December 1, 2023

ENTECH ENGINEERING, INC. 505 ELKTON DRIVE COLORADO SPRINGS, CO 80907 PHONE (719) 531-5599

Classic SRJ 2138 Flying Horse Club Drive Colorado Springs, Colorado 80921

Attn: Loren Moreland

Re: Response to Colorado Geological Survey Review

Sterling Ranch Filing No. 5

Parcel 16

El Paso County, Colorado

Ref: Entech Engineering, Inc., dated November 22, 2022. Soil, Geology, and Geologic Hazard

Study, Sterling Ranch Filing No. 5, Parcel 16, El Paso County, Colorado. Entech Job No.

222159

Dear Mr. Moreland:

This letter is written in response to the Colorado Geological Survey (CGS) review comments dated September 27, 2023, review letter concerning the proposed six detention ponds at the above referenced site. The comments are addressed below, and the revised report is included with this response letter.

CGS COMMENTS AND ENTECH ENGINEERING, INC. RESPONSES

<u>CGS Comment</u>: "CGS recommends the Entech provide groundwater levels measured from "previous investigations" along with the dates/time of year they were measured."

Entech Response: The reference made to previous borings on the site was an error. The borings from the previous investigation were not located on the site, and the nearest boring from the previous investigation B-2 was located approximately 400-500 feet southwest of the site on the southern side of Sterling Ranch Road. Groundwater was encountered at a depth of 11 feet in B-2 in the summer of 2006. The onsite borings were included in the report. Two of the test borings were dry and two had water at 16 and 18.5 feet. Shallow water is not expected to be an issue on this site.

CGS Comment: "Groundwater was encountered at depths of 16 and 18.5 feet in Entech's borings during drilling operations in the fall of 2022. If basements are being considered and based on our experience in the Sterling Ranch development, CGS recommends the County require groundwater monitoring/observation to obtain groundwater data to verify that proposed floor elevations are at least 3 feet (preferably 5 feet) above maximum anticipated groundwater levels and maintained year-round. This monitoring/observation program should be conducted to determine the feasibility of basements and if an underdrain system is required due to shallow groundwater conditions. To be effective, however, this monitoring should include measurements/observations through fall, winter, and spring and not merely during site specific building investigations."

"Subsurface perimeter drains may be necessary to prevent the intrusion of water into areas below grade. Additionally, where shallow groundwater is encountered, underslab drains or interceptor drains may be necessary," and "Where basements are considered, interceptor and underslab drains may be necessary." Mitigation measures recommended by Entech should be included in the preliminary plan."

Classic SRJ
Response to Colorado Geological Survey Review
Soils and Geology Study
Sterling Ranch Filing No. 5
Parcel 16
Colorado Springs, Colorado



"Individual foundation perimeter drains are needed around any below-grade (basement) space, if determined to be feasible, and may discharge to an underdrain system if constructed. Individual foundation perimeter drains are intended to handle small amounts of intermittent, perched water and may NOT be used as sole mitigation of persistent shallow groundwater conditions."

Entech Response: As mentioned above shallow groundwater is not expected to be an issue given the data from the test borings drill on the site. Additional site investigation will be conducted as development plans are being prepared, and following completion of site grading. Drainage improvements along roads and utility underdrains will intercept potential shallow groundwater. In our opinion, the site can be developed based on the preliminary plan. Adjustments to grades and/or type of construction (basement/crawlspace) should be evaluated as plans are developed. Basement feasibility should be evaluated on a block by block basis pending the results of additional site investigation and approved grading plans.

We trust this has provided you with the information you required. In summary, based on the analysis of this site, the proposed development meets stability requirements. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Logan L. Langford, P.G.

Sr. Geologist

Reviewed by:

Joseph C. Goode, Jr., P.E. President

LLL Encl.

F:\AA Projects\2023\230677-PT Overlook-Elbert Road Dooley Property-300-SGS\reports\230677 EPC Response.docx