

October 10, 2024

Ms. Nicole Hay
Morgan County Planning & Zoning Department
231 Ensign Street
Fort Morgan, CO 80701

Re: Revised Drainage Plan Review
Pivot Energy Morgan PS71 Solar Array

I have reviewed the revised documentation that you provided for the proposed Pivot Energy Solar array located west of Brush on the south side of Interstate 76. The documentation consisted of a response to my prior review comments (September 5, 2024), an updated drainage narrative dated October 6, 2024 and updated USR plans.

Based on my review, the revised drainage narrative and site plans have substantially addressed the review comments, which consisted of the following:

<u>Comment</u>	<u>Resolution</u>
Add required drainage facilities to basin P2	Existing depression storage identified on east side of site (basin P2) and modified with berm to retain and infiltrate stormwater runoff
Infiltration ponds should be designed to capture the 24-hour, 100-year storm over entire area tributary to pond (onsite & offsite) in accordance with the CFSCM	Onsite and offsite tributary areas have been identified for both storage ponds and total volume required for the 24-hour, 100-year storm revised accordingly
Stormwater detention and infiltration ponds shall meet the requirements of CRS 37-92-602(8) for time to infiltrate or release the 5- and 100-year volume	Estimated infiltration rate and calculations have been provided that suggest compliance with the statutory requirement
Demonstrate subsurface infiltration capacity of soil underlying proposed infiltration ponds with percolation testing at the design pond bottom elevation	<i>Not provided</i>

While the estimated infiltration rate provided in the drainage narrative of 0.8 inches per hour is not unreasonable for the sandy clayey soils identified from NRCS soil maps, the general region around Brush is known by the engineer from prior projects to have areas of stratified clay lenses that can adversely impact the performance of infiltration ponds. This issue can often be resolved by over excavation of the pond bottom and replacement with suitable excavated materials but should be identified and anticipated as part of the design. Accordingly, I would recommend that the applicant perform a subsurface investigation with percolation testing at the design pond bottom elevation to verify that the ponds will drain in accordance with state criteria. Geotechnical borings should be advanced to a minimum of 20 feet below ground surface elevation at each location. This soils analysis should be completed by a geotechnical engineer licensed in the State of Colorado.

Please feel free to contact me with any questions or concerns, or if I may provide further assistance in this matter.

Sincerely,



Matthew C. Harris, PE
CO PE #49409



10/10/24