

12/6/2015

To

Hon. Jose Huizar, Chair PLUM
Hon. Marqueece Harris Dawson, Vice Chair PLUM
Hon. Mitch Englander
Hon. Gil Cedillo
Hon. Felipe Fuentes
% Sharon Dickinson, Legislative Assistant
Planning and Land Use Management Committee
City of Los Angeles
200 N Spring Street, Rm 395
LA, CA 90012

Re:

VTT-73148-SL
ENV-2014-3809-MND
Geotech & Soils Review - 1936 Preston Ave, LA 90026

This letter will serve to highlight the concerns raised by our geotechnical experts in their review of the geotechnical study (herein referred to as the Subject Report) which was performed on behalf of the developer (4Site) by Robles Engineering (REI) in October 2014. The subsequent review of the Subject Report was completed by Wilson Geosciences, Inc. (Kenneth Wilson Principal Geologist P.G. #3175, C.E.G. #928 (626) 791-1589) and Geo-Dynamics, Inc. (Ali Abdel-Haq Principal Engineer P.E. 46989, G.E. 2308 (805) 496-1222) for the Preston Avenue Neighbors Association in July 2015.

OVERVIEW:

The subject property slopes about 15 degrees and approximately 16 feet downward from Preston Avenue, and is in a classified "Hillside Area". Ground elevations range from 523 to 563 feet, with an elevation difference of approximately 40 feet over the depth of the lot. Surrounding lots are developed with residential units. The proposed development is for 5 immediately adjacent, three-story townhomes with a building mass of approximately 360 tons. Temporary cut slopes would be necessary throughout the property for the construction of foundations and retaining walls, with wall heights up to 12 feet.

The Subject Report provided a Geologic Map and cross-sections that incorporate data from the field investigations, which included 3 hand-dug test pits excavated to depths between 5 and 6.5 feet. An engineering geologist logged these test pits and samples were collected for laboratory testing. Their cross-sections show up to 10-feet of combined residual soil and artificial fill over most of the site and overlying Puente Formation bedrock. The residual soil and artificial fill would be removed based on the grading plan so that in those areas only Puente Formation bedrock would remain. Engineered compacted fill would be placed on the lots where necessary to create the desired surface grades. The Puente bedrock is described as sandstone, massively bedded and dipping to the southwest at 18- to 20 degrees. They indicate that the sandstone is thick bedded, slightly fractured with thin siltstone beds, and that the bedding plane orientations "are considered to be favorable from the standpoint of gross stability of the development". The Robles report indicates that bedrock stability analyses recommended by the City of Los Angeles were performed.

The Subject Report was reviewed by LADBS, then followed by a Correction Letter, an addendum report and an Approval Letter. Our experts reviewed the Subject Report with regard to the proposed grading, engineering geology and geotechnical conditions at the project site, as well Cadastral maps from ZIMAS and all documents mentioned above.

SUMMARY OF REVIEW:

Our experts have stated that there is insufficient testing and analysis in the Subject Report in the following areas:

-This area was previously mapped by Lamar (1970) and Dibblee (1991) as Puente Formation bedrock. Robles' initial report indicates the project site is shown on the 1991 Dibblee Los Angeles Quadrangle, when in fact it is on the neighboring Hollywood-Burbank Quadrangle to the west, suggesting something about the adequacy of the existing data review.

-There is no indication that the studies referenced any historic aerial photographs to interpret and determine any pre-development geologic conditions at the site, i.e: evidence of landslides or oil drilling.

-Robles claim of "exploratory excavations" is misleading since bedding orientations were measured only in the first test pit, 6 feet deep and at the far eastern side of the lot, 80-100 feet away from the steeper slope area that could be exposed to daylighted bedding conditions. Significant changes are often found within these distances. Even with this distant and inadequate "data", there is adverse bedding which dips by 5 degrees, in the same direction as the surface slope. This is not considered favorable. Even a 5-10 degree change in dip or a 30-40 degree change in strike would cause an even more unfavorable situation. While the test values show high strength bedrock, they did not sample or test possible weak layers that could have much lower shear strength values. The other 2 test pits were extended with a small hand-auger such that no geologic observations were possible.

-No groundwater or seepage was noted in borings or test pits excavated at the site. In addition to potential onsite infiltration, structures above the project site appear to be in areas where rainfall, irrigation, and run off could infiltrate and flow along fractures and bedding planes in the bedrock. This condition should be fully considered in slope stability analyses.

-Fractures were noted in these test pits, but no specific orientations were given for these fractures. Even if the joints and fractures are not dipping "out-of-slope", they can affect slope stability and could possibly cause a larger slope failure within the property, since they are planes of weakness. In order to properly assess potential impacts, specific orientations should be identified.

-Cross section A-A' depicts potential daylighted bedding planes. Notwithstanding the removal and recompaction recommended by the consultant, there appears to be a potential for sliding along bedding planes and exiting below the retaining wall at the toe of the slope. The potential for instability should be evaluated to verify compliance with the prerequisite factors of safety, particularly under seismic loading conditions. Analyses should be performed using substantiated parameters. Mitigation measures should be recommended as necessary.

-The weight of these buildings could cause slope instability to properties below the subject property. Considering their general "onsite" conclusions, there was no evaluation made of "offsite" areas down slope to the south and southwest that could be affected by the potential "daylighted bedding condition". There was no discussion of joints and steeply dipping fracture patterns, and no discussion of the characteristics of the thinly bedded siltstone, which might also present areas of weaker strength affecting the slope stability calculations. It would seem prudent, due to the presence of thinly bedded siltstone, the potential out-of-slope daylighted bedding condition and the massive weight of the five townhomes that would surcharge the bedrock mass beneath the site and the lots bordering Echo Park Avenue, to perform a translational slope stability analysis. This would determine critical bedding planes that could affect the feasibility of the current project design. They specifically state that "gross" (bedrock) stability analysis is not warranted.

-The Subject Report provides recommendations for seismic earth pressure on retaining walls. The consultant indicates that the recommended pressure is based on the FEMA 369 commentary. However, based on a review of the seismic pressure calculations included with their report, the Subject Report recommends a pressure value that is HALF of what would be calculated by FEMA or Los Angeles County Code.

-Our review indicates there is substantial geologic evidence for potential slope stability issues within and adjacent to the proposed development site that HAVE NOT been considered. In our professional opinion,

these issues should be considered and addressed prior to approval of the project as it is currently defined. In particular, the long-term bedrock slope stability is questionable due to the geologic bedding orientation, slope angles to the south, assumed material strengths, potential presence of undocumented joints and fractures, up slope groundwater seepage, and the mass of the proposed five residential structures. LADBS requires a formal slope stability analysis for Hillside Area lots: "where adverse geologic conditions are encountered, the soils report shall provide slope stability analysis in accordance with P/BC 2014-049 and P/BC 2011-050 where applicable". P/BC 2014-049 is a published LADBS standards evaluation for slope stability, and it requires specific studies for all slopes that expose unfavorable geologic structure such as unsupported bedding. In addition, LADBS P/BC 2014-049 recommends "Shear strength parameters used in stability evaluations may be based upon peak test values where appropriate. Parameters not exceeding residual test values shall be used for previous landslides, along shale bedding planes, highly distorted bedrock, over-consolidated fissured clays and for organic topsoil zone under fill". Further testing should be completed at the site to fulfill LADBS standards, determine slope stability and guarantee public safety.

The current report does not provide laboratory residual strength test data for the thinly bedded siltstone, clearly identified by Robles beneath Lot 10 and potentially projecting beneath Lots 11, 21, and 22, as required by P/B 2014-049 for determining material properties. Such properties are required for the translational slope stability analysis and must be determined from tests "made on an appropriate number of samples removed from test pits that represent the material in a particular slope". Alternatively, if no test data are available, "An arbitrary residual angle of shearing resistance of six degrees and cohesion of 75 pounds per square foot may be used to represent the strength on shale bedding and in landslide debris in lieu of parameters determined by laboratory testing." Any bedding plane failure that may occur could have a very significant detrimental effect on the environment down slope from the subject property and may result in significant damage to adjacent existing structures down slope along Echo Park Avenue.

Addressing the above issues may result in a need for additional design measures to demonstrate feasibility of the current design and to mitigate the potential for adverse impacts on the proposed development.

IN CONCLUSION:

The Subject Report provides an inadequate Geotechnical study and compromises the safety of neighboring structures and the neighborhood in general.

The Subject Report and our expert Review are in conflict and require a resolution in order to assure public safety for the immediate neighborhood.

Two professional Geologists have demonstrated differing opinions on this matter. A letter from these experts has been submitted, demonstrating their disagreements on the issue of slope stability and the lack of the required study data to ensure the safety of the Project as proposed.

We have repeatedly cited their analysis in our numerous letters and comments. Thus far, our Review has been ignored and none of these discrepancies have been addressed. Under CEQA, and according to the recent ruling Berkeley Hillside Preservation v. City of Berkeley, A131254 (First Appellate District, February 15, 2012) an Environmental Impact Report is necessary. The court found that the existence of differing expert opinions was ALONE sufficient to meet the fair argument exception and trigger an EIR. Approval for this project should be withheld until further testing is done to satisfy these conflicting views; an EIR should be required to resolve the potentially dangerous issues brought forth by the Review. The complete Review was included in our appeal in August, 2015 and

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