Appendix G-4:

Soils Report Approval Letter (2020)

CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

OSAMA YOUNAN, P.E.
GENERAL MANAGER
SUPERINTENDENT OF BUILDING

GEOLOGY AND SOILS REPORT APPROVAL LETTER

April 24, 2020

LOG # 92340-02
SOILS/GEOLOGY FILE - 2
LAN

Manny Valencia
3003 N. Runyon Canyon Road
Los Angeles, CA 90046

TRACT: -- (MP SW ¼ NE ¼ SEC 4 T1S R14W)
LOT(S): PT SW ¼ NE ¼ SEC 4 T1S R14W (Arb. 22)
LOCATION: 3003 N. Runyon Canyon Road

CURRENT REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Addendum Report	IC 16010-I	04/13/2020	Irvine Geotechnical, Inc.
Oversized Doc(s).	``	``	``

PREVIOUS REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Dept. Review Letter	92340-01	11/16/2016	LADBS
Addendum Report	IC 16010-I	10/17/2016	Irvine Geotechnical, Inc.
Dept. Correction Letter	92340	04/07/2016	LADBS
Geology/Soils Report	IC 16010-C	03/11/2016	Irvine Geotechnical, Inc.
Laboratory Test Report	SL16.2127	02/26/2016	Soil Labwork LLC
Dept. Approval Letter	26176	11/12/1998	LADBS
Addendum Report	17848-I	11/12/1998	J. Byer Group
Geology/Soils Report	17848-I	09/30/1998	J. Byer Group

The Grading Division of the Department of Building and Safety has reviewed the referenced report providing recommendations for the proposed three-story residence, swimming pool, patios, and tunnel. The lower floor levels will be partially subterranean. The current development has been revised to include the construction of new fill slopes to minimize the export of material. Retaining walls ranging up to 40 feet in height are proposed for the lower floor levels and an expansion of the driveway area. An onsite wastewater treatment system (OWTS) currently services the existing residence. New seepage pits are proposed along the driveway area to service the new residence. The new residence and existing residence will be connected by the proposed tunnel.

The subject property is developed with a multi-story residence and swimming pool. The building pad is situated along the north-south trending ridge with slopes descending to the south, west, and east. Slopes range as high as 340 feet with gradients of about 2:1 (H:V) to ½:1 locally. Subsurface exploration performed by the consultant consisted of eight test pits supplemented with field mapping of the bedrock outcrops. The earth materials at the subsurface exploration locations consist of up to 3 feet of uncertified fill underlain by soil and sedimentary and granitic bedrock. Geologic structure observed by the consultant within the

sedimentary bedrock consisted of a northeasterly dip of 50 degrees. Geologic structure observed within the granitic bedrock consisted of varying orientations of joints. The consultants recommend to support the proposed structures on conventional and/or drilled-pile foundations bearing on competent bedrock.

Kinematic analyses of the steep bedrock slopes had been performed by the consultant in response to the referenced Department letter. The analyses indicated that the potential existed for planar, wedge, and toppling failures. The consultant recommends to construct a debris fence at the toe of the slope. It is noted that the bedrock outcrops display a significant amount of joint sets compared to the few joints planes mapped and reported by the consultant. Subsequently, only a small data set was utilized in the kinematic analyses. However, since the limited data set concluded the potential for kinematic failure, the inclusion of additional joint sets would not change the overall outcome of the analyses. Therefore, this matter will not be pursued further.

Engineering analyses provided by Irvine Geotechnical, Inc. is based on laboratory testing performed by Soil Labwork LLC. Irvine Geotechnical, Inc. is accepting responsibility for use of the data in accordance to Code section 91.7008.5 of LABC.

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 reports include an acceptable seismic slope stability analysis and the requirements of the 2020 City of Los Angeles Building Code have been satisfied.

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 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. The proposed OWTS for the new residence is <u>not</u> approved at this time. In the event that new seepage pits are proposed to the service the development, a supplemental report shall be submitted to the Grading Division for review. The report shall include, at a minimum, an updated geologic map and cross-sections showing the location of the proposed OWTS, and percolation testing in accordance with information bulletin P/BC 2020-027.

2. 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.

3. Approval shall be obtained from the Department of Public Works, Bureau of Engineering, Development Services and Permits Program for the proposed removal of support and/or retaining of slopes adjoining to a public way (3307.3.2).

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4. 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).

5. All recommendations of the reports that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.

6. 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.

7. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).

8. All graded, brushed or bare slopes shall be planted with low-water consumption, native-type plant varieties to protect slopes against erosion (7012).

9. All new graded fill slopes shall be no steeper than 2H:1V (7010.2 & 7011.2). Cut slopes in bedrock may be created at a 1½:1 (H:V) gradient as recommended on pages 2 and 3 of the 04/13/2020 report.

10. All nonconforming street cut slopes shall be trimmed to a gradient no steeper than 1:1 (H:V) or retained by a designed retaining wall.

11. Prior to the issuance of any permit, an accurate volume determination shall be made and included in the final plans, with regard to the amount of earth material to be exported from the site. For grading involving import or export of more than 1000 cubic yards of earth materials within the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Board of Building and Safety Commission Office. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.

12. 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.

13. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).

14. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).

15. 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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16. 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).

17. 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)

18. 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. 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)

19. 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).

20. The soils engineer shall review and approve the shoring plans prior to issuance of the permit (3307.3.2).

21. Prior to the issuance of the permits, the soils engineer and/or 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.

22. Unsurcharged temporary excavations exposing fill shall be trimmed back at a gradient not exceeding 1:1, as recommended.

23. Unsurcharged temporary excavations in bedrock may be cut vertical up to 8 feet. For excavations over 8 feet, the lower 8 feet may be cut vertically and the portion of the excavation above 8 feet shall be trimmed back at a gradient not exceeding 1:1, as recommended.

24. Shoring shall be designed for the lateral earth pressures specified in the section titled "Shoring" starting on page 8 of the 04/13/2020 report; all surcharge loads shall be included into the design.

25. 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 ½ inch, or to a lower deflection determined by the consultant that does not present any potential hazard to the adjacent structure.

26. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.

27. All foundations shall derive entire support from competent bedrock, as recommended and approved by the geologist and soils engineer by inspection.

28. Foundations adjacent to a descending slope steeper than 3:1 (horizontal to vertical) in gradient shall be a minimum distance of one-third the vertical height of the slope but need not exceed 40 feet measured horizontally from the footing bottom to the face of the slope (1808.7.2); for pools the foundation setback shall be one-sixth the slope height to a maximum of 20 feet (1808.7.3). Where the slope is steeper than 1:1, the required setback shall be measured from an imaginary plane 45 degrees to the horizontal, projected upward from the toe of the slope.

29. Buildings adjacent to ascending slopes steeper than 3H:1V in gradient shall be setback from the toe of the slope a level distance measured perpendicular to slope contours equal to one-half the vertical height of the slope, but need not exceed 15 feet (1808.7.1); for pools the setback shall be one-fourth the vertical height of the slope, but need not exceed 7.5 feet (1808.7.3). Where the slope is steeper than 1:1, the toe of the slope shall be assumed to be at the intersection of a horizontal plane drawn from the top of the foundation and a plane drawn tangent to the slope at an angle of 45 degrees to the horizontal.

30. Pile caisson and/or isolated foundation ties are required by LAMC Sections 91.1809.13 and/or 91.1810.3.13. Exceptions and modification to this requirement are provided in Information Bulletin P/BC 2020-030.

31. Pile and/or caisson shafts shall be designed for a lateral load of 1000 pounds per linear foot of shaft exposed to fill, soil and weathered bedrock per P/BC 2020-050.

32. The design passive pressure shall be neglected for a portion of the pile with a horizontal setback distance less than five feet from fill, soil or weathered bedrock.

33. When water is present in drilled pile holes, the concrete shall be tremied from the bottom up to ensure minimum segregation of the mix and negligible turbulence of the water (1808.8.3).

34. Existing uncertified fill shall not be used for lateral support of deep foundations (1810.2.1).

35. Slabs placed on approved compacted fill shall be at least 4 inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.

36. 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.

37. Retaining walls shall be designed for the lateral earth pressures specified in the section titled "Retaining Walls" starting on page 5 of the 04/13/2020 report. Note: Where two separate stacked retaining walls (the upper wall surcharges the lower wall) are proposed, the lower of the two walls shall be designed for the combined height of the two walls. All surcharge loads shall be included into the design.

38. Basement walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure as specified on page 5 of the 04/13/2020 report (1610.1). All surcharge loads shall be included into the design.

39. Retaining walls at the base of ascending slopes shall be provided with a minimum freeboard of 12 inches, as recommended.

40. The recommended equivalent fluid pressure (EFP) for the proposed retaining wall shall apply from the top of the freeboard to the bottom of the wall footing.

41. 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).

42. 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).

43. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).

44. 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).

45. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.

46. The pool shall be designed in accordance with Information Bulletin P/BC 2017-014.

47. The proposed swimming pool shall be designed for a freestanding condition.

48. Pool foundations adjacent to a descending slope steeper than 3H:1V in gradient shall be a minimum distance of one-sixth the vertical height of the slope but need not exceed 20 feet measured horizontally from the footing bottom to the face of the slope (1808.7.3).

49. The structure shall be connected to the public sewer system per P/BC 2020-027.

50. 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. Water shall not be dispersed on to descending slopes without specific approval from the Grading Division and the consulting geologist and soils engineer (7013.10).

51. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.

52. Sprinkler plans for irrigation shall be submitted and approved by the Mechanical Plan Check Section (7012.3.1).

53. 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).

54. 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).

55. All friction pile or caisson drilling and excavations 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, 1705.1.2)

56. 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)

57. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction, shoring, pile installation, protection fences, and dust and traffic control will be scheduled (108.9.1).

58. Installation of shoring shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).

59. 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)

60. 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).

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