Applied Earth Sciences
a division of Applied Soil Technology, Inc.
GEOTECHNICAL & ENVIRONMENTAL ENGINEERING CONSULTANTS

January 15, 2016 15-363-26

Sinanian Development
18980 Ventura Boulevard, Suite 200
Tarzana, CA 91356

Subject: Supplement No. 2
Geotechnical and Geologic Investigation
Lots 11, 19, and 20, Block 15, Tract No. 7803
1749 and 1751 Malcolm Avenue and 1772 Glendon Avenue
Los Angeles, California

Gentlemen:

INTRODUCTION

We are pleased to submit this Supplement No. 2 report responding to the City comments. The original report of geotechnical and geological investigation report for the subject project was issued by this office on July 21, 2015. A Supplement No. 1 report was prepared dated November 30, 2015 in response to a city correction letter dated August 19, 2015.

This submittal is in response to comments in a Geology and Soils Report Correction Letter dated December 29, 2015 by the Grading Section Of the Department of Building and Safety of the City of Los Angeles (Log # 89430-01). For convenience, we have enclosed a copy of the City Review Letter with this Supplement No. 2 report. Our responses also incorporate verbal discussion of the comments between the undersigned geologist and Mr. Schneidereit of LADBS during a meeting on 1/13/16.

Our responses follow the original order of comments.

RESPONSE TO THE COMMENTS

1. We have hereby revised the fault orientation to reflect the most conservative orientation, based on that fact that direct evidence or observation of the actual orientation of the fault with the exploration methods used is not possible. The revised fault orientation passes through B-3 and CPT-19.

However, now that the most conservative possible fault orientation is being used as a basis for engineering design of the buildings, we have reduced the no-build setback from twenty to ten feet, as was originally recommended in our 7/21/15 original report. This reduction in setback back to ten feet, based on the most conservative possible fault orientation, was discussed and verbally agreed upon with Mr. Schneidereit of LADBS in our meeting on 1/13/16.

2. Based on the presence of abundant fine-grained sag pond deposits north of the two faults encountered during our exploration, it is our opinion that the main trace of the Santa Monica fault lies north of the study area. This corresponds to the geomorphic and topographic evidence of the main trace being along the south-facing escarpment that forms the front lawn of the LDS temple, the northwestward projection of which extends north of the study area. The project area is likely located on the south part of a localized zone of transtension along the generally left-lateral strike-slip fault zone, related to the northwestward bend in the main fault trace one block east of the study area (Miles Kenney, 2014; Scott Lindvall, personal communication, Richard Crook, Jr., personal communication). It is therefore the opinion of the undersigned that the possibility of flower structures or non-linear variability west of the encountered fault is minute, since we consider this fault to be a splay of the main fault north of the project area. Furthermore, it is our opinion that any non-variability west of the study area (B-3) to the north property limit (a span of 50 feet) will be within the established ten-feet setback zone.

3. Based on our correspondence with the aforementioned fault specialists, and our prior experience along the Hollywood and Santa Monica fault zones, it is the opinion of the

undersigned that the maximum vertical offset along this fault for a single earthquake event is 12 inches. We have depicted the cantilevered portion of the building as such: the area around the proposed new building which will be cantilevered within the setback zone shall be subject to minor grading/shaving of the ground surface, confined to the subject property, such that the cantilevered part of the proposed building will have a minimum of 12 inches clearance above the finished ground surface. Any appurtenant stair or bridge structures that provide access to the lower lobby level of the main building shall be structurally separate from the main building. We have revised our drawings to reflect this requirement; see revised Geotechnical Site Plan and new Geotechnical Cross Sections J and K attached.

In addition, to address off-fault deformation we have recommended a 2-feet thick mat slab foundation for both proposed new buildings, as previously discussed in prior Supplemental Report No. 1. Structural engineering plans for the proposed buildings shall be subject to our review and official stamp and signature approval to ensure that the requirements as set forth in our reports are adhered. Lastly, continuous deputy inspection by a geologist representative of this office during the grading phase of the course of construction shall be required.

-o0o-

Thank you for the opportunity to be of continued service on this project. Should you have any questions regarding this Supplement No. 1, or wish to discuss the project further, please do not hesitate to call us.

Respectfully Submitted,

APPLIED EARTH SCIENCES

Shant Minas
Engineering Geologist
EG 2607

Caro J. Minas, President,
Geotechnical Engineer
GE 601

Steven Miller
Senior Engineering Geologist
EG 1303

SM/CJM/la

Enclosure: Drawing No. 1 - Final Geologic Map
Drawing No. 2 - Final Geotechnical Site Plan
Drawing Nos. 3 and 4 - Geologic Cross Sections J and K

Copy of City Correction Letter (Log No. 89430-01)

Scale: 1" = 20'

Qa = Recent Alluvium

Qsp = Sag Pond Deposits

CPT-18 =Location of New CPT Soundings (Oct. 2015)

CPT-13 = Location of Previously Advanced CPTs (Apr. 2015 By AES)

B-3 = Approximate Location of Continuous Core Drilling

B-7 = Approximate Location of Geotechnical Boring

SB-3 = Location of Boring (By Wayne Perry, Inc.)

= Fault Location (Based on Navigate LA)

= Fault Location (AES, 2015, Based on Site-specific Investigation)

= Area of No-Build Zone

= Sewer Pipe & Lateral (By Navigate LA)

= Storm Drain Inlet & Pipes (By Navigate LA)

= Gas Line (By Field Mapping & Dig Alert)

= Water Line (By Field Mapping & Dig Alert)

= Electrical Line (By Field Mapping & Dig Alert)

FINAL GEOLOGIC MAP

PROJECT No:	15-363-26
DESCRIPTION: Proposed Multifamily Building	
DATE:	01 / 15 / 2016
FOR: Sinanian Development	
DRAWN BY:	ZS
ADDRESS: 1749 & 1751 Malcolm Avenue, Los Angeles, CA 90024	
CHECKED BY:	SM
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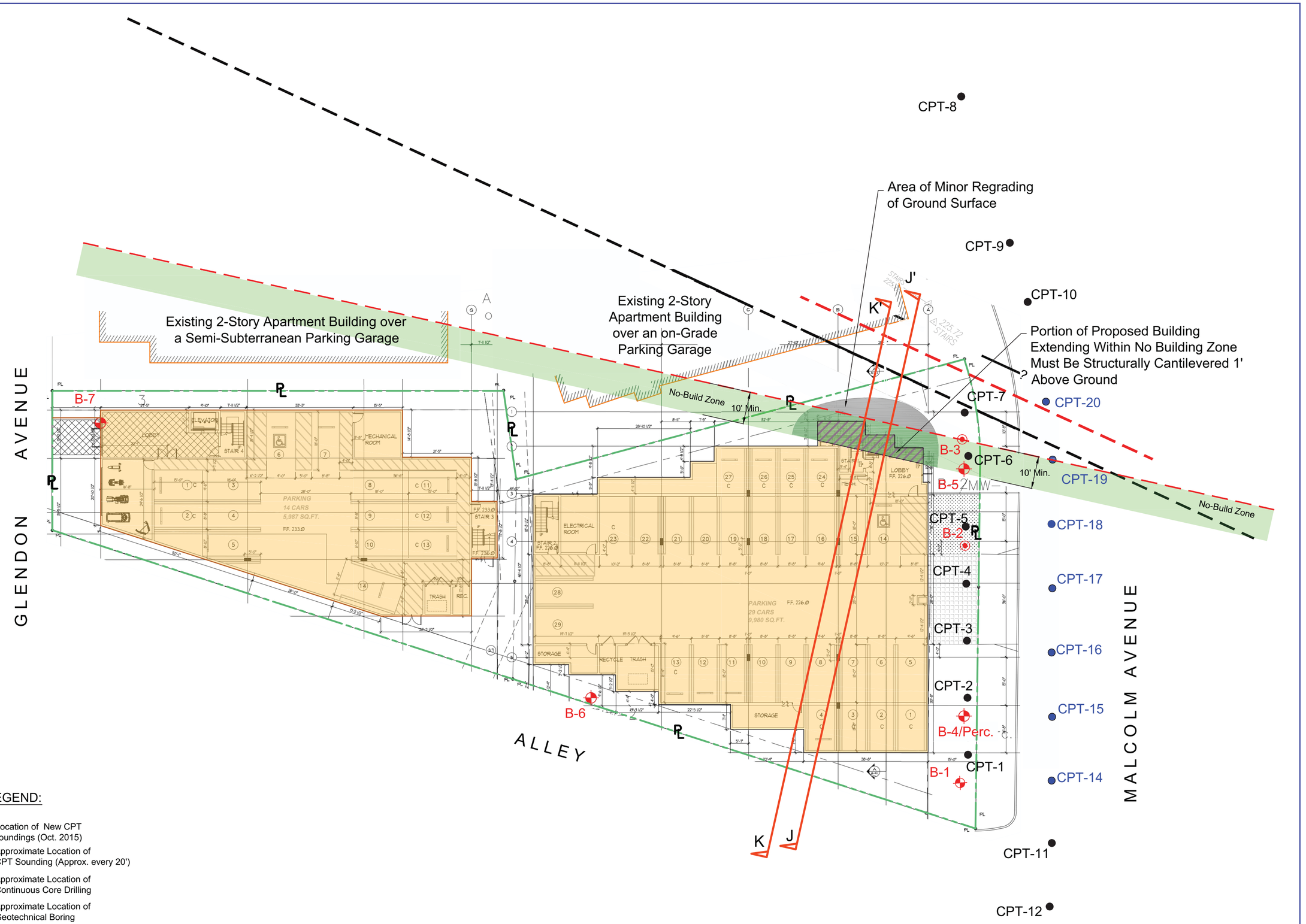
DRAWING No: 1	SUPP. No: 2



LEGEND:

- CPT-18 = Location of New CPT Soundings (Oct. 2015)
- CPT-13 = Approximate Location of CPT Sounding (Approx. every 20')
- B-3 = Approximate Location of Continuous Core Drilling
- B-7 = Approximate Location of Geotechnical Boring
- = Fault Location (Based on Navigate LA)
- = Fault Location (AES, 2015, Based on Site-specific Investigation)
- = Area of No-Build Zone
- = Area of 2' Mat Foundatiom

Scale: 1" = 20'

FINAL GEOTECHNICAL SITE PLAN

DESCRIPTION:	Proposed Multifamily Building	PROJECT No:	15-363-02
FOR:	Sinanian Development	DATE:	01 / 15 / 2016
ADDRESS:	1749 & 1751 Malcolm Ave. & 1772 Glendon Ave., Los Angeles, CA 90024	DRAWN BY:	ZS
		CHECKED BY:	CM
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N36°W

Scale: 1" = 20' (V=H)

J

J'

ELEVATION IN FEET

290
270
250
230
210
190
170

Malcolm Avenue

UNIT 2Ø2
UNIT 2Ø1
UNIT 1Ø2
UNIT 1Ø1
PARKING
ELEVATOR LOBBBY

B-4/Perc.
B-5

TD=51'
TD=26'

Recommended 2' Mat Foundation

Existing 2-Story Apartment Building over an on-Grade Parking Garage

No-Build Zone

Portion of Proposed Building Extending Within No Building Zone Must Be Structurally Cantilevered 1' Above Ground

Scale: 1" = 5' (V=H)

ELEVATOR LOBBBY
B-5
1'
No-Build Zone

LEGEND:

B-4
TD=10' (Projected)
= Location & Number of Boring

= Fault Location (Based on Navigate LA)

= Fault Location (AES, 2015, Based on Site-specific Investigation)

= Area of No-Build Zone

GEOTECHNICAL CROSS SECTION J-J'

DESCRIPTION:	Proposed Multifamily Building	DATE:	01 / 15 / 2016
FOR:	Sinanian Development	DRAWN BY:	ZS
ADDRESS:	1749 & 1751 Malcolm Avenue, Los Angeles, CA 90024	CHECKED BY:	SM

PROJECT No: 15-363-26

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DRAWING No: 3

SUPP. No: 2

K

K'

N36°W

Scale: 1" = 20' (V=H)

ELEVATION IN FEET

290
270
250
230
210
190
170

Malcolm Avenue

UNIT 2Ø2
UNIT 2Ø1
LOBBY
UNIT 1Ø2
UNIT 1Ø1
LOBBY
ELEV.
ELEVATOR LOBBY

Parking

B-4/Perc.

B-5

TD=51'

TD=26'

Existing 2-Story Apartment Building over an on-Grade Parking Garage

Recommended 2' Mat Foundation

No-Build Zone

Portion of Proposed Building Extending Within No Building Zone Must Be Structurally Cantilevered 1' Above Ground

Scale: 1" = 5' (V=H)

B-5

1'

3'-5"

No-Build Zone

LEGEND:

B-4
TD=10'
(Projected)
= Location & Number of Boring

= Fault Location (Based on Navigate LA)

= Fault Location (AES, 2015, Based on Site-specific Investigation)

= Area of No-Build Zone

GEOTECHNICAL CROSS SECTION K-K'		PROJECT No:	15-363-26
DESCRIPTION:	Proposed Multifamily Building	DATE:	01 / 15 / 2016
FOR:	Sinanian Development	DRAWN BY:	ZS
ADDRESS:	1749 & 1751 Malcolm Avenue, Los Angeles, CA 90024	CHECKED BY:	SM
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FRANK BUSH
EXECUTIVE OFFICER

GEOLOGY AND SOILS REPORT CORRECTION LETTER

December 29, 2015

LOG # 89430-01
SOILS/GEOLOGY FILE - 2
LIQ/PFRSA

Ben Neman
458 N. Doheny Drive, Unit 691674
West Hollywood, CA 90069

TRACT:	7803
BLOCK:	15
LOTS:	20 / 19 / 11
LOCATION:	1749 & 1751 Malcolm Avenue and 1772 Glendon Avenue

CURRENT REFERENCE REPORT/LETTER	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Addendum Report No. 1	15-363-26	11/30/2015	Applied Earth Sciences
Oversized Docs.	``	``	``

PREVIOUS REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Dept. Correction Letter	89430	08/19/2015	LADBS
Geology/Soils Report	15-363-26	07/21/2015	Applied Earth Sciences

The Grading Division of the Department of Building and Safety has reviewed the referenced report that provides recommendations for a proposed multi-unit residential development with a parking garage. According to the report, the site is relatively flat and occupied by existing residential structures.

The earth materials at the subsurface exploration locations consist of up to 4 feet of uncertified fill underlain by recent and older alluvium, sag pond and estuarine deposits. The consultants recommend to support the proposed structures on conventional foundations bearing on native undisturbed soils.

The site is located within a City of Los Angeles Preliminary Fault Rupture Study Area designated for the Santa Monica fault. The report includes the results of a fault rupture investigation that consisted of two transect of continuous core borings and cone penetrometer test soundings in Malcolm Avenue on the east side of the property. Active fault splays were identified through the northeastern corner of the property. The consultants recommend that proposed buildings be setback at least 20 feet from the fault splay and that a reinforced (thick mat) foundation be used to support the proposed structures.

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 review of the subject report can not be completed at this time and will be continued upon submittal of

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an addendum to the report which shall include, but not be limited to, the following:

(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. The southern most fault closest to the proposed habitable structures identified by the consultants appears to be located between continuous core boring B-3 and CPT-7 in transect B-B' and between CPT-18 and CPT-10 in transect A-A'. As no direct evidence of the orientation of the fault has been provided, the most conservative orientation of the fault trace appears to be a fault that is located just north of B-3 and just south of CPT-19. Provide a revised possible fault orientation and setback; or, provide additional exploration to confirm the fault's trend as interpreted by the consultant.

2. As no exploration has been performed west of transect B-B' to identify the fault trend, the consultants should provide an opinion as to possible variability (non-linear, flowering, etc.) in the fault trend west of transect B-B', with appropriate setback.

3. As the consultants recommend building a cantilevered structure within the "No-Build Zone", the consultants shall provide recommendations as to the maximum vertical and horizontal offset of the fault; and, a recommendation for vertical and horizontal space to be maintained below the cantilevered structure. Provide a plan that depicts the required space maintained below the cantilevered structure. Note: The current plan appears to show a lobby with doorways in the cantilevered area. No at grade structures can be connected to the cantilevered section of the proposed building.

The geologist and soils engineer shall prepare a report containing the corrections indicated in this letter. The report shall be in the form of an itemized response. It is recommended that once all correction items have been addressed in a response report, to contact the report review engineer and/or geologist to schedule a verification appointment to demonstrate compliance with all the corrections. Do not schedule an appointment until all corrections have been addressed. Bring three copies of the response report, including one unbound wet-signed original for microfilming in the event that the report is found to be acceptable.

CASEY LEE JENSEN
Engineering Geologist Associate II

GLEN RAAD
Geotechnical Engineer I

CLJ/GR:clj/gr
Log No. 89430-01
213-482-0480

cc: Applied Earth Sciences, Project Consultant
WL District Office