

ACCEPTED for FILE Engineering Review 05/16/2022 2:39:57 PM dsdnijkanp EPC Planning & Community Development Department

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: HOMESTEAD NORTH AT STERLING RANCH (PO	ND C)
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Owner name: SR LAND, LLC

Location Address: APPOX. 500 FT NORTHEAST OF INT. OF BRIARGATE PARKWAY AND WHEATLAND DR

Latitude and Longitude:

38deg58min07sec N, 104deg40min08sec W

Assessor's Parcel #: 5228000030 Section: 28 & 33 Township: 12S Range: 65w

Expected Completion date: 8/2021

Project acreage: 224.40 Design Ponding Acres: 1.6 Design Storm: 100 YEAR

Design Engineer Email Address: MBRAMLETT@JRENGINEERING.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):

EXTENDED DETENTION BASIN

For all projects for which the constrained redevelo	opment 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 JDR / GR	
Stormwater Detention and Infiltration Design Data Sheet	EPC Project File No. SP208	
O & M Plan		

Maintenance and Access Agreement

Stormwater Detention and Infiltration Design Data Sheet

Workhook Protected

Worksheet Protected

Stormwater Facility Name: Homestead North at Sterling Ranch

Facility Location & Jurisdiction: Pond C

User Input: Watershed Characteristics

Watershed Slope =	0.034	ft/ft
Watershed Length =	1580	ft
Watershed Area =	224.40	acres
Watershed Imperviousness =	10.3%	percent
Percentage Hydrologic Soil Group A =		percent
Percentage Hydrologic Soil Group B =	100.0%	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	ed User Defined	
Stage [ft]	Area [ft^2]	Stage [ft] Discharge [
0.00	90	0.00	0.00	
0.24	421	0.24	0.09	
1.24	9,215	1.24	0.20	
2.24	25,614	2.24	0.43	
3.24	37,949	3.24	0.66	
4.24	43,976	4.24	0.88	
5.24	47,684	5.24	35.83	
6.24	51,279	6.24	99.85	
7.24	54,996	7.24	126.14	
8.24	58,816	8.24	134.71	
9.24	62,675	9.24	142.76	
9.99	65,646	9.99	148.51	
10.24	66,643	10.24	196.81	
11.24	70,696	11.24	690.10	

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

	Routed Hydro	graph Results					_
Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	1.285	1.501	2.331	5.240	18.965	25.864	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	1.285	1.501	2.330	5.231	18.959	25.854	acre-ft
Time to Drain 97% of Inflow Volume =	37.5	40.7	50.4	46.0	32.4	27.4	hours
Time to Drain 99% of Inflow Volume =	39.7	43.3	54.1	52.5	45.1	42.3	hours
Maximum Ponding Depth =	3.24	3.47	4.30	5.58	10.49	10.97	ft
Maximum Ponded Area =	0.87	0.90	1.01	1.12	1.55	1.60	acres
Maximum Volume Stored =	1.230	1.442	2.224	3.596	10.141	10.911	acre-ft

Stormwater Detention and Infiltration Design Data Sheet

