

March 13, 2013

Project 4411

Larry Larson  
Pacific Investment Company  
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Subject: **PROJECT REVIEW**  
16990 - 17000 Sunset Boulevard  
Pacific Palisades, California

References:

- 1) Geology and Soils Report Correction Letters by the City of Los Angeles, Department of Building and Safety, dated March 11, 2010 and July 21, 2010.
- 2) Geology and Soils Report Approval Letter by the City of Los Angeles, Department of Building and Safety, dated October 25, 2011.
- 3) Preliminary Geotechnical Engineering and Engineering Geologic Investigation for 16990-17020 Sunset Boulevard by Sassan Geosciences, Inc. dated November 11, 2009 and Responses dated April 16, 2010 and July 15, 2011.
- 4) Ground-Water Flow Rate Report by E. D. Michael dated January 2, 2013.
- 5) Response to Comments Report City of Los Angeles ENV-2012-131-MND prepared by Blodgett/Baylosis Associates, dated December 20, 2012.

Dear Mr. Larry Larson:

Pursuant to your request, presented herein is a summary of our project review for 17000 Sunset Boulevard in the Pacific Palisades area of the City of Los Angeles. It is our understanding that the subject site (17000 Sunset Boulevard), addressed in the referenced geotechnical reports, is inclusive of the properties 16990, 17000, 17010 and 17020 Sunset Boulevard. However, the current scope of the development has been reduced to 16990 and 17000 Sunset Boulevard. The scope of our review included a review of available geology and geotechnical reports provided by Pacific Investment Company. Additional documentation at the City of Los Angeles, Department of Building and Safety (LADBS) was also reviewed and included review letters and geology/geotechnical reports by other consultants.

Sassan Geosciences, Inc. (consultant) performed an investigation on the subject site dated November 16, 2009 to address an (89) unit apartment complex on 16990-17020 Sunset Boulevard. The exploration consisted of (10) borings and (5) trenches excavated on the site to a maximum depth of about (65) feet. Subsurface materials encountered by the consultant during the exploration included fill, soils, terrace deposits, and bedrock. The report was reviewed by LADBS and was not approved in their letter dated March 10, 2010. The consultant produced a response dated April 16, 2010 which included additional clarification on possible landslide planes and analyses as requested by LADBS. LADBS deemed that several responses were not adequate and did not approve the report in their letter dated July 21, 2010. In a second response dated July 15, 2011, the consultant stated that the scope of the development had been reduced to only the vacant lots 16990 and 17000 Sunset Boulevard. The reduced development consists of a 5-story apartment complex with a two-story basement garage. The consultant provided revised analyses and recommendations to address the revised development which were satisfactory to LADBS. The report was approved by LADBS in their letter dated October 25, 2011.

Based on our review of the available geotechnical reports, Ground-Water Flow Report and LADBS review letters for the subject site, the following comments are provided for your consideration. It should be noted that, due to the limited documents available, and the archiving methods utilized by the City of Los Angeles, not all of the geotechnical reports and/or review letters may have been available for review and/or were reviewed.

1. The consultant makes reference to reports by previous consultants that have performed investigations in areas that were previously included in the proposed development, which included Fisher Geotechnical, Leighton & Associates, Gorian & Associates, Moran/Proctor and Dames & Moore. It appears that the site (16990 Sunset Boulevard) was also investigated by Converse Consultants (CC), dated August 1, 1986 and Dale Glenn & Associates (DGA) and Ralph Stone and Company, Inc. (RSC) both dated October 9, 1989. These findings and data from these reports should be addressed in the current reports to provide assessment of the site conditions and suitability for development.
2. The subsurface exploration by Converse Consultants and previous consultants referenced therein should be included on the consultant's geologic map and cross-sections.
3. Boring BH-11 by CC near the toe of the south-facing slope encountered a (6) inch layer of clay gouge. LADBS had previously reviewed the CC, DGA & RSC reports and interpreted the clay gouge to be a possible slide plane. The consultant must discuss whether or not the clay gouge is a possible slide plane, which may affect the proposed development located at the top of the slope.
4. RSC performed a back-calculation of a landslide plane in their investigation of the subject site. The consultant should discuss whether they concur with the resulting shear strength values and revise their analyses accordingly.
5. In regard to the slope stability analyses (report by Sassan Geoscience, Inc. dated: July 15, 2011), the equivalent horizontal acceleration ( $K_h = 0.15$ ) used in the analyses does not meet the recommended procedure in the Guidelines for Evaluating and Mitigating Seismic Hazards in California, SP 117A (2008).

6. The cohesion intercept used in the slope stability analyses for the Bedrock3 is high for such bedrock as described in the explorations (report by Sassan Geoscience, Inc. dated: July 15, 2011). If lower values are used in the analyses, it may result in a deeper critical failure surface and increase the lateral force on the proposed piles and the lateral load application point.
7. The undocumented fill shear strength ( $C = 380$  pounds per square foot, and  $\Phi = 34$  degrees) used to calculate the lateral equivalent fluid pressure may be inappropriate as caving within the fill was noted that would indicate lower strengths. Therefore, the wall design may not be adequate for the proposed structure.
8. The recommended pseudo-static lateral earth pressure is low for the documented retained material.
9. Groundwater affects were not fully discussed. The affects include, but not limited to, lateral hydrostatic pressure, the use of effective unit weight in the passive pressure analysis, the use of effective unit weight in the bearing capacity analysis for conventional foundations and pile capacity. Reference is made to retaining a hydrogeologist to provide dewatering recommendations for the site. A report by a hydrogeologist was not available. Until it is demonstrated that the site can be permanently dewatered the stability of the site and the design pressures for the retaining structures may not be adequate.
10. The Ground-Water Rate Report concludes that the primary source of water is from within the fill materials. Additionally it is concluded that the water can be collected near the northern of property. The evaluation does not consider the proposed infiltration of  $\frac{3}{4}$  inch of rainfall during a 24 hour period, therefore, the concluded quantities may not be accurate (see 2.6 & 2.7 below). In addition, disposal of this collected water has not been addressed.
11. The proposed piles are proposed to be incorporated into the proposed structure. What is maximum shear and bending values of the proposed piles? The deflection of the proposed piles will adversely affect the structure.

The following comments are provided per Responses within Reference No. 5 above.

Response 2.1:

The limits of the 'trash' fill has not been adequately defined to ensure that it will be removed during the proposed construction. In addition, the 'organic' and 'petroliferous' odors reported have not been adequately investigated to provide proper mitigation. The assumption that the vapors are from bituminous shale section could indicate a significant amount of natural occurring vapor could be encountered. No mitigation of these vapors has been proposed.

Response 2.6:

The response indicates that the current plan is to dewater the filled channel. The response also indicates that it is proposed to infiltrate  $\frac{3}{4}$  inch of rainfall during a 24 hour period. How can the site be dewatered at the same time that it is have water infiltrated into the ground?

Response 2.7:

The proposed slopes are proposed to be planted and irrigated. Typically irrigation will greatly exceed the amount of natural rainfall. Thus, additional rainfall infiltration will occur that can affect the stability of the site.

Response 2.8:

It is stated that the risk of landsliding will be reduced by dewatering, yet infiltration of stormwater runoff is proposed. See 2.6 above.

Response 2.10:

A study has been completed that presents plans to completely dewater this channel. This report should be provided for review and has this been approved by the City and how does it incorporate infiltrated water (see Response 2.6).

Response 2.13:

Infiltration proposed in Response 2.6 will increase the groundwater which could increase the potential for landslide movement.

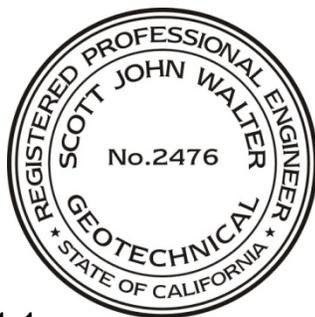
Response 11.2:

A nearly completed study of the ground-water occurrence in the filled channel will recommend dewatering. Response 2.10 says a study has been completed. Is a study completed or not?

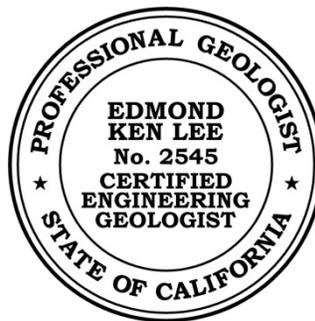
The preceding items need to be addressed to determine the stability of the site and the feasibility of site being developed safely. Additional items may arise as additional information becomes available.

Should you have any questions regarding this review, please do not hesitate to contact the undersigned at your convenience.

Respectfully submitted,  
GeoConcepts, Inc.



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