HAWLEY PUBLIC SCHOOLS
NEW MIDDLE SCHOOL

STORMWATER CALCULATIONS

BY

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CONTENTS:

1. **Stormwater Runoff Summary**
2. **Existing Drainage Maps**
3. **HydroCAD Report for Existing Conditions (2-yr, 10-yr, and 100-yr events)**
4. **Proposed Drainage Maps**
5. **HydroCAD Report for Proposed Conditions (2-yr, 10-yr, and 100-yr events)**

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SUMMARY OF STORMWATER RUNOFF

Introduction:
The project consists of the construction of a new middle school which will include the construction of building, parking lots, sidewalk, and associated grading and utilities. The project is approximately 18 acres and is located on 5th Street/Clay County Highway 33 on the north end of the city of Hawley.

Existing Conditions:
The existing site consists of primarily good grass cover, farm fields, and an existing bus garage.

Curve Numbers used in the stormwater models:
- -80, Grass Cover (Class D soils)
- -80, farmed field (Class D soils)
- -98, Impervious Areas

Proposed Conditions:
New impervious areas consist of the middle school building and bus garage building with associated sidewalks, paved parking lots and driveways. The runoff from the new impervious surfaces will be routed through surface drainage, drainage ditches, and new storm sewer utilities to the proposed wet pond on site as shown on the proposed drainage map.

Curve Numbers used in the stormwater models:
- -80, Grass Cover (Class D soils)
- -98, Impervious Areas
- -100, Surface water

Analysis:
The project area was analyzed using HydroCAD Version 10.0 Stormwater modeling software. SCS TR-20 modeling method, along with the MSE 24-hour storm event, were utilized in the modeling of the existing and proposed runoff conditions. The 2-year, 10-year, 100-year storm events were used to model runoff conditions. Output from NOAA Atlas 14 precipitation frequency data server was used for storm event depths.

Runoff Rates:
Per Watershed and State requirements, the proposed peak runoff rate must not exceed the existing. The existing and proposed peak runoff rates leaving the site are listed in the table below.

Peak Runoff Rates (in cubic feet per second):

2-year event	**Existing**	**Proposed**
North	0.73	0.45
Directed to City Storm	4.74	4.91*
South	3.35	3.12
West	13.03	10.03
10-year event		
North	1.57	0.96
Directed to City Storm	6.84	6.99*
South	7.12	6.59
West	35.69	16.49
100-year event		
North	3.53	2.11
Directed to City Storm	10.05	10.20*
South	15.87	14.67
West	75.89	37.44

*The proposed runoff rates, directed to the city storm, have a small increase (~0.15 cfs) over the existing rates. This small increase could be considered to be within modeling tolerances and should not have any adverse effects to the city infrastructure.

Stormwater Treatment and Volume Control:

A majority of the Stormwater runoff will be routed to a Wet Pond. This Wet Pond will be used to help control rates and reduce pollutant load within the stormwater.

Wet Pond Design

The wet pond meets the requirements of Design Level 2. Below is our analysis of the proposed wet stormwater pond, showing that it meets the criteria for Design Level 2. In order to satisfy Design Level 2, the pond must also satisfy all of the criteria from Design Level 1 also. Our analysis is shown in *italics.*

- Design Level 1 (TSS = 60%, DP = 0%, PP =62%, TP = 34%): Must meet all of the design requirements for Design Level 1 and does not meet all design requirements for Design Level 2.

    - Dead (or permanent) storage of at least 1800 cubic feet per acre that drains to the pond
      Total Drainage Area = *9.41 acres*
      1,800 CF/acre x 8.42 acres = *16,938 CF*
      Provided Dead Storage (below 1156.00') = ***20,512 CF***

    - The pond's permanent storage volume must reach a minimum depth of at least 3 feet and must have no depth greater than 10 feet. The basin must be configured such that scour or resuspension of solids is minimized.
      *Dead storage reaches a depth of **3'**.*

    - Flow path length to pond width ratio < 10:1 (scouring occurs at ratios greater than 10:1)
      Proposed Length = *352'*
      Proposed Width = *42'*
      L:W = ***8.4:1***

- Design Level 2 (TSS = 84%, DP = 8%, PP = 84%, TP = 50%): Meets all of the requirements for Design Levels 1 and 2 and does not meet all design requirements for Design Level 3

    - Water quality volume (flood pool volume) >= 1 inch of impervious area
      New Impervious Area = *262,482 SF*
      Req'd WQV = *262,482 SF x 1" =* *21,874 CF*
      Provided Dead Storage= *20,512 CF*
      WQV Elevation = *1057.14 (where total vol. of 42,386 CF occurs)*
      WQV Area = *23,584 SF =* *0.54 acres*

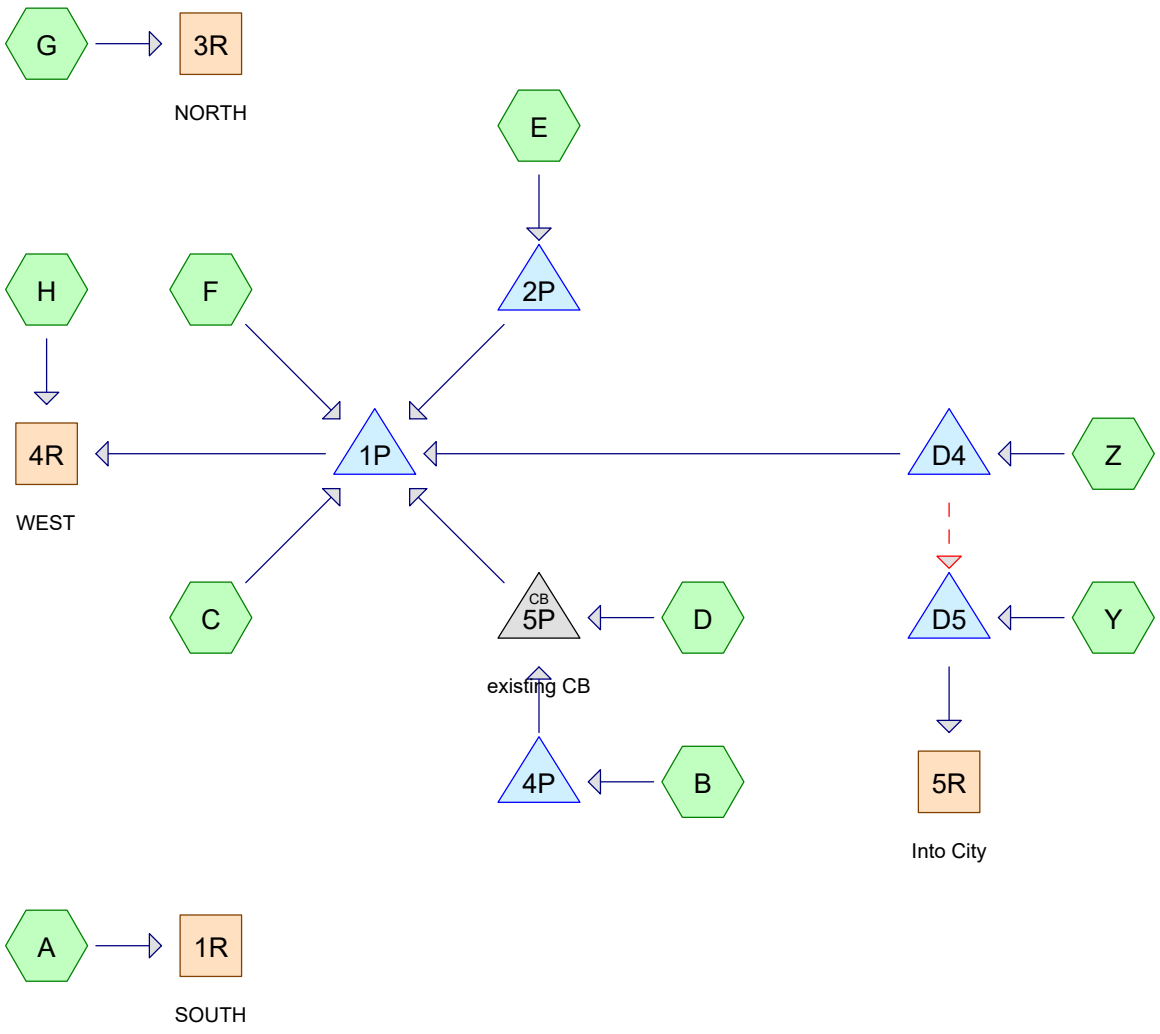
    - Discharge rate of water quality volume does not exceed 5.66 cubic feet per second per acre of surface area of the pond.
      Allowable Discharge = *0.54 ac x 5.66 cfs/ac =* *3.06 cfs*
      Actual Discharge (from HydroCAD model) = ***2.02 cfs***

Wet Pond Design	
	Elevation
Bottom	1153.00
Normal Water Level	1156.00
WQV elevation	1057.14
100-year HWL	1159.23
Outlet Structure	
Weir Wall Orifice, 8.5" dia.	1156.00
Top of Weir Wall	1158.25
Outlet Pipe, 18" HDPE	1156.00

EXISTING DRAINAGE MAP

Larson Engineering, Inc.

Scale: 1:140



Subcat Reach Pond Link

Routing Diagram for Existing - Hawley
Prepared by Larson Engineering Inc, Printed 8/27/2024

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
799,025	80	>75% Grass cover, Good, HSG D (A, B, D, Y, Z)
534,036	80	Field (C, E, F, G, H)
129,621	98	Impervious (A, B, C, D, E, Y, Z)
1,462,682	**82**	**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: Runoff Area=175,647 sf 5.99% Impervious Runoff Depth=0.95"
Flow Length=409' Tc=28.8 min CN=80/98 Runoff=3.35 cfs 13,912 cf

SubcatchmentB: Runoff Area=156,466 sf 24.06% Impervious Runoff Depth=1.20"
Flow Length=330' Tc=32.5 min CN=80/98 Runoff=3.46 cfs 15,628 cf

SubcatchmentC: Runoff Area=119,456 sf 2.48% Impervious Runoff Depth=0.90"
Flow Length=171' Slope=0.0117 '/' Tc=7.4 min CN=80/98 Runoff=4.25 cfs 8,981 cf

SubcatchmentD: Runoff Area=18,627 sf 98.45% Impervious Runoff Depth=2.22"
Flow Length=93' Slope=0.0144 '/' Tc=1.4 min CN=80/98 Runoff=1.71 cfs 3,446 cf

SubcatchmentE: Runoff Area=51,492 sf 13.42% Impervious Runoff Depth=1.05"
Flow Length=149' Tc=8.6 min CN=80/98 Runoff=1.97 cfs 4,516 cf

SubcatchmentF: Runoff Area=225,123 sf 0.00% Impervious Runoff Depth=0.87"
Flow Length=71' Slope=0.0141 '/' Tc=4.4 min CN=80/0 Runoff=9.00 cfs 16,288 cf

SubcatchmentG: Runoff Area=23,097 sf 0.00% Impervious Runoff Depth=0.87"
Flow Length=131' Slope=0.0054 '/' Tc=9.3 min CN=80/0 Runoff=0.73 cfs 1,671 cf

SubcatchmentH: Runoff Area=124,739 sf 0.00% Impervious Runoff Depth=0.87"
Flow Length=221' Slope=0.0407 '/' Tc=9.8 min CN=80/0 Runoff=3.84 cfs 9,025 cf

SubcatchmentY: Runoff Area=308,542 sf 14.34% Impervious Runoff Depth=1.07"
Flow Length=560' Slope=0.0080 '/' Tc=16.7 min CN=80/98 Runoff=8.80 cfs 27,386 cf

SubcatchmentZ: Runoff Area=259,493 sf 3.46% Impervious Runoff Depth=0.92"
Flow Length=549' Slope=0.0091 '/' Tc=15.6 min CN=80/98 Runoff=6.71 cfs 19,802 cf

Reach 1R: SOUTH Inflow=3.35 cfs 13,912 cf
Outflow=3.35 cfs 13,912 cf

Reach 3R: NORTH Inflow=0.73 cfs 1,671 cf
Outflow=0.73 cfs 1,671 cf

Reach 4R: WEST Inflow=13.03 cfs 65,964 cf
Outflow=13.03 cfs 65,964 cf

Reach 5R: Into City Inflow=4.74 cfs 28,855 cf
Outflow=4.74 cfs 28,855 cf

Pond 1P: Peak Elev=1,159.29' Storage=13,601 cf Inflow=16.70 cfs 66,856 cf
Discarded=0.01 cfs 1,303 cf Primary=10.03 cfs 56,939 cf Outflow=10.04 cfs 58,242 cf

Pond 2P: Peak Elev=1,160.75' Storage=745 cf Inflow=1.97 cfs 4,516 cf
Discarded=0.00 cfs 36 cf Primary=1.28 cfs 4,480 cf Outflow=1.29 cfs 4,516 cf

Pond 4P: Peak Elev=1,161.21' Storage=4,378 cf Inflow=3.46 cfs 15,628 cf
Discarded=0.01 cfs 157 cf Primary=2.54 cfs 15,471 cf Outflow=2.55 cfs 15,628 cf

Pond 5P: existing CB Peak Elev=1,161.11' Inflow=2.66 cfs 18,916 cf
18.0" Round Culvert n=0.025 L=76.0' S=0.0020 '/' Outflow=2.66 cfs 18,916 cf

Pond D4: Peak Elev=1,161.31' Storage=1,806 cf Inflow=6.71 cfs 19,802 cf
Discarded=0.01 cfs 37 cf Primary=3.91 cfs 18,191 cf Secondary=2.93 cfs 1,574 cf Outflow=5.87 cfs 19,802 cf

Pond D5: Peak Elev=1,161.32' Storage=7,220 cf Inflow=11.72 cfs 28,960 cf
Discarded=0.01 cfs 106 cf Primary=4.74 cfs 28,855 cf Outflow=4.76 cfs 28,960 cf

Total Runoff Area = 1,462,682 sf Runoff Volume = 120,654 cf Average Runoff Depth = 0.99"
91.14% Pervious = 1,333,061 sf 8.86% Impervious = 129,621 sf

Summary for Subcatchment A:

Runoff = 3.35 cfs @ 12.44 hrs, Volume= 13,912 cf, Depth= 0.95"
Routed to Reach 1R : SOUTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	10,522	98	Impervious
	165,125	80	>75% Grass cover, Good, HSG D
	175,647	81	Weighted Average
	165,125	80	94.01% Pervious Area
	10,522	98	5.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	100	0.0056	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.2	78	0.0056	1.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	100	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.5	60	0.0167	1.94		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.7	71	0.0141	1.78		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.8	409	Total			

Summary for Subcatchment B:

Runoff = 3.46 cfs @ 12.46 hrs, Volume= 15,628 cf, Depth= 1.20"
Routed to Pond 4P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	37,652	98	Impervious
	118,814	80	>75% Grass cover, Good, HSG D
	156,466	84	Weighted Average
	118,814	80	75.94% Pervious Area
	37,652	98	24.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0038	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.2	66	0.0038	0.92		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.3	111	0.0090	1.42		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.4	53	0.0189	2.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
32.5	330	Total			

Summary for Subcatchment C:

Runoff = 4.25 cfs @ 12.15 hrs, Volume= 8,981 cf, Depth= 0.90"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	2,960	98	Impervious
*	116,496	80	Field
	119,456	80	Weighted Average
	116,496	80	97.52% Pervious Area
	2,960	98	2.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	100	0.0117	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
1.2	71	0.0117	0.97		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.4	171	Total			

Summary for Subcatchment D:

Runoff = 1.71 cfs @ 12.10 hrs, Volume= 3,446 cf, Depth= 2.22"
Routed to Pond 5P : existing CB

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	18,339	98	Impervious
	288	80	>75% Grass cover, Good, HSG D
	18,627	98	Weighted Average
	288	80	1.55% Pervious Area
	18,339	98	98.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	93	0.0144	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"

Summary for Subcatchment E:

Runoff = 1.97 cfs @ 12.16 hrs, Volume= 4,516 cf, Depth= 1.05"
Routed to Pond 2P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	44,581	80	Field
*	6,911	98	Impervious
	51,492	82	Weighted Average
	44,581	80	86.58% Pervious Area
	6,911	98	13.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0071	0.22		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
0.9	40	0.0071	0.76		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.1	9	0.1111	3.00		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
8.6	149	Total			

Summary for Subcatchment F:

Runoff = 9.00 cfs @ 12.12 hrs, Volume= 16,288 cf, Depth= 0.87"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	225,123	80	Field
	225,123	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	71	0.0141	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"

Summary for Subcatchment G:

Runoff = 0.73 cfs @ 12.17 hrs, Volume= 1,671 cf, Depth= 0.87"
Routed to Reach 3R : NORTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	23,097	80	Field
	23,097	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0054	0.20		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
0.8	31	0.0054	0.66		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.3	131	Total			

Summary for Subcatchment H:

Runoff = 3.84 cfs @ 12.18 hrs, Volume= 9,025 cf, Depth= 0.87"
Routed to Reach 4R : WEST

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	124,739	80	Field
	124,739	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0407	0.19		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.81"
1.1	121	0.0407	1.82		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.8	221	Total			

Summary for Subcatchment Y:

Runoff = 8.80 cfs @ 12.26 hrs, Volume= 27,386 cf, Depth= 1.07"
Routed to Pond D5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	44,259	98	Impervious
	264,283	80	>75% Grass cover, Good, HSG D
	308,542	83	Weighted Average
	264,283	80	85.66% Pervious Area
	44,259	98	14.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0080	0.23		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
9.5	460	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
16.7	560	Total			

Summary for Subcatchment Z:

Runoff = 6.71 cfs @ 12.25 hrs, Volume= 19,802 cf, Depth= 0.92"
Routed to Pond D4 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	8,978	98	Impervious
	250,515	80	>75% Grass cover, Good, HSG D
	259,493	81	Weighted Average
	250,515	80	96.54% Pervious Area
	8,978	98	3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0091	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
8.7	449	0.0091	0.86		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
15.6	549	Total			

Summary for Reach 1R: SOUTH

Inflow Area = 175,647 sf, 5.99% Impervious, Inflow Depth = 0.95" for 2-Year event
Inflow = 3.35 cfs @ 12.44 hrs, Volume= 13,912 cf
Outflow = 3.35 cfs @ 12.44 hrs, Volume= 13,912 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 3R: NORTH

Inflow Area = 23,097 sf, 0.00% Impervious, Inflow Depth = 0.87" for 2-Year event
Inflow = 0.73 cfs @ 12.17 hrs, Volume= 1,671 cf
Outflow = 0.73 cfs @ 12.17 hrs, Volume= 1,671 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 4R: WEST

Inflow Area = 955,396 sf, 7.83% Impervious, Inflow Depth = 0.83" for 2-Year event
Inflow = 13.03 cfs @ 12.23 hrs, Volume= 65,964 cf
Outflow = 13.03 cfs @ 12.23 hrs, Volume= 65,964 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 5R: Into City

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 1.12" for 2-Year event
Inflow = 4.74 cfs @ 12.47 hrs, Volume= 28,855 cf
Outflow = 4.74 cfs @ 12.47 hrs, Volume= 28,855 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P:

Inflow Area = 830,657 sf, 9.01% Impervious, Inflow Depth = 0.97" for 2-Year event
Inflow = 16.70 cfs @ 12.14 hrs, Volume= 66,856 cf
Outflow = 10.04 cfs @ 12.27 hrs, Volume= 58,242 cf, Atten= 40%, Lag= 8.2 min
Discarded = 0.01 cfs @ 12.27 hrs, Volume= 1,303 cf
Primary = 10.03 cfs @ 12.27 hrs, Volume= 56,939 cf
Routed to Reach 4R : WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,159.29' @ 12.27 hrs Surf.Area= 6,486 sf Storage= 13,601 cf

Plug-Flow detention time= 120.4 min calculated for 58,242 cf (87% of inflow)
Center-of-Mass det. time= 67.5 min (898.3 - 830.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,152.00'	55,527 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,152.00	27	0	0
1,153.00	185	106	106
1,154.00	494	340	446
1,155.00	968	731	1,177
1,156.00	1,627	1,298	2,474
1,157.00	2,492	2,060	4,534
1,158.00	3,594	3,043	7,577
1,159.00	5,079	4,337	11,913
1,160.00	9,898	7,489	19,402
1,161.00	17,264	13,581	32,983
1,162.00	27,825	22,545	55,527

Device	Routing	Invert	Outlet Devices
#1	Primary	1,158.50'	**5.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	1,152.00'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.27 hrs HW=1,159.29' (Free Discharge)
2=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=10.02 cfs @ 12.27 hrs HW=1,159.29' TW=0.00' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Weir Controls 10.02 cfs @ 2.53 fps)

Summary for Pond 2P:

Inflow Area = 51,492 sf, 13.42% Impervious, Inflow Depth = 1.05" for 2-Year event
Inflow = 1.97 cfs @ 12.16 hrs, Volume= 4,516 cf
Outflow = 1.29 cfs @ 12.25 hrs, Volume= 4,516 cf, Atten= 35%, Lag= 5.1 min
Discarded = 0.00 cfs @ 12.25 hrs, Volume= 36 cf
Primary = 1.28 cfs @ 12.25 hrs, Volume= 4,480 cf
Routed to Pond 1P :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,160.75' @ 12.25 hrs Surf.Area= 1,687 sf Storage= 745 cf

Plug-Flow detention time= 12.4 min calculated for 4,515 cf (100% of inflow)
Center-of-Mass det. time= 12.4 min (820.0 - 807.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.89'	5,505 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.89	50	0	0
1,161.00	2,167	1,230	1,230
1,162.00	6,382	4,275	5,505

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.89'	**15.0" Round Culvert** L= 32.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.89' / 1,159.84' S= 0.0016 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf
#2	Discarded	1,159.89'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.25 hrs HW=1,160.75' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=1.28 cfs @ 12.25 hrs HW=1,160.75' TW=1,159.29' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 1.28 cfs @ 2.02 fps)

Summary for Pond 4P:

Inflow Area = 156,466 sf, 24.06% Impervious, Inflow Depth = 1.20" for 2-Year event
Inflow = 3.46 cfs @ 12.46 hrs, Volume= 15,628 cf
Outflow = 2.55 cfs @ 12.80 hrs, Volume= 15,628 cf, Atten= 26%, Lag= 20.3 min
Discarded = 0.01 cfs @ 12.80 hrs, Volume= 157 cf
Primary = 2.54 cfs @ 12.80 hrs, Volume= 15,471 cf
Routed to Pond 5P : existing CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.21' @ 12.80 hrs Surf.Area= 7,284 sf Storage= 4,378 cf

Plug-Flow detention time= 34.4 min calculated for 15,625 cf (100% of inflow)
Center-of-Mass det. time= 34.4 min (853.0 - 818.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.84'	28,962 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.84	50	0	0
1,160.00	228	22	22
1,161.00	5,773	3,001	3,023
1,162.00	13,053	9,413	12,436
1,163.00	20,000	16,527	28,962

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.85'	**18.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.84' / 1,159.85' S= -0.0001 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.84'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.80 hrs HW=1,161.21' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=1.36 cfs @ 12.80 hrs HW=1,161.21' TW=1,161.11' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.36 cfs @ 1.05 fps)

Summary for Pond 5P: existing CB

Inflow Area = 175,093 sf, 31.98% Impervious, Inflow Depth = 1.30" for 2-Year event
Inflow = 2.66 cfs @ 12.80 hrs, Volume= 18,916 cf
Outflow = 2.66 cfs @ 12.80 hrs, Volume= 18,916 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.66 cfs @ 12.80 hrs, Volume= 18,916 cf
Routed to Pond 1P :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.11' @ 12.80 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.85'	**18.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.85' / 1,159.70' S= 0.0020 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=2.66 cfs @ 12.80 hrs HW=1,161.11' TW=1,159.11' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 2.66 cfs @ 2.27 fps)

Summary for Pond D4:

Inflow Area = 259,493 sf, 3.46% Impervious, Inflow Depth = 0.92" for 2-Year event
Inflow = 6.71 cfs @ 12.25 hrs, Volume= 19,802 cf
Outflow = 5.87 cfs @ 12.26 hrs, Volume= 19,802 cf, Atten= 13%, Lag= 0.3 min
Discarded = 0.01 cfs @ 12.44 hrs, Volume= 37 cf
Primary = 3.91 cfs @ 12.44 hrs, Volume= 18,191 cf
Routed to Pond 1P :
Secondary = 2.93 cfs @ 12.25 hrs, Volume= 1,574 cf
Routed to Pond D5 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.31' @ 12.44 hrs Surf.Area= 3,929 sf Storage= 1,806 cf

Plug-Flow detention time= 5.0 min calculated for 19,799 cf (100% of inflow)
Center-of-Mass det. time= 5.0 min (832.8 - 827.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.09'	30,460 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.09	50	0	0
1,160.60	500	140	140
1,161.00	2,724	645	785
1,162.00	6,652	4,688	5,473
1,163.00	11,661	9,157	14,630
1,164.00	20,000	15,831	30,460

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.09'	**24.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.09' / 1,159.75' S= 0.0045 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Secondary	1,160.77'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Elev. (feet) 1,160.77 1,161.00 1,162.00 1,163.00 1,164.00 Width (feet) 1.00 7.00 15.00 29.00 45.00
#3	Discarded	1,160.09'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.44 hrs HW=1,161.31' (Free Discharge)
↑**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=3.91 cfs @ 12.44 hrs HW=1,161.31' TW=1,159.27' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 3.91 cfs @ 2.80 fps)

Secondary OutFlow Max=2.71 cfs @ 12.25 hrs HW=1,161.13' TW=1,161.02' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Weir Controls 2.71 cfs @ 1.41 fps)

Summary for Pond D5:

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 1.13" for 2-Year event
Inflow = 11.72 cfs @ 12.25 hrs, Volume= 28,960 cf
Outflow = 4.76 cfs @ 12.47 hrs, Volume= 28,960 cf, Atten= 59%, Lag= 13.2 min
Discarded = 0.01 cfs @ 12.47 hrs, Volume= 106 cf
Primary = 4.74 cfs @ 12.47 hrs, Volume= 28,855 cf
Routed to Reach 5R : Into City

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.32' @ 12.47 hrs Surf.Area= 10,126 sf Storage= 7,220 cf

Plug-Flow detention time= 16.4 min calculated for 28,956 cf (100% of inflow)
Center-of-Mass det. time= 16.4 min (826.0 - 809.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.62'	62,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.62	100	0	0
1,160.00	500	114	114
1,161.00	7,895	4,198	4,312
1,162.00	14,809	11,352	15,664
1,163.00	23,200	19,005	34,668
1,164.00	32,000	27,600	62,268

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.62'	**18.0" Round Culvert** L= 52.3' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.62' / 1,159.47' S= 0.0029 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.62'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.47 hrs HW=1,161.32' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=4.74 cfs @ 12.47 hrs HW=1,161.32' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 4.74 cfs @ 2.96 fps)

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: Runoff Area=175,647 sf 5.99% Impervious Runoff Depth=1.95"
Flow Length=409' Tc=28.8 min CN=80/98 Runoff=7.12 cfs 28,601 cf

SubcatchmentB: Runoff Area=156,466 sf 24.06% Impervious Runoff Depth=2.26"
Flow Length=330' Tc=32.5 min CN=80/98 Runoff=6.67 cfs 29,443 cf

SubcatchmentC: Runoff Area=119,456 sf 2.48% Impervious Runoff Depth=1.89"
Flow Length=171' Slope=0.0117 '/' Tc=7.4 min CN=80/98 Runoff=9.03 cfs 18,863 cf

SubcatchmentD: Runoff Area=18,627 sf 98.45% Impervious Runoff Depth=3.51"
Flow Length=93' Slope=0.0144 '/' Tc=1.4 min CN=80/98 Runoff=2.64 cfs 5,448 cf

SubcatchmentE: Runoff Area=51,492 sf 13.42% Impervious Runoff Depth=2.08"
Flow Length=149' Tc=8.6 min CN=80/98 Runoff=3.95 cfs 8,921 cf

SubcatchmentF: Runoff Area=225,123 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=71' Slope=0.0141 '/' Tc=4.4 min CN=80/0 Runoff=19.17 cfs 34,766 cf

SubcatchmentG: Runoff Area=23,097 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=131' Slope=0.0054 '/' Tc=9.3 min CN=80/0 Runoff=1.57 cfs 3,567 cf

SubcatchmentH: Runoff Area=124,739 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=221' Slope=0.0407 '/' Tc=9.8 min CN=80/0 Runoff=8.35 cfs 19,264 cf

SubcatchmentY: Runoff Area=308,542 sf 14.34% Impervious Runoff Depth=2.09"
Flow Length=560' Slope=0.0080 '/' Tc=16.7 min CN=80/98 Runoff=17.73 cfs 53,854 cf

SubcatchmentZ: Runoff Area=259,493 sf 3.46% Impervious Runoff Depth=1.91"
Flow Length=549' Slope=0.0091 '/' Tc=15.6 min CN=80/98 Runoff=14.39 cfs 41,333 cf

Reach 1R: SOUTH Inflow=7.12 cfs 28,601 cf
Outflow=7.12 cfs 28,601 cf

Reach 3R: NORTH Inflow=1.57 cfs 3,567 cf
Outflow=1.57 cfs 3,567 cf

Reach 4R: WEST Inflow=35.69 cfs 144,774 cf
Outflow=35.69 cfs 144,774 cf

Reach 5R: Into City Inflow=6.84 cfs 56,617 cf
Outflow=6.84 cfs 56,617 cf

Pond 1P: Peak Elev=1,159.93' Storage=18,686 cf Inflow=34.16 cfs 135,470 cf
Discarded=0.01 cfs 1,342 cf Primary=27.35 cfs 125,511 cf Outflow=27.36 cfs 126,852 cf

Pond 2P: Peak Elev=1,161.13' Storage=1,545 cf Inflow=3.95 cfs 8,921 cf
Discarded=0.00 cfs 47 cf Primary=2.46 cfs 8,874 cf Outflow=2.47 cfs 8,921 cf

Pond 4P: Peak Elev=1,161.75' Storage=9,365 cf Inflow=6.67 cfs 29,443 cf
Discarded=0.02 cfs 238 cf Primary=3.99 cfs 29,204 cf Outflow=4.01 cfs 29,443 cf

Pond 5P: existing CB Peak Elev=1,161.55' Inflow=4.17 cfs 34,652 cf
18.0" Round Culvert n=0.025 L=76.0' S=0.0020 '/' Outflow=4.17 cfs 34,652 cf

Pond D4: Peak Elev=1,162.00' Storage=5,456 cf Inflow=14.39 cfs 41,333 cf
Discarded=0.01 cfs 59 cf Primary=8.44 cfs 38,315 cf Secondary=4.12 cfs 2,958 cf Outflow=8.60 cfs 41,333 cf

Pond D5: Peak Elev=1,162.14' Storage=17,874 cf Inflow=20.57 cfs 56,813 cf
Discarded=0.02 cfs 196 cf Primary=6.84 cfs 56,617 cf Outflow=6.87 cfs 56,813 cf

Total Runoff Area = 1,462,682 sf Runoff Volume = 244,059 cf Average Runoff Depth = 2.00"
91.14% Pervious = 1,333,061 sf 8.86% Impervious = 129,621 sf

Summary for Subcatchment A:

Runoff = 7.12 cfs @ 12.41 hrs, Volume= 28,601 cf, Depth= 1.95"
Routed to Reach 1R : SOUTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	10,522	98	Impervious
	165,125	80	>75% Grass cover, Good, HSG D
	175,647	81	Weighted Average
	165,125	80	94.01% Pervious Area
	10,522	98	5.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	100	0.0056	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.2	78	0.0056	1.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	100	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.5	60	0.0167	1.94		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.7	71	0.0141	1.78		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.8	409	Total			

Summary for Subcatchment B:

Runoff = 6.67 cfs @ 12.46 hrs, Volume= 29,443 cf, Depth= 2.26"
Routed to Pond 4P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	37,652	98	Impervious
	118,814	80	>75% Grass cover, Good, HSG D
	156,466	84	Weighted Average
	118,814	80	75.94% Pervious Area
	37,652	98	24.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0038	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.2	66	0.0038	0.92		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.3	111	0.0090	1.42		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.4	53	0.0189	2.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
32.5	330	Total			

Summary for Subcatchment C:

Runoff = 9.03 cfs @ 12.15 hrs, Volume= 18,863 cf, Depth= 1.89"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	2,960	98	Impervious
*	116,496	80	Field
	119,456	80	Weighted Average
	116,496	80	97.52% Pervious Area
	2,960	98	2.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	100	0.0117	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
1.2	71	0.0117	0.97		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.4	171	Total			

Summary for Subcatchment D:

Runoff = 2.64 cfs @ 12.09 hrs, Volume= 5,448 cf, Depth= 3.51"
Routed to Pond 5P : existing CB

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	18,339	98	Impervious
	288	80	>75% Grass cover, Good, HSG D
	18,627	98	Weighted Average
	288	80	1.55% Pervious Area
	18,339	98	98.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	93	0.0144	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"

Summary for Subcatchment E:

Runoff = 3.95 cfs @ 12.16 hrs, Volume= 8,921 cf, Depth= 2.08"
Routed to Pond 2P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	44,581	80	Field
*	6,911	98	Impervious
	51,492	82	Weighted Average
	44,581	80	86.58% Pervious Area
	6,911	98	13.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0071	0.22		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
0.9	40	0.0071	0.76		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.1	9	0.1111	3.00		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
8.6	149	Total			

Summary for Subcatchment F:

Runoff = 19.17 cfs @ 12.12 hrs, Volume= 34,766 cf, Depth= 1.85"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	225,123	80	Field
	225,123	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	71	0.0141	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"

Summary for Subcatchment G:

Runoff = 1.57 cfs @ 12.17 hrs, Volume= 3,567 cf, Depth= 1.85"
Routed to Reach 3R : NORTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	23,097	80	Field
	23,097	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0054	0.20		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
0.8	31	0.0054	0.66		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.3	131	Total			

Summary for Subcatchment H:

Runoff = 8.35 cfs @ 12.18 hrs, Volume= 19,264 cf, Depth= 1.85"
Routed to Reach 4R : WEST

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	124,739	80	Field
	124,739	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0407	0.19		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.81"
1.1	121	0.0407	1.82		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.8	221	Total			

Summary for Subcatchment Y:

Runoff = 17.73 cfs @ 12.26 hrs, Volume= 53,854 cf, Depth= 2.09"
Routed to Pond D5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	44,259	98	Impervious
	264,283	80	>75% Grass cover, Good, HSG D
	308,542	83	Weighted Average
	264,283	80	85.66% Pervious Area
	44,259	98	14.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0080	0.23		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
9.5	460	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
16.7	560	Total			

Summary for Subcatchment Z:

Runoff = 14.39 cfs @ 12.24 hrs, Volume= 41,333 cf, Depth= 1.91"
Routed to Pond D4 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	8,978	98	Impervious
	250,515	80	>75% Grass cover, Good, HSG D
	259,493	81	Weighted Average
	250,515	80	96.54% Pervious Area
	8,978	98	3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0091	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
8.7	449	0.0091	0.86		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
15.6	549	Total			

Summary for Reach 1R: SOUTH

Inflow Area = 175,647 sf, 5.99% Impervious, Inflow Depth = 1.95" for 10-Year event
Inflow = 7.12 cfs @ 12.41 hrs, Volume= 28,601 cf
Outflow = 7.12 cfs @ 12.41 hrs, Volume= 28,601 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 3R: NORTH

Inflow Area = 23,097 sf, 0.00% Impervious, Inflow Depth = 1.85" for 10-Year event
Inflow = 1.57 cfs @ 12.17 hrs, Volume= 3,567 cf
Outflow = 1.57 cfs @ 12.17 hrs, Volume= 3,567 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 4R: WEST

Inflow Area = 955,396 sf, 7.83% Impervious, Inflow Depth = 1.82" for 10-Year event
Inflow = 35.69 cfs @ 12.18 hrs, Volume= 144,774 cf
Outflow = 35.69 cfs @ 12.18 hrs, Volume= 144,774 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 5R: Into City

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 2.20" for 10-Year event
Inflow = 6.84 cfs @ 12.56 hrs, Volume= 56,617 cf
Outflow = 6.84 cfs @ 12.56 hrs, Volume= 56,617 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P:

Inflow Area = 830,657 sf, 9.01% Impervious, Inflow Depth = 1.96" for 10-Year event
Inflow = 34.16 cfs @ 12.13 hrs, Volume= 135,470 cf
Outflow = 27.36 cfs @ 12.18 hrs, Volume= 126,852 cf, Atten= 20%, Lag= 2.9 min
Discarded = 0.01 cfs @ 12.18 hrs, Volume= 1,342 cf
Primary = 27.35 cfs @ 12.18 hrs, Volume= 125,511 cf
Routed to Reach 4R : WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,159.93' @ 12.18 hrs Surf.Area= 9,543 sf Storage= 18,686 cf

Plug-Flow detention time= 67.7 min calculated for 126,852 cf (94% of inflow)
Center-of-Mass det. time= 37.1 min (856.7 - 819.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,152.00'	55,527 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,152.00	27	0	0
1,153.00	185	106	106
1,154.00	494	340	446
1,155.00	968	731	1,177
1,156.00	1,627	1,298	2,474
1,157.00	2,492	2,060	4,534
1,158.00	3,594	3,043	7,577
1,159.00	5,079	4,337	11,913
1,160.00	9,898	7,489	19,402
1,161.00	17,264	13,581	32,983
1,162.00	27,825	22,545	55,527

Device	Routing	Invert	Outlet Devices
#1	Primary	1,158.50'	**5.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	1,152.00'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.18 hrs HW=1,159.93' (Free Discharge)
2=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=27.33 cfs @ 12.18 hrs HW=1,159.93' TW=0.00' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Weir Controls 27.33 cfs @ 3.83 fps)

Summary for Pond 2P:

Inflow Area = 51,492 sf, 13.42% Impervious, Inflow Depth = 2.08" for 10-Year event
Inflow = 3.95 cfs @ 12.16 hrs, Volume= 8,921 cf
Outflow = 2.47 cfs @ 12.25 hrs, Volume= 8,921 cf, Atten= 38%, Lag= 5.4 min
Discarded = 0.00 cfs @ 12.25 hrs, Volume= 47 cf
Primary = 2.46 cfs @ 12.25 hrs, Volume= 8,874 cf
Routed to Pond 1P :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.13' @ 12.25 hrs Surf.Area= 2,710 sf Storage= 1,545 cf

Plug-Flow detention time= 11.5 min calculated for 8,920 cf (100% of inflow)
Center-of-Mass det. time= 11.5 min (808.9 - 797.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.89'	5,505 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.89	50	0	0
1,161.00	2,167	1,230	1,230
1,162.00	6,382	4,275	5,505

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.89'	**15.0" Round Culvert** L= 32.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.89' / 1,159.84' S= 0.0016 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf
#2	Discarded	1,159.89'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.25 hrs HW=1,161.13' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=2.46 cfs @ 12.25 hrs HW=1,161.13' TW=1,159.85' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 2.46 cfs @ 2.52 fps)

Summary for Pond 4P:

Inflow Area = 156,466 sf, 24.06% Impervious, Inflow Depth = 2.26" for 10-Year event
Inflow = 6.67 cfs @ 12.46 hrs, Volume= 29,443 cf
Outflow = 4.01 cfs @ 12.85 hrs, Volume= 29,443 cf, Atten= 40%, Lag= 23.5 min
Discarded = 0.02 cfs @ 12.84 hrs, Volume= 238 cf
Primary = 3.99 cfs @ 12.85 hrs, Volume= 29,204 cf
Routed to Pond 5P : existing CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.75' @ 12.84 hrs Surf.Area= 11,210 sf Storage= 9,365 cf

Plug-Flow detention time= 39.7 min calculated for 29,438 cf (100% of inflow)
Center-of-Mass det. time= 39.7 min (850.5 - 810.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.84'	28,962 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.84	50	0	0
1,160.00	228	22	22
1,161.00	5,773	3,001	3,023
1,162.00	13,053	9,413	12,436
1,163.00	20,000	16,527	28,962

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.85'	**18.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.84' / 1,159.85' S= -0.0001 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.84'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.84 hrs HW=1,161.75' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=2.58 cfs @ 12.85 hrs HW=1,161.75' TW=1,161.55' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 2.58 cfs @ 1.48 fps)

Summary for Pond 5P: existing CB

Inflow Area = 175,093 sf, 31.98% Impervious, Inflow Depth = 2.37" for 10-Year event
Inflow = 4.17 cfs @ 12.81 hrs, Volume= 34,652 cf
Outflow = 4.17 cfs @ 12.81 hrs, Volume= 34,652 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.17 cfs @ 12.81 hrs, Volume= 34,652 cf
Routed to Pond 1P :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.55' @ 12.81 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.85'	**18.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.85' / 1,159.70' S= 0.0020 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=4.17 cfs @ 12.81 hrs HW=1,161.55' TW=1,159.40' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 4.17 cfs @ 2.60 fps)

Summary for Pond D4:

Inflow Area = 259,493 sf, 3.46% Impervious, Inflow Depth = 1.91" for 10-Year event
Inflow = 14.39 cfs @ 12.24 hrs, Volume= 41,333 cf
Outflow = 8.60 cfs @ 12.21 hrs, Volume= 41,333 cf, Atten= 40%, Lag= 0.0 min
Discarded = 0.01 cfs @ 12.42 hrs, Volume= 59 cf
Primary = 8.44 cfs @ 12.42 hrs, Volume= 38,315 cf
Routed to Pond 1P :
Secondary = 4.12 cfs @ 12.18 hrs, Volume= 2,958 cf
Routed to Pond D5 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.00' @ 12.42 hrs Surf.Area= 6,642 sf Storage= 5,456 cf

Plug-Flow detention time= 6.4 min calculated for 41,327 cf (100% of inflow)
Center-of-Mass det. time= 6.4 min (820.1 - 813.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.09'	30,460 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.09	50	0	0
1,160.60	500	140	140
1,161.00	2,724	645	785
1,162.00	6,652	4,688	5,473
1,163.00	11,661	9,157	14,630
1,164.00	20,000	15,831	30,460

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.09'	**24.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.09' / 1,159.75' S= 0.0045 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Secondary	1,160.77'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Elev. (feet) 1,160.77 1,161.00 1,162.00 1,163.00 1,164.00 Width (feet) 1.00 7.00 15.00 29.00 45.00
#3	Discarded	1,160.09'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.42 hrs HW=1,162.00' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=8.44 cfs @ 12.42 hrs HW=1,162.00' TW=1,159.69' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 8.44 cfs @ 3.51 fps)

Secondary OutFlow Max=1.56 cfs @ 12.18 hrs HW=1,161.33' TW=1,161.33' (Dynamic Tailwater)
└**2=Custom Weir/Orifice** (Weir Controls 1.56 cfs @ 0.42 fps)

Summary for Pond D5:

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 2.21" for 10-Year event
Inflow = 20.57 cfs @ 12.22 hrs, Volume= 56,813 cf
Outflow = 6.87 cfs @ 12.56 hrs, Volume= 56,813 cf, Atten= 67%, Lag= 20.0 min
Discarded = 0.02 cfs @ 12.56 hrs, Volume= 196 cf
Primary = 6.84 cfs @ 12.56 hrs, Volume= 56,617 cf
Routed to Reach 5R : Into City

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.14' @ 12.56 hrs Surf.Area= 16,012 sf Storage= 17,874 cf

Plug-Flow detention time= 25.8 min calculated for 56,805 cf (100% of inflow)
Center-of-Mass det. time= 25.8 min (825.9 - 800.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.62'	62,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.62	100	0	0
1,160.00	500	114	114
1,161.00	7,895	4,198	4,312
1,162.00	14,809	11,352	15,664
1,163.00	23,200	19,005	34,668
1,164.00	32,000	27,600	62,268

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.62'	**18.0" Round Culvert** L= 52.3' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.62' / 1,159.47' S= 0.0029 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.62'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.56 hrs HW=1,162.14' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=6.84 cfs @ 12.56 hrs HW=1,162.14' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 6.84 cfs @ 3.87 fps)

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: Runoff Area=175,647 sf 5.99% Impervious Runoff Depth=4.35"
Flow Length=409' Tc=28.8 min CN=80/98 Runoff=15.87 cfs 63,635 cf

SubcatchmentB: Runoff Area=156,466 sf 24.06% Impervious Runoff Depth=4.71"
Flow Length=330' Tc=32.5 min CN=80/98 Runoff=13.94 cfs 61,459 cf

SubcatchmentC: Runoff Area=119,456 sf 2.48% Impervious Runoff Depth=4.28"
Flow Length=171' Slope=0.0117 '/' Tc=7.4 min CN=80/98 Runoff=19.96 cfs 42,570 cf

SubcatchmentD: Runoff Area=18,627 sf 98.45% Impervious Runoff Depth=6.22"
Flow Length=93' Slope=0.0144 '/' Tc=1.4 min CN=80/98 Runoff=4.58 cfs 9,655 cf

SubcatchmentE: Runoff Area=51,492 sf 13.42% Impervious Runoff Depth=4.50"
Flow Length=149' Tc=8.6 min CN=80/98 Runoff=8.44 cfs 19,301 cf

SubcatchmentF: Runoff Area=225,123 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=71' Slope=0.0141 '/' Tc=4.4 min CN=80/0 Runoff=42.30 cfs 79,284 cf

SubcatchmentG: Runoff Area=23,097 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=131' Slope=0.0054 '/' Tc=9.3 min CN=80/0 Runoff=3.53 cfs 8,134 cf

SubcatchmentH: Runoff Area=124,739 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=221' Slope=0.0407 '/' Tc=9.8 min CN=80/0 Runoff=18.71 cfs 43,931 cf

SubcatchmentY: Runoff Area=308,542 sf 14.34% Impervious Runoff Depth=4.52"
Flow Length=560' Slope=0.0080 '/' Tc=16.7 min CN=80/98 Runoff=38.09 cfs 116,132 cf

SubcatchmentZ: Runoff Area=259,493 sf 3.46% Impervious Runoff Depth=4.30"
Flow Length=549' Slope=0.0091 '/' Tc=15.6 min CN=80/98 Runoff=32.12 cfs 92,903 cf

Reach 1R: SOUTH Inflow=15.87 cfs 63,635 cf
Outflow=15.87 cfs 63,635 cf

Reach 3R: NORTH Inflow=3.53 cfs 8,134 cf
Outflow=3.53 cfs 8,134 cf

Reach 4R: WEST Inflow=75.89 cfs 332,094 cf
Outflow=75.89 cfs 332,094 cf

Reach 5R: Into City Inflow=10.05 cfs 122,002 cf
Outflow=10.05 cfs 122,002 cf

Pond 1P: Peak Elev=1,160.79' Storage=29,485 cf Inflow=75.91 cfs 298,208 cf
Discarded=0.02 cfs 1,422 cf Primary=57.20 cfs 288,163 cf Outflow=57.22 cfs 289,584 cf

Pond 2P: Peak Elev=1,161.76' Storage=4,118 cf Inflow=8.44 cfs 19,301 cf
Discarded=0.01 cfs 71 cf Primary=3.92 cfs 19,229 cf Outflow=3.93 cfs 19,301 cf

Pond 4P: Peak Elev=1,162.89' Storage=26,826 cf Inflow=13.94 cfs 61,459 cf
Discarded=0.03 cfs 463 cf Primary=6.85 cfs 60,996 cf Outflow=6.88 cfs 61,459 cf

Pond 5P: existing CB Peak Elev=1,162.87' Inflow=7.11 cfs 70,651 cf
18.0" Round Culvert n=0.025 L=76.0' S=0.0020 '/' Outflow=7.11 cfs 70,651 cf

Pond D4: Peak Elev=1,163.29' Storage=18,312 cf Inflow=32.12 cfs 92,903 cf
Discarded=0.02 cfs 121 cf Primary=13.97 cfs 86,474 cf Secondary=5.29 cfs 6,308 cf Outflow=15.87 cfs 92,903 cf

Pond D5: Peak Elev=1,163.50' Storage=47,345 cf Inflow=42.21 cfs 122,440 cf
Discarded=0.04 cfs 438 cf Primary=10.05 cfs 122,002 cf Outflow=10.09 cfs 122,440 cf

Total Runoff Area = 1,462,682 sf Runoff Volume = 537,003 cf Average Runoff Depth = 4.41"
91.14% Pervious = 1,333,061 sf 8.86% Impervious = 129,621 sf

Summary for Subcatchment A:

Runoff = 15.87 cfs @ 12.39 hrs, Volume= 63,635 cf, Depth= 4.35"
Routed to Reach 1R : SOUTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	10,522	98	Impervious
	165,125	80	>75% Grass cover, Good, HSG D
	175,647	81	Weighted Average
	165,125	80	94.01% Pervious Area
	10,522	98	5.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	100	0.0056	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.2	78	0.0056	1.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.1	100	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.5	60	0.0167	1.94		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.7	71	0.0141	1.78		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.8	409	Total			

Summary for Subcatchment B:

Runoff = 13.94 cfs @ 12.46 hrs, Volume= 61,459 cf, Depth= 4.71"
Routed to Pond 4P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	37,652	98	Impervious
	118,814	80	>75% Grass cover, Good, HSG D
	156,466	84	Weighted Average
	118,814	80	75.94% Pervious Area
	37,652	98	24.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.6	100	0.0038	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.2	66	0.0038	0.92		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.3	111	0.0090	1.42		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.4	53	0.0189	2.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
32.5	330	Total			

Summary for Subcatchment C:

Runoff = 19.96 cfs @ 12.15 hrs, Volume= 42,570 cf, Depth= 4.28"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	2,960	98	Impervious
*	116,496	80	Field
	119,456	80	Weighted Average
	116,496	80	97.52% Pervious Area
	2,960	98	2.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	100	0.0117	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
1.2	71	0.0117	0.97		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.4	171	Total			

Summary for Subcatchment D:

Runoff = 4.58 cfs @ 12.09 hrs, Volume= 9,655 cf, Depth= 6.22"
Routed to Pond 5P : existing CB

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	18,339	98	Impervious
	288	80	>75% Grass cover, Good, HSG D
	18,627	98	Weighted Average
	288	80	1.55% Pervious Area
	18,339	98	98.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	93	0.0144	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"

Summary for Subcatchment E:

Runoff = 8.44 cfs @ 12.16 hrs, Volume= 19,301 cf, Depth= 4.50"
Routed to Pond 2P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	44,581	80	Field
*	6,911	98	Impervious
	51,492	82	Weighted Average
	44,581	80	86.58% Pervious Area
	6,911	98	13.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0071	0.22		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
0.9	40	0.0071	0.76		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.1	9	0.1111	3.00		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
8.6	149	Total			

Summary for Subcatchment F:

Runoff = 42.30 cfs @ 12.12 hrs, Volume= 79,284 cf, Depth= 4.23"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	225,123	80	Field
	225,123	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	71	0.0141	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"

Summary for Subcatchment G:

Runoff = 3.53 cfs @ 12.17 hrs, Volume= 8,134 cf, Depth= 4.23"
Routed to Reach 3R : NORTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	23,097	80	Field
	23,097	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	100	0.0054	0.20		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
0.8	31	0.0054	0.66		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.3	131	Total			

Summary for Subcatchment H:

Runoff = 18.71 cfs @ 12.17 hrs, Volume= 43,931 cf, Depth= 4.23"
Routed to Reach 4R : WEST

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	124,739	80	Field
	124,739	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0407	0.19		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.81"
1.1	121	0.0407	1.82		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
9.8	221	Total			

Summary for Subcatchment Y:

Runoff = 38.09 cfs @ 12.25 hrs, Volume= 116,132 cf, Depth= 4.52"
Routed to Pond D5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	44,259	98	Impervious
	264,283	80	>75% Grass cover, Good, HSG D
	308,542	83	Weighted Average
	264,283	80	85.66% Pervious Area
	44,259	98	14.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0080	0.23		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
9.5	460	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
16.7	560	Total			

Summary for Subcatchment Z:

Runoff = 32.12 cfs @ 12.24 hrs, Volume= 92,903 cf, Depth= 4.30"
Routed to Pond D4 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	8,978	98	Impervious
	250,515	80	>75% Grass cover, Good, HSG D
	259,493	81	Weighted Average
	250,515	80	96.54% Pervious Area
	8,978	98	3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0091	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
8.7	449	0.0091	0.86		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
15.6	549	Total			

Summary for Reach 1R: SOUTH

Inflow Area = 175,647 sf, 5.99% Impervious, Inflow Depth = 4.35" for 100-Year event
Inflow = 15.87 cfs @ 12.39 hrs, Volume= 63,635 cf
Outflow = 15.87 cfs @ 12.39 hrs, Volume= 63,635 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 3R: NORTH

Inflow Area = 23,097 sf, 0.00% Impervious, Inflow Depth = 4.23" for 100-Year event
Inflow = 3.53 cfs @ 12.17 hrs, Volume= 8,134 cf
Outflow = 3.53 cfs @ 12.17 hrs, Volume= 8,134 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 4R: WEST

Inflow Area = 955,396 sf, 7.83% Impervious, Inflow Depth = 4.17" for 100-Year event
Inflow = 75.89 cfs @ 12.18 hrs, Volume= 332,094 cf
Outflow = 75.89 cfs @ 12.18 hrs, Volume= 332,094 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 5R: Into City

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 4.74" for 100-Year event
Inflow = 10.05 cfs @ 12.65 hrs, Volume= 122,002 cf
Outflow = 10.05 cfs @ 12.65 hrs, Volume= 122,002 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P:

Inflow Area = 830,657 sf, 9.01% Impervious, Inflow Depth = 4.31" for 100-Year event
Inflow = 75.91 cfs @ 12.13 hrs, Volume= 298,208 cf
Outflow = 57.22 cfs @ 12.18 hrs, Volume= 289,584 cf, Atten= 25%, Lag= 3.0 min
Discarded = 0.02 cfs @ 12.18 hrs, Volume= 1,422 cf
Primary = 57.20 cfs @ 12.18 hrs, Volume= 288,163 cf
Routed to Reach 4R : WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,160.79' @ 12.18 hrs Surf.Area= 15,701 sf Storage= 29,485 cf

Plug-Flow detention time= 38.4 min calculated for 289,584 cf (97% of inflow)
Center-of-Mass det. time= 22.8 min (835.9 - 813.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,152.00'	55,527 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,152.00	27	0	0
1,153.00	185	106	106
1,154.00	494	340	446
1,155.00	968	731	1,177
1,156.00	1,627	1,298	2,474
1,157.00	2,492	2,060	4,534
1,158.00	3,594	3,043	7,577
1,159.00	5,079	4,337	11,913
1,160.00	9,898	7,489	19,402
1,161.00	17,264	13,581	32,983
1,162.00	27,825	22,545	55,527

Device	Routing	Invert	Outlet Devices
#1	Primary	1,158.50'	**5.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	1,152.00'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.18 hrs HW=1,160.79' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=57.17 cfs @ 12.18 hrs HW=1,160.79' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 57.17 cfs @ 5.00 fps)

Summary for Pond 2P:

Inflow Area = 51,492 sf, 13.42% Impervious, Inflow Depth = 4.50" for 100-Year event
Inflow = 8.44 cfs @ 12.16 hrs, Volume= 19,301 cf
Outflow = 3.93 cfs @ 12.29 hrs, Volume= 19,301 cf, Atten= 53%, Lag= 8.0 min
Discarded = 0.01 cfs @ 12.29 hrs, Volume= 71 cf
Primary = 3.92 cfs @ 12.29 hrs, Volume= 19,229 cf
Routed to Pond 1P :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.76' @ 12.29 hrs Surf.Area= 5,389 sf Storage= 4,118 cf

Plug-Flow detention time= 12.9 min calculated for 19,298 cf (100% of inflow)
Center-of-Mass det. time= 12.9 min (797.9 - 785.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.89'	5,505 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.89	50	0	0
1,161.00	2,167	1,230	1,230
1,162.00	6,382	4,275	5,505

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.89'	**15.0" Round Culvert** L= 32.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.89' / 1,159.84' S= 0.0016 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf
#2	Discarded	1,159.89'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.29 hrs HW=1,161.76' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=3.92 cfs @ 12.29 hrs HW=1,161.76' TW=1,160.55' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 3.92 cfs @ 3.19 fps)

Summary for Pond 4P:

Inflow Area = 156,466 sf, 24.06% Impervious, Inflow Depth = 4.71" for 100-Year event
Inflow = 13.94 cfs @ 12.46 hrs, Volume= 61,459 cf
Outflow = 6.88 cfs @ 13.09 hrs, Volume= 61,459 cf, Atten= 51%, Lag= 38.0 min
Discarded = 0.03 cfs @ 13.08 hrs, Volume= 463 cf
Primary = 6.85 cfs @ 13.09 hrs, Volume= 60,996 cf
Routed to Pond 5P : existing CB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.89' @ 13.08 hrs Surf.Area= 19,244 sf Storage= 26,826 cf

Plug-Flow detention time= 70.8 min calculated for 61,450 cf (100% of inflow)
Center-of-Mass det. time= 70.8 min (871.4 - 800.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.84'	28,962 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.84	50	0	0
1,160.00	228	22	22
1,161.00	5,773	3,001	3,023
1,162.00	13,053	9,413	12,436
1,163.00	20,000	16,527	28,962

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.85'	**18.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.84' / 1,159.85' S= -0.0001 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.84'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.03 cfs @ 13.08 hrs HW=1,162.89' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.91 cfs @ 13.09 hrs HW=1,162.89' TW=1,162.86' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.91 cfs @ 0.52 fps)

Summary for Pond 5P: existing CB

Inflow Area = 175,093 sf, 31.98% Impervious, Inflow Depth = 4.84" for 100-Year event
Inflow = 7.11 cfs @ 13.01 hrs, Volume= 70,651 cf
Outflow = 7.11 cfs @ 13.01 hrs, Volume= 70,651 cf, Atten= 0%, Lag= 0.0 min
Primary = 7.11 cfs @ 13.01 hrs, Volume= 70,651 cf
Routed to Pond 1P :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.87' @ 13.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.85'	**18.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.85' / 1,159.70' S= 0.0020 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=7.11 cfs @ 13.01 hrs HW=1,162.87' TW=1,159.74' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 7.11 cfs @ 4.02 fps)

Summary for Pond D4:

Inflow Area = 259,493 sf, 3.46% Impervious, Inflow Depth = 4.30" for 100-Year event
Inflow = 32.12 cfs @ 12.24 hrs, Volume= 92,903 cf
Outflow = 15.87 cfs @ 12.22 hrs, Volume= 92,903 cf, Atten= 51%, Lag= 0.0 min
Discarded = 0.02 cfs @ 12.48 hrs, Volume= 121 cf
Primary = 13.97 cfs @ 12.48 hrs, Volume= 86,474 cf
Routed to Pond 1P :
Secondary = 5.29 cfs @ 12.18 hrs, Volume= 6,308 cf
Routed to Pond D5 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,163.29' @ 12.48 hrs Surf.Area= 14,050 sf Storage= 18,312 cf

Plug-Flow detention time= 10.8 min calculated for 92,891 cf (100% of inflow)
Center-of-Mass det. time= 10.8 min (809.1 - 798.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.09'	30,460 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.09	50	0	0
1,160.60	500	140	140
1,161.00	2,724	645	785
1,162.00	6,652	4,688	5,473
1,163.00	11,661	9,157	14,630
1,164.00	20,000	15,831	30,460

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.09'	**24.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.09' / 1,159.75' S= 0.0045 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Secondary	1,160.77'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Elev. (feet) 1,160.77 1,161.00 1,162.00 1,163.00 1,164.00 Width (feet) 1.00 7.00 15.00 29.00 45.00
#3	Discarded	1,160.09'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.48 hrs HW=1,163.29' (Free Discharge)
↑**3=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=13.97 cfs @ 12.48 hrs HW=1,163.29' TW=1,160.14' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 13.97 cfs @ 4.45 fps)

Secondary OutFlow Max=0.00 cfs @ 12.18 hrs HW=1,162.22' TW=1,162.28' (Dynamic Tailwater)
↑**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Summary for Pond D5:

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 4.76" for 100-Year event
Inflow = 42.21 cfs @ 12.23 hrs, Volume= 122,440 cf
Outflow = 10.09 cfs @ 12.65 hrs, Volume= 122,440 cf, Atten= 76%, Lag= 25.3 min
Discarded = 0.04 cfs @ 12.65 hrs, Volume= 438 cf
Primary = 10.05 cfs @ 12.65 hrs, Volume= 122,002 cf
Routed to Reach 5R : Into City

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,163.50' @ 12.65 hrs Surf.Area= 27,593 sf Storage= 47,345 cf

Plug-Flow detention time= 44.7 min calculated for 122,423 cf (100% of inflow)
Center-of-Mass det. time= 44.7 min (833.1 - 788.3)

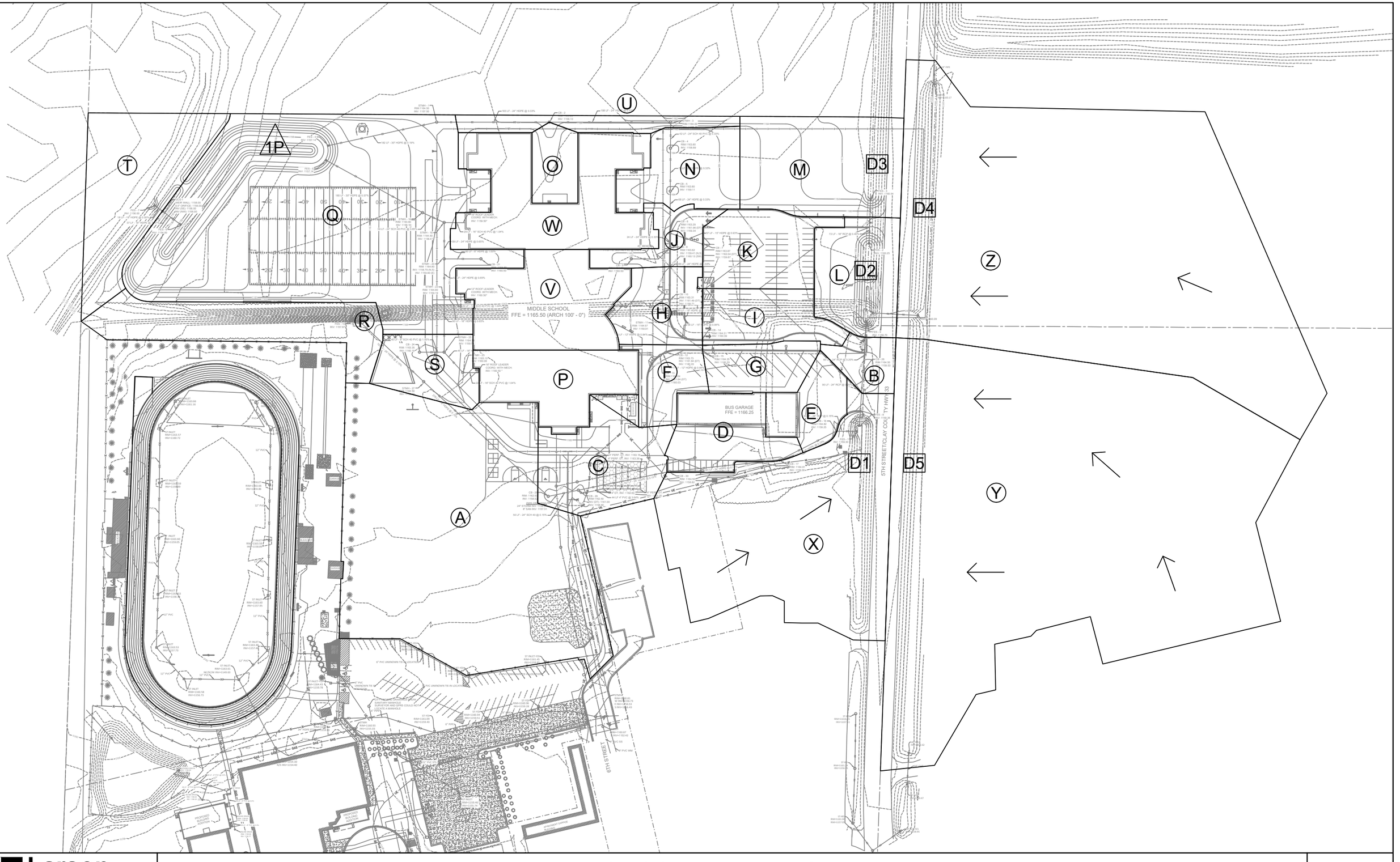
Volume	Invert	Avail.Storage	Storage Description
#1	1,159.62'	62,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.62	100	0	0
1,160.00	500	114	114
1,161.00	7,895	4,198	4,312
1,162.00	14,809	11,352	15,664
1,163.00	23,200	19,005	34,668
1,164.00	32,000	27,600	62,268

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.62'	**18.0" Round Culvert** L= 52.3' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.62' / 1,159.47' S= 0.0029 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.62'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.04 cfs @ 12.65 hrs HW=1,163.50' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.04 cfs)

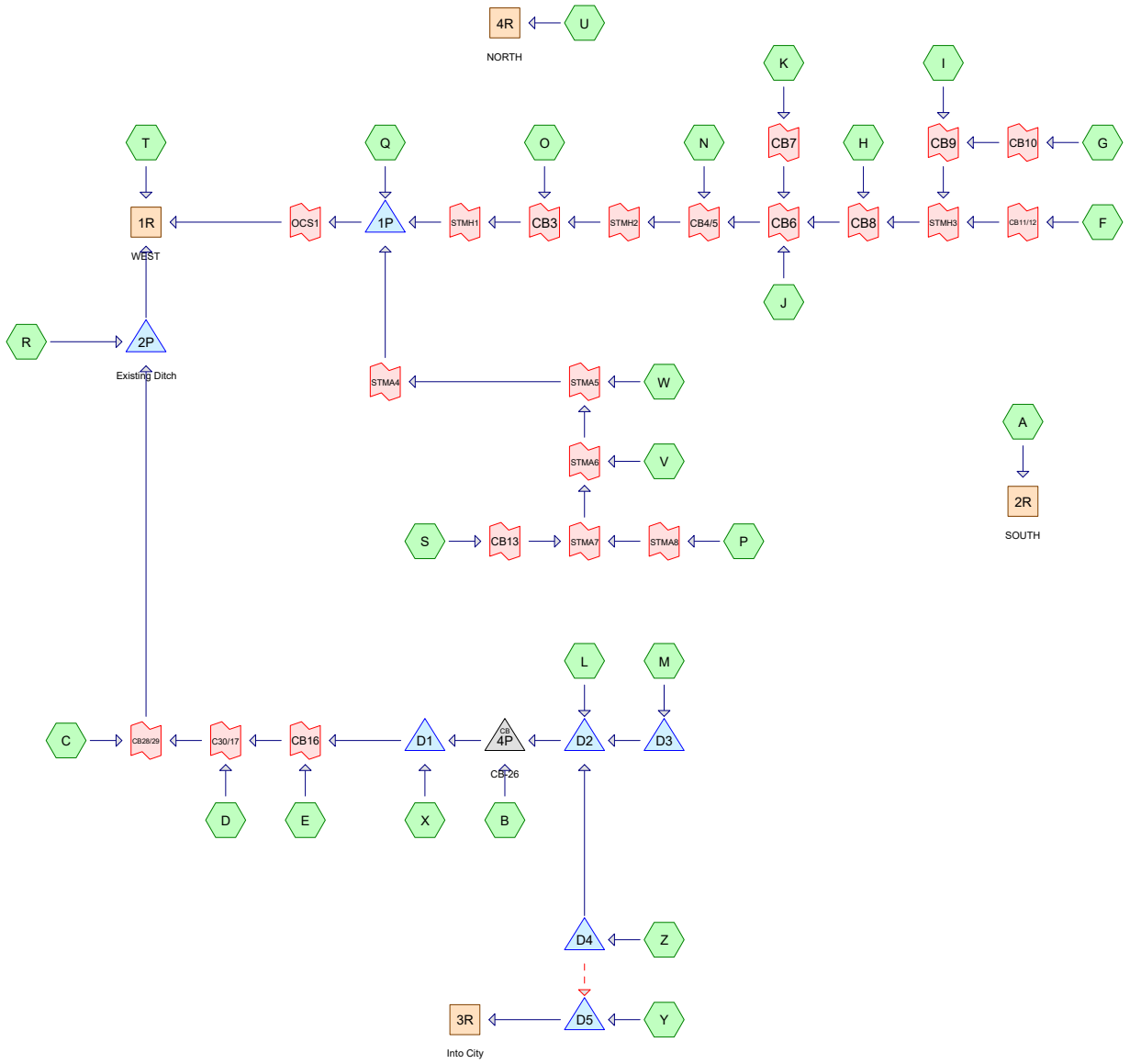
Primary OutFlow Max=10.05 cfs @ 12.65 hrs HW=1,163.50' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 10.05 cfs @ 5.69 fps)



PROPOSED DRAINAGE MAP

Larson Engineering, Inc.

Scale: 1:140



Routing Diagram for Proposed - Hawley
Prepared by Larson Engineering Inc, Printed 8/27/2024

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,095,245	80	>75% Grass cover, Good, HSG D (A, B, C, F, H, I, J, L, M, N, O, Q, R, S, T, U, X, Y, Z)
353,364	98	Impervious (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, S, V, W, X, Y, Z)
14,872	100	Wet Pond (Q)
1,463,481	**85**	**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: Runoff Area=158,651 sf 6.25% Impervious Runoff Depth=0.95"
Flow Length=443' Tc=27.6 min CN=80/98 Runoff=3.12 cfs 12,613 cf

SubcatchmentB: Runoff Area=8,292 sf 48.02% Impervious Runoff Depth=1.53"
Flow Length=83' Slope=0.0316 '/' Tc=10.9 min CN=80/98 Runoff=0.40 cfs 1,055 cf

SubcatchmentC: Runoff Area=28,949 sf 45.52% Impervious Runoff Depth=1.49"
Flow Length=58' Slope=0.0259 '/' Tc=8.9 min CN=80/98 Runoff=1.48 cfs 3,602 cf

SubcatchmentD: Runoff Area=20,775 sf 100.00% Impervious Runoff Depth=2.24"
Flow Length=139' Slope=0.0090 '/' Tc=2.1 min CN=0/98 Runoff=1.92 cfs 3,880 cf

SubcatchmentE: Runoff Area=13,371 sf 100.00% Impervious Runoff Depth=2.24"
Flow Length=134' Slope=0.0107 '/' Tc=2.0 min CN=0/98 Runoff=1.24 cfs 2,497 cf

SubcatchmentF: Runoff Area=12,199 sf 94.12% Impervious Runoff Depth=2.16"
Flow Length=117' Slope=0.0100 '/' Tc=1.8 min CN=80/98 Runoff=1.09 cfs 2,196 cf

SubcatchmentG: Runoff Area=13,852 sf 100.00% Impervious Runoff Depth=2.24"
Flow Length=192' Slope=0.0100 '/' Tc=2.5 min CN=0/98 Runoff=1.28 cfs 2,587 cf

SubcatchmentH: Runoff Area=16,864 sf 61.49% Impervious Runoff Depth=1.71"
Flow Length=84' Slope=0.0200 '/' Tc=11.9 min CN=80/98 Runoff=0.87 cfs 2,406 cf

SubcatchmentI: Runoff Area=18,095 sf 94.81% Impervious Runoff Depth=2.17"
Flow Length=204' Tc=6.8 min CN=80/98 Runoff=1.42 cfs 3,272 cf

SubcatchmentJ: Runoff Area=11,699 sf 41.56% Impervious Runoff Depth=1.44"
Flow Length=165' Tc=18.3 min CN=80/98 Runoff=0.42 cfs 1,403 cf

SubcatchmentK: Runoff Area=23,520 sf 100.00% Impervious Runoff Depth=2.24"
Flow Length=195' Slope=0.0161 '/' Tc=2.0 min CN=0/98 Runoff=2.18 cfs 4,392 cf

SubcatchmentL: Runoff Area=24,447 sf 24.98% Impervious Runoff Depth=1.21"
Flow Length=72' Slope=0.0199 '/' Tc=11.7 min CN=80/98 Runoff=0.92 cfs 2,467 cf

SubcatchmentM: Runoff Area=42,181 sf 9.59% Impervious Runoff Depth=1.00"
Flow Length=208' Slope=0.0168 '/' Tc=17.2 min CN=80/98 Runoff=1.12 cfs 3,515 cf

SubcatchmentN: Runoff Area=22,569 sf 7.02% Impervious Runoff Depth=0.96"
Flow Length=113' Slope=0.0150 '/' Tc=17.2 min CN=80/98 Runoff=0.58 cfs 1,814 cf

SubcatchmentO: Runoff Area=9,265 sf 6.48% Impervious Runoff Depth=0.96"
Flow Length=117' Slope=0.0138 '/' Tc=17.9 min CN=80/98 Runoff=0.23 cfs 739 cf

SubcatchmentP: Runoff Area=34,120 sf 100.00% Impervious Runoff Depth=2.24"
Tc=6.0 min CN=0/98 Runoff=2.84 cfs 6,372 cf

SubcatchmentQ: Runoff Area=159,184 sf 14.27% Impervious Runoff Depth=1.08"
Flow Length=526' Slope=0.0314 '/' Tc=15.4 min CN=80/99 Runoff=4.73 cfs 14,328 cf

SubcatchmentR: Runoff Area=33,669 sf 0.00% Impervious Runoff Depth=0.87"
Flow Length=91' Slope=0.0110 '/' Tc=17.9 min CN=80/0 Runoff=0.77 cfs 2,436 cf

SubcatchmentS: Runoff Area=16,774 sf 35.92% Impervious Runoff Depth=1.36"
Flow Length=132' Slope=0.0133 '/' Tc=18.2 min CN=80/98 Runoff=0.57 cfs 1,903 cf

SubcatchmentT: Runoff Area=41,855 sf 0.00% Impervious Runoff Depth=0.87"
Flow Length=131' Slope=0.0382 '/' Tc=12.0 min CN=80/0 Runoff=1.18 cfs 3,028 cf

SubcatchmentU: Runoff Area=11,086 sf 0.00% Impervious Runoff Depth=0.87"
Flow Length=30' Slope=0.0500 '/' Tc=4.0 min CN=80/0 Runoff=0.45 cfs 802 cf

SubcatchmentV: Runoff Area=24,880 sf 100.00% Impervious Runoff Depth=2.24"
Tc=6.0 min CN=0/98 Runoff=2.07 cfs 4,646 cf

SubcatchmentW: Runoff Area=47,320 sf 100.00% Impervious Runoff Depth=2.24"
Tc=6.0 min CN=0/98 Runoff=3.94 cfs 8,837 cf

SubcatchmentX: Runoff Area=101,829 sf 24.68% Impervious Runoff Depth=1.21"
Flow Length=263' Slope=0.0114 '/' Tc=20.8 min CN=80/98 Runoff=2.90 cfs 10,242 cf

SubcatchmentY: Runoff Area=308,542 sf 14.34% Impervious Runoff Depth=1.07"
Flow Length=560' Slope=0.0080 '/' Tc=16.7 min CN=80/98 Runoff=8.80 cfs 27,386 cf

SubcatchmentZ: Runoff Area=259,493 sf 3.46% Impervious Runoff Depth=0.92"
Flow Length=549' Slope=0.0091 '/' Tc=15.6 min CN=80/98 Runoff=6.71 cfs 19,802 cf

Reach 1R: WEST Inflow=10.03 cfs 96,136 cf
Outflow=10.03 cfs 96,136 cf

Reach 2R: SOUTH Inflow=3.12 cfs 12,613 cf
Outflow=3.12 cfs 12,613 cf

Reach 3R: Into City Inflow=4.91 cfs 29,808 cf
Outflow=4.91 cfs 29,808 cf

Reach 4R: NORTH Inflow=0.45 cfs 802 cf
Outflow=0.45 cfs 802 cf

Pond 1P: Peak Elev=1,157.47' Storage=50,675 cf Inflow=18.48 cfs 54,894 cf
Outflow=2.30 cfs 54,246 cf

Pond 2P: Existing Ditch Peak Elev=1,159.15' Storage=10,009 cf Inflow=7.41 cfs 46,835 cf
Discarded=0.01 cfs 976 cf Primary=7.29 cfs 38,861 cf Outflow=7.30 cfs 39,837 cf

Pond 4P: CB-26 Peak Elev=1,160.88' Inflow=3.97 cfs 24,214 cf
24.0" Round Culvert n=0.011 L=90.0' S=0.0020 '/' Outflow=3.97 cfs 24,214 cf

Pond D1: Peak Elev=1,160.66' Storage=1,671 cf Inflow=6.55 cfs 34,456 cf
Discarded=0.01 cfs 36 cf Primary=6.03 cfs 34,420 cf Outflow=6.04 cfs 34,456 cf

Pond D2: Peak Elev=1,161.08' Storage=1,025 cf Inflow=4.01 cfs 23,189 cf
Discarded=0.00 cfs 31 cf Primary=3.87 cfs 23,158 cf Outflow=3.87 cfs 23,189 cf

Pond D3: Peak Elev=1,161.17' Storage=424 cf Inflow=1.12 cfs 3,515 cf
Discarded=0.00 cfs 23 cf Primary=0.82 cfs 3,491 cf Outflow=0.82 cfs 3,515 cf

Pond D4: Peak Elev=1,161.38' Storage=2,103 cf Inflow=6.71 cfs 19,802 cf
Discarded=0.01 cfs 42 cf Primary=2.95 cfs 17,230 cf Secondary=3.50 cfs 2,530 cf Outflow=5.67 cfs 19,802 cf

Pond D5: Peak Elev=1,161.38' Storage=7,807 cf Inflow=12.29 cfs 29,916 cf
Discarded=0.01 cfs 108 cf Primary=4.91 cfs 29,808 cf Outflow=4.93 cfs 29,916 cf

Link C30/17: Inflow=6.41 cfs 40,797 cf
Primary=6.41 cfs 40,797 cf

Link CB10: Inflow=1.28 cfs 2,587 cf
Primary=1.28 cfs 2,587 cf

Link CB11/12: Inflow=1.09 cfs 2,196 cf
Primary=1.09 cfs 2,196 cf

Link CB13: Inflow=0.57 cfs 1,903 cf
Primary=0.57 cfs 1,903 cf

Link CB16: Inflow=6.17 cfs 36,917 cf
Primary=6.17 cfs 36,917 cf

Link CB28/29: Inflow=6.95 cfs 44,399 cf
Primary=6.95 cfs 44,399 cf

Link CB3: Inflow=7.04 cfs 18,809 cf
Primary=7.04 cfs 18,809 cf

Link CB4/5: Inflow=6.94 cfs 18,070 cf
Primary=6.94 cfs 18,070 cf

Link CB6: Inflow=6.67 cfs 16,256 cf
Primary=6.67 cfs 16,256 cf

Link CB7: Inflow=2.18 cfs 4,392 cf
Primary=2.18 cfs 4,392 cf

Link CB8: Inflow=4.29 cfs 10,461 cf
Primary=4.29 cfs 10,461 cf

Link CB9: Inflow=2.59 cfs 5,858 cf
Primary=2.59 cfs 5,858 cf

Link OCS1: Inflow=2.30 cfs 54,246 cf
Primary=2.30 cfs 54,246 cf

Link STMA4: Inflow=9.19 cfs 21,757 cf
Primary=9.19 cfs 21,757 cf

Link STMA5: Inflow=9.19 cfs 21,757 cf
Primary=9.19 cfs 21,757 cf

Link STMA6: Inflow=5.25 cfs 12,921 cf
Primary=5.25 cfs 12,921 cf

Link STMA7: Inflow=3.18 cfs 8,275 cf
Primary=3.18 cfs 8,275 cf

Link STMA8: Inflow=2.84 cfs 6,372 cf
Primary=2.84 cfs 6,372 cf

Link STMH1: Inflow=7.04 cfs 18,809 cf
Primary=7.04 cfs 18,809 cf

Link STMH2: Inflow=6.94 cfs 18,070 cf
Primary=6.94 cfs 18,070 cf

Link STMH3: Inflow=3.67 cfs 8,054 cf
Primary=3.67 cfs 8,054 cf

Total Runoff Area = 1,463,481 sf Runoff Volume = 148,219 cf Average Runoff Depth = 1.22"
74.84% Pervious = 1,095,245 sf 25.16% Impervious = 368,236 sf

Summary for Subcatchment A:

Runoff = 3.12 cfs @ 12.42 hrs, Volume= 12,613 cf, Depth= 0.95"
Routed to Reach 2R : SOUTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	9,915	98	Impervious
	148,736	80	>75% Grass cover, Good, HSG D
	158,651	81	Weighted Average
	148,736	80	93.75% Pervious Area
	9,915	98	6.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3	100	0.0069	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.6	45	0.0069	1.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	92	0.0109	1.57		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.7	132	0.0076	1.31		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	74	0.0069	1.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
27.6	443	Total			

Summary for Subcatchment B:

Runoff = 0.40 cfs @ 12.19 hrs, Volume= 1,055 cf, Depth= 1.53"
Routed to Pond 4P : CB-26

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	3,982	98	Impervious
	4,310	80	>75% Grass cover, Good, HSG D
	8,292	89	Weighted Average
	4,310	80	51.98% Pervious Area
	3,982	98	48.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	83	0.0316	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment C:

Runoff = 1.48 cfs @ 12.16 hrs, Volume= 3,602 cf, Depth= 1.49"
Routed to Link CB28/29 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	13,179	98	Impervious
	15,770	80	>75% Grass cover, Good, HSG D
	28,949	88	Weighted Average
	15,770	80	54.48% Pervious Area
	13,179	98	45.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	58	0.0259	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment D:

Runoff = 1.92 cfs @ 12.10 hrs, Volume= 3,880 cf, Depth= 2.24"
Routed to Link C30/17 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	20,775	98	Impervious
	20,775	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0090	0.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.3	39	0.0090	1.93		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.1	139	Total			

Summary for Subcatchment E:

Runoff = 1.24 cfs @ 12.10 hrs, Volume= 2,497 cf, Depth= 2.24"
Routed to Link CB16 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	13,371	98	Impervious
	13,371	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0107	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.3	34	0.0107	2.10		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	134	Total			

Summary for Subcatchment F:

Runoff = 1.09 cfs @ 12.10 hrs, Volume= 2,196 cf, Depth= 2.16"
Routed to Link CB11/12 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	11,482	98	Impervious
	717	80	>75% Grass cover, Good, HSG D
	12,199	97	Weighted Average
	717	80	5.88% Pervious Area
	11,482	98	94.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0100	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.1	17	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	117	Total			

Summary for Subcatchment G:

Runoff = 1.28 cfs @ 12.10 hrs, Volume= 2,587 cf, Depth= 2.24"
Routed to Link CB10 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	13,852	98	Impervious
	13,852	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0100	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.8	92	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	192	Total			

Summary for Subcatchment H:

Runoff = 0.87 cfs @ 12.20 hrs, Volume= 2,406 cf, Depth= 1.71"
Routed to Link CB8 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	10,370	98	Impervious
	6,494	80	>75% Grass cover, Good, HSG D
	16,864	91	Weighted Average
	6,494	80	38.51% Pervious Area
	10,370	98	61.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	73	0.0200	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.1	11	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	84	Total			

Summary for Subcatchment I:

Runoff = 1.42 cfs @ 12.14 hrs, Volume= 3,272 cf, Depth= 2.17"
Routed to Link CB9 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	17,155	98	Impervious
	940	80	>75% Grass cover, Good, HSG D
	18,095	97	Weighted Average
	940	80	5.19% Pervious Area
	17,155	98	94.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	20	0.0110	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.5	184	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.8	204	Total			

Summary for Subcatchment J:

Runoff = 0.42 cfs @ 12.27 hrs, Volume= 1,403 cf, Depth= 1.44"
Routed to Link CB6 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	4,862	98	Impervious
	6,837	80	>75% Grass cover, Good, HSG D
	11,699	87	Weighted Average
	6,837	80	58.44% Pervious Area
	4,862	98	41.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0135	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.3	33	0.0135	1.74		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.2	32	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
18.3	165	Total			

Summary for Subcatchment K:

Runoff = 2.18 cfs @ 12.10 hrs, Volume= 4,392 cf, Depth= 2.24"
Routed to Link CB7 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	23,520	98	Impervious
	23,520	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0161	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.6	95	0.0161	2.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	195	Total			

Summary for Subcatchment L:

Runoff = 0.92 cfs @ 12.20 hrs, Volume= 2,467 cf, Depth= 1.21"
Routed to Pond D2 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
	18,340	80	>75% Grass cover, Good, HSG D
*	6,107	98	Impervious
	24,447	84	Weighted Average
	18,340	80	75.02% Pervious Area
	6,107	98	24.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	72	0.0199	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment M:

Runoff = 1.12 cfs @ 12.27 hrs, Volume= 3,515 cf, Depth= 1.00"
Routed to Pond D3 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
	38,135	80	>75% Grass cover, Good, HSG D
*	4,046	98	Impervious
	42,181	82	Weighted Average
	38,135	80	90.41% Pervious Area
	4,046	98	9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0168	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.9	108	0.0168	1.94		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.2	208	Total			

Summary for Subcatchment N:

Runoff = 0.58 cfs @ 12.27 hrs, Volume= 1,814 cf, Depth= 0.96"
Routed to Link CB4/5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	1,584	98	Impervious
	20,985	80	>75% Grass cover, Good, HSG D
	22,569	81	Weighted Average
	20,985	80	92.98% Pervious Area
	1,584	98	7.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0150	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.1	13	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.2	113	Total			

Summary for Subcatchment O:

Runoff = 0.23 cfs @ 12.27 hrs, Volume= 739 cf, Depth= 0.96"
Routed to Link CB3 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	600	98	Impervious
	8,665	80	>75% Grass cover, Good, HSG D
	9,265	81	Weighted Average
	8,665	80	93.52% Pervious Area
	600	98	6.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	100	0.0138	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.2	17	0.0138	1.76		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.9	117	Total			

Summary for Subcatchment P:

Runoff = 2.84 cfs @ 12.13 hrs, Volume= 6,372 cf, Depth= 2.24"
Routed to Link STMA8 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	34,120	98	Impervious
	34,120	98	100.00% Impervious Area

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

Summary for Subcatchment Q:

Runoff = 4.73 cfs @ 12.24 hrs, Volume= 14,328 cf, Depth= 1.08"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	7,849	98	Impervious
*	14,872	100	Wet Pond
	136,463	80	>75% Grass cover, Good, HSG D
	159,184	83	Weighted Average
	136,463	80	85.73% Pervious Area
	22,721	99	14.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0314	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
2.7	426	0.0314	2.66		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.4	526	Total			

Summary for Subcatchment R:

Runoff = 0.77 cfs @ 12.28 hrs, Volume= 2,436 cf, Depth= 0.87"
Routed to Pond 2P : Existing Ditch

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

Area (sf)	CN	Description
33,669	80	>75% Grass cover, Good, HSG D
33,669	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	91	0.0110	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment S:

Runoff = 0.57 cfs @ 12.27 hrs, Volume= 1,903 cf, Depth= 1.36"
Routed to Link CB13 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	6,025	98	Impervious
	10,749	80	>75% Grass cover, Good, HSG D
	16,774	86	Weighted Average
	10,749	80	64.08% Pervious Area
	6,025	98	35.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0133	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.3	32	0.0133	1.73		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
18.2	132	Total			

Summary for Subcatchment T:

Runoff = 1.18 cfs @ 12.21 hrs, Volume= 3,028 cf, Depth= 0.87"
Routed to Reach 1R : WEST

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

Area (sf)	CN	Description
41,855	80	>75% Grass cover, Good, HSG D
41,855	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0382	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.2	31	0.0382	2.93		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
12.0	131	Total			

Summary for Subcatchment U:

Runoff = 0.45 cfs @ 12.12 hrs, Volume= 802 cf, Depth= 0.87"
Routed to Reach 4R : NORTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

Area (sf)	CN	Description
11,086	80	>75% Grass cover, Good, HSG D
11,086	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	30	0.0500	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment V:

Runoff = 2.07 cfs @ 12.13 hrs, Volume= 4,646 cf, Depth= 2.24"
Routed to Link STMA6 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	24,880	98	Impervious
	24,880	98	100.00% Impervious Area

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

Summary for Subcatchment W:

Runoff = 3.94 cfs @ 12.13 hrs, Volume= 8,837 cf, Depth= 2.24"
Routed to Link STMA5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	47,320	98	Impervious
	47,320	98	100.00% Impervious Area

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

Summary for Subcatchment X:

Runoff = 2.90 cfs @ 12.31 hrs, Volume= 10,242 cf, Depth= 1.21"
Routed to Pond D1 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	25,133	98	Impervious
	76,696	80	>75% Grass cover, Good, HSG D
	101,829	84	Weighted Average
	76,696	80	75.32% Pervious Area
	25,133	98	24.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	100	0.0114	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.7	163	0.0114	1.60		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
20.8	263	Total			

Summary for Subcatchment Y:

Runoff = 8.80 cfs @ 12.26 hrs, Volume= 27,386 cf, Depth= 1.07"
Routed to Pond D5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	44,259	98	Impervious
	264,283	80	>75% Grass cover, Good, HSG D
	308,542	83	Weighted Average
	264,283	80	85.66% Pervious Area
	44,259	98	14.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0080	0.23		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
9.5	460	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
16.7	560	Total			

Summary for Subcatchment Z:

Runoff = 6.71 cfs @ 12.25 hrs, Volume= 19,802 cf, Depth= 0.92"
Routed to Pond D4 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.47"

	Area (sf)	CN	Description
*	8,978	98	Impervious
	250,515	80	>75% Grass cover, Good, HSG D
	259,493	81	Weighted Average
	250,515	80	96.54% Pervious Area
	8,978	98	3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0091	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
8.7	449	0.0091	0.86		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
15.6	549	Total			

Summary for Reach 1R: WEST

Inflow Area = 985,202 sf, 31.88% Impervious, Inflow Depth > 1.17" for 2-Year event
Inflow = 10.03 cfs @ 12.42 hrs, Volume= 96,136 cf
Outflow = 10.03 cfs @ 12.42 hrs, Volume= 96,136 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 2R: SOUTH

Inflow Area = 158,651 sf, 6.25% Impervious, Inflow Depth = 0.95" for 2-Year event
Inflow = 3.12 cfs @ 12.42 hrs, Volume= 12,613 cf
Outflow = 3.12 cfs @ 12.42 hrs, Volume= 12,613 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 3R: Into City

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 1.16" for 2-Year event
Inflow = 4.91 cfs @ 12.48 hrs, Volume= 29,808 cf
Outflow = 4.91 cfs @ 12.48 hrs, Volume= 29,808 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 4R: NORTH

Inflow Area = 11,086 sf, 0.00% Impervious, Inflow Depth = 0.87" for 2-Year event
Inflow = 0.45 cfs @ 12.12 hrs, Volume= 802 cf
Outflow = 0.45 cfs @ 12.12 hrs, Volume= 802 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P:

Inflow Area = 410,341 sf, 53.25% Impervious, Inflow Depth = 1.61" for 2-Year event
Inflow = 18.48 cfs @ 12.11 hrs, Volume= 54,894 cf
Outflow = 2.30 cfs @ 12.85 hrs, Volume= 54,246 cf, Atten= 88%, Lag= 44.2 min
Primary = 2.30 cfs @ 12.85 hrs, Volume= 54,246 cf
Routed to Link OCS1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Starting Elev= 1,156.00' Surf.Area= 14,863 sf Storage= 20,512 cf
Peak Elev= 1,157.47' @ 12.85 hrs Surf.Area= 25,891 sf Storage= 50,675 cf (30,163 cf above start)

Plug-Flow detention time= 434.7 min calculated for 33,730 cf (61% of inflow)
Center-of-Mass det. time= 219.4 min (995.2 - 775.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,153.00'	151,623 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,153.00	1,963	0	0
1,154.00	4,654	3,309	3,309
1,155.00	7,445	6,050	9,358
1,156.00	14,863	11,154	20,512
1,157.00	22,609	18,736	39,248
1,158.00	29,574	26,092	65,340
1,159.00	42,264	35,919	101,259
1,160.00	58,465	50,365	151,623

Device	Routing	Invert	Outlet Devices
#1	Primary	1,156.00'	**18.0" Round Culvert** L= 18.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,156.00' / 1,156.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,158.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	1,156.00'	**8.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.30 cfs @ 12.85 hrs HW=1,157.47' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 2.30 cfs of 5.28 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 2.30 cfs @ 5.84 fps)

Summary for Pond 2P: Existing Ditch

Inflow Area = 533,006 sf, 17.93% Impervious, Inflow Depth = 1.05" for 2-Year event
Inflow = 7.41 cfs @ 12.40 hrs, Volume= 46,835 cf
Outflow = 7.30 cfs @ 12.44 hrs, Volume= 39,837 cf, Atten= 2%, Lag= 2.6 min
Discarded = 0.01 cfs @ 12.44 hrs, Volume= 976 cf
Primary = 7.29 cfs @ 12.44 hrs, Volume= 38,861 cf
Routed to Reach 1R : WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,159.15' @ 12.44 hrs Surf.Area= 3,837 sf Storage= 10,009 cf

Plug-Flow detention time= 134.1 min calculated for 39,832 cf (85% of inflow)
Center-of-Mass det. time= 75.9 min (894.8 - 818.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,152.00'	18,775 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,152.00	27	0	0
1,153.00	185	106	106
1,154.00	470	328	434
1,155.00	855	663	1,096
1,156.00	1,345	1,100	2,196
1,157.00	1,973	1,659	3,855
1,158.00	2,754	2,364	6,219
1,159.00	3,690	3,222	9,441
1,160.00	4,661	4,176	13,616
1,161.00	5,657	5,159	18,775

Device	Routing	Invert	Outlet Devices
#1	Primary	1,158.50'	**5.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	1,152.00'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.44 hrs HW=1,159.15' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=7.29 cfs @ 12.44 hrs HW=1,159.15' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 7.29 cfs @ 2.24 fps)

Summary for Pond 4P: CB-26

Inflow Area = 334,413 sf, 6.91% Impervious, Inflow Depth = 0.87" for 2-Year event
Inflow = 3.97 cfs @ 12.48 hrs, Volume= 24,214 cf
Outflow = 3.97 cfs @ 12.48 hrs, Volume= 24,214 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.97 cfs @ 12.48 hrs, Volume= 24,214 cf
Routed to Pond D1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 1,160.88' @ 12.48 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.53'	**24.0" Round Culvert** L= 90.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.53' / 1,159.35' S= 0.0020 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=3.98 cfs @ 12.48 hrs HW=1,160.88' TW=1,160.66' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 3.98 cfs @ 2.48 fps)

Summary for Pond D1:

Inflow Area = 436,242 sf, 11.06% Impervious, Inflow Depth = 0.95" for 2-Year event
Inflow = 6.55 cfs @ 12.36 hrs, Volume= 34,456 cf
Outflow = 6.04 cfs @ 12.47 hrs, Volume= 34,456 cf, Atten= 8%, Lag= 7.0 min
Discarded = 0.01 cfs @ 12.47 hrs, Volume= 36 cf
Primary = 6.03 cfs @ 12.47 hrs, Volume= 34,420 cf
Routed to Link CB16 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,160.66' @ 12.47 hrs Surf.Area= 3,975 sf Storage= 1,671 cf

Plug-Flow detention time= 3.1 min calculated for 34,451 cf (100% of inflow)
Center-of-Mass det. time= 3.1 min (834.0 - 830.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.30'	12,784 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.30	50	0	0
1,160.00	490	189	189
1,161.00	5,740	3,115	3,304
1,162.00	13,219	9,480	12,784

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.30'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.30' / 1,159.25' S= 0.0014 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Discarded	1,159.30'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.47 hrs HW=1,160.66' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=6.03 cfs @ 12.47 hrs HW=1,160.66' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 6.03 cfs @ 3.73 fps)

Summary for Pond D2:

Inflow Area = 326,121 sf, 5.87% Impervious, Inflow Depth = 0.85" for 2-Year event
Inflow = 4.01 cfs @ 12.39 hrs, Volume= 23,189 cf
Outflow = 3.87 cfs @ 12.50 hrs, Volume= 23,189 cf, Atten= 4%, Lag= 6.3 min
Discarded = 0.00 cfs @ 12.50 hrs, Volume= 31 cf
Primary = 3.87 cfs @ 12.50 hrs, Volume= 23,158 cf
Routed to Pond 4P : CB-26

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.08' @ 12.50 hrs Surf.Area= 1,456 sf Storage= 1,025 cf

Plug-Flow detention time= 4.0 min calculated for 23,186 cf (100% of inflow)
Center-of-Mass det. time= 4.0 min (843.8 - 839.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.70'	10,194 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.70	50	0	0
1,160.00	344	59	59
1,161.00	1,372	858	917
1,162.00	2,476	1,924	2,841
1,163.00	3,659	3,068	5,909
1,164.00	4,912	4,286	10,194

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.70'	**24.0" Round Culvert** L= 83.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.70' / 1,159.53' S= 0.0020 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Discarded	1,159.70'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.50 hrs HW=1,161.08' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=3.87 cfs @ 12.50 hrs HW=1,161.08' TW=1,160.88' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 3.87 cfs @ 2.37 fps)

Summary for Pond D3:

Inflow Area = 42,181 sf, 9.59% Impervious, Inflow Depth = 1.00" for 2-Year event
Inflow = 1.12 cfs @ 12.27 hrs, Volume= 3,515 cf
Outflow = 0.82 cfs @ 12.34 hrs, Volume= 3,515 cf, Atten= 27%, Lag= 4.0 min
Discarded = 0.00 cfs @ 12.46 hrs, Volume= 23 cf
Primary = 0.82 cfs @ 12.34 hrs, Volume= 3,491 cf
Routed to Pond D2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.17' @ 12.46 hrs Surf.Area= 1,356 sf Storage= 424 cf

Plug-Flow detention time= 7.8 min calculated for 3,514 cf (100% of inflow)
Center-of-Mass det. time= 7.9 min (828.2 - 820.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.54'	14,069 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.54	50	0	0
1,161.00	960	232	232
1,162.00	3,357	2,159	2,391
1,163.00	5,000	4,179	6,569
1,164.00	10,000	7,500	14,069

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.54'	**18.0" Round Culvert** L= 72.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.54' / 1,160.25' S= 0.0040 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.77 sf
#2	Discarded	1,160.54'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.46 hrs HW=1,161.17' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.79 cfs @ 12.34 hrs HW=1,161.14' TW=1,160.99' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.79 cfs @ 1.78 fps)

Summary for Pond D4:

Inflow Area = 259,493 sf, 3.46% Impervious, Inflow Depth = 0.92" for 2-Year event
Inflow = 6.71 cfs @ 12.25 hrs, Volume= 19,802 cf
Outflow = 5.67 cfs @ 12.25 hrs, Volume= 19,802 cf, Atten= 15%, Lag= 0.3 min
Discarded = 0.01 cfs @ 12.49 hrs, Volume= 42 cf
Primary = 2.95 cfs @ 12.48 hrs, Volume= 17,230 cf
Routed to Pond D2 :
Secondary = 3.50 cfs @ 12.25 hrs, Volume= 2,530 cf
Routed to Pond D5 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.38' @ 12.49 hrs Surf.Area= 4,216 sf Storage= 2,103 cf

Plug-Flow detention time= 6.4 min calculated for 19,799 cf (100% of inflow)
Center-of-Mass det. time= 6.4 min (834.2 - 827.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.09'	30,460 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.09	50	0	0
1,160.60	500	140	140
1,161.00	2,724	645	785
1,162.00	6,652	4,688	5,473
1,163.00	11,661	9,157	14,630
1,164.00	20,000	15,831	30,460

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.09'	**24.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.09' / 1,159.75' S= 0.0045 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Secondary	1,160.77'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Elev. (feet) 1,160.77 1,161.00 1,162.00 1,163.00 1,164.00 Width (feet) 1.00 7.00 15.00 29.00 45.00
#3	Discarded	1,160.09'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.49 hrs HW=1,161.38' (Free Discharge)
3=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=2.94 cfs @ 12.48 hrs HW=1,161.38' TW=1,161.08' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.94 cfs @ 1.96 fps)

Secondary OutFlow Max=3.21 cfs @ 12.25 hrs HW=1,161.17' TW=1,161.05' (Dynamic Tailwater)
2=Custom Weir/Orifice (Weir Controls 3.21 cfs @ 1.45 fps)

Summary for Pond D5:

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 1.16" for 2-Year event
Inflow = 12.29 cfs @ 12.26 hrs, Volume= 29,916 cf
Outflow = 4.93 cfs @ 12.48 hrs, Volume= 29,916 cf, Atten= 60%, Lag= 13.6 min
Discarded = 0.01 cfs @ 12.48 hrs, Volume= 108 cf
Primary = 4.91 cfs @ 12.48 hrs, Volume= 29,808 cf
Routed to Reach 3R : Into City

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.38' @ 12.48 hrs Surf.Area= 10,520 sf Storage= 7,807 cf

Plug-Flow detention time= 16.9 min calculated for 29,912 cf (100% of inflow)
Center-of-Mass det. time= 16.9 min (824.5 - 807.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.62'	62,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.62	100	0	0
1,160.00	500	114	114
1,161.00	7,895	4,198	4,312
1,162.00	14,809	11,352	15,664
1,163.00	23,200	19,005	34,668
1,164.00	32,000	27,600	62,268

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.62'	**18.0" Round Culvert** L= 52.3' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.62' / 1,159.47' S= 0.0029 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.62'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.48 hrs HW=1,161.38' (Free Discharge)
2=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=4.91 cfs @ 12.48 hrs HW=1,161.38' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.91 cfs @ 2.98 fps)

Summary for Link C30/17:

Inflow Area = 470,388 sf, 17.52% Impervious, Inflow Depth = 1.04" for 2-Year event
Inflow = 6.41 cfs @ 12.42 hrs, Volume= 40,797 cf
Primary = 6.41 cfs @ 12.42 hrs, Volume= 40,797 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB28/29 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB10:

Inflow Area = 13,852 sf,100.00% Impervious, Inflow Depth = 2.24" for 2-Year event
Inflow = 1.28 cfs @ 12.10 hrs, Volume= 2,587 cf
Primary = 1.28 cfs @ 12.10 hrs, Volume= 2,587 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB9 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB11/12:

Inflow Area = 12,199 sf, 94.12% Impervious, Inflow Depth = 2.16" for 2-Year event
Inflow = 1.09 cfs @ 12.10 hrs, Volume= 2,196 cf
Primary = 1.09 cfs @ 12.10 hrs, Volume= 2,196 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB13:

Inflow Area = 16,774 sf, 35.92% Impervious, Inflow Depth = 1.36" for 2-Year event
Inflow = 0.57 cfs @ 12.27 hrs, Volume= 1,903 cf
Primary = 0.57 cfs @ 12.27 hrs, Volume= 1,903 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA7 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB16:

Inflow Area = 449,613 sf, 13.70% Impervious, Inflow Depth = 0.99" for 2-Year event
Inflow = 6.17 cfs @ 12.47 hrs, Volume= 36,917 cf
Primary = 6.17 cfs @ 12.47 hrs, Volume= 36,917 cf, Atten= 0%, Lag= 0.0 min
Routed to Link C30/17 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB28/29:

Inflow Area = 499,337 sf, 19.14% Impervious, Inflow Depth = 1.07" for 2-Year event
Inflow = 6.95 cfs @ 12.11 hrs, Volume= 44,399 cf
Primary = 6.95 cfs @ 12.11 hrs, Volume= 44,399 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 2P : Existing Ditch

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB3:

Inflow Area = 128,063 sf, 65.14% Impervious, Inflow Depth = 1.76" for 2-Year event
Inflow = 7.04 cfs @ 12.11 hrs, Volume= 18,809 cf
Primary = 7.04 cfs @ 12.11 hrs, Volume= 18,809 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH1 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB4/5:

Inflow Area = 118,798 sf, 69.72% Impervious, Inflow Depth = 1.83" for 2-Year event
Inflow = 6.94 cfs @ 12.11 hrs, Volume= 18,070 cf
Primary = 6.94 cfs @ 12.11 hrs, Volume= 18,070 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH2 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB6:

Inflow Area = 96,229 sf, 84.42% Impervious, Inflow Depth = 2.03" for 2-Year event
Inflow = 6.67 cfs @ 12.11 hrs, Volume= 16,256 cf
Primary = 6.67 cfs @ 12.11 hrs, Volume= 16,256 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB4/5 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB7:

Inflow Area = 23,520 sf,100.00% Impervious, Inflow Depth = 2.24" for 2-Year event
Inflow = 2.18 cfs @ 12.10 hrs, Volume= 4,392 cf
Primary = 2.18 cfs @ 12.10 hrs, Volume= 4,392 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB8:

Inflow Area = 61,010 sf, 86.64% Impervious, Inflow Depth = 2.06" for 2-Year event
Inflow = 4.29 cfs @ 12.11 hrs, Volume= 10,461 cf
Primary = 4.29 cfs @ 12.11 hrs, Volume= 10,461 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB9:

Inflow Area = 31,947 sf, 97.06% Impervious, Inflow Depth = 2.20" for 2-Year event
Inflow = 2.59 cfs @ 12.11 hrs, Volume= 5,858 cf
Primary = 2.59 cfs @ 12.11 hrs, Volume= 5,858 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link OCS1:

Inflow Area = 410,341 sf, 53.25% Impervious, Inflow Depth > 1.59" for 2-Year event
Inflow = 2.30 cfs @ 12.85 hrs, Volume= 54,246 cf
Primary = 2.30 cfs @ 12.85 hrs, Volume= 54,246 cf, Atten= 0%, Lag= 0.0 min
Routed to Reach 1R : WEST

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA4:

Inflow Area = 123,094 sf, 91.27% Impervious, Inflow Depth = 2.12" for 2-Year event
Inflow = 9.19 cfs @ 12.13 hrs, Volume= 21,757 cf
Primary = 9.19 cfs @ 12.13 hrs, Volume= 21,757 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA5:

Inflow Area = 123,094 sf, 91.27% Impervious, Inflow Depth = 2.12" for 2-Year event
Inflow = 9.19 cfs @ 12.13 hrs, Volume= 21,757 cf
Primary = 9.19 cfs @ 12.13 hrs, Volume= 21,757 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA4 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA6:

Inflow Area = 75,774 sf, 85.81% Impervious, Inflow Depth = 2.05" for 2-Year event
Inflow = 5.25 cfs @ 12.13 hrs, Volume= 12,921 cf
Primary = 5.25 cfs @ 12.13 hrs, Volume= 12,921 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA5 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA7:

Inflow Area = 50,894 sf, 78.88% Impervious, Inflow Depth = 1.95" for 2-Year event
Inflow = 3.18 cfs @ 12.13 hrs, Volume= 8,275 cf
Primary = 3.18 cfs @ 12.13 hrs, Volume= 8,275 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA8:

Inflow Area = 34,120 sf,100.00% Impervious, Inflow Depth = 2.24" for 2-Year event
Inflow = 2.84 cfs @ 12.13 hrs, Volume= 6,372 cf
Primary = 2.84 cfs @ 12.13 hrs, Volume= 6,372 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA7 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH1:

Inflow Area = 128,063 sf, 65.14% Impervious, Inflow Depth = 1.76" for 2-Year event
Inflow = 7.04 cfs @ 12.11 hrs, Volume= 18,809 cf
Primary = 7.04 cfs @ 12.11 hrs, Volume= 18,809 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH2:

Inflow Area = 118,798 sf, 69.72% Impervious, Inflow Depth = 1.83" for 2-Year event
Inflow = 6.94 cfs @ 12.11 hrs, Volume= 18,070 cf
Primary = 6.94 cfs @ 12.11 hrs, Volume= 18,070 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH3:

Inflow Area = 44,146 sf, 96.25% Impervious, Inflow Depth = 2.19" for 2-Year event
Inflow = 3.67 cfs @ 12.11 hrs, Volume= 8,054 cf
Primary = 3.67 cfs @ 12.11 hrs, Volume= 8,054 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB8 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: Runoff Area=158,651 sf 6.25% Impervious Runoff Depth=1.96"
Flow Length=443' Tc=27.6 min CN=80/98 Runoff=6.59 cfs 25,891 cf

SubcatchmentB: Runoff Area=8,292 sf 48.02% Impervious Runoff Depth=2.66"
Flow Length=83' Slope=0.0316 '/' Tc=10.9 min CN=80/98 Runoff=0.70 cfs 1,839 cf

SubcatchmentC: Runoff Area=28,949 sf 45.52% Impervious Runoff Depth=2.62"
Flow Length=58' Slope=0.0259 '/' Tc=8.9 min CN=80/98 Runoff=2.61 cfs 6,318 cf

SubcatchmentD: Runoff Area=20,775 sf 100.00% Impervious Runoff Depth=3.54"
Flow Length=139' Slope=0.0090 '/' Tc=2.1 min CN=0/98 Runoff=2.96 cfs 6,121 cf

SubcatchmentE: Runoff Area=13,371 sf 100.00% Impervious Runoff Depth=3.54"
Flow Length=134' Slope=0.0107 '/' Tc=2.0 min CN=0/98 Runoff=1.91 cfs 3,940 cf

SubcatchmentF: Runoff Area=12,199 sf 94.12% Impervious Runoff Depth=3.44"
Flow Length=117' Slope=0.0100 '/' Tc=1.8 min CN=80/98 Runoff=1.70 cfs 3,494 cf

SubcatchmentG: Runoff Area=13,852 sf 100.00% Impervious Runoff Depth=3.54"
Flow Length=192' Slope=0.0100 '/' Tc=2.5 min CN=0/98 Runoff=1.97 cfs 4,081 cf

SubcatchmentH: Runoff Area=16,864 sf 61.49% Impervious Runoff Depth=2.89"
Flow Length=84' Slope=0.0200 '/' Tc=11.9 min CN=80/98 Runoff=1.46 cfs 4,058 cf

SubcatchmentI: Runoff Area=18,095 sf 94.81% Impervious Runoff Depth=3.45"
Flow Length=204' Tc=6.8 min CN=80/98 Runoff=2.21 cfs 5,200 cf

SubcatchmentJ: Runoff Area=11,699 sf 41.56% Impervious Runoff Depth=2.55"
Flow Length=165' Tc=18.3 min CN=80/98 Runoff=0.75 cfs 2,488 cf

SubcatchmentK: Runoff Area=23,520 sf 100.00% Impervious Runoff Depth=3.54"
Flow Length=195' Slope=0.0161 '/' Tc=2.0 min CN=0/98 Runoff=3.35 cfs 6,930 cf

SubcatchmentL: Runoff Area=24,447 sf 24.98% Impervious Runoff Depth=2.27"
Flow Length=72' Slope=0.0199 '/' Tc=11.7 min CN=80/98 Runoff=1.76 cfs 4,632 cf

SubcatchmentM: Runoff Area=42,181 sf 9.59% Impervious Runoff Depth=2.01"
Flow Length=208' Slope=0.0168 '/' Tc=17.2 min CN=80/98 Runoff=2.31 cfs 7,081 cf

SubcatchmentN: Runoff Area=22,569 sf 7.02% Impervious Runoff Depth=1.97"
Flow Length=113' Slope=0.0150 '/' Tc=17.2 min CN=80/98 Runoff=1.22 cfs 3,707 cf

SubcatchmentO: Runoff Area=9,265 sf 6.48% Impervious Runoff Depth=1.96"
Flow Length=117' Slope=0.0138 '/' Tc=17.9 min CN=80/98 Runoff=0.49 cfs 1,515 cf

SubcatchmentP: Runoff Area=34,120 sf 100.00% Impervious Runoff Depth=3.54"
Tc=6.0 min CN=0/98 Runoff=4.38 cfs 10,053 cf

SubcatchmentQ: Runoff Area=159,184 sf 14.27% Impervious Runoff Depth=2.11"
Flow Length=526' Slope=0.0314 '/' Tc=15.4 min CN=80/99 Runoff=9.50 cfs 27,988 cf

SubcatchmentR: Runoff Area=33,669 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=91' Slope=0.0110 '/' Tc=17.9 min CN=80/0 Runoff=1.70 cfs 5,200 cf

SubcatchmentS: Runoff Area=16,774 sf 35.92% Impervious Runoff Depth=2.46"
Flow Length=132' Slope=0.0133 '/' Tc=18.2 min CN=80/98 Runoff=1.05 cfs 3,435 cf

SubcatchmentT: Runoff Area=41,855 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=131' Slope=0.0382 '/' Tc=12.0 min CN=80/0 Runoff=2.57 cfs 6,464 cf

SubcatchmentU: Runoff Area=11,086 sf 0.00% Impervious Runoff Depth=1.85"
Flow Length=30' Slope=0.0500 '/' Tc=4.0 min CN=80/0 Runoff=0.96 cfs 1,712 cf

SubcatchmentV: Runoff Area=24,880 sf 100.00% Impervious Runoff Depth=3.54"
Tc=6.0 min CN=0/98 Runoff=3.20 cfs 7,331 cf

SubcatchmentW: Runoff Area=47,320 sf 100.00% Impervious Runoff Depth=3.54"
Tc=6.0 min CN=0/98 Runoff=6.08 cfs 13,942 cf

SubcatchmentX: Runoff Area=101,829 sf 24.68% Impervious Runoff Depth=2.27"
Flow Length=263' Slope=0.0114 '/' Tc=20.8 min CN=80/98 Runoff=5.56 cfs 19,250 cf

SubcatchmentY: Runoff Area=308,542 sf 14.34% Impervious Runoff Depth=2.09"
Flow Length=560' Slope=0.0080 '/' Tc=16.7 min CN=80/98 Runoff=17.73 cfs 53,854 cf

SubcatchmentZ: Runoff Area=259,493 sf 3.46% Impervious Runoff Depth=1.91"
Flow Length=549' Slope=0.0091 '/' Tc=15.6 min CN=80/98 Runoff=14.39 cfs 41,333 cf

Reach 1R: WEST Inflow=16.49 cfs 183,439 cf
Outflow=16.49 cfs 183,439 cf

Reach 2R: SOUTH Inflow=6.59 cfs 25,891 cf
Outflow=6.59 cfs 25,891 cf

Reach 3R: Into City Inflow=6.99 cfs 57,736 cf
Outflow=6.99 cfs 57,736 cf

Reach 4R: NORTH Inflow=0.96 cfs 1,712 cf
Outflow=0.96 cfs 1,712 cf

Pond 1P: Peak Elev=1,158.30' Storage=74,795 cf Inflow=30.71 cfs 94,223 cf
Outflow=3.03 cfs 93,560 cf

Pond 2P: Existing Ditch Peak Elev=1,159.41' Storage=11,038 cf Inflow=12.82 cfs 91,413 cf
Discarded=0.01 cfs 998 cf Primary=12.70 cfs 83,415 cf Outflow=12.70 cfs 84,414 cf

Pond 4P: CB-26 Peak Elev=1,161.52' Inflow=7.61 cfs 50,650 cf
24.0" Round Culvert n=0.011 L=90.0' S=0.0020 '/' Outflow=7.61 cfs 50,650 cf

Pond D1: Peak Elev=1,161.22' Storage=4,713 cf Inflow=12.45 cfs 69,899 cf
Discarded=0.01 cfs 65 cf Primary=10.66 cfs 69,834 cf Outflow=10.67 cfs 69,899 cf

Pond D2: Peak Elev=1,161.78' Storage=2,315 cf Inflow=7.92 cfs 48,855 cf
Discarded=0.00 cfs 44 cf Primary=7.45 cfs 48,811 cf Outflow=7.45 cfs 48,855 cf

Pond D3: Peak Elev=1,161.80' Storage=1,759 cf Inflow=2.31 cfs 7,081 cf
Discarded=0.00 cfs 37 cf Primary=1.12 cfs 7,045 cf Outflow=1.12 cfs 7,081 cf

Pond D4: Peak Elev=1,162.16' Storage=6,570 cf Inflow=14.39 cfs 41,333 cf
Discarded=0.01 cfs 73 cf Primary=6.57 cfs 37,178 cf Secondary=4.93 cfs 4,081 cf Outflow=8.29 cfs 41,333 cf

Pond D5: Peak Elev=1,162.20' Storage=18,719 cf Inflow=21.64 cfs 57,936 cf
Discarded=0.02 cfs 200 cf Primary=6.99 cfs 57,736 cf Outflow=7.02 cfs 57,936 cf

Link C30/17: Inflow=11.18 cfs 79,895 cf
Primary=11.18 cfs 79,895 cf

Link CB10: Inflow=1.97 cfs 4,081 cf
Primary=1.97 cfs 4,081 cf

Link CB11/12: Inflow=1.70 cfs 3,494 cf
Primary=1.70 cfs 3,494 cf

Link CB13: Inflow=1.05 cfs 3,435 cf
Primary=1.05 cfs 3,435 cf

Link CB16: Inflow=10.85 cfs 73,774 cf
Primary=10.85 cfs 73,774 cf

Link CB28/29: Inflow=11.69 cfs 86,214 cf
Primary=11.69 cfs 86,214 cf

Link CB3: Inflow=11.34 cfs 31,474 cf
Primary=11.34 cfs 31,474 cf

Link CB4/5: Inflow=11.10 cfs 29,959 cf
Primary=11.10 cfs 29,959 cf

Link CB6: Inflow=10.49 cfs 26,252 cf
Primary=10.49 cfs 26,252 cf

Link CB7: Inflow=3.35 cfs 6,930 cf
Primary=3.35 cfs 6,930 cf

Link CB8: Inflow=6.74 cfs 16,833 cf
Primary=6.74 cfs 16,833 cf

Link CB9: Inflow=4.01 cfs 9,281 cf
Primary=4.01 cfs 9,281 cf

Link OCS1: Inflow=3.03 cfs 93,560 cf
Primary=3.03 cfs 93,560 cf

Link STMA4: Inflow=14.29 cfs 34,761 cf
Primary=14.29 cfs 34,761 cf

Link STMA5: Inflow=14.29 cfs 34,761 cf
Primary=14.29 cfs 34,761 cf

Link STMA6: Inflow=8.22 cfs 20,819 cf
Primary=8.22 cfs 20,819 cf

Link STMA7: Inflow=5.03 cfs 13,488 cf
Primary=5.03 cfs 13,488 cf

Link STMA8: Inflow=4.38 cfs 10,053 cf
Primary=4.38 cfs 10,053 cf

Link STMH1: Inflow=11.34 cfs 31,474 cf
Primary=11.34 cfs 31,474 cf

Link STMH2: Inflow=11.10 cfs 29,959 cf
Primary=11.10 cfs 29,959 cf

Link STMH3: Inflow=5.70 cfs 12,775 cf
Primary=5.70 cfs 12,775 cf

Total Runoff Area = 1,463,481 sf Runoff Volume = 277,858 cf Average Runoff Depth = 2.28"
74.84% Pervious = 1,095,245 sf 25.16% Impervious = 368,236 sf

Summary for Subcatchment A:

Runoff = 6.59 cfs @ 12.40 hrs, Volume= 25,891 cf, Depth= 1.96"
Routed to Reach 2R : SOUTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	9,915	98	Impervious
	148,736	80	>75% Grass cover, Good, HSG D
	158,651	81	Weighted Average
	148,736	80	93.75% Pervious Area
	9,915	98	6.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3	100	0.0069	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.6	45	0.0069	1.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	92	0.0109	1.57		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.7	132	0.0076	1.31		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	74	0.0069	1.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
27.6	443	Total			

Summary for Subcatchment B:

Runoff = 0.70 cfs @ 12.18 hrs, Volume= 1,839 cf, Depth= 2.66"
Routed to Pond 4P : CB-26

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	3,982	98	Impervious
	4,310	80	>75% Grass cover, Good, HSG D
	8,292	89	Weighted Average
	4,310	80	51.98% Pervious Area
	3,982	98	48.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	83	0.0316	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment C:

Runoff = 2.61 cfs @ 12.16 hrs, Volume= 6,318 cf, Depth= 2.62"
Routed to Link CB28/29 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	13,179	98	Impervious
	15,770	80	>75% Grass cover, Good, HSG D
	28,949	88	Weighted Average
	15,770	80	54.48% Pervious Area
	13,179	98	45.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	58	0.0259	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment D:

Runoff = 2.96 cfs @ 12.10 hrs, Volume= 6,121 cf, Depth= 3.54"
Routed to Link C30/17 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	20,775	98	Impervious
	20,775	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0090	0.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.3	39	0.0090	1.93		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.1	139	Total			

Summary for Subcatchment E:

Runoff = 1.91 cfs @ 12.10 hrs, Volume= 3,940 cf, Depth= 3.54"
Routed to Link CB16 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	13,371	98	Impervious
	13,371	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0107	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.3	34	0.0107	2.10		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	134	Total			

Summary for Subcatchment F:

Runoff = 1.70 cfs @ 12.10 hrs, Volume= 3,494 cf, Depth= 3.44"
Routed to Link CB11/12 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	11,482	98	Impervious
	717	80	>75% Grass cover, Good, HSG D
	12,199	97	Weighted Average
	717	80	5.88% Pervious Area
	11,482	98	94.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0100	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.1	17	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	117	Total			

Summary for Subcatchment G:

Runoff = 1.97 cfs @ 12.10 hrs, Volume= 4,081 cf, Depth= 3.54"
Routed to Link CB10 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	13,852	98	Impervious
	13,852	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0100	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.8	92	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	192	Total			

Summary for Subcatchment H:

Runoff = 1.46 cfs @ 12.19 hrs, Volume= 4,058 cf, Depth= 2.89"
Routed to Link CB8 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	10,370	98	Impervious
	6,494	80	>75% Grass cover, Good, HSG D
	16,864	91	Weighted Average
	6,494	80	38.51% Pervious Area
	10,370	98	61.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	73	0.0200	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.1	11	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	84	Total			

Summary for Subcatchment I:

Runoff = 2.21 cfs @ 12.14 hrs, Volume= 5,200 cf, Depth= 3.45"
Routed to Link CB9 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	17,155	98	Impervious
	940	80	>75% Grass cover, Good, HSG D
	18,095	97	Weighted Average
	940	80	5.19% Pervious Area
	17,155	98	94.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	20	0.0110	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.5	184	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.8	204	Total			

Summary for Subcatchment J:

Runoff = 0.75 cfs @ 12.27 hrs, Volume= 2,488 cf, Depth= 2.55"
Routed to Link CB6 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	4,862	98	Impervious
	6,837	80	>75% Grass cover, Good, HSG D
	11,699	87	Weighted Average
	6,837	80	58.44% Pervious Area
	4,862	98	41.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0135	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.3	33	0.0135	1.74		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.2	32	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
18.3	165	Total			

Summary for Subcatchment K:

Runoff = 3.35 cfs @ 12.10 hrs, Volume= 6,930 cf, Depth= 3.54"
Routed to Link CB7 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	23,520	98	Impervious
	23,520	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0161	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.6	95	0.0161	2.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	195	Total			

Summary for Subcatchment L:

Runoff = 1.76 cfs @ 12.19 hrs, Volume= 4,632 cf, Depth= 2.27"
Routed to Pond D2 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
	18,340	80	>75% Grass cover, Good, HSG D
*	6,107	98	Impervious
	24,447	84	Weighted Average
	18,340	80	75.02% Pervious Area
	6,107	98	24.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	72	0.0199	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment M:

Runoff = 2.31 cfs @ 12.26 hrs, Volume= 7,081 cf, Depth= 2.01"
Routed to Pond D3 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
	38,135	80	>75% Grass cover, Good, HSG D
*	4,046	98	Impervious
	42,181	82	Weighted Average
	38,135	80	90.41% Pervious Area
	4,046	98	9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0168	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.9	108	0.0168	1.94		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.2	208	Total			

Summary for Subcatchment N:

Runoff = 1.22 cfs @ 12.26 hrs, Volume= 3,707 cf, Depth= 1.97"
Routed to Link CB4/5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	1,584	98	Impervious
	20,985	80	>75% Grass cover, Good, HSG D
	22,569	81	Weighted Average
	20,985	80	92.98% Pervious Area
	1,584	98	7.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0150	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.1	13	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.2	113	Total			

Summary for Subcatchment O:

Runoff = 0.49 cfs @ 12.27 hrs, Volume= 1,515 cf, Depth= 1.96"
Routed to Link CB3 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	600	98	Impervious
	8,665	80	>75% Grass cover, Good, HSG D
	9,265	81	Weighted Average
	8,665	80	93.52% Pervious Area
	600	98	6.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	100	0.0138	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.2	17	0.0138	1.76		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.9	117	Total			

Summary for Subcatchment P:

Runoff = 4.38 cfs @ 12.13 hrs, Volume= 10,053 cf, Depth= 3.54"
Routed to Link STMA8 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	34,120	98	Impervious
	34,120	98	100.00% Impervious Area

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

Summary for Subcatchment Q:

Runoff = 9.50 cfs @ 12.24 hrs, Volume= 27,988 cf, Depth= 2.11"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	7,849	98	Impervious
*	14,872	100	Wet Pond
	136,463	80	>75% Grass cover, Good, HSG D
	159,184	83	Weighted Average
	136,463	80	85.73% Pervious Area
	22,721	99	14.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0314	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
2.7	426	0.0314	2.66		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.4	526	Total			

Summary for Subcatchment R:

Runoff = 1.70 cfs @ 12.27 hrs, Volume= 5,200 cf, Depth= 1.85"
Routed to Pond 2P : Existing Ditch

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

Area (sf)	CN	Description
33,669	80	>75% Grass cover, Good, HSG D
33,669	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	91	0.0110	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment S:

Runoff = 1.05 cfs @ 12.27 hrs, Volume= 3,435 cf, Depth= 2.46"
Routed to Link CB13 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	6,025	98	Impervious
	10,749	80	>75% Grass cover, Good, HSG D
	16,774	86	Weighted Average
	10,749	80	64.08% Pervious Area
	6,025	98	35.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0133	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.3	32	0.0133	1.73		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
18.2	132	Total			

Summary for Subcatchment T:

Runoff = 2.57 cfs @ 12.20 hrs, Volume= 6,464 cf, Depth= 1.85"
Routed to Reach 1R : WEST

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

Area (sf)	CN	Description
41,855	80	>75% Grass cover, Good, HSG D
41,855	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0382	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.2	31	0.0382	2.93		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
12.0	131	Total			

Summary for Subcatchment U:

Runoff = 0.96 cfs @ 12.12 hrs, Volume= 1,712 cf, Depth= 1.85"
Routed to Reach 4R : NORTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

Area (sf)	CN	Description
11,086	80	>75% Grass cover, Good, HSG D
11,086	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	30	0.0500	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment V:

Runoff = 3.20 cfs @ 12.13 hrs, Volume= 7,331 cf, Depth= 3.54"
Routed to Link STMA6 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	24,880	98	Impervious
	24,880	98	100.00% Impervious Area

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

Summary for Subcatchment W:

Runoff = 6.08 cfs @ 12.13 hrs, Volume= 13,942 cf, Depth= 3.54"
Routed to Link STMA5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	47,320	98	Impervious
	47,320	98	100.00% Impervious Area

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

Summary for Subcatchment X:

Runoff = 5.56 cfs @ 12.31 hrs, Volume= 19,250 cf, Depth= 2.27"
Routed to Pond D1 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	25,133	98	Impervious
	76,696	80	>75% Grass cover, Good, HSG D
	101,829	84	Weighted Average
	76,696	80	75.32% Pervious Area
	25,133	98	24.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	100	0.0114	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.7	163	0.0114	1.60		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
20.8	263	Total			

Summary for Subcatchment Y:

Runoff = 17.73 cfs @ 12.26 hrs, Volume= 53,854 cf, Depth= 2.09"
Routed to Pond D5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	44,259	98	Impervious
	264,283	80	>75% Grass cover, Good, HSG D
	308,542	83	Weighted Average
	264,283	80	85.66% Pervious Area
	44,259	98	14.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0080	0.23		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
9.5	460	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
16.7	560	Total			

Summary for Subcatchment Z:

Runoff = 14.39 cfs @ 12.24 hrs, Volume= 41,333 cf, Depth= 1.91"
Routed to Pond D4 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=3.77"

	Area (sf)	CN	Description
*	8,978	98	Impervious
	250,515	80	>75% Grass cover, Good, HSG D
	259,493	81	Weighted Average
	250,515	80	96.54% Pervious Area
	8,978	98	3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0091	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
8.7	449	0.0091	0.86		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
15.6	549	Total			

Summary for Reach 1R: WEST

Inflow Area = 985,202 sf, 31.88% Impervious, Inflow Depth > 2.23" for 10-Year event
Inflow = 16.49 cfs @ 12.41 hrs, Volume= 183,439 cf
Outflow = 16.49 cfs @ 12.41 hrs, Volume= 183,439 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 2R: SOUTH

Inflow Area = 158,651 sf, 6.25% Impervious, Inflow Depth = 1.96" for 10-Year event
Inflow = 6.59 cfs @ 12.40 hrs, Volume= 25,891 cf
Outflow = 6.59 cfs @ 12.40 hrs, Volume= 25,891 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 3R: Into City

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 2.25" for 10-Year event
Inflow = 6.99 cfs @ 12.55 hrs, Volume= 57,736 cf
Outflow = 6.99 cfs @ 12.55 hrs, Volume= 57,736 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 4R: NORTH

Inflow Area = 11,086 sf, 0.00% Impervious, Inflow Depth = 1.85" for 10-Year event
Inflow = 0.96 cfs @ 12.12 hrs, Volume= 1,712 cf
Outflow = 0.96 cfs @ 12.12 hrs, Volume= 1,712 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P:

Inflow Area = 410,341 sf, 53.25% Impervious, Inflow Depth = 2.76" for 10-Year event
Inflow = 30.71 cfs @ 12.12 hrs, Volume= 94,223 cf
Outflow = 3.03 cfs @ 13.12 hrs, Volume= 93,560 cf, Atten= 90%, Lag= 60.0 min
Primary = 3.03 cfs @ 13.12 hrs, Volume= 93,560 cf
Routed to Link OCS1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Starting Elev= 1,156.00' Surf.Area= 14,863 sf Storage= 20,512 cf
Peak Elev= 1,158.30' @ 13.12 hrs Surf.Area= 33,386 sf Storage= 74,795 cf (54,283 cf above start)

Plug-Flow detention time= 393.7 min calculated for 73,038 cf (78% of inflow)
Center-of-Mass det. time= 248.0 min (1,018.8 - 770.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,153.00'	151,623 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,153.00	1,963	0	0
1,154.00	4,654	3,309	3,309
1,155.00	7,445	6,050	9,358
1,156.00	14,863	11,154	20,512
1,157.00	22,609	18,736	39,248
1,158.00	29,574	26,092	65,340
1,159.00	42,264	35,919	101,259
1,160.00	58,465	50,365	151,623

Device	Routing	Invert	Outlet Devices
#1	Primary	1,156.00'	**18.0" Round Culvert** L= 18.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,156.00' / 1,156.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,158.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	1,156.00'	**8.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.03 cfs @ 13.12 hrs HW=1,158.30' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 3.03 cfs of 9.75 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.15 cfs @ 0.73 fps)
  └─**3=Orifice/Grate** (Orifice Controls 2.88 cfs @ 7.30 fps)

Summary for Pond 2P: Existing Ditch

Inflow Area = 533,006 sf, 17.93% Impervious, Inflow Depth = 2.06" for 10-Year event
Inflow = 12.82 cfs @ 12.41 hrs, Volume= 91,413 cf
Outflow = 12.70 cfs @ 12.45 hrs, Volume= 84,414 cf, Atten= 1%, Lag= 2.2 min
Discarded = 0.01 cfs @ 12.45 hrs, Volume= 998 cf
Primary = 12.70 cfs @ 12.45 hrs, Volume= 83,415 cf
Routed to Reach 1R : WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,159.41' @ 12.45 hrs Surf.Area= 4,089 sf Storage= 11,038 cf

Plug-Flow detention time= 78.8 min calculated for 84,414 cf (92% of inflow)
Center-of-Mass det. time= 43.2 min (856.7 - 813.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,152.00'	18,775 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,152.00	27	0	0
1,153.00	185	106	106
1,154.00	470	328	434
1,155.00	855	663	1,096
1,156.00	1,345	1,100	2,196
1,157.00	1,973	1,659	3,855
1,158.00	2,754	2,364	6,219
1,159.00	3,690	3,222	9,441
1,160.00	4,661	4,176	13,616
1,161.00	5,657	5,159	18,775

Device	Routing	Invert	Outlet Devices
#1	Primary	1,158.50'	**5.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	1,152.00'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.45 hrs HW=1,159.41' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=12.70 cfs @ 12.45 hrs HW=1,159.41' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 12.70 cfs @ 2.79 fps)

Summary for Pond 4P: CB-26

Inflow Area = 334,413 sf, 6.91% Impervious, Inflow Depth = 1.82" for 10-Year event
Inflow = 7.61 cfs @ 12.52 hrs, Volume= 50,650 cf
Outflow = 7.61 cfs @ 12.52 hrs, Volume= 50,650 cf, Atten= 0%, Lag= 0.0 min
Primary = 7.61 cfs @ 12.52 hrs, Volume= 50,650 cf
Routed to Pond D1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 1,161.52' @ 12.54 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.53'	**24.0" Round Culvert** L= 90.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.53' / 1,159.35' S= 0.0020 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=7.59 cfs @ 12.52 hrs HW=1,161.52' TW=1,161.21' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 7.59 cfs @ 3.03 fps)

Summary for Pond D1:

Inflow Area = 436,242 sf, 11.06% Impervious, Inflow Depth = 1.92" for 10-Year event
Inflow = 12.45 cfs @ 12.35 hrs, Volume= 69,899 cf
Outflow = 10.67 cfs @ 12.54 hrs, Volume= 69,899 cf, Atten= 14%, Lag= 11.6 min
Discarded = 0.01 cfs @ 12.54 hrs, Volume= 65 cf
Primary = 10.66 cfs @ 12.54 hrs, Volume= 69,834 cf
Routed to Link CB16 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.22' @ 12.54 hrs Surf.Area= 7,350 sf Storage= 4,713 cf

Plug-Flow detention time= 4.4 min calculated for 69,890 cf (100% of inflow)
Center-of-Mass det. time= 4.4 min (826.2 - 821.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.30'	12,784 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.30	50	0	0
1,160.00	490	189	189
1,161.00	5,740	3,115	3,304
1,162.00	13,219	9,480	12,784

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.30'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.30' / 1,159.25' S= 0.0014 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Discarded	1,159.30'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.54 hrs HW=1,161.22' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=10.66 cfs @ 12.54 hrs HW=1,161.22' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 10.66 cfs @ 4.42 fps)

Summary for Pond D2:

Inflow Area = 326,121 sf, 5.87% Impervious, Inflow Depth = 1.80" for 10-Year event
Inflow = 7.92 cfs @ 12.38 hrs, Volume= 48,855 cf
Outflow = 7.45 cfs @ 12.53 hrs, Volume= 48,855 cf, Atten= 6%, Lag= 8.8 min
Discarded = 0.00 cfs @ 12.55 hrs, Volume= 44 cf
Primary = 7.45 cfs @ 12.53 hrs, Volume= 48,811 cf
Routed to Pond 4P : CB-26

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.78' @ 12.55 hrs Surf.Area= 2,229 sf Storage= 2,315 cf

Plug-Flow detention time= 4.3 min calculated for 48,848 cf (100% of inflow)
Center-of-Mass det. time= 4.3 min (832.4 - 828.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.70'	10,194 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.70	50	0	0
1,160.00	344	59	59
1,161.00	1,372	858	917
1,162.00	2,476	1,924	2,841
1,163.00	3,659	3,068	5,909
1,164.00	4,912	4,286	10,194

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.70'	**24.0" Round Culvert** L= 83.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.70' / 1,159.53' S= 0.0020 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Discarded	1,159.70'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.55 hrs HW=1,161.78' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=7.44 cfs @ 12.53 hrs HW=1,161.78' TW=1,161.52' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 7.44 cfs @ 2.83 fps)

Summary for Pond D3:

Inflow Area = 42,181 sf, 9.59% Impervious, Inflow Depth = 2.01" for 10-Year event
Inflow = 2.31 cfs @ 12.26 hrs, Volume= 7,081 cf
Outflow = 1.12 cfs @ 12.78 hrs, Volume= 7,081 cf, Atten= 51%, Lag= 31.4 min
Discarded = 0.00 cfs @ 12.57 hrs, Volume= 37 cf
Primary = 1.12 cfs @ 12.78 hrs, Volume= 7,045 cf
Routed to Pond D2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.80' @ 12.57 hrs Surf.Area= 2,871 sf Storage= 1,759 cf

Plug-Flow detention time= 14.3 min calculated for 7,080 cf (100% of inflow)
Center-of-Mass det. time= 14.3 min (823.3 - 808.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.54'	14,069 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.54	50	0	0
1,161.00	960	232	232
1,162.00	3,357	2,159	2,391
1,163.00	5,000	4,179	6,569
1,164.00	10,000	7,500	14,069

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.54'	**18.0" Round Culvert** L= 72.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.54' / 1,160.25' S= 0.0040 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.77 sf
#2	Discarded	1,160.54'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.57 hrs HW=1,161.80' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=1.24 cfs @ 12.78 hrs HW=1,161.69' TW=1,161.64' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.24 cfs @ 1.19 fps)

Summary for Pond D4:

Inflow Area = 259,493 sf, 3.46% Impervious, Inflow Depth = 1.91" for 10-Year event
Inflow = 14.39 cfs @ 12.24 hrs, Volume= 41,333 cf
Outflow = 8.29 cfs @ 12.21 hrs, Volume= 41,333 cf, Atten= 42%, Lag= 0.0 min
Discarded = 0.01 cfs @ 12.49 hrs, Volume= 73 cf
Primary = 6.57 cfs @ 12.43 hrs, Volume= 37,178 cf
Routed to Pond D2 :
Secondary = 4.93 cfs @ 12.19 hrs, Volume= 4,081 cf
Routed to Pond D5 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.16' @ 12.49 hrs Surf.Area= 7,433 sf Storage= 6,570 cf

Plug-Flow detention time= 9.8 min calculated for 41,327 cf (100% of inflow)
Center-of-Mass det. time= 9.8 min (823.4 - 813.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.09'	30,460 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.09	50	0	0
1,160.60	500	140	140
1,161.00	2,724	645	785
1,162.00	6,652	4,688	5,473
1,163.00	11,661	9,157	14,630
1,164.00	20,000	15,831	30,460

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.09'	**24.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.09' / 1,159.75' S= 0.0045 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Secondary	1,160.77'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Elev. (feet) 1,160.77 1,161.00 1,162.00 1,163.00 1,164.00 Width (feet) 1.00 7.00 15.00 29.00 45.00
#3	Discarded	1,160.09'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.49 hrs HW=1,162.16' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=6.48 cfs @ 12.43 hrs HW=1,162.13' TW=1,161.72' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 6.48 cfs @ 2.51 fps)

Secondary OutFlow Max=1.57 cfs @ 12.19 hrs HW=1,161.41' TW=1,161.40' (Dynamic Tailwater)
└**2=Custom Weir/Orifice** (Weir Controls 1.57 cfs @ 0.35 fps)

Summary for Pond D5:

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 2.25" for 10-Year event
Inflow = 21.64 cfs @ 12.23 hrs, Volume= 57,936 cf
Outflow = 7.02 cfs @ 12.55 hrs, Volume= 57,936 cf, Atten= 68%, Lag= 19.5 min
Discarded = 0.02 cfs @ 12.55 hrs, Volume= 200 cf
Primary = 6.99 cfs @ 12.55 hrs, Volume= 57,736 cf
Routed to Reach 3R : Into City

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.20' @ 12.55 hrs Surf.Area= 16,449 sf Storage= 18,719 cf

Plug-Flow detention time= 26.5 min calculated for 57,928 cf (100% of inflow)
Center-of-Mass det. time= 26.5 min (825.3 - 798.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.62'	62,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.62	100	0	0
1,160.00	500	114	114
1,161.00	7,895	4,198	4,312
1,162.00	14,809	11,352	15,664
1,163.00	23,200	19,005	34,668
1,164.00	32,000	27,600	62,268

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.62'	**18.0" Round Culvert** L= 52.3' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.62' / 1,159.47' S= 0.0029 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.62'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.55 hrs HW=1,162.20' (Free Discharge)
2=Exfiltration (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=6.99 cfs @ 12.55 hrs HW=1,162.20' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 6.99 cfs @ 3.96 fps)

Summary for Link C30/17:

Inflow Area = 470,388 sf, 17.52% Impervious, Inflow Depth = 2.04" for 10-Year event
Inflow = 11.18 cfs @ 12.51 hrs, Volume= 79,895 cf
Primary = 11.18 cfs @ 12.51 hrs, Volume= 79,895 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB28/29 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB10:

Inflow Area = 13,852 sf,100.00% Impervious, Inflow Depth = 3.54" for 10-Year event
Inflow = 1.97 cfs @ 12.10 hrs, Volume= 4,081 cf
Primary = 1.97 cfs @ 12.10 hrs, Volume= 4,081 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB9 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB11/12:

Inflow Area = 12,199 sf, 94.12% Impervious, Inflow Depth = 3.44" for 10-Year event
Inflow = 1.70 cfs @ 12.10 hrs, Volume= 3,494 cf
Primary = 1.70 cfs @ 12.10 hrs, Volume= 3,494 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB13:

Inflow Area = 16,774 sf, 35.92% Impervious, Inflow Depth = 2.46" for 10-Year event
Inflow = 1.05 cfs @ 12.27 hrs, Volume= 3,435 cf
Primary = 1.05 cfs @ 12.27 hrs, Volume= 3,435 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA7 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB16:

Inflow Area = 449,613 sf, 13.70% Impervious, Inflow Depth = 1.97" for 10-Year event
Inflow = 10.85 cfs @ 12.52 hrs, Volume= 73,774 cf
Primary = 10.85 cfs @ 12.52 hrs, Volume= 73,774 cf, Atten= 0%, Lag= 0.0 min
Routed to Link C30/17 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB28/29:

Inflow Area = 499,337 sf, 19.14% Impervious, Inflow Depth = 2.07" for 10-Year event
Inflow = 11.69 cfs @ 12.50 hrs, Volume= 86,214 cf
Primary = 11.69 cfs @ 12.50 hrs, Volume= 86,214 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 2P : Existing Ditch

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB3:

Inflow Area = 128,063 sf, 65.14% Impervious, Inflow Depth = 2.95" for 10-Year event
Inflow = 11.34 cfs @ 12.11 hrs, Volume= 31,474 cf
Primary = 11.34 cfs @ 12.11 hrs, Volume= 31,474 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH1 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB4/5:

Inflow Area = 118,798 sf, 69.72% Impervious, Inflow Depth = 3.03" for 10-Year event
Inflow = 11.10 cfs @ 12.11 hrs, Volume= 29,959 cf
Primary = 11.10 cfs @ 12.11 hrs, Volume= 29,959 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH2 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB6:

Inflow Area = 96,229 sf, 84.42% Impervious, Inflow Depth = 3.27" for 10-Year event
Inflow = 10.49 cfs @ 12.11 hrs, Volume= 26,252 cf
Primary = 10.49 cfs @ 12.11 hrs, Volume= 26,252 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB4/5 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB7:

Inflow Area = 23,520 sf,100.00% Impervious, Inflow Depth = 3.54" for 10-Year event
Inflow = 3.35 cfs @ 12.10 hrs, Volume= 6,930 cf
Primary = 3.35 cfs @ 12.10 hrs, Volume= 6,930 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB8:

Inflow Area = 61,010 sf, 86.64% Impervious, Inflow Depth = 3.31" for 10-Year event
Inflow = 6.74 cfs @ 12.11 hrs, Volume= 16,833 cf
Primary = 6.74 cfs @ 12.11 hrs, Volume= 16,833 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB9:

Inflow Area = 31,947 sf, 97.06% Impervious, Inflow Depth = 3.49" for 10-Year event
Inflow = 4.01 cfs @ 12.11 hrs, Volume= 9,281 cf
Primary = 4.01 cfs @ 12.11 hrs, Volume= 9,281 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link OCS1:

Inflow Area = 410,341 sf, 53.25% Impervious, Inflow Depth > 2.74" for 10-Year event
Inflow = 3.03 cfs @ 13.12 hrs, Volume= 93,560 cf
Primary = 3.03 cfs @ 13.12 hrs, Volume= 93,560 cf, Atten= 0%, Lag= 0.0 min
Routed to Reach 1R : WEST

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA4:

Inflow Area = 123,094 sf, 91.27% Impervious, Inflow Depth = 3.39" for 10-Year event
Inflow = 14.29 cfs @ 12.13 hrs, Volume= 34,761 cf
Primary = 14.29 cfs @ 12.13 hrs, Volume= 34,761 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA5:

Inflow Area = 123,094 sf, 91.27% Impervious, Inflow Depth = 3.39" for 10-Year event
Inflow = 14.29 cfs @ 12.13 hrs, Volume= 34,761 cf
Primary = 14.29 cfs @ 12.13 hrs, Volume= 34,761 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA4 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA6:

Inflow Area = 75,774 sf, 85.81% Impervious, Inflow Depth = 3.30" for 10-Year event
Inflow = 8.22 cfs @ 12.13 hrs, Volume= 20,819 cf
Primary = 8.22 cfs @ 12.13 hrs, Volume= 20,819 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA5 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA7:

Inflow Area = 50,894 sf, 78.88% Impervious, Inflow Depth = 3.18" for 10-Year event
Inflow = 5.03 cfs @ 12.13 hrs, Volume= 13,488 cf
Primary = 5.03 cfs @ 12.13 hrs, Volume= 13,488 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA8:

Inflow Area = 34,120 sf,100.00% Impervious, Inflow Depth = 3.54" for 10-Year event
Inflow = 4.38 cfs @ 12.13 hrs, Volume= 10,053 cf
Primary = 4.38 cfs @ 12.13 hrs, Volume= 10,053 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA7 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH1:

Inflow Area = 128,063 sf, 65.14% Impervious, Inflow Depth = 2.95" for 10-Year event
Inflow = 11.34 cfs @ 12.11 hrs, Volume= 31,474 cf
Primary = 11.34 cfs @ 12.11 hrs, Volume= 31,474 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH2:

Inflow Area = 118,798 sf, 69.72% Impervious, Inflow Depth = 3.03" for 10-Year event
Inflow = 11.10 cfs @ 12.11 hrs, Volume= 29,959 cf
Primary = 11.10 cfs @ 12.11 hrs, Volume= 29,959 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH3:

Inflow Area = 44,146 sf, 96.25% Impervious, Inflow Depth = 3.47" for 10-Year event
Inflow = 5.70 cfs @ 12.11 hrs, Volume= 12,775 cf
Primary = 5.70 cfs @ 12.11 hrs, Volume= 12,775 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB8 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: Runoff Area=158,651 sf 6.25% Impervious Runoff Depth=4.35"
Flow Length=443' Tc=27.6 min CN=80/98 Runoff=14.67 cfs 57,547 cf

SubcatchmentB: Runoff Area=8,292 sf 48.02% Impervious Runoff Depth=5.20"
Flow Length=83' Slope=0.0316 '/' Tc=10.9 min CN=80/98 Runoff=1.35 cfs 3,592 cf

SubcatchmentC: Runoff Area=28,949 sf 45.52% Impervious Runoff Depth=5.15"
Flow Length=58' Slope=0.0259 '/' Tc=8.9 min CN=80/98 Runoff=5.07 cfs 12,419 cf

SubcatchmentD: Runoff Area=20,775 sf 100.00% Impervious Runoff Depth=6.25"
Flow Length=139' Slope=0.0090 '/' Tc=2.1 min CN=0/98 Runoff=5.12 cfs 10,823 cf

SubcatchmentE: Runoff Area=13,371 sf 100.00% Impervious Runoff Depth=6.25"
Flow Length=134' Slope=0.0107 '/' Tc=2.0 min CN=0/98 Runoff=3.30 cfs 6,966 cf

SubcatchmentF: Runoff Area=12,199 sf 94.12% Impervious Runoff Depth=6.13"
Flow Length=117' Slope=0.0100 '/' Tc=1.8 min CN=80/98 Runoff=2.98 cfs 6,234 cf

SubcatchmentG: Runoff Area=13,852 sf 100.00% Impervious Runoff Depth=6.25"
Flow Length=192' Slope=0.0100 '/' Tc=2.5 min CN=0/98 Runoff=3.40 cfs 7,216 cf

SubcatchmentH: Runoff Area=16,864 sf 61.49% Impervious Runoff Depth=5.47"
Flow Length=84' Slope=0.0200 '/' Tc=11.9 min CN=80/98 Runoff=2.73 cfs 7,689 cf

SubcatchmentI: Runoff Area=18,095 sf 94.81% Impervious Runoff Depth=6.15"
Flow Length=204' Tc=6.8 min CN=80/98 Runoff=3.86 cfs 9,268 cf

SubcatchmentJ: Runoff Area=11,699 sf 41.56% Impervious Runoff Depth=5.07"
Flow Length=165' Tc=18.3 min CN=80/98 Runoff=1.49 cfs 4,941 cf

SubcatchmentK: Runoff Area=23,520 sf 100.00% Impervious Runoff Depth=6.25"
Flow Length=195' Slope=0.0161 '/' Tc=2.0 min CN=0/98 Runoff=5.80 cfs 12,253 cf

SubcatchmentL: Runoff Area=24,447 sf 24.98% Impervious Runoff Depth=4.73"
Flow Length=72' Slope=0.0199 '/' Tc=11.7 min CN=80/98 Runoff=3.64 cfs 9,640 cf

SubcatchmentM: Runoff Area=42,181 sf 9.59% Impervious Runoff Depth=4.42"
Flow Length=208' Slope=0.0168 '/' Tc=17.2 min CN=80/98 Runoff=5.06 cfs 15,538 cf

SubcatchmentN: Runoff Area=22,569 sf 7.02% Impervious Runoff Depth=4.37"
Flow Length=113' Slope=0.0150 '/' Tc=17.2 min CN=80/98 Runoff=2.69 cfs 8,216 cf

SubcatchmentO: Runoff Area=9,265 sf 6.48% Impervious Runoff Depth=4.36"
Flow Length=117' Slope=0.0138 '/' Tc=17.9 min CN=80/98 Runoff=1.08 cfs 3,364 cf

SubcatchmentP: Runoff Area=34,120 sf 100.00% Impervious Runoff Depth=6.25"
Tc=6.0 min CN=0/98 Runoff=7.59 cfs 17,775 cf

SubcatchmentQ: Runoff Area=159,184 sf 14.27% Impervious Runoff Depth=4.53"
Flow Length=526' Slope=0.0314 '/' Tc=15.4 min CN=80/99 Runoff=20.37 cfs 60,121 cf

SubcatchmentR: Runoff Area=33,669 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=91' Slope=0.0110 '/' Tc=17.9 min CN=80/0 Runoff=3.85 cfs 11,858 cf

SubcatchmentS: Runoff Area=16,774 sf 35.92% Impervious Runoff Depth=4.95"
Flow Length=132' Slope=0.0133 '/' Tc=18.2 min CN=80/98 Runoff=2.10 cfs 6,924 cf

SubcatchmentT: Runoff Area=41,855 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=131' Slope=0.0382 '/' Tc=12.0 min CN=80/0 Runoff=5.78 cfs 14,740 cf

SubcatchmentU: Runoff Area=11,086 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=30' Slope=0.0500 '/' Tc=4.0 min CN=80/0 Runoff=2.11 cfs 3,904 cf

SubcatchmentV: Runoff Area=24,880 sf 100.00% Impervious Runoff Depth=6.25"
Tc=6.0 min CN=0/98 Runoff=5.53 cfs 12,961 cf

SubcatchmentW: Runoff Area=47,320 sf 100.00% Impervious Runoff Depth=6.25"
Tc=6.0 min CN=0/98 Runoff=10.52 cfs 24,651 cf

SubcatchmentX: Runoff Area=101,829 sf 24.68% Impervious Runoff Depth=4.73"
Flow Length=263' Slope=0.0114 '/' Tc=20.8 min CN=80/98 Runoff=11.57 cfs 40,104 cf

SubcatchmentY: Runoff Area=308,542 sf 14.34% Impervious Runoff Depth=4.52"
Flow Length=560' Slope=0.0080 '/' Tc=16.7 min CN=80/98 Runoff=38.09 cfs 116,132 cf

SubcatchmentZ: Runoff Area=259,493 sf 3.46% Impervious Runoff Depth=4.30"
Flow Length=549' Slope=0.0091 '/' Tc=15.6 min CN=80/98 Runoff=32.12 cfs 92,903 cf

Reach 1R: WEST Inflow=37.44 cfs 381,804 cf
Outflow=37.44 cfs 381,804 cf

Reach 2R: SOUTH Inflow=14.67 cfs 57,547 cf
Outflow=14.67 cfs 57,547 cf

Reach 3R: Into City Inflow=10.20 cfs 124,900 cf
Outflow=10.20 cfs 124,900 cf

Reach 4R: NORTH Inflow=2.11 cfs 3,904 cf
Outflow=2.11 cfs 3,904 cf

Pond 1P: Peak Elev=1,159.23' Storage=111,282 cf Inflow=57.41 cfs 181,613 cf
Outflow=13.39 cfs 180,935 cf

Pond 2P: Existing Ditch Peak Elev=1,159.74' Storage=12,454 cf Inflow=22.85 cfs 194,167 cf
Discarded=0.01 cfs 1,037 cf Primary=21.55 cfs 186,128 cf Outflow=21.56 cfs 187,165 cf

Pond 4P: CB-26 Peak Elev=1,162.46' Inflow=11.45 cfs 112,141 cf
24.0" Round Culvert n=0.011 L=90.0' S=0.0020 '/' Outflow=11.45 cfs 112,141 cf

Pond D1: Peak Elev=1,161.93' Storage=11,901 cf Inflow=21.86 cfs 152,245 cf
Discarded=0.02 cfs 143 cf Primary=15.85 cfs 152,102 cf Outflow=15.86 cfs 152,245 cf

Pond D2: Peak Elev=1,162.91' Storage=5,585 cf Inflow=12.41 cfs 108,621 cf
Discarded=0.00 cfs 72 cf Primary=11.33 cfs 108,549 cf Outflow=11.33 cfs 108,621 cf

Pond D3: Peak Elev=1,162.93' Storage=6,220 cf Inflow=5.06 cfs 15,538 cf
Discarded=0.01 cfs 71 cf Primary=1.76 cfs 15,467 cf Outflow=1.76 cfs 15,538 cf

Pond D4: Peak Elev=1,163.54' Storage=22,215 cf Inflow=32.12 cfs 92,903 cf
Discarded=0.02 cfs 173 cf Primary=9.51 cfs 83,513 cf Secondary=6.87 cfs 9,218 cf Outflow=15.06 cfs 92,903 cf

Pond D5: Peak Elev=1,163.58' Storage=49,559 cf Inflow=43.99 cfs 125,350 cf
Discarded=0.04 cfs 450 cf Primary=10.20 cfs 124,900 cf Outflow=10.24 cfs 125,350 cf

Link C30/17: Inflow=16.72 cfs 169,890 cf
Primary=16.72 cfs 169,890 cf

Link CB10: Inflow=3.40 cfs 7,216 cf
Primary=3.40 cfs 7,216 cf

Link CB11/12: Inflow=2.98 cfs 6,234 cf
Primary=2.98 cfs 6,234 cf

Link CB13: Inflow=2.10 cfs 6,924 cf
Primary=2.10 cfs 6,924 cf

Link CB16: Inflow=16.15 cfs 159,067 cf
Primary=16.15 cfs 159,067 cf

Link CB28/29: Inflow=20.76 cfs 182,309 cf
Primary=20.76 cfs 182,309 cf

Link CB3: Inflow=20.56 cfs 59,181 cf
Primary=20.56 cfs 59,181 cf

Link CB4/5: Inflow=19.98 cfs 55,816 cf
Primary=19.98 cfs 55,816 cf

Link CB6: Inflow=18.51 cfs 47,601 cf
Primary=18.51 cfs 47,601 cf

Link CB7: Inflow=5.80 cfs 12,253 cf
Primary=5.80 cfs 12,253 cf

Link CB8: Inflow=11.91 cfs 30,407 cf
Primary=11.91 cfs 30,407 cf

Link CB9: Inflow=6.98 cfs 16,484 cf
Primary=6.98 cfs 16,484 cf

Link OCS1: Inflow=13.39 cfs 180,935 cf
Primary=13.39 cfs 180,935 cf

Link STMA4: Inflow=24.97 cfs 62,311 cf
Primary=24.97 cfs 62,311 cf

Link STMA5: Inflow=24.97 cfs 62,311 cf
Primary=24.97 cfs 62,311 cf

Link STMA6: Inflow=14.46 cfs 37,660 cf
Primary=14.46 cfs 37,660 cf

Link STMA7: Inflow=8.93 cfs 24,699 cf
Primary=8.93 cfs 24,699 cf

Link STMA8: Inflow=7.59 cfs 17,775 cf
Primary=7.59 cfs 17,775 cf

Link STMH1: Inflow=20.56 cfs 59,181 cf
Primary=20.56 cfs 59,181 cf

Link STMH2: Inflow=19.98 cfs 55,816 cf
Primary=19.98 cfs 55,816 cf

Link STMH3: Inflow=9.92 cfs 22,718 cf
Primary=9.92 cfs 22,718 cf

Total Runoff Area = 1,463,481 sf Runoff Volume = 577,780 cf Average Runoff Depth = 4.74"
74.84% Pervious = 1,095,245 sf 25.16% Impervious = 368,236 sf

Summary for Subcatchment A:

Runoff = 14.67 cfs @ 12.39 hrs, Volume= 57,547 cf, Depth= 4.35"
Routed to Reach 2R : SOUTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	9,915	98	Impervious
	148,736	80	>75% Grass cover, Good, HSG D
	158,651	81	Weighted Average
	148,736	80	93.75% Pervious Area
	9,915	98	6.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3	100	0.0069	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.6	45	0.0069	1.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	92	0.0109	1.57		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.7	132	0.0076	1.31		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	74	0.0069	1.25		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
27.6	443	Total			

Summary for Subcatchment B:

Runoff = 1.35 cfs @ 12.18 hrs, Volume= 3,592 cf, Depth= 5.20"
Routed to Pond 4P : CB-26

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	3,982	98	Impervious
	4,310	80	>75% Grass cover, Good, HSG D
	8,292	89	Weighted Average
	4,310	80	51.98% Pervious Area
	3,982	98	48.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	83	0.0316	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment C:

Runoff = 5.07 cfs @ 12.16 hrs, Volume= 12,419 cf, Depth= 5.15"
Routed to Link CB28/29 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	13,179	98	Impervious
	15,770	80	>75% Grass cover, Good, HSG D
	28,949	88	Weighted Average
	15,770	80	54.48% Pervious Area
	13,179	98	45.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	58	0.0259	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment D:

Runoff = 5.12 cfs @ 12.10 hrs, Volume= 10,823 cf, Depth= 6.25"
Routed to Link C30/17 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	20,775	98	Impervious
	20,775	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0090	0.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.3	39	0.0090	1.93		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.1	139	Total			

Summary for Subcatchment E:

Runoff = 3.30 cfs @ 12.10 hrs, Volume= 6,966 cf, Depth= 6.25"
Routed to Link CB16 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	13,371	98	Impervious
	13,371	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0107	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.3	34	0.0107	2.10		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	134	Total			

Summary for Subcatchment F:

Runoff = 2.98 cfs @ 12.10 hrs, Volume= 6,234 cf, Depth= 6.13"
Routed to Link CB11/12 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	11,482	98	Impervious
	717	80	>75% Grass cover, Good, HSG D
	12,199	97	Weighted Average
	717	80	5.88% Pervious Area
	11,482	98	94.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0100	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.1	17	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	117	Total			

Summary for Subcatchment G:

Runoff = 3.40 cfs @ 12.10 hrs, Volume= 7,216 cf, Depth= 6.25"
Routed to Link CB10 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	13,852	98	Impervious
	13,852	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	100	0.0100	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.8	92	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	192	Total			

Summary for Subcatchment H:

Runoff = 2.73 cfs @ 12.19 hrs, Volume= 7,689 cf, Depth= 5.47"
Routed to Link CB8 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	10,370	98	Impervious
	6,494	80	>75% Grass cover, Good, HSG D
	16,864	91	Weighted Average
	6,494	80	38.51% Pervious Area
	10,370	98	61.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	73	0.0200	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.1	11	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
11.9	84	Total			

Summary for Subcatchment I:

Runoff = 3.86 cfs @ 12.14 hrs, Volume= 9,268 cf, Depth= 6.15"
Routed to Link CB9 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	17,155	98	Impervious
	940	80	>75% Grass cover, Good, HSG D
	18,095	97	Weighted Average
	940	80	5.19% Pervious Area
	17,155	98	94.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	20	0.0110	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.5	184	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.8	204	Total			

Summary for Subcatchment J:

Runoff = 1.49 cfs @ 12.26 hrs, Volume= 4,941 cf, Depth= 5.07"
Routed to Link CB6 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	4,862	98	Impervious
	6,837	80	>75% Grass cover, Good, HSG D
	11,699	87	Weighted Average
	6,837	80	58.44% Pervious Area
	4,862	98	41.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.8	100	0.0135	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.3	33	0.0135	1.74		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.2	32	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
18.3	165	Total			

Summary for Subcatchment K:

Runoff = 5.80 cfs @ 12.10 hrs, Volume= 12,253 cf, Depth= 6.25"
Routed to Link CB7 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	23,520	98	Impervious
	23,520	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0161	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.81"
0.6	95	0.0161	2.58		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	195	Total			

Summary for Subcatchment L:

Runoff = 3.64 cfs @ 12.19 hrs, Volume= 9,640 cf, Depth= 4.73"
Routed to Pond D2 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
	18,340	80	>75% Grass cover, Good, HSG D
*	6,107	98	Impervious
	24,447	84	Weighted Average
	18,340	80	75.02% Pervious Area
	6,107	98	24.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	72	0.0199	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment M:

Runoff = 5.06 cfs @ 12.25 hrs, Volume= 15,538 cf, Depth= 4.42"
Routed to Pond D3 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
	38,135	80	>75% Grass cover, Good, HSG D
*	4,046	98	Impervious
	42,181	82	Weighted Average
	38,135	80	90.41% Pervious Area
	4,046	98	9.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.3	100	0.0168	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.9	108	0.0168	1.94		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.2	208	Total			

Summary for Subcatchment N:

Runoff = 2.69 cfs @ 12.25 hrs, Volume= 8,216 cf, Depth= 4.37"
Routed to Link CB4/5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	1,584	98	Impervious
	20,985	80	>75% Grass cover, Good, HSG D
	22,569	81	Weighted Average
	20,985	80	92.98% Pervious Area
	1,584	98	7.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	100	0.0150	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.1	13	0.0150	1.84		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.2	113	Total			

Summary for Subcatchment O:

Runoff = 1.08 cfs @ 12.27 hrs, Volume= 3,364 cf, Depth= 4.36"
Routed to Link CB3 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	600	98	Impervious
	8,665	80	>75% Grass cover, Good, HSG D
	9,265	81	Weighted Average
	8,665	80	93.52% Pervious Area
	600	98	6.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.7	100	0.0138	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.2	17	0.0138	1.76		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
17.9	117	Total			

Summary for Subcatchment P:

Runoff = 7.59 cfs @ 12.13 hrs, Volume= 17,775 cf, Depth= 6.25"
Routed to Link STMA8 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	34,120	98	Impervious
	34,120	98	100.00% Impervious Area

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

Summary for Subcatchment Q:

Runoff = 20.37 cfs @ 12.23 hrs, Volume= 60,121 cf, Depth= 4.53"
Routed to Pond 1P :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	7,849	98	Impervious
*	14,872	100	Wet Pond
	136,463	80	>75% Grass cover, Good, HSG D
	159,184	83	Weighted Average
	136,463	80	85.73% Pervious Area
	22,721	99	14.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0314	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
2.7	426	0.0314	2.66		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
15.4	526	Total			

Summary for Subcatchment R:

Runoff = 3.85 cfs @ 12.27 hrs, Volume= 11,858 cf, Depth= 4.23"
Routed to Pond 2P : Existing Ditch

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

Area (sf)	CN	Description
33,669	80	>75% Grass cover, Good, HSG D
33,669	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	91	0.0110	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment S:

Runoff = 2.10 cfs @ 12.27 hrs, Volume= 6,924 cf, Depth= 4.95"
Routed to Link CB13 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	6,025	98	Impervious
	10,749	80	>75% Grass cover, Good, HSG D
	16,774	86	Weighted Average
	10,749	80	64.08% Pervious Area
	6,025	98	35.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0133	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.3	32	0.0133	1.73		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
18.2	132	Total			

Summary for Subcatchment T:

Runoff = 5.78 cfs @ 12.20 hrs, Volume= 14,740 cf, Depth= 4.23"
Routed to Reach 1R : WEST

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

Area (sf)	CN	Description
41,855	80	>75% Grass cover, Good, HSG D
41,855	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0382	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
0.2	31	0.0382	2.93		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
12.0	131	Total			

Summary for Subcatchment U:

Runoff = 2.11 cfs @ 12.11 hrs, Volume= 3,904 cf, Depth= 4.23"
Routed to Reach 4R : NORTH

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

Area (sf)	CN	Description
11,086	80	>75% Grass cover, Good, HSG D
11,086	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.0	30	0.0500	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"

Summary for Subcatchment V:

Runoff = 5.53 cfs @ 12.13 hrs, Volume= 12,961 cf, Depth= 6.25"
Routed to Link STMA6 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	24,880	98	Impervious
	24,880	98	100.00% Impervious Area

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

Summary for Subcatchment W:

Runoff = 10.52 cfs @ 12.13 hrs, Volume= 24,651 cf, Depth= 6.25"
Routed to Link STMA5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	47,320	98	Impervious
	47,320	98	100.00% Impervious Area

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

Summary for Subcatchment X:

Runoff = 11.57 cfs @ 12.30 hrs, Volume= 40,104 cf, Depth= 4.73"
Routed to Pond D1 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	25,133	98	Impervious
	76,696	80	>75% Grass cover, Good, HSG D
	101,829	84	Weighted Average
	76,696	80	75.32% Pervious Area
	25,133	98	24.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	100	0.0114	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.81"
1.7	163	0.0114	1.60		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
20.8	263	Total			

Summary for Subcatchment Y:

Runoff = 38.09 cfs @ 12.25 hrs, Volume= 116,132 cf, Depth= 4.52"
Routed to Pond D5 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	44,259	98	Impervious
	264,283	80	>75% Grass cover, Good, HSG D
	308,542	83	Weighted Average
	264,283	80	85.66% Pervious Area
	44,259	98	14.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0080	0.23		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
9.5	460	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
16.7	560	Total			

Summary for Subcatchment Z:

Runoff = 32.12 cfs @ 12.24 hrs, Volume= 92,903 cf, Depth= 4.30"
Routed to Pond D4 :

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=6.49"

	Area (sf)	CN	Description
*	8,978	98	Impervious
	250,515	80	>75% Grass cover, Good, HSG D
	259,493	81	Weighted Average
	250,515	80	96.54% Pervious Area
	8,978	98	3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0091	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.81"
8.7	449	0.0091	0.86		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
15.6	549	Total			

Summary for Reach 1R: WEST

Inflow Area = 985,202 sf, 31.88% Impervious, Inflow Depth = 4.65" for 100-Year event
Inflow = 37.44 cfs @ 12.35 hrs, Volume= 381,804 cf
Outflow = 37.44 cfs @ 12.35 hrs, Volume= 381,804 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 2R: SOUTH

Inflow Area = 158,651 sf, 6.25% Impervious, Inflow Depth = 4.35" for 100-Year event
Inflow = 14.67 cfs @ 12.39 hrs, Volume= 57,547 cf
Outflow = 14.67 cfs @ 12.39 hrs, Volume= 57,547 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 3R: Into City

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 4.86" for 100-Year event
Inflow = 10.20 cfs @ 12.65 hrs, Volume= 124,900 cf
Outflow = 10.20 cfs @ 12.65 hrs, Volume= 124,900 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Reach 4R: NORTH

Inflow Area = 11,086 sf, 0.00% Impervious, Inflow Depth = 4.23" for 100-Year event
Inflow = 2.11 cfs @ 12.11 hrs, Volume= 3,904 cf
Outflow = 2.11 cfs @ 12.11 hrs, Volume= 3,904 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P:

Inflow Area = 410,341 sf, 53.25% Impervious, Inflow Depth = 5.31" for 100-Year event
Inflow = 57.41 cfs @ 12.12 hrs, Volume= 181,613 cf
Outflow = 13.39 cfs @ 12.58 hrs, Volume= 180,935 cf, Atten= 77%, Lag= 27.8 min
Primary = 13.39 cfs @ 12.58 hrs, Volume= 180,935 cf
Routed to Link OCS1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Starting Elev= 1,156.00' Surf.Area= 14,863 sf Storage= 20,512 cf
Peak Elev= 1,159.23' @ 12.58 hrs Surf.Area= 45,946 sf Storage= 111,282 cf (90,770 cf above start)

Plug-Flow detention time= 278.4 min calculated for 160,423 cf (88% of inflow)
Center-of-Mass det. time= 192.9 min (957.1 - 764.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,153.00'	151,623 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,153.00	1,963	0	0
1,154.00	4,654	3,309	3,309
1,155.00	7,445	6,050	9,358
1,156.00	14,863	11,154	20,512
1,157.00	22,609	18,736	39,248
1,158.00	29,574	26,092	65,340
1,159.00	42,264	35,919	101,259
1,160.00	58,465	50,365	151,623

Device	Routing	Invert	Outlet Devices
#1	Primary	1,156.00'	**18.0" Round Culvert** L= 18.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,156.00' / 1,156.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,158.25'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	1,156.00'	**8.5" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=13.39 cfs @ 12.58 hrs HW=1,159.23' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 13.39 cfs @ 7.58 fps)
↑**2=Sharp-Crested Rectangular Weir** (Passes < 12.02 cfs potential flow)
↑**3=Orifice/Grate** (Passes < 3.41 cfs potential flow)

Summary for Pond 2P: Existing Ditch

Inflow Area = 533,006 sf, 17.93% Impervious, Inflow Depth = 4.37" for 100-Year event
Inflow = 22.85 cfs @ 12.11 hrs, Volume= 194,167 cf
Outflow = 21.56 cfs @ 12.32 hrs, Volume= 187,165 cf, Atten= 6%, Lag= 12.5 min
Discarded = 0.01 cfs @ 12.32 hrs, Volume= 1,037 cf
Primary = 21.55 cfs @ 12.32 hrs, Volume= 186,128 cf
Routed to Reach 1R : WEST

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,159.74' @ 12.32 hrs Surf.Area= 4,412 sf Storage= 12,454 cf

Plug-Flow detention time= 45.2 min calculated for 187,165 cf (96% of inflow)
Center-of-Mass det. time= 26.3 min (838.2 - 811.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,152.00'	18,775 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,152.00	27	0	0
1,153.00	185	106	106
1,154.00	470	328	434
1,155.00	855	663	1,096
1,156.00	1,345	1,100	2,196
1,157.00	1,973	1,659	3,855
1,158.00	2,754	2,364	6,219
1,159.00	3,690	3,222	9,441
1,160.00	4,661	4,176	13,616
1,161.00	5,657	5,159	18,775

Device	Routing	Invert	Outlet Devices
#1	Primary	1,158.50'	**5.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	1,152.00'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.32 hrs HW=1,159.74' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=21.55 cfs @ 12.32 hrs HW=1,159.74' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 21.55 cfs @ 3.46 fps)

Summary for Pond 4P: CB-26

Inflow Area = 334,413 sf, 6.91% Impervious, Inflow Depth = 4.02" for 100-Year event
Inflow = 11.45 cfs @ 13.00 hrs, Volume= 112,141 cf
Outflow = 11.45 cfs @ 13.00 hrs, Volume= 112,141 cf, Atten= 0%, Lag= 0.0 min
Primary = 11.45 cfs @ 13.00 hrs, Volume= 112,141 cf
Routed to Pond D1 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 1,162.46' @ 12.64 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.53'	**24.0" Round Culvert** L= 90.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.53' / 1,159.35' S= 0.0020 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=11.51 cfs @ 13.00 hrs HW=1,162.31' TW=1,161.73' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 11.51 cfs @ 3.66 fps)

Summary for Pond D1:

Inflow Area = 436,242 sf, 11.06% Impervious, Inflow Depth = 4.19" for 100-Year event
Inflow = 21.86 cfs @ 12.30 hrs, Volume= 152,245 cf
Outflow = 15.86 cfs @ 12.59 hrs, Volume= 152,245 cf, Atten= 27%, Lag= 17.6 min
Discarded = 0.02 cfs @ 12.59 hrs, Volume= 143 cf
Primary = 15.85 cfs @ 12.59 hrs, Volume= 152,102 cf
Routed to Link CB16 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,161.93' @ 12.59 hrs Surf.Area= 12,710 sf Storage= 11,901 cf

Plug-Flow detention time= 7.0 min calculated for 152,224 cf (100% of inflow)
Center-of-Mass det. time= 7.0 min (824.8 - 817.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.30'	12,784 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.30	50	0	0
1,160.00	490	189	189
1,161.00	5,740	3,115	3,304
1,162.00	13,219	9,480	12,784

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.30'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.30' / 1,159.25' S= 0.0014 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Discarded	1,159.30'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.59 hrs HW=1,161.93' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=15.85 cfs @ 12.59 hrs HW=1,161.93' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 15.85 cfs @ 5.06 fps)

Summary for Pond D2:

Inflow Area = 326,121 sf, 5.87% Impervious, Inflow Depth = 4.00" for 100-Year event
Inflow = 12.41 cfs @ 12.23 hrs, Volume= 108,621 cf
Outflow = 11.33 cfs @ 13.02 hrs, Volume= 108,621 cf, Atten= 9%, Lag= 47.1 min
Discarded = 0.00 cfs @ 12.68 hrs, Volume= 72 cf
Primary = 11.33 cfs @ 13.02 hrs, Volume= 108,549 cf
Routed to Pond 4P : CB-26

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.91' @ 12.68 hrs Surf.Area= 3,553 sf Storage= 5,585 cf

Plug-Flow detention time= 5.7 min calculated for 108,606 cf (100% of inflow)
Center-of-Mass det. time= 5.8 min (829.9 - 824.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.70'	10,194 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.70	50	0	0
1,160.00	344	59	59
1,161.00	1,372	858	917
1,162.00	2,476	1,924	2,841
1,163.00	3,659	3,068	5,909
1,164.00	4,912	4,286	10,194

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.70'	**24.0" Round Culvert** L= 83.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.70' / 1,159.53' S= 0.0020 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf
#2	Discarded	1,159.70'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.68 hrs HW=1,162.91' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=10.11 cfs @ 13.02 hrs HW=1,162.74' TW=1,162.29' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 10.11 cfs @ 3.22 fps)

Summary for Pond D3:

Inflow Area = 42,181 sf, 9.59% Impervious, Inflow Depth = 4.42" for 100-Year event
Inflow = 5.06 cfs @ 12.25 hrs, Volume= 15,538 cf
Outflow = 1.76 cfs @ 13.33 hrs, Volume= 15,538 cf, Atten= 65%, Lag= 64.6 min
Discarded = 0.01 cfs @ 12.70 hrs, Volume= 71 cf
Primary = 1.76 cfs @ 13.33 hrs, Volume= 15,467 cf
Routed to Pond D2 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,162.93' @ 12.70 hrs Surf.Area= 4,884 sf Storage= 6,220 cf

Plug-Flow detention time= 33.5 min calculated for 15,536 cf (100% of inflow)
Center-of-Mass det. time= 33.5 min (829.0 - 795.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.54'	14,069 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.54	50	0	0
1,161.00	960	232	232
1,162.00	3,357	2,159	2,391
1,163.00	5,000	4,179	6,569
1,164.00	10,000	7,500	14,069

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.54'	**18.0" Round Culvert** L= 72.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.54' / 1,160.25' S= 0.0040 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 1.77 sf
#2	Discarded	1,160.54'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 12.70 hrs HW=1,162.93' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=1.97 cfs @ 13.33 hrs HW=1,162.49' TW=1,162.44' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.97 cfs @ 1.12 fps)

Summary for Pond D4:

Inflow Area = 259,493 sf, 3.46% Impervious, Inflow Depth = 4.30" for 100-Year event
Inflow = 32.12 cfs @ 12.24 hrs, Volume= 92,903 cf
Outflow = 15.06 cfs @ 12.22 hrs, Volume= 92,903 cf, Atten= 53%, Lag= 0.0 min
Discarded = 0.02 cfs @ 12.60 hrs, Volume= 173 cf
Primary = 9.51 cfs @ 12.41 hrs, Volume= 83,513 cf
Routed to Pond D2 :
Secondary = 6.87 cfs @ 12.19 hrs, Volume= 9,218 cf
Routed to Pond D5 :

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,163.54' @ 12.60 hrs Surf.Area= 16,202 sf Storage= 22,215 cf

Plug-Flow detention time= 19.5 min calculated for 92,891 cf (100% of inflow)
Center-of-Mass det. time= 19.5 min (817.8 - 798.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,160.09'	30,460 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,160.09	50	0	0
1,160.60	500	140	140
1,161.00	2,724	645	785
1,162.00	6,652	4,688	5,473
1,163.00	11,661	9,157	14,630
1,164.00	20,000	15,831	30,460

Device	Routing	Invert	Outlet Devices
#1	Primary	1,160.09'	**24.0" Round Culvert** L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,160.09' / 1,159.75' S= 0.0045 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf
#2	Secondary	1,160.77'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Elev. (feet) 1,160.77 1,161.00 1,162.00 1,163.00 1,164.00 Width (feet) 1.00 7.00 15.00 29.00 45.00
#3	Discarded	1,160.09'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.60 hrs HW=1,163.54' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=9.38 cfs @ 12.41 hrs HW=1,163.37' TW=1,162.68' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 9.38 cfs @ 2.98 fps)

Secondary OutFlow Max=0.00 cfs @ 12.19 hrs HW=1,162.32' TW=1,162.38' (Dynamic Tailwater)
└**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Summary for Pond D5:

Inflow Area = 308,542 sf, 14.34% Impervious, Inflow Depth = 4.88" for 100-Year event
Inflow = 43.99 cfs @ 12.23 hrs, Volume= 125,350 cf
Outflow = 10.24 cfs @ 12.65 hrs, Volume= 125,350 cf, Atten= 77%, Lag= 25.0 min
Discarded = 0.04 cfs @ 12.65 hrs, Volume= 450 cf
Primary = 10.20 cfs @ 12.65 hrs, Volume= 124,900 cf
Routed to Reach 3R : Into City

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 1,163.58' @ 12.65 hrs Surf.Area= 28,290 sf Storage= 49,559 cf

Plug-Flow detention time= 46.1 min calculated for 125,332 cf (100% of inflow)
Center-of-Mass det. time= 46.1 min (833.0 - 786.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,159.62'	62,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,159.62	100	0	0
1,160.00	500	114	114
1,161.00	7,895	4,198	4,312
1,162.00	14,809	11,352	15,664
1,163.00	23,200	19,005	34,668
1,164.00	32,000	27,600	62,268

Device	Routing	Invert	Outlet Devices
#1	Primary	1,159.62'	**18.0" Round Culvert** L= 52.3' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,159.62' / 1,159.47' S= 0.0029 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf
#2	Discarded	1,159.62'	**0.060 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.04 cfs @ 12.65 hrs HW=1,163.58' (Free Discharge)
2=Exfiltration (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=10.20 cfs @ 12.65 hrs HW=1,163.58' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 10.20 cfs @ 5.77 fps)

Summary for Link C30/17:

Inflow Area = 470,388 sf, 17.52% Impervious, Inflow Depth = 4.33" for 100-Year event
Inflow = 16.72 cfs @ 12.51 hrs, Volume= 169,890 cf
Primary = 16.72 cfs @ 12.51 hrs, Volume= 169,890 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB28/29 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB10:

Inflow Area = 13,852 sf,100.00% Impervious, Inflow Depth = 6.25" for 100-Year event
Inflow = 3.40 cfs @ 12.10 hrs, Volume= 7,216 cf
Primary = 3.40 cfs @ 12.10 hrs, Volume= 7,216 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB9 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB11/12:

Inflow Area = 12,199 sf, 94.12% Impervious, Inflow Depth = 6.13" for 100-Year event
Inflow = 2.98 cfs @ 12.10 hrs, Volume= 6,234 cf
Primary = 2.98 cfs @ 12.10 hrs, Volume= 6,234 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB13:

Inflow Area = 16,774 sf, 35.92% Impervious, Inflow Depth = 4.95" for 100-Year event
Inflow = 2.10 cfs @ 12.27 hrs, Volume= 6,924 cf
Primary = 2.10 cfs @ 12.27 hrs, Volume= 6,924 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA7 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB16:

Inflow Area = 449,613 sf, 13.70% Impervious, Inflow Depth = 4.25" for 100-Year event
Inflow = 16.15 cfs @ 12.51 hrs, Volume= 159,067 cf
Primary = 16.15 cfs @ 12.51 hrs, Volume= 159,067 cf, Atten= 0%, Lag= 0.0 min
Routed to Link C30/17 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB28/29:

Inflow Area = 499,337 sf, 19.14% Impervious, Inflow Depth = 4.38" for 100-Year event
Inflow = 20.76 cfs @ 12.11 hrs, Volume= 182,309 cf
Primary = 20.76 cfs @ 12.11 hrs, Volume= 182,309 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 2P : Existing Ditch

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB3:

Inflow Area = 128,063 sf, 65.14% Impervious, Inflow Depth = 5.55" for 100-Year event
Inflow = 20.56 cfs @ 12.11 hrs, Volume= 59,181 cf
Primary = 20.56 cfs @ 12.11 hrs, Volume= 59,181 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH1 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB4/5:

Inflow Area = 118,798 sf, 69.72% Impervious, Inflow Depth = 5.64" for 100-Year event
Inflow = 19.98 cfs @ 12.11 hrs, Volume= 55,816 cf
Primary = 19.98 cfs @ 12.11 hrs, Volume= 55,816 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH2 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB6:

Inflow Area = 96,229 sf, 84.42% Impervious, Inflow Depth = 5.94" for 100-Year event
Inflow = 18.51 cfs @ 12.11 hrs, Volume= 47,601 cf
Primary = 18.51 cfs @ 12.11 hrs, Volume= 47,601 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB4/5 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB7:

Inflow Area = 23,520 sf,100.00% Impervious, Inflow Depth = 6.25" for 100-Year event
Inflow = 5.80 cfs @ 12.10 hrs, Volume= 12,253 cf
Primary = 5.80 cfs @ 12.10 hrs, Volume= 12,253 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB8:

Inflow Area = 61,010 sf, 86.64% Impervious, Inflow Depth = 5.98" for 100-Year event
Inflow = 11.91 cfs @ 12.11 hrs, Volume= 30,407 cf
Primary = 11.91 cfs @ 12.11 hrs, Volume= 30,407 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link CB9:

Inflow Area = 31,947 sf, 97.06% Impervious, Inflow Depth = 6.19" for 100-Year event
Inflow = 6.98 cfs @ 12.11 hrs, Volume= 16,484 cf
Primary = 6.98 cfs @ 12.11 hrs, Volume= 16,484 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMH3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link OCS1:

Inflow Area = 410,341 sf, 53.25% Impervious, Inflow Depth > 5.29" for 100-Year event
Inflow = 13.39 cfs @ 12.58 hrs, Volume= 180,935 cf
Primary = 13.39 cfs @ 12.58 hrs, Volume= 180,935 cf, Atten= 0%, Lag= 0.0 min
Routed to Reach 1R : WEST

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA4:

Inflow Area = 123,094 sf, 91.27% Impervious, Inflow Depth = 6.07" for 100-Year event
Inflow = 24.97 cfs @ 12.13 hrs, Volume= 62,311 cf
Primary = 24.97 cfs @ 12.13 hrs, Volume= 62,311 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA5:

Inflow Area = 123,094 sf, 91.27% Impervious, Inflow Depth = 6.07" for 100-Year event
Inflow = 24.97 cfs @ 12.13 hrs, Volume= 62,311 cf
Primary = 24.97 cfs @ 12.13 hrs, Volume= 62,311 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA4 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA6:

Inflow Area = 75,774 sf, 85.81% Impervious, Inflow Depth = 5.96" for 100-Year event
Inflow = 14.46 cfs @ 12.13 hrs, Volume= 37,660 cf
Primary = 14.46 cfs @ 12.13 hrs, Volume= 37,660 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA5 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA7:

Inflow Area = 50,894 sf, 78.88% Impervious, Inflow Depth = 5.82" for 100-Year event
Inflow = 8.93 cfs @ 12.13 hrs, Volume= 24,699 cf
Primary = 8.93 cfs @ 12.13 hrs, Volume= 24,699 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA6 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMA8:

Inflow Area = 34,120 sf,100.00% Impervious, Inflow Depth = 6.25" for 100-Year event
Inflow = 7.59 cfs @ 12.13 hrs, Volume= 17,775 cf
Primary = 7.59 cfs @ 12.13 hrs, Volume= 17,775 cf, Atten= 0%, Lag= 0.0 min
Routed to Link STMA7 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH1:

Inflow Area = 128,063 sf, 65.14% Impervious, Inflow Depth = 5.55" for 100-Year event
Inflow = 20.56 cfs @ 12.11 hrs, Volume= 59,181 cf
Primary = 20.56 cfs @ 12.11 hrs, Volume= 59,181 cf, Atten= 0%, Lag= 0.0 min
Routed to Pond 1P :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH2:

Inflow Area = 118,798 sf, 69.72% Impervious, Inflow Depth = 5.64" for 100-Year event
Inflow = 19.98 cfs @ 12.11 hrs, Volume= 55,816 cf
Primary = 19.98 cfs @ 12.11 hrs, Volume= 55,816 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB3 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link STMH3:

Inflow Area = 44,146 sf, 96.25% Impervious, Inflow Depth = 6.18" for 100-Year event
Inflow = 9.92 cfs @ 12.11 hrs, Volume= 22,718 cf
Primary = 9.92 cfs @ 12.11 hrs, Volume= 22,718 cf, Atten= 0%, Lag= 0.0 min
Routed to Link CB8 :

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs