



# Geotechnical Exploration, Inc.

SOIL AND FOUNDATION ENGINEERING • GROUNDWATER • ENGINEERING GEOLOGY

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03 December 2021

Kimberly Fanelli and Chris Huber  
1851 Spindrift Drive  
La Jolla, CA 92037

**Job No. 21-13237**

Subject: **Response to City of San Diego LDR Geology**  
Proposed Fanelli-Huber Residence  
1851 Spindrift Drive  
La Jolla, California

City Project No. 693529, Cycle 1 dated August 20, 2021

Dear Ms. Fanelli and Mr. Huber:

In accordance with your request and authorization, **Geotechnical Exploration, Inc. (GEI)** is providing this addendum report to respond to the LDR-Geology review issues dated August 20, 2021 as part of the City of San Diego Review process. This report is written in a format first stating the City Reviewer Comment/Question from the August 20, 2021, review followed by our response. Refer to the Vicinity Map, Figure No. I, for the project location. It is our understanding that the following documents referenced in the memorandum have been reviewed:

Reference 1: City of San Diego, 2021 Reviewer Issues draft, prepared by LDR-Geology, Cycle 1, Project No. 693529, review completed dated August 20, 2021.

Reference 2: Geotechnical Exploration, Inc., 2021, Report of Preliminary Geotechnical Investigation, Proposed Fanelli-Huber Residence, 1851 Spindrift Drive, La Jolla, California, dated June 3, 2021.

Reference 3: Pasco Laret Suiter and Associates, 2021, Topographic Survey Map – 1851 Spindrift Drive, dated August 13, 2021.

Reference 4: California Geological Survey, 2021a, Earthquake Zones of Required Investigation, La Jolla Quadrangle, Earthquake Fault Zones, Official Map released September 23, 2021.

Reference 5: CGS, 2021b, Fault Evaluation Report (FER) 265: The Rose Canyon Fault in the Point Loma and La Jolla 7.5 Minute Quadrangles, San Diego, California, February 18, 2021.

Reference 6: Artim and Streiff, 1981, Final Technical Report, Trenching the Rose Canyon Fault Zone, San Diego, California RCF, USGS Contract No. 14-08-0001-19824.

*City Cycle 1, Issue No. 1: Report of Preliminary Geotechnical Investigation, Proposed Fanelli-Huber Residence, 1851 Spindrift Drive, La Jolla, California, prepared by Geotechnical Exploration, Inc., dated June 3, 2021 (their job no. 21-13127)*

**GEI Response:** No response needed- information only

*City Cycle 1, Issue No. 2: Please note, each additional geotechnical document submitted for digital review must be uploaded as an independent PDF using any of the 10 available "Geotechnical..." file names (do not use the "Applicant Responses" file name for any geotechnical document). Geotechnical documents that are uploaded incorrectly or combined with other documents are unacceptable for record documents and cannot be excepted. Please see the Open DSD User Guide for more information (<https://www.sandiego.gov/sites/default/files/opensdsd-user-guide-pts-projects.pdf>).*

**GEI Response:** GEI will work with the project team to upload the project documents as required.

*City Cycle 1, Issue No. 3: (New Issue) The project's geotechnical consultant must submit an addendum geotechnical report or update letter for the purpose of an environmental review that specifically addresses the proposed development plans and the following:*

**GEI Response:** This letter serves as GEI's addendum report addressing the City Comments. See responses below in the following sections.

*City Cycle 1, Issue No. 4: (New Issue) If the project's geotechnical consultant is relying on subsurface information from adjacent sites for their site specific fault hazard investigation, the consultant should demonstrate how that information provides stratigraphic and geologic structural continuity across the subject site and how it provides optimum coverage as specified in the City's Guidelines.*

**GEI Response:** As indicated in this addendum report, GEI performed additional subsurface investigation at the subject site to address the geologic structure and faulting. In addition, GEI performed additional research related to faulting in the



subject area. Refer to Figure No. II (revised) for the project Plot Plan and Site-Specific Geologic Map.

The additional research included review of the investigative work performed by Artim and Streiff, 1981 (refer to Reference 6 above). The Artim and Streiff report researched the Rose Canyon fault zone along Spindrift Drive. Spindrift Drive trends northeast-southwest, approximately perpendicular to the Rose Canyon fault zone. The Artim and Streiff report included the drilling of 13 borings spaced along Spindrift Drive, from northeast of Roseland Drive, southwest to near the southern end of Spindrift Drive, for a total distance of about 800 feet. Several of the borings were drilled in front of or near the subject site. As discussed below, five of the closest borings (#9 through #13) were selected for this report. Refer to Figure Nos. IIIa-d for copies of the Artim and Streiff boring logs.

The five borings spanned a distance of about 300 feet. The subject site, which is about 50 feet wide and fronts Spindrift Drive, is located near the central portion of the 300-foot-long section. ***This 300-foot distance, along with the on-site investigation and mapping of the coastal bluff northwest of the site, is considered sufficient coverage for geologic structural continuity across the site.*** Additional details are presented below.

The intent of the Artim and Streiff borings was to identify the underlying sedimentary bedrock units and look for significant abrupt elevation changes of the contact between the differing geologic units. Of the 13 Artim and Streiff borings, Borings 9 through 13, which are closest to the subject site, were reviewed by GEI to determine the top elevations of the Cretaceous Point Loma Formation. Preparation of cross section A-A' between borings 9 and 13 revealed two main points: (1) the top of the elevation of the underlying Point Loma Formation is uniform and relatively level to gently sloping downward to the northeast between elevations of 53 to 58 feet above MSL; and (2) the elevation of the top of the Point Loma Formation in the Spindrift Drive borings, when projected south to the subject lot, suggested that the depth of the top of the Point Loma Formation would be about 18 feet below the subject site.

It was determined that a typical fault trench would be too deep to reach the top of the Point Loma Formation, which was considered important to assist in determining faulting or lack of faulting. Therefore, it was elected to drill closely spaced borings on the subject property. The rear yard area was selected for the borings as additional research indicated that a concealed fault strand mapped by the State of California (CGS FER report, 2021) is projected through the rear yard portion of the site (refer to Figure No. II, revised). Specifically, GEI drilled three closely spaced small-diameter borings in the rear yard as an alternative to trenching (refer to Figure No. II, revised). Borings B-1 and B-2 were continuously cored with SPTs to depths of about 19 feet. B-3 encountered a pipe at a shallow depth and was completed to a



depth of 13 feet using a hand auger. Soil samples from the borings were collected and transported to the laboratory for additional logging. Refer to Figure Nos. IVa-c for copies of the GEI boring logs.

The results of the drilling indicated that the surface elevation of the underlying Point Loma Formation beneath the site is at a depth of 18 feet and, as anticipated, is very similar to the elevations noted in the Artim and Streiff borings northwest of and adjacent to the site. Cross section A-A' (Figure No. V), specifically in the area of Station Nos. 130 through 180 feet, depicts the Artim and Streiff borings and the GEI borings. GEI Borings B-1 and B-2 are projected 107 feet northwest to the Spindrifft Drive cross section. The cross section reveals that the elevations of the underlying Point Loma Formation surface are essentially the same on Spindrifft Drive in front of the property and in the rear yard of the home. Figure No. VI presents cross section B-B' across the rear yard, and Figure No. VII presents cross section C-C', drawn perpendicular to A-A' and B-B'.

*City Cycle 1, Issue No. 5: (New Issue) If the project's geotechnical consultant is relying on subsurface information from adjacent sites for their site specific fault hazard investigation, the consultant must reference the offsite geotechnical reports utilized to support their conclusions regarding the absence of hazardous faults and state that they agree with the fault investigation data and conclusions contained in those report.*

**GEI Response:** As indicated above in Response No. 4, the off-site geologic report based on borings in Spindrifft Drive immediately adjacent to the subject site was utilized to support our conclusions along with our onsite borings. Therefore, it is our opinion that no significant active bedrock faults offsetting overlying marine terrace deposits exist on site. ***As required by the City of San Diego, GEI states that we agree with the data provided in the referenced Artim and Streiff (1981) report, specifically the boring data utilized adjacent to the subject lot.*** The 1981 report was performed under contract with the U.S. Geological Survey and therefore the information and data presented is considered credible.

In addition, GEI is utilizing geologic mapping of the coastal bluff off-site to the northwest (refer to Reference 2 above, GEI, 2021, Figure No. VIb, reproduced herein as Figure No. VIII), which is parallel to Spindrifft Drive in the section next to the subject property. With three sets of data points regarding the surface of the underlying Point Loma Formation located at the mapped bluff, the borings in Spindrifft Drive and the on-site borings, we interpret and conclude that the Point Loma Formation is not offset or faulted from a significant strike-slip fault standpoint at the subject lot.



*City Cycle 1, Issue No. 6: (New Issue) If the project's geotechnical consultant is relying on subsurface information from adjacent sites for their site specific fault hazard investigation, the consultant should show all offsite exploratory excavations utilized to support their conclusions regarding the absence of hazardous faults on or adjacent to the subject site on their Plot Plan and Site Specific Geologic Map, Figure No. II.*

**GEI Response:** The attached Figure No. II, Site Plan and Site-Specific Geologic Map, depicts the off-site borings by Artim and Streiff (1981) and the recently drilled on-site borings by GEI. In addition, GEI performed geologic mapping of the coastal bluff off-site to the northeast (refer to Reference 2 above, GEI, 2021, Figure No. VIb, reproduced for this response letter as Figure No. VIII). Results of the borings and bluff mapping are discussed above in the response for Issue Nos. 4 and 5.

*City Cycle 1, Issue No. 7: (New Issue) The project's geotechnical consultant should provide logs of all offsite exploratory excavations utilized to support their conclusions.*

**GEI Response:** Logs of Borings B-9 through B-13 from Artim and Streiff, as well as logs of the three GEI borings (B-1, B-2 and B-3) are attached as Figure Nos. IIIa-d and IVa-c, respectively.

*City Cycle 1, Issue No. 8: (New Issue) The project's geotechnical consultant should provide detailed geologic cross sections that demonstrate stratigraphic/structural continuity across the subject site. The cross sections should demonstrate continuity between the subject site geotechnical investigation and the offsite fault trenches or excavations used for the site-specific fault evaluation.*

**GEI Response:** As indicated above in our response to Issue No. 4, cross section A-A' along the portion of Spindrift Drive northwest of the subject site and cross section B-B' across the rear yard parallel to A-A', are attached as Figure Nos. V and VI. In addition, cross section C-C' crossing the site perpendicular to A-A' and B-B' is presented as Figure No. VII. Cross section A-A' depicts the interpreted continuity of the underlying surface of the Cretaceous Point Loma Formation. When compared with elevations of the Point Loma Formation in cross section B-B', it is our opinion that there is no significant bedrock faulting that offsets the overlying marine terrace deposits beneath the subject lot. Cross section C-C' shows the continuity in elevation between cross sections A-A' and B-B'.

The marine terrace deposits (Qop<sub>6</sub>), also referred to as the Bird Rock Terrace, are considered to be approximately 45ka in age at the Spindrift Drive location. Therefore, since they are not offset, there is no active fault underlying the property.



It should be noted that Artim and Streiff (1981) encountered a bedrock change from Cretaceous Point Loma Formation to Eocene Ardath Formation in their continued Spindrift Drive borings (B-1 through B-6) several hundred feet to the northeast. This contact change is bedrock faulting and is interpreted as a significant strand of strike-slip faulting on the Rose Canyon fault. Based on the significant bedrock changes, Artim and Streiff selected to perform a fault trench in the area between their borings B-3 through B-6. Significant faulting was mapped in the trench log in that section (Artim and Streiff, 1981).

*City Cycle 1, Issue No. 9: (New Issue) The project's geotechnical consultant must provide an explicit opinion whether or not a "potentially active" fault trace passes beneath the proposed development. The opinion must be supported by adequate data.*

**GEI Response:** As required by the City of San Diego, GEI provides the explicit opinion that, based on the findings noted above, the site is **not** underlain by an active fault. The numerous borings within and adjacent to the site clearly demonstrate that the underlying Point Loma formation surface elevation is continuous, revealing that a strike-slip fault, which would likely result in significant vertical offsets, has not offset the 45ka Bird Rock Terrace materials.

The City of San Diego identifies "potentially active" faults as faults that have been active during the Quaternary. The 45,000-year-old Bird Rock marine terrace deposits at the location of the project are Quaternary in age. The base of the terrace deposits is not offset and they are in continuous unbroken contact with the underlying Point Loma formation as shown on cross sections A-A', B-B' and C-C', Figure Nos. V, VI and VII, respectively. We therefore render our explicit opinion that a "potentially active" fault trace does not pass below the proposed development.

*City Cycle 1, Issue No. 10: (New Issue) Please note, Storm Water Requirements for the proposed conceptual development will be evaluated by LDR-Engineering review. Priority Development Projects may require an investigation of storm water infiltration feasibility in accordance with the current Storm Water Standards. Check with your LDR-Engineering reviewer for requirements. LDR-Engineering may determine that LDR-Geology review of a storm water infiltration evaluation is required.*

**GEI Response:** If required, GEI will provide a storm water infiltration evaluation.



This opportunity to be of service is sincerely appreciated. Should you have any questions concerning this response letter, please do not hesitate to contact us. Reference to our **Job No. 21-13237** will expedite a response to your inquiries.

Respectfully submitted,

**GEOTECHNICAL EXPLORATION, INC.**



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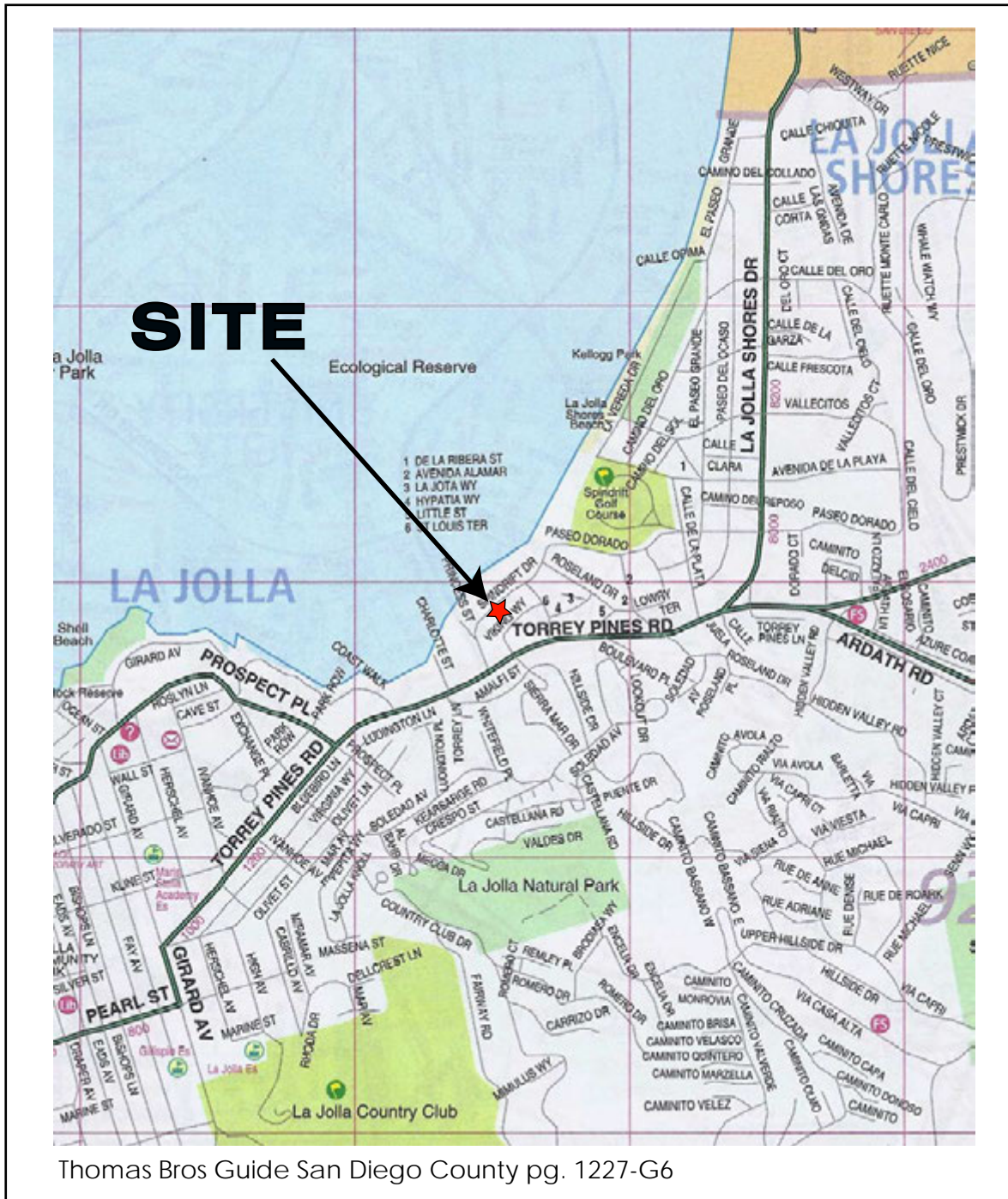


**Attachments**

- Figure No. I, Vicinity Map
- Figure No. II, (Revised) Plot Plan and Site-Specific Geologic Map
- Figure Nos. IIIa-d, Logs of Borings B-9 through B-13 (Artim and Streiff)
- Figure No. IVa-c, GEI boring logs
- Figure No. V, Cross Section A-A'
- Figure No. VI, Cross Section B-B'
- Figure No. VII, Cross Section C-C'
- Figure No. VIII, Reproduced Figure No. VIb from GEI report of June 3, 2021 (Reference 2)



# VICINITY MAP



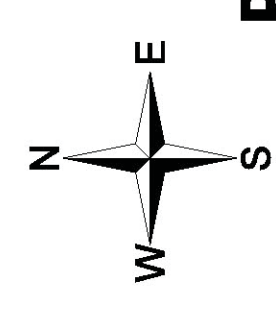
Fanelli-Huber Residence  
1851 Spindrift Drive  
La Jolla, CA.

Figure No. 1  
Job No. 21-13237



**LEGEND**

- FOUND MONUMENT AS INDICATED
  - ( ) RECORD BOUNDARY DATA PER
  - PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - CENTER LINE
  - ADJOINING PROPERTY LINE
  - TIE LINE / REFERENCE LINE
  - EASEMENT LINE
  - FENCE
  - WALL
  - BUILDING OUTLINE
  - BUILDING OVERHANG
  - INDEX CONTOUR LINE
  - INTERMEDIATE CONTOUR LINE
  - SPOT ELEVATION
  - CONC. CONCRETE
  - BRICK
  - ASPHALT
- METER - WATER
  - VAULT
  - UTILITY BOX
  - FIRE HYDRANT
  - VALVE - WATER
  - CLEANOUT
  - RISER - COMMUNICATION
  - GATE
  - TREE/DECIDUOUS
  - SHRUB
  - TREE/PALM AERIAL
  - TREE AERIAL
  - VEGETATION
  - FF FINISH FLOOR
  - RF ROOF
  - CONC. CONCRETE
  - ASPH. ASPHALT



GRAPHIC SCALE  
(approximate)  
SCALE: 1" = 20'  
0 20 40 60

**PASCO LARET SUITER & ASSOCIATES**  
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**LEGEND**

- HP-4 Approximate Location of Exploratory Handpit
- B-3 Approximate Location of Exploratory Boring
- B-13 (WIND) Approximate Location of Exploratory Boring (Woodward-Cyde)
- C Approximate Location of Geologic Cross Section
- Proposed Structure
- Existing Structure
- Approximate Anticipated Limits of Grading
- Approximate Geologic Contact

**GEOLOGIC LEGEND**

- Qts Landscape Topsoil
- Claf Artificial Fill
- Css Subsoil
- Cop<sub>6</sub> Old Paralic Deposits (unit 6)
- Kp Point Loma Formation

REFERENCE: This Plot Plan is not to be used for legal purposes. Locations and dimensions are approximate. The locations and dimensions of structures and utilities may be observed from the Approved Building Plans or the "As-Built" Grading Plans.

**PLOT PLAN AND SITE SPECIFIC GEOLOGIC MAP**

Fanelti-Huber Residence  
1857 Spindrift Drive  
La Jolla, CA.  
Figure No. II  
Job No. 21-13237



December, 2021



Boring 9

Approximate El. 55'

DEPTH IN FEET	TEST DATA			*OTHER TESTS	SAMPLE NUMBER	SOIL DESCRIPTION
	*MC	*DD	*BC			
0						8" Asphalt Concrete
5			32		9-1	Medium dense, moist, light to dark reddish brown silty fine to medium sand (SM) PLEISTOCENE TERRACE DEPOSITS (Q <sub>3</sub> ) Light scattered gravels between 3½' to 4½' Scattered layer of gravels with cobbles at base
10			50/6"		9-2	Very dense, moist, yellowish brown silty fine to medium sand (SM) POINT LOMA FORMATION (Kp)
15						Bottom of Hole

Boring 10

DEPTH IN FEET	TEST DATA			*OTHER TESTS	SAMPLE NUMBER	SOIL DESCRIPTION
	*MC	*DD	*BC			
0						8" Asphalt Concrete
5			20		10-1	Medium dense, moist, brown silty to clayey fine to medium sand (SM) PLEISTOCENE SLOPEWASH ? Clayey zones ?
10			50/6"		10-2	Very dense, moist, light yellowish brown micaceous silty fine to medium sand (SM) POINT LOMA FORMATION (Kp)
15						Bottom of Hole

Figure No. IIIa  
Job No. 21-13237



\*For description of symbols, see Figure A-2

LOG OF TEST BORINGS 9 AND 10				
DRAWN BY: mrk	CHECKED BY: [Signature]	PROJECT NO: 501351-GE03	DATE: 10-2-81	FIGURE NO: A-12

Boring 11

Approximate El. 66'

DEPTH IN FEET	TEST DATA			*OTHER TESTS	SAMPLE NUMBER	SOIL DESCRIPTION
	*MC	*DD	*BC			
0						7" Asphalt Concrete
5			50		11-1	Medium dense to dense, moist, brown silty clayey medium sand (SM) OLDER PLEISTOCENE TERRACE DEPOSITS (Qt)
10			50/6"		11-2	Dense, moist, brown silty fine to coarse sand (SM) traces of white carbonate material (CaCO <sub>3</sub> ) OLDER PLEISTOCENE TERRACE DEPOSITS (Qt) Coarse clean sand from 6' to 7'
15			60/6"		11-3	Very dense, moist, yellowish brown, micaceous silty fine to medium sand (SM) POINT LOMA FORMATION (Kp) With thin clayey silt layers
15						Bottom of Hole
20						
25						
30						
35						
40						

Figure No. IIIb  
Job No. 21-13237



\*For description of symbols, see Figure A-2

LOG OF TEST BORING 11				
DRAWN BY: mrc	CHECKED BY: <i>[Signature]</i>	PROJECT NO: 501351-GE03	DATE: 10-2-81	FIGURE NO: A-13

Boring 12

Approximate El. 71'

DEPTH IN FEET	TEST DATA			*OTHER TESTS	SAMPLE NUMBER	SOIL DESCRIPTION
	*MC	*DD	*BC			
						6" Asphalt Concrete
						Dense, moist, brown silty clayey medium sand (SM) OLDER PLEISTOCENE TERRACE DEPOSIT (Qt)
5			42		12-1	Dense, moist, brown silty fine to coarse sand (SM) OLDER PLEISTOCENE TERRACE DEPOSITS (Qt) Traces of white carbonate material (CaCO <sub>2</sub> )
10			88		12-2	Clean coarse sand Very dense, moist, light yellowish brown micaceous silty fine to medium sand (SM) POINT LOMA FORMATION
15			60/6"		12-3	
						Bottom of Hole
20						
25						
30						
35						
40						

Figure No. IIIc  
Job No. 21-13237



\*For description of symbols, see Figure A-2

LOG OF TEST BORING 12				
DRAWN BY: mzk	CHECKED BY: <i>UJ</i>	PROJECT NO: 501351-GE03	DATE: 10-2-81	FIGURE NO: A-14

Boring 13

Approximate El. 74'

DEPTH IN FEET	TEST DATA			*OTHER TESTS	SAMPLE NUMBER	SOIL DESCRIPTION
	*MC	*DD	*BC			
0						7" Asphalt Concrete
5			26		13-1	Medium dense, moist, brown silty clayey fine to medium sand (SM) OLDER PLEISTOCENE TERRACE DEPOSITS (Qt)
10			37		13-2	Dense, moist, brown silty fine to coarse sand (SM) with traces of white carbonite material (CaCO <sub>3</sub> ) OLDER PLEISTOCENE TERRACE DEPOSITS (Qt) ← Clean coarse sand
15			50/6"		13-3	Very dense, moist, light yellowish brown micaceous silty fine to medium sand (SM) POINT LOMA FORMATION (Kp)
20						Bottom of Hole
25						
30						
35						
40						

Figure No. III d  
Job No. 21-13237



\* For description of symbols, see Figure A-2

LOG OF TEST BORING 13				
DRAWN BY: mzk	CHECKED BY: JS	PROJECT NO: 501351-GE03	DATE: 10-2-81	FIGURE NO: A-15

EQUIPMENT <b>Limited Access Auger Drill Rig</b>	DIMENSION & TYPE OF EXCAVATION <b>6-inch diameter Boring</b>	DATE LOGGED <b>10-26-21</b>
SURFACE ELEVATION <b>± 75' Mean Sea Level</b>	GROUNDWATER/ SEEPAGE DEPTH <b>Not Encountered</b>	LOGGED BY <b>JKH</b>

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION		IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.I.D.)	EXPAN. + CONSOL. (%)	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
			DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)	U.S.C.S.								
75' (MSL)				<b>CONCRETE SLAB AND STONE TILE , 5" thick.</b>								
				<b>SANDY CLAY , with some roots and asphalt fragments. Firm. Moist. Dark brown.</b>	CL						14	3"
2				<b>FILL (Qaf)</b>							11	2"
4											17	2"
6											19	3"
8				<b>CLAYEY SAND , fine- to medium-grained. Medium dense. Moist. Red-brown.</b>	SC						19	2"
				<b>OLD PARALIC DEPOSITS (Qop 6)</b>							16	2"
10											45	3"
12				<b>SILTY SAND , fine- to medium-grained. Medium dense. Damp. Red-brown.</b>	SM						30	2"
				<b>OLD PARALIC DEPOSITS (Qop 6)</b>							27	2"
14				<b>SAND , fine- to coarse-grained; poorly cemented. Dense. Moist. Light brown.</b>	SM						68	3"
16				<b>OLD PARALIC DEPOSITS (Qop 6)</b>							76	2"
18				<b>SILTY SAND , fine- to medium-grained. Very dense. Damp to moist. Light yellow-brown to light gray-brown.</b>	SM						66	2"
20				<b>POINT LOMA FORMATION (Kp)</b> Bottom @ 19'							78	2"

EXPLORATION LOG 13237 FANELLI.GPJ GEO\_EXPL\_GDT 12/2/21

	JOB NAME <b>Fanelli-Huber Residence</b>		LOG No. <b>B-1</b>
	SITE LOCATION <b>1851 Spindrift Drive, La Jolla, CA</b>		
	JOB NUMBER <b>21-13237</b>	REVIEWED BY <b>LDR/JAC</b>	
	FIGURE NUMBER <b>IVa</b>		

EQUIPMENT <b>Limited Access Auger Drill Rig</b>	DIMENSION & TYPE OF EXCAVATION <b>6-inch diameter Boring</b>	DATE LOGGED <b>10-26-21</b>
SURFACE ELEVATION <b>± 75' Mean Sea Level</b>	GROUNDWATER/ SEEPAGE DEPTH <b>Not Encountered</b>	LOGGED BY <b>JKH</b>

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION		U.S.C.S.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.I.D.)	EXPAN. + CONSOL. (%)	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
			DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)										
75' (MSL)				<b>SILTY SAND</b> , fine- to medium-grained, with some rock fragments. Loose to medium dense. Damp. Dark brown.	SM								
2				<b>FILL (Qaf)</b> <b>SANDY CLAY</b> . Firm. Moist. Dark brown.	CL								
4				<b>FILL (Qaf)</b>									
6													
8				<b>SILTY SAND</b> , fine- to medium-grained, with some lenses of gray sand. Medium dense. Damp. Dark brown.	SM							16	2"
				<b>OLD PARALIC DEPOSITS (Qop 6)</b>								26	2"
65' (MSL)				<b>SAND</b> , fine- to medium-grained; poorly cemented. Medium dense. Damp. Olive-brown.	SP SM							19	2"
				<b>OLD PARALIC DEPOSITS (Qop 6)</b>								18	2"
				<b>SILTY SAND</b> , fine- to coarse-grained. Medium dense. Slightly moist. Yellow-brown.								25	2"
				<b>OLD PARALIC DEPOSITS (Qop 6)</b>								36	2"
												39	2"
												37	2"
57' (MSL)				<b>SILTY SAND</b> , fine- to medium-grained. Dense. Damp. Light yellow-brown.	SM							74	2"
				<b>POINT LOMA FORMATION (Kp)</b>									
				Bottom @ 19'									

EXPLORATION LOG 13237 FANELLI.GPJ GEO\_EXPL\_GDT 12/2/21

	JOB NAME <b>Fanelli-Huber Residence</b>	REVIEWED BY <b>LDR/JAC</b>	LOG No. <b>B-2</b>
	SITE LOCATION <b>1851 Spindrift Drive, La Jolla, CA</b>		
	JOB NUMBER <b>21-13237</b>		
	FIGURE NUMBER <b>IVb</b>		

EQUIPMENT <b>Limited Access Auger Drill Rig</b>	DIMENSION & TYPE OF EXCAVATION <b>6-inch diameter Boring</b>	DATE LOGGED <b>10-26-21</b>
SURFACE ELEVATION <b>± 75' Mean Sea Level</b>	GROUNDWATER/ SEEPAGE DEPTH <b>Not Encountered</b>	LOGGED BY <b>JKH</b>

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION		IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.I.D.)	EXPAN. + CONSOL. (%)	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
			DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)	U.S.C.S.								
0 - 2			<b>SILTY SAND</b> , fine- to medium-grained, with some rock fragments. Loose to medium dense. Damp. Dark brown.  <b>FILL (Qaf)</b>	SM								
2 - 4			<b>SANDY CLAY</b> , with some red clay pipe debris. Firm to stiff. Moist. Dark brown.  <b>FILL (Qaf)</b>	CL								
4 - 8			<b>SILTY SAND</b> , fine- to medium-grained. Medium dense. Damp. Dark brown.  <b>OLD PARALIC DEPOSITS (Qop 6)</b>	SM								
8 - 10											36	2"
10 - 12											56	2"
12 - 14			Refusal on cobble.  Bottom @ 13'									

EXPLORATION LOG 13237 FANELLI.GPJ GEO\_EXPL\_GDT 12/2/21

PERCHED WATER TABLE BULK BAG SAMPLE IN-PLACE SAMPLE MODIFIED CALIFORNIA SAMPLE NUCLEAR FIELD DENSITY TEST STANDARD PENETRATION TEST	JOB NAME <b>Fanelli-Huber Residence</b>	
	SITE LOCATION <b>1851 Spindrift Drive, La Jolla, CA</b>	
	JOB NUMBER <b>21-13237</b>	REVIEWED BY <b>LDR/JAC</b>
	FIGURE NUMBER <b>IVc</b>	LOG No. <b>B-3</b>





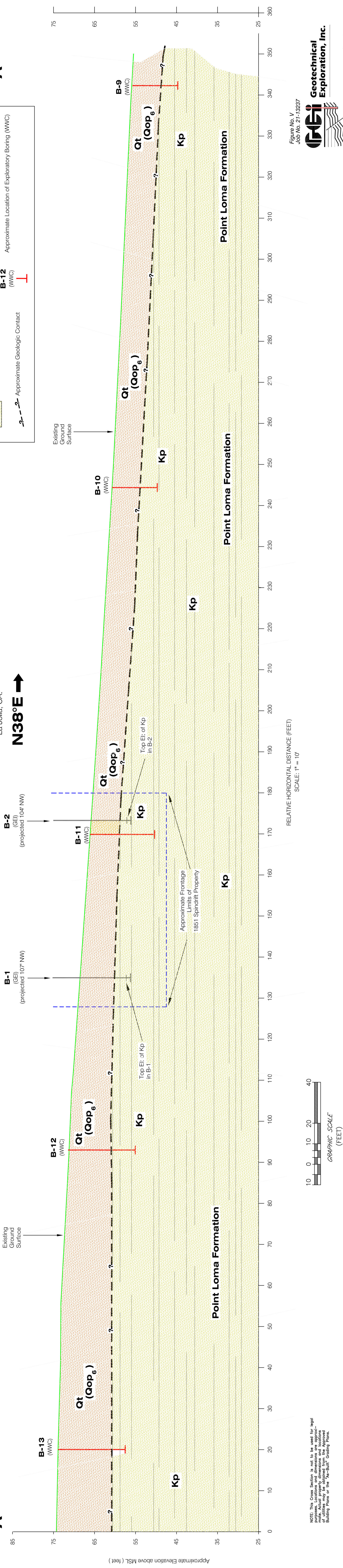
# GEOLOGIC CROSS SECTION A-A'

Fanelli-Huber Residence  
1851 Spindrift Drive  
La Jolla, CA.

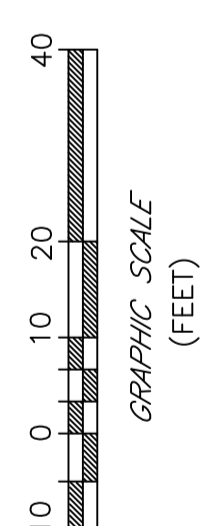
**N38°E** →

**A'**

**A**



RELATIVE HORIZONTAL DISTANCE (FEET)  
SCALE: 1" = 10'



NOTE: This Cross Section is not to be used for legal purposes. Locations and dimensions are approximate. Actual property dimensions and locations of utilities may be obtained from the Approved Building Plans or the As-Built Grading Plans.

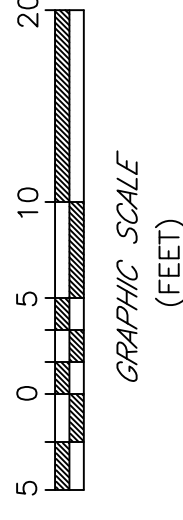
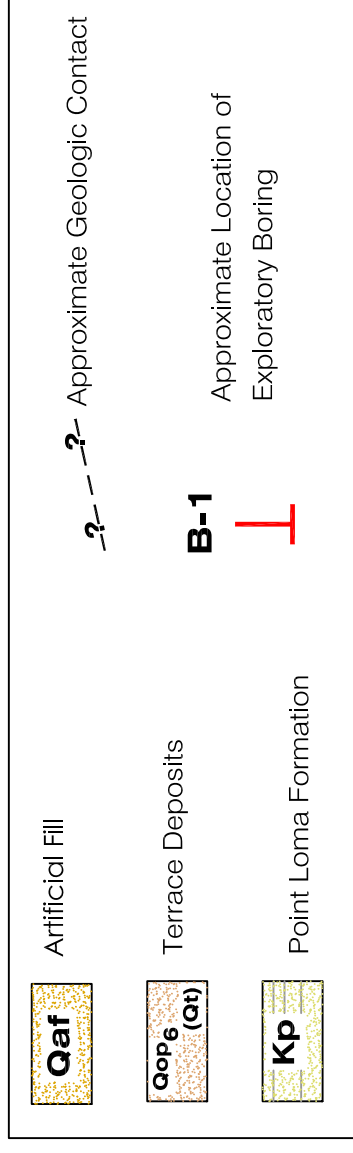
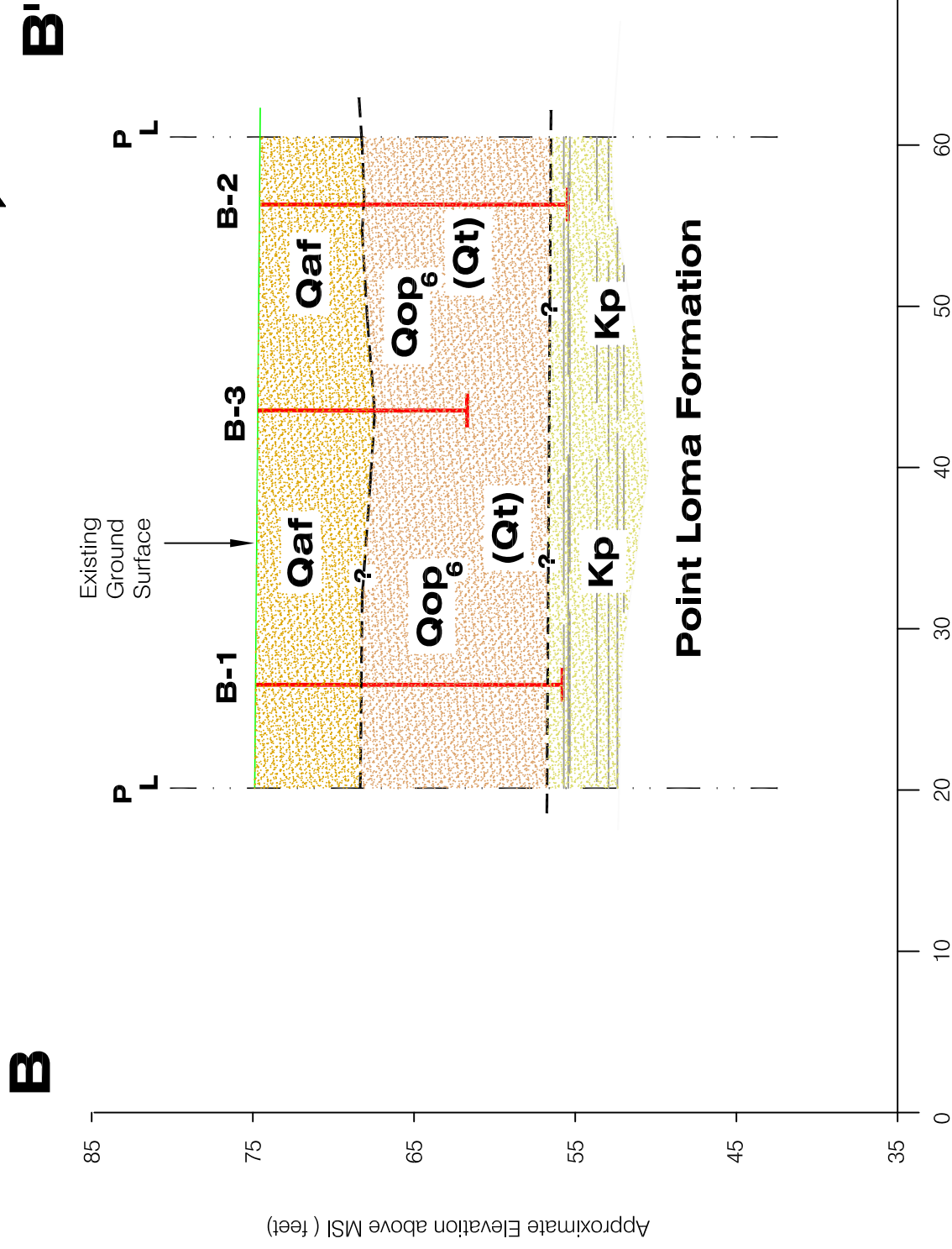
Figure No. V  
Job No. 21-13237



# GEOLOGIC CROSS SECTION B-B'

Fanelli-Huber Residence  
 1851 Spindrift Drive  
 La Jolla, CA.

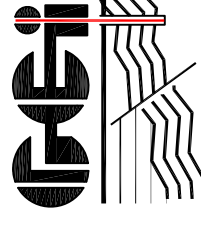
**N42°E** →



Relative Horizontal Distance (feet)  
 Scale: 1" = 10'  
 (Horizontal and Vertical)

Figure No. VI

Job No. 21-13237



**Geotechnical  
 Exploration, Inc.**

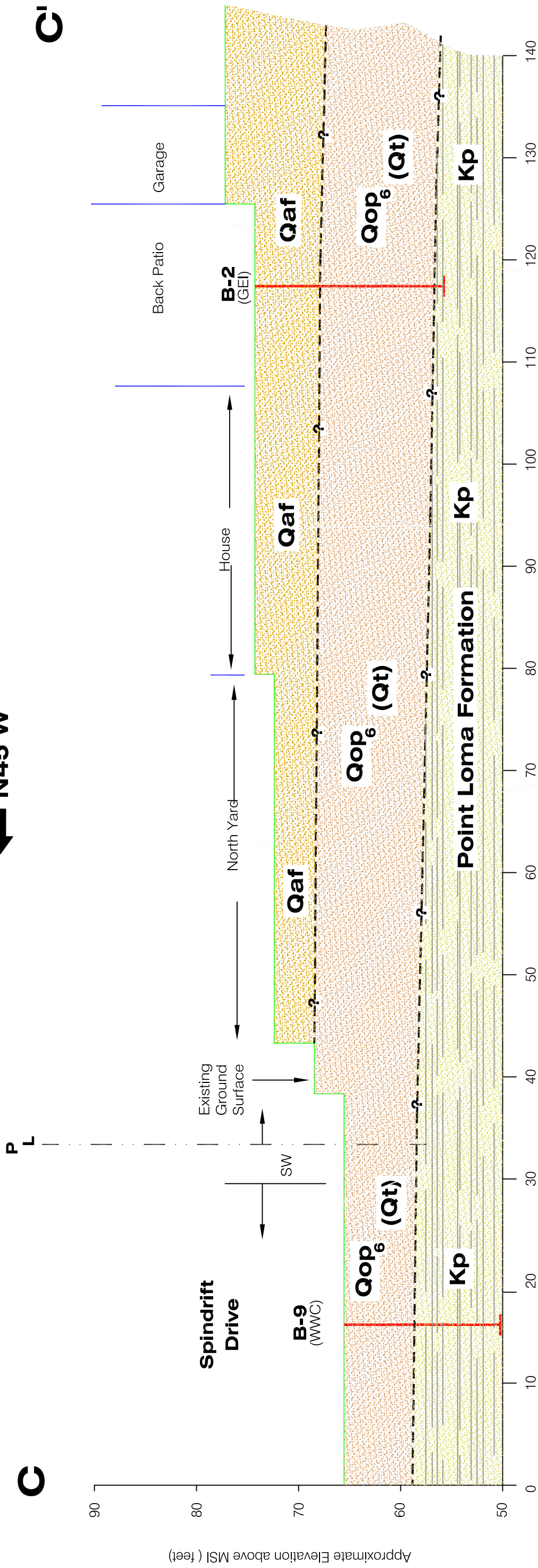
December 2021

NOTE: This Cross Section is not to be used for legal purposes. Locations and dimensions are approximate. Actual property dimensions and locations of utilities may be obtained from the Approved Building Plans or the "As-Built" Grading Plans.

# GEOLOGIC CROSS SECTION C-C'

Fanelli-Huber Residence  
 1851 Spindrift Drive  
 La Jolla, CA.

← **N45°W**



Relative Horizontal Distance (feet)  
 Scale: 1" = 10'  
 (Horizontal and Vertical)

	Artificial Fill		Approximate Geologic Contact
	Terrace Deposits		Approximate Location of Exploratory Boring
	Point Loma Formation		

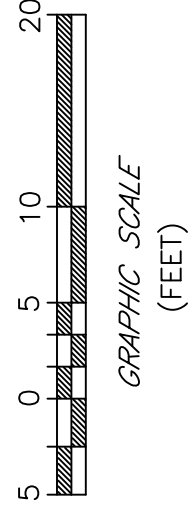
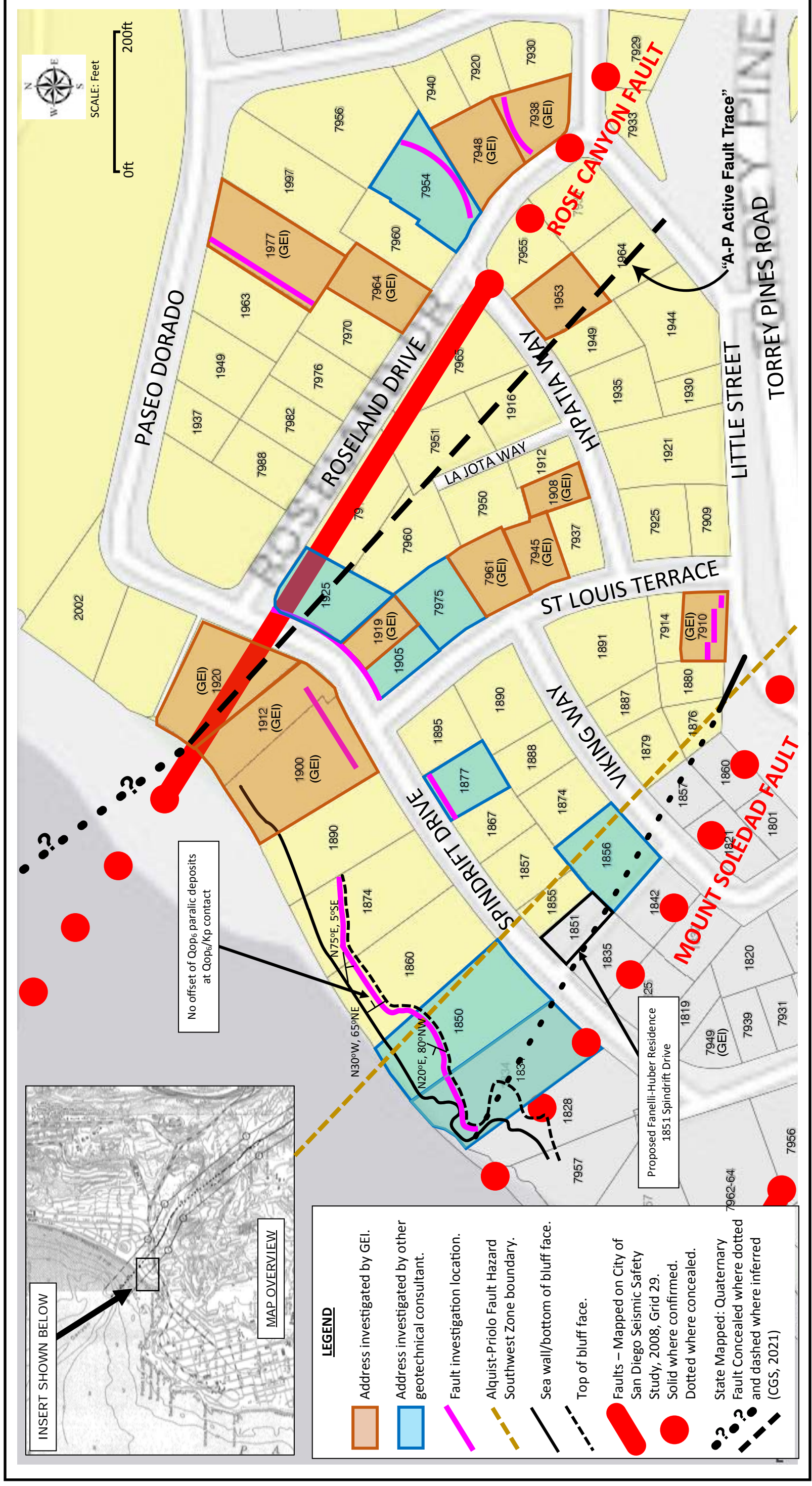


Figure No. VII  
 Job No. 21-13237

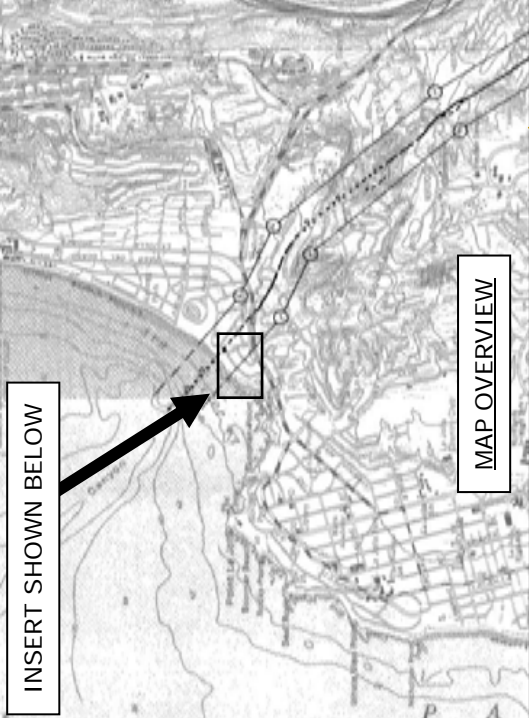


December 2021

NOTE: This Cross Section is not to be used for legal purposes. Locations and dimensions are approximate. Actual property dimensions and locations of utilities may be obtained from the Approved Building Plans or the "As-Built" Grading Plans.



INSERT SHOWN BELOW



MAP OVERVIEW

- LEGEND**
- Address investigated by GEI.
  - Address investigated by other geotechnical consultant.
  - Fault investigation location.
  - Alquist-Priolo Fault Hazard Southwest Zone boundary.
  - Sea wall/bottom of bluff face.
  - Top of bluff face.
  - Faults – Mapped on City of San Diego Seismic Safety Study, 2008, Grid 29.  
Solid where confirmed.  
Dotted where concealed.
  - State Mapped: Quaternary Fault Concealed where dotted and dashed where inferred (CGS, 2021)
  -

No offset of Qop<sub>6</sub> parallel deposits at Qop<sub>6</sub>/Kp contact

Proposed Fanelli-Huber Residence  
1851 Spindrift Drive

## PRIOR INVESTIGATION LOCATIONS ON EXPANDED ALQUIST-PRIOLO MAP

(revised from Figure No. VIb, GEI June 3, 2021)

Figure No. VIII

Job No. 21-13237



December 2021