CGS Unique No. EP-25-0036 Cimarron Hills Southeast Mixed Use Filing No. 1 Plat
El Paso No. SF2420
Location: SW¼ Section 8, T14S, R65W, 6th Meridian
38.8422, -104.6993
Description: Final Plat to subdivide 32.68 acres into 1 lot and 4 tracts.

The available referral documents include the Letter of Intent (Matrix Design Group, May 2026), Final Plat (Matrix Design Group, May 8, 2026), Report of Geotechnical Exploration (ValleyShore Engineering, LLC, October 8, 2025), Construction Drawings (Matrix Design Group, May 2026), and other documents. CGS previously reviewed the Geologic Hazard Evaluation and Preliminary Geotechnical Investigation (CTL Thompson, Inc., Revised September 11, 2025). Per the letter of intent, the applicant proposes to subdivide the property into one 14.09-acre lot (Lot 1) for a residential apartment complex and three tracts (Tracts A-C).

CGS offers the following comments and recommendations.

1. The western portion of the site encompassing Tracts A and B is located within the FEMA floodplain (FIRM 08041C0754G, December 7, 2018) associated with Sand Creek East Fork and contains portions of Tracts A-C. CTL states (page 13), "The project Civil Engineer should determine the extent of the flood mapping for the site, the flood potential, and design surface drainage." The Letter of Intent states, "Tract A (6.48 ac) and Tract B (7.68 ac) are within the FEMA floodplain (Zone AE on FEMA map panel) and will stay undeveloped at this time but may be developed in the future after a LOMR is processed for floodplain modification." **Future development within Tracts A and B, once the LOMR is processed, will require additional review.**

2. CTL states (page 7), "groundwater was encountered in thirteen of the sixteen borings. Depth to groundwater ranged from 13.5 to 31 feet below the existing ground surface in twelve borings, and depth to groundwater was 8 feet below the existing ground surface in boring TH-14. CTL continues, "Groundwater was measured at 6 feet below the existing ground surface in TH-12, and 6.6 feet in TH-14." ValleyShore did not encounter groundwater in their test holes; however, they did not leave the test holes open to re-measure following drilling operations. CTL states (page 7), "A seasonal fluctuation of 3 to 5 feet is typical for this area. Our borings were drilled in the middle of June when groundwater levels are typically rising from seasonal lows. High groundwater conditions generally occur in late September to early October."

   If basements or crawl spaces are planned, CGS recommends that the county require groundwater monitoring/observation to obtain groundwater data for the entire site, which can be used to determine the feasibility of basements and verify that proposed foundation components are at least three feet above the maximum anticipated groundwater levels and are maintained year-round. To be effective, however, this monitoring should include observations through summer, fall, winter, and spring and not merely during site-specific building investigations.

3. The exploration program performed by CTL indicates low blow counts (N-values), as low as 1 in test boring no. 2. Additionally, ValleyShore's exploration program also showed variable blow counts (as low as 3 blows per foot). These collapse-prone soils are listed in CTL's report, and ValleyShore states (page 7), "lower consistency and density materials were encountered in twenty-four out of the thirty-eight borings at various depths. These materials are defined as firm or worse fine-grained materials or loose or worse coarse-grained materials. Some remediation of the lower consistency and density materials should be anticipated where these materials are not removed during grading." Note 22 of the Final Plat states: "Prior to construction of proposed development, lot or tract specific subsurface soil investigations will be performed to determine whether or not shallow groundwater, hydro-compacted soils, or expansive soils are present on the lot or tract, and to determine an appropriate foundation design, basement or crawl space suitability, and or lot specific recommendation are

necessary to mitigate these conditions: - engineered foundations, no basements." CGS agrees and recommends that building-specific subsurface soil investigations be performed to determine the depth of remediation due to collapsible/hydro-compacted soils.

4. A detention basin is proposed within Tract C that has not been evaluated. **Geotechnical borings and specific recommendations should be provided by the project geotechnical engineer prior to approval of the final plat to address pond and embankment construction, groundwater concerns, liner recommendations, etc**.

Submitted 5/28/2026 by Amy Crandall, Colorado Geological Survey: acrandall@mines.edu