APPENDIX H:
GEOTECHNICAL INVESTIGATION REPORT

FEFFER
GEOLOGICAL CONSULTING

September 17, 2020 File No. 2445-04

Jonathan Frankel
New Urban West, Inc.
2001 Wilshire Blvd., Ste. 401
Santa Monica, CA 90403

Subject: **GEOTECHNICAL INVESTIGATION FOR SUSTAINABLE COMMUNITIES ENVIRONMENTAL ASSESSMENT ("SCEA")**
Proposed Multi Family Residential Development
Intersection Of Lost Canyon Road & Harriman Drive
Canyon Country - Santa Clarita, CA 91387
APN: 2840-004-009

Dear Mr. Frankel,

Feffer Geological Consulting is pleased to submit the following preliminary Geotechnical Investigation Report for the proposed development located in the City of Santa Clarita, California. This report is prepared to supplement the draft Sustainable Communities Environmental Assessment ("SCEA") for this project.

We appreciate the opportunity to be of service. Should you have any questions regarding the information contained in this report, please do not hesitate to contact us.

Sincerely,

FEFFER GEOLOGICAL CONSULTING, INC.

PROFESSIONAL GEOLOGIST JOSHUA FEFFER No. 2138 Certified Engineering Geologist STATE OF CALIFORNIA

Joshua R. Feffer
Principal Engineering Geologist
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1.0 INTRODUCTION

1.1 PURPOSE

As requested, Feffer Geological Consulting has completed a preliminary Geotechnical Investigation for the proposed development. The purpose of this investigation is to evaluate the geotechnical conditions at the site in the areas of the proposed construction and provide geotechnical parameters and preliminary recommendations for future design and development. This report is prepared as a technical appendix for the project's draft SCEA.

Based on our investigation, it is our opinion that the proposed construction is feasible from a geotechnical standpoint. When final plans for the proposed construction become available, they should be reviewed by the project soils engineer and engineering geologist of record. A separate geotechnical report will be prepared to provide design level values for development once plans have been finalized.

1.2 SCOPE OF SERVICES

The scope of work performed during this investigation involved the following;

- Research and review of available pertinent geotechnical literature and previous reports for the project site;

- Field Exploration & Testing
  - Subsurface exploration consisting of the drilling of seven borings (B1, B2, B3, B4, B5, B6, B7) the advancement of six cone penetrometer test (CPT) soundings (CPT1, CPT2, CPT3, CPT4, CPT5, CPT6) and the excavation of four test pits (TP1, TP2, TP3, TP4);
  - Sampling and logging of the subsurface soils;
  - Laboratory testing of selected soil samples collected from the subsurface exploration to determine the engineering properties of the underlying earth materials;
  - Engineering and geologic analysis of the field and laboratory data;

- Compliance with *CEQA Appendix G* and an assessment of:
  - Rupture of a known earthquake
  - Strong seismic ground shaking
  - Seismic-related ground failure
  - Landslides
  - Soil erosion or loss of topsoil
  - Unstable geologic unit or soils
  - Expansive soils
  - Support of septic tanks or alternative waste systems

- Preparation of this report presenting our findings, conclusions, and preliminary recommendations for the proposed construction.

1.3 SITE DESCRIPTION

The subject site is located on the east side of Lost Canyon Road at its intersection with Harriman Drive in the Canyon Country area of the City of Santa Clarita, CA. The subject consists of an undeveloped approximately 20 acre irregularly shaped parcel of land. The site is bounded by Lost Canyon Road to the west, Harriman Drive to the north, and Metro Railway lines to the south and east.

The site has approximately twenty feet of overall elevation change and gently descends to the west and northwest with an approximate gradient of 12:1 (horizontal to vertical) or gentler. A graded 2:1 (horizontal to vertical) slope is present along the western portion of the site associated with the extension and construction of Lost Canyon Road and ranges in height from twenty to thirty feet. Figure 1 is a map illustrating the site location. Figure 2 is an aerial photograph with a topographic overlay of the site and vicinity.

1.4 PROPOSED CONSTRUCTION

It is our understanding that the proposed project will consist of the construction of 150 non-age restricted three-story townhomes, 179 non-age restricted apartments, 119 age-qualified apartments, and 50 deed restricted affordable senior apartments. The extent of development is illustrated on conceptual development plans included in Appendix C.

Final plans including structure heights, specific building footprints, and subterranean depths are still within the development phase and will be updated upon final project design. However, preliminary recommendations are based on the proposed maximum tower heights, subterranean depths, and loading factors. The findings and recommendations within this report are adequate to support the analysis of the project's potential geotechnical impacts.

1.5 DOCUMENT REVIEW

City files were researched and previous work on the project site and surrounding area was evaluated for use by this firm. Several reports are referenced but were not located within the city files. The following reports were used to supplement the findings of this investigation:

Reports for the Subject Site and Site to the North:

Assessor's Parcel Nos. 2840-004-009 and 2840-004-010
Geotechnical Constraints Investigation Cloyd Property Assessor's Parcel Nos. 2840-004-009 and 2840-004-010 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated June 29, 2007

Reports for the Property to the North:

Tentative Tract Map No. 69164 & 69164-01 Assessor's Parcel No. 2840-004-010

Geotechnical Report VOLUME I OF II For Tentative Tract Map No. 69164 Canyon Country, California Volume I Of II For Vista Canyon Ranch, Llc by RTF & A Geotechnical Engineering & Engineering Geology, dated November 14, 2008

Geotechnical Report VOLUME I OF II For Tentative Tract Map No. 69164 Canyon Country, California Volume II Of II For Vista Canyon Ranch, Llc by RTF & A Geotechnical Engineering & Engineering Geology, dated November 14, 2008 (referenced but not found in files)

Report of Rough Grading Plan Review Volume 1 Of 2 Vista Canyon Tract No. 69164 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated January 6, 2015

Report of Rough Grading Plan Review Volume 2 Of 2 Vista Canyon Tract No. 69164 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated January 6, 2015

Response to City of Santa Clarita Review Comments City Case # SOL12-00025 Vista Canyon, Tract No. 69164 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated March 30, 2015

Bulk Grading Plan Review Vista Canyon Phase 2 Santa Clarita, California For Vista Canyon Ranch, Llc by RTF & A Geotechnical Engineering & Engineering Geology, dated NOVEMBER 9, 2015

Geotechnical Report of Observation and Testing and As-Built Geologic Report Phase I Bulk Grading Proposed Vista Canyon Ranch Development Southwestern Portion of Tract Map No. 69164 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated April 28, 2016

Engineered Grading Consultant Certification Phase I Bulk Grading Proposed Vista Canyon Ranch Development Southwestern Portion of Tract Map No. 69164 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated July 11, 2016

Geotechnical Grading Plan Review SCRRA Right-of-Way Grading and Drainage Exhibit Vista Canyon Phase 2, Tract No. 69164-01 Santa Clarita, California by RTF & A Geotechnical Engineering & Engineering Geology, dated December 8, 2016

Geotechnical Report of Observation and Testing and As-Built Geologic Report Phase 2 I PA-3 Portion of Bulk Grading Lots 6, 8-14, 16, and 17 Proposed Vista Canyon Ranch Development Northeastern Portion of Tract Map No. 69164 Santa Clarita. California by RTF & A Geotechnical Engineering & Engineering Geology, dated March 18, 2019

Report Of Observation And Testing Services During Grading Of Building Pads 1 & 2 Vista Canyon Apartments 17270 Mitchel Drive, Santa Clarita, California Tract: 69164-01, Lot: 3-5

Rough Grading Permit No. Gra17-00056 Precise Grading Permit No. Gra17-00057 by Geocon West Inc. dated May 7, 2019

Report Of Observation And Testing Services During Grading Of Building Pads 2 Through 11 Vista Canyon Apartments 17350 Humphreys Parkway And 17270 Mitchel Drive Santa Clarita, California Tract: 69164-01, Lot: 3-5 Rough Grading Permit No. Gral 7-00056 Precise Grading Permit No. Gral 7-00057 by Geocon West Inc. dated April 18, 2019

Tract 45023 To West of the Subject Site:
Reports by Allan E. Seward Engineering Geology, Inc.: Geologic/Geotechnical Investigation Report, Proposed Lost Canyon Road Overpass Tr. 45023, dated December 10, 1998

Geologic/Geotechnical Report, Grading Plan for Tract 45023, Phases I and II, The Colony, dated September 21, 1999

Geotechnical Engineering Investigation, Proposed Residential Development, File No. 17520-S, dated January 7, 2000.

Geotechnical Engineering Investigation, Proposed Offsite Grading, File No. 17468-S, dated January 24, 2000.

County of Los Angeles Department of Public Works Correspondence:
Geologic Review Sheet dated February 17, 2000.

Soils Engineering Review Sheet dated February 25, 2000.

Response to County of Los Angeles Review Canyon Park Boulevard, Lost Canyon Road, Jakes Way, and Phase III Grading, Santa Clarita, California by Jerry Kovacs and Associates, Inc. dated April 21, 2000

Response to County of Los Angeles Review, Private Drain 2496, Tract 45023 Santa Clarita, California by Jerry Kovacs and Associates, Inc. dated May 1, 2000

Second Response to County of Los Angeles Review Canyon Park Boulevard, Lost Canyon Road, Jakes Way, and Phase III Grading, Santa Clarita, California, by Jerry Kovacs and Associates, Inc. dated June 6, 2000

Addendum to June 28, 2000, Response to County of Los Angeles Review Private Drain 2496, Tract 45023, MTA Railroad Right-of-Way Santa Clarita, California by Jerry Kovacs and Associates, Inc. dated July 20, 2000

**Our company name has been changed to Geotechnologies, Inc. We have been operating as Jerry Kovacs and Associates, Inc. since 1992 and Kovacs-Byer and Associates since 1971. Extension of Jakes Way and Lost Canyon Road Tract: 45023, Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated April 16, 2001*

Revised Foundation Recommendations Proposed Residential Development Tract: 45023, Phase II, Lots: 1 - 9, Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated January 14, 2002

2nd Response to County of Los Angeles Review Offsite Grading Plan for Tract No. 45023, Grading Permit No. 99-0811-0001 Area of Proposed Lost Canyon Road and Bridge Over Southern Pacific Railroad Tracks, Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated March 14, 2002, Revised March 15, 2002

Updated Retaining Wall Recommendations Offsite Grading Plan for Tract No. 45023, Grading Permit No. 99-0811-0001 Area of Proposed Lost Canyon Road and Bridge Over Southern Pacific Railroad Tracks, Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated March 22, 2002

3rd Response to County of Los Angeles Review Offsite Grading Plan for Tract No. 45023, Grading Permit No.99-0811-0001 Area of Proposed Lost Canyon Road and Bridge Over Southern Pacific Railroad Tracks, Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated June 10, 2002

Update of Geotechnical Engineering Investigation Proposed Residential Development, Tract 45023, Phase III Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated July 29, 2003

Statement Regarding Restricted Use Areas Proposed Residential Development, Tract 45023, Phase III Santa Clarita, California by Geotechnologies, Inc. Consulting Geotechnical Engineers dated April 23, 2004

Compaction Report Proposed Residential Development 27404 Lost Canyon Road, Santa Clarita, California, (Tract 45023, Phase III) by Geotechnologies, Inc. Consulting Geotechnical Engineers dated June 16, 2004

Final Compaction Report 27404 Lost Canyon Road, Santa Clarita, California, (Tract 45023, Phase III) by Geotechnologies, Inc. Consulting Geotechnical Engineers dated August 30, 2005

Final Compaction Report Proposed Fire Lane 27404 Lost Canyon Boulevard, Canyon Country, California (Tract: 45023, Phase I and II) by Geotechnologies, Inc. Consulting Geotechnical Engineers dated March 3, 2009

Jerry Kovacs and Associates, Inc.-Geotechnologies, Inc. produced several reports for the proposed tract development (Phase I-III), a bridge over the Southern Pacific Railroad Tracks and subsequent grading of the site. The collective subsurface investigations consisted of drilling fifty borings and excavating six test pits to depths of ten and fifteen feet below the existing ground surface. The subsurface exploration encountered up to five feet of fill overlying alluvium. Ground water was not encountered. The reports stated that the alluvium was dense and stable and that new foundations should be placed on a new compacted fill cap. The reports were approved by the governing municipality. The tract has been constructed.

2.0 INVESTIGATION

2.1 GENERAL

Our field investigation was performed from April 15, 16, and July 6 and 7, 2020 and consisted of a review of site conditions and subsurface exploration involving the drilling of seven geotechnical borings, advancing six cone penetrometer tests (CPT's), excavating four test pits and soil sampling. The investigation also includes laboratory testing of selected soil samples. A brief summary of these various tasks is provided below.

2.2 FIELD EXPLORATION

The subsurface investigation performed at the site consisted of drilling seven borings by use of a truck-mounted hollow-stem auger drill rig to a maximum depth of 51.5 feet below the existing ground surface, advancing six cone penetrometer tests to a maximum depth of 50 feet below the existing ground surface and excavating four test pits by hand labor to a maximum depth of 17 feet below the existing ground surface.

The purpose of the exploratory borings, cone penetrometer tests, and test pits was to determine the existing subsurface conditions and to collect subsurface samples in the areas of the proposed construction and throughout the site. Earth materials encountered in the borings, CPT and test pits consisted of artificial fill and alluvium.

The earth materials encountered in the borings and test pits consisted of up to four feet of fill over alluvium. Areas of deeper fill may be present at the site but were not encountered in the recent exploration.

A review of geological maps indicates that the material underlying the subject site is comprised of Alluvium-Flood Plain Deposits (Qa-Qfp) (Figure 3 and 4).

The borings were logged by our field geologist using both visual and tactile means. Both bulk and relatively undisturbed soil samples were obtained for testing. The approximate locations of the borings are shown on the attached site map. Detailed boring and test pit logs are presented in Appendix A.

2.3 LABORATORY TESTING

Laboratory testing was performed on representative samples obtained during our field exploration. Samples were tested for the purpose of estimating material properties for use in subsequent engineering evaluations. Testing included in-place moisture and density, hydro-response-swell/collapse, maximum density, and shear strength testing.

A summary of the laboratory test results is included in Appendix B. The physical properties of the soils were tested at Soil Labworks, LLC and Smith-Emery Laboratories. Chemical testing was performed at HDR Schiff. The undersigned geologist and engineer have reviewed the data, concur, and accept responsibility for utilizing the data therein.

3.0 SITE GEOLOGY, SEISMICITY, POTENTIAL HAZARDS

3.1 SITE GEOLOGY

The site is located at the western end of the Soledad basin, within the Transverse Ranges geomorphic province of California. The Soledad basin consists of an elongate, northeast trending basin, measuring approximately 30 miles long and 8 to 12 miles wide. The floor of the basin is irregular, with elevations ranging from 400 feet mean sea level (msl) at its western end to as much as 2,500 feet near the eastern end. The project site is located at an elevation ranging from approximately 1,480 – 1,500 feet above mean sea level.

The basin is bounded on the north, east, and south by ridges and mountain masses of relatively old crystalline rocks that, along with ancestral highland masses, have contributed large quantities of Cenozoic age sediments to the basin (Jahns and Muehlberger, 1954). More than 20,000 feet of stratified rocks were deposited into the elongate lowland area of the basin, with an additional 4,500± feet of volcanic rocks accumulated locally (Jahns and Muehlberger, 1954).

Structurally, the Soledad basin is a westerly plunging open syncline with locally wrinkled flanks (Bailey and Jahns, 1954). The basin appears to have been defined as a trough of deposition mainly by faults, receiving its sedimentary fill in a manner that was very irregular in detail.

Repeated episodes of primarily early Tertiary deformation, both within and along the margins of the basin are indicated by numerous faults, folds, and unconformities, as well as by the distribution and lithology of the sedimentary rocks (Jahns and Muehlberger, 1954). The early Miocene and younger strata of the basin, although maintaining the broadly synclinal structure, have been considerably less deformed (Bailey and Jahns, 1954). These deposits blanket many of the older faults of the basin, but are themselves offset by other faults, such as the nearby San Gabriel fault zone.

Regional Geologic Maps (Figure 3) and the subsurface exploration indicated that the subject site is underlain by Alluvium-Flood Plain Deposits (Qa-Qfp) overlain by a veneer fill (Dibblee and Ehrenspeck, 1996). Descriptions of the materials encountered in the exploratory borings are summarized below.

3.1.1 Artificial Fill (Af)

Fill is material that has been placed or disturbed by construction activity. The fill consists of fine to medium grained silty sand and sandy silt with gravel. The color varies from brown, to gray brown and is moist and firm to medium dense. The fill encountered varies in thickness between three to four feet below the ground surface but may locally be deeper.

3.1.2 Alluvium-Flood Plain Deposits (Qa-Qfp)

The alluvium is a Holocene to youngest Pleistocene alluvial unit which consists of fine to coarse grained silty sand and sandy silt with fine to coarse gravels, and varies in color from brown to yellow brown, olive brown, and dark brown. The alluvium is typically moist and moderately

dense to dense. The alluvium is generally weakly stratified, moderately-well to poorly sorted and oxidized with no significant structural planes. The alluvium is typically found to contain multiple fining upward sequences from coarse grained basal deposits.

3.1.3 Groundwater

Groundwater was not observed to a depth of 51.5 feet in the recent exploration at the subject site. Historically, highest groundwater in this area is shown as being between 5 and 10 feet below the ground surface (Figure 5) (Department of Conservation, 1998).

It should be noted that groundwater was encountered north of the project site in a previous exploration conducted by RTF&A (2008) at depths of twelve to fifty-two feet below the ground surface. This data is summarized in Table 1 in section 5.3.4.

3.2 SEISMICITY

A risk common to all areas of Southern California that should not be overlooked is the potential for damage resulting from seismic events (earthquakes). The project site is located within a seismically active area, as is all of Southern California.

As required by the City of Santa Clarita a site-specific seismic design for the proposed construction will be performed and reviewed by the City of Santa Clarita Community Development Planning Division for the project site.

3.2.1 Seismic Hazards

The State of California enacted the Alquist-Priolo Special Studies Act of 1972 immediately following the destructive 1971 San Fernando earthquake (Department of Conservation, 2020a). The Alquist-Priolo Act is intended to prohibit the location of most structures for human occupancy across a known active fault that intersects the ground surface, thereby mitigating fault-rupture hazard. The Alquist-Priolo Act requires that the State Geologist delineate "Earthquake Fault Zones" along active surficial faults. Development within these Earthquake Fault Zones must include geologic investigation demonstrating the absence of Holocene-active faults.

The California State Legislature passed the Seismic Hazards Mapping Act of 1990 and was signed into law and became effective in 1991 (Department of Conservation, 2020b). The Seismic Hazards Mapping Act was prompted following the 1989 Loma Prieta earthquake, and is intended to reduce the threat to protect public safety and minimize the loss of life and property from the effects of strong ground shaking, liquefaction, landslides, and other earthquake-related hazards (Department of Conservation, 2020b).

The Seismic Hazards Mapping Act and Alquist Priolo Act require the State Geologist to delineate "Earthquake Zones of Required Investigation (EZRI)." The EZRI maps are released by the California Geological Survey (CGS). Zone delineations are based on a combination of factors, including but not limited to: surface distribution of soil deposits and bedrock, slope steepness, depth to groundwater, bedding orientation with respect to slopes, and distance to local earthquake faults (seismic source). Following a rigorous review process the EZRI Map delineates areas that

have been subject to or are potentially subject to earthquake induced fault surface rupture, liquefaction, and landsliding. A discussion of the potential for these earthquake hazards is presented below.

3.2.2 Earthquake Faults

The site is located within a tectonically active area, as is all Southern California. The closest known fault capable of producing strong earthquakes and ground shaking is the San Gabriel Fault located approximately 2 miles southwest of the site. However, not all strands of the San Gabriel Fault are considered active. The active portion of the San Gabriel Fault as zoned by the California Geological Survey is discussed further below. The site is not mapped within an Alquist Priolo Fault Zone and no known Holocene-active faults cross the project site (Figure 6). While the potential for surface rupture is low to non-existent, the site could be impacted by strong ground shaking should an earthquake occur along a nearby fault. A discussion of each fault is provided below.

San Gabriel Fault Zone:

The Alquist Priolo Fault Zone for the San Gabriel fault is located approximately 4.5 miles west of the site and consists of a northwest-trending zone of imbricate steeply north-dipping faults. The fault has strong geomorphic expression characterized by displaced geologic units, deflected drainages, strike valleys, notched ridges, subparallel faulting, fracturing, and folding (Oakeshott, 1958; Wentworth and Yerkes, 1971). According to Oakeshott (1958), the zone of faulting ranges in width from a single plane with no more than a few inches of gouge, to a half-mile wide area of several fault planes, zones of brecciation, and complex steep-limbed folds. No known active faults project into or cross the site. The site is not located in a State defined Alquist-Priolo Earthquake Fault Zone. Faults confined to the Mint Canyon formation are mapped adjacent to the site on the east and southeast. These faults are part of the informally named Sulphur Springs fault. The Sulphur Springs fault is not considered active.

3.2.3 Secondary Ground Effects

The site is located within an area mapped by the CGS (1999) as being potentially affected by seismic-induced liquefaction but not landsliding (Figure 6). A discussion of secondary ground effects is included below.

Liquefaction

Liquefaction is a process which occurs when saturated sediments are subjected to repeated strain reversals during a seismic event. The strain reversals cause an increase in pore water pressure such that the internal pore pressure approaches the overburden pressure and the shear strength approaches a low residual value. Liquefied soils are subject to flow, consolidation, or excessive strain. Liquefaction typically occurs in loose to medium dense sand and silty sandy soils below the groundwater table. Predominately fine-grained soils, such as silts, and clay, are less susceptible to liquefaction. The site is included within a zone of potentially liquefiable soil (Department of Conservation, 1998). Liquefaction is considered a potentially significant hazard at the site and

liquefaction induced settlement may affect the subject site. A site-specific liquefaction analysis will be performed per Recommended Procedures of Implementation of CGS Special Publication 117A, Guidelines for Analyzing and Mitigating Liquefaction in California (Parrish, 2008). To reduce the risk of liquefaction induced settlement to a less than significant level the Guidelines for Mitigating Seismic Hazards (Chapter 7; Parrish, 2008) will be followed. As discussed in the guidelines, ground improvement (i.e., removal and recompaction of soil, vibrocompaction) and structural solutions (i.e., mat foundations, pile and grade beams) are acceptable methods of mitigation.

Prior to building permit issuance, the Project applicant shall prepare a project specific liquefaction settlement analysis that shall include design features to achieve performance standard pursuant to Recommended Procedures of Implementation of CGS Special Publication 117A, Guidelines for Analyzing and Mitigating Liquefaction in California (Parrish, 2008) and to the satisfaction of the City of Santa Clarita's Department of Building and Safety. These binding measures will reduce liquefaction induced settlement to a less than significant level.

Lateral Spreading Hazard

Saturated soils that have experienced liquefaction may be subject to lateral spreading where located adjacent to free faces, such as slopes, channels, and rivers. The site is remote to free-faces and the lateral spreading hazard at the site is insignificant.

Subsidence

According to the City of Santa Clarita Safety Element (2011), land subsidence is recognized as the gradual settling or sinking of the ground surface over a long period of time with little to no horizontal motion. Typically, subsidence is the result of excessive extraction of groundwater, oil, or gas but may occur due to strong ground shaking from earthquakes. Long term affects of subsidence can include structural impacts such as cracked pavement/landscaping, fractured building foundations, and dislocated pipe joints.

In order to mitigate potential localized land subsidence to an acceptable level, specific ground improvement systems should be implemented (i.e., removal and recompaction of soil, vibrocompaction) in combination with structural solutions (i.e., mat foundations, pile and grade beams).

Landsliding

According to mapping by the CGS (1999), the project site is not located within an area subject to potential seismic-induced slope instability (Figure 6). Since the site is not located within a mapped landslide zone, and no slopes exist on or within the immediate site vicinity, seismic induced lansliding is not a significant hazard to the future development.

Tsunamis/Seiches

The project site is located approximately twenty-five miles northeast of the Pacific Ocean and approximately 500 feet south of the Santa Clara river. Due to the sites distance from the coastline

and other large bodies of water, the potential for tsunamis/seiches is considered low. Additionally, the subject site is not downstream of any dams.

Inundation and Flooding

The closest stream gauge on the Santa Clara River near Piru (SCPC1) (Latitude: 34.403611° N, Longitude: 118.738333° W) is located approximately 34 miles to the west and downstream of the project site (NOAA, 2020). As of September 15, 2020, the observed water stage was at 0.98 ft.

NOAA (2020) provides four major flood categories for the Santa Clara River at this location: action stage (12.8 ft.), flood stage (13.1 ft.), moderate flood stage (14 ft.), and the major flood stage (14.2 ft.). The current water level at SCPC1 is 11.82 ft. below the action stage and 12.12 ft. below the flood stage.

It should be noted that in the vicinity of the project site, Santa Clara River is dry and at the time of this report no water was observed within the stream channel. No stream gauges are located near the project site, likely due to the lack of measurable water levels available.

It is our opinion that the project site is at low risk of inundation from flooding along the Santa Clara River due to the site's elevation above the active flood plain, and the low water levels within the river. However, the potential for inundation exists simply due to the site's proximity to the Santa Clara River flood plain and the unknown magnitude of future storm events that will affect runoff.

3.3 2019 CALIFORNIA BUILDING CODE CONSIDERATIONS

The proposed development will be designed in accordance with seismic considerations contained in the 2019 California Building Code, Section 1613. The following parameters may be considered for design of foundations within the alluvium or future compacted fill (ATC, 2020):

A ground motion hazard analysis is required (see Section 11.4.8 of ASCE /SEI 7-16) to be performed in accordance with Section 21.2 for structures on Site Class D with S1 greater than or equal to 0.2. However, as an alternative of performing the ground motion hazard analysis, a long period coefficient (Fv) of 1.7 may be utilized for calculation of Ts, provided that the value of the Seismic Response Coefficient (Cs) is determined by Equation 12.8-2 for values of the fundamental period of the building (T) less than or equal to 1.5 Ts, and taken as 1.5 times the value computed in accordance with either Equation 12.8-3 for T greater than 1.5 Ts and less than or equal to TL or Equation 12.8-4 for T greater than TL.

Mapped Spectral Response Acceleration Parameters:

	S_S	:	2.226g
	S_1	:	0.807g
Site Class:	D	:	Stiff Soil
Site Coefficients:	F_a	:	1.0

F_v : 1.7

Maximum Considered Earthquake Spectral Response Acceleration Parameters:

S_{MS} : 2.226g
S_{M1} : 1.372g

Design Spectral Response Acceleration Parameters:

S_{DS} : 1.484g
S_{D1} : 0.915g
PGA : 0.941
PGA_M : 1.035

4.0 GEOTECHNICAL CONSIDERATIONS

4.1 SUBSURFACE SOIL CONDITIONS

Subsurface materials at the project site consist of a layer of fill over alluvium. Based on laboratory testing the alluvium at the project site is competent and capable of supporting engineered structures and appurtenances. The following sections provide a general discussion about settlement and expansive soil activity.

4.2 SETTLEMENT

Settlement, or consolidation, occurs over time as a response to changes in pressure and soils stress. Our investigation indicates that the consolidation and hydrocollapse potential of the alluvium is low. The in-situ dry densities are high for the samples taken at the foundation level and it is our experience that these soils have a very low potential for consolidation.

4.3 EXPANSIVE SOIL

Typically, soils that contain a high clay content are susceptible to expansion/contraction. Clay minerals are capable of absorbing water, which causes an increase in volume and leads to expansion. The opposite effect occurs when clay rich soils dry out, thus decreasing in volume and contracting. The on-site soil was found to possess low expansive characteristics based upon field soil classifications and laboratory testing. Based on the recommended foundation systems and the underlying soil properties, expansion/contraction is unlikely to affect the proposed development.

4.4 SOIL EROSION & LOSS OF TOPSOIL

Only trace naturally occurring developed topsoil is exposed, and therefore is not at risk of substantially eroding due to proposed future development. During excavation soil will be exposed, however, engineered best management practices will be in place to mitigate and the potential hazard is considered low.

4.5 SLOPE STABILITY

The project site is not located within an area subject to potential seismic-induced slope instability. The site has approximately twenty feet of overall elevation change and gently descends to the south and southeast with an approximate gradient of 12:1 (horizontal to vertical) or gentler. A graded 2:1 (horizontal to vertical) slope is present along the western portion of the site associated with the extension and construction of Lost Canyon Road and ranges in height from twenty to thirty feet high. The 2:1 slope was graded as part of roadway construction and was compacted and inspected during development and approved. There are no significant slopes on the subject site and no potential for slope instability.

5.0 CONCLUSIONS AND PRELIMINARY DESIGN RECOMMENDATIONS

Conclusions and preliminary recommendations contained herein are based upon information provided, information gathered, laboratory testing, engineering, geologic evaluations, experience, and judgment.

Preliminary design values are provided within to meet requirements for the associated Environmental Impact Report and to assess the feasibility of development using conventional construction methods and best practices. The following preliminary values are for the assessment of construction feasibility and should not be used for final design. A separate geotechnical report will be prepared to provide design level values for development once plans have been finalized.

5.1 SITE SUITABILITY

The Geotechnical exploration, analyses, experience, and judgment result in the conclusion that the proposed development is suitable from a geotechnical standpoint.

It is our opinion that the project site can be developed as proposed without adverse geologic impact on adjoining properties. Safe project development will require strict adherence to good construction practices, agency and code requirements, and the recommendations in this report.

It should be realized that the purpose of the seismic design utilizing the above parameters is to safeguard against major structural failures and loss of life, but not to prevent damage altogether. Even if the structural engineer provides designs in accordance with the applicable codes for seismic design, the possibility of damage cannot be ruled out if moderate to strong shaking occurs as a result of a large earthquake. This is the case for essentially all structures in Southern California.

5.2 EARTHWORK

5.2.1 General

Grading should be done in accordance with good construction practice, minimum code requirements, and recommendations to follow. Grading criteria are included within Appendix D.

5.2.2 Site Preparation and Grading

Based on our understanding of the proposed development, laboratory testing, and experience, we recommend that foundations for the proposed development be founded in a future compacted fill cap.

Prior to the start of grading operations, utility lines within the project area, if any, should be located and marked in the field so they can be rerouted or protected during site development. All debris and perishable material should be removed from the project site. Although currently not anticipated, all permanent cut and fill slopes should not be constructed steeper than 2:1.

If fill is to be placed, the upper six to eight inches of surface exposed by the excavation should be scarified; moisture conditioned to two to four percent over optimum moisture content and compacted to 90 percent relative compaction[1]. If localized areas of relatively loose soils prevent proper compaction, over-excavation and re-compaction will be necessary.

5.2.3 Excavation Characteristics

The borings encountered competent earth material at the depth of the proposed construction and below. However, the soil at the site has considerable amounts of sand and gravel and caving may occur in some excavations. Based on the underlying geology, excavation can be completed using standard methods and best practices.

5.2.4 Use of Existing Soil

The existing soil can be used for the future compacted fill.

5.3 FOUNDATION SUPPORT

5.3.1 Foundation

A site-specific geotechnical investigation should be conducted to determine the appropriate type, or types, of foundation systems to use for the proposed development. Such systems may include the removal and recompaction of soil, mat foundations, pile foundations, grade beams or any combination thereof as determined by the appropriate geotechnical engineer.

The design level investigation should consider all relative potential geologic hazards to develop specific foundation recommendations. Based on a preliminary analysis, it is our opinion that site development can move forward if appropriate foundation recommendations and structural designs are implemented to mitigate all potential geologic hazards

[1] Relative compaction refers to the ratio of the in-place dry density of soil to the maximum dry density of the same material as obtained by the "modified proctor" (ASTM D1557-14) test procedure.

5.3.2 Infiltration/SUSMP/LID

Percolation testing consisted of performing multiple in-situ falling head tests in the field, which is consistent with industry standard of practice for similar projects in the Southern California area (LADPW, 2014). The test pits were excavated on July 6, 2020 and infiltration testing was performed July 7, 2020.

All test pits were excavated by hand labor. Test pit one (TP-1) was excavated to a total depth of five feet. The bottom foot of the test pit consisted of a one-foot cube. Test pit two (TP-2) was excavated to a total depth of ten feet. Test pit three (TP-3) and four (TP-4) were excavated to a total depth of seventeen feet. Each test pit was filled with water to pre-soak on July 6, 2020. No water remained on the testing date of July 7, 2020. Multiple tests occurred until the measured rate stabilized within 10% of 3 successive tests.

The following table is a summary of the preliminary infiltration results. Allowable infiltration rates should be 15% of the values shown on the table below for each area tested. Additional testing may be required depending on the final proposed design.

Test Excavation	Total Depth (ft.)	Rate (in./hr)
TP-1	5'	4"
TP-2	10'	24"
TP-3	17'	22.5"
TP-4	17'	24"

5.3.3 Wastewater Disposal

The proposed development will not require the use of septic tanks or alternative wastewater disposal systems. Since sewers will be used for the disposal of wastewater, there will be no impact to the underlying supporting materials from the disposal of wastewater.

5.3.4 Groundwater and Associated Design

According to records, the highest historic groundwater level is located below the proposed foundations (Department of Conservation, 1998). Wet conditions and actual groundwater may be encountered due to seasonal fluctuations.

Groundwater was encountered in six borings north of the subject site in an earlier exploration conducted by RTF&A (2008). This data is summarized in Table 1. No surface water or seeps were observed.

Table 1.

Consultant	Boring	Depth to Groundwater	Date
RTF&A	HS-1	44	5/31/07
	B-1	17	12/7/05

	B-3	12	12/7/05
	B-4	15	12/7/05
	B-5	34	12/7/05
	B-6	52	12/12/05

5.4 RETAINING WALLS

5.4.1 Retaining Wall

Retaining walls up to six feet high that support fill, alluvium, and approved retaining wall backfill, may be designed for an equivalent fluid pressure of 30 pounds per cubic foot for level backslopes.

Retaining walls should be provided with a subdrain or weepholes covered with a minimum of 12 inches of ¾ inch crushed gravel.

It is recommended that retaining walls be waterproofed. Waterproofing design and inspection of its installation is not the responsibility of the geotechnical engineer. A qualified waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to below grade walls.

5.4.2 Retaining Wall Backfill

Retaining wall backfill should be compacted to a minimum of 90 percent of the maximum density as determined by ASTM D 1557-14. It should be pointed out that the use of heavy compaction equipment in close proximity to retaining walls can result in excess wall movement and/or soil loadings exceeding design values. In this regard, care should be taken during backfilling operations.

5.4.3 Waterproofing

Moisture affecting retaining walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water inside the building. Efflorescence is a process in which a powdery substance is produced on the surface of the concrete by the evaporation of water. The white powder usually consists of soluble salts such as gypsum, calcite, and/or halite (common salt). Efflorescence is common to retaining walls and generally does not affect their strength or integrity.

It is recommended that retaining walls be waterproofed. Waterproofing design and inspection of its installation is not the responsibility of the geotechnical engineer. A qualified waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to below grade walls.

5.5 TEMPORARY EXCAVATIONS

All vertical cuts shall be inspected to verify geologic continuity. Un-shored vertical cuts to a height of five (5') may be made in earth materials at the site. Un-shored cuts in excess of five feet (5') shall be sloped at a gradient of no steeper than 1:1 (horizontal to vertical) for the portion of the excavation above the vertical cut.

A representative of the geotechnical engineer or geologist should be present during grading to see temporary slopes. All excavations, including caissons, footings, and utility trenches, shall be properly and adequately fenced, and/or covered to ensure the safety of all those working on the project. All temporary excavations shall be stabilized as soon as possible after the initial excavation.

5.5.1 Shoring

If required, shoring may consist of cast-in-place concrete piles with wood-lagging. Shoring piles should be a minimum of 18 inches in diameter and a minimum of 8 feet into alluvium below the base of the excavation. Piles may be assumed fixed 3 feet below the base of the excavation. For the vertical forces, piles may be designed for a skin friction of 400 to 600 pounds per square foot for that portion of pile in contact with the alluvium. Shoring piles should be spaced a maximum of 10 feet on center.

The friction value is for the total of dead and frequently applied live loads and may be increased by one third for short duration loading, which includes the effects of wind or seismic forces. Resistance to lateral loading may be provided by passive earth pressure within the alluvium below the base of the excavation.

Passive earth pressure may be computed as an equivalent fluid having a density of 400 pounds per cubic foot. The maximum allowable earth pressure is 4,000 to 6,000 pounds per square foot. For design of isolated piles, the allowable passive and maximum earth pressures may be increased by 100 percent. Piles spaced more than 2½ pile diameters on center may be considered isolated.

Rakers or other forms of internal bracing designed by the structural engineer may be used to support the shoring system where tieback anchors cannot be used.

5.5.3 Lagging

Lagging will be required between piles. Due to arching in the soils, the pressure on the lagging will be less that on the shoring piles. It is recommended that the lagging be designed for the full design pressure but be limited to a maximum of 400 pounds per square foot. The void between the lagging and the back-cut should be slurry-filled and observed by a representative of the geotechnical engineer.

A representative of the geotechnical engineer or geologist should be present during grading to see temporary slopes. All excavations, including caissons, footings, and utility trenches, shall be

properly and adequately fenced, and/or covered to ensure the safety of all those working on the project.

All temporary excavations shall be stabilized as soon as possible after the initial excavation.

5.6 EXTERIOR FLATWORK AND AUXILIARY STRUCTURES

Whenever planned, exterior flatwork should be placed directly on a two-foot blanket of approved compacted fill. Five-inch net sections with #4 bars at 18 inches o.c.e.w. are also advised. Control joints should be planned at not more than twelve foot spacing for larger concrete areas. Narrower areas of flatwork such as walkways should have control joints planned at not greater than 1.5 times the width of the walkway. Recommendations provided above for interior slabs can also be used for exterior flatwork, but without a sand layer or Visqueen moisture barrier. Additionally, it is also recommended that at least 12-inch deepened footings be constructed along the edges of larger concrete areas.

Movement of slabs adjacent to structures can be mitigated by doweling slabs to perimeter footings. Doweling should consist of No. 4 bars bent around exterior footing reinforcement. Dowels should be extended at least two feet into planned exterior slabs. Doweling should be spaced consistent with the reinforcement schedule for the slab. With doweling, 3/8-inch minimum thickness expansion joint material should be provided. Where expansion joint material is provided, it should be held down about 3/8 inch below the surface. The expansion joints should be finished with a color matched, flowing, flexible sealer (e.g., pool deck compound) sanded to add mortar-like texture. As an option to doweling, an architectural separation could be provided between the main structures and abutting appurtenant improvements.
Auxiliary structures such as trash enclosures and garden walls can be placed directly on alluvium or on a two-foot blanket of compacted fill.

5.7 CONCRETE/SULFATE/CORROSIVITY

Testing of the sulfate content of the soil indicates that moderate levels of sulfate concentrations were encountered in the soil and therefore specialized concrete is not required for the project. We recommend that the low permeable concrete be utilized at the site to limit moisture transmission through slab and foundation. The structural engineer should specify appropriate compressive strength and water-cement ratio. Limited use (subject to approval of mix designs) of a water reducing agent may be included to increase workability. The concrete should be properly cured to minimize risk of shrinkage cracking. One-inch hard rock mixes should be provided. Pea gravel mixes are specifically not recommended but could be utilized for relatively non-critical improvements (e.g., flatwork) and other improvements provided the mix designs consider limiting shrinkage.

Contractors/other designers should take care in all aspects of designing mixes, detailing, placing, finishing, and curing concrete. The mix designers and contractor are advised to consider all available steps to reduce cracking. The use of shrinkage compensating cement or fiber reinforcing should be considered. Mix designs proposed by the contractor should be considered subject to review by the project engineer.

5.8 SOIL CORROSIVITY

According to testing of the site soils, the soils should be expected to be only mildly corrosive to ferrous metals. It is recommended that a consulting corrosion engineer be retained in order to determine the most appropriate protection measures for the project site.

Recommendations that the corrosion engineer may require include the following:

- All steel and wire concrete reinforcement should have at least 3 inches of concrete cover where cast against soil.

- Below-grade ferrous metals should be given a high-quality protective coating, such as plastic tape, extruded polyethylene, hot-applied coal tar enamel, or fusion-bonded epoxy.

- On any type of pipe, coat all bare metal appurtenances such as bolts, valves, joint harnesses, or flexible couplings with a coal tar or rubber-based mastic, coal tar epoxy, moldable sealant, wax tape, or equivalent, after assembly.

- Bond below-grade ferrous metals with non-conductive type joints for electrical continuity.

- Below-grade metals should be electrically insulated (isolated) from dissimilar metals, cement-mortar coated and concrete-encased metals, and above-grade metals, by means of insulated joints.

- Metal pipes penetrating concrete structures such as floors and walls should be provided with plastic sleeves, rubber seals, or other dielectric material to prevent pipe contact with the concrete and reinforcing steel.

- Bare copper tubing should be bedded and backfilled in clean sand at least 3 inches thick surrounding the tubing. The best corrosion control for hot water copper tubing is placement above-grade. Below-grade hot water copper tubing should be encased in impermeable, unstretched, non-shrink insulation with the joints and seams sealed.

5.9 PAVEMENT DESIGN

The following pavement sections are recommended as minimums:

Traffic Index	Asphalt Thickness	Base Thickness
Light Traffic (T.I.=5) for parking stalls and driveways	4 inches	6 inches
Heavy Traffic (T.I.= 6.5) for loading docs and large truck traffic	4 inches	12 inches

Concrete pavement sections should be a minimum of 6 inches thick and reinforced with #4 bars at 18" on center. A base of 6 inches is required below concrete pavement areas. Control joints should be planned at not more than twelve foot spacing.

All pavement should be placed on a minimum one-foot thick fill cap that is compacted to a minimum of 95% relative compaction.

5.10 DRAINAGE

Drainage should be directed away from structures via non-erodible conduits to suitable disposal areas. Two percent drainage is recommended directly away from structures. Building Code and Civil Engineer requirements and recommendations take precedence. All enclosed planters should be provided with a suitably located drain or drains and/or flooding protection in the form of weep holes or similar. Preferably, structures should have roof gutters and downspouts tied directly to the area drainage system.

5.11 PLAN REVIEW

When detailed grading and structural plans are developed, they should be reviewed by the project geotechnical consultant.

5.12 AGENCY REVIEW

All soil, geologic, and structural aspects of the proposed development are subject to the review and approval of the governing agency(s).

5.13 SUPPLEMENTAL CONSULTING

During construction, a number of reviews by the project geotechnical consultant are recommended to verify site geotechnical conditions and conformance with the intentions of the recommendations for construction. The following site reviews are advised, some of which are required by the governing agencies.

Preconstruction/pregrading meeting	Advised
Cut and/or shoring observation	Required
Periodic geotechnical observations and testing during grading	Required
Reinforcement for all foundations	Advised
Slab subgrade moisture barrier membrane	Advised
Slab subgrade rock placement	Advised
Presaturation checks for all slabs in primary structure areas	Required
Presaturation checks for all slabs for appurtenant structures	Advised
Slab steel placement, primary and appurtenant structures	Advised
Compaction of utility trench backfill	Advised

5.14 PROJECT SAFETY

The contractor is the party responsible for providing a safe site. This consultant will not direct the contractor's operations and cannot be responsible for the safety of personnel other than his own representatives on site. The contractor should notify the owner if he is aware of and/or anticipates unsafe conditions. If the geotechnical consultant at the time of construction considers conditions unsafe, the contractor, as well as the owner's representative, will be notified. Within this report the terminology safe or safely may have been utilized. The intent of such use is to imply low risk. Some risk will remain, however, as is always the case.

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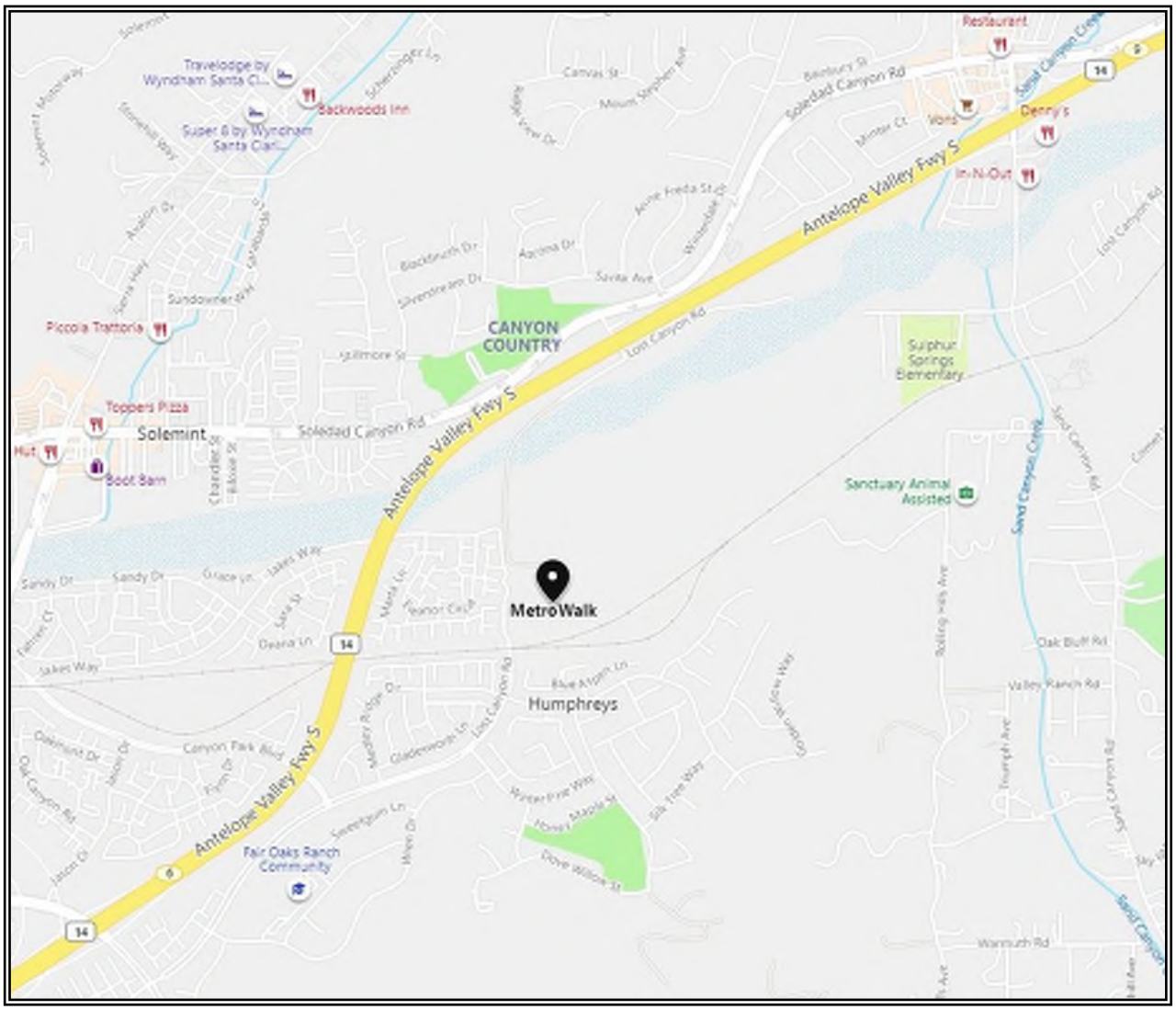


Figure 1. Location map of the subject site (Bing Maps, 2020).

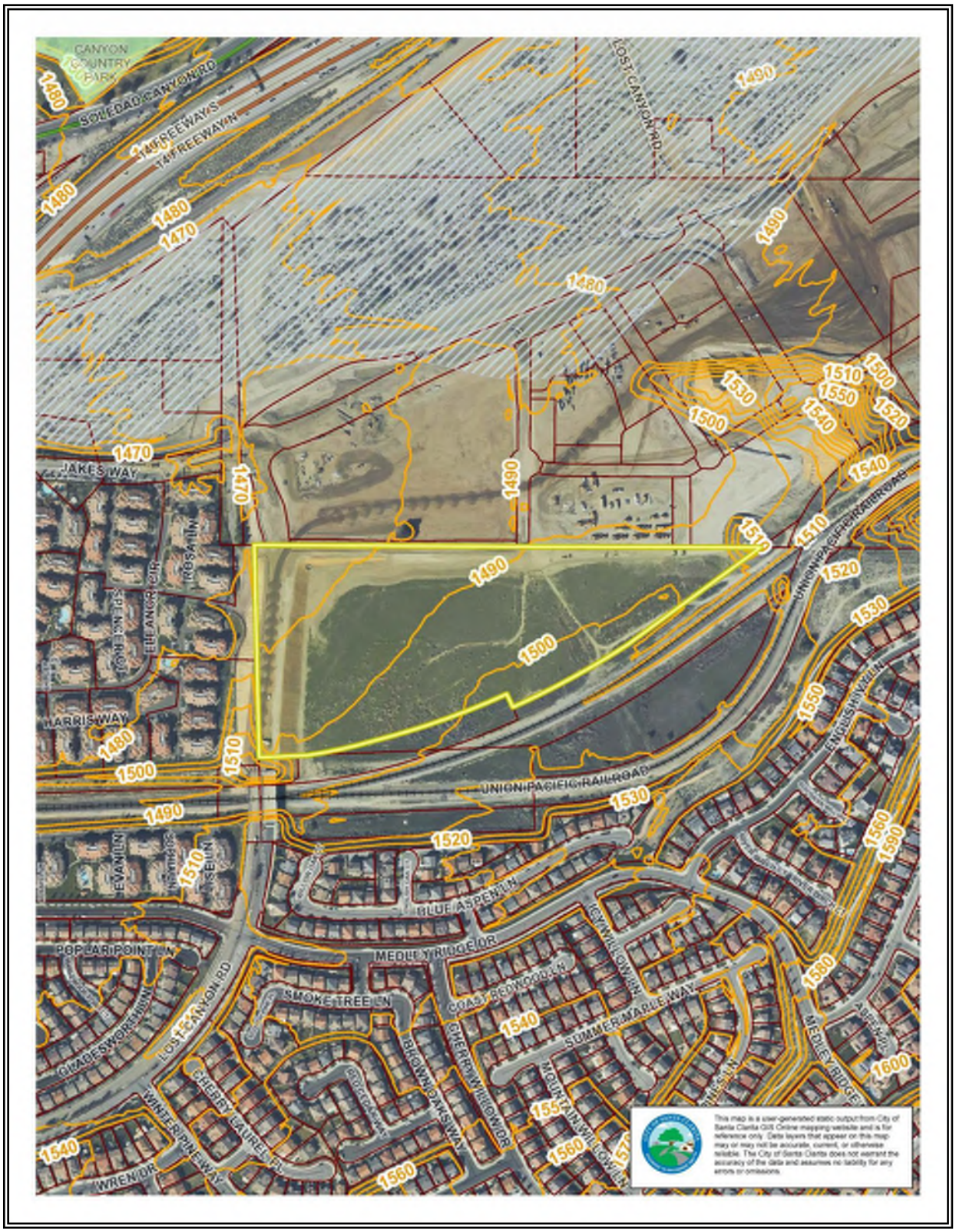


Figure 2. Aerial photograph with topographic overlay from City of Santa Clarita (2020). Site outlined in yellow, approximately. See Site Plan for detailed lot lines.

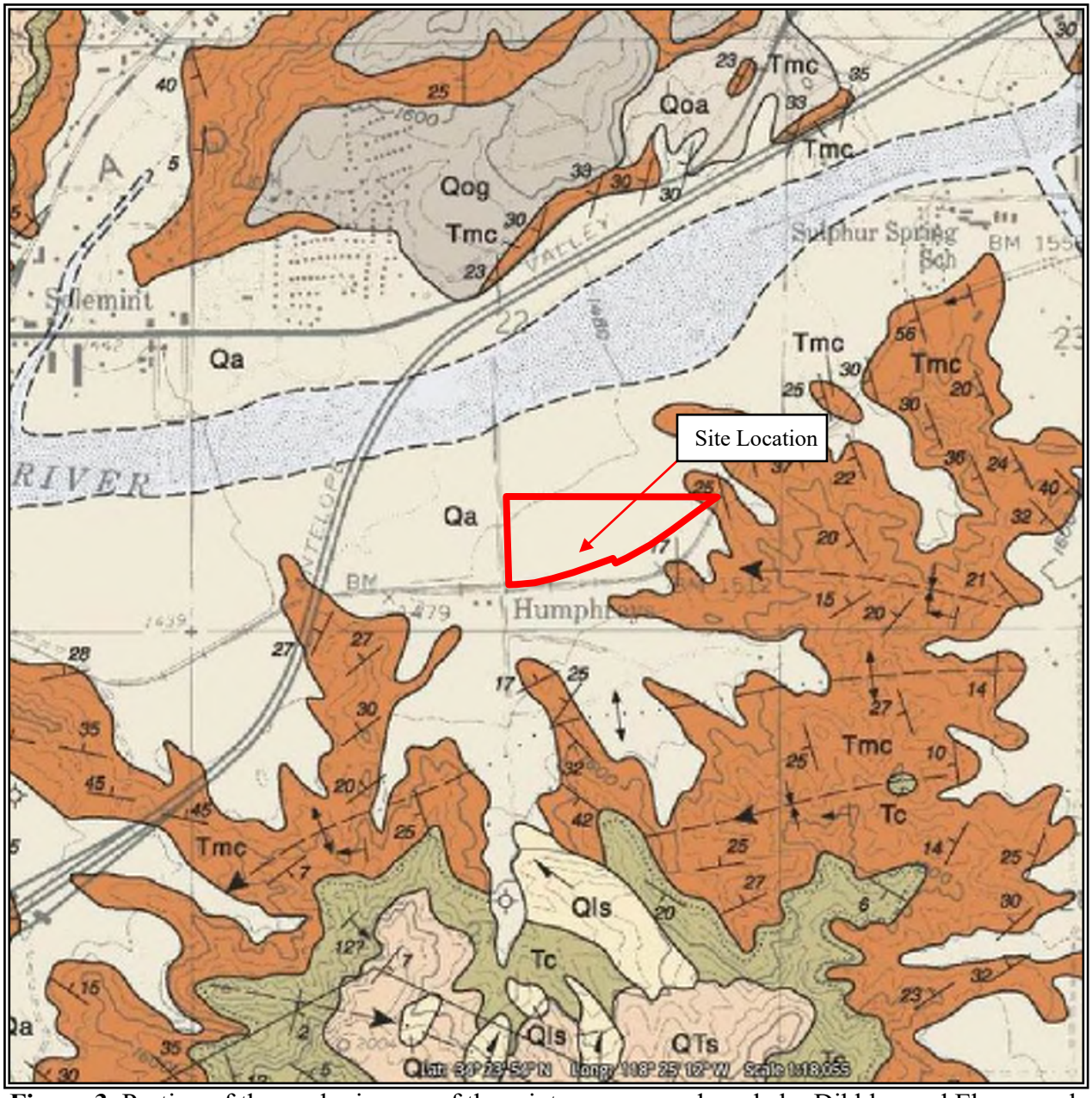


Figure 3. Portion of the geologic map of the mint canyon quadrangle by Dibblee and Ehrenspeck (1996). Site outlined in red, approximately. See Site Plan for detailed lot lines.

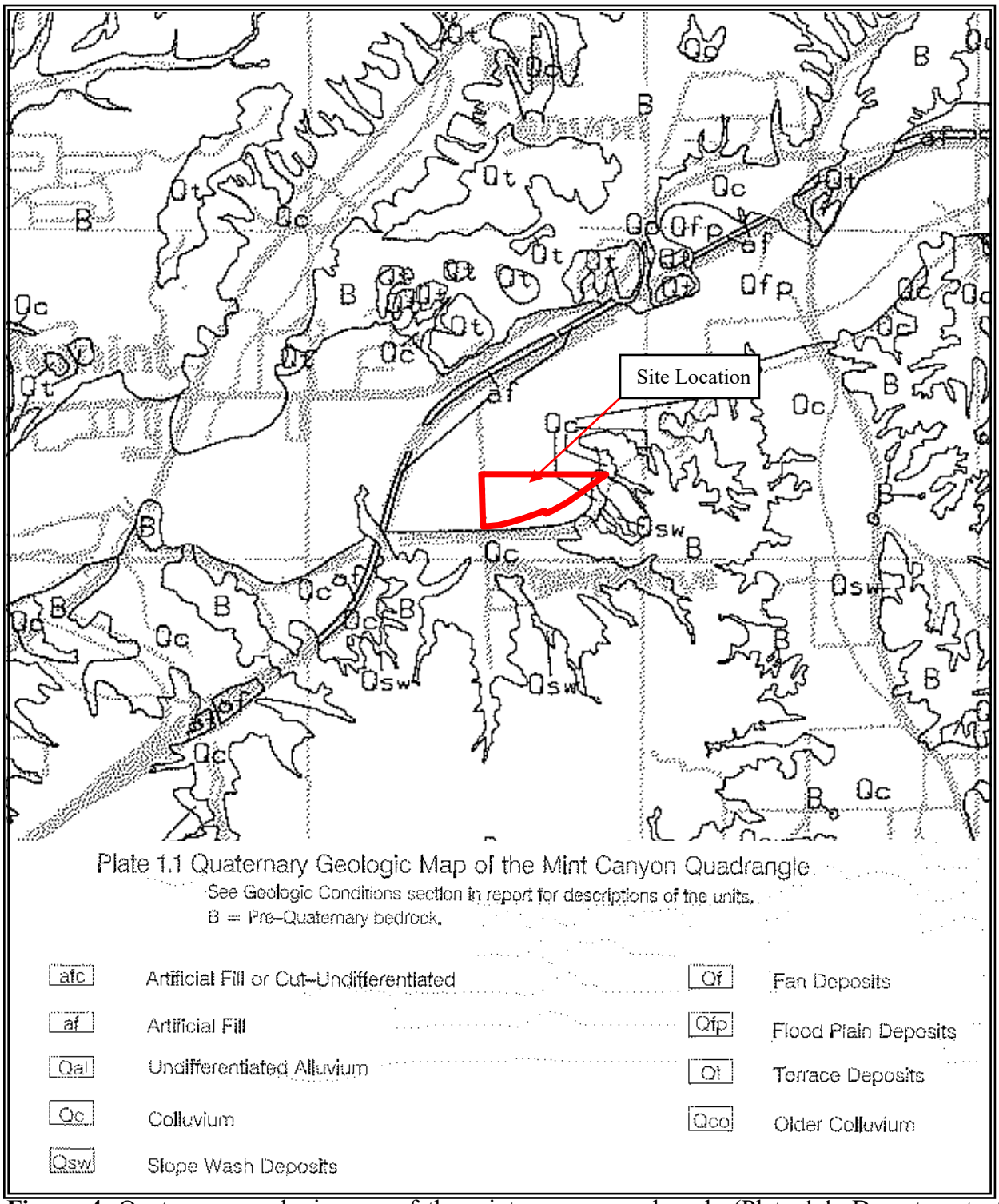


Figure 4. Quaternary geologic map of the mint canyon quadrangle (Plate 1,1; Department of Conservation, 1998).

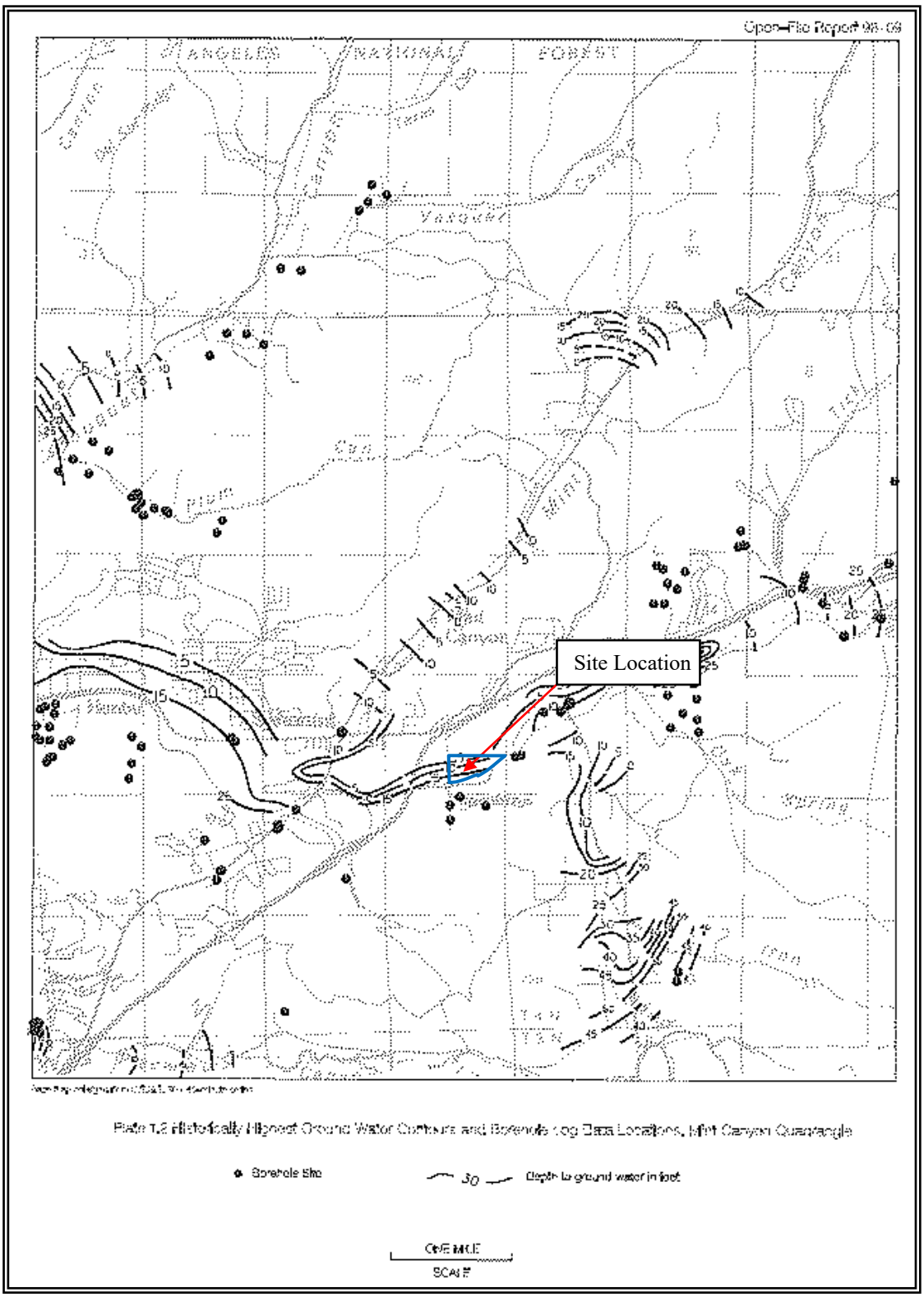


Figure 5. Historically highest groundwater contours in the site vicinity (Plate 1.2; Department of Conservation, 1998). Site outlined in blue, approximately. See Site Plan for detailed lot lines.

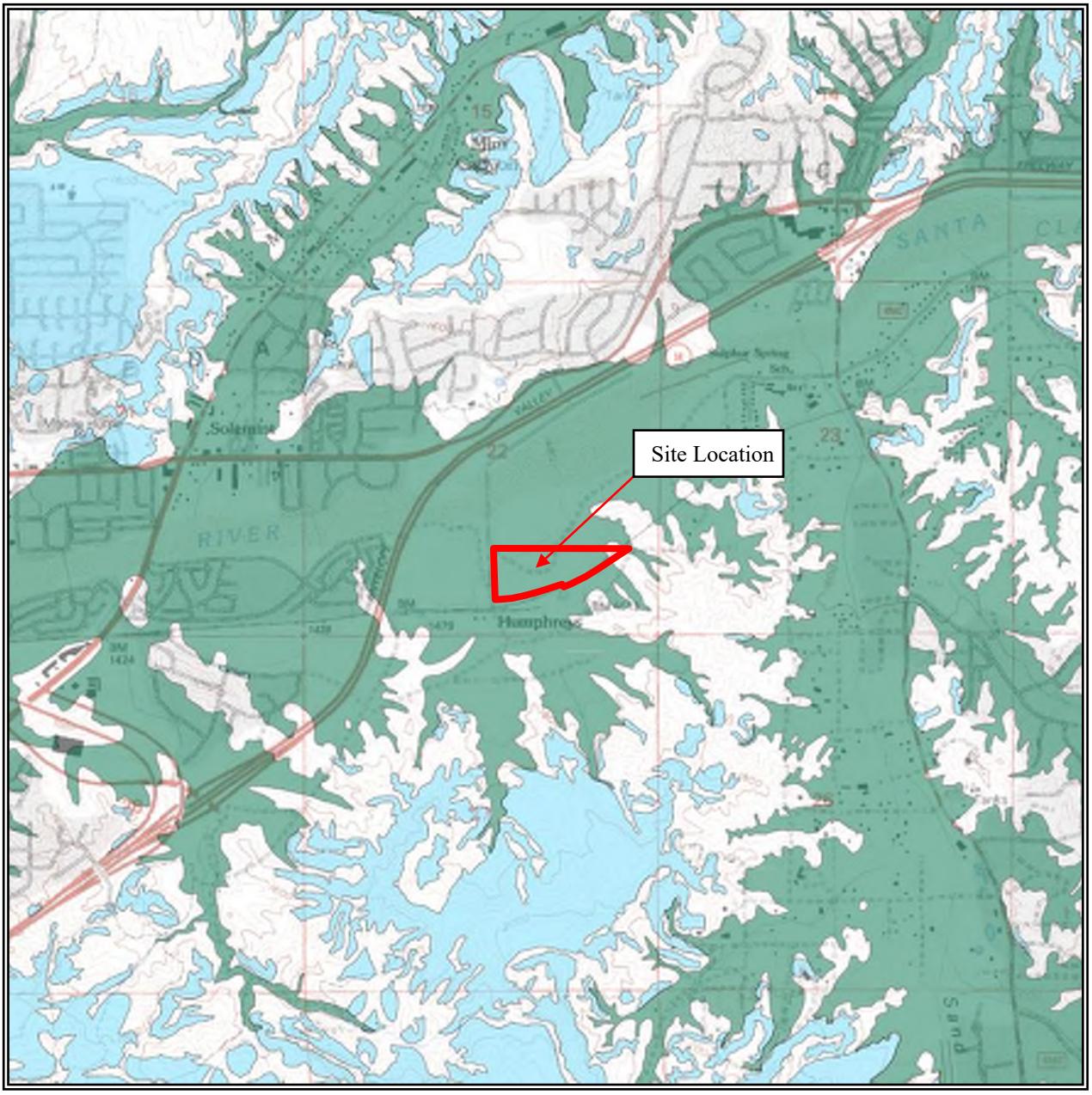
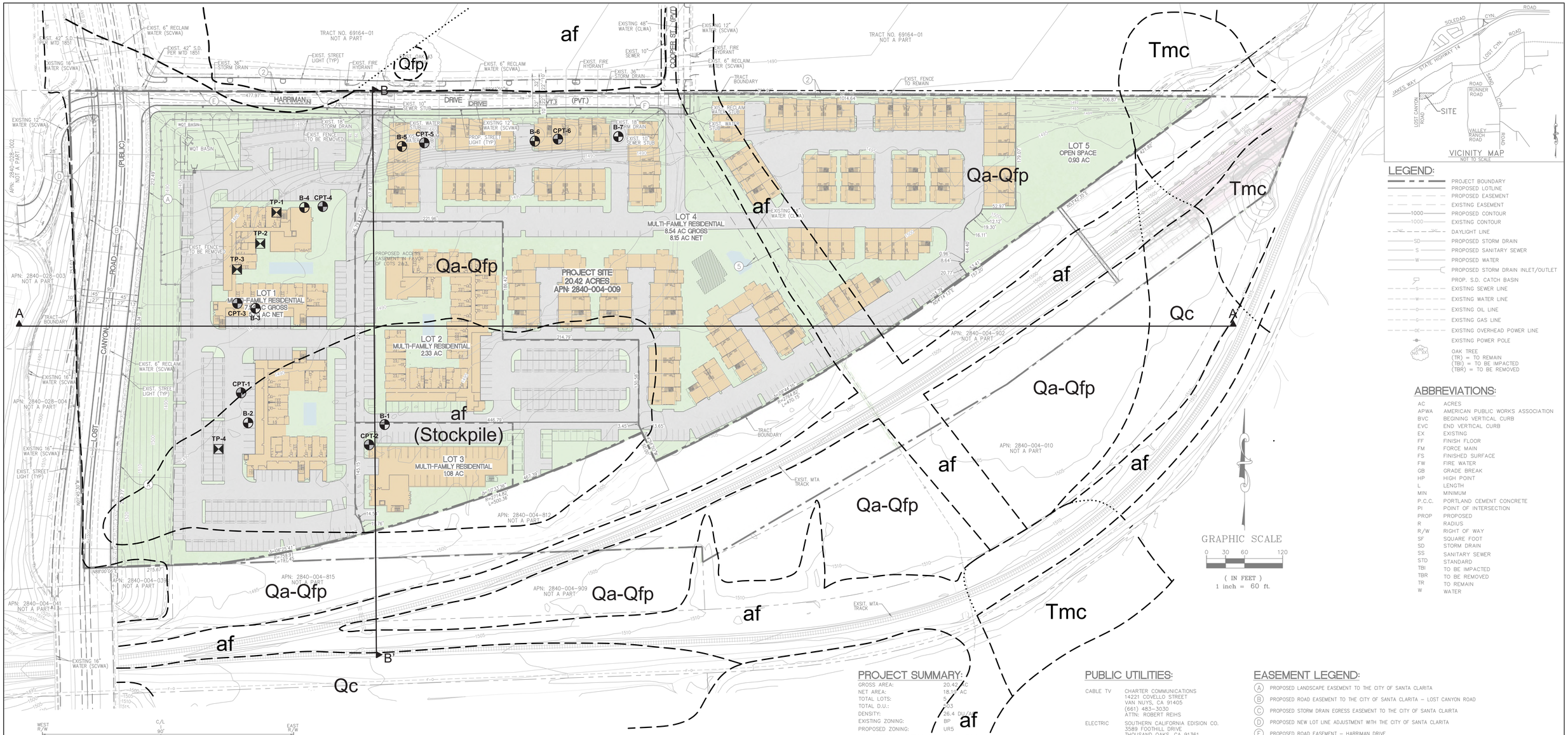


Figure 6. Portion of Earthquake Zones of Required Investigation Mint Canyon Quadrangle Seismic Hazard Zones (CGS, 1999). Site is outlined in red, approximately. See Site Plan for detailed lot lines. Green shading represents liquefaction hazard zones. Blue shading represents landlside hazard zones.

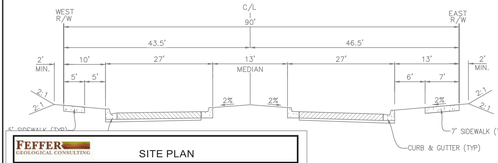


LEGEND:

- PROJECT BOUNDARY
- PROPOSED LOTLINE
- PROPOSED EASEMENT
- EXISTING EASEMENT
- 1000 PROPOSED CONTOUR
- 1000 EXISTING CONTOUR
- DAYLIGHT LINE
- SD PROPOSED STORM DRAIN
- S PROPOSED SANITARY SEWER
- W PROPOSED WATER
- PROPOSED STORM DRAIN INLET/OUTLET
- PROP. S.D. CATCH BASIN
- S EXISTING SEWER LINE
- W EXISTING WATER LINE
- O EXISTING OIL LINE
- G EXISTING GAS LINE
- OE EXISTING OVERHEAD POWER LINE
- EXISTING POWER POLE
- OAK TREE NO. XX — (TR) = TO REMAIN, (TBI) = TO BE IMPACTED, (TBR) = TO BE REMOVED

ABBREVIATIONS:

AC	ACRES
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
BVC	BEGINING VERTICAL CURB
EVC	END VERTICAL CURB
EX	EXISTING
FF	FINISH FLOOR
FM	FORCE MAIN
FS	FINISHED SURFACE
FW	FIRE WATER
GB	GRADE BREAK
HP	HIGH POINT
L	LENGTH
MIN	MINIMUM
P.C.C.	PORTLAND CEMENT CONCRETE
PI	POINT OF INTERSECTION
PROP	PROPOSED
R	RADIUS
R/W	RIGHT OF WAY
SF	SQUARE FOOT
SD	STORM DRAIN
SS	SANITARY SEWER
STD	STANDARD
TBI	TO BE IMPACTED
TBR	TO BE REMOVED
TR	TO REMAIN
W	WATER



FEFFER GEOLOGICAL CONSULTING — SITE PLAN

NAME: NEW URBAN WEST INC.
JB: 2445-04 METRO WALK BY: AG
LOST CANYON RD
DATE: 8/06/20 SCALE: 1"=60' SITE: & HARRIMAN DR
REF: BASE MAP FROM SURVEY

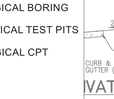
EXPLANATION

- B-7 LOCATION OF FEFFER GEOLOGICAL BORING
- TP-4 LOCATION OF FEFFER GEOLOGICAL TEST PITS
- CPT-6 LOCATION OF FEFFER GEOLOGICAL CPT
- A A' CROSS SECTION LINE
- Af ARTIFICIAL FILL
- Qc QUATERNARY COLLUVIUM
- Qa-Qfp ALLUVIUM-FLOOD PLAIN DEPOSITS
- Tmc MINT CANYON FORMATION

SYMBOLS

- GEOLOGIC CONTACT, dashed where approximate

ROAD (PUBLIC)



VATE)

LEGAL DESCRIPTION:

THAT PORTION OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF SANTA CLARITA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE MARCH 29, 1877, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHERLY LINE OF SAID SOUTH HALF, DISTANT THEREON SOUTH 89 DEGREES 57 MINUTES 20 SECONDS EAST 124.57 FEET FROM THE WESTERLY LINE OF SAID SOUTHEAST QUARTER; THENCE ALONG SAID NORTHERLY LINE SOUTH 89 DEGREES 57 MINUTES 20 SECONDS EAST TO A POINT DISTANT THEREON NORTH 89 DEGREES 57 MINUTES 20 SECONDS WEST 150.99 FEET FROM THE INTERSECTION OF SAID NORTHERLY LINE WITH THE NORTHWESTERLY LINE OF THE 100 FOOT WIDE STRIP OF LAND DESCRIBED IN DEED DATED APRIL 22, 1890, FROM JOHN T. HUMPHREY'S TO SOUTHERN PACIFIC RAILROAD COMPANY; RECORDED APRIL 26, 1890, IN BOOK 650, PAGE 125 OF DEEDS, RECORDS OF SAID COUNTY; THENCE SOUTH 53 DEGREES 28 MINUTES 05 SECONDS WEST 421.92 FEET; THENCE SOUTH 53 DEGREES 59 MINUTES 43 SECONDS WEST 157.20 FEET TO A POINT; THENCE SOUTHWESTERLY ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 2764.82 FEET, THROUGH A CENTRAL ANGLE OF 9 DEGREES 44 MINUTES 35 SECONDS (TANGENT TO SAID CURVE AT THE LAST MENTIONED POINT) BEARS SOUTH 56 DEGREES 04 MINUTES 05 SECONDS WEST AND NORTH OF SAID CURVE BEARS SOUTH 59 DEGREES 56 MINUTES 22 SECONDS WEST 469.59 FEET) AN ARC DISTANCE OF 470.15 FEET; THENCE NORTH 25 DEGREES 11 MINUTES 20 SECONDS WEST 50.00 FEET TO A POINT; THENCE SOUTHWESTERLY ALONG A COMPOUND CURVE TO THE RIGHT (TANGENT TO SAID CURVE AT THE LAST MENTIONED POINT BEARS SOUTH 64 DEGREES 48 MINUTES 40 SECONDS WEST) HAVING THE FOLLOWING RADII, CENTRAL ANGLES AND ARC LENGTHS; 2714.82 FEET, 10 DEGREES 53 MINUTES 36 SECONDS (CENTRAL ANGLES), 500.36 (ARC), 1759.91 FEET, 8 DEGREES 01 MINUTES 14 SECONDS (CENTRAL ANGLES), 246.36 (ARC), TO A POINT IN THE NORTHERLY LINE OF LAND DESCRIBED FIRST IN DEED DATED APRIL 26, 1890, FROM JOHN T. HUMPHREY'S TO SOUTHERN PACIFIC RAILROAD COMPANY RECORDED APRIL 26, 1890, IN BOOK 642, PAGE 277, OF DEEDS, RECORDS OF SAID COUNTY; THENCE ALONG SAID LAST MENTIONED NORTHERLY LINE TO A LINE HAVING A BEARING OF NORTH 2 DEGREES 00 MINUTES 00 SECONDS WEST THAT PASSED THROUGH THE POINT OF BEGINNING; THENCE ALONG SAID LINE NORTH 2 DEGREES 00 MINUTES 00 SECONDS WEST TO THE POINT OF BEGINNING.

APN: 2840-004-009

GENERAL NOTES

1. LOT LINES CAN BE ADJUSTED AND ADDITIONAL RESIDENTIAL OR COMMERCIAL LOTS MAY BE CREATED TO THE SATISFACTION OF THE CITY PLANNING DEPARTMENT AS LONG AS THE MAXIMUM NUMBER OF APPROVED RESIDENTIAL UNITS AND/OR THE MAXIMUM SQUARE FOOTAGE OF COMMERCIAL/OFFICE APPROVED IS NOT EXCEEDED.
2. ALIGNMENT AND GEOMETRICS OF STREETS ARE APPROXIMATE. ADJUSTMENTS TO STREETS CAN BE MADE WITH APPROVAL BY THE CITY OF SANTA CLARITA PLANNING DEPARTMENT AND THE ENGINEERING DEPARTMENTS.
3. GRADES SHOWN ON THIS TENTATIVE MAP ARE APPROXIMATE. GRADES MAY DEVIATE UP TO TEN FEET WITH APPROVAL OF CITY PLANNING AND ENGINEERING DEPARTMENTS.
4. PERMISSION IS REQUESTED FOR MULTIPLE (PHASED/UNIT) TRACT MAPS.
5. PERMISSION IS REQUESTED TO COMBINE LOTS.
6. PERMISSION IS REQUESTED TO CREATE ADDITIONAL LANDSCAPE/OPEN SPACE OR PUBLIC USE LOTS TO THE SATISFACTION OF THE CITY PLANNING DEPARTMENT.
7. PERMISSION IS REQUESTED TO RECORD ADDITIONAL UTILITY LOTS AND PROVIDE MAINTENANCE EASEMENTS TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING AND ENGINEERING DEPARTMENTS.
8. THE LOCATIONS OF APPURTENANT STRUCTURES (E.G., PASEOS, TRANSIT SHELTERS, WATER QUALITY BASINS, ETC.) MAY BE RELOCATED TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING AND ENGINEERING DEPARTMENTS.
9. PERMISSION IS REQUESTED TO MASS GRADE.
10. LOTS DESIGNATED FOR MULTI-FAMILY HOUSING MAY BE FURTHER SUBDIVIDED FOR CONDOMINIUM PURPOSES.
11. RESIDENTIAL UNITS MAY BE TRANSFERRED BETWEEN PLANNING AREAS SUBJECT TO THE APPROVAL OF THE CITY PLANNING DEPARTMENT.

PROJECT SUMMARY:

GROSS AREA:	20.42 AC
NET AREA:	18.15 AC
TOTAL LOTS:	5
TOTAL D.U.:	203
DENSITY:	26.4 DU/AC
EXISTING ZONING:	BP
PROPOSED ZONING:	UR5

EARTHWORK SUMMARY

CUT: 450,000 cy
FILL: 450,000 cy
IMPORT/EXPORT: 0 cy

OWNER:

BLUMAX SANTA CLARITA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY
2001 WILSHIRE BLVD., SUITE 401
SANTA MONICA, CA 94303
PHONE: (310) 556-6390
ATTN: KEVIN HARBISON

FLOOD ZONE

FLOOD INSURANCE RATE MAPS COMMUNITY PANEL NUMBERS
NO. 06037C0840F AND 06037C0845F ZONE X

TOPOGRAPHY:

CONTOURS ARE BASED ON AN AERIAL PHOTOGRAMETRIC SURVEY PERFORMED BY VERTEX AND DON READ CORPORATION FLOWN ON MAY 2017.

BENCHMARK:

L 1668 DATUM NAVD 88(1995 ADJUSTMENT) ELEVATION 1586.011
SAND CANYON ROAD AND 161M NORTH OF LIVE OAK SPRINGS CANYON ROAD
8.2M NORTHEAST OF POWER POLE #115500E MKD (PI 24)
DESCRIPTION: CS MON IN WELL 250M DN ⊕ PI 600M EAST OF CENTERLINE

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING NORTH 89°44'29" WEST OF THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS SHOWN ON MAP OF TRACT NO. 69164-01 FILED IN BOOK 1396 PAGES 40 THROUGH 48 INCLUSIVE, OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY.

ASSESSOR PARCEL NUMBER:

2840-004-009

CONDOMINIUM NOTE:

ALL RESIDENTIAL, COMMERCIAL AND OFFICE LOTS WITHIN THIS TENTATIVE MAP MAY BE FURTHER AIRSPACE SUBDIVIDED FOR CONDOMINIUM PURPOSES.

FOR CONDOMINIUM PURPOSES

PUBLIC UTILITIES:

CABLE TV	CHARTER COMMUNICATIONS 14221 COVELLO STREET VAN NUYS, CA 91405 (661) 483-3030 ATTN: ROBERT REIHS
ELECTRIC	SOUTHERN CALIFORNIA EDISION CO. 3589 FOOTHILL DRIVE THOUSAND OAKS, CA 91361 (661) 607-0512 ATTN: JOSHUA YANEZ
GAS	SOUTHERN CA. GAS COMPANY 9400 OAKDALE AVENUE CHATSWORTH, CA. 91313 (818) 701-7567 ATTN: JOHN CURRAN
SEWER	LOS ANGELES COUNTY SEWER MAINTENANCE DEPARTMENT 45712 NORTH DIVISION LANCASTER, CA. 93535 (626) 300-3370 ATTN: MARISA MORALES
TELEPHONE	AT&T 26971 N. FURNIVALL AVENUE SANTA CLARITA, CA 91351 (661) 251-8799 ATTN: BRYAN MONTGOMERY
WATER	SANTA CLARITA VALLEY WATER AGENCY 26521 SUMMIT CIRCLE SANTA CLARITA, CA 91350 (661) 259-2737 ATTN: BRENT PAYNE

EASEMENT LEGEND:

- (A) PROPOSED LANDSCAPE EASEMENT TO THE CITY OF SANTA CLARITA
- (B) PROPOSED ROAD EASEMENT TO THE CITY OF SANTA CLARITA – LOST CANYON ROAD
- (C) PROPOSED STORM DRAIN EGRESS EASEMENT TO THE CITY OF SANTA CLARITA
- (D) PROPOSED NEW LOT LINE ADJUSTMENT WITH THE CITY OF SANTA CLARITA
- (E) PROPOSED ROAD EASEMENT – HARRIMAN DRIVE

EASEMENTS

EASEMENTS BASED ON CHICAGO TITLE COMPANY PRELIMINARY REPORT
POLICY NO.: 00125823-994-LT2-KD

1. Water rights, claims or title to water, whether or not disclosed by the public records.

2. An easement affecting the portion of said land and for the purposes stated herein and incidental purposes
(No representation is made as to the present ownership of said easement)
In Favor of: Southern California Edison Company, Ltd
For: public utilities
Recorded: In Book 20996, Page 385, of Official Records
Affects: A portion of said land more particularly described therein
SHOWN HEREON AS (2)

5. Easement(s) for the purpose(s) shown below and rights incidental thereto as condemned by an instrument,
Entitled: Amended Final Order of Condemnation
Court: Superior Court
Case No.: BC 317474
In favor of: Castaic Lake Water Agency, a California water agency
Purpose: water pipeline
Recording Date: May 5, 2006
Recording No: 06-0997584, Official Records
Affects: that portion of said land described therein
SHOWN HEREON AS (5)

6. Matters contained in that certain document
Entitled: Memorandum of Grading, Improvements, and Easement Agreement
Dated: November 13, 2009
Executed by: Rachel Jorgenson, Successor Trustee of the Marital Deduction Trust of The Cloyd Family Trust, dated November 3, 2003, Goldman Family Limited Partnership, a Delaware limited partnership, Vista Canyon Ranch, LLC, a California limited liability company and Vista Canyon Phase 1, LLC, a Delaware limited liability company
Recording Date: November 16, 2016
Recording No: 20161433058, Official Records
Reference is hereby made to said document for full particulars.

7. Any rights, claims or interests that may exist or arise by reason of the following facts disclosed by a map dated June 5, 2019 last revised July 9, 2019 of an ALTA/NSPS Land Title Survey completed June 4, 2019 prepared by or under the responsible charge of Michael A. Kennedo LS 5642, of/for Vertex Survey, Inc.
A. Curbs extend across the north, west and south lines of surveyed property.
B. There is vehicular access the west and south lines of surveyed property.
C. A V-ditch extends across the west line of surveyed property.
D. There are street lights and pull boxes on the north and west sides of surveyed property
E. There is a 36" stand pipe in the northwest corner of surveyed property,
F. There are water valves on the north side of the surveyed property.
G. A fire hydrant lies 1.3 feet east of the west line of surveyed property.

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE, CARLSBAD, CA 92008
TEL: (760) 431-9896 FAX: (760) 431-8802
27413 TOURNEY ROAD SUITE 120 VALENCIA, CA 91355 TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PLAN PREPARED FOR:
NEW URBAN WEST, INC.
2001 WILSHIRE BLVD., SUITE 401
SANTA MONICA, CA 91405
TEL: (310) 556-6390
ATTN: KEVIN HARBISON

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431-9896
PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 3/19/20 DATE

REGISTERED PROFESSIONAL ENGINEER — CRAIG M. WHITTEKER — NO. 51929 — EXP 6-30-22 — CIVIL — STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 1 OF | CITY OF SANTA CLARITA | 1 SHEETS

METROWALK
TENTATIVE TRACT MAP 83087

E:\CAD\1934\TENTATIVE MAP\1934_TENTATIVE_MAP_PLAN.dwg

FEFFER GEOLOGICAL CONSULTING

CROSS SECTION A-A'

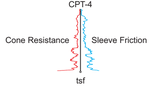
NAME: NEW URBAN WEST INC.

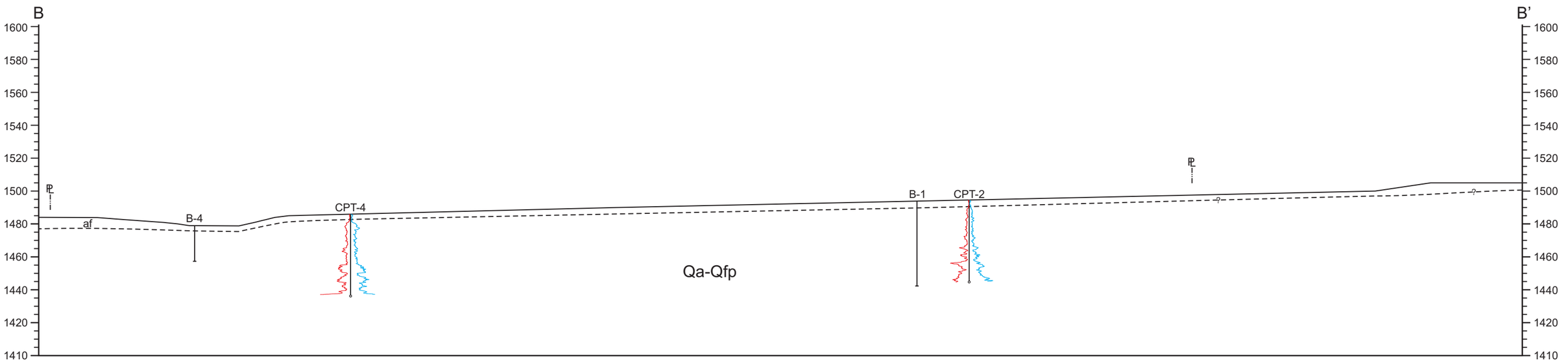
JB: 2445-04 METRO WALK BY: AG

LOST CANYON RD

DATE: 8/06/20 SCALE: 1"=60' SITE:& HARRIMAN DR

REF: ELEVATIONS FROM SURVEY





FEFFER GEOLOGICAL CONSULTING

CROSS SECTION B-B'

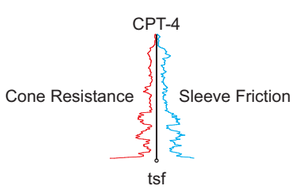
NAME: NEW URBAN WEST INC.

JB: 2445-04 METRO WALK BY: AG

LOST CANYON RD

DATE: 8/06/20 SCALE: 1"=60' SITE: & HARRIMAN DR

REF: ELEVATIONS FROM SURVEY



APPENDIX 'A'

Excavation Logs

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 1
Boring Location: Soil Covered Vacant Land

Date Performed: 4/15/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
5	11	R		Alluvium-Flood Plain Deposits (Qa-Qfp): Sandy silt Gravel at 8’	Medium Brown Yellow Hue	Medium dense	Moist
10	11/12	R		Sandy gravel to gravelly sand, gravels up to 1/4” diameter	Medium Brown Yellow Hue	Medium Dense	Slightly Moist To Moist
15	7/8	R		Silt with gravel	Brown Yellow Brown	Medium Dense	Moist
20	8/9	R		Sandy silt, caliche	Medium Brown Slight Yellow Hue	Medium Dense	Moist
25	19/12	R		Cobbly sand interbeded with sandy silt to silty sand	Light Brown	Dense	Slightly Moist
30	13/15	R		Gravelly sand to sandy gravel, gravels 1/4” to 1” diameter	Brown Yellow Brown	Dense	Slightly Moist
35	28/15	R		Gravelly to cobbly sand	Light Brown Tan	Dense	Slightly Moist
40				End At 36.5’, Af to 4’, No Water, No Caving			

Feffer Geological Consulting

Figure

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 2
Boring Location: Soil Covered Vacant Land

Date Performed: 4/15/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
2.5							
				Alluvium-Flood Plain Deposits (Qa-Qfp):			
5	8/8	R		Silty clay to clayey silt, trace gravels	Gray brown, Medium brown	Firm to stiff	Moist
7.5							
10	7/10	R		Sandy silt	Yellow brown	Firm to stiff	Moist
12.5	2/3/3		SPT	Silty sand to sandy silt, trace gravels, caliche	Light brown, tan	Medium dense	Moist
15	5/9	R		Sandy silt to silty sand, caliche	Light brown, Yellow brown	Firm	Slightly Moist
17.5	3/4/4		SPT	Sandy silt to silty sand, caliche	Light brown, Yellow brown	Firm	Slightly Moist
20	8/11	R		Silty sand, trace gravels, caliche	Light brown	Medium dense Firm	Slightly Moist
22.5	5/8		SPT	Sandy silt	Light yellow Brown	Firm	Moist
25	7/8	R		Sandy silt to silty sand	Light brown Yellow hue	Firm	Moist
27.5	5/7/10		SPT	Silty sand to sandy silt, trace clay & gravels	Light brown Yellow hue	Firm	Moist
30	9/11	R		Silty sand, trace gravels	Light brown Yellow hue		Moist
32.5	5/6/6		SPT	Sandy silt to silty sand	Light brown	Firm	Moist
35	11/17	R		Sandy silt to silty sand, increase in sands with depth	Light brown	Firm, Medium dense	Slightly Moist
37.5	6/8/9		SPT	Sandy silt to silty sand, increase in silt with depth	Light brown, Tan	Firm, Medium dense	Moist
40							

Feffer Geological Consulting

Figure

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 2
Boring Location: Soil Covered Vacant Land

Date Performed: 4/15/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
40	13/20	R		Sandy silt	Light brown, tan	Medium dense, Firm	Slightly Moist
42.5	7/8/8		SPT	Sandy silt, trace clay	Medium brown	Medium dense, Firm	Slightly Moist
45	16/24	R		Silty sand, trace clay	Medium brown	Dense	Slightly Moist
47.5	111/12/14		SPT	Silty sand	Light yellow brown	Dense	Slightly Moist
50	18/25	R		Sandy silt to silty sand	Light brown	Dense	Slightly Moist
				End At 51.5’, Af To 4’, No Water, No Caving			
55							
60							
65							
70							
75							
80							

Feffer Geological Consulting

Figure

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 3
Boring Location: Soil Covered Vacant Land

Date Performed: 4/15/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
5	4/5	R		Alluvium-Flood Plain Deposits (Qa-Qfp): Silty sand to sandy silt	Medium brown	Medium dense	Slightly Moist
10	8/9	R		Silt, trace sand & gravel, caliche	Light yellow brown	Medium dense Firm	Slightly Moist
15	11/12	R		Silt, trace sand	Brown Yellow brown	Medium dense	Moist
20	7/10	R		Silty sand, trace gravel	Light yellow brown	Medium dense	Moist
25	8/11	R		Silty sand with common gravels, caliche	Brown	Medium dense	Slightly Moist
30	10/15	R		Sandy silt	Light Yellow brown	Medium dense Dense	Slightly Moist
35				End At 31.5’, Af to 4’, No Water, No Caving			
40							

Feffer Geological Consulting

Figure

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 4
Boring Location: Soil Covered Vacant Land

Date Performed: 4/15/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
5	4/5	R		Alluvium-Flood Plain Deposits (Qa-Qfp): Clayey silt, caliche	Medium brown	Medium dense	Slightly Moist
10	7/10	R		Sandy silt to silty, trace gravels, caliche, carbon	Brown Yellow vrown	Medium dense Firm	Slightly Moist
15	9/13	R		Sandy silt to silty sand, trace common gravels	Light olive Yellow brown	Medium dense	Moist
20	8/12	R		Silty sand, trace gravel	Light yellow brown	Medium dense	Moist
				End At 21.5’, Af to 4’, No Water, No Caving			
25							
30							
35							
40							

Feffer Geological Consulting

Figure

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 5
Boring Location: Soil Covered Vacant Land

Date Performed: 4/16/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
2.5							
				Alluvium-Flood Plain Deposits (Qa-Qfp):			
5	7/9	R		Sandy silt	Olive brown to brown	Firm	Moist
7.5							
10	7/9	R		Silt, trace clay, mica	Olive yellow Brown	Firm	Moist
12.5	4/6/6		SPT	Sandy silt to silty sand, trace gravels & rootlets	Olive yellow Brown	Firm	Moist
15	8/11	R		Sandy silt to silty sand, trace gravels & rootlets, calachie	Olive yellow Brown	Dense to stiff	Moist
17.5	5/5/5		SPT	Silty sand trace clay & gravel	Olive yellow Brown	Firm Medium dense	Moist
20	8/13	R		Silt grades into sandy silt to silt with trace sand	Olive brown	Medium dense Firm	Moist
22.5	5/6/6		SPT	Silty sand, trace gravels, calachie	Yellow olive Brown	Medium dense	Moist
25	11/19	R		Silty sand, trace gravels, calachie	Yellow olive Brown	Medium dense	Moist
27.5	5/6/8		SPT	Sandy silt, trace gravels, FeO2 staining	Olive yellow Brown	Firm	Moist
30	14/19	R		Gravelly sand, rounded, subrounded, angular gravels up to 1/2” diameter	Olive yellow Brown	Dense	Moist
32.5	6/8/10		SPT	Sandy silt, interbedded with silt and gravelly sands	Brown	Firm	Moist
35	11/19	R		Silty sand grades into gravelly sand, trace clay	Brown	Dense	Moist
37.5	9/10/11		SPT	Sand, trace silt, interbedded with sandy silt	Olive yellow Brown	Firm, Medium dense	Moist
40							

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 5
Boring Location: Soil Covered Vacant Land

Date Performed: 4/16/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
40	14/22	R		Fine grained sandy silt	Olive yellow Brown	Dense	Moist
42.5	9/9/9		SPT	Silty sand	Olive brown	Medium dense, Firm	Moist
45	13/21	R		Silty sand	Olive brown	Dense	Slightly Moist
47.5	6/9/13		SPT	Fine to medium grained sand, trace silt	Light olive yellow brown	Medium dense	Moist
50	27/32	R		Fine grained silty sand grades into gravelly sand, gravels up to 1/2” diameter	Light olive yellow brown	Dense	Moist
				End At 51.5’, Af To 4’, No Water, No Caving			
55							
60							
65							
70							
75							
80							

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 6
Boring Location: Soil Covered Vacant Land

Date Performed: 4/16/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
5	13/14	R		Alluvium-Flood Plain Deposits (Qa-Qfp): Sandy silt to silt	Medium brown Yellow hue	Dense	Moist
10	6/8	R		Silt trace sand & gravel, caliche	Yellow brown	Medium dense Firm	Moist
15	6/9	R		Sandy silt, caliche	Brown Yellow hue	Medium dense Firm	Moist
20	9/11	R		Sand grades into gravelly sand, gravels up to 1/4” diameter	Light brown	Medium dense	Moist
25	7/10	R		Silt, trace clay, caliche, pores	Olive brown	Firm	Moist
30	13/18	R		Silty sand, trace gravel, caliche, carbon, mica	Olive Yellow brown	Dense, stiff	Moist
35	10/13	R		Silty sand grades into silt	Light brown	Dense	Moist
40				End At 36.5’, Af to 4’, No Water, No Caving			

Feffer Geological Consulting

Figure

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 7
Boring Location: Soil Covered Vacant Land

Date Performed: 4/16/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
0				Artificial Fill (Af)			
2.5							
				Alluvium-Flood Plain Deposits (Qa-Qfp):			
5	6/6	R		Silt, caliche	Olive brown to brown	Firm medium dense	Moist
7.5							
10	9/13	R		Sandy silt, caliche	Olive yellow Brown	Firm	Moist
12.5	6/7/11		SPT	Sandy silt	Olive yellow Brown	Firm	Moist
15	7/10	R		Sand trace silt, increase in grain size with depth	Light brown yellow hue	Medium dense	Moist
17.5	5/5/6		SPT	Silty sand grades into sandy silt, trace gravel, poorly laminated, caliche	Brown olive hue	Firm	Slightly moist
20	7/11	R		Sandy silt trace gravel, rootlets	Olive brown	Firm	Moist
22.5	6/12/19		SPT	Gravelly medium grained sand @24’ Gravels	Light to medium Brown	Dense	Moist
25	6/8	R		Silt trace sand, caliche	Brown olive hue	Dense	Moist
27.5	4/5/7		SPT	Silt trace sand, caliche, increase in sand with depth	Brown olive brown	Firm	Moist
30	9/11	R		Silt trace gravels, caliche	Olive brown	Firm	Moist
32.5	7/7/7		SPT	Fine grained sand with gravel	Brown slight olive yellow hue	Medium dense	Moist
35	10/15	R		Sandy silt trace gravels, caliche	Olive brown	Firm	Moist
37.5	6/6/7		SPT	Silt	Olive brown	Firm	Moist
40							

LOG OF EXPLORATORY BORING

Job Number: 2445-04
Project: New Urban West Inc.-Metro Walk

Boring No: 7
Boring Location: Soil Covered Vacant Land

Date Performed: 4/16/2020

Drill Type: 8” Hollow Stem CME Drill Rig

Depth in Feet	Blows per 6”	Sample Type: Undisturbed	Sample Type: Bulk	Bedrock/ Soil Description	Color	Density	Moisture
40	13/20	R		Silt	Light olive brown	Firm	Moist
42.5	7/8/8		SPT	Silt	Olive brown	Firm	Moist
45	16/24	R		Silty sand, trace gravel, caliche, grades into clayey silt	Light olive brown	Dense	Moist
47.5	111/12/14		SPT	Clayey silt, caliche	Brown olive brown	Firm to stiff	Moist
50	18/25	R		Sandy silt trace gravels, increase in gravels with depth	Brown olive brown	Dense	Moist
				End At 51.5’, Af To 4’, No Water, No Caving			
55							
60							
65							
70							
75							
80							

Feffer Geological Consulting

Figure

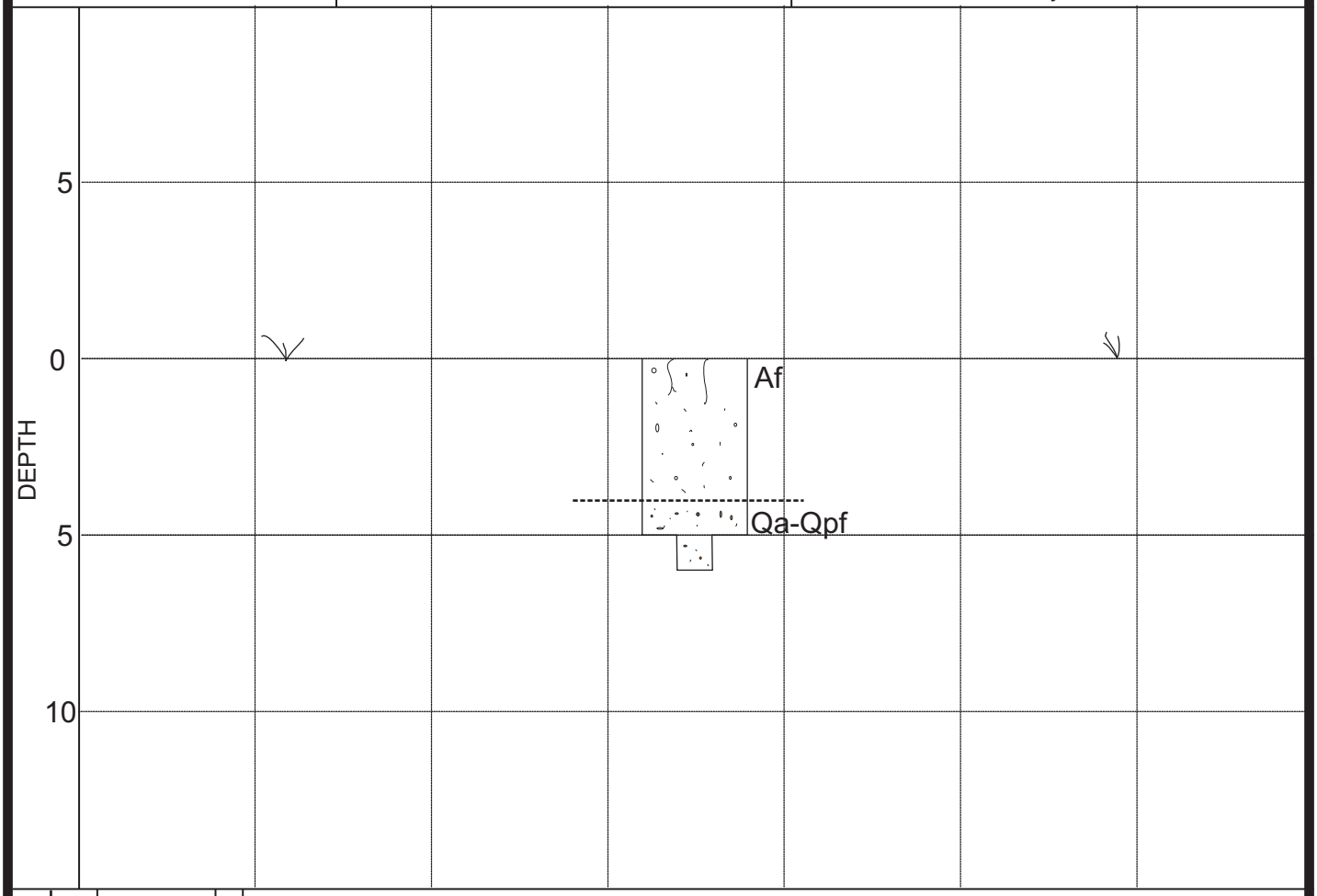
GRAPHIC LOG

APPROXIMATE SCALE : 1"=5'

DATE LOGGED : 7/6/20 BY : YMH

TEST EXCAVATION : 1

ADDRESS: Lost Canyon Rd. & Harriman Dr.



RING	BULK	SAMPLE DEPTH	Blows
		1	
		2	
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	
		11	
		12	
		13	
		14	

LOCATION : See Site Map

DESCRIPTION: Classification (USCS), color, moisture, consistency etc.

0-4' Artificial Fill (Af):
Clayey silt, medium brown, slightly moist, medium dense

4-6' Alluvium-Flood Plain Deposits (Qa-Qfp):
Silty sand to sandy silt, medium brown, slightly moist to moist, medium dense to dense

End At 6', Artificial Fill To 4', No Water, No Caving

FEFFER GEO CONSULTING	F.N. 2445-04	New Urban West Inc. Metro Walk	PLATE

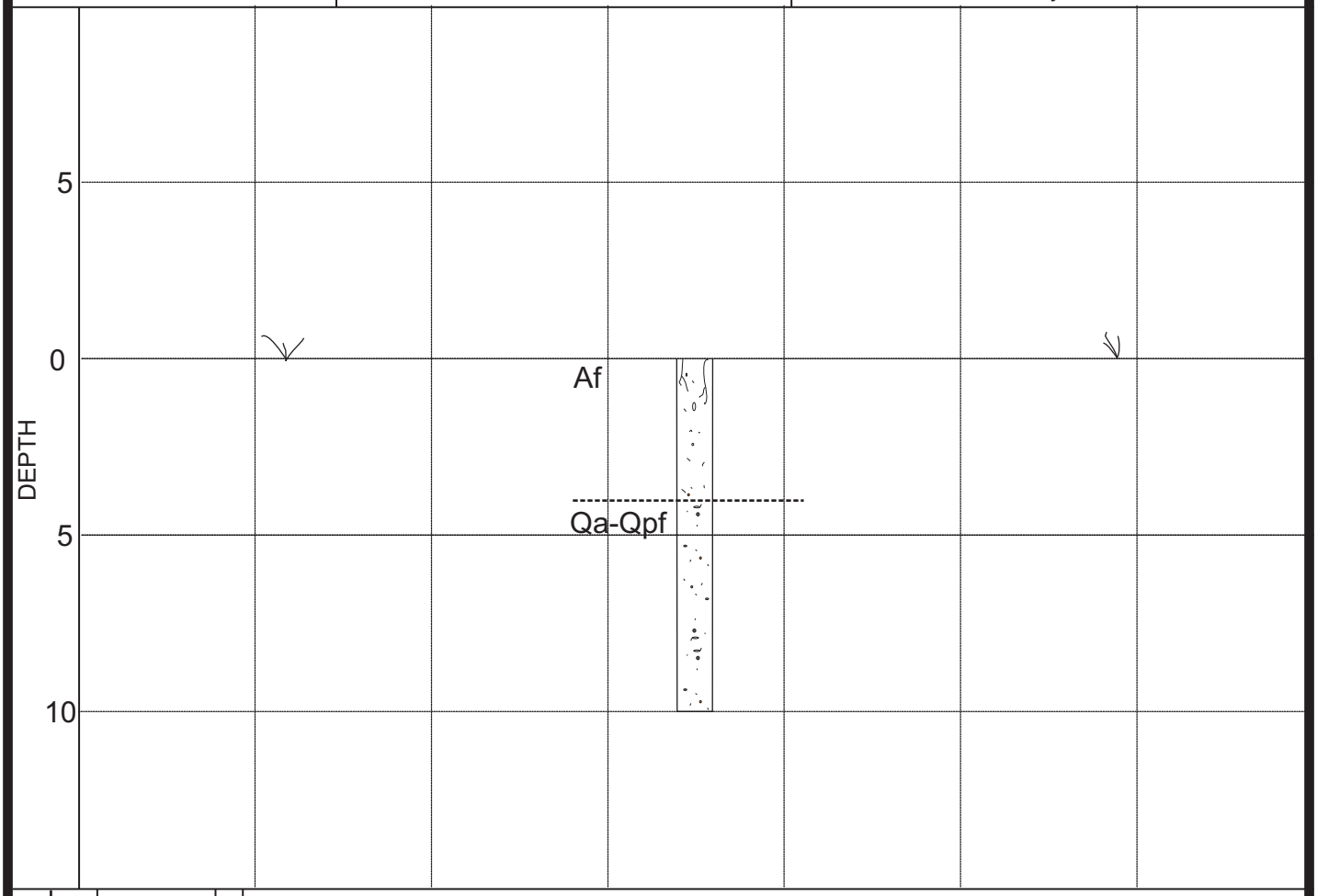
GRAPHIC LOG

APPROXIMATE SCALE : 1"=5'

TEST EXCAVATION : 2

DATE LOGGED : 7/6/20 BY : YMH

ADDRESS: Lost Canyon Rd. & Harriman Dr.



RING	BULK	SAMPLE DEPTH	Blows	LOCATION : See Site Map DESCRIPTION: Classification (USCS), color, moisture, consistency etc.
		1 2 3 4 5 6 7 8 9 10 11 12 13 14		0-4' Artificial Fill (Af): Clayey silt, medium brown, slightly moist, medium dense to dense 4-10' Alluvium-Flood Plain Deposits (Qa-Qfp): Silty sand to sandy silt, medium brown, slightly moist, medium dense @ 10' Silt, trace sand & gravel, caliche light yellow, brown, slightly moist, medium dense to firm End At 10', Artificial Fill To 4', No Water, No Caving

FEFFER GEO CONSULTING	F.N. 2445-04	New Urban West Inc. Metro Walk	PLATE

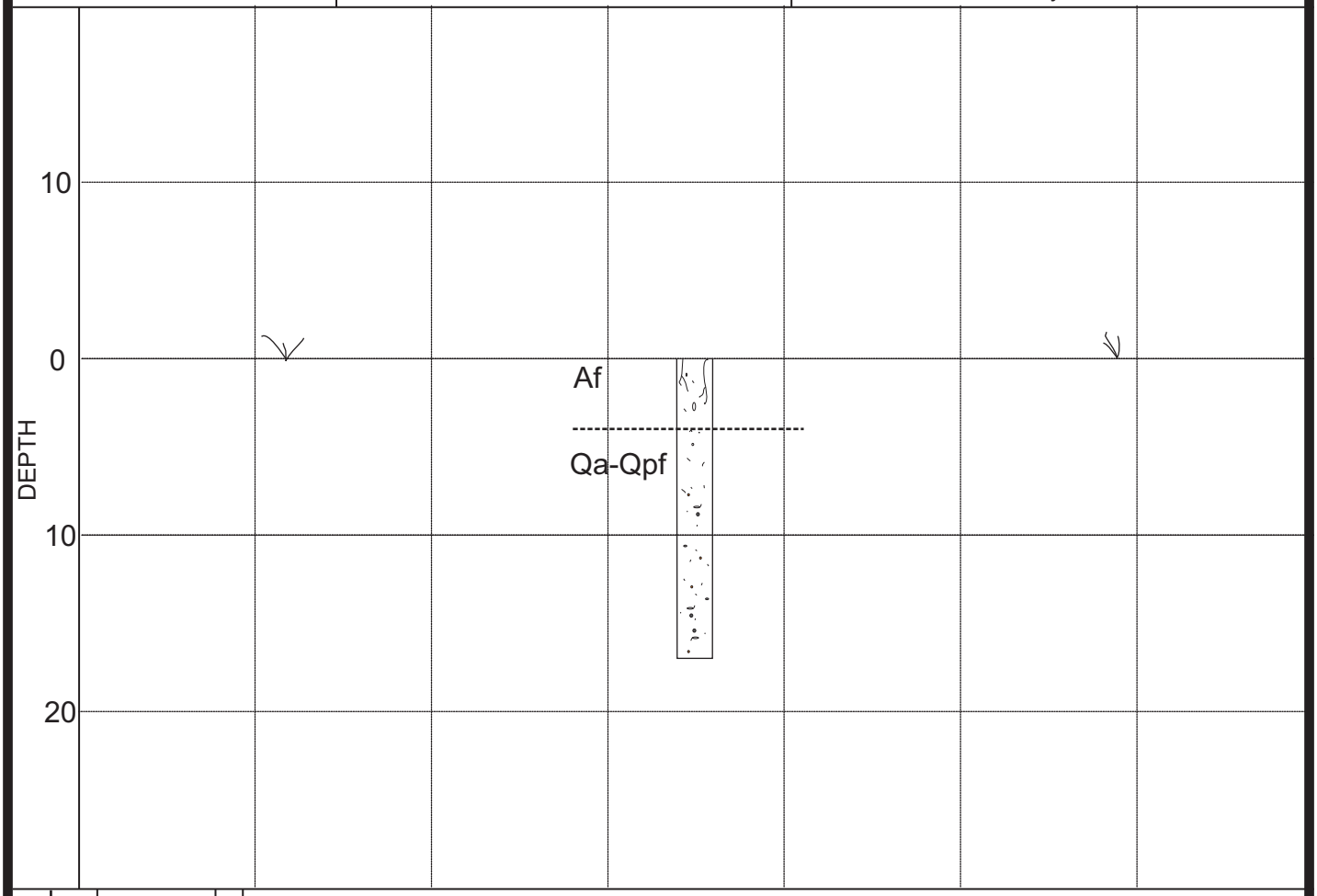
GRAPHIC LOG

APPROXIMATE SCALE : 1"=10'

TEST EXCAVATION : 3

DATE LOGGED : 7/6/20 BY : YMH

ADDRESS: Lost Canyon Rd. & Harriman Dr.



RING	BULK	SAMPLE DEPTH	Blows	LOCATION : See Site Map DESCRIPTION: Classification (USCS), color, moisture, consistency etc.
		2 4 6 8 10 12 14 16 18 20 22 24 26 28		0-4' Artificial Fill (Af): Clayey silt, medium brown, slightly moist, medium dense to dense 4-10' Alluvium-Flood Plain Deposits (Qa-Qfp): Silty sand to sandy silt, medium brown, slightly moist, medium dense @ 10' Silt, trace sand & gravel, caliche light yellow, brown, slightly moist, medium dense to firm @15' Sandy silt to silty sand, trace common gravels, light olive moist yellow brown, moist, medium dense End At 17', Artificial Fill To 4', No Water, No Caving

FEFFER GEO CONSULTING	F.N. 2445-04	New Urban West Inc. Metro Walk	PLATE

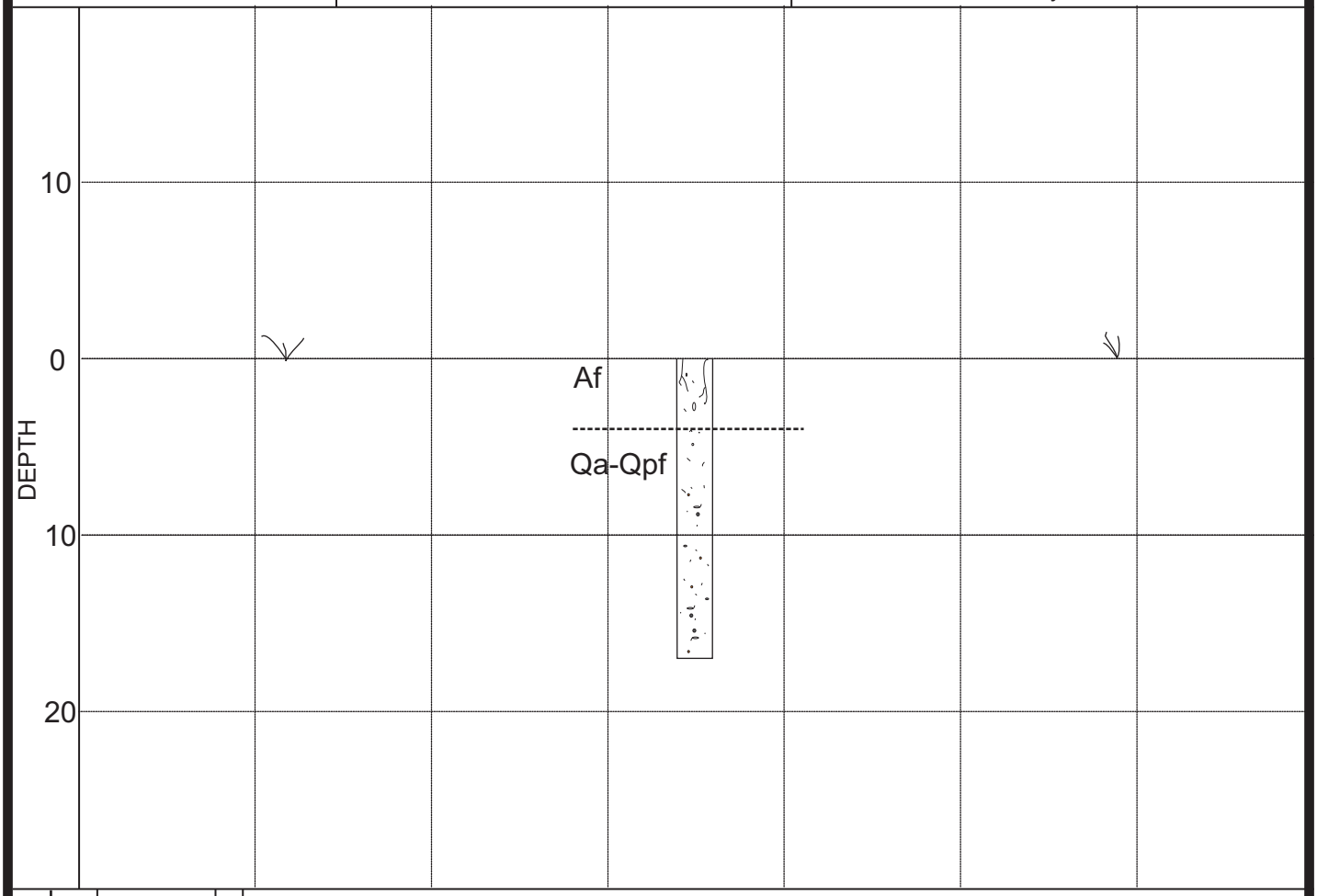
GRAPHIC LOG

APPROXIMATE SCALE : 1"=10'

DATE LOGGED : 7/6/20 BY : YMH

TEST EXCAVATION : 4

ADDRESS: Lost Canyon Rd. & Harriman Dr.



RING	BULK	SAMPLE DEPTH	Blows

LOCATION : See Site Map

DESCRIPTION: Classification (USCS), color, moisture, consistency etc.

2
4
6
8
10
12
14
16
18
20
22
24
26
28

0-4' Artificial Fill (Af):
Clayey silt, medium brown, slightly moist, medium dense to dense

4-10' Alluvium-Flood Plain Deposits (Qa-Qfp):
Silty clay to clayey silt, gray brown, medium brown, moist, firm to stiff

@ 10' Silty sand to sandy silt, trace gravels, caliche, light brown, tan, moist, medium dense

@15' Sandy silt to silty sand, caliche, light brown, yellow brown, slightly moist, firm

End At 17', Artificial Fill To 4', No Water, No Caving

FEFFER GEO CONSULTING	F.N. 2445-04	New Urban West Inc. Metro Walk	PLATE

SUMMARY

OF

CONE PENETRATION TEST DATA

Project:

New Urban West, Inc. – Metrowalk
27327 English Oak Court
Santa Clarita, CA
April 15, 2020

Prepared for:

Ms. Yvette Hays
Feffer Geological Consulting
1990 S. Bundy Drive, Ste 400
Los Angeles, CA 90025
Office (310) 207-5048 / Fax (310) 826-0182

Prepared by:

KEHOE TESTING & ENGINEERING
5415 Industrial Drive
Huntington Beach, CA 92649-1518
Office (714) 901-7270 / Fax (714) 901-7289
www.kehoetesting.com

TABLE OF CONTENTS

SUMMARY

OF

CONE PENETRATION TEST DATA

1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the New Urban West, Inc. - Metrowalk project located at 27327 English Oak Court in Santa Clarita, California. The work was performed by Kehoe Testing & Engineering (KTE) on April 15, 2020. The scope of work was performed as directed by Feffer Geological Consulting personnel.

2. SUMMARY OF FIELD WORK

The fieldwork consisted of performing CPT soundings at six locations to determine the soil lithology. A summary is provided in **TABLE 2.1**.

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
CPT-1	50	
CPT-2	50	
CPT-3	50	
CPT-4	50	
CPT-5	50	
CPT-6	49	

TABLE 2.1 - Summary of CPT Soundings

3. FIELD EQUIPMENT & PROCEDURES

The CPT soundings were carried out by **KTE** using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778). The cone penetrometers were pushed using a 30-ton CPT rig. The cone used during the program was a 15 cm^2 cone and recorded the following parameters at approximately 2.5 cm depth intervals:

- Cone Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (u)
- Inclination
- Penetration Speed

The above parameters were recorded and viewed in real time using a laptop computer. Data is stored at the KTE office for up to 2 years for future analysis and reference. A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

4. CONE PENETRATION TEST DATA & INTERPRETATION

The Cone Penetration Test data is presented in graphical form in the attached Appendix. These plots were generated using the CPeT-IT program. Penetration depths are referenced to ground surface. The soil behavior type on the CPT plots is derived from the attached CPT SBT plot (Robertson, "Interpretation of Cone Penetration Test…", 2009) and presents major soil lithologic changes. The stratigraphic interpretation is based on relationships between cone resistance (qc), sleeve friction (fs), and penetration pore pressure (u). The friction ratio (Rf), which is sleeve friction divided by cone resistance, is a calculated parameter that is used along with cone resistance to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone resistance and generate excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little (or negative) excess pore water pressures.

The CPT data files have also been provided. These files can be imported in CPeT-IT (software by GeoLogismiki) and other programs to calculate various geotechnical parameters.

It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and u. In these situations, experience, judgement and an assessment of the pore pressure data should be used to infer the soil behavior type.

If you have any questions regarding this information, please do not hesitate to call our office at (714) 901-7270.

Sincerely,

KEHOE TESTING & ENGINEERING

Steven P. Kehoe
President

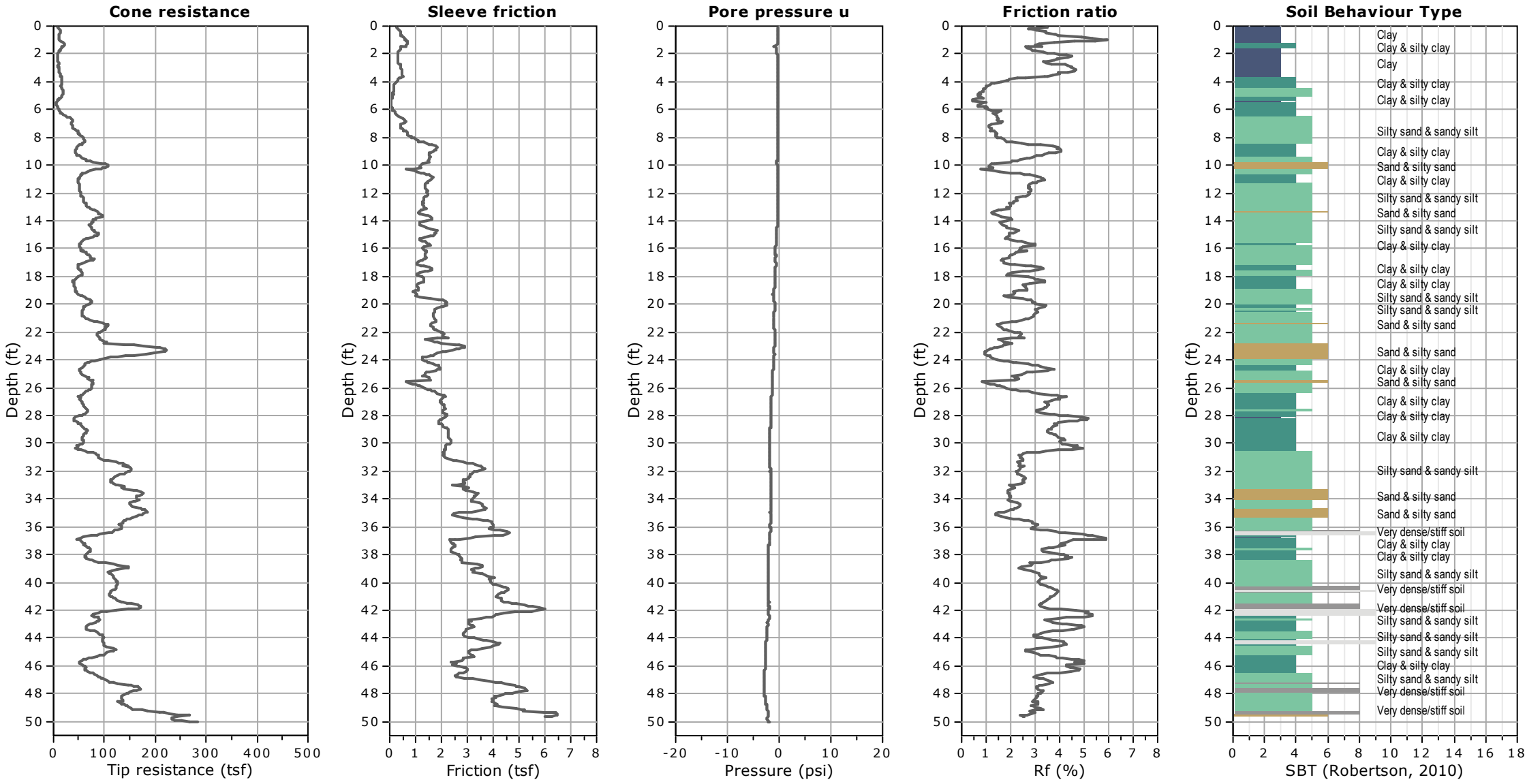
04/17/20-wt-1652

APPENDIX

Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Feffer Geological Consulting / New Urban-Metrowalk**
Location: **Santa Clarita, CA**

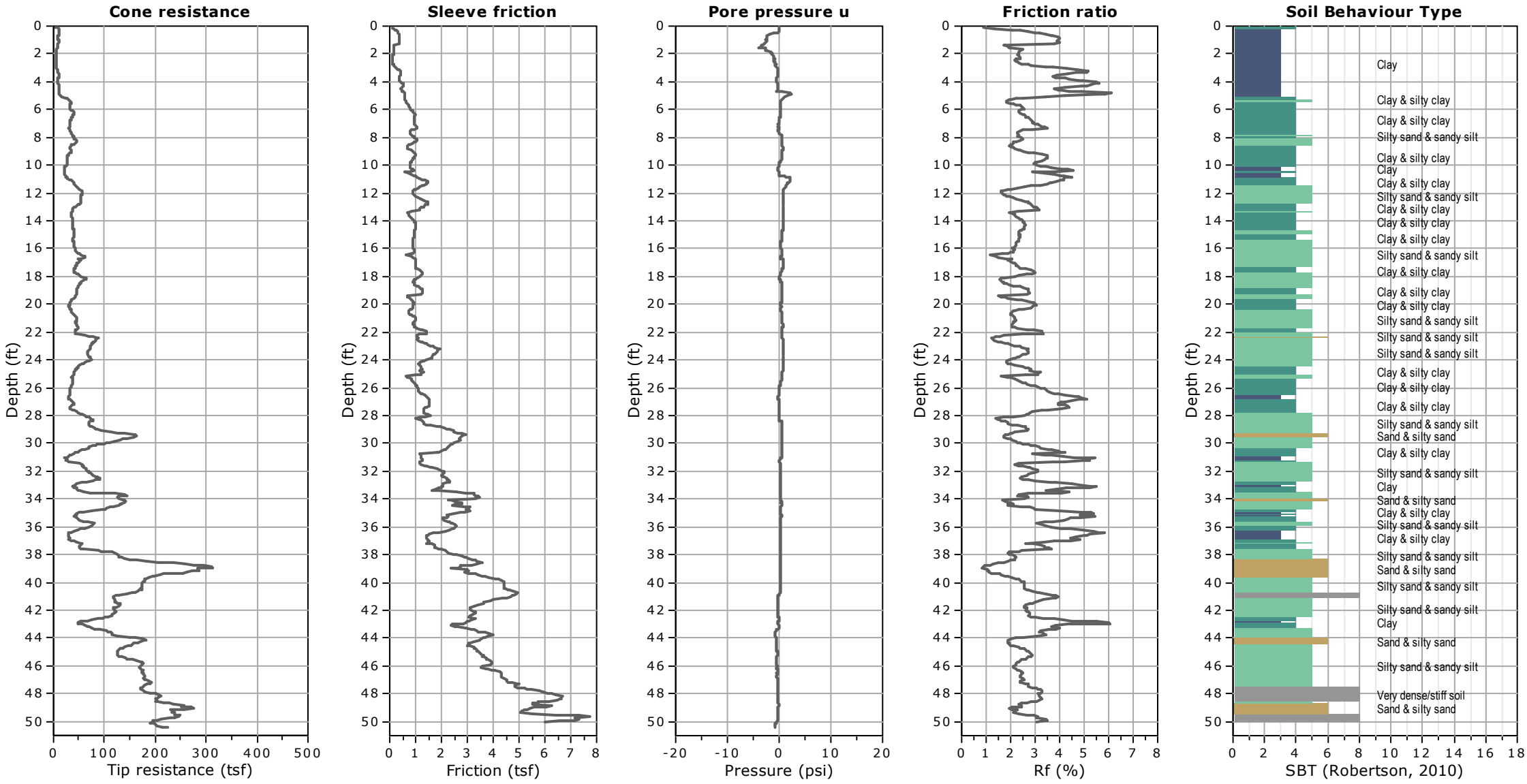
CPT-1
Total depth: 50.07 ft, Date: 4/15/2020



Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Feffer Geological Consulting / New Urban-Metrowalk**
Location: **Santa Clarita, CA**

CPT-2
Total depth: 50.41 ft, Date: 4/15/2020



Kehoe Testing and Engineering
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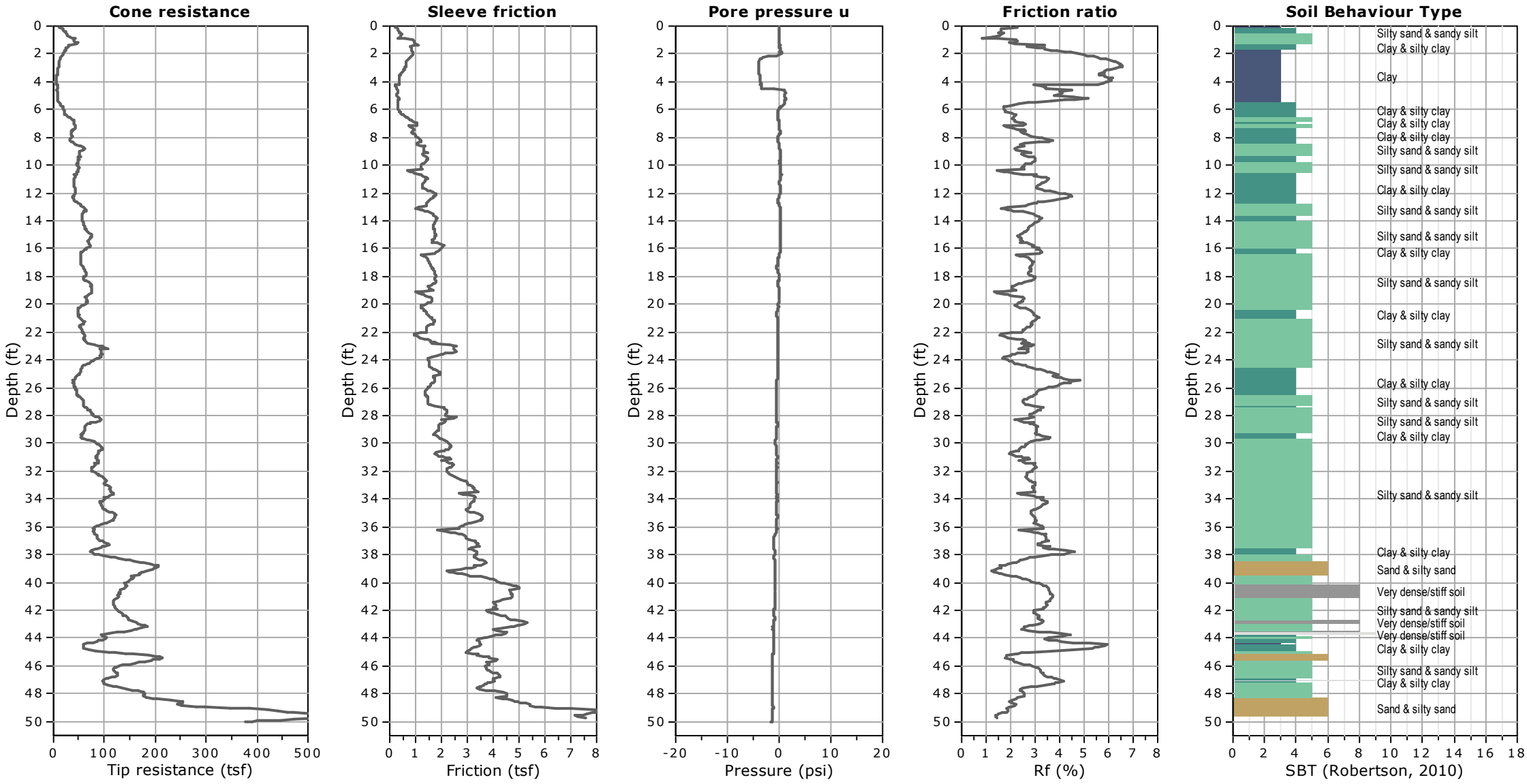
www.kehoetesting.com

Project: **Feffer Geological Consulting / New Urban-Metrowalk**
Location: **Santa Clarita, CA**

CPT-3
Total depth: 50.07 ft, Date: 4/15/2020



Kehoe Testing and Engineering
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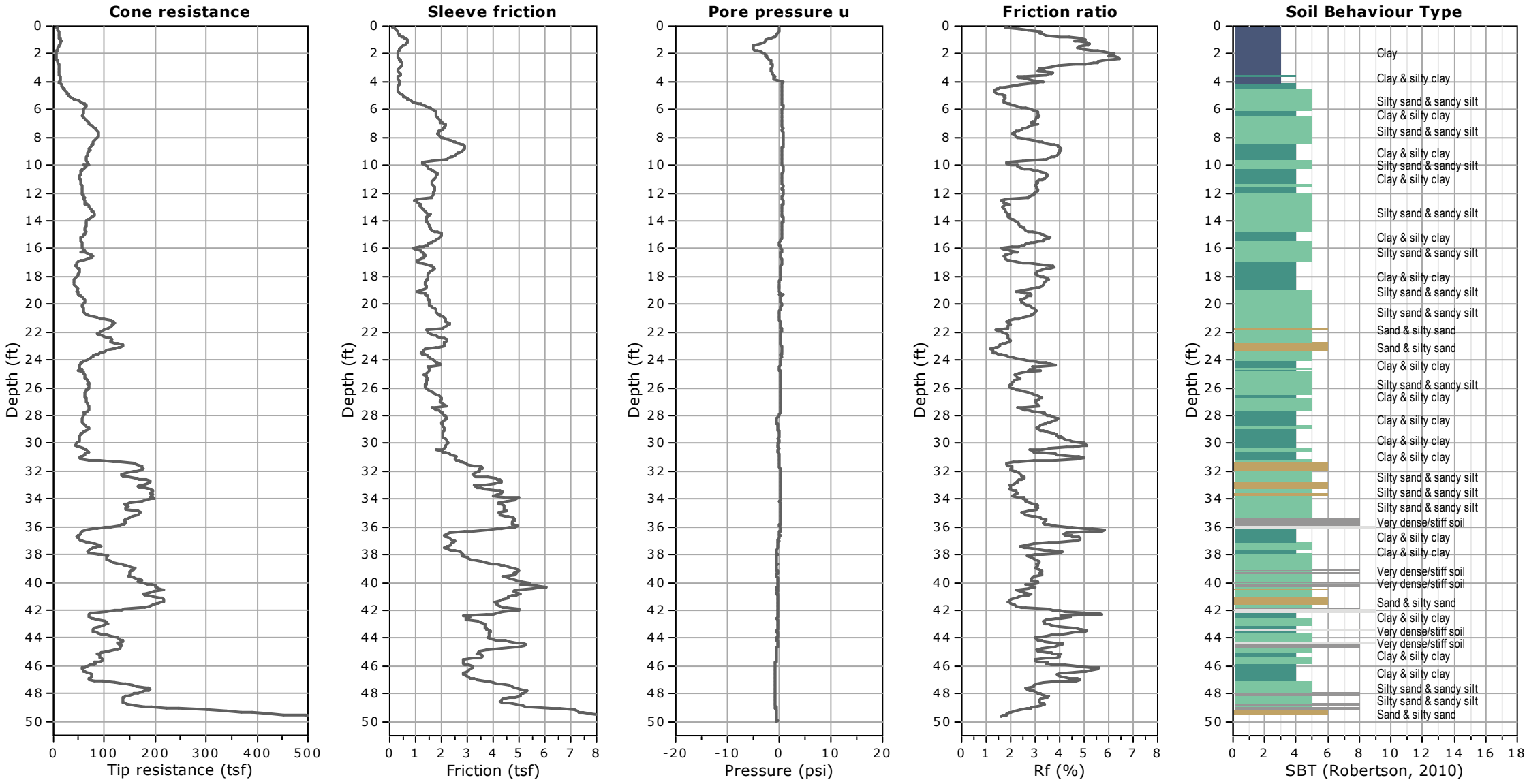
steve@kehoetesting.com
www.kehoetesting.com

Project: **Feffer Geological Consulting / New Urban-Metrowalk**
Location: **Santa Clarita, CA**

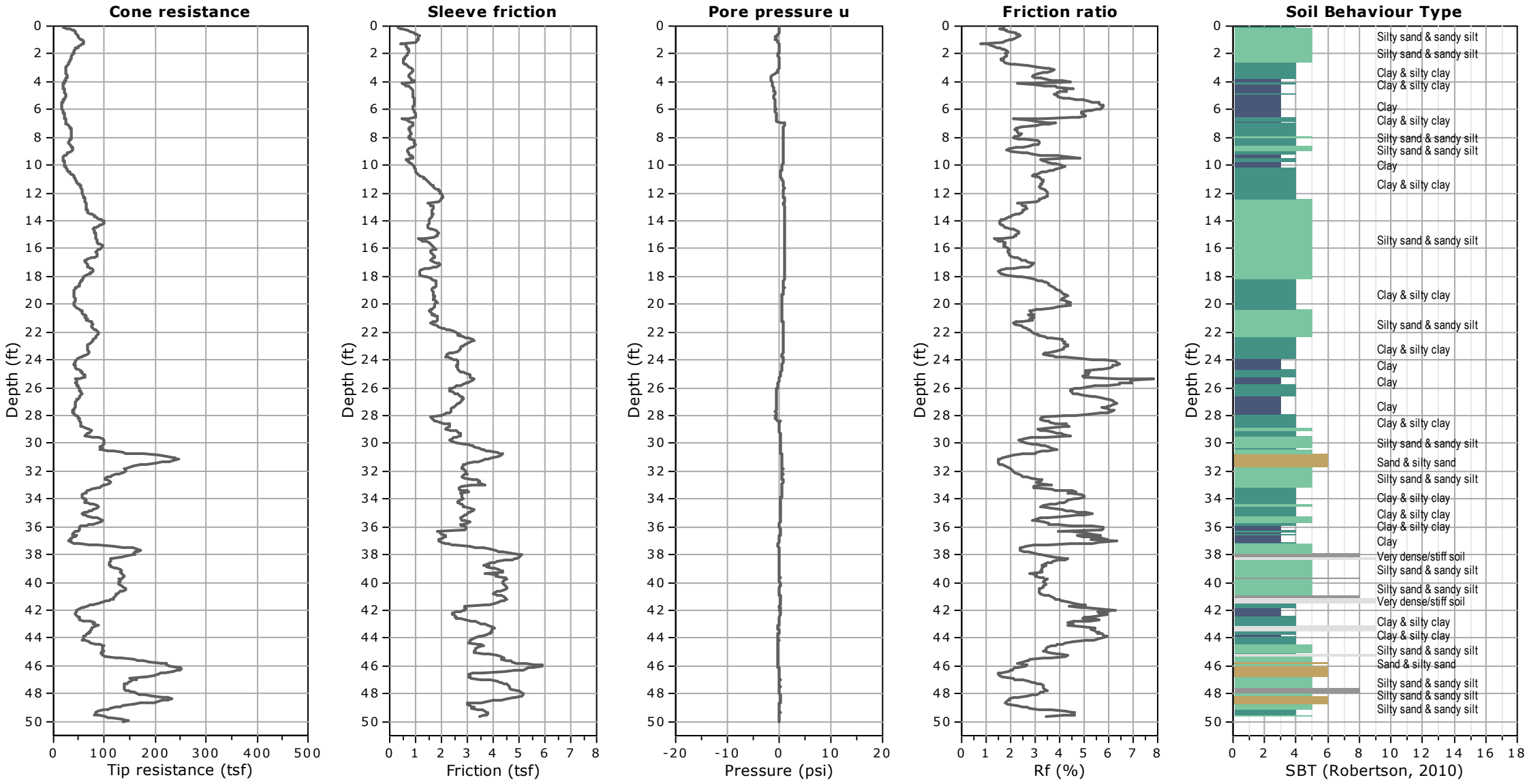
CPT-4
Total depth: 50.01 ft, Date: 4/15/2020



Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Feffer Geological Consulting / New Urban-Metrowalk**
Location: **Santa Clarita, CA**

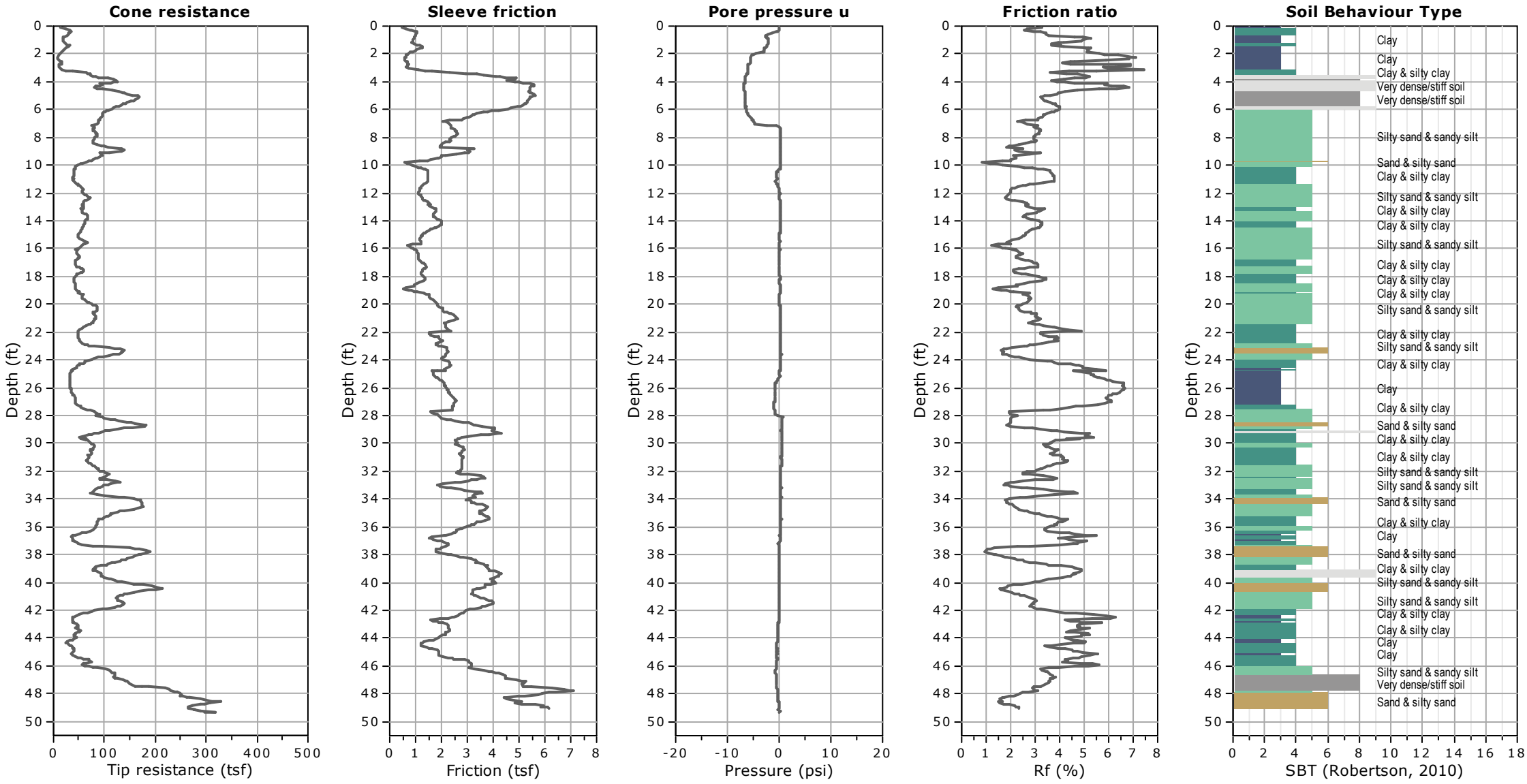
CPT-5
Total depth: 50.03 ft, Date: 4/15/2020



Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Feffer Geological Consulting / New Urban-Metrowalk**
Location: **Santa Clarita, CA**

CPT-6
Total depth: 49.38 ft, Date: 4/15/2020



Kehoe Testing & Engineering
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steve@kehoetesting.com
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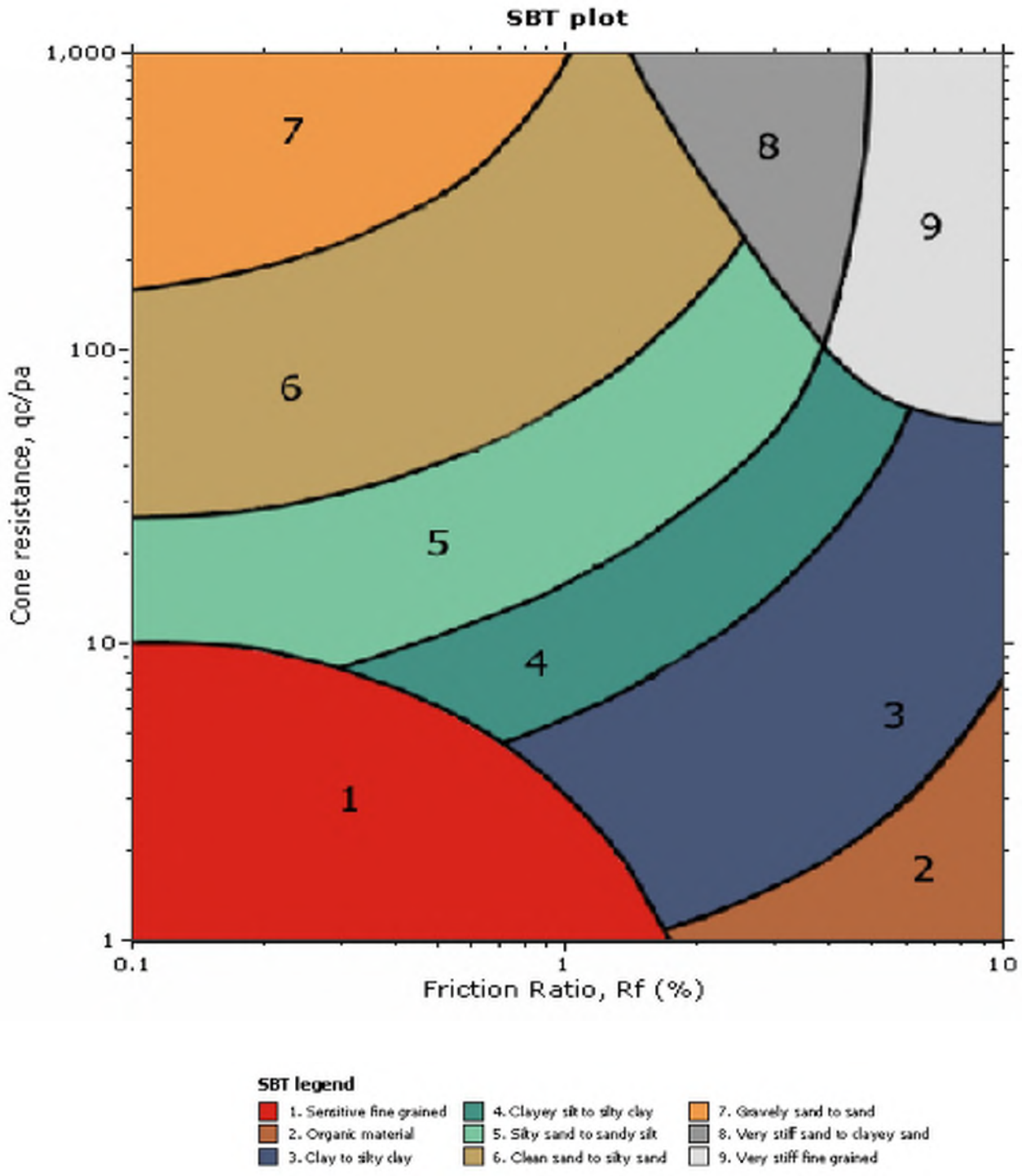


APPENDIX 'B'

Laboratory Testing & Engineering

SL20.3331
June 3, 2020

Feffer Geological Consulting
1990 S. Bundy Drive
4th Floor
Los Angeles, California 90025

Attn: Joshua R. Feffer

Subject: Laboratory Testing

Site: Terminus of Lost Canyon Road
Canyon Country, Santa Clarita, California

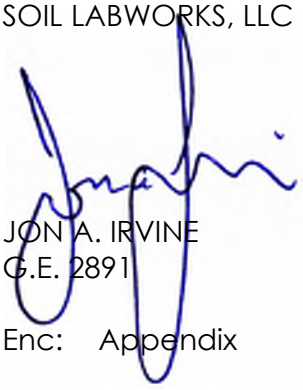
Job: FEFFER/NEW URBAN WEST, INC.-METRO WALK – 2445-04

Laboratory testing for the subject property was performed by Soil Labworks, LLC., under the supervision of the undersigned Engineer. Samples of the earth materials were obtained from the subject property by personnel of Feffer Geological and transported to the laboratory of Soil Labworks for testing and analysis. The laboratory tests performed are described and results are attached.

Services performed by this facility for the subject property were conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

Respectfully Submitted:

SOIL LABWORKS, LLC



JON A. IRVINE
G.E. 2891

Enc: Appendix

2500 Townsgate Road, Suite E, Westlake Village, California 91361
(805) 370-1338 FAX (805) 371-4693

APPENDIX

Laboratory Testing

Sample Retrieval - Drill Rig

Samples of earth materials were obtained at frequent intervals by driving a thick-walled steel sampler conforming to the most recent version of ASTM D 3550/D 3550M-17 with successive drops of a 140 pound hammer falling 30". The earth material was retained in brass rings of 2.416 inches inside diameter and 1.00 inch height. The central portion of the sample was stored in close-fitting, water-tight containers for transportation to the laboratory. Standard Penetration Tests (SPT) were performed at discrete intervals within the 8 inch diameter, hollow stem auger borings drilled on the site. The tests were performed using the 1-3/8 inch inside diameter, split-barrel sampler in accordance with ASTMD1586-11. Standard penetration test samples were retained in air-tight bags.

Moisture Density

The field moisture content and dry density were determined for each of the soil samples. The dry density was determined in pounds per cubic foot following ASTM 2937-17e2. The moisture content was determined as a percentage of the dry soil weight conforming to ASTM 2216-19. The results are presented below in the following table. The percent saturation was calculated on the basis of an estimated specific gravity. Description of earth materials used in this report and shown on the attached Plates were provided by the client.

Test Pit/Boring No.	Sample Depth (Feet)	Soil Type	Dry Density (pcf)	Moisture Content (percent)	Percent Saturation (G_s=2.65)
B1	5	Alluvium	94.3	21.8	77
B1	10	Alluvium	113.5	1.9	11
B1	15	Alluvium	98.5	6.0	23
B1	20	Alluvium	101.3	8.8	37
B1	25	Alluvium	99.3	5.2	21
B1	30	Alluvium	109.0	4.9	25
B1	35	Alluvium	120.8	3.9	28
B2	5	Alluvium	106.7	18.2	88
B2	10	Alluvium	95.5	13.8	50
B2	15	Alluvium	105.2	10.0	46
B2	20	Alluvium	108.9	8.8	45
B2	25	Alluvium	102.8	13.1	57
B2	30	Alluvium	110.6	5.1	27
B2	35	Alluvium	105.8	7.5	36

Moisture Density (continued)

Test Pit/Boring No.	Sample Depth (Feet)	Soil Type	Dry Density (pcf)	Moisture Content (percent)	Percent Saturation (G_s=2.65)
B2	40	Alluvium	109.1	7.4	38
B2	45	Alluvium	106.2	15.7	75
B2	50	Alluvium	111.4	8.0	44
B3	5	Alluvium	108.0	10.9	54
B3	10	Alluvium	108.6	4.5	23
B3	15	Alluvium	105.7	8.8	41
B3	20	Alluvium	104.0	8.6	39
B3	25	Alluvium	108.3	6.7	34
B3	30	Alluvium	102.3	11.3	49
B4	5	Alluvium	105.2	14.4	67
B4	10	Alluvium	97.0	7.3	27
B4	15	Alluvium	107.4	9.2	45
B4	20	Alluvium	100.8	11.0	45
B5	5	Alluvium	109.3	15.4	80
B5	10	Alluvium	96.9	23.2	87
B5	15	Alluvium	109.1	6.5	33
B5	20	Alluvium	103.9	11.8	53
B5	25	Alluvium	113.3	12.1	70
B5	30	Alluvium	115.8	3.9	24
B5	35	Alluvium	113.5	4.0	23
B5	40	Alluvium	108.4	5.3	27
B5	45	Alluvium	111.0	12.2	66
B5	50	Alluvium	116.8	4.4	28
B6	5	Alluvium	111.0	10.4	56
B6	10	Alluvium	99.4	7.7	31
B6	15	Alluvium	107.3	7.2	35
B6	20	Alluvium	115.1	3.5	21
B6	25	Alluvium	113.9	5.9	35
B6	30	Alluvium	109.8	9.9	52
B6	35	Alluvium	101.1	8.8	37
B7	5	Alluvium	103.8	10.4	47
B7	10	Alluvium	96.7	8.2	31
B7	15	Alluvium	98.5	7.8	30
B7	20	Alluvium	115.0	5.7	35
B7	25	Alluvium	99.4	12.5	50
B7	30	Alluvium	110.1	16.7	88
B7	35	Alluvium	103.8	13.1	56

Moisture Density (continued)

Test Pit/Boring No.	Sample Depth (Feet)	Soil Type	Dry Density (pcf)	Moisture Content (percent)	Percent Saturation (G_s=2.65)
B7	40	Alluvium	102.1	12.6	56
B7	45	Alluvium	107.7	7.2	36
B7	50	Alluvium	105.0	11.5	53

Compaction Character

Compaction tests were performed on bulk samples of the earth materials in accordance with ASTM D1557-12ei. The results of the tests are provided on the table below and on the "Moisture-Density Relationship", A-Plates. The specific gravity of the fill/alluvium was estimated from the compaction curves.

Test Pit/Boring No.	Sample Depth (Feet)	Soil Type	Maximum Dry Density (pcf)	Optimum Moisture Content (Percent)
B5	0-10	Fill/Alluvium	128.9	9.4

Shear Strength

The peak and ultimate shear strengths of the alluvium and fill/alluvium were determined by performing consolidated and drained direct shear tests in conformance with ASTM D3080/D3080M-11. The tests were performed in a strain-controlled machine manufactured by GeoMatic. The rate of deformation was 0.01 inches per minute. Samples were sheared under varying confining pressures, as shown on the "Shear Test Diagrams," B-Plates. The moisture conditions during testing are shown on the following table and on the B-Plates. The samples indicated as saturated were artificially saturated in the laboratory. All saturated samples were sheared under submerged conditions.

Test Pit/ Boring No.	Sample Depth (Feet)	Dry Density (pcf)	As-Tested Moisture Content (percent)
B3	15	105.7	23.8
B1	20	101.3	23.8
B6	25	113.9	25.3
B2	30	110.6	23.6

Consolidation

One-dimensional consolidation tests were performed on samples of the alluvium in a consolidometer manufactured by GeoMatic in conformance with ASTM D2435/D2435M-11. The tests were performed on 1-inch high samples retained in brass rings. The samples were initially loaded to approximately ½ of the field over-burden pressure and then unloaded to compensate for the effects of possible disturbance during sampling. Loads were then applied in a geometric progression and resulting deformation recorded. Water was added at a specific load to determine the effect of saturation. The results are plotted on the "Consolidation Test," C-Plates.

Expansion Index

The expansive character of the fill/alluvium was determined by performing Expansion Index Tests in accordance with UBC 18.2 and ASTM 4829-11. A bulk sample of earth material was compacted at a specific moisture content using one fifth the compacted energy for the modified proctor test. The sample was then saturated and the expansion measured. The results of the tests are provided on the following table.

Test Pit No.	Sample Depth (Feet)	Soil Type	Expansion Index
B5	0-10	Fill/Alluvium	46

Atterberg Limits

Atterberg limits determinations were performed on samples of the soil/alluvium in accordance with ASTMD4318-17e1. The test results are presented on the table below.

Test Pit/Boring No.	Sample Depth (Ft)	Soil Type	Liquid Limit	Plastic Limit	Plasticity Index
B2	5	Alluvium	37	21	16
B2	22.5	Alluvium	23	23	0
B5	27.5	Alluvium	31	23	8

Grain Size Distribution

The amount of material in the soil finer than 1 No. 200 sieve was determined on selected samples in conformance with ASTM D1140-17. Wash sieving disperses clay and other fine material that are removed from the soil during the test. The percent of fine material in the soil sample is the calculated base on the loss of mass. The results are present in the table below.

Grain Size Distribution (continued)

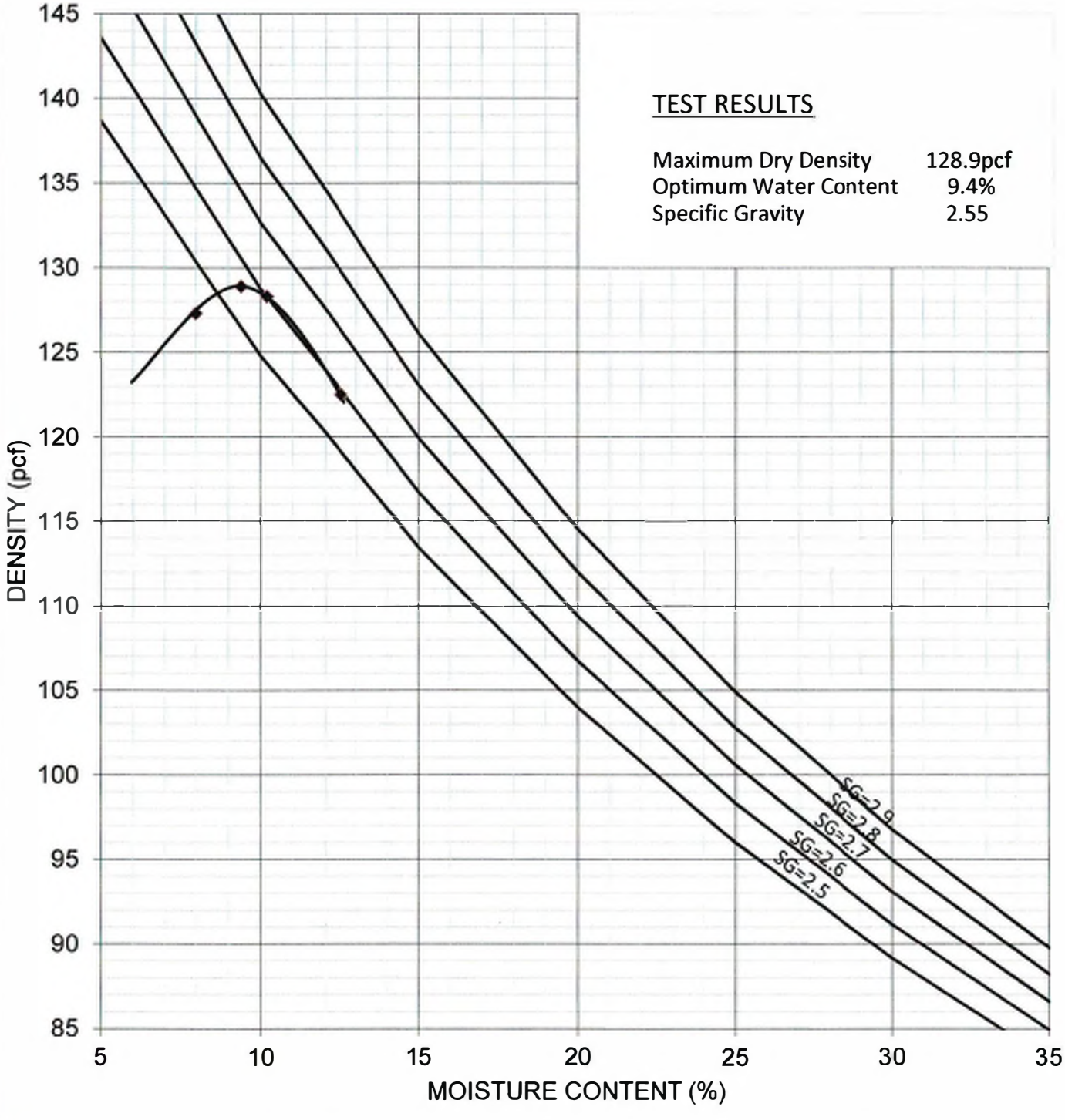
Boring No	Depth	Soil Type	(%) Passing 200 Sieve
B2	12.5	Alluvium	49.2
B5	17.5	Alluvium	52.0
B2	32.5	Alluvium	42.0
B5	47.5	Alluvium	75.7

SOIL LABWORKS LLC

MOISTURE-DENSITY RELATIONSHIP A-1

JN: **SL20.3331** CONSULTANT: **JAI**
CLIENT: **FEFFER/New Urban West, Inc.-Metro Walk**
B5 @ 0-10'
EARTH MATERIAL: **FILL/ALLUVIUM**

NOTE: ASTM Test Method D-1557-12



SOIL LABWORKS LLC

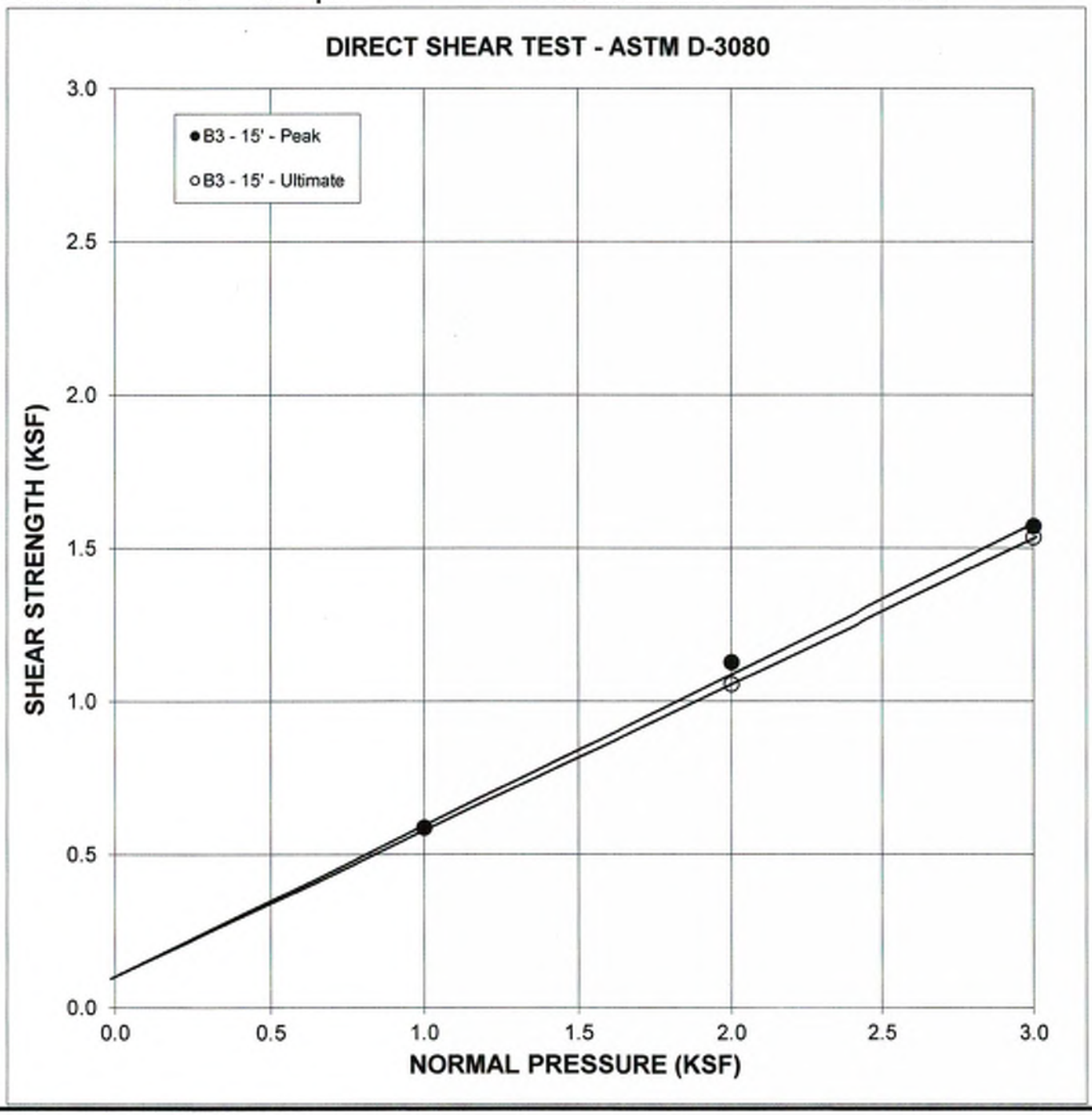
SHEAR DIAGRAM B-1

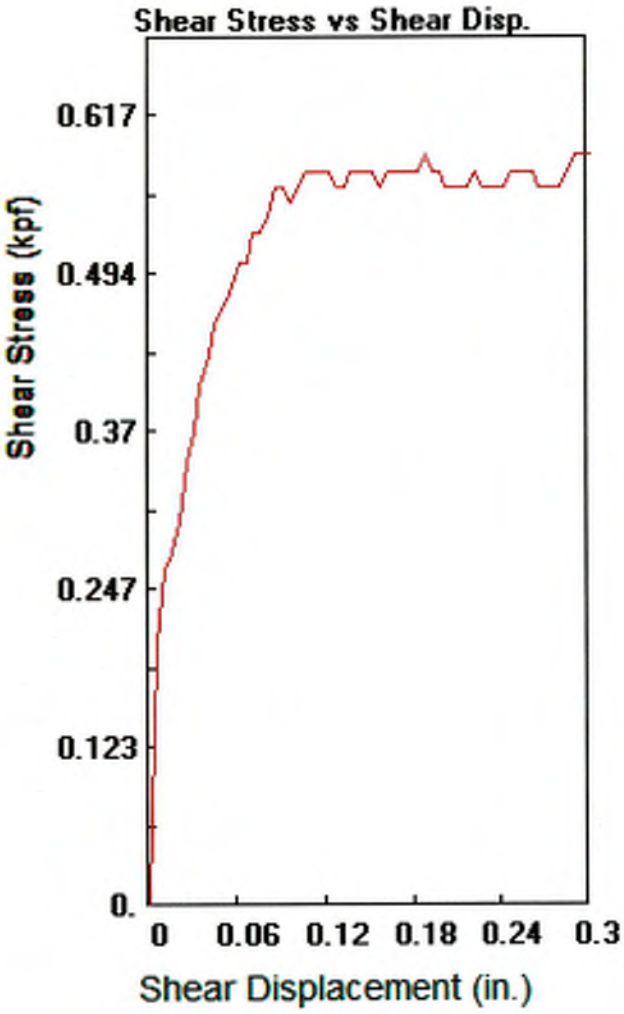
JN: SL20.3331 CONSULTANT JAI
CLIENT: Feffer/New Urban West-Metro Walk

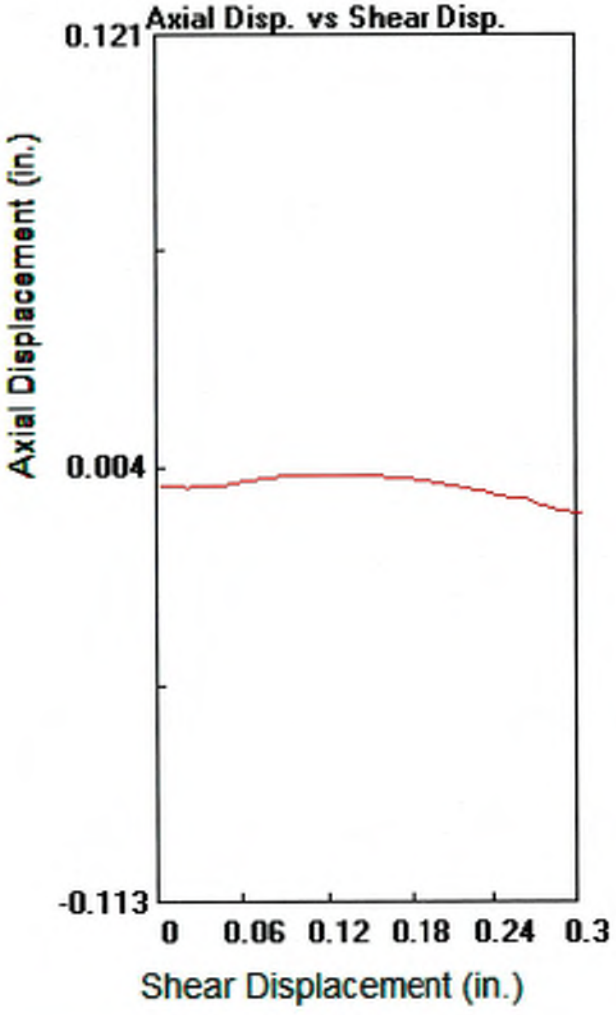
EARTH MATERIAL: ALLUVIUM

	PEAK	ULTIMATE	
Phi Angle	26	25	degrees
Cohesion	110	110	psf

Average Moisture Content	23.8%
Average Dry Density (pcf)	105.7
Percent Saturation	100.0%







Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 1

Technician: BF

Boring: B3

Axial Load: 1000 psf

Depth: 15 ft.

Shear Rate: 0.010 in./sec.

File: 3331B3151.dat

Distance: 0.30 in.

Stress at Max Def
588 0.186

Stress at Max Disp
0.296 588

Maximum Load

588 psf

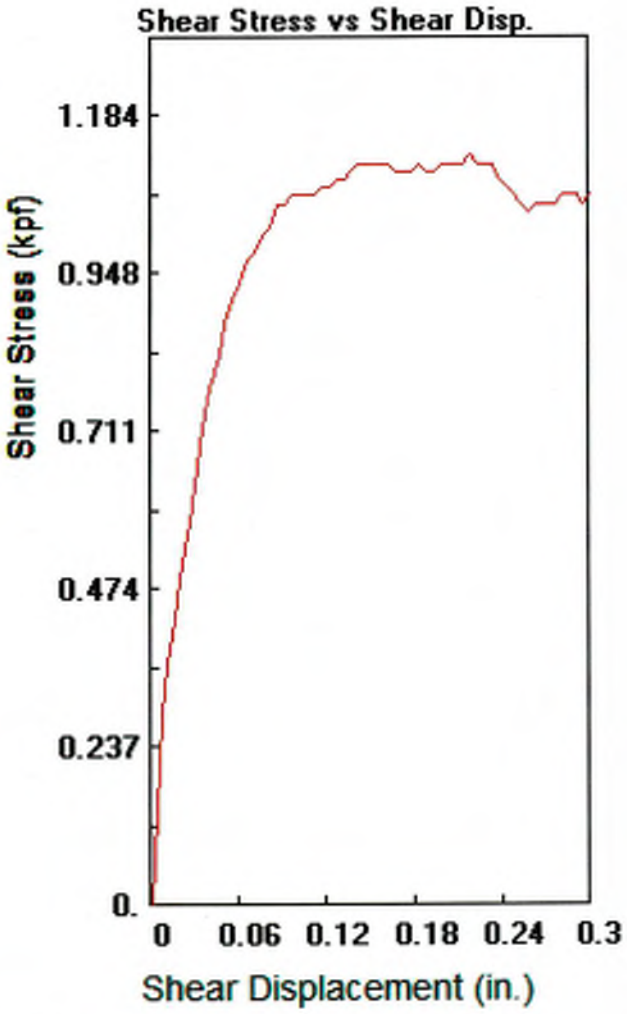
Shear Displacement at maximum Load

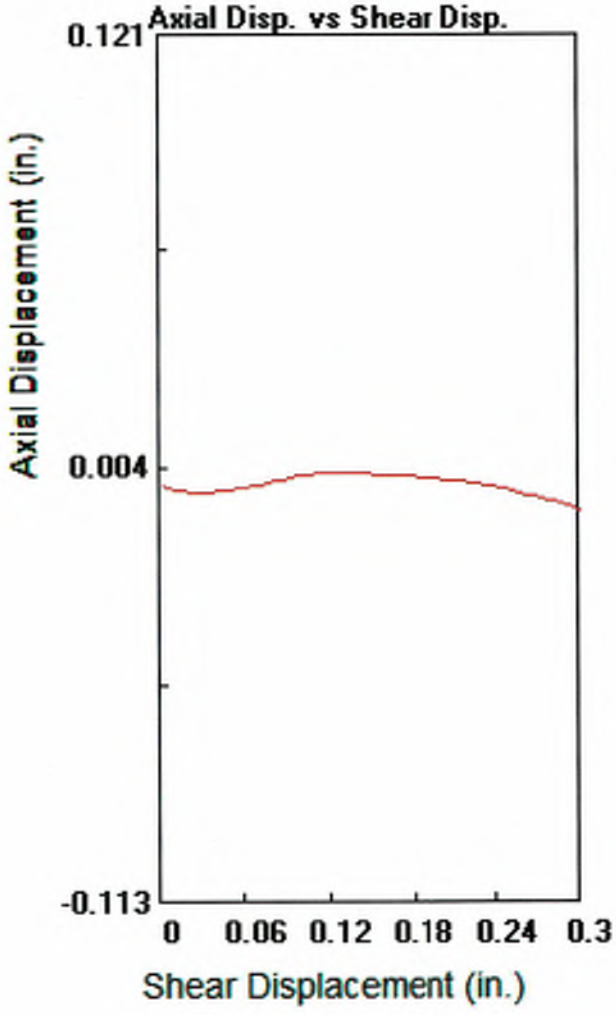
0.1856 in.

Date

5/15/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 2

Technician: BF

Boring: B3

Axial Load: 2000 psf

Depth: 15 ft.

Shear Rate: 0.010 in./sec.

File: 3331B3152.dat

Distance: 0.30 in.

Stress at Max Def
1128 0.216

Stress at Max Disp
0.295 1056

Maximum Load

1128 psf

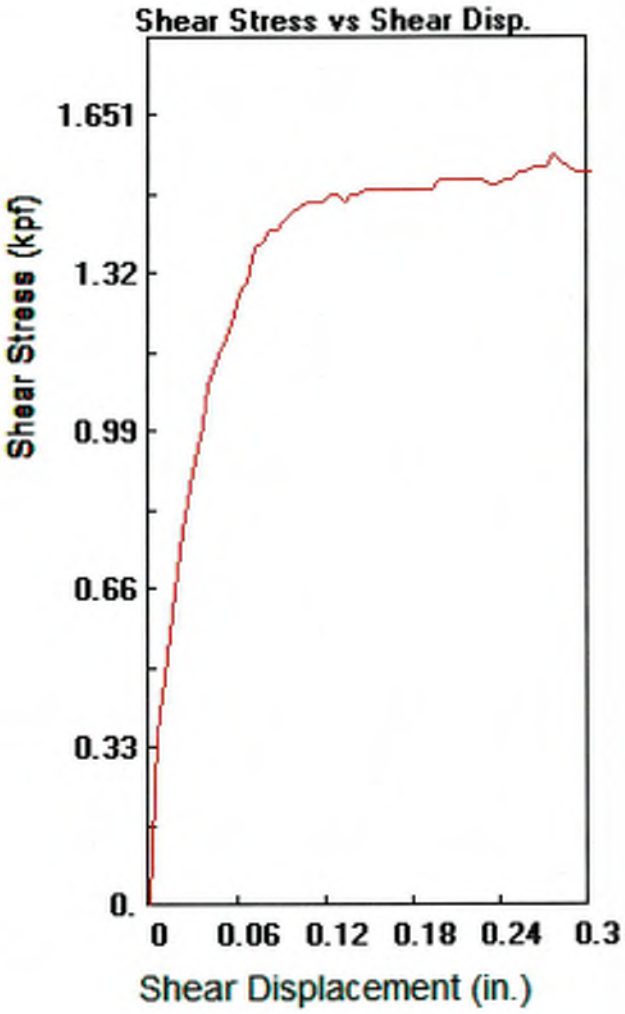
Shear Displacement at maximum Load

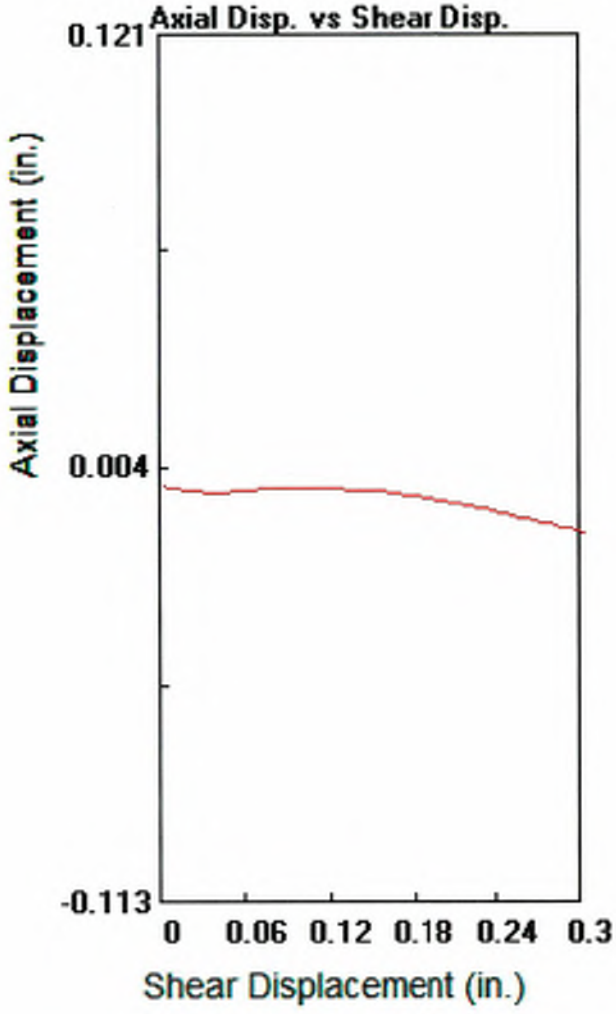
0.2156 in.

Date

5/15/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 3

Technician: BF

Boring: B3

Axial Load: 3000 psf

Depth: 15 ft.

Shear Rate: 0.010 in./sec.

File: 3331B3153.dat

Distance: 0.30 in.

Stress at Max Def
1572 0.276

Stress at Max Disp
0.296 1536

Maximum Load

1572 psf

Shear Displacement at maximum Load

0.2755 in.

Date

5/15/2020

Soil Labworks

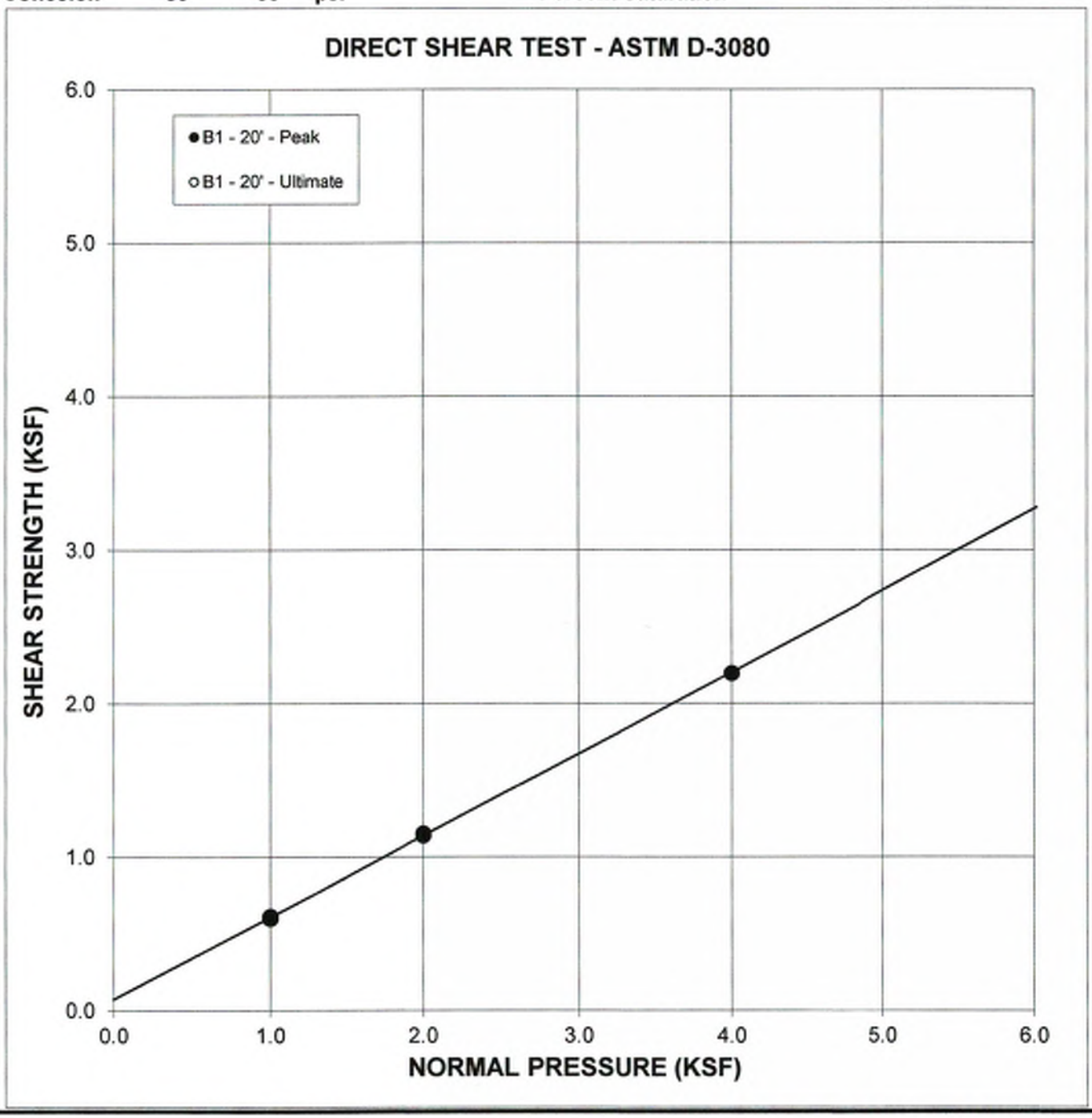
SHEAR DIAGRAM B-2

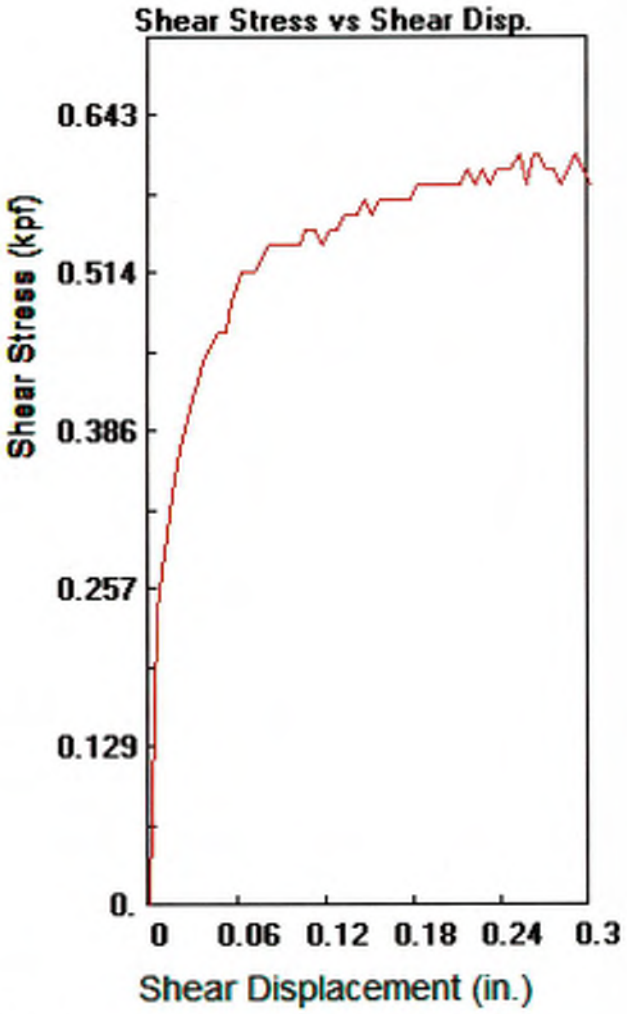
JN: SL20.3331 CONSULTANT JAI
CLIENT: Feffer/New Urban West-Metro Walk

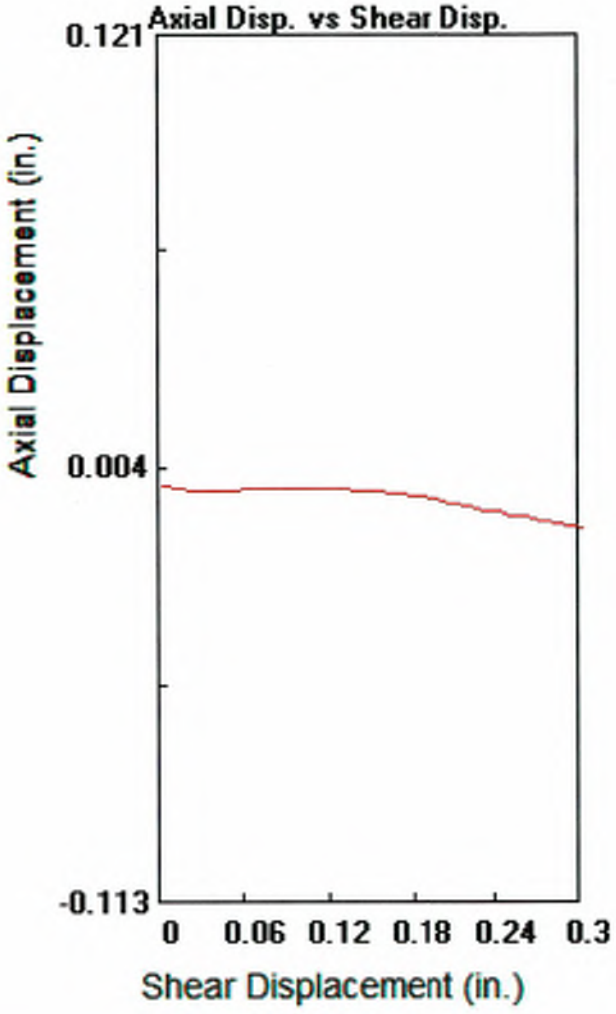
EARTH MATERIAL: ALLUVIUM

	PEAK	ULTIMATE	
Phi Angle	27.5	27.5	degrees
Cohesion	80	80	psf

Average Moisture Content	23.8%
Average Dry Density (pcf)	101.3
Percent Saturation	99.7%







Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 1

Technician: BF

Boring: B1

Axial Load: 1000 psf

Depth: 20 ft.

Shear Rate: 0.010 in./sec.

File: 3331B1201.dat

Distance: 0.30 in.

Stress at Max Def
612 0.251

Stress at Max Disp
0.296 600

Maximum Load

612 psf

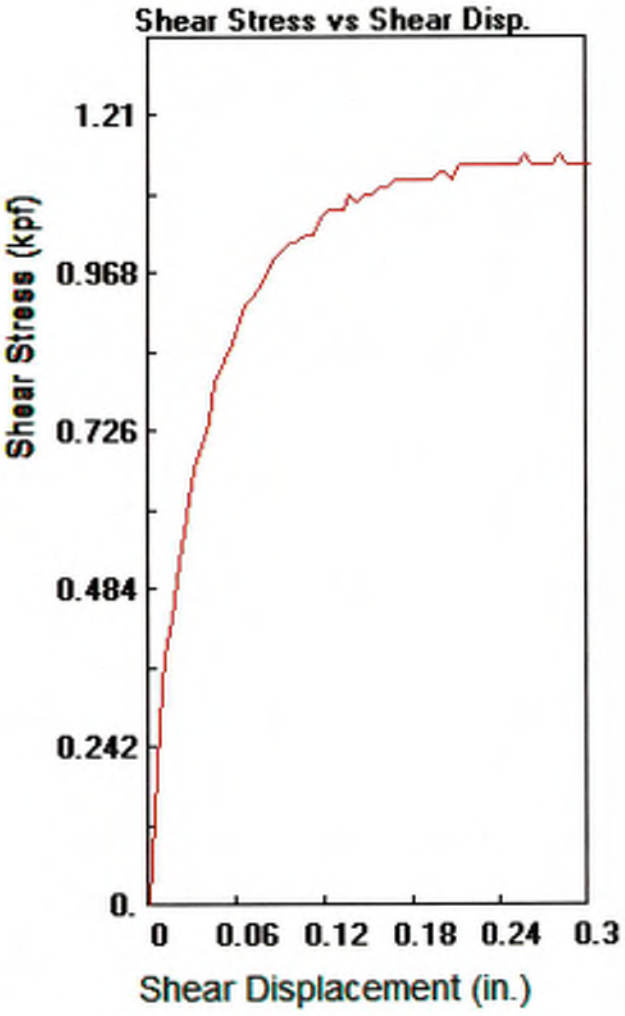
Shear Displacement at maximum Load

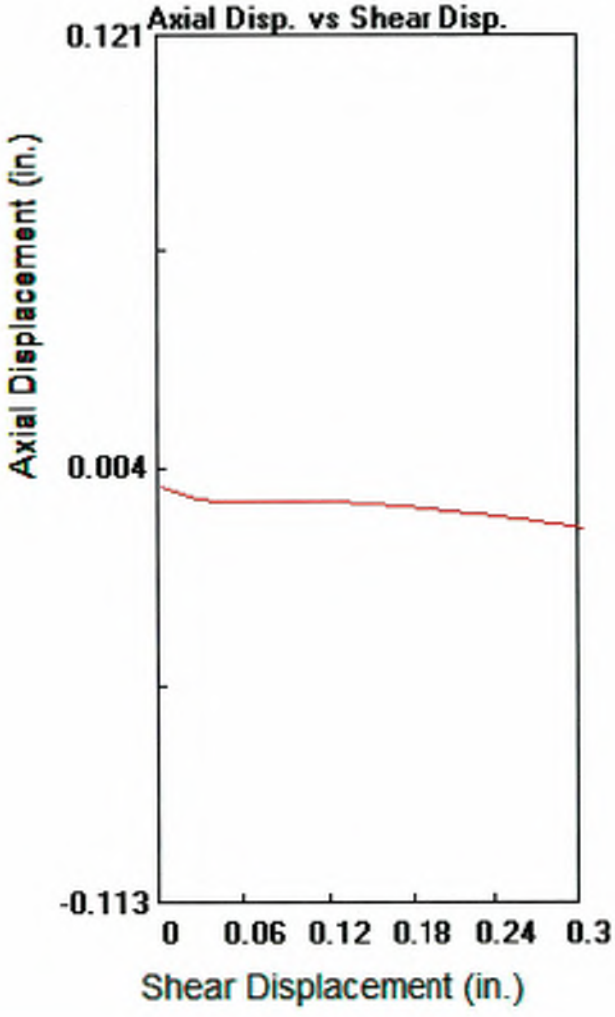
0.2506 in.

Date

5/19/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 2

Technician: BF

Boring: B1

Axial Load: 2000 psf

Depth: 20 ft.

Shear Rate: 0.010 in./sec.

File: 3331B1202.dat

Distance: 0.30 in.

Stress at Max Def
1152 0.256

Stress at Max Disp
0.296 1140

Maximum Load

1152 psf

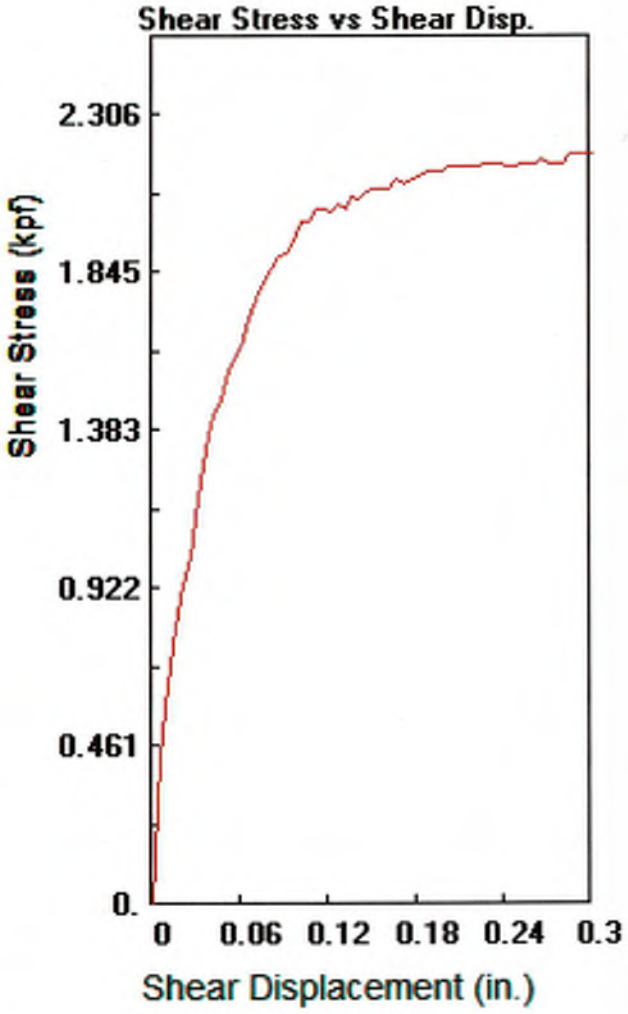
Shear Displacement at maximum Load

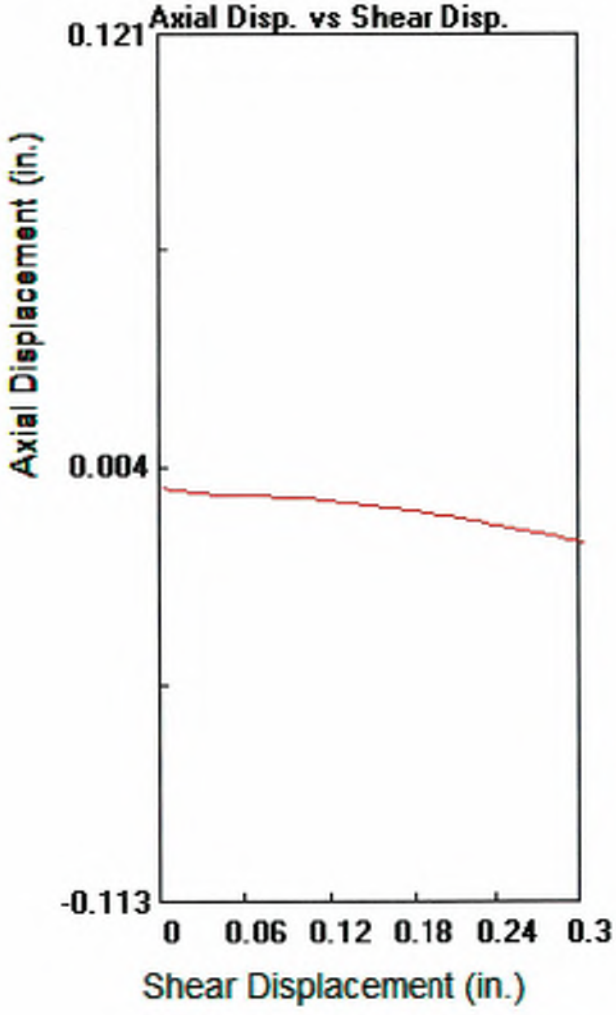
0.2557 in.

Date

5/19/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Sample: 3

Boring: B1

Depth: 20 ft.

File: 3331B1204.dat

Soil Type:QA

Technician: BF

Axial Load: 4000 psf

Shear Rate: 0.010 in./sec.

Distance: 0.30 in.

Stress at Max Def
2196 0.286

Stress at Max Disp
0.296 2196

Maximum Load

2196 psf

Shear Displacement at maximum Load

0.2855 in.

Date

5/19/2020

Soil Labworks

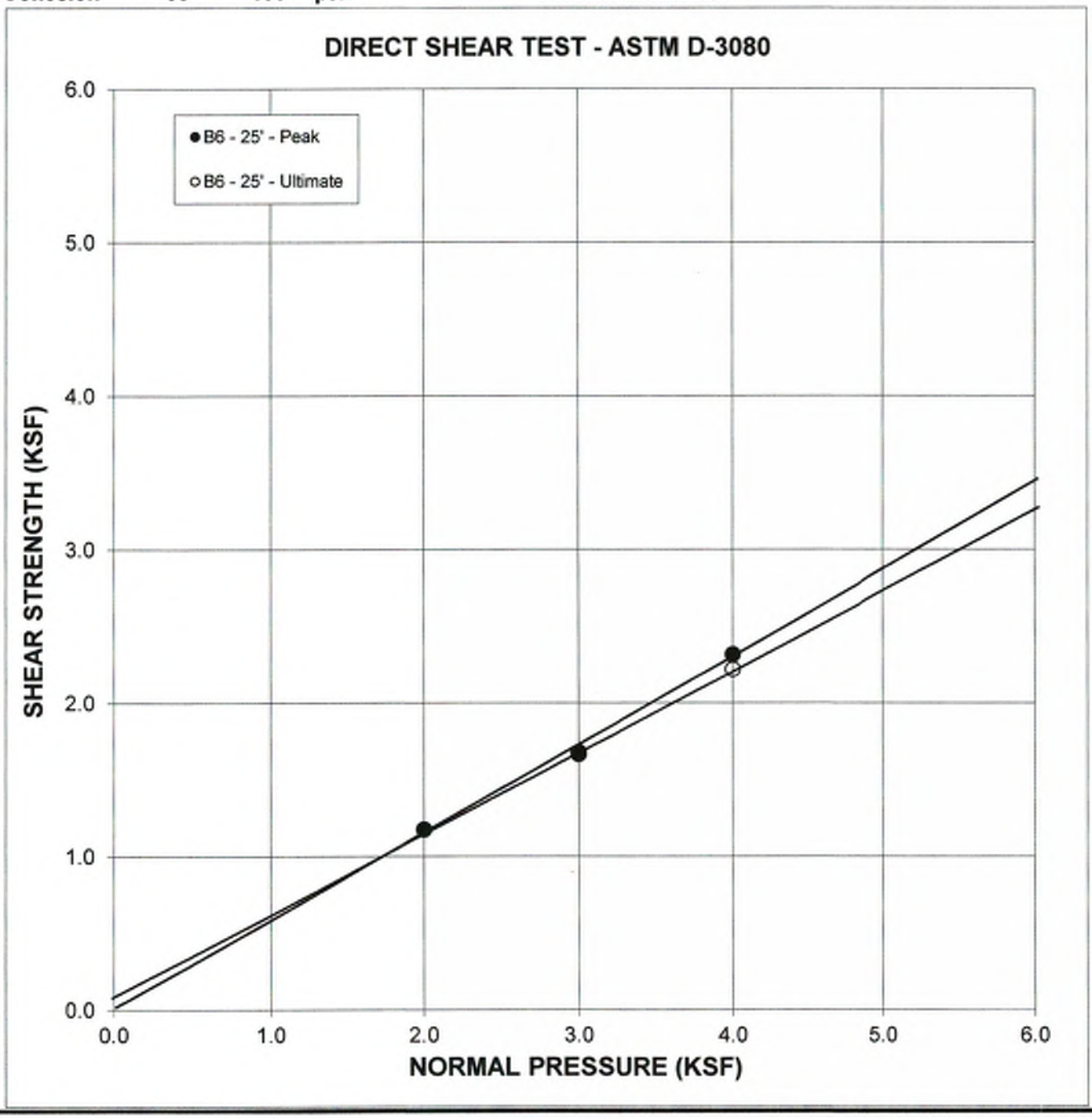
SHEAR DIAGRAM B-3

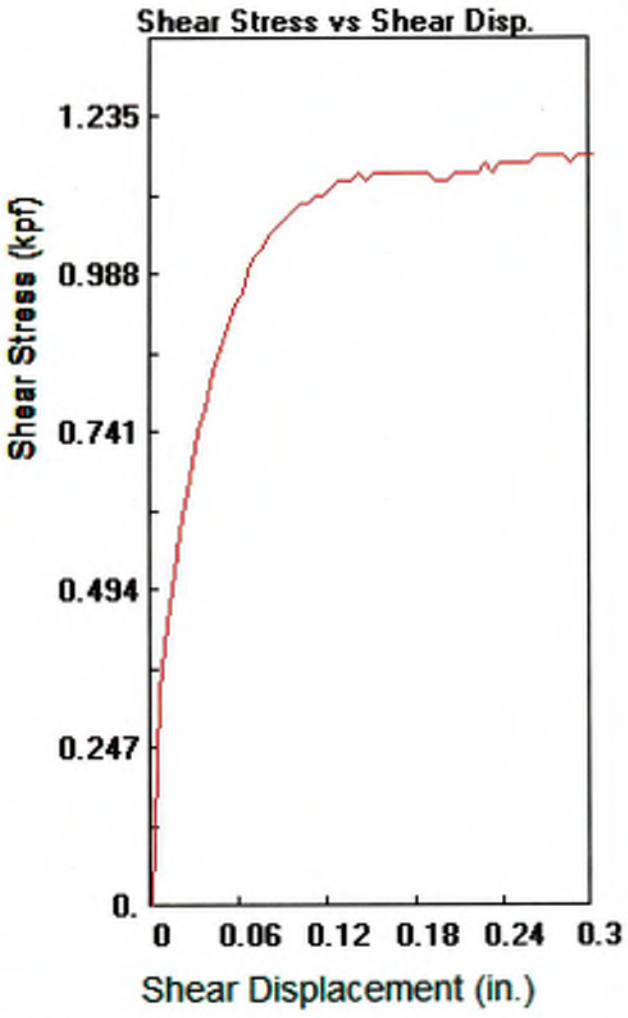
JN: SL20.3331 CONSULTANT JAI
CLIENT: Feffer/New Urban West-Metro Walk

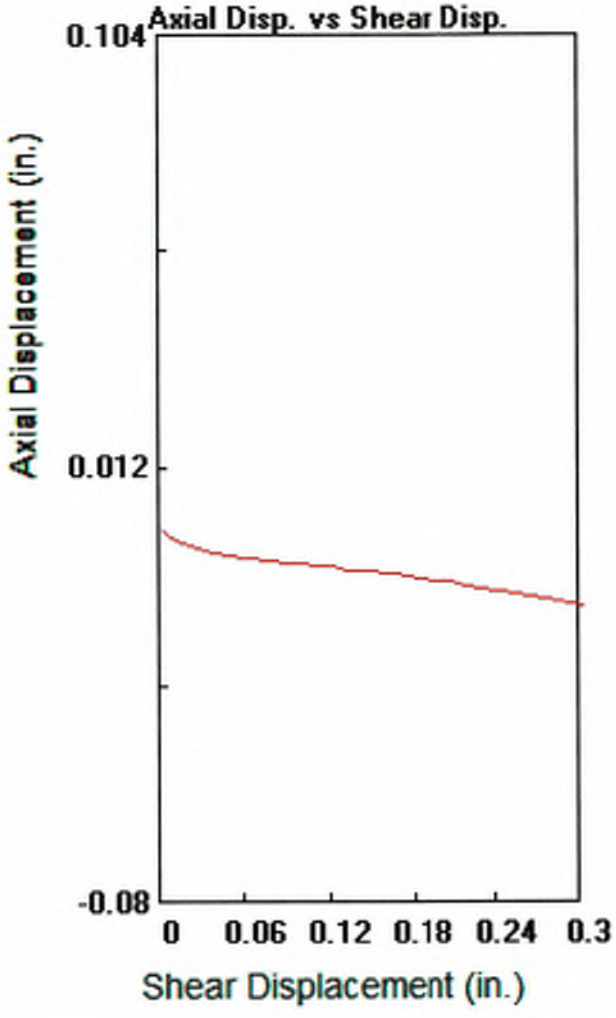
EARTH MATERIAL: ALLUVIUM

	PEAK	ULTIMATE	
Phi Angle	29	27	degrees
Cohesion	30	100	psf

Average Moisture Content	25.3%
Average Dry Density (pcf)	113.9
Percent Saturation	100.0%







Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 1

Technician: BF

Boring: B6

Axial Load: 2000 psf

Depth: 25 ft.

Shear Rate: 0.010 in./sec.

File: 3331B6252.dat

Distance: 0.30 in.

Stress at Max Def
1176 0.261

Stress at Max Disp
0.296 1176

Maximum Load

1176 psf

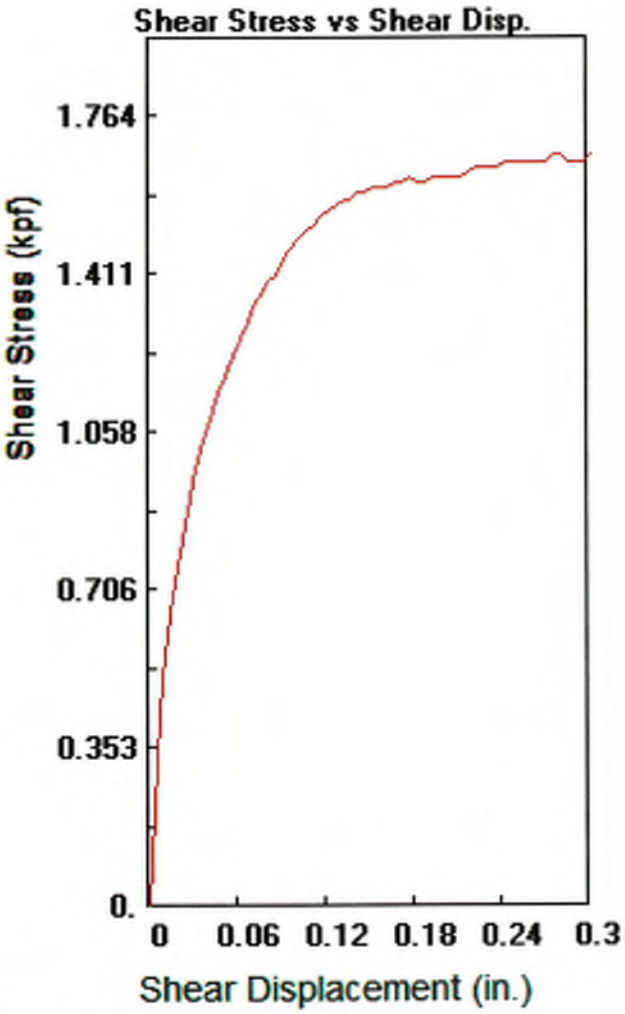
Shear Displacement at maximum Load

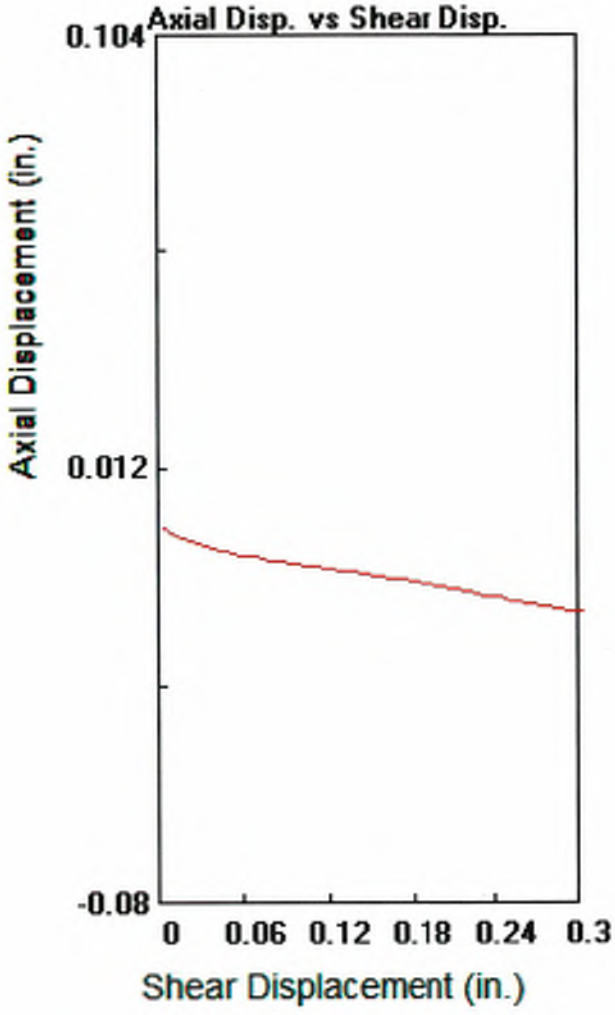
0.2606 in.

Date

5/15/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 2

Technician: BF

Boring: B6

Axial Load: 3000 psf

Depth: 25 ft.

Shear Rate: 0.010 in./sec.

File: 3331B6253.dat

Distance: 0.30 in.

Stress at Max Def
1680 0.276

Stress at Max Disp
0.296 1668

Maximum Load

1680 psf

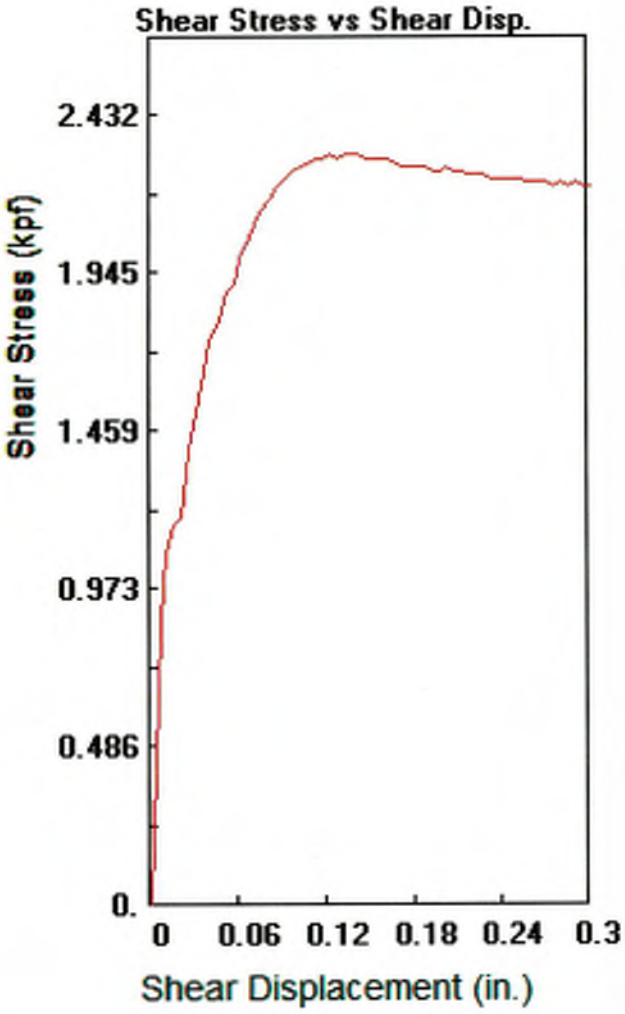
Shear Displacement at maximum Load

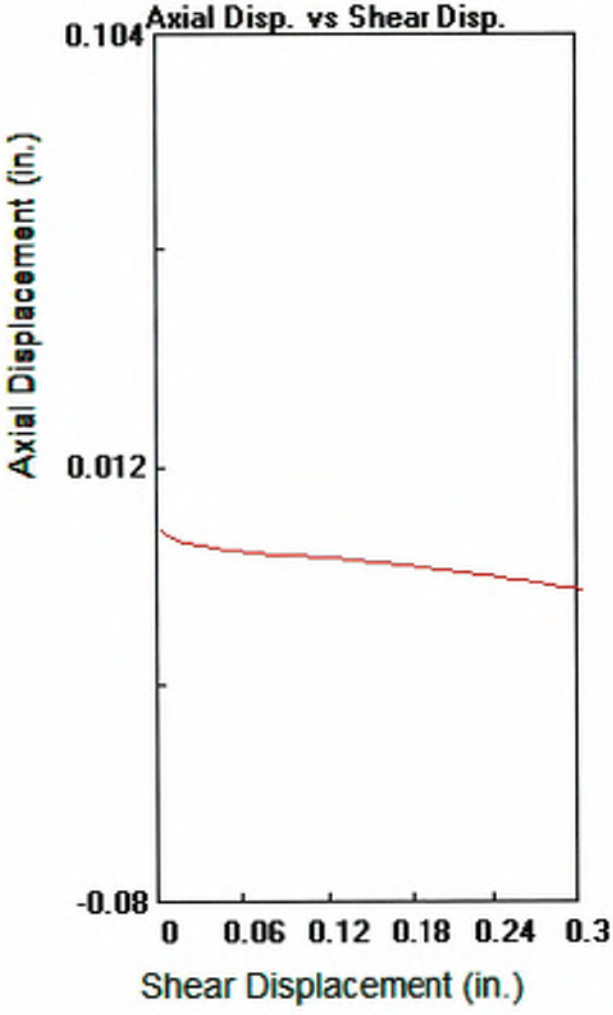
0.2755 in.

Date

5/15/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 3

Technician: BF

Boring: B6

Axial Load: 4000 psf

Depth: 25 ft.

Shear Rate: 0.010 in./sec.

File: 3331B6254.dat

Distance: 0.30 in.

Stress at Max Def
2316 0.121

Stress at Max Disp
0.296 2220

Maximum Load

2316 psf

Shear Displacement at maximum Load

0.1208 in.

Date

5/15/2020

Soil Labworks

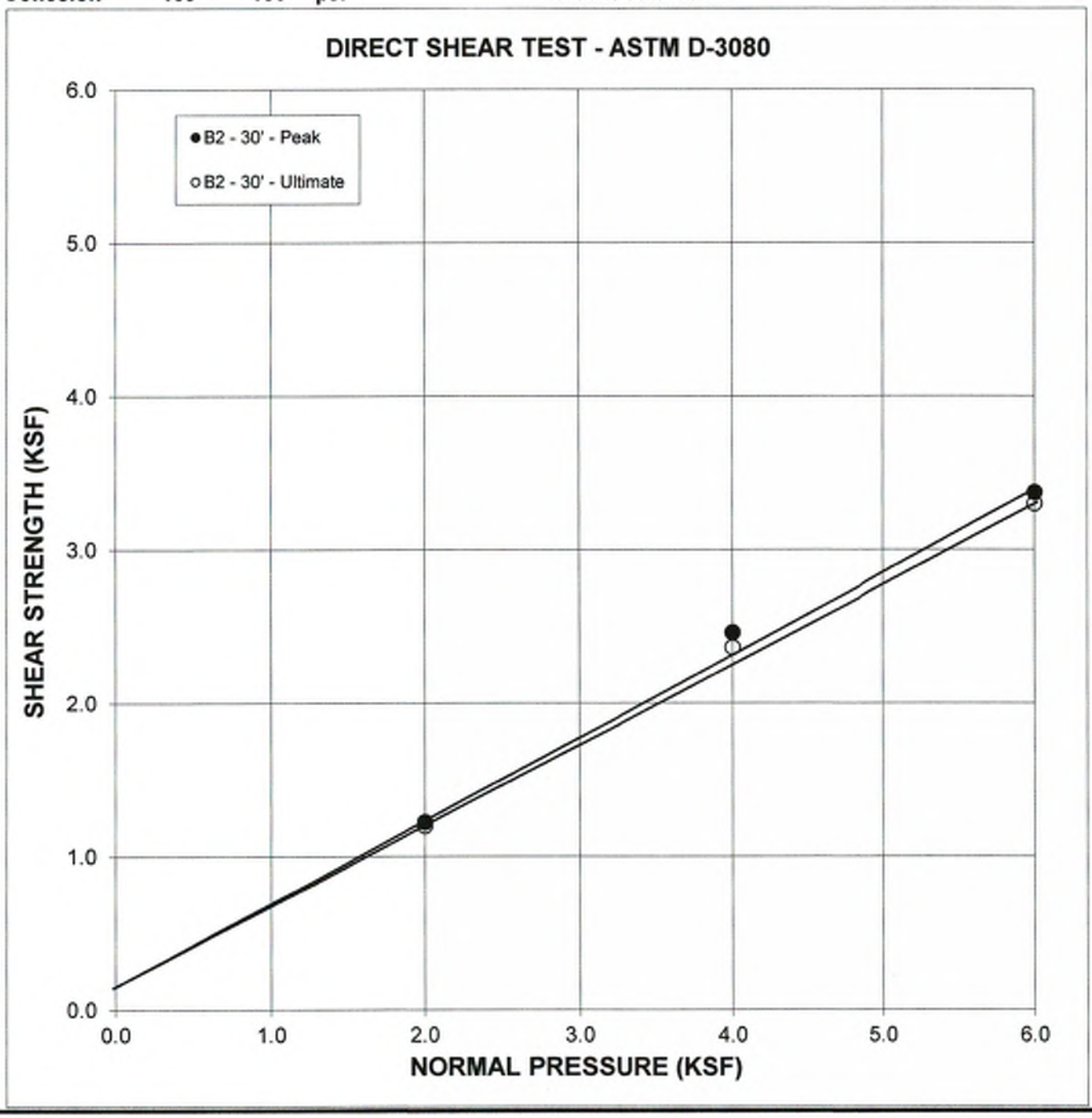
SHEAR DIAGRAM B-4

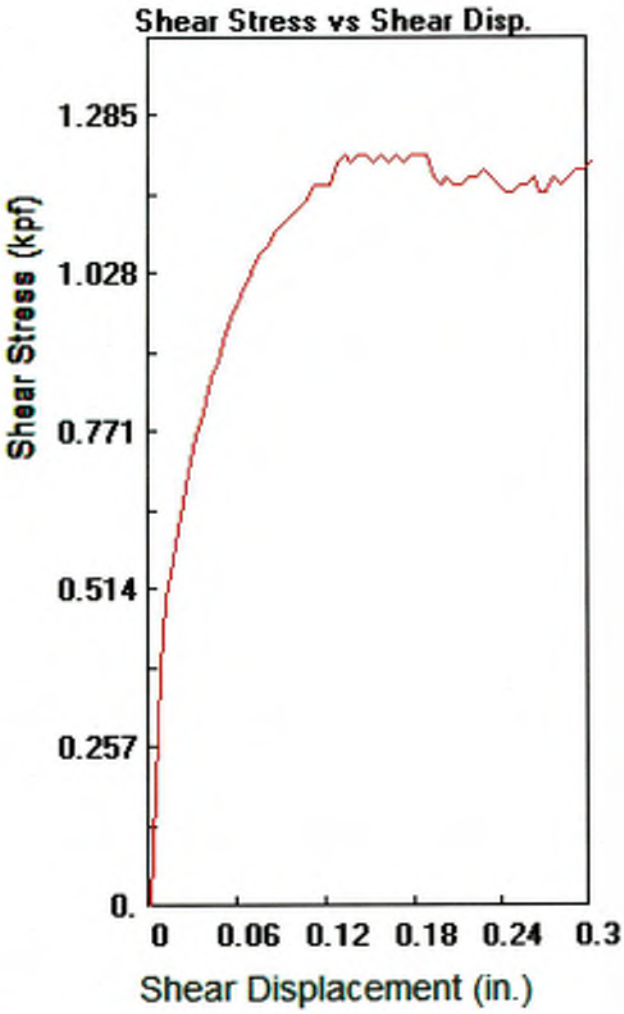
JN: SL20.3331 CONSULTANT JAI
CLIENT: Feffer/New Urban West-Metro Walk

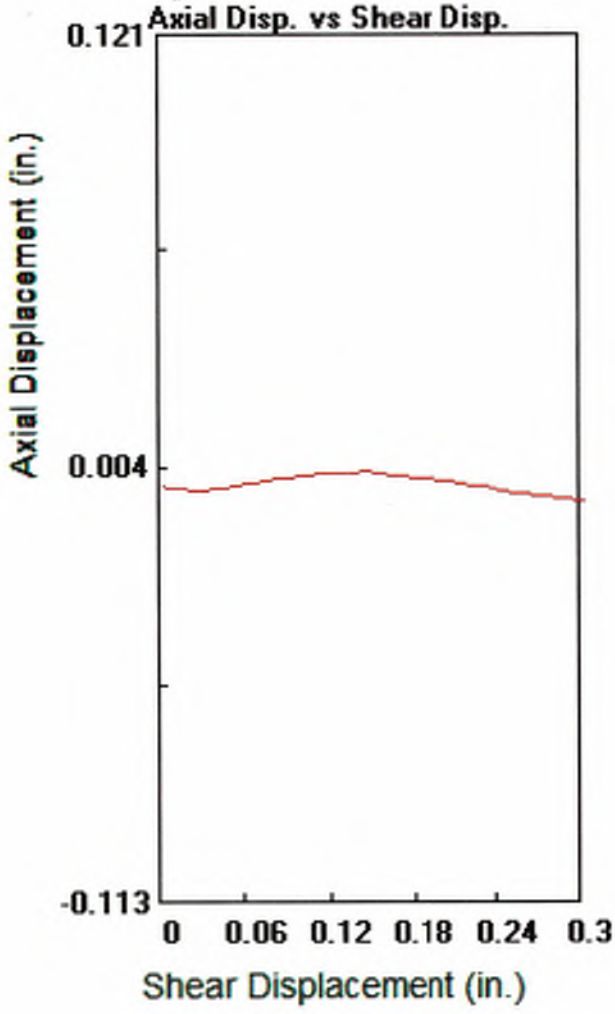
EARTH MATERIAL: ALLUVIUM

	PEAK	ULTIMATE	
Phi Angle	28	27	degrees
Cohesion	150	150	psf

Average Moisture Content	23.6%
Average Dry Density (pcf)	110.6
Percent Saturation	100.0%







Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 1

Technician: BF

Boring: B2

Axial Load: 2000 psf

Depth: 30 ft.

Shear Rate: 0.010 in./sec.

File: 3331B2302.dat

Distance: 0.30 in.

Stress at Max Def
1224 0.131

Stress at Max Disp
0.296 1200

Maximum Load

1224 psf

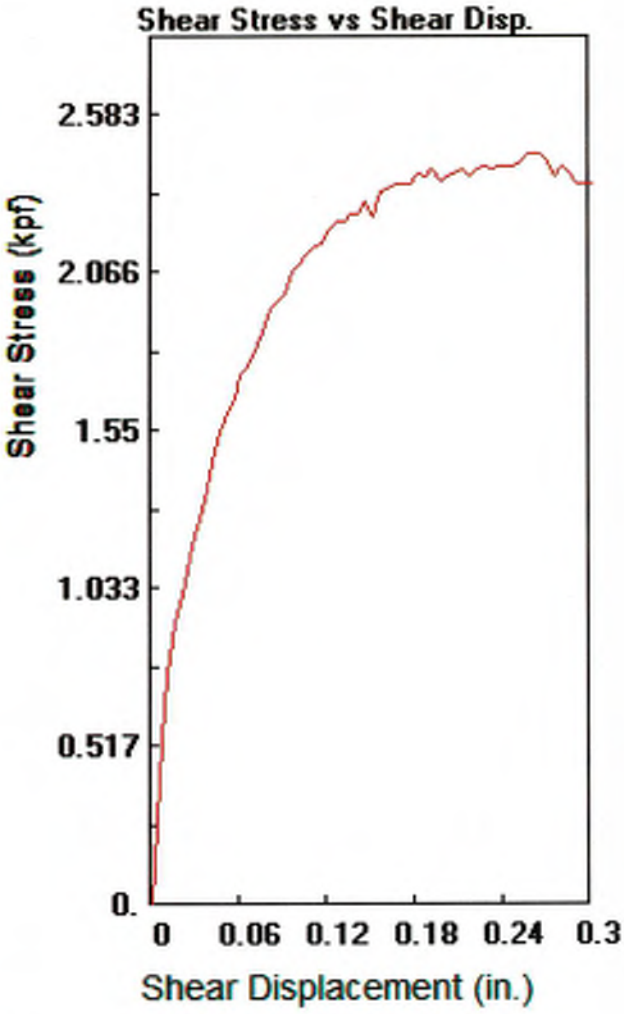
Shear Displacement at maximum Load

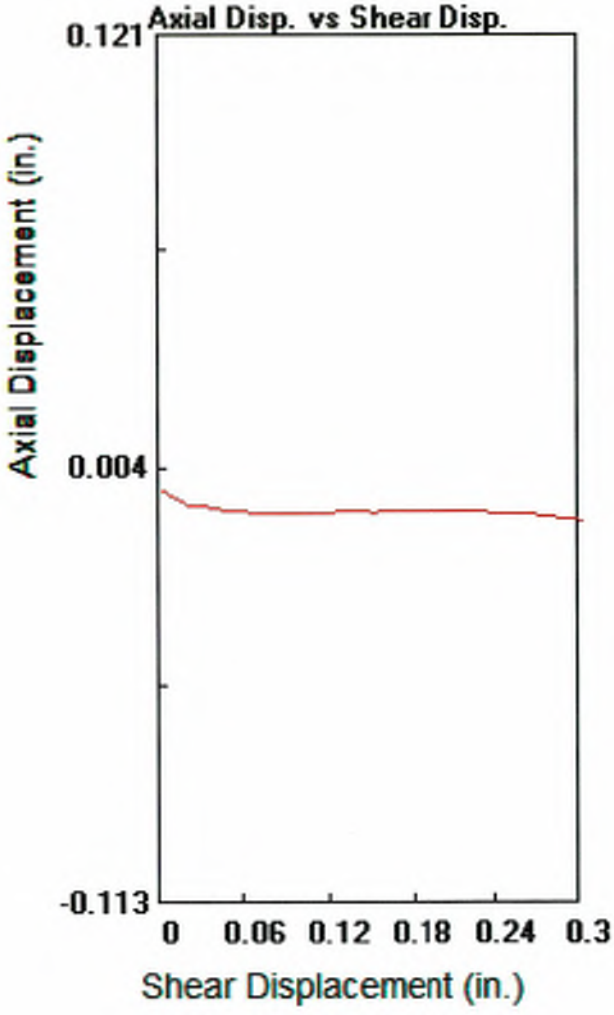
0.1307 in.

Date

5/19/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 2

Technician: BF

Boring: B2

Axial Load: 4000 psf

Depth: 30 ft.

Shear Rate: 0.010 in./sec.

File: 3331B2304.dat

Distance: 0.30 in.

Stress at Max Def
2460 0.256

Stress at Max Disp
0.296 2364

Maximum Load

2460 psf

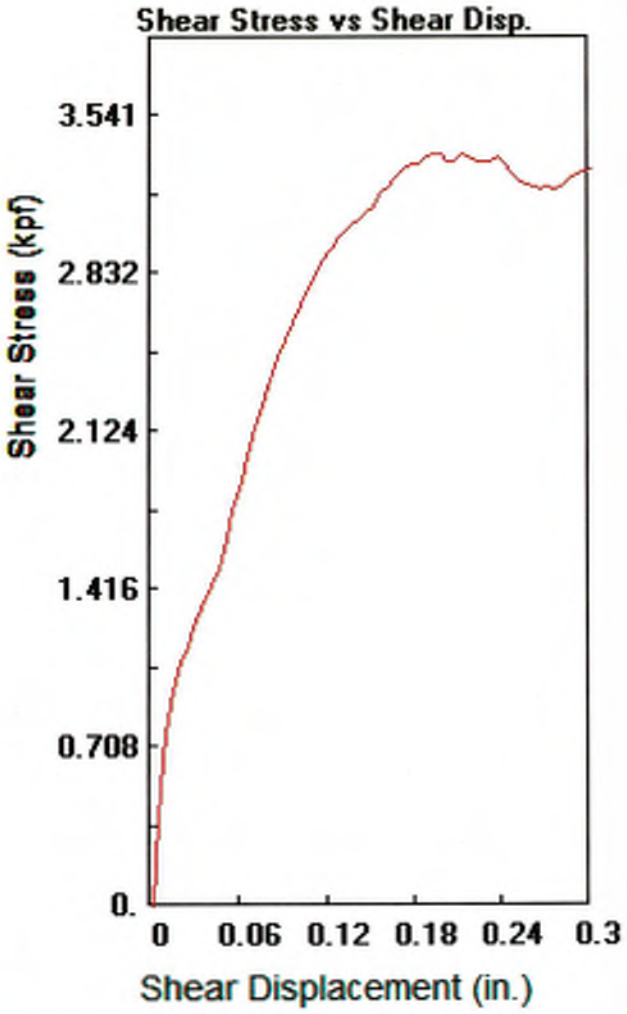
Shear Displacement at maximum Load

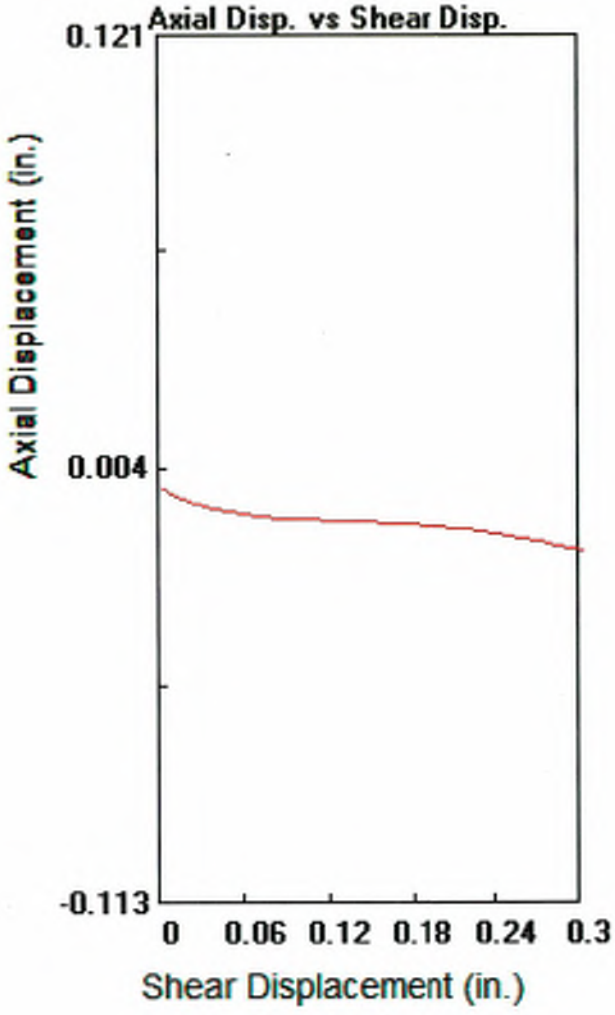
0.2556 in.

Date

5/19/2020

Soil Labworks





Parameters

Client: FEFFER/NEW URBAN WEST

Location: LOST CANYON RD

Job # 3331

Soil Type:QA

Sample: 3

Technician: BF

Boring: B2

Axial Load: 6000 psf

Depth: 30 ft.

Shear Rate: 0.010 in./sec.

File: 3331B2306.dat

Distance: 0.30 in.

Stress at Max Def
3372 0.191

Stress at Max Disp
0.296 3300

Maximum Load

3372 psf

Shear Displacement at maximum Load

0.1906 in.

Date

5/19/2020

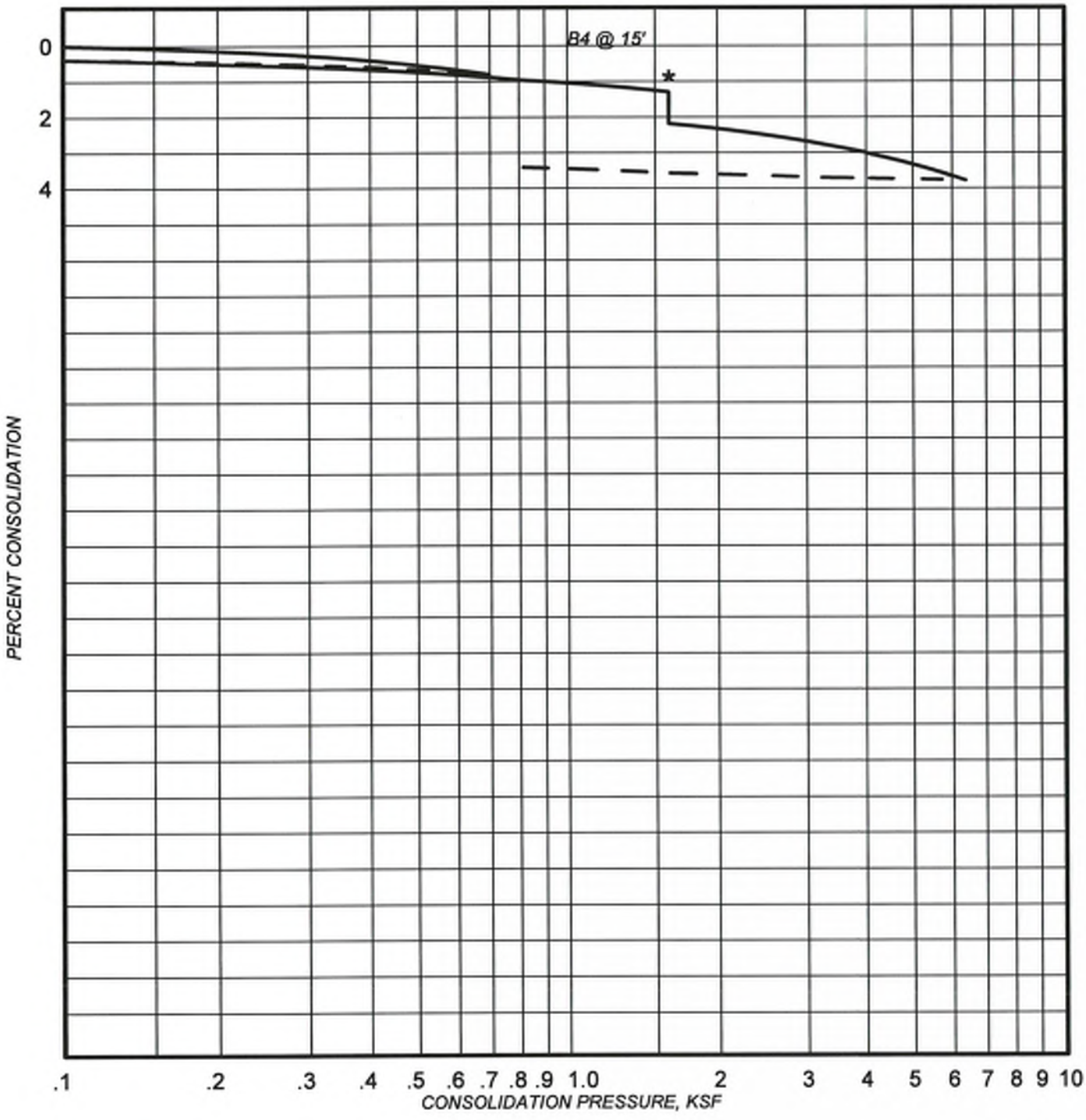
Soil Labworks

CONSOLIDATION TEST

PROJECT: 3331 FEFFER/NEW URBAN WEST-METRO WALK

SAMPLE: B4 @ 15'

ALLUVIUM



* Water Added

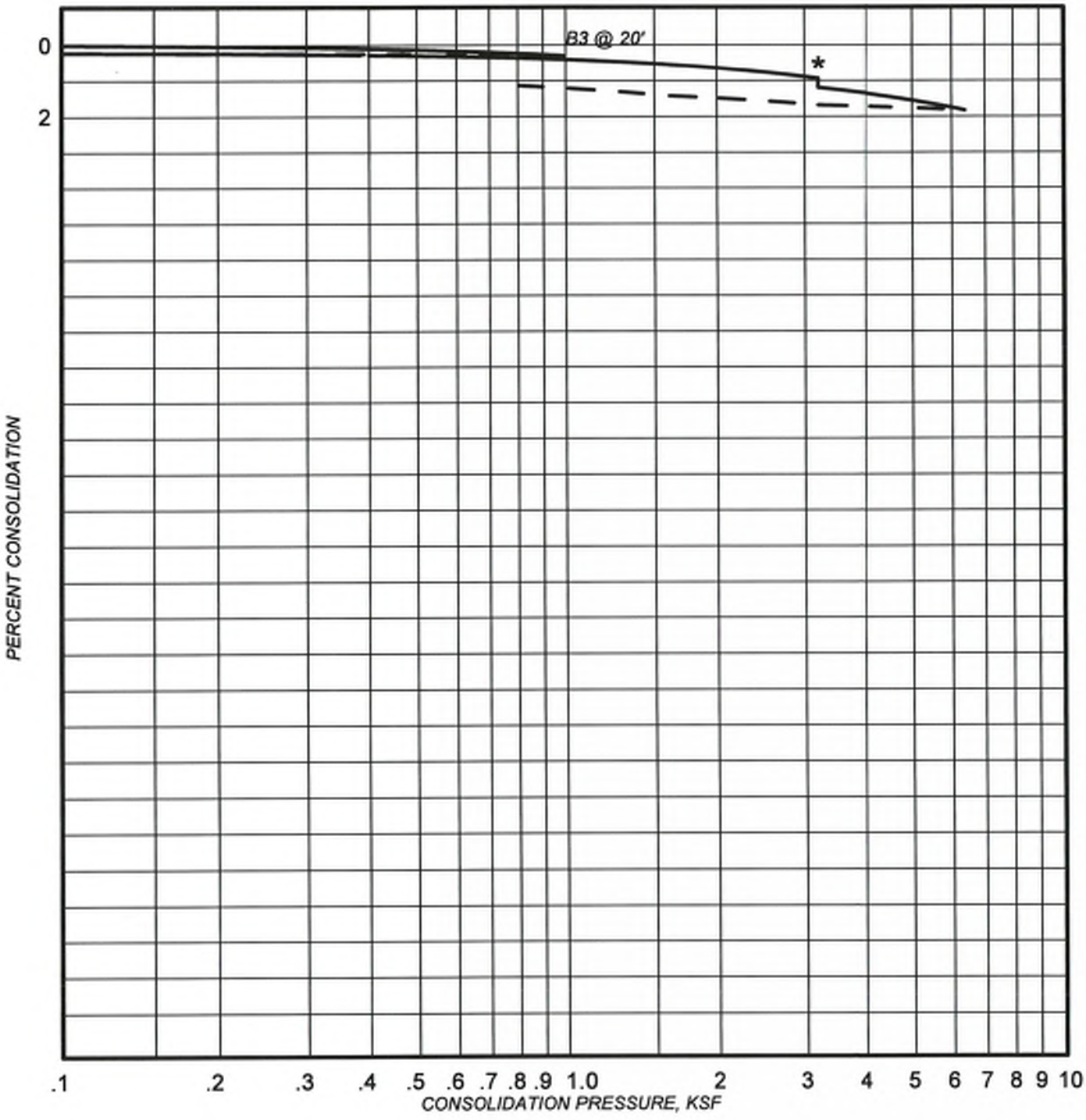
PLATE:

CONSOLIDATION TEST

PROJECT: 3331 FEFFER/NEW URBAN WEST-METRO WALK

SAMPLE: B3 @ 20'

ALLUVIUM



* Water Added

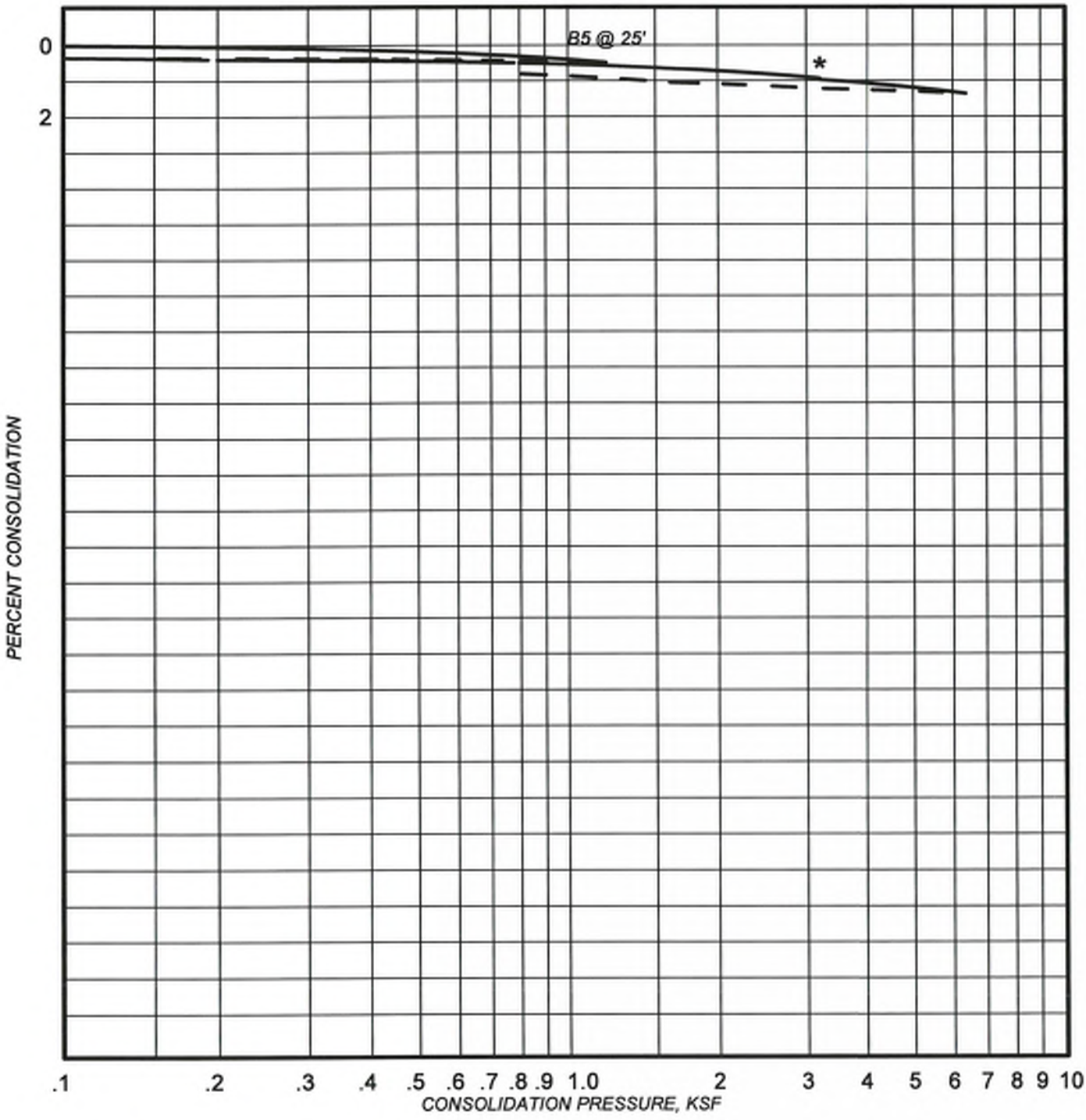
PLATE:

CONSOLIDATION TEST

PROJECT: FEFFER/NEW URBAN WEST, INC.-METRO WALK

SAMPLE: B5 @ 25'

ALLUVIUM



* Water Added

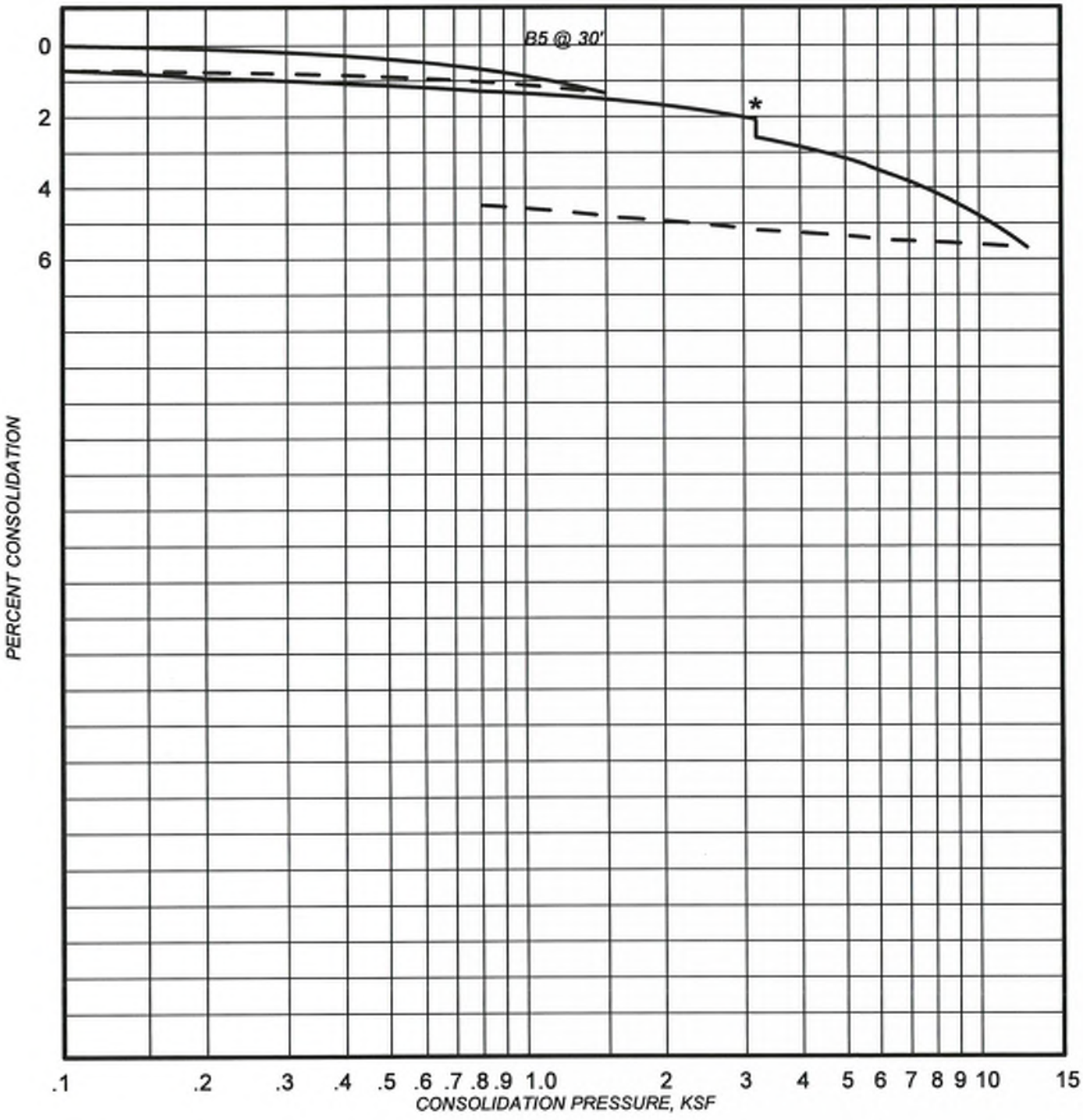
PLATE:

CONSOLIDATION TEST

PROJECT: FEFFER/NEW URBAN WEST, INC.-METRO WALK

SAMPLE: B5 @ 30'

ALLUVIUM



* Water Added

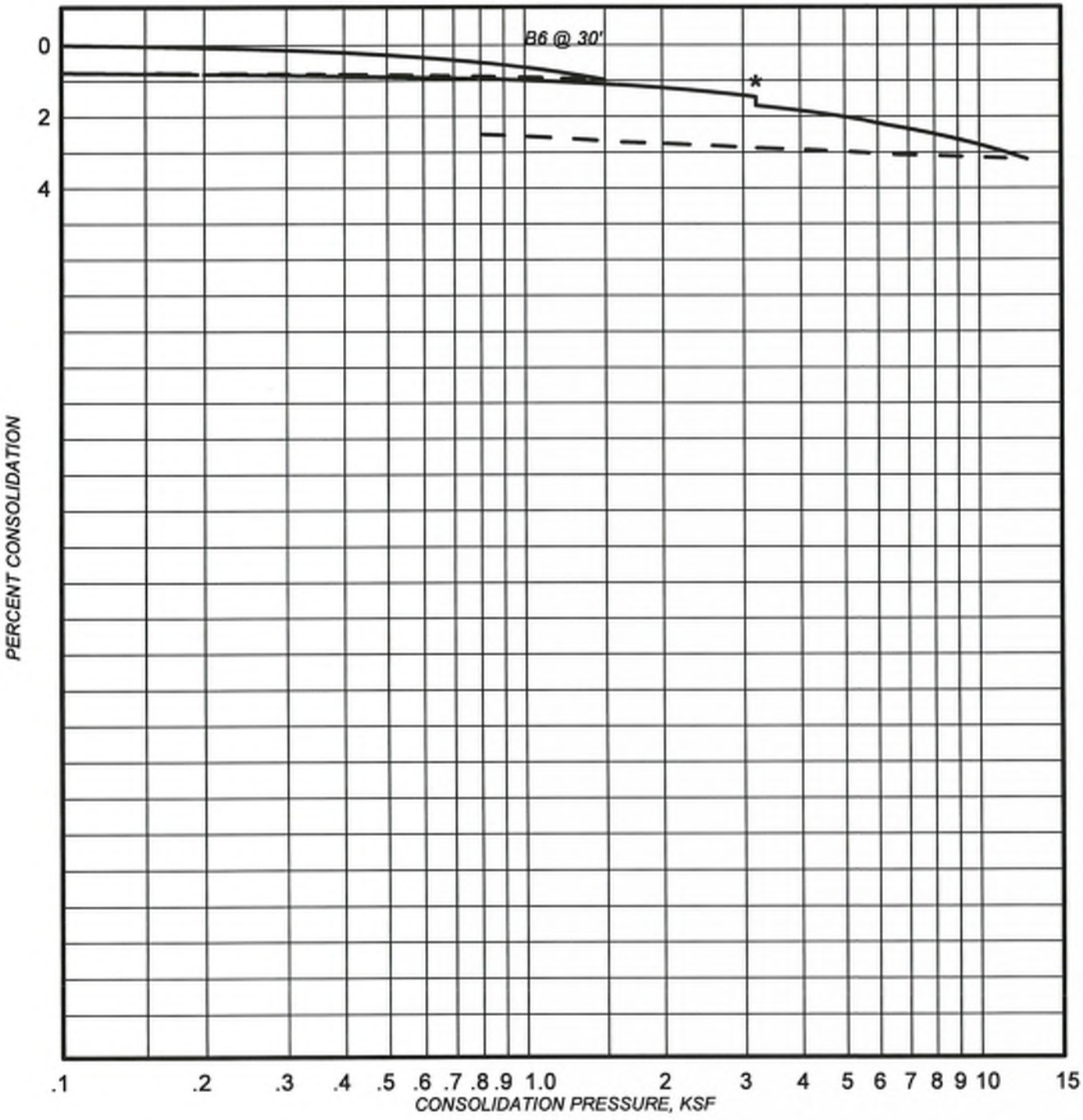
PLATE:

CONSOLIDATION TEST

PROJECT: 3331 FEFFER/NEW URBAN WEST, INC.-METRO WALK

SAMPLE: B6 @ 30'

ALLUVIUM



* Water Added

PLATE:

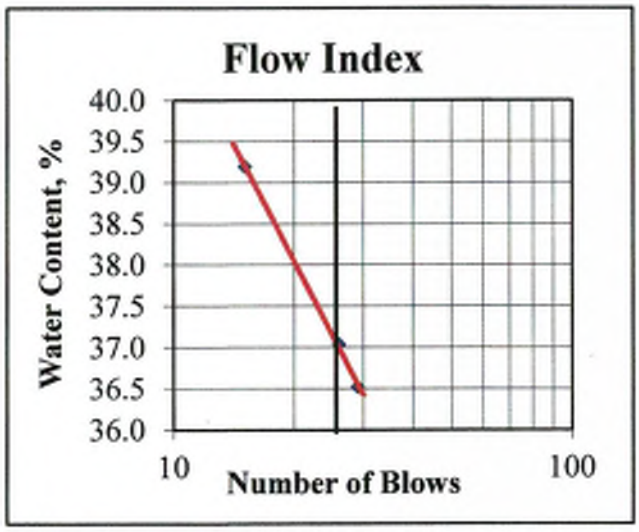
File No.: SL20.3331 June 3, 2020

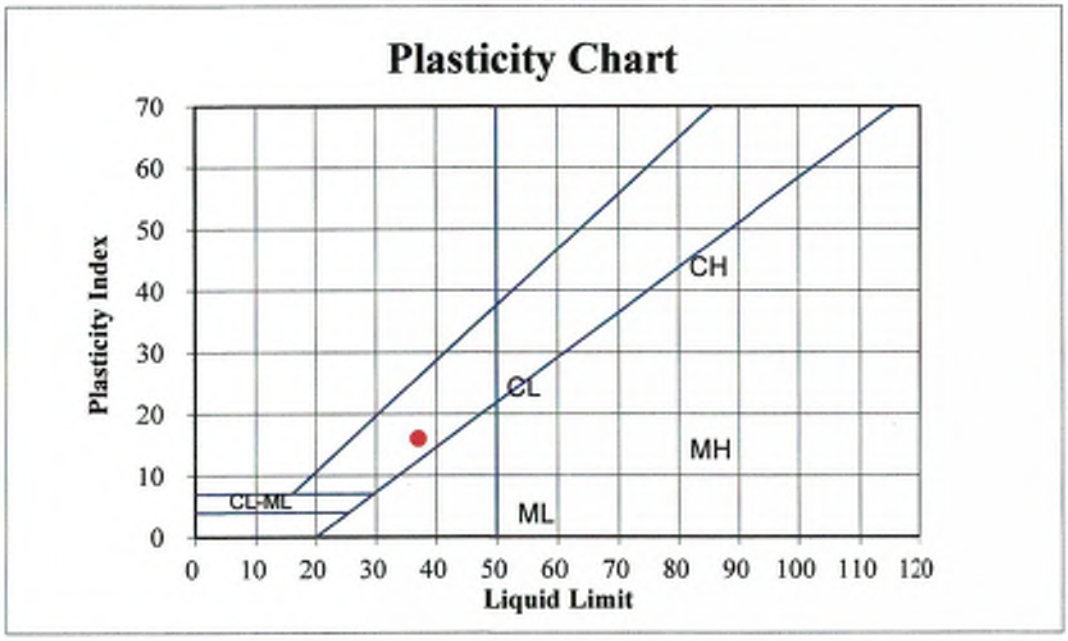
PLASTICITY INDEX

ASTM D-4318

Job Name: FEFFER/NEW URBAN WEST
Sample ID: B2 @ 5'
Soil Description: CL

DATA SUMMARY				TEST RESULTS	
Number of Blows:	15	26	29	**LIQUID LIMIT**	**37**
Water Content, %	39.2	37.0	36.5	**PLASTIC LIMIT**	**21**
Plastic Limit:	21.4	21.1		**PLASTICITY INDEX**	**16**





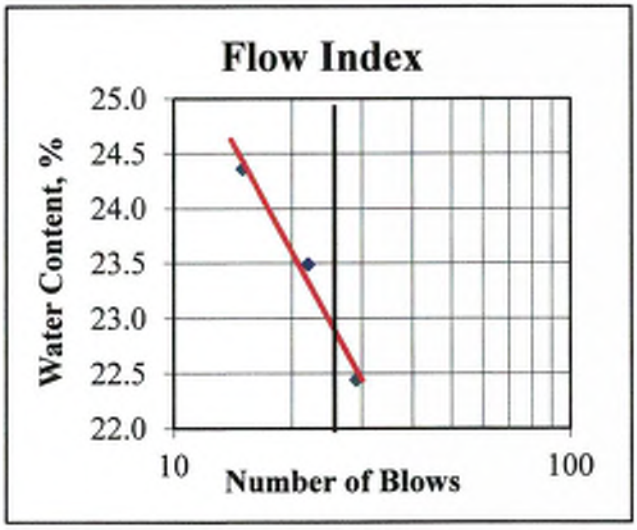
File No.: SL20.3331 June 3, 2020

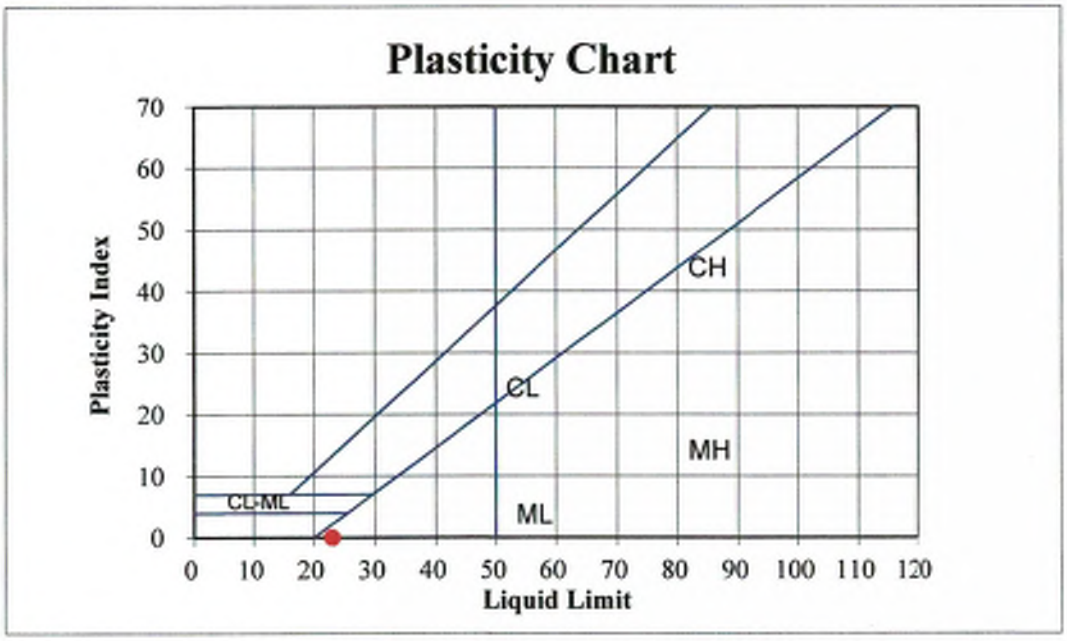
PLASTICITY INDEX

ASTM D-4318

Job Name: FEFFER/NEW URBAN WEST
Sample ID: B2 @ 22.5'
Soil Description: SM/Non Plastic

DATA SUMMARY				TEST RESULTS	
Number of Blows:	15	22	29	**LIQUID LIMIT**	**23**
Water Content, %	24.4	23.5	22.4	**PLASTIC LIMIT**	**23**
Plastic Limit:	23.4	23.5		**PLASTICITY INDEX**	**0**





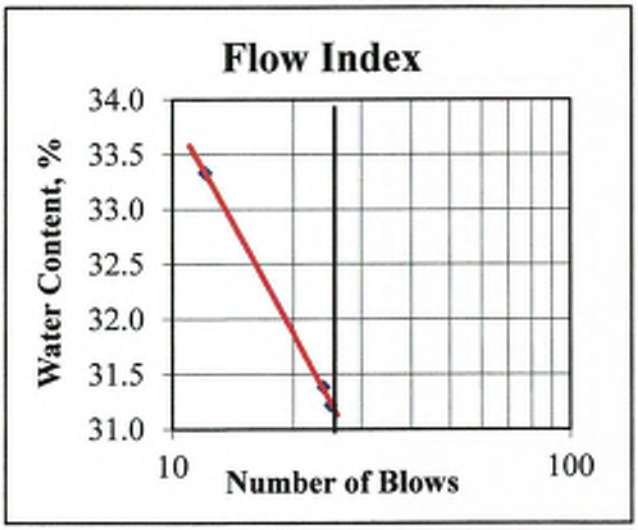
File No.: SL20.3331 June 3, 2020

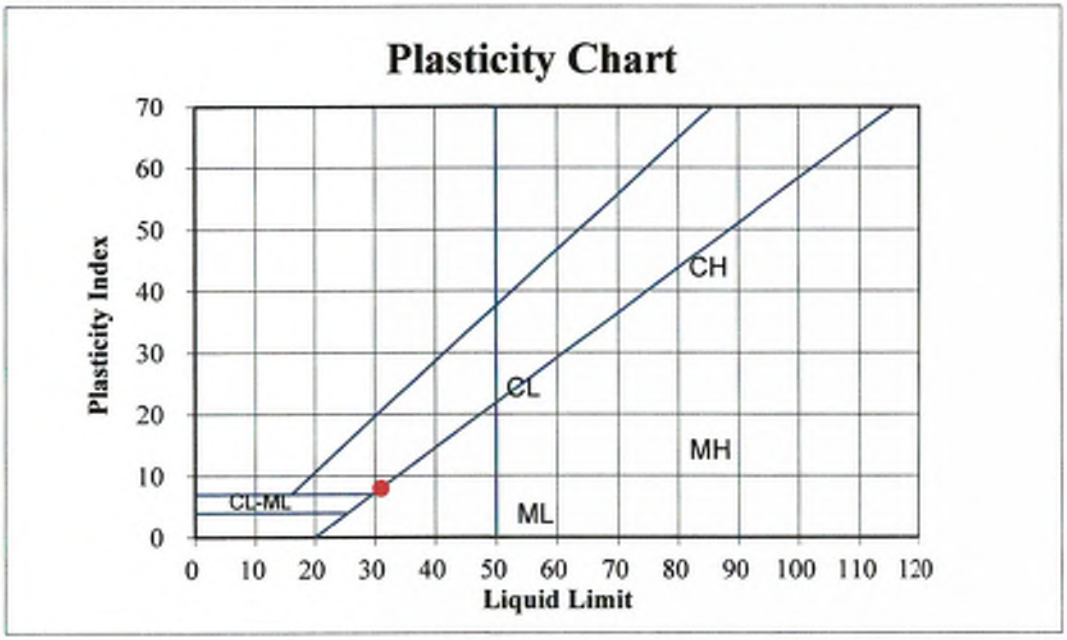
PLASTICITY INDEX

ASTM D-4318

Job Name: FEFFER/NEW URBAN WEST
Sample ID: B2 @ 27.5'
Soil Description: ML

DATA SUMMARY				TEST RESULTS	
Number of Blows:	12	24	25	**LIQUID LIMIT**	**31**
Water Content, %	33.3	31.4	31.2	**PLASTIC LIMIT**	**23**
Plastic Limit:	23.1	23.0		**PLASTICITY INDEX**	**8**





SMITH-EMERY LABORATORIES
An Independent Commercial Testing Laboratory
781 E. Washington Boulevard, Los Angeles, California 90021 ◆ (213) 745-5333 ◆ Fax (213) 741-8621

June 17, 2020

SEL File: 46769-1
SEL Report No.: G-20-2171

Feffer Geological Consulting
Attn.: Ms. Yvette Hays
1990 S. Bundy Drive, 4th floor
Los Angeles, CA 90025

RE: New Urban West Inc.-Metro Walk
2445-04, Terminus of Lost Canyon Rd.
Canyon Country-Santa Clarita, CA
APN: 2840-004-009

SUBJECT: R-Value

STANDARD: Cal Test Method 301

SAMPLE LOCATION: as above

Date Sampled: 6/5/20

Sampled by: E. Vasilon

REPORT OF TESTS

In compliance with the request of your authorized representative, we have conducted the subject test as per project requirements for the above-referenced project.

The bulk soil sample was delivered to our laboratory by your representative. Test result is as follow:

Boring Hole No.	Depth (ft)	Soil Type	R-Value at 300 psi Exudation Pressure		
			Uncorrected	Corrected	By Expansion
B-7	0-10	Olive Brown Silty SAND	7	7	**16**

Assumed Ti-5 G.F-2.5 W-2082.40

Should you have any questions regarding the contents of this report, please call.

Respectfully submitted,
SMITH-EMERY LABORATORIES

ANGELITO CABANILLA
Geotechnical Laboratory Manager

AC/ac
cc: Addressee

SMITH-EMERY LABORATORIES

An Independent Commercial Testing Laboratory, Established 1904

1195 N. Tustin Anahiem, California 92807 • Tel. (714) 238-6133 • Fax (714) 238-6144

(Cal Trans 301)

Report No.: A20-141

SEL JOB #: 46769-1
Date Sample: 6/5/2020
Project: New Urban West Inc.-Metro Walk
Depth: 0-10
SOIL TYPE: Olive Brown Silty Sand
Sample # 877
Location: 2445-04 Terminus of Los Canyon Rd.

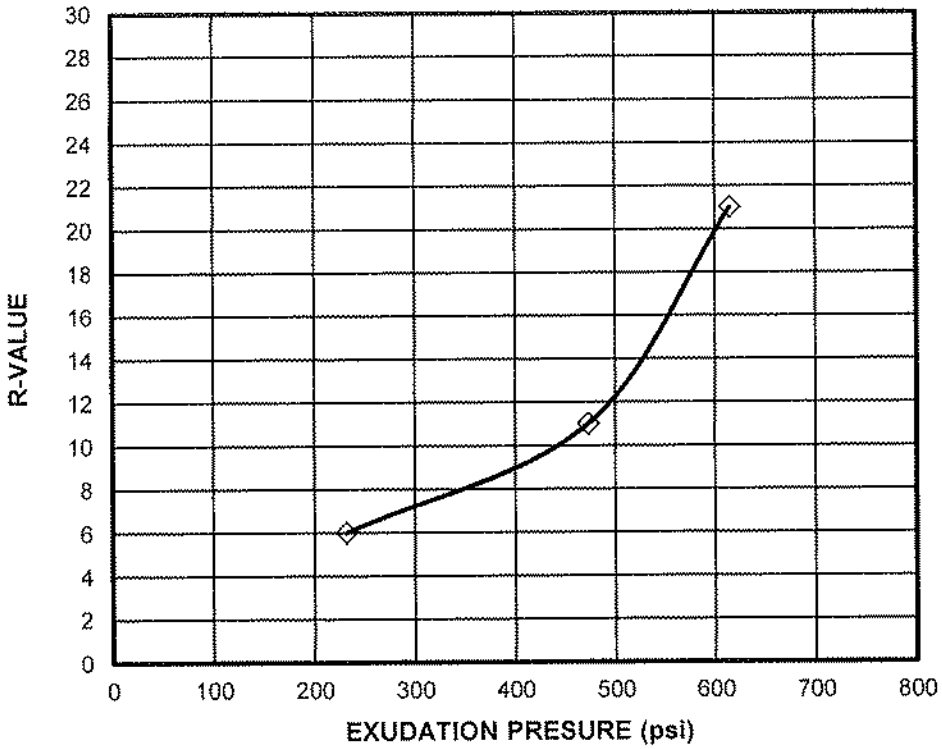
SPECIMEN	A	B	C
EXUDATION PRESSURE (psi)	615	473	232
PREPARED WEIGHT (g)	1100	1100	1100
FINAL WATER ADDED (g)	20	40	70
WEIGHT, SOIL & MOLD (g	3207	3240	3254
WEIGHT, MOLD (g)	2094	2100	2095
HEIGHT (in)	2.72	2.75	2.71
EXPANSION DIAL	0.0034	0.0011	0.0005
STABILOMETER @ 1000 lb	0	0	0
STABILOMETER @ 2000 lb	121	134	140
TURNS DISPLACEMENT	3.76	4.56	5.18
(2.5/d)*((Pv/Ph)-1)+1	1.21	1.11	1.07
100/Above	82	90	94
R-VALUE TEST UnCorr.	18	10	6
R-VALUE TEST Corr.	21	11	6

VALUE AT 300 PSI EXUDATION PRESSURE:

Rvalue uncorrected: 7

Rvalue Corrected: 7

Rvalue by expansion: 16



Moisture: n/a	R-VALUE TEST
Assumed Ti-5 G.F-2.5 W-2082.40	Smith-Emery Laboratory

Smith-Emery Laboratories

791/781 East Washington Blvd., Los Angeles, CA 90021; Tel (213) 745-5333; Fax (213) 749-8621

LABORATORY COMPACTION CHARACTERISTICS
ASTM D1557-12

Client: **Feffer Geological Consulting** | Lab. Ref No.: 877
Project: New Urban West, Inc.-Metro Walk; APN 2840-004-009 | SEL File No.: 46769-1
Location: 2445-04 Terminus of Lost Canyon Road, Canyon Country-Santa Clarita, CA | Date Sampled: 6/5/20
Soil Class: Olive Brown Silty SAND | Date Received: 6/8/20
Source: onsite | Date Tested: 6/9/20
Remarks: *:if 5-25%ret,rock correction reqr'd* | Sampled by: E. Vasilon

Equipment: Scale: B90416085/B846769478 **Drying:** Oven [X] Burner: [ ] Microwave [ ] *Method A* [X] (+)#4≤25% Calibrated Mold Vol. cc:
Rammer: **Mechnical** 10 lbs [X] **Manual** 10 lbs [ ] PREPARATION: *Method B* [ ] (+) 3/8"≤25%
Pie [ ] Round [X] 5.5 lbs [ ] [X] **Wet** [ ] **Dry** *Method C* [ ] (+) 3/4"≤30%

Calibrated Mold Vol. cc:	4" dia.	6" dia
	943	2124

Rock Correction: OD Gs.: MC%: 2.0 % Ret'd #4 1.3
ZAV Assumed Gs.: 2.70 % Pass #4 98.7 Water density: 62.428 Calibrated Mold Vol. cc: 943
Soil Gs ass: 2.70 Boring No.: B-7 Sample No.: **1** Depth (ft): **0-10** Water Density: 62.23

Test no.	1	2	3	4	5
wt. of mold + wet soil (g)	4011.5	4154.0	4178.0	4103.0	
wt. of mold (g)	2011.0	2011.0	2011.0	2011.0	
wt. of wet soil (g)	2000.5	2143.0	2167.0	2092.0	
wet density of soil (g/cc)	2.121	2.273	2.298	2.218	
wt. wet soil + tare (g)	709.7	743.0	712.3	721.6	
wt.dry soil + tare (g)	675.4	695.8	658.7	658.1	
Wt of tare (g)	182.3	176.0	181.9	179.7	
moisture content %	7.0	9.1	11.2	13.3	
Density of soil (pcf)	123.8	130.1	129.0	122.3	
corrected moisture content %					
Density of soil (pcf)corrected					
Dry Density @ ZAV	119	124	129	134	
100 % Saturation @ ZAV	15.3	13.1	11.2	9.4	

sieve size	ret'd (g)	% ret'd
3/4"		
3/8"		
#4	147.0	1.3
Total	**11549.8**	

pass #4 %Moist content 7.0
wet pass #4 (g) 12201.0
dry pass #4 (g) 11402.8
ASTM D127
wt OD (g)
wt SSD
wt in water (g)
OD Gs
moist % 2.0

Max Dry Density (pcf) : 130.4 **OWC % 9.7** % Saturation: **90.8**
Max Dry Density (pcf) corrected : **OWC % Corr** % Saturation:

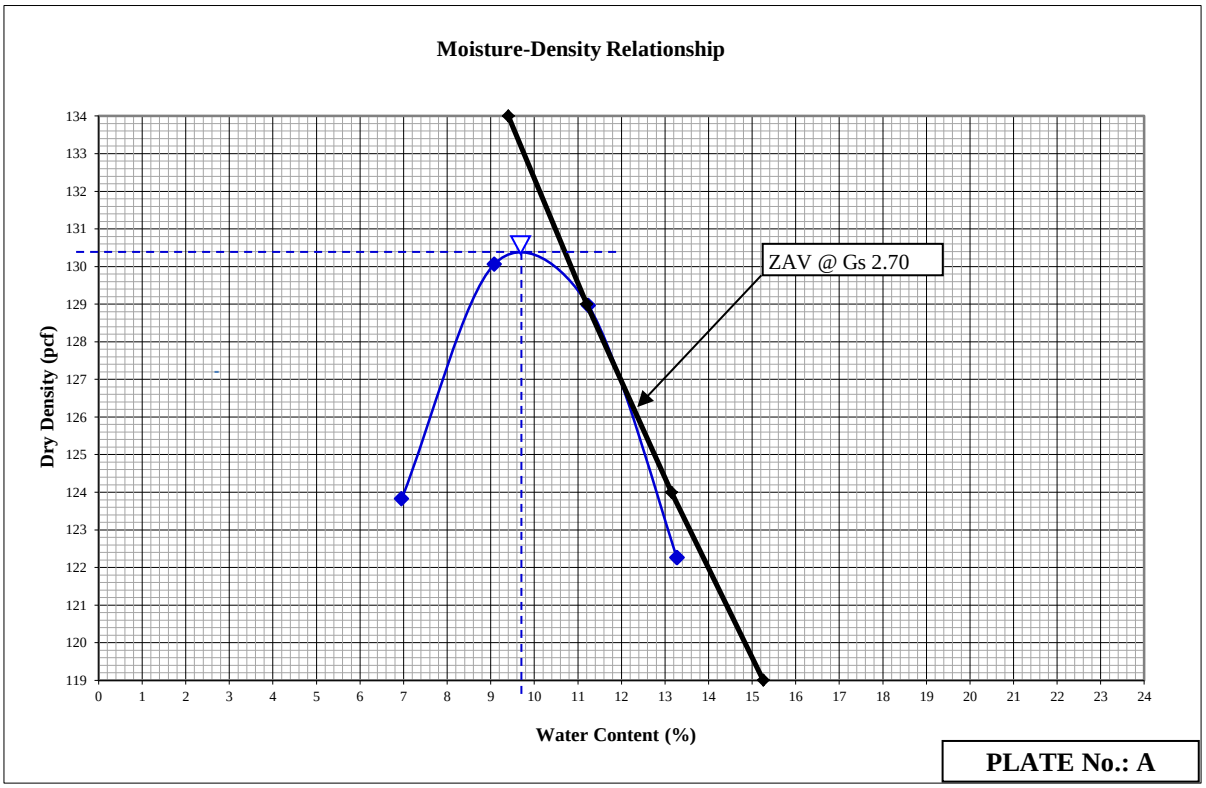


PLATE No.: A

Tested by: E.Saucedo Checked by: A. Cabanilla

PAVING DESIGN

IC: **2445-04** CONSULT: **YMH**
CLIENT **New Urban West-Metro Walk**

CALCULATION SHEET # **1**

CALTRANS METHOD FOR DESIGN OF FLEXIBLE PAVEMENT

Input "R" value or "CBR" of native soil	7	
Type of Index Property - "R" value or "CBR" (C or R)	R	R Value
R Value used for Caltrans Method	7	
Input Traffic Index (TI)	5	
Calculated Total Gravel Equivalent (GE)	1.488	feet
Calculated Total Gravel Equivalent (GE)	17.856	inches
Calculated Gravel Factor (Gf) for A/C paving	2.53	
Gravel Factor for Base Course (Gf)	1.2	
	Caltrans Class II Base	

TRIAL EQUIVALENT PAVEMENT SECTIONS:

A/C SECTION			BASE SECTION	
Section Thickness (inches)	Gravel Equivalent GE (feet)	GE (inches)	Delta (inches)	Minimum Base (inches)
3	0.63	7.60	10.25	8.54
4	0.84	10.14	7.72	6.43
5	1.06	12.67	5.18	4.32
6	1.27	15.21	2.65	2.21
7	1.48	17.74	0.11	0.09
8	1.69	20.28	-2.42	---
9	1.90	22.81	-4.96	---
10	2.11	25.35	-7.49	---
11	2.32	27.88	-10.03	---
12	2.53	30.42	-12.56	---

PAVING DESIGN

IC: **2445-04** CONSULT: **YMH**
CLIENT **New Urban West-Metro Walk**

CALCULATION SHEET # **1**

CALTRANS METHOD FOR DESIGN OF FLEXIBLE PAVEMENT

Input "R" value or "CBR" of native soil	7	
Type of Index Property - "R" value or "CBR" (C or R)	R	R Value
R Value used for Caltrans Method	7	
Input Traffic Index (TI)	6.5	
Calculated Total Gravel Equivalent (GE)	1.9344	feet
Calculated Total Gravel Equivalent (GE)	23.2128	inches
Calculated Gravel Factor (Gf) for A/C paving	2.22	
Gravel Factor for Base Course (Gf)	1.2	
	Caltrans Class II Base	

TRIAL EQUIVALENT PAVEMENT SECTIONS:

A/C SECTION			BASE SECTION	
Section Thickness (inches)	Gravel Equivalent GE (feet)	GE (inches)	Delta (inches)	Minimum Base (inches)
3	0.56	6.67	16.54	13.79
4	0.74	8.89	14.32	11.93
5	0.93	11.12	12.10	10.08
6	1.11	13.34	9.87	8.23
7	1.30	15.56	7.65	6.38
8	1.48	17.79	5.43	4.52
9	1.67	20.01	3.20	2.67
10	1.85	22.23	0.98	0.82
11	2.04	24.45	-1.24	---
12	2.22	26.68	-3.46	---

APPENDIX 'C'

Conceptual Plans

VISTA CANYON SPECIFIC PLAN AREA

PA 1

PA 2

PA 3

PA 4

HARRIMAN DRIVE (PVT.)

COOPER STREET

MITCHELL DRIVE

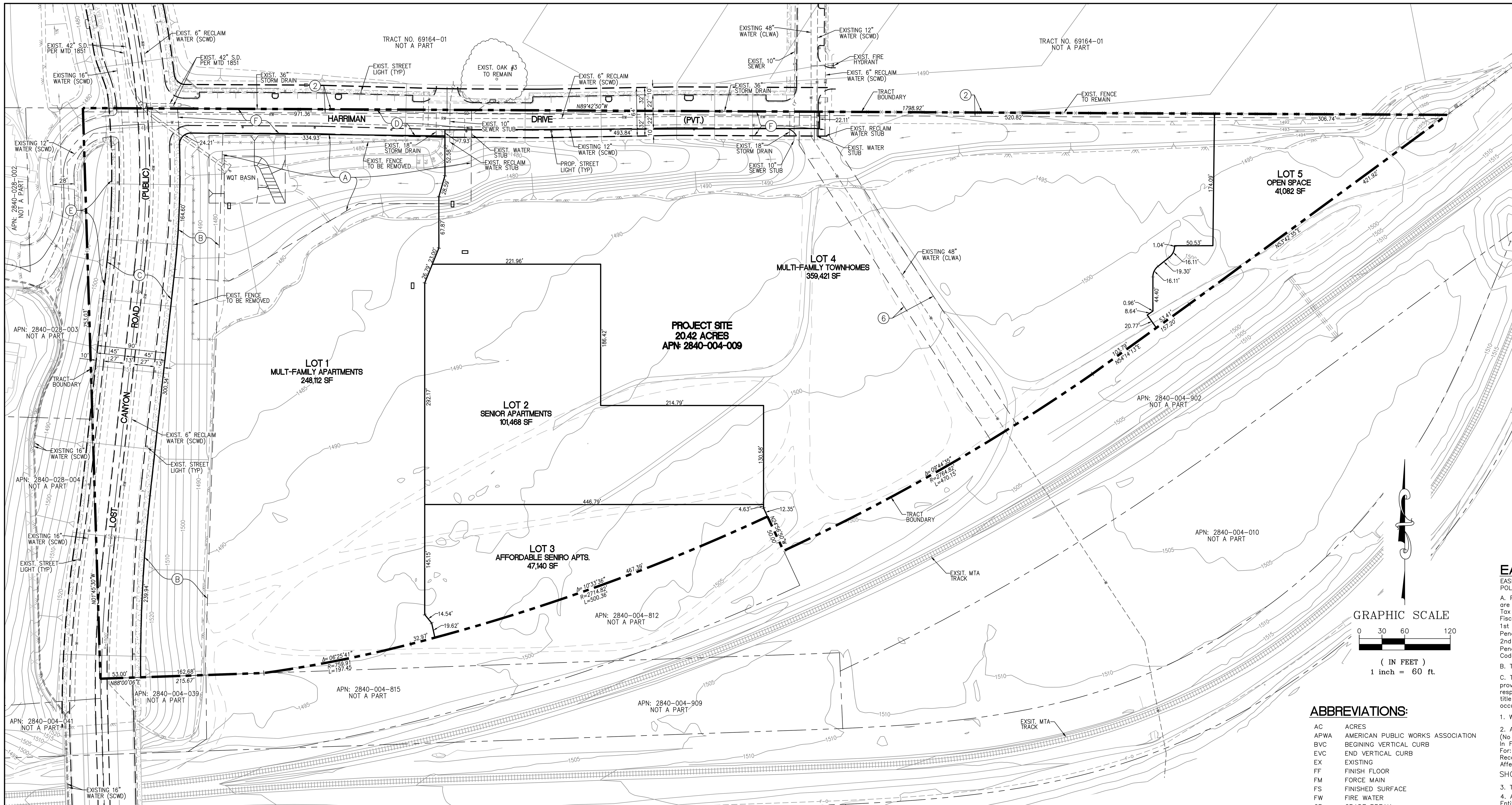
WQT. BASIN

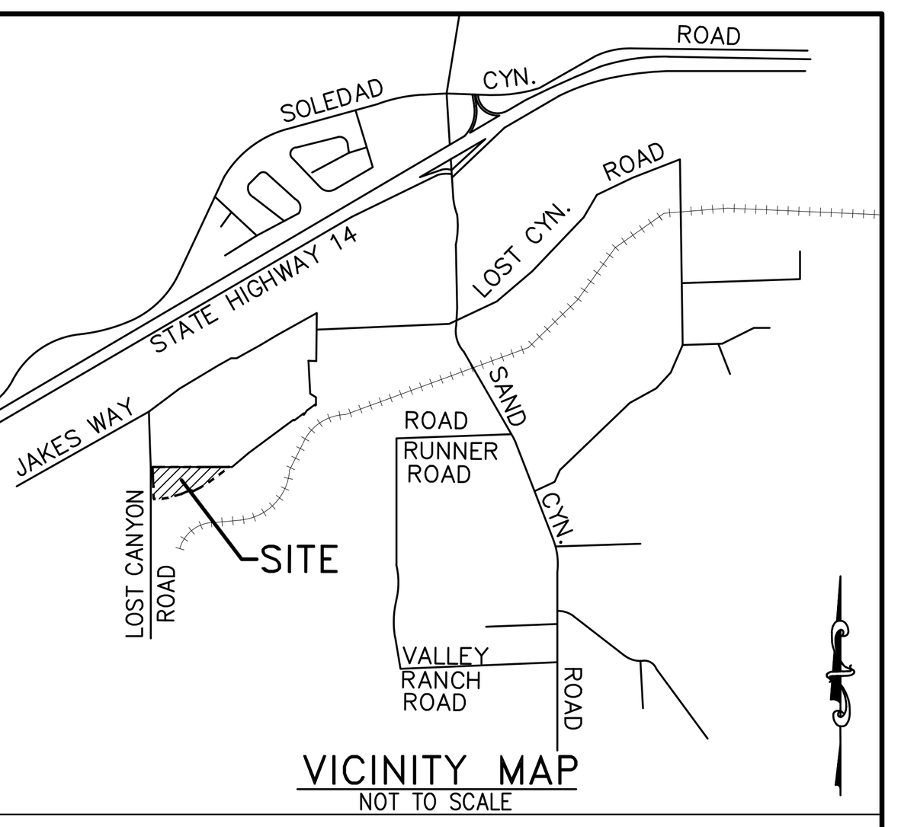
LEGEND

- Residential (R)
- Open Space (OS)
- Metrolink Station

North

0' 30' 60' 120'





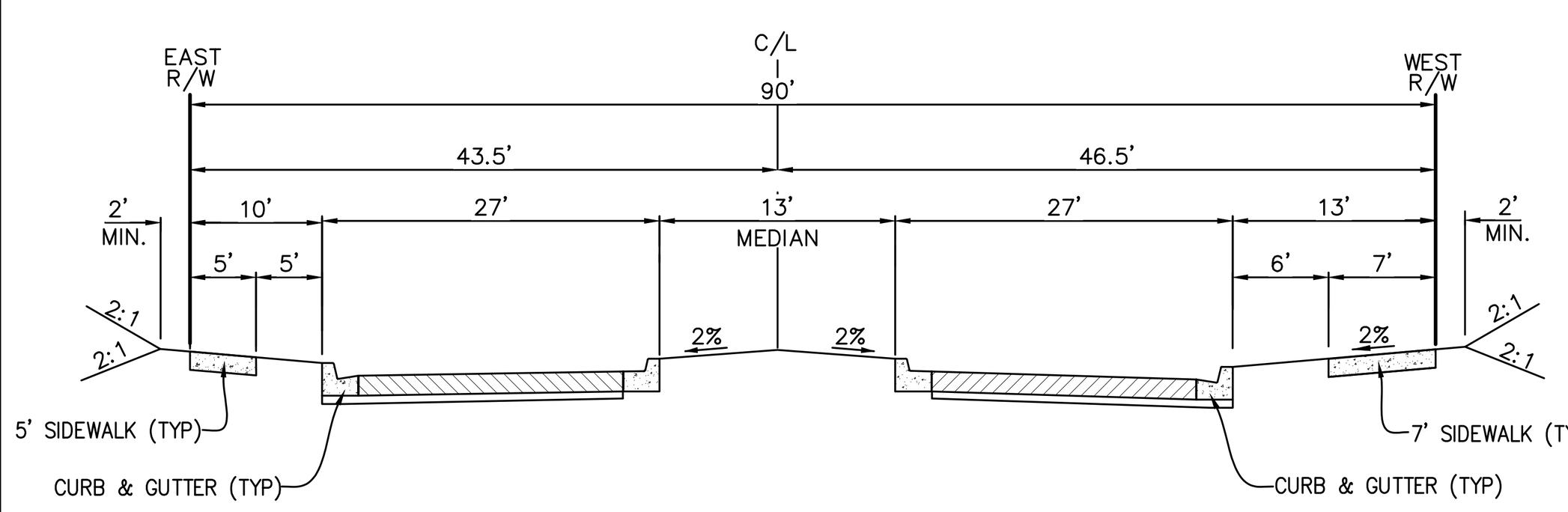
VICINITY MAP
NOT TO SCALE

LEGEND:

- PROJECT BOUNDARY
- PROPOSED ROAD RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING EASEMENT
- FUTURE RIGHT OF WAY
- 1000 PROPOSED CONTOUR
- 1000 EXISTING CONTOUR
- DAYLIGHT LINE
- SD PROP. STORM DRAIN
- S PROP. SANITARY SEWER
- W PROP. WATER
- PROP. STORM DRAIN INLET/OUTLET
- PROP. S.D. CATCH BASIN
- S EXISTING SEWER LINE
- W EXISTING WATER LINE
- O EXISTING OIL LINE
- G EXISTING GAS LINE
- OE EXISTING OVERHEAD POWER LINE
- EXISTING POWER POLE
- OAK NO. XX — OAK TREE (TR) = TO REMAIN (TBI) = TO BE IMPACTED (TBR) = TO BE REMOVED

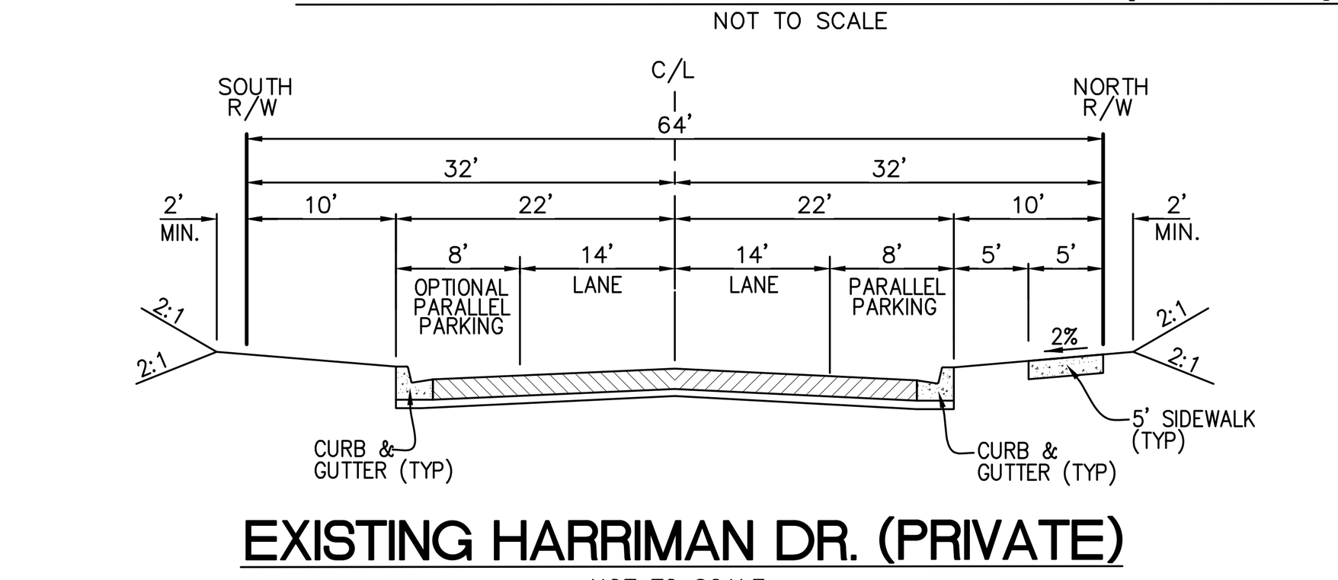
EASEMENT LEGEND:

- (A) PROPOSED COVERED STORM DRAIN EASEMENT TO THE CITY OF SANTA CLARITA
- (B) PROPOSED LANDSCAPE EASEMENT TO THE CITY OF SANTA CLARITA
- (C) PROPOSED ROAD EASEMENT TO THE CITY OF SANTA CLARITA – LOST CANYON ROAD
- (D) PROPOSED STORM DRAIN EGRESS EASEMENT TO THE CITY OF SANTA CLAIRTA
- (E) PROPOSED NEW LOT LINE ADJUSTMENT WITH THE CITY OF SANTA CLARITA
- (F) PROPOSED ROAD EASEMENT – HARRIMAN DRIVE



EXISTING LOST CANYON ROAD (PUBLIC)

NOT TO SCALE



EXISTING HARRIMAN DR. (PRIVATE)

NOT TO SCALE

LEGAL DESCRIPTION:

THAT PORTION OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF SANTA CLARITA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND FILED IN THE DISTRICT LAND OFFICE MARCH 29, 1877, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHERLY LINE OF SAID SOUTH HALF, DISTANT THEREON SOUTH 89 DEGREES 57 MINUTES 20 SECONDS EAST 124.57 FEET FROM THE WESTERLY LINE OF SAID SOUTHEAST QUARTER; THENCE ALONG SAID NORTHERLY LINE SOUTH 89 DEGREES 57 MINUTES 20 SECONDS EAST TO A POINT DISTANT THEREON NORTH 89 DEGREES 57 MINUTES 20 SECONDS WEST 150.99 FEET FROM THE INTERSECTION OF SAID NORTHERLY LINE WITH THE NORTHWESTERLY LINE OF THE 100 FOOT WIDE STRIP OF LAND DESCRIBED IN DEED DATED APRIL 22, 1890, FROM JOHN T. HUMPHREY'S TO SOUTHERN PACIFIC RAILROAD COMPANY; RECORDED APRIL 26, 1890, IN BOOK 650, PAGE 125 OF DEEDS, RECORDS OF SAID COUNTY; THENCE SOUTH 53 DEGREES 28 MINUTES 05 SECONDS WEST 421.92 FEET; THENCE SOUTH 53 DEGREES 59 MINUTES 43 SECONDS WEST 157.20 FEET TO A POINT; THENCE SOUTHWESTERLY ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 2764.82 FEET, THROUGH A CENTRAL ANGLE OF 9 DEGREES 44 MINUTES 35 SECONDS (TANGENT TO SAID CURVE AT THE LAST MENTIONED POINT) BEARS SOUTH 56 DEGREES 04 MINUTES 05 SECONDS WEST AND NORTH OF SAID CURVE BEARS SOUTH 59 DEGREES 56 MINUTES 22 SECONDS WEST 469.59 FEET) AN ARC DISTANCE OF 470.15 FEET; THENCE NORTH 25 DEGREES 11 MINUTES 20 SECONDS WEST 50.00 FEET TO A POINT; THENCE SOUTHWESTERLY ALONG A COMPOUND CURVE TO THE RIGHT (TANGENT TO SAID CURVE A THE LAST MENTIONED POINT BEARS SOUTH 64 DEGREES 48 MINUTES 40 SECONDS WEST) HAVING THE FOLLOWING RADII, CENTRAL ANGLES AND ARC LENGTHS; 2714.82 FEET, 10 DEGREES 53 MINUTES 36 SECONDS (CENTRAL ANGLES), 500.36 (ARC), 1759.91 FEET, 8 DEGREES 01 MINUTES 14 SECONDS (CENTRAL ANGLES), 246.36 (ARC), TO A POINT IN THE NORTHERLY LINE OF LAND DESCRIBED FIRST IN DEED DATED APRIL 26, 1890, FROM JOHN T. HUMPHREY'S TO SOUTHERN PACIFIC RAILROAD COMPANY RECORDED APRIL 26, 1890, IN BOOK 642, PAGE 277, OF DEEDS, RECORDS OF SAID COUNTY' THENCE ALONG SAID LAST MENTIONED NORTHERLY LINE TO A LINE HAVING A BEARING OF NORTH 2 DEGREES 00 MINUTES 00 SECONDS WEST THAT PASSED THROUGH THE POINT OF BEGINNING; THENCE ALONG SAID LINE NORTH 2 DEGREES 00 MINUTES 00 SECONDS WEST TO THE POINT OF BEGINNING.

APN: 2840–004–009

GENERAL NOTES

1. LOT LINES CAN BE ADJUSTED AND ADDITIONAL RESIDENTIAL OR COMMERCIAL LOTS MAY BE CREATED TO THE SATISFACTION OF THE CITY PLANNING DEPARTMENT AS LONG AS THE MAXIMUM NUMBER OF APPROVED RESIDENTIAL LIMITS AND/OR THE MAXIMUM SQUARE FOOTAGE OF COMMERCIAL/OFFICE APPROVED IS NOT EXCEEDED.
2. ALIGNMENT AND GEOMETRICS OF STREETS ARE APPROXIMATE. ADJUSTMENTS TO STREETS CAN BE MADE WITH APPROVAL BY THE CITY OF SANTA CLARITA PLANNING DEPARTMENT AND THE ENGINEERING DEPARTMENTS.
3. BUILDING FOOTPRINTS THAT ARE SHOWN ON THIS TENTATIVE MAP FOR ILLUSTRATIVE PURPOSES. ACTUAL BUILDING LOCATIONS AND FOOTPRINTS MAY VARY. REVISIONS MAY BE ALLOWED DURING FUTURE SITE PLAN REVIEW, PROVIDED THE PROPOSED BUILDINGS SATISFY ALL EXISTING CODES AND ORDINANCES.
4. GRADES SHOWN ON THIS TENTATIVE MAP ARE APPROXIMATE. GRADES MAY DEVIATE UP TO TEN FEET WITH APPROVAL OF CITY PLANNING AND ENGINEERING DEPARTMENTS.
5. PERMISSION IS REQUESTED FOR MULTIPLE (PHASED/UNIT) TRACT MAPS.
6. PERMISSION IS REQUESTED TO COMBINE LOTS.
7. PERMISSION IS REQUESTED TO FILE ADDITIONAL LARGE LOT PARCEL MAPS AS LONG AS EACH PARCEL IS LARGER THAN 20 ACRES.
8. PERMISSION IS REQUESTED TO CREATE ADDITIONAL LANDSCAPE/OPEN SPACE OR PUBLIC USE LOTS TO THE SATISFACTION OF THE CITY PLANNING DEPARTMENT.
9. PERMISSION IS REQUESTED TO RECORD ADDITIONAL UTILITY LOTS AND PROVIDE MAINTENANCE EASEMENTS TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING AND ENGINEERING DEPARTMENTS.
10. THE LOCATIONS OF APPURTENANT STRUCTURES (E.G., PASEOS, TRANSIT SHELTERS, WATER QUALITY BASINS, ETC.) MAY BE RELOCATED TO THE SATISFACTION OF THE CITY OF SANTA CLARITA PLANNING AND ENGINEERING DEPARTMENTS.
11. PERMISSION IS REQUESTED TO MASS GRADE.
12. LOTS DESIGNATED FOR MULTI–FAMILY HOUSING MAY BE FURTHER SUBDIVIDED FOR CONDOMINIUM PURPOSES.
13. OFFSITE GRADING OF THE CITY PARK SITE SHALL BE CONCURRENT WITH GRADING PER THIS TENTATIVE TRACT MAP.
14. RESIDENTIAL UNITS MAY BE TRANSFERRED BETWEEN PLANNING AREAS SUBJECT TO THE APPROVAL OF THE CITY PLANNING DEPARTMENT.

PROJECT SUMMARY:

GROSS AREA:	20.42 AC
TOTAL LOTS:	5
TOTAL D.U.:	503
EXISTING ZONING:	BP
PROPOSED ZONING:	UR5

EARTHWORK SUMARY

CUT: XX,XXX cy
FILL: XX,XXX cy
IMPORT/EXPORT:: 0 cy

OWNER:

BLUMAX SANTA CLARITA, LLC,
A DELAWARE LIMITED LIABILITY COMPANY
2001 WILSHIRE BLVD., SUITE 401
SANTA MONICA, CA 94303
PHONE: (310) 556–6390
ATTN: KEVIN HARBISON

FLOOD ZONE

FLOOD INSURANCE RATE MAPS COMMUNITY PANEL NUMBERS NO. 06037C0840F AND 06037C0845F ZONE X

TOPOGRAPHY:

CONTOURS ARE BASED ON AN AERIAL PHOTOGRAMETRIC SURVEY PERFORMED BY VERTEX AND DON READ CORPORATION FLOWN ON MAY 2017.

BENCHMARK:

L 1668 DATUM NAVD 88(1995 ADJUSTMENT) ELEVATION 1586.011
SAND CANYON ROAD AND 161M NORTH OF LIVE OAK SPRINGS CANYON ROAD
8.2M NORTHEAST OF POWER POLE #1155006E MKD (PI 24)
DESCRIPTION: CS MON IN WELL 250MM DN @ PI 600MM EAST OF CENTERLINE

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING NORTH 89°44'29" WEST OF THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 4 NORTH, RANGE 15 WEST, SAN BERNARDINO MERIDIAN, AS SHOWN ON MAP OF TRACT NO. 69164–01 FILED IN BOOK 1396 PAGES 40 THROUGH 48 INCLUSIVE, OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY.

ASSESSOR PARCEL NUMBER:

2840–004–009

CONDOMINIUM NOTE:

ALL RESIDENTIAL, COMMERCIAL AND OFFICE LOTS WITHIN THIS TENTATIVE MAP MAY BE FURTHER AIRSPACE SUBDIVIDED FOR CONDOMINIUM PURPOSES.

ABBREVIATIONS:

AC	ACRES
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
BVC	BEGINING VERTICAL CURB
EVC	END VERTICAL CURB
EX	EXISTING
FF	FINISH FLOOR
FM	FORCE MAIN
FS	FINISHED SURFACE
FW	FIRE WATER
GB	GRADE BREAK
HP	HIGH POINT
L	LENGTH
MIN	MINIMUM
P.C.C.	PORTLAND CEMENT CONCRETE
PI	POINT OF INTERSECTION
PROP	PROPOSED
R	RADIUS
R/W	RIGHT OF WAY
SF	SQUARE FOOT
SD	STORM DRAIN
SS	SANITARY SEWER
STD	STANDARD
TBI	TO BE IMPACTED
TBR	TO BE REMOVED
TR	TO REMAIN
W	WATER

PUBLIC UTILITIES:

CABLE TV	CHARTER COMMUNICATIONS 14221 COVELLO STREET VAN NUYS, CA 91405 (661) 483–3030 ATTN: ROBERT REIHS
ELECTRIC	SOUTHERN CALIFORNIA EDISION CO. 3589 FOOTHILL DRIVE THOUSAND OAKS, CA 91361 (661) 607–0512 ATTN: JOSHUA YANEZ
GAS	SOUTHERN CA. GAS COMPANY 9400 OAKDALE AVENUE CHATSWORTH, CA. 91313 (818) 701–7567 ATTN: JOHN CURRAN
SEWER	LOS ANGELES COUNTY SEWER MAINTENANCE DEPARTMENT 45712 NORTH DIVISION LANCASTER, CA. 93535 (626) 300–3370 ATTN: MARISA MORALES
TELEPHONE	AT&T 26971 N. FURNIVALL AVENUE SANTA CLARITA, CA 91351 (661) 251–8799 ATTN: BRYAN MONTGOMERY
WATER	SANTA CLARITA VALLEY WATER AGENCY 26521 SUMMIT CIRCLE SANTA CLARITA, CA 91350 (661) 259–2737 ATTN: BRENT PAYNE

EASEMENTS

EASEMENTS BASED ON CHICAGO TITLE COMPANY PRO FORMA REPORT
POLICY NO.: Pro Forma–CA–FBSC–IMP–72306–1–19–00098917.

A. Property taxes, including any personal property taxes and any assessments collected with taxes, are as follows:
Tax Identification No.: 2840–004–009
Fiscal Year: 2019–2020
1st Installment: $68,430.01 Unpaid
Penalty: $6,843.00 (Due after December 10)
2nd Installment: $68,430.00 Unpaid
Penalty and Cost: $6,853.00 (Due after April 10)
Code Area: 15862

B. This exception has been intentionally deleted

C. The lien of supplemental or escaped assessments of property taxes, if any, made pursuant to the provisions of Chapter 3.5 (commencing with Section 75) or Part 2, Chapter 3, Articles 3 and 4, respectively, of the Revenue and Taxation Code of the State of California as a result of the transfer of title to the vestee named in Schedule A or as a result of changes in ownership or new construction occurring prior to Date of Policy.

1. Water rights, claims or title to water, whether or not disclosed by the public records.

2. An easement affecting the portion of said land and for the purposes stated herein and incidental purposes (No representation is made as to the present ownership of said easement)
In Favor of: Southern California Edison Company, Ltd
For: public utilities
Recorded: in Book 20996, Page 385, of Official Records
Affects: A portion of said land more particularly described therein
SHOWN HEREON AS (2)

3. This exception has been intentionally deleted

4. A document subject to all the terms, provisions and conditions therein contained.
Entitled: Resolution No. 91–127 –A Resolution of the City Council of the City of Santa Clarita Confirming the Bouquet Canyon and Route 126 Bridge and Major Thoroughfare Construction Fee Districts Fee Revisions and Providing for Their Adoption as an Urgency Measure
Recorded: October 8, 1991 as Instrument No. 91–1581844, of Official Records

5. A document subject to all the terms, provisions and conditions therein contained.
Entitled: Resolution No. 91–106 –A Resolution of the City Council of the City of Santa Clarita Confirming the Bouquet Canyon and Route 126 Bridge and Major Thoroughfare Construction Fee Districts Fee Revisions
Recorded: October 8, 1991 as Instrument No. 91–1581845, of Official Records

6. Easement(s) for the purpose(s) shown below and rights incidental thereto as condemned by an instrument,
Entitled: Amended Final Order of Condemnation
Court: Superior Court
Case No.: BC 317474
In favor of: Castaic Lake Water Agency, a California water agency
Purpose: water pipeline
Recording Date: May 5, 2006
Recording No: 06–0997584, Official Records
Affects: that portion of said land described therein
SHOWN HEREON AS (6)

7. This exception has been intentionally deleted

8. This exception has been intentionally deleted

9. Matters contained in that certain document
Entitled: Memorandum of Grading, Improvements, and Easement Agreement
Dated: November 13, 2009
Executed by: Rachel Jorgenson, Successor Trustee of the Marital Deduction Trust of The Cloyd Family Trust, dated November 3, 2003, Goldman Family Limited Partnership, a Delaware limited partnership, Vista Canyon Ranch, LLC, a California limited liability company and Vista Canyon Phase 1, LLC, a Delaware limited liability company
Recording Date: November 16, 2016
Recording No: 20161433058, Official Records
Reference is hereby made to said document for full particulars.

10. This exception has been intentionally deleted
11. This exception has been intentionally deleted
12. This exception has been intentionally deleted
13. This exception has been intentionally deleted
14. This exception has been intentionally deleted
15. This exception has been intentionally deleted

16. Any rights, claims or interests that may exist or arise by reason of the following facts disclosed by a map dated June 5, 2019 last revised July 9, 2019 of an ALTA/NSPS Land Title Survey completed June 4, 2019 prepared by or under the responsible charge of Michael A. Kennada LS 5642, of/for Vertex Survey, Inc.
A. Curbs extend across the north, west and south lines of surveyed property.
B. There is vehicular access the west and south lines of surveyed property.
C. A V–ditch extends across the west line of surveyed property.
D. There are street lights and pull boxes on the north and west sides of surveyed property
E. There is a 36" stand pipe in the northwest corner of surveyed property,
F. There are water valves on the north side of the surveyed property.
G. A fire hydrant lies 1.3 feet east of the west line of surveyed property.

17. This exception has been intentionally deleted

18. This exception has been intentionally deleted

19. A deed of trust to secure an indebtedness in the amount shown below,
Amount: $4,500,000.00
Dated: November __, 2019
Trustor/Grantor Blumax Santa Clarita, LLC, a Delaware limited liability company
Trustee: Chicago Title Company
Beneficiary: Goldman Family Limited Partnership
Recording Date: ___, 2019
Recording No: 2019 – ________, Official Records

DRAFT

ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE. CARLSBAD, CA 92008 TEL: (760) 431-9896 FAX: (760) 431-8802
27413 TOURNEY ROAD SUITE 120 VALENCIA, CA 91355 TEL: (661) 799-2760
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PLAN PREPARED FOR:
NEW URBAN WEST, INC.
2001 WILSHIRE BLVD., SUITE 401
SANTA MONICA, CA 91405
TEL: (310) 556–6390
ATTN: KEVIN HARBISON

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
(760) 431–9896
PLANS PREPARED UNDER THE DIRECTION OF:
CRAIG M. WHITTEKER R.C.E. 51929 — 3/13/20 DATE

REGISTERED PROFESSIONAL ENGINEER — CRAIG M. WHITTEKER — NO. 51929 — EXP 6–30–22 — CIVIL — STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	APPR

SHEET 1 OF 1 SHEETS — CITY OF SANTA CLARITA

METROWALK
TENTATIVE TRACT MAP 83087
FOR CONDOMINIUM PURPOSES

I:\CAD\1934\TENTATIVE MAP\1934_TENTATIVE_MAP_PLAN.dwg

APPENDIX ‘D’

Grading Specifications

STANDARD GRADING SPECIFICATIONS

These specifications present the usual and minimum requirements for grading operations performed under our supervision.

GENERAL

1) The Geotechnical Engineer and Engineering Geologist are the developer's representative on the project.

2) All clearing, site preparation or earth work performed on the project shall be conducted by the contractor under the supervision of the Geotechnical Engineer.

3) It is the contractor's responsibility to prepare the ground surface to receive the fills to the satisfaction of the Geotechnical Engineer and to place, spread, mix, water, and compact the fill in accordance with the specifications of the Geotechnical Engineer. The contractor shall also remove all material considered unsatisfactory by the Geotechnical Engineer.

4) It is the contractor's responsibility to have suitable and sufficient compaction equipment on the job site to handle the amount of fill being placed. If necessary, excavation equipment will be shut down to permit completion of compaction. Sufficient watering apparatus will also be provided by the contractor, with due consideration for the fill material, rate of placement and time of year.

5) A final report shall be issued by our firm outlining the contractor's conformance with these specifications.

SITE PREPARATION

1) All vegetation and deleterious materials such as rubbish shall be disposed of off-site. Soil, alluvium or rock materials determined by the Geotechnical Engineer as being unsuitable for placement in compacted fills shall be removed and wasted from the site. Any material incorporated as a part of a compacted fill must be approved by the Geotechnical Engineer.

2) The Engineer shall locate all houses, sheds, sewage disposal systems, large trees or structures on the site or on the grading plan to the best of his knowledge prior to preparing the ground surface.

Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipe lines, or others not located prior to grading are to be removed or treated in a manner prescribed by the Geotechnical Engineer.

3) After the ground surface to receive fill has been cleared, it shall be scarified, disced or bladed by the contractor until it is uniform and free from ruts, hollows, hummocks or other uneven features which may prevent uniform compaction.

The scarified ground surface shall then be brought to optimum moisture, mixed as required, and compacted as specified. If the scarified zone is greater than twelve inches (12") in depth, the excess shall be removed and placed in lifts restricted to six inches (6").

Prior to placing fill, the ground surface to receive fill shall be inspected, tested and approved by the Geotechnical Engineer.

PLACING, SPREADING AND COMPACTION OF FILL MATERIALS

1) The selected fill material shall be placed in layers which when compacted shall not exceed six inches (6") in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to insure uniformity of material and moisture of each layer.

2) Where the moisture content of the fill material is below the limits specified by the Geotechnical Engineer, water shall be added until the moisture content is as required to assure thorough bonding and thorough compaction.

3) Where the moisture content of the fill material is above the limits specified by the Geotechnical Engineer, the fill materials shall be aerated by blading or other satisfactory methods until the moisture content is adequate.

COMPACTED FILLS

1) Any material imported or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable by the Geotechnical Engineer. Roots, tree branches or other matter missed during clearing shall be removed from the fill as directed by the Geotechnical Engineer.

2) Rock fragments less than six inches (6") in diameter may be utilized in the fill, provided:

a) They are not placed in concentrated pockets.

b) There is a sufficient percentage of fine-grained material to surround the rocks.

c) The distribution of the rocks is supervised by the Geotechnical Engineer.

3) Rocks greater than six inches (6") in diameter shall be taken off-site, or placed in accordance with the recommendations of the Geotechnical Engineer in areas designated as suitable for rock disposal. Details for rock disposal such as location, moisture control, percentage of rock placed, will be referred to in the "Conclusions and Recommendations" section of the geotechnical report.

If the rocks greater than six inches (6") in diameter were not anticipated in the preliminary geotechnical and geology report, rock disposal recommendations may not have been made in the "Conclusions and Recommendations" section. In this case, the contractor shall notify the Geotechnical Engineer if rocks greater than six inches (6') in diameter are encountered. The Geotechnical Engineer will than prepare a rock disposal recommendation or request that such rocks be taken off-site.

4) Representative samples of materials to be utilized as compacted fill shall be analyzed in the laboratory by the Geotechnical Engineer to determine their physical properties. If any materials other than that previously tested is encountered during grading, the appropriate analysis of this material shall be conducted by the Geotechnical Engineer as soon as possible.

Material that is spongy, subject to decay or otherwise considered unsuitable shall not be used in the compacted fill.

5) Each layer shall be compacted to a minimum of ninety percent (90%) of the maximum density in compliance with the testing method specified by the controlling governmental agency (ASTM D-1557).

If compaction to a lesser percentage is authorized by the controlling governmental agency because of a specific land use or expansive soil conditions, the area to receive fill compacted to less than ninety percent (90%) shall either be delineated on the grading plan or appropriate reference made to the area in the geotechnical report.

6) Compaction shall be by sheeps foot roller, multi-wheeled pneumatic tire roller, or other types of acceptable rollers. Rollers shall be of such design that they will be able to compact the fill to the specified density. Rolling shall be accomplished while the fill material is at the specified moisture content. The final surface of the lot areas to receive slabs-on-grade should be rolled to a smooth, firm surface.

7) Field density tests shall be made by the Geotechnical Engineer of the compaction of each layer of fill. Density tests shall be made at intervals not to exceed two feet (2') of fill height provided all layers are tested. Where the sheeps foot rollers are used, the soil may be disturbed to a depth of several inches and density readings shall be taken in the compacted material below the disturbed surface. When these readings indicate the density of any layer of fill or portion thereof is below the required ninety percent (90%) density, the particular layer or portion shall be reworked until the required density has been obtained.

8) Buildings shall not span from cut to fill. Cut areas shall be over excavated and compacted to provide a fill mat of three feet (3').

FILL SLOPES

1) All fills shall be keyed and benched through all top soil, colluvium, alluvium, or creep material into sound bedrock or firm material where the slope receiving fill exceeds a ratio of five (5) horizontal to one (1) vertical, in accordance with the recommendations of the Geotechnical Engineer.

2) The key for side hill fills shall be a minimum of fifteen feet (15') within bedrock or firm materials, unless otherwise specified in the geotechnical report.

3) Drainage terraces and subdrainage devices shall be constructed in compliance with the ordinances of the controlling governmental agency, or with the recommendations of the Geotechnical Engineer.

4) The Contractor will be required to obtain a minimum relative compaction of ninety percent (90%) out to the finish slope face of fill slopes, buttresses, and stabilization fills. This may be achieved by either over-building

the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment, or by any other procedure which produces the required compaction.

5) All fill slopes should be planted or protected from erosion by methods specified in the geotechnical report and by the governing agency.

6) Fill-over-cut slopes shall be properly keyed through topsoil, colluvium, or creep material into rock or firm materials. The transition zone shall be stripped of all soil prior to placing fill.

CUT SLOPES

1) The Engineering Geologist shall inspect all cut slopes excavated in rock, lithified, or formation material at vertical intervals not exceeding ten feet (10').

2) If any conditions not anticipated in the preliminary report such as perched water, seepage, lenticular or confined strata of a potentially adverse nature, unfavorably inclined bedding, joints, or fault planes, are encountered during grading, these conditions shall be analyzed by the Engineering Geologist and Geotechnical Engineer; and recommendations shall be made to treat these problems.

3) Cut slope that face in the same direction as the prevailing drainage shall be protected from slope wash by a non-erosive interceptor swale placed at the top of the slope.

4) Unless otherwise specified in the geological and geotechnical report, no cut slopes shall be excavated higher or steeper than that allowed by the ordinances of the controlling governmental agencies.

5) Drainage terraces shall be constructed in compliance with the ordinances of controlling governmental agencies, or with the recommendations of the Geotechnical Engineer or Engineering Geologist.

GRADING CONTROL

1) Inspection of the fill placement shall be provided by the Geotechnical Engineer during the progress of grading.

2) In general, density tests should be made at intervals not exceeding two feet (2') of fill height or every five hundred (500) cubic yards of fill placed. These criteria will vary depending on soil conditions and the size of the job. In any event, an adequate number of field density tests shall be made to verify that the required compaction is being achieved.

3) Density tests should also be made on the surface materials to receive fill as required by the Geotechnical Engineer.

4) All clean-out, processed ground to receive fill, key excavations, subdrains, and rock disposal must be inspected and approved by the Geotechnical Engineer prior to placing any fill. It shall be the Contractor's responsibility to notify the Geotechnical Engineer when such areas are ready for inspection.

CONSTRUCTION CONSIDERATIONS

1) Erosion control measures, when necessary, shall be provided by the Contractor during grading and prior to the completion and construction of permanent drainage controls.

2) Upon completion of grading and termination of inspections by the Geotechnical Engineer, no further filling or excavating, including that necessary for footings, foundations, large tree wells, retaining walls, or other features shall be performed without the approval of the Geotechnical Engineer or Engineering Geologist.

3) Care shall be taken by the contractor during final grading to preserve any berms, drainage terraces, interceptor swales, or other devices of a permanent nature on or adjacent to the property.