13.21 cfs 61,612 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=402.01' Storage=1,513 cf Inflow=0.87 cfs 3,162 cf
Discarded=0.05 cfs 3,163 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 3,163 cf

Link A1: OFF-SITE WEST Inflow=3.95 cfs 17,151 cf
Primary=3.95 cfs 17,151 cf

Link A2: OFF-SITE WEST Inflow=23.41 cfs 100,369 cf
Primary=23.41 cfs 100,369 cf

Link A3: OFF-SITE WEST Inflow=9.30 cfs 40,134 cf
Primary=9.30 cfs 40,134 cf

Link A4: OFF-SITE WEST Inflow=17.87 cfs 87,506 cf
Primary=17.87 cfs 87,506 cf

Link A5: OFF-SITE WEST Inflow=6.82 cfs 29,175 cf
Primary=6.82 cfs 29,175 cf

Link B: OFF-SITE SOUTH Inflow=37.61 cfs 242,787 cf
Primary=37.61 cfs 242,787 cf

Link C: EXIST. HEADWALL Inflow=74.40 cfs 717,156 cf
Primary=74.40 cfs 717,156 cf

Link D: EXIST. CB Inflow=31.02 cfs 257,137 cf
Primary=31.02 cfs 257,137 cf

Link E: OFF-SITE SOUTH EAST Inflow=35.99 cfs 308,379 cf
Primary=35.99 cfs 308,379 cf

Link F: EXIST. 18" CMP Inflow=12.29 cfs 47,745 cf
Primary=12.29 cfs 47,745 cf

Link G: EXIST. 18" CMP Inflow=27.87 cfs 221,667 cf
Primary=27.87 cfs 221,667 cf

Link H: EXIST. 12" CMP Inflow=11.93 cfs 160,395 cf
Primary=11.93 cfs 160,395 cf

Link I: EXIST. CB Inflow=5.19 cfs 110,103 cf
Primary=5.19 cfs 110,103 cf

Link J: OFF-SITE EAST Inflow=0.03 cfs 113 cf
Primary=0.03 cfs 113 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 2,430,774 cf Average Runoff Depth = 2.96"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=3.77"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=5.01 cfs 21,736 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=2.90"
Tc=10.0 min CN=72 Runoff=19.36 cfs 69,625 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=2.09"
Tc=10.0 min CN=63 Runoff=4.64 cfs 17,282 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=2.01"
Flow Length=538' Tc=10.2 min CN=62 Runoff=10.96 cfs 41,362 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=1.60"
Tc=10.0 min CN=57 Runoff=10.80 cfs 42,707 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.19 cfs 705 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.04 cfs 148 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=34.19 cfs 109,745 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=16.74 cfs 53,730 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=88 Runoff=4.36 cfs 14,266 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=22.14 cfs 71,079 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=2.44"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=23.70 cfs 103,099 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=1.03 cfs 3,761 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=86 Runoff=13.43 cfs 43,499 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=4.19"
Tc=10.0 min CN=85 Runoff=43.65 cfs 159,271 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=4.30"
Tc=10.0 min CN=86 Runoff=27.58 cfs 101,065 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=3.32 cfs 10,642 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=79.14 cfs 533,006 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=4.40"
Tc=6.0 min CN=87 Runoff=24.56 cfs 79,948 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=4.73"
Tc=6.0 min CN=90 Runoff=63.76 cfs 211,662 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=86 Runoff=31.02 cfs 100,436 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=88 Runoff=9.53 cfs 31,215 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=5.18"
Tc=6.0 min CN=94 Runoff=2.52 cfs 8,686 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=3.28"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=18.96 cfs 115,602 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=4.40"
Tc=10.0 min CN=87 Runoff=57.71 cfs 212,520 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=3.37"
Tc=10.0 min CN=77 Runoff=14.54 cfs 52,136 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=4.08"
Tc=10.0 min CN=84 Runoff=40.57 cfs 147,455 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=4.51"
Tc=10.0 min CN=88 Runoff=32.29 cfs 119,571 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=5.18"
Tc=10.0 min CN=94 Runoff=19.44 cfs 75,601 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=74 Runoff=0.64 cfs 2,013 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=5.18"
Tc=10.0 min CN=94 Runoff=15.42 cfs 59,976 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=74 Runoff=1.73 cfs 5,472 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=4.51"
Tc=10.0 min CN=88 Runoff=20.60 cfs 76,296 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=5.06"
Tc=6.0 min CN=93 Runoff=46.24 cfs 157,608 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=86 Runoff=7.79 cfs 25,238 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=4.40"
Tc=10.0 min CN=87 Runoff=47.66 cfs 175,514 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=3.98"
Tc=6.0 min CN=83 Runoff=6.10 cfs 19,517 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.39' Max Vel=6.23 fps Inflow=3.16 cfs 101,086 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=3.16 cfs 101,007 cf

Reach 2R: Avg. Flow Depth=0.46' Max Vel=4.32 fps Inflow=3.16 cfs 101,007 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=3.16 cfs 100,735 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.58' Max Vel=6.90 fps Inflow=14.94 cfs 281,517 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=14.94 cfs 281,404 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.73' Max Vel=5.14 fps Inflow=18.43 cfs 390,744 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=18.43 cfs 390,375 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.56' Max Vel=6.13 fps Inflow=3.25 cfs 47,147 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=3.25 cfs 47,118 cf

Reach 6R: Pipe Network Avg. Flow Depth=1.27' Max Vel=15.23 fps Inflow=32.49 cfs 174,035 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=32.13 cfs 174,012 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.39' Max Vel=0.97 fps Inflow=1.74 cfs 8,460 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=1.59 cfs 8,460 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.13' Max Vel=3.39 fps Inflow=1.59 cfs 8,460 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=1.52 cfs 8,460 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=633.54' Storage=41,461 cf Inflow=32.67 cfs 284,723 cf
Outflow=14.94 cfs 281,517 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=664.02' Storage=99,856 cf Inflow=63.76 cfs 211,662 cf
Outflow=12.70 cfs 204,776 cf

Pond 3P: STORMTECH Peak Elev=567.41' Storage=9,277 cf Inflow=15.42 cfs 59,976 cf
Discarded=0.04 cfs 2,423 cf Primary=14.95 cfs 56,447 cf Outflow=14.99 cfs 58,870 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=569.31' Storage=76,605 cf Inflow=46.24 cfs 157,608 cf
Outflow=15.82 cfs 166,919 cf

Pond 5P: STORMTECH Peak Elev=567.53' Storage=13,121 cf Inflow=20.60 cfs 76,296 cf
Discarded=0.05 cfs 3,131 cf Primary=20.46 cfs 71,534 cf Outflow=20.51 cfs 74,664 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=560.10' Storage=79,631 cf Inflow=57.71 cfs 212,520 cf
Outflow=20.86 cfs 209,302 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=711.90' Storage=72,845 cf Inflow=35.50 cfs 128,898 cf
Outflow=3.16 cfs 101,086 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=598.23' Storage=14,860 cf Inflow=63.63 cfs 333,342 cf
Outflow=59.07 cfs 333,380 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=598.52' Storage=30,476 cf Inflow=40.57 cfs 147,455 cf
Discarded=0.29 cfs 9,336 cf Primary=49.16 cfs 138,126 cf Outflow=49.35 cfs 147,461 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=614.38' Storage=62,141 cf Inflow=51.72 cfs 195,173 cf
Outflow=26.39 cfs 195,216 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=643.49' Storage=47,769 cf Inflow=43.65 cfs 159,271 cf
Discarded=0.47 cfs 27,391 cf Primary=32.16 cfs 126,916 cf Outflow=32.63 cfs 154,307 cf

Pond 13P: BIOBASIN - MCR Peak Elev=613.35' Storage=3,680 cf Inflow=2.52 cfs 8,686 cf
Outflow=0.56 cfs 8,605 cf

Pond 14P: SMALL BASIN Peak Elev=619.19' Storage=13,807 cf Inflow=39.78 cfs 217,511 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=32.93 cfs 217,000 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=573.09' Storage=97,072 cf Inflow=47.66 cfs 175,514 cf
Outflow=7.32 cfs 128,145 cf

Pond 16P: STORMTECH Peak Elev=715.47' Storage=7,856 cf Inflow=9.53 cfs 31,215 cf
Discarded=0.03 cfs 1,852 cf Primary=5.96 cfs 28,462 cf Outflow=6.00 cfs 30,314 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 20P: BIOBASIN Peak Elev=661.95' Storage=52,627 cf Inflow=27.58 cfs 101,065 cf
Discarded=0.44 cfs 31,362 cf Primary=3.25 cfs 47,147 cf Outflow=3.69 cfs 78,510 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=404.52' Storage=261 cf Inflow=0.19 cfs 705 cf
Discarded=0.01 cfs 544 cf Primary=0.10 cfs 120 cf Outflow=0.11 cfs 664 cf

Pond 25P: STORMTECHS (2) Peak Elev=503.48' Storage=27,065 cf Inflow=26.50 cfs 85,345 cf
Discarded=0.27 cfs 14,928 cf Primary=14.14 cfs 68,888 cf Outflow=14.41 cfs 83,816 cf

Pond 26P: STORMTECHS (2) Peak Elev=503.44' Storage=16,606 cf Inflow=16.74 cfs 53,730 cf
Discarded=0.17 cfs 9,052 cf Primary=7.93 cfs 43,879 cf Outflow=8.10 cfs 52,931 cf

Pond 27P: STORMTECHS (2) Peak Elev=503.49' Storage=5,724 cf Inflow=16.43 cfs 87,983 cf
Discarded=0.06 cfs 2,704 cf Primary=16.32 cfs 84,963 cf Outflow=16.38 cfs 87,667 cf

Pond 29P: STORMTECHS (4) Peak Elev=508.45' Storage=36,536 cf Inflow=34.19 cfs 109,745 cf
Discarded=0.36 cfs 19,960 cf Primary=16.43 cfs 87,983 cf Outflow=16.79 cfs 107,943 cf

Pond 30P: STORMTECH Peak Elev=696.88' Storage=3,493 cf Inflow=3.32 cfs 10,642 cf
Discarded=0.04 cfs 2,016 cf Primary=1.74 cfs 8,460 cf Outflow=1.77 cfs 10,475 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.76' Storage=2,598 cf Inflow=14.14 cfs 68,888 cf
Discarded=0.05 cfs 2,956 cf Primary=14.50 cfs 64,130 cf Outflow=14.55 cfs 67,086 cf

Pond 33P: INFILTRATION LEVEL Peak Elev=300.72' Storage=3,174 cf Inflow=7.93 cfs 43,879 cf
Discarded=0.06 cfs 3,624 cf Primary=8.75 cfs 38,088 cf Outflow=8.80 cfs 41,712 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.75' Storage=3,230 cf Inflow=16.32 cfs 84,963 cf
Discarded=0.06 cfs 3,588 cf Primary=18.98 cfs 79,124 cf Outflow=19.04 cfs 82,712 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=405.80' Storage=1,858 cf Inflow=1.03 cfs 3,761 cf
Discarded=0.08 cfs 3,593 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 3,593 cf

Link A1: OFF-SITE WEST Inflow=5.21 cfs 21,911 cf
Primary=5.21 cfs 21,911 cf

Link A2: OFF-SITE WEST Inflow=31.57 cfs 133,930 cf
Primary=31.57 cfs 133,930 cf

Link A3: OFF-SITE WEST Inflow=12.93 cfs 55,545 cf
Primary=12.93 cfs 55,545 cf

Link A4: OFF-SITE WEST Inflow=26.48 cfs 120,661 cf
Primary=26.48 cfs 120,661 cf

Link A5: OFF-SITE WEST Inflow=10.81 cfs 42,827 cf
Primary=10.81 cfs 42,827 cf

Link B: OFF-SITE SOUTH Inflow=55.57 cfs 328,558 cf
Primary=55.57 cfs 328,558 cf

Link C: EXIST. HEADWALL Inflow=97.32 cfs 923,381 cf
Primary=97.32 cfs 923,381 cf

Link D: EXIST. CB Inflow=39.74 cfs 324,903 cf
Primary=39.74 cfs 324,903 cf

Link E: OFF-SITE SOUTH EAST Inflow=66.94 cfs 385,516 cf
Primary=66.94 cfs 385,516 cf

Link F: EXIST. 18" CMP Inflow=15.41 cfs 58,460 cf
Primary=15.41 cfs 58,460 cf

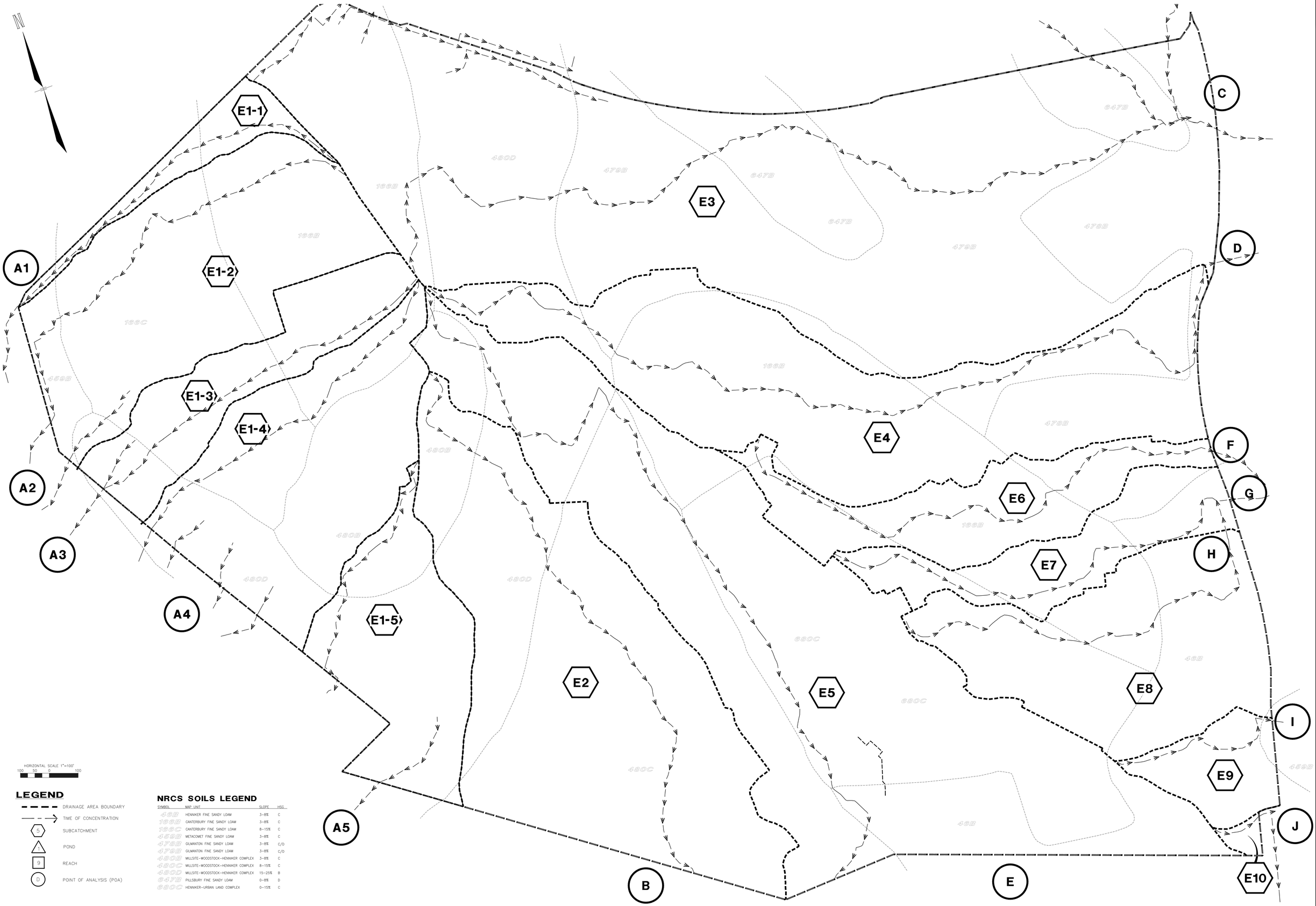
Link G: EXIST. 18" CMP Inflow=39.04 cfs 269,162 cf
Primary=39.04 cfs 269,162 cf

Link H: EXIST. 12" CMP Inflow=18.79 cfs 192,157 cf
Primary=18.79 cfs 192,157 cf

Link I: EXIST. CB Inflow=8.21 cfs 147,661 cf
Primary=8.21 cfs 147,661 cf

Link J: OFF-SITE EAST Inflow=0.04 cfs 148 cf
Primary=0.04 cfs 148 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 3,076,955 cf Average Runoff Depth = 3.75"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf



LEGEND

- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- SUBCATCHMENT
- POND
- REACH
- POINT OF ANALYSIS (POA)

NRCS SOILS LEGEND

SYMBOL	MAP UNIT	SLOPE	HSG
46B	HENNIKER FINE SANDY LOAM	3–8%	C
166B	CANTERBURY FINE SANDY LOAM	3–8%	C
166C	CANTERBURY FINE SANDY LOAM	8–15%	C
450B	METACOMET FINE SANDY LOAM	3–8%	C
478B	GILMANTON FINE SANDY LOAM	3–8%	C/D
479B	GILMANTON FINE SANDY LOAM	3–8%	C/D
480B	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	3–8%	C
480C	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	8–15%	C
480D	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	15–25%	B
647B	PILLSBURY FINE SANDY LOAM	0–8%	D
680C	HENNIKER–URBAN LAND COMPLEX	0–15%	C

REV.	DATE	DESCRIPTION	BY	CK
1	8/14/25	REFINED WATERSHED A	JR	RD

TFM
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FILE	DR	CK	CADFILE	
96126.01	--	--	96126-01 DRAINAGE	CONCEPT R5 — SHEET 1 OF 2

TAX MAP 318-538-11, 318-155-1

PRE DEVELOPMENT DRAINAGE PLAN

LACONIA VILLAGE

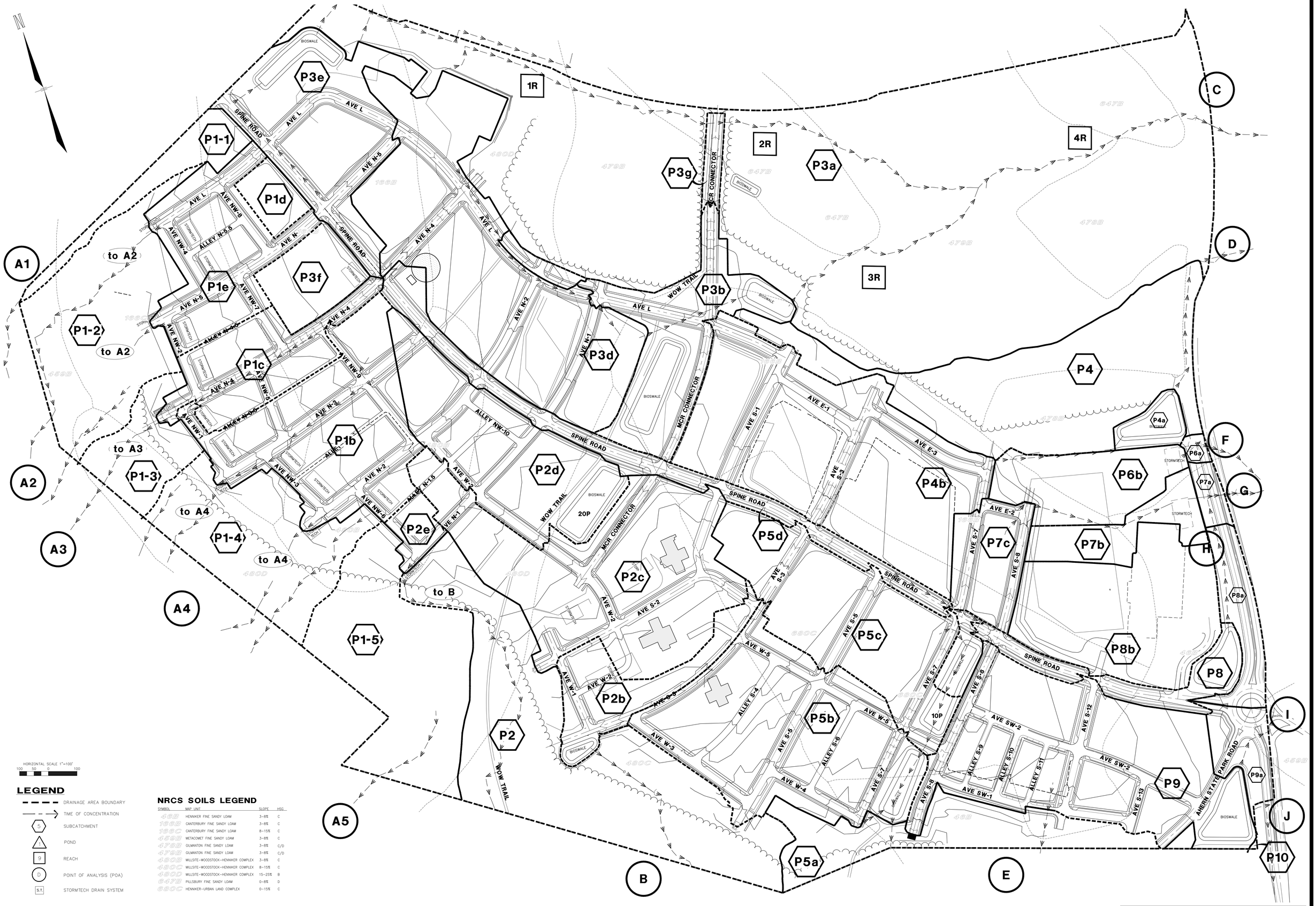
PARADE ROAD, NH RTE 106, LACONIA, NEW HAMPSHIRE

PREPARED FOR

PILLSBURY REALTY DEVELOPMENT, LLC

SCALE: 1"=100' **JUNE 25, 2025**

F:\TFM Projects\96126 Legacy at Laconia - Laconia, NH\96126-01 Pillsbury - NH State School Due Diligence\Drainage\Maps\96126-01 DRAINAGE.dwg, 8/14/2025 8:54:22 AM



HORIZONTAL SCALE 1"=100'
100 50 0 100

LEGEND

- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- SUBCATCHMENT
- POND
- REACH
- POINT OF ANALYSIS (POA)
- STORMTECH DRAIN SYSTEM

NRCS SOILS LEGEND

SYMBOL	MAP UNIT	SLOPE	HSG
46B	HENNIKER FINE SANDY LOAM	3–8%	C
165B	CANTERBURY FINE SANDY LOAM	3–8%	C
165C	CANTERBURY FINE SANDY LOAM	8–15%	C
469B	METACOMET FINE SANDY LOAM	3–8%	C
479B	GILMANTON FINE SANDY LOAM	3–8%	C/D
479C	GILMANTON FINE SANDY LOAM	3–8%	C/D
480B	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	3–8%	C
480C	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	8–15%	C
480D	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	15–25%	B
647B	PILLSBURY FINE SANDY LOAM	0–8%	D
660C	HENNIKER–URBAN LAND COMPLEX	0–15%	C

REV.	DATE	DESCRIPTION	DR	CK
1	8/14/25	REFINED WATERSHED A	JR	RD

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96126.01 | DR -- | CK -- | CONCEPT R5 | CADFILE 96126-01 DRAINAGE | SHEET 2 OF 2

TAX MAP 318-538-11, 318-155-1

POST DEVELOPMENT DRAINAGE PLAN

LACONIA VILLAGE

PARADE ROAD, NH RTE 106, LACONIA, NEW HAMPSHIRE

PREPARED FOR

PILLSBURY REALTY DEVELOPMENT, LLC

SCALE: 1"=100' **JUNE 25, 2025**

F:\TFM Projects\96126 Legacy at Laconia - Laconia, NH\96126-01 Pillsbury - NH State School Due Diligence\Drainage\Maps\96126-01 DRAINAGE.dwg, 8/14/2025 8:33:37 AM

Description of Project

Pillsbury Realty is proposing redevelopment of the existing Laconia State School on tax map Lots 318-538-1.1 and 318-155-1 near the intersection of Parade Road (NH Route 106) and Meridith Center Road in Laconia, NH.

The proposed development is a mixed-use development containing commercial, retail, residential (including multi-family, duplex homes, triplex, quadplex, townhouses, and courtyard cottages), hospitality, and civic uses. The project includes roadways and parking areas, sidewalks, a snowmobile trail, and recreational trails. The proposed development is planned to be built in three phases over several years. A Masterplan of the proposed development was approved by the Laconia Planning Board on 01 July 2025.

The intent of this report is to present a conceptual stormwater management plan for the development to demonstrate that runoff generated by the development can be safely and effectively managed by a combination of collection, treatment, recharge, and flow control best practices.

It is also intended to provide a framework to guide the design of detailed stormwater management plans associated with individual Alteration of Terrain and Site Plan permit applications as the development proceeds.

Storm Water Methodology

Pre-Development Conditions

The existing 217± acre development site was analyzed in the pre-development conditions to identify how stormwater runoff interacts with abutting properties and roadways for various design storms. HydroCad Version 10.20 was used to evaluate the 2, 10, 25, and 50-year storm events for this analysis. HydroCAD is a computer program based on SCS TR-20 methodology commonly used for modeling stormwater runoff.

SCS Soil Survey data for Belknap County was used as the basis for this analysis. A more detailed Site Specific Soils analysis will be used in future for permit applications, including test pits to confirm soil types on this property and determine in-situ infiltration rates in accordance with New Hampshire Alteration of Terrain (AoT) requirements.

Belknap County Soil Survey data shows this site contains the following soils. All these soil groups are rated as Hydraulic Soil Group C or C/D.

- 46B - Henniker fine sandy loam,
- 166B/C Canterbury fine sandy loam,
- 459B - Metacomet fine sandy loam,
- 478B - Gilmanton fine sandy loam,
- 480B/C/D - Millsite-Woodstock-Henniker complex,
- 647B Pillsbury fine sandy loam,
- 680C Henniker-Urban land complex.

The site's overall catchment area was divided into smaller subcatchment areas that split along slight ridgelines to compare pre and post development flows at ten distinct points of analysis (POA). Existing onsite drainage infrastructure is generally in poor condition and will be removed and replaced with new infrastructure as development proceeds.

Three POAs are located adjacent to Ahern State Park and consist of sheet flow and concentrated flow in watercourses crossing the site's property lines.

Seven additional points of analysis are located along the Parade Road frontage. Each of these POAs represent a particular stormwater structure such as a catch basin or culvert that crosses Parade Road. POA "H" is tributary to POA "G", while the others POA's stand alone.

Rainfall Intensity

The NHDES AoT program requires applicants to use rainfall data from the Northeast Regional Climate Center (NRCC) as indicated in the table below ..

24-Hour Rainfall Intensity

	Northeast Regional Climate Center
2-year	2.74 inches
10-year	4.00 inches
25-year	4.98 inches
50-year	5.88 inches

Post-Development Conditions
The project will rely on a combination of NHDES-accepted stormwater Best Management Practices (BMP's) to treat runoff, infiltrate stormwater, and control peak runoff rates. We had initially included Porous Pavement among these practices; however, based on Laconia DPW feedback, we will not include porous pavement due to concern over difficulty of maintenance.

Post-development runoff curve numbers in Section 4 of the report were estimated based on anticipated impervious cover of each subcatchment "block" and the underlying NRCS soils type. As detailed site plans are developed for each phase, Site Specific Soil surveys will be performed to refine soil types for pre vs post development computations.

In this report we are proposing a variety of BMPs including biofiltration basins, infiltration basins, and underground storage/infiltration chambers (e.g. StormTech). Other BMPs (such as wet detention basins, tree filters, gravel wetlands, etc.) will also be considered during site plan preparation where appropriate. The type, size, and configuration of all BMP's will be determined at the Site Plan stage, based on soil surveys, test pits, and infiltration tests at each proposed BMP location.

Stormwater conveyance practices will include normal culverts and catch basins, deep-sump hooded catch basins, and drain manholes, typically connected by HDPE piping, and leading to conventional rip-rap outlet aprons at concentrated discharge points, and over-sized level spreaders at distributed-discharge areas. These level spreaders are shown on the plans near POAs A2 thru A4 that flow towards the East Shore Road neighborhood facing Lake Winnisquam. These POAs are particularly sensitive to stormwater runoff and we propose significant flow reductions here in the post- condition, particularly in the 2-year storm event.

StormTech type RC-750 chambers systems identified in HydroCAD as nodes 11P, 25P, 26P, 27P, and 29P are expected to be broken into 2 or 3 separate StormTech systems in final design. Likewise, Bio-swales represented by node 9P (located on Lots 13, 18, 20 and 26) are expected to be broken into four or more separate basins in final design.

Please refer to the table below for Pre-Development vs. Post-Development peak flow rates.

Conclusion

Peak Flow Rates

The peak rates of runoff will be mitigated at locations where stormwater leaves the project area in post-development conditions to not create an adverse drainage impact adjacent properties.

Peak Flow Rate (cfs)								
POI	2-Yr		10-Yr		25-Yr		50-Yr	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
A1	5.3	4.0	6.8	5.2	1.8	1.5	3.7	2.8
A2	27.5	23.4	36.5	31.6	7.6	3.8	18.1	11.1
A3	10.6	9.3	14.5	12.9	2.4	0.8	6.7	5.7
A4	19.9	17.9	27.7	26.5	3.9	1.6	12.1	10.3
A5	7.3	6.8	11.3	10.8	0.6	0.4	3.5	3.1
B	40.3	37.6	55.7	55.6	8.5	6.7	25.0	17.9
C	76.9	74.4	101.0	97.3	23.3	21.4	52.0	49.3
D	36.1	31.0	47.1	39.7	11.4	8.6	24.7	20.3
E	58.3	36.0	75.2	66.9	19.6	6.7	40.5	22.7
F	14.0	12.3	18.0	15.4	4.7	3.9	9.7	7.7
G	39.0	27.9	50.1	39.0	13.4	6.0	27.3	16.7
H	27.1	11.9	34.7	18.8	9.4	3.7	19.0	7.3
I	7.0	5.2	9.1	8.2	2.2	2.1	4.8	3.8
J	0.8	0.0	1.0	0.0	0.2	0.0	0.5	0.0

This report presents a conceptual stormwater management plan for the development to demonstrate that stormwater runoff from the development can be safely and effectively managed by a combination of collection, treatment, recharge, and flow control best practices.

Final design plans and reports at the site plan stage will include soil surveys, test pit logs and measured infiltration rates, detailed calculations of pre- and post-development flow rates and volumes, and configuration of all proposed BMPs and pipe networks.

Map Scale: 1:12,800 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

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 30, Sep 3, 2024

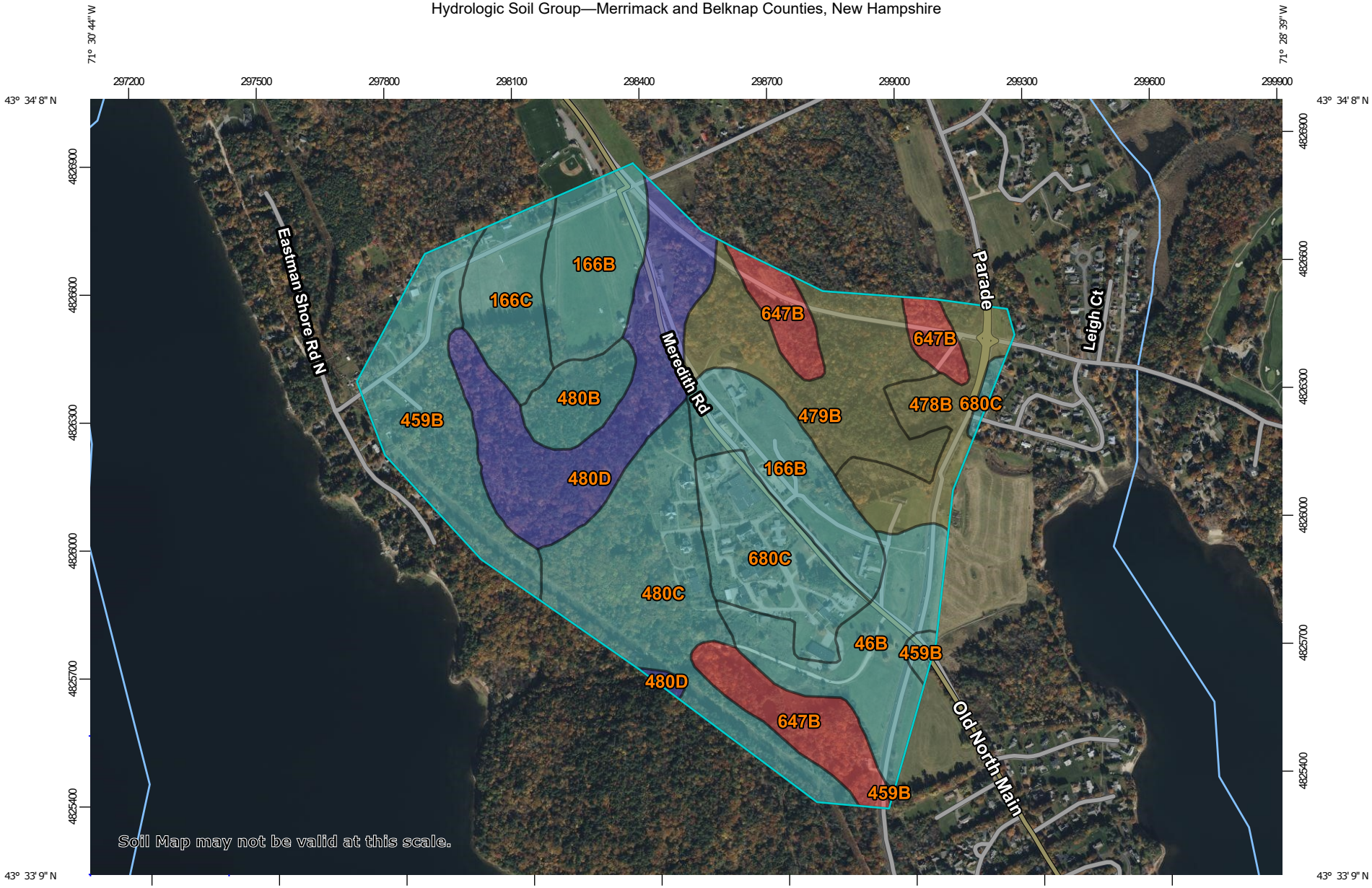
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 6, 2022—Oct 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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
46B	Henniker fine sandy loam, 3 to 8 percent slopes	29.3	8.6%
166B	Canterbury fine sandy loam, 3 to 8 percent slopes	45.4	13.4%
166C	Canterbury fine sandy loam, 8 to 15 percent slopes	17.7	5.2%
459B	Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	35.7	10.5%
478B	Gilmanton fine sandy loam, 3 to 8 percent slopes	20.5	6.1%
479B	Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony	36.8	10.9%
480B	Millsite-Woodstock-Henniker complex, 3 to 8 percent slopes, very stony	10.3	3.0%
480C	Millsite-Woodstock-Henniker complex, 8 to 15 percent slopes, very stony	47.2	13.9%
480D	Millsite-Woodstock-Henniker complex, 15 to 25 percent slopes, very stony	43.0	12.7%
647B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	27.0	8.0%
680C	Henniker-Urban land complex, 0 to 15 percent slopes	26.5	7.8%
Totals for Area of Interest		**339.3**	**100.0%**



Map Scale: 1:12,800 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

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 Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

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 30, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 6, 2022—Oct 22, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
46B	Henniker fine sandy loam, 3 to 8 percent slopes	C	29.3	8.6%
166B	Canterbury fine sandy loam, 3 to 8 percent slopes	C	45.4	13.4%
166C	Canterbury fine sandy loam, 8 to 15 percent slopes	C	17.7	5.2%
459B	Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	C	35.7	10.5%
478B	Gilmanton fine sandy loam, 3 to 8 percent slopes	C/D	20.5	6.1%
479B	Gilmanton fine sandy loam, 3 to 8 percent slopes, very stony	C/D	36.8	10.9%
480B	Millsite-Woodstock-Henniker complex, 3 to 8 percent slopes, very stony	C	10.3	3.0%
480C	Millsite-Woodstock-Henniker complex, 8 to 15 percent slopes, very stony	C	47.2	13.9%
480D	Millsite-Woodstock-Henniker complex, 15 to 25 percent slopes, very stony	B	43.0	12.7%
647B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	D	27.0	8.0%
680C	Henniker-Urban land complex, 0 to 15 percent slopes	C	26.5	7.8%
Totals for Area of Interest			**339.3**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

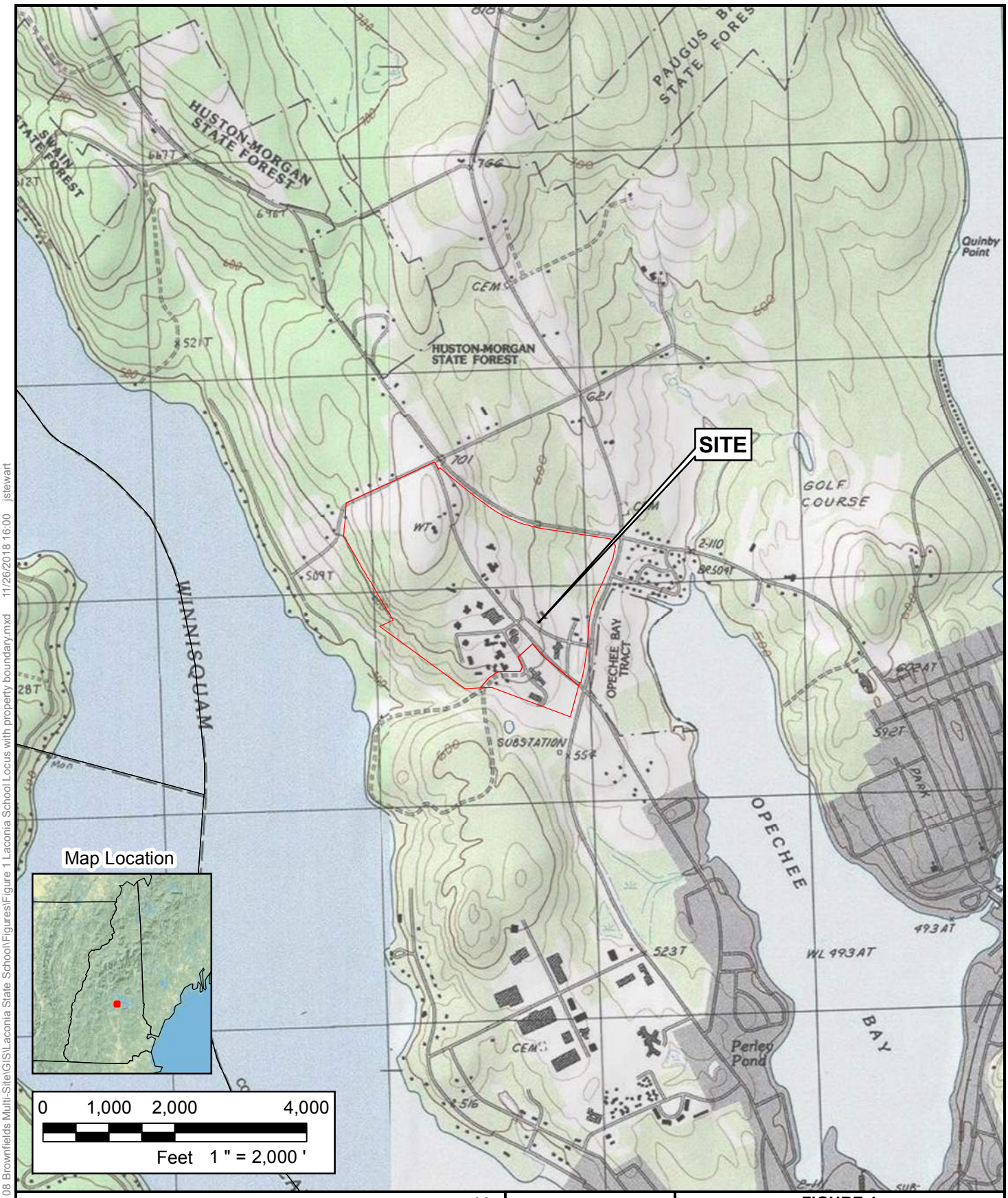
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



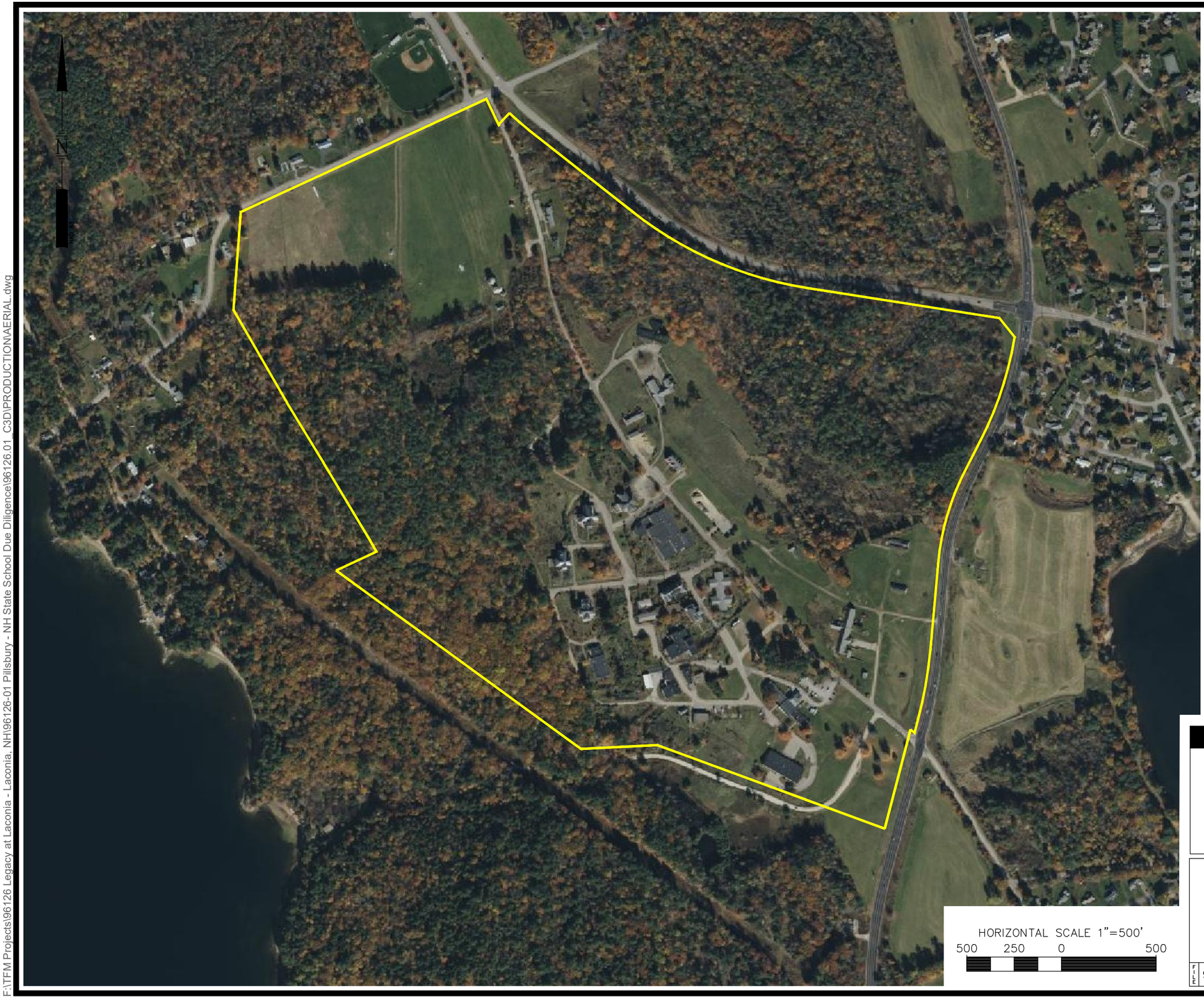
USGS Topographic Map
Laconia, NH
Revised 1987

FIGURE 1

LOCUS MAP
LACONIA STATE SCHOOL TBA
LACONIA, NEW HAMPSHIRE

PREPARED BY: SRP	CHECKED BY: JMR
PROJECT NO. 96126.01	DATE: MARCH 28, 2025

R:\80000 Task Orders\80108 Brownfields Multi-Site\GIS\Laconia State School\Figures\Figure 1 Laconia School Locus with property boundary.mxd 11/26/2018 16:00 jstewart



AERIAL

TAX MAP 318-538-1.1, 318-155-1

AERIAL

LACONIA VILLAGE

PARADE ROAD, NH RTE 106
LACONIA, NEW HAMPSHIRE

PREPARED FOR

PILLSBURY REALTY DEVELOPMENT, LLC

MARCH 28, 2025

TFM
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

file	96126.01	DR SRP / CK JMR	CADFILE AERIAL.DWG	1

Mar 31, 2025 - 11:30am
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Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	43.559 degrees North
Longitude	71.493 degrees West
Elevation	180 feet
Date/Time	Wed Jan 22 2025 09:56:59 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.39	0.49	0.64	0.80	1.01	**1yr**	0.69	0.95	1.16	1.46	1.83	2.30	2.58	**1yr**	2.04	2.48	2.89	3.52	4.10	**1yr**
2yr	0.31	0.48	0.60	0.79	0.99	1.25	**2yr**	0.86	1.14	1.44	1.78	2.21	2.74	3.08	**2yr**	2.42	2.96	3.43	4.14	4.72	**2yr**
5yr	0.37	0.58	0.72	0.97	1.24	1.56	**5yr**	1.07	1.44	1.81	2.24	2.76	3.40	3.87	**5yr**	3.01	3.72	4.29	5.08	5.77	**5yr**
10yr	0.42	0.66	0.83	1.13	1.47	1.87	**10yr**	1.27	1.72	2.16	2.68	3.29	4.00	4.59	**10yr**	3.54	4.42	5.09	5.93	6.71	**10yr**
25yr	0.49	0.79	1.00	1.38	1.83	2.35	**25yr**	1.58	2.18	2.72	3.37	4.12	4.98	5.78	**25yr**	4.41	5.55	6.37	7.28	8.21	**25yr**
50yr	0.56	0.90	1.15	1.61	2.17	2.80	**50yr**	1.87	2.61	3.25	4.02	4.89	5.88	6.87	**50yr**	5.20	6.61	7.56	8.51	9.56	**50yr**
100yr	0.64	1.03	1.33	1.89	2.57	3.34	**100yr**	2.22	3.13	3.89	4.79	5.81	6.94	8.17	**100yr**	6.14	7.86	8.98	9.96	11.14	**100yr**
200yr	0.73	1.20	1.55	2.21	3.05	3.97	**200yr**	2.63	3.76	4.63	5.70	6.89	8.20	9.73	**200yr**	7.25	9.36	10.66	11.65	12.98	**200yr**
500yr	0.88	1.44	1.88	2.73	3.83	5.01	**500yr**	3.30	4.79	5.84	7.19	8.64	10.23	12.26	**500yr**	9.05	11.79	13.39	14.36	15.91	**500yr**

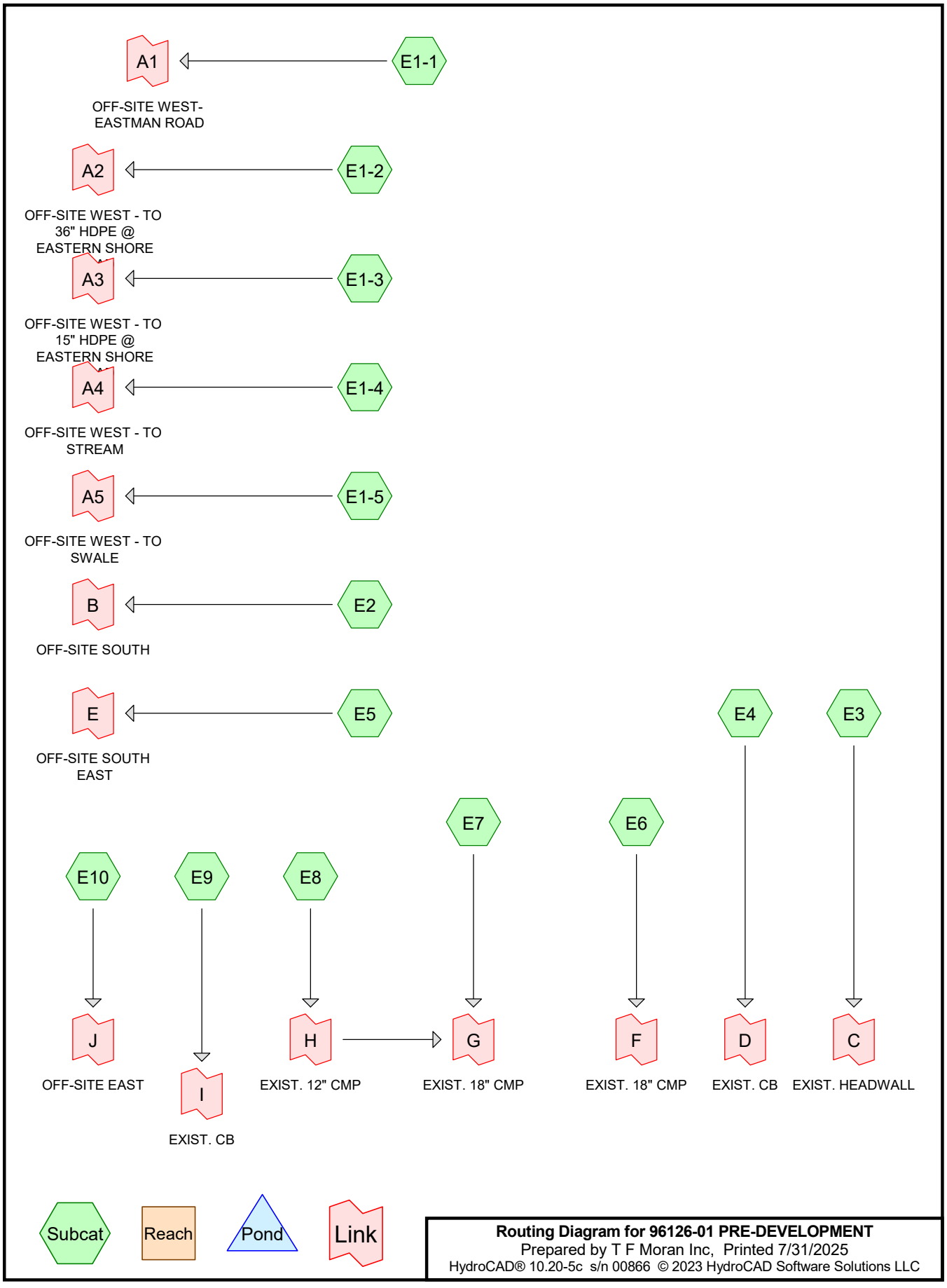
Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.43	0.58	0.72	0.90	**1yr**	0.62	0.88	0.98	1.28	1.55	2.08	2.27	**1yr**	1.84	2.18	2.44	2.98	3.40	**1yr**
2yr	0.30	0.47	0.57	0.78	0.96	1.14	**2yr**	0.83	1.11	1.29	1.71	2.21	2.63	2.95	**2yr**	2.33	2.84	3.29	4.01	4.59	**2yr**
5yr	0.34	0.53	0.66	0.90	1.15	1.36	**5yr**	0.99	1.33	1.55	2.01	2.59	3.05	3.50	**5yr**	2.70	3.36	3.87	4.70	5.40	**5yr**
10yr	0.38	0.58	0.72	1.00	1.29	1.55	**10yr**	1.12	1.52	1.76	2.25	2.90	3.40	3.97	**10yr**	3.01	3.82	4.37	5.30	6.10	**10yr**
25yr	0.43	0.65	0.81	1.15	1.51	1.84	**25yr**	1.31	1.80	2.09	2.63	3.36	3.91	4.73	**25yr**	3.46	4.55	5.11	6.21	7.14	**25yr**
50yr	0.46	0.71	0.88	1.27	1.70	2.09	**50yr**	1.47	2.04	2.39	2.95	3.74	4.34	5.40	**50yr**	3.84	5.19	5.75	7.01	8.05	**50yr**
100yr	0.51	0.77	0.97	1.40	1.92	2.35	**100yr**	1.66	2.30	2.74	3.49	4.17	4.81	6.18	**100yr**	4.26	5.94	6.45	7.95	9.05	**100yr**
200yr	0.56	0.85	1.07	1.55	2.16	2.66	**200yr**	1.87	2.60	3.13	3.97	4.61	5.31	7.09	**200yr**	4.70	6.82	7.23	9.02	10.19	**200yr**
500yr	0.64	0.95	1.22	1.78	2.53	3.10	**500yr**	2.18	3.03	3.75	4.71	5.26	6.05	8.54	**500yr**	5.36	8.21	8.40	10.69	11.92	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.04	**1yr**	0.75	1.02	1.19	1.56	1.97	2.47	2.80	**1yr**	2.19	2.69	3.12	3.81	4.47	**1yr**
2yr	0.33	0.50	0.62	0.84	1.04	1.22	**2yr**	0.90	1.19	1.38	1.83	2.41	2.89	3.23	**2yr**	2.56	3.11	3.60	4.31	5.04	**2yr**
5yr	0.40	0.61	0.76	1.05	1.33	1.60	**5yr**	1.15	1.57	1.81	2.34	2.98	3.84	4.28	**5yr**	3.40	4.12	4.78	5.53	6.15	**5yr**
10yr	0.48	0.74	0.91	1.27	1.64	1.98	**10yr**	1.42	1.94	2.24	2.79	3.52	4.77	5.31	**10yr**	4.22	5.11	5.92	6.68	7.37	**10yr**
25yr	0.61	0.93	1.16	1.65	2.17	2.65	**25yr**	1.87	2.59	2.95	3.60	4.50	6.37	7.04	**25yr**	5.63	6.77	7.88	8.59	9.38	**25yr**
50yr	0.73	1.11	1.38	1.99	2.68	3.31	**50yr**	2.31	3.23	3.65	4.36	5.44	7.95	8.72	**50yr**	7.03	8.39	9.82	10.39	11.25	**50yr**
100yr	0.89	1.34	1.68	2.42	3.32	4.14	**100yr**	2.87	4.05	4.50	5.61	6.56	9.93	10.80	**100yr**	8.78	10.39	12.24	12.56	13.50	**100yr**
200yr	1.07	1.61	2.04	2.95	4.11	5.20	**200yr**	3.55	5.08	5.57	6.84	8.91	12.42	13.37	**200yr**	10.99	12.86	15.31	15.20	16.23	**200yr**
500yr	1.37	2.04	2.63	3.82	5.43	7.05	**500yr**	4.68	6.89	7.36	8.89	11.70	16.73	17.73	**500yr**	14.80	17.05	20.59	19.56	20.74	**500yr**

Powered by ACIS Northeast Regional Climate Center



Routing Diagram for 96126-01 PRE-DEVELOPMENT
Prepared by T F Moran Inc, Printed 7/31/2025

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
145,318	61	>75% Grass cover, Good, HSG B (E2, E3, E4, E5)
3,440,426	74	>75% Grass cover, Good, HSG C (E1-1, E1-2, E1-3, E1-4, E1-5, E10, E2, E3, E4, E5, E6, E7, E8, E9)
309,777	80	>75% Grass cover, Good, HSG D (E3, E4, E6, E7)
9,218	96	Gravel surface, HSG B (E3)
55,634	96	Gravel surface, HSG C (E1-1, E2, E3, E5, E6, E7, E8, E9)
9,520	96	Gravel surface, HSG D (E3, E4, E6)
39,417	98	Paved parking, HSG B (E3, E4, E5)
536,911	98	Paved parking, HSG C (E1-1, E2, E3, E4, E5, E6, E7, E8, E9)
61,303	98	Paved parking, HSG D (E3, E4, E6, E7)
7,417	98	Roofs, HSG B (E2, E3, E5)
240,912	98	Roofs, HSG C (E1-3, E1-4, E2, E3, E4, E5, E6, E7, E8)
14,212	98	Roofs, HSG D (E3, E4, E6, E7)
1,282,952	55	Woods, Good, HSG B (E1-2, E1-3, E1-4, E1-5, E2, E3, E4, E5)
1,730,085	70	Woods, Good, HSG C (E1-2, E1-3, E1-4, E1-5, E2, E3, E4, E5, E6, E7, E8)
1,963,610	77	Woods, Good, HSG D (E3, E4, E6)
9,846,712	**74**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
1,484,322	HSG B	E1-2, E1-3, E1-4, E1-5, E2, E3, E4, E5
6,003,968	HSG C	E1-1, E1-2, E1-3, E1-4, E1-5, E10, E2, E3, E4, E5, E6, E7, E8, E9
2,358,422	HSG D	E3, E4, E6, E7
0	Other	
9,846,712		**TOTAL AREA**

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=1.00"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=1.83 cfs 8,798 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=0.70"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=7.62 cfs 41,247 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=0.54"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=2.38 cfs 13,324 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=0.46"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=3.91 cfs 23,400 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=0.20"
Flow Length=926' Tc=16.7 min CN=58 Runoff=0.57 cfs 6,148 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.23 cfs 886 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=0.50"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=8.45 cfs 47,433 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=0.80"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=23.25 cfs 169,847 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=0.84"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=11.35 cfs 73,931 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=0.95"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=19.60 cfs 130,263 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=0.95"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=4.70 cfs 26,977 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=0.95"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=4.01 cfs 20,972 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=1.00"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=9.40 cfs 49,241 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=0.84"
Flow Length=602' Tc=13.4 min CN=76 Runoff=2.19 cfs 9,280 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=1.83 cfs 8,798 cf
Primary=1.83 cfs 8,798 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=7.62 cfs 41,247 cf
Primary=7.62 cfs 41,247 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=2.38 cfs 13,324 cf
Primary=2.38 cfs 13,324 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=3.91 cfs 23,400 cf
Primary=3.91 cfs 23,400 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=0.57 cfs 6,148 cf
Primary=0.57 cfs 6,148 cf

Link B: OFF-SITE SOUTH Inflow=8.45 cfs 47,433 cf
Primary=8.45 cfs 47,433 cf

Link C: EXIST. HEADWALL Inflow=23.25 cfs 169,847 cf
Primary=23.25 cfs 169,847 cf

Link D: EXIST. CB Inflow=11.35 cfs 73,931 cf
Primary=11.35 cfs 73,931 cf

Link E: OFF-SITE SOUTH EAST Inflow=19.60 cfs 130,263 cf
Primary=19.60 cfs 130,263 cf

Link F: EXIST. 18" CMP Inflow=4.70 cfs 26,977 cf
Primary=4.70 cfs 26,977 cf

Link G: EXIST. 18" CMP Inflow=13.40 cfs 70,214 cf
Primary=13.40 cfs 70,214 cf

Link H: EXIST. 12" CMP Inflow=9.40 cfs 49,241 cf
Primary=9.40 cfs 49,241 cf

Link I: EXIST. CB Inflow=2.19 cfs 9,280 cf
Primary=2.19 cfs 9,280 cf

Link J: OFF-SITE EAST Inflow=0.23 cfs 886 cf
Primary=0.23 cfs 886 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 621,748 cf Average Runoff Depth = 0.76"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

Summary for Subcatchment E1-1:

Runoff = 1.83 cfs @ 12.30 hrs, Volume= 8,798 cf, Depth= 1.00"
Routed to Link A1 : OFF-SITE WEST- EASTMAN ROAD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
0	70	Woods, Good, HSG C
83,629	74	>75% Grass cover, Good, HSG C
11,955	98	Paved parking, HSG C
0	98	Roofs, HSG C
9,776	96	Gravel surface, HSG C
105,360	79	Weighted Average
93,405		88.65% Pervious Area
11,955		11.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0275	0.20		**Sheet Flow,** Range n= 0.130 P2= 2.74"
5.2	505	0.0525	1.60		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.6	755	0.0740	1.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
20.1	1,360	Total			

Summary for Subcatchment E1-2:

Runoff = 7.62 cfs @ 12.35 hrs, Volume= 41,247 cf, Depth= 0.70"
Routed to Link A2 : OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
16,162	55	Woods, Good, HSG B
42,952	70	Woods, Good, HSG C
645,888	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
705,002	73	Weighted Average
705,002		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0500	0.25		**Sheet Flow,** Range n= 0.130 P2= 2.74"
5.2	540	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.7	765	0.0750	1.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.7	292	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.1	1,697	Total			

Summary for Subcatchment E1-3:

Runoff = 2.38 cfs @ 12.31 hrs, Volume= 13,324 cf, Depth= 0.54"
Routed to Link A3 : OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
57,303	55	Woods, Good, HSG B
137,214	70	Woods, Good, HSG C
103,472	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
681	98	Roofs, HSG C
0	96	Gravel surface, HSG C
298,670	69	Weighted Average
297,989		99.77% Pervious Area
681		0.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Range n= 0.130 P2= 2.74"
3.5	355	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.6	595	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.0	266	0.1900	2.18		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.2	1,316	Total			

Summary for Subcatchment E1-4:

Runoff = 3.91 cfs @ 12.32 hrs, Volume= 23,400 cf, Depth= 0.46"
Routed to Link A4 : OFF-SITE WEST - TO STREAM

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
160,186	55	Woods, Good, HSG B
313,553	70	Woods, Good, HSG C
133,543	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
1,806	98	Roofs, HSG C
0	96	Gravel surface, HSG C
609,088	67	Weighted Average
607,282		99.70% Pervious Area
1,806		0.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0600	0.27		**Sheet Flow,** Range n= 0.130 P2= 2.74"
4.5	420	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
4.9	525	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	280	0.1800	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
17.7	1,325	Total			

Summary for Subcatchment E1-5:

Runoff = 0.57 cfs @ 12.52 hrs, Volume= 6,148 cf, Depth= 0.20"
Routed to Link A5 : OFF-SITE WEST - TO SWALE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
302,645	55	Woods, Good, HSG B
72,923	70	Woods, Good, HSG C
1,699	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
377,267	58	Weighted Average
377,267		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0400	0.23		**Sheet Flow,** Range n= 0.130 P2= 2.74"
3.8	280	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.8	480	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	66	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
16.7	926	Total			

Summary for Subcatchment E10:

Runoff = 0.23 cfs @ 12.16 hrs, Volume= 886 cf, Depth= 0.75"
Routed to Link J : OFF-SITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
14,216	74	>75% Grass cover, Good, HSG C
14,216		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0300	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.8	75	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.8	175	Total			

Summary for Subcatchment E2:

Runoff = 8.45 cfs @ 12.29 hrs, Volume= 47,433 cf, Depth= 0.50"
Routed to Link B : OFF-SITE SOUTH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
263,036	55	Woods, Good, HSG B
2,373	61	>75% Grass cover, Good, HSG B
797	98	Roofs, HSG B
667,071	70	Woods, Good, HSG C
172,574	74	>75% Grass cover, Good, HSG C
22,979	98	Paved parking, HSG C
14,837	98	Roofs, HSG C
559	96	Gravel surface, HSG C
1,144,226	68	Weighted Average
1,105,613		96.63% Pervious Area
38,613		3.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	75	0.0600	0.26		**Sheet Flow,** Range n= 0.130 P2= 2.74"
1.8	129	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	303	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	750	0.0500	5.90	29.51	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
2.3	239	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	68	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	628	0.1100	8.76	43.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
16.4	2,192	Total			

Summary for Subcatchment E3:

Runoff = 23.25 cfs @ 12.68 hrs, Volume= 169,847 cf, Depth= 0.80"
Routed to Link C : EXIST. HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
270,481	55	Woods, Good, HSG B
111,692	61	>75% Grass cover, Good, HSG B
24,369	98	Paved parking, HSG B
4,524	98	Roofs, HSG B
9,218	96	Gravel surface, HSG B
39,364	70	Woods, Good, HSG C
261,502	74	>75% Grass cover, Good, HSG C
16,080	98	Paved parking, HSG C
1,256	98	Roofs, HSG C
3,258	96	Gravel surface, HSG C
1,608,454	77	Woods, Good, HSG D
148,959	80	>75% Grass cover, Good, HSG D
50,644	98	Paved parking, HSG D
5,592	98	Roofs, HSG D
8,089	96	Gravel surface, HSG D
2,563,482	75	Weighted Average
2,461,017		96.00% Pervious Area
102,465		4.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0500	0.25		**Sheet Flow,** Range n= 0.130 P2= 2.74"
4.4	259	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	195	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	82	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	111	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	106	0.2500	2.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.3	788	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
10.3	617	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	338	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	151	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	137	0.0400	8.46	338.53	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
0.7	411	0.0500	9.46	378.49	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
2.4	124	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
45.4	3,419	Total			

Summary for Subcatchment E4:

Runoff = 11.35 cfs @ 12.57 hrs, Volume= 73,931 cf, Depth= 0.84"
Routed to Link D : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
63,680	55	Woods, Good, HSG B
16,675	61	>75% Grass cover, Good, HSG B
8,321	98	Paved parking, HSG B
33,265	70	Woods, Good, HSG C
437,723	74	>75% Grass cover, Good, HSG C
58,248	98	Paved parking, HSG C
19,588	98	Roofs, HSG C
330,153	77	Woods, Good, HSG D
67,251	80	>75% Grass cover, Good, HSG D
10,152	98	Paved parking, HSG D
4,796	98	Roofs, HSG D
1,139	96	Gravel surface, HSG D
1,050,991	76	Weighted Average
949,886		90.38% Pervious Area
101,105		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	100	0.0900	0.32		**Sheet Flow,** Range n= 0.130 P2= 2.74"
0.6	68	0.1600	2.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	207	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	89	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	41	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	39	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.2	266	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	209	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	50	0.1600	2.80		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.3	448	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
4.1	458	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	77	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	665	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	176	0.0500	9.44	302.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 8.0 '/' Top.W=32.00' n= 0.035 Earth, dense weeds
0.5	119	0.0200	3.78	56.65	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 15.0 '/' Top.W=30.00' n= 0.035 Earth, dense weeds
1.0	348	0.0500	5.77	17.32	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.035 Earth, dense weeds
37.5	3,378	Total			

Summary for Subcatchment E5:

[47] Hint: Peak is 359% of capacity of segment #8

Runoff = 19.60 cfs @ 12.60 hrs, Volume= 130,263 cf, Depth= 0.95"
Routed to Link E : OFF-SITE SOUTH EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
149,459	55	Woods, Good, HSG B
14,578	61	>75% Grass cover, Good, HSG B
6,727	98	Paved parking, HSG B
2,096	98	Roofs, HSG B
337,777	70	Woods, Good, HSG C
700,009	74	>75% Grass cover, Good, HSG C
273,966	98	Paved parking, HSG C
152,340	98	Roofs, HSG C
12,662	96	Gravel surface, HSG C
1,649,614	78	Weighted Average
1,214,485		73.62% Pervious Area
435,129		26.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0300	0.21		**Sheet Flow,** Range n= 0.130 P2= 2.74"
0.7	71	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	112	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	80	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
5.4	322	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	70	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.0	312	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	37	0.0200	6.95	5.46	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
1.0	496	0.0400	8.45	270.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 8.0 '/' Top.W=32.00' n= 0.035 Earth, dense weeds
1.8	74	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	287	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	148	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	114	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	218	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.8	304	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.7	41	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	17	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	54	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	161	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	133	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
40.7	3,151	Total			

Summary for Subcatchment E6:

Runoff = 4.70 cfs @ 12.45 hrs, Volume= 26,977 cf, Depth= 0.95"
Routed to Link F : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
44,696	70	Woods, Good, HSG C
162,323	74	>75% Grass cover, Good, HSG C
24,537	98	Paved parking, HSG C
21,982	98	Roofs, HSG C
4,018	96	Gravel surface, HSG C
25,003	77	Woods, Good, HSG D
56,513	80	>75% Grass cover, Good, HSG D
190	98	Paved parking, HSG D
2,079	98	Roofs, HSG D
292	96	Gravel surface, HSG D
341,633	78	Weighted Average
292,845		85.72% Pervious Area
48,788		14.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	72	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.5	110	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.3	445	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	259	0.0600	3.94		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.6	294	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.4	121	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.5	301	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.9	285	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
30.0	1,887	Total			

Summary for Subcatchment E7:

Runoff = 4.01 cfs @ 12.36 hrs, Volume= 20,972 cf, Depth= 0.95"
Routed to Link G : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
27,844	70	Woods, Good, HSG C
159,960	74	>75% Grass cover, Good, HSG C
20,747	98	Paved parking, HSG C
11,636	98	Roofs, HSG C
6,285	96	Gravel surface, HSG C
37,054	80	>75% Grass cover, Good, HSG D
317	98	Paved parking, HSG D
1,745	98	Roofs, HSG D
265,588	78	Weighted Average
231,143		87.03% Pervious Area
34,445		12.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.3	86	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.3	361	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	39	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.7	192	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.9	167	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	102	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	276	0.0600	3.94		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.9	247	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
24.3	1,570	Total			

Summary for Subcatchment E8:

Runoff = 9.40 cfs @ 12.37 hrs, Volume= 49,241 cf, Depth= 1.00"
Routed to Link H : EXIST. 12" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
13,426	70	Woods, Good, HSG C
445,022	74	>75% Grass cover, Good, HSG C
100,748	98	Paved parking, HSG C
16,786	98	Roofs, HSG C
13,671	96	Gravel surface, HSG C
589,653	79	Weighted Average
472,119		80.07% Pervious Area
117,534		19.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0500	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
3.0	254	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	59	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.2	181	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	68	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	102	0.1000	2.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.8	76	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.0	187	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	16	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.4	225	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.9	248	0.0100	0.70		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
24.9	1,516	Total			

Summary for Subcatchment E9:

Runoff = 2.19 cfs @ 12.20 hrs, Volume= 9,280 cf, Depth= 0.84"
Routed to Link I : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
118,866	74	>75% Grass cover, Good, HSG C
7,651	98	Paved parking, HSG C
5,405	96	Gravel surface, HSG C
131,922	76	Weighted Average
124,271		94.20% Pervious Area
7,651		5.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0400	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
1.3	153	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	30	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.8	319	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.4	602	Total			

Summary for Link A1: OFF-SITE WEST- EASTMAN ROAD

Inflow Area = 105,360 sf, 11.35% Impervious, Inflow Depth = 1.00" for 2-YEAR event
Inflow = 1.83 cfs @ 12.30 hrs, Volume= 8,798 cf
Primary = 1.83 cfs @ 12.30 hrs, Volume= 8,798 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD

Inflow Area = 705,002 sf, 0.00% Impervious, Inflow Depth = 0.70" for 2-YEAR event
Inflow = 7.62 cfs @ 12.35 hrs, Volume= 41,247 cf
Primary = 7.62 cfs @ 12.35 hrs, Volume= 41,247 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD

Inflow Area = 298,670 sf, 0.23% Impervious, Inflow Depth = 0.54" for 2-YEAR event
Inflow = 2.38 cfs @ 12.31 hrs, Volume= 13,324 cf
Primary = 2.38 cfs @ 12.31 hrs, Volume= 13,324 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A4: OFF-SITE WEST - TO STREAM

Inflow Area = 609,088 sf, 0.30% Impervious, Inflow Depth = 0.46" for 2-YEAR event
Inflow = 3.91 cfs @ 12.32 hrs, Volume= 23,400 cf
Primary = 3.91 cfs @ 12.32 hrs, Volume= 23,400 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A5: OFF-SITE WEST - TO SWALE

Inflow Area = 377,267 sf, 0.00% Impervious, Inflow Depth = 0.20" for 2-YEAR event
Inflow = 0.57 cfs @ 12.52 hrs, Volume= 6,148 cf
Primary = 0.57 cfs @ 12.52 hrs, Volume= 6,148 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link B: OFF-SITE SOUTH

Inflow Area = 1,144,226 sf, 3.37% Impervious, Inflow Depth = 0.50" for 2-YEAR event
Inflow = 8.45 cfs @ 12.29 hrs, Volume= 47,433 cf
Primary = 8.45 cfs @ 12.29 hrs, Volume= 47,433 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link C: EXIST. HEADWALL

Inflow Area = 2,563,482 sf, 4.00% Impervious, Inflow Depth = 0.80" for 2-YEAR event
Inflow = 23.25 cfs @ 12.68 hrs, Volume= 169,847 cf
Primary = 23.25 cfs @ 12.68 hrs, Volume= 169,847 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link D: EXIST. CB

Inflow Area = 1,050,991 sf, 9.62% Impervious, Inflow Depth = 0.84" for 2-YEAR event
Inflow = 11.35 cfs @ 12.57 hrs, Volume= 73,931 cf
Primary = 11.35 cfs @ 12.57 hrs, Volume= 73,931 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link E: OFF-SITE SOUTH EAST

Inflow Area = 1,649,614 sf, 26.38% Impervious, Inflow Depth = 0.95" for 2-YEAR event
Inflow = 19.60 cfs @ 12.60 hrs, Volume= 130,263 cf
Primary = 19.60 cfs @ 12.60 hrs, Volume= 130,263 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link F: EXIST. 18" CMP

Inflow Area = 341,633 sf, 14.28% Impervious, Inflow Depth = 0.95" for 2-YEAR event
Inflow = 4.70 cfs @ 12.45 hrs, Volume= 26,977 cf
Primary = 4.70 cfs @ 12.45 hrs, Volume= 26,977 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link G: EXIST. 18" CMP

Inflow Area = 855,241 sf, 17.77% Impervious, Inflow Depth = 0.99" for 2-YEAR event
Inflow = 13.40 cfs @ 12.37 hrs, Volume= 70,214 cf
Primary = 13.40 cfs @ 12.37 hrs, Volume= 70,214 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link H: EXIST. 12" CMP

Inflow Area = 589,653 sf, 19.93% Impervious, Inflow Depth = 1.00" for 2-YEAR event
Inflow = 9.40 cfs @ 12.37 hrs, Volume= 49,241 cf
Primary = 9.40 cfs @ 12.37 hrs, Volume= 49,241 cf, Atten= 0%, Lag= 0.0 min
Routed to Link G : EXIST. 18" CMP

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link I: EXIST. CB

Inflow Area = 131,922 sf, 5.80% Impervious, Inflow Depth = 0.84" for 2-YEAR event
Inflow = 2.19 cfs @ 12.20 hrs, Volume= 9,280 cf
Primary = 2.19 cfs @ 12.20 hrs, Volume= 9,280 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link J: OFF-SITE EAST

Inflow Area = 14,216 sf, 0.00% Impervious, Inflow Depth = 0.75" for 2-YEAR event
Inflow = 0.23 cfs @ 12.16 hrs, Volume= 886 cf
Primary = 0.23 cfs @ 12.16 hrs, Volume= 886 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=1.96"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=3.71 cfs 17,239 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=1.53"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=18.14 cfs 89,738 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=1.27"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=6.66 cfs 31,525 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=1.14"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=12.11 cfs 58,105 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=0.66"
Flow Length=926' Tc=16.7 min CN=58 Runoff=3.53 cfs 20,903 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=1.60"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.52 cfs 1,891 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=1.20"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=24.96 cfs 114,899 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=1.67"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=51.95 cfs 356,039 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=1.74"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=24.65 cfs 152,266 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=1.89"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=40.54 cfs 259,392 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=1.89"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=9.72 cfs 53,720 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=1.89"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=8.30 cfs 41,762 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=1.96"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=19.01 cfs 96,481 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=1.74"
Flow Length=602' Tc=13.4 min CN=76 Runoff=4.77 cfs 19,113 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=3.71 cfs 17,239 cf
Primary=3.71 cfs 17,239 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=18.14 cfs 89,738 cf
Primary=18.14 cfs 89,738 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=6.66 cfs 31,525 cf
Primary=6.66 cfs 31,525 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=12.11 cfs 58,105 cf
Primary=12.11 cfs 58,105 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=3.53 cfs 20,903 cf
Primary=3.53 cfs 20,903 cf

Link B: OFF-SITE SOUTH Inflow=24.96 cfs 114,899 cf
Primary=24.96 cfs 114,899 cf

Link C: EXIST. HEADWALL Inflow=51.95 cfs 356,039 cf
Primary=51.95 cfs 356,039 cf

Link D: EXIST. CB Inflow=24.65 cfs 152,266 cf
Primary=24.65 cfs 152,266 cf

Link E: OFF-SITE SOUTH EAST Inflow=40.54 cfs 259,392 cf
Primary=40.54 cfs 259,392 cf

Link F: EXIST. 18" CMP Inflow=9.72 cfs 53,720 cf
Primary=9.72 cfs 53,720 cf

Link G: EXIST. 18" CMP Inflow=27.30 cfs 138,244 cf
Primary=27.30 cfs 138,244 cf

Link H: EXIST. 12" CMP Inflow=19.01 cfs 96,481 cf
Primary=19.01 cfs 96,481 cf

Link I: EXIST. CB Inflow=4.77 cfs 19,113 cf
Primary=4.77 cfs 19,113 cf

Link J: OFF-SITE EAST Inflow=0.52 cfs 1,891 cf
Primary=0.52 cfs 1,891 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 1,313,073 cf Average Runoff Depth = 1.60"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=2.78"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=5.29 cfs 24,447 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=2.26"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=27.45 cfs 133,057 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=1.94"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=10.61 cfs 48,355 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=1.79"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=19.88 cfs 90,811 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=1.16"
Flow Length=926' Tc=16.7 min CN=58 Runoff=7.26 cfs 36,400 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=2.35"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.78 cfs 2,782 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=1.87"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=40.32 cfs 177,867 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=2.43"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=76.91 cfs 519,760 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=2.52"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=36.11 cfs 220,625 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=2.69"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=58.31 cfs 370,438 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=2.69"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=13.98 cfs 76,717 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=2.69"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=11.93 cfs 59,641 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=2.78"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=27.08 cfs 136,821 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=2.52"
Flow Length=602' Tc=13.4 min CN=76 Runoff=6.98 cfs 27,693 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=5.29 cfs 24,447 cf
Primary=5.29 cfs 24,447 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=27.45 cfs 133,057 cf
Primary=27.45 cfs 133,057 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=10.61 cfs 48,355 cf
Primary=10.61 cfs 48,355 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=19.88 cfs 90,811 cf
Primary=19.88 cfs 90,811 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=7.26 cfs 36,400 cf
Primary=7.26 cfs 36,400 cf

Link B: OFF-SITE SOUTH Inflow=40.32 cfs 177,867 cf
Primary=40.32 cfs 177,867 cf

Link C: EXIST. HEADWALL Inflow=76.91 cfs 519,760 cf
Primary=76.91 cfs 519,760 cf

Link D: EXIST. CB Inflow=36.11 cfs 220,625 cf
Primary=36.11 cfs 220,625 cf

Link E: OFF-SITE SOUTH EAST Inflow=58.31 cfs 370,438 cf
Primary=58.31 cfs 370,438 cf

Link F: EXIST. 18" CMP Inflow=13.98 cfs 76,717 cf
Primary=13.98 cfs 76,717 cf

Link G: EXIST. 18" CMP Inflow=39.00 cfs 196,462 cf
Primary=39.00 cfs 196,462 cf

Link H: EXIST. 12" CMP Inflow=27.08 cfs 136,821 cf
Primary=27.08 cfs 136,821 cf

Link I: EXIST. CB Inflow=6.98 cfs 27,693 cf
Primary=6.98 cfs 27,693 cf

Link J: OFF-SITE EAST Inflow=0.78 cfs 2,782 cf
Primary=0.78 cfs 2,782 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 1,925,414 cf Average Runoff Depth = 2.35"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E1-1: Runoff Area=105,360 sf 11.35% Impervious Runoff Depth=3.57"
Flow Length=1,360' Tc=20.1 min CN=79 Runoff=6.78 cfs 31,368 cf

Subcatchment E1-2: Runoff Area=705,002 sf 0.00% Impervious Runoff Depth=2.99"
Flow Length=1,697' Tc=22.1 min CN=73 Runoff=36.51 cfs 175,624 cf

Subcatchment E1-3: Runoff Area=298,670 sf 0.23% Impervious Runoff Depth=2.62"
Flow Length=1,316' Tc=18.2 min CN=69 Runoff=14.53 cfs 65,190 cf

Subcatchment E1-4: Runoff Area=609,088 sf 0.30% Impervious Runoff Depth=2.44"
Flow Length=1,325' Tc=17.7 min CN=67 Runoff=27.68 cfs 123,842 cf

Subcatchment E1-5: Runoff Area=377,267 sf 0.00% Impervious Runoff Depth=1.68"
Flow Length=926' Tc=16.7 min CN=58 Runoff=11.27 cfs 52,896 cf

Subcatchment E10: Runoff Area=14,216 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=175' Tc=9.8 min CN=74 Runoff=1.02 cfs 3,654 cf

Subcatchment E2: Runoff Area=1,144,226 sf 3.37% Impervious Runoff Depth=2.53"
Flow Length=2,192' Tc=16.4 min CN=68 Runoff=55.65 cfs 241,151 cf

Subcatchment E3: Runoff Area=2,563,482 sf 4.00% Impervious Runoff Depth=3.18"
Flow Length=3,419' Tc=45.4 min CN=75 Runoff=100.96 cfs 679,334 cf

Subcatchment E4: Runoff Area=1,050,991 sf 9.62% Impervious Runoff Depth=3.28"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=47.08 cfs 286,992 cf

Subcatchment E5: Runoff Area=1,649,614 sf 26.38% Impervious Runoff Depth=3.47"
Flow Length=3,151' Tc=40.7 min CN=78 Runoff=75.19 cfs 477,443 cf

Subcatchment E6: Runoff Area=341,633 sf 14.28% Impervious Runoff Depth=3.47"
Flow Length=1,887' Tc=30.0 min CN=78 Runoff=18.02 cfs 98,878 cf

Subcatchment E7: Runoff Area=265,588 sf 12.97% Impervious Runoff Depth=3.47"
Flow Length=1,570' Tc=24.3 min CN=78 Runoff=15.38 cfs 76,868 cf

Subcatchment E8: Runoff Area=589,653 sf 19.93% Impervious Runoff Depth=3.57"
Flow Length=1,516' Tc=24.9 min CN=79 Runoff=34.72 cfs 175,553 cf

Subcatchment E9: Runoff Area=131,922 sf 5.80% Impervious Runoff Depth=3.28"
Flow Length=602' Tc=13.4 min CN=76 Runoff=9.11 cfs 36,024 cf

Link A1: OFF-SITE WEST- EASTMAN ROAD Inflow=6.78 cfs 31,368 cf
Primary=6.78 cfs 31,368 cf

Link A2: OFF-SITE WEST - TO 36" HDPE @ EASTERN SHORE ROAD Inflow=36.51 cfs 175,624 cf
Primary=36.51 cfs 175,624 cf

Link A3: OFF-SITE WEST - TO 15" HDPE @ EASTERN SHORE ROAD Inflow=14.53 cfs 65,190 cf
Primary=14.53 cfs 65,190 cf

Link A4: OFF-SITE WEST - TO STREAM Inflow=27.68 cfs 123,842 cf
Primary=27.68 cfs 123,842 cf

Link A5: OFF-SITE WEST - TO SWALE Inflow=11.27 cfs 52,896 cf
Primary=11.27 cfs 52,896 cf

Link B: OFF-SITE SOUTH Inflow=55.65 cfs 241,151 cf
Primary=55.65 cfs 241,151 cf

Link C: EXIST. HEADWALL Inflow=100.96 cfs 679,334 cf
Primary=100.96 cfs 679,334 cf

Link D: EXIST. CB Inflow=47.08 cfs 286,992 cf
Primary=47.08 cfs 286,992 cf

Link E: OFF-SITE SOUTH EAST Inflow=75.19 cfs 477,443 cf
Primary=75.19 cfs 477,443 cf

Link F: EXIST. 18" CMP Inflow=18.02 cfs 98,878 cf
Primary=18.02 cfs 98,878 cf

Link G: EXIST. 18" CMP Inflow=50.09 cfs 252,421 cf
Primary=50.09 cfs 252,421 cf

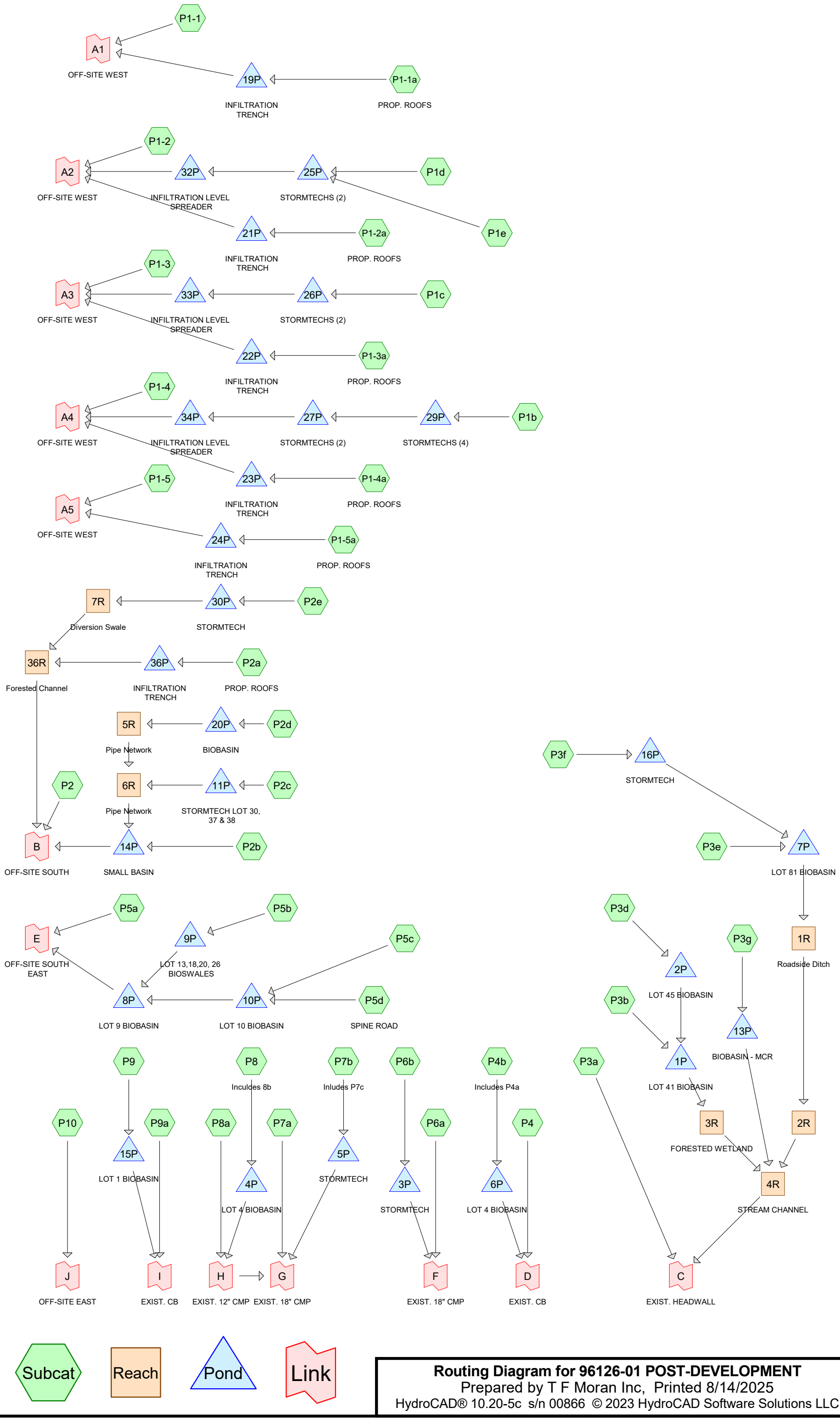
Link H: EXIST. 12" CMP Inflow=34.72 cfs 175,553 cf
Primary=34.72 cfs 175,553 cf

Link I: EXIST. CB Inflow=9.11 cfs 36,024 cf
Primary=9.11 cfs 36,024 cf

Link J: OFF-SITE EAST Inflow=1.02 cfs 3,654 cf
Primary=1.02 cfs 3,654 cf

Total Runoff Area = 9,846,712 sf Runoff Volume = 2,524,815 cf Average Runoff Depth = 3.08"
90.86% Pervious = 8,946,540 sf 9.14% Impervious = 900,172 sf

4



Routing Diagram for 96126-01 POST-DEVELOPMENT

Prepared by T F Moran Inc, Printed 8/14/2025

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-YEAR	Type III 24-hr		Default	24.00	1	2.74	2
2	10-YEAR	Type III 24-hr		Default	24.00	1	4.00	2
3	25-YEAR	Type III 24-hr		Default	24.00	1	4.98	2
4	50-YEAR	Type III 24-hr		Default	24.00	1	5.88	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,153,634	84	(P1b, P1c, P1e, P2e, P5b)
439,124	88	(P1d, P3f, P5c)
507,070	67	(P2)
754,943	86	(P2b, P2d, P3e, P8a)
456,208	85	(P2c)
2,107,972	74	(P3a, P5a, P6a, P7a)
696,324	87	(P3b, P9)
537,094	90	(P3d)
334,343	94	(P3g, P5d, P6b)
423,345	76	(P4)
180,354	77	(P5a)
58,842	83	(P9a)
4,000	61	>75% Grass cover, Good, HSG B (P1-4)
430,650	74	>75% Grass cover, Good, HSG C (P1-1, P1-2, P1-3, P1-4, P1-5, P10)
9,000	96	Gravel surface, HSG C (P1-1)
33,989	74	P4a (P4b)
545,286	88	P6 (P4b)
85,829	94	P7b (P7b)
117,158	84	P7c (P7b)
83,467	90	P8 (P8)
290,000	94	P8b (P8)
10,500	98	Paved parking, HSG C (P1-1)
17,500	98	Roofs, HSG C (P1-1a, P1-2a, P1-3a, P1-4a, P1-5a, P2a)
509,107	55	Woods, Good, HSG B (P1-2, P1-3, P1-4, P1-5)
60,724	70	Woods, Good, HSG C (P1-2, P1-3, P1-4, P1-5)
9,846,463	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
513,107	HSG B	P1-2, P1-3, P1-4, P1-5
528,374	HSG C	P1-1, P1-1a, P1-2, P1-2a, P1-3, P1-3a, P1-4, P1-4a, P1-5, P1-5a, P10, P2a
0	HSG D	
8,804,982	Other	P1b, P1c, P1d, P1e, P2, P2b, P2c, P2d, P2e, P3a, P3b, P3d, P3e, P3f, P3g, P4, P4b, P5a, P5b, P5c, P5d, P6a, P6b, P7a, P7b, P8, P8a, P9, P9a
9,846,463		**TOTAL AREA**

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=1.12"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=1.46 cfs 6,432 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=0.66"
Tc=10.0 min CN=72 Runoff=3.84 cfs 15,824 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=0.33"
Tc=10.0 min CN=63 Runoff=0.41 cfs 2,720 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=0.30"
Flow Length=538' Tc=10.2 min CN=62 Runoff=0.85 cfs 6,177 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.12 cfs 418 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=0.17"
Tc=10.0 min CN=57 Runoff=0.42 cfs 4,601 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.09 cfs 314 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.01 cfs 36 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=11.07 cfs 35,070 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=5.42 cfs 17,170 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=1.59"
Tc=6.0 min CN=88 Runoff=1.59 cfs 5,026 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=7.17 cfs 22,714 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=0.46"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=3.33 cfs 19,481 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=2.51"
Tc=6.0 min CN=98 Runoff=0.47 cfs 1,673 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=86 Runoff=4.62 cfs 14,604 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=1.37"
Tc=10.0 min CN=85 Runoff=14.52 cfs 52,177 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=1.44"
Tc=10.0 min CN=86 Runoff=9.46 cfs 33,930 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=1.31"
Tc=6.0 min CN=84 Runoff=1.07 cfs 3,401 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=17.41 cfs 129,223 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=1.51"
Tc=6.0 min CN=87 Runoff=8.71 cfs 27,499 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=1.75"
Tc=6.0 min CN=90 Runoff=24.60 cfs 78,186 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=86 Runoff=10.68 cfs 33,719 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=1.59"
Tc=6.0 min CN=88 Runoff=3.48 cfs 10,997 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=2.10"
Tc=6.0 min CN=94 Runoff=1.08 cfs 3,522 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=0.84"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=4.57 cfs 29,780 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=1.51"
Tc=10.0 min CN=87 Runoff=20.39 cfs 73,098 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=0.89"
Tc=10.0 min CN=77 Runoff=3.65 cfs 13,827 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=1.31"
Tc=10.0 min CN=84 Runoff=13.08 cfs 47,121 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=1.59"
Tc=10.0 min CN=88 Runoff=11.74 cfs 42,125 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=2.10"
Tc=10.0 min CN=94 Runoff=8.28 cfs 30,653 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=0.75"
Tc=6.0 min CN=74 Runoff=0.14 cfs 488 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=2.10"
Tc=10.0 min CN=94 Runoff=6.57 cfs 24,318 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=0.75"
Tc=6.0 min CN=74 Runoff=0.38 cfs 1,327 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=1.59"
Tc=10.0 min CN=88 Runoff=7.49 cfs 26,879 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=2.01"
Tc=6.0 min CN=93 Runoff=19.27 cfs 62,440 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=86 Runoff=2.68 cfs 8,473 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=1.51"
Tc=10.0 min CN=87 Runoff=16.84 cfs 60,369 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=1.24"
Tc=6.0 min CN=83 Runoff=1.91 cfs 6,082 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.19' Max Vel=3.97 fps Inflow=0.52 cfs 30,048 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=0.52 cfs 29,991 cf

Reach 2R: Avg. Flow Depth=0.22' Max Vel=2.75 fps Inflow=0.52 cfs 29,991 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=0.52 cfs 29,794 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.33' Max Vel=4.76 fps Inflow=3.38 cfs 99,437 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=3.38 cfs 99,377 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.35' Max Vel=3.40 fps Inflow=3.98 cfs 132,625 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=3.98 cfs 132,381 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.13' Max Vel=2.70 fps Inflow=0.19 cfs 9,666 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=0.19 cfs 9,658 cf

Reach 6R: Pipe Network Avg. Flow Depth=0.26' Max Vel=6.57 fps Inflow=1.56 cfs 36,944 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=1.56 cfs 36,937 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.07' Max Vel=0.36 fps Inflow=0.09 cfs 1,740 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=0.09 cfs 1,740 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.03' Max Vel=1.45 fps Inflow=0.09 cfs 1,740 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=0.09 cfs 1,740 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=631.30' Storage=13,325 cf Inflow=10.16 cfs 101,459 cf
Outflow=3.38 cfs 99,437 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=661.81' Storage=41,550 cf Inflow=24.60 cfs 78,186 cf
Outflow=2.05 cfs 73,961 cf

Pond 3P: STORMTECH Peak Elev=566.17' Storage=6,546 cf Inflow=6.57 cfs 24,318 cf
Discarded=0.03 cfs 2,126 cf Primary=3.79 cfs 21,144 cf Outflow=3.82 cfs 23,270 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=567.59' Storage=42,304 cf Inflow=19.27 cfs 62,440 cf
Outflow=1.76 cfs 74,521 cf

Pond 5P: STORMTECH Peak Elev=566.04' Storage=8,584 cf Inflow=7.49 cfs 26,879 cf
Discarded=0.04 cfs 2,632 cf Primary=3.45 cfs 22,720 cf Outflow=3.49 cfs 25,352 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=557.84' Storage=32,268 cf Inflow=20.39 cfs 73,098 cf
Outflow=4.01 cfs 70,720 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=709.69' Storage=27,154 cf Inflow=11.26 cfs 42,317 cf
Outflow=0.52 cfs 30,048 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=586.53' Storage=3,913 cf Inflow=5.67 cfs 112,958 cf
Outflow=5.18 cfs 112,979 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=592.33' Storage=17,106 cf Inflow=13.08 cfs 47,121 cf
Discarded=0.16 cfs 6,946 cf Primary=2.10 cfs 40,177 cf Outflow=2.26 cfs 47,123 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=612.67' Storage=27,459 cf Inflow=20.02 cfs 72,779 cf
Outflow=3.58 cfs 72,781 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=641.58' Storage=23,794 cf Inflow=14.52 cfs 52,177 cf
Discarded=0.35 cfs 22,360 cf Primary=1.37 cfs 27,286 cf Outflow=1.72 cfs 49,646 cf

Pond 13P: BIOBASIN - MCR Peak Elev=612.64' Storage=1,572 cf Inflow=1.08 cfs 3,522 cf
Outflow=0.17 cfs 3,454 cf

Pond 14P: SMALL BASIN Peak Elev=616.74' Storage=2,403 cf Inflow=4.74 cfs 51,541 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=3.52 cfs 51,299 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=571.11' Storage=46,826 cf Inflow=16.84 cfs 60,369 cf
Outflow=0.33 cfs 21,034 cf

Pond 16P: STORMTECH Peak Elev=713.61' Storage=4,011 cf Inflow=3.48 cfs 10,997 cf
Discarded=0.02 cfs 1,564 cf Primary=1.22 cfs 8,598 cf Outflow=1.24 cfs 10,162 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 20P: BIOBASIN Peak Elev=660.50' Storage=18,136 cf Inflow=9.46 cfs 33,930 cf
Discarded=0.36 cfs 22,828 cf Primary=0.19 cfs 9,666 cf Outflow=0.55 cfs 32,494 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=401.26' Storage=206 cf Inflow=0.12 cfs 418 cf
Discarded=0.01 cfs 418 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 418 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=401.25' Storage=136 cf Inflow=0.09 cfs 314 cf
Discarded=0.01 cfs 314 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 314 cf

Pond 25P: STORMTECHS (2) Peak Elev=501.39' Storage=11,700 cf Inflow=8.76 cfs 27,740 cf
Discarded=0.19 cfs 12,307 cf Primary=1.00 cfs 14,951 cf Outflow=1.20 cfs 27,258 cf

Pond 26P: STORMTECHS (2) Peak Elev=501.33' Storage=6,837 cf Inflow=5.42 cfs 17,170 cf
Discarded=0.12 cfs 7,514 cf Primary=0.95 cfs 9,446 cf Outflow=1.07 cfs 16,960 cf

Pond 27P: STORMTECHS (2) Peak Elev=501.20' Storage=2,060 cf Inflow=1.23 cfs 18,270 cf
Discarded=0.04 cfs 2,264 cf Primary=1.12 cfs 16,007 cf Outflow=1.16 cfs 18,271 cf

Pond 29P: STORMTECHS (4) Peak Elev=506.30' Storage=14,675 cf Inflow=11.07 cfs 35,070 cf
Discarded=0.26 cfs 16,398 cf Primary=1.23 cfs 18,270 cf Outflow=1.49 cfs 34,668 cf

Pond 30P: STORMTECH Peak Elev=694.87' Storage=1,499 cf Inflow=1.07 cfs 3,401 cf
Discarded=0.03 cfs 1,644 cf Primary=0.09 cfs 1,740 cf Outflow=0.11 cfs 3,384 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.68' Storage=2,476 cf Inflow=1.00 cfs 14,951 cf
Discarded=0.05 cfs 2,583 cf Primary=0.98 cfs 10,844 cf Outflow=1.02 cfs 13,427 cf

Pond 33P: INFILTRATION LEVEL SPREADER Peak Elev=300.68' Storage=3,083 cf Inflow=0.95 cfs 9,446 cf
Discarded=0.06 cfs 3,007 cf Primary=0.70 cfs 4,686 cf Outflow=0.75 cfs 7,693 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.68' Storage=3,091 cf Inflow=1.12 cfs 16,007 cf
Discarded=0.06 cfs 2,980 cf Primary=1.31 cfs 11,254 cf Outflow=1.37 cfs 14,234 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=400.83' Storage=650 cf Inflow=0.47 cfs 1,673 cf
Discarded=0.04 cfs 1,673 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 1,673 cf

Link A1: OFF-SITE WEST Inflow=1.46 cfs 6,432 cf
Primary=1.46 cfs 6,432 cf

Link A2: OFF-SITE WEST Inflow=3.84 cfs 26,668 cf
Primary=3.84 cfs 26,668 cf

Link A3: OFF-SITE WEST Inflow=0.81 cfs 7,406 cf
Primary=0.81 cfs 7,406 cf

Link A4: OFF-SITE WEST Inflow=1.56 cfs 17,431 cf
Primary=1.56 cfs 17,431 cf

Link A5: OFF-SITE WEST Inflow=0.42 cfs 4,601 cf
Primary=0.42 cfs 4,601 cf

Link B: OFF-SITE SOUTH Inflow=6.73 cfs 72,520 cf
Primary=6.73 cfs 72,520 cf

Link C: EXIST. HEADWALL Inflow=21.38 cfs 261,603 cf
Primary=21.38 cfs 261,603 cf

Link D: EXIST. CB Inflow=8.55 cfs 100,499 cf
Primary=8.55 cfs 100,499 cf

Link E: OFF-SITE SOUTH EAST Inflow=6.67 cfs 126,806 cf
Primary=6.67 cfs 126,806 cf

Link F: EXIST. 18" CMP Inflow=3.86 cfs 21,632 cf
Primary=3.86 cfs 21,632 cf

Link G: EXIST. 18" CMP Inflow=5.98 cfs 107,041 cf
Primary=5.98 cfs 107,041 cf

Link H: EXIST. 12" CMP Inflow=3.68 cfs 82,994 cf
Primary=3.68 cfs 82,994 cf

Link I: EXIST. CB Inflow=2.09 cfs 27,116 cf
Primary=2.09 cfs 27,116 cf

Link J: OFF-SITE EAST Inflow=0.01 cfs 36 cf
Primary=0.01 cfs 36 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 953,146 cf Average Runoff Depth = 1.16"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf

Summary for Subcatchment P1-1:

Runoff = 1.46 cfs @ 12.25 hrs, Volume= 6,432 cf, Depth= 1.12"
Routed to Link A1 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
0	55	Woods, Good, HSG B
0	70	Woods, Good, HSG C
49,602	74	>75% Grass cover, Good, HSG C
10,500	98	Paved parking, HSG C
0	98	Roofs, HSG C
9,000	96	Gravel surface, HSG C
69,102	81	Weighted Average
58,602		84.81% Pervious Area
10,500		15.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	100	0.0275	0.20		**Sheet Flow,** Range n= 0.130 P2= 2.74"
2.1	200	0.0525	1.60		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
6.6	755	0.0740	1.90		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
17.0	1,055	Total			

Summary for Subcatchment P1-1a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 19P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-2:

Runoff = 3.84 cfs @ 12.16 hrs, Volume= 15,824 cf, Depth= 0.66"
Routed to Link A2 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
16,162	55	Woods, Good, HSG B
42,952	70	Woods, Good, HSG C
229,450	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
288,564	72	Weighted Average
288,564		100.00% Pervious Area

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

Summary for Subcatchment P1-2a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 21P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-3:

Runoff = 0.41 cfs @ 12.22 hrs, Volume= 2,720 cf, Depth= 0.33"
Routed to Link A3 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
57,303	55	Woods, Good, HSG B
5,080	70	Woods, Good, HSG C
36,700	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
99,083	63	Weighted Average
99,083		100.00% Pervious Area

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

Summary for Subcatchment P1-3a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 22P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-4:

Runoff = 0.85 cfs @ 12.29 hrs, Volume= 6,177 cf, Depth= 0.30"
Routed to Link A4 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
156,186	55	Woods, Good, HSG B
5,000	70	Woods, Good, HSG C
4,000	61	>75% Grass cover, Good, HSG B
81,898	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
247,084	62	Weighted Average
247,084		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0600	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
1.3	178	0.1000	2.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.1	260	0.1700	2.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
10.2	538	Total			

Summary for Subcatchment P1-4a: PROP. ROOFS

Runoff = 0.12 cfs @ 12.09 hrs, Volume= 418 cf, Depth= 2.51"
Routed to Pond 23P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
2,000	98	Roofs, HSG C
2,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1-5:

Runoff = 0.42 cfs @ 12.44 hrs, Volume= 4,601 cf, Depth= 0.17"
Routed to Link A5 : OFF-SITE WEST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
279,456	55	Woods, Good, HSG B
7,692	70	Woods, Good, HSG C
0	61	>75% Grass cover, Good, HSG B
32,424	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
0	98	Roofs, HSG C
0	96	Gravel surface, HSG C
319,572	57	Weighted Average
319,572		100.00% Pervious Area

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

Summary for Subcatchment P1-5a: PROP. ROOFS

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 314 cf, Depth= 2.51"
Routed to Pond 24P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
1,500	98	Roofs, HSG C
1,500		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P10:

Runoff = 0.01 cfs @ 12.16 hrs, Volume= 36 cf, Depth= 0.75"
Routed to Link J : OFF-SITE EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
576	74	>75% Grass cover, Good, HSG C
576		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0300	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.74"
0.8	75	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.8	175	Total			

Summary for Subcatchment P1b:

Runoff = 11.07 cfs @ 12.09 hrs, Volume= 35,070 cf, Depth= 1.31"
Routed to Pond 29P : STORMTECHS (4)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	322,438	84	
	322,438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1c:

Runoff = 5.42 cfs @ 12.09 hrs, Volume= 17,170 cf, Depth= 1.31"
Routed to Pond 26P : STORMTECHS (2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	157,861	84	
	157,861		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1d:

Runoff = 1.59 cfs @ 12.09 hrs, Volume= 5,026 cf, Depth= 1.59"
Routed to Pond 25P : STORMTECHS (2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	37,954	88	
	37,954		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P1e:

Runoff = 7.17 cfs @ 12.09 hrs, Volume= 22,714 cf, Depth= 1.31"
Routed to Pond 25P : STORMTECHS (2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	208,836	84	
	208,836		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P2:

Runoff = 3.33 cfs @ 12.30 hrs, Volume= 19,481 cf, Depth= 0.46"
Routed to Link B : OFF-SITE SOUTH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	507,070	67	
	507,070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	75	0.0600	0.26		**Sheet Flow,** Range n= 0.130 P2= 2.74"
1.8	129	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	303	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	750	0.0500	5.90	29.51	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
2.3	239	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	68	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.2	628	0.1100	8.76	43.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035 Earth, dense weeds
16.4	2,192	Total			

Summary for Subcatchment P2a: PROP. ROOFS

Runoff = 0.47 cfs @ 12.09 hrs, Volume= 1,673 cf, Depth= 2.51"
Routed to Pond 36P : INFILTRATION TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
8,000	98	Roofs, HSG C
8,000		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P2b:

Runoff = 4.62 cfs @ 12.09 hrs, Volume= 14,604 cf, Depth= 1.44"
Routed to Pond 14P : SMALL BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	121,520	86	
	121,520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P2c:

Runoff = 14.52 cfs @ 12.15 hrs, Volume= 52,177 cf, Depth= 1.37"
Routed to Pond 11P : STORMTECH LOT 30, 37 & 38

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	456,208	85	
	456,208		100.00% Pervious Area

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

Summary for Subcatchment P2d:

Runoff = 9.46 cfs @ 12.15 hrs, Volume= 33,930 cf, Depth= 1.44"
Routed to Pond 20P : BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	282,337	86	
	282,337		100.00% Pervious Area

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

Summary for Subcatchment P2e:

Runoff = 1.07 cfs @ 12.09 hrs, Volume= 3,401 cf, Depth= 1.31"
Routed to Pond 30P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	31,267	84	
	31,267		100.00% Pervious Area

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

Summary for Subcatchment P3a:

Runoff = 17.41 cfs @ 12.69 hrs, Volume= 129,223 cf, Depth= 0.75"
Routed to Link C : EXIST. HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	2,073,802	74	
	2,073,802		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0500	0.25		**Sheet Flow,** Range n= 0.130 P2= 2.74"
4.4	259	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	195	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	82	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	111	0.0500	1.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	106	0.2500	2.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.3	788	0.0800	1.41		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
10.3	617	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.3	338	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.6	151	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	137	0.0400	8.46	338.53	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
0.7	411	0.0500	9.46	378.49	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 10.0 '/' Top.W=40.00' n= 0.035 Earth, dense weeds
2.4	124	0.0300	0.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
45.4	3,419	Total			

Summary for Subcatchment P3b:

Runoff = 8.71 cfs @ 12.09 hrs, Volume= 27,499 cf, Depth= 1.51"
Routed to Pond 1P : LOT 41 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	217,917	87	
	217,917		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3d:

Runoff = 24.60 cfs @ 12.09 hrs, Volume= 78,186 cf, Depth= 1.75"
Routed to Pond 2P : LOT 45 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	537,094	90	
	537,094		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3e:

Runoff = 10.68 cfs @ 12.09 hrs, Volume= 33,719 cf, Depth= 1.44"
Routed to Pond 7P : LOT 81 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	280,581	86	
	280,581		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3f:

Runoff = 3.48 cfs @ 12.09 hrs, Volume= 10,997 cf, Depth= 1.59"
Routed to Pond 16P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	83,048	88	
	83,048		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P3g:

Runoff = 1.08 cfs @ 12.09 hrs, Volume= 3,522 cf, Depth= 2.10"
Routed to Pond 13P : BIOBASIN - MCR

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	20,130	94	
	20,130		100.00% Pervious Area

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

Summary for Subcatchment P4:

Runoff = 4.57 cfs @ 12.57 hrs, Volume= 29,780 cf, Depth= 0.84"
Routed to Link D : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	423,345	76	
	423,345		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	100	0.0900	0.32		**Sheet Flow,** Range n= 0.130 P2= 2.74"
0.6	68	0.1600	2.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.1	207	0.1100	1.66		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	89	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	41	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	39	0.0900	1.50		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.2	266	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	18	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	209	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	50	0.1600	2.80		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.3	448	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
4.1	458	0.0700	1.85		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	77	0.1300	1.80		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.9	665	0.0500	1.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	176	0.0500	9.44	302.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=2.00' Z= 8.0 '/' Top.W=32.00' n= 0.035 Earth, dense weeds
0.5	119	0.0200	3.78	56.65	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 15.0 '/' Top.W=30.00' n= 0.035 Earth, dense weeds
1.0	348	0.0500	5.77	17.32	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.035 Earth, dense weeds
37.5	3,378	Total			

Summary for Subcatchment P4b: Includes P4a

Runoff = 20.39 cfs @ 12.14 hrs, Volume= 73,098 cf, Depth= 1.51"
Routed to Pond 6P : LOT 4 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	545,286	88	P6
*	33,989	74	P4a
	579,275	87	Weighted Average
	579,275		100.00% Pervious Area

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

Summary for Subcatchment P5a:

Runoff = 3.65 cfs @ 12.15 hrs, Volume= 13,827 cf, Depth= 0.89"
Routed to Link E : OFF-SITE SOUTH EAST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	180,354	77	
*	5,047	74	
	185,401	77	Weighted Average
	185,401		100.00% Pervious Area

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

Summary for Subcatchment P5b:

Runoff = 13.08 cfs @ 12.15 hrs, Volume= 47,121 cf, Depth= 1.31"
Routed to Pond 9P : LOT 13,18,20, 26 BIOSWALES

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	433,232	84	
	433,232		100.00% Pervious Area

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

Summary for Subcatchment P5c:

Runoff = 11.74 cfs @ 12.14 hrs, Volume= 42,125 cf, Depth= 1.59"
Routed to Pond 10P : LOT 10 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	318,122	88	
	318,122		100.00% Pervious Area

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

Summary for Subcatchment P5d: SPINE ROAD

Runoff = 8.28 cfs @ 12.14 hrs, Volume= 30,653 cf, Depth= 2.10"
Routed to Pond 10P : LOT 10 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	175,213	94	
	175,213		100.00% Pervious Area

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

Summary for Subcatchment P6a:

Runoff = 0.14 cfs @ 12.10 hrs, Volume= 488 cf, Depth= 0.75"
Routed to Link F : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	7,832	74	
	7,832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P6b:

LESS 250,000 SF TO P8

Runoff = 6.57 cfs @ 12.14 hrs, Volume= 24,318 cf, Depth= 2.10"
Routed to Pond 3P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	139,000	94	
	139,000		100.00% Pervious Area

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

Summary for Subcatchment P7a:

Runoff = 0.38 cfs @ 12.10 hrs, Volume= 1,327 cf, Depth= 0.75"
Routed to Link G : EXIST. 18" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

Area (sf)	CN	Description
21,291	74	
21,291		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P7b: Inludes P7c

LESS 290,000 SF TO P8

Runoff = 7.49 cfs @ 12.14 hrs, Volume= 26,879 cf, Depth= 1.59"
Routed to Pond 5P : STORMTECH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	85,829	94	P7b
*	117,158	84	P7c
	202,987	88	Weighted Average
	202,987		100.00% Pervious Area

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

Summary for Subcatchment P8: Inculdes 8b

Runoff = 19.27 cfs @ 12.09 hrs, Volume= 62,440 cf, Depth= 2.01"
Routed to Pond 4P : LOT 4 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	83,467	90	P8
*	290,000	94	P8b
	373,467	93	Weighted Average
	373,467		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P8a:

Runoff = 2.68 cfs @ 12.09 hrs, Volume= 8,473 cf, Depth= 1.44"
Routed to Link H : EXIST. 12" CMP

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	70,505	86	
	70,505		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

Summary for Subcatchment P9:

Runoff = 16.84 cfs @ 12.14 hrs, Volume= 60,369 cf, Depth= 1.51"
Routed to Pond 15P : LOT 1 BIOBASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	478,407	87	
	478,407		100.00% Pervious Area

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

Summary for Subcatchment P9a:

Runoff = 1.91 cfs @ 12.10 hrs, Volume= 6,082 cf, Depth= 1.24"
Routed to Link I : EXIST. CB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=2.74"

	Area (sf)	CN	Description
*	58,842	83	
	58,842		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**
5.0	0	Total, Increased to minimum Tc = 6.0 min			

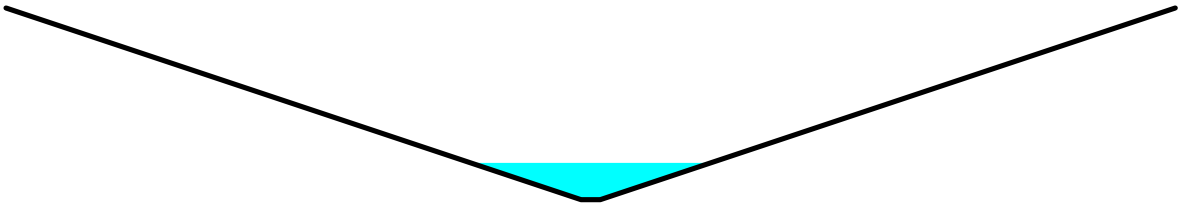
Summary for Reach 1R: Roadside Ditch

Inflow Area = 363,629 sf, 0.00% Impervious, Inflow Depth > 0.99" for 2-YEAR event
Inflow = 0.52 cfs @ 16.06 hrs, Volume= 30,048 cf
Outflow = 0.52 cfs @ 16.09 hrs, Volume= 29,991 cf, Atten= 0%, Lag= 2.0 min
Routed to Reach 2R :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.97 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 3.53 fps, Avg. Travel Time= 2.8 min

Peak Storage= 79 cf @ 16.09 hrs
Average Depth at Peak Storage= 0.19' , Surface Width= 1.26'
Bank-Full Depth= 1.00' Flow Area= 3.1 sf, Capacity= 35.30 cfs

0.10' x 1.00' deep channel, n= 0.028 Earth, grassed & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.10'
Length= 600.0' Slope= 0.1217 '/'
Inlet Invert= 705.00', Outlet Invert= 632.00'



Summary for Reach 2R:

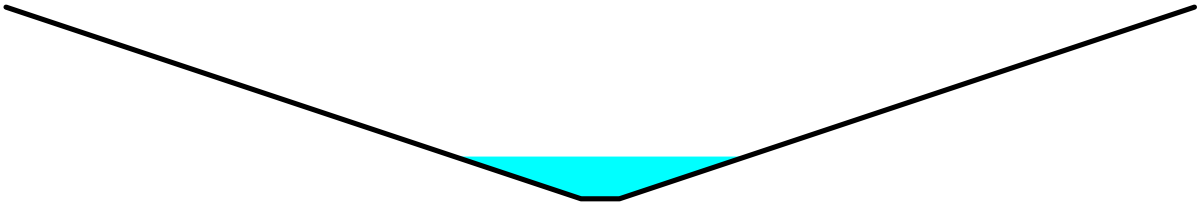
[62] Hint: Exceeded Reach 1R OUTLET depth by 0.03' @ 16.60 hrs

Inflow Area = 363,629 sf, 0.00% Impervious, Inflow Depth > 0.99" for 2-YEAR event
Inflow = 0.52 cfs @ 16.09 hrs, Volume= 29,991 cf
Outflow = 0.52 cfs @ 16.21 hrs, Volume= 29,794 cf, Atten= 0%, Lag= 7.2 min
Routed to Reach 4R : STREAM CHANNEL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.75 fps, Min. Travel Time= 8.6 min
Avg. Velocity = 2.44 fps, Avg. Travel Time= 9.7 min

Peak Storage= 269 cf @ 16.21 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 1.52'
Bank-Full Depth= 1.00' Flow Area= 3.2 sf, Capacity= 22.60 cfs

0.20' x 1.00' deep channel, n= 0.028 Earth, grassed & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.20'
Length= 1,420.0' Slope= 0.0458 '/'
Inlet Invert= 632.00', Outlet Invert= 567.00'



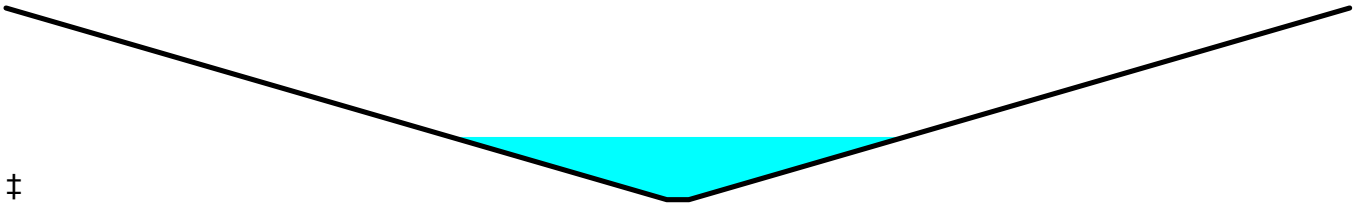
Summary for Reach 3R: FORESTED WETLAND

Inflow Area = 755,011 sf, 0.00% Impervious, Inflow Depth > 1.58" for 2-YEAR event
Inflow = 3.38 cfs @ 12.61 hrs, Volume= 99,437 cf
Outflow = 3.38 cfs @ 12.65 hrs, Volume= 99,377 cf, Atten= 0%, Lag= 2.4 min
Routed to Reach 4R : STREAM CHANNEL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.76 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 3.37 fps, Avg. Travel Time= 3.5 min

Peak Storage= 510 cf @ 12.65 hrs
Average Depth at Peak Storage= 0.33' , Surface Width= 4.13'
Bank-Full Depth= 1.00' Flow Area= 6.2 sf, Capacity= 60.76 cfs

0.20' x 1.00' deep channel, n= 0.025 Earth, clean & winding
Side Slope Z-value= 6.0 '/' Top Width= 12.20'
Length= 718.0' Slope= 0.0682 '/'
Inlet Invert= 616.00', Outlet Invert= 567.00'



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Summary for Reach 4R: STREAM CHANNEL

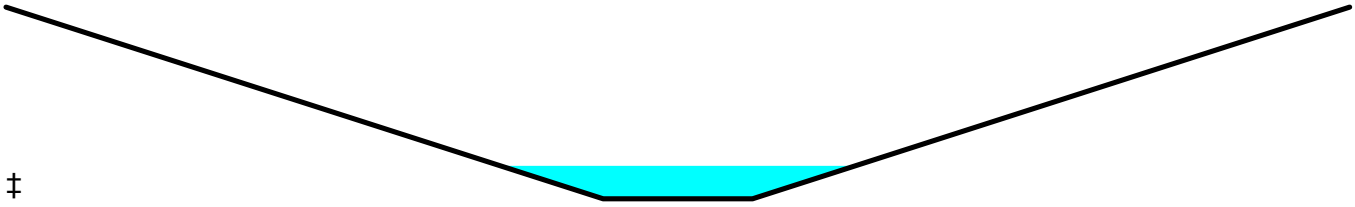
[62] Hint: Exceeded Reach 2R OUTLET depth by 0.14' @ 12.55 hrs
[62] Hint: Exceeded Reach 3R OUTLET depth by 0.02' @ 13.25 hrs

Inflow Area = 1,138,770 sf, 0.00% Impervious, Inflow Depth > 1.40" for 2-YEAR event
Inflow = 3.98 cfs @ 12.73 hrs, Volume= 132,625 cf
Outflow = 3.98 cfs @ 12.80 hrs, Volume= 132,381 cf, Atten= 0%, Lag= 3.9 min
Routed to Link C : EXIST. HEADWALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.40 fps, Min. Travel Time= 4.1 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 6.2 min

Peak Storage= 982 cf @ 12.80 hrs
Average Depth at Peak Storage= 0.35' , Surface Width= 4.76'
Bank-Full Depth= 2.00' Flow Area= 20.0 sf, Capacity= 185.18 cfs

2.00' x 2.00' deep channel, n= 0.040 Earth, cobble bottom, clean sides
Side Slope Z-value= 4.0 '/' Top Width= 18.00'
Length= 840.0' Slope= 0.0560 '/'
Inlet Invert= 567.00', Outlet Invert= 520.00'



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Summary for Reach 5R: Pipe Network

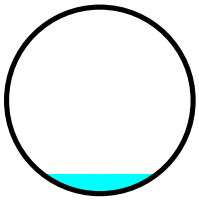
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 282,337 sf, 0.00% Impervious, Inflow Depth > 0.41" for 2-YEAR event
Inflow = 0.19 cfs @ 15.07 hrs, Volume= 9,666 cf
Outflow = 0.19 cfs @ 15.10 hrs, Volume= 9,658 cf, Atten= 0%, Lag= 1.7 min
Routed to Reach 6R : Pipe Network

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.70 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 2.37 fps, Avg. Travel Time= 2.8 min

Peak Storage= 28 cf @ 15.10 hrs
Average Depth at Peak Storage= 0.13' , Surface Width= 0.77'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.91 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 400.0' Slope= 0.0150 '/'
Inlet Invert= 656.00', Outlet Invert= 650.00'



Summary for Reach 6R: Pipe Network

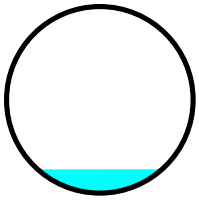
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 738,545 sf, 0.00% Impervious, Inflow Depth > 0.60" for 2-YEAR event
Inflow = 1.56 cfs @ 13.08 hrs, Volume= 36,944 cf
Outflow = 1.56 cfs @ 13.09 hrs, Volume= 36,937 cf, Atten= 0%, Lag= 0.8 min
Routed to Pond 14P : SMALL BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.57 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 4.20 fps, Avg. Travel Time= 1.6 min

Peak Storage= 95 cf @ 13.09 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 1.34'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 43.81 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 400.0' Slope= 0.0375 '/'
Inlet Invert= 638.00', Outlet Invert= 623.00'



Summary for Reach 7R: Diversion Swale

Inflow Area = 31,267 sf, 0.00% Impervious, Inflow Depth = 0.67" for 2-YEAR event
Inflow = 0.09 cfs @ 13.02 hrs, Volume= 1,740 cf
Outflow = 0.09 cfs @ 13.19 hrs, Volume= 1,740 cf, Atten= 0%, Lag= 10.4 min
Routed to Reach 36R : Forested Channel

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.36 fps, Min. Travel Time= 11.5 min
Avg. Velocity = 0.25 fps, Avg. Travel Time= 16.8 min

Peak Storage= 60 cf @ 13.19 hrs
Average Depth at Peak Storage= 0.07' , Surface Width= 3.44'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 42.56 cfs

3.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 3.0 '/' Top Width= 15.00'
Length= 250.0' Slope= 0.0100 '/'
Inlet Invert= 669.50', Outlet Invert= 667.00'

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Summary for Reach 36R: Forested Channel

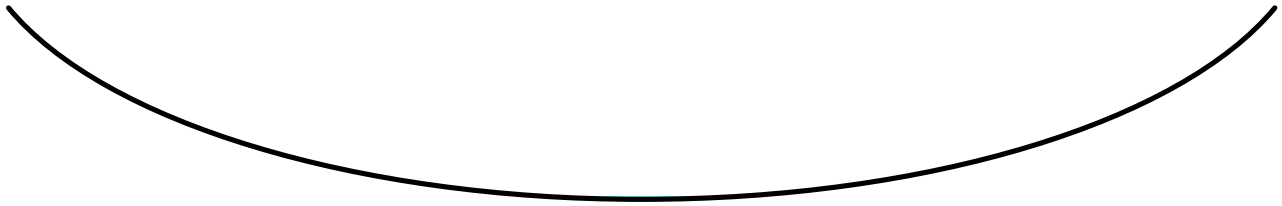
[61] Hint: Exceeded Reach 7R outlet invert by 0.03' @ 13.35 hrs
[80] Warning: Exceeded Pond 36P by 267.01' @ 21.60 hrs (153.18 cfs 16,543,174 cf)

Inflow Area = 39,267 sf, 20.37% Impervious, Inflow Depth = 0.53" for 2-YEAR event
Inflow = 0.09 cfs @ 13.19 hrs, Volume= 1,740 cf
Outflow = 0.09 cfs @ 13.37 hrs, Volume= 1,740 cf, Atten= 0%, Lag= 10.8 min
Routed to Link B : OFF-SITE SOUTH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.45 fps, Min. Travel Time= 9.3 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 11.6 min

Peak Storage= 48 cf @ 13.37 hrs
Average Depth at Peak Storage= 0.03' , Surface Width= 2.59'
Bank-Full Depth= 2.00' Flow Area= 26.7 sf, Capacity= 544.32 cfs

20.00' x 2.00' deep Parabolic Channel, n= 0.030 Stream, clean & straight
Length= 810.0' Slope= 0.1198 '/'
Inlet Invert= 667.00', Outlet Invert= 570.00'



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Summary for Pond 1P: LOT 41 BIOBASIN

Inflow Area = 755,011 sf, 0.00% Impervious, Inflow Depth > 1.61" for 2-YEAR event
Inflow = 10.16 cfs @ 12.10 hrs, Volume= 101,459 cf
Outflow = 3.38 cfs @ 12.61 hrs, Volume= 99,437 cf, Atten= 67%, Lag= 30.9 min
Primary = 3.38 cfs @ 12.61 hrs, Volume= 99,437 cf
Routed to Reach 3R : FORESTED WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 631.30' @ 12.61 hrs Surf.Area= 11,091 sf Storage= 13,325 cf

Plug-Flow detention time= 70.8 min calculated for 99,271 cf (98% of inflow)
Center-of-Mass det. time= 56.8 min (1,056.2 - 999.4)

Volume	Invert	Avail.Storage	Storage Description
#1	630.00'	63,250 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
630.00	9,400	0	0
635.00	15,900	63,250	63,250

Device	Routing	Invert	Outlet Devices
#1	Primary	629.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 629.00' / 628.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	630.00'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	631.30'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	631.50'	**10.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	633.90'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.38 cfs @ 12.61 hrs HW=631.30' TW=616.33' (Dynamic Tailwater)
↑**1=Culvert** (Passes 3.38 cfs of 17.25 cfs potential flow)
↑**2=Orifice** (Orifice Controls 3.38 cfs @ 4.31 fps)
3=Orifice (Orifice Controls 0.00 cfs @ 0.06 fps)
4=Orifice (Controls 0.00 cfs)
5=Grate (Controls 0.00 cfs)

Summary for Pond 2P: LOT 45 BIOBASIN

Inflow Area = 537,094 sf, 0.00% Impervious, Inflow Depth = 1.75" for 2-YEAR event
Inflow = 24.60 cfs @ 12.09 hrs, Volume= 78,186 cf
Outflow = 2.05 cfs @ 13.23 hrs, Volume= 73,961 cf, Atten= 92%, Lag= 68.2 min
Primary = 2.05 cfs @ 13.23 hrs, Volume= 73,961 cf
Routed to Pond 1P : LOT 41 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 661.81' @ 13.23 hrs Surf.Area= 24,494 sf Storage= 41,550 cf

Plug-Flow detention time= 280.0 min calculated for 73,838 cf (94% of inflow)
Center-of-Mass det. time= 251.0 min (1,064.0 - 813.0)

Volume	Invert	Avail.Storage	Storage Description
#1	660.00'	128,500 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	21,300	0	0
665.00	30,100	128,500	128,500

Device	Routing	Invert	Outlet Devices
#1	Primary	659.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 659.00' / 658.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	660.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	662.00'	**12.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	664.00'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.05 cfs @ 13.23 hrs HW=661.81' TW=631.24' (Dynamic Tailwater)
└─**1=Culvert** (Passes 2.05 cfs of 20.38 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 2.05 cfs @ 5.86 fps)
  ├─**3=Orifice** (Controls 0.00 cfs)
  └─**4=Grate** (Controls 0.00 cfs)

Summary for Pond 3P: STORMTECH

Inflow Area = 139,000 sf, 0.00% Impervious, Inflow Depth = 2.10" for 2-YEAR event
Inflow = 6.57 cfs @ 12.14 hrs, Volume= 24,318 cf
Outflow = 3.82 cfs @ 12.31 hrs, Volume= 23,270 cf, Atten= 42%, Lag= 10.2 min
Discarded = 0.03 cfs @ 12.31 hrs, Volume= 2,126 cf
Primary = 3.79 cfs @ 12.31 hrs, Volume= 21,144 cf
Routed to Link F : EXIST. 18" CMP

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 566.17' @ 12.31 hrs Surf.Area= 4,364 sf Storage= 6,546 cf

Plug-Flow detention time= 88.9 min calculated for 23,270 cf (96% of inflow)

Center-of-Mass det. time= 64.2 min (860.2 - 796.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	564.00'	3,890 cf	**49.00'W x 89.06'L x 3.50'H Field A** 15,273 cf Overall - 5,549 cf Embedded = 9,725 cf x 40.0% Voids
#2A	564.50'	5,549 cf	**ADS_StormTech RC-750 +Cap** x 120 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 120 Chambers in 10 Rows
		9,438 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	564.00'	**0.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 560.00'
#2	Primary	563.75'	**18.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 563.75' / 556.00' S= 0.1292 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	564.60'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	565.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	565.50'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	566.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#7	Device 2	566.80'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 12.31 hrs HW=566.16' (Free Discharge)
└**1=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=3.78 cfs @ 12.31 hrs HW=566.16' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 3.78 cfs of 10.97 cfs potential flow)
- **3=Orifice** (Orifice Controls 1.86 cfs @ 5.34 fps)
- **4=Orifice** (Orifice Controls 1.53 cfs @ 4.38 fps)
- **5=Orifice** (Orifice Controls 0.30 cfs @ 3.39 fps)
- **6=Orifice** (Orifice Controls 0.09 cfs @ 1.37 fps)
- **7=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 4P: LOT 4 BIOBASIN

Inflow Area = 373,467 sf, 0.00% Impervious, Inflow Depth = 2.01" for 2-YEAR event
Inflow = 19.27 cfs @ 12.09 hrs, Volume= 62,440 cf
Outflow = 1.76 cfs @ 13.01 hrs, Volume= 74,521 cf, Atten= 91%, Lag= 55.0 min
Primary = 1.76 cfs @ 13.01 hrs, Volume= 74,521 cf
Routed to Link H : EXIST. 12" CMP

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Starting Elev= 566.49' Surf.Area= 16,633 sf Storage= 22,896 cf
Peak Elev= 567.59' @ 13.01 hrs Surf.Area= 18,511 sf Storage= 42,304 cf (19,408 cf above start)

Plug-Flow detention time= 420.4 min calculated for 51,625 cf (83% of inflow)
Center-of-Mass det. time= 123.4 min (921.5 - 798.1)

Volume	Invert	Avail.Storage	Storage Description
#1	565.00'	91,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
565.00	14,100	0	0
570.00	22,600	91,750	91,750

Device	Routing	Invert	Outlet Devices
#1	Primary	564.00'	**18.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 564.00' / 563.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	565.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	567.25'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	567.75'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	568.75'	**48.0" W x 48.0" H Vert. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.76 cfs @ 13.01 hrs HW=567.59' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.76 cfs of 14.35 cfs potential flow)
  - **2=Orifice** (Orifice Controls 1.28 cfs @ 6.54 fps)
  - **3=Orifice** (Orifice Controls 0.48 cfs @ 2.00 fps)
  - **4=Orifice** (Controls 0.00 cfs)
  - **5=Grate** (Controls 0.00 cfs)

Summary for Pond 5P: STORMTECH

Inflow Area = 202,987 sf, 0.00% Impervious, Inflow Depth = 1.59" for 2-YEAR event
Inflow = 7.49 cfs @ 12.14 hrs, Volume= 26,879 cf
Outflow = 3.49 cfs @ 12.40 hrs, Volume= 25,352 cf, Atten= 53%, Lag= 15.6 min
Discarded = 0.04 cfs @ 12.40 hrs, Volume= 2,632 cf
Primary = 3.45 cfs @ 12.40 hrs, Volume= 22,720 cf
Routed to Link G : EXIST. 18" CMP

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 566.04' @ 12.40 hrs Surf.Area= 6,043 sf Storage= 8,584 cf

Plug-Flow detention time= 105.9 min calculated for 25,310 cf (94% of inflow)
Center-of-Mass det. time= 75.9 min (901.2 - 825.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	564.00'	5,353 cf	**58.50'W x 103.30'L x 3.50'H Field A** 21,150 cf Overall - 7,768 cf Embedded = 13,382 cf x 40.0% Voids
#2A	564.50'	7,768 cf	**ADS_StormTech RC-750 +Cap** x 168 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 168 Chambers in 12 Rows
		13,121 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	564.00'	**0.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 560.00'
#2	Primary	563.75'	**18.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 563.75' / 555.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	564.60'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	565.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	565.50'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	566.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#7	Primary	566.80'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 12.40 hrs HW=566.04' (Free Discharge)
└**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=3.44 cfs @ 12.40 hrs HW=566.04' TW=0.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 3.44 cfs of 10.56 cfs potential flow)
  └**3=Orifice** (Orifice Controls 1.77 cfs @ 5.07 fps)
  └**4=Orifice** (Orifice Controls 1.41 cfs @ 4.05 fps)
  └**5=Orifice** (Orifice Controls 0.26 cfs @ 2.94 fps)
  └**6=Orifice** (Orifice Controls 0.01 cfs @ 0.68 fps)
└**7=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 6P: LOT 4 BIOBASIN

Inflow Area = 579,275 sf, 0.00% Impervious, Inflow Depth = 1.51" for 2-YEAR event
Inflow = 20.39 cfs @ 12.14 hrs, Volume= 73,098 cf
Outflow = 4.01 cfs @ 12.66 hrs, Volume= 70,720 cf, Atten= 80%, Lag= 30.9 min
Primary = 4.01 cfs @ 12.66 hrs, Volume= 70,720 cf
Routed to Link D : EXIST. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 557.84' @ 12.66 hrs Surf.Area= 19,067 sf Storage= 32,268 cf

Plug-Flow detention time= 169.5 min calculated for 70,720 cf (97% of inflow)
Center-of-Mass det. time= 151.0 min (980.3 - 829.3)

Volume	Invert	Avail.Storage	Storage Description
#1	556.00'	126,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
556.00	16,000	0	0
562.00	26,000	126,000	126,000

Device	Routing	Invert	Outlet Devices
#1	Primary	555.50'	**30.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 555.50' / 555.00' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	556.00'	**6.0" W x 24.0" H Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#3	Device 1	558.00'	**18.0" W x 18.0" H Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#4	Primary	560.50'	**12.0' long x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.01 cfs @ 12.66 hrs HW=557.84' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.01 cfs of 22.97 cfs potential flow)
  - **2=SLOT WEIR** (Orifice Controls 4.01 cfs @ 4.35 fps)
  - **3=SLOT WEIR** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 7P: LOT 81 BIOBASIN

Inflow Area = 363,629 sf, 0.00% Impervious, Inflow Depth = 1.40" for 2-YEAR event
Inflow = 11.26 cfs @ 12.10 hrs, Volume= 42,317 cf
Outflow = 0.52 cfs @ 16.06 hrs, Volume= 30,048 cf, Atten= 95%, Lag= 237.8 min
Primary = 0.52 cfs @ 16.06 hrs, Volume= 30,048 cf
Routed to Reach 1R : Roadside Ditch

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 709.69' @ 16.06 hrs Surf.Area= 18,065 sf Storage= 27,154 cf

Plug-Flow detention time= 484.6 min calculated for 29,998 cf (71% of inflow)
Center-of-Mass det. time= 390.9 min (1,229.2 - 838.2)

Volume	Invert	Avail.Storage	Storage Description
#1	708.00'	100,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
708.00	14,000	0	0
713.00	26,000	100,000	100,000

Device	Routing	Invert	Outlet Devices
#1	Primary	707.00'	**18.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 707.00' / 706.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Device 1	708.00'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	710.10'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	710.40'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	711.90'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.52 cfs @ 16.06 hrs HW=709.69' TW=705.19' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.52 cfs of 11.86 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 0.52 cfs @ 5.95 fps)
  ├**3=Orifice** (Controls 0.00 cfs)
  ├**4=Orifice** (Controls 0.00 cfs)
  └**5=Grate** (Controls 0.00 cfs)

Summary for Pond 8P: LOT 9 BIOBASIN

[44] Hint: Outlet device #2 is below defined storage

Inflow Area = 926,567 sf, 0.00% Impervious, Inflow Depth = 1.46" for 2-YEAR event
Inflow = 5.67 cfs @ 12.71 hrs, Volume= 112,958 cf
Outflow = 5.18 cfs @ 13.10 hrs, Volume= 112,979 cf, Atten= 9%, Lag= 23.0 min
Primary = 5.18 cfs @ 13.10 hrs, Volume= 112,979 cf
Routed to Link E : OFF-SITE SOUTH EAST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 586.53' @ 13.10 hrs Surf.Area= 3,275 sf Storage= 3,913 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 9.0 min (912.3 - 903.3)

Volume	Invert	Avail.Storage	Storage Description
#1	585.00'	14,860 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
585.00	1,830	0	0
589.00	5,600	14,860	14,860

Device	Routing	Invert	Outlet Devices
#1	Primary	582.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 582.00' / 581.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	583.25'	**6.0" Round Underdrain** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 583.25' / 583.25' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	585.00'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	587.00'	**40.0" W x 12.0" H Vert. SLOT WIER** C= 0.600 Limited to weir flow at low heads
#5	Device 1	587.75'	**48.0" W x 48.0" H Vert. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.18 cfs @ 13.10 hrs HW=586.53' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 5.18 cfs of 28.43 cfs potential flow)
  ├─**2=Underdrain** (Barrel Controls 1.34 cfs @ 6.80 fps)
  ├─**3=Orifice** (Orifice Controls 3.84 cfs @ 4.89 fps)
  ├─**4=SLOT WIER** (Controls 0.00 cfs)
  └─**5=Grate** (Controls 0.00 cfs)

Summary for Pond 9P: LOT 13,18,20, 26 BIOSWALES

Inflow Area = 433,232 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 13.08 cfs @ 12.15 hrs, Volume= 47,121 cf
Outflow = 2.26 cfs @ 12.74 hrs, Volume= 47,123 cf, Atten= 83%, Lag= 35.7 min
Discarded = 0.16 cfs @ 12.74 hrs, Volume= 6,946 cf
Primary = 2.10 cfs @ 12.74 hrs, Volume= 40,177 cf
Routed to Pond 8P : LOT 9 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 592.33' @ 12.74 hrs Surf.Area= 1,875 sf Storage= 17,106 cf

Plug-Flow detention time= 90.5 min calculated for 47,045 cf (100% of inflow)
Center-of-Mass det. time= 90.6 min (931.2 - 840.6)

Volume	Invert	Avail.Storage	Storage Description
#1	589.00'	750 cf	**25.00'W x 75.00'L x 1.00'H STONE BASE** 1,875 cf Overall x 40.0% Voids
#2	590.00'	6 cf	**25.00'W x 75.00'L x 1.00'H FILTRATION MEDIA** -Impervious 1,875 cf Overall x 0.3% Voids
#3	591.00'	29,720 cf	**SURFACE POND (Prismatic)** Listed below (Recalc) x 4 -Impervious
		30,476 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
591.00	1,830	0	0
593.00	5,600	7,430	7,430

Device	Routing	Invert	Outlet Devices
#1	Discarded	589.00'	**0.500 in/hr Exfiltration X 4.00 over Surface area** Conductivity to Groundwater Elevation = 585.00'
#2	Primary	588.00'	**18.0" Round Culvert X 4.00** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 588.00' / 586.50' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	589.50'	**3.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	592.25'	**24.0" W x 24.0" H Vert. Grate X 4.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.16 cfs @ 12.74 hrs HW=592.33' (Free Discharge)
└**1=Exfiltration** (Controls 0.16 cfs)

Primary OutFlow Max=2.10 cfs @ 12.74 hrs HW=592.33' TW=586.38' (Dynamic Tailwater)
└**2=Culvert** (Passes 2.10 cfs of 61.39 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 1.55 cfs @ 7.91 fps)
  └**4=Grate** (Orifice Controls 0.55 cfs @ 0.89 fps)

Summary for Pond 10P: LOT 10 BIOBASIN

[44] Hint: Outlet device #2 is below defined storage
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=37)

Inflow Area = 493,335 sf, 0.00% Impervious, Inflow Depth = 1.77" for 2-YEAR event
Inflow = 20.02 cfs @ 12.14 hrs, Volume= 72,779 cf
Outflow = 3.58 cfs @ 12.67 hrs, Volume= 72,781 cf, Atten= 82%, Lag= 31.9 min
Primary = 3.58 cfs @ 12.67 hrs, Volume= 72,781 cf
Routed to Pond 8P : LOT 9 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 612.67' @ 12.67 hrs Surf.Area= 18,335 sf Storage= 27,459 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 83.4 min (896.4 - 813.0)

Volume	Invert	Avail.Storage	Storage Description
#1	611.00'	101,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
611.00	14,600	0	0
616.00	25,800	101,000	101,000

Device	Routing	Invert	Outlet Devices
#1	Primary	610.00'	**24.0" Round Culvert** L= 200.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 610.00' / 593.00' S= 0.0850 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	609.25'	**6.0" Round Underdrain** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 609.25' / 609.25' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	611.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	612.50'	**10.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	614.00'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.57 cfs @ 12.67 hrs HW=612.67' TW=586.31' (Dynamic Tailwater)
└**1=Culvert** (Passes 3.57 cfs of 19.53 cfs potential flow)
  ├**2=Underdrain** (Outlet Controls 1.31 cfs @ 6.66 fps)
  ├**3=Orifice** (Orifice Controls 1.94 cfs @ 5.56 fps)
  ├**4=Orifice** (Orifice Controls 0.32 cfs @ 1.39 fps)
  └**5=Grate** (Controls 0.00 cfs)

Summary for Pond 11P: STORMTECH LOT 30, 37 & 38

Inflow Area = 456,208 sf, 0.00% Impervious, Inflow Depth = 1.37" for 2-YEAR event
Inflow = 14.52 cfs @ 12.15 hrs, Volume= 52,177 cf
Outflow = 1.72 cfs @ 13.07 hrs, Volume= 49,646 cf, Atten= 88%, Lag= 55.6 min
Discarded = 0.35 cfs @ 13.07 hrs, Volume= 22,360 cf
Primary = 1.37 cfs @ 13.07 hrs, Volume= 27,286 cf
Routed to Reach 6R : Pipe Network

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 641.58' @ 13.07 hrs Surf.Area= 21,799 sf Storage= 23,794 cf
Flood Elev= 643.50' Surf.Area= 21,799 sf Storage= 47,831 cf

Plug-Flow detention time= 241.3 min calculated for 49,646 cf (95% of inflow)
Center-of-Mass det. time= 214.8 min (1,051.8 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	640.00'	18,977 cf	**115.50'W x 188.74'L x 3.50'H Field A** 76,297 cf Overall - 28,853 cf Embedded = 47,444 cf x 40.0% Voids
#2A	640.50'	28,853 cf	**ADS_StormTech RC-750 +Cap** x 624 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 624 Chambers in 24 Rows
		47,831 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	640.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 636.00'
#2	Primary	639.75'	**24.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 639.75' / 639.25' S= 0.0083 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	640.60'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	641.50'	**10.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	642.00'	**6.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	642.25'	**14.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#7	Device 2	642.50'	**14.0" Vert. Orifice X 3.00** C= 0.600 Limited to weir flow at low heads
#8	Primary	643.00'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.35 cfs @ 13.07 hrs HW=641.58' (Free Discharge)
└**1=Exfiltration** (Controls 0.35 cfs)

Primary OutFlow Max=1.37 cfs @ 13.07 hrs HW=641.58' TW=638.26' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.37 cfs of 12.42 cfs potential flow)
  └**3=Orifice** (Orifice Controls 1.35 cfs @ 3.86 fps)
  └**4=Orifice** (Orifice Controls 0.02 cfs @ 0.95 fps)
  └**5=Orifice** (Controls 0.00 cfs)
  └**6=Orifice** (Controls 0.00 cfs)
  └**7=Orifice** (Controls 0.00 cfs)
└**8=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 13P: BIOBASIN - MCR

Inflow Area = 20,130 sf, 0.00% Impervious, Inflow Depth = 2.10" for 2-YEAR event
Inflow = 1.08 cfs @ 12.09 hrs, Volume= 3,522 cf
Outflow = 0.17 cfs @ 12.58 hrs, Volume= 3,454 cf, Atten= 84%, Lag= 29.4 min
Primary = 0.17 cfs @ 12.58 hrs, Volume= 3,454 cf
Routed to Reach 4R : STREAM CHANNEL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 612.64' @ 12.58 hrs Surf.Area= 2,693 sf Storage= 1,572 cf

Plug-Flow detention time= 142.2 min calculated for 3,448 cf (98% of inflow)
Center-of-Mass det. time= 131.0 min (923.3 - 792.3)

Volume	Invert	Avail.Storage	Storage Description
#1	612.00'	10,050 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
612.00	2,200	0	0
615.00	4,500	10,050	10,050

Device	Routing	Invert	Outlet Devices
#1	Primary	610.50'	**30.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 610.50' / 610.00' S= 0.0125 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	612.00'	**3.0" Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#3	Device 1	613.00'	**6.0" Vert. SLOT WEIR** C= 0.600 Limited to weir flow at low heads
#4	Primary	613.75'	**8.0' long x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.17 cfs @ 12.58 hrs HW=612.64' TW=567.34' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.17 cfs of 20.25 cfs potential flow)
  └**2=SLOT WEIR** (Orifice Controls 0.17 cfs @ 3.46 fps)
  └**3=SLOT WEIR** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 14P: SMALL BASIN

Inflow Area = 860,065 sf, 0.00% Impervious, Inflow Depth > 0.72" for 2-YEAR event
Inflow = 4.74 cfs @ 12.10 hrs, Volume= 51,541 cf
Outflow = 3.52 cfs @ 12.21 hrs, Volume= 51,299 cf, Atten= 26%, Lag= 6.5 min
Primary = 3.52 cfs @ 12.21 hrs, Volume= 51,299 cf
Routed to Link B : OFF-SITE SOUTH

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 616.74' @ 12.21 hrs Surf.Area= 3,584 sf Storage= 2,403 cf

Plug-Flow detention time= 20.1 min calculated for 51,214 cf (99% of inflow)
Center-of-Mass det. time= 16.5 min (972.5 - 956.0)

Volume	Invert	Avail.Storage	Storage Description
#1	616.00'	18,700 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
616.00	2,950	0	0
620.00	6,400	18,700	18,700

Device	Routing	Invert	Outlet Devices
#1	Primary	616.00'	**30.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 616.00' / 615.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf

Primary OutFlow Max=3.51 cfs @ 12.21 hrs HW=616.73' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.51 cfs @ 2.92 fps)

Summary for Pond 15P: LOT 1 BIOBASIN

Inflow Area = 478,407 sf, 0.00% Impervious, Inflow Depth = 1.51" for 2-YEAR event
Inflow = 16.84 cfs @ 12.14 hrs, Volume= 60,369 cf
Outflow = 0.33 cfs @ 20.20 hrs, Volume= 21,034 cf, Atten= 98%, Lag= 483.5 min
Primary = 0.33 cfs @ 20.20 hrs, Volume= 21,034 cf
Routed to Link I : EXIST. CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 571.11' @ 20.20 hrs Surf.Area= 23,799 sf Storage= 46,826 cf

Plug-Flow detention time= 554.4 min calculated for 20,999 cf (35% of inflow)
Center-of-Mass det. time= 428.3 min (1,257.6 - 829.3)

Volume	Invert	Avail.Storage	Storage Description
#1	569.00'	136,208 cf	**POND (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
569.00	20,630	0	0
574.50	28,900	136,208	136,208

Device	Routing	Invert	Outlet Devices
#1	Primary	568.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 568.00' / 567.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	569.00'	**3.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	571.20'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	572.20'	**12.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	573.80'	**48.0" x 48.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.33 cfs @ 20.20 hrs HW=571.11' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.33 cfs of 21.96 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.33 cfs @ 6.78 fps)
  ├─**3=Orifice** (Controls 0.00 cfs)
  ├─**4=Orifice** (Controls 0.00 cfs)
  └─**5=Grate** (Controls 0.00 cfs)

Summary for Pond 16P: STORMTECH

Inflow Area = 83,048 sf, 0.00% Impervious, Inflow Depth = 1.59" for 2-YEAR event
Inflow = 3.48 cfs @ 12.09 hrs, Volume= 10,997 cf
Outflow = 1.24 cfs @ 12.39 hrs, Volume= 10,162 cf, Atten= 64%, Lag= 17.6 min
Discarded = 0.02 cfs @ 12.39 hrs, Volume= 1,564 cf
Primary = 1.22 cfs @ 12.39 hrs, Volume= 8,598 cf
Routed to Pond 7P : LOT 81 BIOBASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 713.61' @ 12.39 hrs Surf.Area= 3,666 sf Storage= 4,011 cf

Plug-Flow detention time= 132.2 min calculated for 10,162 cf (92% of inflow)
Center-of-Mass det. time= 93.1 min (914.7 - 821.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	712.00'	3,283 cf	**49.00'W x 74.82'L x 3.50'H Field A** 12,831 cf Overall - 4,624 cf Embedded = 8,207 cf x 40.0% Voids
#2A	712.50'	4,624 cf	**ADS_StormTech RC-750 +Cap** x 100 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 100 Chambers in 10 Rows
		7,907 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	712.00'	**0.200 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 708.00'
#2	Primary	711.75'	**18.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 711.75' / 703.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	712.60'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	713.25'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	714.00'	**8.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	715.40'	**24.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 12.39 hrs HW=713.61' (Free Discharge)
└**1=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.21 cfs @ 12.39 hrs HW=713.61' TW=709.10' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.21 cfs of 8.96 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 0.82 cfs @ 4.19 fps)
  ├**4=Orifice** (Orifice Controls 0.39 cfs @ 2.04 fps)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 19P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A1 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 20P: BIOBASIN

Inflow Area = 282,337 sf, 0.00% Impervious, Inflow Depth = 1.44" for 2-YEAR event
Inflow = 9.46 cfs @ 12.15 hrs, Volume= 33,930 cf
Outflow = 0.55 cfs @ 15.07 hrs, Volume= 32,494 cf, Atten= 94%, Lag= 175.4 min
Discarded = 0.36 cfs @ 15.07 hrs, Volume= 22,828 cf
Primary = 0.19 cfs @ 15.07 hrs, Volume= 9,666 cf
Routed to Reach 5R : Pipe Network

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 660.50' @ 15.07 hrs Surf.Area= 19,200 sf Storage= 18,136 cf

Plug-Flow detention time= 362.0 min calculated for 32,494 cf (96% of inflow)
Center-of-Mass det. time= 338.4 min (1,171.6 - 833.2)

Volume	Invert	Avail.Storage	Storage Description
#1	658.00'	7,680 cf	**80.00'W x 240.00'L x 1.00'H STONE BASE** 19,200 cf Overall x 40.0% Voids
#2	659.00'	58 cf	**80.00'W x 240.00'L x 1.00'H FILTRATION MEDIA** -Impervious 19,200 cf Overall x 0.3% Voids
#3	660.00'	73,251 cf	**SURFACE POND (Prismatic)** Listed below (Recalc) -Impervious
		80,989 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
660.00	20,326	0	0
663.00	28,508	73,251	73,251

Device	Routing	Invert	Outlet Devices
#1	Discarded	658.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 654.00'
#2	Primary	657.00'	**18.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 657.00' / 656.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	658.00'	**2.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	659.40'	**1.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	661.35'	**24.0" W x 24.0" H Vert. Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.36 cfs @ 15.07 hrs HW=660.50' (Free Discharge)
└**1=Exfiltration** (Controls 0.36 cfs)

Primary OutFlow Max=0.19 cfs @ 15.07 hrs HW=660.50' TW=656.13' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.19 cfs of 14.10 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 0.16 cfs @ 7.48 fps)
  ├**4=Orifice** (Orifice Controls 0.03 cfs @ 4.94 fps)
  └**5=Grate** (Controls 0.00 cfs)

Summary for Pond 21P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A2 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
└**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
└**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 22P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A3 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 23P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 2,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.12 cfs @ 12.09 hrs, Volume= 418 cf
Outflow = 0.01 cfs @ 14.41 hrs, Volume= 418 cf, Atten= 95%, Lag= 139.5 min
Discarded = 0.01 cfs @ 14.41 hrs, Volume= 418 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A4 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.26' @ 14.41 hrs Surf.Area= 375 sf Storage= 206 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 332.3 min (1,092.1 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	364 cf	**2.50'W x 150.00'L x 2.50'H Prismatoid** 938 cf Overall - 29 cf Embedded = 909 cf x 40.0% Voids
#2	400.50'	29 cf	**6.0" Round Pipe Storage** Inside #1 L= 146.0'
		392 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 14.41 hrs HW=401.26' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Pond 24P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage

Inflow Area = 1,500 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.09 cfs @ 12.09 hrs, Volume= 314 cf
Outflow = 0.01 cfs @ 13.62 hrs, Volume= 314 cf, Atten= 94%, Lag= 92.1 min
Discarded = 0.01 cfs @ 13.62 hrs, Volume= 314 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Link A5 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 401.25' @ 13.62 hrs Surf.Area= 250 sf Storage= 136 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 207.9 min (967.7 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	242 cf	**2.50'W x 100.00'L x 2.50'H Prismatoid** 625 cf Overall - 19 cf Embedded = 606 cf x 40.0% Voids
#2	400.50'	19 cf	**6.0" Round Pipe Storage** Inside #1 L= 96.0'
		261 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.750 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow X 6.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 13.62 hrs HW=401.25' (Free Discharge)
1=Exfiltration (Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=0.00' (Dynamic Tailwater)
2=Grate Overflow (Controls 0.00 cfs)

Summary for Pond 25P: STORMTECHS (2)

Inflow Area = 246,790 sf, 0.00% Impervious, Inflow Depth = 1.35" for 2-YEAR event
Inflow = 8.76 cfs @ 12.09 hrs, Volume= 27,740 cf
Outflow = 1.20 cfs @ 12.73 hrs, Volume= 27,258 cf, Atten= 86%, Lag= 38.2 min
Discarded = 0.19 cfs @ 12.73 hrs, Volume= 12,307 cf
Primary = 1.00 cfs @ 12.73 hrs, Volume= 14,951 cf
Routed to Pond 32P : INFILTRATION LEVEL SPREADER

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 501.39' @ 12.73 hrs Surf.Area= 12,420 sf Storage= 11,700 cf
Flood Elev= 503.50' Surf.Area= 12,420 sf Storage= 27,154 cf

Plug-Flow detention time= 197.3 min calculated for 27,258 cf (98% of inflow)
Center-of-Mass det. time= 187.1 min (1,021.2 - 834.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	500.00'	10,877 cf	**77.50'W x 160.26'L x 3.50'H Field A** 43,470 cf Overall - 16,276 cf Embedded = 27,193 cf x 40.0% Voids
#2A	500.50'	16,276 cf	**ADS_StormTech RC-750 +Cap** x 352 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 352 Chambers in 16 Rows
		27,154 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.00'
#2	Primary	499.75'	**18.0" Round Culvert X 2.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 499.75' / 491.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	500.60'	**5.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	501.40'	**9.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	502.00'	**9.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	503.35'	**24.0" Horiz. STANDPIPE X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.19 cfs @ 12.73 hrs HW=501.39' (Free Discharge)
└**1=Exfiltration** (Controls 0.19 cfs)

Primary OutFlow Max=1.00 cfs @ 12.73 hrs HW=501.39' TW=300.32' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.00 cfs of 16.08 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 1.00 cfs @ 3.68 fps)
  ├**4=Orifice** (Controls 0.00 cfs)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 26P: STORMTECHS (2)

Inflow Area = 157,861 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 5.42 cfs @ 12.09 hrs, Volume= 17,170 cf
Outflow = 1.07 cfs @ 12.56 hrs, Volume= 16,960 cf, Atten= 80%, Lag= 28.1 min
Discarded = 0.12 cfs @ 12.56 hrs, Volume= 7,514 cf
Primary = 0.95 cfs @ 12.56 hrs, Volume= 9,446 cf
Routed to Pond 33P : INFILTRATION LEVEL SPREADER

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 501.33' @ 12.56 hrs Surf.Area= 7,709 sf Storage= 6,837 cf
Flood Elev= 503.50' Surf.Area= 7,709 sf Storage= 16,785 cf

Plug-Flow detention time= 181.4 min calculated for 16,960 cf (99% of inflow)
Center-of-Mass det. time= 174.2 min (1,011.1 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	500.00'	6,797 cf	**58.50'W x 131.78'L x 3.50'H Field A** 26,981 cf Overall - 9,988 cf Embedded = 16,994 cf x 40.0% Voids
#2A	500.50'	9,988 cf	**ADS_StormTech RC-750 +Cap** x 216 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 216 Chambers in 12 Rows
		16,785 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.00'
#2	Primary	499.75'	**18.0" Round Culvert X 2.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 499.75' / 491.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	500.60'	**4.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	501.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	502.10'	**7.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	503.40'	**18.0" Horiz. STANDPIPE X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.12 cfs @ 12.56 hrs HW=501.33' (Free Discharge)
└**1=Exfiltration** (Controls 0.12 cfs)

Primary OutFlow Max=0.94 cfs @ 12.56 hrs HW=501.33' TW=297.22' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.94 cfs of 15.49 cfs potential flow)
- **3=Orifice** (Orifice Controls 0.63 cfs @ 3.61 fps)
- **4=Orifice** (Orifice Controls 0.32 cfs @ 1.63 fps)
- **5=Orifice** (Controls 0.00 cfs)
- **6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 27P: STORMTECHS (2)

Inflow Area = 322,438 sf, 0.00% Impervious, Inflow Depth = 0.68" for 2-YEAR event
Inflow = 1.23 cfs @ 12.76 hrs, Volume= 18,270 cf
Outflow = 1.16 cfs @ 13.48 hrs, Volume= 18,271 cf, Atten= 6%, Lag= 42.9 min
Discarded = 0.04 cfs @ 13.48 hrs, Volume= 2,264 cf
Primary = 1.12 cfs @ 13.48 hrs, Volume= 16,007 cf
Routed to Pond 34P : INFILTRATION LEVEL SPREADER

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 501.20' @ 13.48 hrs Surf.Area= 2,672 sf Storage= 2,060 cf
Flood Elev= 503.50' Surf.Area= 2,672 sf Storage= 5,738 cf

Plug-Flow detention time= 54.5 min calculated for 18,241 cf (100% of inflow)
Center-of-Mass det. time= 55.1 min (942.6 - 887.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	500.00'	2,409 cf	**30.00'W x 89.06'L x 3.50'H Field A** 9,351 cf Overall - 3,329 cf Embedded = 6,022 cf x 40.0% Voids
#2A	500.50'	3,329 cf	**ADS_StormTech RC-750 +Cap** x 72 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 72 Chambers in 6 Rows
		5,738 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	500.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 496.00'
#2	Primary	499.75'	**18.0" Round Culvert X 2.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 499.75' / 491.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	500.60'	**6.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	501.40'	**10.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	502.20'	**10.0" Vert. Orifice X 2.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	503.35'	**18.0" Horiz. STANDPIPE X 2.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 13.48 hrs HW=501.20' (Free Discharge)
└**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=1.12 cfs @ 13.48 hrs HW=501.20' TW=300.68' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.12 cfs of 14.33 cfs potential flow)
- **3=Orifice** (Orifice Controls 1.12 cfs @ 2.84 fps)
- **4=Orifice** (Controls 0.00 cfs)
- **5=Orifice** (Controls 0.00 cfs)
- **6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 29P: STORMTECHS (4)

Inflow Area = 322,438 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 11.07 cfs @ 12.09 hrs, Volume= 35,070 cf
Outflow = 1.49 cfs @ 12.76 hrs, Volume= 34,668 cf, Atten= 87%, Lag= 40.2 min
Discarded = 0.26 cfs @ 12.76 hrs, Volume= 16,398 cf
Primary = 1.23 cfs @ 12.76 hrs, Volume= 18,270 cf
Routed to Pond 27P : STORMTECHS (2)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 506.30' @ 12.76 hrs Surf.Area= 16,839 sf Storage= 14,675 cf
Flood Elev= 508.50' Surf.Area= 16,839 sf Storage= 36,891 cf

Plug-Flow detention time= 198.1 min calculated for 34,668 cf (99% of inflow)
Center-of-Mass det. time= 191.3 min (1,028.2 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	505.00'	14,697 cf	**96.50'W x 174.50'L x 3.50'H Field A** 58,936 cf Overall - 22,195 cf Embedded = 36,742 cf x 40.0% Voids
#2A	505.50'	22,195 cf	**ADS_StormTech RC-750 +Cap** x 480 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 480 Chambers in 20 Rows
		36,891 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	505.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 501.00'
#2	Primary	504.75'	**18.0" Round Culvert X 4.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 504.75' / 496.00' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	505.60'	**4.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#4	Device 2	506.40'	**7.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#5	Device 2	507.20'	**7.0" Vert. Orifice X 4.00** C= 0.600 Limited to weir flow at low heads
#6	Device 2	508.35'	**18.0" Horiz. STANDPIPE X 4.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.26 cfs @ 12.76 hrs HW=506.30' (Free Discharge)
└**1=Exfiltration** (Controls 0.26 cfs)

Primary OutFlow Max=1.23 cfs @ 12.76 hrs HW=506.30' TW=501.07' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.23 cfs of 30.48 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 1.23 cfs @ 3.52 fps)
  ├**4=Orifice** (Controls 0.00 cfs)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 30P: STORMTECH

Inflow Area = 31,267 sf, 0.00% Impervious, Inflow Depth = 1.31" for 2-YEAR event
Inflow = 1.07 cfs @ 12.09 hrs, Volume= 3,401 cf
Outflow = 0.11 cfs @ 13.02 hrs, Volume= 3,384 cf, Atten= 89%, Lag= 55.6 min
Discarded = 0.03 cfs @ 13.02 hrs, Volume= 1,644 cf
Primary = 0.09 cfs @ 13.02 hrs, Volume= 1,740 cf
Routed to Reach 7R : Diversion Swale

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 694.87' @ 13.02 hrs Surf.Area= 1,680 sf Storage= 1,499 cf
Flood Elev= 697.00' Surf.Area= 1,680 sf Storage= 3,572 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 212.5 min (1,049.4 - 836.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	693.50'	1,538 cf	**20.50'W x 81.94'L x 3.50'H Field A** 5,879 cf Overall - 2,035 cf Embedded = 3,844 cf x 40.0% Voids
#2A	694.00'	2,035 cf	**ADS_StormTech RC-750 +Cap** x 44 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 44 Chambers in 4 Rows
		3,572 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	693.50'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 689.50'
#2	Primary	693.25'	**15.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 693.25' / 684.50' S= 0.1458 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Device 2	694.10'	**2.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 2	695.00'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 2	695.50'	**5.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#6	Device 2	696.80'	**15.0" Horiz. STANDPIPE** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 13.02 hrs HW=694.87' (Free Discharge)
└**1=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=0.09 cfs @ 13.02 hrs HW=694.87' TW=669.57' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.09 cfs of 5.88 cfs potential flow)
  ├**3=Orifice** (Orifice Controls 0.09 cfs @ 3.98 fps)
  ├**4=Orifice** (Controls 0.00 cfs)
  ├**5=Orifice** (Controls 0.00 cfs)
  └**6=STANDPIPE** (Controls 0.00 cfs)

Summary for Pond 32P: INFILTRATION LEVEL SPREADER

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 246,790 sf, 0.00% Impervious, Inflow Depth = 0.73" for 2-YEAR event
Inflow = 1.00 cfs @ 12.73 hrs, Volume= 14,951 cf
Outflow = 1.02 cfs @ 12.95 hrs, Volume= 13,427 cf, Atten= 0%, Lag= 13.1 min
Discarded = 0.05 cfs @ 12.95 hrs, Volume= 2,583 cf
Primary = 0.98 cfs @ 12.95 hrs, Volume= 10,844 cf
Routed to Link A2 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 300.68' @ 12.95 hrs Surf.Area= 2,339 sf Storage= 2,476 cf
Flood Elev= 301.50' Surf.Area= 3,513 sf Storage= 4,288 cf

Plug-Flow detention time= 103.3 min calculated for 13,427 cf (90% of inflow)
Center-of-Mass det. time= 71.4 min (963.0 - 891.5)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,331 cf	**3.50'W x 200.00'L x 5.25'H Stone Trench** 3,675 cf Overall - 346 cf Embedded = 3,329 cf x 40.0% Voids
#2	295.50'	346 cf	**18.0" Round Pipe Storage** Inside #1 L= 196.0'
#3	300.00'	2,610 cf	**3.50'W x 200.00'L x 1.50'H Prismatoid Surface Storage Z=3.3**
		4,288 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	294.75'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 292.00'
#2	Primary	300.67'	**204.0' long + 9.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.05 cfs @ 12.95 hrs HW=300.68' (Free Discharge)
└**1=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.98 cfs @ 12.95 hrs HW=300.68' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.98 cfs @ 0.33 fps)

Summary for Pond 33P: INFILTRATION LEVEL SPREADER

Inflow Area = 157,861 sf, 0.00% Impervious, Inflow Depth = 0.72" for 2-YEAR event
Inflow = 0.95 cfs @ 12.56 hrs, Volume= 9,446 cf
Outflow = 0.75 cfs @ 13.32 hrs, Volume= 7,693 cf, Atten= 20%, Lag= 45.3 min
Discarded = 0.06 cfs @ 13.30 hrs, Volume= 3,007 cf
Primary = 0.70 cfs @ 13.32 hrs, Volume= 4,686 cf
Routed to Link A3 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 300.68' @ 13.30 hrs Surf.Area= 2,907 sf Storage= 3,083 cf
Flood Elev= 301.50' Surf.Area= 4,358 sf Storage= 5,342 cf

Plug-Flow detention time= 195.7 min calculated for 7,693 cf (81% of inflow)
Center-of-Mass det. time= 148.5 min (1,021.8 - 873.2)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,664 cf	**3.50'W x 250.00'L x 5.25'H Stone Trench** 4,594 cf Overall - 435 cf Embedded = 4,159 cf x 40.0% Voids
#2	295.50'	435 cf	**18.0" Round Pipe Storage** Inside #1 L= 246.0'
#3	300.00'	3,244 cf	**3.50'W x 250.00'L x 1.50'H Prismatoid Surface Storage Z=3.3**
		5,342 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	294.75'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 292.00'
#2	Primary	300.67'	**254.0' long + 9.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.06 cfs @ 13.30 hrs HW=300.68' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.61 cfs @ 13.32 hrs HW=300.68' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.61 cfs @ 0.27 fps)

Summary for Pond 34P: INFILTRATION LEVEL SPREADER

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area = 322,438 sf, 0.00% Impervious, Inflow Depth = 0.60" for 2-YEAR event
Inflow = 1.12 cfs @ 13.48 hrs, Volume= 16,007 cf
Outflow = 1.37 cfs @ 13.46 hrs, Volume= 14,234 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.06 cfs @ 13.45 hrs, Volume= 2,980 cf
Primary = 1.31 cfs @ 13.46 hrs, Volume= 11,254 cf
Routed to Link A4 : OFF-SITE WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 300.68' @ 13.45 hrs Surf.Area= 2,913 sf Storage= 3,091 cf
Flood Elev= 301.50' Surf.Area= 4,358 sf Storage= 5,342 cf

Plug-Flow detention time= 108.3 min calculated for 14,234 cf (89% of inflow)
Center-of-Mass det. time= 80.7 min (983.0 - 902.3)

Volume	Invert	Avail.Storage	Storage Description
#1	294.75'	1,664 cf	**3.50'W x 250.00'L x 5.25'H Stone Trench** 4,594 cf Overall - 435 cf Embedded = 4,159 cf x 40.0% Voids
#2	295.50'	435 cf	**18.0" Round Pipe Storage** Inside #1 L= 246.0'
#3	300.00'	3,244 cf	**3.50'W x 250.00'L x 1.50'H Prismatoid Surface Storage Z=3.3**
		5,342 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	294.75'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 292.00'
#2	Primary	300.67'	**304.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Discarded OutFlow Max=0.06 cfs @ 13.45 hrs HW=300.68' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=1.15 cfs @ 13.46 hrs HW=300.68' TW=0.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 1.15 cfs @ 0.31 fps)

Summary for Pond 36P: INFILTRATION TRENCH

[92] Warning: Device #2 is above defined storage
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=24)

Inflow Area = 8,000 sf,100.00% Impervious, Inflow Depth = 2.51" for 2-YEAR event
Inflow = 0.47 cfs @ 12.09 hrs, Volume= 1,673 cf
Outflow = 0.04 cfs @ 13.10 hrs, Volume= 1,673 cf, Atten= 92%, Lag= 61.0 min
Discarded = 0.04 cfs @ 13.10 hrs, Volume= 1,673 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach 36R : Forested Channel

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 400.83' @ 13.10 hrs Surf.Area= 1,775 sf Storage= 650 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 137.2 min (897.0 - 759.8)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	1,720 cf	**2.50'W x 710.00'L x 2.50'H Prismatoid** 4,438 cf Overall - 139 cf Embedded = 4,299 cf x 40.0% Voids
#2	400.50'	139 cf	**6.0" Round Pipe Storage** Inside #1 L= 706.0'
		1,858 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	400.00'	**0.750 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 396.00'
#2	Primary	404.50'	**6.0" Horiz. Grate Overflow X 10.00** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 13.10 hrs HW=400.83' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=400.00' TW=667.00' (Dynamic Tailwater)
↑—**2=Grate Overflow** (Controls 0.00 cfs)

Summary for Link A1: OFF-SITE WEST

Inflow Area = 71,102 sf, 17.58% Impervious, Inflow Depth = 1.09" for 2-YEAR event
Inflow = 1.46 cfs @ 12.25 hrs, Volume= 6,432 cf
Primary = 1.46 cfs @ 12.25 hrs, Volume= 6,432 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A2: OFF-SITE WEST

Inflow Area = 537,354 sf, 0.37% Impervious, Inflow Depth = 0.60" for 2-YEAR event
Inflow = 3.84 cfs @ 12.16 hrs, Volume= 26,668 cf
Primary = 3.84 cfs @ 12.16 hrs, Volume= 26,668 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A3: OFF-SITE WEST

Inflow Area = 258,944 sf, 0.77% Impervious, Inflow Depth = 0.34" for 2-YEAR event
Inflow = 0.81 cfs @ 13.32 hrs, Volume= 7,406 cf
Primary = 0.81 cfs @ 13.32 hrs, Volume= 7,406 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A4: OFF-SITE WEST

Inflow Area = 571,522 sf, 0.35% Impervious, Inflow Depth = 0.37" for 2-YEAR event
Inflow = 1.56 cfs @ 13.46 hrs, Volume= 17,431 cf
Primary = 1.56 cfs @ 13.46 hrs, Volume= 17,431 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link A5: OFF-SITE WEST

Inflow Area = 321,072 sf, 0.47% Impervious, Inflow Depth = 0.17" for 2-YEAR event
Inflow = 0.42 cfs @ 12.44 hrs, Volume= 4,601 cf
Primary = 0.42 cfs @ 12.44 hrs, Volume= 4,601 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link B: OFF-SITE SOUTH

Inflow Area = 1,406,402 sf, 0.57% Impervious, Inflow Depth > 0.62" for 2-YEAR event
Inflow = 6.73 cfs @ 12.27 hrs, Volume= 72,520 cf
Primary = 6.73 cfs @ 12.27 hrs, Volume= 72,520 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link C: EXIST. HEADWALL

Inflow Area = 3,212,572 sf, 0.00% Impervious, Inflow Depth > 0.98" for 2-YEAR event
Inflow = 21.38 cfs @ 12.69 hrs, Volume= 261,603 cf
Primary = 21.38 cfs @ 12.69 hrs, Volume= 261,603 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link D: EXIST. CB

Inflow Area = 1,002,620 sf, 0.00% Impervious, Inflow Depth > 1.20" for 2-YEAR event
Inflow = 8.55 cfs @ 12.58 hrs, Volume= 100,499 cf
Primary = 8.55 cfs @ 12.58 hrs, Volume= 100,499 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link E: OFF-SITE SOUTH EAST

Inflow Area = 1,111,968 sf, 0.00% Impervious, Inflow Depth = 1.37" for 2-YEAR event
Inflow = 6.67 cfs @ 12.17 hrs, Volume= 126,806 cf
Primary = 6.67 cfs @ 12.17 hrs, Volume= 126,806 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link F: EXIST. 18" CMP

Inflow Area = 146,832 sf, 0.00% Impervious, Inflow Depth = 1.77" for 2-YEAR event
Inflow = 3.86 cfs @ 12.31 hrs, Volume= 21,632 cf
Primary = 3.86 cfs @ 12.31 hrs, Volume= 21,632 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link G: EXIST. 18" CMP

Inflow Area = 668,250 sf, 0.00% Impervious, Inflow Depth > 1.92" for 2-YEAR event
Inflow = 5.98 cfs @ 12.34 hrs, Volume= 107,041 cf
Primary = 5.98 cfs @ 12.34 hrs, Volume= 107,041 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link H: EXIST. 12" CMP

Inflow Area = 443,972 sf, 0.00% Impervious, Inflow Depth > 2.24" for 2-YEAR event
Inflow = 3.68 cfs @ 12.10 hrs, Volume= 82,994 cf
Primary = 3.68 cfs @ 12.10 hrs, Volume= 82,994 cf, Atten= 0%, Lag= 0.0 min
Routed to Link G : EXIST. 18" CMP

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link I: EXIST. CB

Inflow Area = 537,249 sf, 0.00% Impervious, Inflow Depth > 0.61" for 2-YEAR event
Inflow = 2.09 cfs @ 12.10 hrs, Volume= 27,116 cf
Primary = 2.09 cfs @ 12.10 hrs, Volume= 27,116 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Summary for Link J: OFF-SITE EAST

Inflow Area = 576 sf, 0.00% Impervious, Inflow Depth = 0.75" for 2-YEAR event
Inflow = 0.01 cfs @ 12.16 hrs, Volume= 36 cf
Primary = 0.01 cfs @ 12.16 hrs, Volume= 36 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=2.12"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=2.82 cfs 12,217 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=1.46"
Tc=10.0 min CN=72 Runoff=9.46 cfs 35,110 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=0.92"
Tc=10.0 min CN=63 Runoff=1.81 cfs 7,578 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=0.86"
Flow Length=538' Tc=10.2 min CN=62 Runoff=4.11 cfs 17,799 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.17 cfs 628 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=0.62"
Tc=10.0 min CN=57 Runoff=3.10 cfs 16,470 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.13 cfs 471 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=1.60"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.02 cfs 77 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=20.14 cfs 63,711 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=9.86 cfs 31,192 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=2.73"
Tc=6.0 min CN=88 Runoff=2.70 cfs 8,631 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=13.04 cfs 41,264 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=1.14"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=10.37 cfs 48,373 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=98 Runoff=0.70 cfs 2,510 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=86 Runoff=8.11 cfs 25,786 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=2.46"
Tc=10.0 min CN=85 Runoff=26.00 cfs 93,439 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=2.55"
Tc=10.0 min CN=86 Runoff=16.63 cfs 59,910 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=2.37"
Tc=6.0 min CN=84 Runoff=1.95 cfs 6,178 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=1.60"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=40.05 cfs 275,869 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=87 Runoff=15.02 cfs 47,881 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=90 Runoff=40.36 cfs 130,657 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=86 Runoff=18.74 cfs 59,537 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=2.73"
Tc=6.0 min CN=88 Runoff=5.90 cfs 18,886 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=3.32"
Tc=6.0 min CN=94 Runoff=1.66 cfs 5,577 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=1.74"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=9.93 cfs 61,334 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=2.64"
Tc=10.0 min CN=87 Runoff=35.23 cfs 127,279 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=1.81"
Tc=10.0 min CN=77 Runoff=7.74 cfs 27,995 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=2.37"
Tc=10.0 min CN=84 Runoff=23.85 cfs 85,603 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=2.73"
Tc=10.0 min CN=88 Runoff=19.95 cfs 72,343 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=3.32"
Tc=10.0 min CN=94 Runoff=12.79 cfs 48,539 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=74 Runoff=0.32 cfs 1,042 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=3.32"
Tc=10.0 min CN=94 Runoff=10.15 cfs 38,507 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=74 Runoff=0.88 cfs 2,832 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=2.73"
Tc=10.0 min CN=88 Runoff=12.73 cfs 46,161 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=3.22"
Tc=6.0 min CN=93 Runoff=30.18 cfs 100,210 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=2.55"
Tc=6.0 min CN=86 Runoff=4.71 cfs 14,961 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=2.64"
Tc=10.0 min CN=87 Runoff=29.10 cfs 105,116 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=2.29"
Tc=6.0 min CN=83 Runoff=3.55 cfs 11,210 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.28' Max Vel=4.99 fps Inflow=1.30 cfs 51,944 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=1.30 cfs 51,869 cf

Reach 2R: Avg. Flow Depth=0.32' Max Vel=3.46 fps Inflow=1.30 cfs 51,869 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=1.30 cfs 51,612 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.47' Max Vel=5.98 fps Inflow=8.41 cfs 170,424 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=8.40 cfs 170,339 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.53' Max Vel=4.29 fps Inflow=9.31 cfs 227,453 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=9.30 cfs 227,132 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.14' Max Vel=2.84 fps Inflow=0.23 cfs 14,170 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=0.23 cfs 14,142 cf

Reach 6R: Pipe Network Avg. Flow Depth=0.57' Max Vel=10.53 fps Inflow=7.79 cfs 78,829 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=7.79 cfs 78,807 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.20' Max Vel=0.67 fps Inflow=0.51 cfs 4,257 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=0.49 cfs 4,257 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.08' Max Vel=2.37 fps Inflow=0.49 cfs 4,257 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=0.47 cfs 4,257 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=632.16' Storage=23,310 cf Inflow=17.07 cfs 173,031 cf
Outflow=8.41 cfs 170,424 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=662.75' Storage=65,348 cf Inflow=40.36 cfs 130,657 cf
Outflow=6.38 cfs 125,150 cf

Pond 3P: STORMTECH Peak Elev=566.95' Storage=8,480 cf Inflow=10.15 cfs 38,507 cf
Discarded=0.04 cfs 2,283 cf Primary=7.53 cfs 35,145 cf Outflow=7.57 cfs 37,427 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=568.39' Storage=57,518 cf Inflow=30.18 cfs 100,210 cf
Outflow=5.99 cfs 111,151 cf

Pond 5P: STORMTECH Peak Elev=567.06' Storage=12,052 cf Inflow=12.73 cfs 46,161 cf
Discarded=0.05 cfs 2,875 cf Primary=9.23 cfs 41,700 cf Outflow=9.28 cfs 44,575 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=558.87' Storage=52,699 cf Inflow=35.23 cfs 127,279 cf
Outflow=10.37 cfs 124,497 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=710.73' Storage=47,233 cf Inflow=20.72 cfs 75,850 cf
Outflow=1.30 cfs 51,944 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=588.00' Storage=9,726 cf Inflow=20.37 cfs 198,485 cf
Outflow=19.90 cfs 198,509 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=592.75' Storage=25,050 cf Inflow=23.85 cfs 85,603 cf
Discarded=0.17 cfs 8,030 cf Primary=10.67 cfs 77,579 cf Outflow=10.84 cfs 85,610 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=613.49' Storage=43,219 cf Inflow=32.74 cfs 120,883 cf
Outflow=9.91 cfs 120,905 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=642.59' Storage=39,153 cf Inflow=26.00 cfs 93,439 cf
Discarded=0.42 cfs 24,862 cf Primary=7.58 cfs 64,687 cf Outflow=7.99 cfs 89,549 cf

Pond 13P: BIOBASIN - MCR Peak Elev=612.98' Storage=2,525 cf Inflow=1.66 cfs 5,577 cf
Outflow=0.22 cfs 5,503 cf

Pond 14P: SMALL BASIN Peak Elev=617.24' Storage=4,337 cf Inflow=9.61 cfs 104,593 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=9.26 cfs 104,097 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=571.89' Storage=65,873 cf Inflow=29.10 cfs 105,116 cf
Outflow=2.02 cfs 59,096 cf

Pond 16P: STORMTECH Peak Elev=714.31' Storage=5,841 cf Inflow=5.90 cfs 18,886 cf
Discarded=0.03 cfs 1,700 cf Primary=2.89 cfs 16,313 cf Outflow=2.92 cfs 18,013 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 20P: BIOBASIN Peak Elev=661.34' Storage=37,496 cf Inflow=16.63 cfs 59,910 cf
Discarded=0.41 cfs 28,606 cf Primary=0.23 cfs 14,170 cf Outflow=0.63 cfs 42,776 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=402.21' Storage=348 cf Inflow=0.17 cfs 628 cf
Discarded=0.01 cfs 508 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 508 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=402.20' Storage=231 cf Inflow=0.13 cfs 471 cf
Discarded=0.01 cfs 470 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 470 cf

Pond 25P: STORMTECHS (2) Peak Elev=502.20' Storage=19,203 cf Inflow=15.74 cfs 49,895 cf
Discarded=0.22 cfs 13,552 cf Primary=4.64 cfs 35,246 cf Outflow=4.86 cfs 48,798 cf

Pond 26P: STORMTECHS (2) Peak Elev=502.07' Storage=11,163 cf Inflow=9.86 cfs 31,192 cf
Discarded=0.14 cfs 8,222 cf Primary=3.08 cfs 22,405 cf Outflow=3.22 cfs 30,627 cf

Pond 27P: STORMTECHS (2) Peak Elev=502.12' Storage=3,887 cf Inflow=5.26 cfs 44,371 cf
Discarded=0.05 cfs 2,483 cf Primary=5.01 cfs 41,674 cf Outflow=5.06 cfs 44,157 cf

Pond 29P: STORMTECHS (4) Peak Elev=507.11' Storage=24,960 cf Inflow=20.14 cfs 63,711 cf
Discarded=0.30 cfs 18,094 cf Primary=5.26 cfs 44,371 cf Outflow=5.56 cfs 62,465 cf

Pond 30P: STORMTECH Peak Elev=695.68' Storage=2,484 cf Inflow=1.95 cfs 6,178 cf
Discarded=0.03 cfs 1,825 cf Primary=0.51 cfs 4,257 cf Outflow=0.54 cfs 6,081 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.71' Storage=2,522 cf Inflow=4.64 cfs 35,246 cf
Discarded=0.05 cfs 2,822 cf Primary=4.90 cfs 30,716 cf Outflow=4.95 cfs 33,538 cf

Pond 33P: INFILTRATION LEVEL Peak Elev=300.70' Storage=3,135 cf Inflow=3.08 cfs 22,405 cf
Discarded=0.06 cfs 3,441 cf Primary=4.59 cfs 16,916 cf Outflow=4.64 cfs 20,357 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.72' Storage=3,160 cf Inflow=5.01 cfs 41,674 cf
Discarded=0.06 cfs 3,448 cf Primary=8.56 cfs 36,128 cf Outflow=8.62 cfs 39,576 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=401.45' Storage=1,116 cf Inflow=0.70 cfs 2,510 cf
Discarded=0.04 cfs 2,512 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 2,512 cf

Link A1: OFF-SITE WEST Inflow=2.82 cfs 12,217 cf
Primary=2.82 cfs 12,217 cf

Link A2: OFF-SITE WEST Inflow=11.14 cfs 65,826 cf
Primary=11.14 cfs 65,826 cf

Link A3: OFF-SITE WEST Inflow=5.67 cfs 24,494 cf
Primary=5.67 cfs 24,494 cf

Link A4: OFF-SITE WEST Inflow=10.27 cfs 53,927 cf
Primary=10.27 cfs 53,927 cf

Link A5: OFF-SITE WEST Inflow=3.10 cfs 16,470 cf
Primary=3.10 cfs 16,470 cf

Link B: OFF-SITE SOUTH Inflow=17.89 cfs 156,726 cf
Primary=17.89 cfs 156,726 cf

Link C: EXIST. HEADWALL Inflow=49.26 cfs 503,002 cf
Primary=49.26 cfs 503,002 cf

Link D: EXIST. CB Inflow=20.30 cfs 185,830 cf
Primary=20.30 cfs 185,830 cf

Link E: OFF-SITE SOUTH EAST Inflow=22.68 cfs 226,504 cf
Primary=22.68 cfs 226,504 cf

Link F: EXIST. 18" CMP Inflow=7.71 cfs 36,186 cf
Primary=7.71 cfs 36,186 cf

Link G: EXIST. 18" CMP Inflow=16.71 cfs 170,643 cf
Primary=16.71 cfs 170,643 cf

Link H: EXIST. 12" CMP Inflow=7.30 cfs 126,111 cf
Primary=7.30 cfs 126,111 cf

Link I: EXIST. CB Inflow=3.81 cfs 70,307 cf
Primary=3.81 cfs 70,307 cf

Link J: OFF-SITE EAST Inflow=0.02 cfs 77 cf
Primary=0.02 cfs 77 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 1,754,764 cf Average Runoff Depth = 2.14"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=2.97"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=3.95 cfs 17,089 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=2.18"
Tc=10.0 min CN=72 Runoff=14.47 cfs 52,482 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=1.50"
Tc=10.0 min CN=63 Runoff=3.20 cfs 12,354 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=1.43"
Flow Length=538' Tc=10.2 min CN=62 Runoff=7.48 cfs 29,363 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.22 cfs 791 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=1.09"
Tc=10.0 min CN=57 Runoff=6.82 cfs 29,132 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.16 cfs 593 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=2.35"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.03 cfs 113 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=27.43 cfs 87,384 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=13.43 cfs 42,782 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=3.65"
Tc=6.0 min CN=88 Runoff=3.56 cfs 11,544 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=17.77 cfs 56,597 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=1.79"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=17.02 cfs 75,600 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=4.74"
Tc=6.0 min CN=98 Runoff=0.87 cfs 3,162 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=86 Runoff=10.88 cfs 34,920 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=3.35"
Tc=10.0 min CN=85 Runoff=35.17 cfs 127,342 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=3.45"
Tc=10.0 min CN=86 Runoff=22.33 cfs 81,133 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=3.25"
Tc=6.0 min CN=84 Runoff=2.66 cfs 8,474 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=2.35"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=59.90 cfs 405,828 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=3.55"
Tc=6.0 min CN=87 Runoff=19.99 cfs 64,439 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=3.86"
Tc=6.0 min CN=90 Runoff=52.59 cfs 172,632 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=86 Runoff=25.13 cfs 80,628 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=3.65"
Tc=6.0 min CN=88 Runoff=7.80 cfs 25,260 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=4.29"
Tc=6.0 min CN=94 Runoff=2.11 cfs 7,194 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=2.52"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=14.54 cfs 88,869 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=3.55"
Tc=10.0 min CN=87 Runoff=46.95 cfs 171,294 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=2.61"
Tc=10.0 min CN=77 Runoff=11.22 cfs 40,267 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=3.25"
Tc=10.0 min CN=84 Runoff=32.53 cfs 117,411 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=3.65"
Tc=10.0 min CN=88 Runoff=26.39 cfs 96,760 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=4.29"
Tc=10.0 min CN=94 Runoff=16.27 cfs 62,613 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=74 Runoff=0.48 cfs 1,533 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=4.29"
Tc=10.0 min CN=94 Runoff=12.90 cfs 49,672 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=74 Runoff=1.31 cfs 4,166 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=3.65"
Tc=10.0 min CN=88 Runoff=16.84 cfs 61,741 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=4.18"
Tc=6.0 min CN=93 Runoff=38.58 cfs 130,037 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=3.45"
Tc=6.0 min CN=86 Runoff=6.31 cfs 20,260 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=3.55"
Tc=10.0 min CN=87 Runoff=38.77 cfs 141,467 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=3.16"
Tc=6.0 min CN=83 Runoff=4.87 cfs 15,475 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.36' Max Vel=5.83 fps Inflow=2.42 cfs 77,078 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=2.42 cfs 77,000 cf

Reach 2R: Avg. Flow Depth=0.41' Max Vel=4.04 fps Inflow=2.42 cfs 77,000 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=2.41 cfs 76,734 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.54' Max Vel=6.58 fps Inflow=12.37 cfs 227,924 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=12.37 cfs 227,824 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.66' Max Vel=4.86 fps Inflow=14.84 cfs 311,674 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=14.84 cfs 311,327 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.35' Max Vel=4.84 fps Inflow=1.38 cfs 29,849 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=1.38 cfs 29,820 cf

Reach 6R: Pipe Network Avg. Flow Depth=0.98' Max Vel=13.77 fps Inflow=20.97 cfs 126,383 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=21.06 cfs 126,361 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.31' Max Vel=0.84 fps Inflow=1.04 cfs 6,412 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=1.02 cfs 6,412 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.11' Max Vel=2.99 fps Inflow=1.02 cfs 6,412 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=1.00 cfs 6,412 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=632.89' Storage=32,546 cf Inflow=24.30 cfs 230,847 cf
Outflow=12.37 cfs 227,924 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=663.40' Storage=82,531 cf Inflow=52.59 cfs 172,632 cf
Outflow=10.11 cfs 166,408 cf

Pond 3P: STORMTECH Peak Elev=567.19' Storage=8,905 cf Inflow=12.90 cfs 49,672 cf
Discarded=0.04 cfs 2,364 cf Primary=11.98 cfs 46,212 cf Outflow=12.02 cfs 48,577 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=568.94' Storage=68,704 cf Inflow=38.58 cfs 130,037 cf
Outflow=9.99 cfs 140,135 cf

Pond 5P: STORMTECH Peak Elev=567.35' Storage=12,752 cf Inflow=16.84 cfs 61,741 cf
Discarded=0.05 cfs 3,022 cf Primary=15.55 cfs 57,106 cf Outflow=15.60 cfs 60,128 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=559.52' Storage=66,553 cf Inflow=46.95 cfs 171,294 cf
Outflow=16.56 cfs 168,268 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=711.29' Storage=58,953 cf Inflow=28.35 cfs 103,213 cf
Outflow=2.42 cfs 77,078 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=588.45' Storage=11,912 cf Inflow=31.59 cfs 268,080 cf
Outflow=31.15 cfs 268,112 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=593.02' Storage=30,476 cf Inflow=32.53 cfs 117,411 cf
Discarded=0.17 cfs 8,725 cf Primary=19.14 cfs 108,686 cf Outflow=19.32 cfs 117,411 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=614.10' Storage=56,076 cf Inflow=42.65 cfs 159,373 cf
Outflow=14.71 cfs 159,394 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=643.10' Storage=44,328 cf Inflow=35.17 cfs 127,342 cf
Discarded=0.45 cfs 26,263 cf Primary=20.75 cfs 96,563 cf Outflow=21.20 cfs 122,826 cf

Pond 13P: BIOBASIN - MCR Peak Elev=613.20' Storage=3,193 cf Inflow=2.11 cfs 7,194 cf
Outflow=0.36 cfs 7,116 cf

Pond 14P: SMALL BASIN Peak Elev=618.16' Storage=8,375 cf Inflow=25.53 cfs 161,281 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=22.53 cfs 160,774 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=572.50' Storage=81,541 cf Inflow=38.77 cfs 141,467 cf
Outflow=4.21 cfs 94,627 cf

Pond 16P: STORMTECH Peak Elev=714.85' Storage=6,942 cf Inflow=7.80 cfs 25,260 cf
Discarded=0.03 cfs 1,785 cf Primary=4.44 cfs 22,585 cf Outflow=4.47 cfs 24,370 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 20P: BIOBASIN Peak Elev=661.67' Storage=45,377 cf Inflow=22.33 cfs 81,133 cf
Discarded=0.43 cfs 30,265 cf Primary=1.38 cfs 29,849 cf Outflow=1.80 cfs 60,113 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=404.55' Storage=392 cf Inflow=0.22 cfs 791 cf
Discarded=0.01 cfs 562 cf Primary=0.06 cfs 62 cf Outflow=0.07 cfs 624 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=404.52' Storage=261 cf Inflow=0.16 cfs 593 cf
Discarded=0.01 cfs 519 cf Primary=0.07 cfs 43 cf Outflow=0.08 cfs 562 cf

Pond 25P: STORMTECHS (2) Peak Elev=502.79' Storage=23,572 cf Inflow=21.33 cfs 68,141 cf
Discarded=0.24 cfs 14,306 cf Primary=8.90 cfs 52,477 cf Outflow=9.14 cfs 66,783 cf

Pond 26P: STORMTECHS (2) Peak Elev=502.70' Storage=14,196 cf Inflow=13.43 cfs 42,782 cf
Discarded=0.15 cfs 8,676 cf Primary=5.53 cfs 33,399 cf Outflow=5.68 cfs 42,075 cf

Pond 27P: STORMTECHS (2) Peak Elev=502.79' Storage=4,964 cf Inflow=10.18 cfs 66,685 cf
Discarded=0.05 cfs 2,594 cf Primary=9.98 cfs 63,812 cf Outflow=10.04 cfs 66,406 cf

Pond 29P: STORMTECHS (4) Peak Elev=507.74' Storage=31,558 cf Inflow=27.43 cfs 87,384 cf
Discarded=0.33 cfs 19,117 cf Primary=10.18 cfs 66,685 cf Outflow=10.51 cfs 85,802 cf

Pond 30P: STORMTECH Peak Elev=696.21' Storage=3,019 cf Inflow=2.66 cfs 8,474 cf
Discarded=0.03 cfs 1,928 cf Primary=1.04 cfs 6,412 cf Outflow=1.08 cfs 8,340 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.74' Storage=2,564 cf Inflow=8.90 cfs 52,477 cf
Discarded=0.05 cfs 2,887 cf Primary=9.95 cfs 47,825 cf Outflow=10.00 cfs 50,713 cf

Pond 33P: INFILTRATION LEVEL Peak Elev=300.71' Storage=3,157 cf Inflow=5.53 cfs 33,399 cf
Discarded=0.06 cfs 3,554 cf Primary=6.78 cfs 27,718 cf Outflow=6.84 cfs 31,272 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.73' Storage=3,192 cf Inflow=9.98 cfs 63,812 cf
Discarded=0.06 cfs 3,531 cf Primary=13.16 cfs 58,081 cf Outflow=13.21 cfs 61,612 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=402.01' Storage=1,513 cf Inflow=0.87 cfs 3,162 cf
Discarded=0.05 cfs 3,163 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 3,163 cf

Link A1: OFF-SITE WEST Inflow=3.95 cfs 17,151 cf
Primary=3.95 cfs 17,151 cf

Link A2: OFF-SITE WEST Inflow=23.41 cfs 100,369 cf
Primary=23.41 cfs 100,369 cf

Link A3: OFF-SITE WEST Inflow=9.30 cfs 40,134 cf
Primary=9.30 cfs 40,134 cf

Link A4: OFF-SITE WEST Inflow=17.87 cfs 87,506 cf
Primary=17.87 cfs 87,506 cf

Link A5: OFF-SITE WEST Inflow=6.82 cfs 29,175 cf
Primary=6.82 cfs 29,175 cf

Link B: OFF-SITE SOUTH Inflow=37.61 cfs 242,787 cf
Primary=37.61 cfs 242,787 cf

Link C: EXIST. HEADWALL Inflow=74.40 cfs 717,156 cf
Primary=74.40 cfs 717,156 cf

Link D: EXIST. CB Inflow=31.02 cfs 257,137 cf
Primary=31.02 cfs 257,137 cf

Link E: OFF-SITE SOUTH EAST Inflow=35.99 cfs 308,379 cf
Primary=35.99 cfs 308,379 cf

Link F: EXIST. 18" CMP Inflow=12.29 cfs 47,745 cf
Primary=12.29 cfs 47,745 cf

Link G: EXIST. 18" CMP Inflow=27.87 cfs 221,667 cf
Primary=27.87 cfs 221,667 cf

Link H: EXIST. 12" CMP Inflow=11.93 cfs 160,395 cf
Primary=11.93 cfs 160,395 cf

Link I: EXIST. CB Inflow=5.19 cfs 110,103 cf
Primary=5.19 cfs 110,103 cf

Link J: OFF-SITE EAST Inflow=0.03 cfs 113 cf
Primary=0.03 cfs 113 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 2,430,774 cf Average Runoff Depth = 2.96"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P1-1: Runoff Area=69,102 sf 15.19% Impervious Runoff Depth=3.77"
Flow Length=1,055' Tc=17.0 min CN=81 Runoff=5.01 cfs 21,736 cf

Subcatchment P1-1a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-2: Runoff Area=288,564 sf 0.00% Impervious Runoff Depth=2.90"
Tc=10.0 min CN=72 Runoff=19.36 cfs 69,625 cf

Subcatchment P1-2a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-3: Runoff Area=99,083 sf 0.00% Impervious Runoff Depth=2.09"
Tc=10.0 min CN=63 Runoff=4.64 cfs 17,282 cf

Subcatchment P1-3a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-4: Runoff Area=247,084 sf 0.00% Impervious Runoff Depth=2.01"
Flow Length=538' Tc=10.2 min CN=62 Runoff=10.96 cfs 41,362 cf

Subcatchment P1-4a: PROP. ROOFS Runoff Area=2,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.26 cfs 940 cf

Subcatchment P1-5: Runoff Area=319,572 sf 0.00% Impervious Runoff Depth=1.60"
Tc=10.0 min CN=57 Runoff=10.80 cfs 42,707 cf

Subcatchment P1-5a: PROP. ROOFS Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=0.19 cfs 705 cf

Subcatchment P10: Runoff Area=576 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=175' Tc=9.8 min CN=74 Runoff=0.04 cfs 148 cf

Subcatchment P1b: Runoff Area=322,438 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=34.19 cfs 109,745 cf

Subcatchment P1c: Runoff Area=157,861 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=16.74 cfs 53,730 cf

Subcatchment P1d: Runoff Area=37,954 sf 0.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=88 Runoff=4.36 cfs 14,266 cf

Subcatchment P1e: Runoff Area=208,836 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=22.14 cfs 71,079 cf

Subcatchment P2: Runoff Area=507,070 sf 0.00% Impervious Runoff Depth=2.44"
Flow Length=2,192' Tc=16.4 min CN=67 Runoff=23.70 cfs 103,099 cf

Subcatchment P2a: PROP. ROOFS Runoff Area=8,000 sf 100.00% Impervious Runoff Depth=5.64"
Tc=6.0 min CN=98 Runoff=1.03 cfs 3,761 cf

Subcatchment P2b: Runoff Area=121,520 sf 0.00% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=86 Runoff=13.43 cfs 43,499 cf

Subcatchment P2c: Runoff Area=456,208 sf 0.00% Impervious Runoff Depth=4.19"
Tc=10.0 min CN=85 Runoff=43.65 cfs 159,271 cf

Subcatchment P2d: Runoff Area=282,337 sf 0.00% Impervious Runoff Depth=4.30"
Tc=10.0 min CN=86 Runoff=27.58 cfs 101,065 cf

Subcatchment P2e: Runoff Area=31,267 sf 0.00% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=84 Runoff=3.32 cfs 10,642 cf

Subcatchment P3a: Runoff Area=2,073,802 sf 0.00% Impervious Runoff Depth=3.08"
Flow Length=3,419' Tc=45.4 min CN=74 Runoff=79.14 cfs 533,006 cf

Subcatchment P3b: Runoff Area=217,917 sf 0.00% Impervious Runoff Depth=4.40"
Tc=6.0 min CN=87 Runoff=24.56 cfs 79,948 cf

Subcatchment P3d: Runoff Area=537,094 sf 0.00% Impervious Runoff Depth=4.73"
Tc=6.0 min CN=90 Runoff=63.76 cfs 211,662 cf

Subcatchment P3e: Runoff Area=280,581 sf 0.00% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=86 Runoff=31.02 cfs 100,436 cf

Subcatchment P3f: Runoff Area=83,048 sf 0.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=88 Runoff=9.53 cfs 31,215 cf

Subcatchment P3g: Runoff Area=20,130 sf 0.00% Impervious Runoff Depth=5.18"
Tc=6.0 min CN=94 Runoff=2.52 cfs 8,686 cf

Subcatchment P4: Runoff Area=423,345 sf 0.00% Impervious Runoff Depth=3.28"
Flow Length=3,378' Tc=37.5 min CN=76 Runoff=18.96 cfs 115,602 cf

Subcatchment P4b: Includes P4a Runoff Area=579,275 sf 0.00% Impervious Runoff Depth=4.40"
Tc=10.0 min CN=87 Runoff=57.71 cfs 212,520 cf

Subcatchment P5a: Runoff Area=185,401 sf 0.00% Impervious Runoff Depth=3.37"
Tc=10.0 min CN=77 Runoff=14.54 cfs 52,136 cf

Subcatchment P5b: Runoff Area=433,232 sf 0.00% Impervious Runoff Depth=4.08"
Tc=10.0 min CN=84 Runoff=40.57 cfs 147,455 cf

Subcatchment P5c: Runoff Area=318,122 sf 0.00% Impervious Runoff Depth=4.51"
Tc=10.0 min CN=88 Runoff=32.29 cfs 119,571 cf

Subcatchment P5d: SPINE ROAD Runoff Area=175,213 sf 0.00% Impervious Runoff Depth=5.18"
Tc=10.0 min CN=94 Runoff=19.44 cfs 75,601 cf

Subcatchment P6a: Runoff Area=7,832 sf 0.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=74 Runoff=0.64 cfs 2,013 cf

Subcatchment P6b: Runoff Area=139,000 sf 0.00% Impervious Runoff Depth=5.18"
Tc=10.0 min CN=94 Runoff=15.42 cfs 59,976 cf

Subcatchment P7a: Runoff Area=21,291 sf 0.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=74 Runoff=1.73 cfs 5,472 cf

Subcatchment P7b: Inludes P7c Runoff Area=202,987 sf 0.00% Impervious Runoff Depth=4.51"
Tc=10.0 min CN=88 Runoff=20.60 cfs 76,296 cf

Subcatchment P8: Inculdes 8b Runoff Area=373,467 sf 0.00% Impervious Runoff Depth=5.06"
Tc=6.0 min CN=93 Runoff=46.24 cfs 157,608 cf

Subcatchment P8a: Runoff Area=70,505 sf 0.00% Impervious Runoff Depth=4.30"
Tc=6.0 min CN=86 Runoff=7.79 cfs 25,238 cf

Subcatchment P9: Runoff Area=478,407 sf 0.00% Impervious Runoff Depth=4.40"
Tc=10.0 min CN=87 Runoff=47.66 cfs 175,514 cf

Subcatchment P9a: Runoff Area=58,842 sf 0.00% Impervious Runoff Depth=3.98"
Tc=6.0 min CN=83 Runoff=6.10 cfs 19,517 cf

Reach 1R: Roadside Ditch Avg. Flow Depth=0.39' Max Vel=6.23 fps Inflow=3.16 cfs 101,086 cf
n=0.028 L=600.0' S=0.1217 '/' Capacity=35.30 cfs Outflow=3.16 cfs 101,007 cf

Reach 2R: Avg. Flow Depth=0.46' Max Vel=4.32 fps Inflow=3.16 cfs 101,007 cf
n=0.028 L=1,420.0' S=0.0458 '/' Capacity=22.60 cfs Outflow=3.16 cfs 100,735 cf

Reach 3R: FORESTED WETLAND Avg. Flow Depth=0.58' Max Vel=6.90 fps Inflow=14.94 cfs 281,517 cf
n=0.025 L=718.0' S=0.0682 '/' Capacity=60.76 cfs Outflow=14.94 cfs 281,404 cf

Reach 4R: STREAM CHANNEL Avg. Flow Depth=0.73' Max Vel=5.14 fps Inflow=18.43 cfs 390,744 cf
n=0.040 L=840.0' S=0.0560 '/' Capacity=185.18 cfs Outflow=18.43 cfs 390,375 cf

Reach 5R: Pipe Network Avg. Flow Depth=0.56' Max Vel=6.13 fps Inflow=3.25 cfs 47,147 cf
15.0" Round Pipe n=0.013 L=400.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=3.25 cfs 47,118 cf

Reach 6R: Pipe Network Avg. Flow Depth=1.27' Max Vel=15.23 fps Inflow=32.49 cfs 174,035 cf
24.0" Round Pipe n=0.013 L=400.0' S=0.0375 '/' Capacity=43.81 cfs Outflow=32.13 cfs 174,012 cf

Reach 7R: Diversion Swale Avg. Flow Depth=0.39' Max Vel=0.97 fps Inflow=1.74 cfs 8,460 cf
n=0.069 L=250.0' S=0.0100 '/' Capacity=42.56 cfs Outflow=1.59 cfs 8,460 cf

Reach 36R: Forested Channel Avg. Flow Depth=0.13' Max Vel=3.39 fps Inflow=1.59 cfs 8,460 cf
n=0.030 L=810.0' S=0.1198 '/' Capacity=544.32 cfs Outflow=1.52 cfs 8,460 cf

Pond 1P: LOT 41 BIOBASIN Peak Elev=633.54' Storage=41,461 cf Inflow=32.67 cfs 284,723 cf
Outflow=14.94 cfs 281,517 cf

Pond 2P: LOT 45 BIOBASIN Peak Elev=664.02' Storage=99,856 cf Inflow=63.76 cfs 211,662 cf
Outflow=12.70 cfs 204,776 cf

Pond 3P: STORMTECH Peak Elev=567.41' Storage=9,277 cf Inflow=15.42 cfs 59,976 cf
Discarded=0.04 cfs 2,423 cf Primary=14.95 cfs 56,447 cf Outflow=14.99 cfs 58,870 cf

Pond 4P: LOT 4 BIOBASIN Peak Elev=569.31' Storage=76,605 cf Inflow=46.24 cfs 157,608 cf
Outflow=15.82 cfs 166,919 cf

Pond 5P: STORMTECH Peak Elev=567.53' Storage=13,121 cf Inflow=20.60 cfs 76,296 cf
Discarded=0.05 cfs 3,131 cf Primary=20.46 cfs 71,534 cf Outflow=20.51 cfs 74,664 cf

Pond 6P: LOT 4 BIOBASIN Peak Elev=560.10' Storage=79,631 cf Inflow=57.71 cfs 212,520 cf
Outflow=20.86 cfs 209,302 cf

Pond 7P: LOT 81 BIOBASIN Peak Elev=711.90' Storage=72,845 cf Inflow=35.50 cfs 128,898 cf
Outflow=3.16 cfs 101,086 cf

Pond 8P: LOT 9 BIOBASIN Peak Elev=598.23' Storage=14,860 cf Inflow=63.63 cfs 333,342 cf
Outflow=59.07 cfs 333,380 cf

Pond 9P: LOT 13,18,20, 26 BIOSWALES Peak Elev=598.52' Storage=30,476 cf Inflow=40.57 cfs 147,455 cf
Discarded=0.29 cfs 9,336 cf Primary=49.16 cfs 138,126 cf Outflow=49.35 cfs 147,461 cf

Pond 10P: LOT 10 BIOBASIN Peak Elev=614.38' Storage=62,141 cf Inflow=51.72 cfs 195,173 cf
Outflow=26.39 cfs 195,216 cf

Pond 11P: STORMTECH LOT 30, 37 & 38 Peak Elev=643.49' Storage=47,769 cf Inflow=43.65 cfs 159,271 cf
Discarded=0.47 cfs 27,391 cf Primary=32.16 cfs 126,916 cf Outflow=32.63 cfs 154,307 cf

Pond 13P: BIOBASIN - MCR Peak Elev=613.35' Storage=3,680 cf Inflow=2.52 cfs 8,686 cf
Outflow=0.56 cfs 8,605 cf

Pond 14P: SMALL BASIN Peak Elev=619.19' Storage=13,807 cf Inflow=39.78 cfs 217,511 cf
30.0" Round Culvert n=0.013 L=40.0' S=0.0250 '/' Outflow=32.93 cfs 217,000 cf

Pond 15P: LOT 1 BIOBASIN Peak Elev=573.09' Storage=97,072 cf Inflow=47.66 cfs 175,514 cf
Outflow=7.32 cfs 128,145 cf

Pond 16P: STORMTECH Peak Elev=715.47' Storage=7,856 cf Inflow=9.53 cfs 31,215 cf
Discarded=0.03 cfs 1,852 cf Primary=5.96 cfs 28,462 cf Outflow=6.00 cfs 30,314 cf

Pond 19P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 20P: BIOBASIN Peak Elev=661.95' Storage=52,627 cf Inflow=27.58 cfs 101,065 cf
Discarded=0.44 cfs 31,362 cf Primary=3.25 cfs 47,147 cf Outflow=3.69 cfs 78,510 cf

Pond 21P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 22P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 23P: INFILTRATION TRENCH Peak Elev=404.62' Storage=392 cf Inflow=0.26 cfs 940 cf
Discarded=0.01 cfs 585 cf Primary=0.21 cfs 175 cf Outflow=0.22 cfs 760 cf

Pond 24P: INFILTRATION TRENCH Peak Elev=404.52' Storage=261 cf Inflow=0.19 cfs 705 cf
Discarded=0.01 cfs 544 cf Primary=0.10 cfs 120 cf Outflow=0.11 cfs 664 cf

Pond 25P: STORMTECHS (2) Peak Elev=503.48' Storage=27,065 cf Inflow=26.50 cfs 85,345 cf
Discarded=0.27 cfs 14,928 cf Primary=14.14 cfs 68,888 cf Outflow=14.41 cfs 83,816 cf

Pond 26P: STORMTECHS (2) Peak Elev=503.44' Storage=16,606 cf Inflow=16.74 cfs 53,730 cf
Discarded=0.17 cfs 9,052 cf Primary=7.93 cfs 43,879 cf Outflow=8.10 cfs 52,931 cf

Pond 27P: STORMTECHS (2) Peak Elev=503.49' Storage=5,724 cf Inflow=16.43 cfs 87,983 cf
Discarded=0.06 cfs 2,704 cf Primary=16.32 cfs 84,963 cf Outflow=16.38 cfs 87,667 cf

Pond 29P: STORMTECHS (4) Peak Elev=508.45' Storage=36,536 cf Inflow=34.19 cfs 109,745 cf
Discarded=0.36 cfs 19,960 cf Primary=16.43 cfs 87,983 cf Outflow=16.79 cfs 107,943 cf

Pond 30P: STORMTECH Peak Elev=696.88' Storage=3,493 cf Inflow=3.32 cfs 10,642 cf
Discarded=0.04 cfs 2,016 cf Primary=1.74 cfs 8,460 cf Outflow=1.77 cfs 10,475 cf

Pond 32P: INFILTRATION LEVEL Peak Elev=300.76' Storage=2,598 cf Inflow=14.14 cfs 68,888 cf
Discarded=0.05 cfs 2,956 cf Primary=14.50 cfs 64,130 cf Outflow=14.55 cfs 67,086 cf

Pond 33P: INFILTRATION LEVEL Peak Elev=300.72' Storage=3,174 cf Inflow=7.93 cfs 43,879 cf
Discarded=0.06 cfs 3,624 cf Primary=8.75 cfs 38,088 cf Outflow=8.80 cfs 41,712 cf

Pond 34P: INFILTRATION LEVEL Peak Elev=300.75' Storage=3,230 cf Inflow=16.32 cfs 84,963 cf
Discarded=0.06 cfs 3,588 cf Primary=18.98 cfs 79,124 cf Outflow=19.04 cfs 82,712 cf

Pond 36P: INFILTRATION TRENCH Peak Elev=405.80' Storage=1,858 cf Inflow=1.03 cfs 3,761 cf
Discarded=0.08 cfs 3,593 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 3,593 cf

Link A1: OFF-SITE WEST Inflow=5.21 cfs 21,911 cf
Primary=5.21 cfs 21,911 cf

Link A2: OFF-SITE WEST Inflow=31.57 cfs 133,930 cf
Primary=31.57 cfs 133,930 cf

Link A3: OFF-SITE WEST Inflow=12.93 cfs 55,545 cf
Primary=12.93 cfs 55,545 cf

Link A4: OFF-SITE WEST Inflow=26.48 cfs 120,661 cf
Primary=26.48 cfs 120,661 cf

Link A5: OFF-SITE WEST Inflow=10.81 cfs 42,827 cf
Primary=10.81 cfs 42,827 cf

Link B: OFF-SITE SOUTH Inflow=55.57 cfs 328,558 cf
Primary=55.57 cfs 328,558 cf

Link C: EXIST. HEADWALL Inflow=97.32 cfs 923,381 cf
Primary=97.32 cfs 923,381 cf

Link D: EXIST. CB Inflow=39.74 cfs 324,903 cf
Primary=39.74 cfs 324,903 cf

Link E: OFF-SITE SOUTH EAST Inflow=66.94 cfs 385,516 cf
Primary=66.94 cfs 385,516 cf

Link F: EXIST. 18" CMP Inflow=15.41 cfs 58,460 cf
Primary=15.41 cfs 58,460 cf

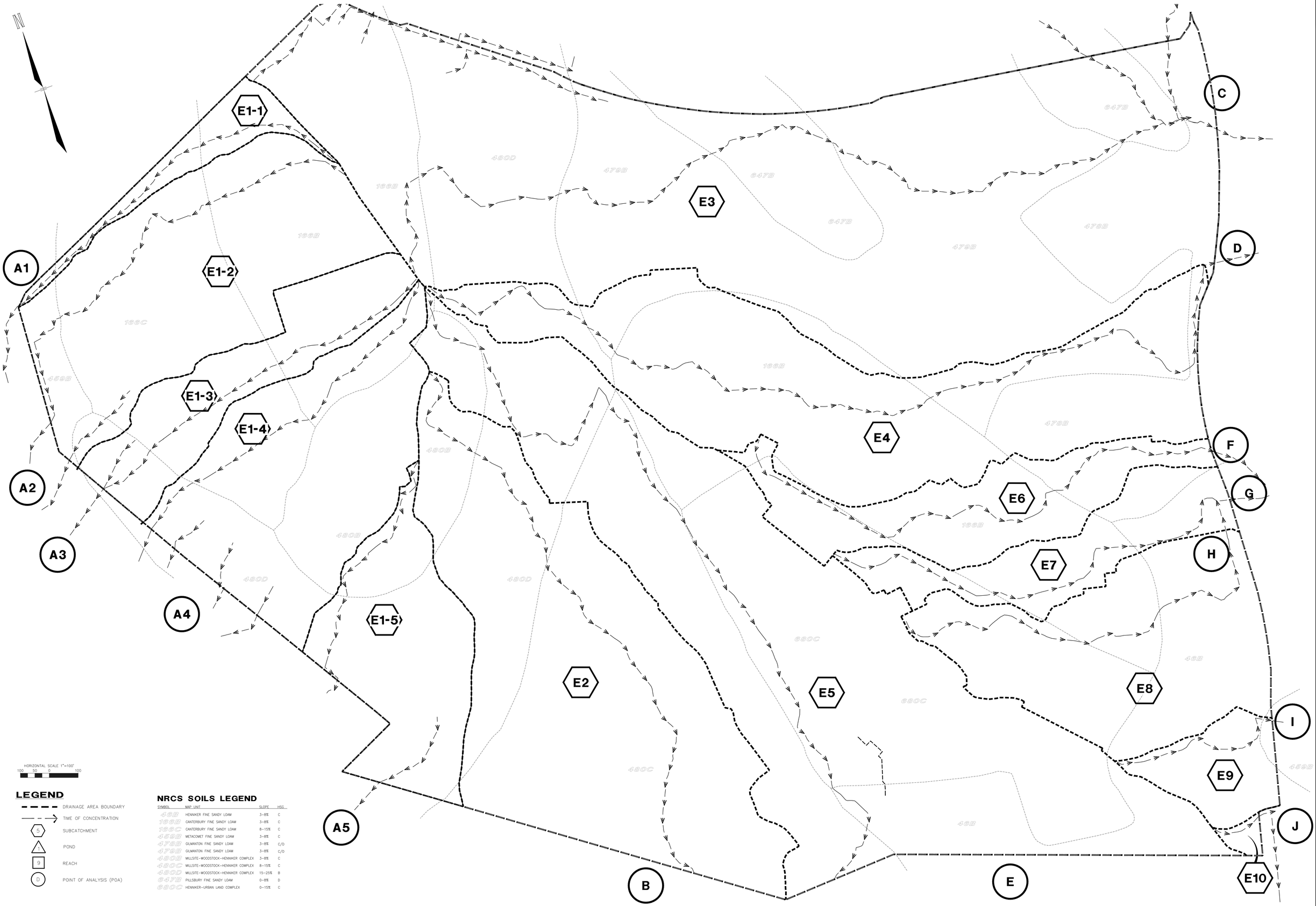
Link G: EXIST. 18" CMP Inflow=39.04 cfs 269,162 cf
Primary=39.04 cfs 269,162 cf

Link H: EXIST. 12" CMP Inflow=18.79 cfs 192,157 cf
Primary=18.79 cfs 192,157 cf

Link I: EXIST. CB Inflow=8.21 cfs 147,661 cf
Primary=8.21 cfs 147,661 cf

Link J: OFF-SITE EAST Inflow=0.04 cfs 148 cf
Primary=0.04 cfs 148 cf

Total Runoff Area = 9,846,463 sf Runoff Volume = 3,076,955 cf Average Runoff Depth = 3.75"
99.72% Pervious = 9,818,463 sf 0.28% Impervious = 28,000 sf



LEGEND

- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- SUBCATCHMENT
- POND
- REACH
- POINT OF ANALYSIS (POA)

NRCS SOILS LEGEND

SYMBOL	MAP UNIT	SLOPE	HSG
46B	HENNIKER FINE SANDY LOAM	3–8%	C
166B	CANTERBURY FINE SANDY LOAM	3–8%	C
166C	CANTERBURY FINE SANDY LOAM	8–15%	C
450B	METACOMET FINE SANDY LOAM	3–8%	C
478B	GILMANTON FINE SANDY LOAM	3–8%	C/D
479B	GILMANTON FINE SANDY LOAM	3–8%	C/D
480B	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	3–8%	C
480C	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	8–15%	C
480D	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	15–25%	B
647B	PILLSBURY FINE SANDY LOAM	0–8%	D
680C	HENNIKER–URBAN LAND COMPLEX	0–15%	C

REV.	DATE	DESCRIPTION	BY	CK
1	8/14/25	REFINED WATERSHED A	JR	RD

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
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FILE	DR	CK	CADFILE	
96126.01	--	--	96126-01 DRAINAGE	CONCEPT R5 — SHEET 1 OF 2

TAX MAP 318-538-11, 318-155-1

PRE DEVELOPMENT DRAINAGE PLAN

LACONIA VILLAGE

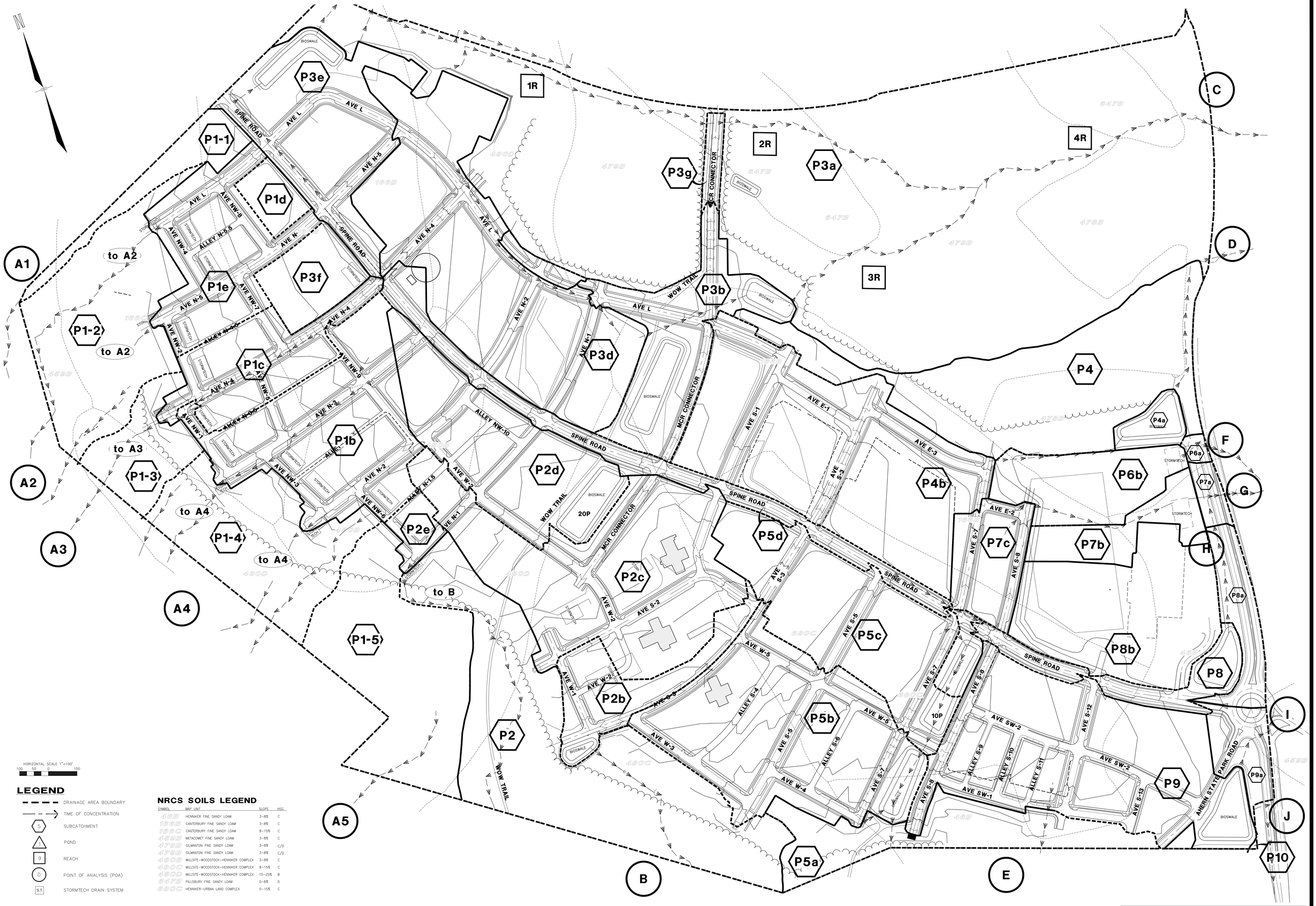
PARADE ROAD, NH RTE 106, LACONIA, NEW HAMPSHIRE

PREPARED FOR

PILLSBURY REALTY DEVELOPMENT, LLC

SCALE: 1"=100' **JUNE 25, 2025**

F:\TFM Projects\96126 Legacy at Laconia - Laconia, NH\96126-01 Pillsbury - NH State School Due Diligence\Drainage\Maps\96126-01 DRAINAGE.dwg, 8/14/2025 8:54:22 AM



HORIZONTAL SCALE 1"=100'
100 50 0 100

LEGEND

- DRAINAGE AREA BOUNDARY
- TIME OF CONCENTRATION
- SUBCATCHMENT
- POND
- REACH
- POINT OF ANALYSIS (POA)
- STORMTECH DRAIN SYSTEM

NRCS SOILS LEGEND

SYMBOL	MAP UNIT	SLOPE	HSG
46B	HENNIKER FINE SANDY LOAM	3–8%	C
165B	CANTERBURY FINE SANDY LOAM	3–8%	C
165C	CANTERBURY FINE SANDY LOAM	8–15%	C
469B	METACOMET FINE SANDY LOAM	3–8%	C
479B	GILMANTON FINE SANDY LOAM	3–8%	C/D
479C	GILMANTON FINE SANDY LOAM	3–8%	C/D
480B	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	3–8%	C
480C	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	8–15%	C
480D	MILLSITE–WOODSTOCK–HENNIKER COMPLEX	15–25%	B
647B	PILLSBURY FINE SANDY LOAM	0–8%	D
660C	HENNIKER–URBAN LAND COMPLEX	0–15%	C

REV.	DATE	DESCRIPTION	DR	CK
1	8/14/25	REFINED WATERSHED A	JR	RD

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
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Landscape Architects
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96126.01 | DR -- | CK -- | CONCEPT R5 | CADFILE 96126-01 DRAINAGE | SHEET 2 OF 2

TAX MAP 318-538-11, 318-155-1

POST DEVELOPMENT DRAINAGE PLAN

LACONIA VILLAGE

PARADE ROAD, NH RTE 106, LACONIA, NEW HAMPSHIRE

PREPARED FOR

PILLSBURY REALTY DEVELOPMENT, LLC

SCALE: 1"=100' **JUNE 25, 2025**

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