



El Paso County MS4 Post Construction Detention / Water Quality Facility Documentation Form

This document must be completed and submitted with required attachments to the County for projects requiring a detention and/or a water quality facility. A separate completed form must be submitted for each facility.

Project name: FALCON MARKETPLACE (POND SR4)

Owner name: LG HI FALCON, LLC.

Location Address: 11680 E. WOODMEN ROAD

Latitude and Longitude: 38.943485, -104.611548

Assessor's Parcel #: 5300000589 Section: 1 Township: 13S Range: 65W

Expected Completion date: SPRING 2020

Project acreage: 36.4 Design Ponding Acres: 3.5 Design Storm: 100-YR

Design Engineer Email Address: tmccconnell@drexelbarrell.com

To ensure compliance with C.R.S. 37-92-602(8), the completed Stormwater Detention and Infiltration Design Data Sheet must be attached. The form can be found here: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif# (click on Download SDI Design Data Sheet)

List all permanent water quality control measure(s) (EDBs, rain gardens, etc): EDB

For all projects for which the constrained redevelopment sites standard is applied, provide an explanation of why it is not practicable to meet the full design standards.

Attach Operations and Maintenance (O&M) Plan describing the operation and maintenance procedures that ensure the long-term observation, maintenance, and operation of control measure(s), including routine inspection frequencies and maintenance activities. If multiple, different water quality control measures are used at the same location, a separate O & M Plan must be provided for each facility.

Attach Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement addressing maintenance of BMPs that shall be binding on all subsequent owners of the permanent BMPs.

Attachments: Review Engineer

Stormwater Detention and Infiltration Design Data Sheet O & M Plan Maintenance and Access Agreement EPC Project File No.

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

Stormwater Facility Name: **Sub-Regional Detention Pond SR4**

Facility Location & Jurisdiction: **Falcon Marketplace, Falcon, CO**

User Input: Watershed Characteristics

Watershed Slope = ft/ft
Watershed Length = ft
Watershed Area = acres
Watershed Imperviousness = percent
Percentage Hydrologic Soil Group A = percent
Percentage Hydrologic Soil Group B = percent
Percentage Hydrologic Soil Groups C/D = percent

Location for 1-hr Rainfall Depths (use dropdown):

User Input ▼

WQCV Treatment Method = Extended Detention ▼

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	886	0.00	0.00
1.00	9,189	1.00	1.98
2.00	27,880	2.00	2.79
3.00	60,263	3.00	4.82
4.00	85,329	4.00	6.37
5.00	103,874	5.00	7.54
6.00	111,922	6.00	10.51
7.00	116,616	7.00	12.21
8.00	128,472	8.00	13.64
9.00	136,926	9.00	24.79
10.00	145,498	10.00	161.20
11.00	154,188	11.00	377.40
12.00	158,590	12.00	507.45
13.00	162,992	13.00	650.12
14.00	167,639	14.00	777.72
14.50	172,286	14.50	799.86
15.00	181,155	15.00	856.42
15.50	190,124	15.50	961.91
16.00	199,194	16.00	1139.63

After completing and printing this worksheet to a pdf, go to:

<https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>

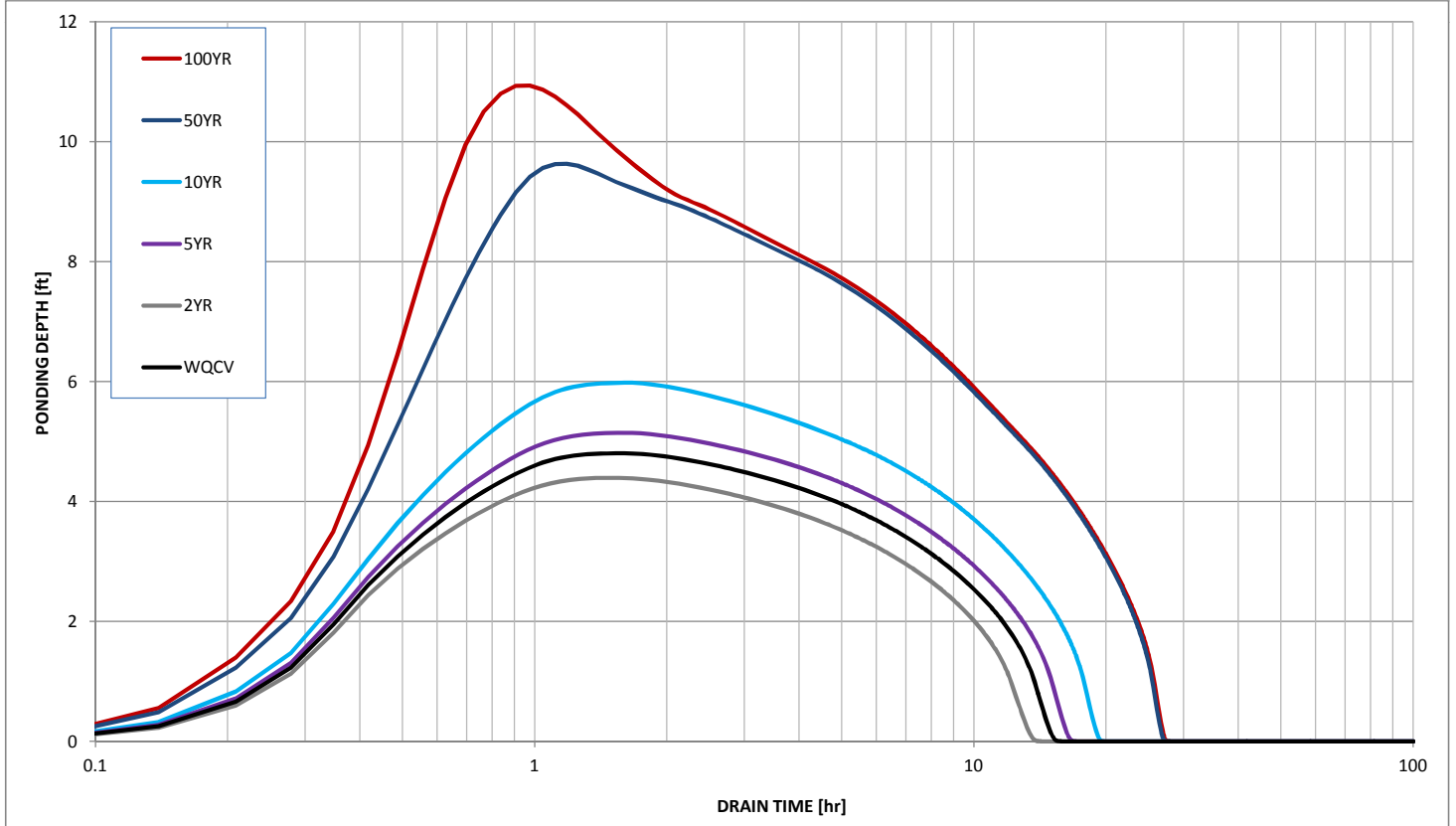
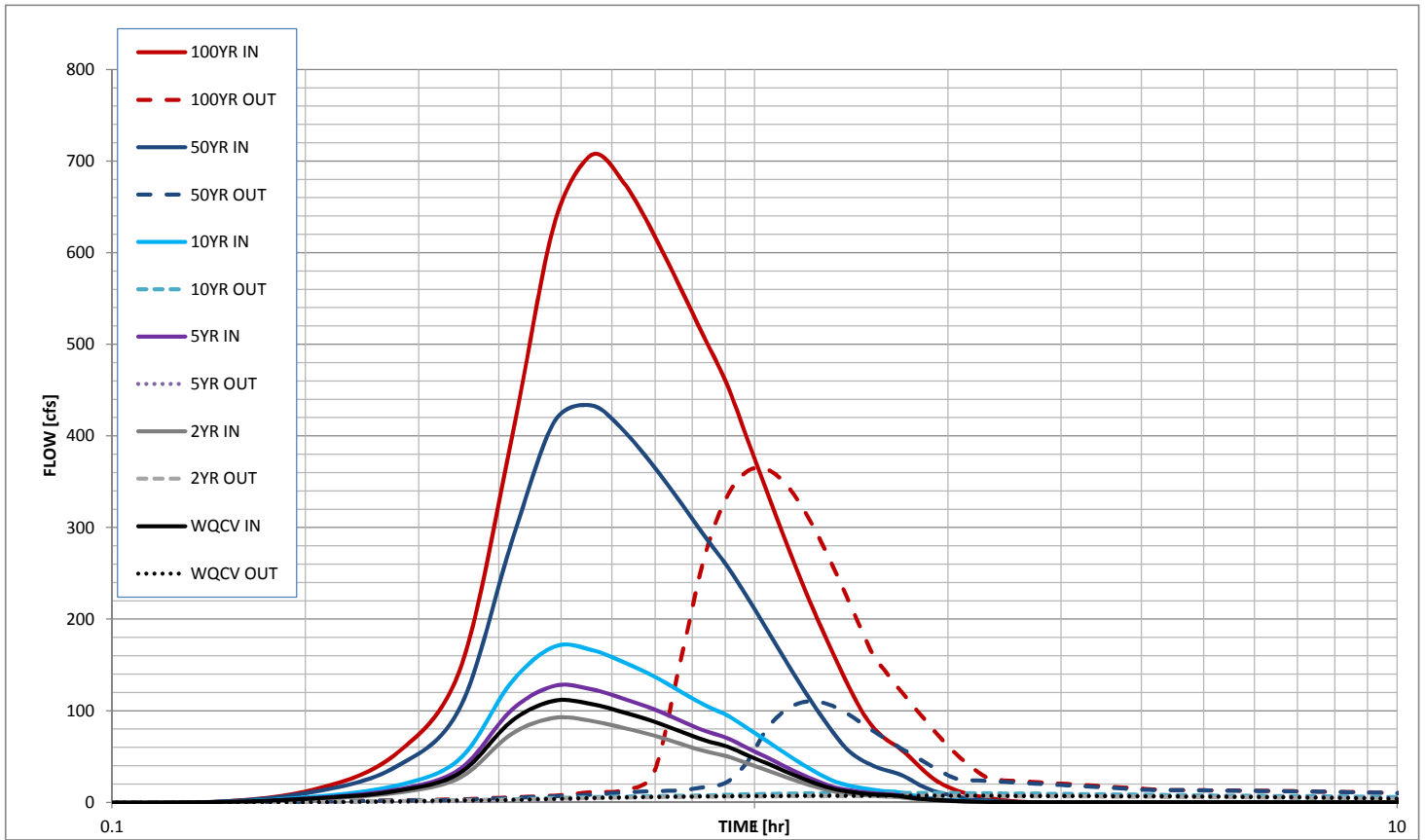
create a new stormwater facility, and

attach the pdf of this worksheet to that record.

Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year
Design Storm Return Period =	0.53	0.95	1.22	1.48	2.19	2.54
One-Hour Rainfall Depth =	0.53	0.95	1.22	1.48	2.19	2.54
Calculated Runoff Volume =	5.753	4.768	6.624	8.944	23.661	40.505
OPTIONAL Override Runoff Volume =						
Inflow Hydrograph Volume =	5.752	4.768	6.622	8.935	23.657	40.504
Time to Drain 97% of Inflow Volume =	13.4	12.0	14.6	17.0	22.7	21.4
Time to Drain 99% of Inflow Volume =	14.2	12.7	15.4	18.0	24.9	24.2
Maximum Ponding Depth =	4.80	4.39	5.14	5.98	9.63	10.94
Maximum Poned Area =	2.29	2.12	2.41	2.56	3.26	3.53
Maximum Volume Stored =	4.891	3.988	5.696	7.800	18.331	22.780

Stormwater Detention and Infiltration Design Data Sheet





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This document must be completed and submitted with required attachments to the County for projects requiring a detention and/or a water quality facility. A separate completed form must be submitted for each facility.

Project name: FALCON MARKETPLACE (POND 2)

Owner name: LG HI FALCON, LLC.

Location Address: 11680 E. WOODMEN ROAD

Latitude and Longitude: 38.943485, -104.611548

Assessor's Parcel #: 5300000589 Section: 1 Township: 13S Range: 65W

Expected Completion date: SUMMER 2020

Project acreage: 36.4 Design Ponding Acres: 0.83 Design Storm: 100-YR

Design Engineer Email Address: tmccconnell@drexelbarrell.com

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List all permanent water quality control measure(s) (EDBs, rain gardens, etc): EDB

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Attach Operations and Maintenance (O&M) Plan describing the operation and maintenance procedures that ensure the long-term observation, maintenance, and operation of control measure(s), including routine inspection frequencies and maintenance activities. If multiple, different water quality control measures are used at the same location, a separate O & M Plan must be provided for each facility.

Attach Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement addressing maintenance of BMPs that shall be binding on all subsequent owners of the permanent BMPs.

Attachments: Review Engineer

Stormwater Detention and Infiltration Design Data Sheet O & M Plan Maintenance and Access Agreement EPC Project File No.

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

Stormwater Facility Name: Falcon Marketplace Pond #2

Facility Location & Jurisdiction:

User Input: Watershed Characteristics

Watershed Slope =	<input type="text" value="0.020"/>	ft/ft
Watershed Length =	<input type="text" value="1500"/>	ft
Watershed Area =	<input type="text" value="27.80"/>	acres
Watershed Imperviousness =	<input type="text" value="86.8%"/>	percent
Percentage Hydrologic Soil Group A =	<input type="text" value="100.0%"/>	percent
Percentage Hydrologic Soil Group B =	<input type="text"/>	percent
Percentage Hydrologic Soil Groups C/D =	<input type="text"/>	percent

Location for 1-hr Rainfall Depths (use dropdown):

User Input ▼

WQCV Treatment Method = ▼

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	300	0.00	0.00
1.00	1,659	0.50	0.06
2.00	4,721	1.00	0.08
3.00	11,225	1.50	0.13
4.00	28,592	2.00	0.18
7.00	46,125	2.50	0.22
7.20	51,425	3.00	0.28
		3.50	0.33
		4.00	0.37
		4.50	8.49
		5.00	36.77
		5.50	48.73
		6.00	83.93
		6.50	269.91
		7.00	548.84
		7.20	681.82

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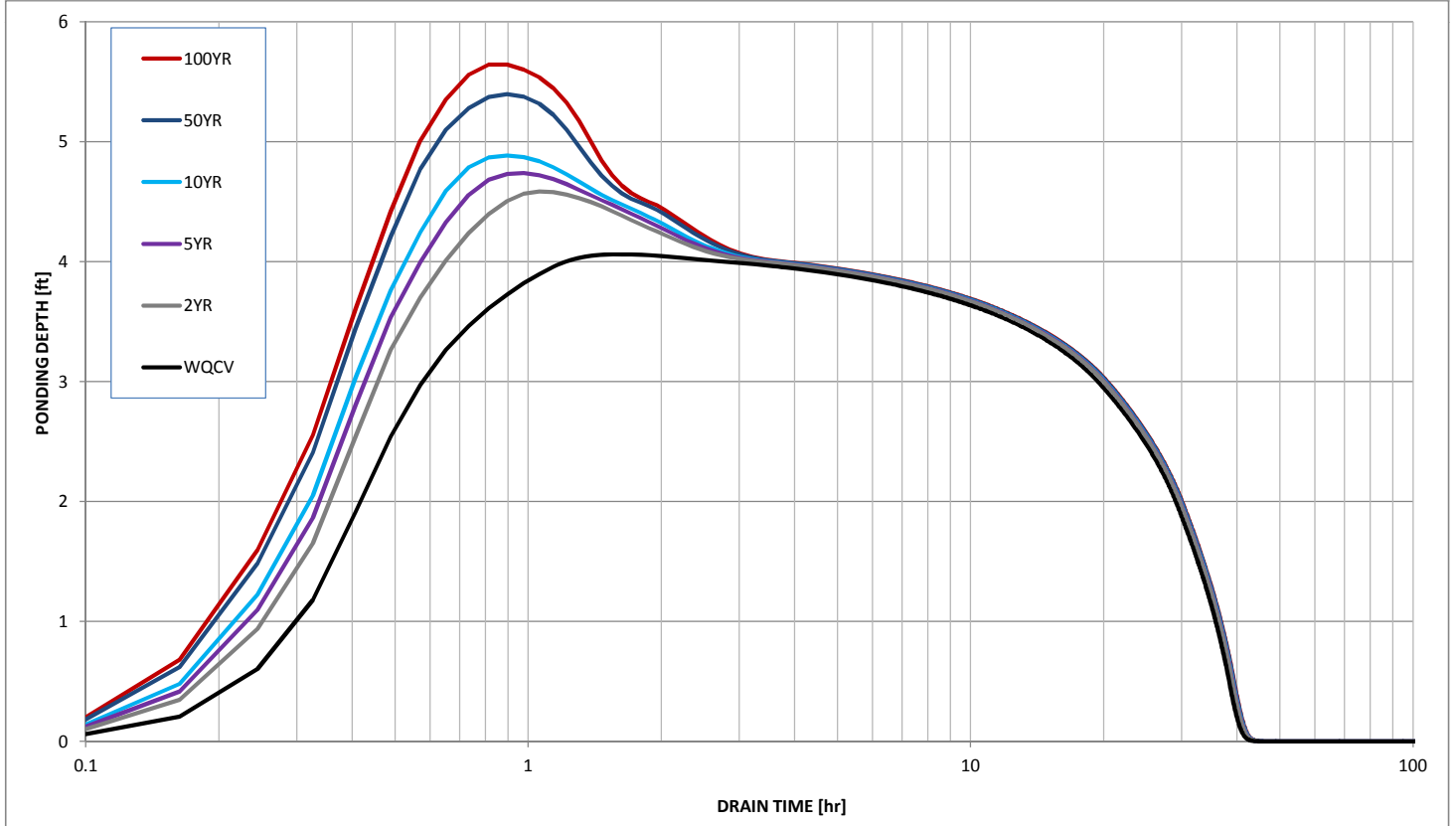
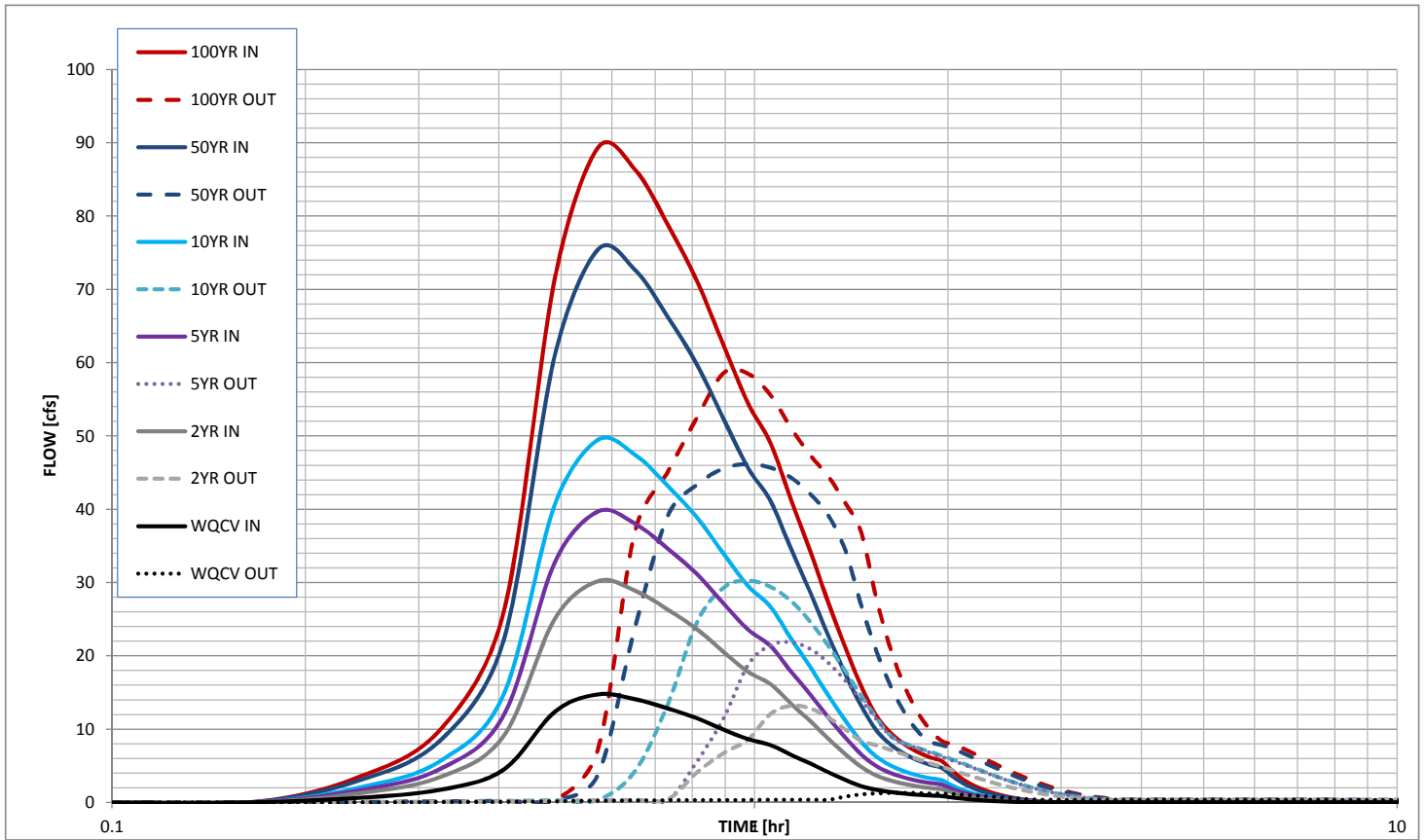
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Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =							
One-Hour Rainfall Depth =	0.53	0.95	1.22	1.48	2.19	2.54	in
Calculated Runoff Volume =	0.870	1.799	2.375	2.968	4.561	5.426	acre-ft
OPTIONAL Override Runoff Volume =							
Inflow Hydrograph Volume =	0.870	1.798	2.375	2.968	4.560	5.421	acre-ft
Time to Drain 97% of Inflow Volume =	35.4	32.9	31.6	30.3	27.5	26.1	hours
Time to Drain 99% of Inflow Volume =	38.2	37.2	36.3	35.6	34.1	33.2	hours
Maximum Ponding Depth =	4.06	4.59	4.74	4.89	5.40	5.64	ft
Maximum Poned Area =	0.66	0.73	0.75	0.77	0.84	0.88	acres
Maximum Volume Stored =	0.773	1.138	1.253	1.365	1.778	1.989	acre-ft

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Project name:

Owner name:

Location Address:

Latitude and Longitude:

Assessor's Parcel #: Section: Township: Range:

Expected Completion date:

Project acreage: Design Ponding Acres: Design Storm:

Design Engineer Email Address:

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Attachments:
Stormwater Detention and Infiltration Design Data Sheet
O & M Plan
Maintenance and Access Agreement

Review Engineer
EPC Project File No.

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

Stormwater Facility Name: Falcon Marketplace Pond #3

Facility Location & Jurisdiction: _____

User Input: Watershed Characteristics

Watershed Slope = ft/ft
 Watershed Length = ft
 Watershed Area = acres
 Watershed Imperviousness = percent
 Percentage Hydrologic Soil Group A = percent
 Percentage Hydrologic Soil Group B = percent
 Percentage Hydrologic Soil Groups C/D = percent
 Location for 1-hr Rainfall Depths (use dropdown):
 User Input ▼

WQCV Treatment Method = Extended Detention ▼

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	303	0.00	0.00
1.50	1,319	0.50	0.01
3.50	2,092	1.00	0.02
4.50	2,370	1.50	0.03
5.50	2,675	2.00	0.03
		2.50	0.05
		3.00	0.05
		3.50	1.32
		4.00	14.00
		4.50	14.98
		5.00	15.91
		5.50	16.78

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Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =							
One-Hour Rainfall Depth =	0.53	0.95	1.22	1.48	2.19	2.54	in
Calculated Runoff Volume =	0.089	0.159	0.213	0.273	0.494	0.635	acre-ft
OPTIONAL Override Runoff Volume =							
Inflow Hydrograph Volume =	0.089	0.159	0.213	0.272	0.494	0.635	acre-ft
Time to Drain 97% of Inflow Volume =	37.7	35.3	33.5	31.8	27.1	24.8	hours
Time to Drain 99% of Inflow Volume =	43.5	41.6	40.1	38.8	35.4	33.8	hours
Maximum Ponding Depth =	2.93	3.37	3.52	3.59	3.74	3.83	ft
Maximum Poned Area =	0.04	0.05	0.05	0.05	0.05	0.05	acres
Maximum Volume Stored =	0.080	0.100	0.107	0.110	0.118	0.122	acre-ft

Stormwater Detention and Infiltration Design Data Sheet

