

FRED AFLAKIAN, PG, CEG
CONSULTING ENGINEERING GEOLOGIST

July 1, 2020

Project No.19-805 Fault

S2 Modular

24360 Village Walk Pl.
Murrieta, California 92562

Attention: Lucy Martinez

Subject: Response to Peer Review by Leighton Consulting dated April 3, 2020, Proposed S2A Showroom and Factory Compound, APNs 439-030-009, 439-030-010 and 439-400-023, West of State Street and Crow's Nest Place, City of Hemet, Riverside County, California

Lucy,

Presented herewith is our response to the peer review by Leighton Consulting dated April 3, 2020 for the subject site. A copy of the peer review is included with this report.

Comment 1:

Consult with Riverside County Geologist and or City to review and available reports relative to faulting on the adjacent or nearby developed properties. A discussion of those findings should be provided.

Response:

The following reports were provided by the Riverside County Geologist:

- Gary S. Rasmussen and Associates, 1975, Engineering Geology Investigation, Mesa Terrace Tract, Lot 4, Hemet, California, Project No. 1104, dated June 16, 1975.
- Lohr, Lewis S., 1977, Fault Hazard Report for a Portion of Lots 104 and 105, of the Estudillo Land and Water Company Addition as shown in M.B. 9-410 Records of San Diego County, Lying within the Rancho San Jacinto Viejo, Job No. 27-77-5, dated May 17, 1977.

The engineering geology investigation prepared by Gary S. Rasmussen was located directly to the south of and included a portion of the subject site. Fault trenching was performed as part of their investigation. Applicable fault trench locations are presented on the Fault Trench Location Map, Plate 1.

The fault hazard report prepared by Lewis S. Lohr was located directly north of the subject site. Fault trenching was performed as part of their investigation. Applicable fault trench locations are presented on the Fault Trench Location Map, Plate 1.

The fault setback zone was adjusted at the north and south ends of the subject site to correlate with adjacent studies.

In addition to the above reports, we also reviewed the following geotechnical report for the subject site:

- Soil Exploration Company, Inc., 2019, Preliminary Soil Investigation, Infiltration Tests and Liquefaction Evaluation Report, Proposed Modular Homes Manufacturing Facility, State Street (APN 439-030-009, 439-030-010 and 439-040-023), City of Hemet, California, Project No. 1999-01, dated October 11, 2019

Pertinent data from this report was utilized in this response.

Comment 2:

Include limits of Alquist-Priolo zone on Site Plan (Plate 1).

Response:

The limits of Alquist-Priolo zone are shown on the Fault Trench Location Map (Plate 1).

Comment 3:

For proposed buildings "D" and "E" that occupy un-trenched portions of the A-P Zone, provide clear evidence of the absence of faulting at those building locations.

Response:

Fault trenching was performed by Rasmussen and Associates across the un-trenched portion of the AP zone in the northeast portion of the site. No evidence of faulting was noted in this area.

Comment 4:

Discuss the potential for possible Holocene-aged faulting buried by young deposits or obscured by historic land use in the lower lying eastern un-trenched portions of A-P zone.

Response:

Fault trenching was performed by Rasmussen and Associates across the un-trenched portion of the AP zone in the northeast portion of the site. No evidence of faulting was noted in this area.

Comment 5:

Secondary seismic hazards including: ground subsidence and liquefaction; ground lurching; lateral spreading; and seismically induced flooding should also be addressed, and mitigation recommendations provided as necessary.

Response:

Ground Subsidence

The county of Riverside has mapped the general site area as being susceptible to ground subsidence. Continued pumping of groundwater within the graben between the Casa Loma and Claremont branches of the San Jacinto fault zone has resulted in regional ground subsidence in some areas of the San Jacinto Valley. Continued pumping of groundwater in the vicinity of the

tract will probably result in continual lowering of the groundwater table northeast of the Casa Loma fault with additional regional subsidence of that area in the future.

Liquefaction

The County of Riverside has mapped the general site area as being moderately susceptible to liquefaction. Soil Exploration Company, Inc. (2019) performed a liquefaction evaluation for the subject site. The results of the evaluation are presented in their referenced report.

Ground Lurching and Lateral Spreading

Ground lurching and lateral spreading could occur due to the differing elevations on either side of the fault. However, the hazardous effects during an earthquake should be confined to the same zone as would be disturbed by fault rupture (the zone between recommended set-back lines on the enclosed Plate 1).

Flooding

The project site is not located in a designated area having the potential for flooding by the County of Riverside. The site lies far enough from the coast or large inland body of water to preclude the dangers from flood inundation.

CLOSURE

Our findings were obtained in accordance with generally accepted current professional principles and local practice in geotechnical engineering. We make no other warranty, either express or implied.

This report is subject to review by the controlling authorities for the project. We thank you for the opportunity of providing our services to you on this project.

Edward L. Burrows, MS, PG, CEG 1750
Engineering Geologist

Fred Aflakian, PG, CEG 2051
Engineering Geologist

Attachments:

Plate 1 – Fault Trench Location Map

Appendix A - References

Appendix B – Geologic Cross-Sections by Gary S. Rasmussen and Associates and Lewis Lohr

**APPENDIX A
REFERENCES**

Aflakian, Fred, PG, CEG, 2019, Fault Rupture Investigation, Proposed S2A Showroom and Factory Compound, APNs 439-020-009, 439-030-010, 439-400-023, West Side of State Street and Crow's Nest Place, City of Hemet, Riverside County, California, Project No. 19-605 Fault, dated September 26, 2019

Gary S. Rasmussen and Associates, 1975, Engineering Geology Investigation, Mesa Terrace Tract, Lot 4, Hemet, California, Project No. 1104, dated June 16, 1975

Leighton Consulting, Inc., 2020, Geologic Fault Hazard Peer Review, Proposed S2A Showroom and Factory, (APNs 439-030-009, 439-030-010 and 439-400-023), City of Hemet, California, Project No.12735.001, dated April 3, 2020

Lohr, Lewis S., 1977, Fault Hazard Report for a Portion of Lots 104 and 105, of the Estudillo Land and Water Company Addition as shown in M.B. 9-410 Records of San Diego County, Lying within the Rancho San Jacinto Viejo, Job No. 27-77-5, dated May 17, 1977

Riverside County Planning Commission – Planning Department, 1975, County Geologic Report #36, Parcel Map 6911, Project 1104, GR-36, dated August 11, 1975

Riverside County Geographic Information System (GIS), <https://gis.countyofriverside.us/>

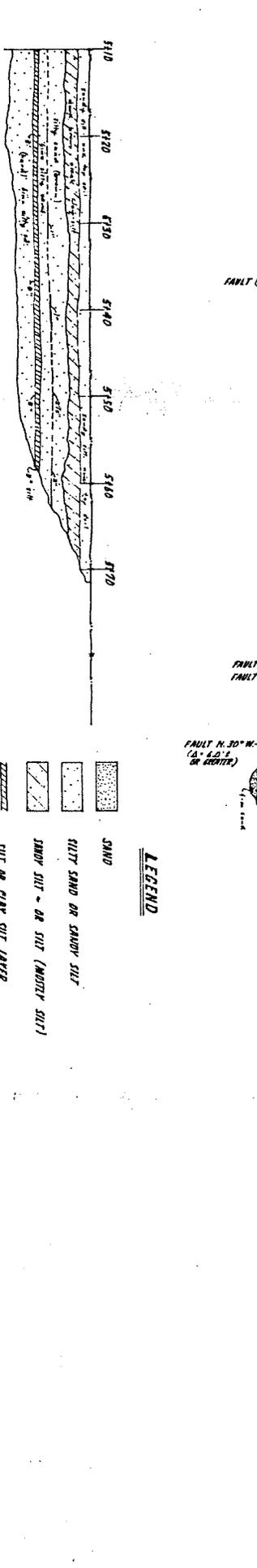
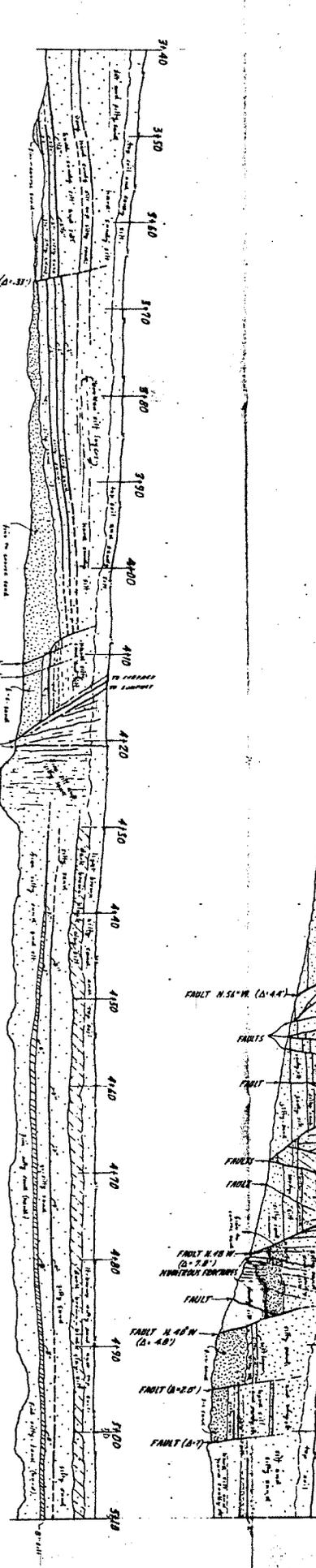
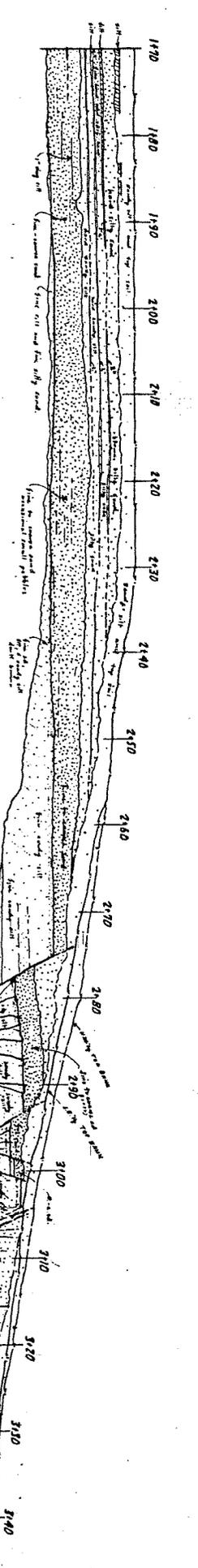
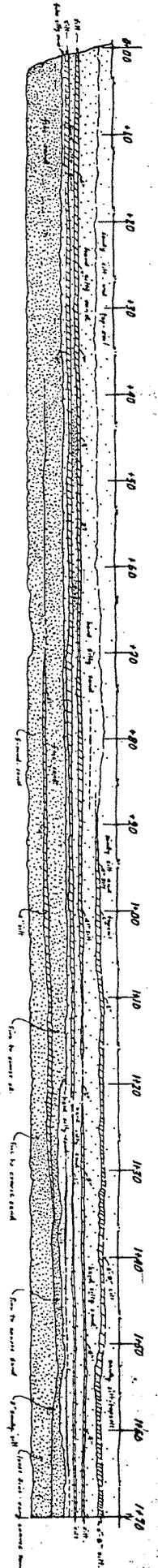
Sake Engineering Inc., 2019, City of Hemet Plot Plan, Lot 5 and a Portion of Lot 4 of Mesa Terrace Tract, in the City of Hemet, County of Riverside, State of California, dated April 29, 2020

Soil Exploration Company, Inc., 2019, Preliminary Soil Investigation, Infiltration Tests and Liquefaction Evaluation Report, Proposed Modular Homes Manufacturing Facility, State Street (APN 439-030-009, 439-030-010 and 439-040-023), City of Hemet, California, Project No. 1999-01, dated October 11, 2019

Appendix B

Geologic Cross-Sections by Gary S. Rasmussen and Associates and Lewis Lohr

DRAFT



MAIN TRENCH (LOOKING NORTHWESTERLY)
 SCALE: 1" = 8' HORIZONTALLY AND VERTICALLY

- LEGEND**
- SAND
 - SILTY SAND OR SANDY SILT
 - SILTY SILT - OR SILT (MOSTLY SILT)
 - SILT OR CLAY SILT LAYER
 - EROSION SURFACE
 - FAULT
 - NATURAL GROUND
 - APPARENT DISPLACEMENT

LEWIS S. LOHR, REGISTERED GEOLOGIST NO. 2666
 4081 LE GRANDE DR., HENRY, CALIFORNIA, 94-658-1048

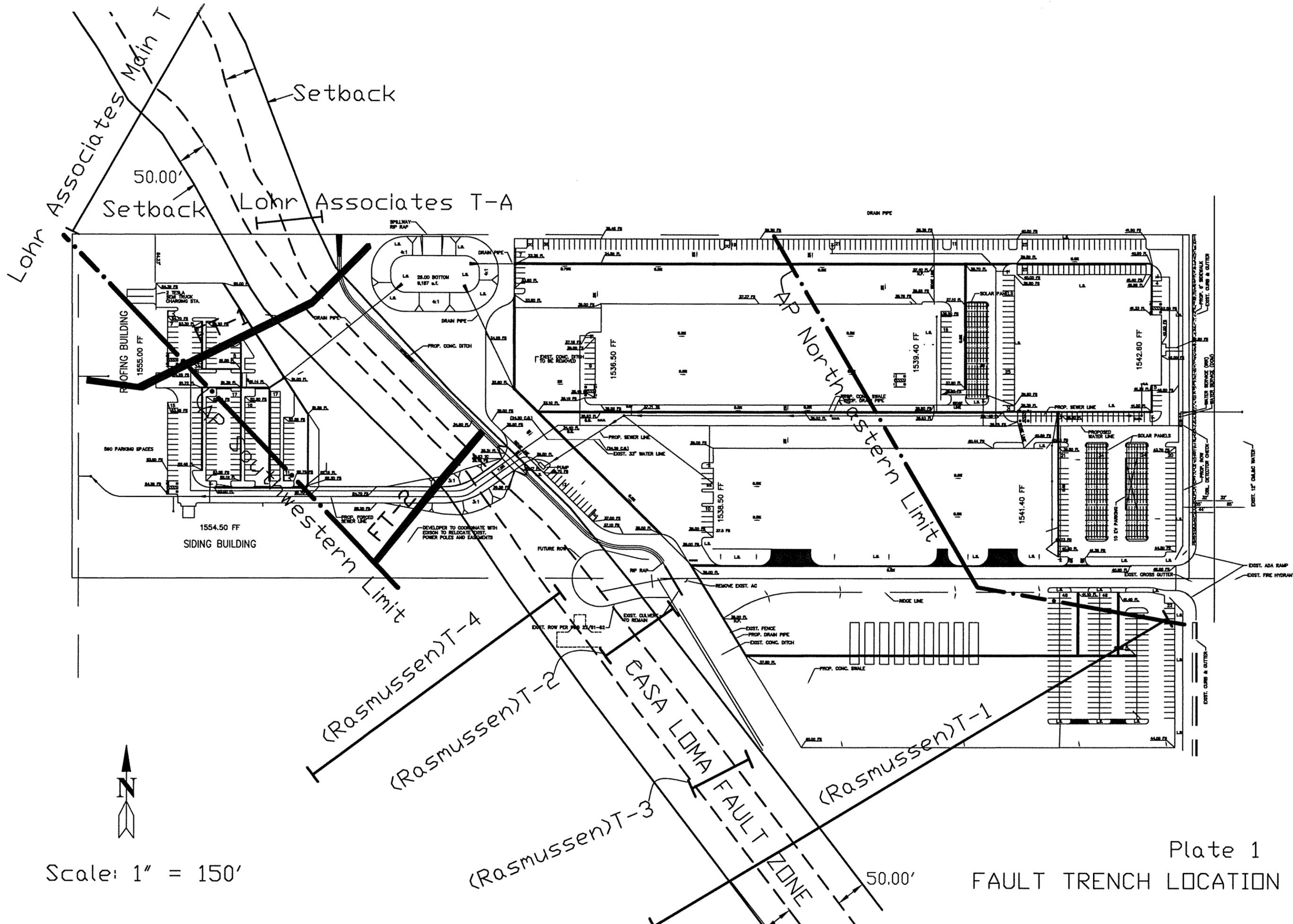
TRENCH CROSS SECTIONS

FOR
 PROPERTY LING SOUTHERLY OF ESPANADE AVENUE
 BETWEEN PALM AVENUE AND STATE STREET

PLATE 1

JOB NO. 27-77-5

GR-80



Scale: 1" = 150'

Plate 1
FAULT TRENCH LOCATION MAP