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SOILS REPORT APPROVAL LETTER

January 21, 2020

LOG # 108420-01
SOILS/GEOLOGY FILE - 2
LIQ

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TRACT: 15724
LOT(S): 46 & 45
LOCATION: 17534 & 17540 W. Sherman Way

CURRENT REFERENCE	REPORT	DATE OF	
<u>REPORT/LETTER(S)</u>	<u>No.</u>	<u>DOCUMENT</u>	<u>PREPARED BY</u>
Soils Report	19-AE-834	12/19/2019	A.G.E. Engineering

CURRENT REFERENCE	REPORT	DATE OF	
<u>REPORT/LETTER(S)</u>	<u>No.</u>	<u>DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Review Letter	108420	06/11/2019	LADBS
Soils Report	19-AE-834	04/22/2019	A.G.E. Engineering

The Grading Division of the Department of Building and Safety has reviewed the referenced reports that provide recommendations for the proposed 2-story, 9-unit, apartment building over street level parking (total 3 stories established near existing grades), as shown on Drawing 1A in the 04/22/2019 report. The existing structures will be demolished. The site is relatively level.

Two borings were drilled to depths of 52 feet. The earth materials at the subsurface exploration locations consist of up to 2 feet of uncertified fill underlain by natural deposits. According to the consultants, the upper soils have a medium expansion potential (see pg. 11 in the 04/22/2019 report). Per the consultants, groundwater was not encountered to the maximum depths explored and historically highest groundwater level is at about 30 feet below existing grade.

The consultants recommend to support the proposed structure(s) on conventional foundations bearing on properly placed fill, a minimum of 3 feet thick below the bottom of the footings (see pg. 1 of the 12/19/2020 report).

The site is located in a designated liquefaction hazard zone as shown on the Seismic Hazard Zones map issued by the State of California. The Liquefaction study included as a part of the 04/22/2019 report demonstrates that the site does not possess a liquefaction potential (based on 2/3rd the PGAM). This satisfies the requirement of the 2017 Los Angeles City Building Code Section 1802.2.7

As of January 1, 2020, the City of Los Angeles has adopted the new 2020 Los Angeles Building Code (LABC). The 2020 LABC requirements will apply to all projects where the permit application submittal date is after January 1, 2020.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2017 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. In the event that the permit application submittal date is after January 1, 2020, a supplemental report shall be provided to update the recommendations to be in conformance to the 2020 LABC.
2. The soils engineer shall review and approve the detailed plans prior to issuance of any permit. This approval shall be by signature on the plans that clearly indicates the soils engineer has reviewed the plans prepared by the design engineer; and, that the plans included the recommendations contained in their reports (7006.1).
3. All recommendations of the reports 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 (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
5. A grading permit shall be obtained for all structural fill (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. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.
7. If import soils are used, no footings shall be poured until the soils engineer has submitted a compaction report containing in-place shear test data and settlement data to the Grading Division of the Department; and, obtained approval (7008.2).
8. Compacted fill shall extend beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings, or a minimum of 5 feet (see pg. 6 in the 04/22/2019 report), whichever is greater, as recommended.
9. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
10. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
11. 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 cubic yards (7007.1).

12. All loose foundation excavation material shall be removed prior to commencement of framing (7005.3).
13. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).
14. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be constructed using ABC slot cuts, as recommended. 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)
15. Where any excavation, not addressed in the approved reports, would remove lateral support (as defined in 3307.3.1) from a public way, adjacent property or structures, a supplemental report shall be submitted to the Grading Division of the Department containing recommendations for shoring, underpinning, and sequence of construction. Shoring recommendations shall include the maximum allowable lateral deflection of shoring system to prevent damage to adjacent structures, properties and/or public ways. Report shall include a plot plan and cross-section(s) showing the construction type, number of stories, and location of adjacent structures, and analysis incorporating all surcharge loads that demonstrate an acceptable factor of safety against failure. (7006.2 & 3307.3.2)
16. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).
17. Unsurcharged temporary excavation may be cut vertical up to 5 feet. Excavations over 5 feet shall be trimmed back at a uniform gradient not exceeding 1:1, from top to bottom of excavation, as recommended.
18. Surcharged ABC slot-cut method may be used for temporary excavations with each slot-cut not exceeding 5 feet in height and not exceeding 8 feet in width, as recommended. The surcharge load shall not exceed the value given in the report. The soils engineer shall determine the clearance between the excavation and the existing foundation. The soils engineer shall verify in the field if the existing earth materials are stable in the slot-cut excavation. Each slot shall be inspected by the soils engineer and approved in writing prior to any worker access.
19. All foundations shall derive entire support from properly placed fill (a minimum of 3 feet thick), as recommended and approved by the soils engineer by inspection.
20. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.
21. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2014-116 "Foundation Design for Expansive Soils" (1803.5.3).
22. Slabs shall be at least 5 inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 12 inches on center each way, as recommended.
23. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane.

24. The seismic design shall be based on a Site Class D as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.
25. The structure shall be connected to the public sewer system per P/BC 2017-027.
26. All roof, pad and deck drainage shall be conducted to the street in an acceptable manner in non-erosive devices or other approved location in a manner that is acceptable to the LADBS and the Department of Public Works (7013.10).
27. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
28. The 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).
29. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS 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)
30. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; ABC slot cuts; protection fences; and, dust and traffic control will be scheduled (108.9.1).
31. Slot cutting shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).
32. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS 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).
33. No footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.



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Geotechnical Engineer I

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cc: Armen Kazanchyan, Applicant
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