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CONSULTANTS
• GEOTECHNICAL
• MATERIALS
• ENVIRONMENTAL

January 31, 2018

KTM Design Solutions, Inc.
528 Kansas City Street
Rapid City, SD 57701

Attn: Mr. Kyle Treloar

RE: Preliminary Geotechnical Observations
Robbinsdale Terrace
Undeveloped Parcel 3712279026

Dear Kyle,

Based on your request, I have reviewed the undeveloped parcel (#3712279026) between E Indiana Street and Oakland Street. Review of the available geologic maps, put that parcel near the contact of the Mowry Shale and the Skull Creek Shale. Between these two formations the Newcastle Sandstone can be found in varying areas of Rapid City. Some of the outcrops of the Newcastle Sandstone are too thin to accurately map on the scale of the geologic quadrangle.

During my site visit to the parcel sandstone outcrops and cobbles/boulders were observed on the surface which could be remnant parts of the Newcastle Sandstone or colluvial deposits from a former sandstone cap rock at the top of the hill. Possible surface slumps typically associated with the local shale formations were also observed on the parcel. The topography suggests that the west portion of the site primarily consists of shale. This was also where the indications of old surface slumps were noted. The eastern portion of the site was where the majority of the sandstone rocks and possible outcrops were noted and the natural topography had a much more gradual gradient/slope. Without doing some borings within this parcel it is difficult to say what the subsurface soils actually consist of and the thickness of these layers.

However, based on my site observation and review of the geologic maps, it is my opinion the potential issues with slope stability would be less severe on the eastern portion of the site. Development of the western portion of the site (west of the easement/access road through the property) would be difficult in regard to slope stability, but could be possible with proper grading.

I would not recommend large amounts of fill to be placed on the downslope side(s) of the parcel. Instead the design of the proposed structures should incorporate walk-out basements as to limit the amount of fill and steep grading necessary.

Preliminary Geotechnical Observations
Robbinsdale Terrace, Undeveloped Parcel 3712279026
Rapid City, South Dakota
January 31, 2018

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If you have any questions or need any additional information, please contact our office at (605) 388-0029.

Thank You,
American Engineering Testing, Inc.


Kristen R. Yates, P.E.
Rapid City Manager


Robert Temme, P.E.
Vice President – Western Region