STORMWATER DRAINAGE CALCULATIONS

for

Definitive Subdivision Modification

at

Northside Farm
New Bedford, MA

Prepared for:

New Bedford Cousins LLC P.O. Box 36 Scituate, MA 02066

Prepared by:

CAVANARO CONSULTING, INC. 687 Main Street Norwell, MASSACHUSETTS 02061

February 10, 2017



1.0 METHODOLOGY

The adequacy of drainage structures and their ability to function properly must be analyzed to minimize detrimental effects due to flooding conditions. The impacts of storm water are mitigated through several mechanisms such as infiltration, transportation and evaporation. The remaining runoff, can be quantified through developed and accepted methods. By determining the characteristics of site specific storm water conditions, mitigating efforts can be taken to avoid floodwater damage by constructing control devices. Designing and analyzing these facilities requires the acquisition of site data through observations, computer modeling the watershed, and the interpretation and application of the calculated values.

2.0 OVERVIEW

Cavanaro Consulting (CC) has analyzed the existing structures on and adjacent to the site utilizing the HydroCad 7.00 Storm water modeling program. Storm rainfall, run-off curve numbers, and other site characteristics are input into the program. The results of calculations are output into tables and graphs for each area and control structure. The complete calculations are presented in Appendix A of this report.

3.0 DESIGN STORMS

CC has computed storm water run-off calculations for the proposed subdivision site, for a 2, 10, 25, and 100 year, Type III, 24-hour storm events. This results in a 3.2", 4.6", 5.6", and a 6.8" rain event respectively for each storm event.

4.0 EXISTING DRAINAGE AREAS

The existing site is currently divided into three drainage areas: one that flows to the west toward Acushnet Ave through an easement; another flows toward Arnoff and Victoria Street; and a much larger area that flows to the east into an existing bordering vegetated wetland area and eventually to an unnamed river which flows further south to a small pond. It is our understanding that the existing pond located to the southeast has a history of flooding during heavy rainfall events. As a result, we have designed the drainage system for this project to reduce the flow toward the existing wetland while maintaining some flow to continue hydration of the resource area.

5.0 PROPOSED SUBCATCHMENT AREAS

The proposed site was divided into 11 subcatchment areas as shown on the accompanying plan. Three design control points were established to compare the existing with the proposed conditions. The design control points were chosen at the down slope side of the four existing subcatchment areas as shown on the plan. The intent was to direct a limited amount of runoff to the Bordering Vegetated Wetland and to Victoria Street to the South due to the inherent drainage problem at the Easterly end of Victoria Street and the adjacent pond. To achieve this goal more runoff was directed towards Acushnet Avenue, thus resulting in an increase in flow

at design control point No. 1 and a net decrease in flow at design control points No. 2 & 3, as shown in the table below.

6.0 PROPOSED DETENTION POND

The proposed drainage system consists of two infiltration basins. One is an existing underground infiltration basin with outlet structures discharge into the exiting drainage systems in the Acushnet avenue. This infiltration system adjacent to the bank site has been installed as part of that project in 2008. The second open infiltration basin is locate to the southwest portion of the project and discharges towards the adjacent wetlands and unnamed river bordering the eastern portion of the project. Both ponds are designed as dry ponds. Therefore, there is no standing water in the ponds between storm events. All street runoff is captured through deep sump catch basins with oil/gas separators, which discharge to the detention ponds. All of the proposed dwellings have their own onsite stormwater recharge systems.

7.0 DRAINAGE ANALYSIS

Design Control Point No. 1 (Acushnet Ave.)

<u>Storm</u> 2-Year-24Hour (3.20")	Existing Conditions (1E) 0.08 cfs	Post-Modification(DCP1) 0.08 cfs
10-Year-24Hour (4.60")	0.17 cfs	2.19 cfs
25-Year-24Hour (5.60")	0.24 cfs	4.20 cfs
100-Year-24Hour (6.80")	0.32 cfs	7.04 cfs

Flow @ Design control Point No. 2 (Monson & Victoria Street)

Storm 2-Year-24Hour (3.20")	Existing Conditions (3E) 3.72 cfs	Post-development (DCP2) 3.33 cfs
10-Year-24Hour (4.60")	7.72 cfs	6.96 cfs
25-Year-24Hour (5.60")	10.84 cfs	9.78 cfs
100-Year-24Hour (6.80")	14.74 cfs	13.30 cfs

Flow @ Design control Point No. 3 (Rear @ Wetland Area/Southeast corner)

<u>Storm</u> 2-Year-24Hour (3.20")	Existing Conditions (4E) 7.93 cfs	Post-development (DCP3) 4.75 cfs
10-Year-24Hour (4.60")	16.42 cfs	9.50 cfs
25-Year-24Hour (5.60")	23.06 cfs	13.10 cfs
100-Year-24Hour (6.80")	31.37 cfs	17.56 cfs

The portion of the proposed project will conform to the Stormwater Standards as follows:

<u>Standard 1: No New Stormwater Conveyances of Untreated Stormwater or</u> Erosion Offsite

The proposed improvements have an increase in pavement that will be treated prior to flowing into the infiltration fields. Also deep sump catch basins with hoods will be provided on all new catch basins, and all runoff will flow through a Stomceptor unit prior to discharging off site.

Standard 2: Peak Rate Attenuation

All proposed runoff rates are less than proposed with the exception of design control point number 1. This existing connection to the street was constructed in 2008 as part of the adjacent bank project. The flow was increased in this area to help alleviate an existing drainage problem with the pond off property to the southeast of the project.

Standard 3: Recharge and Discharge Volume

The required recharge volume for the site is 0.25" per net increase of new impervious, or 0.25"/ $12 \times 63,559 \text{ s.f.} = 1,324 \text{ cubic feet}$. The infiltration systems for each individual house lot have a volume of 226 Cubic feet below the outlet. Therefore, the total recharge for the site including just the infiltration systems on the individual house lots is just under 3,400 cubic feet (226×15 house lots = 3,390) this is well above the required 1,324 cubic feet.

Standard 4: Water Quality

The implementation of a Long Term Operation and Maintenance Plan will further improve water quality in the long term. The required Water Quality Volume for this site is 1.0" per net increase of new pavement, or 1.0"/12 x 36,526 s.f. = 3,044 cubic feet, new roadway and driveways. The existing infiltration systems for the individual house lots have a total volume of 3,390 cubic feet of storage (see above), therefore this requirement is met.

Standard 5: Land Uses with Higher Pollutant Loads (LUHPPLs)

The proposed use of the site does not constitute a higher potential pollutant load, therefore this standard does not apply.

Standard 6: Critical Areas

The locus site is not located within a critical area as can be seen on the attached DEP priority resource map. Thus, Standard 6 does not pertain to this project.

Standard 7: Redevelopment

The project is considered new development.

<u>Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control</u>

The Operation and Maintenance Plan included with this submittal will ensure proper maintenance of the proposed pollution, erosion and sedimentation measures proposed during construction.

Standard 9: Long Term Operation and Maintenance Plan

The Long Term Operation and Maintenance Plan is included within the Operation and Maintenance Plan which is enclosed in this submittal to ensure drainage non-structural BMP's are maintained as intended.

Standard 10: Prohibition of Illicit Discharges

Routine visual inspections are scheduled as part of the Operations and Maintenance Plan to prevent illicit discharges. Furthermore, an Illicit Compliance Statement is included in this submittal.

Improvement Over Existing Conditions

Water quality will be improved through the implementation of an Operation and Maintenance Plan (O & M Plan). This O & M Plan includes good practice measures such as visual maintenance and inspections onsite. The runoff from the existing site has no stormwater controls, the proposed infiltration and stomwater controls will remove greater than 80% of total suspended solids (TSS) from the site improving the downstream runoff dramatically.

Long Term Stormwater Operation and Maintenance Plan and Illicit Discharge Statement

Proposed Residential Development "Northside Farm" Northside Farm Subdivision – New Bedford, MA 02045 Stormwater Management System's Owner: New Bedford Cousins LLC System Owner's Address: P.O. Box 36, Scituate, MA 02066 Party responsible for Operations and Maintenance: Owners of Northside Farm

It is most important for a drainage system to be maintained in order for it to work properly. The following is an Operation and Maintenance plan to upkeep the existing non-structural and structural best performance practices as outlined in the Massachusetts Department of Environmental Protection's Stormwater Management Policy.

Operation and Maintenance Plan After Construction:

Good housekeeping:

General trash and litter cleanup of the site, inspect all vehicles on a regular basis for detention of leaking oil, gas and other fluids, provide routine visual inspections of potential pollution sources, and maintain an inventory of potential pollution sources stored on site. Initiate and maintain record keeping of activity with regard to the contents of this plan.

Spill prevention and response:

In the event of a spill, immediately initiate containment and cleanup procedures appropriate for the material and notify the proper authorities. All attempts must be made to prevent spilled material from entering the drainage system or infiltrating into the ground.

<u>Landscape</u> Maintenance:

Maintenance of lawns and landscaped areas: Regularly mow lawn areas and weed landscaped areas.

Pipes:

Drainage pipes (inlets and outlets) shall be inspected to ensure that they are free of all obstructions and that they are structurally sound during every catch basin inspection.

Street Sweeping:

Sweeping of the parking lots and driveways should be done at least 2 times annually, namely in the spring and fall. It is imperative that sweeping take place immediately following final winter snowmelt to remove winter sand. All sediments containing hydrocarbons shall be handled properly and disposed of in accordance with local, state and federal guidelines and regulations.

Catch Basin Cleaning:

Catch basins shall be inspected and sediment removed at least two times per year and at the end of the foliage and snow removal seasons. Sediment must be removed at the required interval or whenever the depth of deposits is greater than or equal to one half the depth of the sump (2 feet). Care must be exercised to not damage the outlet hood when using a clamshell type cleaning bucket. A damaged or dislodged hood must be repaired or replaced immediately.

Culverts. pipes. and manholes:

All culverts, pipes, and manholes shall be inspected two times per year and cleaned when drainage impediments are discovered. Flushing of pipes may be required to remove accumulated sediment.

Riprap Drain Outfalls:

All riprap drain outfalls shall be inspected two times per year and repaired as necessary. Riprap shall be replaced/repaired as necessary, debris and accumulated sediment removed, and any woody growth removed.

Infiltration Basins:

The infiltration basin shall be inspected at least once a year to ensure that the basin is operating as intended. Inspections conducted at intervals during and after storm events will help to determine if the basin is meeting the expected detention times. The outlet structures should be inspected for evidence of clogging or outflow release velocities that are greater than design flow. Potential problems that should be checked include: subsidence, erosion, cracking or tree growth on the embankment; damage to the emergency spillway; sediment accumulation around the outlet; inadequacy of the inlet/outlet channel erosion control measures and erosion within the basin and banks. Any necessary repairs should be made immediately. During inspections, changes to the detention basin or the contributing watershed should be noted, as these may affect basin performance.

The upper-stage side slopes, embankment and emergency spillway should be mowed at least twice a year. Trash and debris should also be removed at this time. Sediment should be removed from the basin as necessary, and at least once every five years.

The subsurface system is designed to fully drain after a storm event therefore if standing water is observed within the system beyond 24 hours since the cessation of inflow to the system from a rain storm, this may indicate a problem and should be noted on the inspection log and further inspected for repairs. The Owner may need to contact a Registered Professional Engineer to evaluate the system in the event of major problems.

Pet Waste Management

All pet owners and keepers are required to immediately and properly dispose of their pet's solid waste deposited on any property, public or private, not owned or possessed by that person.

Snow Management

Place snow in pervious areas where it can slowly infiltrate however it should not be placed over any component of the site's stormwater management system, particularly the catch basins. Any sand and debris mixed with snow would block the inlet or be quickly introduced into the drainage system upon snowmelt.

At no time shall the stormwater infiltration basins or wetlands be used for the stockpiling of snow.

Estimated Operation and Maintenance Budget:

Maintenance cost will be approximately \$5,000.00 per year.

Illicit Discharges:

At no time will the owner or any other individual utilize the stormwater management system for any purpose other than its intended use. The stormwater management system as shown on the attached site plan at no time shall receive discharges other than stormwater, this includes "wastewater discharges and discharges of stormwater contaminated by contact with process wastes, raw materials, toxic pollutants, hazardous substances, oil or grease."

Thurse Tedeochi
Applicant (Signature)

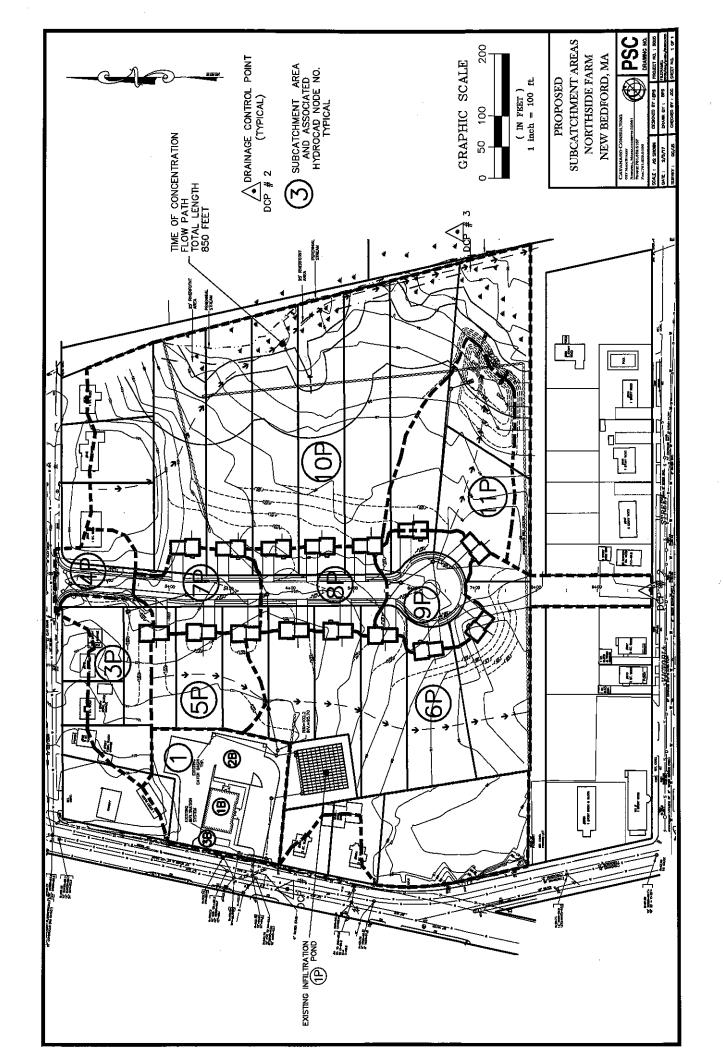
Terrence Tedeschi

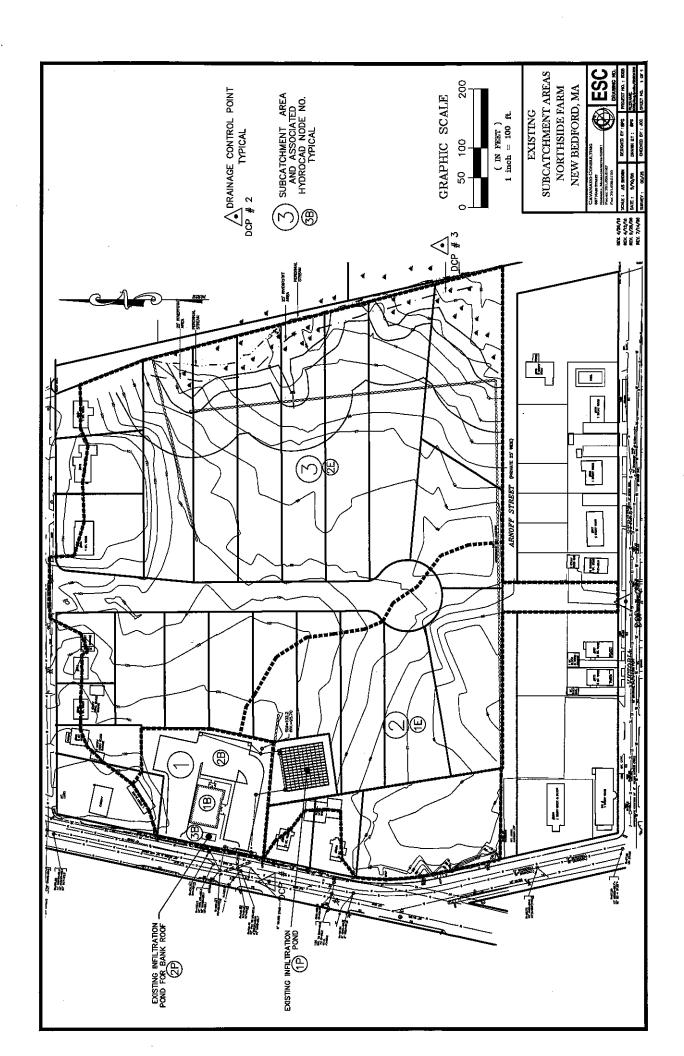
Applicant (Print)

MAINTENANCE INSPECTION LOG FORM

Northside Farm, New Bedford, MA

Contractor Date
OPERATION Inspected Cleaning / Maintenance required
1. Inspect catch basins & inlets
2. Inspect drain outlets
3. Inspect constructed wetland
4. Inspect for signs of drain line blockage
5. Inspect drainage swales
6. Inspect sediment forebay
7. Inspect pavement surface
9. Inspect vegetation on site
COMMENTS / MAINTENANCE REQUIRED:
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INSTRUCTIONS:

- 1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
- Select BMP from Drop Down Menu
 After BMP is selected, TSS Removal and other Columns are automatically completed.

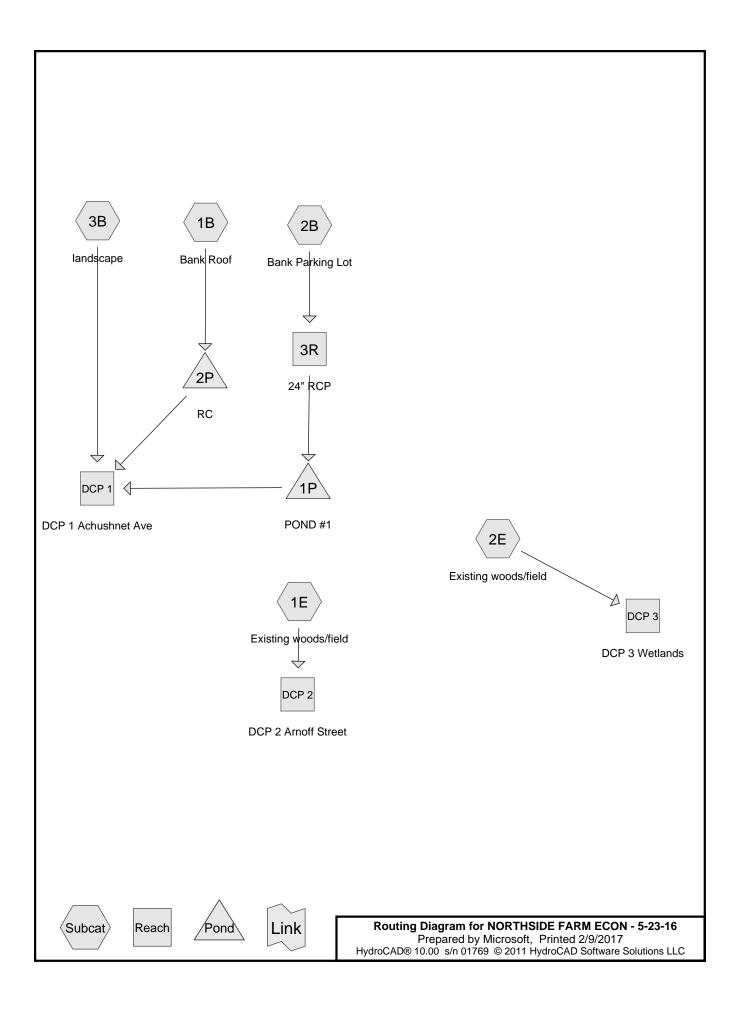
tion: DCP 3-		TS		Street Sweeping - 5%	Deep Sump and Hooded Catch Basin	Sediment Forebay				Project: 6005 Prepared By: BPS	Date: 2/10/2017
LOCATION: DCP 3 - Prior to Pond No. 2	O	TSS Removal	Rate ¹	0.05	0.25	0.25	0.00	0.00	Total		2017
. 2		Starting TSS	Load*	1.00	0.95	0.71	0.53	0.53	Total TSS Removal =		
	Ш	Amount	Removed (C*D)	0.05	0.24	0.18	0.00	0.00	47%	*Equals remaining load from previous BMP (E)	which enters the BMP
	Ŀ	Remaining	Load (D-E)	0.95	0.71	0.53	0.53	0.53	Separate Form Needs to be Completed for Each Outlet or BMP Train	■ m previous BMP (E)	
					1	<u> </u>			Ī		

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed 1. From MassDEP Stormwater Handbook Vol. 1

Mass. Dept. of Environmental Protection

- 1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B; See MassDEP Structural BMP Table
 - 2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
 - 3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
- 4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
 - 5. Total TSS Removal = Sum All Values in Column D

	Ш	•	3*C) Load (C-D)	0.95	12.0	0.06			Separate Form Needs to be Completed for Each Outlet or BMP Train	*Equals remaining load from previous BMP (E)	
[:(1		Amount	Removed (B*C)	0.05	0.24	0.65		94%	948	*Equals remaining loa	
nfiltration Basin	O	Starting TSS	Load*	1.00	96.0	12.0			Total TSS Removal =		
DCP No. 1 prior to Existing Infiltration Basin	В	TSS Removal	Kate	0.05	0.25	0.91			Total T	5005 BPS 2/5/17	
Location: DCP No	⋖	Ĺ	BMP.	Street sweeping	Deep sump catch basin	Stormceptor Model STC 450i				Project: Prepared By: Date:	
	TSS Removal Calculation Worksheet										



Type III 24-hr 2 Year Event Rainfall=3.20"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1B: Bank Roof Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>2.77"

Tc=5.0 min CN=98 Runoff=0.24 cfs 0.018 af

Subcatchment 1E: Existing woods/field Runoff Area=185,628 sf 1.83% Impervious Runoff Depth>0.94"

Flow Length=600' Tc=14.5 min CN=74 Runoff=3.72 cfs 0.335 af

Subcatchment 2B: Bank Parking Lot Runoff Area=36,670 sf 59.99% Impervious Runoff Depth>1.87"

Tc=5.0 min CN=88 Runoff=1.96 cfs 0.131 af

Subcatchment 2E: Existing woods/field Runoff Area=417,719 sf 1.18% Impervious Runoff Depth>0.94"

Flow Length=1,200' Tc=16.7 min CN=74 Runoff=7.93 cfs 0.753 af

Subcatchment 3B: landscape Runoff Area=3,128 sf 0.00% Impervious Runoff Depth>0.95"

Tc=5.0 min CN=74 Runoff=0.08 cfs 0.006 af

Reach 3R: 24" RCP Avg. Flow Depth=0.46' Max Vel=3.60 fps Inflow=1.96 cfs 0.131 af

24.0" Round Pipe n=0.013 L=35.0' S=0.0057'/ Capacity=17.10 cfs Outflow=1.95 cfs 0.131 af

Reach DCP 1: DCP 1 Achushnet Ave Inflow=0.08 cfs 0.006 af

Outflow=0.08 cfs 0.006 af

Reach DCP 2: DCP 2 Arnoff Street Inflow=3.72 cfs 0.335 af

Outflow=3.72 cfs 0.335 af

Reach DCP 3: DCP 3 Wetlands Inflow=7.93 cfs 0.753 af

Outflow=7.93 cfs 0.753 af

Pond 1P: POND #1 Peak Elev=95.51' Storage=604 cf Inflow=1.95 cfs 0.131 af

Discarded=1.02 cfs 0.131 af Primary=0.00 cfs 0.000 af Outflow=1.02 cfs 0.131 af

Pond 2P: RC Peak Elev=91.26' Storage=156 cf Inflow=0.24 cfs 0.018 af

Discarded=0.08 cfs 0.018 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.018 af

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Summary for Subcatchment 1B: Bank Roof

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 0.018 af, Depth> 2.77"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN	Description					
*		3,300	98	Bank Roof					
_		3,300		100.00% Impervious Area					
	Тс	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry, DIRECT			

Summary for Subcatchment 1E: Existing woods/field

Runoff = 3.72 cfs @ 12.22 hrs, Volume= 0.335 af, Depth> 0.94"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	A	rea (sf)	CN [Description				
	1	30,145	73 \	Voods, Fai	r, HSG C			
		49,442	76 \	Woods/gras	s comb., F	air, HSG C		
*		0	74 L	₋awn adj. F	hillips			
*		1,290	98 F	Roofs Achu	shnet Ave			
*		0	98 F	Roofs Philli	ps Ave wes	st .		
*		0	98 F	Roofs Philli	ps Ave Eas	t		
*		2,651	76 g	grass adj. to Monson St				
*		2,100	98 d	drive adj. to	t en			
	1	85,628	74 \	Veighted A	verage			
	1	82,238	ç	98.17% Pei	vious Area			
		3,390	1	1.83% Impe	ervious Area	a		
				•				
	Tc	Length	Slope	Velocity	Capacity	Description		
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
	10.5	50	0.0300	0.08		Sheet Flow, SHEET		
						Woods: Light underbrush n= 0.400 P2= 3.20"		
	4.0	550	0.0200	2.28		Shallow Concentrated Flow, SHALLOW		
						Unpaved Kv= 16.1 fps		
	14.5	600	Total					

Summary for Subcatchment 2B: Bank Parking Lot

Runoff = 1.96 cfs @ 12.08 hrs, Volume= 0.131 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

Type III 24-hr 2 Year Event Rainfall=3.20"

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	Area (sf)	CN	Description							
	22,000	98	Paved park	Paved parking & roofs						
	14,670	74	>75% Gras	s cover, Go	ood, HSG C					
	36,670	88	Weighted Average							
	14,670		40.01% Pervious Area							
	22,000		59.99% Impervious Area							
T		Slop	•	Capacity	Description					
(min) (feet)	(ft/ft) (ft/sec)	(cfs)						
5.0	0				Direct Entry, direct					

Direct Entry, direct

Summary for Subcatchment 2E: Existing woods/field

Runoff 7.93 cfs @ 12.25 hrs, Volume= 0.753 af, Depth> 0.94"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN [Description								
	2	83,267	73 \	•								
		90,464	76 V	Woods/grass comb., Fair, HSG C								
*		39,058	74 L	₋awn adj. P	hillips							
*		0	98 F	Roofs Achu	shnet Ave							
*		2,059			ps Ave wes							
*		2,871			ps Ave Eas							
*		0		grass adj. to Monson St								
*		0	98 c	98 drive adj. to Monson st								
	4	417,719 74 Weighted Average										
	4	12,789	_		vious Area							
		4,930	1	1.18% I mpe	ervious Area	a						
	Tc	Length	Slope	•	Capacity	Description						
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)							
	10.5	50	0.0300	0.08		Sheet Flow, SHEET						
						Woods: Light underbrush n= 0.400 P2= 3.20"						
	5.1	700	0.0200	2.28		Shallow Concentrated Flow, SHALLOW						
						Unpaved Kv= 16.1 fps						
	1.1	450	0.0200	6.67	40.03	Channel Flow, CHANNEL						
_						Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.026						
	16.7	1,200	Total									

Summary for Subcatchment 3B: landscape

Runoff 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

Type III 24-hr 2 Year Event Rainfall=3.20"

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A	rea (sf)	CN [Description						
	3,128	74 >	>75% Grass cover, Good, HSG C						
	3,128	1	100.00% Pervious Area						
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
5.0					Direct Entry, Direct				

Summary for Reach 3R: 24" RCP

Inflow Area = 0.842 ac, 59.99% Impervious, Inflow Depth > 1.87" for 2 Year Event event

Inflow = 1.96 cfs @ 12.08 hrs, Volume= 0.131 af

Outflow = 1.95 cfs @ 12.08 hrs, Volume= 0.131 af, Atten= 1%, Lag= 0.4 min

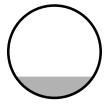
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.60 fps, Min. Travel Time= 0.2 min Avg. Velocity = 1.32 fps, Avg. Travel Time= 0.4 min

Peak Storage= 19 cf @ 12.08 hrs Average Depth at Peak Storage= 0.46'

Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 17.10 cfs

24.0" Round Pipe n= 0.013 Length= 35.0' Slope= 0.0057 '/' Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach DCP 1: DCP 1 Achushnet Ave

Inflow Area = 0.989 ac, 58.70% Impervious, Inflow Depth > 0.07" for 2 Year Event event

Inflow = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af

Outflow = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 2: DCP 2 Arnoff Street

Inflow Area = 4.261 ac, 1.83% Impervious, Inflow Depth > 0.94" for 2 Year Event event

Inflow = 3.72 cfs @ 12.22 hrs, Volume= 0.335 af

Outflow = 3.72 cfs @ 12.22 hrs, Volume= 0.335 af, Atten= 0%, Lag= 0.0 min

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Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 3: DCP 3 Wetlands

Inflow Area = 9.590 ac, 1.18% Impervious, Inflow Depth > 0.94" for 2 Year Event event

Inflow = 7.93 cfs @ 12.25 hrs, Volume= 0.753 af

Outflow = 7.93 cfs @ 12.25 hrs, Volume= 0.753 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area =	0.842 ac, 59.99% Impervious, Inflow Do	epth > 1.87" for 2 Year Event event
Inflow =	1.95 cfs @ 12.08 hrs, Volume=	0.131 af
Outflow =	1.02 cfs @ 12.05 hrs, Volume=	0.131 af, Atten= 48%, Lag= 0.0 min
Discarded =	1.02 cfs @ 12.05 hrs, Volume=	0.131 af
Primary =	0.00 cfs @ 5.00 hrs, Volume=	0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 95.51' @ 12.22 hrs Surf.Area= 5,325 sf Storage= 604 cf

Plug-Flow detention time= 4.5 min calculated for 0.131 af (100% of inflow) Center-of-Mass det. time= 4.1 min (785.1 - 781.0)

Volume	Inve	rt Ava	il.Storage	Storage Description					
#1	#1 95.40' 11,746 cf			Custom Stage Data (Irregular)Listed below					
#2	95.9	O '	6,891 cf	18,638 cf Overall - 6,891 cf Embedded = 11,746 cf StormTech SC-740 x 150 Inside #1					
#2	33.3	U	0,031 0			5.45 sf x 7.12'L = 45.9 cf			
Overall Size= 51.0"W x 30.0"H x 7.56				S'L with 0.44' Overlap					
18,638 cf Total Avail		Total Available Sto	orage						
Clavatia		Cf A	Davisa	In a Ctora	Cura Stara	Mat Aras			
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area			
(fee	:()	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>			
95.4	10	5,325	292.0	0	0	5,325			
98.9	00	5,325	292.0	18,638	18,638	6,347			
Device	Routing	Ir	nvert Outle	et Devices					
#1	Primary	98	5.90' 8.0"	Vert. Orifice/Grate	C = 0.600				
#2	Primary	96	5.30' 11.0	O" Vert. Orifice/Grate C= 0.600					
#3	Discarde	Discarded 95		0 in/hr Exfiltration	over Surface area	1			
Device Routing Invert Outle #1 Primary 95.90' 8.0" ' #2 Primary 96.30' 11.0"		Vert. Orifice/Grate " Vert. Orifice/Gra	te C= 0.600	1					

Discarded OutFlow Max=1.02 cfs @ 12.05 hrs HW=95.45' (Free Discharge) **3=Exfiltration** (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=95.40' (Free Discharge)

1=Orifice/Grate (Controls 0.00 cfs)

-2=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond 2P: RC

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 91.26' @ 12.35 hrs Surf.Area= 408 sf Storage= 156 cf

Plug-Flow detention time= 13.3 min calculated for 0.017 af (100% of inflow) Center-of-Mass det. time= 13.0 min (750.8 - 737.8)

Volume	Inve	ert Avai	I.Storage	e Storage Description					
#1	90.0	0'	320 cf	Custom Stage Data (Irregular)Listed below					
#2	91.0	0'	368 cf	800 cf Overall x 40.0% Voids StormTech SC-740 x 8					
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44'									
688 cf T				Total Available Sto	orage				
Elevation (fee		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)			
90.0	00	200	60.0	0	0	200			
94.0	00	200	60.0	800	800	440			
Device	Routing	In	vert Outle	et Devices					
#1	Primary	93	.50' 6.0"	Vert. Orifice/Grate	C= 0.600				
#2 Discarded 90.00'		.00' 8.27	8.270 in/hr Exfiltration over Surface area						

Discarded OutFlow Max=0.08 cfs @ 12.85 hrs HW=91.01' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 10 Year Event Rainfall=4.60"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1B: Bank Roof Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>4.05"

Tc=5.0 min CN=98 Runoff=0.34 cfs 0.026 af

Subcatchment 1E: Existing woods/field Runoff Area=185,628 sf 1.83% Impervious Runoff Depth>1.89"

Flow Length=600' Tc=14.5 min CN=74 Runoff=7.72 cfs 0.671 af

Subcatchment 2B: Bank Parking Lot Runoff Area=36,670 sf 59.99% Impervious Runoff Depth>3.10"

Tc=5.0 min CN=88 Runoff=3.21 cfs 0.218 af

Subcatchment 2E: Existing woods/field Runoff Area=417,719 sf 1.18% Impervious Runoff Depth>1.89"

Flow Length=1,200' Tc=16.7 min CN=74 Runoff=16.42 cfs 1.508 af

Subcatchment 3B: landscape Runoff Area=3,128 sf 0.00% Impervious Runoff Depth>1.90"

Tc=5.0 min CN=74 Runoff=0.17 cfs 0.011 af

Reach 3R: 24" RCP Avg. Flow Depth=0.59' Max Vel=4.13 fps Inflow=3.21 cfs 0.218 af

24.0" Round Pipe n=0.013 L=35.0' S=0.0057 '/' Capacity=17.10 cfs Outflow=3.17 cfs 0.218 af

Reach DCP 1: DCP 1 Achushnet Ave Inflow=0.17 cfs 0.011 af

Outflow=0.17 cfs 0.011 af

Reach DCP 2: DCP 2 Arnoff Street Inflow=7.72 cfs 0.671 af

Outflow=7.72 cfs 0.671 af

Reach DCP 3: DCP 3 Wetlands Inflow=16.42 cfs 1.508 af

Outflow=16.42 cfs 1.508 af

Pond 1P: POND #1 Peak Elev=95.72' Storage=1,718 cf Inflow=3.17 cfs 0.218 af

Discarded=1.02 cfs 0.217 af Primary=0.00 cfs 0.000 af Outflow=1.02 cfs 0.217 af

Pond 2P: RC Peak Elev=91.73' Storage=289 cf Inflow=0.34 cfs 0.026 af

Discarded=0.08 cfs 0.026 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.026 af

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Summary for Subcatchment 1B: Bank Roof

Runoff = 0.34 cfs @ 12.07 hrs, Volume= 0.026 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	Α	rea (sf)	CN	Description					
*		3,300	98	Bank Roof					
		3,300		100.00% Impervious Area					
	Тс	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry, DIRECT			

Summary for Subcatchment 1E: Existing woods/field

Runoff = 7.72 cfs @ 12.21 hrs, Volume= 0.671 af, Depth> 1.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN I	Description							
	1	30,145	73 \	Woods, Fai	r, HSG C						
		49,442				air, HSG C					
*		0	74 I	awn adi. Phillips							
*		1,290	98	Roofs Achushnet Ave							
*		0	98	Roofs Philli	os Ave wes	st .					
*		0	98	Roofs Philli	oofs Phillips Ave East						
*		2,651	76	grass adj. to	ass adj. to Monson St						
*		2,100	98	drive adj. to	ive adj. to Monson st						
	1	85,628	74 \	Weighted A	verage						
	1	182,238 98.17% Pervious Area									
		3,390		1.83% Impe	ervious Area	a					
				•							
	Tc	Length	Slope	Velocity	Capacity	Description					
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·					
	10.5	50	0.0300	0.08		Sheet Flow, SHEET					
						Woods: Light underbrush n= 0.400 P2= 3.20"					
	4.0	550	0.0200	2.28		Shallow Concentrated Flow, SHALLOW					
						Unpaved Kv= 16.1 fps					
	14.5	600	Total			<u> </u>					

Summary for Subcatchment 2B: Bank Parking Lot

Runoff = 3.21 cfs @ 12.07 hrs, Volume= 0.218 af, Depth> 3.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

Type III 24-hr 10 Year Event Rainfall=4.60"

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_	Aı	rea (sf)	CN	Description						
		22,000	98	Paved parking & roofs						
_		14,670	74	>75% Grass cover, Good, HSG C						
		36,670	88	Weighted Average						
		14,670		40.01% Pervious Area						
		22,000		59.99% Impervious Area						
	_									
	Tc	Length	Slope	,	Capacity	Description				
	(min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
						D: (E (!!	4			

5.0 Direct Entry, direct

Summary for Subcatchment 2E: Existing woods/field

Runoff = 16.42 cfs @ 12.24 hrs, Volume= 1.508 af, Depth> 1.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	A	rea (sf)	CN [Description					
	2	83,267	73 ١	Voods, Fai	r, HSG C				
		90,464				air, HSG C			
*		39,058	74 L	Lawn adj. Phillips					
*		0	98 F	Roofs Achushnet Ave					
*		2,059	98 F	Roofs Phillips Ave west					
*		2,871	98 Roofs Phillips Ave East						
*	* 0 76 grass adj. to Monson St								
*	* 0 98 drive adj. to Monson st								
	4	17,719	74 \	Veighted A	verage				
	4	12,789	ç	98.82% Pei	vious Area				
		4,930	1	1.18% Impe	ervious Area	a			
				•					
	Tc	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	10.5	50	0.0300	0.08		Sheet Flow, SHEET			
						Woods: Light underbrush n= 0.400 P2= 3.20"			
	5.1	700	0.0200	2.28		Shallow Concentrated Flow, SHALLOW			
						Unpaved Kv= 16.1 fps			
	1.1	450	0.0200	6.67	40.03	Channel Flow, CHANNEL			
_						Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.026			
	16.7	1,200	Total						

Summary for Subcatchment 3B: landscape

Runoff = 0.17 cfs @ 12.08 hrs, Volume= 0.011 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

Type III 24-hr 10 Year Event Rainfall=4.60"

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A	rea (sf)	CN [Description					
	3,128	74 >	>75% Grass cover, Good, HSG C					
	3,128	1	100.00% Pervious Area					
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
5.0					Direct Entry, Direct			

Direct Entry, Direct

Summary for Reach 3R: 24" RCP

Inflow Area = 0.842 ac, 59.99% Impervious, Inflow Depth > 3.10" for 10 Year Event event

Inflow 3.21 cfs @ 12.07 hrs, Volume= 0.218 af

3.17 cfs @ 12.08 hrs, Volume= Outflow 0.218 af, Atten= 1%, Lag= 0.3 min

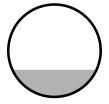
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.13 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.47 fps, Avg. Travel Time= 0.4 min

Peak Storage= 27 cf @ 12.08 hrs Average Depth at Peak Storage= 0.59'

Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 17.10 cfs

24.0" Round Pipe n = 0.013Length= 35.0' Slope= 0.0057 '/' Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach DCP 1: DCP 1 Achushnet Ave

Inflow Area = 0.989 ac, 58.70% Impervious, Inflow Depth > 0.14" for 10 Year Event event

Inflow 0.17 cfs @ 12.08 hrs, Volume= 0.011 af

0.17 cfs @ 12.08 hrs, Volume= Outflow 0.011 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 2: DCP 2 Arnoff Street

Inflow Area = 4.261 ac. 1.83% Impervious, Inflow Depth > 1.89" for 10 Year Event event

Inflow 7.72 cfs @ 12.21 hrs. Volume= 0.671 af

7.72 cfs @ 12.21 hrs, Volume= Outflow 0.671 af, Atten= 0%, Lag= 0.0 min Prepared by Microsoft HydroCAD® 10.00 s/n 01769 © 2011 HydroCAD Software Solutions LLC Printed 2/9/2017

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Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 3: DCP 3 Wetlands

Inflow Area = 9.590 ac, 1.18% Impervious, Inflow Depth > 1.89" for 10 Year Event event

Inflow = 16.42 cfs @ 12.24 hrs, Volume= 1.508 af

Outflow = 16.42 cfs @ 12.24 hrs, Volume= 1.508 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area =	0.842 ac, 59.99% Impervious, Inflow D	Depth > 3.10" for 10 Year Event event
Inflow =	3.17 cfs @ 12.08 hrs, Volume=	0.218 af
Outflow =	1.02 cfs @ 11.90 hrs, Volume=	0.217 af, Atten= 68%, Lag= 0.0 min
Discarded =	1.02 cfs @ 11.90 hrs, Volume=	0.217 af
Primary =	0.00 cfs @ 5.00 hrs, Volume=	0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 95.72' @ 12.38 hrs Surf.Area= 5,325 sf Storage= 1,718 cf

Plug-Flow detention time= 10.0 min calculated for 0.217 af (100% of inflow) Center-of-Mass det. time= 9.6 min (778.6 - 769.0)

Volume	Inve	ert Ava	il.Storage	ge Storage Description					
#1 95.40' 11,746 cf			Custom Stage Data (Irregular)Listed below						
"0	05.0		0.004 (•	18,638 cf Overall - 6,891 cf Embedded = 11,746 cf				
#2	95.9	90,	6,891 cf	StormTech SC-74		45 sf x 7.12'L = 45.9 cf			
Overall Size= 51.0"W x 30.0"H									
			Total Available Sto		<u> </u>				
					3				
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area			
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
95.4	10	5,325	292.0	0	0	5,325			
98.9	90	5,325	292.0	18,638	18,638	6,347			
Device	Routing	Ir	nvert Outle	et Devices					
#1 Primary 95.90' 8.0"		Vert. Orifice/Grate C= 0.600							
#2	Primary	96	5.30' 11.0	" Vert. Orifice/Grate	e C= 0.600				
#3 Discarded 95.40' 8.270 in/hr Exfiltration over Surface area									

Discarded OutFlow Max=1.02 cfs @ 11.90 hrs HW=95.44' (Free Discharge) **3=Exfiltration** (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=95.40' (Free Discharge)

-1=Orifice/Grate (Controls 0.00 cfs)

-2=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond 2P: RC

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 91.73' @ 12.47 hrs Surf.Area= 392 sf Storage= 289 cf

Plug-Flow detention time= 23.1 min calculated for 0.026 af (100% of inflow) Center-of-Mass det. time= 22.8 min (757.6 - 734.9)

Volume	Inve	ert Ava	il.Storage	age Storage Description				
#1	90.0	0'	320 cf	Custom Stage Data (Irregular)Listed below				
#2	91.0	0'	368 cf	800 cf Overall x 40.0% Voids StormTech SC-740 x 8				
						6.45 sf x 7.12'L = 45.9	cf	
				Overall Size= 51.0)"W x 30.0"H x 7.56	6'L with 0.44' Overlap		
688 cf				Total Available Storage				
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area		
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)		
90.0	00	200	60.0	0	0	200		
94.0	00	200	60.0	800	800	440		
Device	Routing	<u> </u>	vert Outle	et Devices				
#1	Primary	93	3.50' 6.0"	Vert. Orifice/Grate C= 0.600				
#2 Discarded 90.00' 8.2 '		70 in/hr Exfiltration over Surface area						

Discarded OutFlow Max=0.08 cfs @ 11.95 hrs HW=91.01' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 25 Year Event Rainfall=5.60"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1B: Bank Roof Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>4.97"

Tc=5.0 min CN=98 Runoff=0.42 cfs 0.031 af

Subcatchment 1E: Existing woods/field Runoff Area=185,628 sf 1.83% Impervious Runoff Depth>2.64"

Flow Length=600' Tc=14.5 min CN=74 Runoff=10.84 cfs 0.938 af

Subcatchment 2B: Bank Parking Lot Runoff Area=36,670 sf 59.99% Impervious Runoff Depth>4.01"

Tc=5.0 min CN=88 Runoff=4.09 cfs 0.281 af

Subcatchment 2E: Existing woods/field Runoff Area=417,719 sf 1.18% Impervious Runoff Depth>2.64"

Flow Length=1,200' Tc=16.7 min CN=74 Runoff=23.06 cfs 2.110 af

Subcatchment 3B: landscape Runoff Area=3,128 sf 0.00% Impervious Runoff Depth>2.65"

Tc=5.0 min CN=74 Runoff=0.24 cfs 0.016 af

Reach 3R: 24" RCP Avg. Flow Depth=0.66' Max Vel=4.42 fps Inflow=4.09 cfs 0.281 af

24.0" Round Pipe n=0.013 L=35.0' S=0.0057 '/' Capacity=17.10 cfs Outflow=4.04 cfs 0.281 af

Reach DCP 1: DCP 1 Achushnet Ave Inflow=0.24 cfs 0.016 af

Outflow=0.24 cfs 0.016 af

Reach DCP 2: DCP 2 Arnoff Street Inflow=10.84 cfs 0.938 af

Outflow=10.84 cfs 0.938 af

Reach DCP 3: DCP 3 Wetlands Inflow=23.06 cfs 2.110 af

Outflow=23.06 cfs 2.110 af

Pond 1P: POND #1 Peak Elev=95.92' Storage=2,764 cf Inflow=4.04 cfs 0.281 af

Discarded=1.02 cfs 0.281 af Primary=0.00 cfs 0.000 af Outflow=1.02 cfs 0.281 af

Pond 2P: RC Peak Elev=92.16' Storage=400 cf Inflow=0.42 cfs 0.031 af

Discarded=0.08 cfs 0.031 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.031 af

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Summary for Subcatchment 1B: Bank Roof

Runoff = 0.42 cfs @ 12.07 hrs, Volume= 0.031 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN	Description		
*		3,300	98	Bank Roof		
		3,300		100.00% Im	npervious A	Area
	Тс	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry, DIRECT

Summary for Subcatchment 1E: Existing woods/field

Runoff = 10.84 cfs @ 12.21 hrs, Volume= 0.938 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN [Description						
	1	30,145	73 V	Voods, Fai	r, HSG C					
		49,442	76 V	Woods/grass comb., Fair, HSG C						
*		0	74 L	awn adj. Phillips						
*		1,290	98 F	Roofs Achushnet Ave						
*		0	98 F	Roofs Philli	os Ave wes	st .				
*		0	98 F	Roofs Philli	oofs Phillips Ave East					
*		2,651	76 g	jrass adj. to	Monson S	St				
*		2,100	98 c	Irive adj. to	rive adj. to Monson st					
	1	85,628	74 V	Veighted A	verage					
	1	82,238	g	8.17% Per	vious Area					
		3,390	1	.83% Impe	ervious Area	a				
	Tc	Length	Slope	Velocity	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	10.5	50	0.0300	0.08		Sheet Flow, SHEET				
						Woods: Light underbrush n= 0.400 P2= 3.20"				
	4.0	550	0.0200	2.28		Shallow Concentrated Flow, SHALLOW				
_						Unpaved Kv= 16.1 fps				
	14.5	600	Total							

Summary for Subcatchment 2B: Bank Parking Lot

Runoff = 4.09 cfs @ 12.07 hrs, Volume= 0.281 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

Type III 24-hr 25 Year Event Rainfall=5.60"

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_	А	rea (sf)	CN	Description						
		22,000	98	Paved parking & roofs						
_		14,670	74	>75% Grass cover, Good, HSG C						
		36,670	88	Weighted Average						
		14,670		40.01% Per						
		22,000		59.99% Imp	pervious Are	ea				
	Tc	Length	Slope	,	Capacity	Description				
_	(min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
				Direct Future Proof						

5.0 Direct Entry, direct

Summary for Subcatchment 2E: Existing woods/field

Runoff = 23.06 cfs @ 12.24 hrs, Volume= 2.110 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN [Description					
	2	83,267	73 \	Voods, Fair, HSG C					
		90,464	76 V	Noods/grass comb., Fair, HSG C					
*		39,058	74 L	₋awn adj. P	hillips				
*		0	98 F	Roofs Achu	shnet Ave				
*		2,059			ps Ave wes				
*		2,871			ps Ave Eas				
*		0			o Monson S				
*		0	98 c	drive adj. to	Monson st	<u> </u>			
	4	17,719	74 \	Veighted A	verage				
	4	12,789	9	98.82% Per	vious Area				
		4,930	1	1.18% I mpe	ervious Area	a			
	Tc	Length	Slope	•	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	10.5	50	0.0300	0.08		Sheet Flow, SHEET			
						Woods: Light underbrush n= 0.400 P2= 3.20"			
	5.1	700	0.0200	2.28		Shallow Concentrated Flow, SHALLOW			
						Unpaved Kv= 16.1 fps			
	1.1	450	0.0200	6.67	40.03	Channel Flow, CHANNEL			
_						Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.026			
	16.7	1,200	Total						

Summary for Subcatchment 3B: landscape

Runoff = 0.24 cfs @ 12.08 hrs, Volume= 0.016 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

Type III 24-hr 25 Year Event Rainfall=5.60"

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Area (sf) CN Description

3,128 74 >75% Grass cover, Good, HSG C

3,128 100.00% Pervious Area

Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)

5.0 Direct Entry, Direct

Summary for Reach 3R: 24" RCP

Inflow Area = 0.842 ac, 59.99% Impervious, Inflow Depth > 4.01" for 25 Year Event event

Inflow = 4.09 cfs @ 12.07 hrs, Volume= 0.281 af

Outflow = 4.04 cfs @ 12.08 hrs, Volume= 0.281 af, Atten= 1%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.42 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.4 min

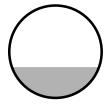
Peak Storage= 32 cf @ 12.08 hrs Average Depth at Peak Storage= 0.66'

Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 17.10 cfs

24.0" Round Pipe n= 0.013

Length= 35.0' Slope= 0.0057 '/'

Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach DCP 1: DCP 1 Achushnet Ave

Inflow Area = 0.989 ac, 58.70% Impervious, Inflow Depth > 0.19" for 25 Year Event event

Inflow = 0.24 cfs @ 12.08 hrs, Volume= 0.016 af

Outflow = 0.24 cfs @ 12.08 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 2: DCP 2 Arnoff Street

Inflow Area = 4.261 ac, 1.83% Impervious, Inflow Depth > 2.64" for 25 Year Event event

Inflow = 10.84 cfs @ 12.21 hrs, Volume= 0.938 af

Outflow = 10.84 cfs @ 12.21 hrs, Volume= 0.938 af, Atten= 0%, Lag= 0.0 min

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Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 3: DCP 3 Wetlands

Inflow Area = 9.590 ac, 1.18% Impervious, Inflow Depth > 2.64" for 25 Year Event event

Inflow = 23.06 cfs @ 12.24 hrs, Volume= 2.110 af

Outflow = 23.06 cfs @ 12.24 hrs, Volume= 2.110 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area =	0.842 ac, 59.99% Impervious, Inflo	ow Depth > 4.01"	for 25 Year Event event
Inflow =	4.04 cfs @ 12.08 hrs, Volume=	0.281 af	
Outflow =	1.02 cfs @ 12.45 hrs, Volume=	0.281 af, Atte	en= 75%, Lag= 22.5 min
Discarded =	1.02 cfs @ 11.85 hrs, Volume=	0.281 af	_
Primary =	0.00 cfs @ 12.45 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 95.92' @ 12.45 hrs Surf.Area= 5,325 sf Storage= 2,764 cf

Plug-Flow detention time= 15.9 min calculated for 0.281 af (100% of inflow) Center-of-Mass det. time= 15.5 min (778.4 - 762.9)

Volume	Invert	Avail.Storage	Storage Description
#1	95.40'	11,746 cf	5
			18,638 cf Overall - 6,891 cf Embedded = 11,746 cf
#2	95.90'	6,891 cf	StormTech SC-740 x 150 Inside #1
			Effective Size= 44.6 "W x 30.0 "H => 6.45 sf x 7.12 'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		18,638 cf	Total Available Storage

Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
5,325	292.0	0	0	5,325
5,325	292.0	18,638	18,638	6,347
	(sq-ft) 5,325	(sq-ft) (feet) 5,325 292.0	(sq-ft) (feet) (cubic-feet) 5,325 292.0 0	(sq-ft) (feet) (cubic-feet) (cubic-feet) 5,325 292.0 0 0

Device	Routing	Invert	Outlet Devices
#1	Primary	95.90'	8.0" Vert. Orifice/Grate C= 0.600
#2	Primary	96.30'	11.0" Vert. Orifice/Grate C= 0.600
#3	Discarded	95.40'	8.270 in/hr Exfiltration over Surface area

Discarded OutFlow Max=1.02 cfs @ 11.85 hrs HW=95.44' (Free Discharge) **3=Exfiltration** (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=0.00 cfs @ 12.45 hrs HW=95.92' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.00 cfs @ 0.47 fps)

-2=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond 2P: RC

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 92.16' @ 12.53 hrs Surf.Area= 371 sf Storage= 400 cf

Plug-Flow detention time= 33.7 min calculated for 0.031 af (100% of inflow) Center-of-Mass det. time= 33.4 min (767.2 - 733.8)

Volume Invert Avail.Storage			Storage Description						
#1	90.0	00' 320 cf		Custom Stage Data (Irregular)Listed below					
#2	91.0	١Ω'	368 cf	800 cf Overall x 4					
#2	31.0	10	300 CI		StormTech SC-740 x 8 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf				
						6'L with 0.44' Overla			
			688 cf	Total Available Storage					
- 1		0 - 1 1	D	Les Otens	0 01	M			
Elevation		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area			
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
90.0	00	200	60.0	0	0	200			
94.0	00	200	60.0	800	800	440			
Dovice	Douting	اما	vort Outl	at Davissa					
<u>Device</u>	Routing	<u> </u>	vert Outle	et Devices					
#1	Primary	93	3.50' 6.0"	Vert. Orifice/Grate	C = 0.600				
#2	Discarde	d 90	.00' 8.270 in/hr Exfiltration over Surface area						

Discarded OutFlow Max=0.08 cfs @ 14.45 hrs HW=91.02' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 100 Year Event Rainfall=6.80"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1B: Bank Roof Runoff Area=3,300 sf 100.00% Impervious Runoff Depth>6.06"

Tc=5.0 min CN=98 Runoff=0.51 cfs 0.038 af

Subcatchment 1E: Existing woods/field Runoff Area=185,628 sf 1.83% Impervious Runoff Depth>3.60"

Flow Length=600' Tc=14.5 min CN=74 Runoff=14.74 cfs 1.279 af

Subcatchment 2B: Bank Parking Lot Runoff Area=36,670 sf 59.99% Impervious Runoff Depth>5.10"

Tc=5.0 min CN=88 Runoff=5.14 cfs 0.358 af

Subcatchment 2E: Existing woods/field Runoff Area=417,719 sf 1.18% Impervious Runoff Depth>3.60"

Flow Length=1,200' Tc=16.7 min CN=74 Runoff=31.37 cfs 2.875 af

Subcatchment 3B: landscape Runoff Area=3,128 sf 0.00% Impervious Runoff Depth>3.61"

Tc=5.0 min CN=74 Runoff=0.33 cfs 0.022 af

Reach 3R: 24" RCP Avg. Flow Depth=0.75' Max Vel=4.71 fps Inflow=5.14 cfs 0.358 af

24.0" Round Pipe n=0.013 L=35.0' S=0.0057 '/' Capacity=17.10 cfs Outflow=5.07 cfs 0.358 af

Reach DCP 1: DCP 1 Achushnet Ave Inflow=0.32 cfs 0.030 af

Outflow=0.32 cfs 0.030 af

Reach DCP 2: DCP 2 Arnoff Street Inflow=14.74 cfs 1.279 af

Outflow=14.74 cfs 1.279 af

Reach DCP 3: DCP 3 Wetlands Inflow=31.37 cfs 2.875 af

Outflow=31.37 cfs 2.875 af

Pond 1P: POND #1 Peak Elev=96.15' Storage=3,989 cf Inflow=5.07 cfs 0.358 af

Discarded=1.02 cfs 0.349 af Primary=0.20 cfs 0.008 af Outflow=1.22 cfs 0.358 af

Pond 2P: RC Peak Elev=92.78' Storage=543 cf Inflow=0.51 cfs 0.038 af

Discarded=0.08 cfs 0.038 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.038 af

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Summary for Subcatchment 1B: Bank Roof

Runoff = 0.51 cfs @ 12.07 hrs, Volume= 0.038 af, Depth> 6.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN I	Description		
*		3,300	98 I	Bank Roof		
		3,300		100.00% Im	npervious A	Area
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry, DIRECT

Summary for Subcatchment 1E: Existing woods/field

Runoff = 14.74 cfs @ 12.20 hrs, Volume= 1.279 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN [Description					
	1	30,145	73 \	/oods, Fair, HSG C					
		49,442	76 \	Voods/gras	s comb., F	air, HSG C			
*		0	74 L	.awn adj. P	hillips				
*		1,290	98 F	Roofs Achu	shnet Ave				
*		0	98 F	Roofs Philli	os Ave wes	st .			
*		0	98 F	Roofs Philli	os Ave Eas	.t			
*		2,651	76 g	grass adj. to	Monson S	St			
*		2,100	98 d	<u>lrive adj. to</u>	Monson st				
	1	85,628	74 \	Veighted A	verage				
	1	82,238	ç	8.17% Per	vious Area				
		3,390	1	.83% Impe	ervious Area	a			
	Tc	Length	Slope	Velocity	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	10.5	50	0.0300	0.08		Sheet Flow, SHEET			
						Woods: Light underbrush n= 0.400 P2= 3.20"			
	4.0	550	0.0200	2.28		Shallow Concentrated Flow, SHALLOW			
						Unpaved Kv= 16.1 fps			
	14.5	600	Total						

Summary for Subcatchment 2B: Bank Parking Lot

Runoff = 5.14 cfs @ 12.07 hrs, Volume= 0.358 af, Depth> 5.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

Type III 24-hr 100 Year Event Rainfall=6.80"

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Α	rea (sf)	CN	Description						
	22,000	98	Paved parking & roofs						
	14,670	74	>75% Grass cover, Good, HSG C						
	36,670	88	Weighted Average						
	14,670		40.01% Pei	vious Area					
	22,000		59.99% Imp	pervious Are	ea				
			•						
Tc	Length	Slope	e Velocity	Capacity	Description				
(min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
- 0					Discot Fater	allina ad			

5.0 Direct Entry, direct

Summary for Subcatchment 2E: Existing woods/field

Runoff = 31.37 cfs @ 12.23 hrs, Volume= 2.875 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN [Description					
	2	83,267	73 \	Woods, Fair, HSG C					
		90,464	76 \	Noods/grass comb., Fair, HSG C					
*		39,058	74 L	Lawn adj. Phillips					
*		0	98 F	Roofs Achu	shnet Ave				
*		2,059	98 F	Roofs Philli	ps Ave wes	st .			
*		2,871	98 F	Roofs Philli	ps Ave Eas	st .			
*		0	76 g	grass adj. to	Monson S	St			
*		0	98	drive adj. to	Monson st				
	4	17,719	74 \	Veighted A	verage				
	4	12,789	Ç	98.82% Pei	vious Area				
		4,930	•	1.18% Impe	ervious Area	a			
	Tc	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	10.5	50	0.0300	0.08		Sheet Flow, SHEET			
						Woods: Light underbrush n= 0.400 P2= 3.20"			
	5.1	700	0.0200	2.28		Shallow Concentrated Flow, SHALLOW			
						Unpaved Kv= 16.1 fps			
	1.1	450	0.0200	6.67	40.03	Channel Flow, CHANNEL			
_						Area= 6.0 sf Perim= 8.0' r= 0.75' n= 0.026			
	16.7	1,200	Total						

Summary for Subcatchment 3B: landscape

Runoff = 0.33 cfs @ 12.08 hrs, Volume= 0.022 af, Depth> 3.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

NORTHSIDE FARM ECON - 5-23-16

Type III 24-hr 100 Year Event Rainfall=6.80"

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	rea (sf)	CN [Description				
	3,128	74 >	>75% Grass cover, Good, HSG C				
	3,128	1	00.00% Pe	ervious Are	ea		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
5.0					Direct Entry, Direct		

Summary for Reach 3R: 24" RCP

Inflow Area = 0.842 ac, 59.99% Impervious, Inflow Depth > 5.10" for 100 Year Event event

Inflow = 5.14 cfs @ 12.07 hrs, Volume= 0.358 af

Outflow = 5.07 cfs @ 12.08 hrs, Volume= 0.358 af, Atten= 1%, Lag= 0.3 min

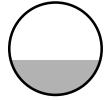
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.71 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.73 fps, Avg. Travel Time= 0.3 min

Peak Storage= 38 cf @ 12.07 hrs Average Depth at Peak Storage= 0.75'

Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 17.10 cfs

24.0" Round Pipe n= 0.013 Length= 35.0' Slope= 0.0057 '/' Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach DCP 1: DCP 1 Achushnet Ave

Inflow Area = 0.989 ac, 58.70% Impervious, Inflow Depth > 0.36" for 100 Year Event event

Inflow = 0.32 cfs @ 12.08 hrs, Volume= 0.030 af

Outflow = 0.32 cfs @ 12.08 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 2: DCP 2 Arnoff Street

Inflow Area = 4.261 ac, 1.83% Impervious, Inflow Depth > 3.60" for 100 Year Event event

Inflow = 14.74 cfs @ 12.20 hrs, Volume= 1.279 af

Outflow = 14.74 cfs @ 12.20 hrs, Volume= 1.279 af, Atten= 0%, Lag= 0.0 min

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Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DCP 3: DCP 3 Wetlands

Inflow Area = 9.590 ac, 1.18% Impervious, Inflow Depth > 3.60" for 100 Year Event event

Inflow = 31.37 cfs @ 12.23 hrs, Volume= 2.875 af

Outflow = 31.37 cfs @ 12.23 hrs, Volume= 2.875 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area =	0.842 ac, 59.99% Impervious, Inflow D	Depth > 5.10" for 100 Year Event event
Inflow =	5.07 cfs @ 12.08 hrs, Volume=	0.358 af
Outflow =	1.22 cfs @ 12.46 hrs, Volume=	0.358 af, Atten= 76%, Lag= 23.1 min
Discarded =	1.02 cfs @ 11.75 hrs, Volume=	0.349 af
Primary =	0.20 cfs @ 12.46 hrs, Volume=	0.008 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 96.15' @ 12.46 hrs Surf.Area= 5,325 sf Storage= 3,989 cf

Plug-Flow detention time= 22.2 min calculated for 0.358 af (100% of inflow) Center-of-Mass det. time= 21.8 min (779.4 - 757.6)

Volume	Invert	Avail.Storage	Storage Description
#1	95.40'	11,746 cf	Custom Stage Data (Irregular)Listed below
			18,638 cf Overall - 6,891 cf Embedded = 11,746 cf
#2	95.90'	6,891 cf	StormTech SC-740 x 150 Inside #1
			Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
			Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		18,638 cf	Total Available Storage
			-

Elevation	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(feet)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
95.40	5,325	292.0	0	0	5,325
98.90	5,325	292.0	18,638	18,638	6,347

Device	Routing	Invert	Outlet Devices
#1	Primary	95.90'	8.0" Vert. Orifice/Grate C= 0.600
#2	Primary	96.30'	11.0" Vert. Orifice/Grate C= 0.600
#3	Discarded	95.40'	8.270 in/hr Exfiltration over Surface area

Discarded OutFlow Max=1.02 cfs @ 11.75 hrs HW=95.44' (Free Discharge) **3=Exfiltration** (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=0.20 cfs @ 12.46 hrs HW=96.15' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.20 cfs @ 1.70 fps)

-2=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Pond 2P: RC

0.076 ac,100.00% Impervious, Inflow	Depth > 6.06" for 100 `	Year Event event
0.51 cfs @ 12.07 hrs, Volume=	0.038 af	
0.08 cfs @ 11.80 hrs, Volume=	0.038 af, Atten= 84%,	Lag= 0.0 min
0.08 cfs @ 11.80 hrs, Volume=	0.038 af	
0.00 cfs @ 5.00 hrs, Volume=	0.000 af	
	0.51 cfs @ 12.07 hrs, Volume= 0.08 cfs @ 11.80 hrs, Volume= 0.08 cfs @ 11.80 hrs, Volume=	0.08 cfs @ 11.80 hrs, Volume= 0.038 af, Atten= 84%, 0.08 cfs @ 11.80 hrs, Volume= 0.038 af

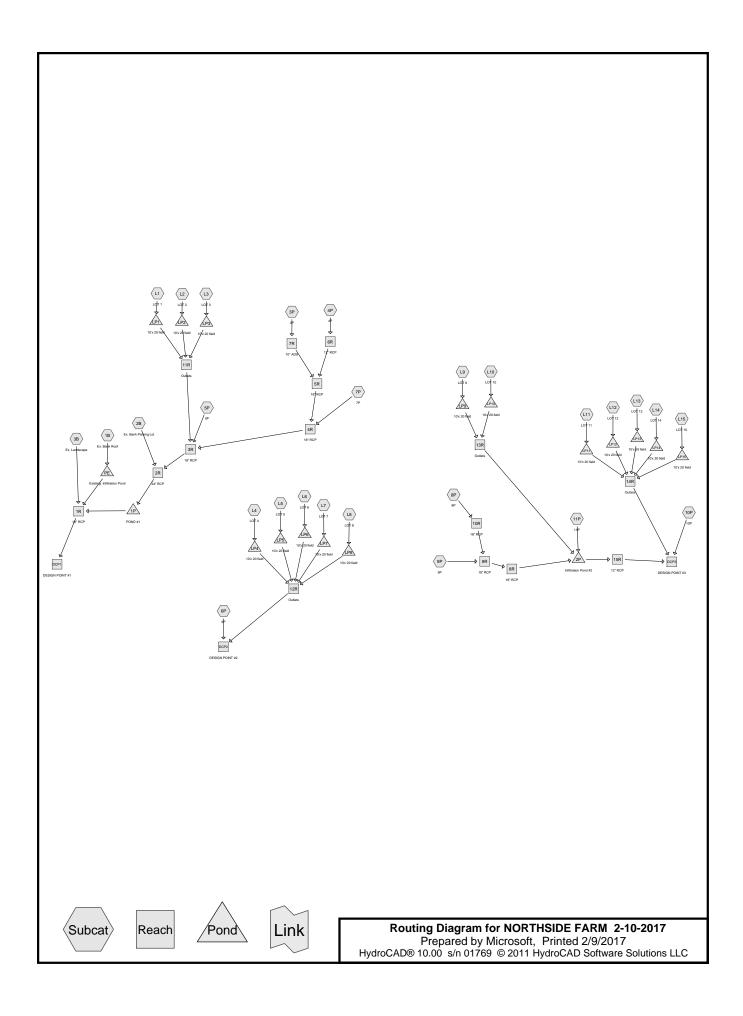
Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 92.78' @ 12.62 hrs Surf.Area= 323 sf Storage= 543 cf

Plug-Flow detention time= 52.5 min calculated for 0.038 af (100% of inflow) Center-of-Mass det. time= 52.0 min (784.9 - 732.9)

Volume	Inve	rt Avai	l.Storage	Storage Description	n			
#1	90.0	0'	320 cf	Custom Stage Data (Irregular)Listed below				
#2	91.0	0'	368 cf	800 cf Overall x 40.0% Voids StormTech SC-740 x 8				
	0110		000 0.			6.45 sf x 7.12'L = 45.	9 cf	
				Overall Size= 51.0	"W x 30.0"H x 7.56	S'L with 0.44' Overlar)	
			688 cf	Total Available Sto	orage			
Elevation	on :	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area		
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)		
90.0	00	200	60.0	0	0	200		
94.0	00	200	60.0	800	800	440		
Device	Routing	lnv	<u>vert Outle</u>	et Devices				
#1	Primary	93	.50' 6.0"	Vert. Orifice/Grate	e C= 0.600			
#2	Discarded	d 90.	.00' 8.27	0 in/hr Exfiltration	over Surface area	1		

Discarded OutFlow Max=0.08 cfs @ 11.80 hrs HW=91.00' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)



Subcatchment L12: LOT 12

Type III 24-hr 2 Year Event Rainfall=3.20"

Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97"

Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf

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Time span=0.00-26.00 hrs, dt=0.05 hrs, 521 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Reach routing by Stor-Ind+Tra	ans method - Pond routing by Stor-Ind method
Subcatchment1B: Ex. Bank Roof	Runoff Area=3,300 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.24 cfs 816 cf
Subcatchment 2B: Ex. Bank Parking Lot	Runoff Area=36,670 sf 59.99% Impervious Runoff Depth=2.00" Tc=5.0 min CN=88 Runoff=1.96 cfs 6,102 cf
Subcatchment3B: Ex. Landscape	Runoff Area=3,128 sf 0.00% Impervious Runoff Depth=1.04" Tc=5.0 min CN=74 Runoff=0.08 cfs 270 cf
Subcatchment 3P: 3P	Runoff Area=28,778 sf 7.13% Impervious Runoff Depth=1.15" Tc=5.0 min CN=76 Runoff=0.87 cfs 2,763 cf
Subcatchment 4P: 4P	Runoff Area=12,451 sf 47.31% Impervious Runoff Depth=1.76" Tc=5.0 min CN=85 Runoff=0.59 cfs 1,824 cf
Subcatchment 5P: 5P Flow Length=200'	Runoff Area=24,485 sf 0.00% Impervious Runoff Depth=1.04" Slope=0.0100 '/' Tc=14.4 min CN=74 Runoff=0.49 cfs 2,117 cf
Subcatchment 6P: 6P Flow Length=440' S	Runoff Area=170,220 sf 0.76% Impervious Runoff Depth=1.04" Slope=0.0200 '/' Tc=15.2 min CN=74 Runoff=3.33 cfs 14,718 cf
Subcatchment 7P: 7P	Runoff Area=20,619 sf 52.80% Impervious Runoff Depth=1.91" Tc=5.0 min CN=87 Runoff=1.06 cfs 3,290 cf
Subcatchment 8P: 8P	Runoff Area=23,809 sf 45.16% Impervious Runoff Depth=1.76" Tc=5.0 min CN=85 Runoff=1.13 cfs 3,487 cf
Subcatchment 9P: 9P	Runoff Area=25,030 sf 54.05% Impervious Runoff Depth=1.91" Tc=5.0 min CN=87 Runoff=1.29 cfs 3,994 cf
Subcatchment 10P: 10P	Runoff Area=226,733 sf 0.90% Impervious Runoff Depth=1.04" ow Length=850' Tc=19.0 min CN=74 Runoff=4.08 cfs 19,604 cf
Subcatchment 11P: 11P Flow Length=300	Runoff Area=48,707 sf 0.00% Impervious Runoff Depth=1.04" Slope=0.0200 '/' Tc=9.8 min CN=74 Runoff=1.12 cfs 4,211 cf
Subcatchment L1: LOT 1	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L10: LOT 10	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L11: LOT 11	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf

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Reach 5R: 18" RCP

Type III 24-hr 2 Year Event Rainfall=3.20"

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Subcatchment L13: LOT 13	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L14: LOT 14	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L15: LOT 15	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L2: LOT 2	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L3: LOT 3	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L4: LOT 4	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L5: LOT 5	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L6: LOT 6	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L7: LOT 7	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L8: LOT 8	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Subcatchment L9: LOT 9	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=2.97" Tc=5.0 min CN=98 Runoff=0.11 cfs 371 cf
Reach 1R: 18" RCP 18.0" Round Pipe n=0.013 L	Avg. Flow Depth=0.08' Max Vel=2.13 fps Inflow=0.08 cfs 270 cf =60.0' S=0.0167 '/' Capacity=13.56 cfs Outflow=0.08 cfs 270 cf
	vg. Flow Depth=0.66' Max Vel=4.80 fps Inflow=4.34 cfs 16,096 cf 0.0' S=0.0067 '/' Capacity=18.47 cfs Outflow=4.32 cfs 16,096 cf
	Avg. Flow Depth=0.58' Max Vel=4.15 fps Inflow=2.64 cfs 9,994 cf =65.0' S=0.0062 '/' Capacity=8.24 cfs Outflow=2.63 cfs 9,994 cf
	Avg. Flow Depth=0.57' Max Vel=3.70 fps Inflow=2.32 cfs 7,877 cf 180.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=2.23 cfs 7,877 cf

Reach 6R: 12" RCPAvg. Flow Depth=0.37' Max Vel=2.17 fps Inflow=0.59 cfs 1,824 cf 12.0" Round Pipe n=0.013 L=190.0' S=0.0030 '/' Capacity=1.95 cfs Outflow=0.55 cfs 1,824 cf

18.0" Round Pipe n=0.013 L=130.0' S=0.0025 '/' Capacity=5.21 cfs Outflow=1.33 cfs 4,586 cf

Avg. Flow Depth=0.53' Max Vel=2.49 fps Inflow=1.40 cfs 4,586 cf

Reach 7R: 10" ADS Avg. Flow Depth=0.23' Max Vel=7.06 fps Inflow=0.87 cfs 2,763 cf 10.0" Round Pipe n=0.010 L=95.0' S=0.0334 '/' Capacity=5.20 cfs Outflow=0.86 cfs 2,763 cf

Type III 24-hr 2 Year Event Rainfall=3.20"

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Reach 8R: 18" RCP Avg. Flow Depth=0.53' Max Vel=4.08 fps Inflow=2.27 cfs 7,481 cf

18.0" Round Pipe n=0.013 L=30.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=2.26 cfs 7,481 cf

Reach 9R: 18" RCP Avg. Flow Depth=0.58' Max Vel=3.74 fps Inflow=2.40 cfs 7,481 cf

18.0" Round Pipe n=0.013 L=280.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=2.27 cfs 7,481 cf

Reach 10R: 18" RCPAvg. Flow Depth=0.37' Max Vel=3.35 fps Inflow=1.13 cfs 3,487 cf

18.0" Round Pipe n=0.013 L=60.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=1.12 cfs 3,487 cf

Reach 11R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 12R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 13R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 14R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 15R: 12" RCPAvg. Flow Depth=0.24' Max Vel=4.88 fps Inflow=0.70 cfs 2,737 cf

12.0" Round Pipe n=0.013 L=20.0' S=0.0250 '/' Capacity=5.63 cfs Outflow=0.70 cfs 2,737 cf

Reach DCP1: DESIGN POINT #1 Inflow=0.08 cfs 270 cf

Outflow=0.08 cfs 270 cf

Reach DCP2: DESIGN POINT #2 Inflow=3.33 cfs 14,718 cf

Outflow=3.33 cfs 14,718 cf

Reach DCP3: DESIGN POINT #3 Inflow=4.75 cfs 22,341 cf

Outflow=4.75 cfs 22,341 cf

Pond 1P: POND #1 Peak Elev=96.55' Storage=3,930 cf Inflow=4.32 cfs 16,096 cf

Discarded=1.02 cfs 16,096 cf Primary=0.00 cfs 0 cf Outflow=1.02 cfs 16,096 cf

Pond 2P: Infiltration Pond #2 Peak Elev=93.29' Storage=2,338 cf Inflow=3.34 cfs 11,693 cf

Discarded=0.66 cfs 8,956 cf Primary=0.70 cfs 2,737 cf Outflow=1.35 cfs 11,693 cf

Pond LP1: 10'x 20 field Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf

Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf

Pond LP10: 10'x 20 field Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf

Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf

Pond LP11: 10'x 20 field Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf

Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf

Pond LP12: 10'x 20 field Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf

Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf

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Pond PE: Existing Infiltration Pond

Type III 24-hr 2 Year Event Rainfall=3.20"

Peak Elev=91.26' Storage=156 cf Inflow=0.24 cfs 816 cf

Discarded=0.08 cfs 816 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 816 cf

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Pond LP13: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP14: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP15: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP2: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP3: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP4: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP5: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP6: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP7: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP8: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf
Pond LP9: 10'x 20 field	Peak Elev=80.51' Storage=42 cf Inflow=0.11 cfs 371 cf Discarded=0.04 cfs 371 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 371 cf

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Summary for Subcatchment 1B: Ex. Bank Roof

Runoff 0.24 cfs @ 12.07 hrs, Volume= 816 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN	Description			
*		3,300	98	Bank Roof			
		3,300	100.00% Impervious Area				
	Tc	Length	Slope	Velocity	Capacity	Description	
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)		
	5.0					Direct Entry, DIRECT	

Summary for Subcatchment 2B: Ex. Bank Parking Lot

1.96 cfs @ 12.08 hrs, Volume= Runoff 6,102 cf, Depth= 2.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

A	rea (sf)	CN	Description					
	22,000	98	Paved park	Paved parking & roofs				
	14,670	74	>75% Ġras	s cover, Go	ood, HSG C			
	36,670	88	B Weighted Average					
	14,670		40.01% Pei	vious Area				
	22,000		59.99% lmp	pervious Ar	ea			
_		0.1						
Tc	Length	Slope	,	Capacity	Description			
(min)	(feet)	(ft/ft	(ft/sec)	(cfs)				
5.0					Direct Entry, direct			

Direct Entry, direct

Summary for Subcatchment 3B: Ex. Landscape

Runoff 0.08 cfs @ 12.09 hrs, Volume= 270 cf, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	A	rea (sf)	CN [Description					
		3,128	74 >	>75% Grass cover, Good, HSG C					
		3,128	1	100.00% Pervious Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
_	5.0	•	•			Direct Entry, Direct			

Direct Entry, Direct

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Summary for Subcatchment 3P: 3P

Runoff 0.87 cfs @ 12.08 hrs, Volume= 2,763 cf, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Area (sf)	CN	Description				
*	2,051	98	Exisitng hou	ses			
	26,727	74	>75% Grass	cover, Go	ood, HSG C		
*	0	98	Roadway				
*	0	98	Sidewalks				
	28,778	8,778 76 Weighted Average					
	26,727		92.87% Pervious Area				
	2,051		7.13% Impe	rvious Area	a		
	Tc Length		•	Capacity	Description		
	(min) (feet)	(ft/	ft) (ft/sec)	(cfs)			
	5.0				Direct Entry, Direct		

Summary for Subcatchment 4P: 4P

0.59 cfs @ 12.08 hrs, Volume= Runoff 1,824 cf, Depth= 1.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN	Description							
		6,560	74	>75% Gras	75% Grass cover, Good, HSG C						
*		5,891	98	Roadway &	Sidewalks	S					
		12,451	85	Weighted A	Veighted Average						
		6,560		52.69% Pervious Area							
		5,891		47.31% lmp	pervious Ar	rea					
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description					
-	5.0	(.001)	(1010	, (.3000)	(010)	Direct Entry, Direct					

Direct Entry, Direct

Summary for Subcatchment 5P: 5P

0.49 cfs @ 12.22 hrs, Volume= 2,117 cf, Depth= 1.04" Runoff

 Area (sf)	CN	Description
24,485	74	>75% Grass cover, Good, HSG C
24,485		100.00% Pervious Area

Type III 24-hr 2 Year Event Rainfall=3.20"

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	10.8	50	0.0100	0.08		Sheet Flow, sheet flow
						Grass: Dense n= 0.240 P2= 3.20"
	3.6	150	0.0100	0.70		Shallow Concentrated Flow, Channel flow Short Grass Pasture Kv= 7.0 fps
-	14.4	200	Total			Officit Grass Fastare Tive 7.0 fps

Summary for Subcatchment 6P: 6P

Runoff = 3.33 cfs @ 12.23 hrs, Volume= 14,718 cf, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN E	Description					
*		1,290	98 E	98 Exisitng houses					
		87,260	74 >	75% Gras	s cover, Go	ood, HSG C			
		81,670	73 V	Voods, Fai	r, HSG C				
	1	70,220	74 V	Veighted A	verage				
	1	68,930	g	9.24% Pei	vious Area				
		1,290	C	.76% Impe	ervious Are	a			
	Tc	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	12.3	50	0.0200	0.07		Sheet Flow, sheet flow			
						Woods: Light underbrush n= 0.400 P2= 3.20"			
	2.9	390	0.0200	2.28		Shallow Concentrated Flow, shallow			
						Unpaved Kv= 16.1 fps			
	15.2	440	Total		·				

Summary for Subcatchment 7P: 7P

Runoff = 1.06 cfs @ 12.08 hrs, Volume= 3,290 cf, Depth= 1.91"

	Area (sf)	CN	Description				
*	0	98	Exisitng houses				
	9,732	74	>75% Grass cover, Good, HSG C				
*	5,787	98	Roadway				
*	5,100	98	Sidewalks & Drives				
	20,619	87	Weighted Average				
	9,732		47.20% Pervious Area				
	10,887		52.80% Impervious Area				

Type III 24-hr 2 Year Event Rainfall=3.20"

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Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0 **Direct Entry, Direct**

Summary for Subcatchment 8P: 8P

Runoff 1.13 cfs @ 12.08 hrs, Volume= 3,487 cf. Depth= 1.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN	Description				
		13,057	74	>75% Gras	s cover, Go	ood, HSG C		
*		5,722	98	Roadway				
*		3,790	98	Drives				
*		1,240	98	Sidewalks				
		23,809	85	35 Weighted Average				
		13,057		54.84% Per	vious Area	a e e e e e e e e e e e e e e e e e e e		
		10,752		45.16% Imp	ervious Ar	rea		
	Tc	Length	Slop	e Velocity	Capacity	Description		
_	(min)	(feet)	(ft/f	(ft/sec)	(cfs)			
	5.0					Direct Entry, Direct		

Direct Entry, Direct

Summary for Subcatchment 9P: 9P

1.29 cfs @ 12.08 hrs, Volume= 3,994 cf. Depth= 1.91" Runoff

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Area	(sf)	CN	Description						
	11,	501	74	>75% Grass cover, Good, HSG C						
*	8,	588	98	Roadway						
*	3,	970	98	Drives						
*		971	98	Sidewalks						
	25,	030	87	Weighted Average						
	11,	501		45.95% Pervious Area						
	13,	529		54.05% Impervious Area						
	Tc Le	ength	Slope	Velocity	Capacity	Description				
(n	nin) ((feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry, Direct				

Summary for Subcatchment 10P: 10P

Runoff 4.08 cfs @ 12.29 hrs, Volume= 19,604 cf, Depth= 1.04"

Type III 24-hr 2 Year Event Rainfall=3.20"

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_	Α	rea (sf)	CN D	Description				
*		2,032 98 Exisitng houses						
		83,173	74 >	75% Ğras	s cover, Go	ood, HSG C		
	141,528 73 Woods, Fair, HSG C							
	2	26,733	74 V	Veighted A	verage			
		24,701			vious Area			
		2,032	0	.90% Impe	ervious Area	a		
	,oo							
	Tc	Length	Slope	Velocity	Capacity	Description		
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·		
	7.4	50	0.0100	0.11		Sheet Flow, Sheet		
						Grass: Short n= 0.150 P2= 3.20"		
	10.1	430	0.0200	0.71		Shallow Concentrated Flow, Shallow		
						Woodland Kv= 5.0 fps		
	1.5	370	0.0100	4.09	24.53	Channel Flow, River Flow		
						Area= 6.0 sf Perim= 8.0' r= 0.75'		
						n= 0.030 Earth, grassed & winding		
	19.0	850	Total		-			

Summary for Subcatchment 11P: 11P

Runoff = 1.12 cfs @ 12.15 hrs, Volume= 4,211 cf, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN E	Description		
*		48,707	74 g	rass		
	48,707 100.00% Pervious Are					a
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.6	50	0.0200	0.15		Sheet Flow, Sheet
_	4.2	250	0.0200	0.99		Grass: Short n= 0.150 P2= 3.20" Shallow Concentrated Flow, shallow Short Grass Pasture Kv= 7.0 fps
	9.8	300	Total		-	·

Summary for Subcatchment L1: LOT 1

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 371 cf, Depth= 2.97"

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_	Α	rea (sf)	CN [Description						
*	•	1,500	98							
_		1,500	1	100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
-	5.0	(100t)	(10/10)	(10300)	(013)	Direct Entry,				

Summary for Subcatchment L10: LOT 10

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN [Description						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
	Тс	Length	Slope	Velocity	Capacity	Description				
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

Summary for Subcatchment L11: LOT 11

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
		Length	Slope	•		Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry

Summary for Subcatchment L12: LOT 12

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

	Area (sf)	CN	Description	
*	1,500	98		
	1,500		100.00% Impervious Area	

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	Tc	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
_						

5.0 Direct Entry,

Summary for Subcatchment L13: LOT 13

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN [Description					
*		1,500	98						
		1,500	100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
_	5.0	(1001)	(10/10)	(10000)	(010)	Direct Entry,			

Summary for Subcatchment L14: LOT 14

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN I	Description					
*		1,500	98						
_		1,500	100.00% Impervious Area						
	Tc	Length	Slope	Velocity	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry,			

Summary for Subcatchment L15: LOT 15

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 371 cf, Depth= 2.97"

	Α	rea (sf)	CN [Description						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
		Length	Slope	•		Description				
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

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Summary for Subcatchment L2: LOT 2

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN	Description						
*		1,500	98							
		1,500	,	100.00% Impervious Area						
	Тс	Length	Slope	•	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

Summary for Subcatchment L3: LOT 3

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	A	rea (sf)	CN D	Description		
*		1,500	98			
		1,500	1	00.00% Im	pervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0	•	•	· ·	•	Direct Entry,

Summary for Subcatchment L4: LOT 4

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

_	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500		100.00% Im	npervious A	Area
		Length	Slope	,	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

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Summary for Subcatchment L5: LOT 5

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	•	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L6: LOT 6

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	rea
	Tc	Length	Slope	,	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L7: LOT 7

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
		Length	Slope	•	. ,	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Type III 24-hr 2 Year Event Rainfall=3.20"

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Summary for Subcatchment L8: LOT 8

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	•	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L9: LOT 9

Runoff = 0.11 cfs @ 12.07 hrs, Volume=

371 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 2 Year Event Rainfall=3.20"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc	-	Slope		Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Reach 1R: 18" RCP

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 0.02" for 2 Year Event event

Inflow = 0.08 cfs @ 12.09 hrs, Volume= 270 cf

Outflow = 0.08 cfs @ 12.10 hrs, Volume= 270 cf, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.13 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 0.85 fps, Avg. Travel Time= 1.2 min

Peak Storage= 2 cf @ 12.09 hrs

Average Depth at Peak Storage= 0.08'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.56 cfs

18.0" Round Pipe

n = 0.013

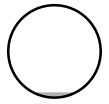
Length= 60.0' Slope= 0.0167 '/'

Inlet Invert= 94.00', Outlet Invert= 93.00'

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Summary for Reach 2R: 24" RCP

127,503 sf, 35.55% Impervious, Inflow Depth = 1.51" for 2 Year Event event Inflow Area =

4.34 cfs @ 12.11 hrs. Volume= Inflow 16,096 cf

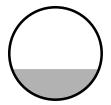
4.32 cfs @ 12.11 hrs, Volume= Outflow 16,096 cf, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.80 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.67 fps, Avg. Travel Time= 0.3 min

Peak Storage= 27 cf @ 12.11 hrs Average Depth at Peak Storage= 0.66' Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.47 cfs

24.0" Round Pipe n = 0.013Length= 30.0' Slope= 0.0067 '/' Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach 3R: 18" RCP

Inflow Area = 90,833 sf, 25.68% Impervious, Inflow Depth = 1.32" for 2 Year Event event

Inflow 2.64 cfs @ 12.14 hrs, Volume= 9,994 cf

Outflow 2.63 cfs @ 12.15 hrs, Volume= 9,994 cf, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.15 fps, Min. Travel Time= 0.3 min Avg. Velocity = 1.47 fps, Avg. Travel Time= 0.7 min

Peak Storage= 41 cf @ 12.14 hrs Average Depth at Peak Storage= 0.58'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.24 cfs

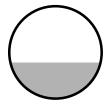
18.0" Round Pipe n = 0.013Length= 65.0' Slope= 0.0062 '/'

Inlet Invert= 96.10', Outlet Invert= 95.70'

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Summary for Reach 4R: 18" RCP

Inflow Area = 61,848 sf, 30.44% Impervious, Inflow Depth = 1.53" for 2 Year Event event

2.32 cfs @ 12.10 hrs, Volume= Inflow 7,877 cf

2.23 cfs @ 12.13 hrs, Volume= Outflow 7,877 cf, Atten= 4%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.70 fps, Min. Travel Time= 0.8 min Avg. Velocity = 1.27 fps, Avg. Travel Time= 2.4 min

Peak Storage= 112 cf @ 12.11 hrs Average Depth at Peak Storage= 0.57'

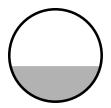
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe

n = 0.013

Length= 180.0' Slope= 0.0050 '/'

Inlet Invert= 97.00', Outlet Invert= 96.10'



Summary for Reach 5R: 18" RCP

Inflow Area = 41,229 sf, 19.26% Impervious, Inflow Depth = 1.33" for 2 Year Event event

Inflow 1.40 cfs @ 12.10 hrs, Volume= 4,586 cf

Outflow 1.33 cfs @ 12.13 hrs, Volume= 4,586 cf, Atten= 5%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.49 fps, Min. Travel Time= 0.9 min Avg. Velocity = 0.86 fps, Avg. Travel Time= 2.5 min

Peak Storage= 72 cf @ 12.11 hrs Average Depth at Peak Storage= 0.53'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.21 cfs

18.0" Round Pipe

n = 0.013

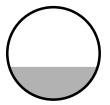
Length= 130.0' Slope= 0.0025 '/'

Inlet Invert= 97.32', Outlet Invert= 97.00'

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Summary for Reach 6R: 12" RCP

Inflow Area = 12,451 sf, 47.31% Impervious, Inflow Depth = 1.76" for 2 Year Event event

Inflow = 0.59 cfs @ 12.08 hrs, Volume= 1,824 cf

Outflow = 0.55 cfs @ 12.12 hrs, Volume= 1,824 cf, Atten= 6%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.17 fps, Min. Travel Time= 1.5 min Avg. Velocity = 0.75 fps, Avg. Travel Time= 4.2 min

Peak Storage= 51 cf @ 12.10 hrs Average Depth at Peak Storage= 0.37'

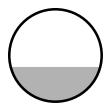
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 1.95 cfs

12.0" Round Pipe

n = 0.013

Length= 190.0' Slope= 0.0030 '/'

Inlet Invert= 97.90', Outlet Invert= 97.33'



Summary for Reach 7R: 10" ADS

Inflow Area = 28,778 sf, 7.13% Impervious, Inflow Depth = 1.15" for 2 Year Event event

Inflow = 0.87 cfs @ 12.08 hrs, Volume= 2.763 cf

Outflow = 0.86 cfs @ 12.09 hrs, Volume= 2,763 cf, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 7.06 fps, Min. Travel Time= 0.2 min Avg. Velocity = 2.69 fps, Avg. Travel Time= 0.6 min

Peak Storage= 12 cf @ 12.09 hrs Average Depth at Peak Storage= 0.23'

Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 5.20 cfs

10.0" Round Pipe

n= 0.010 PVC, smooth interior

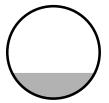
Length= 95.0' Slope= 0.0334 '/'

Inlet Invert= 100.50', Outlet Invert= 97.33'

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Summary for Reach 8R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 1.84" for 2 Year Event event

Inflow = 2.27 cfs @ 12.12 hrs, Volume= 7,481 cf

Outflow = 2.26 cfs @ 12.12 hrs, Volume= 7,481 cf, Atten= 1%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

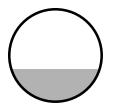
Max. Velocity= 4.08 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.40 fps, Avg. Travel Time= 0.4 min

Peak Storage= 17 cf @ 12.12 hrs Average Depth at Peak Storage= 0.53'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe n= 0.013 Length= 30.0' Slope= 0.0067 '/'

Inlet Invert= 92.90', Outlet Invert= 92.70'



Summary for Reach 9R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 1.84" for 2 Year Event event

Inflow = 2.40 cfs @ 12.08 hrs, Volume= 7,481 cf

Outflow = 2.27 cfs @ 12.12 hrs, Volume= 7,481 cf, Atten= 5%, Lag= 2.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.74 fps, Min. Travel Time= 1.2 min Avg. Velocity = 1.27 fps, Avg. Travel Time= 3.7 min

Peak Storage= 178 cf @ 12.10 hrs Average Depth at Peak Storage= 0.58'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe

n = 0.013

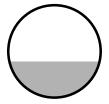
Length= 280.0' Slope= 0.0050 '/'

Inlet Invert= 94.30', Outlet Invert= 92.90'

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Summary for Reach 10R: 18" RCP

Inflow Area = 23,809 sf, 45.16% Impervious, Inflow Depth = 1.76" for 2 Year Event event

Inflow = 1.13 cfs @ 12.08 hrs, Volume= 3,487 cf

Outflow = 1.12 cfs @ 12.09 hrs, Volume= 3,487 cf, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.35 fps, Min. Travel Time= 0.3 min Avg. Velocity = 1.18 fps, Avg. Travel Time= 0.9 min

Peak Storage= 20 cf @ 12.08 hrs Average Depth at Peak Storage= 0.37'

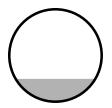
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe

n = 0.013

Length= 60.0' Slope= 0.0067 '/'

Inlet Invert= 94.70', Outlet Invert= 94.30'



Summary for Reach 11R: Outlets

Inflow Area = 4,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 2 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs. Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 2 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Type III 24-hr 2 Year Event Rainfall=3.20"

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Summary for Reach 13R: Outlets

Inflow Area = 3,000 sf,100.00% Impervious, Inflow Depth = 0.00" for 2 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs. Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 14R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 2 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 15R: 12" RCP

Inflow Area = 100,546 sf, 27.13% Impervious, Inflow Depth = 0.33" for 2 Year Event event

Inflow = 0.70 cfs @ 12.43 hrs, Volume= 2,737 cf

Outflow = 0.70 cfs @ 12.44 hrs, Volume= 2,737 cf, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.88 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 1.09 fps, Avg. Travel Time= 0.3 min

Peak Storage= 3 cf @ 12.44 hrs

Average Depth at Peak Storage= 0.24'

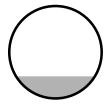
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.63 cfs

12.0" Round Pipe

n = 0.013

Length= 20.0' Slope= 0.0250 '/'

Inlet Invert= 92.50', Outlet Invert= 92.00'



Summary for Reach DCP1: DESIGN POINT #1

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 0.02" for 2 Year Event event

Inflow = 0.08 cfs @ 12.10 hrs, Volume= 270 cf

Outflow = 0.08 cfs @ 12.10 hrs, Volume= 270 cf, Atten= 0%, Lag= 0.0 min

Type III 24-hr 2 Year Event Rainfall=3.20"

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Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP2: DESIGN POINT #2

Inflow Area = 177,720 sf, 4.95% Impervious, Inflow Depth = 0.99" for 2 Year Event event

Inflow = 3.33 cfs @ 12.23 hrs, Volume= 14,718 cf

Outflow = 3.33 cfs @ 12.23 hrs, Volume= 14,718 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP3: DESIGN POINT #3

Inflow Area = 334,779 sf, 11.00% Impervious, Inflow Depth = 0.80" for 2 Year Event event

Inflow = 4.75 cfs @ 12.29 hrs, Volume= 22,341 cf

Outflow = 4.75 cfs @ 12.29 hrs, Volume= 22,341 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 1.51" for 2 Year Event event

Inflow = 4.32 cfs @ 12.11 hrs, Volume= 16,096 cf

Outflow = 1.02 cfs @ 11.85 hrs, Volume= 16,096 cf, Atten= 76%, Lag= 0.0 min

Discarded = 1.02 cfs @ 11.85 hrs, Volume= 16,096 cf Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 96.55' @ 12.61 hrs Surf.Area= 5,325 sf Storage= 3,930 cf

Plug-Flow detention time= 23.1 min calculated for 16,096 cf (100% of inflow)

Center-of-Mass det. time= 23.1 min (856.8 - 833.7)

Volume	Invert Ava	ail.Storage	Storage Description	on				
#1	95.40'	4,699 cf	Custom Stage Da					
#2	95.90'	6,891 cf	•	18,638 cf Overall - 6,891 cf Embedded = 11,746 cf x 40.0% Voids				
π2	95.90	0,031 61		StormTech SC-740 x 150 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf				
			Overall Size= 51.0	"W x 30.0"H x 7.5	6'L with 0.44' Ove	rlap		
		11,590 cf	Total Available Sto	orage				
Floretion	Curf Araa	Dorim	Ina Ctara	Cum Store	Mot Aros			
Elevation	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area			
(feet)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
95.40	5,325	292.0	0	0	5,325			
98.90	5,325	292.0	18,638	18,638	6,347			
Device Ro	Device Routing Invert Outlet Devices							

Device	Routing	invert	Outlet Devices
#1	Discarded	95.40'	8.270 in/hr Exfiltration over Surface area
#2	Primary	96.60'	1.3' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
			5.0' Crest Height

Volume

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Discarded OutFlow Max=1.02 cfs @ 11.85 hrs HW=95.44' (Free Discharge) 1=Exfiltration (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=95.40' (Free Discharge) 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2P: Infiltration Pond #2

Inflow Area =	100,546 sf, 27.13% Impervious,	Inflow Depth = 1.40" for 2 Year Event event
Inflow =	3.34 cfs @ 12.13 hrs, Volume=	11,693 cf
Outflow =	1.35 cfs @ 12.43 hrs, Volume=	11,693 cf, Atten= 59%, Lag= 18.1 min
Discarded =	0.66 cfs @ 12.43 hrs, Volume=	8,956 cf
Primary =	0.70 cfs @ 12.43 hrs, Volume=	2,737 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 93.29' @ 12.43 hrs Surf.Area= 3,401 sf Storage= 2,338 cf

Plug-Flow detention time= 13.8 min calculated for 11,670 cf (100% of inflow)

Avail.Storage Storage Description

Center-of-Mass det. time= 13.8 min (854.0 - 840.1)

Invert

VOIGITIO	11110	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	. Otorago	Ctorage Becomptic	7 111		
#1	92.5	0' 1	9,107 cf	Custom Stage Da	ata (Irregular)Liste	d below	
Elevation (fee		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
92.	50	2,105	235.0	0	0	2,105	
93.0	00	2,850	255.0	1,234	1,234	2,894	
94.0	00	4,720	306.0	3,746	4,980	5,188	
95.0	00	7,025	360.0	5,834	10,814	8,070	
96.0	00	9,629	412.0	8,293	19,107	11,287	
Device	Routing	Inv	ert Outle	et Devices			
#1	Primary	94.	80' 2.0' I	ong Sharp-Creste	d Rectangular We	eir 2 End Contraction(s)
			3.0' (Crest Height			
#2	Primary	92.	50' 6.0"	Vert. Orifice/Grate	C = 0.600		
#3	Discarde	d 92.	_	0 in/hr Exfiltration			
			Cond	ductivity to Ground	water Elevation = 0	.00'	

Discarded OutFlow Max=0.66 cfs @ 12.43 hrs HW=93.29' (Free Discharge) **3=Exfiltration** (Controls 0.66 cfs)

Primary OutFlow Max=0.70 cfs @ 12.43 hrs HW=93.29' (Free Discharge)

1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

—2=Orifice/Grate (Orifice Controls 0.70 cfs @ 3.55 fps)

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Summary for Pond LP1: 10'x 20 field

1,500 sf,100.00% Impervious,	Inflow Depth = 2.97"	for 2 Year Event event
0.11 cfs @ 12.07 hrs, Volume=	371 cf	
0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten	= 59%, Lag= 11.8 min
0.04 cfs @ 12.27 hrs, Volume=	371 cf	-
0.00 cfs @ 0.00 hrs, Volume=	0 cf	
	0.11 cfs @ 12.07 hrs, Volume= 0.04 cfs @ 12.27 hrs, Volume= 0.04 cfs @ 12.27 hrs, Volume=	0.04 cfs @ 12.27 hrs, Volume= 371 cf, Atten 0.04 cfs @ 12.27 hrs, Volume= 371 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	rt Avail	.Storage	Storage Descriptio	n		
#1	80.00	0'	178 cf	Custom Stage Da			
#2	80.50	า'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		14 cf x 40.0% Voids	
#2	00.50	J	30 CI			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0	"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Clayatia	.n. (Curf Araa	Dorim	Ina Ctara	Cum Store	Mot Aroo	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	ετ)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
D	D	1.		of Day land			
Device	Routing	Inv	<u>ert Outle</u>	et Devices			
#1	Primary	82.	40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
			Limit	ted to weir flow at lo	w heads		
#2	Discarded	d 80.	00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP10: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

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Volume	Inve	ert Avai	I.Storage	Storage Description	n		
#1	80.0	00'	178 cf	Custom Stage Da			
#2	80.5	:0'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
#2	00.0	00	30 CI			.86 sf x 7.50'L = 14.0 cf	
					_	'L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
Elevatio	n.	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0		200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
							—
#1	Primary	82		Horiz. Orifice/Grate			
			Limit	nited to weir flow at low heads			
#2	Discarde	d 80	.00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP11: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Volume	Invert	Avail.Storage	Storage Descript	ion		
#1	80.00'	178 c			ted below (Recalc)	
			500 cf Overall - 5	66 cf Embedded =	444 cf x 40.0% Void	ds
#2	80.50'	56 c	Cultec C-100 x 4	1 Inside #1		
			Effective Size= 3	2.1"W x 12.0"H =:	> 1.86 sf x 7.50 L = 1	4.0 cf
			Overall Size= 36	.0"W x 12.5"H x 8.	00'L with 0.50' Overl	ар
		234 c	Total Available S	torage		_
Elevation	Surf.	Area Perim	. Inc.Store	Cum.Store	Wet.Area	
(feet)	(9	sq-ft) (feet) (cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200 60.	0	0	200	
82.50		200 60.	500	500	350	

Type III 24-hr 2 Year Event Rainfall=3.20"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP12: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	ert Avail	l.Storage	Storage Descriptio	n	
#1	80.0	0'	178 cf	Custom Stage Da		
" 0	00.5	01	50 · (4 cf x 40.0% Voids
#2	80.5	0	56 cf	Cultec C-100 x 4		.86 sf x 7.50'L = 14.0 cf
					_	'L with 0.50' Overlap
			234 cf	Total Available Sto		
					-	
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
ъ .	D (;					
Device	Routing	In۱	<u>/ert Outle</u>	et Devices		
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grat	e C= 0.600	
#2	Discarde	4 90		ed to weir flow at lo		
#2	Discarde	u 80.	.00 0.27	U III/III EXIIITIATION	over wetted area	

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond LP13: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	rt Avail	.Storage	Storage Descriptio	n		
#1	80.00	0'	178 cf	Custom Stage Da			
#2	80.50	า'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		14 cf x 40.0% Voids	
#2	00.50	J	30 CI			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0	"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Clayatia	.n. (Curf Araa	Dorim	Ina Ctara	Cum Store	Mot Aroo	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	ετ)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
D	D	1.		of Day land			
Device	Routing	Inv	<u>ert Outle</u>	et Devices			
#1	Primary	82.	40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
			Limit	ted to weir flow at lo	w heads		
#2	Discarded	d 80.	00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP14: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

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Volume	Inv	ert Ava	il.Storage	Storage Description	on		
#1	80.0	00'	178 cf	Custom Stage Da			
#2	80.8	50'	56 cf	Cultec C-100 x 4 Effective Size= 32	Inside #1 .1"W x 12.0"H => 1	44 cf x 40.0% Voids 1.86 sf x 7.50'L = 14.0 cf	f
				Overall Size= 36.0)"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82	2.40' 6.0"	Horiz. Orifice/Gra	te C= 0.600		
#2	Discarde	ed 80		ted to weir flow at lo o in/hr Exfiltration		1	

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP15: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Volume	Invert	Avail.Stora	age	Storage Description	on		
#1	80.00'	17	3 cf			ted below (Recalc)	
						444 cf x 40.0% Voi	ds
#2	80.50'	5	3 cf	Cultec C-100 x 4	Inside #1		
				Effective Size= 32	2.1"W x 12.0"H =>	> 1.86 sf x 7.50'L = 1	14.0 cf
				Overall Size= 36.0)"W x 12.5"H x 8.	00'L with 0.50' Over	lap
		23	4 cf	Total Available St	orage		
Elevation	Surf.	Area Pe	rim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(:	sq-ft) (f	eet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	
82 50		200	30.0	500	500	350	

Type III 24-hr 2 Year Event Rainfall=3.20"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP2: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	ert Avai	I.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)			
				500 cf Overall - 56 cf Embedded = $444 \text{ cf } \times 40.0\% \text{ Voids}$			
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 EOU 44.0 or	<u>r</u>
					_	.86 sf x 7.50'L = 14.0 c 'L with 0.50' Overlap	I
			22.4 of			L WILLI 0.50 Overlap	
			234 cf	Total Available Sto	rage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	d 80		ed to weir flow at lo o in/hr Exfiltration			

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond LP3: 10'x 20 field

1,500 sf,100.00% Impervious,	Inflow Depth = 2.97"	for 2 Year Event event
0.11 cfs @ 12.07 hrs, Volume=	371 cf	
0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten	= 59%, Lag= 11.8 min
0.04 cfs @ 12.27 hrs, Volume=	371 cf	-
0.00 cfs @ 0.00 hrs, Volume=	0 cf	
	0.11 cfs @ 12.07 hrs, Volume= 0.04 cfs @ 12.27 hrs, Volume= 0.04 cfs @ 12.27 hrs, Volume=	0.04 cfs @ 12.27 hrs, Volume= 371 cf, Atten 0.04 cfs @ 12.27 hrs, Volume= 371 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	rt Avail	.Storage	Storage Descriptio	n		
#1	80.00	0'	178 cf	Custom Stage Da			
#2	80.50	า'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		14 cf x 40.0% Voids	
#2	00.50	J	30 CI			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0	"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Clayatia	.n. (Curf Araa	Dorim	Ina Ctara	Cum Store	Mot Aroo	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	ετ)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
D	D	1.		of Day land			
Device	Routing	Inv	<u>ert Outle</u>	et Devices			
#1	Primary	82.	40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
			Limit	ted to weir flow at lo	w heads		
#2	Discarded	d 80.	00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP4: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

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Volume	Inv	ert Ava	il.Storage	Storage Description	on		
#1	80.0	00'	178 cf	Custom Stage Da			
#2	80.8	50'	56 cf	Cultec C-100 x 4 Effective Size= 32	Inside #1 .1"W x 12.0"H => 1	44 cf x 40.0% Voids 1.86 sf x 7.50'L = 14.0 cf	f
				Overall Size= 36.0)"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82	2.40' 6.0"	Horiz. Orifice/Gra	te C= 0.600		
#2	Discarde	ed 80		ted to weir flow at lo o in/hr Exfiltration		1	

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP5: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Volume	Invert	Avail.Storag	e Storage Descrip	tion		
#1	80.00'	178 (f Custom Stage	Data (Irregular)Lis	ted below (Recalc)	
			500 cf Overall -	56 cf Embedded =	444 cf x 40.0% Vo	ids
#2	80.50'	56 d				
					> 1.86 sf x 7.50'L =	
			Overall Size= 36	5.0"W x 12.5"H x 8.	.00'L with 0.50' Ove	rlap
		234 (f Total Available S	Storage		
Elevation	Surf.	.Area Perir	n. Inc.Store	Cum.Store	Wet.Area	
(feet)		sq-ft) (fee	t) (cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200 60	.0 0	0	200	
82.50		200 60	.0 500	500	350	

Type III 24-hr 2 Year Event Rainfall=3.20"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP6: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	ert Avail	l.Storage	Storage Descriptio	n	
#1	80.0	0'	178 cf			
" 0	00.5	01	50 · (500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids		
#2	80.5	0	56 cf	cf Cultec C-100 x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf		
					_	'L with 0.50' Overlap
			234 cf	Total Available Sto		
					-	
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
ъ .	Б .:					
Device	Routing	In۱	<u>/ert Outle</u>	et Devices		
#1	Primary	82.	82.40' 6.0" Horiz. Orifice/Grate C= 0.600			
#2	Limited to weir flow at low heads #2 Discarded 80.00' 8.270 in/hr Exfiltration over Wetted area					
#2	Discarde	u 80.	.00 0.27	U III/III EXIIITIATION	over wetted area	

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond LP7: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Inve	rt Avail.	.Storage	Storage Description	n		
#1	80.00)'	178 cf				
#2	80.50	יי	56 cf	500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids cf Cultec C-100 x 4 Inside #1			
#2	00.50	J	30 CI			1.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0	"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Clayatia	.n. (Curf Araa	Dorino	Ina Ctora	Cum Store	Mot Aroo	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	ετ)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
D	D	1.	(0 ()	of Day land			
Device	Routing	Inv	ert Outle	et Devices			
#1	Primary	82.4	40' 6.0"	6.0" Horiz. Orifice/Grate C= 0.600			
			Limit	ted to weir flow at lo	w heads		
#2	Discarded).08 t	00' 8.27	8.270 in/hr Exfiltration over Wetted area			

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP8: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

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Volume	Inve	ert Ava	il.Storage	age Storage Description				
#1	80.0	0'	178 cf	Custom Stage Da	ata (Irregular)List	ed below (Recalc)		
#2	80.5	i0'	56 cf	500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids cf Cultec C-100 x 4 Inside #1				
<i></i>	00.0	.0	00 01			1.86 sf x 7.50'L = 14.0	cf	
				Overall Size= 36.0)"W x 12.5"H x 8.0	00'L with 0.50' Overlap		
			234 cf	Total Available St	orage			
Elevation		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area		
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>		
80.0	00	200	60.0	0	0	200		
82.5	50	200	60.0	500	500	350		
Device Routing Invert		vert Outle	Outlet Devices					
#1 Primar		82		"Horiz. Orifice/Grate C= 0.600				
#2 Discarded 8		d 80		Limited to weir flow at low heads 8.270 in/hr Exfiltration over Wetted area				

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP9: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.11 cfs @ 12.07 hrs, Volume=	371 cf
Outflow =	0.04 cfs @ 12.27 hrs, Volume=	371 cf, Atten= 59%, Lag= 11.8 min
Discarded =	0.04 cfs @ 12.27 hrs, Volume=	371 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.51' @ 12.27 hrs Surf.Area= 200 sf Storage= 42 cf

Plug-Flow detention time= 4.2 min calculated for 370 cf (100% of inflow) Center-of-Mass det. time= 4.2 min (759.7 - 755.5)

Volume	Invert	Avail.Stora	age	Storage Description	on				
#1	80.00'	17	3 cf	Custom Stage Data (Irregular)Listed below (Recalc)					
						444 cf x 40.0% Voi	ds		
#2	80.50'	5	3 cf	f Cultec C-100 x 4 Inside #1					
				Effective Size= 32	2.1"W x 12.0"H =>	> 1.86 sf x 7.50'L = 1	14.0 cf		
				Overall Size= 36.0)"W x 12.5"H x 8.	00'L with 0.50' Over	lap		
		23	4 cf	Total Available St	orage				
Elevation	Surf.	Area Pe	rim.	Inc.Store	Cum.Store	Wet.Area			
(feet)	(:	sq-ft) (f	eet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
80.00		200	60.0	0	0	200			
82 50		200	30.0	500	500	350			

Type III 24-hr 2 Year Event Rainfall=3.20"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.04 cfs @ 12.27 hrs HW=80.51' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond PE: Existing Infiltration Pond

Inflow Area =	3,300 sf,100.00% Impervious,	Inflow Depth = 2.97" for 2 Year Event event
Inflow =	0.24 cfs @ 12.07 hrs, Volume=	816 cf
Outflow =	0.08 cfs @ 12.85 hrs, Volume=	816 cf, Atten= 67%, Lag= 46.8 min
Discarded =	0.08 cfs @ 12.85 hrs, Volume=	816 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 91.26' @ 12.35 hrs Surf.Area= 408 sf Storage= 156 cf

Plug-Flow detention time= 12.4 min calculated for 814 cf (100% of inflow) Center-of-Mass det. time= 12.4 min (767.9 - 755.5)

<u>Volume</u>	Inve	ert Avail	.Storage	e Storage Description					
#1	90.0	00'	320 cf	Custom Stage Data (Irregular)Listed below					
#2	91.0	00'	368 cf	800 cf Overall x 40.0% Voids StormTech SC-740 x 8					
				Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap					
						L with 0.44 Overlap			
			688 cf	Total Available Stor	age				
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area			
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
90.0	00	200	60.0	0	0	200			
94.0	00	200	60.0	800	800	440			
		_							
Device	Routing	Inv	ert Outle	t Devices					
#1 Primary 93.50' 6.		50' 6.0"	.0" Vert. Orifice/Grate C= 0.600						
,		00' 8.27 0	70 in/hr Exfiltration over Surface area						

Discarded OutFlow Max=0.08 cfs @ 12.85 hrs HW=91.01' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Subcatchment L12: LOT 12

Type III 24-hr 10 Year Event Rainfall=4.60"

Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36"

Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf

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Time span=0.00-26.00 hrs, dt=0.05 hrs, 521 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Reach routing by Stor-Ind+Tra	ns method - Pond routing by Stor-Ind method
Subcatchment 1B: Ex. Bank Roof	Runoff Area=3,300 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.34 cfs 1,200 cf
Subcatchment 2B: Ex. Bank Parking Lot	Runoff Area=36,670 sf 59.99% Impervious Runoff Depth=3.29" Tc=5.0 min CN=88 Runoff=3.21 cfs 10,055 cf
Subcatchment3B: Ex. Landscape	Runoff Area=3,128 sf 0.00% Impervious Runoff Depth=2.05" Tc=5.0 min CN=74 Runoff=0.17 cfs 534 cf
Subcatchment 3P: 3P	Runoff Area=28,778 sf 7.13% Impervious Runoff Depth=2.21" Tc=5.0 min CN=76 Runoff=1.71 cfs 5,300 cf
Subcatchment 4P: 4P	Runoff Area=12,451 sf 47.31% Impervious Runoff Depth=3.00" Tc=5.0 min CN=85 Runoff=1.00 cfs 3,113 cf
Subcatchment 5P: 5P Flow Length=200'	Runoff Area=24,485 sf 0.00% Impervious Runoff Depth=2.05" Slope=0.0100 '/' Tc=14.4 min CN=74 Runoff=1.02 cfs 4,182 cf
Subcatchment 6P: 6P Flow Length=440' S	Runoff Area=170,220 sf 0.76% Impervious Runoff Depth=2.05" Slope=0.0200 '/' Tc=15.2 min CN=74 Runoff=6.96 cfs 29,073 cf
Subcatchment 7P: 7P	Runoff Area=20,619 sf 52.80% Impervious Runoff Depth=3.19" Tc=5.0 min CN=87 Runoff=1.76 cfs 5,485 cf
Subcatchment 8P: 8P	Runoff Area=23,809 sf 45.16% Impervious Runoff Depth=3.00" Tc=5.0 min CN=85 Runoff=1.92 cfs 5,953 cf
Subcatchment9P: 9P	Runoff Area=25,030 sf 54.05% Impervious Runoff Depth=3.19" Tc=5.0 min CN=87 Runoff=2.13 cfs 6,658 cf
Subcatchment 10P: 10P	Runoff Area=226,733 sf 0.90% Impervious Runoff Depth=2.05" bw Length=850' Tc=19.0 min CN=74 Runoff=8.49 cfs 38,725 cf
Subcatchment 11P: 11P Flow Length=300'	Runoff Area=48,707 sf 0.00% Impervious Runoff Depth=2.05" Slope=0.0200 '/' Tc=9.8 min CN=74 Runoff=2.31 cfs 8,319 cf
Subcatchment L1: LOT 1	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf
Subcatchment L10: LOT 10	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf
Subcatchment L11: LOT 11	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf

NORTHSIDE FARM 2-10-2017 Type III 24-hr 10 Year Event Rainfall=4.60" Printed 2/9/2017 Prepared by Microsoft HydroCAD® 10.00 s/n 01769 © 2011 HydroCAD Software Solutions LLC Page 37 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Subcatchment L13: LOT 13 Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L14: LOT 14 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Subcatchment L15: LOT 15 Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L2: LOT 2 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Subcatchment L3: LOT 3 Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L4: LOT 4 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Subcatchment L5: LOT 5 Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L6: LOT 6 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L7: LOT 7 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L8: LOT 8 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Subcatchment L9: LOT 9 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=4.36" Tc=5.0 min CN=98 Runoff=0.16 cfs 545 cf Avg. Flow Depth=0.41' Max Vel=5.63 fps Inflow=2.19 cfs 5,246 cf Reach 1R: 18" RCP 18.0" Round Pipe n=0.013 L=60.0' S=0.0167 '/' Capacity=13.56 cfs Outflow=2.19 cfs 5,246 cf Reach 2R: 24" RCP Avg. Flow Depth=0.90' Max Vel=5.61 fps Inflow=7.70 cfs 28,135 cf 24.0" Round Pipe n=0.013 L=30.0' S=0.0067 '/' Capacity=18.47 cfs Outflow=7.68 cfs 28,135 cf Reach 3R: 18" RCP Avg. Flow Depth=0.83' Max Vel=4.85 fps Inflow=4.87 cfs 18,080 cf 18.0" Round Pipe n=0.013 L=65.0' S=0.0062 '/' Capacity=8.24 cfs Outflow=4.85 cfs 18,080 cf

Reach 4R: 18" RCP Avg. Flow Depth=0.80' Max Vel=4.32 fps Inflow=4.18 cfs 13,898 cf

18.0" Round Pipe n=0.013 L=180.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=4.06 cfs 13,898 cf

Reach 5R: 18" RCP Avg. Flow Depth=0.75' Max Vel=2.95 fps Inflow=2.62 cfs 8,413 cf

Reach 5R: 18" RCP

Avg. Flow Depth=0.75' Max Vel=2.95 fps Inflow=2.62 cfs 8,413 cf

18.0" Round Pipe n=0.013 L=130.0' S=0.0025 '/' Capacity=5.21 cfs Outflow=2.53 cfs 8,413 cf

Reach 6R: 12" RCPAvg. Flow Depth=0.50' Max Vel=2.49 fps Inflow=1.00 cfs 3,113 cf
12.0" Round Pipe n=0.013 L=190.0' S=0.0030 '/' Capacity=1.95 cfs Outflow=0.95 cfs 3,113 cf

Reach 7R: 10" ADSAvg. Flow Depth=0.33' Max Vel=8.52 fps Inflow=1.71 cfs 5,300 cf 10.0" Round Pipe n=0.010 L=95.0' S=0.0334 '/' Capacity=5.20 cfs Outflow=1.70 cfs 5,300 cf

Type III 24-hr 10 Year Event Rainfall=4.60"

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Reach 8R: 18" RCP Avg. Flow Depth=0.70' Max Vel=4.70 fps Inflow=3.83 cfs 12,611 cf

18.0" Round Pipe n=0.013 L=30.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=3.81 cfs 12,611 cf

Reach 9R: 18" RCPAvg. Flow Depth=0.78' Max Vel=4.28 fps Inflow=4.00 cfs 12,611 cf

18.0" Round Pipe n=0.013 L=280.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=3.83 cfs 12,611 cf

Reach 10R: 18" RCP Avg. Flow Depth=0.48' Max Vel=3.88 fps Inflow=1.92 cfs 5,953 cf

18.0" Round Pipe n=0.013 L=60.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=1.89 cfs 5,953 cf

Reach 11R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 12R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 13R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 14R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 15R: 12" RCPAvg. Flow Depth=0.30' Max Vel=5.52 fps Inflow=1.07 cfs 6,534 cf

12.0" Round Pipe n=0.013 L=20.0' S=0.0250 '/' Capacity=5.63 cfs Outflow=1.07 cfs 6,534 cf

Reach DCP1: DESIGN POINT #1 Inflow=2.19 cfs 5,246 cf

Outflow=2.19 cfs 5,246 cf

Reach DCP2: DESIGN POINT #2 Inflow=6.96 cfs 29,073 cf

Outflow=6.96 cfs 29,073 cf

Reach DCP3: DESIGN POINT #3 Inflow=9.50 cfs 45,260 cf

Outflow=9.50 cfs 45,260 cf

Pond 1P: POND #1 Peak Elev=97.27' Storage=6,939 cf Inflow=7.68 cfs 28,135 cf

Discarded=1.02 cfs 23,423 cf Primary=2.14 cfs 4,711 cf Outflow=3.16 cfs 28,135 cf

Peak Elev=94.04' Storage=5,186 cf Inflow=6.05 cfs 20,930 cf

Discarded=0.93 cfs 14,396 cf Primary=1.07 cfs 6,534 cf Outflow=2.00 cfs 20,930 cf

Pond LP1: 10'x 20 field Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf

Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf

Pond LP10: 10'x 20 field Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf

Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf

Pond LP11: 10'x 20 field Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf

Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf

Pond LP12: 10'x 20 field Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf

Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf

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Type III 24-hr 10 Year Event Rainfall=4.60"

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Pond LP13: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP14: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP15: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP2: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP3: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP4: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP5: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP6: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP7: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP8: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf
Pond LP9: 10'x 20 field	Peak Elev=80.90' Storage=90 cf Inflow=0.16 cfs 545 cf Discarded=0.05 cfs 545 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 545 cf

Pond PE: Existing Infiltration Pond Peak Elev=91.73' Storage=289 cf Inflow=0.34 cfs 1,200 cf Discarded=0.08 cfs 1,200 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 1,200 cf

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Summary for Subcatchment 1B: Ex. Bank Roof

0.34 cfs @ 12.07 hrs, Volume= Runoff 1,200 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN	Description		
*		3,300	98	Bank Roof		
		3,300		100.00% Im	npervious A	Area
	Тс	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry, DIRECT

Summary for Subcatchment 2B: Ex. Bank Parking Lot

3.21 cfs @ 12.07 hrs, Volume= 10,055 cf, Depth= 3.29" Runoff

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	A	rea (sf)	CN	Description							
		22,000	98	Paved parking & roofs							
		14,670	74	>75% Gras	s cover, Go	ood, HSG C					
		36,670	88	Weighted A	verage						
		14,670		40.01% Pei	vious Area						
		22,000		59.99% lmp	pervious Are	ea					
	_										
,	Tc Length Slope Velocity Capacity Description										
<u>(m</u>	nin)	(feet)	(ft/ft	ft) (ft/sec) (cfs)							
	5.0					Direct Entry, direct					

Summary for Subcatchment 3B: Ex. Landscape

Runoff 0.17 cfs @ 12.08 hrs, Volume= 534 cf, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	A	rea (sf)	CN [Description						
		3,128	74 >	>75% Grass cover, Good, HSG C						
		3,128	1	100.00% Pervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
_	5.0	•	•			Direct Entry, Direct				

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Summary for Subcatchment 3P: 3P

Runoff 1.71 cfs @ 12.08 hrs, Volume= 5,300 cf, Depth= 2.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN I	Description						
*		2,051	98	Exisitng houses						
		26,727	74	>75% Grass cover, Good, HSG C						
*		0	98	Roadway						
*		0	98	Sidewalks						
28,778 76 Weighted Average										
		26,727	9	92.87% Per	vious Area					
		2,051	•	7.13% Impe	ervious Area	a				
_	Tc (min)	Length (feet)	Slope (ft/ft)	,	Capacity (cfs)	Description				
	5.0					Direct Entry	Direct			

Direct Entry, Direct

Summary for Subcatchment 4P: 4P

1.00 cfs @ 12.07 hrs, Volume= Runoff 3,113 cf. Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN	Description						
		6,560	74	>75% Grass cover, Good, HSG C						
*		5,891	98	Roadway & Sidewalks						
		12,451	85	Weighted Av	/eighted Average					
		6,560		52.69% Pervious Area						
		5,891		47.31% Imp	ervious Are	ırea				
	Tc	Length	Slope	e Velocity	Capacity	/ Description				
	(min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
				D' (F (D')						

5.0 **Direct Entry, Direct**

Summary for Subcatchment 5P: 5P

1.02 cfs @ 12.21 hrs, Volume= 4,182 cf, Depth= 2.05" Runoff

 Area (sf)	CN	Description
24,485	74	>75% Grass cover, Good, HSG C
 24,485		100.00% Pervious Area

Type III 24-hr 10 Year Event Rainfall=4.60"

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	10.8	50	0.0100	0.08		Sheet Flow, sheet flow
	3.6	150	0.0100	0.70		Grass: Dense n= 0.240 P2= 3.20" Shallow Concentrated Flow, Channel flow Short Grass Pasture Kv= 7.0 fps
_	14.4	200	Total			

Summary for Subcatchment 6P: 6P

Runoff = 6.96 cfs @ 12.22 hrs, Volume= 29,073 cf, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN [Description						
*		1,290	98 E	Exisitng hou	uses					
		87,260	74 >	-75% Gras	s cover, Go	ood, HSG C				
_		81,670	73 V	Woods, Fair, HSG C						
170,220 74 Weighted Average					verage					
168,930 99.24% Pervious Area					vious Area					
1,290 0.76% Impervious Area					ervious Are	a				
			Mala 20	0 ''	Description					
	Tc	Length	Slope	Velocity	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	12.3	50	0.0200	0.07		Sheet Flow, sheet flow				
						Woods: Light underbrush n= 0.400 P2= 3.20"				
	2.9	390	0.0200	2.28		Shallow Concentrated Flow, shallow				
						Unpaved Kv= 16.1 fps				
	15.2	440	Total							

Summary for Subcatchment 7P: 7P

Runoff = 1.76 cfs @ 12.07 hrs, Volume= 5,485 cf, Depth= 3.19"

	Area (sf)	CN	Description			
*	0	98	Exisitng houses			
	9,732	74	>75% Grass cover, Good, HSG C			
*	5,787	98	Roadway			
* 5,100 98 Sidewalks & Dr		98	Sidewalks & Drives			
	20,619	87	Weighted Average			
	9,732		47.20% Pervious Area			
	10,887		52.80% Impervious Area			

Type III 24-hr 10 Year Event Rainfall=4.60"

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Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0 **Direct Entry, Direct**

Summary for Subcatchment 8P: 8P

Runoff 1.92 cfs @ 12.07 hrs, Volume= 5,953 cf. Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	Α	rea (sf)	CN	Description						
		13,057	74	75% Grass cover, Good, HSG C						
*		5,722	98	Roadway						
*		3,790	98	Orives ´						
*		1,240	98	Sidewalks	idewalks					
		23,809	85	Weighted Average						
		13,057		54.84% Pei						
		10,752		45.16% lmp	pervious Are	ea				
	Тс	Length	Slope	Velocity	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry, Direct				

Direct Entry, Direct

Summary for Subcatchment 9P: 9P

Runoff 2.13 cfs @ 12.07 hrs, Volume= 6,658 cf, Depth= 3.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN	Description	Description					
		11,501	74	>75% Gras	>75% Grass cover, Good, HSG C					
*		8,588	98	Roadway	Roadway					
*		3,970	98	Drives	Orives Trives Trives Trives Trives					
*		971	98	Sidewalks	Sidewalks					
		25,030	87	Weighted A	Veighted Average					
		11,501		45.95% Per	vious Area	a				
		13,529		54.05% Imp	ervious Ar	rea				
	Tc	Length	Slop	e Velocity	Capacity	Description				
<u>(r</u>	min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
	5.0			Direct Entry, Direct						

Summary for Subcatchment 10P: 10P

Runoff 8.49 cfs @ 12.27 hrs, Volume= 38,725 cf, Depth= 2.05"

Type III 24-hr 10 Year Event Rainfall=4.60"

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_	Α	rea (sf)	CN D	Description				
* 2,032 98 Exisitng houses								
		83,173	74 >	75% Ğras	s cover, Go	ood, HSG C		
	141,528 73 Woods, Fair, HSG C							
	2	26,733	74 V	Veighted A	verage			
		24,701			vious Area			
		2,032	0	.90% Impe	ervious Area	a		
,oo								
	Tc	Length	Slope	Velocity	Capacity	Description		
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·		
	7.4	50	0.0100	0.11		Sheet Flow, Sheet		
						Grass: Short n= 0.150 P2= 3.20"		
	10.1	430	0.0200	0.71		Shallow Concentrated Flow, Shallow		
						Woodland Kv= 5.0 fps		
	1.5	370	0.0100	4.09	24.53	Channel Flow, River Flow		
						Area= 6.0 sf Perim= 8.0' r= 0.75'		
						n= 0.030 Earth, grassed & winding		
	19.0	850	Total		_			

Summary for Subcatchment 11P: 11P

Runoff = 2.31 cfs @ 12.15 hrs, Volume= 8,319 cf, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	Α	rea (sf)	CN E	Description		
*		48,707	74 g	ırass		
	48,707 100.00% Pervious Area					а
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.6	50	0.0200	0.15		Sheet Flow, Sheet
	4.2	250	0.0200	0.99		Grass: Short n= 0.150 P2= 3.20" Shallow Concentrated Flow, shallow Short Grass Pasture Kv= 7.0 fps
	9.8	300	Total			·

Summary for Subcatchment L1: LOT 1

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 545 cf, Depth= 4.36"

Type III 24-hr 10 Year Event Rainfall=4.60"

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_	Α	rea (sf)	CN [Description						
*		1,500	98							
_		1,500	1	100.00% Impervious Area						
	Тс	Length	Slope	•	Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

Summary for Subcatchment L10: LOT 10

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN [Description						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
	Tc	Length	Slope	•		Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

Summary for Subcatchment L11: LOT 11

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN [Description						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
		- 3	Slope	•		Description				
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

Summary for Subcatchment L12: LOT 12

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 545 cf, Depth= 4.36"

		Area (sf)	CN	Description	
4	*	1,500	98		
_		1,500		100.00% Impervious Area	

Type III 24-hr 10 Year Event Rainfall=4.60"

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	Tc	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0

Direct Entry,

Summary for Subcatchment L13: LOT 13

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0	(1661)	(11/11)	(10360)	(013)	Direct Entry,

Summary for Subcatchment L14: LOT 14

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	A	rea (sf)	CN [Description						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
_	5.0	, ,	` ` `	, ,	, ,	Direct Entry,				

Summary for Subcatchment L15: LOT 15

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

	Α	rea (sf)	CN I	Description						
*		1,500	98							
		1,500	,	100.00% Impervious Area						
		Length	Slope	,		Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

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Summary for Subcatchment L2: LOT 2

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	Α	rea (sf)	CN [Description					
*		1,500	98						
		1,500	,	100.00% Impervious Area					
	Тс	Length	Slope	•	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry,			

Summary for Subcatchment L3: LOT 3

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc	-	Slope		Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L4: LOT 4

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

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Summary for Subcatchment L5: LOT 5

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	Α	rea (sf)	CN [Description					
*		1,500	98						
		1,500	,	100.00% Impervious Area					
	Тс	Length	Slope	•	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry,			

Summary for Subcatchment L6: LOT 6

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN E	Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0	•	•	· ·		Direct Entry,

Summary for Subcatchment L7: LOT 7

Runoff = 0.16 cfs @ 12.07 hrs, Volume=

545 cf, Depth= 4.36"

_	Α	rea (sf)	CN	Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Type III 24-hr 10 Year Event Rainfall=4.60" Printed 2/9/2017

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Summary for Subcatchment L8: LOT 8

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc	-	Slope	•	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L9: LOT 9

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 545 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 10 Year Event Rainfall=4.60"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc	-	Slope		Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Reach 1R: 18" RCP

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 0.47" for 10 Year Event event

Inflow = 2.19 cfs @ 12.42 hrs, Volume= 5,246 cf

Outflow = 2.19 cfs @ 12.43 hrs, Volume= 5,246 cf, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.63 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 1.23 fps, Avg. Travel Time= 0.8 min

Peak Storage= 23 cf @ 12.42 hrs

Average Depth at Peak Storage= 0.41'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.56 cfs

18.0" Round Pipe

n = 0.013

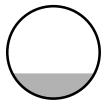
Length= 60.0' Slope= 0.0167 '/'

Inlet Invert= 94.00', Outlet Invert= 93.00'

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Summary for Reach 2R: 24" RCP

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 2.65" for 10 Year Event event

Inflow = 7.70 cfs @ 12.11 hrs, Volume= 28,135 cf

Outflow = 7.68 cfs @ 12.11 hrs, Volume= 28,135 cf, Atten= 0%, Lag= 0.1 min

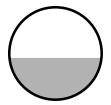
Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.61 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.89 fps, Avg. Travel Time= 0.3 min

Peak Storage= 41 cf @ 12.11 hrs Average Depth at Peak Storage= 0.90'

Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.47 cfs

24.0" Round Pipe n= 0.013 Length= 30.0' Slope= 0.0067 '/' Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach 3R: 18" RCP

Inflow Area = 90,833 sf, 25.68% Impervious, Inflow Depth = 2.39" for 10 Year Event event

Inflow = 4.87 cfs @ 12.13 hrs, Volume= 18,080 cf

Outflow = 4.85 cfs @ 12.14 hrs, Volume= 18,080 cf, Atten= 0%, Lag= 0.5 min

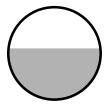
Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.85 fps, Min. Travel Time= 0.2 min Avg. Velocity = 1.67 fps, Avg. Travel Time= 0.6 min

Peak Storage= 65 cf @ 12.13 hrs Average Depth at Peak Storage= 0.83' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.24 cfs

18.0" Round Pipe n= 0.013 Length= 65.0' Slope= 0.0062 '/' Inlet Invert= 96.10', Outlet Invert= 95.70' HydroCAD® 10.00 s/n 01769 © 2011 HydroCAD Software Solutions LLC

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Summary for Reach 4R: 18" RCP

Inflow Area = 61,848 sf, 30.44% Impervious, Inflow Depth = 2.70" for 10 Year Event event

Inflow = 4.18 cfs @ 12.10 hrs, Volume= 13,898 cf

Outflow = 4.06 cfs @ 12.12 hrs, Volume= 13,898 cf, Atten= 3%, Lag= 1.2 min

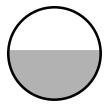
Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.32 fps, Min. Travel Time= 0.7 min Avg. Velocity = 1.44 fps, Avg. Travel Time= 2.1 min

Peak Storage= 174 cf @ 12.11 hrs Average Depth at Peak Storage= 0.80'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe n= 0.013 Length= 180.0' Slope= 0.0050 '/' Inlet Invert= 97.00', Outlet Invert= 96.10'



Summary for Reach 5R: 18" RCP

Inflow Area = 41,229 sf, 19.26% Impervious, Inflow Depth = 2.45" for 10 Year Event event

Inflow = 2.62 cfs @ 12.10 hrs, Volume= 8,413 cf

Outflow = 2.53 cfs @ 12.12 hrs, Volume= 8,413 cf, Atten= 3%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.95 fps, Min. Travel Time= 0.7 min Avg. Velocity = 0.99 fps, Avg. Travel Time= 2.2 min

Peak Storage= 115 cf @ 12.11 hrs Average Depth at Peak Storage= 0.75'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.21 cfs

18.0" Round Pipe

n = 0.013

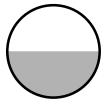
Length= 130.0' Slope= 0.0025 '/'

Inlet Invert= 97.32', Outlet Invert= 97.00'

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Summary for Reach 6R: 12" RCP

Inflow Area = 12,451 sf, 47.31% Impervious, Inflow Depth = 3.00" for 10 Year Event event

Inflow 1.00 cfs @ 12.07 hrs, Volume= 3,113 cf

0.95 cfs @ 12.11 hrs, Volume= Outflow 3,113 cf, Atten= 6%, Lag= 2.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

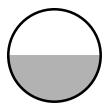
Max. Velocity= 2.49 fps, Min. Travel Time= 1.3 min Avg. Velocity = 0.85 fps, Avg. Travel Time= 3.7 min

Peak Storage= 75 cf @ 12.10 hrs Average Depth at Peak Storage= 0.50'

Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 1.95 cfs

12.0" Round Pipe n = 0.013Length= 190.0' Slope= 0.0030 '/'

Inlet Invert= 97.90', Outlet Invert= 97.33'



Summary for Reach 7R: 10" ADS

Inflow Area = 28,778 sf, 7.13% Impervious, Inflow Depth = 2.21" for 10 Year Event event

Inflow 1.71 cfs @ 12.08 hrs, Volume= 5,300 cf

Outflow 1.70 cfs @ 12.09 hrs, Volume= 5,300 cf, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 8.52 fps, Min. Travel Time= 0.2 min Avg. Velocity = 3.12 fps, Avg. Travel Time= 0.5 min

Peak Storage= 19 cf @ 12.08 hrs Average Depth at Peak Storage= 0.33'

Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 5.20 cfs

10.0" Round Pipe

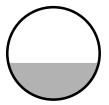
n= 0.010 PVC, smooth interior

Length= 95.0' Slope= 0.0334 '/'

Inlet Invert= 100.50', Outlet Invert= 97.33'

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Summary for Reach 8R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 3.10" for 10 Year Event event

Inflow = 3.83 cfs @ 12.11 hrs, Volume= 12,611 cf

Outflow = 3.81 cfs @ 12.11 hrs, Volume= 12,611 cf, Atten= 1%, Lag= 0.2 min

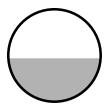
Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.70 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.58 fps, Avg. Travel Time= 0.3 min

Peak Storage= 24 cf @ 12.11 hrs Average Depth at Peak Storage= 0.70'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe n= 0.013 Length= 30.0' Slope= 0.0067 '/' Inlet Invert= 92.90', Outlet Invert= 92.70'



Summary for Reach 9R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 3.10" for 10 Year Event event

Inflow = 4.00 cfs @ 12.08 hrs, Volume= 12.611 cf

Outflow = 3.83 cfs @ 12.11 hrs, Volume= 12,611 cf, Atten= 4%, Lag= 2.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.28 fps, Min. Travel Time= 1.1 min Avg. Velocity = 1.42 fps, Avg. Travel Time= 3.3 min

Peak Storage= 261 cf @ 12.10 hrs Average Depth at Peak Storage= 0.78'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe

n = 0.013

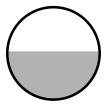
Length= 280.0' Slope= 0.0050 '/'

Inlet Invert= 94.30', Outlet Invert= 92.90'

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Summary for Reach 10R: 18" RCP

Inflow Area = 23,809 sf, 45.16% Impervious, Inflow Depth = 3.00" for 10 Year Event event

Inflow = 1.92 cfs @ 12.07 hrs, Volume= 5,953 cf

Outflow = 1.89 cfs @ 12.08 hrs, Volume= 5,953 cf, Atten= 1%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.88 fps, Min. Travel Time= 0.3 min Avg. Velocity = 1.33 fps, Avg. Travel Time= 0.8 min

Peak Storage= 29 cf @ 12.08 hrs Average Depth at Peak Storage= 0.48'

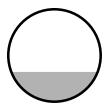
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe

n = 0.013

Length= 60.0' Slope= 0.0067 '/'

Inlet Invert= 94.70', Outlet Invert= 94.30'



Summary for Reach 11R: Outlets

Inflow Area = 4,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 10 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs. Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 10 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Type III 24-hr 10 Year Event Rainfall=4.60"

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Summary for Reach 13R: Outlets

Inflow Area = 3,000 sf,100.00% Impervious, Inflow Depth = 0.00" for 10 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 14R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 10 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 15R: 12" RCP

Inflow Area = 100,546 sf, 27.13% Impervious, Inflow Depth = 0.78" for 10 Year Event event

Inflow = 1.07 cfs @ 12.48 hrs, Volume= 6,534 cf

Outflow = 1.07 cfs @ 12.48 hrs, Volume= 6,534 cf, Atten= 0%, Lag= 0.3 min

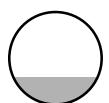
Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.52 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.40 fps, Avg. Travel Time= 0.2 min

Peak Storage= 4 cf @ 12.48 hrs Average Depth at Peak Storage= 0.30'

Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.63 cfs

12.0" Round Pipe n= 0.013 Length= 20.0' Slope= 0.0250 '/' Inlet Invert= 92.50', Outlet Invert= 92.00'



Summary for Reach DCP1: DESIGN POINT #1

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 0.47" for 10 Year Event event

Inflow = 2.19 cfs @ 12.43 hrs, Volume= 5,246 cf

Outflow = 2.19 cfs @ 12.43 hrs. Volume= 5.246 cf. Atten= 0%. Lag= 0.0 min

Type III 24-hr 10 Year Event Rainfall=4.60"

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1 age

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP2: DESIGN POINT #2

Inflow Area = 177,720 sf, 4.95% Impervious, Inflow Depth = 1.96" for 10 Year Event event

Inflow = 6.96 cfs @ 12.22 hrs, Volume= 29,073 cf

Outflow = 6.96 cfs @ 12.22 hrs, Volume= 29,073 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP3: DESIGN POINT #3

Inflow Area = 334,779 sf, 11.00% Impervious, Inflow Depth = 1.62" for 10 Year Event event

Inflow = 9.50 cfs @ 12.27 hrs, Volume= 45,260 cf

Outflow = 9.50 cfs @ 12.27 hrs, Volume= 45,260 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 2.65" for 10 Year Event event Inflow = 7.68 cfs @ 12.11 hrs, Volume= 28,135 cf

Outflow = 3.16 cfs @ 12.42 hrs, Volume= 28,135 cf, Atten= 59%, Lag= 18.7 min

Discarded = 1.02 cfs @ 11.70 hrs, Volume= 23,423 cf Primary = 2.14 cfs @ 12.42 hrs, Volume= 4,711 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 97.27' @ 12.42 hrs Surf.Area= 5,325 sf Storage= 6,939 cf

Plug-Flow detention time= 29.8 min calculated for 28,135 cf (100% of inflow)

Center-of-Mass det. time= 29.9 min (848.5 - 818.6)

Volume	Invert	Ava	il.Storage	Storage Description	on		
#1	95.40'		4,699 cf		ata (Irregular)Liste		
#2	95.90'		6,891 cf	•	- 6,891 cf Embedde 40 x 150 Inside #1	$ed = 11,746 \text{ cf } \times 40.0$	0% Voids
#2	93.90		0,091 0			6.45 sf x 7.12'L = 45.9	9 cf
				Overall Size= 51.0	0"W x 30.0"H x 7.56	6'L with 0.44' Overlap)
			11,590 cf	Total Available Sto	orage		
Elevation	n Si	ırf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
95.4	10	5,325	292.0	0	0	5,325	
98.9	90	5,325	292.0	18,638	18,638	6,347	
Device	Routing	In	vert Outle	et Devices			
#1	Discarded	95	5.40' 8.27	0 in/hr Exfiltration	over Surface are	a	

#1 Discarded #2 Primary 95.40' 8.270 in/hr Exfiltration over Surface area 96.60' 1.3' long Sharp-Crested Rectangular Weir 2 End Contraction(s) 5.0' Crest Height

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Discarded OutFlow Max=1.02 cfs @ 11.70 hrs HW=95.45' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=2.12 cfs @ 12.42 hrs HW=97.27' (Free Discharge) 2=Sharp-Crested Rectangular Weir (Weir Controls 2.12 cfs @ 2.72 fps)

Summary for Pond 2P: Infiltration Pond #2

Inflow Area =	100,546 sf, 27.13% Impervious,	Inflow Depth = 2.50" for 10 Year Event event
Inflow =	6.05 cfs @ 12.12 hrs, Volume=	20,930 cf
Outflow =	2.00 cfs @ 12.48 hrs, Volume=	20,930 cf, Atten= 67%, Lag= 21.3 min
Discarded =	0.93 cfs @ 12.48 hrs, Volume=	14,396 cf
Primary =	1.07 cfs @ 12.48 hrs, Volume=	6,534 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 94.04' @ 12.48 hrs Surf.Area= 4,801 sf Storage= 5,186 cf

Plug-Flow detention time= 21.5 min calculated for 20,930 cf (100% of inflow)

Avail.Storage Storage Description

Center-of-Mass det. time= 21.5 min (845.7 - 824.2)

Invert

Volume

				0.10.10.90 = 0.001.10.11		
#1	92.5	0'	19,107 cf	Custom Stage Da	ata (Irregular)Liste	d below
Elevation (fee		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
92.5		2,105	235.0	0	Ó	2,105
93.0	00	2,850	255.0	1,234	1,234	2,894
94.0	00	4,720	306.0	3,746	4,980	5,188
95.0	00	7,025	360.0	5,834	10,814	8,070
96.0	00	9,629	412.0	8,293	19,107	11,287
Device	Routing	Inv	vert Outle	et Devices		
#1	Primary	94			ed Rectangular We	eir 2 End Contraction(s)
				Crest Height		
#2	Primary	92	.50' 6.0"	Vert. Orifice/Grate	• C= 0.600	
#3	Discarde	d 92		0 in/hr Exfiltration ductivity to Ground		

Discarded OutFlow Max=0.93 cfs @ 12.48 hrs HW=94.03' (Free Discharge) **3=Exfiltration** (Controls 0.93 cfs)

Primary OutFlow Max=1.07 cfs @ 12.48 hrs HW=94.03' (Free Discharge)

1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
2=Orifice/Grate (Orifice Controls 1.07 cfs @ 5.46 fps)

Type III 24-hr 10 Year Event Rainfall=4.60"

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Summary for Pond LP1: 10'x 20 field

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inv	ert Avai	il.Storage	Storage Description	n		
#1	80.0	00'	178 cf	Custom Stage Da			
#2	90.1	=O'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
#2	80.	50	36 CI			.86 sf x 7.50'L = 14.0 cf	
						L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
Elevation	nn.	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grate			
40	Discord	.d 00		ted to weir flow at lo			
#2	Discarde	tu 80	.00' 8.27	0 in/hr Exfiltration	over wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP10: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

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Volume	Inve	rt Avail.	.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Da		,	
#2	80.5	O'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
#2	60.5	U	30 CI			.86 sf x 7.50'L = 14.0 cf	
						L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
Elevatio	n :	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	0	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	Inv	ert Outle	et Devices			
#1	Primary	82.4		Horiz. Orifice/Grat			
#2	Discarde	.08 b		ed to weir flow at logonia in the construction to the construction in the construction			

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP11: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Invert	Avail.Storag	e Storage Descrip	tion		
#1	80.00'	178 (f Custom Stage	Data (Irregular)Lis	ted below (Recalc)	
			500 cf Overall -	56 cf Embedded =	444 cf x 40.0% Vo	ids
#2	80.50'	56 d				
					> 1.86 sf x 7.50'L =	
			Overall Size= 36	5.0"W x 12.5"H x 8.	.00'L with 0.50' Ove	rlap
		234 (f Total Available S	Storage		
Elevation	Surf.	.Area Perir	n. Inc.Store	Cum.Store	Wet.Area	
(feet)		sq-ft) (fee	t) (cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200 60	.0 0	0	200	
82.50		200 60	.0 500	500	350	

Type III 24-hr 10 Year Event Rainfall=4.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP12: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inve	ert Avai	I.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Da			
						4 cf x 40.0% Voids	
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 EOU 44.0 or	<u>r</u>
					_	.86 sf x 7.50'L = 14.0 c 'L with 0.50' Overlap	I
			22.4 of			L WILLI 0.50 Overlap	
			234 cf	Total Available Sto	rage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	d 80		ed to weir flow at lo o in/hr Exfiltration			

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 10 Year Event Rainfall=4.60"

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Summary for Pond LP13: 10'x 20 field

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inve	rt Avail	.Storage	Storage Descriptio	n		
#1	80.00	0'	178 cf	Custom Stage Da			
#2	80.50	า'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		14 cf x 40.0% Voids	
#2	00.50	J	30 CI			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0	"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Clayatia	.n. (Curf Araa	Dorim	Ina Ctara	Cum Store	Mot Aroo	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	:t)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
D	D	1.		of Day land			
Device	Routing	Inv	<u>ert Outle</u>	et Devices			
#1	Primary	82.	40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
			Limit	ted to weir flow at lo	w heads		
#2	Discarded	d 80.	00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP14: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

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Volume	Inve	ert Avai	l.Storage	Storage Description	n	
#1	80.0	00'	178 cf	Custom Stage Da	ta (Irregular)Listed	below (Recalc)
" 0	00.1	-01	50 · (4 cf x 40.0% Voids
#2	80.5	00	56 cf	Cultec C-100 x 4 Effective Size = 32		.86 sf x 7.50'L = 14.0 cf
					· · · · · · · · · · · · · · · · · · ·	'L with 0.50' Overlap
			234 cf	Total Available Sto	rage	-
					_	
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
Device	Routing	Inv	vert Outle	et Devices		
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grate	e C= 0.600	
			Limit	ted to weir flow at lo	w heads	
#2	Discarde	ed 80.	.00' 8.27	0 in/hr Exfiltration	over Wetted area	

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP15: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Invert	Avail.Storage	Storage Descript	ion		
#1	80.00'	178 c	Custom Stage I	Data (Irregular)Lis	ted below (Recalc)	
			500 cf Overall - 5	56 cf Embedded =	444 cf x 40.0% Vo	oids
#2	80.50'	56 c				
					> 1.86 sf x 7.50 L =	
			Overall Size= 36	.0"W x 12.5"H x 8.	00'L with 0.50' Ove	erlap
		234 c	Total Available S	torage		
Elevation	Surf.	.Area Perim	. Inc.Store	Cum.Store	Wet.Area	
(feet)	(sq-ft) (feet) (cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200 60.	0	0	200	
82.50		200 60.	500	500	350	

Type III 24-hr 10 Year Event Rainfall=4.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP2: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inve	ert Avail	l.Storage	Storage Descriptio	n	
#1	80.0	0'	178 cf	Custom Stage Da		
" 0	00.5	01	50 · (4 cf x 40.0% Voids
#2	80.5	0	56 cf	Cultec C-100 x 4		.86 sf x 7.50'L = 14.0 cf
					_	'L with 0.50' Overlap
			234 cf	Total Available Sto		
					-	
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
ъ .	D (;					
Device	Routing	In۱	<u>/ert Outle</u>	et Devices		
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grat	e C= 0.600	
#2	Discarde	4 90		ed to weir flow at lo		
#2	Discarde	u 80.	.00 0.27	U III/III EXIIITIATION	over wetted area	

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 10 Year Event Rainfall=4.60"

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Summary for Pond LP3: 10'x 20 field

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inve	rt Avail	.Storage	Storage Descriptio	n		
#1	80.00	0'	178 cf	Custom Stage Da			
#2	80.50	า'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		14 cf x 40.0% Voids	
#2	00.50	J	30 CI			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0	"W x 12.5"H x 8.00	0'L with 0.50' Overlap	
			234 cf	Total Available Sto	orage		
Clayatia	.n. (Curf Araa	Dorim	Ina Ctara	Cum Store	Mot Aroo	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	:t)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
D	D	1.		of Day land			
Device	Routing	Inv	<u>ert Outle</u>	et Devices			
#1	Primary	82.	40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
			Limit	ted to weir flow at lo	w heads		
#2	Discarded	d 80.	00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP4: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

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Volume	Invert	Avail.S	torage	Storage Description	n		
#1	80.00'		178 cf	Custom Stage Da			_
#2	80.50'		56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
""	00.00		00 01	Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf			
				Overall Size= 36.0'	'W x 12.5"H x 8.00	'L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
					•		
Elevation	Sur	f.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	
82.50		200	60.0	500	500	350	
Device F	Routing	Inver	t Outle	et Devices			
#1 F	Primary	82.40)' 6.0"	Horiz. Orifice/Grate	e C= 0.600		
	•		Limit	ed to weir flow at lov	w heads		
#2 [Discarded	80.00)' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP5: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Invert	Avail.Stora	age	Storage Description	on				
#1	80.00'	17	3 cf			ted below (Recalc)			
						444 cf x 40.0% Voi	ds		
#2	80.50'	5	3 cf	Cultec C-100 x 4	Cultec C-100 x 4 Inside #1				
				Effective Size= 32	2.1"W x 12.0"H =>	> 1.86 sf x 7.50'L = 1	14.0 cf		
				Overall Size= 36.0)"W x 12.5"H x 8.	00'L with 0.50' Over	lap		
		23	4 cf	Total Available St	orage				
Elevation	Surf.	Area Pe	rim.	Inc.Store	Cum.Store	Wet.Area			
(feet)	(:	sq-ft) (f	eet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
80.00		200	60.0	0	0	200			
82 50		200	30.0	500	500	350			

Type III 24-hr 10 Year Event Rainfall=4.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP6: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inve	ert Avail	l.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Da			
" 0	00.5	01	50 · (4 cf x 40.0% Voids	
#2	80.5	0	56 cf	Cultec C-100 x 4		86 cf v 7 50'l = 14.0 cf	
	Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap						
			234 cf	Total Available Sto			
					-		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
ъ .	D (;						
Device	Routing	In۱	<u>/ert Outle</u>	et Devices			
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
#2	Discarde	4 90		ed to weir flow at lo			
#2	Discarde	u 80.	.00 0.27	U III/III EXIIITIATION	over wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 10 Year Event Rainfall=4.60"

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Summary for Pond LP7: 10'x 20 field

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Inv	ert Avai	il.Storage	Storage Description	n		
#1	80.0	00'	178 cf	Custom Stage Date			
#2	80.9	50'	56 cf	500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids Cultec C-100 x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap			
-			234 cf	Total Available Sto		- Will old O'long	
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grate			
#2	Discarde	ed 80		ted to weir flow at low of the contraction of the c			

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP8: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

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Volume	Inve	ert Avai	l.Storage	Storage Description	n	
#1	80.0	00'	178 cf	Custom Stage Da	ta (Irregular)Listed	below (Recalc)
" 0	00.1	-01	50 · (4 cf x 40.0% Voids
#2	80.5	00	56 cf	Cultec C-100 x 4 Effective Size = 32		.86 sf x 7.50'L = 14.0 cf
					· · · · · · · · · · · · · · · · · · ·	'L with 0.50' Overlap
			234 cf	Total Available Sto	rage	-
					_	
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
Device	Routing	Inv	vert Outle	et Devices		
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grate	e C= 0.600	
			Limit	ted to weir flow at lo	w heads	
#2	Discarde	ed 80.	.00' 8.27	0 in/hr Exfiltration	over Wetted area	

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP9: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.16 cfs @ 12.07 hrs, Volume=	545 cf
Outflow =	0.05 cfs @ 12.37 hrs, Volume=	545 cf, Atten= 69%, Lag= 17.7 min
Discarded =	0.05 cfs @ 12.37 hrs, Volume=	545 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 80.90' @ 12.37 hrs Surf.Area= 200 sf Storage= 90 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 8.8 min (757.3 - 748.5)

Volume	Invert	Avail.Stora	age	Storage Description	on				
#1	80.00'	17	3 cf			ted below (Recalc)			
						444 cf x 40.0% Voi	ds		
#2	80.50'	5	3 cf	Cultec C-100 x 4	Cultec C-100 x 4 Inside #1				
				Effective Size= 32	2.1"W x 12.0"H =>	> 1.86 sf x 7.50'L = 1	14.0 cf		
				Overall Size= 36.0)"W x 12.5"H x 8.	00'L with 0.50' Over	lap		
		23	4 cf	Total Available St	orage				
Elevation	Surf.	Area Pe	rim.	Inc.Store	Cum.Store	Wet.Area			
(feet)	(:	sq-ft) (f	eet)	(cubic-feet)	(cubic-feet)	(sq-ft)			
80.00		200	60.0	0	0	200			
82 50		200	30.0	500	500	350			

Type III 24-hr 10 Year Event Rainfall=4.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.37 hrs HW=80.90' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond PE: Existing Infiltration Pond

Inflow Area =	3,300 sf,100.00% Impervious,	Inflow Depth = 4.36" for 10 Year Event event
Inflow =	0.34 cfs @ 12.07 hrs, Volume=	1,200 cf
Outflow =	0.08 cfs @ 11.95 hrs, Volume=	1,200 cf, Atten= 77%, Lag= 0.0 min
Discarded =	0.08 cfs @ 11.95 hrs, Volume=	1,200 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 91.73' @ 12.47 hrs Surf.Area= 392 sf Storage= 289 cf

Plug-Flow detention time= 21.4 min calculated for 1,198 cf (100% of inflow) Center-of-Mass det. time= 21.4 min (769.9 - 748.5)

<u>Volume</u>	Inve	ert Avail.	Storage	Storage Description	n		
#1	90.0	0'	320 cf	Custom Stage Date		below	
#2	#2 91.00'		368 cf	800 cf Overall x 40.0% Voids StormTech SC-740 x 8 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf			
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overla						L with 0.44' Overlap	
			688 cf	Total Available Sto	rage		
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
90.0	00	200	60.0	0	0	200	
94.0	00	200	60.0	800	800	440	
Device #1 #2	Routing Primary Discarded	93.5 d 90.0	50' 6.0 "	et Devices Vert. Orifice/Grate 0 in/hr Exfiltration o			

Discarded OutFlow Max=0.08 cfs @ 11.95 hrs HW=91.01' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Subcatchment L12: LOT 12

Type III 24-hr 25 Year Event Rainfall=5.60"

Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36"

Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf

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Time span=0.00-26.00 hrs, dt=0.05 hrs, 521 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Reach routing by Stor-Ind+Tra	ans method - Pond routing by Stor-Ind method
Subcatchment 1B: Ex. Bank Roof	Runoff Area=3,300 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.42 cfs 1,475 cf
Subcatchment 2B: Ex. Bank Parking Lot	Runoff Area=36,670 sf 59.99% Impervious Runoff Depth=4.24" Tc=5.0 min CN=88 Runoff=4.09 cfs 12,961 cf
Subcatchment3B: Ex. Landscape	Runoff Area=3,128 sf 0.00% Impervious Runoff Depth=2.85" Tc=5.0 min CN=74 Runoff=0.24 cfs 743 cf
Subcatchment 3P: 3P	Runoff Area=28,778 sf 7.13% Impervious Runoff Depth=3.04" Tc=5.0 min CN=76 Runoff=2.36 cfs 7,285 cf
Subcatchment 4P: 4P	Runoff Area=12,451 sf 47.31% Impervious Runoff Depth=3.93" Tc=5.0 min CN=85 Runoff=1.30 cfs 4,074 cf
Subcatchment 5P: 5P Flow Length=200'	Runoff Area=24,485 sf 0.00% Impervious Runoff Depth=2.85" Slope=0.0100 '/' Tc=14.4 min CN=74 Runoff=1.43 cfs 5,818 cf
Subcatchment 6P: 6P Flow Length=440'	Runoff Area=170,220 sf 0.76% Impervious Runoff Depth=2.85" Slope=0.0200 '/' Tc=15.2 min CN=74 Runoff=9.78 cfs 40,449 cf
Subcatchment 7P: 7P	Runoff Area=20,619 sf 52.80% Impervious Runoff Depth=4.14" Tc=5.0 min CN=87 Runoff=2.25 cfs 7,106 cf
Subcatchment 8P: 8P	Runoff Area=23,809 sf 45.16% Impervious Runoff Depth=3.93" Tc=5.0 min CN=85 Runoff=2.49 cfs 7,790 cf
Subcatchment 9P: 9P	Runoff Area=25,030 sf 54.05% Impervious Runoff Depth=4.14" Tc=5.0 min CN=87 Runoff=2.73 cfs 8,626 cf
Subcatchment 10P: 10P	Runoff Area=226,733 sf 0.90% Impervious Runoff Depth=2.85" w Length=850' Tc=19.0 min CN=74 Runoff=11.93 cfs 53,878 cf
Subcatchment 11P: 11P Flow Length=300'	Runoff Area=48,707 sf
Subcatchment L1: LOT 1	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L10: LOT 10	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L11: LOT 11	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf

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Type III 24-hr 25 Year Event Rainfall=5.60"

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Subcatchment L13: LOT 13	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L14: LOT 14	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L15: LOT 15	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L2: LOT 2	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L3: LOT 3	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L4: LOT 4	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L5: LOT 5	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L6: LOT 6	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L7: LOT 7	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L8: LOT 8	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
Subcatchment L9: LOT 9	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=5.36" Tc=5.0 min CN=98 Runoff=0.19 cfs 670 cf
18.0" Round Pipe n=0.013 L=60	g. Flow Depth=0.57' Max Vel=6.77 fps Inflow=4.20 cfs 10,256 cf 1.0' S=0.0167 '/' Capacity=13.56 cfs Outflow=4.20 cfs 10,256 cf
24.0" Round Pipe n=0.013 L=30.0	. Flow Depth=1.06' Max Vel=6.02 fps Inflow=10.18 cfs 37,244 cf D' S=0.0067 '/' Capacity=18.47 cfs Outflow=10.16 cfs 37,244 cf
18.0" Round Pipe n=0.013 L=6	g. Flow Depth=1.01' Max Vel=5.16 fps Inflow=6.54 cfs 24,283 cf :5.0' S=0.0062 '/' Capacity=8.24 cfs Outflow=6.51 cfs 24,283 cf
18.0" Round Pipe n=0.013 L=18	g. Flow Depth=0.97' Max Vel=4.61 fps Inflow=5.57 cfs 18,465 cf 10.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=5.41 cfs 18,465 cf
	g. Flow Depth=0.91' Max Vel=3.17 fps Inflow=3.54 cfs 11,359 cf 0.0' S=0.0025 '/' Capacity=5.21 cfs Outflow=3.44 cfs 11,359 cf
	vg. Flow Depth=0.59' Max Vel=2.65 fps Inflow=1.30 cfs 4,074 cf 90.0' S=0.0030 '/' Capacity=1.95 cfs Outflow=1.23 cfs 4,074 cf

Type III 24-hr 25 Year Event Rainfall=5.60"

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Reach 8R: 18" RCPAvg. Flow Depth=0.82' Max Vel=5.02 fps Inflow=4.95 cfs 16,416 cf

18.0" Round Pipe n=0.013 L=30.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=4.92 cfs 16,416 cf

Reach 9R: 18" RCPAvg. Flow Depth=0.92' Max Vel=4.54 fps Inflow=5.16 cfs 16,416 cf

18.0" Round Pipe n=0.013 L=280.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=4.95 cfs 16,416 cf

Reach 10R: 18" RCPAvg. Flow Depth=0.55' Max Vel=4.17 fps Inflow=2.49 cfs 7,790 cf

18.0" Round Pipe n=0.013 L=60.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=2.46 cfs 7,790 cf

Reach 11R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 12R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 13R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 14R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 15R: 12" RCPAvg. Flow Depth=0.32' Max Vel=5.75 fps Inflow=1.23 cfs 9,597 cf

12.0" Round Pipe n=0.013 L=20.0' S=0.0250 '/' Capacity=5.63 cfs Outflow=1.24 cfs 9,597 cf

Reach DCP1: DESIGN POINT #1 Inflow=4.20 cfs 10,256 cf

Outflow=4.20 cfs 10,256 cf

Reach DCP2: DESIGN POINT #2 Inflow=9.78 cfs 40,449 cf

Outflow=9.78 cfs 40,449 cf

Reach DCP3: DESIGN POINT #3 Inflow=13.10 cfs 63,475 cf

Outflow=13.10 cfs 63,475 cf

Peak Elev=97.68' Storage=8,471 cf Inflow=10.16 cfs 37,244 cf

Discarded=1.02 cfs 27,731 cf Primary=4.10 cfs 9,513 cf Outflow=5.12 cfs 37,244 cf

Pond 2P: Infiltration Pond #2 Peak Elev=94.46' Storage=7,638 cf Inflow=8.07 cfs 27,990 cf

Discarded=1.12 cfs 18,393 cf Primary=1.23 cfs 9,597 cf Outflow=2.35 cfs 27,990 cf

Pond LP1: 10'x 20 field Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf

Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf

Pond LP10: 10'x 20 field Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf

Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf

Pond LP11: 10'x 20 field Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf

Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf

Pond LP12: 10'x 20 field Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf

Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf

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Pond PE: Existing Infiltration Pond

Type III 24-hr 25 Year Event Rainfall=5.60" Printed 2/9/2017

Peak Elev=92.16' Storage=400 cf Inflow=0.42 cfs 1,475 cf

Discarded=0.08 cfs 1,475 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 1,475 cf

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Pond LP13: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP14: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP15: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP2: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP3: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP4: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP5: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP6: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP7: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP8: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf
Pond LP9: 10'x 20 field	Peak Elev=81.23' Storage=128 cf Inflow=0.19 cfs 670 cf Discarded=0.05 cfs 670 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 670 cf

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Summary for Subcatchment 1B: Ex. Bank Roof

0.42 cfs @ 12.07 hrs, Volume= Runoff

1,475 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN	Description				
*		3,300	98	Bank Roof				
_		3,300		100.00% Impervious Area				
	Тс	Length	Slope	Velocity	Capacity	Description		
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
	5.0					Direct Entry, DIRECT		

Summary for Subcatchment 2B: Ex. Bank Parking Lot

4.09 cfs @ 12.07 hrs, Volume= Runoff 12,961 cf, Depth= 4.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

A	rea (sf)	CN	Description						
	22,000	98	Paved parking & roofs						
	14,670	74							
	36,670	88	Weighted Average						
	14,670		40.01% Pervious Area						
	22,000		59.99% lmp	ervious Are	ea				
Tc (min)	Length (feet)		,	Capacity (cfs)	Description				
5.0	(1001)	(1010	(1000)	(0.0)	Direct Entry, direct				
	Tc (min)	22,000 14,670 36,670 14,670 22,000 Tc Length (min) (feet)	22,000 98 14,670 74 36,670 88 14,670 22,000 Tc Length Slope (min) (feet) (ft/ft)	22,000 98 Paved park 14,670 74 >75% Grass 36,670 88 Weighted A 14,670 40.01% Per 22,000 59.99% Imp Tc Length Slope Velocity (min) (feet) (ft/ft) (ft/sec)	22,000 98 Paved parking & roofs 14,670 74 >75% Grass cover, Go 36,670 88 Weighted Average 14,670 40.01% Pervious Area 22,000 59.99% Impervious Are Tc Length Slope Velocity Capacity (min) (feet) (ft/ft) (ft/sec) (cfs)	22,000 98 Paved parking & roofs 14,670 74 >75% Grass cover, Good, HSG C 36,670 88 Weighted Average 14,670 40.01% Pervious Area 22,000 59.99% Impervious Area Tc Length (ft/ft) Capacity Description (cfs)			

Summary for Subcatchment 3B: Ex. Landscape

Runoff 0.24 cfs @ 12.08 hrs, Volume= 743 cf, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	A	rea (sf)	CN [Description					
		3,128	74 >	>75% Grass cover, Good, HSG C					
		3,128	1	100.00% Pervious Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
_	5.0	•	•			Direct Entry, Direct			

Direct Entry, Direct

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Summary for Subcatchment 3P: 3P

Runoff 2.36 cfs @ 12.08 hrs, Volume= 7,285 cf, Depth= 3.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Area (sf)	CN	Description	Description				
*	2,051	98	Exisitng hou	ses				
	26,727	74	>75% Grass	cover, Go	ood, HSG C			
*	0	98	Roadway					
*	0	98	Sidewalks					
	28,778	76	Weighted Av	erage				
	26,727		92.87% Per	∕ious Area	1			
	2,051		7.13% Impe	rvious Area	a			
	Tc Length		•	Capacity	Description			
	(min) (feet)	(ft/	ft) (ft/sec)	(cfs)				
	5.0				Direct Entry, Direct			

Summary for Subcatchment 4P: 4P

1.30 cfs @ 12.07 hrs, Volume= Runoff 4,074 cf. Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

A	rea (sf)	CN	Description							
	6,560	74	>75% Gras	75% Grass cover, Good, HSG C						
*	5,891	98	Roadway &	Roadway & Sidewalks						
	12,451	85	Weighted A	Veighted Average						
	6,560		52.69% Pervious Area							
	5,891		47.31% lmp	ervious Ar	ea					
Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description					
5.0	(1001)	(1010	(1000)	(010)	Direct Entry, Direct					
0.0					Direct Link y, Direct					

Direct Entry, Direct

Summary for Subcatchment 5P: 5P

1.43 cfs @ 12.20 hrs, Volume= 5,818 cf, Depth= 2.85" Runoff

 Area (sf)	CN	Description
24,485	74	>75% Grass cover, Good, HSG C
 24,485		100.00% Pervious Area

Type III 24-hr 25 Year Event Rainfall=5.60"

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	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	10.8	50	0.0100	0.08		Sheet Flow, sheet flow
						Grass: Dense n= 0.240 P2= 3.20"
	3.6	150	0.0100	0.70		Shallow Concentrated Flow, Channel flow
_						Short Grass Pasture Kv= 7.0 fps
	14.4	200	Total			

Summary for Subcatchment 6P: 6P

Runoff = 9.78 cfs @ 12.21 hrs, Volume= 40,449 cf, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN E	escription				
*		1,290	98 E	xisitng hou	uses			
87,260 74 >75% Grass cover, Goo				75% Gras	s cover, Go	ood, HSG C		
81,670			73 V	Woods, Fair, HSG C				
	1	70,220	74 V	Veighted A	verage			
168,930			9	9.24% Per	vious Area			
		1,290	C	.76% Impe	ervious Are	a		
	Tc	Length	Slope	Velocity	Capacity	Description		
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)			
	12.3	50	0.0200	0.07		Sheet Flow, sheet flow		
						Woods: Light underbrush n= 0.400 P2= 3.20"		
	2.9	390	0.0200	2.28		Shallow Concentrated Flow, shallow		
						Unpaved Kv= 16.1 fps		
_	15.2	440	Total	•	•			

Summary for Subcatchment 7P: 7P

Runoff = 2.25 cfs @ 12.07 hrs, Volume= 7,106 cf, Depth= 4.14"

	Area (sf)	CN	Description
*	0	98	Exisitng houses
	9,732	74	>75% Grass cover, Good, HSG C
*	5,787	98	Roadway
*	5,100	98	Sidewalks & Drives
	20,619	87	Weighted Average
	9,732		47.20% Pervious Area
	10,887		52.80% Impervious Area

Type III 24-hr 25 Year Event Rainfall=5.60"

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Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0

Direct Entry, Direct

Summary for Subcatchment 8P: 8P

Runoff = 2.49 cfs @ 12.07 hrs, Volume=

7,790 cf, Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN	Description					
		13,057	74	>75% Gras	75% Grass cover, Good, HSG C				
*		5,722	98	Roadway					
*		3,790	98	Drives					
*		1,240	98	idewalks					
		23,809 85 Weighted Average							
		13,057		54.84% Pei	vious Area				
		10,752		45.16% lmp	pervious Ar	ea			
	Tc	Length	Slope	Velocity	Capacity	Description			
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	5.0					Direct Entry, Direct			

Summary for Subcatchment 9P: 9P

Runoff = 2.73 cfs @ 12.07 hrs, Volume=

8,626 cf, Depth= 4.14"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN	Description					
		11,501	74	>75% Gras	75% Grass cover, Good, HSG C				
*		8,588	98	Roadway					
*		3,970	98	Drives					
*		971	98	Sidewalks					
		25,030 87 Weighted Average							
		11,501		45.95% Per	vious Area	a			
		13,529		54.05% Imp	ervious Ar	rea			
	Tc	Length	Slop	e Velocity	Capacity	Description			
<u>(r</u>	min)	(feet)	(ft/ft) (ft/sec)	(cfs)				
	5.0					Direct Entry, Direct			

Summary for Subcatchment 10P: 10P

Runoff = 11.93 cfs @ 12.27 hrs, Volume= 53,878 cf, Depth= 2.85"

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	Α	rea (sf)	CN E	Description					
*		2,032	98 E	Exisitng houses					
		83,173	74 >	75% Gras	s cover, Go	ood, HSG C			
_	1	41,528	73 V	Woods, Fair, HSG C					
226,733			74 V	Weighted Average					
	2	24,701	9	99.10% Pervious Area					
		2,032	C	.90% Impe	ervious Area	a			
	Tc	Length	Slope	Velocity	Capacity	Description			
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
	7.4	50	0.0100	0.11		Sheet Flow, Sheet			
						Grass: Short n= 0.150 P2= 3.20"			
	10.1	430	0.0200	0.71		Shallow Concentrated Flow, Shallow			
						Woodland Kv= 5.0 fps			
	1.5	370	0.0100	4.09	24.53	Channel Flow, River Flow			
						Area= 6.0 sf Perim= 8.0' r= 0.75'			
_						n= 0.030 Earth, grassed & winding			
	19.0	850	Total						

Summary for Subcatchment 11P: 11P

Runoff = 3.24 cfs @ 12.14 hrs, Volume= 11,574 cf, Depth= 2.85"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN E	Description		
*		48,707	74 g	ırass		
	48,707 100.00% Pervious Area			00.00% Pe	ervious Are	a
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.6	50	0.0200	0.15		Sheet Flow, Sheet
	4.2	250	0.0200	0.99		Grass: Short n= 0.150 P2= 3.20" Shallow Concentrated Flow, shallow Short Grass Pasture Kv= 7.0 fps
	9.8	300	Total			·

Summary for Subcatchment L1: LOT 1

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 670 cf, Depth= 5.36"

Type III 24-hr 25 Year Event Rainfall=5.60"

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_	Д	rea (sf)	CN [Description		
•	•	1,500	98			
Ī		1,500	1	00.00% Im	Area	
	Tc	Length		Velocity	. ,	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L10: LOT 10

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN E	Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	rea
	Тс	3	Slope	•		Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry.

Summary for Subcatchment L11: LOT 11

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
		- 3	Slope	•		Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L12: LOT 12

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 670 cf, Depth= 5.36"

		Area (sf)	CN	Description	
4	*	1,500	98		
_		1,500		100.00% Impervious Area	

Type III 24-hr 25 Year Event Rainfall=5.60"

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	Tc	Length	Slope	Velocity	Capacity	Description	ı
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	-	
_							_

5.0

Direct Entry,

Summary for Subcatchment L13: LOT 13

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
_	5.0	•	•			Direct Entry,

Summary for Subcatchment L14: LOT 14

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

Α	rea (sf)	CN E	Description						
k .	1,500	98							
	1,500	1	100.00% Impervious Area						
Тс	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
5.0					Direct Entry.				

Summary for Subcatchment L15: LOT 15

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500	,	100.00% Im	Area	
		Length	Slope	,		Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

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Summary for Subcatchment L2: LOT 2

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN	Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	•	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L3: LOT 3

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc	Length	Slope		Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L4: LOT 4

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

_	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500		100.00% Im	npervious A	Area
		Length	Slope	,	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

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Summary for Subcatchment L5: LOT 5

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN	Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	•	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L6: LOT 6

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	Α	rea (sf)	CN E	Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0	•	•	· ·		Direct Entry,

Summary for Subcatchment L7: LOT 7

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

670 cf, Depth= 5.36"

_	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500		100.00% Im	npervious A	Area
		Length	Slope	,	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Type III 24-hr 25 Year Event Rainfall=5.60" Printed 2/9/2017

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Summary for Subcatchment L8: LOT 8

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L9: LOT 9

Runoff = 0.19 cfs @ 12.07 hrs, Volume= 670 cf, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 25 Year Event Rainfall=5.60"

	A	rea (sf)	CN D	<u>Description</u>		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Тс	- 3	Slope		Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Reach 1R: 18" RCP

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 0.92" for 25 Year Event event

Inflow = 4.20 cfs @ 12.34 hrs, Volume= 10,256 cf

Outflow = 4.20 cfs @ 12.34 hrs, Volume= 10,256 cf, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.77 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 1.40 fps, Avg. Travel Time= 0.7 min

Peak Storage= 37 cf @ 12.34 hrs Average Depth at Peak Storage= 0.57'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.56 cfs

18.0" Round Pipe

n = 0.013

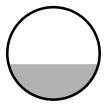
Length= 60.0' Slope= 0.0167 '/'

Inlet Invert= 94.00', Outlet Invert= 93.00'

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Summary for Reach 2R: 24" RCP

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 3.51" for 25 Year Event event

Inflow = 10.18 cfs @ 12.11 hrs, Volume= 37.244 cf

Outflow = 10.16 cfs @ 12.11 hrs, Volume= 37,244 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.02 fps, Min. Travel Time= 0.1 min Avg. Velocity = 2.02 fps, Avg. Travel Time= 0.2 min

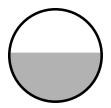
Peak Storage= 51 cf @ 12.11 hrs Average Depth at Peak Storage= 1.06'

Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.47 cfs

24.0" Round Pipe n= 0.013

Length= 30.0' Slope= 0.0067 '/'

Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach 3R: 18" RCP

Inflow Area = 90,833 sf, 25.68% Impervious, Inflow Depth = 3.21" for 25 Year Event event

Inflow = 6.54 cfs @ 12.13 hrs, Volume= 24,283 cf

Outflow = 6.51 cfs @ 12.13 hrs, Volume= 24,283 cf, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.16 fps, Min. Travel Time= 0.2 min Avg. Velocity = 1.79 fps, Avg. Travel Time= 0.6 min

Peak Storage= 82 cf @ 12.13 hrs Average Depth at Peak Storage= 1.01'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.24 cfs

18.0" Round Pipe

n = 0.013

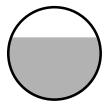
Length= 65.0' Slope= 0.0062 '/'

Inlet Invert= 96.10', Outlet Invert= 95.70'

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Summary for Reach 4R: 18" RCP

Inflow Area = 61,848 sf, 30.44% Impervious, Inflow Depth = 3.58" for 25 Year Event event

Inflow = 5.57 cfs @ 12.10 hrs, Volume= 18,465 cf

Outflow = 5.41 cfs @ 12.12 hrs, Volume= 18,465 cf, Atten= 3%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.61 fps, Min. Travel Time= 0.7 min Avg. Velocity = 1.54 fps, Avg. Travel Time= 1.9 min

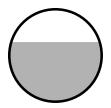
Peak Storage= 217 cf @ 12.11 hrs Average Depth at Peak Storage= 0.97

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe n= 0.013

Length= 180.0' Slope= 0.0050 '/'

Inlet Invert= 97.00', Outlet Invert= 96.10'



Summary for Reach 5R: 18" RCP

Inflow Area = 41,229 sf, 19.26% Impervious, Inflow Depth = 3.31" for 25 Year Event event

Inflow = 3.54 cfs @ 12.09 hrs, Volume= 11,359 cf

Outflow = 3.44 cfs @ 12.11 hrs, Volume= 11,359 cf, Atten= 3%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.17 fps, Min. Travel Time= 0.7 min Avg. Velocity = 1.06 fps, Avg. Travel Time= 2.0 min

Peak Storage= 145 cf @ 12.10 hrs Average Depth at Peak Storage= 0.91'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.21 cfs

18.0" Round Pipe

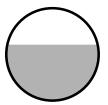
n = 0.013

Length= 130.0' Slope= 0.0025 '/'

Inlet Invert= 97.32', Outlet Invert= 97.00'

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Summary for Reach 6R: 12" RCP

Inflow Area = 12,451 sf, 47.31% Impervious, Inflow Depth = 3.93" for 25 Year Event event

Inflow = 1.30 cfs @ 12.07 hrs, Volume= 4,074 cf

Outflow = 1.23 cfs @ 12.11 hrs, Volume= 4,074 cf, Atten= 5%, Lag= 2.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

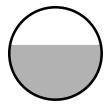
Max. Velocity= 2.65 fps, Min. Travel Time= 1.2 min Avg. Velocity = 0.90 fps, Avg. Travel Time= 3.5 min

Peak Storage= 92 cf @ 12.09 hrs Average Depth at Peak Storage= 0.59'

Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 1.95 cfs

12.0" Round Pipe n= 0.013 Length= 190.0' Slope= 0.0030 '/'

Inlet Invert= 97.90', Outlet Invert= 97.33'



Summary for Reach 7R: 10" ADS

Inflow Area = 28,778 sf, 7.13% Impervious, Inflow Depth = 3.04" for 25 Year Event event

Inflow = 2.36 cfs @ 12.08 hrs, Volume= 7,285 cf

Outflow = 2.34 cfs @ 12.08 hrs, Volume= 7,285 cf, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 9.26 fps, Min. Travel Time= 0.2 min Avg. Velocity = 3.36 fps, Avg. Travel Time= 0.5 min

Peak Storage= 24 cf @ 12.08 hrs Average Depth at Peak Storage= 0.39'

Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 5.20 cfs

10.0" Round Pipe

n= 0.010 PVC, smooth interior

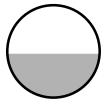
Length= 95.0' Slope= 0.0334 '/'

Inlet Invert= 100.50', Outlet Invert= 97.33'

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Summary for Reach 8R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 4.03" for 25 Year Event event

Inflow = 4.95 cfs @ 12.11 hrs, Volume= 16,416 cf

Outflow = 4.92 cfs @ 12.11 hrs, Volume= 16,416 cf, Atten= 1%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.02 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.68 fps, Avg. Travel Time= 0.3 min

Peak Storage= 30 cf @ 12.11 hrs Average Depth at Peak Storage= 0.82'

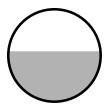
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe

n = 0.013

Length= 30.0' Slope= 0.0067 '/'

Inlet Invert= 92.90', Outlet Invert= 92.70'



Summary for Reach 9R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 4.03" for 25 Year Event event

Inflow = 5.16 cfs @ 12.08 hrs, Volume= 16,416 cf

Outflow = 4.95 cfs @ 12.11 hrs, Volume= 16,416 cf, Atten= 4%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.54 fps, Min. Travel Time= 1.0 min Avg. Velocity = 1.52 fps, Avg. Travel Time= 3.1 min

Peak Storage= 317 cf @ 12.09 hrs Average Depth at Peak Storage= 0.92'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe

n = 0.013

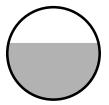
Length= 280.0' Slope= 0.0050 '/'

Inlet Invert= 94.30', Outlet Invert= 92.90'

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Summary for Reach 10R: 18" RCP

Inflow Area = 23,809 sf, 45.16% Impervious, Inflow Depth = 3.93" for 25 Year Event event

Inflow = 2.49 cfs @ 12.07 hrs, Volume= 7,790 cf

Outflow = 2.46 cfs @ 12.08 hrs, Volume= 7,790 cf, Atten= 1%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.17 fps, Min. Travel Time= 0.2 min Avg. Velocity = 1.41 fps, Avg. Travel Time= 0.7 min

Peak Storage= 35 cf @ 12.08 hrs Average Depth at Peak Storage= 0.55'

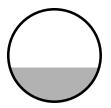
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe

n = 0.013

Length= 60.0' Slope= 0.0067 '/'

Inlet Invert= 94.70', Outlet Invert= 94.30'



Summary for Reach 11R: Outlets

Inflow Area = 4,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 25 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs. Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 25 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Type III 24-hr 25 Year Event Rainfall=5.60"

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Summary for Reach 13R: Outlets

Inflow Area = 3,000 sf,100.00% Impervious, Inflow Depth = 0.00" for 25 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 14R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 25 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 15R: 12" RCP

Inflow Area = 100,546 sf, 27.13% Impervious, Inflow Depth = 1.15" for 25 Year Event event

Inflow = 1.23 cfs @ 12.51 hrs, Volume= 9,597 cf

Outflow = 1.24 cfs @ 12.51 hrs, Volume= 9,597 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity = 5.75 fps, Min. Travel Time = 0.1 min

Avg. Velocity = 1.61 fps, Avg. Travel Time= 0.2 min

Peak Storage= 4 cf @ 12.51 hrs Average Depth at Peak Storage= 0.32'

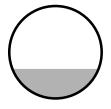
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.63 cfs

12.0" Round Pipe

n = 0.013

Length= 20.0' Slope= 0.0250 '/'

Inlet Invert= 92.50', Outlet Invert= 92.00'



Summary for Reach DCP1: DESIGN POINT #1

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 0.92" for 25 Year Event event

Inflow = 4.20 cfs @ 12.34 hrs, Volume= 10,256 cf

Outflow = 4.20 cfs @ 12.34 hrs. Volume= 10.256 cf. Atten= 0%. Lag= 0.0 min

Type III 24-hr 25 Year Event Rainfall=5.60"

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Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP2: DESIGN POINT #2

Inflow Area = 177,720 sf, 4.95% Impervious, Inflow Depth = 2.73" for 25 Year Event event

Inflow = 9.78 cfs @ 12.21 hrs, Volume= 40,449 cf

Outflow = 9.78 cfs @ 12.21 hrs, Volume= 40,449 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP3: DESIGN POINT #3

Inflow Area = 334,779 sf, 11.00% Impervious, Inflow Depth = 2.28" for 25 Year Event event

Inflow = 13.10 cfs @ 12.27 hrs, Volume= 63,475 cf

Outflow = 13.10 cfs @ 12.27 hrs, Volume= 63,475 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 3.51" for 25 Year Event event

Inflow = 10.16 cfs @ 12.11 hrs, Volume= 37,244 cf

Outflow = 5.12 cfs @ 12.34 hrs, Volume= 37,244 cf, Atten= 50%, Lag= 13.9 min

Discarded = 1.02 cfs @ 11.60 hrs, Volume= 27,731 cf Primary = 4.10 cfs @ 12.34 hrs, Volume= 9,513 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 97.68' @ 12.34 hrs Surf.Area= 5,325 sf Storage= 8,471 cf

Plug-Flow detention time= 29.0 min calculated for 37,173 cf (100% of inflow)

Center-of-Mass det. time= 28.9 min (840.0 - 811.1)

Volume	Invert Ava	ail.Storage	Storage Description	n					
#1	95.40'	4,699 cf	Custom Stage Da						
#2	95.90'	6,891 cf							
				Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap					
		11,590 cf	Total Available Sto	rage					
Elevation	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area				
(feet)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)				
95.40	5,325	292.0	0	0	5,325				
98.90 5,32		292.0	18,638	18,638	6,347				
Device Routing Invert Outlet Devices									

Device	Routing	invert	Outlet Devices
#1	Discarded	95.40'	8.270 in/hr Exfiltration over Surface area
#2	Primary	96.60'	1.3' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
			5.0' Crest Height

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Discarded OutFlow Max=1.02 cfs @ 11.60 hrs HW=95.44' (Free Discharge) 1=Exfiltration (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=4.09 cfs @ 12.34 hrs HW=97.68' (Free Discharge) 2=Sharp-Crested Rectangular Weir (Weir Controls 4.09 cfs @ 3.49 fps)

Summary for Pond 2P: Infiltration Pond #2

Inflow Area =	100,546 sf, 27.13% Impervious,	Inflow Depth = 3.34" for 25 Year Event event
Inflow =	8.07 cfs @ 12.12 hrs, Volume=	27,990 cf
Outflow =	2.35 cfs @ 12.51 hrs, Volume=	27,990 cf, Atten= 71%, Lag= 23.1 min
Discarded =	1.12 cfs @ 12.51 hrs, Volume=	18,393 cf
Primary =	1.23 cfs @ 12.51 hrs, Volume=	9,597 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 94.46' @ 12.51 hrs Surf.Area= 5,770 sf Storage= 7,638 cf

Plug-Flow detention time= 27.2 min calculated for 27,990 cf (100% of inflow) Center-of-Mass det. time= 27.2 min (843.5 - 816.3)

Volume	Inve	rt Avail.	Storage	Storage Descriptio	n		
#1	92.50)' 1:	9,107 cf	Custom Stage Da	ita (Irregular)Liste	d below	
Elevation (fee		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
92.5	50	2,105	235.0	0	0	2,105	
93.0	00	2,850	255.0	1,234	1,234	2,894	
94.0	00	4,720	306.0	3,746	4,980	5,188	
95.0	00	7,025	360.0	5,834	10,814	8,070	
96.0	00	9,629	412.0	8,293	19,107	11,287	
Device	Routing	Inve	ert Outle	et Devices			
#1	Primary	94.8	30' 2.0'	long Sharp-Creste	d Rectangular W	eir 2 End Contraction	ı(s)
				Crest Height			
#2	Primary	92.5	50' 6.0"	Vert. Orifice/Grate	C = 0.600		
#3	Discarded	92.5	50' 8.27	0 in/hr Exfiltration	over Surface are	a	

Conductivity to Groundwater Elevation = 0.00'

Discarded OutFlow Max=1.12 cfs @ 12.51 hrs HW=94.45' (Free Discharge) **3=Exfiltration** (Controls 1.12 cfs)

Primary OutFlow Max=1.23 cfs @ 12.51 hrs HW=94.45' (Free Discharge)

1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

—2=Orifice/Grate (Orifice Controls 1.23 cfs @ 6.29 fps)

Type III 24-hr 25 Year Event Rainfall=5.60"

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#2

Discarded

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Summary for Pond LP1: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Inve	ert Avail	I.Storage	Storage Description			
#1	80.0	00'	178 cf	Custom Stage Data			
				500 cf Overall - 56 c	f Embedded = 44	14 cf x 40.0% Voids	
#2	80.5	50'	56 cf	Cultec C-100 x 4 In			
				Effective Size= 32.1'	'W x 12.0"H => 1	.86 sf x 7.50'L = 14.0 c	of
				Overall Size= 36.0"V	V x 12.5"H x 8.00)'L with 0.50' Overlap	
			234 cf	Total Available Stora	ige		
Elevation	n	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	Inv	vert Outle	et Devices			
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grate	C= 0.600		

Limited to weir flow at low heads 80.00' **8.270 in/hr Exfiltration over Wetted area**

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge)

2=Exfiltration (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP10: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

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Volume	Inve	ert Avail.	Storage	Storage Description	n	
#1	80.0	0'	178 cf	Custom Stage Da	ta (Irregular)Listed	,
#2	80.5	Ο'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids
π ∠	00.5	O	30 CI			86 sf x 7.50'L = 14.0 cf
				Overall Size= 36.0'	'W x 12.5"H x 8.00'	L with 0.50' Overlap
			234 cf	Total Available Sto	rage	
Elevatio		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
ъ .	D ('					
<u>Device</u>	Routing	Inv	ert Outle	et Devices		
#1	Primary	82.4	40' 6.0"	Horiz. Orifice/Grate	e C= 0.600	
			Limit	ed to weir flow at lov	w heads	
#2	Discarde	d 80.0	00' 8.27	0 in/hr Exfiltration	over Wetted area	

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP11: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow)

60.0

Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

200

82.50

Volume	Invert	Avail.Stor	age	Storage Descripti	on		
#1	80.00'	17	8 cf			ted below (Recalc)	
						444 cf x 40.0% Vo	ids
#2	80.50'	5	6 cf	Cultec C-100 x 4			
					-	> 1.86 sf x 7.50'L =	
				Overall Size= 36.	0"W x 12.5"H x 8.	00'L with 0.50' Ove	rlap
		23	4 cf	Total Available S	torage		
					-		
Elevation	Surf.	Area Pe	rim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(9	sq-ft) (i	eet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	0.0	0	0	200	

500

500

350

Type III 24-hr 25 Year Event Rainfall=5.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP12: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Inve	ert Avai	I.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Da			
						4 cf x 40.0% Voids	
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 EOU 44.0 or	<u>r</u>
					_	.86 sf x 7.50'L = 14.0 c 'L with 0.50' Overlap	I
			22.4 of			L WILLI 0.50 Overlap	
			234 cf	Total Available Sto	rage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	d 80		ed to weir flow at lo o in/hr Exfiltration			

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

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Summary for Pond LP13: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Invert	Avail.Storage	Storage Description
#1	80.00'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)
			500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids
#2	80.50'	56 cf	Cultec C-100 x 4 Inside #1
			Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf
			Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap
		234 cf	Total Available Storage

Elevation	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(feet)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
80.00	200	60.0	0	0	200
82.50	200	60.0	500	500	350

Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP14: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

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Volume	Inve	rt Avail.	Storage	Storage Description	n	
#1	80.08	0'	178 cf	Custom Stage Dat	ta (Irregular)Listed	below (Recalc)
#2	80.5	0'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids
<i></i>	00.0		00 01			86 sf x 7.50'L = 14.0 cf
				Overall Size= 36.0"	'W x 12.5"H x 8.00'	L with 0.50' Overlap
			234 cf	Total Available Sto	rage	
Elevation		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
80.0	00	200	60.0	0	0	200
82.5	50	200	60.0	500	500	350
Device	Routing	Inve	ert Outle	et Devices		
#1	Primary	82.4		6.0" Horiz. Orifice/Grate C= 0.600		
			Limit	ted to weir flow at lov	w heads	
#2	Discarded	0.08 b	00' 8.27	0 in/hr Exfiltration o	over Wetted area	

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP15: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow)

60.0

Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

200

82.50

Volume	Invert	Avail.Sto	rage	Storage Descript	ion		
#1	80.00'	1	78 cf			sted below (Recalc 444 cf x 40.0% V	
#2	80.50'		56 cf	Cultec C-100 x 4		: 444 Cl X 40.0% V	olas
					-	> 1.86 sf x 7.50'L =	
				Overall Size= 36	<u>.0"W x 12.5"H x 8</u>	.00'L with 0.50' Ov	erlap
		2	34 cf	Total Available S	torage		
Elevation	Surf.	Area F	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(s	sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	

500

500

350

Type III 24-hr 25 Year Event Rainfall=5.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge)
1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP2: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Inve	ert Avai	I.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)			
						4 cf x 40.0% Voids	
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 EOU 44.0 or	<u>r</u>
					_	.86 sf x 7.50'L = 14.0 c 'L with 0.50' Overlap	I
			22.4 of			L WILLI 0.50 Overlap	
			234 cf	Total Available Sto	rage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	d 80		ed to weir flow at lo o in/hr Exfiltration			

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

#2

Discarded

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Summary for Pond LP3: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Inve	ert Avai	I.Storage	Storage Description				
#1	80.0	00'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)				
						144 cf x 40.0% Voi	ds	
#2	80.5	50'	56 cf	Cultec C-100 x 4				
						1.86 sf x 7.50 'L = 1		
				Overall Size= 36.	0"W x 12.5"H x 8.0	00'L with 0.50' Over	lap	
			234 cf	Total Available St	orage			
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area		
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)		
80.0	00	200	60.0	0	0	200		
82.5	50	200	60.0	500	500	350		
Device	Routing	Inv	vert Outle	et Devices				
#1	Primary	82	.40' 6.0"	Horiz. Orifice/Gra	te C= 0.600			
	,		Limit	ed to weir flow at l	ow heads			

80.00' 8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP4: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

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Volume	Invert	Avail.S	torage	Storage Description	n		
#1	80.00'		178 cf	Custom Stage Da			_
#2	80.50'		56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
""	00.00		00 01			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0'	'W x 12.5"H x 8.00	'L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
					•		
Elevation	Sur	f.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	
82.50		200	60.0	500	500	350	
Device F	Routing	Inver	t Outle	et Devices			
#1 F	Primary	mary 82.40' 6.0" Horiz. Orifice/Grate C= 0.600					
	•		Limit	ed to weir flow at lov	w heads		
#2 [Discarded	80.00)' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP5: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow)

Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Invert	Avail.St	orage	Storage Descripti	on		
#1	80.00'	•	178 cf			ted below (Recalc)	
						444 cf x 40.0% Vc	oids
#2	80.50'		56 cf	Cultec C-100 x 4	Inside #1		
				Effective Size= 32	2.1"W x 12.0"H =:	> 1.86 sf x 7.50'L =	14.0 cf
				Overall Size= 36.	0"W x 12.5"H x 8	.00'L with 0.50' Ove	erlap
		2	234 cf	Total Available St	orage		
Elevation	Surf.	Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(:	sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	
82.50		200	60.0	500	500	350	

Type III 24-hr 25 Year Event Rainfall=5.60"

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#1 Primary 82.40' **6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads 80.00' **8.270 in/hr Exfiltration over Wetted area**

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP6: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Inve	ert Avail	l.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf				
" 0	00.5	01	50 · (500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids			
#2	80.5	0	56 cf	Cultec C-100 x 4		.86 sf x 7.50'L = 14.0 cf	
					_	'L with 0.50' Overlap	
			234 cf	Total Available Sto			
					-		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
ъ .	D (;						
Device	Routing	In۱	<u>/ert Outle</u>	et Devices			
#1	Primary	82.	.40' 6.0"	Horiz. Orifice/Grat	e C= 0.600		
#2			ited to weir flow at low heads 70 in/hr Exfiltration over Wetted area				
#2	Discarde	u 80.	.00 0.27	U III/III EXIIITIATION	over wetted area		

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 25 Year Event Rainfall=5.60"

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Summary for Pond LP7: 10'x 20 field

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow)

Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Inv	ert Avai	il.Storage	Storage Description	n		
#1	80.0	00'	178 cf	Custom Stage Da			
#2	90.1	=O'	56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
#2	80.	50	36 CI			.86 sf x 7.50'L = 14.0 cf	
						L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
Elevation	nn.	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		6.0" Horiz. Orifice/Grate C= 0.600			
40	Discord	.d 00		ted to weir flow at low heads			
#2 Discarded 80.00' 8.27 (70 in/hr Exfiltration over Wetted area					

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP8: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow) Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

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Volume	Inve	ert Avail	.Storage	Storage Description	n		
#1	80.0	00'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)			
#2	80.5	50'	500 cf Overall - 56 cf Embedded = 444 c 56 cf			.86 sf x 7.50'L = 14.0 cf	
•			234 cf	Total Available Sto	rage	·	
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	Ó	0	200	
82.5	50	200	60.0	500	500	350	
Device	e Routing Invert Outlet Devices						
#1	Primary			Horiz. Orifice/Grate			
#2	Discarde	d 80.		ted to weir flow at logonial formation of the contraction of the contr			

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP9: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.19 cfs @ 12.07 hrs, Volume=	670 cf
Outflow =	0.05 cfs @ 12.41 hrs, Volume=	670 cf, Atten= 72%, Lag= 20.1 min
Discarded =	0.05 cfs @ 12.41 hrs, Volume=	670 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.23' @ 12.41 hrs Surf.Area= 200 sf Storage= 128 cf

Plug-Flow detention time= 12.3 min calculated for 669 cf (100% of inflow)

Center-of-Mass det. time= 12.3 min (757.6 - 745.3)

Volume	Invert	Avail.Stor	age	Storage Description	on		
#1	80.00'	17	8 cf	Custom Stage Da			
						444 cf x 40.0% V	oids
#2	80.50'	5	6 cf	Cultec C-100 x 4	Inside #1		
				Effective Size= 32	2.1"W x 12.0"H =:	> 1.86 sf x 7.50'L =	: 14.0 cf
				Overall Size= 36.0)"W x 12.5"H x 8	.00'L with 0.50' Ove	erlap
		23	4 cf	Total Available Sto	orage		
Elevation	Surf.	Area Pe	erim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(:	sq-ft) (eet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	
82.50		200	0.0	500	500	350	

Type III 24-hr 25 Year Event Rainfall=5.60"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.05 cfs @ 12.41 hrs HW=81.23' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond PE: Existing Infiltration Pond

Inflow Area =	3,300 sf,100.00% Impervious,	Inflow Depth = 5.36" for 25 Year Event event
Inflow =	0.42 cfs @ 12.07 hrs, Volume=	1,475 cf
Outflow =	0.08 cfs @ 14.45 hrs, Volume=	1,475 cf, Atten= 81%, Lag= 142.8 min
Discarded =	0.08 cfs @ 14.45 hrs, Volume=	1,475 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 92.16' @ 12.53 hrs Surf.Area= 371 sf Storage= 400 cf

Plug-Flow detention time= 31.2 min calculated for 1,472 cf (100% of inflow) Center-of-Mass det. time= 31.2 min (776.4 - 745.3)

Volume	Inve	ert Avai	I.Storage	Storage Description	on		
#1	90.0	0'	320 cf	Custom Stage Da	ata (Irregular)Liste	ed below	
				800 cf Overall x 4	0.0% Voids		
#2	91.0	0'	368 cf	StormTech SC-74	40 x 8		
						6.45 sf x 7.12'L = 45	
				Overall Size= 51.0)"W x 30.0"H x 7.5	6'L with 0.44' Overla	p
			688 cf	Total Available Sto	orage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
90.0	00	200	60.0	0	0	200	
94.0	00	200	60.0	800	800	440	
Device	Routing	ln [,]	vert Outle	et Devices			
#1	Primary	93	.50' 6.0"	Vert. Orifice/Grate	C = 0.600		
#2	Discarde	d 90	.00' 8.27	0 in/hr Exfiltration	over Surface are	a	

Discarded OutFlow Max=0.08 cfs @ 14.45 hrs HW=91.02' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

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Type III 24-hr 100 Year Event Rainfall=6.80" Printed 2/9/2017

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Time span=0.00-26.00 hrs, dt=0.05 hrs, 521 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1B: Ex. Bank Roof	Runoff Area=3,300 sf	100.00% Impervious	Runoff Depth=6.56"
	To-	FOmin CN-00 Bun	off_0 51 ofc 1 004 of

Tc=5.0 min CN=98 Runoff=0.51 cfs 1,804 cf

Subcatchment 2B: Ex. Bank Parking Lot Runoff Area=36,670 sf 59.99% Impervious Runoff Depth=5.40"

Tc=5.0 min CN=88 Runoff=5.14 cfs 16,499 cf

Subcatchment 3B: Ex. Landscape Runoff Area=3,128 sf 0.00% Impervious Runoff Depth=3.87"

Tc=5.0 min CN=74 Runoff=0.33 cfs 1,008 cf

Subcatchment 3P: 3P Runoff Area=28,778 sf 7.13% Impervious Runoff Depth=4.08"

Tc=5.0 min CN=76 Runoff=3.16 cfs 9,784 cf

Subcatchment 4P: 4P Runoff Area=12,451 sf 47.31% Impervious Runoff Depth=5.06"

Tc=5.0 min CN=85 Runoff=1.66 cfs 5,252 cf

Subcatchment 5P: 5P Runoff Area=24,485 sf 0.00% Impervious Runoff Depth=3.87"

Flow Length=200' Slope=0.0100 '/' Tc=14.4 min CN=74 Runoff=1.95 cfs 7,893 cf

Subcatchment 6P: 6P Runoff Area=170,220 sf 0.76% Impervious Runoff Depth=3.87"

Flow Length=440' Slope=0.0200 '/' Tc=15.2 min CN=74 Runoff=13.30 cfs 54,871 cf

Subcatchment 7P: 7P Runoff Area=20,619 sf 52.80% Impervious Runoff Depth=5.29"

Tc=5.0 min CN=87 Runoff=2.84 cfs 9,083 cf

Subcatchment 8P: 8P Runoff Area=23,809 sf 45.16% Impervious Runoff Depth=5.06"

Tc=5.0 min CN=85 Runoff=3.18 cfs 10,043 cf

Subcatchment 9P: 9P Runoff Area=25,030 sf 54.05% Impervious Runoff Depth=5.29"

Tc=5.0 min CN=87 Runoff=3.45 cfs 11,026 cf

Subcatchment 10P: 10P Runoff Area=226,733 sf 0.90% Impervious Runoff Depth=3.87"

Flow Length=850' Tc=19.0 min $\,$ CN=74 $\,$ Runoff=16.22 cfs 73,088 cf

Subcatchment 11P: 11P Runoff Area=48,707 sf 0.00% Impervious Runoff Depth=3.87"

Flow Length=300' Slope=0.0200 '/' Tc=9.8 min CN=74 Runoff=4.40 cfs 15,701 cf

Subcatchment L1: LOT 1 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56"

Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf

Subcatchment L10: LOT 10 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56"

Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf

Subcatchment L11: LOT 11 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56"

Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf

Subcatchment L12: LOT 12 Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56"

Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf

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Reach 6R: 12" RCP

Type III 24-hr 100 Year Event Rainfall=6.80"

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Subcatchment L13: LOT 13	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L14: LOT 14	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L15: LOT 15	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L2: LOT 2	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L3: LOT 3	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L4: LOT 4	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L5: LOT 5	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L6: LOT 6	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L7: LOT 7	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L8: LOT 8	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
Subcatchment L9: LOT 9	Runoff Area=1,500 sf 100.00% Impervious Runoff Depth=6.56" Tc=5.0 min CN=98 Runoff=0.23 cfs 820 cf
	/g. Flow Depth=0.77' Max Vel=7.74 fps Inflow=7.09 cfs 16,978 cf 0.0' S=0.0167 '/' Capacity=13.56 cfs Outflow=7.04 cfs 16,978 cf
	g. Flow Depth=1.25' Max Vel=6.38 fps Inflow=13.16 cfs 48,511 cf .0' S=0.0067 '/' Capacity=18.47 cfs Outflow=13.13 cfs 48,511 cf
	/g. Flow Depth=1.29' Max Vel=5.31 fps Inflow=8.60 cfs 32,012 cf 65.0' S=0.0062 '/' Capacity=8.24 cfs Outflow=8.56 cfs 32,012 cf
	/g. Flow Depth=1.19' Max Vel=4.79 fps Inflow=7.24 cfs 24,119 cf 80.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=7.03 cfs 24,119 cf
	/g. Flow Depth=1.11' Max Vel=3.34 fps Inflow=4.67 cfs 15,036 cf 30.0' S=0.0025 '/' Capacity=5.21 cfs Outflow=4.54 cfs 15,036 cf

Reach 7R: 10" ADSAvg. Flow Depth=0.47' Max Vel=9.95 fps Inflow=3.16 cfs 9,784 cf 10.0" Round Pipe n=0.010 L=95.0' S=0.0334 '/' Capacity=5.20 cfs Outflow=3.14 cfs 9,784 cf

12.0" Round Pipe n=0.013 L=190.0' S=0.0030 '/' Capacity=1.95 cfs Outflow=1.57 cfs 5,252 cf

Avg. Flow Depth=0.70' Max Vel=2.78 fps Inflow=1.66 cfs 5,252 cf

Type III 24-hr 100 Year Event Rainfall=6.80"

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Reach 8R: 18" RCP Avg. Flow Depth=0.95' Max Vel=5.30 fps Inflow=6.29 cfs 21,069 cf

18.0" Round Pipe n=0.013 L=30.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=6.26 cfs 21,069 cf

Reach 9R: 18" RCPAvg. Flow Depth=1.09' Max Vel=4.74 fps Inflow=6.55 cfs 21,069 cf

18.0" Round Pipe n=0.013 L=280.0' S=0.0050 '/' Capacity=7.43 cfs Outflow=6.29 cfs 21,069 cf

Reach 10R: 18" RCP Avg. Flow Depth=0.63' Max Vel=4.45 fps Inflow=3.18 cfs 10,043 cf

18.0" Round Pipe n=0.013 L=60.0' S=0.0067 '/' Capacity=8.58 cfs Outflow=3.13 cfs 10,043 cf

Reach 11R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 12R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 13R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 14R: Outlets Inflow=0.00 cfs 0 cf

Outflow=0.00 cfs 0 cf

Reach 15R: 12" RCP Avg. Flow Depth=0.39' Max Vel=6.42 fps Inflow=1.85 cfs 13,680 cf

12.0" Round Pipe n=0.013 L=20.0' S=0.0250 '/' Capacity=5.63 cfs Outflow=1.85 cfs 13,680 cf

Reach DCP1: DESIGN POINT #1 Inflow=7.04 cfs 16,978 cf

Outflow=7.04 cfs 16,978 cf

Reach DCP2: DESIGN POINT #2 Inflow=13.30 cfs 54,871 cf

Outflow=13.30 cfs 54,871 cf

Reach DCP3: DESIGN POINT #3 Inflow=17.56 cfs 86,768 cf

Outflow=17.56 cfs 86,768 cf

Pond 1P: POND #1 Peak Elev=98.24' Storage=10,165 cf Inflow=13.13 cfs 48,511 cf

Discarded=1.02 cfs 32,541 cf Primary=6.94 cfs 15,970 cf Outflow=7.96 cfs 48,511 cf

Pond 2P: Infiltration Pond #2 Peak Elev=94.97' Storage=10,617 cf Inflow=10.54 cfs 36,770 cf

Discarded=1.35 cfs 23,090 cf Primary=1.85 cfs 13,680 cf Outflow=3.20 cfs 36,770 cf

Pond LP1: 10'x 20 field Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf

Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf

Pond LP10: 10'x 20 field Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf

Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf

Pond LP11: 10'x 20 field Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf

Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf

Pond LP12: 10'x 20 field Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf

Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf

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Type III 24-hr 100 Year Event Rainfall=6.80"

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Pond LP13: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP14: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP15: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP2: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP3: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP4: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP5: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP6: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP7: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP8: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf
Pond LP9: 10'x 20 field	Peak Elev=81.77' Storage=175 cf Inflow=0.23 cfs 820 cf Discarded=0.06 cfs 820 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 820 cf

Pond PE: Existing Infiltration Pond Peak Elev=92.78' Storage=543 cf Inflow=0.51 cfs 1,804 cf Discarded=0.08 cfs 1,804 cf Primary=0.00 cfs 0 cf Outflow=0.08 cfs 1,804 cf

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Summary for Subcatchment 1B: Ex. Bank Roof

Runoff 0.51 cfs @ 12.07 hrs, Volume= 1,804 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN	Description		
*		3,300	98	Bank Roof		
		3,300		100.00% Im	npervious A	Area
	Тс	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry, DIRECT

Summary for Subcatchment 2B: Ex. Bank Parking Lot

5.14 cfs @ 12.07 hrs, Volume= 16,499 cf, Depth= 5.40" Runoff

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

Ar	rea (sf)	CN	<u>Description</u>					
	22,000	98						
	14,670	74	>75% Grass cover, Good, HSG C					
,	36,670	88	Weighted A	verage				
	14,670 40.01% Pervious Area							
	22,000 59.99% Impervious Area							
Tc	Length	Slope	,	Capacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
5.0					Direct Entry, direct			

Summary for Subcatchment 3B: Ex. Landscape

Runoff 0.33 cfs @ 12.08 hrs, Volume= 1,008 cf, Depth= 3.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	A	rea (sf)	CN [Description						
		3,128	74 >	>75% Grass cover, Good, HSG C						
		3,128	1	100.00% Pervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
_	5.0	•	•			Direct Entry, Direct				

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Summary for Subcatchment 3P: 3P

Runoff = 3.16 cfs @ 12.08 hrs, Volume= 9,784 cf, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Area (sf)) CN	Description							
*	2,051	98	Exisitng hou	Exisitng houses						
	26,727	74	>75% Grass	>75% Grass cover, Good, HSG C						
*	0	98	Roadway	Roadway						
*	0	98	Sidewalks							
	28,778	76	Weighted A	verage						
	26,727	,	92.87% Per	vious Area	a					
	2,051		7.13% Impe	rvious Area	ea ea					
	Tc Lengt			Capacity	•					
_	(min) (fee	t) (ft/	ft) (ft/sec)	(cfs)						
	5.0				Direct Entry, Direct					

Summary for Subcatchment 4P: 4P

Runoff = 1.66 cfs @ 12.07 hrs, Volume= 5,252 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN	Description	Description						
		6,560	74	>75% Gras	75% Grass cover, Good, HSG C						
*		5,891	98	Roadway & Sidewalks							
		12,451	85	Weighted A	verage						
		6,560		52.69% Pervious Area							
		5,891		47.31% lmp	pervious Ar	rea					
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description					
-	5.0	(.001)	(1010	, ((010)	Direct Entry, Direct					

Direct Entry, Direct

Summary for Subcatchment 5P: 5P

Runoff = 1.95 cfs @ 12.20 hrs, Volume= 7,893 cf, Depth= 3.87"

 Area (sf)	CN	Description
24,485	74	>75% Grass cover, Good, HSG C
 24,485		100.00% Pervious Area

Type III 24-hr 100 Year Event Rainfall=6.80"

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	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	10.8	50	0.0100	0.08		Sheet Flow, sheet flow
	3.6	150	0.0100	0.70		Grass: Dense n= 0.240 P2= 3.20" Shallow Concentrated Flow, Channel flow
_						Short Grass Pasture Kv= 7.0 fps
	14.4	200	Total			

Summary for Subcatchment 6P: 6P

Runoff = 13.30 cfs @ 12.21 hrs, Volume= 54,871 cf, Depth= 3.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN E	escription		
*		1,290	98 E	xisitng hou	uses	
		87,260	74 >	75% Gras	s cover, Go	ood, HSG C
_		81,670	73 V	Voods, Fai	r, HSG C	
170,220 74 Weighted Averag			Veighted A	verage		
168,930			9.24% Per	vious Area		
1,290 0.76% Impervi			.76% Impe	ervious Area	a	
	Tc	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	12.3	50	0.0200	0.07		Sheet Flow, sheet flow
						Woods: Light underbrush n= 0.400 P2= 3.20"
	2.9	390	0.0200	2.28		Shallow Concentrated Flow, shallow
						Unpaved Kv= 16.1 fps
	15.2	440	Total			

Summary for Subcatchment 7P: 7P

Runoff = 2.84 cfs @ 12.07 hrs, Volume= 9,083 cf, Depth= 5.29"

	Area (sf)	CN	Description			
*	0	98	Exisitng houses			
	9,732	74	>75% Grass cover, Good, HSG C			
*	5,787	98	Roadway			
*	5,100	98	Sidewalks & Drives			
	20,619	87	Weighted Average			
	9,732		47.20% Pervious Area			
	10,887		52.80% Impervious Area			

Type III 24-hr 100 Year Event Rainfall=6.80"

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Tc	Length	Slope	Velocity	Capacity	Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0 **Direct Entry, Direct**

Summary for Subcatchment 8P: 8P

Runoff 3.18 cfs @ 12.07 hrs, Volume= 10,043 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	Α	rea (sf)	CN	Description						
		13,057	74	>75% Gras	>75% Grass cover, Good, HSG C					
*		5,722	98	Roadway	Roadway					
*		3,790	98	Drives						
*		1,240	98	Sidewalks	Sidewalks					
		23,809	85	Weighted Average						
		13,057		54.84% Per	vious Area	a e e e e e e e e e e e e e e e e e e e				
		10,752		45.16% Imp	ervious Ar	rea				
	Tc	Length	Slop	e Velocity	Capacity	Description				
_	(min)	(feet)	(ft/f	(ft/sec)	(cfs)					
	5.0					Direct Entry, Direct				

Direct Entry, Direct

Summary for Subcatchment 9P: 9P

3.45 cfs @ 12.07 hrs, Volume= 11,026 cf, Depth= 5.29" Runoff

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN	Description						
		11,501	74	>75% Grass cover, Good, HSG C						
*		8,588	98	Roadway						
*		3,970	98	Drives						
*		971	98	Sidewalks	Sidewalks					
		25,030	87	Weighted Average						
		11,501		45.95% Pervious Area						
		13,529		54.05% Imp	ervious Ar	rea				
	Tc	Length	Slop	e Velocity	Capacity	Description				
<u>(r</u>	min)	(feet)	(ft/ft) (ft/sec)	(cfs)					
	5.0					Direct Entry, Direct				

Summary for Subcatchment 10P: 10P

Runoff 16.22 cfs @ 12.26 hrs, Volume= 73,088 cf, Depth= 3.87"

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	Area (sf)	CN E	escription						
*	2,032	98 E	xisitng hou	uses					
	83,173	74 >	75% Grass cover, Good, HSG C						
	141,528	73 V	Voods, Fair, HSG C						
226,733 74 Weighted Average									
	224,701	9	9.10% Pei	vious Area					
	2,032	0	.90% Impe	ervious Area	a				
To	-	Slope	Velocity	Capacity	Description				
(min) (feet)	(ft/ft)	(ft/sec)	(cfs)					
7.4	50	0.0100	0.11		Sheet Flow, Sheet				
					Grass: Short n= 0.150 P2= 3.20"				
10.1	430	0.0200	0.71		Shallow Concentrated Flow, Shallow				
					Woodland Kv= 5.0 fps				
1.5	370	0.0100	4.09	24.53	Channel Flow, River Flow				
					Area= 6.0 sf Perim= 8.0' r= 0.75'				
					n= 0.030 Earth, grassed & winding				
19.0	850	Total							

Summary for Subcatchment 11P: 11P

Runoff = 4.40 cfs @ 12.14 hrs, Volume= 15,701 cf, Depth= 3.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	Α	rea (sf)	CN E	Description		
*		48,707	74 g	rass		
		48,707	1	00.00% Pe	ervious Are	a
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
_	5.6	50	0.0200	0.15	, ,	Sheet Flow, Sheet
	4.2	250	0.0200	0.99		Grass: Short n= 0.150 P2= 3.20" Shallow Concentrated Flow, shallow Short Grass Pasture Kv= 7.0 fps
	9.8	300	Total	•	•	

Summary for Subcatchment L1: LOT 1

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 820 cf, Depth= 6.56"

Type III 24-hr 100 Year Event Rainfall=6.80"

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_	А	rea (sf)	CN E	escription						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	·				
_	5.0	((2 - 7	()	(/	Direct Entry,				

Summary for Subcatchment L10: LOT 10

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	100.00% Im	npervious A	vrea
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry.

Summary for Subcatchment L11: LOT 11

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN [Description						
*		1,500	98							
		1,500	1	100.00% Impervious Area						
		- 3	Slope	•		Description				
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	5.0					Direct Entry,				

Summary for Subcatchment L12: LOT 12

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 820 cf, Depth= 6.56"

	Area (sf)	CN	Description	
*	1,500	98		
	1,500		100.00% Impervious Area	

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	Tc	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0

Direct Entry,

Summary for Subcatchment L13: LOT 13

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
_	5.0	•	•			Direct Entry,

Summary for Subcatchment L14: LOT 14

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	A	rea (sf)	CN [Description					
*		1,500	98						
		1,500	100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
_	5.0				, ,	Direct Entry,			

Summary for Subcatchment L15: LOT 15

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 8

820 cf, Depth= 6.56"

	Α	rea (sf)	CN	Description						
*		1,500	98							
		1,500	,	100.00% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	5.0	, ,	,	,	, ,	Direct Entry,				

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Summary for Subcatchment L2: LOT 2

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L3: LOT 3

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN E	Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0	•	•	· ·		Direct Entry,

Summary for Subcatchment L4: LOT 4

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	pervious A	Area
		Length	Slope	•		Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

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Summary for Subcatchment L5: LOT 5

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Тс	Length	Slope	•	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L6: LOT 6

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN E	Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	5.0	•	•	· ·		Direct Entry,

Summary for Subcatchment L7: LOT 7

Runoff = 0.23 cfs @ 12.07 hrs, Volume=

820 cf, Depth= 6.56"

_	Α	rea (sf)	CN I	Description		
*		1,500	98			
		1,500		100.00% Im	npervious A	Area
		Length	Slope	,	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Subcatchment L8: LOT 8

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

_	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	,	100.00% Im	npervious A	Area
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	5.0					Direct Entry,

Summary for Subcatchment L9: LOT 9

Runoff = 0.23 cfs @ 12.07 hrs, Volume= 820 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Type III 24-hr 100 Year Event Rainfall=6.80"

	Α	rea (sf)	CN [Description		
*		1,500	98			
		1,500	1	00.00% Im	npervious A	Area
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
_	5.0	(/		,/	(/	Direct Entry,

Summary for Reach 1R: 18" RCP

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 1.52" for 100 Year Event event

Inflow = 7.09 cfs @ 12.27 hrs, Volume= 16,978 cf

Outflow = 7.04 cfs @ 12.28 hrs, Volume= 16,978 cf, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 7.74 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 1.55 fps, Avg. Travel Time= 0.6 min

Peak Storage= 55 cf @ 12.27 hrs

Average Depth at Peak Storage= 0.77'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.56 cfs

18.0" Round Pipe

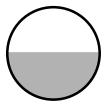
n = 0.013

Length= 60.0' Slope= 0.0167 '/'

Inlet Invert= 94.00', Outlet Invert= 93.00'

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Summary for Reach 2R: 24" RCP

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 4.57" for 100 Year Event event

Inflow = 13.16 cfs @ 12.11 hrs, Volume= 48,511 cf

Outflow = 13.13 cfs @ 12.11 hrs, Volume= 48,511 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.38 fps, Min. Travel Time= 0.1 min Avg. Velocity = 2.16 fps, Avg. Travel Time= 0.2 min

Peak Storage= 62 cf @ 12.11 hrs Average Depth at Peak Storage= 1.25'

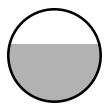
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.47 cfs

24.0" Round Pipe

n = 0.013

Length= 30.0' Slope= 0.0067 '/'

Inlet Invert= 95.65', Outlet Invert= 95.45'



Summary for Reach 3R: 18" RCP

Inflow Area = 90,833 sf, 25.68% Impervious, Inflow Depth = 4.23" for 100 Year Event event

Inflow = 8.60 cfs @ 12.13 hrs, Volume= 32,012 cf

Outflow = 8.56 cfs @ 12.13 hrs, Volume= 32,012 cf, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.31 fps, Min. Travel Time= 0.2 min Avg. Velocity = 1.91 fps, Avg. Travel Time= 0.6 min

Peak Storage= 105 cf @ 12.13 hrs Average Depth at Peak Storage= 1.29'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.24 cfs

18.0" Round Pipe

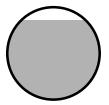
n = 0.013

Length= 65.0' Slope= 0.0062 '/'

Inlet Invert= 96.10', Outlet Invert= 95.70'

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Summary for Reach 4R: 18" RCP

Inflow Area = 61,848 sf, 30.44% Impervious, Inflow Depth = 4.68" for 100 Year Event event

Inflow = 7.24 cfs @ 12.10 hrs, Volume= 24,119 cf

Outflow = 7.03 cfs @ 12.11 hrs, Volume= 24,119 cf, Atten= 3%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.79 fps, Min. Travel Time= 0.6 min Avg. Velocity = 1.65 fps, Avg. Travel Time= 1.8 min

Peak Storage= 271 cf @ 12.10 hrs Average Depth at Peak Storage= 1.19'

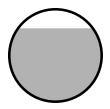
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe

n = 0.013

Length= 180.0' Slope= 0.0050 '/'

Inlet Invert= 97.00', Outlet Invert= 96.10'



Summary for Reach 5R: 18" RCP

Inflow Area = 41,229 sf, 19.26% Impervious, Inflow Depth = 4.38" for 100 Year Event event

Inflow = 4.67 cfs @ 12.09 hrs, Volume= 15,036 cf

Outflow = 4.54 cfs @ 12.11 hrs, Volume= 15,036 cf, Atten= 3%, Lag= 1.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.34 fps, Min. Travel Time= 0.6 min Avg. Velocity = 1.13 fps, Avg. Travel Time= 1.9 min

Peak Storage= 182 cf @ 12.10 hrs Average Depth at Peak Storage= 1.11'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.21 cfs

18.0" Round Pipe

n = 0.013

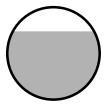
Length= 130.0' Slope= 0.0025 '/'

Inlet Invert= 97.32', Outlet Invert= 97.00'

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Summary for Reach 6R: 12" RCP

Inflow Area = 12,451 sf, 47.31% Impervious, Inflow Depth = 5.06" for 100 Year Event event

Inflow = 1.66 cfs @ 12.07 hrs, Volume= 5,252 cf

Outflow = 1.57 cfs @ 12.11 hrs, Volume= 5,252 cf, Atten= 5%, Lag= 2.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.78 fps, Min. Travel Time= 1.1 min Avg. Velocity = 0.96 fps, Avg. Travel Time= 3.3 min

Peak Storage= 112 cf @ 12.09 hrs Average Depth at Peak Storage= 0.70'

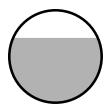
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 1.95 cfs

12.0" Round Pipe

n = 0.013

Length= 190.0' Slope= 0.0030 '/'

Inlet Invert= 97.90', Outlet Invert= 97.33'



Summary for Reach 7R: 10" ADS

Inflow Area = 28,778 sf, 7.13% Impervious, Inflow Depth = 4.08" for 100 Year Event event

Inflow = 3.16 cfs @ 12.08 hrs, Volume= 9.784 cf

Outflow = 3.14 cfs @ 12.08 hrs, Volume= 9,784 cf, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 9.95 fps, Min. Travel Time= 0.2 min Avg. Velocity = 3.58 fps, Avg. Travel Time= 0.4 min

Peak Storage= 30 cf @ 12.08 hrs Average Depth at Peak Storage= 0.47'

Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 5.20 cfs

10.0" Round Pipe

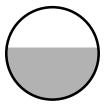
n= 0.010 PVC, smooth interior

Length= 95.0' Slope= 0.0334 '/'

Inlet Invert= 100.50', Outlet Invert= 97.33'

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Summary for Reach 8R: 18" RCP

48,839 sf, 49.72% Impervious, Inflow Depth = 5.18" for 100 Year Event event Inflow Area =

Inflow 6.29 cfs @ 12.11 hrs, Volume= 21,069 cf

6.26 cfs @ 12.11 hrs, Volume= 21,069 cf, Atten= 0%, Lag= 0.2 min Outflow

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

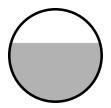
Max. Velocity= 5.30 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.79 fps, Avg. Travel Time= 0.3 min

Peak Storage= 36 cf @ 12.11 hrs Average Depth at Peak Storage= 0.95'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe n = 0.013Length= 30.0' Slope= 0.0067 '/'

Inlet Invert= 92.90', Outlet Invert= 92.70'



Summary for Reach 9R: 18" RCP

Inflow Area = 48,839 sf, 49.72% Impervious, Inflow Depth = 5.18" for 100 Year Event event

Inflow 6.55 cfs @ 12.08 hrs, Volume= 21,069 cf

Outflow 6.29 cfs @ 12.11 hrs, Volume= 21,069 cf, Atten= 4%, Lag= 1.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.74 fps, Min. Travel Time= 1.0 min Avg. Velocity = 1.61 fps, Avg. Travel Time= 2.9 min

Peak Storage= 385 cf @ 12.09 hrs Average Depth at Peak Storage= 1.09'

Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 7.43 cfs

18.0" Round Pipe

n = 0.013

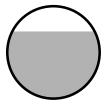
Length= 280.0' Slope= 0.0050 '/'

Inlet Invert= 94.30', Outlet Invert= 92.90'

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Summary for Reach 10R: 18" RCP

Inflow Area = 23.809 sf, 45.16% Impervious, Inflow Depth = 5.06" for 100 Year Event event

Inflow = 3.18 cfs @ 12.07 hrs, Volume= 10,043 cf

Outflow = 3.13 cfs @ 12.08 hrs, Volume= 10,043 cf, Atten= 1%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.45 fps, Min. Travel Time= 0.2 min Avg. Velocity = 1.50 fps, Avg. Travel Time= 0.7 min

Peak Storage= 42 cf @ 12.08 hrs Average Depth at Peak Storage= 0.63'

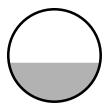
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.58 cfs

18.0" Round Pipe

n = 0.013

Length= 60.0' Slope= 0.0067 '/'

Inlet Invert= 94.70', Outlet Invert= 94.30'



Summary for Reach 11R: Outlets

Inflow Area = 4,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 100 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs. Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 100 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume = 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Reach 13R: Outlets

Inflow Area = 3,000 sf,100.00% Impervious, Inflow Depth = 0.00" for 100 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 14R: Outlets

Inflow Area = 7,500 sf,100.00% Impervious, Inflow Depth = 0.00" for 100 Year Event event

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach 15R: 12" RCP

Inflow Area = 100,546 sf, 27.13% Impervious, Inflow Depth = 1.63" for 100 Year Event event

Inflow = 1.85 cfs @ 12.49 hrs, Volume= 13,680 cf

Outflow = 1.85 cfs @ 12.49 hrs, Volume= 13,680 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.42 fps, Min. Travel Time= 0.1 min Avg. Velocity = 1.83 fps, Avg. Travel Time= 0.2 min

Peak Storage= 6 cf @ 12.49 hrs Average Depth at Peak Storage= 0.39'

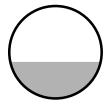
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.63 cfs

12.0" Round Pipe

n = 0.013

Length= 20.0' Slope= 0.0250 '/'

Inlet Invert= 92.50', Outlet Invert= 92.00'



Summary for Reach DCP1: DESIGN POINT #1

Inflow Area = 133,931 sf, 36.31% Impervious, Inflow Depth = 1.52" for 100 Year Event event

Inflow = 7.04 cfs @ 12.28 hrs, Volume= 16,978 cf

Outflow = 7.04 cfs @ 12.28 hrs, Volume= 16,978 cf, Atten= 0%, Lag= 0.0 min

Type III 24-hr 100 Year Event Rainfall=6.80"

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Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP2: DESIGN POINT #2

Inflow Area = 177,720 sf, 4.95% Impervious, Inflow Depth = 3.71" for 100 Year Event event

Inflow = 13.30 cfs @ 12.21 hrs, Volume= 54,871 cf

Outflow = 13.30 cfs @ 12.21 hrs, Volume= 54,871 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Reach DCP3: DESIGN POINT #3

Inflow Area = 334,779 sf, 11.00% Impervious, Inflow Depth = 3.11" for 100 Year Event event

Inflow = 17.56 cfs @ 12.27 hrs, Volume= 86,768 cf

Outflow = 17.56 cfs @ 12.27 hrs, Volume= 86,768 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: POND #1

Inflow Area = 127,503 sf, 35.55% Impervious, Inflow Depth = 4.57" for 100 Year Event event

Inflow = 13.13 cfs @ 12.11 hrs, Volume= 48,511 cf

Outflow = 7.96 cfs @ 12.27 hrs, Volume= 48,511 cf, Atten= 39%, Lag= 9.9 min

Discarded = 1.02 cfs @ 11.30 hrs, Volume= 32,541 cf Primary = 6.94 cfs @ 12.27 hrs, Volume= 15,970 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 98.24' @ 12.27 hrs Surf.Area= 5,325 sf Storage= 10,165 cf

Plug-Flow detention time= 28.0 min calculated for 48,418 cf (100% of inflow)

Center-of-Mass det. time= 27.9 min (831.9 - 804.0)

Volume	Invert A	vail.Storage	Storage Descripti	on		
#1	95.40'	4,699 cf	Custom Stage D 18,638 cf Overall		ted below ded = 11,746 cf x 40.0% '	 Voids
#2	95.90'	6,891 cf	StormTech SC-740 x 150 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap			
		11,590 cf	Total Available St	torage	·	
Elevation (feet)	Surf.Are (sq-f		Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
95.40 98.90	5,32 5,32		0 18,638	0 18,638	5,325 6,347	
	outing		et Devices			

DEVICE	Routing	IIIVEIL	Outlet Devices
#1	Discarded	95.40'	8.270 in/hr Exfiltration over Surface area
#2	Primary	96.60'	1.3' long Sharp-Crested Rectangular Weir 2 End Contraction(s) 5.0' Crest Height

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Discarded OutFlow Max=1.02 cfs @ 11.30 hrs HW=95.44' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 1.02 cfs)

Primary OutFlow Max=6.86 cfs @ 12.27 hrs HW=98.22' (Free Discharge) 2=Sharp-Crested Rectangular Weir (Weir Controls 6.86 cfs @ 4.33 fps)

Summary for Pond 2P: Infiltration Pond #2

Inflow Area =	100,546 sf, 27.13% Impervious,	Inflow Depth = 4.39" for 100 Year Event event
Inflow =	10.54 cfs @ 12.12 hrs, Volume=	36,770 cf
Outflow =	3.20 cfs @ 12.49 hrs, Volume=	36,770 cf, Atten= 70%, Lag= 22.2 min
Discarded =	1.35 cfs @ 12.49 hrs, Volume=	23,090 cf
Primary =	1.85 cfs @ 12.49 hrs, Volume=	13,680 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 94.97' @ 12.49 hrs Surf.Area= 6,947 sf Storage= 10,617 cf

Plug-Flow detention time= 32.6 min calculated for 36,770 cf (100% of inflow) Center-of-Mass det. time= 32.6 min (841.5 - 808.9)

Volume	Inver	t Avail.	Storage	Storage Description	n		
#1	92.50)' 19	9,107 cf	Custom Stage Da	ta (Irregular)Liste	d below	
Elevation (fee	-	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
92.5	50	2,105	235.0	0	0	2,105	
93.0	00	2,850	255.0	1,234	1,234	2,894	
94.0	00	4,720	306.0	3,746	4,980	5,188	
95.0	00	7,025	360.0	5,834	10,814	8,070	
96.0	00	9,629	412.0	8,293	19,107	11,287	
Device	Routing	Inve	ert Outle	et Devices			
#1	Primary	94.8			d Rectangular We	eir 2 End Contraction(s)	
#2 #3	Primary Discarded	92.5 92.5	60' 6.0" 60' 8.27	Crest Height Vert. Orifice/Grate o in/hr Exfiltration ductivity to Groundw	over Surface area		

Discarded OutFlow Max=1.35 cfs @ 12.49 hrs HW=94.96' (Free Discharge) **3=Exfiltration** (Controls 1.35 cfs)

Primary OutFlow Max=1.84 cfs @ 12.49 hrs HW=94.96' (Free Discharge)
—1=Sharp-Crested Rectangular Weir (Weir Controls 0.43 cfs @ 1.34 fps)
—2=Orifice/Grate (Orifice Controls 1.41 cfs @ 7.17 fps)

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Pond LP1: 10'x 20 field

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

Invert	Avail.Storage	Storage Description
80.00'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)
		500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids
80.50'	56 cf	Cultec C-100 x 4 Inside #1
		Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf
		Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap
	234 cf	Total Available Storage
	80.00'	80.00' 178 cf 80.50' 56 cf

Elevation	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area
(feet)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)
80.00	200	60.0	0	0	200
82.50	200	60.0	500	500	350

Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP10: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

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82.50

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Volume	Invert	Avail.S	Storage	Storage Description	า		
#1	80.00'		178 cf	Custom Stage Date			
#2	80.50'		56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
	00.00		00 0.	Effective Size= 32.	1"W x 12.0"H => 1.	86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0'	<u>'W x 12.5"H x 8.00'</u>	L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
Elevation	ı Sur	f.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet))	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00)	200	60.0	0	0	200	
82.50)	200	60.0	500	500	350	
Device	Routing	Inve	rt Outle	et Devices			
#1	Primary	82.40	O' 6.0"	Horiz. Orifice/Grate	e C= 0.600		
	•		Limit	nited to weir flow at low heads			
#2	Discarded	80.00	o' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP11: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

200

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

60.0

Volume	Invert	Avail.	Storage	Storage Description	n		
#1	80.00'		178 cf	Custom Stage Da			
				500 cf Overall - 56	cf Embedded = 4	144 cf x 40.0% Vo	oids
#2	80.50'		56 cf	Cultec C-100 x 4	Inside #1		
				Effective Size= 32	.1"W x 12.0"H =>	1.86 sf x 7.50'L =	14.0 cf
				Overall Size= 36.0	"W x 12.5"H x 8.0	00'L with 0.50' Ove	erlap
			234 cf	Total Available Storage			
Elevation	Surf.	.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(:	sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	

500

500

350

Type III 24-hr 100 Year Event Rainfall=6.80"

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Device	Routing	Invert	Outlet Devices		
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate	C= 0.600	_

Limited to weir flow at low heads #2 Discarded 80.00' 8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP12: 10'x 20 field

Inflow Area	1 =	1,500 sf	,100.00% Impervious,	Inflow Depth = 6.56	5" for 100 Year Event event
Inflow	=	0.23 cfs @	12.07 hrs, Volume=	820 cf	
Outflow	=	0.06 cfs @	12.43 hrs, Volume=	820 cf, At	ten= 75%, Lag= 21.6 min
Discarded	=	0.06 cfs @	12.43 hrs, Volume=	820 cf	
Primary	=	0.00 cfs @	0.00 hrs, Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

Volume	Inve	ert Avai	I.Storage	Storage Description	n		
#1	80.0	0'	178 cf	Custom Stage Da			
		-1				4 cf x 40.0% Voids	
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 FOIL 44.0 of	
						86 sf x 7.50'L = 14.0 cf	
						L with 0.50' Overlap	—
			234 cf	Total Available Sto	rage		
		0 ()	ъ .	. 0.	0 0	NA 4	
Elevation		Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	<u>(sq-ft)</u>	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82	.40' 6.0"	Horiz. Orifice/Grate	e C= 0.600		
	_		Limit	ed to weir flow at lov	w heads		
#2	Discarde	d 80	.00' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

#2

Discarded

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Pond LP13: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

<u>Volume</u>	Inve	ert Avail.	Storage	Storage Description			
#1	80.0	00'	178 cf	Custom Stage Data			
#2	80.5	50'	56 cf	500 cf Overall - 56 cf Cultec C-100 x 4 In		14 ct x 40.0% Voids	
#2	00.0	00	30 CI			.86 sf x 7.50'L = 14.0	cf
				Overall Size= 36.0"V	V x 12.5"H x 8.00	L with 0.50 Overlap	
			234 cf	Total Available Stora	ige		
Elevation	n	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	t)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
	5						
<u>Device</u>	Routing	Inv	ert Outle	et Devices			
#1	Primary	82.4	40' 6.0"	Horiz. Orifice/Grate	C = 0.600		

Limited to weir flow at low heads

80.00' 8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP14: 10'x 20 field

Inflow Area	1 =	1,500 sf	,100.00% Impervious,	Inflow Depth = 6.56"	for 100 Year Event event
Inflow	=	0.23 cfs @	12.07 hrs, Volume=	820 cf	
Outflow	=	0.06 cfs @	12.43 hrs, Volume=	820 cf, Atte	en= 75%, Lag= 21.6 min
Discarded	=	0.06 cfs @	12.43 hrs, Volume=	820 cf	
Primary	=	0.00 cfs @	0.00 hrs, Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

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82.50

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Volume	Inve	ert Avai	I.Storage	Storage Description	on		
#1	80.0	0'	178 cf		ata (Irregular)Liste		
#2	80.5	0'	56 cf	500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids Cultec C-100 x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf			
					-	7.66 St x 7.50 L = 14.0 Ct 0'L with 0.50' Overlap	
			234 cf	Total Available Sto		JE Will 0.00 Overlap	
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82	.40' 6.0"	Horiz. Orifice/Gra	te C= 0.600		
#2	Discarde	d 80		ed to weir flow at lo in/hr Exfiltration			

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP15: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

200

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

60.0

Volume	Invert	Avail.Sto	rage	Storage Descript	ion			
#1	80.00'	1	78 cf			sted below (Recalc		
#2	80.50'		56 cf	500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids Cultec C-100 x 4 Inside #1				
						> 1.86 sf x 7.50'L =		
				Overall Size= 36	<u>.0"W x 12.5"H x 8</u>	.00'L with 0.50' Ov	erlap	
		2	34 cf	Total Available S	torage			
Elevation	Surf.	Area F	Perim.	Inc.Store	Cum.Store	Wet.Area		
(feet)	(s	sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)		
80.00		200	60.0	0	0	200		

500

500

350

Type III 24-hr 100 Year Event Rainfall=6.80"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP2: 10'x 20 field

Inflow Area	a =	1,500 sf,100.	00% Impervious,	Inflow Depth = 6	56" for 100 Year E	vent event
Inflow	=	0.23 cfs @ 12.0	7 hrs, Volume=	820 cf		
Outflow	=	0.06 cfs @ 12.4	3 hrs, Volume=	820 cf,	Atten= 75%, Lag= 2	1.6 min
Discarded	=	0.06 cfs @ 12.4	3 hrs, Volume=	820 cf	-	
Primary	=	0.00 cfs @ 0.0	0 hrs, Volume=	0 cf		

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

Volume	Inve	ert Avai	I.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Da			
						4 cf x 40.0% Voids	
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 EOU 44.0 or	<u>r</u>
					_	.86 sf x 7.50'L = 14.0 c 'L with 0.50' Overlap	I
			22.4 of			L WILLI 0.50 Overlap	
			234 cf	Total Available Sto	rage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	d 80		ed to weir flow at lo o in/hr Exfiltration			

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

#2

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Pond LP3: 10'x 20 field

Inflow Area = 1,500 sf,100.00% Impervious, Inflow Depth = 6.56" for 100 Year Event event Inflow 0.23 cfs @ 12.07 hrs. Volume= 820 cf 0.06 cfs @ 12.43 hrs, Volume= Outflow = 820 cf, Atten= 75%, Lag= 21.6 min 0.06 cfs @ 12.43 hrs, Volume= 820 cf Discarded = Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

<u>Volume</u>	Inv	<u>ert Avai</u>	I.Storage	Storage Description	on		
#1	80.0	00'	178 cf	Custom Stage Da 500 cf Overall - 56		ed below (Recalc) 44 cf x 40.0% Voids	
#2	80.5	50'	56 cf	Cultec C-100 x 4			
				Effective Size= 32	.1"W x 12.0"H =>	1.86 sf x 7.50'L = 14	.0 cf
				Overall Size= 36.0)"W x 12.5"H x 8.0	0'L with 0.50' Overla	р
			234 cf	Total Available Sto	orage		
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	Inv	vert Outle	et Devices			
#1	Primary	82.		Horiz. Orifice/Gra			

Discarded 80.00' 8.270 in/hr Exfiltration over Wetted area **Discarded OutFlow** Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **-2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP4: 10'x 20 field

Inflow Area	1 =	1,500 sf	,100.00% Impervious,	Inflow Depth = 6.56"	for 100 Year Event event
Inflow	=	0.23 cfs @	12.07 hrs, Volume=	820 cf	
Outflow	=	0.06 cfs @	12.43 hrs, Volume=	820 cf, Atte	n= 75%, Lag= 21.6 min
Discarded	=	0.06 cfs @	12.43 hrs, Volume=	820 cf	
Primary	=	0.00 cfs @	0.00 hrs, Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

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80.00

82.50

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200

350

0

500

Volume	Inve	rt Avail.	Storage	Storage Descriptio	n		
#1	80.00)'	178 cf	Custom Stage Da			
#2	80.50)'	56 cf	500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids Cultec C-100 x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap			
			234 cf	Total Available Sto		2 mar ordo o ronap	
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	00	200	60.0	Ó	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	Inv	ert Outle	et Devices			
#1	Primary	82.4		Horiz. Orifice/Grat			
#2	Discarded	d 80.0		ted to weir flow at logonia to the contraction to t			

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP5: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

60.0

60.0

200

200

Volume	Invert	Avail.Storage	Storage Description	1				
#1	80.00'	178 cf	Custom Stage Data (Irregular)Listed below (Recalc)					
# 0	00.50	50 (500 cf Overall - 56 cf Embedded = 444 cf x 40.0% Voids				
#2	80.50'	56 cf	Cultec C-100 x 4		20 - 1 - 7 - 5011 - 440 - 1			
					$86 \text{ sf } \times 7.50 \text{'L} = 14.0 \text{ cf}$			
			Overall Size= 36.0"	VV X 12.5 H X 8.00 I	_ with 0.50 Overlap			
		234 cf	Total Available Stor	rage				
Elevation	Surf.A		Inc.Store	Cum.Store	Wet.Area			
(feet)	(50	q-ft) (feet)	(cubic-feet)	(cubic-feet)	(sq-ft)			

0

500

Type III 24-hr 100 Year Event Rainfall=6.80"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
	•		Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP6: 10'x 20 field

Inflow Area	a =	1,500 sf,100.	00% Impervious,	Inflow Depth = 6	56" for 100 Year E	vent event
Inflow	=	0.23 cfs @ 12.0	7 hrs, Volume=	820 cf		
Outflow	=	0.06 cfs @ 12.4	3 hrs, Volume=	820 cf,	Atten= 75%, Lag= 2	1.6 min
Discarded	=	0.06 cfs @ 12.4	3 hrs, Volume=	820 cf	-	
Primary	=	0.00 cfs @ 0.0	0 hrs, Volume=	0 cf		

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

Volume	Inve	ert Avai	I.Storage	Storage Descriptio	n		
#1	80.0	0'	178 cf	Custom Stage Da			
						4 cf x 40.0% Voids	
#2	80.5	0'	56 cf	Cultec C-100 x 4		00 of v 7 EOU 44.0 or	<u>r</u>
					_	.86 sf x 7.50'L = 14.0 c 'L with 0.50' Overlap	I
			22.4 of			L WILLI 0.50 Overlap	
			234 cf	Total Available Sto	rage		
Elevation	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.0	00	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	d 80		ed to weir flow at lo o in/hr Exfiltration			

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Type III 24-hr 100 Year Event Rainfall=6.80"

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Summary for Pond LP7: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

Volume	Inv	ert Ava	il.Storage	Storage Descriptio	n		
#1	80.0	00'	178 cf	Custom Stage Da		d below (Recalc) 14 cf x 40.0% Voids	
#2	80.5	50'	56 cf	Cultec C-100 x 4	Inside #1	.86 sf x 7.50'L = 14.0 cf	:
)'L with 0.50' Overlap	
			234 cf	Total Available Sto			
Elevatio		Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
80.0	•	200	60.0	0	0	200	
82.5	50	200	60.0	500	500	350	
Device	Routing	In	vert Outle	et Devices			
#1	Primary	82		Horiz. Orifice/Grat			
#2	Discarde	ed 80		ed to weir flow at lo 0 in/hr Exfiltration			

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP8: 10'x 20 field

Inflow Area	1 =	1,500 sf	,100.00% Impervious	s, Inflow Depth = 6.	.56" for 100	Year Event event
Inflow	=	0.23 cfs @	12.07 hrs, Volume:	= 820 cf		
Outflow	=	0.06 cfs @	12.43 hrs, Volume:	= 820 cf,	Atten= 75%,	Lag= 21.6 min
Discarded	=	0.06 cfs @	12.43 hrs, Volume:	= 820 cf		
Primary	=	0.00 cfs @	0.00 hrs, Volume:	= 0 cf		

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

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82.50

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Volume	Invert	Avail.S	torage	Storage Description	n		
#1	80.00'		178 cf	Custom Stage Da			_
#2	80.50'		56 cf	500 cf Overall - 56 Cultec C-100 x 4		4 cf x 40.0% Voids	
""	00.00		00 01			.86 sf x 7.50'L = 14.0 cf	
				Overall Size= 36.0'	'W x 12.5"H x 8.00	'L with 0.50' Overlap	
			234 cf	Total Available Sto	rage		
					•		
Elevation	Sur	f.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)		(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200	60.0	0	0	200	
82.50		200	60.0	500	500	350	
Device F	Routing	Inver	t Outle	et Devices			
#1 F	Primary	82.40)' 6.0"	Horiz. Orifice/Grate	e C= 0.600		
	•		Limit	mited to weir flow at low heads			
#2 [Discarded	80.00)' 8.27	0 in/hr Exfiltration	over Wetted area		

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond LP9: 10'x 20 field

Inflow Area =	1,500 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.23 cfs @ 12.07 hrs, Volume=	820 cf
Outflow =	0.06 cfs @ 12.43 hrs, Volume=	820 cf, Atten= 75%, Lag= 21.6 min
Discarded =	0.06 cfs @ 12.43 hrs, Volume=	820 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 81.77' @ 12.43 hrs Surf.Area= 200 sf Storage= 175 cf

200

Plug-Flow detention time= 16.3 min calculated for 819 cf (100% of inflow) Center-of-Mass det. time= 16.3 min (758.7 - 742.4)

60.0

Volume	Invert	Avail.Storage	Storage Description	n		
#1	80.00'	178 cf	Custom Stage Da			
			500 cf Overall - 56		44 cf x 40.0% Vo	oids
#2	80.50'	56 cf	Cultec C-100 x 4			
			Effective Size= 32	.1"W x 12.0"H =>	1.86 sf x 7.50 'L =	14.0 cf
			Overall Size= 36.0	"W x 12.5"H x 8.0	0'L with 0.50' Ove	erlap
		234 cf	Total Available Sto	orage		
Elevation	Surf.	Area Perim.	Inc.Store	Cum.Store	Wet.Area	
(feet)	(;	sq-ft) (feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
80.00		200 60.0	0	0	200	

500

500

350

Type III 24-hr 100 Year Event Rainfall=6.80"

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Device	Routing	Invert	Outlet Devices
#1	Primary	82.40'	6.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads
#2	Discarded	80.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.06 cfs @ 12.43 hrs HW=81.76' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=80.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond PE: Existing Infiltration Pond

Inflow Area =	3,300 sf,100.00% Impervious,	Inflow Depth = 6.56" for 100 Year Event event
Inflow =	0.51 cfs @ 12.07 hrs, Volume=	1,804 cf
Outflow =	0.08 cfs @ 11.80 hrs, Volume=	1,804 cf, Atten= 84%, Lag= 0.0 min
Discarded =	0.08 cfs @ 11.80 hrs, Volume=	1,804 cf
Primary =	0.00 cfs @ 0.00 hrs, Volume=	0 cf

Routing by Stor-Ind method, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs Peak Elev= 92.78' @ 12.62 hrs Surf.Area= 323 sf Storage= 543 cf

Plug-Flow detention time= 48.3 min calculated for 1,801 cf (100% of inflow) Center-of-Mass det. time= 48.3 min (790.7 - 742.4)

Volume	Inve	ert Avail	.Storage	Storage Description	1		
#1	90.0	00'	320 cf	Custom Stage Dat		below	
#2	91.0	יחו'	368 cf	800 cf Overall x 40 StormTech SC-740			
<i>""</i>	01.0	,,	000 01			45 sf x 7.12'L = 45.9	cf
				Overall Size= 51.0"	W x 30.0"H x 7.56'	L with 0.44' Overlap	
			688 cf	Total Available Stor	rage		
Elevatio	on	Surf.Area	Perim.	Inc.Store	Cum.Store	Wet.Area	
(fee	et)	(sq-ft)	(feet)	(cubic-feet)	(cubic-feet)	(sq-ft)	
90.0	00	200	60.0	0	0	200	
94.0	00	200	60.0	800	800	440	
Device	Routing	Inv	ert Outle	et Devices			
#1	Primary	93.	50' 6.0"	Vert. Orifice/Grate	C= 0.600		•
#2	Discarde	ed 90.	00' 8.27	0 in/hr Exfiltration o	over Surface area		

Discarded OutFlow Max=0.08 cfs @ 11.80 hrs HW=91.00' (Free Discharge) **2=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=90.00' (Free Discharge) 1=Orifice/Grate (Controls 0.00 cfs)