CONCEPT
STORM WATER POLLUTION PREVENTION AND MANAGEMENT PLAN
FOR
BETHANY LUTHERAN HOMES, INC.
EAGLE CREST SOUTH ADDITION PHASE 2
SENIOR HOUSING
LA CROSSE, WISCONSIN

FEBRUARY 2018

THIS REPORT IS A PART OF THE PERMIT DOCUMENTATION
TEMPORARY CONSTRUCTION PRACTICES AND FINAL SOIL STABILIZATION ARE PROVIDED IN THE SPECIFICATIONS AND SHALL BE IMPLEMENTED AND A COPY OF SAID SPECIFICATIONS AND PLANS SHALL BE KEPT ON-SITE DURING ALL LAND-DISTURBING CONSTRUCTION ACTIVITIES.

DAVY ENGINEERING CO.
CONSULTING ENGINEERS
LA CROSSE, WISCONSIN
PROJECT NO. 11067-002.020
FEBRUARY 16, 2018

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PRELIMINARY
STORM WATER POLLUTION PREVENTION AND MANAGEMENT PLAN
FOR
BETHANY LUTHERAN HOMES, INC.
EAGLE CREST SOUTH ADDITION PHASE 2
LA CROSSE, WISCONSIN

FEBRUARY 2018

OWNER:
Bethany Homes, Inc.
(Leased from Gundersen Health Clinic)
2575 South 7th Street
La Crosse, WI 54601

SWPPP CONSTRUCTION PHASE CONTACT(S)
[Below shall to be filled out by the Contractors once selected. Provide Name, address, phone, and email]

	Prime Contractor:	Utility and Storm Water Grading Contractor:	Restoration Contractor:
Name:	Wieser Brothers		
Phone:	507-895-8903		
Email:			
Address:	200 Twilite Street La Crescent, MN 55947		

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TABLE OF CONTENTS
STORM WATER POLLUTION PREVENTION AND MANAGEMENT PLAN
FOR
EAGLE CREST SOUTH ADDITION PHASE 2
ONALASKA, WISCONSIN

FIGURE

APPENDIX

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STORM WATER POLLUTION PREVENTION PLAN AND MANAGEMENT PLAN
EAGLE CREST SOUTH ADDITION PHASE 2
ONALASKA, WISCONSIN

1.0 INTRODUCTION

The purpose of this plan is to aid the Bethany Lutheran Homes and the City of La Crosse in understanding, operating, and maintaining the on-site storm water management facilities and to aid the Contractor with preventing water pollution during construction. In addition, it provides information for WisDNR (Wisconsin Department of Natural Resources) to review the permit concerning post-construction storm water practices and erosion control practices.

The section on post-construction storm water will provide limitations to future development so that when Lots 2 and 3 develop the runoff from the site will be similar or less than the pre-development conditions for most rainfall occurrences and durations and the and total suspended soils will meet the City ordinance.

Schedule: The work for Lot 2 is scheduled to start in late September of 2015 and end in April of 2016.

Location: Lot 2 of Certified Survey Map No. 122, volume 15, NW ¼ of the SW ¼ of Section 6, Township 15 North, Range 7 West, City of La Crosse, La Crosse County.

Revisions: None.

2.0 MAINTENANCE PLAN DURING CONSTRUCTION

Read the specification Section 2.8, Erosion and Sedimentation Control, and Section 10, Special Provisions. The special provision for the erosion control notes contain to the Erosion Control Plan. The sequence of installing and maintaining temporary erosion control is in Section 10 of the specifications.

The intent of the erosion control is to keep the sediment on the disturbed side of the site and to prevent erosion of soils. Erosion control measures for each lot shall include silt fence, inlet protection, temporary mulch, and temporary seed that meet WisDNR standards. Any sediment that is discharged into the detention basin during construction shall be removed and the basin restored to its operation condition by the builder.

3.0 PURPOSE AND GENERAL DESCRIPTION OF THE FACILITIES

The purpose of the storm water management facilities is to improve water quality by reducing suspended solids discharges from the site and reduce peak discharge for the 1-year and 2-year runoff relative predevelopment conditions. The total suspended solids reduction and infiltrate is required for this site to meeting DNR 151.121 requirements.

The storm water treatment and infiltration will not be credited to reduce stormwater utility fee unless the owner applies for and documents the reduction in runoff and total suspended soils.

4.0 STORM WATER MANAGEMENT PLAN POST-CONSTRUCTION

4.1 INTRODUCTION

This section of the report contains the hydrologic and hydraulic analyses performed for the widening of an existing street. This site is subject to WisDNR Chapter NR 151.121 concerning storm

water runoff and treatment. The soils at the site are clay so infiltration is not required but is being promoted. In addition the City of Onalaska requested that the development maintain the peak runoff to be no greater than existing conditions for several storm events.

The objectives of this plan are to provide the following.

1. Analyze the proposed site conditions to determine the peak runoff rate for the 100%, 50%-, 20%-, 10%-, 4%-, and 1%-annual-chance rainfall (1-, 2-, 5-, 10-, 25- and 100-year reoccurrence intervals for the 24 hour. WisDNR requires analyses of the 24 hour duration for the 1-year and 2-year reoccurrence intervals (NR 151.123). The 3-, 6-, and 12-hour durations were also analyzed to check for critical duration for safe passage of storm water. The City requires infiltration of the 100%- and 50%-annual-chance rainfall (1-year and 2-year).

2. Size the storm water management facilities to release the 1- and 2-year reoccurrence intervals peak discharge for developed conditions at or below the pre-development rate for the same reoccurrence interval and 24-hour duration. The City requires infiltration of the 100%- and 50%-annual-chance rainfall (1-year and 2-year).

3. Analyze the other events for the critical duration and design the overflow to safely pass this discharge.

4. Analyze and design the storm water quality measures for removing at least 80% of Total Suspended Solids (TSS) from the post-development site (NR 151.122). No WinSLAMM analyses are provide since he City requires infiltration of the 100%- and 50%-annual-chance rainfall (1-year and 2-year).

The Wisconsin DNR flood study rainfall distribution was used to analyze the hydrology for both the pre- and post-development rainfall. The rainfall was taken from NOAA Atlas 14 point precipitation Frequency Estimates (http://hdsc.nws.noaa.gov/hdsc/pfds/). This was done because the distributions estimated in the NOAA study tend to overestimate the 24 hour duration peak flow but underestimate the detention volume.

4.2 EXISTING PRE-DEVELOPMENT CONDITIONS

The existing tributary area to the existing outlets are estimated to be 7.02 acres and about 3 acres will be disturbed for development of Phase 2. The remainder was developed in 2013 and 2014.

A topographic survey shows the existing conditions for lots 1 and 2 of the CSM in the fall of 2012. The west side of the site was topographically surveyed again in the fall of 2016 to as-build portions of the existing site that is being developed this year. Existing conditions are also shown on the demolition and erosion control sheet. Figure 1 shows the pre-developed hydrologic basin and flow paths with topographic contours. Figure 2 shows the existing and proposed grading associated with the 2013 and 2016 topographic field data with the proposed property lines shown.

The land cover consists to grass and aggregate base.

The soil description is urban, so we used the geotechnical report to conclude that the soils were hydrologic soil group is B. The geotechnical report is in Appendix A.

See Appendix B for detailed output of pre-development conditions.

4.3 PROPOSED DEVELOPED CONDITIONS

The site has three biofilters constructed in 2013. Two small basins on the north and one large one on the south. The northwest basin is being reconfigured and increased in size. There is a small increase in runoff from additional impervious surface to the northeast biofilter, but it continues to infiltrate all of the 50%-annual-chance rainfall.

The flood route for the north area is to Bennora Lee Court. If the inlet clogs at the east driveway or if the flow is more than 1.5" then the storm water will flow down the driveway to the east basement. This will be corrected with the installation of some inlets across that driveway. The flood route was to go east to the storm sewer outfall and overland flow at the west property line of Lot 6 of Gundersen Lutheran Medical Center Addition. The sewer and flood route drain southerly to the slough. The flood route for the south side of the property drains over the path to the slough that is backwater from the Mississippi River.

The existing ditch in the southwest part of the site will be regraded to increase the storage and infiltration capacity.

Appendix C contains the developed storm water hydrology.

No storm water quality modeling was performed using WinSLAMM because the all the total suspended solids (TSS) will be removed by the biofilters. This exceeds Administrative Rule NR 151.122.

4.4 CONCLUSIONS

The storm water design for this project achieves all the design criteria. The post-development conditions for the 1-, 2-, and 5- reoccurrence intervals during the 12 and 24-hour duration are less than the pre-development discharge rates for the runoff to the north. For the runoff to the south the peak runoff is reduced for all events compared to undeveloped conditions.

The post-development peak discharges greater than 100-year exits the proposed site in a non-erosive manner without causing flooding.

The infiltration requirements are exceeded.

No TSS leaves the site as the storm water is infiltrated; therefore, the TSS is reduced by over 80 percent.

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BENNORA LEE COURT (PRIVATE DRIVE)

SIMS PLACE (PRIVATE DRIVE)

7TH STREET (PUBLIC)

LOT 1
3.72 ACRES TOTAL

LOT 2
8.49 ACRES TOTAL

LOT 3
3.28 ACRES TOTAL

LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10

BM 1 BM 2 BM 3 BM 4

001 EXT 011 EXT

OFF SITE
0.333 AC

CHILD CARE CENTER

GARDEN SHED SHED GARAGE MAILBOX

SAND BOX PLAY GROUND BABIES MEMORIAL SIGN PICNIC TABLE

EASTLINE LOT 3

LOT LINE LOT 2

PROPOSED LOT LINE FOR LOTS 2 & 3

PROPOSED LOT LINE FOR LOT 1 &

AGGREGATE BASE

UNDEVELOPED MEADOW, WOODS AND WATER

TRAIL SIGN

EXISTING TRAIL

RIP - RAP

BOULDER BREAKER ROCK

BULKHEAD LINE

100 YEAR FLOOD ELEV. (641.3)

WATERS EDGE (7/13/2012)

SWIFT CREEK / BLUFF SLOUGH
WATER ELEV.=632.1 ON 7/13/12
100 YEAR FLOOD ELEV.=641.3

N

0 50' 100'
SCALE = 1" = 50'-0"

LEGEND

D.A.	DRAINAGE AREA
	D.A. BOUNDARY
XXX AAA	D.A. IDENTIFICATION
XXX XXXXX	HYDROLOGIC UNIT ID.

REMARKS	REVISION DATE

SCALE: AS SHOWN
DRAWN: KK
CHECKED: DC
DATE: 02/17/20014

DAVY ENGINEERING CO.
LA CROSSE, WISCONSIN

PRE DEVELOPMENT STORM WATER MAP
BETHANY LUTHERAN
EAGLE CREST SOUTH
LA CROSSE, WISCONSIN

PROJECT NUMBER
11067-001.020

SHEET NO.

FIGURE 1

H:\AutoCad Drawings\2017\P\Misc. P\Pope Architects Eagle Crest 2\CAD Drawings\Civil\11067-002 STORM WATER.dwg, 2/16/2018 11:39:45 AM

001 DEV
006 BIOFILTER
002 DEV
SIMS PLACE
BENNORA LEE COURT
7TH STREET
2P 007 WEST
004 DEV
003 DEV
008 DEV
011 DEV
010 DEV
011 SOUTHEAST
006 DEV
INLET - 01

N

0 50' 100'
11"x17" SCALE = 1" = 100'

LEGEND

D.A.	DRAINAGE AREA
	D.A. BOUNDARY
XXX DEV	D.A. IDENTIFICATION
XXX XXXXX	HYDROLOGIC UNIT ID.

FIGURE 2

REMARKS	REVISION DATE

FIELDBOOK: XXX
SCALE: AS SHOWN
DRAWN: CSM/KK
CHECKED: DRC
DATE: XX/XX/XXXX

DAVY ENGINEERING CO.
LA CROSSE, WISCONSIN

DEVELOPED STORM WATER
EAGLE CREST
SOUTH ADDITION PHASE 2
LA CROSSE, WISCONSIN

PROJECT NUMBER
11067-002.020

SHEET NO.

Geotechnical Evaluation Report Rev. 1

Proposed Eagle Crest South – Phase II Expansion
622 Bennora Lee Court
La Crosse, Wisconsin

Prepared for

Bethany Lutheran Homes, Inc.

Wright, Brandon
Jan 29 2018 3:11 PM

Brandon K. Wright, PE
Senior Engineer
License Number: 40141
January 29, 2018

Wright, Brandon
Jan 29 2018 3:11 PM

Project B1709904

Braun Intertec Corporation

BRAUN INTERTEC
The Science You Build On.

Braun Intertec Corporation
2309 Palace Street
La Crosse, WI 54603

Phone: 608.781.7277
Fax: 608.781.7279
Web: braunintertec.com

January 29, 2018 Project B1709904

Mr. Todd Wilson
Bethany Lutheran Homes, Inc.
2575 7th Street
La Crosse, Wisconsin 54601

Re: Geotechnical Evaluation – Revision 1
Proposed Eagle Crest South – Phase II Expansion
622 Bennora Lee Court
La Crosse, Wisconsin

Dear Mr. Wilson:

We are pleased to present this Geotechnical Evaluation Report for the proposed Eagle Crest South – Phase II Expansion to be located at 622 Bennora Lee Court in La Crosse, Wisconsin.

Thank you for making Braun Intertec your geotechnical consultant for this project. If you have questions about this report, or if there are other services that we can provide in support of our work to date please contact Brandon Wright or Ben Sullivan at 608.781.7277 or by email at bwright@braunintertec.com or bsullivan@braunintertec.com.

Sincerely,

BRAUN INTERTEC CORPORATION

Benjamin R. Sullivan, EIT
Staff Engineer

Brandon K. Wright, PE
Senior Engineer

Wright, Brandon
Jan 29 2018 3:11 PM

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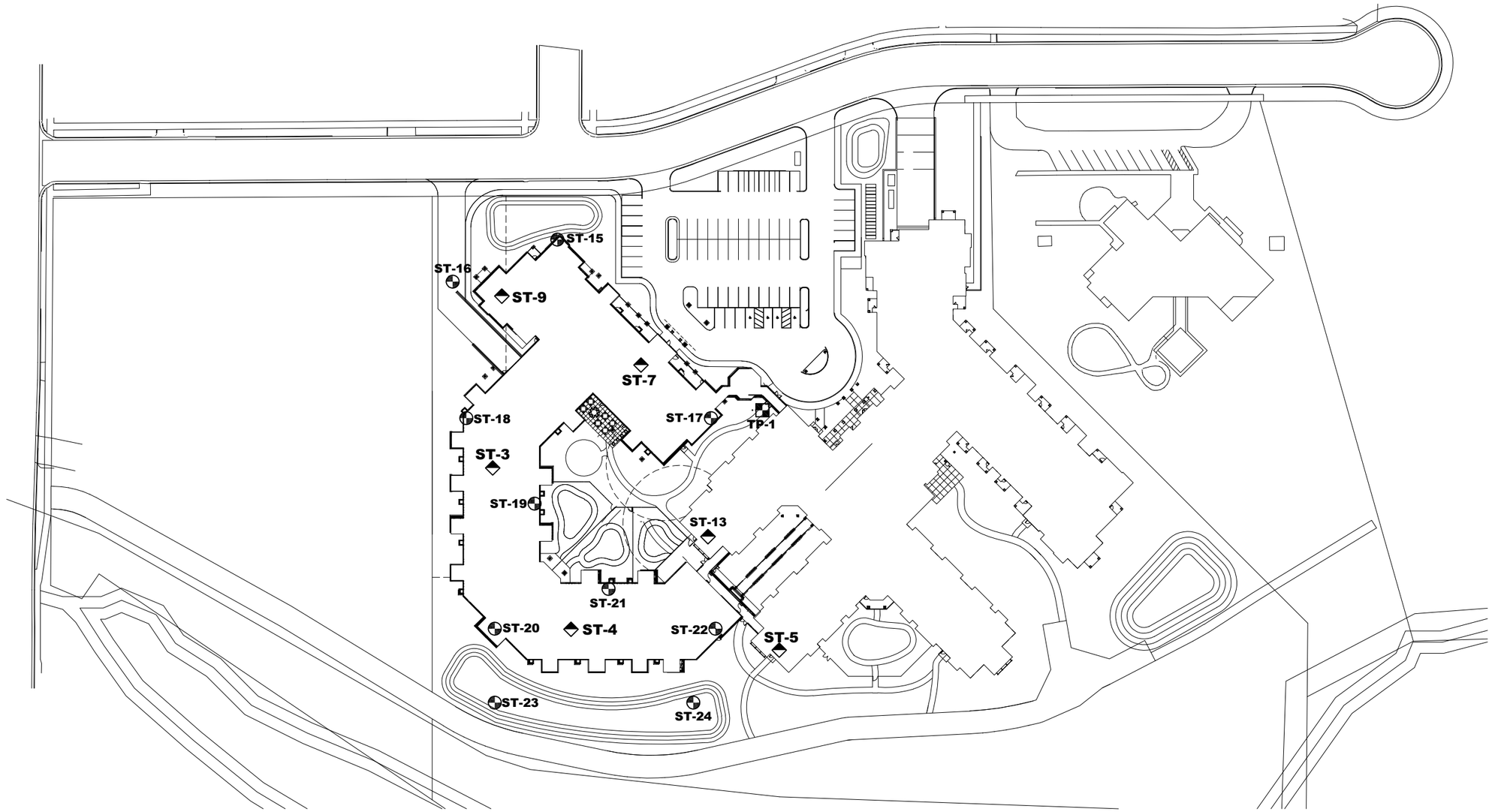
Appendix



DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING FROM PHASE I

DENOTES APPROXIMATE LOCATION OF PREVIOUS TEXT PIT FROM PHASE I

DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING FROM PHASE II EXPANSION

50' 0 100'

SCALE: 1" = 100'

SOIL BORING LOCATION SKETCH

GEOTECHNICAL EVALUATION
PROPOSED EAGLE CREST SOUTH - PHASE II EXPANSION
622 BENNORA LEE COURT
LA CROSSE, WISCONSIN

BRAUN INTERTEC
The Science You Build On.
11001 Hampshire Avenue S
Minneapolis, MN 55438
PH. (952) 995-2000
FAX (952) 995-2020

Base Dwg Provided By:
POPE ARCHITECTS

Project No:	B1709904
Drawing No:	B1709904
Scale:	1" = 100'
Drawn By:	LAO
Date Drawn:	10/11/17
Checked By:	BS
Last Modified:	11/8/17
Sheet: of	Fig:

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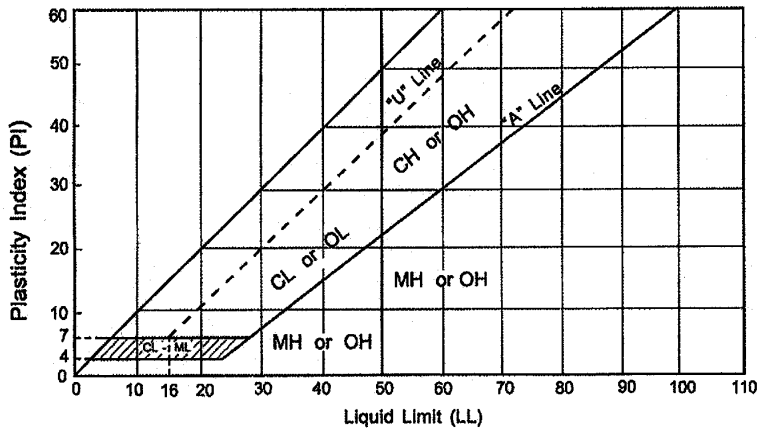
BRAUN INTERTEC

Descriptive Terminology of Soil

Standard D 2487 – 11
Classification of Soils for Engineering Purposes
(Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [a]				Soils Classification	
				Group Symbol	Group Name [b]
Coarse-grained Soils more than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines [e]	$C_u \geq 4$ and $1 \leq C_c \leq 3$ [c]	GW	Well-graded gravel [d]
			$C_u < 4$ and/or $1 > C_c > 3$ [c]	GP	Poorly graded gravel [d]
		Gravels with Fines More than 12% fines [e]	Fines classify as ML or MH	GM	Silty gravel [d f g]
			Fines classify as CL or CH	GC	Clayey gravel [d f g]
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines [i]	$C_u \geq 6$ and $1 \leq C_c \leq 3$ [c]	SW	Well-graded sand [h]
			$C_u < 6$ and/or $1 > C_c > 3$ [c]	SP	Poorly graded sand [h]
		Sands with Fines More than 12% [i]	Fines classify as ML or MH	SM	Silty sand [f g h]
			Fines classify as CL or CH	SC	Clayey sand [f g h]
Fine-grained Soils 50% or more passed the No. 200 sieve	Silts and Clays Liquid limit less than 50	Inorganic	PI > 7 and plots on or above "A" line [j]	CL	Lean clay [k l m]
			PI < 4 or plots below "A" line [j]	ML	Silt [k l m]
		Organic	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OL	Organic clay [k l m n]
				OL	Organic silt [k l m o]
	Silts and clays Liquid limit 50 or more	Inorganic	PI plots on or above "A" line	CH	Fat clay [k l m]
			PI plots below "A" line	MH	Elastic silt [k l m]
		Organic	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OH	Organic clay [k l m p]
				OH	Organic silt [k l m q]
Highly Organic Soils	Primarily organic matter, dark in color and organic odor			PT	Peat

a. Based on the material passing the 3-inch (75mm) sieve.
b. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders or both" to group name.
c. $C_u = D_{60}/D_{10}$ $C_c = \frac{(D30)^2}{D_{10} \times D_{60}}$
d. If soil contains ≥15% sand, add "with sand" to group name.
e. Gravels with 5 to 12% fines require dual symbols:
   GW-GM well-graded gravel with silt
   GW-GC well-graded gravel with clay
   GP-GM poorly graded gravel with silt
   GP-GC poorly graded gravel with clay
f. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
g. If fines are organic, add "with organic fines: to group name.
h. If soil contains ≥15% gravel, add "with gravel" to group name.
i. Sand with 5 to 12% fines require dual symbols:
   SW-SM well-graded sand with silt
   SW-SC well-graded sand with clay
   SP-SM poorly graded sand with silt
   SP-SC poorly graded sand with clay
j. If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
k. If soil contains 10 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant.
l. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
m. If soil contains ≥ 30% plus No. 200 predominantly grave, add "gravelly" to group name.
n. PI ≥ 4 and plots on or above "A" line.
o. PI < 4 or plots below "A" line.
p. PI plots on or above "A" lines.
q. PI plots below "A" line.



Laboratory Tests

DD	Dry density, pcf	**OC**	Organic content, %
WD	Wet density, pcg	**S**	Percent of saturation, %
MC	Natural moisture content, %	**SG**	Specific gravity
LL	Liquid limit, %	**C**	Cohesion, psf
PL	Plastic limits, %	**Ø**	Angle of internal friction
PI	Plasticity index, %	**qu**	Unconfined compressive strength, psf
P200	% passing 200 sieve	**qp**	Pocket penetrometer strength, tsf

Particle Size Identification

Boulders..... over 12"
Cobbles ..... 3" to 12"
Gravel
  Coarse ..... 3/4" to 3"
  Fine..... No. 4 to 3/4"
Sand
  Coarse ..... No. 4 to No. 10
  Medium..... No. 10 to No. 40
  Fine..... No. 40 to No. 200
Silt ..... <No. 200, PI< 4 or below "A" line
Clay ..... <No. 200, PI ≥ 4 and on or about "A" line

Relative Density of Cohesionless Soils

Very Loose..... 0 to 4 BPF
Loose..... 5 to 10 BPF
Medium dense ..... 11 to 30 PPF
Dense ..... 31 to 50 BPF
Very dense..... over 50 BPF

Consistency of Cohesive Soils

Very soft..... 0 to 1 BPF
Soft ..... 2 to 3 BPF
Rather soft ..... 4 to 5 BPF
Medium..... 6 to 8 BPF
Rather stiff ..... 9 to 12 BPF
Stiff ..... 13 to 16 BPF
Very stiff..... 17 to 30 BPF
Hard..... over 30 BPF

Drilling Notes

Standard penetration test borings were advanced by 3 1/4" or 6 1/4" ID hollow-stem augers, unless noted otherwise. Jetting water was used to clean out auger prior to sampling only where indicated on logs. All samples were taken with the standard 2" OD split-tube samples, except where noted.

Power auger borings were advanced by 4" or 6" diameter continuous flight, solid-stern augers. Soil classifications and strata depths were inferred from disturbed samples augered to the surface, and are therefore, somewhat approximate.

Hand auger borings were advanced manually with a 1 1/2" or 3 1/4" diameter auger and were limited to the depth from which the auger could be manually withdrawn.

BPF: Numbers indicate blows per foot recorded in standard penetration test, also known as "N" value. The sampler was set 6" into undisturbed soil below the hollow-stem auger. Driving resistances were then counted for second and third 6" increments, and added to get BPF. Where they differed significantly, they are reported in the following form: 2/12 for the second and third 6" increments, respectively.

WH: WH indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WR: WR indicates the sampler penetrated soil under weight of rods alone; hammer weight, and driving not required.

TW: TW indicates thin-walled (undisturbed) tube sample.

Note: All tests were run in general accordance with applicable ASTM standards.

Wisconsin Department of Commerce
Division of Safety and Buildings

SOIL EVALUATION – STORM

in accordance with Comm. 82.365 & 85, Wis. Adm. Code

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direct and percent slope, scale or dimensions, north arrow, and BM referenced to nearest road.

County: La Crosse
Parcel I.D.: 17-50781-482
Reviewed by: | Date:

Please print all information

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

Property Owner	Property Location
Gundersen Lutheran Medical Center, Inc.	Gov. Lot: NW1/4 SW1/4 S 8 T 15N R 7
Property Owner's Mailing Address: 1910 South Avenue	Lot #:	Block #:	Subd. Name or CSM#:
City: La Crosse | State: WI | Zip Code: 54601 | Phone Number: (608) 775-3400	☒ City ☐ Village ☐ Town | Nearest Road: Bennora Lee Court

Drainage Area _____ ☐ sq. ft. ☐ acres

Optional:

Test Site Suitable for (Check all that apply)

☐ Irrigation ☐ Bio-retention trench ☐ Trench(es)
☐ Rain Garden ☐ Grassed swale ☐ Reuse
☐ Infiltration Trench ☐ SDS (>15' wide) ☐ Other

Hydraulic Application Test Method:

☒ Morphological Evaluation
☐ Double-Ring Infiltrometer
☐ Other (specify)

ST-15 Obs. # ☒ Boring ☐ Test Pit Ground Surface Elev. 650.0 Ft. Depth to limiting factor 198 in.

Horizon	Depth (in.)	Dominate Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate Inches/Hr.
FILL	0 - 5	10YR 3/2	NONE	f.ls	1.f.gr	mvfr	a	10	0.50
FILL	5 - 192	2.5Y 6/6	NONE	f.s	0.f.gr	ml	g	0	0.50
FILL	192 - 240	10YR 5/4	NONE	m.s	0.m.gr	ml	g	0	3.60
O	240 - 264	7.5YR 3/0	NONE	sc	3.vf.sbk	mfi	c	0	0.04
C	264 - 432	2.5Y 4/2	NONE	m.s	0.m.gr	ml	c	0	3.60

ST-23 Obs. # ☒ Boring ☐ Test Pit Ground Surface Elev. 652.1 Ft. Depth to limiting factor N/A in.

Horizon	Depth (in.)	Dominate Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate Inches/Hr.
FILL	0 - 4	10YR 3/2	NONE	f.ls	1.f.gr	mvfr	a	0	0.50
FILL	4 - 24	10YR 4/3	NONE	f.ls	1.f.gr	mvfr	g	10	0.50
FILL	24 - 144	2.5Y 6/6	NONE	f.s	0.f.gr	ml	g	0	0.50
FILL	144 - 216	10YR 6/3	NONE	f.s	0.f.gr	ml	g	0	0.50
FILL	216 - 240	2.5Y 6/6	NONE	f.s	0.f.gr	ml	g	0	0.50

CST/PSS Name (Please Print)	Signature	CST/PSS Number
Benjamin R. Sullivan	Ben Sullivan	1324025
Address	**Date Evaluation Conducted**	**Telephone Number**
2309 Palace Street, La Crosse, Wisconsin 54601	October 11, 2017	608.781.7277

ST-24 Obs. # ☒ Boring ☐ Test Pit Ground Surface Elev. 651.8 Ft. Depth to limiting factor 156 in.

Horizon	Depth (in.)	Dominate Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	Hydraulic App. Rate Inches/Hr.
FILL	0 - 4	10YR 3/2	NONE	f.ls	1.f.gr	mvfr	a	0	0.50
FILL	4 - 24	10YR 4/3	NONE	f.ls	1.f.gr	mvfr	g	10	0.50
FILL	24 - 144	10YR 3/1	NONE	f.sl	2.f.gr	mfr	c	0	0.50
FILL	144 - 156	2.5Y 4/4	NONE	f.s	0.f.gr	ml	g	0	0.50
FILL	156 - 168	7.5YR 3/0	NONE	sc	3.vf.sbk	mfi	c	0	0.04
FILL	168 - 192	10YR 2.5/1	NONE	f.sl	2.f.gr	mfr	c	0	0.50
FILL	192 - 240	2.5Y 6/6	NONE	f.s	0.f.gr	ml	c	0	0.50

BRAUN INTERTEC

LOG OF BORING

Braun Project B1709904
Geotechnical Evaluation
Proposed Eagle Crest South - Phase II Expansion
622 Bennora Lee Court
La Crosse, Wisconsin

BORING: **ST-15**

LOCATION: See attached sketch.

DRILLER: GDC | METHOD: 4 1/4" HSA, Autohammer | DATE: **10/5/17** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Elev. feet	Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	P200 %	Tests or Notes
650.0	0.0							
649.6	0.4	TS FILL	POORLY GRADED SAND with SILT, fine-grained, with roots, trace gravel, dark brown, moist. (Topsoil/Fill)					
			FILL: Poorly Graded Sand, fine- to medium-grained, brown, moist.	12				
				15				
				13				
				18				
				12				
				16				
				13				
				17				
				12		4	2.1	
				14				An open triangle in the water level (WL) column indicates the depth at which groundwater was first observed while drilling. Groundwater levels fluctuate.
				11				
				15				
				11				
634.0	16.0			14				
		FILL	FILL: Poorly Graded Sand, medium-grained, brown, waterbearing.	6	▽			
				6				
				4				
630.0	20.0			8				
		OL	SANDY ORGANIC CLAY, dark gray, wet. (Swamp Deposit)	4		39		OC=4.9%
628.0	22.0			11				
		SP-SM	POORLY GRADED SAND with SILT, medium-grained, brown and gray, waterbearing, loose. (Alluvium)	6				
				6				
				5		38	8.2	
624.0	26.0			8				
		SP	POORLY GRADED SAND, medium-grained, brown and gray, waterbearing, very loose to loose. (Alluvium)	3				
				7				
				4				
				5				
				3				
				6				

LOG OF BORING N:\GINT\PROJECTS\AX PROJECTS\2017\09904.GPJ BRAUN_V8_CURRENT.GDT 1/29/18 10:23

BRAUN INTERTEC

LOG OF BORING

Braun Project B1709904
Geotechnical Evaluation
Proposed Eagle Crest South - Phase II Expansion
622 Bennora Lee Court
La Crosse, Wisconsin

BORING: **ST-15 (cont.)**

LOCATION: See attached sketch.

DRILLER: GDC | METHOD: 4 1/4" HSA, Autohammer | DATE: **10/5/17** | SCALE: **1" = 4'**

Elev. feet	Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	P200 %	Tests or Notes
618.0	32.0		POORLY GRADED SAND, medium-grained, brown and gray, waterbearing, very loose to loose. (Alluvium) *(continued)* -wood pieces at 32 feet.	8 7 7 8				
614.0	36.0		END OF BORING. Water observed at a depth of 16 1/2 feet with a cave-in depth of 14 feet immediately after withdrawal of auger. Boring then grouted.					Benchmark (BM): Boring elevations and surface elevations were referenced to the top nut of the fire hydrant located on the northwest corner of Bennora Lee Court and Sims Place whose elevation was reported to be 654.6.

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING N:\GINT\PROJECTS\AX PROJECTS\2017\09904.GPJ BRAUN_V8_CURRENT.GDT 1/29/18 10:23

BRAUN INTERTEC

LOG OF BORING

Braun Project B1709904
Geotechnical Evaluation
Proposed Eagle Crest South - Phase II Expansion
622 Bennora Lee Court
La Crosse, Wisconsin

BORING: **ST-23**

LOCATION: See attached sketch.

DRILLER: GDC | METHOD: 4 1/4" HSA, Autohammer | DATE: **10/10/17** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Elev. feet	Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	P200 %	Tests or Notes
652.1	0.0							
651.8	0.3	TS	POORLY GRADED SAND with SILT, fine-grained, with roots, dark brown, moist. (Topsoil/Fill)					
650.1	2.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, trace gravel, brown, moist.	12				
		FILL	FILL: Poorly Graded Sand, fine- to medium-grained, brown, moist.	20				
				14				
				20				
				13				
				17				
				13				
				19				
				13				
640.1	12.0			15				
		FILL	FILL: Poorly Graded Sand, fine-grained, brown, moist.	15		5	2.3	
				17				
				15				
				16				
				19				
634.1	18.0			26				
		FILL	FILL: Poorly Graded Sand, fine- to medium-grained, brown, moist.	22				
632.1	20.0			28				
			END OF BORING.					
			Water not observed while drilling.					
			Boring then grouted.					

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BRAUN INTERTEC

LOG OF BORING

Braun Project B1709904
Geotechnical Evaluation
Proposed Eagle Crest South - Phase II Expansion
622 Bennora Lee Court
La Crosse, Wisconsin

BORING: **ST-24**

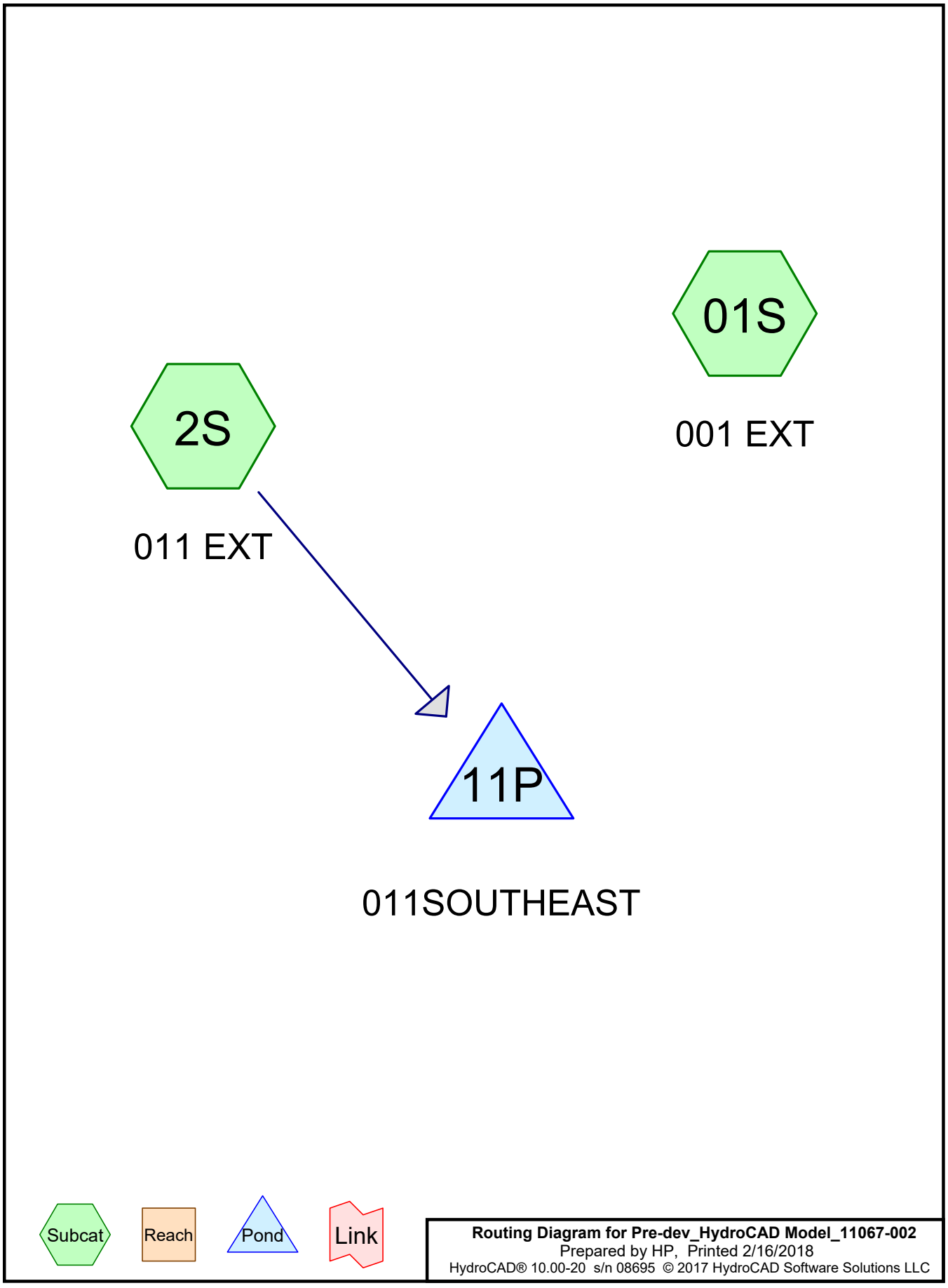
LOCATION: See attached sketch.

DRILLER: GDC | METHOD: 4 1/4" HSA, Autohammer | DATE: **10/10/17** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Elev. feet	Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	MC %	P200 %	Tests or Notes
651.8	0.0							
651.5	0.3	TS	POORLY GRADED SAND with SILT, fine-grained, with roots, dark brown, moist. (Topsoil/Fill)					
649.8	2.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, brown, moist.	6				
		FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, trace gravel, dark gray, moist.	10				
				7		7	6.2	
				16				
				8				
				12				
				7				
				20				
				8				
639.8	12.0			17				
638.8	13.0	FILL	FILL: Poorly Graded Sand, fine- to medium-grained, brown, moist.	8				
637.8	14.0	FILL	FILL: Sandy Organic Clay, with wood pieces, dark gray, wet.	9				
		FILL	FILL: Silty Sand, fine- to medium-grained, dark gray, moist.	6				
635.8	16.0			8				
		FILL	FILL: Poorly Graded Sand, fine- to medium-grained, brown, moist.	12				
				16				
				13				
631.8	20.0			11				
			END OF BORING.					
			Water not observed while drilling.					
			Boring then grouted.					

LOG OF BORING N:\GINT\PROJECTS\AX PROJECTS\2017\09904.GPJ BRAUN_V8_CURRENT.GDT 1/29/18 10:23



Routing Diagram for Pre-dev_HydroCAD Model_11067-002
Prepared by HP, Printed 2/16/2018

Summary for Subcatchment 01S: 001 EXT

Runoff = 0.15 cfs @ 12.28 hrs, Volume= 0.054 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-31.00 hrs, dt= 0.05 hrs
WI 6-96-hour 24.00 hrs 2-yr24hr Rainfall=3.00"

	Area (sf)	CN	Description
	1,000	96	Gravel surface, HSG A
*	0	98	Walk
	70,110	61	>75% Grass cover, Good, HSG B
*	0	98	
	71,110		Weighted Average
	71,110		100.00% Pervious Area

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

Summary for Subcatchment 2S: 011 EXT

Runoff = 0.73 cfs @ 12.18 hrs, Volume= 0.286 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-31.00 hrs, dt= 0.05 hrs
WI 6-96-hour 24.00 hrs 2-yr24hr Rainfall=3.00"

	Area (sf)	CN	Description
	29,060	96	Gravel surface, HSG A
*	0	98	Walk
	205,757	61	>75% Grass cover, Good, HSG B
*	0	98	
	234,817		Weighted Average
	234,817		100.00% Pervious Area

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

Summary for Pond 11P: 011SOUTHEAST

Inflow Area = 5.391 ac, 0.00% Impervious, Inflow Depth = 0.64" for 2-yr24hr event
Inflow = 0.73 cfs @ 12.18 hrs, Volume= 0.286 af
Outflow = 0.73 cfs @ 12.22 hrs, Volume= 0.278 af, Atten= 0%, Lag= 2.2 min
Discarded = 0.06 cfs @ 12.22 hrs, Volume= 0.106 af
Primary = 0.66 cfs @ 12.22 hrs, Volume= 0.172 af

Routing by Dyn-Stor-Ind method, Time Span= 0.05-31.00 hrs, dt= 0.05 hrs
Peak Elev= 642.17' @ 12.22 hrs Surf.Area= 5,257 sf Storage= 1,515 cf

Plug-Flow detention time= 117.8 min calculated for 0.278 af (97% of inflow)

Center-of-Mass det. time= 102.6 min (965.3 - 862.7)

Volume	Invert	Avail.Storage	Storage Description
#1	641.60'	8,975 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
641.60	30	0	0
642.00	3,760	758	758
643.00	12,674	8,217	8,975

Device	Routing	Invert	Outlet Devices
#1	Discarded	641.60'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 620.00'
#2	Primary	642.14'	**Asymmetrical Weir, C= 2.69** Offset (feet) -71.78 0.00 49.70 98.70 110.00 Elev. (feet) 642.63 642.14 642.14 642.46 642.63

Discarded OutFlow Max=0.06 cfs @ 12.22 hrs HW=642.17' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.66 cfs @ 12.22 hrs HW=642.17' (Free Discharge)
↑—**2=Asymmetrical Weir** (Weir Controls 0.66 cfs @ 0.41 fps)

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.333	61	>75% Grass cover, Good, HSG B (01S, 2S)
0.690	96	Gravel surface, HSG A (01S, 2S)
7.023	**64**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.690	HSG A	01S, 2S
6.333	HSG B	01S, 2S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
7.023		**TOTAL AREA**

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.04"
Tc=15.0 min CN=WQ Runoff=0.05 cfs 0.006 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.18"
Tc=20.0 min CN=WQ Runoff=1.27 cfs 0.082 af

Pond 11P: 011SOUTHEAST Peak Elev=642.17' Storage=1,530 cf Inflow=1.27 cfs 0.082 af
Discarded=0.06 cfs 0.043 af Primary=0.78 cfs 0.039 af Outflow=0.84 cfs 0.082 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.088 af Average Runoff Depth = 0.15"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.08"
Tc=15.0 min CN=WQ Runoff=0.04 cfs 0.010 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.23"
Tc=20.0 min CN=WQ Runoff=0.88 cfs 0.104 af

Pond 11P: 011SOUTHEAST Peak Elev=642.17' Storage=1,518 cf Inflow=0.88 cfs 0.104 af
Discarded=0.06 cfs 0.052 af Primary=0.69 cfs 0.052 af Outflow=0.75 cfs 0.104 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.114 af Average Runoff Depth = 0.19"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.16"
Tc=15.0 min CN=WQ Runoff=0.09 cfs 0.022 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.35"
Tc=20.0 min CN=WQ Runoff=0.66 cfs 0.159 af

Pond 11P: 011SOUTHEAST Peak Elev=642.17' Storage=1,504 cf Inflow=0.66 cfs 0.159 af
Discarded=0.06 cfs 0.072 af Primary=0.59 cfs 0.087 af Outflow=0.65 cfs 0.159 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.182 af Average Runoff Depth = 0.31"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.25"
Tc=15.0 min CN=WQ Runoff=0.09 cfs 0.034 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.47"
Tc=20.0 min CN=WQ Runoff=0.49 cfs 0.209 af

Pond 11P: 011SOUTHEAST Peak Elev=642.16' Storage=1,479 cf Inflow=0.49 cfs 0.209 af
Discarded=0.06 cfs 0.102 af Primary=0.43 cfs 0.099 af Outflow=0.49 cfs 0.202 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.244 af Average Runoff Depth = 0.42"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.09"
Tc=15.0 min CN=WQ Runoff=0.11 cfs 0.013 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.26"
Tc=20.0 min CN=WQ Runoff=1.60 cfs 0.116 af

Pond 11P: 011SOUTHEAST Peak Elev=642.19' Storage=1,607 cf Inflow=1.60 cfs 0.116 af
Discarded=0.06 cfs 0.044 af Primary=1.41 cfs 0.073 af Outflow=1.48 cfs 0.116 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.129 af Average Runoff Depth = 0.22"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.17"
Tc=15.0 min CN=WQ Runoff=0.17 cfs 0.023 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.36"
Tc=20.0 min CN=WQ Runoff=1.25 cfs 0.161 af

Pond 11P: 011SOUTHEAST Peak Elev=642.18' Storage=1,580 cf Inflow=1.25 cfs 0.161 af
Discarded=0.06 cfs 0.053 af Primary=1.18 cfs 0.107 af Outflow=1.24 cfs 0.161 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.183 af Average Runoff Depth = 0.31"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.27"
Tc=15.0 min CN=WQ Runoff=0.18 cfs 0.037 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.49"
Tc=20.0 min CN=WQ Runoff=1.00 cfs 0.218 af

Pond 11P: 011SOUTHEAST Peak Elev=642.17' Storage=1,551 cf Inflow=1.00 cfs 0.218 af
Discarded=0.06 cfs 0.074 af Primary=0.94 cfs 0.144 af Outflow=1.00 cfs 0.218 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.255 af Average Runoff Depth = 0.44"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.40"
Tc=15.0 min CN=WQ Runoff=0.15 cfs 0.054 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.64"
Tc=20.0 min CN=WQ Runoff=0.73 cfs 0.286 af

Pond 11P: 011SOUTHEAST Peak Elev=642.17' Storage=1,515 cf Inflow=0.73 cfs 0.286 af
Discarded=0.06 cfs 0.106 af Primary=0.66 cfs 0.172 af Outflow=0.73 cfs 0.278 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.339 af Average Runoff Depth = 0.58"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.38"
Tc=15.0 min CN=WQ Runoff=0.49 cfs 0.051 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.61"
Tc=20.0 min CN=WQ Runoff=2.43 cfs 0.275 af

Pond 11P: 011SOUTHEAST Peak Elev=642.20' Storage=1,698 cf Inflow=2.43 cfs 0.275 af
Discarded=0.07 cfs 0.055 af Primary=2.35 cfs 0.220 af Outflow=2.42 cfs 0.275 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.327 af Average Runoff Depth = 0.56"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.52"
Tc=15.0 min CN=WQ Runoff=0.39 cfs 0.071 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.78"
Tc=20.0 min CN=WQ Runoff=1.79 cfs 0.349 af

Pond 11P: 011SOUTHEAST Peak Elev=642.19' Storage=1,638 cf Inflow=1.79 cfs 0.349 af
Discarded=0.06 cfs 0.077 af Primary=1.72 cfs 0.273 af Outflow=1.79 cfs 0.349 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.420 af Average Runoff Depth = 0.72"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.69"
Tc=15.0 min CN=WQ Runoff=0.27 cfs 0.094 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.97"
Tc=20.0 min CN=WQ Runoff=1.19 cfs 0.437 af

Pond 11P: 011SOUTHEAST Peak Elev=642.18' Storage=1,574 cf Inflow=1.19 cfs 0.437 af
Discarded=0.06 cfs 0.110 af Primary=1.13 cfs 0.319 af Outflow=1.19 cfs 0.429 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.531 af Average Runoff Depth = 0.91"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.40"
Tc=15.0 min CN=WQ Runoff=0.83 cfs 0.054 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.64"
Tc=20.0 min CN=WQ Runoff=4.13 cfs 0.286 af

Pond 11P: 011SOUTHEAST Peak Elev=642.23' Storage=1,832 cf Inflow=4.13 cfs 0.286 af
Discarded=0.07 cfs 0.045 af Primary=4.02 cfs 0.240 af Outflow=4.09 cfs 0.286 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.339 af Average Runoff Depth = 0.58"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.61"
Tc=15.0 min CN=WQ Runoff=0.85 cfs 0.083 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=0.88"
Tc=20.0 min CN=WQ Runoff=3.71 cfs 0.395 af

Pond 11P: 011SOUTHEAST Peak Elev=642.22' Storage=1,803 cf Inflow=3.71 cfs 0.395 af
Discarded=0.07 cfs 0.057 af Primary=3.63 cfs 0.338 af Outflow=3.70 cfs 0.395 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.477 af Average Runoff Depth = 0.82"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=0.80"
Tc=15.0 min CN=WQ Runoff=1.16 cfs 0.109 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=1.09"
Tc=20.0 min CN=WQ Runoff=4.76 cfs 0.491 af

Pond 11P: 011SOUTHEAST Peak Elev=642.23' Storage=1,879 cf Inflow=4.76 cfs 0.491 af
Discarded=0.07 cfs 0.057 af Primary=4.68 cfs 0.434 af Outflow=4.75 cfs 0.491 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.600 af Average Runoff Depth = 1.03"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=1.06"
Tc=15.0 min CN=WQ Runoff=0.43 cfs 0.145 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=1.38"
Tc=20.0 min CN=WQ Runoff=1.76 cfs 0.622 af

Pond 11P: 011SOUTHEAST Peak Elev=642.19' Storage=1,636 cf Inflow=1.76 cfs 0.622 af
Discarded=0.06 cfs 0.115 af Primary=1.70 cfs 0.499 af Outflow=1.76 cfs 0.614 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.767 af Average Runoff Depth = 1.31"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=1.01"
Tc=15.0 min CN=WQ Runoff=1.49 cfs 0.137 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=1.32"
Tc=20.0 min CN=WQ Runoff=5.90 cfs 0.595 af

Pond 11P: 011SOUTHEAST Peak Elev=642.25' Storage=1,954 cf Inflow=5.90 cfs 0.595 af
Discarded=0.07 cfs 0.058 af Primary=5.82 cfs 0.537 af Outflow=5.89 cfs 0.595 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.732 af Average Runoff Depth = 1.25"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=1.35"
Tc=15.0 min CN=WQ Runoff=1.10 cfs 0.184 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=1.70"
Tc=20.0 min CN=WQ Runoff=4.28 cfs 0.762 af

Pond 11P: 011SOUTHEAST Peak Elev=642.23' Storage=1,845 cf Inflow=4.28 cfs 0.762 af
Discarded=0.07 cfs 0.082 af Primary=4.21 cfs 0.680 af Outflow=4.28 cfs 0.762 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.946 af Average Runoff Depth = 1.62"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=1.73"
Tc=15.0 min CN=WQ Runoff=0.72 cfs 0.235 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=2.09"
Tc=20.0 min CN=WQ Runoff=2.76 cfs 0.940 af

Pond 11P: 011SOUTHEAST Peak Elev=642.21' Storage=1,727 cf Inflow=2.76 cfs 0.940 af
Discarded=0.07 cfs 0.121 af Primary=2.69 cfs 0.812 af Outflow=2.76 cfs 0.932 af

Total Runoff Area = 7.023 ac Runoff Volume = 1.175 af Average Runoff Depth = 2.01"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=1.41"
Tc=15.0 min CN=WQ Runoff=3.65 cfs 0.192 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=1.76"
Tc=20.0 min CN=WQ Runoff=13.02 cfs 0.791 af

Pond 11P: 011SOUTHEAST Peak Elev=642.31' Storage=2,338 cf Inflow=13.02 cfs 0.791 af
Discarded=0.08 cfs 0.048 af Primary=12.92 cfs 0.743 af Outflow=12.99 cfs 0.791 af

Total Runoff Area = 7.023 ac Runoff Volume = 0.983 af Average Runoff Depth = 1.68"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=1.92"
Tc=15.0 min CN=WQ Runoff=2.96 cfs 0.261 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=2.30"
Tc=20.0 min CN=WQ Runoff=10.73 cfs 1.033 af

Pond 11P: 011SOUTHEAST Peak Elev=642.29' Storage=2,226 cf Inflow=10.73 cfs 1.033 af
Discarded=0.07 cfs 0.061 af Primary=10.64 cfs 0.973 af Outflow=10.71 cfs 1.033 af

Total Runoff Area = 7.023 ac Runoff Volume = 1.295 af Average Runoff Depth = 2.21"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=2.19"
Tc=15.0 min CN=WQ Runoff=1.81 cfs 0.298 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=2.58"
Tc=20.0 min CN=WQ Runoff=6.69 cfs 1.161 af

Pond 11P: 011SOUTHEAST Peak Elev=642.25' Storage=2,004 cf Inflow=6.69 cfs 1.161 af
Discarded=0.07 cfs 0.086 af Primary=6.62 cfs 1.075 af Outflow=6.69 cfs 1.161 af

Total Runoff Area = 7.023 ac Runoff Volume = 1.459 af Average Runoff Depth = 2.49"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

Time span=0.05-31.00 hrs, dt=0.05 hrs, 620 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 EXT Runoff Area=71,110 sf 0.00% Impervious Runoff Depth=2.46"
Tc=15.0 min CN=WQ Runoff=1.04 cfs 0.335 af

Subcatchment2S: 011 EXT Runoff Area=234,817 sf 0.00% Impervious Runoff Depth=2.87"
Tc=20.0 min CN=WQ Runoff=3.86 cfs 1.289 af

Pond 11P: 011SOUTHEAST Peak Elev=642.22' Storage=1,815 cf Inflow=3.86 cfs 1.289 af
Discarded=0.07 cfs 0.126 af Primary=3.79 cfs 1.155 af Outflow=3.86 cfs 1.281 af

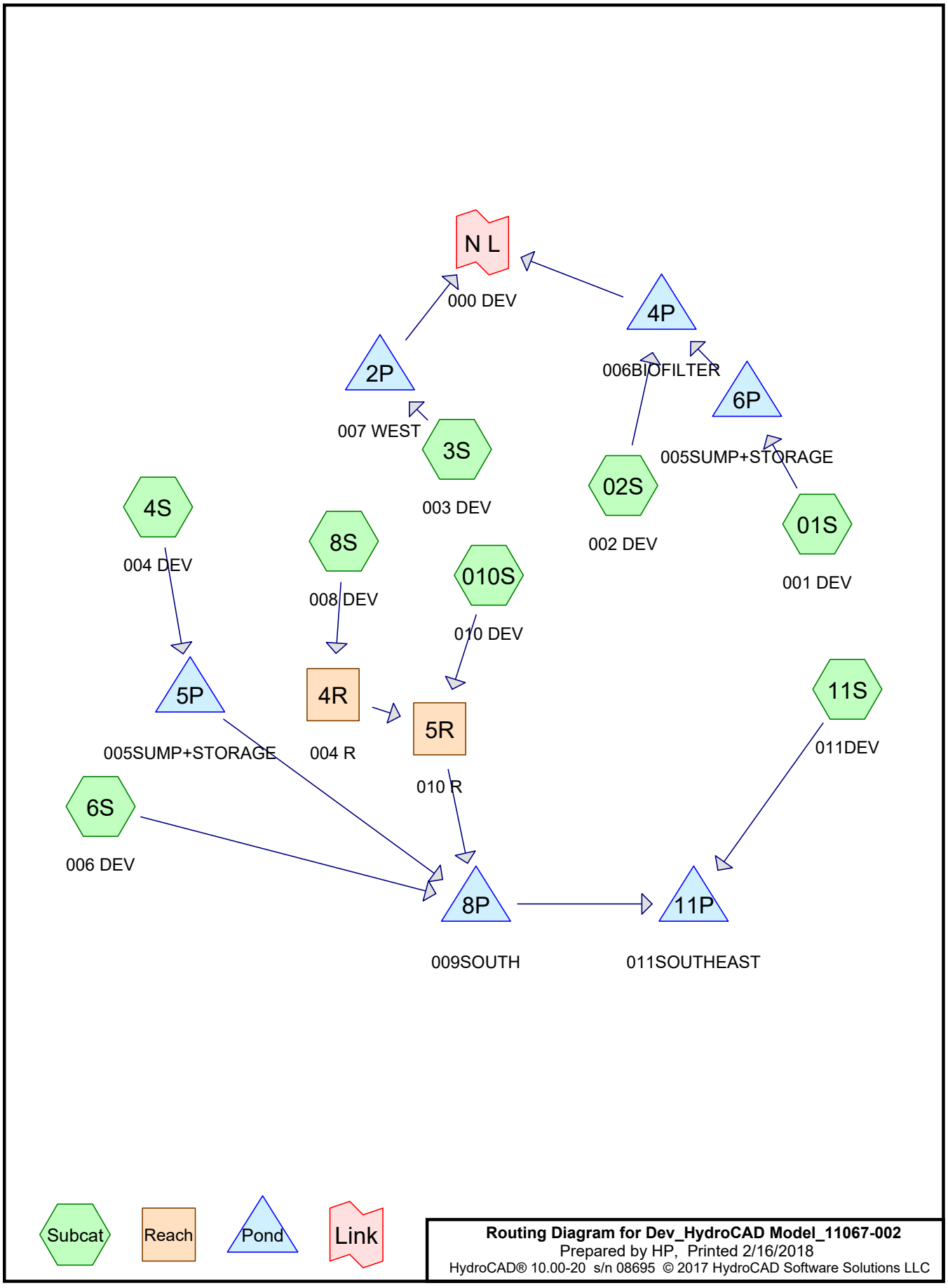
Total Runoff Area = 7.023 ac Runoff Volume = 1.624 af Average Runoff Depth = 2.77"
100.00% Pervious = 7.023 ac 0.00% Impervious = 0.000 ac

NORTH

	Pre-developed	Developed N L	
1-yr03hr	0.05	0	0.05
1-yr06hr	0.04	0	0.04
1-yr12hr	0.09	0	0.09
1-yr24hr	0.09	0	0.09
2-yr03Hr	0.11	0	0.11
2-yr06hr	0.17	0	0.17
2-yr12hr	0.18	0	0.18
2-yr24hr	0.15	0	0.15
5-yr12hr	0.39	0.19	0.2
5-yr24hr	0.27	0.2	0.07
10-yr12hr	1.16	2.09	-0.93
10-yr24hr	0.43	0.7	-0.27
25-yr12hr	1.1	2.33	-1.23
25-yr24hr	0.72	1.44	-0.72
100-yr03H	3.65	5.99	-2.34
100-yr24hr	1.04	2.08	-1.04

SOUTH

	Pre-developed	Developed Pond 11P	
1-yr03hr	0.78	0	0.78
1-yr06hr	0.69	0	0.69
1-yr12hr	0.59	0	0.59
1-yr24hr	0.43	0	0.43
2-yr03Hr	1.41	0	1.41
2-yr06hr	1.18	0	1.18
2-yr12hr	0.94	0	0.94
2-yr24hr	0.66	0	0.66
5-yr06hr	2.35	0.14	2.21
5-yr12hr	1.72	0.09	1.63
5-yr24hr	1.13	0.04	1.09
10-yr12hr	4.68	1.56	3.12
10-yr24hr	1.7	0.63	1.07
10-yr48hr	1.09	0.59	0.5
25-yr12hr	4.21	3	1.21
25-yr24hr	2.69	2.65	0.04
100-yr03H	12.92	4.96	7.96
100-yr24hr	3.79	3.72	0.07



Routing Diagram for Dev_HydroCAD Model_11067-002
Prepared by HP, Printed 2/16/2018

Summary for Subcatchment 01S: 001 DEV

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

Runoff = 0.28 cfs @ 2.84 hrs, Volume= 0.023 af, Depth= 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

Area (sf)	CN	Description
5,877	98	Paved parking, HSG A
5,877		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	40	0.0800	1.48		**Sheet Flow,** n= 0.015 P2= 2.90"
3.7	20	0.0100	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.90"
4.2	60	Total			

Summary for Subcatchment 02S: 002 DEV

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

Runoff = 0.55 cfs @ 2.84 hrs, Volume= 0.047 af, Depth= 1.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
	6,590	98	Paved parking, HSG A
	3,455	98	Roofs, HSG B
*	1,380	98	Sidewalk, HSG B
	5,009	61	>75% Grass cover, Good, HSG B
	16,434		Weighted Average
	5,009		30.48% Pervious Area
	11,425		69.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	40	0.0800	1.48		**Sheet Flow,** n= 0.015 P2= 2.90"
3.7	20	0.0100	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.90"
4.2	60	Total			

Summary for Subcatchment 3S: 003 DEV

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

Runoff = 1.81 cfs @ 2.82 hrs, Volume= 0.153 af, Depth= 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
	22,355	61	>75% Grass cover, Good, HSG B
	27,550	98	Paved parking, HSG B
	8,751	98	Roofs, HSG B
*	500	98	Sidewalk connected, HSG B
	59,156		Weighted Average
	22,355		37.79% Pervious Area
	36,801		62.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	6	0.3300	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.90"
0.5	40	0.0300	1.28		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.90"
1.8	385	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	50	0.0050	3.21	2.52	**Pipe Channel, 12"** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
3.0	481	Total			

Summary for Subcatchment 4S: 004 DEV

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

Runoff = 0.51 cfs @ 2.85 hrs, Volume= 0.042 af, Depth= 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
*	10,560	98	Parking and Roof
	10,560		100.00% Impervious Area

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

Summary for Subcatchment 6S: 006 DEV

Runoff = 0.82 cfs @ 2.94 hrs, Volume= 0.082 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
*	17,400	98	Roof
*	738	98	Walk
	34,392	61	>75% Grass cover, Good, HSG B
*	0	98	
	52,530		Weighted Average
	34,392		65.47% Pervious Area
	18,138		34.53% Impervious Area

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

Summary for Subcatchment 8S: 008 DEV

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

Runoff = 1.26 cfs @ 2.85 hrs, Volume= 0.108 af, Depth= 1.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
	0	90	1/8 acre lots, 65% imp, HSG C
	20,500	98	Roofs, HSG B
*	5,787	98	Sidewalk, HSG B
	13,563	61	>75% Grass cover, Good, HSG B
	39,850		Weighted Average
	13,563		34.04% Pervious Area
	26,287		65.96% Impervious Area

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

Summary for Subcatchment 010S: 010 DEV

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

Runoff = 0.53 cfs @ 2.85 hrs, Volume= 0.044 af, Depth= 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
	541	61	>75% Grass cover, Good, HSG B
*	10,976	98	Roof and sidewalk
	11,517		Weighted Average
	541		4.70% Pervious Area
	10,976		95.30% Impervious Area

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

Summary for Subcatchment 11S: 011DEV

Runoff = 1.95 cfs @ 3.10 hrs, Volume= 0.206 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
WI 6-96-hour 6.00 hrs 2-yr06hr Rainfall=2.31"

	Area (sf)	CN	Description
	62,665	61	>75% Grass cover, Good, HSG B
	39,905	98	Roofs, HSG B
*	7,500	98	Sidewalk Unconnected pavement, HSG B
	110,070		Weighted Average
	62,665		56.93% Pervious Area
	47,405		43.07% Impervious Area
	7,500		15.82% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0200	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.90"
2.1	200	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.9	670	0.0200	5.78	17.35	**Channel Flow,** Area= 3.0 sf Perim= 4.0' r= 0.75' n= 0.030
19.0	970	Total			

Summary for Reach 4R: 004 R

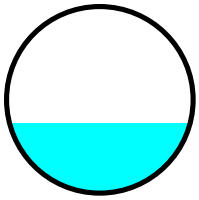
[52] Hint: Inlet/Outlet conditions not evaluated
[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.915 ac, 65.96% Impervious, Inflow Depth = 1.42" for 2-yr06hr event
Inflow = 1.26 cfs @ 2.85 hrs, Volume= 0.108 af
Outflow = 1.26 cfs @ 2.86 hrs, Volume= 0.108 af, Atten= 0%, Lag= 0.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.69 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.48 fps, Avg. Travel Time= 0.7 min

Peak Storage= 27 cf @ 2.86 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.21 cfs

12.0" Round Pipe
n= 0.011
Length= 100.0' Slope= 0.0100 '/'
Inlet Invert= 649.00', Outlet Invert= 648.00'



Summary for Reach 5R: 010 R

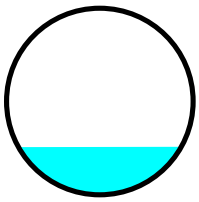
[52] Hint: Inlet/Outlet conditions not evaluated
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[62] Hint: Exceeded Reach 4R OUTLET depth by 0.02' @ 6.15 hrs

Inflow Area = 1.179 ac, 72.54% Impervious, Inflow Depth = 1.55" for 2-yr06hr event
Inflow = 1.79 cfs @ 2.86 hrs, Volume= 0.152 af
Outflow = 1.79 cfs @ 2.86 hrs, Volume= 0.152 af, Atten= 0%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.99 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.55 fps, Avg. Travel Time= 1.3 min

Peak Storage= 72 cf @ 2.86 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 12.41 cfs

18.0" Round Pipe
n= 0.011
Length= 200.0' Slope= 0.0100 '/'
Inlet Invert= 648.00', Outlet Invert= 646.00'



Summary for Pond 2P: 007 WEST

Inflow Area = 1.358 ac, 62.21% Impervious, Inflow Depth = 1.35" for 2-yr06hr event
Inflow = 1.81 cfs @ 2.82 hrs, Volume= 0.153 af
Outflow = 0.05 cfs @ 6.06 hrs, Volume= 0.090 af, Atten= 97%, Lag= 194.9 min
Discarded = 0.05 cfs @ 6.06 hrs, Volume= 0.090 af
Primary = 0.00 cfs @ 0.05 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Peak Elev= 649.78' @ 6.06 hrs Surf.Area= 3,259 sf Storage= 6,008 cf

Plug-Flow detention time= 755.2 min calculated for 0.090 af (59% of inflow)
Center-of-Mass det. time= 717.9 min (905.2 - 187.3)

Volume	Invert	Avail.Storage	Storage Description
#1	647.00'	11,130 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
647.00	950	0	0
648.00	1,900	1,425	1,425
649.00	2,645	2,273	3,698
650.00	3,430	3,038	6,735
651.00	5,360	4,395	11,130

Device	Routing	Invert	Outlet Devices
#1	Primary	645.00'	**18.0" Round Culvert** L= 30.0' Ke= 0.200 Inlet / Outlet Invert= 645.00' / 644.50' S= 0.0167 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Discarded	647.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 639.00'
#3	Device 1	650.00'	**12.8" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	650.80'	**24.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.05 cfs @ 6.06 hrs HW=649.78' (Free Discharge)
└**2=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.05 hrs HW=647.00' TW=0.00' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.00 cfs of 10.72 cfs potential flow)
│└**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: 006BIOFILTER

Inflow Area = 0.512 ac, 77.55% Impervious, Inflow Depth = 1.61" for 2-yr06hr event
Inflow = 1.48 cfs @ 2.80 hrs, Volume= 0.069 af
Outflow = 0.10 cfs @ 4.72 hrs, Volume= 0.069 af, Atten= 93%, Lag= 115.1 min
Discarded = 0.10 cfs @ 4.72 hrs, Volume= 0.069 af
Primary = 0.00 cfs @ 0.05 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Peak Elev= 648.99' @ 4.72 hrs Surf.Area= 1,739 sf Storage= 2,074 cf

Plug-Flow detention time= 304.0 min calculated for 0.069 af (100% of inflow)
Center-of-Mass det. time= 303.8 min (492.6 - 188.8)

Volume	Invert	Avail.Storage	Storage Description
#1	647.00'	7,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
647.00	450	0	0
648.00	1,000	725	725
649.00	1,750	1,375	2,100
650.00	2,700	2,225	4,325
651.00	2,850	2,775	7,100

Device	Routing	Invert	Outlet Devices
#1	Primary	650.20'	**5.0' long Sharp-Crested Rectangular Weir X 2.70** 2 End Contraction(s) 2.8' Crest Height
#2	Discarded	647.00'	**3.000 in/hr Exfiltration over Surface area above 647.00'** Conductivity to Groundwater Elevation = 640.00' Excluded Surface area = 450 sf
#3	Primary	649.35'	**12.8" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.10 cfs @ 4.72 hrs HW=648.98' (Free Discharge)
└**2=Exfiltration** (Controls 0.10 cfs)

Primary OutFlow Max=0.00 cfs @ 0.05 hrs HW=647.00' TW=0.00' (Dynamic Tailwater)
├**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 5P: 005SUMP+STORAGE

Inflow Area = 0.242 ac,100.00% Impervious, Inflow Depth = 2.08" for 2-yr06hr event
Inflow = 0.51 cfs @ 2.85 hrs, Volume= 0.042 af
Outflow = 1.15 cfs @ 2.97 hrs, Volume= 0.042 af, Atten= 0%, Lag= 7.0 min
Primary = 1.15 cfs @ 2.97 hrs, Volume= 0.042 af

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

Peak Elev= 643.35' @ 1.63 hrs Surf.Area= 28 sf Storage= 150 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 6.0 min (192.4 - 186.4)

Volume	Invert	Avail.Storage	Storage Description
#1	638.00'	30,175 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
638.00	28	0	0
643.99	28	168	168
644.00	28	0	168
644.50	40,000	10,007	10,175
645.00	40,000	20,000	30,175

Device	Routing	Invert	Outlet Devices
#1	Primary	643.00'	**Pump** Discharges@647.00' Turns Off@639.00' 4.0" Diam. x 50.0' Long Discharge, Hazen-Williams C= 120 Flow (gpm)= 50.0 100.0 150.0 200.0 250.0 300.0 400.0 520.0 Head (feet)= 33.00 30.70 28.20 25.80 23.50 21.10 17.00 12.00 -Loss (feet)= 0.12 0.44 0.92 1.57 2.38 3.33 5.68 9.23 =Lift (feet)= 32.88 30.26 27.28 24.23 21.12 17.77 11.32 2.77

Primary OutFlow Max=1.02 cfs @ 2.97 hrs HW=641.19' TW=648.52' (Dynamic Tailwater)
↑—**1=Pump** (Pump Controls 1.02 cfs)

Summary for Pond 6P: 005SUMP+STORAGE

Inflow Area = 0.135 ac,100.00% Impervious, Inflow Depth = 2.08" for 2-yr06hr event
Inflow = 0.28 cfs @ 2.84 hrs, Volume= 0.023 af
Outflow = 0.94 cfs @ 2.80 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min
Primary = 0.94 cfs @ 2.80 hrs, Volume= 0.022 af

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Peak Elev= 643.29' @ 2.18 hrs Surf.Area= 28 sf Storage= 148 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 5.6 min (191.2 - 185.6)

Volume	Invert	Avail.Storage	Storage Description
#1	638.00'	2,668 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
638.00	28	0	0
643.99	28	168	168
644.00	28	0	168
644.50	3,324	838	1,006
645.00	3,324	1,662	2,668

Device	Routing	Invert	Outlet Devices
#1	Primary	643.00'	**Pump** Discharges@648.00' Turns Off@639.00' 4.0" Diam. x 70.0' Long Discharge, Hazen-Williams C= 120 Flow (gpm)= 50.0 100.0 150.0 200.0 250.0 300.0 400.0 500.0 Head (feet)= 33.00 30.70 28.20 25.80 23.50 21.10 17.00 12.00 -Loss (feet)= 0.17 0.61 1.29 2.20 3.33 4.67 7.95 12.02 =Lift (feet)= 32.83 30.09 26.91 23.60 20.17 16.43 9.05 -0.02

Primary OutFlow Max=0.93 cfs @ 2.80 hrs HW=640.89' TW=648.16' (Dynamic Tailwater)
└─**1=Pump** (Pump Controls 0.93 cfs)

Summary for Pond 8P: 009SOUTH

[63] Warning: Exceeded Reach 5R INLET depth by 1.40' @ 6.35 hrs

Inflow Area =	2.628 ac,	57.63% Impervious,	Inflow Depth =	1.26"	for 2-yr06hr event
Inflow =	3.58 cfs @	2.96 hrs,	Volume=	0.276 af	
Outflow =	0.14 cfs @	6.09 hrs,	Volume=	0.184 af,	Atten= 96%, Lag= 187.7 min
Discarded =	0.08 cfs @	6.09 hrs,	Volume=	0.155 af	
Primary =	0.06 cfs @	6.09 hrs,	Volume=	0.029 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Peak Elev= 649.42' @ 6.09 hrs Surf.Area= 6,635 sf Storage= 10,391 cf

Plug-Flow detention time= 666.7 min calculated for 0.184 af (66% of inflow)
Center-of-Mass det. time= 631.9 min (824.6 - 192.8)

Volume	Invert	Avail.Storage	Storage Description
#1	647.00'	28,470 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
647.00	1,900	0	0
649.00	5,860	7,760	7,760
650.00	7,700	6,780	14,540
651.00	10,040	8,870	23,410
651.50	10,200	5,060	28,470

Device	Routing	Invert	Outlet Devices
#1	Device 4	650.10'	**12.8" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Discarded	647.00'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 604.60'
#3	Primary	651.01'	**Asymmetrical Weir, C= 2.68** Offset (feet) -70.00 -55.78 -49.83 -33.91 0.00 19.08 40.57 57.52 Height (feet) 0.50 0.35 0.29 0.03 0.01 0.10 0.26 0.50
#4	Primary	645.69'	**30.0" Round Culvert X 2.00** L= 247.5' Ke= 0.200 Inlet / Outlet Invert= 645.69' / 641.46' S= 0.0171 '/' Cc= 0.900 n= 0.011, Flow Area= 4.91 sf

#5 Device 4 649.00' **2.0" Vert. Orifice/Grate** C= 0.620

Discarded OutFlow Max=0.08 cfs @ 6.09 hrs HW=649.42' (Free Discharge)
└**2=Exfiltration** (Controls 0.08 cfs)

Primary OutFlow Max=0.06 cfs @ 6.09 hrs HW=649.42' TW=641.89' (Dynamic Tailwater)
├**3=Asymmetrical Weir** (Controls 0.00 cfs)
└**4=Culvert** (Passes 0.06 cfs of 93.07 cfs potential flow)
  ├**1=Orifice/Grate** (Controls 0.00 cfs)
  └**5=Orifice/Grate** (Orifice Controls 0.06 cfs @ 2.89 fps)

Summary for Pond 11P: 011SOUTHEAST

Inflow Area = 5.154 ac, 50.49% Impervious, Inflow Depth = 0.55" for 2-yr06hr event
Inflow = 1.95 cfs @ 3.10 hrs, Volume= 0.235 af
Outflow = 0.16 cfs @ 6.28 hrs, Volume= 0.235 af, Atten= 92%, Lag= 190.9 min
Discarded = 0.16 cfs @ 6.28 hrs, Volume= 0.235 af
Primary = 0.00 cfs @ 0.05 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.05-30.00 hrs, dt= 0.05 hrs
Peak Elev= 641.90' @ 6.28 hrs Surf.Area= 4,413 sf Storage= 7,224 cf

Plug-Flow detention time= 511.8 min calculated for 0.235 af (100% of inflow)
Center-of-Mass det. time= 512.6 min (744.4 - 231.7)

Volume	Invert	Avail.Storage	Storage Description
#1	639.20'	28,488 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
639.20	0	0	0
640.00	2,211	884	884
641.00	3,430	2,821	3,705
642.00	4,525	3,978	7,682
643.00	5,692	5,109	12,791
644.00	7,424	6,558	19,349
645.00	10,855	9,140	28,488

Device	Routing	Invert	Outlet Devices
#1	Device 3	642.55'	**12.8" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Discarded	639.20'	**1.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 600.00'
#3	Primary	640.00'	**18.0" Round Culvert** L= 53.2' Ke= 0.300 Inlet / Outlet Invert= 640.00' / 639.04' S= 0.0180 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#4	Primary	644.22'	**24.7' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

Discarded OutFlow Max=0.16 cfs @ 6.28 hrs HW=641.90' (Free Discharge)
└**2=Exfiltration** (Controls 0.16 cfs)

Primary OutFlow Max=0.00 cfs @ 0.05 hrs HW=639.20' (Free Discharge)
└**3=Culvert** (Controls 0.00 cfs)
└**1=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Link N L: 000 DEV

Inflow Area = 1.870 ac, 66.41% Impervious, Inflow Depth = 0.00" for 2-yr06hr event
Inflow = 0.00 cfs @ 0.05 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.05 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

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

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.180	61	>75% Grass cover, Good, HSG B (02S, 3S, 6S, 8S, 010S, 11S)
0.242	98	Parking and Roof (4S)
0.286	98	Paved parking, HSG A (01S, 02S)
0.632	98	Paved parking, HSG B (3S)
0.399	98	Roof (6S)
0.252	98	Roof and sidewalk (010S)
1.667	98	Roofs, HSG B (02S, 3S, 8S, 11S)
0.172	98	Sidewalk Unconnected pavement, HSG B (11S)
0.011	98	Sidewalk connected, HSG B (3S)
0.165	98	Sidewalk, HSG B (02S, 8S)
0.017	98	Walk (6S)
7.025	**81**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.286	HSG A	01S, 02S
5.828	HSG B	02S, 3S, 6S, 8S, 010S, 11S
0.000	HSG C	
0.000	HSG D	
0.911	Other	4S, 6S, 010S
7.025		**TOTAL AREA**

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=1.48"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.43 cfs 0.017 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=1.04"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.83 cfs 0.033 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=0.93"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=2.74 cfs 0.105 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=1.48"
Tc=5.0 min CN=98 Runoff=0.74 cfs 0.030 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.53"
Tc=10.0 min CN=WQ Runoff=1.13 cfs 0.053 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=0.98"
Tc=5.0 min CN=WQ Runoff=1.84 cfs 0.075 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=1.41"
Tc=5.0 min CN=WQ Runoff=0.77 cfs 0.031 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=0.65"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=2.36 cfs 0.137 af

Reach 4R: 004 R Avg. Flow Depth=0.46' Max Vel=5.18 fps Inflow=1.84 cfs 0.075 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=1.85 cfs 0.075 af

Reach 5R: 010 R Avg. Flow Depth=0.47' Max Vel=5.58 fps Inflow=2.61 cfs 0.106 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=2.63 cfs 0.106 af

Pond 2P: 007 WEST Peak Elev=649.22' Storage=4,296 cf Inflow=2.74 cfs 0.105 af
Discarded=0.04 cfs 0.075 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.075 af

Pond 4P: 006BIOFILTER Peak Elev=648.74' Storage=1,667 cf Inflow=1.63 cfs 0.048 af
Discarded=0.08 cfs 0.048 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.048 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.11' Storage=143 cf Inflow=0.74 cfs 0.030 af
Outflow=1.17 cfs 0.031 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.20' Storage=146 cf Inflow=0.43 cfs 0.017 af
Outflow=0.97 cfs 0.016 af

Pond 8P: 009SOUTH Peak Elev=649.00' Storage=7,763 cf Inflow=4.68 cfs 0.190 af
Discarded=0.07 cfs 0.136 af Primary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.136 af

Pond 11P: 011SOUTHEAST Peak Elev=641.34' Storage=4,944 cf Inflow=2.36 cfs 0.137 af
Discarded=0.14 cfs 0.137 af Primary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.137 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.480 af Average Runoff Depth = 0.82"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=1.68"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.23 cfs 0.019 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=1.18"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.45 cfs 0.037 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.06"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=1.47 cfs 0.120 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=1.68"
Tc=5.0 min CN=98 Runoff=0.41 cfs 0.034 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.61"
Tc=10.0 min CN=WQ Runoff=0.67 cfs 0.062 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.12"
Tc=5.0 min CN=WQ Runoff=1.02 cfs 0.086 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=1.60"
Tc=5.0 min CN=WQ Runoff=0.43 cfs 0.035 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=0.75"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.57 cfs 0.159 af

Reach 4R: 004 R Avg. Flow Depth=0.34' Max Vel=4.42 fps Inflow=1.02 cfs 0.086 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=1.03 cfs 0.086 af

Reach 5R: 010 R Avg. Flow Depth=0.35' Max Vel=4.70 fps Inflow=1.45 cfs 0.121 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=1.46 cfs 0.121 af

Pond 2P: 007 WEST Peak Elev=649.35' Storage=4,669 cf Inflow=1.47 cfs 0.120 af
Discarded=0.04 cfs 0.078 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.078 af

Pond 4P: 006BIOFILTER Peak Elev=648.74' Storage=1,663 cf Inflow=1.37 cfs 0.054 af
Discarded=0.08 cfs 0.054 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.054 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.35' Storage=150 cf Inflow=0.41 cfs 0.034 af
Outflow=1.09 cfs 0.034 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.33' Storage=149 cf Inflow=0.23 cfs 0.019 af
Outflow=0.94 cfs 0.017 af

Pond 8P: 009SOUTH Peak Elev=649.10' Storage=8,367 cf Inflow=3.17 cfs 0.217 af
Discarded=0.07 cfs 0.142 af Primary=0.02 cfs 0.002 af Outflow=0.09 cfs 0.144 af

Pond 11P: 011SOUTHEAST Peak Elev=641.35' Storage=4,979 cf Inflow=1.57 cfs 0.160 af
Discarded=0.14 cfs 0.160 af Primary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.160 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.551 af Average Runoff Depth = 0.94"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=2.07"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.14 cfs 0.023 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=1.48"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.28 cfs 0.047 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.34"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=0.92 cfs 0.152 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=2.07"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.042 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.81"
Tc=10.0 min CN=WQ Runoff=0.43 cfs 0.081 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.41"
Tc=5.0 min CN=WQ Runoff=0.65 cfs 0.108 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=1.98"
Tc=5.0 min CN=WQ Runoff=0.27 cfs 0.044 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=0.97"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.08 cfs 0.205 af

Reach 4R: 004 R Avg. Flow Depth=0.27' Max Vel=3.88 fps Inflow=0.65 cfs 0.108 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.65 cfs 0.108 af

Reach 5R: 010 R Avg. Flow Depth=0.28' Max Vel=4.11 fps Inflow=0.92 cfs 0.152 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=0.92 cfs 0.152 af

Pond 2P: 007 WEST Peak Elev=649.59' Storage=5,387 cf Inflow=0.92 cfs 0.152 af
Discarded=0.04 cfs 0.084 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.084 af

Pond 4P: 006BIOFILTER Peak Elev=648.76' Storage=1,703 cf Inflow=1.17 cfs 0.071 af
Discarded=0.09 cfs 0.071 af Primary=0.00 cfs 0.000 af Outflow=0.09 cfs 0.071 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.26 cfs 0.042 af
Outflow=1.01 cfs 0.045 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.14 cfs 0.023 af
Outflow=0.93 cfs 0.024 af

Pond 8P: 009SOUTH Peak Elev=649.25' Storage=9,266 cf Inflow=2.35 cfs 0.278 af
Discarded=0.08 cfs 0.147 af Primary=0.04 cfs 0.022 af Outflow=0.12 cfs 0.169 af

Pond 11P: 011SOUTHEAST Peak Elev=641.49' Storage=5,514 cf Inflow=1.08 cfs 0.226 af
Discarded=0.14 cfs 0.226 af Primary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.226 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.701 af Average Runoff Depth = 1.20"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=2.37"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.08 cfs 0.027 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=1.72"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.16 cfs 0.054 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.56"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=0.53 cfs 0.177 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=2.37"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.048 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.97"
Tc=10.0 min CN=WQ Runoff=0.25 cfs 0.097 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.64"
Tc=5.0 min CN=WQ Runoff=0.37 cfs 0.125 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=WQ Runoff=0.16 cfs 0.050 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.15"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=0.65 cfs 0.242 af

Reach 4R: 004 R Avg. Flow Depth=0.20' Max Vel=3.31 fps Inflow=0.37 cfs 0.125 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.37 cfs 0.125 af

Reach 5R: 010 R Avg. Flow Depth=0.21' Max Vel=3.49 fps Inflow=0.53 cfs 0.175 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=0.53 cfs 0.175 af

Pond 2P: 007 WEST Peak Elev=649.55' Storage=5,273 cf Inflow=0.53 cfs 0.177 af
Discarded=0.04 cfs 0.077 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.077 af

Pond 4P: 006BIOFILTER Peak Elev=648.71' Storage=1,631 cf Inflow=1.08 cfs 0.081 af
Discarded=0.08 cfs 0.079 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.079 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.15 cfs 0.048 af
Outflow=1.01 cfs 0.052 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.08 cfs 0.027 af
Outflow=0.92 cfs 0.027 af

Pond 8P: 009SOUTH Peak Elev=649.22' Storage=9,120 cf Inflow=1.78 cfs 0.324 af
Discarded=0.08 cfs 0.135 af Primary=0.04 cfs 0.030 af Outflow=0.12 cfs 0.165 af

Pond 11P: 011SOUTHEAST Peak Elev=641.37' Storage=5,067 cf Inflow=0.65 cfs 0.272 af
Discarded=0.14 cfs 0.230 af Primary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.230 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.819 af Average Runoff Depth = 1.40"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth>1.77"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.51 cfs 0.020 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth>1.26"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.99 cfs 0.039 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth>1.13"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=3.27 cfs 0.128 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth>1.77"
Tc=5.0 min CN=98 Runoff=0.88 cfs 0.036 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.66"
Tc=10.0 min CN=WQ Runoff=1.34 cfs 0.066 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth>1.20"
Tc=5.0 min CN=WQ Runoff=2.19 cfs 0.091 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth>1.69"
Tc=5.0 min CN=WQ Runoff=0.91 cfs 0.037 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=0.81"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=2.82 cfs 0.170 af

Reach 4R: 004 R Avg. Flow Depth=0.51' Max Vel=5.41 fps Inflow=2.19 cfs 0.091 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=2.20 cfs 0.091 af

Reach 5R: 010 R Avg. Flow Depth=0.51' Max Vel=5.85 fps Inflow=3.11 cfs 0.128 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=3.13 cfs 0.128 af

Pond 2P: 007 WEST Peak Elev=649.55' Storage=5,266 cf Inflow=3.27 cfs 0.128 af
Discarded=0.04 cfs 0.084 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.084 af

Pond 4P: 006BIOFILTER Peak Elev=648.95' Storage=2,010 cf Inflow=1.75 cfs 0.060 af
Discarded=0.10 cfs 0.060 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.060 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.09' Storage=143 cf Inflow=0.88 cfs 0.036 af
Outflow=1.07 cfs 0.037 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.01' Storage=140 cf Inflow=0.51 cfs 0.020 af
Outflow=0.94 cfs 0.021 af

Pond 8P: 009SOUTH Peak Elev=649.27' Storage=9,388 cf Inflow=5.35 cfs 0.232 af
Discarded=0.08 cfs 0.149 af Primary=0.05 cfs 0.011 af Outflow=0.12 cfs 0.160 af

Pond 11P: 011SOUTHEAST Peak Elev=641.70' Storage=6,387 cf Inflow=2.82 cfs 0.181 af
Discarded=0.15 cfs 0.181 af Primary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.181 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.588 af Average Runoff Depth = 1.00"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=2.08"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.28 cfs 0.023 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=1.49"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.55 cfs 0.047 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.35"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=1.81 cfs 0.153 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=2.08"
Tc=5.0 min CN=98 Runoff=0.51 cfs 0.042 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.81"
Tc=10.0 min CN=WQ Runoff=0.82 cfs 0.082 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.42"
Tc=5.0 min CN=WQ Runoff=1.26 cfs 0.108 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=1.99"
Tc=5.0 min CN=WQ Runoff=0.53 cfs 0.044 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=0.98"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.95 cfs 0.206 af

Reach 4R: 004 R Avg. Flow Depth=0.38' Max Vel=4.69 fps Inflow=1.26 cfs 0.108 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=1.26 cfs 0.108 af

Reach 5R: 010 R Avg. Flow Depth=0.38' Max Vel=4.99 fps Inflow=1.79 cfs 0.152 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=1.79 cfs 0.152 af

Pond 2P: 007 WEST Peak Elev=649.78' Storage=6,008 cf Inflow=1.81 cfs 0.153 af
Discarded=0.05 cfs 0.090 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.090 af

Pond 4P: 006BIOFILTER Peak Elev=648.99' Storage=2,074 cf Inflow=1.48 cfs 0.069 af
Discarded=0.10 cfs 0.069 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.069 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.35' Storage=150 cf Inflow=0.51 cfs 0.042 af
Outflow=1.15 cfs 0.042 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.29' Storage=148 cf Inflow=0.28 cfs 0.023 af
Outflow=0.94 cfs 0.022 af

Pond 8P: 009SOUTH Peak Elev=649.42' Storage=10,391 cf Inflow=3.58 cfs 0.276 af
Discarded=0.08 cfs 0.155 af Primary=0.06 cfs 0.029 af Outflow=0.14 cfs 0.184 af

Pond 11P: 011SOUTHEAST Peak Elev=641.90' Storage=7,224 cf Inflow=1.95 cfs 0.235 af
Discarded=0.16 cfs 0.235 af Primary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.235 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.705 af Average Runoff Depth = 1.20"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=2.42"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.17 cfs 0.027 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=1.76"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.33 cfs 0.055 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.60"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=1.06 cfs 0.181 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=2.42"
Tc=5.0 min CN=98 Runoff=0.30 cfs 0.049 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=0.99"
Tc=10.0 min CN=WQ Runoff=0.50 cfs 0.100 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.68"
Tc=5.0 min CN=WQ Runoff=0.75 cfs 0.128 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=2.32"
Tc=5.0 min CN=WQ Runoff=0.31 cfs 0.051 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.18"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.26 cfs 0.248 af

Reach 4R: 004 R Avg. Flow Depth=0.29' Max Vel=4.05 fps Inflow=0.75 cfs 0.128 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.75 cfs 0.128 af

Reach 5R: 010 R Avg. Flow Depth=0.30' Max Vel=4.29 fps Inflow=1.06 cfs 0.179 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=1.06 cfs 0.179 af

Pond 2P: 007 WEST Peak Elev=649.94' Storage=6,524 cf Inflow=1.06 cfs 0.181 af
Discarded=0.05 cfs 0.093 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.093 af

Pond 4P: 006BIOFILTER Peak Elev=648.98' Storage=2,071 cf Inflow=1.23 cfs 0.081 af
Discarded=0.10 cfs 0.080 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.080 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.27' Storage=148 cf Inflow=0.30 cfs 0.049 af
Outflow=1.01 cfs 0.052 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.17 cfs 0.027 af
Outflow=0.93 cfs 0.025 af

Pond 8P: 009SOUTH Peak Elev=649.48' Storage=10,787 cf Inflow=2.51 cfs 0.330 af
Discarded=0.08 cfs 0.156 af Primary=0.07 cfs 0.051 af Outflow=0.15 cfs 0.207 af

Pond 11P: 011SOUTHEAST Peak Elev=641.97' Storage=7,567 cf Inflow=1.26 cfs 0.299 af
Discarded=0.16 cfs 0.283 af Primary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.283 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.839 af Average Runoff Depth = 1.43"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.10 cfs 0.031 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=2.04"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.19 cfs 0.064 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.86"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=0.61 cfs 0.211 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=2.77"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.056 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=1.19"
Tc=10.0 min CN=WQ Runoff=0.31 cfs 0.120 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.95"
Tc=5.0 min CN=WQ Runoff=0.43 cfs 0.149 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=2.66"
Tc=5.0 min CN=WQ Runoff=0.18 cfs 0.059 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.40"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=0.78 cfs 0.295 af

Reach 4R: 004 R Avg. Flow Depth=0.22' Max Vel=3.46 fps Inflow=0.43 cfs 0.149 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.44 cfs 0.149 af

Reach 5R: 010 R Avg. Flow Depth=0.23' Max Vel=3.65 fps Inflow=0.62 cfs 0.207 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=0.62 cfs 0.207 af

Pond 2P: 007 WEST Peak Elev=649.91' Storage=6,443 cf Inflow=0.61 cfs 0.211 af
Discarded=0.05 cfs 0.085 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.085 af

Pond 4P: 006BIOFILTER Peak Elev=648.91' Storage=1,950 cf Inflow=1.09 cfs 0.096 af
Discarded=0.10 cfs 0.093 af Primary=0.00 cfs 0.000 af Outflow=0.10 cfs 0.093 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.17 cfs 0.056 af
Outflow=1.01 cfs 0.060 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.10 cfs 0.031 af
Outflow=0.92 cfs 0.032 af

Pond 8P: 009SOUTH Peak Elev=649.47' Storage=10,700 cf Inflow=1.90 cfs 0.388 af
Discarded=0.08 cfs 0.144 af Primary=0.07 cfs 0.068 af Outflow=0.15 cfs 0.213 af

Pond 11P: 011SOUTHEAST Peak Elev=641.86' Storage=7,064 cf Inflow=0.78 cfs 0.363 af
Discarded=0.16 cfs 0.270 af Primary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.270 af

Link N L: 000 DEV

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.984 af Average Runoff Depth = 1.68"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=2.72"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.37 cfs 0.031 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=2.00"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.72 cfs 0.063 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=1.82"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=2.36 cfs 0.206 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=2.72"
Tc=5.0 min CN=98 Runoff=0.65 cfs 0.055 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=1.17"
Tc=10.0 min CN=WQ Runoff=1.16 cfs 0.117 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=1.91"
Tc=5.0 min CN=WQ Runoff=1.65 cfs 0.146 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=2.61"
Tc=5.0 min CN=WQ Runoff=0.68 cfs 0.057 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.37"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=2.71 cfs 0.288 af

Reach 4R: 004 R Avg. Flow Depth=0.43' Max Vel=5.03 fps Inflow=1.65 cfs 0.146 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=1.65 cfs 0.146 af

Reach 5R: 010 R Avg. Flow Depth=0.44' Max Vel=5.38 fps Inflow=2.33 cfs 0.203 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=2.33 cfs 0.203 af

Pond 2P: 007 WEST Peak Elev=650.07' Storage=6,995 cf Inflow=2.36 cfs 0.206 af
Discarded=0.05 cfs 0.099 af Primary=0.22 cfs 0.032 af Outflow=0.27 cfs 0.131 af

Pond 4P: 006BIOFILTER Peak Elev=649.35' Storage=2,764 cf Inflow=1.64 cfs 0.091 af
Discarded=0.13 cfs 0.091 af Primary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.091 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.65 cfs 0.055 af
Outflow=1.10 cfs 0.054 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.26' Storage=147 cf Inflow=0.37 cfs 0.031 af
Outflow=0.94 cfs 0.028 af

Pond 8P: 009SOUTH Peak Elev=649.93' Storage=13,991 cf Inflow=4.27 cfs 0.374 af
Discarded=0.09 cfs 0.173 af Primary=0.10 cfs 0.081 af Outflow=0.19 cfs 0.254 af

Pond 11P: 011SOUTHEAST Peak Elev=642.61' Storage=10,637 cf Inflow=2.75 cfs 0.369 af
Discarded=0.19 cfs 0.338 af Primary=0.14 cfs 0.008 af Outflow=0.33 cfs 0.346 af

Link N L: 000 DEV

Inflow=0.22 cfs 0.032 af
Primary=0.22 cfs 0.032 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.963 af Average Runoff Depth = 1.64"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=3.07"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.21 cfs 0.034 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=2.28"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.42 cfs 0.072 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=2.09"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=1.37 cfs 0.237 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=3.07"
Tc=5.0 min CN=98 Runoff=0.38 cfs 0.062 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=1.38"
Tc=10.0 min CN=WQ Runoff=0.72 cfs 0.138 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=2.19"
Tc=5.0 min CN=WQ Runoff=0.97 cfs 0.167 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=2.95"
Tc=5.0 min CN=WQ Runoff=0.39 cfs 0.065 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.60"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.74 cfs 0.336 af

Reach 4R: 004 R Avg. Flow Depth=0.33' Max Vel=4.35 fps Inflow=0.97 cfs 0.167 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.97 cfs 0.167 af

Reach 5R: 010 R Avg. Flow Depth=0.34' Max Vel=4.61 fps Inflow=1.36 cfs 0.232 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=1.36 cfs 0.232 af

Pond 2P: 007 WEST Peak Elev=650.07' Storage=6,969 cf Inflow=1.37 cfs 0.237 af
Discarded=0.05 cfs 0.098 af Primary=0.19 cfs 0.046 af Outflow=0.24 cfs 0.144 af

Pond 4P: 006BIOFILTER Peak Elev=649.30' Storage=2,658 cf Inflow=1.31 cfs 0.106 af
Discarded=0.12 cfs 0.105 af Primary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.105 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.30' Storage=148 cf Inflow=0.38 cfs 0.062 af
Outflow=1.03 cfs 0.063 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.21 cfs 0.034 af
Outflow=0.93 cfs 0.034 af

Pond 8P: 009SOUTH Peak Elev=649.95' Storage=14,182 cf Inflow=3.06 cfs 0.433 af
Discarded=0.09 cfs 0.174 af Primary=0.10 cfs 0.108 af Outflow=0.19 cfs 0.282 af

Pond 11P: 011SOUTHEAST Peak Elev=642.59' Storage=10,559 cf Inflow=1.77 cfs 0.444 af
Discarded=0.19 cfs 0.352 af Primary=0.09 cfs 0.022 af Outflow=0.28 cfs 0.374 af

Link N L: 000 DEV

Inflow=0.19 cfs 0.046 af
Primary=0.19 cfs 0.046 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.111 af Average Runoff Depth = 1.90"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth>2.77"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.78 cfs 0.031 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth>2.04"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=1.54 cfs 0.064 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth>1.86"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=5.11 cfs 0.211 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth>2.77"
Tc=5.0 min CN=98 Runoff=1.35 cfs 0.056 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth>1.19"
Tc=10.0 min CN=WQ Runoff=2.32 cfs 0.120 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth>1.95"
Tc=5.0 min CN=WQ Runoff=3.44 cfs 0.149 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth>2.66"
Tc=5.0 min CN=WQ Runoff=1.40 cfs 0.059 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.40"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=4.75 cfs 0.295 af

Reach 4R: 004 R Avg. Flow Depth=0.69' Max Vel=5.98 fps Inflow=3.44 cfs 0.149 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=3.44 cfs 0.149 af

Reach 5R: 010 R Avg. Flow Depth=0.65' Max Vel=6.60 fps Inflow=4.84 cfs 0.207 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=4.87 cfs 0.207 af

Pond 2P: 007 WEST Peak Elev=650.13' Storage=7,189 cf Inflow=5.11 cfs 0.211 af
Discarded=0.05 cfs 0.099 af Primary=0.50 cfs 0.044 af Outflow=0.55 cfs 0.143 af

Pond 4P: 006BIOFILTER Peak Elev=649.44' Storage=2,955 cf Inflow=2.46 cfs 0.096 af
Discarded=0.14 cfs 0.085 af Primary=0.28 cfs 0.010 af Outflow=0.41 cfs 0.095 af

Pond 5P: 005SUMP+STORAGE Peak Elev=644.03' Storage=214 cf Inflow=1.35 cfs 0.056 af
Outflow=1.11 cfs 0.055 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.36' Storage=150 cf Inflow=0.78 cfs 0.031 af
Outflow=1.09 cfs 0.032 af

Pond 8P: 009SOUTH Peak Elev=650.10' Storage=15,351 cf Inflow=7.97 cfs 0.382 af
Discarded=0.10 cfs 0.179 af Primary=0.11 cfs 0.088 af Outflow=0.21 cfs 0.267 af

Pond 11P: 011SOUTHEAST Peak Elev=642.67' Storage=10,978 cf Inflow=4.81 cfs 0.383 af
Discarded=0.19 cfs 0.338 af Primary=0.46 cfs 0.032 af Outflow=0.65 cfs 0.370 af

Link N L: 000 DEV

Inflow=0.78 cfs 0.054 af
Primary=0.78 cfs 0.054 af

Total Runoff Area = 7.025 ac Runoff Volume = 0.984 af Average Runoff Depth = 1.68"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=3.27"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.44 cfs 0.037 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=2.45"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.88 cfs 0.077 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=2.25"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=2.92 cfs 0.254 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=3.27"
Tc=5.0 min CN=98 Runoff=0.78 cfs 0.066 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=1.50"
Tc=10.0 min CN=WQ Runoff=1.54 cfs 0.151 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=2.35"
Tc=5.0 min CN=WQ Runoff=2.03 cfs 0.179 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=3.14"
Tc=5.0 min CN=WQ Runoff=0.81 cfs 0.069 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=1.73"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=3.48 cfs 0.365 af

Reach 4R: 004 R Avg. Flow Depth=0.49' Max Vel=5.31 fps Inflow=2.03 cfs 0.179 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=2.03 cfs 0.179 af

Reach 5R: 010 R Avg. Flow Depth=0.49' Max Vel=5.69 fps Inflow=2.84 cfs 0.248 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=2.85 cfs 0.248 af

Pond 2P: 007 WEST Peak Elev=650.15' Storage=7,287 cf Inflow=2.92 cfs 0.254 af
Discarded=0.05 cfs 0.100 af Primary=0.66 cfs 0.080 af Outflow=0.72 cfs 0.179 af

Pond 4P: 006BIOFILTER Peak Elev=649.46' Storage=3,009 cf Inflow=1.82 cfs 0.112 af
Discarded=0.14 cfs 0.099 af Primary=0.41 cfs 0.013 af Outflow=0.55 cfs 0.112 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.78 cfs 0.066 af
Outflow=1.11 cfs 0.065 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.08' Storage=142 cf Inflow=0.44 cfs 0.037 af
Outflow=0.95 cfs 0.036 af

Pond 8P: 009SOUTH Peak Elev=650.19' Storage=16,083 cf Inflow=5.22 cfs 0.464 af
Discarded=0.10 cfs 0.183 af Primary=0.43 cfs 0.149 af Outflow=0.53 cfs 0.332 af

Pond 11P: 011SOUTHEAST Peak Elev=642.71' Storage=11,211 cf Inflow=3.55 cfs 0.514 af
Discarded=0.20 cfs 0.354 af Primary=0.73 cfs 0.127 af Outflow=0.92 cfs 0.481 af

Link N L: 000 DEV

Inflow=1.07 cfs 0.093 af
Primary=1.07 cfs 0.093 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.198 af Average Runoff Depth = 2.05"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=3.67"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.49 cfs 0.041 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=2.78"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=1.00 cfs 0.087 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=2.57"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=3.36 cfs 0.291 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=3.67"
Tc=5.0 min CN=98 Runoff=0.87 cfs 0.074 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=1.76"
Tc=10.0 min CN=WQ Runoff=1.85 cfs 0.177 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=2.68"
Tc=5.0 min CN=WQ Runoff=2.32 cfs 0.204 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=3.53"
Tc=5.0 min CN=WQ Runoff=0.91 cfs 0.078 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=2.01"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=4.08 cfs 0.424 af

Reach 4R: 004 R Avg. Flow Depth=0.53' Max Vel=5.49 fps Inflow=2.32 cfs 0.204 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=2.32 cfs 0.204 af

Reach 5R: 010 R Avg. Flow Depth=0.52' Max Vel=5.90 fps Inflow=3.23 cfs 0.282 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=3.24 cfs 0.282 af

Pond 2P: 007 WEST Peak Elev=650.25' Storage=7,636 cf Inflow=3.36 cfs 0.291 af
Discarded=0.06 cfs 0.100 af Primary=1.33 cfs 0.115 af Outflow=1.39 cfs 0.215 af

Pond 4P: 006BIOFILTER Peak Elev=649.52' Storage=3,136 cf Inflow=2.01 cfs 0.128 af
Discarded=0.14 cfs 0.102 af Primary=0.76 cfs 0.026 af Outflow=0.90 cfs 0.128 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.87 cfs 0.074 af
Outflow=1.03 cfs 0.074 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.31' Storage=149 cf Inflow=0.49 cfs 0.041 af
Outflow=1.06 cfs 0.041 af

Pond 8P: 009SOUTH Peak Elev=650.26' Storage=16,624 cf Inflow=5.84 cfs 0.533 af
Discarded=0.10 cfs 0.184 af Primary=0.82 cfs 0.216 af Outflow=0.92 cfs 0.400 af

Pond 11P: 011SOUTHEAST Peak Elev=642.82' Storage=11,802 cf Inflow=4.17 cfs 0.640 af
Discarded=0.20 cfs 0.357 af Primary=1.56 cfs 0.249 af Outflow=1.76 cfs 0.606 af

Link N L: 000 DEV

Inflow=2.09 cfs 0.141 af
Primary=2.09 cfs 0.141 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.376 af Average Runoff Depth = 2.35"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=4.16"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.14 cfs 0.047 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=3.21"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.30 cfs 0.101 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=2.98"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=0.99 cfs 0.337 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=4.16"
Tc=5.0 min CN=98 Runoff=0.26 cfs 0.084 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=2.11"
Tc=10.0 min CN=WQ Runoff=0.59 cfs 0.212 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=3.10"
Tc=5.0 min CN=WQ Runoff=0.70 cfs 0.236 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=4.02"
Tc=5.0 min CN=WQ Runoff=0.27 cfs 0.088 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=2.38"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.39 cfs 0.500 af

Reach 4R: 004 R Avg. Flow Depth=0.28' Max Vel=3.97 fps Inflow=0.70 cfs 0.236 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.70 cfs 0.236 af

Reach 5R: 010 R Avg. Flow Depth=0.28' Max Vel=4.17 fps Inflow=0.97 cfs 0.324 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=0.97 cfs 0.324 af

Pond 2P: 007 WEST Peak Elev=650.15' Storage=7,255 cf Inflow=0.99 cfs 0.337 af
Discarded=0.05 cfs 0.094 af Primary=0.61 cfs 0.111 af Outflow=0.66 cfs 0.204 af

Pond 4P: 006BIOFILTER Peak Elev=649.41' Storage=2,893 cf Inflow=1.21 cfs 0.149 af
Discarded=0.13 cfs 0.139 af Primary=0.15 cfs 0.004 af Outflow=0.28 cfs 0.143 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.26 cfs 0.084 af
Outflow=1.01 cfs 0.088 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.14 cfs 0.047 af
Outflow=0.93 cfs 0.048 af

Pond 8P: 009SOUTH Peak Elev=650.19' Storage=16,036 cf Inflow=2.51 cfs 0.625 af
Discarded=0.10 cfs 0.175 af Primary=0.40 cfs 0.206 af Outflow=0.50 cfs 0.381 af

Pond 11P: 011SOUTHEAST Peak Elev=642.70' Storage=11,127 cf Inflow=1.45 cfs 0.707 af
Discarded=0.19 cfs 0.342 af Primary=0.63 cfs 0.170 af Outflow=0.82 cfs 0.512 af

Link N L: 000 DEV

Inflow=0.70 cfs 0.114 af
Primary=0.70 cfs 0.114 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.605 af Average Runoff Depth = 2.74"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth>3.90"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.08 cfs 0.044 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth>2.98"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.18 cfs 0.094 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth>2.76"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=0.59 cfs 0.313 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth>3.90"
Tc=5.0 min CN=98 Runoff=0.15 cfs 0.079 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth>1.92"
Tc=10.0 min CN=WQ Runoff=0.36 cfs 0.193 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth>2.88"
Tc=5.0 min CN=WQ Runoff=0.41 cfs 0.219 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth>3.76"
Tc=5.0 min CN=WQ Runoff=0.16 cfs 0.083 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth>2.17"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=0.86 cfs 0.457 af

Reach 4R: 004 R Avg. Flow Depth=0.21' Max Vel=3.40 fps Inflow=0.41 cfs 0.219 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.41 cfs 0.219 af

Reach 5R: 010 R Avg. Flow Depth=0.22' Max Vel=3.56 fps Inflow=0.57 cfs 0.302 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=0.57 cfs 0.302 af

Pond 2P: 007 WEST Peak Elev=650.11' Storage=7,124 cf Inflow=0.59 cfs 0.313 af
Discarded=0.05 cfs 0.066 af Primary=0.40 cfs 0.090 af Outflow=0.45 cfs 0.156 af

Pond 4P: 006BIOFILTER Peak Elev=649.26' Storage=2,587 cf Inflow=1.09 cfs 0.141 af
Discarded=0.12 cfs 0.100 af Primary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.100 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.15 cfs 0.079 af
Outflow=1.01 cfs 0.086 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.08 cfs 0.044 af
Outflow=0.92 cfs 0.047 af

Pond 8P: 009SOUTH Peak Elev=650.19' Storage=16,042 cf Inflow=1.88 cfs 0.581 af
Discarded=0.10 cfs 0.123 af Primary=0.41 cfs 0.105 af Outflow=0.51 cfs 0.229 af

Pond 11P: 011SOUTHEAST Peak Elev=642.69' Storage=11,100 cf Inflow=0.91 cfs 0.563 af
Discarded=0.19 cfs 0.208 af Primary=0.59 cfs 0.112 af Outflow=0.79 cfs 0.320 af

Link N L: 000 DEV

Inflow=0.40 cfs 0.090 af
Primary=0.40 cfs 0.090 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.482 af Average Runoff Depth = 2.53"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=4.06"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.54 cfs 0.046 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=3.12"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=1.13 cfs 0.098 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=2.89"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=3.80 cfs 0.328 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=4.06"
Tc=5.0 min CN=98 Runoff=0.96 cfs 0.082 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=2.04"
Tc=10.0 min CN=WQ Runoff=2.16 cfs 0.205 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=3.01"
Tc=5.0 min CN=WQ Runoff=2.62 cfs 0.230 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=3.92"
Tc=5.0 min CN=WQ Runoff=1.01 cfs 0.086 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=2.30"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=4.71 cfs 0.485 af

Reach 4R: 004 R Avg. Flow Depth=0.57' Max Vel=5.65 fps Inflow=2.62 cfs 0.230 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=2.62 cfs 0.230 af

Reach 5R: 010 R Avg. Flow Depth=0.56' Max Vel=6.09 fps Inflow=3.63 cfs 0.316 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=3.63 cfs 0.316 af

Pond 2P: 007 WEST Peak Elev=650.32' Storage=7,938 cf Inflow=3.80 cfs 0.328 af
Discarded=0.06 cfs 0.100 af Primary=2.00 cfs 0.152 af Outflow=2.06 cfs 0.252 af

Pond 4P: 006BIOFILTER Peak Elev=649.56' Storage=3,237 cf Inflow=2.17 cfs 0.142 af
Discarded=0.15 cfs 0.103 af Primary=1.08 cfs 0.039 af Outflow=1.23 cfs 0.142 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.96 cfs 0.082 af
Outflow=1.16 cfs 0.081 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.35' Storage=150 cf Inflow=0.54 cfs 0.046 af
Outflow=1.05 cfs 0.044 af

Pond 8P: 009SOUTH Peak Elev=650.34' Storage=17,256 cf Inflow=6.53 cfs 0.602 af
Discarded=0.10 cfs 0.185 af Primary=1.37 cfs 0.284 af Outflow=1.48 cfs 0.469 af

Pond 11P: 011SOUTHEAST Peak Elev=642.97' Storage=12,643 cf Inflow=4.89 cfs 0.769 af
Discarded=0.21 cfs 0.360 af Primary=2.80 cfs 0.375 af Outflow=3.01 cfs 0.735 af

Link N L: 000 DEV

Inflow=3.08 cfs 0.191 af
Primary=3.08 cfs 0.191 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.559 af Average Runoff Depth = 2.66"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=4.66"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.32 cfs 0.052 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=3.64"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.68 cfs 0.114 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=3.40"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=2.27 cfs 0.384 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=4.66"
Tc=5.0 min CN=98 Runoff=0.57 cfs 0.094 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=2.47"
Tc=10.0 min CN=WQ Runoff=1.39 cfs 0.248 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=3.52"
Tc=5.0 min CN=WQ Runoff=1.58 cfs 0.268 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=WQ Runoff=0.60 cfs 0.099 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=2.75"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=3.13 cfs 0.580 af

Reach 4R: 004 R Avg. Flow Depth=0.42' Max Vel=4.97 fps Inflow=1.58 cfs 0.268 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=1.58 cfs 0.268 af

Reach 5R: 010 R Avg. Flow Depth=0.42' Max Vel=5.28 fps Inflow=2.17 cfs 0.368 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=2.17 cfs 0.368 af

Pond 2P: 007 WEST Peak Elev=650.28' Storage=7,771 cf Inflow=2.27 cfs 0.384 af
Discarded=0.06 cfs 0.101 af Primary=1.62 cfs 0.190 af Outflow=1.68 cfs 0.292 af

Pond 4P: 006BIOFILTER Peak Elev=649.51' Storage=3,127 cf Inflow=1.60 cfs 0.168 af
Discarded=0.14 cfs 0.131 af Primary=0.73 cfs 0.037 af Outflow=0.88 cfs 0.167 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.46' Storage=153 cf Inflow=0.57 cfs 0.094 af
Outflow=1.15 cfs 0.098 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.33' Storage=149 cf Inflow=0.32 cfs 0.052 af
Outflow=0.93 cfs 0.054 af

Pond 8P: 009SOUTH Peak Elev=650.38' Storage=17,638 cf Inflow=4.61 cfs 0.713 af
Discarded=0.10 cfs 0.188 af Primary=1.75 cfs 0.362 af Outflow=1.85 cfs 0.550 af

Pond 11P: 011SOUTHEAST Peak Elev=643.04' Storage=12,997 cf Inflow=4.13 cfs 0.942 af
Discarded=0.21 cfs 0.374 af Primary=3.00 cfs 0.483 af Outflow=3.21 cfs 0.858 af

Link N L: 000 DEV

Inflow=2.33 cfs 0.227 af
Primary=2.33 cfs 0.227 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.841 af Average Runoff Depth = 3.15"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=5.26"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.18 cfs 0.059 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=4.17"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.39 cfs 0.131 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=3.91"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=1.32 cfs 0.442 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=5.26"
Tc=5.0 min CN=98 Runoff=0.32 cfs 0.106 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=2.92"
Tc=10.0 min CN=WQ Runoff=0.84 cfs 0.293 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=4.04"
Tc=5.0 min CN=WQ Runoff=0.92 cfs 0.308 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=5.09"
Tc=5.0 min CN=WQ Runoff=0.34 cfs 0.112 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=3.22"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=1.93 cfs 0.678 af

Reach 4R: 004 R Avg. Flow Depth=0.32' Max Vel=4.29 fps Inflow=0.92 cfs 0.308 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=0.92 cfs 0.308 af

Reach 5R: 010 R Avg. Flow Depth=0.32' Max Vel=4.51 fps Inflow=1.26 cfs 0.420 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=1.26 cfs 0.420 af

Pond 2P: 007 WEST Peak Elev=650.21' Storage=7,500 cf Inflow=1.32 cfs 0.442 af
Discarded=0.05 cfs 0.097 af Primary=1.06 cfs 0.212 af Outflow=1.11 cfs 0.309 af

Pond 4P: 006BIOFILTER Peak Elev=649.47' Storage=3,031 cf Inflow=1.29 cfs 0.192 af
Discarded=0.14 cfs 0.157 af Primary=0.46 cfs 0.027 af Outflow=0.60 cfs 0.184 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.25' Storage=147 cf Inflow=0.32 cfs 0.106 af
Outflow=1.01 cfs 0.112 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.18 cfs 0.059 af
Outflow=0.92 cfs 0.061 af

Pond 8P: 009SOUTH Peak Elev=650.35' Storage=17,398 cf Inflow=3.03 cfs 0.825 af
Discarded=0.10 cfs 0.183 af Primary=1.51 cfs 0.384 af Outflow=1.61 cfs 0.567 af

Pond 11P: 011SOUTHEAST Peak Elev=642.94' Storage=12,443 cf Inflow=3.03 cfs 1.062 af
Discarded=0.21 cfs 0.356 af Primary=2.65 cfs 0.507 af Outflow=2.86 cfs 0.864 af

Link N L: 000 DEV

Inflow=1.44 cfs 0.240 af
Primary=1.44 cfs 0.240 af

Total Runoff Area = 7.025 ac Runoff Volume = 2.131 af Average Runoff Depth = 3.64"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth>4.76"
Flow Length=60' Tc=4.2 min CN=98 Runoff=1.31 cfs 0.054 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth>3.73"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=2.83 cfs 0.117 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth>3.48"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=9.73 cfs 0.394 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth>4.76"
Tc=5.0 min CN=98 Runoff=2.27 cfs 0.096 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth>2.54"
Tc=10.0 min CN=WQ Runoff=5.27 cfs 0.255 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth>3.61"
Tc=5.0 min CN=WQ Runoff=6.41 cfs 0.275 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth>4.60"
Tc=5.0 min CN=WQ Runoff=2.39 cfs 0.101 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth>2.83"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=9.90 cfs 0.596 af

Reach 4R: 004 R Avg. Flow Depth=1.00' Max Vel=6.09 fps Inflow=6.41 cfs 0.275 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=4.21 cfs 0.275 af

Reach 5R: 010 R Avg. Flow Depth=0.79' Max Vel=7.13 fps Inflow=6.60 cfs 0.376 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=6.77 cfs 0.376 af

Pond 2P: 007 WEST Peak Elev=650.70' Storage=9,613 cf Inflow=9.73 cfs 0.394 af
Discarded=0.07 cfs 0.101 af Primary=3.60 cfs 0.225 af Outflow=3.67 cfs 0.326 af

Pond 4P: 006BIOFILTER Peak Elev=649.72' Storage=3,602 cf Inflow=3.82 cfs 0.170 af
Discarded=0.16 cfs 0.089 af Primary=2.45 cfs 0.082 af Outflow=2.60 cfs 0.170 af

Pond 5P: 005SUMP+STORAGE Peak Elev=644.13' Storage=848 cf Inflow=2.27 cfs 0.096 af
Outflow=1.10 cfs 0.096 af

Pond 6P: 005SUMP+STORAGE Peak Elev=644.13' Storage=227 cf Inflow=1.31 cfs 0.054 af
Outflow=0.99 cfs 0.053 af

Pond 8P: 009SOUTH Peak Elev=650.69' Storage=20,442 cf Inflow=12.58 cfs 0.728 af
Discarded=0.11 cfs 0.186 af Primary=3.45 cfs 0.423 af Outflow=3.57 cfs 0.608 af

Pond 11P: 011SOUTHEAST Peak Elev=643.88' Storage=18,448 cf Inflow=12.56 cfs 1.019 af
Discarded=0.27 cfs 0.357 af Primary=4.96 cfs 0.645 af Outflow=5.22 cfs 1.002 af

Link N L: 000 DEV

Inflow=5.99 cfs 0.307 af
Primary=5.99 cfs 0.307 af

Total Runoff Area = 7.025 ac Runoff Volume = 1.889 af Average Runoff Depth = 3.23"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=5.56"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.73 cfs 0.063 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=4.44"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=1.61 cfs 0.140 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=4.17"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=5.53 cfs 0.472 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=5.56"
Tc=5.0 min CN=98 Runoff=1.30 cfs 0.112 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=3.15"
Tc=10.0 min CN=WQ Runoff=3.46 cfs 0.316 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=4.31"
Tc=5.0 min CN=WQ Runoff=3.77 cfs 0.328 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=5.39"
Tc=5.0 min CN=WQ Runoff=1.37 cfs 0.119 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=3.46"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=7.26 cfs 0.729 af

Reach 4R: 004 R Avg. Flow Depth=0.74' Max Vel=6.06 fps Inflow=3.77 cfs 0.328 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=3.78 cfs 0.328 af

Reach 5R: 010 R Avg. Flow Depth=0.67' Max Vel=6.69 fps Inflow=5.15 cfs 0.447 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=5.16 cfs 0.447 af

Pond 2P: 007 WEST Peak Elev=650.63' Storage=9,282 cf Inflow=5.53 cfs 0.472 af
Discarded=0.07 cfs 0.102 af Primary=3.42 cfs 0.294 af Outflow=3.48 cfs 0.396 af

Pond 4P: 006BIOFILTER Peak Elev=649.66' Storage=3,466 cf Inflow=2.59 cfs 0.201 af
Discarded=0.15 cfs 0.109 af Primary=1.91 cfs 0.092 af Outflow=2.06 cfs 0.200 af

Pond 5P: 005SUMP+STORAGE Peak Elev=644.04' Storage=230 cf Inflow=1.30 cfs 0.112 af
Outflow=1.07 cfs 0.111 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.25' Storage=147 cf Inflow=0.73 cfs 0.063 af
Outflow=0.99 cfs 0.061 af

Pond 8P: 009SOUTH Peak Elev=650.79' Storage=21,322 cf Inflow=9.40 cfs 0.874 af
Discarded=0.12 cfs 0.189 af Primary=3.71 cfs 0.552 af Outflow=3.82 cfs 0.741 af

Pond 11P: 011SOUTHEAST Peak Elev=644.03' Storage=19,605 cf Inflow=10.60 cfs 1.281 af
Discarded=0.28 cfs 0.372 af Primary=5.24 cfs 0.873 af Outflow=5.52 cfs 1.246 af

Link N L: 000 DEV

Inflow=5.16 cfs 0.386 af
Primary=5.16 cfs 0.386 af

Total Runoff Area = 7.025 ac Runoff Volume = 2.278 af Average Runoff Depth = 3.89"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=5.96"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.40 cfs 0.067 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=4.80"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.89 cfs 0.151 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=4.52"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=3.05 cfs 0.511 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=5.96"
Tc=5.0 min CN=98 Runoff=0.72 cfs 0.120 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=3.46"
Tc=10.0 min CN=WQ Runoff=2.00 cfs 0.348 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=4.66"
Tc=5.0 min CN=WQ Runoff=2.10 cfs 0.355 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=5.78"
Tc=5.0 min CN=WQ Runoff=0.76 cfs 0.127 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=3.79"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=4.39 cfs 0.797 af

Reach 4R: 004 R Avg. Flow Depth=0.50' Max Vel=5.36 fps Inflow=2.10 cfs 0.355 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=2.10 cfs 0.355 af

Reach 5R: 010 R Avg. Flow Depth=0.49' Max Vel=5.70 fps Inflow=2.86 cfs 0.483 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=2.86 cfs 0.483 af

Pond 2P: 007 WEST Peak Elev=650.38' Storage=8,182 cf Inflow=3.05 cfs 0.511 af
Discarded=0.06 cfs 0.103 af Primary=2.58 cfs 0.315 af Outflow=2.64 cfs 0.418 af

Pond 4P: 006BIOFILTER Peak Elev=649.57' Storage=3,258 cf Inflow=1.79 cfs 0.219 af
Discarded=0.15 cfs 0.142 af Primary=1.15 cfs 0.075 af Outflow=1.30 cfs 0.218 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.04' Storage=141 cf Inflow=0.72 cfs 0.120 af
Outflow=1.06 cfs 0.124 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.14' Storage=144 cf Inflow=0.40 cfs 0.067 af
Outflow=0.92 cfs 0.068 af

Pond 8P: 009SOUTH Peak Elev=650.62' Storage=19,768 cf Inflow=5.69 cfs 0.955 af
Discarded=0.11 cfs 0.192 af Primary=3.24 cfs 0.598 af Outflow=3.35 cfs 0.791 af

Pond 11P: 011SOUTHEAST Peak Elev=643.79' Storage=17,847 cf Inflow=7.31 cfs 1.396 af
Discarded=0.26 cfs 0.387 af Primary=4.80 cfs 0.923 af Outflow=5.06 cfs 1.310 af

Link N L: 000 DEV

Inflow=3.72 cfs 0.391 af
Primary=3.72 cfs 0.391 af

Total Runoff Area = 7.025 ac Runoff Volume = 2.477 af Average Runoff Depth = 4.23"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac

Time span=0.05-30.00 hrs, dt=0.05 hrs, 600 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment01S: 001 DEV Runoff Area=5,877 sf 100.00% Impervious Runoff Depth=6.35"
Flow Length=60' Tc=4.2 min CN=98 Runoff=0.22 cfs 0.071 af

Subcatchment02S: 002 DEV Runoff Area=16,434 sf 69.52% Impervious Runoff Depth=5.15"
Flow Length=60' Tc=4.2 min CN=WQ Runoff=0.49 cfs 0.162 af

Subcatchment3S: 003 DEV Runoff Area=59,156 sf 62.21% Impervious Runoff Depth=4.86"
Flow Length=481' Tc=3.0 min CN=WQ Runoff=1.65 cfs 0.550 af

Subcatchment4S: 004 DEV Runoff Area=10,560 sf 100.00% Impervious Runoff Depth=6.35"
Tc=5.0 min CN=98 Runoff=0.39 cfs 0.128 af

Subcatchment6S: 006 DEV Runoff Area=52,530 sf 34.53% Impervious Runoff Depth=3.77"
Tc=10.0 min CN=WQ Runoff=1.11 cfs 0.379 af

Subcatchment8S: 008 DEV Runoff Area=39,850 sf 65.96% Impervious Runoff Depth=5.01"
Tc=5.0 min CN=WQ Runoff=1.14 cfs 0.382 af

Subcatchment010S: 010 DEV Runoff Area=11,517 sf 95.30% Impervious Runoff Depth=6.17"
Tc=5.0 min CN=WQ Runoff=0.41 cfs 0.136 af

Subcatchment11S: 011DEV Runoff Area=110,070 sf 43.07% Impervious Runoff Depth=4.11"
Flow Length=970' Tc=19.0 min CN=WQ Runoff=2.50 cfs 0.865 af

Reach 4R: 004 R Avg. Flow Depth=0.36' Max Vel=4.56 fps Inflow=1.14 cfs 0.382 af
12.0" Round Pipe n=0.011 L=100.0' S=0.0100 '/' Capacity=4.21 cfs Outflow=1.14 cfs 0.382 af

Reach 5R: 010 R Avg. Flow Depth=0.36' Max Vel=4.79 fps Inflow=1.56 cfs 0.518 af
18.0" Round Pipe n=0.011 L=200.0' S=0.0100 '/' Capacity=12.41 cfs Outflow=1.56 cfs 0.518 af

Pond 2P: 007 WEST Peak Elev=650.26' Storage=7,700 cf Inflow=1.65 cfs 0.550 af
Discarded=0.06 cfs 0.100 af Primary=1.47 cfs 0.317 af Outflow=1.53 cfs 0.417 af

Pond 4P: 006BIOFILTER Peak Elev=649.50' Storage=3,088 cf Inflow=1.40 cfs 0.237 af
Discarded=0.14 cfs 0.173 af Primary=0.62 cfs 0.053 af Outflow=0.76 cfs 0.226 af

Pond 5P: 005SUMP+STORAGE Peak Elev=643.21' Storage=146 cf Inflow=0.39 cfs 0.128 af
Outflow=1.01 cfs 0.135 af

Pond 6P: 005SUMP+STORAGE Peak Elev=643.00' Storage=140 cf Inflow=0.22 cfs 0.071 af
Outflow=0.92 cfs 0.075 af

Pond 8P: 009SOUTH Peak Elev=650.45' Storage=18,200 cf Inflow=3.58 cfs 1.031 af
Discarded=0.11 cfs 0.189 af Primary=2.35 cfs 0.578 af Outflow=2.46 cfs 0.767 af

Pond 11P: 011SOUTHEAST Peak Elev=643.30' Storage=14,561 cf Inflow=4.61 cfs 1.442 af
Discarded=0.23 cfs 0.369 af Primary=3.72 cfs 0.873 af Outflow=3.95 cfs 1.242 af

Link N L: 000 DEV

Inflow=2.08 cfs 0.371 af
Primary=2.08 cfs 0.371 af

Total Runoff Area = 7.025 ac Runoff Volume = 2.674 af Average Runoff Depth = 4.57"
45.27% Pervious = 3.180 ac 54.73% Impervious = 3.845 ac