A STORMWATER MANAGMENT ANALYSIS

OF THE PROPOSED DEVELOPMENT OF

FIRST BAPTIST CHURCH OF O'FALLON – MULTIPURPOSE BUILDING

IN

CITY OF O'FALLON, MISSOURI

FOR

First Baptist Church of O'Fallon
8750 Veterans Memorial Pkwy
O'Fallon, MO 63366

BAX PROJECT NO. 93-4007D

November 4, 2022

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Introduction

The currently developed site is in the City of O'Fallon, southeast of the Veterans Memorial Pkwy and S Woodlawn Ave intersection. The proposed development disturbs approximately 2.26 acres. One proposed dry detention basin provides the stormwater attenuation required by the City of O'Fallon Design Standards for the proposed development. The storage volume and outfall rates ensure the peak rate of runoff leaving the tract under the Postdeveloped conditions are less than or equal to the peak rate of runoff under the Predeveloped conditions for the 2, 15, 25, and 100 Year 20 Minute Design Storms. The design ensures safe passage of the 100 Year 20 Minute Design Storm assuming blockage of the low flow slot (LFB).

General Site Data and Runoff Conditions

The rational method analysis uses runoff factors displayed in *Table 1: P.I. Factor Values*. A rational method analysis determines the predeveloped runoff rates and the postdeveloped runoff rates.

Table 1: P.I. Factor Values

%Impervious	Cover	PI (2yr 20min)	PI (15yr 20min)	PI (25yr 20min)	PI (100yr 20min)
5%	Greenspace/Parks	1.15	1.70	2.00	2.29
100%	Pavement/Buildings	2.39	3.54	4.16	4.77

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Differential Runoff Calculations

The Predeveloped and Postdeveloped disturbed area consists of three different drainage areas. The rational method determines the runoff rates and determines the differential runoff. The difference of the Postdeveloped runoff rate and the Predeveloped runoff rate determines the differential runoff for each storm. A positive differential runoff requires a stormwater detention within that watershed.

Table 2: Drainage Area A - Rational Method and Differential Runoff

Drainage Area A: Rational Method Flow Calculations						
Predevelopment						
Onsite /Offsite	Cover	Area (acres)	Q (cfs) 2yr 20min	15yr 20min	25yr 20min	100yr 20min
Onsite	Greenspace	1.29	1.48	2.19	2.58	2.95
	Total	1.29	1.48	2.19	2.58	2.95
Total		1.29	1.48	2.19	2.58	2.95
Postdevelopment						
Onsite /Offsite	Cover	Area (acres)	Q (cfs) 2yr 20min	15yr 20min	25yr 20min	100yr 20min
Onsite	Greenspace	0.98	1.13	1.67	1.96	2.24
	Building/Pavement	0.80	1.91	2.83	3.33	3.82
	Total	1.78	3.04	4.50	5.29	6.06
Total		1.78	3.04	4.50	5.29	6.06
Differential Runoff =			1.56	2.31	2.71	3.11

Per the calculations in *Table 2: Drainage Area A - Rational Method and Differential Runoff*, Drainage Area A requires detention.

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Table 3: Drainage Area B - Rational Method and Differential Runoff

Drainage Area B: Rational Method Flow Calculations						
Predevelopment						
Onsite /Offsite	Cover	Area (acres)	Q (cfs)			
			2yr 20min	15yr 20min	25yr 20min	100yr 20min
Onsite	Greenspace	0.80	0.92	1.36	1.60	1.83
	Building/Pavement	0.80	1.91	2.83	3.33	3.82
	Total	1.60	2.83	4.19	4.93	5.65
Total		1.60	2.83	4.19	4.93	5.65
Postdevelopment						
Onsite /Offsite	Cover	Area (acres)	Q (cfs)			
			2yr 20min	15yr 20min	25yr 20min	100yr 20min
Onsite	Greenspace	0.68	0.78	1.16	1.36	1.56
	Building/Pavement	0.78	1.86	2.76	3.24	3.72
	Total	1.46	2.64	3.92	4.60	5.28
Total		1.46	2.64	3.92	4.60	5.28
Differential Runoff =			-0.19	-0.27	-0.33	-0.37

Per the calculations in *Table 3: Drainage Area B - Rational Method and Differential Runoff*, Drainage Area B does not require detention.

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Table 4: Drainage Area C - Rational Method and Differential Runoff

Drainage Area C: Rational Method Flow Calculations						
Predevelopment						
Onsite /Offsite	Cover	Area (acres)	Q (cfs)			
			2yr 20min	15yr 20min	25yr 20min	100yr 20min
Onsite	Greenspace	1.44	1.66	2.45	2.88	3.30
	Building/Pavement	2.22	5.31	7.86	9.24	10.59
	Total	3.66	6.97	10.31	12.12	13.89
Total		3.66	6.97	10.31	12.12	13.89
Postdevelopment						
Onsite /Offsite	Cover	Area (acres)	Q (cfs)			
			2yr 20min	15yr 20min	25yr 20min	100yr 20min
Onsite	Greenspace	1.00	1.15	1.70	2.00	2.29
	Building/Pavement	2.30	5.50	8.14	9.57	10.97
	Total	3.30	6.65	9.84	11.57	13.26
Total		3.30	6.65	9.84	11.57	13.26
Differential Runoff =			-0.32	-0.47	-0.55	-0.63

Per the calculations in *Table 4: Drainage Area C - Rational Method and Differential Runoff*, Drainage Area C does not require detention.

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Detention Calculations (Drainage Area A)

Drainage Area A requires additional detention, as displayed in Table 2. Drainage Area A consists of two subdrainage areas, Basin Inflow and Direct Runoff. *Table 5: Drainage Area A Postdeveloped Basin Inflow and Direct Runoff* displays the breakdown of the two subdrainage areas.

Table 5: Drainage Area A Postdeveloped Basin Inflow and Direct Runoff

Drainage Area A: Inflow and Direct Runoff					
Drainage Area A - Basin Inflow					
Cover	Basin Inflow Area (acres)	Q (cfs)			
		2yr 20min	15yr 20min	25yr 20min	100yr 20min
Greenspace	0.31	0.36	0.53	0.62	0.71
Building/Pavement	0.80	1.91	2.83	3.33	3.82
Total Inflow		2.27	3.36	3.95	4.53
Drainage Area A - Direct Runoff					
Cover	Direct Runoff Acres (acres)	Q (cfs)			
		2yr 20min	15yr 20min	25yr 20min	100yr 20min
Greenspace	0.67	0.77	1.14	1.34	1.53
Building/Pavement	0.00	0	0	0	0
Total Inflow		0.77	1.14	1.34	1.53

Subtracting the differential rate from the basin inflow rate results in the allowable release rate, as displayed in *Table 6: Allowable Release Rate of Basin*.

Table 6: Allowable Release Rate of Basin

Storm:	Basin Inflow (cfs)	-	Differential Runoff Rate (cfs)	=	Allowable Release Rate (cfs)
2 Yr 20 Min:	2.27	-	1.56	=	0.71
15 Yr 20 Min:	3.36	-	2.31	=	1.05
25 Yr 20 Min:	3.95	-	2.71	=	1.24
100 Yr 20 Min:	4.53	-	3.11	=	1.42

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The computer program Pondpack routes the 2, 15, 25, and 100 Year 20 Minute storms and the 100 Year 20 Minute LFB through the proposed basin; refer to Appendix C for the entire Pondpack report. *Table 7: Pondpack Summary for Basin* summarizes the Pondpack routing results.

Table 7: Pondpack Summary for Basin

Drainage Area A: Basin Pondpack Storm Routing Calculations					
Storm	Peak Inflow (cfs)	Allowable Release Rate (cfs)	Calculated Release Rate (cfs)	Peak Elevation (ft)	Freeboard (ft)
2 Yr 20 Min	2.27	0.71	0.66	577.94	4.06
15 Yr 20 Min	3.36	1.05	0.75	578.60	3.40
25 Yr 20 Min	3.95	1.24	0.80	578.92	3.08
100 Yr 20 Min	4.53	1.42	0.83	579.22	2.78
100 Yr 20 Min LFB	4.53	NA	4.53	579.72	2.28

Adding the direct runoff rate and the basin release rate derives the postdeveloped runoff rate of Drainage Area A; this is displayed in *Table 8: Peak Flows for Postdeveloped Drainage Area A.*

Table 8: Peak Flows for Postdeveloped Drainage Area A

Storm	Direct Runoff (cfs)	+	Basin Release Rate (cfs)	=	Postdeveloped Runoff (cfs)
2 Yr 20 Min:	0.77	+	0.66	=	1.43
15 Yr 20 Min:	1.14	+	0.75	=	1.89
25 Yr 20 Min:	1.34	+	0.80	=	2.14
100 Yr 20 Min:	1.53	+	0.83	=	2.36
100 Yr 20 Min LFB:	1.53	+	4.53	=	6.06

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Sediment Storage Calculations

The City of O'Fallon design standards require two years of sediment storage accommodation for all detention facilities. This is accomplished by routing the design stroms through the outfall structure and determining the 100 Year 20 Minute storm high-water elevation. Using the annual sediment storage nomograph included in Appendix B, calculations determine the volume of the sediment delivered to the detention basin over a two year period. By adding the volume of sediment to the storage volume to the 100 Year 20 Minute storm, calculations determine the required crest of structure elevation. Please refer to calculations below

*Storage Required=Years of Storage*Annual Sediment*Drainage Area

Runoff C Value =	0.7
Drainage Area =	1.11
Annual Sediment =	120
Years of Storage =	2
Storage Required =	266

Drainage Area A: Basin Sediment Storage	
100-Year Highwater Elevation =	579.22
Storage Volume at Elevation 579.22 (ft^3)=	4,577
2-Year Sediment Storage Volume (ft^3)=	266
Required Storage Volume (ft^3)=	4,843
Volume 4843 c.f. is Achieved at Elevation =	579.33
Crest of Control Structure=	579.45

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Drainage Area A Summary

Discharge Point

2 Year, 20 Minute Predeveloped Discharge	1.48	cfs
2 Year, 20 Minute Postdeveloped Discharge	1.43	cfs

✓ 2 Year, 20 Minute Detention Requirement is met at the Outfall Point ✓

15 Year, 20 Minute Predeveloped Discharge	2.19	cfs
15 Year, 20 Minute Postdeveloped Discharge	1.89	cfs

✓ 15 Year, 20 Minute Detention Requirement is met at the Outfall Point ✓

25 Year, 20 Minute Predeveloped Discharge	2.58	cfs
25 Year, 20 Minute Postdeveloped Discharge	2.14	cfs

✓ 25 Year, 20 Minute Detention Requirement is met at the Outfall Point ✓

100 Year, 20 Minute Predeveloped Discharge	2.95	cfs
100 Year, 20 Minute Postdeveloped Discharge	2.36	cfs

✓ 100 Year, 20 Minute Detention Requirement is met at the Outfall Point ✓

Dry Detention Basin	Discharge Rate		High Water
2 Year, 20 Minute Storm	0.66	cfs	577.94
15 Year, 20 Minute Storm	0.75	cfs	578.60
25 Year, 20 Minute Storm	0.80	cfs	578.92
100 Year, 24 Hour Storm	0.83	cfs	579.22
100 Year, 24 Hour Storm w/ LFB	4.53	cfs	579.72

Low Flow Slot	3.5 in. W x 4 in. H Rectangular Orifice
Low Flow Slot Elevation	575.48
Structure Type	42" ø Standpipe
Structure Crest Elevation	579.45

✓ Sediment Storage Requirement of Dry Detention Basin is met ✓

Top of Basin Berm	582.00
Freeboard (ft)	2.28

✓ Freeboard Requirement of Dry Detention Basin is met ✓

Water Depth (ft)	4.24

✓ Water Depth Requirement of Dry Detention Basin is met ✓

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Water Quality

The BMP Water Quality Snout provides water quality treatment. It is a simplified hydrodynamic separator and removes suspended soils and detritus.

Table 9: Drainage Area A BMP Snouts - Area Treated breaks down the area navigating to BMP Snouts into Drainage Area A and displays the breakdown of impervious and pervious.

Table 9: Drainage Area A BMP Snouts - Area Treated

Drainage Area A: BMP Routing	
Cover	GI 103 Inflow (acres)
Greenspace	0.12
Building/Pavement	0.80

The BMP Water Quality Snout is within GI 103. The manufacturer specifies the size of the snout based on the outflow pipe from the structure; *Table 10: Basin A - GI 103 Snout Calculations and Design displays the snout design*. A Drainage Solutions Inc Snout 18R Round (or equivalent) is proposed for the outflow pipe in GI 103. The sump depth is 3 feet, meeting the required sump depth of 3 feet. The structure area divided by the outflow pipe area is greater than the minimum requirement of 6, as displayed in Table 10. The sump and structure size allots a sediment storage volume of 37.70 ft^3.

Table 10: Basin A - GI 103 Snout Calculations and Design

Pretreatment - GI 103						
Structure - Round			Pipe		Sump Depth (ft)	
diameter (ft)	min area (ft^2)	area (ft^2)	diameter (ft)	area (ft^2)	Min	Provided
4.00	4.00	12.57	1.00	0.79	3.00	3.00
Structure Area/Pipe Area ≈			16	(6-7) Minimum)		
Sediment Storage Volume (ft^3)=			37.70			
Provided Snout=		**18R**				
Max Pipe Size=		15	inches			
Allowable Structure Size=		48-60	inches			

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Appendix

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Appendix A

- Basin Volume

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Basin Volume				
Contour Elevation (ft)	Contour Area (ft^2)	A1 + A2 + SQRT(A1*A2) (ft)	Incremental Volume (ft^3)	Total Volume (ft^3)
575.48	0	0	0	0
576	362	362	63	63
577	1,132	2,134	711	774
578	1,623	4,110	1,370	2,144
579	2,170	5,670	1,890	4,034
580	2,774	7,397	2,466	6,500
581	3,434	9,294	3,098	9,598
582	4,151	11,361	3,787	13,385

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Appendix B

- Basin Annual Sediment Storage Calculations

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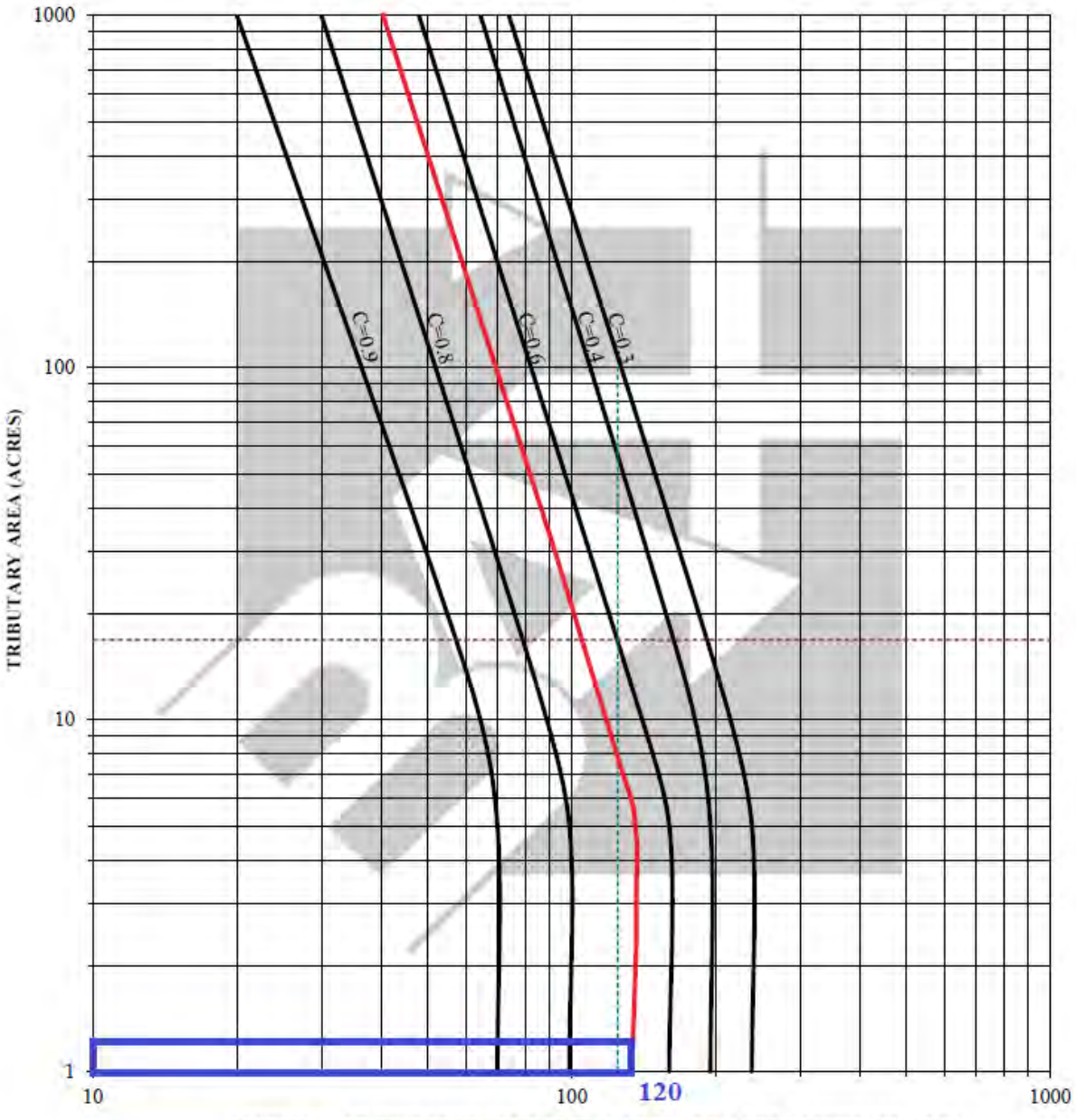
ANNUAL SEDIMENT STORAGE



Storage Required = Years of Storage * Annual Sediment * Drainage Area

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Appendix C

- Basin Pondpack Routing Calculations: 2 Year 20 Minute Storm, 15 Year 20 Minute Storm, 25 Year 20 Minute Storm, 100 Year 20 Minute Storm, and 100 Year 20 Minute Storm Low Flow Blocked.

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Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft³/s)
Basin Inflow	Post-Development 2 year	0	0.063	3.000	2.27
Basin Inflow	Post-Development 15 year	0	0.093	3.000	3.36
Basin Inflow	Post-Development 25 year	0	0.109	3.000	3.95
Basin Inflow	Post- Development 100 year	0	0.125	3.000	4.53
Basin Inflow	100 year LFB	0	0.125	3.000	4.53

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft³/s)
FE 100	Post-Development 2 year	0	0.063	22.000	0.66
FE 100	Post-Development 15 year	0	0.093	24.000	0.75
FE 100	Post-Development 25 year	0	0.109	24.000	0.80
FE 100	Post- Development 100 year	0	0.125	24.000	0.83
FE 100	100 year LFB	0	0.125	18.000	4.53

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft³/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Dry Detention Basin (IN)	Post-Development 2 year	0	0.063	3.000	2.27	(N/A)	(N/A)
Dry Detention Basin (OUT)	Post-Development 2 year	0	0.063	22.000	0.66	577.94	0.047
Dry Detention Basin (IN)	Post-Development 15 year	0	0.093	3.000	3.36	(N/A)	(N/A)
Dry Detention Basin (OUT)	Post-Development 15 year	0	0.093	24.000	0.75	578.60	0.074
Dry Detention Basin (IN)	Post-Development 25 year	0	0.109	3.000	3.95	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft^3/s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
Dry Detention Basin (OUT)	Post-Development 25 year	0	0.109	24.000	0.80	578.92	0.089
Dry Detention Basin (IN)	Post-Development 100 year	0	0.125	3.000	4.53	(N/A)	(N/A)
Dry Detention Basin (OUT)	Post-Development 100 year	0	0.125	24.000	0.83	579.22	0.104
Dry Detention Basin (IN)	100 year LFB	0	0.125	3.000	4.53	(N/A)	(N/A)
Dry Detention Basin (OUT)	100 year LFB	0	0.125	18.000	4.53	579.72	0.132

Subsection: Read Hydrograph
Label: Basin Inflow
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Peak Discharge	2.27 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.063 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	0.76	1.51	2.27	2.27
5.000	2.27	2.27	2.27	2.27	2.27
10.000	2.27	2.27	2.27	2.27	2.27
15.000	2.27	2.27	2.27	2.27	2.27
20.000	2.27	1.51	0.76	0.00	0.00
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Basin Inflow
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Peak Discharge	3.36 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.093 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	1.12	2.24	3.36	3.36
5.000	3.36	3.36	3.36	3.36	3.36
10.000	3.36	3.36	3.36	3.36	3.36
15.000	3.36	3.36	3.36	3.36	3.36
20.000	3.36	2.24	1.12	0.00	0.00
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Basin Inflow
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Peak Discharge	3.95 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.109 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	1.32	2.63	3.95	3.95
5.000	3.95	3.95	3.95	3.95	3.95
10.000	3.95	3.95	3.95	3.95	3.95
15.000	3.95	3.95	3.95	3.95	3.95
20.000	3.95	2.63	1.32	0.00	0.00
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Read Hydrograph
Label: Basin Inflow
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Peak Discharge	4.53 ft³/s
Time to Peak	13.000 min
Hydrograph Volume	0.125 ac-ft

HYDROGRAPH ORDINATES (ft³/s)
Output Time Increment = 1.000 min
Time on left represents time for first value in each row.

Time (min)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)	Flow (ft³/s)
0.000	0.00	1.51	3.02	4.53	4.53
5.000	4.53	4.53	4.53	4.53	4.53
10.000	4.53	4.53	4.53	4.53	4.53
15.000	4.53	4.53	4.53	4.53	4.53
20.000	4.53	3.02	1.51	0.00	0.00
25.000	0.00	0.00	0.00	0.00	0.00
30.000	0.00	0.00	0.00	0.00	0.00
35.000	0.00	0.00	0.00	0.00	0.00
40.000	0.00	0.00	0.00	0.00	0.00
45.000	0.00	0.00	0.00	0.00	0.00
50.000	0.00	0.00	0.00	0.00	0.00
55.000	0.00	0.00	0.00	0.00	0.00
60.000	0.00	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve
Label: Dry Detention Basin
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Elevation (ft)	Planimeter (ft²)	Area (ft²)	A1+A2+sqr (A1*A2) (ft²)	Volume (ac-ft)	Volume (Total) (ac-ft)
575.48	0.000	0.000	0.000	0.000	0.000
576.00	0.000	362.000	362.000	0.001	0.001
577.00	0.000	1,132.000	2,134.144	0.016	0.018
578.00	0.000	1,623.000	4,110.447	0.031	0.049
579.00	0.000	2,170.000	5,669.675	0.043	0.093
580.00	0.000	2,774.000	7,397.483	0.057	0.149
581.00	0.000	3,434.000	9,294.408	0.071	0.220
582.00	0.000	4,151.000	11,360.518	0.087	0.307

Pond Volume Equations
* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2 - El1) * (Area1 + Area2 + sqr(Area1 * Area2))

where:	EL1, EL2	Lower and upper elevations of the increment
	Area1, Area2	Areas computed for EL1, EL2, respectively
	Volume	Incremental volume between EL1 and EL2

Subsection: Outlet Input Data
Label: OS101
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Requested Pond Water Surface Elevations	
Minimum (Headwater)	575.48 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	582.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir1	Forward	Culvert - 1	575.74	576.24
Stand Pipe	Riser - 1	Forward	Culvert - 1	600.00	582.00
Orifice-Area	Orifice1	Forward	Culvert - 1	576.24	582.00
Culvert-Circular	Culvert - 1	Forward	TW	575.48	582.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Riser - 1 Structure Type: Stand Pipe	
Number of Openings	1
Elevation	579.45 ft
Diameter	42.0 in
Orifice Area	9.621 ft²
Orifice Coefficient	0.600
Weir Length	11.00 ft
Weir Coefficient	3.00 (ft^0.5)/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

Structure ID: Culvert - 1 Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	12.0 in
Length	48.00 ft
Length (Computed Barrel)	48.00 ft
Slope (Computed)	0.010 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.031
Kr	0.500
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.090
T2 ratio (HW/D)	1.192
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	576.57 ft	T1 Flow	2.75 ft³/s
T2 Elevation	576.67 ft	T2 Flow	3.14 ft³/s

Structure ID: Weir1 Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	575.48 ft
Weir Length	0.29 ft
Weir Coefficient	3.00 (ft^0.5)/s

Structure ID: Orifice1 Structure Type: Orifice-Area	
Number of Openings	1
Elevation	575.48 ft
Orifice Area	0.097 ft²
Top Elevation	575.81 ft
Datum Elevation	575.65 ft
Orifice Coefficient	0.600

Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft³/s
Flow Tolerance (Maximum)	10.000 ft³/s

Subsection: Composite Rating Curve
Label: OS101
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
575.48	0.00	(N/A)	0.00
575.53	0.00	(N/A)	0.00
575.58	0.02	(N/A)	0.00
575.63	0.04	(N/A)	0.00
575.68	0.06	(N/A)	0.00
575.73	0.08	(N/A)	0.00
575.78	0.11	(N/A)	0.00
575.83	0.16	(N/A)	0.00
575.88	0.18	(N/A)	0.00
575.93	0.20	(N/A)	0.00
575.98	0.22	(N/A)	0.00
576.03	0.24	(N/A)	0.00
576.08	0.26	(N/A)	0.00
576.13	0.27	(N/A)	0.00
576.18	0.29	(N/A)	0.00
576.23	0.31	(N/A)	0.00
576.28	0.32	(N/A)	0.00
576.33	0.33	(N/A)	0.00
576.38	0.35	(N/A)	0.00
576.43	0.36	(N/A)	0.00
576.48	0.37	(N/A)	0.00
576.53	0.39	(N/A)	0.00
576.58	0.40	(N/A)	0.00
576.63	0.41	(N/A)	0.00
576.68	0.42	(N/A)	0.00
576.73	0.43	(N/A)	0.00
576.78	0.44	(N/A)	0.00
576.83	0.46	(N/A)	0.00
576.88	0.47	(N/A)	0.00
576.93	0.48	(N/A)	0.00
576.98	0.49	(N/A)	0.00
577.03	0.50	(N/A)	0.00
577.08	0.51	(N/A)	0.00
577.13	0.52	(N/A)	0.00
577.18	0.53	(N/A)	0.00
577.23	0.54	(N/A)	0.00
577.28	0.54	(N/A)	0.00
577.33	0.55	(N/A)	0.00
577.38	0.56	(N/A)	0.00
577.43	0.57	(N/A)	0.00
577.48	0.58	(N/A)	0.00
577.53	0.59	(N/A)	0.00
577.58	0.60	(N/A)	0.00
577.63	0.61	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS101
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft³/s)	Tailwater Elevation (ft)	Convergence Error (ft)
577.68	0.61	(N/A)	0.00
577.73	0.62	(N/A)	0.00
577.78	0.63	(N/A)	0.00
577.83	0.64	(N/A)	0.00
577.88	0.65	(N/A)	0.00
577.93	0.65	(N/A)	0.00
577.98	0.66	(N/A)	0.00
578.03	0.67	(N/A)	0.00
578.08	0.68	(N/A)	0.00
578.13	0.69	(N/A)	0.00
578.18	0.69	(N/A)	0.00
578.23	0.70	(N/A)	0.00
578.28	0.71	(N/A)	0.00
578.33	0.71	(N/A)	0.00
578.38	0.72	(N/A)	0.00
578.43	0.73	(N/A)	0.00
578.48	0.74	(N/A)	0.00
578.53	0.74	(N/A)	0.00
578.58	0.75	(N/A)	0.00
578.63	0.76	(N/A)	0.00
578.68	0.76	(N/A)	0.00
578.73	0.77	(N/A)	0.00
578.78	0.78	(N/A)	0.00
578.83	0.78	(N/A)	0.00
578.88	0.79	(N/A)	0.00
578.93	0.80	(N/A)	0.00
578.98	0.80	(N/A)	0.00
579.03	0.81	(N/A)	0.00
579.08	0.82	(N/A)	0.00
579.13	0.82	(N/A)	0.00
579.18	0.83	(N/A)	0.00
579.23	0.83	(N/A)	0.00
579.28	0.84	(N/A)	0.00
579.33	0.85	(N/A)	0.00
579.38	0.85	(N/A)	0.00
579.43	0.86	(N/A)	0.00
579.45	0.86	(N/A)	0.00
579.48	1.03	(N/A)	0.00
579.53	1.59	(N/A)	0.00
579.58	2.37	(N/A)	0.00
579.63	3.31	(N/A)	0.00
579.68	4.37	(N/A)	0.00
579.73	5.49	(N/A)	0.00
579.78	6.66	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS101
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
579.83	7.51	(N/A)	0.00
579.88	7.56	(N/A)	0.00
579.93	7.61	(N/A)	0.00
579.98	7.65	(N/A)	0.00
580.03	7.70	(N/A)	0.00
580.08	7.75	(N/A)	0.00
580.13	7.80	(N/A)	0.00
580.18	7.84	(N/A)	0.00
580.23	7.89	(N/A)	0.00
580.28	7.94	(N/A)	0.00
580.33	7.98	(N/A)	0.00
580.38	8.03	(N/A)	0.00
580.43	8.07	(N/A)	0.00
580.48	8.12	(N/A)	0.00
580.53	8.16	(N/A)	0.00
580.58	8.21	(N/A)	0.00
580.63	8.25	(N/A)	0.00
580.68	8.30	(N/A)	0.00
580.73	8.34	(N/A)	0.00
580.78	8.39	(N/A)	0.00
580.83	8.43	(N/A)	0.00
580.88	8.47	(N/A)	0.00
580.93	8.51	(N/A)	0.00
580.98	8.56	(N/A)	0.00
581.03	8.60	(N/A)	0.00
581.08	8.64	(N/A)	0.00
581.13	8.68	(N/A)	0.00
581.18	8.73	(N/A)	0.00
581.23	8.77	(N/A)	0.00
581.28	8.81	(N/A)	0.00
581.33	8.85	(N/A)	0.00
581.38	8.89	(N/A)	0.00
581.43	8.93	(N/A)	0.00
581.48	8.98	(N/A)	0.00
581.53	9.02	(N/A)	0.00
581.58	9.06	(N/A)	0.00
581.63	9.10	(N/A)	0.00
581.68	9.14	(N/A)	0.00
581.73	9.18	(N/A)	0.00
581.78	9.22	(N/A)	0.00
581.83	9.26	(N/A)	0.00
581.88	9.30	(N/A)	0.00
581.93	9.34	(N/A)	0.00
581.98	9.38	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS101
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
582.00	9.39	(N/A)	0.00

Contributing Structures
(no Q: Weir1,Riser - 1,Orifice1,Culvert - 1)
Weir1,Culvert - 1 (no Q: Riser - 1,Orifice1)
Weir1,Culvert - 1 (no Q: Riser - 1,Orifice1)
Weir1,Culvert - 1 (no Q: Riser - 1,Orifice1)
Weir1,Culvert - 1 (no Q: Riser - 1,Orifice1)
Weir1,Culvert - 1 (no Q: Riser - 1,Orifice1)
Weir1,Culvert - 1 (no Q: Riser - 1,Orifice1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
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Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)

Composite Outflow Summary

Contributing Structures
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
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Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
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Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)

Subsection: Composite Rating Curve
Label: OS101
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Composite Outflow Summary

Contributing Structures
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
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Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
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Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)

Composite Outflow Summary

Contributing Structures
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
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Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Orifice1,Culvert - 1 (no Q: Weir1,Riser - 1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Orifice1,Culvert - 1 (no Q: Weir1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)

Composite Outflow Summary

Contributing Structures
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
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Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
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Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)

Subsection: Composite Rating Curve Return Event: 2 years
Label: OS101 Storm Event:
Scenario: Post-Development 2 year

Composite Outflow Summary

Contributing Structures
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)
Riser - 1,Culvert - 1 (no Q: Weir1,Orifice1)

Requested Pond Water Surface Elevations	
Minimum (Headwater)	575.48 ft
Increment (Headwater)	0.05 ft
Maximum (Headwater)	582.00 ft

Outlet Connectivity

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Stand Pipe	Riser - 1	Forward	Culvert - 1	580.00	580.00
Culvert-Circular	Culvert - 1	Forward	TW	576.00	580.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Structure ID: Riser - 1 Structure Type: Stand Pipe	
Number of Openings	1
Elevation	579.45 ft
Diameter	42.0 in
Orifice Area	9.621 ft²
Orifice Coefficient	0.600
Weir Length	11.00 ft
Weir Coefficient	3.00 (ft^0.5)/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

Structure ID: Culvert - 1 Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	12.0 in
Length	48.00 ft
Length (Computed Barrel)	48.00 ft
Slope (Computed)	0.010 ft/ft

Outlet Control Data	
Manning's n	0.013
Ke	0.200
Kb	0.031
Kr	0.500
Convergence Tolerance	0.00 ft

Inlet Control Data	
Equation Form	Form 1
K	0.0045
M	2.0000
C	0.0317
Y	0.6900
T1 ratio (HW/D)	1.090
T2 ratio (HW/D)	1.192
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.
Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...

T1 Elevation	576.57 ft	T1 Flow	2.75 ft³/s
T2 Elevation	576.67 ft	T2 Flow	3.14 ft³/s

Structure ID: TW
Structure Type: TW Setup, DS Channel

Tailwater Type	Free Outfall

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft^3/s
Flow Tolerance (Maximum)	10.000 ft^3/s

Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
575.48	0.00	(N/A)	0.00
575.53	0.00	(N/A)	0.00
575.58	0.00	(N/A)	0.00
575.63	0.00	(N/A)	0.00
575.68	0.00	(N/A)	0.00
575.73	0.00	(N/A)	0.00
575.78	0.00	(N/A)	0.00
575.83	0.00	(N/A)	0.00
575.88	0.00	(N/A)	0.00
575.93	0.00	(N/A)	0.00
575.98	0.00	(N/A)	0.00
576.03	0.00	(N/A)	0.00
576.08	0.00	(N/A)	0.00
576.13	0.00	(N/A)	0.00
576.18	0.00	(N/A)	0.00
576.23	0.00	(N/A)	0.00
576.28	0.00	(N/A)	0.00
576.33	0.00	(N/A)	0.00
576.38	0.00	(N/A)	0.00
576.43	0.00	(N/A)	0.00
576.48	0.00	(N/A)	0.00
576.53	0.00	(N/A)	0.00
576.58	0.00	(N/A)	0.00
576.63	0.00	(N/A)	0.00
576.68	0.00	(N/A)	0.00
576.73	0.00	(N/A)	0.00
576.78	0.00	(N/A)	0.00
576.83	0.00	(N/A)	0.00
576.88	0.00	(N/A)	0.00
576.93	0.00	(N/A)	0.00
576.98	0.00	(N/A)	0.00
577.03	0.00	(N/A)	0.00
577.08	0.00	(N/A)	0.00
577.13	0.00	(N/A)	0.00
577.18	0.00	(N/A)	0.00
577.23	0.00	(N/A)	0.00
577.28	0.00	(N/A)	0.00
577.33	0.00	(N/A)	0.00
577.38	0.00	(N/A)	0.00
577.43	0.00	(N/A)	0.00
577.48	0.00	(N/A)	0.00
577.53	0.00	(N/A)	0.00
577.58	0.00	(N/A)	0.00
577.63	0.00	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
577.68	0.00	(N/A)	0.00
577.73	0.00	(N/A)	0.00
577.78	0.00	(N/A)	0.00
577.83	0.00	(N/A)	0.00
577.88	0.00	(N/A)	0.00
577.93	0.00	(N/A)	0.00
577.98	0.00	(N/A)	0.00
578.03	0.00	(N/A)	0.00
578.08	0.00	(N/A)	0.00
578.13	0.00	(N/A)	0.00
578.18	0.00	(N/A)	0.00
578.23	0.00	(N/A)	0.00
578.28	0.00	(N/A)	0.00
578.33	0.00	(N/A)	0.00
578.38	0.00	(N/A)	0.00
578.43	0.00	(N/A)	0.00
578.48	0.00	(N/A)	0.00
578.53	0.00	(N/A)	0.00
578.58	0.00	(N/A)	0.00
578.63	0.00	(N/A)	0.00
578.68	0.00	(N/A)	0.00
578.73	0.00	(N/A)	0.00
578.78	0.00	(N/A)	0.00
578.83	0.00	(N/A)	0.00
578.88	0.00	(N/A)	0.00
578.93	0.00	(N/A)	0.00
578.98	0.00	(N/A)	0.00
579.03	0.00	(N/A)	0.00
579.08	0.00	(N/A)	0.00
579.13	0.00	(N/A)	0.00
579.18	0.00	(N/A)	0.00
579.23	0.00	(N/A)	0.00
579.28	0.00	(N/A)	0.00
579.33	0.00	(N/A)	0.00
579.38	0.00	(N/A)	0.00
579.43	0.00	(N/A)	0.00
579.45	0.00	(N/A)	0.00
579.48	0.17	(N/A)	0.00
579.53	0.75	(N/A)	0.00
579.58	1.55	(N/A)	0.00
579.63	2.52	(N/A)	0.00
579.68	3.64	(N/A)	0.00
579.73	4.89	(N/A)	0.00
579.78	6.25	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
579.83	7.51	(N/A)	0.00
579.88	7.56	(N/A)	0.00
579.93	7.61	(N/A)	0.00
579.98	7.65	(N/A)	0.00
580.03	7.70	(N/A)	0.00
580.08	7.75	(N/A)	0.00
580.13	7.80	(N/A)	0.00
580.18	7.84	(N/A)	0.00
580.23	7.89	(N/A)	0.00
580.28	7.94	(N/A)	0.00
580.33	7.98	(N/A)	0.00
580.38	8.03	(N/A)	0.00
580.43	8.07	(N/A)	0.00
580.48	8.12	(N/A)	0.00
580.53	8.16	(N/A)	0.00
580.58	8.21	(N/A)	0.00
580.63	8.25	(N/A)	0.00
580.68	8.30	(N/A)	0.00
580.73	8.34	(N/A)	0.00
580.78	8.39	(N/A)	0.00
580.83	8.43	(N/A)	0.00
580.88	8.47	(N/A)	0.00
580.93	8.51	(N/A)	0.00
580.98	8.56	(N/A)	0.00
581.03	8.60	(N/A)	0.00
581.08	8.64	(N/A)	0.00
581.13	8.68	(N/A)	0.00
581.18	8.73	(N/A)	0.00
581.23	8.77	(N/A)	0.00
581.28	8.81	(N/A)	0.00
581.33	8.85	(N/A)	0.00
581.38	8.89	(N/A)	0.00
581.43	8.93	(N/A)	0.00
581.48	8.98	(N/A)	0.00
581.53	9.02	(N/A)	0.00
581.58	9.06	(N/A)	0.00
581.63	9.10	(N/A)	0.00
581.68	9.14	(N/A)	0.00
581.73	9.18	(N/A)	0.00
581.78	9.22	(N/A)	0.00
581.83	9.26	(N/A)	0.00
581.88	9.30	(N/A)	0.00
581.93	9.34	(N/A)	0.00
581.98	9.38	(N/A)	0.00

Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Water Surface Elevation (ft)	Flow (ft^3/s)	Tailwater Elevation (ft)	Convergence Error (ft)
582.00	9.39	(N/A)	0.00

Contributing Structures
(no Q: Riser - 1,Culvert - 1)
(no Q: Riser - 1,Culvert - 1)
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Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Riser - 1,Culvert - 1)
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Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Riser - 1,Culvert - 1)
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Subsection: Composite Rating Curve
Label: OS101LFB
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Composite Outflow Summary

Contributing Structures
(no Q: Riser - 1,Culvert - 1)
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Riser - 1,Culvert - 1

Subsection: Composite Rating Curve | Return Event: 100 years
Label: OS101LFB | Storm Event:
Scenario: 100 year LFB

Composite Outflow Summary

Contributing Structures
Riser - 1,Culvert - 1
Riser - 1,Culvert - 1
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Riser - 1,Culvert - 1
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Riser - 1,Culvert - 1
Riser - 1,Culvert - 1

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	1.000 min

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
575.48	0.00	0.000	0.000	0.00	0.00	0.00
575.53	0.00	0.000	3.347	0.00	0.00	0.01
575.58	0.02	0.000	13.388	0.00	0.02	0.03
575.63	0.04	0.000	30.122	0.00	0.04	0.09
575.68	0.06	0.000	53.550	0.00	0.06	0.18
575.73	0.08	0.000	83.672	0.00	0.08	0.31
575.78	0.11	0.000	120.488	0.00	0.11	0.51
575.83	0.16	0.000	163.998	0.00	0.16	0.80
575.88	0.18	0.001	214.201	0.00	0.18	1.13
575.93	0.20	0.001	271.098	0.00	0.20	1.56
575.98	0.22	0.001	334.689	0.00	0.22	2.08
576.03	0.24	0.002	378.881	0.00	0.24	2.70
576.08	0.26	0.002	407.871	0.00	0.26	3.38
576.13	0.27	0.003	437.929	0.00	0.27	4.10
576.18	0.29	0.003	469.056	0.00	0.29	4.87
576.23	0.31	0.004	501.252	0.00	0.31	5.69
576.28	0.32	0.004	534.516	0.00	0.32	6.57
576.33	0.33	0.005	568.848	0.00	0.33	7.50
576.38	0.35	0.006	604.249	0.00	0.35	8.49
576.43	0.36	0.006	640.719	0.00	0.36	9.54
576.48	0.37	0.007	678.257	0.00	0.37	10.66
576.53	0.39	0.008	716.864	0.00	0.39	11.83
576.58	0.40	0.009	756.540	0.00	0.40	13.07
576.63	0.41	0.010	797.284	0.00	0.41	14.38
576.68	0.42	0.011	839.096	0.00	0.42	15.75
576.73	0.43	0.012	881.977	0.00	0.43	17.20
576.78	0.44	0.013	925.927	0.00	0.44	18.72
576.83	0.46	0.014	970.945	0.00	0.46	20.31
576.88	0.47	0.015	1,017.032	0.00	0.47	21.97
576.93	0.48	0.016	1,064.187	0.00	0.48	23.72

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
576.98	0.49	0.017	1,112.411	0.00	0.49	25.54
577.03	0.50	0.019	1,145.447	0.00	0.50	27.44
577.08	0.51	0.020	1,168.034	0.00	0.51	29.38
577.13	0.52	0.021	1,190.842	0.00	0.52	31.35
577.18	0.53	0.023	1,213.870	0.00	0.53	33.37
577.23	0.54	0.024	1,237.119	0.00	0.54	35.42
577.28	0.54	0.025	1,260.588	0.00	0.54	37.51
577.33	0.55	0.027	1,284.278	0.00	0.55	39.64
577.38	0.56	0.028	1,308.189	0.00	0.56	41.81
577.43	0.57	0.030	1,332.320	0.00	0.57	44.02
577.48	0.58	0.031	1,356.671	0.00	0.58	46.27
577.53	0.59	0.033	1,381.243	0.00	0.59	48.56
577.58	0.60	0.035	1,406.036	0.00	0.60	50.89
577.63	0.61	0.036	1,431.049	0.00	0.61	53.26
577.68	0.61	0.038	1,456.282	0.00	0.61	55.67
577.73	0.62	0.040	1,481.737	0.00	0.62	58.13
577.78	0.63	0.041	1,507.411	0.00	0.63	60.63
577.83	0.64	0.043	1,533.307	0.00	0.64	63.17
577.88	0.65	0.045	1,559.422	0.00	0.65	65.76
577.93	0.65	0.047	1,585.759	0.00	0.65	68.39
577.98	0.66	0.048	1,612.316	0.00	0.66	71.06
578.03	0.67	0.050	1,638.256	0.00	0.67	73.78
578.08	0.68	0.052	1,663.842	0.00	0.68	76.54
578.13	0.69	0.054	1,689.626	0.00	0.69	79.34
578.18	0.69	0.056	1,715.608	0.00	0.69	82.18
578.23	0.70	0.058	1,741.788	0.00	0.70	85.07
578.28	0.71	0.060	1,768.167	0.00	0.71	88.00
578.33	0.71	0.062	1,794.743	0.00	0.71	90.98
578.38	0.72	0.064	1,821.519	0.00	0.72	94.00
578.43	0.73	0.066	1,848.492	0.00	0.73	97.07
578.48	0.74	0.068	1,875.663	0.00	0.74	100.18
578.53	0.74	0.071	1,903.033	0.00	0.74	103.33
578.58	0.75	0.073	1,930.601	0.00	0.75	106.53
578.63	0.76	0.075	1,958.368	0.00	0.76	109.78
578.68	0.76	0.077	1,986.332	0.00	0.76	113.07
578.73	0.77	0.080	2,014.495	0.00	0.77	116.42
578.78	0.78	0.082	2,042.856	0.00	0.78	119.80
578.83	0.78	0.084	2,071.415	0.00	0.78	123.24
578.88	0.79	0.087	2,100.173	0.00	0.79	126.72
578.93	0.80	0.089	2,129.129	0.00	0.80	130.25
578.98	0.80	0.092	2,158.283	0.00	0.80	133.83
579.03	0.81	0.094	2,187.042	0.00	0.81	137.46
579.08	0.82	0.097	2,215.594	0.00	0.82	141.14
579.13	0.82	0.099	2,244.332	0.00	0.82	144.86
579.18	0.83	0.102	2,273.254	0.00	0.83	148.63

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
579.23	0.83	0.104	2,302.361	0.00	0.83	152.45
579.28	0.84	0.107	2,331.654	0.00	0.84	156.32
579.33	0.85	0.110	2,361.132	0.00	0.85	160.23
579.38	0.85	0.112	2,390.795	0.00	0.85	164.20
579.43	0.86	0.115	2,420.643	0.00	0.86	168.21
579.45	0.86	0.116	2,432.634	0.00	0.86	169.83
579.48	1.03	0.118	2,450.676	0.00	1.03	172.44
579.53	1.59	0.121	2,480.895	0.00	1.59	177.11
579.58	2.37	0.124	2,511.299	0.00	2.37	182.05
579.63	3.31	0.127	2,541.887	0.00	3.31	187.21
579.68	4.37	0.130	2,572.662	0.00	4.37	192.53
579.73	5.49	0.133	2,603.621	0.00	5.49	197.96
579.78	6.66	0.136	2,634.765	0.00	6.66	203.50
579.83	7.51	0.139	2,666.095	0.00	7.51	208.76
579.88	7.56	0.142	2,697.609	0.00	7.56	213.28
579.93	7.61	0.145	2,729.309	0.00	7.61	217.85
579.98	7.65	0.148	2,761.194	0.00	7.65	222.48
580.03	7.70	0.151	2,792.776	0.00	7.70	227.15
580.08	7.75	0.154	2,824.210	0.00	7.75	231.88
580.13	7.80	0.158	2,855.821	0.00	7.80	236.66
580.18	7.84	0.161	2,887.607	0.00	7.84	241.49
580.23	7.89	0.164	2,919.569	0.00	7.89	246.38
580.28	7.94	0.168	2,951.707	0.00	7.94	251.32
580.33	7.98	0.171	2,984.021	0.00	7.98	256.31
580.38	8.03	0.174	3,016.511	0.00	8.03	261.36
580.43	8.07	0.178	3,049.177	0.00	8.07	266.46
580.48	8.12	0.181	3,082.018	0.00	8.12	271.61
580.53	8.16	0.185	3,115.036	0.00	8.16	276.82
580.58	8.21	0.189	3,148.229	0.00	8.21	282.08
580.63	8.25	0.192	3,181.599	0.00	8.25	287.40
580.68	8.30	0.196	3,215.144	0.00	8.30	292.78
580.73	8.34	0.200	3,248.865	0.00	8.34	298.21
580.78	8.39	0.203	3,282.763	0.00	8.39	303.70
580.83	8.43	0.207	3,316.836	0.00	8.43	309.24
580.88	8.47	0.211	3,351.085	0.00	8.47	314.84
580.93	8.51	0.215	3,385.510	0.00	8.51	320.50
580.98	8.56	0.219	3,420.110	0.00	8.56	326.21
581.03	8.60	0.223	3,454.522	0.00	8.60	331.98
581.08	8.64	0.227	3,488.860	0.00	8.64	337.81
581.13	8.68	0.231	3,523.369	0.00	8.68	343.70
581.18	8.73	0.235	3,558.047	0.00	8.73	349.64
581.23	8.77	0.239	3,592.895	0.00	8.77	355.64
581.28	8.81	0.243	3,627.913	0.00	8.81	361.70
581.33	8.85	0.247	3,663.100	0.00	8.85	367.82
581.38	8.89	0.251	3,698.458	0.00	8.89	373.99

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (ft^2)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
581.43	8.93	0.256	3,733.985	0.00	8.93	380.23
581.48	8.98	0.260	3,769.682	0.00	8.98	386.52
581.53	9.02	0.264	3,805.549	0.00	9.02	392.88
581.58	9.06	0.269	3,841.586	0.00	9.06	399.29
581.63	9.10	0.273	3,877.793	0.00	9.10	405.76
581.68	9.14	0.278	3,914.169	0.00	9.14	412.30
581.73	9.18	0.282	3,950.716	0.00	9.18	418.89
581.78	9.22	0.287	3,987.432	0.00	9.22	425.54
581.83	9.26	0.291	4,024.318	0.00	9.26	432.26
581.88	9.30	0.296	4,061.373	0.00	9.30	439.04
581.93	9.34	0.301	4,098.599	0.00	9.34	445.88
581.98	9.38	0.305	4,135.994	0.00	9.38	452.78
582.00	9.39	0.307	4,151.000	0.00	9.39	455.56

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
575.48	0.00	0.000	0.000	0.00	0.00	0.00
575.53	0.00	0.000	3.347	0.00	0.00	0.01
575.58	0.02	0.000	13.388	0.00	0.02	0.02
575.63	0.04	0.000	30.122	0.00	0.04	0.05
575.68	0.06	0.000	53.550	0.00	0.06	0.10
575.73	0.08	0.000	83.672	0.00	0.08	0.16
575.78	0.11	0.000	120.488	0.00	0.11	0.24
575.83	0.16	0.000	163.998	0.00	0.16	0.37
575.88	0.18	0.001	214.201	0.00	0.18	0.50
575.93	0.20	0.001	271.098	0.00	0.20	0.65
575.98	0.22	0.001	334.689	0.00	0.22	0.84
576.03	0.24	0.002	378.881	0.00	0.24	1.06
576.08	0.26	0.002	407.871	0.00	0.26	1.30
576.13	0.27	0.003	437.929	0.00	0.27	1.55
576.18	0.29	0.003	469.056	0.00	0.29	1.82
576.23	0.31	0.004	501.252	0.00	0.31	2.10
576.28	0.32	0.004	534.516	0.00	0.32	2.40
576.33	0.33	0.005	568.848	0.00	0.33	2.72
576.38	0.35	0.006	604.249	0.00	0.35	3.06
576.43	0.36	0.006	640.719	0.00	0.36	3.42
576.48	0.37	0.007	678.257	0.00	0.37	3.80
576.53	0.39	0.008	716.864	0.00	0.39	4.20
576.58	0.40	0.009	756.540	0.00	0.40	4.62
576.63	0.41	0.010	797.284	0.00	0.41	5.07
576.68	0.42	0.011	839.096	0.00	0.42	5.53
576.73	0.43	0.012	881.977	0.00	0.43	6.02
576.78	0.44	0.013	925.927	0.00	0.44	6.53
576.83	0.46	0.014	970.945	0.00	0.46	7.07
576.88	0.47	0.015	1,017.032	0.00	0.47	7.64
576.93	0.48	0.016	1,064.187	0.00	0.48	8.22

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
576.98	0.49	0.017	1,112.411	0.00	0.49	8.84
577.03	0.50	0.019	1,145.447	0.00	0.50	9.48
577.08	0.51	0.020	1,168.034	0.00	0.51	10.13
577.13	0.52	0.021	1,190.842	0.00	0.52	10.80
577.18	0.53	0.023	1,213.870	0.00	0.53	11.47
577.23	0.54	0.024	1,237.119	0.00	0.54	12.16
577.28	0.54	0.025	1,260.588	0.00	0.54	12.87
577.33	0.55	0.027	1,284.278	0.00	0.55	13.58
577.38	0.56	0.028	1,308.189	0.00	0.56	14.31
577.43	0.57	0.030	1,332.320	0.00	0.57	15.05
577.48	0.58	0.031	1,356.671	0.00	0.58	15.81
577.53	0.59	0.033	1,381.243	0.00	0.59	16.58
577.58	0.60	0.035	1,406.036	0.00	0.60	17.36
577.63	0.61	0.036	1,431.049	0.00	0.61	18.16
577.68	0.61	0.038	1,456.282	0.00	0.61	18.97
577.73	0.62	0.040	1,481.737	0.00	0.62	19.79
577.78	0.63	0.041	1,507.411	0.00	0.63	20.63
577.83	0.64	0.043	1,533.307	0.00	0.64	21.48
577.88	0.65	0.045	1,559.422	0.00	0.65	22.35
577.93	0.65	0.047	1,585.759	0.00	0.65	23.23
577.98	0.66	0.048	1,612.316	0.00	0.66	24.13
578.03	0.67	0.050	1,638.256	0.00	0.67	25.04
578.08	0.68	0.052	1,663.842	0.00	0.68	25.96
578.13	0.69	0.054	1,689.626	0.00	0.69	26.90
578.18	0.69	0.056	1,715.608	0.00	0.69	27.86
578.23	0.70	0.058	1,741.788	0.00	0.70	28.82
578.28	0.71	0.060	1,768.167	0.00	0.71	29.81
578.33	0.71	0.062	1,794.743	0.00	0.71	30.80
578.38	0.72	0.064	1,821.519	0.00	0.72	31.81
578.43	0.73	0.066	1,848.492	0.00	0.73	32.84
578.48	0.74	0.068	1,875.663	0.00	0.74	33.88
578.53	0.74	0.071	1,903.033	0.00	0.74	34.94
578.58	0.75	0.073	1,930.601	0.00	0.75	36.01
578.63	0.76	0.075	1,958.368	0.00	0.76	37.10
578.68	0.76	0.077	1,986.332	0.00	0.76	38.20
578.73	0.77	0.080	2,014.495	0.00	0.77	39.32
578.78	0.78	0.082	2,042.856	0.00	0.78	40.45
578.83	0.78	0.084	2,071.415	0.00	0.78	41.60
578.88	0.79	0.087	2,100.173	0.00	0.79	42.77
578.93	0.80	0.089	2,129.129	0.00	0.80	43.95
578.98	0.80	0.092	2,158.283	0.00	0.80	45.15
579.03	0.81	0.094	2,187.042	0.00	0.81	46.36
579.08	0.82	0.097	2,215.594	0.00	0.82	47.59
579.13	0.82	0.099	2,244.332	0.00	0.82	48.83
579.18	0.83	0.102	2,273.254	0.00	0.83	50.10

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
579.23	0.83	0.104	2,302.361	0.00	0.83	51.37
579.28	0.84	0.107	2,331.654	0.00	0.84	52.67
579.33	0.85	0.110	2,361.132	0.00	0.85	53.97
579.38	0.85	0.112	2,390.795	0.00	0.85	55.30
579.43	0.86	0.115	2,420.643	0.00	0.86	56.64
579.45	0.86	0.116	2,432.634	0.00	0.86	57.19
579.48	1.03	0.118	2,450.676	0.00	1.03	58.17
579.53	1.59	0.121	2,480.895	0.00	1.59	60.10
579.58	2.37	0.124	2,511.299	0.00	2.37	62.26
579.63	3.31	0.127	2,541.887	0.00	3.31	64.61
579.68	4.37	0.130	2,572.662	0.00	4.37	67.09
579.73	5.49	0.133	2,603.621	0.00	5.49	69.65
579.78	6.66	0.136	2,634.765	0.00	6.66	72.27
579.83	7.51	0.139	2,666.095	0.00	7.51	74.59
579.88	7.56	0.142	2,697.609	0.00	7.56	76.13
579.93	7.61	0.145	2,729.309	0.00	7.61	77.69
579.98	7.65	0.148	2,761.194	0.00	7.65	79.26
580.03	7.70	0.151	2,792.776	0.00	7.70	80.85
580.08	7.75	0.154	2,824.210	0.00	7.75	82.46
580.13	7.80	0.158	2,855.821	0.00	7.80	84.08
580.18	7.84	0.161	2,887.607	0.00	7.84	85.73
580.23	7.89	0.164	2,919.569	0.00	7.89	87.39
580.28	7.94	0.168	2,951.707	0.00	7.94	89.06
580.33	7.98	0.171	2,984.021	0.00	7.98	90.76
580.38	8.03	0.174	3,016.511	0.00	8.03	92.47
580.43	8.07	0.178	3,049.177	0.00	8.07	94.20
580.48	8.12	0.181	3,082.018	0.00	8.12	95.95
580.53	8.16	0.185	3,115.036	0.00	8.16	97.72
580.58	8.21	0.189	3,148.229	0.00	8.21	99.50
580.63	8.25	0.192	3,181.599	0.00	8.25	101.30
580.68	8.30	0.196	3,215.144	0.00	8.30	103.12
580.73	8.34	0.200	3,248.865	0.00	8.34	104.96
580.78	8.39	0.203	3,282.763	0.00	8.39	106.82
580.83	8.43	0.207	3,316.836	0.00	8.43	108.70
580.88	8.47	0.211	3,351.085	0.00	8.47	110.59
580.93	8.51	0.215	3,385.510	0.00	8.51	112.51
580.98	8.56	0.219	3,420.110	0.00	8.56	114.44
581.03	8.60	0.223	3,454.522	0.00	8.60	116.39
581.08	8.64	0.227	3,488.860	0.00	8.64	118.37
581.13	8.68	0.231	3,523.369	0.00	8.68	120.35
581.18	8.73	0.235	3,558.047	0.00	8.73	122.36
581.23	8.77	0.239	3,592.895	0.00	8.77	124.39
581.28	8.81	0.243	3,627.913	0.00	8.81	126.44
581.33	8.85	0.247	3,663.100	0.00	8.85	128.51
581.38	8.89	0.251	3,698.458	0.00	8.89	130.59

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (ft^2)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
581.43	8.93	0.256	3,733.985	0.00	8.93	132.70
581.48	8.98	0.260	3,769.682	0.00	8.98	134.82
581.53	9.02	0.264	3,805.549	0.00	9.02	136.97
581.58	9.06	0.269	3,841.586	0.00	9.06	139.13
581.63	9.10	0.273	3,877.793	0.00	9.10	141.32
581.68	9.14	0.278	3,914.169	0.00	9.14	143.52
581.73	9.18	0.282	3,950.716	0.00	9.18	145.75
581.78	9.22	0.287	3,987.432	0.00	9.22	147.99
581.83	9.26	0.291	4,024.318	0.00	9.26	150.26
581.88	9.30	0.296	4,061.373	0.00	9.30	152.54
581.93	9.34	0.301	4,098.599	0.00	9.34	154.85
581.98	9.38	0.305	4,135.994	0.00	9.38	157.18
582.00	9.39	0.307	4,151.000	0.00	9.39	158.11

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
575.48	0.00	0.000	0.000	0.00	0.00	0.00
575.53	0.00	0.000	3.347	0.00	0.00	0.01
575.58	0.02	0.000	13.388	0.00	0.02	0.02
575.63	0.04	0.000	30.122	0.00	0.04	0.05
575.68	0.06	0.000	53.550	0.00	0.06	0.10
575.73	0.08	0.000	83.672	0.00	0.08	0.16
575.78	0.11	0.000	120.488	0.00	0.11	0.24
575.83	0.16	0.000	163.998	0.00	0.16	0.37
575.88	0.18	0.001	214.201	0.00	0.18	0.50
575.93	0.20	0.001	271.098	0.00	0.20	0.65
575.98	0.22	0.001	334.689	0.00	0.22	0.84
576.03	0.24	0.002	378.881	0.00	0.24	1.06
576.08	0.26	0.002	407.871	0.00	0.26	1.30
576.13	0.27	0.003	437.929	0.00	0.27	1.55
576.18	0.29	0.003	469.056	0.00	0.29	1.82
576.23	0.31	0.004	501.252	0.00	0.31	2.10
576.28	0.32	0.004	534.516	0.00	0.32	2.40
576.33	0.33	0.005	568.848	0.00	0.33	2.72
576.38	0.35	0.006	604.249	0.00	0.35	3.06
576.43	0.36	0.006	640.719	0.00	0.36	3.42
576.48	0.37	0.007	678.257	0.00	0.37	3.80
576.53	0.39	0.008	716.864	0.00	0.39	4.20
576.58	0.40	0.009	756.540	0.00	0.40	4.62
576.63	0.41	0.010	797.284	0.00	0.41	5.07
576.68	0.42	0.011	839.096	0.00	0.42	5.53
576.73	0.43	0.012	881.977	0.00	0.43	6.02
576.78	0.44	0.013	925.927	0.00	0.44	6.53
576.83	0.46	0.014	970.945	0.00	0.46	7.07
576.88	0.47	0.015	1,017.032	0.00	0.47	7.64
576.93	0.48	0.016	1,064.187	0.00	0.48	8.22

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
576.98	0.49	0.017	1,112.411	0.00	0.49	8.84
577.03	0.50	0.019	1,145.447	0.00	0.50	9.48
577.08	0.51	0.020	1,168.034	0.00	0.51	10.13
577.13	0.52	0.021	1,190.842	0.00	0.52	10.80
577.18	0.53	0.023	1,213.870	0.00	0.53	11.47
577.23	0.54	0.024	1,237.119	0.00	0.54	12.16
577.28	0.54	0.025	1,260.588	0.00	0.54	12.87
577.33	0.55	0.027	1,284.278	0.00	0.55	13.58
577.38	0.56	0.028	1,308.189	0.00	0.56	14.31
577.43	0.57	0.030	1,332.320	0.00	0.57	15.05
577.48	0.58	0.031	1,356.671	0.00	0.58	15.81
577.53	0.59	0.033	1,381.243	0.00	0.59	16.58
577.58	0.60	0.035	1,406.036	0.00	0.60	17.36
577.63	0.61	0.036	1,431.049	0.00	0.61	18.16
577.68	0.61	0.038	1,456.282	0.00	0.61	18.97
577.73	0.62	0.040	1,481.737	0.00	0.62	19.79
577.78	0.63	0.041	1,507.411	0.00	0.63	20.63
577.83	0.64	0.043	1,533.307	0.00	0.64	21.48
577.88	0.65	0.045	1,559.422	0.00	0.65	22.35
577.93	0.65	0.047	1,585.759	0.00	0.65	23.23
577.98	0.66	0.048	1,612.316	0.00	0.66	24.13
578.03	0.67	0.050	1,638.256	0.00	0.67	25.04
578.08	0.68	0.052	1,663.842	0.00	0.68	25.96
578.13	0.69	0.054	1,689.626	0.00	0.69	26.90
578.18	0.69	0.056	1,715.608	0.00	0.69	27.86
578.23	0.70	0.058	1,741.788	0.00	0.70	28.82
578.28	0.71	0.060	1,768.167	0.00	0.71	29.81
578.33	0.71	0.062	1,794.743	0.00	0.71	30.80
578.38	0.72	0.064	1,821.519	0.00	0.72	31.81
578.43	0.73	0.066	1,848.492	0.00	0.73	32.84
578.48	0.74	0.068	1,875.663	0.00	0.74	33.88
578.53	0.74	0.071	1,903.033	0.00	0.74	34.94
578.58	0.75	0.073	1,930.601	0.00	0.75	36.01
578.63	0.76	0.075	1,958.368	0.00	0.76	37.10
578.68	0.76	0.077	1,986.332	0.00	0.76	38.20
578.73	0.77	0.080	2,014.495	0.00	0.77	39.32
578.78	0.78	0.082	2,042.856	0.00	0.78	40.45
578.83	0.78	0.084	2,071.415	0.00	0.78	41.60
578.88	0.79	0.087	2,100.173	0.00	0.79	42.77
578.93	0.80	0.089	2,129.129	0.00	0.80	43.95
578.98	0.80	0.092	2,158.283	0.00	0.80	45.15
579.03	0.81	0.094	2,187.042	0.00	0.81	46.36
579.08	0.82	0.097	2,215.594	0.00	0.82	47.59
579.13	0.82	0.099	2,244.332	0.00	0.82	48.83
579.18	0.83	0.102	2,273.254	0.00	0.83	50.10

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
579.23	0.83	0.104	2,302.361	0.00	0.83	51.37
579.28	0.84	0.107	2,331.654	0.00	0.84	52.67
579.33	0.85	0.110	2,361.132	0.00	0.85	53.97
579.38	0.85	0.112	2,390.795	0.00	0.85	55.30
579.43	0.86	0.115	2,420.643	0.00	0.86	56.64
579.45	0.86	0.116	2,432.634	0.00	0.86	57.19
579.48	1.03	0.118	2,450.676	0.00	1.03	58.17
579.53	1.59	0.121	2,480.895	0.00	1.59	60.10
579.58	2.37	0.124	2,511.299	0.00	2.37	62.26
579.63	3.31	0.127	2,541.887	0.00	3.31	64.61
579.68	4.37	0.130	2,572.662	0.00	4.37	67.09
579.73	5.49	0.133	2,603.621	0.00	5.49	69.65
579.78	6.66	0.136	2,634.765	0.00	6.66	72.27
579.83	7.51	0.139	2,666.095	0.00	7.51	74.59
579.88	7.56	0.142	2,697.609	0.00	7.56	76.13
579.93	7.61	0.145	2,729.309	0.00	7.61	77.69
579.98	7.65	0.148	2,761.194	0.00	7.65	79.26
580.03	7.70	0.151	2,792.776	0.00	7.70	80.85
580.08	7.75	0.154	2,824.210	0.00	7.75	82.46
580.13	7.80	0.158	2,855.821	0.00	7.80	84.08
580.18	7.84	0.161	2,887.607	0.00	7.84	85.73
580.23	7.89	0.164	2,919.569	0.00	7.89	87.39
580.28	7.94	0.168	2,951.707	0.00	7.94	89.06
580.33	7.98	0.171	2,984.021	0.00	7.98	90.76
580.38	8.03	0.174	3,016.511	0.00	8.03	92.47
580.43	8.07	0.178	3,049.177	0.00	8.07	94.20
580.48	8.12	0.181	3,082.018	0.00	8.12	95.95
580.53	8.16	0.185	3,115.036	0.00	8.16	97.72
580.58	8.21	0.189	3,148.229	0.00	8.21	99.50
580.63	8.25	0.192	3,181.599	0.00	8.25	101.30
580.68	8.30	0.196	3,215.144	0.00	8.30	103.12
580.73	8.34	0.200	3,248.865	0.00	8.34	104.96
580.78	8.39	0.203	3,282.763	0.00	8.39	106.82
580.83	8.43	0.207	3,316.836	0.00	8.43	108.70
580.88	8.47	0.211	3,351.085	0.00	8.47	110.59
580.93	8.51	0.215	3,385.510	0.00	8.51	112.51
580.98	8.56	0.219	3,420.110	0.00	8.56	114.44
581.03	8.60	0.223	3,454.522	0.00	8.60	116.39
581.08	8.64	0.227	3,488.860	0.00	8.64	118.37
581.13	8.68	0.231	3,523.369	0.00	8.68	120.35
581.18	8.73	0.235	3,558.047	0.00	8.73	122.36
581.23	8.77	0.239	3,592.895	0.00	8.77	124.39
581.28	8.81	0.243	3,627.913	0.00	8.81	126.44
581.33	8.85	0.247	3,663.100	0.00	8.85	128.51
581.38	8.89	0.251	3,698.458	0.00	8.89	130.59

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post-Development 25 year

Return Event: 25 years
Storm Event:

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (ft^2)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
581.43	8.93	0.256	3,733.985	0.00	8.93	132.70
581.48	8.98	0.260	3,769.682	0.00	8.98	134.82
581.53	9.02	0.264	3,805.549	0.00	9.02	136.97
581.58	9.06	0.269	3,841.586	0.00	9.06	139.13
581.63	9.10	0.273	3,877.793	0.00	9.10	141.32
581.68	9.14	0.278	3,914.169	0.00	9.14	143.52
581.73	9.18	0.282	3,950.716	0.00	9.18	145.75
581.78	9.22	0.287	3,987.432	0.00	9.22	147.99
581.83	9.26	0.291	4,024.318	0.00	9.26	150.26
581.88	9.30	0.296	4,061.373	0.00	9.30	152.54
581.93	9.34	0.301	4,098.599	0.00	9.34	154.85
581.98	9.38	0.305	4,135.994	0.00	9.38	157.18
582.00	9.39	0.307	4,151.000	0.00	9.39	158.11

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	579.45 ft
Volume (Initial)	0.116 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
575.48	0.00	0.000	0.000	0.00	0.00	0.00
575.53	0.00	0.000	3.347	0.00	0.00	0.00
575.58	0.00	0.000	13.388	0.00	0.00	0.00
575.63	0.00	0.000	30.122	0.00	0.00	0.02
575.68	0.00	0.000	53.550	0.00	0.00	0.04
575.73	0.00	0.000	83.672	0.00	0.00	0.08
575.78	0.00	0.000	120.488	0.00	0.00	0.13
575.83	0.00	0.000	163.998	0.00	0.00	0.21
575.88	0.00	0.001	214.201	0.00	0.00	0.32
575.93	0.00	0.001	271.098	0.00	0.00	0.45
575.98	0.00	0.001	334.689	0.00	0.00	0.62
576.03	0.00	0.002	378.881	0.00	0.00	0.82
576.08	0.00	0.002	407.871	0.00	0.00	1.04
576.13	0.00	0.003	437.929	0.00	0.00	1.27
576.18	0.00	0.003	469.056	0.00	0.00	1.53
576.23	0.00	0.004	501.252	0.00	0.00	1.80
576.28	0.00	0.004	534.516	0.00	0.00	2.08
576.33	0.00	0.005	568.848	0.00	0.00	2.39
576.38	0.00	0.006	604.249	0.00	0.00	2.72
576.43	0.00	0.006	640.719	0.00	0.00	3.06
576.48	0.00	0.007	678.257	0.00	0.00	3.43
576.53	0.00	0.008	716.864	0.00	0.00	3.81
576.58	0.00	0.009	756.540	0.00	0.00	4.22
576.63	0.00	0.010	797.284	0.00	0.00	4.66
576.68	0.00	0.011	839.096	0.00	0.00	5.11
576.73	0.00	0.012	881.977	0.00	0.00	5.59
576.78	0.00	0.013	925.927	0.00	0.00	6.09
576.83	0.00	0.014	970.945	0.00	0.00	6.62
576.88	0.00	0.015	1,017.032	0.00	0.00	7.17
576.93	0.00	0.016	1,064.187	0.00	0.00	7.75

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (ft^2)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
576.98	0.00	0.017	1,112.411	0.00	0.00	8.35
577.03	0.00	0.019	1,145.447	0.00	0.00	8.98
577.08	0.00	0.020	1,168.034	0.00	0.00	9.62
577.13	0.00	0.021	1,190.842	0.00	0.00	10.28
577.18	0.00	0.023	1,213.870	0.00	0.00	10.95
577.23	0.00	0.024	1,237.119	0.00	0.00	11.63
577.28	0.00	0.025	1,260.588	0.00	0.00	12.32
577.33	0.00	0.027	1,284.278	0.00	0.00	13.03
577.38	0.00	0.028	1,308.189	0.00	0.00	13.75
577.43	0.00	0.030	1,332.320	0.00	0.00	14.48
577.48	0.00	0.031	1,356.671	0.00	0.00	15.23
577.53	0.00	0.033	1,381.243	0.00	0.00	15.99
577.58	0.00	0.035	1,406.036	0.00	0.00	16.76
577.63	0.00	0.036	1,431.049	0.00	0.00	17.55
577.68	0.00	0.038	1,456.282	0.00	0.00	18.35
577.73	0.00	0.040	1,481.737	0.00	0.00	19.17
577.78	0.00	0.041	1,507.411	0.00	0.00	20.00
577.83	0.00	0.043	1,533.307	0.00	0.00	20.84
577.88	0.00	0.045	1,559.422	0.00	0.00	21.70
577.93	0.00	0.047	1,585.759	0.00	0.00	22.58
577.98	0.00	0.048	1,612.316	0.00	0.00	23.47
578.03	0.00	0.050	1,638.256	0.00	0.00	24.37
578.08	0.00	0.052	1,663.842	0.00	0.00	25.29
578.13	0.00	0.054	1,689.626	0.00	0.00	26.22
578.18	0.00	0.056	1,715.608	0.00	0.00	27.16
578.23	0.00	0.058	1,741.788	0.00	0.00	28.12
578.28	0.00	0.060	1,768.167	0.00	0.00	29.10
578.33	0.00	0.062	1,794.743	0.00	0.00	30.09
578.38	0.00	0.064	1,821.519	0.00	0.00	31.09
578.43	0.00	0.066	1,848.492	0.00	0.00	32.11
578.48	0.00	0.068	1,875.663	0.00	0.00	33.15
578.53	0.00	0.071	1,903.033	0.00	0.00	34.20
578.58	0.00	0.073	1,930.601	0.00	0.00	35.26
578.63	0.00	0.075	1,958.368	0.00	0.00	36.34
578.68	0.00	0.077	1,986.332	0.00	0.00	37.44
578.73	0.00	0.080	2,014.495	0.00	0.00	38.55
578.78	0.00	0.082	2,042.856	0.00	0.00	39.68
578.83	0.00	0.084	2,071.415	0.00	0.00	40.82
578.88	0.00	0.087	2,100.173	0.00	0.00	41.98
578.93	0.00	0.089	2,129.129	0.00	0.00	43.15
578.98	0.00	0.092	2,158.283	0.00	0.00	44.34
579.03	0.00	0.094	2,187.042	0.00	0.00	45.55
579.08	0.00	0.097	2,215.594	0.00	0.00	46.77
579.13	0.00	0.099	2,244.332	0.00	0.00	48.01
579.18	0.00	0.102	2,273.254	0.00	0.00	49.27

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
579.23	0.00	0.104	2,302.361	0.00	0.00	50.54
579.28	0.00	0.107	2,331.654	0.00	0.00	51.83
579.33	0.00	0.110	2,361.132	0.00	0.00	53.13
579.38	0.00	0.112	2,390.795	0.00	0.00	54.45
579.43	0.00	0.115	2,420.643	0.00	0.00	55.79
579.45	0.00	0.116	2,432.634	0.00	0.00	56.32
579.48	0.17	0.118	2,450.676	0.00	0.17	57.31
579.53	0.75	0.121	2,480.895	0.00	0.75	59.25
579.58	1.55	0.124	2,511.299	0.00	1.55	61.44
579.63	2.52	0.127	2,541.887	0.00	2.52	63.82
579.68	3.64	0.130	2,572.662	0.00	3.64	66.36
579.73	4.89	0.133	2,603.621	0.00	4.89	69.04
579.78	6.25	0.136	2,634.765	0.00	6.25	71.87
579.83	7.51	0.139	2,666.095	0.00	7.51	74.59
579.88	7.56	0.142	2,697.609	0.00	7.56	76.13
579.93	7.61	0.145	2,729.309	0.00	7.61	77.69
579.98	7.65	0.148	2,761.194	0.00	7.65	79.26
580.03	7.70	0.151	2,792.776	0.00	7.70	80.85
580.08	7.75	0.154	2,824.210	0.00	7.75	82.46
580.13	7.80	0.158	2,855.821	0.00	7.80	84.08
580.18	7.84	0.161	2,887.607	0.00	7.84	85.73
580.23	7.89	0.164	2,919.569	0.00	7.89	87.39
580.28	7.94	0.168	2,951.707	0.00	7.94	89.06
580.33	7.98	0.171	2,984.021	0.00	7.98	90.76
580.38	8.03	0.174	3,016.511	0.00	8.03	92.47
580.43	8.07	0.178	3,049.177	0.00	8.07	94.20
580.48	8.12	0.181	3,082.018	0.00	8.12	95.95
580.53	8.16	0.185	3,115.036	0.00	8.16	97.72
580.58	8.21	0.189	3,148.229	0.00	8.21	99.50
580.63	8.25	0.192	3,181.599	0.00	8.25	101.30
580.68	8.30	0.196	3,215.144	0.00	8.30	103.12
580.73	8.34	0.200	3,248.865	0.00	8.34	104.96
580.78	8.39	0.203	3,282.763	0.00	8.39	106.82
580.83	8.43	0.207	3,316.836	0.00	8.43	108.70
580.88	8.47	0.211	3,351.085	0.00	8.47	110.59
580.93	8.51	0.215	3,385.510	0.00	8.51	112.51
580.98	8.56	0.219	3,420.110	0.00	8.56	114.44
581.03	8.60	0.223	3,454.522	0.00	8.60	116.39
581.08	8.64	0.227	3,488.860	0.00	8.64	118.37
581.13	8.68	0.231	3,523.369	0.00	8.68	120.35
581.18	8.73	0.235	3,558.047	0.00	8.73	122.36
581.23	8.77	0.239	3,592.895	0.00	8.77	124.39
581.28	8.81	0.243	3,627.913	0.00	8.81	126.44
581.33	8.85	0.247	3,663.100	0.00	8.85	128.51
581.38	8.89	0.251	3,698.458	0.00	8.89	130.59

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: 100 year LFB

Return Event: 100 years
Storm Event:

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (ft^2)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
581.43	8.93	0.256	3,733.985	0.00	8.93	132.70
581.48	8.98	0.260	3,769.682	0.00	8.98	134.82
581.53	9.02	0.264	3,805.549	0.00	9.02	136.97
581.58	9.06	0.269	3,841.586	0.00	9.06	139.13
581.63	9.10	0.273	3,877.793	0.00	9.10	141.32
581.68	9.14	0.278	3,914.169	0.00	9.14	143.52
581.73	9.18	0.282	3,950.716	0.00	9.18	145.75
581.78	9.22	0.287	3,987.432	0.00	9.22	147.99
581.83	9.26	0.291	4,024.318	0.00	9.26	150.26
581.88	9.30	0.296	4,061.373	0.00	9.30	152.54
581.93	9.34	0.301	4,098.599	0.00	9.34	154.85
581.98	9.38	0.305	4,135.994	0.00	9.38	157.18
582.00	9.39	0.307	4,151.000	0.00	9.39	158.11

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
575.48	0.00	0.000	0.000	0.00	0.00	0.00
575.53	0.00	0.000	3.347	0.00	0.00	0.01
575.58	0.02	0.000	13.388	0.00	0.02	0.02
575.63	0.04	0.000	30.122	0.00	0.04	0.05
575.68	0.06	0.000	53.550	0.00	0.06	0.10
575.73	0.08	0.000	83.672	0.00	0.08	0.16
575.78	0.11	0.000	120.488	0.00	0.11	0.24
575.83	0.16	0.000	163.998	0.00	0.16	0.37
575.88	0.18	0.001	214.201	0.00	0.18	0.50
575.93	0.20	0.001	271.098	0.00	0.20	0.65
575.98	0.22	0.001	334.689	0.00	0.22	0.84
576.03	0.24	0.002	378.881	0.00	0.24	1.06
576.08	0.26	0.002	407.871	0.00	0.26	1.30
576.13	0.27	0.003	437.929	0.00	0.27	1.55
576.18	0.29	0.003	469.056	0.00	0.29	1.82
576.23	0.31	0.004	501.252	0.00	0.31	2.10
576.28	0.32	0.004	534.516	0.00	0.32	2.40
576.33	0.33	0.005	568.848	0.00	0.33	2.72
576.38	0.35	0.006	604.249	0.00	0.35	3.06
576.43	0.36	0.006	640.719	0.00	0.36	3.42
576.48	0.37	0.007	678.257	0.00	0.37	3.80
576.53	0.39	0.008	716.864	0.00	0.39	4.20
576.58	0.40	0.009	756.540	0.00	0.40	4.62
576.63	0.41	0.010	797.284	0.00	0.41	5.07
576.68	0.42	0.011	839.096	0.00	0.42	5.53
576.73	0.43	0.012	881.977	0.00	0.43	6.02
576.78	0.44	0.013	925.927	0.00	0.44	6.53
576.83	0.46	0.014	970.945	0.00	0.46	7.07
576.88	0.47	0.015	1,017.032	0.00	0.47	7.64
576.93	0.48	0.016	1,064.187	0.00	0.48	8.22

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
576.98	0.49	0.017	1,112.411	0.00	0.49	8.84
577.03	0.50	0.019	1,145.447	0.00	0.50	9.48
577.08	0.51	0.020	1,168.034	0.00	0.51	10.13
577.13	0.52	0.021	1,190.842	0.00	0.52	10.80
577.18	0.53	0.023	1,213.870	0.00	0.53	11.47
577.23	0.54	0.024	1,237.119	0.00	0.54	12.16
577.28	0.54	0.025	1,260.588	0.00	0.54	12.87
577.33	0.55	0.027	1,284.278	0.00	0.55	13.58
577.38	0.56	0.028	1,308.189	0.00	0.56	14.31
577.43	0.57	0.030	1,332.320	0.00	0.57	15.05
577.48	0.58	0.031	1,356.671	0.00	0.58	15.81
577.53	0.59	0.033	1,381.243	0.00	0.59	16.58
577.58	0.60	0.035	1,406.036	0.00	0.60	17.36
577.63	0.61	0.036	1,431.049	0.00	0.61	18.16
577.68	0.61	0.038	1,456.282	0.00	0.61	18.97
577.73	0.62	0.040	1,481.737	0.00	0.62	19.79
577.78	0.63	0.041	1,507.411	0.00	0.63	20.63
577.83	0.64	0.043	1,533.307	0.00	0.64	21.48
577.88	0.65	0.045	1,559.422	0.00	0.65	22.35
577.93	0.65	0.047	1,585.759	0.00	0.65	23.23
577.98	0.66	0.048	1,612.316	0.00	0.66	24.13
578.03	0.67	0.050	1,638.256	0.00	0.67	25.04
578.08	0.68	0.052	1,663.842	0.00	0.68	25.96
578.13	0.69	0.054	1,689.626	0.00	0.69	26.90
578.18	0.69	0.056	1,715.608	0.00	0.69	27.86
578.23	0.70	0.058	1,741.788	0.00	0.70	28.82
578.28	0.71	0.060	1,768.167	0.00	0.71	29.81
578.33	0.71	0.062	1,794.743	0.00	0.71	30.80
578.38	0.72	0.064	1,821.519	0.00	0.72	31.81
578.43	0.73	0.066	1,848.492	0.00	0.73	32.84
578.48	0.74	0.068	1,875.663	0.00	0.74	33.88
578.53	0.74	0.071	1,903.033	0.00	0.74	34.94
578.58	0.75	0.073	1,930.601	0.00	0.75	36.01
578.63	0.76	0.075	1,958.368	0.00	0.76	37.10
578.68	0.76	0.077	1,986.332	0.00	0.76	38.20
578.73	0.77	0.080	2,014.495	0.00	0.77	39.32
578.78	0.78	0.082	2,042.856	0.00	0.78	40.45
578.83	0.78	0.084	2,071.415	0.00	0.78	41.60
578.88	0.79	0.087	2,100.173	0.00	0.79	42.77
578.93	0.80	0.089	2,129.129	0.00	0.80	43.95
578.98	0.80	0.092	2,158.283	0.00	0.80	45.15
579.03	0.81	0.094	2,187.042	0.00	0.81	46.36
579.08	0.82	0.097	2,215.594	0.00	0.82	47.59
579.13	0.82	0.099	2,244.332	0.00	0.82	48.83
579.18	0.83	0.102	2,273.254	0.00	0.83	50.10

Subsection: Elevation-Volume-Flow Table (Pond)
Label: Dry Detention Basin
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Elevation (ft)	Outflow (ft³/s)	Storage (ac-ft)	Area (ft²)	Infiltration (ft³/s)	Flow (Total) (ft³/s)	2S/t + O (ft³/s)
579.23	0.83	0.104	2,302.361	0.00	0.83	51.37
579.28	0.84	0.107	2,331.654	0.00	0.84	52.67
579.33	0.85	0.110	2,361.132	0.00	0.85	53.97
579.38	0.85	0.112	2,390.795	0.00	0.85	55.30
579.43	0.86	0.115	2,420.643	0.00	0.86	56.64
579.45	0.86	0.116	2,432.634	0.00	0.86	57.19
579.48	1.03	0.118	2,450.676	0.00	1.03	58.17
579.53	1.59	0.121	2,480.895	0.00	1.59	60.10
579.58	2.37	0.124	2,511.299	0.00	2.37	62.26
579.63	3.31	0.127	2,541.887	0.00	3.31	64.61
579.68	4.37	0.130	2,572.662	0.00	4.37	67.09
579.73	5.49	0.133	2,603.621	0.00	5.49	69.65
579.78	6.66	0.136	2,634.765	0.00	6.66	72.27
579.83	7.51	0.139	2,666.095	0.00	7.51	74.59
579.88	7.56	0.142	2,697.609	0.00	7.56	76.13
579.93	7.61	0.145	2,729.309	0.00	7.61	77.69
579.98	7.65	0.148	2,761.194	0.00	7.65	79.26
580.03	7.70	0.151	2,792.776	0.00	7.70	80.85
580.08	7.75	0.154	2,824.210	0.00	7.75	82.46
580.13	7.80	0.158	2,855.821	0.00	7.80	84.08
580.18	7.84	0.161	2,887.607	0.00	7.84	85.73
580.23	7.89	0.164	2,919.569	0.00	7.89	87.39
580.28	7.94	0.168	2,951.707	0.00	7.94	89.06
580.33	7.98	0.171	2,984.021	0.00	7.98	90.76
580.38	8.03	0.174	3,016.511	0.00	8.03	92.47
580.43	8.07	0.178	3,049.177	0.00	8.07	94.20
580.48	8.12	0.181	3,082.018	0.00	8.12	95.95
580.53	8.16	0.185	3,115.036	0.00	8.16	97.72
580.58	8.21	0.189	3,148.229	0.00	8.21	99.50
580.63	8.25	0.192	3,181.599	0.00	8.25	101.30
580.68	8.30	0.196	3,215.144	0.00	8.30	103.12
580.73	8.34	0.200	3,248.865	0.00	8.34	104.96
580.78	8.39	0.203	3,282.763	0.00	8.39	106.82
580.83	8.43	0.207	3,316.836	0.00	8.43	108.70
580.88	8.47	0.211	3,351.085	0.00	8.47	110.59
580.93	8.51	0.215	3,385.510	0.00	8.51	112.51
580.98	8.56	0.219	3,420.110	0.00	8.56	114.44
581.03	8.60	0.223	3,454.522	0.00	8.60	116.39
581.08	8.64	0.227	3,488.860	0.00	8.64	118.37
581.13	8.68	0.231	3,523.369	0.00	8.68	120.35
581.18	8.73	0.235	3,558.047	0.00	8.73	122.36
581.23	8.77	0.239	3,592.895	0.00	8.77	124.39
581.28	8.81	0.243	3,627.913	0.00	8.81	126.44
581.33	8.85	0.247	3,663.100	0.00	8.85	128.51
581.38	8.89	0.251	3,698.458	0.00	8.89	130.59

Subsection: Elevation-Volume-Flow Table (Pond) Return Event: 100 years
Label: Dry Detention Basin Storm Event:
Scenario: Post- Development 100 year

Elevation (ft)	Outflow (ft^3/s)	Storage (ac-ft)	Area (ft^2)	Infiltration (ft^3/s)	Flow (Total) (ft^3/s)	2S/t + O (ft^3/s)
581.43	8.93	0.256	3,733.985	0.00	8.93	132.70
581.48	8.98	0.260	3,769.682	0.00	8.98	134.82
581.53	9.02	0.264	3,805.549	0.00	9.02	136.97
581.58	9.06	0.269	3,841.586	0.00	9.06	139.13
581.63	9.10	0.273	3,877.793	0.00	9.10	141.32
581.68	9.14	0.278	3,914.169	0.00	9.14	143.52
581.73	9.18	0.282	3,950.716	0.00	9.18	145.75
581.78	9.22	0.287	3,987.432	0.00	9.22	147.99
581.83	9.26	0.291	4,024.318	0.00	9.26	150.26
581.88	9.30	0.296	4,061.373	0.00	9.30	152.54
581.93	9.34	0.301	4,098.599	0.00	9.34	154.85
581.98	9.38	0.305	4,135.994	0.00	9.38	157.18
582.00	9.39	0.307	4,151.000	0.00	9.39	158.11

Subsection: Level Pool Pond Routing Summary
Label: Dry Detention Basin (IN)
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	1.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	2.27 ft³/s	Time to Peak (Flow, In)	3.000 min
Flow (Peak Outlet)	0.66 ft³/s	Time to Peak (Flow, Outlet)	22.000 min

Elevation (Water Surface, Peak)	577.94 ft
Volume (Peak)	0.047 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.063 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.063 ac-ft
Volume (Retained)	0.000 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary
Label: Dry Detention Basin (IN)
Scenario: Post-Development 15 year

Return Event: 15 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	3.36 ft³/s	Time to Peak (Flow, In)	3.000 min
Flow (Peak Outlet)	0.75 ft³/s	Time to Peak (Flow, Outlet)	24.000 min

Elevation (Water Surface, Peak)	578.60 ft
Volume (Peak)	0.074 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.093 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.093 ac-ft
Volume (Retained)	0.000 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	3.95 ft³/s	Time to Peak (Flow, In)	3.000 min
Flow (Peak Outlet)	0.80 ft³/s	Time to Peak (Flow, Outlet)	24.000 min

Elevation (Water Surface, Peak)	578.92 ft
Volume (Peak)	0.089 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.109 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.109 ac-ft
Volume (Retained)	0.000 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	579.45 ft
Volume (Initial)	0.116 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	4.53 ft³/s	Time to Peak (Flow, In)	3.000 min
Flow (Peak Outlet)	4.53 ft³/s	Time to Peak (Flow, Outlet)	18.000 min

Elevation (Water Surface, Peak)	579.72 ft
Volume (Peak)	0.132 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.116 ac-ft
Volume (Total Inflow)	0.125 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.125 ac-ft
Volume (Retained)	0.116 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Level Pool Pond Routing Summary
Label: Dry Detention Basin (IN)
Scenario: Post- Development 100 year

Return Event: 100 years
Storm Event:

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	575.48 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft³/s
Flow (Initial Infiltration)	0.00 ft³/s
Flow (Initial, Total)	0.00 ft³/s
Time Increment	3.000 min

Inflow/Outflow Hydrograph Summary			
Flow (Peak In)	4.53 ft³/s	Time to Peak (Flow, In)	3.000 min
Flow (Peak Outlet)	0.83 ft³/s	Time to Peak (Flow, Outlet)	24.000 min

Elevation (Water Surface, Peak)	579.22 ft
Volume (Peak)	0.104 ac-ft

Mass Balance (ac-ft)	
Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	0.125 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	0.125 ac-ft
Volume (Retained)	0.000 ac-ft
Volume (Unrouted)	0.000 ac-ft
Error (Mass Balance)	0.0 %

Subsection: Pond Inflow Summary
Label: Dry Detention Basin (IN)
Scenario: Post-Development 2 year

Return Event: 2 years
Storm Event:

Summary for Hydrograph Addition at 'Dry Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Basin Inflow

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Basin Inflow	0.063	3.000	2.27
Flow (In)	Dry Detention Basin	0.063	3.000	2.27

Summary for Hydrograph Addition at 'Dry Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Basin Inflow

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Basin Inflow	0.093	3.000	3.36
Flow (In)	Dry Detention Basin	0.093	3.000	3.36

Summary for Hydrograph Addition at 'Dry Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Basin Inflow

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Basin Inflow	0.109	3.000	3.95
Flow (In)	Dry Detention Basin	0.109	3.000	3.95

Summary for Hydrograph Addition at 'Dry Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Basin Inflow

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Basin Inflow	0.125	3.000	4.53
Flow (In)	Dry Detention Basin	0.125	3.000	4.53

Summary for Hydrograph Addition at 'Dry Detention Basin'

Upstream Link	Upstream Node
<Catchment to Outflow Node>	Basin Inflow

Node Inflows

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft³/s)
Flow (From)	Basin Inflow	0.125	3.000	4.53
Flow (In)	Dry Detention Basin	0.125	3.000	4.53

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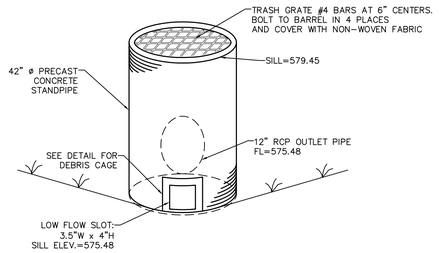
Appendix D

- Basin Control Structure

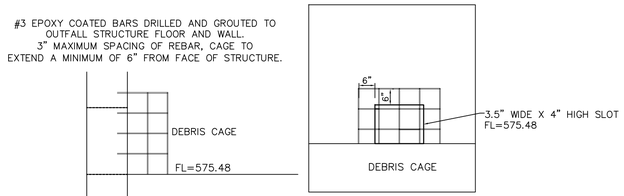
BAX ENGINEERING CO.
221 Point West Blvd.
St. Charles, MO 63301
(636) 928-5552 Fax: (636) 928-1718
www.baxengineering.com



OVERFLOW STRUCTURE OS 101 DETAIL

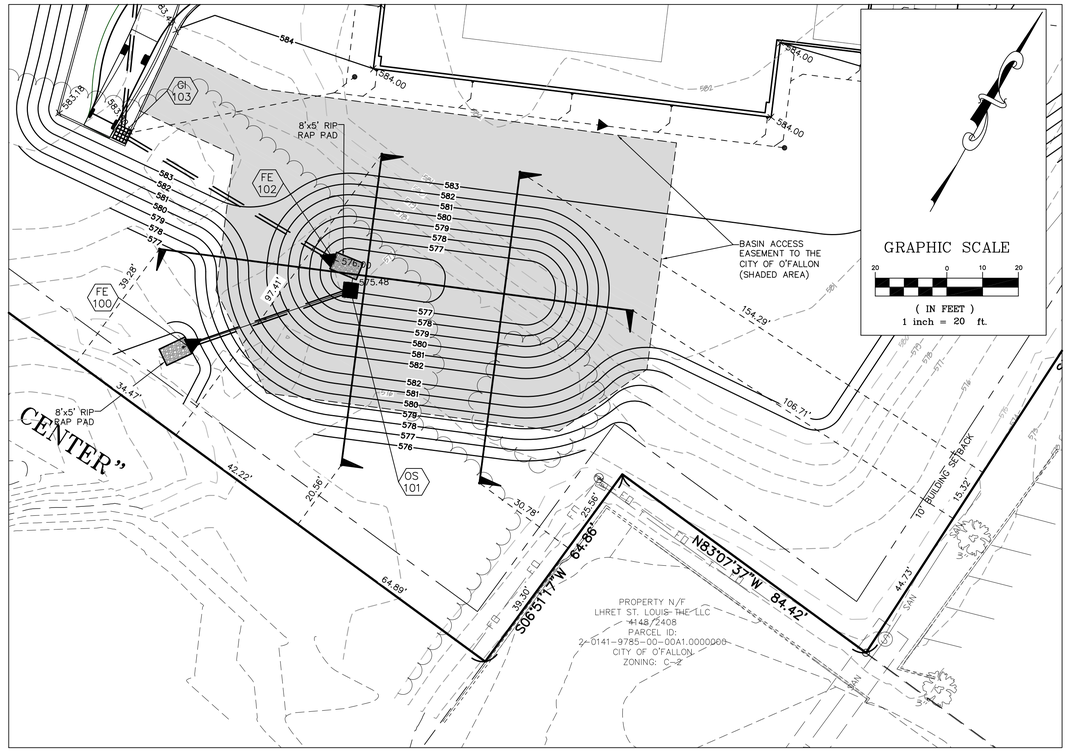
NOT TO SCALE

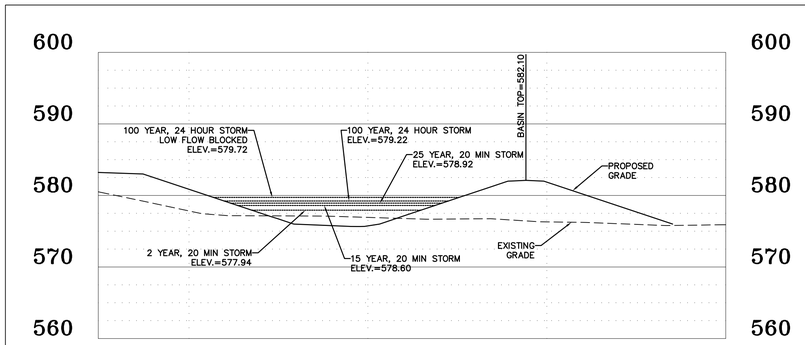
2 YEAR 20 MINUTE HIGHWATER = 577.94
15 YEAR 20 MINUTE HIGHWATER = 578.60
25 YEAR 20 MINUTE HIGHWATER = 578.92
100 YEAR 24 HOUR HIGHWATER = 579.22
100 YEAR 24 HOUR LFB HIGHWATER = 579.72



DRY/BIORETENTION BASIN DEBRIS CAGE

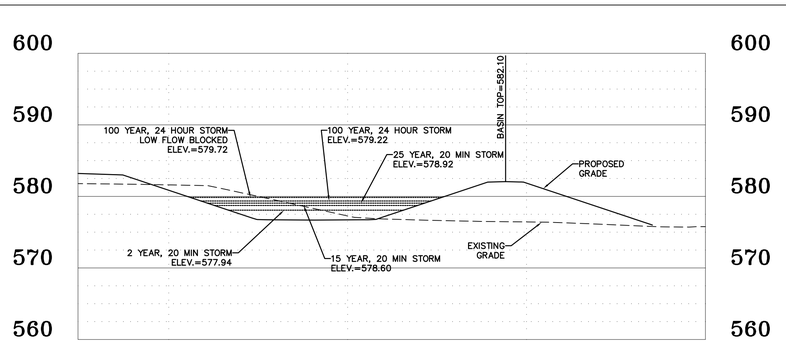
NOT TO SCALE





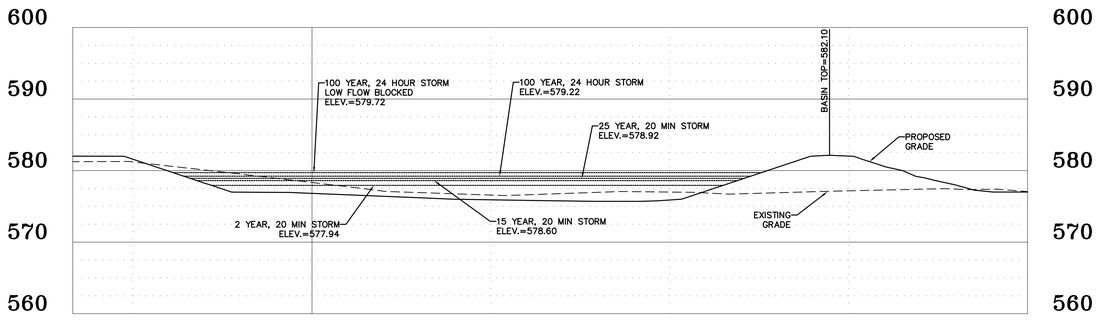
BASIN SECTION AA

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BASIN SECTION BB

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BASIN SECTION CC

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'

CALL BEFORE YOU DIG! 1-800-DIG-RITE

PROJECT TITLE:
CONSTRUCTION PLANS FOR:
First Baptist Church of O'Fallon
8750 Veterans Memorial Pkwy
O'Fallon, MO 63366

Bax Project #93-4007D Issue Date: XX/XX/2022

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

CLIFFORD L. HEITMANN
CIVIL ENGINEER
E-29817

REVISIONS

11-4-22	CITY COMMENTS

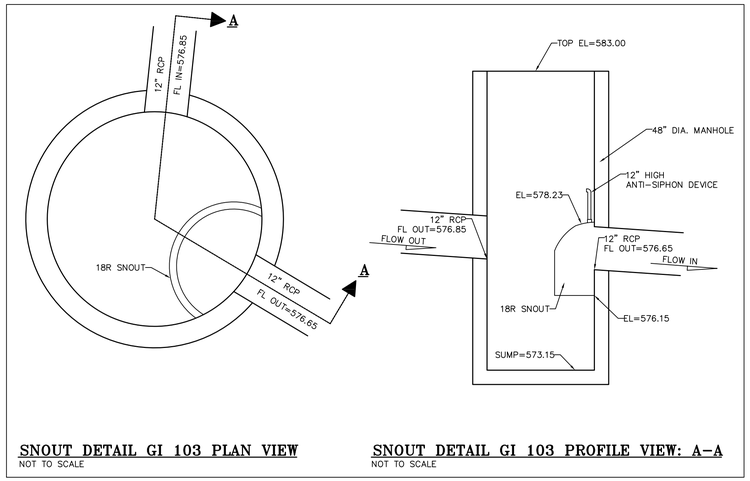
Developer / Owner:
First Baptist Church of O'Fallon
8750 Veterans Memorial Pkwy
O'Fallon, MO 63366
Phone #

BASIN DETAILS

P+Z No. 22-005714
Approved: 07-07-22

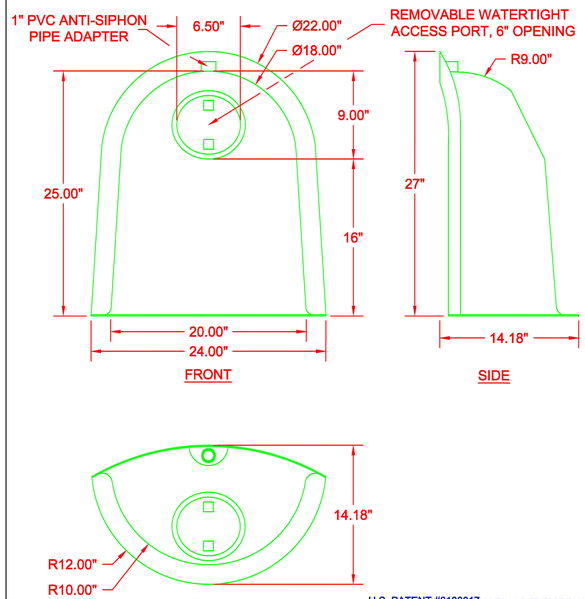
City No.
22-010520

Page No.
6 of 15



SNOUT DETAIL GI 103 PLAN VIEW
NOT TO SCALE

SNOUT DETAIL GI 103 PROFILE VIEW: A-A
NOT TO SCALE



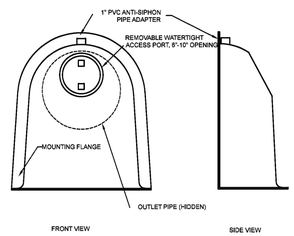
U.S. PATENT #6126817 ADDITONAL PATENTS PENDING

DESIGNED TO FIT
48"-60" DIAM.
STRUCTURES

BMP, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

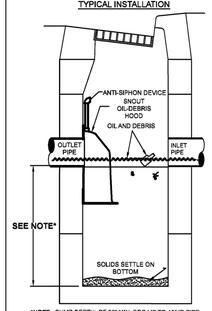
DESCRIPTION	DATE	SCALE
18R SNOUT OIL & DEBRIS STOP	09/06/99	NONE
	DRAWING NUMBER	18R

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION



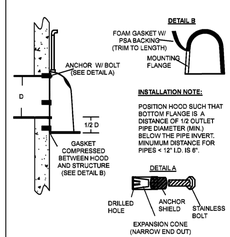
*NOTE- SUMP DEPTH OF 36" MIN. FOR UP TO 12" ID PIPE. OUTLET FOR PIPES 15" ID AND ABOVE SUMP DEPTH OF 2.5 TO 3 TIMES PIPE ID RECOMMENDED (E.G. 6' DEEP for 24" PIPE)

NOTES:

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   9 MATHEWS DRIVE, UNIT A1-A2.
   EAST HADDAM, CT 06423
   TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197
   WEB SITE: www.bmpinc.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT PIPE AND ELBOW AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION (SNOUT SIZE ALWAYS LARGER THAN PIPE SIZE).
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 12" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL AND PIPE SHALL BE FINISHED FLUSH TO WALL.
8. ALL STRUCTURE JOINTS SHALL BE WATERTIGHT.
9. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH ⅜" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
    INSTALLATION KIT SHALL INCLUDE:
    A. INSTALLATION INSTRUCTIONS
    B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
    C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
    D. 3/8" STAINLESS STEEL BOLTS
    E. ANCHOR SHIELDS

US Patent # 6126817, 7951294, 7857966, 8512556
Canada Patent # 2285146, 2690156, 2690156 others pending

INSTALLATION DETAIL



HOOD SPECIFICATION FOR
CATCH BASINS AND
WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/18	NONE
	DRAWING NUMBER	SP-SN

PROJECT TITLE:
CONSTRUCTION PLANS FOR:
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8750 Veterans Memorial Pkwy
O'Fallon, MO 63366

Bax Project #93-4007D Issue Date: XX/XX/2022

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

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CLIFFORD L. HEITMANN
CIVIL ENGINEER
E-29817

REVISIONS

11-4-22	CITY COMMENTS

Developer / Owner:
First Baptist Church of O'Fallon
8750 Veterans Memorial Pkwy
O'Fallon, MO 63366
Phone #

CONSTRUCTION DETAILS

P-I-Z No. 22-005714
Approved: 07-07-22

City No.
22-010520

Page No.
16 of 16

Appendix E

- Predeveloped Drainage Area Map
- Postdeveloped Drainage Area Map

BAX ENGINEERING CO.
221 Point West Blvd.
St. Charles, MO 63301
(636) 928-5552 Fax: (636) 928-1718
www.baxengineering.com

Exhibit A
Predeveloped Drainage Area Map
First Baptist Church of O'Fallon
93-4007D

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.

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St. Charles, MO 63301
636-928-5552
FAX 928-1718

PREDEVELOPED DISCHARGE POINT A
LAND USE SOIL	ACRE	P.I.
ONSITE GREENSPACE	1.29	1.70

PREDEVELOPED DISCHARGE POINT B
LAND USE SOIL	ACRE	P.I.
ONSITE GREENSPACE	0.98	1.70
ONSITE BUILDING/PAVEMENT	0.77	3.54

PREDEVELOPED DISCHARGE POINT C
LAND USE SOIL	ACRE	P.I.
ONSITE GREENSPACE	1.41	1.70
ONSITE BUILDING/PAVEMENT	2.03	3.54

TOTAL AREA
14.498 ACRES

PROPERTY N/F
FIRST BAPTIST CHURCH
OF O'FALLON 449/459
TRACT NO. 3
FORT ZUMWALT HEIGHTS
P.B.5 PG.40

PROPERTY N/F
CHURCH OF
1341/1674

PROPERTY N/F
FIRST BAPTIST CHURCH
OF O'FALLON, MISSOURI
3715/7

PROPERTY N/F
TVH PARTNERSHIP
1341/1674

LOT 2
HIGHWAY K PLAZA
P.B.33 PG.313

PROPERTY N/F
TVH PARTNERSHIP
1814/1440

LOT 1
HIGHWAY K PLAZA
P.B.33 PG.313

PROPERTY N/F
WEST HILL PROPERTIES LLC
4610/676
PARCEL ID:
2-057D-5029-00-0037.0000000
ST. CHARLES COUNTY
ZONING: RIE

PROPERTY N/F
HWY K 929 LLC
6923/697
PARCEL ID:
2-057D-7607-00-0001.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
SSM HEALTH CARE ST. LOUIS
4900/22
PARCEL ID:
2-0141-9785-00-00A2.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
LHRET STL LOUIS THE LLC
4148/2408
PARCEL ID:
2-0141-9785-00-99A1.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
GUNN PROPERTIES LLC
2021/9304
PARCEL ID:
2-0141-8462-00-0002.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
TVH PARTNERSHIP

PROPERTY N/F
TSUTOMU & NOBUKO KAMADA
781/1438

PROPERTY N/F
ALLIANCE CREDIT UNION
PARCEL ID:
2-0141-8462-00-0001.0000000
CITY OF O'FALLON
ZONING: C-2

"HIGHWAY K BUSINESS CENTER"
TRACT 2
P.B.30 PG.365

N83°06'11"W 426.34'
S06°51'17"W 84.36'
N83°01'37"W 84.43'
S03°38'52"W 229.30'
S22°04'32"E 116.77'
S68°40'04"E 63.27'
N83°57'48"E 31.00'
S22°04'32"E 200.10'
S68°40'04"E 233.17'

10'W SANITARY SEWER EASEMENT TO THE CITY OF O'FALLON 1322/701

10'W EASEMENT TO MISSOURI EDISON COMPANY AND CONTINENTAL TELEPHONE COMPANY 784/1683

10'W SEWER EASEMENT TO THE CHURCH OF CHRIST 845/553

25' INGRESS-EGRESS EASEMENT 1503/750

EXISTING 10'W EASEMENT TO THE CITY OF O'FALLON - 1140/969

PERMANENT DRAINAGE EASEMENT GRANTED TO THE CITY OF O'FALLON - 1140/969

EXISTING 10'W EASEMENT TO THE CITY OF O'FALLON - 1140/969

CROSS ACCESS AGREEMENT 1598/1701

EX ASPHALT
EX ONE STORY FRAME
EX FRAME SHED
EX CONCRETE
EX ASPHALT INGRESS/EGRESS
EX ASPHALT DRIVE
EX ASPHALT SWALE
EX CONCRETE BLOCK WALL
EX TREE LINE
EX LIGHT STANDARD
APPROXIMATE LOCATION OF EX ELECTRIC LINE
EXISTING LIGHT POLE
EXISTING WATER MAIN SHOWN APPROXIMATE LOCATION WAS NOT FLAGGED BY THE CITY. (TYPICAL OF ENTIRE REACH)
SHELTER WITH CONCRETE PAD
BASKETBALL HOOP
ASPHALT CURB
CONCRETE CURB
ASPHALT PAVEMENT
CONCRETE PAVEMENT
ONE STORY CONCRETE BLOCK HARDWARE STORE
ONE STORY FRAME
TWIN BASE
FIRE HYDRANT & VALVE
SUMP PUMP
STEPS
HORSES
GUARD RAIL
CONCRETE

EX GRATE INLET TOP=567.72 FL=567.72
EX GRATE INLET TOP=567.72 FL=567.24
EX GRATE INLET TOP=578.10 FL=574.56
EX GRATE INLET TOP=578.10 FL=574.92
EX GRATE INLET TOP=576.18 FL=570.03 OUT NORTH FL=571.03
EX GRATE INLET TOP=575.05 NORTHWEST DROP=567.22 WEST DROP=568.99 NORTH DROP=566.67 FL=566.67
EX GRATE INLET TOP=576.60 FL=567.40
EX GRATE INLET TOP=575.56 FL=569.01
EX GRATE INLET TOP=575.18 FL=571.68
EX GRATE INLET TOP=575.18 FL=571.68
EX AREA INLET TOP=569.30 FL=564.57
EX AREA INLET TOP=572.75 FL=567.91
EX CURB INLET TOP=572.61 FL=569.37
EX SANITARY MANHOLE TOP=579.50 FL IN=575.00 FL OUT=575.00
EX SANITARY MANHOLE TOP=579.10 FL=575.60
EX SANITARY MANHOLE TOP=579.10 EXIST SANITARY FL=575.90
EX SANITARY MANHOLE TOP=571.51 FL=571.16
EX SANITARY MANHOLE TOP=574.14 NORTH DROP=566.25 FL=566.25
EX SANITARY MANHOLE TOP=575.18 FL=571.68
EX SANITARY MANHOLE TOP=568.91 FL IN=562.22 FL OUT=579.07
EX SANITARY CLEANOUT @ METAL TOP=568.45A
EX SANITARY CLEANOUT @ METAL TOP=566.7A
EX SANITARY MANHOLE TOP=568.91 EAST DROP=560.42 FL=560.77
EX SANITARY MANHOLE TOP=568.91 FL=560.42
EX SANITARY MANHOLE TOP=572.72 FL=572.72
EX SANITARY MANHOLE TOP=577.24 FL=
EX CONC INLET TOP=568.65 FL=568.11
EX CONC INLET TOP=568.76 FL=571.96
EX CONC INLET TOP=564.78 FL=558.16
EX CONC INLET TOP=564.78 FL=558.16
EX CONC INLET TOP=564.78 FL=558.16

Exhibit B
Postdeveloped Drainage Area Map
First Baptist Church of O'Fallon
93-4007D

GRAPHIC SCALE

30 0 15 30

(IN FEET)
1 inch = 30 ft.

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St. Charles, MO 63301
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FAX 928-1718

POSTDEVELOPED DISCHARGE POINT B

LAND USE/SOIL	ACRE	P.I.
ONSITE GREENSPACE	0.68	1.70
ONSITE BUILDING/PAVEMENT	0.78	3.54

POSTDEVELOPED DISCHARGE POINT C

LAND USE/SOIL	ACRE	P.I.
ONSITE GREENSPACE	1.00	1.70
ONSITE BUILDING/PAVEMENT	2.30	3.54

POSTDEVELOPED DISCHARGE POINT A (DIRECT RUNOFF)

LAND USE/SOIL	ACRE	P.I.
ONSITE GREENSPACE	0.00	1.70

POSTDEVELOPED DISCHARGE POINT A (BASIN INFLOW)

LAND USE/SOIL	ACRE	P.I.
ONSITE GREENSPACE	0.51	1.70
ONSITE BUILDING/PAVEMENT	0.89	3.54

TOTAL AREA
14.498 ACRES

PROPOSED BUILDING
26,801 SQ. FT.
F.F.=584.50

PROPERTY N/F
FIRST BAPTIST CHURCH
OF O'FALLON 449/459
TRACT NO. 3
FORT ZUMWALT HEIGHTS
P.B.5 PG.40

PROPERTY N/F
FIRST BAPTIST CHURCH
OF O'FALLON, MISSOURI
3715/7

PROPERTY N/F
CHURCH OF

PROPERTY N/F
TVH PARTNERSHIP
1341/1674

PROPERTY N/F
TVH PARTNERSHIP
1814/1440

PROPERTY N/F
WEST HILL PROPERTIES LLC
4610/676
PARCEL ID:
2-057D-5029-00-0037.0000000
ST. CHARLES COUNTY
ZONING: RIE

PROPERTY N/F
GUNN PROPERTIES LLC
2021/9304
PARCEL ID:
2-0141-8462-00-0002.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
HWY K 929 LLC
6923/697
PARCEL ID:
2-057D-7607-00-0001.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
SSM HEALTH CARE ST. LOUIS
4900/22
PARCEL ID:
2-0141-9785-00-00A2.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
LHRET STL LOUIS THE LLC
4148/2408
PARCEL ID:
2-0141-9785-00-90A1.0000000
CITY OF O'FALLON
ZONING: C-2

PROPERTY N/F
TSUTOMU & NOBUKO KAMADA
781/1438

PROPERTY N/F
ALLIANCE CREDIT UNION
PARCEL ID:
2-0141-8462-00-0001.0000000
CITY OF O'FALLON
ZONING: C-2

LOT 2
HIGHWAY K PLAZA
P.B.33 PG.313

LOT 1
HIGHWAY K PLAZA
P.B.33 PG.313

"HIGHWAY K BUSINESS CENTER"
TRACT
P.B.30 PG.365

S88°40'04"E 233.17'
S88°40'04"W 63.27'
S22°04'32"E 116.77'
N83°57'48"E 31.00'
S22°04'32"E 200.76'
S03°08'52"W 228.30'
N83°07'37"W 54.42'
S06°51'17"W 54.86'
N83°08'11"W 426.34'

SILTATION CONTROL
GRADING LIMITS
BASIN ACCESS EASEMENT TO THE CITY OF O'FALLON (SHADED AREA)
MAIN ENTRY DOORS
OFFICE DOORS
DOOR
DOORS
TO BUILDING SETBACK
EXISTING LIGHT POLE
EX ONE STORY FRAME
ONE STORY CONCRETE BLOCK HARDWARE STORE
EX FRAME SHED
ASPHALT CURB
EX ASPHALT
CONCRETE
SHELTER WITH CONCRETE PAD
APPROXIMATE LOCATION OF EX ELECTRIC LINE
EX LIGHT STANDARD
BASKETBALL HOOP
HORSESHOE PIT
ASPHALT PAVEMENT
ASPHALT SWALE
EX TREE LINE
CONCRETE BLOCK WALL
EXISTING WATER MAIN SHOW APPROXIMATE LOCATION WAS NOT FLAGGED BY THE CITY. (TYPICAL OF ENTIRE REACH)
10'W SEWER EASEMENT TO THE CHURCH OF CHRIST 845/553
10'W SANITARY SEWER EASEMENT TO THE CITY OF O'FALLON 1322/701
10'W EASEMENT TO MISSOURI EDISON COMPANY AND CONTINENTAL TELEPHONE COMPANY 784/1683
NEW ESMT GRANTED TO O'FALLON GMS
PERMANENT DRAINAGE ESMT GRANTED TO THE CITY OF O'FALLON
EXISTING 10'W EASEMENT TO THE CITY OF O'FALLON - 1140/549
EXISTING 10'W EASEMENT TO THE CITY OF O'FALLON - 1140/549
25' INGRESS-EGRESS EASEMENT 1630/150
CROSS ACCESS AGREEMENT 1586/1701
SILTATION CONTROL AROUND TREE/BRUSH CLEARING LIMITS
TO BUILDING SETBACK
SHELTER WITH CONCRETE PAD
TWIN PAGE CEDAR
ONE STORY FRAME

EX GRATE INLET TOP=577.22 FL=
EX GRATE INLET TOP=577.24 FL=
EX GRATE INLET TOP=578.40 FL=574.56
EX GRATE INLET TOP=578.10 FL=574.92
EX GRATE INLET TOP=576.18 FL=571.03
EX GRATE INLET TOP=576.56 FL=570.02
EX GRATE INLET TOP=575.05 NORTHWEST DROP=567.22 WEST DROP=568.99 NORTH DROP=566.60 FL=566.22
GRATE INLET TOP=576.60 FL=567.40
GRATE INLET TOP=580.65 FL=584.11
EX CURB INLET TOP=570.84 FL=565.37
EX AREA INLET TOP=572.79 FL=567.91
AREA INLET TOP=569.50 FL=564.97
EX SANITARY MANHOLE TOP=576.50 FL\ IN=565.00 FL\ OUT=562.00
EX SANITARY MANHOLE TOP=579.10 FL=575.50
EX SANITARY MANHOLE TOP=579.51 FL=571.10
EX SANITARY MANHOLE TOP=574.14 NORTH DROP=566.25 FL=562.65
EX SANITARY CLEANOUT @ METAL TOP=586.74
EX SANITARY MANHOLE TOP=586.16 FL=577.96
EX SANITARY CLEANOUT @ METAL TOP=584.94
EX SANITARY MANHOLE TOP=582.98 EAST DROP=569.42 FL=565.77
STORM MANHOLE TOP=588.97 FL IN=582.22 FL OUT=579.07
EX TPED CURB INLET TOP=589.76 FL=577.96
SUMP PUMP
FIRE HYDRANT & VALVE
4" PVC CLEANOUT
6" PVC CLEANOUT
8" PVC CLEANOUT
10" PVC CLEANOUT
12" PVC
15" RCP
24"
GI 104
GI 103
FE 102
FE 100
OS 101
MH A
MH B
MH C
SIDEWALK CULVERT
5" RIP RAP PAD
5" RIP RAP PAD
SILTATION CONTROL
SILTATION CONTROL
SILTATION CONTROL