

APPENDIX E: GEOTECHNICAL INVESTIGATION REPORT

E.3

City of Los Angeles Department of Building and Safety,
Geology and Soils Report Approval Letter,

March 30, 2023

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CITY OF LOS ANGELES

CALIFORNIA

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BUILDING AND SAFETY
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LOS ANGELES, CA 90012

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SUPERINTENDENT OF BUILDING

JOHN WEIGHT
EXECUTIVE OFFICER

GEOLOGY AND SOILS REPORT APPROVAL LETTER

March 30, 2023

LOG # 123970-01
SOILS/GEOLOGY FILE - 2
LIQ

400 S. San Vicente LLC
c/o Heather Hawks
501 NW Grand Blvd., Suite 600
Oklahoma City, OK 73118

TRACT: 7555
BLOCK: 37
LOT(S): FR18, FR17, FR16, FR15, FR14, FR13
LOCATION: 400 S. San Vicente Blvd., (aka 406 N. San Vicente Bl.), 410 S. San Vicente Blvd., 414 S. San Vicente Blvd., 418 S. San Vicente Blvd., 420 and 424 S. San Vicente Blvd., 426 & 428 S. San Vicente Blvd.

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Geology/Soils Report	700109901	02/06/2023	Langan

<u>PREVIOUS REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Review Letter	123970	12/19/2022	LADBS – Grading
Geology/Soils Report	700109901	10/12/2022	Langan

The Grading Division of the Department of Building and Safety has reviewed the referenced reports dated February 6, 2023, and October 12, 2022, that provides recommendations for the proposed mixed-use multi-family development, consisting of 8-stories above grade building over three subterranean parking levels. The lowest finished floor level is approximately 37 feet below ground surface. The site is currently occupied with one- and two-story commercial buildings. The site is essentially flat with slopes to the west at an approximate elevation change of 4 feet.

The consultants excavated three (B-5, B-6, B-7) 4.75-inch diameter mud rotary borings to a maximum depth of 76.5 feet, and one (B-8) 8-inch diameter Hollow stem auger boring to a maximum depth of 51.5 feet. The earth materials at the subsurface exploration locations consist of fill ranges in depth from 2 to 7 feet in thickness, underlain by younger alluvial soils underlain by older alluvial soils (San Pedro Formation). Older alluvial soils were marked by the presence of

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coarse-grained deposits, trace shell fragments, and/or caliche. Highest groundwater levels measured within the exploratory excavations was approximately 12 feet from below the ground surface, while groundwater levels measured in the existing monitoring wells, ranged from approximately 13.5 to 14.5 feet from below the ground surface. Historic high groundwater in the vicinity of the subject site appears to be approximately 10 feet below the ground surface.

The consultants recommend to support the proposed structure(s) on mat-type foundations bearing on native undisturbed soils.

The site is located in a designated liquefaction hazard zone as shown on the Seismic Hazard Zones map issued by the State of California. Soil layers above the lowest finished floor level and bottom of foundation are not subject to liquefaction. The results of the consultants liquefaction analysis indicate that soils below the planned foundation levels are subject to liquefaction settlement of less than 0.5 inches. The Liquefaction study included as a part of the report demonstrates that the site does not possess a liquefaction potential. This satisfies the requirement of the 2020 Los Angeles City Building Code Section 1803.5.12.

As of January 1, 2023, the City of Los Angeles has adopted the new 2023 Los Angeles Building Code (LABC). The 2023 LABC requirements will apply to all projects where the permit application submittal date is after January 1, 2023.

The referenced report dated February 6, 2023, and October 12, 2022, are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2020 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. Approval shall be obtained from the Department of Public Works, Bureau of Engineering, Development Services and Permits Program where removal of support and/or retaining of slopes adjoining to a public way is proposed (3307.3.2).

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2. Provide a notarized letter from all adjoining property owners allowing temporary tie-back anchors on their property (7006.6).
3. 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).
4. 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.
5. 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.

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6. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).
7. 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.
8. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
9. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
10. 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).

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11. All loose foundation excavation material shall be removed prior to commencement of framing. Slopes disturbed by construction activities shall be restored (7005.3).
12. 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).
13. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by shoring. 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)
14. 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)
15. 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

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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).

16. The soils engineer shall review and approve the shoring and underpinning plans prior to issuance of the permit (3307.3.2).
17. Prior to the issuance of the permits, the soils engineer and the structural designer shall evaluate the surcharge loads used in the report calculations for the design of the retaining walls and shoring. If the surcharge loads used in the calculations do not conform to the actual surcharge loads, the soil engineer shall submit a supplementary report with revised recommendations to the Department for approval.
18. Unsurcharged temporary excavations over 4 feet exposing soil shall be trimmed back at a gradient not exceeding 1(H):1(V), to a maximum height of 20 feet, as recommended.
19. Shoring shall be designed for the lateral earth pressures as recommended on page 3 of the 02/06/2023, referenced report. All surcharge loads shall be included into the design, as recommended.
20. Temporary shoring design shall need to include provisions to support the existing building located south of the site at 432 San Vicente Blvd., as recommended on page 8 of the October 12, 2022, referenced report.
21. Shoring shall be designed for a maximum lateral deflection of 1 inch, provided there are no structures within a 1(H):1(V) plane projected up from the base of the excavation. Where a structure is within a 1(H):1(V) plane projected up from the base of the excavation, shoring shall be designed for a maximum lateral deflection of ½ inch, or to a lower deflection determined by the consultant that does not present any potential hazard to the adjacent structure.
22. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.
23. The structural designer and soils engineer shall verify and attest to the adequacy of the existing footings for underpinning by signature and license stamp, on the final plans. The structural integrity of the existing footings to span during the proposed underpinning shall be addressed by the structural designer. (See page 4 of the 02/06/2023 report)
24. All foundations shall derive entire support from competent native soils, as recommended and approved by the geologist and soils engineer by inspection.
25. The structure shall be supported on a mat foundation designed to resist uplift hydrostatic pressures that would develop due to the historic high groundwater level conditions or the current groundwater level, whichever is higher, as recommended on page 10 of the 10/12/2022 report.
26. The below-grade building walls shall be designed to resist the hydrostatic pressure. In the event a hydrostatic pressure head is applied at the bottom of the retaining walls for that portion below the historically-high groundwater level, a subdrain system shall be located above the historically-high groundwater level.

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27. Slabs on uncertified fill shall be designed as a structural slab (7011.3).
28. Slabs placed on approved compacted fill shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way. Vapor barriers shall be utilized as recommended.
29. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane. The slabs shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.
30. 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. According to ASCE 7-16 Section 11.4.8, for structures on Site Class D sites with S1 greater than or equal to 0.2, the parameter SM1 determined by EQ. (11.4-2) shall be increased by 50%. Alternatively, a supplemental report containing a site-specific ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 shall be submitted for review and approval.
31. Basement walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure and hydrostatic pressure as specified on page 3 and Figure No.10 of the 02/06/2023 report (1610.1). All surcharge loads shall be included into the design.
32. Retaining walls/basement walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified on page 3 and Figure No.11 of the 02/06/2023 report (1803.5.12).

Note: Lateral earth pressure due to earthquake motions shall be in addition to static lateral earth pressures and other surcharge pressures.
33. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).
34. 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 soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).
35. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).
36. Basement walls and floors shall be waterproofed/damp-proofed with an LA City approved "Below-grade" waterproofing/damp-proofing material with a research report number (104.2.6).

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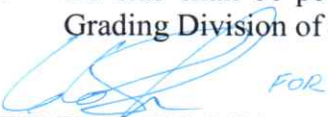
37. The use of acceptable prefabricated drainage composites (also known as geosynthetic subdrain systems), as an alternative to traditionally accepted methods of draining retained earth, shall be determined during structural plan check.
38. Where the ground water table is lowered and maintained at an elevation not less than 6 inches below the bottom of the lowest floor, or where hydrostatic pressures will not occur, the floor and basement walls shall be damp-proofed. Where a hydrostatic pressure condition exists, and the design does not include a ground-water control system, basement walls and floors shall be waterproofed. (1803.5.4, 1805.1.3, 1805.2, 1805.3)
39. Temporary excavation dewatering will be required to perform the planned excavation, as recommended on page 8 of the October 12, 2022, referenced report.
40. Temporary construction dewatering system shall be designed by a professional licensed by the State of California to perform groundwater studies. The dewatering system shall be designed in such a way that groundwater drawdown does not present any potential hazard to the adjacent properties and structures.
41. Prior to issuance of a permit involving de-watering, clearance shall be obtained from the Department of Public Works and from the California Regional Water Quality Control Board.

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320 W. 4th Street, Suite 200 (213) 576-6600 (LARWQB)
42. The structure shall be connected to the public sewer system per P/BC 2020-027.
43. 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).
44. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.
45. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
46. 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 use in the field (7008.2, 7008.3).
47. 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 & 1705.8).
48. 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

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be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)

49. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; shoring; underpinning; pile installation; protection fences; and, dust and traffic control will be scheduled (108.9.1).
50. Installation of shoring, underpinning and pile excavations shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).
51. The installation and testing of tie-back anchors shall comply with the recommendations included in the report or the standard sheets titled "Requirement for Tie-back Earth Anchors", whichever is more restrictive. Research Report #23835
52. 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).
53. No slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.

 FOR
JEFFREY T. WILSON
Engineering Geologist I

JTW/LE:jtw/le
Log No. 123970-01
213-482-0480


LEILA ETAAT
Structural Engineering Associate II

cc: Langan, Project Consultant
LA District Office

APPLICATION FOR REVIEW OF TECHNICAL REPORTS

INSTRUCTIONS

- A. Address all communications to the Grading Division, LADBS, 221 N. Figueroa St., 12th Fl., Los Angeles, CA 90012 Telephone No. (213)482-0480.
- B. Submit two copies (three for subdivisions) of reports, one "pdf" copy of the report on a CD-Rom or flash drive, and one copy of application with items "1" through "10" completed.
- C. Check should be made to the City of Los Angeles.

<p>1. LEGAL DESCRIPTION</p> <p>Tract: <u>TR 7555</u></p> <p>Block: <u>37</u> Lots: <u>FR13 to FR 18</u></p> <p>3. OWNER: <u>JJ Abraham - 400 san vicente</u></p> <p>Address: <u>900 cercis place</u></p> <p>City: <u>newport beach</u> Zip: <u>92660</u></p> <p>Phone (Daytime): _____</p>	<p>2. PROJECT ADDRESS: <u>400 san vicente blvd</u></p> <p>4. APPLICANT <u>langan engineering</u></p> <p>Address: <u>18575 jamboree rd</u></p> <p>City: <u>irvine</u> Zip: <u>92612</u></p> <p>Phone (Daytime): <u>7144250666</u></p> <p>E-mail address: <u>czadoorian@langan.com; srivadenevra@langan.com</u></p>
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5. Report(s) Prepared by: <u>langan</u>	6. Report Date(s): <u>10/12/22</u>
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7. Status of project: Proposed Under Construction Storm Damage

8. Previous site reports? YES if yes, give date(s) of report(s) and name of company who prepared report(s)

9. Previous Department actions? YES if yes, provide dates and attach a copy to expedite processing.

Dates: _____

10. Applicant Signature: [Signature] Position: Staff Engineer

(DEPARTMENT USE ONLY)

REVIEW REQUESTED	FEES	REVIEW REQUESTED	FEES
<input type="checkbox"/> Soils Engineering		No. of Lots	
<input type="checkbox"/> Geology		No. of Acres	
<input checked="" type="checkbox"/> Combined Soils Engr. & Geol.		<input type="checkbox"/> Division of Land	
<input type="checkbox"/> Supplemental		Other	
<input type="checkbox"/> Combined Supplemental		<input checked="" type="checkbox"/> Expedite	181.50
<input type="checkbox"/> Import-Export Route		<input checked="" type="checkbox"/> Response to Correction	363.00
Cubic Yards: _____		<input type="checkbox"/> Expedite ONLY	
		Sub-total	544.50
		Surcharge	129.80
		TOTAL FEE	674.30

Fee Due: 674.30
 Fee Verified By: AM Date: 2/27/22
 (Cashier Use Only)

Receipt #

1534394

Paid on

3/10/23

ACTION BY: _____

THE REPORT IS: NOT APPROVED APPROVED WITH CONDITIONS BELOW ATTACHED

For Geology	Date
For Soils	Date