Great Basin Earth Science, Inc.

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PROJECT MEMORANDUM

Date: January 27, 2016 GBES Project No: 06-01

From: Elliott W. Lips, P.G.

To: Dana Shuler, P.E., CFM
Weber County Engineering Division
2280 Washington Blvd., Suite 240
Ogden, Utah 84401

Subject: Field Review
Lot 23 Big Sky Estates Phase I
2292 North Panorama Circle
Liberty, Utah

On January 18, 2016, Great Basin Earth Science (GBES) and Taylor Geotechnical (TG) conducted a field review of the trench and test pits excavated by Western GeoLogic and GSH on the subject property.

Present during the field review were:

Elliott Lips, GBES, Weber County Geologic Consultant;
Alan Taylor, TG, Weber County Geotechnical Consultant;
Carl Lundin, Applicant;
Bill Black, Western GeoLogic, Applicant's Geologic Consultant; and
Robert Gifford, GSH Geotechnical, Applicant's Consultant.

Discussion

1. One trench and three test pits were excavated in general agreement with the Work Plan prepared by Western GeoLogic on December 9, 2015. Mr. Black had prepared logs of the trench and two of the test pits; one test pit was excavated in a manner that Mr. Black determined was unsuitable for logging. The location of the proposed boring was not yet determined by GSH.

2. Mr. Black explained that he had documented the presence of a landslide in the trench and test pits and that he was recommending that the house location be re-evaluated. Based on the final location of the house and other site improvements, additional test pits and/or trenches may be necessary.

3. Weather conditions were not favorable for conducting the field review. Wet snow was falling at the time of the review, and in order to preserve the trench logs, they were examined in a vehicle prior to the review, but were not taken into the trenches or test pits to verify that site geologic conditions were recorded accurately on the logs. In addition, the wet conditions prevented the reviewers from taking notes and photographing the exposed geologic materials.

4. Recent snow accumulation covered significant portions of the trench wall. In some locations nearly the entire trench wall was covered, and overall approximately half of the trench was covered. This prevented the reviewers from observing the geologic materials exposed in the trench.

5. Early in the review (after about one-half hour of attempting to make observations in the upper portions of the trench), Mr. Taylor explained to Mr. Lundin that he and Mr. Lips were unable to complete the review and that it would be advantageous to return when the trench walls were free of snow and necessary if the field review ended with inconclusive findings due to lack of observable trench walls.

6. There was a discussion about the possibility that the house location would change and that additional test pits and/or trenches would be necessary. Based on this, and the inability to see the materials exposed in the trench walls, Mr. Lips and Mr. Taylor suggested that they return when the trench was observable and when additional test pits and/or trenches (if necessary) were ready for field review.

7. At the request of Mr. Lundin, Mr. Taylor and Mr. Lips continued with the field review and made observations, where possible, in the trench and test pits.

8. There was a discussion of backfilling all, or portions, of the trench and the test pits in order to demobilize the excavator. Mr. Taylor explained to Mr. Lundin that the risk involved is that the trench may have to be re-excavated.

9. At the conclusion of the field review, it was agreed that the consultants (Western GeoLogic and GSH) would review the preliminary information obtained from the existing subsurface exploration. GeoLogic would provide recommendations on the house siting based on the documented presence of the landslide. The consultants and the applicant would determine the proposed location of the house, driveway, drain field, and other site improvements, and the proposed locations of any additional subsurface investigations intended to evaluate the stability of the site.

10. It was agreed that Western GeoLogic would prepare a map showing the locations of the existing trench and test pits, the preliminary boundary of the landslide, the site improvements, and the location of any proposed additional test pits, trenches, and/or boring. This map, along with the logs of the existing trench and test pits and a very brief summary of any proposed subsurface exploration would be submitted to Weber County. Mr. Lips and Mr. Taylor would review this submittal, and if necessary, conduct a scoping meeting via conference call; it would likely not be necessary to conduct the second “scoping meeting” at Weber County offices.

11. It was agreed that Mr. Lips and Mr. Taylor would conduct a second field review when the trench wall was observable and other test pits and/or trenches (if necessary) were ready for review.

Closure

Comments presented herein are provided to assist Weber County in reducing risks from geologic hazards and to protect public health, safety, and welfare. All services performed by GBES for this project were provided for the exclusive use and benefit of Weber County; no other person or entity may, or is entitled to use or rely upon any of the information presented herein. This memorandum was reviewed and accepted by Taylor Geotechnical.

If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Great Basin Earth Science, Inc.

Elliott W. Lips, P.G.
Principal Engineering Geologist

Taylor Geotechnical

Alanson O. Taylor, P.E.
Principal