Appendix D
Geotechnical Report

Revised Geotechnical Diligence Exploration Report

Proposed Multifamily Residential Development
1400 Montefino Avenue (Parcel 14894)
Diamond Bar, County of Los Angeles, California

Prepared for:

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Project No. 036.0000030477

August 1, 2025
Revised October 9, 2025

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Subject: **Revised Geotechnical Diligence Exploration Report**
Proposed Multifamily Residential Development
1400 Montefino Avenue (Parcel 14894)
Diamond Bar, County of Los Angeles, California

Per our November 11, 2024 proposal, authorized on February 14, 2025, and supplemental work authorizations dated February 21, June 2, and June 26, 2025, Leighton and Associates, Inc. (A Verdantas Company) has completed diligence-level geotechnical explorations and infiltration testing for the subject project. Leighton reviewed the preliminary design second submittal entitled *Civil Design Package 1400 Montefino Avenue, City of Diamond Bar, County of Los Angeles, California*, prepared by Huitt Zollars, dated October 6, 2025. Based on our review, we understand this approximately 3.9-acre site, of which 2.7 acres are proposed for development with forty-nine (49) three-story row townhomes with private garages. Review of the *Preliminary Utility Plan 1400 Montefino Avenue,* prepared by Huitt Zollars indicates ancillary improvements to consist of utility infrastructure (water, sewer, storm drain, electrical), pavers and/or decorative concrete with landscaping. New retaining walls are being planned to accommodate changes to site grade. The site is currently developed with a 2-story concrete tilt-up commercial building surrounded by paved access and parking areas which include several existing retaining walls ranging in height from approximately 8 to 25 feet. Based on review of the *Technical Site Plan 1400 Montefino Avenue,* prepared by Huitt Zollars we understand that building setbacks from the existing retaining walls will be less than 15 feet in some areas (approximately 11.7 to 13.4 feet), and that alternate slope setback reductions will be requested at these locations.

The project is considered feasible from a geotechnical standpoint, and reduced alternate setbacks from the existing walls are considered geotechnically acceptable. This report presents the findings from our explorations along with our conclusions and preliminary recommendations for foundation design and earthwork construction.

We appreciate the opportunity to be of service to you on this project. If you have any questions or if we can be of further service, please contact us at **949.250.1421**; or specifically at the phone number or e-mail addresses listed below.

Respectfully submitted,

Leighton And Associates, Inc.
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1.0 Introduction

1.1 Site Description and Proposed Development

The project site is bordered by ascending manufactured slopes rising to residential development to the west and southwest, South Diamond Bar Boulevard to the east/southeast and by Montefino Avenue to the north. The central site location (latitude 33.99768°, longitude -117.81448°) and immediate vicinity are shown on Figure 1, *Site Location Map.* Review of Google Aerial Terrain imagery suggest site elevations (El.) range from approximately El. 901 ft. to El. 896ft ±.

The approximately 3.9-acre site is currently occupied with a two (2)-story tilt-up commercial building and ancillary parking lots with existing retaining walls ranging in height from approximately 8 to 25 feet retaining engineered fill placed in 1982.

Proposed Development: Leighton reviewed the preliminary design second submittal entitled *Civil Design Package, 1400 Montefino Avenue, City of Diamond Bar, County of Los Angeles, California*, prepared by Huitt Zollars, dated October 6, 2025. Based on our review, we understand this approximately 3.9-acre site, of which 2.7 acres are proposed for development with forty-nine (49) three-story row townhomes with private garages. Review of the *Preliminary Utility Plan 1400 Montefino Avenue,* prepared by Huitt Zollars indicates ancillary improvements to consist of utility infrastructure (water, sewer, storm drain, electrical), pavers and/or decorative concrete with landscaping. New retaining walls are being planned to accommodate changes to site grade.

Based on review of the *Technical Site Plan 1400 Montefino Avenue,* prepared by Huitt Zollars, we understand that in some areas of the site, the proposed structures fall within the 15-foot setback from existing walls (approximately 11.7 to 13.4 feet), and that alternate setbacks will be requested. This condition is addressed in Section 4.3 of this report.

1.2 Site Background

Based on review of historical aerial photographs and topographic maps (NETR, 2025), until at least 1966 the project site and much of the surrounding area was undeveloped and occupied by a series of rolling hills and valleys. By 1972, the existing residential development located to the southwest of the subject site was constructed, including the manufactured slopes that descend from the residences down to the site along the northwestern boundary. Original site grading occurred between 1981 and 1982.

Mass Grading 1981-1982: Mass grading for the subject site, noted as Tract 40972 Lot 9 and surrounding lots was performed by Kirst Construction between April 1981 through January 1982 under the observation of Medal, Aragon, Worswick and Associates, Inc (MAWA, 1982). Mass grading of the site and surrounding tracts indicate canyon cleanouts, subdrain placements, fills, stabilization and buttress key, buttress back cuts were inspected by engineering geologist performed in accordance with the recommendations of geotechnical reports prepared for the site. A stabilization fill key was constructed in Tract 40972 Lot 9 approximately 23 to 47 feet wide by 3 feet deep with subdrains mapped to outlet to the slope face, see Figure 2, *Exploration Location Map* for approximate location of the stabilization fill key. ***"During grading of the site any and all subdrain outlets will need to be rerouted to preserve their function".*** The eastern portion of Lot 9 was constructed with a 6-inch diameter subdrain to capture groundwater encountered in the

canyon along the east boundary of the site that outlets to the storm drain system along the lower property adjacent Diamond Bar Boulevard. Lot 9 is reported as constructed entirely of certified placed under the observation and testing of Medall Worswick and Associates Inc., ranging in thickness of 5 to 14 feet over alluvial material left in place below the fill. The as-built map of Lot 9 is included in Appendix G, *Medall Worswick and Associates Inc.*

Additional Field Investigation: In December of 1984, Western Laboratories performed a site exploration consisting of eight (8) test pit excavations (TP-1 thru TP-8) in order to evaluate subsurface site conditions to develop preliminary recommendations for a 25,000 square foot concrete tilt-up structure (*Western Laboratories, 1984*; Appendix F). Subsurface information and laboratory data from this investigation has been used to supplement the findings of our current exploration.

Existing Retaining Wall Design Parameters: In 1985, Medal, Worswick and Associates, Inc. provided a report for Revised Retaining Wall Design Parameters for the subject lot (Appendix G). The report identifies the slope to be retained (located on the north, northwest, and west sides of the subject lot) as a fill slope, with the northern and northwestern area constructed during mass grading for the subject lot. Recommendations included providing equivalent fluid pressures (EFP) for various wall types and heights for drained conditions. All walls were expected to require excavation into the existing stabilization fills and were recommended to include provisions to provide subdrains or to ensure existing subdrains maintained their function. Allowable bearing capacity of 1,500 pcf at a minimum embedment of 18-inches below grade was provided in the report.

1.3 Purpose and Scope

The purpose of our geotechnical exploration was to evaluate subsurface conditions relative to the proposed improvements and provide preliminary geotechnical recommendations for design and construction. The following scope of work was performed:

Pre-Field Exploration Activities – Reconnaissance of the site was performed by a certified engineering geologist to mark the proposed exploration locations during each phase of field work. Underground Service Alert (USA) was notified to locate and mark existing underground utilities prior to our subsurface explorations. Underground utility plans were not provided for our review.

Field Exploration:

- **Cone Penetrometer Test (CPT) Soundings:** On March 1, 2025 we advanced three (3) cone penetrometer test (CPT-1, -2, -3) soundings to target depths ranging from 37 to 42 feet bgs where they met refusal interpreted to be on bedrock. Shear wave velocity measurements were performed in CPT-1 to develop seismic design parameters and determine seismic site class. In addition, pore pressure dissipation tests were performed in CPT-1 and CPT-3 to evaluate the current groundwater conditions across the site near the transition zone from bedrock to canyon alluvium. Upon completion, each CPT was backfilled with bentonite, and the surface patched to match existing conditions.

- **Soil Borings and Percolation Testing** – Drilling, logging, and sampling of three (3) hollow-stem auger borings (designated LB-1, LP-1 and LP-2) was conducted on March 11, 2025, additional borings LB-2 through LB-4 were drilled onsite on July 3, 2025. Borings were drilled to depths ranging from approximately 11 to 41 feet below ground surface (bgs). Borings LP-1 and LP-2 were converted into percolation test wells for infiltration testing.

  During drilling of the hollow-stem auger borings, bulk and drive samples were obtained from the borings for geotechnical laboratory testing. Driven Standard Penetration Tests (SPTs) were performed within the hollow stem auger borings in accordance with ASTM Test Method D 1586. Samples were collected at 2½ and 5-foot intervals throughout the depth of exploration. In both test methods, the sampler is driven below the bottom of the borehole by a 140-pound weight (hammer) free-falling 30 inches. The drilling rig was equipped with an automatic hammer to provide greater consistency in the drop height and striking frequency. The number of blows to drive the sampler the final 12-inches of the 18-inch drive interval is termed the "blowcount" or SPT N-value. N-values provide a measure of relative density in granular (non-cohesive) soils and comparative consistency in cohesive soils. Number of blows per 6 inches of penetration was recorded on the boring logs included in Appendix A, *Exploration Logs*.

  Each boring was logged in the field by a geologist from our firm under supervision of a certified engineering geologist. Each soil sample collected was reviewed and described in accordance with the Unified Soil Classification System (USCS). The samples were sealed and packaged for transportation to our laboratory for testing. After completion of drilling, the borings were backfilled to the ground surface with soil cuttings.

- **Hand Auger Borings** – In order to obtain in place samples of engineered fill (MWA, 1982) in the constructed slopes four (4) Hand Auger borings (HA-1 thru HA-4) were advanced using a 4-inch diameter auger to depths of 2.5 to 5 feet bgs. Bulk soil samples were collected from the cuttings. Upon completion the hand auger borings were back filled with bentonite chips and soil cuttings.

  Approximate soil boring, hand auger and CPT locations are shown on Figure 2, *Exploration Location Map*. Boring and CPT logs are presented in Appendix A, *Exploration Logs*.

- **Percolation Testing** – Borings LP-1 and LP-2 (see Figure 2) were converted to temporary percolation test wells upon completion of drilling and sampling. Test wells LP-1 and LP-2 were constructed with 2-inch slotted (0.020-inch slots) PVC well casing screened between depths of 7- to 12 and 10- to 20 feet bgs, respectively. The annulus of the screened well zone was backfilled with No. 3 Monterey sand filter pack to approximately 2 feet above the screen zone. The full results of the percolation testing are presented in Appendix B, *Percolation Test Data*. Upon completion of the percolation testing, the well casing was removed, and the boring was backfilled with soil cuttings to existing ground surface.

Laboratory Testing – Selected relatively undisturbed and bulk soil samples obtained from our borings were tested at our in-house Irvine geotechnical laboratory. This laboratory testing program was designed to evaluate physical geotechnical characteristics of site soils including corrosion potential. Geotechnical test results are presented in Appendix C, *Geotechnical Laboratory Testing*.

Tests performed during the current investigation include:

- Particle Size Analysis (ASTM D 7928 & 6913);
- Direct Shear (ASTM D 3080);
- Modified Proctor Compaction (ASTM D 1557);
- Percent Passing No. 200 Sieve
- Corrosivity Suite – pH, Sulfate, Chloride, and Resistivity (California Test Methods 417, 422, and 532/643).

Engineering Analysis – Data obtained from historic and current explorations and geotechnical laboratory testing was evaluated and analyzed to develop preliminary geotechnical conclusions and recommendations for the proposed development described in Section 1.1 of this report.

Report Preparation – This report presents our findings, conclusions, and preliminary recommendations for the proposed development.

2.0 Geotechnical Findings

2.1 Geologic Setting

The project is located within the northeastern Puente Hills. The Puente Hills are a structural block, north of the Whittier fault and southwest of the Chino fault, that uplifted and emerged during the Pleistocene. This uplift is a result of north-south compression that has been accommodated by the Puente Hills blind thrust fault (Grant and Gath, 2007). The relief of the Puente Hills is a result of a history of uplift and erosion. During Quaternary uplift, erosion rates of the streams in the Puente Hills increased, and gullies were incised in existing broad canyons. These gullies decrease in depth upstream, and, in general, streams that flow towards the southwest are longer than those flowing to the north and northeast. This pattern of gully depth and the asymmetrical pattern of the older broad canyons indicates that the Puente Hills block tilted towards the northeast during Quaternary uplift (Durham and Yerkes, 1964).

Published regional geologic mapping (Morton and Miller, 2004) indicates that the project area is underlain by the Miocene Soquel Member of Puente Formation bedrock consisting of medium to coarse grained sandstone interbedded with pebbly sandstone. Regional geology relative to the location of the site is depicted in Figure 4, *Regional Geology Map,* illustrating the site in relation to the predominate geologic material (Puente Formation bedrock) of the area.

2.1.1 Geologic Structure

The tectonic regime of Miocene extensional system in southern California and the site area was very different from the compressional regime active today. Major changes relate to a transition of the North American tectonic plate boundary from subduction to a translational style of motion. This change resulted in formation of the San Andreas Fault system. Since middle- to late-Miocene time over the past 16 million years, the site area was subjected to first extensional and then compressional forces (Bjorklund, 2003). The north-south oriented extensional forces were active between 14 and 8 million years ago producing large depositional grabens and local volcanism. Miocene and older rocks were uplifted along the Whittier Fault by as much as 4.5 kilometers since cessation of extension at about 7 to 8 million years ago and the onset of north south crustal compression associated with the San Andreas transform fault system, which, produced about 50 kilometers of shortening across the Los Angeles Basin (Bjorkland, 2003).

In the mid to late Miocene under the extensional regime, the Proto-Whittier Fault began development as a normal fault with a right lateral component. Over the past 8 million years during the Plio-Pleistocene in this area of the Los Angeles Basin, the stress regime changed and the overall motion changed to that of convergence allowing the right lateral strike slip faults of the Peninsular Ranges (San Andreas, Newport Inglewood, San Jacinto Whittier-Elsinore) and the east-west trending left lateral oblique slip faults of the Western Transverse ranges (Santa Monica, Hollywood, Raymond and Sierra Madre) and related faults to mature.

Whittier Fault: The Whittier fault is the northwestward extension of the Elsinore fault-Glen Ivy Segment. The Whittier fault is considered a strike slip fault along most of its length with a component of vertical thrust, is approximately 40 km (25 miles) long, and extends from the Whittier Narrows section of the San Gabriel River southeastward to the Santa Ana River where it is concealed beneath the alluvium. The Whittier fault is considered to have a slip rate of

approximately 2 to 3 mm/year. The estimated maximum earthquake to occur along the Whittier fault segment is 6.8 Mw (Petersen et al., 1996)

2.2 Subsurface Conditions

Presented below are brief descriptions of the geologic units encountered in the exploratory borings completed at the site by Leighton. Detailed descriptions of the geologic units encountered are presented on the boring logs in Appendix A. Geotechnical conditions described on the logs represent the conditions at the actual exploratory excavation locations. Other variations may occur beyond and/or between the excavations. Lines of demarcation between the geologic units and the various earth materials on the logs represent approximated boundaries, and (unless otherwise noted) actual transitions may be gradual. The locations of the subsurface explorations are shown on Figure 2 and subsurface profiles based on data obtained and interpreted from the subsurface data collected are shown on Figures 3A through 3E, *Geotechnical Cross Sections.*

Artificial Fill, Certified (Afc): The existing artificial fill soils encountered in our exploratory borings were reportedly placed during grading of the site under the supervision of Medal, Aragon, Worswick and Associates, Inc. (MAWA, 1982a and b). The artificial fill materials encountered in our borings range in thickness from approximately 5.5 to 15.5 feet bgs at the explored locations. These soils are characterized as olive brown, yellowish brown, dark brown, and gray, moist, medium dense to dense sand, silty sand, and very stiff to hard sandy clay. The thickness of fill material may be locally thinner or thicker at locations not explored in this study.

Quaternary Age Young Alluvial Fan Deposits (Qyf): The alluvial deposits encountered beneath the fill materials to a depth of approximately 35 feet consisted of alternating beds of dark brown to reddish-brown, moist to wet, medium stiff to very stiff sandy clay and very loose to medium dense clayey sand.

Puente Formation – Soquel Member (Tps): The bedrock unit encountered beneath the alluvial soils consisted of interbedded yellowish brown sandstone and olive gray siltstone and claystone, which were heavily to moderately weathered and friable. The stratigraphy of the subsurface soils encountered in each soil boring is presented on the boring logs (Appendix A).

2.2.1 Expansive Soil Characteristics

Expansive soils contain significant amounts of clay particles that swell considerably when wetted and which shrink when dried. Foundations constructed on these soils are subject to uplifting forces caused by the swelling. Without proper mitigation measures, heaving and cracking of both building foundations and slabs-on-grade could result.

Six (6) samples were tested for expansion potential during site investigation by Western Laboratories (*Western Laboratories*, 1985). Expansion Index ranges from 29 to 56, or low to medium expansion potential. Test results are presented in Appendix F, *Western Laboratories*.

Based on our exploration, the near-surface soils consisted mainly of granular materials (i.e. sand and silty sand with varying proportions of clay). For purposes of foundation design, site soils should be considered to have a Medium Expansion potential. Additional testing should be performed upon completion of site grading and excavation to confirm the expansion potential presented in this report.

2.2.2 Corrosion

In general, soil resistivity, which is a measure of how easily electrical current flows through soils, is the most influential factor for ferrous corrosivity. Based on findings of studies presented in the American Society for Testing and Materials (ASTM) STP 1013 titled "Effects of Soil Characteristics on Corrosion" (February, 1989), an approximate relationship between soil resistivity and soil corrosiveness was developed as shown in the table below.

Table 1 - Soil Corrosivity as a Function of Resistivity

Soil Resistivity (ohm-cm)	Classification of Soil Corrosiveness
0 to 900	Very severe corrosion
900 to 2,300	Severely corrosive
2,300 to 5,000	Moderately corrosive
5,000 to 10,000	Mildly corrosive
10,000 to >100,000	Very mildly corrosive

Sulfate Exposure: Sulfate ions in the soil can lower the soil resistivity and can be highly aggressive to Portland cement concrete by combining chemically with certain constituents of the concrete, principally tricalcium aluminate. This reaction is accompanied by expansion and eventual disruption of the concrete matrix. A potentially high sulfate content could also cause corrosion of reinforcing steel in concrete. Section 1904A of the 2022 California Building Code (CBC) defers to the American Concrete Institute's (ACI's) ACI 318-14 for concrete durability requirements.

Table 19.3.1.1 of ACI 318-14 lists "*Exposure categories and classes*," including sulfate exposure as follows:

Table 2 – Sulfate Concentration and Exposure

Water-Soluble Sulfate (SO_4) in soil (percentage by dry weight)	ACI 318-14 Sulfate Class
0.00 - 0.10	S0 (negligible)
0.10 - 0.20	S1 (moderate)
0.20 - 2.00	S2 (severe)
>2.00	S3 (very severe)

One composite, near-surface (0-5 feet) bulk soil sample was tested to evaluate corrosion potential. The chemical analysis test results for the onsite soil from our geotechnical explorations are included in Appendix C, *Laboratory Test Results* of this report and are summarized in section 4.2.5 of this report.

2.2.3 Soil Compressibility

Two (2) samples collected during site investigation by Western Laboratories (Western Laboratories, 1985) were subjected to consolidation testing to evaluate the compressibility of the materials under assumed loads representative of anticipated structural bearing stresses for the now-constructed commercial building at the site. The results of testing indicate the tested soil exhibit low to moderate compressibility potential. Test results are presented in Appendix F.

2.2.4 Shear Strength

Shear strength parameters of selected earth samples were obtained by direct shear tests in accordance with ASTM D3080. The laboratory test results are presented in Appendix C. In addition, six (6) samples collected during site investigation by Western Laboratories (Western Laboratories, 1985) were remolded to approximate field density and subjected to direct shear testing. Test results are presented in Appendix F, *Western Laboratories Soils Investigation Report*.

Based on the current plan concept and the findings from our study, the shear strength is adequate to provide structural support provided grading and design recommendations presented herein and in supplemental reports are implemented.

Based on subsurface exploration and geotechnical laboratory testing performed on selected soil samples collected from the site, or performed by others, a summary of geotechnical properties of the site soils is shown below.

Table 3 – Summary of Geotechnical Properties

Parameters	General Soil Properties
In-situ Moisture	Moist to wet
In-situ Density	Very loose very dense, medium stiff to hard
Swell/Expansion Potential	Swell/expansion potential is considered **low to moderate**.
Collapse Potential	Not susceptible to collapse when wetted
Strength	Adequate to provide structural support provided grading recommendations presented herein and in supplemental reports are implemented.
Corrosivity	Negligible sulfate attack of concrete and severely corrosive to ferrous metals.

2.2.5 Excavation Characteristics

Based on our subsurface explorations performed at the site and our experience from grading jobs in the vicinity of the site, we anticipate the onsite artificial fill and native earth materials can generally be excavated using conventional excavation equipment in good operating condition.

2.3 Groundwater Conditions

Groundwater was encountered during our subsurface investigation at depths ranging from 22.0 to 31.7 feet bgs (Appendix A). Based on review of the *Seismic Hazard Zone Report for the Yorba Linda Quadrangle* (CGS, 2005), the historically shallowest groundwater depth at the site is reported as being between approximately 0 and 30 feet below existing ground surface (bgs). According to CGS, the 0 to 30 foot contour denotes areas with present or anticipated shallow groundwater, which is defined as shallower than 40 feet bgs. Based on the presence of subdrains installed at the site during mass grading, and the significant drop (approximately 10 feet) in groundwater elevation at the southern end of the site, it is our opinion that subsurface water is being effectively drained away from the site by natural and engineered means, and that it is unlikely that groundwater will reach shallower than 20 feet below ground surface in the future. Accordingly, we have assumed a design groundwater depth of 20 feet in our analysis.

Based on these findings, groundwater is not expected to pose a constraint during or after construction. Fluctuations of the groundwater level, localized zones of perched water, and an increase in soil moisture, should be anticipated during and following the rainy seasons or periods of locally intense rainfall or storm water runoff, or from stormwater infiltration.

2.4 Infiltration

Percolation testing was performed within temporary percolation wells LP-1 and LP-2 to evaluate the infiltration characteristics of subsurface soils within a screened interval of 7 to 12 feet bgs and 10 to 20 feet bgs, respectively. The percolation tests were conducted in general accordance with County of Los Angeles Department of Public Works guidelines (LADPW, 2021). The full results of percolation testing are presented in Appendix B. The test locations are shown on Figure 2.

A boring percolation test is useful for field measurements of the infiltration rate of soils, and is suited for testing when the design depth of the infiltration device is deeper than current existing grades, especially in areas where it is difficult to dig test pits, or where the depths of these test pits would be considerably deep.

Percolation tests for wells LP-1 and LP-2 were performed using a falling-head method, which records the average drop in water height from the top of the screened portion of the well over a set time interval during the testing period. The infiltration rate was calculated by dividing the rate of discharge by the infiltration surface area, or flow area. The volume of discharge was calculated by adding the total volume of water that dropped within the PVC pipe and within the annulus, and incorporating a porosity reduction factor to account for the porosity of the annulus material. The flow area was based on the average water height within the test well.

Per County of Los Angeles Guidelines (LADPW, 2021), the design infiltration rate incorporates a reduction factor for the test procedure, site variability, number of tests, thoroughness of subsurface investigation and long-term siltation, plugging and maintenance, with a minimum reduction factor of 3. As such, we have applied a minimum reduction factor to the small-scale infiltration rates measured at the test wells for use in design of the system(s) according to County of Los Angeles Guidelines (LADPW, 2021).

Detailed results of the field-testing data and measured infiltration rate for the test wells are presented in Appendix B. The test results are summarized below:

Table 4 – Measured (Unfactored) and Design Infiltration Rate

Test Well Designation	Approximate Depth of Test Zone (feet bgs)	Measured Infiltration Rate (inch per hour)	Design Infiltration Rate (inch per hour)
LP-1	7 to 12	0.02	0.01*
LP-2	10 to 20	0.00	0.00*

* Includes Reduction Factor of 3

The results of the percolation tests in wells LP-1 and LP-2 indicate unfavorable infiltration rates at the specific locations and depths tested. Based on the requirements of LADPW (2021), **stormwater infiltration is not considered feasible**.

3.0 Geologic/Seismic Hazards

Geologic and seismic hazards include surface fault rupture, seismic shaking, liquefaction, seismically-induced settlement, lateral spreading, seismically-induced landslides, flooding, seismically-induced flooding, seiches and tsunamis. The following sections discuss these hazards and their potential impact at the project site.

3.1 Surface Fault Rupture

Our review of available literature (geologic maps, aerial photos) indicates that no known active faults have been mapped across the site, and the site is **not** located within a currently established *Alquist-Priolo Earthquake Fault Zone* (CGS, 2018). Therefore, the potential for surface fault rupture at the site is expected to be low and a surface fault rupture hazard evaluation is not mandated for this site.

The location of the closest active faults to the site was evaluated using the United States Geological Survey (USGS) Earthquake Hazards Program National Seismic Hazard Maps (USGS, 2008). The closest active faults to the site with the potential for surface fault rupture are the San Jose Fault, Chino-Central Avenue Fault, and Whittier Fault, located approximately 4.41, 4.55, and 5.18 miles from the site, respectively. The San Andreas fault, which is the largest active fault in California, is approximately 40 miles northeast of the site. Major regional faults with surface expression in proximity to the site are shown on Figure 5, *Regional Fault and Historic Seismicity Map*.

3.2 Strong Ground Shaking

The principal seismic hazard to the site is ground shaking resulting from an earthquake occurring along any of several major active and potentially active faults in southern California (Figure 5). The intensity of ground shaking at a given location depends primarily upon the earthquake magnitude, the distance from the source, and the site response characteristics.

Accordingly, design of the project should be performed in accordance with all applicable current codes and standards utilizing the appropriate seismic design parameters to reduce seismic risk as defined by California Geological Survey (CGS) Chapter 2 of Special Publication 117A (CGS, 2008). The 2022 edition of the California Building Code (CBC) is the current edition of the code. Through compliance with these regulatory requirements and the utilization of appropriate seismic design parameters selected by the design professionals, potential effects relating to seismic shaking can be reduced.

The following code-based seismic parameters should be considered for design under the 2022 CBC:

Table 5 – 2022 CBC Based Ground Motion Parameters (Mapped Values)

Categorization Coefficient	Code-Based
Site Latitude	33.99768°
Site Longitude	-117.81448°
Site Class	C
Mapped Spectral Response Acceleration at Short Period (0.2 sec), S_S	1.845
Mapped Spectral Response Acceleration at Long Period (1 sec), S_1	0.64
Short Period (0.2 sec) Site Coefficient, F_a	1.2
Long Period (1 sec) Site Coefficient, F_v	1.4[1]
Adjusted Spectral Response Acceleration at Short Period (0.2 sec), S_{MS}	2.214
Adjusted Spectral Response Acceleration at Long Period (1 sec), S_{M1}	0.896[1]
Design Spectral Response Acceleration at Short Period (0.2 sec), S_{DS}	1.476
Design Spectral Response Acceleration at Long Period (1 sec), S_{D1}	0.598[1]
Site-adjusted geometric mean Peak Ground Acceleration, PGA_M	0.949

[1] *See Section 11.4.8 of ASCE 7-16. A site-specific ground motion hazard analysis in accordance with Section 21.2 of ASCE 7-16 is required for this site. Per Supplement 3 to ASCE 7-16, a site-specific ground motion hazard analysis is not required where the value of the parameters S_{M1} and S_{D1} in the table are increased by 50%.*

3.3 Liquefaction Potential

The term liquefaction is generally referenced to loss of strength and stiffness in soils due to build-up of pore water pressure when subject to cyclic or monotonic loading. Both sandy and clayey soils are susceptible to loss of strength and stiffness. Because of the difference in strength characteristic and methods for evaluating strength loss potential for granular and clayey soils, the term liquefaction is used for granular soils while cyclic softening is used for fine-grained soils (i.e., clays and plastic silts).

In general, adverse effects of liquefaction or cyclic softening include excessive ground settlement, loss of bearing support for structural foundations, and seismically-induced lateral ground deformations such as lateral spreading. Depending upon the relative thickness of the liquefied strata with respect to overlying non-liquefiable soils, other potentially adverse effects such as ground oscillation and ground fissuring may occur.

As shown on the *Earthquake Zones of Required Investigation* map for the Yorba Linda Quadrangle (CGS, 2018), the project site **is** located within an area that has been identified by the State of California as being potentially susceptible to liquefaction (Figure 6, *Seismic Hazard Map*). We have performed liquefaction analysis of the soil profiles from the borings and CPTs. The liquefaction evaluation was conducted using a peak horizontal ground acceleration of 0.95g, a Moment Magnitude (Mw) of 6.1, and a design groundwater of 20 feet bgs. Our analysis, presented in Appendix D, *Liquefaction Analysis*, identifies layers of potentially liquefiable soils in CPT-1 mainly at depths between approximately 20 to 26 feet below the existing grade. No significant layers of potentially liquefiable soils were identified in CPT-2 and CPT-3. Based on our evaluation, the liquefaction potential at the site is considered low.

3.4 Seismically-Induced Settlement

Seismically-induced settlement consists of dynamic settlement of unsaturated soil (above groundwater) and liquefaction-induced settlement (below groundwater). These settlements occur primarily within low density sandy soil due to reduction in volume during and shortly after an earthquake event.

The settlements of these strata were estimated to result in a cumulative settlement on the order of 1¼ inches. The seismically-induced differential settlement was estimated to be on the order of ¾ inch over 30 feet.

3.5 Lateral Spreading

With groundwater at a depth of 22 to 32 feet below grade and relatively medium dense to dense sands below the site the potential for liquefaction and lateral spreading to affect the site is considered low.

3.6 Earthquake-Induced Landsliding

As shown on Figure 6, the sloped areas of the site **are** mapped within a seismically-induced landslide hazard zone identified by the State of California (CGS, 2018). However, due to the slopes being constructed of fill materials placed under engineering controls, we consider the potential for seismically-induced landslide hazard at the site to be low.

3.7 Flooding

As shown on Figure 7, *Flood Hazard Zone Map*, and the site is located outside of areas recognized by the Federal Emergency Management Agency (FEMA) to within 0.2% annual flood potential (FEMA, 2008). Earthquake-induced flooding can be caused by failure of dams or other water-retaining structures as a result of an earthquake. As shown on Figure 8, the site is located outside of a dam inundation area due to the absence of such structures near the site, therefore the potential for earthquake-induced flooding at the site is considered low.

4.0 Geotechnical Design Recommendations

Based on this study, we conclude that the proposed development concept as described in Section 1.1 of this report is considered feasible from a geotechnical standpoint, provided that the recommendations presented in this report are properly incorporated in design and construction.

The following preliminary recommendations have been developed based on the exhibited engineering properties of the onsite soils and their anticipated behavior during and after construction. Preliminary recommendations are specifically provided for design of foundations, seismic design considerations, floor slabs, retaining structures, paving, and grading. The proposed structures may be supported on spread-type shallow footing foundation systems established on engineered fill. Leighton should review the grading plan, foundation plans, and specifications when they are available to verify that the recommendations presented in this report have been properly interpreted and incorporated.

4.1 Site Grading

Earthwork guide specifications are presented in Appendix H, *Earthwork and Grading Guide Specifications*. Earthwork is expected to consist of overexcavation to remove undocumented fill materials and near-surface, compressible native soils, foundation excavation, and other site improvement work. Recommendations for site earthwork are provided in the following sections.

4.1.1 Site Preparation

Vegetation, debris, and other deleterious materials should be removed and disposed of offsite prior to the commencement of grading operations. Existing underground improvements, including utility lines, should be identified prior to the start of grading and abandoned or relocated as necessary. Trenches resulting from removal of existing improvements should be excavated to competent materials and properly backfilled under the observation and testing of the geotechnical engineer.

4.1.2 Overexcavation and Recompaction

The foundation for the proposed structures should be underlain by compacted fill to provide a uniform support and reduce potential for differential settlement. The compacted fill should extend a minimum 3 feet below bottom of the foundation and a minimum 5 feet beyond outside edges of the foundation, where feasible. In general, to accommodate the low density near surface soil and recondition shallow fill in support of foundation design, you may consider a five-foot overexcavation and recompaction to recondition the existing fill deposits onsite. Pavement areas, driveway, and concrete flatwork should be underlain by a minimum 24 inches of newly reconditioned fill. Local conditions may be encountered that could require additional overexcavation beyond the above noted minimum to obtain an acceptable subgrade. The actual depths and lateral extents of remedial grading will be determined by Leighton, based on subsurface conditions encountered during grading.

4.1.3 Excavation Bottom Preparation

Resulting removal excavation bottom-surfaces should be observed by Leighton prior to placement of engineered fill materials. After the over-excavations are completed, and prior to engineered fill placement, the exposed surfaces should be scarified to a minimum depth of 6 inches, moisture-conditioned to 2 to 4 percent above optimum moisture content, and recompacted to a minimum 95 percent relative compaction as determined by ASTM D1557 Test Method.

4.1.4 Fill Materials

On-site soil that is free of construction debris, organics, or rock larger than 4 inches in largest dimension is suitable to be used as fill for support of structures. Any imported fill soil should be approved by the geotechnical engineer prior to import or use onsite. Import soils should be uncontaminated from an environmental perspective, granular in nature, free of organic material (loss on ignition less than 2 percent), have a very low expansion potential (with an EI less than 21) and have a low corrosion potential with respect to the proposed improvements.

4.1.5 Fill Placement and Compaction

Onsite soils free of organics, debris and oversized material (greater-than 6 inches in largest dimension) are suitable for use as engineered fill. However, any soil to be placed as fill, whether onsite or imported material, should be first viewed by Leighton and then tested if and as necessary, prior to approval for use as engineered fill. All engineered fill must be free of hazardous materials.

All fill soil should be placed in thin, loose lifts, moisture-conditioned, as necessary, to within 2 percent of optimum moisture content, and compacted to a minimum 90% relative compaction as determined by ASTM D 1557 standard test method (modified Proctor compaction curve) within building footprints. Aggregate base for pavement sections should be compacted to a minimum of 95% relative compaction. At least the upper 12 inches of the exposed soils in roadways and access drives, parking and (concrete –paver) flatwork areas, should be compacted to at least 95 percent relative compaction based on ASTM Test Method D 1557.

4.1.6 Reuse of Concrete and Asphalt in Fill

Pulverized demolition concrete free of rebar and other materials and demolished asphalt pavement can be pulverized to particles no-larger-than (≤) 3-inches and mixed with site soils for use in compacted fill. Blended pulverized concrete and asphalt should be mixed with at least 25% soils by weight. Such materials must be free of and segregated from any hazardous materials and/or organic material of any kind.

4.2 Foundation Design

Concrete slabs-on-grade should be designed by the structural engineer in accordance with applicable California Building Code (CBC) requirements for soils with a low expansion potential. The design expansion potential and other recommendations should be re-evaluated after grading operations or other additional exploratory work is performed. More stringent requirements may be required by the structural engineer and/or architect; however, slabs-on-grade should have the following minimum recommended components:

4.2.1 Bearing and Lateral Resistance

Footings or post-tensioned concrete slabs with thickened edges established on engineered fill should have a minimum embedment depth of 18 inches below exterior grade with a minimum width of 24 inches. A net allowable soil bearing capacity of 2,000 pounds per square foot (psf) may be used for design of the footings based on the minimum width and embedment depth. The allowable bearing value may be increased by 250 psf per foot increase in depth or width to a maximum allowable bearing pressure of 3,000 psf.

A one-third increase in the bearing value for short duration loading, such as wind or seismic forces may be used.

Soil resistance available to withstand lateral loads on a shallow foundation is a function of the frictional resistance along the base of the footing and the passive resistance that may develop as the face of the structure tends to move into the soil. The frictional resistance between the base of the foundation and the subgrade soil may be computed using a coefficient of friction of 0.30. The passive resistance may be computed using an equivalent fluid pressure of 200 pounds-per-cubic-foot (pcf), assuming there is constant contact between the footing and undisturbed soil.

The passive resistance can be increased by one-third when considering short-duration wind or seismic loads. The friction resistance and the passive resistance of the soils can be combined without reduction in determining the total lateral resistance.

4.2.2 Estimated Settlement

Differential settlement due to static loading is generally estimated at one inch over a horizontal distance of 40 feet.

Once plans are developed, we should review total dead and sustained live loads for the proposed structures, to evaluate if differential settlements between dissimilarly loaded columns will be tolerable. If excessive differential settlement is anticipated, then methods to lessen may need to be implemented. Such methods include: reduced bearing pressures; deeper footing embedment; modified overexcavation schemes; or possibly other methods.

4.2.3 Post-Tensioned Slab Design

It is this firm’s understanding that post-tension slabs will be utilized. The following geotechnical parameters are recommended for design of post-tension slab:

Table 6 – Post-Tensioned Slab Design Parameters

Summary of Design Parameters	
Design Expansion Potential	Low
Approximated Depth to Constant Suction, feet	9
Thornthwaite Moisture Index (Im):	-20
Approximate Soil Suction, pF:	3.9
Average Edge Moisture Variation Distance, em:	
Center Lift	9.0 feet
Edge Lift	4.7 feet
Anticipated Swell, ym:	
Center Lift	0.30 inch
Edge Lift	0.50 inch

The above recommended slab design parameters are based on Post-Tensioning Institute's Standard Requirement for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive and Stable Soils, (PTI DC10.5-19).

A subgrade reaction of 120 pounds per cubic inch (pci) may be used for designing the slab.

4.2.4 Footings and Floor Slabs

Exterior continuous footings for three-story structures should be founded at a minimum depth of 18 inches below the lowest adjacent finished ground surface. Interior footings may be founded at a minimum depth of 12 inches below the tops of the adjacent finish floor slabs.

In accordance with Table 1809.7 of 2022 CBC for light-frame construction, all continuous footings should have minimum widths of 15 inches for three-story construction. We recommend all continuous footings should be reinforced with a minimum of two No. 4 bars, one top and one bottom. Alternatively, post-tensioned tendons may be used in the perimeter continuous footings in lieu of the reinforcement bars.

A minimum 12-inch-wide grade beam founded at the same depth as adjacent footings should be provided across the garage entrances or similar openings (such as large doors or bay windows). The grade beam should be reinforced in a similar manner as provided above.

Exterior isolated pad footings intended for support of roof overhangs such as decks, patio covers, and similar construction should be a minimum of 24 inches square and founded at a minimum depth of 24 inches below the lowest adjacent final grade. The pad footings should be reinforced with No. 4 bars spaced a maximum of 18 inches on centers, both ways, placed near the bottoms of the footings. Exterior isolated pad footings may need to be connected to adjacent pad and/or continuous footings via tie beams at the discretion of the project structural engineer.

The thickness of the floor slabs should be determined by the project structural engineer with consideration given to the expansion potential of the on-site soils; however; we recommend that a minimum slab thickness of 4 inches be considered.

Slab-on-grade subgrade soil should be moisture conditioned to optimum moisture content or slightly above, to a minimum depth of 12 inches within building footprints and compacted to 90% of the modified proctor (ASTM D 1557) laboratory maximum density prior to placing either a moisture barrier, steel and/or concrete.

A moisture retarder membrane barrier consisting of at least 15-mil-thick Stego-Wrap (see: http://www.stegoindustries.com/products/stego_wrap_vapor_barrier.php), or equivalent, should then be placed below slabs where moisture-sensitive floor coverings or equipment will be placed. The moisture vapor retarder should meet the minimum requirements of ASTM E96 and ASTM E1745. All laps within the membrane should be sealed. If a smooth surface cannot be achieved by grading, consideration should be given to lowering the pad finished grade an additional inch and then placing a 1-inch-thick leveling course of sand across the pad surface prior to the placement of the membrane.

Minor cracking of concrete after curing due to expansion, drying and shrinkage is normal and will occur. However, cracking is often aggravated by a high water-to-cement ratio, high concrete temperature at the time of placement, small nominal aggregate size, and rapid moisture loss due to hot, dry, and/or windy weather conditions during placement and curing. Cracking due to temperature and moisture fluctuations can also be expected. The use of low-slump concrete or low water/cement ratios can reduce the potential for shrinkage.

4.2.5 Corrosion

To evaluate corrosion potential of near surface soils sampled from this site, we tested soil samples for soluble sulfate content, soluble chloride content, pH and resistivity. Results of these tests are summarized below:

Table 7 – Results of Corrosivity Testing

Boring Number	Sample Depth (feet)	Sulfate (mg/kg)	Chloride (mg/kg)	pH	Minimum Resistivity (ohm-cm)
LP-1	0-5	136	240	7.25	1,850

Note: mg/kg = milligrams per kilogram, or parts-per-million (ppm)

These results are discussed as follows:

- **Sulfate Exposure:** Based on test results and Table 19.3.2.1 of ACI 318-14, in our opinion, sulfate exposure should be considered “negligible” with an Exposure Class S0.
- **Ferrous Corrosivity:** As shown above, minimum soil resistivity of 1,850 ohm-centimeters was measured in our laboratory test. Based on the resistivity correlation per ASTM STP 1013 presented in Table 1 Section 2.2.2, it appears for site soils that corrosion potential to buried steel may be characterized as “severely corrosive” at the site.

As standard design concepts, ferrous pipe buried in moist to wet site earth materials should be avoided by using high-density polyethylene (HDPE) or other non-ferrous pipe when possible. Or ferrous pipe can be protected by polyethylene bags, tape or coatings, di-electric fittings or other means to separate the pipe from on-site earth materials. *Additional testing of subgrade materials recommended upon completion of grading to confirm these reported values once rough grade mixing of onsite fill soils is complete.*

4.3 Slope Stability Analysis

The stability of the planned retaining walls and the temporary cut slopes required for construction was evaluated. The slope stability analysis was conducted using computer program SLIDE v9.030 (Rocscience, 2023). SLIDE performs stability calculations using two-dimensional (2D) limit equilibrium techniques based on vertical slice equilibrium. Models programmed into SLIDE include the subsurface profiles presented on Cross Sections (Figures 3A through 3E) shown on Figure 2, *Exploration Location Map*. The subsurface profiles were developed based on our review of as-built rough grading documentation (MAWA, 1982a and b), our experience at the site, and our evaluation of prior laboratory testing performed by others (Appendix F). Based upon review of the current concept in conjunction with the site topography and proposed backcut to construct retaining walls, both certified artificial fill (MAWA, 1986) and bedrock (Tps, Miocene Sandstone and Siltstone) will be exposed in temporary cuts.

Shear strength parameters used in the analyses, presented in Table 8, were developed from direct shear test results, local geologic data, and existing geotechnical data. The following table summarizes the strength parameters used in the stability analysis.

Table 8 - Shear Strength Parameters

Material Description	Total Unit weight (pcf)	cohesion (psf)	friction angle (degrees)
Artificial Fill (Afc)	125	250	31
Young Alluvial Fan Deposits	120	200	32
Bedrock (Tps) - Cross Bedding	120	200	34
Bedrock (Tps) - Along Bedding	120	200	24

Deep-seated stability analyses were conducted to calculate the factor of safety (FOS) for static and pseudo-static (“seismic”) conditions. Analysis criteria were a minimum factor of safety of 1.5 for deep-seated static conditions and 1.0 for deep-seated seismic conditions. Analysis criteria for temporary excavations included a minimum factor of safety of 1.25 under static condition. Note that we used the peak direct shear strength values of 29 degrees and 500 psf for the artificial fill (Afc) for analysis of the temporary excavation condition.

A seismic coefficient value (kh) of 0.26 was determined following the California Geologic Survey (CGS) Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CGS, 2008). A factor of safety of unity for seismic condition is considered acceptable following these guidelines, as the “kh” seismic coefficient value is derived based on a maximum slope displacement of 5 cm (i.e. 2 inches). Graphical outputs of our computer analyses showing critical failure surfaces along with factors-of-safety are presented in Appendix E, Slope Stability

Analyses. Lowest calculated factors of safety for each condition analyzed are summarized in the following table:

Table 9 – Slope Stability Analysis Results

Cross Section	Scenario	Factor of Safety			
		Global Stability		Local Stability	
		Static	Seismic k_{eq}=0.26	Static	Seismic k_{eq}=0.26
A - A’	Global Stability	2.12	1.22	-	-
B - B'	Global Stability	1.67	1.10	-	-
C - C'	Global Stability	1.5	1.07	-	-
D - D’	Global Stability	1.51	1.03	2.55	1.68
E – E’	Global Stability	1.54	1.02	2.63	1.76

The results of the analyses indicate that the planned retaining walls and temporary back cuts modeled in cross sections A-A’ through E-E’ meet minimum factor of safety requirements for both static and seismic conditions. Following these analyses, we conclude, from a geotechnical perspective that the retained slopes and existing retaining walls demonstrate adequate stability to support the reduced alternate setbacks requested.

4.4 Lateral Earth Pressures

The following design earth pressure recommendations are for a retaining wall with a level backfill and for retaining walls with a 2:1 sloped backfill. Recommended lateral earth pressures are provided as equivalent fluid unit weights, in psf/ft or pounds-per-cubic-foot (pcf). These values do not contain an appreciable factor of safety, so the structural engineer should apply the applicable factors of safety and/or load factors during design.

Recommended lateral earth pressures for retaining walls under drained conditions are as follows:

Table 10 - Retaining Wall Design Earth Pressures

Retaining Wall Condition	Level Backfill Equivalent Fluid Pressure (pcf)*	2:1 Backfill Equivalent Fluid Pressure (pcf)*
Active (cantilever)	40	63
At-Rest (braced)	60	83
Passive Resistance (front of wall)	300	
Seismic Increment**	34	54
Coefficient of Friction	0.30	

*Only for level and drained properly compacted backfill

**Add to the active condition for walls over 6 feet in height

Walls that are free to rotate or deflect may be designed using active earth pressure. For walls that are fixed against rotation, the at-rest pressure should be used.

4.4.1 Sliding and Overturning

Total depth of retained earth for design of walls and for uplift resistance, should be measured as the vertical height of the stem below the ground surface at the wall face for stem design, or measured at the heel of the footing for overturning and sliding. A soil unit weight of 120 pcf may be assumed for calculating the actual weight of the soil over the wall footing, if drained, or 60 pcf if submerged, for properly compacted backfill

4.4.2 Drainage

Adequate drainage may be provided by a subdrain system positioned behind any earth retaining walls. Typically, this system consists of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with pervious backfill material described in Section 300-3.5.2 of the *Standard Specifications for Public Works Construction* (Green Book), current edition. This pervious backfill should extend at least 2 feet out from the wall and to within 2 feet of the outside finished grade. This pervious backfill and pipe should be wrapped in filter fabric, such as Mirafi 140N or equivalent, placed as described in Section 300-8.1 of the *Standard Specifications for Public Works Construction* (Green Book), current edition. The subdrain outlet should be connected to a free-draining outlet or sump.

4.5 Pavements

To provide support for paving, pavers, concrete etc., the subgrade soils should be prepared as recommended in the Section 4.1. Compaction of the subgrade for new pavement is 95 percent of the maximum dry density as determined by ASTM Test Method D1557 in the upper 12-inches. The preparation of the paving area subgrade should be performed immediately prior to placement of the base course.

Adequate drainage (both surface and subsurface) should be provided such that the subgrade soils and aggregate base materials are not allowed to become wet. Cut-off walls achieved by deepening curb sections or grade beams around planters or other comparable barriers are also recommended to minimize lateral flow of irrigation water beneath the adjacent subgrade soils.

Excessive over-irrigation will have an adverse impact on adjacent pavements. Irrigation adjacent to pavements, without a deep curb or other cutoff to separate landscaping from paving, will result in premature pavement failure.

4.5.1 Asphalt Concrete

The following pavement sections are presented for planning purposes. The required asphalt paving and base thicknesses will depend on the expected wheel loads and volume of traffic (Traffic Index or TI) and the support characteristics (R-Value) of the subgrade soils. No R-Value testing was performed as part of the current work scope.

Assuming that the paving subgrade will consist of the onsite or comparable soils with an R-value of at least 20 compacted to at least 90 percent relative compaction based on ASTM Test Method D 1557, the minimum recommended paving thicknesses are presented in the following table.

Table 11 – Asphalt Concrete Pavement Sections

Area	Design Traffic Index (TI)	Asphalt Concrete (inches)	Base Course (inches)
Car Parking	4	4	4
Light Truck	5	4	5
Heavy Truck	6	5	7
Main Drives	7	6	8

Final pavement structural sections should be based on R-value testing of subgrade soils performed at the conclusion of grading and Traffic Indices provide by the design Civil Engineer.

4.5.2 Portland Cement Concrete Paving

For light axle loads and average daily truck traffic (ADT) less than (<) 500, fire lanes subject to outrigger loads, trash corral aprons, or other areas where point loads are possible, should be paved with Portland Cement Concrete (PCC) with a minimum thickness of 6 inches over properly compacted fill. However, for medium/heavy axle loads and an ADT of (≥) 500 or more over properly compacted fill subgrades, a minimum PCC thickness of 7 inches should be used. All PCC pavements should have a minimum 28-day concrete compressive strength of 4,000 pounds-per-square-inch (psi) and have appropriate joints and saw cuts in accordance with either Portland Cement Association (PCA) or American Concrete Institute (ACI) guidelines. PCC subgrades supporting axle loads are recommended to be compacted to 95 percent relative compaction in the upper 12 inches.

A 4-inch layer of Class 2 aggregate may be used beneath areas of PCC pavement to improve performance. Additional details should be added to plans indicating pavement thickness transitions, pavement joint dowels, expansion joints and saw cut joints. Use of concrete cutoff or edge barriers should be considered at the perimeter of common parking or driveway areas when abutting either open (unfinished) or landscaped areas.

4.5.3 Paving Materials

Recommended structural pavement materials should conform to the specified provisions in the *Standard Specifications for Public Works Construction* (Green Book) indicated below:

- Asphalt concrete (hot mixed asphalt) for pavement should conform to Section 203-6 of the *Standard Specifications for Public Works Construction* (Green Book), current edition.
- Crushed aggregate base or crushed miscellaneous base should conform to Sections 200-2.2 and 200-2.4 of the *Standard Specifications for Public Works Construction* (Green Book), current edition.
- PCC pavement materials should conform to Section 90 of the *Standard Specifications for Public Works Construction* (Green Book), current edition.

4.6 Temporary Excavations

All temporary excavations, including utility trenches, retaining wall excavations, and foundation excavations should be performed in accordance with project plans, specifications, and all OSHA requirements. Excavations 4 feet or deeper should be laid back or shored in accordance with OSHA requirements before personnel are allowed to enter.

No surcharge loads should be permitted within a horizontal distance equal to the height of cut or 5 feet, whichever is greater from the top of the cut, unless the cut is shored appropriately. Excavations that extend below an imaginary plane inclined at 45 degrees below the edge of any adjacent existing site foundation should be properly shored to maintain support of the adjacent structure.

Temporary excavations should be treated in accordance with the State of California version of OSHA excavation regulations, Construction Safety Orders for Excavation General Requirements, Article 6, Section 1541, effective October 1, 1995. The sides of excavations should be shored or sloped in accordance with OSHA regulations. OSHA allows the sides of unbraced excavations, up to a maximum height of 20 feet, to be cut to a ¾H:1V (horizontal:vertical) slope for Type A soils, 1H:1V for Type B soils, and 1½H:1V for Type C soils. Near-surface onsite soils are to be considered Type B soils.

During construction, the soil conditions should be regularly evaluated to verify that conditions are as anticipated. The contractor shall be responsible for providing the “competent person” required by OSHA standards to evaluate soil conditions. Close coordination between the competent person and the geotechnical engineer should be maintained to facilitate construction while providing safe excavations.

4.7 Trench Backfill

Utility trenches should be backfilled with compacted fill in accordance with Sections 306-1 and 306-6 of the Standard Specifications for Public Works Construction, (“Greenbook”), current edition. Utility trenches can be backfilled with onsite sandy material free of rubble, debris, organic and oversized material up to (≤) 3 inches in largest dimension. Prior to backfilling trenches, pipes should be bedded in and covered with either:

(1) Sand: A uniform, sand material that has a Sand Equivalent (SE) greater-than-or-equal-to (≥) 30, passing the No. 4 U.S. Standard Sieve (or as specified by the pipe manufacturer), water densified in place, or

(2) CLSM: Controlled Low Strength Material (CLSM) conforming to Section 201-6 of the *Standard Specifications for Public Works Construction,* (“Greenbook”), current Edition. CLSM should not be jetted.

Pipe bedding should extend at least 4 inches below the pipeline invert and at least 12 inches over the top of the pipeline. Native and clean fill soils can be used as backfill over the pipe bedding zone, and should be placed in thin lifts, moisture conditioned above optimum, and mechanically compacted to at least 90 percent relative compaction, relative to the ASTM D 1557 laboratory maximum density. The upper 12-inches in roadway or parking should be compacted to 95% relative compaction per ASTM 1557.

Utility trenches excavated into site clays should not have sand bedding placed within 3 feet of the trench as it exits from under the slabs to prevent water migration along bedding sand into and under the foundation. A bentonite plug or clayey soil can be placed to interrupt bedding sand and prevent water migration.

4.8 Drainage and Landscaping

Surface drainage should be designed to direct water away from foundations and toward approved drainage devices. Irrigation of landscaping should be controlled to maintain, as much as possible, consistent moisture content sufficient to provide healthy plant growth without overwatering.

4.9 Additional Geotechnical Services

Our preliminary geotechnical recommendations provided in this report are based on information available at the time the report was prepared and may change as plans are developed. Additional geotechnical exploration, testing and/or analysis may be recommended as the project progresses. Leighton should review site grading, foundation, retaining wall and shoring plans when available, as necessary, to comment further on geotechnical aspects of this project and check to see general conformance of final project plans to recommendations presented in this report.

Geotechnical observation and testing should be provided for the following elements:

- Grading and excavation of the site;
- Subgrade preparation;
- Compaction of fill materials;
- Utility trench backfilling and compaction;
- Footing excavation and slab-on-grade preparation;
- Pavement subgrade and base preparation;
- Placement of asphalt concrete, pavers and/or concrete; and
- When any unusual conditions are encountered.

5.0 Limitations

This geotechnical exploration does not address the potential for encountering hazardous soil at this site. In addition, this report was necessarily based in part upon data obtained from a limited number of observances, site visits, soil samples, tests, analyses, histories of occurrences, spaced subsurface explorations and limited information on historical events and observations. Such information is, by necessity, incomplete. Please also refer GBA's *Important Information About Your Geotechnical Report* (included at the rear of the text), presenting additional information and limitations regarding geotechnical engineering studies and reports. The nature of many sites is such that differing soil or geologic conditions can be present within small distances and under varying climatic conditions. Changes in subsurface conditions can and do occur over time. Therefore, the findings, conclusions, and recommendations presented in this report are only valid if Leighton and Associates, Inc. has the opportunity to observe subsurface conditions during grading and construction, to confirm that our data are representative for the site. Leighton and Associates, Inc. should also review the construction plans and project specifications, when available, to comment on the geotechnical aspects.

This report was prepared using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing at this time in Los Angeles County. We do not make any warranty, either expressed or implied.

6.0 References

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Figures



Project: 30477	Eng/Geol: KD
Scale: 1"=2000'	Date: March 2025

Sources: Aerial Imagery: Esri Imagery Web Service dated 2021.

Author: (btran)

SITE LOCATION MAP

1400 Montefino Avenue
Diamond Bar, California

FIGURE 1

Leighton

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Legend

LB-1 Approximate location of hollow-stem auger boring showing total depth (T.D.), depth to earth units and depth to groundwater (G.W.) in feet below existing surface.

CPT-3 Approximate location of cone penetrometer test sounding (CPT) showing total depth (T.D.), depth to groundwater (G.W.) where measured in depth below existing surface.

LP-2 Approximate location of hollow-stem auger boring converted to percolation test well showing total depth (T.D.), depth to earth units and depth to groundwater (G.W.) in feet below existing surface.

TP-8 Approximate location of test pit performed by Western Laboratories showing total depth (T.D.) in feet below grade at time of exploration. (Western Laboratories, 1984)

HA-4 Approximate location of hand auger boring showing total depth (T.D.), depth to earth units in feet below existing surface.

E E' Geologic Cross Section, See Figures 3A-3E

Approximate location stabilization fill key MWA, 1982A

30 Strike and dip (MWA, 1982A)

Syncline

Approximate Site Boundary

See Figure 3 for description of earth units

CITY OF DIAMOND BAR,
IN THE COUNTY OF LOS ANGELES,
STATE OF CALIFORNIA

IN BOOK 153, PAGES 71 AND
ORDER OF SAID COUNTY.

HA-2b T.D.3' Afc@0-3'
HA-2a T.D.5' Afc@0-5'
HA-3a T.D.2.5' Afc@0-2.5'
HA-3b T.D.3' Afc@0-3'
LB-2 T.D.12' Afc@0-2' Tps@2' No G.W.
LB-3 T.D.23' Afc@0-8.3' Qyf@8.3-17.5' Tps@17.5' No G.W.
LB-4 T.D.30.8' Afc@0-10' Qyf@10-25' Tps@25' No G.W.
HA-4 T.D.3' Afc@0-3'
TP-4 T.D.10.5'
CPT-3 T.D.37.8'
LP-2 T.D.31.7' Afc@0-15.5' Qyf@15.5-35' Tps@35' G.W.@31.7' Perc Well Testing 10 to 20'
TP-7 T.D.10'
LB-1 T.D.41' Afc@0-5.5' Qyf@5.5-35' Tps@35' G.W.@23.1'
TP-8 T.D.10'
HA-1 T.D.5' Afc@0-5'
TP-2 T.D.13'
TP-1 T.D.20'
TP-6 T.D.18.5'
TP-3 T.D.20'
TP-5 T.D.14'
CPT-2 T.D.38.7'
CPT-1 T.D.42.6'
LP-1 T.D.36.5' Afc@0-15' Qyf@15-35' Tps@35' G.W.@22.0' Perc Well Testing 7 to 12'

MONTEFINO AVENUE (PUBLIC)

STREET 'A'
STREET 'B'
STREET 'C'

NOTE: ANY SLOPE SETBACKS THAT ARE LESS THAN THE REQUIREMENTS IN CBC 1808.7 HAVE BEEN REVIEWED AND ANALYZED BY THE GEOTECHNICAL ENGINEER. PLEASE REFER TO THE SOILS REPORT FOR FURTHER JUSTIFICATION AND EXPLANATION.

NOTE: ALL PARKING SPACES SHALL BE OUTLINED WITH FOUR-INCH WIDE LINES PAINTED ON THE SURFACE OF THE PARKING FACILITY [DBCC SECTION 22.30.070(11)(a)].

0 60 120
Feet

Project: 30477	Eng/Geol: CD/KD
Scale: 1"=60'	Date: October 2025

Base Map: Technical Site Plan, Sheet 1 of 2,
Dated: 10/6/2025 by Huitt Zollars

Author: (btran)

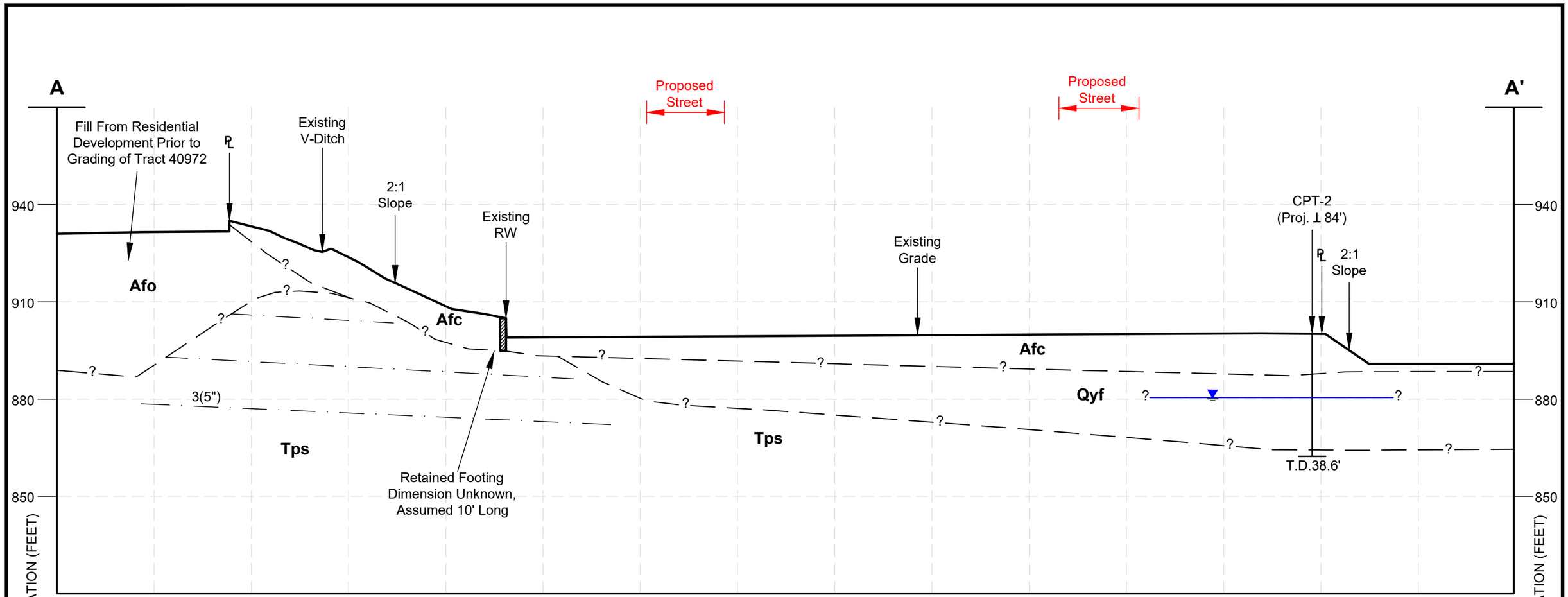
EXPLORATION LOCATION MAP

Proposed Residential Development
1400 Montefino Avenue
Diamond Bar, California

FIGURE 2

Leighton

Map Saved as C:\Users\btran\OneDrive - Verdantas\Files\Project Files\IA-JZ\INTRACORPSW\30477\GIS\Mapping.aprx on 10/9/2025 8:21 AM



Approximate groundwater elevation used in analyses corresponding to approximate elevation 880 feet.

Afc Certified engineered fill locally derived sandy clayey, silt, clayey and silty sands and minor quantities of sedimentary bedrock (Medall Aragon, Worswick and Associates Inc., February 1982A.

Qyf Young alluvial fan deposits. Characterized as sand, silty sandy clay, clayey silty sand with sedimentary gravel fragments

Tps Puente Formation Soquel Member Bedrock. Sandstone and claystone

Geologic contact, dashed where approximate, queried where uncertain

Proj: 30477	Eng/Geol: CD/KD
Scale: 1"=30'	Date: July 2025
Reference:	

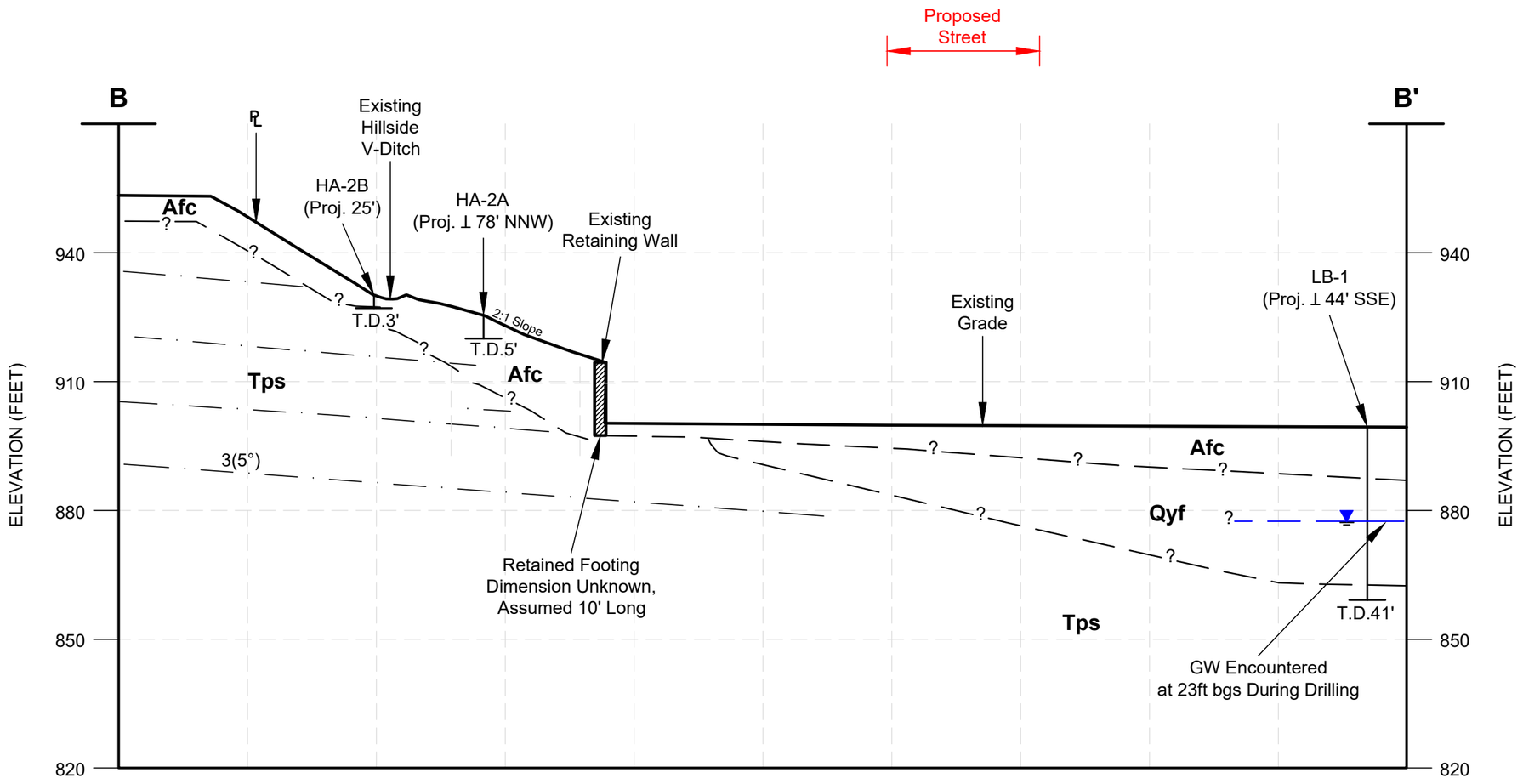
GEOTECHNICAL CROSS SECTION A-A'

Proposed Residential Development
1400 Montefino Avenue, Diamond Bar, California

FIGURE 3A

Leighton

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Approximate groundwater elevation used in analyses corresponding to approximate elevation 880 feet.

Afc Certified engineered fill locally derived sandy clayey, silt, clayey and silty sands and minor quantities of sedimentary bedrock (Medall Aragon, Worswick and Associates Inc., February 1982A.

Qyf Young alluvial fan deposits. Characterized as sand, silty sandy clay, clayey silty sand with sedimentary gravel fragments

Tps Puente Formation Soquel Member Bedrock. Sandstone and claystone

Geologic contact, dashed where approximate, queried where uncertain

Proj: 30477	Eng/Geol: CD/KD
Scale: 1"=30'	Date: July 2025
Reference:	

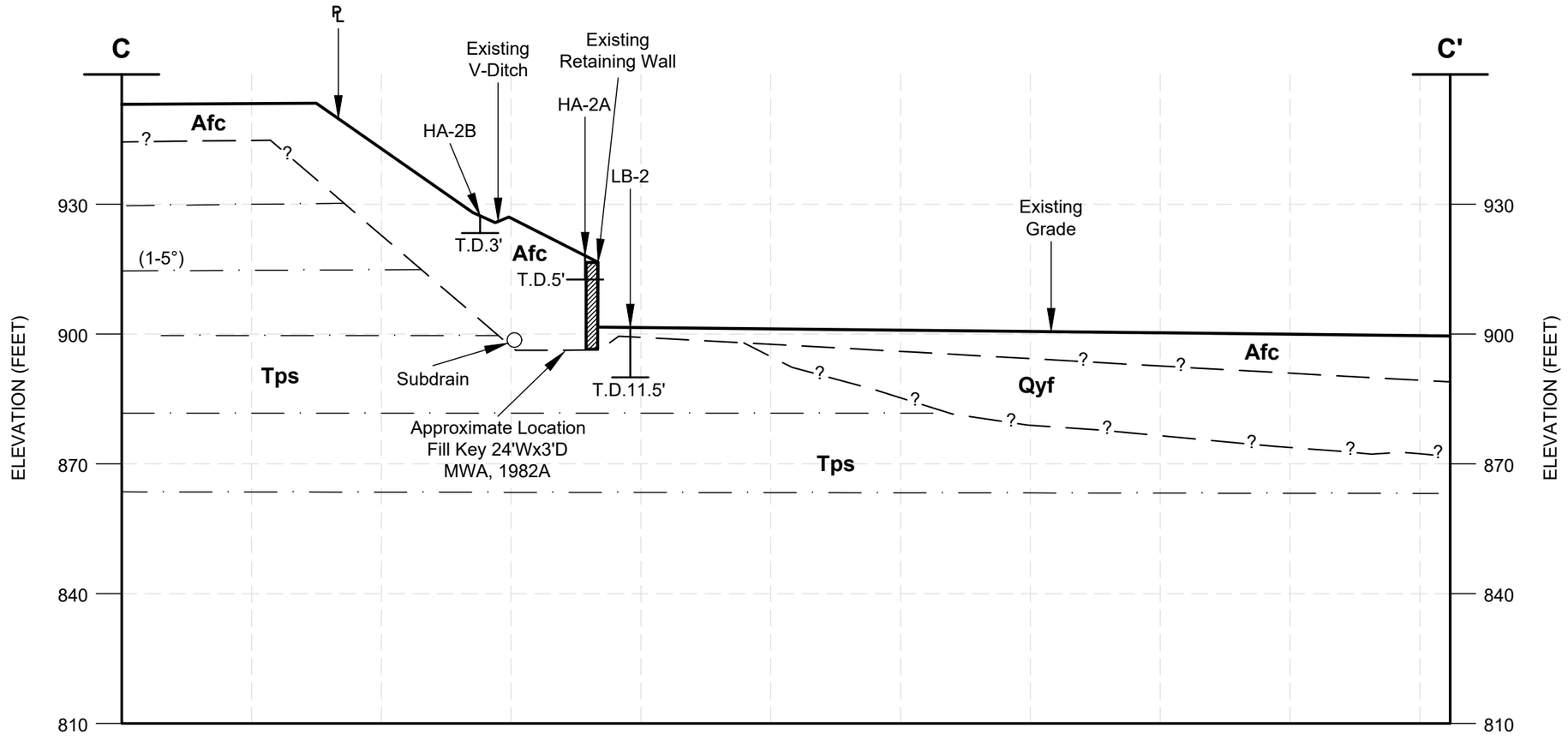
GEOTECHNICAL CROSS SECTION B-B'

Proposed Residential Development
1400 Montefino Avenue, Diamond Bar, California

FIGURE 3B

Leighton

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Approximate groundwater elevation used in analyses corresponding to approximate elevation 880 feet.

Afc Certified engineered fill locally derived sandy clayey, silt, clayey and silty sands and minor quantities of sedimentary bedrock (Medall Aragon, Worswick and Associates Inc., February 1982A.

Qyf Young alluvial fan deposits. Characterized as sand, silty sandy clay, clayey silty sand with sedimentary gravel fragments

Tps Puente Formation Soquel Member Bedrock. Sandstone and claystone

Geologic contact, dashed where approximate, queried where uncertain

Proj: 30477	Eng/Geol: CD/KD
Scale: 1"=30'	Date: July 2025
Reference:	

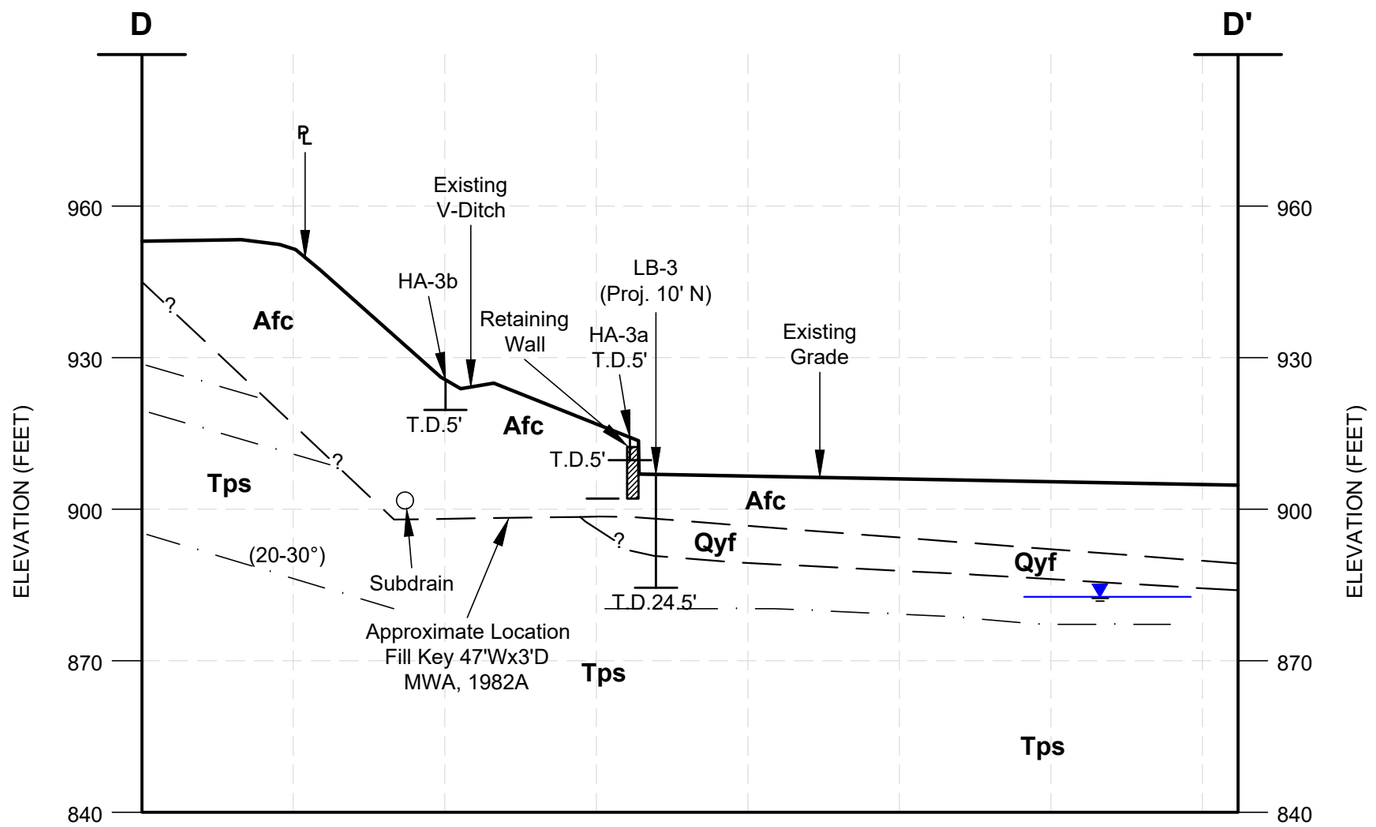
GEOTECHNICAL CROSS SECTION C-C'

Proposed Residential Development
1400 Montefino Avenue, Diamond Bar, California

FIGURE 3C

Leighton

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Approximate groundwater elevation used in analyses corresponding to approximate elevation 880 feet.

Afc Certified engineered fill locally derived sandy clayey, silt, clayey and silty sands and minor quantities of sedimentary bedrock (Medall Aragon, Worswick and Associates Inc., February 1982A.

Qyf Young alluvial fan deposits. Characterized as sand, silty sandy clay, clayey silty sand with sedimentary gravel fragments

Tps Puente Formation Soquel Member Bedrock. Sandstone and claystone

Geologic contact, dashed where approximate, queried where uncertain

Proj: 30477	Eng/Geol: CD/KD
Scale: 1"=30'	Date: July 2025
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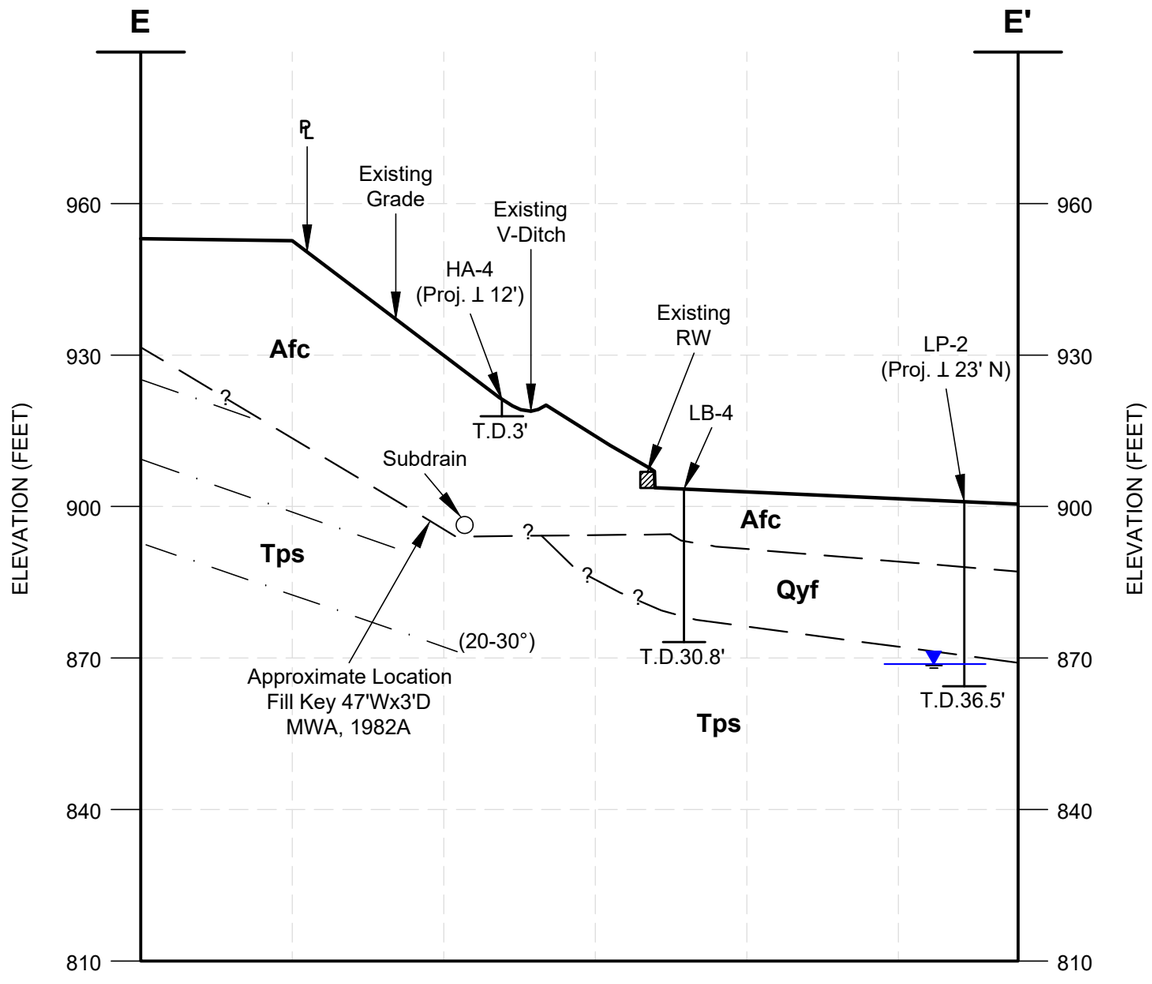
GEOTECHNICAL CROSS SECTION D-D'

Proposed Residential Development
1400 Montefino Avenue, Diamond Bar, California

FIGURE 3D

Leighton

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Approximate groundwater elevation used in analyses corresponding to approximate elevation 880 feet.

Afc Certified engineered fill locally derived sandy clayey, silt, clayey and silty sands and minor quantities of sedimentary bedrock (Medall Aragon, Worswick and Associates Inc., February 1982A.

Qyf Young alluvial fan deposits. Characterized as sand, silty sandy clay, clayey silty sand with sedimentary gravel fragments

Tps Puente Formation Soquel Member Bedrock. Sandstone and claystone

Geologic contact, dashed where approximate, queried where uncertain

Proj: 30477	Eng/Geol: CD/KD
Scale: 1"=30'	Date: July 2025
Reference:	

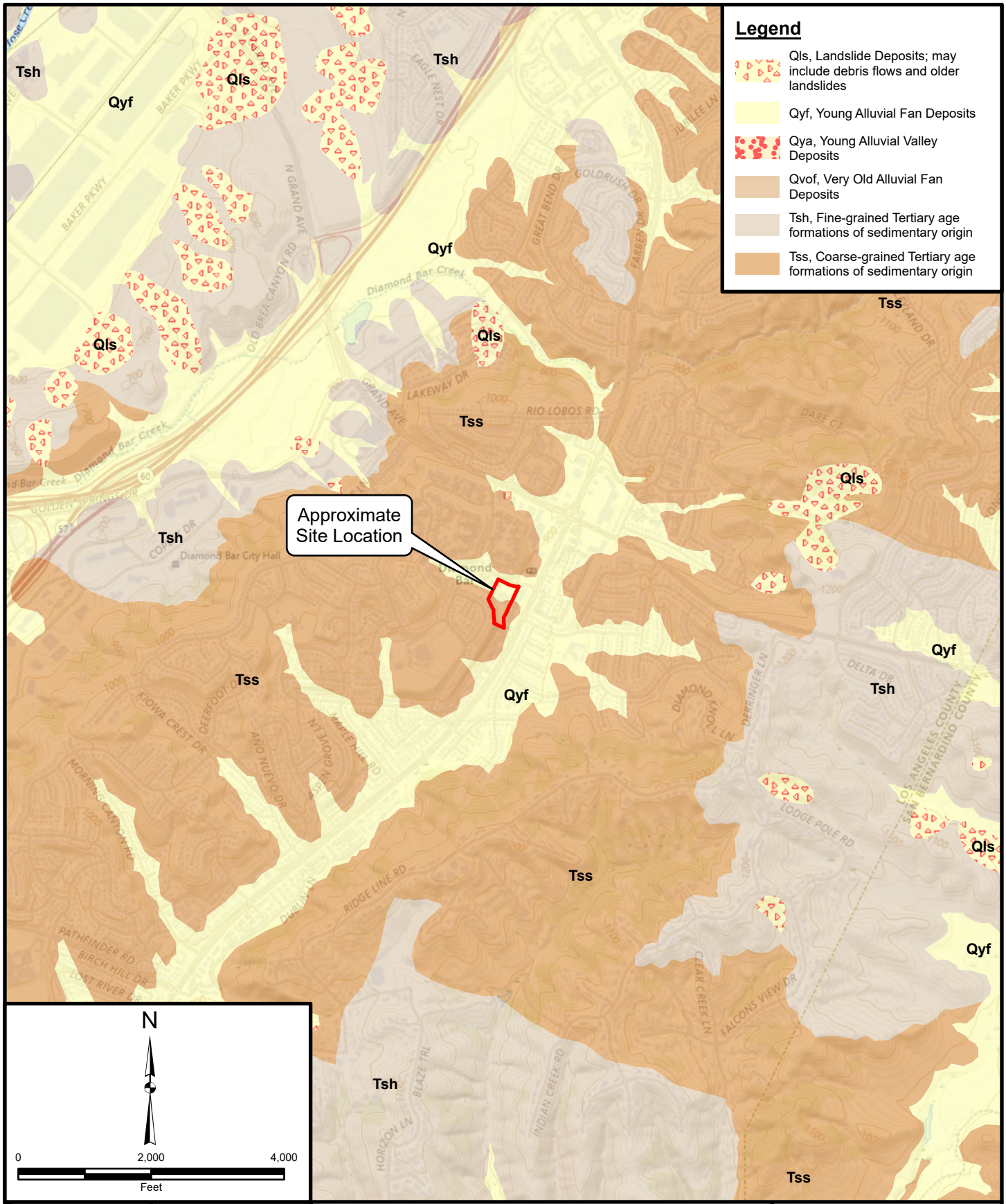
GEOTECHNICAL CROSS SECTION E-E'

Proposed Residential Development
1400 Montefino Avenue, Diamond Bar, California

FIGURE 3E

Leighton

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Reference: USGS Geologic Map of the Southern California GIS Compilation by CGS

Author: (btran)

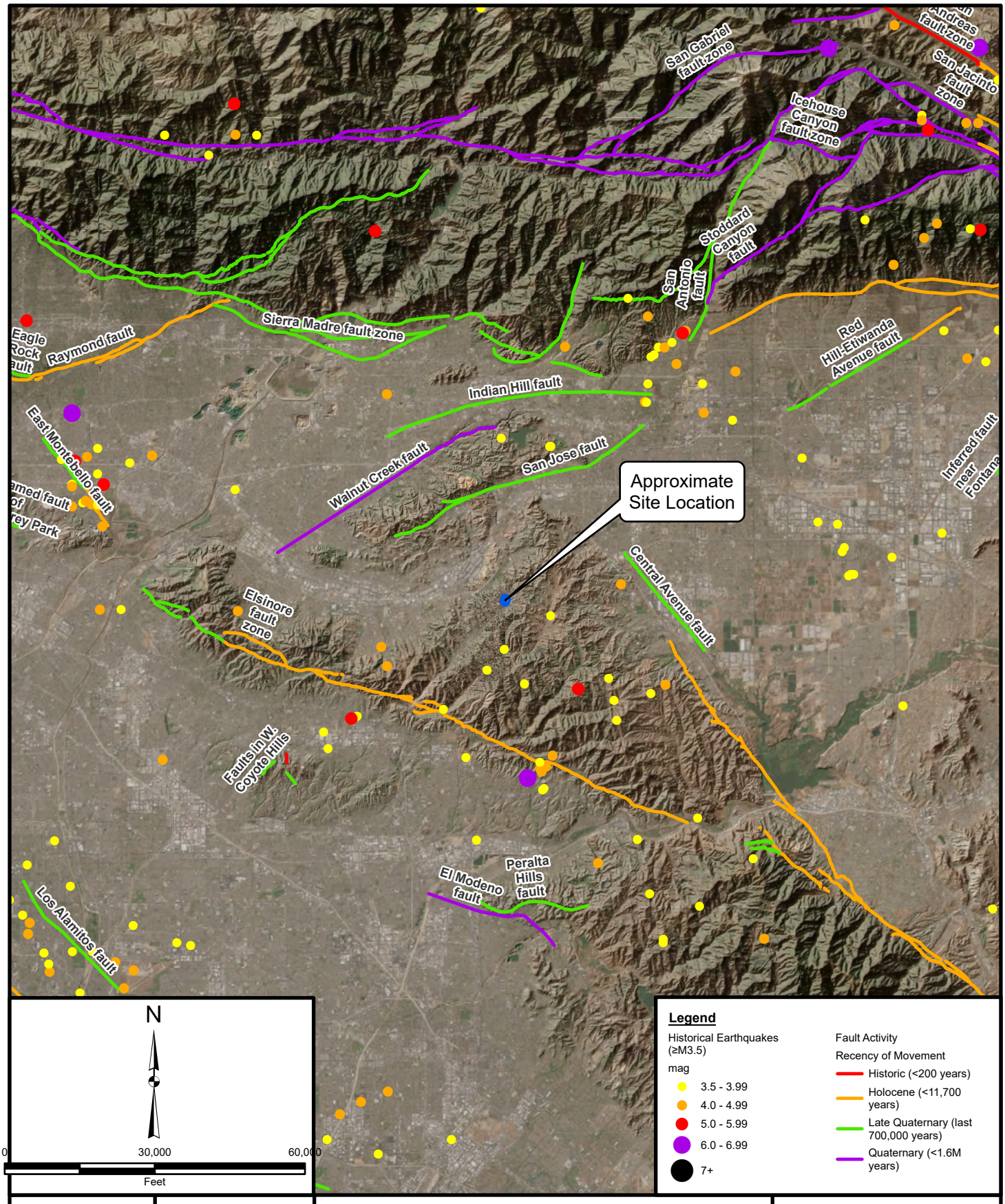
REGIONAL GEOLOGY MAP

1400 Montefino Avenue
Diamond Bar, California

FIGURE 4

Leighton

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Project: 30477	Eng/Geol: KD
Scale: 1"=2000'	Date: March 2025

Basemap: USGS Topo Map Service from Esri, 2021
Reference: maps.conservation.ca.gov

Author: (btran)

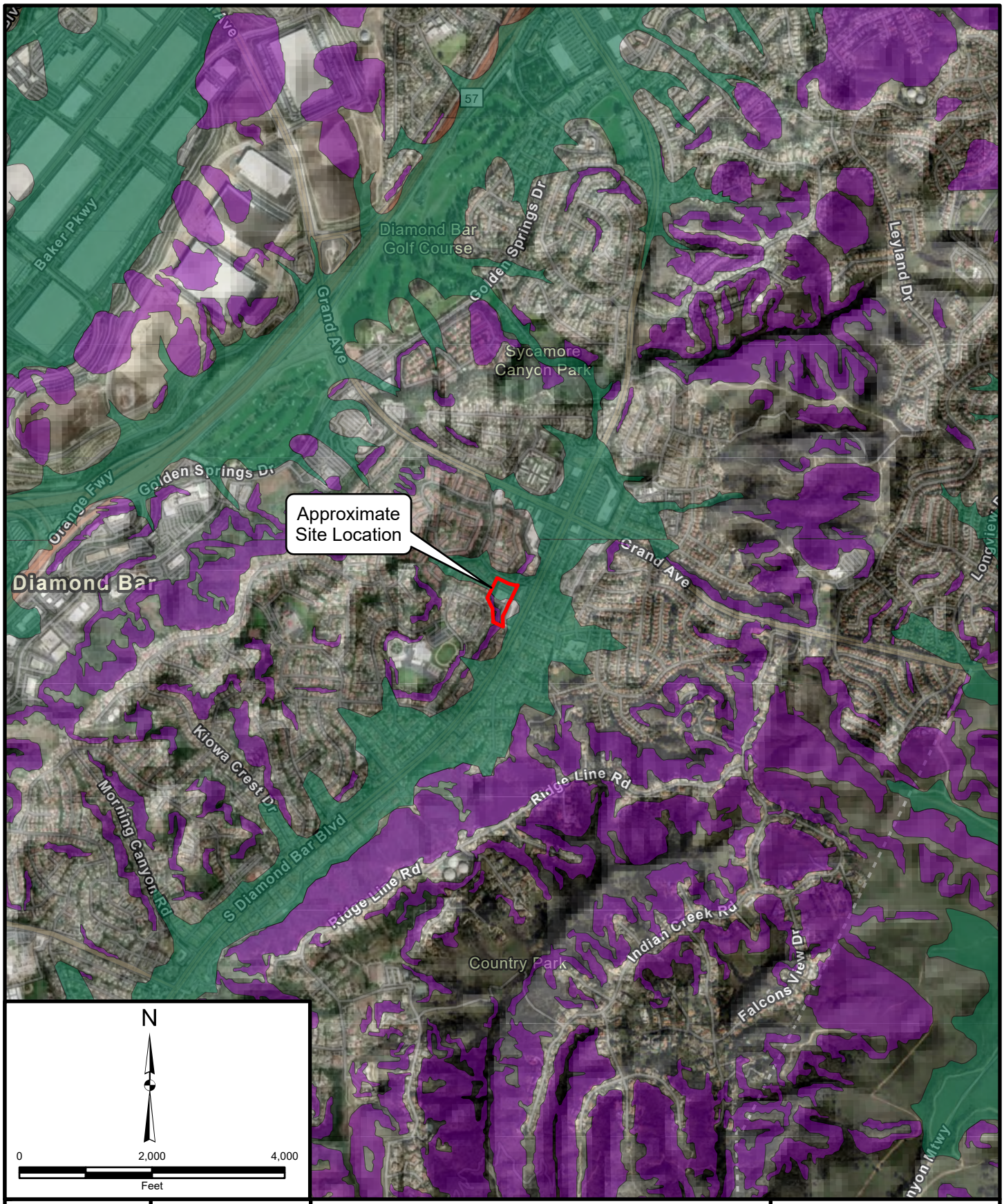
HISTORICAL SEISMIC AND FAULT LOCATION MAP

1400 Montefino Avenue
Diamond Bar, California

FIGURE 5

Leighton

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Reference: maps.conservation.ca.gov

Author: (btran)

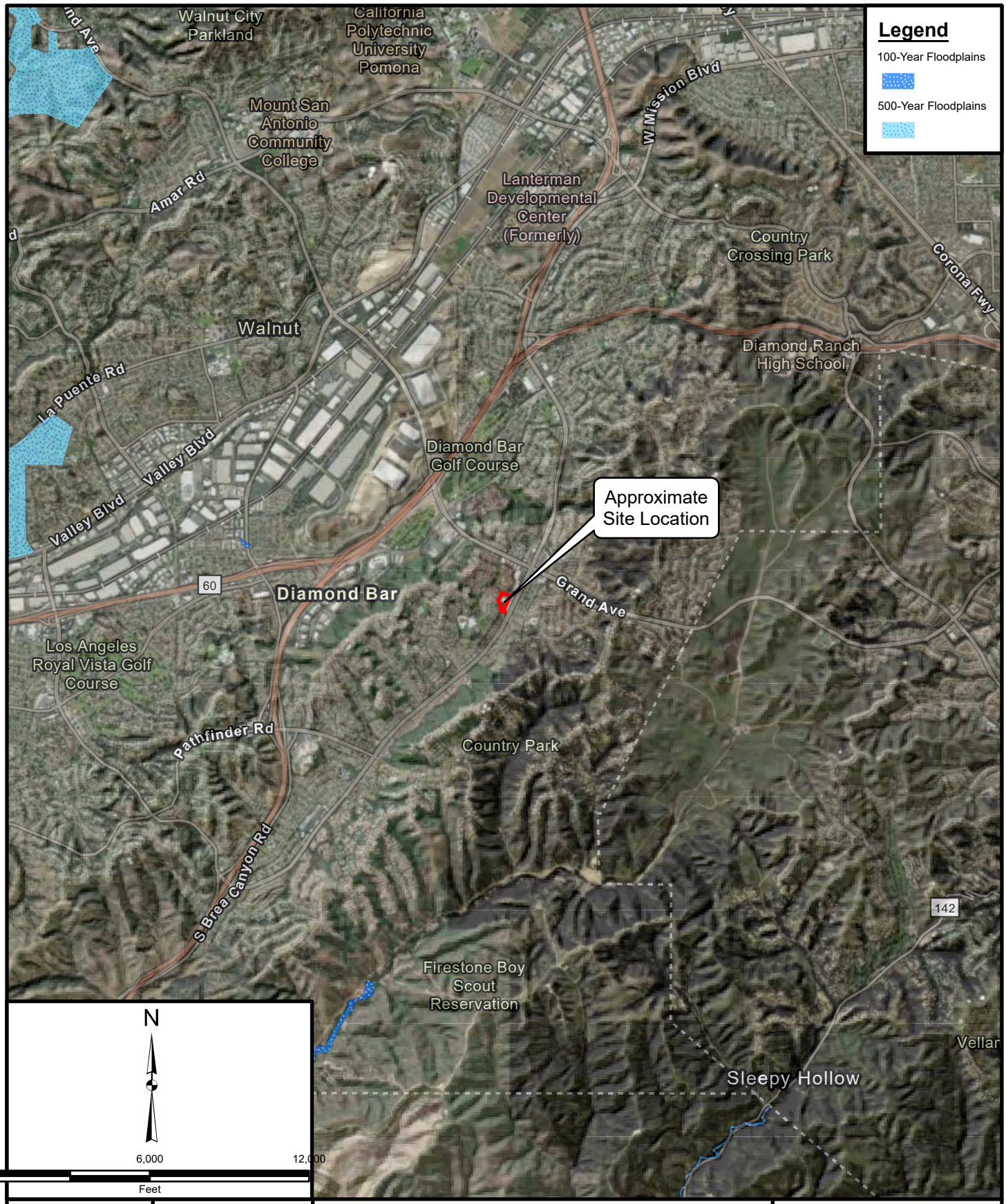
SEISMIC HAZARD MAP

1400 Montefino Avenue
Diamond Bar, California

FIGURE 6

Leighton

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Project: 30477	Eng/Geol: KD
Scale: 1:60,000	Date: March 2025

Basemap: USGS Topo Map Service from Esri, 2021
Reference: FEMA, California Department of Water Resources

Author: (btran)

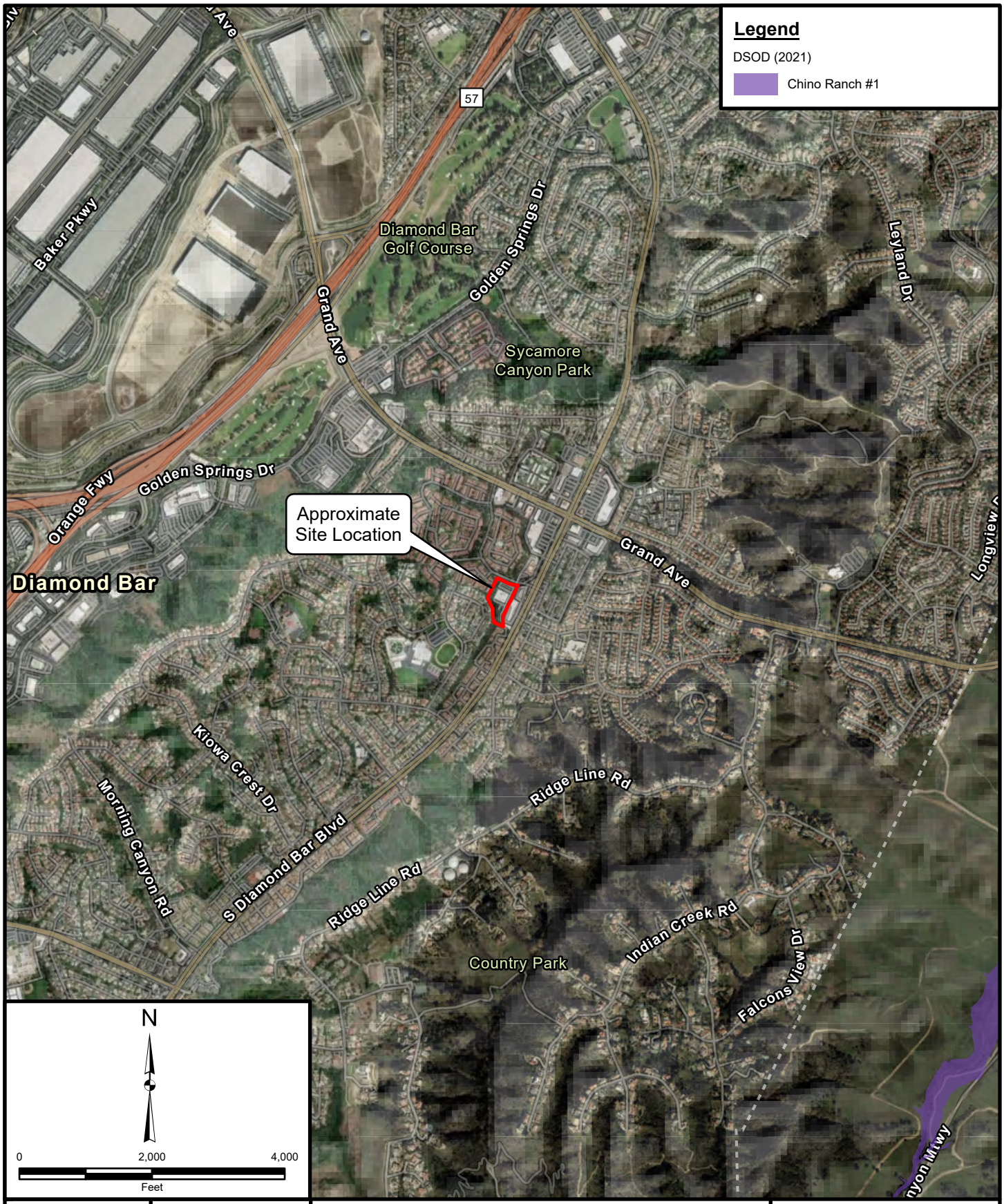
FLOOD HAZARD ZONE MAP

1400 Montefino Avenue
Diamond Bar, California

FIGURE 7

Leighton

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Project: 30477	Eng/Geol: KD
Scale: 1"=2000'	Date: March 2025

Basemap: USGS Topo Map Service from Esri, 2021
Reference: Office of Emergency Services (2007), Dept of Safety of Dams (2021), National Inventory of Dams, Army Corps of Engrs (2021)

Author: (btran)

DAM INUNDATION MAP

1400 Montefino Avenue
Diamond Bar, California

FIGURE 8

Leighton

Map Saved as C:\Users\btran\OneDrive - Verdantas\Files\Project Files\IA-JZ\INTRACORPSW\30477\GIS\Mapping.aprx on 3/14/2025 1:53 PM

Appendix A

Exploration Logs

SUMMARY

OF

CONE PENETRATION TEST DATA

Project:

Intracorp – Montefino Geo DD
1400 Montefino Avenue
Diamond Bar, CA
March 1, 2025

Prepared for:

Ms. Kalie Duccini
Leighton & Associates, Inc.
2600 Michelson Drive, Ste 400
Irvine, CA 92612
Office (800) 253-4567 / Fax (949) 250-1114

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

1. **INTRODUCTION**
2. **SUMMARY OF FIELD WORK**
3. **FIELD EQUIPMENT & PROCEDURES**
4. **CONE PENETRATION TEST DATA & INTERPRETATION**

APPENDIX

- CPT Plots
- CPT Classification/Soil Behavior Chart
- Summary of Shear Wave Velocities
- Pore Pressure Dissipation Graphs
- CPT Data Files (sent via email)

SUMMARY
OF
CONE PENETRATION TEST DATA

1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the Intracorp – Montefino Geo DD project located at 1400 Montefino Avenue in Diamond Bar, California. The work was performed by Kehoe Testing & Engineering (KTE) on March 1, 2025. The scope of work was performed as directed by Leighton & Associates, Inc. personnel.

2. SUMMARY OF FIELD WORK

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

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
CPT-1	42	Refusal
CPT-2	38	Refusal
CPT-3	37	Refusal

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 with a cone net area ratio of 0.83. The following parameters were recorded at approximately 2.5 cm depth intervals:

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

At location CPT-1, shear wave measurements were obtained at various depths. The shear wave is generated using an air-actuated hammer, which is located inside the front jack of the CPT rig. The cone has a triaxial geophone, which recorded the shear wave signal generated by the air hammer.

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

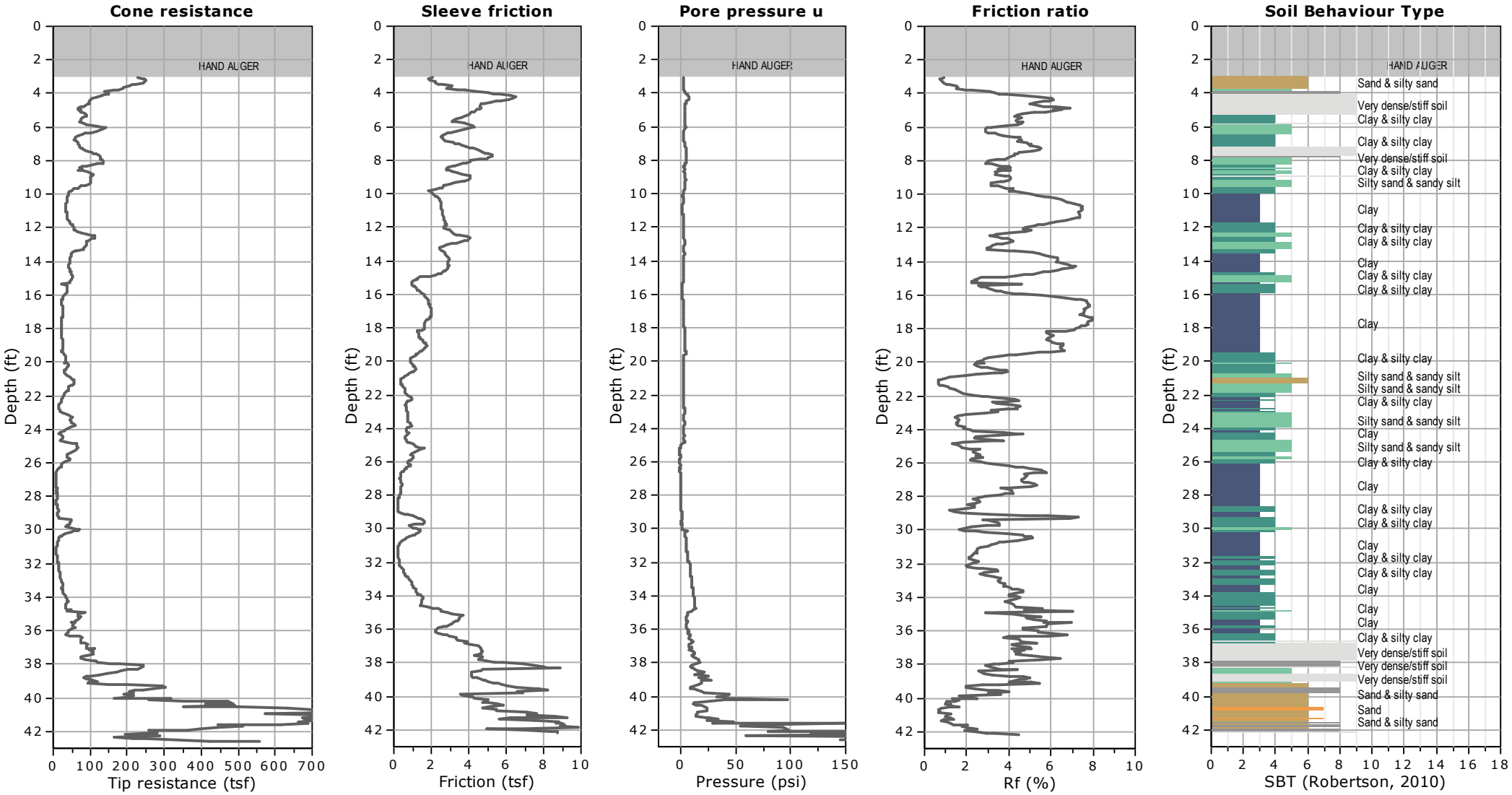
03/06/25-eb-7059

APPENDIX

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

Project: **Leighton & Associates / Intercorp - Montefino Geo DD**
Location: **1400 Montefino Ave, Diamond Bar, CA**

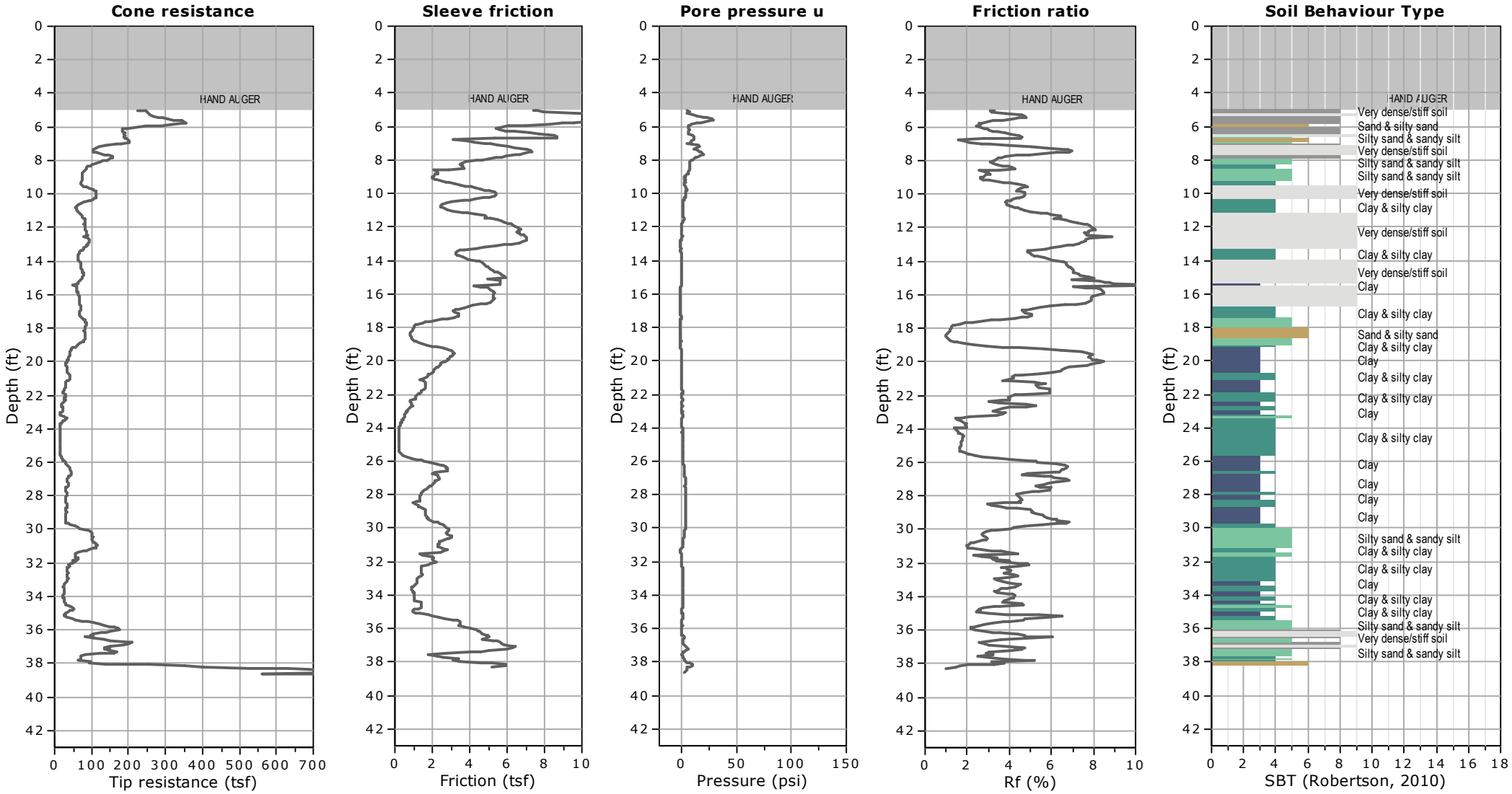
CPT-1
Total depth: 42.60 ft, Date: 3/1/2025



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Project: **Leighton & Associates / Intercorp - Montefino Geo DD**
Location: **1400 Montefino Ave, Diamond Bar, CA**

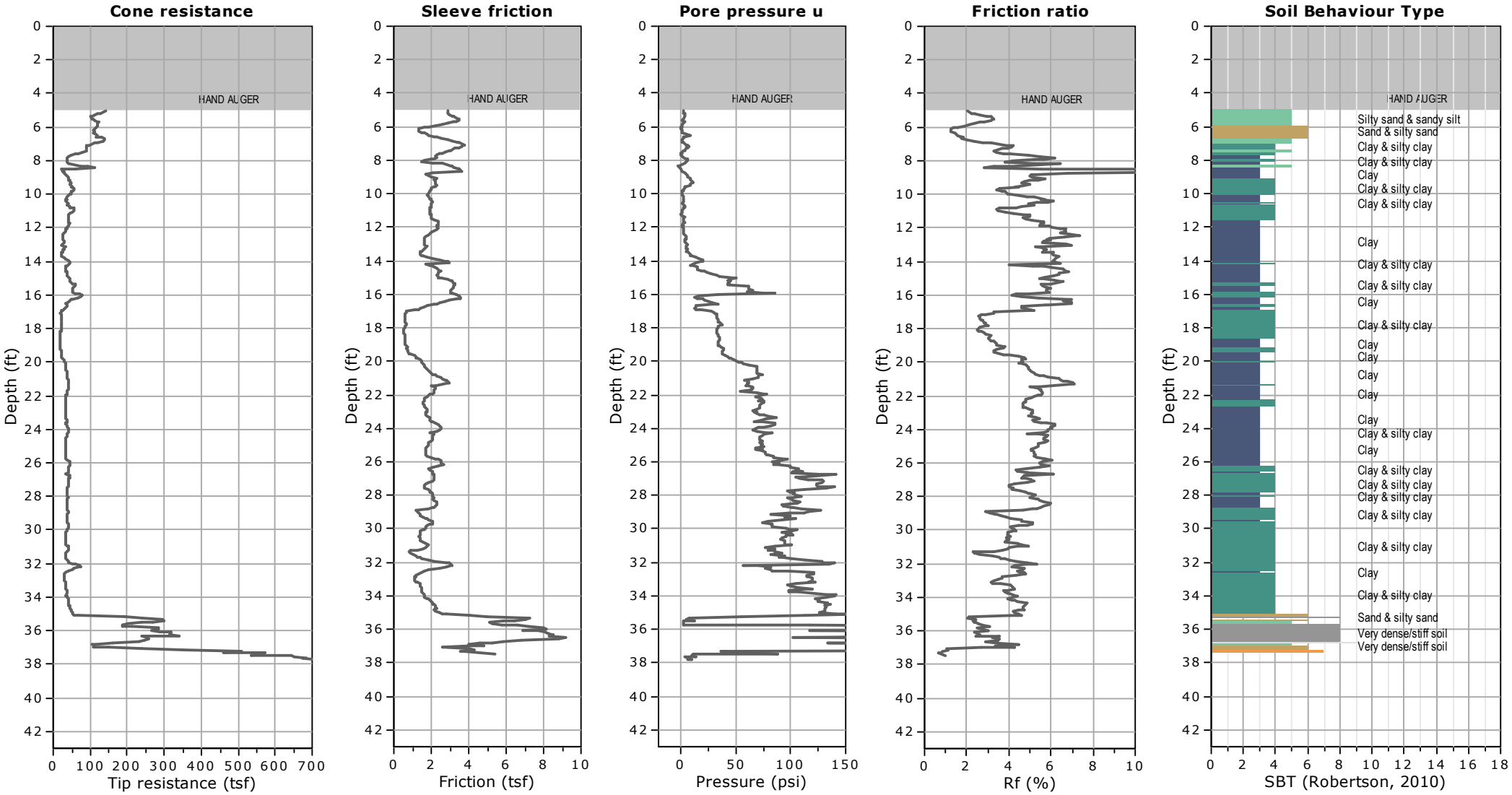
CPT-2
Total depth: 38.66 ft, Date: 3/1/2025



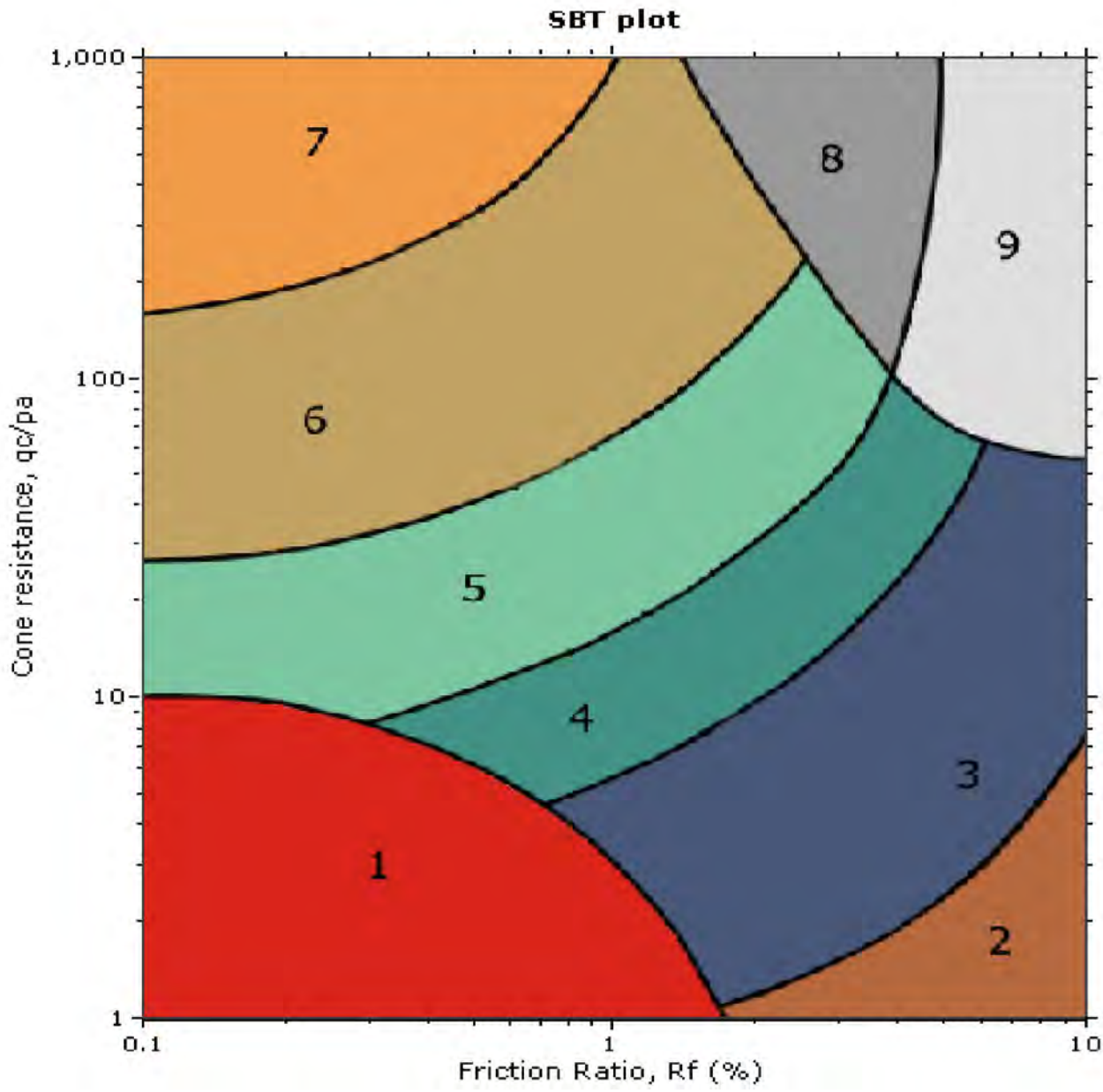
Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Leighton & Associates / Intercorp - Montefino Geo DD**
Location: **1400 Montefino Ave, Diamond Bar, CA**

CPT-3
Total depth: 37.81 ft, Date: 3/1/2025



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



SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to clayey sand
9. Very stiff fine grained

Leighton & Associates
Intercorp - Montefino Geo DD
Diamond Bar, CA

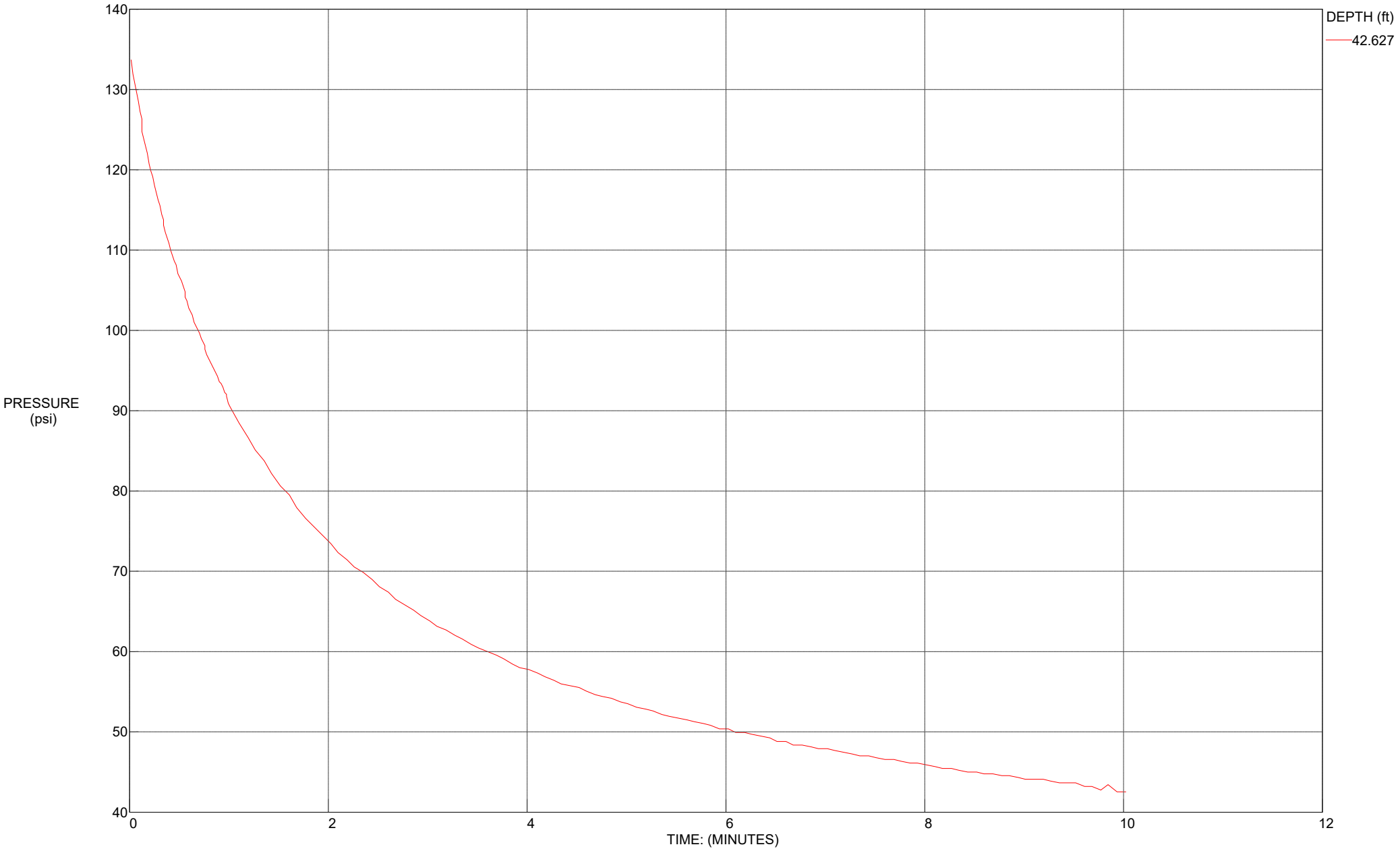
CPT Shear Wave Measurements

Location	Tip Depth (ft)	Geophone Depth (ft)	Travel Distance (ft)	S-Wave Arrival (msec)	S-Wave Velocity from Surface (ft/sec)	Interval S-Wave Velocity (ft/sec)
CPT-1	10.04	9.04	9.26	8.32	1113	
	20.01	19.01	19.11	18.72	1021	948
	30.05	29.05	29.12	32.76	889	713
	40.03	39.03	39.08	43.06	908	967
	42.62	41.62	41.67	44.72	932	1558

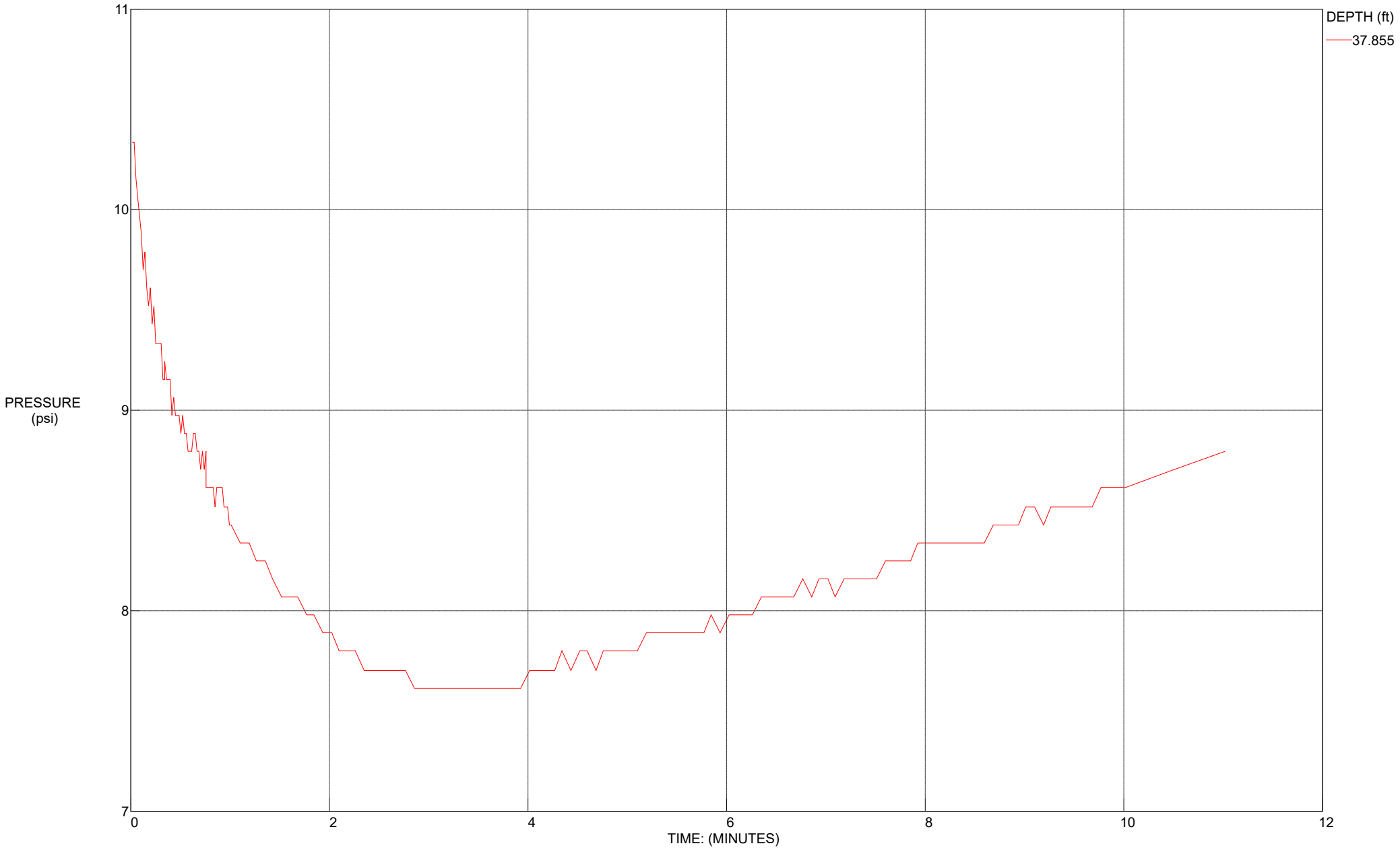
Shear Wave Source Offset - 2 ft

S-Wave Velocity from Surface = Travel Distance/S-Wave Arrival
Interval S-Wave Velocity = (Travel Dist2-Travel Dist1)/(Time2-Time1)

TEST ID: CPT-1


DEPTH (ft)
42.627
PRESSURE
(psi)
140
130
120
110
100
90
80
70
60
50
40
0
2
4
6
8
10
12
TIME: (MINUTES)

TEST ID: CPT-3


DEPTH (ft)
37.855
PRESSURE
(psi)
11
10
9
8
7
0
2
4
6
8
10
12
TIME: (MINUTES)

GEOTECHNICAL BORING LOG LB-1

Project No.	30477	**Date Drilled**	3-11-25
Project	Intracorp Diamond Bar Montefino	**Logged By**	JWJ/MDK
Drilling Co.	Martini Drilling Corporation	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	904'
Location	See Figure 2: Exploration Location Map	**Sampled By**	JWJ/MDK

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No. (Bulk / Driven)	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								@0': 5-inches Asphalt Concrete over 5-inches Aggregate Base	
				BB-1				SPg	**Artificial Fill, certified (Afc):** @0.83: Poorly-graded SAND with gravel, light yellow brown to light reddish brown to light gray, moist, fine to medium sand	
900										
	5			S-1	1 3 6			CL	@4': Sandy Lean CLAY, dark blackish brown, mottled with rust red, moist, fine sand	
								SC	**Quaternary Age Young Alluvial Fan Deposits (Qyf):** @5.5': Clayey SAND, dark reddish brown, moist, medium dense, few coarse sand	
895										
	10			S-2	3 4 5			SCg	@10': With fine to coarse gravel-sized sandstone and siltstone clasts	
890										
	15			S-3	3 3 4				@15': Clayey SAND, dark blackish brown, moist, loose to medium dense, moderately well bedded, beds ~3 to 5 inches thick, predominantly very fine to medium sand, some mechanically broken rock clasts, some coarse grained sand members with basal erosion surface	
885										
	20			S-4	1 2 2			SCg	@20': Clayey SAND, loose, with silstone and sandstone gravels	
									@23.10': Groundwater encountered during drilling	
880										
	25			S-5	3 3 2			SP/CL	@25': Interlaminated SAND and Silty CLAY, dark red and medium gray, wet, loose/medium stiff, abundant FeO staining	
875										
	30									

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

verdantas

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GEOTECHNICAL BORING LOG LB-1

Project No.	30477	**Date Drilled**	3-11-25
Project	Intracorp Diamond Bar Montefino	**Logged By**	JWJ/MDK
Drilling Co.	Martini Drilling Corporation	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	904'
Location	See Figure 2: Exploration Location Map	**Sampled By**	JWJ/MDK

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			S-6		Push Push 2			SC	@30': Clayey SAND, medium gray to rust reddish brown, wet, very loose, fine to coarse grained sand, interbedded with sandy lean clay, no structure	
870											
	35			S-7		8 21 28			Tps	**Puente Formation, Soquel Member (Tps):** @35': SANDSTONE, yellowish brown, oxidized, with SILTSTONE interbeds, well-sorted, fine to medium grained, FeO banding, 2-inch thick siltstone layer @36'	
865											
	40			S-8		24 50/6"				@40': SANDSTONE, yellowish brown, medium to coarse sand, massive with one diffused member contact @41.1', saturated, friable, FeO mineralization, fines upwards	
										Total Depth: 41 feet bgs **Groundwater encountered at 23.10 feet during drilling.** **Boring backfilled with soil cuttings, tamped, and patched with cold mix asphalt concrete upon completion.**	
860											
	45										
855											
	50										
850											
	55										
845											
	60										

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-2

Project No.	30477	**Date Drilled**	7-3-25
Project	Intracorp Diamond Bar	**Logged By**	KMD
Drilling Co.	Martini Drilling Corp.	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - Autohammer	**Ground Elevation**	899'
Location	See Figure 2: Exploration Location Map.	**Sampled By**	KMD

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0									@ Surface: 5-inches Asphalt Concrete (AC) over 4-inches base	
									SM	**Artificial Fill, certified (Afc)**	
									Tps	@ 0.75': Silty SAND, light yellowish brown, slightly moist, very fine to fine sand	
										Puente Formation, Soquel Member (Tps)	
895										@ 2': SANDSTONE, yellow-brown, moist, fine snad, trace fine gravel	
	5			R-1		19 40 50/2"				@ 5': SANDSTONE, yellow-brown, moist, very dense, fine sand, uncemented, Fe_2O_3 staining @ 6': Becomes interbedded with SILTSTONE, light gray, hard, laminated, strong oxidation in sand at contacts	
				R-2		25 50/3"				@ 7.5': Interbedded SANDSTONE and STILTSTONE SILTSTONE: Light gray, mosit, hard, heavy MnO_2 spotting SANDSTONE: Strong orange brown, with ~1" gleyed gray patches, fine sand, micaceous, slightly to moderately cemented	DS
890	10			R-3		33 50/6"				@ 10': SANDSTONE, strong orange-brown, moist, very dense, fine sand, micaceous, vertical laminations/fracture infill of Clay/Silt and strongly oxidized sand	
										@ 11.5': SANDSTONE, dark yellow-brown, moist to very moist, moderately cemented, heavy and abundant black MnO_2 deposits	
885	15									**Total Depth: 11.5' bgs** **No groundwater encountered** **Backfilled with soil cuttings and patched with cold mix asphalt concrete upon completion.**	
880	20										
875	25										
870	30										

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

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GEOTECHNICAL BORING LOG LB-3

Project No.	30477	**Date Drilled**	7-3-25
Project	Intracorp Diamond Bar	**Logged By**	KMD
Drilling Co.	Martini Drilling Corp.	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - Autohammer	**Ground Elevation**	900'
Location	See Figure 2: Exploration Location Map.	**Sampled By**	KMD

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
900	0									*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
										@ Surface: 4.5-inches of Asphalt Concrete over 4-inches base	
									CLs	**Artificial Fill, certified (Afc)**	
										@ 5': Sandy CLAY, brown with dark gray mottling, hard, slightly moist, very fine to fine sand, some medium to coarse sand, some MnO_2 nodules, fine rootlets, coarse sand sized siltstone	
895	5			R-1		12 20 29					
				R-2		12 21 25				@ 7.5': Becomes reddish brown, hard, fewer dark gray mottling	
									CLs	**Quaternary Age Young Alluvial Fan Deposits (Qyf)**	
890	10			R-3		9 15 29				@ 8.25': Sandy CLAY, brown, poorly graded fine sand, possible planar orientation of platy clasts, very weak bedding @ 10': Sandy CLAY, dark brown, hard, moist, fine sand, few medium to coarse sand, clay films on coarse sand grains, very faint laminations/bedding, hackly structure	DS
				R-4		15 32 37			CLs	**Quaternary Age Colluvium (Qcol)**	
885	15			R-5		9 17 21				@ 12.5': Alternating brown and reddish brown laminations, hard, fine sand, increasing sand content and size with depth to include some medium to coarse sand @ 15': Sandy CLAY to very Clayey SAND, dark yellowish brown, hard/very dense, moist, fine to coarse sand, fine subangular gravels, heavily weathered and fissile @ 16.5': Predominantly medium to coarse sand and fine gravel in clay matrix, gray, Fe_2O_3	
				R-6		42 50/4"			Tps	**Puente Formation, Soquel Member (Tps)**	
880	20			R-7		22 50/4"				@ 17.5': SILTSTONE, light olive gray, hard, some clay, micaceous @ 19': SANDSTONE, dark yellowish brown, hard, very moist to wet, fine sand, micaceous, strong patchy Fe_2O_3 staining @ 20': Sandy SILTSTONE, interlaminations of light gray, orange, and dark red, hard, very fine sand, very micacaous @ 20.5': SANDSTONE, interlaminated light gray, orange, and dark red, few medium to coarse sand	
				R-8		50/6"				@ 22.5': SANDSTONE, becomes clayey SILTSTONE, interlaminated light gray, orange, and dark red, hard, strong MnO_2 dendritic mineralization @ 22.75': SANDSTONE, laminations of light gray and yellowish brown, fine sand, few medium to coarse sand, patchy dark orange Fe_2O_3	
875	25									**Total Depth: 23' bgs** **No groundwater encountered** **Backfilled with soil cuttings and patched with cold-mix asphalt concrete upon completion.**	
870	30										

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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GEOTECHNICAL BORING LOG LB-4

Project No.	30477	**Date Drilled**	7-3-25
Project	Intracorp Diamond Bar	**Logged By**	KMD
Drilling Co.	Martini Drilling Corp.	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - Autohammer	**Ground Elevation**	897'
Location	See Figure 2: Exploration Location Map.	**Sampled By**	KMD

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No. (Bulk / Driven)	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	0								*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
				B-1				SM	@ Surface: 4-inches Asphalt Concrete over 4-inches Base **Artificial Fill, certified (Afc)**	
895								CLs	@ 0.67': Silty SAND, olive gray, slighlty moist, predominantly very fine sand, some medium to coarse sand, some fine subangular gravel	
	5			R-1	10 19 23				@ 2.5': Sandy CLAY to Clayey SAND, dark brown, slightly moist, fine sand, few medium sand, fine rootlets, tight @ 5': Sandy CLAY, dark brown, hard, moist, fine sand, fine angular siltstrone chips, heavy oxidation, pockets of light brown clayey sand	
890				R-2	25 41 50/6"			SC	@ 7.5': Increased sand content, hard, fine to medium sand, quartz @ 8.5': Grades to Clayey SAND	
	10			R-3	21 28 26				@ 10': Clayey SAND, hard, few to some fine gravels, MnO_2 nodules	
885				R-4	11 19 26			CLs	**Quaternary Age Young Alluvial Fan Deposits (Qyf)** @ 12.5': Sandy CLAY with Silt, brown, hard, moist, significant decrease in sand content and grain size, very fine to fine sand, fine MnO_2 nodules, hackly structure	
	15			R-5	7 11 19			CLs	@ 15': Sandy CLAY, dark brown, stiff, moist, very fine to fine sand, medium to coarse sand sized MnO_2 nodules, Fe_2O_3 staining	
880				R-6	23 36 38				@ 17.5': Sandy CLAY, dark brown to blackish brown, hard, moist, very fine to fine sand, some medium to coarse sand, clay films	
	20			R-7	5 17 26				@ 20': Sandy CLAY, dark brown to blackish brown, hard, fine to coarse siltstone and sandstone clasts, friable, fine plagioclase gravel	
875				R-8	12 15 23				@ 22.5': Increase in coarse sand and fine gravel, increase in MnO_2	
	25			R-9	11 13 21			Tps	**Puente Formation, Soquel Member (Tps)** @ 25': CLAYSTONE, brown and gray laminations, hard, fine sandy clay, weathered	
870				R-10	13 19 32				@ 28.5': CLAYSTONE, light olive gray, hard, strong oxidations, less weathered, micaceous, well developed Fe_2O_3 veins, coarse sand siezed MnO_2 nodules, heavily oxidized sandstone clasts	
	30									

SAMPLE TYPES:

B	BULK SAMPLE
C	CORE SAMPLE
G	GRAB SAMPLE
R	RING SAMPLE
S	SPLIT SPOON SAMPLE
T	TUBE SAMPLE

TYPE OF TESTS:

-200	% FINES PASSING	DS	DIRECT SHEAR	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	EI	EXPANSION INDEX	SE	SAND EQUIVALENT
CN	CONSOLIDATION	H	HYDROMETER	SG	SPECIFIC GRAVITY
CO	COLLAPSE	MD	MAXIMUM DENSITY	UC	UNCONFINED COMPRESSIVE STRENGTH
CR	CORROSION	PP	POCKET PENETROMETER		
CU	UNDRAINED TRIAXIAL	RV	R VALUE		

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GEOTECHNICAL BORING LOG LB-4

Project No.	30477	**Date Drilled**	7-3-25
Project	Intracorp Diamond Bar	**Logged By**	KMD
Drilling Co.	Martini Drilling Corp.	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - Autohammer	**Ground Elevation**	897'
Location	See Figure 2: Exploration Location Map.	**Sampled By**	KMD

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
	30			R-11		19 50/4"				@ 30': Interbedded CLAYSTONE and SANDSTONE, strong red-brown, hard/very dense, slightly moist, strongly oxidized, fine to medium sand, some coarse sand, strongly oxidized at contacts with claystone	
865										**Total Depth: 30.83' bgs** **No groundwater encountered** **Backfilled with soil cuttings and patched with cold-mix asphalt concrete upon completion.**	
	35										
860											
	40										
855											
	45										
850											
	50										
845											
	55										
840											
	60										

The Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

verdantas

*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LP-1

Project No.	30477	**Date Drilled**	3-11-25
Project	Intracorp Diamond Bar Montefino	**Logged By**	JWJ/MDK
Drilling Co.	Martini Drilling Corporation	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	900'
Location	See Figure 2: Exploration Location Map	**Sampled By**	JWJ/MDK

Elevation Feet	Depth Feet	Graphic Log	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
		N S								*This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.*	
900	0									@0': 5-inches Asphalt Concrete over 6-inches Aggregate Base	
				BB-1					SMg	**Artificial Fill, certified (Afc):** @0.92': Silty SAND, yellowish brown, slightly moist, predominantly fine sand, trace coarse sand, trace fine gravel @1': Abundant siltstone and sandstone rock clasts, intensely weathered @3': Rootlets	CR
895	5			S-1		7 12 13			MLc	@5': Sandy SILT, mottled olive brown to yellowish brown, moist, hard, few clay, massive, fine to medium sand, abundant light gray rock clasts @5.8' to 6'	
890	10			S-2-1 S-2-2		4 7 8			SC SC	@10': Clayey SAND, olive brown, medium dense, fine to medium sand @10.75': Clayey SAND, dark brown, with rusty reddish brown staining, moist, medium dense, rootlets, plastic	-200 -200
885	15			S-3		6 6 6			SCg	**Quaternary Age Young Alluvial Fan Deposits (Qyf):** @15': Clayey SAND, light reddish brown, moist, medium dense, few coarse gravels, trace to few pinhole pores, very consistent sample	
880	20			S-4		2 3 3				@20': Loose, with fine siltstone and sandstone clasts, fine to medium grained, abundant pinhole porosity @22.28': Groundwater encountered during drilling; rose to 22.01' after 30 minutes	
875	25			S-5		1 3 4				@25': Dark reddish brown, wet, loose to medium dense	
870	30										

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
- DS DIRECT SHEAR
- EI EXPANSION INDEX
- H HYDROMETER
- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
- RV R VALUE
- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LP-1

Project No.	30477	**Date Drilled**	3-11-25
Project	Intracorp Diamond Bar Montefino	**Logged By**	JWJ/MDK
Drilling Co.	Martini Drilling Corporation	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	900'
Location	See Figure 2: Exploration Location Map	**Sampled By**	JWJ/MDK

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
870	30			S-6		Push 2 2			SC	@30': Clayey SAND, light reddish brown to medium gray, wet, loose, fine to medium grained	
865	35			S-7		3 5 7			Tps	**Puente Formation, Soquel Member (Tps):** @35': Interbedded CLAYSTONE and SANDSTONE, yellow brown to pale yellow brown to olive gray, very moist, medum dense, intensely weathered @35' to 36', less weathered @36' to 36.5'	
860	40									**Total Depth: 36.5 feet bgs** **Groundwater initially encountered at 22.28 feet, rose to 22.01 feet after 30 minutes.** **Step-over 4.3 feet south, redrilled to 12 feet bgs and installed Percolation Test Boring LP-1:** **0.020-inch slotted screen 2-inch diameter PVC pipe installed from 7 to 12 feet;** **Solid PVC riser pipe from 7 feet to ground surface;** **Annular space filled with sand filter pack to 6 feet bgs.** **Upon Completion of testing, the boring was backfilled with soil cuttings, tamped, and patched with cold mix asphalt concrete.**	
855	45										
850	50										
845	55										
840	60										

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
- CU UNDRAINED TRIAXIAL
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- MD MAXIMUM DENSITY
- PP POCKET PENETROMETER
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- SA SIEVE ANALYSIS
- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

GEOTECHNICAL BORING LOG LP-2

Project No.	30477	**Date Drilled**	3-11-25
Project	Intracorp Diamond Bar Montefino	**Logged By**	JWJ/MDK
Drilling Co.	Martini Drilling Corporation	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	900'
Location	See Figure 2: Exploration Location Map	**Sampled By**	JWJ/MDK

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
900	0									@0': 5-inches Asphalt Concrete over 5-inches Aggregate Base	
				BB-1					SPg	**Artificial Fill, certified (Afc):** @0.83': Poorly-graded SAND with gravel, light yellow brown to light reddish brown, moist, fine to medium sand	
895	5			S-1		9 12 8			SM	@5': Medium dense to dense, with some yellow orange brown sandstone and siltstone rock clasts @6': Silty SAND, medium gray, moist, medium dense to dense, fine sand	
890	10			S-2		3 5 7			SC	@10': Clayey SAND with gravel, olive brown, moist, medium dense, with fine gravel sized siltstone and sandstone clasts	-200
885	15			S-3		1 3 8			CLs	**Quaternary Age Young Alluvial Fan Deposits (Qyf):** @15.5': Sandy Lean CLAY, dark gray to black, moist, very stiff, faint organic odor	
880	20			S-4		2 2 4			SCg	@20': Clayey SAND with gravel, reddish brown to dark reddish brown, mottled, moist, loose, with fine siltstone and sandstone rock clasts	-200
875	25			S-5		3 6 10				@25': Mottled reddish brown and medium gray, medium dense, MnO staining, FeO staining	
870	30										

This Soil Description applies only to a location of the exploration at the time of sampling. Subsurface conditions may differ at other locations and may change with time. The description is a simplification of the actual conditions encountered. Transitions between soil types may be gradual.

SAMPLE TYPES:
- B BULK SAMPLE
- C CORE SAMPLE
- G GRAB SAMPLE
- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:
- -200 % FINES PASSING
- AL ATTERBERG LIMITS
- CN CONSOLIDATION
- CO COLLAPSE
- CR CORROSION
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GEOTECHNICAL BORING LOG LP-2

Project No.	30477	**Date Drilled**	3-11-25
Project	Intracorp Diamond Bar Montefino	**Logged By**	JWJ/MDK
Drilling Co.	Martini Drilling Corporation	**Hole Diameter**	8"
Drilling Method	Hollow Stem Auger - 140lb - Autohammer - 30" Drop	**Ground Elevation**	900'
Location	See Figure 2: Exploration Location Map	**Sampled By**	JWJ/MDK

Elevation Feet	Depth Feet	Graphic Log (N S)	Attitudes	Sample No.	Bulk / Driven	Blows Per 6 Inches	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	SOIL DESCRIPTION	Type of Tests
870	30			S-6		3 6 10			SC	@30': Clayey SAND, dark reddish brown, wet, medium dense, fine to medium sand, some silt @33.10': Groundwater encountered during drilling, rose to 31.65' in 15 minutes	
865	35			S-7		3 6 11			Tps	**Puente Formation, Soquel Member (Tps):** @35': Interbedded CLAYSTONE and SANDSTONE, olive gray to light yellow brown, very moist, very stiff, moderate to high plasticity, intensely weathered	
860	40									**Total Depth: 36.5 feet bgs** **Groundwater initially encountered at 33.10 feet, rose to 31.65 feet after 15 minutes.** **Boring backfilled with bentonite chips and hydrated from 36.5 feet to 20 feet and installed Percolation Test Boring LP-2:** **0.020-inch slotted screen 2-inch diameter PVC pipe installed from 10 to 20 feet;** **Solid PVC riser pipe from 10 feet to ground surface;** **Annular space filled with sand filter pack to 8 feet bgs.** **Upon Completion of testing, the boring was backfilled with soil cuttings, tamped, and patched with cold mix asphalt concrete.**	
855	45										
850	50										
845	55										
840	60										

SAMPLE TYPES:

- B BULK SAMPLE
- C CORE SAMPLE
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- R RING SAMPLE
- S SPLIT SPOON SAMPLE
- T TUBE SAMPLE

TYPE OF TESTS:

- -200 % FINES PASSING
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- SE SAND EQUIVALENT
- SG SPECIFIC GRAVITY
- UC UNCONFINED COMPRESSIVE STRENGTH

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*** This log is a part of a report by Leighton and should not be used as a stand-alone document. ***

Appendix B

Percolation Test Results

Boring Percolation Test Data Sheet

Project Number:	30477	**Test Hole Number:**	LP-1
Project Name:	Intracorp Montefino	**Date Excavated:**	3/11/2024
Earth Description:	CL	**Date Tested:**	3/12/2025
Liquid Description:	Tap water	**Depth of boring (ft):**	12
Tested By:	JK	**Radius of boring (in):**	4
Time Interval Standard		**Radius of casing (in):**	1
Start Time for Pre-Soak:	3/11/25 11:15 AM	**Length of slotted of casing (ft):**	5
Start Time for Standard:	3/12/25 7:43 AM	**Depth to Initial Water Depth (ft):**	7
Standard Time Interval		**Porosity of Annulus Material, *n* :**	0.35
Between Readings, mins:	30	**Bentonite Plug at Bottom:**	no

Percolation Data

Reading	Time	Time Interval, Δt (min.)	Initial/Final Depth to Water (ft.)	Initial/Final Water Height, H_0/H_f (in.)	Total Water Drop, Δd (in.)	Infiltration Rate (in./hr.)
1	7:43	30	7.09	58.9	0.7	0.02
	8:13		7.15	58.2		
2	8:13	30	7.15	58.2	1.2	0.03
	8:43		7.25	57.0		
3	8:43	30	7.25	57.0	0.5	0.01
	9:13		7.29	56.5		
4	9:13	30	7.29	56.5	1.1	0.03
	9:43		7.38	55.4		
5	9:45	30	7.38	55.4	0.1	0.00
	10:15		7.39	55.3		
6	10:15	30	7.39	55.3	0.6	0.02
	10:45		7.44	54.7		
7	10:45	30	6.44	66.7	1.0	0.02
	11:15		6.52	65.8		
8	11:15	30	6.52	65.8	1.1	0.03
	11:45		6.61	64.7		

Infiltration Rate (I) = Discharge Volume/Surface Area of Test Section/Time Interval

Measured Infiltration Rate, I (Average of Last 3 ReadingsLast Readings) = **0.02** **in./hr.**

Design Infiltration Rate

Reduction Factor from Test Procedure, RF_t = 1

Reduction Factor for Site Variability, # of Tests and Investigation, RF_v = 1

Reduction Factor for Long Term Siltation, Plugging and Maintenance, RF_t = 1

Reduction Factor, $RF = RF_t \times RF_v \times RF_s$ = 3

Design Infiltration Rate = Measured Infiltration Rate / Reduction Factor (RF) = **0.01** **in./hr.**

Boring Percolation Test Data Sheet

Project Number:	30477	**Test Hole Number:**	LP-2
Project Name:	Intracorp Montefino	**Date Excavated:**	3/11/2025
Earth Description:	CL	**Date Tested:**	3/12/2025
Liquid Description:	Tap water	**Depth of boring (ft):**	20
Tested By:	JK	**Radius of boring (in):**	4
Time Interval Standard		**Radius of casing (in):**	1
Start Time for Pre-Soak:	3/11/25 11:00 AM	**Length of slotted of casing (ft):**	10
Start Time for Standard:	3/12/25 7:35 AM	**Depth to Initial Water Depth (ft):**	10
Standard Time Interval		**Porosity of Annulus Material, *n* :**	0.35
Between Readings, mins:	30	**Bentonite Plug at Bottom:**	yes

Percolation Data

Reading	Time	Time Interval, Δt (min.)	Initial/Final Depth to Water (ft.)	Initial/Final Water Height, H_0/H_f (in.)	Total Water Drop, Δd (in.)	Infiltration Rate (in./hr.)
1	7:35	30	10.01	119.9	0.1	0.00
	8:05		10.02	119.8		
2	8:05	30	10.02	119.8	0.1	0.00
	8:35		10.03	119.6		
3	8:35	30	10.03	119.6	0.1	0.00
	9:05		10.04	119.5		
4	9:05	30	10.04	119.5	0.1	0.00
	9:35		10.05	119.4		
5	9:35	30	10.05	119.4	0.1	0.00
	10:05		10.06	119.3		
6	10:05	30	10.06	119.3	0.1	0.00
	10:35		10.07	119.2		
7	10:35	30	10.07	119.2	0.1	0.00
	11:05		10.08	119.0		
8	11:05	30	10.08	119.0	0.1	0.00
	11:35		10.09	118.9		

Infiltration Rate (I) = Discharge Volume/Surface Area of Test Section/Time Interval

Measured Infiltration Rate, I (Average of Last 3 ReadingsLast Readings) = **0.00** **in./hr.**

Design Infiltration Rate

Reduction Factor from Test Procedure, RF_t = 1

Reduction Factor for Site Variability, # of Tests and Investigation, RF_v = 1

Reduction Factor for Long Term Siltation, Plugging and Maintenance, RF_t = 1

Reduction Factor, $RF = RF_t \times RF_v \times RF_s$ = 3

Design Infiltration Rate = Measured Infiltration Rate / Reduction Factor (RF) = **0.00** **in./hr.**

Appendix C

Laboratory Test Results

Boring No.	LP-1	LP-1	LP-2	LP-2				
Sample No.	S-2-1	S-2-2	S-2	S-4				
Depth (ft.)	10.0	10.8	10.0	20				
Sample Type	SPT	SPT	SPT	SPT				
Soil Identification	Olive brown clayey sand (SC)	Dark brown clayey sand (SC)	Olive brown clayey sand (SC)	Brown clayey sand (SC)				
Moisture Correction								
Wet Weight of Soil + Container (g)	0.00	0.00	0.00	0.00				
Dry Weight of Soil + Container (g)	0.00	0.00	0.00	0.00				
Weight of Container (g)	1.00	1.00	1.00	1.00				
Moisture Content (%)	0.00	0.00	0.00	0.00				
Sample Dry Weight Determination								
Weight of Sample + Container (g)	416.67	402.19	649.00	622.86				
Weight of Container (g)	82.47	72.30	77.89	75.38				
Weight of Dry Sample (g)	334.20	329.89	571.11	547.48				
Container No.:								
After Wash								
Method (A or B)	B	A	B	B				
Dry Weight of Sample + Cont. (g)	345.88	251.39	460.92	368.15				
Weight of Container (g)	82.47	72.30	77.89	75.38				
Dry Weight of Sample (g)	263.41	179.09	383.03	292.77				
% Passing No. 200 Sieve	**21.2**	**45.7**	**32.9**	**46.5**				
% Retained No. 200 Sieve	78.8	54.3	67.1	53.5				

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PERCENT PASSING
No. 200 SIEVE
ASTM D 1140

Project Name: 1400 Montefino Diamond Bar

Project No.: 036.0000030477

Tested By: J. Domingo Date: 03/18/25

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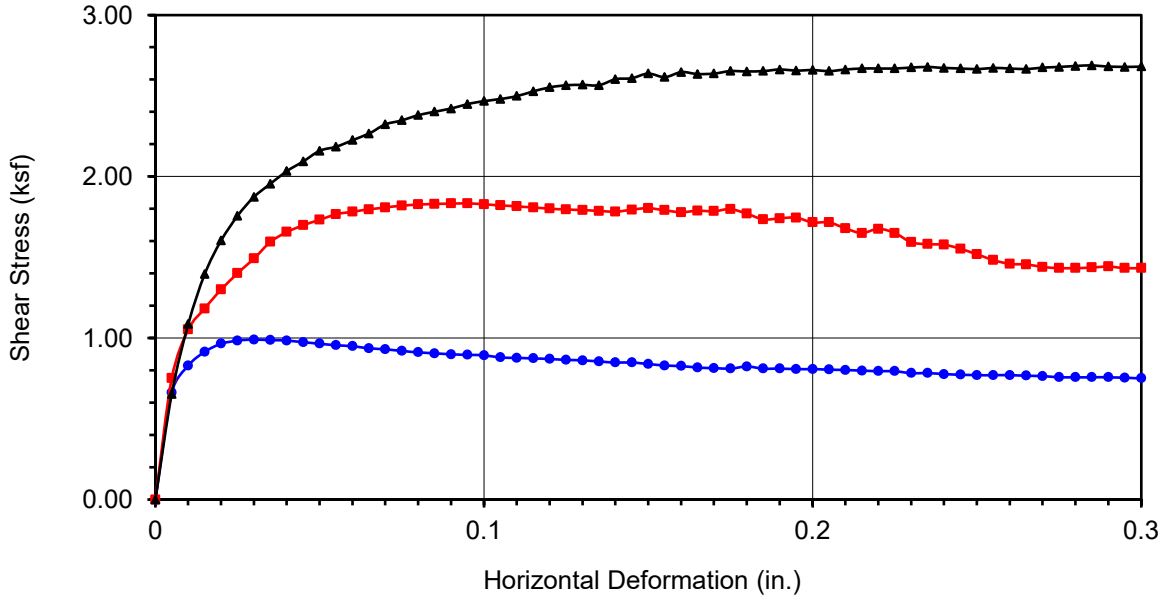
DIRECT SHEAR TEST

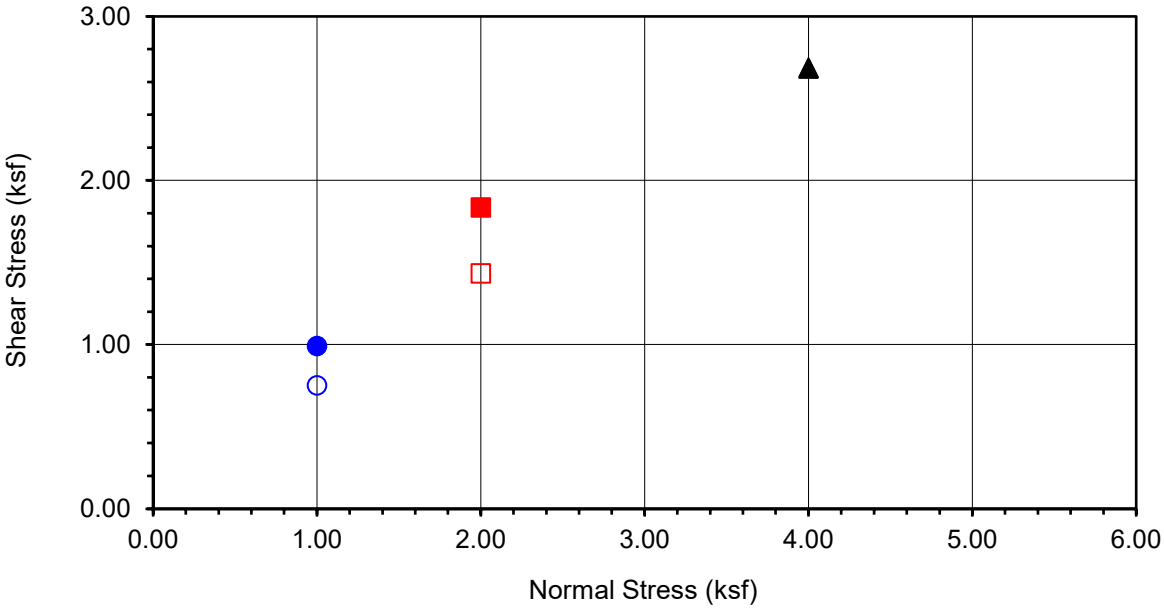
Consolidated Drained - ASTM D 3080

Project Name:	1400 Montefino Diamond Bar	Tested By:	G. Bathala	Date:	07/09/25
Project No.:	036.0000030477	Checked By:	A. Santos	Date:	07/14/25
Boring No.:	HA-1, HA-2	Sample Type:	90% Remold		
Sample No.:	BB-1, BB-2 Composite	Depth (ft.):	0-5		

Soil Identification: Olive brown sandy lean clay with gravel s(CL)g, noted organics

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	180.02	183.32	183.90
Weight of Ring(gm):	41.88	44.92	45.35
Before Shearing			
Weight of Wet Sample+Cont.(gm):	178.93	178.93	178.93
Weight of Dry Sample+Cont.(gm):	163.40	163.40	163.40
Weight of Container(gm):	61.20	61.20	61.20
Vertical Rdg.(in): Initial	0.0000	0.2512	0.2331
Vertical Rdg.(in): Final	-0.0109	0.2684	0.2612
After Shearing			
Weight of Wet Sample+Cont.(gm):	220.31	203.47	218.00
Weight of Dry Sample+Cont.(gm):	192.27	176.61	189.97
Weight of Container(gm):	74.16	57.45	72.15
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**HA-1, HA-2**
Sample No.	**BB-1, BB-2 C**
Depth (ft)	**0-5**
Sample Type: 90% Remold	
Soil Identification: Olive brown sandy lean clay with gravel s(CL)g, noted organics	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 0.990	■ 1.834	▲ 2.688
Shear Stress @ End of Test (ksf)	○ 0.751	□ 1.434	△ 2.682
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	15.20	15.20	15.20
Dry Density (pcf)	99.7	99.9	100.0
Saturation (%)	59.4	59.7	59.9
Soil Height Before Shearing (in.)	0.9891	0.9828	0.9719
Final Moisture Content (%)	23.7	22.5	23.8

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DIRECT SHEAR TEST RESULTS

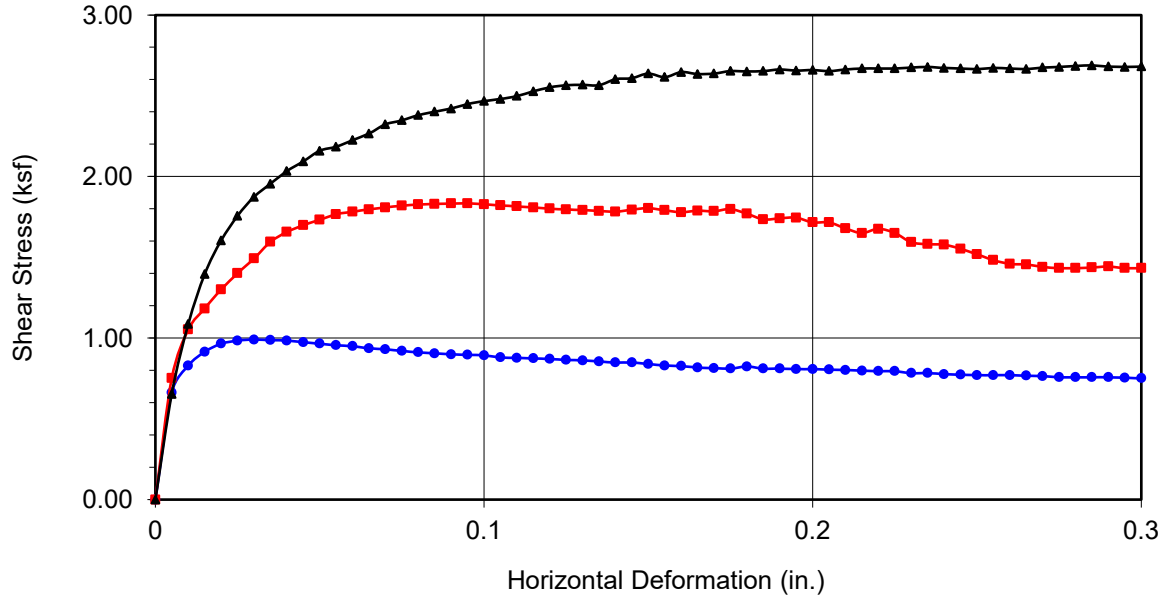
Consolidated Drained - ASTM D 3080

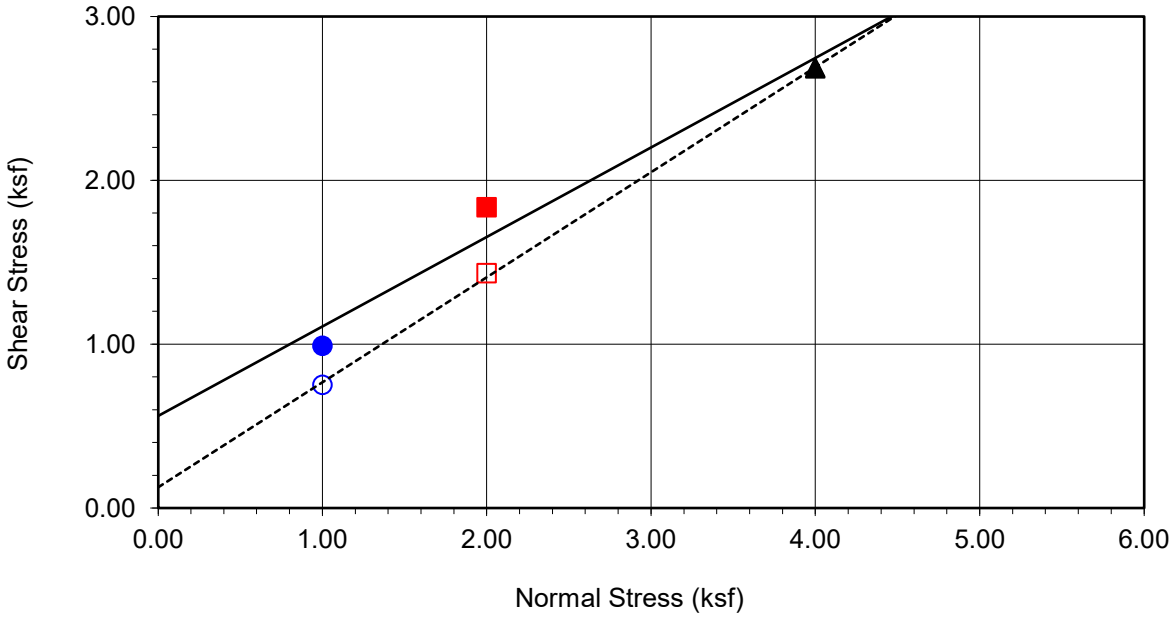
Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25

DS HA-1, HA-2; BB-1, BB-2 Composite @ 0-5





Boring No.	**HA-1, HA-2**
Sample No.	**BB-1, BB-2 C**
Depth (ft)	**0-5**
Sample Type:	90% Remold
Soil Identification:	Olive brown sandy lean clay with gravel s(CL)g, noted

Strength Parameters

	C (psf)	ϕ (°)
Peak	563	29
Ultimate	127	33

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 0.990	■ 1.834	▲ 2.688
Shear Stress @ End of Test (ksf)	○ 0.751	□ 1.434	△ 2.682
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	15.20	15.20	15.20
Dry Density (pcf)	99.7	99.9	100.0
Saturation (%)	59.4	59.7	59.9
Soil Height Before Shearing (in.)	0.9891	0.9828	0.9719
Final Moisture Content (%)	23.7	22.5	23.8

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DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25

DS HA-1, HA-2; BB-1, BB-2 Composite @ 0-5

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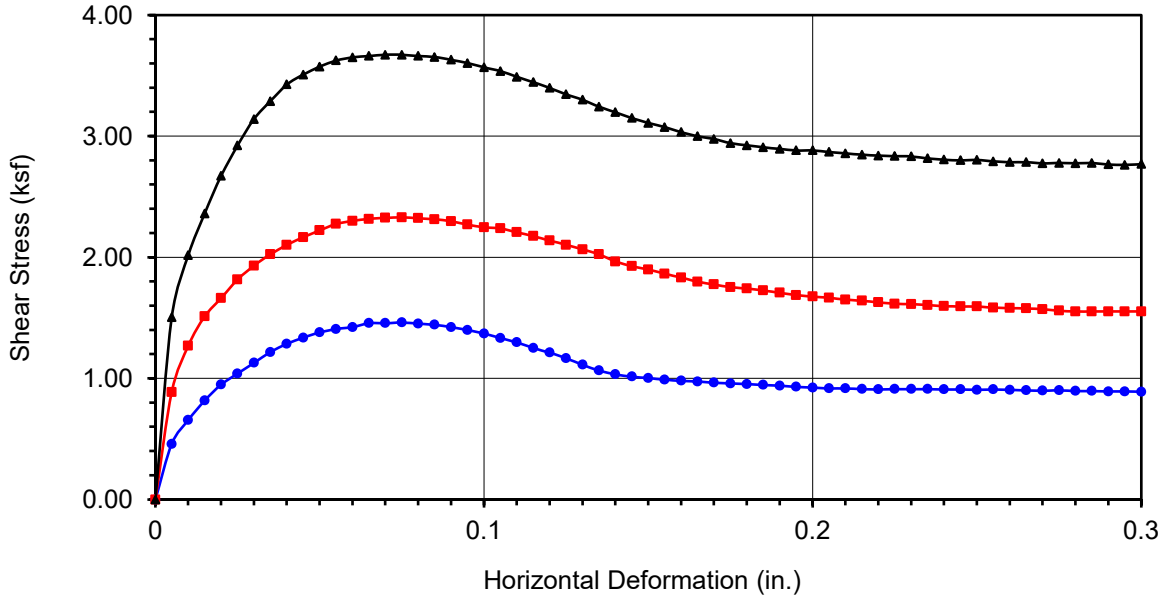
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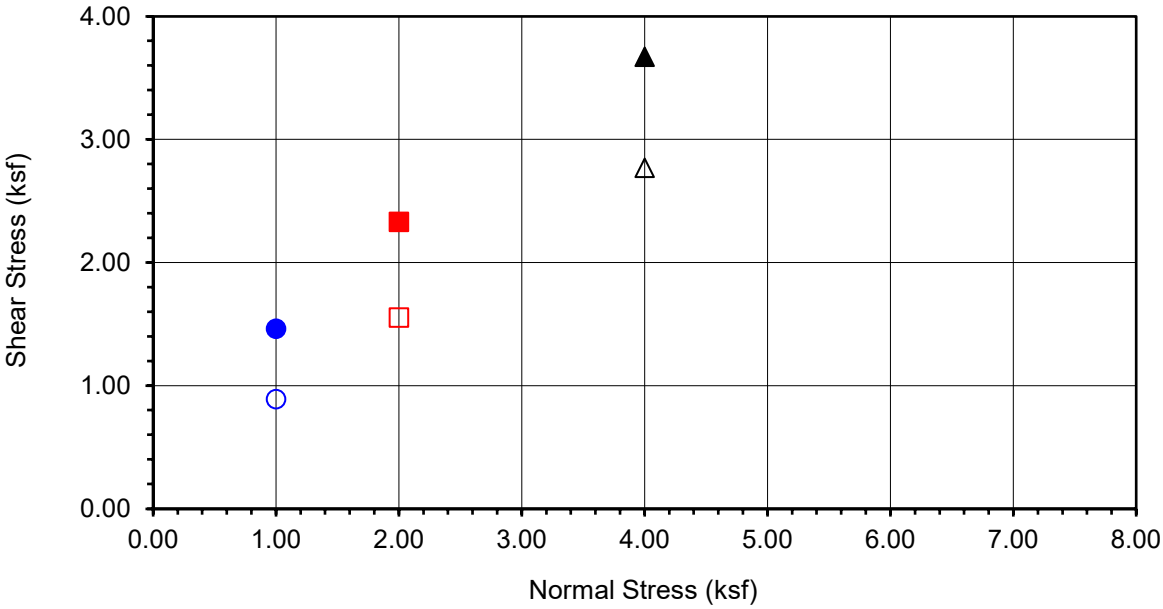
Consolidated Drained - ASTM D 3080

Project Name:	1400 Montefino Diamond Bar	Tested By:	G. Bathala	Date:	07/08/25
Project No.:	036.0000030477	Checked By:	A. Santos	Date:	07/10/25
Boring No.:	LB-3	Sample Type:	Ring		
Sample No.:	R-3	Depth (ft.):	10.0		

Soil Identification: Brown sandy lean clay s(CL)

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	200.40	205.18	206.96
Weight of Ring(gm):	42.10	42.86	42.07
Before Shearing			
Weight of Wet Sample+Cont.(gm):	191.77	191.77	191.77
Weight of Dry Sample+Cont.(gm):	175.82	175.82	175.82
Weight of Container(gm):	57.18	57.18	57.18
Vertical Rdg.(in): Initial	0.0000	0.2301	0.2607
Vertical Rdg.(in): Final	-0.0085	0.2419	0.2783
After Shearing			
Weight of Wet Sample+Cont.(gm):	226.18	228.58	227.76
Weight of Dry Sample+Cont.(gm):	203.29	206.01	205.78
Weight of Container(gm):	65.19	64.98	62.60
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**LB-3**
Sample No.	**R-3**
Depth (ft)	**10**
Sample Type:	
Ring	
Soil Identification:	
Brown sandy lean clay s(CL)	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.462	■ 2.330	▲ 3.672
Shear Stress @ End of Test (ksf)	○ 0.890	□ 1.553	△ 2.770
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	13.44	13.44	13.44
Dry Density (pcf)	116.0	119.0	120.9
Saturation (%)	80.2	87.1	92.0
Soil Height Before Shearing (in.)	0.9915	0.9882	0.9824
Final Moisture Content (%)	16.6	16.0	15.4

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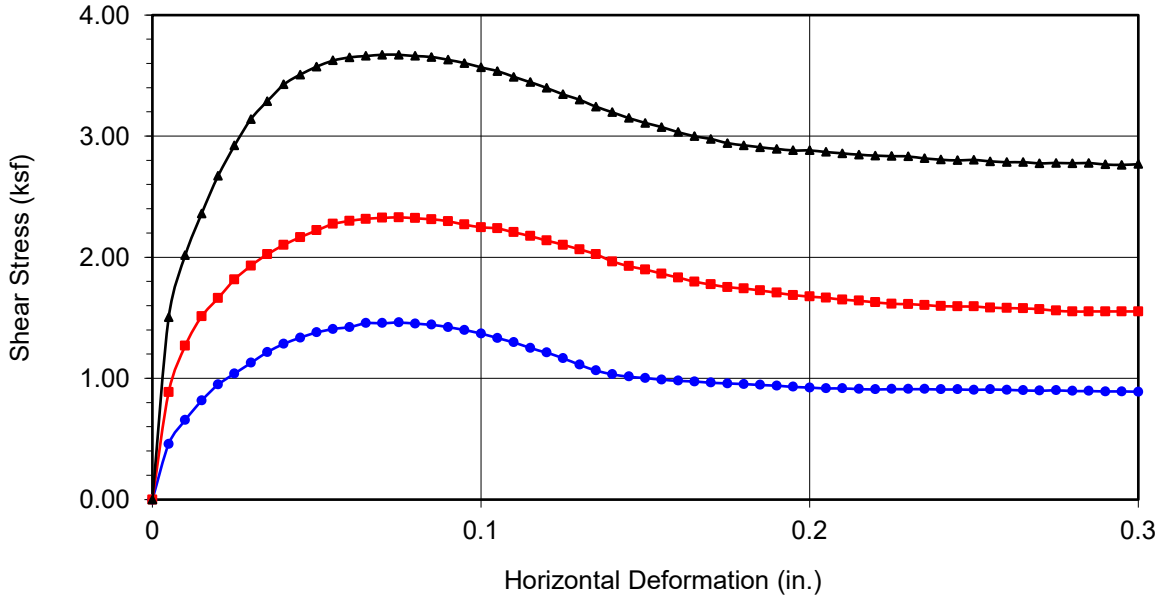
DIRECT SHEAR TEST RESULTS

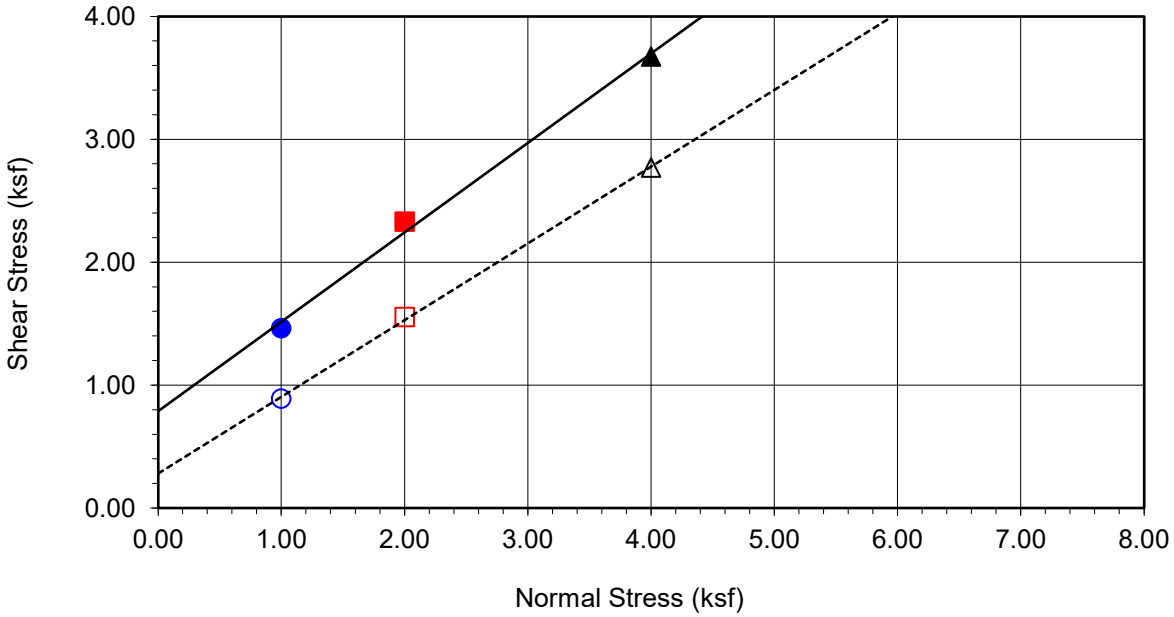
Consolidated Drained - ASTM D 3080

Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25





Boring No.	**LB-3**
Sample No.	**R-3**
Depth (ft)	**10**
Sample Type:	Ring
Soil Identification: Brown sandy lean clay s(CL)	

Strength Parameters

	C (psf)	ϕ (°)
Peak	791	36
Ultimate	282	32

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.462	■ 2.330	▲ 3.672
Shear Stress @ End of Test (ksf)	○ 0.890	□ 1.553	△ 2.770
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	13.44	13.44	13.44
Dry Density (pcf)	116.0	119.0	120.9
Saturation (%)	80.2	87.1	92.0
Soil Height Before Shearing (in.)	0.9915	0.9882	0.9824
Final Moisture Content (%)	16.6	16.0	15.4

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DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25

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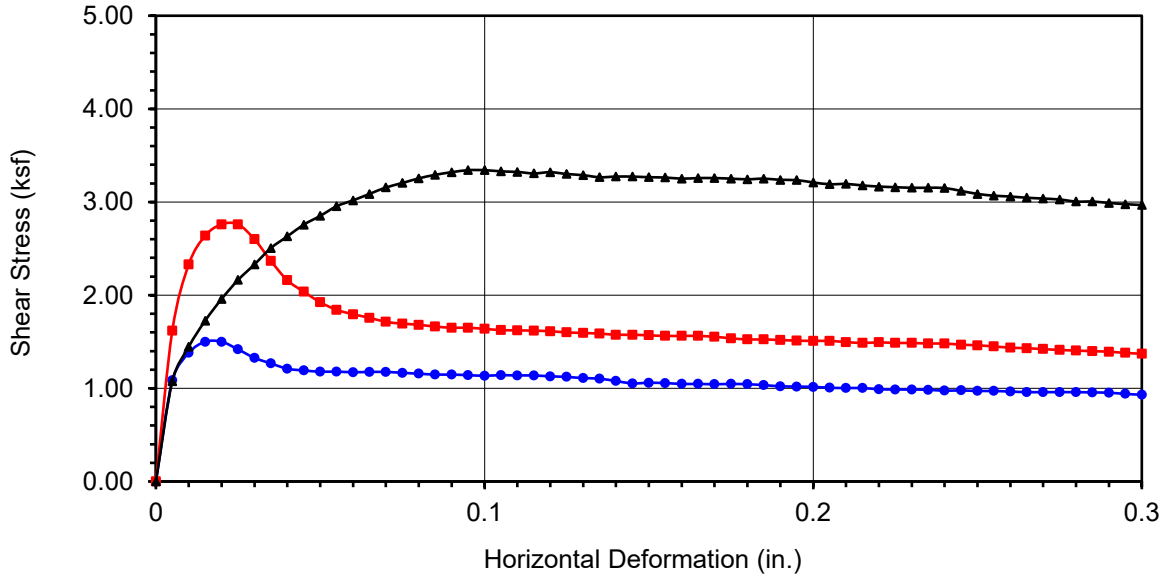
DIRECT SHEAR TEST

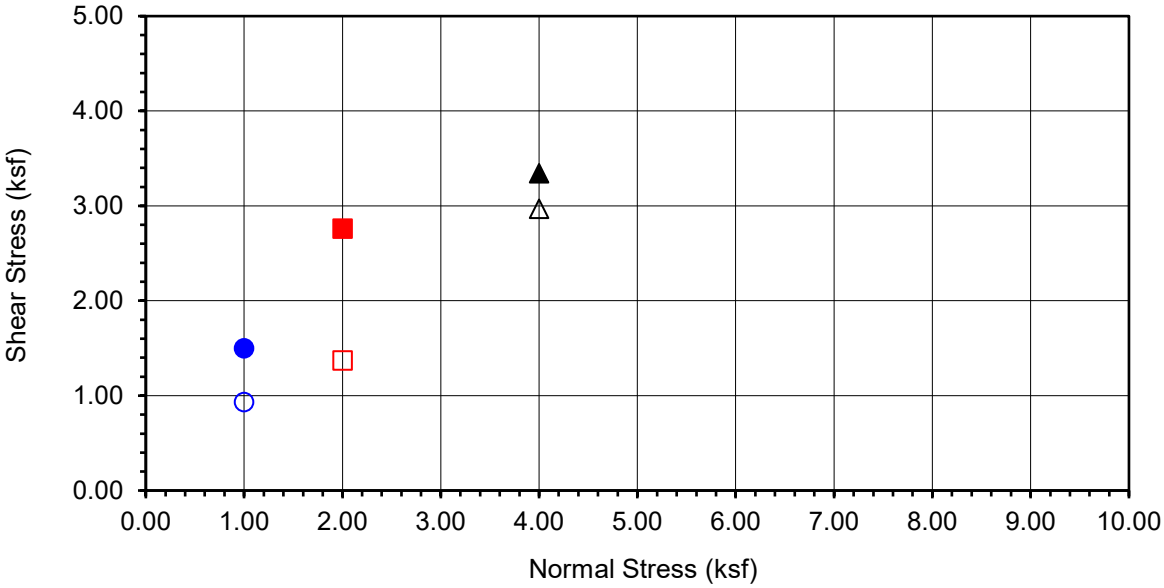
Consolidated Drained - ASTM D 3080

Project Name:	1400 Montefino Diamond Bar	Tested By:	G. Bathala	Date:	07/07/25
Project No.:	036.0000030477	Checked By:	J. Ward	Date:	07/24/25
Boring No.:	LB-2	Sample Type:	Ring		
Sample No.:	R-2	Depth (ft.):	7.5		

Soil Identification: Olive silty clay with sand (CL-ML)s

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	193.82	193.24	186.30
Weight of Ring(gm):	44.67	42.55	45.47
Before Shearing			
Weight of Wet Sample+Cont.(gm):	165.01	165.01	165.01
Weight of Dry Sample+Cont.(gm):	154.18	154.18	154.18
Weight of Container(gm):	62.59	62.59	62.59
Vertical Rdg.(in): Initial	0.0000	0.0000	0.2243
Vertical Rdg.(in): Final	-0.0041	-0.0066	0.2501
After Shearing			
Weight of Wet Sample+Cont.(gm):	208.65	203.85	197.15
Weight of Dry Sample+Cont.(gm):	180.44	172.67	167.89
Weight of Container(gm):	57.48	57.62	57.03
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Boring No.	**LB-2**
Sample No.	**R-2**
Depth (ft)	**7.5**
Sample Type: Ring	
Soil Identification: Olive silty clay with sand (CL-ML)s	

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.500	■ 2.760	▲ 3.342
Shear Stress @ End of Test (ksf)	○ 0.931	□ 1.371	△ 2.968
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	11.82	11.82	11.82
Dry Density (pcf)	110.9	112.1	104.7
Saturation (%)	61.4	63.3	52.4
Soil Height Before Shearing (in.)	0.9959	0.9934	0.9742
Final Moisture Content (%)	22.9	27.1	26.4

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DIRECT SHEAR TEST RESULTS

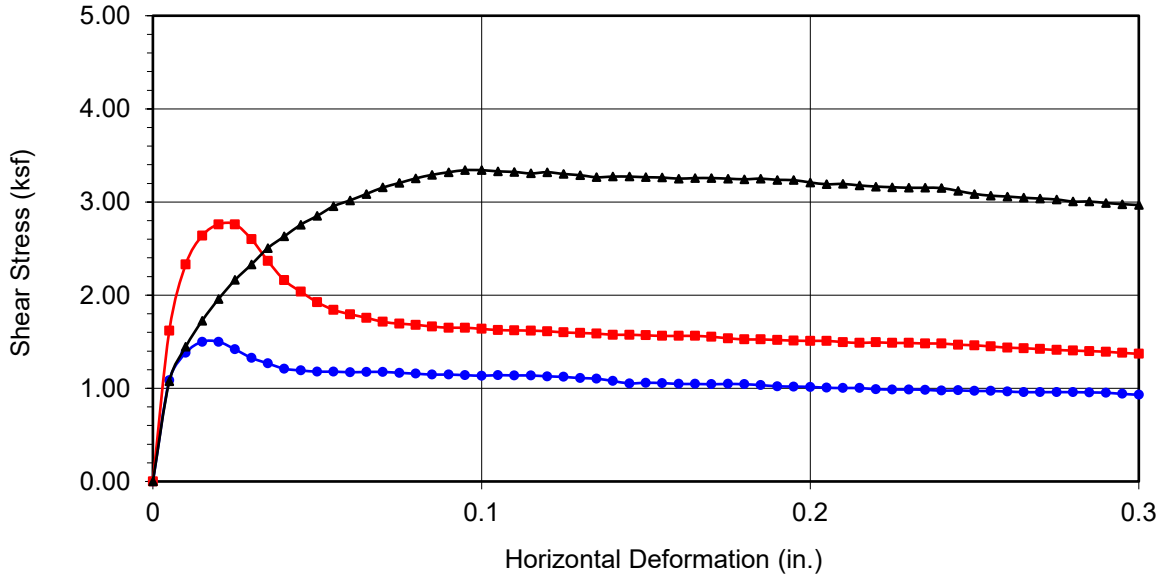
Consolidated Drained - ASTM D 3080

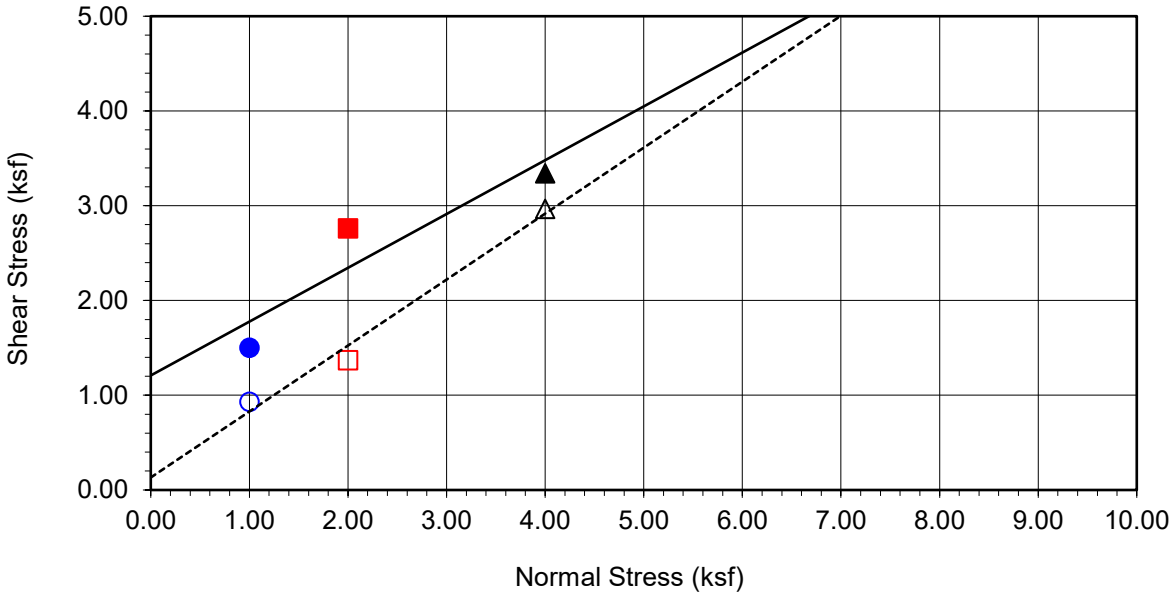
Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25

DS LB-2, R-2 @ 7.5, first pass only





Boring No.	**LB-2**
Sample No.	**R-2**
Depth (ft)	**7.5**
Sample Type:	Ring
Soil Identification:	Olive silty clay with sand (CL-ML)s

Strength Parameters

	C (psf)	ϕ (°)
Peak	1209	30
Ultimate	132	35

Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress (kip/ft²)	● 1.500	■ 2.760	▲ 3.342
Shear Stress @ End of Test (ksf)	○ 0.931	□ 1.371	△ 2.968
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	11.82	11.82	11.82
Dry Density (pcf)	110.9	112.1	104.7
Saturation (%)	61.4	63.3	52.4
Soil Height Before Shearing (in.)	0.9959	0.9934	0.9742
Final Moisture Content (%)	22.9	27.1	26.4

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DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25

DS LB-2, R-2 @ 7.5, first pass only

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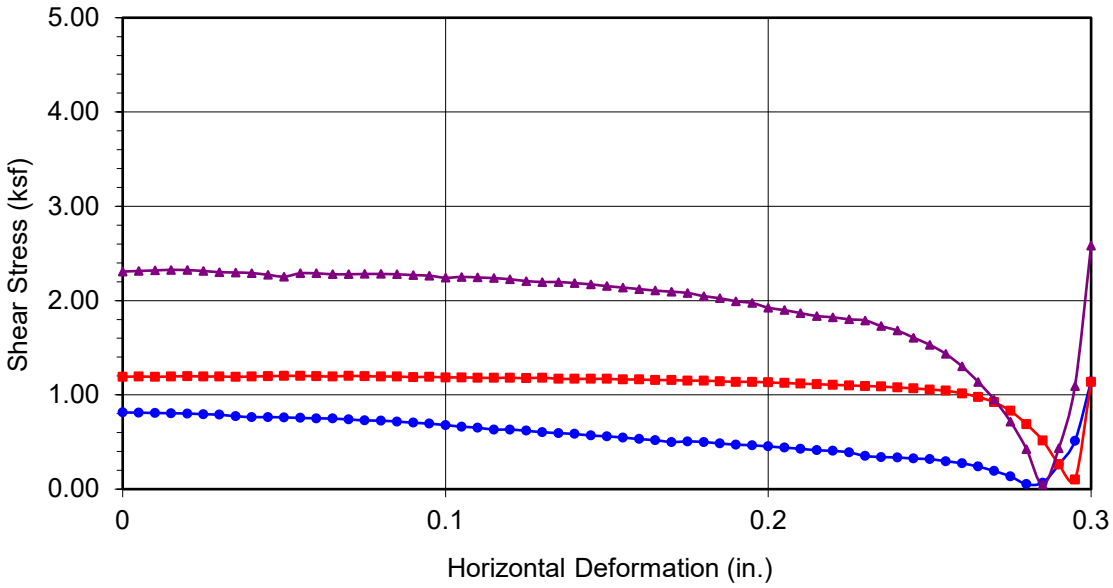
DIRECT SHEAR TEST

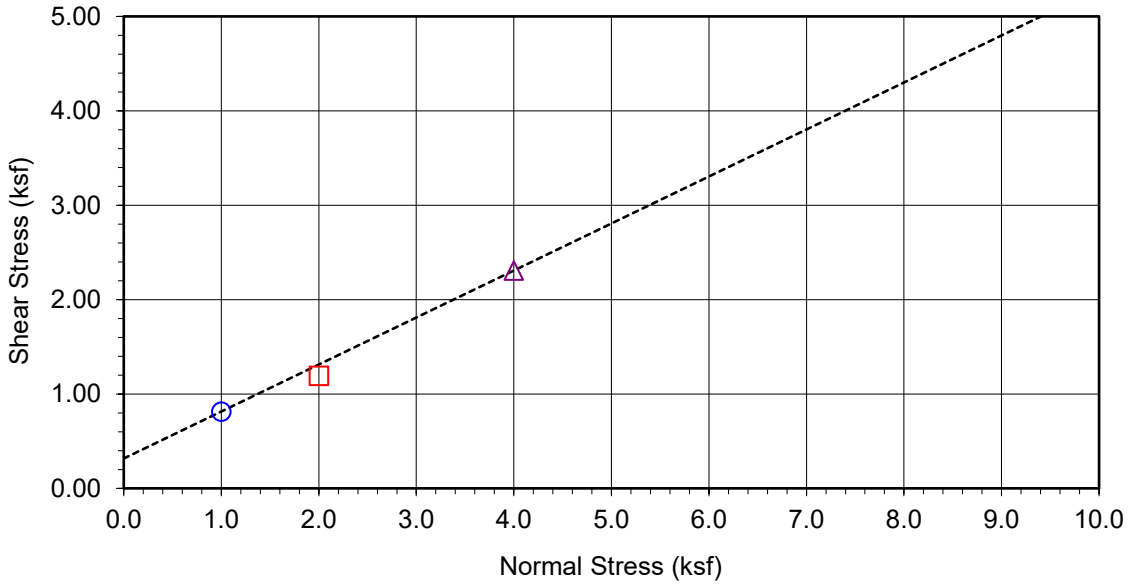
ASTM D3080

Project Name:	1400 Montefino Diamond Bar	Tested By:	G. Bathala	Date:	07/07/25
Project No.:	036.0000030477	Checked By:	J. Ward	Date:	07/14/25
Boring No.:	LB-2	Sample Type:	Ring		
Sample No.:	R-2	Depth (ft.):	7.5		

Sample Description: Olive silty clay with sand (CL-ML)s

Sample Diameter(in):	2.415	2.415	2.415
Sample Thickness(in.):	1.000	1.000	1.000
Weight of Sample + ring(gm):	193.82	193.24	186.30
Weight of Ring(gm):	44.67	42.55	45.47
Before Shearing			
Weight of Wet Sample+Cont.(gm):	165.01	165.01	165.01
Weight of Dry Sample+Cont.(gm):	154.18	154.18	154.18
Weight of Container(gm):	62.59	62.59	62.59
Vertical Rdg.(in): Initial	0.0000	0.0000	0.2243
Vertical Rdg.(in): Final	-0.0041	-0.0066	0.2501
After Shearing			
Weight of Wet Sample+Cont.(gm):	208.65	203.85	197.15
Weight of Dry Sample+Cont.(gm):	180.44	172.67	167.89
Weight of Container(gm):	57.48	57.62	57.03
Specific Gravity (Assumed):	2.70	2.70	2.70
Water Density(pcf):	62.43	62.43	62.43





Normal Stress (kip/ft²)	1.000	2.000	4.000
Peak Shear Stress, Pass 10 (kip/ft²)	● 1.144	■ 1.201	▲ 2.581
Shear Stress @ End of Pass 10 (ksf)	○ 0.814	□ 1.191	△ 2.308
Deformation Rate (in./min.)	0.0017	0.0017	0.0017
Initial Sample Height (in.)	1.000	1.000	1.000
Diameter (in.)	2.415	2.415	2.415
Initial Moisture Content (%)	11.82	11.82	11.82
Dry Density (pcf)	110.9	112.1	104.7
Saturation (%)	61.4	63.3	52.4
Soil Height Before Shearing (in.)	0.9959	0.9934	0.9742
Final Moisture Content (%)	22.9	27.1	26.4

DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

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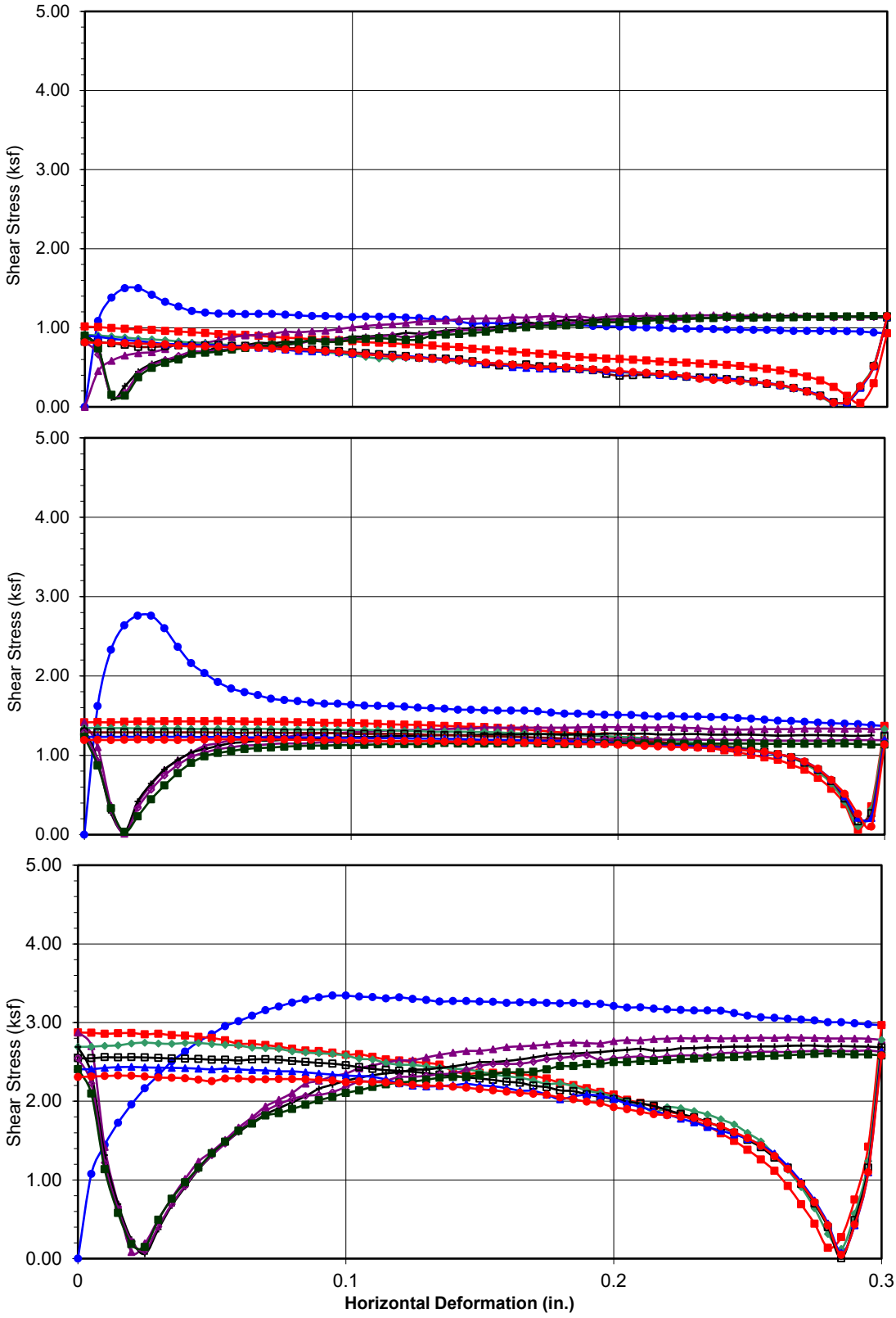
Boring No.:	LB-2
Sample No.:	R-2
Depth (ft)	7.5
Sample Type:	Ring
Soil Description:	Olive silty clay with sand (CL-ML)s

Project No.: 036.0000030477

1400 Montefino
Diamond Bar

07-25

DS w Residual LB-2, R-2 @ 7.5, rev 07-28-25, pass 10 only



Normal Stress (ksf) 1.00	
Shear Stress @ End of Pass (ksf)	
Pass No.	Shear Stress (ksf)
1	0.931
2	1.015
3	1.144
4	0.912
5	1.129
6	0.824
7	1.138
8	0.899
9	1.144
10	0.814

Normal Stress (ksf) 2.00	
Shear Stress @ End of Pass (ksf)	
Pass No.	Shear Stress (ksf)
1	1.371
2	1.415
3	1.330
4	1.342
5	1.242
6	1.289
7	1.191
8	1.232
9	1.135
10	1.191

Normal Stress (ksf) 4.00	
Shear Stress @ End of Pass (ksf)	
Pass No.	Shear Stress (ksf)
1	2.968
2	2.873
3	2.779
4	2.691
5	2.685
6	2.546
7	2.628
8	2.408
9	2.581
10	2.308
Pass 1-10	0.0017"/min

DIRECT SHEAR TEST RESULTS

Consolidated Drained - ASTM D 3080

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Boring No.:	LB-2
Sample No.:	R-2
Depth (ft)	7.5
Soil Type:	Ring
Soil Description:	Olive silty clay with sand (CL-ML)s

Project No.: 036.0000030477

1400 Montefino Diamond Bar

07-25

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TESTS for SULFATE CONTENT
CHLORIDE CONTENT and pH of SOILS

Project Name: 1400 Montefino Diamond Bar Tested By : G. Berdy Date: 03/19/25

Project No. : 036.0000030477 Checked By: A. Santos Date: 03/25/25

Boring No.	LP-1			
Sample No.	BB-1			
Sample Depth (ft)	0-5			
Soil Identification:	Olive (SC)g			
Wet Weight of Soil + Container (g)	0.00			
Dry Weight of Soil + Container (g)	0.00			
Weight of Container (g)	1.00			
Moisture Content (%)	0.00			
Weight of Soaked Soil (g)	100.64			

SULFATE CONTENT, DOT California Test 417, Part II

Beaker No.	3			
Crucible No.	302			
Furnace Temperature (°C)	860			
Time In / Time Out	7:00/7:45			
Duration of Combustion (min)	45			
Wt. of Crucible + Residue (g)	62.7808			
Wt. of Crucible (g)	62.7775			
Wt. of Residue (g) (A)	0.0033			
PPM of Sulfate (A) x 41150	135.79			
PPM of Sulfate, Dry Weight Basis	**136**			

CHLORIDE CONTENT, DOT California Test 422

ml of Extract For Titration (B)	5			
ml of AgNO3 Soln. Used in Titration (C)	0.6			
PPM of Chloride (C -0.2) * 100 * 30 / B	240			
PPM of Chloride, Dry Wt. Basis	**240**			

pH TEST, DOT California Test 643

pH Value	**7.25**			
Temperature °C	19.1			

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SOIL RESISTIVITY TEST

DOT CA TEST 643

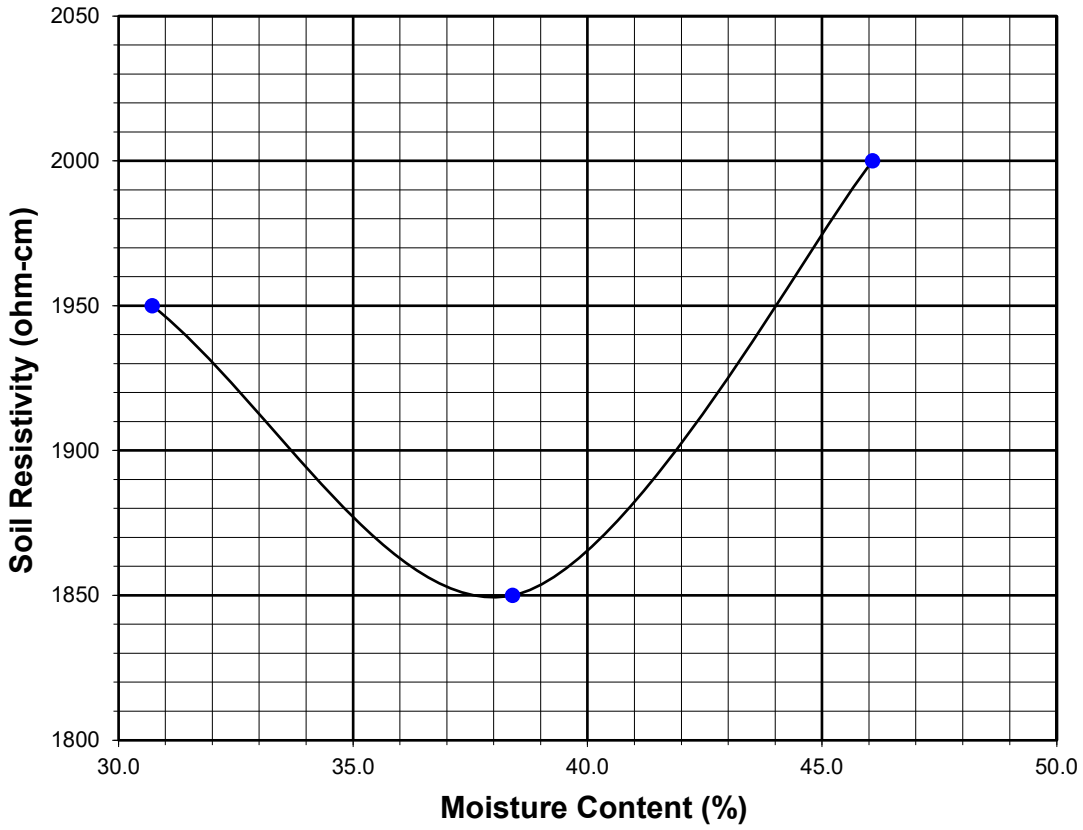
Project Name:	1400 Montefino Diamond Bar		Tested By :	G. Berdy	Date: 03/20/25
Project No. :	036.0000030477		Checked By:	A. Santos	Date: 03/25/25
Boring No.:	LP-1		Depth (ft.) :	0-5	
Sample No. :	BB-1				
Soil Identification:*	Olive (SC)g				

*California Test 643 requires soil specimens to consist only of portions of samples passing through the No. 8 US Standard Sieve before resistivity testing. Therefore, this test method may not be representative for coarser materials.

Specimen No.	Water Added (ml) (Wa)	Adjusted Moisture Content (MC)	Resistance Reading (ohm)	Soil Resistivity (ohm-cm)
1	40	30.72	1950	1950
2	50	38.40	1850	1850
3	60	46.08	2000	2000
4				
5				

Moisture Content (%) (MCi)	0.00
Wet Wt. of Soil + Cont. (g)	0.00
Dry Wt. of Soil + Cont. (g)	0.00
Wt. of Container (g)	1.00
Container No.	
Initial Soil Wt. (g) (Wt)	130.21
Box Constant	1.000
MC =(((1+Mci/100)x(Wa/Wt+1))-1)x100	

Min. Resistivity (ohm-cm)	Moisture Content (%)	Sulfate Content (ppm)	Chloride Content (ppm)	Soil pH	
				pH	Temp. (°C)
DOT CA Test 643		DOT CA Test 417 Part II	DOT CA Test 422	DOT CA Test 643	
1850	**38.2**	**136**	**240**	**7.25**	**19.1**



Appendix D

Liquefaction Analysis

Verdantas Inc.
2600 Michelson Drive, Suite 400
Irvine, California 92612
http://www.geologismiki.gr

Project title : Intracorp Diamond Bar Montefino

Location : 1400 Montefino Avenue, Diamond Bar, CA

Overall vertical settlements report

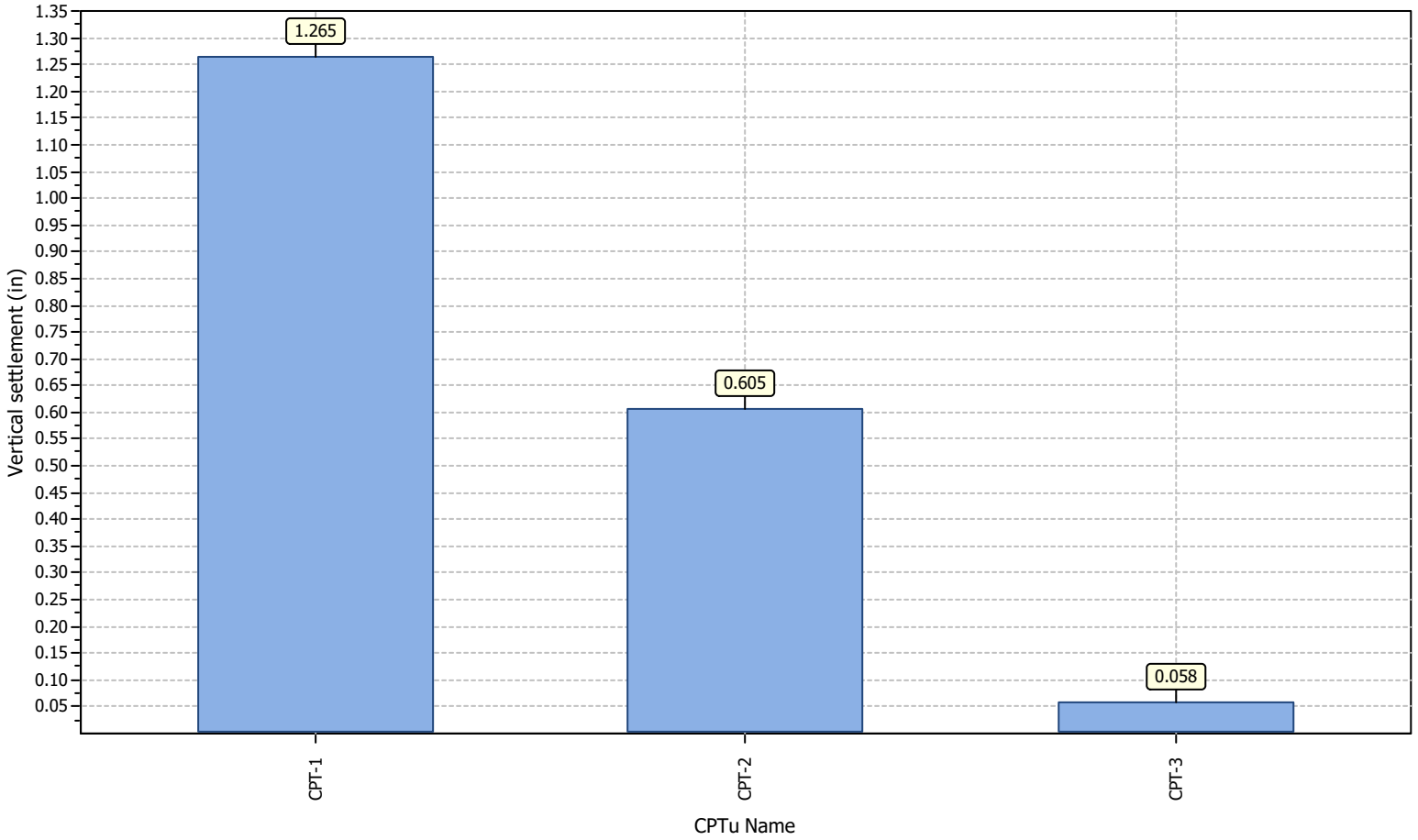


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Verdantas Inc.
2600 Michelson Drive, Suite 400
Irvine, California 92612
http://www.geologismiki.gr

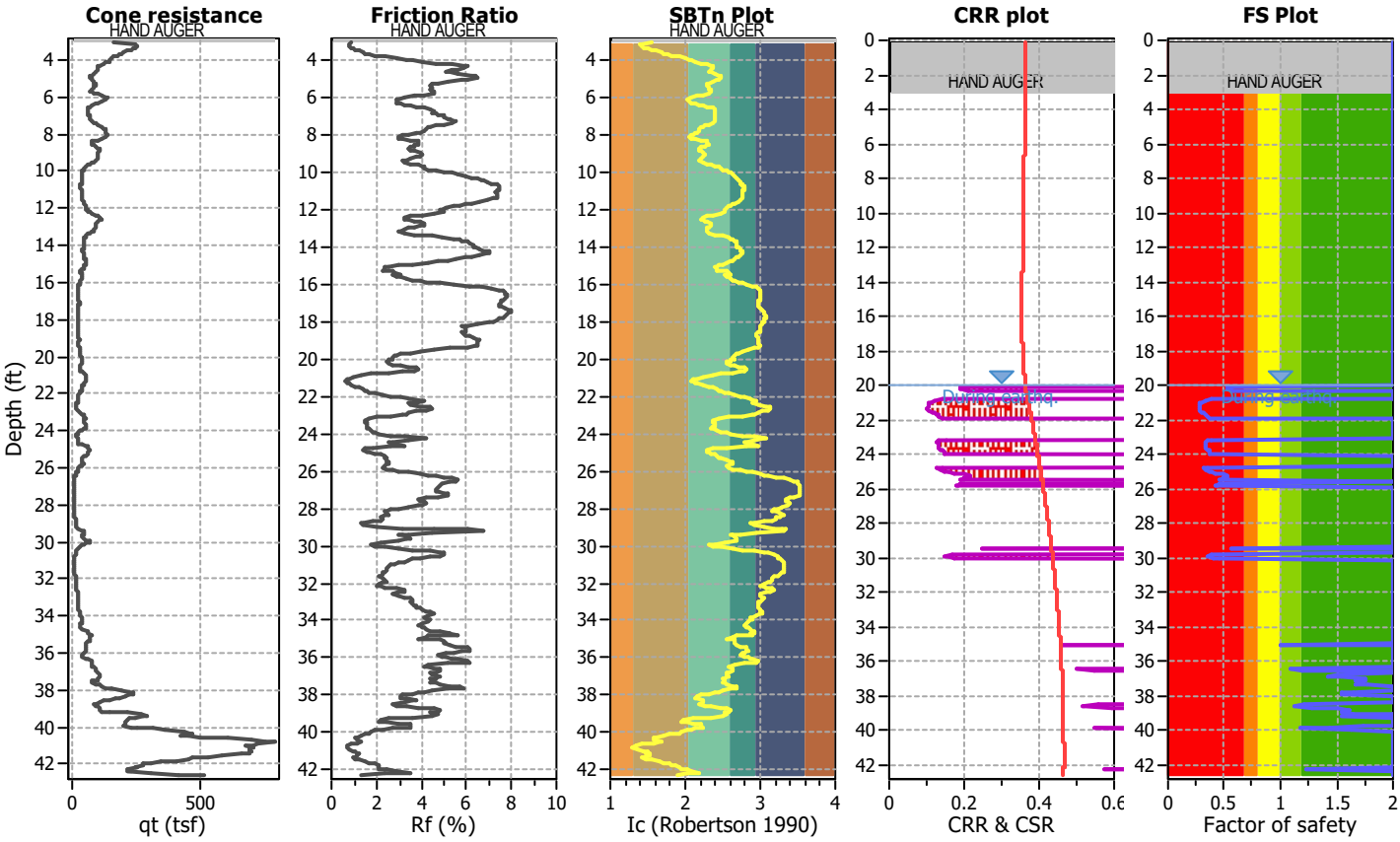
LIQUEFACTION ANALYSIS REPORT

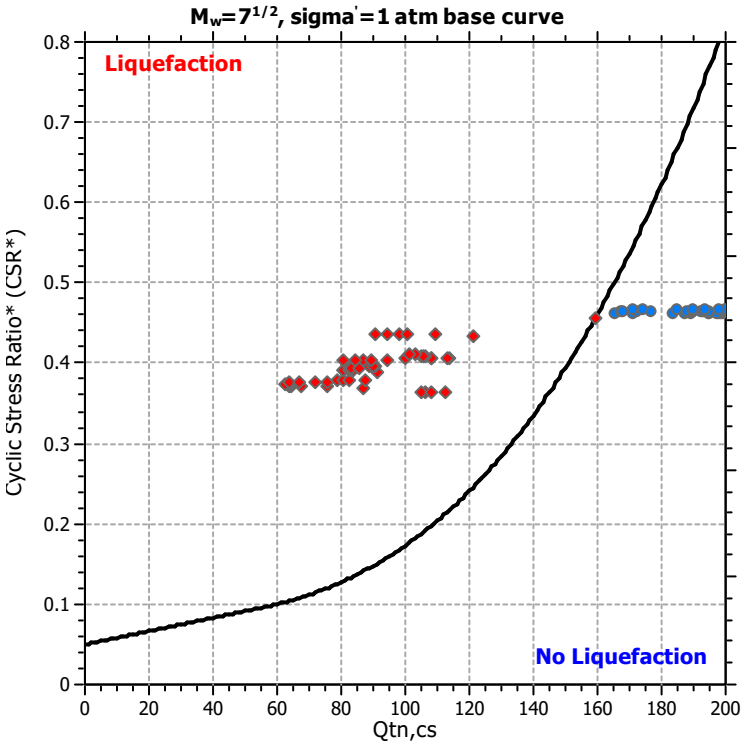
Project title : Intracorp Diamond Bar Montefino **Location : 1400 Montefino Avenue, Diamond Bar, CA**

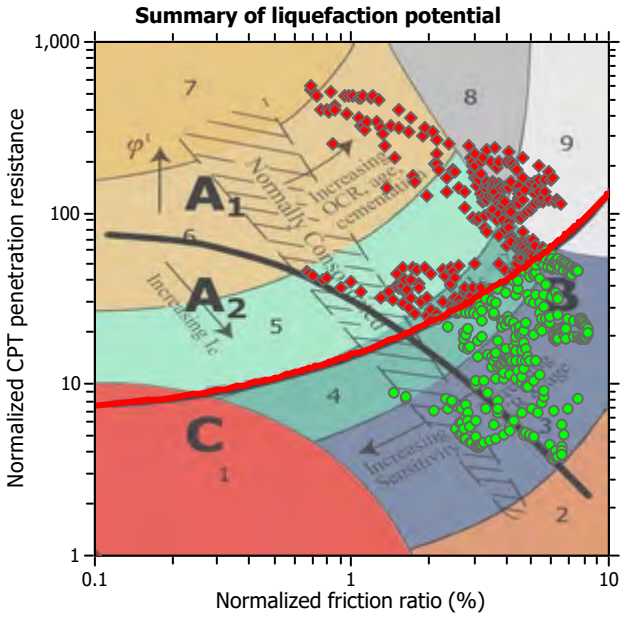
CPT file : CPT-1

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	20.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	45.00 ft
Earthquake magnitude M_w:	6.11	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.95	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

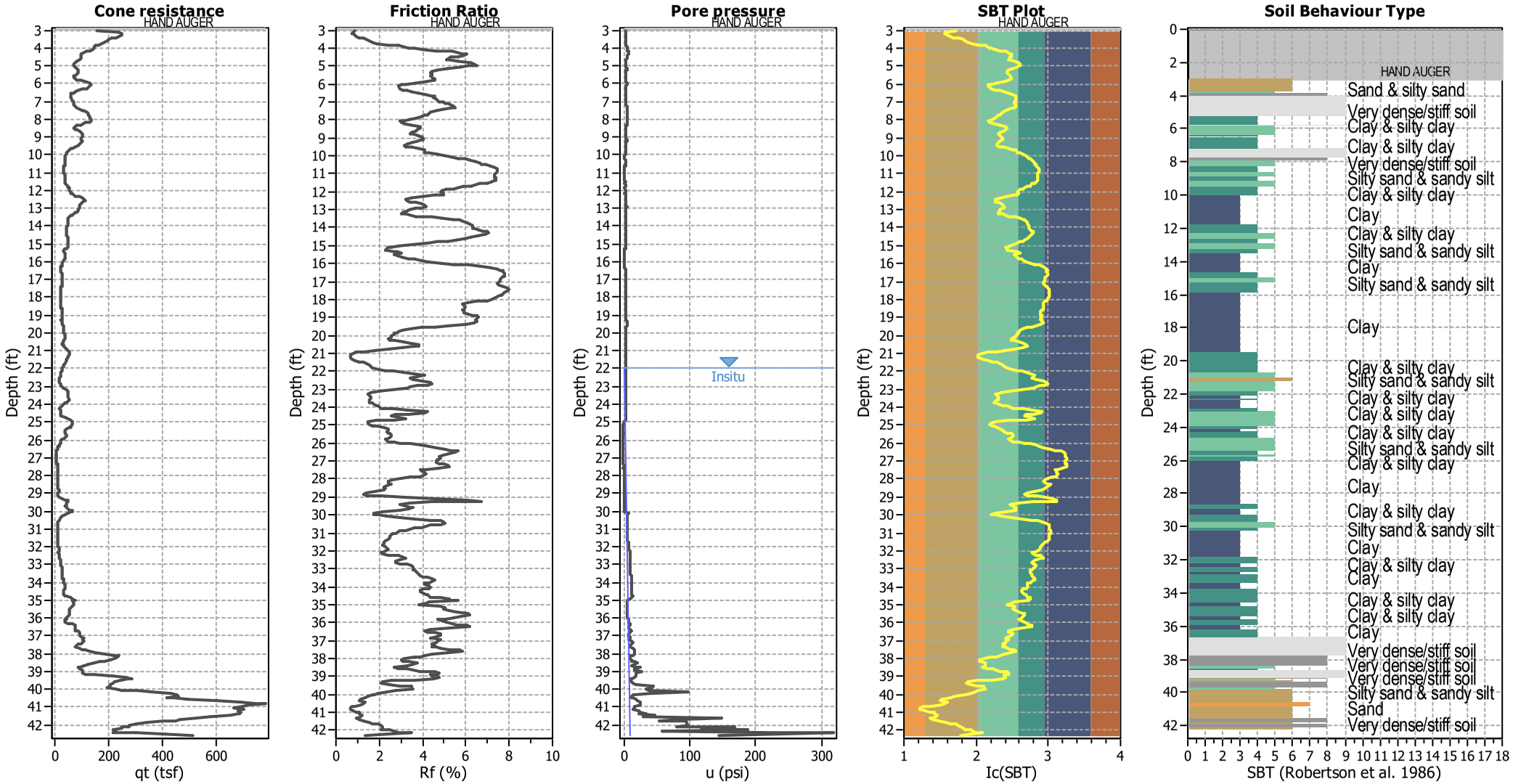






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



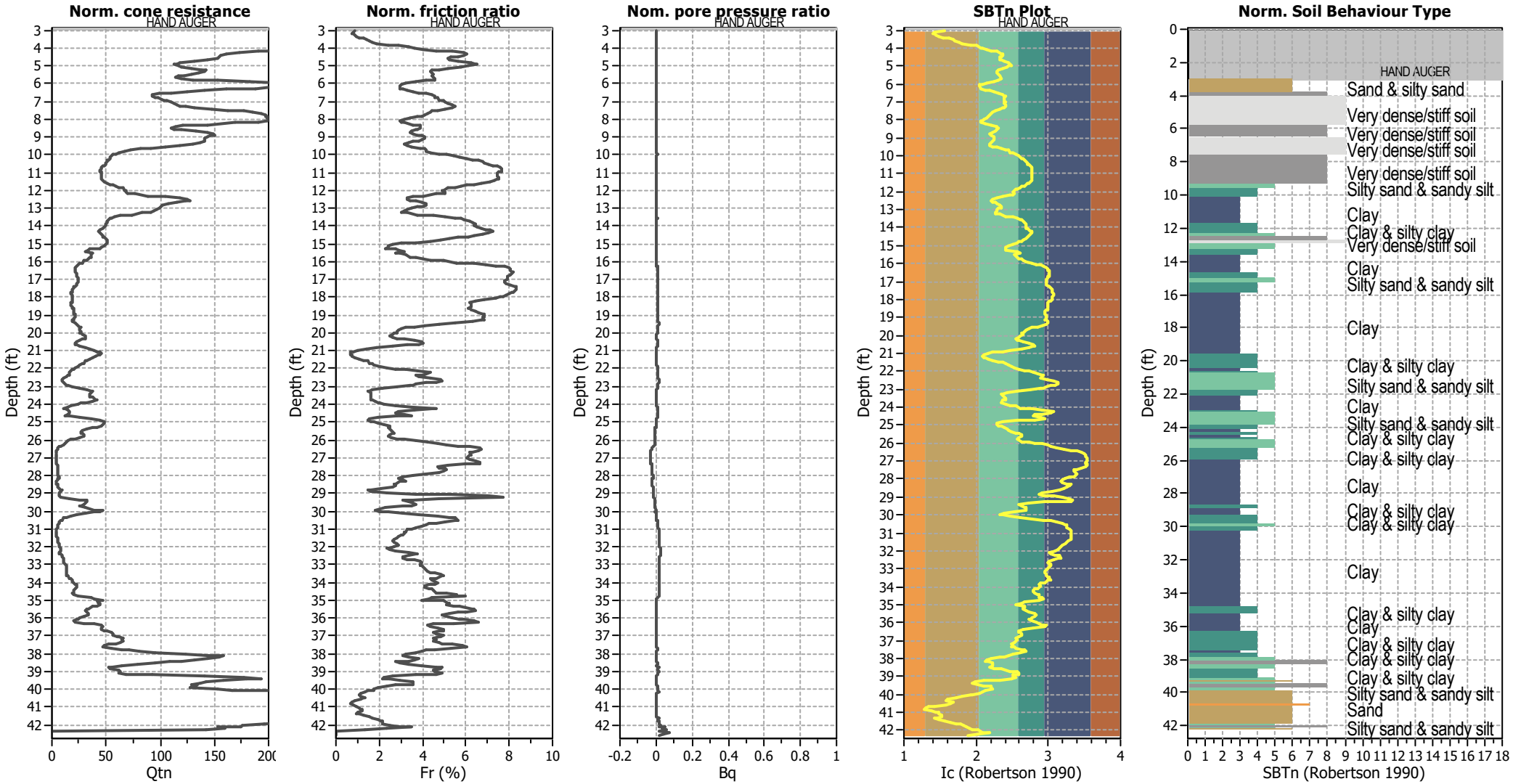
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



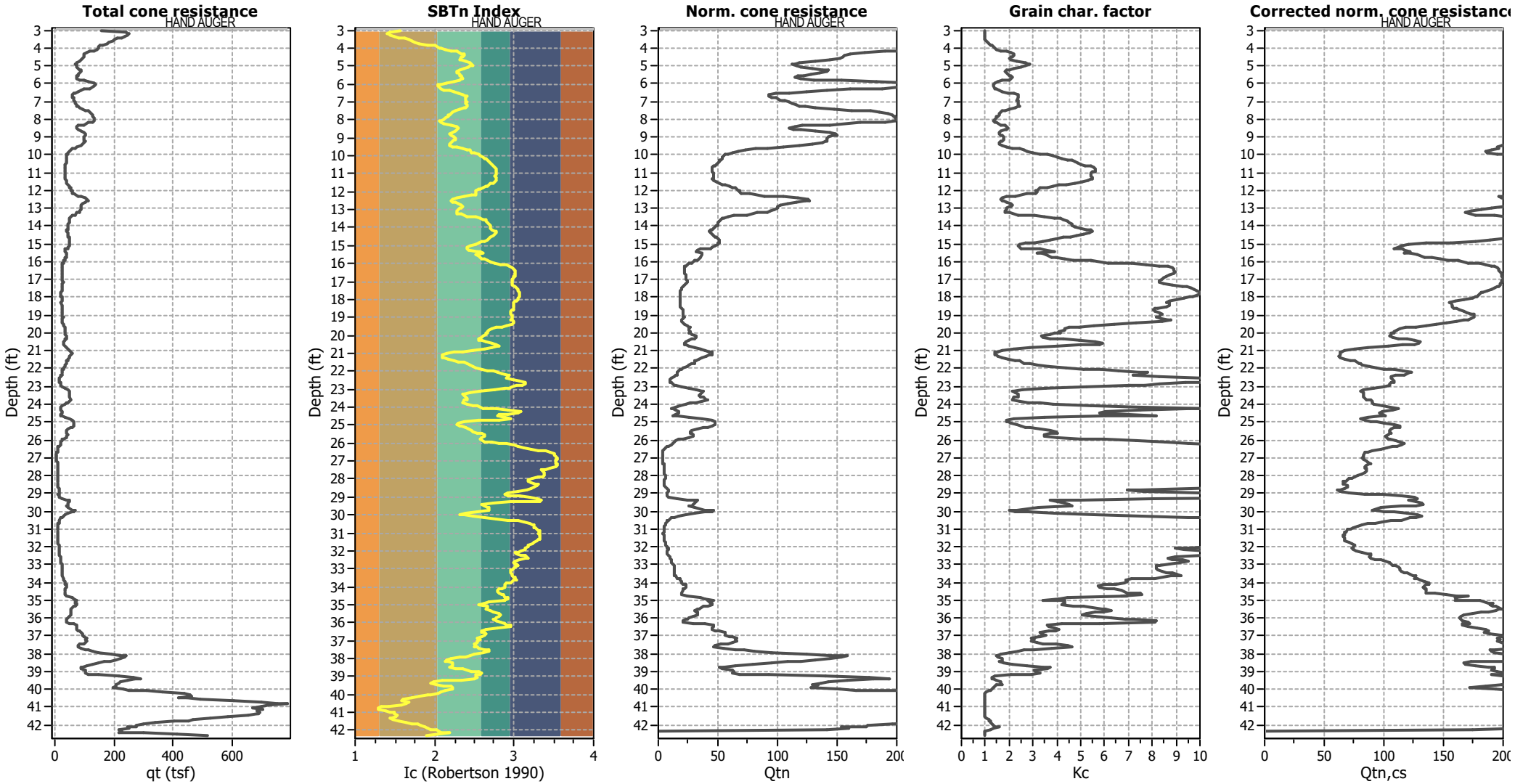
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

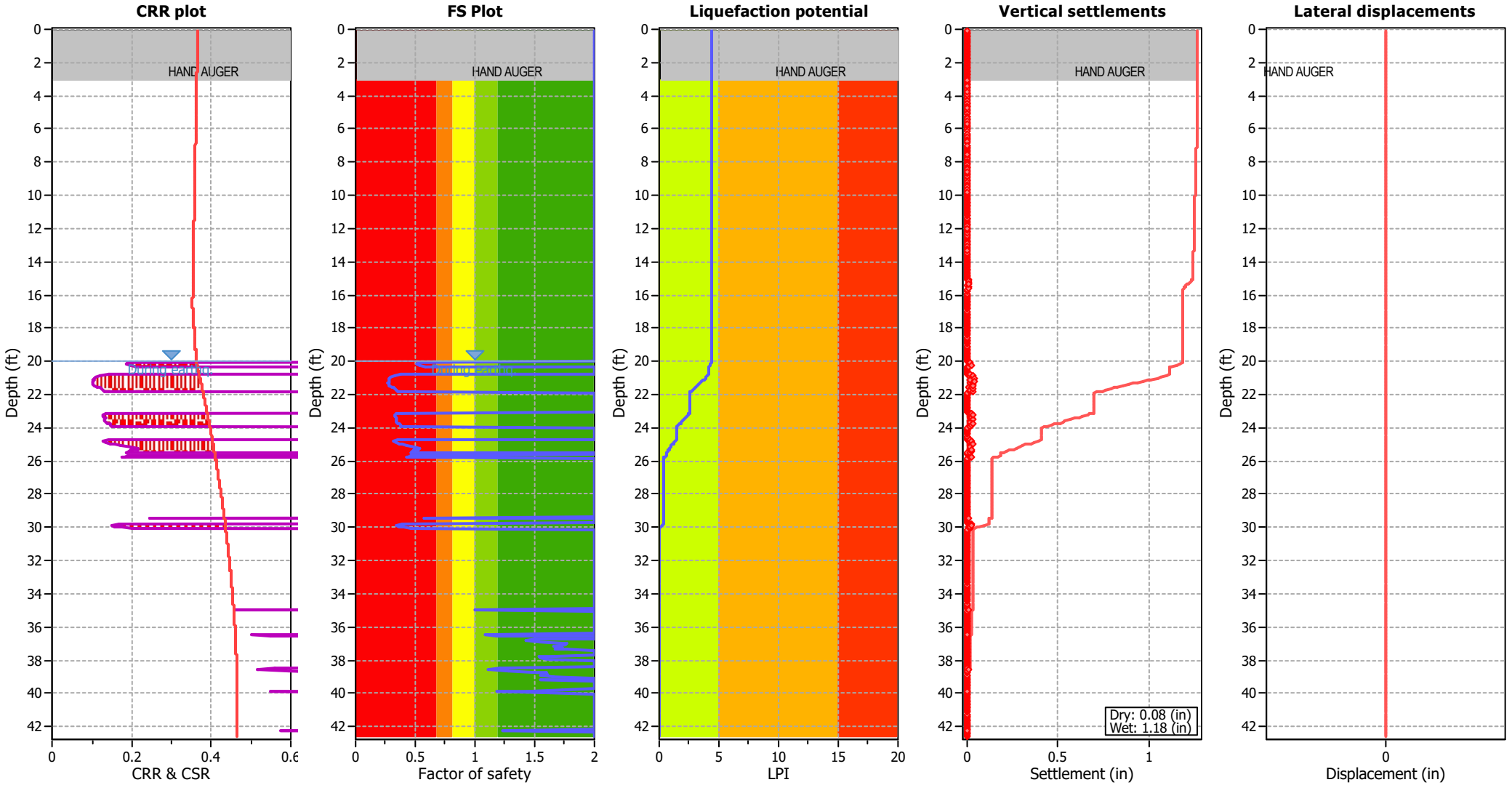
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

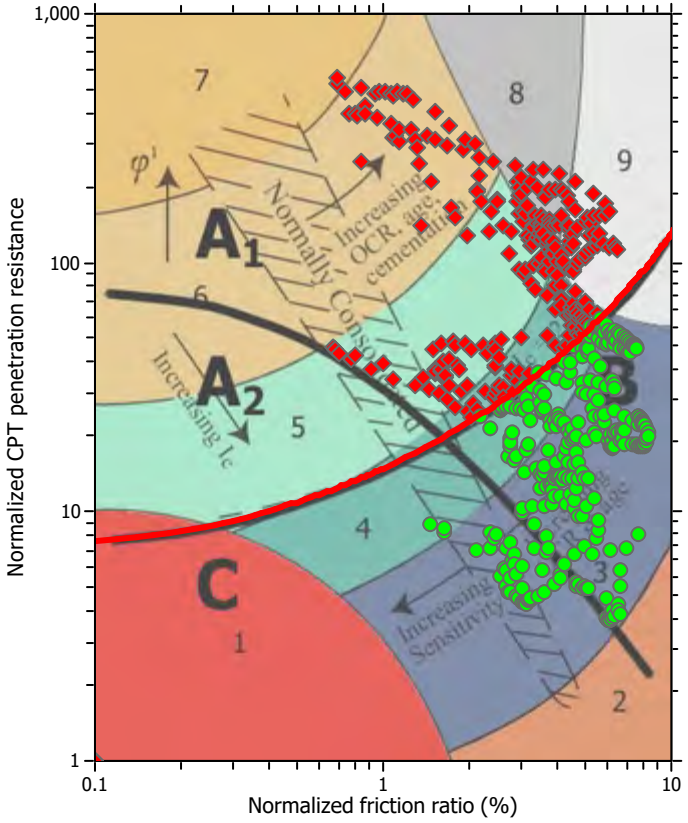
F.S. color scheme

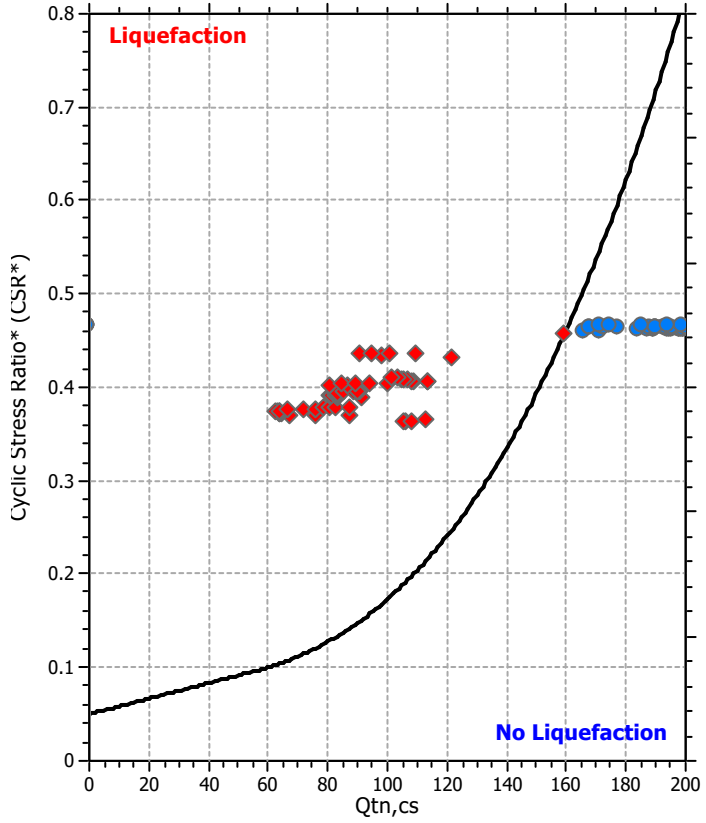
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

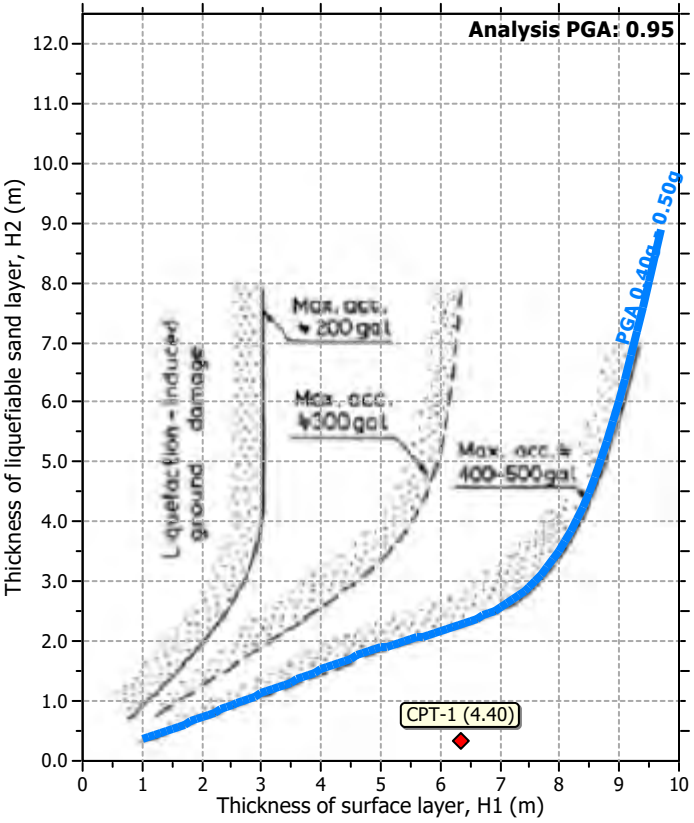
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



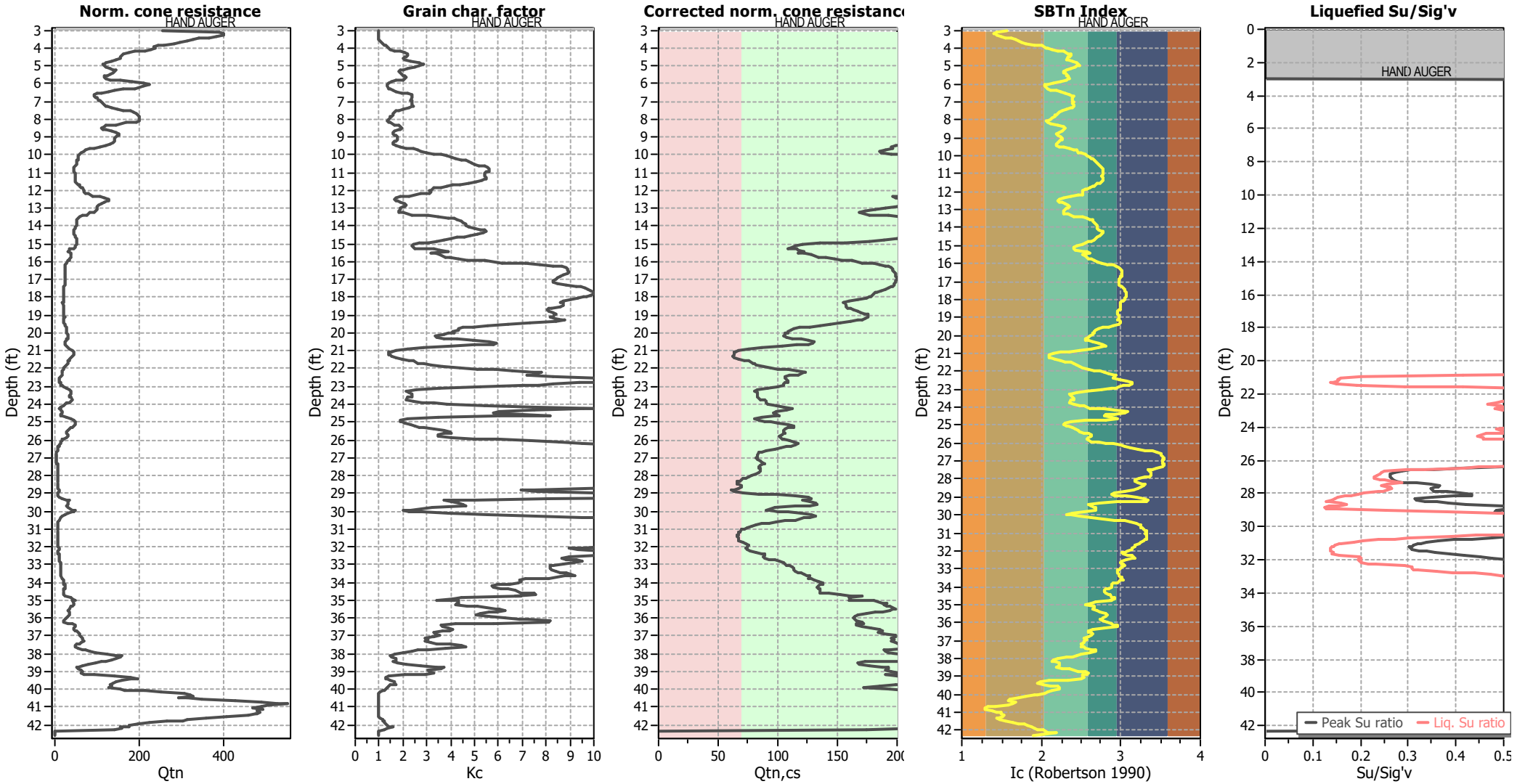




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.09	-9999.00	-9999.00	-9999.00	N/A	120.90
2	0.14	-9999.00	-9999.00	-9999.00	N/A	120.90
3	0.22	-9999.00	-9999.00	-9999.00	N/A	120.90
4	0.27	-9999.00	-9999.00	-9999.00	N/A	120.90
5	0.37	-9999.00	-9999.00	-9999.00	N/A	120.90
6	0.41	-9999.00	-9999.00	-9999.00	N/A	120.90
7	0.46	-9999.00	-9999.00	-9999.00	N/A	120.90
8	0.55	-9999.00	-9999.00	-9999.00	N/A	120.90
9	0.60	-9999.00	-9999.00	-9999.00	N/A	120.90
10	0.69	-9999.00	-9999.00	-9999.00	N/A	120.90
11	0.73	-9999.00	-9999.00	-9999.00	N/A	120.90
12	0.83	-9999.00	-9999.00	-9999.00	N/A	120.90
13	0.87	-9999.00	-9999.00	-9999.00	N/A	120.90
14	0.92	-9999.00	-9999.00	-9999.00	N/A	120.90
15	1.01	-9999.00	-9999.00	-9999.00	N/A	120.90
16	1.05	-9999.00	-9999.00	-9999.00	N/A	120.90
17	1.15	-9999.00	-9999.00	-9999.00	N/A	120.90
18	1.20	-9999.00	-9999.00	-9999.00	N/A	120.90
19	1.29	-9999.00	-9999.00	-9999.00	N/A	120.90
20	1.33	-9999.00	-9999.00	-9999.00	N/A	120.90
21	1.38	-9999.00	-9999.00	-9999.00	N/A	120.90
22	1.46	-9999.00	-9999.00	-9999.00	N/A	120.90
23	1.52	-9999.00	-9999.00	-9999.00	N/A	120.90
24	1.60	-9999.00	-9999.00	-9999.00	N/A	120.90
25	1.66	-9999.00	-9999.00	-9999.00	N/A	120.90
26	1.74	-9999.00	-9999.00	-9999.00	N/A	120.90
27	1.79	-9999.00	-9999.00	-9999.00	N/A	120.90
28	1.84	-9999.00	-9999.00	-9999.00	N/A	120.90
29	1.92	-9999.00	-9999.00	-9999.00	N/A	120.90
30	1.98	-9999.00	-9999.00	-9999.00	N/A	120.90
31	2.04	-9999.00	-9999.00	-9999.00	N/A	120.90
32	2.11	-9999.00	-9999.00	-9999.00	N/A	120.90
33	2.20	-9999.00	-9999.00	-9999.00	N/A	120.90
34	2.25	-9999.00	-9999.00	-9999.00	N/A	120.90
35	2.30	-9999.00	-9999.00	-9999.00	N/A	120.90
36	2.39	-9999.00	-9999.00	-9999.00	N/A	120.90
37	2.44	-9999.00	-9999.00	-9999.00	N/A	120.90
38	2.53	-9999.00	-9999.00	-9999.00	N/A	120.90
39	2.57	-9999.00	-9999.00	-9999.00	N/A	120.90
40	2.66	-9999.00	-9999.00	-9999.00	N/A	120.90
41	2.71	-9999.00	-9999.00	-9999.00	N/A	120.90
42	2.76	-9999.00	-9999.00	-9999.00	N/A	120.90
43	2.85	-9999.00	-9999.00	-9999.00	N/A	120.90
44	2.90	-9999.00	-9999.00	-9999.00	N/A	120.90
45	2.98	-9999.00	-9999.00	-9999.00	N/A	120.90
46	3.04	229.36	2.11	2.90	3.79	124.70
47	3.12	244.83	1.88	2.54	1.91	128.51
48	3.17	248.75	1.84	2.54	1.58	128.38

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.22	250.24	1.95	2.63	1.78	128.80
50	3.31	248.47	2.21	2.45	2.11	129.28
51	3.35	245.11	2.26	2.45	2.74	129.64
52	3.44	220.97	2.37	2.45	3.47	129.89
53	3.48	211.75	2.57	2.36	4.66	130.53
54	3.54	205.32	3.07	2.54	5.66	130.97
55	3.62	190.22	3.01	2.99	6.29	131.07
56	3.68	187.52	2.80	2.90	7.21	131.23
57	3.77	174.93	3.44	2.90	8.34	131.69
58	3.82	166.45	3.76	3.08	10.83	132.47
59	3.88	139.33	4.28	4.08	12.88	133.31
60	3.97	150.14	5.05	4.45	14.66	134.04
61	4.01	149.96	5.33	4.72	15.43	134.71
62	4.07	143.90	5.63	5.90	17.05	135.13
63	4.15	130.94	6.23	6.17	19.30	135.43
64	4.20	119.67	6.51	7.99	22.02	135.46
65	4.30	104.57	6.37	7.53	24.00	135.20
66	4.34	99.63	6.12	7.44	25.13	134.68
67	4.43	96.09	5.67	5.54	25.06	134.23
68	4.47	96.04	5.45	5.54	24.40	133.79
69	4.53	97.67	5.16	5.54	23.65	133.39
70	4.62	95.99	4.81	5.54	23.28	133.00
71	4.66	92.08	4.70	3.72	24.13	132.55
72	4.76	80.90	4.58	3.90	25.95	132.23
73	4.80	74.00	4.59	3.81	28.56	131.95
74	4.88	67.29	4.65	4.08	29.32	131.87
75	4.94	74.37	4.56	4.04	29.83	131.73
76	4.99	68.59	4.45	4.04	28.48	131.61
77	5.08	74.75	4.27	3.99	27.40	131.44
78	5.12	79.68	4.15	4.54	24.97	131.42
79	5.22	87.42	4.07	4.36	23.16	131.41
80	5.26	90.78	3.99	4.26	22.00	131.27
81	5.36	88.63	3.79	3.81	21.84	131.05
82	5.40	85.09	3.74	3.81	22.39	130.73
83	5.45	80.06	3.66	3.36	23.02	130.31
84	5.54	75.86	3.34	3.36	23.46	129.77
85	5.58	73.07	3.16	3.36	23.77	129.26
86	5.67	69.99	3.11	3.36	24.21	129.20
87	5.71	71.67	3.33	3.36	24.11	129.75
88	5.78	81.74	3.77	3.36	23.18	130.57
89	5.84	90.50	4.00	3.54	20.53	131.54
90	5.91	115.47	4.22	3.90	17.56	132.30
91	6.00	135.98	4.33	4.81	15.14	132.77
92	6.05	142.31	4.22	5.63	14.02	132.74
93	6.14	136.07	3.95	3.99	14.04	131.98
94	6.27	114.91	3.30	3.27	14.92	130.91
95	6.32	99.82	3.04	3.08	16.57	129.77
96	6.37	87.14	2.92	2.90	18.41	129.00

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.45	78.19	2.75	2.81	20.34	128.32
98	6.51	69.15	2.59	2.90	22.59	127.64
99	6.57	58.62	2.52	2.81	24.78	127.28
100	6.64	58.30	2.63	2.90	26.27	127.14
101	6.70	58.30	2.60	2.81	26.65	127.28
102	6.78	57.97	2.69	2.54	26.35	127.44
103	6.83	61.88	2.75	3.08	26.34	128.05
104	6.97	65.52	3.19	3.54	26.20	128.60
105	6.98	65.52	3.23	3.54	26.48	129.22
106	7.06	67.85	3.46	3.72	26.25	129.62
107	7.11	72.42	3.62	3.54	26.37	130.09
108	7.18	71.20	3.82	3.99	26.52	130.54
109	7.25	73.07	4.06	4.81	26.73	130.98
110	7.29	77.26	4.24	4.99	26.32	131.47
111	7.36	81.74	4.46	4.90	25.30	131.92
112	7.43	88.63	4.56	4.90	23.24	132.45
113	7.52	105.78	4.73	5.08	21.45	132.89
114	7.56	109.97	4.86	4.90	19.93	133.34
115	7.61	117.24	5.01	4.90	19.37	133.72
116	7.70	122.93	5.25	4.90	18.79	134.02
117	7.76	127.40	5.24	4.90	18.32	134.10
118	7.84	127.87	5.05	4.90	17.86	133.99
119	7.89	128.61	4.93	4.90	17.14	133.69
120	7.96	132.71	4.57	5.35	16.16	133.23
121	8.03	134.21	4.08	5.63	15.18	132.79
122	8.08	136.35	4.06	5.26	14.63	132.37
123	8.16	132.99	3.86	4.90	15.04	132.05
124	8.21	118.55	3.73	4.54	16.52	131.25
125	8.30	91.33	3.28	4.45	19.08	130.34
126	8.34	78.75	3.15	3.08	21.82	129.24
127	8.43	70.09	2.87	2.99	22.30	128.72
128	8.47	79.59	2.78	3.45	22.79	128.32
129	8.56	69.06	2.81	3.45	21.98	128.50
130	8.61	80.43	2.95	3.45	21.31	128.93
131	8.67	92.73	3.13	3.27	19.72	129.71
132	8.75	99.44	3.43	3.72	18.69	130.45
133	8.79	107.27	3.63	3.90	18.86	131.15
134	8.89	104.94	4.00	3.90	19.40	131.58
135	8.94	101.96	4.07	3.99	20.37	131.80
136	9.02	99.63	4.09	4.17	20.82	131.78
137	9.07	99.58	4.04	4.26	20.94	131.71
138	9.13	99.54	3.98	4.63	20.57	131.54
139	9.21	101.31	3.79	4.45	20.13	131.32
140	9.25	101.40	3.67	4.26	19.26	130.84
141	9.34	101.40	3.23	3.99	18.78	130.28
142	9.39	97.11	3.04	3.72	18.78	129.41
143	9.48	85.46	2.72	3.63	19.93	128.69
144	9.53	76.42	2.65	3.54	22.00	127.95

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.62	65.70	2.57	3.45	24.57	127.34
146	9.67	57.04	2.42	3.36	26.71	126.62
147	9.71	53.87	2.22	3.36	28.17	125.62
148	9.80	47.16	1.88	3.27	29.24	124.84
149	9.85	44.83	1.92	3.27	30.90	124.36
150	9.93	42.41	1.99	3.27	32.79	124.47
151	9.99	40.63	2.07	3.18	34.45	124.62
152	10.04	39.94	2.12	1.81	35.86	124.85
153	10.13	39.24	2.24	2.09	36.88	125.06
154	10.18	39.05	2.29	1.91	38.02	125.33
155	10.27	38.30	2.41	2.18	39.02	125.51
156	10.32	37.65	2.44	2.18	39.96	125.66
157	10.40	37.37	2.47	2.18	40.69	125.71
158	10.45	36.72	2.49	2.18	41.19	125.75
159	10.50	36.63	2.51	2.18	41.97	125.75
160	10.59	35.32	2.52	2.18	42.90	125.74
161	10.64	34.30	2.53	2.00	43.94	125.69
162	10.70	33.74	2.53	2.00	44.49	125.66
163	10.78	33.92	2.53	2.00	44.74	125.66
164	10.87	33.92	2.54	2.00	44.80	125.69
165	10.92	34.02	2.55	2.00	44.78	125.73
166	10.96	34.39	2.56	2.00	44.41	125.81
167	11.05	35.51	2.58	2.00	44.11	125.90
168	11.10	35.70	2.60	2.00	43.89	126.00
169	11.19	35.74	2.63	2.00	44.02	126.04
170	11.24	35.74	2.63	2.09	44.16	126.09
171	11.37	35.79	2.65	2.09	44.27	126.12
172	11.39	36.07	2.65	2.09	44.03	126.17
173	11.42	36.81	2.66	2.09	43.37	126.25
174	11.49	38.21	2.67	2.18	42.33	126.36
175	11.56	40.08	2.68	2.09	40.67	126.55
176	11.65	43.52	2.71	2.27	38.93	126.75
177	11.70	45.95	2.73	2.27	37.21	126.94
178	11.79	48.18	2.74	2.27	35.73	127.15
179	11.84	51.54	2.79	2.09	34.35	127.34
180	11.88	53.96	2.80	2.09	32.84	127.44
181	11.97	56.39	2.70	2.18	31.76	127.43
182	12.02	57.32	2.69	2.18	31.48	127.57
183	12.12	57.04	2.90	2.27	31.72	127.82
184	12.16	58.16	2.96	2.09	31.54	128.15
185	12.21	62.07	3.00	2.36	29.06	128.55
186	12.30	76.61	3.08	2.45	25.48	129.08
187	12.35	91.52	3.15	2.63	22.09	129.74
188	12.43	103.92	3.33	2.81	19.95	130.38
189	12.48	113.42	3.52	3.08	19.43	131.09
190	12.57	113.24	3.93	3.08	19.83	131.63
191	12.61	110.53	4.07	3.18	21.03	131.92
192	12.67	103.92	4.10	3.18	22.45	131.76

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.76	92.92	3.92	3.45	23.77	131.43
194	12.80	90.12	3.80	3.54	24.48	130.95
195	12.89	88.45	3.56	3.99	24.05	130.55
196	12.94	90.78	3.35	4.36	23.22	130.08
197	12.99	90.68	3.13	4.08	22.34	129.53
198	13.08	88.26	2.84	3.36	21.95	128.94
199	13.13	85.46	2.68	3.08	21.66	128.27
200	13.22	83.04	2.44	2.81	21.70	127.82
201	13.27	81.36	2.43	2.72	23.61	127.40
202	13.36	62.54	2.50	2.72	26.53	127.22
203	13.39	58.90	2.54	2.72	31.11	127.03
204	13.49	51.45	2.64	2.72	33.80	127.05
205	13.54	49.58	2.71	3.36	36.19	127.11
206	13.59	49.02	2.77	3.63	37.37	127.20
207	13.68	47.53	2.81	3.18	38.08	127.25
208	13.72	47.62	2.82	2.99	39.05	127.33
209	13.82	46.13	2.92	2.63	39.60	127.43
210	13.87	46.69	2.95	2.63	40.10	127.52
211	13.95	46.69	2.94	2.63	40.10	127.51
212	14.00	46.32	2.90	2.63	40.22	127.44
213	14.05	45.85	2.89	2.63	40.83	127.35
214	14.14	43.90	2.89	2.45	41.89	127.27
215	14.19	42.31	2.89	2.54	43.09	127.19
216	14.24	41.47	2.90	2.45	44.06	127.17
217	14.31	40.82	2.93	2.45	44.40	127.18
218	14.37	41.57	2.92	2.45	43.70	127.19
219	14.46	43.90	2.85	2.45	42.54	127.18
220	14.51	44.74	2.83	2.45	41.00	127.12
221	14.59	46.41	2.75	2.45	39.87	127.02
222	14.65	47.35	2.67	2.45	38.26	126.82
223	14.73	49.30	2.52	2.27	36.72	126.53
224	14.79	50.23	2.38	2.27	35.05	126.16
225	14.84	51.17	2.23	2.27	33.56	125.57
226	14.91	50.70	1.95	2.27	31.13	124.37
227	14.97	50.89	1.38	2.27	28.66	122.80
228	15.06	49.49	1.17	2.27	26.89	121.51
229	15.11	48.93	1.24	2.27	26.64	120.75
230	15.20	46.13	1.05	2.27	27.11	120.28
231	15.25	43.80	0.99	2.18	27.20	119.51
232	15.30	43.06	0.96	2.09	32.65	118.74
233	15.36	20.60	0.95	1.72	34.06	118.61
234	15.44	38.77	0.98	1.72	36.06	118.64
235	15.49	37.75	1.02	1.81	31.88	119.37
236	15.55	37.75	1.09	1.72	32.88	119.74
237	15.63	37.75	1.15	1.72	34.06	120.26
238	15.73	37.28	1.27	1.72	35.37	120.76
239	15.78	36.81	1.34	1.72	36.65	121.17
240	15.82	36.44	1.39	1.81	38.36	121.43

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.91	33.92	1.46	1.63	40.35	121.62
242	15.96	32.62	1.51	1.63	43.89	121.80
243	16.05	28.71	1.61	1.63	47.51	121.91
244	16.10	26.84	1.66	1.72	51.59	122.02
245	16.16	25.44	1.71	1.81	54.33	122.11
246	16.24	24.60	1.76	1.63	56.46	122.20
247	16.28	23.95	1.79	1.91	57.95	122.32
248	16.36	23.77	1.83	2.09	58.69	122.43
249	16.42	24.14	1.86	2.18	58.96	122.54
250	16.51	24.14	1.87	2.18	58.94	122.63
251	16.55	24.32	1.88	2.27	59.10	122.69
252	16.61	24.23	1.90	2.45	59.14	122.77
253	16.68	24.51	1.92	2.45	58.91	122.88
254	16.74	25.26	1.95	2.54	58.18	123.04
255	16.83	26.10	1.98	2.54	57.63	123.16
256	16.87	26.10	1.99	2.54	57.17	123.30
257	16.97	26.65	2.02	2.54	57.09	123.39
258	17.06	26.84	2.03	2.54	56.59	123.47
259	17.16	27.49	2.02	2.54	56.52	123.47
260	17.20	26.93	2.01	2.45	57.21	123.35
261	17.29	25.26	1.97	2.36	58.77	123.14
262	17.36	24.32	1.93	2.36	60.28	122.91
263	17.39	23.86	1.91	2.36	61.11	122.68
264	17.47	23.21	1.85	2.36	61.78	122.46
265	17.52	22.65	1.80	2.36	62.25	122.16
266	17.62	22.18	1.73	2.54	62.76	121.84
267	17.71	21.53	1.66	2.72	63.16	121.58
268	17.74	21.34	1.65	2.81	63.31	121.41
269	17.80	21.44	1.63	2.99	63.12	121.34
270	17.86	21.62	1.61	2.99	62.71	121.29
271	17.94	21.72	1.60	3.27	62.12	121.28
272	17.98	22.27	1.61	3.45	61.48	121.29
273	18.05	22.55	1.60	3.36	60.74	121.12
274	18.13	22.18	1.48	3.45	59.49	120.59
275	18.18	22.09	1.28	3.36	58.34	120.02
276	18.26	22.09	1.28	3.45	57.64	119.67
277	18.31	22.00	1.30	3.45	58.29	119.68
278	18.45	21.34	1.30	3.90	58.19	119.85
279	18.55	23.02	1.35	3.90	57.73	120.04
280	18.59	23.49	1.38	3.90	56.37	120.38
281	18.64	24.60	1.43	3.99	55.86	120.76
282	18.74	25.35	1.52	3.90	55.48	121.12
283	18.78	25.72	1.55	3.81	55.77	121.48
284	18.87	25.72	1.63	3.45	56.40	121.72
285	18.92	25.54	1.67	3.45	57.02	121.95
286	18.96	25.82	1.71	3.63	56.84	122.21
287	19.08	27.21	1.78	4.26	56.39	122.39
288	19.10	27.21	1.76	4.26	56.02	122.42

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	19.16	26.65	1.72	4.26	56.72	122.15
290	19.24	24.98	1.64	4.26	58.02	121.79
291	19.29	23.77	1.58	4.08	58.40	121.33
292	19.37	24.32	1.47	4.36	57.11	120.96
293	19.43	25.54	1.40	5.44	52.54	120.58
294	19.52	28.98	1.27	5.81	48.51	120.32
295	19.57	30.48	1.22	5.35	44.45	120.03
296	19.66	32.62	1.15	3.27	41.66	119.59
297	19.71	33.37	1.00	2.99	39.53	118.96
298	19.79	32.62	0.92	2.99	38.61	118.35
299	19.84	31.97	0.91	2.99	38.37	118.06
300	19.89	32.62	0.90	2.99	37.36	118.02
301	19.98	35.14	0.88	2.90	37.64	117.93
302	20.02	30.94	0.89	2.81	36.13	118.08
303	20.09	37.65	0.91	2.45	35.12	118.33
304	20.16	39.61	0.93	2.45	33.16	118.84
305	20.25	40.35	1.00	2.36	33.56	119.21
306	20.30	38.77	1.05	2.45	35.10	119.52
307	20.34	36.53	1.09	2.36	38.13	119.70
308	20.43	32.34	1.16	2.45	41.69	119.73
309	20.48	29.73	1.16	2.63	44.97	119.59
310	20.57	28.43	1.12	2.63	46.21	119.24
311	20.62	28.33	1.05	2.63	45.68	118.78
312	20.67	28.80	0.97	2.63	41.89	118.20
313	20.75	33.83	0.82	2.81	36.73	117.60
314	20.81	38.30	0.74	2.72	29.74	116.69
315	20.90	46.04	0.56	2.63	24.85	115.73
316	20.94	48.37	0.49	2.54	20.23	114.39
317	21.03	53.96	0.39	2.45	17.69	113.50
318	21.08	56.39	0.37	2.45	15.93	112.88
319	21.13	57.13	0.37	2.45	15.57	112.86
320	21.22	56.85	0.38	2.45	15.83	112.88
321	21.27	54.71	0.37	2.36	16.54	112.83
322	21.34	51.35	0.37	2.36	17.85	112.91
323	21.41	48.18	0.41	2.36	20.18	113.30
324	21.50	42.96	0.47	2.27	22.66	113.89
325	21.53	41.94	0.51	2.27	25.25	114.62
326	21.59	40.54	0.58	2.27	26.93	115.23
327	21.68	39.61	0.62	2.27	28.34	115.50
328	21.73	38.12	0.59	2.27	29.79	115.46
329	21.82	35.14	0.60	2.36	31.76	115.16
330	21.86	31.69	0.59	2.36	34.84	115.27
331	21.94	29.73	0.67	2.45	38.90	115.43
332	22.01	25.91	0.71	2.45	42.55	115.85
333	22.06	25.82	0.76	2.54	45.95	116.54
334	22.15	26.10	0.92	2.63	49.33	117.18
335	22.20	22.65	0.96	2.63	53.11	117.57
336	22.25	21.44	0.96	2.63	54.53	117.28

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.34	23.11	0.85	2.90	52.86	116.69
338	22.38	23.02	0.75	2.81	52.06	115.69
339	22.47	19.29	0.66	2.81	56.49	114.70
340	22.52	15.38	0.64	2.81	63.50	113.79
341	22.59	13.51	0.62	2.90	67.85	113.57
342	22.66	15.19	0.66	3.08	68.56	113.64
343	22.75	15.00	0.67	3.27	65.62	113.94
344	22.78	16.59	0.66	3.36	60.76	114.13
345	22.84	20.13	0.64	3.36	56.44	114.36
346	22.94	20.32	0.67	3.36	53.98	114.58
347	22.97	19.39	0.68	3.36	51.43	115.05
348	23.05	24.88	0.72	3.36	43.26	115.80
349	23.12	36.35	0.72	3.63	34.29	116.53
350	23.17	44.36	0.71	3.18	28.00	117.00
351	23.26	49.86	0.71	2.81	25.17	117.29
352	23.30	51.45	0.73	2.54	24.66	117.57
353	23.36	49.12	0.77	2.54	25.50	117.68
354	23.44	46.41	0.76	2.72	26.37	117.63
355	23.53	46.88	0.74	2.99	26.60	117.45
356	23.57	46.88	0.72	3.36	26.40	117.44
357	23.63	47.35	0.75	3.72	25.19	118.04
358	23.72	57.32	0.87	3.54	24.23	118.81
359	23.76	58.34	0.92	3.36	24.66	119.38
360	23.85	49.67	0.94	2.81	26.84	118.97
361	23.91	42.50	0.80	2.63	29.63	118.10
362	23.95	39.70	0.73	2.63	32.65	117.00
363	24.04	31.87	0.70	2.63	35.91	116.21
364	24.09	28.61	0.67	2.72	44.12	115.43
365	24.18	17.89	0.68	3.08	52.95	114.99
366	24.23	16.68	0.73	3.27	63.80	114.97
367	24.29	17.15	0.80	3.27	61.45	115.31
368	24.36	21.16	0.74	3.27	53.25	115.39
369	24.41	25.82	0.64	3.54	46.76	115.03
370	24.50	25.54	0.61	2.90	45.70	114.59
371	24.56	21.44	0.62	2.72	50.93	114.25
372	24.64	16.87	0.63	2.99	55.91	114.10
373	24.69	19.85	0.63	3.27	46.92	114.67
374	24.75	34.48	0.64	3.90	33.63	116.03
375	24.82	52.10	0.73	3.63	25.03	117.61
376	24.87	63.93	0.85	2.99	22.19	119.29
377	24.96	65.24	1.04	1.81	22.03	120.43
378	25.01	64.21	1.11	0.73	22.85	121.21
379	25.07	66.08	1.17	0.54	24.07	121.97
380	25.14	64.77	1.41	-0.27	25.89	122.93
381	25.20	62.26	1.64	-0.64	27.55	123.23
382	25.30	59.09	1.40	-0.54	28.78	122.79
383	25.34	53.59	1.24	-0.91	29.94	121.55
384	25.42	45.39	1.10	-0.82	32.63	120.36

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.48	38.30	1.00	-1.18	35.03	119.31
386	25.55	37.93	0.91	-0.64	36.48	118.83
387	25.62	37.93	0.97	-0.36	36.88	118.91
388	25.67	37.56	1.03	0.00	35.27	119.35
389	25.75	45.67	1.02	-0.18	33.69	119.47
390	25.80	44.27	0.97	-0.73	33.80	119.07
391	25.90	34.67	0.89	-0.73	36.71	118.31
392	25.94	31.87	0.84	-0.73	41.83	117.26
393	25.99	25.82	0.75	-0.73	46.61	116.43
394	26.06	21.62	0.74	-0.73	52.37	116.18
395	26.13	21.81	0.87	-0.36	57.61	116.46
396	26.22	20.78	0.91	-0.27	61.28	116.47
397	26.27	17.24	0.80	-0.27	66.71	115.60
398	26.34	13.89	0.69	-0.54	74.52	114.26
399	26.40	11.56	0.64	-0.36	81.64	113.12
400	26.45	10.81	0.60	-0.54	89.25	111.89
401	26.54	8.39	0.48	-0.54	94.06	110.62
402	26.59	8.11	0.42	-0.54	98.64	109.05
403	26.68	7.64	0.36	-0.36	100.00	108.14
404	26.73	7.27	0.35	-0.27	100.00	107.52
405	26.82	7.18	0.35	-0.27	100.00	107.33
406	26.88	7.18	0.34	-0.27	100.00	107.22
407	26.91	7.18	0.34	-0.36	100.00	107.12
408	27.00	7.18	0.33	-0.18	100.00	107.08
409	27.05	7.27	0.33	-0.18	100.00	107.18
410	27.14	7.36	0.35	-0.27	100.00	107.42
411	27.19	7.36	0.36	-0.09	100.00	107.78
412	27.23	7.36	0.38	-0.09	100.00	108.28
413	27.32	7.83	0.42	-0.09	100.00	108.65
414	27.38	8.11	0.41	-0.09	94.89	108.78
415	27.46	9.32	0.37	0.00	88.69	108.58
416	27.51	9.79	0.36	0.00	85.03	108.46
417	27.57	9.41	0.38	-0.09	85.64	108.49
418	27.63	9.13	0.38	0.09	87.17	108.67
419	27.69	9.41	0.39	0.09	88.50	108.60
420	27.78	8.85	0.37	0.09	87.54	108.50
421	27.85	9.41	0.36	0.09	86.18	108.27
422	27.90	9.69	0.35	0.36	81.01	107.94
423	27.99	10.62	0.30	0.45	76.19	107.54
424	28.04	11.18	0.29	0.45	71.87	106.96
425	28.13	11.18	0.26	0.64	70.58	106.48
426	28.17	10.72	0.25	0.45	73.36	105.70
427	28.26	8.76	0.23	0.64	77.94	104.96
428	28.31	8.29	0.22	0.45	82.14	104.28
429	28.36	8.39	0.21	0.64	80.12	103.86
430	28.45	9.13	0.19	0.64	77.09	103.76
431	28.49	9.41	0.20	0.73	74.69	104.27
432	28.56	9.97	0.24	0.64	73.39	105.14

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.63	10.72	0.25	0.73	69.80	105.66
434	28.73	11.93	0.23	0.64	61.69	105.62
435	28.78	15.00	0.20	0.73	53.26	105.20
436	28.82	15.94	0.19	0.73	50.82	104.77
437	28.91	13.42	0.19	0.64	53.83	104.96
438	28.96	12.68	0.22	0.82	62.95	106.77
439	29.05	12.49	0.38	0.82	71.97	109.54
440	29.09	11.84	0.57	0.91	79.57	112.13
441	29.15	12.40	0.73	0.91	84.38	114.59
442	29.23	13.98	1.02	0.91	82.55	116.53
443	29.28	16.68	1.16	0.91	55.86	119.42
444	29.37	48.56	1.34	1.09	42.00	121.15
445	29.42	49.67	1.43	0.91	35.32	122.38
446	29.46	47.16	1.53	0.91	36.85	122.76
447	29.56	45.67	1.60	0.54	38.47	122.94
448	29.60	45.29	1.60	0.91	39.60	122.85
449	29.67	42.68	1.52	0.73	40.02	121.91
450	29.74	37.93	1.12	0.91	39.70	120.16
451	29.83	35.23	0.79	1.18	32.28	119.46
452	29.92	63.19	1.04	1.45	26.11	120.12
453	29.96	72.04	1.16	1.45	23.48	121.68
454	30.02	66.92	1.30	1.45	25.34	122.27
455	30.07	56.66	1.38	1.27	29.65	122.38
456	30.12	48.09	1.40	6.62	36.30	121.97
457	30.21	34.48	1.35	4.45	44.49	121.04
458	30.31	25.82	1.20	4.45	53.60	119.95
459	30.34	23.95	1.14	4.45	61.22	118.76
460	30.40	19.76	1.01	4.45	66.45	117.41
461	30.49	15.38	0.79	4.54	72.42	115.70
462	30.54	13.98	0.68	4.81	76.09	114.06
463	30.58	13.51	0.60	4.81	76.67	112.61
464	30.68	12.30	0.46	4.99	76.83	111.28
465	30.73	11.65	0.42	5.08	78.08	109.85
466	30.80	10.62	0.37	5.08	80.01	108.72
467	30.86	9.79	0.31	5.17	81.87	107.61
468	30.91	9.41	0.29	5.17	82.36	106.48
469	31.02	9.13	0.24	5.44	82.34	105.75
470	31.05	9.04	0.24	5.44	82.06	105.10
471	31.14	8.85	0.22	5.54	82.57	104.81
472	31.18	8.67	0.22	5.54	82.40	104.55
473	31.24	8.85	0.22	5.63	83.03	104.39
474	31.32	8.48	0.21	5.81	82.39	104.31
475	31.36	8.85	0.21	5.90	81.57	104.28
476	31.44	9.13	0.21	6.08	79.48	104.37
477	31.51	9.41	0.21	6.17	77.16	104.58
478	31.59	10.07	0.22	6.35	75.14	104.75
479	31.65	10.25	0.22	6.35	71.91	105.22
480	31.73	11.56	0.24	6.62	70.64	106.27

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.83	12.12	0.31	6.80	69.01	107.29
482	31.92	12.68	0.31	6.99	67.96	107.94
483	31.97	13.23	0.31	7.26	64.96	108.09
484	32.06	14.45	0.31	8.17	61.34	108.30
485	32.10	15.84	0.32	8.53	59.24	108.49
486	32.15	15.38	0.32	8.62	60.56	108.65
487	32.24	13.61	0.34	8.80	64.36	108.84
488	32.29	13.14	0.36	8.80	69.12	109.69
489	32.38	13.42	0.46	8.89	70.98	110.57
490	32.43	13.89	0.49	8.89	68.05	111.44
491	32.52	16.87	0.49	8.98	63.59	111.84
492	32.57	17.99	0.49	9.07	59.17	112.19
493	32.62	19.01	0.51	9.07	57.93	112.73
494	32.70	19.57	0.57	9.07	58.74	113.35
495	32.75	18.73	0.63	9.26	60.34	114.13
496	32.81	19.29	0.70	9.53	61.24	114.83
497	32.89	20.50	0.75	9.71	59.92	115.53
498	32.98	22.27	0.79	9.89	58.13	116.09
499	33.03	23.30	0.82	10.16	56.63	116.55
500	33.07	24.05	0.86	10.25	56.04	117.05
501	33.17	24.88	0.93	10.43	55.94	117.44
502	33.21	24.88	0.95	10.43	55.98	117.68
503	33.31	24.88	0.94	10.53	56.31	117.75
504	33.35	24.70	0.96	10.53	57.00	117.87
505	33.44	24.32	1.00	10.71	57.67	118.07
506	33.49	24.70	1.03	10.62	58.79	118.28
507	33.53	23.86	1.06	10.89	59.49	118.66
508	33.63	24.70	1.16	11.07	60.13	119.02
509	33.67	25.16	1.18	11.25	58.49	119.48
510	33.77	28.05	1.21	11.52	55.74	119.78
511	33.81	30.48	1.22	11.61	51.79	120.15
512	33.88	31.87	1.28	11.61	50.76	120.69
513	33.95	32.62	1.43	11.71	50.98	121.21
514	33.99	32.71	1.48	11.89	50.49	121.79
515	34.09	35.88	1.56	12.34	48.87	122.11
516	34.14	38.02	1.55	12.52	46.50	122.28
517	34.22	39.42	1.50	12.61	45.35	122.23
518	34.27	38.58	1.49	12.43	45.75	122.10
519	34.32	36.25	1.49	12.43	47.14	121.98
520	34.40	35.32	1.48	12.88	48.59	121.85
521	34.46	34.48	1.46	12.79	49.74	121.65
522	34.58	32.62	1.42	12.79	50.88	121.55
523	34.59	32.53	1.47	12.79	53.19	122.11
524	34.69	32.71	1.84	13.07	53.61	123.21
525	34.73	37.65	2.09	13.43	49.92	124.72
526	34.78	50.14	2.37	13.61	50.88	125.57
527	34.85	36.07	2.55	11.89	39.26	126.85
528	34.92	87.14	2.55	9.80	37.12	127.54

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	35.01	67.29	2.85	6.44	33.37	128.43
530	35.05	67.43	3.15	6.08	38.46	129.16
531	35.14	67.57	3.73	6.08	38.48	129.83
532	35.19	75.40	3.65	6.08	38.30	130.17
533	35.24	72.79	3.56	5.26	37.96	130.03
534	35.33	67.66	3.52	4.63	40.27	129.74
535	35.38	60.11	3.49	5.17	42.38	129.47
536	35.47	59.93	3.40	5.08	46.21	129.09
537	35.50	48.28	3.36	6.08	46.92	128.80
538	35.59	54.80	3.20	5.90	47.89	128.48
539	35.64	53.68	3.09	4.90	46.35	128.22
540	35.70	51.35	2.96	4.72	44.77	127.94
541	35.78	58.06	2.80	5.17	43.20	127.61
542	35.83	56.66	2.65	5.26	42.15	127.06
543	35.92	50.33	2.37	5.26	44.77	126.31
544	35.97	42.03	2.28	6.44	48.02	125.56
545	36.06	40.73	2.20	7.35	50.63	125.19
546	36.10	40.73	2.20	6.90	52.31	125.03
547	36.16	36.81	2.22	7.08	56.07	125.15
548	36.24	35.42	2.41	6.62	55.68	125.70
549	36.30	45.20	2.65	8.17	45.77	126.88
550	36.35	70.09	2.81	9.07	37.80	128.03
551	36.43	79.22	3.00	8.98	34.51	128.95
552	36.52	74.28	3.34	7.17	34.89	129.42
553	36.57	74.09	3.36	7.71	36.30	129.66
554	36.62	74.09	3.40	9.89	37.29	130.08
555	36.70	74.09	3.94	11.52	36.47	130.60
556	36.75	85.93	3.95	9.80	34.66	131.03
557	36.84	91.99	3.80	10.62	32.76	131.25
558	36.89	91.24	4.04	8.08	32.96	131.67
559	36.96	91.24	4.55	7.99	34.15	132.11
560	37.03	90.50	4.60	7.89	32.74	132.59
561	37.07	110.44	4.62	9.98	32.17	132.73
562	37.17	98.42	4.69	9.71	30.52	132.92
563	37.22	108.86	4.68	7.80	31.28	132.94
564	37.31	104.01	4.76	11.89	30.44	132.99
565	37.35	107.27	4.66	13.25	32.04	132.86
566	37.44	92.08	4.69	11.79	33.31	132.65
567	37.49	89.94	4.57	12.43	36.57	132.16
568	37.54	75.49	4.28	10.53	39.15	132.03
569	37.63	73.91	4.77	10.89	40.00	132.05
570	37.68	85.46	4.70	13.88	35.51	132.55
571	37.76	111.84	4.55	16.15	31.03	132.79
572	37.81	114.35	4.59	16.20	28.43	133.18
573	37.91	118.46	4.97	16.20	26.30	133.87
574	37.95	151.63	5.39	16.24	23.45	134.84
575	38.00	178.94	5.87	17.42	19.27	136.26
576	38.09	241.48	6.92	13.70	17.41	137.28

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	38.14	243.06	7.44	10.43	16.83	137.28
578	38.20	236.63	7.91	8.98	17.92	137.28
579	38.26	226.57	8.23	9.62	19.94	137.28
580	38.32	202.05	8.88	11.16	20.08	137.28
581	38.41	184.07	4.77	13.07	20.01	136.24
582	38.46	170.46	4.63	15.33	18.76	133.79
583	38.55	146.69	4.14	21.32	20.87	133.15
584	38.59	128.06	4.14	16.88	24.43	132.47
585	38.69	102.15	4.14	12.97	28.97	132.06
586	38.74	88.45	4.14	19.42	33.56	131.68
587	38.78	82.57	4.14	25.22	35.16	131.64
588	38.88	89.94	4.25	16.60	34.42	131.89
589	38.91	97.86	4.43	16.15	31.29	132.55
590	39.01	119.20	4.78	28.22	31.35	132.96
591	39.06	97.02	4.90	19.60	32.55	133.24
592	39.15	92.64	5.06	19.46	30.36	133.75
593	39.20	149.86	5.36	19.46	23.82	134.70
594	39.24	200.10	5.57	19.33	15.93	135.93
595	39.32	296.09	5.75	16.24	12.47	136.74
596	39.38	302.15	6.04	12.52	11.58	137.28
597	39.44	269.34	6.53	9.44	13.49	137.28
598	39.52	245.02	7.46	9.53	16.34	137.28
599	39.57	219.76	7.72	11.07	19.13	137.28
600	39.63	204.94	8.23	15.06	19.56	137.28
601	39.71	218.27	6.60	19.42	20.16	137.28
602	39.78	190.13	6.92	21.41	16.91	136.04
603	39.84	216.78	3.58	44.82	15.37	134.62
604	39.91	204.10	3.71	43.10	14.00	132.93
605	40.01	164.68	4.14	33.39	11.67	133.73
606	40.04	319.97	4.23	39.38	10.84	134.28
607	40.09	259.74	4.32	39.61	8.04	135.32
608	40.19	352.38	5.03	97.45	6.49	136.11
609	40.23	471.21	5.04	39.83	4.52	136.77
610	40.32	485.19	4.71	15.15	4.10	136.88
611	40.37	412.40	5.05	12.97	4.14	137.17
612	40.46	491.72	5.55	12.07	5.66	137.28
613	40.51	351.45	5.84	13.43	5.20	137.28
614	40.56	498.24	5.81	19.05	4.04	137.28
615	40.63	631.33	5.14	21.23	1.89	137.28
616	40.69	691.35	4.71	24.59	0.81	137.28
617	40.79	767.58	5.47	24.14	0.41	137.28
618	40.84	794.80	5.48	24.68	0.30	137.28
619	40.88	798.15	5.47	24.41	1.23	137.28
620	40.97	572.43	7.08	15.88	1.97	137.28
621	41.02	727.51	7.64	15.52	2.70	137.28
622	41.09	708.78	7.11	13.70	2.64	137.28
623	41.15	672.99	8.58	13.70	3.18	137.28
624	41.24	683.15	9.29	22.96	3.03	137.28

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
625	41.29	699.08	6.22	25.50	2.24	137.28
626	41.35	702.16	5.60	34.66	1.90	137.28
627	41.41	664.41	7.52	23.68	2.55	137.28
628	41.48	688.08	8.83	48.27	3.63	137.28
629	41.58	615.58	8.65	28.94	5.14	137.28
630	41.62	443.72	8.98	148.17	6.44	137.28
631	41.67	511.47	9.14	79.67	8.00	137.28
632	41.76	441.85	8.92	54.90	8.74	137.28
633	41.80	396.84	9.85	92.72	9.75	137.28
634	41.89	362.17	7.04	95.79	10.78	137.28
635	41.94	258.44	4.96	95.79	11.47	137.28
636	42.00	281.09	7.07	98.87	13.75	137.28
637	42.09	280.71	8.37	79.94	15.44	137.28
638	42.13	262.63	8.74	167.95	18.45	137.28
639	42.19	194.69	8.77	118.05	13.93	136.65
640	42.28	286.52	0.00	186.95	10.13	131.25
641	42.34	166.08	0.00	59.25	N/A	87.36
642	42.42	218.27	0.00	226.66	N/A	87.36
643	42.46	252.38	0.00	317.75	N/A	87.36
644	42.55	424.05	0.00	230.56	N/A	87.36
645	42.60	556.02	0.00	144.63	N/A	87.36

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.09	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
2	0.14	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
3	0.22	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
4	0.27	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
5	0.37	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
6	0.41	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
7	0.46	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
8	0.55	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
9	0.60	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
10	0.69	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
11	0.73	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
12	0.83	0.05	0.00	0.05	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
13	0.87	0.05	0.00	0.05	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
14	0.92	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
15	1.01	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
16	1.05	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
17	1.15	0.07	0.00	0.07	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
18	1.20	0.07	0.00	0.07	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
19	1.29	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
20	1.33	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
21	1.38	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
22	1.46	0.09	0.00	0.09	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
23	1.52	0.09	0.00	0.09	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
24	1.60	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
25	1.66	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
26	1.74	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
27	1.79	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
28	1.84	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
29	1.92	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
30	1.98	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
31	2.04	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
32	2.11	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
33	2.20	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
34	2.25	0.14	0.00	0.14	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
35	2.30	0.14	0.00	0.14	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
36	2.39	0.14	0.00	0.14	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
37	2.44	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
38	2.53	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
39	2.57	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
40	2.66	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
41	2.71	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
42	2.76	0.17	0.00	0.17	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
43	2.85	0.17	0.00	0.17	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
44	2.90	0.18	0.00	0.18	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
45	2.98	0.18	0.00	0.18	1.00	0.614	1.69	0.364	1.00	1.00	2.000	No
46	3.04	0.18	0.00	0.18	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
47	3.12	0.19	0.00	0.19	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
48	3.17	0.19	0.00	0.19	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.22	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
50	3.31	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
51	3.35	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
52	3.44	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
53	3.48	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
54	3.54	0.22	0.00	0.22	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
55	3.62	0.22	0.00	0.22	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
56	3.68	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
57	3.77	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
58	3.82	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
59	3.88	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
60	3.97	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
61	4.01	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
62	4.07	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
63	4.15	0.26	0.00	0.26	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
64	4.20	0.26	0.00	0.26	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
65	4.30	0.27	0.00	0.27	0.99	0.612	1.69	0.363	1.00	1.00	2.000	No
66	4.34	0.27	0.00	0.27	0.99	0.612	1.69	0.363	1.00	1.00	2.000	No
67	4.43	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
68	4.47	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
69	4.53	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
70	4.62	0.29	0.00	0.29	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
71	4.66	0.29	0.00	0.29	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
72	4.76	0.30	0.00	0.30	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
73	4.80	0.30	0.00	0.30	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
74	4.88	0.31	0.00	0.31	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
75	4.94	0.31	0.00	0.31	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
76	4.99	0.31	0.00	0.31	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
77	5.08	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
78	5.12	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
79	5.22	0.33	0.00	0.33	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
80	5.26	0.33	0.00	0.33	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
81	5.36	0.34	0.00	0.34	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
82	5.40	0.34	0.00	0.34	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
83	5.45	0.34	0.00	0.34	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
84	5.54	0.35	0.00	0.35	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
85	5.58	0.35	0.00	0.35	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
86	5.67	0.36	0.00	0.36	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
87	5.71	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
88	5.78	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
89	5.84	0.37	0.00	0.37	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
90	5.91	0.37	0.00	0.37	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
91	6.00	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
92	6.05	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
93	6.14	0.39	0.00	0.39	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
94	6.27	0.40	0.00	0.40	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
95	6.32	0.40	0.00	0.40	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
96	6.37	0.40	0.00	0.40	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.45	0.41	0.00	0.41	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
98	6.51	0.41	0.00	0.41	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
99	6.57	0.42	0.00	0.42	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
100	6.64	0.42	0.00	0.42	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
101	6.70	0.42	0.00	0.42	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
102	6.78	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
103	6.83	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
104	6.97	0.44	0.00	0.44	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
105	6.98	0.44	0.00	0.44	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
106	7.06	0.45	0.00	0.45	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
107	7.11	0.45	0.00	0.45	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
108	7.18	0.45	0.00	0.45	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
109	7.25	0.46	0.00	0.46	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
110	7.29	0.46	0.00	0.46	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
111	7.36	0.47	0.00	0.47	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
112	7.43	0.47	0.00	0.47	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
113	7.52	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
114	7.56	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
115	7.61	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
116	7.70	0.49	0.00	0.49	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
117	7.76	0.49	0.00	0.49	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
118	7.84	0.50	0.00	0.50	0.98	0.607	1.69	0.360	1.00	1.00	2.000	No
119	7.89	0.50	0.00	0.50	0.98	0.607	1.69	0.360	1.00	1.00	2.000	No
120	7.96	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
121	8.03	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
122	8.08	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
123	8.16	0.52	0.00	0.52	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
124	8.21	0.52	0.00	0.52	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
125	8.30	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
126	8.34	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
127	8.43	0.54	0.00	0.54	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
128	8.47	0.54	0.00	0.54	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
129	8.56	0.55	0.00	0.55	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
130	8.61	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
131	8.67	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
132	8.75	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
133	8.79	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
134	8.89	0.57	0.00	0.57	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
135	8.94	0.57	0.00	0.57	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
136	9.02	0.58	0.00	0.58	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
137	9.07	0.58	0.00	0.58	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
138	9.13	0.58	0.00	0.58	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
139	9.21	0.59	0.00	0.59	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
140	9.25	0.59	0.00	0.59	0.98	0.606	1.69	0.358	1.00	1.00	2.000	No
141	9.34	0.60	0.00	0.60	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
142	9.39	0.60	0.00	0.60	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
143	9.48	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
144	9.53	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.62	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
146	9.67	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
147	9.71	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
148	9.80	0.63	0.00	0.63	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
149	9.85	0.63	0.00	0.63	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
150	9.93	0.63	0.00	0.63	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
151	9.99	0.64	0.00	0.64	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
152	10.04	0.64	0.00	0.64	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
153	10.13	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
154	10.18	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
155	10.27	0.66	0.00	0.66	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
156	10.32	0.66	0.00	0.66	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
157	10.40	0.66	0.00	0.66	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
158	10.45	0.67	0.00	0.67	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
159	10.50	0.67	0.00	0.67	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
160	10.59	0.68	0.00	0.68	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
161	10.64	0.68	0.00	0.68	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
162	10.70	0.68	0.00	0.68	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
163	10.78	0.69	0.00	0.69	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
164	10.87	0.69	0.00	0.69	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
165	10.92	0.70	0.00	0.70	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
166	10.96	0.70	0.00	0.70	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
167	11.05	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
168	11.10	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
169	11.19	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
170	11.24	0.72	0.00	0.72	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
171	11.37	0.72	0.00	0.72	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
172	11.39	0.73	0.00	0.73	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
173	11.42	0.73	0.00	0.73	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
174	11.49	0.73	0.00	0.73	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
175	11.56	0.74	0.00	0.74	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
176	11.65	0.74	0.00	0.74	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
177	11.70	0.75	0.00	0.75	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
178	11.79	0.75	0.00	0.75	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
179	11.84	0.75	0.00	0.75	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
180	11.88	0.76	0.00	0.76	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
181	11.97	0.76	0.00	0.76	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
182	12.02	0.77	0.00	0.77	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
183	12.12	0.77	0.00	0.77	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
184	12.16	0.78	0.00	0.78	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
185	12.21	0.78	0.00	0.78	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
186	12.30	0.78	0.00	0.78	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
187	12.35	0.79	0.00	0.79	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
188	12.43	0.79	0.00	0.79	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
189	12.48	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
190	12.57	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
191	12.61	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
192	12.67	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.76	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
194	12.80	0.82	0.00	0.82	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
195	12.89	0.82	0.00	0.82	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
196	12.94	0.83	0.00	0.83	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
197	12.99	0.83	0.00	0.83	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
198	13.08	0.84	0.00	0.84	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
199	13.13	0.84	0.00	0.84	0.97	0.601	1.69	0.355	1.00	1.00	2.000	No
200	13.22	0.84	0.00	0.84	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
201	13.27	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
202	13.36	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
203	13.39	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
204	13.49	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
205	13.54	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
206	13.59	0.87	0.00	0.87	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
207	13.68	0.87	0.00	0.87	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
208	13.72	0.88	0.00	0.88	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
209	13.82	0.88	0.00	0.88	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
210	13.87	0.89	0.00	0.89	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
211	13.95	0.89	0.00	0.89	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
212	14.00	0.89	0.00	0.89	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
213	14.05	0.90	0.00	0.90	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
214	14.14	0.90	0.00	0.90	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
215	14.19	0.91	0.00	0.91	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
216	14.24	0.91	0.00	0.91	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
217	14.31	0.91	0.00	0.91	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
218	14.37	0.92	0.00	0.92	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
219	14.46	0.92	0.00	0.92	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
220	14.51	0.93	0.00	0.93	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
221	14.59	0.93	0.00	0.93	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
222	14.65	0.94	0.00	0.94	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
223	14.73	0.94	0.00	0.94	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
224	14.79	0.94	0.00	0.94	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
225	14.84	0.95	0.00	0.95	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
226	14.91	0.95	0.00	0.95	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
227	14.97	0.96	0.00	0.96	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
228	15.06	0.96	0.00	0.96	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
229	15.11	0.96	0.00	0.96	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
230	15.20	0.97	0.00	0.97	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
231	15.25	0.97	0.00	0.97	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
232	15.30	0.97	0.00	0.97	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
233	15.36	0.98	0.00	0.98	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
234	15.44	0.98	0.00	0.98	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
235	15.49	0.99	0.00	0.99	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
236	15.55	0.99	0.00	0.99	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
237	15.63	0.99	0.00	0.99	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
238	15.73	1.00	0.00	1.00	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
239	15.78	1.00	0.00	1.00	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
240	15.82	1.01	0.00	1.01	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.91	1.01	0.00	1.01	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
242	15.96	1.01	0.00	1.01	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
243	16.05	1.02	0.00	1.02	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
244	16.10	1.02	0.00	1.02	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
245	16.16	1.03	0.00	1.03	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
246	16.24	1.03	0.00	1.03	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
247	16.28	1.03	0.00	1.03	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
248	16.36	1.04	0.00	1.04	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
249	16.42	1.04	0.00	1.04	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
250	16.51	1.05	0.00	1.05	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
251	16.55	1.05	0.00	1.05	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
252	16.61	1.05	0.00	1.05	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
253	16.68	1.06	0.00	1.06	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
254	16.74	1.06	0.00	1.06	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
255	16.83	1.07	0.00	1.07	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
256	16.87	1.07	0.00	1.07	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
257	16.97	1.08	0.00	1.08	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
258	17.06	1.08	0.00	1.08	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
259	17.16	1.09	0.00	1.09	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
260	17.20	1.09	0.00	1.09	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
261	17.29	1.10	0.00	1.10	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
262	17.36	1.10	0.00	1.10	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
263	17.39	1.10	0.00	1.10	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
264	17.47	1.11	0.00	1.11	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
265	17.52	1.11	0.00	1.11	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
266	17.62	1.12	0.00	1.12	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
267	17.71	1.12	0.00	1.12	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
268	17.74	1.12	0.00	1.12	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
269	17.80	1.13	0.00	1.13	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
270	17.86	1.13	0.00	1.13	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
271	17.94	1.14	0.00	1.14	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
272	17.98	1.14	0.00	1.14	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
273	18.05	1.14	0.00	1.14	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
274	18.13	1.15	0.00	1.15	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
275	18.18	1.15	0.00	1.15	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
276	18.26	1.16	0.00	1.16	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
277	18.31	1.16	0.00	1.16	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
278	18.45	1.17	0.00	1.17	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
279	18.55	1.17	0.00	1.17	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
280	18.59	1.18	0.00	1.18	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
281	18.64	1.18	0.00	1.18	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
282	18.74	1.18	0.00	1.18	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
283	18.78	1.19	0.00	1.19	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
284	18.87	1.19	0.00	1.19	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
285	18.92	1.20	0.00	1.20	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
286	18.96	1.20	0.00	1.20	0.96	0.592	1.69	0.351	0.98	1.00	2.000	No
287	19.08	1.20	0.00	1.20	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No
288	19.10	1.21	0.00	1.21	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	19.16	1.21	0.00	1.21	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No
290	19.24	1.21	0.00	1.21	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
291	19.29	1.22	0.00	1.22	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
292	19.37	1.22	0.00	1.22	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
293	19.43	1.23	0.00	1.23	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
294	19.52	1.23	0.00	1.23	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
295	19.57	1.23	0.00	1.23	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
296	19.66	1.24	0.00	1.24	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
297	19.71	1.24	0.00	1.24	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
298	19.79	1.25	0.00	1.25	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
299	19.84	1.25	0.00	1.25	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
300	19.89	1.25	0.00	1.25	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
301	19.98	1.26	0.00	1.26	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
302	20.02	1.26	0.00	1.26	0.96	0.591	1.69	0.350	0.97	1.00	0.362	No
303	20.09	1.27	0.00	1.26	0.96	0.592	1.69	0.350	0.97	1.00	0.363	No
304	20.16	1.27	0.00	1.26	0.96	0.593	1.69	0.351	0.96	1.00	0.364	No
305	20.25	1.28	0.01	1.27	0.96	0.594	1.69	0.352	0.96	1.00	0.365	No
306	20.30	1.28	0.01	1.27	0.96	0.595	1.69	0.352	0.96	1.00	0.365	No
307	20.34	1.28	0.01	1.27	0.96	0.595	1.69	0.352	0.96	1.00	0.365	No
308	20.43	1.29	0.01	1.27	0.96	0.596	1.69	0.353	0.96	1.00	0.366	No
309	20.48	1.29	0.02	1.27	0.96	0.597	1.69	0.353	0.96	1.00	0.367	No
310	20.57	1.29	0.02	1.28	0.96	0.598	1.69	0.354	0.96	1.00	0.368	No
311	20.62	1.30	0.02	1.28	0.96	0.599	1.69	0.354	0.96	1.00	0.368	No
312	20.67	1.30	0.02	1.28	0.96	0.599	1.69	0.355	0.96	1.00	0.369	No
313	20.75	1.30	0.02	1.28	0.95	0.600	1.69	0.355	0.96	1.00	0.369	No
314	20.81	1.31	0.03	1.28	0.95	0.601	1.69	0.356	0.96	1.00	0.370	No
315	20.90	1.31	0.03	1.29	0.95	0.602	1.69	0.357	0.96	1.00	0.371	No
316	20.94	1.32	0.03	1.29	0.95	0.603	1.69	0.357	0.96	1.00	0.371	No
317	21.03	1.32	0.03	1.29	0.95	0.604	1.69	0.357	0.96	1.00	0.372	No
318	21.08	1.32	0.03	1.29	0.95	0.605	1.69	0.358	0.96	1.00	0.372	No
319	21.13	1.33	0.04	1.29	0.95	0.605	1.69	0.358	0.96	1.00	0.373	No
320	21.22	1.33	0.04	1.29	0.95	0.606	1.69	0.359	0.96	1.00	0.374	No
321	21.27	1.33	0.04	1.29	0.95	0.607	1.69	0.359	0.96	1.00	0.374	No
322	21.34	1.34	0.04	1.30	0.95	0.608	1.69	0.360	0.96	1.00	0.375	No
323	21.41	1.34	0.04	1.30	0.95	0.608	1.69	0.360	0.96	1.00	0.375	No
324	21.50	1.35	0.05	1.30	0.95	0.610	1.69	0.361	0.96	1.00	0.376	No
325	21.53	1.35	0.05	1.30	0.95	0.610	1.69	0.361	0.96	1.00	0.376	No
326	21.59	1.35	0.05	1.30	0.95	0.611	1.69	0.361	0.96	1.00	0.377	No
327	21.68	1.36	0.05	1.31	0.95	0.612	1.69	0.362	0.96	1.00	0.378	No
328	21.73	1.36	0.05	1.31	0.95	0.612	1.69	0.362	0.96	1.00	0.378	No
329	21.82	1.37	0.06	1.31	0.95	0.613	1.69	0.363	0.96	1.00	0.379	No
330	21.86	1.37	0.06	1.31	0.95	0.614	1.69	0.363	0.96	1.00	0.379	No
331	21.94	1.37	0.06	1.31	0.95	0.615	1.69	0.364	0.96	1.00	0.380	No
332	22.01	1.38	0.06	1.31	0.95	0.616	1.69	0.364	0.96	1.00	0.381	No
333	22.06	1.38	0.06	1.32	0.95	0.616	1.69	0.365	0.96	1.00	0.381	No
334	22.15	1.38	0.07	1.32	0.95	0.617	1.69	0.365	0.96	1.00	0.382	No
335	22.20	1.39	0.07	1.32	0.95	0.618	1.69	0.366	0.96	1.00	0.382	No
336	22.25	1.39	0.07	1.32	0.95	0.618	1.69	0.366	0.96	1.00	0.383	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.34	1.40	0.07	1.32	0.95	0.619	1.69	0.367	0.96	1.00	0.383	No
338	22.38	1.40	0.07	1.32	0.95	0.620	1.69	0.367	0.96	1.00	0.384	No
339	22.47	1.40	0.08	1.33	0.95	0.621	1.69	0.367	0.96	1.00	0.384	No
340	22.52	1.41	0.08	1.33	0.95	0.621	1.69	0.368	0.96	1.00	0.385	No
341	22.59	1.41	0.08	1.33	0.95	0.622	1.69	0.368	0.96	1.00	0.385	No
342	22.66	1.41	0.08	1.33	0.95	0.623	1.69	0.369	0.96	1.00	0.386	No
343	22.75	1.42	0.09	1.33	0.95	0.624	1.69	0.369	0.95	1.00	0.387	No
344	22.78	1.42	0.09	1.33	0.95	0.624	1.69	0.369	0.95	1.00	0.387	No
345	22.84	1.42	0.09	1.34	0.95	0.625	1.69	0.370	0.95	1.00	0.388	No
346	22.94	1.43	0.09	1.34	0.95	0.626	1.69	0.370	0.95	1.00	0.388	No
347	22.97	1.43	0.09	1.34	0.95	0.626	1.69	0.371	0.95	1.00	0.389	No
348	23.05	1.44	0.10	1.34	0.95	0.627	1.69	0.371	0.95	1.00	0.389	No
349	23.12	1.44	0.10	1.34	0.95	0.628	1.69	0.372	0.95	1.00	0.390	No
350	23.17	1.44	0.10	1.34	0.95	0.628	1.69	0.372	0.95	1.00	0.390	No
351	23.26	1.45	0.10	1.35	0.95	0.629	1.69	0.373	0.95	1.00	0.391	No
352	23.30	1.45	0.10	1.35	0.95	0.630	1.69	0.373	0.95	1.00	0.391	No
353	23.36	1.46	0.10	1.35	0.95	0.630	1.69	0.373	0.95	1.00	0.392	No
354	23.44	1.46	0.11	1.35	0.95	0.631	1.69	0.374	0.95	1.00	0.392	No
355	23.53	1.46	0.11	1.35	0.95	0.632	1.69	0.374	0.95	1.00	0.393	No
356	23.57	1.47	0.11	1.36	0.95	0.633	1.69	0.374	0.95	1.00	0.394	No
357	23.63	1.47	0.11	1.36	0.95	0.633	1.69	0.375	0.95	1.00	0.394	No
358	23.72	1.48	0.12	1.36	0.95	0.634	1.69	0.375	0.95	1.00	0.395	No
359	23.76	1.48	0.12	1.36	0.95	0.635	1.69	0.376	0.95	1.00	0.395	No
360	23.85	1.48	0.12	1.36	0.95	0.635	1.69	0.376	0.95	1.00	0.396	No
361	23.91	1.49	0.12	1.37	0.95	0.636	1.69	0.376	0.95	1.00	0.396	No
362	23.95	1.49	0.12	1.37	0.95	0.636	1.69	0.377	0.95	1.00	0.397	No
363	24.04	1.49	0.13	1.37	0.95	0.637	1.69	0.377	0.95	1.00	0.397	No
364	24.09	1.50	0.13	1.37	0.94	0.638	1.69	0.378	0.95	1.00	0.398	No
365	24.18	1.50	0.13	1.37	0.94	0.639	1.69	0.378	0.95	1.00	0.398	No
366	24.23	1.51	0.13	1.37	0.94	0.639	1.69	0.378	0.95	1.00	0.399	No
367	24.29	1.51	0.13	1.38	0.94	0.640	1.69	0.379	0.95	1.00	0.399	No
368	24.36	1.51	0.14	1.38	0.94	0.641	1.69	0.379	0.95	1.00	0.400	No
369	24.41	1.52	0.14	1.38	0.94	0.641	1.69	0.379	0.95	1.00	0.400	No
370	24.50	1.52	0.14	1.38	0.94	0.642	1.69	0.380	0.95	1.00	0.401	No
371	24.56	1.52	0.14	1.38	0.94	0.642	1.69	0.380	0.95	1.00	0.401	No
372	24.64	1.53	0.14	1.38	0.94	0.643	1.69	0.381	0.95	1.00	0.402	No
373	24.69	1.53	0.15	1.39	0.94	0.644	1.69	0.381	0.95	1.00	0.402	No
374	24.75	1.54	0.15	1.39	0.94	0.644	1.69	0.381	0.95	1.00	0.403	No
375	24.82	1.54	0.15	1.39	0.94	0.645	1.69	0.382	0.95	1.00	0.403	No
376	24.87	1.54	0.15	1.39	0.94	0.645	1.69	0.382	0.95	1.00	0.404	No
377	24.96	1.55	0.15	1.39	0.94	0.646	1.69	0.383	0.95	1.00	0.404	No
378	25.01	1.55	0.16	1.40	0.94	0.647	1.69	0.383	0.95	1.00	0.405	No
379	25.07	1.55	0.16	1.40	0.94	0.647	1.69	0.383	0.95	1.00	0.405	No
380	25.14	1.56	0.16	1.40	0.94	0.648	1.69	0.384	0.95	1.00	0.406	No
381	25.20	1.56	0.16	1.40	0.94	0.648	1.69	0.384	0.95	1.00	0.406	No
382	25.30	1.57	0.17	1.40	0.94	0.649	1.69	0.384	0.95	1.00	0.407	No
383	25.34	1.57	0.17	1.41	0.94	0.650	1.69	0.385	0.94	1.00	0.407	No
384	25.42	1.58	0.17	1.41	0.94	0.650	1.69	0.385	0.94	1.00	0.408	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.48	1.58	0.17	1.41	0.94	0.651	1.69	0.385	0.94	1.00	0.408	No
386	25.55	1.58	0.17	1.41	0.94	0.652	1.69	0.386	0.94	1.00	0.409	No
387	25.62	1.59	0.18	1.41	0.94	0.652	1.69	0.386	0.94	1.00	0.409	No
388	25.67	1.59	0.18	1.41	0.94	0.653	1.69	0.386	0.94	1.00	0.409	No
389	25.75	1.60	0.18	1.42	0.94	0.653	1.69	0.387	0.94	1.00	0.410	No
390	25.80	1.60	0.18	1.42	0.94	0.654	1.69	0.387	0.94	1.00	0.410	No
391	25.90	1.60	0.18	1.42	0.94	0.655	1.69	0.387	0.94	1.00	0.411	No
392	25.94	1.61	0.19	1.42	0.94	0.655	1.69	0.388	0.94	1.00	0.411	No
393	25.99	1.61	0.19	1.42	0.94	0.655	1.69	0.388	0.94	1.00	0.412	No
394	26.06	1.61	0.19	1.43	0.94	0.656	1.69	0.388	0.94	1.00	0.412	No
395	26.13	1.62	0.19	1.43	0.94	0.657	1.69	0.389	0.94	1.00	0.413	No
396	26.22	1.62	0.19	1.43	0.94	0.657	1.69	0.389	0.94	1.00	0.413	No
397	26.27	1.63	0.20	1.43	0.94	0.658	1.69	0.389	0.94	1.00	0.414	No
398	26.34	1.63	0.20	1.43	0.94	0.658	1.69	0.390	0.94	1.00	0.414	No
399	26.40	1.63	0.20	1.43	0.94	0.659	1.69	0.390	0.94	1.00	0.414	No
400	26.45	1.64	0.20	1.44	0.94	0.659	1.69	0.390	0.94	1.00	0.415	No
401	26.54	1.64	0.20	1.44	0.94	0.660	1.69	0.391	0.94	1.00	0.415	No
402	26.59	1.64	0.21	1.44	0.94	0.660	1.69	0.391	0.94	1.00	0.416	No
403	26.68	1.65	0.21	1.44	0.94	0.661	1.69	0.391	0.94	1.00	0.416	No
404	26.73	1.65	0.21	1.44	0.94	0.662	1.69	0.392	0.94	1.00	0.417	No
405	26.82	1.66	0.21	1.44	0.93	0.662	1.69	0.392	0.94	1.00	0.417	No
406	26.88	1.66	0.21	1.45	0.93	0.663	1.69	0.392	0.94	1.00	0.418	No
407	26.91	1.66	0.22	1.45	0.93	0.663	1.69	0.393	0.94	1.00	0.418	No
408	27.00	1.67	0.22	1.45	0.93	0.664	1.69	0.393	0.94	1.00	0.418	No
409	27.05	1.67	0.22	1.45	0.93	0.664	1.69	0.393	0.94	1.00	0.419	No
410	27.14	1.67	0.22	1.45	0.93	0.665	1.69	0.394	0.94	1.00	0.419	No
411	27.19	1.68	0.22	1.45	0.93	0.665	1.69	0.394	0.94	1.00	0.420	No
412	27.23	1.68	0.23	1.45	0.93	0.666	1.69	0.394	0.94	1.00	0.420	No
413	27.32	1.68	0.23	1.46	0.93	0.666	1.69	0.395	0.94	1.00	0.420	No
414	27.38	1.69	0.23	1.46	0.93	0.667	1.69	0.395	0.94	1.00	0.421	No
415	27.46	1.69	0.23	1.46	0.93	0.668	1.69	0.395	0.94	1.00	0.421	No
416	27.51	1.69	0.23	1.46	0.93	0.668	1.69	0.395	0.94	1.00	0.422	No
417	27.57	1.70	0.24	1.46	0.93	0.668	1.69	0.396	0.94	1.00	0.422	No
418	27.63	1.70	0.24	1.46	0.93	0.669	1.69	0.396	0.94	1.00	0.422	No
419	27.69	1.70	0.24	1.46	0.93	0.669	1.69	0.396	0.94	1.00	0.423	No
420	27.78	1.71	0.24	1.47	0.93	0.670	1.69	0.397	0.94	1.00	0.423	No
421	27.85	1.71	0.24	1.47	0.93	0.671	1.69	0.397	0.94	1.00	0.424	No
422	27.90	1.71	0.25	1.47	0.93	0.671	1.69	0.397	0.94	1.00	0.424	No
423	27.99	1.72	0.25	1.47	0.93	0.672	1.69	0.398	0.94	1.00	0.425	No
424	28.04	1.72	0.25	1.47	0.93	0.672	1.69	0.398	0.94	1.00	0.425	No
425	28.13	1.73	0.25	1.47	0.93	0.673	1.69	0.398	0.94	1.00	0.425	No
426	28.17	1.73	0.25	1.47	0.93	0.673	1.69	0.398	0.94	1.00	0.426	No
427	28.26	1.73	0.26	1.48	0.93	0.674	1.69	0.399	0.94	1.00	0.426	No
428	28.31	1.74	0.26	1.48	0.93	0.674	1.69	0.399	0.94	1.00	0.427	No
429	28.36	1.74	0.26	1.48	0.93	0.674	1.69	0.399	0.94	1.00	0.427	No
430	28.45	1.74	0.26	1.48	0.93	0.675	1.69	0.400	0.94	1.00	0.427	No
431	28.49	1.75	0.26	1.48	0.93	0.675	1.69	0.400	0.93	1.00	0.428	No
432	28.56	1.75	0.27	1.48	0.93	0.676	1.69	0.400	0.93	1.00	0.428	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.63	1.75	0.27	1.48	0.93	0.676	1.69	0.400	0.93	1.00	0.428	No
434	28.73	1.76	0.27	1.49	0.93	0.677	1.69	0.401	0.93	1.00	0.429	No
435	28.78	1.76	0.27	1.49	0.93	0.677	1.69	0.401	0.93	1.00	0.429	No
436	28.82	1.76	0.28	1.49	0.93	0.678	1.69	0.401	0.93	1.00	0.429	No
437	28.91	1.77	0.28	1.49	0.93	0.678	1.69	0.402	0.93	1.00	0.430	No
438	28.96	1.77	0.28	1.49	0.93	0.679	1.69	0.402	0.93	1.00	0.430	No
439	29.05	1.78	0.28	1.49	0.93	0.679	1.69	0.402	0.93	1.00	0.431	No
440	29.09	1.78	0.28	1.49	0.93	0.680	1.69	0.402	0.93	1.00	0.431	No
441	29.15	1.78	0.29	1.50	0.92	0.680	1.69	0.402	0.93	1.00	0.431	No
442	29.23	1.79	0.29	1.50	0.92	0.681	1.69	0.403	0.93	1.00	0.432	No
443	29.28	1.79	0.29	1.50	0.92	0.681	1.69	0.403	0.93	1.00	0.432	No
444	29.37	1.79	0.29	1.50	0.92	0.681	1.69	0.403	0.93	1.00	0.433	No
445	29.42	1.80	0.29	1.50	0.92	0.682	1.69	0.403	0.93	1.00	0.433	No
446	29.46	1.80	0.30	1.51	0.92	0.682	1.69	0.404	0.93	1.00	0.433	No
447	29.56	1.81	0.30	1.51	0.92	0.682	1.69	0.404	0.93	1.00	0.434	No
448	29.60	1.81	0.30	1.51	0.92	0.683	1.69	0.404	0.93	1.00	0.434	No
449	29.67	1.81	0.30	1.51	0.92	0.683	1.69	0.404	0.93	1.00	0.434	No
450	29.74	1.82	0.30	1.51	0.92	0.684	1.69	0.405	0.93	1.00	0.435	No
451	29.83	1.82	0.31	1.52	0.92	0.684	1.69	0.405	0.93	1.00	0.435	No
452	29.92	1.83	0.31	1.52	0.92	0.685	1.69	0.405	0.93	1.00	0.436	No
453	29.96	1.83	0.31	1.52	0.92	0.685	1.69	0.405	0.93	1.00	0.436	No
454	30.02	1.83	0.31	1.52	0.92	0.685	1.69	0.406	0.93	1.00	0.436	No
455	30.07	1.84	0.31	1.52	0.92	0.685	1.69	0.406	0.93	1.00	0.436	No
456	30.12	1.84	0.32	1.52	0.92	0.686	1.69	0.406	0.93	1.00	0.437	No
457	30.21	1.85	0.32	1.53	0.92	0.686	1.69	0.406	0.93	1.00	0.437	No
458	30.31	1.85	0.32	1.53	0.92	0.687	1.69	0.407	0.93	1.00	0.438	No
459	30.34	1.85	0.32	1.53	0.92	0.687	1.69	0.407	0.93	1.00	0.438	No
460	30.40	1.86	0.32	1.53	0.92	0.687	1.69	0.407	0.93	1.00	0.438	No
461	30.49	1.86	0.33	1.53	0.92	0.688	1.69	0.407	0.93	1.00	0.439	No
462	30.54	1.87	0.33	1.54	0.92	0.688	1.69	0.407	0.93	1.00	0.439	No
463	30.58	1.87	0.33	1.54	0.92	0.688	1.69	0.407	0.93	1.00	0.439	No
464	30.68	1.87	0.33	1.54	0.92	0.689	1.69	0.408	0.93	1.00	0.439	No
465	30.73	1.88	0.33	1.54	0.92	0.689	1.69	0.408	0.93	1.00	0.440	No
466	30.80	1.88	0.34	1.54	0.92	0.690	1.69	0.408	0.93	1.00	0.440	No
467	30.86	1.88	0.34	1.54	0.92	0.690	1.69	0.408	0.93	1.00	0.440	No
468	30.91	1.89	0.34	1.54	0.92	0.690	1.69	0.409	0.93	1.00	0.441	No
469	31.02	1.89	0.34	1.55	0.92	0.691	1.69	0.409	0.93	1.00	0.441	No
470	31.05	1.89	0.34	1.55	0.92	0.691	1.69	0.409	0.93	1.00	0.441	No
471	31.14	1.90	0.35	1.55	0.91	0.691	1.69	0.409	0.93	1.00	0.442	No
472	31.18	1.90	0.35	1.55	0.91	0.692	1.69	0.409	0.93	1.00	0.442	No
473	31.24	1.90	0.35	1.55	0.91	0.692	1.69	0.410	0.93	1.00	0.442	No
474	31.32	1.91	0.35	1.55	0.91	0.692	1.69	0.410	0.93	1.00	0.443	No
475	31.36	1.91	0.35	1.55	0.91	0.693	1.69	0.410	0.93	1.00	0.443	No
476	31.44	1.91	0.36	1.56	0.91	0.693	1.69	0.410	0.93	1.00	0.443	No
477	31.51	1.92	0.36	1.56	0.91	0.693	1.69	0.410	0.93	1.00	0.443	No
478	31.59	1.92	0.36	1.56	0.91	0.694	1.69	0.411	0.93	1.00	0.444	No
479	31.65	1.92	0.36	1.56	0.91	0.694	1.69	0.411	0.93	1.00	0.444	No
480	31.73	1.93	0.37	1.56	0.91	0.695	1.69	0.411	0.93	1.00	0.444	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.83	1.93	0.37	1.56	0.91	0.695	1.69	0.411	0.92	1.00	0.445	No
482	31.92	1.94	0.37	1.57	0.91	0.695	1.69	0.412	0.92	1.00	0.445	No
483	31.97	1.94	0.37	1.57	0.91	0.696	1.69	0.412	0.92	1.00	0.446	No
484	32.06	1.95	0.38	1.57	0.91	0.696	1.69	0.412	0.92	1.00	0.446	No
485	32.10	1.95	0.38	1.57	0.91	0.696	1.69	0.412	0.92	1.00	0.446	No
486	32.15	1.95	0.38	1.57	0.91	0.697	1.69	0.412	0.92	1.00	0.446	No
487	32.24	1.96	0.38	1.57	0.91	0.697	1.69	0.413	0.92	1.00	0.447	No
488	32.29	1.96	0.38	1.58	0.91	0.697	1.69	0.413	0.92	1.00	0.447	No
489	32.38	1.96	0.39	1.58	0.91	0.698	1.69	0.413	0.92	1.00	0.447	No
490	32.43	1.97	0.39	1.58	0.91	0.698	1.69	0.413	0.92	1.00	0.447	No
491	32.52	1.97	0.39	1.58	0.91	0.698	1.69	0.413	0.92	1.00	0.448	No
492	32.57	1.97	0.39	1.58	0.91	0.698	1.69	0.413	0.92	1.00	0.448	No
493	32.62	1.98	0.39	1.58	0.91	0.699	1.69	0.414	0.92	1.00	0.448	No
494	32.70	1.98	0.40	1.59	0.91	0.699	1.69	0.414	0.92	1.00	0.449	No
495	32.75	1.98	0.40	1.59	0.91	0.699	1.69	0.414	0.92	1.00	0.449	No
496	32.81	1.99	0.40	1.59	0.90	0.699	1.69	0.414	0.92	1.00	0.449	No
497	32.89	1.99	0.40	1.59	0.90	0.700	1.69	0.414	0.92	1.00	0.449	No
498	32.98	2.00	0.41	1.59	0.90	0.700	1.69	0.414	0.92	1.00	0.450	No
499	33.03	2.00	0.41	1.59	0.90	0.700	1.69	0.414	0.92	1.00	0.450	No
500	33.07	2.00	0.41	1.60	0.90	0.700	1.69	0.415	0.92	1.00	0.450	No
501	33.17	2.01	0.41	1.60	0.90	0.701	1.69	0.415	0.92	1.00	0.450	No
502	33.21	2.01	0.41	1.60	0.90	0.701	1.69	0.415	0.92	1.00	0.451	No
503	33.31	2.02	0.42	1.60	0.90	0.701	1.69	0.415	0.92	1.00	0.451	No
504	33.35	2.02	0.42	1.60	0.90	0.701	1.69	0.415	0.92	1.00	0.451	No
505	33.44	2.02	0.42	1.61	0.90	0.702	1.69	0.415	0.92	1.00	0.451	No
506	33.49	2.03	0.42	1.61	0.90	0.702	1.69	0.415	0.92	1.00	0.452	No
507	33.53	2.03	0.42	1.61	0.90	0.702	1.69	0.416	0.92	1.00	0.452	No
508	33.63	2.04	0.43	1.61	0.90	0.702	1.69	0.416	0.92	1.00	0.452	No
509	33.67	2.04	0.43	1.61	0.90	0.702	1.69	0.416	0.92	1.00	0.452	No
510	33.77	2.04	0.43	1.61	0.90	0.703	1.69	0.416	0.92	1.00	0.453	No
511	33.81	2.05	0.43	1.62	0.90	0.703	1.69	0.416	0.92	1.00	0.453	No
512	33.88	2.05	0.43	1.62	0.90	0.703	1.69	0.416	0.92	1.00	0.453	No
513	33.95	2.06	0.44	1.62	0.90	0.703	1.69	0.416	0.92	1.00	0.453	No
514	33.99	2.06	0.44	1.62	0.90	0.703	1.69	0.416	0.92	1.00	0.453	No
515	34.09	2.06	0.44	1.62	0.90	0.704	1.69	0.416	0.92	1.00	0.454	No
516	34.14	2.07	0.44	1.63	0.90	0.704	1.69	0.417	0.92	1.00	0.454	No
517	34.22	2.07	0.44	1.63	0.90	0.704	1.69	0.417	0.92	1.00	0.454	No
518	34.27	2.08	0.45	1.63	0.90	0.704	1.69	0.417	0.92	1.00	0.454	No
519	34.32	2.08	0.45	1.63	0.90	0.704	1.69	0.417	0.92	1.00	0.455	No
520	34.40	2.08	0.45	1.63	0.89	0.704	1.69	0.417	0.92	1.00	0.455	No
521	34.46	2.09	0.45	1.64	0.89	0.705	1.69	0.417	0.92	1.00	0.455	No
522	34.58	2.09	0.45	1.64	0.89	0.705	1.69	0.417	0.92	1.00	0.455	No
523	34.59	2.09	0.46	1.64	0.89	0.705	1.69	0.417	0.92	1.00	0.455	No
524	34.69	2.10	0.46	1.64	0.89	0.705	1.69	0.417	0.92	1.00	0.456	No
525	34.73	2.10	0.46	1.64	0.89	0.705	1.69	0.417	0.92	1.00	0.456	No
526	34.78	2.11	0.46	1.65	0.89	0.705	1.69	0.418	0.92	1.00	0.456	No
527	34.85	2.11	0.46	1.65	0.89	0.705	1.69	0.418	0.92	1.00	0.456	No
528	34.92	2.11	0.47	1.65	0.89	0.706	1.69	0.418	0.92	1.00	0.456	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	35.01	2.12	0.47	1.65	0.89	0.706	1.69	0.418	0.91	1.00	0.457	No
530	35.05	2.12	0.47	1.65	0.89	0.706	1.69	0.418	0.91	1.00	0.457	No
531	35.14	2.13	0.47	1.66	0.89	0.706	1.69	0.418	0.91	1.00	0.457	No
532	35.19	2.13	0.47	1.66	0.89	0.706	1.69	0.418	0.91	1.00	0.457	No
533	35.24	2.14	0.48	1.66	0.89	0.706	1.69	0.418	0.91	1.00	0.457	No
534	35.33	2.14	0.48	1.66	0.89	0.706	1.69	0.418	0.91	1.00	0.458	No
535	35.38	2.14	0.48	1.66	0.89	0.706	1.69	0.418	0.91	1.00	0.458	No
536	35.47	2.15	0.48	1.67	0.89	0.706	1.69	0.418	0.91	1.00	0.458	No
537	35.50	2.15	0.48	1.67	0.89	0.707	1.69	0.418	0.91	1.00	0.458	No
538	35.59	2.16	0.49	1.67	0.89	0.707	1.69	0.418	0.91	1.00	0.458	No
539	35.64	2.16	0.49	1.67	0.89	0.707	1.69	0.418	0.91	1.00	0.458	No
540	35.70	2.17	0.49	1.68	0.89	0.707	1.69	0.418	0.91	1.00	0.459	No
541	35.78	2.17	0.49	1.68	0.89	0.707	1.69	0.418	0.91	1.00	0.459	No
542	35.83	2.17	0.49	1.68	0.88	0.707	1.69	0.418	0.91	1.00	0.459	No
543	35.92	2.18	0.50	1.68	0.88	0.707	1.69	0.419	0.91	1.00	0.459	No
544	35.97	2.18	0.50	1.68	0.88	0.707	1.69	0.419	0.91	1.00	0.459	No
545	36.06	2.19	0.50	1.69	0.88	0.707	1.69	0.419	0.91	1.00	0.460	No
546	36.10	2.19	0.50	1.69	0.88	0.707	1.69	0.419	0.91	1.00	0.460	No
547	36.16	2.19	0.50	1.69	0.88	0.707	1.69	0.419	0.91	1.00	0.460	No
548	36.24	2.20	0.51	1.69	0.88	0.707	1.69	0.419	0.91	1.00	0.460	No
549	36.30	2.20	0.51	1.69	0.88	0.707	1.69	0.419	0.91	1.00	0.460	No
550	36.35	2.21	0.51	1.70	0.88	0.708	1.69	0.419	0.91	1.00	0.460	No
551	36.43	2.21	0.51	1.70	0.88	0.708	1.69	0.419	0.91	1.00	0.460	No
552	36.52	2.22	0.52	1.70	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
553	36.57	2.22	0.52	1.70	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
554	36.62	2.22	0.52	1.71	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
555	36.70	2.23	0.52	1.71	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
556	36.75	2.23	0.52	1.71	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
557	36.84	2.24	0.53	1.71	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
558	36.89	2.24	0.53	1.71	0.88	0.708	1.69	0.419	0.91	1.00	0.461	No
559	36.96	2.25	0.53	1.72	0.88	0.708	1.69	0.419	0.91	1.00	0.462	No
560	37.03	2.25	0.53	1.72	0.88	0.708	1.69	0.419	0.91	1.00	0.462	No
561	37.07	2.25	0.53	1.72	0.88	0.708	1.69	0.419	0.91	1.00	0.462	No
562	37.17	2.26	0.54	1.72	0.87	0.708	1.69	0.419	0.91	1.00	0.462	No
563	37.22	2.26	0.54	1.73	0.87	0.708	1.69	0.419	0.91	1.00	0.462	No
564	37.31	2.27	0.54	1.73	0.87	0.708	1.69	0.419	0.91	1.00	0.462	No
565	37.35	2.27	0.54	1.73	0.87	0.708	1.69	0.419	0.91	1.00	0.462	No
566	37.44	2.28	0.54	1.73	0.87	0.708	1.69	0.419	0.91	1.00	0.462	No
567	37.49	2.28	0.55	1.74	0.87	0.708	1.69	0.419	0.91	1.00	0.463	No
568	37.54	2.28	0.55	1.74	0.87	0.708	1.69	0.419	0.91	1.00	0.463	No
569	37.63	2.29	0.55	1.74	0.87	0.708	1.69	0.419	0.91	1.00	0.463	No
570	37.68	2.29	0.55	1.74	0.87	0.708	1.69	0.419	0.91	1.00	0.463	No
571	37.76	2.30	0.55	1.75	0.87	0.708	1.69	0.419	0.90	1.00	0.463	No
572	37.81	2.30	0.56	1.75	0.87	0.708	1.69	0.419	0.90	1.00	0.463	No
573	37.91	2.31	0.56	1.75	0.87	0.708	1.69	0.419	0.90	1.00	0.463	No
574	37.95	2.31	0.56	1.75	0.87	0.708	1.69	0.419	0.90	1.00	0.463	No
575	38.00	2.32	0.56	1.75	0.87	0.708	1.69	0.419	0.90	1.00	0.463	No
576	38.09	2.32	0.56	1.76	0.87	0.708	1.69	0.419	0.90	1.00	0.464	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	38.14	2.32	0.57	1.76	0.87	0.707	1.69	0.419	0.90	1.00	0.464	No
578	38.20	2.33	0.57	1.76	0.87	0.707	1.69	0.419	0.90	1.00	0.464	No
579	38.26	2.33	0.57	1.76	0.87	0.707	1.69	0.419	0.90	1.00	0.464	No
580	38.32	2.34	0.57	1.77	0.87	0.707	1.69	0.419	0.90	1.00	0.464	No
581	38.41	2.34	0.57	1.77	0.86	0.707	1.69	0.419	0.90	1.00	0.464	No
582	38.46	2.35	0.58	1.77	0.86	0.707	1.69	0.419	0.90	1.00	0.464	No
583	38.55	2.35	0.58	1.77	0.86	0.707	1.69	0.419	0.90	1.00	0.464	No
584	38.59	2.36	0.58	1.78	0.86	0.707	1.69	0.419	0.90	1.00	0.464	No
585	38.69	2.36	0.58	1.78	0.86	0.707	1.69	0.418	0.90	1.00	0.464	No
586	38.74	2.37	0.58	1.78	0.86	0.707	1.69	0.418	0.90	1.00	0.464	No
587	38.78	2.37	0.59	1.78	0.86	0.707	1.69	0.418	0.90	1.00	0.464	No
588	38.88	2.37	0.59	1.79	0.86	0.707	1.69	0.418	0.90	1.00	0.465	No
589	38.91	2.38	0.59	1.79	0.86	0.707	1.69	0.418	0.90	1.00	0.465	No
590	39.01	2.38	0.59	1.79	0.86	0.707	1.69	0.418	0.90	1.00	0.465	No
591	39.06	2.39	0.59	1.79	0.86	0.707	1.69	0.418	0.90	1.00	0.465	No
592	39.15	2.39	0.60	1.80	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
593	39.20	2.40	0.60	1.80	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
594	39.24	2.40	0.60	1.80	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
595	39.32	2.40	0.60	1.80	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
596	39.38	2.41	0.60	1.80	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
597	39.44	2.41	0.61	1.81	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
598	39.52	2.42	0.61	1.81	0.86	0.706	1.69	0.418	0.90	1.00	0.465	No
599	39.57	2.42	0.61	1.81	0.85	0.706	1.69	0.418	0.90	1.00	0.465	No
600	39.63	2.43	0.61	1.81	0.85	0.706	1.69	0.418	0.90	1.00	0.465	No
601	39.71	2.43	0.61	1.82	0.85	0.706	1.69	0.418	0.90	1.00	0.465	No
602	39.78	2.44	0.62	1.82	0.85	0.705	1.69	0.418	0.90	1.00	0.465	No
603	39.84	2.44	0.62	1.82	0.85	0.705	1.69	0.418	0.90	1.00	0.465	No
604	39.91	2.44	0.62	1.82	0.85	0.705	1.69	0.417	0.90	1.00	0.465	No
605	40.01	2.45	0.62	1.83	0.85	0.705	1.69	0.417	0.90	1.00	0.465	No
606	40.04	2.45	0.63	1.83	0.85	0.705	1.69	0.417	0.90	1.00	0.466	No
607	40.09	2.46	0.63	1.83	0.85	0.705	1.69	0.417	0.90	1.00	0.466	No
608	40.19	2.46	0.63	1.83	0.85	0.705	1.69	0.417	0.90	1.00	0.466	No
609	40.23	2.47	0.63	1.83	0.85	0.705	1.69	0.417	0.90	1.00	0.466	No
610	40.32	2.47	0.63	1.84	0.85	0.704	1.69	0.417	0.90	1.00	0.466	No
611	40.37	2.48	0.64	1.84	0.85	0.704	1.69	0.417	0.90	1.00	0.466	No
612	40.46	2.48	0.64	1.84	0.85	0.704	1.69	0.417	0.89	1.00	0.466	No
613	40.51	2.49	0.64	1.85	0.85	0.704	1.69	0.417	0.89	1.00	0.466	No
614	40.56	2.49	0.64	1.85	0.85	0.704	1.69	0.417	0.89	1.00	0.466	No
615	40.63	2.49	0.64	1.85	0.85	0.704	1.69	0.417	0.89	1.00	0.466	No
616	40.69	2.50	0.65	1.85	0.84	0.704	1.69	0.416	0.89	1.00	0.466	No
617	40.79	2.50	0.65	1.86	0.84	0.703	1.69	0.416	0.89	1.00	0.466	No
618	40.84	2.51	0.65	1.86	0.84	0.703	1.69	0.416	0.89	1.00	0.466	No
619	40.88	2.51	0.65	1.86	0.84	0.703	1.69	0.416	0.89	1.00	0.466	No
620	40.97	2.52	0.65	1.86	0.84	0.703	1.69	0.416	0.89	1.00	0.466	No
621	41.02	2.52	0.66	1.86	0.84	0.703	1.69	0.416	0.89	1.00	0.466	No
622	41.09	2.53	0.66	1.87	0.84	0.703	1.69	0.416	0.89	1.00	0.466	No
623	41.15	2.53	0.66	1.87	0.84	0.702	1.69	0.416	0.89	1.00	0.466	No
624	41.24	2.54	0.66	1.87	0.84	0.702	1.69	0.416	0.89	1.00	0.466	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
625	41.29	2.54	0.66	1.87	0.84	0.702	1.69	0.416	0.89	1.00	0.466	No
626	41.35	2.54	0.67	1.88	0.84	0.702	1.69	0.415	0.89	1.00	0.466	No
627	41.41	2.55	0.67	1.88	0.84	0.702	1.69	0.415	0.89	1.00	0.466	No
628	41.48	2.55	0.67	1.88	0.84	0.701	1.69	0.415	0.89	1.00	0.466	No
629	41.58	2.56	0.67	1.89	0.84	0.701	1.69	0.415	0.89	1.00	0.466	No
630	41.62	2.56	0.67	1.89	0.84	0.701	1.69	0.415	0.89	1.00	0.466	No
631	41.67	2.56	0.68	1.89	0.84	0.701	1.69	0.415	0.89	1.00	0.466	No
632	41.76	2.57	0.68	1.89	0.84	0.701	1.69	0.415	0.89	1.00	0.466	No
633	41.80	2.57	0.68	1.89	0.83	0.701	1.69	0.415	0.89	1.00	0.466	No
634	41.89	2.58	0.68	1.90	0.83	0.700	1.69	0.415	0.89	1.00	0.466	No
635	41.94	2.58	0.68	1.90	0.83	0.700	1.69	0.414	0.89	1.00	0.466	No
636	42.00	2.59	0.69	1.90	0.83	0.700	1.69	0.414	0.89	1.00	0.466	No
637	42.09	2.59	0.69	1.90	0.83	0.700	1.69	0.414	0.89	1.00	0.466	No
638	42.13	2.60	0.69	1.91	0.83	0.700	1.69	0.414	0.89	1.00	0.466	No
639	42.19	2.60	0.69	1.91	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No
640	42.28	2.61	0.70	1.91	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No
641	42.34	2.61	0.70	1.91	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No
642	42.42	2.61	0.70	1.91	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No
643	42.46	2.61	0.70	1.91	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No
644	42.55	2.62	0.70	1.91	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No
645	42.60	2.62	0.71	1.92	0.83	0.699	1.69	0.414	0.89	1.00	0.466	No

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.09	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
2	0.14	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
3	0.22	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
4	0.27	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
5	0.37	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
6	0.41	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
7	0.46	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
8	0.55	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
9	0.60	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
10	0.69	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
11	0.73	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
12	0.83	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
13	0.87	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
14	0.92	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
15	1.01	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
16	1.05	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
17	1.15	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
18	1.20	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
19	1.29	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
20	1.33	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
21	1.38	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
22	1.46	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
23	1.52	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
24	1.60	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
25	1.66	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
26	1.74	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
27	1.79	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
28	1.84	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
29	1.92	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
30	1.98	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
31	2.04	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
32	2.11	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
33	2.20	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
34	2.25	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
35	2.30	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
36	2.39	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
37	2.44	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
38	2.53	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
39	2.57	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
40	2.66	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
41	2.71	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
42	2.76	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
43	2.85	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
44	2.90	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
45	2.98	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
46	3.04	158.09	1.56	0.84	0.50	253.70	1.00	253.70	4.000	No	No	2.00
47	3.12	241.02	1.43	0.81	0.50	386.93	1.00	386.93	4.000	No	No	2.00
48	3.17	247.98	1.40	0.76	0.50	398.10	1.00	398.10	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.22	249.19	1.42	0.80	0.50	400.04	1.00	400.04	4.000	No	No	2.00
50	3.31	247.98	1.45	0.86	0.50	398.09	1.00	398.09	4.000	No	No	2.00
51	3.35	238.22	1.49	0.96	0.50	382.40	1.00	382.40	4.000	No	No	2.00
52	3.44	225.98	1.54	1.06	0.50	362.73	1.00	362.73	4.000	No	No	2.00
53	3.48	212.72	1.62	1.26	0.50	341.42	1.00	341.42	4.000	No	No	2.00
54	3.54	202.47	1.68	1.43	0.51	324.95	1.00	324.95	4.000	No	No	2.00
55	3.62	194.39	1.71	1.52	0.52	311.96	1.01	313.94	4.000	No	No	2.00
56	3.68	184.27	1.76	1.68	0.53	295.69	1.09	323.53	4.000	No	No	2.00
57	3.77	176.34	1.81	1.89	0.55	282.95	1.16	329.42	4.000	No	No	2.00
58	3.82	160.29	1.92	2.39	0.58	257.14	1.25	321.12	4.000	No	No	2.00
59	3.88	152.03	2.00	2.87	0.61	243.87	1.31	318.31	4.000	No	No	2.00
60	3.97	146.54	2.06	3.34	0.63	235.04	1.37	321.45	4.000	No	No	2.00
61	4.01	148.07	2.09	3.61	0.63	237.50	1.40	332.72	4.000	No	No	2.00
62	4.07	141.68	2.14	4.05	0.65	227.23	1.49	337.48	4.000	No	No	2.00
63	4.15	131.60	2.21	4.66	0.67	211.02	1.64	345.42	4.000	No	No	2.00
64	4.20	118.50	2.29	5.39	0.69	189.96	1.87	356.02	4.000	No	No	2.00
65	4.30	108.07	2.34	5.87	0.71	173.20	2.08	360.82	4.000	No	No	2.00
66	4.34	100.20	2.37	6.06	0.72	160.54	2.21	355.43	4.000	No	No	2.00
67	4.43	97.34	2.37	5.92	0.72	155.95	2.21	344.02	4.000	No	No	2.00
68	4.47	96.68	2.35	5.63	0.71	154.88	2.13	329.64	4.000	No	No	2.00
69	4.53	96.65	2.33	5.33	0.71	154.82	2.04	316.43	4.000	No	No	2.00
70	4.62	95.32	2.32	5.14	0.70	152.68	2.00	305.98	4.000	No	No	2.00
71	4.66	89.72	2.34	5.25	0.71	143.68	2.10	301.30	4.000	No	No	2.00
72	4.76	82.38	2.39	5.63	0.72	131.88	2.31	305.27	4.000	No	No	2.00
73	4.80	74.12	2.45	6.24	0.74	118.60	2.66	316.01	4.000	No	No	2.00
74	4.88	71.94	2.47	6.42	0.75	115.10	2.77	319.35	4.000	No	No	2.00
75	4.94	70.14	2.48	6.52	0.75	112.19	2.85	319.76	4.000	No	No	2.00
76	4.99	72.63	2.45	6.12	0.74	116.18	2.65	308.35	4.000	No	No	2.00
77	5.08	74.40	2.42	5.79	0.74	119.02	2.50	298.05	4.000	No	No	2.00
78	5.12	80.68	2.36	5.18	0.72	129.10	2.20	283.46	4.000	No	No	2.00
79	5.22	86.02	2.32	4.75	0.70	137.68	1.99	274.15	4.000	No	No	2.00
80	5.26	89.00	2.29	4.46	0.69	142.46	1.87	266.83	4.000	No	No	2.00
81	5.36	88.22	2.28	4.37	0.69	141.20	1.86	262.17	4.000	No	No	2.00
82	5.40	84.65	2.30	4.43	0.70	135.45	1.91	258.85	4.000	No	No	2.00
83	5.45	80.39	2.31	4.47	0.70	128.60	1.98	254.11	4.000	No	No	2.00
84	5.54	76.38	2.33	4.46	0.71	122.15	2.02	247.16	4.000	No	No	2.00
85	5.58	73.02	2.33	4.41	0.71	116.75	2.06	240.14	4.000	No	No	2.00
86	5.67	71.63	2.34	4.49	0.71	114.50	2.11	241.20	4.000	No	No	2.00
87	5.71	74.52	2.34	4.59	0.71	119.14	2.10	249.63	4.000	No	No	2.00
88	5.78	81.35	2.32	4.57	0.70	130.12	1.99	259.36	4.000	No	No	2.00
89	5.84	95.96	2.24	4.18	0.68	153.57	1.74	266.75	4.000	No	No	2.00
90	5.91	114.04	2.16	3.68	0.65	182.63	1.52	276.91	4.000	No	No	2.00
91	6.00	131.32	2.08	3.25	0.63	210.38	1.39	291.96	4.000	No	No	2.00
92	6.05	138.19	2.04	3.02	0.62	221.41	1.34	297.37	4.000	No	No	2.00
93	6.14	131.16	2.04	2.92	0.62	210.10	1.34	282.30	4.000	No	No	2.00
94	6.27	116.98	2.07	2.94	0.63	187.31	1.38	258.21	4.000	No	No	2.00
95	6.32	100.67	2.12	3.08	0.65	161.09	1.46	234.88	4.000	No	No	2.00
96	6.37	88.43	2.18	3.30	0.66	141.42	1.57	222.36	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.45	78.20	2.24	3.54	0.68	124.99	1.72	215.12	4.000	No	No	2.00
98	6.51	68.69	2.30	3.84	0.70	109.71	1.93	211.92	4.000	No	No	2.00
99	6.57	62.06	2.36	4.19	0.72	99.05	2.17	215.19	4.000	No	No	2.00
100	6.64	58.45	2.40	4.45	0.73	93.23	2.36	219.63	4.000	No	No	2.00
101	6.70	58.23	2.41	4.56	0.73	92.87	2.40	223.35	4.000	No	No	2.00
102	6.78	59.42	2.40	4.54	0.73	94.78	2.37	224.29	4.000	No	No	2.00
103	6.83	61.83	2.40	4.68	0.73	98.65	2.36	233.21	4.000	No	No	2.00
104	6.97	64.36	2.39	4.78	0.73	102.69	2.35	240.94	4.000	No	No	2.00
105	6.98	66.35	2.40	4.99	0.73	105.89	2.38	252.34	4.000	No	No	2.00
106	7.06	68.65	2.40	5.04	0.73	109.58	2.35	257.78	4.000	No	No	2.00
107	7.11	70.54	2.40	5.18	0.73	112.62	2.37	266.67	4.000	No	No	2.00
108	7.18	72.29	2.40	5.34	0.73	115.41	2.39	275.65	4.000	No	No	2.00
109	7.25	73.91	2.41	5.50	0.73	118.01	2.42	285.04	4.000	No	No	2.00
110	7.29	77.43	2.40	5.53	0.73	123.65	2.36	292.10	4.000	No	No	2.00
111	7.36	82.61	2.37	5.38	0.72	131.98	2.23	294.89	4.000	No	No	2.00
112	7.43	92.12	2.32	5.00	0.70	147.25	2.00	294.47	4.000	No	No	2.00
113	7.52	101.53	2.27	4.67	0.69	162.36	1.82	295.46	4.000	No	No	2.00
114	7.56	111.07	2.23	4.40	0.68	177.68	1.69	299.74	4.000	No	No	2.00
115	7.61	116.78	2.21	4.33	0.67	185.87	1.64	305.33	4.000	No	No	2.00
116	7.70	122.59	2.19	4.23	0.67	192.78	1.60	308.30	4.000	No	No	2.00
117	7.76	126.14	2.18	4.12	0.66	196.71	1.57	308.04	4.000	No	No	2.00
118	7.84	128.03	2.17	3.98	0.66	197.53	1.54	303.24	4.000	No	No	2.00
119	7.89	129.80	2.14	3.75	0.65	198.49	1.49	295.82	4.000	No	No	2.00
120	7.96	131.92	2.11	3.44	0.64	199.10	1.44	285.95	4.000	No	No	2.00
121	8.03	134.50	2.08	3.16	0.63	200.45	1.39	278.54	4.000	No	No	2.00
122	8.08	134.59	2.06	2.98	0.63	198.98	1.37	271.85	4.000	No	No	2.00
123	8.16	129.37	2.07	3.01	0.63	190.51	1.38	263.59	4.000	No	No	2.00
124	8.21	114.36	2.12	3.18	0.65	169.41	1.46	246.56	4.000	No	No	2.00
125	8.30	96.27	2.20	3.54	0.67	143.75	1.62	232.89	4.000	No	No	2.00
126	8.34	80.11	2.28	3.90	0.69	121.09	1.85	224.60	4.000	No	No	2.00
127	8.43	76.19	2.29	3.88	0.70	114.59	1.90	217.92	4.000	No	No	2.00
128	8.47	72.96	2.31	3.90	0.70	109.58	1.95	213.97	4.000	No	No	2.00
129	8.56	76.41	2.29	3.75	0.69	113.42	1.87	212.20	4.000	No	No	2.00
130	8.61	80.79	2.27	3.69	0.69	119.08	1.81	215.18	4.000	No	No	2.00
131	8.67	90.92	2.22	3.51	0.67	132.23	1.67	220.80	4.000	No	No	2.00
132	8.75	99.87	2.19	3.42	0.67	143.65	1.59	228.69	4.000	No	No	2.00
133	8.79	103.94	2.20	3.57	0.67	149.14	1.60	239.27	4.000	No	No	2.00
134	8.89	104.78	2.21	3.75	0.67	149.68	1.64	246.20	4.000	No	No	2.00
135	8.94	102.23	2.24	3.99	0.68	146.18	1.72	251.98	4.000	No	No	2.00
136	9.02	100.45	2.25	4.07	0.68	143.05	1.76	252.21	4.000	No	No	2.00
137	9.07	99.65	2.26	4.08	0.69	141.40	1.77	250.70	4.000	No	No	2.00
138	9.13	100.21	2.25	3.96	0.68	141.36	1.74	246.03	4.000	No	No	2.00
139	9.21	100.81	2.23	3.81	0.68	140.99	1.70	240.13	4.000	No	No	2.00
140	9.25	101.43	2.21	3.54	0.67	140.72	1.63	229.98	4.000	No	No	2.00
141	9.34	100.03	2.19	3.34	0.67	137.57	1.60	219.85	4.000	No	No	2.00
142	9.39	94.71	2.19	3.19	0.67	129.71	1.60	207.28	4.000	No	No	2.00
143	9.48	86.38	2.23	3.27	0.68	118.11	1.69	199.22	4.000	No	No	2.00
144	9.53	75.91	2.29	3.51	0.69	104.37	1.87	195.43	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.62	66.44	2.35	3.87	0.71	91.63	2.15	196.77	4.000	No	No	2.00
146	9.67	58.92	2.41	4.12	0.73	81.57	2.41	196.74	4.000	No	No	2.00
147	9.71	52.74	2.44	4.17	0.74	73.10	2.61	190.80	4.000	No	No	2.00
148	9.80	48.67	2.47	4.18	0.75	67.17	2.76	185.57	4.000	No	No	2.00
149	9.85	44.85	2.50	4.36	0.76	61.98	3.01	186.69	4.000	No	No	2.00
150	9.93	42.67	2.55	4.74	0.77	58.94	3.31	195.31	4.000	No	No	2.00
151	9.99	41.03	2.58	5.10	0.78	56.70	3.59	203.75	4.000	No	No	2.00
152	10.04	39.97	2.61	5.45	0.79	55.23	3.84	212.13	4.000	No	Yes	2.00
153	10.13	39.44	2.63	5.72	0.80	54.25	4.03	218.43	4.000	No	Yes	2.00
154	10.18	38.89	2.65	6.04	0.80	53.46	4.24	226.52	4.000	No	Yes	2.00
155	10.27	38.36	2.67	6.31	0.81	52.50	4.43	232.47	4.000	No	Yes	2.00
156	10.32	37.80	2.69	6.57	0.82	51.64	4.61	238.05	4.000	No	Yes	2.00
157	10.40	37.28	2.70	6.75	0.82	50.69	4.75	240.97	4.000	No	Yes	2.00
158	10.45	36.94	2.71	6.87	0.82	50.08	4.85	243.06	4.000	No	Yes	2.00
159	10.50	36.25	2.73	7.05	0.83	49.04	5.01	245.66	4.000	No	Yes	2.00
160	10.59	35.45	2.75	7.25	0.83	47.72	5.20	248.13	4.000	No	Yes	2.00
161	10.64	34.48	2.76	7.48	0.84	46.31	5.42	250.81	4.000	No	Yes	2.00
162	10.70	34.02	2.77	7.59	0.84	45.52	5.53	251.77	4.000	No	Yes	2.00
163	10.78	33.89	2.78	7.63	0.84	45.09	5.58	251.76	4.000	No	Yes	2.00
164	10.87	33.98	2.78	7.62	0.84	44.89	5.60	251.28	4.000	No	Yes	2.00
165	10.92	34.14	2.78	7.62	0.84	44.93	5.59	251.26	4.000	No	Yes	2.00
166	10.96	34.67	2.77	7.55	0.84	45.46	5.51	250.67	4.000	No	Yes	2.00
167	11.05	35.23	2.77	7.48	0.84	45.85	5.45	249.89	4.000	No	Yes	2.00
168	11.10	35.68	2.76	7.45	0.84	46.27	5.41	250.08	4.000	No	Yes	2.00
169	11.19	35.76	2.77	7.48	0.84	46.08	5.43	250.34	4.000	No	Yes	2.00
170	11.24	35.79	2.77	7.51	0.84	45.94	5.46	250.94	4.000	No	Yes	2.00
171	11.37	35.90	2.77	7.52	0.84	45.65	5.48	250.37	4.000	No	Yes	2.00
172	11.39	36.25	2.77	7.47	0.84	46.02	5.43	250.04	4.000	No	Yes	2.00
173	11.42	37.06	2.75	7.33	0.83	46.89	5.30	248.37	4.000	No	Yes	2.00
174	11.49	38.40	2.73	7.09	0.83	48.26	5.08	245.31	4.000	No	Yes	2.00
175	11.56	40.63	2.70	6.74	0.82	50.70	4.75	240.82	4.000	No	Yes	2.00
176	11.65	43.22	2.67	6.37	0.81	53.43	4.41	235.62	4.000	No	Yes	2.00
177	11.70	45.92	2.64	6.04	0.80	56.44	4.09	230.69	4.000	No	Yes	2.00
178	11.79	48.59	2.61	5.75	0.79	59.25	3.82	226.27	4.000	No	Yes	2.00
179	11.84	51.26	2.58	5.50	0.78	62.15	3.58	222.35	4.000	No	No	2.00
180	11.88	53.99	2.55	5.19	0.77	65.12	3.32	216.34	4.000	No	No	2.00
181	11.97	55.92	2.52	4.95	0.77	66.92	3.15	210.63	4.000	No	No	2.00
182	12.02	56.95	2.52	4.92	0.76	67.91	3.10	210.68	4.000	No	No	2.00
183	12.12	57.54	2.52	5.02	0.77	68.25	3.14	214.41	4.000	No	No	2.00
184	12.16	59.12	2.52	5.06	0.76	69.92	3.11	217.64	4.000	No	No	2.00
185	12.21	65.65	2.46	4.64	0.75	77.09	2.74	210.90	4.000	No	No	2.00
186	12.30	76.77	2.38	4.05	0.72	89.12	2.26	201.10	4.000	No	No	2.00
187	12.35	90.72	2.29	3.54	0.69	104.38	1.88	196.39	4.000	No	No	2.00
188	12.43	102.99	2.23	3.26	0.68	117.45	1.69	198.30	4.000	No	No	2.00
189	12.48	110.24	2.21	3.28	0.67	125.24	1.65	206.23	4.000	No	No	2.00
190	12.57	112.44	2.22	3.44	0.68	127.22	1.68	213.57	4.000	No	No	2.00
191	12.61	109.28	2.26	3.72	0.69	123.68	1.78	220.37	4.000	No	No	2.00
192	12.67	102.50	2.30	3.96	0.70	115.96	1.92	222.36	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.76	95.70	2.33	4.15	0.71	107.94	2.06	222.04	4.000	No	No	2.00
194	12.80	90.55	2.35	4.19	0.71	101.97	2.14	217.99	4.000	No	No	2.00
195	12.89	89.84	2.34	4.01	0.71	100.58	2.09	210.01	4.000	No	No	2.00
196	12.94	90.03	2.32	3.75	0.70	100.31	2.00	200.32	4.000	No	No	2.00
197	12.99	89.96	2.30	3.48	0.70	99.79	1.91	190.26	4.000	No	No	2.00
198	13.08	88.18	2.28	3.30	0.69	97.26	1.87	181.65	4.000	No	No	2.00
199	13.13	85.63	2.28	3.13	0.69	94.11	1.84	173.11	4.000	No	No	2.00
200	13.22	83.33	2.28	3.05	0.69	91.14	1.84	168.00	4.000	No	No	2.00
201	13.27	75.69	2.33	3.28	0.71	82.77	2.04	168.78	4.000	No	No	2.00
202	13.36	67.64	2.40	3.73	0.73	73.85	2.39	176.43	4.000	No	No	2.00
203	13.39	57.67	2.51	4.50	0.76	63.15	3.05	192.28	4.000	No	No	2.00
204	13.49	53.35	2.57	5.01	0.78	58.23	3.48	202.79	4.000	No	No	2.00
205	13.54	50.06	2.62	5.51	0.79	54.57	3.90	212.91	4.000	No	Yes	2.00
206	13.59	48.76	2.64	5.78	0.80	53.06	4.12	218.45	4.000	No	Yes	2.00
207	13.68	48.10	2.65	5.93	0.80	52.09	4.25	221.34	4.000	No	Yes	2.00
208	13.72	47.14	2.67	6.16	0.81	50.94	4.43	225.88	4.000	No	Yes	2.00
209	13.82	46.85	2.68	6.30	0.81	50.36	4.54	228.63	4.000	No	Yes	2.00
210	13.87	46.54	2.69	6.43	0.82	49.91	4.64	231.41	4.000	No	Yes	2.00
211	13.95	46.60	2.69	6.41	0.82	49.71	4.64	230.48	4.000	No	Yes	2.00
212	14.00	46.32	2.70	6.41	0.82	49.27	4.66	229.65	4.000	No	Yes	2.00
213	14.05	45.39	2.71	6.50	0.82	48.16	4.78	230.24	4.000	No	Yes	2.00
214	14.14	44.06	2.73	6.70	0.83	46.49	4.99	232.18	4.000	No	Yes	2.00
215	14.19	42.60	2.75	6.94	0.83	44.83	5.24	234.93	4.000	No	Yes	2.00
216	14.24	41.57	2.77	7.14	0.84	43.64	5.44	237.41	4.000	No	Yes	2.00
217	14.31	41.32	2.77	7.22	0.84	43.20	5.51	238.16	4.000	No	Yes	2.00
218	14.37	42.13	2.76	7.04	0.84	43.88	5.37	235.46	4.000	No	Yes	2.00
219	14.46	43.44	2.74	6.75	0.83	44.98	5.13	230.56	4.000	No	Yes	2.00
220	14.51	45.05	2.71	6.37	0.82	46.53	4.82	224.07	4.000	No	Yes	2.00
221	14.59	46.20	2.69	6.07	0.81	47.48	4.59	218.02	4.000	No	Yes	2.00
222	14.65	47.72	2.66	5.66	0.81	48.84	4.28	209.18	4.000	No	Yes	2.00
223	14.73	48.99	2.63	5.25	0.80	49.88	4.00	199.41	4.000	No	Yes	2.00
224	14.79	50.27	2.59	4.82	0.79	50.99	3.70	188.58	4.000	No	No	2.00
225	14.84	50.73	2.56	4.39	0.78	51.29	3.44	176.54	4.000	No	No	2.00
226	14.91	50.95	2.51	3.71	0.76	51.24	3.05	156.14	4.000	No	No	2.00
227	14.97	50.39	2.45	3.03	0.74	50.41	2.68	135.05	4.000	No	No	2.00
228	15.06	49.80	2.41	2.59	0.73	49.53	2.44	120.66	4.000	No	No	2.00
229	15.11	48.22	2.41	2.44	0.73	47.82	2.40	114.93	4.000	No	No	2.00
230	15.20	46.32	2.42	2.41	0.73	45.71	2.47	112.70	4.000	No	No	2.00
231	15.25	44.36	2.42	2.30	0.73	43.64	2.48	108.10	4.000	No	No	2.00
232	15.30	35.85	2.54	2.77	0.77	35.11	3.29	115.52	4.000	No	No	2.00
233	15.36	34.17	2.57	2.90	0.78	33.35	3.53	117.64	4.000	No	No	2.00
234	15.44	32.40	2.61	3.13	0.79	31.46	3.88	122.00	4.000	No	Yes	2.00
235	15.49	38.12	2.53	2.78	0.77	37.02	3.17	117.24	4.000	No	No	2.00
236	15.55	37.78	2.55	2.95	0.77	36.60	3.33	121.80	4.000	No	No	2.00
237	15.63	37.62	2.57	3.19	0.78	36.32	3.53	128.08	4.000	No	No	2.00
238	15.73	37.30	2.60	3.46	0.79	35.86	3.75	134.61	4.000	No	Yes	2.00
239	15.78	36.87	2.63	3.72	0.80	35.35	3.98	140.84	4.000	No	Yes	2.00
240	15.82	35.75	2.66	4.02	0.81	34.19	4.30	147.10	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.91	34.35	2.70	4.35	0.82	32.68	4.69	153.15	4.000	No	Yes	2.00
242	15.96	31.77	2.76	4.96	0.84	30.11	5.40	162.75	4.000	No	Yes	2.00
243	16.05	29.41	2.83	5.60	0.86	27.68	6.18	171.18	4.000	No	Yes	2.00
244	16.10	27.02	2.89	6.38	0.88	25.31	7.11	179.91	4.000	No	Yes	2.00
245	16.16	25.65	2.94	6.95	0.89	23.90	7.76	185.47	4.000	No	Yes	2.00
246	16.24	24.69	2.97	7.42	1.00	22.93	8.28	189.87	4.000	No	Yes	2.00
247	16.28	24.13	2.99	7.77	1.00	22.34	8.65	193.22	4.000	No	Yes	2.00
248	16.36	23.98	3.00	7.96	1.00	22.07	8.84	195.07	4.000	No	Yes	2.00
249	16.42	24.05	3.01	8.06	1.00	22.06	8.90	196.44	4.000	No	Yes	2.00
250	16.51	24.23	3.01	8.07	1.00	22.12	8.90	196.78	4.000	No	Yes	2.00
251	16.55	24.26	3.01	8.12	1.00	22.09	8.94	197.43	4.000	No	Yes	2.00
252	16.61	24.39	3.01	8.15	1.00	22.13	8.95	198.09	4.000	No	Yes	2.00
253	16.68	24.70	3.01	8.13	1.00	22.33	8.89	198.51	4.000	No	Yes	2.00
254	16.74	25.33	3.00	8.03	1.00	22.83	8.71	198.82	4.000	No	Yes	2.00
255	16.83	25.86	2.99	7.95	1.00	23.20	8.57	198.85	4.000	No	Yes	2.00
256	16.87	26.32	2.98	7.90	1.00	23.59	8.46	199.47	4.000	No	Yes	2.00
257	16.97	26.57	2.98	7.90	1.00	23.67	8.44	199.69	4.000	No	Yes	2.00
258	17.06	27.03	2.97	7.80	1.00	23.97	8.31	199.21	4.000	No	Yes	2.00
259	17.16	27.12	2.97	7.76	1.00	23.93	8.29	198.44	4.000	No	Yes	2.00
260	17.20	26.60	2.98	7.84	1.00	23.38	8.46	197.91	4.000	No	Yes	2.00
261	17.29	25.54	3.00	8.07	1.00	22.29	8.86	197.35	4.000	No	Yes	2.00
262	17.36	24.51	3.03	8.27	1.00	21.27	9.24	196.56	4.000	No	Yes	2.00
263	17.39	23.83	3.04	8.34	1.00	20.62	9.45	194.91	4.000	No	Yes	2.00
264	17.47	23.27	3.05	8.35	1.00	20.02	9.63	192.76	4.000	No	Yes	2.00
265	17.52	22.71	3.05	8.30	1.00	19.45	9.75	189.70	4.000	No	Yes	2.00
266	17.62	22.16	3.06	8.23	1.00	18.85	9.89	186.35	4.000	No	Yes	2.00
267	17.71	21.72	3.07	8.16	1.00	18.36	9.99	183.49	4.000	No	Yes	2.00
268	17.74	21.48	3.07	8.10	1.00	18.11	10.03	181.72	4.000	No	Yes	2.00
269	17.80	21.51	3.07	8.01	1.00	18.07	9.98	180.43	4.000	No	Yes	2.00
270	17.86	21.64	3.06	7.88	1.00	18.13	9.87	179.04	4.000	No	Yes	2.00
271	17.94	21.92	3.05	7.74	1.00	18.29	9.72	177.79	4.000	No	Yes	2.00
272	17.98	22.23	3.04	7.60	1.00	18.52	9.55	176.90	4.000	No	Yes	2.00
273	18.05	22.38	3.03	7.36	1.00	18.58	9.36	173.92	4.000	No	Yes	2.00
274	18.13	22.32	3.01	6.87	1.00	18.46	9.04	166.83	4.000	No	Yes	2.00
275	18.18	22.17	3.00	6.42	1.00	18.27	8.75	159.80	4.000	No	Yes	2.00
276	18.26	22.11	2.99	6.14	1.00	18.14	8.57	155.45	4.000	No	Yes	2.00
277	18.31	21.86	3.00	6.25	1.00	17.88	8.74	156.15	4.000	No	Yes	2.00
278	18.45	22.17	3.00	6.27	1.00	18.01	8.71	156.84	4.000	No	Yes	2.00
279	18.55	22.67	2.99	6.25	1.00	18.33	8.60	157.56	4.000	No	Yes	2.00
280	18.59	23.76	2.97	6.13	1.00	19.22	8.26	158.68	4.000	No	Yes	2.00
281	18.64	24.54	2.96	6.18	1.00	19.82	8.13	161.18	4.000	No	Yes	2.00
282	18.74	25.28	2.95	6.23	1.00	20.35	8.04	163.61	4.000	No	Yes	2.00
283	18.78	25.65	2.96	6.41	1.00	20.62	8.11	167.20	4.000	No	Yes	2.00
284	18.87	25.71	2.97	6.61	1.00	20.56	8.26	169.96	4.000	No	Yes	2.00
285	18.92	25.74	2.98	6.81	1.00	20.54	8.42	172.90	4.000	No	Yes	2.00
286	18.96	26.24	2.98	6.87	1.00	20.91	8.37	175.06	4.000	No	Yes	2.00
287	19.08	26.81	2.97	6.83	1.00	21.25	8.26	175.59	4.000	No	Yes	2.00
288	19.10	27.08	2.96	6.77	1.00	21.45	8.17	175.24	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	19.16	26.34	2.97	6.78	1.00	20.77	8.34	173.26	4.000	No	Yes	2.00
290	19.24	25.19	2.99	6.86	1.00	19.74	8.67	171.08	4.000	No	Yes	2.00
291	19.29	24.42	3.00	6.74	1.00	19.05	8.76	166.92	4.000	No	Yes	2.00
292	19.37	24.61	2.98	6.34	1.00	19.13	8.44	161.42	4.000	No	Yes	2.00
293	19.43	26.35	2.91	5.47	0.88	20.86	7.33	152.98	4.000	No	Yes	2.00
294	19.52	28.41	2.84	4.76	0.86	22.54	6.41	144.42	4.000	No	Yes	2.00
295	19.57	30.76	2.77	4.10	0.84	24.52	5.52	135.39	4.000	No	Yes	2.00
296	19.66	32.21	2.72	3.63	0.82	25.69	4.95	127.05	4.000	No	Yes	2.00
297	19.71	32.91	2.68	3.23	0.81	26.26	4.53	118.83	4.000	No	Yes	2.00
298	19.79	32.70	2.66	3.00	0.81	26.01	4.35	113.15	4.000	No	Yes	2.00
299	19.84	32.45	2.66	2.91	0.81	25.76	4.30	110.89	4.000	No	Yes	2.00
300	19.89	33.29	2.64	2.80	0.80	26.43	4.11	108.77	4.000	No	Yes	2.00
301	19.98	32.94	2.65	2.80	0.80	26.05	4.17	108.54	4.000	No	Yes	2.00
302	20.02	34.62	2.62	2.67	0.79	27.42	3.89	106.68	3.600	No	Yes	2.00
303	20.09	36.10	2.60	2.61	0.79	28.60	3.71	106.13	0.191	No	No	0.53
304	20.16	39.24	2.55	2.50	0.77	31.17	3.38	105.20	0.188	No	No	0.52
305	20.25	39.61	2.56	2.60	0.78	31.34	3.44	107.91	0.197	No	No	0.54
306	20.30	38.58	2.59	2.81	0.79	30.39	3.71	112.67	0.213	No	No	0.58
307	20.34	35.91	2.66	3.17	0.80	28.07	4.26	119.55	3.600	No	Yes	2.00
308	20.43	32.90	2.72	3.60	0.82	25.45	4.95	126.05	3.600	No	Yes	2.00
309	20.48	30.20	2.78	3.97	0.84	23.14	5.63	130.35	3.600	No	Yes	2.00
310	20.57	28.87	2.80	4.03	0.85	21.96	5.90	129.58	3.600	No	Yes	2.00
311	20.62	28.56	2.79	3.84	0.85	21.68	5.78	125.42	3.600	No	Yes	2.00
312	20.67	30.36	2.73	3.26	0.83	23.17	4.99	115.67	3.600	No	Yes	2.00
313	20.75	33.68	2.63	2.60	0.80	25.89	4.00	103.53	3.600	No	Yes	2.00
314	20.81	39.43	2.48	1.85	0.75	30.72	2.84	87.12	0.142	No	No	0.38
315	20.90	44.27	2.36	1.39	0.72	34.78	2.18	75.86	0.121	No	No	0.33
316	20.94	49.49	2.24	0.99	0.68	39.27	1.71	67.20	0.108	No	No	0.29
317	21.03	52.94	2.16	0.80	0.66	42.17	1.52	64.30	0.105	No	No	0.28
318	21.08	55.86	2.10	0.69	0.64	44.67	1.42	63.65	0.104	No	No	0.28
319	21.13	56.83	2.09	0.67	0.64	45.43	1.41	63.93	0.104	No	No	0.28
320	21.22	56.26	2.10	0.68	0.64	44.83	1.42	63.64	0.104	No	No	0.28
321	21.27	54.34	2.12	0.71	0.65	43.13	1.46	62.82	0.103	No	No	0.28
322	21.34	51.45	2.17	0.77	0.66	40.58	1.53	62.29	0.102	No	No	0.27
323	21.41	47.53	2.23	0.90	0.68	37.15	1.71	63.44	0.104	No	No	0.28
324	21.50	44.39	2.30	1.08	0.70	34.36	1.94	66.62	0.108	No	No	0.29
325	21.53	41.85	2.37	1.29	0.72	32.14	2.23	71.63	0.114	No	No	0.30
326	21.59	40.73	2.41	1.45	0.73	31.09	2.44	75.92	0.121	No	No	0.32
327	21.68	39.46	2.45	1.58	0.74	29.92	2.63	78.81	0.126	No	No	0.33
328	21.73	37.66	2.48	1.67	0.75	28.39	2.84	80.74	0.129	No	No	0.34
329	21.82	35.02	2.52	1.77	0.77	26.16	3.15	82.31	0.132	No	No	0.35
330	21.86	32.22	2.59	2.02	0.78	23.83	3.66	87.27	0.142	No	No	0.37
331	21.94	29.14	2.67	2.37	0.81	21.26	4.41	93.67	3.600	No	Yes	2.00
332	22.01	27.19	2.74	2.76	0.83	19.61	5.13	100.56	3.600	No	Yes	2.00
333	22.06	25.98	2.80	3.23	0.85	18.59	5.84	108.61	3.600	No	Yes	2.00
334	22.15	24.89	2.86	3.75	0.87	17.65	6.59	116.35	3.600	No	Yes	2.00
335	22.20	23.43	2.92	4.30	0.88	16.46	7.47	122.93	3.600	No	Yes	2.00
336	22.25	22.44	2.94	4.39	0.89	15.67	7.81	122.38	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.34	22.56	2.91	4.02	0.88	15.77	7.41	116.85	3.600	No	Yes	2.00
338	22.38	21.85	2.90	3.67	0.88	15.24	7.22	110.03	3.600	No	Yes	2.00
339	22.47	19.27	2.97	3.82	1.00	12.86	8.29	106.57	3.600	No	Yes	2.00
340	22.52	16.10	3.07	4.36	1.00	10.57	10.08	106.59	3.600	No	Yes	2.00
341	22.59	14.74	3.13	4.81	1.00	9.57	11.26	107.85	3.600	No	Yes	2.00
342	22.66	14.61	3.14	4.91	1.00	9.47	11.46	108.55	3.600	No	Yes	2.00
343	22.75	15.64	3.10	4.64	1.00	10.19	10.65	108.50	3.600	No	Yes	2.00
344	22.78	17.29	3.03	4.13	1.00	11.36	9.37	106.39	3.600	No	Yes	2.00
345	22.84	19.06	2.97	3.71	1.00	12.61	8.27	104.33	3.600	No	Yes	2.00
346	22.94	20.00	2.93	3.58	0.89	13.68	7.68	104.97	3.600	No	Yes	2.00
347	22.97	21.58	2.89	3.43	0.88	14.88	7.07	105.28	3.600	No	Yes	2.00
348	23.05	26.92	2.75	2.79	0.83	19.03	5.27	100.35	3.600	No	Yes	2.00
349	23.12	35.25	2.58	2.12	0.78	25.59	3.57	91.23	0.151	No	No	0.39
350	23.17	43.57	2.44	1.69	0.74	32.24	2.59	83.40	0.134	No	No	0.34
351	23.26	48.60	2.37	1.52	0.72	36.26	2.22	80.45	0.128	No	No	0.33
352	23.30	50.18	2.36	1.51	0.72	37.49	2.16	80.90	0.129	No	No	0.33
353	23.36	49.03	2.38	1.58	0.72	36.50	2.26	82.46	0.132	No	No	0.34
354	23.44	47.51	2.40	1.64	0.73	35.23	2.37	83.45	0.134	No	No	0.34
355	23.53	46.77	2.40	1.63	0.73	34.59	2.40	82.98	0.133	No	No	0.34
356	23.57	47.09	2.40	1.62	0.73	34.83	2.37	82.63	0.132	No	No	0.34
357	23.63	50.57	2.37	1.59	0.72	37.56	2.22	83.43	0.134	No	No	0.34
358	23.72	54.39	2.35	1.60	0.71	40.51	2.11	85.42	0.138	No	No	0.35
359	23.76	55.16	2.36	1.70	0.72	41.03	2.16	88.56	0.145	No	No	0.37
360	23.85	50.21	2.41	1.83	0.73	37.02	2.43	89.95	0.148	No	No	0.37
361	23.91	44.00	2.48	1.94	0.75	32.08	2.82	90.44	0.149	No	No	0.38
362	23.95	38.06	2.54	2.04	0.77	27.42	3.29	90.22	0.148	No	No	0.37
363	24.04	33.43	2.61	2.19	0.79	23.76	3.85	91.52	3.600	No	Yes	2.00
364	24.09	26.16	2.77	2.76	0.84	18.08	5.45	98.61	3.600	No	Yes	2.00
365	24.18	21.10	2.92	3.52	0.88	14.16	7.43	105.19	3.600	No	Yes	2.00
366	24.23	17.29	3.08	4.66	1.00	10.99	10.16	111.67	3.600	No	Yes	2.00
367	24.29	18.38	3.04	4.47	1.00	11.73	9.54	111.97	3.600	No	Yes	2.00
368	24.36	21.43	2.92	3.64	0.88	14.33	7.50	107.50	3.600	No	Yes	2.00
369	24.41	24.22	2.81	2.92	0.85	16.49	6.02	99.25	3.600	No	Yes	2.00
370	24.50	24.31	2.79	2.73	0.85	16.56	5.79	95.85	3.600	No	Yes	2.00
371	24.56	21.32	2.88	3.14	0.87	14.26	6.96	99.17	3.600	No	Yes	2.00
372	24.64	19.43	2.96	3.51	1.00	12.37	8.14	100.74	3.600	No	Yes	2.00
373	24.69	23.78	2.82	2.85	0.85	16.09	6.05	97.40	3.600	No	Yes	2.00
374	24.75	35.53	2.56	1.97	0.78	25.15	3.45	86.85	0.141	No	No	0.35
375	24.82	50.22	2.37	1.52	0.72	36.66	2.20	80.72	0.129	No	No	0.32
376	24.87	60.46	2.29	1.48	0.70	44.65	1.89	84.46	0.136	No	No	0.34
377	24.96	64.49	2.29	1.59	0.69	47.66	1.88	89.39	0.146	No	No	0.36
378	25.01	65.19	2.31	1.74	0.70	48.05	1.96	94.12	0.158	No	No	0.39
379	25.07	65.02	2.34	1.94	0.71	47.74	2.09	99.82	0.173	No	No	0.43
380	25.14	64.37	2.39	2.24	0.72	46.98	2.31	108.43	0.199	No	No	0.49
381	25.20	62.03	2.43	2.45	0.74	45.01	2.52	113.59	0.216	No	No	0.53
382	25.30	58.30	2.46	2.51	0.75	42.05	2.70	113.36	0.215	No	No	0.53
383	25.34	52.68	2.48	2.44	0.75	37.76	2.87	108.20	0.198	No	No	0.49
384	25.42	45.75	2.54	2.51	0.77	32.40	3.29	106.52	0.192	No	No	0.47

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.48	40.53	2.59	2.57	0.79	28.40	3.69	104.93	0.187	No	No	0.46
386	25.55	38.04	2.62	2.63	0.80	26.48	3.95	104.70	3.600	No	Yes	2.00
387	25.62	37.80	2.63	2.68	0.80	26.26	4.03	105.73	3.600	No	Yes	2.00
388	25.67	40.38	2.60	2.60	0.79	28.20	3.74	105.39	0.189	No	No	0.46
389	25.75	42.50	2.57	2.46	0.78	29.79	3.46	103.19	0.182	No	No	0.44
390	25.80	41.53	2.57	2.41	0.78	29.05	3.48	101.18	0.176	No	No	0.43
391	25.90	36.93	2.63	2.55	0.80	25.51	4.00	101.94	3.600	No	Yes	2.00
392	25.94	30.78	2.73	2.84	0.83	20.84	4.98	103.85	3.600	No	Yes	2.00
393	25.99	26.43	2.81	3.14	0.85	17.57	5.99	105.19	3.600	No	Yes	2.00
394	26.06	23.07	2.91	3.67	0.88	15.03	7.29	109.60	3.600	No	Yes	2.00
395	26.13	21.40	2.99	4.24	1.00	13.28	8.56	113.72	3.600	No	Yes	2.00
396	26.22	19.94	3.04	4.70	1.00	12.28	9.50	116.64	3.600	No	Yes	2.00
397	26.27	17.30	3.12	5.11	1.00	10.50	10.95	114.96	3.600	No	Yes	2.00
398	26.34	14.22	3.22	5.65	1.00	8.42	13.18	111.03	3.600	No	Yes	2.00
399	26.40	12.08	3.31	6.16	1.00	6.98	15.37	107.26	3.600	No	Yes	2.00
400	26.45	10.25	3.39	6.67	1.00	5.75	17.88	102.78	3.600	No	Yes	2.00
401	26.54	9.10	3.45	6.74	1.00	4.97	19.56	97.23	3.600	No	Yes	2.00
402	26.59	8.04	3.50	6.60	1.00	4.26	21.24	90.52	3.600	No	Yes	2.00
403	26.68	7.67	3.51	6.29	1.00	4.00	21.60	86.50	3.600	No	Yes	2.00
404	26.73	7.36	3.52	6.18	1.00	3.79	22.14	84.01	3.600	No	Yes	2.00
405	26.82	7.21	3.53	6.25	1.00	3.68	22.63	83.36	3.600	No	Yes	2.00
406	26.88	7.18	3.54	6.19	1.00	3.66	22.64	82.84	3.600	No	Yes	2.00
407	26.91	7.18	3.53	6.11	1.00	3.66	22.53	82.38	3.600	No	Yes	2.00
408	27.00	7.21	3.53	6.04	1.00	3.67	22.38	82.11	3.600	No	Yes	2.00
409	27.05	7.27	3.52	6.04	1.00	3.70	22.25	82.41	3.600	No	Yes	2.00
410	27.14	7.33	3.53	6.17	1.00	3.74	22.33	83.40	3.600	No	Yes	2.00
411	27.19	7.36	3.54	6.44	1.00	3.75	22.67	85.03	3.600	No	Yes	2.00
412	27.23	7.52	3.54	6.66	1.00	3.85	22.64	87.19	3.600	No	Yes	2.00
413	27.32	7.77	3.52	6.65	1.00	4.01	22.10	88.54	3.600	No	Yes	2.00
414	27.38	8.42	3.46	5.96	1.00	4.43	19.86	88.04	3.600	No	Yes	2.00
415	27.46	9.07	3.39	5.15	1.00	4.85	17.69	85.84	3.600	No	Yes	2.00
416	27.51	9.51	3.35	4.71	1.00	5.13	16.46	84.50	3.600	No	Yes	2.00
417	27.57	9.44	3.35	4.79	1.00	5.08	16.67	84.74	3.600	No	Yes	2.00
418	27.63	9.32	3.37	5.01	1.00	5.00	17.17	85.79	3.600	No	Yes	2.00
419	27.69	9.13	3.39	5.13	1.00	4.87	17.62	85.77	3.600	No	Yes	2.00
420	27.78	9.22	3.38	4.98	1.00	4.92	17.30	85.06	3.600	No	Yes	2.00
421	27.85	9.32	3.36	4.75	1.00	4.97	16.84	83.76	3.600	No	Yes	2.00
422	27.90	9.91	3.30	4.13	1.00	5.35	15.17	81.21	3.600	No	Yes	2.00
423	27.99	10.50	3.24	3.58	1.00	5.73	13.68	78.37	3.600	No	Yes	2.00
424	28.04	11.00	3.19	3.08	1.00	6.05	12.41	75.03	3.600	No	Yes	2.00
425	28.13	11.03	3.17	2.87	1.00	6.06	12.03	72.92	3.600	No	Yes	2.00
426	28.17	10.23	3.20	2.90	1.00	5.53	12.84	70.99	3.600	No	Yes	2.00
427	28.26	9.26	3.26	3.06	1.00	4.89	14.21	69.53	3.600	No	Yes	2.00
428	28.31	8.49	3.31	3.20	1.00	4.38	15.53	68.07	3.600	No	Yes	2.00
429	28.36	8.61	3.29	2.96	1.00	4.46	14.89	66.40	3.600	No	Yes	2.00
430	28.45	8.99	3.25	2.73	1.00	4.69	13.95	65.50	3.600	No	Yes	2.00
431	28.49	9.51	3.22	2.68	1.00	5.03	13.23	66.57	3.600	No	Yes	2.00
432	28.56	10.04	3.21	2.77	1.00	5.37	12.85	68.97	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.63	10.88	3.16	2.63	1.00	5.90	11.81	69.72	3.600	No	Yes	2.00
434	28.73	12.56	3.05	2.11	1.00	6.97	9.61	67.00	3.600	No	Yes	2.00
435	28.78	14.30	2.92	1.64	0.88	8.46	7.50	63.45	3.600	No	Yes	2.00
436	28.82	14.80	2.88	1.47	0.87	8.82	6.93	61.17	3.600	No	Yes	2.00
437	28.91	14.02	2.93	1.64	0.89	8.24	7.64	62.97	3.600	No	Yes	2.00
438	28.96	12.87	3.06	2.38	1.00	7.15	9.94	71.01	3.600	No	Yes	2.00
439	29.05	12.35	3.19	3.70	1.00	6.80	12.43	84.50	3.600	No	Yes	2.00
440	29.09	12.26	3.28	5.33	1.00	6.73	14.72	99.02	3.600	No	Yes	2.00
441	29.15	12.75	3.34	7.04	1.00	7.04	16.25	114.42	3.600	No	Yes	2.00
442	29.23	14.37	3.32	7.69	1.00	8.06	15.66	126.21	3.600	No	Yes	2.00
443	29.28	26.42	2.96	4.76	1.00	15.77	8.13	128.22	3.600	No	Yes	2.00
444	29.37	38.32	2.73	3.59	0.83	24.98	5.02	125.29	3.600	No	Yes	2.00
445	29.42	48.48	2.60	3.07	0.79	32.39	3.75	121.32	0.246	No	No	0.57
446	29.46	47.51	2.63	3.33	0.80	31.58	4.02	126.98	3.600	No	Yes	2.00
447	29.56	46.05	2.66	3.56	0.81	30.41	4.32	131.46	3.600	No	Yes	2.00
448	29.60	44.56	2.68	3.68	0.81	29.28	4.54	132.94	3.600	No	Yes	2.00
449	29.67	41.98	2.69	3.52	0.82	27.46	4.62	126.87	3.600	No	Yes	2.00
450	29.74	38.63	2.69	3.10	0.81	25.16	4.56	114.67	3.600	No	Yes	2.00
451	29.83	45.47	2.54	2.25	0.77	30.33	3.23	97.97	0.167	No	No	0.38
452	29.92	56.84	2.39	1.82	0.73	38.85	2.34	90.71	0.149	No	No	0.34
453	29.96	67.40	2.33	1.78	0.71	46.65	2.02	94.47	0.158	No	No	0.36
454	30.02	65.23	2.37	2.02	0.72	44.81	2.24	100.38	0.174	No	No	0.40
455	30.07	57.27	2.48	2.45	0.75	38.66	2.82	109.12	0.201	No	No	0.46
456	30.12	46.47	2.62	3.08	0.79	30.57	3.92	119.86	3.600	No	Yes	2.00
457	30.21	36.20	2.77	3.84	0.84	23.07	5.53	127.59	3.600	No	Yes	2.00
458	30.31	28.15	2.93	4.69	0.89	17.30	7.58	131.22	3.600	No	Yes	2.00
459	30.34	23.24	3.04	5.23	1.00	13.42	9.48	127.32	3.600	No	Yes	2.00
460	30.40	19.76	3.11	5.48	1.00	11.23	10.88	122.13	3.600	No	Yes	2.00
461	30.49	16.44	3.19	5.67	1.00	9.13	12.57	114.67	3.600	No	Yes	2.00
462	30.54	14.36	3.24	5.52	1.00	7.82	13.65	106.67	3.600	No	Yes	2.00
463	30.58	13.33	3.25	5.06	1.00	7.17	13.82	99.09	3.600	No	Yes	2.00
464	30.68	12.56	3.25	4.62	1.00	6.67	13.87	92.55	3.600	No	Yes	2.00
465	30.73	11.60	3.26	4.29	1.00	6.06	14.26	86.44	3.600	No	Yes	2.00
466	30.80	10.76	3.29	4.13	1.00	5.53	14.85	82.19	3.600	No	Yes	2.00
467	30.86	10.01	3.31	3.96	1.00	5.06	15.44	78.18	3.600	No	Yes	2.00
468	30.91	9.52	3.32	3.68	1.00	4.75	15.60	74.08	3.600	No	Yes	2.00
469	31.02	9.27	3.32	3.48	1.00	4.58	15.59	71.47	3.600	No	Yes	2.00
470	31.05	9.09	3.31	3.29	1.00	4.47	15.50	69.24	3.600	No	Yes	2.00
471	31.14	8.93	3.32	3.25	1.00	4.36	15.66	68.35	3.600	No	Yes	2.00
472	31.18	8.87	3.32	3.17	1.00	4.32	15.61	67.46	3.600	No	Yes	2.00
473	31.24	8.75	3.32	3.17	1.00	4.24	15.81	67.05	3.600	No	Yes	2.00
474	31.32	8.81	3.32	3.11	1.00	4.27	15.61	66.66	3.600	No	Yes	2.00
475	31.36	8.91	3.31	3.04	1.00	4.33	15.35	66.40	3.600	No	Yes	2.00
476	31.44	9.22	3.28	2.91	1.00	4.51	14.69	66.29	3.600	No	Yes	2.00
477	31.51	9.63	3.25	2.80	1.00	4.76	13.97	66.51	3.600	No	Yes	2.00
478	31.59	10.00	3.23	2.70	1.00	4.98	13.37	66.58	3.600	No	Yes	2.00
479	31.65	10.72	3.19	2.58	1.00	5.42	12.42	67.29	3.600	No	Yes	2.00
480	31.73	11.40	3.17	2.71	1.00	5.83	12.05	70.30	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.83	12.22	3.15	2.81	1.00	6.32	11.59	73.26	3.600	No	Yes	2.00
482	31.92	12.78	3.13	2.87	1.00	6.65	11.30	75.16	3.600	No	Yes	2.00
483	31.97	13.56	3.09	2.68	1.00	7.13	10.47	74.65	3.600	No	Yes	2.00
484	32.06	14.62	3.04	2.46	1.00	7.77	9.51	73.89	3.600	No	Yes	2.00
485	32.10	15.34	3.01	2.35	1.00	8.20	8.98	73.62	3.600	No	Yes	2.00
486	32.15	15.07	3.03	2.47	1.00	8.03	9.31	74.75	3.600	No	Yes	2.00
487	32.24	14.17	3.08	2.78	1.00	7.46	10.31	76.97	3.600	No	Yes	2.00
488	32.29	13.52	3.15	3.35	1.00	7.06	11.62	82.03	3.600	No	Yes	2.00
489	32.38	13.61	3.17	3.75	1.00	7.10	12.15	86.30	3.600	No	Yes	2.00
490	32.43	14.86	3.13	3.70	1.00	7.85	11.32	88.92	3.600	No	Yes	2.00
491	32.52	16.38	3.07	3.39	1.00	8.77	10.11	88.63	3.600	No	Yes	2.00
492	32.57	18.09	3.01	3.07	1.00	9.80	8.96	87.78	3.600	No	Yes	2.00
493	32.62	18.99	2.99	3.08	1.00	10.34	8.64	89.35	3.600	No	Yes	2.00
494	32.70	19.23	3.00	3.29	1.00	10.47	8.85	92.64	3.600	No	Yes	2.00
495	32.75	19.33	3.03	3.64	1.00	10.52	9.26	97.37	3.600	No	Yes	2.00
496	32.81	19.64	3.04	3.92	1.00	10.70	9.49	101.51	3.600	No	Yes	2.00
497	32.89	20.83	3.02	3.96	1.00	11.40	9.15	104.27	3.600	No	Yes	2.00
498	32.98	22.17	2.99	3.91	1.00	12.18	8.69	105.95	3.600	No	Yes	2.00
499	33.03	23.35	2.97	3.86	1.00	12.89	8.32	107.25	3.600	No	Yes	2.00
500	33.07	24.22	2.96	3.93	1.00	13.40	8.17	109.57	3.600	No	Yes	2.00
501	33.17	24.75	2.96	4.02	1.00	13.70	8.15	111.65	3.600	No	Yes	2.00
502	33.21	25.03	2.96	4.09	1.00	13.86	8.16	113.08	3.600	No	Yes	2.00
503	33.31	24.97	2.97	4.14	1.00	13.79	8.24	113.67	3.600	No	Yes	2.00
504	33.35	24.79	2.98	4.26	1.00	13.67	8.41	115.01	3.600	No	Yes	2.00
505	33.44	24.73	2.99	4.39	1.00	13.61	8.58	116.76	3.600	No	Yes	2.00
506	33.49	24.45	3.00	4.59	1.00	13.43	8.86	119.00	3.600	No	Yes	2.00
507	33.53	24.58	3.01	4.80	1.00	13.50	9.04	122.00	3.600	No	Yes	2.00
508	33.63	24.73	3.02	5.00	1.00	13.56	9.20	124.83	3.600	No	Yes	2.00
509	33.67	26.13	3.00	4.92	1.00	14.39	8.79	126.44	3.600	No	Yes	2.00
510	33.77	28.06	2.96	4.64	1.00	15.51	8.10	125.70	3.600	No	Yes	2.00
511	33.81	30.30	2.90	4.38	0.88	17.81	7.16	127.48	3.600	No	Yes	2.00
512	33.88	31.82	2.88	4.40	0.87	18.80	6.92	130.03	3.600	No	Yes	2.00
513	33.95	32.57	2.88	4.58	0.87	19.23	6.97	134.03	3.600	No	Yes	2.00
514	33.99	33.91	2.88	4.68	0.87	20.08	6.86	137.71	3.600	No	Yes	2.00
515	34.09	35.71	2.85	4.55	0.86	21.27	6.49	137.97	3.600	No	Yes	2.00
516	34.14	37.95	2.81	4.28	0.85	22.79	5.96	135.90	3.600	No	Yes	2.00
517	34.22	38.85	2.79	4.11	0.84	23.40	5.72	133.71	3.600	No	Yes	2.00
518	34.27	38.26	2.80	4.13	0.85	22.98	5.80	133.27	3.600	No	Yes	2.00
519	34.32	36.90	2.82	4.28	0.85	22.02	6.10	134.39	3.600	No	Yes	2.00
520	34.40	35.53	2.84	4.42	0.86	21.06	6.42	135.26	3.600	No	Yes	2.00
521	34.46	34.32	2.86	4.52	0.87	20.22	6.68	135.17	3.600	No	Yes	2.00
522	34.58	33.39	2.88	4.64	0.87	19.54	6.95	135.74	3.600	No	Yes	2.00
523	34.59	32.81	2.92	5.13	0.88	19.07	7.49	142.79	3.600	No	Yes	2.00
524	34.69	34.49	2.93	5.56	0.89	20.06	7.59	152.23	3.600	No	Yes	2.00
525	34.73	40.36	2.87	5.49	0.87	23.88	6.73	160.62	3.600	No	Yes	2.00
526	34.78	41.47	2.88	5.94	0.87	24.50	6.94	170.16	3.600	No	Yes	2.00
527	34.85	57.95	2.68	4.46	0.81	35.76	4.47	159.97	3.600	No	Yes	2.00
528	34.92	63.64	2.64	4.31	0.80	39.58	4.07	161.10	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	35.01	74.06	2.56	3.96	0.78	46.74	3.41	159.38	0.457	No	No	1.00
530	35.05	67.52	2.66	4.96	0.81	41.84	4.32	180.81	3.600	No	Yes	2.00
531	35.14	70.22	2.66	5.15	0.81	43.49	4.32	188.09	3.600	No	Yes	2.00
532	35.19	72.00	2.66	5.22	0.81	44.62	4.29	191.40	3.600	No	Yes	2.00
533	35.24	72.03	2.65	5.12	0.80	44.64	4.23	188.69	3.600	No	Yes	2.00
534	35.33	66.93	2.70	5.44	0.82	41.05	4.67	191.69	3.600	No	Yes	2.00
535	35.38	62.64	2.74	5.74	0.83	38.08	5.09	193.99	3.600	No	Yes	2.00
536	35.47	56.19	2.80	6.33	0.85	33.63	5.90	198.41	3.600	No	Yes	2.00
537	35.50	54.42	2.82	6.36	0.85	32.45	6.05	196.49	3.600	No	Yes	2.00
538	35.59	52.33	2.83	6.41	0.86	31.03	6.27	194.50	3.600	No	Yes	2.00
539	35.64	53.35	2.81	6.03	0.85	31.76	5.93	188.35	3.600	No	Yes	2.00
540	35.70	54.43	2.78	5.65	0.84	32.53	5.59	181.89	3.600	No	Yes	2.00
541	35.78	55.43	2.75	5.27	0.83	33.24	5.26	174.88	3.600	No	Yes	2.00
542	35.83	55.09	2.73	4.93	0.83	33.10	5.05	167.00	3.600	No	Yes	2.00
543	35.92	49.75	2.78	5.11	0.84	29.50	5.59	164.96	3.600	No	Yes	2.00
544	35.97	44.45	2.83	5.40	0.86	25.98	6.30	163.59	3.600	No	Yes	2.00
545	36.06	41.26	2.88	5.69	0.87	23.82	6.89	164.11	3.600	No	Yes	2.00
546	36.10	39.53	2.90	5.91	0.88	22.65	7.28	164.88	3.600	No	Yes	2.00
547	36.16	37.75	2.96	6.40	1.00	20.29	8.18	166.02	3.600	No	Yes	2.00
548	36.24	39.25	2.96	6.54	1.00	21.11	8.09	170.71	3.600	No	Yes	2.00
549	36.30	50.35	2.80	5.44	0.85	29.61	5.81	171.91	3.600	No	Yes	2.00
550	36.35	64.96	2.65	4.49	0.80	39.44	4.20	165.51	3.600	No	Yes	2.00
551	36.43	74.65	2.58	4.21	0.78	45.93	3.60	165.52	0.502	No	No	1.09
552	36.52	75.98	2.59	4.38	0.79	46.65	3.67	171.24	0.547	No	No	1.19
553	36.57	74.27	2.62	4.67	0.79	45.33	3.92	177.74	3.600	No	Yes	2.00
554	36.62	74.23	2.64	4.96	0.80	45.14	4.10	185.11	3.600	No	Yes	2.00
555	36.70	78.19	2.62	4.95	0.80	47.67	3.95	188.35	3.600	No	Yes	2.00
556	36.75	84.16	2.59	4.75	0.78	51.67	3.63	187.55	0.694	No	No	1.50
557	36.84	89.86	2.55	4.48	0.77	55.55	3.31	183.84	0.658	No	No	1.43
558	36.89	91.62	2.55	4.62	0.77	56.56	3.34	189.07	0.709	No	No	1.54
559	36.96	91.11	2.58	4.95	0.78	55.96	3.54	198.25	0.805	No	No	1.74
560	37.03	97.52	2.55	4.82	0.77	60.21	3.31	199.07	0.814	No	No	1.76
561	37.07	99.92	2.53	4.75	0.77	61.82	3.21	198.66	0.809	No	No	1.75
562	37.17	106.04	2.50	4.50	0.76	65.97	2.95	194.86	0.768	No	No	1.66
563	37.22	103.90	2.51	4.64	0.76	64.39	3.07	197.79	0.800	No	No	1.73
564	37.31	106.87	2.49	4.49	0.76	66.37	2.94	195.25	0.772	No	No	1.67
565	37.35	101.30	2.53	4.75	0.77	62.44	3.19	199.36	0.817	No	No	1.77
566	37.44	96.61	2.56	4.92	0.78	59.13	3.40	201.06	4.000	No	No	2.00
567	37.49	86.00	2.62	5.39	0.80	51.88	3.97	205.99	3.600	No	Yes	2.00
568	37.54	79.94	2.68	5.85	0.81	47.71	4.45	212.44	3.600	No	Yes	2.00
569	37.63	78.46	2.69	6.02	0.82	46.60	4.62	215.16	3.600	No	Yes	2.00
570	37.68	90.60	2.60	5.29	0.79	54.76	3.78	206.99	3.600	No	Yes	2.00
571	37.76	104.11	2.51	4.53	0.76	64.03	3.03	194.16	0.761	No	No	1.64
572	37.81	115.12	2.45	4.17	0.74	71.58	2.65	189.42	0.712	No	No	1.54
573	37.91	128.38	2.40	3.95	0.73	80.55	2.36	190.08	0.719	No	No	1.55
574	37.95	149.92	2.32	3.66	0.71	95.36	2.02	192.84	0.747	No	No	1.61
575	38.00	190.91	2.21	3.21	0.67	124.07	1.63	202.85	4.000	No	No	2.00
576	38.09	221.36	2.15	3.08	0.65	145.26	1.51	218.84	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	38.14	240.55	2.13	3.12	0.65	158.36	1.47	233.15	4.000	No	No	2.00
578	38.20	235.56	2.17	3.37	0.66	154.04	1.54	237.13	4.000	No	No	2.00
579	38.26	221.89	2.23	3.80	0.68	143.47	1.69	242.11	4.000	No	No	2.00
580	38.32	204.39	2.23	3.61	0.68	131.83	1.70	224.05	4.000	No	No	2.00
581	38.41	185.72	2.23	3.32	0.68	119.53	1.69	202.46	4.000	No	No	2.00
582	38.46	167.31	2.19	2.74	0.67	108.12	1.60	172.66	0.559	No	No	1.20
583	38.55	148.66	2.25	2.94	0.68	94.81	1.77	167.50	0.517	No	No	1.11
584	38.59	125.88	2.35	3.35	0.71	78.75	2.13	167.87	0.520	No	No	1.12
585	38.69	106.46	2.46	3.98	0.75	65.06	2.72	177.18	0.597	No	No	1.29
586	38.74	91.33	2.56	4.66	0.78	54.64	3.44	188.07	0.699	No	No	1.50
587	38.78	87.28	2.60	4.92	0.79	51.82	3.72	192.62	0.745	No	No	1.60
588	38.88	90.40	2.58	4.86	0.78	53.79	3.59	193.05	0.749	No	No	1.61
589	38.91	102.63	2.51	4.48	0.76	61.92	3.07	190.24	0.720	No	No	1.55
590	39.01	105.00	2.51	4.59	0.76	63.28	3.08	195.07	0.770	No	No	1.66
591	39.06	103.28	2.54	4.87	0.77	61.89	3.27	202.68	4.000	No	No	2.00
592	39.15	113.45	2.49	4.60	0.76	68.59	2.93	200.97	4.000	No	No	2.00
593	39.20	147.81	2.33	3.67	0.71	92.19	2.06	190.17	0.720	No	No	1.55
594	39.24	215.61	2.10	2.61	0.64	140.46	1.42	200.13	4.000	No	No	2.00
595	39.32	266.34	1.98	2.19	0.60	177.35	1.29	229.30	4.000	No	No	2.00
596	39.38	289.38	1.95	2.13	0.59	193.78	1.27	245.85	4.000	No	No	2.00
597	39.44	272.32	2.02	2.47	0.61	179.94	1.32	238.30	4.000	No	No	2.00
598	39.52	244.85	2.12	2.98	0.64	158.78	1.45	229.55	4.000	No	No	2.00
599	39.57	223.41	2.20	3.53	0.67	142.51	1.62	231.47	4.000	No	No	2.00
600	39.63	214.54	2.22	3.54	0.67	136.37	1.66	226.01	4.000	No	No	2.00
601	39.71	204.71	2.23	3.59	0.68	129.53	1.71	221.00	4.000	No	No	2.00
602	39.78	208.80	2.14	2.76	0.65	134.29	1.48	198.33	0.806	No	No	1.73
603	39.84	204.19	2.09	2.35	0.63	132.33	1.40	184.99	0.669	No	No	1.44
604	39.91	195.77	2.04	1.97	0.62	127.75	1.34	171.45	0.549	No	No	1.18
605	40.01	230.14	1.95	1.77	0.59	152.54	1.27	193.90	0.758	No	No	1.63
606	40.04	248.67	1.92	1.72	0.58	165.85	1.25	207.16	4.000	No	No	2.00
607	40.09	311.54	1.80	1.46	0.55	212.57	1.15	244.09	4.000	No	No	2.00
608	40.19	361.96	1.72	1.33	0.52	250.31	1.03	257.53	4.000	No	No	2.00
609	40.23	436.99	1.61	1.13	0.50	306.68	1.00	306.68	4.000	No	No	2.00
610	40.32	456.59	1.58	1.09	0.50	320.23	1.00	320.23	4.000	No	No	2.00
611	40.37	463.30	1.59	1.11	0.50	324.79	1.00	324.79	4.000	No	No	2.00
612	40.46	418.71	1.68	1.32	0.51	291.30	1.00	291.30	4.000	No	No	2.00
613	40.51	447.35	1.65	1.29	0.50	312.59	1.00	312.59	4.000	No	No	2.00
614	40.56	493.93	1.58	1.14	0.50	345.74	1.00	345.74	4.000	No	No	2.00
615	40.63	607.28	1.43	0.86	0.50	425.19	1.00	425.19	4.000	No	No	2.00
616	40.69	697.09	1.34	0.74	0.50	488.05	1.00	488.05	4.000	No	No	2.00
617	40.79	751.60	1.30	0.70	0.50	525.82	1.00	525.82	4.000	No	No	2.00
618	40.84	787.19	1.29	0.70	0.50	550.54	1.00	550.54	4.000	No	No	2.00
619	40.88	722.11	1.38	0.83	0.50	504.65	1.00	504.65	4.000	No	No	2.00
620	40.97	699.63	1.44	0.97	0.50	488.48	1.00	488.48	4.000	No	No	2.00
621	41.02	669.79	1.49	1.09	0.50	467.35	1.00	467.35	4.000	No	No	2.00
622	41.09	703.30	1.49	1.11	0.50	490.44	1.00	490.44	4.000	No	No	2.00
623	41.15	688.55	1.52	1.21	0.50	479.88	1.00	479.88	4.000	No	No	2.00
624	41.24	685.37	1.51	1.18	0.50	477.20	1.00	477.20	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
625	41.29	695.20	1.46	1.02	0.50	483.85	1.00	483.85	4.000	No	No	2.00
626	41.35	688.95	1.43	0.94	0.50	479.20	1.00	479.20	4.000	No	No	2.00
627	41.41	685.40	1.48	1.07	0.50	476.42	1.00	476.42	4.000	No	No	2.00
628	41.48	656.51	1.55	1.27	0.50	455.98	1.00	455.98	4.000	No	No	2.00
629	41.58	583.54	1.65	1.52	0.50	404.26	1.00	404.26	4.000	No	No	2.00
630	41.62	524.82	1.72	1.71	0.52	358.56	1.02	366.84	4.000	No	No	2.00
631	41.67	467.04	1.79	1.94	0.55	314.22	1.15	360.27	4.000	No	No	2.00
632	41.76	451.14	1.83	2.07	0.56	301.29	1.18	356.16	4.000	No	No	2.00
633	41.80	401.46	1.87	2.16	0.57	265.60	1.22	323.54	4.000	No	No	2.00
634	41.89	340.51	1.92	2.15	0.58	223.01	1.25	278.20	4.000	No	No	2.00
635	41.94	301.96	1.94	2.12	0.59	196.47	1.27	248.65	4.000	No	No	2.00
636	42.00	274.73	2.03	2.50	0.62	175.65	1.33	234.23	4.000	No	No	2.00
637	42.09	276.47	2.09	2.94	0.63	174.68	1.40	244.82	4.000	No	No	2.00
638	42.13	247.77	2.18	3.52	0.66	153.53	1.57	241.79	4.000	No	No	2.00
639	42.19	250.22	2.04	2.36	0.62	159.27	1.34	213.37	4.000	No	No	2.00
640	42.28	217.51	1.89	1.36	0.57	141.93	1.23	174.52	0.574	No	No	1.23
641	42.34	225.89	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
642	42.42	215.14	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
643	42.46	301.95	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
644	42.55	414.14	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
645	42.60	514.53	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.09	2.00	0.00	0.00	0.00	0.00	0.14	2.00	0.00	0.00	0.00	0.00
0.22	2.00	0.00	0.00	0.00	0.00	0.27	2.00	0.00	0.00	0.00	0.00
0.37	2.00	0.00	0.00	0.00	0.00	0.41	2.00	0.00	0.00	0.00	0.00
0.46	2.00	0.00	0.00	0.00	0.00	0.55	2.00	0.00	0.00	0.00	0.00
0.60	2.00	0.00	0.00	0.00	0.00	0.69	2.00	0.00	0.00	0.00	0.00
0.73	2.00	0.00	0.00	0.00	0.00	0.83	2.00	0.00	0.00	0.00	0.00
0.87	2.00	0.00	0.00	0.00	0.00	0.92	2.00	0.00	0.00	0.00	0.00
1.01	2.00	0.00	0.00	0.00	0.00	1.05	2.00	0.00	0.00	0.00	0.00
1.15	2.00	0.00	0.00	0.00	0.00	1.20	2.00	0.00	0.00	0.00	0.00
1.29	2.00	0.00	0.00	0.00	0.00	1.33	2.00	0.00	0.00	0.00	0.00
1.38	2.00	0.00	0.00	0.00	0.00	1.46	2.00	0.00	0.00	0.00	0.00
1.52	2.00	0.00	0.00	0.00	0.00	1.60	2.00	0.00	0.00	0.00	0.00
1.66	2.00	0.00	0.00	0.00	0.00	1.74	2.00	0.00	0.00	0.00	0.00
1.79	2.00	0.00	0.00	0.00	0.00	1.84	2.00	0.00	0.00	0.00	0.00
1.92	2.00	0.00	0.00	0.00	0.00	1.98	2.00	0.00	0.00	0.00	0.00
2.04	2.00	0.00	0.00	0.00	0.00	2.11	2.00	0.00	0.00	0.00	0.00
2.20	2.00	0.00	0.00	0.00	0.00	2.25	2.00	0.00	0.00	0.00	0.00
2.30	2.00	0.00	0.00	0.00	0.00	2.39	2.00	0.00	0.00	0.00	0.00
2.44	2.00	0.00	0.00	0.00	0.00	2.53	2.00	0.00	0.00	0.00	0.00
2.57	2.00	0.00	0.00	0.00	0.00	2.66	2.00	0.00	0.00	0.00	0.00
2.71	2.00	0.00	0.00	0.00	0.00	2.76	2.00	0.00	0.00	0.00	0.00
2.85	2.00	0.00	0.00	0.00	0.00	2.90	2.00	0.00	0.00	0.00	0.00
2.98	2.00	0.00	0.00	0.00	0.00	3.04	2.00	0.00	0.00	0.06	0.00
3.12	2.00	0.00	0.00	0.08	0.00	3.17	2.00	0.00	0.00	0.05	0.00
3.22	2.00	0.00	0.00	0.05	0.00	3.31	2.00	0.00	0.00	0.09	0.00
3.35	2.00	0.00	0.00	0.04	0.00	3.44	2.00	0.00	0.00	0.09	0.00
3.48	2.00	0.00	0.00	0.04	0.00	3.54	2.00	0.00	0.00	0.06	0.00
3.62	2.00	0.00	0.00	0.08	0.00	3.68	2.00	0.00	0.00	0.06	0.00
3.77	2.00	0.00	0.00	0.09	0.00	3.82	2.00	0.00	0.00	0.05	0.00
3.88	2.00	0.00	0.00	0.06	0.00	3.97	2.00	0.00	0.00	0.09	0.00
4.01	2.00	0.00	0.00	0.04	0.00	4.07	2.00	0.00	0.00	0.06	0.00
4.15	2.00	0.00	0.00	0.08	0.00	4.20	2.00	0.00	0.00	0.05	0.00
4.30	2.00	0.00	0.00	0.10	0.00	4.34	2.00	0.00	0.00	0.05	0.00
4.43	2.00	0.00	0.00	0.09	0.00	4.47	2.00	0.00	0.00	0.04	0.00
4.53	2.00	0.00	0.00	0.06	0.00	4.62	2.00	0.00	0.00	0.08	0.00
4.66	2.00	0.00	0.00	0.05	0.00	4.76	2.00	0.00	0.00	0.10	0.00
4.80	2.00	0.00	0.00	0.04	0.00	4.88	2.00	0.00	0.00	0.08	0.00
4.94	2.00	0.00	0.00	0.06	0.00	4.99	2.00	0.00	0.00	0.05	0.00
5.08	2.00	0.00	0.00	0.09	0.00	5.12	2.00	0.00	0.00	0.05	0.00
5.22	2.00	0.00	0.00	0.09	0.00	5.26	2.00	0.00	0.00	0.05	0.00
5.36	2.00	0.00	0.00	0.09	0.00	5.40	2.00	0.00	0.00	0.04	0.00
5.45	2.00	0.00	0.00	0.05	0.00	5.54	2.00	0.00	0.00	0.09	0.00
5.58	2.00	0.00	0.00	0.05	0.00	5.67	2.00	0.00	0.00	0.09	0.00
5.71	2.00	0.00	0.00	0.04	0.00	5.78	2.00	0.00	0.00	0.07	0.00
5.84	2.00	0.00	0.00	0.06	0.00	5.91	2.00	0.00	0.00	0.07	0.00
6.00	2.00	0.00	0.00	0.09	0.00	6.05	2.00	0.00	0.00	0.05	0.00
6.14	2.00	0.00	0.00	0.09	0.00	6.27	2.00	0.00	0.00	0.14	0.00
6.32	2.00	0.00	0.00	0.05	0.00	6.37	2.00	0.00	0.00	0.04	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.45	2.00	0.00	0.00	0.08	0.00	6.51	2.00	0.00	0.00	0.06	0.00
6.57	2.00	0.00	0.00	0.06	0.00	6.64	2.00	0.00	0.00	0.07	0.00
6.70	2.00	0.00	0.00	0.05	0.00	6.78	2.00	0.00	0.00	0.09	0.00
6.83	2.00	0.00	0.00	0.04	0.00	6.97	2.00	0.00	0.00	0.14	0.00
6.98	2.00	0.00	0.00	0.01	0.00	7.06	2.00	0.00	0.00	0.08	0.00
7.11	2.00	0.00	0.00	0.05	0.00	7.18	2.00	0.00	0.00	0.07	0.00
7.25	2.00	0.00	0.00	0.07	0.00	7.29	2.00	0.00	0.00	0.05	0.00
7.36	2.00	0.00	0.00	0.07	0.00	7.43	2.00	0.00	0.00	0.07	0.00
7.52	2.00	0.00	0.00	0.09	0.00	7.56	2.00	0.00	0.00	0.04	0.00
7.61	2.00	0.00	0.00	0.06	0.00	7.70	2.00	0.00	0.00	0.09	0.00
7.76	2.00	0.00	0.00	0.06	0.00	7.84	2.00	0.00	0.00	0.09	0.00
7.89	2.00	0.00	0.00	0.04	0.00	7.96	2.00	0.00	0.00	0.07	0.00
8.03	2.00	0.00	0.00	0.07	0.00	8.08	2.00	0.00	0.00	0.05	0.00
8.16	2.00	0.00	0.00	0.08	0.00	8.21	2.00	0.00	0.00	0.05	0.00
8.30	2.00	0.00	0.00	0.10	0.00	8.34	2.00	0.00	0.00	0.03	0.00
8.43	2.00	0.00	0.00	0.09	0.00	8.47	2.00	0.00	0.00	0.04	0.00
8.56	2.00	0.00	0.00	0.09	0.00	8.61	2.00	0.00	0.00	0.05	0.00
8.67	2.00	0.00	0.00	0.06	0.00	8.75	2.00	0.00	0.00	0.07	0.00
8.79	2.00	0.00	0.00	0.05	0.00	8.89	2.00	0.00	0.00	0.10	0.00
8.94	2.00	0.00	0.00	0.05	0.00	9.02	2.00	0.00	0.00	0.08	0.00
9.07	2.00	0.00	0.00	0.05	0.00	9.13	2.00	0.00	0.00	0.05	0.00
9.21	2.00	0.00	0.00	0.08	0.00	9.25	2.00	0.00	0.00	0.05	0.00
9.34	2.00	0.00	0.00	0.08	0.00	9.39	2.00	0.00	0.00	0.05	0.00
9.48	2.00	0.00	0.00	0.09	0.00	9.53	2.00	0.00	0.00	0.04	0.00
9.62	2.00	0.00	0.00	0.09	0.00	9.67	2.00	0.00	0.00	0.05	0.00
9.71	2.00	0.00	0.00	0.04	0.00	9.80	2.00	0.00	0.00	0.09	0.00
9.85	2.00	0.00	0.00	0.05	0.00	9.93	2.00	0.00	0.00	0.08	0.00
9.99	2.00	0.00	0.00	0.06	0.00	10.04	2.00	0.00	0.00	0.05	0.00
10.13	2.00	0.00	0.00	0.09	0.00	10.18	2.00	0.00	0.00	0.05	0.00
10.27	2.00	0.00	0.00	0.09	0.00	10.32	2.00	0.00	0.00	0.05	0.00
10.40	2.00	0.00	0.00	0.08	0.00	10.45	2.00	0.00	0.00	0.05	0.00
10.50	2.00	0.00	0.00	0.05	0.00	10.59	2.00	0.00	0.00	0.08	0.00
10.64	2.00	0.00	0.00	0.06	0.00	10.70	2.00	0.00	0.00	0.06	0.00
10.78	2.00	0.00	0.00	0.08	0.00	10.87	2.00	0.00	0.00	0.09	0.00
10.92	2.00	0.00	0.00	0.05	0.00	10.96	2.00	0.00	0.00	0.04	0.00
11.05	2.00	0.00	0.00	0.09	0.00	11.10	2.00	0.00	0.00	0.04	0.00
11.19	2.00	0.00	0.00	0.09	0.00	11.24	2.00	0.00	0.00	0.05	0.00
11.37	2.00	0.00	0.00	0.13	0.00	11.39	2.00	0.00	0.00	0.02	0.00
11.42	2.00	0.00	0.00	0.03	0.00	11.49	2.00	0.00	0.00	0.07	0.00
11.56	2.00	0.00	0.00	0.07	0.00	11.65	2.00	0.00	0.00	0.09	0.00
11.70	2.00	0.00	0.00	0.05	0.00	11.79	2.00	0.00	0.00	0.09	0.00
11.84	2.00	0.00	0.00	0.05	0.00	11.88	2.00	0.00	0.00	0.04	0.00
11.97	2.00	0.00	0.00	0.09	0.00	12.02	2.00	0.00	0.00	0.05	0.00
12.12	2.00	0.00	0.00	0.09	0.00	12.16	2.00	0.00	0.00	0.05	0.00
12.21	2.00	0.00	0.00	0.05	0.00	12.30	2.00	0.00	0.00	0.09	0.00
12.35	2.00	0.00	0.00	0.04	0.00	12.43	2.00	0.00	0.00	0.08	0.00
12.48	2.00	0.00	0.00	0.05	0.00	12.57	2.00	0.00	0.00	0.09	0.00
12.61	2.00	0.00	0.00	0.04	0.00	12.67	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.76	2.00	0.00	0.00	0.09	0.00	12.80	2.00	0.00	0.00	0.04	0.00
12.89	2.00	0.00	0.00	0.09	0.00	12.94	2.00	0.00	0.00	0.06	0.00
12.99	2.00	0.00	0.00	0.05	0.00	13.08	2.00	0.00	0.00	0.09	0.00
13.13	2.00	0.00	0.00	0.05	0.00	13.22	2.00	0.00	0.00	0.09	0.00
13.27	2.00	0.00	0.00	0.05	0.00	13.36	2.00	0.00	0.00	0.09	0.00
13.39	2.00	0.00	0.00	0.03	0.00	13.49	2.00	0.00	0.00	0.10	0.00
13.54	2.00	0.00	0.00	0.05	0.00	13.59	2.00	0.00	0.00	0.04	0.00
13.68	2.00	0.00	0.00	0.09	0.00	13.72	2.00	0.00	0.00	0.04	0.00
13.82	2.00	0.00	0.00	0.10	0.00	13.87	2.00	0.00	0.00	0.04	0.00
13.95	2.00	0.00	0.00	0.09	0.00	14.00	2.00	0.00	0.00	0.05	0.00
14.05	2.00	0.00	0.00	0.05	0.00	14.14	2.00	0.00	0.00	0.09	0.00
14.19	2.00	0.00	0.00	0.05	0.00	14.24	2.00	0.00	0.00	0.05	0.00
14.31	2.00	0.00	0.00	0.07	0.00	14.37	2.00	0.00	0.00	0.06	0.00
14.46	2.00	0.00	0.00	0.09	0.00	14.51	2.00	0.00	0.00	0.04	0.00
14.59	2.00	0.00	0.00	0.08	0.00	14.65	2.00	0.00	0.00	0.06	0.00
14.73	2.00	0.00	0.00	0.09	0.00	14.79	2.00	0.00	0.00	0.05	0.00
14.84	2.00	0.00	0.00	0.05	0.00	14.91	2.00	0.00	0.00	0.07	0.00
14.97	2.00	0.00	0.00	0.07	0.00	15.06	2.00	0.00	0.00	0.09	0.00
15.11	2.00	0.00	0.00	0.04	0.00	15.20	2.00	0.00	0.00	0.09	0.00
15.25	2.00	0.00	0.00	0.05	0.00	15.30	2.00	0.00	0.00	0.05	0.00
15.36	2.00	0.00	0.00	0.06	0.00	15.44	2.00	0.00	0.00	0.09	0.00
15.49	2.00	0.00	0.00	0.05	0.00	15.55	2.00	0.00	0.00	0.06	0.00
15.63	2.00	0.00	0.00	0.08	0.00	15.73	2.00	0.00	0.00	0.10	0.00
15.78	2.00	0.00	0.00	0.05	0.00	15.82	2.00	0.00	0.00	0.04	0.00
15.91	2.00	0.00	0.00	0.09	0.00	15.96	2.00	0.00	0.00	0.04	0.00
16.05	2.00	0.00	0.00	0.10	0.00	16.10	2.00	0.00	0.00	0.05	0.00
16.16	2.00	0.00	0.00	0.06	0.00	16.24	2.00	0.00	0.00	0.08	0.00
16.28	2.00	0.00	0.00	0.04	0.00	16.36	2.00	0.00	0.00	0.09	0.00
16.42	2.00	0.00	0.00	0.05	0.00	16.51	2.00	0.00	0.00	0.09	0.00
16.55	2.00	0.00	0.00	0.05	0.00	16.61	2.00	0.00	0.00	0.05	0.00
16.68	2.00	0.00	0.00	0.08	0.00	16.74	2.00	0.00	0.00	0.06	0.00
16.83	2.00	0.00	0.00	0.09	0.00	16.87	2.00	0.00	0.00	0.03	0.00
16.97	2.00	0.00	0.00	0.10	0.00	17.06	2.00	0.00	0.00	0.09	0.00
17.16	2.00	0.00	0.00	0.09	0.00	17.20	2.00	0.00	0.00	0.04	0.00
17.29	2.00	0.00	0.00	0.09	0.00	17.36	2.00	0.00	0.00	0.07	0.00
17.39	2.00	0.00	0.00	0.03	0.00	17.47	2.00	0.00	0.00	0.08	0.00
17.52	2.00	0.00	0.00	0.05	0.00	17.62	2.00	0.00	0.00	0.09	0.00
17.71	2.00	0.00	0.00	0.09	0.00	17.74	2.00	0.00	0.00	0.03	0.00
17.80	2.00	0.00	0.00	0.07	0.00	17.86	2.00	0.00	0.00	0.06	0.00
17.94	2.00	0.00	0.00	0.08	0.00	17.98	2.00	0.00	0.00	0.05	0.00
18.05	2.00	0.00	0.00	0.07	0.00	18.13	2.00	0.00	0.00	0.07	0.00
18.18	2.00	0.00	0.00	0.06	0.00	18.26	2.00	0.00	0.00	0.08	0.00
18.31	2.00	0.00	0.00	0.05	0.00	18.45	2.00	0.00	0.00	0.14	0.00
18.55	2.00	0.00	0.00	0.11	0.00	18.59	2.00	0.00	0.00	0.04	0.00
18.64	2.00	0.00	0.00	0.05	0.00	18.74	2.00	0.00	0.00	0.09	0.00
18.78	2.00	0.00	0.00	0.04	0.00	18.87	2.00	0.00	0.00	0.10	0.00
18.92	2.00	0.00	0.00	0.05	0.00	18.96	2.00	0.00	0.00	0.04	0.00
19.08	2.00	0.00	0.00	0.11	0.00	19.10	2.00	0.00	0.00	0.03	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
19.16	2.00	0.00	0.00	0.06	0.00	19.24	2.00	0.00	0.00	0.08	0.00
19.29	2.00	0.00	0.00	0.05	0.00	19.37	2.00	0.00	0.00	0.08	0.00
19.43	2.00	0.00	0.00	0.06	0.00	19.52	2.00	0.00	0.00	0.09	0.00
19.57	2.00	0.00	0.00	0.05	0.00	19.66	2.00	0.00	0.00	0.09	0.00
19.71	2.00	0.00	0.00	0.05	0.00	19.79	2.00	0.00	0.00	0.08	0.00
19.84	2.00	0.00	0.00	0.05	0.00	19.89	2.00	0.00	0.00	0.04	0.00
19.98	2.00	0.00	0.00	0.09	0.00	20.02	2.00	0.00	0.00	0.05	0.00
20.09	0.53	0.00	0.00	0.07	0.07	20.16	0.52	0.00	0.00	0.06	0.06
20.25	0.54	0.00	0.00	0.10	0.09	20.30	0.58	0.00	0.00	0.05	0.04
20.34	2.00	0.00	0.00	0.04	0.00	20.43	2.00	0.00	0.00	0.08	0.00
20.48	2.00	0.00	0.00	0.06	0.00	20.57	2.00	0.00	0.00	0.09	0.00
20.62	2.00	0.00	0.00	0.05	0.00	20.67	2.00	0.00	0.00	0.05	0.00
20.75	2.00	0.00	0.00	0.08	0.00	20.81	0.38	0.62	0.37	0.05	0.07
20.90	0.33	0.67	0.34	0.09	0.13	20.94	0.29	0.71	0.32	0.04	0.06
21.03	0.28	0.72	0.31	0.09	0.13	21.08	0.28	0.72	0.31	0.05	0.07
21.13	0.28	0.72	0.31	0.05	0.07	21.22	0.28	0.72	0.31	0.09	0.13
21.27	0.28	0.72	0.31	0.04	0.07	21.34	0.27	0.73	0.31	0.07	0.10
21.41	0.28	0.72	0.31	0.07	0.11	21.50	0.29	0.71	0.32	0.09	0.13
21.53	0.30	0.70	0.32	0.03	0.04	21.59	0.32	0.68	0.33	0.06	0.09
21.68	0.33	0.67	0.34	0.10	0.13	21.73	0.34	0.66	0.35	0.05	0.06
21.82	0.35	0.65	0.35	0.09	0.12	21.86	0.37	0.63	0.37	0.04	0.05
21.94	2.00	0.00	0.00	0.07	0.00	22.01	2.00	0.00	0.00	0.08	0.00
22.06	2.00	0.00	0.00	0.05	0.00	22.15	2.00	0.00	0.00	0.09	0.00
22.20	2.00	0.00	0.00	0.05	0.00	22.25	2.00	0.00	0.00	0.05	0.00
22.34	2.00	0.00	0.00	0.09	0.00	22.38	2.00	0.00	0.00	0.05	0.00
22.47	2.00	0.00	0.00	0.09	0.00	22.52	2.00	0.00	0.00	0.05	0.00
22.59	2.00	0.00	0.00	0.07	0.00	22.66	2.00	0.00	0.00	0.08	0.00
22.75	2.00	0.00	0.00	0.09	0.00	22.78	2.00	0.00	0.00	0.02	0.00
22.84	2.00	0.00	0.00	0.07	0.00	22.94	2.00	0.00	0.00	0.09	0.00
22.97	2.00	0.00	0.00	0.04	0.00	23.05	2.00	0.00	0.00	0.07	0.00
23.12	0.39	0.61	0.38	0.07	0.09	23.17	0.34	0.66	0.35	0.05	0.06
23.26	0.33	0.67	0.34	0.09	0.12	23.30	0.33	0.67	0.34	0.05	0.06
23.36	0.34	0.66	0.34	0.06	0.08	23.44	0.34	0.66	0.35	0.08	0.10
23.53	0.34	0.66	0.34	0.09	0.12	23.57	0.34	0.66	0.34	0.04	0.06
23.63	0.34	0.66	0.35	0.05	0.07	23.72	0.35	0.65	0.35	0.09	0.12
23.76	0.37	0.63	0.36	0.05	0.06	23.85	0.37	0.63	0.37	0.09	0.11
23.91	0.38	0.62	0.37	0.05	0.06	23.95	0.37	0.63	0.37	0.05	0.05
24.04	2.00	0.00	0.00	0.09	0.00	24.09	2.00	0.00	0.00	0.05	0.00
24.18	2.00	0.00	0.00	0.10	0.00	24.23	2.00	0.00	0.00	0.04	0.00
24.29	2.00	0.00	0.00	0.06	0.00	24.36	2.00	0.00	0.00	0.08	0.00
24.41	2.00	0.00	0.00	0.05	0.00	24.50	2.00	0.00	0.00	0.09	0.00
24.56	2.00	0.00	0.00	0.05	0.00	24.64	2.00	0.00	0.00	0.08	0.00
24.69	2.00	0.00	0.00	0.05	0.00	24.75	0.35	0.65	0.35	0.06	0.08
24.82	0.32	0.68	0.33	0.08	0.10	24.87	0.34	0.66	0.34	0.05	0.06
24.96	0.36	0.64	0.36	0.09	0.11	25.01	0.39	0.61	0.38	0.05	0.06
25.07	0.43	0.57	0.41	0.06	0.06	25.14	0.49	0.51	0.47	0.07	0.07
25.20	0.53	0.00	0.00	0.07	0.06	25.30	0.53	0.00	0.00	0.09	0.08
25.34	0.49	0.51	0.46	0.05	0.04	25.42	0.47	0.53	0.45	0.08	0.08

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.48	0.46	0.54	0.44	0.06	0.06	25.55	2.00	0.00	0.00	0.07	0.00
25.62	2.00	0.00	0.00	0.07	0.00	25.67	0.46	0.54	0.44	0.05	0.05
25.75	0.44	0.56	0.42	0.09	0.09	25.80	0.43	0.57	0.41	0.05	0.06
25.90	2.00	0.00	0.00	0.09	0.00	25.94	2.00	0.00	0.00	0.04	0.00
25.99	2.00	0.00	0.00	0.05	0.00	26.06	2.00	0.00	0.00	0.07	0.00
26.13	2.00	0.00	0.00	0.07	0.00	26.22	2.00	0.00	0.00	0.09	0.00
26.27	2.00	0.00	0.00	0.05	0.00	26.34	2.00	0.00	0.00	0.08	0.00
26.40	2.00	0.00	0.00	0.06	0.00	26.45	2.00	0.00	0.00	0.04	0.00
26.54	2.00	0.00	0.00	0.09	0.00	26.59	2.00	0.00	0.00	0.05	0.00
26.68	2.00	0.00	0.00	0.09	0.00	26.73	2.00	0.00	0.00	0.05	0.00
26.82	2.00	0.00	0.00	0.09	0.00	26.88	2.00	0.00	0.00	0.06	0.00
26.91	2.00	0.00	0.00	0.03	0.00	27.00	2.00	0.00	0.00	0.09	0.00
27.05	2.00	0.00	0.00	0.05	0.00	27.14	2.00	0.00	0.00	0.09	0.00
27.19	2.00	0.00	0.00	0.05	0.00	27.23	2.00	0.00	0.00	0.05	0.00
27.32	2.00	0.00	0.00	0.09	0.00	27.38	2.00	0.00	0.00	0.05	0.00
27.46	2.00	0.00	0.00	0.09	0.00	27.51	2.00	0.00	0.00	0.05	0.00
27.57	2.00	0.00	0.00	0.06	0.00	27.63	2.00	0.00	0.00	0.06	0.00
27.69	2.00	0.00	0.00	0.06	0.00	27.78	2.00	0.00	0.00	0.09	0.00
27.85	2.00	0.00	0.00	0.06	0.00	27.90	2.00	0.00	0.00	0.05	0.00
27.99	2.00	0.00	0.00	0.09	0.00	28.04	2.00	0.00	0.00	0.05	0.00
28.13	2.00	0.00	0.00	0.09	0.00	28.17	2.00	0.00	0.00	0.05	0.00
28.26	2.00	0.00	0.00	0.09	0.00	28.31	2.00	0.00	0.00	0.05	0.00
28.36	2.00	0.00	0.00	0.05	0.00	28.45	2.00	0.00	0.00	0.09	0.00
28.49	2.00	0.00	0.00	0.04	0.00	28.56	2.00	0.00	0.00	0.07	0.00
28.63	2.00	0.00	0.00	0.08	0.00	28.73	2.00	0.00	0.00	0.09	0.00
28.78	2.00	0.00	0.00	0.06	0.00	28.82	2.00	0.00	0.00	0.04	0.00
28.91	2.00	0.00	0.00	0.10	0.00	28.96	2.00	0.00	0.00	0.04	0.00
29.05	2.00	0.00	0.00	0.09	0.00	29.09	2.00	0.00	0.00	0.05	0.00
29.15	2.00	0.00	0.00	0.05	0.00	29.23	2.00	0.00	0.00	0.09	0.00
29.28	2.00	0.00	0.00	0.05	0.00	29.37	2.00	0.00	0.00	0.10	0.00
29.42	0.57	0.00	0.00	0.05	0.03	29.46	2.00	0.00	0.00	0.04	0.00
29.56	2.00	0.00	0.00	0.09	0.00	29.60	2.00	0.00	0.00	0.04	0.00
29.67	2.00	0.00	0.00	0.07	0.00	29.74	2.00	0.00	0.00	0.07	0.00
29.83	0.38	0.62	0.37	0.09	0.09	29.92	0.34	0.66	0.35	0.09	0.10
29.96	0.36	0.64	0.36	0.04	0.04	30.02	0.40	0.60	0.38	0.05	0.05
30.07	0.46	0.54	0.44	0.05	0.05	30.12	2.00	0.00	0.00	0.06	0.00
30.21	2.00	0.00	0.00	0.09	0.00	30.31	2.00	0.00	0.00	0.10	0.00
30.34	2.00	0.00	0.00	0.03	0.00	30.40	2.00	0.00	0.00	0.07	0.00
30.49	2.00	0.00	0.00	0.09	0.00	30.54	2.00	0.00	0.00	0.05	0.00
30.58	2.00	0.00	0.00	0.04	0.00	30.68	2.00	0.00	0.00	0.09	0.00
30.73	2.00	0.00	0.00	0.05	0.00	30.80	2.00	0.00	0.00	0.07	0.00
30.86	2.00	0.00	0.00	0.06	0.00	30.91	2.00	0.00	0.00	0.05	0.00
31.02	2.00	0.00	0.00	0.11	0.00	31.05	2.00	0.00	0.00	0.03	0.00
31.14	2.00	0.00	0.00	0.09	0.00	31.18	2.00	0.00	0.00	0.04	0.00
31.24	2.00	0.00	0.00	0.06	0.00	31.32	2.00	0.00	0.00	0.08	0.00
31.36	2.00	0.00	0.00	0.04	0.00	31.44	2.00	0.00	0.00	0.07	0.00
31.51	2.00	0.00	0.00	0.07	0.00	31.59	2.00	0.00	0.00	0.09	0.00
31.65	2.00	0.00	0.00	0.05	0.00	31.73	2.00	0.00	0.00	0.08	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.83	2.00	0.00	0.00	0.10	0.00	31.92	2.00	0.00	0.00	0.09	0.00
31.97	2.00	0.00	0.00	0.05	0.00	32.06	2.00	0.00	0.00	0.09	0.00
32.10	2.00	0.00	0.00	0.05	0.00	32.15	2.00	0.00	0.00	0.05	0.00
32.24	2.00	0.00	0.00	0.09	0.00	32.29	2.00	0.00	0.00	0.04	0.00
32.38	2.00	0.00	0.00	0.09	0.00	32.43	2.00	0.00	0.00	0.05	0.00
32.52	2.00	0.00	0.00	0.09	0.00	32.57	2.00	0.00	0.00	0.05	0.00
32.62	2.00	0.00	0.00	0.05	0.00	32.70	2.00	0.00	0.00	0.08	0.00
32.75	2.00	0.00	0.00	0.05	0.00	32.81	2.00	0.00	0.00	0.06	0.00
32.89	2.00	0.00	0.00	0.07	0.00	32.98	2.00	0.00	0.00	0.09	0.00
33.03	2.00	0.00	0.00	0.05	0.00	33.07	2.00	0.00	0.00	0.05	0.00
33.17	2.00	0.00	0.00	0.09	0.00	33.21	2.00	0.00	0.00	0.04	0.00
33.31	2.00	0.00	0.00	0.10	0.00	33.35	2.00	0.00	0.00	0.04	0.00
33.44	2.00	0.00	0.00	0.09	0.00	33.49	2.00	0.00	0.00	0.04	0.00
33.53	2.00	0.00	0.00	0.05	0.00	33.63	2.00	0.00	0.00	0.09	0.00
33.67	2.00	0.00	0.00	0.04	0.00	33.77	2.00	0.00	0.00	0.10	0.00
33.81	2.00	0.00	0.00	0.04	0.00	33.88	2.00	0.00	0.00	0.07	0.00
33.95	2.00	0.00	0.00	0.07	0.00	33.99	2.00	0.00	0.00	0.04	0.00
34.09	2.00	0.00	0.00	0.09	0.00	34.14	2.00	0.00	0.00	0.05	0.00
34.22	2.00	0.00	0.00	0.08	0.00	34.27	2.00	0.00	0.00	0.05	0.00
34.32	2.00	0.00	0.00	0.05	0.00	34.40	2.00	0.00	0.00	0.08	0.00
34.46	2.00	0.00	0.00	0.06	0.00	34.58	2.00	0.00	0.00	0.12	0.00
34.59	2.00	0.00	0.00	0.01	0.00	34.69	2.00	0.00	0.00	0.09	0.00
34.73	2.00	0.00	0.00	0.05	0.00	34.78	2.00	0.00	0.00	0.05	0.00
34.85	2.00	0.00	0.00	0.06	0.00	34.92	2.00	0.00	0.00	0.07	0.00
35.01	1.00	0.00	0.00	0.09	0.00	35.05	2.00	0.00	0.00	0.04	0.00
35.14	2.00	0.00	0.00	0.10	0.00	35.19	2.00	0.00	0.00	0.05	0.00
35.24	2.00	0.00	0.00	0.05	0.00	35.33	2.00	0.00	0.00	0.09	0.00
35.38	2.00	0.00	0.00	0.05	0.00	35.47	2.00	0.00	0.00	0.09	0.00
35.50	2.00	0.00	0.00	0.03	0.00	35.59	2.00	0.00	0.00	0.09	0.00
35.64	2.00	0.00	0.00	0.05	0.00	35.70	2.00	0.00	0.00	0.06	0.00
35.78	2.00	0.00	0.00	0.09	0.00	35.83	2.00	0.00	0.00	0.05	0.00
35.92	2.00	0.00	0.00	0.09	0.00	35.97	2.00	0.00	0.00	0.04	0.00
36.06	2.00	0.00	0.00	0.09	0.00	36.10	2.00	0.00	0.00	0.04	0.00
36.16	2.00	0.00	0.00	0.05	0.00	36.24	2.00	0.00	0.00	0.09	0.00
36.30	2.00	0.00	0.00	0.05	0.00	36.35	2.00	0.00	0.00	0.06	0.00
36.43	1.09	0.00	0.00	0.08	0.00	36.52	1.19	0.00	0.00	0.09	0.00
36.57	2.00	0.00	0.00	0.05	0.00	36.62	2.00	0.00	0.00	0.05	0.00
36.70	2.00	0.00	0.00	0.09	0.00	36.75	1.50	0.00	0.00	0.05	0.00
36.84	1.43	0.00	0.00	0.09	0.00	36.89	1.54	0.00	0.00	0.06	0.00
36.96	1.74	0.00	0.00	0.06	0.00	37.03	1.76	0.00	0.00	0.07	0.00
37.07	1.75	0.00	0.00	0.04	0.00	37.17	1.66	0.00	0.00	0.09	0.00
37.22	1.73	0.00	0.00	0.05	0.00	37.31	1.67	0.00	0.00	0.09	0.00
37.35	1.77	0.00	0.00	0.05	0.00	37.44	2.00	0.00	0.00	0.09	0.00
37.49	2.00	0.00	0.00	0.05	0.00	37.54	2.00	0.00	0.00	0.05	0.00
37.63	2.00	0.00	0.00	0.09	0.00	37.68	2.00	0.00	0.00	0.05	0.00
37.76	1.64	0.00	0.00	0.08	0.00	37.81	1.54	0.00	0.00	0.05	0.00
37.91	1.55	0.00	0.00	0.09	0.00	37.95	1.61	0.00	0.00	0.04	0.00
38.00	2.00	0.00	0.00	0.05	0.00	38.09	2.00	0.00	0.00	0.09	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
38.14	2.00	0.00	0.00	0.05	0.00	38.20	2.00	0.00	0.00	0.06	0.00
38.26	2.00	0.00	0.00	0.06	0.00	38.32	2.00	0.00	0.00	0.06	0.00
38.41	2.00	0.00	0.00	0.09	0.00	38.46	1.20	0.00	0.00	0.05	0.00
38.55	1.11	0.00	0.00	0.09	0.00	38.59	1.12	0.00	0.00	0.04	0.00
38.69	1.29	0.00	0.00	0.11	0.00	38.74	1.50	0.00	0.00	0.04	0.00
38.78	1.60	0.00	0.00	0.05	0.00	38.88	1.61	0.00	0.00	0.09	0.00
38.91	1.55	0.00	0.00	0.04	0.00	39.01	1.66	0.00	0.00	0.10	0.00
39.06	2.00	0.00	0.00	0.05	0.00	39.15	2.00	0.00	0.00	0.09	0.00
39.20	1.55	0.00	0.00	0.05	0.00	39.24	2.00	0.00	0.00	0.04	0.00
39.32	2.00	0.00	0.00	0.08	0.00	39.38	2.00	0.00	0.00	0.07	0.00
39.44	2.00	0.00	0.00	0.05	0.00	39.52	2.00	0.00	0.00	0.08	0.00
39.57	2.00	0.00	0.00	0.05	0.00	39.63	2.00	0.00	0.00	0.07	0.00
39.71	2.00	0.00	0.00	0.08	0.00	39.78	1.73	0.00	0.00	0.07	0.00
39.84	1.44	0.00	0.00	0.06	0.00	39.91	1.18	0.00	0.00	0.06	0.00
40.01	1.63	0.00	0.00	0.11	0.00	40.04	2.00	0.00	0.00	0.03	0.00
40.09	2.00	0.00	0.00	0.05	0.00	40.19	2.00	0.00	0.00	0.09	0.00
40.23	2.00	0.00	0.00	0.04	0.00	40.32	2.00	0.00	0.00	0.09	0.00
40.37	2.00	0.00	0.00	0.05	0.00	40.46	2.00	0.00	0.00	0.09	0.00
40.51	2.00	0.00	0.00	0.05	0.00	40.56	2.00	0.00	0.00	0.05	0.00
40.63	2.00	0.00	0.00	0.07	0.00	40.69	2.00	0.00	0.00	0.06	0.00
40.79	2.00	0.00	0.00	0.10	0.00	40.84	2.00	0.00	0.00	0.05	0.00
40.88	2.00	0.00	0.00	0.04	0.00	40.97	2.00	0.00	0.00	0.09	0.00
41.02	2.00	0.00	0.00	0.05	0.00	41.09	2.00	0.00	0.00	0.08	0.00
41.15	2.00	0.00	0.00	0.05	0.00	41.24	2.00	0.00	0.00	0.10	0.00
41.29	2.00	0.00	0.00	0.05	0.00	41.35	2.00	0.00	0.00	0.06	0.00
41.41	2.00	0.00	0.00	0.07	0.00	41.48	2.00	0.00	0.00	0.06	0.00
41.58	2.00	0.00	0.00	0.10	0.00	41.62	2.00	0.00	0.00	0.04	0.00
41.67	2.00	0.00	0.00	0.05	0.00	41.76	2.00	0.00	0.00	0.09	0.00
41.80	2.00	0.00	0.00	0.05	0.00	41.89	2.00	0.00	0.00	0.09	0.00
41.94	2.00	0.00	0.00	0.04	0.00	42.00	2.00	0.00	0.00	0.06	0.00
42.09	2.00	0.00	0.00	0.09	0.00	42.13	2.00	0.00	0.00	0.04	0.00
42.19	2.00	0.00	0.00	0.07	0.00	42.28	1.23	0.00	0.00	0.09	0.00
42.34	2.00	0.00	0.00	0.05	0.00	42.42	2.00	0.00	0.00	0.08	0.00
42.46	2.00	0.00	0.00	0.04	0.00	42.55	2.00	0.00	0.00	0.09	0.00
42.60	2.00	0.00	0.00	0.05	0.00						

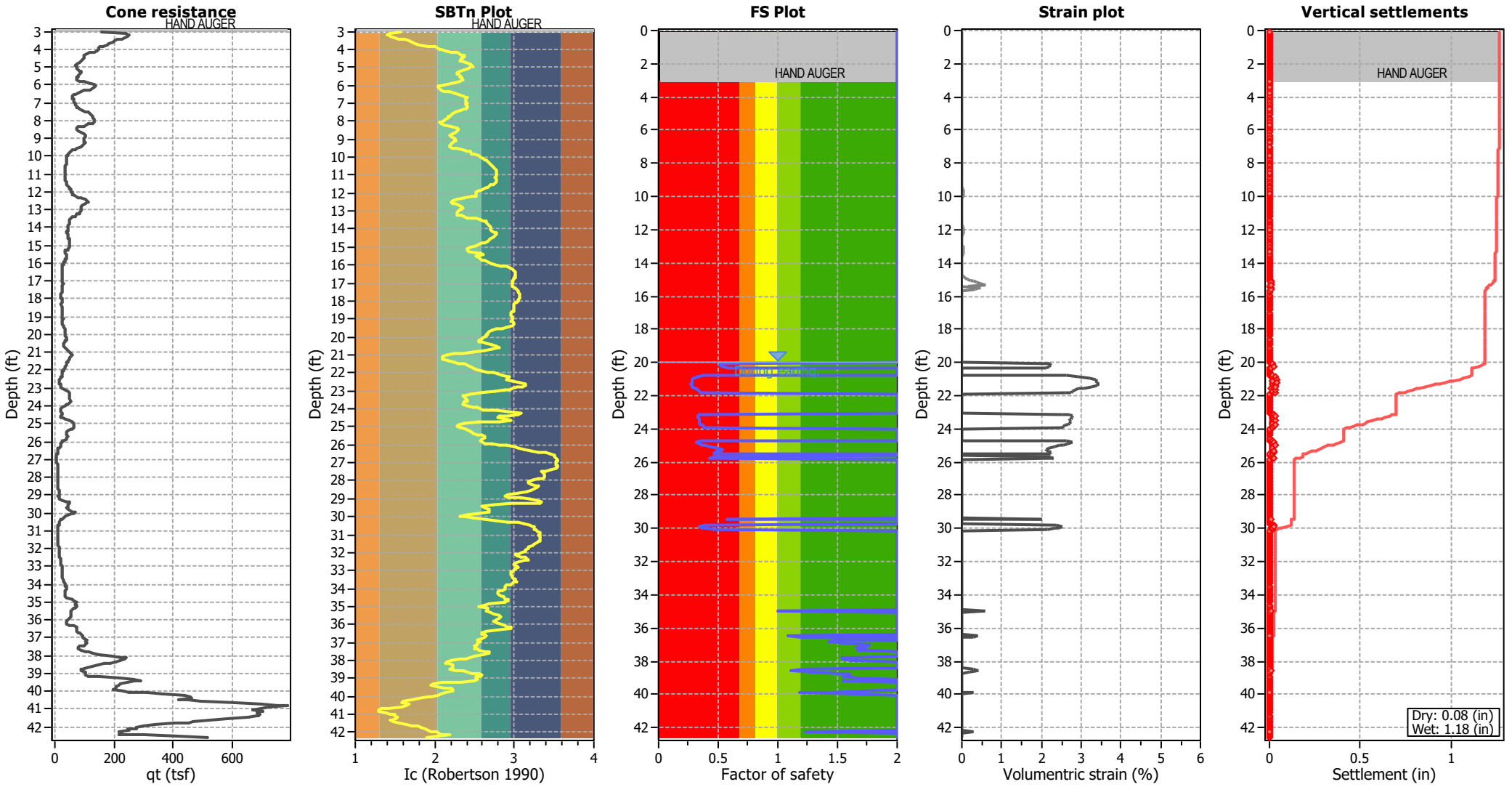
Overall liquefaction potential: 4.40

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.09	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.14	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.22	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.27	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.37	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.41	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.46	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.55	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.60	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.69	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.73	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.83	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.87	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.92	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.01	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.05	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.15	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.20	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.29	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.33	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.38	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.46	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.52	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.60	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.66	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.74	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.79	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.84	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.92	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.98	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.04	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.11	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.20	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.25	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.30	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.39	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.44	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.53	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.57	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.66	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.71	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.76	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.85	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.90	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.98	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.04	1.56	253.70	1.00	253.70	45	1030	0.36	0.019	0.01	5.05	0.00	0.000
3.12	1.43	386.93	1.00	386.93	66	1327	0.36	0.013	0.00	5.05	0.00	0.000
3.17	1.40	398.10	1.00	398.10	67	1320	0.36	0.013	0.00	5.05	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.22	1.42	400.04	1.00	400.04	68	1354	0.36	0.013	0.00	5.05	0.00	0.000
3.31	1.45	398.09	1.00	398.09	68	1393	0.36	0.013	0.00	5.05	0.00	0.000
3.35	1.49	382.40	1.00	382.40	67	1419	0.36	0.012	0.00	5.05	0.00	0.000
3.44	1.54	362.73	1.00	362.73	64	1434	0.36	0.013	0.00	5.05	0.00	0.000
3.48	1.62	341.42	1.00	341.42	62	1484	0.36	0.012	0.00	5.05	0.00	0.000
3.54	1.68	324.95	1.00	324.95	60	1519	0.36	0.012	0.00	5.05	0.00	0.000
3.62	1.71	311.96	1.01	313.94	59	1522	0.36	0.012	0.00	5.05	0.00	0.000
3.68	1.76	295.69	1.09	323.53	62	1531	0.36	0.013	0.00	5.05	0.00	0.000
3.77	1.81	282.95	1.16	329.42	64	1569	0.36	0.012	0.00	5.05	0.00	0.000
3.82	1.92	257.14	1.25	321.12	65	1634	0.36	0.012	0.00	5.05	0.00	0.000
3.88	2.00	243.87	1.31	318.31	66	1714	0.36	0.011	0.00	5.05	0.00	0.000
3.97	2.06	235.04	1.37	321.45	69	1791	0.36	0.011	0.00	5.05	0.00	0.000
4.01	2.09	237.50	1.40	332.72	72	1871	0.36	0.010	0.00	5.05	0.00	0.000
4.07	2.14	227.23	1.49	337.48	74	1913	0.36	0.010	0.00	5.05	0.00	0.000
4.15	2.21	211.02	1.64	345.42	78	1939	0.36	0.010	0.00	5.05	0.00	0.000
4.20	2.29	189.96	1.87	356.02	83	1925	0.36	0.011	0.00	5.05	0.00	0.000
4.30	2.34	173.20	2.08	360.82	86	1877	0.36	0.011	0.00	5.05	0.00	0.000
4.34	2.37	160.54	2.21	355.43	86	1804	0.36	0.012	0.00	5.05	0.00	0.000
4.43	2.37	155.95	2.21	344.02	83	1749	0.36	0.013	0.00	5.05	0.00	0.000
4.47	2.35	154.88	2.13	329.64	79	1700	0.36	0.014	0.00	5.05	0.00	0.000
4.53	2.33	154.82	2.04	316.43	75	1658	0.36	0.015	0.00	5.05	0.00	0.000
4.62	2.32	152.68	2.00	305.98	73	1615	0.36	0.016	0.00	5.05	0.00	0.000
4.66	2.34	143.68	2.10	301.30	72	1563	0.36	0.017	0.00	5.05	0.00	0.000
4.76	2.39	131.88	2.31	305.27	75	1521	0.36	0.018	0.00	5.05	0.00	0.000
4.80	2.45	118.60	2.66	316.01	80	1481	0.36	0.019	0.00	5.05	0.00	0.000
4.88	2.47	115.10	2.77	319.35	81	1470	0.36	0.020	0.00	5.05	0.00	0.000
4.94	2.48	112.19	2.85	319.76	82	1454	0.36	0.020	0.00	5.05	0.00	0.000
4.99	2.45	116.18	2.65	308.35	78	1448	0.36	0.021	0.00	5.05	0.00	0.000
5.08	2.42	119.02	2.50	298.05	74	1436	0.36	0.022	0.00	5.05	0.00	0.000
5.12	2.36	129.10	2.20	283.46	69	1444	0.36	0.022	0.00	5.05	0.00	0.000
5.22	2.32	137.68	1.99	274.15	65	1451	0.36	0.022	0.01	5.05	0.00	0.000
5.26	2.29	142.46	1.87	266.83	62	1443	0.36	0.023	0.01	5.05	0.00	0.000
5.36	2.28	141.20	1.86	262.17	61	1422	0.36	0.024	0.01	5.05	0.00	0.000
5.40	2.30	135.45	1.91	258.85	61	1390	0.36	0.025	0.01	5.05	0.00	0.000
5.45	2.31	128.60	1.98	254.11	60	1348	0.36	0.027	0.01	5.05	0.00	0.000
5.54	2.33	122.15	2.02	247.16	59	1300	0.36	0.030	0.01	5.05	0.00	0.000
5.58	2.33	116.75	2.06	240.14	57	1255	0.36	0.032	0.01	5.05	0.01	0.000
5.67	2.34	114.50	2.11	241.20	58	1249	0.36	0.033	0.01	5.05	0.01	0.000
5.71	2.34	119.14	2.10	249.63	60	1295	0.36	0.031	0.01	5.05	0.01	0.000
5.78	2.32	130.12	1.99	259.36	61	1372	0.36	0.028	0.01	5.05	0.00	0.000
5.84	2.24	153.57	1.74	266.75	61	1476	0.36	0.025	0.01	5.05	0.00	0.000
5.91	2.16	182.63	1.52	276.91	61	1570	0.36	0.023	0.01	5.05	0.00	0.000
6.00	2.08	210.38	1.39	291.96	63	1636	0.36	0.022	0.01	5.05	0.00	0.000
6.05	2.04	221.41	1.34	297.37	63	1640	0.36	0.022	0.01	5.05	0.00	0.000
6.14	2.04	210.10	1.34	282.30	60	1557	0.36	0.024	0.01	5.05	0.00	0.000
6.27	2.07	187.31	1.38	258.21	55	1443	0.36	0.029	0.01	5.05	0.01	0.000
6.32	2.12	161.09	1.46	234.88	51	1330	0.36	0.034	0.01	5.05	0.01	0.000
6.37	2.18	141.42	1.57	222.36	50	1256	0.36	0.039	0.01	5.05	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.45	2.24	124.99	1.72	215.12	49	1193	0.36	0.045	0.02	5.05	0.01	0.000
6.51	2.30	109.71	1.93	211.92	50	1134	0.36	0.052	0.02	5.05	0.01	0.000
6.57	2.36	99.05	2.17	215.19	52	1101	0.36	0.057	0.02	5.05	0.01	0.000
6.64	2.40	93.23	2.36	219.63	54	1086	0.36	0.061	0.02	5.05	0.01	0.000
6.70	2.41	92.87	2.40	223.35	55	1095	0.36	0.060	0.02	5.05	0.01	0.000
6.78	2.40	94.78	2.37	224.29	55	1107	0.36	0.060	0.02	5.05	0.01	0.000
6.83	2.40	98.65	2.36	233.21	57	1152	0.36	0.054	0.02	5.05	0.01	0.000
6.97	2.39	102.69	2.35	240.94	59	1194	0.36	0.051	0.01	5.05	0.01	0.000
6.98	2.40	105.89	2.38	252.34	62	1242	0.36	0.047	0.01	5.05	0.01	0.000
7.06	2.40	109.58	2.35	257.78	63	1276	0.36	0.045	0.01	5.05	0.01	0.000
7.11	2.40	112.62	2.37	266.67	66	1316	0.36	0.042	0.01	5.05	0.01	0.000
7.18	2.40	115.41	2.39	275.65	68	1355	0.36	0.040	0.01	5.05	0.01	0.000
7.25	2.41	118.01	2.42	285.04	70	1395	0.36	0.038	0.01	5.05	0.01	0.000
7.29	2.40	123.65	2.36	292.10	72	1443	0.36	0.036	0.01	5.05	0.00	0.000
7.36	2.37	131.98	2.23	294.89	72	1491	0.36	0.034	0.01	5.05	0.00	0.000
7.43	2.32	147.25	2.00	294.47	70	1556	0.36	0.032	0.01	5.05	0.00	0.000
7.52	2.27	162.36	1.82	295.46	69	1613	0.36	0.030	0.01	5.05	0.00	0.000
7.56	2.23	177.68	1.69	299.74	68	1671	0.36	0.028	0.01	5.05	0.00	0.000
7.61	2.21	185.87	1.64	305.33	69	1722	0.36	0.027	0.01	5.05	0.00	0.000
7.70	2.19	192.78	1.60	308.30	69	1768	0.36	0.026	0.01	5.05	0.00	0.000
7.76	2.18	196.71	1.57	308.04	69	1787	0.36	0.026	0.01	5.05	0.00	0.000
7.84	2.17	197.53	1.54	303.24	67	1782	0.36	0.027	0.01	5.05	0.00	0.000
7.89	2.14	198.49	1.49	295.82	65	1755	0.36	0.028	0.01	5.05	0.00	0.000
7.96	2.11	199.10	1.44	285.95	62	1714	0.36	0.029	0.01	5.05	0.00	0.000
8.03	2.08	200.45	1.39	278.54	60	1677	0.36	0.031	0.01	5.05	0.01	0.000
8.08	2.06	198.98	1.37	271.85	58	1639	0.36	0.032	0.01	5.05	0.01	0.000
8.16	2.07	190.51	1.38	263.59	56	1604	0.36	0.034	0.01	5.05	0.01	0.000
8.21	2.12	169.41	1.46	246.56	54	1507	0.36	0.039	0.01	5.05	0.01	0.000
8.30	2.20	143.75	1.62	232.89	53	1402	0.36	0.047	0.01	5.05	0.01	0.000
8.34	2.28	121.09	1.85	224.60	52	1286	0.36	0.058	0.02	5.05	0.01	0.000
8.43	2.29	114.59	1.90	217.92	51	1243	0.36	0.064	0.02	5.05	0.01	0.000
8.47	2.31	109.58	1.95	213.97	51	1211	0.36	0.069	0.02	5.05	0.01	0.000
8.56	2.29	113.42	1.87	212.20	50	1234	0.36	0.067	0.02	5.05	0.01	0.000
8.61	2.27	119.08	1.81	215.18	50	1274	0.36	0.062	0.02	5.05	0.01	0.000
8.67	2.22	132.23	1.67	220.80	50	1355	0.36	0.054	0.02	5.05	0.01	0.000
8.75	2.19	143.65	1.59	228.69	51	1433	0.36	0.048	0.02	5.05	0.01	0.000
8.79	2.20	149.14	1.60	239.27	54	1501	0.36	0.044	0.01	5.05	0.01	0.000
8.89	2.21	149.68	1.64	246.20	56	1544	0.36	0.042	0.01	5.05	0.01	0.000
8.94	2.24	146.18	1.72	251.98	58	1561	0.36	0.041	0.01	5.05	0.01	0.000
9.02	2.25	143.05	1.76	252.21	58	1559	0.36	0.042	0.01	5.05	0.01	0.000
9.07	2.26	141.40	1.77	250.70	58	1553	0.36	0.043	0.01	5.05	0.01	0.000
9.13	2.25	141.36	1.74	246.03	57	1541	0.36	0.044	0.01	5.05	0.01	0.000
9.21	2.23	140.99	1.70	240.13	55	1526	0.36	0.045	0.01	5.05	0.01	0.000
9.25	2.21	140.72	1.63	229.98	52	1487	0.36	0.048	0.02	5.05	0.01	0.000
9.34	2.19	137.57	1.60	219.85	49	1439	0.36	0.053	0.02	5.05	0.01	0.000
9.39	2.19	129.71	1.60	207.28	47	1362	0.36	0.061	0.02	5.05	0.01	0.000
9.48	2.23	118.11	1.69	199.22	45	1296	0.36	0.070	0.03	5.05	0.02	0.000
9.53	2.29	104.37	1.87	195.43	46	1225	0.36	0.082	0.03	5.05	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.62	2.35	91.63	2.15	196.77	47	1167	0.36	0.097	0.03	5.05	0.02	0.000
9.67	2.41	81.57	2.41	196.74	49	1106	0.36	0.115	0.04	5.05	0.02	0.000
9.71	2.44	73.10	2.61	190.80	48	1034	0.36	0.146	0.05	5.05	0.03	0.000
9.80	2.47	67.17	2.76	185.57	47	983	0.36	0.178	0.06	5.05	0.04	0.001
9.85	2.50	61.98	3.01	186.69	48	949	0.36	0.206	0.07	5.05	0.04	0.000
9.93	2.55	58.94	3.31	195.31	51	951	0.36	0.209	0.07	5.05	0.04	0.001
9.99	2.58	56.70	3.59	203.75	55	955	0.36	0.207	0.06	5.05	0.04	0.001
10.04	2.61	55.23	3.84	212.13	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.13	2.63	54.25	4.03	218.43	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.18	2.65	53.46	4.24	226.52	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.27	2.67	52.50	4.43	232.47	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.32	2.69	51.64	4.61	238.05	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.40	2.70	50.69	4.75	240.97	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.45	2.71	50.08	4.85	243.06	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.50	2.73	49.04	5.01	245.66	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.59	2.75	47.72	5.20	248.13	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.64	2.76	46.31	5.42	250.81	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.70	2.77	45.52	5.53	251.77	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.78	2.78	45.09	5.58	251.76	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.87	2.78	44.89	5.60	251.28	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.92	2.78	44.93	5.59	251.26	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.96	2.77	45.46	5.51	250.67	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.05	2.77	45.85	5.45	249.89	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.10	2.76	46.27	5.41	250.08	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.19	2.77	46.08	5.43	250.34	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.24	2.77	45.94	5.46	250.94	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.37	2.77	45.65	5.48	250.37	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.39	2.77	46.02	5.43	250.04	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.42	2.75	46.89	5.30	248.37	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.49	2.73	48.26	5.08	245.31	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.56	2.70	50.70	4.75	240.82	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.65	2.67	53.43	4.41	235.62	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.70	2.64	56.44	4.09	230.69	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.79	2.61	59.25	3.82	226.27	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.84	2.58	62.15	3.58	222.35	60	1191	0.36	0.133	0.04	5.05	0.02	0.000
11.88	2.55	65.12	3.32	216.34	57	1206	0.36	0.129	0.04	5.05	0.02	0.000
11.97	2.52	66.92	3.15	210.63	55	1213	0.36	0.128	0.04	5.05	0.02	0.001
12.02	2.52	67.91	3.10	210.68	55	1226	0.36	0.125	0.04	5.05	0.02	0.000
12.12	2.52	68.25	3.14	214.41	56	1247	0.36	0.120	0.04	5.05	0.02	0.000
12.16	2.52	69.92	3.11	217.64	57	1275	0.36	0.113	0.03	5.05	0.02	0.000
12.21	2.46	77.09	2.74	210.90	53	1321	0.36	0.103	0.03	5.05	0.02	0.000
12.30	2.38	89.12	2.26	201.10	49	1387	0.36	0.091	0.03	5.05	0.02	0.000
12.35	2.29	104.38	1.88	196.39	46	1468	0.36	0.078	0.03	5.05	0.02	0.000
12.43	2.23	117.45	1.69	198.30	45	1545	0.36	0.070	0.03	5.05	0.02	0.000
12.48	2.21	125.24	1.65	206.23	47	1623	0.36	0.062	0.02	5.05	0.01	0.000
12.57	2.22	127.22	1.68	213.57	49	1681	0.36	0.058	0.02	5.05	0.01	0.000
12.61	2.26	123.68	1.78	220.37	51	1706	0.36	0.057	0.02	5.05	0.01	0.000
12.67	2.30	115.96	1.92	222.36	52	1680	0.36	0.059	0.02	5.05	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.76	2.33	107.94	2.06	222.04	53	1639	0.36	0.063	0.02	5.05	0.01	0.000
12.80	2.35	101.97	2.14	217.99	52	1587	0.36	0.069	0.02	5.05	0.01	0.000
12.89	2.34	100.58	2.09	210.01	50	1552	0.36	0.073	0.02	5.05	0.01	0.000
12.94	2.32	100.31	2.00	200.32	48	1513	0.36	0.079	0.03	5.05	0.02	0.000
12.99	2.30	99.79	1.91	190.26	45	1467	0.36	0.086	0.03	5.05	0.02	0.000
13.08	2.28	97.26	1.87	181.65	42	1419	0.36	0.095	0.04	5.05	0.02	0.000
13.13	2.28	94.11	1.84	173.11	40	1363	0.36	0.107	0.05	5.05	0.03	0.000
13.22	2.28	91.14	1.84	168.00	39	1328	0.36	0.117	0.05	5.05	0.03	0.001
13.27	2.33	82.77	2.04	168.78	40	1286	0.36	0.130	0.06	5.05	0.03	0.000
13.36	2.40	73.85	2.39	176.43	43	1260	0.36	0.141	0.06	5.05	0.03	0.001
13.39	2.51	63.15	3.05	192.28	50	1227	0.36	0.154	0.05	5.05	0.03	0.000
13.49	2.57	58.23	3.48	202.79	54	1220	0.36	0.159	0.05	5.05	0.03	0.001
13.54	2.62	54.57	3.90	212.91	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.59	2.64	53.06	4.12	218.45	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.68	2.65	52.09	4.25	221.34	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.72	2.67	50.94	4.43	225.88	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.82	2.68	50.36	4.54	228.63	0	0	0.35	0.000	0.00	0.00	0.00	0.000
13.87	2.69	49.91	4.64	231.41	0	0	0.35	0.000	0.00	0.00	0.00	0.000
13.95	2.69	49.71	4.64	230.48	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.00	2.70	49.27	4.66	229.65	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.05	2.71	48.16	4.78	230.24	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.14	2.73	46.49	4.99	232.18	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.19	2.75	44.83	5.24	234.93	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.24	2.77	43.64	5.44	237.41	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.31	2.77	43.20	5.51	238.16	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.37	2.76	43.88	5.37	235.46	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.46	2.74	44.98	5.13	230.56	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.51	2.71	46.53	4.82	224.07	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.59	2.69	47.48	4.59	218.02	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.65	2.66	48.84	4.28	209.18	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.73	2.63	49.88	4.00	199.41	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.79	2.59	50.99	3.70	188.58	51	1185	0.35	0.212	0.07	5.05	0.04	0.001
14.84	2.56	51.29	3.44	176.54	47	1150	0.35	0.239	0.09	5.05	0.05	0.001
14.91	2.51	51.24	3.05	156.14	40	1080	0.35	0.308	0.13	5.05	0.08	0.001
14.97	2.45	50.41	2.68	135.05	34	995	0.35	0.442	0.23	5.05	0.14	0.002
15.06	2.41	49.53	2.44	120.66	30	932	0.35	0.608	0.38	5.05	0.23	0.005
15.11	2.41	47.82	2.40	114.93	28	895	0.35	0.748	0.49	5.05	0.30	0.003
15.20	2.42	45.71	2.47	112.70	28	871	0.35	0.870	0.58	5.05	0.36	0.008
15.25	2.42	43.64	2.48	108.10	27	836	0.35	1.094	0.77	5.05	0.47	0.006
15.30	2.54	35.11	3.29	115.52	30	786	0.35	1.557	0.94	5.05	0.58	0.007
15.36	2.57	33.35	3.53	117.64	31	777	0.35	1.680	0.98	5.05	0.60	0.008
15.44	2.61	31.46	3.88	122.00	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.49	2.53	37.02	3.17	117.24	31	819	0.35	1.271	0.76	5.05	0.47	0.006
15.55	2.55	36.60	3.33	121.80	32	834	0.35	1.163	0.66	5.05	0.40	0.006
15.63	2.57	36.32	3.53	128.08	34	857	0.35	1.017	0.53	5.05	0.33	0.006
15.73	2.60	35.86	3.75	134.61	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.78	2.63	35.35	3.98	140.84	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.82	2.66	34.19	4.30	147.10	0	0	0.35	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.91	2.70	32.68	4.69	153.15	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.96	2.76	30.11	5.40	162.75	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.05	2.83	27.68	6.18	171.18	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.10	2.89	25.31	7.11	179.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.16	2.94	23.90	7.76	185.47	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.24	2.97	22.93	8.28	189.87	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.28	2.99	22.34	8.65	193.22	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.36	3.00	22.07	8.84	195.07	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.42	3.01	22.06	8.90	196.44	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.51	3.01	22.12	8.90	196.78	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.55	3.01	22.09	8.94	197.43	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.61	3.01	22.13	8.95	198.09	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.68	3.01	22.33	8.89	198.51	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.74	3.00	22.83	8.71	198.82	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.83	2.99	23.20	8.57	198.85	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.87	2.98	23.59	8.46	199.47	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.97	2.98	23.67	8.44	199.69	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.06	2.97	23.97	8.31	199.21	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.16	2.97	23.93	8.29	198.44	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.20	2.98	23.38	8.46	197.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.29	3.00	22.29	8.86	197.35	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.36	3.03	21.27	9.24	196.56	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.39	3.04	20.62	9.45	194.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.47	3.05	20.02	9.63	192.76	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.52	3.05	19.45	9.75	189.70	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.62	3.06	18.85	9.89	186.35	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.71	3.07	18.36	9.99	183.49	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.74	3.07	18.11	10.03	181.72	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.80	3.07	18.07	9.98	180.43	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.86	3.06	18.13	9.87	179.04	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.94	3.05	18.29	9.72	177.79	0	0	0.36	0.000	0.00	0.00	0.00	0.000
17.98	3.04	18.52	9.55	176.90	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.05	3.03	18.58	9.36	173.92	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.13	3.01	18.46	9.04	166.83	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.18	3.00	18.27	8.75	159.80	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.26	2.99	18.14	8.57	155.45	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.31	3.00	17.88	8.74	156.15	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.45	3.00	18.01	8.71	156.84	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.55	2.99	18.33	8.60	157.56	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.59	2.97	19.22	8.26	158.68	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.64	2.96	19.82	8.13	161.18	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.74	2.95	20.35	8.04	163.61	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.78	2.96	20.62	8.11	167.20	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.87	2.97	20.56	8.26	169.96	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.92	2.98	20.54	8.42	172.90	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.96	2.98	20.91	8.37	175.06	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.08	2.97	21.25	8.26	175.59	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.10	2.96	21.45	8.17	175.24	0	0	0.36	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
19.16	2.97	20.77	8.34	173.26	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.24	2.99	19.74	8.67	171.08	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.29	3.00	19.05	8.76	166.92	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.37	2.98	19.13	8.44	161.42	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.43	2.91	20.86	7.33	152.98	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.52	2.84	22.54	6.41	144.42	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.57	2.77	24.52	5.52	135.39	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.66	2.72	25.69	4.95	127.05	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.71	2.68	26.26	4.53	118.83	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.79	2.66	26.01	4.35	113.15	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.84	2.66	25.76	4.30	110.89	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.89	2.64	26.43	4.11	108.77	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.98	2.65	26.05	4.17	108.54	0	0	0.36	0.000	0.00	0.00	0.00	0.000

Total estimated settlement: 0.08

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

:: Post-earthquake settlement due to soil liquefaction ::

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
20.02	106.68	2.00	0.00	1.00	0.00	20.09	106.13	0.53	2.23	1.00	0.02
20.16	105.20	0.52	2.24	1.00	0.02	20.25	107.91	0.54	2.20	1.00	0.03
20.30	112.67	0.58	2.12	1.00	0.01	20.34	119.55	2.00	0.00	1.00	0.00
20.43	126.05	2.00	0.00	1.00	0.00	20.48	130.35	2.00	0.00	1.00	0.00
20.57	129.58	2.00	0.00	1.00	0.00	20.62	125.42	2.00	0.00	1.00	0.00
20.67	115.67	2.00	0.00	1.00	0.00	20.75	103.53	2.00	0.00	1.00	0.00
20.81	87.12	0.38	2.62	1.00	0.02	20.90	75.86	0.33	2.93	1.00	0.03
20.94	67.20	0.29	3.24	1.00	0.02	21.03	64.30	0.28	3.36	1.00	0.04
21.08	63.65	0.28	3.38	1.00	0.02	21.13	63.93	0.28	3.37	1.00	0.02
21.22	63.64	0.28	3.38	1.00	0.04	21.27	62.82	0.28	3.42	1.00	0.02
21.34	62.29	0.27	3.44	1.00	0.03	21.41	63.44	0.28	3.39	1.00	0.03
21.50	66.62	0.29	3.26	1.00	0.04	21.53	71.63	0.30	3.07	1.00	0.01
21.59	75.92	0.32	2.93	1.00	0.02	21.68	78.81	0.33	2.84	1.00	0.03
21.73	80.74	0.34	2.78	1.00	0.02	21.82	82.31	0.35	2.74	1.00	0.03
21.86	87.27	0.37	2.61	1.00	0.01	21.94	93.67	2.00	0.00	1.00	0.00
22.01	100.56	2.00	0.00	1.00	0.00	22.06	108.61	2.00	0.00	1.00	0.00
22.15	116.35	2.00	0.00	1.00	0.00	22.20	122.93	2.00	0.00	1.00	0.00
22.25	122.38	2.00	0.00	1.00	0.00	22.34	116.85	2.00	0.00	1.00	0.00
22.38	110.03	2.00	0.00	1.00	0.00	22.47	106.57	2.00	0.00	1.00	0.00
22.52	106.59	2.00	0.00	1.00	0.00	22.59	107.85	2.00	0.00	1.00	0.00
22.66	108.55	2.00	0.00	1.00	0.00	22.75	108.50	2.00	0.00	1.00	0.00
22.78	106.39	2.00	0.00	1.00	0.00	22.84	104.33	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
22.94	104.97	2.00	0.00	1.00	0.00	22.97	105.28	2.00	0.00	1.00	0.00
23.05	100.35	2.00	0.00	1.00	0.00	23.12	91.23	0.39	2.52	1.00	0.02
23.17	83.40	0.34	2.71	1.00	0.01	23.26	80.45	0.33	2.79	1.00	0.03
23.30	80.90	0.33	2.78	1.00	0.02	23.36	82.46	0.34	2.74	1.00	0.02
23.44	83.45	0.34	2.71	1.00	0.03	23.53	82.98	0.34	2.72	1.00	0.03
23.57	82.63	0.34	2.73	1.00	0.01	23.63	83.43	0.34	2.71	1.00	0.02
23.72	85.42	0.35	2.66	1.00	0.03	23.76	88.56	0.37	2.58	1.00	0.01
23.85	89.95	0.37	2.55	1.00	0.03	23.91	90.44	0.38	2.54	1.00	0.02
23.95	90.22	0.37	2.54	1.00	0.01	24.04	91.52	2.00	0.00	1.00	0.00
24.09	98.61	2.00	0.00	1.00	0.00	24.18	105.19	2.00	0.00	1.00	0.00
24.23	111.67	2.00	0.00	1.00	0.00	24.29	111.97	2.00	0.00	1.00	0.00
24.36	107.50	2.00	0.00	1.00	0.00	24.41	99.25	2.00	0.00	1.00	0.00
24.50	95.85	2.00	0.00	1.00	0.00	24.56	99.17	2.00	0.00	1.00	0.00
24.64	100.74	2.00	0.00	1.00	0.00	24.69	97.40	2.00	0.00	1.00	0.00
24.75	86.85	0.35	2.62	1.00	0.02	24.82	80.72	0.32	2.79	1.00	0.03
24.87	84.46	0.34	2.68	1.00	0.02	24.96	89.39	0.36	2.56	1.00	0.03
25.01	94.12	0.39	2.46	1.00	0.01	25.07	99.82	0.43	2.34	1.00	0.02
25.14	108.43	0.49	2.19	1.00	0.02	25.20	113.59	0.53	2.10	1.00	0.02
25.30	113.36	0.53	2.11	1.00	0.02	25.34	108.20	0.49	2.19	1.00	0.01
25.42	106.52	0.47	2.22	1.00	0.02	25.48	104.93	0.46	2.25	1.00	0.02
25.55	104.70	2.00	0.00	1.00	0.00	25.62	105.73	2.00	0.00	1.00	0.00
25.67	105.39	0.46	2.24	1.00	0.01	25.75	103.19	0.44	2.28	1.00	0.02
25.80	101.18	0.43	2.31	1.00	0.01	25.90	101.94	2.00	0.00	1.00	0.00
25.94	103.85	2.00	0.00	1.00	0.00	25.99	105.19	2.00	0.00	1.00	0.00
26.06	109.60	2.00	0.00	1.00	0.00	26.13	113.72	2.00	0.00	1.00	0.00
26.22	116.64	2.00	0.00	1.00	0.00	26.27	114.96	2.00	0.00	1.00	0.00
26.34	111.03	2.00	0.00	1.00	0.00	26.40	107.26	2.00	0.00	1.00	0.00
26.45	102.78	2.00	0.00	1.00	0.00	26.54	97.23	2.00	0.00	1.00	0.00
26.59	90.52	2.00	0.00	1.00	0.00	26.68	86.50	2.00	0.00	1.00	0.00
26.73	84.01	2.00	0.00	1.00	0.00	26.82	83.36	2.00	0.00	1.00	0.00
26.88	82.84	2.00	0.00	1.00	0.00	26.91	82.38	2.00	0.00	1.00	0.00
27.00	82.11	2.00	0.00	1.00	0.00	27.05	82.41	2.00	0.00	1.00	0.00
27.14	83.40	2.00	0.00	1.00	0.00	27.19	85.03	2.00	0.00	1.00	0.00
27.23	87.19	2.00	0.00	1.00	0.00	27.32	88.54	2.00	0.00	1.00	0.00
27.38	88.04	2.00	0.00	1.00	0.00	27.46	85.84	2.00	0.00	1.00	0.00
27.51	84.50	2.00	0.00	1.00	0.00	27.57	84.74	2.00	0.00	1.00	0.00
27.63	85.79	2.00	0.00	1.00	0.00	27.69	85.77	2.00	0.00	1.00	0.00
27.78	85.06	2.00	0.00	1.00	0.00	27.85	83.76	2.00	0.00	1.00	0.00
27.90	81.21	2.00	0.00	1.00	0.00	27.99	78.37	2.00	0.00	1.00	0.00
28.04	75.03	2.00	0.00	1.00	0.00	28.13	72.92	2.00	0.00	1.00	0.00
28.17	70.99	2.00	0.00	1.00	0.00	28.26	69.53	2.00	0.00	1.00	0.00
28.31	68.07	2.00	0.00	1.00	0.00	28.36	66.40	2.00	0.00	1.00	0.00
28.45	65.50	2.00	0.00	1.00	0.00	28.49	66.57	2.00	0.00	1.00	0.00
28.56	68.97	2.00	0.00	1.00	0.00	28.63	69.72	2.00	0.00	1.00	0.00
28.73	67.00	2.00	0.00	1.00	0.00	28.78	63.45	2.00	0.00	1.00	0.00
28.82	61.17	2.00	0.00	1.00	0.00	28.91	62.97	2.00	0.00	1.00	0.00
28.96	71.01	2.00	0.00	1.00	0.00	29.05	84.50	2.00	0.00	1.00	0.00
29.09	99.02	2.00	0.00	1.00	0.00	29.15	114.42	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
29.23	126.21	2.00	0.00	1.00	0.00	29.28	128.22	2.00	0.00	1.00	0.00
29.37	125.29	2.00	0.00	1.00	0.00	29.42	121.32	0.57	1.99	1.00	0.01
29.46	126.98	2.00	0.00	1.00	0.00	29.56	131.46	2.00	0.00	1.00	0.00
29.60	132.94	2.00	0.00	1.00	0.00	29.67	126.87	2.00	0.00	1.00	0.00
29.74	114.67	2.00	0.00	1.00	0.00	29.83	97.97	0.38	2.38	1.00	0.03
29.92	90.71	0.34	2.53	1.00	0.03	29.96	94.47	0.36	2.45	1.00	0.01
30.02	100.38	0.40	2.33	1.00	0.01	30.07	109.12	0.46	2.18	1.00	0.01
30.12	119.86	2.00	0.00	1.00	0.00	30.21	127.59	2.00	0.00	1.00	0.00
30.31	131.22	2.00	0.00	1.00	0.00	30.34	127.32	2.00	0.00	1.00	0.00
30.40	122.13	2.00	0.00	1.00	0.00	30.49	114.67	2.00	0.00	1.00	0.00
30.54	106.67	2.00	0.00	1.00	0.00	30.58	99.09	2.00	0.00	1.00	0.00
30.68	92.55	2.00	0.00	1.00	0.00	30.73	86.44	2.00	0.00	1.00	0.00
30.80	82.19	2.00	0.00	1.00	0.00	30.86	78.18	2.00	0.00	1.00	0.00
30.91	74.08	2.00	0.00	1.00	0.00	31.02	71.47	2.00	0.00	1.00	0.00
31.05	69.24	2.00	0.00	1.00	0.00	31.14	68.35	2.00	0.00	1.00	0.00
31.18	67.46	2.00	0.00	1.00	0.00	31.24	67.05	2.00	0.00	1.00	0.00
31.32	66.66	2.00	0.00	1.00	0.00	31.36	66.40	2.00	0.00	1.00	0.00
31.44	66.29	2.00	0.00	1.00	0.00	31.51	66.51	2.00	0.00	1.00	0.00
31.59	66.58	2.00	0.00	1.00	0.00	31.65	67.29	2.00	0.00	1.00	0.00
31.73	70.30	2.00	0.00	1.00	0.00	31.83	73.26	2.00	0.00	1.00	0.00
31.92	75.16	2.00	0.00	1.00	0.00	31.97	74.65	2.00	0.00	1.00	0.00
32.06	73.89	2.00	0.00	1.00	0.00	32.10	73.62	2.00	0.00	1.00	0.00
32.15	74.75	2.00	0.00	1.00	0.00	32.24	76.97	2.00	0.00	1.00	0.00
32.29	82.03	2.00	0.00	1.00	0.00	32.38	86.30	2.00	0.00	1.00	0.00
32.43	88.92	2.00	0.00	1.00	0.00	32.52	88.63	2.00	0.00	1.00	0.00
32.57	87.78	2.00	0.00	1.00	0.00	32.62	89.35	2.00	0.00	1.00	0.00
32.70	92.64	2.00	0.00	1.00	0.00	32.75	97.37	2.00	0.00	1.00	0.00
32.81	101.51	2.00	0.00	1.00	0.00	32.89	104.27	2.00	0.00	1.00	0.00
32.98	105.95	2.00	0.00	1.00	0.00	33.03	107.25	2.00	0.00	1.00	0.00
33.07	109.57	2.00	0.00	1.00	0.00	33.17	111.65	2.00	0.00	1.00	0.00
33.21	113.08	2.00	0.00	1.00	0.00	33.31	113.67	2.00	0.00	1.00	0.00
33.35	115.01	2.00	0.00	1.00	0.00	33.44	116.76	2.00	0.00	1.00	0.00
33.49	119.00	2.00	0.00	1.00	0.00	33.53	122.00	2.00	0.00	1.00	0.00
33.63	124.83	2.00	0.00	1.00	0.00	33.67	126.44	2.00	0.00	1.00	0.00
33.77	125.70	2.00	0.00	1.00	0.00	33.81	127.48	2.00	0.00	1.00	0.00
33.88	130.03	2.00	0.00	1.00	0.00	33.95	134.03	2.00	0.00	1.00	0.00
33.99	137.71	2.00	0.00	1.00	0.00	34.09	137.97	2.00	0.00	1.00	0.00
34.14	135.90	2.00	0.00	1.00	0.00	34.22	133.71	2.00	0.00	1.00	0.00
34.27	133.27	2.00	0.00	1.00	0.00	34.32	134.39	2.00	0.00	1.00	0.00
34.40	135.26	2.00	0.00	1.00	0.00	34.46	135.17	2.00	0.00	1.00	0.00
34.58	135.74	2.00	0.00	1.00	0.00	34.59	142.79	2.00	0.00	1.00	0.00
34.69	152.23	2.00	0.00	1.00	0.00	34.73	160.62	2.00	0.00	1.00	0.00
34.78	170.16	2.00	0.00	1.00	0.00	34.85	159.97	2.00	0.00	1.00	0.00
34.92	161.10	2.00	0.00	1.00	0.00	35.01	159.38	1.00	0.57	1.00	0.01
35.05	180.81	2.00	0.00	1.00	0.00	35.14	188.09	2.00	0.00	1.00	0.00
35.19	191.40	2.00	0.00	1.00	0.00	35.24	188.69	2.00	0.00	1.00	0.00
35.33	191.69	2.00	0.00	1.00	0.00	35.38	193.99	2.00	0.00	1.00	0.00
35.47	198.41	2.00	0.00	1.00	0.00	35.50	196.49	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
35.59	194.50	2.00	0.00	1.00	0.00	35.64	188.35	2.00	0.00	1.00	0.00
35.70	181.89	2.00	0.00	1.00	0.00	35.78	174.88	2.00	0.00	1.00	0.00
35.83	167.00	2.00	0.00	1.00	0.00	35.92	164.96	2.00	0.00	1.00	0.00
35.97	163.59	2.00	0.00	1.00	0.00	36.06	164.11	2.00	0.00	1.00	0.00
36.10	164.88	2.00	0.00	1.00	0.00	36.16	166.02	2.00	0.00	1.00	0.00
36.24	170.71	2.00	0.00	1.00	0.00	36.30	171.91	2.00	0.00	1.00	0.00
36.35	165.51	2.00	0.00	1.00	0.00	36.43	165.52	1.09	0.40	1.00	0.00
36.52	171.24	1.19	0.28	1.00	0.00	36.57	177.74	2.00	0.00	1.00	0.00
36.62	185.11	2.00	0.00	1.00	0.00	36.70	188.35	2.00	0.00	1.00	0.00
36.75	187.55	1.50	0.00	1.00	0.00	36.84	183.84	1.43	0.00	1.00	0.00
36.89	189.07	1.54	0.00	1.00	0.00	36.96	198.25	1.74	0.00	1.00	0.00
37.03	199.07	1.76	0.00	1.00	0.00	37.07	198.66	1.75	0.00	1.00	0.00
37.17	194.86	1.66	0.00	1.00	0.00	37.22	197.79	1.73	0.00	1.00	0.00
37.31	195.25	1.67	0.00	1.00	0.00	37.35	199.36	1.77	0.00	1.00	0.00
37.44	201.06	2.00	0.00	1.00	0.00	37.49	205.99	2.00	0.00	1.00	0.00
37.54	212.44	2.00	0.00	1.00	0.00	37.63	215.16	2.00	0.00	1.00	0.00
37.68	206.99	2.00	0.00	1.00	0.00	37.76	194.16	1.64	0.00	1.00	0.00
37.81	189.42	1.54	0.00	1.00	0.00	37.91	190.08	1.55	0.00	1.00	0.00
37.95	192.84	1.61	0.00	1.00	0.00	38.00	202.85	2.00	0.00	1.00	0.00
38.09	218.84	2.00	0.00	1.00	0.00	38.14	233.15	2.00	0.00	1.00	0.00
38.20	237.13	2.00	0.00	1.00	0.00	38.26	242.11	2.00	0.00	1.00	0.00
38.32	224.05	2.00	0.00	1.00	0.00	38.41	202.46	2.00	0.00	1.00	0.00
38.46	172.66	1.20	0.28	1.00	0.00	38.55	167.50	1.11	0.39	1.00	0.00
38.59	167.87	1.12	0.39	1.00	0.00	38.69	177.18	1.29	0.19	1.00	0.00
38.74	188.07	1.50	0.00	1.00	0.00	38.78	192.62	1.60	0.00	1.00	0.00
38.88	193.05	1.61	0.00	1.00	0.00	38.91	190.24	1.55	0.00	1.00	0.00
39.01	195.07	1.66	0.00	1.00	0.00	39.06	202.68	2.00	0.00	1.00	0.00
39.15	200.97	2.00	0.00	1.00	0.00	39.20	190.17	1.55	0.00	1.00	0.00
39.24	200.13	2.00	0.00	1.00	0.00	39.32	229.30	2.00	0.00	1.00	0.00
39.38	245.85	2.00	0.00	1.00	0.00	39.44	238.30	2.00	0.00	1.00	0.00
39.52	229.55	2.00	0.00	1.00	0.00	39.57	231.47	2.00	0.00	1.00	0.00
39.63	226.01	2.00	0.00	1.00	0.00	39.71	221.00	2.00	0.00	1.00	0.00
39.78	198.33	1.73	0.00	1.00	0.00	39.84	184.99	1.44	0.00	1.00	0.00
39.91	171.45	1.18	0.28	1.00	0.00	40.01	193.90	1.63	0.00	1.00	0.00
40.04	207.16	2.00	0.00	1.00	0.00	40.09	244.09	2.00	0.00	1.00	0.00
40.19	257.53	2.00	0.00	1.00	0.00	40.23	306.68	2.00	0.00	1.00	0.00
40.32	320.23	2.00	0.00	1.00	0.00	40.37	324.79	2.00	0.00	1.00	0.00
40.46	291.30	2.00	0.00	1.00	0.00	40.51	312.59	2.00	0.00	1.00	0.00
40.56	345.74	2.00	0.00	1.00	0.00	40.63	425.19	2.00	0.00	1.00	0.00
40.69	488.05	2.00	0.00	1.00	0.00	40.79	525.82	2.00	0.00	1.00	0.00
40.84	550.54	2.00	0.00	1.00	0.00	40.88	504.65	2.00	0.00	1.00	0.00
40.97	488.48	2.00	0.00	1.00	0.00	41.02	467.35	2.00	0.00	1.00	0.00
41.09	490.44	2.00	0.00	1.00	0.00	41.15	479.88	2.00	0.00	1.00	0.00
41.24	477.20	2.00	0.00	1.00	0.00	41.29	483.85	2.00	0.00	1.00	0.00
41.35	479.20	2.00	0.00	1.00	0.00	41.41	476.42	2.00	0.00	1.00	0.00
41.48	455.98	2.00	0.00	1.00	0.00	41.58	404.26	2.00	0.00	1.00	0.00
41.62	366.84	2.00	0.00	1.00	0.00	41.67	360.27	2.00	0.00	1.00	0.00
41.76	356.16	2.00	0.00	1.00	0.00	41.80	323.54	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
41.89	278.20	2.00	0.00	1.00	0.00	41.94	248.65	2.00	0.00	1.00	0.00
42.00	234.23	2.00	0.00	1.00	0.00	42.09	244.82	2.00	0.00	1.00	0.00
42.13	241.79	2.00	0.00	1.00	0.00	42.19	213.37	2.00	0.00	1.00	0.00
42.28	174.52	1.23	0.28	1.00	0.00	42.34	-1.00	2.00	0.00	1.00	0.00
42.42	-1.00	2.00	0.00	1.00	0.00	42.46	-1.00	2.00	0.00	1.00	0.00
42.55	-1.00	2.00	0.00	1.00	0.00	42.60	-1.00	2.00	0.00	1.00	0.00

Total estimated settlement: 1.18

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.09	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.14	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.22	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.27	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.37	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.41	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.46	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.55	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.60	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.69	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.73	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.83	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.87	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.92	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.01	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.05	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.15	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.20	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.29	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.33	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.38	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.46	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.52	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.60	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.66	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.74	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.79	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.84	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.92	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.98	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.04	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.11	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.20	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.25	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.30	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.39	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.44	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.53	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.57	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.66	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.71	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.76	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.85	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.90	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.98	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.04	158.09	253.70	1.00	253.70	1.56	0.94	0.94
3.12	241.02	386.93	1.00	386.93	1.43	1.04	1.04
3.17	247.98	398.10	1.00	398.10	1.40	1.05	1.05

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.22	249.19	400.04	1.00	400.04	1.42	1.05	1.05
3.31	247.98	398.09	1.00	398.09	1.45	1.05	1.05
3.35	238.22	382.40	1.00	382.40	1.49	1.04	1.04
3.44	225.98	362.73	1.00	362.73	1.54	1.02	1.02
3.48	212.72	341.42	1.00	341.42	1.62	1.01	1.01
3.54	202.47	324.95	1.00	324.95	1.68	1.00	1.00
3.62	194.39	311.96	1.01	313.94	1.71	0.99	0.99
3.68	184.27	295.69	1.09	323.53	1.76	1.00	1.00
3.77	176.34	282.95	1.16	329.42	1.81	1.00	1.00
3.82	160.29	257.14	1.25	321.12	1.92	0.99	0.99
3.88	152.03	243.87	1.31	318.31	2.00	0.99	0.99
3.97	146.54	235.04	1.37	321.45	2.06	0.99	0.99
4.01	148.07	237.50	1.40	332.72	2.09	1.00	1.00
4.07	141.68	227.23	1.49	337.48	2.14	1.01	1.01
4.15	131.60	211.02	1.64	345.42	2.21	1.01	1.01
4.20	118.50	189.96	1.87	356.02	2.29	1.02	1.02
4.30	108.07	173.20	2.08	360.82	2.34	1.02	1.02
4.34	100.20	160.54	2.21	355.43	2.37	1.02	1.02
4.43	97.34	155.95	2.21	344.02	2.37	1.01	1.01
4.47	96.68	154.88	2.13	329.64	2.35	1.00	1.00
4.53	96.65	154.82	2.04	316.43	2.33	0.99	0.99
4.62	95.32	152.68	2.00	305.98	2.32	0.98	0.98
4.66	89.72	143.68	2.10	301.30	2.34	0.98	0.98
4.76	82.38	131.88	2.31	305.27	2.39	0.98	0.98
4.80	74.12	118.60	2.66	316.01	2.45	0.99	0.99
4.88	71.94	115.10	2.77	319.35	2.47	0.99	0.99
4.94	70.14	112.19	2.85	319.76	2.48	0.99	0.99
4.99	72.63	116.18	2.65	308.35	2.45	0.98	0.98
5.08	74.40	119.02	2.50	298.05	2.42	0.98	0.98
5.12	80.68	129.10	2.20	283.46	2.36	0.96	0.96
5.22	86.02	137.68	1.99	274.15	2.32	0.96	0.96
5.26	89.00	142.46	1.87	266.83	2.29	0.95	0.95
5.36	88.22	141.20	1.86	262.17	2.28	0.95	0.95
5.40	84.65	135.45	1.91	258.85	2.30	0.94	0.94
5.45	80.39	128.60	1.98	254.11	2.31	0.94	0.94
5.54	76.38	122.15	2.02	247.16	2.33	0.93	0.93
5.58	73.02	116.75	2.06	240.14	2.33	0.93	0.93
5.67	71.63	114.50	2.11	241.20	2.34	0.93	0.93
5.71	74.52	119.14	2.10	249.63	2.34	0.94	0.94
5.78	81.35	130.12	1.99	259.36	2.32	0.94	0.94
5.84	95.96	153.57	1.74	266.75	2.24	0.95	0.95
5.91	114.04	182.63	1.52	276.91	2.16	0.96	0.96
6.00	131.32	210.38	1.39	291.96	2.08	0.97	0.97
6.05	138.19	221.41	1.34	297.37	2.04	0.98	0.98
6.14	131.16	210.10	1.34	282.30	2.04	0.96	0.96
6.27	116.98	187.31	1.38	258.21	2.07	0.94	0.94
6.32	100.67	161.09	1.46	234.88	2.12	0.92	0.92
6.37	88.43	141.42	1.57	222.36	2.18	0.91	0.91

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.45	78.20	124.99	1.72	215.12	2.24	0.90	0.90
6.51	68.69	109.71	1.93	211.92	2.30	0.90	0.90
6.57	62.06	99.05	2.17	215.19	2.36	0.90	0.90
6.64	58.45	93.23	2.36	219.63	2.40	0.91	0.91
6.70	58.23	92.87	2.40	223.35	2.41	0.91	0.91
6.78	59.42	94.78	2.37	224.29	2.40	0.91	0.91
6.83	61.83	98.65	2.36	233.21	2.40	0.92	0.92
6.97	64.36	102.69	2.35	240.94	2.39	0.93	0.93
6.98	66.35	105.89	2.38	252.34	2.40	0.94	0.94
7.06	68.65	109.58	2.35	257.78	2.40	0.94	0.94
7.11	70.54	112.62	2.37	266.67	2.40	0.95	0.95
7.18	72.29	115.41	2.39	275.65	2.40	0.96	0.96
7.25	73.91	118.01	2.42	285.04	2.41	0.97	0.97
7.29	77.43	123.65	2.36	292.10	2.40	0.97	0.97
7.36	82.61	131.98	2.23	294.89	2.37	0.97	0.97
7.43	92.12	147.25	2.00	294.47	2.32	0.97	0.97
7.52	101.53	162.36	1.82	295.46	2.27	0.97	0.97
7.56	111.07	177.68	1.69	299.74	2.23	0.98	0.98
7.61	116.78	185.87	1.64	305.33	2.21	0.98	0.98
7.70	122.59	192.78	1.60	308.30	2.19	0.98	0.98
7.76	126.14	196.71	1.57	308.04	2.18	0.98	0.98
7.84	128.03	197.53	1.54	303.24	2.17	0.98	0.98
7.89	129.80	198.49	1.49	295.82	2.14	0.97	0.97
7.96	131.92	199.10	1.44	285.95	2.11	0.97	0.97
8.03	134.50	200.45	1.39	278.54	2.08	0.96	0.96
8.08	134.59	198.98	1.37	271.85	2.06	0.95	0.95
8.16	129.37	190.51	1.38	263.59	2.07	0.95	0.95
8.21	114.36	169.41	1.46	246.56	2.12	0.93	0.93
8.30	96.27	143.75	1.62	232.89	2.20	0.92	0.92
8.34	80.11	121.09	1.85	224.60	2.28	0.91	0.91
8.43	76.19	114.59	1.90	217.92	2.29	0.91	0.91
8.47	72.96	109.58	1.95	213.97	2.31	0.90	0.90
8.56	76.41	113.42	1.87	212.20	2.29	0.90	0.90
8.61	80.79	119.08	1.81	215.18	2.27	0.90	0.90
8.67	90.92	132.23	1.67	220.80	2.22	0.91	0.91
8.75	99.87	143.65	1.59	228.69	2.19	0.92	0.92
8.79	103.94	149.14	1.60	239.27	2.20	0.93	0.93
8.89	104.78	149.68	1.64	246.20	2.21	0.93	0.93
8.94	102.23	146.18	1.72	251.98	2.24	0.94	0.94
9.02	100.45	143.05	1.76	252.21	2.25	0.94	0.94
9.07	99.65	141.40	1.77	250.70	2.26	0.94	0.94
9.13	100.21	141.36	1.74	246.03	2.25	0.93	0.93
9.21	100.81	140.99	1.70	240.13	2.23	0.93	0.93
9.25	101.43	140.72	1.63	229.98	2.21	0.92	0.92
9.34	100.03	137.57	1.60	219.85	2.19	0.91	0.91
9.39	94.71	129.71	1.60	207.28	2.19	0.89	0.89
9.48	86.38	118.11	1.69	199.22	2.23	0.89	0.89
9.53	75.91	104.37	1.87	195.43	2.29	0.88	0.88

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.62	66.44	91.63	2.15	196.77	2.35	0.88	0.88
9.67	58.92	81.57	2.41	196.74	2.41	0.88	0.88
9.71	52.74	73.10	2.61	190.80	2.44	0.88	0.88
9.80	48.67	67.17	2.76	185.57	2.47	0.87	0.87
9.85	44.85	61.98	3.01	186.69	2.50	0.87	0.87
9.93	42.67	58.94	3.31	195.31	2.55	0.88	0.88
9.99	41.03	56.70	3.59	203.75	2.58	0.89	0.89
10.04	39.97	55.23	3.84	212.13	2.61	3.31	4.38
10.13	39.44	54.25	4.03	218.43	2.63	3.45	4.28
10.18	38.89	53.46	4.24	226.52	2.65	3.53	4.20
10.27	38.36	52.50	4.43	232.47	2.67	3.67	4.11
10.32	37.80	51.64	4.61	238.05	2.69	3.71	4.03
10.40	37.28	50.69	4.75	240.97	2.70	3.73	3.94
10.45	36.94	50.08	4.85	243.06	2.71	3.73	3.88
10.50	36.25	49.04	5.01	245.66	2.73	3.74	3.79
10.59	35.45	47.72	5.20	248.13	2.75	3.73	3.68
10.64	34.48	46.31	5.42	250.81	2.76	3.72	3.56
10.70	34.02	45.52	5.53	251.77	2.77	3.71	3.49
10.78	33.89	45.09	5.58	251.76	2.78	3.67	3.45
10.87	33.98	44.89	5.60	251.28	2.78	3.66	3.43
10.92	34.14	44.93	5.59	251.26	2.78	3.66	3.43
10.96	34.67	45.46	5.51	250.67	2.77	3.66	3.47
11.05	35.23	45.85	5.45	249.89	2.77	3.66	3.50
11.10	35.68	46.27	5.41	250.08	2.76	3.68	3.53
11.19	35.76	46.08	5.43	250.34	2.77	3.68	3.51
11.24	35.79	45.94	5.46	250.94	2.77	3.67	3.49
11.37	35.90	45.65	5.48	250.37	2.77	3.65	3.47
11.39	36.25	46.02	5.43	250.04	2.77	3.65	3.49
11.42	37.06	46.89	5.30	248.37	2.75	3.65	3.56
11.49	38.40	48.26	5.08	245.31	2.73	3.65	3.67
11.56	40.63	50.70	4.75	240.82	2.70	3.64	3.87
11.65	43.22	53.43	4.41	235.62	2.67	3.65	4.08
11.70	45.92	56.44	4.09	230.69	2.64	3.65	4.32
11.79	48.59	59.25	3.82	226.27	2.61	3.64	4.55
11.84	51.26	62.15	3.58	222.35	2.58	0.91	0.91
11.88	53.99	65.12	3.32	216.34	2.55	0.90	0.90
11.97	55.92	66.92	3.15	210.63	2.52	0.90	0.90
12.02	56.95	67.91	3.10	210.68	2.52	0.90	0.90
12.12	57.54	68.25	3.14	214.41	2.52	0.90	0.90
12.16	59.12	69.92	3.11	217.64	2.52	0.91	0.91
12.21	65.65	77.09	2.74	210.90	2.46	0.90	0.90
12.30	76.77	89.12	2.26	201.10	2.38	0.89	0.89
12.35	90.72	104.38	1.88	196.39	2.29	0.88	0.88
12.43	102.99	117.45	1.69	198.30	2.23	0.89	0.89
12.48	110.24	125.24	1.65	206.23	2.21	0.89	0.89
12.57	112.44	127.22	1.68	213.57	2.22	0.90	0.90
12.61	109.28	123.68	1.78	220.37	2.26	0.91	0.91
12.67	102.50	115.96	1.92	222.36	2.30	0.91	0.91

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.76	95.70	107.94	2.06	222.04	2.33	0.91	0.91
12.80	90.55	101.97	2.14	217.99	2.35	0.91	0.91
12.89	89.84	100.58	2.09	210.01	2.34	0.90	0.90
12.94	90.03	100.31	2.00	200.32	2.32	0.89	0.89
12.99	89.96	99.79	1.91	190.26	2.30	0.88	0.88
13.08	88.18	97.26	1.87	181.65	2.28	0.87	0.87
13.13	85.63	94.11	1.84	173.11	2.28	0.86	0.86
13.22	83.33	91.14	1.84	168.00	2.28	0.85	0.85
13.27	75.69	82.77	2.04	168.78	2.33	0.85	0.85
13.36	67.64	73.85	2.39	176.43	2.40	0.86	0.86
13.39	57.67	63.15	3.05	192.28	2.51	0.88	0.88
13.49	53.35	58.23	3.48	202.79	2.57	0.89	0.89
13.54	50.06	54.57	3.90	212.91	2.62	3.14	4.06
13.59	48.76	53.06	4.12	218.45	2.64	3.20	3.94
13.68	48.10	52.09	4.25	221.34	2.65	3.22	3.86
13.72	47.14	50.94	4.43	225.88	2.67	3.22	3.77
13.82	46.85	50.36	4.54	228.63	2.68	3.31	3.72
13.87	46.54	49.91	4.64	231.41	2.69	3.33	3.68
13.95	46.60	49.71	4.64	230.48	2.69	3.30	3.67
14.00	46.32	49.27	4.66	229.65	2.70	3.25	3.63
14.05	45.39	48.16	4.78	230.24	2.71	3.22	3.54
14.14	44.06	46.49	4.99	232.18	2.73	3.20	3.41
14.19	42.60	44.83	5.24	234.93	2.75	3.19	3.29
14.24	41.57	43.64	5.44	237.41	2.77	3.19	3.19
14.31	41.32	43.20	5.51	238.16	2.77	3.20	3.16
14.37	42.13	43.88	5.37	235.46	2.76	3.19	3.21
14.46	43.44	44.98	5.13	230.56	2.74	3.09	3.29
14.51	45.05	46.53	4.82	224.07	2.71	3.05	3.40
14.59	46.20	47.48	4.59	218.02	2.69	2.96	3.47
14.65	47.72	48.84	4.28	209.18	2.66	2.85	3.57
14.73	48.99	49.88	4.00	199.41	2.63	2.68	3.65
14.79	50.27	50.99	3.70	188.58	2.59	0.87	0.87
14.84	50.73	51.29	3.44	176.54	2.56	0.86	0.86
14.91	50.95	51.24	3.05	156.14	2.51	0.84	0.84
14.97	50.39	50.41	2.68	135.05	2.45	0.81	0.81
15.06	49.80	49.53	2.44	120.66	2.41	0.78	0.78
15.11	48.22	47.82	2.40	114.93	2.41	0.77	0.77
15.20	46.32	45.71	2.47	112.70	2.42	0.77	0.77
15.25	44.36	43.64	2.48	108.10	2.42	0.76	0.76
15.30	35.85	35.11	3.29	115.52	2.54	0.78	0.78
15.36	34.17	33.35	3.53	117.64	2.57	0.78	0.78
15.44	32.40	31.46	3.88	122.00	2.61	1.00	2.28
15.49	38.12	37.02	3.17	117.24	2.53	0.78	0.78
15.55	37.78	36.60	3.33	121.80	2.55	0.79	0.79
15.63	37.62	36.32	3.53	128.08	2.57	0.80	0.80
15.73	37.30	35.86	3.75	134.61	2.60	1.27	2.59
15.78	36.87	35.35	3.98	140.84	2.63	1.34	2.55
15.82	35.75	34.19	4.30	147.10	2.66	1.38	2.47

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.91	34.35	32.68	4.69	153.15	2.70	1.44	2.35
15.96	31.77	30.11	5.40	162.75	2.76	1.48	2.17
16.05	29.41	27.68	6.18	171.18	2.83	1.58	1.99
16.10	27.02	25.31	7.11	179.91	2.89	1.62	1.82
16.16	25.65	23.90	7.76	185.47	2.94	1.67	1.71
16.24	24.69	22.93	8.28	189.87	2.97	1.71	1.64
16.28	24.13	22.34	8.65	193.22	2.99	1.73	1.60
16.36	23.98	22.07	8.84	195.07	3.00	1.76	1.58
16.42	24.05	22.06	8.90	196.44	3.01	1.78	1.58
16.51	24.23	22.12	8.90	196.78	3.01	1.78	1.58
16.55	24.26	22.09	8.94	197.43	3.01	1.79	1.58
16.61	24.39	22.13	8.95	198.09	3.01	1.80	1.58
16.68	24.70	22.33	8.89	198.51	3.01	1.82	1.59
16.74	25.33	22.83	8.71	198.82	3.00	1.83	1.63
16.83	25.86	23.20	8.57	198.85	2.99	1.85	1.66
16.87	26.32	23.59	8.46	199.47	2.98	1.86	1.69
16.97	26.57	23.67	8.44	199.69	2.98	1.88	1.69
17.06	27.03	23.97	8.31	199.21	2.97	1.88	1.71
17.16	27.12	23.93	8.29	198.44	2.97	1.86	1.71
17.20	26.60	23.38	8.46	197.91	2.98	1.84	1.67
17.29	25.54	22.29	8.86	197.35	3.00	1.80	1.59
17.36	24.51	21.27	9.24	196.56	3.03	1.76	1.52
17.39	23.83	20.62	9.45	194.91	3.04	1.73	1.47
17.47	23.27	20.02	9.63	192.76	3.05	1.67	1.43
17.52	22.71	19.45	9.75	189.70	3.05	1.62	1.39
17.62	22.16	18.85	9.89	186.35	3.06	1.55	1.35
17.71	21.72	18.36	9.99	183.49	3.07	1.48	1.31
17.74	21.48	18.11	10.03	181.72	3.07	1.47	1.29
17.80	21.51	18.07	9.98	180.43	3.07	1.45	1.29
17.86	21.64	18.13	9.87	179.04	3.06	1.43	1.30
17.94	21.92	18.29	9.72	177.79	3.05	1.41	1.31
17.98	22.23	18.52	9.55	176.90	3.04	1.41	1.32
18.05	22.38	18.58	9.36	173.92	3.03	1.40	1.33
18.13	22.32	18.46	9.04	166.83	3.01	1.29	1.32
18.18	22.17	18.27	8.75	159.80	3.00	1.11	1.30
18.26	22.11	18.14	8.57	155.45	2.99	1.11	1.30
18.31	21.86	17.88	8.74	156.15	3.00	1.12	1.28
18.45	22.17	18.01	8.71	156.84	3.00	1.12	1.29
18.55	22.67	18.33	8.60	157.56	2.99	1.15	1.31
18.59	23.76	19.22	8.26	158.68	2.97	1.17	1.37
18.64	24.54	19.82	8.13	161.18	2.96	1.21	1.42
18.74	25.28	20.35	8.04	163.61	2.95	1.29	1.45
18.78	25.65	20.62	8.11	167.20	2.96	1.31	1.47
18.87	25.71	20.56	8.26	169.96	2.97	1.37	1.47
18.92	25.74	20.54	8.42	172.90	2.98	1.40	1.47
18.96	26.24	20.91	8.37	175.06	2.98	1.43	1.49
19.08	26.81	21.25	8.26	175.59	2.97	1.48	1.52
19.10	27.08	21.45	8.17	175.24	2.96	1.46	1.53

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
19.16	26.34	20.77	8.34	173.26	2.97	1.42	1.48
19.24	25.19	19.74	8.67	171.08	2.99	1.35	1.41
19.29	24.42	19.05	8.76	166.92	3.00	1.30	1.36
19.37	24.61	19.13	8.44	161.42	2.98	1.20	1.37
19.43	26.35	20.86	7.33	152.98	2.91	1.14	1.46
19.52	28.41	22.54	6.41	144.42	2.84	1.03	1.58
19.57	30.76	24.52	5.52	135.39	2.77	0.99	1.71
19.66	32.21	25.69	4.95	127.05	2.72	0.93	1.78
19.71	32.91	26.26	4.53	118.83	2.68	0.80	1.82
19.79	32.70	26.01	4.35	113.15	2.66	0.74	1.80
19.84	32.45	25.76	4.30	110.89	2.66	0.73	1.78
19.89	33.29	26.43	4.11	108.77	2.64	0.72	1.83
19.98	32.94	26.05	4.17	108.54	2.65	0.70	1.80
20.02	34.62	27.42	3.89	106.68	2.62	0.70	1.89
20.09	36.10	28.60	3.71	106.13	2.60	0.76	0.76
20.16	39.24	31.17	3.38	105.20	2.55	0.76	0.76
20.25	39.61	31.34	3.44	107.91	2.56	0.76	0.76
20.30	38.58	30.39	3.71	112.67	2.59	0.77	0.77
20.34	35.91	28.07	4.26	119.55	2.66	0.86	1.93
20.43	32.90	25.45	4.95	126.05	2.72	0.91	1.76
20.48	30.20	23.14	5.63	130.35	2.78	0.91	1.60
20.57	28.87	21.96	5.90	129.58	2.80	0.88	1.52
20.62	28.56	21.68	5.78	125.42	2.79	0.82	1.50
20.67	30.36	23.17	4.99	115.67	2.73	0.76	1.60
20.75	33.68	25.89	4.00	103.53	2.63	0.64	1.77
20.81	39.43	30.72	2.84	87.12	2.48	0.72	0.72
20.90	44.27	34.78	2.18	75.86	2.36	0.41	0.70
20.94	49.49	39.27	1.71	67.20	2.24	0.20	0.68
21.03	52.94	42.17	1.52	64.30	2.16	0.16	0.67
21.08	55.86	44.67	1.42	63.65	2.10	0.15	0.67
21.13	56.83	45.43	1.41	63.93	2.09	0.16	0.67
21.22	56.26	44.83	1.42	63.64	2.10	0.15	0.67
21.27	54.34	43.13	1.46	62.82	2.12	0.14	0.66
21.34	51.45	40.58	1.53	62.29	2.17	0.14	0.66
21.41	47.53	37.15	1.71	63.44	2.23	0.15	0.67
21.50	44.39	34.36	1.94	66.62	2.30	0.19	0.67
21.53	41.85	32.14	2.23	71.63	2.37	0.29	0.69
21.59	40.73	31.09	2.44	75.92	2.41	0.42	0.70
21.68	39.46	29.92	2.63	78.81	2.45	0.53	0.70
21.73	37.66	28.39	2.84	80.74	2.48	0.62	0.71
21.82	35.02	26.16	3.15	82.31	2.52	0.71	0.71
21.86	32.22	23.83	3.66	87.27	2.59	0.72	0.72
21.94	29.14	21.26	4.41	93.67	2.67	0.51	1.45
22.01	27.19	19.61	5.13	100.56	2.74	0.54	1.34
22.06	25.98	18.59	5.84	108.61	2.80	0.58	1.28
22.15	24.89	17.65	6.59	116.35	2.86	0.70	1.22
22.20	23.43	16.46	7.47	122.93	2.92	0.73	1.14
22.25	22.44	15.67	7.81	122.38	2.94	0.73	1.09

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.34	22.56	15.77	7.41	116.85	2.91	0.64	1.09
22.38	21.85	15.24	7.22	110.03	2.90	0.56	1.05
22.47	19.27	12.86	8.29	106.57	2.97	0.50	0.92
22.52	16.10	10.57	10.08	106.59	3.07	0.48	0.76
22.59	14.74	9.57	11.26	107.85	3.13	0.47	0.68
22.66	14.61	9.47	11.46	108.55	3.14	0.49	0.68
22.75	15.64	10.19	10.65	108.50	3.10	0.50	0.73
22.78	17.29	11.36	9.37	106.39	3.03	0.49	0.81
22.84	19.06	12.61	8.27	104.33	2.97	0.48	0.90
22.94	20.00	13.68	7.68	104.97	2.93	0.50	0.95
22.97	21.58	14.88	7.07	105.28	2.89	0.51	1.03
23.05	26.92	19.03	5.27	100.35	2.75	0.54	1.30
23.12	35.25	25.59	3.57	91.23	2.58	0.73	0.73
23.17	43.57	32.24	2.59	83.40	2.44	0.71	0.71
23.26	48.60	36.26	2.22	80.45	2.37	0.61	0.71
23.30	50.18	37.49	2.16	80.90	2.36	0.63	0.71
23.36	49.03	36.50	2.26	82.46	2.38	0.71	0.71
23.44	47.51	35.23	2.37	83.45	2.40	0.71	0.71
23.53	46.77	34.59	2.40	82.98	2.40	0.71	0.71
23.57	47.09	34.83	2.37	82.63	2.40	0.71	0.71
23.63	50.57	37.56	2.22	83.43	2.37	0.71	0.71
23.72	54.39	40.51	2.11	85.42	2.35	0.72	0.72
23.76	55.16	41.03	2.16	88.56	2.36	0.73	0.73
23.85	50.21	37.02	2.43	89.95	2.41	0.73	0.73
23.91	44.00	32.08	2.82	90.44	2.48	0.73	0.73
23.95	38.06	27.42	3.29	90.22	2.54	0.73	0.73
24.04	33.43	23.76	3.85	91.52	2.61	0.51	1.59
24.09	26.16	18.08	5.45	98.61	2.77	0.49	1.23
24.18	21.10	14.16	7.43	105.19	2.92	0.49	0.98
24.23	17.29	10.99	10.16	111.67	3.08	0.53	0.78
24.29	18.38	11.73	9.54	111.97	3.04	0.58	0.84
24.36	21.43	14.33	7.50	107.50	2.92	0.53	0.99
24.41	24.22	16.49	6.02	99.25	2.81	0.46	1.13
24.50	24.31	16.56	5.79	95.85	2.79	0.44	1.13
24.56	21.32	14.26	6.96	99.17	2.88	0.45	0.98
24.64	19.43	12.37	8.14	100.74	2.96	0.46	0.88
24.69	23.78	16.09	6.05	97.40	2.82	0.46	1.10
24.75	35.53	25.15	3.45	86.85	2.56	0.72	0.72
24.82	50.22	36.66	2.20	80.72	2.37	0.62	0.71
24.87	60.46	44.65	1.89	84.46	2.29	0.72	0.72
24.96	64.49	47.66	1.88	89.39	2.29	0.73	0.73
25.01	65.19	48.05	1.96	94.12	2.31	0.74	0.74
25.07	65.02	47.74	2.09	99.82	2.34	0.75	0.75
25.14	64.37	46.98	2.31	108.43	2.39	0.76	0.76
25.20	62.03	45.01	2.52	113.59	2.43	0.77	0.77
25.30	58.30	42.05	2.70	113.36	2.46	0.77	0.77
25.34	52.68	37.76	2.87	108.20	2.48	0.76	0.76
25.42	45.75	32.40	3.29	106.52	2.54	0.76	0.76

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.48	40.53	28.40	3.69	104.93	2.59	0.76	0.76
25.55	38.04	26.48	3.95	104.70	2.62	0.65	1.77
25.62	37.80	26.26	4.03	105.73	2.63	0.68	1.75
25.67	40.38	28.20	3.74	105.39	2.60	0.76	0.76
25.75	42.50	29.79	3.46	103.19	2.57	0.75	0.75
25.80	41.53	29.05	3.48	101.18	2.57	0.75	0.75
25.90	36.93	25.51	4.00	101.94	2.63	0.63	1.70
25.94	30.78	20.84	4.98	103.85	2.73	0.59	1.40
25.99	26.43	17.57	5.99	105.19	2.81	0.53	1.19
26.06	23.07	15.03	7.29	109.60	2.91	0.52	1.03
26.13	21.40	13.28	8.56	113.72	2.99	0.61	0.95
26.22	19.94	12.28	9.50	116.64	3.04	0.63	0.88
26.27	17.30	10.50	10.95	114.96	3.12	0.56	0.75
26.34	14.22	8.42	13.18	111.03	3.22	0.48	0.60
26.40	12.08	6.98	15.37	107.26	3.31	0.45	0.50
26.45	10.25	5.75	17.88	102.78	3.39	0.42	0.41
26.54	9.10	4.97	19.56	97.23	3.45	0.34	0.35
26.59	8.04	4.26	21.24	90.52	3.50	0.29	0.30
26.68	7.67	4.00	21.60	86.50	3.51	0.25	0.29
26.73	7.36	3.79	22.14	84.01	3.52	0.25	0.27
26.82	7.21	3.68	22.63	83.36	3.53	0.24	0.26
26.88	7.18	3.66	22.64	82.84	3.54	0.24	0.26
26.91	7.18	3.66	22.53	82.38	3.53	0.23	0.26
27.00	7.21	3.67	22.38	82.11	3.53	0.23	0.26
27.05	7.27	3.70	22.25	82.41	3.52	0.23	0.26
27.14	7.33	3.74	22.33	83.40	3.53	0.24	0.27
27.19	7.36	3.75	22.67	85.03	3.54	0.25	0.27
27.23	7.52	3.85	22.64	87.19	3.54	0.26	0.28
27.32	7.77	4.01	22.10	88.54	3.52	0.29	0.29
27.38	8.42	4.43	19.86	88.04	3.46	0.28	0.32
27.46	9.07	4.85	17.69	85.84	3.39	0.26	0.35
27.51	9.51	5.13	16.46	84.50	3.35	0.24	0.37
27.57	9.44	5.08	16.67	84.74	3.35	0.26	0.36
27.63	9.32	5.00	17.17	85.79	3.37	0.26	0.36
27.69	9.13	4.87	17.62	85.77	3.39	0.27	0.35
27.78	9.22	4.92	17.30	85.06	3.38	0.25	0.35
27.85	9.32	4.97	16.84	83.76	3.36	0.25	0.36
27.90	9.91	5.35	15.17	81.21	3.30	0.24	0.38
27.99	10.50	5.73	13.68	78.37	3.24	0.21	0.41
28.04	11.00	6.05	12.41	75.03	3.19	0.20	0.43
28.13	11.03	6.06	12.03	72.92	3.17	0.18	0.43
28.17	10.23	5.53	12.84	70.99	3.20	0.17	0.39
28.26	9.26	4.89	14.21	69.53	3.26	0.15	0.35
28.31	8.49	4.38	15.53	68.07	3.31	0.15	0.31
28.36	8.61	4.46	14.89	66.40	3.29	0.14	0.32
28.45	8.99	4.69	13.95	65.50	3.25	0.13	0.34
28.49	9.51	5.03	13.23	66.57	3.22	0.13	0.36
28.56	10.04	5.37	12.85	68.97	3.21	0.16	0.38

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.63	10.88	5.90	11.81	69.72	3.16	0.17	0.42
28.73	12.56	6.97	9.61	67.00	3.05	0.16	0.50
28.78	14.30	8.46	7.50	63.45	2.92	0.13	0.58
28.82	14.80	8.82	6.93	61.17	2.88	0.13	0.60
28.91	14.02	8.24	7.64	62.97	2.93	0.13	0.56
28.96	12.87	7.15	9.94	71.01	3.06	0.15	0.51
29.05	12.35	6.80	12.43	84.50	3.19	0.25	0.49
29.09	12.26	6.73	14.72	99.02	3.28	0.38	0.48
29.15	12.75	7.04	16.25	114.42	3.34	0.49	0.50
29.23	14.37	8.06	15.66	126.21	3.32	0.68	0.58
29.28	26.42	15.77	8.13	128.22	2.96	0.77	1.13
29.37	38.32	24.98	5.02	125.29	2.73	0.89	1.67
29.42	48.48	32.39	3.75	121.32	2.60	0.78	0.78
29.46	47.51	31.58	4.02	126.98	2.63	1.01	2.08
29.56	46.05	30.41	4.32	131.46	2.66	1.06	2.01
29.60	44.56	29.28	4.54	132.94	2.68	1.06	1.94
29.67	41.98	27.46	4.62	126.87	2.69	1.01	1.82
29.74	38.63	25.16	4.56	114.67	2.69	0.74	1.67
29.83	45.47	30.33	3.23	97.97	2.54	0.74	0.74
29.92	56.84	38.85	2.34	90.71	2.39	0.73	0.73
29.96	67.40	46.65	2.02	94.47	2.33	0.74	0.74
30.02	65.23	44.81	2.24	100.38	2.37	0.75	0.75
30.07	57.27	38.66	2.82	109.12	2.48	0.76	0.76
30.12	46.47	30.57	3.92	119.86	2.62	0.92	2.01
30.21	36.20	23.07	5.53	127.59	2.77	0.89	1.54
30.31	28.15	17.30	7.58	131.22	2.93	0.79	1.18
30.34	23.24	13.42	9.48	127.32	3.04	0.75	0.96
30.40	19.76	11.23	10.88	122.13	3.11	0.66	0.80
30.49	16.44	9.13	12.57	114.67	3.19	0.52	0.65
30.54	14.36	7.82	13.65	106.67	3.24	0.44	0.56
30.58	13.33	7.17	13.82	99.09	3.25	0.39	0.51
30.68	12.56	6.67	13.87	92.55	3.25	0.30	0.48
30.73	11.60	6.06	14.26	86.44	3.26	0.27	0.43
30.80	10.76	5.53	14.85	82.19	3.29	0.24	0.40
30.86	10.01	5.06	15.44	78.18	3.31	0.20	0.36
30.91	9.52	4.75	15.60	74.08	3.32	0.18	0.34
31.02	9.27	4.58	15.59	71.47	3.32	0.16	0.33
31.05	9.09	4.47	15.50	69.24	3.31	0.16	0.32
31.14	8.93	4.36	15.66	68.35	3.32	0.15	0.31
31.18	8.87	4.32	15.61	67.46	3.32	0.14	0.31
31.24	8.75	4.24	15.81	67.05	3.32	0.14	0.30
31.32	8.81	4.27	15.61	66.66	3.32	0.14	0.31
31.36	8.91	4.33	15.35	66.40	3.31	0.14	0.31
31.44	9.22	4.51	14.69	66.29	3.28	0.14	0.32
31.51	9.63	4.76	13.97	66.51	3.25	0.14	0.34
31.59	10.00	4.98	13.37	66.58	3.23	0.14	0.36
31.65	10.72	5.42	12.42	67.29	3.19	0.14	0.39
31.73	11.40	5.83	12.05	70.30	3.17	0.15	0.42

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.83	12.22	6.32	11.59	73.26	3.15	0.20	0.45
31.92	12.78	6.65	11.30	75.16	3.13	0.20	0.48
31.97	13.56	7.13	10.47	74.65	3.09	0.20	0.51
32.06	14.62	7.77	9.51	73.89	3.04	0.20	0.55
32.10	15.34	8.20	8.98	73.62	3.01	0.20	0.59
32.15	15.07	8.03	9.31	74.75	3.03	0.20	0.57
32.24	14.17	7.46	10.31	76.97	3.08	0.22	0.53
32.29	13.52	7.06	11.62	82.03	3.15	0.23	0.50
32.38	13.61	7.10	12.15	86.30	3.17	0.29	0.51
32.43	14.86	7.85	11.32	88.92	3.13	0.31	0.56
32.52	16.38	8.77	10.11	88.63	3.07	0.31	0.63
32.57	18.09	9.80	8.96	87.78	3.01	0.31	0.70
32.62	18.99	10.34	8.64	89.35	2.99	0.32	0.74
32.70	19.23	10.47	8.85	92.64	3.00	0.36	0.75
32.75	19.33	10.52	9.26	97.37	3.03	0.39	0.75
32.81	19.64	10.70	9.49	101.51	3.04	0.44	0.76
32.89	20.83	11.40	9.15	104.27	3.02	0.47	0.81
32.98	22.17	12.18	8.69	105.95	2.99	0.50	0.87
33.03	23.35	12.89	8.32	107.25	2.97	0.52	0.92
33.07	24.22	13.40	8.17	109.57	2.96	0.54	0.96
33.17	24.75	13.70	8.15	111.65	2.96	0.58	0.98
33.21	25.03	13.86	8.16	113.08	2.96	0.59	0.99
33.31	24.97	13.79	8.24	113.67	2.97	0.59	0.99
33.35	24.79	13.67	8.41	115.01	2.98	0.60	0.98
33.44	24.73	13.61	8.58	116.76	2.99	0.62	0.97
33.49	24.45	13.43	8.86	119.00	3.00	0.64	0.96
33.53	24.58	13.50	9.04	122.00	3.01	0.66	0.96
33.63	24.73	13.56	9.20	124.83	3.02	0.72	0.97
33.67	26.13	14.39	8.79	126.44	3.00	0.73	1.03
33.77	28.06	15.51	8.10	125.70	2.96	0.75	1.11
33.81	30.30	17.81	7.16	127.48	2.90	0.76	1.20
33.88	31.82	18.80	6.92	130.03	2.88	0.79	1.27
33.95	32.57	19.23	6.97	134.03	2.88	0.88	1.30
33.99	33.91	20.08	6.86	137.71	2.88	0.92	1.35
34.09	35.71	21.27	6.49	137.97	2.85	0.96	1.43
34.14	37.95	22.79	5.96	135.90	2.81	0.95	1.52
34.22	38.85	23.40	5.72	133.71	2.79	0.92	1.55
34.27	38.26	22.98	5.80	133.27	2.80	0.91	1.53
34.32	36.90	22.02	6.10	134.39	2.82	0.92	1.47
34.40	35.53	21.06	6.42	135.26	2.84	0.91	1.41
34.46	34.32	20.22	6.68	135.17	2.86	0.89	1.36
34.58	33.39	19.54	6.95	135.74	2.88	0.87	1.31
34.59	32.81	19.07	7.49	142.79	2.92	0.90	1.29
34.69	34.49	20.06	7.59	152.23	2.93	1.12	1.36
34.73	40.36	23.88	6.73	160.62	2.87	1.27	1.60
34.78	41.47	24.50	6.94	170.16	2.88	1.44	1.65
34.85	57.95	35.76	4.47	159.97	2.68	1.55	2.33
34.92	63.64	39.58	4.07	161.10	2.64	1.55	2.57

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
35.01	74.06	46.74	3.41	159.38	2.56	0.84	0.84
35.05	67.52	41.84	4.32	180.81	2.66	1.90	2.72
35.14	70.22	43.49	4.32	188.09	2.66	2.25	2.83
35.19	72.00	44.62	4.29	191.40	2.66	2.20	2.90
35.24	72.03	44.64	4.23	188.69	2.65	2.15	2.90
35.33	66.93	41.05	4.67	191.69	2.70	2.11	2.68
35.38	62.64	38.08	5.09	193.99	2.74	2.10	2.50
35.47	56.19	33.63	5.90	198.41	2.80	2.04	2.23
35.50	54.42	32.45	6.05	196.49	2.82	2.01	2.16
35.59	52.33	31.03	6.27	194.50	2.83	1.92	2.07
35.64	53.35	31.76	5.93	188.35	2.81	1.85	2.11
35.70	54.43	32.53	5.59	181.89	2.78	1.77	2.15
35.78	55.43	33.24	5.26	174.88	2.75	1.67	2.19
35.83	55.09	33.10	5.05	167.00	2.73	1.58	2.17
35.92	49.75	29.50	5.59	164.96	2.78	1.41	1.95
35.97	44.45	25.98	6.30	163.59	2.83	1.35	1.73
36.06	41.26	23.82	6.89	164.11	2.88	1.30	1.60
36.10	39.53	22.65	7.28	164.88	2.90	1.30	1.52
36.16	37.75	20.29	8.18	166.02	2.96	1.31	1.45
36.24	39.25	21.11	8.09	170.71	2.96	1.42	1.51
36.30	50.35	29.61	5.81	171.91	2.80	1.56	1.96
36.35	64.96	39.44	4.20	165.51	2.65	1.65	2.55
36.43	74.65	45.93	3.60	165.52	2.58	0.85	0.85
36.52	75.98	46.65	3.67	171.24	2.59	0.85	0.85
36.57	74.27	45.33	3.92	177.74	2.62	1.97	2.91
36.62	74.23	45.14	4.10	185.11	2.64	2.00	2.91
36.70	78.19	47.67	3.95	188.35	2.62	2.31	3.06
36.75	84.16	51.67	3.63	187.55	2.59	0.87	0.87
36.84	89.86	55.55	3.31	183.84	2.55	0.87	0.87
36.89	91.62	56.56	3.34	189.07	2.55	0.87	0.87
36.96	91.11	55.96	3.54	198.25	2.58	0.88	0.88
37.03	97.52	60.21	3.31	199.07	2.55	0.89	0.89
37.07	99.92	61.82	3.21	198.66	2.53	0.89	0.89
37.17	106.04	65.97	2.95	194.86	2.50	0.88	0.88
37.22	103.90	64.39	3.07	197.79	2.51	0.88	0.88
37.31	106.87	66.37	2.94	195.25	2.49	0.88	0.88
37.35	101.30	62.44	3.19	199.36	2.53	0.89	0.89
37.44	96.61	59.13	3.40	201.06	2.56	0.89	0.89
37.49	86.00	51.88	3.97	205.99	2.62	2.64	3.33
37.54	79.94	47.71	4.45	212.44	2.68	2.46	3.08
37.63	78.46	46.60	4.62	215.16	2.69	2.74	3.02
37.68	90.60	54.76	3.78	206.99	2.60	2.70	3.50
37.76	104.11	64.03	3.03	194.16	2.51	0.88	0.88
37.81	115.12	71.58	2.65	189.42	2.45	0.88	0.88
37.91	128.38	80.55	2.36	190.08	2.40	0.88	0.88
37.95	149.92	95.36	2.02	192.84	2.32	0.88	0.88
38.00	190.91	124.07	1.63	202.85	2.21	0.89	0.89
38.09	221.36	145.26	1.51	218.84	2.15	0.91	0.91

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
38.14	240.55	158.36	1.47	233.15	2.13	0.92	0.92
38.20	235.56	154.04	1.54	237.13	2.17	0.92	0.92
38.26	221.89	143.47	1.69	242.11	2.23	0.93	0.93
38.32	204.39	131.83	1.70	224.05	2.23	0.91	0.91
38.41	185.72	119.53	1.69	202.46	2.23	0.89	0.89
38.46	167.31	108.12	1.60	172.66	2.19	0.86	0.86
38.55	148.66	94.81	1.77	167.50	2.25	0.85	0.85
38.59	125.88	78.75	2.13	167.87	2.35	0.85	0.85
38.69	106.46	65.06	2.72	177.18	2.46	0.86	0.86
38.74	91.33	54.64	3.44	188.07	2.56	0.87	0.87
38.78	87.28	51.82	3.72	192.62	2.60	0.88	0.88
38.88	90.40	53.79	3.59	193.05	2.58	0.88	0.88
38.91	102.63	61.92	3.07	190.24	2.51	0.88	0.88
39.01	105.00	63.28	3.08	195.07	2.51	0.88	0.88
39.06	103.28	61.89	3.27	202.68	2.54	0.89	0.89
39.15	113.45	68.59	2.93	200.97	2.49	0.89	0.89
39.20	147.81	92.19	2.06	190.17	2.33	0.88	0.88
39.24	215.61	140.46	1.42	200.13	2.10	0.89	0.89
39.32	266.34	177.35	1.29	229.30	1.98	0.92	0.92
39.38	289.38	193.78	1.27	245.85	1.95	0.93	0.93
39.44	272.32	179.94	1.32	238.30	2.02	0.93	0.93
39.52	244.85	158.78	1.45	229.55	2.12	0.92	0.92
39.57	223.41	142.51	1.62	231.47	2.20	0.92	0.92
39.63	214.54	136.37	1.66	226.01	2.22	0.91	0.91
39.71	204.71	129.53	1.71	221.00	2.23	0.91	0.91
39.78	208.80	134.29	1.48	198.33	2.14	0.89	0.89
39.84	204.19	132.33	1.40	184.99	2.09	0.87	0.87
39.91	195.77	127.75	1.34	171.45	2.04	0.85	0.85
40.01	230.14	152.54	1.27	193.90	1.95	0.88	0.88
40.04	248.67	165.85	1.25	207.16	1.92	0.89	0.89
40.09	311.54	212.57	1.15	244.09	1.80	0.93	0.93
40.19	361.96	250.31	1.03	257.53	1.72	0.94	0.94
40.23	436.99	306.68	1.00	306.68	1.61	0.98	0.98
40.32	456.59	320.23	1.00	320.23	1.58	0.99	0.99
40.37	463.30	324.79	1.00	324.79	1.59	1.00	1.00
40.46	418.71	291.30	1.00	291.30	1.68	0.97	0.97
40.51	447.35	312.59	1.00	312.59	1.65	0.99	0.99
40.56	493.93	345.74	1.00	345.74	1.58	1.01	1.01
40.63	607.28	425.19	1.00	425.19	1.43	1.06	1.06
40.69	697.09	488.05	1.00	488.05	1.34	1.10	1.10
40.79	751.60	525.82	1.00	525.82	1.30	1.12	1.12
40.84	787.19	550.54	1.00	550.54	1.29	1.13	1.13
40.88	722.11	504.65	1.00	504.65	1.38	1.11	1.11
40.97	699.63	488.48	1.00	488.48	1.44	1.10	1.10
41.02	669.79	467.35	1.00	467.35	1.49	1.09	1.09
41.09	703.30	490.44	1.00	490.44	1.49	1.10	1.10
41.15	688.55	479.88	1.00	479.88	1.52	1.09	1.09
41.24	685.37	477.20	1.00	477.20	1.51	1.09	1.09

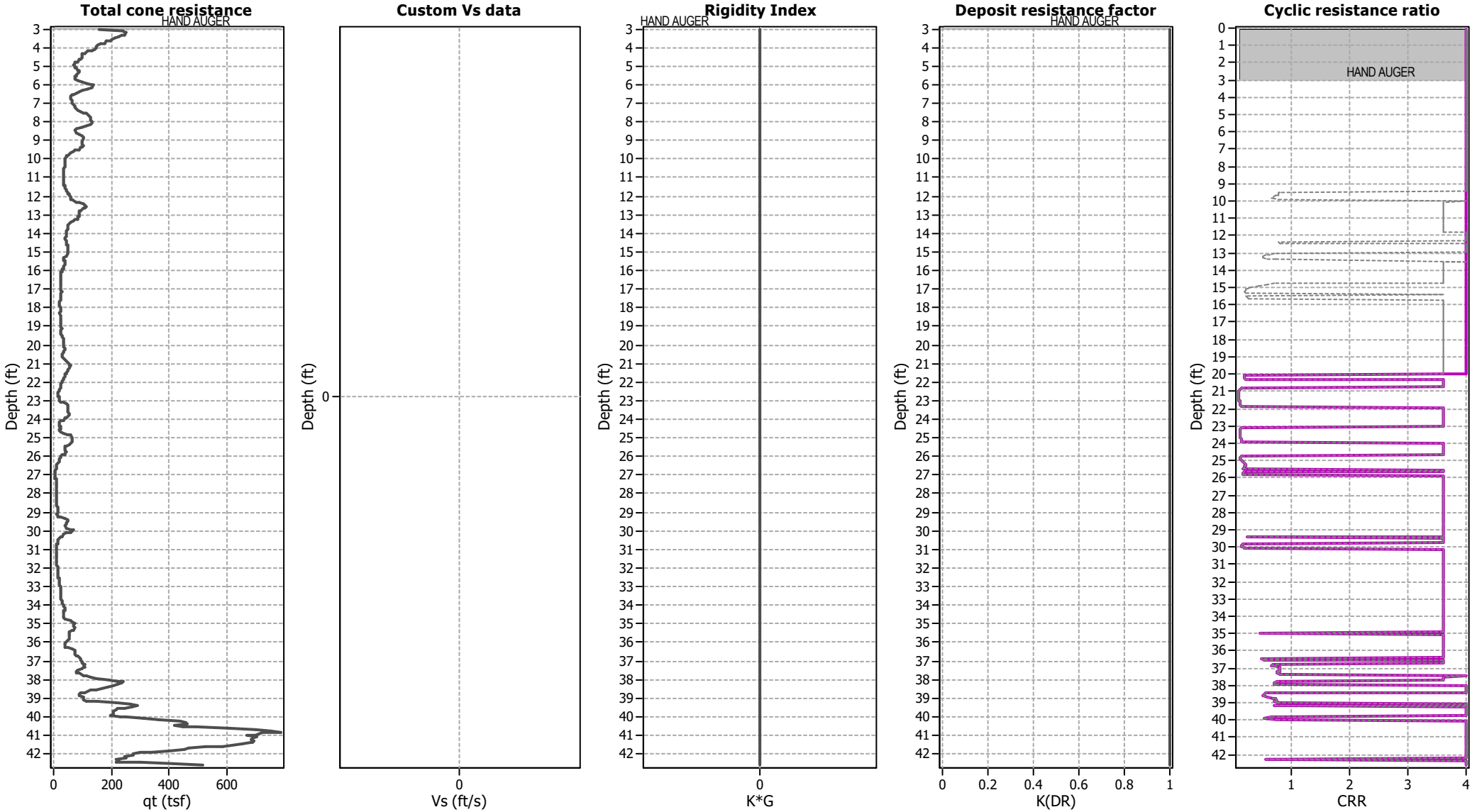
:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
41.29	695.20	483.85	1.00	483.85	1.46	1.10	1.10
41.35	688.95	479.20	1.00	479.20	1.43	1.09	1.09
41.41	685.40	476.42	1.00	476.42	1.48	1.09	1.09
41.48	656.51	455.98	1.00	455.98	1.55	1.08	1.08
41.58	583.54	404.26	1.00	404.26	1.65	1.05	1.05
41.62	524.82	358.56	1.02	366.84	1.72	1.03	1.03
41.67	467.04	314.22	1.15	360.27	1.79	1.02	1.02
41.76	451.14	301.29	1.18	356.16	1.83	1.02	1.02
41.80	401.46	265.60	1.22	323.54	1.87	1.00	1.00
41.89	340.51	223.01	1.25	278.20	1.92	0.96	0.96
41.94	301.96	196.47	1.27	248.65	1.94	0.93	0.93
42.00	274.73	175.65	1.33	234.23	2.03	0.92	0.92
42.09	276.47	174.68	1.40	244.82	2.09	0.93	0.93
42.13	247.77	153.53	1.57	241.79	2.18	0.93	0.93
42.19	250.22	159.27	1.34	213.37	2.04	0.90	0.90
42.28	217.51	141.93	1.23	174.52	1.89	0.86	0.86
42.34	225.89	-1.00	1.00	-1.00	-1.00	0.00	0.00
42.42	215.14	-1.00	1.00	-1.00	-1.00	0.00	0.00
42.46	301.95	-1.00	1.00	-1.00	-1.00	0.00	0.00
42.55	414.14	-1.00	1.00	-1.00	-1.00	0.00	0.00
42.60	514.53	-1.00	1.00	-1.00	-1.00	0.00	0.00

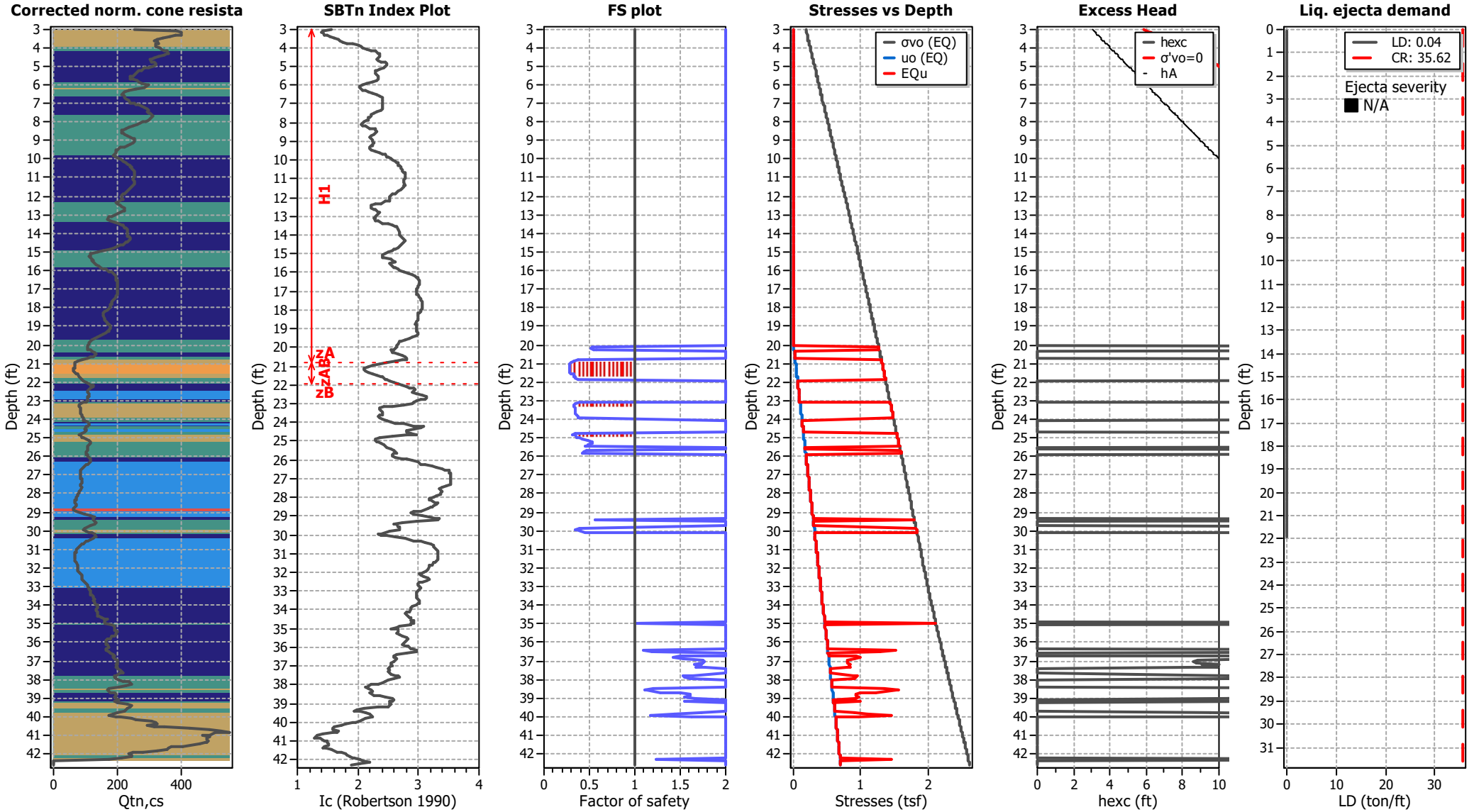
Abbreviations

q_t: Total cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Adjusted and corrected cone resistance due to fines
I_c: Soil behavior type index
$S_{u(liq)}/\sigma'_v$: Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$: Calculated peak undrained strength ratio

Aging Calculation Estimation



Ejecta Severity Estimation



Verdantas Inc.
2600 Michelson Drive, Suite 400
Irvine, California 92612
http://www.geologismiki.gr

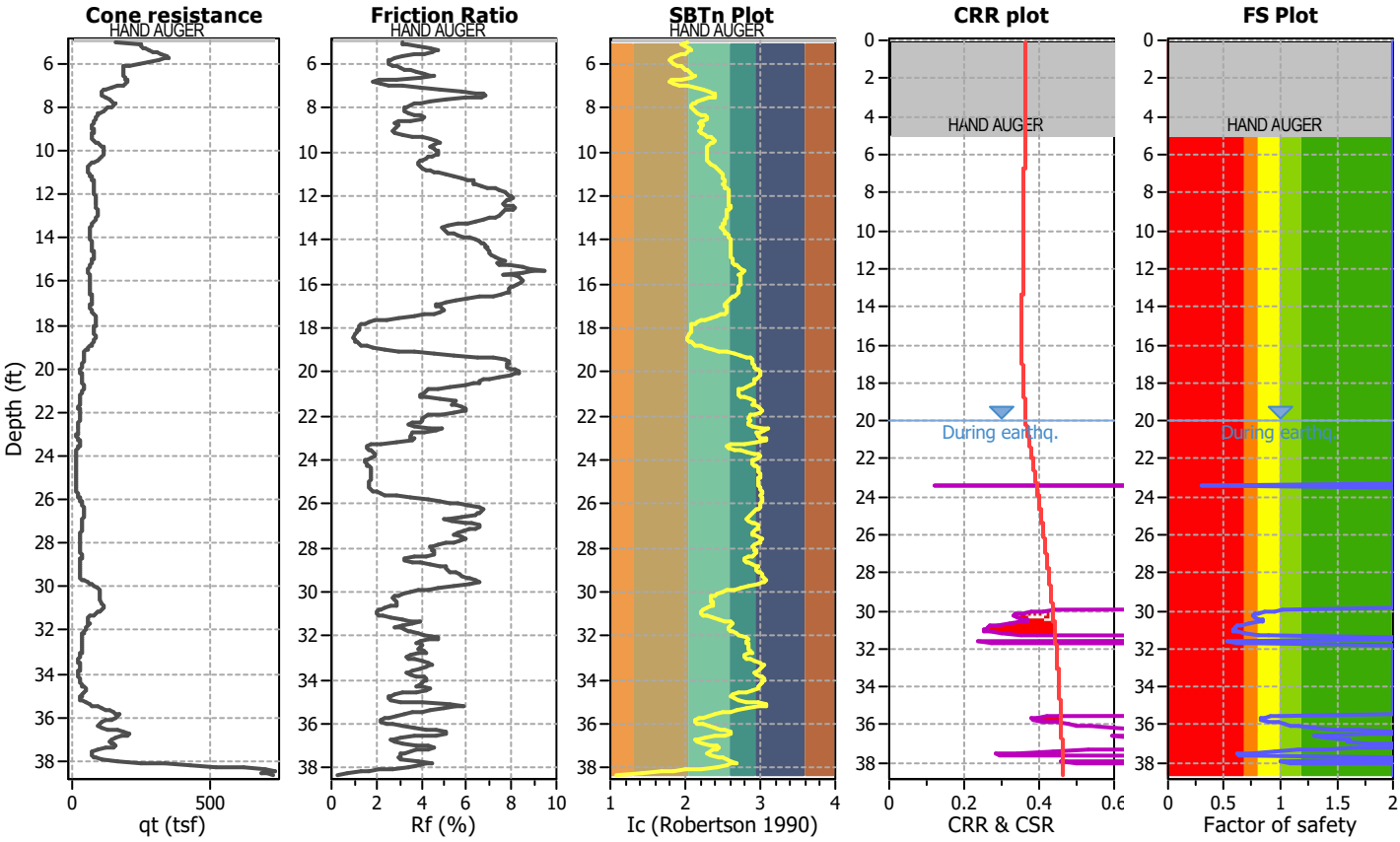
LIQUEFACTION ANALYSIS REPORT

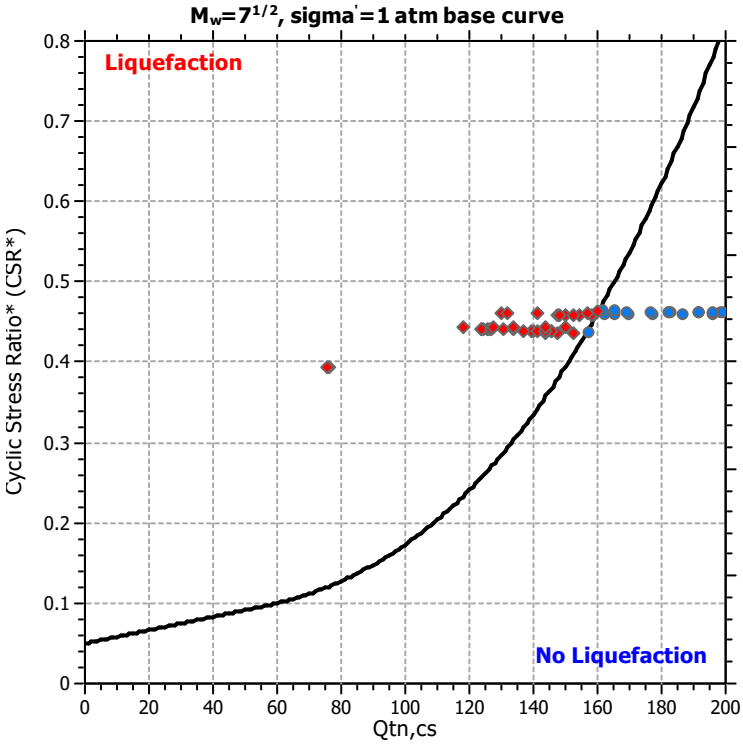
Project title : Intracorp Diamond Bar Montefino **Location : 1400 Montefino Avenue, Diamond Bar, CA**

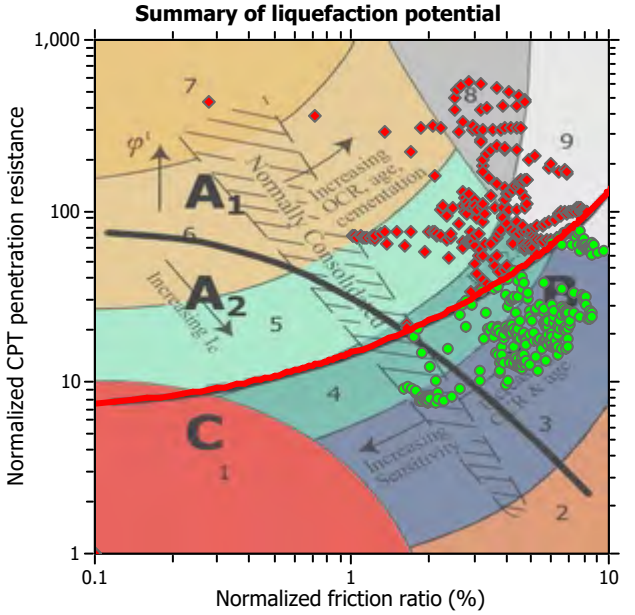
CPT file : CPT-2

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	25.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	20.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	45.00 ft
Earthquake magnitude M_w:	6.11	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.95	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

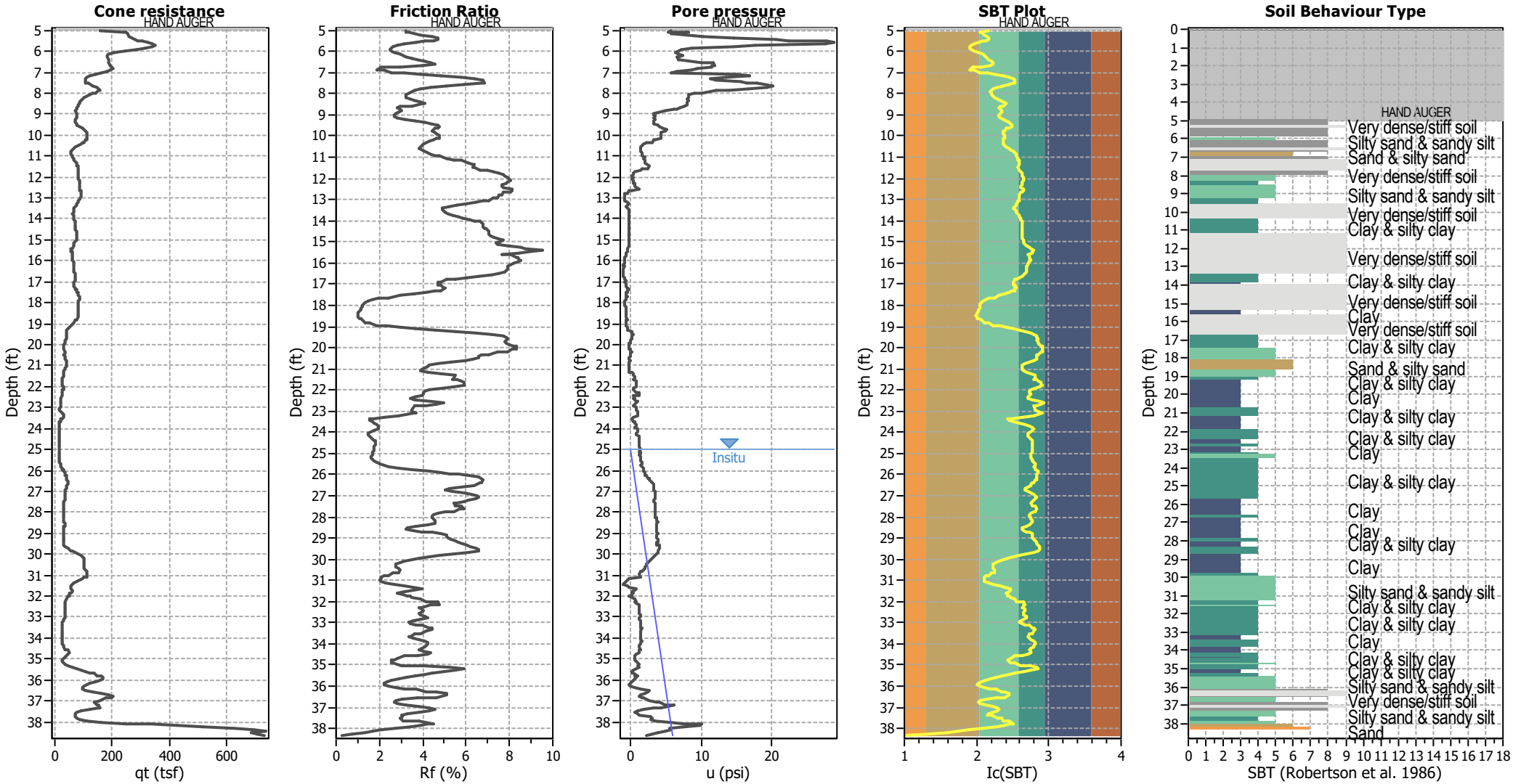






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



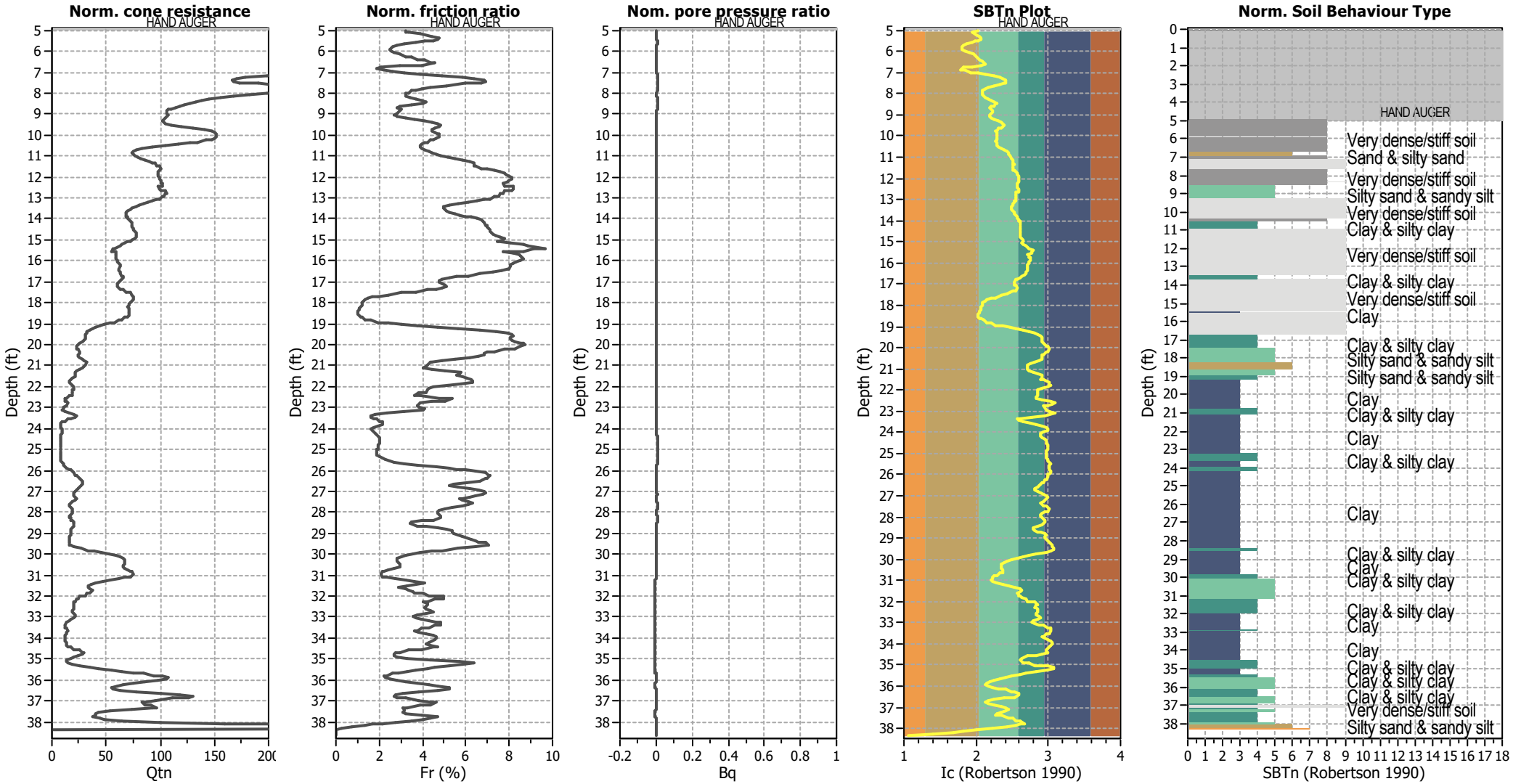
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	25.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



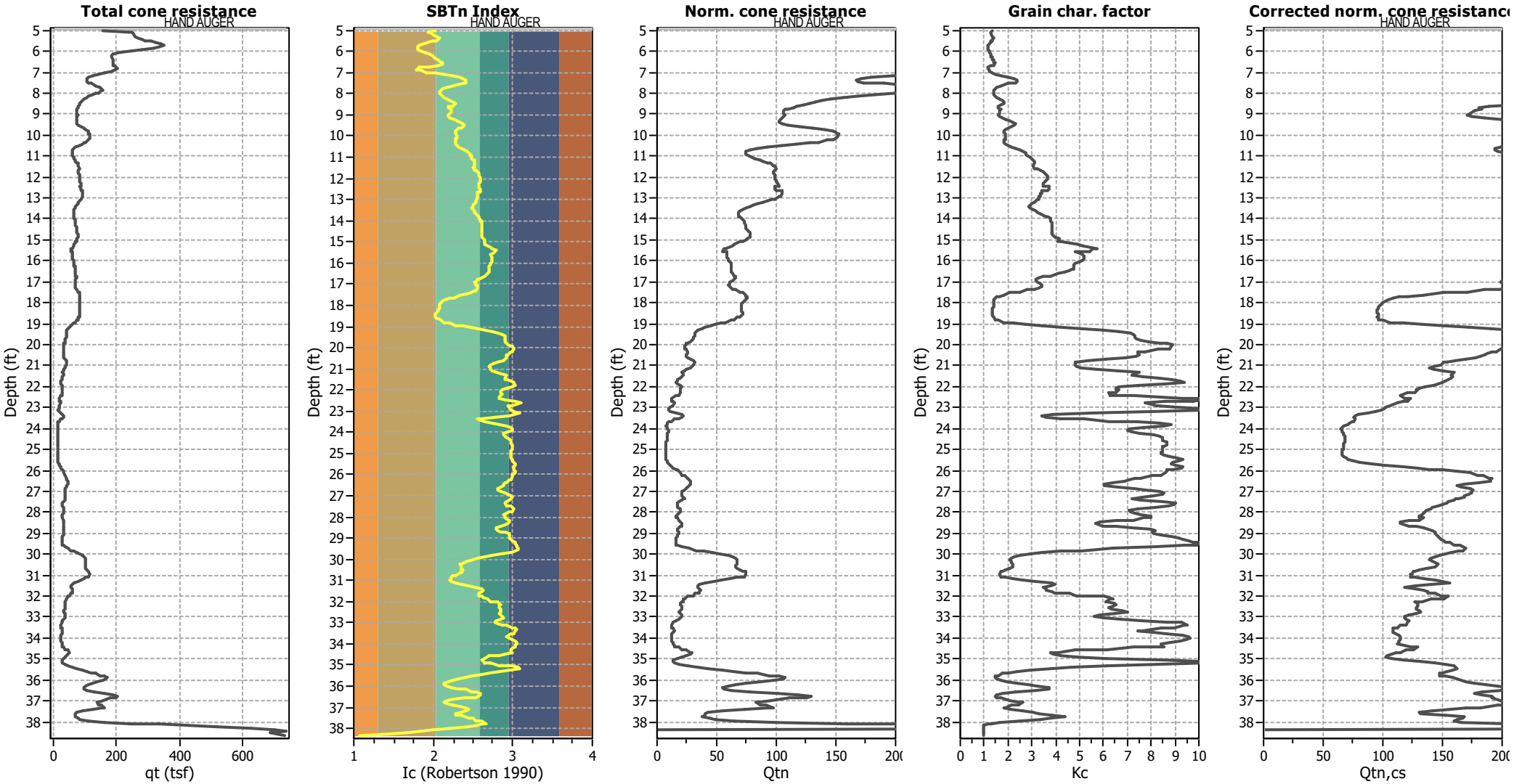
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	25.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

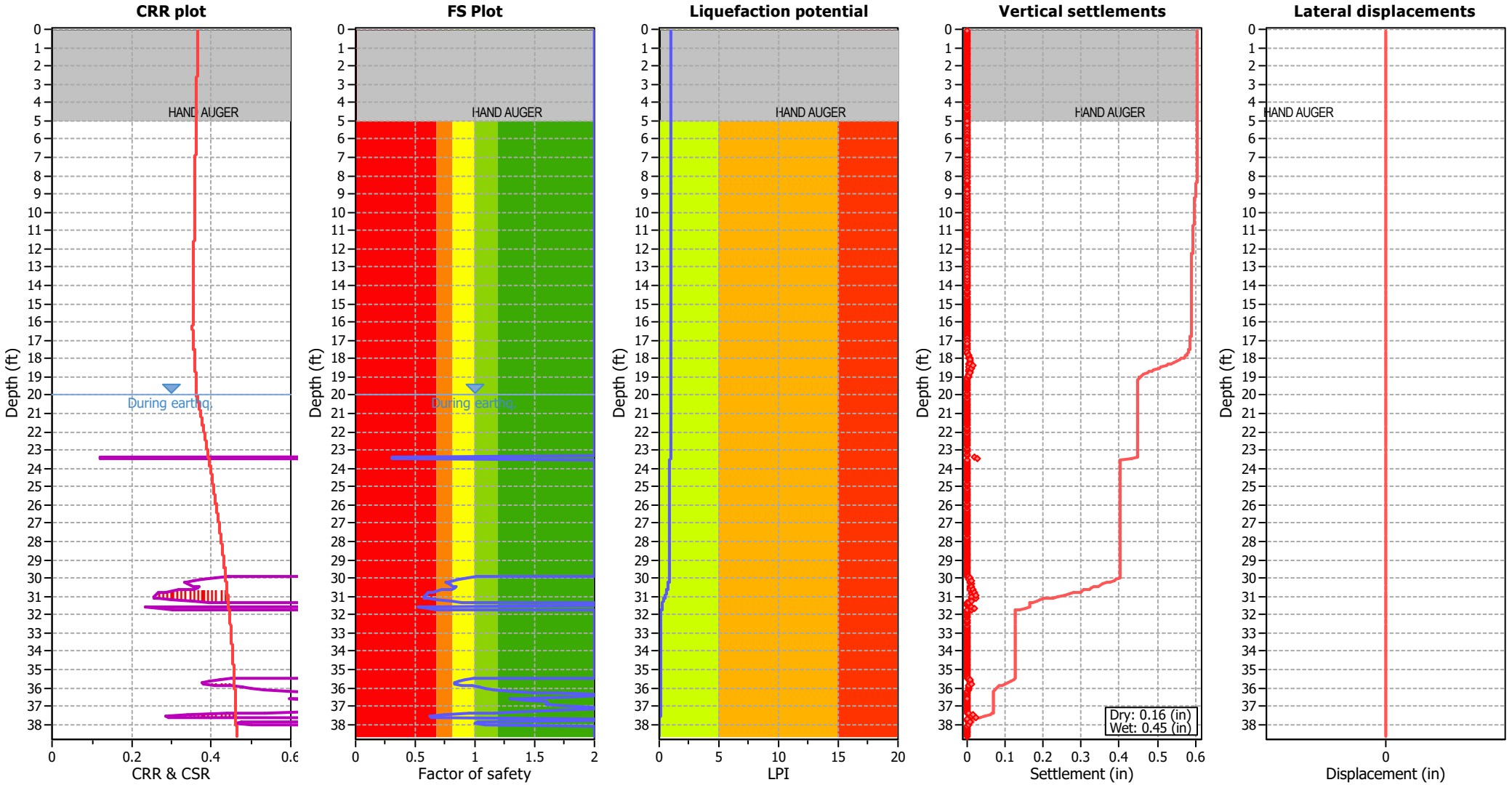
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	25.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	25.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

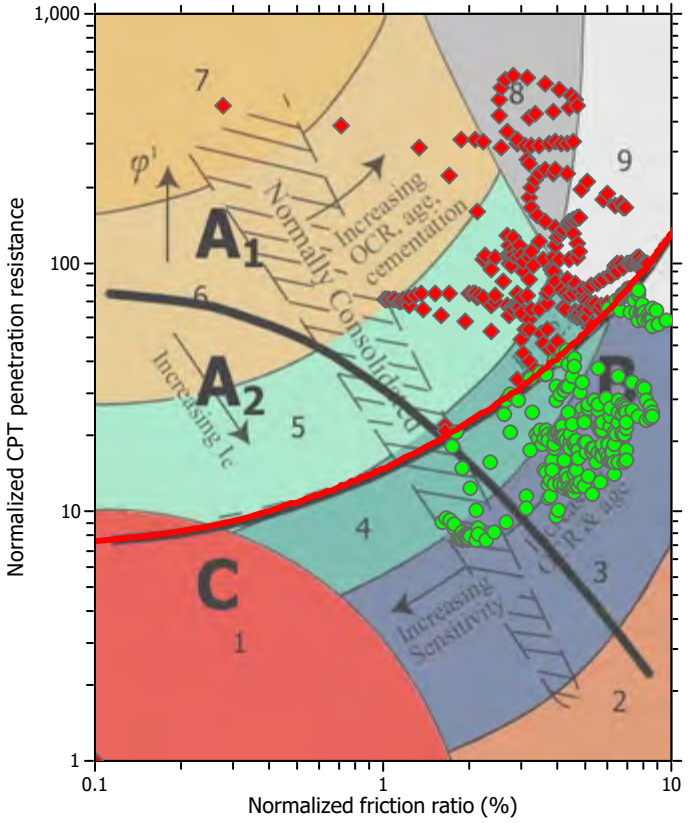
F.S. color scheme

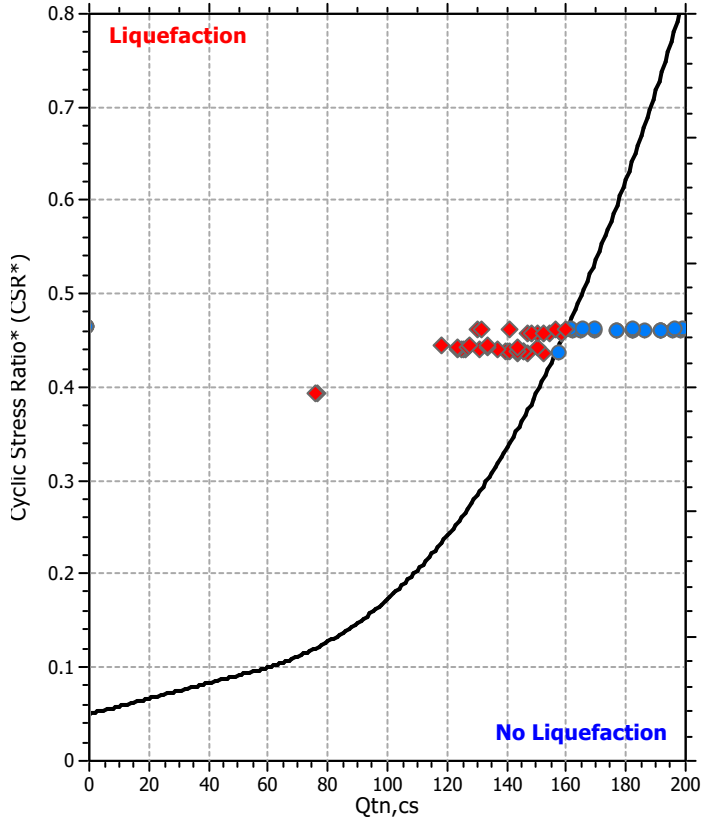
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

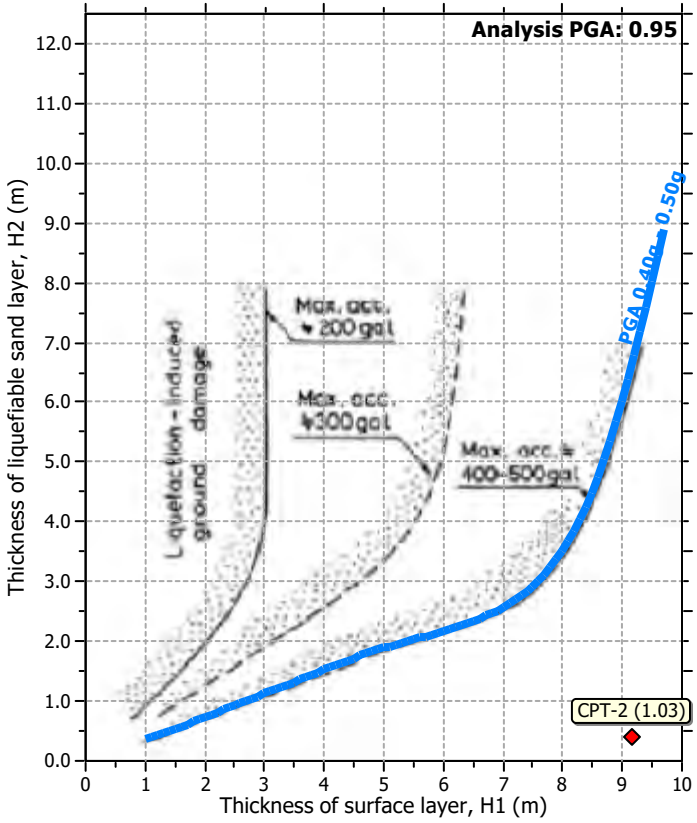
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



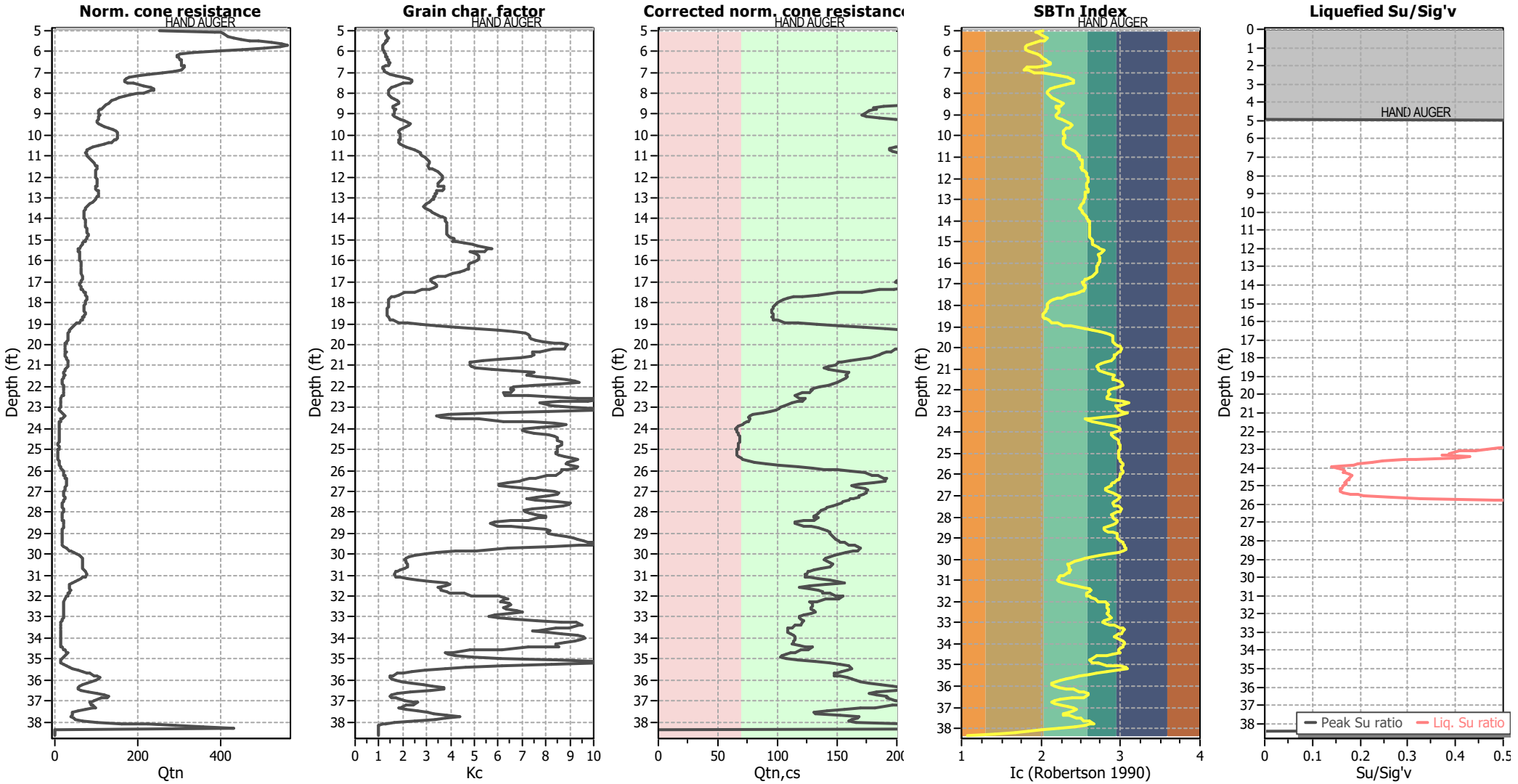




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	25.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	25.00 ft	Fill height:	N/A	Limit depth:	45.00 ft

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.08	-9999.00	-9999.00	-9999.00	N/A	120.90
2	0.13	-9999.00	-9999.00	-9999.00	N/A	120.90
3	0.22	-9999.00	-9999.00	-9999.00	N/A	120.90
4	0.27	-9999.00	-9999.00	-9999.00	N/A	120.90
5	0.34	-9999.00	-9999.00	-9999.00	N/A	120.90
6	0.41	-9999.00	-9999.00	-9999.00	N/A	120.90
7	0.51	-9999.00	-9999.00	-9999.00	N/A	120.90
8	0.55	-9999.00	-9999.00	-9999.00	N/A	120.90
9	0.60	-9999.00	-9999.00	-9999.00	N/A	120.90
10	0.68	-9999.00	-9999.00	-9999.00	N/A	120.90
11	0.74	-9999.00	-9999.00	-9999.00	N/A	120.90
12	0.83	-9999.00	-9999.00	-9999.00	N/A	120.90
13	0.87	-9999.00	-9999.00	-9999.00	N/A	120.90
14	0.92	-9999.00	-9999.00	-9999.00	N/A	120.90
15	1.01	-9999.00	-9999.00	-9999.00	N/A	120.90
16	1.06	-9999.00	-9999.00	-9999.00	N/A	120.90
17	1.15	-9999.00	-9999.00	-9999.00	N/A	120.90
18	1.18	-9999.00	-9999.00	-9999.00	N/A	120.90
19	1.25	-9999.00	-9999.00	-9999.00	N/A	120.90
20	1.34	-9999.00	-9999.00	-9999.00	N/A	120.90
21	1.38	-9999.00	-9999.00	-9999.00	N/A	120.90
22	1.47	-9999.00	-9999.00	-9999.00	N/A	120.90
23	1.52	-9999.00	-9999.00	-9999.00	N/A	120.90
24	1.60	-9999.00	-9999.00	-9999.00	N/A	120.90
25	1.66	-9999.00	-9999.00	-9999.00	N/A	120.90
26	1.75	-9999.00	-9999.00	-9999.00	N/A	120.90
27	1.79	-9999.00	-9999.00	-9999.00	N/A	120.90
28	1.84	-9999.00	-9999.00	-9999.00	N/A	120.90
29	1.92	-9999.00	-9999.00	-9999.00	N/A	120.90
30	1.99	-9999.00	-9999.00	-9999.00	N/A	120.90
31	2.07	-9999.00	-9999.00	-9999.00	N/A	120.90
32	2.12	-9999.00	-9999.00	-9999.00	N/A	120.90
33	2.17	-9999.00	-9999.00	-9999.00	N/A	120.90
34	2.23	-9999.00	-9999.00	-9999.00	N/A	120.90
35	2.31	-9999.00	-9999.00	-9999.00	N/A	120.90
36	2.40	-9999.00	-9999.00	-9999.00	N/A	120.90
37	2.45	-9999.00	-9999.00	-9999.00	N/A	120.90
38	2.50	-9999.00	-9999.00	-9999.00	N/A	120.90
39	2.58	-9999.00	-9999.00	-9999.00	N/A	120.90
40	2.63	-9999.00	-9999.00	-9999.00	N/A	120.90
41	2.73	-9999.00	-9999.00	-9999.00	N/A	120.90
42	2.77	-9999.00	-9999.00	-9999.00	N/A	120.90
43	2.86	-9999.00	-9999.00	-9999.00	N/A	120.90
44	2.91	-9999.00	-9999.00	-9999.00	N/A	120.90
45	2.96	-9999.00	-9999.00	-9999.00	N/A	120.90
46	3.05	-9999.00	-9999.00	-9999.00	N/A	120.90
47	3.09	-9999.00	-9999.00	-9999.00	N/A	120.90
48	3.18	-9999.00	-9999.00	-9999.00	N/A	120.90

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.23	-9999.00	-9999.00	-9999.00	N/A	120.90
50	3.30	-9999.00	-9999.00	-9999.00	N/A	120.90
51	3.36	-9999.00	-9999.00	-9999.00	N/A	120.90
52	3.42	-9999.00	-9999.00	-9999.00	N/A	120.90
53	3.51	-9999.00	-9999.00	-9999.00	N/A	120.90
54	3.55	-9999.00	-9999.00	-9999.00	N/A	120.90
55	3.65	-9999.00	-9999.00	-9999.00	N/A	120.90
56	3.69	-9999.00	-9999.00	-9999.00	N/A	120.90
57	3.74	-9999.00	-9999.00	-9999.00	N/A	120.90
58	3.83	-9999.00	-9999.00	-9999.00	N/A	120.90
59	3.88	-9999.00	-9999.00	-9999.00	N/A	120.90
60	3.97	-9999.00	-9999.00	-9999.00	N/A	120.90
61	4.01	-9999.00	-9999.00	-9999.00	N/A	120.90
62	4.11	-9999.00	-9999.00	-9999.00	N/A	120.90
63	4.15	-9999.00	-9999.00	-9999.00	N/A	120.90
64	4.20	-9999.00	-9999.00	-9999.00	N/A	120.90
65	4.29	-9999.00	-9999.00	-9999.00	N/A	120.90
66	4.33	-9999.00	-9999.00	-9999.00	N/A	120.90
67	4.42	-9999.00	-9999.00	-9999.00	N/A	120.90
68	4.47	-9999.00	-9999.00	-9999.00	N/A	120.90
69	4.53	-9999.00	-9999.00	-9999.00	N/A	120.90
70	4.61	-9999.00	-9999.00	-9999.00	N/A	120.90
71	4.70	-9999.00	-9999.00	-9999.00	N/A	120.90
72	4.75	-9999.00	-9999.00	-9999.00	N/A	120.90
73	4.80	-9999.00	-9999.00	-9999.00	N/A	120.90
74	4.89	-9999.00	-9999.00	-9999.00	N/A	120.90
75	4.93	-9999.00	-9999.00	-9999.00	N/A	120.90
76	5.02	225.45	7.44	5.63	13.76	134.40
77	5.07	245.39	7.60	5.26	11.33	137.28
78	5.12	249.35	7.96	8.26	11.67	137.28
79	5.19	253.31	9.65	5.81	13.06	137.28
80	5.29	258.25	11.97	10.25	14.33	137.28
81	5.34	266.27	12.70	14.61	14.97	137.28
82	5.41	279.04	13.38	20.51	14.62	137.28
83	5.47	291.62	13.07	22.50	13.88	137.28
84	5.52	305.41	12.72	27.86	12.71	137.28
85	5.59	322.47	11.93	28.85	11.30	137.28
86	5.64	346.05	11.09	27.67	9.71	137.28
87	5.74	356.39	9.59	17.69	8.55	137.28
88	5.79	347.07	9.00	14.52	8.10	137.28
89	5.85	313.05	8.29	8.71	8.10	137.28
90	5.92	287.42	6.95	7.08	8.40	137.28
91	5.98	248.00	6.07	6.80	9.14	136.96
92	6.07	193.57	5.43	6.35	10.51	135.96
93	6.11	183.60	5.43	6.76	11.86	135.49
94	6.21	183.65	5.60	7.35	12.44	135.67
95	6.25	183.65	5.96	6.71	12.96	136.06
96	6.30	183.69	6.34	6.62	13.68	136.71

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.38	189.57	7.21	6.80	14.45	137.28
98	6.44	188.63	7.70	6.99	15.34	137.28
99	6.53	189.94	8.50	10.16	16.05	137.28
100	6.58	188.73	8.66	11.80	16.47	137.28
101	6.67	189.47	8.66	11.89	14.86	137.28
102	6.71	193.95	5.36	11.43	11.65	135.86
103	6.76	198.89	3.09	11.52	8.56	133.51
104	6.85	202.80	3.87	9.35	7.76	132.86
105	6.90	201.68	4.26	8.62	9.23	133.84
106	6.99	180.90	4.83	6.53	10.87	134.35
107	7.03	166.73	5.09	5.81	13.44	134.68
108	7.09	140.36	5.51	14.97	16.65	134.93
109	7.18	119.48	6.10	16.79	20.34	135.14
110	7.23	110.81	6.41	13.52	23.60	135.45
111	7.32	104.38	6.94	11.25	25.40	135.69
112	7.37	104.29	7.07	12.16	26.53	135.95
113	7.46	104.20	7.28	15.61	26.62	136.09
114	7.49	106.43	7.30	16.42	25.93	136.19
115	7.55	114.17	7.17	17.88	23.37	136.22
116	7.65	135.60	6.69	20.14	20.46	136.18
117	7.69	147.16	6.44	19.42	17.83	135.98
118	7.78	155.92	5.96	16.61	16.41	135.69
119	7.83	157.13	5.67	13.88	15.58	135.29
120	7.88	153.31	5.40	12.16	15.25	134.65
121	7.97	143.43	4.68	10.16	15.39	133.88
122	8.01	131.78	4.37	9.07	15.50	132.82
123	8.10	121.72	3.77	8.26	16.05	131.99
124	8.15	112.96	3.62	8.17	16.78	131.21
125	8.24	101.96	3.48	8.26	18.03	130.85
126	8.29	96.37	3.52	8.08	19.44	130.65
127	8.38	91.15	3.59	8.26	20.72	130.63
128	8.43	87.14	3.63	8.08	21.75	130.64
129	8.47	85.74	3.68	7.99	21.71	130.05
130	8.56	81.83	2.87	7.89	20.36	128.80
131	8.61	81.27	2.10	7.53	18.93	127.36
132	8.67	78.57	2.21	6.99	18.54	126.68
133	8.75	76.05	2.28	6.53	19.55	126.78
134	8.80	73.16	2.27	6.17	19.93	126.66
135	8.87	73.67	2.15	4.99	19.75	126.37
136	8.96	74.19	2.04	3.27	19.15	126.13
137	9.01	76.24	2.03	3.36	18.75	126.00
138	9.07	76.24	2.03	3.27	18.78	126.12
139	9.14	75.86	2.12	3.36	19.31	126.36
140	9.19	75.02	2.25	3.27	20.84	127.10
141	9.29	72.51	2.74	3.36	22.47	127.82
142	9.33	72.04	2.90	3.27	24.14	128.63
143	9.42	72.69	3.21	3.18	25.13	129.22
144	9.47	73.44	3.47	3.27	25.75	129.93

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.55	77.45	3.78	3.81	25.56	130.63
146	9.61	85.28	4.05	4.08	24.51	131.34
147	9.66	94.69	4.28	4.45	23.15	132.04
148	9.74	104.10	4.57	5.17	22.09	132.67
149	9.79	110.35	4.81	4.81	21.67	133.18
150	9.85	111.09	5.01	4.36	21.81	133.60
151	9.93	112.21	5.31	4.36	22.13	133.91
152	9.98	113.89	5.42	4.36	22.33	134.11
153	10.11	113.33	5.40	4.36	22.33	134.13
154	10.13	113.80	5.33	4.36	22.11	133.94
155	10.21	112.68	5.01	3.54	21.88	133.61
156	10.25	109.41	4.77	3.18	21.67	133.00
157	10.34	103.54	4.27	2.99	21.80	132.32
158	10.39	97.39	3.97	2.18	21.83	131.56
159	10.44	94.32	3.68	1.72	22.37	130.56
160	10.52	79.50	3.05	1.54	23.21	129.38
161	10.57	70.37	2.71	1.36	24.61	128.08
162	10.65	64.03	2.50	1.45	25.95	127.30
163	10.71	60.11	2.44	1.45	27.24	126.88
164	10.81	57.41	2.46	1.45	28.26	126.82
165	10.84	57.69	2.52	1.54	28.91	126.99
166	10.90	58.25	2.64	1.54	29.27	127.35
167	10.96	59.46	2.81	1.63	29.66	127.93
168	11.04	62.16	3.11	2.00	30.25	128.85
169	11.13	65.80	3.65	1.72	30.80	129.70
170	11.17	66.92	3.86	2.00	31.15	130.61
171	11.25	71.76	4.32	1.91	31.50	131.40
172	11.32	74.65	4.82	2.00	31.63	132.05
173	11.36	75.58	4.88	1.91	31.40	132.38
174	11.45	78.47	4.82	2.54	31.10	132.59
175	11.50	80.52	5.12	2.54	31.06	132.95
176	11.59	81.83	5.49	2.36	31.59	133.38
177	11.64	81.92	5.67	1.63	32.28	133.69
178	11.69	80.66	5.82	1.36	33.10	133.90
179	11.77	79.50	6.04	0.55	33.79	134.10
180	11.83	80.62	6.19	0.27	34.26	134.30
181	11.90	80.99	6.32	0.27	34.43	134.49
182	11.97	81.74	6.47	0.09	34.67	134.65
183	12.02	82.01	6.58	0.27	34.82	134.83
184	12.10	83.13	6.73	0.09	34.82	134.94
185	12.15	84.07	6.72	0.27	34.51	134.97
186	12.22	85.00	6.57	0.45	34.21	134.96
187	12.29	85.56	6.63	0.45	33.84	134.91
188	12.34	86.39	6.52	0.64	33.77	134.99
189	12.42	87.33	6.74	0.64	33.75	135.10
190	12.48	87.98	6.86	0.64	35.06	135.18
191	12.58	78.38	6.98	1.09	35.08	135.30
192	12.62	89.84	7.01	0.09	34.81	135.40

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.67	91.89	7.03	-0.18	33.42	135.55
194	12.76	92.45	7.06	-0.45	33.24	135.59
195	12.81	92.45	7.03	-0.82	33.08	135.52
196	12.90	92.27	6.83	-0.82	32.99	135.36
197	12.95	90.78	6.65	-0.82	32.78	135.04
198	13.03	88.54	6.23	-0.82	32.67	134.60
199	13.08	85.93	5.85	-0.91	32.32	134.05
200	13.13	84.34	5.44	-0.91	31.93	133.33
201	13.22	79.68	4.76	-0.54	31.53	132.54
202	13.27	76.89	4.39	-0.36	30.83	131.52
203	13.36	74.09	3.72	-0.54	30.30	130.65
204	13.41	71.30	3.46	-0.64	29.99	129.86
205	13.45	68.41	3.34	-0.54	30.46	129.44
206	13.55	65.80	3.27	-0.27	31.10	129.25
207	13.59	65.24	3.29	-0.18	31.72	129.16
208	13.68	63.75	3.30	-0.18	32.31	129.21
209	13.73	63.37	3.39	-0.18	33.08	129.43
210	13.82	63.65	3.62	-0.18	33.79	129.76
211	13.87	64.03	3.76	-0.18	34.35	130.14
212	13.92	65.05	3.93	-0.18	34.95	130.62
213	14.00	66.45	4.34	-0.18	35.36	131.11
214	14.05	68.13	4.50	-0.18	35.69	131.57
215	14.12	69.34	4.67	-0.18	35.67	131.82
216	14.18	70.09	4.72	-0.18	35.69	132.03
217	14.28	71.11	4.84	-0.18	35.75	132.16
218	14.33	71.30	4.89	-0.18	35.84	132.29
219	14.37	71.39	4.93	-0.27	35.94	132.42
220	14.46	72.51	5.07	-0.18	36.02	132.56
221	14.51	73.25	5.14	-0.27	35.97	132.76
222	14.60	74.74	5.27	-0.18	35.85	132.94
223	14.65	76.24	5.36	-0.27	35.74	133.15
224	14.70	77.17	5.50	-0.27	35.81	133.33
225	14.78	77.35	5.63	-0.27	36.09	133.50
226	14.84	77.26	5.71	-0.27	36.68	133.64
227	14.93	75.77	5.86	-0.27	37.48	133.73
228	14.99	74.09	5.93	-0.27	37.57	133.41
229	15.06	72.32	5.08	-0.27	37.34	132.97
230	15.11	71.30	4.99	-0.27	37.97	132.75
231	15.18	67.57	5.61	-0.27	39.67	132.91
232	15.25	65.43	5.62	-0.18	41.53	133.11
233	15.30	64.49	5.62	-0.36	42.39	133.06
234	15.39	62.91	5.62	-0.41	45.35	132.84
235	15.43	49.86	5.59	-0.45	44.59	132.16
236	15.53	60.21	4.25	-0.45	43.92	131.63
237	15.57	60.30	4.61	-0.54	41.02	131.45
238	15.62	60.77	4.95	-0.73	41.97	131.88
239	15.71	60.95	5.07	-0.64	42.53	132.15
240	15.75	61.23	5.14	-0.77	42.75	132.30

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.85	61.70	5.24	-0.82	42.87	132.42
242	15.88	62.12	5.29	-0.82	42.84	132.51
243	15.96	62.54	5.30	-0.82	42.47	132.57
244	16.01	64.49	5.29	-0.82	41.79	132.62
245	16.11	66.26	5.29	-0.82	41.12	132.68
246	16.15	66.82	5.29	-1.00	40.75	132.70
247	16.24	66.92	5.29	-1.00	40.72	132.72
248	16.29	66.92	5.30	-0.91	40.74	132.72
249	16.38	66.92	5.29	-1.00	40.71	132.68
250	16.43	66.92	5.21	-1.00	40.51	132.59
251	16.47	67.10	5.12	-1.00	39.89	132.41
252	16.56	67.94	4.87	-1.00	38.90	132.13
253	16.61	68.87	4.59	-1.00	37.24	131.68
254	16.71	70.64	4.17	-1.00	35.55	131.20
255	16.75	71.76	3.93	-1.09	33.93	130.70
256	16.80	72.14	3.69	-0.91	32.82	130.23
257	16.89	71.39	3.41	-0.82	32.09	129.73
258	16.94	70.18	3.24	-0.73	31.91	129.28
259	17.03	67.66	3.14	-0.82	32.22	129.06
260	17.06	67.01	3.18	-0.64	32.94	129.12
261	17.16	66.82	3.38	-0.64	33.50	129.33
262	17.21	67.29	3.42	-0.64	33.48	129.51
263	17.30	69.62	3.40	-0.45	32.70	129.52
264	17.35	71.95	3.31	-0.36	31.50	129.40
265	17.40	73.35	3.15	-0.45	29.48	129.04
266	17.49	78.66	2.80	-0.45	27.24	128.51
267	17.53	81.36	2.54	-0.64	24.08	127.44
268	17.63	83.97	1.89	-0.73	21.44	126.18
269	17.68	84.72	1.61	-0.54	19.03	124.77
270	17.72	85.18	1.46	-0.73	17.47	123.70
271	17.81	85.56	1.21	-0.73	16.39	122.84
272	17.86	85.18	1.13	-0.73	15.50	121.98
273	17.95	83.79	1.05	-0.82	15.28	121.53
274	18.00	82.57	1.02	-0.82	15.13	121.10
275	18.08	81.36	0.96	-0.82	15.13	120.79
276	18.14	80.15	0.93	-0.91	14.96	120.52
277	18.20	81.32	0.92	-0.73	14.80	120.31
278	18.27	80.80	0.89	-0.73	14.47	120.07
279	18.31	81.27	0.84	-0.73	14.09	119.75
280	18.41	82.01	0.80	-0.73	13.78	119.57
281	18.45	82.67	0.82	-0.73	13.70	119.62
282	18.55	83.23	0.85	-0.64	13.86	119.84
283	18.59	83.13	0.87	-0.67	14.25	120.07
284	18.66	80.99	0.91	-0.67	14.83	120.25
285	18.70	78.85	0.94	-0.67	15.82	120.63
286	18.80	76.89	1.04	-0.45	17.08	121.06
287	18.84	73.44	1.11	-0.73	18.98	121.75
288	18.93	69.06	1.29	-0.73	21.59	122.45

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.98	63.47	1.47	-0.64	24.99	123.34
290	19.04	58.81	1.72	-0.64	28.95	124.22
291	19.12	54.33	2.00	-0.73	33.23	125.03
292	19.16	49.67	2.24	-0.54	37.91	125.82
293	19.24	45.85	2.58	-0.54	42.37	126.42
294	19.31	43.24	2.78	-0.45	46.62	126.97
295	19.39	40.63	3.02	0.09	49.53	127.30
296	19.44	40.17	3.10	0.18	51.59	127.53
297	19.53	39.52	3.15	0.27	52.29	127.60
298	19.58	39.52	3.14	0.09	52.48	127.60
299	19.63	39.80	3.10	0.09	52.41	127.48
300	19.71	38.96	3.02	0.09	52.70	127.29
301	19.77	37.75	2.95	0.00	53.50	127.03
302	19.86	36.25	2.88	-0.09	54.74	126.80
303	19.90	34.76	2.84	-0.09	56.71	126.55
304	19.95	32.90	2.80	-0.18	57.98	126.27
305	20.03	32.06	2.66	-0.18	58.86	125.96
306	20.08	31.50	2.59	-0.18	58.77	125.62
307	20.18	31.31	2.48	-0.18	58.43	125.40
308	20.22	31.69	2.44	-0.09	56.61	125.21
309	20.32	34.11	2.34	-0.09	54.34	125.10
310	20.36	34.58	2.29	0.09	53.05	124.93
311	20.43	33.46	2.23	0.00	53.06	124.68
312	20.50	32.81	2.14	0.00	53.37	124.42
313	20.55	32.62	2.10	0.00	52.64	124.23
314	20.63	34.02	2.05	-0.18	50.82	124.14
315	20.69	36.35	1.99	-0.18	47.01	124.03
316	20.78	41.10	1.86	-0.09	43.71	123.89
317	20.82	42.13	1.80	-0.18	41.31	123.69
318	20.87	42.22	1.75	-0.18	40.91	123.52
319	20.95	41.29	1.73	-0.27	41.02	123.16
320	21.01	39.52	1.59	-0.27	41.43	122.46
321	21.10	36.44	1.35	-0.27	42.14	121.80
322	21.14	35.42	1.41	-0.27	45.36	121.52
323	21.24	29.82	1.55	-0.27	49.32	121.76
324	21.29	29.17	1.61	-0.27	53.35	121.95
325	21.33	28.61	1.64	0.12	53.12	122.14
326	21.41	31.22	1.65	0.27	52.57	122.21
327	21.48	30.66	1.63	0.45	51.96	122.21
328	21.53	29.92	1.62	0.55	53.72	122.05
329	21.61	27.21	1.62	0.55	56.40	121.78
330	21.67	25.91	1.54	0.45	58.80	121.27
331	21.76	23.95	1.41	0.82	60.07	120.80
332	21.81	23.58	1.40	0.82	60.81	120.49
333	21.86	23.77	1.40	0.82	57.73	120.50
334	21.95	28.52	1.33	0.82	53.27	120.43
335	21.99	29.54	1.26	0.73	49.61	120.05
336	22.09	28.71	1.13	0.27	49.02	119.60

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.13	27.77	1.12	0.27	49.14	119.29
338	22.18	28.01	1.13	0.27	49.61	119.24
339	22.27	27.68	1.12	0.82	49.08	119.09
340	22.32	28.24	1.05	1.27	47.72	118.40
341	22.40	27.59	0.84	1.09	47.87	117.56
342	22.45	24.05	0.83	0.36	52.20	116.77
343	22.55	18.36	0.88	0.55	60.52	116.56
344	22.59	17.15	0.90	0.45	65.09	116.65
345	22.69	19.39	0.94	0.82	62.16	116.80
346	22.73	21.99	0.88	1.00	57.80	116.78
347	22.78	22.37	0.82	0.73	54.21	116.07
348	22.91	20.88	0.67	0.36	56.28	115.13
349	23.00	17.61	0.64	0.73	59.36	114.09
350	23.05	16.03	0.61	0.82	63.33	113.38
351	23.10	15.28	0.56	0.73	64.40	112.83
352	23.20	15.47	0.53	0.91	55.80	112.91
353	23.29	24.88	0.53	0.91	44.74	113.28
354	23.33	30.38	0.51	0.91	36.11	113.73
355	23.38	34.58	0.51	0.91	33.54	113.66
356	23.46	31.31	0.48	0.45	34.55	113.15
357	23.52	25.63	0.44	0.18	37.94	112.30
358	23.56	23.39	0.40	0.18	42.96	111.06
359	23.65	17.99	0.34	0.36	47.54	109.86
360	23.70	15.84	0.31	0.55	52.82	108.45
361	23.78	14.26	0.27	0.64	56.85	107.51
362	23.83	13.33	0.26	0.73	58.62	106.85
363	23.89	13.23	0.26	0.73	57.52	106.11
364	23.97	13.98	0.20	0.64	54.05	105.70
365	24.02	14.82	0.21	0.91	51.54	105.52
366	24.11	15.19	0.23	0.91	51.28	106.02
367	24.16	15.19	0.24	0.91	52.05	106.19
368	24.25	14.45	0.23	0.82	53.18	106.18
369	24.29	14.21	0.23	0.73	55.82	106.25
370	24.37	13.89	0.25	1.09	56.88	106.47
371	24.41	13.98	0.26	1.09	57.20	106.64
372	24.50	14.26	0.25	1.09	57.21	106.66
373	24.56	13.98	0.25	1.27	57.31	106.57
374	24.62	13.79	0.25	1.27	57.93	106.46
375	24.69	13.61	0.24	1.27	58.11	106.29
376	24.79	13.61	0.24	1.27	57.93	106.22
377	24.84	13.89	0.24	1.27	57.54	106.22
378	24.88	13.98	0.24	1.27	57.20	106.25
379	24.97	13.98	0.24	1.36	57.26	106.17
380	25.01	13.79	0.23	1.27	57.29	106.00
381	25.11	13.70	0.23	1.36	57.24	105.90
382	25.16	13.89	0.23	1.27	57.02	105.83
383	25.20	13.89	0.23	1.36	57.09	105.80
384	25.30	13.61	0.23	1.27	57.61	105.87

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.34	13.61	0.23	1.36	58.56	106.16
386	25.42	13.61	0.26	1.45	59.70	106.70
387	25.48	13.61	0.28	1.45	60.55	107.31
388	25.53	13.98	0.30	1.45	60.02	108.47
389	25.61	16.12	0.38	1.54	58.95	110.00
390	25.66	17.61	0.47	1.54	58.75	112.43
391	25.75	19.67	0.69	1.45	59.51	114.67
392	25.80	21.16	0.87	1.63	60.60	117.18
393	25.89	23.77	1.21	1.72	60.44	119.07
394	25.94	26.37	1.39	1.72	58.91	120.71
395	25.98	29.82	1.58	1.72	58.10	122.15
396	26.06	31.50	1.96	1.72	57.92	123.43
397	26.12	32.99	2.20	1.91	57.86	124.68
398	26.21	36.63	2.49	2.09	57.06	125.47
399	26.25	37.84	2.58	2.18	55.65	126.15
400	26.35	40.45	2.73	2.45	53.51	126.52
401	26.40	42.03	2.76	2.72	52.43	126.80
402	26.45	42.59	2.79	2.72	51.51	126.94
403	26.54	43.90	2.81	2.90	50.64	127.01
404	26.58	45.02	2.78	2.99	48.57	126.47
405	26.68	44.46	2.15	3.18	46.71	125.64
406	26.72	43.24	1.99	3.18	46.85	124.99
407	26.82	39.98	2.27	3.18	49.24	125.03
408	26.86	38.30	2.29	3.27	52.11	125.25
409	26.90	37.56	2.30	3.27	54.15	125.24
410	27.00	35.23	2.36	3.36	56.86	125.21
411	27.04	34.30	2.35	3.36	57.56	125.07
412	27.13	35.32	2.22	3.45	57.16	124.88
413	27.18	35.04	2.18	3.45	55.71	124.70
414	27.27	36.44	2.14	3.45	53.76	124.55
415	27.32	36.63	2.06	3.45	52.09	124.37
416	27.37	37.75	1.98	3.45	51.91	124.06
417	27.45	35.04	1.91	3.27	53.50	123.68
418	27.50	31.04	1.86	3.27	57.21	123.20
419	27.59	29.73	1.76	3.36	59.46	122.75
420	27.64	28.71	1.70	3.36	59.24	122.30
421	27.73	29.36	1.58	3.45	58.25	122.01
422	27.76	30.20	1.55	3.36	55.95	121.79
423	27.82	31.87	1.50	3.54	52.86	121.60
424	27.92	32.34	1.41	3.36	51.48	121.40
425	27.96	31.97	1.41	3.36	51.64	121.10
426	28.05	30.10	1.35	3.36	52.54	120.84
427	28.10	29.45	1.31	3.36	53.59	120.59
428	28.16	28.89	1.31	3.45	55.28	120.51
429	28.24	28.71	1.33	3.54	55.26	120.55
430	28.29	29.73	1.33	3.72	53.90	120.66
431	28.38	29.92	1.36	3.72	52.17	120.39
432	28.43	30.66	1.15	3.72	49.17	119.69

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.49	32.25	0.95	3.81	46.06	119.17
434	28.56	33.92	1.08	3.72	45.23	119.40
435	28.65	33.74	1.22	3.72	46.67	120.15
436	28.70	32.90	1.29	3.72	49.08	120.64
437	28.75	31.22	1.36	3.72	52.06	121.03
438	28.82	29.73	1.49	3.72	55.25	121.52
439	28.89	31.41	1.60	3.72	56.07	121.99
440	28.95	31.97	1.64	3.72	55.46	122.32
441	29.00	32.62	1.66	3.90	55.77	122.37
442	29.08	31.13	1.64	3.72	57.00	122.29
443	29.14	29.26	1.63	3.72	58.68	122.16
444	29.23	28.98	1.64	3.72	59.99	122.15
445	29.27	28.89	1.68	3.81	60.70	122.29
446	29.34	28.71	1.73	3.81	61.60	122.44
447	29.42	28.24	1.76	3.81	62.35	122.55
448	29.47	28.24	1.77	3.72	63.32	122.85
449	29.54	28.52	1.95	3.72	63.00	123.35
450	29.60	31.13	2.09	3.99	60.97	124.14
451	29.66	35.70	2.26	4.08	56.27	124.96
452	29.73	42.68	2.38	4.17	48.41	125.99
453	29.83	55.08	2.61	3.90	42.15	126.89
454	29.88	64.12	2.70	3.90	37.84	127.60
455	29.93	68.31	2.77	3.90	33.47	128.20
456	30.01	85.65	2.87	3.63	30.29	128.68
457	30.06	91.52	2.91	3.36	27.23	129.02
458	30.15	97.86	2.85	3.18	25.69	129.09
459	30.20	100.84	2.79	3.08	24.53	129.01
460	30.26	101.68	2.73	2.90	24.11	129.04
461	30.34	102.70	2.84	2.72	24.26	129.21
462	30.43	102.61	2.97	2.45	24.57	129.46
463	30.48	103.08	3.01	2.27	24.87	129.61
464	30.52	102.43	3.03	2.18	24.94	129.56
465	30.62	100.93	2.92	2.00	24.83	129.38
466	30.65	101.21	2.81	1.91	23.67	128.90
467	30.75	106.06	2.44	1.81	22.10	128.46
468	30.80	110.35	2.36	1.54	20.67	128.13
469	30.84	112.02	2.39	1.45	19.97	128.09
470	30.94	114.35	2.35	1.27	19.62	128.02
471	30.98	113.61	2.27	1.27	19.48	127.89
472	31.07	111.47	2.27	1.36	20.08	127.86
473	31.12	106.25	2.38	1.36	22.01	127.99
474	31.17	93.29	2.55	-0.27	24.78	128.24
475	31.26	87.23	2.73	-0.54	28.42	128.38
476	31.31	77.08	2.81	-0.73	31.84	128.11
477	31.37	65.05	2.56	-0.91	36.01	127.50
478	31.45	55.64	2.45	-1.09	36.47	125.65
479	31.53	55.64	1.30	-0.45	35.49	124.16
480	31.58	55.64	1.50	-0.27	33.85	123.34

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.66	55.64	1.89	0.73	34.45	124.48
482	31.71	63.47	2.01	0.55	34.49	125.35
483	31.77	63.93	2.08	0.18	35.76	125.44
484	31.82	50.51	2.02	0.41	36.39	125.39
485	31.89	60.21	2.01	0.11	39.63	125.31
486	31.98	49.49	2.18	0.11	41.39	125.41
487	32.03	44.83	2.19	-0.18	46.78	124.96
488	32.12	38.96	1.93	0.55	48.54	124.26
489	32.16	39.80	1.75	0.64	47.98	123.11
490	32.26	38.86	1.42	0.73	47.22	122.20
491	32.31	35.42	1.38	0.64	47.33	121.46
492	32.35	35.28	1.37	0.82	48.78	121.42
493	32.44	35.28	1.44	1.18	49.09	121.48
494	32.49	35.14	1.42	1.27	48.51	121.55
495	32.58	37.00	1.39	1.18	47.74	121.49
496	32.62	36.81	1.39	1.18	48.35	121.45
497	32.71	33.55	1.42	1.18	50.23	121.49
498	32.75	33.09	1.46	1.18	51.22	121.44
499	32.81	34.48	1.39	1.18	48.66	121.33
500	32.91	38.58	1.29	1.45	45.89	121.06
501	32.95	38.21	1.25	1.45	44.94	120.73
502	33.04	34.95	1.21	1.18	46.84	120.36
503	33.09	32.06	1.18	1.27	50.07	119.96
504	33.14	29.26	1.16	1.36	53.65	119.73
505	33.22	27.21	1.20	1.36	58.10	119.56
506	33.28	26.00	1.18	1.36	60.32	119.28
507	33.35	24.70	1.09	1.36	61.28	118.85
508	33.41	24.23	1.04	1.36	60.83	118.27
509	33.50	24.60	0.95	1.45	59.28	117.90
510	33.55	25.63	0.93	1.54	56.97	117.66
511	33.63	26.84	0.91	1.36	53.78	117.64
512	33.69	27.49	0.91	1.36	52.94	117.69
513	33.73	27.21	0.93	1.36	55.71	117.86
514	33.83	25.26	0.99	1.36	58.08	118.02
515	33.87	24.42	1.01	1.36	60.62	118.13
516	33.93	23.95	1.02	1.45	61.56	118.15
517	34.01	24.05	1.02	1.45	61.72	118.17
518	34.05	24.32	1.02	1.45	61.09	118.21
519	34.13	24.98	1.02	1.63	60.06	118.28
520	34.20	25.82	1.02	1.45	58.48	118.38
521	34.29	27.12	1.03	1.36	57.06	118.49
522	34.33	27.68	1.03	1.27	56.97	119.38
523	34.43	29.64	1.37	1.27	57.46	120.20
524	34.46	29.82	1.39	1.27	52.28	121.17
525	34.55	39.42	1.39	1.36	47.49	121.50
526	34.59	41.94	1.39	1.18	40.94	121.91
527	34.68	50.51	1.39	1.18	37.32	122.15
528	34.73	53.59	1.38	1.18	35.47	122.07

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.80	48.56	1.29	0.73	36.13	121.30
530	34.87	42.13	1.05	0.55	38.02	120.14
531	34.91	38.96	0.95	0.55	41.71	118.94
532	35.01	30.57	0.93	0.55	47.18	118.72
533	35.06	28.15	1.10	0.64	57.56	119.22
534	35.11	24.60	1.33	0.82	63.69	120.74
535	35.19	27.21	1.77	1.00	63.99	122.32
536	35.24	34.39	1.98	1.09	56.19	124.29
537	35.33	49.58	2.36	1.00	47.49	125.85
538	35.38	56.94	2.65	1.18	40.20	127.57
539	35.46	76.61	3.09	0.73	35.46	128.84
540	35.51	88.45	3.31	0.45	30.27	130.02
541	35.59	109.32	3.50	0.18	26.52	130.68
542	35.65	121.90	3.48	0.09	23.31	131.10
543	35.70	133.18	3.45	0.36	20.67	131.28
544	35.78	149.58	3.40	0.91	18.58	131.51
545	35.83	161.51	3.48	0.55	17.12	131.90
546	35.90	171.30	3.72	0.73	16.74	132.47
547	35.97	174.47	4.08	0.55	17.85	133.01
548	36.04	155.27	4.39	0.27	19.98	133.29
549	36.11	139.61	4.47	0.09	22.90	133.27
550	36.16	127.12	4.51	0.00	26.41	133.08
551	36.25	104.76	4.62	-0.18	29.90	132.92
552	36.29	99.07	4.70	-0.09	32.47	132.96
553	36.36	104.43	4.92	0.64	35.31	132.94
554	36.43	81.55	4.94	1.45	35.10	133.13
555	36.52	104.10	5.01	2.63	31.94	133.37
556	36.58	135.32	4.90	2.36	26.08	133.72
557	36.62	151.45	4.67	2.00	20.74	134.40
558	36.70	202.80	5.28	1.45	18.01	135.03
559	36.75	211.19	5.47	1.27	16.93	135.68
560	36.83	201.68	5.64	1.54	17.75	135.81
561	36.89	187.61	5.71	1.72	20.42	135.72
562	36.97	149.40	5.87	2.63	24.16	135.65
563	37.03	133.18	6.27	3.63	26.93	135.74
564	37.08	149.68	6.45	4.08	28.13	135.83
565	37.17	135.98	6.29	4.99	26.84	135.81
566	37.21	149.96	5.98	6.08	24.65	135.36
567	37.31	168.69	5.07	4.26	22.04	134.74
568	37.35	160.30	4.63	3.27	21.66	133.66
569	37.41	125.26	4.06	1.72	24.40	131.77
570	37.49	83.60	2.71	0.91	28.07	128.97
571	37.54	70.37	1.76	0.55	31.00	126.66
572	37.63	71.06	2.21	1.00	32.59	126.42
573	37.68	71.06	2.62	1.27	35.77	128.06
574	37.77	71.76	3.40	2.90	38.98	128.91
575	37.80	64.12	3.32	3.08	35.66	129.58
576	37.89	98.04	3.10	2.90	33.07	129.86

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
577	37.94	92.73	3.49	3.36	27.25	131.39
578	38.02	139.43	4.62	5.81	19.66	133.58
579	38.07	255.92	5.17	7.62	12.90	135.85
580	38.13	353.60	5.92	9.98	8.83	137.15
581	38.19	400.75	5.89	9.80	5.74	137.28
582	38.27	527.22	5.17	7.62	1.67	135.07
583	38.34	631.42	0.00	5.54	0.00	129.96
584	38.41	720.33	0.00	5.63	N/A	87.36
585	38.46	745.59	0.00	4.81	N/A	87.36
586	38.52	748.01	0.00	3.81	N/A	87.36
587	38.59	563.29	0.00	2.99	N/A	87.36
588	38.66	815.86	0.00	2.27	N/A	87.36

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.08	0.00	0.00	0.00	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
2	0.13	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
3	0.22	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
4	0.27	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
5	0.34	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
6	0.41	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
7	0.51	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
8	0.55	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
9	0.60	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
10	0.68	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
11	0.74	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
12	0.83	0.05	0.00	0.05	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
13	0.87	0.05	0.00	0.05	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
14	0.92	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
15	1.01	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
16	1.06	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
17	1.15	0.07	0.00	0.07	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
18	1.18	0.07	0.00	0.07	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
19	1.25	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
20	1.34	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
21	1.38	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
22	1.47	0.09	0.00	0.09	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
23	1.52	0.09	0.00	0.09	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
24	1.60	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
25	1.66	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
26	1.75	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
27	1.79	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
28	1.84	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
29	1.92	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
30	1.99	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
31	2.07	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
32	2.12	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
33	2.17	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
34	2.23	0.14	0.00	0.14	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
35	2.31	0.14	0.00	0.14	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
36	2.40	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
37	2.45	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
38	2.50	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
39	2.58	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
40	2.63	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
41	2.73	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
42	2.77	0.17	0.00	0.17	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
43	2.86	0.17	0.00	0.17	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
44	2.91	0.18	0.00	0.18	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
45	2.96	0.18	0.00	0.18	1.00	0.614	1.69	0.364	1.00	1.00	2.000	No
46	3.05	0.18	0.00	0.18	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
47	3.09	0.19	0.00	0.19	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
48	3.18	0.19	0.00	0.19	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.23	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
50	3.30	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
51	3.36	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
52	3.42	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
53	3.51	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
54	3.55	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
55	3.65	0.22	0.00	0.22	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
56	3.69	0.22	0.00	0.22	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
57	3.74	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
58	3.83	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
59	3.88	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
60	3.97	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
61	4.01	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
62	4.11	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
63	4.15	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
64	4.20	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
65	4.29	0.26	0.00	0.26	0.99	0.612	1.69	0.363	1.00	1.00	2.000	No
66	4.33	0.26	0.00	0.26	0.99	0.612	1.69	0.363	1.00	1.00	2.000	No
67	4.42	0.27	0.00	0.27	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
68	4.47	0.27	0.00	0.27	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
69	4.53	0.27	0.00	0.27	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
70	4.61	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
71	4.70	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
72	4.75	0.29	0.00	0.29	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
73	4.80	0.29	0.00	0.29	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
74	4.89	0.30	0.00	0.30	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
75	4.93	0.30	0.00	0.30	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
76	5.02	0.30	0.00	0.30	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
77	5.07	0.31	0.00	0.31	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
78	5.12	0.31	0.00	0.31	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
79	5.19	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
80	5.29	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
81	5.34	0.33	0.00	0.33	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
82	5.41	0.33	0.00	0.33	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
83	5.47	0.34	0.00	0.34	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
84	5.52	0.34	0.00	0.34	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
85	5.59	0.34	0.00	0.34	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
86	5.64	0.35	0.00	0.35	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
87	5.74	0.35	0.00	0.35	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
88	5.79	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
89	5.85	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
90	5.92	0.37	0.00	0.37	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
91	5.98	0.37	0.00	0.37	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
92	6.07	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
93	6.11	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
94	6.21	0.39	0.00	0.39	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
95	6.25	0.39	0.00	0.39	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
96	6.30	0.39	0.00	0.39	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.38	0.40	0.00	0.40	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
98	6.44	0.40	0.00	0.40	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
99	6.53	0.41	0.00	0.41	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
100	6.58	0.41	0.00	0.41	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
101	6.67	0.42	0.00	0.42	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
102	6.71	0.42	0.00	0.42	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
103	6.76	0.42	0.00	0.42	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
104	6.85	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
105	6.90	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
106	6.99	0.44	0.00	0.44	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
107	7.03	0.44	0.00	0.44	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
108	7.09	0.45	0.00	0.45	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
109	7.18	0.45	0.00	0.45	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
110	7.23	0.45	0.00	0.45	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
111	7.32	0.46	0.00	0.46	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
112	7.37	0.46	0.00	0.46	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
113	7.46	0.47	0.00	0.47	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
114	7.49	0.47	0.00	0.47	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
115	7.55	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
116	7.65	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
117	7.69	0.49	0.00	0.49	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
118	7.78	0.49	0.00	0.49	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
119	7.83	0.50	0.00	0.50	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
120	7.88	0.50	0.00	0.50	0.98	0.607	1.69	0.360	1.00	1.00	2.000	No
121	7.97	0.50	0.00	0.50	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
122	8.01	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
123	8.10	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
124	8.15	0.52	0.00	0.52	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
125	8.24	0.52	0.00	0.52	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
126	8.29	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
127	8.38	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
128	8.43	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
129	8.47	0.54	0.00	0.54	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
130	8.56	0.54	0.00	0.54	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
131	8.61	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
132	8.67	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
133	8.75	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
134	8.80	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
135	8.87	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
136	8.96	0.57	0.00	0.57	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
137	9.01	0.57	0.00	0.57	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
138	9.07	0.58	0.00	0.58	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
139	9.14	0.58	0.00	0.58	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
140	9.19	0.58	0.00	0.58	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
141	9.29	0.59	0.00	0.59	0.98	0.606	1.69	0.358	1.00	1.00	2.000	No
142	9.33	0.59	0.00	0.59	0.98	0.606	1.69	0.358	1.00	1.00	2.000	No
143	9.42	0.60	0.00	0.60	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
144	9.47	0.60	0.00	0.60	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.55	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
146	9.61	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
147	9.66	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
148	9.74	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
149	9.79	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
150	9.85	0.63	0.00	0.63	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
151	9.93	0.63	0.00	0.63	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
152	9.98	0.63	0.00	0.63	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
153	10.11	0.64	0.00	0.64	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
154	10.13	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
155	10.21	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
156	10.25	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
157	10.34	0.66	0.00	0.66	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
158	10.39	0.66	0.00	0.66	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
159	10.44	0.67	0.00	0.67	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
160	10.52	0.67	0.00	0.67	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
161	10.57	0.67	0.00	0.67	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
162	10.65	0.68	0.00	0.68	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
163	10.71	0.68	0.00	0.68	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
164	10.81	0.69	0.00	0.69	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
165	10.84	0.69	0.00	0.69	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
166	10.90	0.69	0.00	0.69	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
167	10.96	0.70	0.00	0.70	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
168	11.04	0.70	0.00	0.70	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
169	11.13	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
170	11.17	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
171	11.25	0.72	0.00	0.72	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
172	11.32	0.72	0.00	0.72	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
173	11.36	0.72	0.00	0.72	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
174	11.45	0.73	0.00	0.73	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
175	11.50	0.73	0.00	0.73	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
176	11.59	0.74	0.00	0.74	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
177	11.64	0.74	0.00	0.74	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
178	11.69	0.75	0.00	0.75	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
179	11.77	0.75	0.00	0.75	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
180	11.83	0.76	0.00	0.76	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
181	11.90	0.76	0.00	0.76	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
182	11.97	0.77	0.00	0.77	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
183	12.02	0.77	0.00	0.77	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
184	12.10	0.77	0.00	0.77	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
185	12.15	0.78	0.00	0.78	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
186	12.22	0.78	0.00	0.78	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
187	12.29	0.79	0.00	0.79	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
188	12.34	0.79	0.00	0.79	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
189	12.42	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
190	12.48	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
191	12.58	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
192	12.62	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.67	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
194	12.76	0.82	0.00	0.82	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
195	12.81	0.82	0.00	0.82	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
196	12.90	0.83	0.00	0.83	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
197	12.95	0.83	0.00	0.83	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
198	13.03	0.84	0.00	0.84	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
199	13.08	0.84	0.00	0.84	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
200	13.13	0.84	0.00	0.84	0.97	0.601	1.69	0.355	1.00	1.00	2.000	No
201	13.22	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
202	13.27	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
203	13.36	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
204	13.41	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
205	13.45	0.87	0.00	0.87	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
206	13.55	0.87	0.00	0.87	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
207	13.59	0.87	0.00	0.87	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
208	13.68	0.88	0.00	0.88	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
209	13.73	0.88	0.00	0.88	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
210	13.82	0.89	0.00	0.89	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
211	13.87	0.89	0.00	0.89	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
212	13.92	0.90	0.00	0.90	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
213	14.00	0.90	0.00	0.90	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
214	14.05	0.90	0.00	0.90	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
215	14.12	0.91	0.00	0.91	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
216	14.18	0.91	0.00	0.91	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
217	14.28	0.92	0.00	0.92	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
218	14.33	0.92	0.00	0.92	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
219	14.37	0.93	0.00	0.93	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
220	14.46	0.93	0.00	0.93	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
221	14.51	0.93	0.00	0.93	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
222	14.60	0.94	0.00	0.94	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
223	14.65	0.94	0.00	0.94	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
224	14.70	0.95	0.00	0.95	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
225	14.78	0.95	0.00	0.95	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
226	14.84	0.96	0.00	0.96	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
227	14.93	0.96	0.00	0.96	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
228	14.99	0.97	0.00	0.97	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
229	15.06	0.97	0.00	0.97	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
230	15.11	0.97	0.00	0.97	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
231	15.18	0.98	0.00	0.98	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
232	15.25	0.98	0.00	0.98	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
233	15.30	0.99	0.00	0.99	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
234	15.39	0.99	0.00	0.99	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
235	15.43	1.00	0.00	1.00	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
236	15.53	1.00	0.00	1.00	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
237	15.57	1.00	0.00	1.00	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
238	15.62	1.01	0.00	1.01	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
239	15.71	1.01	0.00	1.01	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
240	15.75	1.02	0.00	1.02	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.85	1.02	0.00	1.02	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
242	15.88	1.03	0.00	1.03	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
243	15.96	1.03	0.00	1.03	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
244	16.01	1.03	0.00	1.03	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
245	16.11	1.04	0.00	1.04	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
246	16.15	1.04	0.00	1.04	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
247	16.24	1.05	0.00	1.05	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
248	16.29	1.05	0.00	1.05	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
249	16.38	1.06	0.00	1.06	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
250	16.43	1.06	0.00	1.06	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
251	16.47	1.06	0.00	1.06	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
252	16.56	1.07	0.00	1.07	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
253	16.61	1.07	0.00	1.07	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
254	16.71	1.08	0.00	1.08	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
255	16.75	1.08	0.00	1.08	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
256	16.80	1.09	0.00	1.09	0.96	0.596	1.69	0.353	0.99	1.00	2.000	No
257	16.89	1.09	0.00	1.09	0.96	0.596	1.69	0.352	0.99	1.00	2.000	No
258	16.94	1.10	0.00	1.10	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
259	17.03	1.10	0.00	1.10	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
260	17.06	1.10	0.00	1.10	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
261	17.16	1.11	0.00	1.11	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
262	17.21	1.11	0.00	1.11	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
263	17.30	1.12	0.00	1.12	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
264	17.35	1.12	0.00	1.12	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
265	17.40	1.12	0.00	1.12	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
266	17.49	1.13	0.00	1.13	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
267	17.53	1.13	0.00	1.13	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
268	17.63	1.14	0.00	1.14	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
269	17.68	1.14	0.00	1.14	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
270	17.72	1.15	0.00	1.15	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
271	17.81	1.15	0.00	1.15	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
272	17.86	1.15	0.00	1.15	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
273	17.95	1.16	0.00	1.16	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
274	18.00	1.16	0.00	1.16	0.96	0.594	1.69	0.352	0.98	1.00	2.000	No
275	18.08	1.17	0.00	1.17	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
276	18.14	1.17	0.00	1.17	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
277	18.20	1.17	0.00	1.17	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
278	18.27	1.18	0.00	1.18	0.96	0.594	1.69	0.351	0.98	1.00	2.000	No
279	18.31	1.18	0.00	1.18	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
280	18.41	1.19	0.00	1.19	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
281	18.45	1.19	0.00	1.19	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
282	18.55	1.20	0.00	1.20	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
283	18.59	1.20	0.00	1.20	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
284	18.66	1.20	0.00	1.20	0.96	0.593	1.69	0.351	0.97	1.00	2.000	No
285	18.70	1.20	0.00	1.20	0.96	0.593	1.69	0.351	0.97	1.00	2.000	No
286	18.80	1.21	0.00	1.21	0.96	0.593	1.69	0.351	0.97	1.00	2.000	No
287	18.84	1.21	0.00	1.21	0.96	0.593	1.69	0.351	0.97	1.00	2.000	No
288	18.93	1.22	0.00	1.22	0.96	0.593	1.69	0.351	0.97	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.98	1.22	0.00	1.22	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No
290	19.04	1.23	0.00	1.23	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No
291	19.12	1.23	0.00	1.23	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No
292	19.16	1.23	0.00	1.23	0.96	0.592	1.69	0.351	0.97	1.00	2.000	No
293	19.24	1.24	0.00	1.24	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
294	19.31	1.24	0.00	1.24	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
295	19.39	1.25	0.00	1.25	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
296	19.44	1.25	0.00	1.25	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
297	19.53	1.26	0.00	1.26	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
298	19.58	1.26	0.00	1.26	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
299	19.63	1.26	0.00	1.26	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
300	19.71	1.27	0.00	1.27	0.96	0.591	1.69	0.350	0.96	1.00	2.000	No
301	19.77	1.27	0.00	1.27	0.96	0.591	1.69	0.350	0.96	1.00	2.000	No
302	19.86	1.28	0.00	1.28	0.96	0.591	1.69	0.350	0.96	1.00	2.000	No
303	19.90	1.28	0.00	1.28	0.96	0.591	1.69	0.350	0.96	1.00	2.000	No
304	19.95	1.28	0.00	1.28	0.96	0.591	1.69	0.350	0.96	1.00	2.000	No
305	20.03	1.29	0.00	1.29	0.96	0.591	1.69	0.350	0.96	1.00	0.364	No
306	20.08	1.29	0.00	1.29	0.96	0.592	1.69	0.350	0.96	1.00	0.364	No
307	20.18	1.30	0.01	1.29	0.96	0.593	1.69	0.351	0.96	1.00	0.365	No
308	20.22	1.30	0.01	1.29	0.96	0.594	1.69	0.351	0.96	1.00	0.366	No
309	20.32	1.31	0.01	1.30	0.96	0.595	1.69	0.352	0.96	1.00	0.367	No
310	20.36	1.31	0.01	1.30	0.96	0.595	1.69	0.352	0.96	1.00	0.367	No
311	20.43	1.31	0.01	1.30	0.96	0.596	1.69	0.353	0.96	1.00	0.368	No
312	20.50	1.32	0.02	1.30	0.96	0.597	1.69	0.353	0.96	1.00	0.368	No
313	20.55	1.32	0.02	1.30	0.96	0.598	1.69	0.354	0.96	1.00	0.369	No
314	20.63	1.33	0.02	1.31	0.96	0.599	1.69	0.354	0.96	1.00	0.370	No
315	20.69	1.33	0.02	1.31	0.96	0.599	1.69	0.355	0.96	1.00	0.370	No
316	20.78	1.33	0.02	1.31	0.95	0.601	1.69	0.355	0.96	1.00	0.371	No
317	20.82	1.34	0.03	1.31	0.95	0.601	1.69	0.356	0.96	1.00	0.371	No
318	20.87	1.34	0.03	1.31	0.95	0.602	1.69	0.356	0.96	1.00	0.372	No
319	20.95	1.35	0.03	1.32	0.95	0.603	1.69	0.357	0.96	1.00	0.373	No
320	21.01	1.35	0.03	1.32	0.95	0.603	1.69	0.357	0.96	1.00	0.373	No
321	21.10	1.35	0.03	1.32	0.95	0.604	1.69	0.358	0.96	1.00	0.374	No
322	21.14	1.36	0.04	1.32	0.95	0.605	1.69	0.358	0.96	1.00	0.374	No
323	21.24	1.36	0.04	1.32	0.95	0.606	1.69	0.359	0.96	1.00	0.375	No
324	21.29	1.37	0.04	1.33	0.95	0.607	1.69	0.359	0.96	1.00	0.376	No
325	21.33	1.37	0.04	1.33	0.95	0.607	1.69	0.359	0.96	1.00	0.376	No
326	21.41	1.37	0.04	1.33	0.95	0.608	1.69	0.360	0.96	1.00	0.377	No
327	21.48	1.38	0.05	1.33	0.95	0.609	1.69	0.360	0.96	1.00	0.377	No
328	21.53	1.38	0.05	1.33	0.95	0.609	1.69	0.361	0.95	1.00	0.378	No
329	21.61	1.39	0.05	1.34	0.95	0.610	1.69	0.361	0.95	1.00	0.378	No
330	21.67	1.39	0.05	1.34	0.95	0.611	1.69	0.362	0.95	1.00	0.379	No
331	21.76	1.39	0.06	1.34	0.95	0.612	1.69	0.362	0.95	1.00	0.380	No
332	21.81	1.40	0.06	1.34	0.95	0.613	1.69	0.363	0.95	1.00	0.380	No
333	21.86	1.40	0.06	1.34	0.95	0.613	1.69	0.363	0.95	1.00	0.381	No
334	21.95	1.41	0.06	1.35	0.95	0.614	1.69	0.364	0.95	1.00	0.381	No
335	21.99	1.41	0.06	1.35	0.95	0.615	1.69	0.364	0.95	1.00	0.382	No
336	22.09	1.41	0.07	1.35	0.95	0.616	1.69	0.364	0.95	1.00	0.383	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.13	1.42	0.07	1.35	0.95	0.616	1.69	0.365	0.95	1.00	0.383	No
338	22.18	1.42	0.07	1.35	0.95	0.617	1.69	0.365	0.95	1.00	0.383	No
339	22.27	1.43	0.07	1.35	0.95	0.618	1.69	0.366	0.95	1.00	0.384	No
340	22.32	1.43	0.07	1.36	0.95	0.618	1.69	0.366	0.95	1.00	0.385	No
341	22.40	1.43	0.07	1.36	0.95	0.619	1.69	0.366	0.95	1.00	0.385	No
342	22.45	1.44	0.08	1.36	0.95	0.620	1.69	0.367	0.95	1.00	0.386	No
343	22.55	1.44	0.08	1.36	0.95	0.621	1.69	0.367	0.95	1.00	0.386	No
344	22.59	1.44	0.08	1.36	0.95	0.621	1.69	0.368	0.95	1.00	0.387	No
345	22.69	1.45	0.08	1.37	0.95	0.622	1.69	0.368	0.95	1.00	0.388	No
346	22.73	1.45	0.09	1.37	0.95	0.623	1.69	0.369	0.95	1.00	0.388	No
347	22.78	1.45	0.09	1.37	0.95	0.623	1.69	0.369	0.95	1.00	0.388	No
348	22.91	1.46	0.09	1.37	0.95	0.625	1.69	0.370	0.95	1.00	0.389	No
349	23.00	1.47	0.09	1.37	0.95	0.626	1.69	0.370	0.95	1.00	0.390	No
350	23.05	1.47	0.10	1.38	0.95	0.626	1.69	0.371	0.95	1.00	0.391	No
351	23.10	1.47	0.10	1.38	0.95	0.627	1.69	0.371	0.95	1.00	0.391	No
352	23.20	1.48	0.10	1.38	0.95	0.628	1.69	0.371	0.95	1.00	0.392	No
353	23.29	1.48	0.10	1.38	0.95	0.629	1.69	0.372	0.95	1.00	0.392	No
354	23.33	1.49	0.10	1.38	0.95	0.629	1.69	0.372	0.95	1.00	0.393	No
355	23.38	1.49	0.11	1.38	0.95	0.630	1.69	0.373	0.95	1.00	0.393	No
356	23.46	1.49	0.11	1.39	0.95	0.630	1.69	0.373	0.95	1.00	0.394	No
357	23.52	1.50	0.11	1.39	0.95	0.631	1.69	0.373	0.95	1.00	0.394	No
358	23.56	1.50	0.11	1.39	0.95	0.631	1.69	0.374	0.95	1.00	0.395	No
359	23.65	1.50	0.11	1.39	0.95	0.632	1.69	0.374	0.95	1.00	0.395	No
360	23.70	1.51	0.12	1.39	0.95	0.633	1.69	0.375	0.95	1.00	0.396	No
361	23.78	1.51	0.12	1.39	0.95	0.634	1.69	0.375	0.95	1.00	0.396	No
362	23.83	1.51	0.12	1.39	0.95	0.634	1.69	0.375	0.95	1.00	0.397	No
363	23.89	1.52	0.12	1.40	0.95	0.635	1.69	0.376	0.95	1.00	0.397	No
364	23.97	1.52	0.12	1.40	0.95	0.635	1.69	0.376	0.95	1.00	0.398	No
365	24.02	1.52	0.13	1.40	0.95	0.636	1.69	0.376	0.95	1.00	0.398	No
366	24.11	1.53	0.13	1.40	0.94	0.637	1.69	0.377	0.95	1.00	0.399	No
367	24.16	1.53	0.13	1.40	0.94	0.637	1.69	0.377	0.95	1.00	0.399	No
368	24.25	1.54	0.13	1.40	0.94	0.638	1.69	0.378	0.95	1.00	0.400	No
369	24.29	1.54	0.13	1.40	0.94	0.639	1.69	0.378	0.94	1.00	0.400	No
370	24.37	1.54	0.14	1.41	0.94	0.639	1.69	0.379	0.94	1.00	0.401	No
371	24.41	1.54	0.14	1.41	0.94	0.640	1.69	0.379	0.94	1.00	0.401	No
372	24.50	1.55	0.14	1.41	0.94	0.641	1.69	0.379	0.94	1.00	0.402	No
373	24.56	1.55	0.14	1.41	0.94	0.641	1.69	0.380	0.94	1.00	0.402	No
374	24.62	1.56	0.14	1.41	0.94	0.642	1.69	0.380	0.94	1.00	0.403	No
375	24.69	1.56	0.15	1.41	0.94	0.643	1.69	0.380	0.94	1.00	0.403	No
376	24.79	1.56	0.15	1.42	0.94	0.643	1.69	0.381	0.94	1.00	0.404	No
377	24.84	1.57	0.15	1.42	0.94	0.644	1.69	0.381	0.94	1.00	0.404	No
378	24.88	1.57	0.15	1.42	0.94	0.644	1.69	0.381	0.94	1.00	0.404	No
379	24.97	1.57	0.16	1.42	0.94	0.645	1.69	0.382	0.94	1.00	0.405	No
380	25.01	1.58	0.16	1.42	0.94	0.646	1.69	0.382	0.94	1.00	0.405	No
381	25.11	1.58	0.16	1.42	0.94	0.646	1.69	0.383	0.94	1.00	0.406	No
382	25.16	1.58	0.16	1.42	0.94	0.647	1.69	0.383	0.94	1.00	0.406	No
383	25.20	1.59	0.16	1.42	0.94	0.647	1.69	0.383	0.94	1.00	0.407	No
384	25.30	1.59	0.17	1.43	0.94	0.648	1.69	0.384	0.94	1.00	0.407	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.34	1.59	0.17	1.43	0.94	0.649	1.69	0.384	0.94	1.00	0.408	No
386	25.42	1.60	0.17	1.43	0.94	0.649	1.69	0.384	0.94	1.00	0.408	No
387	25.48	1.60	0.17	1.43	0.94	0.650	1.69	0.385	0.94	1.00	0.409	No
388	25.53	1.60	0.17	1.43	0.94	0.650	1.69	0.385	0.94	1.00	0.409	No
389	25.61	1.61	0.18	1.43	0.94	0.651	1.69	0.385	0.94	1.00	0.410	No
390	25.66	1.61	0.18	1.43	0.94	0.652	1.69	0.386	0.94	1.00	0.410	No
391	25.75	1.62	0.18	1.44	0.94	0.652	1.69	0.386	0.94	1.00	0.411	No
392	25.80	1.62	0.18	1.44	0.94	0.653	1.69	0.386	0.94	1.00	0.411	No
393	25.89	1.63	0.18	1.44	0.94	0.654	1.69	0.387	0.94	1.00	0.411	No
394	25.94	1.63	0.19	1.44	0.94	0.654	1.69	0.387	0.94	1.00	0.412	No
395	25.98	1.63	0.19	1.44	0.94	0.654	1.69	0.387	0.94	1.00	0.412	No
396	26.06	1.64	0.19	1.45	0.94	0.655	1.69	0.388	0.94	1.00	0.413	No
397	26.12	1.64	0.19	1.45	0.94	0.655	1.69	0.388	0.94	1.00	0.413	No
398	26.21	1.64	0.19	1.45	0.94	0.656	1.69	0.388	0.94	1.00	0.414	No
399	26.25	1.65	0.19	1.45	0.94	0.656	1.69	0.389	0.94	1.00	0.414	No
400	26.35	1.65	0.20	1.46	0.94	0.657	1.69	0.389	0.94	1.00	0.415	No
401	26.40	1.66	0.20	1.46	0.94	0.658	1.69	0.389	0.94	1.00	0.415	No
402	26.45	1.66	0.20	1.46	0.94	0.658	1.69	0.389	0.94	1.00	0.415	No
403	26.54	1.67	0.20	1.46	0.94	0.659	1.69	0.390	0.94	1.00	0.416	No
404	26.58	1.67	0.21	1.46	0.94	0.659	1.69	0.390	0.94	1.00	0.416	No
405	26.68	1.67	0.21	1.47	0.94	0.660	1.69	0.391	0.94	1.00	0.417	No
406	26.72	1.68	0.21	1.47	0.94	0.660	1.69	0.391	0.94	1.00	0.417	No
407	26.82	1.68	0.21	1.47	0.93	0.661	1.69	0.391	0.94	1.00	0.418	No
408	26.86	1.69	0.21	1.47	0.93	0.661	1.69	0.391	0.94	1.00	0.418	No
409	26.90	1.69	0.22	1.47	0.93	0.662	1.69	0.392	0.94	1.00	0.418	No
410	27.00	1.69	0.22	1.48	0.93	0.662	1.69	0.392	0.94	1.00	0.419	No
411	27.04	1.70	0.22	1.48	0.93	0.663	1.69	0.392	0.94	1.00	0.419	No
412	27.13	1.70	0.22	1.48	0.93	0.663	1.69	0.393	0.94	1.00	0.420	No
413	27.18	1.71	0.22	1.48	0.93	0.664	1.69	0.393	0.93	1.00	0.420	No
414	27.27	1.71	0.23	1.48	0.93	0.664	1.69	0.393	0.93	1.00	0.421	No
415	27.32	1.71	0.23	1.49	0.93	0.665	1.69	0.393	0.93	1.00	0.421	No
416	27.37	1.72	0.23	1.49	0.93	0.665	1.69	0.394	0.93	1.00	0.421	No
417	27.45	1.72	0.23	1.49	0.93	0.666	1.69	0.394	0.93	1.00	0.422	No
418	27.50	1.73	0.23	1.49	0.93	0.666	1.69	0.394	0.93	1.00	0.422	No
419	27.59	1.73	0.24	1.49	0.93	0.667	1.69	0.395	0.93	1.00	0.423	No
420	27.64	1.73	0.24	1.50	0.93	0.667	1.69	0.395	0.93	1.00	0.423	No
421	27.73	1.74	0.24	1.50	0.93	0.668	1.69	0.395	0.93	1.00	0.424	No
422	27.76	1.74	0.24	1.50	0.93	0.668	1.69	0.395	0.93	1.00	0.424	No
423	27.82	1.75	0.24	1.50	0.93	0.668	1.69	0.396	0.93	1.00	0.424	No
424	27.92	1.75	0.25	1.50	0.93	0.669	1.69	0.396	0.93	1.00	0.425	No
425	27.96	1.75	0.25	1.51	0.93	0.669	1.69	0.396	0.93	1.00	0.425	No
426	28.05	1.76	0.25	1.51	0.93	0.670	1.69	0.396	0.93	1.00	0.426	No
427	28.10	1.76	0.25	1.51	0.93	0.670	1.69	0.397	0.93	1.00	0.426	No
428	28.16	1.77	0.25	1.51	0.93	0.671	1.69	0.397	0.93	1.00	0.426	No
429	28.24	1.77	0.26	1.51	0.93	0.671	1.69	0.397	0.93	1.00	0.427	No
430	28.29	1.77	0.26	1.51	0.93	0.671	1.69	0.397	0.93	1.00	0.427	No
431	28.38	1.78	0.26	1.52	0.93	0.672	1.69	0.398	0.93	1.00	0.427	No
432	28.43	1.78	0.26	1.52	0.93	0.672	1.69	0.398	0.93	1.00	0.428	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.49	1.79	0.26	1.52	0.93	0.673	1.69	0.398	0.93	1.00	0.428	No
434	28.56	1.79	0.27	1.52	0.93	0.673	1.69	0.398	0.93	1.00	0.429	No
435	28.65	1.80	0.27	1.53	0.93	0.674	1.69	0.399	0.93	1.00	0.429	No
436	28.70	1.80	0.27	1.53	0.93	0.674	1.69	0.399	0.93	1.00	0.429	No
437	28.75	1.80	0.27	1.53	0.93	0.674	1.69	0.399	0.93	1.00	0.430	No
438	28.82	1.81	0.28	1.53	0.93	0.675	1.69	0.399	0.93	1.00	0.430	No
439	28.89	1.81	0.28	1.53	0.93	0.675	1.69	0.400	0.93	1.00	0.430	No
440	28.95	1.81	0.28	1.53	0.93	0.676	1.69	0.400	0.93	1.00	0.431	No
441	29.00	1.82	0.28	1.54	0.93	0.676	1.69	0.400	0.93	1.00	0.431	No
442	29.08	1.82	0.28	1.54	0.93	0.676	1.69	0.400	0.93	1.00	0.432	No
443	29.14	1.82	0.29	1.54	0.92	0.677	1.69	0.401	0.93	1.00	0.432	No
444	29.23	1.83	0.29	1.54	0.92	0.677	1.69	0.401	0.93	1.00	0.432	No
445	29.27	1.83	0.29	1.54	0.92	0.678	1.69	0.401	0.93	1.00	0.433	No
446	29.34	1.84	0.29	1.55	0.92	0.678	1.69	0.401	0.93	1.00	0.433	No
447	29.42	1.84	0.29	1.55	0.92	0.678	1.69	0.402	0.93	1.00	0.433	No
448	29.47	1.84	0.30	1.55	0.92	0.679	1.69	0.402	0.93	1.00	0.434	No
449	29.54	1.85	0.30	1.55	0.92	0.679	1.69	0.402	0.93	1.00	0.434	No
450	29.60	1.85	0.30	1.55	0.92	0.680	1.69	0.402	0.93	1.00	0.434	No
451	29.66	1.86	0.30	1.56	0.92	0.680	1.69	0.402	0.93	1.00	0.435	No
452	29.73	1.86	0.30	1.56	0.92	0.680	1.69	0.403	0.93	1.00	0.435	No
453	29.83	1.87	0.31	1.56	0.92	0.681	1.69	0.403	0.93	1.00	0.436	No
454	29.88	1.87	0.31	1.56	0.92	0.681	1.69	0.403	0.93	1.00	0.436	No
455	29.93	1.87	0.31	1.56	0.92	0.681	1.69	0.403	0.92	1.00	0.436	No
456	30.01	1.88	0.31	1.57	0.92	0.682	1.69	0.404	0.92	1.00	0.437	No
457	30.06	1.88	0.31	1.57	0.92	0.682	1.69	0.404	0.92	1.00	0.437	No
458	30.15	1.89	0.32	1.57	0.92	0.682	1.69	0.404	0.92	1.00	0.437	No
459	30.20	1.89	0.32	1.57	0.92	0.683	1.69	0.404	0.92	1.00	0.437	No
460	30.26	1.89	0.32	1.57	0.92	0.683	1.69	0.404	0.92	1.00	0.438	No
461	30.34	1.90	0.32	1.58	0.92	0.683	1.69	0.405	0.92	1.00	0.438	No
462	30.43	1.91	0.33	1.58	0.92	0.684	1.69	0.405	0.92	1.00	0.439	No
463	30.48	1.91	0.33	1.58	0.92	0.684	1.69	0.405	0.92	1.00	0.439	No
464	30.52	1.91	0.33	1.58	0.92	0.684	1.69	0.405	0.92	1.00	0.439	No
465	30.62	1.92	0.33	1.59	0.92	0.685	1.69	0.405	0.92	1.00	0.440	No
466	30.65	1.92	0.33	1.59	0.92	0.685	1.69	0.405	0.92	1.00	0.440	No
467	30.75	1.93	0.34	1.59	0.92	0.685	1.69	0.406	0.92	1.00	0.440	No
468	30.80	1.93	0.34	1.59	0.92	0.686	1.69	0.406	0.92	1.00	0.440	No
469	30.84	1.93	0.34	1.59	0.92	0.686	1.69	0.406	0.92	1.00	0.441	No
470	30.94	1.94	0.34	1.60	0.92	0.686	1.69	0.406	0.92	1.00	0.441	No
471	30.98	1.94	0.34	1.60	0.92	0.686	1.69	0.406	0.92	1.00	0.441	No
472	31.07	1.95	0.35	1.60	0.91	0.687	1.69	0.407	0.92	1.00	0.442	No
473	31.12	1.95	0.35	1.60	0.91	0.687	1.69	0.407	0.92	1.00	0.442	No
474	31.17	1.95	0.35	1.61	0.91	0.687	1.69	0.407	0.92	1.00	0.442	No
475	31.26	1.96	0.35	1.61	0.91	0.688	1.69	0.407	0.92	1.00	0.443	No
476	31.31	1.96	0.35	1.61	0.91	0.688	1.69	0.407	0.92	1.00	0.443	No
477	31.37	1.97	0.35	1.61	0.91	0.688	1.69	0.407	0.92	1.00	0.443	No
478	31.45	1.97	0.36	1.61	0.91	0.688	1.69	0.407	0.92	1.00	0.443	No
479	31.53	1.98	0.36	1.62	0.91	0.689	1.69	0.408	0.92	1.00	0.444	No
480	31.58	1.98	0.36	1.62	0.91	0.689	1.69	0.408	0.92	1.00	0.444	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.66	1.98	0.36	1.62	0.91	0.689	1.69	0.408	0.92	1.00	0.444	No
482	31.71	1.99	0.37	1.62	0.91	0.690	1.69	0.408	0.92	1.00	0.445	No
483	31.77	1.99	0.37	1.62	0.91	0.690	1.69	0.408	0.92	1.00	0.445	No
484	31.82	1.99	0.37	1.63	0.91	0.690	1.69	0.408	0.92	1.00	0.445	No
485	31.89	2.00	0.37	1.63	0.91	0.690	1.69	0.409	0.92	1.00	0.445	No
486	31.98	2.00	0.37	1.63	0.91	0.691	1.69	0.409	0.92	1.00	0.446	No
487	32.03	2.01	0.38	1.63	0.91	0.691	1.69	0.409	0.92	1.00	0.446	No
488	32.12	2.01	0.38	1.64	0.91	0.691	1.69	0.409	0.92	1.00	0.446	No
489	32.16	2.02	0.38	1.64	0.91	0.691	1.69	0.409	0.92	1.00	0.447	No
490	32.26	2.02	0.38	1.64	0.91	0.692	1.69	0.409	0.92	1.00	0.447	No
491	32.31	2.02	0.38	1.64	0.91	0.692	1.69	0.410	0.92	1.00	0.447	No
492	32.35	2.03	0.39	1.64	0.91	0.692	1.69	0.410	0.92	1.00	0.447	No
493	32.44	2.03	0.39	1.64	0.91	0.692	1.69	0.410	0.92	1.00	0.448	No
494	32.49	2.04	0.39	1.65	0.91	0.693	1.69	0.410	0.92	1.00	0.448	No
495	32.58	2.04	0.39	1.65	0.91	0.693	1.69	0.410	0.92	1.00	0.448	No
496	32.62	2.04	0.39	1.65	0.91	0.693	1.69	0.410	0.91	1.00	0.448	No
497	32.71	2.05	0.40	1.65	0.91	0.693	1.69	0.410	0.91	1.00	0.449	No
498	32.75	2.05	0.40	1.65	0.91	0.693	1.69	0.410	0.91	1.00	0.449	No
499	32.81	2.06	0.40	1.66	0.90	0.694	1.69	0.411	0.91	1.00	0.449	No
500	32.91	2.06	0.40	1.66	0.90	0.694	1.69	0.411	0.91	1.00	0.449	No
501	32.95	2.06	0.40	1.66	0.90	0.694	1.69	0.411	0.91	1.00	0.450	No
502	33.04	2.07	0.41	1.66	0.90	0.694	1.69	0.411	0.91	1.00	0.450	No
503	33.09	2.07	0.41	1.66	0.90	0.695	1.69	0.411	0.91	1.00	0.450	No
504	33.14	2.08	0.41	1.67	0.90	0.695	1.69	0.411	0.91	1.00	0.450	No
505	33.22	2.08	0.41	1.67	0.90	0.695	1.69	0.411	0.91	1.00	0.451	No
506	33.28	2.08	0.41	1.67	0.90	0.695	1.69	0.412	0.91	1.00	0.451	No
507	33.35	2.09	0.42	1.67	0.90	0.695	1.69	0.412	0.91	1.00	0.451	No
508	33.41	2.09	0.42	1.67	0.90	0.696	1.69	0.412	0.91	1.00	0.451	No
509	33.50	2.10	0.42	1.68	0.90	0.696	1.69	0.412	0.91	1.00	0.452	No
510	33.55	2.10	0.42	1.68	0.90	0.696	1.69	0.412	0.91	1.00	0.452	No
511	33.63	2.10	0.43	1.68	0.90	0.696	1.69	0.412	0.91	1.00	0.452	No
512	33.69	2.11	0.43	1.68	0.90	0.697	1.69	0.412	0.91	1.00	0.452	No
513	33.73	2.11	0.43	1.68	0.90	0.697	1.69	0.412	0.91	1.00	0.452	No
514	33.83	2.12	0.43	1.68	0.90	0.697	1.69	0.413	0.91	1.00	0.453	No
515	33.87	2.12	0.43	1.69	0.90	0.697	1.69	0.413	0.91	1.00	0.453	No
516	33.93	2.12	0.43	1.69	0.90	0.697	1.69	0.413	0.91	1.00	0.453	No
517	34.01	2.13	0.44	1.69	0.90	0.697	1.69	0.413	0.91	1.00	0.453	No
518	34.05	2.13	0.44	1.69	0.90	0.698	1.69	0.413	0.91	1.00	0.453	No
519	34.13	2.13	0.44	1.69	0.90	0.698	1.69	0.413	0.91	1.00	0.454	No
520	34.20	2.14	0.44	1.69	0.90	0.698	1.69	0.413	0.91	1.00	0.454	No
521	34.29	2.14	0.45	1.70	0.90	0.698	1.69	0.413	0.91	1.00	0.454	No
522	34.33	2.15	0.45	1.70	0.90	0.698	1.69	0.413	0.91	1.00	0.454	No
523	34.43	2.15	0.45	1.70	0.89	0.699	1.69	0.413	0.91	1.00	0.455	No
524	34.46	2.15	0.45	1.70	0.89	0.699	1.69	0.414	0.91	1.00	0.455	No
525	34.55	2.16	0.45	1.70	0.89	0.699	1.69	0.414	0.91	1.00	0.455	No
526	34.59	2.16	0.46	1.71	0.89	0.699	1.69	0.414	0.91	1.00	0.455	No
527	34.68	2.17	0.46	1.71	0.89	0.699	1.69	0.414	0.91	1.00	0.455	No
528	34.73	2.17	0.46	1.71	0.89	0.699	1.69	0.414	0.91	1.00	0.456	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.80	2.17	0.46	1.71	0.89	0.699	1.69	0.414	0.91	1.00	0.456	No
530	34.87	2.18	0.46	1.71	0.89	0.699	1.69	0.414	0.91	1.00	0.456	No
531	34.91	2.18	0.47	1.72	0.89	0.700	1.69	0.414	0.91	1.00	0.456	No
532	35.01	2.19	0.47	1.72	0.89	0.700	1.69	0.414	0.91	1.00	0.456	No
533	35.06	2.19	0.47	1.72	0.89	0.700	1.69	0.414	0.91	1.00	0.457	No
534	35.11	2.19	0.47	1.72	0.89	0.700	1.69	0.414	0.91	1.00	0.457	No
535	35.19	2.20	0.47	1.72	0.89	0.700	1.69	0.414	0.91	1.00	0.457	No
536	35.24	2.20	0.48	1.73	0.89	0.700	1.69	0.414	0.91	1.00	0.457	No
537	35.33	2.21	0.48	1.73	0.89	0.700	1.69	0.415	0.91	1.00	0.457	No
538	35.38	2.21	0.48	1.73	0.89	0.700	1.69	0.415	0.91	1.00	0.457	No
539	35.46	2.21	0.48	1.73	0.89	0.701	1.69	0.415	0.91	1.00	0.458	No
540	35.51	2.22	0.48	1.73	0.89	0.701	1.69	0.415	0.91	1.00	0.458	No
541	35.59	2.22	0.49	1.74	0.89	0.701	1.69	0.415	0.91	1.00	0.458	No
542	35.65	2.23	0.49	1.74	0.89	0.701	1.69	0.415	0.91	1.00	0.458	No
543	35.70	2.23	0.49	1.74	0.89	0.701	1.69	0.415	0.91	1.00	0.458	No
544	35.78	2.24	0.49	1.74	0.89	0.701	1.69	0.415	0.90	1.00	0.458	No
545	35.83	2.24	0.49	1.75	0.88	0.701	1.69	0.415	0.90	1.00	0.459	No
546	35.90	2.24	0.50	1.75	0.88	0.701	1.69	0.415	0.90	1.00	0.459	No
547	35.97	2.25	0.50	1.75	0.88	0.701	1.69	0.415	0.90	1.00	0.459	No
548	36.04	2.25	0.50	1.75	0.88	0.701	1.69	0.415	0.90	1.00	0.459	No
549	36.11	2.26	0.50	1.75	0.88	0.701	1.69	0.415	0.90	1.00	0.459	No
550	36.16	2.26	0.50	1.76	0.88	0.701	1.69	0.415	0.90	1.00	0.459	No
551	36.25	2.27	0.51	1.76	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
552	36.29	2.27	0.51	1.76	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
553	36.36	2.27	0.51	1.76	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
554	36.43	2.28	0.51	1.77	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
555	36.52	2.28	0.52	1.77	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
556	36.58	2.29	0.52	1.77	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
557	36.62	2.29	0.52	1.77	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
558	36.70	2.30	0.52	1.78	0.88	0.701	1.69	0.415	0.90	1.00	0.460	No
559	36.75	2.30	0.52	1.78	0.88	0.701	1.69	0.415	0.90	1.00	0.461	No
560	36.83	2.31	0.53	1.78	0.88	0.701	1.69	0.415	0.90	1.00	0.461	No
561	36.89	2.31	0.53	1.78	0.88	0.701	1.69	0.415	0.90	1.00	0.461	No
562	36.97	2.32	0.53	1.79	0.88	0.701	1.69	0.415	0.90	1.00	0.461	No
563	37.03	2.32	0.53	1.79	0.88	0.701	1.69	0.415	0.90	1.00	0.461	No
564	37.08	2.32	0.53	1.79	0.88	0.701	1.69	0.415	0.90	1.00	0.461	No
565	37.17	2.33	0.54	1.79	0.87	0.701	1.69	0.415	0.90	1.00	0.461	No
566	37.21	2.33	0.54	1.79	0.87	0.701	1.69	0.415	0.90	1.00	0.461	No
567	37.31	2.34	0.54	1.80	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
568	37.35	2.34	0.54	1.80	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
569	37.41	2.34	0.54	1.80	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
570	37.49	2.35	0.55	1.80	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
571	37.54	2.35	0.55	1.81	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
572	37.63	2.36	0.55	1.81	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
573	37.68	2.36	0.55	1.81	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
574	37.77	2.37	0.55	1.81	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
575	37.80	2.37	0.56	1.81	0.87	0.701	1.69	0.415	0.90	1.00	0.462	No
576	37.89	2.38	0.56	1.82	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
577	37.94	2.38	0.56	1.82	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
578	38.02	2.38	0.56	1.82	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
579	38.07	2.39	0.56	1.82	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
580	38.13	2.39	0.57	1.83	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
581	38.19	2.40	0.57	1.83	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
582	38.27	2.40	0.57	1.83	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
583	38.34	2.41	0.57	1.83	0.87	0.701	1.69	0.415	0.90	1.00	0.463	No
584	38.41	2.41	0.57	1.83	0.86	0.701	1.69	0.415	0.90	1.00	0.463	No
585	38.46	2.41	0.58	1.84	0.86	0.701	1.69	0.415	0.90	1.00	0.463	No
586	38.52	2.41	0.58	1.84	0.86	0.701	1.69	0.415	0.90	1.00	0.463	No
587	38.59	2.42	0.58	1.84	0.86	0.701	1.69	0.415	0.90	1.00	0.464	No
588	38.66	2.42	0.58	1.84	0.86	0.701	1.69	0.415	0.90	1.00	0.464	No

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.08	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
2	0.13	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
3	0.22	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
4	0.27	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
5	0.34	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
6	0.41	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
7	0.51	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
8	0.55	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
9	0.60	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
10	0.68	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
11	0.74	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
12	0.83	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
13	0.87	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
14	0.92	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
15	1.01	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
16	1.06	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
17	1.15	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
18	1.18	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
19	1.25	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
20	1.34	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
21	1.38	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
22	1.47	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
23	1.52	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
24	1.60	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
25	1.66	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
26	1.75	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
27	1.79	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
28	1.84	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
29	1.92	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
30	1.99	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
31	2.07	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
32	2.12	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
33	2.17	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
34	2.23	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
35	2.31	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
36	2.40	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
37	2.45	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
38	2.50	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
39	2.58	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
40	2.63	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
41	2.73	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
42	2.77	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
43	2.86	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
44	2.91	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
45	2.96	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
46	3.05	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
47	3.09	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
48	3.18	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.23	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
50	3.30	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
51	3.36	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
52	3.42	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
53	3.51	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
54	3.55	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
55	3.65	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
56	3.69	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
57	3.74	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
58	3.83	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
59	3.88	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
60	3.97	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
61	4.01	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
62	4.11	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
63	4.15	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
64	4.20	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
65	4.29	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
66	4.33	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
67	4.42	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
68	4.47	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
69	4.53	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
70	4.61	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
71	4.70	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
72	4.75	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
73	4.80	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
74	4.89	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
75	4.93	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
76	5.02	157.00	2.03	3.20	0.62	251.75	1.33	335.77	4.000	No	No	2.00
77	5.07	240.16	1.94	3.20	0.59	385.35	1.26	486.31	4.000	No	No	2.00
78	5.12	249.44	1.95	3.37	0.59	400.27	1.27	508.73	4.000	No	No	2.00
79	5.19	253.75	2.00	3.89	0.61	407.18	1.31	533.62	4.000	No	No	2.00
80	5.29	259.42	2.05	4.42	0.62	416.28	1.35	563.94	4.000	No	No	2.00
81	5.34	268.07	2.07	4.74	0.63	430.17	1.38	593.86	4.000	No	No	2.00
82	5.41	279.25	2.06	4.68	0.63	448.13	1.37	612.13	4.000	No	No	2.00
83	5.47	292.36	2.03	4.47	0.62	469.18	1.34	627.75	4.000	No	No	2.00
84	5.52	306.88	1.99	4.10	0.61	492.50	1.30	640.25	4.000	No	No	2.00
85	5.59	325.05	1.94	3.67	0.59	521.68	1.26	657.91	4.000	No	No	2.00
86	5.64	341.99	1.87	3.18	0.57	548.90	1.22	667.90	4.000	No	No	2.00
87	5.74	350.12	1.82	2.83	0.55	561.96	1.17	659.73	4.000	No	No	2.00
88	5.79	339.03	1.80	2.64	0.55	544.13	1.15	626.79	4.000	No	No	2.00
89	5.85	315.99	1.80	2.56	0.55	507.11	1.15	584.02	4.000	No	No	2.00
90	5.92	282.93	1.81	2.51	0.55	453.98	1.17	529.71	4.000	No	No	2.00
91	5.98	243.09	1.85	2.53	0.56	389.97	1.20	467.11	4.000	No	No	2.00
92	6.07	208.49	1.90	2.71	0.58	334.36	1.24	414.66	4.000	No	No	2.00
93	6.11	187.04	1.96	2.94	0.60	299.90	1.28	382.69	4.000	No	No	2.00
94	6.21	183.73	1.98	3.09	0.60	294.57	1.29	380.66	4.000	No	No	2.00
95	6.25	183.76	2.00	3.25	0.61	294.62	1.31	385.27	4.000	No	No	2.00
96	6.30	185.73	2.03	3.51	0.62	297.78	1.33	396.36	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.38	187.39	2.05	3.79	0.62	300.44	1.36	408.38	4.000	No	No	2.00
98	6.44	189.49	2.08	4.13	0.63	303.81	1.40	424.28	4.000	No	No	2.00
99	6.53	189.24	2.11	4.39	0.64	303.38	1.43	434.09	4.000	No	No	2.00
100	6.58	189.54	2.12	4.55	0.64	303.87	1.45	441.47	4.000	No	No	2.00
101	6.67	190.89	2.07	3.97	0.63	306.01	1.38	420.97	4.000	No	No	2.00
102	6.71	194.27	1.95	2.94	0.59	311.45	1.27	395.70	4.000	No	No	2.00
103	6.76	198.70	1.82	2.07	0.55	311.34	1.17	365.61	4.000	No	No	2.00
104	6.85	201.26	1.78	1.86	0.54	309.79	1.13	350.72	4.000	No	No	2.00
105	6.90	195.24	1.85	2.22	0.56	304.76	1.20	366.02	4.000	No	No	2.00
106	6.99	183.20	1.92	2.59	0.58	288.85	1.25	361.01	4.000	No	No	2.00
107	7.03	162.79	2.02	3.17	0.61	260.84	1.32	345.05	4.000	No	No	2.00
108	7.09	142.37	2.13	3.92	0.65	228.02	1.46	333.49	4.000	No	No	2.00
109	7.18	123.77	2.24	4.87	0.68	198.12	1.72	341.00	4.000	No	No	2.00
110	7.23	111.76	2.33	5.82	0.71	178.82	2.04	364.61	4.000	No	No	2.00
111	7.32	106.67	2.37	6.41	0.72	170.64	2.25	383.40	4.000	No	No	2.00
112	7.37	104.48	2.40	6.82	0.73	167.11	2.39	399.14	4.000	No	No	2.00
113	7.46	105.19	2.41	6.89	0.73	168.24	2.40	403.84	4.000	No	No	2.00
114	7.49	108.51	2.39	6.71	0.72	173.57	2.31	401.32	4.000	No	No	2.00
115	7.55	118.99	2.32	5.95	0.70	190.42	2.01	383.48	4.000	No	No	2.00
116	7.65	132.59	2.24	5.12	0.68	212.24	1.73	367.43	4.000	No	No	2.00
117	7.69	146.50	2.16	4.36	0.66	230.08	1.53	352.76	4.000	No	No	2.00
118	7.78	153.64	2.12	3.93	0.64	236.92	1.45	343.44	4.000	No	No	2.00
119	7.83	155.66	2.09	3.66	0.64	237.51	1.41	334.32	4.000	No	No	2.00
120	7.88	151.46	2.08	3.48	0.63	229.57	1.39	319.74	4.000	No	No	2.00
121	7.97	142.99	2.09	3.38	0.63	215.29	1.40	301.18	4.000	No	No	2.00
122	8.01	132.44	2.09	3.24	0.64	198.77	1.40	279.11	4.000	No	No	2.00
123	8.10	122.28	2.11	3.22	0.64	182.92	1.43	261.71	4.000	No	No	2.00
124	8.15	112.33	2.13	3.24	0.65	168.10	1.47	247.04	4.000	No	No	2.00
125	8.24	103.88	2.17	3.43	0.66	155.52	1.55	240.52	4.000	No	No	2.00
126	8.29	96.61	2.21	3.68	0.67	145.23	1.65	239.35	4.000	No	No	2.00
127	8.38	91.67	2.25	3.93	0.68	137.89	1.75	241.83	4.000	No	No	2.00
128	8.43	88.13	2.28	4.15	0.69	132.72	1.85	245.36	4.000	No	No	2.00
129	8.47	85.02	2.28	4.02	0.69	127.52	1.84	235.26	4.000	No	No	2.00
130	8.56	83.06	2.24	3.49	0.68	122.68	1.72	211.34	4.000	No	No	2.00
131	8.61	80.66	2.20	2.99	0.67	117.66	1.61	189.34	4.000	No	No	2.00
132	8.67	78.73	2.19	2.81	0.66	114.08	1.58	180.41	4.000	No	No	2.00
133	8.75	76.02	2.22	2.98	0.67	110.08	1.66	182.36	4.000	No	No	2.00
134	8.80	74.38	2.23	3.03	0.68	107.49	1.69	181.35	4.000	No	No	2.00
135	8.87	73.74	2.22	2.94	0.68	105.91	1.67	177.15	4.000	No	No	2.00
136	8.96	74.76	2.20	2.79	0.67	106.22	1.63	172.70	4.000	No	No	2.00
137	9.01	75.60	2.19	2.71	0.67	106.81	1.60	170.49	4.000	No	No	2.00
138	9.07	76.16	2.19	2.72	0.67	107.14	1.60	171.26	4.000	No	No	2.00
139	9.14	75.75	2.21	2.84	0.67	106.29	1.64	174.09	4.000	No	No	2.00
140	9.19	74.51	2.25	3.21	0.68	104.97	1.76	185.18	4.000	No	No	2.00
141	9.29	73.24	2.30	3.62	0.70	103.26	1.92	198.22	4.000	No	No	2.00
142	9.33	72.46	2.34	4.10	0.71	102.66	2.10	215.40	4.000	No	No	2.00
143	9.42	72.77	2.37	4.42	0.72	102.76	2.21	227.52	4.000	No	No	2.00
144	9.47	74.58	2.38	4.72	0.72	105.21	2.29	240.96	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.55	78.78	2.38	4.82	0.72	110.34	2.27	250.04	4.000	No	No	2.00
146	9.61	85.87	2.35	4.74	0.71	119.33	2.14	255.49	4.000	No	No	2.00
147	9.66	94.76	2.32	4.57	0.70	130.50	1.99	259.68	4.000	No	No	2.00
148	9.74	103.12	2.29	4.44	0.69	140.55	1.88	264.39	4.000	No	No	2.00
149	9.79	108.58	2.28	4.44	0.69	147.19	1.84	270.93	4.000	No	No	2.00
150	9.85	111.28	2.28	4.56	0.69	150.34	1.85	278.69	4.000	No	No	2.00
151	9.93	112.46	2.29	4.69	0.69	151.23	1.89	285.12	4.000	No	No	2.00
152	9.98	113.21	2.29	4.78	0.70	151.83	1.91	289.35	4.000	No	No	2.00
153	10.11	113.74	2.29	4.76	0.70	151.08	1.91	287.89	4.000	No	No	2.00
154	10.13	113.33	2.29	4.66	0.69	150.11	1.88	282.67	4.000	No	No	2.00
155	10.21	112.02	2.28	4.52	0.69	147.48	1.86	274.51	4.000	No	No	2.00
156	10.25	108.59	2.28	4.34	0.69	142.36	1.84	262.02	4.000	No	No	2.00
157	10.34	103.49	2.28	4.22	0.69	134.82	1.85	249.90	4.000	No	No	2.00
158	10.39	98.45	2.28	4.06	0.69	127.81	1.86	237.17	4.000	No	No	2.00
159	10.44	90.43	2.30	3.97	0.70	117.20	1.91	223.80	4.000	No	No	2.00
160	10.52	81.42	2.32	3.89	0.70	105.15	2.00	209.88	4.000	No	No	2.00
161	10.57	71.32	2.35	3.89	0.71	92.11	2.15	198.23	4.000	No	No	2.00
162	10.65	64.86	2.39	3.98	0.72	83.62	2.31	193.57	4.000	No	No	2.00
163	10.71	60.54	2.42	4.12	0.73	77.99	2.48	193.60	4.000	No	No	2.00
164	10.81	58.42	2.44	4.29	0.74	74.98	2.62	196.57	4.000	No	No	2.00
165	10.84	57.81	2.46	4.45	0.75	74.14	2.71	201.22	4.000	No	No	2.00
166	10.90	58.49	2.47	4.60	0.75	74.84	2.77	207.08	4.000	No	No	2.00
167	10.96	59.98	2.48	4.81	0.75	76.51	2.82	216.11	4.000	No	No	2.00
168	11.04	62.50	2.49	5.16	0.76	79.46	2.91	231.37	4.000	No	No	2.00
169	11.13	64.99	2.50	5.51	0.76	82.24	3.00	246.50	4.000	No	No	2.00
170	11.17	68.19	2.51	5.84	0.76	86.19	3.05	262.91	4.000	No	No	2.00
171	11.25	71.14	2.52	6.15	0.76	89.52	3.11	277.97	4.000	No	No	2.00
172	11.32	74.02	2.52	6.37	0.76	92.78	3.13	290.10	4.000	No	No	2.00
173	11.36	76.26	2.52	6.40	0.76	95.29	3.09	294.42	4.000	No	No	2.00
174	11.45	78.22	2.51	6.37	0.76	97.05	3.04	295.39	4.000	No	No	2.00
175	11.50	80.31	2.51	6.46	0.76	99.32	3.04	301.62	4.000	No	No	2.00
176	11.59	81.45	2.52	6.72	0.76	100.25	3.12	312.73	4.000	No	No	2.00
177	11.64	81.50	2.54	7.01	0.77	100.09	3.23	323.43	4.000	No	No	2.00
178	11.69	80.71	2.55	7.31	0.77	98.94	3.37	332.98	4.000	No	No	2.00
179	11.77	80.27	2.57	7.57	0.78	97.98	3.48	341.17	4.000	No	No	2.00
180	11.83	80.38	2.58	7.76	0.78	97.80	3.56	348.23	4.000	No	No	2.00
181	11.90	81.12	2.58	7.87	0.78	98.28	3.59	352.95	4.000	No	No	2.00
182	11.97	81.58	2.59	7.99	0.78	98.41	3.63	357.44	4.000	No	No	2.00
183	12.02	82.30	2.59	8.09	0.78	98.93	3.66	361.85	4.000	No	No	2.00
184	12.10	83.07	2.59	8.11	0.78	99.35	3.66	363.39	4.000	No	No	2.00
185	12.15	84.07	2.58	8.01	0.78	100.12	3.61	360.93	4.000	No	No	2.00
186	12.22	84.88	2.58	7.90	0.78	100.59	3.55	357.38	4.000	No	No	2.00
187	12.29	85.66	2.57	7.75	0.78	100.98	3.49	352.41	4.000	No	No	2.00
188	12.34	86.43	2.57	7.74	0.78	101.55	3.48	353.08	4.000	No	No	2.00
189	12.42	87.24	2.57	7.76	0.78	101.91	3.48	354.17	4.000	No	No	2.00
190	12.48	84.57	2.59	8.19	0.79	98.64	3.70	365.02	4.000	No	No	2.00
191	12.58	85.41	2.59	8.21	0.79	98.96	3.70	366.45	4.000	No	No	2.00
192	12.62	86.71	2.59	8.15	0.78	100.15	3.66	366.22	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.67	91.39	2.56	7.76	0.78	104.99	3.42	358.89	4.000	No	No	2.00
194	12.76	92.26	2.56	7.70	0.77	105.37	3.39	357.00	4.000	No	No	2.00
195	12.81	92.38	2.55	7.62	0.77	105.15	3.36	353.52	4.000	No	No	2.00
196	12.90	91.82	2.55	7.51	0.77	103.88	3.35	347.79	4.000	No	No	2.00
197	12.95	90.52	2.55	7.33	0.77	102.05	3.31	338.05	4.000	No	No	2.00
198	13.03	88.40	2.54	7.13	0.77	99.09	3.29	326.46	4.000	No	No	2.00
199	13.08	86.26	2.54	6.84	0.77	96.33	3.24	311.81	4.000	No	No	2.00
200	13.13	83.31	2.53	6.49	0.77	92.67	3.17	294.16	4.000	No	No	2.00
201	13.22	80.29	2.52	6.12	0.76	88.76	3.11	276.07	4.000	No	No	2.00
202	13.27	76.88	2.50	5.64	0.76	84.59	3.00	253.93	4.000	No	No	2.00
203	13.36	74.09	2.49	5.27	0.76	81.01	2.92	236.63	4.000	No	No	2.00
204	13.41	71.26	2.48	4.98	0.75	77.62	2.87	223.05	4.000	No	No	2.00
205	13.45	68.50	2.50	4.97	0.76	74.42	2.95	219.19	4.000	No	No	2.00
206	13.55	66.48	2.51	5.03	0.76	71.87	3.04	218.72	4.000	No	No	2.00
207	13.59	64.93	2.52	5.13	0.76	70.06	3.14	220.04	4.000	No	No	2.00
208	13.68	64.12	2.54	5.26	0.77	68.85	3.24	222.82	4.000	No	No	2.00
209	13.73	63.59	2.55	5.48	0.77	68.16	3.36	229.13	4.000	No	No	2.00
210	13.82	63.68	2.57	5.72	0.78	67.94	3.48	236.55	4.000	No	No	2.00
211	13.87	64.24	2.58	5.95	0.78	68.41	3.58	244.71	4.000	No	No	2.00
212	13.92	65.17	2.59	6.24	0.79	69.25	3.68	254.93	4.000	No	No	2.00
213	14.00	66.54	2.60	6.49	0.79	70.42	3.75	264.35	4.000	No	Yes	2.00
214	14.05	67.97	2.61	6.71	0.79	71.76	3.81	273.46	4.000	No	Yes	2.00
215	14.12	69.18	2.61	6.78	0.79	72.78	3.81	277.16	4.000	No	Yes	2.00
216	14.18	70.18	2.61	6.85	0.79	73.56	3.81	280.38	4.000	No	Yes	2.00
217	14.28	70.83	2.61	6.89	0.79	73.84	3.82	282.20	4.000	No	Yes	2.00
218	14.33	71.26	2.61	6.95	0.79	74.09	3.84	284.45	4.000	No	Yes	2.00
219	14.37	71.73	2.61	7.01	0.79	74.42	3.86	286.96	4.000	No	Yes	2.00
220	14.46	72.38	2.61	7.06	0.79	74.71	3.87	289.13	4.000	No	Yes	2.00
221	14.51	73.50	2.61	7.11	0.79	75.66	3.86	292.12	4.000	No	Yes	2.00
222	14.60	74.74	2.61	7.13	0.79	76.55	3.84	293.91	4.000	No	Yes	2.00
223	14.65	76.05	2.61	7.16	0.79	77.69	3.82	296.81	4.000	No	Yes	2.00
224	14.70	76.92	2.61	7.24	0.79	78.37	3.83	300.31	4.000	No	Yes	2.00
225	14.78	77.26	2.61	7.36	0.79	78.36	3.88	304.33	4.000	No	Yes	2.00
226	14.84	76.79	2.63	7.56	0.80	77.68	3.99	309.87	4.000	No	Yes	2.00
227	14.93	75.70	2.64	7.80	0.80	76.21	4.14	315.27	4.000	No	Yes	2.00
228	14.99	74.06	2.64	7.69	0.80	74.26	4.15	308.43	4.000	No	Yes	2.00
229	15.06	72.57	2.64	7.45	0.80	72.45	4.11	297.86	4.000	No	Yes	2.00
230	15.11	70.39	2.65	7.53	0.80	70.11	4.23	296.41	4.000	No	Yes	2.00
231	15.18	68.10	2.69	8.05	0.81	67.58	4.55	307.70	4.000	No	Yes	2.00
232	15.25	65.83	2.72	8.66	0.82	65.08	4.92	320.29	4.000	No	Yes	2.00
233	15.30	64.27	2.74	8.88	0.83	63.36	5.10	322.84	4.000	No	Yes	2.00
234	15.39	59.08	2.79	9.66	0.84	57.92	5.71	330.91	4.000	No	Yes	2.00
235	15.43	57.65	2.78	9.10	0.84	56.36	5.55	312.97	4.000	No	Yes	2.00
236	15.53	56.78	2.76	8.64	0.84	55.17	5.41	298.57	4.000	No	Yes	2.00
237	15.57	60.42	2.71	7.75	0.82	58.58	4.82	282.23	4.000	No	Yes	2.00
238	15.62	60.66	2.73	8.18	0.83	58.68	5.01	293.97	4.000	No	Yes	2.00
239	15.71	60.97	2.74	8.43	0.83	58.70	5.12	300.79	4.000	No	Yes	2.00
240	15.75	61.28	2.74	8.55	0.83	58.86	5.17	304.23	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.85	61.67	2.74	8.61	0.83	58.94	5.19	306.06	4.000	No	Yes	2.00
242	15.88	62.11	2.74	8.64	0.83	59.25	5.19	307.39	4.000	No	Yes	2.00
243	15.96	63.04	2.74	8.53	0.83	59.87	5.11	306.04	4.000	No	Yes	2.00
244	16.01	64.42	2.72	8.35	0.83	61.04	4.97	303.48	4.000	No	Yes	2.00
245	16.11	65.84	2.71	8.17	0.82	62.10	4.84	300.49	4.000	No	Yes	2.00
246	16.15	66.65	2.71	8.06	0.82	62.72	4.77	298.85	4.000	No	Yes	2.00
247	16.24	66.87	2.71	8.04	0.82	62.62	4.76	298.06	4.000	No	Yes	2.00
248	16.29	66.91	2.71	8.04	0.82	62.50	4.76	297.69	4.000	No	Yes	2.00
249	16.38	66.91	2.70	8.00	0.82	62.20	4.76	295.91	4.000	No	Yes	2.00
250	16.43	66.97	2.70	7.90	0.82	62.10	4.72	292.96	4.000	No	Yes	2.00
251	16.47	67.31	2.69	7.65	0.81	62.29	4.60	286.22	4.000	No	Yes	2.00
252	16.56	67.96	2.67	7.27	0.81	62.63	4.41	275.88	4.000	No	Yes	2.00
253	16.61	69.14	2.64	6.68	0.80	63.56	4.09	260.05	4.000	No	Yes	2.00
254	16.71	70.41	2.60	6.10	0.79	64.46	3.79	244.03	4.000	No	Yes	2.00
255	16.75	71.50	2.57	5.58	0.78	65.35	3.50	229.01	4.000	No	No	2.00
256	16.80	71.75	2.55	5.21	0.77	65.45	3.32	217.23	4.000	No	No	2.00
257	16.89	71.22	2.53	4.91	0.77	64.70	3.20	207.05	4.000	No	No	2.00
258	16.94	69.73	2.53	4.76	0.77	63.18	3.17	200.41	4.000	No	No	2.00
259	17.03	68.27	2.53	4.75	0.77	61.58	3.22	198.34	4.000	No	No	2.00
260	17.06	67.15	2.55	4.90	0.77	60.44	3.34	201.86	4.000	No	No	2.00
261	17.16	67.03	2.56	5.05	0.78	60.04	3.43	206.08	4.000	No	No	2.00
262	17.21	67.90	2.56	5.09	0.78	60.69	3.43	208.10	4.000	No	No	2.00
263	17.30	69.61	2.54	4.93	0.77	62.02	3.30	204.61	4.000	No	No	2.00
264	17.35	71.63	2.52	4.66	0.76	63.73	3.11	197.92	4.000	No	No	2.00
265	17.40	74.65	2.47	4.20	0.75	66.37	2.80	185.62	4.000	No	No	2.00
266	17.49	77.78	2.42	3.70	0.73	69.00	2.48	171.27	4.000	No	No	2.00
267	17.53	81.32	2.34	3.01	0.71	72.16	2.09	150.95	4.000	No	No	2.00
268	17.63	83.34	2.27	2.45	0.69	73.82	1.82	134.27	4.000	No	No	2.00
269	17.68	84.61	2.20	1.98	0.67	74.93	1.62	121.15	4.000	No	No	2.00
270	17.72	85.14	2.15	1.70	0.65	75.37	1.51	113.87	4.000	No	No	2.00
271	17.81	85.30	2.12	1.50	0.64	75.34	1.45	109.12	4.000	No	No	2.00
272	17.86	84.83	2.09	1.35	0.63	74.86	1.40	105.11	4.000	No	No	2.00
273	17.95	83.84	2.08	1.29	0.63	73.75	1.39	102.79	4.000	No	No	2.00
274	18.00	82.56	2.08	1.24	0.63	72.51	1.39	100.60	4.000	No	No	2.00
275	18.08	81.35	2.08	1.21	0.63	71.23	1.39	98.82	4.000	No	No	2.00
276	18.14	80.93	2.07	1.18	0.63	70.74	1.38	97.61	4.000	No	No	2.00
277	18.20	80.75	2.07	1.15	0.63	70.43	1.37	96.72	4.000	No	No	2.00
278	18.27	81.12	2.05	1.10	0.62	70.62	1.36	96.04	4.000	No	No	2.00
279	18.31	81.35	2.04	1.05	0.62	70.76	1.35	95.21	4.000	No	No	2.00
280	18.41	81.97	2.03	1.01	0.62	71.12	1.33	94.91	4.000	No	No	2.00
281	18.45	82.63	2.03	1.01	0.62	71.61	1.33	95.34	4.000	No	No	2.00
282	18.55	83.00	2.03	1.04	0.62	71.69	1.34	95.86	4.000	No	No	2.00
283	18.59	82.44	2.05	1.08	0.62	71.07	1.35	96.04	4.000	No	No	2.00
284	18.66	80.98	2.07	1.13	0.63	69.60	1.37	95.68	4.000	No	No	2.00
285	18.70	78.90	2.10	1.24	0.64	67.60	1.42	95.95	4.000	No	No	2.00
286	18.80	76.38	2.14	1.37	0.65	65.10	1.49	96.79	4.000	No	No	2.00
287	18.84	73.12	2.20	1.60	0.67	62.03	1.61	100.06	4.000	No	No	2.00
288	18.93	68.65	2.27	1.91	0.69	57.81	1.83	105.95	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.98	63.77	2.36	2.39	0.72	53.32	2.20	117.20	4.000	No	No	2.00
290	19.04	58.86	2.46	3.00	0.75	48.83	2.72	132.82	4.000	No	No	2.00
291	19.12	54.26	2.56	3.74	0.77	44.60	3.39	151.07	4.000	No	No	2.00
292	19.16	49.94	2.65	4.67	0.80	40.71	4.22	171.68	4.000	No	Yes	2.00
293	19.24	46.25	2.74	5.63	0.83	37.35	5.09	190.14	4.000	No	Yes	2.00
294	19.31	43.24	2.81	6.65	0.85	34.63	5.99	207.33	4.000	No	Yes	2.00
295	19.39	41.35	2.86	7.39	0.87	32.86	6.64	218.05	4.000	No	Yes	2.00
296	19.44	40.11	2.89	7.95	0.88	31.72	7.11	225.51	4.000	No	Yes	2.00
297	19.53	39.74	2.90	8.13	0.88	31.28	7.27	227.51	4.000	No	Yes	2.00
298	19.58	39.62	2.91	8.16	0.88	31.10	7.32	227.60	4.000	No	Yes	2.00
299	19.63	39.43	2.91	8.08	0.88	30.88	7.30	225.50	4.000	No	Yes	2.00
300	19.71	38.84	2.91	8.05	0.88	30.27	7.37	223.12	4.000	No	Yes	2.00
301	19.77	37.65	2.92	8.11	0.89	29.23	7.56	220.96	4.000	No	Yes	2.00
302	19.86	36.25	2.94	8.27	0.89	27.96	7.86	219.71	4.000	No	Yes	2.00
303	19.90	34.63	2.97	8.51	1.00	26.07	8.34	217.43	4.000	No	Yes	2.00
304	19.95	33.24	2.99	8.66	1.00	24.91	8.66	215.67	4.000	No	Yes	2.00
305	20.03	32.15	3.01	8.70	1.00	23.96	8.88	212.69	3.600	No	Yes	2.00
306	20.08	31.62	3.00	8.50	1.00	23.49	8.86	208.02	3.600	No	Yes	2.00
307	20.18	31.50	3.00	8.29	1.00	23.28	8.77	204.18	3.600	No	Yes	2.00
308	20.22	32.37	2.97	7.78	1.00	23.90	8.31	198.75	3.600	No	Yes	2.00
309	20.32	33.46	2.94	7.33	0.89	25.20	7.76	195.62	3.600	No	Yes	2.00
310	20.36	34.05	2.92	6.98	0.88	25.65	7.45	191.19	3.600	No	Yes	2.00
311	20.43	33.62	2.92	6.87	0.88	25.24	7.46	188.16	3.600	No	Yes	2.00
312	20.50	32.96	2.92	6.82	0.88	24.64	7.53	185.53	3.600	No	Yes	2.00
313	20.55	33.15	2.91	6.59	0.88	24.75	7.36	182.07	3.600	No	Yes	2.00
314	20.63	34.33	2.88	6.20	0.87	25.63	6.93	177.61	3.600	No	Yes	2.00
315	20.69	37.15	2.82	5.49	0.85	27.87	6.07	169.33	3.600	No	Yes	2.00
316	20.78	39.86	2.76	4.89	0.84	29.98	5.37	160.95	3.600	No	Yes	2.00
317	20.82	41.81	2.72	4.45	0.82	31.55	4.88	153.84	3.600	No	Yes	2.00
318	20.87	41.88	2.71	4.34	0.82	31.56	4.80	151.36	3.600	No	Yes	2.00
319	20.95	41.01	2.71	4.26	0.82	30.77	4.82	148.28	3.600	No	Yes	2.00
320	21.01	39.08	2.72	4.13	0.82	29.20	4.90	143.12	3.600	No	Yes	2.00
321	21.10	37.12	2.73	4.05	0.83	27.56	5.04	139.01	3.600	No	Yes	2.00
322	21.14	33.89	2.79	4.42	0.84	24.92	5.72	142.45	3.600	No	Yes	2.00
323	21.24	31.47	2.86	5.06	0.86	22.85	6.59	150.57	3.600	No	Yes	2.00
324	21.29	29.20	2.92	5.76	0.88	20.99	7.53	157.96	3.600	No	Yes	2.00
325	21.33	29.67	2.92	5.78	0.88	21.31	7.47	159.18	3.600	No	Yes	2.00
326	21.41	30.17	2.91	5.70	0.88	21.63	7.34	158.75	3.600	No	Yes	2.00
327	21.48	30.61	2.90	5.59	0.88	21.91	7.20	157.65	3.600	No	Yes	2.00
328	21.53	29.27	2.93	5.82	0.89	20.82	7.61	158.53	3.600	No	Yes	2.00
329	21.61	27.69	2.97	6.06	1.00	18.99	8.26	156.88	3.600	No	Yes	2.00
330	21.67	25.70	3.00	6.27	1.00	17.50	8.86	155.12	3.600	No	Yes	2.00
331	21.76	24.49	3.02	6.29	1.00	16.56	9.19	152.13	3.600	No	Yes	2.00
332	21.81	23.78	3.03	6.28	1.00	16.01	9.38	150.17	3.600	No	Yes	2.00
333	21.86	25.30	2.99	5.77	1.00	17.07	8.59	146.68	3.600	No	Yes	2.00
334	21.95	27.29	2.92	5.14	0.88	19.03	7.51	142.82	3.600	No	Yes	2.00
335	21.99	28.93	2.86	4.50	0.87	20.30	6.65	135.11	3.600	No	Yes	2.00
336	22.09	28.68	2.85	4.29	0.86	20.06	6.52	130.78	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.13	28.17	2.85	4.21	0.86	19.65	6.55	128.62	3.600	No	Yes	2.00
338	22.18	27.83	2.86	4.26	0.87	19.34	6.66	128.73	3.600	No	Yes	2.00
339	22.27	27.99	2.85	4.14	0.86	19.41	6.53	126.82	3.600	No	Yes	2.00
340	22.32	27.85	2.83	3.79	0.86	19.31	6.23	120.34	3.600	No	Yes	2.00
341	22.40	26.64	2.83	3.60	0.86	18.37	6.26	115.04	3.600	No	Yes	2.00
342	22.45	23.34	2.90	3.88	0.88	15.83	7.25	114.82	3.600	No	Yes	2.00
343	22.55	19.86	3.03	4.74	1.00	12.78	9.30	118.85	3.600	No	Yes	2.00
344	22.59	18.31	3.09	5.38	1.00	11.68	10.51	122.76	3.600	No	Yes	2.00
345	22.69	19.52	3.05	5.01	1.00	12.47	9.73	121.30	3.600	No	Yes	2.00
346	22.73	21.26	2.99	4.44	1.00	13.64	8.61	117.47	3.600	No	Yes	2.00
347	22.78	21.76	2.93	3.90	0.89	14.46	7.73	111.78	3.600	No	Yes	2.00
348	22.91	20.30	2.97	3.78	1.00	12.88	8.23	106.02	3.600	No	Yes	2.00
349	23.00	18.18	3.01	3.83	1.00	11.39	9.00	102.55	3.600	No	Yes	2.00
350	23.05	16.32	3.07	4.06	1.00	10.10	10.04	101.34	3.600	No	Yes	2.00
351	23.10	15.61	3.09	4.02	1.00	9.59	10.32	99.04	3.600	No	Yes	2.00
352	23.20	18.56	2.96	3.17	1.00	11.55	8.12	93.74	3.600	No	Yes	2.00
353	23.29	23.59	2.78	2.38	0.84	15.72	5.58	87.77	3.600	No	Yes	2.00
354	23.33	29.96	2.62	1.81	0.79	20.56	3.89	79.88	3.600	No	Yes	2.00
355	23.38	32.10	2.56	1.63	0.78	22.19	3.44	76.28	0.121	No	No	0.31
356	23.46	30.51	2.58	1.64	0.78	20.94	3.61	75.61	0.120	No	No	0.31
357	23.52	26.78	2.65	1.74	0.80	18.08	4.22	76.37	3.600	No	Yes	2.00
358	23.56	22.34	2.75	1.90	0.83	14.74	5.21	76.81	3.600	No	Yes	2.00
359	23.65	19.08	2.83	2.01	0.86	12.29	6.19	76.09	3.600	No	Yes	2.00
360	23.70	16.04	2.91	2.13	0.88	10.05	7.40	74.38	3.600	No	Yes	2.00
361	23.78	14.49	2.98	2.17	1.00	8.59	8.38	71.91	3.600	No	Yes	2.00
362	23.83	13.62	3.00	2.17	1.00	7.99	8.82	70.49	3.600	No	Yes	2.00
363	23.89	13.52	2.99	1.98	1.00	7.91	8.54	67.59	3.600	No	Yes	2.00
364	23.97	14.02	2.93	1.78	0.89	8.56	7.69	65.83	3.600	No	Yes	2.00
365	24.02	14.68	2.89	1.62	0.88	9.03	7.10	64.09	3.600	No	Yes	2.00
366	24.11	15.08	2.89	1.67	0.87	9.28	7.04	65.33	3.600	No	Yes	2.00
367	24.16	14.96	2.90	1.73	0.88	9.17	7.22	66.20	3.600	No	Yes	2.00
368	24.25	14.63	2.92	1.79	0.88	8.90	7.48	66.61	3.600	No	Yes	2.00
369	24.29	14.20	2.96	1.88	1.00	8.23	8.12	66.83	3.600	No	Yes	2.00
370	24.37	14.04	2.98	1.97	1.00	8.10	8.38	67.92	3.600	No	Yes	2.00
371	24.41	14.06	2.98	2.02	1.00	8.10	8.46	68.54	3.600	No	Yes	2.00
372	24.50	14.09	2.98	2.01	1.00	8.09	8.47	68.51	3.600	No	Yes	2.00
373	24.56	14.03	2.98	2.00	1.00	8.04	8.49	68.22	3.600	No	Yes	2.00
374	24.62	13.81	2.99	2.02	1.00	7.88	8.65	68.10	3.600	No	Yes	2.00
375	24.69	13.69	2.99	2.00	1.00	7.78	8.69	67.57	3.600	No	Yes	2.00
376	24.79	13.72	2.99	1.97	1.00	7.77	8.64	67.16	3.600	No	Yes	2.00
377	24.84	13.84	2.99	1.95	1.00	7.83	8.55	66.96	3.600	No	Yes	2.00
378	24.88	13.97	2.98	1.93	1.00	7.90	8.46	66.85	3.600	No	Yes	2.00
379	24.97	13.94	2.98	1.92	1.00	7.85	8.48	66.54	3.600	No	Yes	2.00
380	25.01	13.84	2.98	1.89	1.00	7.78	8.49	66.03	3.600	No	Yes	2.00
381	25.11	13.81	2.98	1.87	1.00	7.75	8.47	65.66	3.600	No	Yes	2.00
382	25.16	13.85	2.98	1.85	1.00	7.76	8.42	65.35	3.600	No	Yes	2.00
383	25.20	13.82	2.98	1.85	1.00	7.74	8.43	65.26	3.600	No	Yes	2.00
384	25.30	13.72	2.99	1.89	1.00	7.67	8.56	65.65	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.34	13.63	3.00	1.98	1.00	7.60	8.80	66.91	3.600	No	Yes	2.00
386	25.42	13.63	3.02	2.14	1.00	7.59	9.09	69.02	3.600	No	Yes	2.00
387	25.48	13.75	3.03	2.29	1.00	7.66	9.31	71.33	3.600	No	Yes	2.00
388	25.53	14.59	3.02	2.46	1.00	8.18	9.17	75.05	3.600	No	Yes	2.00
389	25.61	15.93	3.01	2.68	1.00	9.01	8.90	80.17	3.600	No	Yes	2.00
390	25.66	17.82	3.00	3.17	1.00	10.19	8.85	90.20	3.600	No	Yes	2.00
391	25.75	19.50	3.02	3.79	1.00	11.23	9.04	101.52	3.600	No	Yes	2.00
392	25.80	21.56	3.03	4.63	1.00	12.50	9.32	116.58	3.600	No	Yes	2.00
393	25.89	23.79	3.03	5.22	1.00	13.88	9.28	128.83	3.600	No	Yes	2.00
394	25.94	26.68	3.01	5.57	1.00	15.67	8.89	139.36	3.600	No	Yes	2.00
395	25.98	29.25	2.99	5.96	1.00	17.27	8.69	149.98	3.600	No	Yes	2.00
396	26.06	31.46	2.99	6.41	1.00	18.62	8.64	160.90	3.600	No	Yes	2.00
397	26.12	33.73	2.99	6.91	1.00	20.01	8.63	172.61	3.600	No	Yes	2.00
398	26.21	35.85	2.98	7.08	1.00	21.29	8.43	179.39	3.600	No	Yes	2.00
399	26.25	38.34	2.96	7.08	1.00	22.82	8.08	184.34	3.600	No	Yes	2.00
400	26.35	40.14	2.92	6.99	0.89	25.07	7.56	189.59	3.600	No	Yes	2.00
401	26.40	41.73	2.91	6.89	0.88	26.13	7.31	190.94	3.600	No	Yes	2.00
402	26.45	42.88	2.89	6.76	0.88	26.91	7.09	190.84	3.600	No	Yes	2.00
403	26.54	43.88	2.88	6.62	0.87	27.56	6.89	189.93	3.600	No	Yes	2.00
404	26.58	44.50	2.84	6.03	0.86	28.07	6.42	180.20	3.600	No	Yes	2.00
405	26.68	44.28	2.81	5.42	0.85	27.99	6.01	168.20	3.600	No	Yes	2.00
406	26.72	42.61	2.81	5.23	0.85	26.86	6.04	162.16	3.600	No	Yes	2.00
407	26.82	40.55	2.85	5.63	0.86	25.33	6.57	166.45	3.600	No	Yes	2.00
408	26.86	38.66	2.90	6.19	0.88	23.94	7.23	173.09	3.600	No	Yes	2.00
409	26.90	37.08	2.93	6.56	0.89	22.80	7.72	175.94	3.600	No	Yes	2.00
410	27.00	35.74	2.98	6.87	1.00	20.87	8.38	174.83	3.600	No	Yes	2.00
411	27.04	35.00	2.99	6.94	1.00	20.39	8.55	174.37	3.600	No	Yes	2.00
412	27.13	34.94	2.98	6.77	1.00	20.31	8.45	171.68	3.600	No	Yes	2.00
413	27.18	35.65	2.96	6.43	1.00	20.73	8.09	167.78	3.600	No	Yes	2.00
414	27.27	36.09	2.93	6.19	0.89	22.02	7.62	167.87	3.600	No	Yes	2.00
415	27.32	36.99	2.90	5.84	0.88	22.66	7.23	163.76	3.600	No	Yes	2.00
416	27.37	36.52	2.90	5.70	0.88	22.35	7.18	160.58	3.600	No	Yes	2.00
417	27.45	34.66	2.92	5.82	0.89	21.05	7.56	159.16	3.600	No	Yes	2.00
418	27.50	31.98	2.98	6.10	1.00	18.37	8.47	155.48	3.600	No	Yes	2.00
419	27.59	29.87	3.01	6.30	1.00	17.06	9.03	154.05	3.600	No	Yes	2.00
420	27.64	29.32	3.01	6.09	1.00	16.70	8.98	149.90	3.600	No	Yes	2.00
421	27.73	29.47	3.00	5.81	1.00	16.76	8.73	146.26	3.600	No	Yes	2.00
422	27.76	30.53	2.96	5.36	1.00	17.39	8.15	141.78	3.600	No	Yes	2.00
423	27.82	31.52	2.91	5.00	0.88	18.94	7.41	140.34	3.600	No	Yes	2.00
424	27.92	32.11	2.89	4.74	0.88	19.34	7.08	137.03	3.600	No	Yes	2.00
425	27.96	31.52	2.89	4.67	0.88	18.95	7.12	134.92	3.600	No	Yes	2.00
426	28.05	30.56	2.91	4.71	0.88	18.27	7.33	133.93	3.600	No	Yes	2.00
427	28.10	29.53	2.93	4.77	0.89	17.56	7.58	133.15	3.600	No	Yes	2.00
428	28.16	29.07	2.95	4.83	1.00	16.38	7.99	130.85	3.600	No	Yes	2.00
429	28.24	29.16	2.95	4.83	1.00	16.41	7.98	131.01	3.600	No	Yes	2.00
430	28.29	29.51	2.93	4.83	0.89	17.48	7.66	133.81	3.600	No	Yes	2.00
431	28.38	30.16	2.90	4.51	0.88	17.93	7.25	129.92	3.600	No	Yes	2.00
432	28.43	31.00	2.85	3.95	0.86	18.57	6.55	121.68	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.49	32.33	2.80	3.47	0.85	19.54	5.87	114.60	3.600	No	Yes	2.00
434	28.56	33.36	2.79	3.43	0.84	20.21	5.69	114.94	3.600	No	Yes	2.00
435	28.65	33.57	2.81	3.76	0.85	20.25	6.00	121.46	3.600	No	Yes	2.00
436	28.70	32.67	2.85	4.18	0.86	19.55	6.54	127.74	3.600	No	Yes	2.00
437	28.75	31.34	2.90	4.67	0.88	18.56	7.22	134.00	3.600	No	Yes	2.00
438	28.82	30.84	2.95	5.11	1.00	17.22	7.98	137.47	3.600	No	Yes	2.00
439	28.89	31.09	2.96	5.39	1.00	17.35	8.18	141.96	3.600	No	Yes	2.00
440	28.95	32.05	2.95	5.40	1.00	17.90	8.03	143.76	3.600	No	Yes	2.00
441	29.00	31.96	2.96	5.46	1.00	17.82	8.11	144.50	3.600	No	Yes	2.00
442	29.08	31.06	2.98	5.62	1.00	17.26	8.41	145.20	3.600	No	Yes	2.00
443	29.14	29.84	3.00	5.84	1.00	16.52	8.83	145.96	3.600	No	Yes	2.00
444	29.23	29.10	3.02	6.05	1.00	16.06	9.17	147.18	3.600	No	Yes	2.00
445	29.27	28.91	3.03	6.22	1.00	15.94	9.35	149.01	3.600	No	Yes	2.00
446	29.34	28.67	3.05	6.42	1.00	15.77	9.58	151.10	3.600	No	Yes	2.00
447	29.42	28.45	3.06	6.60	1.00	15.62	9.78	152.73	3.600	No	Yes	2.00
448	29.47	28.39	3.07	6.89	1.00	15.56	10.04	156.19	3.600	No	Yes	2.00
449	29.54	29.35	3.07	7.04	1.00	16.11	9.95	160.28	3.600	No	Yes	2.00
450	29.60	31.84	3.04	7.00	1.00	17.54	9.42	165.23	3.600	No	Yes	2.00
451	29.66	36.56	2.97	6.46	1.00	20.28	8.23	166.93	3.600	No	Yes	2.00
452	29.73	44.55	2.84	5.66	0.86	26.64	6.38	170.06	3.600	No	Yes	2.00
453	29.83	54.02	2.73	4.91	0.83	33.02	5.05	166.59	3.600	No	Yes	2.00
454	29.88	62.56	2.65	4.43	0.80	38.85	4.20	163.34	3.600	No	Yes	2.00
455	29.93	72.75	2.56	3.92	0.78	45.93	3.43	157.39	0.443	No	No	1.01
456	30.01	81.88	2.49	3.56	0.76	52.32	2.92	152.68	0.411	No	No	0.94
457	30.06	91.73	2.42	3.20	0.73	59.33	2.48	147.22	0.377	No	No	0.86
458	30.15	96.79	2.38	3.00	0.72	62.94	2.28	143.66	0.356	No	No	0.81
459	30.20	100.17	2.35	2.84	0.71	65.42	2.14	140.23	0.336	No	No	0.77
460	30.26	101.78	2.34	2.79	0.71	66.54	2.10	139.45	0.332	No	No	0.76
461	30.34	102.37	2.35	2.83	0.71	66.81	2.11	141.09	0.341	No	No	0.78
462	30.43	102.83	2.35	2.91	0.71	66.95	2.15	143.82	0.357	No	No	0.81
463	30.48	102.74	2.36	2.98	0.72	66.77	2.18	145.77	0.368	No	No	0.84
464	30.52	102.18	2.36	2.98	0.72	66.34	2.19	145.42	0.366	No	No	0.83
465	30.62	101.55	2.36	2.93	0.72	65.86	2.18	143.50	0.355	No	No	0.81
466	30.65	102.76	2.33	2.70	0.71	66.93	2.05	136.94	0.319	No	No	0.73
467	30.75	105.90	2.29	2.44	0.69	69.35	1.88	130.56	0.287	No	No	0.65
468	30.80	109.50	2.25	2.23	0.68	72.13	1.75	126.22	0.267	No	No	0.61
469	30.84	112.26	2.23	2.15	0.68	74.17	1.69	125.37	0.263	No	No	0.60
470	30.94	113.35	2.22	2.10	0.67	74.92	1.66	124.53	0.260	No	No	0.59
471	30.98	113.16	2.21	2.06	0.67	74.80	1.65	123.47	0.255	No	No	0.58
472	31.07	110.46	2.23	2.12	0.68	72.70	1.70	123.51	0.255	No	No	0.58
473	31.12	103.68	2.29	2.36	0.69	67.56	1.87	126.57	0.269	No	No	0.61
474	31.17	95.59	2.36	2.72	0.72	61.45	2.17	133.54	0.301	No	No	0.68
475	31.26	85.86	2.45	3.21	0.74	54.25	2.64	143.45	0.355	No	No	0.80
476	31.31	76.44	2.53	3.62	0.77	47.56	3.16	150.29	0.396	No	No	0.89
477	31.37	65.91	2.61	4.08	0.79	40.24	3.87	155.66	3.600	No	Yes	2.00
478	31.45	58.76	2.62	3.70	0.80	35.65	3.95	140.84	3.600	No	Yes	2.00
479	31.53	55.63	2.60	3.26	0.79	33.75	3.78	127.43	3.600	No	Yes	2.00
480	31.58	55.64	2.57	2.91	0.78	33.91	3.49	118.39	0.234	No	No	0.53

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.66	58.25	2.58	3.20	0.78	35.45	3.59	127.41	0.272	No	No	0.61
482	31.71	61.02	2.58	3.38	0.78	37.16	3.60	133.82	0.303	No	No	0.68
483	31.77	59.31	2.61	3.55	0.79	35.90	3.82	137.26	3.600	No	Yes	2.00
484	31.82	58.22	2.62	3.63	0.79	35.11	3.94	138.27	3.600	No	Yes	2.00
485	31.89	53.41	2.68	4.03	0.81	31.76	4.55	144.36	3.600	No	Yes	2.00
486	31.98	51.51	2.72	4.30	0.82	30.39	4.89	148.69	3.600	No	Yes	2.00
487	32.03	44.43	2.81	4.95	0.85	25.63	6.02	154.38	3.600	No	Yes	2.00
488	32.12	41.20	2.84	5.00	0.86	23.53	6.41	150.90	3.600	No	Yes	2.00
489	32.16	39.22	2.83	4.57	0.86	22.36	6.29	140.61	3.600	No	Yes	2.00
490	32.26	38.04	2.82	4.21	0.85	21.66	6.12	132.55	3.600	No	Yes	2.00
491	32.31	36.53	2.82	4.03	0.86	20.73	6.14	127.38	3.600	No	Yes	2.00
492	32.35	35.34	2.85	4.20	0.86	19.93	6.47	128.86	3.600	No	Yes	2.00
493	32.44	35.25	2.85	4.25	0.86	19.83	6.54	129.63	3.600	No	Yes	2.00
494	32.49	35.82	2.84	4.19	0.86	20.19	6.41	129.31	3.600	No	Yes	2.00
495	32.58	36.33	2.83	4.08	0.86	20.50	6.23	127.83	3.600	No	Yes	2.00
496	32.62	35.80	2.84	4.14	0.86	20.14	6.37	128.32	3.600	No	Yes	2.00
497	32.71	34.50	2.87	4.38	0.87	19.24	6.80	130.74	3.600	No	Yes	2.00
498	32.75	33.72	2.89	4.50	0.87	18.72	7.02	131.49	3.600	No	Yes	2.00
499	32.81	35.40	2.85	4.14	0.86	19.82	6.44	127.66	3.600	No	Yes	2.00
500	32.91	37.11	2.80	3.74	0.85	20.97	5.83	122.23	3.600	No	Yes	2.00
501	32.95	37.27	2.78	3.55	0.84	21.10	5.63	118.75	3.600	No	Yes	2.00
502	33.04	35.09	2.81	3.67	0.85	19.67	6.04	118.72	3.600	No	Yes	2.00
503	33.09	32.11	2.87	3.94	0.87	17.72	6.76	119.78	3.600	No	Yes	2.00
504	33.14	29.53	2.93	4.29	0.89	16.03	7.60	121.81	3.600	No	Yes	2.00
505	33.22	27.51	2.99	4.64	1.00	13.94	8.69	121.13	3.600	No	Yes	2.00
506	33.28	25.99	3.03	4.84	1.00	13.10	9.25	121.18	3.600	No	Yes	2.00
507	33.35	25.00	3.04	4.82	1.00	12.54	9.50	119.10	3.600	No	Yes	2.00
508	33.41	24.53	3.03	4.58	1.00	12.27	9.38	115.11	3.600	No	Yes	2.00
509	33.50	24.84	3.01	4.27	1.00	12.42	8.99	111.59	3.600	No	Yes	2.00
510	33.55	25.71	2.98	3.94	1.00	12.88	8.40	108.29	3.600	No	Yes	2.00
511	33.63	26.67	2.93	3.73	0.89	14.25	7.63	108.68	3.600	No	Yes	2.00
512	33.69	27.20	2.92	3.65	0.88	14.57	7.43	108.25	3.600	No	Yes	2.00
513	33.73	26.67	2.96	3.84	1.00	13.37	8.09	108.19	3.600	No	Yes	2.00
514	33.83	25.65	2.99	4.15	1.00	12.79	8.68	111.02	3.600	No	Yes	2.00
515	33.87	24.56	3.03	4.49	1.00	12.19	9.33	113.68	3.600	No	Yes	2.00
516	33.93	24.16	3.04	4.61	1.00	11.96	9.57	114.46	3.600	No	Yes	2.00
517	34.01	24.13	3.05	4.63	1.00	11.92	9.61	114.61	3.600	No	Yes	2.00
518	34.05	24.47	3.04	4.56	1.00	12.10	9.45	114.34	3.600	No	Yes	2.00
519	34.13	25.06	3.02	4.45	1.00	12.40	9.18	113.90	3.600	No	Yes	2.00
520	34.20	25.99	3.00	4.29	1.00	12.89	8.78	113.21	3.600	No	Yes	2.00
521	34.29	26.89	2.98	4.14	1.00	13.35	8.43	112.54	3.600	No	Yes	2.00
522	34.33	28.17	2.98	4.39	1.00	14.03	8.40	117.92	3.600	No	Yes	2.00
523	34.43	29.06	2.98	4.69	1.00	14.49	8.53	123.58	3.600	No	Yes	2.00
524	34.46	32.98	2.90	4.49	0.88	17.75	7.27	129.10	3.600	No	Yes	2.00
525	34.55	37.08	2.83	3.98	0.86	20.35	6.18	125.76	3.600	No	Yes	2.00
526	34.59	43.97	2.71	3.33	0.82	24.84	4.80	119.31	3.600	No	Yes	2.00
527	34.68	48.70	2.64	2.98	0.80	27.95	4.11	114.79	3.600	No	Yes	2.00
528	34.73	50.90	2.60	2.78	0.79	29.44	3.77	111.06	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.80	48.11	2.62	2.70	0.79	27.66	3.89	107.58	3.600	No	Yes	2.00
530	34.87	43.23	2.65	2.67	0.80	24.54	4.24	103.97	3.600	No	Yes	2.00
531	34.91	37.23	2.72	2.79	0.83	20.68	4.96	102.55	3.600	No	Yes	2.00
532	35.01	32.57	2.82	3.27	0.85	17.61	6.11	107.66	3.600	No	Yes	2.00
533	35.06	27.78	2.99	4.38	1.00	13.65	8.55	116.69	3.600	No	Yes	2.00
534	35.11	26.67	3.08	5.72	1.00	13.04	10.13	132.09	3.600	No	Yes	2.00
535	35.19	28.75	3.08	6.38	1.00	14.12	10.21	144.27	3.600	No	Yes	2.00
536	35.24	37.07	2.97	5.84	1.00	18.54	8.21	152.26	3.600	No	Yes	2.00
537	35.33	46.99	2.83	5.20	0.86	25.83	6.18	159.57	3.600	No	Yes	2.00
538	35.38	61.06	2.70	4.59	0.82	34.69	4.66	161.56	3.600	No	Yes	2.00
539	35.46	74.01	2.60	4.20	0.79	42.97	3.77	162.02	3.600	No	Yes	2.00
540	35.51	91.47	2.49	3.70	0.76	54.43	2.91	158.66	0.451	No	No	0.99
541	35.59	106.56	2.40	3.29	0.73	64.54	2.39	154.11	0.420	No	No	0.92
542	35.65	121.47	2.32	2.92	0.70	74.76	2.01	150.01	0.394	No	No	0.86
543	35.70	134.89	2.25	2.60	0.68	84.18	1.75	147.30	0.377	No	No	0.82
544	35.78	148.10	2.19	2.36	0.66	93.46	1.58	148.06	0.382	No	No	0.83
545	35.83	160.81	2.14	2.23	0.65	102.35	1.49	152.43	0.409	No	No	0.89
546	35.90	169.10	2.13	2.25	0.65	107.84	1.47	158.29	0.449	No	No	0.98
547	35.97	167.02	2.17	2.47	0.66	105.75	1.53	162.30	0.478	No	No	1.04
548	36.04	156.45	2.23	2.80	0.68	97.77	1.69	165.32	0.500	No	No	1.09
549	36.11	140.67	2.31	3.22	0.70	86.43	1.96	169.73	0.535	No	No	1.16
550	36.16	123.83	2.40	3.73	0.73	74.66	2.37	177.23	0.598	No	No	1.30
551	36.25	110.32	2.48	4.27	0.75	65.31	2.86	186.77	0.686	No	No	1.49
552	36.29	102.76	2.54	4.72	0.77	60.10	3.26	196.04	0.781	No	No	1.70
553	36.36	95.03	2.60	5.23	0.79	54.83	3.74	205.23	4.000	No	No	2.00
554	36.43	96.72	2.59	5.25	0.79	55.81	3.71	206.93	4.000	No	No	2.00
555	36.52	107.02	2.53	4.72	0.77	62.57	3.18	198.69	0.810	No	No	1.76
556	36.58	130.32	2.39	3.79	0.73	78.31	2.33	182.61	0.646	No	No	1.40
557	36.62	163.22	2.25	3.08	0.68	100.90	1.76	177.18	0.597	No	No	1.30
558	36.70	188.50	2.17	2.76	0.66	118.34	1.55	182.85	0.649	No	No	1.41
559	36.75	205.24	2.14	2.69	0.65	129.68	1.48	191.75	0.736	No	No	1.60
560	36.83	200.18	2.16	2.83	0.66	125.74	1.53	192.16	0.740	No	No	1.61
561	36.89	179.59	2.24	3.24	0.68	110.96	1.73	191.71	0.735	No	No	1.60
562	36.97	156.77	2.34	3.85	0.71	94.79	2.10	199.15	0.815	No	No	1.77
563	37.03	144.14	2.41	4.37	0.73	85.87	2.44	209.65	4.000	No	No	2.00
564	37.08	139.67	2.44	4.61	0.74	82.68	2.60	215.29	4.000	No	No	2.00
565	37.17	145.28	2.41	4.36	0.73	86.43	2.43	209.96	4.000	No	No	2.00
566	37.21	151.62	2.36	3.87	0.71	91.12	2.16	196.56	0.786	No	No	1.70
567	37.31	159.72	2.29	3.32	0.69	97.16	1.88	182.29	0.643	No	No	1.39
568	37.35	151.46	2.28	3.07	0.69	92.19	1.84	169.63	0.534	No	No	1.16
569	37.41	123.08	2.35	3.15	0.71	73.59	2.13	156.67	0.438	No	No	0.95
570	37.49	93.09	2.44	3.13	0.74	54.34	2.60	141.08	0.341	No	No	0.74
571	37.54	75.02	2.51	3.06	0.76	42.95	3.03	130.06	0.285	No	No	0.62
572	37.63	70.84	2.54	3.21	0.77	40.17	3.28	131.80	0.293	No	No	0.63
573	37.68	71.32	2.61	3.98	0.79	39.93	3.83	152.74	3.600	No	Yes	2.00
574	37.77	69.01	2.67	4.67	0.81	38.09	4.42	168.36	3.600	No	Yes	2.00
575	37.80	78.02	2.61	4.33	0.79	43.75	3.81	166.51	3.600	No	Yes	2.00
576	37.89	85.01	2.55	4.00	0.77	48.22	3.36	161.99	0.475	No	No	1.03

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
577	37.94	110.12	2.42	3.47	0.73	64.40	2.48	159.94	0.461	No	No	1.00
578	38.02	162.77	2.22	2.76	0.67	99.43	1.67	165.55	0.502	No	No	1.08
579	38.07	249.76	2.00	2.12	0.61	159.76	1.31	208.62	4.000	No	No	2.00
580	38.13	336.89	1.83	1.69	0.56	222.73	1.19	264.08	4.000	No	No	2.00
581	38.19	427.32	1.68	1.33	0.51	291.06	1.00	291.06	4.000	No	No	2.00
582	38.27	519.91	1.41	0.71	0.50	356.88	1.00	356.88	4.000	No	No	2.00
583	38.34	626.41	1.07	0.28	0.50	430.08	1.00	430.08	4.000	No	No	2.00
584	38.41	699.19	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
585	38.46	738.05	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
586	38.52	685.69	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
587	38.59	709.10	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
588	38.66	731.71	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.08	2.00	0.00	0.00	0.00	0.00	0.13	2.00	0.00	0.00	0.00	0.00
0.22	2.00	0.00	0.00	0.00	0.00	0.27	2.00	0.00	0.00	0.00	0.00
0.34	2.00	0.00	0.00	0.00	0.00	0.41	2.00	0.00	0.00	0.00	0.00
0.51	2.00	0.00	0.00	0.00	0.00	0.55	2.00	0.00	0.00	0.00	0.00
0.60	2.00	0.00	0.00	0.00	0.00	0.68	2.00	0.00	0.00	0.00	0.00
0.74	2.00	0.00	0.00	0.00	0.00	0.83	2.00	0.00	0.00	0.00	0.00
0.87	2.00	0.00	0.00	0.00	0.00	0.92	2.00	0.00	0.00	0.00	0.00
1.01	2.00	0.00	0.00	0.00	0.00	1.06	2.00	0.00	0.00	0.00	0.00
1.15	2.00	0.00	0.00	0.00	0.00	1.18	2.00	0.00	0.00	0.00	0.00
1.25	2.00	0.00	0.00	0.00	0.00	1.34	2.00	0.00	0.00	0.00	0.00
1.38	2.00	0.00	0.00	0.00	0.00	1.47	2.00	0.00	0.00	0.00	0.00
1.52	2.00	0.00	0.00	0.00	0.00	1.60	2.00	0.00	0.00	0.00	0.00
1.66	2.00	0.00	0.00	0.00	0.00	1.75	2.00	0.00	0.00	0.00	0.00
1.79	2.00	0.00	0.00	0.00	0.00	1.84	2.00	0.00	0.00	0.00	0.00
1.92	2.00	0.00	0.00	0.00	0.00	1.99	2.00	0.00	0.00	0.00	0.00
2.07	2.00	0.00	0.00	0.00	0.00	2.12	2.00	0.00	0.00	0.00	0.00
2.17	2.00	0.00	0.00	0.00	0.00	2.23	2.00	0.00	0.00	0.00	0.00
2.31	2.00	0.00	0.00	0.00	0.00	2.40	2.00	0.00	0.00	0.00	0.00
2.45	2.00	0.00	0.00	0.00	0.00	2.50	2.00	0.00	0.00	0.00	0.00
2.58	2.00	0.00	0.00	0.00	0.00	2.63	2.00	0.00	0.00	0.00	0.00
2.73	2.00	0.00	0.00	0.00	0.00	2.77	2.00	0.00	0.00	0.00	0.00
2.86	2.00	0.00	0.00	0.00	0.00	2.91	2.00	0.00	0.00	0.00	0.00
2.96	2.00	0.00	0.00	0.00	0.00	3.05	2.00	0.00	0.00	0.00	0.00
3.09	2.00	0.00	0.00	0.00	0.00	3.18	2.00	0.00	0.00	0.00	0.00
3.23	2.00	0.00	0.00	0.00	0.00	3.30	2.00	0.00	0.00	0.00	0.00
3.36	2.00	0.00	0.00	0.00	0.00	3.42	2.00	0.00	0.00	0.00	0.00
3.51	2.00	0.00	0.00	0.00	0.00	3.55	2.00	0.00	0.00	0.00	0.00
3.65	2.00	0.00	0.00	0.00	0.00	3.69	2.00	0.00	0.00	0.00	0.00
3.74	2.00	0.00	0.00	0.00	0.00	3.83	2.00	0.00	0.00	0.00	0.00
3.88	2.00	0.00	0.00	0.00	0.00	3.97	2.00	0.00	0.00	0.00	0.00
4.01	2.00	0.00	0.00	0.00	0.00	4.11	2.00	0.00	0.00	0.00	0.00
4.15	2.00	0.00	0.00	0.00	0.00	4.20	2.00	0.00	0.00	0.00	0.00
4.29	2.00	0.00	0.00	0.00	0.00	4.33	2.00	0.00	0.00	0.00	0.00
4.42	2.00	0.00	0.00	0.00	0.00	4.47	2.00	0.00	0.00	0.00	0.00
4.53	2.00	0.00	0.00	0.00	0.00	4.61	2.00	0.00	0.00	0.00	0.00
4.70	2.00	0.00	0.00	0.00	0.00	4.75	2.00	0.00	0.00	0.00	0.00
4.80	2.00	0.00	0.00	0.00	0.00	4.89	2.00	0.00	0.00	0.00	0.00
4.93	2.00	0.00	0.00	0.00	0.00	5.02	2.00	0.00	0.00	0.09	0.00
5.07	2.00	0.00	0.00	0.05	0.00	5.12	2.00	0.00	0.00	0.05	0.00
5.19	2.00	0.00	0.00	0.07	0.00	5.29	2.00	0.00	0.00	0.09	0.00
5.34	2.00	0.00	0.00	0.05	0.00	5.41	2.00	0.00	0.00	0.07	0.00
5.47	2.00	0.00	0.00	0.07	0.00	5.52	2.00	0.00	0.00	0.04	0.00
5.59	2.00	0.00	0.00	0.08	0.00	5.64	2.00	0.00	0.00	0.05	0.00
5.74	2.00	0.00	0.00	0.09	0.00	5.79	2.00	0.00	0.00	0.05	0.00
5.85	2.00	0.00	0.00	0.06	0.00	5.92	2.00	0.00	0.00	0.07	0.00
5.98	2.00	0.00	0.00	0.06	0.00	6.07	2.00	0.00	0.00	0.09	0.00
6.11	2.00	0.00	0.00	0.04	0.00	6.21	2.00	0.00	0.00	0.10	0.00
6.25	2.00	0.00	0.00	0.05	0.00	6.30	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.38	2.00	0.00	0.00	0.08	0.00	6.44	2.00	0.00	0.00	0.05	0.00
6.53	2.00	0.00	0.00	0.09	0.00	6.58	2.00	0.00	0.00	0.04	0.00
6.67	2.00	0.00	0.00	0.09	0.00	6.71	2.00	0.00	0.00	0.04	0.00
6.76	2.00	0.00	0.00	0.05	0.00	6.85	2.00	0.00	0.00	0.09	0.00
6.90	2.00	0.00	0.00	0.05	0.00	6.99	2.00	0.00	0.00	0.09	0.00
7.03	2.00	0.00	0.00	0.04	0.00	7.09	2.00	0.00	0.00	0.06	0.00
7.18	2.00	0.00	0.00	0.09	0.00	7.23	2.00	0.00	0.00	0.05	0.00
7.32	2.00	0.00	0.00	0.09	0.00	7.37	2.00	0.00	0.00	0.05	0.00
7.46	2.00	0.00	0.00	0.09	0.00	7.49	2.00	0.00	0.00	0.02	0.00
7.55	2.00	0.00	0.00	0.06	0.00	7.65	2.00	0.00	0.00	0.10	0.00
7.69	2.00	0.00	0.00	0.04	0.00	7.78	2.00	0.00	0.00	0.09	0.00
7.83	2.00	0.00	0.00	0.05	0.00	7.88	2.00	0.00	0.00	0.05	0.00
7.97	2.00	0.00	0.00	0.09	0.00	8.01	2.00	0.00	0.00	0.04	0.00
8.10	2.00	0.00	0.00	0.08	0.00	8.15	2.00	0.00	0.00	0.05	0.00
8.24	2.00	0.00	0.00	0.09	0.00	8.29	2.00	0.00	0.00	0.05	0.00
8.38	2.00	0.00	0.00	0.08	0.00	8.43	2.00	0.00	0.00	0.05	0.00
8.47	2.00	0.00	0.00	0.04	0.00	8.56	2.00	0.00	0.00	0.09	0.00
8.61	2.00	0.00	0.00	0.05	0.00	8.67	2.00	0.00	0.00	0.05	0.00
8.75	2.00	0.00	0.00	0.08	0.00	8.80	2.00	0.00	0.00	0.05	0.00
8.87	2.00	0.00	0.00	0.07	0.00	8.96	2.00	0.00	0.00	0.09	0.00
9.01	2.00	0.00	0.00	0.05	0.00	9.07	2.00	0.00	0.00	0.06	0.00
9.14	2.00	0.00	0.00	0.07	0.00	9.19	2.00	0.00	0.00	0.05	0.00
9.29	2.00	0.00	0.00	0.09	0.00	9.33	2.00	0.00	0.00	0.04	0.00
9.42	2.00	0.00	0.00	0.09	0.00	9.47	2.00	0.00	0.00	0.05	0.00
9.55	2.00	0.00	0.00	0.08	0.00	9.61	2.00	0.00	0.00	0.05	0.00
9.66	2.00	0.00	0.00	0.05	0.00	9.74	2.00	0.00	0.00	0.08	0.00
9.79	2.00	0.00	0.00	0.05	0.00	9.85	2.00	0.00	0.00	0.06	0.00
9.93	2.00	0.00	0.00	0.08	0.00	9.98	2.00	0.00	0.00	0.05	0.00
10.11	2.00	0.00	0.00	0.13	0.00	10.13	2.00	0.00	0.00	0.03	0.00
10.21	2.00	0.00	0.00	0.07	0.00	10.25	2.00	0.00	0.00	0.04	0.00
10.34	2.00	0.00	0.00	0.09	0.00	10.39	2.00	0.00	0.00	0.05	0.00
10.44	2.00	0.00	0.00	0.05	0.00	10.52	2.00	0.00	0.00	0.08	0.00
10.57	2.00	0.00	0.00	0.05	0.00	10.65	2.00	0.00	0.00	0.08	0.00
10.71	2.00	0.00	0.00	0.06	0.00	10.81	2.00	0.00	0.00	0.10	0.00
10.84	2.00	0.00	0.00	0.04	0.00	10.90	2.00	0.00	0.00	0.05	0.00
10.96	2.00	0.00	0.00	0.06	0.00	11.04	2.00	0.00	0.00	0.08	0.00
11.13	2.00	0.00	0.00	0.09	0.00	11.17	2.00	0.00	0.00	0.04	0.00
11.25	2.00	0.00	0.00	0.08	0.00	11.32	2.00	0.00	0.00	0.07	0.00
11.36	2.00	0.00	0.00	0.04	0.00	11.45	2.00	0.00	0.00	0.09	0.00
11.50	2.00	0.00	0.00	0.05	0.00	11.59	2.00	0.00	0.00	0.09	0.00
11.64	2.00	0.00	0.00	0.05	0.00	11.69	2.00	0.00	0.00	0.05	0.00
11.77	2.00	0.00	0.00	0.08	0.00	11.83	2.00	0.00	0.00	0.06	0.00
11.90	2.00	0.00	0.00	0.07	0.00	11.97	2.00	0.00	0.00	0.07	0.00
12.02	2.00	0.00	0.00	0.05	0.00	12.10	2.00	0.00	0.00	0.08	0.00
12.15	2.00	0.00	0.00	0.05	0.00	12.22	2.00	0.00	0.00	0.06	0.00
12.29	2.00	0.00	0.00	0.07	0.00	12.34	2.00	0.00	0.00	0.05	0.00
12.42	2.00	0.00	0.00	0.09	0.00	12.48	2.00	0.00	0.00	0.05	0.00
12.58	2.00	0.00	0.00	0.10	0.00	12.62	2.00	0.00	0.00	0.04	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.67	2.00	0.00	0.00	0.05	0.00	12.76	2.00	0.00	0.00	0.09	0.00
12.81	2.00	0.00	0.00	0.05	0.00	12.90	2.00	0.00	0.00	0.09	0.00
12.95	2.00	0.00	0.00	0.05	0.00	13.03	2.00	0.00	0.00	0.09	0.00
13.08	2.00	0.00	0.00	0.05	0.00	13.13	2.00	0.00	0.00	0.05	0.00
13.22	2.00	0.00	0.00	0.09	0.00	13.27	2.00	0.00	0.00	0.05	0.00
13.36	2.00	0.00	0.00	0.09	0.00	13.41	2.00	0.00	0.00	0.05	0.00
13.45	2.00	0.00	0.00	0.05	0.00	13.55	2.00	0.00	0.00	0.09	0.00
13.59	2.00	0.00	0.00	0.04	0.00	13.68	2.00	0.00	0.00	0.09	0.00
13.73	2.00	0.00	0.00	0.04	0.00	13.82	2.00	0.00	0.00	0.09	0.00
13.87	2.00	0.00	0.00	0.04	0.00	13.92	2.00	0.00	0.00	0.05	0.00
14.00	2.00	0.00	0.00	0.08	0.00	14.05	2.00	0.00	0.00	0.05	0.00
14.12	2.00	0.00	0.00	0.07	0.00	14.18	2.00	0.00	0.00	0.06	0.00
14.28	2.00	0.00	0.00	0.10	0.00	14.33	2.00	0.00	0.00	0.05	0.00
14.37	2.00	0.00	0.00	0.04	0.00	14.46	2.00	0.00	0.00	0.09	0.00
14.51	2.00	0.00	0.00	0.05	0.00	14.60	2.00	0.00	0.00	0.09	0.00
14.65	2.00	0.00	0.00	0.05	0.00	14.70	2.00	0.00	0.00	0.05	0.00
14.78	2.00	0.00	0.00	0.08	0.00	14.84	2.00	0.00	0.00	0.05	0.00
14.93	2.00	0.00	0.00	0.09	0.00	14.99	2.00	0.00	0.00	0.07	0.00
15.06	2.00	0.00	0.00	0.07	0.00	15.11	2.00	0.00	0.00	0.04	0.00
15.18	2.00	0.00	0.00	0.07	0.00	15.25	2.00	0.00	0.00	0.07	0.00
15.30	2.00	0.00	0.00	0.05	0.00	15.39	2.00	0.00	0.00	0.09	0.00
15.43	2.00	0.00	0.00	0.04	0.00	15.53	2.00	0.00	0.00	0.10	0.00
15.57	2.00	0.00	0.00	0.04	0.00	15.62	2.00	0.00	0.00	0.05	0.00
15.71	2.00	0.00	0.00	0.09	0.00	15.75	2.00	0.00	0.00	0.05	0.00
15.85	2.00	0.00	0.00	0.09	0.00	15.88	2.00	0.00	0.00	0.04	0.00
15.96	2.00	0.00	0.00	0.08	0.00	16.01	2.00	0.00	0.00	0.05	0.00
16.11	2.00	0.00	0.00	0.09	0.00	16.15	2.00	0.00	0.00	0.05	0.00
16.24	2.00	0.00	0.00	0.09	0.00	16.29	2.00	0.00	0.00	0.05	0.00
16.38	2.00	0.00	0.00	0.09	0.00	16.43	2.00	0.00	0.00	0.05	0.00
16.47	2.00	0.00	0.00	0.04	0.00	16.56	2.00	0.00	0.00	0.08	0.00
16.61	2.00	0.00	0.00	0.06	0.00	16.71	2.00	0.00	0.00	0.09	0.00
16.75	2.00	0.00	0.00	0.04	0.00	16.80	2.00	0.00	0.00	0.05	0.00
16.89	2.00	0.00	0.00	0.09	0.00	16.94	2.00	0.00	0.00	0.05	0.00
17.03	2.00	0.00	0.00	0.09	0.00	17.06	2.00	0.00	0.00	0.04	0.00
17.16	2.00	0.00	0.00	0.10	0.00	17.21	2.00	0.00	0.00	0.05	0.00
17.30	2.00	0.00	0.00	0.08	0.00	17.35	2.00	0.00	0.00	0.05	0.00
17.40	2.00	0.00	0.00	0.05	0.00	17.49	2.00	0.00	0.00	0.09	0.00
17.53	2.00	0.00	0.00	0.05	0.00	17.63	2.00	0.00	0.00	0.09	0.00
17.68	2.00	0.00	0.00	0.05	0.00	17.72	2.00	0.00	0.00	0.04	0.00
17.81	2.00	0.00	0.00	0.09	0.00	17.86	2.00	0.00	0.00	0.05	0.00
17.95	2.00	0.00	0.00	0.09	0.00	18.00	2.00	0.00	0.00	0.05	0.00
18.08	2.00	0.00	0.00	0.08	0.00	18.14	2.00	0.00	0.00	0.06	0.00
18.20	2.00	0.00	0.00	0.07	0.00	18.27	2.00	0.00	0.00	0.07	0.00
18.31	2.00	0.00	0.00	0.04	0.00	18.41	2.00	0.00	0.00	0.10	0.00
18.45	2.00	0.00	0.00	0.04	0.00	18.55	2.00	0.00	0.00	0.10	0.00
18.59	2.00	0.00	0.00	0.04	0.00	18.66	2.00	0.00	0.00	0.06	0.00
18.70	2.00	0.00	0.00	0.05	0.00	18.80	2.00	0.00	0.00	0.09	0.00
18.84	2.00	0.00	0.00	0.04	0.00	18.93	2.00	0.00	0.00	0.09	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.98	2.00	0.00	0.00	0.05	0.00	19.04	2.00	0.00	0.00	0.05	0.00
19.12	2.00	0.00	0.00	0.08	0.00	19.16	2.00	0.00	0.00	0.05	0.00
19.24	2.00	0.00	0.00	0.07	0.00	19.31	2.00	0.00	0.00	0.07	0.00
19.39	2.00	0.00	0.00	0.08	0.00	19.44	2.00	0.00	0.00	0.05	0.00
19.53	2.00	0.00	0.00	0.08	0.00	19.58	2.00	0.00	0.00	0.05	0.00
19.63	2.00	0.00	0.00	0.05	0.00	19.71	2.00	0.00	0.00	0.09	0.00
19.77	2.00	0.00	0.00	0.05	0.00	19.86	2.00	0.00	0.00	0.09	0.00
19.90	2.00	0.00	0.00	0.04	0.00	19.95	2.00	0.00	0.00	0.05	0.00
20.03	2.00	0.00	0.00	0.09	0.00	20.08	2.00	0.00	0.00	0.05	0.00
20.18	2.00	0.00	0.00	0.09	0.00	20.22	2.00	0.00	0.00	0.04	0.00
20.32	2.00	0.00	0.00	0.10	0.00	20.36	2.00	0.00	0.00	0.04	0.00
20.43	2.00	0.00	0.00	0.06	0.00	20.50	2.00	0.00	0.00	0.07	0.00
20.55	2.00	0.00	0.00	0.05	0.00	20.63	2.00	0.00	0.00	0.08	0.00
20.69	2.00	0.00	0.00	0.06	0.00	20.78	2.00	0.00	0.00	0.09	0.00
20.82	2.00	0.00	0.00	0.04	0.00	20.87	2.00	0.00	0.00	0.04	0.00
20.95	2.00	0.00	0.00	0.09	0.00	21.01	2.00	0.00	0.00	0.06	0.00
21.10	2.00	0.00	0.00	0.09	0.00	21.14	2.00	0.00	0.00	0.05	0.00
21.24	2.00	0.00	0.00	0.10	0.00	21.29	2.00	0.00	0.00	0.04	0.00
21.33	2.00	0.00	0.00	0.04	0.00	21.41	2.00	0.00	0.00	0.08	0.00
21.48	2.00	0.00	0.00	0.07	0.00	21.53	2.00	0.00	0.00	0.05	0.00
21.61	2.00	0.00	0.00	0.08	0.00	21.67	2.00	0.00	0.00	0.06	0.00
21.76	2.00	0.00	0.00	0.09	0.00	21.81	2.00	0.00	0.00	0.05	0.00
21.86	2.00	0.00	0.00	0.05	0.00	21.95	2.00	0.00	0.00	0.09	0.00
21.99	2.00	0.00	0.00	0.04	0.00	22.09	2.00	0.00	0.00	0.10	0.00
22.13	2.00	0.00	0.00	0.04	0.00	22.18	2.00	0.00	0.00	0.05	0.00
22.27	2.00	0.00	0.00	0.09	0.00	22.32	2.00	0.00	0.00	0.05	0.00
22.40	2.00	0.00	0.00	0.08	0.00	22.45	2.00	0.00	0.00	0.05	0.00
22.55	2.00	0.00	0.00	0.10	0.00	22.59	2.00	0.00	0.00	0.04	0.00
22.69	2.00	0.00	0.00	0.10	0.00	22.73	2.00	0.00	0.00	0.05	0.00
22.78	2.00	0.00	0.00	0.04	0.00	22.91	2.00	0.00	0.00	0.14	0.00
23.00	2.00	0.00	0.00	0.09	0.00	23.05	2.00	0.00	0.00	0.05	0.00
23.10	2.00	0.00	0.00	0.05	0.00	23.20	2.00	0.00	0.00	0.09	0.00
23.29	2.00	0.00	0.00	0.09	0.00	23.33	2.00	0.00	0.00	0.04	0.00
23.38	0.31	0.00	0.00	0.05	0.07	23.46	0.31	0.00	0.00	0.08	0.11
23.52	2.00	0.00	0.00	0.05	0.00	23.56	2.00	0.00	0.00	0.05	0.00
23.65	2.00	0.00	0.00	0.09	0.00	23.70	2.00	0.00	0.00	0.05	0.00
23.78	2.00	0.00	0.00	0.08	0.00	23.83	2.00	0.00	0.00	0.05	0.00
23.89	2.00	0.00	0.00	0.06	0.00	23.97	2.00	0.00	0.00	0.07	0.00
24.02	2.00	0.00	0.00	0.05	0.00	24.11	2.00	0.00	0.00	0.09	0.00
24.16	2.00	0.00	0.00	0.04	0.00	24.25	2.00	0.00	0.00	0.10	0.00
24.29	2.00	0.00	0.00	0.04	0.00	24.37	2.00	0.00	0.00	0.08	0.00
24.41	2.00	0.00	0.00	0.04	0.00	24.50	2.00	0.00	0.00	0.09	0.00
24.56	2.00	0.00	0.00	0.05	0.00	24.62	2.00	0.00	0.00	0.07	0.00
24.69	2.00	0.00	0.00	0.07	0.00	24.79	2.00	0.00	0.00	0.09	0.00
24.84	2.00	0.00	0.00	0.05	0.00	24.88	2.00	0.00	0.00	0.04	0.00
24.97	2.00	0.00	0.00	0.10	0.00	25.01	2.00	0.00	0.00	0.04	0.00
25.11	2.00	0.00	0.00	0.09	0.00	25.16	2.00	0.00	0.00	0.05	0.00
25.20	2.00	0.00	0.00	0.04	0.00	25.30	2.00	0.00	0.00	0.10	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.34	2.00	0.00	0.00	0.04	0.00	25.42	2.00	0.00	0.00	0.08	0.00
25.48	2.00	0.00	0.00	0.06	0.00	25.53	2.00	0.00	0.00	0.05	0.00
25.61	2.00	0.00	0.00	0.09	0.00	25.66	2.00	0.00	0.00	0.05	0.00
25.75	2.00	0.00	0.00	0.09	0.00	25.80	2.00	0.00	0.00	0.05	0.00
25.89	2.00	0.00	0.00	0.09	0.00	25.94	2.00	0.00	0.00	0.05	0.00
25.98	2.00	0.00	0.00	0.04	0.00	26.06	2.00	0.00	0.00	0.08	0.00
26.12	2.00	0.00	0.00	0.06	0.00	26.21	2.00	0.00	0.00	0.09	0.00
26.25	2.00	0.00	0.00	0.03	0.00	26.35	2.00	0.00	0.00	0.10	0.00
26.40	2.00	0.00	0.00	0.05	0.00	26.45	2.00	0.00	0.00	0.05	0.00
26.54	2.00	0.00	0.00	0.09	0.00	26.58	2.00	0.00	0.00	0.05	0.00
26.68	2.00	0.00	0.00	0.09	0.00	26.72	2.00	0.00	0.00	0.04	0.00
26.82	2.00	0.00	0.00	0.10	0.00	26.86	2.00	0.00	0.00	0.04	0.00
26.90	2.00	0.00	0.00	0.04	0.00	27.00	2.00	0.00	0.00	0.10	0.00
27.04	2.00	0.00	0.00	0.05	0.00	27.13	2.00	0.00	0.00	0.09	0.00
27.18	2.00	0.00	0.00	0.05	0.00	27.27	2.00	0.00	0.00	0.09	0.00
27.32	2.00	0.00	0.00	0.05	0.00	27.37	2.00	0.00	0.00	0.05	0.00
27.45	2.00	0.00	0.00	0.09	0.00	27.50	2.00	0.00	0.00	0.05	0.00
27.59	2.00	0.00	0.00	0.09	0.00	27.64	2.00	0.00	0.00	0.05	0.00
27.73	2.00	0.00	0.00	0.09	0.00	27.76	2.00	0.00	0.00	0.03	0.00
27.82	2.00	0.00	0.00	0.06	0.00	27.92	2.00	0.00	0.00	0.10	0.00
27.96	2.00	0.00	0.00	0.04	0.00	28.05	2.00	0.00	0.00	0.09	0.00
28.10	2.00	0.00	0.00	0.04	0.00	28.16	2.00	0.00	0.00	0.07	0.00
28.24	2.00	0.00	0.00	0.07	0.00	28.29	2.00	0.00	0.00	0.05	0.00
28.38	2.00	0.00	0.00	0.09	0.00	28.43	2.00	0.00	0.00	0.05	0.00
28.49	2.00	0.00	0.00	0.06	0.00	28.56	2.00	0.00	0.00	0.08	0.00
28.65	2.00	0.00	0.00	0.09	0.00	28.70	2.00	0.00	0.00	0.05	0.00
28.75	2.00	0.00	0.00	0.04	0.00	28.82	2.00	0.00	0.00	0.07	0.00
28.89	2.00	0.00	0.00	0.07	0.00	28.95	2.00	0.00	0.00	0.06	0.00
29.00	2.00	0.00	0.00	0.06	0.00	29.08	2.00	0.00	0.00	0.08	0.00
29.14	2.00	0.00	0.00	0.06	0.00	29.23	2.00	0.00	0.00	0.09	0.00
29.27	2.00	0.00	0.00	0.03	0.00	29.34	2.00	0.00	0.00	0.08	0.00
29.42	2.00	0.00	0.00	0.07	0.00	29.47	2.00	0.00	0.00	0.05	0.00
29.54	2.00	0.00	0.00	0.07	0.00	29.60	2.00	0.00	0.00	0.06	0.00
29.66	2.00	0.00	0.00	0.06	0.00	29.73	2.00	0.00	0.00	0.07	0.00
29.83	2.00	0.00	0.00	0.09	0.00	29.88	2.00	0.00	0.00	0.05	0.00
29.93	1.01	0.00	0.00	0.05	0.00	30.01	0.94	0.00	0.00	0.09	0.01
30.06	0.86	0.00	0.00	0.05	0.01	30.15	0.81	0.00	0.00	0.09	0.03
30.20	0.77	0.00	0.00	0.05	0.02	30.26	0.76	0.00	0.00	0.06	0.02
30.34	0.78	0.00	0.00	0.08	0.03	30.43	0.81	0.00	0.00	0.09	0.03
30.48	0.84	0.00	0.00	0.04	0.01	30.52	0.83	0.00	0.00	0.04	0.01
30.62	0.81	0.00	0.00	0.10	0.03	30.65	0.73	0.00	0.00	0.04	0.02
30.75	0.65	0.00	0.00	0.10	0.06	30.80	0.61	0.00	0.00	0.05	0.03
30.84	0.60	0.00	0.00	0.04	0.03	30.94	0.59	0.00	0.00	0.09	0.06
30.98	0.58	0.00	0.00	0.05	0.03	31.07	0.58	0.00	0.00	0.09	0.06
31.12	0.61	0.00	0.00	0.05	0.03	31.17	0.68	0.00	0.00	0.05	0.03
31.26	0.80	0.00	0.00	0.09	0.03	31.31	0.89	0.00	0.00	0.05	0.01
31.37	2.00	0.00	0.00	0.06	0.00	31.45	2.00	0.00	0.00	0.07	0.00
31.53	2.00	0.00	0.00	0.09	0.00	31.58	0.53	0.00	0.00	0.05	0.04

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.66	0.61	0.00	0.00	0.08	0.05	31.71	0.68	0.00	0.00	0.06	0.03
31.77	2.00	0.00	0.00	0.05	0.00	31.82	2.00	0.00	0.00	0.06	0.00
31.89	2.00	0.00	0.00	0.07	0.00	31.98	2.00	0.00	0.00	0.09	0.00
32.03	2.00	0.00	0.00	0.05	0.00	32.12	2.00	0.00	0.00	0.09	0.00
32.16	2.00	0.00	0.00	0.04	0.00	32.26	2.00	0.00	0.00	0.09	0.00
32.31	2.00	0.00	0.00	0.05	0.00	32.35	2.00	0.00	0.00	0.04	0.00
32.44	2.00	0.00	0.00	0.09	0.00	32.49	2.00	0.00	0.00	0.05	0.00
32.58	2.00	0.00	0.00	0.10	0.00	32.62	2.00	0.00	0.00	0.03	0.00
32.71	2.00	0.00	0.00	0.10	0.00	32.75	2.00	0.00	0.00	0.03	0.00
32.81	2.00	0.00	0.00	0.07	0.00	32.91	2.00	0.00	0.00	0.09	0.00
32.95	2.00	0.00	0.00	0.05	0.00	33.04	2.00	0.00	0.00	0.08	0.00
33.09	2.00	0.00	0.00	0.06	0.00	33.14	2.00	0.00	0.00	0.05	0.00
33.22	2.00	0.00	0.00	0.08	0.00	33.28	2.00	0.00	0.00	0.05	0.00
33.35	2.00	0.00	0.00	0.08	0.00	33.41	2.00	0.00	0.00	0.06	0.00
33.50	2.00	0.00	0.00	0.09	0.00	33.55	2.00	0.00	0.00	0.04	0.00
33.63	2.00	0.00	0.00	0.09	0.00	33.69	2.00	0.00	0.00	0.05	0.00
33.73	2.00	0.00	0.00	0.04	0.00	33.83	2.00	0.00	0.00	0.10	0.00
33.87	2.00	0.00	0.00	0.05	0.00	33.93	2.00	0.00	0.00	0.05	0.00
34.01	2.00	0.00	0.00	0.08	0.00	34.05	2.00	0.00	0.00	0.05	0.00
34.13	2.00	0.00	0.00	0.07	0.00	34.20	2.00	0.00	0.00	0.07	0.00
34.29	2.00	0.00	0.00	0.09	0.00	34.33	2.00	0.00	0.00	0.04	0.00
34.43	2.00	0.00	0.00	0.10	0.00	34.46	2.00	0.00	0.00	0.03	0.00
34.55	2.00	0.00	0.00	0.09	0.00	34.59	2.00	0.00	0.00	0.04	0.00
34.68	2.00	0.00	0.00	0.10	0.00	34.73	2.00	0.00	0.00	0.05	0.00
34.80	2.00	0.00	0.00	0.06	0.00	34.87	2.00	0.00	0.00	0.07	0.00
34.91	2.00	0.00	0.00	0.04	0.00	35.01	2.00	0.00	0.00	0.10	0.00
35.06	2.00	0.00	0.00	0.05	0.00	35.11	2.00	0.00	0.00	0.05	0.00
35.19	2.00	0.00	0.00	0.08	0.00	35.24	2.00	0.00	0.00	0.05	0.00
35.33	2.00	0.00	0.00	0.09	0.00	35.38	2.00	0.00	0.00	0.05	0.00
35.46	2.00	0.00	0.00	0.08	0.00	35.51	0.99	0.00	0.00	0.05	0.00
35.59	0.92	0.00	0.00	0.08	0.01	35.65	0.86	0.00	0.00	0.06	0.01
35.70	0.82	0.00	0.00	0.05	0.01	35.78	0.83	0.00	0.00	0.08	0.02
35.83	0.89	0.00	0.00	0.05	0.01	35.90	0.98	0.00	0.00	0.06	0.00
35.97	1.04	0.00	0.00	0.07	0.00	36.04	1.09	0.00	0.00	0.07	0.00
36.11	1.16	0.00	0.00	0.07	0.00	36.16	1.30	0.00	0.00	0.05	0.00
36.25	1.49	0.00	0.00	0.09	0.00	36.29	1.70	0.00	0.00	0.03	0.00
36.36	2.00	0.00	0.00	0.07	0.00	36.43	2.00	0.00	0.00	0.07	0.00
36.52	1.76	0.00	0.00	0.09	0.00	36.58	1.40	0.00	0.00	0.06	0.00
36.62	1.30	0.00	0.00	0.04	0.00	36.70	1.41	0.00	0.00	0.09	0.00
36.75	1.60	0.00	0.00	0.05	0.00	36.83	1.61	0.00	0.00	0.08	0.00
36.89	1.60	0.00	0.00	0.06	0.00	36.97	1.77	0.00	0.00	0.09	0.00
37.03	2.00	0.00	0.00	0.06	0.00	37.08	2.00	0.00	0.00	0.05	0.00
37.17	2.00	0.00	0.00	0.09	0.00	37.21	1.70	0.00	0.00	0.04	0.00
37.31	1.39	0.00	0.00	0.10	0.00	37.35	1.16	0.00	0.00	0.04	0.00
37.41	0.95	0.00	0.00	0.05	0.00	37.49	0.74	0.00	0.00	0.09	0.03
37.54	0.62	0.00	0.00	0.05	0.02	37.63	0.63	0.00	0.00	0.10	0.05
37.68	2.00	0.00	0.00	0.04	0.00	37.77	2.00	0.00	0.00	0.10	0.00
37.80	2.00	0.00	0.00	0.02	0.00	37.89	1.03	0.00	0.00	0.09	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
37.94	1.00	0.00	0.00	0.05	0.00	38.02	1.08	0.00	0.00	0.09	0.00
38.07	2.00	0.00	0.00	0.05	0.00	38.13	2.00	0.00	0.00	0.06	0.00
38.19	2.00	0.00	0.00	0.06	0.00	38.27	2.00	0.00	0.00	0.08	0.00
38.34	2.00	0.00	0.00	0.07	0.00	38.41	2.00	0.00	0.00	0.07	0.00
38.46	2.00	0.00	0.00	0.05	0.00	38.52	2.00	0.00	0.00	0.07	0.00
38.59	2.00	0.00	0.00	0.07	0.00	38.66	2.00	0.00	0.00	0.06	0.00

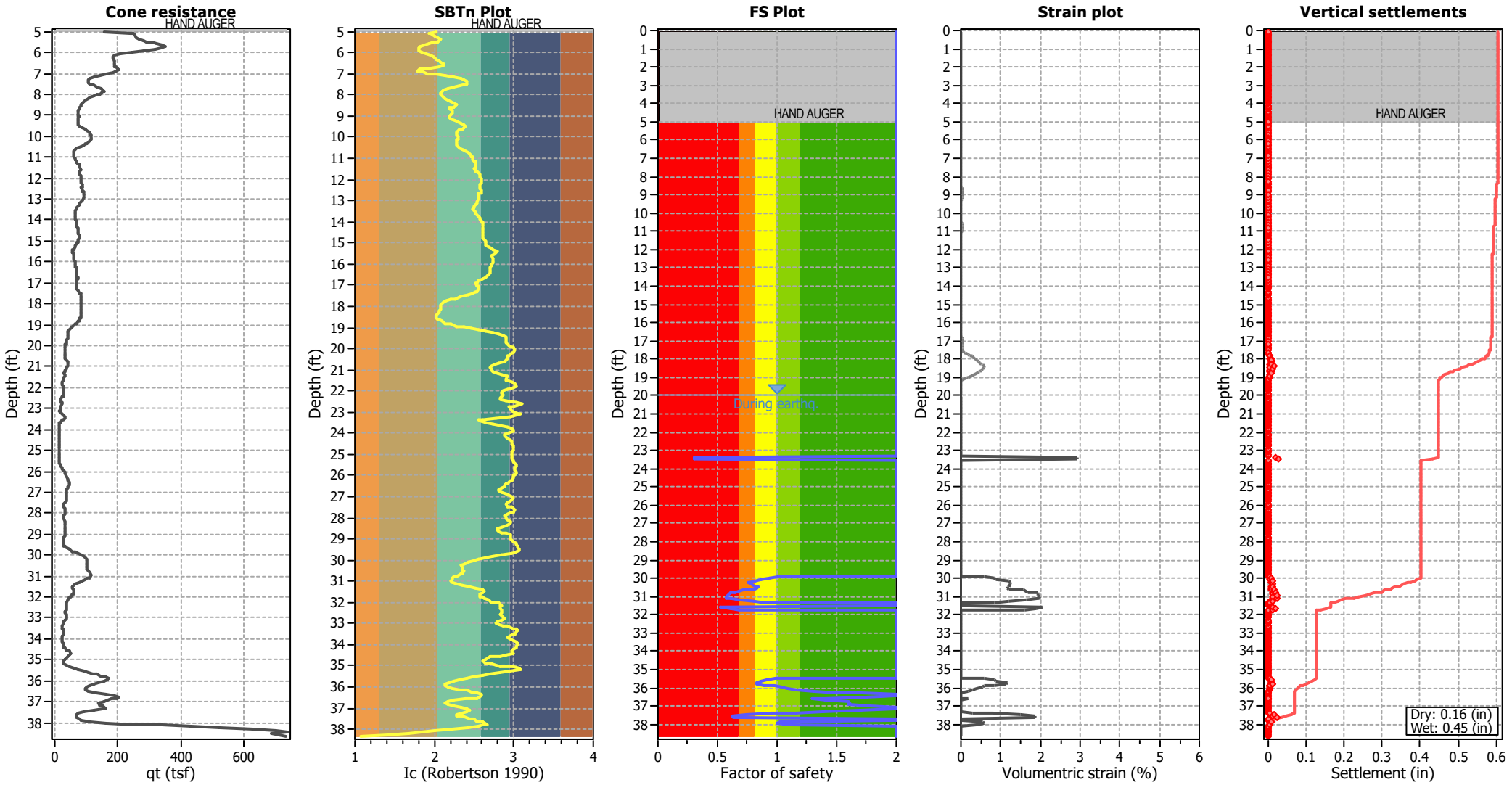
Overall liquefaction potential: 1.03

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.08	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.13	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.22	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.27	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.34	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.41	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.51	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.55	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.60	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.68	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.74	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.83	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.87	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.92	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.01	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.06	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.15	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.18	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.25	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.34	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.38	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.47	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.52	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.60	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.66	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.75	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.79	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.84	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.92	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.99	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.07	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.12	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.17	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.23	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.31	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.40	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.45	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.50	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.58	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.63	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.73	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.77	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.86	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.91	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.96	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.05	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.09	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.18	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.23	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.30	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.36	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.42	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.51	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.55	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.65	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.69	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.74	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.83	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.88	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.97	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.01	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.11	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.15	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.20	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.29	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.33	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.42	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.47	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.53	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.61	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.70	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.75	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.80	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.89	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.93	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
5.02	2.03	251.75	1.33	335.77	71	1843	0.36	0.014	0.00	5.05	0.00	0.000
5.07	1.94	385.35	1.26	486.31	99	2512	0.36	0.009	0.00	5.05	0.00	0.000
5.12	1.95	400.27	1.27	508.73	104	2654	0.36	0.009	0.00	5.05	0.00	0.000
5.19	2.00	407.18	1.31	533.62	111	2885	0.36	0.008	0.00	5.05	0.00	0.000
5.29	2.05	416.28	1.35	563.94	120	3126	0.36	0.007	0.00	5.05	0.00	0.000
5.34	2.07	430.17	1.38	593.86	127	3322	0.36	0.007	0.00	5.05	0.00	0.000
5.41	2.06	448.13	1.37	612.13	130	3408	0.36	0.007	0.00	5.05	0.00	0.000
5.47	2.03	469.18	1.34	627.75	132	3453	0.36	0.007	0.00	5.05	0.00	0.000
5.52	1.99	492.50	1.30	640.25	133	3434	0.36	0.007	0.00	5.05	0.00	0.000
5.59	1.94	521.68	1.26	657.91	134	3395	0.36	0.007	0.00	5.05	0.00	0.000
5.64	1.87	548.90	1.22	667.90	132	3287	0.36	0.007	0.00	5.05	0.00	0.000
5.74	1.82	561.96	1.17	659.73	128	3155	0.36	0.008	0.00	5.05	0.00	0.000
5.79	1.80	544.13	1.15	626.79	121	2975	0.36	0.009	0.00	5.05	0.00	0.000
5.85	1.80	507.11	1.15	584.02	113	2772	0.36	0.010	0.00	5.05	0.00	0.000
5.92	1.81	453.98	1.17	529.71	103	2526	0.36	0.011	0.00	5.05	0.00	0.000
5.98	1.85	389.97	1.20	467.11	92	2264	0.36	0.013	0.00	5.05	0.00	0.000
6.07	1.90	334.36	1.24	414.66	83	2090	0.36	0.015	0.00	5.05	0.00	0.000
6.11	1.96	299.90	1.28	382.69	78	2007	0.36	0.016	0.00	5.05	0.00	0.000
6.21	1.98	294.57	1.29	380.66	79	2028	0.36	0.016	0.00	5.05	0.00	0.000
6.25	2.00	294.62	1.31	385.27	80	2079	0.36	0.015	0.00	5.05	0.00	0.000
6.30	2.03	297.78	1.33	396.36	83	2172	0.36	0.014	0.00	5.05	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.38	2.05	300.44	1.36	408.38	87	2268	0.36	0.014	0.00	5.05	0.00	0.000
6.44	2.08	303.81	1.40	424.28	91	2383	0.36	0.013	0.00	5.05	0.00	0.000
6.53	2.11	303.38	1.43	434.09	94	2453	0.36	0.013	0.00	5.05	0.00	0.000
6.58	2.12	303.87	1.45	441.47	96	2500	0.36	0.013	0.00	5.05	0.00	0.000
6.67	2.07	306.01	1.38	420.97	90	2351	0.36	0.014	0.00	5.05	0.00	0.000
6.71	1.95	311.45	1.27	395.70	81	2063	0.36	0.017	0.00	5.05	0.00	0.000
6.76	1.82	311.34	1.17	365.61	71	1789	0.36	0.021	0.00	5.05	0.00	0.000
6.85	1.78	309.79	1.13	350.72	67	1728	0.36	0.023	0.01	5.05	0.00	0.000
6.90	1.85	304.76	1.20	366.02	72	1826	0.36	0.021	0.00	5.05	0.00	0.000
6.99	1.92	288.85	1.25	361.01	73	1870	0.36	0.021	0.00	5.05	0.00	0.000
7.03	2.02	260.84	1.32	345.05	72	1881	0.36	0.021	0.00	5.05	0.00	0.000
7.09	2.13	228.02	1.46	333.49	73	1889	0.36	0.021	0.00	5.05	0.00	0.000
7.18	2.24	198.12	1.72	341.00	78	1892	0.36	0.021	0.00	5.05	0.00	0.000
7.23	2.33	178.82	2.04	364.61	87	1912	0.36	0.021	0.00	5.05	0.00	0.000
7.32	2.37	170.64	2.25	383.40	93	1934	0.36	0.021	0.00	5.05	0.00	0.000
7.37	2.40	167.11	2.39	399.14	98	1962	0.36	0.021	0.00	5.05	0.00	0.000
7.46	2.41	168.24	2.40	403.84	100	1981	0.36	0.021	0.00	5.05	0.00	0.000
7.49	2.39	173.57	2.31	401.32	98	2001	0.36	0.020	0.00	5.05	0.00	0.000
7.55	2.32	190.42	2.01	383.48	91	2021	0.36	0.020	0.00	5.05	0.00	0.000
7.65	2.24	212.24	1.73	367.43	84	2035	0.36	0.020	0.00	5.05	0.00	0.000
7.69	2.16	230.08	1.53	352.76	78	2037	0.36	0.021	0.00	5.05	0.00	0.000
7.78	2.12	236.92	1.45	343.44	75	2019	0.36	0.021	0.00	5.05	0.00	0.000
7.83	2.09	237.51	1.41	334.32	72	1975	0.36	0.022	0.00	5.05	0.00	0.000
7.88	2.08	229.57	1.39	319.74	69	1896	0.36	0.024	0.01	5.05	0.00	0.000
7.97	2.09	215.29	1.40	301.18	65	1800	0.36	0.027	0.01	5.05	0.00	0.000
8.01	2.09	198.77	1.40	279.11	60	1675	0.36	0.030	0.01	5.05	0.00	0.000
8.10	2.11	182.92	1.43	261.71	57	1581	0.36	0.035	0.01	5.05	0.01	0.000
8.15	2.13	168.10	1.47	247.04	54	1496	0.36	0.039	0.01	5.05	0.01	0.000
8.24	2.17	155.52	1.55	240.52	54	1454	0.36	0.042	0.01	5.05	0.01	0.000
8.29	2.21	145.23	1.65	239.35	54	1426	0.36	0.044	0.01	5.05	0.01	0.000
8.38	2.25	137.89	1.75	241.83	56	1417	0.36	0.046	0.01	5.05	0.01	0.000
8.43	2.28	132.72	1.85	245.36	57	1413	0.36	0.046	0.01	5.05	0.01	0.000
8.47	2.28	127.52	1.84	235.26	55	1361	0.36	0.051	0.02	5.05	0.01	0.000
8.56	2.24	122.68	1.72	211.34	48	1267	0.36	0.062	0.02	5.05	0.01	0.000
8.61	2.20	117.66	1.61	189.34	43	1166	0.36	0.078	0.03	5.05	0.02	0.000
8.67	2.19	114.08	1.58	180.41	40	1122	0.36	0.089	0.04	5.05	0.02	0.000
8.75	2.22	110.08	1.66	182.36	41	1125	0.36	0.090	0.04	5.05	0.02	0.000
8.80	2.23	107.49	1.69	181.35	41	1116	0.36	0.093	0.04	5.05	0.02	0.000
8.87	2.22	105.91	1.67	177.15	40	1099	0.36	0.099	0.04	5.05	0.03	0.000
8.96	2.20	106.22	1.63	172.70	39	1089	0.36	0.103	0.05	5.05	0.03	0.001
9.01	2.19	106.81	1.60	170.49	38	1085	0.36	0.106	0.05	5.05	0.03	0.000
9.07	2.19	107.14	1.60	171.26	39	1094	0.36	0.104	0.05	5.05	0.03	0.000
9.14	2.21	106.29	1.64	174.09	39	1110	0.36	0.101	0.04	5.05	0.03	0.000
9.19	2.25	104.97	1.76	185.18	43	1154	0.36	0.091	0.04	5.05	0.02	0.000
9.29	2.30	103.26	1.92	198.22	47	1201	0.36	0.082	0.03	5.05	0.02	0.000
9.33	2.34	102.66	2.10	215.40	52	1257	0.36	0.073	0.02	5.05	0.01	0.000
9.42	2.37	102.76	2.21	227.52	55	1303	0.36	0.068	0.02	5.05	0.01	0.000
9.47	2.38	105.21	2.29	240.96	59	1362	0.36	0.061	0.02	5.05	0.01	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.55	2.38	110.34	2.27	250.04	61	1431	0.36	0.055	0.01	5.05	0.01	0.000
9.61	2.35	119.33	2.14	255.49	62	1509	0.36	0.049	0.01	5.05	0.01	0.000
9.66	2.32	130.50	1.99	259.68	62	1593	0.36	0.044	0.01	5.05	0.01	0.000
9.74	2.29	140.55	1.88	264.39	62	1673	0.36	0.040	0.01	5.05	0.01	0.000
9.79	2.28	147.19	1.84	270.93	63	1736	0.36	0.038	0.01	5.05	0.01	0.000
9.85	2.28	150.34	1.85	278.69	65	1788	0.36	0.036	0.01	5.05	0.01	0.000
9.93	2.29	151.23	1.89	285.12	67	1828	0.36	0.035	0.01	5.05	0.01	0.000
9.98	2.29	151.83	1.91	289.35	68	1853	0.36	0.034	0.01	5.05	0.00	0.000
10.11	2.29	151.08	1.91	287.89	68	1861	0.36	0.035	0.01	5.05	0.00	0.000
10.13	2.29	150.11	1.88	282.67	66	1840	0.36	0.035	0.01	5.05	0.01	0.000
10.21	2.28	147.48	1.86	274.51	64	1805	0.36	0.037	0.01	5.05	0.01	0.000
10.25	2.28	142.36	1.84	262.02	61	1736	0.36	0.040	0.01	5.05	0.01	0.000
10.34	2.28	134.82	1.85	249.90	58	1662	0.36	0.045	0.01	5.05	0.01	0.000
10.39	2.28	127.81	1.86	237.17	55	1581	0.36	0.050	0.01	5.05	0.01	0.000
10.44	2.30	117.20	1.91	223.80	53	1479	0.36	0.059	0.02	5.05	0.01	0.000
10.52	2.32	105.15	2.00	209.88	50	1369	0.36	0.072	0.02	5.05	0.01	0.000
10.57	2.35	92.11	2.15	198.23	48	1254	0.36	0.092	0.03	5.05	0.02	0.000
10.65	2.39	83.62	2.31	193.57	47	1189	0.36	0.110	0.04	5.05	0.02	0.000
10.71	2.42	77.99	2.48	193.60	48	1154	0.36	0.122	0.04	5.05	0.03	0.000
10.81	2.44	74.98	2.62	196.57	49	1148	0.36	0.126	0.04	5.05	0.03	0.001
10.84	2.46	74.14	2.71	201.22	51	1158	0.36	0.123	0.04	5.05	0.02	0.000
10.90	2.47	74.84	2.77	207.08	53	1184	0.36	0.116	0.04	5.05	0.02	0.000
10.96	2.48	76.51	2.82	216.11	55	1229	0.36	0.105	0.03	5.05	0.02	0.000
11.04	2.49	79.46	2.91	231.37	59	1302	0.36	0.089	0.02	5.05	0.01	0.000
11.13	2.50	82.24	3.00	246.50	64	1376	0.36	0.078	0.02	5.05	0.01	0.000
11.17	2.51	86.19	3.05	262.91	68	1459	0.36	0.068	0.02	5.05	0.01	0.000
11.25	2.52	89.52	3.11	277.97	72	1537	0.36	0.060	0.01	5.05	0.01	0.000
11.32	2.52	92.78	3.13	290.10	76	1606	0.36	0.055	0.01	5.05	0.01	0.000
11.36	2.52	95.29	3.09	294.42	76	1645	0.36	0.052	0.01	5.05	0.01	0.000
11.45	2.51	97.05	3.04	295.39	76	1673	0.36	0.051	0.01	5.05	0.01	0.000
11.50	2.51	99.32	3.04	301.62	78	1716	0.36	0.049	0.01	5.05	0.01	0.000
11.59	2.52	100.25	3.12	312.73	81	1767	0.36	0.046	0.01	5.05	0.01	0.000
11.64	2.54	100.09	3.23	323.43	85	1802	0.36	0.045	0.01	5.05	0.00	0.000
11.69	2.55	98.94	3.37	332.98	88	1824	0.36	0.044	0.01	5.05	0.00	0.000
11.77	2.57	97.98	3.48	341.17	91	1848	0.36	0.043	0.01	5.05	0.00	0.000
11.83	2.58	97.80	3.56	348.23	93	1873	0.36	0.043	0.01	5.05	0.00	0.000
11.90	2.58	98.28	3.59	352.95	95	1900	0.36	0.042	0.01	5.05	0.00	0.000
11.97	2.59	98.41	3.63	357.44	96	1922	0.36	0.041	0.01	5.05	0.00	0.000
12.02	2.59	98.93	3.66	361.85	97	1947	0.36	0.041	0.01	5.05	0.00	0.000
12.10	2.59	99.35	3.66	363.39	98	1965	0.36	0.040	0.01	5.05	0.00	0.000
12.15	2.58	100.12	3.61	360.93	97	1973	0.36	0.040	0.01	5.05	0.00	0.000
12.22	2.58	100.59	3.55	357.38	96	1977	0.36	0.040	0.01	5.05	0.00	0.000
12.29	2.57	100.98	3.49	352.41	94	1975	0.36	0.041	0.01	5.05	0.00	0.000
12.34	2.57	101.55	3.48	353.08	94	1989	0.36	0.040	0.01	5.05	0.00	0.000
12.42	2.57	101.91	3.48	354.17	94	2007	0.36	0.040	0.01	5.05	0.00	0.000
12.48	2.59	98.64	3.70	365.02	98	2013	0.36	0.040	0.01	5.05	0.00	0.000
12.58	2.59	98.96	3.70	366.45	99	2034	0.36	0.040	0.01	5.05	0.00	0.000
12.62	2.59	100.15	3.66	366.22	99	2051	0.36	0.039	0.01	5.05	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.67	2.56	104.99	3.42	358.89	95	2084	0.36	0.038	0.01	5.05	0.00	0.000
12.76	2.56	105.37	3.39	357.00	95	2094	0.36	0.039	0.01	5.05	0.00	0.000
12.81	2.55	105.15	3.36	353.52	93	2088	0.36	0.039	0.01	5.05	0.00	0.000
12.90	2.55	103.88	3.35	347.79	92	2070	0.36	0.040	0.01	5.05	0.00	0.000
12.95	2.55	102.05	3.31	338.05	89	2028	0.36	0.042	0.01	5.05	0.00	0.000
13.03	2.54	99.09	3.29	326.46	86	1975	0.36	0.044	0.01	5.05	0.00	0.000
13.08	2.54	96.33	3.24	311.81	82	1908	0.36	0.048	0.01	5.05	0.01	0.000
13.13	2.53	92.67	3.17	294.16	77	1822	0.36	0.053	0.01	5.05	0.01	0.000
13.22	2.52	88.76	3.11	276.07	72	1736	0.36	0.059	0.01	5.05	0.01	0.000
13.27	2.50	84.59	3.00	253.93	66	1629	0.36	0.069	0.02	5.05	0.01	0.000
13.36	2.49	81.01	2.92	236.63	61	1546	0.36	0.079	0.02	5.05	0.01	0.000
13.41	2.48	77.62	2.87	223.05	57	1473	0.36	0.091	0.03	5.05	0.02	0.000
13.45	2.50	74.42	2.95	219.19	56	1434	0.36	0.098	0.03	5.05	0.02	0.000
13.55	2.51	71.87	3.04	218.72	57	1416	0.36	0.103	0.03	5.05	0.02	0.000
13.59	2.52	70.06	3.14	220.04	57	1407	0.36	0.105	0.03	5.05	0.02	0.000
13.68	2.54	68.85	3.24	222.82	58	1412	0.36	0.106	0.03	5.05	0.02	0.000
13.73	2.55	68.16	3.36	229.13	61	1430	0.36	0.102	0.03	5.05	0.02	0.000
13.82	2.57	67.94	3.48	236.55	63	1459	0.35	0.098	0.02	5.05	0.02	0.000
13.87	2.58	68.41	3.58	244.71	66	1494	0.35	0.092	0.02	5.05	0.01	0.000
13.92	2.59	69.25	3.68	254.93	69	1540	0.35	0.086	0.02	5.05	0.01	0.000
14.00	2.60	70.42	3.75	264.35	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.05	2.61	71.76	3.81	273.46	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.12	2.61	72.78	3.81	277.16	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.18	2.61	73.56	3.81	280.38	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.28	2.61	73.84	3.82	282.20	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.33	2.61	74.09	3.84	284.45	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.37	2.61	74.42	3.86	286.96	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.46	2.61	74.71	3.87	289.13	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.51	2.61	75.66	3.86	292.12	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.60	2.61	76.55	3.84	293.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.65	2.61	77.69	3.82	296.81	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.70	2.61	78.37	3.83	300.31	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.78	2.61	78.36	3.88	304.33	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.84	2.63	77.68	3.99	309.87	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.93	2.64	76.21	4.14	315.27	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.99	2.64	74.26	4.15	308.43	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.06	2.64	72.45	4.11	297.86	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.11	2.65	70.11	4.23	296.41	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.18	2.69	67.58	4.55	307.70	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.25	2.72	65.08	4.92	320.29	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.30	2.74	63.36	5.10	322.84	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.39	2.79	57.92	5.71	330.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.43	2.78	56.36	5.55	312.97	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.53	2.76	55.17	5.41	298.57	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.57	2.71	58.58	4.82	282.23	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.62	2.73	58.68	5.01	293.97	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.71	2.74	58.70	5.12	300.79	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.75	2.74	58.86	5.17	304.23	0	0	0.35	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.85	2.74	58.94	5.19	306.06	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.88	2.74	59.25	5.19	307.39	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.96	2.74	59.87	5.11	306.04	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.01	2.72	61.04	4.97	303.48	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.11	2.71	62.10	4.84	300.49	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.15	2.71	62.72	4.77	298.85	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.24	2.71	62.62	4.76	298.06	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.29	2.71	62.50	4.76	297.69	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.38	2.70	62.20	4.76	295.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.43	2.70	62.10	4.72	292.96	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.47	2.69	62.29	4.60	286.22	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.56	2.67	62.63	4.41	275.88	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.61	2.64	63.56	4.09	260.05	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.71	2.60	64.46	3.79	244.03	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.75	2.57	65.35	3.50	229.01	61	1643	0.35	0.100	0.03	5.05	0.02	0.000
16.80	2.55	65.45	3.32	217.23	57	1600	0.35	0.108	0.03	5.05	0.02	0.000
16.89	2.53	64.70	3.20	207.05	54	1557	0.35	0.117	0.04	5.05	0.02	0.000
16.94	2.53	63.18	3.17	200.41	52	1516	0.35	0.127	0.04	5.05	0.02	0.000
17.03	2.53	61.58	3.22	198.34	52	1496	0.36	0.133	0.04	5.05	0.03	0.001
17.06	2.55	60.44	3.34	201.86	53	1501	0.36	0.133	0.04	5.05	0.03	0.000
17.16	2.56	60.04	3.43	206.08	55	1520	0.36	0.129	0.04	5.05	0.02	0.001
17.21	2.56	60.69	3.43	208.10	55	1539	0.36	0.125	0.04	5.05	0.02	0.000
17.30	2.54	62.02	3.30	204.61	54	1546	0.36	0.125	0.04	5.05	0.02	0.000
17.35	2.52	63.73	3.11	197.92	51	1539	0.36	0.127	0.04	5.05	0.02	0.000
17.40	2.47	66.37	2.80	185.62	47	1515	0.36	0.133	0.05	5.05	0.03	0.000
17.49	2.42	69.00	2.48	171.27	43	1478	0.36	0.145	0.06	5.05	0.04	0.001
17.53	2.34	72.16	2.09	150.95	36	1399	0.36	0.173	0.09	5.05	0.05	0.001
17.63	2.27	73.82	1.82	134.27	31	1311	0.36	0.218	0.13	5.05	0.08	0.002
17.68	2.20	74.93	1.62	121.15	27	1220	0.36	0.286	0.20	5.05	0.12	0.002
17.72	2.15	75.37	1.51	113.87	25	1156	0.36	0.356	0.27	5.05	0.17	0.002
17.81	2.12	75.34	1.45	109.12	24	1108	0.36	0.429	0.35	5.05	0.21	0.005
17.86	2.09	74.86	1.40	105.11	23	1062	0.36	0.520	0.45	5.05	0.27	0.003
17.95	2.08	73.75	1.39	102.79	22	1039	0.36	0.581	0.52	5.05	0.32	0.007
18.00	2.08	72.51	1.39	100.60	22	1017	0.36	0.647	0.59	5.05	0.36	0.004
18.08	2.08	71.23	1.39	98.82	21	1002	0.36	0.703	0.66	5.05	0.40	0.008
18.14	2.07	70.74	1.38	97.61	21	989	0.36	0.754	0.72	5.05	0.44	0.006
18.20	2.07	70.43	1.37	96.72	21	980	0.36	0.795	0.77	5.05	0.47	0.008
18.27	2.05	70.62	1.36	96.04	20	970	0.36	0.843	0.82	5.05	0.50	0.008
18.31	2.04	70.76	1.35	95.21	20	957	0.36	0.910	0.90	5.05	0.55	0.005
18.41	2.03	71.12	1.33	94.91	20	951	0.36	0.951	0.95	5.05	0.58	0.014
18.45	2.03	71.61	1.33	95.34	20	955	0.36	0.936	0.93	5.05	0.57	0.006
18.55	2.03	71.69	1.34	95.86	20	966	0.36	0.893	0.88	5.05	0.54	0.013
18.59	2.05	71.07	1.35	96.04	20	977	0.36	0.851	0.83	5.05	0.51	0.005
18.66	2.07	69.60	1.37	95.68	20	984	0.36	0.827	0.81	5.05	0.49	0.007
18.70	2.10	67.60	1.42	95.95	21	999	0.36	0.769	0.73	5.05	0.45	0.005
18.80	2.14	65.10	1.49	96.79	21	1018	0.36	0.712	0.66	5.05	0.40	0.009
18.84	2.20	62.03	1.61	100.06	23	1049	0.36	0.621	0.54	5.05	0.33	0.004
18.93	2.27	57.81	1.83	105.95	25	1081	0.36	0.546	0.43	5.05	0.26	0.006

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.98	2.36	53.32	2.20	117.20	28	1124	0.36	0.462	0.30	5.05	0.19	0.002
19.04	2.46	48.83	2.72	132.82	34	1170	0.36	0.393	0.21	5.05	0.13	0.002
19.12	2.56	44.60	3.39	151.07	40	1214	0.36	0.341	0.15	5.05	0.09	0.002
19.16	2.65	40.71	4.22	171.68	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.24	2.74	37.35	5.09	190.14	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.31	2.81	34.63	5.99	207.33	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.39	2.86	32.86	6.64	218.05	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.44	2.89	31.72	7.11	225.51	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.53	2.90	31.28	7.27	227.51	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.58	2.91	31.10	7.32	227.60	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.63	2.91	30.88	7.30	225.50	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.71	2.91	30.27	7.37	223.12	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.77	2.92	29.23	7.56	220.96	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.86	2.94	27.96	7.86	219.71	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.90	2.97	26.07	8.34	217.43	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.95	2.99	24.91	8.66	215.67	0	0	0.36	0.000	0.00	0.00	0.00	0.000

Total estimated settlement: 0.16

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

:: Post-earthquake settlement due to soil liquefaction ::

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
20.03	212.69	2.00	0.00	1.00	0.00	20.08	208.02	2.00	0.00	1.00	0.00
20.18	204.18	2.00	0.00	1.00	0.00	20.22	198.75	2.00	0.00	1.00	0.00
20.32	195.62	2.00	0.00	1.00	0.00	20.36	191.19	2.00	0.00	1.00	0.00
20.43	188.16	2.00	0.00	1.00	0.00	20.50	185.53	2.00	0.00	1.00	0.00
20.55	182.07	2.00	0.00	1.00	0.00	20.63	177.61	2.00	0.00	1.00	0.00
20.69	169.33	2.00	0.00	1.00	0.00	20.78	160.95	2.00	0.00	1.00	0.00
20.82	153.84	2.00	0.00	1.00	0.00	20.87	151.36	2.00	0.00	1.00	0.00
20.95	148.28	2.00	0.00	1.00	0.00	21.01	143.12	2.00	0.00	1.00	0.00
21.10	139.01	2.00	0.00	1.00	0.00	21.14	142.45	2.00	0.00	1.00	0.00
21.24	150.57	2.00	0.00	1.00	0.00	21.29	157.96	2.00	0.00	1.00	0.00
21.33	159.18	2.00	0.00	1.00	0.00	21.41	158.75	2.00	0.00	1.00	0.00
21.48	157.65	2.00	0.00	1.00	0.00	21.53	158.53	2.00	0.00	1.00	0.00
21.61	156.88	2.00	0.00	1.00	0.00	21.67	155.12	2.00	0.00	1.00	0.00
21.76	152.13	2.00	0.00	1.00	0.00	21.81	150.17	2.00	0.00	1.00	0.00
21.86	146.68	2.00	0.00	1.00	0.00	21.95	142.82	2.00	0.00	1.00	0.00
21.99	135.11	2.00	0.00	1.00	0.00	22.09	130.78	2.00	0.00	1.00	0.00
22.13	128.62	2.00	0.00	1.00	0.00	22.18	128.73	2.00	0.00	1.00	0.00
22.27	126.82	2.00	0.00	1.00	0.00	22.32	120.34	2.00	0.00	1.00	0.00
22.40	115.04	2.00	0.00	1.00	0.00	22.45	114.82	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
22.55	118.85	2.00	0.00	1.00	0.00	22.59	122.76	2.00	0.00	1.00	0.00
22.69	121.30	2.00	0.00	1.00	0.00	22.73	117.47	2.00	0.00	1.00	0.00
22.78	111.78	2.00	0.00	1.00	0.00	22.91	106.02	2.00	0.00	1.00	0.00
23.00	102.55	2.00	0.00	1.00	0.00	23.05	101.34	2.00	0.00	1.00	0.00
23.10	99.04	2.00	0.00	1.00	0.00	23.20	93.74	2.00	0.00	1.00	0.00
23.29	87.77	2.00	0.00	1.00	0.00	23.33	79.88	2.00	0.00	1.00	0.00
23.38	76.28	0.31	2.92	1.00	0.02	23.46	75.61	0.31	2.94	1.00	0.03
23.52	76.37	2.00	0.00	1.00	0.00	23.56	76.81	2.00	0.00	1.00	0.00
23.65	76.09	2.00	0.00	1.00	0.00	23.70	74.38	2.00	0.00	1.00	0.00
23.78	71.91	2.00	0.00	1.00	0.00	23.83	70.49	2.00	0.00	1.00	0.00
23.89	67.59	2.00	0.00	1.00	0.00	23.97	65.83	2.00	0.00	1.00	0.00
24.02	64.09	2.00	0.00	1.00	0.00	24.11	65.33	2.00	0.00	1.00	0.00
24.16	66.20	2.00	0.00	1.00	0.00	24.25	66.61	2.00	0.00	1.00	0.00
24.29	66.83	2.00	0.00	1.00	0.00	24.37	67.92	2.00	0.00	1.00	0.00
24.41	68.54	2.00	0.00	1.00	0.00	24.50	68.51	2.00	0.00	1.00	0.00
24.56	68.22	2.00	0.00	1.00	0.00	24.62	68.10	2.00	0.00	1.00	0.00
24.69	67.57	2.00	0.00	1.00	0.00	24.79	67.16	2.00	0.00	1.00	0.00
24.84	66.96	2.00	0.00	1.00	0.00	24.88	66.85	2.00	0.00	1.00	0.00
24.97	66.54	2.00	0.00	1.00	0.00	25.01	66.03	2.00	0.00	1.00	0.00
25.11	65.66	2.00	0.00	1.00	0.00	25.16	65.35	2.00	0.00	1.00	0.00
25.20	65.26	2.00	0.00	1.00	0.00	25.30	65.65	2.00	0.00	1.00	0.00
25.34	66.91	2.00	0.00	1.00	0.00	25.42	69.02	2.00	0.00	1.00	0.00
25.48	71.33	2.00	0.00	1.00	0.00	25.53	75.05	2.00	0.00	1.00	0.00
25.61	80.17	2.00	0.00	1.00	0.00	25.66	90.20	2.00	0.00	1.00	0.00
25.75	101.52	2.00	0.00	1.00	0.00	25.80	116.58	2.00	0.00	1.00	0.00
25.89	128.83	2.00	0.00	1.00	0.00	25.94	139.36	2.00	0.00	1.00	0.00
25.98	149.98	2.00	0.00	1.00	0.00	26.06	160.90	2.00	0.00	1.00	0.00
26.12	172.61	2.00	0.00	1.00	0.00	26.21	179.39	2.00	0.00	1.00	0.00
26.25	184.34	2.00	0.00	1.00	0.00	26.35	189.59	2.00	0.00	1.00	0.00
26.40	190.94	2.00	0.00	1.00	0.00	26.45	190.84	2.00	0.00	1.00	0.00
26.54	189.93	2.00	0.00	1.00	0.00	26.58	180.20	2.00	0.00	1.00	0.00
26.68	168.20	2.00	0.00	1.00	0.00	26.72	162.16	2.00	0.00	1.00	0.00
26.82	166.45	2.00	0.00	1.00	0.00	26.86	173.09	2.00	0.00	1.00	0.00
26.90	175.94	2.00	0.00	1.00	0.00	27.00	174.83	2.00	0.00	1.00	0.00
27.04	174.37	2.00	0.00	1.00	0.00	27.13	171.68	2.00	0.00	1.00	0.00
27.18	167.78	2.00	0.00	1.00	0.00	27.27	167.87	2.00	0.00	1.00	0.00
27.32	163.76	2.00	0.00	1.00	0.00	27.37	160.58	2.00	0.00	1.00	0.00
27.45	159.16	2.00	0.00	1.00	0.00	27.50	155.48	2.00	0.00	1.00	0.00
27.59	154.05	2.00	0.00	1.00	0.00	27.64	149.90	2.00	0.00	1.00	0.00
27.73	146.26	2.00	0.00	1.00	0.00	27.76	141.78	2.00	0.00	1.00	0.00
27.82	140.34	2.00	0.00	1.00	0.00	27.92	137.03	2.00	0.00	1.00	0.00
27.96	134.92	2.00	0.00	1.00	0.00	28.05	133.93	2.00	0.00	1.00	0.00
28.10	133.15	2.00	0.00	1.00	0.00	28.16	130.85	2.00	0.00	1.00	0.00
28.24	131.01	2.00	0.00	1.00	0.00	28.29	133.81	2.00	0.00	1.00	0.00
28.38	129.92	2.00	0.00	1.00	0.00	28.43	121.68	2.00	0.00	1.00	0.00
28.49	114.60	2.00	0.00	1.00	0.00	28.56	114.94	2.00	0.00	1.00	0.00
28.65	121.46	2.00	0.00	1.00	0.00	28.70	127.74	2.00	0.00	1.00	0.00
28.75	134.00	2.00	0.00	1.00	0.00	28.82	137.47	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
28.89	141.96	2.00	0.00	1.00	0.00	28.95	143.76	2.00	0.00	1.00	0.00
29.00	144.50	2.00	0.00	1.00	0.00	29.08	145.20	2.00	0.00	1.00	0.00
29.14	145.96	2.00	0.00	1.00	0.00	29.23	147.18	2.00	0.00	1.00	0.00
29.27	149.01	2.00	0.00	1.00	0.00	29.34	151.10	2.00	0.00	1.00	0.00
29.42	152.73	2.00	0.00	1.00	0.00	29.47	156.19	2.00	0.00	1.00	0.00
29.54	160.28	2.00	0.00	1.00	0.00	29.60	165.23	2.00	0.00	1.00	0.00
29.66	166.93	2.00	0.00	1.00	0.00	29.73	170.06	2.00	0.00	1.00	0.00
29.83	166.59	2.00	0.00	1.00	0.00	29.88	163.34	2.00	0.00	1.00	0.00
29.93	157.39	1.01	0.58	1.00	0.00	30.01	152.68	0.94	0.84	1.00	0.01
30.06	147.22	0.86	0.88	1.00	0.00	30.15	143.66	0.81	1.20	1.00	0.01
30.20	140.23	0.77	1.24	1.00	0.01	30.26	139.45	0.76	1.25	1.00	0.01
30.34	141.09	0.78	1.23	1.00	0.01	30.43	143.82	0.81	1.20	1.00	0.01
30.48	145.77	0.84	1.17	1.00	0.01	30.52	145.42	0.83	1.18	1.00	0.01
30.62	143.50	0.81	1.20	1.00	0.01	30.65	136.94	0.73	1.57	1.00	0.01
30.75	130.56	0.65	1.68	1.00	0.02	30.80	126.22	0.61	1.93	1.00	0.01
30.84	125.37	0.60	1.94	1.00	0.01	30.94	124.53	0.59	1.95	1.00	0.02
30.98	123.47	0.58	1.97	1.00	0.01	31.07	123.51	0.58	1.97	1.00	0.02
31.12	126.57	0.61	1.93	1.00	0.01	31.17	133.54	0.68	1.63	1.00	0.01
31.26	143.45	0.80	1.20	1.00	0.01	31.31	150.29	0.89	0.86	1.00	0.00
31.37	155.66	2.00	0.00	1.00	0.00	31.45	140.84	2.00	0.00	1.00	0.00
31.53	127.43	2.00	0.00	1.00	0.00	31.58	118.39	0.53	2.03	1.00	0.01
31.66	127.41	0.61	1.92	1.00	0.02	31.71	133.82	0.68	1.63	1.00	0.01
31.77	137.26	2.00	0.00	1.00	0.00	31.82	138.27	2.00	0.00	1.00	0.00
31.89	144.36	2.00	0.00	1.00	0.00	31.98	148.69	2.00	0.00	1.00	0.00
32.03	154.38	2.00	0.00	1.00	0.00	32.12	150.90	2.00	0.00	1.00	0.00
32.16	140.61	2.00	0.00	1.00	0.00	32.26	132.55	2.00	0.00	1.00	0.00
32.31	127.38	2.00	0.00	1.00	0.00	32.35	128.86	2.00	0.00	1.00	0.00
32.44	129.63	2.00	0.00	1.00	0.00	32.49	129.31	2.00	0.00	1.00	0.00
32.58	127.83	2.00	0.00	1.00	0.00	32.62	128.32	2.00	0.00	1.00	0.00
32.71	130.74	2.00	0.00	1.00	0.00	32.75	131.49	2.00	0.00	1.00	0.00
32.81	127.66	2.00	0.00	1.00	0.00	32.91	122.23	2.00	0.00	1.00	0.00
32.95	118.75	2.00	0.00	1.00	0.00	33.04	118.72	2.00	0.00	1.00	0.00
33.09	119.78	2.00	0.00	1.00	0.00	33.14	121.81	2.00	0.00	1.00	0.00
33.22	121.13	2.00	0.00	1.00	0.00	33.28	121.18	2.00	0.00	1.00	0.00
33.35	119.10	2.00	0.00	1.00	0.00	33.41	115.11	2.00	0.00	1.00	0.00
33.50	111.59	2.00	0.00	1.00	0.00	33.55	108.29	2.00	0.00	1.00	0.00
33.63	108.68	2.00	0.00	1.00	0.00	33.69	108.25	2.00	0.00	1.00	0.00
33.73	108.19	2.00	0.00	1.00	0.00	33.83	111.02	2.00	0.00	1.00	0.00
33.87	113.68	2.00	0.00	1.00	0.00	33.93	114.46	2.00	0.00	1.00	0.00
34.01	114.61	2.00	0.00	1.00	0.00	34.05	114.34	2.00	0.00	1.00	0.00
34.13	113.90	2.00	0.00	1.00	0.00	34.20	113.21	2.00	0.00	1.00	0.00
34.29	112.54	2.00	0.00	1.00	0.00	34.33	117.92	2.00	0.00	1.00	0.00
34.43	123.58	2.00	0.00	1.00	0.00	34.46	129.10	2.00	0.00	1.00	0.00
34.55	125.76	2.00	0.00	1.00	0.00	34.59	119.31	2.00	0.00	1.00	0.00
34.68	114.79	2.00	0.00	1.00	0.00	34.73	111.06	2.00	0.00	1.00	0.00
34.80	107.58	2.00	0.00	1.00	0.00	34.87	103.97	2.00	0.00	1.00	0.00
34.91	102.55	2.00	0.00	1.00	0.00	35.01	107.66	2.00	0.00	1.00	0.00
35.06	116.69	2.00	0.00	1.00	0.00	35.11	132.09	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
35.19	144.27	2.00	0.00	1.00	0.00	35.24	152.26	2.00	0.00	1.00	0.00
35.33	159.57	2.00	0.00	1.00	0.00	35.38	161.56	2.00	0.00	1.00	0.00
35.46	162.02	2.00	0.00	1.00	0.00	35.51	158.66	0.99	0.58	1.00	0.00
35.59	154.11	0.92	0.83	1.00	0.01	35.65	150.01	0.86	0.86	1.00	0.01
35.70	147.30	0.82	1.15	1.00	0.01	35.78	148.06	0.83	1.15	1.00	0.01
35.83	152.43	0.89	0.84	1.00	0.01	35.90	158.29	0.98	0.58	1.00	0.00
35.97	162.30	1.04	0.56	1.00	0.00	36.04	165.32	1.09	0.40	1.00	0.00
36.11	169.73	1.16	0.28	1.00	0.00	36.16	177.23	1.30	0.19	1.00	0.00
36.25	186.77	1.49	0.00	1.00	0.00	36.29	196.04	1.70	0.00	1.00	0.00
36.36	205.23	2.00	0.00	1.00	0.00	36.43	206.93	2.00	0.00	1.00	0.00
36.52	198.69	1.76	0.00	1.00	0.00	36.58	182.61	1.40	0.00	1.00	0.00
36.62	177.18	1.30	0.19	1.00	0.00	36.70	182.85	1.41	0.00	1.00	0.00
36.75	191.75	1.60	0.00	1.00	0.00	36.83	192.16	1.61	0.00	1.00	0.00
36.89	191.71	1.60	0.00	1.00	0.00	36.97	199.15	1.77	0.00	1.00	0.00
37.03	209.65	2.00	0.00	1.00	0.00	37.08	215.29	2.00	0.00	1.00	0.00
37.17	209.96	2.00	0.00	1.00	0.00	37.21	196.56	1.70	0.00	1.00	0.00
37.31	182.29	1.39	0.00	1.00	0.00	37.35	169.63	1.16	0.28	1.00	0.00
37.41	156.67	0.95	0.81	1.00	0.01	37.49	141.08	0.74	1.51	1.00	0.02
37.54	130.06	0.62	1.88	1.00	0.01	37.63	131.80	0.63	1.86	1.00	0.02
37.68	152.74	2.00	0.00	1.00	0.00	37.77	168.36	2.00	0.00	1.00	0.00
37.80	166.51	2.00	0.00	1.00	0.00	37.89	161.99	1.03	0.56	1.00	0.01
37.94	159.94	1.00	0.57	1.00	0.00	38.02	165.55	1.08	0.40	1.00	0.00
38.07	208.62	2.00	0.00	1.00	0.00	38.13	264.08	2.00	0.00	1.00	0.00
38.19	291.06	2.00	0.00	1.00	0.00	38.27	356.88	2.00	0.00	1.00	0.00
38.34	430.08	2.00	0.00	1.00	0.00	38.41	-1.00	2.00	0.00	1.00	0.00
38.46	-1.00	2.00	0.00	1.00	0.00	38.52	-1.00	2.00	0.00	1.00	0.00
38.59	-1.00	2.00	0.00	1.00	0.00	38.66	-1.00	2.00	0.00	1.00	0.00

Total estimated settlement: 0.45

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.08	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.13	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.22	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.27	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.34	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.41	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.51	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.55	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.60	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.68	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.74	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.83	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.87	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.92	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.01	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.06	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.15	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.18	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.25	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.34	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.38	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.47	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.52	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.60	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.66	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.75	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.79	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.84	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.92	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.99	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.07	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.12	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.17	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.23	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.31	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.40	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.45	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.50	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.58	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.63	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.73	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.77	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.86	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.91	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.96	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.05	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.09	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.18	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.23	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.30	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.36	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.42	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.51	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.55	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.65	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.69	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.74	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.83	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.88	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.97	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.01	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.11	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.15	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.20	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.29	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.33	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.42	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.47	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.53	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.61	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.70	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.75	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.80	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.89	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.93	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
5.02	157.00	251.75	1.33	335.77	2.03	1.00	1.00
5.07	240.16	385.35	1.26	486.31	1.94	1.10	1.10
5.12	249.44	400.27	1.27	508.73	1.95	1.11	1.11
5.19	253.75	407.18	1.31	533.62	2.00	1.12	1.12
5.29	259.42	416.28	1.35	563.94	2.05	1.14	1.14
5.34	268.07	430.17	1.38	593.86	2.07	1.15	1.15
5.41	279.25	448.13	1.37	612.13	2.06	1.16	1.16
5.47	292.36	469.18	1.34	627.75	2.03	1.17	1.17
5.52	306.88	492.50	1.30	640.25	1.99	1.17	1.17
5.59	325.05	521.68	1.26	657.91	1.94	1.18	1.18
5.64	341.99	548.90	1.22	667.90	1.87	1.19	1.19
5.74	350.12	561.96	1.17	659.73	1.82	1.18	1.18
5.79	339.03	544.13	1.15	626.79	1.80	1.17	1.17
5.85	315.99	507.11	1.15	584.02	1.80	1.15	1.15
5.92	282.93	453.98	1.17	529.71	1.81	1.12	1.12
5.98	243.09	389.97	1.20	467.11	1.85	1.09	1.09
6.07	208.49	334.36	1.24	414.66	1.90	1.06	1.06
6.11	187.04	299.90	1.28	382.69	1.96	1.04	1.04
6.21	183.73	294.57	1.29	380.66	1.98	1.04	1.04
6.25	183.76	294.62	1.31	385.27	2.00	1.04	1.04
6.30	185.73	297.78	1.33	396.36	2.03	1.05	1.05

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.38	187.39	300.44	1.36	408.38	2.05	1.05	1.05
6.44	189.49	303.81	1.40	424.28	2.08	1.06	1.06
6.53	189.24	303.38	1.43	434.09	2.11	1.07	1.07
6.58	189.54	303.87	1.45	441.47	2.12	1.07	1.07
6.67	190.89	306.01	1.38	420.97	2.07	1.06	1.06
6.71	194.27	311.45	1.27	395.70	1.95	1.05	1.05
6.76	198.70	311.34	1.17	365.61	1.82	1.03	1.03
6.85	201.26	309.79	1.13	350.72	1.78	1.02	1.02
6.90	195.24	304.76	1.20	366.02	1.85	1.03	1.03
6.99	183.20	288.85	1.25	361.01	1.92	1.02	1.02
7.03	162.79	260.84	1.32	345.05	2.02	1.01	1.01
7.09	142.37	228.02	1.46	333.49	2.13	1.00	1.00
7.18	123.77	198.12	1.72	341.00	2.24	1.01	1.01
7.23	111.76	178.82	2.04	364.61	2.33	1.02	1.02
7.32	106.67	170.64	2.25	383.40	2.37	1.04	1.04
7.37	104.48	167.11	2.39	399.14	2.40	1.05	1.05
7.46	105.19	168.24	2.40	403.84	2.41	1.05	1.05
7.49	108.51	173.57	2.31	401.32	2.39	1.05	1.05
7.55	118.99	190.42	2.01	383.48	2.32	1.04	1.04
7.65	132.59	212.24	1.73	367.43	2.24	1.03	1.03
7.69	146.50	230.08	1.53	352.76	2.16	1.02	1.02
7.78	153.64	236.92	1.45	343.44	2.12	1.01	1.01
7.83	155.66	237.51	1.41	334.32	2.09	1.00	1.00
7.88	151.46	229.57	1.39	319.74	2.08	0.99	0.99
7.97	142.99	215.29	1.40	301.18	2.09	0.98	0.98
8.01	132.44	198.77	1.40	279.11	2.09	0.96	0.96
8.10	122.28	182.92	1.43	261.71	2.11	0.95	0.95
8.15	112.33	168.10	1.47	247.04	2.13	0.93	0.93
8.24	103.88	155.52	1.55	240.52	2.17	0.93	0.93
8.29	96.61	145.23	1.65	239.35	2.21	0.93	0.93
8.38	91.67	137.89	1.75	241.83	2.25	0.93	0.93
8.43	88.13	132.72	1.85	245.36	2.28	0.93	0.93
8.47	85.02	127.52	1.84	235.26	2.28	0.92	0.92
8.56	83.06	122.68	1.72	211.34	2.24	0.90	0.90
8.61	80.66	117.66	1.61	189.34	2.20	0.88	0.88
8.67	78.73	114.08	1.58	180.41	2.19	0.86	0.86
8.75	76.02	110.08	1.66	182.36	2.22	0.87	0.87
8.80	74.38	107.49	1.69	181.35	2.23	0.87	0.87
8.87	73.74	105.91	1.67	177.15	2.22	0.86	0.86
8.96	74.76	106.22	1.63	172.70	2.20	0.86	0.86
9.01	75.60	106.81	1.60	170.49	2.19	0.85	0.85
9.07	76.16	107.14	1.60	171.26	2.19	0.85	0.85
9.14	75.75	106.29	1.64	174.09	2.21	0.86	0.86
9.19	74.51	104.97	1.76	185.18	2.25	0.87	0.87
9.29	73.24	103.26	1.92	198.22	2.30	0.88	0.88
9.33	72.46	102.66	2.10	215.40	2.34	0.90	0.90
9.42	72.77	102.76	2.21	227.52	2.37	0.91	0.91
9.47	74.58	105.21	2.29	240.96	2.38	0.93	0.93

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.55	78.78	110.34	2.27	250.04	2.38	0.94	0.94
9.61	85.87	119.33	2.14	255.49	2.35	0.94	0.94
9.66	94.76	130.50	1.99	259.68	2.32	0.94	0.94
9.74	103.12	140.55	1.88	264.39	2.29	0.95	0.95
9.79	108.58	147.19	1.84	270.93	2.28	0.95	0.95
9.85	111.28	150.34	1.85	278.69	2.28	0.96	0.96
9.93	112.46	151.23	1.89	285.12	2.29	0.97	0.97
9.98	113.21	151.83	1.91	289.35	2.29	0.97	0.97
10.11	113.74	151.08	1.91	287.89	2.29	0.97	0.97
10.13	113.33	150.11	1.88	282.67	2.29	0.96	0.96
10.21	112.02	147.48	1.86	274.51	2.28	0.96	0.96
10.25	108.59	142.36	1.84	262.02	2.28	0.95	0.95
10.34	103.49	134.82	1.85	249.90	2.28	0.94	0.94
10.39	98.45	127.81	1.86	237.17	2.28	0.92	0.92
10.44	90.43	117.20	1.91	223.80	2.30	0.91	0.91
10.52	81.42	105.15	2.00	209.88	2.32	0.90	0.90
10.57	71.32	92.11	2.15	198.23	2.35	0.88	0.88
10.65	64.86	83.62	2.31	193.57	2.39	0.88	0.88
10.71	60.54	77.99	2.48	193.60	2.42	0.88	0.88
10.81	58.42	74.98	2.62	196.57	2.44	0.88	0.88
10.84	57.81	74.14	2.71	201.22	2.46	0.89	0.89
10.90	58.49	74.84	2.77	207.08	2.47	0.89	0.89
10.96	59.98	76.51	2.82	216.11	2.48	0.90	0.90
11.04	62.50	79.46	2.91	231.37	2.49	0.92	0.92
11.13	64.99	82.24	3.00	246.50	2.50	0.93	0.93
11.17	68.19	86.19	3.05	262.91	2.51	0.95	0.95
11.25	71.14	89.52	3.11	277.97	2.52	0.96	0.96
11.32	74.02	92.78	3.13	290.10	2.52	0.97	0.97
11.36	76.26	95.29	3.09	294.42	2.52	0.97	0.97
11.45	78.22	97.05	3.04	295.39	2.51	0.97	0.97
11.50	80.31	99.32	3.04	301.62	2.51	0.98	0.98
11.59	81.45	100.25	3.12	312.73	2.52	0.99	0.99
11.64	81.50	100.09	3.23	323.43	2.54	1.00	1.00
11.69	80.71	98.94	3.37	332.98	2.55	1.00	1.00
11.77	80.27	97.98	3.48	341.17	2.57	1.01	1.01
11.83	80.38	97.80	3.56	348.23	2.58	1.01	1.01
11.90	81.12	98.28	3.59	352.95	2.58	1.02	1.02
11.97	81.58	98.41	3.63	357.44	2.59	1.02	1.02
12.02	82.30	98.93	3.66	361.85	2.59	1.02	1.02
12.10	83.07	99.35	3.66	363.39	2.59	1.02	1.02
12.15	84.07	100.12	3.61	360.93	2.58	1.02	1.02
12.22	84.88	100.59	3.55	357.38	2.58	1.02	1.02
12.29	85.66	100.98	3.49	352.41	2.57	1.02	1.02
12.34	86.43	101.55	3.48	353.08	2.57	1.02	1.02
12.42	87.24	101.91	3.48	354.17	2.57	1.02	1.02
12.48	84.57	98.64	3.70	365.02	2.59	1.02	1.02
12.58	85.41	98.96	3.70	366.45	2.59	1.03	1.03
12.62	86.71	100.15	3.66	366.22	2.59	1.03	1.03

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.67	91.39	104.99	3.42	358.89	2.56	1.02	1.02
12.76	92.26	105.37	3.39	357.00	2.56	1.02	1.02
12.81	92.38	105.15	3.36	353.52	2.55	1.02	1.02
12.90	91.82	103.88	3.35	347.79	2.55	1.01	1.01
12.95	90.52	102.05	3.31	338.05	2.55	1.01	1.01
13.03	88.40	99.09	3.29	326.46	2.54	1.00	1.00
13.08	86.26	96.33	3.24	311.81	2.54	0.99	0.99
13.13	83.31	92.67	3.17	294.16	2.53	0.97	0.97
13.22	80.29	88.76	3.11	276.07	2.52	0.96	0.96
13.27	76.88	84.59	3.00	253.93	2.50	0.94	0.94
13.36	74.09	81.01	2.92	236.63	2.49	0.92	0.92
13.41	71.26	77.62	2.87	223.05	2.48	0.91	0.91
13.45	68.50	74.42	2.95	219.19	2.50	0.91	0.91
13.55	66.48	71.87	3.04	218.72	2.51	0.91	0.91
13.59	64.93	70.06	3.14	220.04	2.52	0.91	0.91
13.68	64.12	68.85	3.24	222.82	2.54	0.91	0.91
13.73	63.59	68.16	3.36	229.13	2.55	0.92	0.92
13.82	63.68	67.94	3.48	236.55	2.57	0.92	0.92
13.87	64.24	68.41	3.58	244.71	2.58	0.93	0.93
13.92	65.17	69.25	3.68	254.93	2.59	0.94	0.94
14.00	66.54	70.42	3.75	264.35	2.60	4.82	5.20
14.05	67.97	71.76	3.81	273.46	2.61	4.98	5.30
14.12	69.18	72.78	3.81	277.16	2.61	5.14	5.37
14.18	70.18	73.56	3.81	280.38	2.61	5.17	5.42
14.28	70.83	73.84	3.82	282.20	2.61	5.26	5.43
14.33	71.26	74.09	3.84	284.45	2.61	5.30	5.45
14.37	71.73	74.42	3.86	286.96	2.61	5.33	5.47
14.46	72.38	74.71	3.87	289.13	2.61	5.44	5.48
14.51	73.50	75.66	3.86	292.12	2.61	5.50	5.55
14.60	74.74	76.55	3.84	293.91	2.61	5.61	5.60
14.65	76.05	77.69	3.82	296.81	2.61	5.68	5.68
14.70	76.92	78.37	3.83	300.31	2.61	5.81	5.73
14.78	77.26	78.36	3.88	304.33	2.61	5.91	5.72
14.84	76.79	77.68	3.99	309.87	2.63	5.98	5.66
14.93	75.70	76.21	4.14	315.27	2.64	6.09	5.55
14.99	74.06	74.26	4.15	308.43	2.64	6.13	5.40
15.06	72.57	72.45	4.11	297.86	2.64	5.23	5.26
15.11	70.39	70.11	4.23	296.41	2.65	5.13	5.09
15.18	68.10	67.58	4.55	307.70	2.69	5.73	4.90
15.25	65.83	65.08	4.92	320.29	2.72	5.71	4.71
15.30	64.27	63.36	5.10	322.84	2.74	5.70	4.58
15.39	59.08	57.92	5.71	330.91	2.79	5.66	4.18
15.43	57.65	56.36	5.55	312.97	2.78	5.62	4.06
15.53	56.78	55.17	5.41	298.57	2.76	4.24	3.98
15.57	60.42	58.58	4.82	282.23	2.71	4.59	4.22
15.62	60.66	58.68	5.01	293.97	2.73	4.91	4.23
15.71	60.97	58.70	5.12	300.79	2.74	5.00	4.22
15.75	61.28	58.86	5.17	304.23	2.74	5.05	4.23

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.85	61.67	58.94	5.19	306.06	2.74	5.12	4.23
15.88	62.11	59.25	5.19	307.39	2.74	5.15	4.25
15.96	63.04	59.87	5.11	306.04	2.74	5.14	4.30
16.01	64.42	61.04	4.97	303.48	2.72	5.12	4.38
16.11	65.84	62.10	4.84	300.49	2.71	5.08	4.45
16.15	66.65	62.72	4.77	298.85	2.71	5.07	4.49
16.24	66.87	62.62	4.76	298.06	2.71	5.04	4.48
16.29	66.91	62.50	4.76	297.69	2.71	5.03	4.47
16.38	66.91	62.20	4.76	295.91	2.70	5.00	4.44
16.43	66.97	62.10	4.72	292.96	2.70	4.90	4.43
16.47	67.31	62.29	4.60	286.22	2.69	4.81	4.44
16.56	67.96	62.63	4.41	275.88	2.67	4.55	4.46
16.61	69.14	63.56	4.09	260.05	2.64	4.27	4.53
16.71	70.41	64.46	3.79	244.03	2.60	3.86	4.58
16.75	71.50	65.35	3.50	229.01	2.57	0.92	0.92
16.80	71.75	65.45	3.32	217.23	2.55	0.90	0.90
16.89	71.22	64.70	3.20	207.05	2.53	0.89	0.89
16.94	69.73	63.18	3.17	200.41	2.53	0.89	0.89
17.03	68.27	61.58	3.22	198.34	2.53	0.89	0.89
17.06	67.15	60.44	3.34	201.86	2.55	0.89	0.89
17.16	67.03	60.04	3.43	206.08	2.56	0.89	0.89
17.21	67.90	60.69	3.43	208.10	2.56	0.90	0.90
17.30	69.61	62.02	3.30	204.61	2.54	0.89	0.89
17.35	71.63	63.73	3.11	197.92	2.52	0.88	0.88
17.40	74.65	66.37	2.80	185.62	2.47	0.87	0.87
17.49	77.78	69.00	2.48	171.27	2.42	0.85	0.85
17.53	81.32	72.16	2.09	150.95	2.34	0.83	0.83
17.63	83.34	73.82	1.82	134.27	2.27	0.80	0.80
17.68	84.61	74.93	1.62	121.15	2.20	0.78	0.78
17.72	85.14	75.37	1.51	113.87	2.15	0.77	0.77
17.81	85.30	75.34	1.45	109.12	2.12	0.76	0.76
17.86	84.83	74.86	1.40	105.11	2.09	0.76	0.76
17.95	83.84	73.75	1.39	102.79	2.08	0.75	0.75
18.00	82.56	72.51	1.39	100.60	2.08	0.75	0.75
18.08	81.35	71.23	1.39	98.82	2.08	0.75	0.75
18.14	80.93	70.74	1.38	97.61	2.07	0.74	0.74
18.20	80.75	70.43	1.37	96.72	2.07	0.74	0.74
18.27	81.12	70.62	1.36	96.04	2.05	0.74	0.74
18.31	81.35	70.76	1.35	95.21	2.04	0.74	0.74
18.41	81.97	71.12	1.33	94.91	2.03	0.74	0.74
18.45	82.63	71.61	1.33	95.34	2.03	0.74	0.74
18.55	83.00	71.69	1.34	95.86	2.03	0.74	0.74
18.59	82.44	71.07	1.35	96.04	2.05	0.74	0.74
18.66	80.98	69.60	1.37	95.68	2.07	0.74	0.74
18.70	78.90	67.60	1.42	95.95	2.10	0.74	0.74
18.80	76.38	65.10	1.49	96.79	2.14	0.74	0.74
18.84	73.12	62.03	1.61	100.06	2.20	0.75	0.75
18.93	68.65	57.81	1.83	105.95	2.27	0.76	0.76

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.98	63.77	53.32	2.20	117.20	2.36	0.78	0.78
19.04	58.86	48.83	2.72	132.82	2.46	0.80	0.80
19.12	54.26	44.60	3.39	151.07	2.56	0.83	0.83
19.16	49.94	40.71	4.22	171.68	2.65	1.81	2.82
19.24	46.25	37.35	5.09	190.14	2.74	2.08	2.60
19.31	43.24	34.63	5.99	207.33	2.81	2.24	2.41
19.39	41.35	32.86	6.64	218.05	2.86	2.42	2.30
19.44	40.11	31.72	7.11	225.51	2.89	2.47	2.22
19.53	39.74	31.28	7.27	227.51	2.90	2.51	2.19
19.58	39.62	31.10	7.32	227.60	2.91	2.49	2.18
19.63	39.43	30.88	7.30	225.50	2.91	2.46	2.16
19.71	38.84	30.27	7.37	223.12	2.91	2.38	2.12
19.77	37.65	29.23	7.56	220.96	2.92	2.32	2.04
19.86	36.25	27.96	7.86	219.71	2.94	2.25	1.96
19.90	34.63	26.07	8.34	217.43	2.97	2.22	1.86
19.95	33.24	24.91	8.66	215.67	2.99	2.18	1.78
20.03	32.15	23.96	8.88	212.69	3.01	2.07	1.71
20.08	31.62	23.49	8.86	208.02	3.00	2.01	1.68
20.18	31.50	23.28	8.77	204.18	3.00	1.92	1.66
20.22	32.37	23.90	8.31	198.75	2.97	1.89	1.71
20.32	33.46	25.20	7.76	195.62	2.94	1.80	1.76
20.36	34.05	25.65	7.45	191.19	2.92	1.77	1.79
20.43	33.62	25.24	7.46	188.16	2.92	1.72	1.76
20.50	32.96	24.64	7.53	185.53	2.92	1.64	1.72
20.55	33.15	24.75	7.36	182.07	2.91	1.61	1.72
20.63	34.33	25.63	6.93	177.61	2.88	1.57	1.78
20.69	37.15	27.87	6.07	169.33	2.82	1.52	1.93
20.78	39.86	29.98	5.37	160.95	2.76	1.42	2.06
20.82	41.81	31.55	4.88	153.84	2.72	1.37	2.16
20.87	41.88	31.56	4.80	151.36	2.71	1.33	2.16
20.95	41.01	30.77	4.82	148.28	2.71	1.32	2.11
21.01	39.08	29.20	4.90	143.12	2.72	1.21	2.00
21.10	37.12	27.56	5.04	139.01	2.73	1.03	1.89
21.14	33.89	24.92	5.72	142.45	2.79	1.06	1.71
21.24	31.47	22.85	6.59	150.57	2.86	1.17	1.58
21.29	29.20	20.99	7.53	157.96	2.92	1.22	1.46
21.33	29.67	21.31	7.47	159.18	2.92	1.24	1.48
21.41	30.17	21.63	7.34	158.75	2.91	1.24	1.50
21.48	30.61	21.91	7.20	157.65	2.90	1.22	1.52
21.53	29.27	20.82	7.61	158.53	2.93	1.22	1.44
21.61	27.69	18.99	8.26	156.88	2.97	1.21	1.36
21.67	25.70	17.50	8.86	155.12	3.00	1.15	1.25
21.76	24.49	16.56	9.19	152.13	3.02	1.06	1.18
21.81	23.78	16.01	9.38	150.17	3.03	1.04	1.14
21.86	25.30	17.07	8.59	146.68	2.99	1.05	1.22
21.95	27.29	19.03	7.51	142.82	2.92	0.99	1.31
21.99	28.93	20.30	6.65	135.11	2.86	0.93	1.40
22.09	28.68	20.06	6.52	130.78	2.85	0.84	1.38

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.13	28.17	19.65	6.55	128.62	2.85	0.83	1.35
22.18	27.83	19.34	6.66	128.73	2.86	0.84	1.33
22.27	27.99	19.41	6.53	126.82	2.85	0.83	1.33
22.32	27.85	19.31	6.23	120.34	2.83	0.77	1.32
22.40	26.64	18.37	6.26	115.04	2.83	0.62	1.26
22.45	23.34	15.83	7.25	114.82	2.90	0.61	1.09
22.55	19.86	12.78	9.30	118.85	3.03	0.65	0.91
22.59	18.31	11.68	10.51	122.76	3.09	0.66	0.83
22.69	19.52	12.47	9.73	121.30	3.05	0.69	0.89
22.73	21.26	13.64	8.61	117.47	2.99	0.64	0.97
22.78	21.76	14.46	7.73	111.78	2.93	0.60	1.00
22.91	20.30	12.88	8.23	106.02	2.97	0.49	0.92
23.00	18.18	11.39	9.00	102.55	3.01	0.47	0.81
23.05	16.32	10.10	10.04	101.34	3.07	0.44	0.72
23.10	15.61	9.59	10.32	99.04	3.09	0.41	0.69
23.20	18.56	11.55	8.12	93.74	2.96	0.39	0.82
23.29	23.59	15.72	5.58	87.77	2.78	0.38	1.06
23.33	29.96	20.56	3.89	79.88	2.62	0.37	1.37
23.38	32.10	22.19	3.44	76.28	2.56	0.43	0.70
23.46	30.51	20.94	3.61	75.61	2.58	0.41	0.70
23.52	26.78	18.08	4.22	76.37	2.65	0.32	1.21
23.56	22.34	14.74	5.21	76.81	2.75	0.29	0.99
23.65	19.08	12.29	6.19	76.09	2.83	0.25	0.83
23.70	16.04	10.05	7.40	74.38	2.91	0.23	0.69
23.78	14.49	8.59	8.38	71.91	2.98	0.19	0.61
23.83	13.62	7.99	8.82	70.49	3.00	0.19	0.57
23.89	13.52	7.91	8.54	67.59	2.99	0.18	0.57
23.97	14.02	8.56	7.69	65.83	2.93	0.14	0.59
24.02	14.68	9.03	7.10	64.09	2.89	0.15	0.62
24.11	15.08	9.28	7.04	65.33	2.89	0.16	0.63
24.16	14.96	9.17	7.22	66.20	2.90	0.17	0.63
24.25	14.63	8.90	7.48	66.61	2.92	0.16	0.61
24.29	14.20	8.23	8.12	66.83	2.96	0.17	0.59
24.37	14.04	8.10	8.38	67.92	2.98	0.18	0.58
24.41	14.06	8.10	8.46	68.54	2.98	0.18	0.58
24.50	14.09	8.09	8.47	68.51	2.98	0.18	0.58
24.56	14.03	8.04	8.49	68.22	2.98	0.18	0.57
24.62	13.81	7.88	8.65	68.10	2.99	0.18	0.56
24.69	13.69	7.78	8.69	67.57	2.99	0.17	0.56
24.79	13.72	7.77	8.64	67.16	2.99	0.17	0.55
24.84	13.84	7.83	8.55	66.96	2.99	0.17	0.56
24.88	13.97	7.90	8.46	66.85	2.98	0.17	0.56
24.97	13.94	7.85	8.48	66.54	2.98	0.17	0.56
25.01	13.84	7.78	8.49	66.03	2.98	0.16	0.56
25.11	13.81	7.75	8.47	65.66	2.98	0.16	0.55
25.16	13.85	7.76	8.42	65.35	2.98	0.16	0.55
25.20	13.82	7.74	8.43	65.26	2.98	0.16	0.55
25.30	13.72	7.67	8.56	65.65	2.99	0.16	0.55

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.34	13.63	7.60	8.80	66.91	3.00	0.16	0.54
25.42	13.63	7.59	9.09	69.02	3.02	0.18	0.54
25.48	13.75	7.66	9.31	71.33	3.03	0.20	0.55
25.53	14.59	8.18	9.17	75.05	3.02	0.21	0.58
25.61	15.93	9.01	8.90	80.17	3.01	0.27	0.64
25.66	17.82	10.19	8.85	90.20	3.00	0.33	0.73
25.75	19.50	11.23	9.04	101.52	3.02	0.48	0.80
25.80	21.56	12.50	9.32	116.58	3.03	0.61	0.89
25.89	23.79	13.88	9.28	128.83	3.03	0.84	0.99
25.94	26.68	15.67	8.89	139.36	3.01	0.97	1.12
25.98	29.25	17.27	8.69	149.98	2.99	1.09	1.23
26.06	31.46	18.62	8.64	160.90	2.99	1.36	1.33
26.12	33.73	20.01	8.63	172.61	2.99	1.52	1.43
26.21	35.85	21.29	8.43	179.39	2.98	1.72	1.52
26.25	38.34	22.82	8.08	184.34	2.96	1.77	1.63
26.35	40.14	25.07	7.56	189.59	2.92	1.88	1.71
26.40	41.73	26.13	7.31	190.94	2.91	1.90	1.77
26.45	42.88	26.91	7.09	190.84	2.89	1.91	1.82
26.54	43.88	27.56	6.89	189.93	2.88	1.92	1.86
26.58	44.50	28.07	6.42	180.20	2.84	1.90	1.89
26.68	44.28	27.99	6.01	168.20	2.81	1.47	1.88
26.72	42.61	26.86	6.04	162.16	2.81	1.36	1.80
26.82	40.55	25.33	6.57	166.45	2.85	1.55	1.71
26.86	38.66	23.94	7.23	173.09	2.90	1.56	1.62
26.90	37.08	22.80	7.72	175.94	2.93	1.56	1.55
27.00	35.74	20.87	8.38	174.83	2.98	1.60	1.49
27.04	35.00	20.39	8.55	174.37	2.99	1.59	1.46
27.13	34.94	20.31	8.45	171.68	2.98	1.50	1.45
27.18	35.65	20.73	8.09	167.78	2.96	1.47	1.48
27.27	36.09	22.02	7.62	167.87	2.93	1.44	1.50
27.32	36.99	22.66	7.23	163.76	2.90	1.39	1.53
27.37	36.52	22.35	7.18	160.58	2.90	1.33	1.51
27.45	34.66	21.05	7.56	159.16	2.92	1.28	1.43
27.50	31.98	18.37	8.47	155.48	2.98	1.25	1.31
27.59	29.87	17.06	9.03	154.05	3.01	1.18	1.22
27.64	29.32	16.70	8.98	149.90	3.01	1.13	1.19
27.73	29.47	16.76	8.73	146.26	3.00	1.05	1.20
27.76	30.53	17.39	8.15	141.78	2.96	1.04	1.24
27.82	31.52	18.94	7.41	140.34	2.91	1.00	1.28
27.92	32.11	19.34	7.08	137.03	2.89	0.94	1.31
27.96	31.52	18.95	7.12	134.92	2.89	0.93	1.28
28.05	30.56	18.27	7.33	133.93	2.91	0.90	1.24
28.10	29.53	17.56	7.58	133.15	2.93	0.87	1.19
28.16	29.07	16.38	7.99	130.85	2.95	0.87	1.17
28.24	29.16	16.41	7.98	131.01	2.95	0.88	1.17
28.29	29.51	17.48	7.66	133.81	2.93	0.88	1.19
28.38	30.16	17.93	7.25	129.92	2.90	0.90	1.21
28.43	31.00	18.57	6.55	121.68	2.85	0.76	1.25

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.49	32.33	19.54	5.87	114.60	2.80	0.62	1.30
28.56	33.36	20.21	5.69	114.94	2.79	0.71	1.34
28.65	33.57	20.25	6.00	121.46	2.81	0.80	1.35
28.70	32.67	19.55	6.54	127.74	2.85	0.84	1.31
28.75	31.34	18.56	7.22	134.00	2.90	0.89	1.25
28.82	30.84	17.22	7.98	137.47	2.95	0.98	1.23
28.89	31.09	17.35	8.18	141.96	2.96	1.04	1.24
28.95	32.05	17.90	8.03	143.76	2.95	1.07	1.28
29.00	31.96	17.82	8.11	144.50	2.96	1.08	1.27
29.08	31.06	17.26	8.41	145.20	2.98	1.07	1.23
29.14	29.84	16.52	8.83	145.96	3.00	1.06	1.18
29.23	29.10	16.06	9.17	147.18	3.02	1.06	1.15
29.27	28.91	15.94	9.35	149.01	3.03	1.09	1.14
29.34	28.67	15.77	9.58	151.10	3.05	1.12	1.13
29.42	28.45	15.62	9.78	152.73	3.06	1.14	1.12
29.47	28.39	15.56	10.04	156.19	3.07	1.14	1.11
29.54	29.35	16.11	9.95	160.28	3.07	1.26	1.15
29.60	31.84	17.54	9.42	165.23	3.04	1.34	1.25
29.66	36.56	20.28	8.23	166.93	2.97	1.45	1.45
29.73	44.55	26.64	6.38	170.06	2.84	1.53	1.78
29.83	54.02	33.02	5.05	166.59	2.73	1.67	2.17
29.88	62.56	38.85	4.20	163.34	2.65	1.73	2.52
29.93	72.75	45.93	3.43	157.39	2.56	0.84	0.84
30.01	81.88	52.32	2.92	152.68	2.49	0.83	0.83
30.06	91.73	59.33	2.48	147.22	2.42	0.82	0.82
30.15	96.79	62.94	2.28	143.66	2.38	0.82	0.82
30.20	100.17	65.42	2.14	140.23	2.35	0.81	0.81
30.26	101.78	66.54	2.10	139.45	2.34	0.81	0.81
30.34	102.37	66.81	2.11	141.09	2.35	0.81	0.81
30.43	102.83	66.95	2.15	143.82	2.35	0.82	0.82
30.48	102.74	66.77	2.18	145.77	2.36	0.82	0.82
30.52	102.18	66.34	2.19	145.42	2.36	0.82	0.82
30.62	101.55	65.86	2.18	143.50	2.36	0.82	0.82
30.65	102.76	66.93	2.05	136.94	2.33	0.81	0.81
30.75	105.90	69.35	1.88	130.56	2.29	0.80	0.80
30.80	109.50	72.13	1.75	126.22	2.25	0.79	0.79
30.84	112.26	74.17	1.69	125.37	2.23	0.79	0.79
30.94	113.35	74.92	1.66	124.53	2.22	0.79	0.79
30.98	113.16	74.80	1.65	123.47	2.21	0.79	0.79
31.07	110.46	72.70	1.70	123.51	2.23	0.79	0.79
31.12	103.68	67.56	1.87	126.57	2.29	0.79	0.79
31.17	95.59	61.45	2.17	133.54	2.36	0.80	0.80
31.26	85.86	54.25	2.64	143.45	2.45	0.82	0.82
31.31	76.44	47.56	3.16	150.29	2.53	0.83	0.83
31.37	65.91	40.24	3.87	155.66	2.61	1.59	2.58
31.45	58.76	35.65	3.95	140.84	2.62	1.52	2.29
31.53	55.63	33.75	3.78	127.43	2.60	0.80	2.16
31.58	55.64	33.91	3.49	118.39	2.57	0.78	0.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.66	58.25	35.45	3.59	127.41	2.58	0.79	0.79
31.71	61.02	37.16	3.60	133.82	2.58	0.80	0.80
31.77	59.31	35.90	3.82	137.26	2.61	1.28	2.30
31.82	58.22	35.11	3.94	138.27	2.62	1.24	2.25
31.89	53.41	31.76	4.55	144.36	2.68	1.24	2.06
31.98	51.51	30.39	4.89	148.69	2.72	1.34	1.98
32.03	44.43	25.63	6.02	154.38	2.81	1.34	1.69
32.12	41.20	23.53	6.41	150.90	2.84	1.18	1.56
32.16	39.22	22.36	6.29	140.61	2.83	1.07	1.48
32.26	38.04	21.66	6.12	132.55	2.82	0.87	1.43
32.31	36.53	20.73	6.14	127.38	2.82	0.84	1.37
32.35	35.34	19.93	6.47	128.86	2.85	0.84	1.32
32.44	35.25	19.83	6.54	129.63	2.85	0.88	1.32
32.49	35.82	20.19	6.41	129.31	2.84	0.86	1.34
32.58	36.33	20.50	6.23	127.83	2.83	0.84	1.36
32.62	35.80	20.14	6.37	128.32	2.84	0.84	1.34
32.71	34.50	19.24	6.80	130.74	2.87	0.86	1.28
32.75	33.72	18.72	7.02	131.49	2.89	0.88	1.25
32.81	35.40	19.82	6.44	127.66	2.85	0.84	1.31
32.91	37.11	20.97	5.83	122.23	2.80	0.78	1.38
32.95	37.27	21.10	5.63	118.75	2.78	0.75	1.38
33.04	35.09	19.67	6.04	118.72	2.81	0.73	1.30
33.09	32.11	17.72	6.76	119.78	2.87	0.71	1.18
33.14	29.53	16.03	7.60	121.81	2.93	0.70	1.08
33.22	27.51	13.94	8.69	121.13	2.99	0.72	1.00
33.28	25.99	13.10	9.25	121.18	3.03	0.71	0.94
33.35	25.00	12.54	9.50	119.10	3.04	0.65	0.90
33.41	24.53	12.27	9.38	115.11	3.03	0.62	0.88
33.50	24.84	12.42	8.99	111.59	3.01	0.57	0.89
33.55	25.71	12.88	8.40	108.29	2.98	0.55	0.92
33.63	26.67	14.25	7.63	108.68	2.93	0.54	0.96
33.69	27.20	14.57	7.43	108.25	2.92	0.54	0.98
33.73	26.67	13.37	8.09	108.19	2.96	0.55	0.95
33.83	25.65	12.79	8.68	111.02	2.99	0.59	0.91
33.87	24.56	12.19	9.33	113.68	3.03	0.60	0.87
33.93	24.16	11.96	9.57	114.46	3.04	0.60	0.85
34.01	24.13	11.92	9.61	114.61	3.05	0.60	0.85
34.05	24.47	12.10	9.45	114.34	3.04	0.60	0.86
34.13	25.06	12.40	9.18	113.90	3.02	0.60	0.89
34.20	25.99	12.89	8.78	113.21	3.00	0.60	0.92
34.29	26.89	13.35	8.43	112.54	2.98	0.60	0.95
34.33	28.17	14.03	8.40	117.92	2.98	0.61	1.00
34.43	29.06	14.49	8.53	123.58	2.98	0.81	1.04
34.46	32.98	17.75	7.27	129.10	2.90	0.82	1.18
34.55	37.08	20.35	6.18	125.76	2.83	0.81	1.34
34.59	43.97	24.84	4.80	119.31	2.71	0.82	1.60
34.68	48.70	27.95	4.11	114.79	2.64	0.81	1.78
34.73	50.90	29.44	3.77	111.06	2.60	0.81	1.86

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.80	48.11	27.66	3.89	107.58	2.62	0.75	1.76
34.87	43.23	24.54	4.24	103.97	2.65	0.61	1.57
34.91	37.23	20.68	4.96	102.55	2.72	0.55	1.34
35.01	32.57	17.61	6.11	107.66	2.82	0.54	1.16
35.06	27.78	13.65	8.55	116.69	2.99	0.64	0.97
35.11	26.67	13.04	10.13	132.09	3.08	0.77	0.93
35.19	28.75	14.12	10.21	144.27	3.08	1.03	1.01
35.24	37.07	18.54	8.21	152.26	2.97	1.15	1.32
35.33	46.99	25.83	6.18	159.57	2.83	1.37	1.70
35.38	61.06	34.69	4.66	161.56	2.70	1.53	2.23
35.46	74.01	42.97	3.77	162.02	2.60	1.78	2.72
35.51	91.47	54.43	2.91	158.66	2.49	0.84	0.84
35.59	106.56	64.54	2.39	154.11	2.40	0.83	0.83
35.65	121.47	74.76	2.01	150.01	2.32	0.83	0.83
35.70	134.89	84.18	1.75	147.30	2.25	0.82	0.82
35.78	148.10	93.46	1.58	148.06	2.19	0.82	0.82
35.83	160.81	102.35	1.49	152.43	2.14	0.83	0.83
35.90	169.10	107.84	1.47	158.29	2.13	0.84	0.84
35.97	167.02	105.75	1.53	162.30	2.17	0.84	0.84
36.04	156.45	97.77	1.69	165.32	2.23	0.85	0.85
36.11	140.67	86.43	1.96	169.73	2.31	0.85	0.85
36.16	123.83	74.66	2.37	177.23	2.40	0.86	0.86
36.25	110.32	65.31	2.86	186.77	2.48	0.87	0.87
36.29	102.76	60.10	3.26	196.04	2.54	0.88	0.88
36.36	95.03	54.83	3.74	205.23	2.60	0.89	0.89
36.43	96.72	55.81	3.71	206.93	2.59	0.89	0.89
36.52	107.02	62.57	3.18	198.69	2.53	0.89	0.89
36.58	130.32	78.31	2.33	182.61	2.39	0.87	0.87
36.62	163.22	100.90	1.76	177.18	2.25	0.86	0.86
36.70	188.50	118.34	1.55	182.85	2.17	0.87	0.87
36.75	205.24	129.68	1.48	191.75	2.14	0.88	0.88
36.83	200.18	125.74	1.53	192.16	2.16	0.88	0.88
36.89	179.59	110.96	1.73	191.71	2.24	0.88	0.88
36.97	156.77	94.79	2.10	199.15	2.34	0.89	0.89
37.03	144.14	85.87	2.44	209.65	2.41	0.90	0.90
37.08	139.67	82.68	2.60	215.29	2.44	0.90	0.90
37.17	145.28	86.43	2.43	209.96	2.41	0.90	0.90
37.21	151.62	91.12	2.16	196.56	2.36	0.88	0.88
37.31	159.72	97.16	1.88	182.29	2.29	0.87	0.87
37.35	151.46	92.19	1.84	169.63	2.28	0.85	0.85
37.41	123.08	73.59	2.13	156.67	2.35	0.84	0.84
37.49	93.09	54.34	2.60	141.08	2.44	0.81	0.81
37.54	75.02	42.95	3.03	130.06	2.51	0.80	0.80
37.63	70.84	40.17	3.28	131.80	2.54	0.80	0.80
37.68	71.32	39.93	3.83	152.74	2.61	1.45	2.50
37.77	69.01	38.09	4.42	168.36	2.67	1.88	2.42
37.80	78.02	43.75	3.81	166.51	2.61	1.83	2.74
37.89	85.01	48.22	3.36	161.99	2.55	0.84	0.84

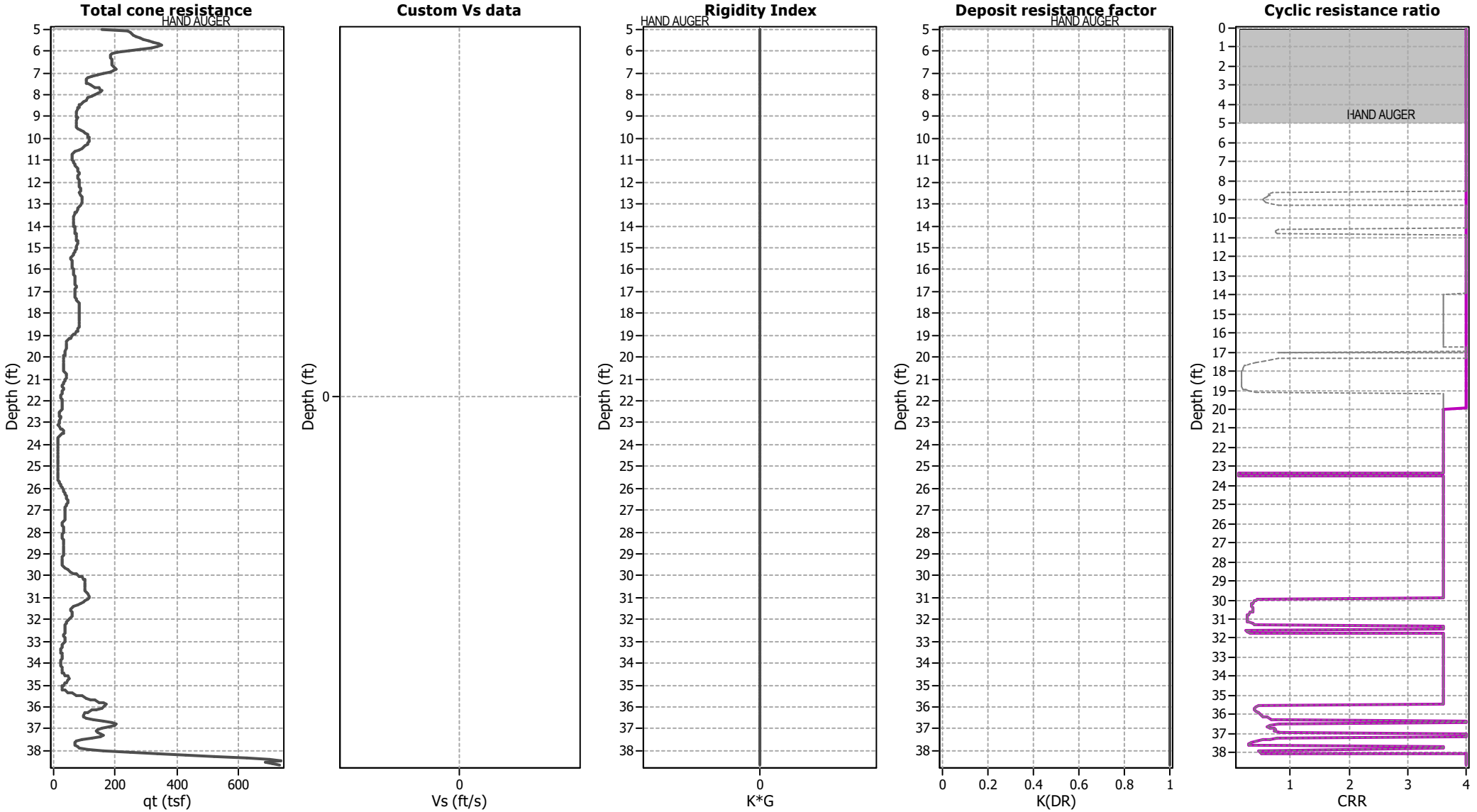
:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
37.94	110.12	64.40	2.48	159.94	2.42	0.84	0.84
38.02	162.77	99.43	1.67	165.55	2.22	0.85	0.85
38.07	249.76	159.76	1.31	208.62	2.00	0.90	0.90
38.13	336.89	222.73	1.19	264.08	1.83	0.95	0.95
38.19	427.32	291.06	1.00	291.06	1.68	0.97	0.97
38.27	519.91	356.88	1.00	356.88	1.41	1.02	1.02
38.34	626.41	430.08	1.00	430.08	1.07	1.07	1.07
38.41	699.19	-1.00	1.00	-1.00	-1.00	0.00	0.00
38.46	738.05	-1.00	1.00	-1.00	-1.00	0.00	0.00
38.52	685.69	-1.00	1.00	-1.00	-1.00	0.00	0.00
38.59	709.10	-1.00	1.00	-1.00	-1.00	0.00	0.00
38.66	731.71	-1.00	1.00	-1.00	-1.00	0.00	0.00

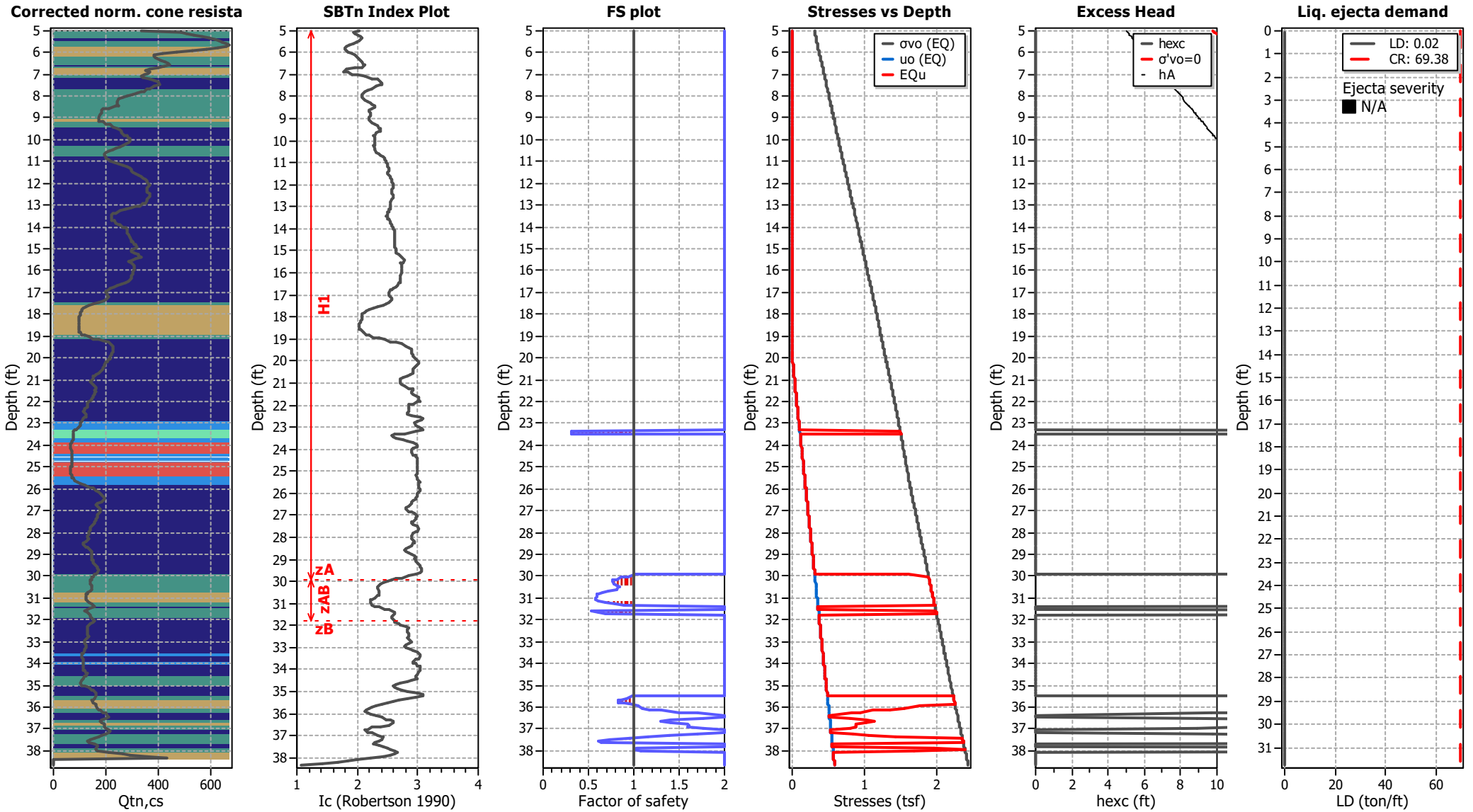
Abbreviations

q_t: Total cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Adjusted and corrected cone resistance due to fines
I_c: Soil behavior type index
$S_{u(liq)}/\sigma'_v$: Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$: Calculated peak undrained strength ratio

Aging Calculation Estimation



Ejecta Severity Estimation



Verdantas Inc.
2600 Michelson Drive, Suite 400
Irvine, California 92612
http://www.geologismiki.gr

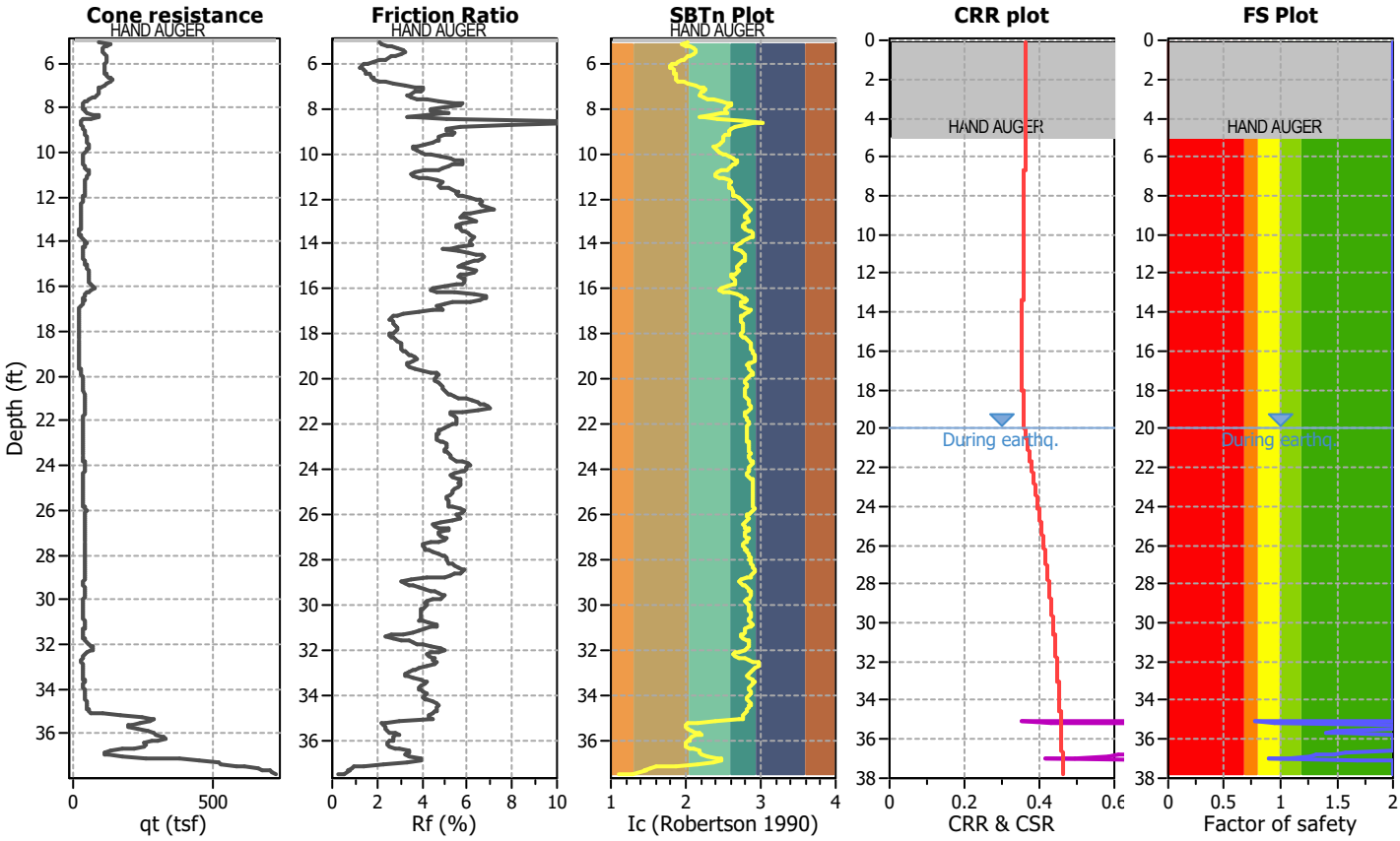
LIQUEFACTION ANALYSIS REPORT

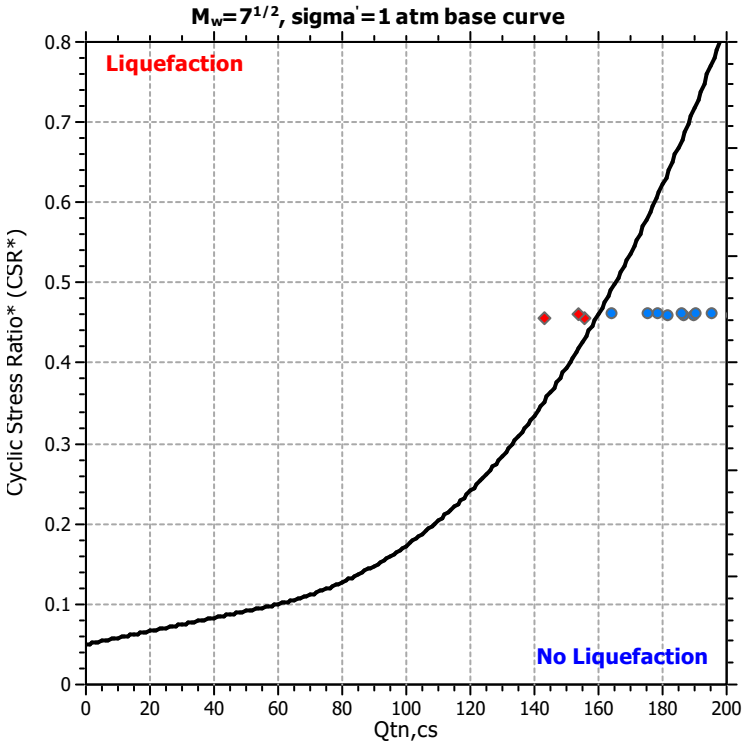
Project title : Intracorp Diamond Bar Montefino **Location : 1400 Montefino Avenue, Diamond Bar, CA**

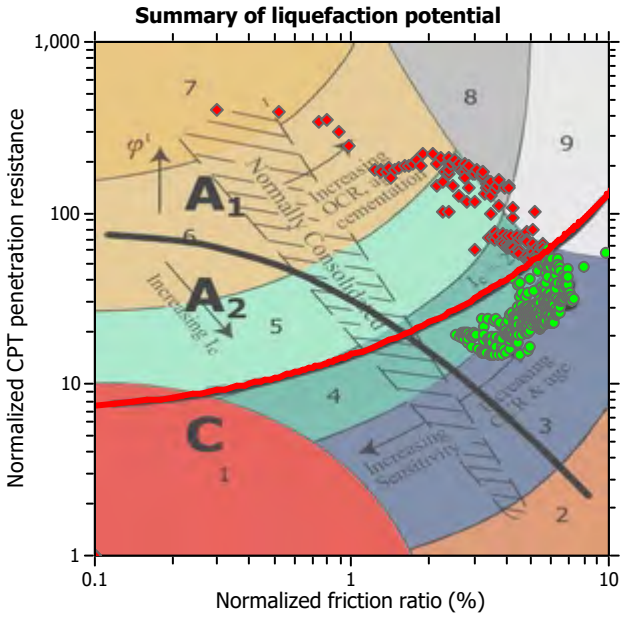
CPT file : CPT-3

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	31.65 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	20.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	45.00 ft
Earthquake magnitude M_w:	6.11	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.95	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

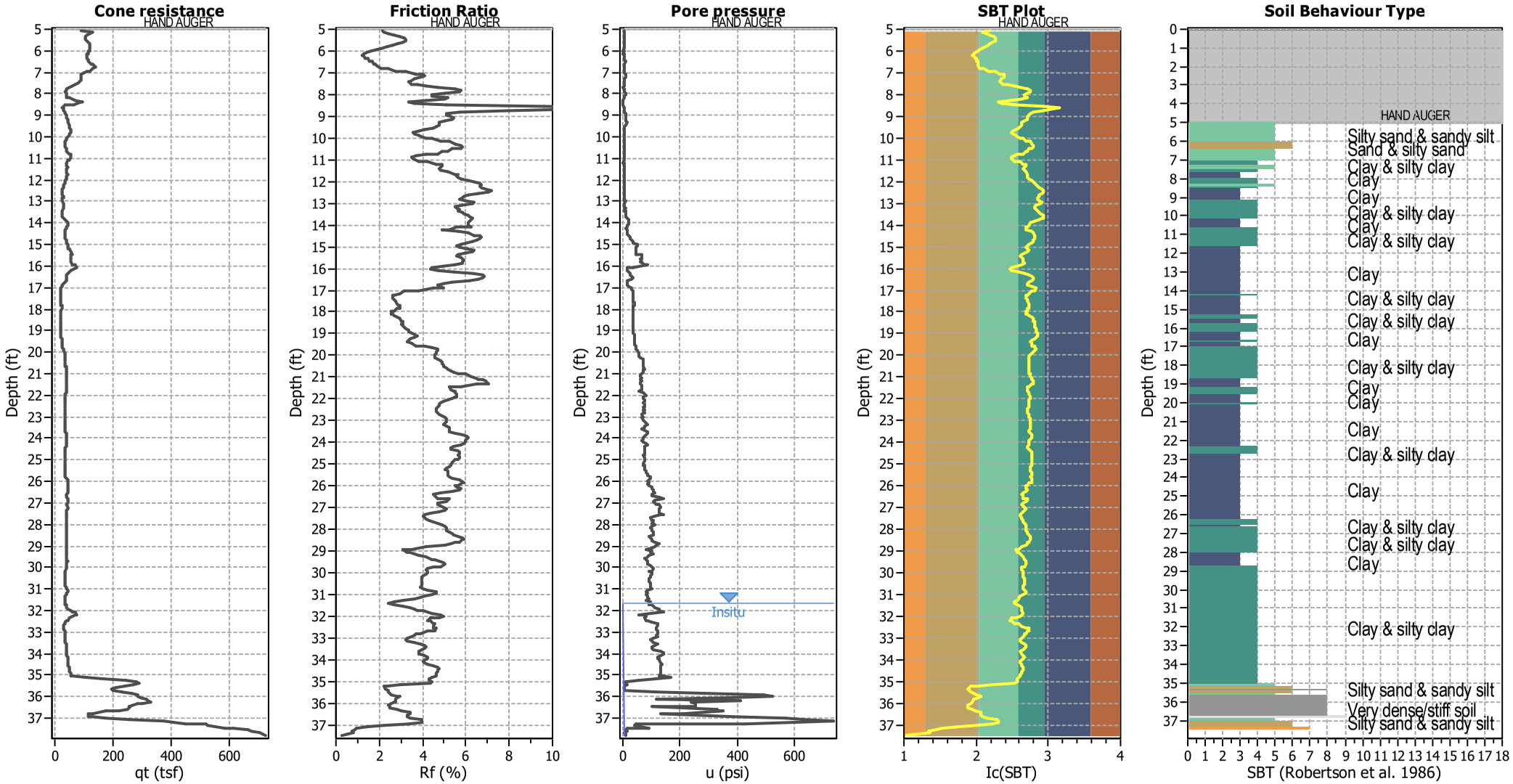






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



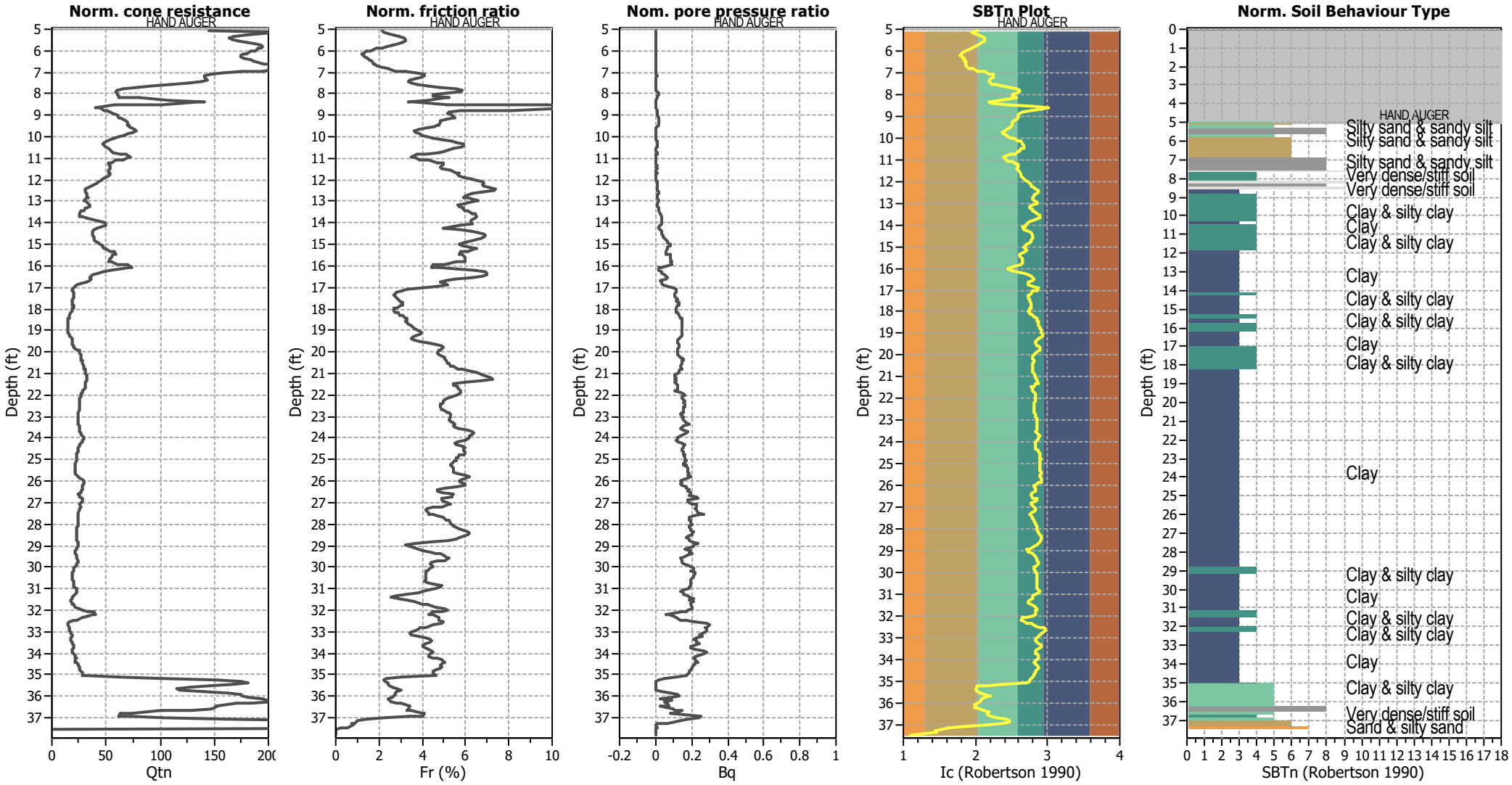
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	31.65 ft	Fill height:	N/A	Limit depth:	45.00 ft

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

CPT basic interpretation plots (normalized)



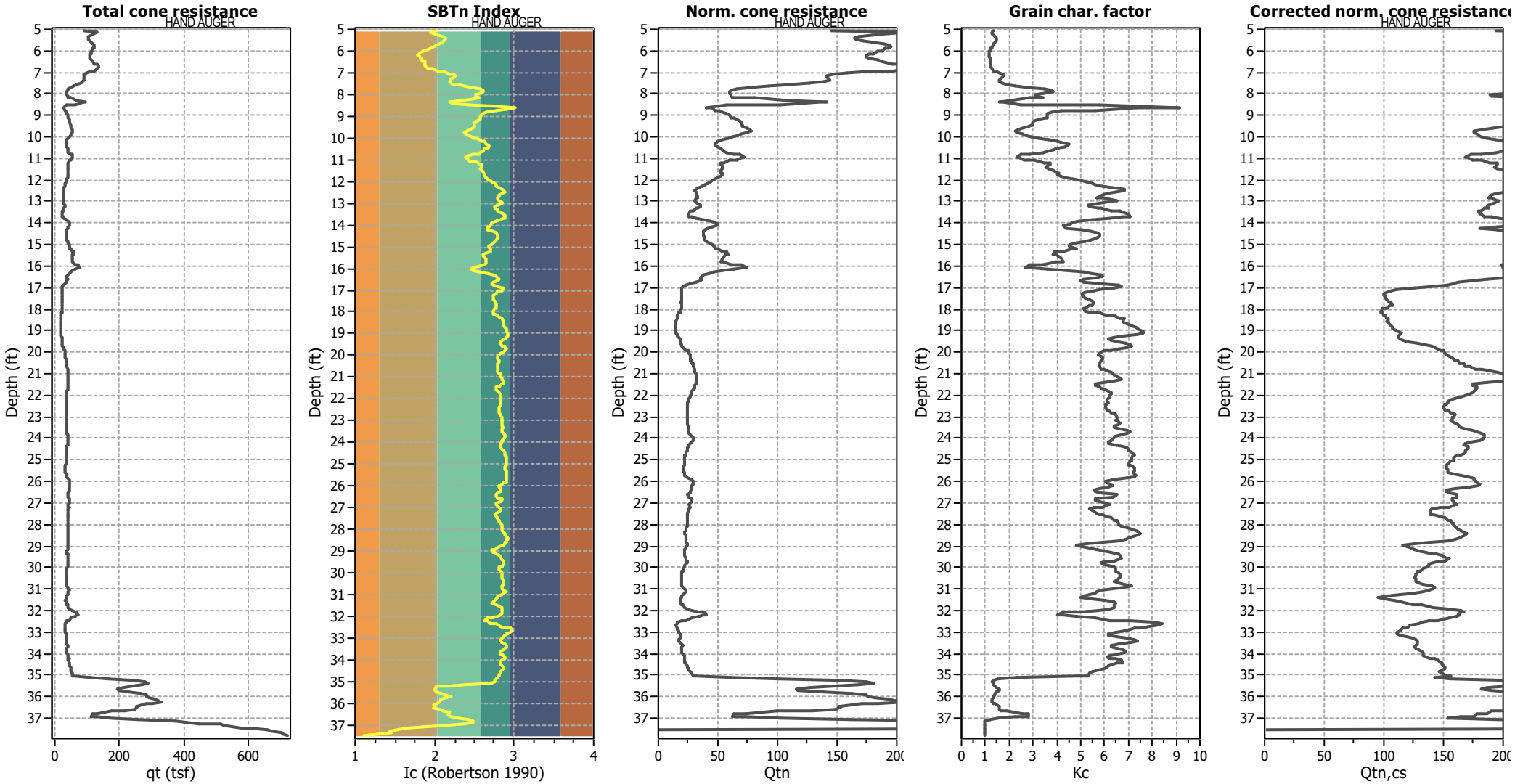
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	31.65 ft	Fill height:	N/A	Limit depth:	45.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty clay
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

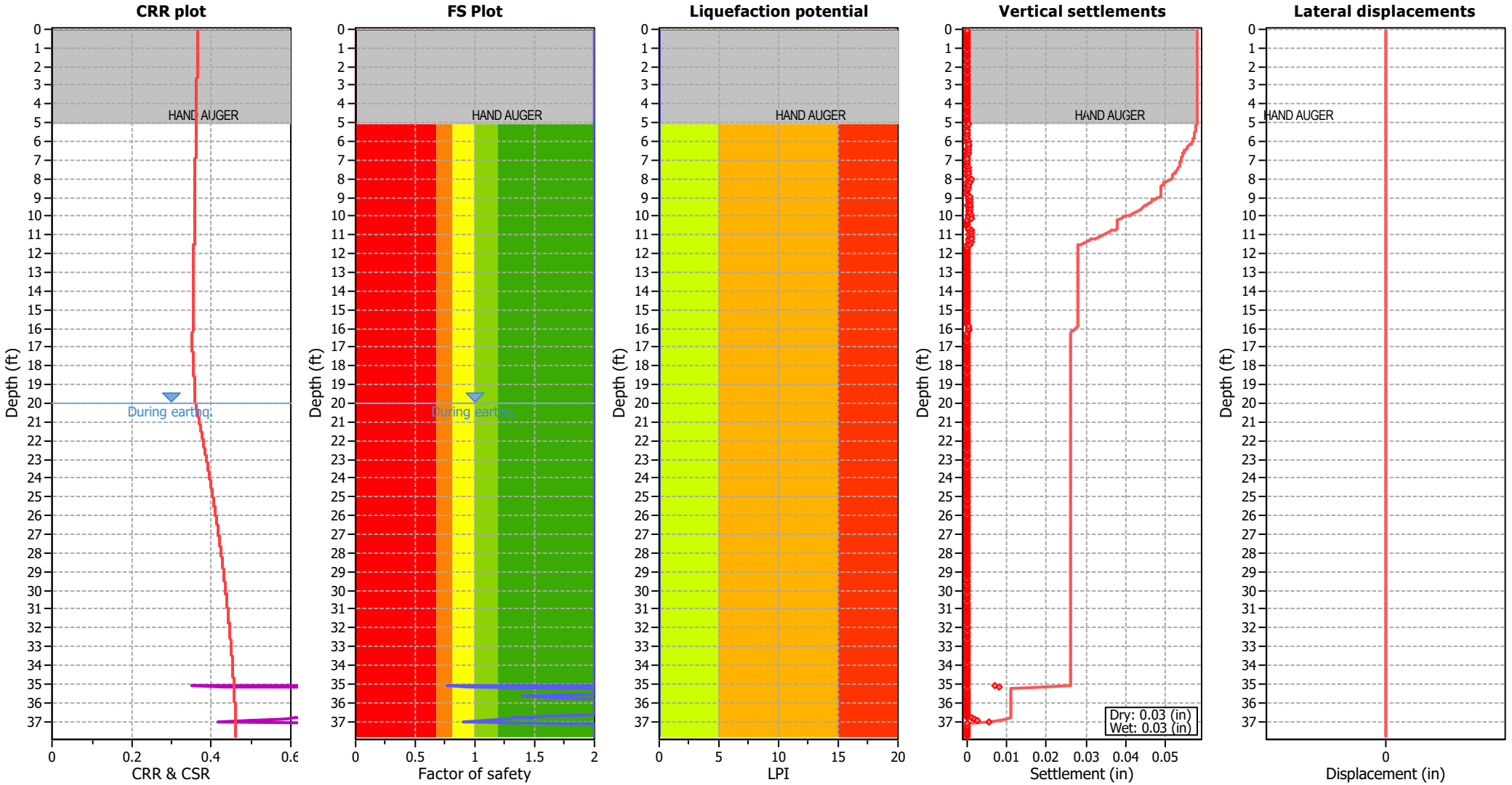
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	31.65 ft	Fill height:	N/A	Limit depth:	45.00 ft

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	31.65 ft	Fill height:	N/A	Limit depth:	45.00 ft

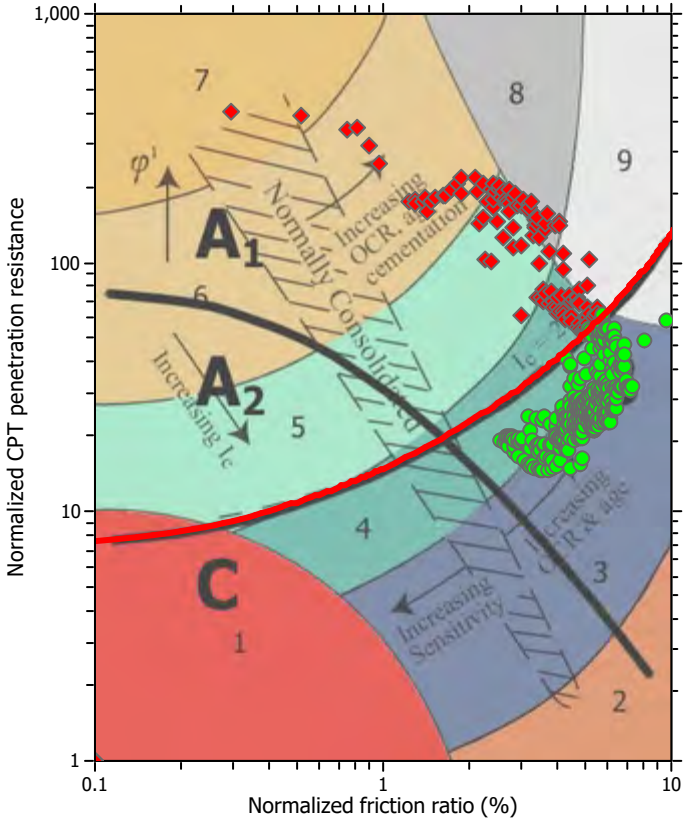
F.S. color scheme

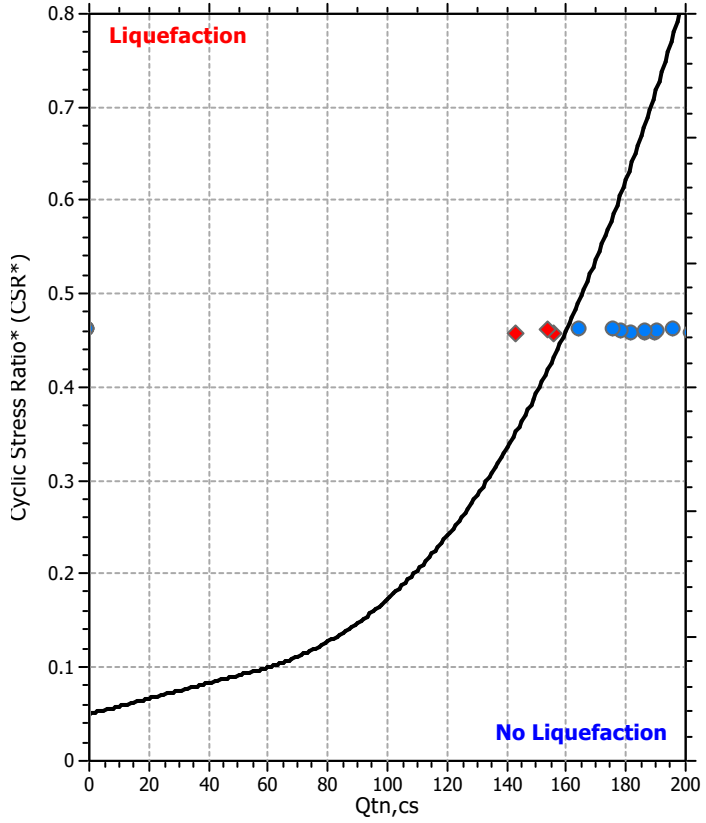
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

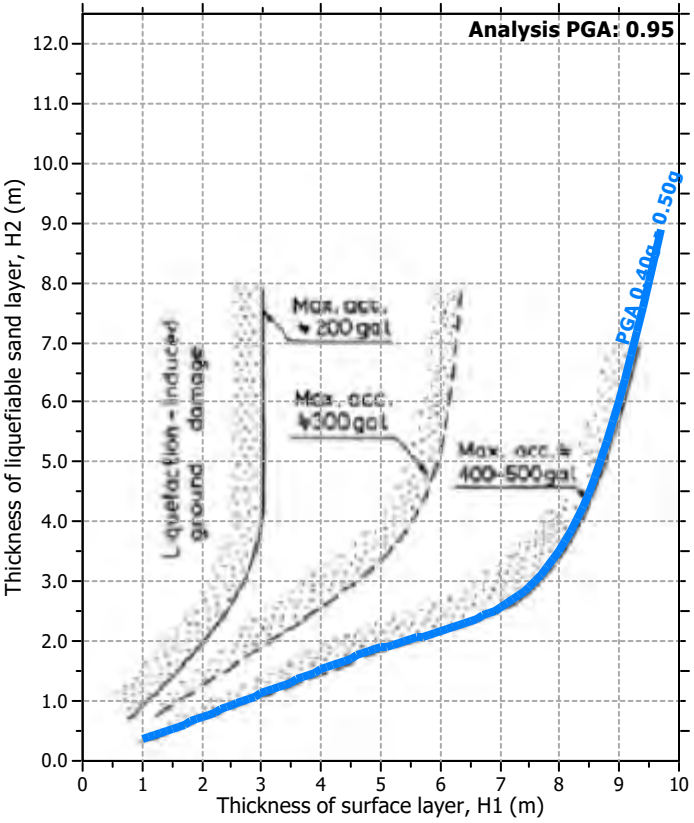
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots



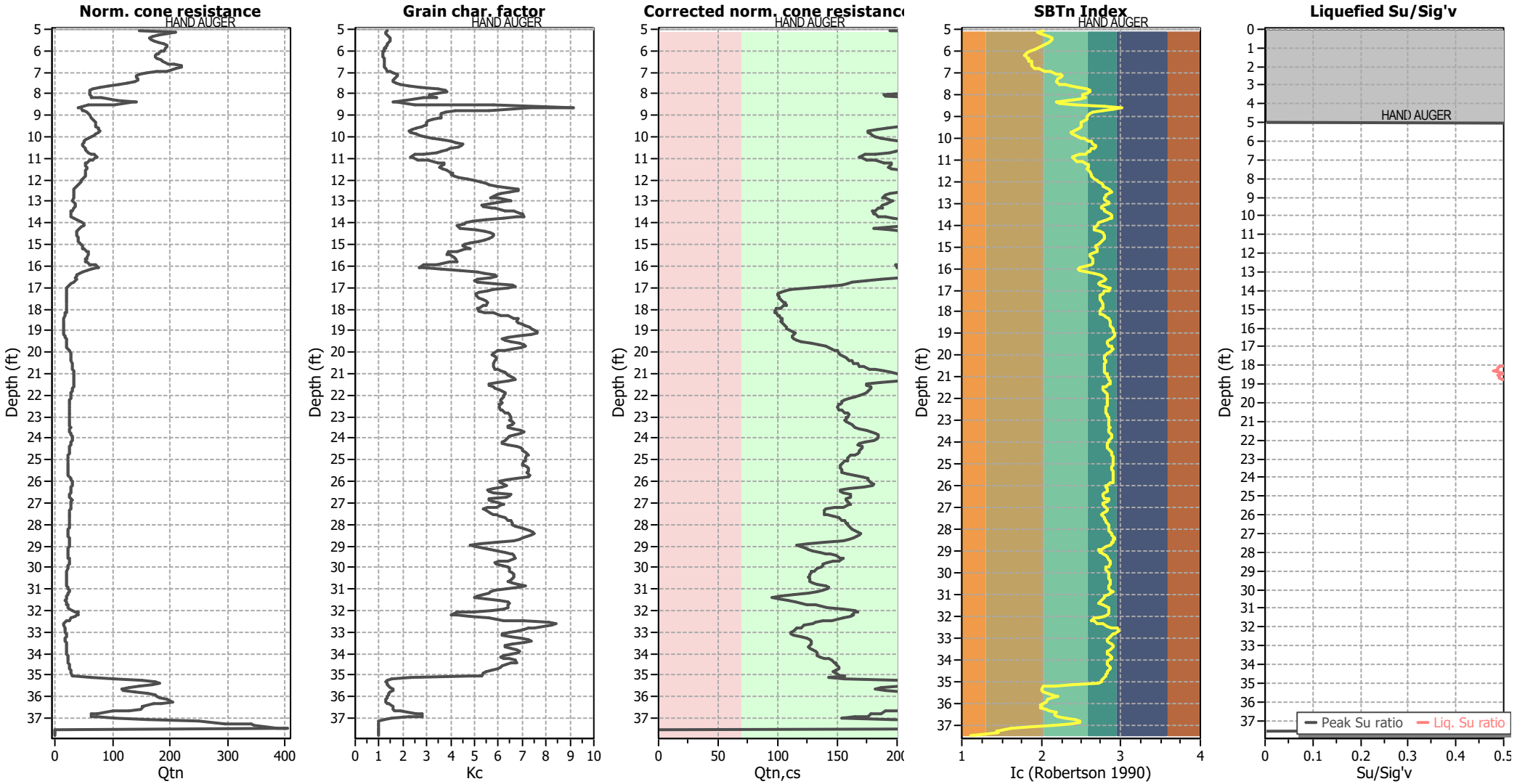




Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	31.65 ft	Fill height:	N/A	Limit depth:	45.00 ft

Check for strength loss plots (Robertson (2010))



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	20.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.11	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.95	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	31.65 ft	Fill height:	N/A	Limit depth:	45.00 ft

:: Field input data ::

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
1	0.09	-9999.00	-9999.00	-9999.00	N/A	120.90
2	0.13	-9999.00	-9999.00	-9999.00	N/A	120.90
3	0.22	-9999.00	-9999.00	-9999.00	N/A	120.90
4	0.27	-9999.00	-9999.00	-9999.00	N/A	120.90
5	0.36	-9999.00	-9999.00	-9999.00	N/A	120.90
6	0.41	-9999.00	-9999.00	-9999.00	N/A	120.90
7	0.51	-9999.00	-9999.00	-9999.00	N/A	120.90
8	0.54	-9999.00	-9999.00	-9999.00	N/A	120.90
9	0.60	-9999.00	-9999.00	-9999.00	N/A	120.90
10	0.69	-9999.00	-9999.00	-9999.00	N/A	120.90
11	0.73	-9999.00	-9999.00	-9999.00	N/A	120.90
12	0.82	-9999.00	-9999.00	-9999.00	N/A	120.90
13	0.86	-9999.00	-9999.00	-9999.00	N/A	120.90
14	0.95	-9999.00	-9999.00	-9999.00	N/A	120.90
15	0.98	-9999.00	-9999.00	-9999.00	N/A	120.90
16	1.05	-9999.00	-9999.00	-9999.00	N/A	120.90
17	1.14	-9999.00	-9999.00	-9999.00	N/A	120.90
18	1.19	-9999.00	-9999.00	-9999.00	N/A	120.90
19	1.28	-9999.00	-9999.00	-9999.00	N/A	120.90
20	1.32	-9999.00	-9999.00	-9999.00	N/A	120.90
21	1.38	-9999.00	-9999.00	-9999.00	N/A	120.90
22	1.47	-9999.00	-9999.00	-9999.00	N/A	120.90
23	1.51	-9999.00	-9999.00	-9999.00	N/A	120.90
24	1.61	-9999.00	-9999.00	-9999.00	N/A	120.90
25	1.64	-9999.00	-9999.00	-9999.00	N/A	120.90
26	1.71	-9999.00	-9999.00	-9999.00	N/A	120.90
27	1.79	-9999.00	-9999.00	-9999.00	N/A	120.90
28	1.84	-9999.00	-9999.00	-9999.00	N/A	120.90
29	1.92	-9999.00	-9999.00	-9999.00	N/A	120.90
30	1.98	-9999.00	-9999.00	-9999.00	N/A	120.90
31	2.04	-9999.00	-9999.00	-9999.00	N/A	120.90
32	2.12	-9999.00	-9999.00	-9999.00	N/A	120.90
33	2.17	-9999.00	-9999.00	-9999.00	N/A	120.90
34	2.26	-9999.00	-9999.00	-9999.00	N/A	120.90
35	2.31	-9999.00	-9999.00	-9999.00	N/A	120.90
36	2.41	-9999.00	-9999.00	-9999.00	N/A	120.90
37	2.44	-9999.00	-9999.00	-9999.00	N/A	120.90
38	2.52	-9999.00	-9999.00	-9999.00	N/A	120.90
39	2.59	-9999.00	-9999.00	-9999.00	N/A	120.90
40	2.67	-9999.00	-9999.00	-9999.00	N/A	120.90
41	2.72	-9999.00	-9999.00	-9999.00	N/A	120.90
42	2.77	-9999.00	-9999.00	-9999.00	N/A	120.90
43	2.86	-9999.00	-9999.00	-9999.00	N/A	120.90
44	2.90	-9999.00	-9999.00	-9999.00	N/A	120.90
45	2.99	-9999.00	-9999.00	-9999.00	N/A	120.90
46	3.04	-9999.00	-9999.00	-9999.00	N/A	120.90
47	3.09	-9999.00	-9999.00	-9999.00	N/A	120.90
48	3.17	-9999.00	-9999.00	-9999.00	N/A	120.90

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
49	3.22	-9999.00	-9999.00	-9999.00	N/A	120.90
50	3.28	-9999.00	-9999.00	-9999.00	N/A	120.90
51	3.36	-9999.00	-9999.00	-9999.00	N/A	120.90
52	3.46	-9999.00	-9999.00	-9999.00	N/A	120.90
53	3.50	-9999.00	-9999.00	-9999.00	N/A	120.90
54	3.55	-9999.00	-9999.00	-9999.00	N/A	120.90
55	3.63	-9999.00	-9999.00	-9999.00	N/A	120.90
56	3.68	-9999.00	-9999.00	-9999.00	N/A	120.90
57	3.77	-9999.00	-9999.00	-9999.00	N/A	120.90
58	3.82	-9999.00	-9999.00	-9999.00	N/A	120.90
59	3.90	-9999.00	-9999.00	-9999.00	N/A	120.90
60	3.95	-9999.00	-9999.00	-9999.00	N/A	120.90
61	4.00	-9999.00	-9999.00	-9999.00	N/A	120.90
62	4.10	-9999.00	-9999.00	-9999.00	N/A	120.90
63	4.14	-9999.00	-9999.00	-9999.00	N/A	120.90
64	4.20	-9999.00	-9999.00	-9999.00	N/A	120.90
65	4.29	-9999.00	-9999.00	-9999.00	N/A	120.90
66	4.33	-9999.00	-9999.00	-9999.00	N/A	120.90
67	4.42	-9999.00	-9999.00	-9999.00	N/A	120.90
68	4.48	-9999.00	-9999.00	-9999.00	N/A	120.90
69	4.56	-9999.00	-9999.00	-9999.00	N/A	120.90
70	4.59	-9999.00	-9999.00	-9999.00	N/A	120.90
71	4.67	-9999.00	-9999.00	-9999.00	N/A	120.90
72	4.75	-9999.00	-9999.00	-9999.00	N/A	120.90
73	4.80	-9999.00	-9999.00	-9999.00	N/A	120.90
74	4.88	-9999.00	-9999.00	-9999.00	N/A	120.90
75	4.92	-9999.00	-9999.00	-9999.00	N/A	120.90
76	5.00	-9999.00	-9999.00	-9999.00	N/A	120.90
77	5.07	142.36	2.89	2.81	13.79	126.10
78	5.17	129.05	2.92	2.45	11.46	129.96
79	5.22	120.86	2.90	3.35	12.83	129.80
80	5.26	111.26	2.95	3.54	14.27	129.76
81	5.34	103.07	3.09	3.90	15.72	129.85
82	5.40	100.65	3.20	3.99	16.66	130.13
83	5.49	103.91	3.39	2.54	16.85	130.45
84	5.54	106.98	3.48	2.17	16.55	130.75
85	5.58	111.26	3.50	1.99	15.65	130.82
86	5.67	118.99	3.34	3.26	14.56	130.74
87	5.72	122.62	3.21	3.44	13.43	130.33
88	5.81	121.23	2.86	2.99	12.50	129.71
89	5.86	121.60	2.56	1.99	11.62	128.81
90	5.92	118.06	2.23	1.45	10.57	127.73
91	6.00	117.22	1.84	0.27	9.53	126.56
92	6.04	116.67	1.61	1.50	8.57	125.30
93	6.13	111.36	1.37	0.64	8.17	124.48
94	6.18	108.94	1.36	1.54	8.00	124.01
95	6.24	110.80	1.36	1.18	8.42	124.23
96	6.32	106.80	1.51	1.36	8.76	124.65

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
97	6.37	110.24	1.61	1.72	9.19	125.28
98	6.46	114.62	1.74	5.17	9.19	125.88
99	6.51	119.27	1.86	8.43	9.75	126.65
100	6.60	115.36	2.16	3.72	9.76	127.45
101	6.64	132.49	2.30	3.17	9.78	128.30
102	6.70	139.48	2.52	2.72	9.73	129.14
103	6.78	138.27	2.86	1.99	10.56	129.90
104	6.84	133.33	3.13	1.99	12.12	130.49
105	6.93	121.13	3.38	1.99	13.93	130.81
106	6.97	111.36	3.51	2.45	16.43	130.99
107	7.06	96.83	3.75	5.08	18.82	130.96
108	7.11	88.36	3.71	6.16	20.65	130.85
109	7.16	88.31	3.64	8.16	21.01	130.59
110	7.23	88.31	3.46	6.25	20.50	130.28
111	7.29	88.27	3.27	5.44	19.54	129.85
112	7.39	90.97	3.01	3.81	18.77	129.46
113	7.44	89.94	2.94	2.54	18.75	128.94
114	7.52	79.61	2.74	1.27	20.03	128.35
115	7.57	68.53	2.58	0.72	22.22	127.57
116	7.62	59.96	2.44	1.27	25.50	126.73
117	7.69	46.93	2.30	0.18	29.22	125.98
118	7.75	41.15	2.26	1.27	33.65	125.40
119	7.81	36.78	2.28	2.36	35.57	125.01
120	7.90	37.43	2.12	5.26	35.82	124.62
121	7.95	37.52	1.97	7.07	33.68	123.86
122	8.04	38.27	1.62	7.07	31.59	122.98
123	8.08	38.45	1.46	5.62	31.37	123.15
124	8.17	39.48	2.06	4.26	33.52	124.41
125	8.20	39.85	2.56	3.90	29.75	126.72
126	8.31	73.18	3.04	-1.09	23.96	128.41
127	8.36	94.69	3.11	-1.90	18.57	129.65
128	8.40	112.85	3.19	-1.72	19.86	129.81
129	8.49	61.17	3.38	-0.27	27.32	129.31
130	8.54	22.07	3.47	0.64	45.61	128.21
131	8.63	25.98	3.65	1.36	59.83	127.42
132	8.67	28.21	3.50	1.63	52.35	126.65
133	8.77	30.63	2.08	3.90	44.89	125.10
134	8.81	32.40	1.71	5.08	38.01	123.17
135	8.87	33.43	1.70	4.62	35.49	123.06
136	8.95	37.34	1.88	6.16	34.55	123.64
137	9.00	39.48	2.02	6.71	34.46	124.49
138	9.09	39.76	2.28	9.06	34.49	124.97
139	9.14	41.06	2.23	9.06	33.99	125.21
140	9.19	43.30	2.17	9.06	32.45	125.26
141	9.28	46.37	2.20	10.15	31.05	125.40
142	9.32	48.60	2.23	11.42	30.90	125.53
143	9.43	45.25	2.25	9.43	30.78	125.62
144	9.45	48.28	2.26	9.06	30.31	125.62

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
145	9.54	51.02	2.20	4.62	29.72	125.56
146	9.59	47.95	2.15	3.54	27.92	125.42
147	9.67	56.42	2.02	3.72	26.54	125.25
148	9.72	57.36	1.97	2.81	25.43	125.05
149	9.81	52.79	1.94	2.17	26.19	124.83
150	9.86	50.28	1.92	1.54	27.63	124.56
151	9.95	47.21	1.88	1.27	28.70	124.33
152	10.00	45.90	1.85	1.09	30.37	124.00
153	10.04	40.13	1.81	1.90	32.23	123.79
154	10.13	38.17	1.85	2.36	34.76	123.61
155	10.18	35.75	1.87	2.81	36.85	123.64
156	10.28	33.71	1.94	2.81	37.99	123.73
157	10.32	35.66	1.96	2.81	39.33	123.84
158	10.41	32.77	2.01	2.81	39.29	124.07
159	10.46	35.57	2.09	2.90	38.66	124.31
160	10.51	39.20	2.10	2.27	36.60	124.48
161	10.60	40.50	2.01	1.63	35.81	124.41
162	10.64	38.08	1.99	2.63	34.62	124.39
163	10.73	43.39	2.01	3.99	33.39	124.48
164	10.78	46.09	1.99	4.17	30.04	124.72
165	10.83	54.38	1.94	2.81	27.58	124.86
166	10.92	57.26	1.94	2.54	26.03	124.95
167	10.96	56.14	1.95	1.81	26.61	124.90
168	11.05	50.74	1.95	1.36	28.46	124.74
169	11.10	46.09	1.95	1.00	31.23	124.49
170	11.19	41.15	1.95	0.54	33.72	124.32
171	11.24	39.66	1.97	0.72	35.26	124.28
172	11.29	40.32	2.01	0.82	35.25	124.37
173	11.38	41.99	2.01	3.35	34.64	124.49
174	11.43	43.02	2.01	2.81	34.25	124.55
175	11.50	42.36	2.02	3.17	34.72	124.65
176	11.56	41.34	2.11	2.99	35.96	125.02
177	11.66	41.43	2.35	2.54	37.02	125.39
178	11.68	41.81	2.37	3.35	37.17	125.73
179	11.76	43.48	2.40	2.45	36.90	125.75
180	11.84	42.83	2.34	1.81	37.46	125.65
181	11.90	39.39	2.33	2.45	38.61	125.48
182	11.95	38.45	2.32	1.99	40.41	125.36
183	12.01	36.50	2.36	2.45	41.83	125.32
184	12.09	35.10	2.37	3.26	43.11	125.17
185	12.17	34.17	2.28	2.81	44.14	124.85
186	12.22	32.12	2.16	2.45	44.73	124.31
187	12.29	30.54	1.98	2.45	46.25	123.71
188	12.35	27.56	1.91	2.45	48.25	123.14
189	12.45	25.23	1.86	3.90	50.29	122.80
190	12.47	25.33	1.83	4.53	50.47	122.48
191	12.54	25.79	1.71	5.71	48.87	122.17
192	12.63	26.81	1.60	5.71	47.14	121.91

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
193	12.68	27.56	1.61	4.89	46.31	121.81
194	12.74	27.09	1.62	4.17	45.70	121.88
195	12.81	28.49	1.61	4.53	45.26	121.94
196	12.87	28.96	1.62	4.53	46.52	121.92
197	12.96	24.58	1.66	4.80	48.94	121.86
198	13.00	23.84	1.67	5.98	48.57	122.00
199	13.08	30.35	1.69	4.99	45.29	122.37
200	13.14	33.05	1.74	4.62	43.32	122.56
201	13.23	29.42	1.69	5.17	43.73	122.48
202	13.28	29.14	1.65	5.44	45.33	122.15
203	13.33	27.93	1.61	6.71	45.94	121.72
204	13.42	26.16	1.47	5.62	47.90	121.15
205	13.46	23.00	1.41	6.25	49.52	120.65
206	13.54	23.09	1.41	7.52	51.02	120.46
207	13.60	23.09	1.42	8.79	51.28	120.59
208	13.69	23.18	1.48	9.43	51.48	120.85
209	13.72	23.93	1.54	10.15	50.09	121.62
210	13.79	28.58	1.79	13.78	47.67	122.72
211	13.85	32.87	2.04	17.13	44.40	124.27
212	13.92	39.76	2.44	19.85	41.75	125.69
213	14.01	45.25	2.76	20.49	40.11	126.76
214	14.06	46.55	2.89	19.04	39.72	127.36
215	14.11	46.37	2.99	13.60	38.26	126.37
216	14.20	42.64	1.71	11.60	38.47	125.18
217	14.25	36.87	1.91	9.15	38.86	123.79
218	14.31	35.47	2.02	10.97	42.30	124.17
219	14.38	35.20	2.14	14.69	44.07	124.59
220	14.48	34.92	2.31	14.69	45.11	124.93
221	14.50	35.10	2.33	15.59	45.80	125.23
222	14.58	35.29	2.41	19.13	45.84	125.46
223	14.63	36.41	2.50	21.12	45.33	125.58
224	14.72	37.24	2.41	24.66	44.73	125.58
225	14.77	36.96	2.37	28.01	43.93	125.42
226	14.84	37.52	2.32	32.81	42.85	125.43
227	14.90	40.41	2.34	35.81	41.09	125.60
228	14.99	43.39	2.41	48.31	39.66	125.97
229	15.04	45.06	2.54	51.03	39.42	126.61
230	15.13	46.37	2.88	43.69	40.11	127.20
231	15.18	46.18	3.01	42.51	40.97	127.67
232	15.22	46.18	3.08	45.69	40.11	128.01
233	15.31	52.70	3.17	43.01	38.05	128.40
234	15.36	58.38	3.25	44.60	36.14	128.73
235	15.44	58.47	3.29	43.51	35.75	128.80
236	15.50	55.31	3.21	62.37	36.70	128.69
237	15.57	52.61	3.21	62.09	37.49	128.58
238	15.64	53.72	3.22	62.09	37.82	128.49
239	15.69	53.17	3.13	61.82	37.77	128.35
240	15.77	51.68	3.05	65.36	38.10	128.18

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
241	15.82	50.93	3.05	60.37	36.46	128.23
242	15.91	60.89	3.05	76.14	33.37	128.53
243	15.96	70.30	3.10	86.21	29.81	129.13
244	16.05	80.26	3.37	34.35	28.81	129.62
245	16.10	75.79	3.49	15.95	30.11	129.90
246	16.14	66.29	3.57	12.87	34.35	129.70
247	16.24	51.77	3.57	15.32	38.95	129.26
248	16.28	48.42	3.39	20.30	42.51	128.47
249	16.38	44.51	2.93	21.57	44.11	127.63
250	16.42	39.39	2.76	24.75	45.90	126.59
251	16.50	35.10	2.47	29.19	46.16	125.91
252	16.56	39.11	2.32	33.72	45.26	125.27
253	16.61	37.62	2.16	29.01	42.48	124.61
254	16.70	38.83	1.80	13.78	41.81	123.68
255	16.74	35.38	1.63	14.01	42.37	122.37
256	16.83	28.40	1.38	12.87	45.70	121.22
257	16.88	25.05	1.30	14.23	49.24	119.92
258	16.93	22.72	1.12	19.13	49.73	118.21
259	17.00	20.76	0.70	27.56	48.55	116.42
260	17.06	20.39	0.68	30.91	45.75	114.75
261	17.16	21.32	0.62	31.55	44.50	114.39
262	17.21	21.60	0.59	32.54	42.88	114.00
263	17.26	21.79	0.57	32.36	42.27	113.87
264	17.35	21.97	0.58	32.32	42.08	113.85
265	17.40	21.97	0.58	32.27	42.43	113.98
266	17.46	21.69	0.60	33.90	42.86	114.03
267	17.53	21.51	0.60	34.27	43.58	114.08
268	17.62	21.04	0.60	33.72	44.15	114.12
269	17.67	21.04	0.62	35.08	44.56	114.25
270	17.72	21.32	0.64	36.71	44.63	114.57
271	17.81	21.97	0.68	37.53	44.40	114.76
272	17.85	22.16	0.66	36.08	43.73	114.65
273	17.95	22.16	0.60	34.35	42.95	114.26
274	18.00	22.16	0.58	34.27	42.42	113.80
275	18.09	21.60	0.55	33.27	42.88	113.52
276	18.14	20.67	0.55	32.72	44.00	113.32
277	18.18	19.83	0.55	32.45	45.59	113.19
278	18.27	18.90	0.54	33.09	47.02	113.07
279	18.32	18.44	0.54	32.54	48.58	113.09
280	18.41	17.88	0.57	33.90	49.64	113.17
281	18.46	17.88	0.57	34.08	50.24	113.23
282	18.54	17.88	0.56	34.81	50.15	113.18
283	18.60	17.97	0.56	35.17	50.11	113.15
284	18.64	17.88	0.56	35.17	50.30	113.21
285	18.72	17.88	0.57	35.17	51.12	113.30
286	18.77	17.32	0.59	35.17	51.78	113.43
287	18.84	17.50	0.60	34.72	52.48	113.55
288	18.91	17.50	0.61	34.35	52.65	113.69

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
289	18.96	17.60	0.62	34.08	53.26	114.03
290	19.05	17.78	0.68	34.27	53.79	114.40
291	19.10	17.97	0.70	35.08	53.80	114.76
292	19.18	18.62	0.71	37.08	52.62	114.85
293	19.24	19.46	0.68	38.80	50.48	115.02
294	19.29	21.23	0.71	38.71	48.61	115.38
295	19.37	22.44	0.77	37.89	47.31	115.79
296	19.43	22.90	0.77	37.89	47.92	116.22
297	19.54	21.88	0.84	37.89	48.91	116.67
298	19.58	22.63	0.92	37.89	50.59	117.54
299	19.67	23.46	1.08	40.16	51.40	118.39
300	19.71	23.84	1.16	42.60	51.78	119.13
301	19.77	24.86	1.22	43.96	51.00	119.60
302	19.82	26.63	1.26	45.51	49.40	120.19
303	19.91	29.14	1.38	48.04	47.82	120.81
304	19.95	30.82	1.46	50.58	46.42	121.35
305	20.04	32.22	1.48	53.66	45.62	121.66
306	20.09	32.59	1.50	55.84	45.49	121.88
307	20.17	32.31	1.57	56.29	45.95	122.11
308	20.23	32.49	1.62	61.73	46.37	122.35
309	20.32	32.87	1.66	69.62	46.30	122.56
310	20.37	33.61	1.69	69.80	46.07	122.76
311	20.41	34.17	1.73	69.89	45.87	123.02
312	20.50	34.92	1.80	68.98	45.73	123.29
313	20.55	35.75	1.85	69.98	45.67	123.60
314	20.64	36.31	1.93	69.25	45.65	123.86
315	20.69	36.78	1.97	69.71	45.79	124.22
316	20.78	37.71	2.11	74.78	46.02	124.59
317	20.83	38.27	2.21	71.70	46.48	125.02
318	20.87	38.45	2.31	71.25	47.22	125.53
319	20.96	39.29	2.55	71.16	47.87	125.98
320	21.01	39.94	2.63	65.27	48.30	126.42
321	21.09	40.60	2.73	58.47	48.61	126.67
322	21.13	40.60	2.81	60.28	49.09	126.92
323	21.20	40.60	2.90	62.37	49.56	127.11
324	21.29	40.78	2.94	61.01	49.80	127.21
325	21.33	40.87	2.92	62.09	48.37	126.64
326	21.42	40.50	2.24	58.92	46.44	125.75
327	21.47	40.04	2.03	61.82	44.82	124.97
328	21.56	40.04	2.20	66.08	44.98	124.96
329	21.61	40.13	2.24	65.27	45.66	125.18
330	21.66	39.66	2.23	64.36	46.07	125.10
331	21.73	38.45	2.16	64.90	46.79	124.89
332	21.80	37.06	2.12	53.84	47.44	124.70
333	21.89	36.78	2.11	69.71	47.92	124.52
334	21.94	36.13	2.05	76.14	47.92	124.31
335	21.98	35.47	1.96	78.77	47.78	123.97
336	22.07	35.10	1.87	72.25	47.59	123.62

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
337	22.12	34.73	1.80	67.89	47.31	123.17
338	22.21	33.61	1.65	73.61	47.22	122.80
339	22.26	33.33	1.64	74.69	47.25	122.56
340	22.33	33.33	1.65	71.16	47.27	122.50
341	22.40	33.33	1.62	76.05	47.16	122.44
342	22.44	33.33	1.59	75.51	46.96	122.34
343	22.54	33.33	1.59	73.06	46.88	122.32
344	22.59	33.61	1.60	71.79	46.90	122.37
345	22.67	33.71	1.62	72.52	47.02	122.48
346	22.72	33.80	1.66	72.06	47.43	122.66
347	22.79	33.80	1.72	72.34	47.99	122.89
348	22.84	33.89	1.78	69.53	48.47	123.07
349	22.91	33.89	1.78	65.54	48.85	123.11
350	23.00	33.33	1.76	69.21	48.99	123.03
351	23.04	33.33	1.73	67.08	49.02	122.96
352	23.13	33.43	1.74	68.89	48.97	122.91
353	23.18	33.33	1.73	72.16	48.88	122.85
354	23.23	33.15	1.69	75.24	49.17	122.96
355	23.31	33.33	1.81	78.95	49.60	123.22
356	23.36	33.80	1.91	87.11	49.17	123.59
357	23.46	36.31	1.90	76.87	48.59	123.80
358	23.50	36.22	1.93	72.97	48.44	123.98
359	23.60	35.66	2.03	66.72	49.55	124.18
360	23.64	35.10	2.09	73.97	50.88	124.55
361	23.72	35.20	2.25	85.75	51.41	124.93
362	23.78	36.68	2.34	85.39	50.85	125.37
363	23.84	39.20	2.42	82.31	49.79	125.75
364	23.92	40.60	2.51	76.14	48.86	126.01
365	23.97	41.34	2.52	71.16	48.42	126.12
366	24.06	41.53	2.49	67.71	48.21	126.09
367	24.11	41.25	2.46	65.90	48.06	125.88
368	24.15	40.41	2.33	69.53	47.43	125.25
369	24.23	38.83	1.94	77.87	47.53	124.76
370	24.29	37.52	2.08	82.76	48.43	124.49
371	24.38	36.31	2.17	75.78	50.12	124.62
372	24.43	35.66	2.11	75.06	50.91	124.54
373	24.49	35.38	2.06	72.43	51.04	124.36
374	24.57	35.10	2.04	72.38	51.13	124.27
375	24.62	35.10	2.04	72.38	51.69	124.23
376	24.68	33.98	2.05	72.34	52.05	124.10
377	24.75	33.61	1.96	73.88	52.20	123.83
378	24.81	33.33	1.85	71.97	51.87	123.53
379	24.90	33.05	1.83	73.83	51.65	123.33
380	24.94	33.15	1.83	72.88	51.67	123.30
381	25.04	33.15	1.83	73.79	51.61	123.27
382	25.08	33.15	1.80	75.96	51.33	123.13
383	25.18	33.15	1.73	68.44	51.07	122.96
384	25.22	32.87	1.71	75.06	51.06	122.80

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
385	25.27	32.49	1.70	67.99	51.44	122.73
386	25.34	31.94	1.70	74.15	51.88	122.71
387	25.40	31.94	1.71	76.96	52.19	122.73
388	25.48	31.94	1.73	76.60	52.25	122.77
389	25.55	32.12	1.72	77.69	52.12	122.83
390	25.59	32.59	1.74	79.14	51.94	122.97
391	25.67	33.05	1.81	84.21	52.28	123.38
392	25.73	33.71	1.99	84.39	52.54	124.12
393	25.82	36.13	2.26	94.91	52.27	124.85
394	25.85	37.99	2.33	97.72	50.18	125.59
395	25.95	43.67	2.49	90.28	48.17	126.02
396	26.00	44.97	2.51	83.03	46.73	126.36
397	26.05	45.06	2.55	89.56	47.09	126.50
398	26.14	43.85	2.64	84.48	47.81	126.60
399	26.19	43.67	2.64	88.83	48.17	126.41
400	26.28	42.46	2.39	99.53	47.40	125.81
401	26.33	41.62	2.07	99.26	45.72	124.97
402	26.41	42.27	1.88	107.06	44.50	124.39
403	26.46	42.08	1.92	104.52	44.88	124.33
404	26.56	39.94	2.04	110.68	45.64	124.55
405	26.59	41.85	2.07	101.98	49.07	124.57
406	26.64	32.96	2.09	100.35	48.67	124.68
407	26.72	41.62	2.11	126.00	48.24	124.78
408	26.78	43.20	2.12	141.23	44.86	125.04
409	26.87	44.51	2.12	109.86	44.73	125.07
410	26.92	42.74	2.12	104.70	45.58	125.03
411	27.01	40.87	2.13	108.96	46.88	124.97
412	27.05	40.41	2.14	115.85	47.70	124.97
413	27.10	40.13	2.16	128.36	47.43	124.92
414	27.18	41.06	2.07	129.44	46.23	124.60
415	27.24	41.53	1.85	128.90	44.64	124.03
416	27.30	40.97	1.69	124.10	43.78	123.42
417	27.38	39.57	1.64	124.14	44.21	123.06
418	27.47	37.99	1.64	124.19	45.19	122.91
419	27.52	37.24	1.64	139.78	45.66	122.88
420	27.56	38.08	1.64	132.25	46.17	123.15
421	27.65	38.55	1.82	111.68	46.86	123.56
422	27.70	38.83	1.92	97.63	47.89	123.97
423	27.80	38.59	1.96	99.53	48.45	124.20
424	27.84	38.92	2.00	103.16	49.08	124.38
425	27.92	38.36	2.07	102.07	49.31	124.52
426	27.98	39.01	2.06	104.70	49.24	124.62
427	28.03	39.76	2.07	109.23	49.29	124.69
428	28.12	38.83	2.13	100.53	49.84	124.74
429	28.16	38.17	2.12	96.90	50.85	124.73
430	28.25	37.34	2.10	101.16	51.57	124.75
431	28.30	37.34	2.17	102.16	52.40	124.95
432	28.39	37.34	2.30	107.96	53.02	125.16

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
433	28.43	37.34	2.30	106.42	53.28	125.31
434	28.49	37.71	2.30	104.15	52.71	125.31
435	28.57	39.01	2.28	92.55	52.06	125.24
436	28.62	38.83	2.21	92.82	51.16	125.09
437	28.68	39.11	2.14	100.80	50.58	124.86
438	28.76	38.92	2.07	101.71	49.55	124.44
439	28.81	38.55	1.85	110.23	46.24	123.19
440	28.90	39.39	1.18	126.72	43.16	121.96
441	28.95	39.48	1.27	115.58	41.08	121.06
442	29.04	38.92	1.35	112.31	42.25	121.38
443	29.08	38.55	1.37	98.72	43.57	121.56
444	29.16	37.43	1.39	81.67	45.04	121.64
445	29.22	35.75	1.44	99.48	46.43	121.89
446	29.28	36.68	1.54	94.18	48.07	122.38
447	29.38	36.13	1.71	100.26	48.92	122.89
448	29.40	36.78	1.75	104.15	49.26	123.36
449	29.46	38.83	1.84	92.37	49.55	123.87
450	29.56	39.01	2.05	79.05	49.79	124.34
451	29.59	39.76	2.08	74.88	49.73	124.62
452	29.70	41.06	2.05	83.40	48.47	124.53
453	29.74	41.90	1.93	82.58	46.88	124.15
454	29.79	41.43	1.74	83.53	46.13	123.69
455	29.87	40.13	1.71	83.67	46.39	123.32
456	29.93	38.64	1.71	95.45	47.51	123.10
457	30.01	36.87	1.65	100.17	48.38	122.80
458	30.07	35.85	1.56	105.60	48.69	122.31
459	30.15	35.01	1.44	100.53	48.64	121.88
460	30.20	34.73	1.41	91.46	48.64	121.56
461	30.27	34.17	1.40	100.89	49.18	121.46
462	30.34	33.33	1.41	101.62	49.55	121.37
463	30.38	33.43	1.37	96.09	49.68	121.24
464	30.46	33.33	1.34	95.72	49.61	121.22
465	30.53	33.61	1.39	92.01	49.42	121.32
466	30.62	34.54	1.42	92.46	49.17	121.48
467	30.66	35.01	1.41	91.37	48.61	121.49
468	30.71	34.92	1.38	94.18	49.20	121.79
469	30.80	34.92	1.59	94.68	50.27	122.24
470	30.84	35.20	1.68	94.68	51.61	122.96
471	30.92	36.13	1.84	95.18	50.44	123.42
472	30.98	40.41	1.83	100.89	48.29	123.67
473	31.07	42.46	1.76	85.93	46.01	123.57
474	31.11	42.08	1.69	77.50	45.06	123.15
475	31.18	40.60	1.53	85.30	44.98	122.27
476	31.26	37.06	1.26	79.86	43.59	120.65
477	31.30	35.85	0.86	84.67	42.47	118.88
478	31.38	33.52	0.81	85.66	41.82	117.79
479	31.44	32.87	0.89	92.64	44.36	118.28
480	31.54	32.31	1.06	81.94	46.97	119.13

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
481	31.59	31.94	1.17	94.45	48.36	120.06
482	31.67	34.64	1.29	89.47	48.69	120.76
483	31.72	35.20	1.38	92.55	48.54	121.48
484	31.77	36.22	1.51	101.44	48.37	122.49
485	31.86	40.69	1.82	112.95	48.42	123.79
486	31.91	42.92	2.17	128.18	47.66	125.63
487	32.00	51.12	2.81	128.18	45.53	127.05
488	32.05	59.12	2.94	140.14	41.58	128.19
489	32.09	69.46	3.03	134.79	38.29	128.69
490	32.18	73.37	3.09	56.66	36.74	128.87
491	32.23	70.86	3.02	70.34	38.29	128.54
492	32.30	58.01	2.80	81.67	40.86	127.75
493	32.36	52.23	2.47	77.23	44.73	126.20
494	32.45	40.97	1.84	82.40	47.80	124.54
495	32.50	35.47	1.66	83.12	51.40	123.03
496	32.55	32.96	1.61	97.99	55.89	122.28
497	32.64	29.70	1.50	120.65	56.91	121.65
498	32.69	29.70	1.35	121.56	56.29	120.77
499	32.78	29.70	1.15	114.76	53.17	120.10
500	32.83	29.70	1.15	114.22	52.19	119.71
501	32.88	29.79	1.16	116.57	51.55	119.67
502	32.96	30.73	1.12	119.29	50.41	119.60
503	33.01	31.56	1.09	120.02	48.64	119.56
504	33.09	33.24	1.10	119.84	47.34	119.76
505	33.14	34.73	1.17	116.03	47.33	120.24
506	33.20	34.17	1.29	122.92	48.93	120.82
507	33.28	32.96	1.39	104.33	50.86	121.23
508	33.34	33.01	1.42	96.81	52.28	121.42
509	33.43	32.59	1.43	100.89	52.61	121.56
510	33.47	33.05	1.47	106.78	51.38	121.80
511	33.57	36.59	1.50	119.75	49.38	122.03
512	33.60	38.36	1.49	112.04	47.89	122.15
513	33.70	37.52	1.49	98.72	48.01	122.11
514	33.74	36.41	1.49	98.81	48.94	122.04
515	33.79	35.75	1.48	107.33	50.04	122.19
516	33.88	35.38	1.60	132.44	50.75	122.42
517	33.93	35.57	1.63	141.50	50.45	122.71
518	34.01	37.71	1.64	139.42	48.98	122.85
519	34.07	39.94	1.64	132.25	47.67	123.19
520	34.16	41.43	1.79	122.56	47.20	123.54
521	34.20	41.62	1.83	122.47	47.67	123.91
522	34.25	41.34	1.90	126.64	48.85	124.21
523	34.33	40.22	2.03	124.73	49.72	124.47
524	34.41	40.97	2.05	133.16	50.00	124.71
525	34.46	42.27	2.08	131.44	49.12	124.92
526	34.52	43.95	2.15	136.33	48.11	125.20
527	34.60	46.00	2.21	131.30	47.42	125.43
528	34.66	46.18	2.23	132.34	47.06	125.64

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)
529	34.73	46.83	2.29	131.17	46.55	125.69
530	34.78	48.04	2.22	131.30	45.44	125.64
531	34.87	49.44	2.13	131.30	44.29	125.63
532	34.92	50.74	2.23	131.44	43.68	125.97
533	35.01	53.26	2.46	125.82	43.55	126.55
534	35.06	55.03	2.61	141.59	41.39	127.35
535	35.11	66.57	2.82	168.15	26.09	130.14
536	35.19	194.13	4.11	113.04	17.81	132.84
537	35.24	240.97	4.93	55.66	13.81	136.07
538	35.33	296.55	7.27	7.61	13.03	137.28
539	35.38	301.21	7.02	5.62	13.19	137.28
540	35.46	271.13	6.46	12.87	13.71	137.28
541	35.52	239.85	5.88	3.26	15.08	136.51
542	35.61	202.33	5.14	3.04	16.77	135.69
543	35.64	188.55	5.27	3.04	18.50	135.44
544	35.70	188.36	5.78	2.81	19.01	136.12
545	35.77	213.87	6.57	117.03	16.91	137.24
546	35.83	283.61	7.15	299.14	15.33	137.28
547	35.92	285.56	8.00	492.67	14.77	137.28
548	35.97	265.08	8.13	523.67	14.57	137.28
549	36.03	287.52	6.93	362.59	13.84	137.28
550	36.10	318.62	7.67	117.30	12.79	137.28
551	36.16	319.18	8.06	413.99	12.92	137.28
552	36.24	312.66	8.23	237.77	12.80	137.28
553	36.30	341.06	8.41	255.94	14.58	137.28
554	36.35	239.20	8.55	255.94	15.86	137.28
555	36.43	255.68	8.33	255.94	18.36	137.28
556	36.49	259.21	9.21	102.70	18.21	137.28
557	36.56	248.51	8.83	329.60	18.18	137.28
558	36.63	230.72	6.84	329.60	19.28	137.28
559	36.69	162.66	5.83	350.23	22.29	135.94
560	36.77	116.11	5.27	207.94	27.70	134.26
561	36.82	105.96	4.56	133.07	29.59	133.02
562	36.90	113.59	3.98	384.80	29.64	132.74
563	36.95	107.54	4.84	385.52	25.53	132.85
564	37.01	147.95	4.17	569.17	17.31	132.75
565	37.09	240.50	2.62	636.53	9.54	133.18
566	37.14	352.79	4.03	739.68	4.65	134.21
567	37.23	509.30	4.30	428.04	3.38	135.21
568	37.28	462.19	3.53	41.61	2.00	135.35
569	37.34	572.06	3.68	36.53	2.29	136.05
570	37.44	535.38	5.41	88.92	0.27	133.92
571	37.48	644.96	0.00	11.78	0.00	130.24
572	37.54	652.79	0.00	10.24	N/A	87.36
573	37.62	686.30	0.00	14.32	N/A	87.36
574	37.67	675.50	0.00	3.44	N/A	87.36
575	37.76	744.96	0.00	9.61	N/A	87.36
576	37.81	711.35	0.00	7.07	N/A	87.36

:: Field input data :: (continued)

Point ID	Depth (ft)	q_c (tsf)	f_s (tsf)	u (tsf)	Fines content (%)	Unit weight (pcf)

Abbreviations

Depth:	Depth from free surface, at which CPT was performed (ft)
q_c:	Measured cone resistance (tsf)
f_s:	Sleeve friction resistance (tsf)
u:	Pore pressure (tsf)
Fines content:	Percentage of fines in soil (%)
Unit weight:	Bulk soil unit weight (pcf)

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data ::

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
1	0.09	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
2	0.13	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
3	0.22	0.01	0.00	0.01	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
4	0.27	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
5	0.36	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
6	0.41	0.02	0.00	0.02	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
7	0.51	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
8	0.54	0.03	0.00	0.03	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
9	0.60	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
10	0.69	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
11	0.73	0.04	0.00	0.04	1.00	0.618	1.69	0.366	1.00	1.00	2.000	No
12	0.82	0.05	0.00	0.05	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
13	0.86	0.05	0.00	0.05	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
14	0.95	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
15	0.98	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
16	1.05	0.06	0.00	0.06	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
17	1.14	0.07	0.00	0.07	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
18	1.19	0.07	0.00	0.07	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
19	1.28	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
20	1.32	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
21	1.38	0.08	0.00	0.08	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
22	1.47	0.09	0.00	0.09	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
23	1.51	0.09	0.00	0.09	1.00	0.617	1.69	0.365	1.00	1.00	2.000	No
24	1.61	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
25	1.64	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
26	1.71	0.10	0.00	0.10	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
27	1.79	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
28	1.84	0.11	0.00	0.11	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
29	1.92	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
30	1.98	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
31	2.04	0.12	0.00	0.12	1.00	0.616	1.69	0.365	1.00	1.00	2.000	No
32	2.12	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
33	2.17	0.13	0.00	0.13	1.00	0.616	1.69	0.364	1.00	1.00	2.000	No
34	2.26	0.14	0.00	0.14	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
35	2.31	0.14	0.00	0.14	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
36	2.41	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
37	2.44	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
38	2.52	0.15	0.00	0.15	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
39	2.59	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
40	2.67	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
41	2.72	0.16	0.00	0.16	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
42	2.77	0.17	0.00	0.17	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
43	2.86	0.17	0.00	0.17	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
44	2.90	0.18	0.00	0.18	1.00	0.615	1.69	0.364	1.00	1.00	2.000	No
45	2.99	0.18	0.00	0.18	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
46	3.04	0.18	0.00	0.18	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
47	3.09	0.19	0.00	0.19	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No
48	3.17	0.19	0.00	0.19	0.99	0.614	1.69	0.364	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
49	3.22	0.19	0.00	0.19	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
50	3.28	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
51	3.36	0.20	0.00	0.20	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
52	3.46	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
53	3.50	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
54	3.55	0.21	0.00	0.21	0.99	0.614	1.69	0.363	1.00	1.00	2.000	No
55	3.63	0.22	0.00	0.22	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
56	3.68	0.22	0.00	0.22	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
57	3.77	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
58	3.82	0.23	0.00	0.23	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
59	3.90	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
60	3.95	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
61	4.00	0.24	0.00	0.24	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
62	4.10	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
63	4.14	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
64	4.20	0.25	0.00	0.25	0.99	0.613	1.69	0.363	1.00	1.00	2.000	No
65	4.29	0.26	0.00	0.26	0.99	0.612	1.69	0.363	1.00	1.00	2.000	No
66	4.33	0.26	0.00	0.26	0.99	0.612	1.69	0.363	1.00	1.00	2.000	No
67	4.42	0.27	0.00	0.27	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
68	4.48	0.27	0.00	0.27	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
69	4.56	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
70	4.59	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
71	4.67	0.28	0.00	0.28	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
72	4.75	0.29	0.00	0.29	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
73	4.80	0.29	0.00	0.29	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
74	4.88	0.30	0.00	0.30	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
75	4.92	0.30	0.00	0.30	0.99	0.612	1.69	0.362	1.00	1.00	2.000	No
76	5.00	0.30	0.00	0.30	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
77	5.07	0.31	0.00	0.31	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
78	5.17	0.31	0.00	0.31	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
79	5.22	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
80	5.26	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
81	5.34	0.32	0.00	0.32	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
82	5.40	0.33	0.00	0.33	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
83	5.49	0.33	0.00	0.33	0.99	0.611	1.69	0.362	1.00	1.00	2.000	No
84	5.54	0.34	0.00	0.34	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
85	5.58	0.34	0.00	0.34	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
86	5.67	0.35	0.00	0.35	0.99	0.611	1.69	0.361	1.00	1.00	2.000	No
87	5.72	0.35	0.00	0.35	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
88	5.81	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
89	5.86	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
90	5.92	0.36	0.00	0.36	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
91	6.00	0.37	0.00	0.37	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
92	6.04	0.37	0.00	0.37	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
93	6.13	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
94	6.18	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
95	6.24	0.38	0.00	0.38	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
96	6.32	0.39	0.00	0.39	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
97	6.37	0.39	0.00	0.39	0.99	0.610	1.69	0.361	1.00	1.00	2.000	No
98	6.46	0.40	0.00	0.40	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
99	6.51	0.40	0.00	0.40	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
100	6.60	0.40	0.00	0.40	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
101	6.64	0.41	0.00	0.41	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
102	6.70	0.41	0.00	0.41	0.99	0.609	1.69	0.361	1.00	1.00	2.000	No
103	6.78	0.42	0.00	0.42	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
104	6.84	0.42	0.00	0.42	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
105	6.93	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
106	6.97	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
107	7.06	0.43	0.00	0.43	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
108	7.11	0.44	0.00	0.44	0.99	0.609	1.69	0.360	1.00	1.00	2.000	No
109	7.16	0.44	0.00	0.44	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
110	7.23	0.45	0.00	0.45	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
111	7.29	0.45	0.00	0.45	0.99	0.608	1.69	0.360	1.00	1.00	2.000	No
112	7.39	0.46	0.00	0.46	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
113	7.44	0.46	0.00	0.46	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
114	7.52	0.46	0.00	0.46	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
115	7.57	0.47	0.00	0.47	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
116	7.62	0.47	0.00	0.47	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
117	7.69	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
118	7.75	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
119	7.81	0.48	0.00	0.48	0.98	0.608	1.69	0.360	1.00	1.00	2.000	No
120	7.90	0.49	0.00	0.49	0.98	0.607	1.69	0.360	1.00	1.00	2.000	No
121	7.95	0.49	0.00	0.49	0.98	0.607	1.69	0.360	1.00	1.00	2.000	No
122	8.04	0.50	0.00	0.50	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
123	8.08	0.50	0.00	0.50	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
124	8.17	0.50	0.00	0.50	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
125	8.20	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
126	8.31	0.51	0.00	0.51	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
127	8.36	0.52	0.00	0.52	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
128	8.40	0.52	0.00	0.52	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
129	8.49	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
130	8.54	0.53	0.00	0.53	0.98	0.607	1.69	0.359	1.00	1.00	2.000	No
131	8.63	0.53	0.00	0.53	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
132	8.67	0.54	0.00	0.54	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
133	8.77	0.54	0.00	0.54	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
134	8.81	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
135	8.87	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
136	8.95	0.55	0.00	0.55	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
137	9.00	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
138	9.09	0.56	0.00	0.56	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
139	9.14	0.57	0.00	0.57	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
140	9.19	0.57	0.00	0.57	0.98	0.606	1.69	0.359	1.00	1.00	2.000	No
141	9.28	0.57	0.00	0.57	0.98	0.606	1.69	0.358	1.00	1.00	2.000	No
142	9.32	0.58	0.00	0.58	0.98	0.606	1.69	0.358	1.00	1.00	2.000	No
143	9.43	0.58	0.00	0.58	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
144	9.45	0.59	0.00	0.59	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
145	9.54	0.59	0.00	0.59	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
146	9.59	0.59	0.00	0.59	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
147	9.67	0.60	0.00	0.60	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
148	9.72	0.60	0.00	0.60	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
149	9.81	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
150	9.86	0.61	0.00	0.61	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
151	9.95	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
152	10.00	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
153	10.04	0.62	0.00	0.62	0.98	0.605	1.69	0.358	1.00	1.00	2.000	No
154	10.13	0.63	0.00	0.63	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
155	10.18	0.63	0.00	0.63	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
156	10.28	0.64	0.00	0.64	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
157	10.32	0.64	0.00	0.64	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
158	10.41	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
159	10.46	0.65	0.00	0.65	0.98	0.604	1.69	0.358	1.00	1.00	2.000	No
160	10.51	0.65	0.00	0.65	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
161	10.60	0.66	0.00	0.66	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
162	10.64	0.66	0.00	0.66	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
163	10.73	0.67	0.00	0.67	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
164	10.78	0.67	0.00	0.67	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
165	10.83	0.67	0.00	0.67	0.98	0.604	1.69	0.357	1.00	1.00	2.000	No
166	10.92	0.68	0.00	0.68	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
167	10.96	0.68	0.00	0.68	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
168	11.05	0.69	0.00	0.69	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
169	11.10	0.69	0.00	0.69	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
170	11.19	0.69	0.00	0.69	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
171	11.24	0.70	0.00	0.70	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
172	11.29	0.70	0.00	0.70	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
173	11.38	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
174	11.43	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
175	11.50	0.71	0.00	0.71	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
176	11.56	0.72	0.00	0.72	0.98	0.603	1.69	0.357	1.00	1.00	2.000	No
177	11.66	0.72	0.00	0.72	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
178	11.68	0.72	0.00	0.72	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
179	11.76	0.73	0.00	0.73	0.98	0.602	1.69	0.357	1.00	1.00	2.000	No
180	11.84	0.73	0.00	0.73	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
181	11.90	0.74	0.00	0.74	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
182	11.95	0.74	0.00	0.74	0.98	0.602	1.69	0.356	1.00	1.00	2.000	No
183	12.01	0.75	0.00	0.75	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
184	12.09	0.75	0.00	0.75	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
185	12.17	0.76	0.00	0.76	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
186	12.22	0.76	0.00	0.76	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
187	12.29	0.76	0.00	0.76	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
188	12.35	0.77	0.00	0.77	0.97	0.602	1.69	0.356	1.00	1.00	2.000	No
189	12.45	0.77	0.00	0.77	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
190	12.47	0.77	0.00	0.77	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
191	12.54	0.78	0.00	0.78	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
192	12.63	0.78	0.00	0.78	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
193	12.68	0.79	0.00	0.79	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
194	12.74	0.79	0.00	0.79	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
195	12.81	0.79	0.00	0.79	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
196	12.87	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
197	12.96	0.80	0.00	0.80	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
198	13.00	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
199	13.08	0.81	0.00	0.81	0.97	0.601	1.69	0.356	1.00	1.00	2.000	No
200	13.14	0.81	0.00	0.81	0.97	0.601	1.69	0.355	1.00	1.00	2.000	No
201	13.23	0.82	0.00	0.82	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
202	13.28	0.82	0.00	0.82	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
203	13.33	0.83	0.00	0.83	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
204	13.42	0.83	0.00	0.83	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
205	13.46	0.83	0.00	0.83	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
206	13.54	0.84	0.00	0.84	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
207	13.60	0.84	0.00	0.84	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
208	13.69	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
209	13.72	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
210	13.79	0.85	0.00	0.85	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
211	13.85	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
212	13.92	0.86	0.00	0.86	0.97	0.600	1.69	0.355	1.00	1.00	2.000	No
213	14.01	0.87	0.00	0.87	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
214	14.06	0.87	0.00	0.87	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
215	14.11	0.87	0.00	0.87	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
216	14.20	0.88	0.00	0.88	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
217	14.25	0.88	0.00	0.88	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
218	14.31	0.89	0.00	0.89	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
219	14.38	0.89	0.00	0.89	0.97	0.599	1.69	0.355	1.00	1.00	2.000	No
220	14.48	0.90	0.00	0.90	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
221	14.50	0.90	0.00	0.90	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
222	14.58	0.90	0.00	0.90	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
223	14.63	0.91	0.00	0.91	0.97	0.599	1.69	0.354	1.00	1.00	2.000	No
224	14.72	0.91	0.00	0.91	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
225	14.77	0.92	0.00	0.92	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
226	14.84	0.92	0.00	0.92	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
227	14.90	0.92	0.00	0.92	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
228	14.99	0.93	0.00	0.93	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
229	15.04	0.93	0.00	0.93	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
230	15.13	0.94	0.00	0.94	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
231	15.18	0.94	0.00	0.94	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
232	15.22	0.94	0.00	0.94	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
233	15.31	0.95	0.00	0.95	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
234	15.36	0.95	0.00	0.95	0.97	0.598	1.69	0.354	1.00	1.00	2.000	No
235	15.44	0.96	0.00	0.96	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
236	15.50	0.96	0.00	0.96	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
237	15.57	0.97	0.00	0.97	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
238	15.64	0.97	0.00	0.97	0.97	0.597	1.69	0.354	1.00	1.00	2.000	No
239	15.69	0.97	0.00	0.97	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
240	15.77	0.98	0.00	0.98	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
241	15.82	0.98	0.00	0.98	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
242	15.91	0.99	0.00	0.99	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
243	15.96	0.99	0.00	0.99	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
244	16.05	1.00	0.00	1.00	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
245	16.10	1.00	0.00	1.00	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
246	16.14	1.00	0.00	1.00	0.97	0.597	1.69	0.353	1.00	1.00	2.000	No
247	16.24	1.01	0.00	1.01	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
248	16.28	1.01	0.00	1.01	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
249	16.38	1.02	0.00	1.02	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
250	16.42	1.02	0.00	1.02	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
251	16.50	1.03	0.00	1.03	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
252	16.56	1.03	0.00	1.03	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
253	16.61	1.03	0.00	1.03	0.97	0.596	1.69	0.353	1.00	1.00	2.000	No
254	16.70	1.04	0.00	1.04	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
255	16.74	1.04	0.00	1.04	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
256	16.83	1.05	0.00	1.05	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
257	16.88	1.05	0.00	1.05	0.96	0.596	1.69	0.353	1.00	1.00	2.000	No
258	16.93	1.05	0.00	1.05	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
259	17.00	1.06	0.00	1.06	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
260	17.06	1.06	0.00	1.06	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
261	17.16	1.07	0.00	1.07	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
262	17.21	1.07	0.00	1.07	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
263	17.26	1.07	0.00	1.07	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
264	17.35	1.08	0.00	1.08	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
265	17.40	1.08	0.00	1.08	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
266	17.46	1.08	0.00	1.08	0.96	0.595	1.69	0.352	1.00	1.00	2.000	No
267	17.53	1.09	0.00	1.09	0.96	0.595	1.69	0.352	0.99	1.00	2.000	No
268	17.62	1.09	0.00	1.09	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
269	17.67	1.09	0.00	1.09	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
270	17.72	1.10	0.00	1.10	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
271	17.81	1.10	0.00	1.10	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
272	17.85	1.11	0.00	1.11	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
273	17.95	1.11	0.00	1.11	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
274	18.00	1.11	0.00	1.11	0.96	0.594	1.69	0.352	0.99	1.00	2.000	No
275	18.09	1.12	0.00	1.12	0.96	0.594	1.69	0.351	0.99	1.00	2.000	No
276	18.14	1.12	0.00	1.12	0.96	0.594	1.69	0.351	0.99	1.00	2.000	No
277	18.18	1.12	0.00	1.12	0.96	0.594	1.69	0.351	0.99	1.00	2.000	No
278	18.27	1.13	0.00	1.13	0.96	0.594	1.69	0.351	0.99	1.00	2.000	No
279	18.32	1.13	0.00	1.13	0.96	0.593	1.69	0.351	0.99	1.00	2.000	No
280	18.41	1.14	0.00	1.14	0.96	0.593	1.69	0.351	0.99	1.00	2.000	No
281	18.46	1.14	0.00	1.14	0.96	0.593	1.69	0.351	0.99	1.00	2.000	No
282	18.54	1.14	0.00	1.14	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
283	18.60	1.15	0.00	1.15	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
284	18.64	1.15	0.00	1.15	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
285	18.72	1.15	0.00	1.15	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
286	18.77	1.16	0.00	1.16	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
287	18.84	1.16	0.00	1.16	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No
288	18.91	1.17	0.00	1.17	0.96	0.593	1.69	0.351	0.98	1.00	2.000	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
289	18.96	1.17	0.00	1.17	0.96	0.592	1.69	0.351	0.98	1.00	2.000	No
290	19.05	1.17	0.00	1.17	0.96	0.592	1.69	0.351	0.98	1.00	2.000	No
291	19.10	1.18	0.00	1.18	0.96	0.592	1.69	0.351	0.98	1.00	2.000	No
292	19.18	1.18	0.00	1.18	0.96	0.592	1.69	0.351	0.98	1.00	2.000	No
293	19.24	1.18	0.00	1.18	0.96	0.592	1.69	0.350	0.98	1.00	2.000	No
294	19.29	1.19	0.00	1.19	0.96	0.592	1.69	0.350	0.98	1.00	2.000	No
295	19.37	1.19	0.00	1.19	0.96	0.592	1.69	0.350	0.98	1.00	2.000	No
296	19.43	1.19	0.00	1.19	0.96	0.592	1.69	0.350	0.98	1.00	2.000	No
297	19.54	1.20	0.00	1.20	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
298	19.58	1.20	0.00	1.20	0.96	0.592	1.69	0.350	0.97	1.00	2.000	No
299	19.67	1.21	0.00	1.21	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
300	19.71	1.21	0.00	1.21	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
301	19.77	1.22	0.00	1.22	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
302	19.82	1.22	0.00	1.22	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
303	19.91	1.22	0.00	1.22	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
304	19.95	1.23	0.00	1.23	0.96	0.591	1.69	0.350	0.97	1.00	2.000	No
305	20.04	1.23	0.00	1.23	0.96	0.591	1.69	0.350	0.97	1.00	0.361	No
306	20.09	1.23	0.00	1.23	0.96	0.592	1.69	0.350	0.97	1.00	0.361	No
307	20.17	1.24	0.01	1.23	0.96	0.593	1.69	0.351	0.97	1.00	0.362	No
308	20.23	1.24	0.01	1.24	0.96	0.594	1.69	0.352	0.97	1.00	0.363	No
309	20.32	1.25	0.01	1.24	0.96	0.595	1.69	0.352	0.97	1.00	0.364	No
310	20.37	1.25	0.01	1.24	0.96	0.596	1.69	0.353	0.97	1.00	0.364	No
311	20.41	1.25	0.01	1.24	0.96	0.596	1.69	0.353	0.97	1.00	0.364	No
312	20.50	1.26	0.02	1.24	0.96	0.598	1.69	0.354	0.97	1.00	0.365	No
313	20.55	1.26	0.02	1.25	0.96	0.598	1.69	0.354	0.97	1.00	0.366	No
314	20.64	1.27	0.02	1.25	0.96	0.599	1.69	0.355	0.97	1.00	0.367	No
315	20.69	1.27	0.02	1.25	0.96	0.600	1.69	0.355	0.97	1.00	0.367	No
316	20.78	1.28	0.02	1.25	0.95	0.601	1.69	0.356	0.97	1.00	0.368	No
317	20.83	1.28	0.03	1.25	0.95	0.602	1.69	0.356	0.97	1.00	0.368	No
318	20.87	1.28	0.03	1.26	0.95	0.602	1.69	0.356	0.97	1.00	0.369	No
319	20.96	1.29	0.03	1.26	0.95	0.603	1.69	0.357	0.97	1.00	0.370	No
320	21.01	1.29	0.03	1.26	0.95	0.604	1.69	0.357	0.97	1.00	0.370	No
321	21.09	1.30	0.03	1.26	0.95	0.605	1.69	0.358	0.97	1.00	0.371	No
322	21.13	1.30	0.04	1.26	0.95	0.606	1.69	0.358	0.97	1.00	0.371	No
323	21.20	1.30	0.04	1.27	0.95	0.606	1.69	0.359	0.96	1.00	0.372	No
324	21.29	1.31	0.04	1.27	0.95	0.607	1.69	0.360	0.96	1.00	0.373	No
325	21.33	1.31	0.04	1.27	0.95	0.608	1.69	0.360	0.96	1.00	0.373	No
326	21.42	1.32	0.04	1.27	0.95	0.609	1.69	0.360	0.96	1.00	0.374	No
327	21.47	1.32	0.05	1.27	0.95	0.610	1.69	0.361	0.96	1.00	0.375	No
328	21.56	1.33	0.05	1.28	0.95	0.611	1.69	0.361	0.96	1.00	0.375	No
329	21.61	1.33	0.05	1.28	0.95	0.611	1.69	0.362	0.96	1.00	0.376	No
330	21.66	1.33	0.05	1.28	0.95	0.612	1.69	0.362	0.96	1.00	0.376	No
331	21.73	1.34	0.05	1.28	0.95	0.613	1.69	0.363	0.96	1.00	0.377	No
332	21.80	1.34	0.06	1.29	0.95	0.614	1.69	0.363	0.96	1.00	0.378	No
333	21.89	1.35	0.06	1.29	0.95	0.615	1.69	0.364	0.96	1.00	0.378	No
334	21.94	1.35	0.06	1.29	0.95	0.615	1.69	0.364	0.96	1.00	0.379	No
335	21.98	1.35	0.06	1.29	0.95	0.616	1.69	0.364	0.96	1.00	0.379	No
336	22.07	1.36	0.06	1.29	0.95	0.617	1.69	0.365	0.96	1.00	0.380	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
337	22.12	1.36	0.07	1.29	0.95	0.617	1.69	0.365	0.96	1.00	0.380	No
338	22.21	1.37	0.07	1.30	0.95	0.618	1.69	0.366	0.96	1.00	0.381	No
339	22.26	1.37	0.07	1.30	0.95	0.619	1.69	0.366	0.96	1.00	0.382	No
340	22.33	1.37	0.07	1.30	0.95	0.620	1.69	0.367	0.96	1.00	0.382	No
341	22.40	1.38	0.07	1.30	0.95	0.620	1.69	0.367	0.96	1.00	0.383	No
342	22.44	1.38	0.08	1.30	0.95	0.621	1.69	0.368	0.96	1.00	0.383	No
343	22.54	1.39	0.08	1.31	0.95	0.622	1.69	0.368	0.96	1.00	0.384	No
344	22.59	1.39	0.08	1.31	0.95	0.623	1.69	0.369	0.96	1.00	0.385	No
345	22.67	1.39	0.08	1.31	0.95	0.623	1.69	0.369	0.96	1.00	0.385	No
346	22.72	1.40	0.08	1.31	0.95	0.624	1.69	0.369	0.96	1.00	0.386	No
347	22.79	1.40	0.09	1.32	0.95	0.625	1.69	0.370	0.96	1.00	0.386	No
348	22.84	1.41	0.09	1.32	0.95	0.625	1.69	0.370	0.96	1.00	0.387	No
349	22.91	1.41	0.09	1.32	0.95	0.626	1.69	0.371	0.96	1.00	0.387	No
350	23.00	1.42	0.09	1.32	0.95	0.627	1.69	0.371	0.96	1.00	0.388	No
351	23.04	1.42	0.09	1.32	0.95	0.628	1.69	0.372	0.96	1.00	0.388	No
352	23.13	1.42	0.10	1.33	0.95	0.629	1.69	0.372	0.96	1.00	0.389	No
353	23.18	1.43	0.10	1.33	0.95	0.629	1.69	0.372	0.96	1.00	0.390	No
354	23.23	1.43	0.10	1.33	0.95	0.630	1.69	0.373	0.96	1.00	0.390	No
355	23.31	1.43	0.10	1.33	0.95	0.630	1.69	0.373	0.96	1.00	0.391	No
356	23.36	1.44	0.10	1.33	0.95	0.631	1.69	0.374	0.95	1.00	0.391	No
357	23.46	1.44	0.11	1.34	0.95	0.632	1.69	0.374	0.95	1.00	0.392	No
358	23.50	1.45	0.11	1.34	0.95	0.632	1.69	0.374	0.95	1.00	0.392	No
359	23.60	1.45	0.11	1.34	0.95	0.633	1.69	0.375	0.95	1.00	0.393	No
360	23.64	1.45	0.11	1.34	0.95	0.634	1.69	0.375	0.95	1.00	0.393	No
361	23.72	1.46	0.12	1.34	0.95	0.635	1.69	0.376	0.95	1.00	0.394	No
362	23.78	1.46	0.12	1.35	0.95	0.635	1.69	0.376	0.95	1.00	0.395	No
363	23.84	1.47	0.12	1.35	0.95	0.636	1.69	0.376	0.95	1.00	0.395	No
364	23.92	1.47	0.12	1.35	0.95	0.637	1.69	0.377	0.95	1.00	0.396	No
365	23.97	1.48	0.12	1.35	0.95	0.637	1.69	0.377	0.95	1.00	0.396	No
366	24.06	1.48	0.13	1.35	0.95	0.638	1.69	0.378	0.95	1.00	0.397	No
367	24.11	1.48	0.13	1.36	0.94	0.639	1.69	0.378	0.95	1.00	0.397	No
368	24.15	1.49	0.13	1.36	0.94	0.639	1.69	0.378	0.95	1.00	0.398	No
369	24.23	1.49	0.13	1.36	0.94	0.640	1.69	0.379	0.95	1.00	0.398	No
370	24.29	1.50	0.13	1.36	0.94	0.640	1.69	0.379	0.95	1.00	0.399	No
371	24.38	1.50	0.14	1.36	0.94	0.641	1.69	0.380	0.95	1.00	0.399	No
372	24.43	1.50	0.14	1.37	0.94	0.642	1.69	0.380	0.95	1.00	0.400	No
373	24.49	1.51	0.14	1.37	0.94	0.642	1.69	0.380	0.95	1.00	0.400	No
374	24.57	1.51	0.14	1.37	0.94	0.643	1.69	0.381	0.95	1.00	0.401	No
375	24.62	1.52	0.14	1.37	0.94	0.644	1.69	0.381	0.95	1.00	0.401	No
376	24.68	1.52	0.15	1.37	0.94	0.644	1.69	0.381	0.95	1.00	0.402	No
377	24.75	1.52	0.15	1.38	0.94	0.645	1.69	0.382	0.95	1.00	0.402	No
378	24.81	1.53	0.15	1.38	0.94	0.645	1.69	0.382	0.95	1.00	0.403	No
379	24.90	1.53	0.15	1.38	0.94	0.646	1.69	0.383	0.95	1.00	0.403	No
380	24.94	1.54	0.15	1.38	0.94	0.647	1.69	0.383	0.95	1.00	0.404	No
381	25.04	1.54	0.16	1.38	0.94	0.648	1.69	0.383	0.95	1.00	0.404	No
382	25.08	1.54	0.16	1.39	0.94	0.648	1.69	0.384	0.95	1.00	0.405	No
383	25.18	1.55	0.16	1.39	0.94	0.649	1.69	0.384	0.95	1.00	0.405	No
384	25.22	1.55	0.16	1.39	0.94	0.649	1.69	0.384	0.95	1.00	0.406	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
385	25.27	1.56	0.16	1.39	0.94	0.650	1.69	0.385	0.95	1.00	0.406	No
386	25.34	1.56	0.17	1.39	0.94	0.650	1.69	0.385	0.95	1.00	0.407	No
387	25.40	1.56	0.17	1.40	0.94	0.651	1.69	0.385	0.95	1.00	0.407	No
388	25.48	1.57	0.17	1.40	0.94	0.652	1.69	0.386	0.95	1.00	0.408	No
389	25.55	1.57	0.17	1.40	0.94	0.652	1.69	0.386	0.95	1.00	0.408	No
390	25.59	1.58	0.17	1.40	0.94	0.652	1.69	0.386	0.95	1.00	0.409	No
391	25.67	1.58	0.18	1.40	0.94	0.653	1.69	0.387	0.95	1.00	0.409	No
392	25.73	1.58	0.18	1.41	0.94	0.654	1.69	0.387	0.94	1.00	0.410	No
393	25.82	1.59	0.18	1.41	0.94	0.654	1.69	0.387	0.94	1.00	0.410	No
394	25.85	1.59	0.18	1.41	0.94	0.655	1.69	0.388	0.94	1.00	0.410	No
395	25.95	1.60	0.19	1.41	0.94	0.656	1.69	0.388	0.94	1.00	0.411	No
396	26.00	1.60	0.19	1.41	0.94	0.656	1.69	0.388	0.94	1.00	0.412	No
397	26.05	1.60	0.19	1.42	0.94	0.656	1.69	0.389	0.94	1.00	0.412	No
398	26.14	1.61	0.19	1.42	0.94	0.657	1.69	0.389	0.94	1.00	0.412	No
399	26.19	1.61	0.19	1.42	0.94	0.658	1.69	0.389	0.94	1.00	0.413	No
400	26.28	1.62	0.20	1.42	0.94	0.658	1.69	0.390	0.94	1.00	0.413	No
401	26.33	1.62	0.20	1.42	0.94	0.659	1.69	0.390	0.94	1.00	0.414	No
402	26.41	1.63	0.20	1.43	0.94	0.659	1.69	0.390	0.94	1.00	0.414	No
403	26.46	1.63	0.20	1.43	0.94	0.660	1.69	0.391	0.94	1.00	0.415	No
404	26.56	1.64	0.20	1.43	0.94	0.661	1.69	0.391	0.94	1.00	0.415	No
405	26.59	1.64	0.21	1.43	0.94	0.661	1.69	0.391	0.94	1.00	0.416	No
406	26.64	1.64	0.21	1.43	0.94	0.661	1.69	0.391	0.94	1.00	0.416	No
407	26.72	1.65	0.21	1.44	0.94	0.662	1.69	0.392	0.94	1.00	0.416	No
408	26.78	1.65	0.21	1.44	0.94	0.662	1.69	0.392	0.94	1.00	0.417	No
409	26.87	1.66	0.21	1.44	0.93	0.663	1.69	0.392	0.94	1.00	0.418	No
410	26.92	1.66	0.22	1.44	0.93	0.663	1.69	0.393	0.94	1.00	0.418	No
411	27.01	1.66	0.22	1.45	0.93	0.664	1.69	0.393	0.94	1.00	0.418	No
412	27.05	1.67	0.22	1.45	0.93	0.664	1.69	0.393	0.94	1.00	0.419	No
413	27.10	1.67	0.22	1.45	0.93	0.665	1.69	0.394	0.94	1.00	0.419	No
414	27.18	1.68	0.22	1.45	0.93	0.665	1.69	0.394	0.94	1.00	0.420	No
415	27.24	1.68	0.23	1.45	0.93	0.666	1.69	0.394	0.94	1.00	0.420	No
416	27.30	1.68	0.23	1.45	0.93	0.666	1.69	0.394	0.94	1.00	0.420	No
417	27.38	1.69	0.23	1.46	0.93	0.667	1.69	0.395	0.94	1.00	0.421	No
418	27.47	1.69	0.23	1.46	0.93	0.668	1.69	0.395	0.94	1.00	0.421	No
419	27.52	1.70	0.23	1.46	0.93	0.668	1.69	0.395	0.94	1.00	0.422	No
420	27.56	1.70	0.24	1.46	0.93	0.668	1.69	0.396	0.94	1.00	0.422	No
421	27.65	1.70	0.24	1.47	0.93	0.669	1.69	0.396	0.94	1.00	0.423	No
422	27.70	1.71	0.24	1.47	0.93	0.669	1.69	0.396	0.94	1.00	0.423	No
423	27.80	1.71	0.24	1.47	0.93	0.670	1.69	0.397	0.94	1.00	0.424	No
424	27.84	1.72	0.24	1.47	0.93	0.670	1.69	0.397	0.94	1.00	0.424	No
425	27.92	1.72	0.25	1.47	0.93	0.671	1.69	0.397	0.94	1.00	0.424	No
426	27.98	1.72	0.25	1.48	0.93	0.671	1.69	0.397	0.94	1.00	0.425	No
427	28.03	1.73	0.25	1.48	0.93	0.672	1.69	0.398	0.94	1.00	0.425	No
428	28.12	1.73	0.25	1.48	0.93	0.672	1.69	0.398	0.94	1.00	0.425	No
429	28.16	1.74	0.25	1.48	0.93	0.672	1.69	0.398	0.93	1.00	0.426	No
430	28.25	1.74	0.26	1.48	0.93	0.673	1.69	0.398	0.93	1.00	0.426	No
431	28.30	1.74	0.26	1.49	0.93	0.673	1.69	0.399	0.93	1.00	0.427	No
432	28.39	1.75	0.26	1.49	0.93	0.674	1.69	0.399	0.93	1.00	0.427	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
433	28.43	1.75	0.26	1.49	0.93	0.674	1.69	0.399	0.93	1.00	0.427	No
434	28.49	1.76	0.26	1.49	0.93	0.675	1.69	0.399	0.93	1.00	0.428	No
435	28.57	1.76	0.27	1.49	0.93	0.675	1.69	0.400	0.93	1.00	0.428	No
436	28.62	1.76	0.27	1.50	0.93	0.676	1.69	0.400	0.93	1.00	0.429	No
437	28.68	1.77	0.27	1.50	0.93	0.676	1.69	0.400	0.93	1.00	0.429	No
438	28.76	1.77	0.27	1.50	0.93	0.676	1.69	0.400	0.93	1.00	0.429	No
439	28.81	1.78	0.27	1.50	0.93	0.677	1.69	0.401	0.93	1.00	0.430	No
440	28.90	1.78	0.28	1.50	0.93	0.677	1.69	0.401	0.93	1.00	0.430	No
441	28.95	1.78	0.28	1.51	0.93	0.678	1.69	0.401	0.93	1.00	0.430	No
442	29.04	1.79	0.28	1.51	0.93	0.678	1.69	0.401	0.93	1.00	0.431	No
443	29.08	1.79	0.28	1.51	0.93	0.678	1.69	0.402	0.93	1.00	0.431	No
444	29.16	1.80	0.29	1.51	0.92	0.679	1.69	0.402	0.93	1.00	0.432	No
445	29.22	1.80	0.29	1.51	0.92	0.679	1.69	0.402	0.93	1.00	0.432	No
446	29.28	1.81	0.29	1.52	0.92	0.680	1.69	0.402	0.93	1.00	0.432	No
447	29.38	1.81	0.29	1.52	0.92	0.680	1.69	0.403	0.93	1.00	0.433	No
448	29.40	1.81	0.29	1.52	0.92	0.680	1.69	0.403	0.93	1.00	0.433	No
449	29.46	1.82	0.30	1.52	0.92	0.681	1.69	0.403	0.93	1.00	0.433	No
450	29.56	1.82	0.30	1.52	0.92	0.681	1.69	0.403	0.93	1.00	0.434	No
451	29.59	1.82	0.30	1.53	0.92	0.682	1.69	0.403	0.93	1.00	0.434	No
452	29.70	1.83	0.30	1.53	0.92	0.682	1.69	0.404	0.93	1.00	0.435	No
453	29.74	1.83	0.30	1.53	0.92	0.682	1.69	0.404	0.93	1.00	0.435	No
454	29.79	1.84	0.31	1.53	0.92	0.683	1.69	0.404	0.93	1.00	0.435	No
455	29.87	1.84	0.31	1.53	0.92	0.683	1.69	0.404	0.93	1.00	0.435	No
456	29.93	1.84	0.31	1.54	0.92	0.683	1.69	0.405	0.93	1.00	0.436	No
457	30.01	1.85	0.31	1.54	0.92	0.684	1.69	0.405	0.93	1.00	0.436	No
458	30.07	1.85	0.31	1.54	0.92	0.684	1.69	0.405	0.93	1.00	0.437	No
459	30.15	1.86	0.32	1.54	0.92	0.685	1.69	0.405	0.93	1.00	0.437	No
460	30.20	1.86	0.32	1.54	0.92	0.685	1.69	0.405	0.93	1.00	0.437	No
461	30.27	1.87	0.32	1.55	0.92	0.685	1.69	0.406	0.93	1.00	0.438	No
462	30.34	1.87	0.32	1.55	0.92	0.686	1.69	0.406	0.93	1.00	0.438	No
463	30.38	1.87	0.32	1.55	0.92	0.686	1.69	0.406	0.93	1.00	0.438	No
464	30.46	1.88	0.33	1.55	0.92	0.686	1.69	0.406	0.93	1.00	0.439	No
465	30.53	1.88	0.33	1.55	0.92	0.687	1.69	0.406	0.93	1.00	0.439	No
466	30.62	1.89	0.33	1.56	0.92	0.687	1.69	0.407	0.93	1.00	0.439	No
467	30.66	1.89	0.33	1.56	0.92	0.687	1.69	0.407	0.93	1.00	0.439	No
468	30.71	1.89	0.33	1.56	0.92	0.688	1.69	0.407	0.93	1.00	0.440	No
469	30.80	1.90	0.34	1.56	0.92	0.688	1.69	0.407	0.93	1.00	0.440	No
470	30.84	1.90	0.34	1.56	0.92	0.688	1.69	0.407	0.92	1.00	0.440	No
471	30.92	1.91	0.34	1.56	0.92	0.689	1.69	0.408	0.92	1.00	0.441	No
472	30.98	1.91	0.34	1.57	0.92	0.689	1.69	0.408	0.92	1.00	0.441	No
473	31.07	1.91	0.35	1.57	0.91	0.689	1.69	0.408	0.92	1.00	0.441	No
474	31.11	1.92	0.35	1.57	0.91	0.690	1.69	0.408	0.92	1.00	0.442	No
475	31.18	1.92	0.35	1.57	0.91	0.690	1.69	0.408	0.92	1.00	0.442	No
476	31.26	1.93	0.35	1.58	0.91	0.690	1.69	0.409	0.92	1.00	0.442	No
477	31.30	1.93	0.35	1.58	0.91	0.690	1.69	0.409	0.92	1.00	0.443	No
478	31.38	1.93	0.36	1.58	0.91	0.691	1.69	0.409	0.92	1.00	0.443	No
479	31.44	1.94	0.36	1.58	0.91	0.691	1.69	0.409	0.92	1.00	0.443	No
480	31.54	1.94	0.36	1.58	0.91	0.692	1.69	0.409	0.92	1.00	0.444	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
481	31.59	1.95	0.36	1.58	0.91	0.692	1.69	0.409	0.92	1.00	0.444	No
482	31.67	1.95	0.36	1.59	0.91	0.692	1.69	0.410	0.92	1.00	0.444	No
483	31.72	1.95	0.37	1.59	0.91	0.692	1.69	0.410	0.92	1.00	0.444	No
484	31.77	1.96	0.37	1.59	0.91	0.693	1.69	0.410	0.92	1.00	0.445	No
485	31.86	1.96	0.37	1.59	0.91	0.693	1.69	0.410	0.92	1.00	0.445	No
486	31.91	1.97	0.37	1.59	0.91	0.693	1.69	0.410	0.92	1.00	0.445	No
487	32.00	1.97	0.37	1.60	0.91	0.693	1.69	0.410	0.92	1.00	0.446	No
488	32.05	1.97	0.38	1.60	0.91	0.694	1.69	0.411	0.92	1.00	0.446	No
489	32.09	1.98	0.38	1.60	0.91	0.694	1.69	0.411	0.92	1.00	0.446	No
490	32.18	1.98	0.38	1.60	0.91	0.694	1.69	0.411	0.92	1.00	0.446	No
491	32.23	1.99	0.38	1.60	0.91	0.694	1.69	0.411	0.92	1.00	0.447	No
492	32.30	1.99	0.38	1.61	0.91	0.695	1.69	0.411	0.92	1.00	0.447	No
493	32.36	1.99	0.39	1.61	0.91	0.695	1.69	0.411	0.92	1.00	0.447	No
494	32.45	2.00	0.39	1.61	0.91	0.695	1.69	0.411	0.92	1.00	0.448	No
495	32.50	2.00	0.39	1.61	0.91	0.695	1.69	0.412	0.92	1.00	0.448	No
496	32.55	2.01	0.39	1.61	0.91	0.696	1.69	0.412	0.92	1.00	0.448	No
497	32.64	2.01	0.39	1.62	0.91	0.696	1.69	0.412	0.92	1.00	0.448	No
498	32.69	2.01	0.40	1.62	0.91	0.696	1.69	0.412	0.92	1.00	0.449	No
499	32.78	2.02	0.40	1.62	0.91	0.696	1.69	0.412	0.92	1.00	0.449	No
500	32.83	2.02	0.40	1.62	0.90	0.697	1.69	0.412	0.92	1.00	0.449	No
501	32.88	2.03	0.40	1.62	0.90	0.697	1.69	0.412	0.92	1.00	0.449	No
502	32.96	2.03	0.40	1.63	0.90	0.697	1.69	0.413	0.92	1.00	0.450	No
503	33.01	2.03	0.41	1.63	0.90	0.697	1.69	0.413	0.92	1.00	0.450	No
504	33.09	2.04	0.41	1.63	0.90	0.697	1.69	0.413	0.92	1.00	0.450	No
505	33.14	2.04	0.41	1.63	0.90	0.698	1.69	0.413	0.92	1.00	0.450	No
506	33.20	2.05	0.41	1.63	0.90	0.698	1.69	0.413	0.92	1.00	0.451	No
507	33.28	2.05	0.41	1.64	0.90	0.698	1.69	0.413	0.92	1.00	0.451	No
508	33.34	2.05	0.42	1.64	0.90	0.698	1.69	0.413	0.92	1.00	0.451	No
509	33.43	2.06	0.42	1.64	0.90	0.699	1.69	0.413	0.92	1.00	0.451	No
510	33.47	2.06	0.42	1.64	0.90	0.699	1.69	0.414	0.92	1.00	0.452	No
511	33.57	2.07	0.42	1.64	0.90	0.699	1.69	0.414	0.92	1.00	0.452	No
512	33.60	2.07	0.42	1.65	0.90	0.699	1.69	0.414	0.92	1.00	0.452	No
513	33.70	2.08	0.43	1.65	0.90	0.699	1.69	0.414	0.92	1.00	0.452	No
514	33.74	2.08	0.43	1.65	0.90	0.699	1.69	0.414	0.92	1.00	0.452	No
515	33.79	2.08	0.43	1.65	0.90	0.700	1.69	0.414	0.91	1.00	0.453	No
516	33.88	2.09	0.43	1.65	0.90	0.700	1.69	0.414	0.91	1.00	0.453	No
517	33.93	2.09	0.43	1.66	0.90	0.700	1.69	0.414	0.91	1.00	0.453	No
518	34.01	2.09	0.44	1.66	0.90	0.700	1.69	0.414	0.91	1.00	0.453	No
519	34.07	2.10	0.44	1.66	0.90	0.700	1.69	0.415	0.91	1.00	0.454	No
520	34.16	2.10	0.44	1.66	0.90	0.701	1.69	0.415	0.91	1.00	0.454	No
521	34.20	2.11	0.44	1.66	0.90	0.701	1.69	0.415	0.91	1.00	0.454	No
522	34.25	2.11	0.44	1.67	0.90	0.701	1.69	0.415	0.91	1.00	0.454	No
523	34.33	2.11	0.45	1.67	0.90	0.701	1.69	0.415	0.91	1.00	0.454	No
524	34.41	2.12	0.45	1.67	0.89	0.701	1.69	0.415	0.91	1.00	0.455	No
525	34.46	2.12	0.45	1.67	0.89	0.701	1.69	0.415	0.91	1.00	0.455	No
526	34.52	2.13	0.45	1.67	0.89	0.701	1.69	0.415	0.91	1.00	0.455	No
527	34.60	2.13	0.46	1.68	0.89	0.702	1.69	0.415	0.91	1.00	0.455	No
528	34.66	2.13	0.46	1.68	0.89	0.702	1.69	0.415	0.91	1.00	0.455	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition
529	34.73	2.14	0.46	1.68	0.89	0.702	1.69	0.415	0.91	1.00	0.456	No
530	34.78	2.14	0.46	1.68	0.89	0.702	1.69	0.416	0.91	1.00	0.456	No
531	34.87	2.15	0.46	1.68	0.89	0.702	1.69	0.416	0.91	1.00	0.456	No
532	34.92	2.15	0.47	1.69	0.89	0.702	1.69	0.416	0.91	1.00	0.456	No
533	35.01	2.16	0.47	1.69	0.89	0.702	1.69	0.416	0.91	1.00	0.457	No
534	35.06	2.16	0.47	1.69	0.89	0.702	1.69	0.416	0.91	1.00	0.457	No
535	35.11	2.16	0.47	1.69	0.89	0.703	1.69	0.416	0.91	1.00	0.457	No
536	35.19	2.17	0.47	1.70	0.89	0.703	1.69	0.416	0.91	1.00	0.457	No
537	35.24	2.17	0.48	1.70	0.89	0.703	1.69	0.416	0.91	1.00	0.457	No
538	35.33	2.18	0.48	1.70	0.89	0.703	1.69	0.416	0.91	1.00	0.457	No
539	35.38	2.18	0.48	1.70	0.89	0.703	1.69	0.416	0.91	1.00	0.458	No
540	35.46	2.19	0.48	1.71	0.89	0.703	1.69	0.416	0.91	1.00	0.458	No
541	35.52	2.19	0.48	1.71	0.89	0.703	1.69	0.416	0.91	1.00	0.458	No
542	35.61	2.20	0.49	1.71	0.89	0.703	1.69	0.416	0.91	1.00	0.458	No
543	35.64	2.20	0.49	1.71	0.89	0.703	1.69	0.416	0.91	1.00	0.458	No
544	35.70	2.20	0.49	1.71	0.89	0.703	1.69	0.416	0.91	1.00	0.458	No
545	35.77	2.21	0.49	1.72	0.89	0.703	1.69	0.416	0.91	1.00	0.459	No
546	35.83	2.21	0.49	1.72	0.88	0.703	1.69	0.416	0.91	1.00	0.459	No
547	35.92	2.22	0.50	1.72	0.88	0.703	1.69	0.416	0.91	1.00	0.459	No
548	35.97	2.22	0.50	1.72	0.88	0.703	1.69	0.416	0.91	1.00	0.459	No
549	36.03	2.23	0.50	1.73	0.88	0.703	1.69	0.416	0.91	1.00	0.459	No
550	36.10	2.23	0.50	1.73	0.88	0.703	1.69	0.416	0.91	1.00	0.459	No
551	36.16	2.24	0.50	1.73	0.88	0.703	1.69	0.416	0.91	1.00	0.459	No
552	36.24	2.24	0.51	1.73	0.88	0.704	1.69	0.416	0.91	1.00	0.460	No
553	36.30	2.25	0.51	1.74	0.88	0.704	1.69	0.416	0.91	1.00	0.460	No
554	36.35	2.25	0.51	1.74	0.88	0.704	1.69	0.416	0.91	1.00	0.460	No
555	36.43	2.25	0.51	1.74	0.88	0.704	1.69	0.416	0.91	1.00	0.460	No
556	36.49	2.26	0.51	1.74	0.88	0.704	1.69	0.416	0.90	1.00	0.460	No
557	36.56	2.26	0.52	1.75	0.88	0.704	1.69	0.416	0.90	1.00	0.460	No
558	36.63	2.27	0.52	1.75	0.88	0.704	1.69	0.416	0.90	1.00	0.461	No
559	36.69	2.27	0.52	1.75	0.88	0.704	1.69	0.416	0.90	1.00	0.461	No
560	36.77	2.28	0.52	1.75	0.88	0.704	1.69	0.417	0.90	1.00	0.461	No
561	36.82	2.28	0.52	1.76	0.88	0.704	1.69	0.417	0.90	1.00	0.461	No
562	36.90	2.29	0.53	1.76	0.88	0.704	1.69	0.417	0.90	1.00	0.461	No
563	36.95	2.29	0.53	1.76	0.88	0.704	1.69	0.417	0.90	1.00	0.461	No
564	37.01	2.29	0.53	1.76	0.88	0.704	1.69	0.417	0.90	1.00	0.461	No
565	37.09	2.30	0.53	1.77	0.88	0.704	1.69	0.417	0.90	1.00	0.461	No
566	37.14	2.30	0.53	1.77	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
567	37.23	2.31	0.54	1.77	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
568	37.28	2.31	0.54	1.77	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
569	37.34	2.32	0.54	1.77	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
570	37.44	2.32	0.54	1.78	0.87	0.704	1.69	0.416	0.90	1.00	0.462	No
571	37.48	2.32	0.55	1.78	0.87	0.704	1.69	0.416	0.90	1.00	0.462	No
572	37.54	2.33	0.55	1.78	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
573	37.62	2.33	0.55	1.78	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
574	37.67	2.33	0.55	1.78	0.87	0.704	1.69	0.417	0.90	1.00	0.462	No
575	37.76	2.34	0.55	1.78	0.87	0.704	1.69	0.417	0.90	1.00	0.463	No
576	37.81	2.34	0.56	1.78	0.87	0.704	1.69	0.417	0.90	1.00	0.463	No

:: Cyclic Stress Ratio fully adjusted (CSR*) calculation data :: (continued)

Point ID	Depth (ft)	σ_v (tsf)	u_0 (tsf)	σ_v' (tsf)	r_d	CSR	MSF	CSR_{eq}	K_σ	User FS	CSR^*	Belongs to transition

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
σ_v: Total overburden pressure at test point (tsf)
u_0: Water pressure at test point (tsf)
σ_v': Effective overburden pressure based on GWT during earthquake (tsf)
r_d: Nonlinear shear mass factor
CSR: Cyclic Stress Ratio
MSF: Magnitude Scaling Factor
CSR_{eq}: CSR adjusted for M=7.5
K_σ: Effective overburden stress factor
CSR^*: CSR fully adjusted

:: Cyclic Resistance Ratio (CRR) calculation data ::

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
1	0.09	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
2	0.13	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
3	0.22	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
4	0.27	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
5	0.36	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
6	0.41	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
7	0.51	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
8	0.54	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
9	0.60	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
10	0.69	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
11	0.73	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
12	0.82	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
13	0.86	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
14	0.95	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
15	0.98	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
16	1.05	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
17	1.14	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
18	1.19	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
19	1.28	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
20	1.32	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
21	1.38	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
22	1.47	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
23	1.51	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
24	1.61	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
25	1.64	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
26	1.71	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
27	1.79	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
28	1.84	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
29	1.92	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
30	1.98	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
31	2.04	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
32	2.12	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
33	2.17	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
34	2.26	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
35	2.31	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
36	2.41	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
37	2.44	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
38	2.52	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
39	2.59	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
40	2.67	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
41	2.72	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
42	2.77	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
43	2.86	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
44	2.90	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
45	2.99	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
46	3.04	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
47	3.09	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
48	3.17	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
49	3.22	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
50	3.28	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
51	3.36	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
52	3.46	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
53	3.50	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
54	3.55	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
55	3.63	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
56	3.68	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
57	3.77	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
58	3.82	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
59	3.90	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
60	3.95	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
61	4.00	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
62	4.10	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
63	4.14	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
64	4.20	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
65	4.29	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
66	4.33	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
67	4.42	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
68	4.48	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
69	4.56	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
70	4.59	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
71	4.67	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
72	4.75	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
73	4.80	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
74	4.88	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
75	4.92	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
76	5.00	0.00	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
77	5.07	90.50	2.03	2.15	0.62	144.90	1.33	193.38	4.000	No	No	2.00
78	5.17	130.80	1.94	2.23	0.59	209.64	1.27	265.29	4.000	No	No	2.00
79	5.22	120.43	2.00	2.43	0.61	192.99	1.30	251.59	4.000	No	No	2.00
80	5.26	111.78	2.05	2.67	0.62	179.08	1.35	242.19	4.000	No	No	2.00
81	5.34	105.05	2.10	2.94	0.64	168.25	1.41	237.97	4.000	No	No	2.00
82	5.40	102.59	2.13	3.15	0.65	164.30	1.46	240.37	4.000	No	No	2.00
83	5.49	103.89	2.13	3.24	0.65	166.37	1.47	245.22	4.000	No	No	2.00
84	5.54	107.42	2.12	3.23	0.65	172.04	1.46	250.65	4.000	No	No	2.00
85	5.58	112.45	2.09	3.07	0.64	180.11	1.41	254.13	4.000	No	No	2.00
86	5.67	117.67	2.06	2.85	0.63	188.49	1.36	257.01	4.000	No	No	2.00
87	5.72	120.99	2.02	2.60	0.61	193.83	1.32	256.31	4.000	No	No	2.00
88	5.81	121.86	1.98	2.37	0.60	195.21	1.29	252.55	4.000	No	No	2.00
89	5.86	120.33	1.95	2.13	0.59	192.75	1.27	244.71	4.000	No	No	2.00
90	5.92	118.98	1.91	1.86	0.58	190.57	1.24	236.64	4.000	No	No	2.00
91	6.00	117.33	1.86	1.62	0.57	187.92	1.21	227.59	4.000	No	No	2.00
92	6.04	115.09	1.82	1.40	0.55	184.32	1.17	216.51	4.000	No	No	2.00
93	6.13	112.34	1.80	1.29	0.55	179.89	1.16	207.81	4.000	No	No	2.00
94	6.18	110.38	1.79	1.24	0.55	176.74	1.15	202.57	4.000	No	No	2.00
95	6.24	108.87	1.81	1.30	0.55	174.30	1.17	203.51	4.000	No	No	2.00
96	6.32	109.30	1.83	1.37	0.56	174.99	1.18	206.97	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
97	6.37	110.59	1.85	1.47	0.56	177.06	1.20	212.41	4.000	No	No	2.00
98	6.46	114.78	1.85	1.52	0.56	183.78	1.20	220.45	4.000	No	No	2.00
99	6.51	116.50	1.87	1.65	0.57	186.53	1.22	227.23	4.000	No	No	2.00
100	6.60	122.45	1.87	1.73	0.57	196.08	1.22	238.90	4.000	No	No	2.00
101	6.64	129.16	1.87	1.81	0.57	206.85	1.22	252.18	4.000	No	No	2.00
102	6.70	136.78	1.87	1.88	0.57	219.10	1.22	266.80	4.000	No	No	2.00
103	6.78	137.06	1.91	2.08	0.58	219.54	1.24	272.56	4.000	No	No	2.00
104	6.84	130.94	1.97	2.39	0.60	209.70	1.28	269.05	4.000	No	No	2.00
105	6.93	121.97	2.04	2.75	0.62	195.28	1.34	261.59	4.000	No	No	2.00
106	6.97	109.82	2.12	3.24	0.64	175.75	1.45	254.94	4.000	No	No	2.00
107	7.06	98.92	2.19	3.71	0.67	158.22	1.60	253.35	4.000	No	No	2.00
108	7.11	91.26	2.25	4.07	0.68	145.92	1.75	254.96	4.000	No	No	2.00
109	7.16	88.43	2.26	4.10	0.69	141.36	1.78	251.51	4.000	No	No	2.00
110	7.23	88.39	2.24	3.93	0.68	141.30	1.73	245.09	4.000	No	No	2.00
111	7.29	89.26	2.22	3.66	0.67	142.68	1.66	236.23	4.000	No	No	2.00
112	7.39	89.78	2.19	3.44	0.67	143.52	1.60	229.26	4.000	No	No	2.00
113	7.44	86.88	2.19	3.35	0.67	138.84	1.60	221.64	4.000	No	No	2.00
114	7.52	79.38	2.23	3.49	0.68	126.79	1.70	214.91	4.000	No	No	2.00
115	7.57	69.38	2.29	3.75	0.70	110.72	1.89	209.78	4.000	No	No	2.00
116	7.62	58.48	2.38	4.21	0.72	93.21	2.26	210.60	4.000	No	No	2.00
117	7.69	49.36	2.47	4.77	0.75	78.54	2.76	216.78	4.000	No	No	2.00
118	7.75	41.64	2.56	5.54	0.78	66.13	3.46	228.61	4.000	No	No	2.00
119	7.81	38.50	2.60	5.84	0.79	61.07	3.79	231.47	4.000	No	Yes	2.00
120	7.90	37.31	2.61	5.77	0.79	59.17	3.83	226.89	4.000	No	Yes	2.00
121	7.95	37.83	2.57	5.11	0.78	60.00	3.46	207.77	4.000	No	No	2.00
122	8.04	38.17	2.52	4.48	0.76	60.54	3.12	188.84	4.000	No	No	2.00
123	8.08	38.81	2.52	4.48	0.76	61.56	3.09	189.95	4.000	No	No	2.00
124	8.17	39.33	2.56	5.23	0.78	62.37	3.44	214.31	4.000	No	No	2.00
125	8.20	50.87	2.48	5.07	0.75	80.92	2.84	229.65	4.000	No	No	2.00
126	8.31	69.24	2.34	4.23	0.71	108.41	2.08	225.28	4.000	No	No	2.00
127	8.36	93.55	2.19	3.35	0.66	141.51	1.58	224.06	4.000	No	No	2.00
128	8.40	89.55	2.23	3.63	0.68	136.00	1.68	228.60	4.000	No	No	2.00
129	8.49	65.36	2.42	5.16	0.73	102.45	2.49	255.41	4.000	No	No	2.00
130	8.54	36.41	2.79	9.76	0.85	57.66	5.77	332.64	4.000	No	Yes	2.00
131	8.63	25.44	3.02	14.22	1.00	40.01	9.13	365.13	4.000	No	Yes	2.00
132	8.67	28.31	2.91	11.08	0.88	44.62	7.29	325.19	4.000	No	Yes	2.00
133	8.77	30.46	2.78	8.12	0.84	48.07	5.62	270.02	4.000	No	Yes	2.00
134	8.81	32.22	2.65	5.78	0.80	50.89	4.24	215.53	4.000	No	Yes	2.00
135	8.87	34.47	2.60	5.20	0.79	53.78	3.78	203.09	4.000	No	Yes	2.00
136	8.95	36.83	2.58	5.15	0.78	56.87	3.61	205.35	4.000	No	No	2.00
137	9.00	38.97	2.58	5.36	0.78	59.94	3.60	215.50	4.000	No	No	2.00
138	9.09	40.22	2.58	5.49	0.78	61.40	3.60	221.13	4.000	No	No	2.00
139	9.14	41.50	2.57	5.43	0.78	63.01	3.52	221.49	4.000	No	No	2.00
140	9.19	43.71	2.54	5.10	0.77	65.73	3.26	214.16	4.000	No	No	2.00
141	9.28	46.24	2.51	4.82	0.76	68.65	3.03	208.33	4.000	No	No	2.00
142	9.32	46.89	2.50	4.82	0.76	69.32	3.01	208.81	4.000	No	No	2.00
143	9.43	47.52	2.50	4.79	0.76	69.62	2.99	208.36	4.000	No	No	2.00
144	9.45	48.29	2.49	4.69	0.76	70.50	2.92	205.92	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
145	9.54	49.17	2.48	4.54	0.75	71.12	2.83	201.43	4.000	No	No	2.00
146	9.59	51.85	2.44	4.15	0.74	74.22	2.57	191.10	4.000	No	No	2.00
147	9.67	53.96	2.40	3.84	0.73	76.31	2.39	182.41	4.000	No	No	2.00
148	9.72	55.57	2.38	3.60	0.72	77.93	2.25	175.44	4.000	No	No	2.00
149	9.81	53.51	2.39	3.67	0.73	74.72	2.35	175.28	4.000	No	No	2.00
150	9.86	50.12	2.43	3.86	0.74	70.10	2.54	177.76	4.000	No	No	2.00
151	9.95	47.82	2.45	3.99	0.74	66.63	2.68	178.86	4.000	No	No	2.00
152	10.00	44.43	2.49	4.21	0.76	62.02	2.93	181.79	4.000	No	No	2.00
153	10.04	41.43	2.53	4.50	0.77	57.94	3.22	186.73	4.000	No	No	2.00
154	10.13	38.05	2.59	4.92	0.78	53.24	3.65	194.19	4.000	No	No	2.00
155	10.18	35.91	2.63	5.34	0.80	50.35	4.02	202.47	4.000	No	Yes	2.00
156	10.28	35.08	2.65	5.58	0.80	48.94	4.23	207.14	4.000	No	Yes	2.00
157	10.32	34.09	2.68	5.89	0.81	47.56	4.49	213.37	4.000	No	Yes	2.00
158	10.41	34.71	2.68	5.93	0.81	48.07	4.48	215.33	4.000	No	Yes	2.00
159	10.46	35.88	2.67	5.86	0.81	49.46	4.36	215.54	4.000	No	Yes	2.00
160	10.51	38.46	2.63	5.46	0.80	52.56	3.97	208.92	4.000	No	Yes	2.00
161	10.60	39.29	2.61	5.26	0.79	53.23	3.83	203.99	4.000	No	Yes	2.00
162	10.64	40.70	2.58	5.00	0.78	54.77	3.62	198.45	4.000	No	No	2.00
163	10.73	42.57	2.56	4.77	0.78	56.75	3.41	193.73	4.000	No	No	2.00
164	10.78	48.01	2.49	4.19	0.75	63.25	2.88	182.21	4.000	No	No	2.00
165	10.83	52.62	2.43	3.77	0.74	68.61	2.53	173.44	4.000	No	No	2.00
166	10.92	55.96	2.39	3.52	0.73	72.22	2.33	167.92	4.000	No	No	2.00
167	10.96	54.74	2.40	3.60	0.73	70.54	2.40	169.29	4.000	No	No	2.00
168	11.05	51.01	2.45	3.87	0.74	65.66	2.65	174.06	4.000	No	No	2.00
169	11.10	46.01	2.51	4.30	0.76	59.42	3.06	182.07	4.000	No	No	2.00
170	11.19	42.31	2.57	4.70	0.78	54.59	3.47	189.40	4.000	No	No	2.00
171	11.24	40.39	2.60	4.98	0.79	52.11	3.73	194.62	4.000	No	No	2.00
172	11.29	40.68	2.60	5.00	0.79	52.31	3.73	195.35	4.000	No	No	2.00
173	11.38	41.81	2.59	4.89	0.78	53.35	3.63	193.52	4.000	No	No	2.00
174	11.43	42.50	2.58	4.82	0.78	54.02	3.56	192.34	4.000	No	No	2.00
175	11.50	42.28	2.59	4.93	0.78	53.52	3.64	194.86	4.000	No	No	2.00
176	11.56	41.75	2.61	5.27	0.79	52.78	3.86	203.75	4.000	No	Yes	2.00
177	11.66	41.57	2.63	5.58	0.80	52.31	4.05	211.90	4.000	No	Yes	2.00
178	11.68	42.28	2.64	5.71	0.80	53.15	4.08	216.85	4.000	No	Yes	2.00
179	11.76	42.74	2.63	5.65	0.80	53.41	4.03	215.28	4.000	No	Yes	2.00
180	11.84	41.93	2.64	5.72	0.80	52.14	4.13	215.53	4.000	No	Yes	2.00
181	11.90	40.25	2.66	5.90	0.81	49.94	4.35	217.22	4.000	No	Yes	2.00
182	11.95	38.15	2.70	6.25	0.82	47.30	4.70	222.23	4.000	No	Yes	2.00
183	12.01	36.72	2.73	6.54	0.83	45.41	4.98	226.19	4.000	No	Yes	2.00
184	12.09	35.30	2.75	6.76	0.83	43.49	5.24	228.04	4.000	No	Yes	2.00
185	12.17	33.84	2.77	6.86	0.84	41.47	5.46	226.34	4.000	No	Yes	2.00
186	12.22	32.31	2.78	6.78	0.84	39.48	5.58	220.38	4.000	No	Yes	2.00
187	12.29	30.11	2.80	6.87	0.85	36.64	5.91	216.47	4.000	No	Yes	2.00
188	12.35	27.82	2.84	7.08	0.86	33.73	6.35	214.15	4.000	No	Yes	2.00
189	12.45	26.09	2.87	7.38	0.87	31.46	6.81	214.20	4.000	No	Yes	2.00
190	12.47	25.52	2.88	7.28	0.87	30.71	6.85	210.42	4.000	No	Yes	2.00
191	12.54	26.05	2.85	6.79	0.86	31.15	6.49	202.10	4.000	No	Yes	2.00
192	12.63	26.80	2.82	6.30	0.85	31.78	6.10	193.97	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
193	12.68	27.22	2.81	6.09	0.85	32.15	5.92	190.40	4.000	No	Yes	2.00
194	12.74	27.78	2.79	5.98	0.85	32.66	5.79	189.11	4.000	No	Yes	2.00
195	12.81	28.24	2.79	5.90	0.84	33.04	5.70	188.18	4.000	No	Yes	2.00
196	12.87	27.41	2.81	6.13	0.85	31.97	5.97	190.79	4.000	No	Yes	2.00
197	12.96	25.87	2.85	6.58	0.86	30.04	6.50	195.38	4.000	No	Yes	2.00
198	13.00	26.33	2.84	6.54	0.86	30.49	6.42	195.76	4.000	No	Yes	2.00
199	13.08	29.15	2.79	5.99	0.84	33.53	5.70	191.15	4.000	No	Yes	2.00
200	13.14	31.01	2.75	5.66	0.83	35.48	5.29	187.55	4.000	No	Yes	2.00
201	13.23	30.61	2.76	5.69	0.84	34.84	5.37	187.14	4.000	No	Yes	2.00
202	13.28	28.91	2.79	5.88	0.84	32.82	5.71	187.38	4.000	No	Yes	2.00
203	13.33	27.83	2.80	5.84	0.85	31.48	5.84	183.86	4.000	No	Yes	2.00
204	13.42	25.79	2.83	6.00	0.86	29.00	6.27	181.84	4.000	No	Yes	2.00
205	13.46	24.18	2.86	6.12	0.87	27.10	6.63	179.75	4.000	No	Yes	2.00
206	13.54	23.17	2.88	6.33	0.87	25.84	6.98	180.30	4.000	No	Yes	2.00
207	13.60	23.24	2.89	6.41	0.87	25.84	7.04	181.84	4.000	No	Yes	2.00
208	13.69	23.54	2.89	6.53	0.88	26.03	7.08	184.39	4.000	No	Yes	2.00
209	13.72	25.39	2.87	6.54	0.87	28.06	6.76	189.81	4.000	No	Yes	2.00
210	13.79	28.66	2.83	6.44	0.86	31.57	6.22	196.29	4.000	No	Yes	2.00
211	13.85	33.98	2.77	6.31	0.84	37.33	5.51	205.75	4.000	No	Yes	2.00
212	13.92	39.57	2.72	6.24	0.83	43.30	4.97	215.04	4.000	No	Yes	2.00
213	14.01	44.14	2.69	6.23	0.82	48.07	4.64	222.99	4.000	No	Yes	2.00
214	14.06	46.31	2.69	6.34	0.81	50.30	4.56	229.50	4.000	No	Yes	2.00
215	14.11	45.40	2.66	5.68	0.81	49.06	4.28	210.14	4.000	No	Yes	2.00
216	14.20	42.12	2.66	5.35	0.81	45.24	4.32	195.61	4.000	No	Yes	2.00
217	14.25	38.48	2.67	5.00	0.81	41.13	4.40	180.81	4.000	No	Yes	2.00
218	14.31	36.01	2.73	5.76	0.83	38.44	5.08	195.10	4.000	No	Yes	2.00
219	14.38	35.39	2.77	6.25	0.84	37.65	5.44	204.95	4.000	No	Yes	2.00
220	14.48	35.29	2.78	6.58	0.84	37.36	5.66	211.58	4.000	No	Yes	2.00
221	14.50	35.34	2.80	6.83	0.85	37.37	5.81	217.19	4.000	No	Yes	2.00
222	14.58	35.87	2.80	6.91	0.85	37.77	5.82	219.77	4.000	No	Yes	2.00
223	14.63	36.62	2.79	6.83	0.84	38.44	5.71	219.48	4.000	No	Yes	2.00
224	14.72	37.22	2.78	6.68	0.84	38.87	5.58	216.97	4.000	No	Yes	2.00
225	14.77	37.65	2.76	6.44	0.84	39.20	5.41	212.18	4.000	No	Yes	2.00
226	14.84	38.76	2.74	6.19	0.83	40.17	5.19	208.42	4.000	No	Yes	2.00
227	14.90	41.00	2.71	5.88	0.82	42.34	4.83	204.66	4.000	No	Yes	2.00
228	14.99	43.60	2.69	5.69	0.81	44.81	4.55	203.98	4.000	No	Yes	2.00
229	15.04	45.63	2.68	5.84	0.81	46.80	4.50	210.82	4.000	No	Yes	2.00
230	15.13	46.53	2.69	6.17	0.82	47.53	4.64	220.53	4.000	No	Yes	2.00
231	15.18	46.88	2.71	6.51	0.82	47.78	4.81	229.81	4.000	No	Yes	2.00
232	15.22	48.98	2.69	6.43	0.82	49.82	4.64	231.14	4.000	No	Yes	2.00
233	15.31	53.06	2.65	6.08	0.80	53.70	4.24	227.91	4.000	No	Yes	2.00
234	15.36	57.15	2.62	5.76	0.79	57.69	3.89	224.50	4.000	No	Yes	2.00
235	15.44	58.11	2.61	5.69	0.79	58.41	3.82	223.26	4.000	No	Yes	2.00
236	15.50	56.27	2.63	5.85	0.80	56.39	3.99	225.22	4.000	No	Yes	2.00
237	15.57	54.78	2.64	5.97	0.80	54.68	4.14	226.29	4.000	No	Yes	2.00
238	15.64	54.06	2.65	6.00	0.80	53.77	4.20	225.87	4.000	No	Yes	2.00
239	15.69	53.77	2.65	5.94	0.80	53.31	4.19	223.44	4.000	No	Yes	2.00
240	15.77	52.83	2.65	5.94	0.80	52.13	4.25	221.68	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
241	15.82	55.47	2.62	5.60	0.79	54.61	3.95	215.68	4.000	No	Yes	2.00
242	15.91	61.78	2.56	5.05	0.78	60.57	3.41	206.54	4.000	No	No	2.00
243	15.96	71.43	2.48	4.50	0.75	69.91	2.85	199.00	4.000	No	No	2.00
244	16.05	76.11	2.46	4.42	0.75	74.17	2.70	200.32	4.000	No	No	2.00
245	16.10	74.42	2.49	4.73	0.75	72.37	2.89	209.21	4.000	No	No	2.00
246	16.14	64.83	2.58	5.55	0.78	62.87	3.58	224.91	4.000	No	No	2.00
247	16.24	55.73	2.67	6.41	0.81	53.71	4.41	237.07	4.000	No	Yes	2.00
248	16.28	48.51	2.74	6.94	0.83	46.56	5.12	238.38	4.000	No	Yes	2.00
249	16.38	44.43	2.77	6.98	0.84	42.36	5.45	230.89	4.000	No	Yes	2.00
250	16.42	40.03	2.80	6.97	0.85	38.00	5.83	221.64	4.000	No	Yes	2.00
251	16.50	38.29	2.80	6.75	0.85	36.13	5.89	212.77	4.000	No	Yes	2.00
252	16.56	37.72	2.79	6.32	0.84	35.48	5.70	202.06	4.000	No	Yes	2.00
253	16.61	38.89	2.74	5.54	0.83	36.50	5.11	186.61	4.000	No	Yes	2.00
254	16.70	37.55	2.73	5.11	0.83	35.04	4.98	174.40	4.000	No	Yes	2.00
255	16.74	34.40	2.74	4.82	0.83	31.95	5.09	162.66	4.000	No	Yes	2.00
256	16.83	29.81	2.79	5.00	0.85	27.44	5.79	158.86	4.000	No	Yes	2.00
257	16.88	25.61	2.86	5.16	0.86	23.37	6.57	153.58	4.000	No	Yes	2.00
258	16.93	23.14	2.86	4.71	0.87	20.97	6.68	140.11	4.000	No	Yes	2.00
259	17.00	21.66	2.84	4.03	0.86	19.49	6.42	125.06	4.000	No	Yes	2.00
260	17.06	21.26	2.80	3.30	0.85	19.05	5.80	110.52	4.000	No	Yes	2.00
261	17.16	21.56	2.77	3.08	0.84	19.26	5.53	106.56	4.000	No	Yes	2.00
262	17.21	22.03	2.74	2.83	0.83	19.65	5.19	102.09	4.000	No	Yes	2.00
263	17.26	22.25	2.73	2.74	0.83	19.81	5.07	100.44	4.000	No	Yes	2.00
264	17.35	22.38	2.73	2.72	0.83	19.85	5.03	99.87	4.000	No	Yes	2.00
265	17.40	22.35	2.74	2.77	0.83	19.78	5.10	100.94	4.000	No	Yes	2.00
266	17.46	22.21	2.74	2.82	0.83	19.58	5.19	101.65	4.000	No	Yes	2.00
267	17.53	21.90	2.76	2.89	0.84	19.24	5.34	102.72	4.000	No	Yes	2.00
268	17.62	21.69	2.77	2.95	0.84	18.96	5.46	103.48	4.000	No	Yes	2.00
269	17.67	21.64	2.77	3.01	0.84	18.87	5.55	104.62	4.000	No	Yes	2.00
270	17.72	21.97	2.78	3.08	0.84	19.13	5.56	106.35	4.000	No	Yes	2.00
271	17.81	22.35	2.77	3.09	0.84	19.39	5.51	106.91	4.000	No	Yes	2.00
272	17.85	22.61	2.76	2.99	0.84	19.60	5.37	105.26	4.000	No	Yes	2.00
273	17.95	22.66	2.75	2.83	0.83	19.56	5.21	101.90	4.000	No	Yes	2.00
274	18.00	22.46	2.74	2.69	0.83	19.34	5.10	98.66	4.000	No	Yes	2.00
275	18.09	21.96	2.74	2.67	0.83	18.80	5.20	97.69	4.000	No	Yes	2.00
276	18.14	21.17	2.77	2.74	0.84	18.05	5.43	97.99	4.000	No	Yes	2.00
277	18.18	20.27	2.79	2.86	0.85	17.20	5.77	99.16	4.000	No	Yes	2.00
278	18.27	19.53	2.82	2.96	0.85	16.45	6.08	99.98	4.000	No	Yes	2.00
279	18.32	18.88	2.84	3.11	0.86	15.84	6.42	101.69	4.000	No	Yes	2.00
280	18.41	18.55	2.86	3.23	0.87	15.46	6.66	103.03	4.000	No	Yes	2.00
281	18.46	18.37	2.87	3.29	0.87	15.27	6.80	103.82	4.000	No	Yes	2.00
282	18.54	18.41	2.87	3.27	0.87	15.24	6.78	103.30	4.000	No	Yes	2.00
283	18.60	18.41	2.87	3.25	0.87	15.21	6.77	102.94	4.000	No	Yes	2.00
284	18.64	18.42	2.87	3.28	0.87	15.18	6.81	103.39	4.000	No	Yes	2.00
285	18.72	18.20	2.89	3.37	0.87	14.93	7.00	104.49	4.000	No	Yes	2.00
286	18.77	18.07	2.90	3.47	0.88	14.77	7.16	105.71	4.000	No	Yes	2.00
287	18.84	17.94	2.91	3.57	0.88	14.61	7.32	106.94	4.000	No	Yes	2.00
288	18.91	18.03	2.91	3.61	0.88	14.64	7.36	107.72	4.000	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
289	18.96	18.12	2.92	3.76	0.88	14.68	7.50	110.11	4.000	No	Yes	2.00
290	19.05	18.28	2.93	3.90	0.89	14.75	7.63	112.57	4.000	No	Yes	2.00
291	19.10	18.63	2.93	3.99	0.89	15.02	7.63	114.62	4.000	No	Yes	2.00
292	19.18	19.22	2.91	3.87	0.88	15.47	7.35	113.77	4.000	No	Yes	2.00
293	19.24	20.32	2.88	3.66	0.87	16.40	6.85	112.37	4.000	No	Yes	2.00
294	19.29	21.60	2.84	3.54	0.86	17.47	6.43	112.29	4.000	No	Yes	2.00
295	19.37	22.74	2.82	3.48	0.85	18.39	6.14	112.95	4.000	No	Yes	2.00
296	19.43	22.95	2.83	3.65	0.86	18.52	6.27	116.23	4.000	No	Yes	2.00
297	19.54	23.02	2.85	3.86	0.86	18.47	6.50	120.01	4.000	No	Yes	2.00
298	19.58	23.21	2.88	4.30	0.87	18.59	6.88	127.86	4.000	No	Yes	2.00
299	19.67	23.89	2.89	4.64	0.88	19.07	7.07	134.75	4.000	No	Yes	2.00
300	19.71	24.66	2.90	4.92	0.88	19.67	7.15	140.76	4.000	No	Yes	2.00
301	19.77	25.74	2.88	4.94	0.87	20.54	6.97	143.25	4.000	No	Yes	2.00
302	19.82	27.54	2.86	4.88	0.87	22.02	6.61	145.47	4.000	No	Yes	2.00
303	19.91	29.56	2.83	4.82	0.86	23.64	6.25	147.82	4.000	No	Yes	2.00
304	19.95	31.46	2.81	4.76	0.85	25.20	5.95	149.84	4.000	No	Yes	2.00
305	20.04	32.65	2.79	4.72	0.85	26.11	5.77	150.70	3.600	No	Yes	2.00
306	20.09	33.17	2.79	4.76	0.85	26.49	5.74	152.16	3.600	No	Yes	2.00
307	20.17	33.30	2.80	4.89	0.85	26.50	5.84	154.81	3.600	No	Yes	2.00
308	20.23	33.46	2.81	5.02	0.85	26.55	5.93	157.52	3.600	No	Yes	2.00
309	20.32	33.96	2.81	5.06	0.85	26.85	5.92	158.94	3.600	No	Yes	2.00
310	20.37	34.55	2.80	5.08	0.85	27.29	5.87	160.16	3.600	No	Yes	2.00
311	20.41	35.23	2.80	5.12	0.85	27.80	5.83	161.96	3.600	No	Yes	2.00
312	20.50	35.95	2.80	5.17	0.85	28.28	5.80	163.88	3.600	No	Yes	2.00
313	20.55	36.66	2.79	5.25	0.85	28.80	5.78	166.52	3.600	No	Yes	2.00
314	20.64	37.28	2.79	5.32	0.85	29.20	5.78	168.70	3.600	No	Yes	2.00
315	20.69	37.96	2.80	5.46	0.85	29.67	5.81	172.38	3.600	No	Yes	2.00
316	20.78	38.62	2.80	5.61	0.85	30.09	5.86	176.29	3.600	No	Yes	2.00
317	20.83	39.19	2.81	5.83	0.85	30.47	5.96	181.53	3.600	No	Yes	2.00
318	20.87	39.70	2.82	6.14	0.85	30.80	6.12	188.51	3.600	No	Yes	2.00
319	20.96	40.22	2.83	6.42	0.86	31.07	6.26	194.62	3.600	No	Yes	2.00
320	21.01	40.88	2.84	6.66	0.86	31.52	6.36	200.47	3.600	No	Yes	2.00
321	21.09	41.26	2.84	6.81	0.86	31.71	6.43	203.80	3.600	No	Yes	2.00
322	21.13	41.47	2.85	7.00	0.86	31.79	6.54	207.82	3.600	No	Yes	2.00
323	21.20	41.54	2.86	7.17	0.87	31.74	6.64	210.87	3.600	No	Yes	2.00
324	21.29	41.64	2.86	7.25	0.87	31.69	6.70	212.23	3.600	No	Yes	2.00
325	21.33	41.59	2.84	6.71	0.86	31.64	6.38	201.70	3.600	No	Yes	2.00
326	21.42	41.35	2.81	5.99	0.85	31.39	5.95	186.78	3.600	No	Yes	2.00
327	21.47	41.09	2.78	5.43	0.84	31.18	5.60	174.68	3.600	No	Yes	2.00
328	21.56	41.00	2.78	5.44	0.84	30.99	5.64	174.65	3.600	No	Yes	2.00
329	21.61	40.88	2.79	5.63	0.85	30.81	5.78	178.14	3.600	No	Yes	2.00
330	21.66	40.35	2.80	5.67	0.85	30.32	5.87	177.99	3.600	No	Yes	2.00
331	21.73	39.27	2.81	5.72	0.85	29.38	6.03	177.02	3.600	No	Yes	2.00
332	21.80	38.33	2.82	5.76	0.86	28.54	6.17	176.06	3.600	No	Yes	2.00
333	21.89	37.62	2.83	5.77	0.86	27.86	6.28	174.84	3.600	No	Yes	2.00
334	21.94	37.20	2.83	5.69	0.86	27.50	6.28	172.56	3.600	No	Yes	2.00
335	21.98	36.66	2.83	5.55	0.86	27.03	6.24	168.74	3.600	No	Yes	2.00
336	22.07	36.15	2.83	5.39	0.86	26.55	6.20	164.65	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
337	22.12	35.51	2.82	5.19	0.85	26.02	6.14	159.75	3.600	No	Yes	2.00
338	22.21	34.93	2.82	5.05	0.85	25.49	6.12	156.02	3.600	No	Yes	2.00
339	22.26	34.48	2.82	4.98	0.85	25.09	6.13	153.74	3.600	No	Yes	2.00
340	22.33	34.40	2.82	4.96	0.85	24.97	6.13	153.09	3.600	No	Yes	2.00
341	22.40	34.40	2.82	4.91	0.85	24.90	6.11	152.07	3.600	No	Yes	2.00
342	22.44	34.41	2.82	4.85	0.85	24.87	6.06	150.80	3.600	No	Yes	2.00
343	22.54	34.48	2.82	4.82	0.85	24.84	6.04	150.13	3.600	No	Yes	2.00
344	22.59	34.59	2.82	4.83	0.85	24.87	6.05	150.44	3.600	No	Yes	2.00
345	22.67	34.75	2.82	4.87	0.85	24.90	6.08	151.33	3.600	No	Yes	2.00
346	22.72	34.81	2.82	4.98	0.86	24.88	6.17	153.44	3.600	No	Yes	2.00
347	22.79	34.86	2.83	5.13	0.86	24.83	6.29	156.20	3.600	No	Yes	2.00
348	22.84	34.86	2.84	5.26	0.86	24.76	6.40	158.44	3.600	No	Yes	2.00
349	22.91	34.68	2.85	5.32	0.86	24.55	6.48	159.16	3.600	No	Yes	2.00
350	23.00	34.49	2.85	5.31	0.86	24.32	6.51	158.38	3.600	No	Yes	2.00
351	23.04	34.35	2.85	5.29	0.86	24.17	6.52	157.64	3.600	No	Yes	2.00
352	23.13	34.36	2.85	5.26	0.86	24.10	6.51	156.90	3.600	No	Yes	2.00
353	23.18	34.34	2.85	5.21	0.86	24.04	6.49	156.01	3.600	No	Yes	2.00
354	23.23	34.36	2.85	5.29	0.86	23.99	6.56	157.29	3.600	No	Yes	2.00
355	23.31	34.58	2.86	5.44	0.87	24.07	6.65	160.13	3.600	No	Yes	2.00
356	23.36	35.65	2.85	5.48	0.86	24.81	6.55	162.60	3.600	No	Yes	2.00
357	23.46	36.58	2.84	5.45	0.86	25.41	6.43	163.28	3.600	No	Yes	2.00
358	23.50	37.10	2.84	5.48	0.86	25.76	6.39	164.63	3.600	No	Yes	2.00
359	23.60	36.69	2.86	5.72	0.87	25.32	6.64	168.13	3.600	No	Yes	2.00
360	23.64	36.41	2.88	6.07	0.87	25.02	6.95	173.80	3.600	No	Yes	2.00
361	23.72	36.84	2.89	6.30	0.88	25.23	7.07	178.31	3.600	No	Yes	2.00
362	23.78	38.24	2.88	6.36	0.87	26.19	6.94	181.77	3.600	No	Yes	2.00
363	23.84	40.00	2.86	6.29	0.87	27.43	6.70	183.65	3.600	No	Yes	2.00
364	23.92	41.48	2.85	6.20	0.86	28.44	6.49	184.43	3.600	No	Yes	2.00
365	23.97	42.19	2.84	6.16	0.86	28.91	6.39	184.62	3.600	No	Yes	2.00
366	24.06	42.36	2.84	6.09	0.86	28.94	6.34	183.47	3.600	No	Yes	2.00
367	24.11	42.04	2.84	5.99	0.86	28.67	6.31	180.77	3.600	No	Yes	2.00
368	24.15	41.19	2.82	5.65	0.86	28.05	6.17	172.92	3.600	No	Yes	2.00
369	24.23	40.02	2.83	5.49	0.86	27.14	6.19	167.90	3.600	No	Yes	2.00
370	24.29	38.69	2.84	5.55	0.86	26.10	6.39	166.72	3.600	No	Yes	2.00
371	24.38	37.62	2.87	5.87	0.87	25.19	6.77	170.54	3.600	No	Yes	2.00
372	24.43	36.86	2.88	5.97	0.87	24.58	6.95	170.88	3.600	No	Yes	2.00
373	24.49	36.44	2.88	5.93	0.87	24.23	6.98	169.19	3.600	No	Yes	2.00
374	24.57	36.24	2.89	5.90	0.87	24.01	7.00	168.15	3.600	No	Yes	2.00
375	24.62	35.77	2.90	5.97	0.88	23.62	7.13	168.45	3.600	No	Yes	2.00
376	24.68	35.28	2.90	5.98	0.88	23.21	7.22	167.55	3.600	No	Yes	2.00
377	24.75	34.69	2.90	5.90	0.88	22.74	7.25	164.90	3.600	No	Yes	2.00
378	24.81	34.38	2.90	5.73	0.88	22.50	7.17	161.41	3.600	No	Yes	2.00
379	24.90	34.23	2.89	5.62	0.88	22.32	7.13	159.06	3.600	No	Yes	2.00
380	24.94	34.18	2.89	5.60	0.88	22.25	7.13	158.62	3.600	No	Yes	2.00
381	25.04	34.22	2.89	5.57	0.88	22.21	7.11	157.97	3.600	No	Yes	2.00
382	25.08	34.20	2.89	5.47	0.87	22.16	7.05	156.23	3.600	No	Yes	2.00
383	25.18	34.11	2.89	5.36	0.87	22.04	6.99	154.07	3.600	No	Yes	2.00
384	25.22	33.85	2.88	5.30	0.87	21.83	6.99	152.53	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
385	25.27	33.48	2.89	5.33	0.88	21.52	7.08	152.30	3.600	No	Yes	2.00
386	25.34	33.17	2.90	5.39	0.88	21.25	7.18	152.54	3.600	No	Yes	2.00
387	25.40	33.03	2.90	5.44	0.88	21.10	7.25	152.96	3.600	No	Yes	2.00
388	25.48	33.11	2.90	5.45	0.88	21.08	7.27	153.15	3.600	No	Yes	2.00
389	25.55	33.34	2.90	5.44	0.88	21.19	7.23	153.27	3.600	No	Yes	2.00
390	25.59	33.74	2.90	5.46	0.88	21.43	7.19	154.15	3.600	No	Yes	2.00
391	25.67	34.31	2.90	5.64	0.88	21.73	7.27	157.98	3.600	No	Yes	2.00
392	25.73	35.56	2.91	5.94	0.88	22.50	7.33	165.00	3.600	No	Yes	2.00
393	25.82	37.27	2.90	6.15	0.88	23.57	7.27	171.34	3.600	No	Yes	2.00
394	25.85	40.62	2.87	6.05	0.87	25.86	6.78	175.42	3.600	No	Yes	2.00
395	25.95	43.51	2.84	5.84	0.86	27.79	6.33	175.92	3.600	No	Yes	2.00
396	26.00	45.83	2.81	5.69	0.85	29.36	6.01	176.53	3.600	No	Yes	2.00
397	26.05	45.86	2.82	5.80	0.85	29.31	6.09	178.54	3.600	No	Yes	2.00
398	26.14	45.46	2.83	5.95	0.86	28.91	6.25	180.67	3.600	No	Yes	2.00
399	26.19	44.64	2.84	5.95	0.86	28.30	6.33	179.18	3.600	No	Yes	2.00
400	26.28	43.96	2.82	5.60	0.86	27.82	6.16	171.34	3.600	No	Yes	2.00
401	26.33	43.58	2.80	5.05	0.85	27.62	5.79	160.02	3.600	No	Yes	2.00
402	26.41	43.48	2.77	4.68	0.84	27.55	5.53	152.44	3.600	No	Yes	2.00
403	26.46	42.98	2.78	4.71	0.84	27.15	5.61	152.42	3.600	No	Yes	2.00
404	26.56	42.81	2.79	4.89	0.85	26.91	5.78	155.45	3.600	No	Yes	2.00
405	26.59	39.75	2.85	5.43	0.86	24.69	6.53	161.33	3.600	No	Yes	2.00
406	26.64	40.39	2.85	5.39	0.86	25.08	6.44	161.54	3.600	No	Yes	2.00
407	26.72	41.02	2.84	5.35	0.86	25.45	6.35	161.51	3.600	No	Yes	2.00
408	26.78	44.92	2.78	4.89	0.84	28.12	5.61	157.78	3.600	No	Yes	2.00
409	26.87	45.19	2.78	4.87	0.84	28.22	5.58	157.57	3.600	No	Yes	2.00
410	26.92	44.26	2.79	4.99	0.85	27.52	5.76	158.64	3.600	No	Yes	2.00
411	27.01	42.92	2.82	5.16	0.85	26.49	6.04	160.15	3.600	No	Yes	2.00
412	27.05	42.17	2.83	5.29	0.86	25.92	6.23	161.39	3.600	No	Yes	2.00
413	27.10	42.33	2.82	5.22	0.86	26.00	6.17	160.31	3.600	No	Yes	2.00
414	27.18	42.76	2.80	4.93	0.85	26.28	5.90	155.18	3.600	No	Yes	2.00
415	27.24	43.02	2.78	4.53	0.84	26.50	5.56	147.45	3.600	No	Yes	2.00
416	27.30	42.50	2.76	4.24	0.84	26.17	5.38	140.81	3.600	No	Yes	2.00
417	27.38	41.30	2.77	4.19	0.84	25.31	5.47	138.50	3.600	No	Yes	2.00
418	27.47	40.13	2.79	4.28	0.84	24.43	5.68	138.75	3.600	No	Yes	2.00
419	27.52	39.67	2.79	4.33	0.85	24.07	5.78	139.16	3.600	No	Yes	2.00
420	27.56	39.80	2.80	4.47	0.85	24.09	5.89	141.91	3.600	No	Yes	2.00
421	27.65	40.13	2.81	4.67	0.85	24.19	6.04	146.10	3.600	No	Yes	2.00
422	27.70	40.14	2.83	4.94	0.86	24.09	6.27	151.03	3.600	No	Yes	2.00
423	27.80	40.22	2.84	5.09	0.86	24.04	6.39	153.67	3.600	No	Yes	2.00
424	27.84	40.09	2.85	5.24	0.86	23.88	6.54	156.06	3.600	No	Yes	2.00
425	27.92	40.25	2.86	5.31	0.87	23.90	6.59	157.43	3.600	No	Yes	2.00
426	27.98	40.56	2.86	5.33	0.86	24.06	6.57	158.07	3.600	No	Yes	2.00
427	28.03	40.71	2.86	5.35	0.87	24.11	6.58	158.67	3.600	No	Yes	2.00
428	28.12	40.39	2.86	5.45	0.87	23.81	6.71	159.68	3.600	No	Yes	2.00
429	28.16	39.55	2.88	5.60	0.87	23.20	6.94	160.96	3.600	No	Yes	2.00
430	28.25	39.06	2.89	5.72	0.88	22.79	7.11	161.95	3.600	No	Yes	2.00
431	28.30	38.83	2.91	5.92	0.88	22.57	7.30	164.76	3.600	No	Yes	2.00
432	28.39	38.86	2.92	6.09	0.88	22.49	7.45	167.42	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
433	28.43	38.99	2.92	6.18	0.88	22.52	7.51	169.08	3.600	No	Yes	2.00
434	28.49	39.48	2.91	6.08	0.88	22.80	7.37	168.13	3.600	No	Yes	2.00
435	28.57	39.91	2.90	5.93	0.88	23.03	7.22	166.30	3.600	No	Yes	2.00
436	28.62	40.36	2.89	5.73	0.87	23.32	7.01	163.49	3.600	No	Yes	2.00
437	28.68	40.37	2.88	5.55	0.87	23.32	6.88	160.32	3.600	No	Yes	2.00
438	28.76	40.36	2.86	5.24	0.87	23.32	6.64	154.83	3.600	No	Yes	2.00
439	28.81	40.58	2.80	4.39	0.85	23.61	5.91	139.45	3.600	No	Yes	2.00
440	28.90	40.83	2.75	3.67	0.83	23.91	5.25	125.57	3.600	No	Yes	2.00
441	28.95	40.97	2.71	3.24	0.82	24.10	4.83	116.38	3.600	No	Yes	2.00
442	29.04	40.55	2.73	3.43	0.83	23.70	5.07	120.06	3.600	No	Yes	2.00
443	29.08	39.70	2.76	3.62	0.84	23.06	5.34	123.10	3.600	No	Yes	2.00
444	29.16	38.59	2.78	3.80	0.84	22.24	5.65	125.59	3.600	No	Yes	2.00
445	29.22	37.94	2.81	4.03	0.85	21.72	5.95	129.19	3.600	No	Yes	2.00
446	29.28	37.60	2.84	4.37	0.86	21.38	6.31	134.85	3.600	No	Yes	2.00
447	29.38	37.96	2.85	4.62	0.86	21.49	6.50	139.65	3.600	No	Yes	2.00
448	29.40	38.67	2.86	4.80	0.86	21.87	6.58	143.78	3.600	No	Yes	2.00
449	29.46	39.53	2.86	5.00	0.87	22.32	6.64	148.23	3.600	No	Yes	2.00
450	29.56	40.38	2.86	5.17	0.87	22.74	6.70	152.27	3.600	No	Yes	2.00
451	29.59	41.08	2.86	5.25	0.87	23.13	6.68	154.58	3.600	No	Yes	2.00
452	29.70	42.06	2.84	5.02	0.86	23.71	6.40	151.71	3.600	No	Yes	2.00
453	29.74	42.66	2.82	4.67	0.85	24.14	6.05	145.95	3.600	No	Yes	2.00
454	29.79	42.35	2.80	4.43	0.85	23.97	5.88	141.01	3.600	No	Yes	2.00
455	29.87	41.33	2.81	4.36	0.85	23.30	5.94	138.36	3.600	No	Yes	2.00
456	29.93	39.89	2.83	4.44	0.86	22.34	6.18	138.13	3.600	No	Yes	2.00
457	30.01	38.57	2.84	4.47	0.86	21.45	6.38	136.83	3.600	No	Yes	2.00
458	30.07	37.38	2.85	4.37	0.86	20.71	6.45	133.48	3.600	No	Yes	2.00
459	30.15	36.63	2.84	4.23	0.86	20.22	6.43	130.08	3.600	No	Yes	2.00
460	30.20	36.04	2.85	4.14	0.86	19.85	6.44	127.75	3.600	No	Yes	2.00
461	30.27	35.49	2.85	4.18	0.86	19.46	6.56	127.55	3.600	No	Yes	2.00
462	30.34	35.08	2.86	4.19	0.87	19.16	6.64	127.24	3.600	No	Yes	2.00
463	30.38	34.77	2.86	4.17	0.87	18.95	6.67	126.40	3.600	No	Yes	2.00
464	30.46	34.82	2.86	4.15	0.87	18.94	6.66	126.05	3.600	No	Yes	2.00
465	30.53	35.17	2.86	4.15	0.87	19.11	6.61	126.36	3.600	No	Yes	2.00
466	30.62	35.71	2.85	4.16	0.86	19.38	6.55	127.05	3.600	No	Yes	2.00
467	30.66	36.16	2.84	4.09	0.86	19.65	6.43	126.34	3.600	No	Yes	2.00
468	30.71	36.30	2.85	4.24	0.86	19.66	6.56	129.04	3.600	No	Yes	2.00
469	30.80	36.37	2.87	4.49	0.87	19.60	6.81	133.35	3.600	No	Yes	2.00
470	30.84	36.78	2.89	4.88	0.88	19.73	7.11	140.35	3.600	No	Yes	2.00
471	30.92	38.64	2.87	4.86	0.87	20.80	6.85	142.39	3.600	No	Yes	2.00
472	30.98	41.02	2.84	4.63	0.86	22.24	6.36	141.39	3.600	No	Yes	2.00
473	31.07	42.92	2.80	4.29	0.85	23.43	5.86	137.20	3.600	No	Yes	2.00
474	31.11	42.91	2.78	4.05	0.84	23.46	5.65	132.57	3.600	No	Yes	2.00
475	31.18	41.08	2.78	3.82	0.84	22.38	5.63	126.10	3.600	No	Yes	2.00
476	31.26	39.04	2.76	3.28	0.84	21.25	5.34	113.56	3.600	No	Yes	2.00
477	31.30	36.68	2.74	2.81	0.83	19.95	5.11	101.99	3.600	No	Yes	2.00
478	31.38	35.34	2.73	2.55	0.83	19.19	4.98	95.56	3.600	No	Yes	2.00
479	31.44	34.15	2.77	2.86	0.84	18.32	5.50	100.82	3.600	No	Yes	2.00
480	31.54	33.66	2.82	3.28	0.85	17.84	6.06	108.21	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
481	31.59	34.24	2.84	3.63	0.86	18.07	6.37	115.14	3.600	No	Yes	2.00
482	31.67	35.25	2.85	3.84	0.86	18.58	6.45	119.77	3.600	No	Yes	2.00
483	31.72	36.71	2.84	4.00	0.86	19.39	6.41	124.33	3.600	No	Yes	2.00
484	31.77	38.84	2.84	4.25	0.86	20.57	6.38	131.15	3.600	No	Yes	2.00
485	31.86	41.59	2.84	4.62	0.86	22.07	6.39	140.92	3.600	No	Yes	2.00
486	31.91	46.68	2.83	5.06	0.86	24.94	6.22	155.10	3.600	No	Yes	2.00
487	32.00	52.96	2.79	5.17	0.85	28.60	5.75	164.50	3.600	No	Yes	2.00
488	32.05	61.83	2.72	4.89	0.82	33.99	4.93	167.61	3.600	No	Yes	2.00
489	32.09	68.91	2.66	4.51	0.81	38.44	4.29	164.86	3.600	No	Yes	2.00
490	32.18	72.49	2.63	4.32	0.80	40.67	4.00	162.74	3.600	No	Yes	2.00
491	32.23	68.41	2.66	4.47	0.81	38.08	4.29	163.30	3.600	No	Yes	2.00
492	32.30	61.47	2.71	4.64	0.82	33.74	4.79	161.50	3.600	No	Yes	2.00
493	32.36	51.56	2.78	4.78	0.84	27.73	5.58	154.78	3.600	No	Yes	2.00
494	32.45	44.06	2.83	4.73	0.86	23.27	6.25	145.42	3.600	No	Yes	2.00
495	32.50	37.73	2.89	4.77	0.88	19.54	7.07	138.05	3.600	No	Yes	2.00
496	32.55	34.16	2.96	4.94	1.00	16.25	8.14	132.29	3.600	No	Yes	2.00
497	32.64	32.42	2.98	4.88	1.00	15.35	8.39	128.81	3.600	No	Yes	2.00
498	32.69	31.41	2.97	4.53	1.00	14.83	8.24	122.16	3.600	No	Yes	2.00
499	32.78	31.38	2.92	4.14	0.88	15.91	7.48	119.06	3.600	No	Yes	2.00
500	32.83	31.39	2.90	3.92	0.88	15.95	7.25	115.67	3.600	No	Yes	2.00
501	32.88	31.75	2.89	3.84	0.88	16.17	7.10	114.82	3.600	No	Yes	2.00
502	32.96	32.40	2.87	3.69	0.87	16.56	6.84	113.23	3.600	No	Yes	2.00
503	33.01	33.57	2.85	3.50	0.86	17.28	6.44	111.20	3.600	No	Yes	2.00
504	33.09	34.88	2.82	3.41	0.86	18.05	6.15	110.97	3.600	No	Yes	2.00
505	33.14	35.77	2.82	3.52	0.86	18.53	6.14	113.83	3.600	No	Yes	2.00
506	33.20	35.60	2.85	3.83	0.86	18.32	6.50	119.12	3.600	No	Yes	2.00
507	33.28	34.94	2.88	4.16	0.87	17.83	6.94	123.78	3.600	No	Yes	2.00
508	33.34	34.30	2.90	4.38	0.88	17.40	7.27	126.52	3.600	No	Yes	2.00
509	33.43	34.34	2.91	4.46	0.88	17.38	7.35	127.73	3.600	No	Yes	2.00
510	33.47	35.65	2.89	4.37	0.88	18.14	7.06	128.10	3.600	No	Yes	2.00
511	33.57	37.63	2.86	4.19	0.87	19.30	6.60	127.45	3.600	No	Yes	2.00
512	33.60	39.08	2.83	4.04	0.86	20.17	6.27	126.44	3.600	No	Yes	2.00
513	33.70	38.92	2.83	4.04	0.86	20.05	6.29	126.20	3.600	No	Yes	2.00
514	33.74	38.02	2.85	4.13	0.86	19.49	6.50	126.79	3.600	No	Yes	2.00
515	33.79	37.47	2.87	4.30	0.87	19.11	6.75	129.06	3.600	No	Yes	2.00
516	33.88	37.40	2.88	4.45	0.87	19.01	6.91	131.42	3.600	No	Yes	2.00
517	33.93	38.20	2.88	4.50	0.87	19.44	6.85	133.14	3.600	No	Yes	2.00
518	34.01	39.72	2.85	4.35	0.86	20.33	6.51	132.41	3.600	No	Yes	2.00
519	34.07	41.59	2.83	4.27	0.86	21.41	6.22	133.18	3.600	No	Yes	2.00
520	34.16	42.81	2.82	4.30	0.85	22.08	6.12	135.04	3.600	No	Yes	2.00
521	34.20	43.25	2.83	4.47	0.86	22.27	6.22	138.51	3.600	No	Yes	2.00
522	34.25	42.85	2.85	4.71	0.86	21.96	6.48	142.34	3.600	No	Yes	2.00
523	34.33	42.69	2.86	4.91	0.87	21.78	6.68	145.51	3.600	No	Yes	2.00
524	34.41	43.02	2.87	5.02	0.87	21.92	6.74	147.77	3.600	No	Yes	2.00
525	34.46	44.32	2.85	4.96	0.86	22.66	6.54	148.28	3.600	No	Yes	2.00
526	34.52	45.99	2.84	4.89	0.86	23.61	6.32	149.16	3.600	No	Yes	2.00
527	34.60	47.30	2.82	4.86	0.86	24.34	6.16	150.06	3.600	No	Yes	2.00
528	34.66	48.23	2.82	4.87	0.85	24.86	6.08	151.25	3.600	No	Yes	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS
529	34.73	48.91	2.81	4.81	0.85	25.24	5.97	150.78	3.600	No	Yes	2.00
530	34.78	49.99	2.79	4.63	0.85	25.90	5.73	148.52	3.600	No	Yes	2.00
531	34.87	51.30	2.77	4.47	0.84	26.68	5.49	146.47	3.600	No	Yes	2.00
532	34.92	53.01	2.76	4.47	0.84	27.65	5.36	148.23	3.600	No	Yes	2.00
533	35.01	54.92	2.76	4.61	0.84	28.67	5.33	152.93	3.600	No	Yes	2.00
534	35.06	60.38	2.72	4.52	0.82	31.87	4.89	155.90	3.600	No	Yes	2.00
535	35.11	107.27	2.39	3.03	0.73	61.35	2.33	143.13	0.353	No	No	0.77
536	35.19	168.84	2.16	2.37	0.66	101.71	1.53	155.83	0.432	No	No	0.94
537	35.24	244.73	2.03	2.24	0.62	151.92	1.34	202.87	4.000	No	No	2.00
538	35.33	279.91	2.00	2.31	0.61	174.74	1.31	228.88	4.000	No	No	2.00
539	35.38	289.76	2.01	2.40	0.61	180.64	1.31	237.48	4.000	No	No	2.00
540	35.46	270.83	2.03	2.40	0.62	167.96	1.33	223.72	4.000	No	No	2.00
541	35.52	237.86	2.08	2.47	0.63	145.83	1.39	202.02	4.000	No	No	2.00
542	35.61	210.29	2.13	2.61	0.65	127.19	1.47	186.89	0.687	No	No	1.50
543	35.64	193.12	2.19	2.83	0.66	115.39	1.58	182.13	0.642	No	No	1.40
544	35.70	197.52	2.20	3.01	0.67	117.59	1.62	189.96	0.718	No	No	1.57
545	35.77	230.62	2.14	2.85	0.65	139.24	1.48	205.71	4.000	No	No	2.00
546	35.83	265.38	2.08	2.75	0.63	161.99	1.40	226.19	4.000	No	No	2.00
547	35.92	284.40	2.07	2.75	0.63	174.20	1.37	239.03	4.000	No	No	2.00
548	35.97	286.01	2.06	2.71	0.63	175.35	1.36	239.14	4.000	No	No	2.00
549	36.03	295.22	2.03	2.59	0.62	181.87	1.34	243.05	4.000	No	No	2.00
550	36.10	312.73	1.99	2.43	0.61	194.08	1.30	252.76	4.000	No	No	2.00
551	36.16	320.51	2.00	2.51	0.61	198.62	1.31	259.48	4.000	No	No	2.00
552	36.24	328.66	1.99	2.52	0.61	203.71	1.30	265.39	4.000	No	No	2.00
553	36.30	301.24	2.06	2.81	0.63	184.04	1.36	251.06	4.000	No	No	2.00
554	36.35	282.33	2.10	3.01	0.64	170.77	1.42	242.72	4.000	No	No	2.00
555	36.43	254.31	2.18	3.45	0.66	151.07	1.57	237.00	4.000	No	No	2.00
556	36.49	257.77	2.18	3.44	0.66	153.18	1.56	238.71	4.000	No	No	2.00
557	36.56	249.80	2.18	3.35	0.66	148.29	1.56	230.80	4.000	No	No	2.00
558	36.63	218.81	2.21	3.31	0.67	128.74	1.64	210.52	4.000	No	No	2.00
559	36.69	174.09	2.29	3.48	0.70	100.28	1.90	190.62	0.724	No	No	1.57
560	36.77	131.56	2.43	4.04	0.74	73.26	2.55	186.44	0.683	No	No	1.48
561	36.82	115.37	2.48	4.07	0.75	63.45	2.81	178.58	0.610	No	No	1.32
562	36.90	113.37	2.48	4.01	0.75	62.25	2.82	175.65	0.584	No	No	1.27
563	36.95	129.46	2.38	3.40	0.72	72.70	2.26	164.53	0.494	No	No	1.07
564	37.01	172.97	2.15	2.27	0.65	102.31	1.50	153.53	0.417	No	No	0.90
565	37.09	256.42	1.86	1.42	0.57	161.55	1.21	195.71	0.777	No	No	1.68
566	37.14	376.19	1.62	0.98	0.50	249.02	1.00	249.02	4.000	No	No	2.00
567	37.23	447.23	1.54	0.89	0.50	296.10	1.00	296.10	4.000	No	No	2.00
568	37.28	516.95	1.44	0.75	0.50	342.36	1.00	342.36	4.000	No	No	2.00
569	37.34	524.01	1.46	0.81	0.50	346.88	1.00	346.88	4.000	No	No	2.00
570	37.44	584.79	1.29	0.52	0.50	386.97	1.00	386.97	4.000	No	No	2.00
571	37.48	611.58	1.11	0.30	0.50	404.63	1.00	404.63	4.000	No	No	2.00
572	37.54	661.52	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
573	37.62	671.66	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
574	37.67	702.38	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
575	37.76	710.70	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00
576	37.81	722.67	N/A	0.00	1.00	-1.00	1.00	N/A	4.000	No	No	2.00

:: Cyclic Resistance Ratio (CRR) calculation data :: (continued)

Point ID	Depth (ft)	q_t (tsf)	I_c	Fr (%)	n	Q_{tn}	K_c	$Q_{tn,cs}$	$CRR_{7.5}$	Belongs to trans. layer	Clay-like behaviour	FS

Abbreviations

Depth: Depth from free surface, at which CPT was performed (ft)
q_t: Total cone resistance
I_c: Soil behavior type index
Fr: Normalized friction ratio (%)
n: Stress exponent
Q_{tn}: Normalized cone resistance
K_c: Cone resistance correction factor due to fines
$Q_{tn,cs}$: Normalized and adjusted cone resistance
$CRR_{7.5}$: Cyclic resistance ratio for M_w=7.5
FS: Factor of safety against soil liquefaction

:: Liquefaction Potential Index calculation data ::

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
0.09	2.00	0.00	0.00	0.00	0.00	0.13	2.00	0.00	0.00	0.00	0.00
0.22	2.00	0.00	0.00	0.00	0.00	0.27	2.00	0.00	0.00	0.00	0.00
0.36	2.00	0.00	0.00	0.00	0.00	0.41	2.00	0.00	0.00	0.00	0.00
0.51	2.00	0.00	0.00	0.00	0.00	0.54	2.00	0.00	0.00	0.00	0.00
0.60	2.00	0.00	0.00	0.00	0.00	0.69	2.00	0.00	0.00	0.00	0.00
0.73	2.00	0.00	0.00	0.00	0.00	0.82	2.00	0.00	0.00	0.00	0.00
0.86	2.00	0.00	0.00	0.00	0.00	0.95	2.00	0.00	0.00	0.00	0.00
0.98	2.00	0.00	0.00	0.00	0.00	1.05	2.00	0.00	0.00	0.00	0.00
1.14	2.00	0.00	0.00	0.00	0.00	1.19	2.00	0.00	0.00	0.00	0.00
1.28	2.00	0.00	0.00	0.00	0.00	1.32	2.00	0.00	0.00	0.00	0.00
1.38	2.00	0.00	0.00	0.00	0.00	1.47	2.00	0.00	0.00	0.00	0.00
1.51	2.00	0.00	0.00	0.00	0.00	1.61	2.00	0.00	0.00	0.00	0.00
1.64	2.00	0.00	0.00	0.00	0.00	1.71	2.00	0.00	0.00	0.00	0.00
1.79	2.00	0.00	0.00	0.00	0.00	1.84	2.00	0.00	0.00	0.00	0.00
1.92	2.00	0.00	0.00	0.00	0.00	1.98	2.00	0.00	0.00	0.00	0.00
2.04	2.00	0.00	0.00	0.00	0.00	2.12	2.00	0.00	0.00	0.00	0.00
2.17	2.00	0.00	0.00	0.00	0.00	2.26	2.00	0.00	0.00	0.00	0.00
2.31	2.00	0.00	0.00	0.00	0.00	2.41	2.00	0.00	0.00	0.00	0.00
2.44	2.00	0.00	0.00	0.00	0.00	2.52	2.00	0.00	0.00	0.00	0.00
2.59	2.00	0.00	0.00	0.00	0.00	2.67	2.00	0.00	0.00	0.00	0.00
2.72	2.00	0.00	0.00	0.00	0.00	2.77	2.00	0.00	0.00	0.00	0.00
2.86	2.00	0.00	0.00	0.00	0.00	2.90	2.00	0.00	0.00	0.00	0.00
2.99	2.00	0.00	0.00	0.00	0.00	3.04	2.00	0.00	0.00	0.00	0.00
3.09	2.00	0.00	0.00	0.00	0.00	3.17	2.00	0.00	0.00	0.00	0.00
3.22	2.00	0.00	0.00	0.00	0.00	3.28	2.00	0.00	0.00	0.00	0.00
3.36	2.00	0.00	0.00	0.00	0.00	3.46	2.00	0.00	0.00	0.00	0.00
3.50	2.00	0.00	0.00	0.00	0.00	3.55	2.00	0.00	0.00	0.00	0.00
3.63	2.00	0.00	0.00	0.00	0.00	3.68	2.00	0.00	0.00	0.00	0.00
3.77	2.00	0.00	0.00	0.00	0.00	3.82	2.00	0.00	0.00	0.00	0.00
3.90	2.00	0.00	0.00	0.00	0.00	3.95	2.00	0.00	0.00	0.00	0.00
4.00	2.00	0.00	0.00	0.00	0.00	4.10	2.00	0.00	0.00	0.00	0.00
4.14	2.00	0.00	0.00	0.00	0.00	4.20	2.00	0.00	0.00	0.00	0.00
4.29	2.00	0.00	0.00	0.00	0.00	4.33	2.00	0.00	0.00	0.00	0.00
4.42	2.00	0.00	0.00	0.00	0.00	4.48	2.00	0.00	0.00	0.00	0.00
4.56	2.00	0.00	0.00	0.00	0.00	4.59	2.00	0.00	0.00	0.00	0.00
4.67	2.00	0.00	0.00	0.00	0.00	4.75	2.00	0.00	0.00	0.00	0.00
4.80	2.00	0.00	0.00	0.00	0.00	4.88	2.00	0.00	0.00	0.00	0.00
4.92	2.00	0.00	0.00	0.00	0.00	5.00	2.00	0.00	0.00	0.00	0.00
5.07	2.00	0.00	0.00	0.08	0.00	5.17	2.00	0.00	0.00	0.10	0.00
5.22	2.00	0.00	0.00	0.05	0.00	5.26	2.00	0.00	0.00	0.04	0.00
5.34	2.00	0.00	0.00	0.08	0.00	5.40	2.00	0.00	0.00	0.06	0.00
5.49	2.00	0.00	0.00	0.09	0.00	5.54	2.00	0.00	0.00	0.04	0.00
5.58	2.00	0.00	0.00	0.05	0.00	5.67	2.00	0.00	0.00	0.09	0.00
5.72	2.00	0.00	0.00	0.05	0.00	5.81	2.00	0.00	0.00	0.09	0.00
5.86	2.00	0.00	0.00	0.05	0.00	5.92	2.00	0.00	0.00	0.06	0.00
6.00	2.00	0.00	0.00	0.08	0.00	6.04	2.00	0.00	0.00	0.05	0.00
6.13	2.00	0.00	0.00	0.09	0.00	6.18	2.00	0.00	0.00	0.05	0.00
6.24	2.00	0.00	0.00	0.06	0.00	6.32	2.00	0.00	0.00	0.08	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
6.37	2.00	0.00	0.00	0.05	0.00	6.46	2.00	0.00	0.00	0.09	0.00
6.51	2.00	0.00	0.00	0.05	0.00	6.60	2.00	0.00	0.00	0.09	0.00
6.64	2.00	0.00	0.00	0.04	0.00	6.70	2.00	0.00	0.00	0.06	0.00
6.78	2.00	0.00	0.00	0.08	0.00	6.84	2.00	0.00	0.00	0.06	0.00
6.93	2.00	0.00	0.00	0.09	0.00	6.97	2.00	0.00	0.00	0.04	0.00
7.06	2.00	0.00	0.00	0.09	0.00	7.11	2.00	0.00	0.00	0.05	0.00
7.16	2.00	0.00	0.00	0.05	0.00	7.23	2.00	0.00	0.00	0.07	0.00
7.29	2.00	0.00	0.00	0.07	0.00	7.39	2.00	0.00	0.00	0.10	0.00
7.44	2.00	0.00	0.00	0.04	0.00	7.52	2.00	0.00	0.00	0.09	0.00
7.57	2.00	0.00	0.00	0.05	0.00	7.62	2.00	0.00	0.00	0.05	0.00
7.69	2.00	0.00	0.00	0.07	0.00	7.75	2.00	0.00	0.00	0.05	0.00
7.81	2.00	0.00	0.00	0.06	0.00	7.90	2.00	0.00	0.00	0.09	0.00
7.95	2.00	0.00	0.00	0.05	0.00	8.04	2.00	0.00	0.00	0.09	0.00
8.08	2.00	0.00	0.00	0.04	0.00	8.17	2.00	0.00	0.00	0.09	0.00
8.20	2.00	0.00	0.00	0.04	0.00	8.31	2.00	0.00	0.00	0.11	0.00
8.36	2.00	0.00	0.00	0.05	0.00	8.40	2.00	0.00	0.00	0.05	0.00
8.49	2.00	0.00	0.00	0.09	0.00	8.54	2.00	0.00	0.00	0.04	0.00
8.63	2.00	0.00	0.00	0.10	0.00	8.67	2.00	0.00	0.00	0.04	0.00
8.77	2.00	0.00	0.00	0.10	0.00	8.81	2.00	0.00	0.00	0.04	0.00
8.87	2.00	0.00	0.00	0.05	0.00	8.95	2.00	0.00	0.00	0.09	0.00
9.00	2.00	0.00	0.00	0.04	0.00	9.09	2.00	0.00	0.00	0.09	0.00
9.14	2.00	0.00	0.00	0.05	0.00	9.19	2.00	0.00	0.00	0.05	0.00
9.28	2.00	0.00	0.00	0.09	0.00	9.32	2.00	0.00	0.00	0.04	0.00
9.43	2.00	0.00	0.00	0.10	0.00	9.45	2.00	0.00	0.00	0.02	0.00
9.54	2.00	0.00	0.00	0.09	0.00	9.59	2.00	0.00	0.00	0.05	0.00
9.67	2.00	0.00	0.00	0.08	0.00	9.72	2.00	0.00	0.00	0.05	0.00
9.81	2.00	0.00	0.00	0.09	0.00	9.86	2.00	0.00	0.00	0.04	0.00
9.95	2.00	0.00	0.00	0.09	0.00	10.00	2.00	0.00	0.00	0.05	0.00
10.04	2.00	0.00	0.00	0.04	0.00	10.13	2.00	0.00	0.00	0.09	0.00
10.18	2.00	0.00	0.00	0.05	0.00	10.28	2.00	0.00	0.00	0.10	0.00
10.32	2.00	0.00	0.00	0.04	0.00	10.41	2.00	0.00	0.00	0.09	0.00
10.46	2.00	0.00	0.00	0.05	0.00	10.51	2.00	0.00	0.00	0.05	0.00
10.60	2.00	0.00	0.00	0.09	0.00	10.64	2.00	0.00	0.00	0.05	0.00
10.73	2.00	0.00	0.00	0.09	0.00	10.78	2.00	0.00	0.00	0.04	0.00
10.83	2.00	0.00	0.00	0.06	0.00	10.92	2.00	0.00	0.00	0.09	0.00
10.96	2.00	0.00	0.00	0.04	0.00	11.05	2.00	0.00	0.00	0.09	0.00
11.10	2.00	0.00	0.00	0.05	0.00	11.19	2.00	0.00	0.00	0.09	0.00
11.24	2.00	0.00	0.00	0.04	0.00	11.29	2.00	0.00	0.00	0.05	0.00
11.38	2.00	0.00	0.00	0.09	0.00	11.43	2.00	0.00	0.00	0.05	0.00
11.50	2.00	0.00	0.00	0.07	0.00	11.56	2.00	0.00	0.00	0.06	0.00
11.66	2.00	0.00	0.00	0.10	0.00	11.68	2.00	0.00	0.00	0.02	0.00
11.76	2.00	0.00	0.00	0.08	0.00	11.84	2.00	0.00	0.00	0.08	0.00
11.90	2.00	0.00	0.00	0.05	0.00	11.95	2.00	0.00	0.00	0.05	0.00
12.01	2.00	0.00	0.00	0.06	0.00	12.09	2.00	0.00	0.00	0.08	0.00
12.17	2.00	0.00	0.00	0.09	0.00	12.22	2.00	0.00	0.00	0.04	0.00
12.29	2.00	0.00	0.00	0.07	0.00	12.35	2.00	0.00	0.00	0.07	0.00
12.45	2.00	0.00	0.00	0.10	0.00	12.47	2.00	0.00	0.00	0.02	0.00
12.54	2.00	0.00	0.00	0.07	0.00	12.63	2.00	0.00	0.00	0.09	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
12.68	2.00	0.00	0.00	0.05	0.00	12.74	2.00	0.00	0.00	0.06	0.00
12.81	2.00	0.00	0.00	0.07	0.00	12.87	2.00	0.00	0.00	0.06	0.00
12.96	2.00	0.00	0.00	0.09	0.00	13.00	2.00	0.00	0.00	0.04	0.00
13.08	2.00	0.00	0.00	0.08	0.00	13.14	2.00	0.00	0.00	0.06	0.00
13.23	2.00	0.00	0.00	0.09	0.00	13.28	2.00	0.00	0.00	0.05	0.00
13.33	2.00	0.00	0.00	0.05	0.00	13.42	2.00	0.00	0.00	0.09	0.00
13.46	2.00	0.00	0.00	0.05	0.00	13.54	2.00	0.00	0.00	0.08	0.00
13.60	2.00	0.00	0.00	0.05	0.00	13.69	2.00	0.00	0.00	0.09	0.00
13.72	2.00	0.00	0.00	0.02	0.00	13.79	2.00	0.00	0.00	0.07	0.00
13.85	2.00	0.00	0.00	0.06	0.00	13.92	2.00	0.00	0.00	0.07	0.00
14.01	2.00	0.00	0.00	0.09	0.00	14.06	2.00	0.00	0.00	0.05	0.00
14.11	2.00	0.00	0.00	0.05	0.00	14.20	2.00	0.00	0.00	0.08	0.00
14.25	2.00	0.00	0.00	0.06	0.00	14.31	2.00	0.00	0.00	0.06	0.00
14.38	2.00	0.00	0.00	0.07	0.00	14.48	2.00	0.00	0.00	0.10	0.00
14.50	2.00	0.00	0.00	0.03	0.00	14.58	2.00	0.00	0.00	0.08	0.00
14.63	2.00	0.00	0.00	0.05	0.00	14.72	2.00	0.00	0.00	0.08	0.00
14.77	2.00	0.00	0.00	0.05	0.00	14.84	2.00	0.00	0.00	0.08	0.00
14.90	2.00	0.00	0.00	0.06	0.00	14.99	2.00	0.00	0.00	0.09	0.00
15.04	2.00	0.00	0.00	0.05	0.00	15.13	2.00	0.00	0.00	0.09	0.00
15.18	2.00	0.00	0.00	0.05	0.00	15.22	2.00	0.00	0.00	0.05	0.00
15.31	2.00	0.00	0.00	0.09	0.00	15.36	2.00	0.00	0.00	0.05	0.00
15.44	2.00	0.00	0.00	0.08	0.00	15.50	2.00	0.00	0.00	0.05	0.00
15.57	2.00	0.00	0.00	0.07	0.00	15.64	2.00	0.00	0.00	0.07	0.00
15.69	2.00	0.00	0.00	0.05	0.00	15.77	2.00	0.00	0.00	0.08	0.00
15.82	2.00	0.00	0.00	0.05	0.00	15.91	2.00	0.00	0.00	0.09	0.00
15.96	2.00	0.00	0.00	0.05	0.00	16.05	2.00	0.00	0.00	0.09	0.00
16.10	2.00	0.00	0.00	0.05	0.00	16.14	2.00	0.00	0.00	0.04	0.00
16.24	2.00	0.00	0.00	0.10	0.00	16.28	2.00	0.00	0.00	0.04	0.00
16.38	2.00	0.00	0.00	0.09	0.00	16.42	2.00	0.00	0.00	0.04	0.00
16.50	2.00	0.00	0.00	0.09	0.00	16.56	2.00	0.00	0.00	0.05	0.00
16.61	2.00	0.00	0.00	0.05	0.00	16.70	2.00	0.00	0.00	0.09	0.00
16.74	2.00	0.00	0.00	0.04	0.00	16.83	2.00	0.00	0.00	0.08	0.00
16.88	2.00	0.00	0.00	0.06	0.00	16.93	2.00	0.00	0.00	0.05	0.00
17.00	2.00	0.00	0.00	0.08	0.00	17.06	2.00	0.00	0.00	0.06	0.00
17.16	2.00	0.00	0.00	0.09	0.00	17.21	2.00	0.00	0.00	0.05	0.00
17.26	2.00	0.00	0.00	0.05	0.00	17.35	2.00	0.00	0.00	0.09	0.00
17.40	2.00	0.00	0.00	0.05	0.00	17.46	2.00	0.00	0.00	0.07	0.00
17.53	2.00	0.00	0.00	0.07	0.00	17.62	2.00	0.00	0.00	0.09	0.00
17.67	2.00	0.00	0.00	0.05	0.00	17.72	2.00	0.00	0.00	0.04	0.00
17.81	2.00	0.00	0.00	0.09	0.00	17.85	2.00	0.00	0.00	0.05	0.00
17.95	2.00	0.00	0.00	0.10	0.00	18.00	2.00	0.00	0.00	0.04	0.00
18.09	2.00	0.00	0.00	0.09	0.00	18.14	2.00	0.00	0.00	0.05	0.00
18.18	2.00	0.00	0.00	0.04	0.00	18.27	2.00	0.00	0.00	0.09	0.00
18.32	2.00	0.00	0.00	0.05	0.00	18.41	2.00	0.00	0.00	0.09	0.00
18.46	2.00	0.00	0.00	0.05	0.00	18.54	2.00	0.00	0.00	0.08	0.00
18.60	2.00	0.00	0.00	0.06	0.00	18.64	2.00	0.00	0.00	0.04	0.00
18.72	2.00	0.00	0.00	0.08	0.00	18.77	2.00	0.00	0.00	0.05	0.00
18.84	2.00	0.00	0.00	0.06	0.00	18.91	2.00	0.00	0.00	0.08	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
18.96	2.00	0.00	0.00	0.05	0.00	19.05	2.00	0.00	0.00	0.09	0.00
19.10	2.00	0.00	0.00	0.05	0.00	19.18	2.00	0.00	0.00	0.08	0.00
19.24	2.00	0.00	0.00	0.06	0.00	19.29	2.00	0.00	0.00	0.05	0.00
19.37	2.00	0.00	0.00	0.08	0.00	19.43	2.00	0.00	0.00	0.05	0.00
19.54	2.00	0.00	0.00	0.12	0.00	19.58	2.00	0.00	0.00	0.04	0.00
19.67	2.00	0.00	0.00	0.09	0.00	19.71	2.00	0.00	0.00	0.05	0.00
19.77	2.00	0.00	0.00	0.05	0.00	19.82	2.00	0.00	0.00	0.05	0.00
19.91	2.00	0.00	0.00	0.09	0.00	19.95	2.00	0.00	0.00	0.05	0.00
20.04	2.00	0.00	0.00	0.09	0.00	20.09	2.00	0.00	0.00	0.05	0.00
20.17	2.00	0.00	0.00	0.07	0.00	20.23	2.00	0.00	0.00	0.06	0.00
20.32	2.00	0.00	0.00	0.09	0.00	20.37	2.00	0.00	0.00	0.05	0.00
20.41	2.00	0.00	0.00	0.04	0.00	20.50	2.00	0.00	0.00	0.09	0.00
20.55	2.00	0.00	0.00	0.05	0.00	20.64	2.00	0.00	0.00	0.08	0.00
20.69	2.00	0.00	0.00	0.05	0.00	20.78	2.00	0.00	0.00	0.09	0.00
20.83	2.00	0.00	0.00	0.05	0.00	20.87	2.00	0.00	0.00	0.04	0.00
20.96	2.00	0.00	0.00	0.09	0.00	21.01	2.00	0.00	0.00	0.05	0.00
21.09	2.00	0.00	0.00	0.08	0.00	21.13	2.00	0.00	0.00	0.05	0.00
21.20	2.00	0.00	0.00	0.06	0.00	21.29	2.00	0.00	0.00	0.09	0.00
21.33	2.00	0.00	0.00	0.04	0.00	21.42	2.00	0.00	0.00	0.09	0.00
21.47	2.00	0.00	0.00	0.05	0.00	21.56	2.00	0.00	0.00	0.09	0.00
21.61	2.00	0.00	0.00	0.05	0.00	21.66	2.00	0.00	0.00	0.05	0.00
21.73	2.00	0.00	0.00	0.07	0.00	21.80	2.00	0.00	0.00	0.07	0.00
21.89	2.00	0.00	0.00	0.09	0.00	21.94	2.00	0.00	0.00	0.05	0.00
21.98	2.00	0.00	0.00	0.05	0.00	22.07	2.00	0.00	0.00	0.09	0.00
22.12	2.00	0.00	0.00	0.04	0.00	22.21	2.00	0.00	0.00	0.09	0.00
22.26	2.00	0.00	0.00	0.05	0.00	22.33	2.00	0.00	0.00	0.06	0.00
22.40	2.00	0.00	0.00	0.07	0.00	22.44	2.00	0.00	0.00	0.04	0.00
22.54	2.00	0.00	0.00	0.10	0.00	22.59	2.00	0.00	0.00	0.05	0.00
22.67	2.00	0.00	0.00	0.08	0.00	22.72	2.00	0.00	0.00	0.05	0.00
22.79	2.00	0.00	0.00	0.07	0.00	22.84	2.00	0.00	0.00	0.05	0.00
22.91	2.00	0.00	0.00	0.07	0.00	23.00	2.00	0.00	0.00	0.09	0.00
23.04	2.00	0.00	0.00	0.05	0.00	23.13	2.00	0.00	0.00	0.09	0.00
23.18	2.00	0.00	0.00	0.05	0.00	23.23	2.00	0.00	0.00	0.05	0.00
23.31	2.00	0.00	0.00	0.08	0.00	23.36	2.00	0.00	0.00	0.05	0.00
23.46	2.00	0.00	0.00	0.10	0.00	23.50	2.00	0.00	0.00	0.04	0.00
23.60	2.00	0.00	0.00	0.10	0.00	23.64	2.00	0.00	0.00	0.04	0.00
23.72	2.00	0.00	0.00	0.08	0.00	23.78	2.00	0.00	0.00	0.06	0.00
23.84	2.00	0.00	0.00	0.06	0.00	23.92	2.00	0.00	0.00	0.08	0.00
23.97	2.00	0.00	0.00	0.05	0.00	24.06	2.00	0.00	0.00	0.09	0.00
24.11	2.00	0.00	0.00	0.05	0.00	24.15	2.00	0.00	0.00	0.04	0.00
24.23	2.00	0.00	0.00	0.09	0.00	24.29	2.00	0.00	0.00	0.05	0.00
24.38	2.00	0.00	0.00	0.09	0.00	24.43	2.00	0.00	0.00	0.05	0.00
24.49	2.00	0.00	0.00	0.06	0.00	24.57	2.00	0.00	0.00	0.09	0.00
24.62	2.00	0.00	0.00	0.05	0.00	24.68	2.00	0.00	0.00	0.06	0.00
24.75	2.00	0.00	0.00	0.07	0.00	24.81	2.00	0.00	0.00	0.05	0.00
24.90	2.00	0.00	0.00	0.09	0.00	24.94	2.00	0.00	0.00	0.05	0.00
25.04	2.00	0.00	0.00	0.09	0.00	25.08	2.00	0.00	0.00	0.05	0.00
25.18	2.00	0.00	0.00	0.09	0.00	25.22	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
25.27	2.00	0.00	0.00	0.04	0.00	25.34	2.00	0.00	0.00	0.07	0.00
25.40	2.00	0.00	0.00	0.06	0.00	25.48	2.00	0.00	0.00	0.09	0.00
25.55	2.00	0.00	0.00	0.06	0.00	25.59	2.00	0.00	0.00	0.04	0.00
25.67	2.00	0.00	0.00	0.08	0.00	25.73	2.00	0.00	0.00	0.06	0.00
25.82	2.00	0.00	0.00	0.09	0.00	25.85	2.00	0.00	0.00	0.03	0.00
25.95	2.00	0.00	0.00	0.10	0.00	26.00	2.00	0.00	0.00	0.05	0.00
26.05	2.00	0.00	0.00	0.05	0.00	26.14	2.00	0.00	0.00	0.09	0.00
26.19	2.00	0.00	0.00	0.05	0.00	26.28	2.00	0.00	0.00	0.09	0.00
26.33	2.00	0.00	0.00	0.05	0.00	26.41	2.00	0.00	0.00	0.09	0.00
26.46	2.00	0.00	0.00	0.05	0.00	26.56	2.00	0.00	0.00	0.10	0.00
26.59	2.00	0.00	0.00	0.03	0.00	26.64	2.00	0.00	0.00	0.06	0.00
26.72	2.00	0.00	0.00	0.07	0.00	26.78	2.00	0.00	0.00	0.07	0.00
26.87	2.00	0.00	0.00	0.09	0.00	26.92	2.00	0.00	0.00	0.05	0.00
27.01	2.00	0.00	0.00	0.09	0.00	27.05	2.00	0.00	0.00	0.04	0.00
27.10	2.00	0.00	0.00	0.05	0.00	27.18	2.00	0.00	0.00	0.08	0.00
27.24	2.00	0.00	0.00	0.06	0.00	27.30	2.00	0.00	0.00	0.06	0.00
27.38	2.00	0.00	0.00	0.08	0.00	27.47	2.00	0.00	0.00	0.09	0.00
27.52	2.00	0.00	0.00	0.05	0.00	27.56	2.00	0.00	0.00	0.05	0.00
27.65	2.00	0.00	0.00	0.08	0.00	27.70	2.00	0.00	0.00	0.05	0.00
27.80	2.00	0.00	0.00	0.10	0.00	27.84	2.00	0.00	0.00	0.05	0.00
27.92	2.00	0.00	0.00	0.08	0.00	27.98	2.00	0.00	0.00	0.05	0.00
28.03	2.00	0.00	0.00	0.05	0.00	28.12	2.00	0.00	0.00	0.09	0.00
28.16	2.00	0.00	0.00	0.04	0.00	28.25	2.00	0.00	0.00	0.09	0.00
28.30	2.00	0.00	0.00	0.05	0.00	28.39	2.00	0.00	0.00	0.09	0.00
28.43	2.00	0.00	0.00	0.04	0.00	28.49	2.00	0.00	0.00	0.05	0.00
28.57	2.00	0.00	0.00	0.09	0.00	28.62	2.00	0.00	0.00	0.05	0.00
28.68	2.00	0.00	0.00	0.06	0.00	28.76	2.00	0.00	0.00	0.08	0.00
28.81	2.00	0.00	0.00	0.05	0.00	28.90	2.00	0.00	0.00	0.09	0.00
28.95	2.00	0.00	0.00	0.05	0.00	29.04	2.00	0.00	0.00	0.09	0.00
29.08	2.00	0.00	0.00	0.05	0.00	29.16	2.00	0.00	0.00	0.07	0.00
29.22	2.00	0.00	0.00	0.06	0.00	29.28	2.00	0.00	0.00	0.06	0.00
29.38	2.00	0.00	0.00	0.09	0.00	29.40	2.00	0.00	0.00	0.03	0.00
29.46	2.00	0.00	0.00	0.06	0.00	29.56	2.00	0.00	0.00	0.09	0.00
29.59	2.00	0.00	0.00	0.04	0.00	29.70	2.00	0.00	0.00	0.10	0.00
29.74	2.00	0.00	0.00	0.04	0.00	29.79	2.00	0.00	0.00	0.05	0.00
29.87	2.00	0.00	0.00	0.07	0.00	29.93	2.00	0.00	0.00	0.06	0.00
30.01	2.00	0.00	0.00	0.08	0.00	30.07	2.00	0.00	0.00	0.06	0.00
30.15	2.00	0.00	0.00	0.09	0.00	30.20	2.00	0.00	0.00	0.05	0.00
30.27	2.00	0.00	0.00	0.07	0.00	30.34	2.00	0.00	0.00	0.07	0.00
30.38	2.00	0.00	0.00	0.04	0.00	30.46	2.00	0.00	0.00	0.07	0.00
30.53	2.00	0.00	0.00	0.07	0.00	30.62	2.00	0.00	0.00	0.09	0.00
30.66	2.00	0.00	0.00	0.04	0.00	30.71	2.00	0.00	0.00	0.05	0.00
30.80	2.00	0.00	0.00	0.09	0.00	30.84	2.00	0.00	0.00	0.04	0.00
30.92	2.00	0.00	0.00	0.07	0.00	30.98	2.00	0.00	0.00	0.07	0.00
31.07	2.00	0.00	0.00	0.08	0.00	31.11	2.00	0.00	0.00	0.05	0.00
31.18	2.00	0.00	0.00	0.06	0.00	31.26	2.00	0.00	0.00	0.08	0.00
31.30	2.00	0.00	0.00	0.05	0.00	31.38	2.00	0.00	0.00	0.08	0.00
31.44	2.00	0.00	0.00	0.06	0.00	31.54	2.00	0.00	0.00	0.10	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI
31.59	2.00	0.00	0.00	0.04	0.00	31.67	2.00	0.00	0.00	0.09	0.00
31.72	2.00	0.00	0.00	0.05	0.00	31.77	2.00	0.00	0.00	0.05	0.00
31.86	2.00	0.00	0.00	0.09	0.00	31.91	2.00	0.00	0.00	0.05	0.00
32.00	2.00	0.00	0.00	0.09	0.00	32.05	2.00	0.00	0.00	0.05	0.00
32.09	2.00	0.00	0.00	0.04	0.00	32.18	2.00	0.00	0.00	0.09	0.00
32.23	2.00	0.00	0.00	0.05	0.00	32.30	2.00	0.00	0.00	0.08	0.00
32.36	2.00	0.00	0.00	0.05	0.00	32.45	2.00	0.00	0.00	0.09	0.00
32.50	2.00	0.00	0.00	0.06	0.00	32.55	2.00	0.00	0.00	0.05	0.00
32.64	2.00	0.00	0.00	0.09	0.00	32.69	2.00	0.00	0.00	0.05	0.00
32.78	2.00	0.00	0.00	0.09	0.00	32.83	2.00	0.00	0.00	0.05	0.00
32.88	2.00	0.00	0.00	0.05	0.00	32.96	2.00	0.00	0.00	0.09	0.00
33.01	2.00	0.00	0.00	0.05	0.00	33.09	2.00	0.00	0.00	0.08	0.00
33.14	2.00	0.00	0.00	0.05	0.00	33.20	2.00	0.00	0.00	0.06	0.00
33.28	2.00	0.00	0.00	0.08	0.00	33.34	2.00	0.00	0.00	0.06	0.00
33.43	2.00	0.00	0.00	0.09	0.00	33.47	2.00	0.00	0.00	0.04	0.00
33.57	2.00	0.00	0.00	0.10	0.00	33.60	2.00	0.00	0.00	0.04	0.00
33.70	2.00	0.00	0.00	0.10	0.00	33.74	2.00	0.00	0.00	0.04	0.00
33.79	2.00	0.00	0.00	0.05	0.00	33.88	2.00	0.00	0.00	0.09	0.00
33.93	2.00	0.00	0.00	0.05	0.00	34.01	2.00	0.00	0.00	0.08	0.00
34.07	2.00	0.00	0.00	0.06	0.00	34.16	2.00	0.00	0.00	0.09	0.00
34.20	2.00	0.00	0.00	0.04	0.00	34.25	2.00	0.00	0.00	0.05	0.00
34.33	2.00	0.00	0.00	0.07	0.00	34.41	2.00	0.00	0.00	0.08	0.00
34.46	2.00	0.00	0.00	0.05	0.00	34.52	2.00	0.00	0.00	0.05	0.00
34.60	2.00	0.00	0.00	0.08	0.00	34.66	2.00	0.00	0.00	0.05	0.00
34.73	2.00	0.00	0.00	0.08	0.00	34.78	2.00	0.00	0.00	0.05	0.00
34.87	2.00	0.00	0.00	0.08	0.00	34.92	2.00	0.00	0.00	0.05	0.00
35.01	2.00	0.00	0.00	0.09	0.00	35.06	2.00	0.00	0.00	0.05	0.00
35.11	0.77	0.23	1.36	0.05	0.02	35.19	0.94	0.06	34.00	0.08	0.01
35.24	2.00	0.00	0.00	0.05	0.00	35.33	2.00	0.00	0.00	0.09	0.00
35.38	2.00	0.00	0.00	0.05	0.00	35.46	2.00	0.00	0.00	0.08	0.00
35.52	2.00	0.00	0.00	0.06	0.00	35.61	1.50	0.00	0.00	0.09	0.00
35.64	1.40	0.00	0.00	0.03	0.00	35.70	1.57	0.00	0.00	0.06	0.00
35.77	2.00	0.00	0.00	0.06	0.00	35.83	2.00	0.00	0.00	0.07	0.00
35.92	2.00	0.00	0.00	0.09	0.00	35.97	2.00	0.00	0.00	0.05	0.00
36.03	2.00	0.00	0.00	0.06	0.00	36.10	2.00	0.00	0.00	0.08	0.00
36.16	2.00	0.00	0.00	0.06	0.00	36.24	2.00	0.00	0.00	0.08	0.00
36.30	2.00	0.00	0.00	0.07	0.00	36.35	2.00	0.00	0.00	0.05	0.00
36.43	2.00	0.00	0.00	0.07	0.00	36.49	2.00	0.00	0.00	0.06	0.00
36.56	2.00	0.00	0.00	0.08	0.00	36.63	2.00	0.00	0.00	0.06	0.00
36.69	1.57	0.00	0.00	0.06	0.00	36.77	1.48	0.00	0.00	0.08	0.00
36.82	1.32	0.00	0.00	0.05	0.00	36.90	1.27	0.00	0.00	0.08	0.00
36.95	1.07	0.00	0.00	0.06	0.00	37.01	0.90	0.10	6.53	0.05	0.01
37.09	1.68	0.00	0.00	0.08	0.00	37.14	2.00	0.00	0.00	0.05	0.00
37.23	2.00	0.00	0.00	0.09	0.00	37.28	2.00	0.00	0.00	0.05	0.00
37.34	2.00	0.00	0.00	0.06	0.00	37.44	2.00	0.00	0.00	0.10	0.00
37.48	2.00	0.00	0.00	0.04	0.00	37.54	2.00	0.00	0.00	0.06	0.00
37.62	2.00	0.00	0.00	0.09	0.00	37.67	2.00	0.00	0.00	0.05	0.00
37.76	2.00	0.00	0.00	0.09	0.00	37.81	2.00	0.00	0.00	0.05	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (ft)	FS	F_L	w_z	d_z	LPI	Depth (ft)	FS	F_L	w_z	d_z	LPI

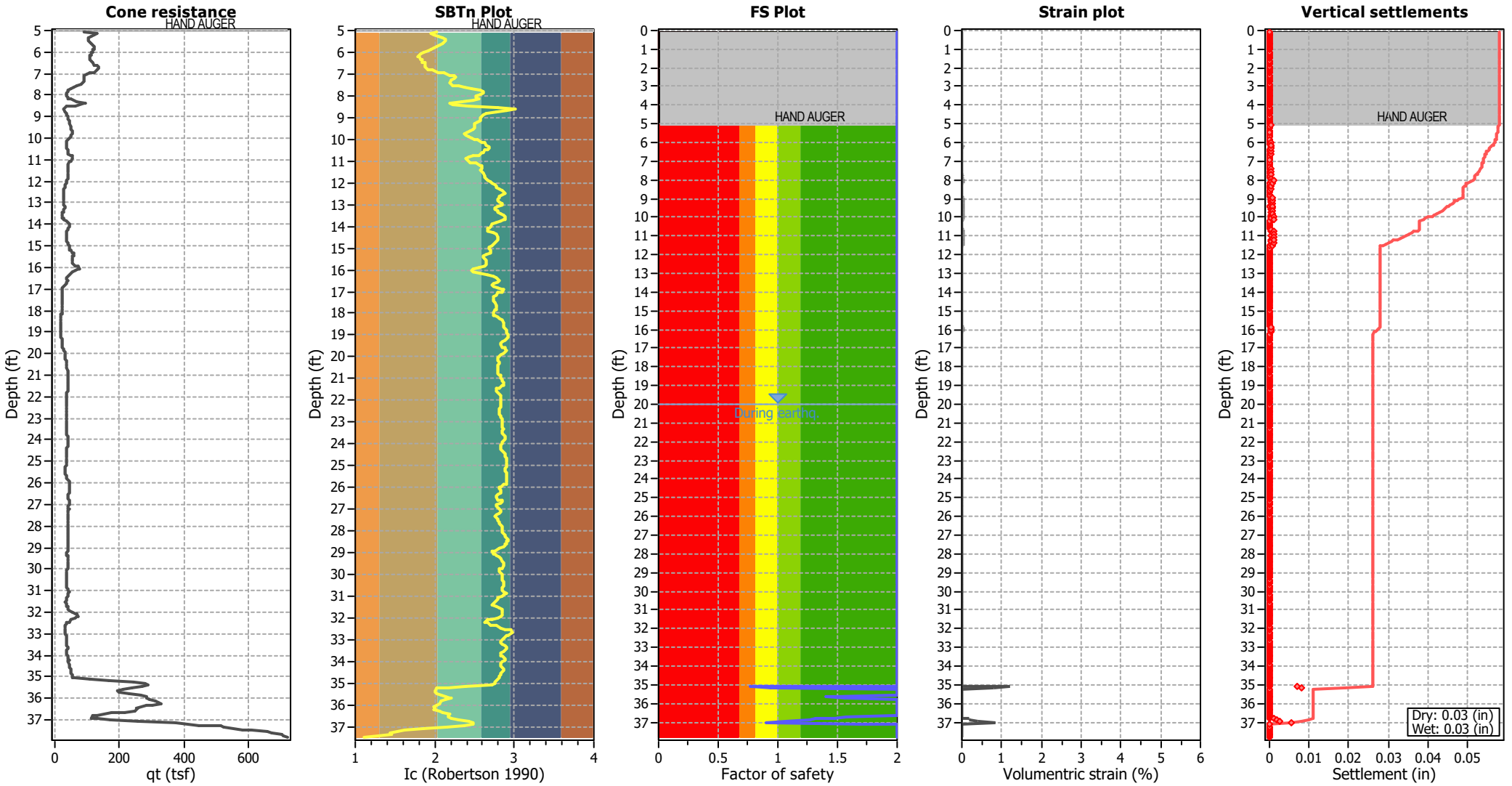
Overall liquefaction potential: 0.03

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (ft)
LPI: Liquefaction potential index value for test point

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

:: Post-earthquake settlement of dry sands ::

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
0.09	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.13	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.22	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.27	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.36	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.41	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.51	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.54	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.60	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.69	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.73	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.82	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.86	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.95	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
0.98	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.05	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.14	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.19	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.28	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.32	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.38	-1.00	-1.00	1.00	-1.00	0	0	0.37	0.000	0.00	0.00	0.00	0.000
1.47	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.51	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.61	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.64	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.71	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.79	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.84	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.92	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
1.98	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.04	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.12	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.17	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.26	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.31	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.41	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.44	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.52	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.59	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.67	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.72	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.77	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.86	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.90	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
2.99	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.04	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.09	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.17	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
3.22	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.28	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.36	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.46	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.50	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.55	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.63	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.68	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.77	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.82	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.90	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
3.95	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.00	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.10	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.14	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.20	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.29	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.33	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.42	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.48	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.56	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.59	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.67	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.75	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.80	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.88	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
4.92	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
5.00	-1.00	-1.00	1.00	-1.00	0	0	0.36	0.000	0.00	0.00	0.00	0.000
5.07	2.03	144.90	1.33	193.38	41	1062	0.36	0.038	0.02	5.05	0.01	0.000
5.17	1.94	209.64	1.27	265.29	54	1376	0.36	0.023	0.01	5.05	0.00	0.000
5.22	2.00	192.99	1.30	251.59	52	1353	0.36	0.024	0.01	5.05	0.00	0.000
5.26	2.05	179.08	1.35	242.19	51	1341	0.36	0.025	0.01	5.05	0.00	0.000
5.34	2.10	168.25	1.41	237.97	51	1341	0.36	0.025	0.01	5.05	0.00	0.000
5.40	2.13	164.30	1.46	240.37	53	1362	0.36	0.025	0.01	5.05	0.00	0.000
5.49	2.13	166.37	1.47	245.22	54	1390	0.36	0.024	0.01	5.05	0.00	0.000
5.54	2.12	172.04	1.46	250.65	55	1420	0.36	0.024	0.01	5.05	0.00	0.000
5.58	2.09	180.11	1.41	254.13	55	1432	0.36	0.024	0.01	5.05	0.00	0.000
5.67	2.06	188.49	1.36	257.01	55	1430	0.36	0.024	0.01	5.05	0.00	0.000
5.72	2.02	193.83	1.32	256.31	54	1397	0.36	0.026	0.01	5.05	0.00	0.000
5.81	1.98	195.21	1.29	252.55	52	1347	0.36	0.028	0.01	5.05	0.01	0.000
5.86	1.95	192.75	1.27	244.71	50	1275	0.36	0.032	0.01	5.05	0.01	0.000
5.92	1.91	190.57	1.24	236.64	48	1195	0.36	0.037	0.01	5.05	0.01	0.000
6.00	1.86	187.92	1.21	227.59	45	1114	0.36	0.045	0.02	5.05	0.01	0.000
6.04	1.82	184.32	1.17	216.51	42	1036	0.36	0.055	0.02	5.05	0.01	0.000
6.13	1.80	179.89	1.16	207.81	40	987	0.36	0.065	0.03	5.05	0.02	0.000
6.18	1.79	176.74	1.15	202.57	39	960	0.36	0.072	0.03	5.05	0.02	0.000
6.24	1.81	174.30	1.17	203.51	40	971	0.36	0.070	0.03	5.05	0.02	0.000
6.32	1.83	174.99	1.18	206.97	40	994	0.36	0.067	0.03	5.05	0.02	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
6.37	1.85	177.06	1.20	212.41	42	1031	0.36	0.061	0.03	5.05	0.02	0.000
6.46	1.85	183.78	1.20	220.45	43	1070	0.36	0.057	0.02	5.05	0.01	0.000
6.51	1.87	186.53	1.22	227.23	45	1120	0.36	0.051	0.02	5.05	0.01	0.000
6.60	1.87	196.08	1.22	238.90	47	1177	0.36	0.046	0.02	5.05	0.01	0.000
6.64	1.87	206.85	1.22	252.18	50	1244	0.36	0.041	0.01	5.05	0.01	0.000
6.70	1.87	219.10	1.22	266.80	53	1314	0.36	0.037	0.01	5.05	0.01	0.000
6.78	1.91	219.54	1.24	272.56	55	1376	0.36	0.034	0.01	5.05	0.01	0.000
6.84	1.97	209.70	1.28	269.05	55	1421	0.36	0.032	0.01	5.05	0.01	0.000
6.93	2.04	195.28	1.34	261.59	55	1440	0.36	0.032	0.01	5.05	0.01	0.000
6.97	2.12	175.75	1.45	254.94	56	1443	0.36	0.032	0.01	5.05	0.01	0.000
7.06	2.19	158.22	1.60	253.35	57	1428	0.36	0.033	0.01	5.05	0.01	0.000
7.11	2.25	145.92	1.75	254.96	59	1409	0.36	0.035	0.01	5.05	0.01	0.000
7.16	2.26	141.36	1.78	251.51	58	1382	0.36	0.036	0.01	5.05	0.01	0.000
7.23	2.24	141.30	1.73	245.09	56	1357	0.36	0.039	0.01	5.05	0.01	0.000
7.29	2.22	142.68	1.66	236.23	54	1323	0.36	0.041	0.01	5.05	0.01	0.000
7.39	2.19	143.52	1.60	229.26	52	1292	0.36	0.045	0.01	5.05	0.01	0.000
7.44	2.19	138.84	1.60	221.64	50	1250	0.36	0.049	0.02	5.05	0.01	0.000
7.52	2.23	126.79	1.70	214.91	49	1197	0.36	0.055	0.02	5.05	0.01	0.000
7.57	2.29	110.72	1.89	209.78	49	1130	0.36	0.065	0.02	5.05	0.01	0.000
7.62	2.38	93.21	2.26	210.60	51	1060	0.36	0.079	0.03	5.05	0.02	0.000
7.69	2.47	78.54	2.76	216.78	55	1000	0.36	0.096	0.03	5.05	0.02	0.000
7.75	2.56	66.13	3.46	228.61	61	953	0.36	0.115	0.03	5.05	0.02	0.000
7.81	2.60	61.07	3.79	231.47	0	0	0.36	0.000	0.00	0.00	0.00	0.000
7.90	2.61	59.17	3.83	226.89	0	0	0.36	0.000	0.00	0.00	0.00	0.000
7.95	2.57	60.00	3.46	207.77	55	865	0.36	0.172	0.05	5.05	0.03	0.000
8.04	2.52	60.54	3.12	188.84	49	825	0.36	0.214	0.07	5.05	0.04	0.001
8.08	2.52	61.56	3.09	189.95	49	834	0.36	0.207	0.07	5.05	0.04	0.000
8.17	2.56	62.37	3.44	214.31	57	896	0.36	0.160	0.05	5.05	0.03	0.001
8.20	2.48	80.92	2.84	229.65	59	1047	0.36	0.094	0.03	5.05	0.02	0.000
8.31	2.34	108.41	2.08	225.28	54	1195	0.36	0.066	0.02	5.05	0.01	0.000
8.36	2.19	141.51	1.58	224.06	50	1336	0.36	0.050	0.02	5.05	0.01	0.000
8.40	2.23	136.00	1.68	228.60	52	1342	0.36	0.050	0.02	5.05	0.01	0.000
8.49	2.42	102.45	2.49	255.41	63	1253	0.36	0.060	0.02	5.05	0.01	0.000
8.54	2.79	57.66	5.77	332.64	0	0	0.36	0.000	0.00	0.00	0.00	0.000
8.63	3.02	40.01	9.13	365.13	0	0	0.36	0.000	0.00	0.00	0.00	0.000
8.67	2.91	44.62	7.29	325.19	0	0	0.36	0.000	0.00	0.00	0.00	0.000
8.77	2.78	48.07	5.62	270.02	0	0	0.36	0.000	0.00	0.00	0.00	0.000
8.81	2.65	50.89	4.24	215.53	0	0	0.36	0.000	0.00	0.00	0.00	0.000
8.87	2.60	53.78	3.78	203.09	0	0	0.36	0.000	0.00	0.00	0.00	0.000
8.95	2.58	56.87	3.61	205.35	55	860	0.36	0.230	0.07	5.05	0.04	0.001
9.00	2.58	59.94	3.60	215.50	58	909	0.36	0.187	0.05	5.05	0.03	0.000
9.09	2.58	61.40	3.60	221.13	59	939	0.36	0.169	0.05	5.05	0.03	0.001
9.14	2.57	63.01	3.52	221.49	59	957	0.36	0.159	0.04	5.05	0.03	0.000
9.19	2.54	65.73	3.26	214.16	56	967	0.36	0.155	0.04	5.05	0.03	0.000
9.28	2.51	68.65	3.03	208.33	54	984	0.36	0.148	0.05	5.05	0.03	0.001
9.32	2.50	69.32	3.01	208.81	54	994	0.36	0.144	0.04	5.05	0.03	0.000
9.43	2.50	69.62	2.99	208.36	54	1004	0.36	0.143	0.04	5.05	0.03	0.001
9.45	2.49	70.50	2.92	205.92	53	1007	0.36	0.142	0.04	5.05	0.03	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
9.54	2.48	71.12	2.83	201.43	51	1008	0.36	0.144	0.05	5.05	0.03	0.001
9.59	2.44	74.22	2.57	191.10	48	1009	0.36	0.145	0.05	5.05	0.03	0.000
9.67	2.40	76.31	2.39	182.41	45	1007	0.36	0.149	0.06	5.05	0.03	0.001
9.72	2.38	77.93	2.25	175.44	43	1002	0.36	0.153	0.06	5.05	0.04	0.000
9.81	2.39	74.72	2.35	175.28	43	988	0.36	0.165	0.07	5.05	0.04	0.001
9.86	2.43	70.10	2.54	177.76	44	966	0.36	0.180	0.07	5.05	0.04	0.000
9.95	2.45	66.63	2.68	178.86	45	951	0.36	0.196	0.07	5.05	0.05	0.001
10.00	2.49	62.02	2.93	181.79	47	927	0.36	0.219	0.08	5.05	0.05	0.001
10.04	2.53	57.94	3.22	186.73	49	909	0.36	0.239	0.08	5.05	0.05	0.001
10.13	2.59	53.24	3.65	194.19	52	892	0.36	0.263	0.08	5.05	0.05	0.001
10.18	2.63	50.35	4.02	202.47	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.28	2.65	48.94	4.23	207.14	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.32	2.68	47.56	4.49	213.37	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.41	2.68	48.07	4.48	215.33	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.46	2.67	49.46	4.36	215.54	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.51	2.63	52.56	3.97	208.92	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.60	2.61	53.23	3.83	203.99	0	0	0.36	0.000	0.00	0.00	0.00	0.000
10.64	2.58	54.77	3.62	198.45	53	951	0.36	0.227	0.07	5.05	0.04	0.000
10.73	2.56	56.75	3.41	193.73	51	964	0.36	0.219	0.07	5.05	0.04	0.001
10.78	2.49	63.25	2.88	182.21	47	992	0.36	0.198	0.07	5.05	0.04	0.000
10.83	2.43	68.61	2.53	173.44	43	1012	0.36	0.185	0.07	5.05	0.05	0.001
10.92	2.39	72.22	2.33	167.92	41	1027	0.36	0.178	0.08	5.05	0.05	0.001
10.96	2.40	70.54	2.40	169.29	42	1023	0.36	0.183	0.08	5.05	0.05	0.001
11.05	2.45	65.66	2.65	174.06	44	1007	0.36	0.197	0.08	5.05	0.05	0.001
11.10	2.51	59.42	3.06	182.07	47	982	0.36	0.219	0.08	5.05	0.05	0.001
11.19	2.57	54.59	3.47	189.40	50	965	0.36	0.239	0.08	5.05	0.05	0.001
11.24	2.60	52.11	3.73	194.62	53	959	0.36	0.248	0.08	5.05	0.05	0.001
11.29	2.60	52.31	3.73	195.35	53	966	0.36	0.243	0.08	5.05	0.05	0.001
11.38	2.59	53.35	3.63	193.52	52	977	0.36	0.236	0.08	5.05	0.05	0.001
11.43	2.58	54.02	3.56	192.34	51	983	0.36	0.232	0.07	5.05	0.05	0.001
11.50	2.59	53.52	3.64	194.86	52	990	0.36	0.229	0.07	5.05	0.04	0.001
11.56	2.61	52.78	3.86	203.75	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.66	2.63	52.31	4.05	211.90	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.68	2.64	53.15	4.08	216.85	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.76	2.63	53.41	4.03	215.28	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.84	2.64	52.14	4.13	215.53	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.90	2.66	49.94	4.35	217.22	0	0	0.36	0.000	0.00	0.00	0.00	0.000
11.95	2.70	47.30	4.70	222.23	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.01	2.73	45.41	4.98	226.19	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.09	2.75	43.49	5.24	228.04	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.17	2.77	41.47	5.46	226.34	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.22	2.78	39.48	5.58	220.38	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.29	2.80	36.64	5.91	216.47	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.35	2.84	33.73	6.35	214.15	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.45	2.87	31.46	6.81	214.20	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.47	2.88	30.71	6.85	210.42	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.54	2.85	31.15	6.49	202.10	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.63	2.82	31.78	6.10	193.97	0	0	0.36	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
12.68	2.81	32.15	5.92	190.40	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.74	2.79	32.66	5.79	189.11	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.81	2.79	33.04	5.70	188.18	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.87	2.81	31.97	5.97	190.79	0	0	0.36	0.000	0.00	0.00	0.00	0.000
12.96	2.85	30.04	6.50	195.38	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.00	2.84	30.49	6.42	195.76	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.08	2.79	33.53	5.70	191.15	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.14	2.75	35.48	5.29	187.55	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.23	2.76	34.84	5.37	187.14	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.28	2.79	32.82	5.71	187.38	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.33	2.80	31.48	5.84	183.86	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.42	2.83	29.00	6.27	181.84	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.46	2.86	27.10	6.63	179.75	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.54	2.88	25.84	6.98	180.30	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.60	2.89	25.84	7.04	181.84	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.69	2.89	26.03	7.08	184.39	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.72	2.87	28.06	6.76	189.81	0	0	0.36	0.000	0.00	0.00	0.00	0.000
13.79	2.83	31.57	6.22	196.29	0	0	0.35	0.000	0.00	0.00	0.00	0.000
13.85	2.77	37.33	5.51	205.75	0	0	0.35	0.000	0.00	0.00	0.00	0.000
13.92	2.72	43.30	4.97	215.04	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.01	2.69	48.07	4.64	222.99	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.06	2.69	50.30	4.56	229.50	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.11	2.66	49.06	4.28	210.14	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.20	2.66	45.24	4.32	195.61	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.25	2.67	41.13	4.40	180.81	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.31	2.73	38.44	5.08	195.10	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.38	2.77	37.65	5.44	204.95	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.48	2.78	37.36	5.66	211.58	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.50	2.80	37.37	5.81	217.19	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.58	2.80	37.77	5.82	219.77	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.63	2.79	38.44	5.71	219.48	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.72	2.78	38.87	5.58	216.97	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.77	2.76	39.20	5.41	212.18	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.84	2.74	40.17	5.19	208.42	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.90	2.71	42.34	4.83	204.66	0	0	0.35	0.000	0.00	0.00	0.00	0.000
14.99	2.69	44.81	4.55	203.98	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.04	2.68	46.80	4.50	210.82	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.13	2.69	47.53	4.64	220.53	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.18	2.71	47.78	4.81	229.81	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.22	2.69	49.82	4.64	231.14	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.31	2.65	53.70	4.24	227.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.36	2.62	57.69	3.89	224.50	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.44	2.61	58.41	3.82	223.26	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.50	2.63	56.39	3.99	225.22	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.57	2.64	54.68	4.14	226.29	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.64	2.65	53.77	4.20	225.87	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.69	2.65	53.31	4.19	223.44	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.77	2.65	52.13	4.25	221.68	0	0	0.35	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
15.82	2.62	54.61	3.95	215.68	0	0	0.35	0.000	0.00	0.00	0.00	0.000
15.91	2.56	60.57	3.41	206.54	55	1397	0.35	0.134	0.04	5.05	0.02	0.001
15.96	2.48	69.91	2.85	199.00	51	1466	0.35	0.117	0.04	5.05	0.02	0.000
16.05	2.46	74.17	2.70	200.32	51	1518	0.35	0.107	0.04	5.05	0.02	0.000
16.10	2.49	72.37	2.89	209.21	54	1541	0.35	0.103	0.03	5.05	0.02	0.000
16.14	2.58	62.87	3.58	224.91	60	1506	0.35	0.110	0.03	5.05	0.02	0.000
16.24	2.67	53.71	4.41	237.07	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.28	2.74	46.56	5.12	238.38	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.38	2.77	42.36	5.45	230.89	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.42	2.80	38.00	5.83	221.64	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.50	2.80	36.13	5.89	212.77	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.56	2.79	35.48	5.70	202.06	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.61	2.74	36.50	5.11	186.61	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.70	2.73	35.04	4.98	174.40	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.74	2.74	31.95	5.09	162.66	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.83	2.79	27.44	5.79	158.86	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.88	2.86	23.37	6.57	153.58	0	0	0.35	0.000	0.00	0.00	0.00	0.000
16.93	2.86	20.97	6.68	140.11	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.00	2.84	19.49	6.42	125.06	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.06	2.80	19.05	5.80	110.52	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.16	2.77	19.26	5.53	106.56	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.21	2.74	19.65	5.19	102.09	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.26	2.73	19.81	5.07	100.44	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.35	2.73	19.85	5.03	99.87	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.40	2.74	19.78	5.10	100.94	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.46	2.74	19.58	5.19	101.65	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.53	2.76	19.24	5.34	102.72	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.62	2.77	18.96	5.46	103.48	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.67	2.77	18.87	5.55	104.62	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.72	2.78	19.13	5.56	106.35	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.81	2.77	19.39	5.51	106.91	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.85	2.76	19.60	5.37	105.26	0	0	0.35	0.000	0.00	0.00	0.00	0.000
17.95	2.75	19.56	5.21	101.90	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.00	2.74	19.34	5.10	98.66	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.09	2.74	18.80	5.20	97.69	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.14	2.77	18.05	5.43	97.99	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.18	2.79	17.20	5.77	99.16	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.27	2.82	16.45	6.08	99.98	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.32	2.84	15.84	6.42	101.69	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.41	2.86	15.46	6.66	103.03	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.46	2.87	15.27	6.80	103.82	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.54	2.87	15.24	6.78	103.30	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.60	2.87	15.21	6.77	102.94	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.64	2.87	15.18	6.81	103.39	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.72	2.89	14.93	7.00	104.49	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.77	2.90	14.77	7.16	105.71	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.84	2.91	14.61	7.32	106.94	0	0	0.36	0.000	0.00	0.00	0.00	0.000
18.91	2.91	14.64	7.36	107.72	0	0	0.36	0.000	0.00	0.00	0.00	0.000

:: Post-earthquake settlement of dry sands :: (continued)

Depth (ft)	Ic	Q_{tn}	Kc	$Q_{tn,cs}$	$N_{1,60}$ (blows)	G_{max} (tsf)	CSR	Shear, γ (%)	$e_{vol(15)}$ (%)	N_c	e_v (%)	Settle. (in)
18.96	2.92	14.68	7.50	110.11	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.05	2.93	14.75	7.63	112.57	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.10	2.93	15.02	7.63	114.62	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.18	2.91	15.47	7.35	113.77	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.24	2.88	16.40	6.85	112.37	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.29	2.84	17.47	6.43	112.29	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.37	2.82	18.39	6.14	112.95	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.43	2.83	18.52	6.27	116.23	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.54	2.85	18.47	6.50	120.01	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.58	2.88	18.59	6.88	127.86	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.67	2.89	19.07	7.07	134.75	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.71	2.90	19.67	7.15	140.76	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.77	2.88	20.54	6.97	143.25	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.82	2.86	22.02	6.61	145.47	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.91	2.83	23.64	6.25	147.82	0	0	0.36	0.000	0.00	0.00	0.00	0.000
19.95	2.81	25.20	5.95	149.84	0	0	0.36	0.000	0.00	0.00	0.00	0.000

Total estimated settlement: 0.03

Abbreviations

Q_{tn}: Equivalent clean sand normalized cone resistance
K_c: Fines correction factor
$Q_{tn,cs}$: Post-liquefaction volumentric strain
G_{max}: Small strain shear modulus
CSR: Soil cyclic stress ratio
γ: Cyclic shear strain
$e_{vol(15)}$: Volumetric strain after 15 cycles
N_c: Equivalent number of cycles
e_v: Volumetric strain
Settle.: Calculated settlement

:: Post-earthquake settlement due to soil liquefaction ::

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
20.04	150.70	2.00	0.00	1.00	0.00	20.09	152.16	2.00	0.00	1.00	0.00
20.17	154.81	2.00	0.00	1.00	0.00	20.23	157.52	2.00	0.00	1.00	0.00
20.32	158.94	2.00	0.00	1.00	0.00	20.37	160.16	2.00	0.00	1.00	0.00
20.41	161.96	2.00	0.00	1.00	0.00	20.50	163.88	2.00	0.00	1.00	0.00
20.55	166.52	2.00	0.00	1.00	0.00	20.64	168.70	2.00	0.00	1.00	0.00
20.69	172.38	2.00	0.00	1.00	0.00	20.78	176.29	2.00	0.00	1.00	0.00
20.83	181.53	2.00	0.00	1.00	0.00	20.87	188.51	2.00	0.00	1.00	0.00
20.96	194.62	2.00	0.00	1.00	0.00	21.01	200.47	2.00	0.00	1.00	0.00
21.09	203.80	2.00	0.00	1.00	0.00	21.13	207.82	2.00	0.00	1.00	0.00
21.20	210.87	2.00	0.00	1.00	0.00	21.29	212.23	2.00	0.00	1.00	0.00
21.33	201.70	2.00	0.00	1.00	0.00	21.42	186.78	2.00	0.00	1.00	0.00
21.47	174.68	2.00	0.00	1.00	0.00	21.56	174.65	2.00	0.00	1.00	0.00
21.61	178.14	2.00	0.00	1.00	0.00	21.66	177.99	2.00	0.00	1.00	0.00
21.73	177.02	2.00	0.00	1.00	0.00	21.80	176.06	2.00	0.00	1.00	0.00
21.89	174.84	2.00	0.00	1.00	0.00	21.94	172.56	2.00	0.00	1.00	0.00
21.98	168.74	2.00	0.00	1.00	0.00	22.07	164.65	2.00	0.00	1.00	0.00
22.12	159.75	2.00	0.00	1.00	0.00	22.21	156.02	2.00	0.00	1.00	0.00
22.26	153.74	2.00	0.00	1.00	0.00	22.33	153.09	2.00	0.00	1.00	0.00
22.40	152.07	2.00	0.00	1.00	0.00	22.44	150.80	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
22.54	150.13	2.00	0.00	1.00	0.00	22.59	150.44	2.00	0.00	1.00	0.00
22.67	151.33	2.00	0.00	1.00	0.00	22.72	153.44	2.00	0.00	1.00	0.00
22.79	156.20	2.00	0.00	1.00	0.00	22.84	158.44	2.00	0.00	1.00	0.00
22.91	159.16	2.00	0.00	1.00	0.00	23.00	158.38	2.00	0.00	1.00	0.00
23.04	157.64	2.00	0.00	1.00	0.00	23.13	156.90	2.00	0.00	1.00	0.00
23.18	156.01	2.00	0.00	1.00	0.00	23.23	157.29	2.00	0.00	1.00	0.00
23.31	160.13	2.00	0.00	1.00	0.00	23.36	162.60	2.00	0.00	1.00	0.00
23.46	163.28	2.00	0.00	1.00	0.00	23.50	164.63	2.00	0.00	1.00	0.00
23.60	168.13	2.00	0.00	1.00	0.00	23.64	173.80	2.00	0.00	1.00	0.00
23.72	178.31	2.00	0.00	1.00	0.00	23.78	181.77	2.00	0.00	1.00	0.00
23.84	183.65	2.00	0.00	1.00	0.00	23.92	184.43	2.00	0.00	1.00	0.00
23.97	184.62	2.00	0.00	1.00	0.00	24.06	183.47	2.00	0.00	1.00	0.00
24.11	180.77	2.00	0.00	1.00	0.00	24.15	172.92	2.00	0.00	1.00	0.00
24.23	167.90	2.00	0.00	1.00	0.00	24.29	166.72	2.00	0.00	1.00	0.00
24.38	170.54	2.00	0.00	1.00	0.00	24.43	170.88	2.00	0.00	1.00	0.00
24.49	169.19	2.00	0.00	1.00	0.00	24.57	168.15	2.00	0.00	1.00	0.00
24.62	168.45	2.00	0.00	1.00	0.00	24.68	167.55	2.00	0.00	1.00	0.00
24.75	164.90	2.00	0.00	1.00	0.00	24.81	161.41	2.00	0.00	1.00	0.00
24.90	159.06	2.00	0.00	1.00	0.00	24.94	158.62	2.00	0.00	1.00	0.00
25.04	157.97	2.00	0.00	1.00	0.00	25.08	156.23	2.00	0.00	1.00	0.00
25.18	154.07	2.00	0.00	1.00	0.00	25.22	152.53	2.00	0.00	1.00	0.00
25.27	152.30	2.00	0.00	1.00	0.00	25.34	152.54	2.00	0.00	1.00	0.00
25.40	152.96	2.00	0.00	1.00	0.00	25.48	153.15	2.00	0.00	1.00	0.00
25.55	153.27	2.00	0.00	1.00	0.00	25.59	154.15	2.00	0.00	1.00	0.00
25.67	157.98	2.00	0.00	1.00	0.00	25.73	165.00	2.00	0.00	1.00	0.00
25.82	171.34	2.00	0.00	1.00	0.00	25.85	175.42	2.00	0.00	1.00	0.00
25.95	175.92	2.00	0.00	1.00	0.00	26.00	176.53	2.00	0.00	1.00	0.00
26.05	178.54	2.00	0.00	1.00	0.00	26.14	180.67	2.00	0.00	1.00	0.00
26.19	179.18	2.00	0.00	1.00	0.00	26.28	171.34	2.00	0.00	1.00	0.00
26.33	160.02	2.00	0.00	1.00	0.00	26.41	152.44	2.00	0.00	1.00	0.00
26.46	152.42	2.00	0.00	1.00	0.00	26.56	155.45	2.00	0.00	1.00	0.00
26.59	161.33	2.00	0.00	1.00	0.00	26.64	161.54	2.00	0.00	1.00	0.00
26.72	161.51	2.00	0.00	1.00	0.00	26.78	157.78	2.00	0.00	1.00	0.00
26.87	157.57	2.00	0.00	1.00	0.00	26.92	158.64	2.00	0.00	1.00	0.00
27.01	160.15	2.00	0.00	1.00	0.00	27.05	161.39	2.00	0.00	1.00	0.00
27.10	160.31	2.00	0.00	1.00	0.00	27.18	155.18	2.00	0.00	1.00	0.00
27.24	147.45	2.00	0.00	1.00	0.00	27.30	140.81	2.00	0.00	1.00	0.00
27.38	138.50	2.00	0.00	1.00	0.00	27.47	138.75	2.00	0.00	1.00	0.00
27.52	139.16	2.00	0.00	1.00	0.00	27.56	141.91	2.00	0.00	1.00	0.00
27.65	146.10	2.00	0.00	1.00	0.00	27.70	151.03	2.00	0.00	1.00	0.00
27.80	153.67	2.00	0.00	1.00	0.00	27.84	156.06	2.00	0.00	1.00	0.00
27.92	157.43	2.00	0.00	1.00	0.00	27.98	158.07	2.00	0.00	1.00	0.00
28.03	158.67	2.00	0.00	1.00	0.00	28.12	159.68	2.00	0.00	1.00	0.00
28.16	160.96	2.00	0.00	1.00	0.00	28.25	161.95	2.00	0.00	1.00	0.00
28.30	164.76	2.00	0.00	1.00	0.00	28.39	167.42	2.00	0.00	1.00	0.00
28.43	169.08	2.00	0.00	1.00	0.00	28.49	168.13	2.00	0.00	1.00	0.00
28.57	166.30	2.00	0.00	1.00	0.00	28.62	163.49	2.00	0.00	1.00	0.00
28.68	160.32	2.00	0.00	1.00	0.00	28.76	154.83	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
28.81	139.45	2.00	0.00	1.00	0.00	28.90	125.57	2.00	0.00	1.00	0.00
28.95	116.38	2.00	0.00	1.00	0.00	29.04	120.06	2.00	0.00	1.00	0.00
29.08	123.10	2.00	0.00	1.00	0.00	29.16	125.59	2.00	0.00	1.00	0.00
29.22	129.19	2.00	0.00	1.00	0.00	29.28	134.85	2.00	0.00	1.00	0.00
29.38	139.65	2.00	0.00	1.00	0.00	29.40	143.78	2.00	0.00	1.00	0.00
29.46	148.23	2.00	0.00	1.00	0.00	29.56	152.27	2.00	0.00	1.00	0.00
29.59	154.58	2.00	0.00	1.00	0.00	29.70	151.71	2.00	0.00	1.00	0.00
29.74	145.95	2.00	0.00	1.00	0.00	29.79	141.01	2.00	0.00	1.00	0.00
29.87	138.36	2.00	0.00	1.00	0.00	29.93	138.13	2.00	0.00	1.00	0.00
30.01	136.83	2.00	0.00	1.00	0.00	30.07	133.48	2.00	0.00	1.00	0.00
30.15	130.08	2.00	0.00	1.00	0.00	30.20	127.75	2.00	0.00	1.00	0.00
30.27	127.55	2.00	0.00	1.00	0.00	30.34	127.24	2.00	0.00	1.00	0.00
30.38	126.40	2.00	0.00	1.00	0.00	30.46	126.05	2.00	0.00	1.00	0.00
30.53	126.36	2.00	0.00	1.00	0.00	30.62	127.05	2.00	0.00	1.00	0.00
30.66	126.34	2.00	0.00	1.00	0.00	30.71	129.04	2.00	0.00	1.00	0.00
30.80	133.35	2.00	0.00	1.00	0.00	30.84	140.35	2.00	0.00	1.00	0.00
30.92	142.39	2.00	0.00	1.00	0.00	30.98	141.39	2.00	0.00	1.00	0.00
31.07	137.20	2.00	0.00	1.00	0.00	31.11	132.57	2.00	0.00	1.00	0.00
31.18	126.10	2.00	0.00	1.00	0.00	31.26	113.56	2.00	0.00	1.00	0.00
31.30	101.99	2.00	0.00	1.00	0.00	31.38	95.56	2.00	0.00	1.00	0.00
31.44	100.82	2.00	0.00	1.00	0.00	31.54	108.21	2.00	0.00	1.00	0.00
31.59	115.14	2.00	0.00	1.00	0.00	31.67	119.77	2.00	0.00	1.00	0.00
31.72	124.33	2.00	0.00	1.00	0.00	31.77	131.15	2.00	0.00	1.00	0.00
31.86	140.92	2.00	0.00	1.00	0.00	31.91	155.10	2.00	0.00	1.00	0.00
32.00	164.50	2.00	0.00	1.00	0.00	32.05	167.61	2.00	0.00	1.00	0.00
32.09	164.86	2.00	0.00	1.00	0.00	32.18	162.74	2.00	0.00	1.00	0.00
32.23	163.30	2.00	0.00	1.00	0.00	32.30	161.50	2.00	0.00	1.00	0.00
32.36	154.78	2.00	0.00	1.00	0.00	32.45	145.42	2.00	0.00	1.00	0.00
32.50	138.05	2.00	0.00	1.00	0.00	32.55	132.29	2.00	0.00	1.00	0.00
32.64	128.81	2.00	0.00	1.00	0.00	32.69	122.16	2.00	0.00	1.00	0.00
32.78	119.06	2.00	0.00	1.00	0.00	32.83	115.67	2.00	0.00	1.00	0.00
32.88	114.82	2.00	0.00	1.00	0.00	32.96	113.23	2.00	0.00	1.00	0.00
33.01	111.20	2.00	0.00	1.00	0.00	33.09	110.97	2.00	0.00	1.00	0.00
33.14	113.83	2.00	0.00	1.00	0.00	33.20	119.12	2.00	0.00	1.00	0.00
33.28	123.78	2.00	0.00	1.00	0.00	33.34	126.52	2.00	0.00	1.00	0.00
33.43	127.73	2.00	0.00	1.00	0.00	33.47	128.10	2.00	0.00	1.00	0.00
33.57	127.45	2.00	0.00	1.00	0.00	33.60	126.44	2.00	0.00	1.00	0.00
33.70	126.20	2.00	0.00	1.00	0.00	33.74	126.79	2.00	0.00	1.00	0.00
33.79	129.06	2.00	0.00	1.00	0.00	33.88	131.42	2.00	0.00	1.00	0.00
33.93	133.14	2.00	0.00	1.00	0.00	34.01	132.41	2.00	0.00	1.00	0.00
34.07	133.18	2.00	0.00	1.00	0.00	34.16	135.04	2.00	0.00	1.00	0.00
34.20	138.51	2.00	0.00	1.00	0.00	34.25	142.34	2.00	0.00	1.00	0.00
34.33	145.51	2.00	0.00	1.00	0.00	34.41	147.77	2.00	0.00	1.00	0.00
34.46	148.28	2.00	0.00	1.00	0.00	34.52	149.16	2.00	0.00	1.00	0.00
34.60	150.06	2.00	0.00	1.00	0.00	34.66	151.25	2.00	0.00	1.00	0.00
34.73	150.78	2.00	0.00	1.00	0.00	34.78	148.52	2.00	0.00	1.00	0.00
34.87	146.47	2.00	0.00	1.00	0.00	34.92	148.23	2.00	0.00	1.00	0.00
35.01	152.93	2.00	0.00	1.00	0.00	35.06	155.90	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$Q_{tn,cs}$	FS	e_v (%)	DF	Settlement (in)
35.11	143.13	0.77	1.20	1.00	0.01	35.19	155.83	0.94	0.81	1.00	0.01
35.24	202.87	2.00	0.00	1.00	0.00	35.33	228.88	2.00	0.00	1.00	0.00
35.38	237.48	2.00	0.00	1.00	0.00	35.46	223.72	2.00	0.00	1.00	0.00
35.52	202.02	2.00	0.00	1.00	0.00	35.61	186.89	1.50	0.00	1.00	0.00
35.64	182.13	1.40	0.00	1.00	0.00	35.70	189.96	1.57	0.00	1.00	0.00
35.77	205.71	2.00	0.00	1.00	0.00	35.83	226.19	2.00	0.00	1.00	0.00
35.92	239.03	2.00	0.00	1.00	0.00	35.97	239.14	2.00	0.00	1.00	0.00
36.03	243.05	2.00	0.00	1.00	0.00	36.10	252.76	2.00	0.00	1.00	0.00
36.16	259.48	2.00	0.00	1.00	0.00	36.24	265.39	2.00	0.00	1.00	0.00
36.30	251.06	2.00	0.00	1.00	0.00	36.35	242.72	2.00	0.00	1.00	0.00
36.43	237.00	2.00	0.00	1.00	0.00	36.49	238.71	2.00	0.00	1.00	0.00
36.56	230.80	2.00	0.00	1.00	0.00	36.63	210.52	2.00	0.00	1.00	0.00
36.69	190.62	1.57	0.00	1.00	0.00	36.77	186.44	1.48	0.00	1.00	0.00
36.82	178.58	1.32	0.19	1.00	0.00	36.90	175.65	1.27	0.19	1.00	0.00
36.95	164.53	1.07	0.40	1.00	0.00	37.01	153.53	0.90	0.83	1.00	0.01
37.09	195.71	1.68	0.00	1.00	0.00	37.14	249.02	2.00	0.00	1.00	0.00
37.23	296.10	2.00	0.00	1.00	0.00	37.28	342.36	2.00	0.00	1.00	0.00
37.34	346.88	2.00	0.00	1.00	0.00	37.44	386.97	2.00	0.00	1.00	0.00
37.48	404.63	2.00	0.00	1.00	0.00	37.54	-1.00	2.00	0.00	1.00	0.00
37.62	-1.00	2.00	0.00	1.00	0.00	37.67	-1.00	2.00	0.00	1.00	0.00
37.76	-1.00	2.00	0.00	1.00	0.00	37.81	-1.00	2.00	0.00	1.00	0.00

Total estimated settlement: 0.03

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

:: Strength loss calculation (Robertson (2009) ::

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
0.09	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.13	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.22	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.27	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.36	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.41	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.51	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.54	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.60	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.69	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.73	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.82	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.86	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.95	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
0.98	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.05	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.14	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.19	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.28	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.32	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.38	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.47	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.51	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.61	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.64	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.71	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.79	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.84	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.92	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
1.98	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.04	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.12	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.17	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.26	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.31	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.41	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.44	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.52	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.59	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.67	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.72	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.77	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.86	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.90	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
2.99	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.04	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.09	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.17	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
3.22	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.28	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.36	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.46	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.50	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.55	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.63	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.68	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.77	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.82	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.90	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
3.95	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.00	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.10	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.14	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.20	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.29	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.33	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.42	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.48	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.56	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.59	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.67	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.75	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.80	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.88	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
4.92	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
5.00	0.00	-1.00	1.00	-1.00	-1.00	0.00	0.00
5.07	90.50	144.90	1.33	193.38	2.03	0.88	0.88
5.17	130.80	209.64	1.27	265.29	1.94	0.95	0.95
5.22	120.43	192.99	1.30	251.59	2.00	0.94	0.94
5.26	111.78	179.08	1.35	242.19	2.05	0.93	0.93
5.34	105.05	168.25	1.41	237.97	2.10	0.92	0.92
5.40	102.59	164.30	1.46	240.37	2.13	0.93	0.93
5.49	103.89	166.37	1.47	245.22	2.13	0.93	0.93
5.54	107.42	172.04	1.46	250.65	2.12	0.94	0.94
5.58	112.45	180.11	1.41	254.13	2.09	0.94	0.94
5.67	117.67	188.49	1.36	257.01	2.06	0.94	0.94
5.72	120.99	193.83	1.32	256.31	2.02	0.94	0.94
5.81	121.86	195.21	1.29	252.55	1.98	0.94	0.94
5.86	120.33	192.75	1.27	244.71	1.95	0.93	0.93
5.92	118.98	190.57	1.24	236.64	1.91	0.92	0.92
6.00	117.33	187.92	1.21	227.59	1.86	0.91	0.91
6.04	115.09	184.32	1.17	216.51	1.82	0.90	0.90
6.13	112.34	179.89	1.16	207.81	1.80	0.90	0.90
6.18	110.38	176.74	1.15	202.57	1.79	0.89	0.89
6.24	108.87	174.30	1.17	203.51	1.81	0.89	0.89
6.32	109.30	174.99	1.18	206.97	1.83	0.89	0.89

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
6.37	110.59	177.06	1.20	212.41	1.85	0.90	0.90
6.46	114.78	183.78	1.20	220.45	1.85	0.91	0.91
6.51	116.50	186.53	1.22	227.23	1.87	0.91	0.91
6.60	122.45	196.08	1.22	238.90	1.87	0.93	0.93
6.64	129.16	206.85	1.22	252.18	1.87	0.94	0.94
6.70	136.78	219.10	1.22	266.80	1.87	0.95	0.95
6.78	137.06	219.54	1.24	272.56	1.91	0.96	0.96
6.84	130.94	209.70	1.28	269.05	1.97	0.95	0.95
6.93	121.97	195.28	1.34	261.59	2.04	0.95	0.95
6.97	109.82	175.75	1.45	254.94	2.12	0.94	0.94
7.06	98.92	158.22	1.60	253.35	2.19	0.94	0.94
7.11	91.26	145.92	1.75	254.96	2.25	0.94	0.94
7.16	88.43	141.36	1.78	251.51	2.26	0.94	0.94
7.23	88.39	141.30	1.73	245.09	2.24	0.93	0.93
7.29	89.26	142.68	1.66	236.23	2.22	0.92	0.92
7.39	89.78	143.52	1.60	229.26	2.19	0.92	0.92
7.44	86.88	138.84	1.60	221.64	2.19	0.91	0.91
7.52	79.38	126.79	1.70	214.91	2.23	0.90	0.90
7.57	69.38	110.72	1.89	209.78	2.29	0.90	0.90
7.62	58.48	93.21	2.26	210.60	2.38	0.90	0.90
7.69	49.36	78.54	2.76	216.78	2.47	0.90	0.90
7.75	41.64	66.13	3.46	228.61	2.56	0.92	0.92
7.81	38.50	61.07	3.79	231.47	2.60	4.73	5.63
7.90	37.31	59.17	3.83	226.89	2.61	4.35	5.39
7.95	37.83	60.00	3.46	207.77	2.57	0.90	0.90
8.04	38.17	60.54	3.12	188.84	2.52	0.87	0.87
8.08	38.81	61.56	3.09	189.95	2.52	0.88	0.88
8.17	39.33	62.37	3.44	214.31	2.56	0.90	0.90
8.20	50.87	80.92	2.84	229.65	2.48	0.92	0.92
8.31	69.24	108.41	2.08	225.28	2.34	0.91	0.91
8.36	93.55	141.51	1.58	224.06	2.19	0.91	0.91
8.40	89.55	136.00	1.68	228.60	2.23	0.92	0.92
8.49	65.36	102.45	2.49	255.41	2.42	0.94	0.94
8.54	36.41	57.66	5.77	332.64	2.79	6.57	4.85
8.63	25.44	40.01	9.13	365.13	3.02	6.84	3.33
8.67	28.31	44.62	7.29	325.19	2.91	6.51	3.69
8.77	30.46	48.07	5.62	270.02	2.78	3.83	3.93
8.81	32.22	50.89	4.24	215.53	2.65	3.14	4.14
8.87	34.47	53.78	3.78	203.09	2.60	3.10	4.41
8.95	36.83	56.87	3.61	205.35	2.58	0.89	0.89
9.00	38.97	59.94	3.60	215.50	2.58	0.90	0.90
9.09	40.22	61.40	3.60	221.13	2.58	0.91	0.91
9.14	41.50	63.01	3.52	221.49	2.57	0.91	0.91
9.19	43.71	65.73	3.26	214.16	2.54	0.90	0.90
9.28	46.24	68.65	3.03	208.33	2.51	0.90	0.90
9.32	46.89	69.32	3.01	208.81	2.50	0.90	0.90
9.43	47.52	69.62	2.99	208.36	2.50	0.90	0.90
9.45	48.29	70.50	2.92	205.92	2.49	0.89	0.89

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
9.54	49.17	71.12	2.83	201.43	2.48	0.89	0.89
9.59	51.85	74.22	2.57	191.10	2.44	0.88	0.88
9.67	53.96	76.31	2.39	182.41	2.40	0.87	0.87
9.72	55.57	77.93	2.25	175.44	2.38	0.86	0.86
9.81	53.51	74.72	2.35	175.28	2.39	0.86	0.86
9.86	50.12	70.10	2.54	177.76	2.43	0.86	0.86
9.95	47.82	66.63	2.68	178.86	2.45	0.86	0.86
10.00	44.43	62.02	2.93	181.79	2.49	0.87	0.87
10.04	41.43	57.94	3.22	186.73	2.53	0.87	0.87
10.13	38.05	53.24	3.65	194.19	2.59	0.88	0.88
10.18	35.91	50.35	4.02	202.47	2.63	2.96	3.99
10.28	35.08	48.94	4.23	207.14	2.65	3.04	3.86
10.32	34.09	47.56	4.49	213.37	2.68	3.07	3.73
10.41	34.71	48.07	4.48	215.33	2.68	3.11	3.77
10.46	35.88	49.46	4.36	215.54	2.67	3.22	3.88
10.51	38.46	52.56	3.97	208.92	2.63	3.22	4.15
10.60	39.29	53.23	3.83	203.99	2.61	3.06	4.20
10.64	40.70	54.77	3.62	198.45	2.58	0.89	0.89
10.73	42.57	56.75	3.41	193.73	2.56	0.88	0.88
10.78	48.01	63.25	2.88	182.21	2.49	0.87	0.87
10.83	52.62	68.61	2.53	173.44	2.43	0.86	0.86
10.92	55.96	72.22	2.33	167.92	2.39	0.85	0.85
10.96	54.74	70.54	2.40	169.29	2.40	0.85	0.85
11.05	51.01	65.66	2.65	174.06	2.45	0.86	0.86
11.10	46.01	59.42	3.06	182.07	2.51	0.87	0.87
11.19	42.31	54.59	3.47	189.40	2.57	0.88	0.88
11.24	40.39	52.11	3.73	194.62	2.60	0.88	0.88
11.29	40.68	52.31	3.73	195.35	2.60	0.88	0.88
11.38	41.81	53.35	3.63	193.52	2.59	0.88	0.88
11.43	42.50	54.02	3.56	192.34	2.58	0.88	0.88
11.50	42.28	53.52	3.64	194.86	2.59	0.88	0.88
11.56	41.75	52.78	3.86	203.75	2.61	2.95	4.09
11.66	41.57	52.31	4.05	211.90	2.63	3.25	4.03
11.68	42.28	53.15	4.08	216.85	2.64	3.28	4.10
11.76	42.74	53.41	4.03	215.28	2.63	3.29	4.11
11.84	41.93	52.14	4.13	215.53	2.64	3.19	4.00
11.90	40.25	49.94	4.35	217.22	2.66	3.15	3.82
11.95	38.15	47.30	4.70	222.23	2.70	3.13	3.60
12.01	36.72	45.41	4.98	226.19	2.73	3.17	3.45
12.09	35.30	43.49	5.24	228.04	2.75	3.16	3.29
12.17	33.84	41.47	5.46	226.34	2.77	3.01	3.13
12.22	32.31	39.48	5.58	220.38	2.78	2.85	2.97
12.29	30.11	36.64	5.91	216.47	2.80	2.59	2.75
12.35	27.82	33.73	6.35	214.15	2.84	2.50	2.52
12.45	26.09	31.46	6.81	214.20	2.87	2.41	2.34
12.47	25.52	30.71	6.85	210.42	2.88	2.37	2.28
12.54	26.05	31.15	6.49	202.10	2.85	2.20	2.32
12.63	26.80	31.78	6.10	193.97	2.82	2.04	2.37

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
12.68	27.22	32.15	5.92	190.40	2.81	2.04	2.40
12.74	27.78	32.66	5.79	189.11	2.79	2.06	2.44
12.81	28.24	33.04	5.70	188.18	2.79	2.03	2.47
12.87	27.41	31.97	5.97	190.79	2.81	2.03	2.38
12.96	25.87	30.04	6.50	195.38	2.85	2.07	2.23
13.00	26.33	30.49	6.42	195.76	2.84	2.07	2.26
13.08	29.15	33.53	5.70	191.15	2.79	2.08	2.50
13.14	31.01	35.48	5.29	187.55	2.75	2.14	2.65
13.23	30.61	34.84	5.37	187.14	2.76	2.07	2.59
13.28	28.91	32.82	5.71	187.38	2.79	2.00	2.44
13.33	27.83	31.48	5.84	183.86	2.80	1.95	2.33
13.42	25.79	29.00	6.27	181.84	2.83	1.77	2.14
13.46	24.18	27.10	6.63	179.75	2.86	1.69	2.00
13.54	23.17	25.84	6.98	180.30	2.88	1.68	1.90
13.60	23.24	25.84	7.04	181.84	2.89	1.69	1.90
13.69	23.54	26.03	7.08	184.39	2.89	1.75	1.91
13.72	25.39	28.06	6.76	189.81	2.87	1.81	2.06
13.79	28.66	31.57	6.22	196.29	2.83	2.10	2.33
13.85	33.98	37.33	5.51	205.75	2.77	2.38	2.76
13.92	39.57	43.30	4.97	215.04	2.72	2.83	3.21
14.01	44.14	48.07	4.64	222.99	2.69	3.18	3.56
14.06	46.31	50.30	4.56	229.50	2.69	3.31	3.73
14.11	45.40	49.06	4.28	210.14	2.66	3.42	3.64
14.20	42.12	45.24	4.32	195.61	2.66	1.95	3.35
14.25	38.48	41.13	4.40	180.81	2.67	2.16	3.04
14.31	36.01	38.44	5.08	195.10	2.73	2.28	2.83
14.38	35.39	37.65	5.44	204.95	2.77	2.40	2.77
14.48	35.29	37.36	5.66	211.58	2.78	2.57	2.74
14.50	35.34	37.37	5.81	217.19	2.80	2.60	2.74
14.58	35.87	37.77	5.82	219.77	2.80	2.67	2.76
14.63	36.62	38.44	5.71	219.48	2.79	2.76	2.81
14.72	37.22	38.87	5.58	216.97	2.78	2.64	2.84
14.77	37.65	39.20	5.41	212.18	2.76	2.59	2.87
14.84	38.76	40.17	5.19	208.42	2.74	2.52	2.94
14.90	41.00	42.34	4.83	204.66	2.71	2.54	3.10
14.99	43.60	44.81	4.55	203.98	2.69	2.59	3.28
15.04	45.63	46.80	4.50	210.82	2.68	2.72	3.42
15.13	46.53	47.53	4.64	220.53	2.69	3.07	3.47
15.18	46.88	47.78	4.81	229.81	2.71	3.20	3.49
15.22	48.98	49.82	4.64	231.14	2.69	3.26	3.63
15.31	53.06	53.70	4.24	227.91	2.65	3.34	3.92
15.36	57.15	57.69	3.89	224.50	2.62	3.41	4.21
15.44	58.11	58.41	3.82	223.26	2.61	3.43	4.26
15.50	56.27	56.39	3.99	225.22	2.63	3.34	4.11
15.57	54.78	54.68	4.14	226.29	2.64	3.32	3.98
15.64	54.06	53.77	4.20	225.87	2.65	3.32	3.91
15.69	53.77	53.31	4.19	223.44	2.65	3.22	3.87
15.77	52.83	52.13	4.25	221.68	2.65	3.12	3.78

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
15.82	55.47	54.61	3.95	215.68	2.62	3.11	3.96
15.91	61.78	60.57	3.41	206.54	2.56	0.89	0.89
15.96	71.43	69.91	2.85	199.00	2.48	0.89	0.89
16.05	76.11	74.17	2.70	200.32	2.46	0.89	0.89
16.10	74.42	72.37	2.89	209.21	2.49	0.90	0.90
16.14	64.83	62.87	3.58	224.91	2.58	0.91	0.91
16.24	55.73	53.71	4.41	237.07	2.67	3.53	3.87
16.28	48.51	46.56	5.12	238.38	2.74	3.35	3.35
16.38	44.43	42.36	5.45	230.89	2.77	2.88	3.04
16.42	40.03	38.00	5.83	221.64	2.80	2.70	2.73
16.50	38.29	36.13	5.89	212.77	2.80	2.40	2.59
16.56	37.72	35.48	5.70	202.06	2.79	2.25	2.54
16.61	38.89	36.50	5.11	186.61	2.74	2.10	2.62
16.70	37.55	35.04	4.98	174.40	2.73	1.74	2.51
16.74	34.40	31.95	5.09	162.66	2.74	1.57	2.29
16.83	29.81	27.44	5.79	158.86	2.79	1.32	1.96
16.88	25.61	23.37	6.57	153.58	2.86	1.24	1.67
16.93	23.14	20.97	6.68	140.11	2.86	1.06	1.50
17.00	21.66	19.49	6.42	125.06	2.84	0.66	1.39
17.06	21.26	19.05	5.80	110.52	2.80	0.64	1.36
17.16	21.56	19.26	5.53	106.56	2.77	0.58	1.37
17.21	22.03	19.65	5.19	102.09	2.74	0.55	1.40
17.26	22.25	19.81	5.07	100.44	2.73	0.53	1.41
17.35	22.38	19.85	5.03	99.87	2.73	0.54	1.41
17.40	22.35	19.78	5.10	100.94	2.74	0.54	1.41
17.46	22.21	19.58	5.19	101.65	2.74	0.55	1.39
17.53	21.90	19.24	5.34	102.72	2.76	0.55	1.37
17.62	21.69	18.96	5.46	103.48	2.77	0.55	1.35
17.67	21.64	18.87	5.55	104.62	2.77	0.56	1.34
17.72	21.97	19.13	5.56	106.35	2.78	0.58	1.36
17.81	22.35	19.39	5.51	106.91	2.77	0.61	1.38
17.85	22.61	19.60	5.37	105.26	2.76	0.59	1.39
17.95	22.66	19.56	5.21	101.90	2.75	0.54	1.39
18.00	22.46	19.34	5.10	98.66	2.74	0.52	1.37
18.09	21.96	18.80	5.20	97.69	2.74	0.49	1.33
18.14	21.17	18.05	5.43	97.99	2.77	0.49	1.28
18.18	20.27	17.20	5.77	99.16	2.79	0.49	1.22
18.27	19.53	16.45	6.08	99.98	2.82	0.48	1.16
18.32	18.88	15.84	6.42	101.69	2.84	0.48	1.12
18.41	18.55	15.46	6.66	103.03	2.86	0.50	1.09
18.46	18.37	15.27	6.80	103.82	2.87	0.50	1.08
18.54	18.41	15.24	6.78	103.30	2.87	0.49	1.08
18.60	18.41	15.21	6.77	102.94	2.87	0.49	1.07
18.64	18.42	15.18	6.81	103.39	2.87	0.49	1.07
18.72	18.20	14.93	7.00	104.49	2.89	0.50	1.05
18.77	18.07	14.77	7.16	105.71	2.90	0.51	1.04
18.84	17.94	14.61	7.32	106.94	2.91	0.51	1.03
18.91	18.03	14.64	7.36	107.72	2.91	0.52	1.03

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
18.96	18.12	14.68	7.50	110.11	2.92	0.53	1.04
19.05	18.28	14.75	7.63	112.57	2.93	0.58	1.04
19.10	18.63	15.02	7.63	114.62	2.93	0.60	1.06
19.18	19.22	15.47	7.35	113.77	2.91	0.60	1.09
19.24	20.32	16.40	6.85	112.37	2.88	0.58	1.15
19.29	21.60	17.47	6.43	112.29	2.84	0.60	1.23
19.37	22.74	18.39	6.14	112.95	2.82	0.65	1.29
19.43	22.95	18.52	6.27	116.23	2.83	0.64	1.30
19.54	23.02	18.47	6.50	120.01	2.85	0.70	1.30
19.58	23.21	18.59	6.88	127.86	2.88	0.76	1.31
19.67	23.89	19.07	7.07	134.75	2.89	0.89	1.34
19.71	24.66	19.67	7.15	140.76	2.90	0.96	1.38
19.77	25.74	20.54	6.97	143.25	2.88	1.00	1.44
19.82	27.54	22.02	6.61	145.47	2.86	1.03	1.54
19.91	29.56	23.64	6.25	147.82	2.83	1.12	1.65
19.95	31.46	25.20	5.95	149.84	2.81	1.19	1.76
20.04	32.65	26.11	5.77	150.70	2.79	1.20	1.82
20.09	33.17	26.49	5.74	152.16	2.79	1.22	1.85
20.17	33.30	26.50	5.84	154.81	2.80	1.28	1.85
20.23	33.46	26.55	5.93	157.52	2.81	1.31	1.85
20.32	33.96	26.85	5.92	158.94	2.81	1.34	1.87
20.37	34.55	27.29	5.87	160.16	2.80	1.36	1.90
20.41	35.23	27.80	5.83	161.96	2.80	1.40	1.94
20.50	35.95	28.28	5.80	163.88	2.80	1.45	1.97
20.55	36.66	28.80	5.78	166.52	2.79	1.49	2.00
20.64	37.28	29.20	5.78	168.70	2.79	1.55	2.03
20.69	37.96	29.67	5.81	172.38	2.80	1.58	2.06
20.78	38.62	30.09	5.86	176.29	2.80	1.68	2.09
20.83	39.19	30.47	5.96	181.53	2.81	1.76	2.12
20.87	39.70	30.80	6.12	188.51	2.82	1.84	2.14
20.96	40.22	31.07	6.26	194.62	2.83	2.03	2.16
21.01	40.88	31.52	6.36	200.47	2.84	2.08	2.19
21.09	41.26	31.71	6.43	203.80	2.84	2.16	2.20
21.13	41.47	31.79	6.54	207.82	2.85	2.22	2.21
21.20	41.54	31.74	6.64	210.87	2.86	2.29	2.21
21.29	41.64	31.69	6.70	212.23	2.86	2.32	2.20
21.33	41.59	31.64	6.38	201.70	2.84	2.30	2.19
21.42	41.35	31.39	5.95	186.78	2.81	1.76	2.17
21.47	41.09	31.18	5.60	174.68	2.78	1.59	2.15
21.56	41.00	30.99	5.64	174.65	2.78	1.72	2.14
21.61	40.88	30.81	5.78	178.14	2.79	1.75	2.13
21.66	40.35	30.32	5.87	177.99	2.80	1.74	2.09
21.73	39.27	29.38	6.03	177.02	2.81	1.68	2.03
21.80	38.33	28.54	6.17	176.06	2.82	1.65	1.97
21.89	37.62	27.86	6.28	174.84	2.83	1.64	1.92
21.94	37.20	27.50	6.28	172.56	2.83	1.59	1.90
21.98	36.66	27.03	6.24	168.74	2.83	1.52	1.86
22.07	36.15	26.55	6.20	164.65	2.83	1.44	1.83

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
22.12	35.51	26.02	6.14	159.75	2.82	1.39	1.79
22.21	34.93	25.49	6.12	156.02	2.82	1.27	1.75
22.26	34.48	25.09	6.13	153.74	2.82	1.26	1.73
22.33	34.40	24.97	6.13	153.09	2.82	1.27	1.72
22.40	34.40	24.90	6.11	152.07	2.82	1.24	1.71
22.44	34.41	24.87	6.06	150.80	2.82	1.22	1.71
22.54	34.48	24.84	6.04	150.13	2.82	1.22	1.70
22.59	34.59	24.87	6.05	150.44	2.82	1.22	1.71
22.67	34.75	24.90	6.08	151.33	2.82	1.23	1.71
22.72	34.81	24.88	6.17	153.44	2.82	1.26	1.71
22.79	34.86	24.83	6.29	156.20	2.83	1.31	1.70
22.84	34.86	24.76	6.40	158.44	2.84	1.35	1.70
22.91	34.68	24.55	6.48	159.16	2.85	1.35	1.69
23.00	34.49	24.32	6.51	158.38	2.85	1.33	1.67
23.04	34.35	24.17	6.52	157.64	2.85	1.31	1.66
23.13	34.36	24.10	6.51	156.90	2.85	1.31	1.65
23.18	34.34	24.04	6.49	156.01	2.85	1.30	1.65
23.23	34.36	23.99	6.56	157.29	2.85	1.27	1.65
23.31	34.58	24.07	6.65	160.13	2.86	1.36	1.65
23.36	35.65	24.81	6.55	162.60	2.85	1.43	1.70
23.46	36.58	25.41	6.43	163.28	2.84	1.43	1.74
23.50	37.10	25.76	6.39	164.63	2.84	1.44	1.76
23.60	36.69	25.32	6.64	168.13	2.86	1.51	1.73
23.64	36.41	25.02	6.95	173.80	2.88	1.56	1.72
23.72	36.84	25.23	7.07	178.31	2.89	1.68	1.73
23.78	38.24	26.19	6.94	181.77	2.88	1.74	1.80
23.84	40.00	27.43	6.70	183.65	2.86	1.79	1.88
23.92	41.48	28.44	6.49	184.43	2.85	1.86	1.94
23.97	42.19	28.91	6.39	184.62	2.84	1.86	1.97
24.06	42.36	28.94	6.34	183.47	2.84	1.84	1.97
24.11	42.04	28.67	6.31	180.77	2.84	1.82	1.95
24.15	41.19	28.05	6.17	172.92	2.82	1.72	1.91
24.23	40.02	27.14	6.19	167.90	2.83	1.43	1.84
24.29	38.69	26.10	6.39	166.72	2.84	1.53	1.78
24.38	37.62	25.19	6.77	170.54	2.87	1.59	1.72
24.43	36.86	24.58	6.95	170.88	2.88	1.54	1.68
24.49	36.44	24.23	6.98	169.19	2.88	1.50	1.65
24.57	36.24	24.01	7.00	168.15	2.89	1.49	1.64
24.62	35.77	23.62	7.13	168.45	2.90	1.49	1.61
24.68	35.28	23.21	7.22	167.55	2.90	1.49	1.59
24.75	34.69	22.74	7.25	164.90	2.90	1.43	1.55
24.81	34.38	22.50	7.17	161.41	2.90	1.35	1.54
24.90	34.23	22.32	7.13	159.06	2.89	1.32	1.52
24.94	34.18	22.25	7.13	158.62	2.89	1.32	1.52
25.04	34.22	22.21	7.11	157.97	2.89	1.32	1.51
25.08	34.20	22.16	7.05	156.23	2.89	1.30	1.51
25.18	34.11	22.04	6.99	154.07	2.89	1.24	1.50
25.22	33.85	21.83	6.99	152.53	2.88	1.23	1.49

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
25.27	33.48	21.52	7.08	152.30	2.89	1.22	1.47
25.34	33.17	21.25	7.18	152.54	2.90	1.22	1.45
25.40	33.03	21.10	7.25	152.96	2.90	1.23	1.44
25.48	33.11	21.08	7.27	153.15	2.90	1.23	1.44
25.55	33.34	21.19	7.23	153.27	2.90	1.23	1.44
25.59	33.74	21.43	7.19	154.15	2.90	1.24	1.46
25.67	34.31	21.73	7.27	157.98	2.90	1.29	1.48
25.73	35.56	22.50	7.33	165.00	2.91	1.42	1.53
25.82	37.27	23.57	7.27	171.34	2.90	1.60	1.60
25.85	40.62	25.86	6.78	175.42	2.87	1.66	1.75
25.95	43.51	27.79	6.33	175.92	2.84	1.77	1.87
26.00	45.83	29.36	6.01	176.53	2.81	1.77	1.97
26.05	45.86	29.31	6.09	178.54	2.82	1.80	1.97
26.14	45.46	28.91	6.25	180.67	2.83	1.86	1.94
26.19	44.64	28.30	6.33	179.18	2.84	1.86	1.91
26.28	43.96	27.82	6.16	171.34	2.82	1.68	1.87
26.33	43.58	27.62	5.79	160.02	2.80	1.46	1.85
26.41	43.48	27.55	5.53	152.44	2.77	1.32	1.84
26.46	42.98	27.15	5.61	152.42	2.78	1.35	1.81
26.56	42.81	26.91	5.78	155.45	2.79	1.43	1.80
26.59	39.75	24.69	6.53	161.33	2.85	1.44	1.66
26.64	40.39	25.08	6.44	161.54	2.85	1.46	1.69
26.72	41.02	25.45	6.35	161.51	2.84	1.47	1.71
26.78	44.92	28.12	5.61	157.78	2.78	1.47	1.87
26.87	45.19	28.22	5.58	157.57	2.78	1.47	1.88
26.92	44.26	27.52	5.76	158.64	2.79	1.47	1.83
27.01	42.92	26.49	6.04	160.15	2.82	1.47	1.77
27.05	42.17	25.92	6.23	161.39	2.83	1.48	1.73
27.10	42.33	26.00	6.17	160.31	2.82	1.49	1.74
27.18	42.76	26.28	5.90	155.18	2.80	1.43	1.75
27.24	43.02	26.50	5.56	147.45	2.78	1.27	1.76
27.30	42.50	26.17	5.38	140.81	2.76	1.16	1.73
27.38	41.30	25.31	5.47	138.50	2.77	1.13	1.68
27.47	40.13	24.43	5.68	138.75	2.79	1.13	1.62
27.52	39.67	24.07	5.78	139.16	2.79	1.12	1.60
27.56	39.80	24.09	5.89	141.91	2.80	1.12	1.60
27.65	40.13	24.19	6.04	146.10	2.81	1.24	1.61
27.70	40.14	24.09	6.27	151.03	2.83	1.31	1.61
27.80	40.22	24.04	6.39	153.67	2.84	1.33	1.61
27.84	40.09	23.88	6.54	156.06	2.85	1.36	1.60
27.92	40.25	23.90	6.59	157.43	2.86	1.41	1.60
27.98	40.56	24.06	6.57	158.07	2.86	1.40	1.61
28.03	40.71	24.11	6.58	158.67	2.86	1.40	1.61
28.12	40.39	23.81	6.71	159.68	2.86	1.44	1.59
28.16	39.55	23.20	6.94	160.96	2.88	1.43	1.56
28.25	39.06	22.79	7.11	161.95	2.89	1.42	1.53
28.30	38.83	22.57	7.30	164.76	2.91	1.46	1.52
28.39	38.86	22.49	7.45	167.42	2.92	1.55	1.51

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
28.43	38.99	22.52	7.51	169.08	2.92	1.54	1.52
28.49	39.48	22.80	7.37	168.13	2.91	1.54	1.53
28.57	39.91	23.03	7.22	166.30	2.90	1.52	1.55
28.62	40.36	23.32	7.01	163.49	2.89	1.48	1.56
28.68	40.37	23.32	6.88	160.32	2.88	1.43	1.56
28.76	40.36	23.32	6.64	154.83	2.86	1.38	1.55
28.81	40.58	23.61	5.91	139.45	2.80	1.23	1.56
28.90	40.83	23.91	5.25	125.57	2.75	0.79	1.57
28.95	40.97	24.10	4.83	116.38	2.71	0.84	1.57
29.04	40.55	23.70	5.07	120.06	2.73	0.90	1.55
29.08	39.70	23.06	5.34	123.10	2.76	0.91	1.51
29.16	38.59	22.24	5.65	125.59	2.78	0.92	1.46
29.22	37.94	21.72	5.95	129.19	2.81	0.95	1.43
29.28	37.60	21.38	6.31	134.85	2.84	1.02	1.42
29.38	37.96	21.49	6.50	139.65	2.85	1.13	1.43
29.40	38.67	21.87	6.58	143.78	2.86	1.15	1.45
29.46	39.53	22.32	6.64	148.23	2.86	1.21	1.48
29.56	40.38	22.74	6.70	152.27	2.86	1.35	1.51
29.59	41.08	23.13	6.68	154.58	2.86	1.37	1.54
29.70	42.06	23.71	6.40	151.71	2.84	1.34	1.57
29.74	42.66	24.14	6.05	145.95	2.82	1.26	1.59
29.79	42.35	23.97	5.88	141.01	2.80	1.14	1.58
29.87	41.33	23.30	5.94	138.36	2.81	1.12	1.53
29.93	39.89	22.34	6.18	138.13	2.83	1.11	1.47
30.01	38.57	21.45	6.38	136.83	2.84	1.07	1.42
30.07	37.38	20.71	6.45	133.48	2.85	1.01	1.37
30.15	36.63	20.22	6.43	130.08	2.84	0.94	1.34
30.20	36.04	19.85	6.44	127.75	2.85	0.91	1.31
30.27	35.49	19.46	6.56	127.55	2.85	0.90	1.29
30.34	35.08	19.16	6.64	127.24	2.86	0.91	1.27
30.38	34.77	18.95	6.67	126.40	2.86	0.89	1.25
30.46	34.82	18.94	6.66	126.05	2.86	0.86	1.25
30.53	35.17	19.11	6.61	126.36	2.86	0.90	1.26
30.62	35.71	19.38	6.55	127.05	2.85	0.91	1.28
30.66	36.16	19.65	6.43	126.34	2.84	0.91	1.30
30.71	36.30	19.66	6.56	129.04	2.85	0.88	1.30
30.80	36.37	19.60	6.81	133.35	2.87	1.02	1.30
30.84	36.78	19.73	7.11	140.35	2.89	1.08	1.31
30.92	38.64	20.80	6.85	142.39	2.87	1.18	1.38
30.98	41.02	22.24	6.36	141.39	2.84	1.17	1.46
31.07	42.92	23.43	5.86	137.20	2.80	1.12	1.53
31.11	42.91	23.46	5.65	132.57	2.78	1.07	1.53
31.18	41.08	22.38	5.63	126.10	2.78	0.98	1.46
31.26	39.04	21.25	5.34	113.56	2.76	0.80	1.38
31.30	36.68	19.95	5.11	101.99	2.74	0.54	1.29
31.38	35.34	19.19	4.98	95.56	2.73	0.51	1.23
31.44	34.15	18.32	5.50	100.82	2.77	0.56	1.19
31.54	33.66	17.84	6.06	108.21	2.82	0.67	1.17

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
31.59	34.24	18.07	6.37	115.14	2.84	0.74	1.19
31.67	35.25	18.58	6.45	119.77	2.85	0.81	1.22
31.72	36.71	19.39	6.41	124.33	2.84	0.87	1.27
31.77	38.84	20.57	6.38	131.15	2.84	0.95	1.35
31.86	41.59	22.07	6.39	140.92	2.84	1.14	1.45
31.91	46.68	24.94	6.22	155.10	2.83	1.36	1.63
32.00	52.96	28.60	5.75	164.50	2.79	1.76	1.86
32.05	61.83	33.99	4.93	167.61	2.72	1.84	2.18
32.09	68.91	38.44	4.29	164.86	2.66	1.90	2.43
32.18	72.49	40.67	4.00	162.74	2.63	1.93	2.56
32.23	68.41	38.08	4.29	163.30	2.66	1.88	2.41
32.30	61.47	33.74	4.79	161.50	2.71	1.74	2.16
32.36	51.56	27.73	5.58	154.78	2.78	1.53	1.80
32.45	44.06	23.27	6.25	145.42	2.83	1.14	1.52
32.50	37.73	19.54	7.07	138.05	2.89	1.03	1.29
32.55	34.16	16.25	8.14	132.29	2.96	1.00	1.16
32.64	32.42	15.35	8.39	128.81	2.98	0.92	1.10
32.69	31.41	14.83	8.24	122.16	2.97	0.83	1.06
32.78	31.38	15.91	7.48	119.06	2.92	0.71	1.06
32.83	31.39	15.95	7.25	115.67	2.90	0.71	1.06
32.88	31.75	16.17	7.10	114.82	2.89	0.71	1.07
32.96	32.40	16.56	6.84	113.23	2.87	0.69	1.09
33.01	33.57	17.28	6.44	111.20	2.85	0.67	1.13
33.09	34.88	18.05	6.15	110.97	2.82	0.67	1.18
33.14	35.77	18.53	6.14	113.83	2.82	0.72	1.21
33.20	35.60	18.32	6.50	119.12	2.85	0.79	1.20
33.28	34.94	17.83	6.94	123.78	2.88	0.85	1.17
33.34	34.30	17.40	7.27	126.52	2.90	0.87	1.15
33.43	34.34	17.38	7.35	127.73	2.91	0.87	1.15
33.47	35.65	18.14	7.06	128.10	2.89	0.90	1.20
33.57	37.63	19.30	6.60	127.45	2.86	0.92	1.27
33.60	39.08	20.17	6.27	126.44	2.83	0.91	1.32
33.70	38.92	20.05	6.29	126.20	2.83	0.90	1.31
33.74	38.02	19.49	6.50	126.79	2.85	0.90	1.28
33.79	37.47	19.11	6.75	129.06	2.87	0.90	1.25
33.88	37.40	19.01	6.91	131.42	2.88	0.97	1.25
33.93	38.20	19.44	6.85	133.14	2.88	0.99	1.28
34.01	39.72	20.33	6.51	132.41	2.85	0.99	1.33
34.07	41.59	21.41	6.22	133.18	2.83	0.99	1.39
34.16	42.81	22.08	6.12	135.04	2.82	1.08	1.44
34.20	43.25	22.27	6.22	138.51	2.83	1.10	1.45
34.25	42.85	21.96	6.48	142.34	2.85	1.14	1.43
34.33	42.69	21.78	6.68	145.51	2.86	1.22	1.43
34.41	43.02	21.92	6.74	147.77	2.87	1.23	1.44
34.46	44.32	22.66	6.54	148.28	2.85	1.25	1.48
34.52	45.99	23.61	6.32	149.16	2.84	1.28	1.54
34.60	47.30	24.34	6.16	150.06	2.82	1.32	1.58
34.66	48.23	24.86	6.08	151.25	2.82	1.33	1.61

:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$
34.73	48.91	25.24	5.97	150.78	2.81	1.37	1.63
34.78	49.99	25.90	5.73	148.52	2.79	1.32	1.67
34.87	51.30	26.68	5.49	146.47	2.77	1.27	1.71
34.92	53.01	27.65	5.36	148.23	2.76	1.32	1.77
35.01	54.92	28.67	5.33	152.93	2.76	1.46	1.84
35.06	60.38	31.87	4.89	155.90	2.72	1.55	2.02
35.11	107.27	61.35	2.33	143.13	2.39	0.82	0.82
35.19	168.84	101.71	1.53	155.83	2.16	0.83	0.83
35.24	244.73	151.92	1.34	202.87	2.03	0.89	0.89
35.33	279.91	174.74	1.31	228.88	2.00	0.92	0.92
35.38	289.76	180.64	1.31	237.48	2.01	0.92	0.92
35.46	270.83	167.96	1.33	223.72	2.03	0.91	0.91
35.52	237.86	145.83	1.39	202.02	2.08	0.89	0.89
35.61	210.29	127.19	1.47	186.89	2.13	0.87	0.87
35.64	193.12	115.39	1.58	182.13	2.19	0.87	0.87
35.70	197.52	117.59	1.62	189.96	2.20	0.88	0.88
35.77	230.62	139.24	1.48	205.71	2.14	0.89	0.89
35.83	265.38	161.99	1.40	226.19	2.08	0.91	0.91
35.92	284.40	174.20	1.37	239.03	2.07	0.93	0.93
35.97	286.01	175.35	1.36	239.14	2.06	0.93	0.93
36.03	295.22	181.87	1.34	243.05	2.03	0.93	0.93
36.10	312.73	194.08	1.30	252.76	1.99	0.94	0.94
36.16	320.51	198.62	1.31	259.48	2.00	0.94	0.94
36.24	328.66	203.71	1.30	265.39	1.99	0.95	0.95
36.30	301.24	184.04	1.36	251.06	2.06	0.94	0.94
36.35	282.33	170.77	1.42	242.72	2.10	0.93	0.93
36.43	254.31	151.07	1.57	237.00	2.18	0.92	0.92
36.49	257.77	153.18	1.56	238.71	2.18	0.93	0.93
36.56	249.80	148.29	1.56	230.80	2.18	0.92	0.92
36.63	218.81	128.74	1.64	210.52	2.21	0.90	0.90
36.69	174.09	100.28	1.90	190.62	2.29	0.88	0.88
36.77	131.56	73.26	2.55	186.44	2.43	0.87	0.87
36.82	115.37	63.45	2.81	178.58	2.48	0.86	0.86
36.90	113.37	62.25	2.82	175.65	2.48	0.86	0.86
36.95	129.46	72.70	2.26	164.53	2.38	0.85	0.85
37.01	172.97	102.31	1.50	153.53	2.15	0.83	0.83
37.09	256.42	161.55	1.21	195.71	1.86	0.88	0.88
37.14	376.19	249.02	1.00	249.02	1.62	0.94	0.94
37.23	447.23	296.10	1.00	296.10	1.54	0.97	0.97
37.28	516.95	342.36	1.00	342.36	1.44	1.01	1.01
37.34	524.01	346.88	1.00	346.88	1.46	1.01	1.01
37.44	584.79	386.97	1.00	386.97	1.29	1.04	1.04
37.48	611.58	404.63	1.00	404.63	1.11	1.05	1.05
37.54	661.52	-1.00	1.00	-1.00	-1.00	0.00	0.00
37.62	671.66	-1.00	1.00	-1.00	-1.00	0.00	0.00
37.67	702.38	-1.00	1.00	-1.00	-1.00	0.00	0.00
37.76	710.70	-1.00	1.00	-1.00	-1.00	0.00	0.00
37.81	722.67	-1.00	1.00	-1.00	-1.00	0.00	0.00

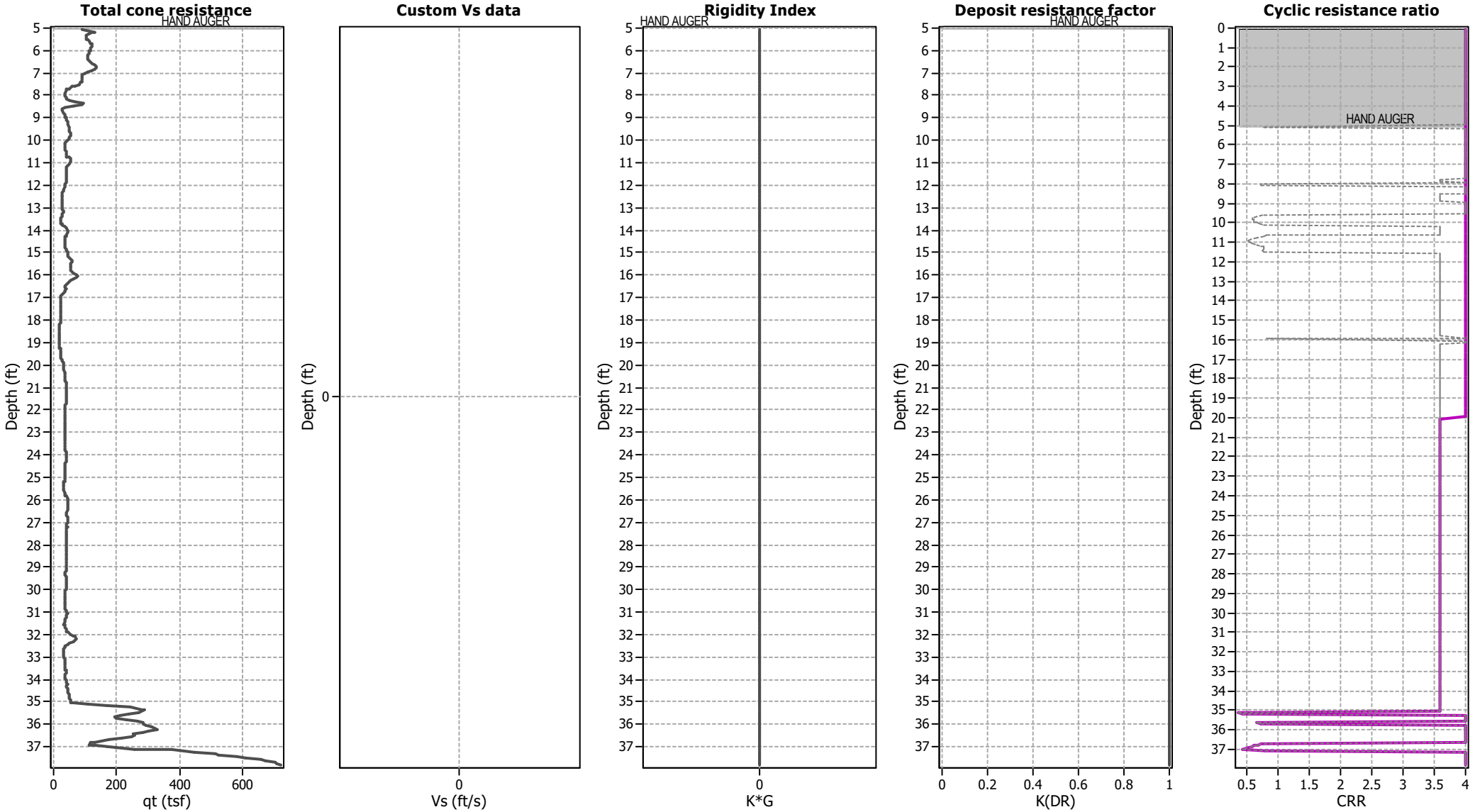
:: Strength loss calculation (Robertson (2009) :: (continued)

Depth (ft)	q_t (tsf)	Q_{tn}	K_c	$Q_{tn,cs}$	I_c	$S_{u(liq)}/\sigma'_v$	$S_{u(peak)}/\sigma'_v$

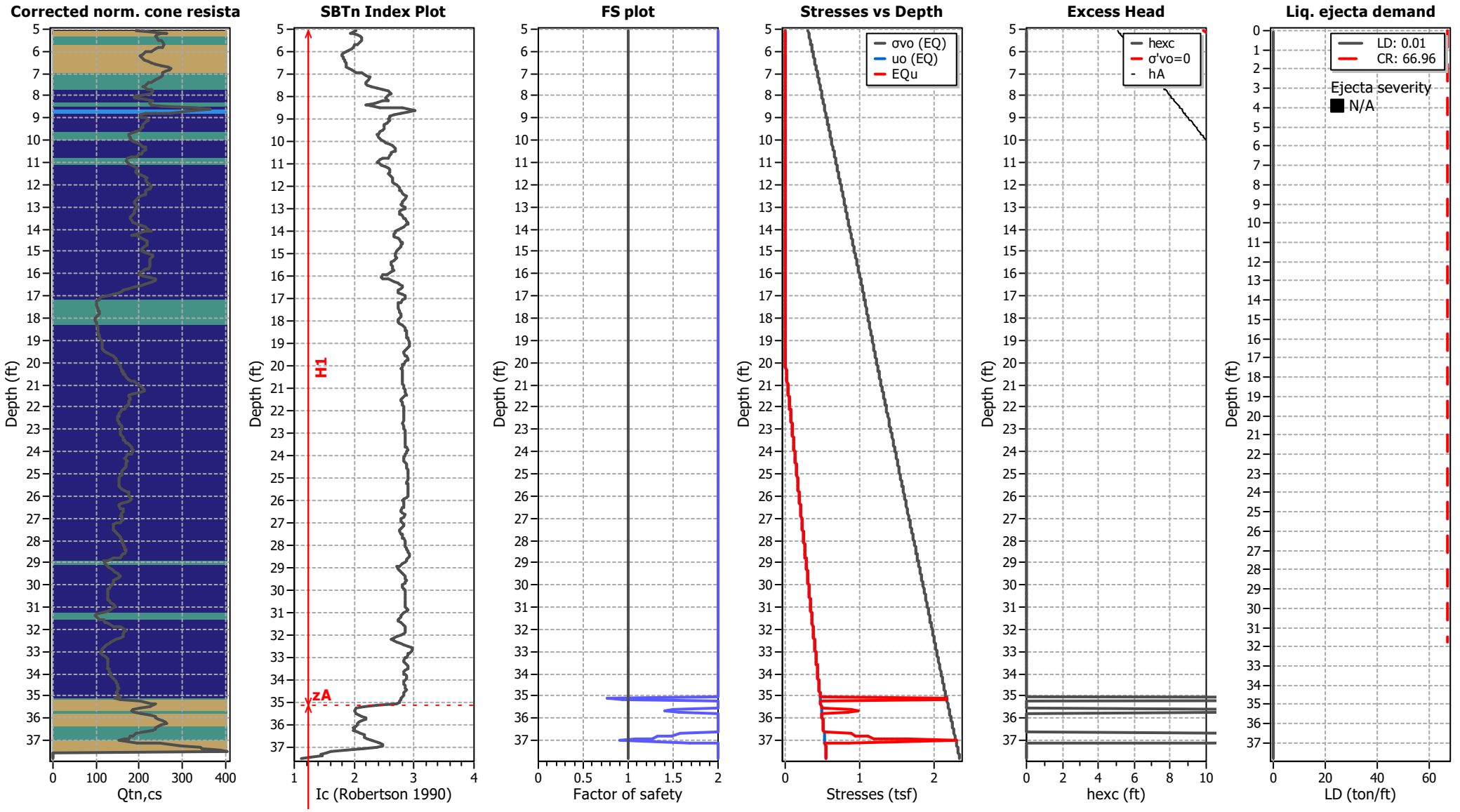
Abbreviations

q_t:	Total cone resistance
K_c:	Cone resistance correction factor due to fines
$Q_{tn,cs}$:	Adjusted and corrected cone resistance due to fines
I_c:	Soil behavior type index
$S_{u(liq)}/\sigma'_v$:	Calculated liquefied undrained strength ratio
$S_{u(peak)}/\sigma'_v$:	Calculated peak undrained strength ratio

Aging Calculation Estimation

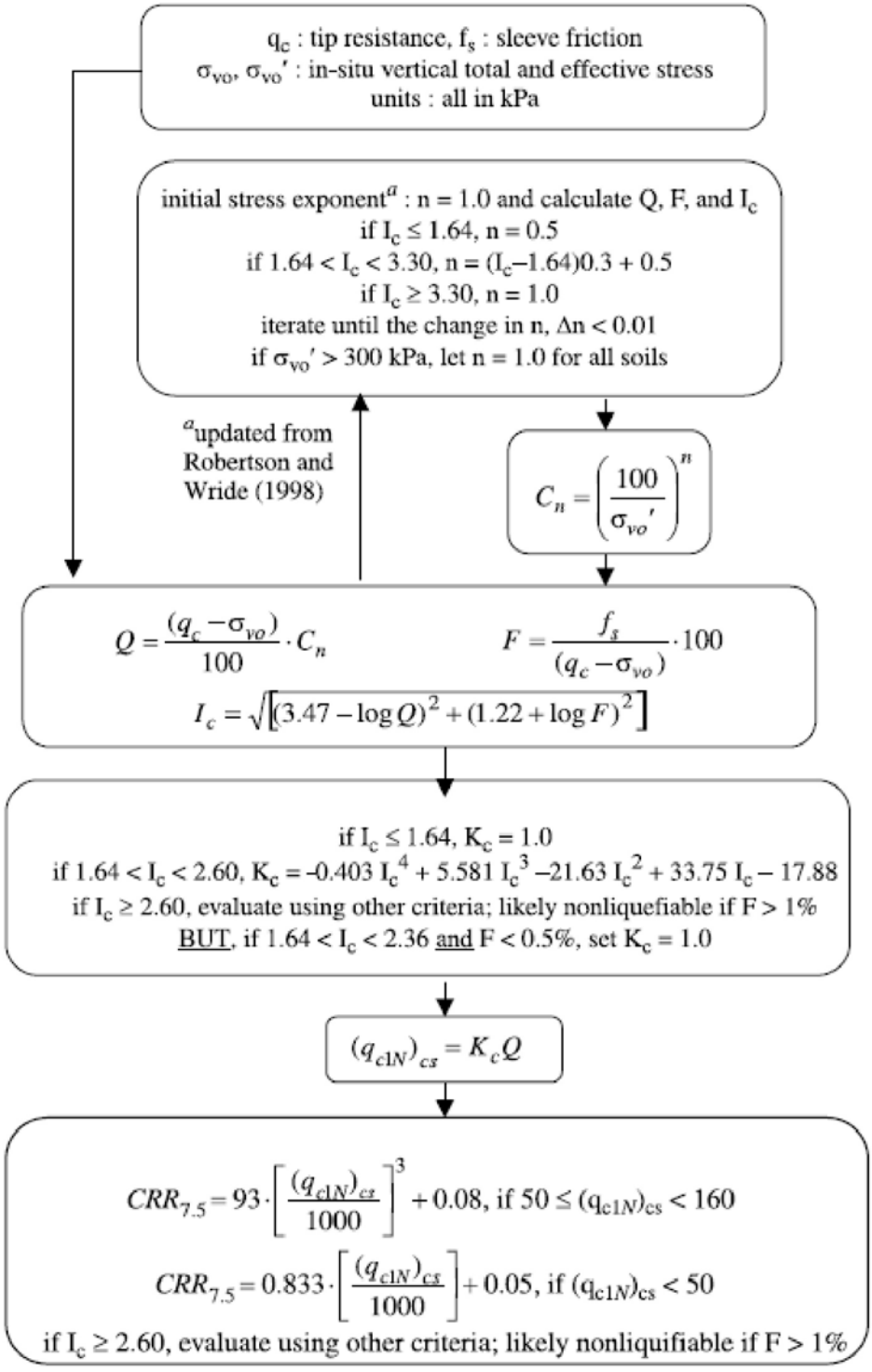


Ejecta Severity Estimation



Procedure for the evaluation of soil liquefaction resistance, NCEER (1998)

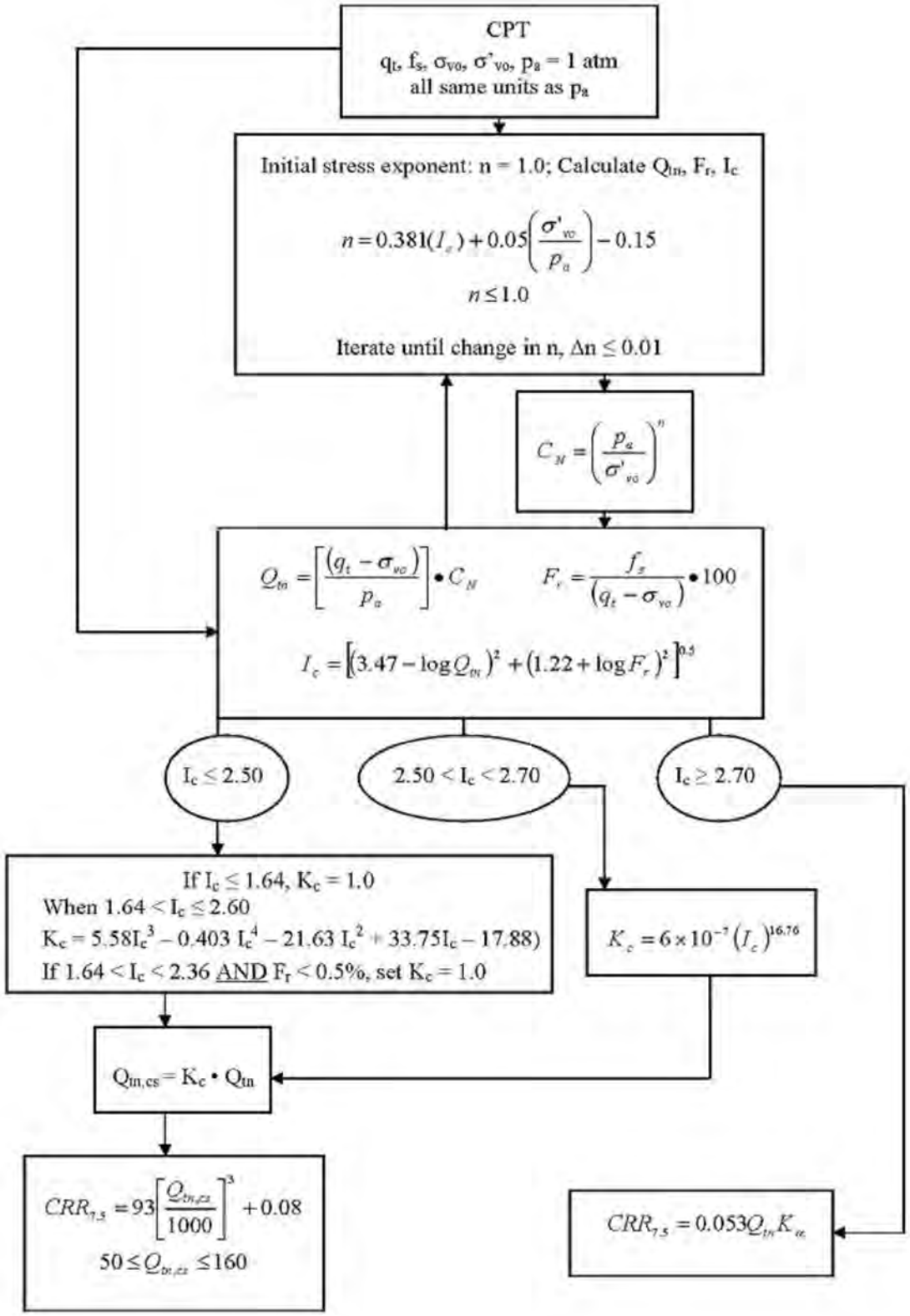
Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. The procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart[1]:



[1] "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

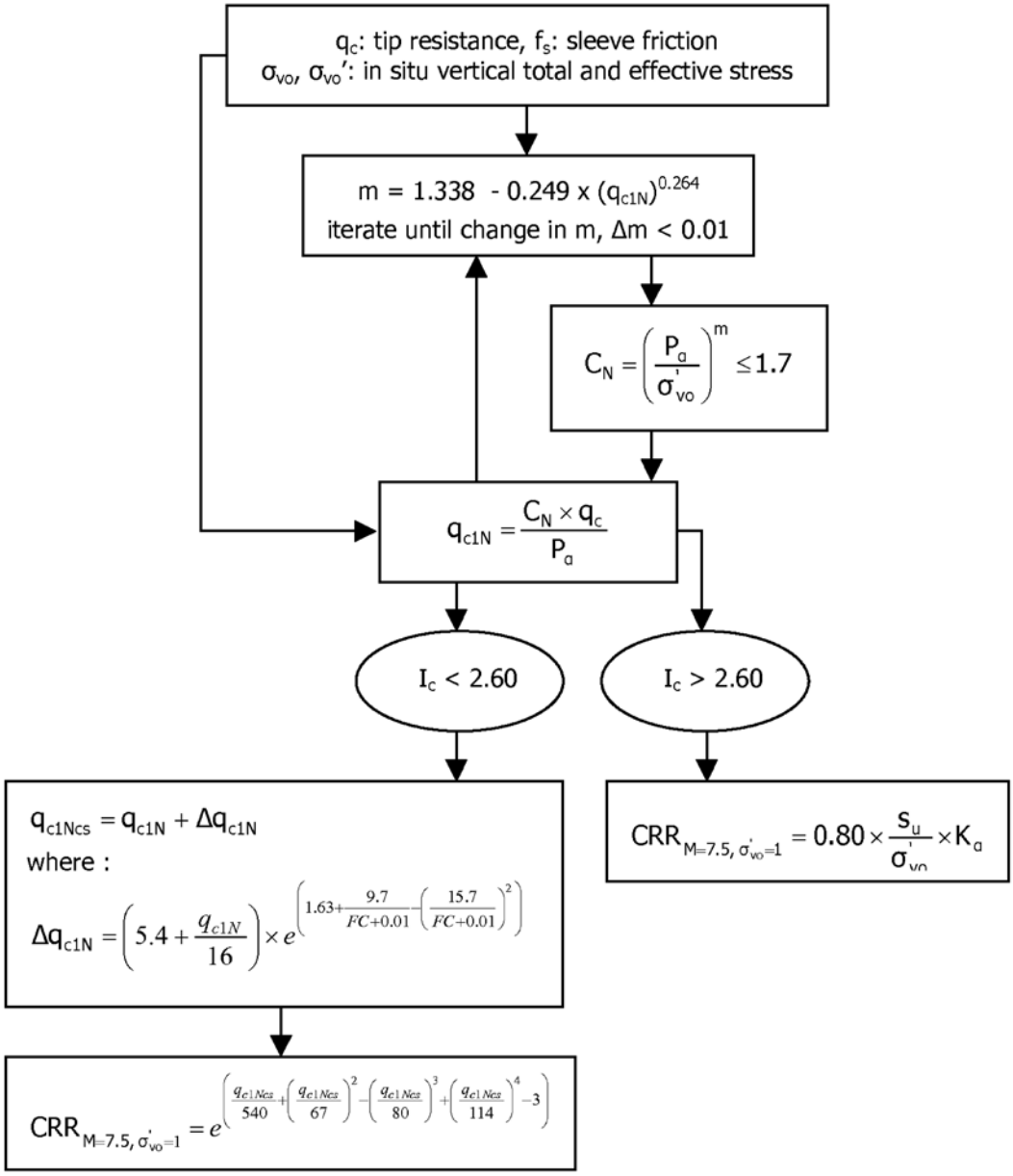
Procedure for the evaluation of soil liquefaction resistance (all soils), Robertson (2010)

Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. This procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart[1]:

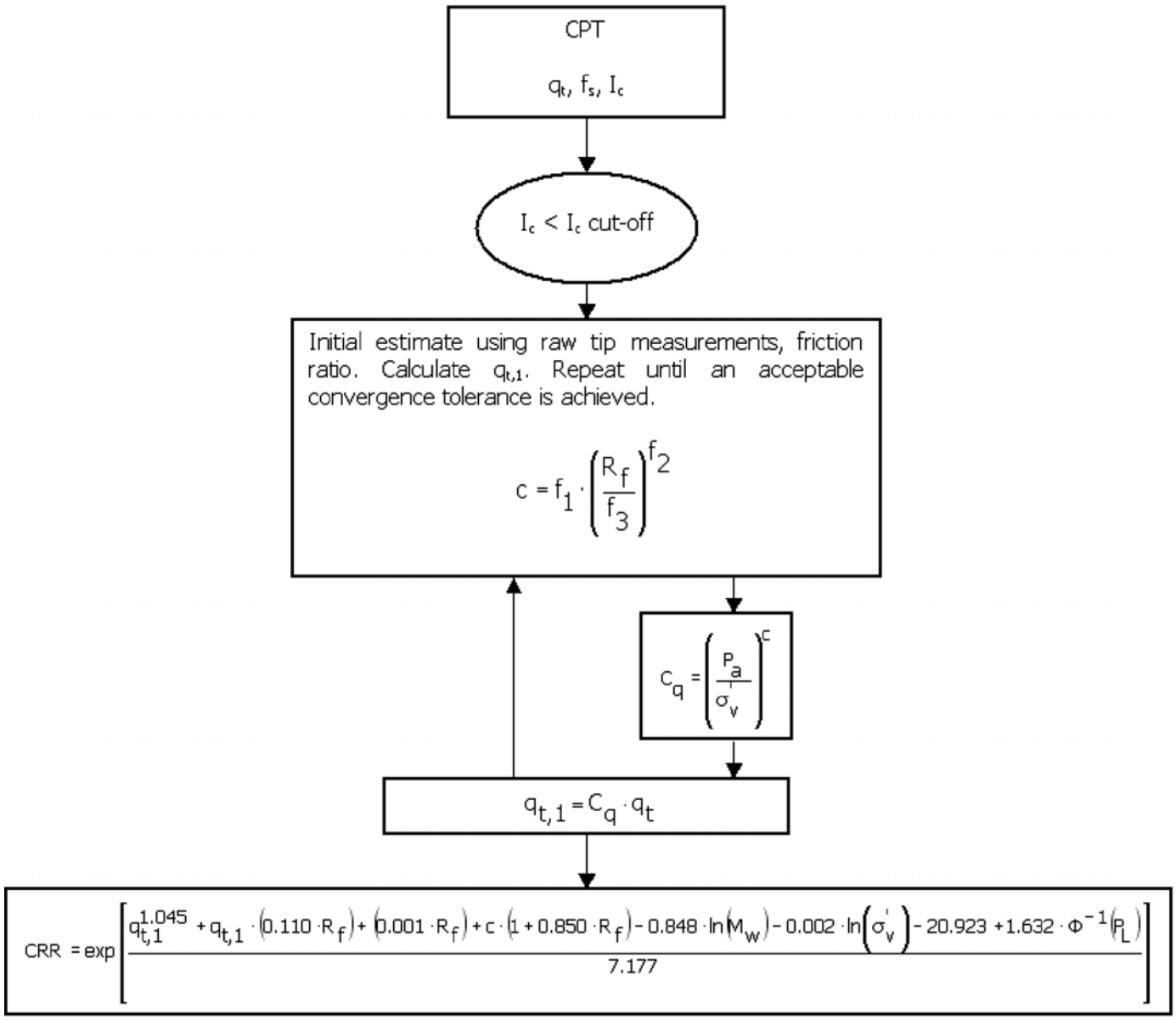


[1] P.K. Robertson, 2009. "Performance based earthquake design using the CPT", Keynote Lecture, International Conference on Performance-based Design in Earthquake Geotechnical Engineering – from case history to practice, IS-Tokyo, June 2009

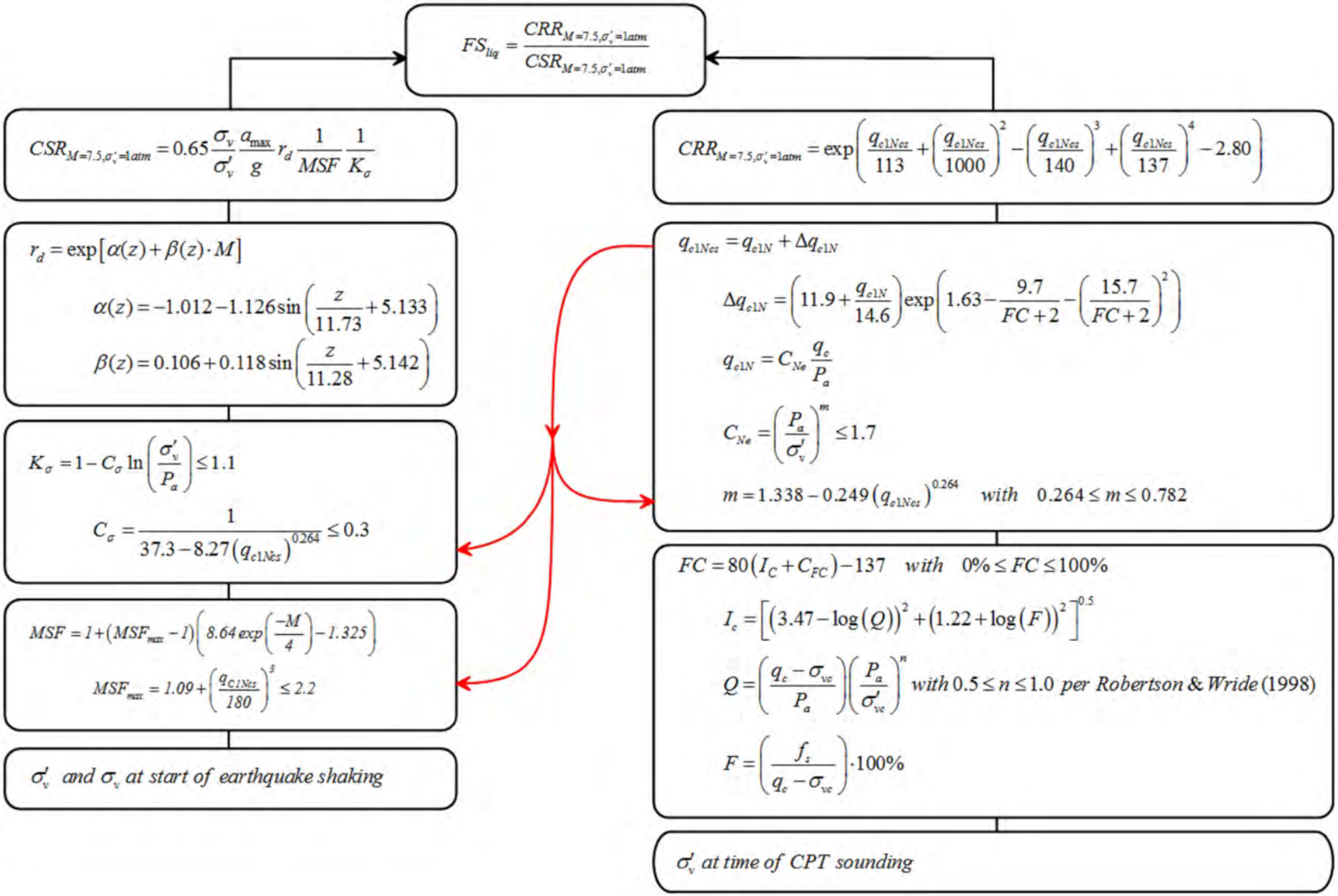
Procedure for the evaluation of soil liquefaction resistance, Idriss & Boulanger (2008)



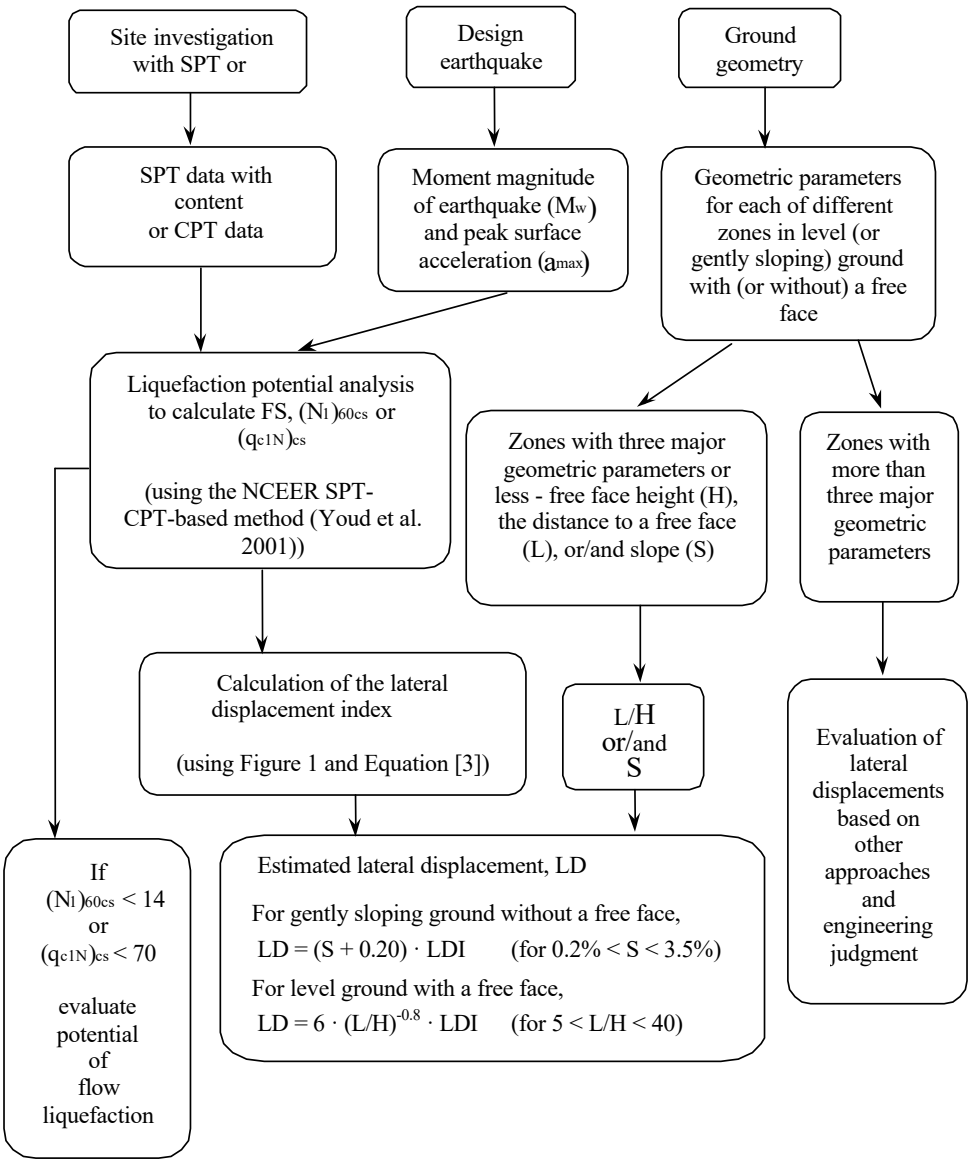
Procedure for the evaluation of soil liquefaction resistance (sandy soils), Moss et al. (2006)



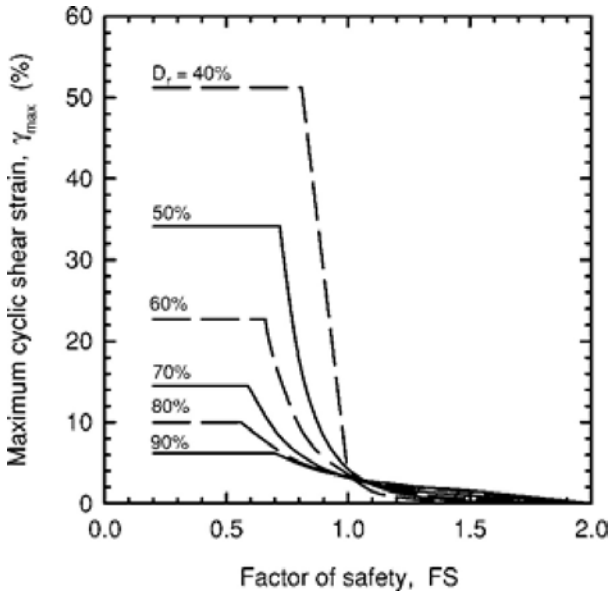
Procedure for the evaluation of soil liquefaction resistance, Boulanger & Idriss(2014)



Procedure for the evaluation of liquefaction-induced lateral spreading displacements



[1] Flow chart illustrating major steps in estimating liquefaction-induced lateral spreading displacements using the proposed approach



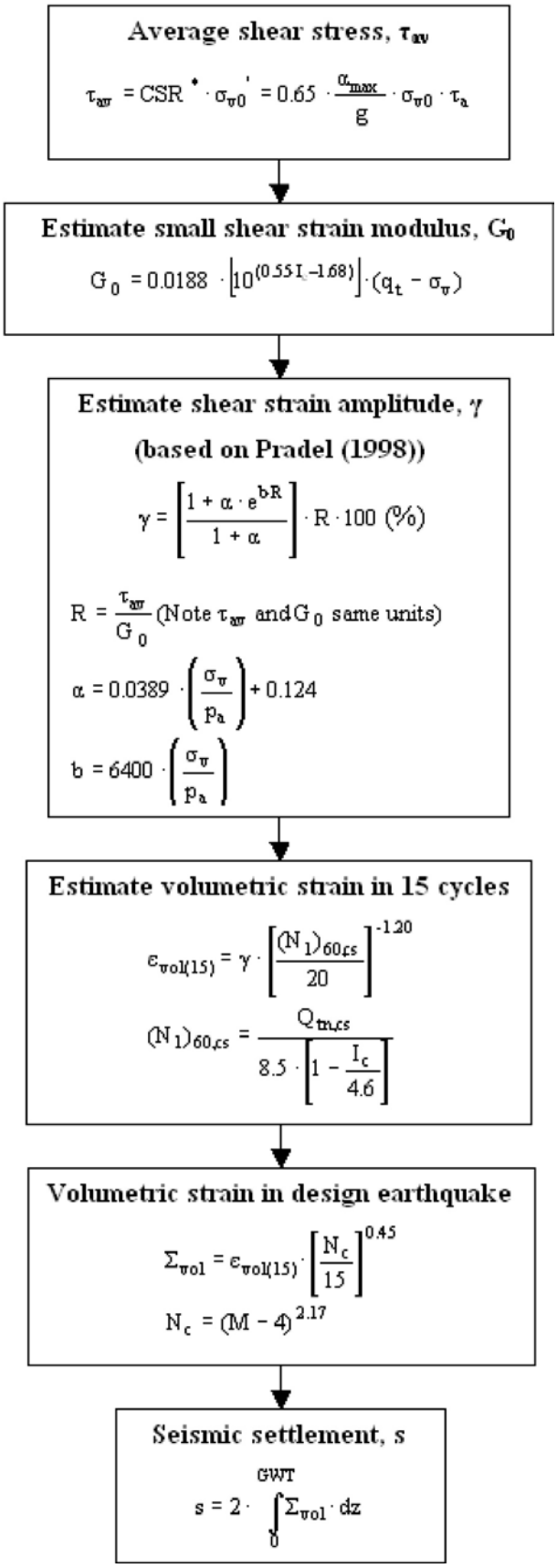
[1] Figure 1

$$LDI = \int_0^{z_{max}} \gamma_{max} dz$$

[1] Equation [3]

[1] "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

Procedure for the estimation of seismic induced settlements in dry sands



Robertson, P.K. and Lisheng, S., 2010, "Estimation of seismic compression in dry soils using the CPT" FIFTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS, Symposium in honor of professor I. M. Idriss, San Diego, CA

Liquefaction Potential Index (LPI) calculation procedure

Calculation of the Liquefaction Potential Index (LPI) is used to interpret the liquefaction assessment calculations in terms of severity over depth. The calculation procedure is based on the methology developed by Iwasaki (1982) and is adopted by AFPS.

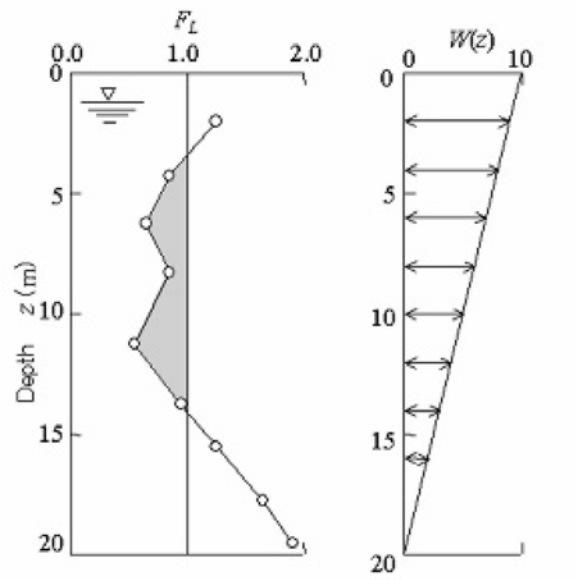
To estimate the severity of liquefaction extent at a given site, LPI is calculated based on the following equation:

$$\mathbf{LPI} = \int_0^{20} (10 - 0{,}5z) \times F_L \times dz$$

where:
F_L = 1 - F.S. when F.S. less than 1
F_L = 0 when F.S. greater than 1
z depth of measurment in meters

Values of LPI range between zero (0) when no test point is characterized as liquefiable and 100 when all points are characterized as susceptible to liquefaction. Iwasaki proposed four (4) discrete categories based on the numeric value of LPI:

- LPI = 0 : Liquefaction risk is very low
- 0 < LPI <= 5 : Liquefaction risk is low
- 5 < LPI <= 15 : Liquefaction risk is high
- LPI > 15 : Liquefaction risk is very high



Graphical presentation of the LPI calculation procedure

Shear-Induced Building Settlement (Ds) calculation procedure

The shear-induced building settlement (Ds) due to liquefaction below the building can be estimated using the relationship developed by Bray and Macedo (2017):

$$Ln(Ds) = c1 + c2 * LBS + 0.58 * Ln\left(Tanh\left(\frac{HL}{6}\right)\right) + 4.59 * Ln(Q) - 0.42 * Ln(Q)^2 - 0.02 * B + 0.84 * Ln(CAVdp) + 0.41 * Ln(Sa1) + \varepsilon$$

where Ds is in the units of mm, c1= -8.35 and c2= 0.072 for LBS ≤ 16, and c1= -7.48 and c2= 0.014 otherwise. Q is the building contact pressure in units of kPa, HL is the cumulative thickness of the liquefiable layers in the units of m, B is the building width in the units of m, CAVdp is a standardized version of the cumulative absolute velocity in the units of g-s, Sa1 is 5%-damped pseudo-acceleration response spectral value at a period of 1 s in the units of g, and ε is a normal random variable with zero mean and 0.50 standard deviation in Ln units. The liquefaction-induced building settlement index (LBS) is:

$$LBS = \sum W * \frac{\varepsilon_{shear}}{z} dz$$

where z (m) is the depth measured from the ground surface > 0, W is a foundation-weighting factor wherein W = 0.0 for z less than Df, which is the embedment depth of the foundation, and W = 1.0 otherwise. The shear strain parameter (ε_shear) is the liquefaction-induced free-field shear strain (in %) estimated using Zhang et al. (2004). It is calculated based on the estimated Dr of the liquefied soil layer and the calculated safety factor against liquefaction triggering (FSL).

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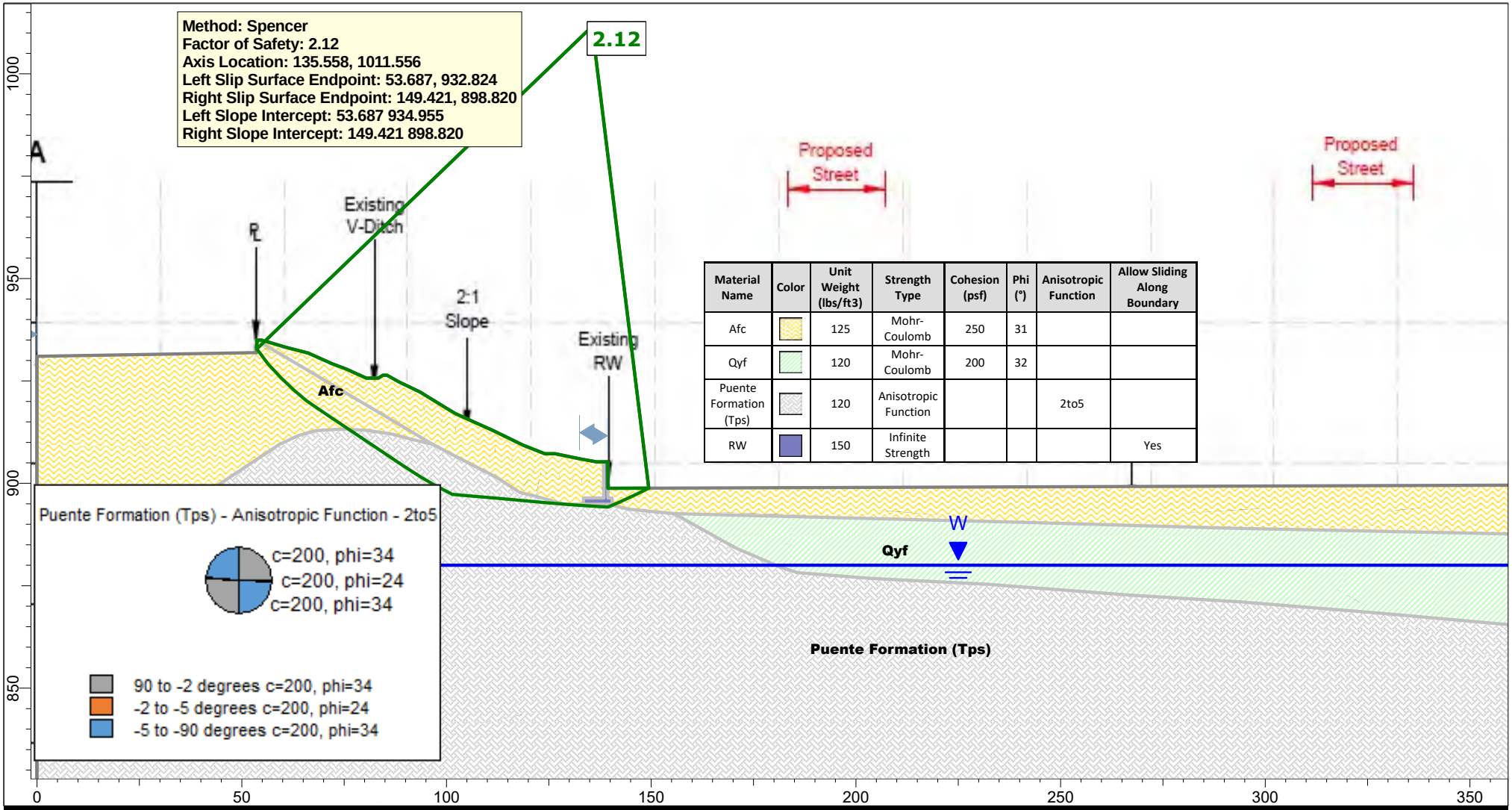
Appendix E

Slope Stability Analysis

Section A - A'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			2to5	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

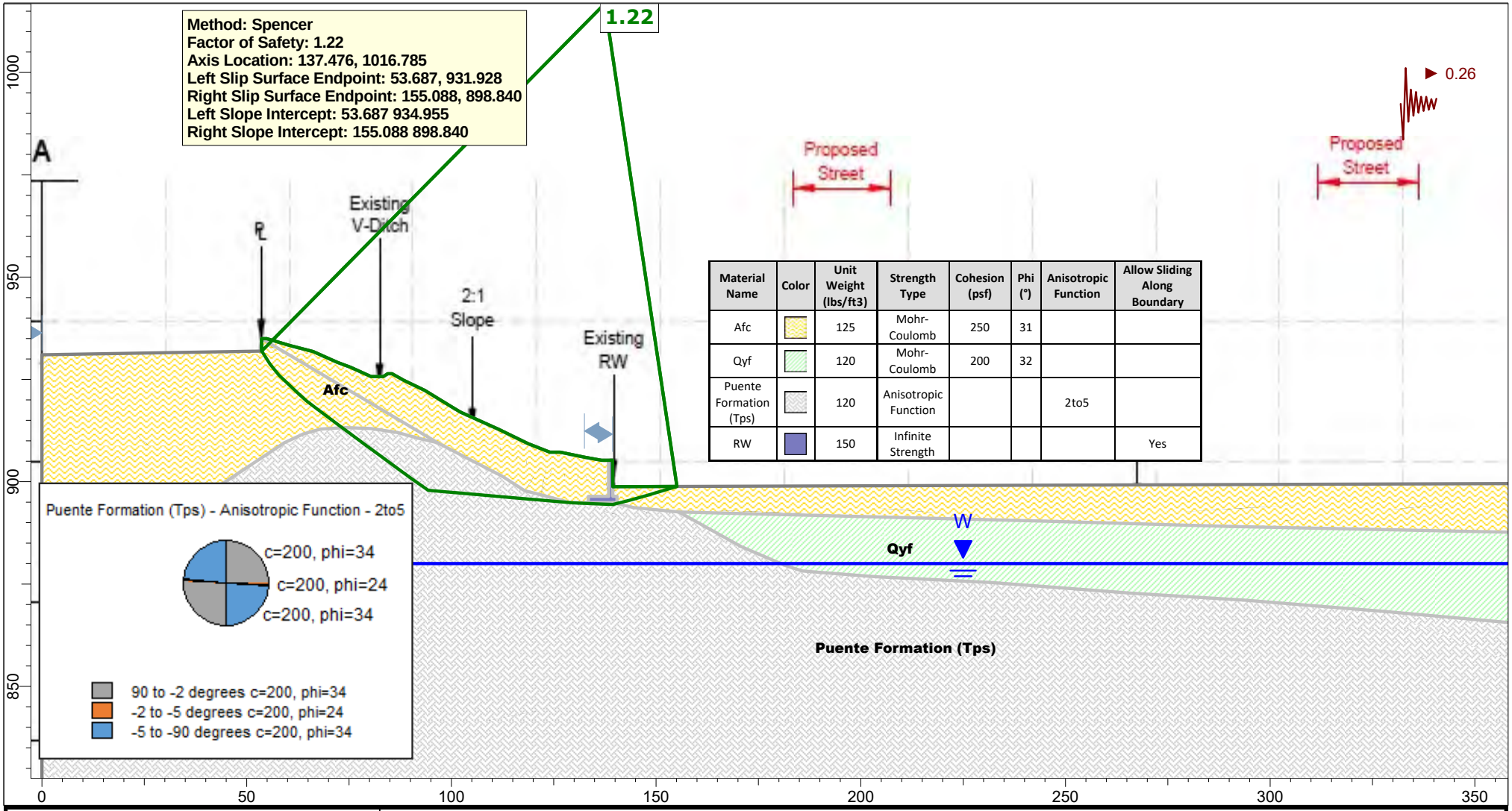
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Date:	*Condition:*
July 2025	**Static**

Section A - A'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			2to5	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

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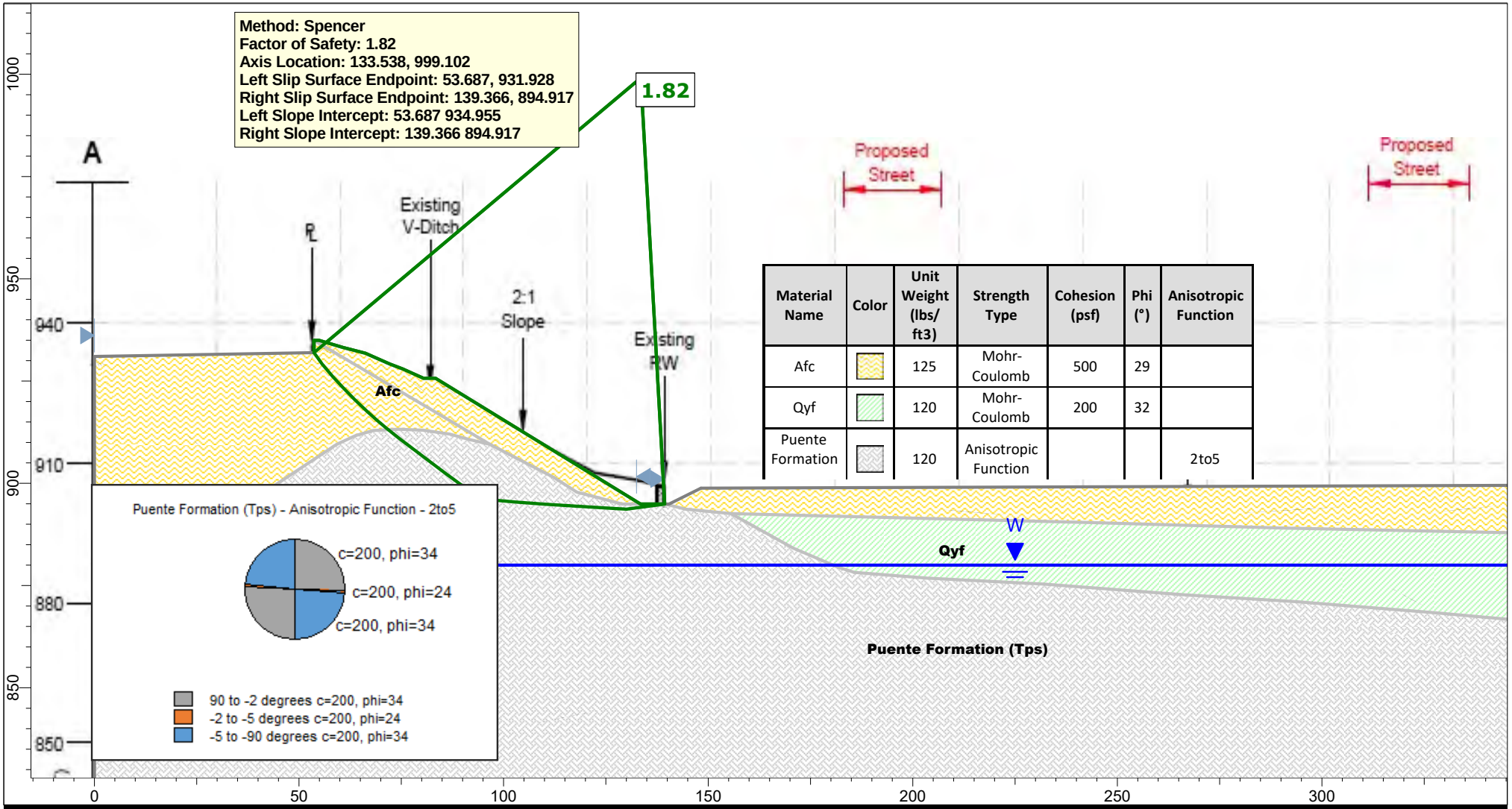
Date: July 2025

Condition: **Pseudo Static**

Section A - A'

Global Stability - Temporary Backcut

Z:\Project Files\IA-JZ\INTRACORPSW\30477 - Intracorp Diamond Bar Montefino Geo\Analyses\S L I D E\July 2025\Sec A\Section A revised\Section A_cco_static_global_temp bck.slim



Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function
Afc		125	Mohr-Coulomb	500	29	
Qyf		120	Mohr-Coulomb	200	32	
Puente Formation		120	Anisotropic Function			2to5

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

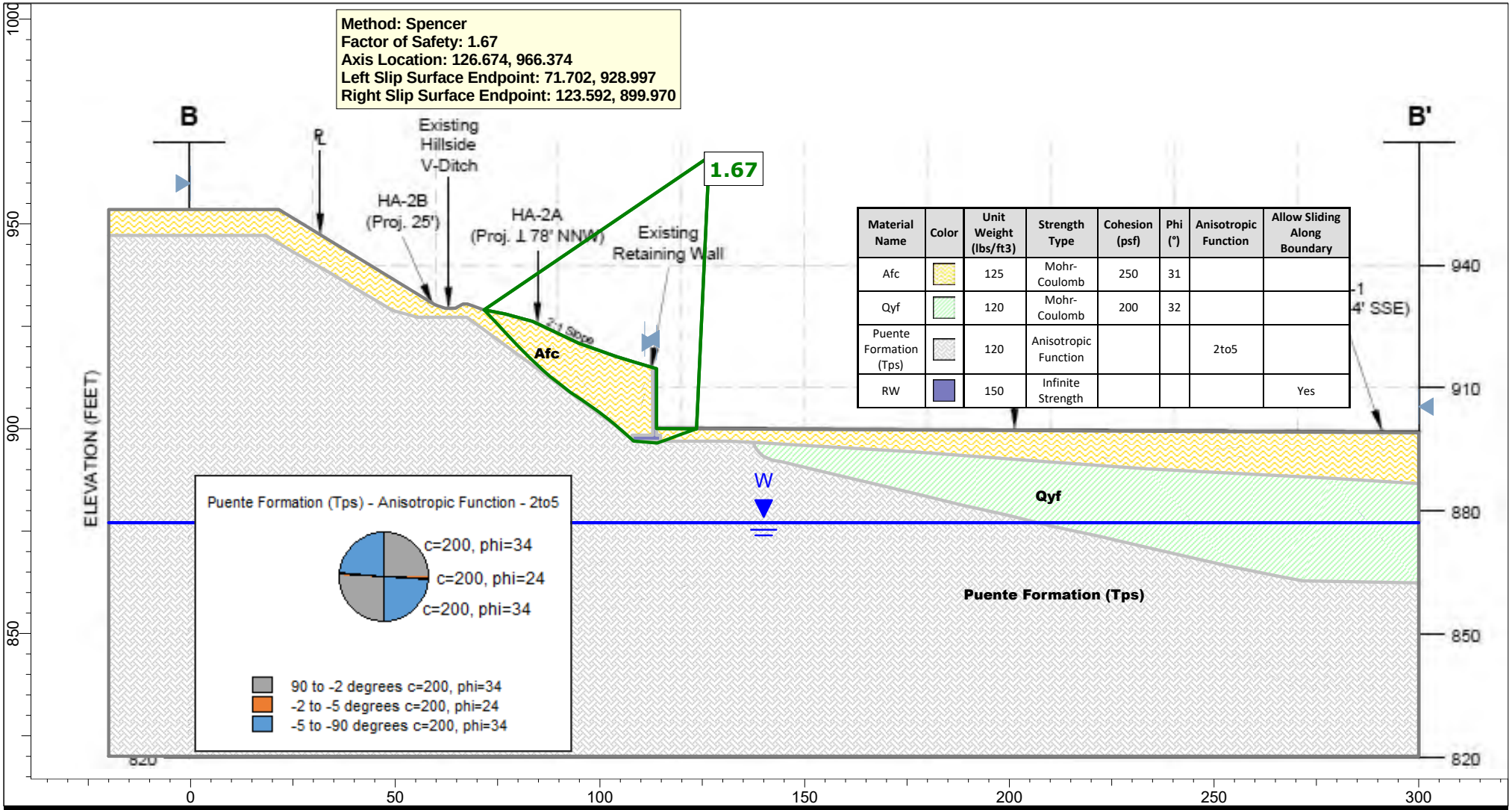
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Date:	*Condition:*
July 2025	**Static**

Section B - B'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			2to5	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

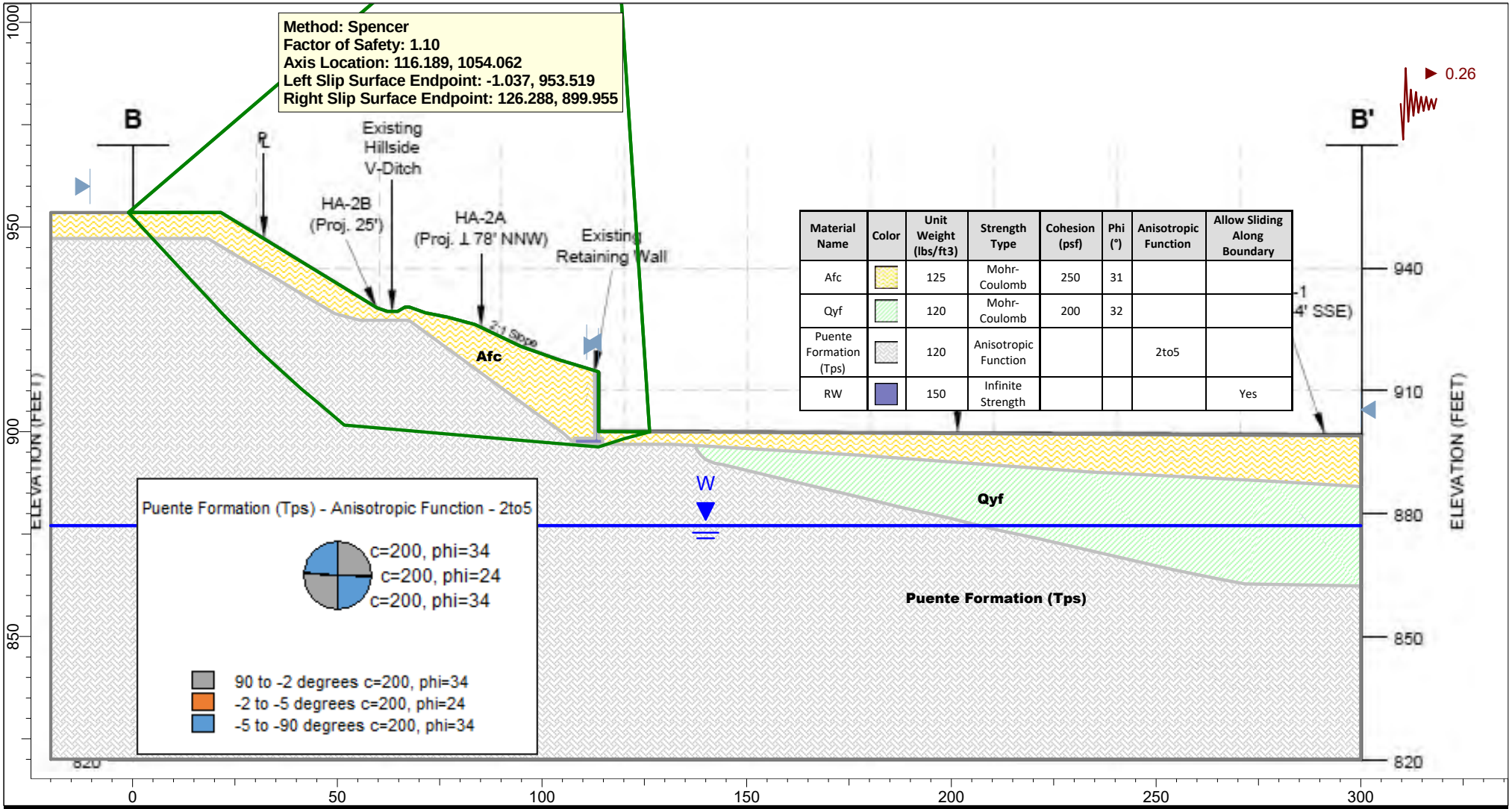
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Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**				
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Date: July 2025	Condition: **Static**			

Section B - B'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			2to5	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

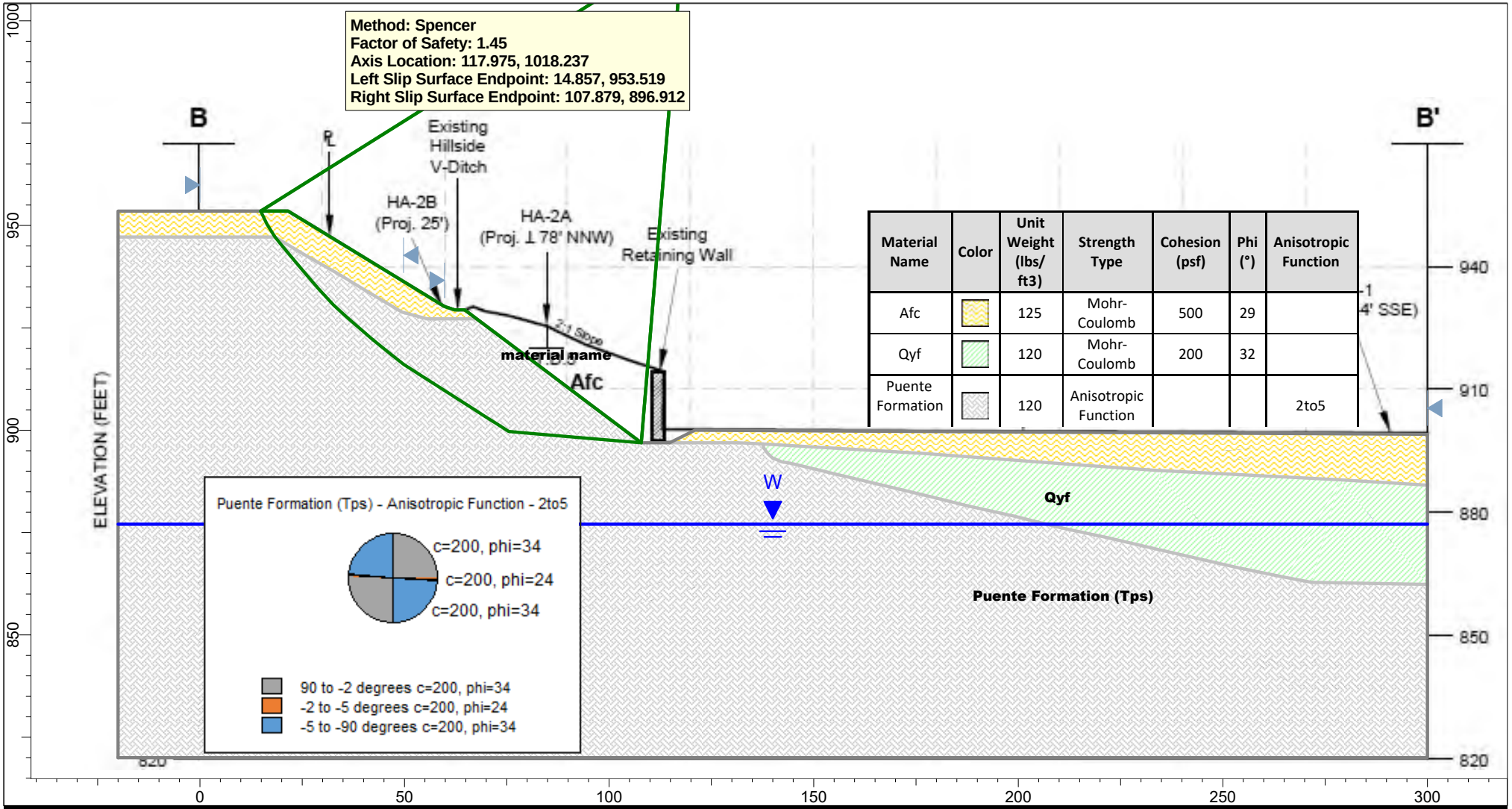
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Date: July 2025	Condition: **Pseudo Static**			

Section B - B'

Global Stability - Temporary Backcut

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Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function
Afc		125	Mohr-Coulomb	500	29	
Qyf		120	Mohr-Coulomb	200	32	
Puente Formation		120	Anisotropic Function			2to5

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

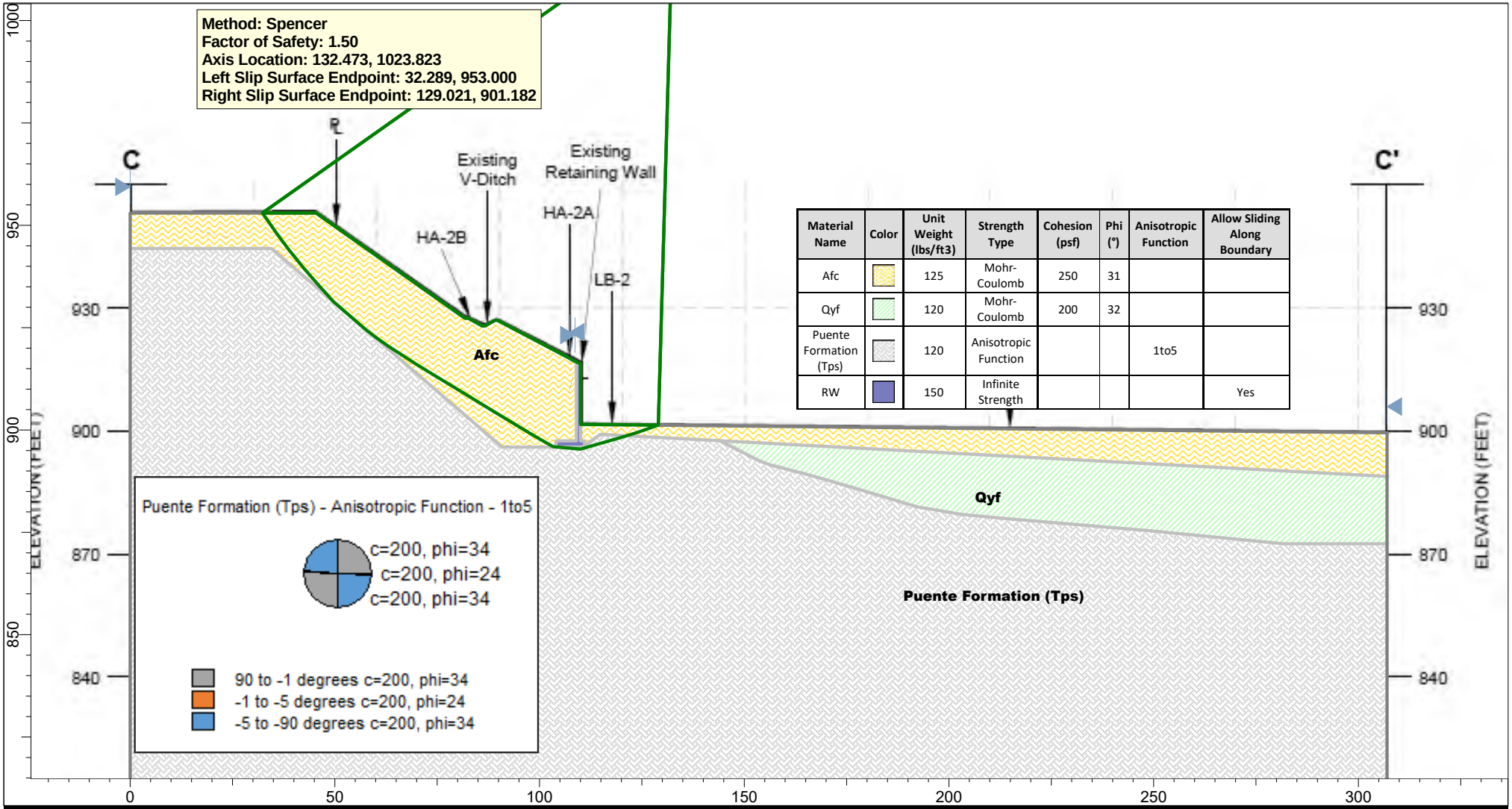
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Date:	*Condition:*
July 2025	**Static**

Section C - C'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			1to5	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

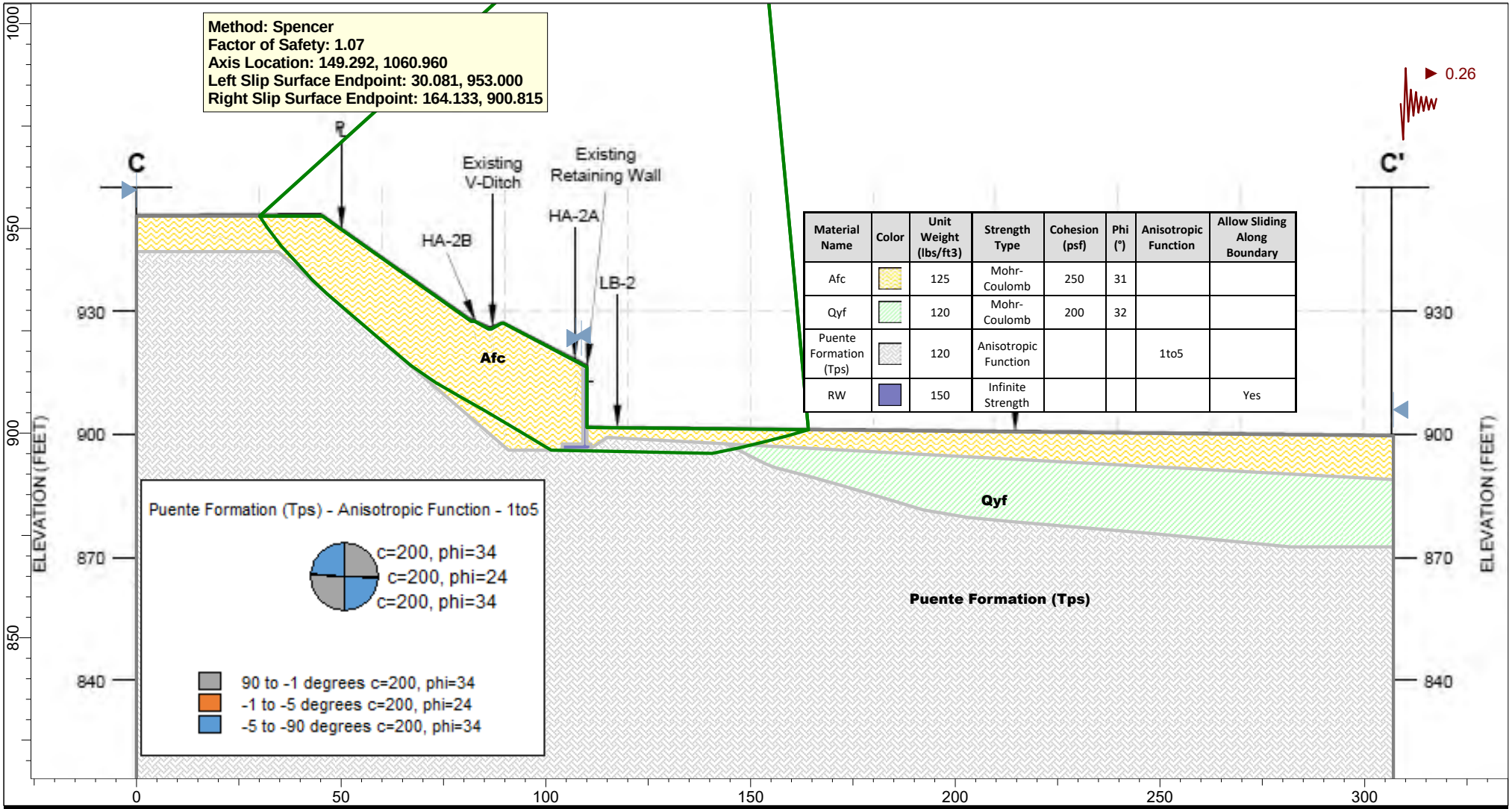
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Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**				
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Date: July 2025	*Condition:* **Static**			

Section C - C'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
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Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			1to5	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

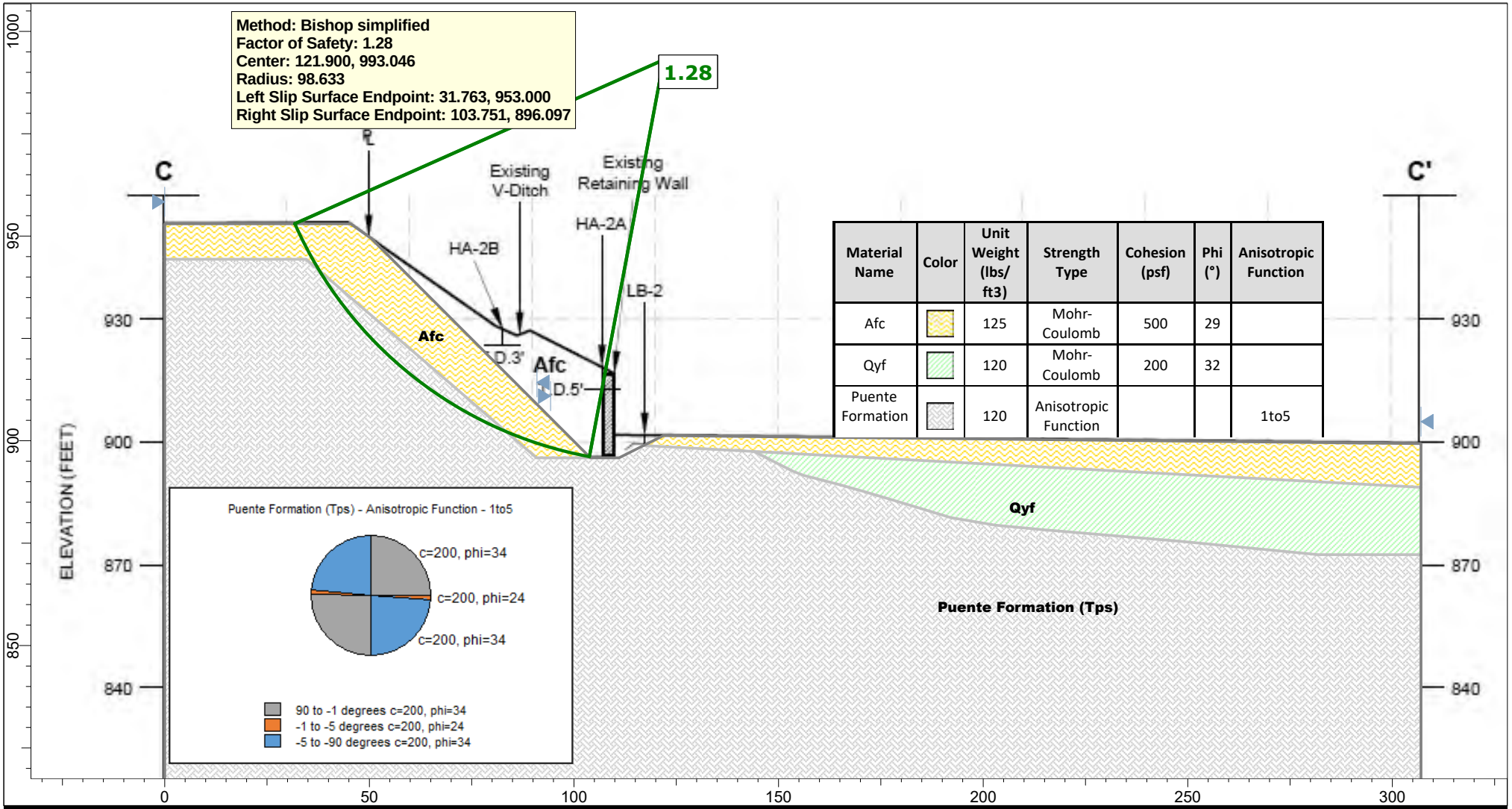
verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**				
Analyzed By: LRM	*Units:* feet	*Scale:* 1:420	*Project No.:* **30477**	*File Name:* Section C_cco_p-static_global.slim
Date: July 2025	*Condition:* **Pseudo Static**			

Section C - C'

Global Stability - Temporary Backcut

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Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function
Afc		125	Mohr-Coulomb	500	29	
Qyf		120	Mohr-Coulomb	200	32	
Puente Formation		120	Anisotropic Function			1to5

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

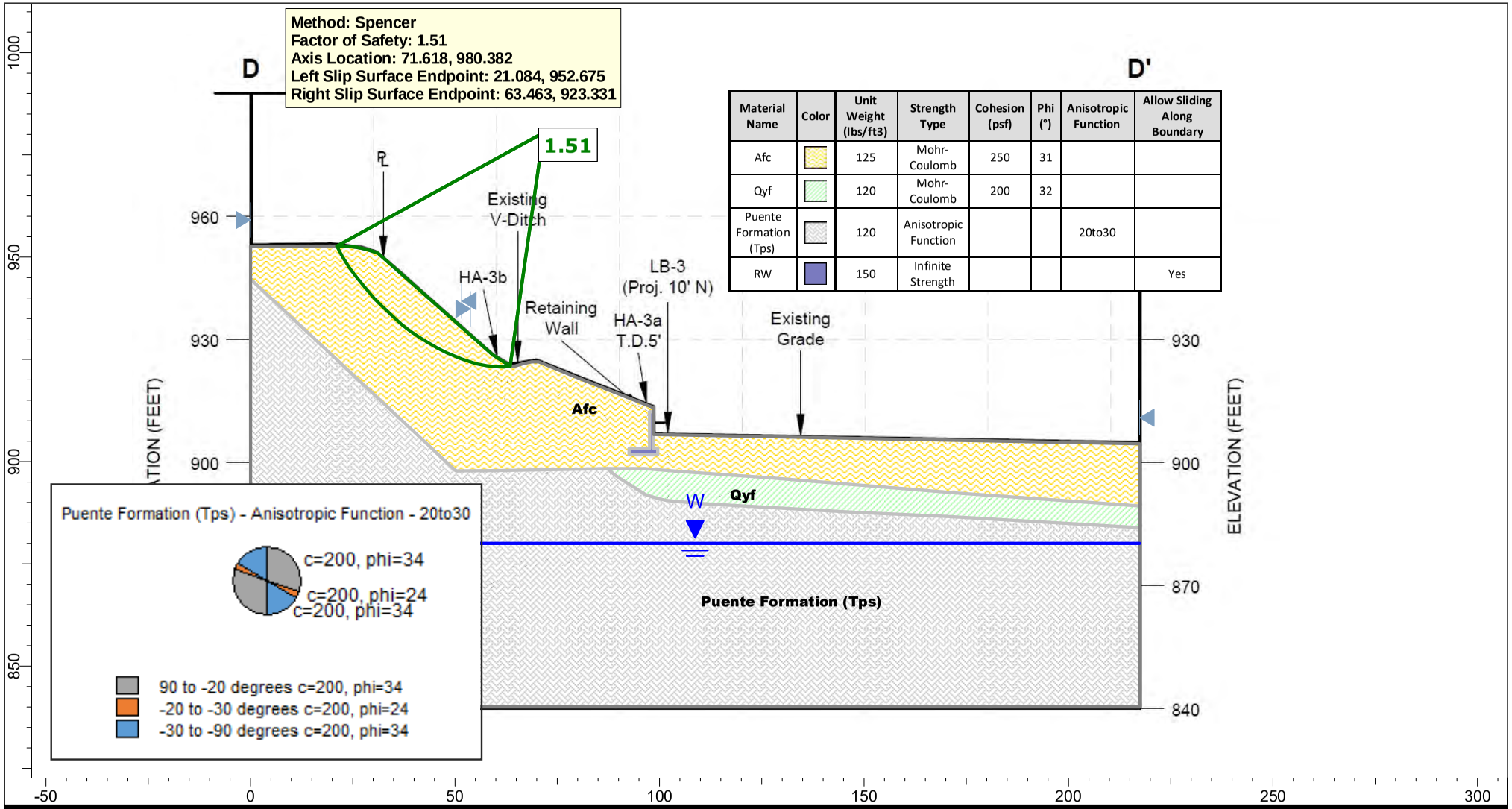
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Date:	*Condition:*
July 2025	**Static**

Section D - D'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

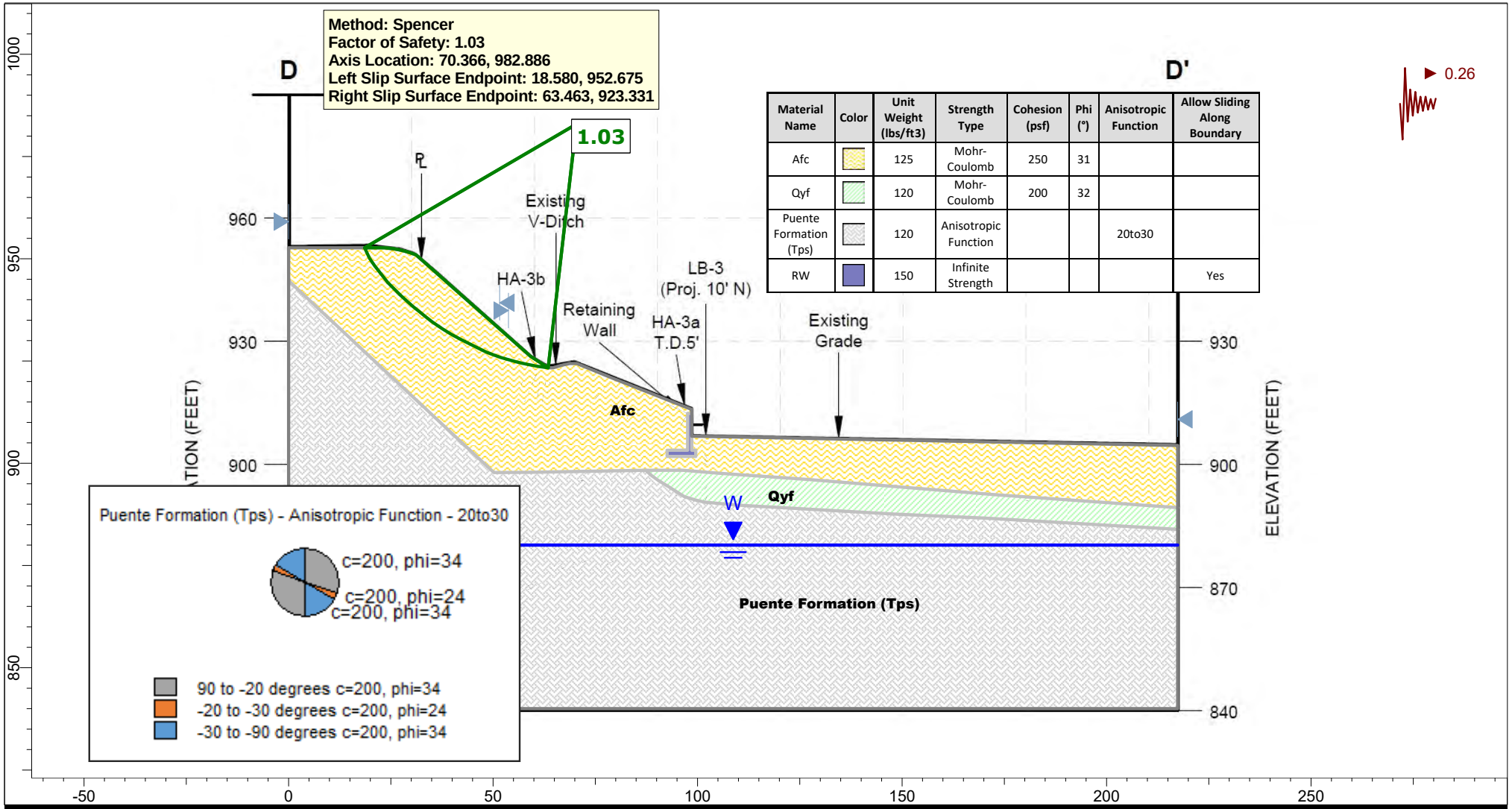
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Date:	*Condition:*
July 2025	**Static**

Section D - D'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
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Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

Analyzed By:	*Units:*	*Scale:*	*Project No.:*	*File Name:*
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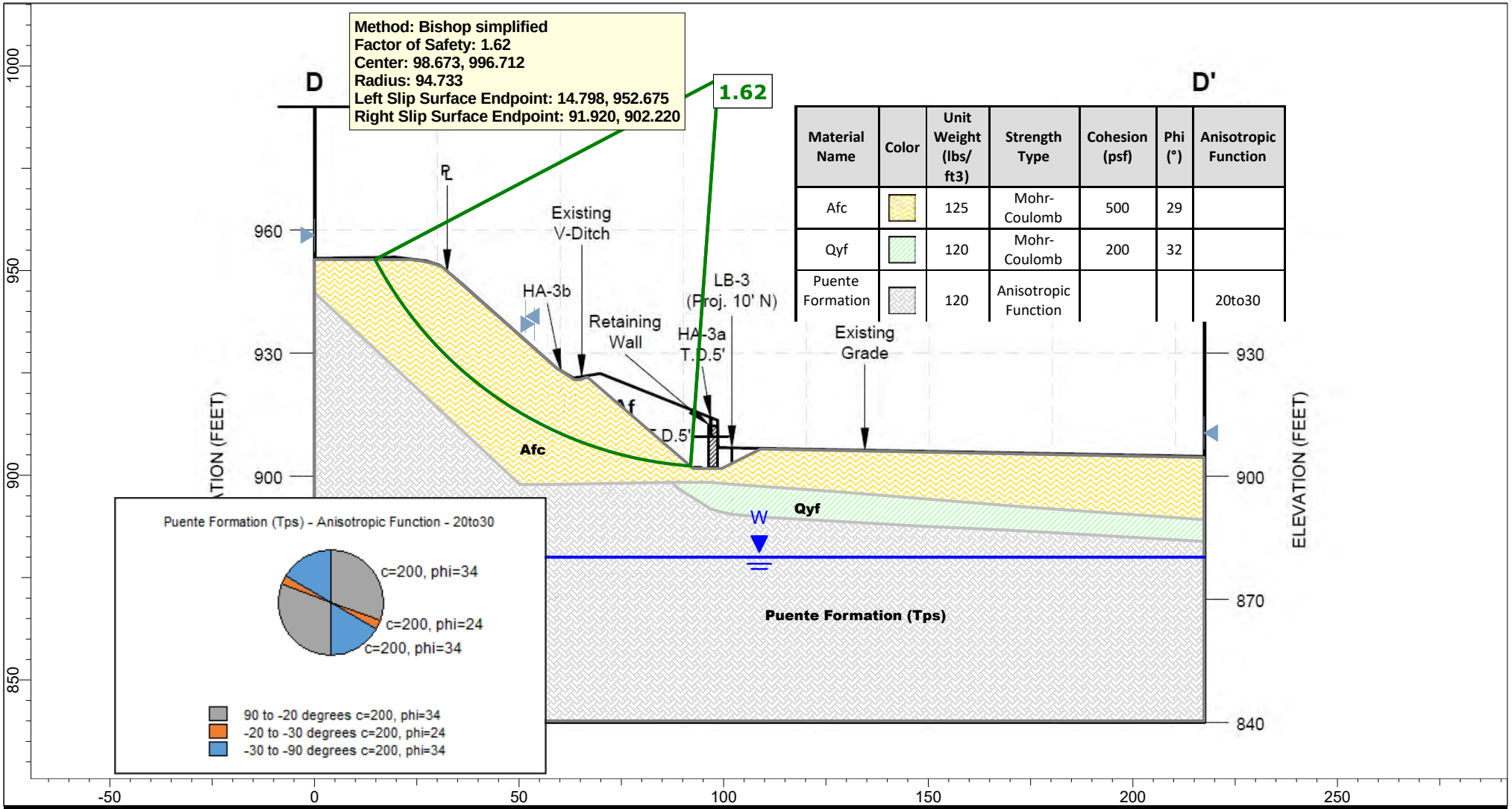
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Condition: **Pseudo Static**

Section D - D'

Global Stability - Temporary Backcut

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Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function
Afc		125	Mohr-Coulomb	500	29	
Qyf		120	Mohr-Coulomb	200	32	
Puente Formation		120	Anisotropic Function			20to30

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

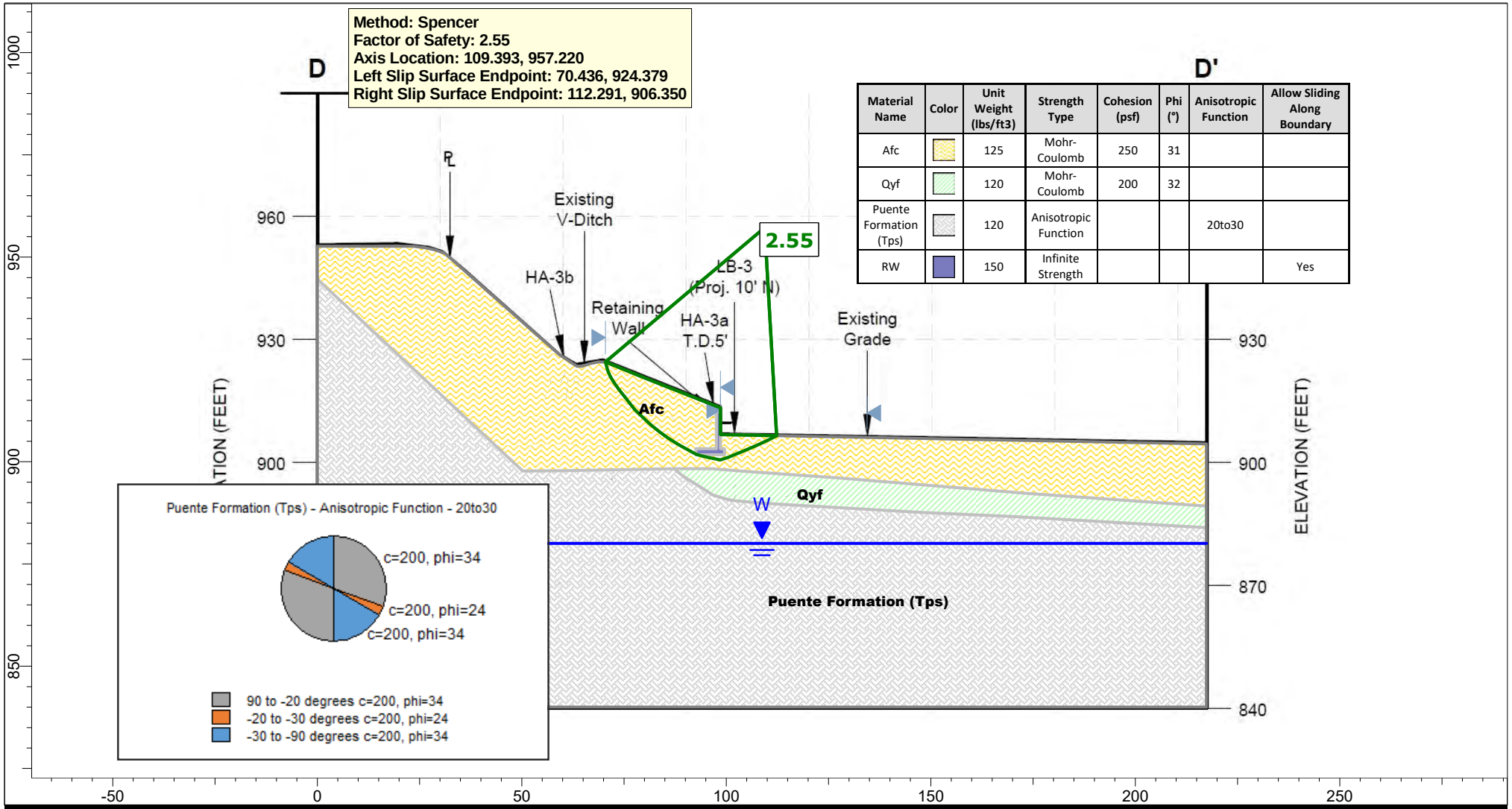
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Date:	*Condition:*
July 2025	**Static**

Section D - D'

Local Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

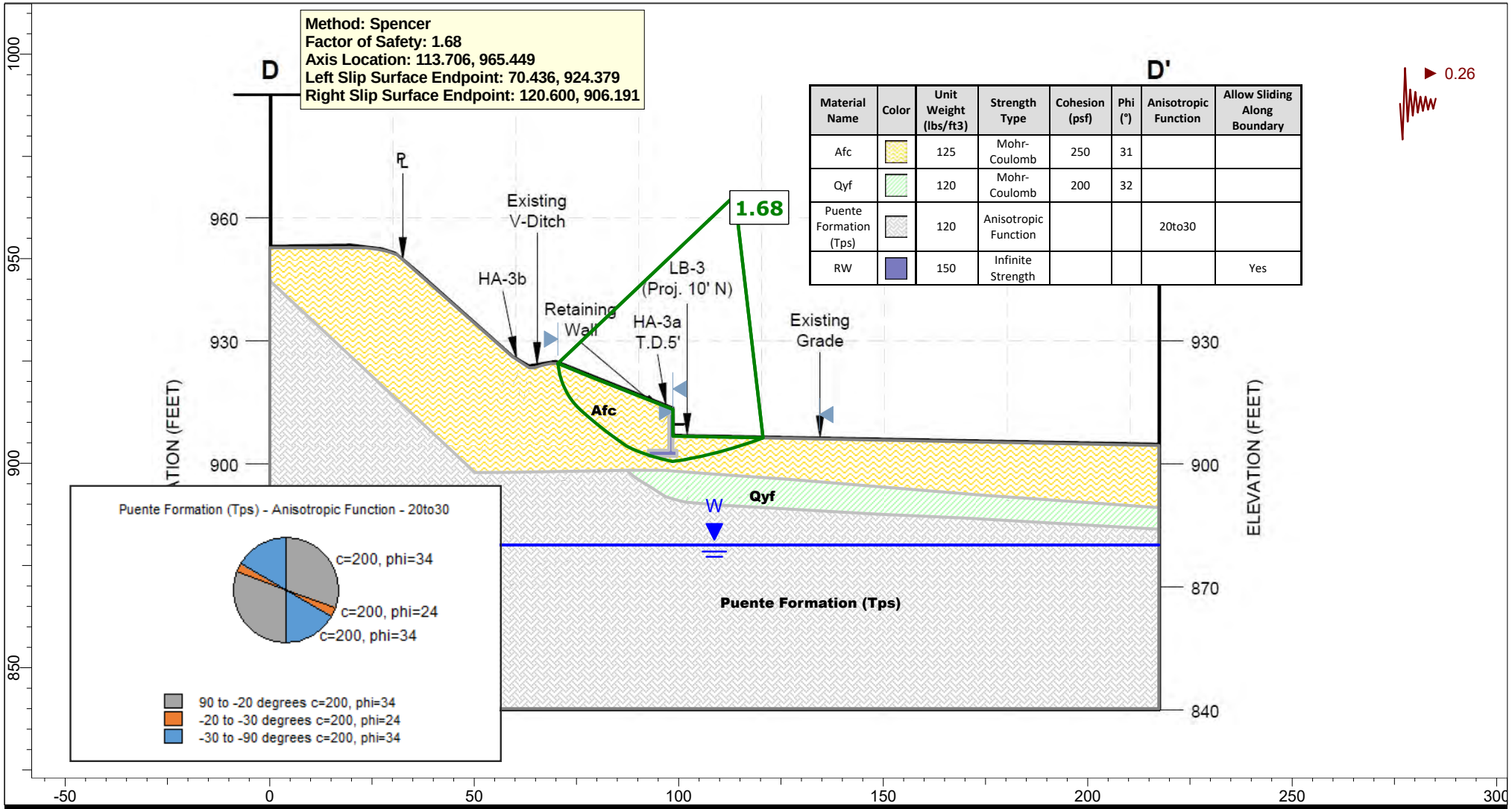
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Date:	*Condition:*
July 2025	**Static**

Section D - D'

Local Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
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Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

Analyzed By:	*Units:*	*Scale:*	*Project No.:*	*File Name:*
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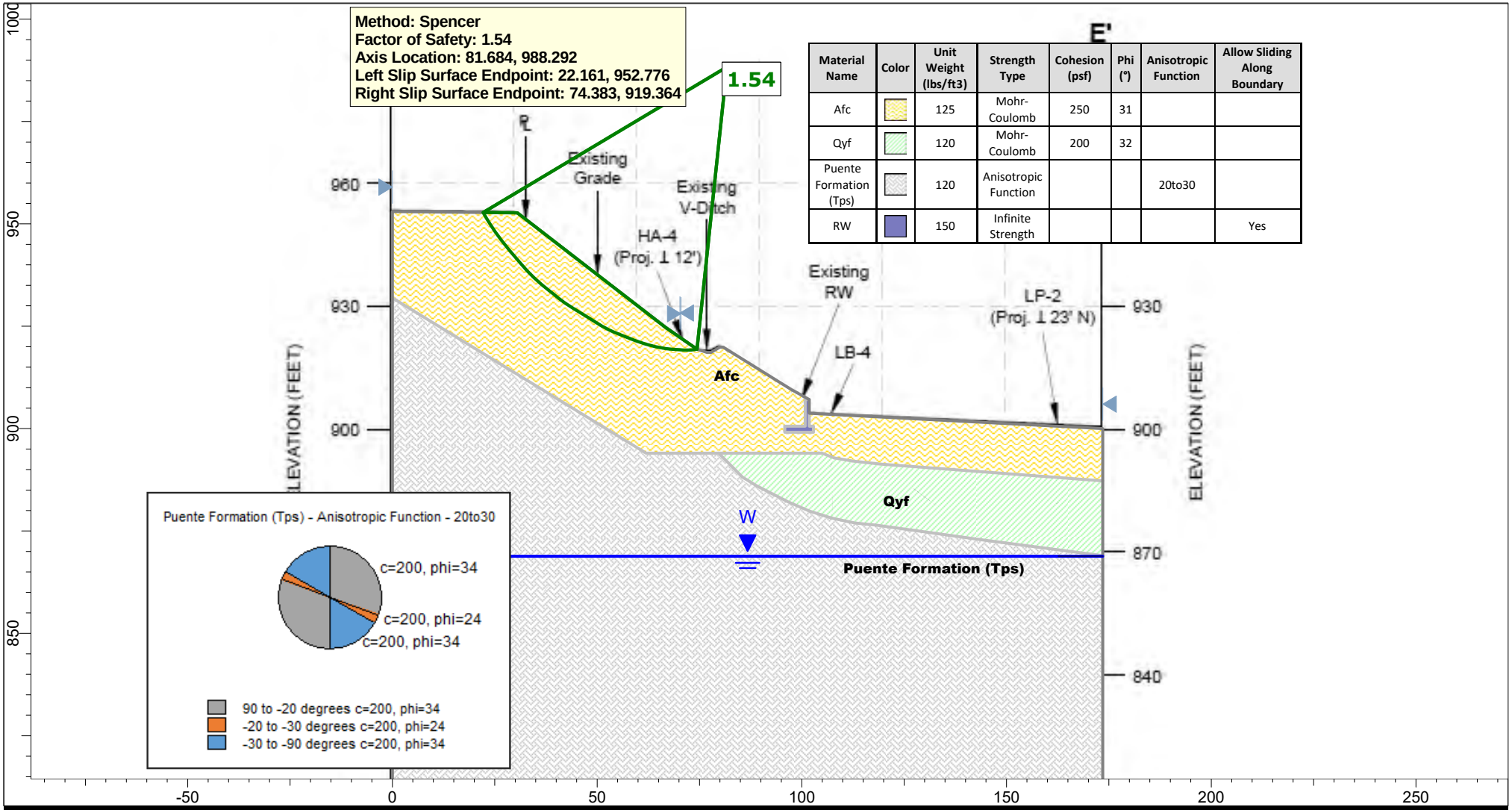
Date: July 2025

Condition: **Pseudo Static**

Section E - E'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

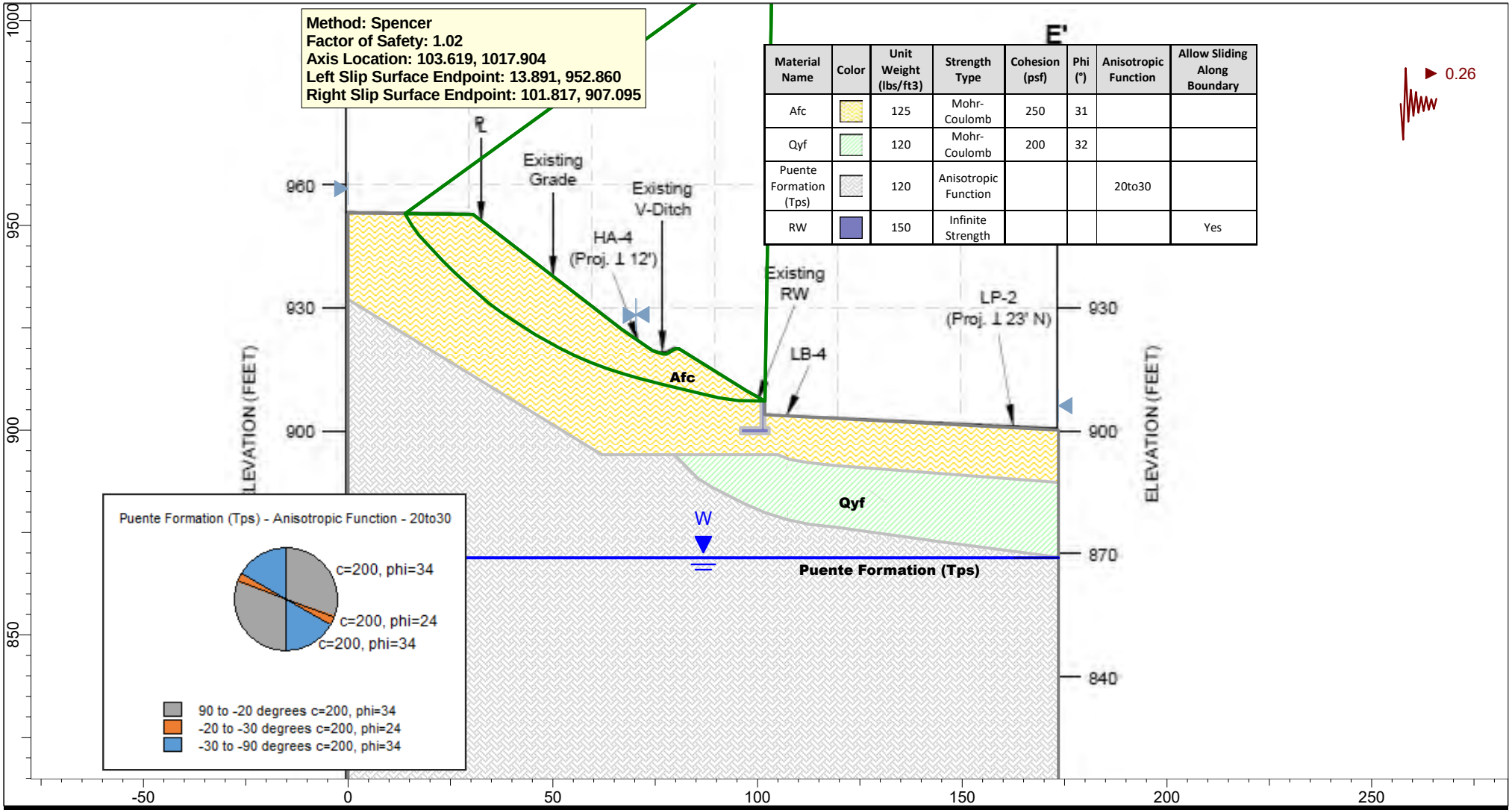
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Date:	*Condition:*
July 2025	**Static**

Section E - E'

Global Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
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Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

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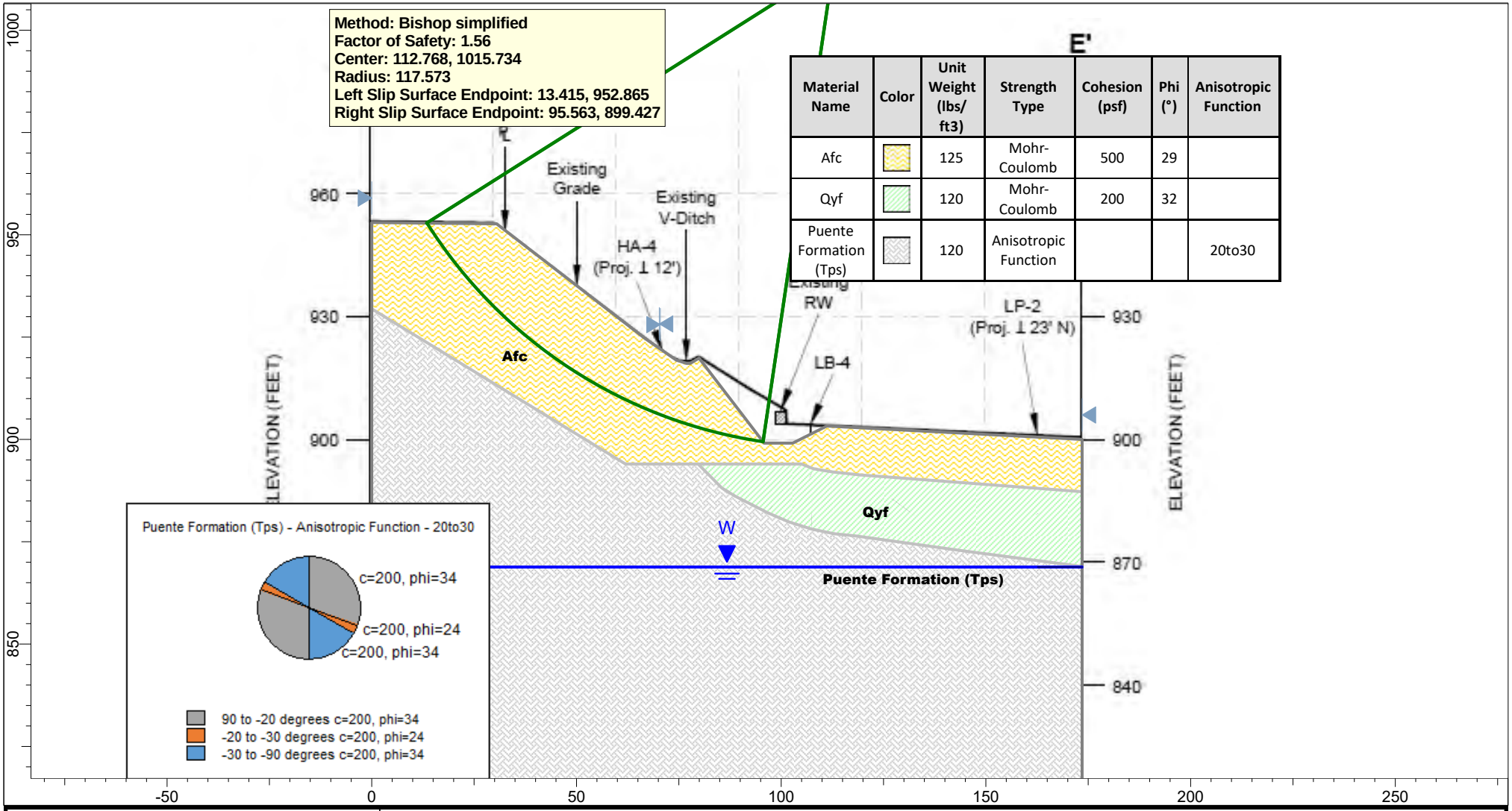
Date: July 2025

Condition: **Pseudo Static**

Section E - E'

Global Stability - Temporary Backcut

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Material Name	Color	Unit Weight (lbs/ ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function
Afc		125	Mohr-Coulomb	500	29	
Qyf		120	Mohr-Coulomb	200	32	
Puente Formation (Tps)		120	Anisotropic Function			20to30

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

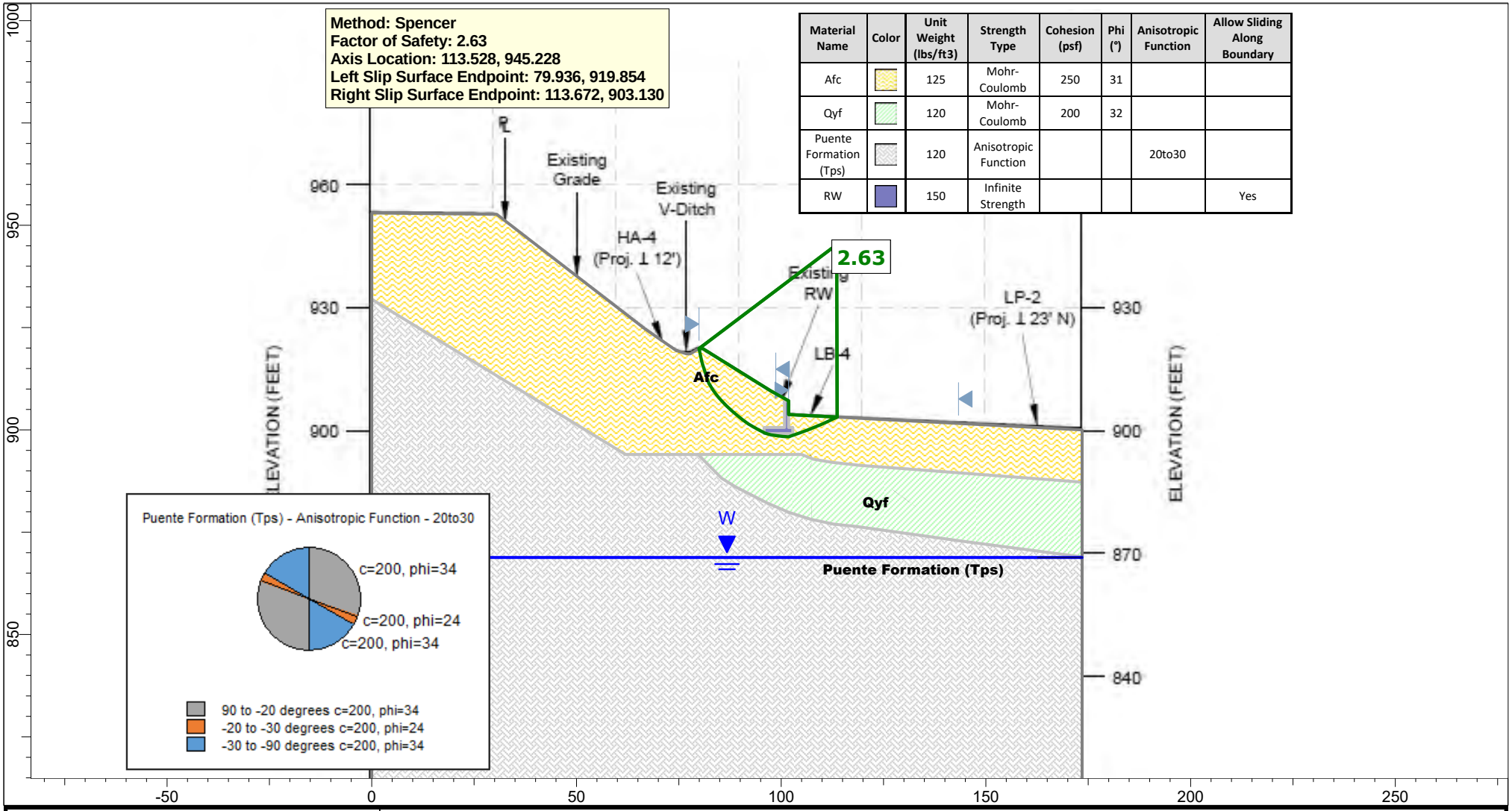
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LRM	feet	1:420	**30477**	Section E_crcl_static_global_temp bck.slim

Date:	*Condition:*
July 2025	**Static**

Section E - E'

Local Stability

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Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (°)	Anisotropic Function	Allow Sliding Along Boundary
Afc		125	Mohr-Coulomb	250	31		
Qyf		120	Mohr-Coulomb	200	32		
Puente Formation (Tps)		120	Anisotropic Function			20to30	
RW		150	Infinite Strength				Yes

SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**

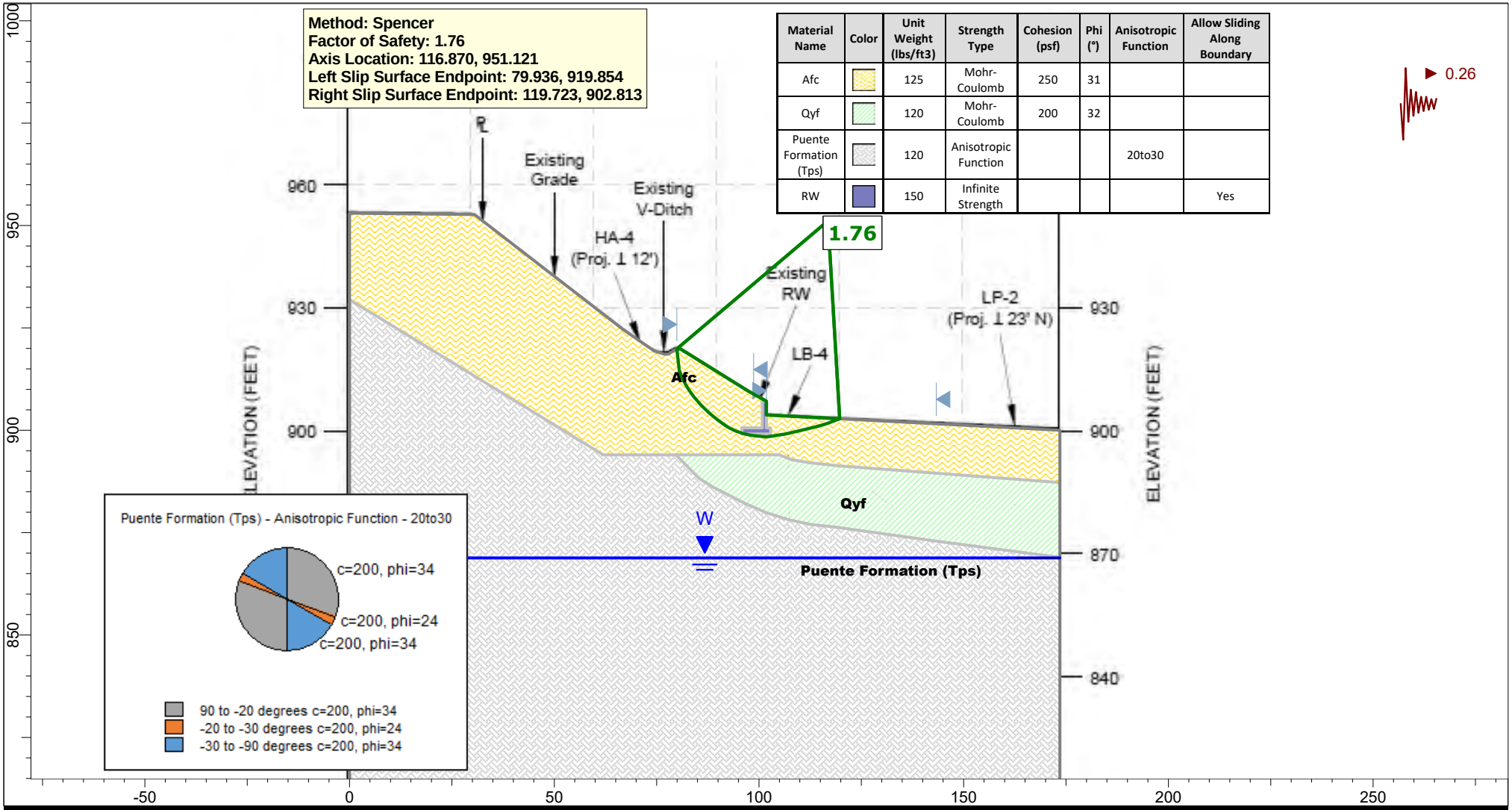
Analyzed By:	*Units:*	*Scale:*	*Project No.:*	*File Name:*
LRM	feet	1:420	**30477**	Section E_cco_static_local.slim

Date:	*Condition:*
July 2025	**Static**

Section E - E'

Local Stability

Z:\Project Files\IA-JZ\INTRACORPSW\30477 - Intracorp Diamond Bar Montefino Geo\Analyses\S L I D E\July 2025\Sec E\Section E Revised\Section E_cco_p-static_local.slim



SLIDEINTERPRET 9.037

verdantas

Project: **Proposed Residential Development, 1400 Montefino Avenue, Diamond Bar, Calif.**				
Analyzed By: LRM	Units: feet	Scale: 1:420	Project No.: **30477**	File Name: Section E_cco_p-static_local.slim
Date: July 2025	Condition: **Pseudo Static**			

Appendix F

Western Laboratories, 1984

P.C.# 9269

WESTERN LABORATORIES

13609 SOUTH NORMANDIE AVENUE • GARDENA, CALIFORNIA 90249
(213) 321-9900 & 538-2101

December 20, 1984 Work Order 8765

Pacific Newport Properties
4299 MacArthur Boulevard
Newport Beach, California 92660

Re: Soils Investigation - Proposed Office Building - Located South of Montefino Avenue, Westerly of Diamond Bar Boulevard - Portion of Lot 9 of Tract 36741 - Diamond Bar, in the County of Los Angeles, California

Dear Sirs:

At the request of Mr. Marshall Wilkinson, a soils investigation was performed at the above reference.

It is proposed to construct a 25,000 sq.ft. reinforced concrete tilt-up structures on the parcel which consists of ± 2.5 acres. The proposed structures will be two story with maximum anticipated column loadings on the order of 120 kips.

The property is presently vacant of any structures and contains scattered surface debris and a large commercial sign adjacent to Montefino Avenue.

The westerly property line is an upslope to the adjacent property and the east property line is a down slope which were constructed during previous grading operations.

The purpose of our investigation was to explore subsurface conditions and to develop preliminary soils engineering design data to permit evaluation of the site with respect to the proposed development.

Eight (8) 24-inch exploratory test excavations were placed at locations as shown on the attached plot plan. These excavations were logged by our Field Engineer and disturbed and undisturbed samples were obtained for laboratory testing and analysis. Logs of the excavations are shown on Table I.

The property has been rough graded and contains compacted fill soils which were certified by Medall, Aragon, Worswick & Associates, Inc., in their report dated February 25, 1982, Project S-1809.

The upper 1.0 - 1.5 feet of the existing soils were low in density which can be attributed to weathering of the upper soils. These soils were high in moisture content from the recent rains.

The fill soils and natural soils below this upper 1.0 - 1.5 feet layer were noted to be dense. No caving occured and no ground water was encountered. Natural soils as encountered classify as Clay, sandy.

Undisturbed samples for detailed testing in our laboratory were obtained where possible, by pushing or driving a sampling spoon into the material. A solid barrel-type spoon was used, having an inside diameter of 2.50 inches with a tapered cutting tip at the lower end and a ball valve at the upper end. The barrel is lined with thin brass rings, each one inch in length. The spoon penetrated into the soil below the depth of boring approximately 12 inches. The central portion of this sample was retained for testing. All samples in their natural field condition were sealed in airtight containers and transported to the laboratory.

LABORATORY TESTS

A. Shear Tests were made with a direct shear machine of the strain control type in which the rate of strain is 0.05 inch per minute. Specimens were subjected to shear under varying loads and under conditions of saturation. The results are those given on Table II.

B. Expansion Index Tests, in accordance with the requirements of the Uniform Building Code Standard No. 29-2, were performed on typical specimens of the on-site soils from 50 percent saturation to toal saturation under a total load of 12.63 pounds, after a 24 hour saturation period or until the rate of expansion becomes constant. Results of these tests are presented on Table III and indicate the upper soils to be low to moderate in expansion potential under the above standard.

C. Consolidation Tests were performed on in-situ moisture and saturated specimens of typical soils. The consolidometer, like the direct shear machine, is designed to receive the specimens in the field condition. Porous stones, placed at the top and bottom of the specimens permit the free flow of water into or from the specimens during the test. Successive load increments were applied to the top of the specimens and progressive and final settlements under each increment were recorded to an accuracy of 0.0001 inch. The final settlements so obtained are plotted to determine the curves shown on Plates A and B.

D. Resistance 'R' Value Tests were performed on typical specimens of the on-site soils. Results of these tests are shown on Table IV with the recommended pavement sections. The lowest 'R' Value obtained from these samples was 31.

FOUNDATION RECOMMENDATIONS

The existing soils are suitable in their present condition for slab, structural and pavement support once the upper 1.0 - 1.5 feet is recompacted to a minimum of 90 percent relative compaction in accordance with the attached "Specifications for Compacted Fill".

Any additional soils required to bring the proposed structure to finish grade shall be so compacted in accordance with the attached "Specifications for Compacted Fill".

The recommended safe bearing capacity for foundations founded a minimum of 18 inches into certified fill soils or competent natural ground is 2000 lbs./sq.ft. and 2500 lbs./sq.ft. for continuous and isolated footings, respectively.

Continuous foundations shall be reinforced with a minimum of one (1) #4 bar, top and bottom. Isolated foundations shall be reinforced as deemed necessary by the Structural Engineer for the project.

Slabs-on-grade shall be reinforced with a minimum reinforcement of 6X6/10X10 welded wire mesh. Care shall be taken to position the reinforcement in the center of the slab.

The welded wire mesh reinforcement requirements due to the expansive quality of the soils may be waived, provided measures are taken to prevent any addition or reduction of moisture in the soils below the slab area; and a five (5) inch thick concrete slab shall be utilized.

While reinforcement of slabs poured-on-grade will not be necessary due to soil expansion characteristics if the above requirements are accomplished, other factors may require that slabs be reinforced, such as structural, confinement and temperature changes.

In designing for lateral loads, a coefficient of friction of 0.35 may be assumed between the slabs-on-grade, the footings and the compact underlying soils. Compact soils around the footings may be assumed to develop passive earth pressures equivalent to those pressures exerted by a fluid having a density of 200 lbs./cu.ft. with a maximum of 2000 lbs./sq.ft. Where the direction of thrust is towards a slope due consideration should be given to the mass of soil immediately in front of the footing to determine the capability of developing this passive and frictional resistance.

Active earth pressures against retaining walls will be equivalent to the pressure exerted by a fluid having a density of 30 lbs./cu.ft., for granular drained soils where the slope of the retained material is level and there is no surcharge.

It should be brought to your attention that it will be necessary to deepen those foundations near property lines if perimeter over-excavation of the foundations is not accomplished due to the close proximity of the property line.

All backfill adjacent to walls should be mechanically compacted to at least 90 percent of the maximum density obtainable by the ASTM:Designation D-1557-70T method of compaction. Flooding should not be permitted in any wall or trench backfill.

Any excavation without shoring shall be cut at a one horizontal to one vertical slope and adequate safety precautions should be provided for any adjacent streets or structures.

Adequate protection shall be provided for adjacent buildings or improvements on adjoining properties during grading operations. Shoring may be required prior to excavation.

Computations for ultimate settlement based on the aforementioned recommended soils pressures and the results of consolidation-pressure curves shown on Plates A and B, indicate that all footings sized for the recommended soil pressure and founded in compacted fill soils should experience long-term ultimate settlements of less than three-quarters inch with differential settlements not in excess of one-quarter inch, if the recommendations in this report are followed.

The recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the borings. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the present time, Western Laboratories should be notified so that supplemental recommendations can be given.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are called to the attnetion of the Architect and Engineers for the project and incorporated into the plans and that the Contractors and Subcontractors carry out such recommendations in the field.

This report is subject to review by the controlling authorities for the project.

We appreciate this opportunity to be of service to you.

Respectfully submitted,

WESTERN LABORATORIES

Jules A. Juge, Jr.
R.C.E. 9597

TABLE I

LOG OF EXCAVATIONS

Test Excavation 1

0.0 - 1.0	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.0 - 6.0	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
6.0 - 10.0	CLAY, sandy - Brown - Natural Ground, dense
10.0 - 12.5	SAND, clayey - Brown, very dense
12.5 - 20.0	SAND, medium to coarse, clayey - Light Brown, dense

Test Excavation 2

0.0 - 1.5	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.5 - 6.0	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
6.0 - 9.0	CLAY, sandy - Brown - Natural Ground, dense
9.0 - 13.0	SAND, medium to coarse, clayey - Light Brown, dense

TABLE I
(Continued)

Test Excavation 3

0.0 - 1.5	FILL SOILS - Sand, clayey & Clay, sandy - low density, high moisture content
1.5 - 11.0	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
11.0 - 13.0	CLAY, sandy - Brown - Natural Ground, dense
13.0 - 20.0	SAND, medium to coarse, clayey - Light Brown, dense

Test Excavation 4

0.0 - 1.0	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.0 - 7.0	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
7.0 - 10.5	CLAY, sandy - Brown - Natural Ground, dense

TABLE I
(Continued)

Test Excavation 5

0.0 - 1.0	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.0 - 10.0	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
10.0 - 12.0	CLAY, sandy - Brown - Natural Ground, dense
12.0 - 14.0	SAND, clayey - Brown, very dense

Test Excavation 6

0.0 - 1.0	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.0 - 5.0	COMPACTED FILL SOILS - Sand, clayey, and Clay, sandy - dense to very dense, variable moisture content
5.0 - 9.5	CLAY, sandy - Brown - Natural Ground, dense
9.5 - 13.0	SAND, clayey - Brown, very dense
13.0 - 18.5	SAND, medium to coarse, clayey - Light Brown, dense

TABLE I
(Continued)

Test Excavation 7

0.0 - 1.0	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.0 - 2.0	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
2.0 - 6.0	CLAY, sandy - Brown - Natural Ground, dense
6.0 - 10.0	SAND, medium to coarse, clayey - Light Brown, dense

Test Excavation 8

0.0 - 1.0	FILL SOILS - Sand, clayey and Clay, sandy - low density, high moisture content
1.0 - 4.5	COMPACTED FILL SOILS - Sand, clayey and Clay, sandy - dense to very dense, variable moisture content
4.5 - 6.5	CLAY, sandy - Brown - Natural Ground, dense
6.5 - 10.0	SAND, medium to coarse, clayey - Light Brown, dense

TABLE II

DIRECT SHEAR TESTS

Sample	Classification	Angle of Internal Friction (Degrees)	Cohesion (Lbs./Sq.Ft.)
A	Clay, sandy	23	400
B	Clay, sandy	26	420
C	Sand, clayey	32	225
* D	Sand, clayey	35	340
* E	Clay, sandy	29	500
* F	Clay, sandy	26	480

* Compacted Fill Soils - portion of samples remolded to approximate field density utilizing the material passing the #10 sieve

Work Order 8765

TABLE III

EXPANSION TESTS

Sample	Classification	Expansion Index
A	Clay, sandy	49
B	Clay, sandy	43
C	Sand, clayey	29
* D	Sand, clayey	38
* E	Clay, sandy	52
* F	Clay, sandy	56

* Compacted Fill Soils - portion of samples remolded to approximate field density utilizing the material passing the #10 sieve

TABLE IV

PAVEMENT SECTIONS

Area	Traffic Index	Min. Recommended A.C. Thickness	Min. Recommended Base Thickness
Automobile Parking	4	3.0"	4.0"
Truck Areas and Driveways			

	Min. Recommended Concrete Thickness	Min. Recommended Base Thickness
Fork Lift Areas	5.0"	4.0"

TEST EXCAVATION No. 1

DEPTH

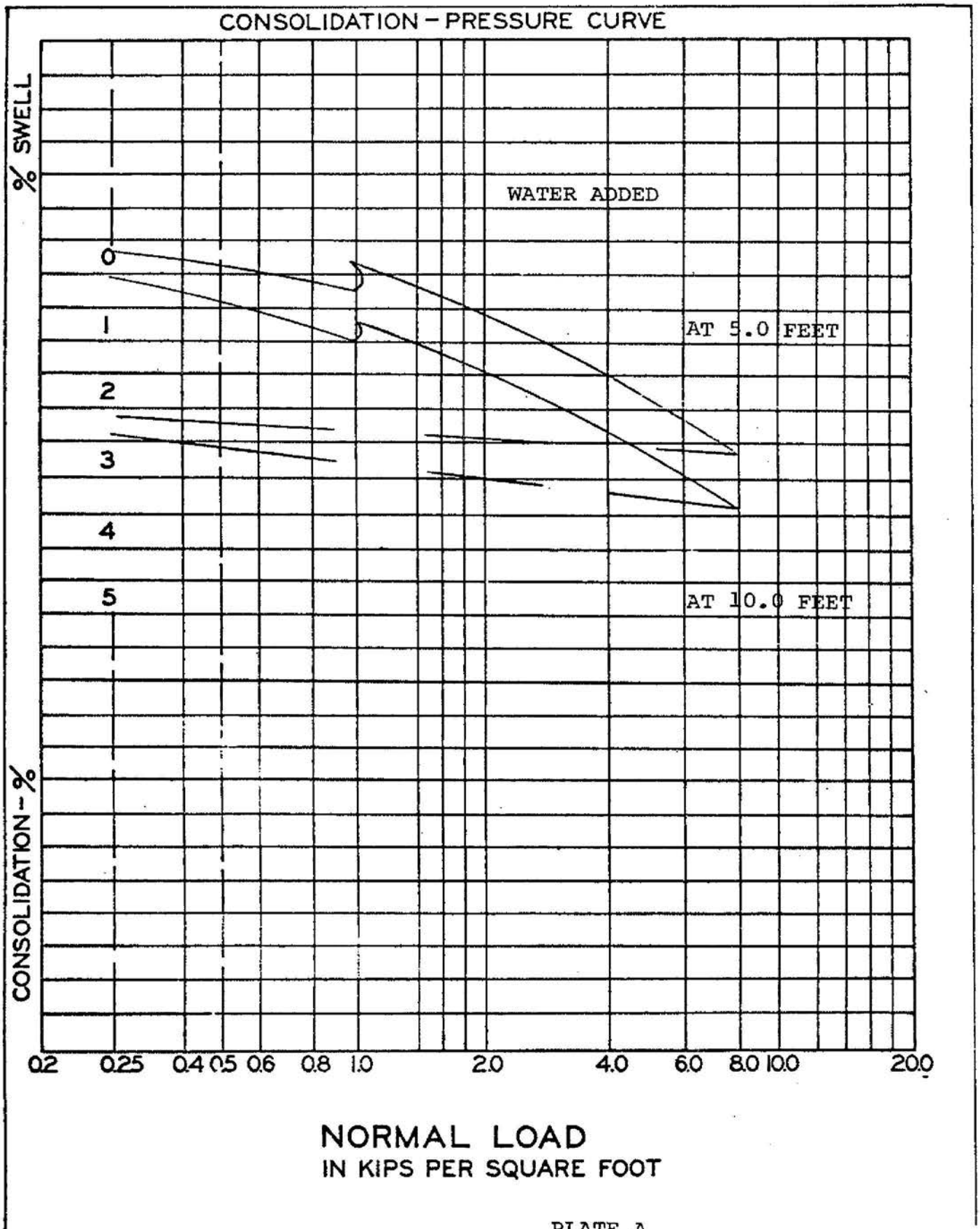


PLATE A

DATE: 12-19-84

SCALE:

WORK ORDER: 8765

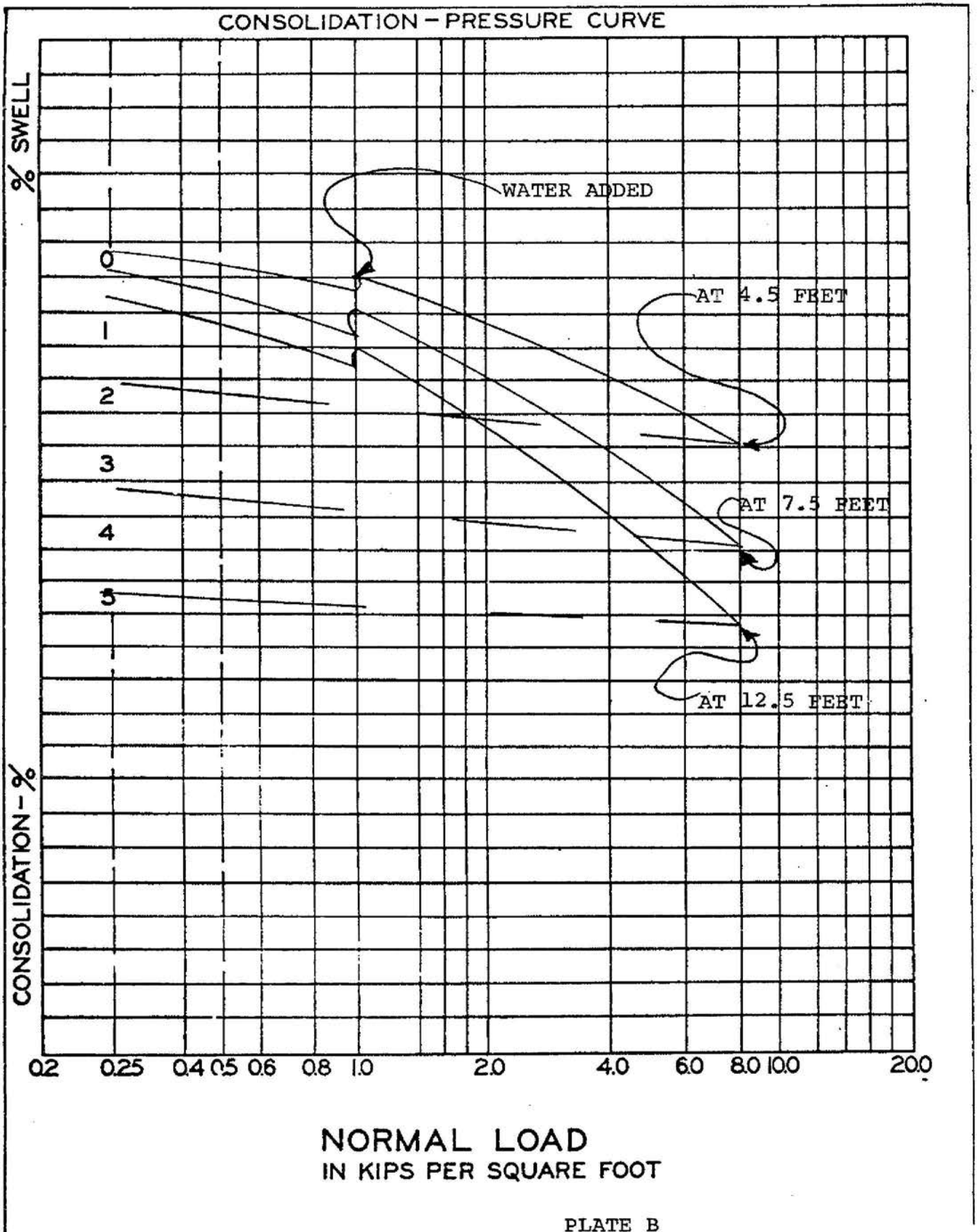
PREPARED FOR

PACIFIC NEWPORT PROPERTIES

WESTERN LABORATORIES
13626 S. NORMANDIE AVENUE
GARDENA, CALIFORNIA

TEST EXCAVATION 3

DEPTH



NORMAL LOAD
IN KIPS PER SQUARE FOOT

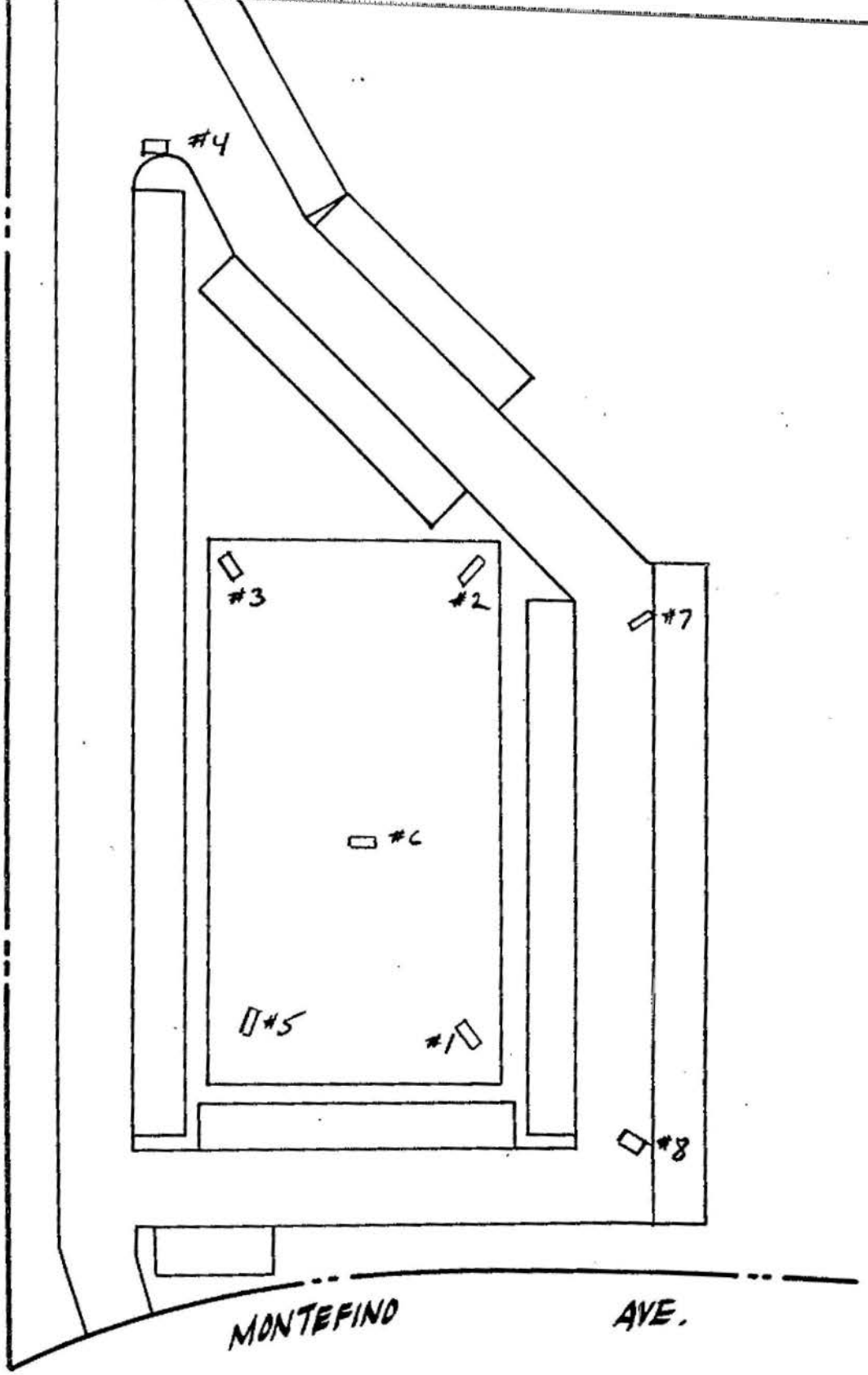
PLATE B

DATE: 12-19-84
SCALE:
WORK ORDER: 8765

PREPARED FOR

PACIFIC NEWPORT PROPERTIES

WESTERN LABORATORIES
13626 S. NORMANDIE AVENUE
GARDENA, CALIFORNIA



APPROXIMATE LOCATION OF EXPLORATORY TESTS

□ = TEST EXCAVATION

○ = BORING

DATE: 12-18-84
SCALE: 1" = 60'
WORK ORDER: 8765

PACIFIC NEWPORT PROPERTIES

WESTERN LABORATORIES
13609 S. NORMANDIE AVENUE
GARDENA, CALIFORNIA

Appendix G

Medall, Worswick And Associates, Inc., 1985

REVISED RETAINING WALL
DESIGN PARAMETERS
PROPOSED HARTFORD OFFICE FACILITY
LOT 9, TRACT 40972
DIAMOND BAR
LOS ANGELES COUNTY, CALIFORNIA

JUN 03 1985

FOR

PACIFIC NEWPORT PROPERTIES

PROJ. NO. S1809-9-1 MAY 10, 1985

Medall, Worswick & Associates, Inc.
Consulting Engineers & Geologists

2044 Cotner Ave. Los Angeles, CA 90025 213/477-8507
2168 South Hathaway St. Santa Ana, CA 92705 714/546-6602
11300 Sorrento Valley Rd. San Diego, CA 92121 619/452-0160

May 10, 1985
Project No. S1809-9-1

Pacific Newport Properties
17842 Mitchell North
Suite 100
Irvine, California 92714

Attention: Mr. Marshall P. Wilkinson

Subject: Revised Retaining Wall Design Parameters, Proposed Hartford Office Facility, Lot 9, Tract 40972, Diamond Bar, Los Angeles County, California.

Gentlemen:

As requested by Mr. Marshall P. Wilkinson of Pacific Newport Properties, we have evaluated newly proposed retaining walls at the subject site. To complete this evaluation, we have reviewed an untitled, undated plan prepared by John J. Mullen and Associates. In addition, we have reviewed relevant information contained in previous reports that we have prepared on the subject site (see References). The following paragraphs present our conclusions and recommendations for design of the retaining walls at the subject site.

BACKGROUND INFORMATION

Rough grading for Tract 40972 was completed in 1982. The rough grading operations and geotechnical conclusions and recommendations were summarized in a report entitled, "Rough Grade Soil and Geologic Report, Tract 36741, West Commercial Area, Tracts 42533, 42534, 42535, 42536 and Tract 40972, Lot 9, Proposed Residential

and Commercial Developments, Diamond Bar, County of Los Angeles, California," Project No. S1809, dated February 26, 1982. A review of the subject report indicates that the proposed wall alignments traverse compacted fill areas. Footing excavations may extend into, and some walls may retain, the bedrock located below the fill.

PROPOSED DEVELOPMENT

The proposed retaining walls covered under this study are part of the development of Lot 9, Tract 40972. A two-story commercial building with surrounding at-grade parking is planned. Geotechnical recommendations for the proposed building are being provided by another firm.

The maximum height of the proposed retaining walls is about 20 feet. The walls total about 680 feet in length. The majority of the walls will retain 2:1 (horizontal:vertical) fill slopes. However, some walls will retain bedrock with potentially adverse bedding attitudes.

EXISTING CONDITIONS

A review of data contained in our files and a site reconnaissance indicate that a 2:1 fill slope abuts the site to the north, east and west. Upper portions of the slope along the west are inclined at 1½:1 (horizontal:vertical). The maximum height of the fill slope is about 52 feet. A portion of this fill slope was constructed as a stabilization fill (Reference 1). Out-of-slope bedding of about 5 degrees was noted during grading in a localized area (see Site Plan, Figure 1). However, the majority of the bedrock attitudes in this area obtained during the preliminary investigation and during the grading operations indicate

that attitudes are highly variable. Most attitudes noted were favorably oriented.

RETAINING WALL RECOMMENDATIONS

General

We have estimated the likely conditions along the proposed retaining wall alignments. We have not performed any site specific field exploration for this study. Consequently, conditions other than those assumed for this evaluation may occur in the field. We strongly recommend that all excavations for retaining walls be observed and mapped by a geologist from our office. Also, we recommend that we review and approve the contractors construction scheme prior to the start of construction.

Lateral Earth Pressures

Retaining walls will be subjected to lateral earth pressure from the surround backfill and adjacent slopes. Conditions vary along the proposed wall alignments. Recommended equivalent fluid pressures (EFP) for each condition are presented in the following table. The wall section where each condition applies is presented on Figure 1, Site Plan.

RECOMMENDED EQUIVALENT FLUID PRESSURES (EFP)

WALL TYPE	MAXIMUM WALL HEIGHT (FT)	EFP (PCF)
A	±20	95
B	±15	80
C	±12	60

The equivalent fluid pressures recommended above assume that on-site, moderately expansive soils will be used as backfill behind walls. If select, non-expansive, granular import soils (i.e., 3/4-inch crushed rock or pea gravel) are used behind walls, the equivalent fluid pressures for wall types B and C may be reduced by 20 pcf. The select import should extend at least 36 inches behind the wall and should be approved prior to import. A soil cap of at least 18 inches in thickness should be placed at the top of the wall over the select import material. All backfill should be properly compacted to a minimum of 90 percent of the laboratory maximum dry density as determined in accordance with ASTM D1557-78 and tested. Care should be taken when compacting adjacent to the walls. Improper compaction techniques and/or equipment can produce excessive lateral pressures on the wall and may damage the walls.

Lateral forces may be resisted by a combination of passive soil resistance against the vertical sides of footings and frictional resistance at the base of the footings. We recommend that passive earth pressures be determined using a pressure of 200 psf per foot of depth up to the allowable bearing pressure. A frictional coefficient of 0.3 between rough concrete and approved bearing soils is recommended.

Retaining Wall Drainage System

Portions of the retaining wall construction will require excavation into the existing stabilization fill. We anticipate that the existing subdrainage system for the stabilization fill will be damaged due to construction of the proposed wall. It is our opinion that a properly constructed subdrainage system for the proposed wall will provide adequate drainage for the remaining

stabilization fill. Proper drainage should be provided to relieve the wall of hydrostatic pressure or the wall should be designed for additional hydrostatic pressure. A typical perimeter drain detail is presented as Figure 2 and guide specifications for subsurface drains are presented in Table I.

Retaining Wall Footings

Footings for retaining walls may be designed using an allowable bearing capacity of 1500 pounds per square foot (psf) at a minimum embedment of 18 inches below lowest adjacent grade. All retaining wall footings should be founded in approved competent native soils or compacted fill. If non-uniform conditions are encountered at the proposed bearing levels, we recommend that the top 18 inches of exposed soils be processed. Processing consists of removal, scarification, moisture conditioning and recompaction in lifts not exceeding eight inches, loose measurement. All earthwork operations should be performed in accordance with the applicable portions of the Los Angeles County Grading Code and with our Suggested Items to Include in Standard Grading Specifications, attached as Appendix A. Properly designed and constructed construction joints may be provided at soil transition zones in lieu of processing. A representative of our firm should identify the proper location for the construction joints in the field.

The bearing values recommended are for dead and frequently applied live loads. The recommended values may be increased by one-third when designing for transient loading conditions, such as seismic or wind loads.

The retaining wall footing excavations should be approved by a representative of our firm prior to the placement of rebar or

concrete. We also recommend that all backfill behind the proposed retaining walls be properly benched into existing competent materials. All backfill operations should be observed and tested to verify that the specified conditions are being met.

Construction Considerations

Due to the presence of local adverse bedding conditions along portions of the proposed wall, we recommend that the time the backcut for the wall is left open and unsupported be minimized. We recommend that the backcut be visually inspected by a qualified Engineering Geologist. Staggered slot cutting may be required along portions of the wall (Type A).

To be in conformance with CAL-OSHA safety requirements, it is recommended that vertical construction cuts over five feet high be braced, or that they be cut back to an inclination of 1:1 (horizontal:vertical), or flatter, if field conditions dictate.

CLOSURE

We recommend that the project structural engineer review the recommendations presented in this report to verify that the present wall designs are in compliance with these recommendations.

The findings and recommendations of this report were prepared in accordance with generally accepted professional engineering principles and practice in the fields of soil mechanics and foundation engineering. This warranty is in lieu of all other warranties, either express or implied.

We hope that this information satisfies your needs at this time. If you have any questions or require additional information, please contact the undersigned at your convenience.

Respectfully submitted,

B. Michael Yacyshyn

B. Michael Yacyshyn, R.C.E. 38976
for MEDALL, WORSWICK & ASSOCIATES, INC.

BMY:dk

Enclosures: References
Figure 1 - Site Plan
Figure 2 - Typical Perimeter Drain Detail
Table I - Guide Specifications for Perimeter Drains
Appendix A - Suggested Items to Include in Standard Grading Specifications

c: (6) Addressee

REFERENCES

1. Medall, Aragon, Worswick & Associates, Inc., 1982a, Rough Grade Soil and Geologic Report, Tract 36741, West Commercial Area, Tracts 42533, 42534, 42535, 42536 and Tract 40972, Lot 9, Proposed Residential and Commercial Developments, Diamond Bar, County of Los Angeles, California: for Presley of Southern California; consultants report, Santa Ana, Calif., (February 26, project no. S1809).

2. _____, 1982b, Revised Grading Plan, Tract 36741, Lot 9, (Tennis Court Area), Diamond Bar, County of Los Angeles, California: for Presley of Southern California; consultants report, Santa Ana, Calif., (January 6, 1982, project no. S1809).

3. Medall, Worswick & Associates, Inc., 1985, Retaining Wall Design Parameters, Proposed Office Facility, Lot 9, Tract 40972, Diamond Bar, County of Los Angeles, California: for Pacific Newport Properties; consultants report, Santa Ana, Calif., (January 24, project no. S1809-9-1).

Pacific Newport Properties
Project No. S1809-9-1

May 10, 1985

TABLE I

GUIDE SPECIFICATIONS FOR PERIMETER DRAINS

I. DESCRIPTION

Subsurface drains consisting of standard drain tile, concrete drain tile, perforated corrugated metal pipe, or equivalent plastic pipe shall be installed as shown on the plans and in accordance with these specifications, unless otherwise specified by the Engineer.

II. MANUFACTURE

Underdrains shall be manufactured in accordance with the following or equivalent requirements:

1. Concrete drain tile shall conform to AASHTO M178 or ASTM C118.
2. Perforated corrugated metal pipe (CMP) shall conform to the AASHTO M36.
3. Perforated clay pipe shall conform to AASHTO M65.
4. Perforated Polyvinyl Chloride plastic pipe (PVC) shall conform to ASTM D1785 or D3034 for Schedule 40 or SDR 35 pipe, respectively.
5. Perforated Acrylonitrile Butadiene Styrene Pipe (ABS) conforming to ASTM D2751 or D1527 for SDR 35 or Schedule 40 pipe, respectively.

III. FILTER MATERIAL

Filter material for use in backfilling trenches around and over underdrains shall consist of clean, coarse sand and gravel or crushed stone conforming to Section 68, Class 2 permeable material according to CalTrans Standard Specifications with the following grading requirements:

SIEVE SIZE	PERCENTAGE PASSING SIEVES
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25- 40
No. 8	18- 33
No. 30	5- 15
No. 50	0- 7
No. 200	0- 3

IV. LAYING

Trenches for underdrains shall be excavated to a minimum width equal to the outside diameter of the pipe plus 1 foot and to a depth of 3 inches below the top of the wall footing or as directed by the Engineer. The bottom of the trench shall then be covered full width by a layer of plastic film or building paper, and the drain pipe shall be laid. Unless otherwise specified, perforated pipe shall be laid with the perforations at the bottom and sections shall be joined with couplers. Drain tile shall be laid with a clear opening of 1/2" between sections. The pipe shall be laid on a minimum slope of 0.2 percent.

After the pipe has been placed, the trench shall be backfilled with filter material to the elevation shown on the plans, or as directed by the Engineer. The remainder of the trench shall then be backfilled with an impervious soil that shall be compacted to the requirements for engineered fills.

EXPLANATION

afc — MAN MADE FILL (REPORTED COMPACTED BY MAWA 2-26-82).

Oafc — OLDER MAN MADE FILL (REPORTED COMPACTED BY OTHERS).

APPROXIMATE LIMITS OF FILL (AS REPORTED BY MAWA, 2-26-82).

/15 — ATTITUDE OF BEDDING BENEATH COMPACTED FILL.

34 — APPROXIMATE DEPTH OF COMPACTED FILL (IN FEET).

REFERENCE:
BASE PLAN TAKEN FROM UNDATED GRADING PLAN PREPARED BY J. J. MULLEN AND ASSOCIATES.

TYPE "A" WALL

TYPE "C" WALL

TYPE "B" WALL

TYPE "C" WALL

TYPE "C" WALL

Oafc

afc

APPROXIMATE LIMITS OF CONSTRUCTED STABILIZATION

TYPE "C" WALL

APPROXIMATE LOCATION OF SUBDRAIN

afc

afc

NOTES

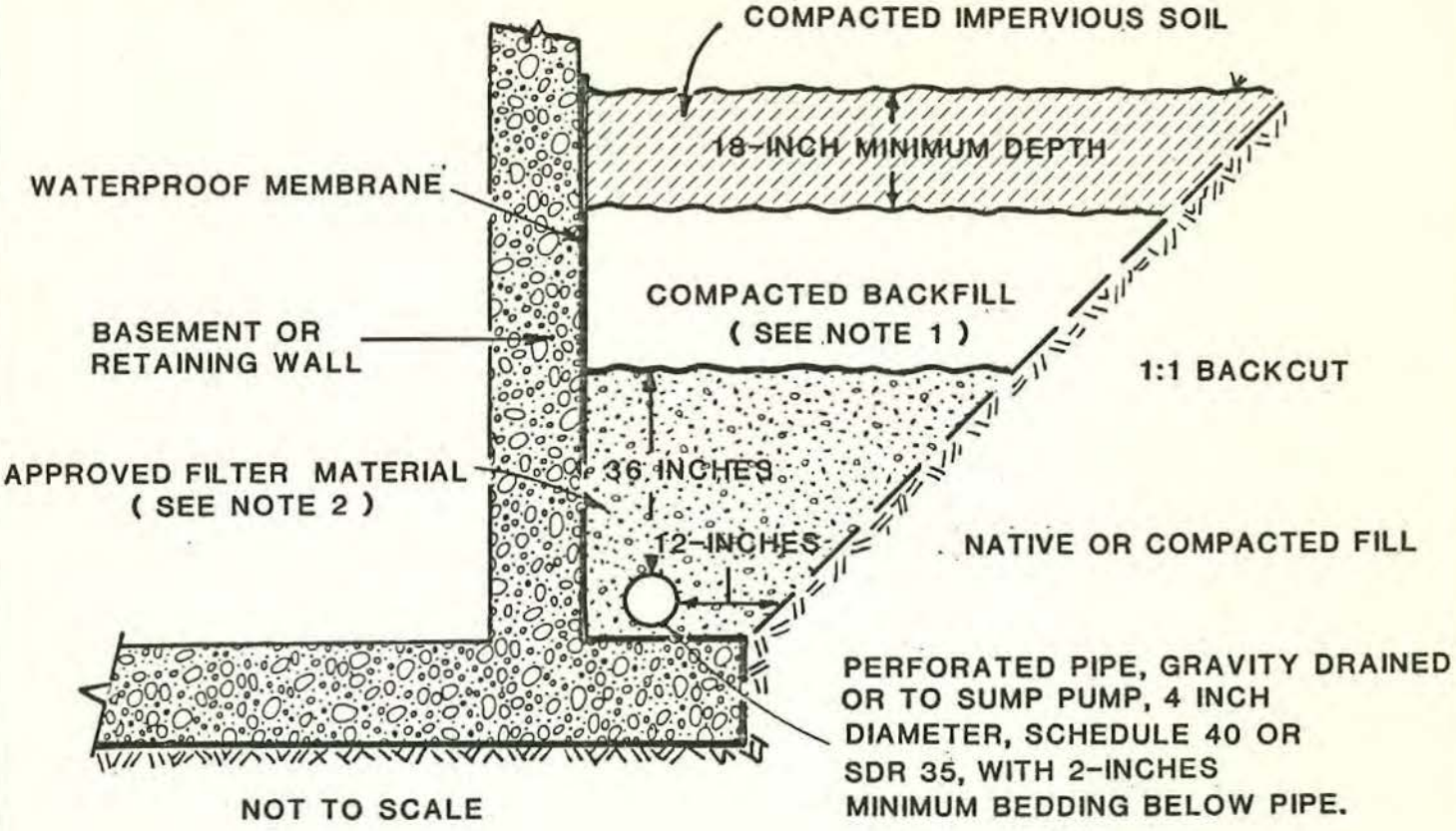
- MEDALL, WORSWICK AND ASSOCIATES, INC. HAS ADDED ONLY GEOTECHNICAL DATA TO THIS PLAN PREPARED BY OTHERS. WE HAVE NOT CHECKED ANY OTHER INFORMATION ON THIS PLAN AND GIVE NO ASSURANCE TO ITS ACCURACY.
- THIS DRAWING IS PART OF CONSULTANT REPORT *S1809-9-1* DATED *5-10-85* AND SHOULD BE READ WITH THE REPORT FOR COMPLETE EVALUATION.

SITE PLAN

Medall, Worswick & Associates, Inc.
Consulting Engineers & Geologists

DATE 5-10-85	DRAWN BY S.W.D.
SCALE 1"=40'	CHECKED BY BMW
PROJ. NO S1809-9-1	FIGURE 1

TYPICAL PERIMETER DRAIN DETAIL



NOTES:

1. COMPACTED BACKFILL MAY BE EITHER SELECT NON-EXPANSIVE SOIL OR NATIVE SOIL DEPENDING ON DESIGN WALL PRESSURES(SEE LATERAL EARTH PRESSURE SECTION IN TEXT).

2. A 3/4-INCH CRUSHED ROCK MAY BE SUBSTITUTED FOR THE APPROVED FILTER MATERIAL IF AN APPROVED, NON-WOVEN GEOTEXTILE FILTER FABRIC IS USED TO ENCAPSULATE THE 3/4-INCH CRUSHED ROCK (SUCH AS MIRAFI 140N OR SUPAC 4NP).

APPENDIX A

SUGGESTED ITEMS TO INCLUDE IN STANDARD GRADING SPECIFICATIONS

Pacific Newport Properties
Project No. S1809-9-1

May 10, 1985

APPENDIX A

SUGGESTED ITEMS TO INCLUDE IN STANDARD GRADING SPECIFICATIONS

These specifications present the usual and minimum requirements for grading operations performed under the observation and testing of Medall, Worswick & Associates, Inc.

No deviation from these specifications will be allowed, except where specifically superseded in the preliminary geotechnical report, or in other written communication signed by the Geotechnical Engineer or Engineering Geologist.

I. GENERAL

A. The Geotechnical Engineer and Engineering Geologist are the Owner's or Builder's representative on the project. For the purpose of these specifications, observation and testing by the Geotechnical Engineer includes that observation and testing performed by any person or persons employed by, and responsible to, the licensed Civil Engineer signing the soil report.

B. All clearing, site preparation or earthwork performed on the project shall be conducted by the Contractor under the observation of the Geotechnical Engineer.

C. It is the Contractor's responsibility to prepare the ground surface to receive the 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.

D. It is also the Contractor's responsibility to have suitable and sufficient compaction equipment on the jobsite 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.

E. A final report will be issued by the Geotechnical Engi neer and Engineering Geologist attesting to the Contractor's conformance with these specifications.

II. SITE PREPARATION

A. All vegetation and deleterious material, such as rubbish, shall be disposed of offsite. This removal must be concluded prior to placing fill.

B. The Project Civil 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.

C. Soil or rock materials determined by the Geotechnical Engineer to be unsuitable for placement in compacted fills shall be removed and wasted from the site. All material incorporated as a part of a compacted fill must be approved by the Geotechnical Engineer.

D. 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 the specified moisture content, mixed as required, and compacted as specified. If the scarified zone is greater than twelve inches in depth, the excess shall be removed and placed in lifts restricted to six inches.

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

E. Any underground structures such as cesspools, cisterns, minimum 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.

III. COMPACTED FILL

A. 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 and other matter missed during clearing shall be removed from the fill as directed by the Geotechnical Engineer.

B. Rock fragments less than six inches in diameter may be utilized in the fill, provided:

1. They are not placed in concentrated pockets.

2. There is a sufficient percentage of fine-grained material to completely surround the rocks.

3. The distribution of the rocks is observed by the Geotechnical Engineer.

C. Rocks greater than six inches in diameter shall be taken offsite, 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, etc., will be referred to in the "Conclusions and Recommendations" section of the soils report and in a later section of this appendix, when necessary.

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

E. 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 material 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.

F. Material used in the compacting process shall be evenly spread, watered or dried, processed and compacted in thin lifts not to exceed six inches in thickness to obtain a uniformly dense layer. The fill shall be placed and compacted on a horizontal plane, unless otherwise approved by the Geotechnical Engineer.

G. If the moisture content or relative compaction varies from that required by the Geotechnical Engineer, the Contractor shall rework the fill until it is approved by the Geotechnical Engineer.

H. Each layer shall be compacted to 92 percent of the maximum density in compliance with the testing method

specified by the controlling governmental agency. (In general, ASTM D1557-78 will be used).

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 92 percent shall either be delineated on the grading plan or appropriate reference made to the area in the soil report.

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

J. The key for sidehill fills shall have a minimum width of 15 feet within bedrock or firm materials, unless otherwise specified in the geotechnical report. (see Figure entitled, "General Grading Recommendations, Typical Fill Over Natural Slope").

K. 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 and Engineering Geologist.

L. The Contractor will be required to obtain a minimum relative compaction of 92 percent out to the finish slope face of fill slopes, buttresses and stabilization fills. This may be achieved by either overbuilding 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.

The Contractor shall prepare a written detailed description of the method or methods he will employ to obtain the required slope compaction. Such documents shall be submitted to the Geotechnical Engineer for review and comments prior to the start of grading.

If a method other than overbuilding and cutting back to the compacted core is to be employed, slope tests will be made by the Geotechnical Engineer during construction of the slopes to determine if the required compaction is being achieved. Where failing tests occur or other field

problems arise, the Contractor will be notified by the Geotechnical Engineer.

If the method of achieving the required slope compaction selected by the Contractor fails to produce the necessary results, the Contractor shall rework or rebuild such slopes until the required degree of compaction is obtained, at no additional cost to the Owner or Geotechnical Engineer.

M. All fill slopes should be planted or protected from erosion by methods specified in the geotechnical report or by means approved by the governing authorities.

N. Fill-over-cut slopes shall be properly keyed through topsoil, colluvium or creep material into rock or firm materials; and the transition shall be stripped of all soil prior to placing fill. (see Figure entitled, "General Grading Recommendations, Typical Fill Above Cut Slope").

IV. CUT SLOPES

A. The Engineering Geologist shall inspect all cut slopes excavated in rock, lithified or formational material, at vertical intervals not exceeding ten feet.

B. 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.

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

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

E. 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.

V. GRADING CONTROL

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

B. In general, density tests should be performed at intervals not exceeding two feet of fill height or every 500 cubic yards of fill placed. This 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.

C. Density tests should also be performed on the surface material to receive fill as required by the Geotechnical Engineer.

D. All cleanout, processed ground to receive fill, key excavations, subdrains and rock disposal must be observed and approved by the Geotechnical Engineer (and often by the governing authorities) prior to placing any fill. It is the Contractor's responsibility to notify the Geotechnical Engineer and governing authorities when such areas are ready for inspection.

VI. CONSTRUCTION CONSIDERATIONS

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

B. Upon completion of grading and termination of observations 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.

C. Care should 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.

VII. OVERSIZE MATERIAL DISPOSAL RECOMMENDATIONS

All materials having a minimum dimension of 6 inches shall be disposed of in accordance with the following recommendations:

A. All oversize material shall be properly disposed of in approved windrow trenches.

B. Individual windrow trenches shall be excavated into firm, natural ground or compacted fill to a maximum width and depth of 5 feet and 3 feet, respectively.

C. Windrow trenches shall be excavated below an approximately horizontal plane and shall be staggered over other buried windrows with a minimum 5 foot vertical clearance between windrows.

D. Windrows shall have a minimum horizontal spacing of 15 feet, edge to edge.

E. Windrows shall not be constructed within 20 feet horizontally of the finished surface of any fill slope, and, windrows shall not be constructed within 20 feet vertically of the proposed finished grades.

F. Windrows shall not be placed closer than 20 feet horizontally from a natural, cut or fill slope which is to be benched and covered with compacted fill.

G. Windrows shall not be placed in stabilization or buttress fills.

H. No single rocks larger than about 3 feet in largest dimension shall be placed in each windrow trench. Rocks larger than about 3 feet in diameter must be either broken down or removed offsite.*

*If the quantity, size and character of material precludes breaking down of material or disposing of excess offsite, special handling procedures may be considered applicable following advanced written approval by the Geotechnical Engineer.

I. Sandy material with a minimum sand equivalent value of 30 should be properly jetted under and around rocks in the windrow trench to fill all voids and assure complete coverage of individual rocks.

J. Rocks shall not be placed in rows on the surface and shall not be nested in piles, beyond the windrow trench.

Appendix H

Earthwork And Grading Guide Specifications

Appendix H

Earthwork And Grading Guide Specifications

LEIGHTON AND ASSOCIATES, INC. A VERDANTAS COMPANY

GENERAL EARTHWORK AND GRADING SPECIFICATIONS FOR ROUGH GRADING

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1 GENERAL

1.1 Intent

These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ the Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultants shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required. Subsurface areas to be geotechnically observed, mapped, elevations recorded, and/or tested include natural ground after it has been cleared for receiving fill but before fill is placed, bottoms of all "remedial removal" areas, all key bottoms, and benches made on sloping ground to receive fill.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to determine the attained level of compaction. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor

The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the plans and specifications.

The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "spreads" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate observations and tests can be planned and accomplished. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified.

2 PREPARATION OF AREAS TO BE FILLED

2.1 Clearing and Grubbing

Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). No fill lift shall contain more than 5 percent of organic matter. Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed.

2.2 Processing

Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free of large clay lumps or clods and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Overexcavation

In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 Evaluation/Acceptance of Fill Areas

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3 FILL MATERIAL

3.1 General

Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 Oversize

Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import

If importing of fill material is required for grading, proposed import material shall meet the requirements of Section 3.1. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4 FILL PLACEMENT AND COMPACTION

4.1 Fill Layers

Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning

Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557).

4.3 Compaction of Fill

After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes

In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557.

4.5 Compaction Testing

Field-tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction

levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing

Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations

The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5 SUBDRAIN INSTALLATION

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6 EXCAVATION

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7 TRENCH BACKFILLS

7.1 Safety

The Contractor shall follow all OSHA and Cal/OSHA requirements for safety of trench excavations.

7.2 Bedding and Backfill

All bedding and backfill of utility trenches shall be performed in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of relative compaction from 1 foot above the top of the conduit to the surface.

The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

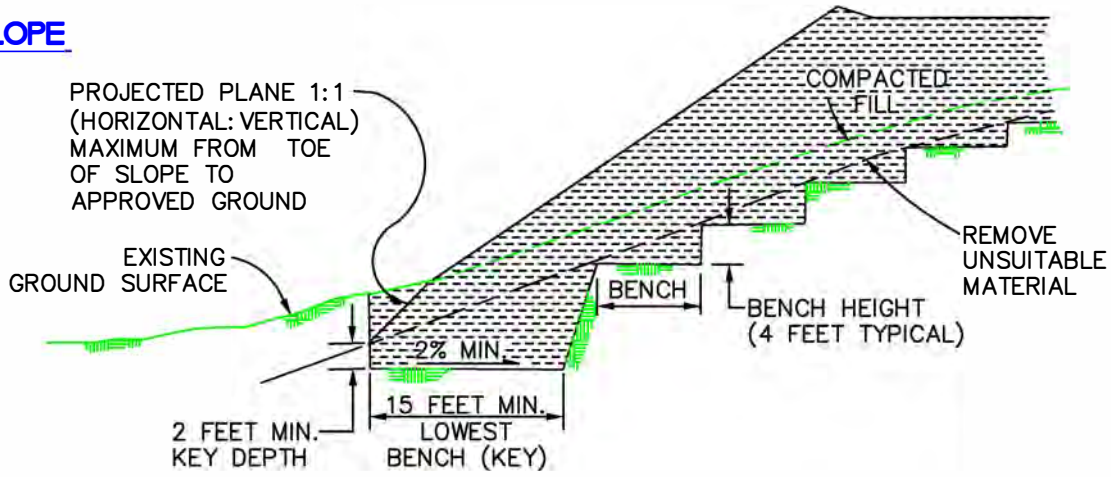
7.3 Lift Thickness

Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

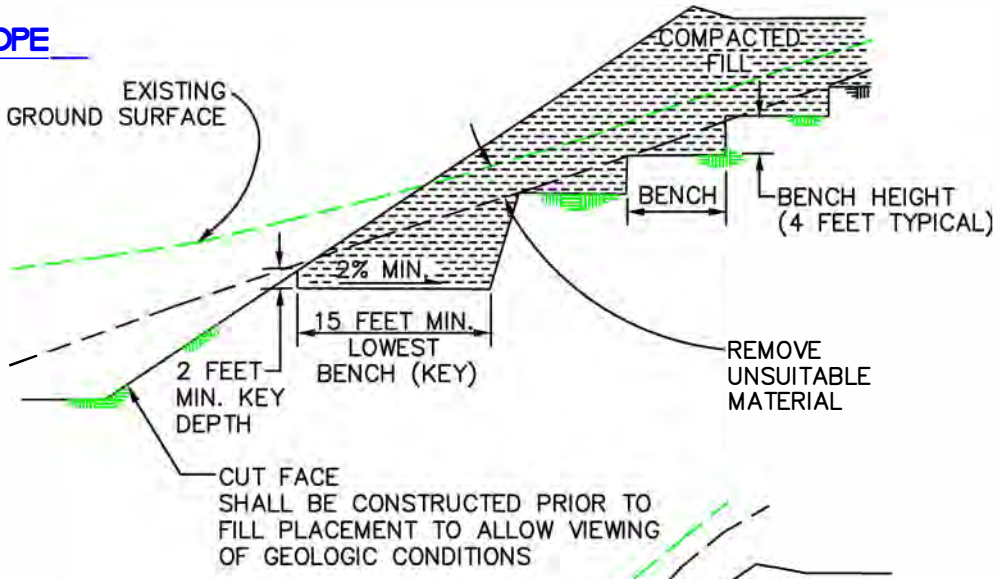
7.4 Observation and Testing

The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

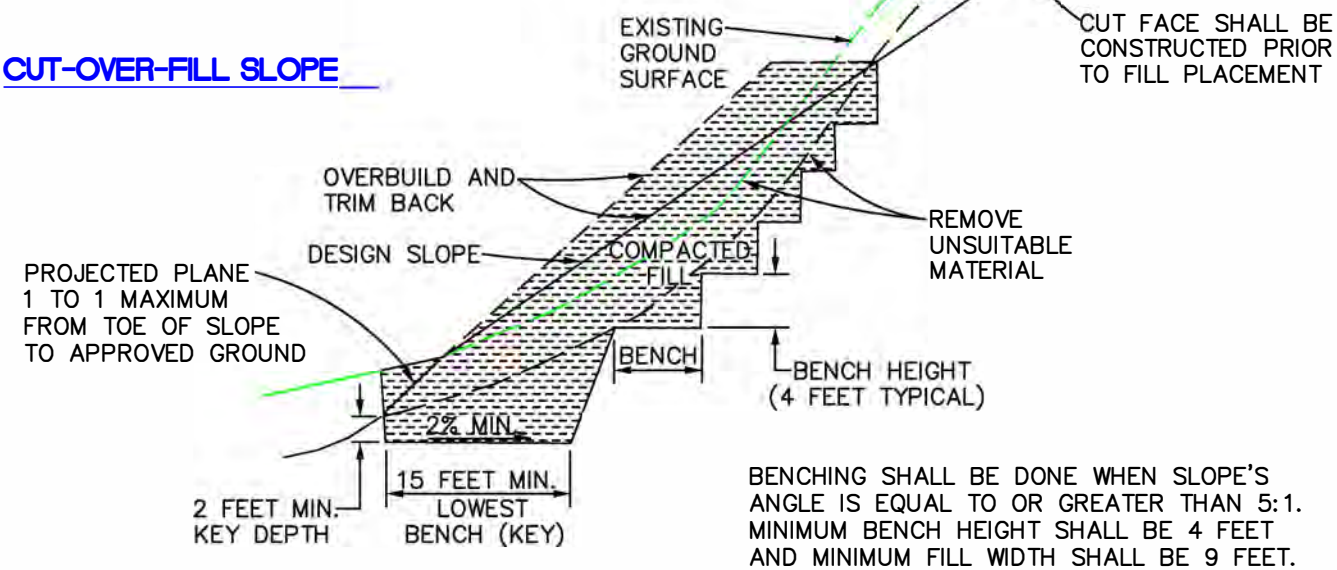
FILL SLOPE



FILL-OVER-CUT SLOPE

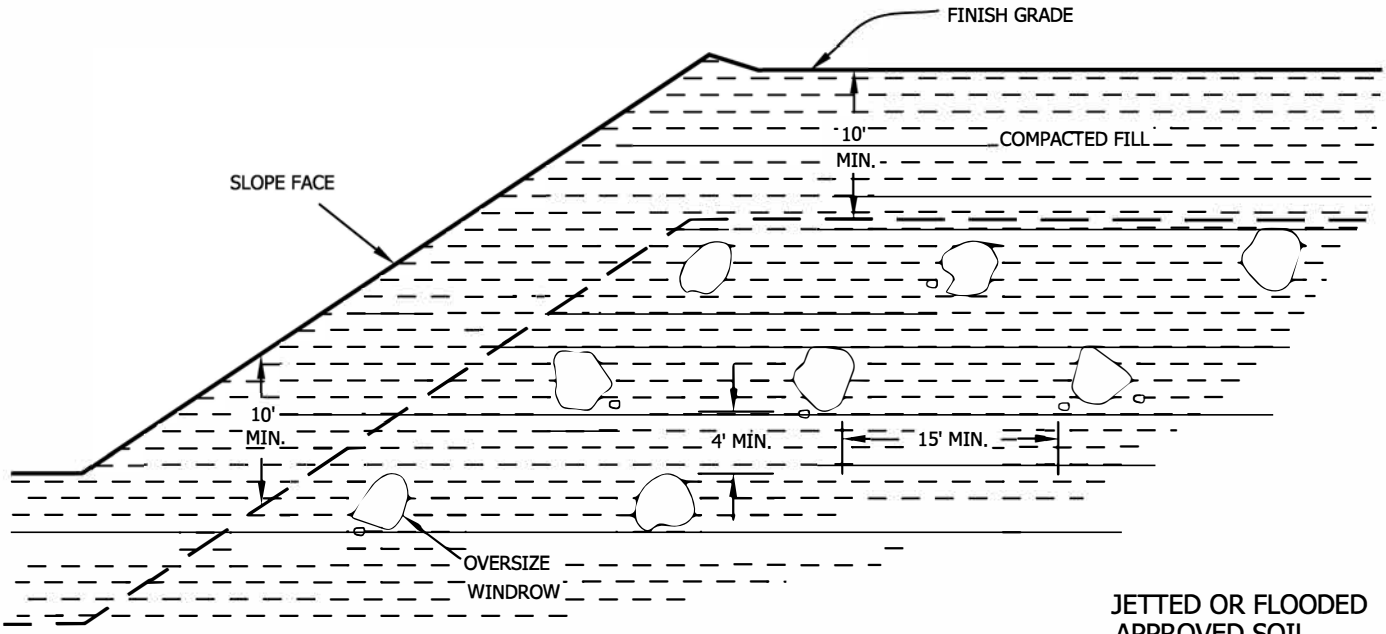


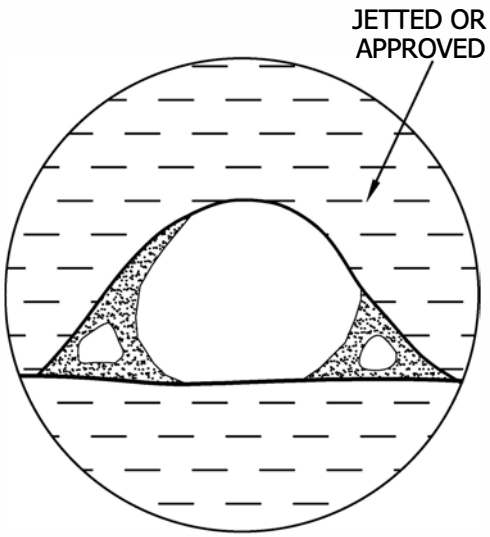
CUT-OVER-FILL SLOPE



BENCHING SHALL BE DONE WHEN SLOPE'S ANGLE IS EQUAL TO OR GREATER THAN 5:1. MINIMUM BENCH HEIGHT SHALL BE 4 FEET AND MINIMUM FILL WIDTH SHALL BE 9 FEET.

KEYING AND BENCHING	GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAILS A	verdantas

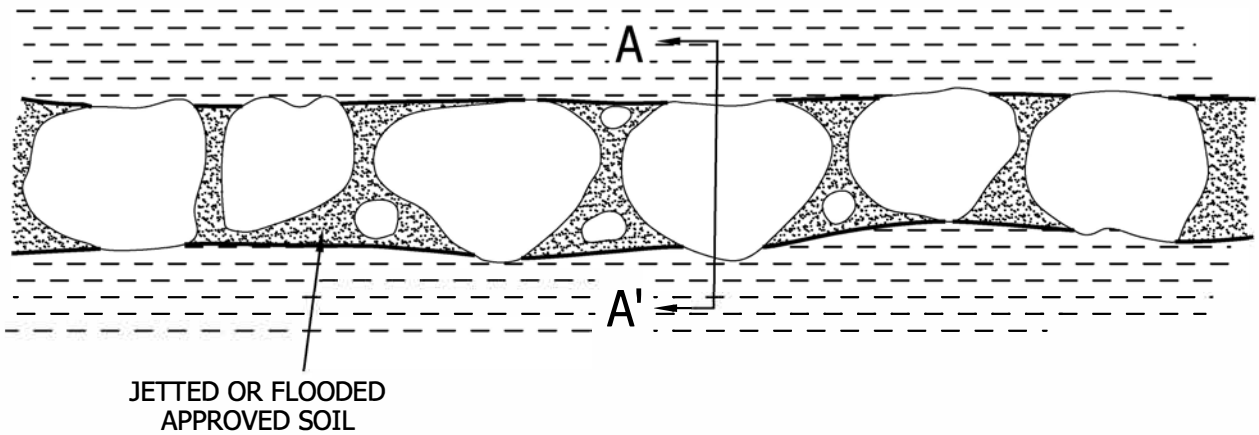




SECTION A-A'

- Oversize rock is larger than 8 inches in largest dimension.
- Backfill with approved soil jetted or flooded in place to fill all the voids.
- Do not bury rock within 10 feet of finish grade.
- Windrow of buried rock shall be parallel to the finished slope face.

PROFILE ALONG WINDROW

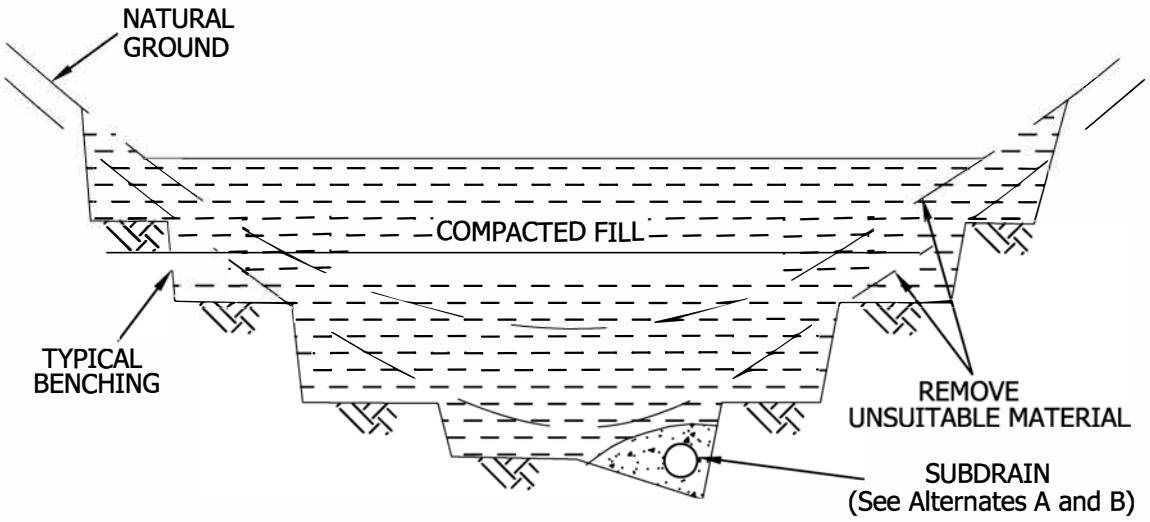


OVERSIZE ROCK DISPOSAL

GENERAL EARTHWORK AND GRADING
SPECIFICATIONS
STANDARD DETAILS B

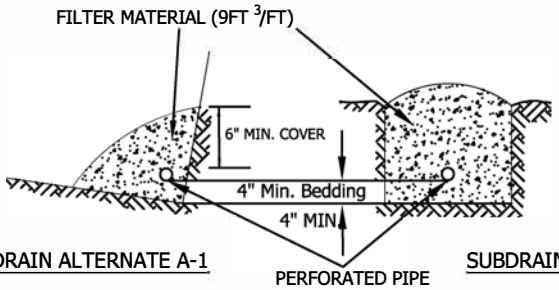
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SUBDRAIN ALTERNATE A

PERFORATED PIPE SURROUNDED WITH FILTER MATERIAL



SUBDRAIN ALTERNATE A-1 SUBDRAIN ALTERNATE A-2

FILTER MATERIAL

FILTER MATERIAL SHALL BE CLASS 2 PERMEABLE MATERIAL PER STATE OF CALIFORNIA STANDARD SPECIFICATION, OR APPROVED ALTERNATE. CLASS 2 GRADING AS FOLLOWS:

Sieve Size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

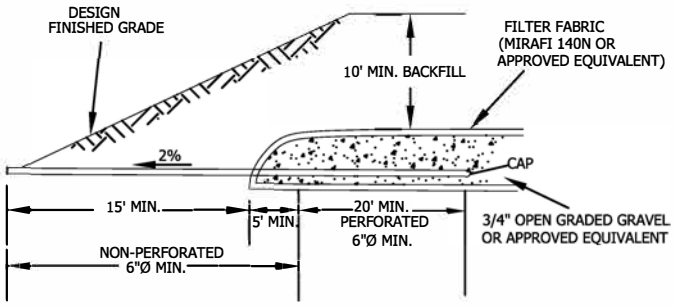
SUBDRAIN ALTERNATE B



ALTERNATE B-1 ALTERNATE B-2

○ PERFORATED PIPE IS OPTIONAL PER GOVERNING AGENCY'S REQUIREMENTS

DETAIL OF CANYON SUBDRAIN TERMINAL

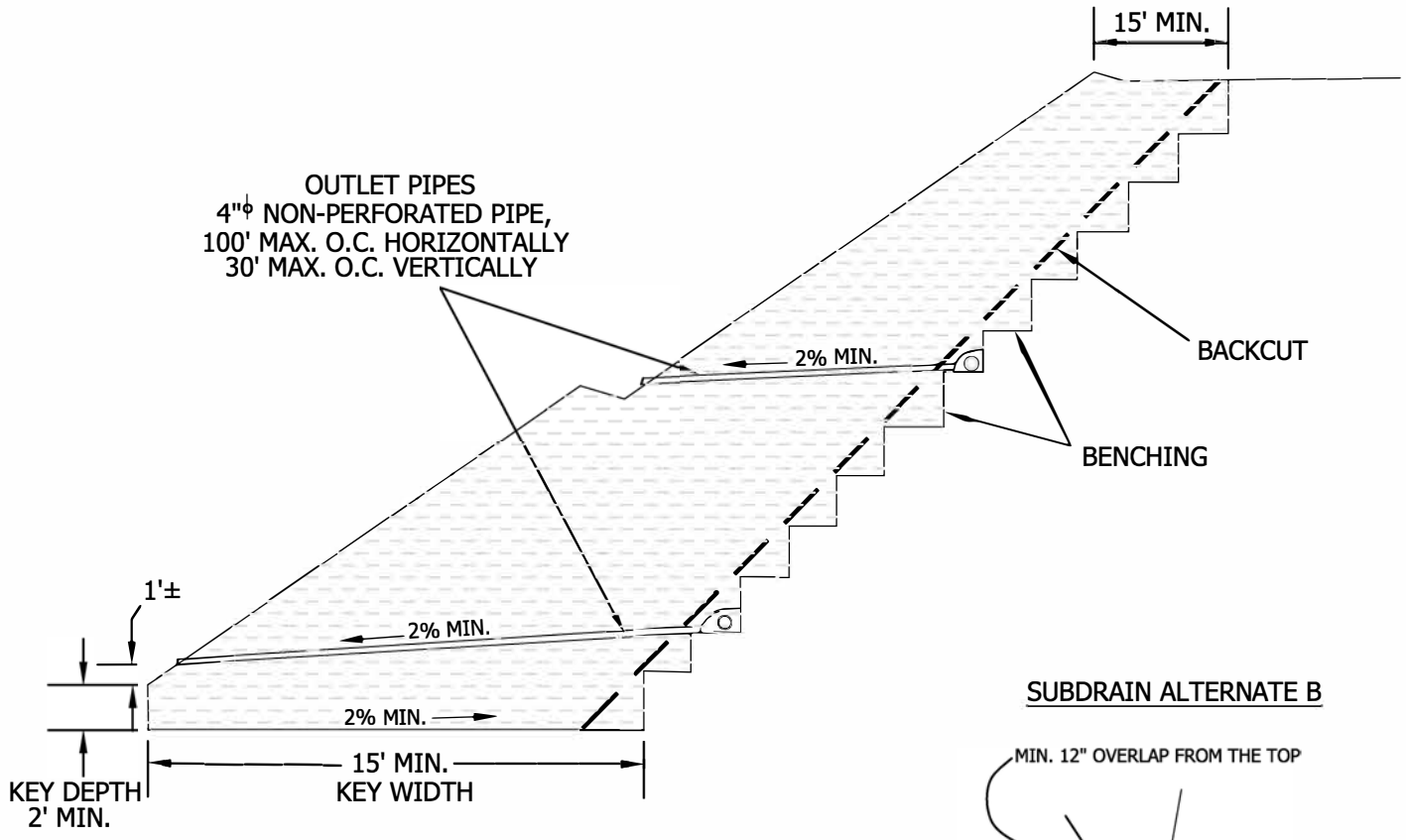


CANYON SUBDRAIN

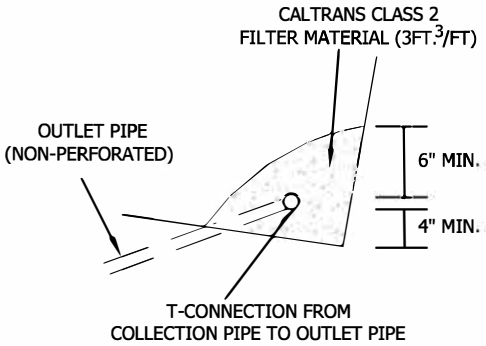
GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAILS C

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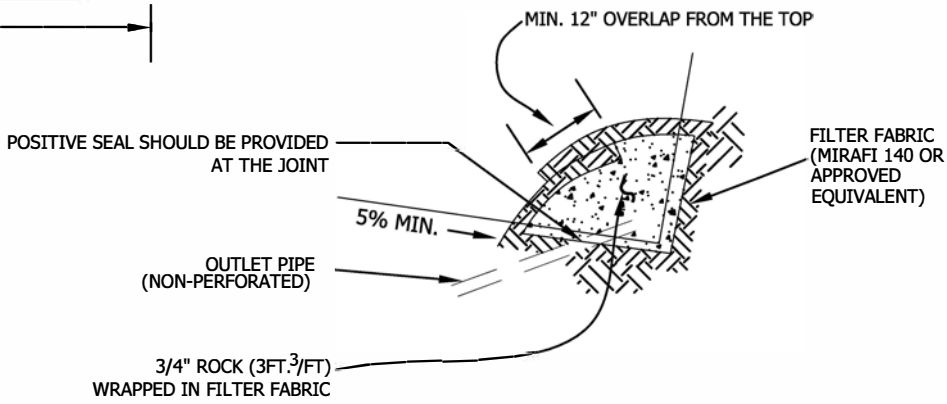
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SUBDRAIN ALTERNATE A



SUBDRAIN ALTERNATE B

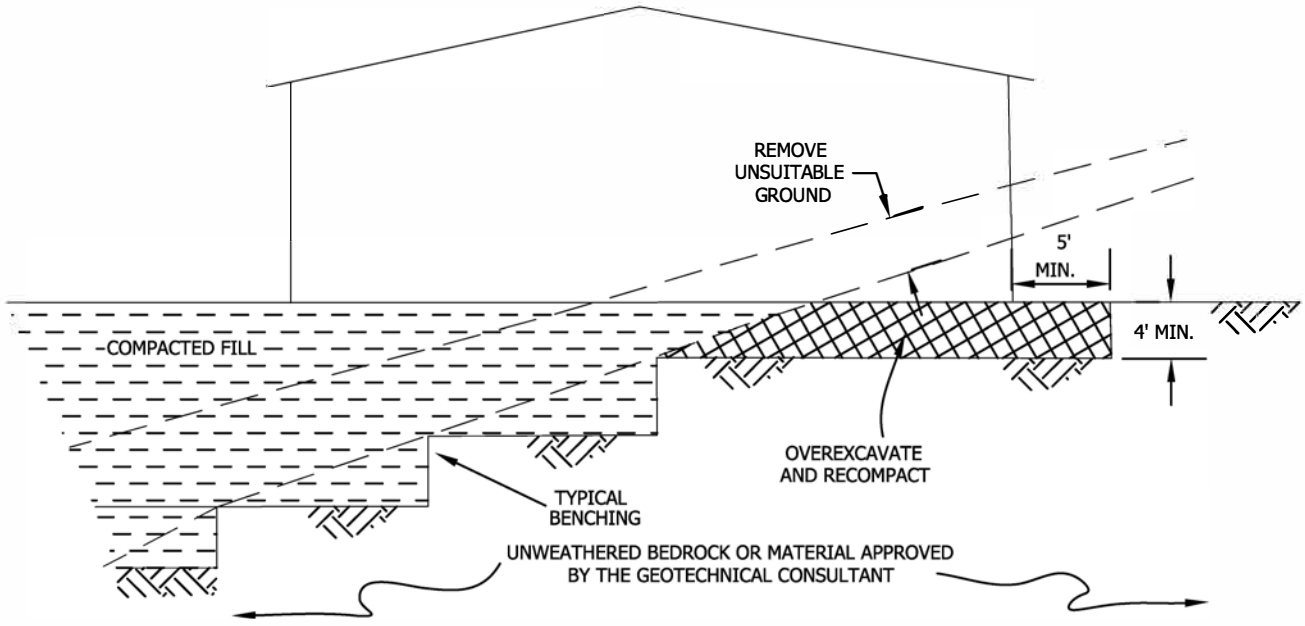


- SUBDRAIN INSTALLATION - Subdrain collector pipe shall be installed with perforations down or, unless otherwise designated by the geotechnical consultant. Outlet pipes shall be non-perforated pipe. The subdrain pipe shall have at least 8 perforations uniformly spaced per foot. Perforation shall be 1/4" to 1/2" if drilled holes are used. All subdrain pipes shall have a gradient at least 2% towards the outlet.
- SUBDRAIN PIPE - Subdrain pipe shall be ASTM D2751, ASTM D1527 (Schedule 40) or SDR 23.5 ABS pipe or ASTM D3034 (Schedule 40) or SDR 23.5 PVC pipe.
- All outlet pipe shall be placed in a trench and, after fill is placed above it, rodded to verify integrity.

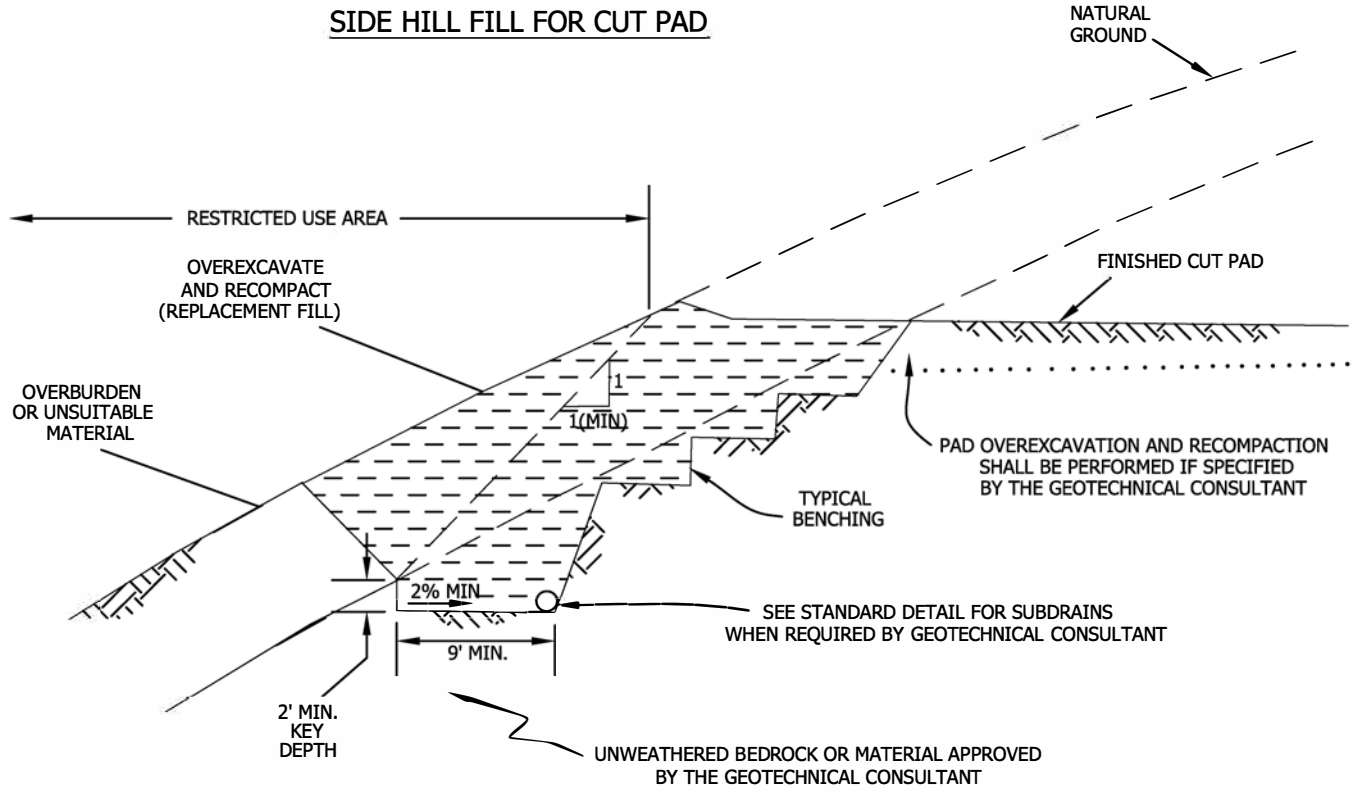
BUTTRESS OR REPLACEMENT FILL SUBDRAINS	GENERAL EARTHWORK AND GRADING SPECIFICATIONS STANDARD DETAILS D	verdantas

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CUT-FILL TRANSITION LOT OVEREXCAVATION



SIDE HILL FILL FOR CUT PAD



TRANSITION LOT FILLS AND SIDE HILL FILLS

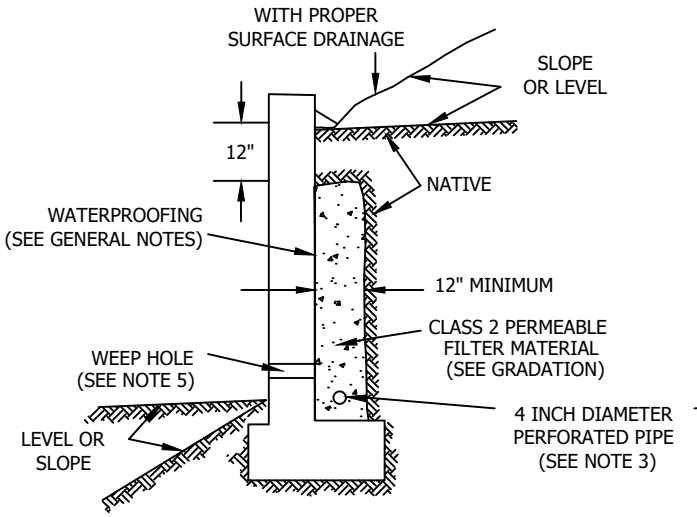
GENERAL EARTHWORK AND GRADING SPECIFICATIONS
STANDARD DETAILS E

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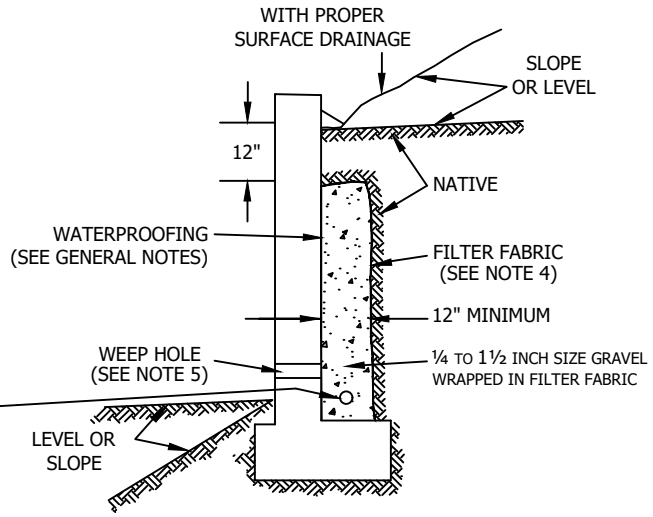
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SUBDRAIN OPTIONS AND BACKFILL WHEN NATIVE MATERIAL HAS EXPANSION INDEX OF ≤50

OPTION 1: PIPE SURROUNDED WITH CLASS 2 PERMEABLE MATERIAL



OPTION 2: GRAVEL WRAPPED IN FILTER FABRIC



Class 2 Filter Permeable Material Gradation
Per Caltrans Specifications

Sieve Size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

GENERAL NOTES:

* Waterproofing should be provided where moisture nuisance problem through the wall is undesirable.
* Water proofing of the walls is not under purview of the geotechnical engineer
* All drains should have a gradient of 1 percent minimum
*Outlet portion of the subdrain should have a 4-inch diameter solid pipe discharged into a suitable disposal area designed by the project engineer. The subdrain pipe should be accessible for maintenance (rodding)
*Other subdrain backfill options are subject to the review by the geotechnical engineer and modification of design parameters.

Notes:
1) Sand should have a sand equivalent of 30 or greater and may be densified by water jetting.
2) 1 Cu. ft. per ft. of 1/4- to 1 1/2-inch size gravel wrapped in filter fabric
3) Pipe type should be ASTM D1527 Acrylonitrile Butadiene Styrene (ABS) SDR35 or ASTM D1785 Polyvinyl Chloride plastic (PVC), Schedule 40, Armco A2000 PVC, or approved equivalent. Pipe should be installed with perforations down. Perforations should be 3/8 inch in diameter placed at the ends of a 120-degree arc in two rows at 3-inch on center (staggered)
4) Filter fabric should be Mirafi 140NC or approved equivalent.
5) Weephole should be 3-inch minimum diameter and provided at 10-foot maximum intervals. If exposure is permitted, weepholes should be located 12 inches above finished grade. If exposure is not permitted such as for a wall adjacent to a sidewalk/curb, a pipe under the sidewalk to be discharged through the curb face or equivalent should be provided. For a basement-type wall, a proper subdrain outlet system should be provided.
6) Retaining wall plans should be reviewed and approved by the geotechnical engineer.
7) Walls over six feet in height are subject to a special review by the geotechnical engineer and modifications to the above requirements.

RETAINING WALL BACKFILL AND SUBDRAIN DETAIL FOR WALLS 6 FEET OR LESS IN HEIGHT

WHEN NATIVE MATERIAL HAS EXPANSION INDEX OF ≤50

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