EPC STORMWATER REVIEW COMMENTS
IN ORANGE BOXES WITH BLACK TEXT

Tech Contractors
ENGINEERING GROUP

Brad Walters
Inspection Supervisor
El Paso County Development Services
2880 International Circle, Suite 110
Colorado Springs CO, 80910

Calculation previously provided with attached worksheet, comparison table provided below.
As-Built Plan updated to show as-built dimensions.

RE: Substantial Compliance
Rain Garden
Rex Road at Falcon Regional Park
Improvement Plans Approved July 11, 2023

Discuss the runoff reduction and verify if it was built per plan. Provide the calculations for the runoff reduction areas and update dimensions if anything changed in construction.

April 9, 2025

Dear Mr. Walters,

Added discussion re runoff reduction

Tech Contractors has visually inspected and completed an as-built topographic survey of the rain garden located at the southwest corner of the Rex Rd – Eastonville Rd intersection within the Falcon Regional Park and based upon our observations and the data collected, the rain garden has been substantially completed per all approved plans and specifications. The analysis indicates the bottom area after construction is approximately 1,950 sq. ft. with a top surface area of 2,815 sq. ft. providing more than the required minimum flat surface area of 381 sq. ft. Please see the below chart and attached worksheet for more detailed information.

	Minimum Flat Surface Area	Flat Surface Area	Top Surface Area	Total Volume Provided
DESIGN	381 sq. ft.	1,620 sq. ft.	2,040 sq. ft.	915 cf.
AS-BUILT	381 sq. ft.	1,950 sq. ft.	2,815 sq. ft.	1,191 cf.

Should you have any questions or concerns please feel free to contact me at 719-495-7444 or by email at tom@meridianranch.com

Sincerely

Thomas A. Kerby, PE
Tech Contractors
11886 Stapleton Drive
Falcon, Colorado 808

Revise the PCM Certification Letter to include the required statements listed in ECM Section 5.10.6.B (something similar is even required for Runoff Reduction):

"The site and adjacent properties (as affected by work performed under the County permit) are stable with respect to settlement and subsidence, sloughing of cut and fill slopes, revegetation or other ground cover, and that the improvements (public improvements, common development improvements, site grading and paving) meet or exceed the minimum design requirements. The PCM(s) provide the required storage volume and meet the required release rates, stage areas, elevations, and outlet dimensions, as documented by the attached revised MHFD-Detention spreadsheet that shows the as-built conditions."

cc
Raul Guzman (GTL Dev
Bret Haycock (Tech Contractors)

Revised, added similar language to Substantial Compliance Letter

Telephone No.: 719.495.7444
11910 Tourmaline Dr., #130
Falcon CO. 80831
Billing Address
P. O. Box 80036
San Diego, CA 92138

Design Procedure Form: Rain Garden (RG)

UD-BMP (Version 3.07, March 2018)

Designer: Thomas A Kerby, PE
Company: Tech Contractors
Date: April 9, 2025
Project: Rex Road Extension at Falcon Regional Park - AS BUILT 04/08/2025
Location: FALCON, CO

1. Basin Storage Volume		
A) Effective Imperviousness of Tributary Area, I_a (100% if all paved and roofed areas upstream of rain garden)	I_a = 97.4	%
B) Tributary Area's Imperviousness Ratio (i = I_a/100)	i = 0.974	
C) Water Quality Capture Volume (WQCV) for a 12-hour Drain Time ($WQCV= 0.8 * (0.91* i^3 - 1.19 * i^2 + 0.78 * i)$)	WQCV = 0.38	watershed inches
D) Contributing Watershed Area (including rain garden area)	Area = 19,540	sq ft
E) Water Quality Capture Volume (WQCV) Design Volume Vol = (WQCV / 12) * Area	V_{WQCV} =	cu ft
F) For Watersheds Outside of the Denver Region, Depth of Average Runoff Producing Storm	d_6 = 0.60	in
G) For Watersheds Outside of the Denver Region, Water Quality Capture Volume (WQCV) Design Volume	$V_{WQCV\ OTHER}$ = 858	cu ft
H) User Input of Water Quality Capture Volume (WQCV) Design Volume (Only if a different WQCV Design Volume is desired)	$V_{WQCV\ USER}$ =	cu ft
2. Basin Geometry		
A) WQCV Depth (12-inch maximum)	D_{WQCV} = 6	in
B) Rain Garden Side Slopes (Z = 4 min., horiz. dist per unit vertical) (Use "0" if rain garden has vertical walls)	Z = 4.00	ft / ft
C) Mimimum Flat Surface Area	A_{Min} = 381	sq ft
D) Actual Flat Surface Area	A_{Actual} = 1950	sq ft
E) Area at Design Depth (Top Surface Area)	A_{Top} = 2815	sq ft
F) Rain Garden Total Volume ($V_T= ((A_{Top} + A_{Actual}) / 2) * Depth$)	V_T= 1,191	cu ft
3. Growing Media	Choose One: (•) 18" Rain Garden Growing Media ( ) Other (Explain):	
4. Underdrain System		
A) Are underdrains provided?	Choose One: ( ) YES (•) NO	
B) Underdrain system orifice diameter for 12 hour drain time		
i) Distance From Lowest Elevation of the Storage Volume to the Center of the Orifice	y = N/A	ft
ii) Volume to Drain in 12 Hours	Vol_{12} = N/A	cu ft
iii) Orifice Diameter, 3/8" Minimum	D_O = N/A	in

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5. Impermeable Geomembrane Liner and Geotextile Separator Fabric A) Is an impermeable liner provided due to proximity of structures or groundwater contamination?	Choose One ○ YES ○ NO
6. Inlet / Outlet Control A) Inlet Control	Choose One ○ Sheet Flow- No Energy Dissipation Required ○ Concentrated Flow- Energy Dissipation Provided
7. Vegetation	Choose One ○ Seed (Plan for frequent weed control) ○ Plantings ○ Sand Grown or Other High Infiltration Sod
8. Irrigation A) Will the rain garden be irrigated?	Choose One ○ YES ○ NO

Notes: