



Permanent Extended Detention Basin Certification Letter

October 30, 2024

Project: Electronic Storage

Site Location: 7717 Electronic Drive, Colorado Springs, CO

Sand Filter Location: Southeast corner of site

Discussion: The permanent full spectrum detention structure for Electronic Storage is an extended detention basin. The required storage volume was calculated to be 0.202 ac-ft. Based upon as-built surveys by Edward-James Surveying and site inspections, the extended detention basin provides the volume required.

The following notable discrepancies were identified when the surveyed/as-built pond was compared to the approved plans:

- Steps were not installed in the outlet structure.
- The trash rack installed is different than that called out on the plans.
- Additional riprap was installed on the southeast side of the pond.
- The top of the outlet structure was constructed 6" high.
 - Per the design spreadsheet the storage volume and flow rates are still acceptable in this condition.
- The inlet orifice plate bottom orifice was constructed 3" high.
 - Per the design spreadsheet the 99% drain times all look fine in this condition. The 5 year, 97% drain time has been flagged as being too slow.

More detailed information about these discrepancies, and additional minor discrepancies, has been documented on the Extended Detention Basin As-Built.

Based on periodic site visits to the project during significant/key phases of the installation and the survey, Terra Nova Engineering is of the opinion that the extended detention basin has been constructed in general compliance with the approved Grading, Erosion, & Sediment Control Plan; Construction Plans; and Specifications as filed with this project.

Statement of Engineer in Responsible Charge: I, Dane Frank, a registered Professional Engineer in the State of Colorado, in accordance with Sections 5.2 and 5.3 of the Bylaws and Rules of the State Board of Registration for Professional Engineers and Professional Land Surveyors, do hereby certify that I or a person under my responsible charge periodically observed the construction of the above mentioned project. Based on the on-site field observations and review of pertinent documentation, it is my professional opinion that the required stormwater treatment facilities have been installed and are in general compliance with the approved Grading, Erosion, & Sediment Control Plan; Construction Plans; and Specifications as filed with El Paso County; provide the required storage volume; and will meet the required release rates with the possible exception of the 97% drain time discrepancy noted above. For structures with a Water Quality Capture Volume (WQCV), I have attached the post-construction As-Built drawings. The As-Built drawings accurately depict the final installation of the stormwater facilities and verify the WQCV.

PREPARED BY:
TERRA NOVA ENGINEERING, INC.

Dane Frank

Dane Frank, P.E.
Colorado #50207
Project Engineer



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Attachments

- Extended Detention Basin As-Built, 2024/10/30
- Original UD-Detention Spreadsheet
- As-Built UD-Detention Spreadsheet

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.03 (May 2020)

