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CALIFORNIA



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GEOLOGY AND SOILS REPORT APPROVAL LETTER

March 21, 2017

LOG # 96066-01
SOILS/GEOLOGY FILE - 2
LAN

20401 Ventura LLC
6862 Hayvenhurst Avenue
Van Nuys, CA 91406

TRACT: 26267
LOT(S): 1
LOCATION: 20401 W. Ventura Blvd.

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE(S) OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Geology/Soils Report	15-485-22	02/13/2017	Applied Earth Sciences

<u>PREVIOUS REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE(S) OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Review Letter	96066	01/09/2017	LADBS
Geology/Soils Report	15-485-22	12/01/2015	Applied Earth Sciences

The Grading Division of the Department of Building and Safety has reviewed the referenced reports dated February 13, 2017, and December 1, 2015, that provides recommendations for the proposed 8 level hotel with 3 level subterranean parking garage (approximately 40 feet bgs), retaining walls.

The earth materials at the subsurface exploration locations consist of up to 5 feet of uncertified fill underlain by up to 8 feet of colluvium underlain by Modelo Formation sandstone, shale, and siltstone bedrock. South walls or north facing excavations will expose north dipping bedding 4 to 12 degrees, and will require temporary shoring systems.

The consultants recommend to support the proposed structure on conventional foundations bearing on competent bedrock.

The site is located in a designated seismically induced landslide hazard zone as shown on the Seismic Hazard Zones map issued by the State of California. The above report includes an acceptable seismic slope stability analysis and the requirements of the 2014 City of Los Angeles Building Code have been satisfied.

The referenced reports dated February 13, 2017, and December 1, 2015, are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2014 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)


1. Conformance with the Zoning Code Section 12.21 C8, which limits the heights and number of retaining walls, will be determined during structural plan check.
 2. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans that clearly indicates the geologist and soils engineer have reviewed the plans prepared by the design engineer and that the plans include the recommendations contained in their reports. (7006.1)
 3. All recommendations of the report(s) that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
 4. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans. Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit. (7006.1)
 5. A grading permit shall be obtained for all structural fill and retaining wall backfill. (106.1.2)
 6. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density (D1556). Placement of gravel in lieu of compacted fill is allowed only if complying with Section 91.7011.3 of the Code. (7011.3)
 7. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill. (1809.2, 7011.3)
 8. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction. (7013.12)
 9. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cu yd. (7007.1)
- 6262 Van Nuys Blvd. Ste 351, Van Nuys (818) 374-4605
10. All loose foundation excavation material shall be removed prior to commencement of framing. Slopes disturbed by construction activities shall be restored. (7005.3)
 11. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the State Construction Safety Orders enforced by the State Division of Industrial Safety. (3301.1)

12. Excavations shall not remove lateral support from a public way, adjacent property or an existing structure. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)
13. The soils engineer shall review and approve the shoring plans prior to issuance of the permit. (3307.3.2)
14. Prior to the issuance of the permits, the soils engineer and the structural designer shall evaluate all applicable surcharge loads for the design of the retaining walls and shoring.
15. Unsurcharged temporary excavations over 10 feet exposing bedrock shall be trimmed back at a gradient not exceeding $\frac{3}{4}(H):1(V)$, as recommended.
16. Unsurcharged temporary excavations up to 5 feet exposing soil shall be trimmed back at a gradient not exceeding $\frac{1}{2}(H):1(V)$, from 5 to 10 feet shall be trimmed back at $\frac{3}{4}(H):1(V)$, over 10 feet shall be trimmed to $1(H):1(V)$, as recommended.
17. Shoring shall be designed for a minimum EFP as recommended on page 9 of the referenced report dated December 1, 2015; all surcharge loads shall be included into the design, as recommended.
18. Shoring shall be designed for a maximum lateral deflection of 1 inch, provided there are no structures within a 1:1 plane projected up from the base of the excavation. Where a structure is within a 1:1 plane projected up from the base of the excavation, shoring shall be designed for a maximum lateral deflection of $\frac{1}{2}$ inch, or to a lower deflection determined by the consultant that does not present any potential hazard to the adjacent structure.
19. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.
20. All foundations shall derive entire support from competent bedrock, as recommended and approved by the geologist and soils engineer by inspection.
21. Slabs placed on approved compacted fill shall be at least 5 inches thick and shall be reinforced with $\frac{1}{2}$ -inch diameter (#4) reinforcing bars spaced maximum of 18 inches on center each way. Vapor barriers shall be utilized as recommended.
22. The seismic design shall be based on a Site Class C as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.
23. Basement walls shall be designed for the minimum EFP as specified on page 12 of the December 1, 2015, referenced report. All surcharge loads shall be incorporated into the design.
24. Retaining walls and basement walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified on page 13 of the December 1, 2015, referenced report (1803.5.12).

25. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted to the street in an acceptable manner and in a non-erosive device. (7013.11)
26. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soil report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record. (1805.4)
27. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector. (108.9)
28. Basement walls and floors shall be waterproofed/damp-proofed with an L.A. City approved "Below-grade" waterproofing/damp-proofing material with a research report number. (104.2.6)
29. Prefabricated drainage composites (Miradrain) (Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.
30. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.
31. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS. (7013.10)
32. Any recommendations prepared by the geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Grading Division of the Department for approval prior to utilization in the field. (7008.2, 7008.3)
33. The geologist and soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading. (7008 & 1705.6)
34. All friction pile or caisson drilling and installation shall be performed under the inspection and approval of the geologist and soils engineer. The geologist shall indicate the distance that friction piles or caissons penetrate into competent bedrock in a written field memorandum. (1803.5.5, 1704.9)
35. Prior to the pouring of concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. He/She shall post a notice on the job site for the LADBS Building Inspector and the Contractor stating that the work so inspected meets the conditions of the report, but that no concrete shall be poured until the City Building Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)
36. Prior to excavation, an initial inspection shall be called with LADBS Inspector at which time sequence of construction, shoring, pile installation, protection fences and dust and traffic control will be scheduled. (108.9.1)

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37. Installation of shoring and/or pile installation shall be performed under the inspection and approval of the soils engineer and deputy grading inspector. (1705.6)
38. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. He/She shall post a notice on the job site for the City Grading Inspector and the Contractor stating that the soil inspected meets the conditions of the report, but that no fill shall be placed until the LADBS Grading Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included. (7011.3)
39. No slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.


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