



11.4 Geotechnical Reports

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DUE-DILIGENCE GEOTECHNICAL INVESTIGATION

**PROPOSED MULTI-FAMILY
RESIDENTIAL DEVELOPMENT
26126 VICTORIA BOULEVARD
DANA POINT, CALIFORNIA**



GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

**TOLL BROTHERS APARTMENT LIVING
IRVINE, CALIFORNIA**

PROJECT NO. A9942-88-01

AUGUST 11, 2022



Project No. A9942-88-01

August 11, 2022

Toll Brothers Apartment Living
200 Spectrum Center Drive, Suite 300
Irvine, California 92618

Attention: Mr. John Hyde

Subject: DUE-DILIGENCE GEOTECHNICAL INVESTIGATION
VICTORIA BOULEVARD APARTMENTS
MULTI-FAMILY RESIDENTIAL DEVELOPMENT
26126 VICTORIA BOULEVARD, DANA POINT, CALIFORNIA

Dear Mr. Hyde:

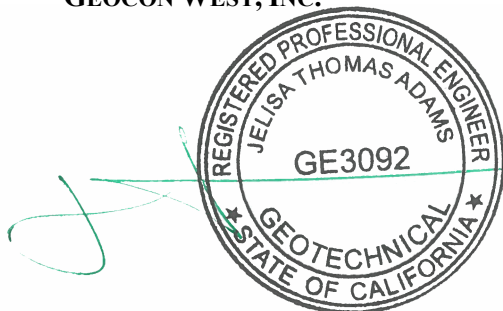
In accordance with your authorization of our proposal dated January 29, 2019, we have performed a due-diligence geotechnical investigation for the proposed Victoria Boulevard Apartments development located at 26126 Victoria Boulevard in the City of Dana Point, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed.

The primary intent of this study was to address potential geologic hazards and geotechnical conditions that could impact the project. As the project design progresses, updated geotechnical recommendations should be provided for design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.



Jelisa Thomas Adams
GE 3092



Susan F. Kirkgard
CEG 1754

(EMAIL) Addressee

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CLIQ LIQUEFACTION ANALYSIS REPORT

DUE-DILIGENCE GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a due-diligence geotechnical investigation for the proposed Victoria Boulevard Apartments development located at 26126 Victoria Boulevard, Dana Point, California (see Vicinity Map, Figure 1). The purpose of the due-diligence investigation was to develop an understanding of the soil and groundwater conditions at the site as well as potential geologic and seismic hazards that may affect development of the subject site. As the project design progresses, updated geotechnical recommendations should be provided for design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on February 25, 2019, by excavating five 8-inch diameter borings to depths between 31½ and 51½ feet below the existing ground surface using a truck-mounted hollow-stem auger drilling machine. On February 27, 2019, five CPTs were advanced to depths between 90 and 100 feet below the existing ground surface. The approximate locations of the exploratory borings and CPTs are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including boring and CPT logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is located at 26126 Victoria Boulevard in the City of Dana Point, California. The 5.52-acre lot is irregular in shape and is bounded by Victoria Boulevard to the north, an approximate 12 to 45-foot high ascending cutslope to the south and east, and by Sepulveda Avenue to the west. The existing development in the site vicinity consists of one and two-story residential and commercial structures. The property is currently occupied by the Capistrano School District Maintenance and Bus Yard which consists of several relatively small single-story buildings scattered throughout the property and abundant parking areas and storage bins. The site is very gently sloping to the northwest with approximately 12 feet of vertical relief across the property. The existing slope which bounds the site to the south and east is generally inclined at a gradient of 2:1 (H:V) and flatter. Surface water drainage at the site appears to be by sheet flow along the existing ground contours to the city streets. The site is covered predominately with asphalt and concrete.

It is our understanding that the proposed development will include 5-story apartment buildings wrapped around a 6.5-story parking structure to be constructed at or near present grade. Additional site improvements will include courtyards, landscape areas, a swimming pool, and driveways. The proposed development is depicted on the Site Plan and Geologic Sections (see Figures 2 through 4).

It is our understanding that a retaining wall will be constructed along the southeast property line at the base of the existing offsite slope. The wall design includes a minimum 6-foot level bench at the top of the wall. It is our further understanding that proposed retaining walls may have a maximum height of 7 feet, and that the preferred method of construction would be to use temporary sloped excavations to facilitate construction of the retaining walls.

Based on the preliminary nature of the design at this time, wall and column loads were not available. Column loads and wall loads for the proposed parking structure are estimated be up to 650 kips and 35 kips per linear foot, respectively. Column loads and wall loads for the proposed apartment building are estimated be up to 150 kips and 6 kips per linear foot, respectively.

We understand that final design of the project has not been completed, hence, once the design phase proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is situated in the northwestern portion of the Peninsular Ranges geomorphic province characterized by fault block northwest trending mountain ranges with intervening valleys, plains and basins. The site is located in the middle of the Dana Point 7.5-minute Quadrangle Sheet and at the southern terminus of the locally rugged San Joaquin Hills (CDMG, 1999 and Edington, 1974). The prominent structural feature within the San Joaquin Hills includes the gentle folding of the geologic units into a broad, north-trending syncline. Geologically, the site is situated approximately 2000-feet east-southeast of the mouth of the San Juan Creek and within the alluvial plain. The geologic units in the area consist of Holocene alluvium overlying Tertiary marine and nonmarine sedimentary strata ranging in age from late Miocene to early Pliocene.

The geologic formation that is present on site is the flat lying Holocene-age stream alluvial deposits, which is underlain, at depth, by Capistrano Formation. Regional faulting in the area is common with active faults including the San Joaquin Hills, Newport-Inglewood, Chino, Elsinore, and others that could influence the site.

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill, Holocene age stream alluvial deposits, and ultimately, at depth, by late Miocene to early Pliocene Capistrano Formation. Detailed stratigraphic profiles of the materials encountered at the site are provided on the boring and CPT logs in Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in our field explorations to a maximum depth of 5 feet below existing ground surface. The artificial fill generally consists of brown, grayish brown, and reddish brown, sandy silty clay, clayey silt, and clayey silty sand. The artificial fill is characterized as slightly moist to moist and soft to firm or loose. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

We understand that previously abandoned underground storage tanks were removed from the northeast most corner of the site. Based on available information, the prior excavations extended to depths of up to 29 feet below the ground surface. We have not been provided with documentation that the excavations were backfilled with certified engineered fill. Therefore, the backfill material should be considered to be undocumented artificial fill.

4.2 Alluvium

Holocene age alluvial stream deposits were encountered beneath the fill. The alluvial stream deposits consist of brown to dark brown or gray to olive brown, interbedded sandy clayey silt, silty clay, and clayey sand. The alluvium is characterized as slightly moist to wet and very soft to firm and medium dense.

4.3 Capistrano Formation (Tc)

Tertiary age Capistrano Formation was encountered in Borings B1, B2, and B5 at depths of approximately 40, 25, and 35 feet below the existing ground surface, respectively. Where encountered, the bedrock consists of clayey and sandy siltstone and silty sandstone. In general, the unit generally consists of a stiff to hard siltstone to claystone that is highly expansive.

5. GROUNDWATER

Review of the Seismic Hazard Zone Report for the Dana Point 7.5 Minute Quadrangle (California Division of Mines and Geology [CDMG], 2001) indicates the historically highest groundwater level in the area is approximately 5 feet beneath the ground surface.

Groundwater was encountered in our borings at depths ranging from approximately 16 to 20 feet below the existing ground surface. Considering the historic high groundwater level and the depth to groundwater observed in our borings, static groundwater and seepage may be encountered during construction and the contractor should be prepared for these conditions. It is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the *Surface Drainage* section of this report (see Section 7.24).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include Holocene-active, pre-Holocene, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018). By definition, a Holocene-active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A pre-Holocene fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone (CGS, 2022a; 2022b). No Holocene-active or pre-Holocene faults with the potential for surface fault rupture are known to project toward or pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 5, Regional Fault Map.

Localized and unnamed faults are mapped approximately 2,000 feet and 5,100 feet north and northeast of the site, respectively (Edington, 1974). Recent activity on these faults have not been established within the last 11,700 years. Consequently, these faults are not considered Holocene-active. The closest surface trace of a Holocene-active fault to the site is the Newport-Inglewood Fault Zone located approximately 2.9 miles to the southwest. Other nearby active faults are the Elsinore Fault Zone and the Palos Verdes Fault (Offshore Segment) located approximately 22 miles northeast and 17 miles southwest of the site, respectively. Strong ground motion could also be expected from earthquakes occurring along the San Jacinto and San Andreas fault zones located approximately 45 miles and 56 miles from the site, respectively. The San Clemente Fault, approximately 58 miles southwest of the site, as well as numerous other offshore faults could also provide strong ground motion.

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin (including the Orange County Coastal Plain) at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987, M_w 5.9 Whittier Narrows earthquake and the January 17, 1994, M_w 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. The San Joaquin Thrust underlies the site at depth. This thrust fault and others in the greater Los Angeles/Orange County area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 6, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	44	NE
Long Beach	March 10, 1933	6.4	20	WNW
Tehachapi	July 21, 1952	7.5	131	NW
San Fernando	February 9, 1971	6.6	77	NW
Whittier Narrows	October 1, 1987	5.9	47	NW
Sierra Madre	June 28, 1991	5.8	58	NNW
Landers	June 28, 1992	7.3	87	NE
Big Bear	June 28, 1992	6.4	70	NE
Northridge	January 17, 1994	6.7	71	NW
Hector Mine	October 16, 1999	7.1	112	NE

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be minimized if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

Within the footprint of the proposed development, bedrock is estimated to be as shallow as 25 feet below the ground surface and increases in depth to the northwest. The alluvial soils are generally soft and characterized by an average SPT blow count of about 7 blows per foot. The underlying bedrock is initially relatively soft, with an increase in density around 75 feet based on the CPT profiles.

Following the procedures in ASCE 7-16 Chapter 20 and supplementing the insitu blow counts with correlated values from the CPTs, the weighted average blow count for the upper 100 feet is approximately 10, which falls within the boundary of a Site Class E definition.

The following table summarizes the site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application Seismic Design Maps, provided by OSHPD. The short spectral response uses a period of 0.2 second. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

The closest surface trace of an active fault to the site is the Newport-Inglewood Fault Zone located approximately 2.9 miles (4.7 km) to the southwest, which is capable of producing a Mw 7.15 earthquake according to the BSSC 2014 Scenario Catalog. Therefore, the site is classified as a “near-fault” site.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	E	Section 1613.2.2
MCE _R Ground Motion Spectral Response Acceleration – Class B (short), S _S	1.222g	Figure 1613.2.1(1)
MCE _R Ground Motion Spectral Response Acceleration – Class B (1 sec), S ₁	0.44g	Figure 1613.2.1(2)
Site Coefficient, F _A	1.2	Table 1613.2.3(1)
Site Coefficient, F _V	2.321	Table 1613.2.3(2)
Site Class Modified MCE _R Spectral Response Acceleration (short), S _{MS}	1.467g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE _R Spectral Response Acceleration – (1 sec), S _{M1}	1.02g	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S _{DS}	0.976g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S _{D1}	0.68g*	Section 1613.2.4 (Eqn 16-39)
<p>*Per Supplement 3 of ASCE 7-16, a ground motion hazard analysis (GMHA) shall be performed for projects on Site Class “E” sites with short-period spectral accelerations (S_S) greater than or equal to 1.0 or with 1-second spectral acceleration (S₁) greater than or equal to 0.2g, which is true for this site. However, Supplement 3 of ASCE 7-16 provides an exception stating that that the GMHA may be waived provided that either (1) where the equivalent lateral force procedure is used for design and the value of C_s is determined by Eq. (12.8-2) for all values of T, or (2) where (i) the value of S_{ai} is determined by Eq. (15.7-7) for all values of T_i and (ii) the value of the parameter S_{D1} is replaced with 1.5S_{D1} in Eq. (15.7-10) and Eq. (15.7-11). The value of S_{D1} presented above has not been modified in accordance with Supplement 3 of ASCE 7-16.</p>		

Based on our correspondence with the project team, the proposed project is classified as a Risk Category II in accordance with the 2019 CBC Table 1604.5. Therefore, the proposed project is classified as a Seismic Design Category “D” in accordance with 2019 CBC Section 1613.3.5.

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE _G Peak Ground Acceleration, PGA	0.532g	Figure 22-7
Site Coefficient, F _{PGA}	1.168	Table 11.8-1
Site Class Modified MCE _G Peak Ground Acceleration, PG _M	0.621g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2019 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain “Life Safety” during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.65 magnitude event occurring at a hypocentral distance of 13.08 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.57 magnitude occurring at a hypocentral distance of 23.92 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the “Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California” and “Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California” requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine- to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Dana Point Quadrangle (CDMG, 2001) indicates that the site is located within an area designated as having a potential for liquefaction.

Liquefaction analysis of the soils underlying the site was performed using an updated version of the spreadsheet template LIQ2_30.WQ1 developed by Thomas F. Blake (1996). This program utilizes the 1996 NCEER method of analysis. This semi-empirical method is based on a correlation between values of Standard Penetration Test (SPT) resistance and field performance data.

Screening criteria presented by Bray and Sancio (2006) was used to evaluate the liquefaction susceptibility of the fine-grained soils encountered in the boring. Based on these screening criteria, fine-grained soils with a plasticity index of greater than 18 and fine-grained soils with a plasticity index of greater than 12 and a saturated water content of less than 85 percent of the liquid limit are considered not susceptible to liquefaction. Laboratory test results used for the screening criteria are presented as Figures B7 and B8.

The liquefaction analysis was performed for a Design Earthquake level by using a historic high groundwater table of 5 feet below the ground surface, a magnitude 6.57 earthquake, and a peak horizontal acceleration of 0.414g ($\frac{2}{3}$ PGAM). The enclosed liquefaction analyses, included herein for boring B4, indicate that the alluvial soils below the historic high groundwater would not be susceptible to liquefaction induced settlement during Design Earthquake ground motion (see enclosed calculation sheets, Figures 7 and 8).

A comparative analysis was also performed by using select CPTs and the program CLiq (Version 3.0.3.2). This program utilizes the Boulanger & Idriss (2014) method of analysis, and the same values for the historic high groundwater table, earthquake magnitude, and peak ground acceleration as indicated above.

Based on the analyses of CPT-1 through CPT-5, subsequent to the recommended grading, the alluvial soils below the historic high groundwater depth may be susceptible to less than $\frac{1}{2}$ inch of settlement during Design Earthquake ground motion (see enclosed settlement report, Figure 9).

Given that the CPTs generate a continuous soil profile, and that the driven samples in the borings may not capture thin layers of soils between the samples, the boring and CPT analyses appear to be in agreement regarding the general magnitude of potential liquefaction settlement during Design Earthquake ground motion. It is recommended that the proposed project be designed for up to $\frac{1}{2}$ inch of differential liquefaction induced settlement during Design Earthquake ground motion.

It is our understanding that the intent of the Building Code is to maintain “Life Safety” during Maximum Considered Earthquake level events. Therefore, additional analysis was performed to evaluate the potential for liquefaction during a MCE event. The structural engineer should evaluate the proposed structure for the anticipated MCE liquefaction induced settlements and verify that anticipated deformations would not cause the foundation system to lose the ability to support the gravity loads and/or cause collapse of the structure.

The liquefaction analysis was also performed for the Maximum Considered Earthquake level by using a historic high groundwater table of 5 feet below the ground surface, a magnitude 6.65 earthquake, and a peak horizontal acceleration of 0.621g (PGA_M). The enclosed liquefaction analyses, included herein for boring B4, indicate that the alluvial soils below the historic high groundwater table would not be susceptible to liquefaction induced settlement during Maximum Considered Earthquake ground motion (see enclosed calculation sheets, Figures 10 and 11).

Based on the analyses of CPT-1 through CPT-5, subsequent to the recommended grading, the alluvial soils below the historic high groundwater depth may be susceptible to less than 1.1 inches of settlement during Maximum Considered Earthquake ground motion (see enclosed settlement report, Figure 12).

6.5 Lateral Spread

In order for lateral spreading of gently sloping ground to occur, potentially liquefiable layers must be relatively continuous to allow for substantial surface deformation. Based on the liquefaction analyses, a continuous soil layer susceptible to liquefaction is not present across the site. Therefore, the potential for lateral spreading of the gently sloping ground surface is considered low.

The potential for lateral spreading within the offsite slope was also considered. As discussed in *Section 6.6*, the existing offsite slope is underlain by artificial fill that was likely placed for construction of Pacific Coast Highway located at the top of the slope. The slope ascends approximately 15 to 40 feet above the adjacent onsite grade. Therefore, groundwater within the ascending portion of the slope is not anticipated and the potential for liquefaction within the slope is considered low. Furthermore, the portions of the slope underlain by shallow bedrock of the Capistrano Formation are not considered susceptible to liquefaction.

Based on the lack of groundwater within the slope as well as lack of continuous liquefiable layers below the groundwater table, it is our opinion that the potential for lateral spreading of the offsite slope is considered low.

6.6 Slope Stability

The topography at the site is relatively flat with no pronounced highs or lows. Offsite slopes bounding the southwestern portion of the property range from 12 feet on the southwest to 45 feet at the northeast corner. The slopes are generally inclined at 2:1 (horizontal to vertical) or flatter.

Published geologic maps and visual observation indicate that the existing ascending slope along the south and southeast project boundary is predominantly underlain by artificial fill. The ascending slope is approximately 15 to 40 feet in height and inclined at gradients of 2:1 (H:V) or flatter. The slope is likely associated with construction of Pacific Coast Highway located at the top of the slope.

Locally, an isolated outcrop of Capistrano Formation bedrock is shown on geologic maps (CDMG, 1974; USGS, 1999) on the slope in the area between borings B2 and B5 (see Figures 2 through 4). Geologic mapping of the slope indicates that the bedrock is massive and highly weathered siltstone with no apparent structure.

Considering the height and inclination of the ascending slope, the massive nature of the artificial fill soils, the lack of through-going planar geologic structure (bedding plans, joints, fractures) in the bedrock, and the distance between the toe of the slope and proposed structures (minimum distance of 30 feet), the slope is considered grossly stable and is not anticipated to impact the proposed project.

Based on surficial slope stability calculations performed using the shear strength of a near-surface sample, the slope is considered stable for surficial stability (see Figure 13). Although the parameters used in the surficial stability analysis are from a boring conducted from the pad area, based on our reconnaissance of the slope we feel that the shear strength values are representative of the slope conditions.

The site is not located within an area identified as having a potential for seismic slope instability (CDMG, 2001). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

6.7 Tsunamis, Seiches, and Flooding

The site is located within a coastal area and therefore, tsunamis, seiches, and flooding are considered possible geologic hazards in the site vicinity. The site is not located within a tsunami inundation area (CEMA, 2009), therefore, the risk of tsunami inundation is considered unlikely.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically induced seiche is considered unlikely.

The majority of the site is within an area of minimal flooding (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2022). The northeastern most portion of the site, see Figure 14, is categorized as being in Flood Zone A. Flood Zone A, as defined by FEMA (2022) as area areas with a 1% annual change of flooding and a 26% change of flooding over the life of a 30-year mortgage. No depths of base flood elevations were provided by FEMA (2022) in these areas because detailed analyses were not performed. The Dana Point Shoreline Management Plan (Project Dimensions, 2014) does not indicate the area lies within the 100-year coastal flood event.

6.8 Oil Fields & Methane Potential

Review of the California Geologic Energy Management Division (CalGEM) Well Finder Website indicates that the site is not located within the limits of an oilfield and oil or gas wells are not located within the immediate site vicinity (CalGEM, 2022). The closest well to the site is the Union Oil Company of California, Well Number 5, a plugged core hole, located approximately 2,650 feet to the west. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the CalGEM.

Since the site is not located within the boundaries of a known oil field, the potential for the presence of methane or other volatile gases at the site is considered low. However, should it be determined that a methane study is required for the proposed development, it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

- 7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed site improvements provided the recommendations presented herein are followed and implemented during design and construction.
- 7.1.2 Provided our recommendations are followed and properly maintained, the proposed grading and proposed structures will be safe for its intended use against hazard from landslide, settlement or slippage and the proposed grading and proposed structures will have no adverse effect on the stability of the site or adjoining properties.
- 7.1.3 Up to 5 feet of existing artificial fill was encountered during site exploration. Additionally, it is our understanding that deeper fill on the order of 29 feet may exist in the northeast corner of the site. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the Grading section of this report are followed (see Section 7.4).
- 7.1.4 Based on the enclosed liquefaction induced settlement calculations and subsequent to the recommended grading, it is recommended that the proposed project be designed for up to ½ inches of settlement as a result the Design Earthquake peak ground acceleration. The grading and foundation recommendations presented herein are intended to minimize and design for the effects of liquefaction settlement on proposed structures.
- 7.1.5 Based on the results of our laboratory testing, the existing alluvium could yield excessive static and differential settlements upon application of the foundation loads associated with the proposed parking structure. Based on this consideration, it is recommended that soil modification (e.g. rammed aggregate piers) be considered below the parking structure. Recommendations for Rammed Aggregate Piers (RAP) foundations are provided in Section 7.8.
- 7.1.6 Where supported on ground improvement, it is recommended that the upper 3 feet of existing site soils within the footprint of the proposed parking structure be excavated and properly compacted for foundation and slab support. The engineered fill blanket should extend at least 3 feet beyond the edge of foundations, including building appurtenances, or for a distance equal to the depth of fill below the foundations, whichever is greater. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).

- 7.1.7 As a minimum, the upper 6 feet of existing soils within the footprint areas of the proposed apartment buildings should be excavated and properly compacted for foundation and slab support. The engineered fill blanket should extend at least 3 feet beyond the edge of foundations or for a distance equal to the depth of fill below the foundations, whichever is greater. Proposed foundations should be underlain by at least 4 feet of newly compacted engineered fill. It is recommended that the grading contractor verify the depth of all building foundations prior to commencement of site grading activities in order to correctly determine the required grading overexcavations for foundations. Deeper fill or soft soils encountered during site grading operations should be completely over-excavated as necessary at the direction of the Geotechnical Engineer. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading operations.
- 7.1.8 Subsequent to the recommended grading, the proposed apartment buildings may be supported on a post-tensioned foundation system deriving support in the newly placed engineered fill. Recommendations for the design of a post-tensioned foundation system are provided in Section 7.10.
- 7.1.9 Soft alluvium is anticipated to be exposed throughout the excavation bottoms and these soils will likely be very moist to wet and subject to excessive pumping. Operation of rubber tire equipment on these subgrade soils may cause excessive disturbance of the soils, and equipment may sink and become stuck in the soft soils. Excavation activities to establish the finished subgrade elevation must be conducted carefully and methodically to avoid excessive disturbance to the subgrade. Track-mounted equipment should be considered. Stabilization of the bottom of the excavation may be required in order to provide a firm working surface upon which heavy equipment can operate. Recommendations for bottom stabilization and earthwork are provided in the *Grading* section of this report (see Section 7.4).
- 7.1.10 The upper alluvial soils as encountered during site exploration were very moist and the grading contractor should be aware that the existing soils are currently near or slightly above optimum moisture content. Conditions could change seasonally. If the soils are more than 3 percent above the optimum moisture content at the time of construction the soils will likely require some spreading and drying activities in order to achieve proper compaction.
- 7.1.11 Soil additives, like lime or cement, can also be considered to reduce the moisture content, reduce the expansion potential, and stabilize the upper soils. Recommendations for soil stabilization through the use of lime or cement can be addressed under separate cover, if desired.

- 7.1.12 Groundwater was encountered at depths of approximately 16 to 20 feet during the field investigation at the subject site. The depth to groundwater at the time of construction may be different. We expect groundwater will be encountered during the installation of rammed aggregate piers or deep drilled excavations, and during deep removals of existing artificial fill.
- 7.1.13 It is anticipated that stable excavations for the recommended grading associated with the proposed structures can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.22).
- 7.1.14 At this time, it is unknown if the deeper artificial fill associated with the former USTs will be excavated and recompacted as engineered fill. Based on available information, the artificial fill may extend to depths of up to 29 feet below the ground surface. Temporary excavations to remove this artificial fill will likely require sloping and or shoring measures. Furthermore, the excavation would extend below the groundwater table and temporary dewatering measures may be required. Once the project proceeds to a more finalized state, additional recommendations for temporary dewatering and deeper temporary excavations can be provided under separate cover.
- 7.1.15 Where miscellaneous subterranean improvements are planned (Elevator Pits and Swimming Pool), the structures may be supported on a conventional foundation system deriving support in the undisturbed alluvial soils found at and below a depth of 6 feet. If necessary, these miscellaneous improvements may derive support in a combination of newly placed engineered fill and undisturbed alluvium found at and below a depth of 6 feet. Stabilization of the alluvial soils at the excavation bottom may be necessary. It is the intent of the Geotechnical Engineer to allow miscellaneous subterranean structures to derive support in both engineered fill and alluvium if project conditions warrant such an occurrence. Recommendations for swimming pool and elevator pit design are provided in Sections 7.18 and 7.20 of this report, respectively.
- 7.1.16 Improvements which are not supported on deepened foundations, such as walkways, paving, and utilities, may still be subject to seismic and/or static settlement. Furthermore, the upper portion of existing site soils have a medium expansive potential and could be subject to heave and settlement if the soil is subjected to repeated wetting and drying. The client should consider the flexibility of the products and pavements being installed. It is recommended that all utilities traversing through existing site soils utilize flexible connections in order to minimize the damage to underground installations caused by potential soil movements.

- 7.1.17 Foundations for small outlying structures, such as block walls less than 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed, foundations may derive support directly in the undisturbed alluvial soils found at or below a depth of 2 feet and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved in writing by a Geocon representative.
- 7.1.18 Where new paving is to be placed, it is recommended that all existing fill and soft alluvial soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable alluvium may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.14).
- 7.1.19 Based on the presence of expansive soils and relatively shallow groundwater at the subject site, infiltration of stormwater is not considered feasible and is not recommended for this development.
- 7.1.20 Once the design and foundation loading configuration for the proposed structure proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be re-evaluated by this office.
- 7.1.21 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

- 7.2.1 The in-situ soils can be excavated with light to moderate effort using conventional excavation equipment. Moderate caving and slumping should be anticipated in unshored excavations, especially where granular or saturated soil is encountered

- 7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.
- 7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping and shoring. Temporary excavation recommendations are provided in Section of this report (see Section 7.22).
- 7.2.4 Based on laboratory test results, the near surface site soils encountered during the field investigation are considered to have a “medium” (expansion index of 90 or less) expansive potential and are classified as “expansive” in accordance with the 2019 California Building Code (CBC) Section 1803.5.3. The recommendations presented herein assume that the building foundations, slabs, and paving will derive support in these materials.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

- 7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered “severely corrosive” with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B10) and should be considered for design of underground structures. Due to the corrosive potential of the soils, it is recommended that ABS pipes be considered in lieu of cast-iron for subdrains and retaining wall drains.
- 7.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B10) and indicate that the on-site materials possess a sulfate exposure class of “S0” to concrete structures as defined by 2019 CBC Section 1904 and ACI 318 Table 19.3.1.1.
- 7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

- 7.4.1 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill encountered during exploration is suitable for re-use as an engineered fill, provided any encountered oversized material (greater than 6 inches) and any encountered deleterious debris is removed.
- 7.4.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.
- 7.4.3 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).
- 7.4.4 As a minimum, the upper 6 feet of existing soils within the footprint areas of the proposed apartment structures should be excavated and properly compacted for foundation and slab support. The engineered fill blanket should extend at least 3 feet beyond the edge of foundations or for a distance equal to the depth of fill below the foundations, whichever is greater. Proposed foundations should be underlain by at least 4 feet of newly compacted engineered fill. It is recommended that the grading contractor verify the depth of all building foundations prior to commencement of site grading activities in order to correctly determine the required depth of excavation below foundations. Deeper fill or soft soils encountered during site grading operations should be completely over-excavated as necessary at the direction of the Geotechnical Engineer. The limits of existing fill and/or soft soil removal will be verified by the Geocon representative during site grading operations.
- 7.4.5 Where supported on ground improvement, it is recommended that the upper 3 feet of existing site soils within the footprint of the proposed structures be excavated and properly compacted for foundation and slab support. The engineered fill blanket should extend at least 3 feet beyond the edge of foundations, including building appurtenances, or for a distance equal to the depth of fill below the foundations, whichever is greater.

- 7.4.6 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the excavation bottom must be proof-rolled with heavy equipment in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.). If determined to be excessively soft, additional removals or stabilization of the excavation bottom may be required in order to provide a firm working surface upon which engineered fill can be placed and heavy equipment can operate.
- 7.4.7 If subgrade stabilization is required at the excavation bottom, rubber tire equipment should not be allowed in the excavation bottom until it is stabilized or extensive soil disturbance could result. It is suggested that excavation and grading be performed during the summer season to promote moisture control of the soils. In addition, the use of track equipment should be considered to minimize disturbance to the soils if they become wet at the excavation bottom. Bottom stabilization, if necessary, may be achieved by introducing a thin lift of 3- to 6-inch diameter crushed angular rock into the soft excavation bottom. The use of crushed concrete will also be acceptable. The crushed rock should be spread thinly across the excavation bottom and pressed into the soils by track rolling or wheel rolling with heavy equipment. It is very important that voids between the rock fragments are not created so the rock must be thoroughly pressed or blended into the soils.
- 7.4.8 The upper alluvial soils at the site are currently very moist and the grading contractor should be aware that the existing soils are currently near or slightly above optimum moisture content. Conditions could change seasonally. If the soils are in excess of 3 percent above optimum moisture content at the time of construction the soils will likely require some spreading and drying activities in order to achieve proper compaction.
- 7.4.9 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to 2 percent above optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).
- 7.4.10 It is anticipated that stable excavations for the recommended grading can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of the existing offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.22).
- 7.4.11. Where new paving is to be placed, it is recommended that all existing fill and soft alluvium be excavated and properly compacted for paving support. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to optimum moisture content, and compacted to at least 92 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.14).

- 7.4.12 Foundations for small outlying structures, such as block walls less than 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed, foundations may derive support directly in the undisturbed alluvial soils found at or below a depth of 2 feet, and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.
- 7.4.13 It is recommended that flexible utility connections be utilized for all rigid utilities to minimize or prevent damage to utilities from minor differential soil movements and subsidence. Utility trenches should be properly backfilled in accordance with the following requirements. The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry is also acceptable as backfill. Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).
- 7.4.14 Although not anticipated for this project, all imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 50 and soil corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B10).
- 7.4.15 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel or concrete.

7.5 Removal of Underground Storage Tanks (USTs)

- 7.5.1 Up to 29 feet of undocumented artificial fill was likely placed during prior removal of USTs (see Site Plan, Figure 2). Unless the project can locate a compaction certificate demonstrating that the existing fill is a certified engineered fill, the backfill associated with the former UST removal must be excavated and replaced. A representative of Geocon should be present during the excavation activities to provide observation and written approval that all existing artificial fill has been removed. Temporary excavations to remove deep artificial fill and existing USTs will likely require sloping and/or shoring measures. The excavation would extend below the groundwater table and temporary dewatering measures may be required. Evaluation of stable temporary excavations associated with the removal of the deep fill should be addressed prior to the start of construction.
- 7.5.2 It is our understanding that the two existing USTs onsite are planned for removal by the current property owner (the school district) under a separate permit and prior to the start of construction (see Site Plan, Figure 2). It is anticipated that these USTs will be removed and the excavation subsequently backfilled with certified engineered fill. It is recommended that the backfill be moisture conditioned to the optimum moisture content and placed and compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D1557 (latest edition). It is recommended that Geocon be provided with a sample of the proposed backfill material for review and approval prior to bringing the material to the site. It is suggested that Geocon be retained to provide the observation and testing services during the backfill process for continuity of Geotechnical Engineer of Record. At a minimum, Geocon should be provided with a copy of the compaction report for our review and concurrence that the engineered fill has been placed satisfactorily.
- 7.5.3 Provided that the existing artificial fill associated with the former USTs is removed and replaced as a certified engineered fill, and that the future excavation required for removal of the existing USTs is backfilled with certified engineered fill, there are not anticipated impacts on the proposed grading and development.

7.6 Shrinkage

- 7.6.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor of up to 10 percent should be anticipated when excavating and compacting the upper 5 feet of existing earth materials on the site to an average relative compaction of 92 percent.
- 7.4.2 If import soils will be utilized in the building pad, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geocon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.7 Foundation Design – General

- 7.7.1 Due to the expansive nature of the on-site soils, the moisture content of untreated subgrade soils should be maintained at 2 to 3 percent above optimum moisture content prior to and at the time of concrete placement. If the subgrade is allowed to dry out, presaturation and/or moisture conditioning and recompacting will be required.
- 7.7.2 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.
- 7.7.3 Where side by side construction is planned for the residential structure and parking structure it is recommended that the parking structure be constructed prior to the adjacent residential structure in order to allow the majority of the static settlement to occur in the parking structure. This will help to minimize differential settlements between the two structures. It is recommended that either a seismic separation or flexible connection be utilized where the apartment structures and parking structure may be attached. The design of the connection is at the discretion of the project structural engineer. Additional settlement analyses should be performed once the foundation loading configuration for the proposed structures is established to further evaluate the potential for differential settlement between the residential structure and parking structure. The utilization of a lesser bearing value, or increasing the thickness of engineered fill below the foundations, would further reduce the anticipated settlements and could be evaluated once the design becomes more finalized.
- 7.7.4 It is recommended that a seismic separation or flexible connection be utilized where the adjacent structures abut. The design of the connection is at the discretion of the project structural engineer and should take into account potential differential settlements between structures.
- 7.7.5 It is recommended that flexible utility connections be utilized for all rigid utilities to minimize or prevent damage to utilities from minor differential movements.
- 7.7.6 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.
- 7.7.7 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.8 Rammed Aggregate Piers (RAP)

- 7.8.1 Due to the compressible alluvial soils, it is recommended that soil improvement (e.g. Rammed Aggregate Piers) be considered below the proposed parking structure. Subsequent to construction of the Rammed Aggregate Pier (RAP), the proposed parking structure may be supported on a conventional foundation system deriving support in the improved soils. The foundation should be designed to derive vertical support from the RAP improved soils and may develop lateral resistance at the foundation perimeter, as well as by friction beneath the foundations, if necessary.
- 7.8.2 The RAP system is based on soil improvement that consists of installing densified, aggregate columns to depths typically ranging up to about 25 feet below the proposed foundation elevation. The system increases density and lateral stress in the surrounding soil and claims improvement in bearing capacity and settlement potential. RAP elements are constructed by creating shafts (commonly 30 inches in diameter) by drilling or displacement methods, and backfilling the open shaft with specially rammed/compacted, open graded crushed rock and Class 2 AB in 10- to 12-inch lifts. It should be noted that creating the shaft using the displacement method, advancing the shaft with a displacement mandrel, reduces the soil cuttings generated during the creation of the shaft.
- 7.8.3 The pattern and depth of ground improvements may vary depending upon the purposes of mitigation and stratigraphic conditions. The contractor should design the RAP to incorporate allowable static and seismic settlements in accordance with the recommendations of the project structural engineer. The RAP contractor should evaluate the post-installation static and dynamic settlement within the remediation zone of the RAP. In addition, the project structural engineer should evaluate if the planned structures can tolerate the planned settlements after the installation of the RAP.
- 7.8.4 Spacing and diameter should be selected by the specialty contractor to obtain the necessary remediation as outlined herein. The RAP mitigation should extend at least 15 feet laterally outside the edge of planned building structures, where practical.
- 7.8.5 RAP design should be based on settlement criteria of a maximum combined static and seismic differential settlement of 1 inch between adjacent columns. The anticipated seismic induced differential settlement should be evaluated once the depth of the RAP ground improvement is established, as the ground improvement may mitigate some of the potentially liquefiable soil layers.

7.8.6 The RAP design package should be submitted to Geocon West, Inc. for review at least two weeks prior to mobilization for construction. Within the design package, the specialty contractor should outline a performance and load testing program to verify the effectiveness of the ground improvement and to confirm the bearing capacity of the improved soils with a full-scale load test. During the load testing, a representative of Geocon should be present to observe RAP installation and testing. The information obtained from the load testing should be used to modify the depth necessary to achieve design capacities, as well as develop installation criteria that can be used during construction.

7.9 Conventional Foundation Design – Parking Structure

7.9.1 The proposed parking structure may be supported on a conventional spread foundation system deriving support on the RAP ground improvement. All foundation excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete.

7.9.2 Continuous footings should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material. Isolated spread foundations should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material. Foundations constructed over RAP ground improvement can achieve relatively high bearing pressures. For preliminary design purposes, a bearing pressure of 6,000 psf may be assumed; however, the design bearing pressure should be provided by the RAP contractor.

7.9.3 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.9.4 For preliminary design purposes, a modulus of subgrade reaction of 150 pounds per cubic inch (pci) may be utilized for design of the foundations where directly underlain by compacted fill. However, the RAP contractor should provide the structural engineer a revised modulus value incorporating the planned improvement techniques. Additionally, where a higher subgrade modulus is required beneath the foundation system, the site soils can be stabilized using lime or cement, or can be replaced with a more granular imported soil. This value is a unit value for use with a 1-foot square footing. The modulus should be reduced in accordance with the following equation when used with larger foundations:

$$K_R = K \left[\frac{B+1}{2B} \right]^2$$

where: K_R = reduced subgrade modulus
 K = unit subgrade modulus
 B = foundation width (in feet)

- 7.9.5 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.
- 7.9.6 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.
- 7.9.7 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.
- 7.9.8 Due to the expansive nature of the on-site soils, the moisture content of untreated subgrade soils should be maintained at 2 to 5 percent above optimum moisture content prior to and at the time of concrete placement. If the subgrade is allowed to dry out, presaturation and/or moisture conditioning and recompacting will be required.
- 7.9.9 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.
- 7.9.10 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.10 Post-Tensioned Foundation Recommendations

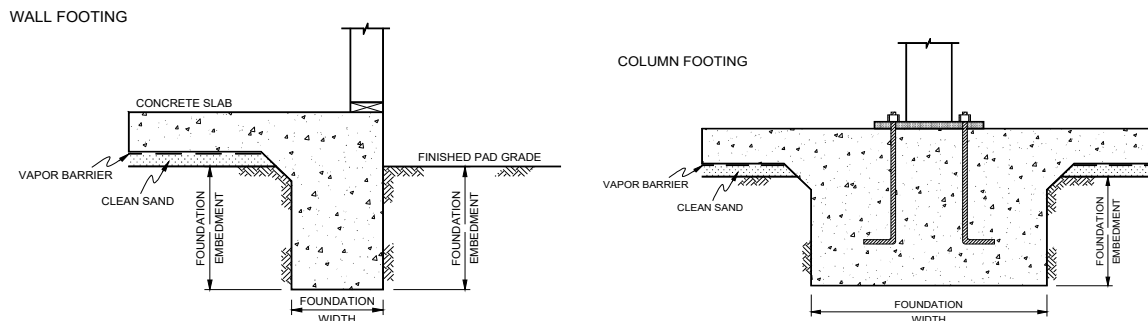
- 7.10.1 Subsequent to the recommended grading, it is recommended that a post-tensioned foundation system be utilized for support of the proposed apartment buildings. Proposed post-tensioned foundations should be underlain by at least 4 feet of newly placed engineered fill. Additional grading should be conducted as necessary in order to maintain the required 4-foot-thick blanket of engineered fill below foundations.

7.10.2 The post-tensioned system should be designed by a structural engineer experienced in post-tensioned slab design and design criteria of the Post-Tensioning Institute (PTI) DC 10.5-12 *Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive Soils* or *WRI/CRSI Design of Slab-on-Ground Foundations*, as required by the 2019 California Building Code (CBC Section 1808.6.2). Although this procedure was developed for expansive soil conditions, we understand it can also be used to reduce the potential for foundation distress due to differential settlement. The post-tensioned design should incorporate the geotechnical parameters presented in the following table, which are based on the guidelines presented in the PTI DC 10.5 design manual. The parameters presented below are based on a medium expansive potential ($50 < EI < 90$), as well as the potential for and magnitude of anticipated seismically induced settlements.

POST-TENSIONED FOUNDATION SYSTEM DESIGN PARAMETERS

Post-Tensioning Institute (PTI) DC 10.5-12 Design Parameters	Value
Thornthwaite Index	-20
Equilibrium Suction	3.9
Edge Lift Moisture Variation Distance, e_M (Feet)	5.1
Edge Lift, y_M (Inches)	1.10
Center Lift Moisture Variation Distance, e_M (Feet)	9.0
Center Lift, y_M (Inches)	0.47

7.10.3 The foundations for the post-tensioned slabs should be embedded in accordance with the recommendations of the structural engineer. If a post-tensioned mat foundation system is proposed, the slab should possess a thickened edge with a minimum width of 12 inches and extend below the clean sand or crushed rock layer. A graphic depicting the foundation embedment is provided below.



- 7.10.4 If the structural engineer proposes a post-tensioned foundation design method other than PTI DC 10.5:
- The criteria presented in the above table are still applicable.
 - Interior stiffener beams should be used.
 - The width of the perimeter foundations should be at least 12 inches.
 - The perimeter footing embedment depths should be at least 24 inches. The embedment depths should be measured from the lowest adjacent pad grade.
- 7.10.5 During the construction of the post-tension foundation system, the concrete should be placed monolithically. Under no circumstances should cold joints form between the footings/grade beams and the slab during the construction of the post-tension foundation system unless specifically designed by the structural engineer.
- 7.10.6 Post-tensioned foundations for support of the apartment structures may be designed for an allowable soil bearing pressure of 2,500 psf (dead plus live load). This bearing pressure may be increased by one-third for transient loads due to wind or seismic forces. We estimate the total static settlements under the imposed allowable loads to be about $\frac{2}{3}$ inch with differential settlements on the order of $\frac{1}{2}$ inch over a horizontal distance of 20 feet. A majority of the settlement of the foundation system is expected to occur on initial application of loading; however, additional settlements are expected within the first twelve months. Based on seismic considerations, the proposed structures supported on should be designed for a combined static and seismically induced differential settlement of 1 inch over a distance of 20 feet.
- 7.10.7 The maximum total settlement for miscellaneous improvements (such as elevator pits) deriving support in the undisturbed alluvial soils is expected to be less than $\frac{1}{2}$ inch and occur below the heaviest loaded structural element. Differential settlement is expected to be less than $\frac{1}{2}$ inch over a distance of 20 feet.
- 7.10.8 Differential settlement between the residential structures and parking structure is estimated to be less than $\frac{1}{2}$ inch. It is recommended that either a seismic separation or flexible connection be utilized where the apartment structures and parking structure may be attached. The design of the connection is at the discretion of the project structural engineer.
- 7.10.9 Isolated footings, if present, should have a minimum embedment depth and width of 24 inches. The use of isolated footings, which are located beyond the perimeter of the building and support structural elements connected to the building, are not recommended. If this condition cannot be avoided, the isolated footings should be connected to the building foundation system with grade beams. In addition, consideration should be given to connecting patio slabs, which exceed 5 feet in width, to the building foundation to reduce the potential for future separation to occur.

- 7.10.10 Due to the expansive potential of the subgrade soils, the moisture content in the slab and foundation subgrade should be maintained between 2 and 3 percent above optimum moisture content prior to and at the time of concrete placement.
- 7.10.11 The recommendations of this report are intended to reduce the potential for cracking of slabs and foundations due to expansive soil (if present), differential settlement of fill soil with varying thicknesses. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade placed on such conditions may still exhibit some cracking due to soil movement and/or shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.
- 7.10.12 Interior stiffening beams should be incorporated into the design of the foundation system in accordance with the PTI design procedures.
- 7.10.13 Foundation excavations should be observed by the Geotechnical Engineer (a representative of Geocon West, Inc.) prior to the placement of reinforcing steel and concrete to check that the exposed soil conditions are consistent with those expected and have been extended to appropriate bearing strata. If unexpected soil conditions are encountered, foundation modifications may be required.
- 7.10.14 Our experience indicates post-tensioned slabs may be susceptible to excessive edge lift, regardless of the underlying soil conditions. Placing reinforcing steel at the bottom of the perimeter footings and the interior stiffener beams may mitigate this potential. The structural engineer should design the foundation system to reduce the potential of edge lift occurring for the proposed structures.
- 7.10.15 During the construction of the post-tension foundation system, the concrete should be placed monolithically. Under no circumstances should cold joints form between the footings/grade beams and the slab during the construction of the post-tension foundation system unless designed by the structural engineer.
- 7.10.16 Geocon should observe the foundation excavations prior to the placement of reinforcing steel to check that the exposed soil conditions are similar to those expected and that they have been extended to the appropriate bearing strata. If unexpected soil conditions are encountered, foundation modifications may be required.

7.11 Lateral Design

- 7.11.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.25 may be used with the dead load forces in the competent alluvial soils or in properly compacted engineered fill.
- 7.11.2 Passive earth pressure for the sides of foundations and slabs poured against properly compacted engineered fill or competent alluvial soils may be computed as an equivalent fluid having a density of 200 pcf with a maximum earth pressure of 2,000 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.12 Miscellaneous Foundations

- 7.12.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be structurally supported by the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils found at or below a depth of 2 feet, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials.
- 7.12.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.
- 7.12.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.13 Concrete Slabs-on-Grade

- 7.13.1 Where supported on a conventional foundation system underlain by RAP ground improvement, concrete slabs-on-grade for structures subject to vehicle loading should be a minimum 5 inches of concrete reinforced with No. 4 steel reinforcing bars placed 16 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint. The slab-on-grade may derive support in the newly placed engineered fill.
- 7.13.2 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder selection and design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) as well as ASTM E1745 and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4-inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.
- 7.13.3 For seismic design purposes, a coefficient of friction of 0.25 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

- 7.13.4 Exterior slabs, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to near optimum moisture content and properly compacted to at least 92 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.
- 8.12.6 Due to the expansive potential of the anticipated subgrade soils, the moisture content of the slab subgrade should be maintained and sprinkled as necessary to maintain a moist condition as would be expected in any concrete placement. Furthermore, consideration should be given to doweling slabs into adjacent curbs and foundations to minimize movements and offsets which could lead to a potential tripping hazard. As an alternative, the upper 18 inches of soil could be replaced with granular, non-expansive soils which will reduce the potential for movements and offsets.
- 7.13.5 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.14 Preliminary Pavement Recommendations

- 7.14.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable soils be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all soft or unsuitable soils in the area of new paving is not required, however, paving constructed over existing unsuitable soils may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified and recompacted to at least 92 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).
- 7.14.2 The truck loading considered for the paving designs is patterned after our understanding that the fire department vehicle is on the order of 94,000 pounds. The paving sections provided herein are intended to meet the H-20 loading criteria which has a maximum axle loading of 32,000 pounds.

7.14.3 The following pavement sections are based on an assumed R-Value of 10. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.14.4 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	5.5	10	3.0
Trash Truck & Fire Lanes	7.0	10	4.0

7.14.5 Prior to placing base materials, the upper 12 inches of the subgrade should be scarified, moisture conditioned to at least 2 percent above moisture content, and compacted to a dry density of at least 92 percent of the laboratory maximum dry density as determined by ASTM D 1557. Similarly, the base material should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density at near to slightly above optimum moisture content. Asphalt concrete should be compacted to a density of at least 95 percent of the laboratory Hveem density in accordance with ASTM D 2726.

7.14.6 Asphalt concrete should conform to Section 203-6 of the “*Standard Specifications for Public Works Construction*” (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the “*Standard Specifications of the State of California, Department of Transportation*” (Caltrans). Crushed Miscellaneous Base should conform to Section 200-2.4 of the “*Standard Specifications for Public Works Construction*” (Green Book).

7.14.7 Unless specifically designed and evaluated by the project structural engineer, where concrete paving will be utilized for support of vehicles, we recommend that the concrete be a minimum of 6 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to at least 92 percent and 95 percent relative compaction, respectively, as determined by ASTM Test Method D 1557 (latest edition).

7.14.8 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.15 Vehicular Rated Concrete Paver Recommendations

7.15.1 It is our understanding that concrete unit pavers are planned for driveway access road off of Victoria Boulevard and a concrete pavement system is planned between the EVA swing access gates located along the south property line.

7.15.2 We calculated the paver sections in general conformance with the *Caltrans Method of Flexible Pavement Design* (Highway Design Manual, Section 608.4) using an estimated Traffic Indices (TI). The project civil engineer and owner should review the pavement designations to determine appropriate locations for pavement thickness. Based on the Interlocking Concrete Pavement Institute (ICPI), the pavers should possess a minimum thickness of 3⅞ inches overlying 1 to 1½ inch of sand. In addition, the pavers should be installed in a pattern acceptable for vehicular traffic. It is anticipated that base materials will be used for the paver underlayment, and the pavers will not be installed for stormwater management. The table below presents the recommended concrete-unit paver sections.

RECOMMENDED CONCRETE UNIT PAVER SECTIONS

Location	Traffic Index	Assumed Subgrade R-Value	Equivalent Paver Asphalt Concrete Thickness** (inches)	Min. Aggregate Base Thickness (inches)
Driveways for automobiles and light-duty vehicles	5.5	10	3⅞	7.0
Driveways for heavy truck traffic	7.0	10	3⅞	16.0

** indicates estimated value

7.15.3 Based on the manufacture’s literature for the concrete pavement system with precast artificial turf by Soil Retention, the typical cross section for the concrete paving system consists of the 1½ concrete paving mat underlain by a ½ to 2 inch sand bedding layer. When used with artificial turf, the manufacture indicates that the design may assume a Gravel Equivalency factor $GE_f = 0$ for the paving mat, which ignores contribution from the concrete paving system to the overall paving section design. If a different design is selected, we should be contacted to provide updated recommendations.

RECOMMENDED CONCRETE PAVING SYSTEM (SOIL RETENTION) SECTIONS

Location	Traffic Index	Assumed Subgrade R-Value	Equivalent Asphalt Concrete Thickness** (inches)	Min. Aggregate Base Thickness (inches)
Driveways for automobiles and light-duty vehicles	5.5	10	0	17.5
Driveways for heavy truck traffic	7.0	10	0	22.0

** indicates estimated value

- 7.15.4 Prior to placing base materials, the subgrade should be scarified to a depth of approximately 12 inches, moisture conditioned to at least 2 percent above optimum moisture content, and compacted to a dry density of at least 92 percent of the laboratory maximum dry density as determined by ASTM D 1557. Similarly, the base materials should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density at or slightly above optimum moisture content.
- 7.15.5 Although the pavers are not intended for stormwater infiltration, due to the expansive nature of the onsite soils, consideration should be given to installing a subdrain for the paver sections. The subdrain could be placed at the bottom of the base section below the pavers and the soil subgrade should be graded to allow water to flow to a subdrain. The subdrain should run the distance of the paver area to reduce the potential for water to build up within the paving section. The drain should be connected to an approved drainage device. The drain should consist of a 3-inch diameter perforated Schedule 40, PVC pipe and placed at the bottom of the base materials.
- 7.15.6 The pavers should be installed and maintained in accordance with the manufacturer's recommendations. Future property owners should be made aware and responsible for the maintenance program. In addition, pavers tend to shift vertically and horizontally during the life of the pavement and should be expected. The pavers normally require a concrete border to prevent lateral movement from traffic. The concrete border surrounding the pavers should be embedded at least 6 inches from finish grade surface to reduce the potential for water migration to the adjacent landscape areas and pavement areas. The pavers should be placed tightly adjacent to each other and the spacing between the paver units should be filled with appropriate filler. A polymer sand (Poly-Sand) can be used on the non-storm water quality paver area to help prevent water infiltration.

7.15.7 The performance of pavement is highly dependent on providing positive surface drainage away from the edge of the pavement. Ponding of water on or adjacent to the pavement will likely result in pavement distress and subgrade failure. Drainage from landscaped areas should be directed to controlled drainage structures. Landscape areas adjacent to the edge of asphalt pavements are not recommended due to the potential for surface or irrigation water to infiltrate the underlying permeable aggregate base and cause distress. Where such a condition cannot be avoided, consideration should be given to incorporating measures that will significantly reduce the potential for subsurface water migration into the aggregate base. If planter islands are planned, the perimeter curb should extend at least 6 inches below the level of the base materials.

7.16 Retaining Wall Design

7.16.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 7 feet. In the event that walls significantly higher than 7 feet are planned, Geocon should be contacted for additional recommendations.

7.16.2 Proposed retaining walls may be supported on a conventional foundation system deriving support in the undisturbed alluvial soils found at or below a depth of 6 feet and/or engineered fill.

7.16.3 Continuous foundations may be designed for an allowable bearing capacity of 2,000 pounds per square foot (psf), and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.16.4 Isolated spread foundations may be designed for an allowable bearing capacity of 2,500 psf, and should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

7.16.5 The allowable soil bearing pressure above may be increased by 50 psf and 250 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 3,000 psf.

7.16.6 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.16.7 Retaining walls that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure). Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure). The table below presents recommended pressures to be used in retaining wall design assuming that proper drainage will be maintained.

RETAINING WALL WITH MINIMUM 6-FOOT LEVEL BENCH

HEIGHT OF RETAINING WALL (FEET)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (ACTIVE PRESSURE)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (AT-REST PRESSURE)
Up to 7	40	60

7.16.8 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

7.16.9 The wall pressures provided above assume that the proposed retaining walls will support engineered fill derived from onsite soils. If import soil will be used to backfill proposed retaining walls, revised earth pressures may be required to account for the geotechnical properties of the import soil used as engineered fill. This should be evaluated once the use of import soil is established. All imported fill shall be observed, tested, and approved by Gecon West, Inc. prior to bringing soil to the site.

7.16.10 Additional active pressure should be added for a surcharge conditions, such as due to vehicular traffic or adjacent structures, and should be designed for each condition as the project progresses. Recommendations for the incorporation of surcharges are provided in section 7.22 of this report.

7.16.11 In addition to the recommended earth pressure, the upper 10 feet of the subterranean wall adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the wall due to normal street traffic. If the traffic is kept back at least 10 feet from the subterranean walls, the traffic surcharge may be neglected.

- 7.16.12 It is recommended that slough walls or impact walls be constructed above retaining walls with an ascending backslope. The purpose of the slough and impact walls is to contain runout material and other debris from impacting the improvements below the retaining wall. It is recommended that freeboard be constructed above the retaining portion of the wall to serve as a slough wall. Slough walls should be a minimum of 2 feet in height and should be designed for impact utilizing a triangular distribution of pressure of 125 pcf. The area upslope of the slough wall will require periodic evaluations and maintenance; accumulations of debris shall be removed on a periodic basis and after severe storms. Maintenance and removal of debris should be written into a maintenance agreement with future owners by the developer of the site.
- 7.16.13 Seismic lateral forces should be incorporated into the design as necessary, and recommendations for seismic lateral forces are presented below.

7.17 Dynamic (Seismic) Lateral Forces

- 7.17.1 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2019 CBC).
- 7.17.2 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2019 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two thirds of PGA_M calculated from ASCE 7-16 Section 11.8.3.

7.18 Retaining Wall Drainage

- 7.18.1 Unless designed for hydrostatic pressures, retaining walls should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 15). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

- 7.18.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 16). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.
- 7.18.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures.
- 7.18.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.19 Swimming Pool

- 7.19.1 The proposed swimming pools should be designed as free-standing structures deriving support in newly placed engineered fill and/or the competent alluvial soils found at or below a depth of 6 feet. Swimming pool walls may be designed in accordance with the *Retaining Wall Design* section of this report (see Section 7.16). The proposed pools should be constructed utilizing an expansive soils design and a hydrostatic relief valve should be considered as part of the swimming pool design unless a gravity drain system can be placed beneath the pool shell.
- 7.19.2 If a spa is proposed it should be constructed independent of the swimming pool and must not be cantilevered from the swimming pool shell.

7.20 Elevator Pit Design

- 7.20.1 The elevator pit slab and retaining wall should be designed by the project structural engineer. As a minimum the slab-on-grade for the elevator pit bottom should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Elevator pit walls may be designed in accordance with the recommendations in the *Retaining Wall Design* section of this report (see Section 7.16).

- 7.20.2 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent foundations and should be designed for each condition as the project progresses.
- 7.20.3 If retaining wall drainage is to be provided, the drainage system should be designed in accordance with the *Retaining Wall Drainage* section of this report (see Section 7.18).
- 7.20.4 It is suggested that the exterior walls and slab be waterproofed to prevent excessive moisture inside of the elevator pit. Waterproofing design and installation is not the responsibility of the geotechnical engineer.

7.21 Elevator Piston

- 7.21.1 If a plunger-type elevator piston is installed for this project, a deep drilled excavation will be required. It is important to verify that the drilled excavation is not situated immediately adjacent to a foundation or shoring pile, or the drilled excavation could compromise the existing foundation or pile support, especially if the drilling is performed subsequent to the foundation or pile construction.
- 7.21.2 Casing may be required if caving is encountered in the drilled excavation. The contractor should be prepared to use casing and should have it readily available at the commencement of drilling activities. The contractor should also be prepared to mitigate buoyant forces during installation of the piston casing. Continuous observation of the drilling and installation of the elevator piston by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.
- 7.21.3 The annular space between the piston casing and drilled excavation wall should be filled with a minimum of 1½-sack slurry pumped from the bottom up. As an alternative, pea gravel may be utilized. The use of soil to backfill the annular space is not acceptable.

7.22 Temporary Excavations

- 7.22.1 Excavations up to 8 feet in height may be required for construction of the proposed retaining walls, including excavations to remove or penetrate through existing artificial fill. The excavations are expected to expose fill and alluvial soils which are suitable for vertical excavations up to 5 feet where loose soils or caving sands are not present, and where excavations are not surcharged by adjacent traffic, structures, or slopes.

- 7.22.2 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping or shoring measures in order to provide a stable excavation. For construction of the proposed wall at the base of the existing offsite slope, a temporary unsurcharged slope may be excavated into the existing slope at a uniform 1:1 slope gradient or flatter up to a maximum height of 8 feet. A uniform slope does not have a vertical portion. A slope constructed at this gradient has been analyzed to have an adequate temporary factor of safety.
- 7.22.3 If excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures such as slot-cutting or shoring may be necessary in order to maintain lateral support of offsite improvements. Recommendations for special temporary excavation measures can be provided under separate cover once the proposed building layout is established.
- 7.22.4 Where temporary construction slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction slopes are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. The soils exposed in the cut slopes should be inspected during excavation by our personnel and the contractor's competent person so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.23 Surcharge from Adjacent Structures and Improvements

- 7.23.1 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.23.2 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$\text{For } x/H \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$\text{For } x/H > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z .

7.23.3 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$\text{For } x/H \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$\text{For } x/H > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) \cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_P is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z , θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z .

7.24 Surface Drainage

- 7.24.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.
- 7.24.2 Site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2019 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.
- 7.24.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pads and pavement areas should be fine graded such that water is not allowed to pond.
- 7.24.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.25 Plan Review

- 7.25.1 Grading, foundation, and shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

7.26 Anticipated Geotechnical Observations and Testing during Construction

7.26.1 The anticipated geotechnical observation and testing services include, but may not be limited to:

GRADING

- Inspection and approval of all excavation bottoms prior placing backfill.
- Approval of imported soils prior to utilization as an engineered fill.
- Verification of grading limits and over-excavations.
- Inspection and approval of ground improvement operations (Rammed Aggregate Piers).
- Inspection and approval of all foundation excavations and subgrade prior to the placement of steel and concrete.
- Inspection and approval of swimming pool excavations prior to the placement of steel and concrete.
- Inspection and approval of all hardscape subgrade prior to the placement of base materials, steel, or concrete.
- Inspection of sand and moisture barrier prior to placement of the concrete slab-on-grade.
- Inspection and approval of all retaining wall drains.
- Observation and approval of all temporary slot-cuts and slopes.

UTILITIES

- Utilities are to be installed per Green Book Section 306-1.2.1 of Public Works Standard Specifications.
- Trench bottoms and approval of all bedding materials prior to placement.
- Observation of utility installation and subsequent shading, and compaction of approved bedding materials.
- Observation and testing of all trench backfill for fire lines, water lines, sewer lines, storm drains, power lines, gas lines, phone lines, cable lines, etc.
- Inspection and approval of all manhole bottoms for storm drains, sewer lines and inlet-outlet structures.
- Observation and approval of excavation bottoms for vaults, grease interceptors and power poles as well as subsequent testing of any backfill placed.

STREET IMPROVEMENTS

- Inspection and approval of all subgrade areas prior to placement of base materials.
- Approval of all base materials prior to placement.
- Inspection and approval of sub-base grade prior to placement curb and gutter.
- Observation and testing during the placement and compaction of base materials and asphalt paving.

RETAINING WALLS

- Inspection and approval of retaining wall foundation excavations or slot cuts.
- Inspection and approval of all perforated drain pipes, geo-fabrics and aggregate materials.
- Observation and testing during the placement and compaction of wall backfill.
- Rock Pocket installation.
- Drainage Board installation verification.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.
2. 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 brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.
4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

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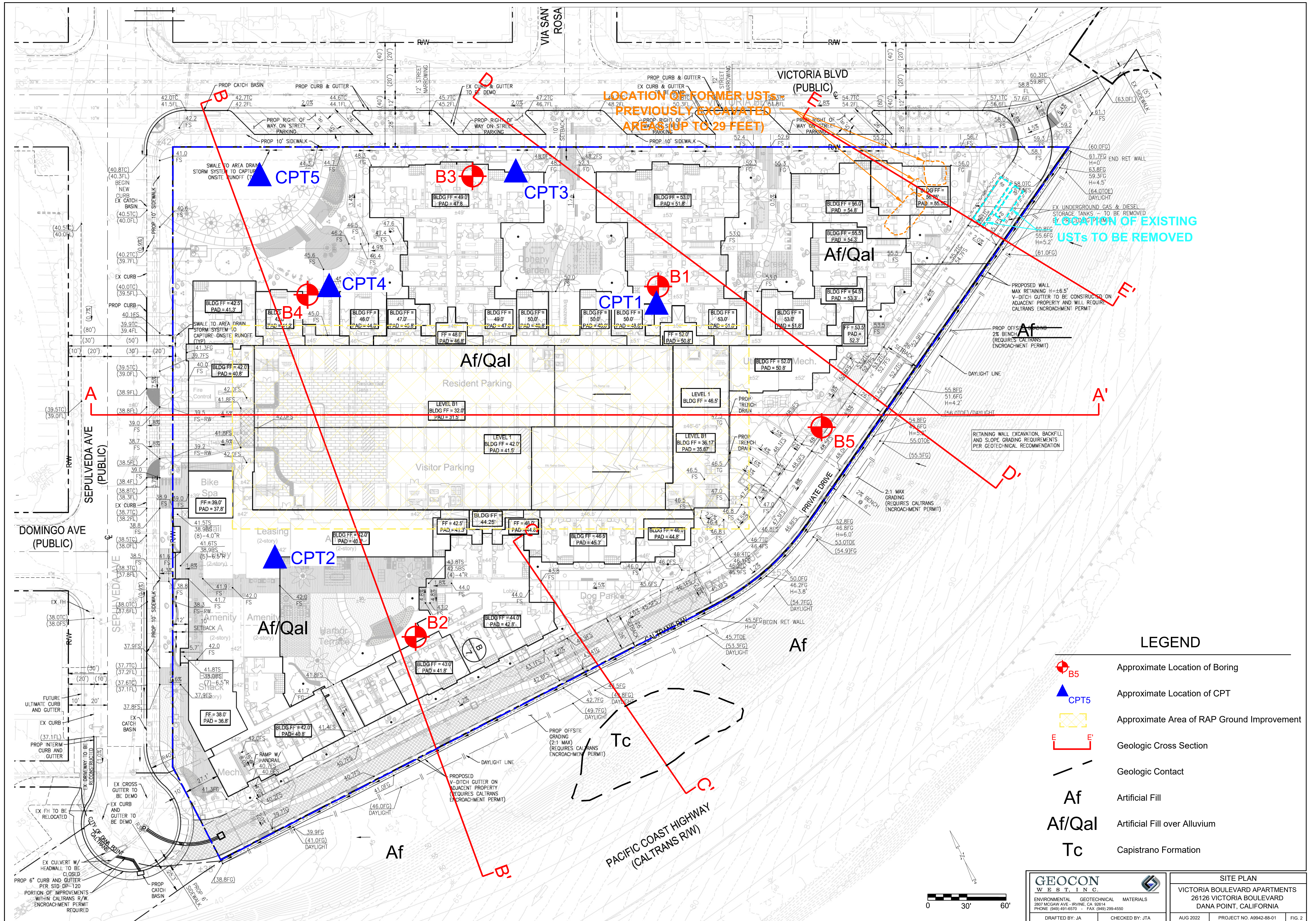
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Drafted by: JTA	Checked by: JTA
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VICINITY MAP

VICTORIA BOULEVARD APARTMENTS
26126 VICTORIA BOULEVARD
DANA POINT, CALIFORNIA

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LOCATION OF FORMER USTs PREVIOUSLY EXCAVATED AREAS (UP TO 29 FEET)

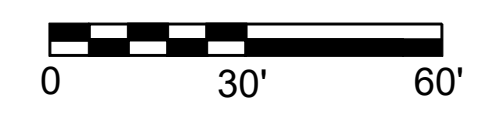
LOCATION OF EXISTING USTs TO BE REMOVED

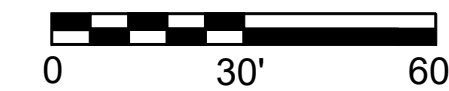
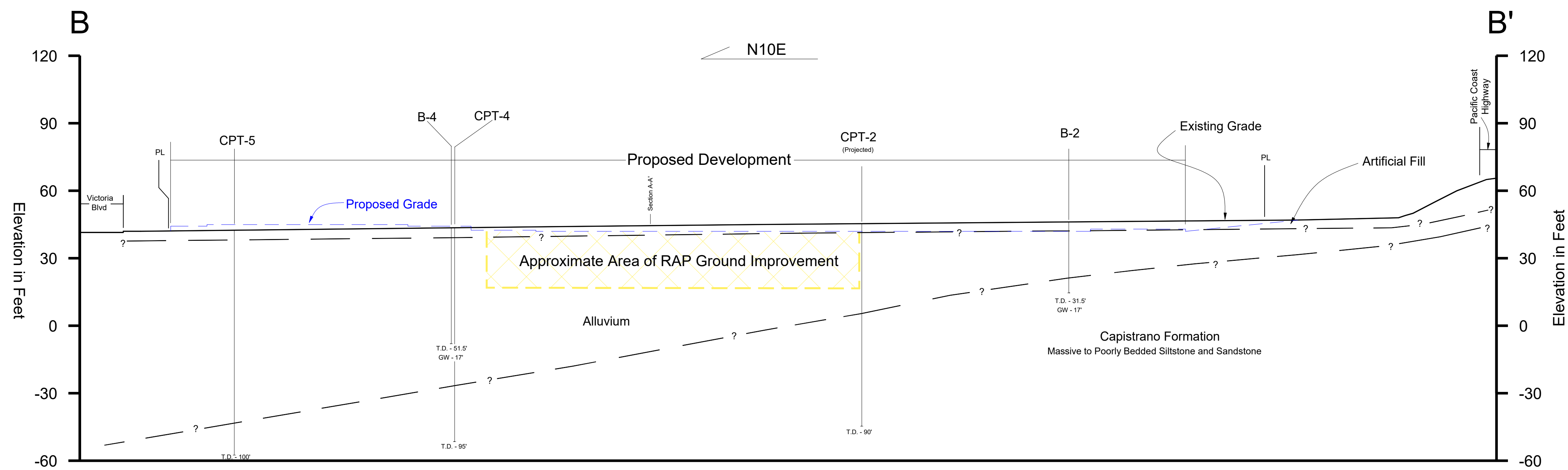
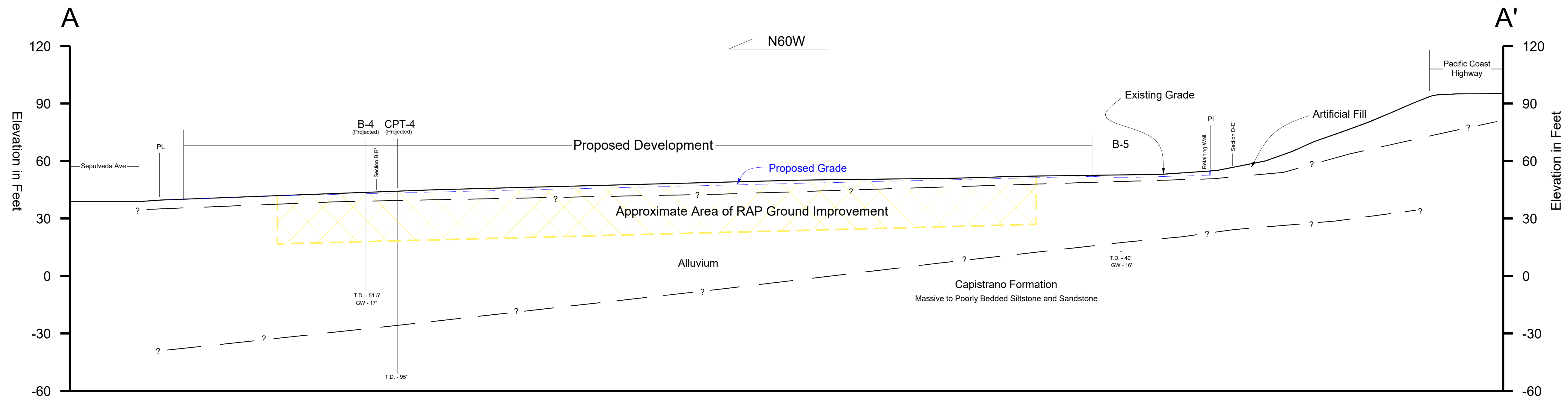
LEGEND

- B5 Approximate Location of Boring
- CPT5 Approximate Location of CPT
- Approximate Area of RAP Ground Improvement
- Geologic Cross Section
- Geologic Contact
- Af** Artificial Fill
- Af/Qal** Artificial Fill over Alluvium
- Tc** Capistrano Formation

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SITE PLAN
 VICTORIA BOULEVARD APARTMENTS
 26126 VICTORIA BOULEVARD
 DANA POINT, CALIFORNIA

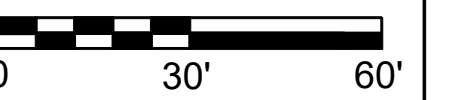
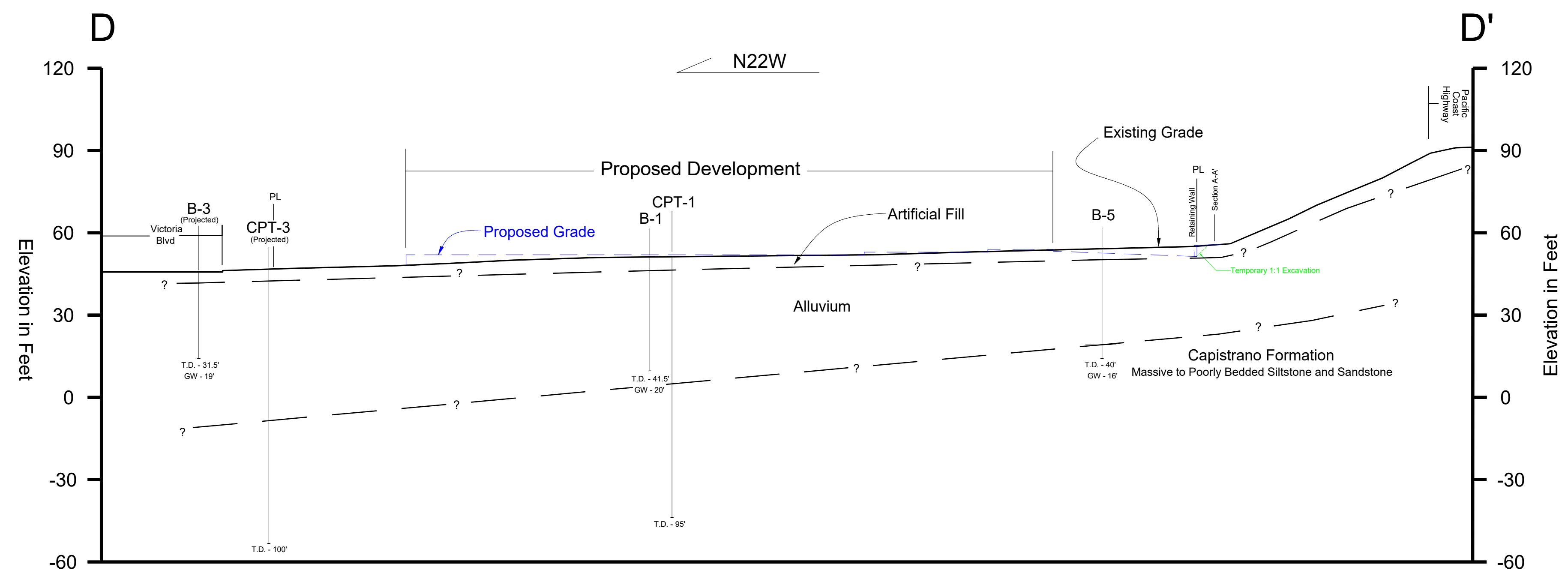
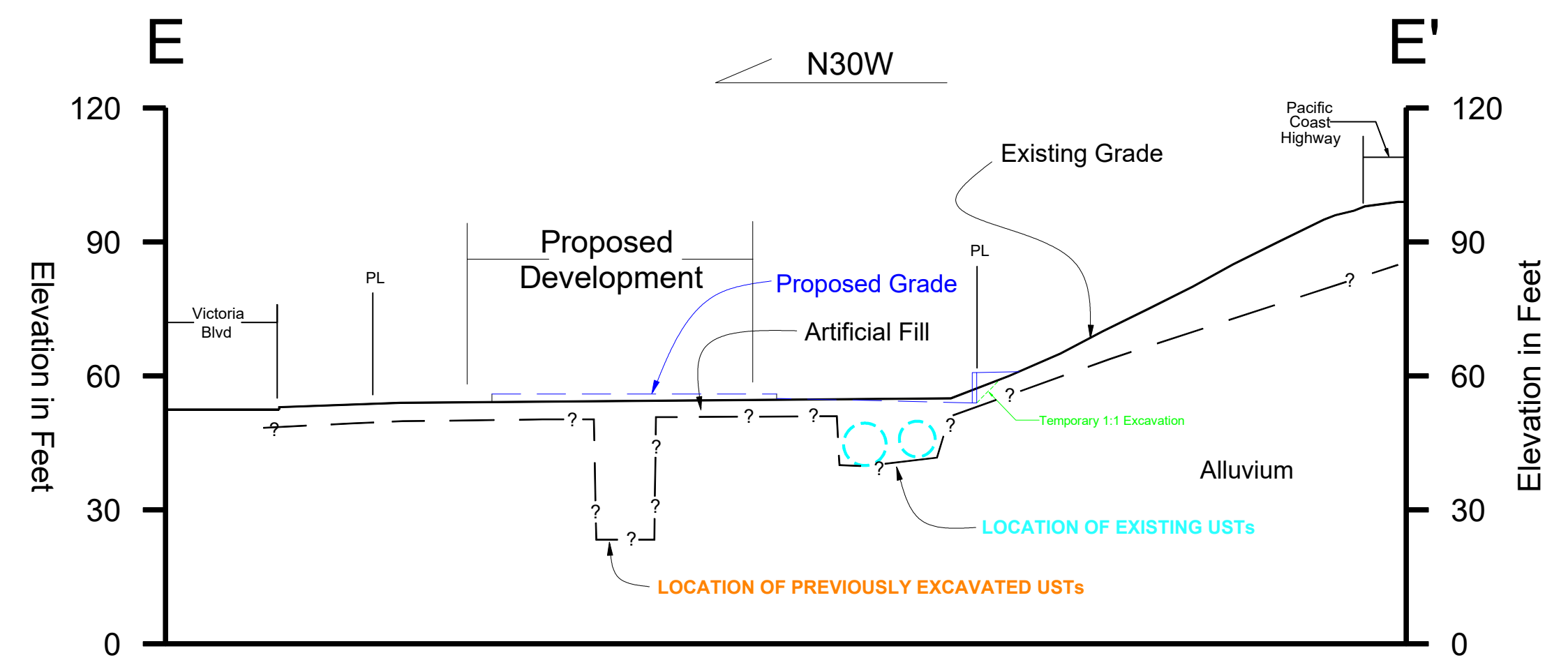
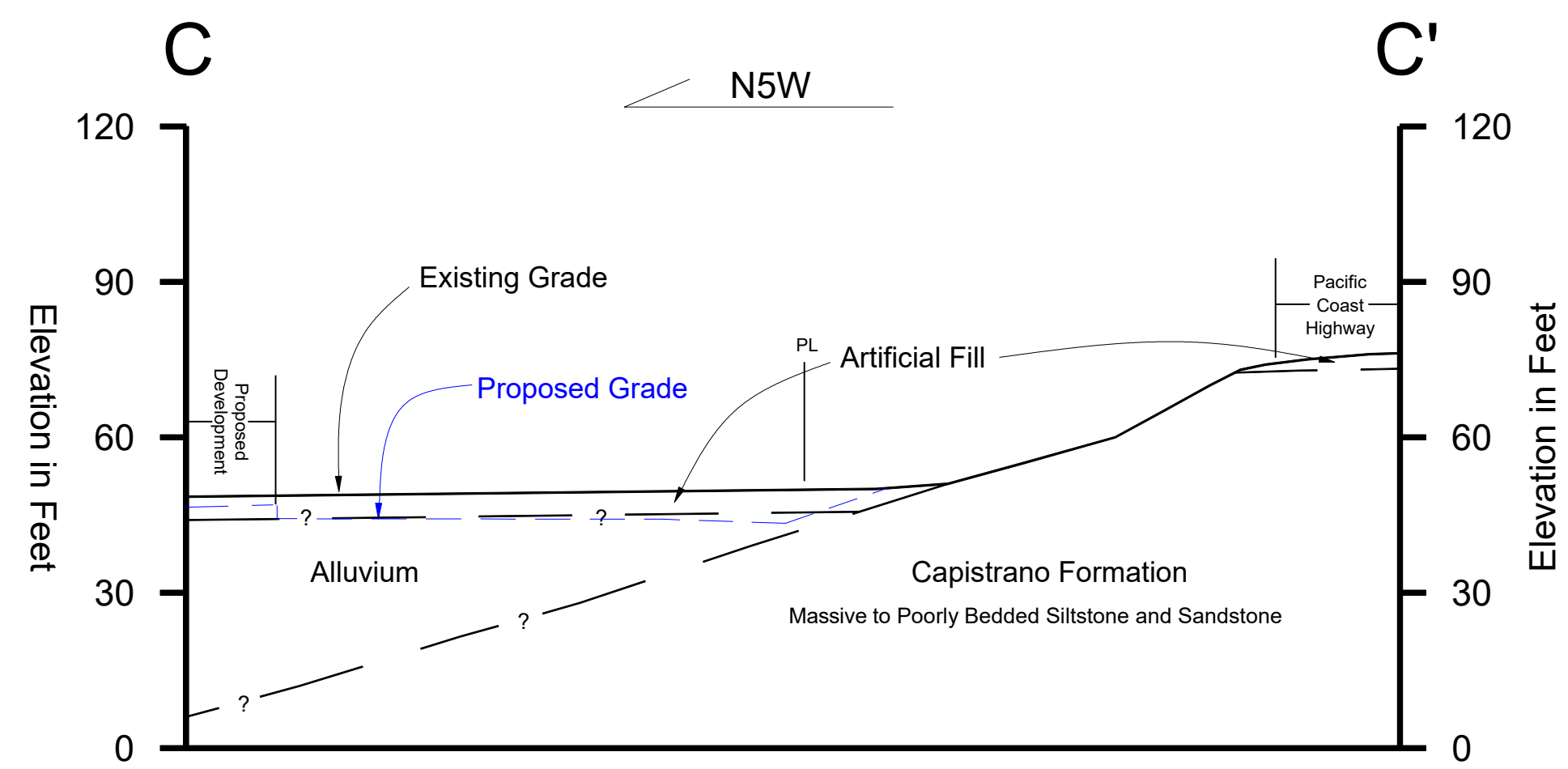




SCALE 1" = 30'
1:1 HORIZONTAL AND VERTICAL SCALE

NOTES
 1. THE SECTIONS ARE BASED ON GEOLOGIC CONDITIONS AT EXPLORATION LOCATIONS, SURFACE EXPOSURES, AND GEOLOGIC DATA FROM AVAILABLE PUBLISHED GEOLOGIC MAPS. SECTIONS ARE FOR ILLUSTRATION PURPOSES ONLY, NOT FOR CONSTRUCTION.
 2. SEE FIGURE 1 FOR LOCATION OF SECTION

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SCALE 1" = 30'
1:1 HORIZONTAL AND VERTICAL SCALE

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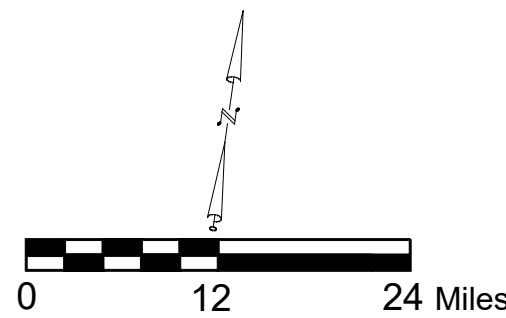
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		FIGURE 4			

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale	Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
				ON LAND	OFFSHORE
Quaternary	Late Quaternary Holocene Historic			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
				Displacement during Holocene time.	Fault offsets soil/rock sediments or strata of Holocene age.
				Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
Early Quaternary	Pleistocene 700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary	1,600,000			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
	4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

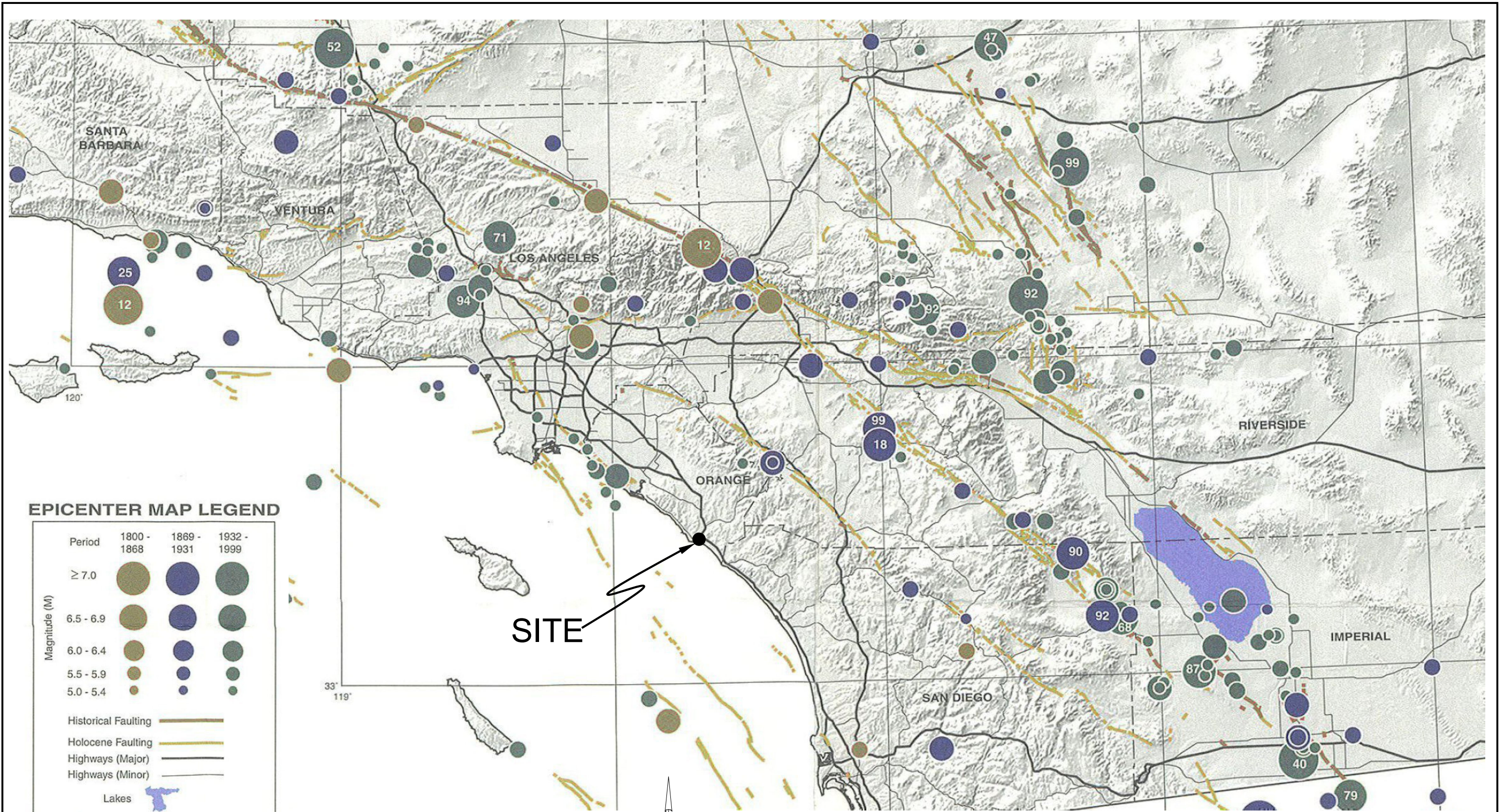


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REGIONAL FAULT MAP
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 26126 VICTORIA BOULEVARD
 DANA POINT, CALIFORNIA

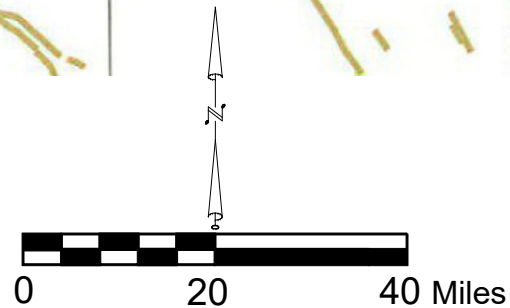
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EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M)			
≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			
Historical Faulting			
Holocene Faulting			
Highways (Major)			
Highways (Minor)			
Lakes			
	Last two digits of M ≥ 6.5 earthquake year		

Reference: Topozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M>5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.



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REGIONAL SEISMICITY MAP

VICTORIA BOULEVARD APARTMENTS
26126 VICTORIA BOULEVARD
DANA POINT, CALIFORNIA

AUG 2022

PROJECT NO. A9942-88-01

FIG. 6



EMPIRICAL ESTIMATION OF LIQUEFACTION POTENTIAL DESIGN EARTHQUAKE

**NCEER (1996) METHOD
 EARTHQUAKE INFORMATION:**

Earthquake Magnitude:	6.67
Peak Horiz. Acceleration PGA_M (g):	0.621
2/3 PGA_M (g):	0.414
Calculated Mag.Wtg.Factor:	0.744
Historic High Groundwater:	5.0
Groundwater Depth During Exploration:	17.0

**By Thomas F. Blake (1994-1996)
 ENERGY & ROD CORRECTIONS:**

Energy Correction (CE) for N60:	1.25
Rod Len.Corr.(CR)(0-no or 1-yes):	1.0
Bore Dia. Corr. (CB):	1.00
Sampler Corr. (CS):	1.20
Use Ksigma (0 or 1):	1.0

LIQUEFACTION CALCULATIONS:

Unit Wt. Water (pcf):		62.4													
Depth to Base (ft)	Total Unit Wt. (pcf)	Water (0 or 1)	FIELD SPT (N)	Depth of SPT (ft)	Liq.Sus. (0 or 1)	-200 (%)	Est. Dr (%)	CN Factor	Corrected (N1)60	Eff. Unit Wt. (psf)	Resist. CRR	rd Factor	Induced CSR	Liquefac. Safe.Fact.	
1.0	120.0	0	9.0	1.0	0			1.700	17.2	120.0	~	0.998	0.200	~	
2.0	120.0	0	9.0	2.0	0			1.700	17.2	120.0	~	0.993	0.199	~	
3.0	120.0	0	9.0	3.0	0			1.700	17.2	120.0	~	0.989	0.198	~	
4.0	120.0	0	9.0	4.0	0			1.700	17.2	120.0	~	0.984	0.197	~	
5.0	120.0	0	9.0	5.0	0			1.700	17.2	120.0	~	0.979	0.196	~	
6.0	120.0	1	6.0	6.0	0			1.700	11.5	57.6	~	0.975	0.205	~	
7.0	120.0	1	6.0	7.0	0			1.636	11.0	57.6	~	0.970	0.221	~	
8.0	120.0	1	6.0	8.0	0			1.523	10.3	57.6	~	0.966	0.234	~	
9.0	120.0	1	6.0	9.0	0			1.431	9.7	57.6	~	0.961	0.245	~	
10.0	120.0	1	6.0	10.0	0			1.353	9.1	57.6	~	0.957	0.254	~	
11.0	120.0	1	6.0	10.0	0			1.287	8.7	57.6	~	0.952	0.262	~	
12.0	120.0	1	4.0	10.0	0			1.230	5.5	57.6	~	0.947	0.269	~	
13.0	120.0	1	4.0	12.5	0			1.180	5.3	57.6	~	0.943	0.275	~	
14.0	120.0	1	4.0	12.5	0			1.135	5.1	57.6	~	0.938	0.280	~	
15.0	120.0	1	4.0	12.5	0			1.095	4.9	57.6	~	0.934	0.284	~	
16.0	120.0	1	4.0	12.5	0			1.060	4.8	57.6	~	0.929	0.287	~	
17.0	120.0	1	2.0	17.5	0			1.035	2.7	57.6	~	0.925	0.291	~	
18.0	120.0	1	2.0	17.5	0			1.020	2.6	57.6	~	0.920	0.293	~	
19.0	120.0	1	2.0	17.5	0			1.006	2.6	57.6	~	0.915	0.296	~	
20.0	120.0	1	2.0	17.5	0			0.992	2.5	57.6	~	0.911	0.298	~	
21.0	120.0	1	2.0	17.5	0			0.979	2.5	57.6	~	0.906	0.299	~	
22.0	120.0	1	3.0	22.5	0			0.966	4.0	57.6	~	0.902	0.301	~	
23.0	120.0	1	3.0	22.5	0			0.954	4.0	57.6	~	0.897	0.302	~	
24.0	120.0	1	3.0	22.5	0			0.942	3.9	57.6	~	0.893	0.303	~	
25.0	120.0	1	3.0	22.5	0			0.931	3.9	57.6	~	0.888	0.304	~	
26.0	120.0	1	3.0	22.5	0			0.920	3.8	57.6	~	0.883	0.304	~	
27.0	120.0	1	2.0	27.5	0			0.909	2.7	57.6	~	0.879	0.305	~	
28.0	120.0	1	2.0	27.5	0			0.899	2.6	57.6	~	0.874	0.305	~	
29.0	120.0	1	2.0	27.5	0			0.889	2.6	57.6	~	0.870	0.305	~	
30.0	120.0	1	2.0	27.5	0			0.880	2.6	57.6	~	0.865	0.305	~	
31.0	120.0	1	2.0	27.5	0			0.871	2.6	57.6	~	0.861	0.305	~	
32.0	120.0	1	3.0	32.5	0			0.862	3.9	57.6	~	0.856	0.305	~	
33.0	120.0	1	3.0	32.5	0			0.853	3.8	57.6	~	0.851	0.305	~	
34.0	120.0	1	3.0	32.5	0			0.844	3.8	57.6	~	0.847	0.304	~	
35.0	120.0	1	4.0	37.5	0			0.836	5.0	57.6	~	0.842	0.304	~	
36.0	120.0	1	4.0	37.5	0			0.828	5.0	57.6	~	0.838	0.303	~	
37.0	120.0	1	4.0	37.5	0			0.821	4.9	57.6	~	0.833	0.303	~	
38.0	120.0	1	4.0	37.5	0			0.813	4.9	57.6	~	0.829	0.302	~	
39.0	120.0	1	4.0	37.5	0			0.806	4.8	57.6	~	0.824	0.302	~	
40.0	120.0	1	4.0	37.5	0			0.799	4.8	57.6	~	0.819	0.301	~	
41.0	120.0	1	4.0	37.5	0			0.792	4.8	57.6	~	0.815	0.300	~	
42.0	120.0	1	6.0	42.5	0			0.785	7.1	57.6	~	0.810	0.299	~	
43.0	120.0	1	6.0	42.5	0			0.778	7.0	57.6	~	0.806	0.298	~	
44.0	120.0	1	6.0	42.5	0			0.772	6.9	57.6	~	0.801	0.297	~	
45.0	120.0	1	6.0	42.5	0			0.766	6.9	57.6	~	0.797	0.296	~	
46.0	120.0	1	6.0	42.5	0			0.760	6.8	57.6	~	0.792	0.295	~	
47.0	120.0	1	18.0	47.5	0			0.754	20.3	57.6	~	0.787	0.294	~	
48.0	120.0	1	18.0	47.5	0			0.748	20.2	57.6	~	0.783	0.293	~	
49.0	120.0	1	18.0	47.5	0			0.742	20.0	57.6	~	0.778	0.292	~	
50.0	120.0	1	18.0	47.5	0			0.736	19.9	57.6	~	0.774	0.291	~	

Figure 7



LIQUEFACTION SETTLEMENT ANALYSIS DESIGN EARTHQUAKE

(SATURATED SAND AT INITIAL LIQUEFACTION CONDITION)

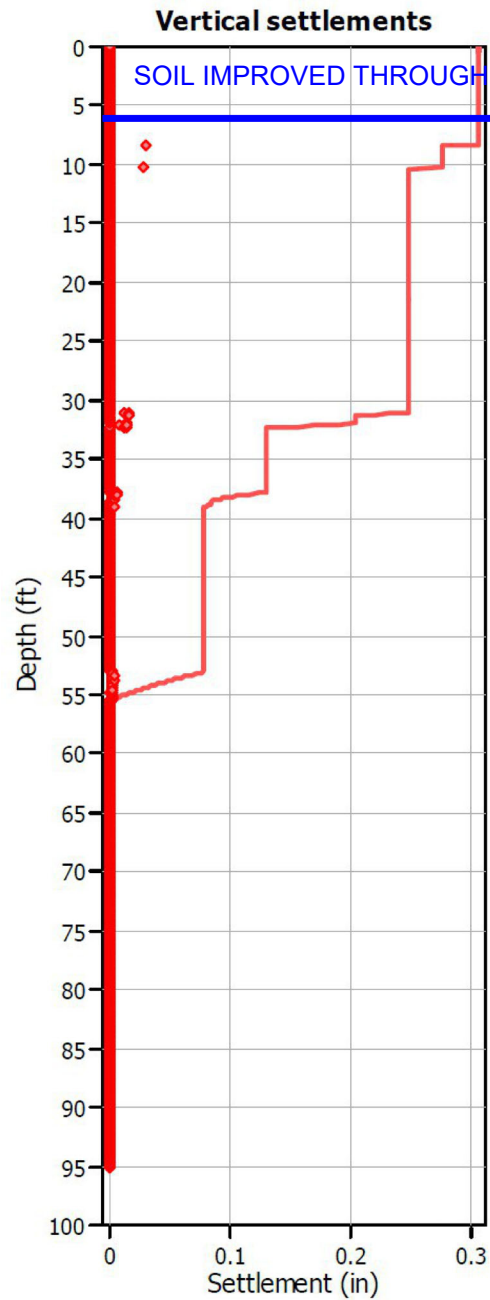
NCEER (1996) METHOD
 EARTHQUAKE INFORMATION:

Earthquake Magnitude:	6.67
PGAM (g):	0.621
2/3 PGAM (g):	0.41
Calculated Mag.Wtg.Factor:	0.744
Historic High Groundwater:	5.0
Groundwater @ Exploration:	17.0

DEPTH TO BASE	BLOW COUNT N	WET DENSITY (PCF)	TOTAL STRESS O (TSF)	EFFECT STRESS O' (TSF)	REL. DEN. Dr (%)	ADJUST BLOWS (N1)60	Tav/o'	LIQUEFACTION SAFETY FACTOR	Volumetric Strain [e _{1s}] (%)	EQ. SETTLE. Pe (in.)
1	9	120	0.030	0.030		17	0.269	~	0.00	0.00
2	9	120	0.090	0.090		17	0.269	~	0.00	0.00
3	9	120	0.150	0.150		17	0.269	~	0.00	0.00
4	9	120	0.210	0.210		17	0.269	~	0.00	0.00
5	9	120	0.270	0.270		17	0.269	~	0.00	0.00
6	6	120	0.330	0.314		11	0.283	~	0.00	0.00
7	6	120	0.390	0.343		11	0.306	~	0.00	0.00
8	6	120	0.450	0.372		10	0.326	~	0.00	0.00
9	6	120	0.510	0.401		10	0.343	~	0.00	0.00
10	6	120	0.570	0.430		9	0.357	~	0.00	0.00
11	6	120	0.630	0.458		9	0.370	~	0.00	0.00
12	4	120	0.690	0.487		6	0.381	~	0.00	0.00
13	4	120	0.750	0.516		5	0.391	~	0.00	0.00
14	4	120	0.810	0.545		5	0.400	~	0.00	0.00
15	4	120	0.870	0.574		5	0.408	~	0.00	0.00
16	4	120	0.930	0.602		5	0.416	~	0.00	0.00
17	2	120	0.990	0.631		3	0.422	~	0.00	0.00
18	2	120	1.050	0.660		3	0.428	~	0.00	0.00
19	2	120	1.110	0.689		3	0.434	~	0.00	0.00
20	2	120	1.170	0.718		3	0.439	~	0.00	0.00
21	2	120	1.230	0.746		3	0.444	~	0.00	0.00
22	3	120	1.290	0.775		4	0.448	~	0.00	0.00
23	3	120	1.350	0.804		4	0.452	~	0.00	0.00
24	3	120	1.410	0.833		4	0.456	~	0.00	0.00
25	3	120	1.470	0.862		4	0.459	~	0.00	0.00
26	3	120	1.530	0.890		4	0.463	~	0.00	0.00
27	2	120	1.590	0.919		3	0.466	~	0.00	0.00
28	2	120	1.650	0.948		3	0.469	~	0.00	0.00
29	2	120	1.710	0.977		3	0.471	~	0.00	0.00
30	2	120	1.770	1.006		3	0.474	~	0.00	0.00
31	2	120	1.830	1.034		3	0.476	~	0.00	0.00
32	3	120	1.890	1.063		4	0.479	~	0.00	0.00
33	3	120	1.950	1.092		4	0.481	~	0.00	0.00
34	3	120	2.010	1.121		4	0.483	~	0.00	0.00
35	4	120	2.070	1.150		5	0.485	~	0.00	0.00
36	4	120	2.130	1.178		5	0.487	~	0.00	0.00
37	4	120	2.190	1.207		5	0.488	~	0.00	0.00
38	4	120	2.250	1.236		5	0.490	~	0.00	0.00
39	4	120	2.310	1.265		5	0.492	~	0.00	0.00
40	4	120	2.370	1.294		5	0.493	~	0.00	0.00
41	4	120	2.430	1.322		5	0.495	~	0.00	0.00
42	6	120	2.490	1.351		7	0.496	~	0.00	0.00
43	6	120	2.550	1.380		7	0.497	~	0.00	0.00
44	6	120	2.610	1.409		7	0.499	~	0.00	0.00
45	6	120	2.670	1.438		7	0.500	~	0.00	0.00
46	6	120	2.730	1.466		7	0.501	~	0.00	0.00
47	18	120	2.790	1.495		20	0.502	~	0.00	0.00
48	18	120	2.850	1.524		20	0.503	~	0.00	0.00
49	18	120	2.910	1.553		20	0.505	~	0.00	0.00
50	18	120	2.970	1.582		20	0.506	~	0.00	0.00

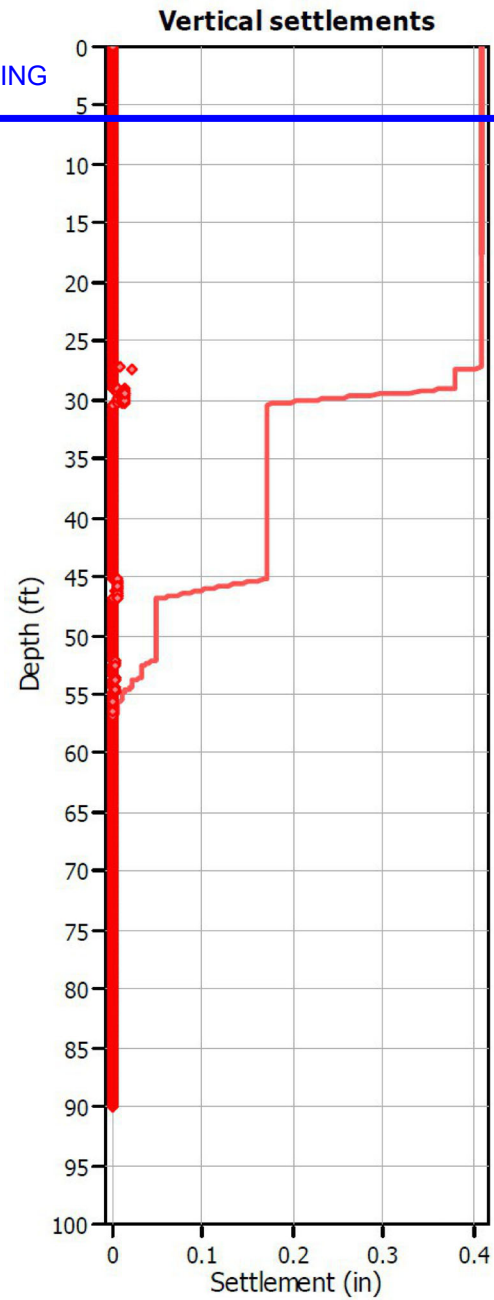
TOTAL SETTLEMENT = 0.0 INCHES

Figure 8



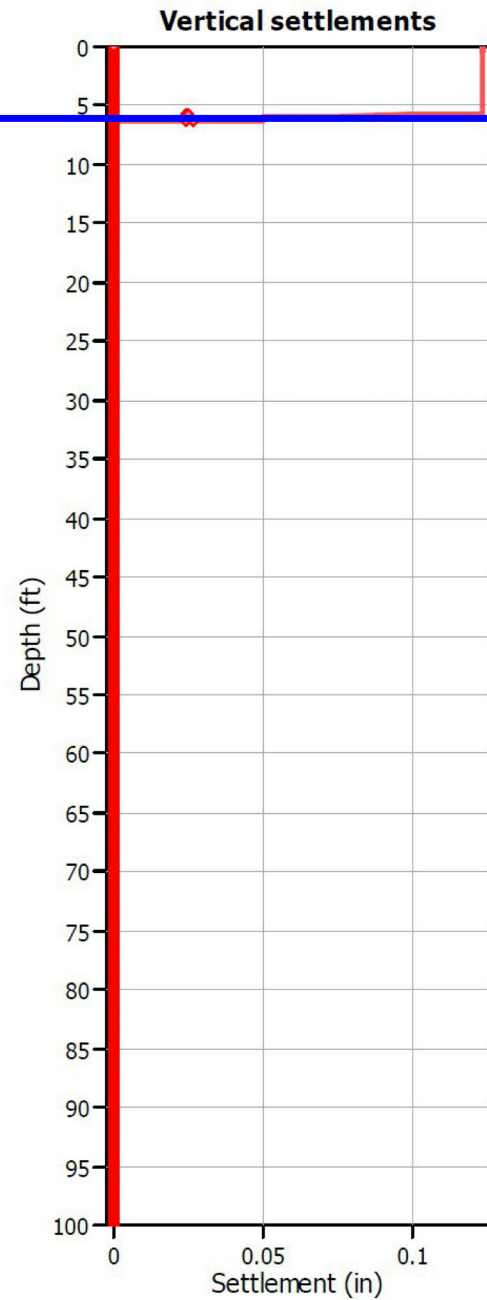
CPT 1

Total Anticipated Settlement = 0.31 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.31 in



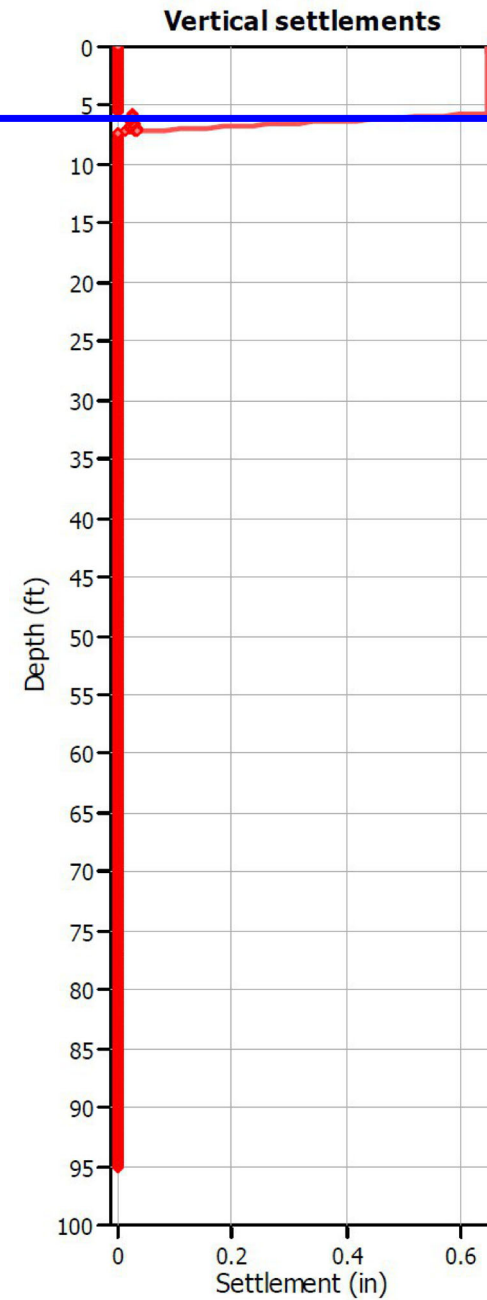
CPT 2

Total Anticipated Settlement = 0.41 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.41 in



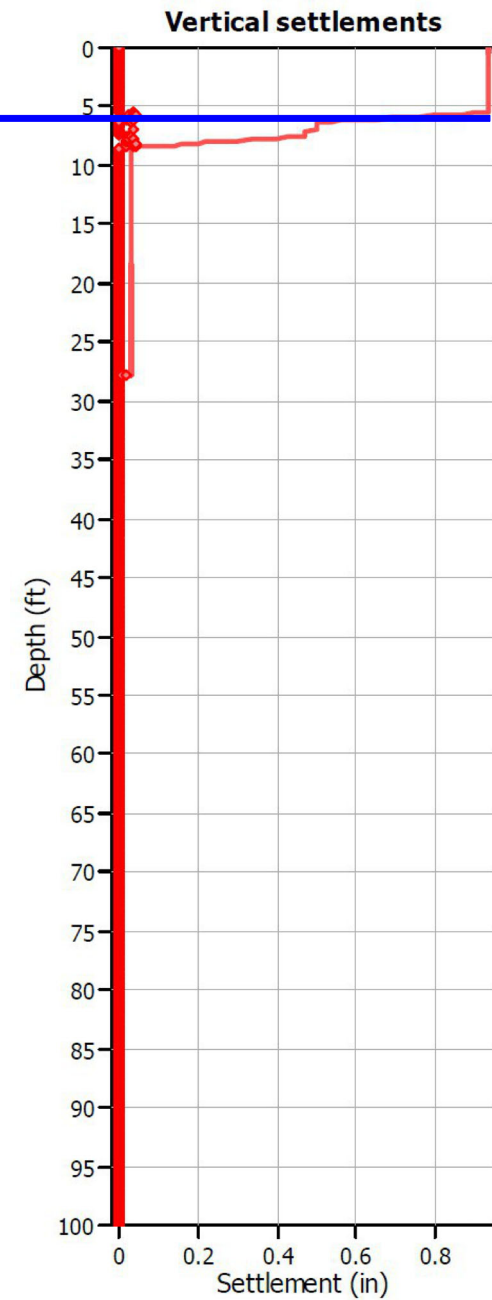
CPT 3

Total Anticipated Settlement = 0.12 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.1 in



CPT 4

Total Anticipated Settlement = 0.65 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.43 in



CPT 5

Total Anticipated Settlement = 0.93 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.5 in

GEOCON
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 ENVIRONMENTAL GEOTECHNICAL MATERIALS
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 PHONE (949) 491-6570 - FAX (949) 299-4550



DRAFTED BY: JA

CHECKED BY: JTA

DE ESTIMATION OF LIQUEFACTION SETTLEMENTS

VICTORIA BOULEVARD APARTMENTS
 26126 VICTORIA BOULEVARD
 DANA POINT, CALIFORNIA

AUG 2022

PROJECT NO. A9942-88-01

FIG. 9



EMPIRICAL ESTIMATION OF LIQUEFACTION POTENTIAL MAXIMUM CONSIDERED EARTHQUAKE

NCEER (1996) METHOD
 EARTHQUAKE INFORMATION:

Earthquake Magnitude:	6.65
Peak Horiz. Acceleration PGA_M (g):	0.621
Calculated Mag.Wtg.Factor:	0.739
Historic High Groundwater:	5.0
Groundwater Depth During Exploration:	17.0

By Thomas F. Blake (1994-1996)
 ENERGY & ROD CORRECTIONS:

Energy Correction (CE) for N_{60} :	1.25
Rod Len.Corr.(CR)(0-no or 1-yes):	1.0
Bore Dia. Corr. (CB):	1.00
Sampler Corr. (CS):	1.20
Use K_{sigma} (0 or 1):	1.0

LIQUEFACTION CALCULATIONS:

Unit Wt. Water (pcf):															
62.4															
Depth to Base (ft)	Total Unit Wt. (pcf)	Water (0 or 1)	FIELD SPT (N)	Depth of SPT (ft)	Liq.Sus. (0 or 1)	-200 (%)	Est. Dr (%)	CN Factor	Corrected (N1)60	Eff. Unit Wt. (psf)	Resist. CRR	rd Factor	Induced CSR	Liquefac. Safe.Fact.	
1.0	120.0	0	9.0	1.0	0			1.700	17.2	120.0	~	0.998	0.297	~	
2.0	120.0	0	9.0	2.0	0			1.700	17.2	120.0	~	0.993	0.296	~	
3.0	120.0	0	9.0	3.0	0			1.700	17.2	120.0	~	0.989	0.295	~	
4.0	120.0	0	9.0	4.0	0			1.700	17.2	120.0	~	0.984	0.293	~	
5.0	120.0	0	9.0	5.0	0			1.700	17.2	120.0	~	0.979	0.292	~	
6.0	120.0	1	6.0	6.0	0			1.700	11.5	57.6	~	0.975	0.305	~	
7.0	120.0	1	6.0	7.0	0			1.636	11.0	57.6	~	0.970	0.329	~	
8.0	120.0	1	6.0	8.0	0			1.523	10.3	57.6	~	0.966	0.348	~	
9.0	120.0	1	6.0	9.0	0			1.431	9.7	57.6	~	0.961	0.365	~	
10.0	120.0	1	6.0	10.0	0			1.353	9.1	57.6	~	0.957	0.378	~	
11.0	120.0	1	6.0	10.0	0			1.287	8.7	57.6	~	0.952	0.390	~	
12.0	120.0	1	4.0	10.0	0			1.230	5.5	57.6	~	0.947	0.400	~	
13.0	120.0	1	4.0	12.5	0			1.180	5.3	57.6	~	0.943	0.409	~	
14.0	120.0	1	4.0	12.5	0			1.135	5.1	57.6	~	0.938	0.416	~	
15.0	120.0	1	4.0	12.5	0			1.095	4.9	57.6	~	0.934	0.422	~	
16.0	120.0	1	4.0	12.5	0			1.060	4.8	57.6	~	0.929	0.428	~	
17.0	120.0	1	2.0	17.5	0			1.035	2.7	57.6	~	0.925	0.432	~	
18.0	120.0	1	2.0	17.5	0			1.020	2.6	57.6	~	0.920	0.436	~	
19.0	120.0	1	2.0	17.5	0			1.006	2.6	57.6	~	0.915	0.440	~	
20.0	120.0	1	2.0	17.5	0			0.992	2.5	57.6	~	0.911	0.443	~	
21.0	120.0	1	2.0	17.5	0			0.979	2.5	57.6	~	0.906	0.445	~	
22.0	120.0	1	3.0	22.5	0			0.966	4.0	57.6	~	0.902	0.447	~	
23.0	120.0	1	3.0	22.5	0			0.954	4.0	57.6	~	0.897	0.449	~	
24.0	120.0	1	3.0	22.5	0			0.942	3.9	57.6	~	0.893	0.451	~	
25.0	120.0	1	3.0	22.5	0			0.931	3.9	57.6	~	0.888	0.452	~	
26.0	120.0	1	3.0	22.5	0			0.920	3.8	57.6	~	0.883	0.453	~	
27.0	120.0	1	2.0	27.5	0			0.909	2.7	57.6	~	0.879	0.453	~	
28.0	120.0	1	2.0	27.5	0			0.899	2.6	57.6	~	0.874	0.454	~	
29.0	120.0	1	2.0	27.5	0			0.889	2.6	57.6	~	0.870	0.454	~	
30.0	120.0	1	2.0	27.5	0			0.880	2.6	57.6	~	0.865	0.454	~	
31.0	120.0	1	2.0	27.5	0			0.871	2.6	57.6	~	0.861	0.454	~	
32.0	120.0	1	3.0	32.5	0			0.862	3.9	57.6	~	0.856	0.454	~	
33.0	120.0	1	3.0	32.5	0			0.853	3.8	57.6	~	0.851	0.453	~	
34.0	120.0	1	3.0	32.5	0			0.844	3.8	57.6	~	0.847	0.453	~	
35.0	120.0	1	4.0	37.5	0			0.836	5.0	57.6	~	0.842	0.452	~	
36.0	120.0	1	4.0	37.5	0			0.828	5.0	57.6	~	0.838	0.451	~	
37.0	120.0	1	4.0	37.5	0			0.821	4.9	57.6	~	0.833	0.451	~	
38.0	120.0	1	4.0	37.5	0			0.813	4.9	57.6	~	0.829	0.450	~	
39.0	120.0	1	4.0	37.5	0			0.806	4.8	57.6	~	0.824	0.449	~	
40.0	120.0	1	4.0	37.5	0			0.799	4.8	57.6	~	0.819	0.448	~	
41.0	120.0	1	4.0	37.5	0			0.792	4.8	57.6	~	0.815	0.446	~	
42.0	120.0	1	6.0	42.5	0			0.785	7.1	57.6	~	0.810	0.445	~	
43.0	120.0	1	6.0	42.5	0			0.778	7.0	57.6	~	0.806	0.444	~	
44.0	120.0	1	6.0	42.5	0			0.772	6.9	57.6	~	0.801	0.442	~	
45.0	120.0	1	6.0	42.5	0			0.766	6.9	57.6	~	0.797	0.441	~	
46.0	120.0	1	6.0	42.5	0			0.760	6.8	57.6	~	0.792	0.440	~	
47.0	120.0	1	18.0	47.5	0			0.754	20.3	57.6	~	0.787	0.438	~	
48.0	120.0	1	18.0	47.5	0			0.748	20.2	57.6	~	0.783	0.436	~	
49.0	120.0	1	18.0	47.5	0			0.742	20.0	57.6	~	0.778	0.435	~	
50.0	120.0	1	18.0	47.5	0			0.736	19.9	57.6	~	0.774	0.433	~	

Figure 10



Client : Toll Brothers
 File No. : A9942-88-01
 Boring : 4

LIQUEFACTION SETTLEMENT ANALYSIS MAXIMUM CONSIDERED EARTHQUAKE

(SATURATED SAND AT INITIAL LIQUEFACTION CONDITION)

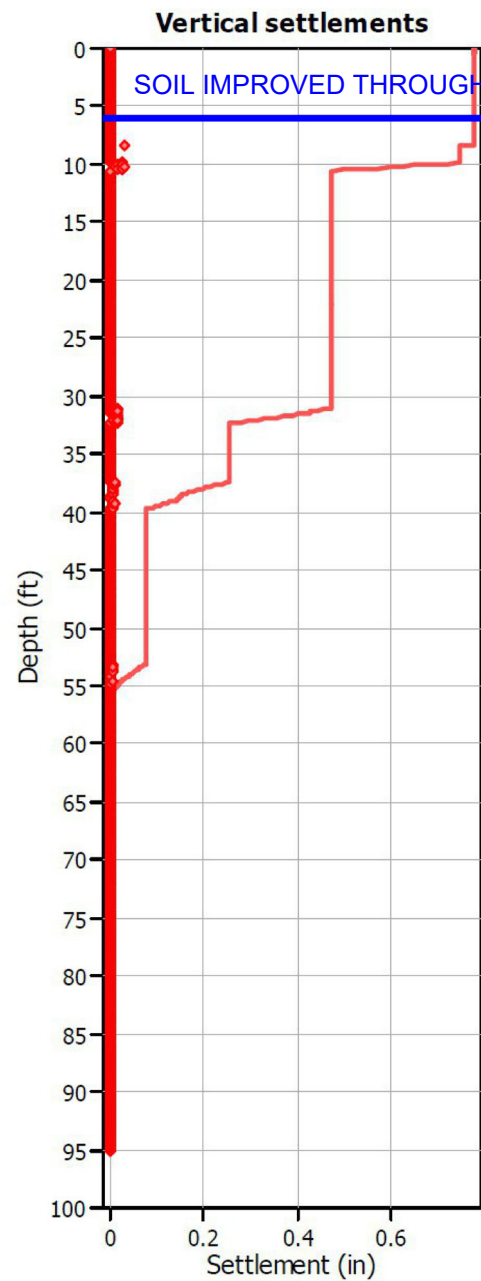
NCEER (1996) METHOD
 EARTHQUAKE INFORMATION:

Earthquake Magnitude:	6.65
PGA _M (g):	0.621
Calculated Mag.Wtg.Factor:	0.739
Historic High Groundwater:	5.0
Groundwater @ Exploration:	17.0

DEPTH TO BASE	BLOW COUNT N	WET DENSITY (PCF)	TOTAL STRESS O (TSF)	EFFECT STRESS O' (TSF)	REL. DEN. Dr (%)	ADJUST BLOWS (N1)60	Tav/σ' _v	LIQUEFACTION SAFETY FACTOR	Volumetric Strain [e ₁₅] (%)	EQ. SETTLE. Pe (in.)
1	9	120	0.030	0.030		17	0.404	~	0.00	0.00
2	9	120	0.090	0.090		17	0.404	~	0.00	0.00
3	9	120	0.150	0.150		17	0.404	~	0.00	0.00
4	9	120	0.210	0.210		17	0.404	~	0.00	0.00
5	9	120	0.270	0.270		17	0.404	~	0.00	0.00
6	6	120	0.330	0.314		11	0.424	~	0.00	0.00
7	6	120	0.390	0.343		11	0.459	~	0.00	0.00
8	6	120	0.450	0.372		10	0.488	~	0.00	0.00
9	6	120	0.510	0.401		10	0.514	~	0.00	0.00
10	6	120	0.570	0.430		9	0.536	~	0.00	0.00
11	6	120	0.630	0.458		9	0.555	~	0.00	0.00
12	4	120	0.690	0.487		6	0.572	~	0.00	0.00
13	4	120	0.750	0.516		5	0.587	~	0.00	0.00
14	4	120	0.810	0.545		5	0.600	~	0.00	0.00
15	4	120	0.870	0.574		5	0.612	~	0.00	0.00
16	4	120	0.930	0.602		5	0.623	~	0.00	0.00
17	2	120	0.990	0.631		3	0.633	~	0.00	0.00
18	2	120	1.050	0.660		3	0.642	~	0.00	0.00
19	2	120	1.110	0.689		3	0.650	~	0.00	0.00
20	2	120	1.170	0.718		3	0.658	~	0.00	0.00
21	2	120	1.230	0.746		3	0.665	~	0.00	0.00
22	3	120	1.290	0.775		4	0.672	~	0.00	0.00
23	3	120	1.350	0.804		4	0.678	~	0.00	0.00
24	3	120	1.410	0.833		4	0.683	~	0.00	0.00
25	3	120	1.470	0.862		4	0.689	~	0.00	0.00
26	3	120	1.530	0.890		4	0.694	~	0.00	0.00
27	2	120	1.590	0.919		3	0.698	~	0.00	0.00
28	2	120	1.650	0.948		3	0.703	~	0.00	0.00
29	2	120	1.710	0.977		3	0.707	~	0.00	0.00
30	2	120	1.770	1.006		3	0.710	~	0.00	0.00
31	2	120	1.830	1.034		3	0.714	~	0.00	0.00
32	3	120	1.890	1.063		4	0.718	~	0.00	0.00
33	3	120	1.950	1.092		4	0.721	~	0.00	0.00
34	3	120	2.010	1.121		4	0.724	~	0.00	0.00
35	4	120	2.070	1.150		5	0.727	~	0.00	0.00
36	4	120	2.130	1.178		5	0.730	~	0.00	0.00
37	4	120	2.190	1.207		5	0.732	~	0.00	0.00
38	4	120	2.250	1.236		5	0.735	~	0.00	0.00
39	4	120	2.310	1.265		5	0.737	~	0.00	0.00
40	4	120	2.370	1.294		5	0.740	~	0.00	0.00
41	4	120	2.430	1.322		5	0.742	~	0.00	0.00
42	6	120	2.490	1.351		7	0.744	~	0.00	0.00
43	6	120	2.550	1.380		7	0.746	~	0.00	0.00
44	6	120	2.610	1.409		7	0.748	~	0.00	0.00
45	6	120	2.670	1.438		7	0.750	~	0.00	0.00
46	6	120	2.730	1.466		7	0.751	~	0.00	0.00
47	18	120	2.790	1.495		20	0.753	~	0.00	0.00
48	18	120	2.850	1.524		20	0.755	~	0.00	0.00
49	18	120	2.910	1.553		20	0.756	~	0.00	0.00
50	18	120	2.970	1.582		20	0.758	~	0.00	0.00

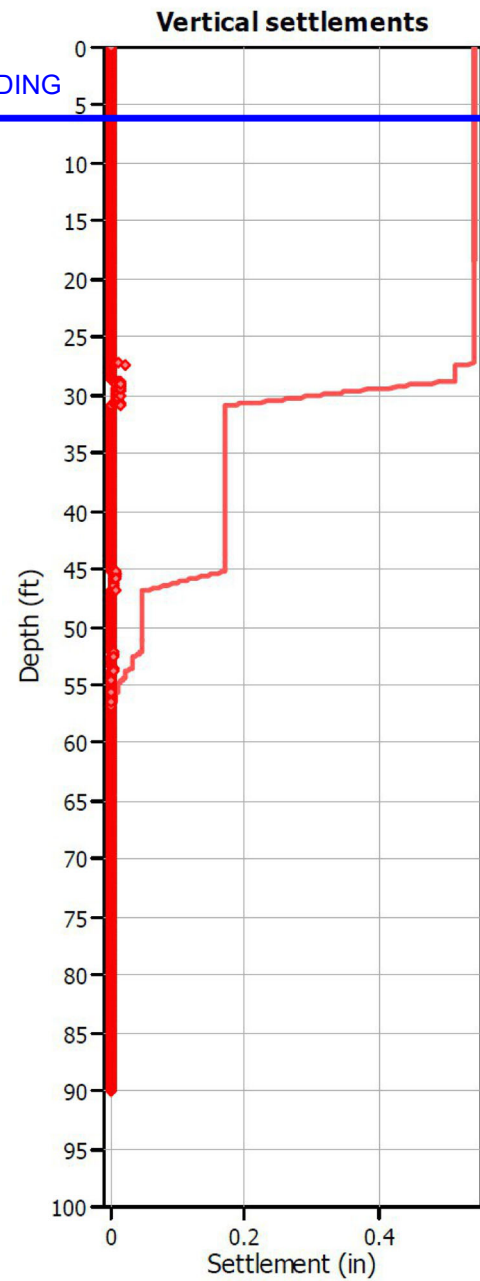
TOTAL SETTLEMENT = 0.0 INCHES

Figure 11



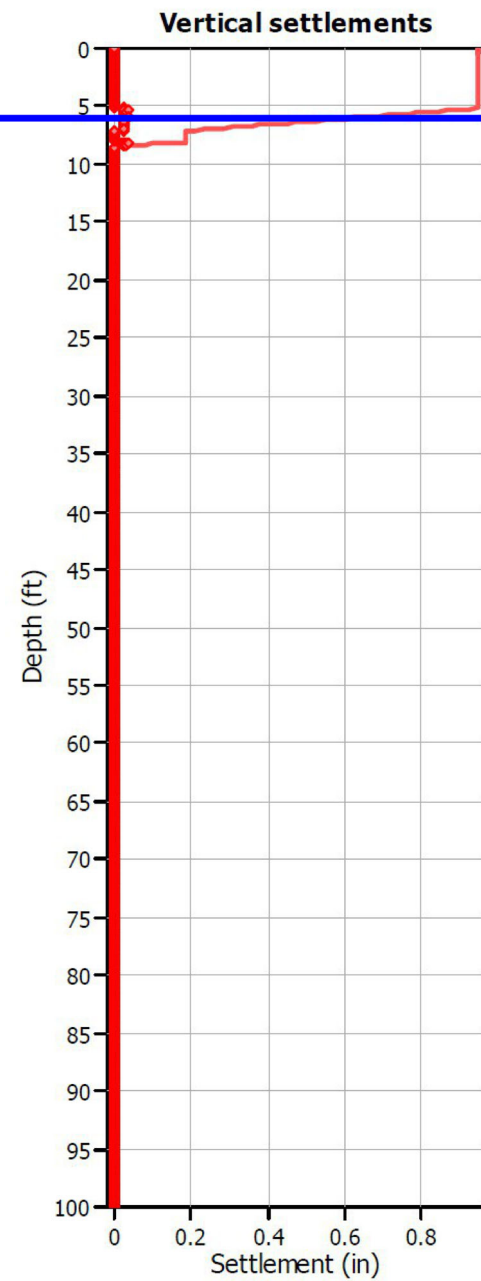
CPT 1

Total Anticipated Settlement = 0.78 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.78 in



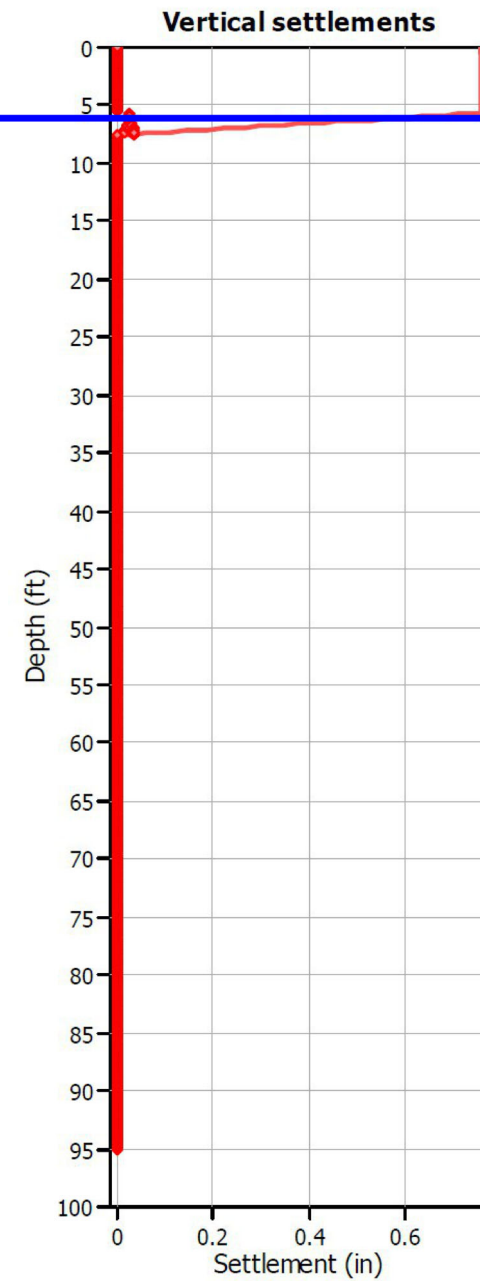
CPT 2

Total Anticipated Settlement = 0.54 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.54 in



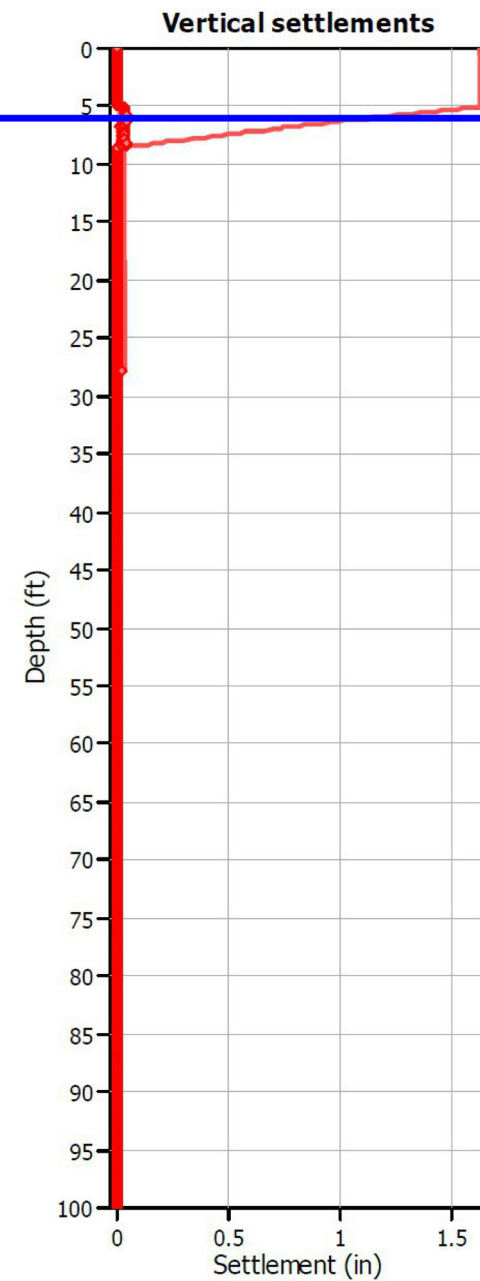
CPT 3

Total Anticipated Settlement = 0.95 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.59 in



CPT 4

Total Anticipated Settlement = 0.76 in
 Anticipated Settlement Subsequent to Recommended Grading = 0.54 in



CPT 5

Total Anticipated Settlement = 1.63 in
 Anticipated Settlement Subsequent to Recommended Grading = 1.07 in

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DRAFTED BY: JA

CHECKED BY: JTA

MCE ESTIMATION OF LIQUEFACTION SETTLEMENTS

VICTORIA BOULEVARD APARTMENTS
 26126 VICTORIA BOULEVARD
 DANA POINT, CALIFORNIA

AUG 2022

PROJECT NO. A9942-88-01

FIG. 12

ASSUMED CONDITIONS:

Slope Height	H	=	Infinite
Depth of Saturation	Z	=	4 feet
Slope Inclination	2:1	=	(Horizontal : Vertical)
Slope Angle	i	=	26.6 degrees
Unit Weight of Water	γ_w	=	62.4 pounds per cubic foot
Total Unit Weight of Soil	γ_t	=	125 pounds per cubic foot
Angle of Internal Friction	f	=	20 degrees
Apparent Cohesion	c	=	340 pounds per cubic foot

Slope saturated to vertical depth Z below slope face.
 Seepage forces parallel to slope face.

ANALYSIS:

$$FS = \frac{C + (\gamma_t - \gamma_w)Z \cos^2 i \tan \phi}{\gamma_t Z \sin i \cos i} = 2.06$$

REFERENCES:

- (1) Haefeli, R. The Stability of Slopes Acted Upon by Parallel Seepage, Proc. Second International Conference, SMFE, Rotterdam, 1948, 1, 57-62.
- (2) Skempton, A. W., and F. A. Delory, Stability of Natural Slopes in London Clay, Proc. Fourth International Conference, SMFE, London, 1957, 2, 378-81.

SURFICIAL SLOPE STABILITY ANALYSIS

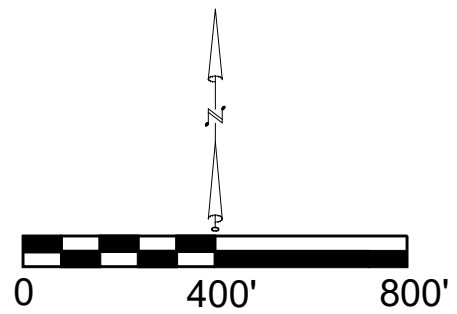
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FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
OTHER AREAS OF FLOOD HAZARD		Regulatory Floodway
		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes, Zone X
OTHER AREAS		Area with Flood Risk due to Levee Zone D
		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Base Flood Elevation Line (BFE)
	Limit of Study	
	Jurisdiction Boundary	



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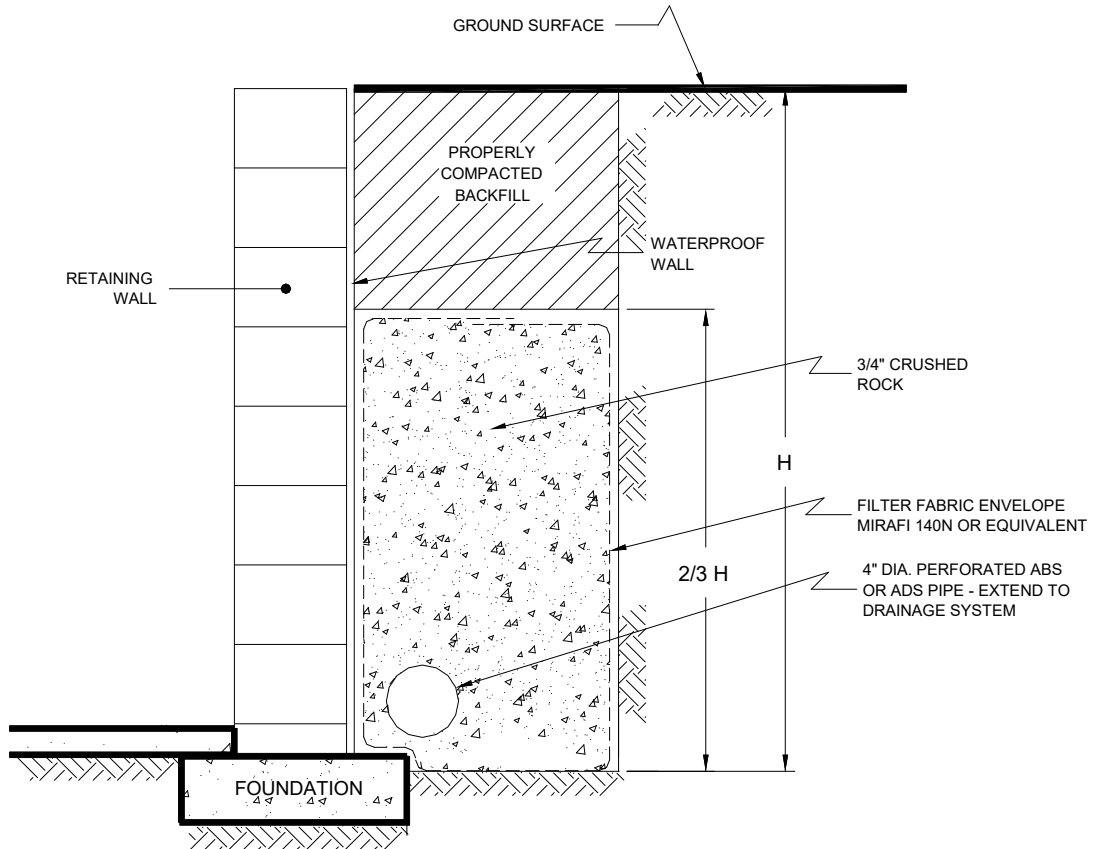
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FLOOD ZONE MAP

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NO SCALE

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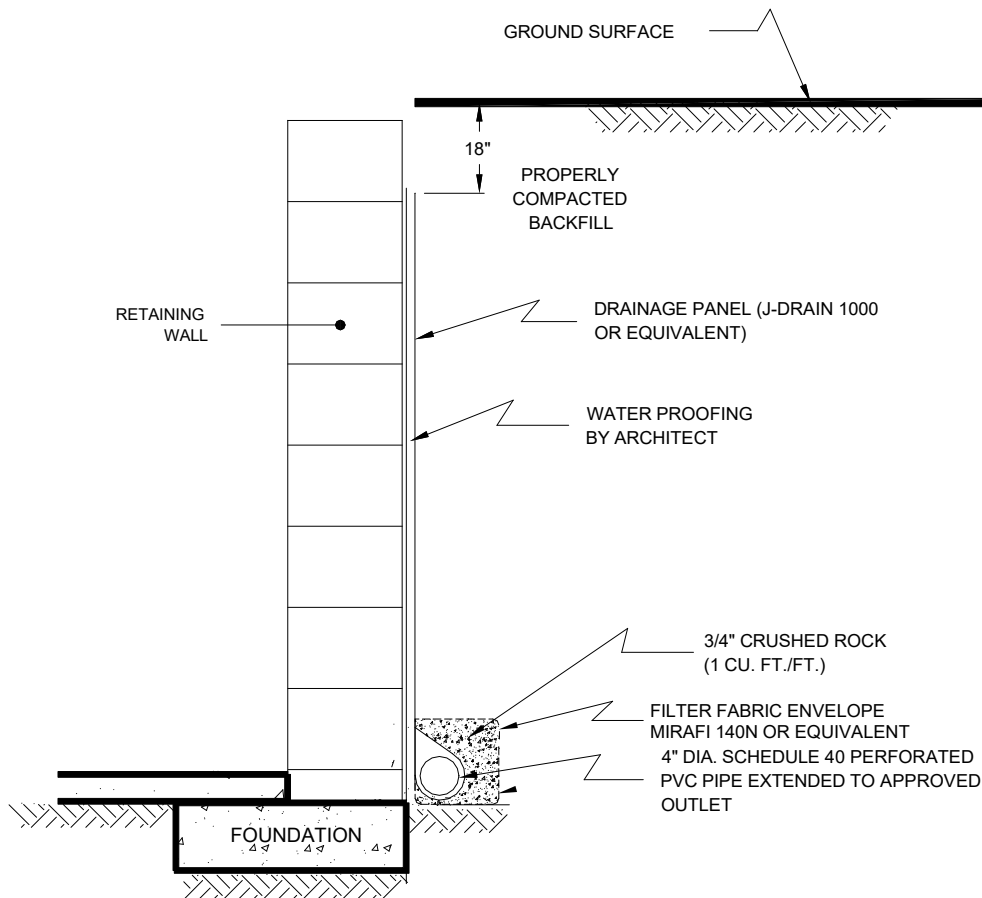
Checked by: JTA

RETAINING WALL DRAINAGE
VICTORIA BOULEVARD APARTMENTS
26126 VICTORIA BOULEVARD
DANA POINT, CALIFORNIA

AUG 2022

PROJECT NO. A9942-88-01

FIG. 15



NO SCALE

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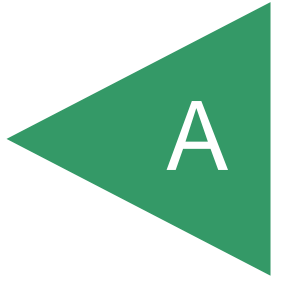
AUG 2022

PROJECT NO. A9942-88-01

FIG. 16

APPENDIX

A



APPENDIX A

FIELD INVESTIGATION







The site was explored on February 25, 2019, by excavating five 8-inch diameter borings to depths between 31½ and 51½ feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the “undisturbed” soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2³/₈-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained in the upper 5-feet on each of the borings. Standard Penetration Tests (SPTs) were also performed. On February 27, 2019, five CPTs were advanced to depths between 90 and 100 feet below the existing ground surface. The approximate locations of the exploratory borings and CPTs are depicted on the Site Plan (see Figure 2).

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the hollow-stem auger borings are presented on Figures A1 through A5 and the logs of the CPTs are presented on Figures A6 through A10. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the boring logs were revised based on subsequent laboratory testing.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.)	DATE COMPLETED				
					ELEV. (MSL.) --	DATE COMPLETED 02/25/2019				
					EQUIPMENT HOLLOW STEM AUGER	BY: SAF				
					MATERIAL DESCRIPTION					
0	BULK 0-5'				ASPHALT: 3" BASE: 6" ARTIFICIAL FILL Sandy Silty Clay, soft, moist, brown.					
2										
4										
6	B1@5'				ALLUVIUM Silty Clay, soft, moist, brown.			5	70.6	15.7
8										
10	B1@10'				- slightly reddish brown, sand in sample, mica present			7	101.5	20.7
12										
14										
16	B1@15'				- firm to stiff, dry to slightly moist, dark brown			26	98.9	24.2
18				CL						
20	B1@20'				- pocket of oxidized Sandy Clay to Clayey very fine Sand in light to dark brown Sandy Silty Clay			14	99.3	24.1
22										
24										
26	B1@25'							6	96.2	28.5
28										

Figure A1,
Log of Boring 1, Page 1 of 2

A9942-88-01 BORING LOGS.GPJ

SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 1			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.)	--	DATE COMPLETED <u>02/25/2019</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>SAF</u>					
MATERIAL DESCRIPTION										
30	B1@30'			SM	Clayey Silty Sand, saturated, loose, light to dark brown, fine-grained.			8	113.4	17.5
32										
34										
36	B1@35'		- medium dense, moist, light brown to gray with orange/gray mottled sand, fine- to medium-grained, mica present			26	15.9			
38										
40	B1@40'	- tip of sample (~2") was Silty Clay, firm, moist, highly weathered Capistrano Formation			11	26.5				
					Total depth of boring: 41.5 feet. Fill to 5 feet. Grounwater encountered at 20 feet. No caving. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.					

**Figure A1,
Log of Boring 1, Page 2 of 2**

A9942-88-01 BORING LOGS.GPJ

SAMPLE SYMBOLS	... SAMPLING UNSUCCESSFUL	... STANDARD PENETRATION TEST	... DRIVE SAMPLE (UNDISTURBED)
	... DISTURBED OR BAG SAMPLE	... CHUNK SAMPLE	... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.


DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 2		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>02/25/2019</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JF</u>				
MATERIAL DESCRIPTION									
0	BULK 0-5'				ASPHALT: 4" BASE: 4" ARTIFICIAL FILL Silty Clay, soft to firm, moist, gray brown.				
2									
4	B2@5'			CL	ALLUVIUM Sandy Clay and Silty Clay, soft to firm, moist, brown.		20	103.9	23.2
6									
8									
10	B2@10'				Silty Sand and Sandy Clayey Silt, loose to medium-dense and soft to firm, moist, light brown, fine-grained, some clay partings, scattered cobble.		13	106.6	13.5
12									
14									
16	B2@15'				- sample disturbed, only 3 rings recovered		49	114.8	20.2
18				SM/ML					
20	B2@20'				- no recovery, driller reports difficult drilling, cobbles/gravel		31		
22									
24									
26	B2@25'				CAPISTRANO FORMATION (Tcs) Silty Sandstone and Sandy Siltstone, moderately weathered, gray.		24		38.7
28									

Figure A2,
Log of Boring 2, Page 1 of 2

A9942-88-01 BORING LOGS.GPJ







SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 2			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)		
					ELEV. (MSL.) --	DATE COMPLETED						
					ELEV. (MSL.) --	DATE COMPLETED	02/25/2019					
					EQUIPMENT	HOLLOW STEM AUGER	BY: JF					
					MATERIAL DESCRIPTION							
30	B2@30'				- dark gray			67	97.7	36.9		
					Total depth of boring: 31.5 feet. Fill to 4 feet. Groundwater encountered at 17 feet. No caving. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.							

**Figure A2,
Log of Boring 2, Page 2 of 2**

A9942-88-01 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.


DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>02/25/2019</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JF</u>				
MATERIAL DESCRIPTION									
0	BULK 0-5'				CONCRETE: 4" BASE: 4" ARTIFICIAL FILL Sandy Clayey Silt and Sandy Silt, soft, moist, reddish brown.				
2									
4	B3@5'				ALLUVIUM Sandy Clayey Silt, soft, moist, brown, scattered micas.		13	111.1	25.9
6									
8									
10	B3@10'						9	107.6	23.6
12									
14									
16	B3@15'						4	102.4	31.4
18				ML					
20	B3@20'				- becomes sandier, sand stringers present		11	106.4	32.2
22									
24									
26	B3@25'						8	113.9	27.8
28									

Figure A3,
Log of Boring 3, Page 1 of 2

A9942-88-01 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 3			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)		
					ELEV. (MSL.) --	DATE COMPLETED						
					ELEV. (MSL.) --	DATE COMPLETED	02/25/2019					
					EQUIPMENT	HOLLOW STEM AUGER	BY: JF					
					MATERIAL DESCRIPTION							
30	B3@30'			ML						10	106.0	29.5
					Total depth of boring: 31.5 feet. Fill to 4 feet. Groundwater encountered at 19 feet. No caving. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.							

**Figure A3,
Log of Boring 3, Page 2 of 2**

A9942-88-01 BORING LOGS.GPJ







SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 4		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>02/25/2019</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JF</u>				
MATERIAL DESCRIPTION									
0	BULK 0-5'				CONCRETE: 4" BASE: 4" ARTIFICIAL FILL Clayey and Silty Sand and Sandy Clayey Silt, loose and soft, moist, reddish brown.				
2	B4@2.5'					9		24.0	
4	B4@5'				ALLUVIUM Sandy Clayey Silt and Silty Clay, soft, moist to wet, olive brown, scattered mica.	10	113.6	22.1	
6	B4@7.5'					6		21.9	
8	BULK 8-12'				ML/CL - sand lenses present	9	105.7	21.8	
10	B4@10'					4		25.2	
12	B4@12.5'				ML/CH	10	111.9	26.1	
14	B4@15'					2		31.0	
16	B4@17.5'				Silty Clay and Clayey Silt, very soft, moist to saturated, sand stringers.	5	105.8	32.5	
18	B4@20'					3		29.7	
20	B4@22.5'				ML/CH	9	105.7	28.7	
22	B4@25'					2		28.0	
24	B4@27.5'								

Figure A4,
Log of Boring 4, Page 1 of 2

A9942-88-01 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 4		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>02/25/2019</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>JF</u>				
MATERIAL DESCRIPTION									
30	B4@30'				ML/CL	Silty Clay and Clayey Silt, very soft, moist to saturated.	9	107.8	29.0
32	B4@32.5'							3	
34					ML	Sandy Clayey Silt, very soft to soft, moist, gray. - increase in sand content, still a Sandy Clayey Silt and Silty Sandy Clay	6	103.8	32.0
36	B4@35'							4	
38	B4@37.5'				ML		10	96.0	36.0
40	B4@40'							6	
42	B4@42.5'				CL	Sandy Silty Clay, firm, moist, dark gray to gray.	19	108.1	26.9
44	B4@45'							18	
46	B4@47.5'				CL		18	107.1	29.4
48	B4@50'								
50									
					Total depth of boring: 51.5 feet. Fill to 5 feet. Groundwater encountered at 17 feet. No caving. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.				

Figure A4,
Log of Boring 4, Page 2 of 2

A9942-88-01 BORING LOGS.GPJ







SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 5		PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED <u>02/25/2019</u>			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>SAF</u>				
MATERIAL DESCRIPTION									
0	BULK 0-5'				ASPHALT: 7" NO BASE ARTIFICIAL FILL Silty Sand, loose to very loose, slightly moist, light to dark brown, fine-grained.				
2									
4	B5@5'				ALLUVIUM Silty Clay, soft, moist, gray to brownish gray.		10		7.6
6									
8									
10					- scattered small pebbles				
12				CL					
14									
16	B5@15'		▼				7		17.2
18									
20	B5@20'				Sandy Clayey Silt, soft, slightly moist.		8		20.5
22				ML					
24									
26	B5@25'				Clayey Sand, medium dense, moist to wet, fine- to medium-grained.		27		20.0
28				SC					

Figure A5,
Log of Boring 5, Page 1 of 2

A9942-88-01 BORING LOGS.GPJ

SAMPLE SYMBOLS	 ... SAMPLING UNSUCCESSFUL	 ... STANDARD PENETRATION TEST	 ... DRIVE SAMPLE (UNDISTURBED)
	 ... DISTURBED OR BAG SAMPLE	 ... CHUNK SAMPLE	 ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

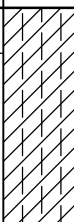







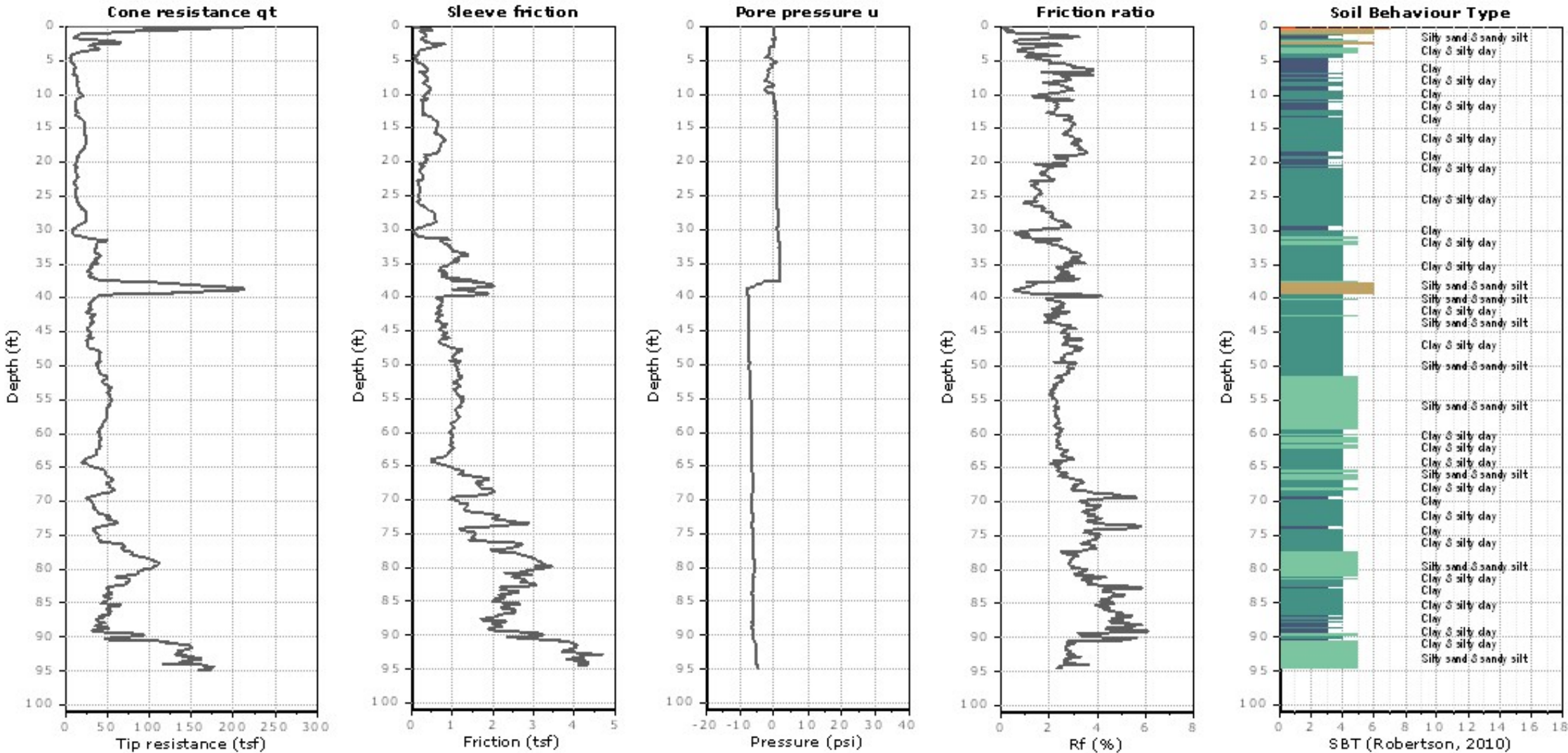
DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	BORING 5			PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) --	DATE COMPLETED	02/25/2019			
					EQUIPMENT <u>HOLLOW STEM AUGER</u> BY: <u>SAF</u>					
MATERIAL DESCRIPTION										
30	B5@30'			CL	Silty Clay, very soft to soft, moist to wet, brown with occasional pockets of fine- to medium-grained sand.			9		21.5
32										
34										
36	B5@35'			ML	CAPISTRANO FORMATION (Tcs) Clayey and Sandy Siltstone, moderately weathered, gray.			15	92.5	40.8
38										
40					Total depth of boring: 40 feet. Fill to 4 feet. Groundwater encountered at 16 feet. No caving. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.					

Figure A5,
Log of Boring 5, Page 2 of 2

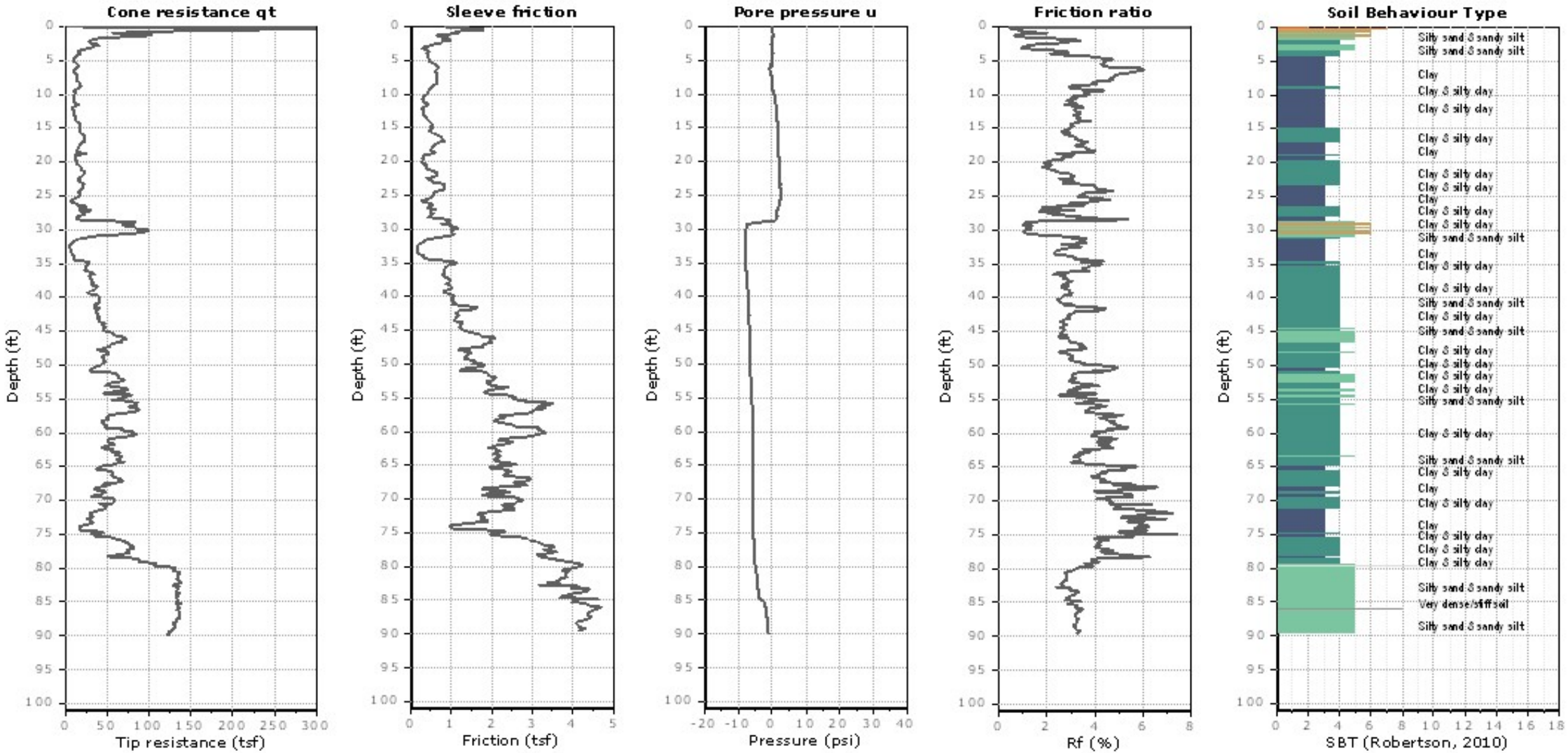
A9942-88-01 BORING LOGS.GPJ

SAMPLE SYMBOLS		... SAMPLING UNSUCCESSFUL		... STANDARD PENETRATION TEST		... DRIVE SAMPLE (UNDISTURBED)
		... DISTURBED OR BAG SAMPLE		... CHUNK SAMPLE		... WATER TABLE OR SEEPAGE

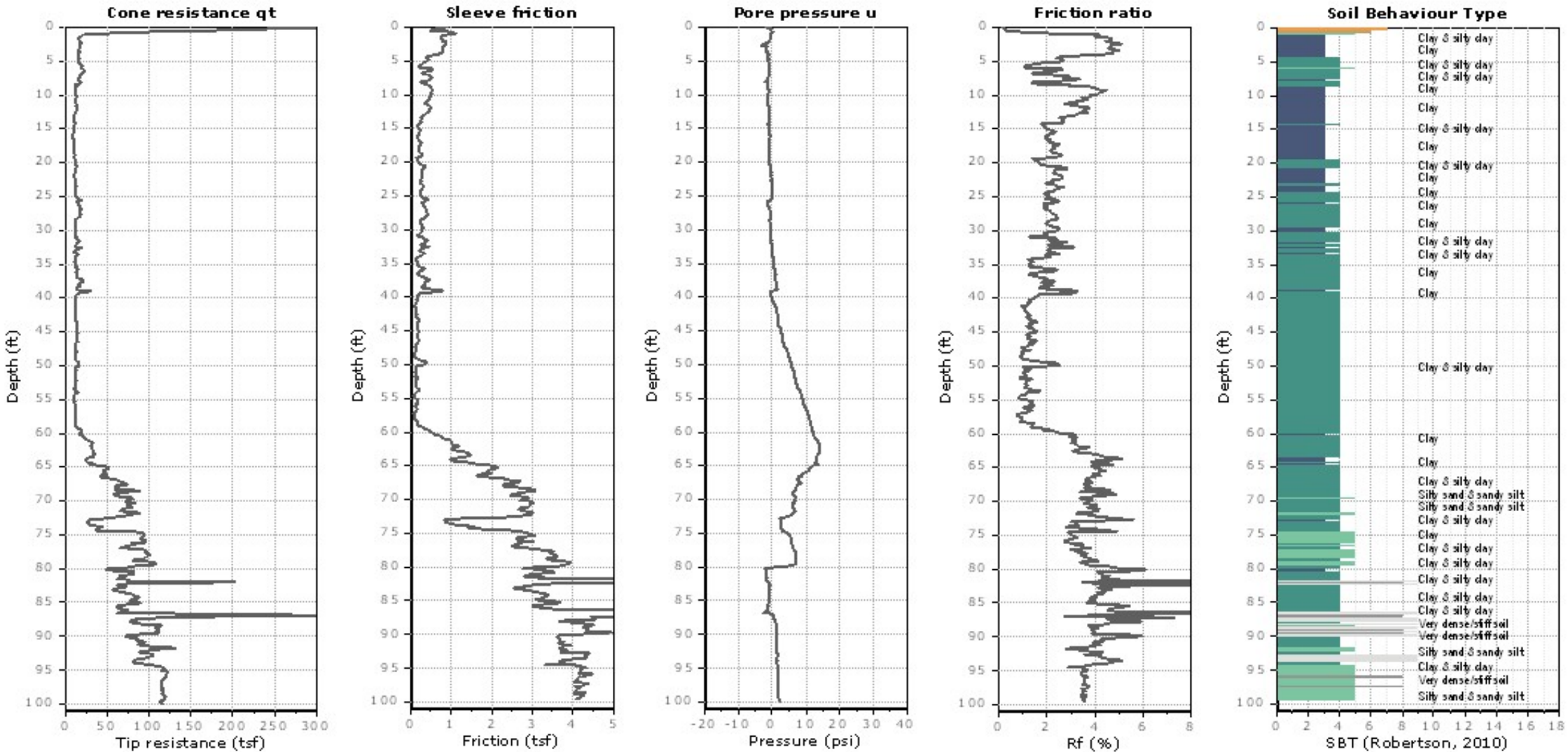
NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED.
IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



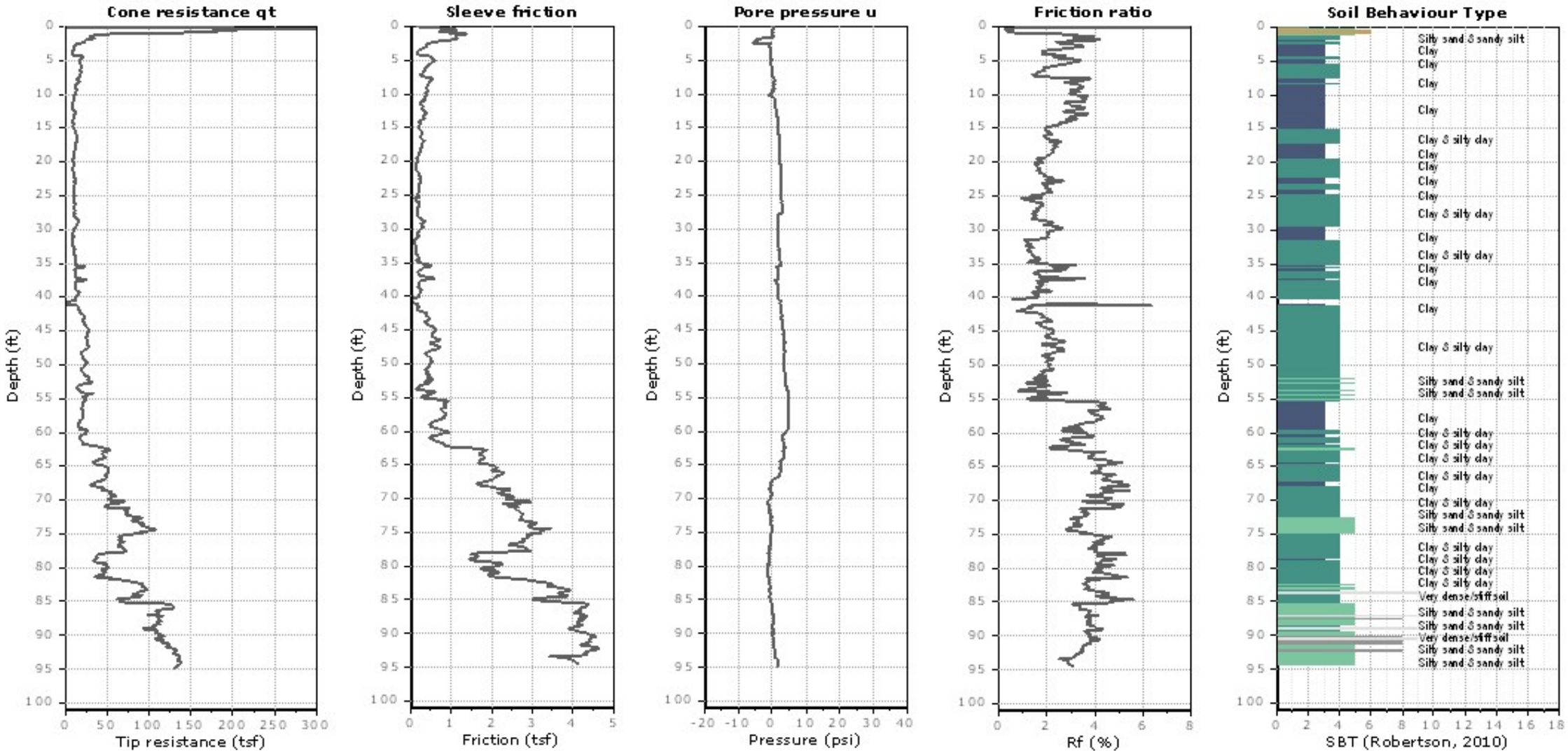
Geocon Project No. A9442-88-01



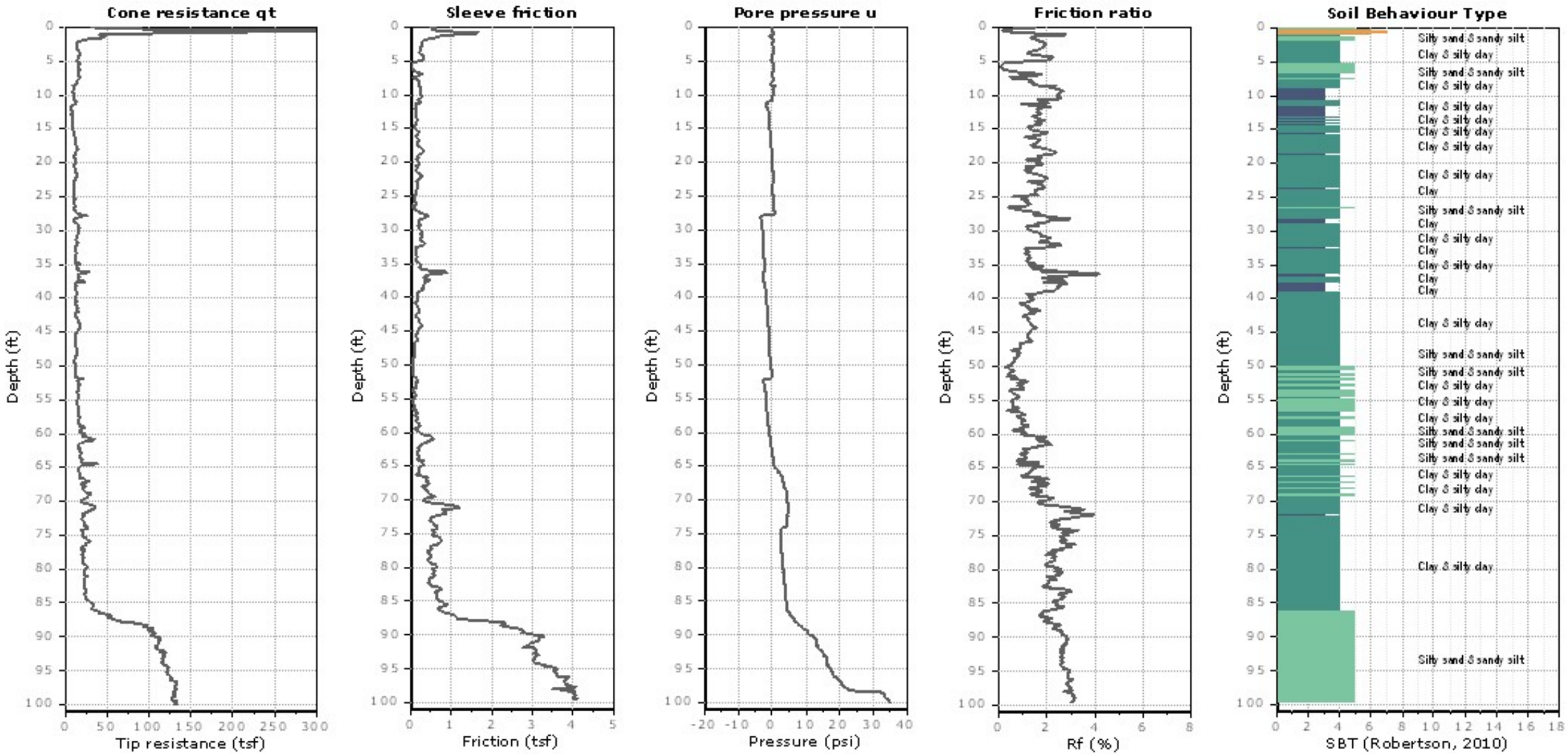
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Geocon Project No. A9442-88-01

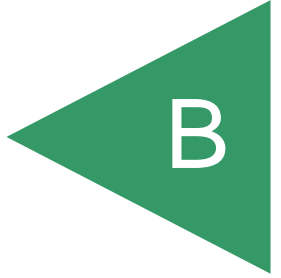


Geocon Project No. A9442-88-01



Geocon Project No. A9442-88-01

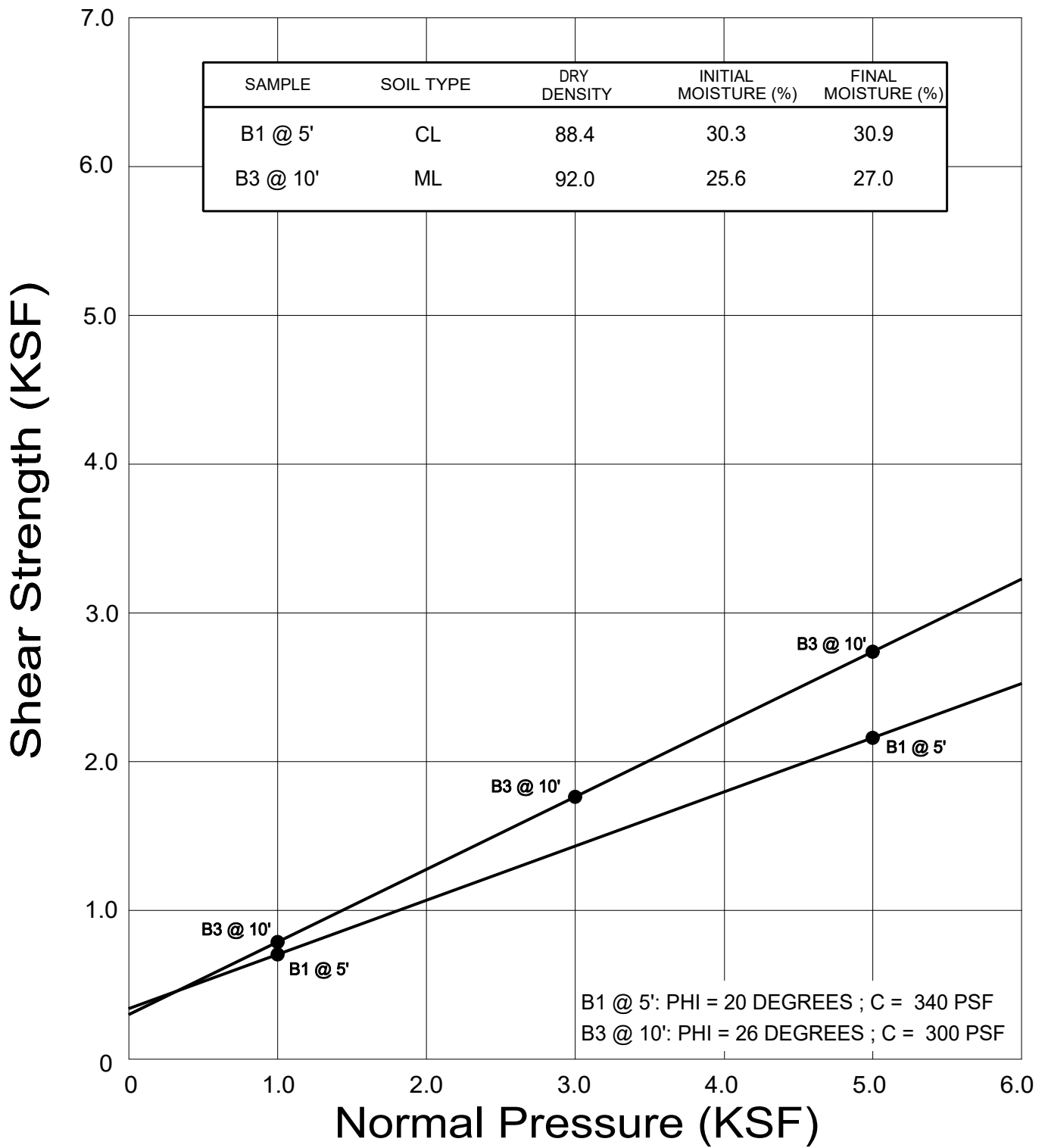
APPENDIX



APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the “American Society for Testing and Materials (ASTM)”, or other suggested procedures. Selected samples were tested for direct shear strength, consolidation, expansion characteristics, Atterberg limits, corrosivity, and in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B10. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



● Direct Shear, Saturated

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DIRECT SHEAR TEST RESULTS

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26126 VICTORIA BOULEVARD
DANA POINT, CALIFORNIA

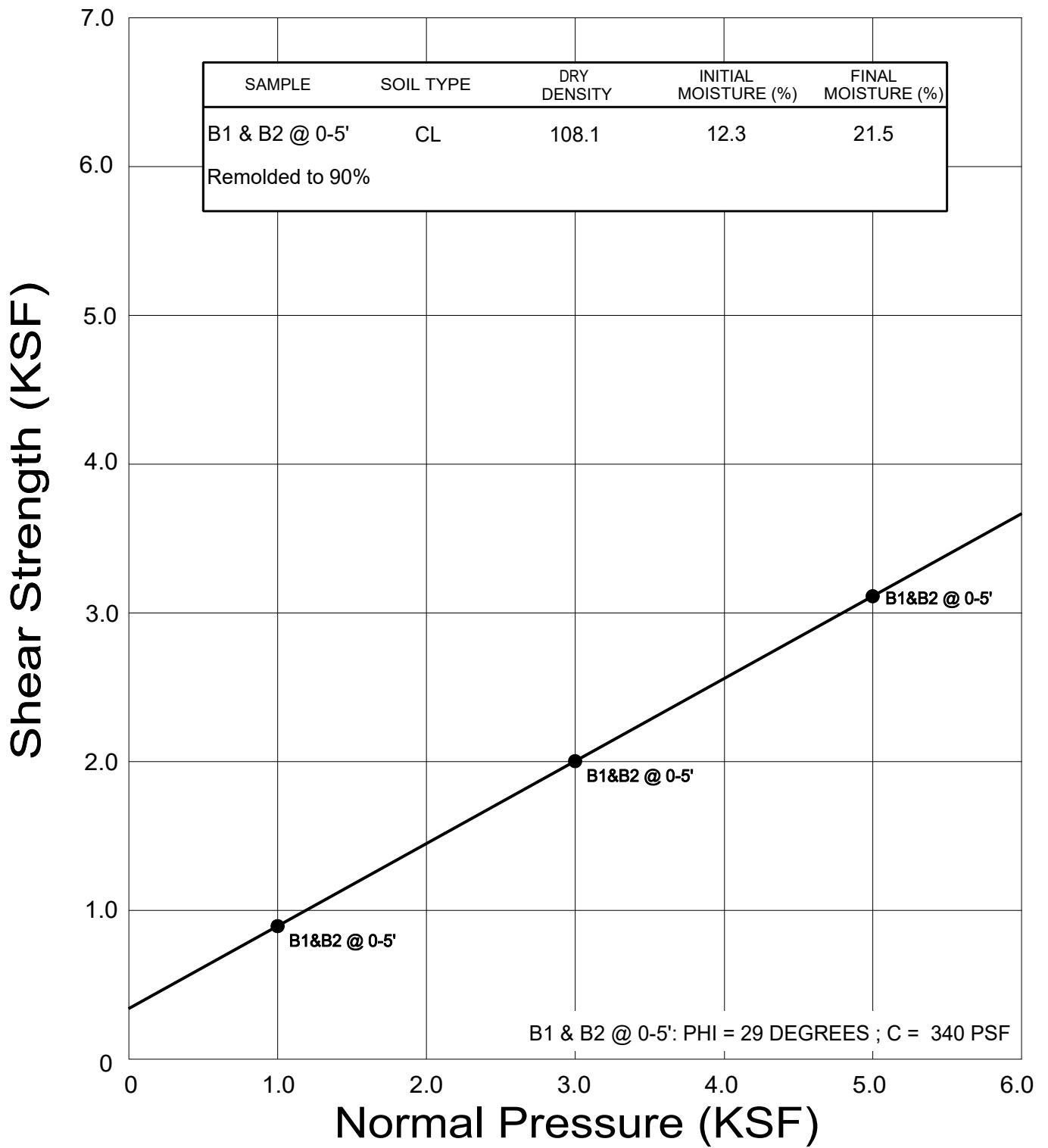
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FIG. B1



● Direct Shear, Saturated

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DIRECT SHEAR TEST RESULTS

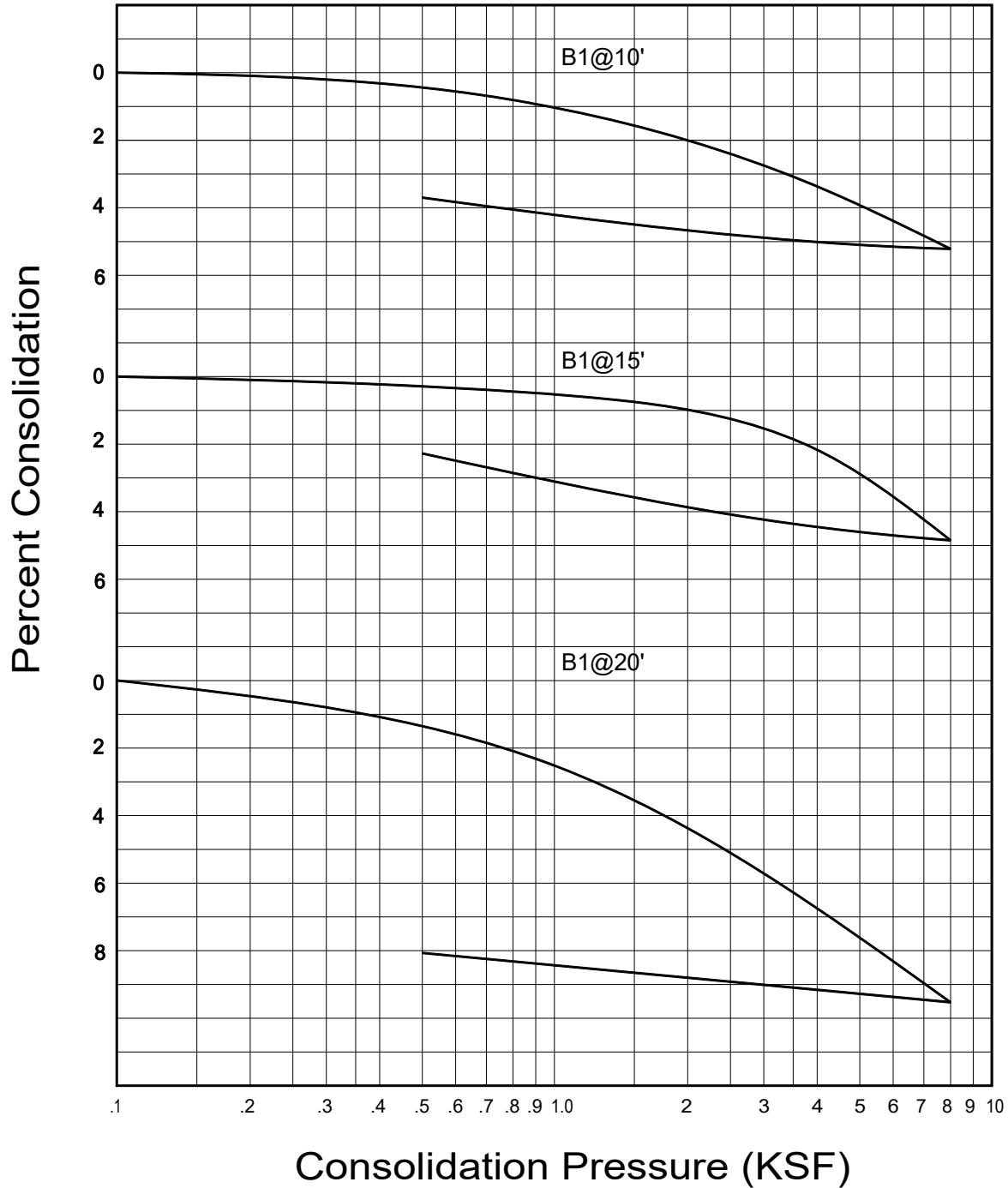
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FIG. B2

WATER ADDED AT 2 KSF



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CONSOLIDATION TEST RESULTS
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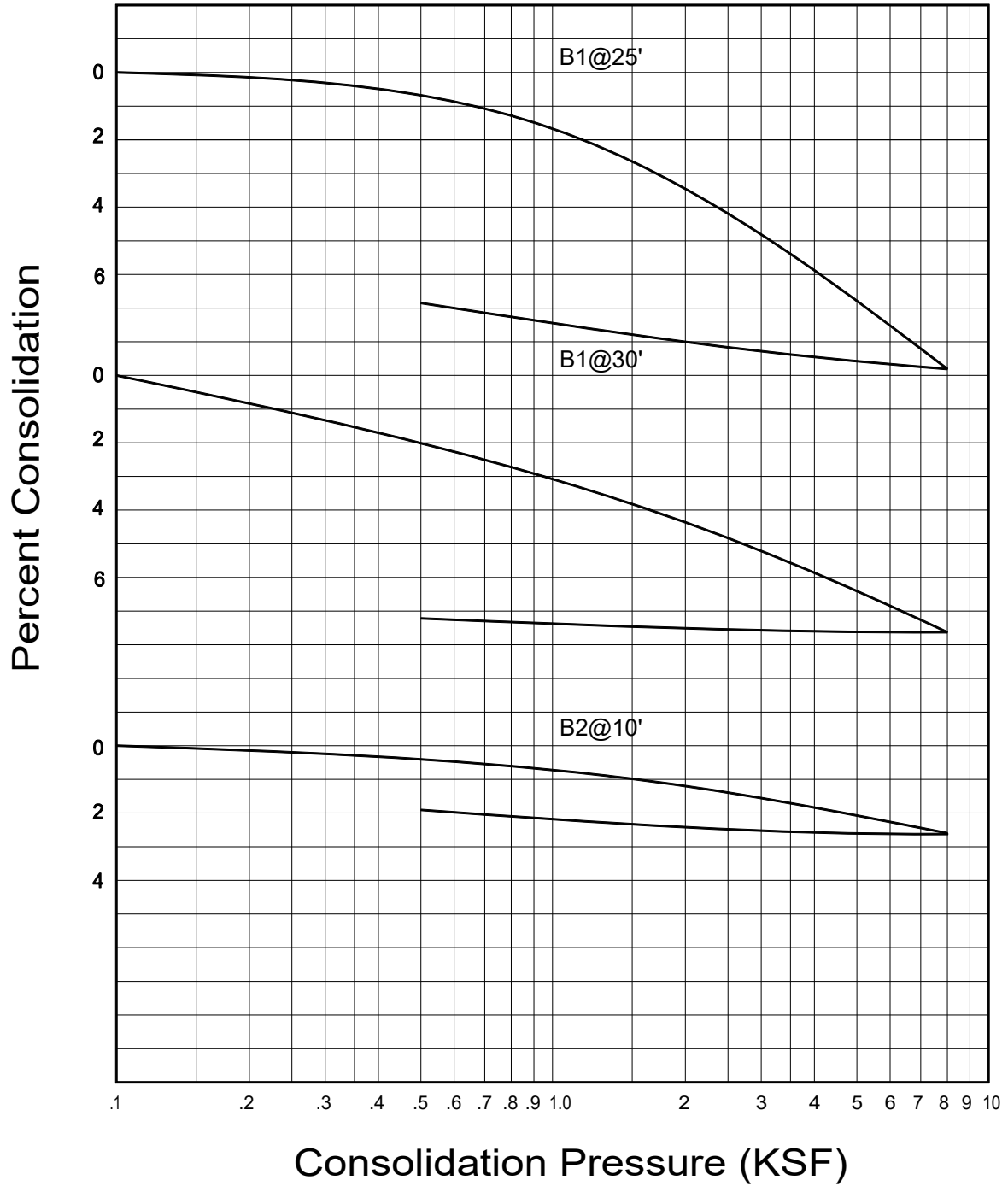
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FIG. B3

WATER ADDED AT 2 KSF



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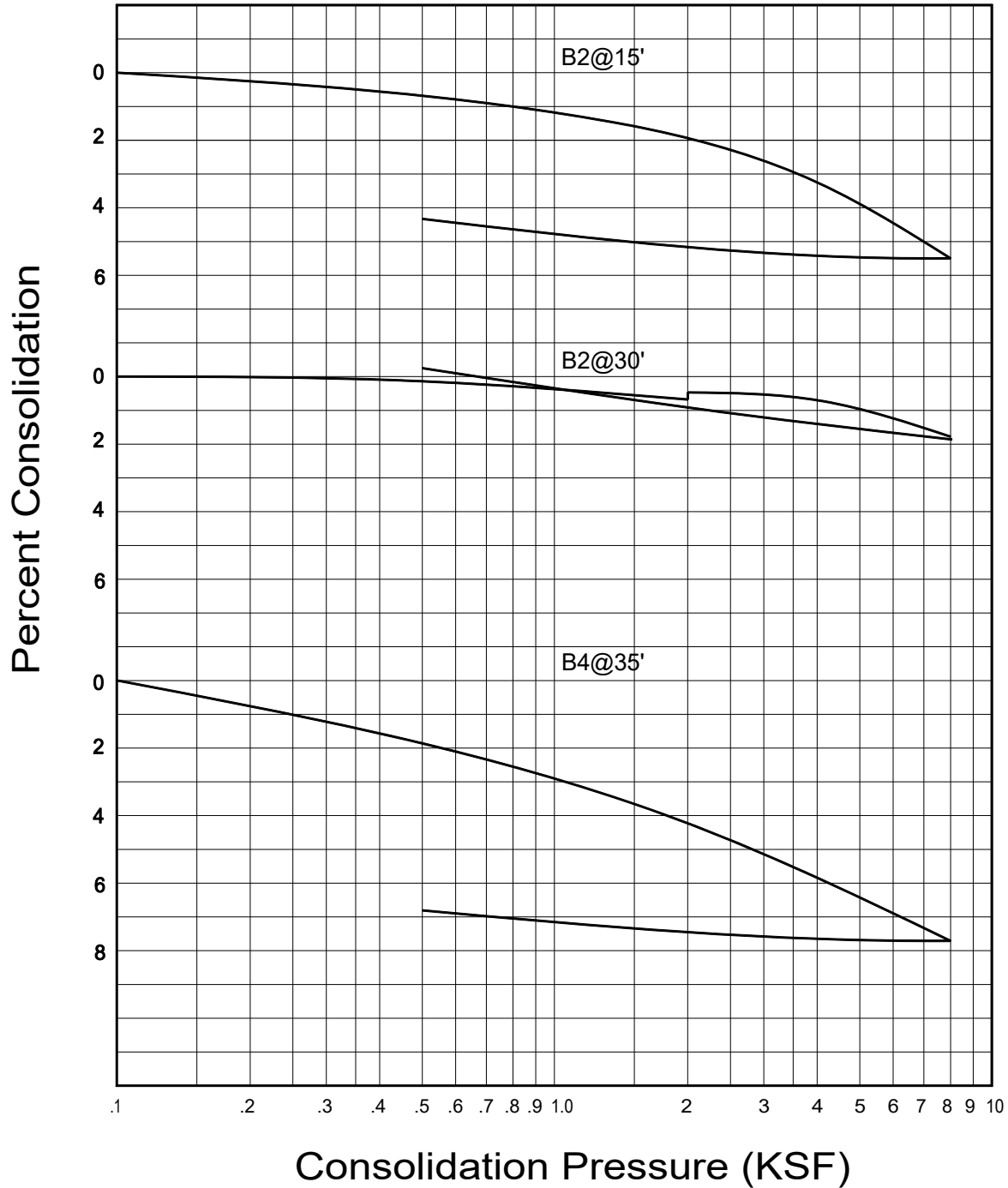
CONSOLIDATION TEST RESULTS
VICTORIA BOULEVARD APARTMENTS
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FIG. B4

WATER ADDED AT 2 KSF



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CONSOLIDATION TEST RESULTS

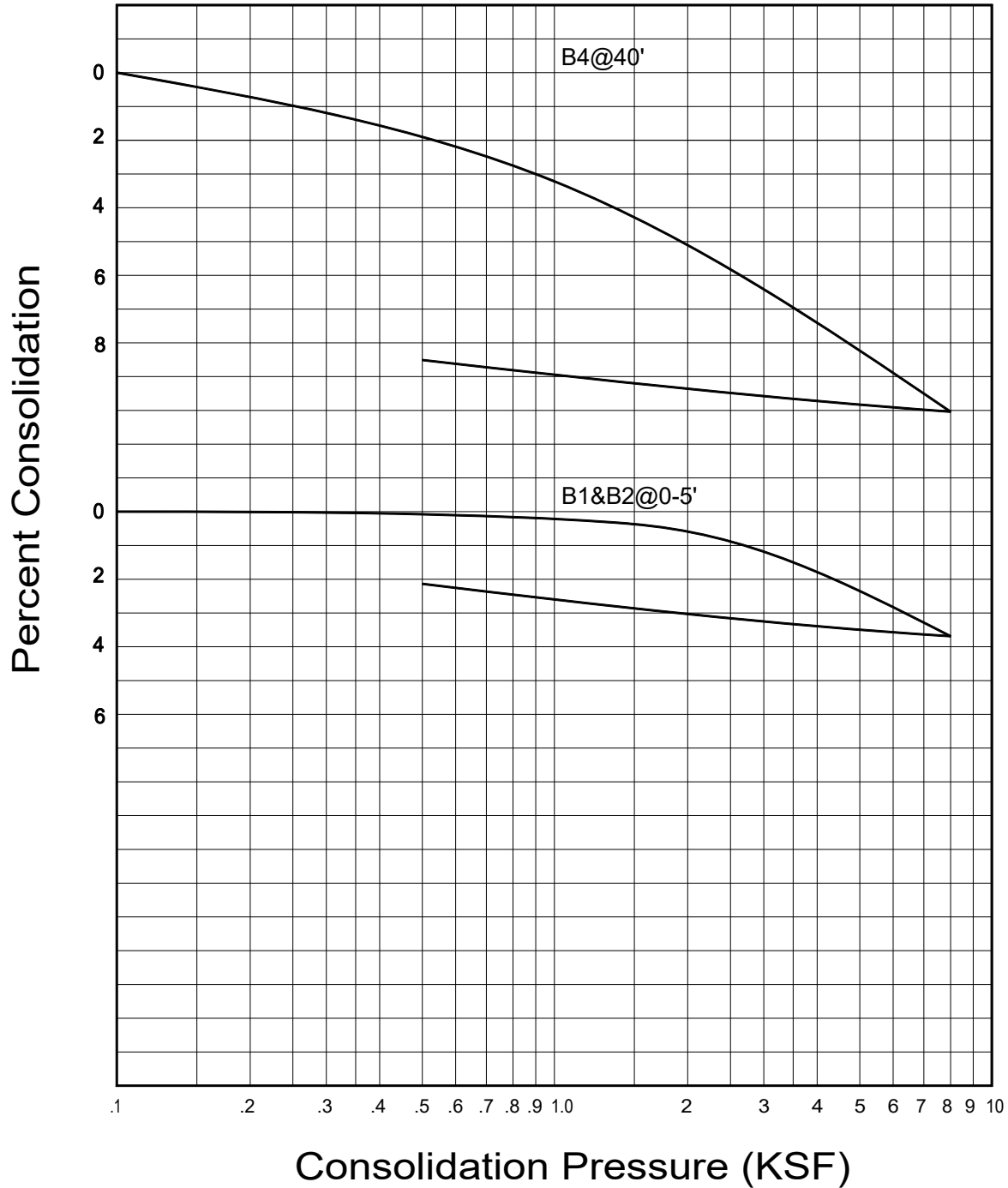
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FIG. B5

WATER ADDED AT 2 KSF



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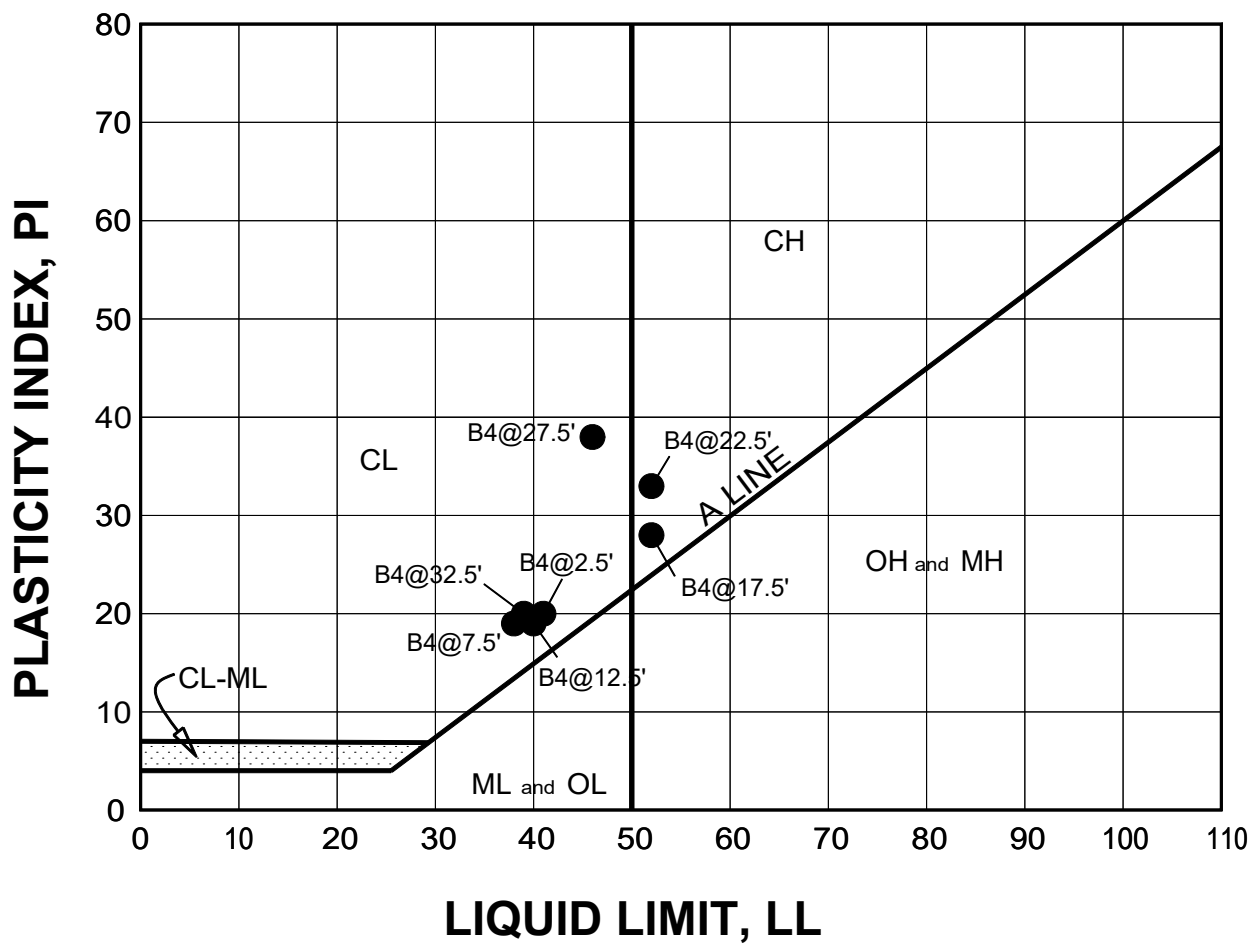
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FIG. B6



BORING NUMBER	DEPTH (FEET)	LL	PL	PI	MOISTURE CONTENT AT SATURATION	SOIL BEHAVIOR
B4	2.5	41	21	20	--	CL
B4	7.5	38	19	19	--	CL
B4	12.5	40	21	19	--	CL
B4	17.5	52	24	28	--	CH
B4	22.5	52	19	33	--	CH
B4	27.5	46	18	28	--	CL
B4	32.5	39	19	20	--	CL

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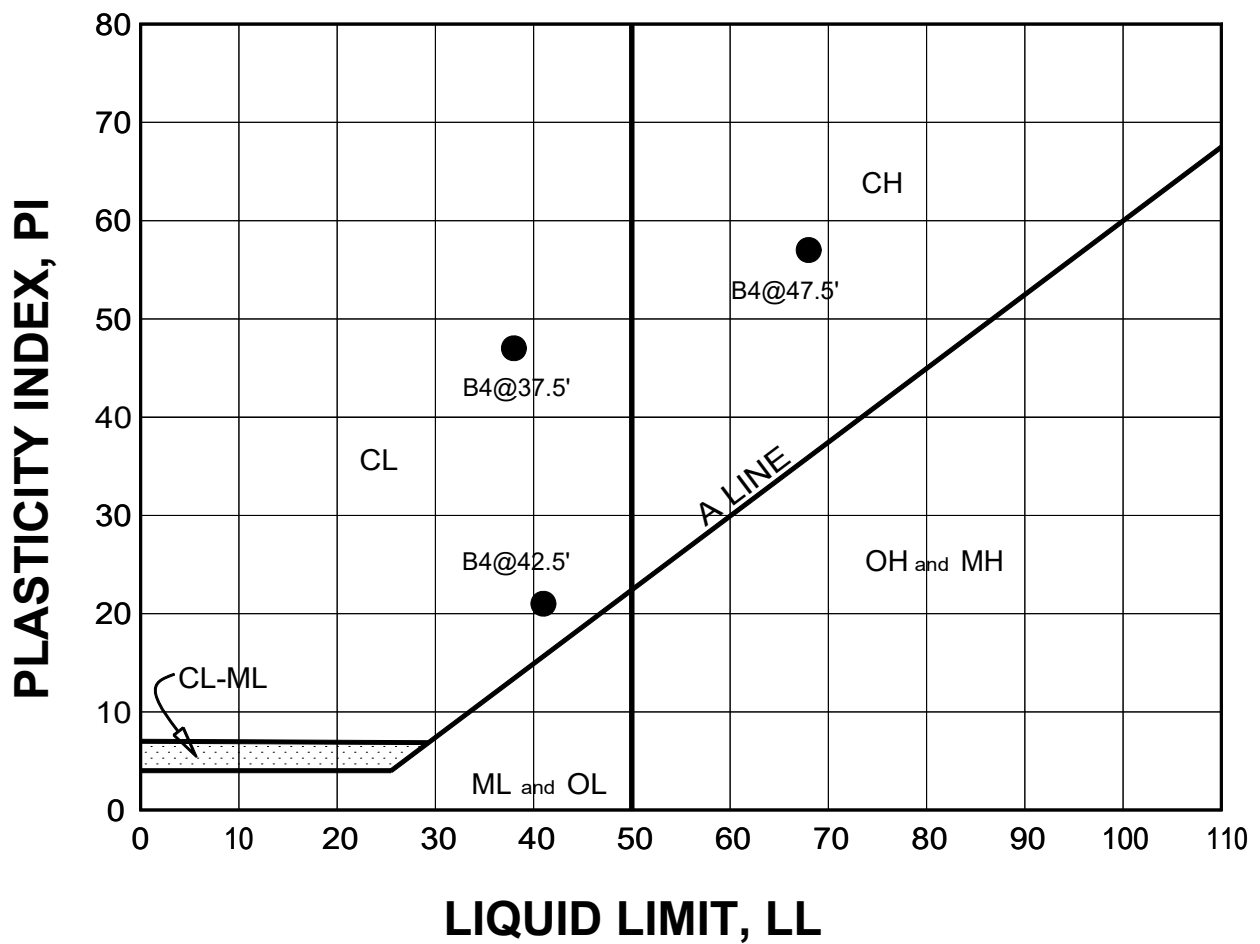
ATTERBERG LIMITS

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FIG. B7



BORING NUMBER	DEPTH (FEET)	LL	PL	PI	MOISTURE CONTENT AT SATURATION	SOIL BEHAVIOR
B4	37.5	38	21	17	--	CL
B4	42.5	41	20	21	--	CL
B4	47.5	68	21	47	--	CH

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FIG. B8

**SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829-11**

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	*UBC Classification	**CBC Classification
	Before	After				
B1&B2 @ 0-5'	10.0	19.1	109.8	50	Medium	Expansive

* Reference: 1997 Uniform Building Code, Table 18-I-B.

** Reference: 2016 California Building Code, Section 1803.5.3

**SUMMARY OF LABORATORY MAXIMUM DENSITY AND
AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557-12**

Sample No.	Soil Description	Maximum Dry Density (pcf)	Optimum Moisture (%)
B1&B2 @ 0-5'	Dark Olive Brown Clay	123.0	10.2

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LABORATORY TEST RESULTS

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FIG. B9

**SUMMARY OF LABORATORY POTENTIAL OF
HYDROGEN (pH) AND RESISTIVITY TEST RESULTS
CALIFORNIA TEST NO. 643**

Sample No.	pH	Resistivity (ohm centimeters)
B1&B2 @ 0-5'	8.03	560 (Severely Corrosive)

**SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS
EPA NO. 325.3**

Sample No.	Chloride Ion Content (%)
B1&B2 @ 0-5'	0.085

**SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST NO. 417**

Sample No.	Water Soluble Sulfate (% SO ₄)	Sulfate Exposure*
B1&B2 @ 0-5'	0.002	Negligible

* Reference: 2016 California Building Code, Section 1904.3 and ACI 318-14 Table 19.3.1.1

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CORROSIVITY TEST RESULTS

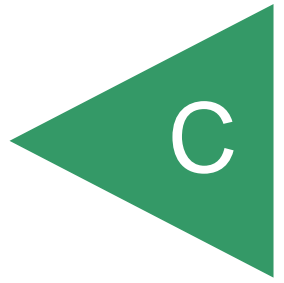
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FIG. B10

APPENDIX

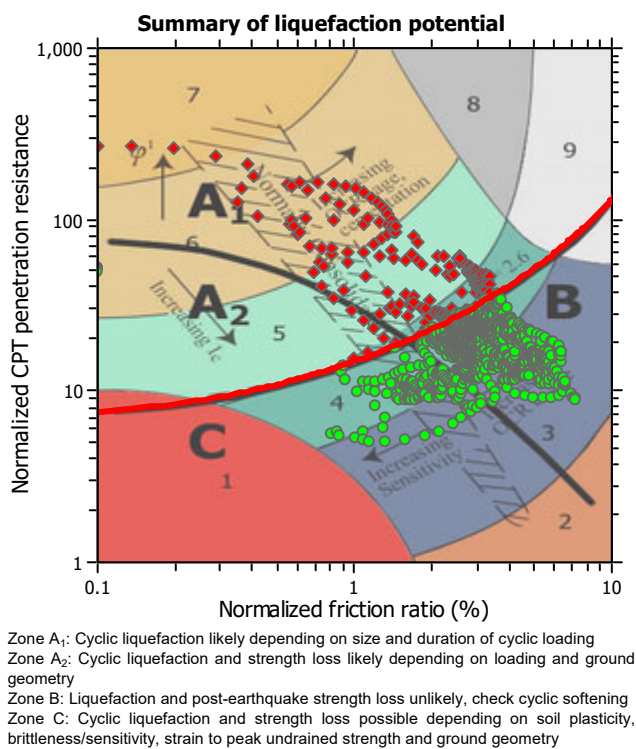
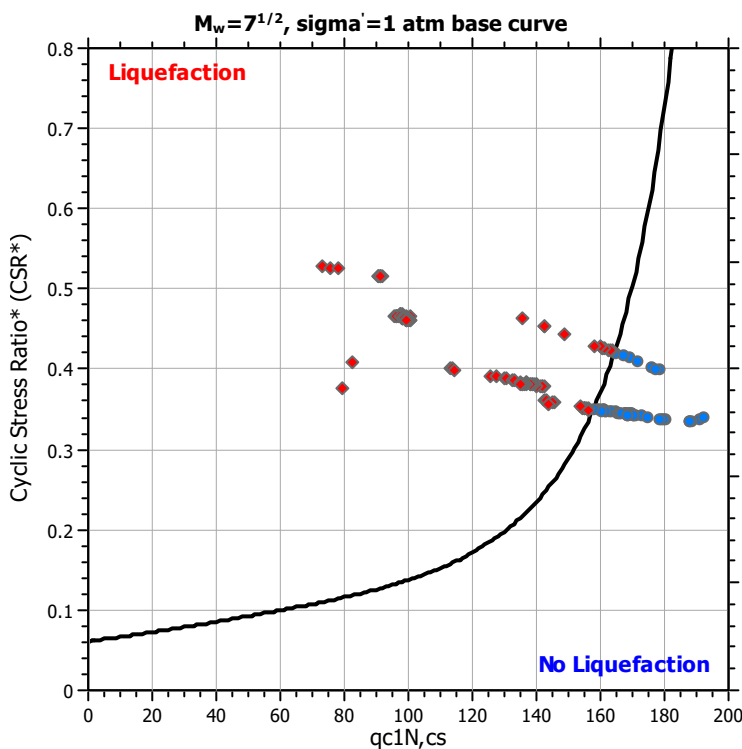
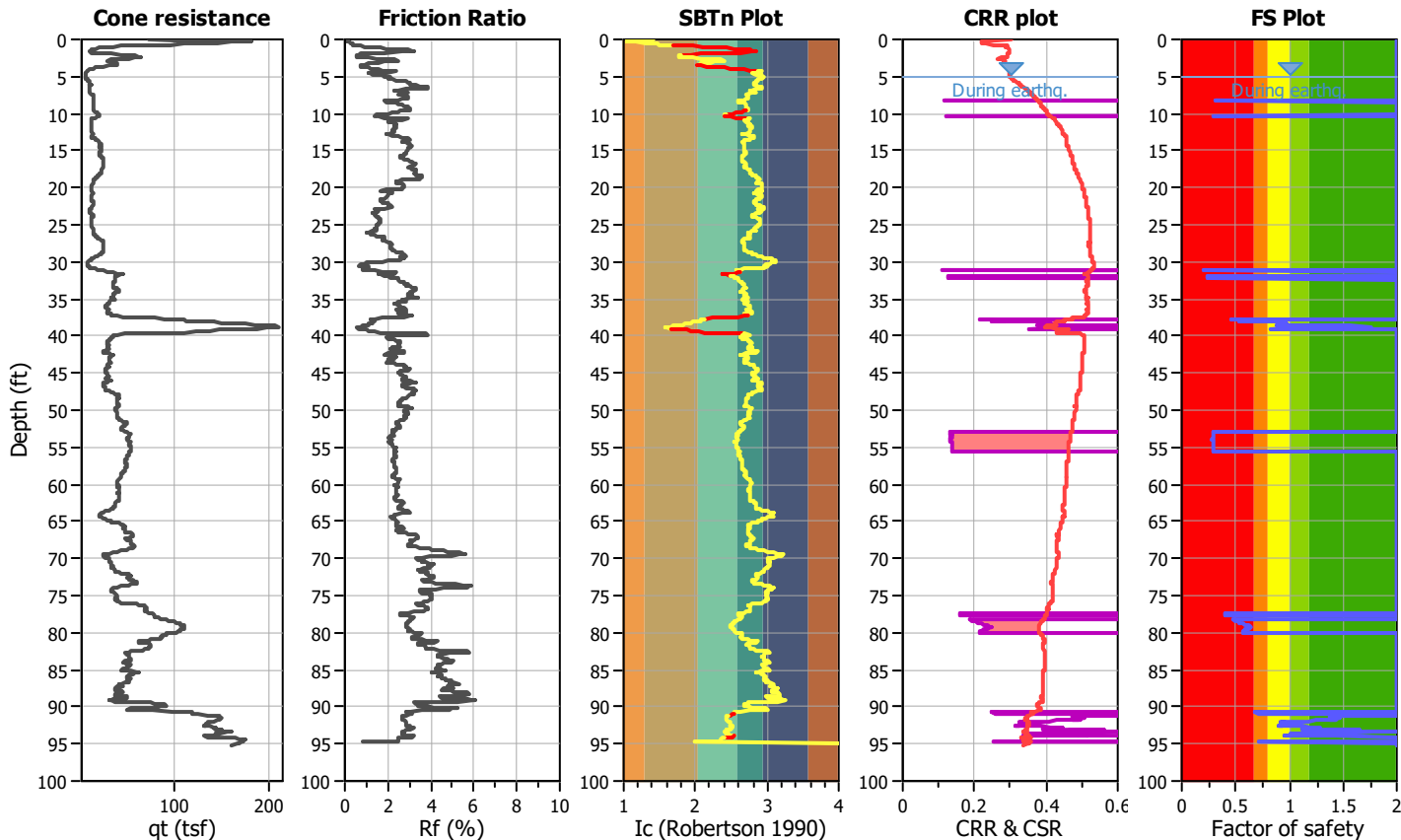


APPENDIX C
CLIQ LIQUEFACTION ANALYSIS REPORT

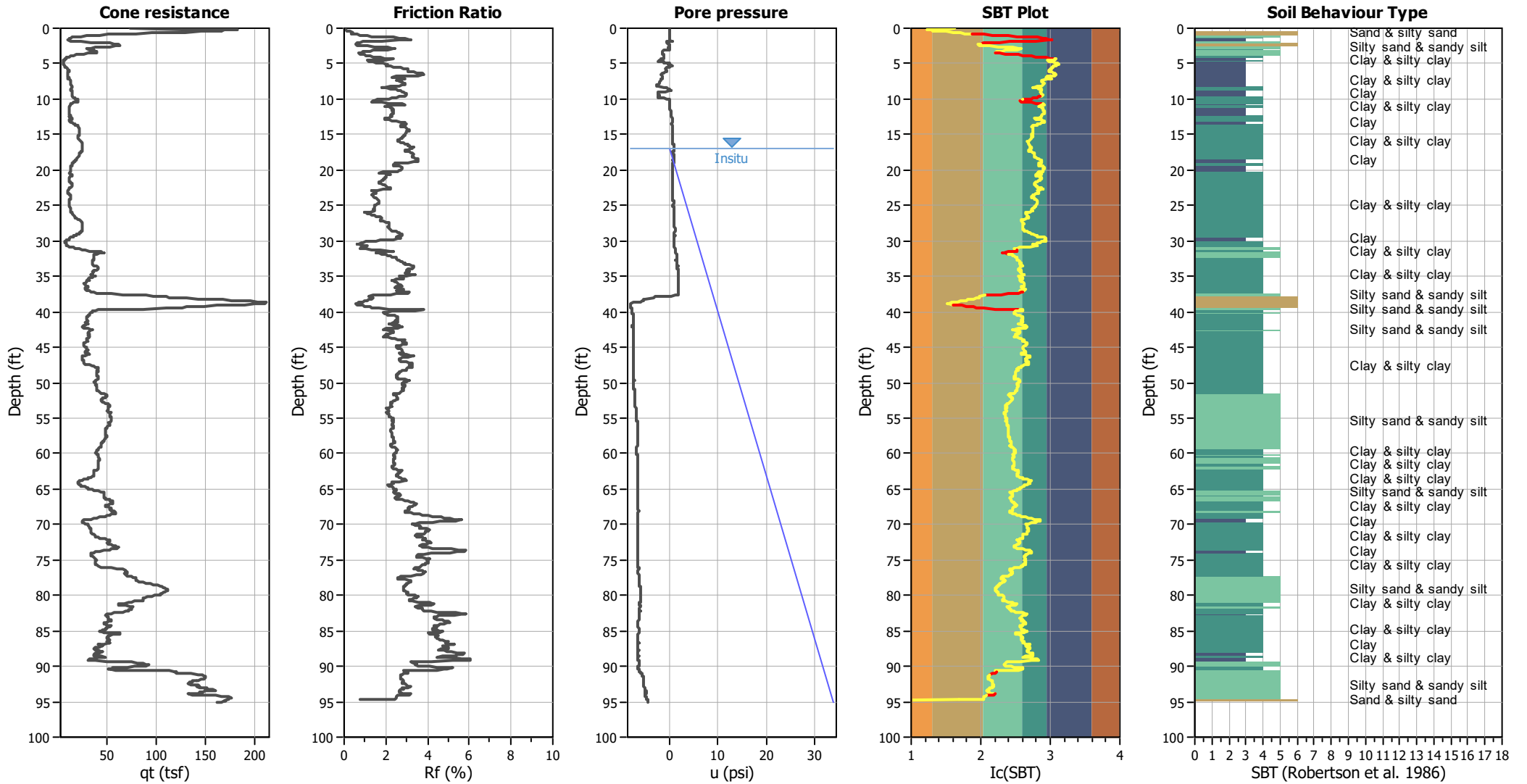
LIQUEFACTION ANALYSIS REPORT

Project title : Victoria Apartments
Location : A9942-88-01
CPT file : C-1
Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.57	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.41	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



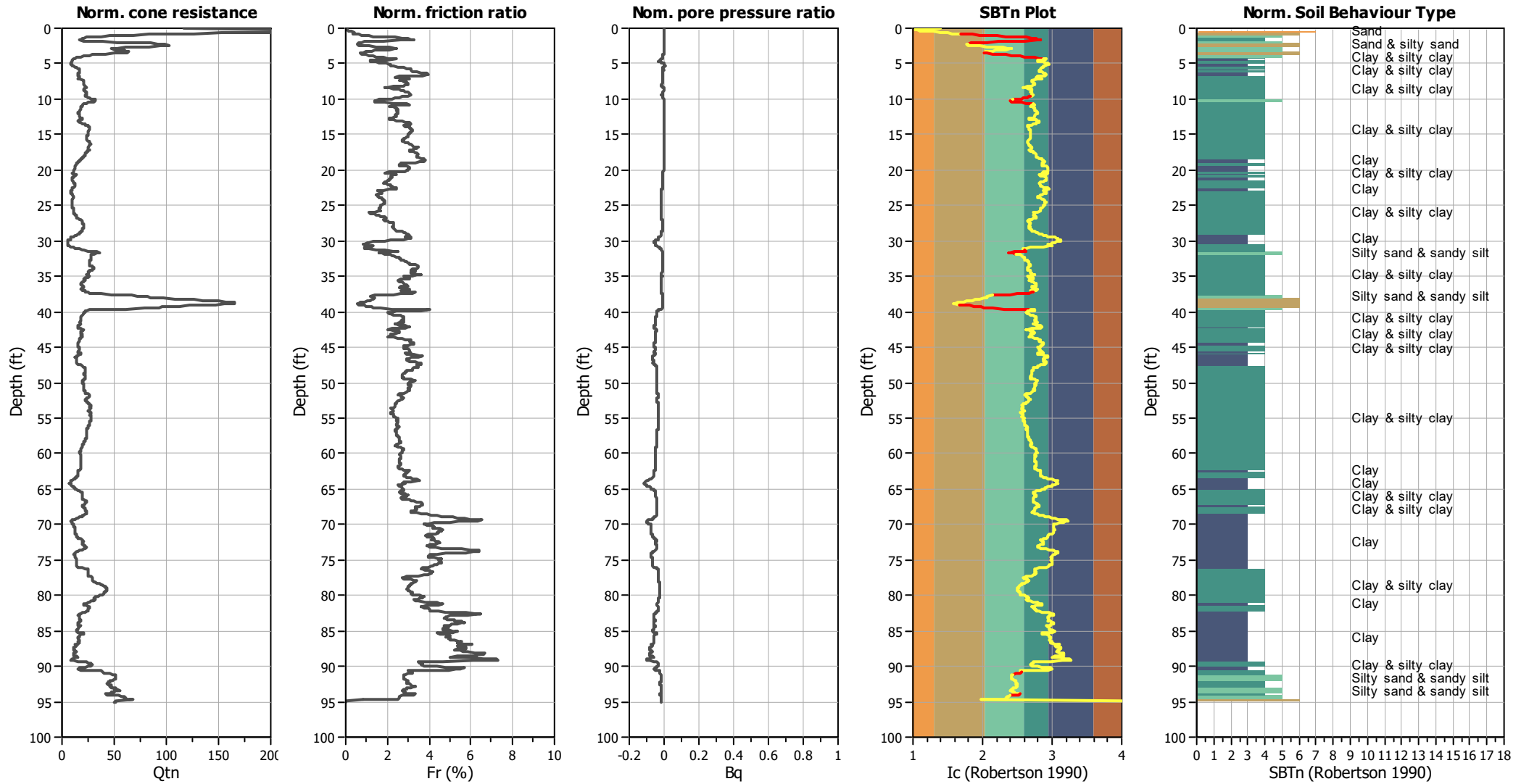
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



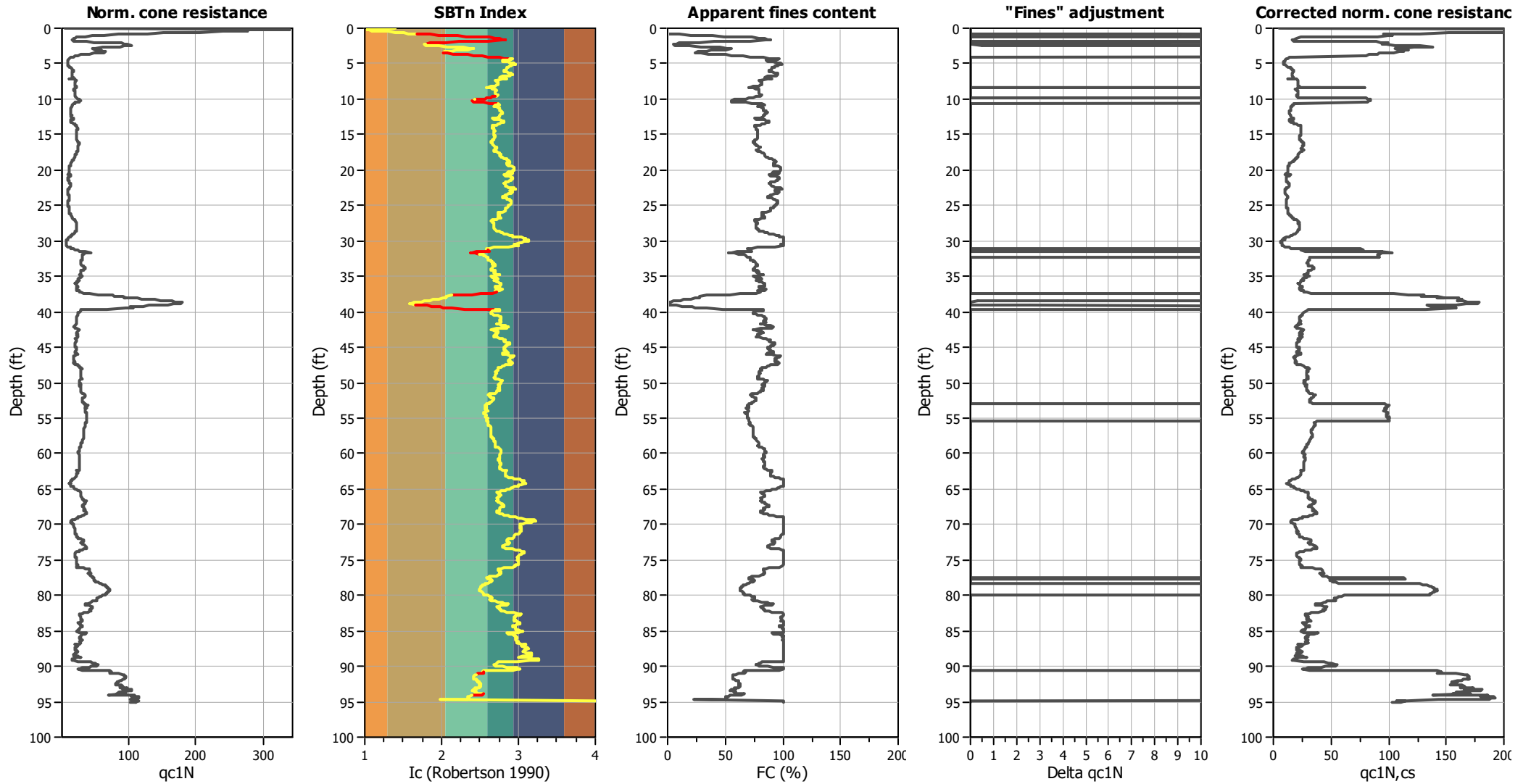
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

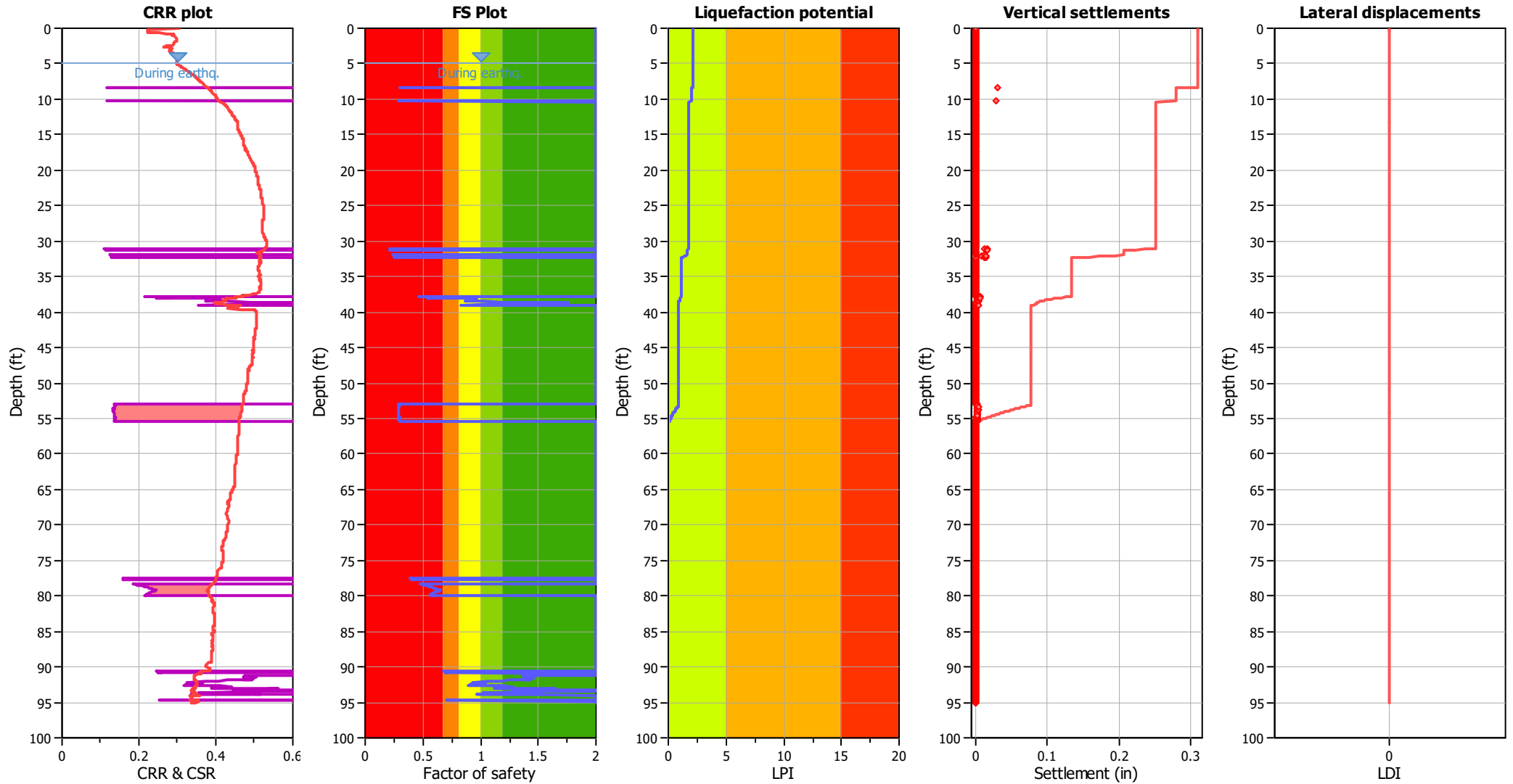
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

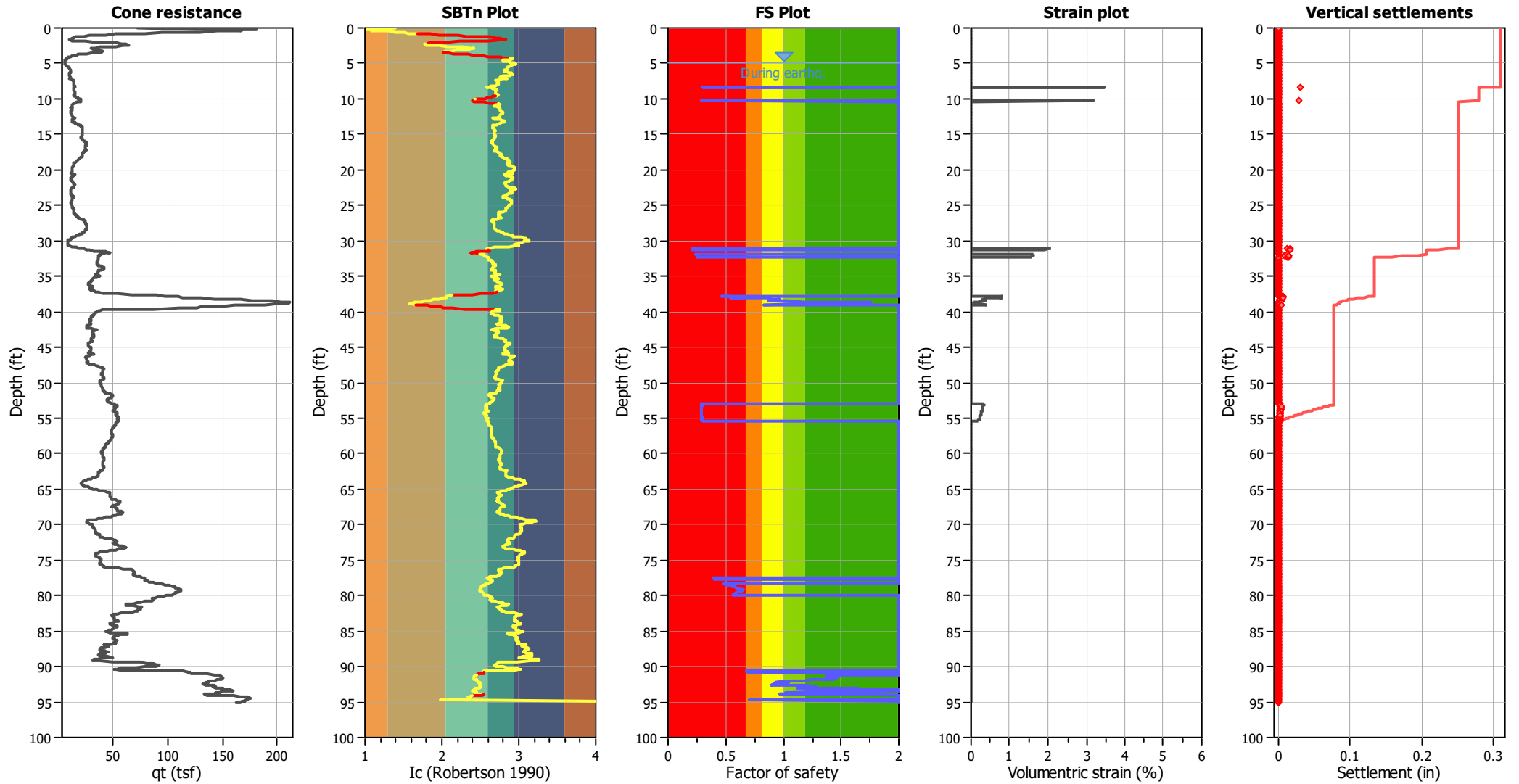
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- q_c: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.02	9.43	2.00	0.00	0.91	0.00	5.08	9.43	2.00	0.00	0.91	0.00
5.14	9.72	2.00	0.00	0.91	0.00	5.20	10.15	2.00	0.00	0.91	0.00
5.27	10.73	2.00	0.00	0.91	0.00	5.33	11.31	2.00	0.00	0.91	0.00
5.39	11.89	2.00	0.00	0.91	0.00	5.46	12.77	2.00	0.00	0.91	0.00
5.52	13.93	2.00	0.00	0.91	0.00	5.59	15.09	2.00	0.00	0.91	0.00
5.66	15.66	2.00	0.00	0.90	0.00	5.73	16.24	2.00	0.00	0.90	0.00
5.79	16.53	2.00	0.00	0.90	0.00	5.87	16.97	2.00	0.00	0.90	0.00
5.93	17.56	2.00	0.00	0.90	0.00	6.00	17.85	2.00	0.00	0.90	0.00
6.07	17.85	2.00	0.00	0.90	0.00	6.13	17.71	2.00	0.00	0.90	0.00
6.20	17.26	2.00	0.00	0.89	0.00	6.27	16.97	2.00	0.00	0.89	0.00
6.32	16.68	2.00	0.00	0.89	0.00	6.37	16.24	2.00	0.00	0.89	0.00
6.45	16.24	2.00	0.00	0.89	0.00	6.51	16.24	2.00	0.00	0.89	0.00
6.58	16.10	2.00	0.00	0.89	0.00	6.64	16.10	2.00	0.00	0.89	0.00
6.71	16.10	2.00	0.00	0.89	0.00	6.77	16.39	2.00	0.00	0.89	0.00
6.84	16.68	2.00	0.00	0.88	0.00	6.91	17.11	2.00	0.00	0.88	0.00
6.99	17.42	2.00	0.00	0.88	0.00	7.02	17.56	2.00	0.00	0.88	0.00
7.09	18.14	2.00	0.00	0.88	0.00	7.18	12.47	2.00	0.00	0.88	0.00
7.25	19.87	2.00	0.00	0.88	0.00	7.32	21.03	2.00	0.00	0.88	0.00
7.35	21.61	2.00	0.00	0.88	0.00	7.43	21.89	2.00	0.00	0.87	0.00
7.50	21.38	2.00	0.00	0.87	0.00	7.57	21.13	2.00	0.00	0.87	0.00
7.64	21.03	2.00	0.00	0.87	0.00	7.71	20.92	2.00	0.00	0.87	0.00
7.75	20.87	2.00	0.00	0.87	0.00	7.83	20.76	2.00	0.00	0.87	0.00
7.89	20.93	2.00	0.00	0.87	0.00	7.97	20.96	2.00	0.00	0.86	0.00
8.01	21.05	2.00	0.00	0.86	0.00	8.08	21.36	2.00	0.00	0.86	0.00
8.15	21.80	2.00	0.00	0.86	0.00	8.22	22.11	2.00	0.00	0.86	0.00
8.30	22.54	2.00	0.00	0.86	0.00	8.37	79.41	0.31	3.47	0.86	0.03
8.41	21.88	2.00	0.00	0.86	0.00	8.47	20.88	2.00	0.00	0.86	0.00
8.55	20.12	2.00	0.00	0.86	0.00	8.62	19.89	2.00	0.00	0.85	0.00
8.69	19.42	2.00	0.00	0.85	0.00	8.73	19.62	2.00	0.00	0.85	0.00
8.81	20.16	2.00	0.00	0.85	0.00	8.87	20.85	2.00	0.00	0.85	0.00
8.94	21.38	2.00	0.00	0.85	0.00	9.01	21.54	2.00	0.00	0.85	0.00
9.09	21.56	2.00	0.00	0.85	0.00	9.16	21.59	2.00	0.00	0.84	0.00
9.19	21.67	2.00	0.00	0.84	0.00	9.26	21.47	2.00	0.00	0.84	0.00
9.33	21.14	2.00	0.00	0.84	0.00	9.41	20.44	2.00	0.00	0.84	0.00
9.48	20.11	2.00	0.00	0.84	0.00	9.52	20.19	2.00	0.00	0.84	0.00
9.58	20.49	2.00	0.00	0.84	0.00	9.67	21.24	2.00	0.00	0.84	0.00
9.73	22.01	2.00	0.00	0.84	0.00	9.80	22.76	2.00	0.00	0.83	0.00
9.87	81.06	2.00	0.00	0.83	0.00	9.94	81.60	2.00	0.00	0.83	0.00
9.98	81.92	2.00	0.00	0.83	0.00	10.05	83.35	2.00	0.00	0.83	0.00
10.12	83.79	2.00	0.00	0.83	0.00	10.19	83.71	2.00	0.00	0.83	0.00
10.26	82.71	0.29	3.21	0.83	0.03	10.34	81.35	2.00	0.00	0.82	0.00
10.38	80.74	2.00	0.00	0.82	0.00	10.44	79.13	2.00	0.00	0.82	0.00
10.51	77.77	2.00	0.00	0.82	0.00	10.58	19.92	2.00	0.00	0.82	0.00
10.66	18.79	2.00	0.00	0.82	0.00	10.73	17.78	2.00	0.00	0.82	0.00
10.76	17.28	2.00	0.00	0.82	0.00	10.83	16.77	2.00	0.00	0.82	0.00
10.91	16.72	2.00	0.00	0.82	0.00	10.98	16.32	2.00	0.00	0.81	0.00
11.05	15.70	2.00	0.00	0.81	0.00	11.11	15.64	2.00	0.00	0.81	0.00
11.18	15.25	2.00	0.00	0.81	0.00	11.24	15.25	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.31	15.26	2.00	0.00	0.81	0.00	11.37	15.21	2.00	0.00	0.81	0.00
11.44	15.28	2.00	0.00	0.81	0.00	11.51	15.23	2.00	0.00	0.80	0.00
11.58	15.17	2.00	0.00	0.80	0.00	11.62	15.04	2.00	0.00	0.80	0.00
11.69	14.65	2.00	0.00	0.80	0.00	11.76	14.27	2.00	0.00	0.80	0.00
11.82	14.01	2.00	0.00	0.80	0.00	11.89	13.85	2.00	0.00	0.80	0.00
11.97	14.02	2.00	0.00	0.80	0.00	12.04	14.20	2.00	0.00	0.80	0.00
12.07	14.29	2.00	0.00	0.80	0.00	12.17	14.88	2.00	0.00	0.79	0.00
12.24	15.15	2.00	0.00	0.79	0.00	12.28	15.34	2.00	0.00	0.79	0.00
12.35	15.51	2.00	0.00	0.79	0.00	12.43	15.25	2.00	0.00	0.79	0.00
12.49	14.88	2.00	0.00	0.79	0.00	12.55	14.84	2.00	0.00	0.79	0.00
12.63	15.75	2.00	0.00	0.79	0.00	12.70	17.63	2.00	0.00	0.78	0.00
12.74	18.14	2.00	0.00	0.78	0.00	12.81	17.55	2.00	0.00	0.78	0.00
12.87	15.80	2.00	0.00	0.78	0.00	12.94	14.17	2.00	0.00	0.78	0.00
13.02	14.12	2.00	0.00	0.78	0.00	13.09	14.08	2.00	0.00	0.78	0.00
13.16	14.03	2.00	0.00	0.78	0.00	13.19	14.64	2.00	0.00	0.78	0.00
13.26	15.85	2.00	0.00	0.78	0.00	13.32	17.06	2.00	0.00	0.77	0.00
13.40	18.03	2.00	0.00	0.77	0.00	13.47	19.10	2.00	0.00	0.77	0.00
13.55	19.98	2.00	0.00	0.77	0.00	13.62	20.93	2.00	0.00	0.77	0.00
13.66	21.40	2.00	0.00	0.77	0.00	13.73	22.55	2.00	0.00	0.77	0.00
13.80	23.31	2.00	0.00	0.77	0.00	13.85	23.46	2.00	0.00	0.77	0.00
13.93	23.69	2.00	0.00	0.76	0.00	14.00	23.62	2.00	0.00	0.76	0.00
14.08	24.24	2.00	0.00	0.76	0.00	14.11	24.31	2.00	0.00	0.76	0.00
14.21	24.51	2.00	0.00	0.76	0.00	14.24	24.38	2.00	0.00	0.76	0.00
14.31	24.01	2.00	0.00	0.76	0.00	14.38	23.85	2.00	0.00	0.76	0.00
14.44	23.79	2.00	0.00	0.76	0.00	14.51	23.44	2.00	0.00	0.75	0.00
14.59	23.70	2.00	0.00	0.75	0.00	14.66	23.69	2.00	0.00	0.75	0.00
14.70	23.75	2.00	0.00	0.75	0.00	14.78	23.68	2.00	0.00	0.75	0.00
14.85	23.62	2.00	0.00	0.75	0.00	14.92	23.56	2.00	0.00	0.75	0.00
15.00	23.49	2.00	0.00	0.75	0.00	15.03	23.46	2.00	0.00	0.75	0.00
15.10	23.30	2.00	0.00	0.74	0.00	15.17	22.96	2.00	0.00	0.74	0.00
15.24	22.52	2.00	0.00	0.74	0.00	15.32	22.45	2.00	0.00	0.74	0.00
15.39	22.39	2.00	0.00	0.74	0.00	15.43	22.36	2.00	0.00	0.74	0.00
15.49	22.41	2.00	0.00	0.74	0.00	15.57	22.53	2.00	0.00	0.74	0.00
15.64	22.58	2.00	0.00	0.73	0.00	15.71	22.52	2.00	0.00	0.73	0.00
15.78	22.93	2.00	0.00	0.73	0.00	15.82	23.28	2.00	0.00	0.73	0.00
15.89	23.96	2.00	0.00	0.73	0.00	15.96	24.75	2.00	0.00	0.73	0.00
16.03	25.44	2.00	0.00	0.73	0.00	16.10	25.65	2.00	0.00	0.73	0.00
16.15	25.70	2.00	0.00	0.73	0.00	16.21	26.11	2.00	0.00	0.73	0.00
16.29	26.50	2.00	0.00	0.72	0.00	16.36	26.34	2.00	0.00	0.72	0.00
16.44	26.18	2.00	0.00	0.72	0.00	16.51	25.84	2.00	0.00	0.72	0.00
16.54	25.63	2.00	0.00	0.72	0.00	16.61	25.39	2.00	0.00	0.72	0.00
16.68	25.15	2.00	0.00	0.72	0.00	16.76	24.89	2.00	0.00	0.72	0.00
16.83	24.83	2.00	0.00	0.71	0.00	16.86	24.90	2.00	0.00	0.71	0.00
16.93	25.11	2.00	0.00	0.71	0.00	17.00	24.51	2.00	0.00	0.71	0.00
17.09	25.47	2.00	0.00	0.71	0.00	17.16	25.81	2.00	0.00	0.71	0.00
17.22	25.33	2.00	0.00	0.71	0.00	17.29	24.77	2.00	0.00	0.71	0.00
17.33	24.48	2.00	0.00	0.71	0.00	17.39	23.92	2.00	0.00	0.71	0.00
17.47	23.44	2.00	0.00	0.70	0.00	17.54	22.96	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.60	22.58	2.00	0.00	0.70	0.00	17.67	22.19	2.00	0.00	0.70	0.00
17.75	21.99	2.00	0.00	0.70	0.00	17.79	21.71	2.00	0.00	0.70	0.00
17.86	21.68	2.00	0.00	0.70	0.00	17.92	21.66	2.00	0.00	0.70	0.00
17.99	21.73	2.00	0.00	0.70	0.00	18.06	21.62	2.00	0.00	0.69	0.00
18.14	20.97	2.00	0.00	0.69	0.00	18.18	20.69	2.00	0.00	0.69	0.00
18.24	20.14	2.00	0.00	0.69	0.00	18.31	19.57	2.00	0.00	0.69	0.00
18.38	18.84	2.00	0.00	0.69	0.00	18.45	18.55	2.00	0.00	0.69	0.00
18.53	18.26	2.00	0.00	0.69	0.00	18.59	17.72	2.00	0.00	0.68	0.00
18.67	17.25	2.00	0.00	0.68	0.00	18.72	17.06	2.00	0.00	0.68	0.00
18.80	16.33	2.00	0.00	0.68	0.00	18.85	15.96	2.00	0.00	0.68	0.00
18.94	15.32	2.00	0.00	0.68	0.00	18.98	14.96	2.00	0.00	0.68	0.00
19.07	14.15	2.00	0.00	0.68	0.00	19.12	13.87	2.00	0.00	0.68	0.00
19.17	13.77	2.00	0.00	0.68	0.00	19.26	13.93	2.00	0.00	0.67	0.00
19.30	14.02	2.00	0.00	0.67	0.00	19.36	13.74	2.00	0.00	0.67	0.00
19.44	13.54	2.00	0.00	0.67	0.00	19.53	12.91	2.00	0.00	0.67	0.00
19.58	12.72	2.00	0.00	0.67	0.00	19.67	12.62	2.00	0.00	0.67	0.00
19.71	12.70	2.00	0.00	0.67	0.00	19.76	12.52	2.00	0.00	0.67	0.00
19.84	12.68	2.00	0.00	0.66	0.00	19.90	12.67	2.00	0.00	0.66	0.00
19.99	12.48	2.00	0.00	0.66	0.00	20.03	12.47	2.00	0.00	0.66	0.00
20.08	12.46	2.00	0.00	0.66	0.00	20.17	12.54	2.00	0.00	0.66	0.00
20.22	12.27	2.00	0.00	0.66	0.00	20.31	12.08	2.00	0.00	0.66	0.00
20.35	11.99	2.00	0.00	0.66	0.00	20.45	11.89	2.00	0.00	0.65	0.00
20.50	11.88	2.00	0.00	0.65	0.00	20.54	11.87	2.00	0.00	0.65	0.00
20.60	9.94	2.00	0.00	0.65	0.00	20.70	14.46	2.00	0.00	0.65	0.00
20.74	14.54	2.00	0.00	0.65	0.00	20.83	13.83	2.00	0.00	0.65	0.00
20.88	13.21	2.00	0.00	0.65	0.00	20.95	11.90	2.00	0.00	0.64	0.00
21.03	11.19	2.00	0.00	0.64	0.00	21.07	11.10	2.00	0.00	0.64	0.00
21.15	10.92	2.00	0.00	0.64	0.00	21.21	11.00	2.00	0.00	0.64	0.00
21.26	10.99	2.00	0.00	0.64	0.00	21.34	10.98	2.00	0.00	0.64	0.00
21.41	10.97	2.00	0.00	0.64	0.00	21.49	11.13	2.00	0.00	0.64	0.00
21.53	11.21	2.00	0.00	0.64	0.00	21.61	11.72	2.00	0.00	0.63	0.00
21.65	11.97	2.00	0.00	0.63	0.00	21.72	12.47	2.00	0.00	0.63	0.00
21.80	12.81	2.00	0.00	0.63	0.00	21.87	13.05	2.00	0.00	0.63	0.00
21.95	13.22	2.00	0.00	0.63	0.00	21.98	13.38	2.00	0.00	0.63	0.00
22.06	13.63	2.00	0.00	0.63	0.00	22.15	13.78	2.00	0.00	0.62	0.00
22.22	13.69	2.00	0.00	0.62	0.00	22.26	13.51	2.00	0.00	0.62	0.00
22.33	13.24	2.00	0.00	0.62	0.00	22.40	12.88	2.00	0.00	0.62	0.00
22.45	12.62	2.00	0.00	0.62	0.00	22.52	11.93	2.00	0.00	0.62	0.00
22.60	11.41	2.00	0.00	0.62	0.00	22.64	11.15	2.00	0.00	0.62	0.00
22.72	10.71	2.00	0.00	0.62	0.00	22.79	10.45	2.00	0.00	0.61	0.00
22.87	10.19	2.00	0.00	0.61	0.00	22.90	10.09	2.00	0.00	0.61	0.00
22.99	10.00	2.00	0.00	0.61	0.00	23.06	9.99	2.00	0.00	0.61	0.00
23.14	9.81	2.00	0.00	0.61	0.00	23.18	10.02	2.00	0.00	0.61	0.00
23.24	10.05	2.00	0.00	0.61	0.00	23.31	10.31	2.00	0.00	0.60	0.00
23.39	10.64	2.00	0.00	0.60	0.00	23.43	10.80	2.00	0.00	0.60	0.00
23.51	11.29	2.00	0.00	0.60	0.00	23.58	11.70	2.00	0.00	0.60	0.00
23.66	12.03	2.00	0.00	0.60	0.00	23.70	12.78	2.00	0.00	0.60	0.00
23.77	13.03	2.00	0.00	0.60	0.00	23.84	12.76	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.90	12.83	2.00	0.00	0.59	0.00	23.97	12.49	2.00	0.00	0.59	0.00
24.02	12.15	2.00	0.00	0.59	0.00	24.09	11.55	2.00	0.00	0.59	0.00
24.16	11.38	2.00	0.00	0.59	0.00	24.23	11.37	2.00	0.00	0.59	0.00
24.31	11.19	2.00	0.00	0.59	0.00	24.34	11.11	2.00	0.00	0.59	0.00
24.41	10.93	2.00	0.00	0.59	0.00	24.48	10.84	2.00	0.00	0.59	0.00
24.56	10.83	2.00	0.00	0.58	0.00	24.63	10.82	2.00	0.00	0.58	0.00
24.71	10.89	2.00	0.00	0.58	0.00	24.76	10.81	2.00	0.00	0.58	0.00
24.84	10.80	2.00	0.00	0.58	0.00	24.88	10.79	2.00	0.00	0.58	0.00
24.96	10.95	2.00	0.00	0.58	0.00	25.02	11.02	2.00	0.00	0.58	0.00
25.11	11.01	2.00	0.00	0.57	0.00	25.15	11.01	2.00	0.00	0.57	0.00
25.20	11.17	2.00	0.00	0.57	0.00	25.28	11.57	2.00	0.00	0.57	0.00
25.33	11.81	2.00	0.00	0.57	0.00	25.41	12.13	2.00	0.00	0.57	0.00
25.47	12.21	2.00	0.00	0.57	0.00	25.55	12.19	2.00	0.00	0.57	0.00
25.60	12.27	2.00	0.00	0.57	0.00	25.69	12.26	2.00	0.00	0.56	0.00
25.73	12.25	2.00	0.00	0.56	0.00	25.79	12.25	2.00	0.00	0.56	0.00
25.87	12.40	2.00	0.00	0.56	0.00	25.96	12.64	2.00	0.00	0.56	0.00
26.01	12.80	2.00	0.00	0.56	0.00	26.06	12.87	2.00	0.00	0.56	0.00
26.14	13.11	2.00	0.00	0.56	0.00	26.18	12.94	2.00	0.00	0.56	0.00
26.27	13.34	2.00	0.00	0.55	0.00	26.33	14.06	2.00	0.00	0.55	0.00
26.41	14.54	2.00	0.00	0.55	0.00	26.47	15.19	2.00	0.00	0.55	0.00
26.51	15.43	2.00	0.00	0.55	0.00	26.58	15.67	2.00	0.00	0.55	0.00
26.65	15.82	2.00	0.00	0.55	0.00	26.73	16.05	2.00	0.00	0.55	0.00
26.79	16.44	2.00	0.00	0.55	0.00	26.86	17.08	2.00	0.00	0.54	0.00
26.93	18.14	2.00	0.00	0.54	0.00	26.99	19.34	2.00	0.00	0.54	0.00
27.07	20.30	2.00	0.00	0.54	0.00	27.14	20.95	2.00	0.00	0.54	0.00
27.18	21.26	2.00	0.00	0.54	0.00	27.24	21.65	2.00	0.00	0.54	0.00
27.31	22.12	2.00	0.00	0.54	0.00	27.40	22.18	2.00	0.00	0.54	0.00
27.46	22.00	2.00	0.00	0.53	0.00	27.53	21.99	2.00	0.00	0.53	0.00
27.56	21.98	2.00	0.00	0.53	0.00	27.66	22.44	2.00	0.00	0.53	0.00
27.70	22.59	2.00	0.00	0.53	0.00	27.77	22.57	2.00	0.00	0.53	0.00
27.84	22.63	2.00	0.00	0.53	0.00	27.91	22.29	2.00	0.00	0.53	0.00
27.99	22.43	2.00	0.00	0.53	0.00	28.03	22.42	2.00	0.00	0.52	0.00
28.11	22.48	2.00	0.00	0.52	0.00	28.16	22.55	2.00	0.00	0.52	0.00
28.23	22.36	2.00	0.00	0.52	0.00	28.29	22.35	2.00	0.00	0.52	0.00
28.37	22.25	2.00	0.00	0.52	0.00	28.42	22.07	2.00	0.00	0.52	0.00
28.51	21.97	2.00	0.00	0.52	0.00	28.55	21.88	2.00	0.00	0.52	0.00
28.65	21.62	2.00	0.00	0.51	0.00	28.68	21.13	2.00	0.00	0.51	0.00
28.75	20.14	2.00	0.00	0.51	0.00	28.84	20.20	2.00	0.00	0.51	0.00
28.87	19.71	2.00	0.00	0.51	0.00	28.97	18.74	2.00	0.00	0.51	0.00
29.00	18.09	2.00	0.00	0.51	0.00	29.10	17.03	2.00	0.00	0.51	0.00
29.14	16.38	2.00	0.00	0.51	0.00	29.22	15.10	2.00	0.00	0.50	0.00
29.28	14.61	2.00	0.00	0.50	0.00	29.36	13.56	2.00	0.00	0.50	0.00
29.41	12.92	2.00	0.00	0.50	0.00	29.49	11.88	2.00	0.00	0.50	0.00
29.54	11.32	2.00	0.00	0.50	0.00	29.63	9.42	2.00	0.00	0.50	0.00
29.68	10.20	2.00	0.00	0.50	0.00	29.76	9.48	2.00	0.00	0.50	0.00
29.80	8.92	2.00	0.00	0.49	0.00	29.88	7.98	2.00	0.00	0.49	0.00
29.93	7.58	2.00	0.00	0.49	0.00	30.00	6.95	2.00	0.00	0.49	0.00
30.06	6.79	2.00	0.00	0.49	0.00	30.15	6.79	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.19	6.78	2.00	0.00	0.49	0.00	30.27	6.78	2.00	0.00	0.49	0.00
30.32	6.93	2.00	0.00	0.49	0.00	30.40	7.32	2.00	0.00	0.48	0.00
30.48	7.47	2.00	0.00	0.48	0.00	30.54	7.54	2.00	0.00	0.48	0.00
30.58	7.54	2.00	0.00	0.48	0.00	30.67	7.77	2.00	0.00	0.48	0.00
30.73	8.54	2.00	0.00	0.48	0.00	30.80	10.02	2.00	0.00	0.48	0.00
30.86	11.88	2.00	0.00	0.48	0.00	30.91	13.75	2.00	0.00	0.48	0.00
31.00	15.31	2.00	0.00	0.47	0.00	31.05	16.23	2.00	0.00	0.47	0.00
31.12	73.19	0.21	2.06	0.47	0.02	31.17	75.37	0.21	2.00	0.47	0.01
31.24	78.06	0.22	1.93	0.47	0.02	31.33	24.20	2.00	0.00	0.47	0.00
31.39	27.18	2.00	0.00	0.47	0.00	31.46	91.03	2.00	0.00	0.47	0.00
31.53	93.89	2.00	0.00	0.47	0.00	31.59	93.71	2.00	0.00	0.46	0.00
31.64	102.71	2.00	0.00	0.46	0.00	31.71	98.45	2.00	0.00	0.46	0.00
31.78	94.34	2.00	0.00	0.46	0.00	31.85	91.79	2.00	0.00	0.46	0.00
31.92	91.58	2.00	0.00	0.46	0.00	31.98	90.55	0.24	1.63	0.46	0.01
32.06	90.79	0.25	1.62	0.46	0.01	32.09	91.13	0.25	1.61	0.46	0.01
32.17	91.58	0.25	1.60	0.45	0.01	32.24	91.19	0.25	1.60	0.45	0.01
32.30	91.46	0.25	1.59	0.45	0.01	32.37	31.19	2.00	0.00	0.45	0.00
32.45	31.48	2.00	0.00	0.45	0.00	32.51	31.46	2.00	0.00	0.45	0.00
32.55	31.44	2.00	0.00	0.45	0.00	32.62	31.42	2.00	0.00	0.45	0.00
32.69	31.01	2.00	0.00	0.45	0.00	32.75	30.04	2.00	0.00	0.45	0.00
32.83	30.34	2.00	0.00	0.44	0.00	32.89	30.08	2.00	0.00	0.44	0.00
32.97	30.37	2.00	0.00	0.44	0.00	33.03	29.56	2.00	0.00	0.44	0.00
33.10	29.69	2.00	0.00	0.44	0.00	33.17	29.75	2.00	0.00	0.44	0.00
33.21	29.81	2.00	0.00	0.44	0.00	33.28	30.03	2.00	0.00	0.44	0.00
33.35	30.08	2.00	0.00	0.43	0.00	33.42	29.98	2.00	0.00	0.43	0.00
33.48	30.74	2.00	0.00	0.43	0.00	33.55	31.88	2.00	0.00	0.43	0.00
33.61	33.34	2.00	0.00	0.43	0.00	33.70	34.23	2.00	0.00	0.43	0.00
33.73	34.68	2.00	0.00	0.43	0.00	33.80	34.89	2.00	0.00	0.43	0.00
33.87	35.02	2.00	0.00	0.43	0.00	33.93	34.83	2.00	0.00	0.42	0.00
34.00	34.49	2.00	0.00	0.42	0.00	34.07	33.15	2.00	0.00	0.42	0.00
34.15	31.34	2.00	0.00	0.42	0.00	34.22	30.09	2.00	0.00	0.42	0.00
34.28	29.61	2.00	0.00	0.42	0.00	34.36	30.04	2.00	0.00	0.42	0.00
34.42	30.17	2.00	0.00	0.42	0.00	34.46	30.00	2.00	0.00	0.42	0.00
34.53	29.36	2.00	0.00	0.41	0.00	34.60	29.26	2.00	0.00	0.41	0.00
34.67	28.40	2.00	0.00	0.41	0.00	34.73	28.46	2.00	0.00	0.41	0.00
34.78	28.68	2.00	0.00	0.41	0.00	34.86	26.42	2.00	0.00	0.41	0.00
34.92	31.30	2.00	0.00	0.41	0.00	34.99	31.50	2.00	0.00	0.41	0.00
35.06	30.64	2.00	0.00	0.41	0.00	35.14	28.85	2.00	0.00	0.40	0.00
35.17	27.78	2.00	0.00	0.40	0.00	35.25	26.16	2.00	0.00	0.40	0.00
35.31	25.00	2.00	0.00	0.40	0.00	35.38	25.36	2.00	0.00	0.40	0.00
35.46	25.86	2.00	0.00	0.40	0.00	35.53	26.37	2.00	0.00	0.40	0.00
35.60	25.52	2.00	0.00	0.40	0.00	35.66	24.52	2.00	0.00	0.40	0.00
35.71	23.83	2.00	0.00	0.39	0.00	35.78	24.12	2.00	0.00	0.39	0.00
35.85	23.57	2.00	0.00	0.39	0.00	35.92	22.43	2.00	0.00	0.39	0.00
35.98	21.74	2.00	0.00	0.39	0.00	36.05	21.95	2.00	0.00	0.39	0.00
36.09	22.09	2.00	0.00	0.39	0.00	36.16	22.15	2.00	0.00	0.39	0.00
36.24	22.58	2.00	0.00	0.39	0.00	36.30	23.69	2.00	0.00	0.38	0.00
36.37	24.87	2.00	0.00	0.38	0.00	36.44	25.45	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.48	25.29	2.00	0.00	0.38	0.00	36.55	24.82	2.00	0.00	0.38	0.00
36.62	23.91	2.00	0.00	0.38	0.00	36.69	22.62	2.00	0.00	0.38	0.00
36.77	22.64	2.00	0.00	0.38	0.00	36.83	22.63	2.00	0.00	0.38	0.00
36.91	22.65	2.00	0.00	0.37	0.00	36.94	23.53	2.00	0.00	0.37	0.00
37.01	25.37	2.00	0.00	0.37	0.00	37.08	26.55	2.00	0.00	0.37	0.00
37.15	26.61	2.00	0.00	0.37	0.00	37.23	27.04	2.00	0.00	0.37	0.00
37.30	28.82	2.00	0.00	0.37	0.00	37.37	32.77	2.00	0.00	0.37	0.00
37.41	96.27	2.00	0.00	0.37	0.00	37.48	104.13	2.00	0.00	0.36	0.00
37.55	116.63	2.00	0.00	0.36	0.00	37.62	126.82	2.00	0.00	0.36	0.00
37.70	130.85	2.00	0.00	0.36	0.00	37.74	128.37	2.00	0.00	0.36	0.00
37.80	135.33	0.47	0.84	0.36	0.01	37.87	142.43	0.54	0.79	0.36	0.01
37.95	149.04	0.64	0.75	0.36	0.01	38.00	142.34	0.54	0.78	0.36	0.00
38.09	160.63	0.89	0.38	0.35	0.00	38.15	160.70	0.89	0.38	0.35	0.00
38.20	162.62	0.94	0.33	0.35	0.00	38.27	163.52	0.97	0.31	0.35	0.00
38.33	162.87	0.95	0.32	0.35	0.00	38.40	160.97	0.90	0.37	0.35	0.00
38.47	160.19	0.87	0.38	0.35	0.00	38.54	165.06	1.03	0.27	0.35	0.00
38.58	169.17	1.19	0.19	0.35	0.00	38.66	176.19	1.56	0.08	0.34	0.00
38.73	178.99	1.76	0.04	0.34	0.00	38.80	177.56	1.65	0.06	0.34	0.00
38.87	171.83	1.31	0.14	0.34	0.00	38.91	167.61	1.12	0.21	0.34	0.00
38.98	158.24	0.82	0.43	0.34	0.00	39.06	145.29	2.00	0.00	0.34	0.00
39.13	133.32	2.00	0.00	0.34	0.00	39.21	137.64	2.00	0.00	0.34	0.00
39.24	146.88	2.00	0.00	0.33	0.00	39.33	144.15	2.00	0.00	0.33	0.00
39.40	151.82	2.00	0.00	0.33	0.00	39.44	158.08	2.00	0.00	0.33	0.00
39.52	156.70	2.00	0.00	0.33	0.00	39.59	131.70	2.00	0.00	0.33	0.00
39.64	108.86	2.00	0.00	0.33	0.00	39.70	36.52	2.00	0.00	0.33	0.00
39.77	30.21	2.00	0.00	0.33	0.00	39.85	29.38	2.00	0.00	0.32	0.00
39.93	29.12	2.00	0.00	0.32	0.00	39.97	28.44	2.00	0.00	0.32	0.00
40.05	26.95	2.00	0.00	0.32	0.00	40.12	25.84	2.00	0.00	0.32	0.00
40.20	25.61	2.00	0.00	0.32	0.00	40.25	25.45	2.00	0.00	0.32	0.00
40.32	25.51	2.00	0.00	0.32	0.00	40.40	24.84	2.00	0.00	0.32	0.00
40.44	24.62	2.00	0.00	0.31	0.00	40.51	24.32	2.00	0.00	0.31	0.00
40.59	23.94	2.00	0.00	0.31	0.00	40.62	23.86	2.00	0.00	0.31	0.00
40.70	23.42	2.00	0.00	0.31	0.00	40.78	23.18	2.00	0.00	0.31	0.00
40.82	23.03	2.00	0.00	0.31	0.00	40.89	22.80	2.00	0.00	0.31	0.00
40.97	22.49	2.00	0.00	0.31	0.00	41.01	22.41	2.00	0.00	0.30	0.00
41.08	22.62	2.00	0.00	0.30	0.00	41.17	23.09	2.00	0.00	0.30	0.00
41.24	23.65	2.00	0.00	0.30	0.00	41.27	23.43	2.00	0.00	0.30	0.00
41.36	22.70	2.00	0.00	0.30	0.00	41.43	22.10	2.00	0.00	0.30	0.00
41.47	22.09	2.00	0.00	0.30	0.00	41.55	22.08	2.00	0.00	0.30	0.00
41.62	21.91	2.00	0.00	0.29	0.00	41.71	23.82	2.00	0.00	0.29	0.00
41.74	23.67	2.00	0.00	0.29	0.00	41.81	22.45	2.00	0.00	0.29	0.00
41.88	21.30	2.00	0.00	0.29	0.00	41.93	20.80	2.00	0.00	0.29	0.00
42.00	20.22	2.00	0.00	0.29	0.00	42.07	19.29	2.00	0.00	0.29	0.00
42.15	19.35	2.00	0.00	0.29	0.00	42.22	19.75	2.00	0.00	0.28	0.00
42.26	19.67	2.00	0.00	0.28	0.00	42.33	19.94	2.00	0.00	0.28	0.00
42.41	22.81	2.00	0.00	0.28	0.00	42.49	26.48	2.00	0.00	0.28	0.00
42.56	26.88	2.00	0.00	0.28	0.00	42.60	26.45	2.00	0.00	0.28	0.00
42.68	25.17	2.00	0.00	0.28	0.00	42.74	23.94	2.00	0.00	0.28	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.80	24.57	2.00	0.00	0.27	0.00	42.86	23.92	2.00	0.00	0.27	0.00
42.93	23.41	2.00	0.00	0.27	0.00	43.00	23.18	2.00	0.00	0.27	0.00
43.06	23.24	2.00	0.00	0.27	0.00	43.13	24.41	2.00	0.00	0.27	0.00
43.20	24.55	2.00	0.00	0.27	0.00	43.26	23.54	2.00	0.00	0.27	0.00
43.34	23.17	2.00	0.00	0.27	0.00	43.40	23.79	2.00	0.00	0.26	0.00
43.44	24.06	2.00	0.00	0.26	0.00	43.54	24.82	2.00	0.00	0.26	0.00
43.57	24.46	2.00	0.00	0.26	0.00	43.65	24.23	2.00	0.00	0.26	0.00
43.73	23.52	2.00	0.00	0.26	0.00	43.80	22.39	2.00	0.00	0.26	0.00
43.84	21.75	2.00	0.00	0.26	0.00	43.91	22.30	2.00	0.00	0.26	0.00
43.97	21.94	2.00	0.00	0.25	0.00	44.04	22.21	2.00	0.00	0.25	0.00
44.12	22.61	2.00	0.00	0.25	0.00	44.19	23.22	2.00	0.00	0.25	0.00
44.24	23.01	2.00	0.00	0.25	0.00	44.31	20.69	2.00	0.00	0.25	0.00
44.39	20.26	2.00	0.00	0.25	0.00	44.43	19.98	2.00	0.00	0.25	0.00
44.50	20.04	2.00	0.00	0.25	0.00	44.59	19.74	2.00	0.00	0.24	0.00
44.62	19.87	2.00	0.00	0.24	0.00	44.70	19.86	2.00	0.00	0.24	0.00
44.77	19.84	2.00	0.00	0.24	0.00	44.82	19.83	2.00	0.00	0.24	0.00
44.88	20.30	2.00	0.00	0.24	0.00	44.95	20.49	2.00	0.00	0.24	0.00
45.02	21.38	2.00	0.00	0.24	0.00	45.08	22.06	2.00	0.00	0.24	0.00
45.15	22.33	2.00	0.00	0.23	0.00	45.22	21.97	2.00	0.00	0.23	0.00
45.28	21.96	2.00	0.00	0.23	0.00	45.36	22.49	2.00	0.00	0.23	0.00
45.43	22.69	2.00	0.00	0.23	0.00	45.50	22.33	2.00	0.00	0.23	0.00
45.56	21.35	2.00	0.00	0.23	0.00	45.63	20.23	2.00	0.00	0.23	0.00
45.71	20.22	2.00	0.00	0.23	0.00	45.75	20.21	2.00	0.00	0.22	0.00
45.81	22.40	2.00	0.00	0.22	0.00	45.89	23.69	2.00	0.00	0.22	0.00
45.97	24.16	2.00	0.00	0.22	0.00	46.01	23.74	2.00	0.00	0.22	0.00
46.08	22.42	2.00	0.00	0.22	0.00	46.16	20.69	2.00	0.00	0.22	0.00
46.20	19.87	2.00	0.00	0.22	0.00	46.27	18.69	2.00	0.00	0.22	0.00
46.35	17.93	2.00	0.00	0.21	0.00	46.42	18.63	2.00	0.00	0.21	0.00
46.50	17.96	2.00	0.00	0.21	0.00	46.54	18.57	2.00	0.00	0.21	0.00
46.61	19.03	2.00	0.00	0.21	0.00	46.69	18.61	2.00	0.00	0.21	0.00
46.72	18.26	2.00	0.00	0.21	0.00	46.81	18.52	2.00	0.00	0.21	0.00
46.88	19.26	2.00	0.00	0.21	0.00	46.94	19.73	2.00	0.00	0.20	0.00
47.02	19.44	2.00	0.00	0.20	0.00	47.07	19.23	2.00	0.00	0.20	0.00
47.16	19.08	2.00	0.00	0.20	0.00	47.20	19.28	2.00	0.00	0.20	0.00
47.29	19.74	2.00	0.00	0.20	0.00	47.33	19.60	2.00	0.00	0.20	0.00
47.42	20.12	2.00	0.00	0.20	0.00	47.46	22.15	2.00	0.00	0.20	0.00
47.51	24.32	2.00	0.00	0.19	0.00	47.60	26.02	2.00	0.00	0.19	0.00
47.65	26.62	2.00	0.00	0.19	0.00	47.74	26.87	2.00	0.00	0.19	0.00
47.78	27.69	2.00	0.00	0.19	0.00	47.87	29.46	2.00	0.00	0.19	0.00
47.91	30.06	2.00	0.00	0.19	0.00	48.00	30.94	2.00	0.00	0.19	0.00
48.06	30.15	2.00	0.00	0.19	0.00	48.10	30.01	2.00	0.00	0.18	0.00
48.20	29.36	2.00	0.00	0.18	0.00	48.23	29.42	2.00	0.00	0.18	0.00
48.33	29.67	2.00	0.00	0.18	0.00	48.36	29.72	2.00	0.00	0.18	0.00
48.43	29.70	2.00	0.00	0.18	0.00	48.49	29.34	2.00	0.00	0.18	0.00
48.56	29.46	2.00	0.00	0.18	0.00	48.62	29.30	2.00	0.00	0.18	0.00
48.69	28.88	2.00	0.00	0.17	0.00	48.76	28.65	2.00	0.00	0.17	0.00
48.82	28.77	2.00	0.00	0.17	0.00	48.89	28.89	2.00	0.00	0.17	0.00
48.95	29.08	2.00	0.00	0.17	0.00	49.02	29.06	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.08	29.59	2.00	0.00	0.17	0.00	49.15	29.64	2.00	0.00	0.17	0.00
49.22	29.56	2.00	0.00	0.17	0.00	49.31	29.53	2.00	0.00	0.16	0.00
49.35	29.86	2.00	0.00	0.16	0.00	49.41	30.47	2.00	0.00	0.16	0.00
49.48	30.46	2.00	0.00	0.16	0.00	49.55	29.22	2.00	0.00	0.16	0.00
49.62	28.12	2.00	0.00	0.16	0.00	49.69	26.94	2.00	0.00	0.16	0.00
49.74	27.04	2.00	0.00	0.16	0.00	49.81	27.11	2.00	0.00	0.16	0.00
49.88	27.03	2.00	0.00	0.15	0.00	49.95	26.81	2.00	0.00	0.15	0.00
50.02	26.92	2.00	0.00	0.15	0.00	50.07	27.31	2.00	0.00	0.15	0.00
50.14	28.25	2.00	0.00	0.15	0.00	50.22	28.23	2.00	0.00	0.15	0.00
50.29	28.41	2.00	0.00	0.15	0.00	50.36	27.79	2.00	0.00	0.15	0.00
50.40	28.39	2.00	0.00	0.15	0.00	50.48	27.49	2.00	0.00	0.14	0.00
50.55	28.35	2.00	0.00	0.14	0.00	50.62	28.74	2.00	0.00	0.14	0.00
50.66	28.93	2.00	0.00	0.14	0.00	50.73	28.30	2.00	0.00	0.14	0.00
50.79	28.96	2.00	0.00	0.14	0.00	50.87	28.47	2.00	0.00	0.14	0.00
50.92	28.46	2.00	0.00	0.14	0.00	51.02	28.44	2.00	0.00	0.14	0.00
51.05	28.77	2.00	0.00	0.13	0.00	51.12	29.15	2.00	0.00	0.13	0.00
51.18	30.01	2.00	0.00	0.13	0.00	51.25	30.33	2.00	0.00	0.13	0.00
51.32	30.11	2.00	0.00	0.13	0.00	51.40	30.15	2.00	0.00	0.13	0.00
51.46	31.01	2.00	0.00	0.13	0.00	51.53	32.41	2.00	0.00	0.13	0.00
51.60	34.36	2.00	0.00	0.13	0.00	51.67	35.69	2.00	0.00	0.12	0.00
51.73	36.01	2.00	0.00	0.12	0.00	51.81	35.18	2.00	0.00	0.12	0.00
51.84	35.10	2.00	0.00	0.12	0.00	51.91	35.49	2.00	0.00	0.12	0.00
51.98	35.34	2.00	0.00	0.12	0.00	52.05	34.03	2.00	0.00	0.12	0.00
52.11	33.34	2.00	0.00	0.12	0.00	52.19	32.50	2.00	0.00	0.12	0.00
52.25	32.08	2.00	0.00	0.11	0.00	52.32	31.79	2.00	0.00	0.11	0.00
52.39	31.29	2.00	0.00	0.11	0.00	52.43	31.35	2.00	0.00	0.11	0.00
52.50	31.39	2.00	0.00	0.11	0.00	52.56	31.37	2.00	0.00	0.11	0.00
52.64	31.35	2.00	0.00	0.11	0.00	52.71	32.00	2.00	0.00	0.11	0.00
52.78	32.58	2.00	0.00	0.11	0.00	52.85	33.10	2.00	0.00	0.10	0.00
52.91	33.97	2.00	0.00	0.10	0.00	52.99	35.36	2.00	0.00	0.10	0.00
53.03	97.31	0.29	0.33	0.10	0.00	53.09	98.42	0.29	0.33	0.10	0.00
53.15	97.91	0.29	0.33	0.10	0.00	53.23	100.74	0.30	0.31	0.10	0.00
53.30	99.67	0.29	0.31	0.10	0.00	53.39	98.27	0.29	0.31	0.10	0.00
53.45	97.69	0.29	0.31	0.09	0.00	53.48	97.52	0.29	0.31	0.09	0.00
53.55	97.20	0.29	0.31	0.09	0.00	53.61	98.44	0.29	0.30	0.09	0.00
53.68	97.38	0.29	0.30	0.09	0.00	53.77	97.50	0.29	0.29	0.09	0.00
53.83	96.96	0.29	0.29	0.09	0.00	53.90	96.07	0.28	0.29	0.09	0.00
53.96	95.82	0.28	0.29	0.09	0.00	54.03	96.23	0.28	0.28	0.08	0.00
54.07	96.49	0.29	0.28	0.08	0.00	54.14	97.78	0.29	0.27	0.08	0.00
54.21	98.86	0.29	0.26	0.08	0.00	54.28	99.25	0.29	0.26	0.08	0.00
54.35	98.85	0.29	0.26	0.08	0.00	54.42	98.38	0.29	0.25	0.08	0.00
54.49	98.15	0.29	0.25	0.08	0.00	54.53	98.05	0.29	0.25	0.08	0.00
54.60	98.27	0.29	0.24	0.07	0.00	54.70	98.73	0.29	0.24	0.07	0.00
54.73	98.68	0.29	0.24	0.07	0.00	54.80	98.78	0.29	0.23	0.07	0.00
54.88	100.35	0.30	0.22	0.07	0.00	54.94	100.62	0.30	0.22	0.07	0.00
55.02	99.51	0.30	0.22	0.07	0.00	55.08	100.02	0.30	0.21	0.07	0.00
55.15	99.46	0.30	0.21	0.07	0.00	55.19	99.12	0.30	0.21	0.06	0.00
55.26	100.17	0.30	0.20	0.06	0.00	55.33	100.13	0.30	0.20	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.39	99.50	0.30	0.20	0.06	0.00	55.45	99.47	0.30	0.19	0.06	0.00
55.52	37.56	2.00	0.00	0.06	0.00	55.58	37.08	2.00	0.00	0.06	0.00
55.65	36.27	2.00	0.00	0.06	0.00	55.71	35.85	2.00	0.00	0.06	0.00
55.81	36.55	2.00	0.00	0.05	0.00	55.84	36.67	2.00	0.00	0.05	0.00
55.94	36.57	2.00	0.00	0.05	0.00	56.01	36.09	2.00	0.00	0.05	0.00
56.04	35.49	2.00	0.00	0.05	0.00	56.11	35.01	2.00	0.00	0.05	0.00
56.18	34.99	2.00	0.00	0.05	0.00	56.25	34.97	2.00	0.00	0.05	0.00
56.32	34.82	2.00	0.00	0.05	0.00	56.38	34.27	2.00	0.00	0.04	0.00
56.45	34.12	2.00	0.00	0.04	0.00	56.50	33.98	2.00	0.00	0.04	0.00
56.58	33.56	2.00	0.00	0.04	0.00	56.64	33.55	2.00	0.00	0.04	0.00
56.72	32.72	2.00	0.00	0.04	0.00	56.79	32.77	2.00	0.00	0.04	0.00
56.83	32.89	2.00	0.00	0.04	0.00	56.89	33.01	2.00	0.00	0.04	0.00
56.98	33.12	2.00	0.00	0.03	0.00	57.03	33.04	2.00	0.00	0.03	0.00
57.09	33.22	2.00	0.00	0.03	0.00	57.18	33.54	2.00	0.00	0.03	0.00
57.24	33.52	2.00	0.00	0.03	0.00	57.29	33.44	2.00	0.00	0.03	0.00
57.37	33.88	2.00	0.00	0.03	0.00	57.43	33.60	2.00	0.00	0.03	0.00
57.50	34.17	2.00	0.00	0.03	0.00	57.56	34.16	2.00	0.00	0.02	0.00
57.62	33.62	2.00	0.00	0.02	0.00	57.69	33.41	2.00	0.00	0.02	0.00
57.75	33.27	2.00	0.00	0.02	0.00	57.82	33.11	2.00	0.00	0.02	0.00
57.88	32.90	2.00	0.00	0.02	0.00	57.94	32.69	2.00	0.00	0.02	0.00
58.04	31.88	2.00	0.00	0.02	0.00	58.10	31.93	2.00	0.00	0.02	0.00
58.17	31.85	2.00	0.00	0.01	0.00	58.23	31.83	2.00	0.00	0.01	0.00
58.29	31.62	2.00	0.00	0.01	0.00	58.36	30.96	2.00	0.00	0.01	0.00
58.42	30.56	2.00	0.00	0.01	0.00	58.48	30.09	2.00	0.00	0.01	0.00
58.53	29.98	2.00	0.00	0.01	0.00	58.61	29.86	2.00	0.00	0.01	0.00
58.67	29.53	2.00	0.00	0.01	0.00	58.73	29.06	2.00	0.00	0.00	0.00
58.79	29.37	2.00	0.00	0.00	0.00	58.89	29.34	2.00	0.00	0.00	0.00
58.95	29.30	2.00	0.00	0.00	0.00	58.99	29.13	2.00	0.00	0.00	0.00
59.06	29.25	2.00	0.00	0.00	0.00	59.12	28.92	2.00	0.00	0.00	0.00
59.19	28.21	2.00	0.00	0.00	0.00	59.27	27.62	2.00	0.00	0.00	0.00
59.34	27.16	2.00	0.00	0.00	0.00	59.41	27.03	2.00	0.00	0.00	0.00
59.46	26.95	2.00	0.00	0.00	0.00	59.54	26.74	2.00	0.00	0.00	0.00
59.62	26.47	2.00	0.00	0.00	0.00	59.66	26.21	2.00	0.00	0.00	0.00
59.74	26.01	2.00	0.00	0.00	0.00	59.79	25.75	2.00	0.00	0.00	0.00
59.87	25.95	2.00	0.00	0.00	0.00	59.91	25.60	2.00	0.00	0.00	0.00
59.98	25.90	2.00	0.00	0.00	0.00	60.06	26.32	2.00	0.00	0.00	0.00
60.12	27.38	2.00	0.00	0.00	0.00	60.18	27.11	2.00	0.00	0.00	0.00
60.25	26.72	2.00	0.00	0.00	0.00	60.31	26.84	2.00	0.00	0.00	0.00
60.38	26.82	2.00	0.00	0.00	0.00	60.44	26.81	2.00	0.00	0.00	0.00
60.50	27.43	2.00	0.00	0.00	0.00	60.57	27.67	2.00	0.00	0.00	0.00
60.63	27.91	2.00	0.00	0.00	0.00	60.70	27.89	2.00	0.00	0.00	0.00
60.77	27.75	2.00	0.00	0.00	0.00	60.85	27.92	2.00	0.00	0.00	0.00
60.92	27.40	2.00	0.00	0.00	0.00	60.98	27.14	2.00	0.00	0.00	0.00
61.06	26.81	2.00	0.00	0.00	0.00	61.10	26.61	2.00	0.00	0.00	0.00
61.16	26.60	2.00	0.00	0.00	0.00	61.24	26.58	2.00	0.00	0.00	0.00
61.30	26.57	2.00	0.00	0.00	0.00	61.39	26.81	2.00	0.00	0.00	0.00
61.42	26.80	2.00	0.00	0.00	0.00	61.49	26.60	2.00	0.00	0.00	0.00
61.56	26.62	2.00	0.00	0.00	0.00	61.63	26.61	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.70	26.62	2.00	0.00	0.00	0.00	61.78	26.98	2.00	0.00	0.00	0.00
61.81	26.97	2.00	0.00	0.00	0.00	61.89	26.95	2.00	0.00	0.00	0.00
61.94	26.94	2.00	0.00	0.00	0.00	62.04	26.92	2.00	0.00	0.00	0.00
62.10	26.66	2.00	0.00	0.00	0.00	62.18	26.84	2.00	0.00	0.00	0.00
62.22	26.77	2.00	0.00	0.00	0.00	62.29	26.33	2.00	0.00	0.00	0.00
62.36	25.52	2.00	0.00	0.00	0.00	62.42	23.83	2.00	0.00	0.00	0.00
62.47	24.88	2.00	0.00	0.00	0.00	62.56	23.99	2.00	0.00	0.00	0.00
62.61	23.98	2.00	0.00	0.00	0.00	62.69	23.97	2.00	0.00	0.00	0.00
62.76	23.89	2.00	0.00	0.00	0.00	62.80	23.76	2.00	0.00	0.00	0.00
62.87	23.69	2.00	0.00	0.00	0.00	62.95	23.55	2.00	0.00	0.00	0.00
63.01	23.42	2.00	0.00	0.00	0.00	63.08	23.35	2.00	0.00	0.00	0.00
63.12	23.22	2.00	0.00	0.00	0.00	63.19	23.08	2.00	0.00	0.00	0.00
63.27	22.52	2.00	0.00	0.00	0.00	63.34	21.60	2.00	0.00	0.00	0.00
63.42	20.61	2.00	0.00	0.00	0.00	63.45	20.31	2.00	0.00	0.00	0.00
63.52	19.46	2.00	0.00	0.00	0.00	63.59	18.19	2.00	0.00	0.00	0.00
63.67	16.93	2.00	0.00	0.00	0.00	63.74	15.60	2.00	0.00	0.00	0.00
63.81	14.59	2.00	0.00	0.00	0.00	63.85	14.29	2.00	0.00	0.00	0.00
63.93	13.70	2.00	0.00	0.00	0.00	64.00	13.51	2.00	0.00	0.00	0.00
64.06	13.33	2.00	0.00	0.00	0.00	64.14	13.15	2.00	0.00	0.00	0.00
64.18	13.09	2.00	0.00	0.00	0.00	64.25	13.20	2.00	0.00	0.00	0.00
64.31	11.62	2.00	0.00	0.00	0.00	64.40	14.12	2.00	0.00	0.00	0.00
64.46	14.59	2.00	0.00	0.00	0.00	64.53	14.88	2.00	0.00	0.00	0.00
64.59	15.22	2.00	0.00	0.00	0.00	64.65	16.46	2.00	0.00	0.00	0.00
64.72	17.51	2.00	0.00	0.00	0.00	64.78	18.09	2.00	0.00	0.00	0.00
64.86	19.04	2.00	0.00	0.00	0.00	64.93	20.22	2.00	0.00	0.00	0.00
64.97	20.64	2.00	0.00	0.00	0.00	65.04	21.53	2.00	0.00	0.00	0.00
65.11	22.60	2.00	0.00	0.00	0.00	65.19	23.98	2.00	0.00	0.00	0.00
65.23	24.70	2.00	0.00	0.00	0.00	65.29	26.27	2.00	0.00	0.00	0.00
65.37	28.28	2.00	0.00	0.00	0.00	65.44	29.68	2.00	0.00	0.00	0.00
65.51	30.03	2.00	0.00	0.00	0.00	65.59	30.27	2.00	0.00	0.00	0.00
65.65	30.07	2.00	0.00	0.00	0.00	65.69	30.20	2.00	0.00	0.00	0.00
65.77	29.94	2.00	0.00	0.00	0.00	65.83	30.30	2.00	0.00	0.00	0.00
65.89	29.91	2.00	0.00	0.00	0.00	65.95	29.90	2.00	0.00	0.00	0.00
66.01	29.57	2.00	0.00	0.00	0.00	66.08	30.04	2.00	0.00	0.00	0.00
66.18	30.64	2.00	0.00	0.00	0.00	66.21	31.06	2.00	0.00	0.00	0.00
66.29	30.80	2.00	0.00	0.00	0.00	66.37	30.85	2.00	0.00	0.00	0.00
66.43	31.64	2.00	0.00	0.00	0.00	66.50	32.96	2.00	0.00	0.00	0.00
66.54	33.45	2.00	0.00	0.00	0.00	66.62	34.43	2.00	0.00	0.00	0.00
66.69	35.85	2.00	0.00	0.00	0.00	66.75	36.98	2.00	0.00	0.00	0.00
66.83	36.39	2.00	0.00	0.00	0.00	66.87	36.20	2.00	0.00	0.00	0.00
66.94	36.12	2.00	0.00	0.00	0.00	67.04	35.66	2.00	0.00	0.00	0.00
67.08	35.41	2.00	0.00	0.00	0.00	67.15	34.45	2.00	0.00	0.00	0.00
67.22	32.88	2.00	0.00	0.00	0.00	67.26	32.13	2.00	0.00	0.00	0.00
67.33	31.11	2.00	0.00	0.00	0.00	67.40	30.66	2.00	0.00	0.00	0.00
67.47	31.19	2.00	0.00	0.00	0.00	67.55	32.73	2.00	0.00	0.00	0.00
67.62	33.64	2.00	0.00	0.00	0.00	67.68	34.30	2.00	0.00	0.00	0.00
67.72	34.54	2.00	0.00	0.00	0.00	67.80	34.71	2.00	0.00	0.00	0.00
67.87	34.19	2.00	0.00	0.00	0.00	67.94	34.58	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
67.99	33.91	2.00	0.00	0.00	0.00	68.06	34.46	2.00	0.00	0.00	0.00
68.12	35.55	2.00	0.00	0.00	0.00	68.18	36.71	2.00	0.00	0.00	0.00
68.25	37.32	2.00	0.00	0.00	0.00	68.34	37.73	2.00	0.00	0.00	0.00
68.40	37.79	2.00	0.00	0.00	0.00	68.47	37.35	2.00	0.00	0.00	0.00
68.52	36.72	2.00	0.00	0.00	0.00	68.57	35.22	2.00	0.00	0.00	0.00
68.66	33.47	2.00	0.00	0.00	0.00	68.73	32.30	2.00	0.00	0.00	0.00
68.79	31.35	2.00	0.00	0.00	0.00	68.84	30.31	2.00	0.00	0.00	0.00
68.90	29.21	2.00	0.00	0.00	0.00	68.98	25.26	2.00	0.00	0.00	0.00
69.05	25.61	2.00	0.00	0.00	0.00	69.10	24.52	2.00	0.00	0.00	0.00
69.18	22.90	2.00	0.00	0.00	0.00	69.24	21.35	2.00	0.00	0.00	0.00
69.30	19.05	2.00	0.00	0.00	0.00	69.36	17.36	2.00	0.00	0.00	0.00
69.43	16.09	2.00	0.00	0.00	0.00	69.49	15.28	2.00	0.00	0.00	0.00
69.56	15.10	2.00	0.00	0.00	0.00	69.62	15.21	2.00	0.00	0.00	0.00
69.69	15.43	2.00	0.00	0.00	0.00	69.77	15.31	2.00	0.00	0.00	0.00
69.83	15.88	2.00	0.00	0.00	0.00	69.89	17.35	2.00	0.00	0.00	0.00
69.96	18.33	2.00	0.00	0.00	0.00	70.03	19.25	2.00	0.00	0.00	0.00
70.10	19.12	2.00	0.00	0.00	0.00	70.17	19.20	2.00	0.00	0.00	0.00
70.23	19.16	2.00	0.00	0.00	0.00	70.30	19.09	2.00	0.00	0.00	0.00
70.37	19.49	2.00	0.00	0.00	0.00	70.42	19.31	2.00	0.00	0.00	0.00
70.48	19.83	2.00	0.00	0.00	0.00	70.54	19.88	2.00	0.00	0.00	0.00
70.61	20.10	2.00	0.00	0.00	0.00	70.68	20.38	2.00	0.00	0.00	0.00
70.74	20.37	2.00	0.00	0.00	0.00	70.81	20.48	2.00	0.00	0.00	0.00
70.88	20.81	2.00	0.00	0.00	0.00	70.95	20.17	2.00	0.00	0.00	0.00
71.00	21.03	2.00	0.00	0.00	0.00	71.08	21.13	2.00	0.00	0.00	0.00
71.15	20.77	2.00	0.00	0.00	0.00	71.22	20.42	2.00	0.00	0.00	0.00
71.30	20.87	2.00	0.00	0.00	0.00	71.35	21.91	2.00	0.00	0.00	0.00
71.42	22.72	2.00	0.00	0.00	0.00	71.49	23.17	2.00	0.00	0.00	0.00
71.53	22.99	2.00	0.00	0.00	0.00	71.59	22.92	2.00	0.00	0.00	0.00
71.69	23.20	2.00	0.00	0.00	0.00	71.76	23.54	2.00	0.00	0.00	0.00
71.79	23.71	2.00	0.00	0.00	0.00	71.86	24.75	2.00	0.00	0.00	0.00
71.93	25.86	2.00	0.00	0.00	0.00	72.00	27.38	2.00	0.00	0.00	0.00
72.06	29.09	2.00	0.00	0.00	0.00	72.13	32.11	2.00	0.00	0.00	0.00
72.21	32.45	2.00	0.00	0.00	0.00	72.27	33.04	2.00	0.00	0.00	0.00
72.33	33.09	2.00	0.00	0.00	0.00	72.40	32.84	2.00	0.00	0.00	0.00
72.46	32.28	2.00	0.00	0.00	0.00	72.53	31.61	2.00	0.00	0.00	0.00
72.60	30.19	2.00	0.00	0.00	0.00	72.66	31.73	2.00	0.00	0.00	0.00
72.73	30.93	2.00	0.00	0.00	0.00	72.79	31.84	2.00	0.00	0.00	0.00
72.86	33.56	2.00	0.00	0.00	0.00	72.93	34.93	2.00	0.00	0.00	0.00
72.97	35.03	2.00	0.00	0.00	0.00	73.03	36.30	2.00	0.00	0.00	0.00
73.13	37.74	2.00	0.00	0.00	0.00	73.17	38.16	2.00	0.00	0.00	0.00
73.23	38.34	2.00	0.00	0.00	0.00	73.33	37.35	2.00	0.00	0.00	0.00
73.39	36.25	2.00	0.00	0.00	0.00	73.44	35.03	2.00	0.00	0.00	0.00
73.51	33.82	2.00	0.00	0.00	0.00	73.57	32.37	2.00	0.00	0.00	0.00
73.63	30.42	2.00	0.00	0.00	0.00	73.70	28.14	2.00	0.00	0.00	0.00
73.76	26.18	2.00	0.00	0.00	0.00	73.83	24.29	2.00	0.00	0.00	0.00
73.91	22.19	2.00	0.00	0.00	0.00	73.97	21.67	2.00	0.00	0.00	0.00
74.02	21.02	2.00	0.00	0.00	0.00	74.09	20.27	2.00	0.00	0.00	0.00
74.17	19.70	2.00	0.00	0.00	0.00	74.23	19.97	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.28	20.13	2.00	0.00	0.00	0.00	74.36	20.07	2.00	0.00	0.00	0.00
74.42	20.23	2.00	0.00	0.00	0.00	74.50	20.73	2.00	0.00	0.00	0.00
74.55	21.64	2.00	0.00	0.00	0.00	74.62	21.91	2.00	0.00	0.00	0.00
74.68	22.31	2.00	0.00	0.00	0.00	74.76	22.24	2.00	0.00	0.00	0.00
74.81	22.74	2.00	0.00	0.00	0.00	74.90	23.37	2.00	0.00	0.00	0.00
74.96	23.41	2.00	0.00	0.00	0.00	75.00	23.41	2.00	0.00	0.00	0.00
75.08	23.39	2.00	0.00	0.00	0.00	75.14	22.63	2.00	0.00	0.00	0.00
75.20	22.63	2.00	0.00	0.00	0.00	75.26	22.73	2.00	0.00	0.00	0.00
75.36	22.58	2.00	0.00	0.00	0.00	75.42	22.53	2.00	0.00	0.00	0.00
75.49	22.87	2.00	0.00	0.00	0.00	75.54	23.04	2.00	0.00	0.00	0.00
75.61	22.28	2.00	0.00	0.00	0.00	75.67	22.27	2.00	0.00	0.00	0.00
75.73	24.27	2.00	0.00	0.00	0.00	75.80	24.71	2.00	0.00	0.00	0.00
75.86	24.47	2.00	0.00	0.00	0.00	75.92	23.89	2.00	0.00	0.00	0.00
75.98	23.92	2.00	0.00	0.00	0.00	76.08	30.00	2.00	0.00	0.00	0.00
76.14	33.65	2.00	0.00	0.00	0.00	76.19	36.43	2.00	0.00	0.00	0.00
76.25	39.00	2.00	0.00	0.00	0.00	76.32	41.46	2.00	0.00	0.00	0.00
76.38	42.74	2.00	0.00	0.00	0.00	76.45	42.67	2.00	0.00	0.00	0.00
76.51	42.23	2.00	0.00	0.00	0.00	76.60	42.83	2.00	0.00	0.00	0.00
76.66	42.94	2.00	0.00	0.00	0.00	76.72	43.16	2.00	0.00	0.00	0.00
76.80	43.94	2.00	0.00	0.00	0.00	76.85	43.01	2.00	0.00	0.00	0.00
76.90	40.64	2.00	0.00	0.00	0.00	76.98	42.59	2.00	0.00	0.00	0.00
77.05	42.19	2.00	0.00	0.00	0.00	77.12	41.98	2.00	0.00	0.00	0.00
77.19	42.01	2.00	0.00	0.00	0.00	77.26	43.33	2.00	0.00	0.00	0.00
77.33	45.13	2.00	0.00	0.00	0.00	77.37	46.25	2.00	0.00	0.00	0.00
77.43	47.46	2.00	0.00	0.00	0.00	77.50	113.38	0.39	0.00	0.00	0.00
77.56	113.61	0.40	0.00	0.00	0.00	77.63	114.49	0.40	0.00	0.00	0.00
77.70	48.65	2.00	0.00	0.00	0.00	77.77	49.35	2.00	0.00	0.00	0.00
77.84	48.59	2.00	0.00	0.00	0.00	77.91	49.33	2.00	0.00	0.00	0.00
77.98	50.31	2.00	0.00	0.00	0.00	78.04	51.36	2.00	0.00	0.00	0.00
78.10	53.24	2.00	0.00	0.00	0.00	78.16	54.47	2.00	0.00	0.00	0.00
78.24	56.42	2.00	0.00	0.00	0.00	78.30	125.65	0.47	0.00	0.00	0.00
78.37	127.51	0.49	0.00	0.00	0.00	78.43	129.96	0.51	0.00	0.00	0.00
78.49	130.84	0.52	0.00	0.00	0.00	78.56	132.54	0.53	0.00	0.00	0.00
78.62	133.41	0.54	0.00	0.00	0.00	78.69	135.22	0.56	0.00	0.00	0.00
78.76	136.58	0.57	0.00	0.00	0.00	78.82	136.77	0.58	0.00	0.00	0.00
78.88	137.90	0.59	0.00	0.00	0.00	78.94	138.89	0.60	0.00	0.00	0.00
79.01	139.88	0.61	0.00	0.00	0.00	79.10	139.98	0.62	0.00	0.00	0.00
79.14	141.59	0.64	0.00	0.00	0.00	79.22	142.36	0.65	0.00	0.00	0.00
79.29	141.21	0.63	0.00	0.00	0.00	79.33	141.65	0.64	0.00	0.00	0.00
79.41	139.88	0.62	0.00	0.00	0.00	79.49	139.15	0.61	0.00	0.00	0.00
79.54	138.80	0.60	0.00	0.00	0.00	79.62	137.84	0.59	0.00	0.00	0.00
79.68	137.13	0.58	0.00	0.00	0.00	79.73	136.31	0.57	0.00	0.00	0.00
79.81	135.88	0.57	0.00	0.00	0.00	79.87	135.73	0.57	0.00	0.00	0.00
79.93	135.01	0.56	0.00	0.00	0.00	80.01	62.01	2.00	0.00	0.00	0.00
80.06	59.48	2.00	0.00	0.00	0.00	80.13	57.60	2.00	0.00	0.00	0.00
80.19	57.17	2.00	0.00	0.00	0.00	80.25	56.73	2.00	0.00	0.00	0.00
80.32	55.05	2.00	0.00	0.00	0.00	80.39	53.37	2.00	0.00	0.00	0.00
80.46	53.28	2.00	0.00	0.00	0.00	80.52	52.49	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.59	53.97	2.00	0.00	0.00	0.00	80.66	53.99	2.00	0.00	0.00	0.00
80.73	53.85	2.00	0.00	0.00	0.00	80.79	51.03	2.00	0.00	0.00	0.00
80.86	47.11	2.00	0.00	0.00	0.00	80.92	44.85	2.00	0.00	0.00	0.00
81.00	44.79	2.00	0.00	0.00	0.00	81.07	43.89	2.00	0.00	0.00	0.00
81.13	40.98	2.00	0.00	0.00	0.00	81.19	37.18	2.00	0.00	0.00	0.00
81.24	36.57	2.00	0.00	0.00	0.00	81.30	35.93	2.00	0.00	0.00	0.00
81.40	37.59	2.00	0.00	0.00	0.00	81.45	41.15	2.00	0.00	0.00	0.00
81.50	44.62	2.00	0.00	0.00	0.00	81.59	46.06	2.00	0.00	0.00	0.00
81.65	46.04	2.00	0.00	0.00	0.00	81.70	45.55	2.00	0.00	0.00	0.00
81.77	45.05	2.00	0.00	0.00	0.00	81.85	44.91	2.00	0.00	0.00	0.00
81.91	45.33	2.00	0.00	0.00	0.00	81.97	45.07	2.00	0.00	0.00	0.00
82.05	42.86	2.00	0.00	0.00	0.00	82.10	42.97	2.00	0.00	0.00	0.00
82.16	43.56	2.00	0.00	0.00	0.00	82.22	42.88	2.00	0.00	0.00	0.00
82.30	42.23	2.00	0.00	0.00	0.00	82.36	39.42	2.00	0.00	0.00	0.00
82.42	37.22	2.00	0.00	0.00	0.00	82.51	32.69	2.00	0.00	0.00	0.00
82.55	31.25	2.00	0.00	0.00	0.00	82.64	29.67	2.00	0.00	0.00	0.00
82.71	28.06	2.00	0.00	0.00	0.00	82.76	28.17	2.00	0.00	0.00	0.00
82.82	28.16	2.00	0.00	0.00	0.00	82.88	27.58	2.00	0.00	0.00	0.00
82.96	29.14	2.00	0.00	0.00	0.00	83.02	29.59	2.00	0.00	0.00	0.00
83.08	29.29	2.00	0.00	0.00	0.00	83.14	29.62	2.00	0.00	0.00	0.00
83.22	29.66	2.00	0.00	0.00	0.00	83.28	29.42	2.00	0.00	0.00	0.00
83.35	29.44	2.00	0.00	0.00	0.00	83.41	29.43	2.00	0.00	0.00	0.00
83.47	29.45	2.00	0.00	0.00	0.00	83.53	31.17	2.00	0.00	0.00	0.00
83.60	32.29	2.00	0.00	0.00	0.00	83.68	31.32	2.00	0.00	0.00	0.00
83.74	29.91	2.00	0.00	0.00	0.00	83.80	28.48	2.00	0.00	0.00	0.00
83.88	26.78	2.00	0.00	0.00	0.00	83.94	25.77	2.00	0.00	0.00	0.00
84.01	26.37	2.00	0.00	0.00	0.00	84.06	27.03	2.00	0.00	0.00	0.00
84.12	26.57	2.00	0.00	0.00	0.00	84.20	28.24	2.00	0.00	0.00	0.00
84.25	30.31	2.00	0.00	0.00	0.00	84.35	31.28	2.00	0.00	0.00	0.00
84.41	31.10	2.00	0.00	0.00	0.00	84.45	29.32	2.00	0.00	0.00	0.00
84.53	28.74	2.00	0.00	0.00	0.00	84.60	28.11	2.00	0.00	0.00	0.00
84.67	27.99	2.00	0.00	0.00	0.00	84.72	27.92	2.00	0.00	0.00	0.00
84.79	27.63	2.00	0.00	0.00	0.00	84.85	26.67	2.00	0.00	0.00	0.00
84.92	25.56	2.00	0.00	0.00	0.00	84.97	24.22	2.00	0.00	0.00	0.00
85.05	23.50	2.00	0.00	0.00	0.00	85.11	23.88	2.00	0.00	0.00	0.00
85.18	26.62	2.00	0.00	0.00	0.00	85.24	29.05	2.00	0.00	0.00	0.00
85.31	35.85	2.00	0.00	0.00	0.00	85.37	38.65	2.00	0.00	0.00	0.00
85.44	35.64	2.00	0.00	0.00	0.00	85.50	34.44	2.00	0.00	0.00	0.00
85.56	31.89	2.00	0.00	0.00	0.00	85.63	29.94	2.00	0.00	0.00	0.00
85.71	28.76	2.00	0.00	0.00	0.00	85.79	29.02	2.00	0.00	0.00	0.00
85.84	29.57	2.00	0.00	0.00	0.00	85.90	28.38	2.00	0.00	0.00	0.00
85.97	27.70	2.00	0.00	0.00	0.00	86.03	28.08	2.00	0.00	0.00	0.00
86.09	27.85	2.00	0.00	0.00	0.00	86.16	28.84	2.00	0.00	0.00	0.00
86.23	29.50	2.00	0.00	0.00	0.00	86.29	30.78	2.00	0.00	0.00	0.00
86.36	30.32	2.00	0.00	0.00	0.00	86.43	28.85	2.00	0.00	0.00	0.00
86.49	28.33	2.00	0.00	0.00	0.00	86.55	28.10	2.00	0.00	0.00	0.00
86.63	29.37	2.00	0.00	0.00	0.00	86.68	29.69	2.00	0.00	0.00	0.00
86.77	29.29	2.00	0.00	0.00	0.00	86.82	26.45	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.89	23.60	2.00	0.00	0.00	0.00	86.96	21.60	2.00	0.00	0.00	0.00
87.01	23.66	2.00	0.00	0.00	0.00	87.09	24.99	2.00	0.00	0.00	0.00
87.16	25.00	2.00	0.00	0.00	0.00	87.22	25.02	2.00	0.00	0.00	0.00
87.28	23.12	2.00	0.00	0.00	0.00	87.34	22.19	2.00	0.00	0.00	0.00
87.41	20.74	2.00	0.00	0.00	0.00	87.50	19.99	2.00	0.00	0.00	0.00
87.54	20.09	2.00	0.00	0.00	0.00	87.60	20.51	2.00	0.00	0.00	0.00
87.67	20.39	2.00	0.00	0.00	0.00	87.73	20.86	2.00	0.00	0.00	0.00
87.81	22.40	2.00	0.00	0.00	0.00	87.88	24.54	2.00	0.00	0.00	0.00
87.93	25.40	2.00	0.00	0.00	0.00	88.00	25.01	2.00	0.00	0.00	0.00
88.06	23.43	2.00	0.00	0.00	0.00	88.15	21.55	2.00	0.00	0.00	0.00
88.20	20.48	2.00	0.00	0.00	0.00	88.27	20.48	2.00	0.00	0.00	0.00
88.34	19.63	2.00	0.00	0.00	0.00	88.39	20.54	2.00	0.00	0.00	0.00
88.47	19.09	2.00	0.00	0.00	0.00	88.53	20.60	2.00	0.00	0.00	0.00
88.59	25.14	2.00	0.00	0.00	0.00	88.66	27.96	2.00	0.00	0.00	0.00
88.72	28.39	2.00	0.00	0.00	0.00	88.79	25.11	2.00	0.00	0.00	0.00
88.85	22.25	2.00	0.00	0.00	0.00	88.92	19.14	2.00	0.00	0.00	0.00
88.98	17.84	2.00	0.00	0.00	0.00	89.05	17.00	2.00	0.00	0.00	0.00
89.11	16.79	2.00	0.00	0.00	0.00	89.18	16.68	2.00	0.00	0.00	0.00
89.24	18.06	2.00	0.00	0.00	0.00	89.31	26.00	2.00	0.00	0.00	0.00
89.37	38.30	2.00	0.00	0.00	0.00	89.44	44.55	2.00	0.00	0.00	0.00
89.50	47.50	2.00	0.00	0.00	0.00	89.58	47.42	2.00	0.00	0.00	0.00
89.65	50.89	2.00	0.00	0.00	0.00	89.72	53.85	2.00	0.00	0.00	0.00
89.78	54.11	2.00	0.00	0.00	0.00	89.85	55.02	2.00	0.00	0.00	0.00
89.92	53.56	2.00	0.00	0.00	0.00	89.98	49.87	2.00	0.00	0.00	0.00
90.05	45.10	2.00	0.00	0.00	0.00	90.10	41.26	2.00	0.00	0.00	0.00
90.16	35.70	2.00	0.00	0.00	0.00	90.23	30.55	2.00	0.00	0.00	0.00
90.29	27.84	2.00	0.00	0.00	0.00	90.36	30.78	2.00	0.00	0.00	0.00
90.42	25.06	2.00	0.00	0.00	0.00	90.50	30.98	2.00	0.00	0.00	0.00
90.56	42.86	2.00	0.00	0.00	0.00	90.62	61.36	2.00	0.00	0.00	0.00
90.68	142.26	0.68	0.00	0.00	0.00	90.76	145.58	0.73	0.00	0.00	0.00
90.82	142.93	0.69	0.00	0.00	0.00	90.89	145.08	0.72	0.00	0.00	0.00
90.95	142.62	2.00	0.00	0.00	0.00	91.02	148.33	2.00	0.00	0.00	0.00
91.09	158.79	2.00	0.00	0.00	0.00	91.16	166.40	2.00	0.00	0.00	0.00
91.21	166.83	2.00	0.00	0.00	0.00	91.29	168.17	1.38	0.00	0.00	0.00
91.34	168.11	1.37	0.00	0.00	0.00	91.42	168.08	1.37	0.00	0.00	0.00
91.48	170.09	1.47	0.00	0.00	0.00	91.55	169.42	1.44	0.00	0.00	0.00
91.61	169.75	1.46	0.00	0.00	0.00	91.67	169.17	1.43	0.00	0.00	0.00
91.74	168.09	1.37	0.00	0.00	0.00	91.80	169.32	1.43	0.00	0.00	0.00
91.88	165.11	1.25	0.00	0.00	0.00	91.93	163.38	1.18	0.00	0.00	0.00
92.01	161.06	1.10	0.00	0.00	0.00	92.09	160.17	1.07	0.00	0.00	0.00
92.14	155.05	0.93	0.00	0.00	0.00	92.19	159.54	1.05	0.00	0.00	0.00
92.28	156.56	0.96	0.00	0.00	0.00	92.33	155.75	0.94	0.00	0.00	0.00
92.39	154.76	0.92	0.00	0.00	0.00	92.47	155.08	0.93	0.00	0.00	0.00
92.53	154.67	0.92	0.00	0.00	0.00	92.60	153.75	0.90	0.00	0.00	0.00
92.66	161.49	1.11	0.00	0.00	0.00	92.72	163.68	1.19	0.00	0.00	0.00
92.79	166.00	1.29	0.00	0.00	0.00	92.85	165.56	1.27	0.00	0.00	0.00
92.93	161.73	1.12	0.00	0.00	0.00	92.98	161.71	1.12	0.00	0.00	0.00
93.05	171.39	1.55	0.00	0.00	0.00	93.12	173.11	1.65	0.00	0.00	0.00

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

Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.20	168.01	1.38	0.00	0.00	0.00	93.26	166.03	1.29	0.00	0.00	0.00
93.31	180.60	2.00	0.00	0.00	0.00	93.39	179.44	2.00	0.00	0.00	0.00
93.44	175.15	1.78	0.00	0.00	0.00	93.51	169.02	1.43	0.00	0.00	0.00
93.58	160.39	1.08	0.00	0.00	0.00	93.64	170.33	1.49	0.00	0.00	0.00
93.71	158.25	1.02	0.00	0.00	0.00	93.77	170.86	1.52	0.00	0.00	0.00
93.85	166.63	1.32	0.00	0.00	0.00	93.90	156.30	0.96	0.00	0.00	0.00
93.97	169.04	1.43	0.00	0.00	0.00	94.03	138.54	2.00	0.00	0.00	0.00
94.10	167.28	2.00	0.00	0.00	0.00	94.16	185.58	2.00	0.00	0.00	0.00
94.26	181.46	2.00	0.00	0.00	0.00	94.31	180.00	2.00	0.00	0.00	0.00
94.36	191.41	2.00	0.00	0.00	0.00	94.44	192.40	2.00	0.00	0.00	0.00
94.49	188.38	2.00	0.00	0.00	0.00	94.57	188.45	2.00	0.00	0.00	0.00
94.62	188.05	2.00	0.00	0.00	0.00	94.69	178.84	2.00	0.00	0.00	0.00
94.76	143.87	0.71	0.00	0.00	0.00	94.82	114.41	2.00	0.00	0.00	0.00
94.89	107.35	2.00	0.00	0.00	0.00	94.95	114.16	2.00	0.00	0.00	0.00
95.02	110.16	2.00	0.00	0.00	0.00	95.08	102.81	2.00	0.00	0.00	0.00

Total estimated settlement: 0.31**Abbreviations**

Q _{tn,cs} :	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e _v (%):	Post-liquefaction volumetric strain
DF:	e _v depth weighting factor
Settlement:	Calculated settlement

LIQUEFACTION ANALYSIS REPORT

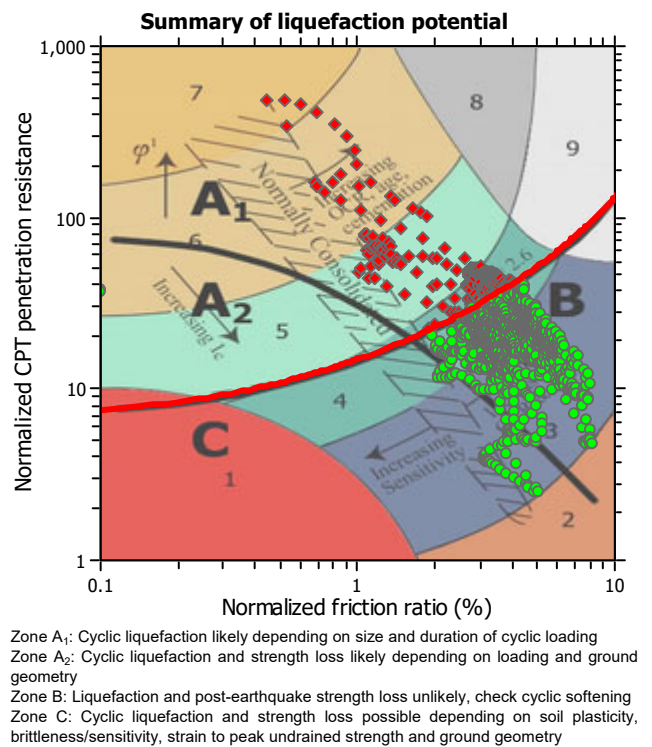
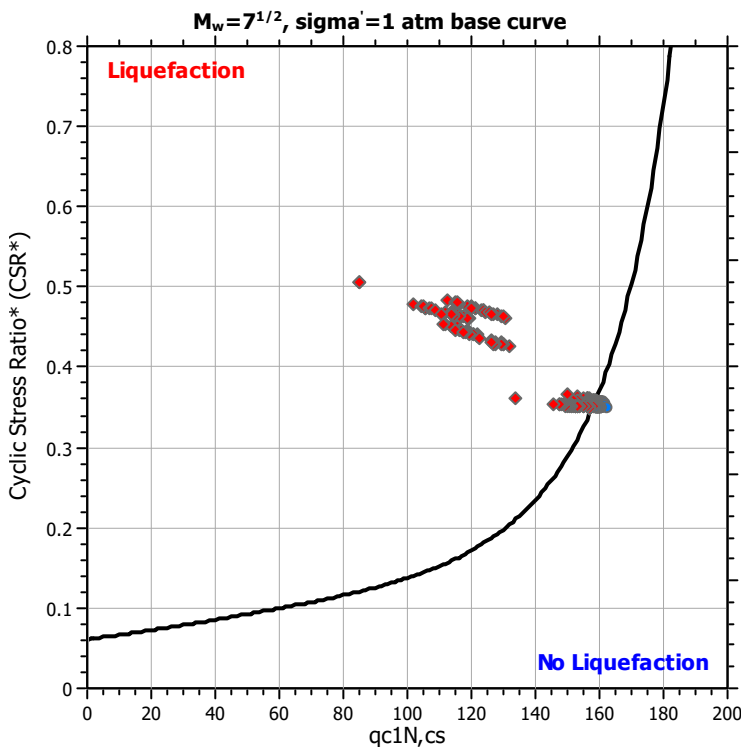
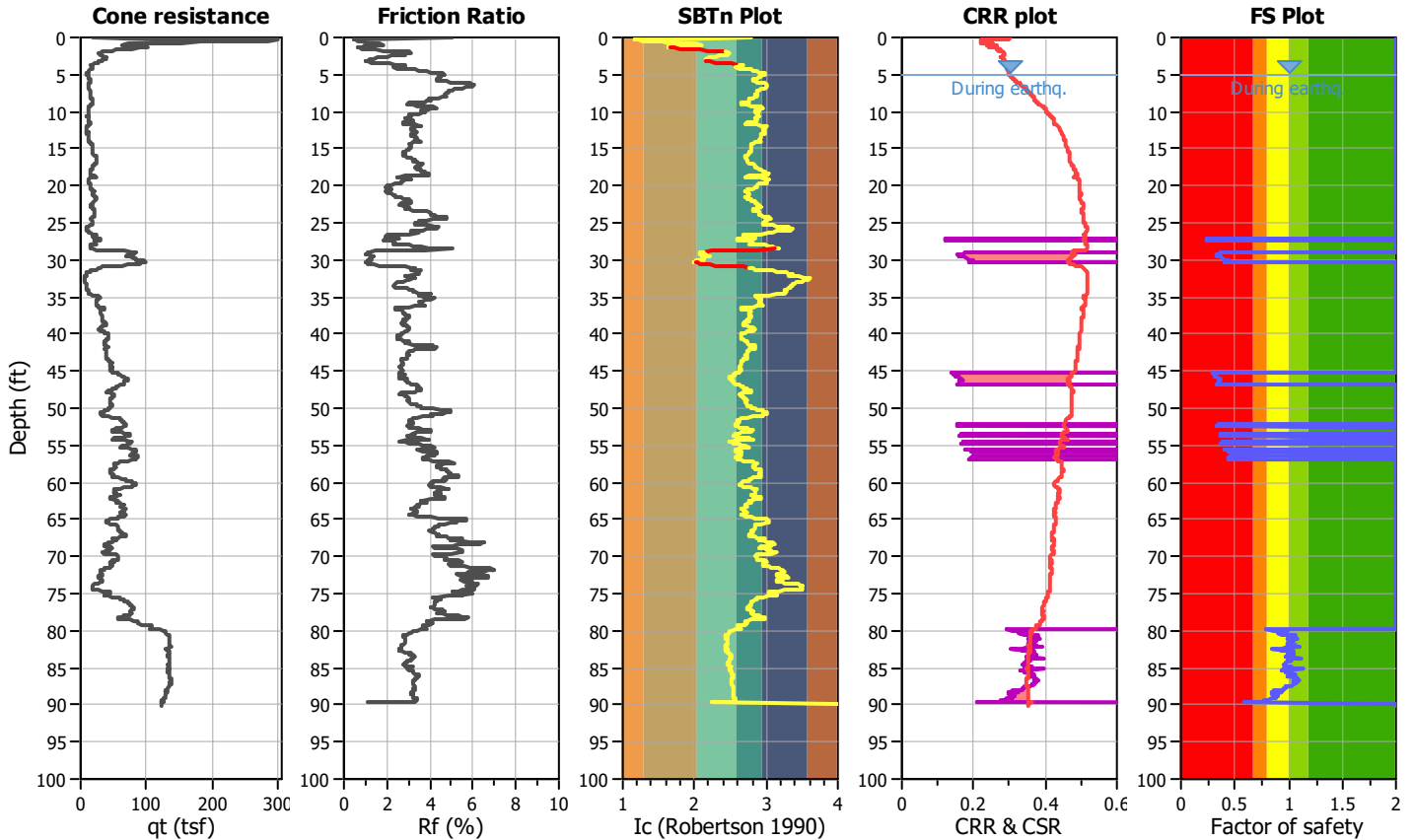
Project title : Victoria Apartments

Location : A9942-88-01

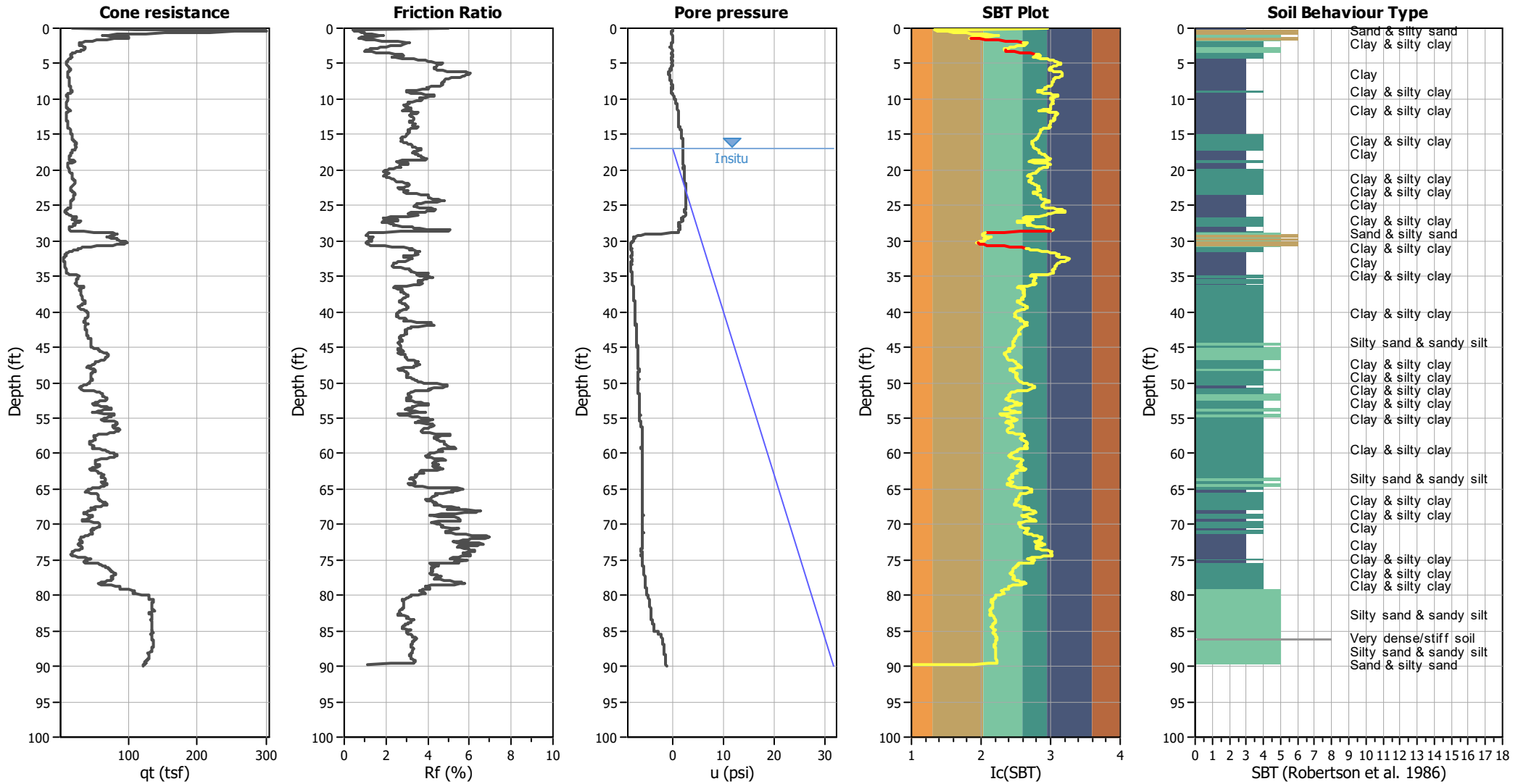
CPT file : C-2

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.57	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.41	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



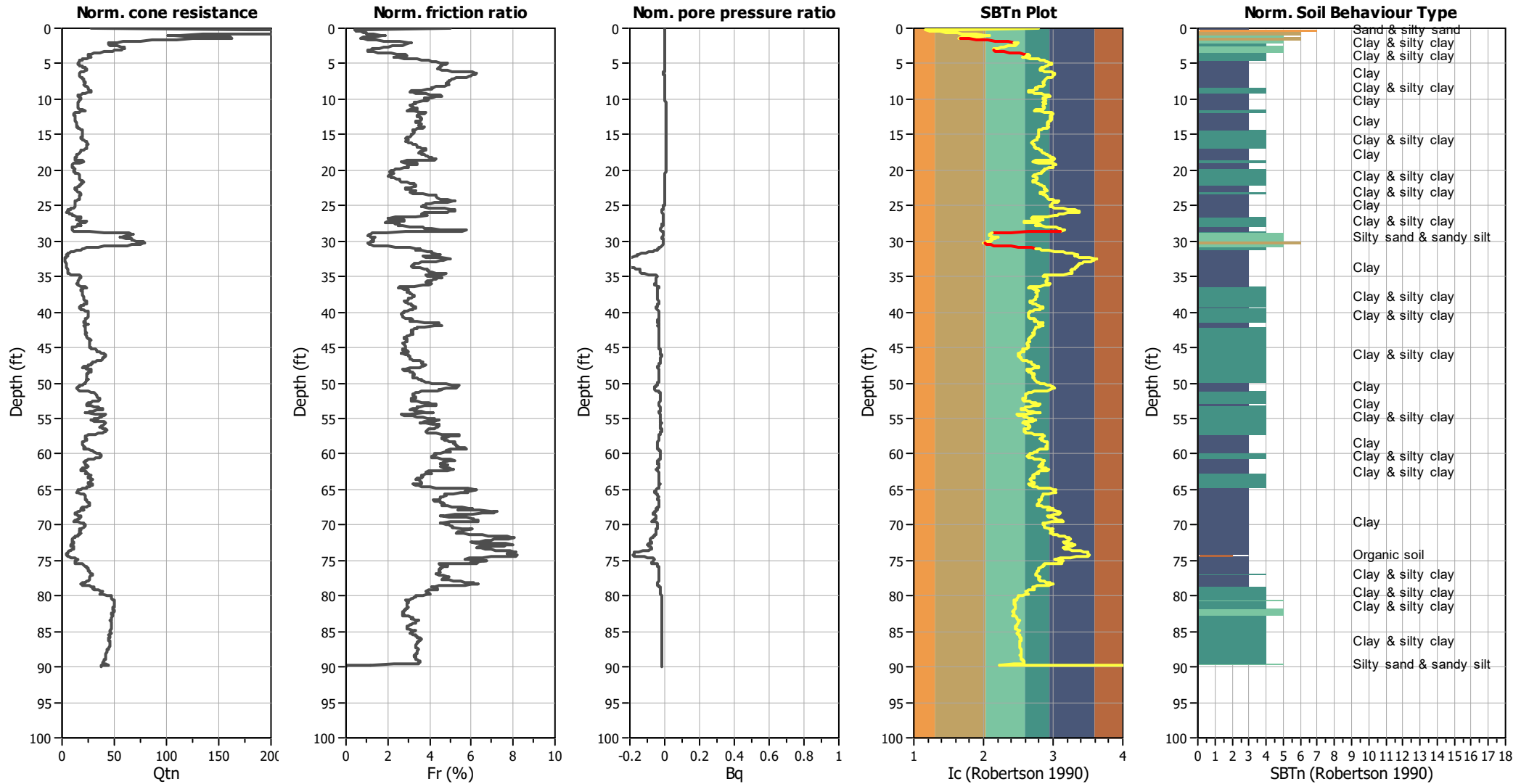
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



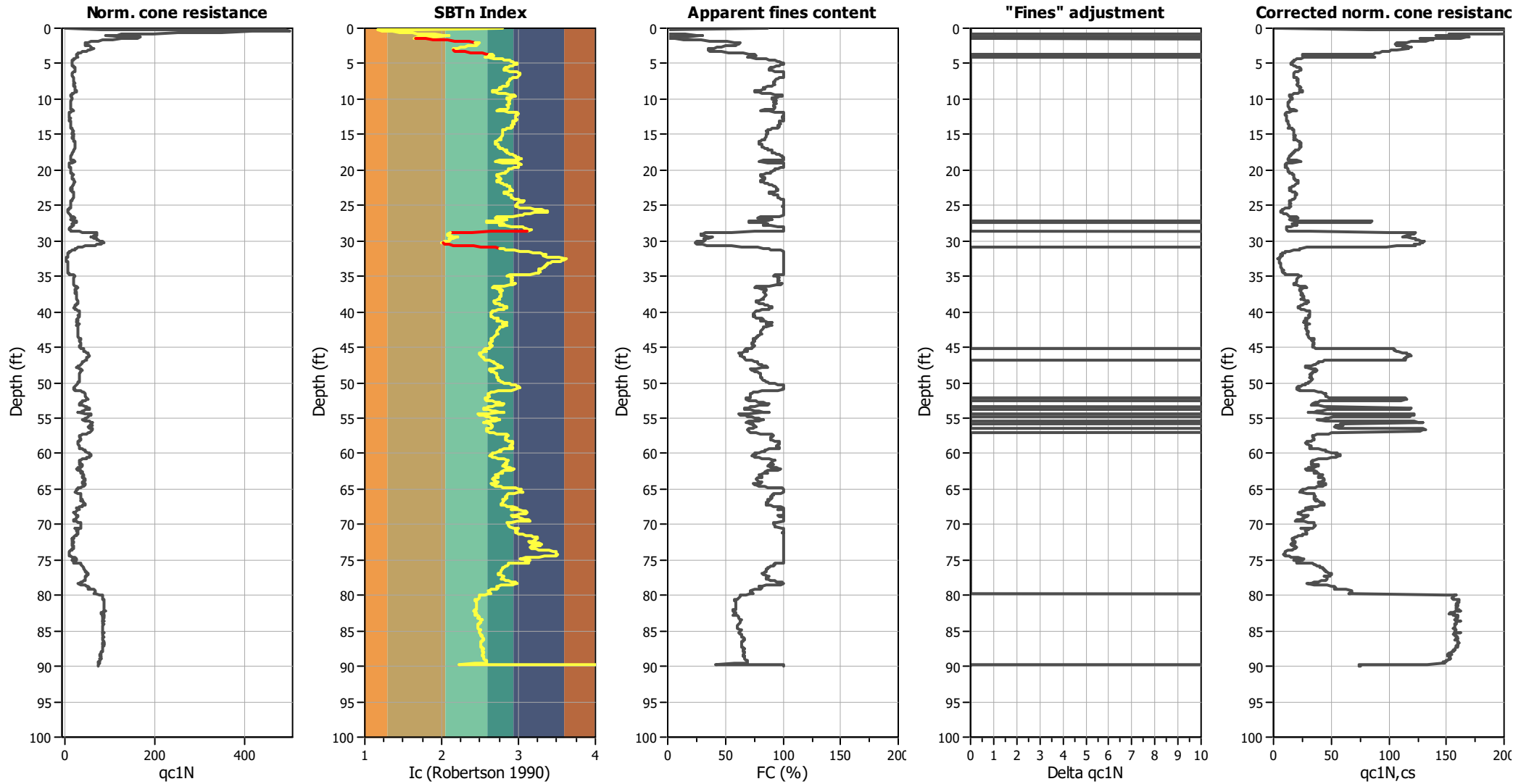
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

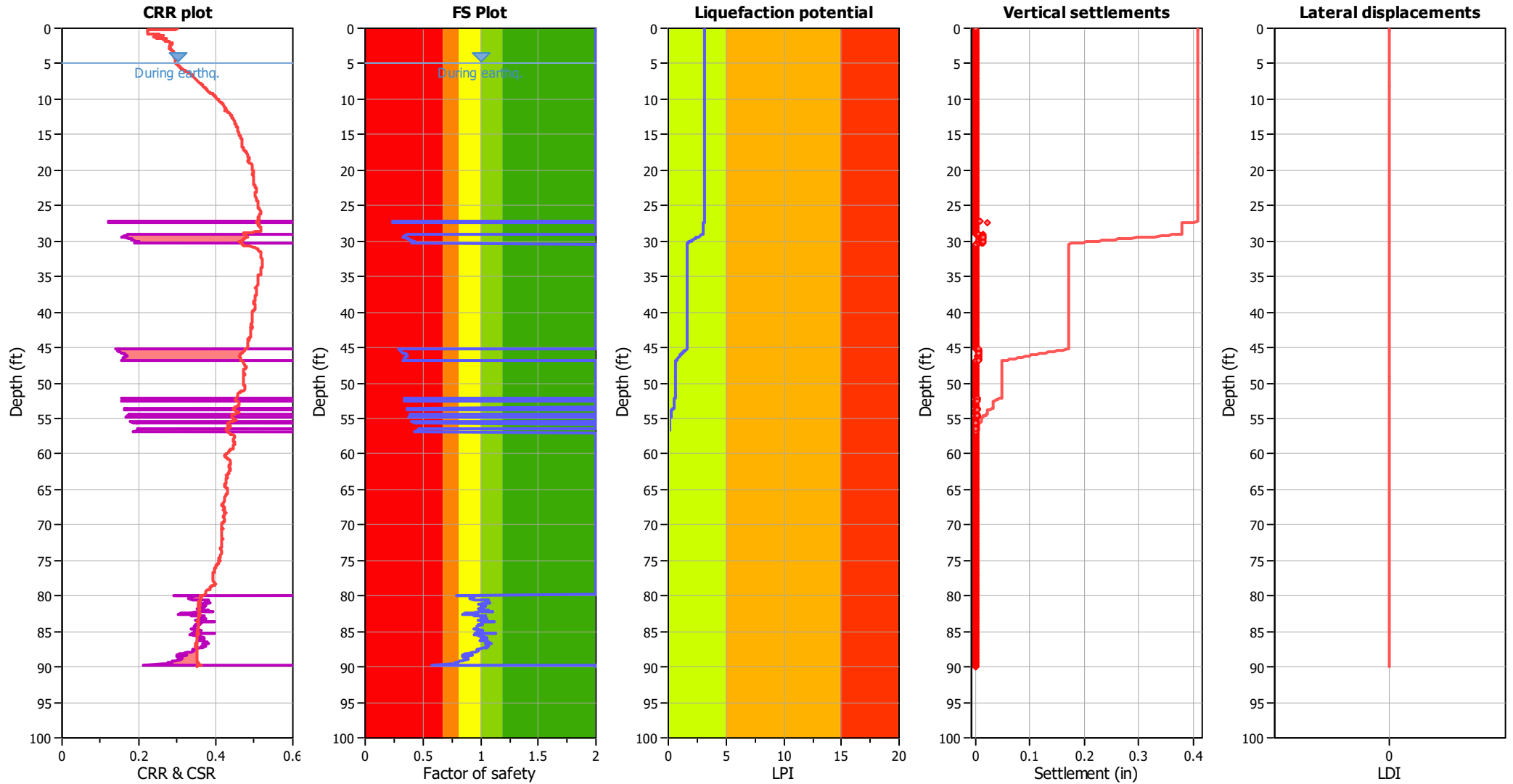
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

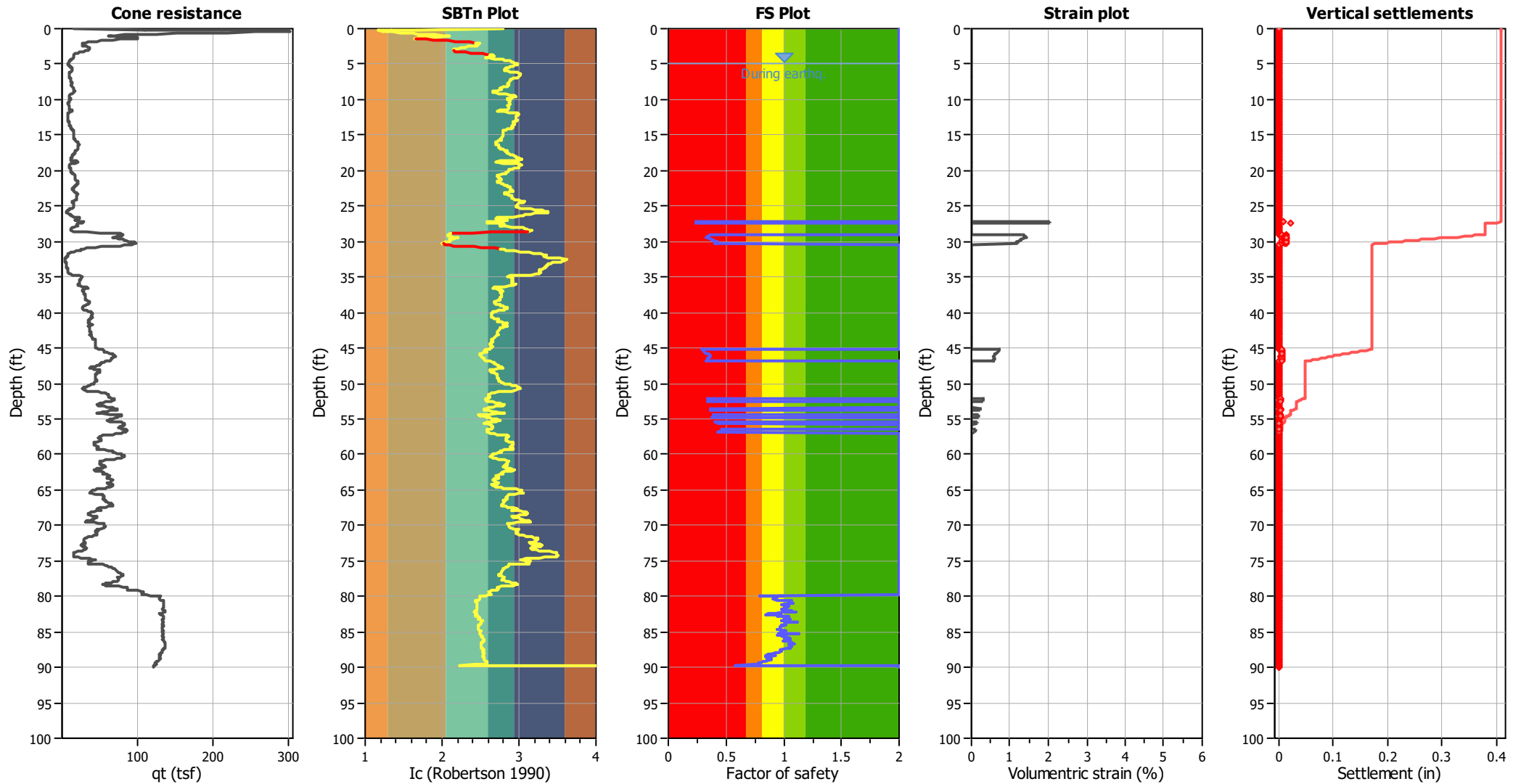
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- qt: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.06	15.41	2.00	0.00	0.91	0.00	5.12	16.02	2.00	0.00	0.91	0.00
5.19	16.93	2.00	0.00	0.91	0.00	5.28	17.54	2.00	0.00	0.91	0.00
5.34	18.30	2.00	0.00	0.91	0.00	5.40	19.07	2.00	0.00	0.91	0.00
5.47	20.60	2.00	0.00	0.91	0.00	5.54	21.51	2.00	0.00	0.91	0.00
5.59	22.27	2.00	0.00	0.91	0.00	5.66	23.34	2.00	0.00	0.90	0.00
5.72	23.79	2.00	0.00	0.90	0.00	5.79	23.96	2.00	0.00	0.90	0.00
5.85	24.10	2.00	0.00	0.90	0.00	5.93	23.65	2.00	0.00	0.90	0.00
5.98	23.18	2.00	0.00	0.90	0.00	6.05	21.66	2.00	0.00	0.90	0.00
6.11	21.05	2.00	0.00	0.90	0.00	6.17	19.52	2.00	0.00	0.90	0.00
6.24	18.60	2.00	0.00	0.89	0.00	6.31	17.69	2.00	0.00	0.89	0.00
6.39	17.38	2.00	0.00	0.89	0.00	6.43	17.38	2.00	0.00	0.89	0.00
6.52	17.08	2.00	0.00	0.89	0.00	6.56	17.24	2.00	0.00	0.89	0.00
6.65	17.24	2.00	0.00	0.89	0.00	6.72	17.24	2.00	0.00	0.89	0.00
6.78	17.24	2.00	0.00	0.89	0.00	6.85	18.16	2.00	0.00	0.88	0.00
6.91	18.91	2.00	0.00	0.88	0.00	6.96	19.68	2.00	0.00	0.88	0.00
7.03	20.47	2.00	0.00	0.88	0.00	7.10	20.65	2.00	0.00	0.88	0.00
7.16	20.57	2.00	0.00	0.88	0.00	7.24	20.88	2.00	0.00	0.88	0.00
7.29	20.95	2.00	0.00	0.88	0.00	7.37	20.97	2.00	0.00	0.88	0.00
7.42	20.62	2.00	0.00	0.87	0.00	7.49	20.95	2.00	0.00	0.87	0.00
7.57	20.97	2.00	0.00	0.87	0.00	7.61	21.18	2.00	0.00	0.87	0.00
7.70	21.34	2.00	0.00	0.87	0.00	7.75	21.40	2.00	0.00	0.87	0.00
7.83	20.89	2.00	0.00	0.87	0.00	7.88	20.54	2.00	0.00	0.87	0.00
7.96	20.17	2.00	0.00	0.87	0.00	8.01	20.25	2.00	0.00	0.86	0.00
8.09	20.81	2.00	0.00	0.86	0.00	8.14	21.42	2.00	0.00	0.86	0.00
8.21	22.65	2.00	0.00	0.86	0.00	8.29	23.46	2.00	0.00	0.86	0.00
8.34	23.65	2.00	0.00	0.86	0.00	8.40	23.82	2.00	0.00	0.86	0.00
8.47	22.95	2.00	0.00	0.86	0.00	8.55	22.84	2.00	0.00	0.86	0.00
8.61	22.64	2.00	0.00	0.85	0.00	8.67	22.56	2.00	0.00	0.85	0.00
8.73	23.13	2.00	0.00	0.85	0.00	8.81	24.67	2.00	0.00	0.85	0.00
8.86	25.12	2.00	0.00	0.85	0.00	8.93	24.66	2.00	0.00	0.85	0.00
9.02	23.28	2.00	0.00	0.85	0.00	9.07	22.20	2.00	0.00	0.85	0.00
9.12	20.86	2.00	0.00	0.85	0.00	9.21	18.48	2.00	0.00	0.84	0.00
9.27	17.39	2.00	0.00	0.84	0.00	9.35	15.79	2.00	0.00	0.84	0.00
9.41	14.85	2.00	0.00	0.84	0.00	9.47	14.16	2.00	0.00	0.84	0.00
9.54	13.72	2.00	0.00	0.84	0.00	9.60	13.94	2.00	0.00	0.84	0.00
9.66	14.26	2.00	0.00	0.84	0.00	9.72	14.85	2.00	0.00	0.84	0.00
9.78	15.68	2.00	0.00	0.83	0.00	9.86	16.36	2.00	0.00	0.83	0.00
9.92	16.18	2.00	0.00	0.83	0.00	9.98	15.89	2.00	0.00	0.83	0.00
10.06	15.58	2.00	0.00	0.83	0.00	10.12	15.04	2.00	0.00	0.83	0.00
10.17	14.37	2.00	0.00	0.83	0.00	10.26	14.07	2.00	0.00	0.83	0.00
10.33	13.77	2.00	0.00	0.82	0.00	10.40	13.49	2.00	0.00	0.82	0.00
10.46	13.20	2.00	0.00	0.82	0.00	10.52	12.81	2.00	0.00	0.82	0.00
10.59	13.06	2.00	0.00	0.82	0.00	10.65	12.00	2.00	0.00	0.82	0.00
10.71	12.93	2.00	0.00	0.82	0.00	10.78	13.00	2.00	0.00	0.82	0.00
10.84	12.96	2.00	0.00	0.82	0.00	10.92	13.03	2.00	0.00	0.81	0.00
10.99	12.99	2.00	0.00	0.81	0.00	11.05	12.95	2.00	0.00	0.81	0.00
11.12	13.02	2.00	0.00	0.81	0.00	11.18	13.22	2.00	0.00	0.81	0.00
11.26	13.29	2.00	0.00	0.81	0.00	11.29	13.38	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.36	13.70	2.00	0.00	0.81	0.00	11.43	15.15	2.00	0.00	0.81	0.00
11.49	17.41	2.00	0.00	0.81	0.00	11.56	19.64	2.00	0.00	0.80	0.00
11.63	19.58	2.00	0.00	0.80	0.00	11.69	17.94	2.00	0.00	0.80	0.00
11.75	15.96	2.00	0.00	0.80	0.00	11.82	14.32	2.00	0.00	0.80	0.00
11.88	12.45	2.00	0.00	0.80	0.00	11.95	11.15	2.00	0.00	0.80	0.00
12.01	10.32	2.00	0.00	0.80	0.00	12.09	10.18	2.00	0.00	0.80	0.00
12.16	10.15	2.00	0.00	0.79	0.00	12.22	10.35	2.00	0.00	0.79	0.00
12.29	10.54	2.00	0.00	0.79	0.00	12.35	10.85	2.00	0.00	0.79	0.00
12.42	11.14	2.00	0.00	0.79	0.00	12.48	11.11	2.00	0.00	0.79	0.00
12.55	11.08	2.00	0.00	0.79	0.00	12.61	11.05	2.00	0.00	0.79	0.00
12.68	11.46	2.00	0.00	0.79	0.00	12.74	11.77	2.00	0.00	0.78	0.00
12.81	11.52	2.00	0.00	0.78	0.00	12.88	11.15	2.00	0.00	0.78	0.00
12.94	11.12	2.00	0.00	0.78	0.00	13.00	11.31	2.00	0.00	0.78	0.00
13.08	11.61	2.00	0.00	0.78	0.00	13.15	12.22	2.00	0.00	0.78	0.00
13.21	12.63	2.00	0.00	0.78	0.00	13.28	12.70	2.00	0.00	0.77	0.00
13.34	12.66	2.00	0.00	0.77	0.00	13.40	12.63	2.00	0.00	0.77	0.00
13.47	12.59	2.00	0.00	0.77	0.00	13.53	12.78	2.00	0.00	0.77	0.00
13.60	12.96	2.00	0.00	0.77	0.00	13.66	13.25	2.00	0.00	0.77	0.00
13.73	13.42	2.00	0.00	0.77	0.00	13.79	13.60	2.00	0.00	0.77	0.00
13.86	13.67	2.00	0.00	0.77	0.00	13.92	13.74	2.00	0.00	0.76	0.00
13.99	14.01	2.00	0.00	0.76	0.00	14.05	12.73	2.00	0.00	0.76	0.00
14.13	15.30	2.00	0.00	0.76	0.00	14.19	15.98	2.00	0.00	0.76	0.00
14.26	16.56	2.00	0.00	0.76	0.00	14.32	17.25	2.00	0.00	0.76	0.00
14.39	17.83	2.00	0.00	0.76	0.00	14.45	18.09	2.00	0.00	0.76	0.00
14.51	18.15	2.00	0.00	0.75	0.00	14.58	18.20	2.00	0.00	0.75	0.00
14.64	17.96	2.00	0.00	0.75	0.00	14.70	17.91	2.00	0.00	0.75	0.00
14.77	17.87	2.00	0.00	0.75	0.00	14.83	18.03	2.00	0.00	0.75	0.00
14.92	17.97	2.00	0.00	0.75	0.00	14.99	18.03	2.00	0.00	0.75	0.00
15.05	18.19	2.00	0.00	0.74	0.00	15.12	18.25	2.00	0.00	0.74	0.00
15.18	18.20	2.00	0.00	0.74	0.00	15.24	18.27	2.00	0.00	0.74	0.00
15.30	18.12	2.00	0.00	0.74	0.00	15.37	17.88	2.00	0.00	0.74	0.00
15.44	17.84	2.00	0.00	0.74	0.00	15.50	17.80	2.00	0.00	0.74	0.00
15.57	17.95	2.00	0.00	0.74	0.00	15.64	18.50	2.00	0.00	0.73	0.00
15.71	19.05	2.00	0.00	0.73	0.00	15.76	18.03	2.00	0.00	0.73	0.00
15.84	20.53	2.00	0.00	0.73	0.00	15.88	21.08	2.00	0.00	0.73	0.00
15.95	21.71	2.00	0.00	0.73	0.00	16.01	22.54	2.00	0.00	0.73	0.00
16.09	23.15	2.00	0.00	0.73	0.00	16.15	23.49	2.00	0.00	0.73	0.00
16.22	23.92	2.00	0.00	0.73	0.00	16.28	24.06	2.00	0.00	0.72	0.00
16.35	23.71	2.00	0.00	0.72	0.00	16.42	23.18	2.00	0.00	0.72	0.00
16.47	23.14	2.00	0.00	0.72	0.00	16.54	23.09	2.00	0.00	0.72	0.00
16.61	23.32	2.00	0.00	0.72	0.00	16.68	23.55	2.00	0.00	0.72	0.00
16.75	23.39	2.00	0.00	0.72	0.00	16.82	23.25	2.00	0.00	0.71	0.00
16.89	23.01	2.00	0.00	0.71	0.00	16.97	22.47	2.00	0.00	0.71	0.00
17.01	22.07	2.00	0.00	0.71	0.00	17.08	21.11	2.00	0.00	0.71	0.00
17.14	20.24	2.00	0.00	0.71	0.00	17.23	19.18	2.00	0.00	0.71	0.00
17.26	18.71	2.00	0.00	0.71	0.00	17.33	18.40	2.00	0.00	0.71	0.00
17.42	18.38	2.00	0.00	0.70	0.00	17.45	18.09	2.00	0.00	0.70	0.00
17.52	17.13	2.00	0.00	0.70	0.00	17.60	17.21	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.69	16.44	2.00	0.00	0.70	0.00	17.72	16.06	2.00	0.00	0.70	0.00
17.81	15.48	2.00	0.00	0.70	0.00	17.88	14.90	2.00	0.00	0.70	0.00
17.92	14.71	2.00	0.00	0.70	0.00	18.00	14.50	2.00	0.00	0.69	0.00
18.08	14.30	2.00	0.00	0.69	0.00	18.12	14.20	2.00	0.00	0.69	0.00
18.20	13.91	2.00	0.00	0.69	0.00	18.27	13.33	2.00	0.00	0.69	0.00
18.35	12.66	2.00	0.00	0.69	0.00	18.39	12.47	2.00	0.00	0.69	0.00
18.44	12.37	2.00	0.00	0.69	0.00	18.52	13.10	2.00	0.00	0.69	0.00
18.57	13.83	2.00	0.00	0.69	0.00	18.67	17.13	2.00	0.00	0.68	0.00
18.71	20.08	2.00	0.00	0.68	0.00	18.80	23.74	2.00	0.00	0.68	0.00
18.84	22.44	2.00	0.00	0.68	0.00	18.93	16.53	2.00	0.00	0.68	0.00
18.98	13.75	2.00	0.00	0.68	0.00	19.08	10.69	2.00	0.00	0.68	0.00
19.12	10.65	2.00	0.00	0.68	0.00	19.16	10.64	2.00	0.00	0.68	0.00
19.25	10.58	2.00	0.00	0.67	0.00	19.31	10.76	2.00	0.00	0.67	0.00
19.40	10.65	2.00	0.00	0.67	0.00	19.44	10.74	2.00	0.00	0.67	0.00
19.54	10.54	2.00	0.00	0.67	0.00	19.57	10.72	2.00	0.00	0.67	0.00
19.63	10.98	2.00	0.00	0.67	0.00	19.70	11.89	2.00	0.00	0.67	0.00
19.78	13.07	2.00	0.00	0.66	0.00	19.85	12.96	2.00	0.00	0.66	0.00
19.91	12.86	2.00	0.00	0.66	0.00	19.98	12.49	2.00	0.00	0.66	0.00
20.03	12.39	2.00	0.00	0.66	0.00	20.10	12.56	2.00	0.00	0.66	0.00
20.19	12.64	2.00	0.00	0.66	0.00	20.23	12.72	2.00	0.00	0.66	0.00
20.30	13.43	2.00	0.00	0.66	0.00	20.35	13.88	2.00	0.00	0.66	0.00
20.42	14.86	2.00	0.00	0.65	0.00	20.47	15.40	2.00	0.00	0.65	0.00
20.55	16.47	2.00	0.00	0.65	0.00	20.61	16.27	2.00	0.00	0.65	0.00
20.70	18.15	2.00	0.00	0.65	0.00	20.77	17.95	2.00	0.00	0.65	0.00
20.82	17.67	2.00	0.00	0.65	0.00	20.91	17.47	2.00	0.00	0.65	0.00
20.96	17.37	2.00	0.00	0.64	0.00	21.01	17.27	2.00	0.00	0.64	0.00
21.10	17.34	2.00	0.00	0.64	0.00	21.14	17.06	2.00	0.00	0.64	0.00
21.23	17.30	2.00	0.00	0.64	0.00	21.27	17.48	2.00	0.00	0.64	0.00
21.36	18.27	2.00	0.00	0.64	0.00	21.40	18.88	2.00	0.00	0.64	0.00
21.49	20.20	2.00	0.00	0.64	0.00	21.53	20.99	2.00	0.00	0.64	0.00
21.62	21.60	2.00	0.00	0.63	0.00	21.66	21.49	2.00	0.00	0.63	0.00
21.75	21.38	2.00	0.00	0.63	0.00	21.79	21.19	2.00	0.00	0.63	0.00
21.88	20.46	2.00	0.00	0.63	0.00	21.97	19.80	2.00	0.00	0.63	0.00
22.01	19.44	2.00	0.00	0.63	0.00	22.06	18.89	2.00	0.00	0.63	0.00
22.14	18.34	2.00	0.00	0.62	0.00	22.23	17.25	2.00	0.00	0.62	0.00
22.28	16.71	2.00	0.00	0.62	0.00	22.32	16.18	2.00	0.00	0.62	0.00
22.42	15.01	2.00	0.00	0.62	0.00	22.46	14.64	2.00	0.00	0.62	0.00
22.55	14.37	2.00	0.00	0.62	0.00	22.60	14.36	2.00	0.00	0.62	0.00
22.64	14.53	2.00	0.00	0.62	0.00	22.74	14.86	2.00	0.00	0.61	0.00
22.77	14.76	2.00	0.00	0.61	0.00	22.84	13.87	2.00	0.00	0.61	0.00
22.93	15.44	2.00	0.00	0.61	0.00	22.97	15.60	2.00	0.00	0.61	0.00
23.07	16.64	2.00	0.00	0.61	0.00	23.11	17.42	2.00	0.00	0.61	0.00
23.20	18.89	2.00	0.00	0.61	0.00	23.25	19.49	2.00	0.00	0.61	0.00
23.34	19.81	2.00	0.00	0.60	0.00	23.39	19.80	2.00	0.00	0.60	0.00
23.43	19.79	2.00	0.00	0.60	0.00	23.51	18.72	2.00	0.00	0.60	0.00
23.57	18.76	2.00	0.00	0.60	0.00	23.64	18.78	2.00	0.00	0.60	0.00
23.69	18.77	2.00	0.00	0.60	0.00	23.78	18.75	2.00	0.00	0.60	0.00
23.83	18.74	2.00	0.00	0.60	0.00	23.92	18.71	2.00	0.00	0.59	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.96	18.53	2.00	0.00	0.59	0.00	24.05	17.90	2.00	0.00	0.59	0.00
24.09	17.36	2.00	0.00	0.59	0.00	24.18	16.31	2.00	0.00	0.59	0.00
24.24	15.26	2.00	0.00	0.59	0.00	24.28	14.73	2.00	0.00	0.59	0.00
24.36	13.76	2.00	0.00	0.59	0.00	24.44	13.41	2.00	0.00	0.59	0.00
24.48	13.49	2.00	0.00	0.59	0.00	24.56	13.90	2.00	0.00	0.58	0.00
24.63	14.32	2.00	0.00	0.58	0.00	24.71	14.56	2.00	0.00	0.58	0.00
24.75	14.56	2.00	0.00	0.58	0.00	24.83	14.29	2.00	0.00	0.58	0.00
24.87	14.28	2.00	0.00	0.58	0.00	24.94	14.27	2.00	0.00	0.58	0.00
25.03	14.25	2.00	0.00	0.58	0.00	25.07	14.59	2.00	0.00	0.58	0.00
25.14	14.75	2.00	0.00	0.57	0.00	25.23	14.13	2.00	0.00	0.57	0.00
25.27	13.53	2.00	0.00	0.57	0.00	25.34	11.98	2.00	0.00	0.57	0.00
25.42	10.51	2.00	0.00	0.57	0.00	25.52	9.14	2.00	0.00	0.57	0.00
25.55	8.63	2.00	0.00	0.57	0.00	25.60	7.27	2.00	0.00	0.57	0.00
25.69	7.10	2.00	0.00	0.56	0.00	25.73	6.75	2.00	0.00	0.56	0.00
25.81	6.24	2.00	0.00	0.56	0.00	25.88	6.15	2.00	0.00	0.56	0.00
25.95	6.48	2.00	0.00	0.56	0.00	26.00	6.98	2.00	0.00	0.56	0.00
26.07	8.07	2.00	0.00	0.56	0.00	26.14	9.17	2.00	0.00	0.56	0.00
26.22	10.25	2.00	0.00	0.56	0.00	26.26	10.84	2.00	0.00	0.55	0.00
26.33	12.18	2.00	0.00	0.55	0.00	26.42	12.76	2.00	0.00	0.55	0.00
26.45	13.01	2.00	0.00	0.55	0.00	26.52	13.25	2.00	0.00	0.55	0.00
26.61	19.90	2.00	0.00	0.55	0.00	26.66	20.73	2.00	0.00	0.55	0.00
26.72	21.48	2.00	0.00	0.55	0.00	26.81	20.02	2.00	0.00	0.55	0.00
26.85	18.58	2.00	0.00	0.54	0.00	26.93	15.28	2.00	0.00	0.54	0.00
26.97	18.81	2.00	0.00	0.54	0.00	27.05	14.34	2.00	0.00	0.54	0.00
27.13	19.03	2.00	0.00	0.54	0.00	27.20	25.15	2.00	0.00	0.54	0.00
27.24	85.29	0.24	2.03	0.54	0.01	27.32	84.71	0.24	2.04	0.54	0.02
27.39	22.57	2.00	0.00	0.54	0.00	27.44	19.96	2.00	0.00	0.53	0.00
27.52	16.59	2.00	0.00	0.53	0.00	27.59	19.55	2.00	0.00	0.53	0.00
27.64	16.90	2.00	0.00	0.53	0.00	27.71	19.14	2.00	0.00	0.53	0.00
27.80	20.63	2.00	0.00	0.53	0.00	27.84	19.95	2.00	0.00	0.53	0.00
27.90	17.19	2.00	0.00	0.53	0.00	27.96	15.59	2.00	0.00	0.53	0.00
28.03	12.93	2.00	0.00	0.52	0.00	28.11	11.67	2.00	0.00	0.52	0.00
28.15	11.34	2.00	0.00	0.52	0.00	28.22	11.33	2.00	0.00	0.52	0.00
28.31	11.57	2.00	0.00	0.52	0.00	28.38	11.31	2.00	0.00	0.52	0.00
28.43	11.30	2.00	0.00	0.52	0.00	28.51	11.79	2.00	0.00	0.52	0.00
28.55	12.53	2.00	0.00	0.52	0.00	28.63	16.80	2.00	0.00	0.51	0.00
28.70	30.91	2.00	0.00	0.51	0.00	28.74	98.81	2.00	0.00	0.51	0.00
28.82	117.87	2.00	0.00	0.51	0.00	28.90	123.36	2.00	0.00	0.51	0.00
28.98	121.68	2.00	0.00	0.51	0.00	29.02	121.35	0.37	1.33	0.51	0.01
29.10	121.29	0.37	1.33	0.51	0.01	29.14	119.81	0.36	1.35	0.51	0.01
29.21	118.49	0.35	1.36	0.50	0.01	29.29	116.16	0.34	1.38	0.50	0.01
29.36	112.38	0.32	1.43	0.50	0.01	29.40	115.13	0.34	1.39	0.50	0.01
29.48	115.69	0.34	1.38	0.50	0.01	29.54	115.48	0.34	1.38	0.50	0.01
29.62	120.20	0.36	1.32	0.50	0.01	29.69	123.50	0.38	1.28	0.50	0.01
29.74	123.23	0.38	1.28	0.50	0.01	29.81	123.69	0.38	1.27	0.49	0.01
29.89	124.63	0.39	1.26	0.49	0.01	29.94	125.83	0.40	1.24	0.49	0.01
30.00	128.37	0.41	1.21	0.49	0.01	30.09	130.80	0.43	1.18	0.49	0.01
30.13	129.20	0.42	1.20	0.49	0.01	30.20	129.72	0.42	1.19	0.49	0.01

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.28	126.90	0.40	1.22	0.49	0.01	30.32	126.52	0.40	1.22	0.49	0.01
30.40	126.68	2.00	0.00	0.48	0.00	30.48	125.23	2.00	0.00	0.48	0.00
30.55	122.31	2.00	0.00	0.48	0.00	30.58	122.91	2.00	0.00	0.48	0.00
30.67	117.55	2.00	0.00	0.48	0.00	30.74	110.30	2.00	0.00	0.48	0.00
30.78	106.97	2.00	0.00	0.48	0.00	30.86	98.08	2.00	0.00	0.48	0.00
30.93	31.22	2.00	0.00	0.48	0.00	30.98	28.62	2.00	0.00	0.47	0.00
31.05	24.52	2.00	0.00	0.47	0.00	31.12	22.40	2.00	0.00	0.47	0.00
31.17	22.79	2.00	0.00	0.47	0.00	31.25	22.37	2.00	0.00	0.47	0.00
31.32	19.05	2.00	0.00	0.47	0.00	31.37	17.03	2.00	0.00	0.47	0.00
31.44	13.50	2.00	0.00	0.47	0.00	31.51	12.06	2.00	0.00	0.47	0.00
31.59	10.53	2.00	0.00	0.46	0.00	31.63	9.66	2.00	0.00	0.46	0.00
31.71	8.46	2.00	0.00	0.46	0.00	31.76	7.98	2.00	0.00	0.46	0.00
31.83	7.20	2.00	0.00	0.46	0.00	31.90	6.72	2.00	0.00	0.46	0.00
31.97	7.19	2.00	0.00	0.46	0.00	32.03	6.79	2.00	0.00	0.46	0.00
32.09	7.18	2.00	0.00	0.46	0.00	32.16	6.70	2.00	0.00	0.45	0.00
32.22	6.15	2.00	0.00	0.45	0.00	32.29	5.60	2.00	0.00	0.45	0.00
32.36	4.89	2.00	0.00	0.45	0.00	32.43	4.42	2.00	0.00	0.45	0.00
32.48	4.10	2.00	0.00	0.45	0.00	32.55	4.50	2.00	0.00	0.45	0.00
32.63	4.49	2.00	0.00	0.45	0.00	32.71	4.56	2.00	0.00	0.45	0.00
32.75	4.64	2.00	0.00	0.44	0.00	32.83	4.71	2.00	0.00	0.44	0.00
32.90	4.87	2.00	0.00	0.44	0.00	32.97	5.17	2.00	0.00	0.44	0.00
33.01	5.33	2.00	0.00	0.44	0.00	33.08	5.48	2.00	0.00	0.44	0.00
33.15	5.63	2.00	0.00	0.44	0.00	33.21	5.71	2.00	0.00	0.44	0.00
33.28	5.78	2.00	0.00	0.44	0.00	33.34	5.78	2.00	0.00	0.43	0.00
33.42	5.85	2.00	0.00	0.43	0.00	33.48	5.92	2.00	0.00	0.43	0.00
33.56	6.00	2.00	0.00	0.43	0.00	33.63	6.00	2.00	0.00	0.43	0.00
33.69	6.22	2.00	0.00	0.43	0.00	33.76	6.46	2.00	0.00	0.43	0.00
33.83	6.68	2.00	0.00	0.43	0.00	33.90	7.14	2.00	0.00	0.43	0.00
33.93	7.45	2.00	0.00	0.42	0.00	33.99	7.98	2.00	0.00	0.42	0.00
34.07	8.13	2.00	0.00	0.42	0.00	34.13	8.21	2.00	0.00	0.42	0.00
34.20	7.96	2.00	0.00	0.42	0.00	34.26	7.96	2.00	0.00	0.42	0.00
34.33	7.95	2.00	0.00	0.42	0.00	34.40	7.95	2.00	0.00	0.42	0.00
34.47	8.33	2.00	0.00	0.42	0.00	34.55	8.94	2.00	0.00	0.41	0.00
34.61	9.78	2.00	0.00	0.41	0.00	34.66	10.32	2.00	0.00	0.41	0.00
34.75	15.05	2.00	0.00	0.41	0.00	34.78	17.61	2.00	0.00	0.41	0.00
34.85	21.20	2.00	0.00	0.41	0.00	34.91	22.92	2.00	0.00	0.41	0.00
34.98	23.45	2.00	0.00	0.41	0.00	35.04	22.42	2.00	0.00	0.41	0.00
35.11	20.99	2.00	0.00	0.40	0.00	35.21	21.13	2.00	0.00	0.40	0.00
35.24	20.88	2.00	0.00	0.40	0.00	35.31	20.47	2.00	0.00	0.40	0.00
35.37	20.46	2.00	0.00	0.40	0.00	35.44	20.22	2.00	0.00	0.40	0.00
35.50	19.58	2.00	0.00	0.40	0.00	35.59	19.59	2.00	0.00	0.40	0.00
35.65	19.62	2.00	0.00	0.40	0.00	35.71	20.07	2.00	0.00	0.39	0.00
35.77	19.75	2.00	0.00	0.39	0.00	35.84	19.58	2.00	0.00	0.39	0.00
35.93	19.41	2.00	0.00	0.39	0.00	35.99	18.85	2.00	0.00	0.39	0.00
36.06	18.14	2.00	0.00	0.39	0.00	36.09	18.06	2.00	0.00	0.39	0.00
36.18	18.04	2.00	0.00	0.39	0.00	36.24	19.73	2.00	0.00	0.39	0.00
36.31	22.11	2.00	0.00	0.38	0.00	36.37	24.11	2.00	0.00	0.38	0.00
36.43	25.72	2.00	0.00	0.38	0.00	36.49	27.10	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.55	28.72	2.00	0.00	0.38	0.00	36.62	28.16	2.00	0.00	0.38	0.00
36.68	25.96	2.00	0.00	0.38	0.00	36.77	24.47	2.00	0.00	0.38	0.00
36.83	23.29	2.00	0.00	0.38	0.00	36.89	22.43	2.00	0.00	0.37	0.00
36.96	23.15	2.00	0.00	0.37	0.00	37.04	23.01	2.00	0.00	0.37	0.00
37.08	24.00	2.00	0.00	0.37	0.00	37.14	24.45	2.00	0.00	0.37	0.00
37.22	24.39	2.00	0.00	0.37	0.00	37.27	24.38	2.00	0.00	0.37	0.00
37.34	24.33	2.00	0.00	0.37	0.00	37.41	24.93	2.00	0.00	0.37	0.00
37.47	24.68	2.00	0.00	0.36	0.00	37.53	24.86	2.00	0.00	0.36	0.00
37.60	24.50	2.00	0.00	0.36	0.00	37.69	24.78	2.00	0.00	0.36	0.00
37.74	25.93	2.00	0.00	0.36	0.00	37.82	25.52	2.00	0.00	0.36	0.00
37.88	25.66	2.00	0.00	0.36	0.00	37.94	25.72	2.00	0.00	0.36	0.00
38.00	25.78	2.00	0.00	0.36	0.00	38.09	25.83	2.00	0.00	0.35	0.00
38.14	25.35	2.00	0.00	0.35	0.00	38.20	25.80	2.00	0.00	0.35	0.00
38.26	24.48	2.00	0.00	0.35	0.00	38.33	25.77	2.00	0.00	0.35	0.00
38.40	28.20	2.00	0.00	0.35	0.00	38.46	29.72	2.00	0.00	0.35	0.00
38.52	29.78	2.00	0.00	0.35	0.00	38.60	28.98	2.00	0.00	0.35	0.00
38.66	29.97	2.00	0.00	0.34	0.00	38.74	29.33	2.00	0.00	0.34	0.00
38.81	29.09	2.00	0.00	0.34	0.00	38.87	27.38	2.00	0.00	0.34	0.00
38.93	26.45	2.00	0.00	0.34	0.00	39.00	25.59	2.00	0.00	0.34	0.00
39.04	24.98	2.00	0.00	0.34	0.00	39.12	23.66	2.00	0.00	0.34	0.00
39.18	22.51	2.00	0.00	0.34	0.00	39.25	21.51	2.00	0.00	0.33	0.00
39.32	21.28	2.00	0.00	0.33	0.00	39.38	20.96	2.00	0.00	0.33	0.00
39.46	21.70	2.00	0.00	0.33	0.00	39.53	22.29	2.00	0.00	0.33	0.00
39.60	23.33	2.00	0.00	0.33	0.00	39.66	24.14	2.00	0.00	0.33	0.00
39.73	26.77	2.00	0.00	0.33	0.00	39.80	29.18	2.00	0.00	0.33	0.00
39.83	29.40	2.00	0.00	0.32	0.00	39.93	31.05	2.00	0.00	0.32	0.00
39.99	31.33	2.00	0.00	0.32	0.00	40.03	31.17	2.00	0.00	0.32	0.00
40.10	31.52	2.00	0.00	0.32	0.00	40.17	31.65	2.00	0.00	0.32	0.00
40.24	31.63	2.00	0.00	0.32	0.00	40.31	31.84	2.00	0.00	0.32	0.00
40.38	31.36	2.00	0.00	0.32	0.00	40.48	31.40	2.00	0.00	0.31	0.00
40.50	31.40	2.00	0.00	0.31	0.00	40.58	30.76	2.00	0.00	0.31	0.00
40.62	31.51	2.00	0.00	0.31	0.00	40.71	31.64	2.00	0.00	0.31	0.00
40.78	31.24	2.00	0.00	0.31	0.00	40.81	30.70	2.00	0.00	0.31	0.00
40.88	29.55	2.00	0.00	0.31	0.00	40.95	28.10	2.00	0.00	0.31	0.00
41.02	27.26	2.00	0.00	0.30	0.00	41.10	27.84	2.00	0.00	0.30	0.00
41.15	28.42	2.00	0.00	0.30	0.00	41.23	28.40	2.00	0.00	0.30	0.00
41.30	27.85	2.00	0.00	0.30	0.00	41.37	27.02	2.00	0.00	0.30	0.00
41.43	27.05	2.00	0.00	0.30	0.00	41.50	26.70	2.00	0.00	0.30	0.00
41.54	27.07	2.00	0.00	0.30	0.00	41.62	26.67	2.00	0.00	0.29	0.00
41.70	31.47	2.00	0.00	0.29	0.00	41.74	32.05	2.00	0.00	0.29	0.00
41.80	30.75	2.00	0.00	0.29	0.00	41.87	28.47	2.00	0.00	0.29	0.00
41.93	27.40	2.00	0.00	0.29	0.00	42.01	28.13	2.00	0.00	0.29	0.00
42.07	28.78	2.00	0.00	0.29	0.00	42.14	29.12	2.00	0.00	0.29	0.00
42.22	28.43	2.00	0.00	0.28	0.00	42.28	28.33	2.00	0.00	0.28	0.00
42.34	28.32	2.00	0.00	0.28	0.00	42.41	28.22	2.00	0.00	0.28	0.00
42.48	28.50	2.00	0.00	0.28	0.00	42.55	28.55	2.00	0.00	0.28	0.00
42.59	28.77	2.00	0.00	0.28	0.00	42.66	29.20	2.00	0.00	0.28	0.00
42.72	29.25	2.00	0.00	0.28	0.00	42.82	29.60	2.00	0.00	0.27	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.85	29.74	2.00	0.00	0.27	0.00	42.92	29.87	2.00	0.00	0.27	0.00
42.98	29.92	2.00	0.00	0.27	0.00	43.05	29.98	2.00	0.00	0.27	0.00
43.11	28.99	2.00	0.00	0.27	0.00	43.18	28.68	2.00	0.00	0.27	0.00
43.25	28.73	2.00	0.00	0.27	0.00	43.33	30.34	2.00	0.00	0.27	0.00
43.39	30.62	2.00	0.00	0.26	0.00	43.46	30.59	2.00	0.00	0.26	0.00
43.53	30.57	2.00	0.00	0.26	0.00	43.59	30.70	2.00	0.00	0.26	0.00
43.66	31.13	2.00	0.00	0.26	0.00	43.73	32.52	2.00	0.00	0.26	0.00
43.77	33.77	2.00	0.00	0.26	0.00	43.83	34.80	2.00	0.00	0.26	0.00
43.91	35.07	2.00	0.00	0.26	0.00	43.97	34.61	2.00	0.00	0.25	0.00
44.03	33.09	2.00	0.00	0.25	0.00	44.11	34.05	2.00	0.00	0.25	0.00
44.18	34.02	2.00	0.00	0.25	0.00	44.25	33.99	2.00	0.00	0.25	0.00
44.33	34.71	2.00	0.00	0.25	0.00	44.36	35.00	2.00	0.00	0.25	0.00
44.43	34.60	2.00	0.00	0.25	0.00	44.49	34.28	2.00	0.00	0.25	0.00
44.56	34.60	2.00	0.00	0.24	0.00	44.63	34.62	2.00	0.00	0.24	0.00
44.70	34.37	2.00	0.00	0.24	0.00	44.78	33.90	2.00	0.00	0.24	0.00
44.84	33.96	2.00	0.00	0.24	0.00	44.91	34.09	2.00	0.00	0.24	0.00
44.97	34.95	2.00	0.00	0.24	0.00	45.04	35.37	2.00	0.00	0.24	0.00
45.10	36.09	2.00	0.00	0.24	0.00	45.18	38.14	2.00	0.00	0.23	0.00
45.21	101.57	0.29	0.74	0.23	0.00	45.28	104.61	0.30	0.71	0.23	0.01
45.35	105.87	0.31	0.70	0.23	0.01	45.42	105.71	0.31	0.70	0.23	0.01
45.48	104.80	0.30	0.70	0.23	0.01	45.55	106.69	0.31	0.69	0.23	0.01
45.61	107.54	0.31	0.68	0.23	0.00	45.68	108.68	0.32	0.67	0.23	0.01
45.76	111.70	0.33	0.64	0.22	0.01	45.83	113.47	0.34	0.63	0.22	0.01
45.89	115.59	0.35	0.61	0.22	0.00	45.96	115.86	0.35	0.61	0.22	0.00
46.02	116.88	0.36	0.60	0.22	0.00	46.09	117.74	0.36	0.59	0.22	0.00
46.16	118.98	0.37	0.58	0.22	0.00	46.20	119.41	0.37	0.58	0.22	0.00
46.27	118.56	0.36	0.58	0.22	0.00	46.33	116.06	0.35	0.59	0.21	0.00
46.39	114.38	0.34	0.60	0.21	0.00	46.46	114.07	0.34	0.60	0.21	0.01
46.53	114.46	0.34	0.59	0.21	0.00	46.59	113.69	0.34	0.59	0.21	0.00
46.66	114.54	0.34	0.58	0.21	0.00	46.74	113.90	0.34	0.58	0.21	0.01
46.80	110.77	0.33	0.60	0.21	0.00	46.88	43.87	2.00	0.00	0.21	0.00
46.94	42.22	2.00	0.00	0.20	0.00	47.01	40.42	2.00	0.00	0.20	0.00
47.07	38.83	2.00	0.00	0.20	0.00	47.11	38.81	2.00	0.00	0.20	0.00
47.19	38.78	2.00	0.00	0.20	0.00	47.25	38.76	2.00	0.00	0.20	0.00
47.32	38.23	2.00	0.00	0.20	0.00	47.39	36.68	2.00	0.00	0.20	0.00
47.45	35.85	2.00	0.00	0.20	0.00	47.52	34.60	2.00	0.00	0.19	0.00
47.58	33.19	2.00	0.00	0.19	0.00	47.66	31.86	2.00	0.00	0.19	0.00
47.71	28.11	2.00	0.00	0.19	0.00	47.79	27.95	2.00	0.00	0.19	0.00
47.86	27.21	2.00	0.00	0.19	0.00	47.92	29.18	2.00	0.00	0.19	0.00
47.98	32.60	2.00	0.00	0.19	0.00	48.05	34.68	2.00	0.00	0.19	0.00
48.12	37.04	2.00	0.00	0.18	0.00	48.18	38.19	2.00	0.00	0.18	0.00
48.26	37.23	2.00	0.00	0.18	0.00	48.32	37.29	2.00	0.00	0.18	0.00
48.39	37.05	2.00	0.00	0.18	0.00	48.46	36.60	2.00	0.00	0.18	0.00
48.52	35.05	2.00	0.00	0.18	0.00	48.56	34.47	2.00	0.00	0.18	0.00
48.62	33.73	2.00	0.00	0.18	0.00	48.69	33.29	2.00	0.00	0.17	0.00
48.76	32.25	2.00	0.00	0.17	0.00	48.82	31.73	2.00	0.00	0.17	0.00
48.89	32.43	2.00	0.00	0.17	0.00	48.96	32.48	2.00	0.00	0.17	0.00
49.03	32.39	2.00	0.00	0.17	0.00	49.10	32.37	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.16	32.17	2.00	0.00	0.17	0.00	49.23	32.15	2.00	0.00	0.17	0.00
49.30	31.95	2.00	0.00	0.16	0.00	49.36	32.89	2.00	0.00	0.16	0.00
49.44	33.08	2.00	0.00	0.16	0.00	49.48	33.57	2.00	0.00	0.16	0.00
49.58	33.90	2.00	0.00	0.16	0.00	49.61	33.03	2.00	0.00	0.16	0.00
49.68	33.01	2.00	0.00	0.16	0.00	49.74	33.00	2.00	0.00	0.16	0.00
49.83	31.40	2.00	0.00	0.16	0.00	49.89	30.40	2.00	0.00	0.15	0.00
49.96	30.41	2.00	0.00	0.15	0.00	50.01	30.40	2.00	0.00	0.15	0.00
50.07	30.44	2.00	0.00	0.15	0.00	50.16	28.16	2.00	0.00	0.15	0.00
50.22	27.16	2.00	0.00	0.15	0.00	50.29	26.31	2.00	0.00	0.15	0.00
50.33	25.46	2.00	0.00	0.15	0.00	50.41	24.68	2.00	0.00	0.15	0.00
50.47	23.62	2.00	0.00	0.14	0.00	50.53	22.78	2.00	0.00	0.14	0.00
50.61	21.31	2.00	0.00	0.14	0.00	50.66	20.47	2.00	0.00	0.14	0.00
50.73	19.84	2.00	0.00	0.14	0.00	50.80	20.38	2.00	0.00	0.14	0.00
50.86	22.02	2.00	0.00	0.14	0.00	50.93	22.01	2.00	0.00	0.14	0.00
50.99	20.41	2.00	0.00	0.14	0.00	51.06	22.59	2.00	0.00	0.13	0.00
51.13	29.72	2.00	0.00	0.13	0.00	51.20	35.13	2.00	0.00	0.13	0.00
51.27	38.67	2.00	0.00	0.13	0.00	51.33	40.95	2.00	0.00	0.13	0.00
51.40	41.56	2.00	0.00	0.13	0.00	51.46	44.00	2.00	0.00	0.13	0.00
51.53	44.76	2.00	0.00	0.13	0.00	51.61	44.22	2.00	0.00	0.13	0.00
51.64	44.86	2.00	0.00	0.12	0.00	51.71	45.13	2.00	0.00	0.12	0.00
51.78	45.10	2.00	0.00	0.12	0.00	51.84	45.08	2.00	0.00	0.12	0.00
51.91	45.06	2.00	0.00	0.12	0.00	51.98	46.49	2.00	0.00	0.12	0.00
52.06	47.41	2.00	0.00	0.12	0.00	52.13	111.96	0.34	0.33	0.12	0.00
52.19	113.81	0.35	0.32	0.12	0.00	52.24	114.68	0.36	0.32	0.11	0.00
52.31	115.74	0.36	0.31	0.11	0.00	52.37	113.87	0.35	0.32	0.11	0.00
52.46	110.99	0.34	0.32	0.11	0.00	52.53	44.46	2.00	0.00	0.11	0.00
52.56	43.16	2.00	0.00	0.11	0.00	52.63	40.40	2.00	0.00	0.11	0.00
52.69	38.97	2.00	0.00	0.11	0.00	52.78	37.75	2.00	0.00	0.11	0.00
52.84	36.19	2.00	0.00	0.10	0.00	52.91	33.72	2.00	0.00	0.10	0.00
52.98	33.92	2.00	0.00	0.10	0.00	53.04	33.56	2.00	0.00	0.10	0.00
53.10	32.48	2.00	0.00	0.10	0.00	53.17	36.24	2.00	0.00	0.10	0.00
53.22	38.95	2.00	0.00	0.10	0.00	53.31	44.64	2.00	0.00	0.10	0.00
53.35	45.82	2.00	0.00	0.10	0.00	53.41	48.41	2.00	0.00	0.09	0.00
53.49	116.01	0.36	0.26	0.09	0.00	53.55	118.51	0.38	0.25	0.09	0.00
53.62	119.56	0.38	0.24	0.09	0.00	53.68	118.82	0.38	0.24	0.09	0.00
53.74	117.15	0.37	0.24	0.09	0.00	53.83	115.22	0.36	0.24	0.09	0.00
53.88	46.26	2.00	0.00	0.09	0.00	53.96	41.38	2.00	0.00	0.09	0.00
54.03	38.19	2.00	0.00	0.08	0.00	54.09	35.60	2.00	0.00	0.08	0.00
54.16	32.67	2.00	0.00	0.08	0.00	54.22	30.57	2.00	0.00	0.08	0.00
54.29	33.64	2.00	0.00	0.08	0.00	54.36	46.80	2.00	0.00	0.08	0.00
54.43	120.55	0.39	0.20	0.08	0.00	54.47	121.86	0.40	0.20	0.08	0.00
54.53	122.02	0.40	0.20	0.08	0.00	54.60	120.34	0.39	0.20	0.07	0.00
54.67	119.15	0.38	0.20	0.07	0.00	54.73	118.19	0.38	0.20	0.07	0.00
54.80	117.66	0.38	0.19	0.07	0.00	54.87	51.26	2.00	0.00	0.07	0.00
54.94	48.42	2.00	0.00	0.07	0.00	55.00	46.11	2.00	0.00	0.07	0.00
55.08	44.67	2.00	0.00	0.07	0.00	55.15	42.44	2.00	0.00	0.07	0.00
55.21	44.76	2.00	0.00	0.06	0.00	55.28	37.73	2.00	0.00	0.06	0.00
55.34	44.79	2.00	0.00	0.06	0.00	55.40	52.59	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.47	55.01	2.00	0.00	0.06	0.00	55.51	122.40	0.40	0.15	0.06	0.00
55.58	126.12	0.43	0.15	0.06	0.00	55.65	129.08	0.45	0.14	0.06	0.00
55.72	127.68	0.44	0.14	0.06	0.00	55.78	58.11	2.00	0.00	0.05	0.00
55.85	58.19	2.00	0.00	0.05	0.00	55.91	57.78	2.00	0.00	0.05	0.00
55.98	60.36	2.00	0.00	0.05	0.00	56.04	53.92	2.00	0.00	0.05	0.00
56.13	56.02	2.00	0.00	0.05	0.00	56.20	53.50	2.00	0.00	0.05	0.00
56.26	53.37	2.00	0.00	0.05	0.00	56.33	53.22	2.00	0.00	0.05	0.00
56.40	56.53	2.00	0.00	0.04	0.00	56.43	57.81	2.00	0.00	0.04	0.00
56.51	130.15	0.46	0.10	0.04	0.00	56.57	131.68	0.48	0.10	0.04	0.00
56.64	130.19	0.46	0.10	0.04	0.00	56.71	129.30	0.46	0.10	0.04	0.00
56.77	127.45	0.44	0.09	0.04	0.00	56.84	127.16	0.44	0.09	0.04	0.00
56.92	126.03	0.43	0.09	0.04	0.00	56.98	55.94	2.00	0.00	0.03	0.00
57.05	53.69	2.00	0.00	0.03	0.00	57.12	50.66	2.00	0.00	0.03	0.00
57.19	47.59	2.00	0.00	0.03	0.00	57.25	44.04	2.00	0.00	0.03	0.00
57.31	39.56	2.00	0.00	0.03	0.00	57.35	37.46	2.00	0.00	0.03	0.00
57.42	35.39	2.00	0.00	0.03	0.00	57.50	35.02	2.00	0.00	0.03	0.00
57.55	33.64	2.00	0.00	0.02	0.00	57.62	33.68	2.00	0.00	0.02	0.00
57.69	33.80	2.00	0.00	0.02	0.00	57.76	33.36	2.00	0.00	0.02	0.00
57.82	34.71	2.00	0.00	0.02	0.00	57.89	35.23	2.00	0.00	0.02	0.00
57.95	35.08	2.00	0.00	0.02	0.00	58.02	35.00	2.00	0.00	0.02	0.00
58.09	34.91	2.00	0.00	0.02	0.00	58.16	33.53	2.00	0.00	0.01	0.00
58.22	32.31	2.00	0.00	0.01	0.00	58.30	29.99	2.00	0.00	0.01	0.00
58.36	28.58	2.00	0.00	0.01	0.00	58.43	28.57	2.00	0.00	0.01	0.00
58.49	28.75	2.00	0.00	0.01	0.00	58.56	28.14	2.00	0.00	0.01	0.00
58.63	28.65	2.00	0.00	0.01	0.00	58.67	29.44	2.00	0.00	0.01	0.00
58.76	30.02	2.00	0.00	0.00	0.00	58.80	31.08	2.00	0.00	0.00	0.00
58.87	31.82	2.00	0.00	0.00	0.00	58.95	33.07	2.00	0.00	0.00	0.00
59.02	33.13	2.00	0.00	0.00	0.00	59.08	32.10	2.00	0.00	0.00	0.00
59.15	31.22	2.00	0.00	0.00	0.00	59.22	31.97	2.00	0.00	0.00	0.00
59.29	31.85	2.00	0.00	0.00	0.00	59.32	34.72	2.00	0.00	0.00	0.00
59.38	39.09	2.00	0.00	0.00	0.00	59.46	42.18	2.00	0.00	0.00	0.00
59.52	45.71	2.00	0.00	0.00	0.00	59.58	45.90	2.00	0.00	0.00	0.00
59.65	45.45	2.00	0.00	0.00	0.00	59.72	45.99	2.00	0.00	0.00	0.00
59.78	46.79	2.00	0.00	0.00	0.00	59.86	50.41	2.00	0.00	0.00	0.00
59.93	52.98	2.00	0.00	0.00	0.00	60.00	55.53	2.00	0.00	0.00	0.00
60.06	53.84	2.00	0.00	0.00	0.00	60.13	54.09	2.00	0.00	0.00	0.00
60.20	58.16	2.00	0.00	0.00	0.00	60.26	57.68	2.00	0.00	0.00	0.00
60.33	56.50	2.00	0.00	0.00	0.00	60.40	56.40	2.00	0.00	0.00	0.00
60.46	54.02	2.00	0.00	0.00	0.00	60.52	51.81	2.00	0.00	0.00	0.00
60.59	49.69	2.00	0.00	0.00	0.00	60.65	47.02	2.00	0.00	0.00	0.00
60.72	43.61	2.00	0.00	0.00	0.00	60.79	39.19	2.00	0.00	0.00	0.00
60.85	35.48	2.00	0.00	0.00	0.00	60.92	33.40	2.00	0.00	0.00	0.00
60.99	33.44	2.00	0.00	0.00	0.00	61.03	34.09	2.00	0.00	0.00	0.00
61.12	33.26	2.00	0.00	0.00	0.00	61.19	34.05	2.00	0.00	0.00	0.00
61.25	32.24	2.00	0.00	0.00	0.00	61.32	34.01	2.00	0.00	0.00	0.00
61.38	34.58	2.00	0.00	0.00	0.00	61.42	34.12	2.00	0.00	0.00	0.00
61.51	32.90	2.00	0.00	0.00	0.00	61.58	35.67	2.00	0.00	0.00	0.00
61.64	38.39	2.00	0.00	0.00	0.00	61.71	38.43	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.75	38.35	2.00	0.00	0.00	0.00	61.82	38.33	2.00	0.00	0.00	0.00
61.90	35.64	2.00	0.00	0.00	0.00	61.96	33.05	2.00	0.00	0.00	0.00
62.03	30.39	2.00	0.00	0.00	0.00	62.09	29.73	2.00	0.00	0.00	0.00
62.15	27.77	2.00	0.00	0.00	0.00	62.22	27.56	2.00	0.00	0.00	0.00
62.29	28.97	2.00	0.00	0.00	0.00	62.35	30.50	2.00	0.00	0.00	0.00
62.42	34.76	2.00	0.00	0.00	0.00	62.50	37.18	2.00	0.00	0.00	0.00
62.55	37.37	2.00	0.00	0.00	0.00	62.62	35.76	2.00	0.00	0.00	0.00
62.68	35.35	2.00	0.00	0.00	0.00	62.75	35.92	2.00	0.00	0.00	0.00
62.81	36.50	2.00	0.00	0.00	0.00	62.87	39.54	2.00	0.00	0.00	0.00
62.94	40.80	2.00	0.00	0.00	0.00	62.99	43.15	2.00	0.00	0.00	0.00
63.06	42.65	2.00	0.00	0.00	0.00	63.13	40.61	2.00	0.00	0.00	0.00
63.20	39.23	2.00	0.00	0.00	0.00	63.26	39.25	2.00	0.00	0.00	0.00
63.32	39.22	2.00	0.00	0.00	0.00	63.39	39.22	2.00	0.00	0.00	0.00
63.49	43.12	2.00	0.00	0.00	0.00	63.55	44.24	2.00	0.00	0.00	0.00
63.58	44.37	2.00	0.00	0.00	0.00	63.67	43.73	2.00	0.00	0.00	0.00
63.75	43.99	2.00	0.00	0.00	0.00	63.81	43.70	2.00	0.00	0.00	0.00
63.87	42.87	2.00	0.00	0.00	0.00	63.91	41.92	2.00	0.00	0.00	0.00
64.00	39.59	2.00	0.00	0.00	0.00	64.07	39.54	2.00	0.00	0.00	0.00
64.13	39.48	2.00	0.00	0.00	0.00	64.18	41.01	2.00	0.00	0.00	0.00
64.27	44.96	2.00	0.00	0.00	0.00	64.31	45.07	2.00	0.00	0.00	0.00
64.40	45.32	2.00	0.00	0.00	0.00	64.46	44.16	2.00	0.00	0.00	0.00
64.53	42.40	2.00	0.00	0.00	0.00	64.60	40.25	2.00	0.00	0.00	0.00
64.66	38.10	2.00	0.00	0.00	0.00	64.72	36.91	2.00	0.00	0.00	0.00
64.79	36.53	2.00	0.00	0.00	0.00	64.85	33.07	2.00	0.00	0.00	0.00
64.92	30.08	2.00	0.00	0.00	0.00	64.98	27.94	2.00	0.00	0.00	0.00
65.05	26.20	2.00	0.00	0.00	0.00	65.11	25.75	2.00	0.00	0.00	0.00
65.16	24.47	2.00	0.00	0.00	0.00	65.26	25.15	2.00	0.00	0.00	0.00
65.29	24.51	2.00	0.00	0.00	0.00	65.38	22.99	2.00	0.00	0.00	0.00
65.45	22.66	2.00	0.00	0.00	0.00	65.51	23.84	2.00	0.00	0.00	0.00
65.57	29.21	2.00	0.00	0.00	0.00	65.64	33.06	2.00	0.00	0.00	0.00
65.70	34.79	2.00	0.00	0.00	0.00	65.76	34.90	2.00	0.00	0.00	0.00
65.83	35.01	2.00	0.00	0.00	0.00	65.88	35.06	2.00	0.00	0.00	0.00
65.97	36.47	2.00	0.00	0.00	0.00	66.03	35.86	2.00	0.00	0.00	0.00
66.10	35.78	2.00	0.00	0.00	0.00	66.16	35.77	2.00	0.00	0.00	0.00
66.22	34.90	2.00	0.00	0.00	0.00	66.29	34.89	2.00	0.00	0.00	0.00
66.35	34.87	2.00	0.00	0.00	0.00	66.42	35.11	2.00	0.00	0.00	0.00
66.48	36.38	2.00	0.00	0.00	0.00	66.54	37.53	2.00	0.00	0.00	0.00
66.60	37.72	2.00	0.00	0.00	0.00	66.70	36.71	2.00	0.00	0.00	0.00
66.76	38.40	2.00	0.00	0.00	0.00	66.83	40.65	2.00	0.00	0.00	0.00
66.89	42.09	2.00	0.00	0.00	0.00	66.95	42.47	2.00	0.00	0.00	0.00
67.02	42.38	2.00	0.00	0.00	0.00	67.08	42.83	2.00	0.00	0.00	0.00
67.14	44.28	2.00	0.00	0.00	0.00	67.21	44.40	2.00	0.00	0.00	0.00
67.27	42.24	2.00	0.00	0.00	0.00	67.33	39.78	2.00	0.00	0.00	0.00
67.39	37.53	2.00	0.00	0.00	0.00	67.46	35.19	2.00	0.00	0.00	0.00
67.53	32.31	2.00	0.00	0.00	0.00	67.63	28.01	2.00	0.00	0.00	0.00
67.65	27.57	2.00	0.00	0.00	0.00	67.72	30.65	2.00	0.00	0.00	0.00
67.80	33.51	2.00	0.00	0.00	0.00	67.87	33.49	2.00	0.00	0.00	0.00
67.93	31.58	2.00	0.00	0.00	0.00	67.99	28.63	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
68.06	26.61	2.00	0.00	0.00	0.00	68.12	25.41	2.00	0.00	0.00	0.00
68.19	24.65	2.00	0.00	0.00	0.00	68.26	23.71	2.00	0.00	0.00	0.00
68.33	21.12	2.00	0.00	0.00	0.00	68.40	21.97	2.00	0.00	0.00	0.00
68.46	21.47	2.00	0.00	0.00	0.00	68.52	21.46	2.00	0.00	0.00	0.00
68.59	22.79	2.00	0.00	0.00	0.00	68.65	25.50	2.00	0.00	0.00	0.00
68.71	28.84	2.00	0.00	0.00	0.00	68.78	29.71	2.00	0.00	0.00	0.00
68.84	29.51	2.00	0.00	0.00	0.00	68.91	28.75	2.00	0.00	0.00	0.00
68.97	27.49	2.00	0.00	0.00	0.00	69.04	26.79	2.00	0.00	0.00	0.00
69.11	26.47	2.00	0.00	0.00	0.00	69.17	25.46	2.00	0.00	0.00	0.00
69.24	23.48	2.00	0.00	0.00	0.00	69.30	21.34	2.00	0.00	0.00	0.00
69.37	19.88	2.00	0.00	0.00	0.00	69.44	18.92	2.00	0.00	0.00	0.00
69.50	18.79	2.00	0.00	0.00	0.00	69.56	20.76	2.00	0.00	0.00	0.00
69.63	26.18	2.00	0.00	0.00	0.00	69.70	30.77	2.00	0.00	0.00	0.00
69.76	33.92	2.00	0.00	0.00	0.00	69.82	35.36	2.00	0.00	0.00	0.00
69.89	35.73	2.00	0.00	0.00	0.00	69.95	35.47	2.00	0.00	0.00	0.00
70.05	35.63	2.00	0.00	0.00	0.00	70.08	35.75	2.00	0.00	0.00	0.00
70.15	35.74	2.00	0.00	0.00	0.00	70.24	36.10	2.00	0.00	0.00	0.00
70.31	35.51	2.00	0.00	0.00	0.00	70.37	34.92	2.00	0.00	0.00	0.00
70.43	34.91	2.00	0.00	0.00	0.00	70.50	34.16	2.00	0.00	0.00	0.00
70.55	24.35	2.00	0.00	0.00	0.00	70.63	30.99	2.00	0.00	0.00	0.00
70.68	30.08	2.00	0.00	0.00	0.00	70.75	28.88	2.00	0.00	0.00	0.00
70.81	27.44	2.00	0.00	0.00	0.00	70.87	27.05	2.00	0.00	0.00	0.00
70.94	27.66	2.00	0.00	0.00	0.00	71.01	27.95	2.00	0.00	0.00	0.00
71.07	28.56	2.00	0.00	0.00	0.00	71.13	28.92	2.00	0.00	0.00	0.00
71.20	29.10	2.00	0.00	0.00	0.00	71.26	29.14	2.00	0.00	0.00	0.00
71.33	28.57	2.00	0.00	0.00	0.00	71.40	27.08	2.00	0.00	0.00	0.00
71.46	25.78	2.00	0.00	0.00	0.00	71.53	24.85	2.00	0.00	0.00	0.00
71.60	23.26	2.00	0.00	0.00	0.00	71.67	21.27	2.00	0.00	0.00	0.00
71.73	20.60	2.00	0.00	0.00	0.00	71.80	19.59	2.00	0.00	0.00	0.00
71.86	18.93	2.00	0.00	0.00	0.00	71.92	16.58	2.00	0.00	0.00	0.00
72.00	18.21	2.00	0.00	0.00	0.00	72.07	16.97	2.00	0.00	0.00	0.00
72.13	16.96	2.00	0.00	0.00	0.00	72.20	16.95	2.00	0.00	0.00	0.00
72.26	16.83	2.00	0.00	0.00	0.00	72.33	17.70	2.00	0.00	0.00	0.00
72.39	18.80	2.00	0.00	0.00	0.00	72.46	19.44	2.00	0.00	0.00	0.00
72.52	19.14	2.00	0.00	0.00	0.00	72.59	17.67	2.00	0.00	0.00	0.00
72.65	15.86	2.00	0.00	0.00	0.00	72.72	14.82	2.00	0.00	0.00	0.00
72.78	15.94	2.00	0.00	0.00	0.00	72.84	15.26	2.00	0.00	0.00	0.00
72.91	16.01	2.00	0.00	0.00	0.00	72.97	16.17	2.00	0.00	0.00	0.00
73.03	17.26	2.00	0.00	0.00	0.00	73.10	18.47	2.00	0.00	0.00	0.00
73.17	18.82	2.00	0.00	0.00	0.00	73.23	18.93	2.00	0.00	0.00	0.00
73.30	19.56	2.00	0.00	0.00	0.00	73.37	19.09	2.00	0.00	0.00	0.00
73.43	18.15	2.00	0.00	0.00	0.00	73.51	17.56	2.00	0.00	0.00	0.00
73.56	16.05	2.00	0.00	0.00	0.00	73.64	13.94	2.00	0.00	0.00	0.00
73.70	12.24	2.00	0.00	0.00	0.00	73.76	10.56	2.00	0.00	0.00	0.00
73.83	9.84	2.00	0.00	0.00	0.00	73.89	9.73	2.00	0.00	0.00	0.00
73.96	9.56	2.00	0.00	0.00	0.00	74.03	9.61	2.00	0.00	0.00	0.00
74.09	9.55	2.00	0.00	0.00	0.00	74.16	9.33	2.00	0.00	0.00	0.00
74.21	9.51	2.00	0.00	0.00	0.00	74.30	9.27	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.36	9.48	2.00	0.00	0.00	0.00	74.41	10.57	2.00	0.00	0.00	0.00
74.49	13.24	2.00	0.00	0.00	0.00	74.56	14.98	2.00	0.00	0.00	0.00
74.61	17.26	2.00	0.00	0.00	0.00	74.70	21.84	2.00	0.00	0.00	0.00
74.75	25.05	2.00	0.00	0.00	0.00	74.81	26.90	2.00	0.00	0.00	0.00
74.89	26.22	2.00	0.00	0.00	0.00	74.95	24.95	2.00	0.00	0.00	0.00
75.01	17.27	2.00	0.00	0.00	0.00	75.10	23.14	2.00	0.00	0.00	0.00
75.17	22.42	2.00	0.00	0.00	0.00	75.23	21.47	2.00	0.00	0.00	0.00
75.29	20.06	2.00	0.00	0.00	0.00	75.36	20.17	2.00	0.00	0.00	0.00
75.39	21.86	2.00	0.00	0.00	0.00	75.49	30.29	2.00	0.00	0.00	0.00
75.55	34.26	2.00	0.00	0.00	0.00	75.62	34.98	2.00	0.00	0.00	0.00
75.69	35.28	2.00	0.00	0.00	0.00	75.75	35.95	2.00	0.00	0.00	0.00
75.82	38.11	2.00	0.00	0.00	0.00	75.86	39.09	2.00	0.00	0.00	0.00
75.96	40.18	2.00	0.00	0.00	0.00	75.99	40.73	2.00	0.00	0.00	0.00
76.05	41.47	2.00	0.00	0.00	0.00	76.12	43.05	2.00	0.00	0.00	0.00
76.18	43.28	2.00	0.00	0.00	0.00	76.25	43.20	2.00	0.00	0.00	0.00
76.32	43.70	2.00	0.00	0.00	0.00	76.40	44.64	2.00	0.00	0.00	0.00
76.46	45.39	2.00	0.00	0.00	0.00	76.53	45.70	2.00	0.00	0.00	0.00
76.59	45.74	2.00	0.00	0.00	0.00	76.66	46.24	2.00	0.00	0.00	0.00
76.73	46.99	2.00	0.00	0.00	0.00	76.79	48.14	2.00	0.00	0.00	0.00
76.86	49.42	2.00	0.00	0.00	0.00	76.92	50.59	2.00	0.00	0.00	0.00
77.00	50.63	2.00	0.00	0.00	0.00	77.06	50.36	2.00	0.00	0.00	0.00
77.13	49.36	2.00	0.00	0.00	0.00	77.17	49.15	2.00	0.00	0.00	0.00
77.23	48.56	2.00	0.00	0.00	0.00	77.31	43.87	2.00	0.00	0.00	0.00
77.37	46.32	2.00	0.00	0.00	0.00	77.44	46.02	2.00	0.00	0.00	0.00
77.51	46.13	2.00	0.00	0.00	0.00	77.57	46.36	2.00	0.00	0.00	0.00
77.64	46.54	2.00	0.00	0.00	0.00	77.71	46.58	2.00	0.00	0.00	0.00
77.78	46.26	2.00	0.00	0.00	0.00	77.84	45.09	2.00	0.00	0.00	0.00
77.92	43.60	2.00	0.00	0.00	0.00	77.99	41.75	2.00	0.00	0.00	0.00
78.04	38.68	2.00	0.00	0.00	0.00	78.10	36.83	2.00	0.00	0.00	0.00
78.16	35.29	2.00	0.00	0.00	0.00	78.23	33.08	2.00	0.00	0.00	0.00
78.29	35.45	2.00	0.00	0.00	0.00	78.35	28.57	2.00	0.00	0.00	0.00
78.43	35.58	2.00	0.00	0.00	0.00	78.49	41.02	2.00	0.00	0.00	0.00
78.56	46.06	2.00	0.00	0.00	0.00	78.63	49.90	2.00	0.00	0.00	0.00
78.69	52.55	2.00	0.00	0.00	0.00	78.77	53.04	2.00	0.00	0.00	0.00
78.83	53.36	2.00	0.00	0.00	0.00	78.90	53.80	2.00	0.00	0.00	0.00
78.97	53.92	2.00	0.00	0.00	0.00	79.03	52.78	2.00	0.00	0.00	0.00
79.10	53.02	2.00	0.00	0.00	0.00	79.14	55.75	2.00	0.00	0.00	0.00
79.20	63.45	2.00	0.00	0.00	0.00	79.27	68.20	2.00	0.00	0.00	0.00
79.34	68.35	2.00	0.00	0.00	0.00	79.40	68.41	2.00	0.00	0.00	0.00
79.47	68.32	2.00	0.00	0.00	0.00	79.54	67.74	2.00	0.00	0.00	0.00
79.61	67.25	2.00	0.00	0.00	0.00	79.68	66.19	2.00	0.00	0.00	0.00
79.74	65.20	2.00	0.00	0.00	0.00	79.81	69.37	2.00	0.00	0.00	0.00
79.88	150.12	0.79	0.00	0.00	0.00	79.94	153.08	0.85	0.00	0.00	0.00
80.01	158.47	0.99	0.00	0.00	0.00	80.06	157.38	0.96	0.00	0.00	0.00
80.13	156.58	0.94	0.00	0.00	0.00	80.21	156.42	0.94	0.00	0.00	0.00
80.26	156.28	0.93	0.00	0.00	0.00	80.32	156.11	0.93	0.00	0.00	0.00
80.39	155.09	0.90	0.00	0.00	0.00	80.47	156.55	0.94	0.00	0.00	0.00
80.54	157.92	0.98	0.00	0.00	0.00	80.61	158.72	1.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.67	160.75	1.06	0.00	0.00	0.00	80.74	160.55	1.06	0.00	0.00	0.00
80.80	160.72	1.06	0.00	0.00	0.00	80.86	160.24	1.05	0.00	0.00	0.00
80.93	160.52	1.06	0.00	0.00	0.00	81.00	161.15	1.08	0.00	0.00	0.00
81.05	160.27	1.05	0.00	0.00	0.00	81.11	158.11	0.99	0.00	0.00	0.00
81.17	160.11	1.05	0.00	0.00	0.00	81.23	159.30	1.02	0.00	0.00	0.00
81.32	160.06	1.05	0.00	0.00	0.00	81.38	158.61	1.00	0.00	0.00	0.00
81.44	160.02	1.04	0.00	0.00	0.00	81.50	159.71	1.04	0.00	0.00	0.00
81.58	159.19	1.02	0.00	0.00	0.00	81.65	158.83	1.01	0.00	0.00	0.00
81.71	158.36	1.00	0.00	0.00	0.00	81.78	158.19	0.99	0.00	0.00	0.00
81.84	157.99	0.99	0.00	0.00	0.00	81.90	158.19	0.99	0.00	0.00	0.00
81.97	159.06	1.02	0.00	0.00	0.00	82.03	160.39	1.06	0.00	0.00	0.00
82.10	160.79	1.07	0.00	0.00	0.00	82.16	160.23	1.05	0.00	0.00	0.00
82.22	161.93	1.11	0.00	0.00	0.00	82.30	158.19	0.99	0.00	0.00	0.00
82.35	155.90	0.93	0.00	0.00	0.00	82.43	153.81	0.88	0.00	0.00	0.00
82.50	153.10	0.86	0.00	0.00	0.00	82.55	151.92	0.84	0.00	0.00	0.00
82.63	157.42	0.97	0.00	0.00	0.00	82.70	157.70	0.98	0.00	0.00	0.00
82.76	156.30	0.94	0.00	0.00	0.00	82.83	159.83	1.04	0.00	0.00	0.00
82.89	158.11	0.99	0.00	0.00	0.00	82.95	158.74	1.01	0.00	0.00	0.00
83.03	159.82	1.04	0.00	0.00	0.00	83.08	158.93	1.02	0.00	0.00	0.00
83.15	159.47	1.03	0.00	0.00	0.00	83.20	160.00	1.05	0.00	0.00	0.00
83.28	158.40	1.00	0.00	0.00	0.00	83.34	157.98	0.99	0.00	0.00	0.00
83.40	159.06	1.02	0.00	0.00	0.00	83.47	157.47	0.98	0.00	0.00	0.00
83.53	158.69	1.01	0.00	0.00	0.00	83.61	158.69	1.01	0.00	0.00	0.00
83.67	162.15	1.12	0.00	0.00	0.00	83.73	158.87	1.02	0.00	0.00	0.00
83.81	158.89	1.02	0.00	0.00	0.00	83.87	158.71	1.01	0.00	0.00	0.00
83.93	158.48	1.01	0.00	0.00	0.00	84.01	158.28	1.00	0.00	0.00	0.00
84.07	157.57	0.98	0.00	0.00	0.00	84.13	158.81	1.02	0.00	0.00	0.00
84.20	157.32	0.98	0.00	0.00	0.00	84.26	157.28	0.98	0.00	0.00	0.00
84.32	157.12	0.97	0.00	0.00	0.00	84.39	157.04	0.97	0.00	0.00	0.00
84.45	157.06	0.97	0.00	0.00	0.00	84.52	156.95	0.97	0.00	0.00	0.00
84.58	157.01	0.97	0.00	0.00	0.00	84.67	156.19	0.95	0.00	0.00	0.00
84.72	157.16	0.97	0.00	0.00	0.00	84.78	158.69	1.02	0.00	0.00	0.00
84.87	158.25	1.00	0.00	0.00	0.00	84.92	158.93	1.02	0.00	0.00	0.00
84.99	157.34	0.98	0.00	0.00	0.00	85.05	157.06	0.97	0.00	0.00	0.00
85.11	157.04	0.97	0.00	0.00	0.00	85.18	156.64	0.96	0.00	0.00	0.00
85.24	162.22	1.13	0.00	0.00	0.00	85.31	156.65	0.96	0.00	0.00	0.00
85.38	155.72	0.94	0.00	0.00	0.00	85.44	157.28	0.98	0.00	0.00	0.00
85.51	156.76	0.97	0.00	0.00	0.00	85.59	157.75	0.99	0.00	0.00	0.00
85.64	158.81	1.02	0.00	0.00	0.00	85.70	158.22	1.01	0.00	0.00	0.00
85.76	158.54	1.02	0.00	0.00	0.00	85.83	159.95	1.06	0.00	0.00	0.00
85.90	158.76	1.02	0.00	0.00	0.00	85.97	158.09	1.00	0.00	0.00	0.00
86.03	159.20	1.04	0.00	0.00	0.00	86.10	158.28	1.01	0.00	0.00	0.00
86.16	159.85	1.06	0.00	0.00	0.00	86.23	157.86	1.00	0.00	0.00	0.00
86.29	159.73	1.05	0.00	0.00	0.00	86.36	159.64	1.05	0.00	0.00	0.00
86.42	160.33	1.07	0.00	0.00	0.00	86.48	160.37	1.08	0.00	0.00	0.00
86.57	160.22	1.07	0.00	0.00	0.00	86.63	160.94	1.09	0.00	0.00	0.00
86.68	159.54	1.05	0.00	0.00	0.00	86.75	160.56	1.08	0.00	0.00	0.00
86.82	159.74	1.06	0.00	0.00	0.00	86.88	159.60	1.05	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.94	160.00	1.07	0.00	0.00	0.00	87.01	159.90	1.06	0.00	0.00	0.00
87.08	160.25	1.07	0.00	0.00	0.00	87.14	159.09	1.04	0.00	0.00	0.00
87.21	159.46	1.05	0.00	0.00	0.00	87.28	159.42	1.05	0.00	0.00	0.00
87.34	159.48	1.05	0.00	0.00	0.00	87.41	158.73	1.03	0.00	0.00	0.00
87.49	156.80	0.97	0.00	0.00	0.00	87.55	157.10	0.98	0.00	0.00	0.00
87.61	157.12	0.98	0.00	0.00	0.00	87.67	156.84	0.98	0.00	0.00	0.00
87.74	156.52	0.97	0.00	0.00	0.00	87.81	157.02	0.98	0.00	0.00	0.00
87.87	156.05	0.95	0.00	0.00	0.00	87.94	156.18	0.96	0.00	0.00	0.00
88.01	155.04	0.93	0.00	0.00	0.00	88.07	153.54	0.89	0.00	0.00	0.00
88.14	152.50	0.87	0.00	0.00	0.00	88.20	152.37	0.87	0.00	0.00	0.00
88.26	151.42	0.85	0.00	0.00	0.00	88.32	154.87	0.93	0.00	0.00	0.00
88.39	154.90	0.93	0.00	0.00	0.00	88.45	151.32	0.84	0.00	0.00	0.00
88.52	152.61	0.87	0.00	0.00	0.00	88.58	152.79	0.88	0.00	0.00	0.00
88.65	153.04	0.88	0.00	0.00	0.00	88.72	153.09	0.88	0.00	0.00	0.00
88.79	153.44	0.89	0.00	0.00	0.00	88.87	153.17	0.89	0.00	0.00	0.00
88.91	152.50	0.87	0.00	0.00	0.00	88.99	151.77	0.86	0.00	0.00	0.00
89.05	153.02	0.88	0.00	0.00	0.00	89.12	150.98	0.84	0.00	0.00	0.00
89.18	150.84	0.84	0.00	0.00	0.00	89.25	149.80	0.82	0.00	0.00	0.00
89.31	149.53	0.81	0.00	0.00	0.00	89.38	148.62	0.79	0.00	0.00	0.00
89.44	147.67	0.78	0.00	0.00	0.00	89.51	148.18	0.79	0.00	0.00	0.00
89.57	147.52	0.77	0.00	0.00	0.00	89.64	145.48	0.74	0.00	0.00	0.00
89.70	133.68	0.58	0.00	0.00	0.00	89.77	74.44	2.00	0.00	0.00	0.00
89.83	74.71	2.00	0.00	0.00	0.00	89.91	74.97	2.00	0.00	0.00	0.00
89.96	74.20	2.00	0.00	0.00	0.00	90.03	74.26	2.00	0.00	0.00	0.00

Total estimated settlement: 0.41

Abbreviations

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

LIQUEFACTION ANALYSIS REPORT

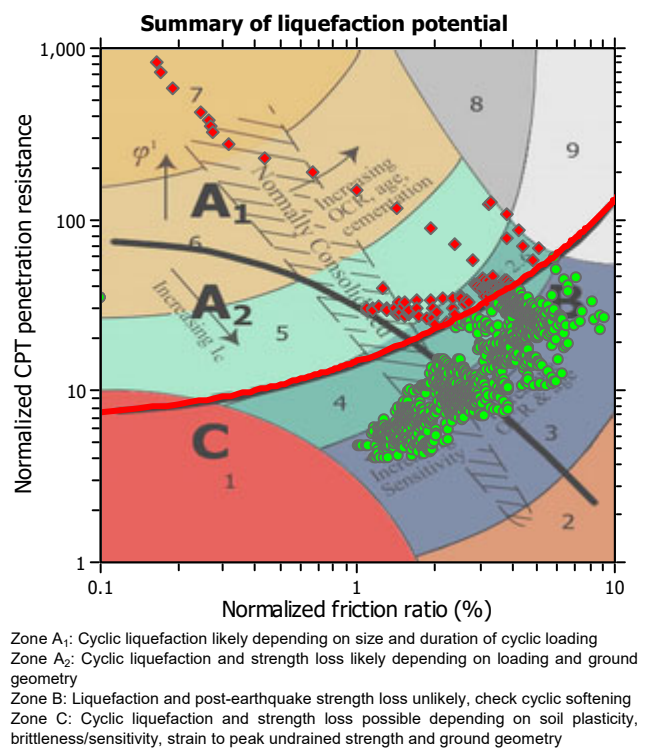
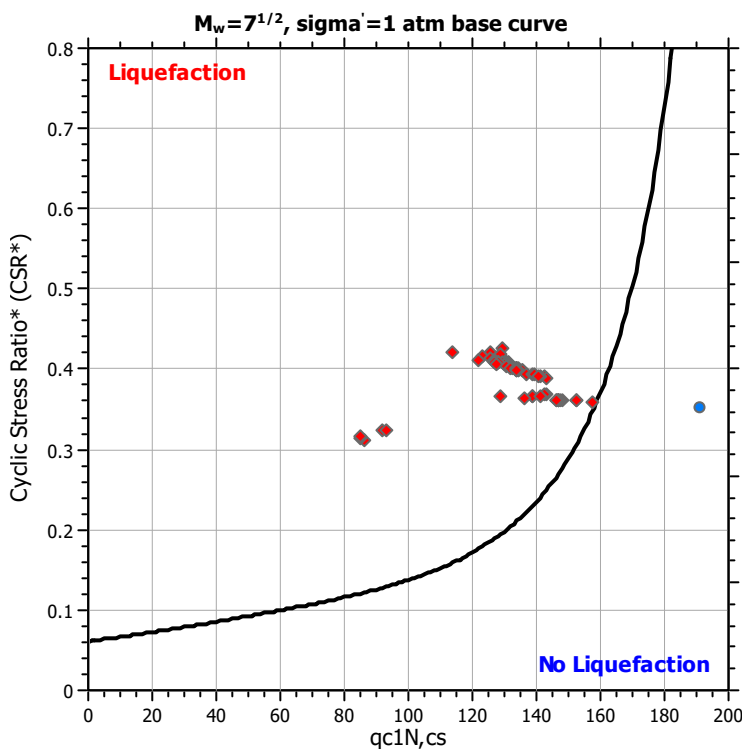
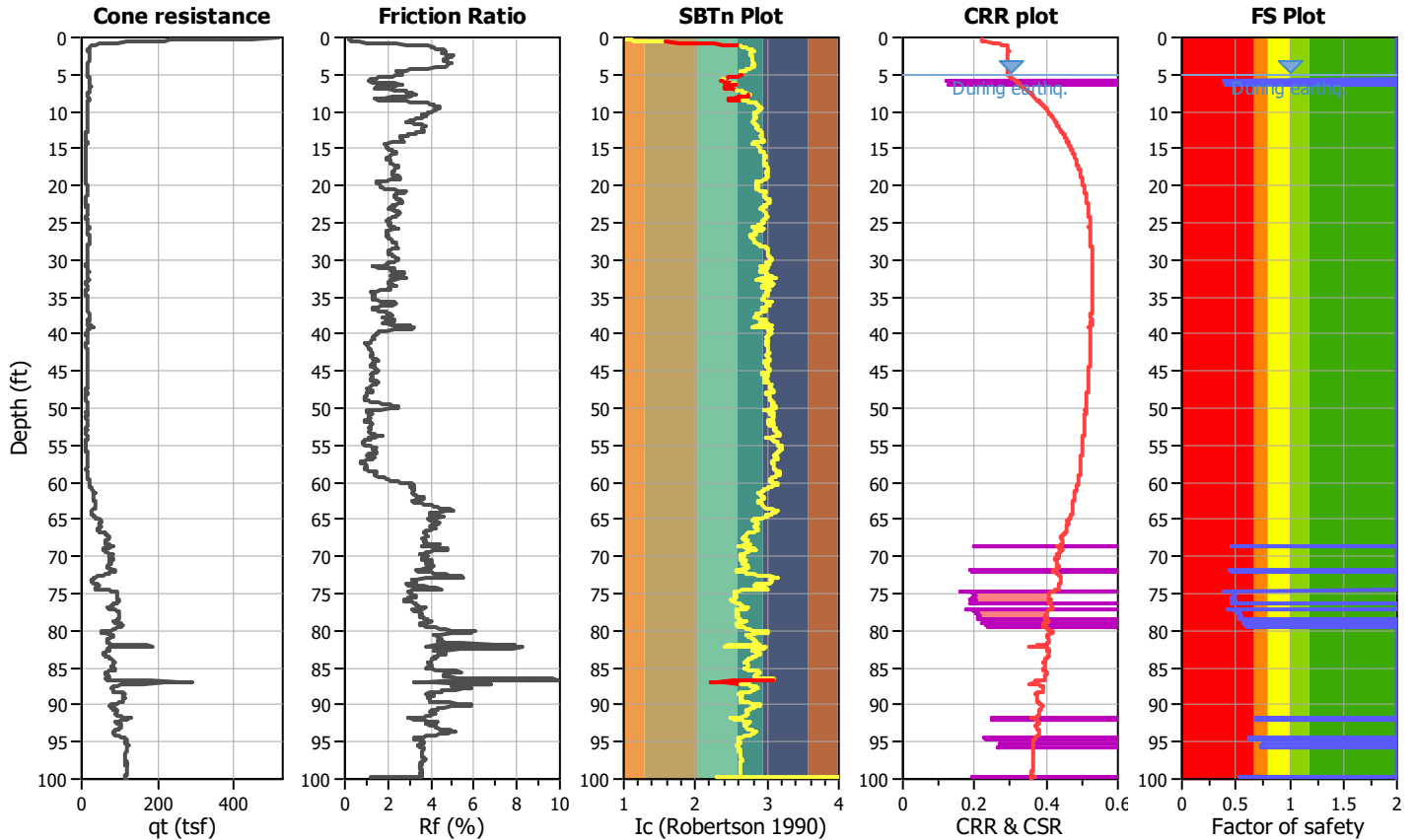
Project title : Victoria Apartments

Location : A9942-88-01

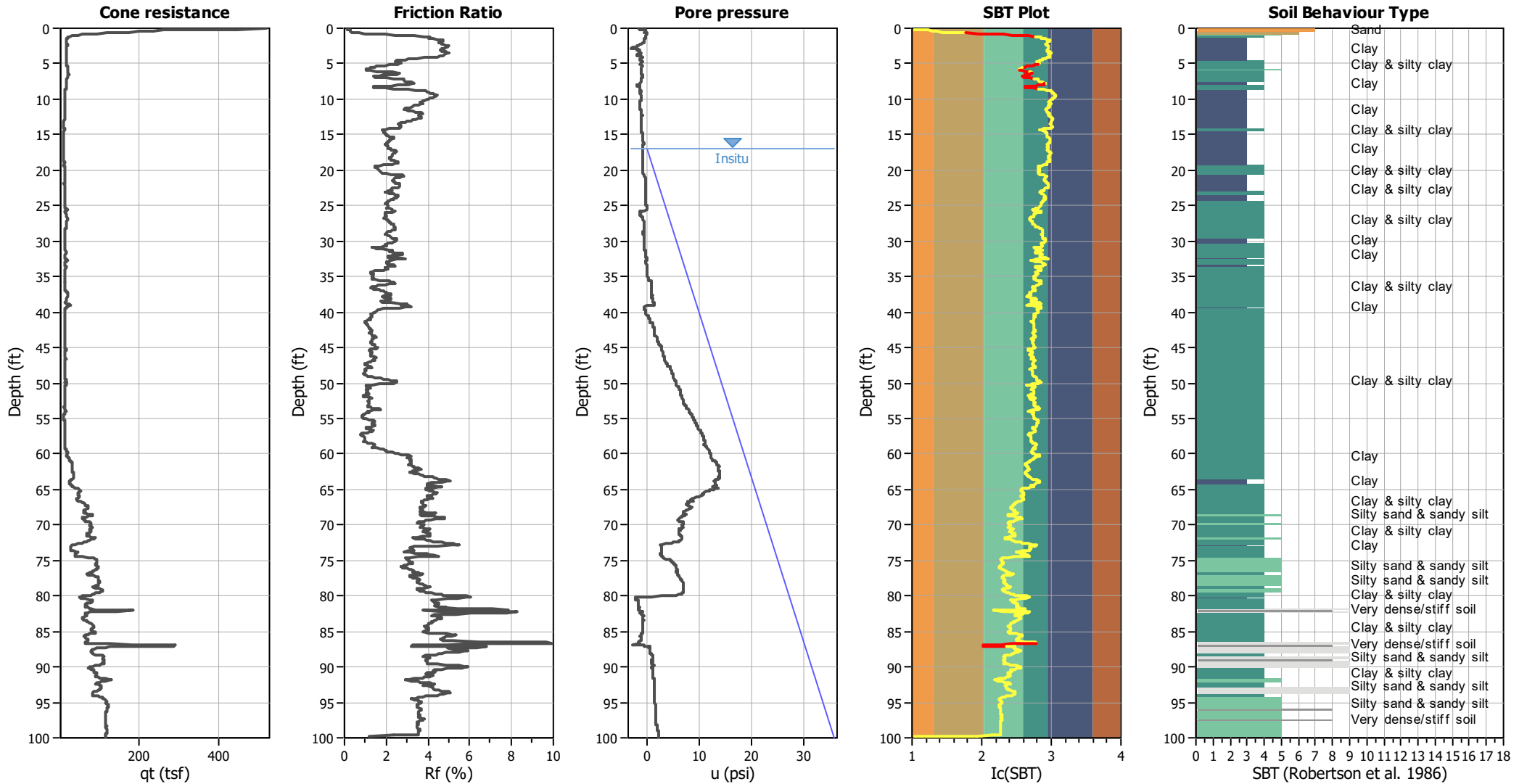
CPT file : C-3

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.57	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.41	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



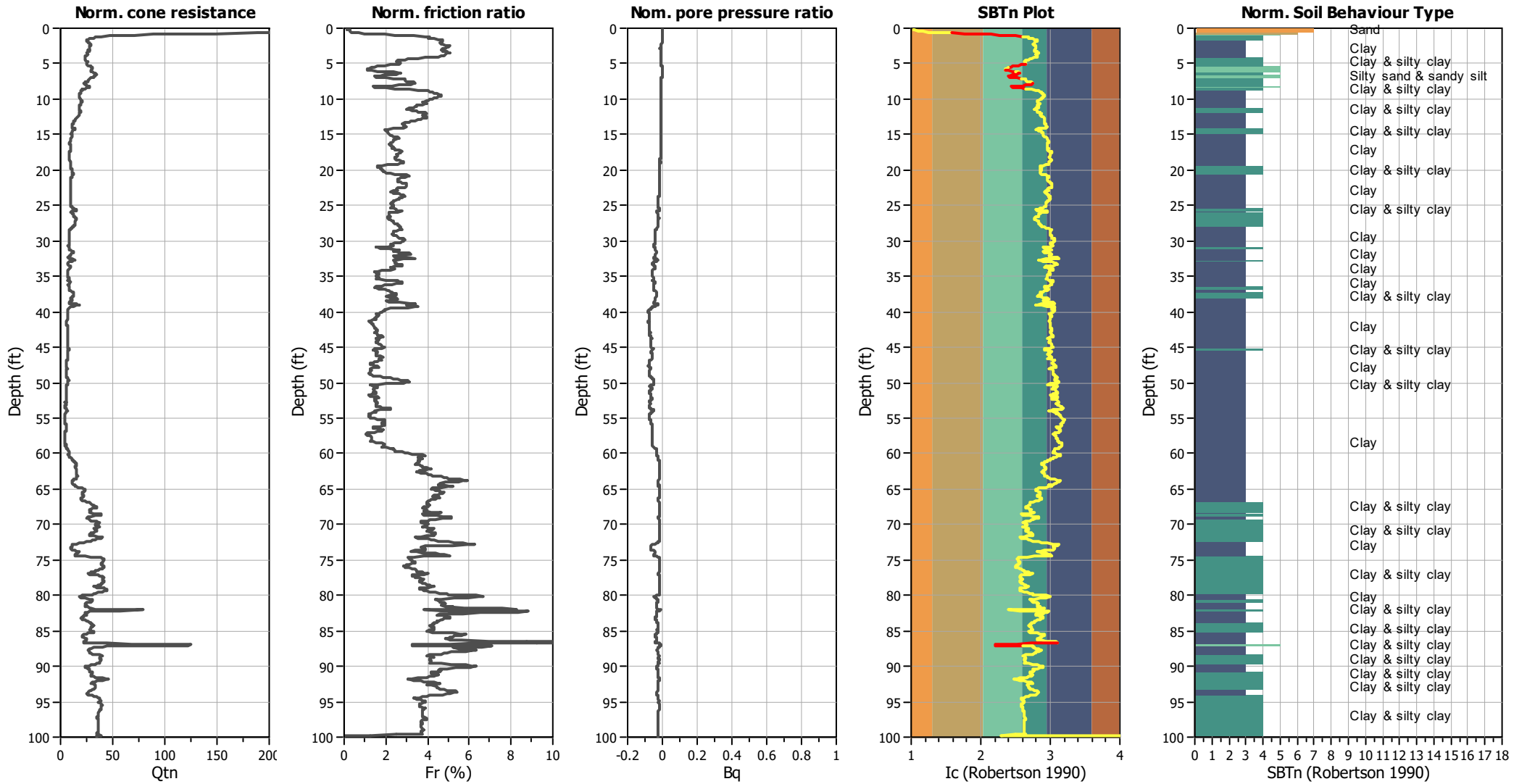
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



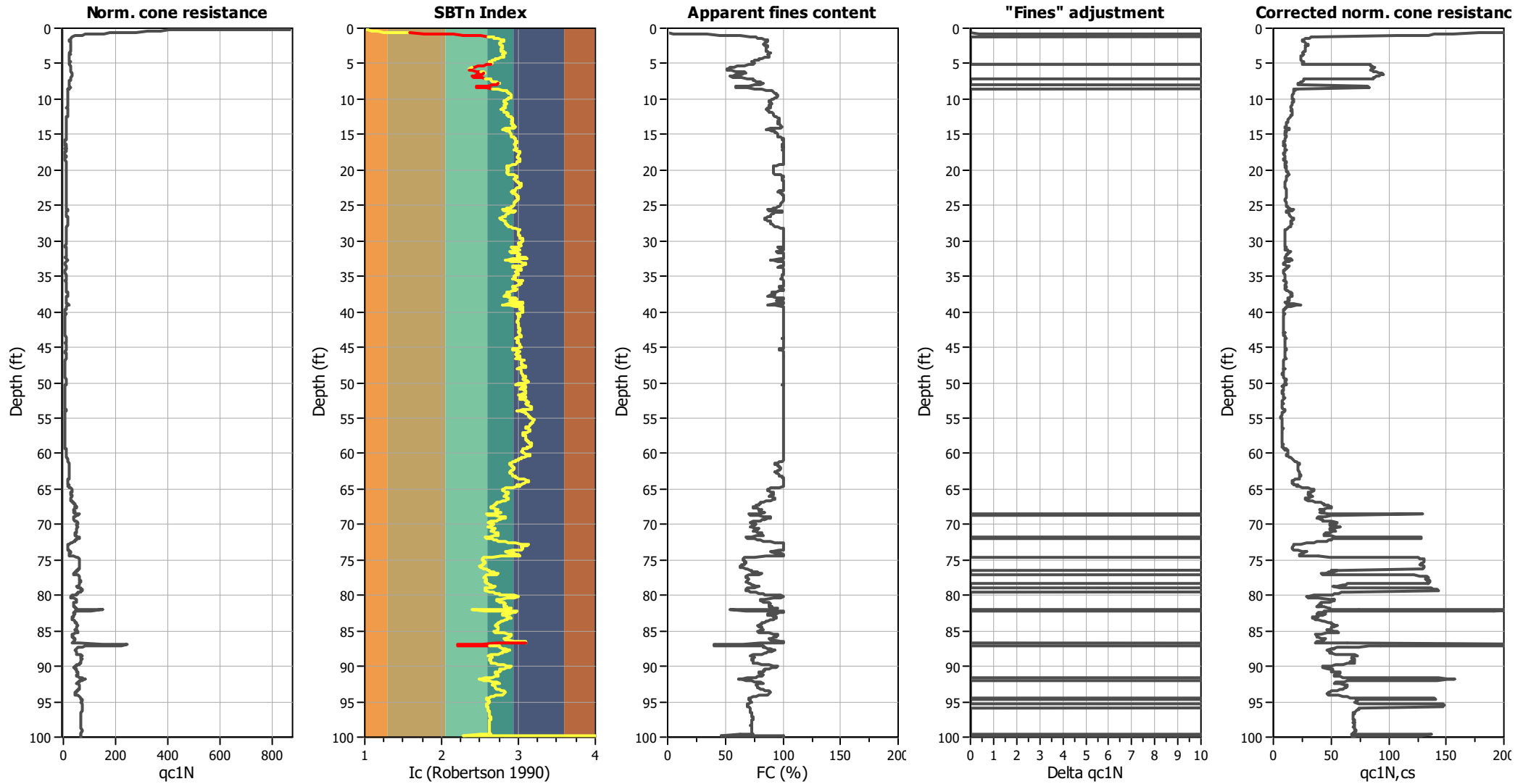
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

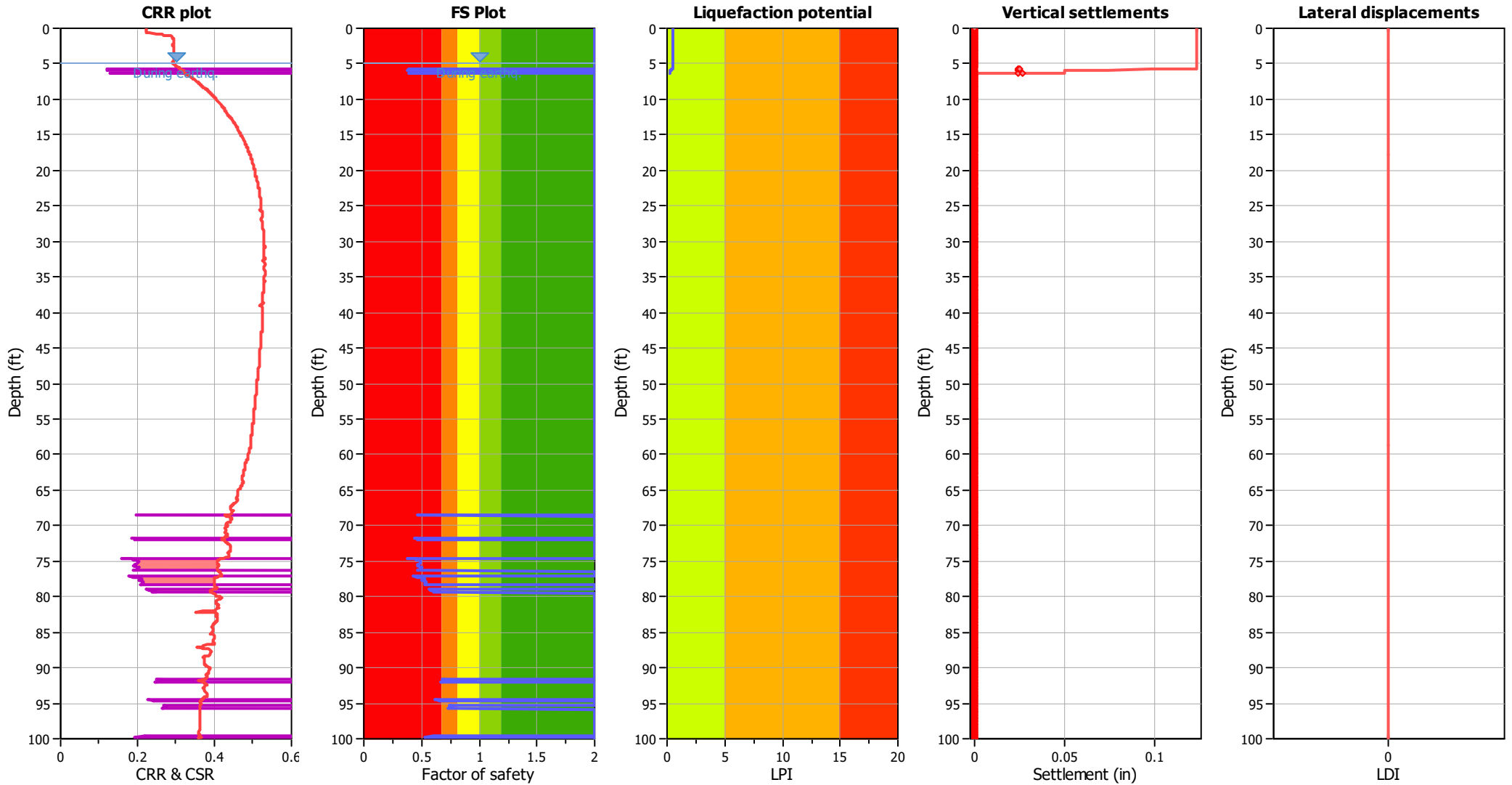
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

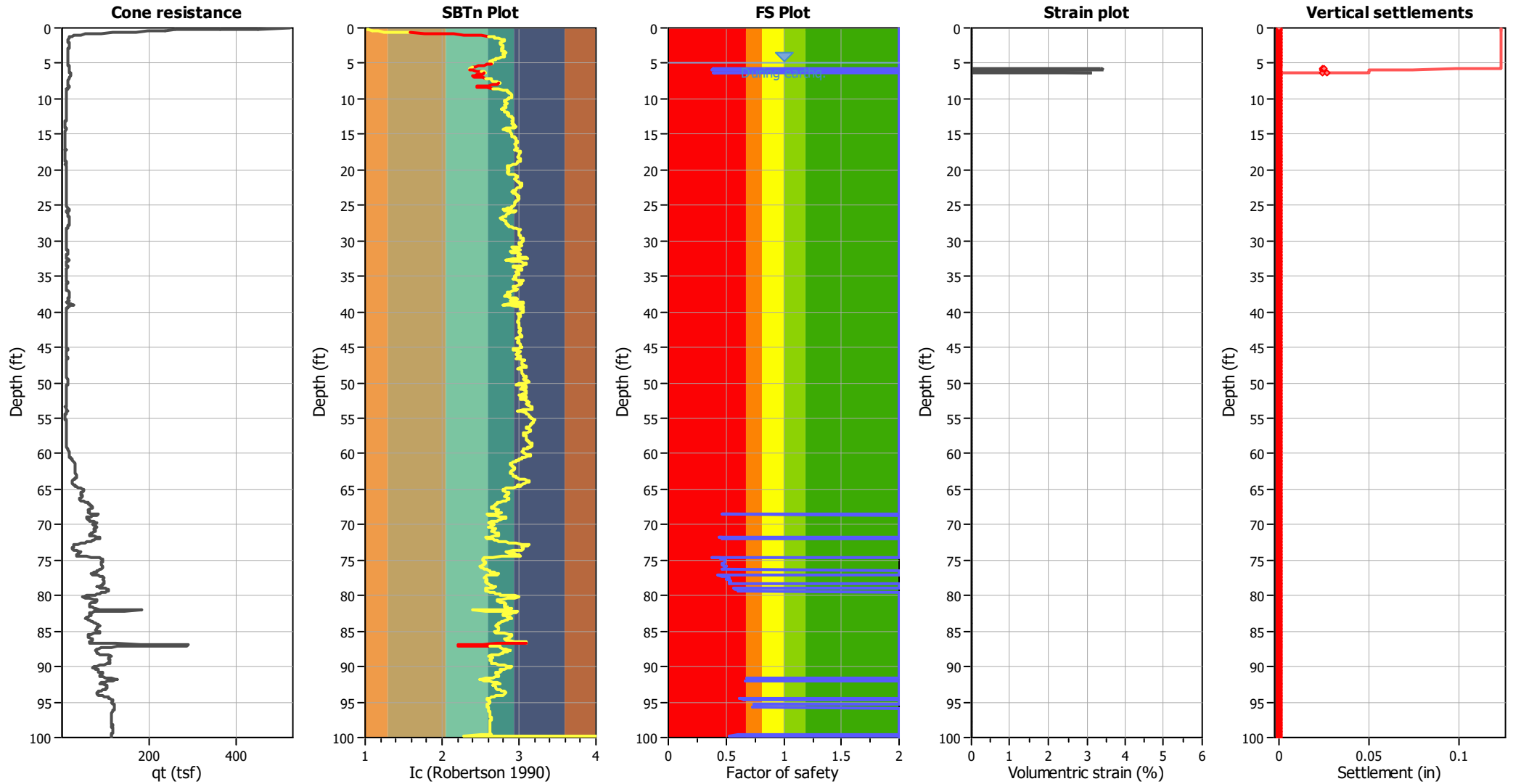
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- qt: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.06	25.27	2.00	0.00	0.91	0.00	5.15	25.27	2.00	0.00	0.91	0.00
5.20	84.10	2.00	0.00	0.91	0.00	5.26	84.58	2.00	0.00	0.91	0.00
5.34	85.18	2.00	0.00	0.91	0.00	5.40	85.74	2.00	0.00	0.91	0.00
5.46	87.04	2.00	0.00	0.91	0.00	5.53	85.64	2.00	0.00	0.91	0.00
5.59	87.62	2.00	0.00	0.91	0.00	5.66	86.94	2.00	0.00	0.90	0.00
5.72	86.28	0.39	3.36	0.90	0.02	5.78	85.21	0.38	3.40	0.90	0.02
5.84	84.73	0.38	3.42	0.90	0.02	5.94	84.92	2.00	0.00	0.90	0.00
6.00	86.16	2.00	0.00	0.90	0.00	6.06	87.22	2.00	0.00	0.90	0.00
6.12	88.72	2.00	0.00	0.90	0.00	6.19	89.81	2.00	0.00	0.90	0.00
6.26	91.88	0.40	3.13	0.89	0.03	6.33	93.38	0.40	3.07	0.89	0.02
6.39	94.89	2.00	0.00	0.89	0.00	6.46	95.10	2.00	0.00	0.89	0.00
6.52	95.11	2.00	0.00	0.89	0.00	6.58	94.06	2.00	0.00	0.89	0.00
6.65	92.50	2.00	0.00	0.89	0.00	6.71	91.54	2.00	0.00	0.89	0.00
6.77	90.66	2.00	0.00	0.89	0.00	6.83	89.45	2.00	0.00	0.88	0.00
6.89	88.38	2.00	0.00	0.88	0.00	6.96	87.74	2.00	0.00	0.88	0.00
7.03	87.38	2.00	0.00	0.88	0.00	7.09	86.63	2.00	0.00	0.88	0.00
7.16	27.60	2.00	0.00	0.88	0.00	7.25	27.00	2.00	0.00	0.88	0.00
7.31	26.34	2.00	0.00	0.88	0.00	7.39	26.36	2.00	0.00	0.87	0.00
7.43	26.15	2.00	0.00	0.87	0.00	7.50	25.74	2.00	0.00	0.87	0.00
7.57	24.67	2.00	0.00	0.87	0.00	7.63	23.47	2.00	0.00	0.87	0.00
7.70	22.41	2.00	0.00	0.87	0.00	7.74	22.27	2.00	0.00	0.87	0.00
7.83	21.81	2.00	0.00	0.87	0.00	7.90	21.99	2.00	0.00	0.87	0.00
7.97	22.86	2.00	0.00	0.86	0.00	8.01	23.22	2.00	0.00	0.86	0.00
8.09	82.36	2.00	0.00	0.86	0.00	8.16	82.07	2.00	0.00	0.86	0.00
8.23	81.97	2.00	0.00	0.86	0.00	8.27	81.84	2.00	0.00	0.86	0.00
8.34	82.42	2.00	0.00	0.86	0.00	8.41	82.25	2.00	0.00	0.86	0.00
8.47	82.74	2.00	0.00	0.86	0.00	8.54	17.53	2.00	0.00	0.86	0.00
8.60	22.00	2.00	0.00	0.85	0.00	8.67	20.62	2.00	0.00	0.85	0.00
8.73	19.36	2.00	0.00	0.85	0.00	8.80	18.61	2.00	0.00	0.85	0.00
8.86	18.16	2.00	0.00	0.85	0.00	8.93	17.69	2.00	0.00	0.85	0.00
9.01	17.49	2.00	0.00	0.85	0.00	9.06	17.43	2.00	0.00	0.85	0.00
9.12	17.37	2.00	0.00	0.85	0.00	9.19	17.17	2.00	0.00	0.84	0.00
9.26	17.09	2.00	0.00	0.84	0.00	9.32	16.66	2.00	0.00	0.84	0.00
9.39	16.21	2.00	0.00	0.84	0.00	9.45	16.03	2.00	0.00	0.84	0.00
9.52	15.97	2.00	0.00	0.84	0.00	9.59	15.79	2.00	0.00	0.84	0.00
9.67	16.09	2.00	0.00	0.84	0.00	9.74	16.02	2.00	0.00	0.83	0.00
9.78	16.11	2.00	0.00	0.83	0.00	9.88	16.40	2.00	0.00	0.83	0.00
9.91	16.38	2.00	0.00	0.83	0.00	10.01	16.66	2.00	0.00	0.83	0.00
10.07	17.10	2.00	0.00	0.83	0.00	10.14	17.41	2.00	0.00	0.83	0.00
10.18	17.49	2.00	0.00	0.83	0.00	10.25	17.80	2.00	0.00	0.83	0.00
10.32	17.85	2.00	0.00	0.83	0.00	10.38	17.55	2.00	0.00	0.82	0.00
10.46	17.49	2.00	0.00	0.82	0.00	10.53	16.83	2.00	0.00	0.82	0.00
10.60	16.16	2.00	0.00	0.82	0.00	10.64	16.02	2.00	0.00	0.82	0.00
10.70	15.96	2.00	0.00	0.82	0.00	10.78	15.90	2.00	0.00	0.82	0.00
10.86	15.84	2.00	0.00	0.82	0.00	10.90	15.92	2.00	0.00	0.82	0.00
10.97	15.64	2.00	0.00	0.81	0.00	11.03	15.47	2.00	0.00	0.81	0.00
11.10	15.19	2.00	0.00	0.81	0.00	11.17	15.02	2.00	0.00	0.81	0.00
11.25	15.19	2.00	0.00	0.81	0.00	11.32	15.61	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.35	15.94	2.00	0.00	0.81	0.00	11.44	16.46	2.00	0.00	0.81	0.00
11.51	16.29	2.00	0.00	0.80	0.00	11.56	15.44	2.00	0.00	0.80	0.00
11.64	16.65	2.00	0.00	0.80	0.00	11.71	16.70	2.00	0.00	0.80	0.00
11.78	16.76	2.00	0.00	0.80	0.00	11.82	16.61	2.00	0.00	0.80	0.00
11.90	16.22	2.00	0.00	0.80	0.00	11.97	15.82	2.00	0.00	0.80	0.00
12.04	15.77	2.00	0.00	0.80	0.00	12.08	15.74	2.00	0.00	0.80	0.00
12.15	15.81	2.00	0.00	0.79	0.00	12.22	15.99	2.00	0.00	0.79	0.00
12.30	15.70	2.00	0.00	0.79	0.00	12.36	15.66	2.00	0.00	0.79	0.00
12.43	15.28	2.00	0.00	0.79	0.00	12.49	15.01	2.00	0.00	0.79	0.00
12.56	14.64	2.00	0.00	0.79	0.00	12.62	13.94	2.00	0.00	0.79	0.00
12.68	13.68	2.00	0.00	0.79	0.00	12.74	13.42	2.00	0.00	0.78	0.00
12.83	13.05	2.00	0.00	0.78	0.00	12.87	12.91	2.00	0.00	0.78	0.00
12.94	12.66	2.00	0.00	0.78	0.00	13.01	12.40	2.00	0.00	0.78	0.00
13.09	12.36	2.00	0.00	0.78	0.00	13.13	12.24	2.00	0.00	0.78	0.00
13.20	11.99	2.00	0.00	0.78	0.00	13.27	11.74	2.00	0.00	0.78	0.00
13.35	11.58	2.00	0.00	0.77	0.00	13.42	11.34	2.00	0.00	0.77	0.00
13.45	11.32	2.00	0.00	0.77	0.00	13.53	10.97	2.00	0.00	0.77	0.00
13.61	11.05	2.00	0.00	0.77	0.00	13.68	11.12	2.00	0.00	0.77	0.00
13.74	11.09	2.00	0.00	0.77	0.00	13.81	11.06	2.00	0.00	0.77	0.00
13.86	10.94	2.00	0.00	0.77	0.00	13.92	10.59	2.00	0.00	0.76	0.00
14.00	10.45	2.00	0.00	0.76	0.00	14.06	10.64	2.00	0.00	0.76	0.00
14.13	11.77	2.00	0.00	0.76	0.00	14.20	13.30	2.00	0.00	0.76	0.00
14.24	13.59	2.00	0.00	0.76	0.00	14.31	13.35	2.00	0.00	0.76	0.00
14.38	12.29	2.00	0.00	0.76	0.00	14.44	11.31	2.00	0.00	0.76	0.00
14.52	10.67	2.00	0.00	0.75	0.00	14.58	10.23	2.00	0.00	0.75	0.00
14.66	10.81	2.00	0.00	0.75	0.00	14.72	10.69	2.00	0.00	0.75	0.00
14.79	10.36	2.00	0.00	0.75	0.00	14.86	10.23	2.00	0.00	0.75	0.00
14.92	10.20	2.00	0.00	0.75	0.00	14.99	10.38	2.00	0.00	0.75	0.00
15.06	10.56	2.00	0.00	0.74	0.00	15.10	10.64	2.00	0.00	0.74	0.00
15.17	10.82	2.00	0.00	0.74	0.00	15.24	10.99	2.00	0.00	0.74	0.00
15.30	10.97	2.00	0.00	0.74	0.00	15.37	11.05	2.00	0.00	0.74	0.00
15.43	10.71	2.00	0.00	0.74	0.00	15.50	10.39	2.00	0.00	0.74	0.00
15.57	10.17	2.00	0.00	0.74	0.00	15.64	9.94	2.00	0.00	0.73	0.00
15.71	9.82	2.00	0.00	0.73	0.00	15.78	9.80	2.00	0.00	0.73	0.00
15.84	9.58	2.00	0.00	0.73	0.00	15.91	9.46	2.00	0.00	0.73	0.00
15.98	9.43	2.00	0.00	0.73	0.00	16.04	9.41	2.00	0.00	0.73	0.00
16.12	9.19	2.00	0.00	0.73	0.00	16.15	9.38	2.00	0.00	0.73	0.00
16.22	9.16	2.00	0.00	0.73	0.00	16.29	9.34	2.00	0.00	0.72	0.00
16.35	9.42	2.00	0.00	0.72	0.00	16.42	9.69	2.00	0.00	0.72	0.00
16.48	9.57	2.00	0.00	0.72	0.00	16.55	9.26	2.00	0.00	0.72	0.00
16.61	9.92	2.00	0.00	0.72	0.00	16.68	9.80	2.00	0.00	0.72	0.00
16.75	9.77	2.00	0.00	0.72	0.00	16.82	9.66	2.00	0.00	0.71	0.00
16.89	9.73	2.00	0.00	0.71	0.00	16.98	9.61	2.00	0.00	0.71	0.00
17.01	9.69	2.00	0.00	0.71	0.00	17.08	10.07	2.00	0.00	0.71	0.00
17.15	10.63	2.00	0.00	0.71	0.00	17.20	10.72	2.00	0.00	0.71	0.00
17.27	10.61	2.00	0.00	0.71	0.00	17.34	10.22	2.00	0.00	0.71	0.00
17.42	9.92	2.00	0.00	0.70	0.00	17.48	9.44	2.00	0.00	0.70	0.00
17.55	9.43	2.00	0.00	0.70	0.00	17.60	9.43	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.70	9.42	2.00	0.00	0.70	0.00	17.74	9.41	2.00	0.00	0.70	0.00
17.78	9.41	2.00	0.00	0.70	0.00	17.87	9.40	2.00	0.00	0.70	0.00
17.93	9.58	2.00	0.00	0.70	0.00	18.00	9.57	2.00	0.00	0.70	0.00
18.05	9.66	2.00	0.00	0.69	0.00	18.12	9.65	2.00	0.00	0.69	0.00
18.18	9.74	2.00	0.00	0.69	0.00	18.25	9.54	2.00	0.00	0.69	0.00
18.34	9.44	2.00	0.00	0.69	0.00	18.37	9.34	2.00	0.00	0.69	0.00
18.47	9.14	2.00	0.00	0.69	0.00	18.53	9.13	2.00	0.00	0.69	0.00
18.59	9.22	2.00	0.00	0.68	0.00	18.65	9.49	2.00	0.00	0.68	0.00
18.72	9.86	2.00	0.00	0.68	0.00	18.77	10.23	2.00	0.00	0.68	0.00
18.84	10.68	2.00	0.00	0.68	0.00	18.91	11.05	2.00	0.00	0.68	0.00
18.97	11.13	2.00	0.00	0.68	0.00	19.03	10.84	2.00	0.00	0.68	0.00
19.10	10.56	2.00	0.00	0.68	0.00	19.17	10.36	2.00	0.00	0.68	0.00
19.23	10.35	2.00	0.00	0.67	0.00	19.31	10.34	2.00	0.00	0.67	0.00
19.38	10.33	2.00	0.00	0.67	0.00	19.44	10.60	2.00	0.00	0.67	0.00
19.51	10.78	2.00	0.00	0.67	0.00	19.58	10.77	2.00	0.00	0.67	0.00
19.63	10.86	2.00	0.00	0.67	0.00	19.70	10.67	2.00	0.00	0.67	0.00
19.77	11.03	2.00	0.00	0.66	0.00	19.83	11.29	2.00	0.00	0.66	0.00
19.89	11.38	2.00	0.00	0.66	0.00	19.97	11.46	2.00	0.00	0.66	0.00
20.03	11.45	2.00	0.00	0.66	0.00	20.09	11.44	2.00	0.00	0.66	0.00
20.15	11.43	2.00	0.00	0.66	0.00	20.24	11.69	2.00	0.00	0.66	0.00
20.30	11.97	2.00	0.00	0.66	0.00	20.36	12.14	2.00	0.00	0.65	0.00
20.42	12.40	2.00	0.00	0.65	0.00	20.48	13.04	2.00	0.00	0.65	0.00
20.57	13.75	2.00	0.00	0.65	0.00	20.62	12.92	2.00	0.00	0.65	0.00
20.68	12.91	2.00	0.00	0.65	0.00	20.74	12.72	2.00	0.00	0.65	0.00
20.82	12.07	2.00	0.00	0.65	0.00	20.88	11.88	2.00	0.00	0.65	0.00
20.94	11.68	2.00	0.00	0.65	0.00	21.02	11.39	2.00	0.00	0.64	0.00
21.08	11.21	2.00	0.00	0.64	0.00	21.14	11.20	2.00	0.00	0.64	0.00
21.23	11.28	2.00	0.00	0.64	0.00	21.28	11.27	2.00	0.00	0.64	0.00
21.34	11.17	2.00	0.00	0.64	0.00	21.39	11.07	2.00	0.00	0.64	0.00
21.48	10.97	2.00	0.00	0.64	0.00	21.55	10.87	2.00	0.00	0.63	0.00
21.60	10.68	2.00	0.00	0.63	0.00	21.66	10.59	2.00	0.00	0.63	0.00
21.72	10.48	2.00	0.00	0.63	0.00	21.80	10.29	2.00	0.00	0.63	0.00
21.86	10.29	2.00	0.00	0.63	0.00	21.92	10.01	2.00	0.00	0.63	0.00
21.98	10.27	2.00	0.00	0.63	0.00	22.07	10.17	2.00	0.00	0.63	0.00
22.13	10.25	2.00	0.00	0.63	0.00	22.18	10.25	2.00	0.00	0.62	0.00
22.27	10.23	2.00	0.00	0.62	0.00	22.33	10.23	2.00	0.00	0.62	0.00
22.41	10.31	2.00	0.00	0.62	0.00	22.46	10.39	2.00	0.00	0.62	0.00
22.52	10.48	2.00	0.00	0.62	0.00	22.58	10.65	2.00	0.00	0.62	0.00
22.67	10.90	2.00	0.00	0.62	0.00	22.72	10.89	2.00	0.00	0.61	0.00
22.78	10.80	2.00	0.00	0.61	0.00	22.84	10.70	2.00	0.00	0.61	0.00
22.91	11.13	2.00	0.00	0.61	0.00	23.00	11.57	2.00	0.00	0.61	0.00
23.04	11.65	2.00	0.00	0.61	0.00	23.11	11.56	2.00	0.00	0.61	0.00
23.18	11.55	2.00	0.00	0.61	0.00	23.24	11.54	2.00	0.00	0.61	0.00
23.30	11.53	2.00	0.00	0.61	0.00	23.37	11.52	2.00	0.00	0.60	0.00
23.43	11.51	2.00	0.00	0.60	0.00	23.52	11.86	2.00	0.00	0.60	0.00
23.57	11.76	2.00	0.00	0.60	0.00	23.62	11.04	2.00	0.00	0.60	0.00
23.71	11.47	2.00	0.00	0.60	0.00	23.77	11.11	2.00	0.00	0.60	0.00
23.84	11.10	2.00	0.00	0.60	0.00	23.89	11.10	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.98	10.99	2.00	0.00	0.59	0.00	24.03	10.73	2.00	0.00	0.59	0.00
24.08	10.46	2.00	0.00	0.59	0.00	24.16	10.45	2.00	0.00	0.59	0.00
24.22	10.44	2.00	0.00	0.59	0.00	24.31	10.43	2.00	0.00	0.59	0.00
24.35	10.60	2.00	0.00	0.59	0.00	24.41	10.68	2.00	0.00	0.59	0.00
24.50	10.84	2.00	0.00	0.58	0.00	24.54	10.84	2.00	0.00	0.58	0.00
24.64	11.00	2.00	0.00	0.58	0.00	24.69	11.08	2.00	0.00	0.58	0.00
24.75	11.07	2.00	0.00	0.58	0.00	24.82	11.15	2.00	0.00	0.58	0.00
24.88	11.23	2.00	0.00	0.58	0.00	24.94	11.22	2.00	0.00	0.58	0.00
25.02	11.38	2.00	0.00	0.58	0.00	25.08	11.64	2.00	0.00	0.57	0.00
25.14	11.89	2.00	0.00	0.57	0.00	25.22	12.32	2.00	0.00	0.57	0.00
25.27	12.57	2.00	0.00	0.57	0.00	25.35	13.16	2.00	0.00	0.57	0.00
25.41	13.59	2.00	0.00	0.57	0.00	25.49	15.14	2.00	0.00	0.57	0.00
25.55	16.95	2.00	0.00	0.57	0.00	25.61	18.15	2.00	0.00	0.57	0.00
25.68	15.80	2.00	0.00	0.56	0.00	25.74	14.92	2.00	0.00	0.56	0.00
25.80	13.44	2.00	0.00	0.56	0.00	25.87	11.88	2.00	0.00	0.56	0.00
25.93	11.43	2.00	0.00	0.56	0.00	26.00	12.12	2.00	0.00	0.56	0.00
26.06	12.71	2.00	0.00	0.56	0.00	26.12	13.22	2.00	0.00	0.56	0.00
26.19	13.81	2.00	0.00	0.56	0.00	26.25	13.98	2.00	0.00	0.56	0.00
26.33	14.30	2.00	0.00	0.55	0.00	26.39	14.46	2.00	0.00	0.55	0.00
26.47	14.45	2.00	0.00	0.55	0.00	26.53	14.70	2.00	0.00	0.55	0.00
26.60	15.29	2.00	0.00	0.55	0.00	26.66	15.54	2.00	0.00	0.55	0.00
26.72	16.47	2.00	0.00	0.55	0.00	26.78	16.80	2.00	0.00	0.55	0.00
26.86	17.13	2.00	0.00	0.54	0.00	26.92	17.20	2.00	0.00	0.54	0.00
26.97	16.84	2.00	0.00	0.54	0.00	27.04	16.58	2.00	0.00	0.54	0.00
27.10	16.22	2.00	0.00	0.54	0.00	27.20	15.61	2.00	0.00	0.54	0.00
27.26	15.60	2.00	0.00	0.54	0.00	27.31	15.59	2.00	0.00	0.54	0.00
27.39	15.58	2.00	0.00	0.54	0.00	27.44	15.65	2.00	0.00	0.53	0.00
27.52	15.81	2.00	0.00	0.53	0.00	27.57	16.05	2.00	0.00	0.53	0.00
27.65	15.86	2.00	0.00	0.53	0.00	27.71	15.69	2.00	0.00	0.53	0.00
27.76	15.42	2.00	0.00	0.53	0.00	27.84	15.24	2.00	0.00	0.53	0.00
27.90	15.23	2.00	0.00	0.53	0.00	27.97	14.88	2.00	0.00	0.53	0.00
28.02	14.45	2.00	0.00	0.53	0.00	28.10	13.76	2.00	0.00	0.52	0.00
28.18	13.07	2.00	0.00	0.52	0.00	28.24	12.48	2.00	0.00	0.52	0.00
28.28	12.05	2.00	0.00	0.52	0.00	28.37	11.45	2.00	0.00	0.52	0.00
28.41	11.03	2.00	0.00	0.52	0.00	28.50	10.68	2.00	0.00	0.52	0.00
28.56	10.42	2.00	0.00	0.52	0.00	28.61	10.33	2.00	0.00	0.52	0.00
28.69	10.32	2.00	0.00	0.51	0.00	28.75	10.32	2.00	0.00	0.51	0.00
28.83	10.14	2.00	0.00	0.51	0.00	28.88	9.97	2.00	0.00	0.51	0.00
28.95	10.22	2.00	0.00	0.51	0.00	29.01	10.21	2.00	0.00	0.51	0.00
29.09	10.28	2.00	0.00	0.51	0.00	29.14	10.27	2.00	0.00	0.51	0.00
29.23	10.26	2.00	0.00	0.50	0.00	29.28	10.34	2.00	0.00	0.50	0.00
29.36	10.33	2.00	0.00	0.50	0.00	29.41	10.32	2.00	0.00	0.50	0.00
29.48	10.57	2.00	0.00	0.50	0.00	29.56	10.47	2.00	0.00	0.50	0.00
29.61	10.30	2.00	0.00	0.50	0.00	29.67	10.30	2.00	0.00	0.50	0.00
29.74	10.21	2.00	0.00	0.50	0.00	29.80	10.20	2.00	0.00	0.49	0.00
29.87	10.12	2.00	0.00	0.49	0.00	29.93	10.11	2.00	0.00	0.49	0.00
30.02	10.10	2.00	0.00	0.49	0.00	30.06	10.10	2.00	0.00	0.49	0.00
30.14	10.17	2.00	0.00	0.49	0.00	30.20	10.49	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.28	10.65	2.00	0.00	0.49	0.00	30.33	10.64	2.00	0.00	0.49	0.00
30.41	10.63	2.00	0.00	0.48	0.00	30.46	10.38	2.00	0.00	0.48	0.00
30.53	9.88	2.00	0.00	0.48	0.00	30.59	9.55	2.00	0.00	0.48	0.00
30.66	9.54	2.00	0.00	0.48	0.00	30.72	9.53	2.00	0.00	0.48	0.00
30.79	9.53	2.00	0.00	0.48	0.00	30.85	10.09	2.00	0.00	0.48	0.00
30.92	10.82	2.00	0.00	0.48	0.00	30.98	10.81	2.00	0.00	0.48	0.00
31.06	10.56	2.00	0.00	0.47	0.00	31.12	10.76	2.00	0.00	0.47	0.00
31.19	10.14	2.00	0.00	0.47	0.00	31.24	10.71	2.00	0.00	0.47	0.00
31.31	11.43	2.00	0.00	0.47	0.00	31.38	11.99	2.00	0.00	0.47	0.00
31.43	12.40	2.00	0.00	0.47	0.00	31.51	13.85	2.00	0.00	0.47	0.00
31.58	14.75	2.00	0.00	0.46	0.00	31.66	14.32	2.00	0.00	0.46	0.00
31.70	13.75	2.00	0.00	0.46	0.00	31.77	12.43	2.00	0.00	0.46	0.00
31.82	12.10	2.00	0.00	0.46	0.00	31.92	11.68	2.00	0.00	0.46	0.00
31.97	11.44	2.00	0.00	0.46	0.00	32.04	11.43	2.00	0.00	0.46	0.00
32.10	11.50	2.00	0.00	0.46	0.00	32.16	11.41	2.00	0.00	0.45	0.00
32.23	10.67	2.00	0.00	0.45	0.00	32.30	9.86	2.00	0.00	0.45	0.00
32.35	9.61	2.00	0.00	0.45	0.00	32.42	9.69	2.00	0.00	0.45	0.00
32.49	10.41	2.00	0.00	0.45	0.00	32.55	14.76	2.00	0.00	0.45	0.00
32.63	16.93	2.00	0.00	0.45	0.00	32.70	16.19	2.00	0.00	0.45	0.00
32.75	15.29	2.00	0.00	0.44	0.00	32.82	13.59	2.00	0.00	0.44	0.00
32.89	12.12	2.00	0.00	0.44	0.00	32.95	11.32	2.00	0.00	0.44	0.00
33.02	10.03	2.00	0.00	0.44	0.00	33.09	9.46	2.00	0.00	0.44	0.00
33.14	9.30	2.00	0.00	0.44	0.00	33.21	8.97	2.00	0.00	0.44	0.00
33.28	8.80	2.00	0.00	0.44	0.00	33.35	9.12	2.00	0.00	0.43	0.00
33.40	9.59	2.00	0.00	0.43	0.00	33.47	10.70	2.00	0.00	0.43	0.00
33.55	12.37	2.00	0.00	0.43	0.00	33.61	13.24	2.00	0.00	0.43	0.00
33.69	12.99	2.00	0.00	0.43	0.00	33.75	12.50	2.00	0.00	0.43	0.00
33.80	12.10	2.00	0.00	0.43	0.00	33.87	11.38	2.00	0.00	0.43	0.00
33.94	10.41	2.00	0.00	0.42	0.00	34.00	9.93	2.00	0.00	0.42	0.00
34.07	9.44	2.00	0.00	0.42	0.00	34.12	9.36	2.00	0.00	0.42	0.00
34.19	9.27	2.00	0.00	0.42	0.00	34.26	9.27	2.00	0.00	0.42	0.00
34.32	9.26	2.00	0.00	0.42	0.00	34.40	9.26	2.00	0.00	0.42	0.00
34.46	9.25	2.00	0.00	0.42	0.00	34.54	9.25	2.00	0.00	0.41	0.00
34.60	9.24	2.00	0.00	0.41	0.00	34.66	8.60	2.00	0.00	0.41	0.00
34.72	9.63	2.00	0.00	0.41	0.00	34.79	9.70	2.00	0.00	0.41	0.00
34.84	9.69	2.00	0.00	0.41	0.00	34.94	9.92	2.00	0.00	0.41	0.00
34.98	9.92	2.00	0.00	0.41	0.00	35.04	9.99	2.00	0.00	0.41	0.00
35.12	9.99	2.00	0.00	0.40	0.00	35.19	9.98	2.00	0.00	0.40	0.00
35.24	10.05	2.00	0.00	0.40	0.00	35.33	10.28	2.00	0.00	0.40	0.00
35.39	10.35	2.00	0.00	0.40	0.00	35.45	10.43	2.00	0.00	0.40	0.00
35.51	10.27	2.00	0.00	0.40	0.00	35.60	10.10	2.00	0.00	0.40	0.00
35.63	9.39	2.00	0.00	0.40	0.00	35.70	10.95	2.00	0.00	0.39	0.00
35.76	11.81	2.00	0.00	0.39	0.00	35.85	11.72	2.00	0.00	0.39	0.00
35.90	11.63	2.00	0.00	0.39	0.00	35.99	11.00	2.00	0.00	0.39	0.00
36.05	10.76	2.00	0.00	0.39	0.00	36.12	10.59	2.00	0.00	0.39	0.00
36.18	10.20	2.00	0.00	0.39	0.00	36.24	9.96	2.00	0.00	0.39	0.00
36.30	9.95	2.00	0.00	0.38	0.00	36.36	10.26	2.00	0.00	0.38	0.00
36.43	10.64	2.00	0.00	0.38	0.00	36.50	10.71	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.56	10.70	2.00	0.00	0.38	0.00	36.63	10.39	2.00	0.00	0.38	0.00
36.71	10.15	2.00	0.00	0.38	0.00	36.78	10.15	2.00	0.00	0.38	0.00
36.85	10.21	2.00	0.00	0.38	0.00	36.90	10.45	2.00	0.00	0.37	0.00
36.97	10.98	2.00	0.00	0.37	0.00	37.05	11.98	2.00	0.00	0.37	0.00
37.09	12.68	2.00	0.00	0.37	0.00	37.16	13.99	2.00	0.00	0.37	0.00
37.25	15.14	2.00	0.00	0.37	0.00	37.28	15.68	2.00	0.00	0.37	0.00
37.35	16.37	2.00	0.00	0.37	0.00	37.44	16.04	2.00	0.00	0.37	0.00
37.47	15.65	2.00	0.00	0.36	0.00	37.53	15.17	2.00	0.00	0.36	0.00
37.63	15.71	2.00	0.00	0.36	0.00	37.68	16.55	2.00	0.00	0.36	0.00
37.77	16.85	2.00	0.00	0.36	0.00	37.82	15.98	2.00	0.00	0.36	0.00
37.88	14.89	2.00	0.00	0.36	0.00	37.94	13.64	2.00	0.00	0.36	0.00
38.00	12.86	2.00	0.00	0.36	0.00	38.06	12.56	2.00	0.00	0.35	0.00
38.15	12.55	2.00	0.00	0.35	0.00	38.21	12.61	2.00	0.00	0.35	0.00
38.27	13.07	2.00	0.00	0.35	0.00	38.33	13.68	2.00	0.00	0.35	0.00
38.39	14.13	2.00	0.00	0.35	0.00	38.45	13.58	2.00	0.00	0.35	0.00
38.53	12.19	2.00	0.00	0.35	0.00	38.60	11.34	2.00	0.00	0.35	0.00
38.65	10.57	2.00	0.00	0.34	0.00	38.72	10.64	2.00	0.00	0.34	0.00
38.79	10.71	2.00	0.00	0.34	0.00	38.88	13.68	2.00	0.00	0.34	0.00
38.91	17.59	2.00	0.00	0.34	0.00	39.00	24.40	2.00	0.00	0.34	0.00
39.07	22.12	2.00	0.00	0.34	0.00	39.11	19.65	2.00	0.00	0.34	0.00
39.20	15.17	2.00	0.00	0.34	0.00	39.27	13.25	2.00	0.00	0.33	0.00
39.35	11.94	2.00	0.00	0.33	0.00	39.38	11.55	2.00	0.00	0.33	0.00
39.45	11.01	2.00	0.00	0.33	0.00	39.52	10.63	2.00	0.00	0.33	0.00
39.60	9.94	2.00	0.00	0.33	0.00	39.66	9.63	2.00	0.00	0.33	0.00
39.70	9.32	2.00	0.00	0.33	0.00	39.77	9.09	2.00	0.00	0.33	0.00
39.84	9.02	2.00	0.00	0.32	0.00	39.90	9.01	2.00	0.00	0.32	0.00
39.98	8.93	2.00	0.00	0.32	0.00	40.05	8.92	2.00	0.00	0.32	0.00
40.12	8.92	2.00	0.00	0.32	0.00	40.18	9.06	2.00	0.00	0.32	0.00
40.26	9.36	2.00	0.00	0.32	0.00	40.32	9.66	2.00	0.00	0.32	0.00
40.37	9.65	2.00	0.00	0.32	0.00	40.44	9.42	2.00	0.00	0.31	0.00
40.49	9.12	2.00	0.00	0.31	0.00	40.57	9.18	2.00	0.00	0.31	0.00
40.65	9.18	2.00	0.00	0.31	0.00	40.69	9.10	2.00	0.00	0.31	0.00
40.77	9.10	2.00	0.00	0.31	0.00	40.84	9.31	2.00	0.00	0.31	0.00
40.89	9.31	2.00	0.00	0.31	0.00	40.97	9.31	2.00	0.00	0.31	0.00
41.03	9.15	2.00	0.00	0.30	0.00	41.11	9.00	2.00	0.00	0.30	0.00
41.15	8.92	2.00	0.00	0.30	0.00	41.23	8.84	2.00	0.00	0.30	0.00
41.30	8.76	2.00	0.00	0.30	0.00	41.34	8.68	2.00	0.00	0.30	0.00
41.42	8.68	2.00	0.00	0.30	0.00	41.50	8.67	2.00	0.00	0.30	0.00
41.54	8.67	2.00	0.00	0.30	0.00	41.61	8.66	2.00	0.00	0.29	0.00
41.68	8.74	2.00	0.00	0.29	0.00	41.75	8.80	2.00	0.00	0.29	0.00
41.82	8.80	2.00	0.00	0.29	0.00	41.88	8.79	2.00	0.00	0.29	0.00
41.94	8.87	2.00	0.00	0.29	0.00	42.01	9.01	2.00	0.00	0.29	0.00
42.07	9.08	2.00	0.00	0.29	0.00	42.13	9.14	2.00	0.00	0.29	0.00
42.20	9.22	2.00	0.00	0.28	0.00	42.26	9.21	2.00	0.00	0.28	0.00
42.35	9.13	2.00	0.00	0.28	0.00	42.42	9.05	2.00	0.00	0.28	0.00
42.48	9.05	2.00	0.00	0.28	0.00	42.54	9.04	2.00	0.00	0.28	0.00
42.61	9.04	2.00	0.00	0.28	0.00	42.67	9.11	2.00	0.00	0.28	0.00
42.73	9.18	2.00	0.00	0.28	0.00	42.79	9.32	2.00	0.00	0.27	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.86	9.39	2.00	0.00	0.27	0.00	42.92	9.46	2.00	0.00	0.27	0.00
42.99	9.38	2.00	0.00	0.27	0.00	43.05	9.30	2.00	0.00	0.27	0.00
43.14	9.22	2.00	0.00	0.27	0.00	43.21	9.21	2.00	0.00	0.27	0.00
43.26	9.21	2.00	0.00	0.27	0.00	43.32	9.21	2.00	0.00	0.27	0.00
43.39	9.20	2.00	0.00	0.26	0.00	43.45	9.57	2.00	0.00	0.26	0.00
43.52	9.71	2.00	0.00	0.26	0.00	43.58	9.85	2.00	0.00	0.26	0.00
43.64	10.21	2.00	0.00	0.26	0.00	43.70	10.72	2.00	0.00	0.26	0.00
43.80	10.56	2.00	0.00	0.26	0.00	43.86	10.12	2.00	0.00	0.26	0.00
43.91	9.83	2.00	0.00	0.26	0.00	43.98	9.74	2.00	0.00	0.25	0.00
44.04	9.67	2.00	0.00	0.25	0.00	44.10	9.67	2.00	0.00	0.25	0.00
44.16	9.66	2.00	0.00	0.25	0.00	44.25	9.65	2.00	0.00	0.25	0.00
44.32	9.72	2.00	0.00	0.25	0.00	44.37	9.64	2.00	0.00	0.25	0.00
44.44	9.56	2.00	0.00	0.25	0.00	44.50	9.64	2.00	0.00	0.25	0.00
44.56	9.63	2.00	0.00	0.24	0.00	44.63	9.62	2.00	0.00	0.24	0.00
44.69	9.69	2.00	0.00	0.24	0.00	44.76	9.68	2.00	0.00	0.24	0.00
44.82	9.68	2.00	0.00	0.24	0.00	44.91	9.82	2.00	0.00	0.24	0.00
44.97	9.81	2.00	0.00	0.24	0.00	45.04	9.88	2.00	0.00	0.24	0.00
45.10	10.32	2.00	0.00	0.24	0.00	45.16	10.82	2.00	0.00	0.23	0.00
45.23	11.10	2.00	0.00	0.23	0.00	45.29	11.39	2.00	0.00	0.23	0.00
45.37	11.23	2.00	0.00	0.23	0.00	45.42	10.79	2.00	0.00	0.23	0.00
45.49	10.21	2.00	0.00	0.23	0.00	45.55	9.55	2.00	0.00	0.23	0.00
45.61	9.55	2.00	0.00	0.23	0.00	45.67	9.55	2.00	0.00	0.23	0.00
45.77	9.54	2.00	0.00	0.22	0.00	45.82	9.89	2.00	0.00	0.22	0.00
45.87	10.18	2.00	0.00	0.22	0.00	45.94	10.46	2.00	0.00	0.22	0.00
46.03	10.17	2.00	0.00	0.22	0.00	46.09	10.16	2.00	0.00	0.22	0.00
46.15	10.16	2.00	0.00	0.22	0.00	46.21	10.01	2.00	0.00	0.22	0.00
46.28	10.15	2.00	0.00	0.22	0.00	46.33	9.79	2.00	0.00	0.21	0.00
46.42	10.13	2.00	0.00	0.21	0.00	46.47	10.63	2.00	0.00	0.21	0.00
46.53	10.99	2.00	0.00	0.21	0.00	46.60	10.99	2.00	0.00	0.21	0.00
46.66	9.97	2.00	0.00	0.21	0.00	46.74	9.10	2.00	0.00	0.21	0.00
46.81	8.95	2.00	0.00	0.21	0.00	46.86	8.95	2.00	0.00	0.21	0.00
46.92	8.95	2.00	0.00	0.20	0.00	46.98	8.94	2.00	0.00	0.20	0.00
47.07	8.87	2.00	0.00	0.20	0.00	47.13	8.72	2.00	0.00	0.20	0.00
47.21	8.43	2.00	0.00	0.20	0.00	47.27	8.36	2.00	0.00	0.20	0.00
47.33	8.36	2.00	0.00	0.20	0.00	47.39	8.35	2.00	0.00	0.20	0.00
47.45	8.27	2.00	0.00	0.20	0.00	47.53	8.20	2.00	0.00	0.19	0.00
47.59	8.20	2.00	0.00	0.19	0.00	47.65	8.19	2.00	0.00	0.19	0.00
47.71	8.33	2.00	0.00	0.19	0.00	47.77	8.33	2.00	0.00	0.19	0.00
47.84	8.39	2.00	0.00	0.19	0.00	47.91	9.24	2.00	0.00	0.19	0.00
47.97	9.16	2.00	0.00	0.19	0.00	48.03	9.59	2.00	0.00	0.19	0.00
48.13	8.52	2.00	0.00	0.18	0.00	48.19	8.37	2.00	0.00	0.18	0.00
48.26	8.37	2.00	0.00	0.18	0.00	48.31	8.36	2.00	0.00	0.18	0.00
48.37	8.36	2.00	0.00	0.18	0.00	48.44	8.36	2.00	0.00	0.18	0.00
48.49	8.29	2.00	0.00	0.18	0.00	48.58	8.21	2.00	0.00	0.18	0.00
48.64	8.14	2.00	0.00	0.18	0.00	48.70	8.13	2.00	0.00	0.17	0.00
48.76	8.13	2.00	0.00	0.17	0.00	48.82	8.13	2.00	0.00	0.17	0.00
48.92	8.12	2.00	0.00	0.17	0.00	48.97	8.19	2.00	0.00	0.17	0.00
49.02	8.32	2.00	0.00	0.17	0.00	49.11	8.46	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.18	8.60	2.00	0.00	0.17	0.00	49.23	8.73	2.00	0.00	0.17	0.00
49.29	8.94	2.00	0.00	0.16	0.00	49.35	9.29	2.00	0.00	0.16	0.00
49.43	10.48	2.00	0.00	0.16	0.00	49.49	10.90	2.00	0.00	0.16	0.00
49.55	10.82	2.00	0.00	0.16	0.00	49.62	11.32	2.00	0.00	0.16	0.00
49.68	11.24	2.00	0.00	0.16	0.00	49.76	10.60	2.00	0.00	0.16	0.00
49.82	10.37	2.00	0.00	0.16	0.00	49.88	10.58	2.00	0.00	0.15	0.00
49.94	10.22	2.00	0.00	0.15	0.00	50.03	10.57	2.00	0.00	0.15	0.00
50.08	11.06	2.00	0.00	0.15	0.00	50.14	11.54	2.00	0.00	0.15	0.00
50.23	10.76	2.00	0.00	0.15	0.00	50.29	9.99	2.00	0.00	0.15	0.00
50.34	9.36	2.00	0.00	0.15	0.00	50.40	8.72	2.00	0.00	0.15	0.00
50.48	8.23	2.00	0.00	0.14	0.00	50.54	8.02	2.00	0.00	0.14	0.00
50.59	8.26	2.00	0.00	0.14	0.00	50.68	8.29	2.00	0.00	0.14	0.00
50.75	8.77	2.00	0.00	0.14	0.00	50.79	9.05	2.00	0.00	0.14	0.00
50.87	9.25	2.00	0.00	0.14	0.00	50.93	8.96	2.00	0.00	0.14	0.00
51.00	8.48	2.00	0.00	0.14	0.00	51.06	8.19	2.00	0.00	0.13	0.00
51.13	7.99	2.00	0.00	0.13	0.00	51.19	7.98	2.00	0.00	0.13	0.00
51.27	7.98	2.00	0.00	0.13	0.00	51.32	7.98	2.00	0.00	0.13	0.00
51.41	7.90	2.00	0.00	0.13	0.00	51.46	8.11	2.00	0.00	0.13	0.00
51.51	8.24	2.00	0.00	0.13	0.00	51.60	8.72	2.00	0.00	0.13	0.00
51.67	8.92	2.00	0.00	0.12	0.00	51.73	8.99	2.00	0.00	0.12	0.00
51.78	8.77	2.00	0.00	0.12	0.00	51.86	8.49	2.00	0.00	0.12	0.00
51.92	8.28	2.00	0.00	0.12	0.00	51.97	8.28	2.00	0.00	0.12	0.00
52.05	8.28	2.00	0.00	0.12	0.00	52.11	8.75	2.00	0.00	0.12	0.00
52.18	9.30	2.00	0.00	0.12	0.00	52.24	9.51	2.00	0.00	0.11	0.00
52.33	9.37	2.00	0.00	0.11	0.00	52.38	8.81	2.00	0.00	0.11	0.00
52.43	8.46	2.00	0.00	0.11	0.00	52.50	8.11	2.00	0.00	0.11	0.00
52.56	8.04	2.00	0.00	0.11	0.00	52.64	7.97	2.00	0.00	0.11	0.00
52.72	7.90	2.00	0.00	0.11	0.00	52.77	7.82	2.00	0.00	0.11	0.00
52.83	7.76	2.00	0.00	0.10	0.00	52.89	8.43	2.00	0.00	0.10	0.00
52.97	8.30	2.00	0.00	0.10	0.00	53.02	8.16	2.00	0.00	0.10	0.00
53.10	8.02	2.00	0.00	0.10	0.00	53.16	7.88	2.00	0.00	0.10	0.00
53.25	7.66	2.00	0.00	0.10	0.00	53.29	7.46	2.00	0.00	0.10	0.00
53.35	7.45	2.00	0.00	0.10	0.00	53.44	7.31	2.00	0.00	0.09	0.00
53.49	7.31	2.00	0.00	0.09	0.00	53.57	8.05	2.00	0.00	0.09	0.00
53.62	8.05	2.00	0.00	0.09	0.00	53.68	8.05	2.00	0.00	0.09	0.00
53.75	8.18	2.00	0.00	0.09	0.00	53.81	8.79	2.00	0.00	0.09	0.00
53.88	9.68	2.00	0.00	0.09	0.00	53.96	10.35	2.00	0.00	0.09	0.00
54.01	10.28	2.00	0.00	0.08	0.00	54.08	9.46	2.00	0.00	0.08	0.00
54.15	8.57	2.00	0.00	0.08	0.00	54.21	8.15	2.00	0.00	0.08	0.00
54.27	8.01	2.00	0.00	0.08	0.00	54.34	7.81	2.00	0.00	0.08	0.00
54.41	7.54	2.00	0.00	0.08	0.00	54.47	7.26	2.00	0.00	0.08	0.00
54.53	7.12	2.00	0.00	0.08	0.00	54.60	7.05	2.00	0.00	0.07	0.00
54.66	6.98	2.00	0.00	0.07	0.00	54.74	6.91	2.00	0.00	0.07	0.00
54.80	6.91	2.00	0.00	0.07	0.00	54.88	6.84	2.00	0.00	0.07	0.00
54.95	6.84	2.00	0.00	0.07	0.00	55.01	6.97	2.00	0.00	0.07	0.00
55.07	7.03	2.00	0.00	0.07	0.00	55.14	7.03	2.00	0.00	0.07	0.00
55.21	7.23	2.00	0.00	0.06	0.00	55.27	7.42	2.00	0.00	0.06	0.00
55.32	7.56	2.00	0.00	0.06	0.00	55.39	7.69	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.46	7.68	2.00	0.00	0.06	0.00	55.52	7.62	2.00	0.00	0.06	0.00
55.58	7.48	2.00	0.00	0.06	0.00	55.65	7.48	2.00	0.00	0.06	0.00
55.72	7.47	2.00	0.00	0.06	0.00	55.78	7.94	2.00	0.00	0.05	0.00
55.85	8.14	2.00	0.00	0.05	0.00	55.93	8.13	2.00	0.00	0.05	0.00
55.99	8.13	2.00	0.00	0.05	0.00	56.04	8.13	2.00	0.00	0.05	0.00
56.12	8.12	2.00	0.00	0.05	0.00	56.18	7.92	2.00	0.00	0.05	0.00
56.25	8.12	2.00	0.00	0.05	0.00	56.31	8.04	2.00	0.00	0.05	0.00
56.37	8.11	2.00	0.00	0.04	0.00	56.43	8.23	2.00	0.00	0.04	0.00
56.51	8.30	2.00	0.00	0.04	0.00	56.57	7.97	2.00	0.00	0.04	0.00
56.64	8.02	2.00	0.00	0.04	0.00	56.70	8.09	2.00	0.00	0.04	0.00
56.77	8.09	2.00	0.00	0.04	0.00	56.83	7.95	2.00	0.00	0.04	0.00
56.91	7.95	2.00	0.00	0.04	0.00	56.96	7.87	2.00	0.00	0.03	0.00
57.03	7.87	2.00	0.00	0.03	0.00	57.10	7.87	2.00	0.00	0.03	0.00
57.16	7.93	2.00	0.00	0.03	0.00	57.24	7.93	2.00	0.00	0.03	0.00
57.29	7.86	2.00	0.00	0.03	0.00	57.36	7.93	2.00	0.00	0.03	0.00
57.42	7.85	2.00	0.00	0.03	0.00	57.48	7.92	2.00	0.00	0.03	0.00
57.55	7.98	2.00	0.00	0.02	0.00	57.62	8.05	2.00	0.00	0.02	0.00
57.70	8.04	2.00	0.00	0.02	0.00	57.77	8.10	2.00	0.00	0.02	0.00
57.83	8.03	2.00	0.00	0.02	0.00	57.88	7.96	2.00	0.00	0.02	0.00
57.95	7.96	2.00	0.00	0.02	0.00	58.02	7.96	2.00	0.00	0.02	0.00
58.09	7.95	2.00	0.00	0.02	0.00	58.14	7.68	2.00	0.00	0.01	0.00
58.21	7.68	2.00	0.00	0.01	0.00	58.27	7.68	2.00	0.00	0.01	0.00
58.34	7.67	2.00	0.00	0.01	0.00	58.40	7.80	2.00	0.00	0.01	0.00
58.47	8.07	2.00	0.00	0.01	0.00	58.53	7.80	2.00	0.00	0.01	0.00
58.62	7.92	2.00	0.00	0.01	0.00	58.68	8.38	2.00	0.00	0.01	0.00
58.74	8.18	2.00	0.00	0.00	0.00	58.80	8.05	2.00	0.00	0.00	0.00
58.87	8.18	2.00	0.00	0.00	0.00	58.94	7.98	2.00	0.00	0.00	0.00
59.00	8.17	2.00	0.00	0.00	0.00	59.06	8.43	2.00	0.00	0.00	0.00
59.13	8.69	2.00	0.00	0.00	0.00	59.19	8.82	2.00	0.00	0.00	0.00
59.28	9.35	2.00	0.00	0.00	0.00	59.33	10.47	2.00	0.00	0.00	0.00
59.40	11.39	2.00	0.00	0.00	0.00	59.47	11.65	2.00	0.00	0.00	0.00
59.52	10.38	2.00	0.00	0.00	0.00	59.59	12.24	2.00	0.00	0.00	0.00
59.65	12.04	2.00	0.00	0.00	0.00	59.72	11.97	2.00	0.00	0.00	0.00
59.79	12.16	2.00	0.00	0.00	0.00	59.86	12.89	2.00	0.00	0.00	0.00
59.93	13.08	2.00	0.00	0.00	0.00	59.98	12.94	2.00	0.00	0.00	0.00
60.06	12.13	2.00	0.00	0.00	0.00	60.11	11.60	2.00	0.00	0.00	0.00
60.19	11.59	2.00	0.00	0.00	0.00	60.24	11.79	2.00	0.00	0.00	0.00
60.31	12.38	2.00	0.00	0.00	0.00	60.39	13.04	2.00	0.00	0.00	0.00
60.44	13.63	2.00	0.00	0.00	0.00	60.51	14.09	2.00	0.00	0.00	0.00
60.57	14.69	2.00	0.00	0.00	0.00	60.64	15.75	2.00	0.00	0.00	0.00
60.70	16.01	2.00	0.00	0.00	0.00	60.78	16.41	2.00	0.00	0.00	0.00
60.86	17.07	2.00	0.00	0.00	0.00	60.90	17.33	2.00	0.00	0.00	0.00
60.98	17.72	2.00	0.00	0.00	0.00	61.04	18.12	2.00	0.00	0.00	0.00
61.11	19.06	2.00	0.00	0.00	0.00	61.18	19.11	2.00	0.00	0.00	0.00
61.24	20.52	2.00	0.00	0.00	0.00	61.31	21.05	2.00	0.00	0.00	0.00
61.37	21.72	2.00	0.00	0.00	0.00	61.43	22.53	2.00	0.00	0.00	0.00
61.49	22.86	2.00	0.00	0.00	0.00	61.55	21.75	2.00	0.00	0.00	0.00
61.63	21.48	2.00	0.00	0.00	0.00	61.69	21.26	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.75	21.05	2.00	0.00	0.00	0.00	61.81	21.04	2.00	0.00	0.00	0.00
61.88	21.03	2.00	0.00	0.00	0.00	61.95	21.02	2.00	0.00	0.00	0.00
62.01	21.01	2.00	0.00	0.00	0.00	62.10	21.33	2.00	0.00	0.00	0.00
62.14	21.66	2.00	0.00	0.00	0.00	62.21	21.58	2.00	0.00	0.00	0.00
62.30	21.50	2.00	0.00	0.00	0.00	62.35	21.48	2.00	0.00	0.00	0.00
62.41	21.87	2.00	0.00	0.00	0.00	62.48	22.07	2.00	0.00	0.00	0.00
62.54	22.19	2.00	0.00	0.00	0.00	62.61	22.45	2.00	0.00	0.00	0.00
62.67	22.77	2.00	0.00	0.00	0.00	62.74	22.83	2.00	0.00	0.00	0.00
62.80	22.82	2.00	0.00	0.00	0.00	62.88	23.08	2.00	0.00	0.00	0.00
62.93	22.53	2.00	0.00	0.00	0.00	63.00	23.54	2.00	0.00	0.00	0.00
63.09	23.79	2.00	0.00	0.00	0.00	63.14	23.51	2.00	0.00	0.00	0.00
63.19	22.89	2.00	0.00	0.00	0.00	63.26	23.01	2.00	0.00	0.00	0.00
63.33	23.07	2.00	0.00	0.00	0.00	63.40	22.85	2.00	0.00	0.00	0.00
63.46	22.71	2.00	0.00	0.00	0.00	63.52	22.02	2.00	0.00	0.00	0.00
63.59	20.53	2.00	0.00	0.00	0.00	63.66	19.05	2.00	0.00	0.00	0.00
63.73	17.57	2.00	0.00	0.00	0.00	63.80	16.71	2.00	0.00	0.00	0.00
63.85	16.30	2.00	0.00	0.00	0.00	63.94	16.03	2.00	0.00	0.00	0.00
63.99	15.96	2.00	0.00	0.00	0.00	64.07	15.95	2.00	0.00	0.00	0.00
64.12	16.47	2.00	0.00	0.00	0.00	64.18	16.86	2.00	0.00	0.00	0.00
64.27	17.36	2.00	0.00	0.00	0.00	64.33	18.22	2.00	0.00	0.00	0.00
64.39	19.86	2.00	0.00	0.00	0.00	64.45	20.99	2.00	0.00	0.00	0.00
64.51	21.18	2.00	0.00	0.00	0.00	64.59	20.36	2.00	0.00	0.00	0.00
64.65	20.55	2.00	0.00	0.00	0.00	64.71	22.88	2.00	0.00	0.00	0.00
64.77	24.94	2.00	0.00	0.00	0.00	64.85	27.97	2.00	0.00	0.00	0.00
64.91	30.67	2.00	0.00	0.00	0.00	64.98	33.00	2.00	0.00	0.00	0.00
65.03	33.39	2.00	0.00	0.00	0.00	65.11	35.31	2.00	0.00	0.00	0.00
65.17	35.29	2.00	0.00	0.00	0.00	65.25	35.27	2.00	0.00	0.00	0.00
65.29	34.85	2.00	0.00	0.00	0.00	65.39	32.90	2.00	0.00	0.00	0.00
65.43	32.48	2.00	0.00	0.00	0.00	65.51	30.80	2.00	0.00	0.00	0.00
65.57	31.27	2.00	0.00	0.00	0.00	65.64	31.04	2.00	0.00	0.00	0.00
65.69	30.00	2.00	0.00	0.00	0.00	65.76	30.25	2.00	0.00	0.00	0.00
65.82	31.47	2.00	0.00	0.00	0.00	65.90	32.68	2.00	0.00	0.00	0.00
65.96	33.28	2.00	0.00	0.00	0.00	66.01	33.47	2.00	0.00	0.00	0.00
66.09	33.11	2.00	0.00	0.00	0.00	66.14	32.55	2.00	0.00	0.00	0.00
66.21	31.10	2.00	0.00	0.00	0.00	66.28	29.79	2.00	0.00	0.00	0.00
66.36	28.28	2.00	0.00	0.00	0.00	66.43	28.20	2.00	0.00	0.00	0.00
66.48	28.18	2.00	0.00	0.00	0.00	66.55	28.09	2.00	0.00	0.00	0.00
66.62	30.51	2.00	0.00	0.00	0.00	66.68	32.05	2.00	0.00	0.00	0.00
66.74	34.42	2.00	0.00	0.00	0.00	66.81	37.07	2.00	0.00	0.00	0.00
66.87	41.22	2.00	0.00	0.00	0.00	66.93	41.89	2.00	0.00	0.00	0.00
67.00	42.43	2.00	0.00	0.00	0.00	67.07	43.38	2.00	0.00	0.00	0.00
67.13	44.06	2.00	0.00	0.00	0.00	67.19	44.04	2.00	0.00	0.00	0.00
67.26	45.43	2.00	0.00	0.00	0.00	67.32	48.38	2.00	0.00	0.00	0.00
67.41	49.55	2.00	0.00	0.00	0.00	67.46	48.51	2.00	0.00	0.00	0.00
67.53	50.91	2.00	0.00	0.00	0.00	67.59	50.10	2.00	0.00	0.00	0.00
67.66	48.44	2.00	0.00	0.00	0.00	67.72	46.09	2.00	0.00	0.00	0.00
67.80	42.71	2.00	0.00	0.00	0.00	67.85	40.18	2.00	0.00	0.00	0.00
67.94	42.36	2.00	0.00	0.00	0.00	68.00	40.90	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
68.07	41.99	2.00	0.00	0.00	0.00	68.12	43.36	2.00	0.00	0.00	0.00
68.19	43.55	2.00	0.00	0.00	0.00	68.25	43.13	2.00	0.00	0.00	0.00
68.32	40.34	2.00	0.00	0.00	0.00	68.39	40.39	2.00	0.00	0.00	0.00
68.45	47.55	2.00	0.00	0.00	0.00	68.51	55.25	2.00	0.00	0.00	0.00
68.59	129.56	0.46	0.00	0.00	0.00	68.65	57.76	2.00	0.00	0.00	0.00
68.72	53.59	2.00	0.00	0.00	0.00	68.77	49.91	2.00	0.00	0.00	0.00
68.84	45.25	2.00	0.00	0.00	0.00	68.91	41.13	2.00	0.00	0.00	0.00
68.98	38.69	2.00	0.00	0.00	0.00	69.03	37.59	2.00	0.00	0.00	0.00
69.11	37.97	2.00	0.00	0.00	0.00	69.17	39.53	2.00	0.00	0.00	0.00
69.24	41.90	2.00	0.00	0.00	0.00	69.30	42.84	2.00	0.00	0.00	0.00
69.36	42.81	2.00	0.00	0.00	0.00	69.44	43.19	2.00	0.00	0.00	0.00
69.50	46.16	2.00	0.00	0.00	0.00	69.56	46.74	2.00	0.00	0.00	0.00
69.62	50.86	2.00	0.00	0.00	0.00	69.69	55.37	2.00	0.00	0.00	0.00
69.77	55.55	2.00	0.00	0.00	0.00	69.84	54.12	2.00	0.00	0.00	0.00
69.90	50.98	2.00	0.00	0.00	0.00	69.96	49.34	2.00	0.00	0.00	0.00
70.03	50.87	2.00	0.00	0.00	0.00	70.10	48.78	2.00	0.00	0.00	0.00
70.17	50.73	2.00	0.00	0.00	0.00	70.23	53.38	2.00	0.00	0.00	0.00
70.31	56.19	2.00	0.00	0.00	0.00	70.35	57.39	2.00	0.00	0.00	0.00
70.41	56.02	2.00	0.00	0.00	0.00	70.48	52.53	2.00	0.00	0.00	0.00
70.54	49.62	2.00	0.00	0.00	0.00	70.61	49.61	2.00	0.00	0.00	0.00
70.68	49.57	2.00	0.00	0.00	0.00	70.74	51.23	2.00	0.00	0.00	0.00
70.81	51.96	2.00	0.00	0.00	0.00	70.89	53.69	2.00	0.00	0.00	0.00
70.94	53.96	2.00	0.00	0.00	0.00	71.01	51.89	2.00	0.00	0.00	0.00
71.09	48.72	2.00	0.00	0.00	0.00	71.14	47.11	2.00	0.00	0.00	0.00
71.22	45.08	2.00	0.00	0.00	0.00	71.27	45.96	2.00	0.00	0.00	0.00
71.34	46.07	2.00	0.00	0.00	0.00	71.40	44.80	2.00	0.00	0.00	0.00
71.47	43.69	2.00	0.00	0.00	0.00	71.53	43.60	2.00	0.00	0.00	0.00
71.59	44.18	2.00	0.00	0.00	0.00	71.66	50.10	2.00	0.00	0.00	0.00
71.73	53.81	2.00	0.00	0.00	0.00	71.79	125.73	0.44	0.00	0.00	0.00
71.87	128.66	0.46	0.00	0.00	0.00	71.94	128.59	0.46	0.00	0.00	0.00
72.00	56.69	2.00	0.00	0.00	0.00	72.06	52.10	2.00	0.00	0.00	0.00
72.13	49.65	2.00	0.00	0.00	0.00	72.19	49.93	2.00	0.00	0.00	0.00
72.25	48.03	2.00	0.00	0.00	0.00	72.31	45.95	2.00	0.00	0.00	0.00
72.38	42.66	2.00	0.00	0.00	0.00	72.45	38.03	2.00	0.00	0.00	0.00
72.51	35.50	2.00	0.00	0.00	0.00	72.58	33.58	2.00	0.00	0.00	0.00
72.64	28.72	2.00	0.00	0.00	0.00	72.71	23.69	2.00	0.00	0.00	0.00
72.79	19.64	2.00	0.00	0.00	0.00	72.85	17.70	2.00	0.00	0.00	0.00
72.92	17.57	2.00	0.00	0.00	0.00	72.99	17.62	2.00	0.00	0.00	0.00
73.04	17.43	2.00	0.00	0.00	0.00	73.12	16.93	2.00	0.00	0.00	0.00
73.16	16.80	2.00	0.00	0.00	0.00	73.24	16.42	2.00	0.00	0.00	0.00
73.31	16.41	2.00	0.00	0.00	0.00	73.36	16.40	2.00	0.00	0.00	0.00
73.44	16.40	2.00	0.00	0.00	0.00	73.51	16.70	2.00	0.00	0.00	0.00
73.56	17.00	2.00	0.00	0.00	0.00	73.63	17.79	2.00	0.00	0.00	0.00
73.71	21.87	2.00	0.00	0.00	0.00	73.77	25.70	2.00	0.00	0.00	0.00
73.84	28.62	2.00	0.00	0.00	0.00	73.90	28.16	2.00	0.00	0.00	0.00
73.97	26.75	2.00	0.00	0.00	0.00	74.03	26.37	2.00	0.00	0.00	0.00
74.09	24.72	2.00	0.00	0.00	0.00	74.15	23.76	2.00	0.00	0.00	0.00
74.23	22.87	2.00	0.00	0.00	0.00	74.28	22.86	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.36	23.03	2.00	0.00	0.00	0.00	74.41	23.26	2.00	0.00	0.00	0.00
74.51	38.65	2.00	0.00	0.00	0.00	74.56	48.53	2.00	0.00	0.00	0.00
74.61	113.93	0.38	0.00	0.00	0.00	74.69	123.41	0.43	0.00	0.00	0.00
74.74	125.87	0.45	0.00	0.00	0.00	74.82	127.08	0.46	0.00	0.00	0.00
74.88	130.17	0.48	0.00	0.00	0.00	74.95	130.71	0.49	0.00	0.00	0.00
75.00	130.79	0.49	0.00	0.00	0.00	75.07	130.83	0.49	0.00	0.00	0.00
75.14	131.42	0.49	0.00	0.00	0.00	75.20	131.18	0.49	0.00	0.00	0.00
75.27	130.86	0.49	0.00	0.00	0.00	75.33	130.36	0.49	0.00	0.00	0.00
75.41	129.61	0.48	0.00	0.00	0.00	75.48	128.30	0.47	0.00	0.00	0.00
75.53	128.22	0.47	0.00	0.00	0.00	75.61	127.75	0.47	0.00	0.00	0.00
75.67	127.56	0.46	0.00	0.00	0.00	75.74	127.05	0.46	0.00	0.00	0.00
75.80	131.11	0.49	0.00	0.00	0.00	75.86	131.42	0.50	0.00	0.00	0.00
75.93	131.33	0.50	0.00	0.00	0.00	75.99	130.87	0.49	0.00	0.00	0.00
76.06	131.11	0.49	0.00	0.00	0.00	76.13	130.81	0.49	0.00	0.00	0.00
76.19	129.74	0.48	0.00	0.00	0.00	76.27	128.18	0.47	0.00	0.00	0.00
76.31	126.93	0.46	0.00	0.00	0.00	76.40	57.35	2.00	0.00	0.00	0.00
76.44	50.81	2.00	0.00	0.00	0.00	76.54	54.88	2.00	0.00	0.00	0.00
76.60	52.56	2.00	0.00	0.00	0.00	76.65	50.78	2.00	0.00	0.00	0.00
76.73	48.79	2.00	0.00	0.00	0.00	76.78	47.70	2.00	0.00	0.00	0.00
76.85	46.27	2.00	0.00	0.00	0.00	76.91	44.58	2.00	0.00	0.00	0.00
76.98	41.37	2.00	0.00	0.00	0.00	77.04	42.51	2.00	0.00	0.00	0.00
77.11	52.07	2.00	0.00	0.00	0.00	77.17	122.17	0.43	0.00	0.00	0.00
77.24	127.61	0.47	0.00	0.00	0.00	77.30	130.38	0.49	0.00	0.00	0.00
77.37	133.01	0.52	0.00	0.00	0.00	77.45	134.12	0.53	0.00	0.00	0.00
77.50	133.72	0.52	0.00	0.00	0.00	77.58	132.25	0.51	0.00	0.00	0.00
77.63	134.03	0.53	0.00	0.00	0.00	77.70	131.82	0.51	0.00	0.00	0.00
77.76	133.81	0.53	0.00	0.00	0.00	77.83	133.76	0.52	0.00	0.00	0.00
77.90	134.23	0.53	0.00	0.00	0.00	77.96	135.34	0.54	0.00	0.00	0.00
78.02	135.35	0.54	0.00	0.00	0.00	78.10	135.47	0.54	0.00	0.00	0.00
78.18	134.59	0.53	0.00	0.00	0.00	78.25	133.73	0.53	0.00	0.00	0.00
78.30	134.02	0.53	0.00	0.00	0.00	78.36	133.58	0.52	0.00	0.00	0.00
78.41	63.79	2.00	0.00	0.00	0.00	78.49	62.43	2.00	0.00	0.00	0.00
78.56	61.35	2.00	0.00	0.00	0.00	78.62	60.93	2.00	0.00	0.00	0.00
78.69	55.97	2.00	0.00	0.00	0.00	78.75	53.43	2.00	0.00	0.00	0.00
78.82	51.68	2.00	0.00	0.00	0.00	78.88	57.33	2.00	0.00	0.00	0.00
78.94	62.84	2.00	0.00	0.00	0.00	79.01	137.08	0.56	0.00	0.00	0.00
79.07	138.71	0.58	0.00	0.00	0.00	79.14	139.67	0.59	0.00	0.00	0.00
79.23	142.49	0.63	0.00	0.00	0.00	79.29	143.05	0.64	0.00	0.00	0.00
79.34	141.24	0.61	0.00	0.00	0.00	79.41	140.67	0.61	0.00	0.00	0.00
79.47	65.39	2.00	0.00	0.00	0.00	79.53	62.16	2.00	0.00	0.00	0.00
79.60	59.58	2.00	0.00	0.00	0.00	79.68	56.25	2.00	0.00	0.00	0.00
79.74	53.37	2.00	0.00	0.00	0.00	79.80	52.48	2.00	0.00	0.00	0.00
79.86	51.64	2.00	0.00	0.00	0.00	79.93	49.02	2.00	0.00	0.00	0.00
80.00	40.93	2.00	0.00	0.00	0.00	80.06	34.68	2.00	0.00	0.00	0.00
80.13	30.67	2.00	0.00	0.00	0.00	80.18	29.04	2.00	0.00	0.00	0.00
80.26	30.37	2.00	0.00	0.00	0.00	80.34	30.06	2.00	0.00	0.00	0.00
80.40	39.50	2.00	0.00	0.00	0.00	80.48	49.33	2.00	0.00	0.00	0.00
80.53	52.46	2.00	0.00	0.00	0.00	80.58	52.16	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.66	52.20	2.00	0.00	0.00	0.00	80.71	52.59	2.00	0.00	0.00	0.00
80.79	52.23	2.00	0.00	0.00	0.00	80.84	51.88	2.00	0.00	0.00	0.00
80.93	49.64	2.00	0.00	0.00	0.00	80.99	45.76	2.00	0.00	0.00	0.00
81.06	41.94	2.00	0.00	0.00	0.00	81.11	39.86	2.00	0.00	0.00	0.00
81.18	39.91	2.00	0.00	0.00	0.00	81.25	41.18	2.00	0.00	0.00	0.00
81.31	41.29	2.00	0.00	0.00	0.00	81.38	40.43	2.00	0.00	0.00	0.00
81.44	39.57	2.00	0.00	0.00	0.00	81.50	40.47	2.00	0.00	0.00	0.00
81.57	38.24	2.00	0.00	0.00	0.00	81.65	40.50	2.00	0.00	0.00	0.00
81.69	43.46	2.00	0.00	0.00	0.00	81.77	47.70	2.00	0.00	0.00	0.00
81.85	48.53	2.00	0.00	0.00	0.00	81.91	49.36	2.00	0.00	0.00	0.00
81.96	74.08	2.00	0.00	0.00	0.00	82.03	241.02	2.00	0.00	0.00	0.00
82.09	231.56	2.00	0.00	0.00	0.00	82.15	191.03	2.00	0.00	0.00	0.00
82.24	49.62	2.00	0.00	0.00	0.00	82.29	43.78	2.00	0.00	0.00	0.00
82.36	45.47	2.00	0.00	0.00	0.00	82.43	43.72	2.00	0.00	0.00	0.00
82.48	39.26	2.00	0.00	0.00	0.00	82.55	38.17	2.00	0.00	0.00	0.00
82.64	41.23	2.00	0.00	0.00	0.00	82.69	44.70	2.00	0.00	0.00	0.00
82.76	42.20	2.00	0.00	0.00	0.00	82.82	40.32	2.00	0.00	0.00	0.00
82.89	37.80	2.00	0.00	0.00	0.00	82.94	38.43	2.00	0.00	0.00	0.00
83.01	37.03	2.00	0.00	0.00	0.00	83.09	34.57	2.00	0.00	0.00	0.00
83.17	33.75	2.00	0.00	0.00	0.00	83.23	33.92	2.00	0.00	0.00	0.00
83.30	34.89	2.00	0.00	0.00	0.00	83.36	36.37	2.00	0.00	0.00	0.00
83.43	38.17	2.00	0.00	0.00	0.00	83.48	39.44	2.00	0.00	0.00	0.00
83.55	43.08	2.00	0.00	0.00	0.00	83.61	44.28	2.00	0.00	0.00	0.00
83.67	43.91	2.00	0.00	0.00	0.00	83.74	43.53	2.00	0.00	0.00	0.00
83.81	47.21	2.00	0.00	0.00	0.00	83.88	49.81	2.00	0.00	0.00	0.00
83.95	50.85	2.00	0.00	0.00	0.00	84.01	50.49	2.00	0.00	0.00	0.00
84.07	51.00	2.00	0.00	0.00	0.00	84.13	51.64	2.00	0.00	0.00	0.00
84.22	54.27	2.00	0.00	0.00	0.00	84.27	55.79	2.00	0.00	0.00	0.00
84.33	54.42	2.00	0.00	0.00	0.00	84.39	52.34	2.00	0.00	0.00	0.00
84.47	50.73	2.00	0.00	0.00	0.00	84.53	50.06	2.00	0.00	0.00	0.00
84.58	50.01	2.00	0.00	0.00	0.00	84.67	49.95	2.00	0.00	0.00	0.00
84.73	49.93	2.00	0.00	0.00	0.00	84.79	49.25	2.00	0.00	0.00	0.00
84.87	46.99	2.00	0.00	0.00	0.00	84.93	48.66	2.00	0.00	0.00	0.00
84.98	52.46	2.00	0.00	0.00	0.00	85.06	55.63	2.00	0.00	0.00	0.00
85.12	55.95	2.00	0.00	0.00	0.00	85.18	56.16	2.00	0.00	0.00	0.00
85.27	53.00	2.00	0.00	0.00	0.00	85.32	50.36	2.00	0.00	0.00	0.00
85.37	46.91	2.00	0.00	0.00	0.00	85.45	41.35	2.00	0.00	0.00	0.00
85.52	39.45	2.00	0.00	0.00	0.00	85.57	36.96	2.00	0.00	0.00	0.00
85.65	37.13	2.00	0.00	0.00	0.00	85.71	37.11	2.00	0.00	0.00	0.00
85.77	37.27	2.00	0.00	0.00	0.00	85.84	37.25	2.00	0.00	0.00	0.00
85.91	37.23	2.00	0.00	0.00	0.00	85.96	38.52	2.00	0.00	0.00	0.00
86.03	41.88	2.00	0.00	0.00	0.00	86.12	43.64	2.00	0.00	0.00	0.00
86.19	45.16	2.00	0.00	0.00	0.00	86.24	43.86	2.00	0.00	0.00	0.00
86.29	43.73	2.00	0.00	0.00	0.00	86.38	43.47	2.00	0.00	0.00	0.00
86.44	41.40	2.00	0.00	0.00	0.00	86.51	39.11	2.00	0.00	0.00	0.00
86.57	38.11	2.00	0.00	0.00	0.00	86.63	37.10	2.00	0.00	0.00	0.00
86.70	40.57	2.00	0.00	0.00	0.00	86.75	63.80	2.00	0.00	0.00	0.00
86.82	245.08	2.00	0.00	0.00	0.00	86.88	261.55	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.95	350.65	2.00	0.00	0.00	0.00	87.02	319.96	2.00	0.00	0.00	0.00
87.08	249.65	2.00	0.00	0.00	0.00	87.14	93.60	2.00	0.00	0.00	0.00
87.21	83.34	2.00	0.00	0.00	0.00	87.29	73.98	2.00	0.00	0.00	0.00
87.35	64.97	2.00	0.00	0.00	0.00	87.41	54.87	2.00	0.00	0.00	0.00
87.48	51.37	2.00	0.00	0.00	0.00	87.55	52.89	2.00	0.00	0.00	0.00
87.62	50.90	2.00	0.00	0.00	0.00	87.68	46.99	2.00	0.00	0.00	0.00
87.73	45.95	2.00	0.00	0.00	0.00	87.81	46.44	2.00	0.00	0.00	0.00
87.87	48.93	2.00	0.00	0.00	0.00	87.94	50.64	2.00	0.00	0.00	0.00
88.00	50.80	2.00	0.00	0.00	0.00	88.09	50.04	2.00	0.00	0.00	0.00
88.13	49.42	2.00	0.00	0.00	0.00	88.21	49.78	2.00	0.00	0.00	0.00
88.28	53.67	2.00	0.00	0.00	0.00	88.33	60.15	2.00	0.00	0.00	0.00
88.40	69.91	2.00	0.00	0.00	0.00	88.48	73.13	2.00	0.00	0.00	0.00
88.54	72.42	2.00	0.00	0.00	0.00	88.60	68.98	2.00	0.00	0.00	0.00
88.67	68.26	2.00	0.00	0.00	0.00	88.72	67.75	2.00	0.00	0.00	0.00
88.80	67.98	2.00	0.00	0.00	0.00	88.87	68.42	2.00	0.00	0.00	0.00
88.92	68.53	2.00	0.00	0.00	0.00	88.99	69.92	2.00	0.00	0.00	0.00
89.06	70.80	2.00	0.00	0.00	0.00	89.11	70.43	2.00	0.00	0.00	0.00
89.18	70.13	2.00	0.00	0.00	0.00	89.24	69.06	2.00	0.00	0.00	0.00
89.31	69.95	2.00	0.00	0.00	0.00	89.39	67.03	2.00	0.00	0.00	0.00
89.44	69.75	2.00	0.00	0.00	0.00	89.53	70.19	2.00	0.00	0.00	0.00
89.58	68.68	2.00	0.00	0.00	0.00	89.67	64.68	2.00	0.00	0.00	0.00
89.73	60.78	2.00	0.00	0.00	0.00	89.79	57.12	2.00	0.00	0.00	0.00
89.85	53.82	2.00	0.00	0.00	0.00	89.90	50.23	2.00	0.00	0.00	0.00
89.97	44.96	2.00	0.00	0.00	0.00	90.03	42.99	2.00	0.00	0.00	0.00
90.11	42.83	2.00	0.00	0.00	0.00	90.16	42.49	2.00	0.00	0.00	0.00
90.23	43.20	2.00	0.00	0.00	0.00	90.31	47.27	2.00	0.00	0.00	0.00
90.38	50.05	2.00	0.00	0.00	0.00	90.43	51.19	2.00	0.00	0.00	0.00
90.51	51.62	2.00	0.00	0.00	0.00	90.58	50.88	2.00	0.00	0.00	0.00
90.63	50.55	2.00	0.00	0.00	0.00	90.70	50.90	2.00	0.00	0.00	0.00
90.76	53.08	2.00	0.00	0.00	0.00	90.81	55.46	2.00	0.00	0.00	0.00
90.89	57.41	2.00	0.00	0.00	0.00	90.96	57.38	2.00	0.00	0.00	0.00
91.03	56.70	2.00	0.00	0.00	0.00	91.08	55.90	2.00	0.00	0.00	0.00
91.15	54.12	2.00	0.00	0.00	0.00	91.24	52.60	2.00	0.00	0.00	0.00
91.28	52.26	2.00	0.00	0.00	0.00	91.35	53.20	2.00	0.00	0.00	0.00
91.43	55.37	2.00	0.00	0.00	0.00	91.49	57.83	2.00	0.00	0.00	0.00
91.55	60.44	2.00	0.00	0.00	0.00	91.63	65.76	2.00	0.00	0.00	0.00
91.67	142.87	0.67	0.00	0.00	0.00	91.73	152.78	0.85	0.00	0.00	0.00
91.81	157.23	0.96	0.00	0.00	0.00	91.87	152.26	0.84	0.00	0.00	0.00
91.94	142.68	0.67	0.00	0.00	0.00	92.01	66.57	2.00	0.00	0.00	0.00
92.07	63.89	2.00	0.00	0.00	0.00	92.13	61.69	2.00	0.00	0.00	0.00
92.20	58.32	2.00	0.00	0.00	0.00	92.27	54.71	2.00	0.00	0.00	0.00
92.34	52.96	2.00	0.00	0.00	0.00	92.40	52.95	2.00	0.00	0.00	0.00
92.47	53.29	2.00	0.00	0.00	0.00	92.53	58.48	2.00	0.00	0.00	0.00
92.59	61.47	2.00	0.00	0.00	0.00	92.67	62.98	2.00	0.00	0.00	0.00
92.72	63.86	2.00	0.00	0.00	0.00	92.81	63.45	2.00	0.00	0.00	0.00
92.85	63.44	2.00	0.00	0.00	0.00	92.94	64.08	2.00	0.00	0.00	0.00
93.00	63.49	2.00	0.00	0.00	0.00	93.05	62.90	2.00	0.00	0.00	0.00
93.14	61.86	2.00	0.00	0.00	0.00	93.20	60.86	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.26	58.73	2.00	0.00	0.00	0.00	93.32	57.54	2.00	0.00	0.00	0.00
93.39	55.38	2.00	0.00	0.00	0.00	93.45	52.78	2.00	0.00	0.00	0.00
93.52	50.66	2.00	0.00	0.00	0.00	93.58	48.80	2.00	0.00	0.00	0.00
93.64	47.89	2.00	0.00	0.00	0.00	93.70	47.93	2.00	0.00	0.00	0.00
93.77	47.96	2.00	0.00	0.00	0.00	93.85	47.81	2.00	0.00	0.00	0.00
93.92	46.39	2.00	0.00	0.00	0.00	93.98	48.19	2.00	0.00	0.00	0.00
94.04	52.03	2.00	0.00	0.00	0.00	94.10	54.30	2.00	0.00	0.00	0.00
94.17	56.65	2.00	0.00	0.00	0.00	94.26	60.34	2.00	0.00	0.00	0.00
94.31	62.75	2.00	0.00	0.00	0.00	94.37	64.64	2.00	0.00	0.00	0.00
94.44	66.86	2.00	0.00	0.00	0.00	94.50	138.49	0.62	0.00	0.00	0.00
94.56	139.06	0.63	0.00	0.00	0.00	94.65	141.43	0.66	0.00	0.00	0.00
94.71	71.25	2.00	0.00	0.00	0.00	94.77	71.84	2.00	0.00	0.00	0.00
94.83	72.59	2.00	0.00	0.00	0.00	94.90	72.85	2.00	0.00	0.00	0.00
94.95	73.13	2.00	0.00	0.00	0.00	95.02	70.26	2.00	0.00	0.00	0.00
95.09	70.04	2.00	0.00	0.00	0.00	95.16	69.98	2.00	0.00	0.00	0.00
95.23	73.67	2.00	0.00	0.00	0.00	95.28	146.91	0.75	0.00	0.00	0.00
95.36	147.13	0.75	0.00	0.00	0.00	95.41	147.89	0.76	0.00	0.00	0.00
95.48	147.50	0.76	0.00	0.00	0.00	95.56	146.88	0.75	0.00	0.00	0.00
95.61	146.60	0.74	0.00	0.00	0.00	95.69	146.44	0.74	0.00	0.00	0.00
95.74	145.97	0.73	0.00	0.00	0.00	95.82	74.06	2.00	0.00	0.00	0.00
95.89	74.08	2.00	0.00	0.00	0.00	95.95	74.22	2.00	0.00	0.00	0.00
96.02	74.05	2.00	0.00	0.00	0.00	96.06	73.69	2.00	0.00	0.00	0.00
96.14	72.40	2.00	0.00	0.00	0.00	96.21	73.28	2.00	0.00	0.00	0.00
96.27	71.93	2.00	0.00	0.00	0.00	96.33	71.64	2.00	0.00	0.00	0.00
96.39	71.13	2.00	0.00	0.00	0.00	96.46	70.21	2.00	0.00	0.00	0.00
96.53	70.54	2.00	0.00	0.00	0.00	96.61	69.68	2.00	0.00	0.00	0.00
96.65	69.95	2.00	0.00	0.00	0.00	96.72	69.51	2.00	0.00	0.00	0.00
96.80	69.28	2.00	0.00	0.00	0.00	96.87	68.99	2.00	0.00	0.00	0.00
96.94	68.69	2.00	0.00	0.00	0.00	96.99	68.86	2.00	0.00	0.00	0.00
97.06	69.58	2.00	0.00	0.00	0.00	97.13	69.08	2.00	0.00	0.00	0.00
97.19	68.80	2.00	0.00	0.00	0.00	97.25	69.11	2.00	0.00	0.00	0.00
97.31	69.13	2.00	0.00	0.00	0.00	97.38	69.30	2.00	0.00	0.00	0.00
97.46	69.33	2.00	0.00	0.00	0.00	97.51	69.44	2.00	0.00	0.00	0.00
97.58	69.94	2.00	0.00	0.00	0.00	97.64	70.59	2.00	0.00	0.00	0.00
97.72	69.86	2.00	0.00	0.00	0.00	97.78	70.45	2.00	0.00	0.00	0.00
97.86	69.59	2.00	0.00	0.00	0.00	97.90	70.34	2.00	0.00	0.00	0.00
97.99	70.58	2.00	0.00	0.00	0.00	98.05	69.26	2.00	0.00	0.00	0.00
98.11	70.54	2.00	0.00	0.00	0.00	98.18	69.81	2.00	0.00	0.00	0.00
98.25	70.47	2.00	0.00	0.00	0.00	98.30	70.54	2.00	0.00	0.00	0.00
98.37	70.62	2.00	0.00	0.00	0.00	98.44	69.92	2.00	0.00	0.00	0.00
98.49	69.49	2.00	0.00	0.00	0.00	98.57	70.27	2.00	0.00	0.00	0.00
98.62	70.04	2.00	0.00	0.00	0.00	98.69	70.72	2.00	0.00	0.00	0.00
98.77	70.48	2.00	0.00	0.00	0.00	98.82	70.60	2.00	0.00	0.00	0.00
98.89	70.92	2.00	0.00	0.00	0.00	98.97	71.17	2.00	0.00	0.00	0.00
99.03	71.75	2.00	0.00	0.00	0.00	99.10	72.32	2.00	0.00	0.00	0.00
99.16	71.69	2.00	0.00	0.00	0.00	99.22	70.98	2.00	0.00	0.00	0.00
99.28	71.03	2.00	0.00	0.00	0.00	99.36	70.73	2.00	0.00	0.00	0.00
99.41	70.44	2.00	0.00	0.00	0.00	99.48	69.40	2.00	0.00	0.00	0.00

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

Depth (ft)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (in)
99.54	69.25	2.00	0.00	0.00	0.00	99.62	68.00	2.00	0.00	0.00	0.00
99.68	136.53	0.61	0.00	0.00	0.00	99.74	128.57	0.53	0.00	0.00	0.00
99.81	68.67	2.00	0.00	0.00	0.00	99.87	68.46	2.00	0.00	0.00	0.00
99.94	68.99	2.00	0.00	0.00	0.00	100.01	69.67	2.00	0.00	0.00	0.00
100.07	70.27	2.00	0.00	0.00	0.00						

Total estimated settlement: 0.12**Abbreviations**

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

LIQUEFACTION ANALYSIS REPORT

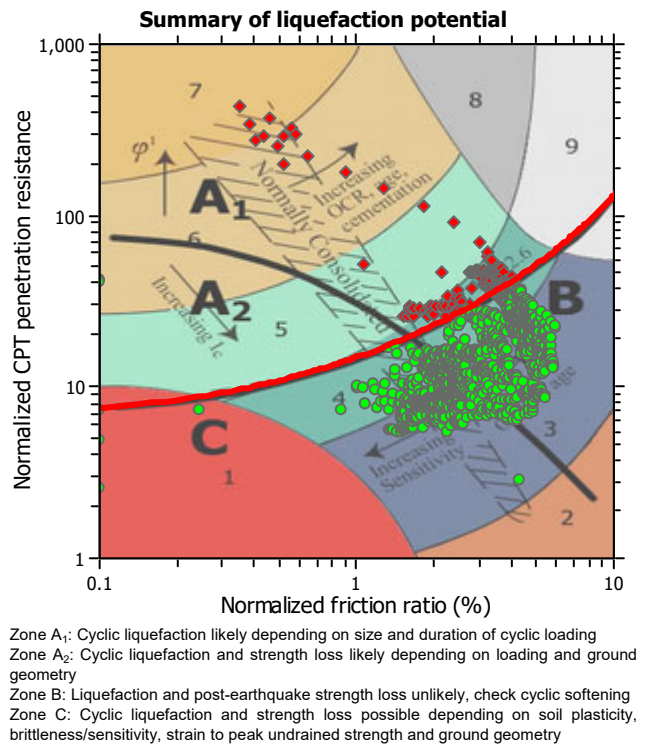
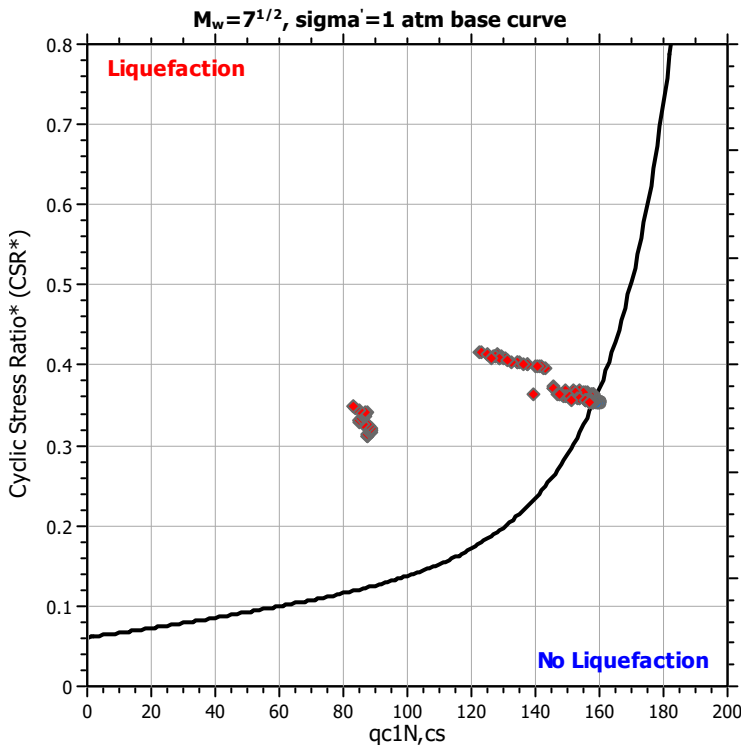
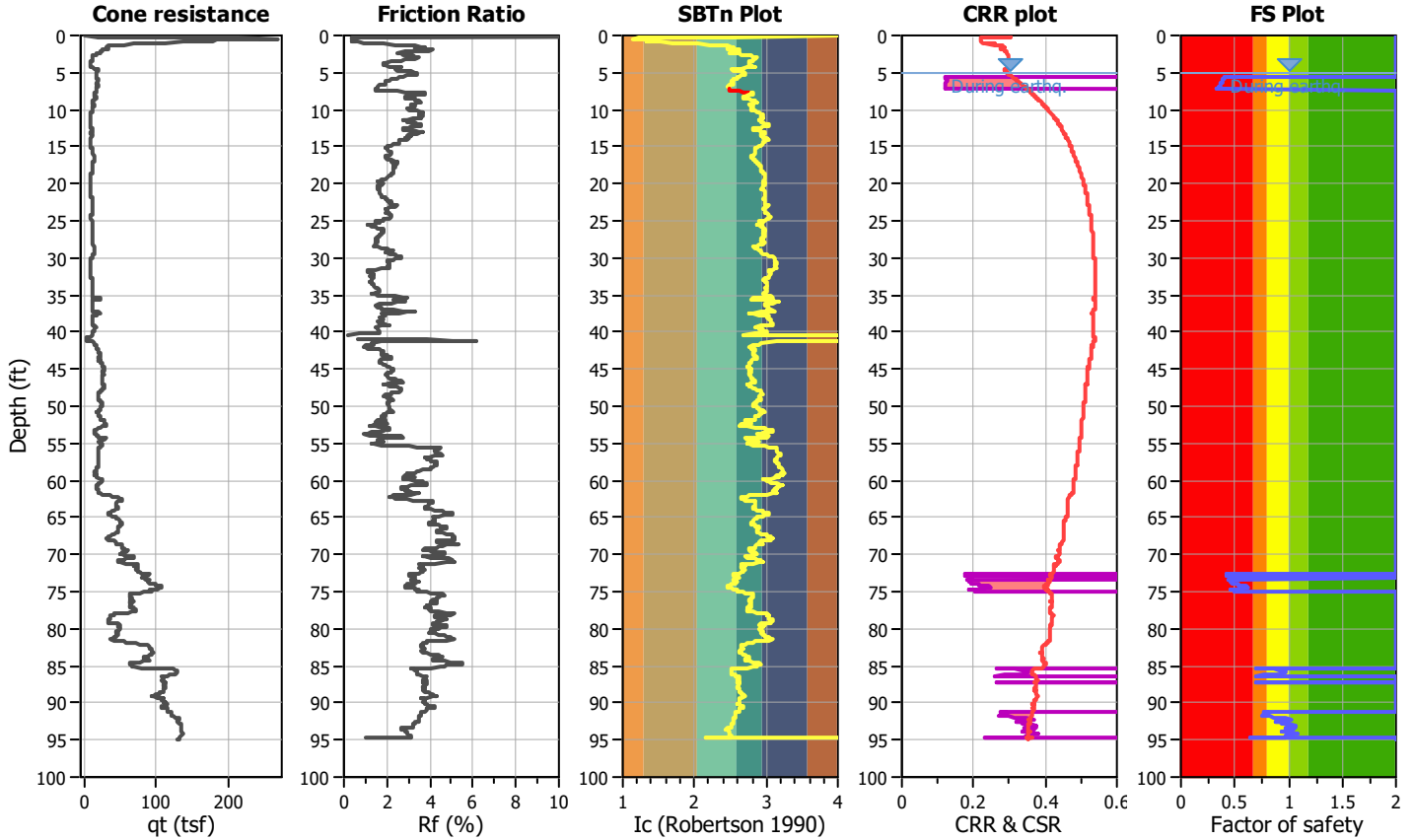
Project title : Victoria Apartments

Location : A9942-88-01

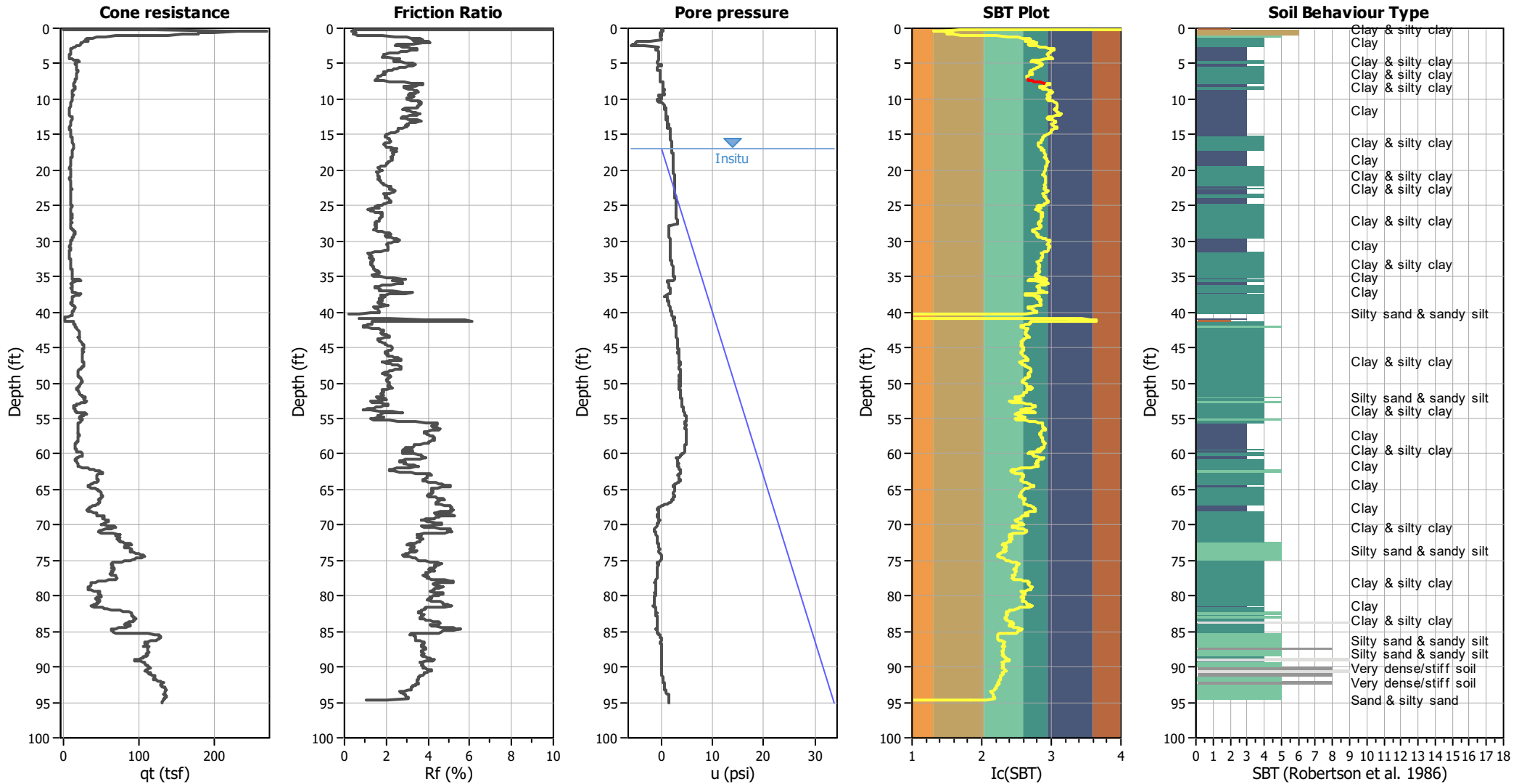
CPT file : C-4

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.57	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.41	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



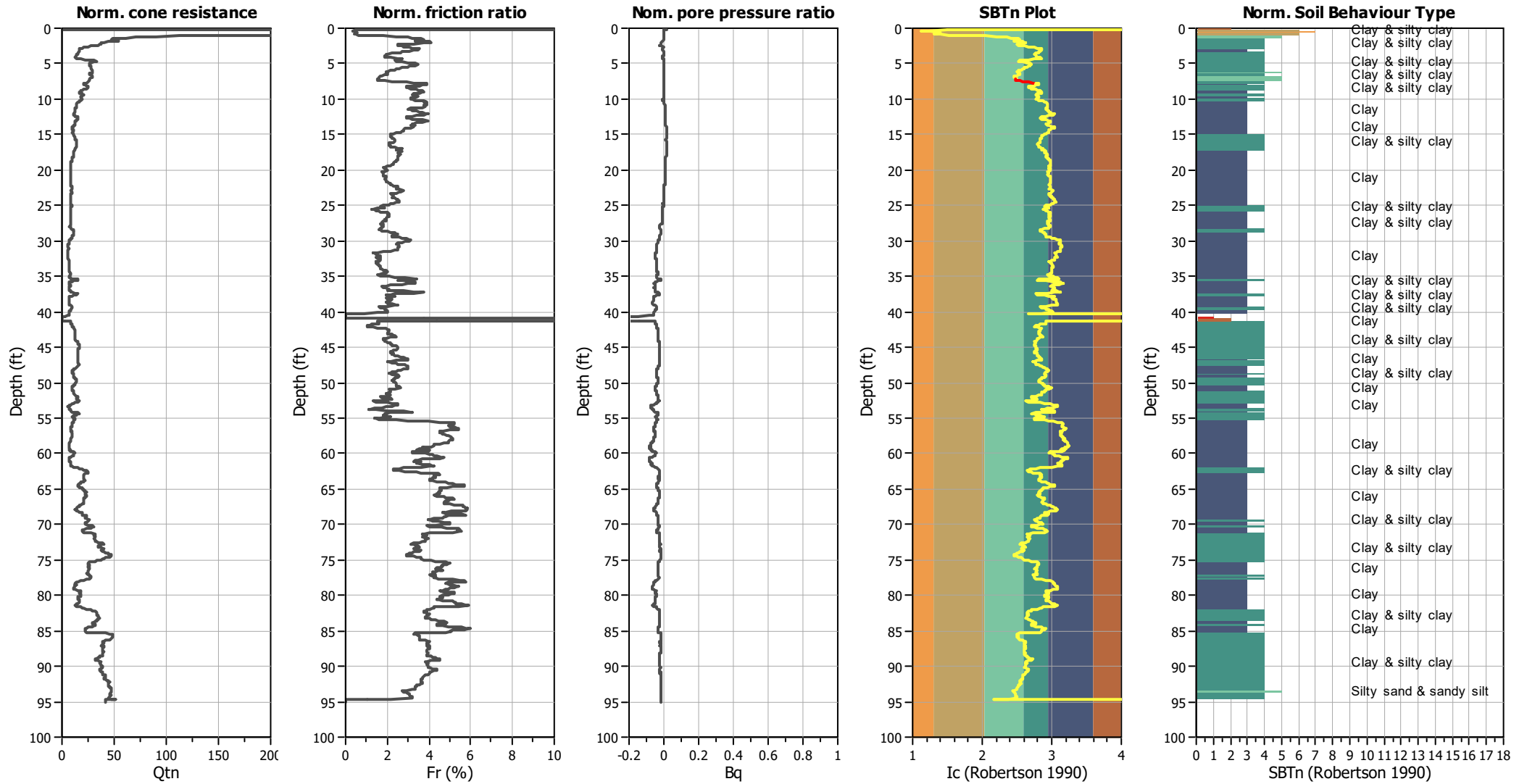
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



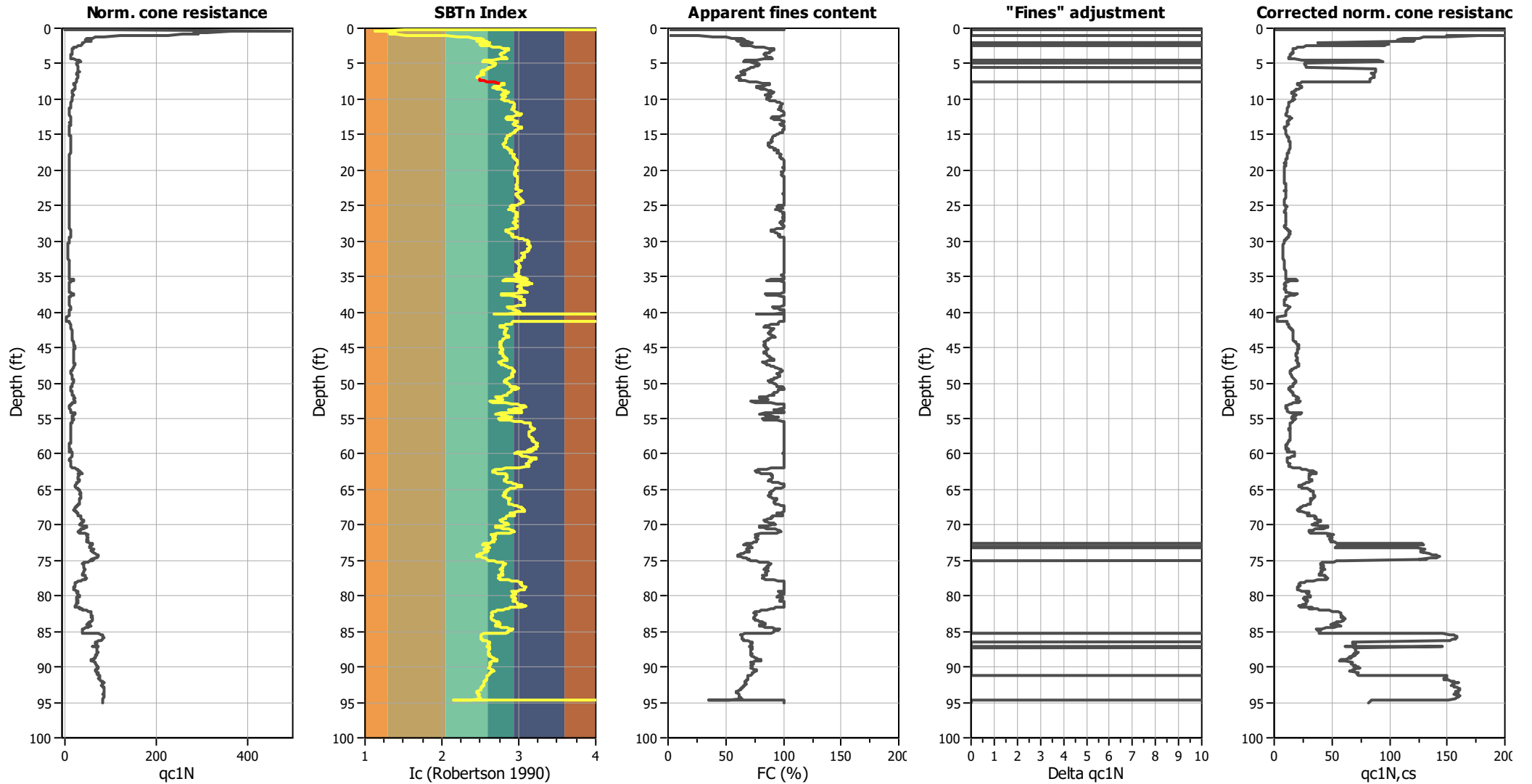
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

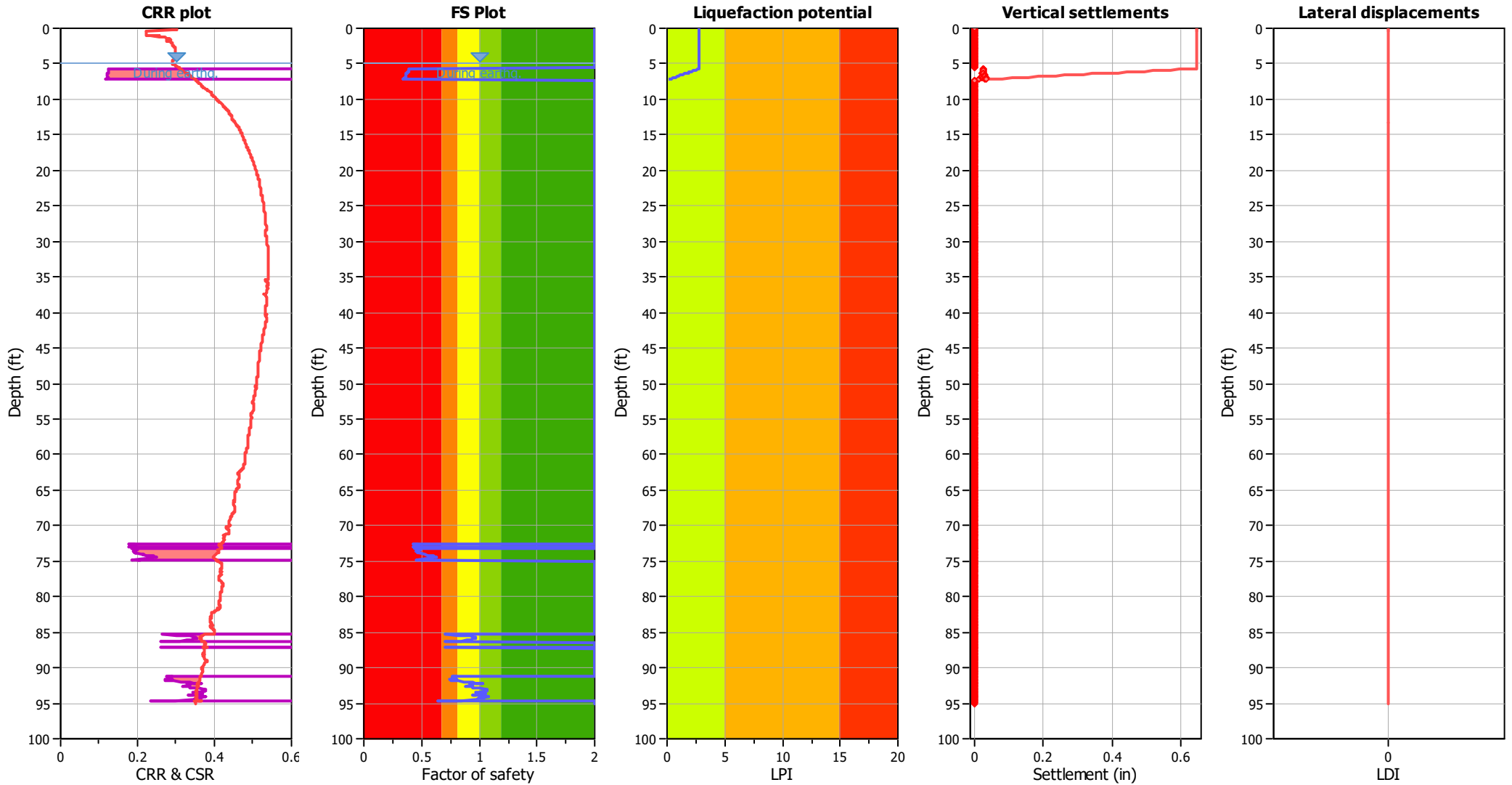
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

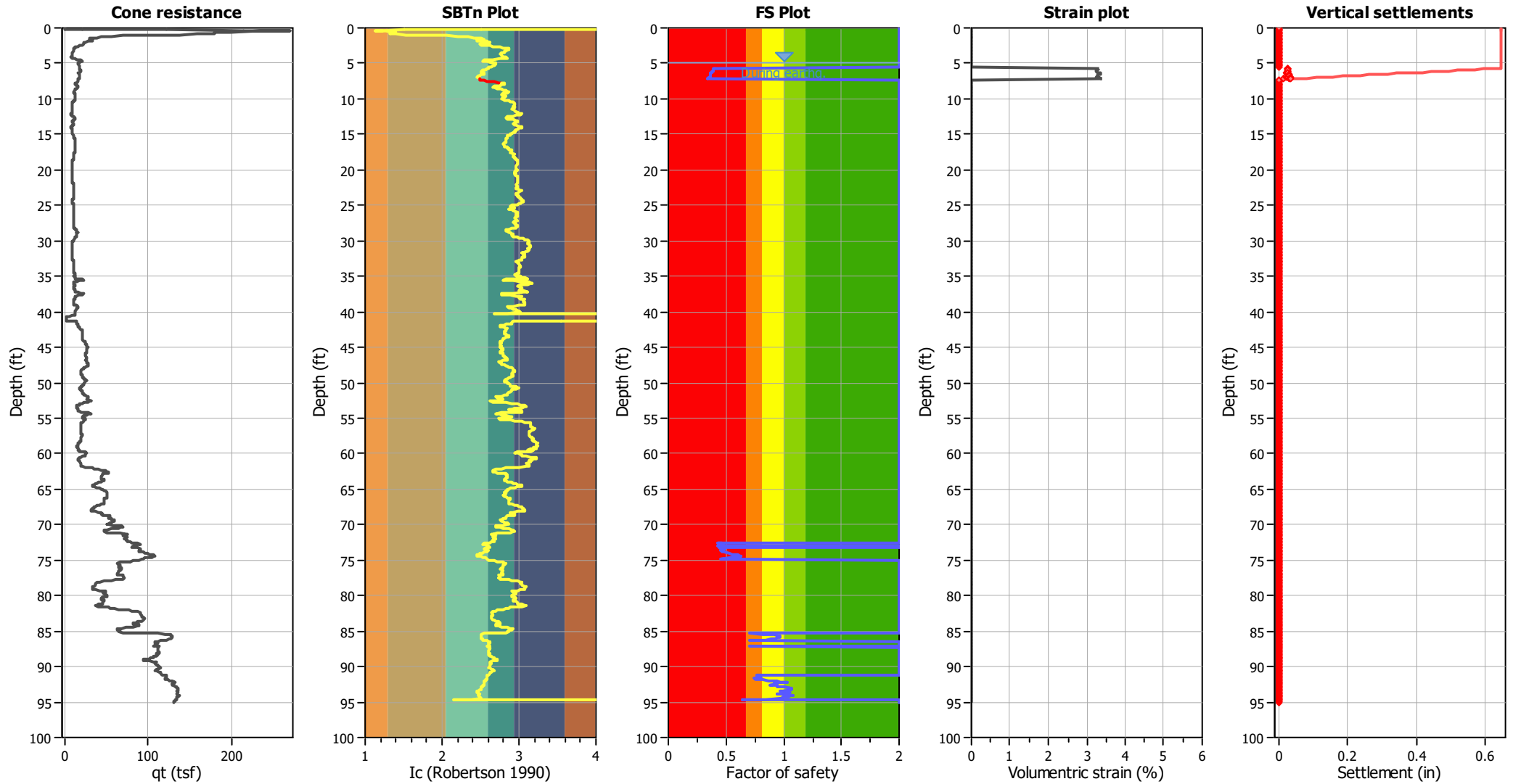
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- q_c: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.01	26.46	2.00	0.00	0.92	0.00	5.07	26.40	2.00	0.00	0.91	0.00
5.13	26.69	2.00	0.00	0.91	0.00	5.19	26.98	2.00	0.00	0.91	0.00
5.25	27.41	2.00	0.00	0.91	0.00	5.32	27.70	2.00	0.00	0.91	0.00
5.38	27.84	2.00	0.00	0.91	0.00	5.45	27.84	2.00	0.00	0.91	0.00
5.54	27.84	2.00	0.00	0.91	0.00	5.61	28.57	2.00	0.00	0.90	0.00
5.67	87.65	0.40	3.32	0.90	0.03	5.73	87.70	0.40	3.31	0.90	0.02
5.80	87.54	0.39	3.31	0.90	0.03	5.86	87.87	0.39	3.30	0.90	0.03
5.93	88.52	0.39	3.27	0.90	0.02	5.99	88.59	0.39	3.26	0.90	0.03
6.06	88.49	0.39	3.26	0.90	0.03	6.12	88.68	0.39	3.25	0.90	0.03
6.18	88.29	0.38	3.26	0.90	0.02	6.25	87.36	0.38	3.29	0.89	0.03
6.31	86.17	0.37	3.33	0.89	0.02	6.38	84.91	0.37	3.38	0.89	0.03
6.44	85.03	0.36	3.37	0.89	0.02	6.50	84.96	0.36	3.36	0.89	0.03
6.58	85.67	0.36	3.33	0.89	0.03	6.64	86.42	0.36	3.30	0.89	0.03
6.72	86.58	0.36	3.29	0.89	0.03	6.77	86.66	0.36	3.28	0.89	0.02
6.84	86.82	0.36	3.27	0.88	0.03	6.91	87.20	0.36	3.25	0.88	0.03
6.96	86.98	0.36	3.26	0.88	0.02	7.04	85.21	0.35	3.32	0.88	0.03
7.13	83.63	0.34	3.38	0.88	0.03	7.16	83.20	0.34	3.39	0.88	0.01
7.24	82.92	0.34	3.40	0.88	0.03	7.32	82.87	2.00	0.00	0.88	0.00
7.36	83.16	2.00	0.00	0.88	0.00	7.43	83.10	2.00	0.00	0.87	0.00
7.51	83.54	2.00	0.00	0.87	0.00	7.55	24.99	2.00	0.00	0.87	0.00
7.63	24.44	2.00	0.00	0.87	0.00	7.68	23.04	2.00	0.00	0.87	0.00
7.77	20.82	2.00	0.00	0.87	0.00	7.83	20.21	2.00	0.00	0.87	0.00
7.88	20.26	2.00	0.00	0.87	0.00	7.96	20.81	2.00	0.00	0.87	0.00
8.02	21.12	2.00	0.00	0.86	0.00	8.09	22.18	2.00	0.00	0.86	0.00
8.15	23.37	2.00	0.00	0.86	0.00	8.23	23.52	2.00	0.00	0.86	0.00
8.27	23.60	2.00	0.00	0.86	0.00	8.34	23.87	2.00	0.00	0.86	0.00
8.42	23.13	2.00	0.00	0.86	0.00	8.50	21.77	2.00	0.00	0.86	0.00
8.54	20.83	2.00	0.00	0.86	0.00	8.62	19.23	2.00	0.00	0.85	0.00
8.69	18.77	2.00	0.00	0.85	0.00	8.73	18.48	2.00	0.00	0.85	0.00
8.80	18.01	2.00	0.00	0.85	0.00	8.88	17.17	2.00	0.00	0.85	0.00
8.96	16.48	2.00	0.00	0.85	0.00	8.99	16.19	2.00	0.00	0.85	0.00
9.07	15.62	2.00	0.00	0.85	0.00	9.15	15.56	2.00	0.00	0.85	0.00
9.22	16.48	2.00	0.00	0.84	0.00	9.27	17.05	2.00	0.00	0.84	0.00
9.34	18.21	2.00	0.00	0.84	0.00	9.42	18.49	2.00	0.00	0.84	0.00
9.49	18.06	2.00	0.00	0.84	0.00	9.53	17.65	2.00	0.00	0.84	0.00
9.60	16.85	2.00	0.00	0.84	0.00	9.65	16.45	2.00	0.00	0.84	0.00
9.72	16.38	2.00	0.00	0.84	0.00	9.80	16.31	2.00	0.00	0.83	0.00
9.91	16.58	2.00	0.00	0.83	0.00	9.95	16.78	2.00	0.00	0.83	0.00
9.98	16.98	2.00	0.00	0.83	0.00	10.07	16.91	2.00	0.00	0.83	0.00
10.14	16.02	2.00	0.00	0.83	0.00	10.18	15.63	2.00	0.00	0.83	0.00
10.26	14.86	2.00	0.00	0.83	0.00	10.33	14.22	2.00	0.00	0.82	0.00
10.37	13.96	2.00	0.00	0.82	0.00	10.45	13.32	2.00	0.00	0.82	0.00
10.52	12.81	2.00	0.00	0.82	0.00	10.60	12.40	2.00	0.00	0.82	0.00
10.64	12.26	2.00	0.00	0.82	0.00	10.71	12.22	2.00	0.00	0.82	0.00
10.79	12.17	2.00	0.00	0.82	0.00	10.83	12.14	2.00	0.00	0.82	0.00
10.90	12.22	2.00	0.00	0.82	0.00	10.99	12.17	2.00	0.00	0.81	0.00
11.06	12.12	2.00	0.00	0.81	0.00	11.09	11.99	2.00	0.00	0.81	0.00
11.17	11.59	2.00	0.00	0.81	0.00	11.25	11.21	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.34	11.05	2.00	0.00	0.81	0.00	11.37	11.04	2.00	0.00	0.81	0.00
11.44	11.00	2.00	0.00	0.81	0.00	11.52	10.96	2.00	0.00	0.80	0.00
11.59	10.92	2.00	0.00	0.80	0.00	11.65	10.89	2.00	0.00	0.80	0.00
11.68	10.99	2.00	0.00	0.80	0.00	11.76	10.95	2.00	0.00	0.80	0.00
11.83	11.02	2.00	0.00	0.80	0.00	11.89	10.88	2.00	0.00	0.80	0.00
11.97	10.29	2.00	0.00	0.80	0.00	12.04	9.93	2.00	0.00	0.80	0.00
12.08	9.80	2.00	0.00	0.80	0.00	12.14	9.78	2.00	0.00	0.79	0.00
12.23	9.74	2.00	0.00	0.79	0.00	12.30	9.92	2.00	0.00	0.79	0.00
12.36	10.65	2.00	0.00	0.79	0.00	12.46	12.01	2.00	0.00	0.79	0.00
12.49	12.43	2.00	0.00	0.79	0.00	12.56	13.77	2.00	0.00	0.79	0.00
12.60	14.17	2.00	0.00	0.79	0.00	12.68	14.54	2.00	0.00	0.79	0.00
12.76	14.39	2.00	0.00	0.78	0.00	12.84	14.13	2.00	0.00	0.78	0.00
12.88	13.89	2.00	0.00	0.78	0.00	12.95	13.01	2.00	0.00	0.78	0.00
13.03	12.44	2.00	0.00	0.78	0.00	13.07	12.11	2.00	0.00	0.78	0.00
13.14	11.45	2.00	0.00	0.78	0.00	13.22	11.41	2.00	0.00	0.78	0.00
13.26	11.39	2.00	0.00	0.78	0.00	13.33	11.36	2.00	0.00	0.77	0.00
13.42	11.73	2.00	0.00	0.77	0.00	13.48	12.01	2.00	0.00	0.77	0.00
13.53	11.99	2.00	0.00	0.77	0.00	13.60	11.85	2.00	0.00	0.77	0.00
13.68	11.61	2.00	0.00	0.77	0.00	13.76	11.26	2.00	0.00	0.77	0.00
13.80	10.84	2.00	0.00	0.77	0.00	13.87	10.09	2.00	0.00	0.76	0.00
13.92	9.77	2.00	0.00	0.76	0.00	13.99	9.13	2.00	0.00	0.76	0.00
14.07	8.60	2.00	0.00	0.76	0.00	14.12	9.24	2.00	0.00	0.76	0.00
14.19	9.36	2.00	0.00	0.76	0.00	14.26	9.84	2.00	0.00	0.76	0.00
14.33	10.22	2.00	0.00	0.76	0.00	14.41	10.39	2.00	0.00	0.76	0.00
14.45	10.47	2.00	0.00	0.76	0.00	14.53	10.34	2.00	0.00	0.75	0.00
14.58	10.32	2.00	0.00	0.75	0.00	14.66	10.10	2.00	0.00	0.75	0.00
14.71	10.08	2.00	0.00	0.75	0.00	14.78	10.05	2.00	0.00	0.75	0.00
14.87	10.31	2.00	0.00	0.75	0.00	14.91	10.49	2.00	0.00	0.75	0.00
14.97	10.57	2.00	0.00	0.75	0.00	15.04	10.84	2.00	0.00	0.75	0.00
15.13	11.28	2.00	0.00	0.74	0.00	15.17	11.46	2.00	0.00	0.74	0.00
15.26	11.81	2.00	0.00	0.74	0.00	15.29	11.89	2.00	0.00	0.74	0.00
15.39	12.04	2.00	0.00	0.74	0.00	15.43	12.12	2.00	0.00	0.74	0.00
15.52	12.37	2.00	0.00	0.74	0.00	15.56	12.54	2.00	0.00	0.74	0.00
15.64	12.89	2.00	0.00	0.73	0.00	15.70	13.05	2.00	0.00	0.73	0.00
15.77	13.11	2.00	0.00	0.73	0.00	15.82	13.09	2.00	0.00	0.73	0.00
15.90	13.15	2.00	0.00	0.73	0.00	15.96	13.12	2.00	0.00	0.73	0.00
16.03	13.28	2.00	0.00	0.73	0.00	16.12	13.43	2.00	0.00	0.73	0.00
16.16	13.51	2.00	0.00	0.73	0.00	16.25	13.47	2.00	0.00	0.72	0.00
16.29	13.45	2.00	0.00	0.72	0.00	16.37	13.50	2.00	0.00	0.72	0.00
16.41	13.58	2.00	0.00	0.72	0.00	16.50	13.54	2.00	0.00	0.72	0.00
16.56	13.51	2.00	0.00	0.72	0.00	16.63	13.48	2.00	0.00	0.72	0.00
16.68	13.46	2.00	0.00	0.72	0.00	16.76	13.42	2.00	0.00	0.72	0.00
16.80	13.40	2.00	0.00	0.72	0.00	16.89	13.36	2.00	0.00	0.71	0.00
16.94	13.34	2.00	0.00	0.71	0.00	17.02	13.31	2.00	0.00	0.71	0.00
17.11	13.11	2.00	0.00	0.71	0.00	17.15	12.92	2.00	0.00	0.71	0.00
17.20	12.72	2.00	0.00	0.71	0.00	17.28	12.25	2.00	0.00	0.71	0.00
17.33	12.06	2.00	0.00	0.71	0.00	17.40	12.05	2.00	0.00	0.71	0.00
17.47	12.09	2.00	0.00	0.70	0.00	17.55	12.12	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.59	12.02	2.00	0.00	0.70	0.00	17.69	11.73	2.00	0.00	0.70	0.00
17.76	11.27	2.00	0.00	0.70	0.00	17.81	11.08	2.00	0.00	0.70	0.00
17.89	11.25	2.00	0.00	0.70	0.00	17.94	11.15	2.00	0.00	0.70	0.00
18.02	11.23	2.00	0.00	0.69	0.00	18.06	11.32	2.00	0.00	0.69	0.00
18.15	11.21	2.00	0.00	0.69	0.00	18.19	11.21	2.00	0.00	0.69	0.00
18.27	10.84	2.00	0.00	0.69	0.00	18.32	10.83	2.00	0.00	0.69	0.00
18.40	10.55	2.00	0.00	0.69	0.00	18.45	10.45	2.00	0.00	0.69	0.00
18.52	10.26	2.00	0.00	0.69	0.00	18.61	10.07	2.00	0.00	0.68	0.00
18.66	9.98	2.00	0.00	0.68	0.00	18.70	9.88	2.00	0.00	0.68	0.00
18.78	9.78	2.00	0.00	0.68	0.00	18.87	9.51	2.00	0.00	0.68	0.00
18.91	9.50	2.00	0.00	0.68	0.00	18.99	9.40	2.00	0.00	0.68	0.00
19.03	9.49	2.00	0.00	0.68	0.00	19.12	9.39	2.00	0.00	0.68	0.00
19.16	9.47	2.00	0.00	0.68	0.00	19.25	9.46	2.00	0.00	0.67	0.00
19.33	9.45	2.00	0.00	0.67	0.00	19.37	9.54	2.00	0.00	0.67	0.00
19.45	9.26	2.00	0.00	0.67	0.00	19.50	9.08	2.00	0.00	0.67	0.00
19.59	8.79	2.00	0.00	0.67	0.00	19.63	8.79	2.00	0.00	0.67	0.00
19.72	8.78	2.00	0.00	0.67	0.00	19.76	8.78	2.00	0.00	0.67	0.00
19.84	8.86	2.00	0.00	0.66	0.00	19.89	8.95	2.00	0.00	0.66	0.00
19.97	9.12	2.00	0.00	0.66	0.00	20.05	9.11	2.00	0.00	0.66	0.00
20.11	9.10	2.00	0.00	0.66	0.00	20.18	9.09	2.00	0.00	0.66	0.00
20.22	9.18	2.00	0.00	0.66	0.00	20.30	9.17	2.00	0.00	0.66	0.00
20.36	9.08	2.00	0.00	0.65	0.00	20.44	9.07	2.00	0.00	0.65	0.00
20.48	9.06	2.00	0.00	0.65	0.00	20.57	9.32	2.00	0.00	0.65	0.00
20.64	9.40	2.00	0.00	0.65	0.00	20.69	9.30	2.00	0.00	0.65	0.00
20.77	9.03	2.00	0.00	0.65	0.00	20.82	9.03	2.00	0.00	0.65	0.00
20.89	8.85	2.00	0.00	0.65	0.00	20.94	8.84	2.00	0.00	0.65	0.00
21.02	8.74	2.00	0.00	0.64	0.00	21.07	8.73	2.00	0.00	0.64	0.00
21.14	8.64	2.00	0.00	0.64	0.00	21.20	8.63	2.00	0.00	0.64	0.00
21.27	8.63	2.00	0.00	0.64	0.00	21.37	8.62	2.00	0.00	0.64	0.00
21.41	8.70	2.00	0.00	0.64	0.00	21.50	8.96	2.00	0.00	0.64	0.00
21.53	8.96	2.00	0.00	0.64	0.00	21.62	9.03	2.00	0.00	0.63	0.00
21.65	9.03	2.00	0.00	0.63	0.00	21.75	9.19	2.00	0.00	0.63	0.00
21.79	9.27	2.00	0.00	0.63	0.00	21.88	9.61	2.00	0.00	0.63	0.00
21.92	9.61	2.00	0.00	0.63	0.00	22.01	9.77	2.00	0.00	0.63	0.00
22.09	9.93	2.00	0.00	0.63	0.00	22.13	9.93	2.00	0.00	0.62	0.00
22.22	10.00	2.00	0.00	0.62	0.00	22.26	10.08	2.00	0.00	0.62	0.00
22.34	10.07	2.00	0.00	0.62	0.00	22.39	10.15	2.00	0.00	0.62	0.00
22.47	10.23	2.00	0.00	0.62	0.00	22.51	10.31	2.00	0.00	0.62	0.00
22.60	10.47	2.00	0.00	0.62	0.00	22.64	10.46	2.00	0.00	0.62	0.00
22.73	10.37	2.00	0.00	0.61	0.00	22.77	10.36	2.00	0.00	0.61	0.00
22.86	10.35	2.00	0.00	0.61	0.00	22.93	9.15	2.00	0.00	0.61	0.00
23.00	10.33	2.00	0.00	0.61	0.00	23.03	9.99	2.00	0.00	0.61	0.00
23.12	10.32	2.00	0.00	0.61	0.00	23.18	10.31	2.00	0.00	0.61	0.00
23.25	10.30	2.00	0.00	0.61	0.00	23.34	10.21	2.00	0.00	0.60	0.00
23.38	10.12	2.00	0.00	0.60	0.00	23.47	10.11	2.00	0.00	0.60	0.00
23.50	10.02	2.00	0.00	0.60	0.00	23.59	9.84	2.00	0.00	0.60	0.00
23.63	9.83	2.00	0.00	0.60	0.00	23.70	9.78	2.00	0.00	0.60	0.00
23.76	9.57	2.00	0.00	0.60	0.00	23.83	9.73	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.90	9.55	2.00	0.00	0.59	0.00	23.98	9.54	2.00	0.00	0.59	0.00
24.02	9.45	2.00	0.00	0.59	0.00	24.08	9.36	2.00	0.00	0.59	0.00
24.15	9.27	2.00	0.00	0.59	0.00	24.23	9.26	2.00	0.00	0.59	0.00
24.30	9.09	2.00	0.00	0.59	0.00	24.37	9.08	2.00	0.00	0.59	0.00
24.44	8.99	2.00	0.00	0.59	0.00	24.48	8.99	2.00	0.00	0.59	0.00
24.54	8.98	2.00	0.00	0.58	0.00	24.62	8.97	2.00	0.00	0.58	0.00
24.69	9.13	2.00	0.00	0.58	0.00	24.76	9.12	2.00	0.00	0.58	0.00
24.83	9.20	2.00	0.00	0.58	0.00	24.87	9.36	2.00	0.00	0.58	0.00
24.94	9.94	2.00	0.00	0.58	0.00	25.01	10.60	2.00	0.00	0.58	0.00
25.09	10.92	2.00	0.00	0.57	0.00	25.17	10.50	2.00	0.00	0.57	0.00
25.20	10.33	2.00	0.00	0.57	0.00	25.28	9.90	2.00	0.00	0.57	0.00
25.35	9.73	2.00	0.00	0.57	0.00	25.42	9.56	2.00	0.00	0.57	0.00
25.46	9.63	2.00	0.00	0.57	0.00	25.55	9.63	2.00	0.00	0.57	0.00
25.61	9.45	2.00	0.00	0.57	0.00	25.69	9.36	2.00	0.00	0.56	0.00
25.73	9.28	2.00	0.00	0.56	0.00	25.81	9.23	2.00	0.00	0.56	0.00
25.87	9.27	2.00	0.00	0.56	0.00	25.94	9.26	2.00	0.00	0.56	0.00
26.00	9.34	2.00	0.00	0.56	0.00	26.06	9.49	2.00	0.00	0.56	0.00
26.13	9.73	2.00	0.00	0.56	0.00	26.25	10.05	2.00	0.00	0.56	0.00
26.28	10.05	2.00	0.00	0.55	0.00	26.32	10.04	2.00	0.00	0.55	0.00
26.38	9.95	2.00	0.00	0.55	0.00	26.45	9.95	2.00	0.00	0.55	0.00
26.54	9.44	2.00	0.00	0.55	0.00	26.59	9.77	2.00	0.00	0.55	0.00
26.66	10.17	2.00	0.00	0.55	0.00	26.71	10.25	2.00	0.00	0.55	0.00
26.78	10.08	2.00	0.00	0.55	0.00	26.85	9.74	2.00	0.00	0.54	0.00
26.92	9.57	2.00	0.00	0.54	0.00	27.00	9.56	2.00	0.00	0.54	0.00
27.04	9.64	2.00	0.00	0.54	0.00	27.10	9.55	2.00	0.00	0.54	0.00
27.18	9.54	2.00	0.00	0.54	0.00	27.25	9.94	2.00	0.00	0.54	0.00
27.32	10.18	2.00	0.00	0.54	0.00	27.39	9.85	2.00	0.00	0.54	0.00
27.44	9.68	2.00	0.00	0.54	0.00	27.51	9.51	2.00	0.00	0.53	0.00
27.58	9.59	2.00	0.00	0.53	0.00	27.66	10.06	2.00	0.00	0.53	0.00
27.70	9.90	2.00	0.00	0.53	0.00	27.77	9.49	2.00	0.00	0.53	0.00
27.84	9.15	2.00	0.00	0.53	0.00	27.92	9.15	2.00	0.00	0.53	0.00
27.96	9.22	2.00	0.00	0.53	0.00	28.03	9.30	2.00	0.00	0.52	0.00
28.10	9.37	2.00	0.00	0.52	0.00	28.19	9.69	2.00	0.00	0.52	0.00
28.22	9.93	2.00	0.00	0.52	0.00	28.29	10.73	2.00	0.00	0.52	0.00
28.36	11.45	2.00	0.00	0.52	0.00	28.44	12.17	2.00	0.00	0.52	0.00
28.51	12.81	2.00	0.00	0.52	0.00	28.55	12.96	2.00	0.00	0.52	0.00
28.62	13.27	2.00	0.00	0.51	0.00	28.70	12.94	2.00	0.00	0.51	0.00
28.75	13.50	2.00	0.00	0.51	0.00	28.82	13.65	2.00	0.00	0.51	0.00
28.91	13.47	2.00	0.00	0.51	0.00	28.98	13.22	2.00	0.00	0.51	0.00
29.01	13.06	2.00	0.00	0.51	0.00	29.08	12.89	2.00	0.00	0.51	0.00
29.16	12.56	2.00	0.00	0.51	0.00	29.23	12.14	2.00	0.00	0.50	0.00
29.27	12.14	2.00	0.00	0.50	0.00	29.35	12.05	2.00	0.00	0.50	0.00
29.42	11.88	2.00	0.00	0.50	0.00	29.50	11.47	2.00	0.00	0.50	0.00
29.53	11.31	2.00	0.00	0.50	0.00	29.61	10.73	2.00	0.00	0.50	0.00
29.69	10.72	2.00	0.00	0.50	0.00	29.73	10.48	2.00	0.00	0.50	0.00
29.79	9.91	2.00	0.00	0.50	0.00	29.86	9.51	2.00	0.00	0.49	0.00
29.94	9.03	2.00	0.00	0.49	0.00	30.02	8.78	2.00	0.00	0.49	0.00
30.05	8.62	2.00	0.00	0.49	0.00	30.14	8.45	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.21	8.37	2.00	0.00	0.49	0.00	30.28	8.20	2.00	0.00	0.49	0.00
30.36	8.20	2.00	0.00	0.49	0.00	30.40	8.12	2.00	0.00	0.48	0.00
30.47	8.11	2.00	0.00	0.48	0.00	30.56	7.86	2.00	0.00	0.48	0.00
30.58	7.78	2.00	0.00	0.48	0.00	30.66	7.77	2.00	0.00	0.48	0.00
30.75	7.76	2.00	0.00	0.48	0.00	30.82	7.76	2.00	0.00	0.48	0.00
30.85	7.83	2.00	0.00	0.48	0.00	30.93	7.92	2.00	0.00	0.48	0.00
31.00	8.15	2.00	0.00	0.47	0.00	31.04	8.14	2.00	0.00	0.47	0.00
31.12	8.14	2.00	0.00	0.47	0.00	31.19	8.05	2.00	0.00	0.47	0.00
31.26	7.97	2.00	0.00	0.47	0.00	31.31	7.89	2.00	0.00	0.47	0.00
31.38	7.79	2.00	0.00	0.47	0.00	31.46	7.63	2.00	0.00	0.47	0.00
31.53	7.55	2.00	0.00	0.47	0.00	31.60	7.47	2.00	0.00	0.46	0.00
31.65	7.46	2.00	0.00	0.46	0.00	31.72	7.38	2.00	0.00	0.46	0.00
31.79	7.38	2.00	0.00	0.46	0.00	31.84	7.37	2.00	0.00	0.46	0.00
31.90	7.06	2.00	0.00	0.46	0.00	31.96	7.44	2.00	0.00	0.46	0.00
32.06	7.51	2.00	0.00	0.46	0.00	32.09	7.51	2.00	0.00	0.46	0.00
32.17	7.51	2.00	0.00	0.45	0.00	32.23	7.50	2.00	0.00	0.45	0.00
32.31	7.57	2.00	0.00	0.45	0.00	32.37	7.65	2.00	0.00	0.45	0.00
32.43	7.72	2.00	0.00	0.45	0.00	32.50	7.80	2.00	0.00	0.45	0.00
32.57	8.11	2.00	0.00	0.45	0.00	32.63	8.26	2.00	0.00	0.45	0.00
32.70	8.48	2.00	0.00	0.45	0.00	32.76	8.94	2.00	0.00	0.44	0.00
32.83	9.09	2.00	0.00	0.44	0.00	32.89	9.16	2.00	0.00	0.44	0.00
32.95	9.24	2.00	0.00	0.44	0.00	33.02	9.08	2.00	0.00	0.44	0.00
33.09	8.84	2.00	0.00	0.44	0.00	33.16	8.68	2.00	0.00	0.44	0.00
33.21	8.60	2.00	0.00	0.44	0.00	33.30	8.59	2.00	0.00	0.44	0.00
33.34	8.59	2.00	0.00	0.44	0.00	33.40	8.58	2.00	0.00	0.43	0.00
33.47	8.58	2.00	0.00	0.43	0.00	33.54	8.57	2.00	0.00	0.43	0.00
33.62	8.57	2.00	0.00	0.43	0.00	33.69	8.64	2.00	0.00	0.43	0.00
33.76	8.79	2.00	0.00	0.43	0.00	33.81	8.86	2.00	0.00	0.43	0.00
33.88	9.01	2.00	0.00	0.43	0.00	33.94	9.15	2.00	0.00	0.42	0.00
34.03	9.38	2.00	0.00	0.42	0.00	34.06	9.45	2.00	0.00	0.42	0.00
34.14	9.52	2.00	0.00	0.42	0.00	34.21	9.59	2.00	0.00	0.42	0.00
34.28	9.58	2.00	0.00	0.42	0.00	34.33	9.66	2.00	0.00	0.42	0.00
34.39	9.73	2.00	0.00	0.42	0.00	34.47	9.87	2.00	0.00	0.42	0.00
34.55	9.86	2.00	0.00	0.41	0.00	34.58	9.86	2.00	0.00	0.41	0.00
34.65	9.93	2.00	0.00	0.41	0.00	34.74	10.00	2.00	0.00	0.41	0.00
34.80	9.99	2.00	0.00	0.41	0.00	34.89	9.76	2.00	0.00	0.41	0.00
34.92	9.75	2.00	0.00	0.41	0.00	35.00	9.82	2.00	0.00	0.41	0.00
35.06	9.82	2.00	0.00	0.41	0.00	35.13	9.81	2.00	0.00	0.40	0.00
35.20	9.88	2.00	0.00	0.40	0.00	35.28	10.10	2.00	0.00	0.40	0.00
35.32	10.56	2.00	0.00	0.40	0.00	35.39	14.74	2.00	0.00	0.40	0.00
35.47	19.38	2.00	0.00	0.40	0.00	35.51	19.84	2.00	0.00	0.40	0.00
35.58	17.53	2.00	0.00	0.40	0.00	35.65	14.39	2.00	0.00	0.40	0.00
35.71	11.57	2.00	0.00	0.39	0.00	35.77	10.51	2.00	0.00	0.39	0.00
35.84	9.59	2.00	0.00	0.39	0.00	35.90	9.05	2.00	0.00	0.39	0.00
35.97	8.82	2.00	0.00	0.39	0.00	36.03	8.74	2.00	0.00	0.39	0.00
36.10	9.18	2.00	0.00	0.39	0.00	36.17	9.70	2.00	0.00	0.39	0.00
36.23	10.15	2.00	0.00	0.39	0.00	36.30	10.29	2.00	0.00	0.38	0.00
36.37	9.99	2.00	0.00	0.38	0.00	36.45	9.45	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.51	8.93	2.00	0.00	0.38	0.00	36.57	8.92	2.00	0.00	0.38	0.00
36.64	8.91	2.00	0.00	0.38	0.00	36.71	9.21	2.00	0.00	0.38	0.00
36.78	9.35	2.00	0.00	0.38	0.00	36.85	9.72	2.00	0.00	0.38	0.00
36.92	10.09	2.00	0.00	0.37	0.00	36.94	10.23	2.00	0.00	0.37	0.00
37.01	10.23	2.00	0.00	0.37	0.00	37.08	10.22	2.00	0.00	0.37	0.00
37.16	10.21	2.00	0.00	0.37	0.00	37.22	10.20	2.00	0.00	0.37	0.00
37.29	11.85	2.00	0.00	0.37	0.00	37.36	16.26	2.00	0.00	0.37	0.00
37.43	19.94	2.00	0.00	0.37	0.00	37.47	20.08	2.00	0.00	0.36	0.00
37.54	17.95	2.00	0.00	0.36	0.00	37.61	15.23	2.00	0.00	0.36	0.00
37.68	13.59	2.00	0.00	0.36	0.00	37.75	11.79	2.00	0.00	0.36	0.00
37.82	10.37	2.00	0.00	0.36	0.00	37.89	9.62	2.00	0.00	0.36	0.00
37.95	9.83	2.00	0.00	0.36	0.00	38.01	10.12	2.00	0.00	0.36	0.00
38.08	10.04	2.00	0.00	0.35	0.00	38.15	9.74	2.00	0.00	0.35	0.00
38.20	9.52	2.00	0.00	0.35	0.00	38.27	9.22	2.00	0.00	0.35	0.00
38.34	9.21	2.00	0.00	0.35	0.00	38.41	9.20	2.00	0.00	0.35	0.00
38.48	9.27	2.00	0.00	0.35	0.00	38.52	9.27	2.00	0.00	0.35	0.00
38.60	8.89	2.00	0.00	0.35	0.00	38.67	8.74	2.00	0.00	0.34	0.00
38.75	8.74	2.00	0.00	0.34	0.00	38.78	8.73	2.00	0.00	0.34	0.00
38.85	8.73	2.00	0.00	0.34	0.00	38.93	8.87	2.00	0.00	0.34	0.00
39.00	9.30	2.00	0.00	0.34	0.00	39.07	10.10	2.00	0.00	0.34	0.00
39.11	10.91	2.00	0.00	0.34	0.00	39.19	12.52	2.00	0.00	0.34	0.00
39.26	13.54	2.00	0.00	0.33	0.00	39.33	13.68	2.00	0.00	0.33	0.00
39.41	12.85	2.00	0.00	0.33	0.00	39.44	12.49	2.00	0.00	0.33	0.00
39.52	12.11	2.00	0.00	0.33	0.00	39.58	11.81	2.00	0.00	0.33	0.00
39.67	11.58	2.00	0.00	0.33	0.00	39.71	11.29	2.00	0.00	0.33	0.00
39.77	10.85	2.00	0.00	0.33	0.00	39.85	10.55	2.00	0.00	0.32	0.00
39.92	10.18	2.00	0.00	0.32	0.00	40.00	9.94	2.00	0.00	0.32	0.00
40.03	9.87	2.00	0.00	0.32	0.00	40.11	9.86	2.00	0.00	0.32	0.00
40.18	9.85	2.00	0.00	0.32	0.00	40.25	9.84	2.00	0.00	0.32	0.00
40.33	9.90	2.00	0.00	0.32	0.00	40.37	9.84	2.00	0.00	0.32	0.00
40.44	9.98	2.00	0.00	0.31	0.00	40.51	10.21	2.00	0.00	0.31	0.00
40.57	9.47	2.00	0.00	0.31	0.00	40.63	2.13	2.00	0.00	0.31	0.00
40.71	2.21	2.00	0.00	0.31	0.00	40.77	2.06	2.00	0.00	0.31	0.00
40.85	2.06	2.00	0.00	0.31	0.00	40.89	2.06	2.00	0.00	0.31	0.00
40.96	2.06	2.00	0.00	0.31	0.00	41.03	2.13	2.00	0.00	0.30	0.00
41.11	2.13	2.00	0.00	0.30	0.00	41.15	2.13	2.00	0.00	0.30	0.00
41.22	2.13	2.00	0.00	0.30	0.00	41.28	2.20	2.00	0.00	0.30	0.00
41.34	10.44	2.00	0.00	0.30	0.00	41.41	11.23	2.00	0.00	0.30	0.00
41.50	11.22	2.00	0.00	0.30	0.00	41.57	11.28	2.00	0.00	0.30	0.00
41.65	11.56	2.00	0.00	0.29	0.00	41.69	11.63	2.00	0.00	0.29	0.00
41.76	11.91	2.00	0.00	0.29	0.00	41.82	12.26	2.00	0.00	0.29	0.00
41.89	12.91	2.00	0.00	0.29	0.00	41.93	12.90	2.00	0.00	0.29	0.00
42.02	12.74	2.00	0.00	0.29	0.00	42.10	13.10	2.00	0.00	0.29	0.00
42.14	13.38	2.00	0.00	0.29	0.00	42.23	13.66	2.00	0.00	0.28	0.00
42.27	13.95	2.00	0.00	0.28	0.00	42.33	13.37	2.00	0.00	0.28	0.00
42.39	14.51	2.00	0.00	0.28	0.00	42.46	15.51	2.00	0.00	0.28	0.00
42.54	16.02	2.00	0.00	0.28	0.00	42.62	16.15	2.00	0.00	0.28	0.00
42.68	16.36	2.00	0.00	0.28	0.00	42.72	16.35	2.00	0.00	0.28	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.80	16.48	2.00	0.00	0.27	0.00	42.87	16.61	2.00	0.00	0.27	0.00
42.94	16.75	2.00	0.00	0.27	0.00	43.02	16.66	2.00	0.00	0.27	0.00
43.06	16.66	2.00	0.00	0.27	0.00	43.13	16.79	2.00	0.00	0.27	0.00
43.20	16.78	2.00	0.00	0.27	0.00	43.28	16.70	2.00	0.00	0.27	0.00
43.32	16.69	2.00	0.00	0.27	0.00	43.39	16.32	2.00	0.00	0.26	0.00
43.46	16.03	2.00	0.00	0.26	0.00	43.54	16.01	2.00	0.00	0.26	0.00
43.57	16.01	2.00	0.00	0.26	0.00	43.64	16.28	2.00	0.00	0.26	0.00
43.72	16.62	2.00	0.00	0.26	0.00	43.80	16.39	2.00	0.00	0.26	0.00
43.87	16.34	2.00	0.00	0.26	0.00	43.91	16.34	2.00	0.00	0.26	0.00
43.98	16.30	2.00	0.00	0.25	0.00	44.05	16.93	2.00	0.00	0.25	0.00
44.12	17.84	2.00	0.00	0.25	0.00	44.16	18.26	2.00	0.00	0.25	0.00
44.24	18.83	2.00	0.00	0.25	0.00	44.31	19.11	2.00	0.00	0.25	0.00
44.39	19.24	2.00	0.00	0.25	0.00	44.43	19.37	2.00	0.00	0.25	0.00
44.50	19.79	2.00	0.00	0.25	0.00	44.57	20.35	2.00	0.00	0.24	0.00
44.64	20.84	2.00	0.00	0.24	0.00	44.72	21.11	2.00	0.00	0.24	0.00
44.75	21.18	2.00	0.00	0.24	0.00	44.82	20.02	2.00	0.00	0.24	0.00
44.90	21.44	2.00	0.00	0.24	0.00	44.95	21.50	2.00	0.00	0.24	0.00
45.03	21.63	2.00	0.00	0.24	0.00	45.09	21.33	2.00	0.00	0.24	0.00
45.15	20.96	2.00	0.00	0.23	0.00	45.23	20.66	2.00	0.00	0.23	0.00
45.28	20.29	2.00	0.00	0.23	0.00	45.34	20.13	2.00	0.00	0.23	0.00
45.42	20.12	2.00	0.00	0.23	0.00	45.49	20.10	2.00	0.00	0.23	0.00
45.54	20.23	2.00	0.00	0.23	0.00	45.60	20.43	2.00	0.00	0.23	0.00
45.69	20.49	2.00	0.00	0.23	0.00	45.75	20.34	2.00	0.00	0.22	0.00
45.83	19.61	2.00	0.00	0.22	0.00	45.89	19.25	2.00	0.00	0.22	0.00
45.97	19.38	2.00	0.00	0.22	0.00	46.00	19.30	2.00	0.00	0.22	0.00
46.08	19.29	2.00	0.00	0.22	0.00	46.15	19.28	2.00	0.00	0.22	0.00
46.21	19.13	2.00	0.00	0.22	0.00	46.27	19.33	2.00	0.00	0.22	0.00
46.34	19.60	2.00	0.00	0.21	0.00	46.42	20.01	2.00	0.00	0.21	0.00
46.49	20.07	2.00	0.00	0.21	0.00	46.55	19.99	2.00	0.00	0.21	0.00
46.62	19.90	2.00	0.00	0.21	0.00	46.69	19.61	2.00	0.00	0.21	0.00
46.75	19.39	2.00	0.00	0.21	0.00	46.81	19.30	2.00	0.00	0.21	0.00
46.88	19.63	2.00	0.00	0.21	0.00	46.96	20.32	2.00	0.00	0.20	0.00
47.00	20.09	2.00	0.00	0.20	0.00	47.06	20.43	2.00	0.00	0.20	0.00
47.13	20.71	2.00	0.00	0.20	0.00	47.20	20.62	2.00	0.00	0.20	0.00
47.26	19.77	2.00	0.00	0.20	0.00	47.33	21.24	2.00	0.00	0.20	0.00
47.39	21.51	2.00	0.00	0.20	0.00	47.46	21.43	2.00	0.00	0.20	0.00
47.52	21.14	2.00	0.00	0.19	0.00	47.59	20.85	2.00	0.00	0.19	0.00
47.65	20.34	2.00	0.00	0.19	0.00	47.72	19.84	2.00	0.00	0.19	0.00
47.78	19.06	2.00	0.00	0.19	0.00	47.86	18.49	2.00	0.00	0.19	0.00
47.90	18.00	2.00	0.00	0.19	0.00	47.99	16.73	2.00	0.00	0.19	0.00
48.06	16.10	2.00	0.00	0.19	0.00	48.13	15.47	2.00	0.00	0.18	0.00
48.19	14.91	2.00	0.00	0.18	0.00	48.26	14.48	2.00	0.00	0.18	0.00
48.32	14.13	2.00	0.00	0.18	0.00	48.36	13.92	2.00	0.00	0.18	0.00
48.43	14.05	2.00	0.00	0.18	0.00	48.52	13.97	2.00	0.00	0.18	0.00
48.58	14.30	2.00	0.00	0.18	0.00	48.65	14.29	2.00	0.00	0.18	0.00
48.71	14.42	2.00	0.00	0.17	0.00	48.79	14.62	2.00	0.00	0.17	0.00
48.82	14.75	2.00	0.00	0.17	0.00	48.92	15.16	2.00	0.00	0.17	0.00
48.95	15.15	2.00	0.00	0.17	0.00	49.02	15.21	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.09	15.27	2.00	0.00	0.17	0.00	49.15	15.61	2.00	0.00	0.17	0.00
49.23	16.21	2.00	0.00	0.17	0.00	49.31	16.67	2.00	0.00	0.16	0.00
49.38	16.94	2.00	0.00	0.16	0.00	49.41	17.00	2.00	0.00	0.16	0.00
49.49	17.26	2.00	0.00	0.16	0.00	49.56	17.94	2.00	0.00	0.16	0.00
49.64	18.82	2.00	0.00	0.16	0.00	49.68	19.08	2.00	0.00	0.16	0.00
49.76	19.14	2.00	0.00	0.16	0.00	49.83	18.65	2.00	0.00	0.16	0.00
49.88	18.44	2.00	0.00	0.15	0.00	49.96	18.02	2.00	0.00	0.15	0.00
50.00	17.60	2.00	0.00	0.15	0.00	50.09	17.10	2.00	0.00	0.15	0.00
50.14	16.69	2.00	0.00	0.15	0.00	50.22	16.13	2.00	0.00	0.15	0.00
50.26	16.13	2.00	0.00	0.15	0.00	50.35	16.12	2.00	0.00	0.15	0.00
50.43	16.04	2.00	0.00	0.15	0.00	50.48	15.90	2.00	0.00	0.14	0.00
50.56	14.87	2.00	0.00	0.14	0.00	50.60	14.33	2.00	0.00	0.14	0.00
50.68	13.64	2.00	0.00	0.14	0.00	50.74	13.23	2.00	0.00	0.14	0.00
50.81	13.02	2.00	0.00	0.14	0.00	50.86	13.15	2.00	0.00	0.14	0.00
50.95	13.81	2.00	0.00	0.14	0.00	51.00	14.00	2.00	0.00	0.14	0.00
51.09	14.26	2.00	0.00	0.13	0.00	51.13	14.60	2.00	0.00	0.13	0.00
51.22	15.13	2.00	0.00	0.13	0.00	51.25	14.99	2.00	0.00	0.13	0.00
51.32	15.72	2.00	0.00	0.13	0.00	51.38	15.97	2.00	0.00	0.13	0.00
51.45	15.96	2.00	0.00	0.13	0.00	51.53	15.95	2.00	0.00	0.13	0.00
51.59	15.94	2.00	0.00	0.13	0.00	51.67	16.47	2.00	0.00	0.12	0.00
51.74	17.14	2.00	0.00	0.12	0.00	51.80	18.21	2.00	0.00	0.12	0.00
51.84	18.94	2.00	0.00	0.12	0.00	51.92	20.07	2.00	0.00	0.12	0.00
51.99	20.26	2.00	0.00	0.12	0.00	52.03	20.72	2.00	0.00	0.12	0.00
52.11	21.18	2.00	0.00	0.12	0.00	52.19	20.57	2.00	0.00	0.12	0.00
52.24	19.75	2.00	0.00	0.11	0.00	52.33	19.40	2.00	0.00	0.11	0.00
52.37	20.00	2.00	0.00	0.11	0.00	52.46	21.80	2.00	0.00	0.11	0.00
52.50	22.39	2.00	0.00	0.11	0.00	52.59	22.84	2.00	0.00	0.11	0.00
52.63	22.63	2.00	0.00	0.11	0.00	52.69	21.68	2.00	0.00	0.11	0.00
52.78	18.31	2.00	0.00	0.11	0.00	52.83	16.84	2.00	0.00	0.10	0.00
52.92	15.11	2.00	0.00	0.10	0.00	52.98	14.51	2.00	0.00	0.10	0.00
53.03	13.70	2.00	0.00	0.10	0.00	53.13	11.78	2.00	0.00	0.10	0.00
53.17	11.05	2.00	0.00	0.10	0.00	53.23	10.39	2.00	0.00	0.10	0.00
53.33	9.54	2.00	0.00	0.10	0.00	53.38	9.60	2.00	0.00	0.10	0.00
53.43	9.66	2.00	0.00	0.09	0.00	53.49	9.79	2.00	0.00	0.09	0.00
53.58	10.50	2.00	0.00	0.09	0.00	53.62	10.82	2.00	0.00	0.09	0.00
53.70	11.46	2.00	0.00	0.09	0.00	53.74	11.79	2.00	0.00	0.09	0.00
53.81	11.71	2.00	0.00	0.09	0.00	53.88	11.72	2.00	0.00	0.09	0.00
53.97	11.71	2.00	0.00	0.09	0.00	54.01	11.84	2.00	0.00	0.08	0.00
54.09	13.33	2.00	0.00	0.08	0.00	54.14	14.52	2.00	0.00	0.08	0.00
54.22	16.08	2.00	0.00	0.08	0.00	54.29	23.75	2.00	0.00	0.08	0.00
54.36	22.50	2.00	0.00	0.08	0.00	54.42	20.55	2.00	0.00	0.08	0.00
54.49	19.61	2.00	0.00	0.08	0.00	54.53	19.13	2.00	0.00	0.08	0.00
54.60	18.00	2.00	0.00	0.07	0.00	54.67	16.74	2.00	0.00	0.07	0.00
54.73	15.35	2.00	0.00	0.07	0.00	54.80	14.69	2.00	0.00	0.07	0.00
54.86	14.68	2.00	0.00	0.07	0.00	54.94	14.67	2.00	0.00	0.07	0.00
55.01	16.28	2.00	0.00	0.07	0.00	55.08	18.25	2.00	0.00	0.07	0.00
55.16	18.18	2.00	0.00	0.07	0.00	55.19	17.27	2.00	0.00	0.06	0.00
55.27	16.21	2.00	0.00	0.06	0.00	55.32	16.21	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.40	16.33	2.00	0.00	0.06	0.00	55.49	16.12	2.00	0.00	0.06	0.00
55.53	15.66	2.00	0.00	0.06	0.00	55.62	14.73	2.00	0.00	0.06	0.00
55.66	14.47	2.00	0.00	0.06	0.00	55.71	14.27	2.00	0.00	0.06	0.00
55.79	13.92	2.00	0.00	0.05	0.00	55.88	13.65	2.00	0.00	0.05	0.00
55.93	13.58	2.00	0.00	0.05	0.00	55.97	13.58	2.00	0.00	0.05	0.00
56.06	13.76	2.00	0.00	0.05	0.00	56.15	13.75	2.00	0.00	0.05	0.00
56.19	13.75	2.00	0.00	0.05	0.00	56.27	13.54	2.00	0.00	0.05	0.00
56.32	13.41	2.00	0.00	0.05	0.00	56.39	13.27	2.00	0.00	0.04	0.00
56.44	13.07	2.00	0.00	0.04	0.00	56.52	13.23	2.00	0.00	0.04	0.00
56.57	12.74	2.00	0.00	0.04	0.00	56.65	13.18	2.00	0.00	0.04	0.00
56.70	13.36	2.00	0.00	0.04	0.00	56.78	13.55	2.00	0.00	0.04	0.00
56.83	13.54	2.00	0.00	0.04	0.00	56.92	13.47	2.00	0.00	0.04	0.00
56.96	13.40	2.00	0.00	0.03	0.00	57.05	13.71	2.00	0.00	0.03	0.00
57.09	13.97	2.00	0.00	0.03	0.00	57.16	13.96	2.00	0.00	0.03	0.00
57.24	13.95	2.00	0.00	0.03	0.00	57.30	14.20	2.00	0.00	0.03	0.00
57.36	14.26	2.00	0.00	0.03	0.00	57.42	14.44	2.00	0.00	0.03	0.00
57.51	14.17	2.00	0.00	0.03	0.00	57.57	14.04	2.00	0.00	0.02	0.00
57.63	13.97	2.00	0.00	0.02	0.00	57.69	13.83	2.00	0.00	0.02	0.00
57.76	13.56	2.00	0.00	0.02	0.00	57.82	13.43	2.00	0.00	0.02	0.00
57.89	13.29	2.00	0.00	0.02	0.00	57.94	13.22	2.00	0.00	0.02	0.00
58.01	13.21	2.00	0.00	0.02	0.00	58.08	13.21	2.00	0.00	0.02	0.00
58.14	13.20	2.00	0.00	0.01	0.00	58.22	12.81	2.00	0.00	0.01	0.00
58.28	12.68	2.00	0.00	0.01	0.00	58.35	12.16	2.00	0.00	0.01	0.00
58.42	11.65	2.00	0.00	0.01	0.00	58.48	11.14	2.00	0.00	0.01	0.00
58.55	10.88	2.00	0.00	0.01	0.00	58.61	10.87	2.00	0.00	0.01	0.00
58.68	10.93	2.00	0.00	0.01	0.00	58.74	10.55	2.00	0.00	0.00	0.00
58.81	10.54	2.00	0.00	0.00	0.00	58.88	10.10	2.00	0.00	0.00	0.00
58.95	10.09	2.00	0.00	0.00	0.00	59.02	10.21	2.00	0.00	0.00	0.00
59.08	10.39	2.00	0.00	0.00	0.00	59.15	10.70	2.00	0.00	0.00	0.00
59.19	10.70	2.00	0.00	0.00	0.00	59.25	10.63	2.00	0.00	0.00	0.00
59.33	9.69	2.00	0.00	0.00	0.00	59.39	12.13	2.00	0.00	0.00	0.00
59.45	12.43	2.00	0.00	0.00	0.00	59.53	11.68	2.00	0.00	0.00	0.00
59.60	11.11	2.00	0.00	0.00	0.00	59.67	11.29	2.00	0.00	0.00	0.00
59.73	13.99	2.00	0.00	0.00	0.00	59.80	17.67	2.00	0.00	0.00	0.00
59.86	17.72	2.00	0.00	0.00	0.00	59.93	17.33	2.00	0.00	0.00	0.00
60.00	17.25	2.00	0.00	0.00	0.00	60.07	17.18	2.00	0.00	0.00	0.00
60.11	17.11	2.00	0.00	0.00	0.00	60.18	17.10	2.00	0.00	0.00	0.00
60.24	17.03	2.00	0.00	0.00	0.00	60.31	16.20	2.00	0.00	0.00	0.00
60.37	14.98	2.00	0.00	0.00	0.00	60.44	13.72	2.00	0.00	0.00	0.00
60.52	12.14	2.00	0.00	0.00	0.00	60.58	11.51	2.00	0.00	0.00	0.00
60.65	11.32	2.00	0.00	0.00	0.00	60.71	11.01	2.00	0.00	0.00	0.00
60.77	11.27	2.00	0.00	0.00	0.00	60.83	10.74	2.00	0.00	0.00	0.00
60.90	11.24	2.00	0.00	0.00	0.00	60.99	11.60	2.00	0.00	0.00	0.00
61.05	11.66	2.00	0.00	0.00	0.00	61.12	11.65	2.00	0.00	0.00	0.00
61.18	11.71	2.00	0.00	0.00	0.00	61.24	11.89	2.00	0.00	0.00	0.00
61.30	12.75	2.00	0.00	0.00	0.00	61.36	13.43	2.00	0.00	0.00	0.00
61.42	13.36	2.00	0.00	0.00	0.00	61.51	12.91	2.00	0.00	0.00	0.00
61.57	13.03	2.00	0.00	0.00	0.00	61.64	13.02	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.71	13.02	2.00	0.00	0.00	0.00	61.77	13.33	2.00	0.00	0.00	0.00
61.82	13.76	2.00	0.00	0.00	0.00	61.88	16.75	2.00	0.00	0.00	0.00
61.95	20.15	2.00	0.00	0.00	0.00	62.01	22.49	2.00	0.00	0.00	0.00
62.08	24.52	2.00	0.00	0.00	0.00	62.15	26.43	2.00	0.00	0.00	0.00
62.21	28.02	2.00	0.00	0.00	0.00	62.28	30.16	2.00	0.00	0.00	0.00
62.34	31.65	2.00	0.00	0.00	0.00	62.43	33.55	2.00	0.00	0.00	0.00
62.50	35.80	2.00	0.00	0.00	0.00	62.56	36.66	2.00	0.00	0.00	0.00
62.64	36.78	2.00	0.00	0.00	0.00	62.70	36.84	2.00	0.00	0.00	0.00
62.74	36.24	2.00	0.00	0.00	0.00	62.80	34.13	2.00	0.00	0.00	0.00
62.87	29.57	2.00	0.00	0.00	0.00	62.93	31.40	2.00	0.00	0.00	0.00
63.00	31.24	2.00	0.00	0.00	0.00	63.06	30.69	2.00	0.00	0.00	0.00
63.13	30.42	2.00	0.00	0.00	0.00	63.19	29.75	2.00	0.00	0.00	0.00
63.29	29.92	2.00	0.00	0.00	0.00	63.32	30.11	2.00	0.00	0.00	0.00
63.40	30.09	2.00	0.00	0.00	0.00	63.47	30.07	2.00	0.00	0.00	0.00
63.54	30.25	2.00	0.00	0.00	0.00	63.59	30.36	2.00	0.00	0.00	0.00
63.66	32.25	2.00	0.00	0.00	0.00	63.73	32.55	2.00	0.00	0.00	0.00
63.79	32.34	2.00	0.00	0.00	0.00	63.85	31.41	2.00	0.00	0.00	0.00
63.92	30.35	2.00	0.00	0.00	0.00	63.99	28.85	2.00	0.00	0.00	0.00
64.05	27.23	2.00	0.00	0.00	0.00	64.12	26.45	2.00	0.00	0.00	0.00
64.18	25.68	2.00	0.00	0.00	0.00	64.25	24.83	2.00	0.00	0.00	0.00
64.32	23.86	2.00	0.00	0.00	0.00	64.40	22.76	2.00	0.00	0.00	0.00
64.46	21.99	2.00	0.00	0.00	0.00	64.53	21.98	2.00	0.00	0.00	0.00
64.59	22.54	2.00	0.00	0.00	0.00	64.66	23.48	2.00	0.00	0.00	0.00
64.72	24.10	2.00	0.00	0.00	0.00	64.79	24.46	2.00	0.00	0.00	0.00
64.86	27.43	2.00	0.00	0.00	0.00	64.92	29.21	2.00	0.00	0.00	0.00
64.96	29.84	2.00	0.00	0.00	0.00	65.03	30.34	2.00	0.00	0.00	0.00
65.13	31.48	2.00	0.00	0.00	0.00	65.16	31.81	2.00	0.00	0.00	0.00
65.23	32.75	2.00	0.00	0.00	0.00	65.30	33.58	2.00	0.00	0.00	0.00
65.36	34.08	2.00	0.00	0.00	0.00	65.43	34.38	2.00	0.00	0.00	0.00
65.49	34.43	2.00	0.00	0.00	0.00	65.56	33.89	2.00	0.00	0.00	0.00
65.64	34.43	2.00	0.00	0.00	0.00	65.71	33.39	2.00	0.00	0.00	0.00
65.78	34.41	2.00	0.00	0.00	0.00	65.82	34.52	2.00	0.00	0.00	0.00
65.89	34.96	2.00	0.00	0.00	0.00	65.97	34.68	2.00	0.00	0.00	0.00
66.04	34.67	2.00	0.00	0.00	0.00	66.08	34.60	2.00	0.00	0.00	0.00
66.16	34.06	2.00	0.00	0.00	0.00	66.22	33.22	2.00	0.00	0.00	0.00
66.29	30.94	2.00	0.00	0.00	0.00	66.37	31.57	2.00	0.00	0.00	0.00
66.42	31.62	2.00	0.00	0.00	0.00	66.51	32.04	2.00	0.00	0.00	0.00
66.55	32.29	2.00	0.00	0.00	0.00	66.62	31.88	2.00	0.00	0.00	0.00
66.68	31.90	2.00	0.00	0.00	0.00	66.75	31.88	2.00	0.00	0.00	0.00
66.81	31.89	2.00	0.00	0.00	0.00	66.87	31.88	2.00	0.00	0.00	0.00
66.95	31.86	2.00	0.00	0.00	0.00	67.00	31.13	2.00	0.00	0.00	0.00
67.06	30.29	2.00	0.00	0.00	0.00	67.13	29.13	2.00	0.00	0.00	0.00
67.20	28.18	2.00	0.00	0.00	0.00	67.28	26.52	2.00	0.00	0.00	0.00
67.33	25.32	2.00	0.00	0.00	0.00	67.40	24.49	2.00	0.00	0.00	0.00
67.47	23.91	2.00	0.00	0.00	0.00	67.54	23.03	2.00	0.00	0.00	0.00
67.61	22.09	2.00	0.00	0.00	0.00	67.67	21.89	2.00	0.00	0.00	0.00
67.74	21.33	2.00	0.00	0.00	0.00	67.82	20.64	2.00	0.00	0.00	0.00
67.86	21.22	2.00	0.00	0.00	0.00	67.93	19.58	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
68.00	21.10	2.00	0.00	0.00	0.00	68.05	21.95	2.00	0.00	0.00	0.00
68.12	24.35	2.00	0.00	0.00	0.00	68.21	27.20	2.00	0.00	0.00	0.00
68.25	28.37	2.00	0.00	0.00	0.00	68.32	29.68	2.00	0.00	0.00	0.00
68.41	29.72	2.00	0.00	0.00	0.00	68.44	28.96	2.00	0.00	0.00	0.00
68.53	28.89	2.00	0.00	0.00	0.00	68.61	28.81	2.00	0.00	0.00	0.00
68.65	32.02	2.00	0.00	0.00	0.00	68.73	35.37	2.00	0.00	0.00	0.00
68.79	34.96	2.00	0.00	0.00	0.00	68.83	35.90	2.00	0.00	0.00	0.00
68.91	35.69	2.00	0.00	0.00	0.00	69.00	34.90	2.00	0.00	0.00	0.00
69.04	34.63	2.00	0.00	0.00	0.00	69.13	35.30	2.00	0.00	0.00	0.00
69.17	36.10	2.00	0.00	0.00	0.00	69.26	38.25	2.00	0.00	0.00	0.00
69.30	38.29	2.00	0.00	0.00	0.00	69.38	39.29	2.00	0.00	0.00	0.00
69.42	40.15	2.00	0.00	0.00	0.00	69.51	40.33	2.00	0.00	0.00	0.00
69.59	38.23	2.00	0.00	0.00	0.00	69.64	37.52	2.00	0.00	0.00	0.00
69.72	36.23	2.00	0.00	0.00	0.00	69.76	35.78	2.00	0.00	0.00	0.00
69.85	34.55	2.00	0.00	0.00	0.00	69.89	34.09	2.00	0.00	0.00	0.00
69.97	33.38	2.00	0.00	0.00	0.00	70.02	33.10	2.00	0.00	0.00	0.00
70.10	38.65	2.00	0.00	0.00	0.00	70.15	42.38	2.00	0.00	0.00	0.00
70.23	46.54	2.00	0.00	0.00	0.00	70.32	46.97	2.00	0.00	0.00	0.00
70.37	46.64	2.00	0.00	0.00	0.00	70.42	45.33	2.00	0.00	0.00	0.00
70.51	42.25	2.00	0.00	0.00	0.00	70.55	40.24	2.00	0.00	0.00	0.00
70.64	35.22	2.00	0.00	0.00	0.00	70.69	33.70	2.00	0.00	0.00	0.00
70.79	31.48	2.00	0.00	0.00	0.00	70.83	30.71	2.00	0.00	0.00	0.00
70.88	30.33	2.00	0.00	0.00	0.00	70.98	29.75	2.00	0.00	0.00	0.00
71.02	30.17	2.00	0.00	0.00	0.00	71.07	32.04	2.00	0.00	0.00	0.00
71.14	35.75	2.00	0.00	0.00	0.00	71.22	45.10	2.00	0.00	0.00	0.00
71.30	51.42	2.00	0.00	0.00	0.00	71.33	50.93	2.00	0.00	0.00	0.00
71.42	47.74	2.00	0.00	0.00	0.00	71.46	46.36	2.00	0.00	0.00	0.00
71.55	46.40	2.00	0.00	0.00	0.00	71.60	46.83	2.00	0.00	0.00	0.00
71.67	49.16	2.00	0.00	0.00	0.00	71.77	50.31	2.00	0.00	0.00	0.00
71.80	49.84	2.00	0.00	0.00	0.00	71.89	47.97	2.00	0.00	0.00	0.00
71.93	47.25	2.00	0.00	0.00	0.00	72.02	47.22	2.00	0.00	0.00	0.00
72.05	47.72	2.00	0.00	0.00	0.00	72.14	49.66	2.00	0.00	0.00	0.00
72.18	49.77	2.00	0.00	0.00	0.00	72.27	49.02	2.00	0.00	0.00	0.00
72.35	49.06	2.00	0.00	0.00	0.00	72.40	50.74	2.00	0.00	0.00	0.00
72.48	52.68	2.00	0.00	0.00	0.00	72.53	54.10	2.00	0.00	0.00	0.00
72.59	122.27	0.42	0.00	0.00	0.00	72.66	128.10	0.46	0.00	0.00	0.00
72.72	129.39	0.48	0.00	0.00	0.00	72.79	128.14	0.47	0.00	0.00	0.00
72.85	124.79	0.44	0.00	0.00	0.00	72.92	123.18	0.43	0.00	0.00	0.00
72.98	55.04	2.00	0.00	0.00	0.00	73.07	53.75	2.00	0.00	0.00	0.00
73.11	53.41	2.00	0.00	0.00	0.00	73.21	52.78	2.00	0.00	0.00	0.00
73.25	53.47	2.00	0.00	0.00	0.00	73.30	124.98	0.44	0.00	0.00	0.00
73.39	130.12	0.48	0.00	0.00	0.00	73.43	130.75	0.49	0.00	0.00	0.00
73.52	127.28	0.46	0.00	0.00	0.00	73.58	126.56	0.46	0.00	0.00	0.00
73.68	127.24	0.46	0.00	0.00	0.00	73.72	127.19	0.46	0.00	0.00	0.00
73.77	127.67	0.46	0.00	0.00	0.00	73.85	128.96	0.48	0.00	0.00	0.00
73.91	128.68	0.47	0.00	0.00	0.00	74.00	134.63	0.53	0.00	0.00	0.00
74.04	135.16	0.53	0.00	0.00	0.00	74.09	134.31	0.52	0.00	0.00	0.00
74.18	137.47	0.56	0.00	0.00	0.00	74.23	140.09	0.59	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.28	141.40	0.60	0.00	0.00	0.00	74.37	142.51	0.62	0.00	0.00	0.00
74.42	142.99	0.63	0.00	0.00	0.00	74.51	141.72	0.61	0.00	0.00	0.00
74.56	140.39	0.59	0.00	0.00	0.00	74.65	137.78	0.56	0.00	0.00	0.00
74.70	136.07	0.54	0.00	0.00	0.00	74.76	126.08	0.46	0.00	0.00	0.00
74.84	132.61	0.51	0.00	0.00	0.00	74.88	131.25	0.50	0.00	0.00	0.00
74.96	59.87	2.00	0.00	0.00	0.00	75.04	55.80	2.00	0.00	0.00	0.00
75.08	54.37	2.00	0.00	0.00	0.00	75.16	51.08	2.00	0.00	0.00	0.00
75.24	47.24	2.00	0.00	0.00	0.00	75.28	44.74	2.00	0.00	0.00	0.00
75.35	41.42	2.00	0.00	0.00	0.00	75.40	41.10	2.00	0.00	0.00	0.00
75.48	39.87	2.00	0.00	0.00	0.00	75.56	40.99	2.00	0.00	0.00	0.00
75.60	40.59	2.00	0.00	0.00	0.00	75.69	40.87	2.00	0.00	0.00	0.00
75.75	42.49	2.00	0.00	0.00	0.00	75.79	42.54	2.00	0.00	0.00	0.00
75.86	42.46	2.00	0.00	0.00	0.00	75.94	41.05	2.00	0.00	0.00	0.00
76.03	40.58	2.00	0.00	0.00	0.00	76.07	41.94	2.00	0.00	0.00	0.00
76.12	43.06	2.00	0.00	0.00	0.00	76.21	44.10	2.00	0.00	0.00	0.00
76.26	44.28	2.00	0.00	0.00	0.00	76.31	43.32	2.00	0.00	0.00	0.00
76.40	41.53	2.00	0.00	0.00	0.00	76.45	40.77	2.00	0.00	0.00	0.00
76.54	40.31	2.00	0.00	0.00	0.00	76.58	40.85	2.00	0.00	0.00	0.00
76.68	41.82	2.00	0.00	0.00	0.00	76.73	41.23	2.00	0.00	0.00	0.00
76.81	39.55	2.00	0.00	0.00	0.00	76.87	39.35	2.00	0.00	0.00	0.00
76.91	39.68	2.00	0.00	0.00	0.00	77.00	39.32	2.00	0.00	0.00	0.00
77.05	40.82	2.00	0.00	0.00	0.00	77.15	44.25	2.00	0.00	0.00	0.00
77.18	44.35	2.00	0.00	0.00	0.00	77.24	44.34	2.00	0.00	0.00	0.00
77.33	44.06	2.00	0.00	0.00	0.00	77.38	45.01	2.00	0.00	0.00	0.00
77.47	45.54	2.00	0.00	0.00	0.00	77.51	46.16	2.00	0.00	0.00	0.00
77.57	46.59	2.00	0.00	0.00	0.00	77.65	44.86	2.00	0.00	0.00	0.00
77.69	42.92	2.00	0.00	0.00	0.00	77.79	37.42	2.00	0.00	0.00	0.00
77.82	33.78	2.00	0.00	0.00	0.00	77.91	32.40	2.00	0.00	0.00	0.00
78.00	27.99	2.00	0.00	0.00	0.00	78.04	26.09	2.00	0.00	0.00	0.00
78.13	24.08	2.00	0.00	0.00	0.00	78.17	23.50	2.00	0.00	0.00	0.00
78.22	22.91	2.00	0.00	0.00	0.00	78.30	21.80	2.00	0.00	0.00	0.00
78.39	21.61	2.00	0.00	0.00	0.00	78.43	21.72	2.00	0.00	0.00	0.00
78.48	21.89	2.00	0.00	0.00	0.00	78.56	22.51	2.00	0.00	0.00	0.00
78.61	22.27	2.00	0.00	0.00	0.00	78.69	20.94	2.00	0.00	0.00	0.00
78.77	20.30	2.00	0.00	0.00	0.00	78.83	20.41	2.00	0.00	0.00	0.00
78.90	19.66	2.00	0.00	0.00	0.00	78.99	19.68	2.00	0.00	0.00	0.00
79.03	19.67	2.00	0.00	0.00	0.00	79.10	19.69	2.00	0.00	0.00	0.00
79.15	20.19	2.00	0.00	0.00	0.00	79.24	21.89	2.00	0.00	0.00	0.00
79.29	24.30	2.00	0.00	0.00	0.00	79.37	29.01	2.00	0.00	0.00	0.00
79.42	29.94	2.00	0.00	0.00	0.00	79.47	29.88	2.00	0.00	0.00	0.00
79.57	28.04	2.00	0.00	0.00	0.00	79.60	27.22	2.00	0.00	0.00	0.00
79.70	28.73	2.00	0.00	0.00	0.00	79.74	29.12	2.00	0.00	0.00	0.00
79.79	29.23	2.00	0.00	0.00	0.00	79.88	30.57	2.00	0.00	0.00	0.00
79.92	30.32	2.00	0.00	0.00	0.00	80.02	30.94	2.00	0.00	0.00	0.00
80.07	31.11	2.00	0.00	0.00	0.00	80.17	29.67	2.00	0.00	0.00	0.00
80.21	28.26	2.00	0.00	0.00	0.00	80.25	26.85	2.00	0.00	0.00	0.00
80.34	25.62	2.00	0.00	0.00	0.00	80.39	26.01	2.00	0.00	0.00	0.00
80.48	26.28	2.00	0.00	0.00	0.00	80.53	26.97	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.58	27.54	2.00	0.00	0.00	0.00	80.67	29.10	2.00	0.00	0.00	0.00
80.72	29.21	2.00	0.00	0.00	0.00	80.80	28.44	2.00	0.00	0.00	0.00
80.84	27.27	2.00	0.00	0.00	0.00	80.95	27.31	2.00	0.00	0.00	0.00
80.99	27.25	2.00	0.00	0.00	0.00	81.06	27.47	2.00	0.00	0.00	0.00
81.11	27.05	2.00	0.00	0.00	0.00	81.19	25.70	2.00	0.00	0.00	0.00
81.23	24.55	2.00	0.00	0.00	0.00	81.32	22.76	2.00	0.00	0.00	0.00
81.40	20.94	2.00	0.00	0.00	0.00	81.44	22.51	2.00	0.00	0.00	0.00
81.53	22.27	2.00	0.00	0.00	0.00	81.57	26.67	2.00	0.00	0.00	0.00
81.66	32.55	2.00	0.00	0.00	0.00	81.70	34.02	2.00	0.00	0.00	0.00
81.76	30.48	2.00	0.00	0.00	0.00	81.84	37.19	2.00	0.00	0.00	0.00
81.90	39.59	2.00	0.00	0.00	0.00	81.96	41.88	2.00	0.00	0.00	0.00
82.03	44.94	2.00	0.00	0.00	0.00	82.10	47.46	2.00	0.00	0.00	0.00
82.17	50.08	2.00	0.00	0.00	0.00	82.23	51.69	2.00	0.00	0.00	0.00
82.30	55.87	2.00	0.00	0.00	0.00	82.35	57.97	2.00	0.00	0.00	0.00
82.42	57.56	2.00	0.00	0.00	0.00	82.50	58.05	2.00	0.00	0.00	0.00
82.56	58.36	2.00	0.00	0.00	0.00	82.61	57.83	2.00	0.00	0.00	0.00
82.70	57.48	2.00	0.00	0.00	0.00	82.76	57.52	2.00	0.00	0.00	0.00
82.83	59.18	2.00	0.00	0.00	0.00	82.89	59.73	2.00	0.00	0.00	0.00
82.95	58.01	2.00	0.00	0.00	0.00	83.02	58.76	2.00	0.00	0.00	0.00
83.08	60.35	2.00	0.00	0.00	0.00	83.17	61.04	2.00	0.00	0.00	0.00
83.23	61.42	2.00	0.00	0.00	0.00	83.29	60.96	2.00	0.00	0.00	0.00
83.35	59.25	2.00	0.00	0.00	0.00	83.41	59.51	2.00	0.00	0.00	0.00
83.47	59.82	2.00	0.00	0.00	0.00	83.54	58.39	2.00	0.00	0.00	0.00
83.60	56.77	2.00	0.00	0.00	0.00	83.66	54.64	2.00	0.00	0.00	0.00
83.76	52.57	2.00	0.00	0.00	0.00	83.82	53.07	2.00	0.00	0.00	0.00
83.89	51.78	2.00	0.00	0.00	0.00	83.95	48.98	2.00	0.00	0.00	0.00
84.01	51.34	2.00	0.00	0.00	0.00	84.08	55.11	2.00	0.00	0.00	0.00
84.12	55.33	2.00	0.00	0.00	0.00	84.21	57.75	2.00	0.00	0.00	0.00
84.26	55.55	2.00	0.00	0.00	0.00	84.32	54.79	2.00	0.00	0.00	0.00
84.40	51.30	2.00	0.00	0.00	0.00	84.47	47.41	2.00	0.00	0.00	0.00
84.52	45.08	2.00	0.00	0.00	0.00	84.60	41.28	2.00	0.00	0.00	0.00
84.65	38.99	2.00	0.00	0.00	0.00	84.73	36.91	2.00	0.00	0.00	0.00
84.79	38.13	2.00	0.00	0.00	0.00	84.86	39.51	2.00	0.00	0.00	0.00
84.93	39.78	2.00	0.00	0.00	0.00	84.97	39.01	2.00	0.00	0.00	0.00
85.04	38.99	2.00	0.00	0.00	0.00	85.11	38.97	2.00	0.00	0.00	0.00
85.18	39.32	2.00	0.00	0.00	0.00	85.25	48.66	2.00	0.00	0.00	0.00
85.30	61.75	2.00	0.00	0.00	0.00	85.38	145.81	0.70	0.00	0.00	0.00
85.44	151.84	0.82	0.00	0.00	0.00	85.50	153.73	0.86	0.00	0.00	0.00
85.57	156.02	0.91	0.00	0.00	0.00	85.65	157.48	0.95	0.00	0.00	0.00
85.73	158.02	0.97	0.00	0.00	0.00	85.78	157.90	0.96	0.00	0.00	0.00
85.83	158.21	0.97	0.00	0.00	0.00	85.91	157.97	0.97	0.00	0.00	0.00
85.98	157.34	0.95	0.00	0.00	0.00	86.04	156.65	0.93	0.00	0.00	0.00
86.09	155.79	0.91	0.00	0.00	0.00	86.16	155.10	0.89	0.00	0.00	0.00
86.24	152.76	0.84	0.00	0.00	0.00	86.29	149.51	0.77	0.00	0.00	0.00
86.36	145.34	0.70	0.00	0.00	0.00	86.43	71.20	2.00	0.00	0.00	0.00
86.50	68.16	2.00	0.00	0.00	0.00	86.55	68.18	2.00	0.00	0.00	0.00
86.62	68.17	2.00	0.00	0.00	0.00	86.68	70.96	2.00	0.00	0.00	0.00
86.77	70.98	2.00	0.00	0.00	0.00	86.81	70.50	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.90	69.09	2.00	0.00	0.00	0.00	86.96	69.69	2.00	0.00	0.00	0.00
87.02	70.20	2.00	0.00	0.00	0.00	87.07	61.55	2.00	0.00	0.00	0.00
87.15	73.95	2.00	0.00	0.00	0.00	87.22	145.52	0.71	0.00	0.00	0.00
87.28	69.63	2.00	0.00	0.00	0.00	87.34	70.43	2.00	0.00	0.00	0.00
87.41	71.47	2.00	0.00	0.00	0.00	87.49	70.83	2.00	0.00	0.00	0.00
87.53	70.48	2.00	0.00	0.00	0.00	87.60	70.74	2.00	0.00	0.00	0.00
87.68	70.54	2.00	0.00	0.00	0.00	87.76	70.62	2.00	0.00	0.00	0.00
87.81	70.33	2.00	0.00	0.00	0.00	87.87	70.43	2.00	0.00	0.00	0.00
87.95	72.27	2.00	0.00	0.00	0.00	88.02	72.92	2.00	0.00	0.00	0.00
88.07	71.10	2.00	0.00	0.00	0.00	88.13	69.31	2.00	0.00	0.00	0.00
88.20	70.77	2.00	0.00	0.00	0.00	88.27	67.40	2.00	0.00	0.00	0.00
88.33	70.39	2.00	0.00	0.00	0.00	88.40	71.02	2.00	0.00	0.00	0.00
88.46	68.51	2.00	0.00	0.00	0.00	88.52	68.05	2.00	0.00	0.00	0.00
88.60	65.81	2.00	0.00	0.00	0.00	88.66	65.47	2.00	0.00	0.00	0.00
88.73	66.11	2.00	0.00	0.00	0.00	88.78	65.90	2.00	0.00	0.00	0.00
88.85	64.71	2.00	0.00	0.00	0.00	88.92	62.38	2.00	0.00	0.00	0.00
88.99	59.36	2.00	0.00	0.00	0.00	89.05	57.38	2.00	0.00	0.00	0.00
89.11	56.85	2.00	0.00	0.00	0.00	89.18	58.70	2.00	0.00	0.00	0.00
89.25	62.01	2.00	0.00	0.00	0.00	89.31	67.98	2.00	0.00	0.00	0.00
89.39	68.31	2.00	0.00	0.00	0.00	89.45	67.51	2.00	0.00	0.00	0.00
89.52	66.85	2.00	0.00	0.00	0.00	89.58	66.38	2.00	0.00	0.00	0.00
89.66	66.86	2.00	0.00	0.00	0.00	89.72	68.89	2.00	0.00	0.00	0.00
89.78	69.91	2.00	0.00	0.00	0.00	89.85	69.92	2.00	0.00	0.00	0.00
89.92	69.94	2.00	0.00	0.00	0.00	89.97	69.05	2.00	0.00	0.00	0.00
90.03	72.62	2.00	0.00	0.00	0.00	90.09	71.69	2.00	0.00	0.00	0.00
90.16	73.96	2.00	0.00	0.00	0.00	90.25	72.20	2.00	0.00	0.00	0.00
90.30	69.62	2.00	0.00	0.00	0.00	90.38	68.82	2.00	0.00	0.00	0.00
90.44	68.42	2.00	0.00	0.00	0.00	90.49	67.32	2.00	0.00	0.00	0.00
90.56	65.86	2.00	0.00	0.00	0.00	90.63	66.42	2.00	0.00	0.00	0.00
90.69	66.81	2.00	0.00	0.00	0.00	90.75	71.22	2.00	0.00	0.00	0.00
90.82	72.68	2.00	0.00	0.00	0.00	90.88	72.45	2.00	0.00	0.00	0.00
90.95	71.96	2.00	0.00	0.00	0.00	91.02	71.14	2.00	0.00	0.00	0.00
91.08	71.31	2.00	0.00	0.00	0.00	91.15	72.65	2.00	0.00	0.00	0.00
91.21	148.14	0.76	0.00	0.00	0.00	91.28	150.13	0.80	0.00	0.00	0.00
91.35	149.15	0.78	0.00	0.00	0.00	91.41	148.34	0.77	0.00	0.00	0.00
91.47	148.91	0.78	0.00	0.00	0.00	91.55	150.22	0.80	0.00	0.00	0.00
91.61	148.31	0.77	0.00	0.00	0.00	91.67	147.12	0.75	0.00	0.00	0.00
91.73	147.39	0.75	0.00	0.00	0.00	91.81	147.77	0.76	0.00	0.00	0.00
91.87	150.88	0.82	0.00	0.00	0.00	91.94	153.35	0.87	0.00	0.00	0.00
92.00	153.74	0.88	0.00	0.00	0.00	92.07	156.09	0.94	0.00	0.00	0.00
92.13	157.28	0.97	0.00	0.00	0.00	92.20	159.50	1.03	0.00	0.00	0.00
92.26	159.24	1.03	0.00	0.00	0.00	92.33	155.33	0.92	0.00	0.00	0.00
92.39	156.16	0.94	0.00	0.00	0.00	92.46	155.61	0.93	0.00	0.00	0.00
92.53	156.11	0.94	0.00	0.00	0.00	92.60	153.85	0.88	0.00	0.00	0.00
92.67	155.99	0.94	0.00	0.00	0.00	92.73	156.27	0.94	0.00	0.00	0.00
92.80	156.41	0.95	0.00	0.00	0.00	92.86	158.38	1.00	0.00	0.00	0.00
92.93	158.53	1.01	0.00	0.00	0.00	93.00	160.12	1.06	0.00	0.00	0.00
93.06	159.69	1.04	0.00	0.00	0.00	93.12	160.41	1.07	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (in)
93.18	160.17	1.06	0.00	0.00	0.00	93.24	160.49	1.07	0.00	0.00	0.00
93.33	160.39	1.07	0.00	0.00	0.00	93.39	158.22	1.00	0.00	0.00	0.00
93.45	156.90	0.96	0.00	0.00	0.00	93.51	157.13	0.97	0.00	0.00	0.00
93.58	157.46	0.98	0.00	0.00	0.00	93.64	157.82	0.99	0.00	0.00	0.00
93.71	159.92	1.05	0.00	0.00	0.00	93.77	157.04	0.97	0.00	0.00	0.00
93.84	155.94	0.94	0.00	0.00	0.00	93.91	158.01	1.00	0.00	0.00	0.00
93.98	158.71	1.02	0.00	0.00	0.00	94.03	159.92	1.05	0.00	0.00	0.00
94.11	160.67	1.08	0.00	0.00	0.00	94.17	159.93	1.05	0.00	0.00	0.00
94.23	159.61	1.04	0.00	0.00	0.00	94.29	158.89	1.02	0.00	0.00	0.00
94.37	157.89	0.99	0.00	0.00	0.00	94.43	157.48	0.98	0.00	0.00	0.00
94.49	157.24	0.98	0.00	0.00	0.00	94.55	157.00	0.97	0.00	0.00	0.00
94.63	151.51	0.84	0.00	0.00	0.00	94.69	139.63	0.64	0.00	0.00	0.00
94.76	84.30	2.00	0.00	0.00	0.00	94.82	83.53	2.00	0.00	0.00	0.00
94.89	82.89	2.00	0.00	0.00	0.00	94.95	82.40	2.00	0.00	0.00	0.00
95.03	82.11	2.00	0.00	0.00	0.00						

Total estimated settlement: 0.65

Abbreviations

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

LIQUEFACTION ANALYSIS REPORT

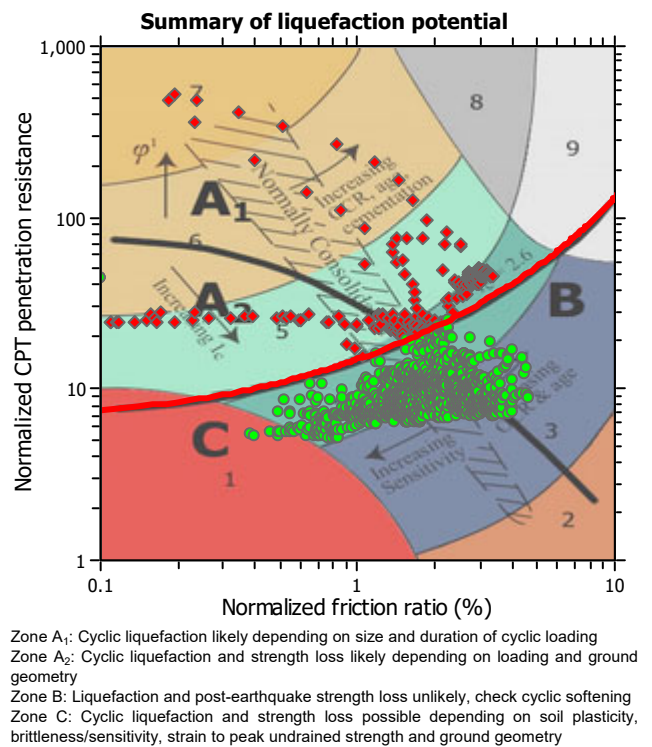
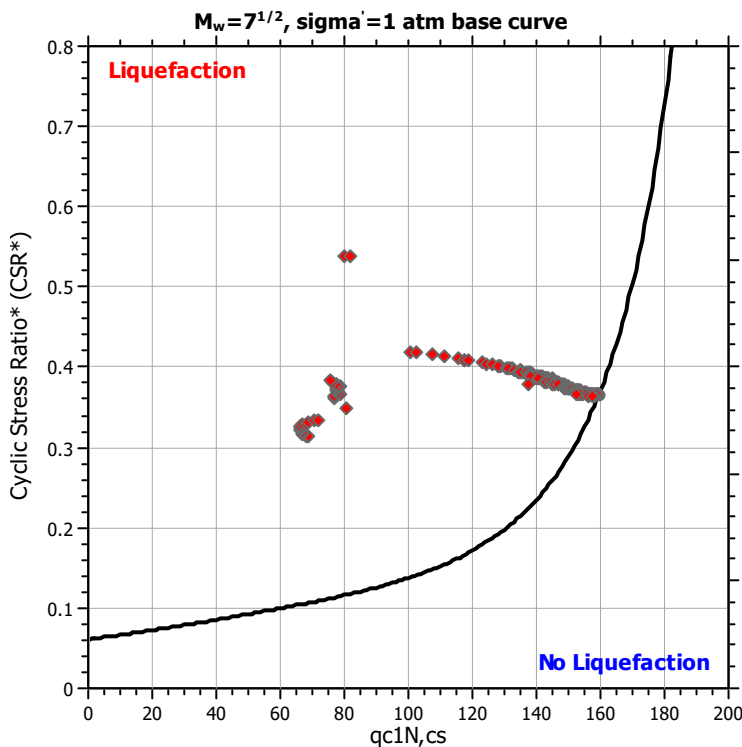
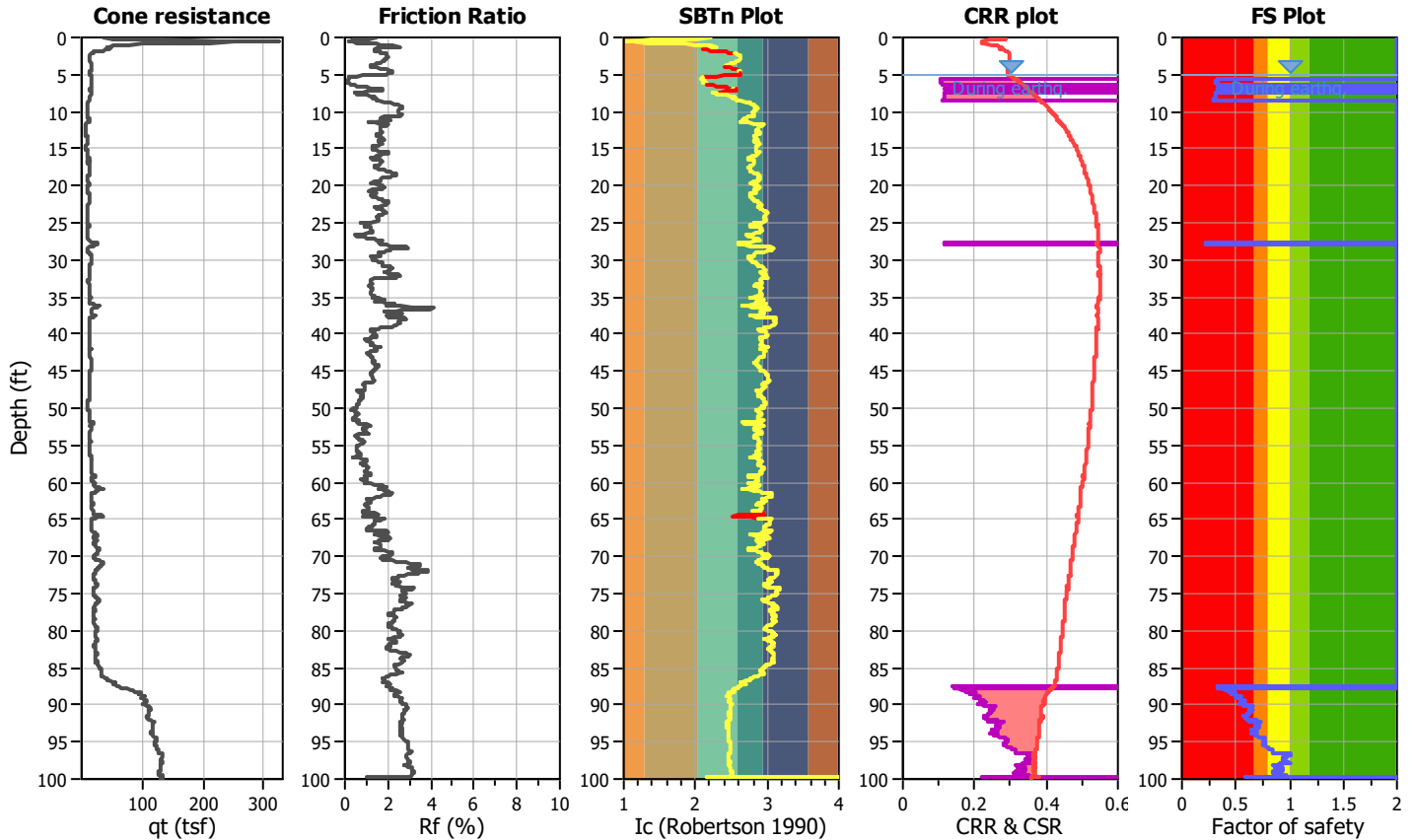
Project title : Victoria Apartments

Location : A9942-88-01

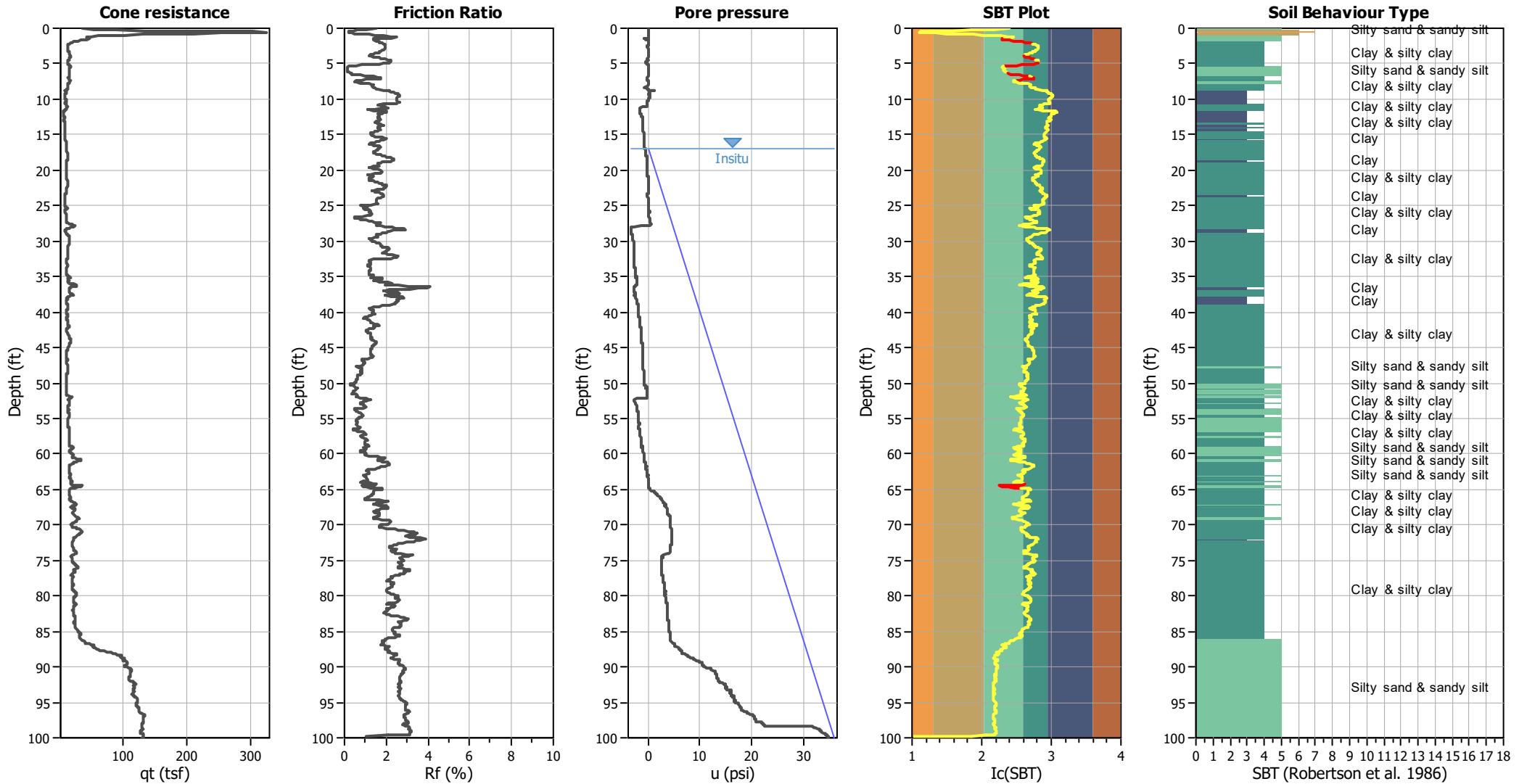
CPT file : C-5

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.57	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.41	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



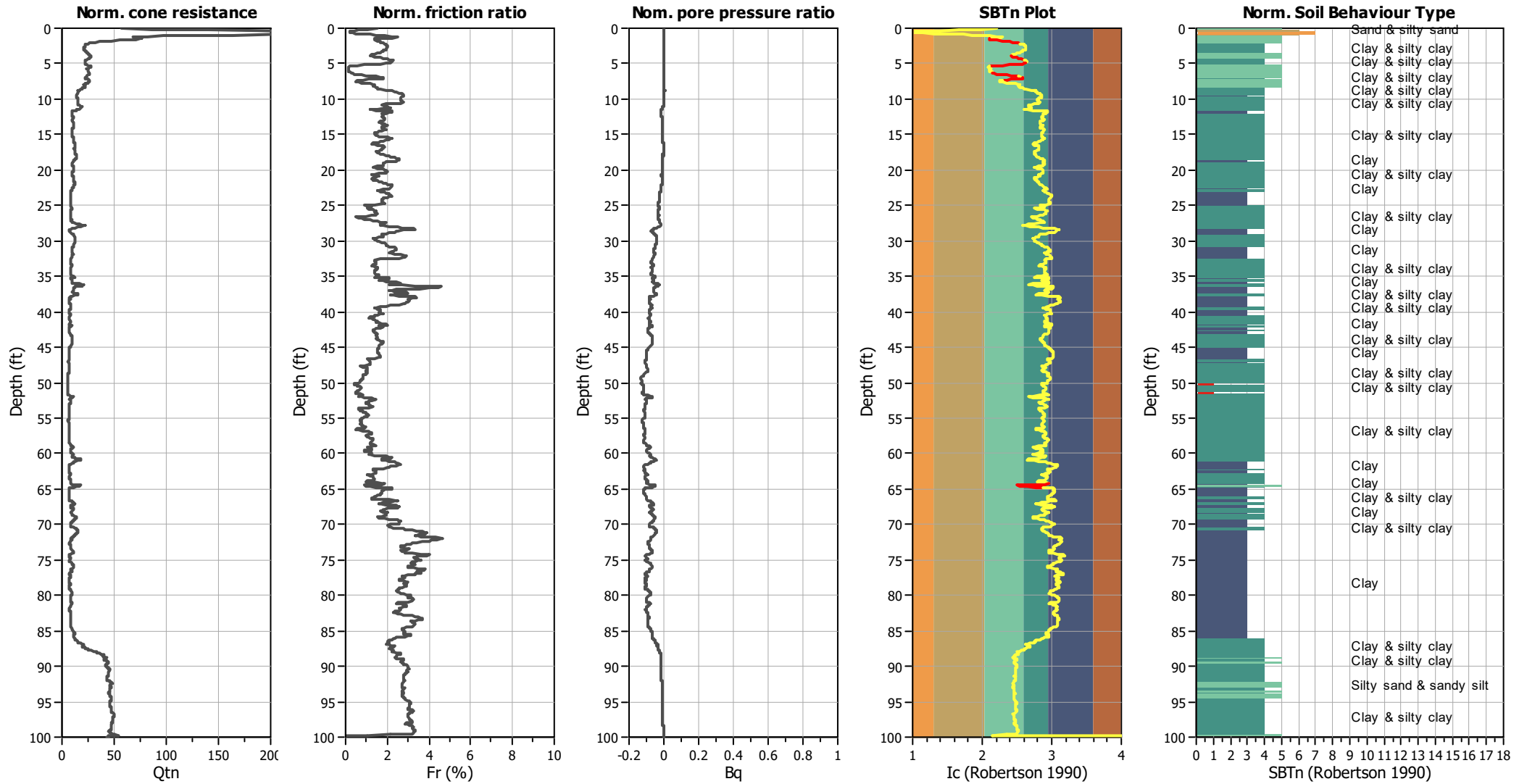
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



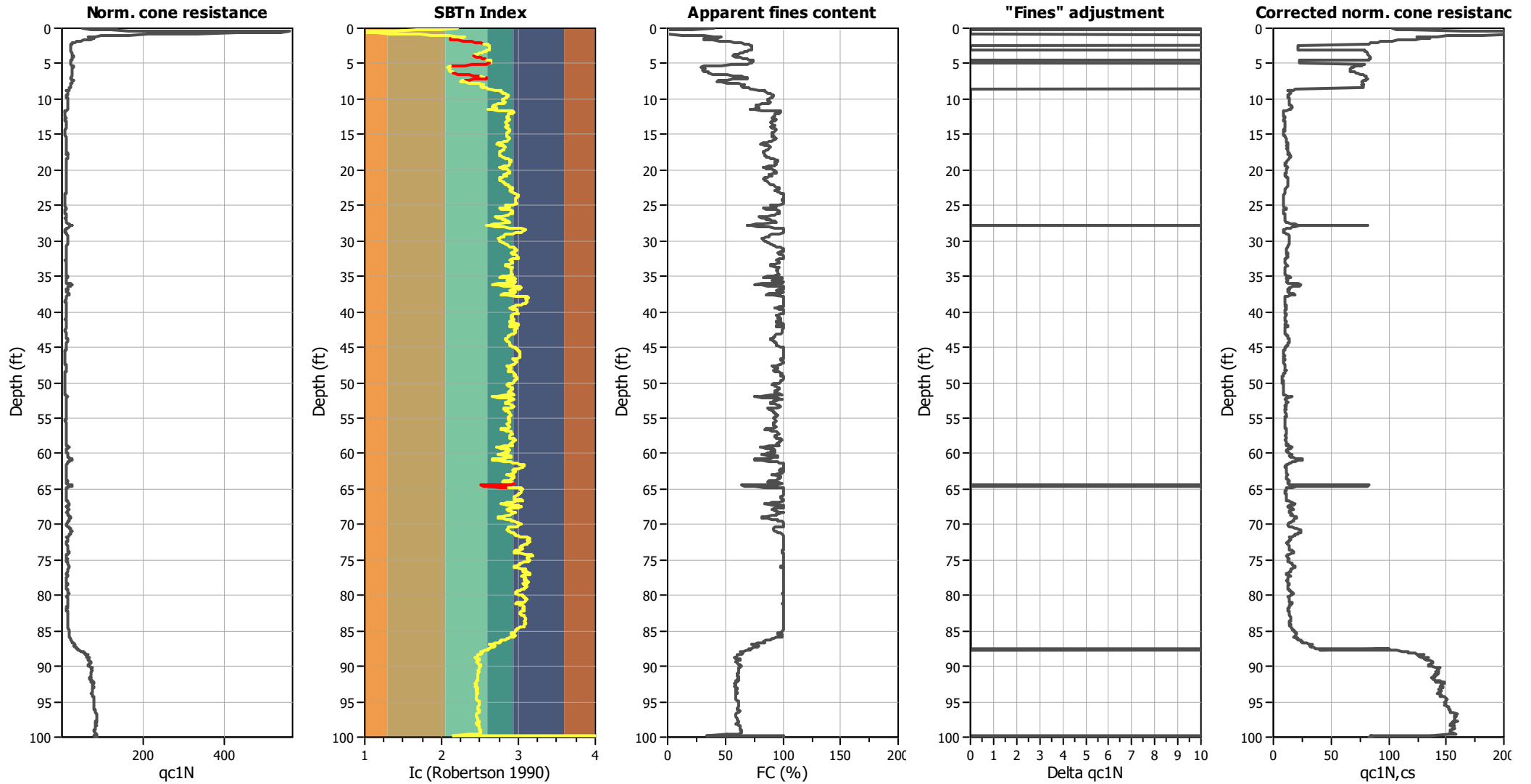
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

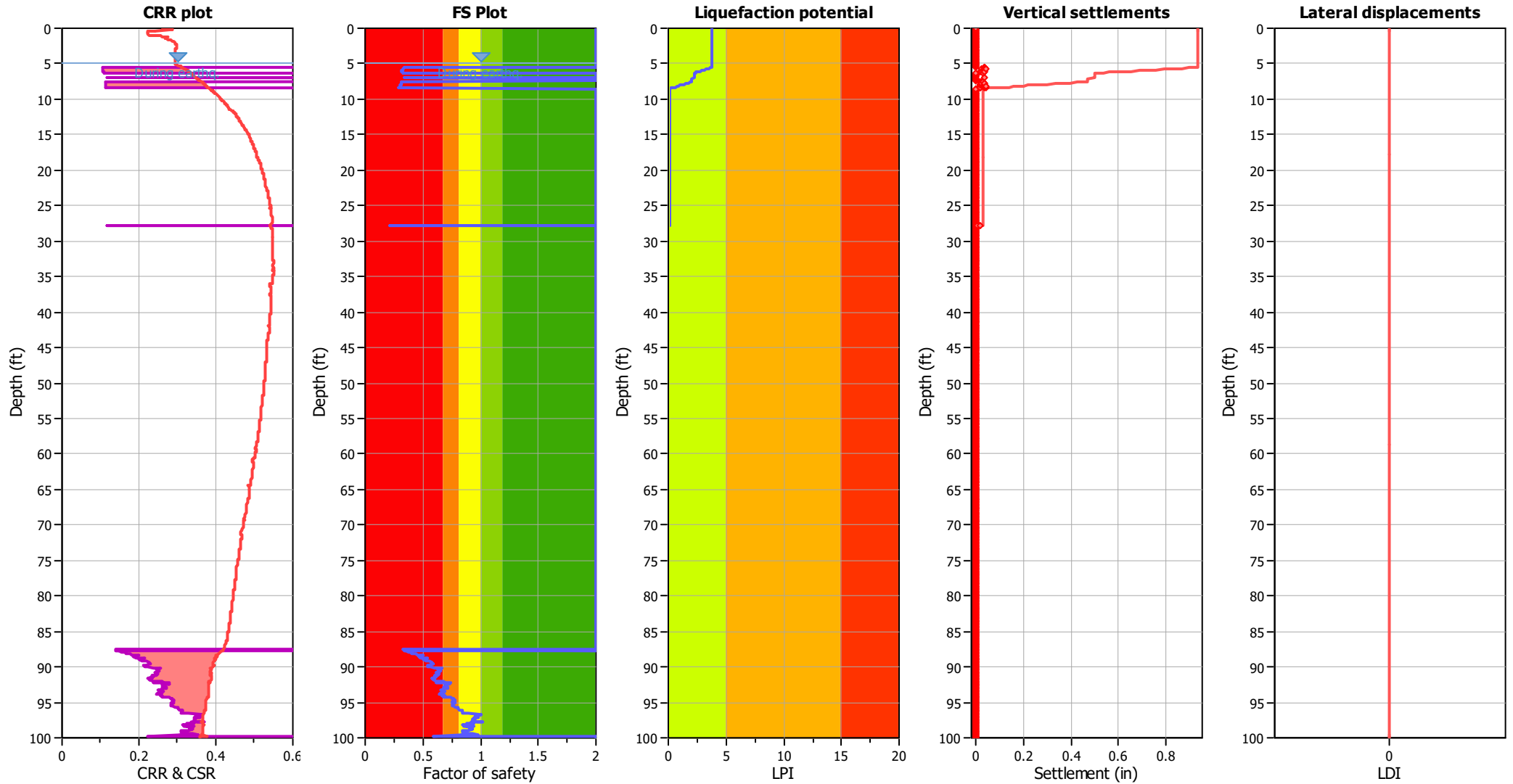
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_{σ} applied:	Yes
Earthquake magnitude M_w :	6.57	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

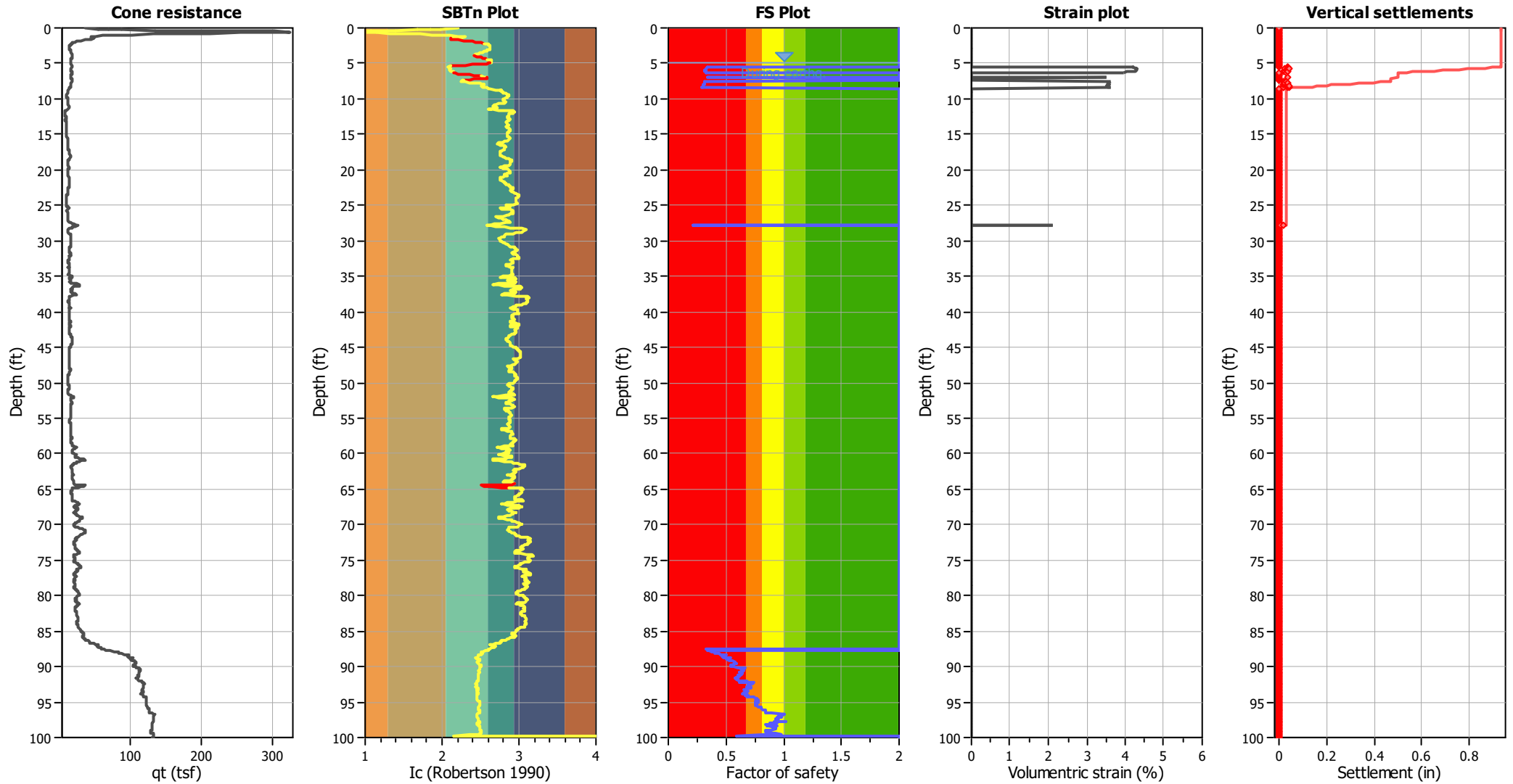
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- qt: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.01	79.11	2.00	0.00	0.92	0.00	5.08	78.46	2.00	0.00	0.91	0.00
5.12	78.19	2.00	0.00	0.91	0.00	5.18	77.77	2.00	0.00	0.91	0.00
5.26	76.89	2.00	0.00	0.91	0.00	5.33	74.77	2.00	0.00	0.91	0.00
5.39	71.26	2.00	0.00	0.91	0.00	5.46	68.76	2.00	0.00	0.91	0.00
5.52	67.88	0.34	4.24	0.91	0.03	5.59	68.56	0.34	4.20	0.91	0.04
5.64	66.68	0.33	4.30	0.90	0.03	5.73	67.02	0.33	4.28	0.90	0.04
5.80	66.27	0.32	4.31	0.90	0.04	5.87	66.21	0.32	4.31	0.90	0.03
5.93	66.04	0.32	4.32	0.90	0.03	6.00	66.34	0.32	4.29	0.90	0.03
6.07	67.06	0.32	4.25	0.90	0.04	6.11	68.18	0.32	4.18	0.90	0.02
6.18	68.90	0.32	4.13	0.90	0.04	6.24	70.47	0.32	4.04	0.89	0.03
6.31	71.64	0.33	3.98	0.89	0.03	6.39	73.57	2.00	0.00	0.89	0.00
6.47	74.87	2.00	0.00	0.89	0.00	6.51	76.52	2.00	0.00	0.89	0.00
6.58	77.19	2.00	0.00	0.89	0.00	6.63	78.35	2.00	0.00	0.89	0.00
6.70	78.96	2.00	0.00	0.89	0.00	6.79	79.88	2.00	0.00	0.88	0.00
6.82	80.54	2.00	0.00	0.88	0.00	6.90	80.41	2.00	0.00	0.88	0.00
6.99	80.41	0.33	3.52	0.88	0.03	7.07	80.40	2.00	0.00	0.88	0.00
7.11	80.61	2.00	0.00	0.88	0.00	7.19	81.26	2.00	0.00	0.88	0.00
7.24	80.64	2.00	0.00	0.88	0.00	7.32	81.04	2.00	0.00	0.88	0.00
7.37	79.44	2.00	0.00	0.88	0.00	7.45	77.85	2.00	0.00	0.87	0.00
7.50	77.11	0.31	3.63	0.87	0.02	7.55	77.15	0.31	3.62	0.87	0.02
7.62	77.10	0.31	3.62	0.87	0.03	7.68	78.20	0.31	3.56	0.87	0.02
7.76	78.49	0.31	3.55	0.87	0.03	7.85	78.09	0.31	3.56	0.87	0.04
7.90	78.11	0.31	3.55	0.87	0.02	7.98	77.55	0.31	3.57	0.86	0.04
8.03	77.33	0.30	3.58	0.86	0.02	8.07	77.95	0.31	3.55	0.86	0.02
8.17	78.48	0.31	3.52	0.86	0.04	8.21	78.32	0.30	3.52	0.86	0.02
8.30	77.65	0.30	3.54	0.86	0.04	8.34	77.41	0.30	3.55	0.86	0.02
8.44	75.96	0.29	3.61	0.86	0.04	8.48	75.58	0.29	3.62	0.86	0.02
8.57	18.71	2.00	0.00	0.85	0.00	8.62	18.25	2.00	0.00	0.85	0.00
8.70	17.87	2.00	0.00	0.85	0.00	8.73	12.88	2.00	0.00	0.85	0.00
8.81	16.58	2.00	0.00	0.85	0.00	8.89	15.48	2.00	0.00	0.85	0.00
8.94	15.30	2.00	0.00	0.85	0.00	9.02	14.97	2.00	0.00	0.85	0.00
9.10	14.89	2.00	0.00	0.85	0.00	9.15	14.72	2.00	0.00	0.84	0.00
9.23	14.52	2.00	0.00	0.84	0.00	9.27	14.23	2.00	0.00	0.84	0.00
9.35	13.78	2.00	0.00	0.84	0.00	9.39	13.62	2.00	0.00	0.84	0.00
9.47	13.06	2.00	0.00	0.84	0.00	9.52	13.02	2.00	0.00	0.84	0.00
9.59	13.09	2.00	0.00	0.84	0.00	9.65	12.93	2.00	0.00	0.84	0.00
9.72	13.12	2.00	0.00	0.84	0.00	9.80	13.68	2.00	0.00	0.83	0.00
9.85	13.77	2.00	0.00	0.83	0.00	9.92	13.96	2.00	0.00	0.83	0.00
10.01	14.39	2.00	0.00	0.83	0.00	10.04	14.36	2.00	0.00	0.83	0.00
10.13	14.41	2.00	0.00	0.83	0.00	10.21	14.35	2.00	0.00	0.83	0.00
10.24	14.33	2.00	0.00	0.83	0.00	10.32	14.26	2.00	0.00	0.83	0.00
10.40	13.85	2.00	0.00	0.82	0.00	10.44	13.70	2.00	0.00	0.82	0.00
10.52	13.52	2.00	0.00	0.82	0.00	10.59	13.47	2.00	0.00	0.82	0.00
10.64	13.44	2.00	0.00	0.82	0.00	10.71	13.41	2.00	0.00	0.82	0.00
10.80	13.83	2.00	0.00	0.82	0.00	10.83	14.16	2.00	0.00	0.82	0.00
10.90	15.15	2.00	0.00	0.82	0.00	10.98	15.91	2.00	0.00	0.81	0.00
11.06	16.53	2.00	0.00	0.81	0.00	11.11	16.73	2.00	0.00	0.81	0.00
11.18	15.98	2.00	0.00	0.81	0.00	11.26	15.45	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.30	15.43	2.00	0.00	0.81	0.00	11.37	15.39	2.00	0.00	0.81	0.00
11.45	14.20	2.00	0.00	0.81	0.00	11.49	13.37	2.00	0.00	0.81	0.00
11.57	11.48	2.00	0.00	0.80	0.00	11.62	10.75	2.00	0.00	0.80	0.00
11.68	9.23	2.00	0.00	0.80	0.00	11.75	8.40	2.00	0.00	0.80	0.00
11.82	8.60	2.00	0.00	0.80	0.00	11.89	8.57	2.00	0.00	0.80	0.00
11.98	8.54	2.00	0.00	0.80	0.00	12.01	8.53	2.00	0.00	0.80	0.00
12.08	8.73	2.00	0.00	0.80	0.00	12.15	9.03	2.00	0.00	0.79	0.00
12.23	9.23	2.00	0.00	0.79	0.00	12.27	9.21	2.00	0.00	0.79	0.00
12.35	9.18	2.00	0.00	0.79	0.00	12.42	9.26	2.00	0.00	0.79	0.00
12.49	9.45	2.00	0.00	0.79	0.00	12.56	9.65	2.00	0.00	0.79	0.00
12.61	9.85	2.00	0.00	0.79	0.00	12.68	9.92	2.00	0.00	0.79	0.00
12.76	9.67	2.00	0.00	0.78	0.00	12.83	9.42	2.00	0.00	0.78	0.00
12.87	9.19	2.00	0.00	0.78	0.00	12.94	9.16	2.00	0.00	0.78	0.00
12.99	9.25	2.00	0.00	0.78	0.00	13.07	9.44	2.00	0.00	0.78	0.00
13.14	9.73	2.00	0.00	0.78	0.00	13.22	9.92	2.00	0.00	0.78	0.00
13.26	9.90	2.00	0.00	0.78	0.00	13.33	10.09	2.00	0.00	0.77	0.00
13.41	10.05	2.00	0.00	0.77	0.00	13.48	10.23	2.00	0.00	0.77	0.00
13.56	10.52	2.00	0.00	0.77	0.00	13.60	10.50	2.00	0.00	0.77	0.00
13.68	10.36	2.00	0.00	0.77	0.00	13.74	10.33	2.00	0.00	0.77	0.00
13.79	10.31	2.00	0.00	0.77	0.00	13.86	10.49	2.00	0.00	0.77	0.00
13.93	10.68	2.00	0.00	0.76	0.00	13.98	10.66	2.00	0.00	0.76	0.00
14.06	10.31	2.00	0.00	0.76	0.00	14.14	9.97	2.00	0.00	0.76	0.00
14.18	9.85	2.00	0.00	0.76	0.00	14.25	9.41	2.00	0.00	0.76	0.00
14.32	9.58	2.00	0.00	0.76	0.00	14.40	9.55	2.00	0.00	0.76	0.00
14.44	9.54	2.00	0.00	0.76	0.00	14.51	9.31	2.00	0.00	0.75	0.00
14.59	9.08	2.00	0.00	0.75	0.00	14.66	9.26	2.00	0.00	0.75	0.00
14.73	9.03	2.00	0.00	0.75	0.00	14.81	9.21	2.00	0.00	0.75	0.00
14.84	9.20	2.00	0.00	0.75	0.00	14.90	9.18	2.00	0.00	0.75	0.00
14.98	9.15	2.00	0.00	0.75	0.00	15.05	9.23	2.00	0.00	0.74	0.00
15.11	9.31	2.00	0.00	0.74	0.00	15.16	9.59	2.00	0.00	0.74	0.00
15.24	9.96	2.00	0.00	0.74	0.00	15.30	10.15	2.00	0.00	0.74	0.00
15.37	10.42	2.00	0.00	0.74	0.00	15.43	10.59	2.00	0.00	0.74	0.00
15.51	10.85	2.00	0.00	0.74	0.00	15.56	10.83	2.00	0.00	0.74	0.00
15.64	10.80	2.00	0.00	0.73	0.00	15.69	10.78	2.00	0.00	0.73	0.00
15.77	10.75	2.00	0.00	0.73	0.00	15.82	10.83	2.00	0.00	0.73	0.00
15.89	10.90	2.00	0.00	0.73	0.00	15.97	11.06	2.00	0.00	0.73	0.00
16.03	11.23	2.00	0.00	0.73	0.00	16.08	11.41	2.00	0.00	0.73	0.00
16.16	11.66	2.00	0.00	0.73	0.00	16.23	12.02	2.00	0.00	0.72	0.00
16.28	12.20	2.00	0.00	0.72	0.00	16.35	12.45	2.00	0.00	0.72	0.00
16.42	12.52	2.00	0.00	0.72	0.00	16.50	12.58	2.00	0.00	0.72	0.00
16.54	12.32	2.00	0.00	0.72	0.00	16.61	11.67	2.00	0.00	0.72	0.00
16.67	12.02	2.00	0.00	0.72	0.00	16.74	12.18	2.00	0.00	0.72	0.00
16.83	12.06	2.00	0.00	0.71	0.00	16.88	12.03	2.00	0.00	0.71	0.00
16.95	11.91	2.00	0.00	0.71	0.00	17.01	11.89	2.00	0.00	0.71	0.00
17.07	11.88	2.00	0.00	0.71	0.00	17.13	12.15	2.00	0.00	0.71	0.00
17.19	12.33	2.00	0.00	0.71	0.00	17.26	12.50	2.00	0.00	0.71	0.00
17.35	12.58	2.00	0.00	0.71	0.00	17.42	12.66	2.00	0.00	0.70	0.00
17.48	12.66	2.00	0.00	0.70	0.00	17.54	12.92	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.61	13.11	2.00	0.00	0.70	0.00	17.67	13.28	2.00	0.00	0.70	0.00
17.73	13.45	2.00	0.00	0.70	0.00	17.78	12.97	2.00	0.00	0.70	0.00
17.89	14.26	2.00	0.00	0.70	0.00	17.92	14.53	2.00	0.00	0.70	0.00
18.00	14.69	2.00	0.00	0.69	0.00	18.07	14.68	2.00	0.00	0.69	0.00
18.11	14.48	2.00	0.00	0.69	0.00	18.19	14.47	2.00	0.00	0.69	0.00
18.27	14.36	2.00	0.00	0.69	0.00	18.34	13.89	2.00	0.00	0.69	0.00
18.38	13.70	2.00	0.00	0.69	0.00	18.45	13.22	2.00	0.00	0.69	0.00
18.53	12.56	2.00	0.00	0.69	0.00	18.60	12.09	2.00	0.00	0.68	0.00
18.64	11.99	2.00	0.00	0.68	0.00	18.72	11.61	2.00	0.00	0.68	0.00
18.80	11.23	2.00	0.00	0.68	0.00	18.87	11.22	2.00	0.00	0.68	0.00
18.91	11.13	2.00	0.00	0.68	0.00	18.99	10.75	2.00	0.00	0.68	0.00
19.06	10.38	2.00	0.00	0.68	0.00	19.10	10.28	2.00	0.00	0.68	0.00
19.17	10.09	2.00	0.00	0.68	0.00	19.24	10.17	2.00	0.00	0.67	0.00
19.32	10.43	2.00	0.00	0.67	0.00	19.36	10.61	2.00	0.00	0.67	0.00
19.43	11.06	2.00	0.00	0.67	0.00	19.52	11.50	2.00	0.00	0.67	0.00
19.59	12.03	2.00	0.00	0.67	0.00	19.62	12.21	2.00	0.00	0.67	0.00
19.70	12.29	2.00	0.00	0.67	0.00	19.78	11.91	2.00	0.00	0.66	0.00
19.82	11.82	2.00	0.00	0.66	0.00	19.89	10.99	2.00	0.00	0.66	0.00
19.96	11.43	2.00	0.00	0.66	0.00	20.03	11.24	2.00	0.00	0.66	0.00
20.11	11.05	2.00	0.00	0.66	0.00	20.15	11.05	2.00	0.00	0.66	0.00
20.22	11.04	2.00	0.00	0.66	0.00	20.30	11.11	2.00	0.00	0.66	0.00
20.38	10.83	2.00	0.00	0.65	0.00	20.41	10.74	2.00	0.00	0.65	0.00
20.49	10.64	2.00	0.00	0.65	0.00	20.57	10.63	2.00	0.00	0.65	0.00
20.64	10.62	2.00	0.00	0.65	0.00	20.67	10.53	2.00	0.00	0.65	0.00
20.75	10.52	2.00	0.00	0.65	0.00	20.82	10.33	2.00	0.00	0.65	0.00
20.89	11.31	2.00	0.00	0.65	0.00	20.95	11.65	2.00	0.00	0.64	0.00
21.00	11.91	2.00	0.00	0.64	0.00	21.10	12.08	2.00	0.00	0.64	0.00
21.17	12.07	2.00	0.00	0.64	0.00	21.20	12.06	2.00	0.00	0.64	0.00
21.28	11.97	2.00	0.00	0.64	0.00	21.35	12.13	2.00	0.00	0.64	0.00
21.39	12.21	2.00	0.00	0.64	0.00	21.46	12.29	2.00	0.00	0.64	0.00
21.54	12.37	2.00	0.00	0.63	0.00	21.62	12.46	2.00	0.00	0.63	0.00
21.68	12.62	2.00	0.00	0.63	0.00	21.73	12.70	2.00	0.00	0.63	0.00
21.80	12.87	2.00	0.00	0.63	0.00	21.87	13.03	2.00	0.00	0.63	0.00
21.96	13.02	2.00	0.00	0.63	0.00	21.99	13.01	2.00	0.00	0.63	0.00
22.06	12.91	2.00	0.00	0.63	0.00	22.14	12.72	2.00	0.00	0.62	0.00
22.18	12.72	2.00	0.00	0.62	0.00	22.26	12.44	2.00	0.00	0.62	0.00
22.33	12.07	2.00	0.00	0.62	0.00	22.41	11.62	2.00	0.00	0.62	0.00
22.45	11.35	2.00	0.00	0.62	0.00	22.51	10.99	2.00	0.00	0.62	0.00
22.59	10.72	2.00	0.00	0.62	0.00	22.67	10.45	2.00	0.00	0.62	0.00
22.71	10.36	2.00	0.00	0.62	0.00	22.78	10.17	2.00	0.00	0.61	0.00
22.86	10.08	2.00	0.00	0.61	0.00	22.93	9.89	2.00	0.00	0.61	0.00
22.97	9.98	2.00	0.00	0.61	0.00	23.04	9.97	2.00	0.00	0.61	0.00
23.12	9.96	2.00	0.00	0.61	0.00	23.18	9.95	2.00	0.00	0.61	0.00
23.25	9.94	2.00	0.00	0.61	0.00	23.31	9.76	2.00	0.00	0.60	0.00
23.39	9.58	2.00	0.00	0.60	0.00	23.44	9.40	2.00	0.00	0.60	0.00
23.50	9.22	2.00	0.00	0.60	0.00	23.58	9.13	2.00	0.00	0.60	0.00
23.66	9.12	2.00	0.00	0.60	0.00	23.69	9.12	2.00	0.00	0.60	0.00
23.77	9.11	2.00	0.00	0.60	0.00	23.84	9.27	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.91	9.26	2.00	0.00	0.59	0.00	23.99	9.00	2.00	0.00	0.59	0.00
24.03	8.99	2.00	0.00	0.59	0.00	24.10	8.99	2.00	0.00	0.59	0.00
24.17	8.98	2.00	0.00	0.59	0.00	24.25	8.97	2.00	0.00	0.59	0.00
24.29	8.97	2.00	0.00	0.59	0.00	24.36	8.96	2.00	0.00	0.59	0.00
24.43	9.04	2.00	0.00	0.59	0.00	24.51	8.95	2.00	0.00	0.58	0.00
24.55	8.94	2.00	0.00	0.58	0.00	24.62	8.94	2.00	0.00	0.58	0.00
24.69	8.93	2.00	0.00	0.58	0.00	24.77	8.92	2.00	0.00	0.58	0.00
24.84	8.91	2.00	0.00	0.58	0.00	24.87	8.91	2.00	0.00	0.58	0.00
24.95	8.99	2.00	0.00	0.58	0.00	25.03	8.98	2.00	0.00	0.58	0.00
25.10	9.06	2.00	0.00	0.57	0.00	25.18	9.22	2.00	0.00	0.57	0.00
25.22	9.39	2.00	0.00	0.57	0.00	25.28	10.58	2.00	0.00	0.57	0.00
25.34	11.84	2.00	0.00	0.57	0.00	25.41	11.75	2.00	0.00	0.57	0.00
25.47	11.23	2.00	0.00	0.57	0.00	25.53	10.12	2.00	0.00	0.57	0.00
25.62	9.10	2.00	0.00	0.57	0.00	25.69	8.92	2.00	0.00	0.56	0.00
25.74	8.92	2.00	0.00	0.56	0.00	25.81	8.99	2.00	0.00	0.56	0.00
25.88	9.16	2.00	0.00	0.56	0.00	25.94	9.15	2.00	0.00	0.56	0.00
26.01	9.23	2.00	0.00	0.56	0.00	26.07	9.39	2.00	0.00	0.56	0.00
26.13	9.39	2.00	0.00	0.56	0.00	26.20	9.63	2.00	0.00	0.56	0.00
26.26	9.88	2.00	0.00	0.55	0.00	26.33	10.21	2.00	0.00	0.55	0.00
26.39	10.29	2.00	0.00	0.55	0.00	26.44	10.45	2.00	0.00	0.55	0.00
26.51	10.36	2.00	0.00	0.55	0.00	26.61	9.93	2.00	0.00	0.55	0.00
26.68	9.92	2.00	0.00	0.55	0.00	26.73	9.83	2.00	0.00	0.55	0.00
26.80	9.83	2.00	0.00	0.55	0.00	26.85	9.65	2.00	0.00	0.54	0.00
26.92	10.23	2.00	0.00	0.54	0.00	26.99	10.40	2.00	0.00	0.54	0.00
27.05	10.47	2.00	0.00	0.54	0.00	27.11	10.47	2.00	0.00	0.54	0.00
27.18	10.38	2.00	0.00	0.54	0.00	27.23	10.54	2.00	0.00	0.54	0.00
27.30	10.70	2.00	0.00	0.54	0.00	27.40	11.35	2.00	0.00	0.54	0.00
27.43	11.69	2.00	0.00	0.54	0.00	27.50	12.68	2.00	0.00	0.53	0.00
27.58	14.75	2.00	0.00	0.53	0.00	27.66	18.42	2.00	0.00	0.53	0.00
27.73	21.40	2.00	0.00	0.53	0.00	27.76	79.70	0.21	2.13	0.53	0.01
27.84	81.92	0.22	2.07	0.53	0.02	27.91	23.02	2.00	0.00	0.53	0.00
27.99	19.34	2.00	0.00	0.53	0.00	28.06	17.65	2.00	0.00	0.52	0.00
28.10	16.82	2.00	0.00	0.52	0.00	28.16	14.81	2.00	0.00	0.52	0.00
28.23	12.15	2.00	0.00	0.52	0.00	28.28	11.06	2.00	0.00	0.52	0.00
28.35	9.90	2.00	0.00	0.52	0.00	28.42	9.15	2.00	0.00	0.52	0.00
28.49	9.06	2.00	0.00	0.52	0.00	28.57	8.97	2.00	0.00	0.52	0.00
28.61	8.97	2.00	0.00	0.52	0.00	28.68	8.96	2.00	0.00	0.51	0.00
28.76	9.28	2.00	0.00	0.51	0.00	28.85	9.85	2.00	0.00	0.51	0.00
28.89	10.25	2.00	0.00	0.51	0.00	28.96	11.14	2.00	0.00	0.51	0.00
29.03	12.05	2.00	0.00	0.51	0.00	29.07	12.53	2.00	0.00	0.51	0.00
29.15	13.26	2.00	0.00	0.51	0.00	29.24	13.49	2.00	0.00	0.50	0.00
29.28	13.40	2.00	0.00	0.50	0.00	29.33	13.56	2.00	0.00	0.50	0.00
29.42	13.79	2.00	0.00	0.50	0.00	29.47	13.94	2.00	0.00	0.50	0.00
29.55	14.18	2.00	0.00	0.50	0.00	29.60	14.33	2.00	0.00	0.50	0.00
29.68	14.32	2.00	0.00	0.50	0.00	29.73	14.15	2.00	0.00	0.50	0.00
29.81	13.89	2.00	0.00	0.49	0.00	29.86	13.93	2.00	0.00	0.49	0.00
29.93	13.96	2.00	0.00	0.49	0.00	30.02	14.19	2.00	0.00	0.49	0.00
30.06	14.26	2.00	0.00	0.49	0.00	30.15	14.17	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.22	14.16	2.00	0.00	0.49	0.00	30.30	14.06	2.00	0.00	0.49	0.00
30.34	13.90	2.00	0.00	0.49	0.00	30.41	13.64	2.00	0.00	0.48	0.00
30.46	13.56	2.00	0.00	0.48	0.00	30.54	13.30	2.00	0.00	0.48	0.00
30.62	12.97	2.00	0.00	0.48	0.00	30.66	12.80	2.00	0.00	0.48	0.00
30.73	12.63	2.00	0.00	0.48	0.00	30.79	12.54	2.00	0.00	0.48	0.00
30.86	12.37	2.00	0.00	0.48	0.00	30.94	12.20	2.00	0.00	0.48	0.00
30.98	12.11	2.00	0.00	0.47	0.00	31.06	11.86	2.00	0.00	0.47	0.00
31.14	11.61	2.00	0.00	0.47	0.00	31.18	11.53	2.00	0.00	0.47	0.00
31.26	11.20	2.00	0.00	0.47	0.00	31.30	11.10	2.00	0.00	0.47	0.00
31.38	10.93	2.00	0.00	0.47	0.00	31.46	10.92	2.00	0.00	0.47	0.00
31.54	11.24	2.00	0.00	0.47	0.00	31.58	11.48	2.00	0.00	0.46	0.00
31.65	11.95	2.00	0.00	0.46	0.00	31.71	12.18	2.00	0.00	0.46	0.00
31.78	12.49	2.00	0.00	0.46	0.00	31.83	12.56	2.00	0.00	0.46	0.00
31.91	12.63	2.00	0.00	0.46	0.00	31.96	11.83	2.00	0.00	0.46	0.00
32.04	12.37	2.00	0.00	0.46	0.00	32.11	12.21	2.00	0.00	0.46	0.00
32.17	12.12	2.00	0.00	0.45	0.00	32.24	12.03	2.00	0.00	0.45	0.00
32.30	11.62	2.00	0.00	0.45	0.00	32.37	11.22	2.00	0.00	0.45	0.00
32.43	10.73	2.00	0.00	0.45	0.00	32.49	10.48	2.00	0.00	0.45	0.00
32.56	10.32	2.00	0.00	0.45	0.00	32.62	10.31	2.00	0.00	0.45	0.00
32.70	10.23	2.00	0.00	0.45	0.00	32.77	10.06	2.00	0.00	0.44	0.00
32.82	9.66	2.00	0.00	0.44	0.00	32.89	10.02	2.00	0.00	0.44	0.00
32.94	9.73	2.00	0.00	0.44	0.00	33.01	9.96	2.00	0.00	0.44	0.00
33.08	10.03	2.00	0.00	0.44	0.00	33.14	9.95	2.00	0.00	0.44	0.00
33.23	10.25	2.00	0.00	0.44	0.00	33.31	10.96	2.00	0.00	0.44	0.00
33.36	11.35	2.00	0.00	0.43	0.00	33.43	11.89	2.00	0.00	0.43	0.00
33.47	11.96	2.00	0.00	0.43	0.00	33.55	11.25	2.00	0.00	0.43	0.00
33.64	10.37	2.00	0.00	0.43	0.00	33.68	10.13	2.00	0.00	0.43	0.00
33.76	10.12	2.00	0.00	0.43	0.00	33.81	10.12	2.00	0.00	0.43	0.00
33.89	10.27	2.00	0.00	0.43	0.00	33.93	10.34	2.00	0.00	0.42	0.00
34.01	10.49	2.00	0.00	0.42	0.00	34.06	10.33	2.00	0.00	0.42	0.00
34.13	10.55	2.00	0.00	0.42	0.00	34.22	10.55	2.00	0.00	0.42	0.00
34.25	10.39	2.00	0.00	0.42	0.00	34.34	10.30	2.00	0.00	0.42	0.00
34.42	10.29	2.00	0.00	0.42	0.00	34.47	10.21	2.00	0.00	0.42	0.00
34.55	10.13	2.00	0.00	0.41	0.00	34.59	10.04	2.00	0.00	0.41	0.00
34.68	10.11	2.00	0.00	0.41	0.00	34.73	9.88	2.00	0.00	0.41	0.00
34.82	10.10	2.00	0.00	0.41	0.00	34.86	10.48	2.00	0.00	0.41	0.00
34.95	12.11	2.00	0.00	0.41	0.00	34.99	13.73	2.00	0.00	0.41	0.00
35.08	15.27	2.00	0.00	0.41	0.00	35.13	14.73	2.00	0.00	0.40	0.00
35.21	11.84	2.00	0.00	0.40	0.00	35.24	10.92	2.00	0.00	0.40	0.00
35.33	10.91	2.00	0.00	0.40	0.00	35.38	11.36	2.00	0.00	0.40	0.00
35.46	12.28	2.00	0.00	0.40	0.00	35.51	12.58	2.00	0.00	0.40	0.00
35.60	12.41	2.00	0.00	0.40	0.00	35.65	12.02	2.00	0.00	0.40	0.00
35.74	11.55	2.00	0.00	0.39	0.00	35.78	11.40	2.00	0.00	0.39	0.00
35.83	11.24	2.00	0.00	0.39	0.00	35.91	12.61	2.00	0.00	0.39	0.00
35.96	14.76	2.00	0.00	0.39	0.00	36.05	21.25	2.00	0.00	0.39	0.00
36.10	23.87	2.00	0.00	0.39	0.00	36.19	24.24	2.00	0.00	0.39	0.00
36.23	23.46	2.00	0.00	0.39	0.00	36.32	22.27	2.00	0.00	0.38	0.00
36.36	20.80	2.00	0.00	0.38	0.00	36.45	17.23	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.49	15.91	2.00	0.00	0.38	0.00	36.58	14.66	2.00	0.00	0.38	0.00
36.63	14.19	2.00	0.00	0.38	0.00	36.71	13.26	2.00	0.00	0.38	0.00
36.76	13.10	2.00	0.00	0.38	0.00	36.86	13.16	2.00	0.00	0.38	0.00
36.90	13.53	2.00	0.00	0.37	0.00	36.99	13.68	2.00	0.00	0.37	0.00
37.03	13.51	2.00	0.00	0.37	0.00	37.08	13.13	2.00	0.00	0.37	0.00
37.16	12.81	2.00	0.00	0.37	0.00	37.21	12.88	2.00	0.00	0.37	0.00
37.30	13.25	2.00	0.00	0.37	0.00	37.34	13.94	2.00	0.00	0.37	0.00
37.43	16.20	2.00	0.00	0.37	0.00	37.47	17.80	2.00	0.00	0.36	0.00
37.57	19.22	2.00	0.00	0.36	0.00	37.61	18.38	2.00	0.00	0.36	0.00
37.69	14.64	2.00	0.00	0.36	0.00	37.75	12.89	2.00	0.00	0.36	0.00
37.83	10.84	2.00	0.00	0.36	0.00	37.87	9.93	2.00	0.00	0.36	0.00
37.95	9.99	2.00	0.00	0.36	0.00	38.03	10.06	2.00	0.00	0.36	0.00
38.08	10.21	2.00	0.00	0.35	0.00	38.15	10.43	2.00	0.00	0.35	0.00
38.20	10.27	2.00	0.00	0.35	0.00	38.27	10.04	2.00	0.00	0.35	0.00
38.33	9.88	2.00	0.00	0.35	0.00	38.40	9.65	2.00	0.00	0.35	0.00
38.45	9.64	2.00	0.00	0.35	0.00	38.53	9.64	2.00	0.00	0.35	0.00
38.62	9.63	2.00	0.00	0.35	0.00	38.66	9.63	2.00	0.00	0.34	0.00
38.74	9.84	2.00	0.00	0.34	0.00	38.82	9.98	2.00	0.00	0.34	0.00
38.87	10.20	2.00	0.00	0.34	0.00	38.95	10.50	2.00	0.00	0.34	0.00
38.98	10.57	2.00	0.00	0.34	0.00	39.06	11.53	2.00	0.00	0.34	0.00
39.13	11.30	2.00	0.00	0.34	0.00	39.22	10.92	2.00	0.00	0.34	0.00
39.26	10.69	2.00	0.00	0.33	0.00	39.32	10.53	2.00	0.00	0.33	0.00
39.40	11.56	2.00	0.00	0.33	0.00	39.44	11.48	2.00	0.00	0.33	0.00
39.54	11.03	2.00	0.00	0.33	0.00	39.58	10.73	2.00	0.00	0.33	0.00
39.67	9.98	2.00	0.00	0.33	0.00	39.71	9.90	2.00	0.00	0.33	0.00
39.80	9.82	2.00	0.00	0.33	0.00	39.85	9.81	2.00	0.00	0.32	0.00
39.90	9.81	2.00	0.00	0.32	0.00	39.99	9.73	2.00	0.00	0.32	0.00
40.03	9.73	2.00	0.00	0.32	0.00	40.12	9.72	2.00	0.00	0.32	0.00
40.21	9.71	2.00	0.00	0.32	0.00	40.25	9.71	2.00	0.00	0.32	0.00
40.30	9.92	2.00	0.00	0.32	0.00	40.38	10.81	2.00	0.00	0.32	0.00
40.43	11.24	2.00	0.00	0.31	0.00	40.53	11.16	2.00	0.00	0.31	0.00
40.57	10.79	2.00	0.00	0.31	0.00	40.65	10.11	2.00	0.00	0.31	0.00
40.69	9.89	2.00	0.00	0.31	0.00	40.79	9.73	2.00	0.00	0.31	0.00
40.82	9.73	2.00	0.00	0.31	0.00	40.92	9.72	2.00	0.00	0.31	0.00
40.97	9.79	2.00	0.00	0.31	0.00	41.04	9.57	2.00	0.00	0.30	0.00
41.08	10.08	2.00	0.00	0.30	0.00	41.15	10.22	2.00	0.00	0.30	0.00
41.24	10.51	2.00	0.00	0.30	0.00	41.28	10.65	2.00	0.00	0.30	0.00
41.36	11.15	2.00	0.00	0.30	0.00	41.41	11.37	2.00	0.00	0.30	0.00
41.48	11.73	2.00	0.00	0.30	0.00	41.56	11.06	2.00	0.00	0.30	0.00
41.60	10.77	2.00	0.00	0.29	0.00	41.69	10.11	2.00	0.00	0.29	0.00
41.74	10.10	2.00	0.00	0.29	0.00	41.82	10.09	2.00	0.00	0.29	0.00
41.87	10.67	2.00	0.00	0.29	0.00	41.95	11.10	2.00	0.00	0.29	0.00
42.02	12.91	2.00	0.00	0.29	0.00	42.06	12.03	2.00	0.00	0.29	0.00
42.15	10.72	2.00	0.00	0.29	0.00	42.23	10.20	2.00	0.00	0.28	0.00
42.28	10.13	2.00	0.00	0.28	0.00	42.35	9.82	2.00	0.00	0.28	0.00
42.40	9.75	2.00	0.00	0.28	0.00	42.47	9.60	2.00	0.00	0.28	0.00
42.55	9.52	2.00	0.00	0.28	0.00	42.59	9.51	2.00	0.00	0.28	0.00
42.67	9.51	2.00	0.00	0.28	0.00	42.76	9.50	2.00	0.00	0.28	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.81	9.64	2.00	0.00	0.27	0.00	42.85	9.71	2.00	0.00	0.27	0.00
42.93	9.92	2.00	0.00	0.27	0.00	42.98	10.07	2.00	0.00	0.27	0.00
43.08	10.56	2.00	0.00	0.27	0.00	43.11	10.92	2.00	0.00	0.27	0.00
43.21	11.56	2.00	0.00	0.27	0.00	43.26	11.77	2.00	0.00	0.27	0.00
43.34	12.19	2.00	0.00	0.27	0.00	43.39	12.11	2.00	0.00	0.26	0.00
43.48	12.25	2.00	0.00	0.26	0.00	43.53	12.24	2.00	0.00	0.26	0.00
43.58	12.45	2.00	0.00	0.26	0.00	43.67	13.03	2.00	0.00	0.26	0.00
43.72	13.16	2.00	0.00	0.26	0.00	43.81	13.37	2.00	0.00	0.26	0.00
43.85	13.44	2.00	0.00	0.26	0.00	43.90	13.43	2.00	0.00	0.26	0.00
43.99	13.35	2.00	0.00	0.25	0.00	44.03	13.49	2.00	0.00	0.25	0.00
44.13	13.62	2.00	0.00	0.25	0.00	44.17	13.40	2.00	0.00	0.25	0.00
44.25	13.54	2.00	0.00	0.25	0.00	44.32	13.24	2.00	0.00	0.25	0.00
44.38	13.09	2.00	0.00	0.25	0.00	44.45	13.01	2.00	0.00	0.25	0.00
44.51	12.86	2.00	0.00	0.25	0.00	44.57	12.49	2.00	0.00	0.24	0.00
44.64	12.20	2.00	0.00	0.24	0.00	44.70	12.33	2.00	0.00	0.24	0.00
44.77	12.11	2.00	0.00	0.24	0.00	44.84	11.68	2.00	0.00	0.24	0.00
44.91	11.10	2.00	0.00	0.24	0.00	44.98	10.60	2.00	0.00	0.24	0.00
45.04	10.38	2.00	0.00	0.24	0.00	45.11	10.24	2.00	0.00	0.24	0.00
45.15	10.09	2.00	0.00	0.23	0.00	45.24	9.94	2.00	0.00	0.23	0.00
45.28	9.87	2.00	0.00	0.23	0.00	45.34	9.71	2.00	0.00	0.23	0.00
45.41	9.57	2.00	0.00	0.23	0.00	45.48	9.42	2.00	0.00	0.23	0.00
45.54	9.28	2.00	0.00	0.23	0.00	45.62	9.27	2.00	0.00	0.23	0.00
45.71	9.26	2.00	0.00	0.23	0.00	45.75	9.26	2.00	0.00	0.22	0.00
45.84	9.25	2.00	0.00	0.22	0.00	45.88	9.25	2.00	0.00	0.22	0.00
45.94	9.32	2.00	0.00	0.22	0.00	46.03	9.38	2.00	0.00	0.22	0.00
46.07	9.31	2.00	0.00	0.22	0.00	46.17	9.44	2.00	0.00	0.22	0.00
46.21	9.44	2.00	0.00	0.22	0.00	46.26	9.43	2.00	0.00	0.22	0.00
46.36	9.43	2.00	0.00	0.21	0.00	46.40	9.42	2.00	0.00	0.21	0.00
46.49	9.28	2.00	0.00	0.21	0.00	46.54	9.27	2.00	0.00	0.21	0.00
46.64	9.48	2.00	0.00	0.21	0.00	46.68	9.54	2.00	0.00	0.21	0.00
46.73	9.54	2.00	0.00	0.21	0.00	46.82	9.39	2.00	0.00	0.21	0.00
46.87	9.39	2.00	0.00	0.21	0.00	46.93	9.04	2.00	0.00	0.20	0.00
47.02	9.10	2.00	0.00	0.20	0.00	47.07	9.10	2.00	0.00	0.20	0.00
47.11	9.09	2.00	0.00	0.20	0.00	47.20	9.16	2.00	0.00	0.20	0.00
47.26	9.29	2.00	0.00	0.20	0.00	47.35	9.64	2.00	0.00	0.20	0.00
47.39	9.71	2.00	0.00	0.20	0.00	47.44	9.77	2.00	0.00	0.20	0.00
47.54	9.77	2.00	0.00	0.19	0.00	47.58	9.83	2.00	0.00	0.19	0.00
47.67	9.96	2.00	0.00	0.19	0.00	47.72	9.82	2.00	0.00	0.19	0.00
47.81	9.81	2.00	0.00	0.19	0.00	47.87	9.81	2.00	0.00	0.19	0.00
47.91	9.81	2.00	0.00	0.19	0.00	47.98	10.08	2.00	0.00	0.19	0.00
48.04	10.49	2.00	0.00	0.19	0.00	48.11	10.55	2.00	0.00	0.18	0.00
48.18	10.69	2.00	0.00	0.18	0.00	48.25	10.89	2.00	0.00	0.18	0.00
48.33	10.67	2.00	0.00	0.18	0.00	48.38	10.53	2.00	0.00	0.18	0.00
48.45	10.11	2.00	0.00	0.18	0.00	48.53	9.63	2.00	0.00	0.18	0.00
48.57	9.48	2.00	0.00	0.18	0.00	48.66	9.20	2.00	0.00	0.18	0.00
48.70	9.06	2.00	0.00	0.17	0.00	48.79	8.85	2.00	0.00	0.17	0.00
48.83	8.71	2.00	0.00	0.17	0.00	48.92	8.70	2.00	0.00	0.17	0.00
48.95	8.70	2.00	0.00	0.17	0.00	49.05	8.56	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.09	8.49	2.00	0.00	0.17	0.00	49.18	8.14	2.00	0.00	0.17	0.00
49.22	8.07	2.00	0.00	0.17	0.00	49.31	7.99	2.00	0.00	0.16	0.00
49.35	7.99	2.00	0.00	0.16	0.00	49.44	7.99	2.00	0.00	0.16	0.00
49.48	7.92	2.00	0.00	0.16	0.00	49.57	8.05	2.00	0.00	0.16	0.00
49.62	8.12	2.00	0.00	0.16	0.00	49.69	8.25	2.00	0.00	0.16	0.00
49.74	8.31	2.00	0.00	0.16	0.00	49.82	8.24	2.00	0.00	0.16	0.00
49.87	8.17	2.00	0.00	0.15	0.00	49.95	8.17	2.00	0.00	0.15	0.00
50.04	8.16	2.00	0.00	0.15	0.00	50.09	8.16	2.00	0.00	0.15	0.00
50.17	8.35	2.00	0.00	0.15	0.00	50.22	8.28	2.00	0.00	0.15	0.00
50.30	8.62	2.00	0.00	0.15	0.00	50.34	8.75	2.00	0.00	0.15	0.00
50.42	9.09	2.00	0.00	0.15	0.00	50.49	9.15	2.00	0.00	0.14	0.00
50.54	9.09	2.00	0.00	0.14	0.00	50.62	8.81	2.00	0.00	0.14	0.00
50.67	8.88	2.00	0.00	0.14	0.00	50.75	8.87	2.00	0.00	0.14	0.00
50.80	8.87	2.00	0.00	0.14	0.00	50.89	8.73	2.00	0.00	0.14	0.00
50.93	8.73	2.00	0.00	0.14	0.00	51.02	8.72	2.00	0.00	0.14	0.00
51.06	8.72	2.00	0.00	0.13	0.00	51.15	8.71	2.00	0.00	0.13	0.00
51.19	8.71	2.00	0.00	0.13	0.00	51.31	8.70	2.00	0.00	0.13	0.00
51.35	8.63	2.00	0.00	0.13	0.00	51.39	8.63	2.00	0.00	0.13	0.00
51.48	8.63	2.00	0.00	0.13	0.00	51.53	8.62	2.00	0.00	0.13	0.00
51.61	8.69	2.00	0.00	0.13	0.00	51.66	8.76	2.00	0.00	0.12	0.00
51.74	8.75	2.00	0.00	0.12	0.00	51.79	10.51	2.00	0.00	0.12	0.00
51.87	12.74	2.00	0.00	0.12	0.00	51.92	14.36	2.00	0.00	0.12	0.00
52.00	15.88	2.00	0.00	0.12	0.00	52.05	12.93	2.00	0.00	0.12	0.00
52.13	12.12	2.00	0.00	0.12	0.00	52.18	10.96	2.00	0.00	0.12	0.00
52.26	10.48	2.00	0.00	0.11	0.00	52.30	10.82	2.00	0.00	0.11	0.00
52.38	11.22	2.00	0.00	0.11	0.00	52.43	11.28	2.00	0.00	0.11	0.00
52.52	11.34	2.00	0.00	0.11	0.00	52.56	11.33	2.00	0.00	0.11	0.00
52.65	11.32	2.00	0.00	0.11	0.00	52.74	11.92	2.00	0.00	0.11	0.00
52.78	11.98	2.00	0.00	0.11	0.00	52.86	11.88	2.00	0.00	0.10	0.00
52.92	11.84	2.00	0.00	0.10	0.00	52.99	11.43	2.00	0.00	0.10	0.00
53.03	11.02	2.00	0.00	0.10	0.00	53.11	10.82	2.00	0.00	0.10	0.00
53.20	10.61	2.00	0.00	0.10	0.00	53.24	10.61	2.00	0.00	0.10	0.00
53.33	10.67	2.00	0.00	0.10	0.00	53.37	10.66	2.00	0.00	0.10	0.00
53.45	10.73	2.00	0.00	0.09	0.00	53.49	10.65	2.00	0.00	0.09	0.00
53.58	10.57	2.00	0.00	0.09	0.00	53.62	10.57	2.00	0.00	0.09	0.00
53.71	10.76	2.00	0.00	0.09	0.00	53.75	10.76	2.00	0.00	0.09	0.00
53.84	10.75	2.00	0.00	0.09	0.00	53.88	10.62	2.00	0.00	0.09	0.00
53.94	10.08	2.00	0.00	0.09	0.00	54.03	10.41	2.00	0.00	0.08	0.00
54.07	10.41	2.00	0.00	0.08	0.00	54.16	10.47	2.00	0.00	0.08	0.00
54.24	10.53	2.00	0.00	0.08	0.00	54.29	10.59	2.00	0.00	0.08	0.00
54.38	10.79	2.00	0.00	0.08	0.00	54.42	10.79	2.00	0.00	0.08	0.00
54.46	10.85	2.00	0.00	0.08	0.00	54.55	10.71	2.00	0.00	0.08	0.00
54.60	10.71	2.00	0.00	0.07	0.00	54.68	10.70	2.00	0.00	0.07	0.00
54.73	10.70	2.00	0.00	0.07	0.00	54.82	10.69	2.00	0.00	0.07	0.00
54.87	10.75	2.00	0.00	0.07	0.00	54.96	10.54	2.00	0.00	0.07	0.00
55.00	10.41	2.00	0.00	0.07	0.00	55.06	10.14	2.00	0.00	0.07	0.00
55.13	9.94	2.00	0.00	0.07	0.00	55.22	9.60	2.00	0.00	0.06	0.00
55.30	9.59	2.00	0.00	0.06	0.00	55.35	9.53	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.40	9.52	2.00	0.00	0.06	0.00	55.48	9.65	2.00	0.00	0.06	0.00
55.53	9.78	2.00	0.00	0.06	0.00	55.62	9.97	2.00	0.00	0.06	0.00
55.66	10.10	2.00	0.00	0.06	0.00	55.76	10.23	2.00	0.00	0.05	0.00
55.80	10.22	2.00	0.00	0.05	0.00	55.84	10.29	2.00	0.00	0.05	0.00
55.93	10.35	2.00	0.00	0.05	0.00	55.97	10.41	2.00	0.00	0.05	0.00
56.04	10.41	2.00	0.00	0.05	0.00	56.14	10.47	2.00	0.00	0.05	0.00
56.17	10.40	2.00	0.00	0.05	0.00	56.27	10.59	2.00	0.00	0.05	0.00
56.30	10.65	2.00	0.00	0.05	0.00	56.40	10.65	2.00	0.00	0.04	0.00
56.45	10.77	2.00	0.00	0.04	0.00	56.53	10.95	2.00	0.00	0.04	0.00
56.58	10.88	2.00	0.00	0.04	0.00	56.66	10.81	2.00	0.00	0.04	0.00
56.72	10.88	2.00	0.00	0.04	0.00	56.78	10.85	2.00	0.00	0.04	0.00
56.84	10.88	2.00	0.00	0.04	0.00	56.89	11.08	2.00	0.00	0.04	0.00
56.97	11.14	2.00	0.00	0.03	0.00	57.03	11.26	2.00	0.00	0.03	0.00
57.11	11.13	2.00	0.00	0.03	0.00	57.18	11.06	2.00	0.00	0.03	0.00
57.23	10.99	2.00	0.00	0.03	0.00	57.30	10.78	2.00	0.00	0.03	0.00
57.38	10.64	2.00	0.00	0.03	0.00	57.42	10.64	2.00	0.00	0.03	0.00
57.49	10.63	2.00	0.00	0.03	0.00	57.58	11.15	2.00	0.00	0.02	0.00
57.66	11.34	2.00	0.00	0.02	0.00	57.70	11.47	2.00	0.00	0.02	0.00
57.79	11.53	2.00	0.00	0.02	0.00	57.83	11.33	2.00	0.00	0.02	0.00
57.93	11.13	2.00	0.00	0.02	0.00	57.96	10.93	2.00	0.00	0.02	0.00
58.05	10.67	2.00	0.00	0.02	0.00	58.09	10.66	2.00	0.00	0.02	0.00
58.18	10.66	2.00	0.00	0.01	0.00	58.21	10.78	2.00	0.00	0.01	0.00
58.31	10.84	2.00	0.00	0.01	0.00	58.34	10.77	2.00	0.00	0.01	0.00
58.43	10.90	2.00	0.00	0.01	0.00	58.48	10.96	2.00	0.00	0.01	0.00
58.57	11.27	2.00	0.00	0.01	0.00	58.61	11.60	2.00	0.00	0.01	0.00
58.69	11.99	2.00	0.00	0.01	0.00	58.73	11.92	2.00	0.00	0.00	0.00
58.82	11.65	2.00	0.00	0.00	0.00	58.91	12.04	2.00	0.00	0.00	0.00
58.95	12.62	2.00	0.00	0.00	0.00	58.99	13.65	2.00	0.00	0.00	0.00
59.08	16.27	2.00	0.00	0.00	0.00	59.13	16.80	2.00	0.00	0.00	0.00
59.20	15.46	2.00	0.00	0.00	0.00	59.26	14.68	2.00	0.00	0.00	0.00
59.32	13.42	2.00	0.00	0.00	0.00	59.40	12.51	2.00	0.00	0.00	0.00
59.46	12.12	2.00	0.00	0.00	0.00	59.52	11.78	2.00	0.00	0.00	0.00
59.59	11.58	2.00	0.00	0.00	0.00	59.65	11.64	2.00	0.00	0.00	0.00
59.74	12.22	2.00	0.00	0.00	0.00	59.80	12.41	2.00	0.00	0.00	0.00
59.86	12.08	2.00	0.00	0.00	0.00	59.93	13.11	2.00	0.00	0.00	0.00
59.99	13.88	2.00	0.00	0.00	0.00	60.04	15.25	2.00	0.00	0.00	0.00
60.11	16.41	2.00	0.00	0.00	0.00	60.19	16.28	2.00	0.00	0.00	0.00
60.24	14.91	2.00	0.00	0.00	0.00	60.33	14.06	2.00	0.00	0.00	0.00
60.39	13.66	2.00	0.00	0.00	0.00	60.45	14.64	2.00	0.00	0.00	0.00
60.51	16.33	2.00	0.00	0.00	0.00	60.57	17.24	2.00	0.00	0.00	0.00
60.66	18.54	2.00	0.00	0.00	0.00	60.72	20.18	2.00	0.00	0.00	0.00
60.78	22.61	2.00	0.00	0.00	0.00	60.83	24.74	2.00	0.00	0.00	0.00
60.92	25.45	2.00	0.00	0.00	0.00	60.98	23.77	2.00	0.00	0.00	0.00
61.04	21.11	2.00	0.00	0.00	0.00	61.10	18.67	2.00	0.00	0.00	0.00
61.16	16.70	2.00	0.00	0.00	0.00	61.22	16.11	2.00	0.00	0.00	0.00
61.32	15.38	2.00	0.00	0.00	0.00	61.37	14.86	2.00	0.00	0.00	0.00
61.44	13.81	2.00	0.00	0.00	0.00	61.49	12.71	2.00	0.00	0.00	0.00
61.55	11.93	2.00	0.00	0.00	0.00	61.64	11.35	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.71	10.95	2.00	0.00	0.00	0.00	61.77	10.69	2.00	0.00	0.00	0.00
61.82	10.69	2.00	0.00	0.00	0.00	61.89	10.68	2.00	0.00	0.00	0.00
61.94	10.74	2.00	0.00	0.00	0.00	62.03	10.92	2.00	0.00	0.00	0.00
62.10	11.17	2.00	0.00	0.00	0.00	62.15	11.50	2.00	0.00	0.00	0.00
62.24	11.49	2.00	0.00	0.00	0.00	62.28	11.35	2.00	0.00	0.00	0.00
62.34	11.15	2.00	0.00	0.00	0.00	62.43	11.15	2.00	0.00	0.00	0.00
62.49	10.70	2.00	0.00	0.00	0.00	62.54	11.27	2.00	0.00	0.00	0.00
62.60	11.46	2.00	0.00	0.00	0.00	62.70	11.45	2.00	0.00	0.00	0.00
62.76	11.45	2.00	0.00	0.00	0.00	62.83	11.82	2.00	0.00	0.00	0.00
62.90	12.63	2.00	0.00	0.00	0.00	62.95	12.88	2.00	0.00	0.00	0.00
63.01	12.75	2.00	0.00	0.00	0.00	63.08	12.11	2.00	0.00	0.00	0.00
63.15	11.41	2.00	0.00	0.00	0.00	63.20	11.09	2.00	0.00	0.00	0.00
63.27	11.47	2.00	0.00	0.00	0.00	63.34	11.21	2.00	0.00	0.00	0.00
63.41	11.52	2.00	0.00	0.00	0.00	63.46	11.64	2.00	0.00	0.00	0.00
63.53	11.70	2.00	0.00	0.00	0.00	63.59	11.95	2.00	0.00	0.00	0.00
63.67	12.19	2.00	0.00	0.00	0.00	63.75	12.56	2.00	0.00	0.00	0.00
63.78	12.87	2.00	0.00	0.00	0.00	63.85	13.49	2.00	0.00	0.00	0.00
63.93	13.74	2.00	0.00	0.00	0.00	64.00	13.48	2.00	0.00	0.00	0.00
64.07	12.91	2.00	0.00	0.00	0.00	64.11	12.66	2.00	0.00	0.00	0.00
64.19	12.47	2.00	0.00	0.00	0.00	64.26	12.53	2.00	0.00	0.00	0.00
64.33	13.98	2.00	0.00	0.00	0.00	64.37	16.04	2.00	0.00	0.00	0.00
64.44	79.87	2.00	0.00	0.00	0.00	64.52	83.14	2.00	0.00	0.00	0.00
64.58	81.15	2.00	0.00	0.00	0.00	64.66	20.23	2.00	0.00	0.00	0.00
64.74	16.78	2.00	0.00	0.00	0.00	64.77	15.20	2.00	0.00	0.00	0.00
64.84	12.85	2.00	0.00	0.00	0.00	64.92	11.53	2.00	0.00	0.00	0.00
64.96	11.27	2.00	0.00	0.00	0.00	65.03	11.20	2.00	0.00	0.00	0.00
65.11	11.07	2.00	0.00	0.00	0.00	65.19	10.87	2.00	0.00	0.00	0.00
65.24	10.37	2.00	0.00	0.00	0.00	65.31	10.61	2.00	0.00	0.00	0.00
65.37	10.48	2.00	0.00	0.00	0.00	65.45	10.48	2.00	0.00	0.00	0.00
65.50	10.48	2.00	0.00	0.00	0.00	65.57	10.66	2.00	0.00	0.00	0.00
65.64	10.84	2.00	0.00	0.00	0.00	65.72	11.15	2.00	0.00	0.00	0.00
65.76	11.21	2.00	0.00	0.00	0.00	65.83	11.14	2.00	0.00	0.00	0.00
65.89	10.88	2.00	0.00	0.00	0.00	65.95	11.82	2.00	0.00	0.00	0.00
66.02	11.69	2.00	0.00	0.00	0.00	66.09	11.56	2.00	0.00	0.00	0.00
66.16	11.37	2.00	0.00	0.00	0.00	66.23	11.24	2.00	0.00	0.00	0.00
66.30	11.04	2.00	0.00	0.00	0.00	66.36	10.98	2.00	0.00	0.00	0.00
66.43	10.98	2.00	0.00	0.00	0.00	66.49	11.09	2.00	0.00	0.00	0.00
66.56	11.28	2.00	0.00	0.00	0.00	66.62	11.64	2.00	0.00	0.00	0.00
66.69	12.63	2.00	0.00	0.00	0.00	66.76	14.13	2.00	0.00	0.00	0.00
66.82	15.25	2.00	0.00	0.00	0.00	66.89	15.74	2.00	0.00	0.00	0.00
66.96	15.98	2.00	0.00	0.00	0.00	67.03	17.22	2.00	0.00	0.00	0.00
67.09	18.92	2.00	0.00	0.00	0.00	67.13	19.43	2.00	0.00	0.00	0.00
67.22	17.15	2.00	0.00	0.00	0.00	67.29	14.45	2.00	0.00	0.00	0.00
67.36	13.25	2.00	0.00	0.00	0.00	67.42	12.38	2.00	0.00	0.00	0.00
67.48	13.30	2.00	0.00	0.00	0.00	67.55	12.49	2.00	0.00	0.00	0.00
67.61	13.36	2.00	0.00	0.00	0.00	67.69	14.72	2.00	0.00	0.00	0.00
67.72	15.52	2.00	0.00	0.00	0.00	67.79	16.64	2.00	0.00	0.00	0.00
67.87	17.00	2.00	0.00	0.00	0.00	67.93	17.00	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
67.99	16.05	2.00	0.00	0.00	0.00	68.06	15.23	2.00	0.00	0.00	0.00
68.14	14.29	2.00	0.00	0.00	0.00	68.21	13.23	2.00	0.00	0.00	0.00
68.28	13.23	2.00	0.00	0.00	0.00	68.31	13.22	2.00	0.00	0.00	0.00
68.37	14.15	2.00	0.00	0.00	0.00	68.44	14.88	2.00	0.00	0.00	0.00
68.51	14.62	2.00	0.00	0.00	0.00	68.59	15.86	2.00	0.00	0.00	0.00
68.65	15.79	2.00	0.00	0.00	0.00	68.72	15.72	2.00	0.00	0.00	0.00
68.79	16.89	2.00	0.00	0.00	0.00	68.86	19.07	2.00	0.00	0.00	0.00
68.91	19.80	2.00	0.00	0.00	0.00	68.98	20.42	2.00	0.00	0.00	0.00
69.05	20.53	2.00	0.00	0.00	0.00	69.10	20.35	2.00	0.00	0.00	0.00
69.17	19.28	2.00	0.00	0.00	0.00	69.24	18.08	2.00	0.00	0.00	0.00
69.33	17.71	2.00	0.00	0.00	0.00	69.36	17.64	2.00	0.00	0.00	0.00
69.43	17.57	2.00	0.00	0.00	0.00	69.51	17.25	2.00	0.00	0.00	0.00
69.56	16.94	2.00	0.00	0.00	0.00	69.62	16.13	2.00	0.00	0.00	0.00
69.70	15.00	2.00	0.00	0.00	0.00	69.78	14.07	2.00	0.00	0.00	0.00
69.85	13.07	2.00	0.00	0.00	0.00	69.89	12.70	2.00	0.00	0.00	0.00
69.97	12.39	2.00	0.00	0.00	0.00	70.04	12.69	2.00	0.00	0.00	0.00
70.09	12.32	2.00	0.00	0.00	0.00	70.16	12.68	2.00	0.00	0.00	0.00
70.25	13.47	2.00	0.00	0.00	0.00	70.29	14.01	2.00	0.00	0.00	0.00
70.37	15.97	2.00	0.00	0.00	0.00	70.41	16.95	2.00	0.00	0.00	0.00
70.50	18.68	2.00	0.00	0.00	0.00	70.58	19.98	2.00	0.00	0.00	0.00
70.61	20.73	2.00	0.00	0.00	0.00	70.70	22.10	2.00	0.00	0.00	0.00
70.74	22.54	2.00	0.00	0.00	0.00	70.82	23.29	2.00	0.00	0.00	0.00
70.90	23.84	2.00	0.00	0.00	0.00	70.95	23.90	2.00	0.00	0.00	0.00
71.02	23.70	2.00	0.00	0.00	0.00	71.08	23.57	2.00	0.00	0.00	0.00
71.14	22.42	2.00	0.00	0.00	0.00	71.21	22.09	2.00	0.00	0.00	0.00
71.26	21.77	2.00	0.00	0.00	0.00	71.34	20.82	2.00	0.00	0.00	0.00
71.41	19.93	2.00	0.00	0.00	0.00	71.46	19.24	2.00	0.00	0.00	0.00
71.53	18.30	2.00	0.00	0.00	0.00	71.62	17.67	2.00	0.00	0.00	0.00
71.66	17.48	2.00	0.00	0.00	0.00	71.75	16.73	2.00	0.00	0.00	0.00
71.79	16.23	2.00	0.00	0.00	0.00	71.86	13.24	2.00	0.00	0.00	0.00
71.92	14.62	2.00	0.00	0.00	0.00	72.01	14.55	2.00	0.00	0.00	0.00
72.07	14.48	2.00	0.00	0.00	0.00	72.14	15.15	2.00	0.00	0.00	0.00
72.20	14.90	2.00	0.00	0.00	0.00	72.26	13.98	2.00	0.00	0.00	0.00
72.33	13.49	2.00	0.00	0.00	0.00	72.39	13.00	2.00	0.00	0.00	0.00
72.46	12.51	2.00	0.00	0.00	0.00	72.52	12.56	2.00	0.00	0.00	0.00
72.58	12.56	2.00	0.00	0.00	0.00	72.65	11.84	2.00	0.00	0.00	0.00
72.72	12.37	2.00	0.00	0.00	0.00	72.79	12.78	2.00	0.00	0.00	0.00
72.84	12.77	2.00	0.00	0.00	0.00	72.93	13.25	2.00	0.00	0.00	0.00
73.00	13.49	2.00	0.00	0.00	0.00	73.03	13.54	2.00	0.00	0.00	0.00
73.12	13.53	2.00	0.00	0.00	0.00	73.21	14.37	2.00	0.00	0.00	0.00
73.25	13.82	2.00	0.00	0.00	0.00	73.32	13.69	2.00	0.00	0.00	0.00
73.37	13.87	2.00	0.00	0.00	0.00	73.44	14.10	2.00	0.00	0.00	0.00
73.49	14.22	2.00	0.00	0.00	0.00	73.57	14.33	2.00	0.00	0.00	0.00
73.66	15.65	2.00	0.00	0.00	0.00	73.70	16.43	2.00	0.00	0.00	0.00
73.78	16.78	2.00	0.00	0.00	0.00	73.83	16.90	2.00	0.00	0.00	0.00
73.90	17.01	2.00	0.00	0.00	0.00	73.98	17.61	2.00	0.00	0.00	0.00
74.02	17.54	2.00	0.00	0.00	0.00	74.11	16.20	2.00	0.00	0.00	0.00
74.18	13.31	2.00	0.00	0.00	0.00	74.22	13.13	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.30	12.11	2.00	0.00	0.00	0.00	74.36	11.93	2.00	0.00	0.00	0.00
74.44	11.92	2.00	0.00	0.00	0.00	74.49	11.91	2.00	0.00	0.00	0.00
74.59	12.44	2.00	0.00	0.00	0.00	74.64	12.74	2.00	0.00	0.00	0.00
74.68	12.91	2.00	0.00	0.00	0.00	74.78	13.20	2.00	0.00	0.00	0.00
74.84	13.13	2.00	0.00	0.00	0.00	74.87	13.25	2.00	0.00	0.00	0.00
74.95	12.46	2.00	0.00	0.00	0.00	75.02	12.22	2.00	0.00	0.00	0.00
75.09	12.22	2.00	0.00	0.00	0.00	75.16	12.56	2.00	0.00	0.00	0.00
75.23	12.68	2.00	0.00	0.00	0.00	75.27	12.80	2.00	0.00	0.00	0.00
75.35	13.73	2.00	0.00	0.00	0.00	75.41	14.91	2.00	0.00	0.00	0.00
75.48	15.75	2.00	0.00	0.00	0.00	75.55	15.86	2.00	0.00	0.00	0.00
75.62	16.09	2.00	0.00	0.00	0.00	75.66	16.21	2.00	0.00	0.00	0.00
75.73	16.62	2.00	0.00	0.00	0.00	75.80	17.57	2.00	0.00	0.00	0.00
75.88	18.52	2.00	0.00	0.00	0.00	75.92	18.64	2.00	0.00	0.00	0.00
75.99	18.81	2.00	0.00	0.00	0.00	76.05	18.44	2.00	0.00	0.00	0.00
76.14	17.35	2.00	0.00	0.00	0.00	76.21	16.38	2.00	0.00	0.00	0.00
76.28	15.06	2.00	0.00	0.00	0.00	76.31	14.58	2.00	0.00	0.00	0.00
76.39	14.63	2.00	0.00	0.00	0.00	76.47	15.16	2.00	0.00	0.00	0.00
76.53	15.63	2.00	0.00	0.00	0.00	76.62	14.85	2.00	0.00	0.00	0.00
76.65	14.37	2.00	0.00	0.00	0.00	76.72	13.30	2.00	0.00	0.00	0.00
76.80	12.54	2.00	0.00	0.00	0.00	76.84	12.18	2.00	0.00	0.00	0.00
76.91	11.82	2.00	0.00	0.00	0.00	76.98	11.94	2.00	0.00	0.00	0.00
77.09	11.93	2.00	0.00	0.00	0.00	77.10	11.58	2.00	0.00	0.00	0.00
77.19	13.61	2.00	0.00	0.00	0.00	77.25	14.54	2.00	0.00	0.00	0.00
77.31	14.36	2.00	0.00	0.00	0.00	77.37	13.54	2.00	0.00	0.00	0.00
77.44	13.06	2.00	0.00	0.00	0.00	77.51	12.59	2.00	0.00	0.00	0.00
77.60	12.06	2.00	0.00	0.00	0.00	77.63	12.58	2.00	0.00	0.00	0.00
77.72	12.46	2.00	0.00	0.00	0.00	77.78	12.57	2.00	0.00	0.00	0.00
77.84	12.97	2.00	0.00	0.00	0.00	77.90	12.27	2.00	0.00	0.00	0.00
77.97	11.80	2.00	0.00	0.00	0.00	78.02	12.23	2.00	0.00	0.00	0.00
78.11	11.96	2.00	0.00	0.00	0.00	78.18	12.18	2.00	0.00	0.00	0.00
78.23	12.42	2.00	0.00	0.00	0.00	78.28	12.82	2.00	0.00	0.00	0.00
78.37	13.45	2.00	0.00	0.00	0.00	78.42	13.50	2.00	0.00	0.00	0.00
78.50	13.38	2.00	0.00	0.00	0.00	78.56	13.03	2.00	0.00	0.00	0.00
78.63	12.50	2.00	0.00	0.00	0.00	78.68	12.44	2.00	0.00	0.00	0.00
78.77	12.32	2.00	0.00	0.00	0.00	78.83	12.31	2.00	0.00	0.00	0.00
78.89	12.13	2.00	0.00	0.00	0.00	78.95	12.24	2.00	0.00	0.00	0.00
79.01	12.41	2.00	0.00	0.00	0.00	79.08	12.46	2.00	0.00	0.00	0.00
79.14	12.98	2.00	0.00	0.00	0.00	79.23	13.78	2.00	0.00	0.00	0.00
79.29	14.18	2.00	0.00	0.00	0.00	79.35	14.70	2.00	0.00	0.00	0.00
79.41	15.39	2.00	0.00	0.00	0.00	79.47	15.15	2.00	0.00	0.00	0.00
79.53	15.09	2.00	0.00	0.00	0.00	79.62	16.36	2.00	0.00	0.00	0.00
79.68	17.00	2.00	0.00	0.00	0.00	79.75	16.87	2.00	0.00	0.00	0.00
79.81	16.69	2.00	0.00	0.00	0.00	79.87	16.27	2.00	0.00	0.00	0.00
79.94	15.69	2.00	0.00	0.00	0.00	80.00	15.45	2.00	0.00	0.00	0.00
80.06	14.98	2.00	0.00	0.00	0.00	80.12	14.39	2.00	0.00	0.00	0.00
80.21	14.32	2.00	0.00	0.00	0.00	80.26	13.16	2.00	0.00	0.00	0.00
80.32	13.96	2.00	0.00	0.00	0.00	80.38	13.50	2.00	0.00	0.00	0.00
80.46	13.47	2.00	0.00	0.00	0.00	80.53	13.26	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.61	13.42	2.00	0.00	0.00	0.00	80.65	13.59	2.00	0.00	0.00	0.00
80.72	13.41	2.00	0.00	0.00	0.00	80.80	13.40	2.00	0.00	0.00	0.00
80.84	13.40	2.00	0.00	0.00	0.00	80.91	13.39	2.00	0.00	0.00	0.00
80.97	14.36	2.00	0.00	0.00	0.00	81.07	16.09	2.00	0.00	0.00	0.00
81.13	16.31	2.00	0.00	0.00	0.00	81.19	16.08	2.00	0.00	0.00	0.00
81.25	15.72	2.00	0.00	0.00	0.00	81.32	15.25	2.00	0.00	0.00	0.00
81.37	14.73	2.00	0.00	0.00	0.00	81.46	14.20	2.00	0.00	0.00	0.00
81.52	13.74	2.00	0.00	0.00	0.00	81.58	13.39	2.00	0.00	0.00	0.00
81.65	13.21	2.00	0.00	0.00	0.00	81.71	13.27	2.00	0.00	0.00	0.00
81.77	13.20	2.00	0.00	0.00	0.00	81.83	13.09	2.00	0.00	0.00	0.00
81.90	13.19	2.00	0.00	0.00	0.00	81.96	12.90	2.00	0.00	0.00	0.00
82.03	12.73	2.00	0.00	0.00	0.00	82.09	12.72	2.00	0.00	0.00	0.00
82.15	12.95	2.00	0.00	0.00	0.00	82.24	13.28	2.00	0.00	0.00	0.00
82.31	13.56	2.00	0.00	0.00	0.00	82.37	13.72	2.00	0.00	0.00	0.00
82.43	13.72	2.00	0.00	0.00	0.00	82.49	13.94	2.00	0.00	0.00	0.00
82.55	14.22	2.00	0.00	0.00	0.00	82.64	14.04	2.00	0.00	0.00	0.00
82.70	14.09	2.00	0.00	0.00	0.00	82.77	14.26	2.00	0.00	0.00	0.00
82.82	14.31	2.00	0.00	0.00	0.00	82.89	14.31	2.00	0.00	0.00	0.00
82.95	14.70	2.00	0.00	0.00	0.00	83.01	15.03	2.00	0.00	0.00	0.00
83.07	15.03	2.00	0.00	0.00	0.00	83.15	15.02	2.00	0.00	0.00	0.00
83.22	14.95	2.00	0.00	0.00	0.00	83.31	14.78	2.00	0.00	0.00	0.00
83.36	14.66	2.00	0.00	0.00	0.00	83.42	14.59	2.00	0.00	0.00	0.00
83.49	14.70	2.00	0.00	0.00	0.00	83.55	14.53	2.00	0.00	0.00	0.00
83.61	14.46	2.00	0.00	0.00	0.00	83.67	14.29	2.00	0.00	0.00	0.00
83.74	14.17	2.00	0.00	0.00	0.00	83.80	14.04	2.00	0.00	0.00	0.00
83.86	14.21	2.00	0.00	0.00	0.00	83.93	14.38	2.00	0.00	0.00	0.00
83.99	14.03	2.00	0.00	0.00	0.00	84.08	14.59	2.00	0.00	0.00	0.00
84.13	14.98	2.00	0.00	0.00	0.00	84.22	14.69	2.00	0.00	0.00	0.00
84.27	14.57	2.00	0.00	0.00	0.00	84.34	14.39	2.00	0.00	0.00	0.00
84.40	14.61	2.00	0.00	0.00	0.00	84.47	15.00	2.00	0.00	0.00	0.00
84.53	15.51	2.00	0.00	0.00	0.00	84.59	15.90	2.00	0.00	0.00	0.00
84.65	16.29	2.00	0.00	0.00	0.00	84.73	16.74	2.00	0.00	0.00	0.00
84.79	16.96	2.00	0.00	0.00	0.00	84.85	17.18	2.00	0.00	0.00	0.00
84.93	17.69	2.00	0.00	0.00	0.00	84.98	17.62	2.00	0.00	0.00	0.00
85.04	17.79	2.00	0.00	0.00	0.00	85.13	18.35	2.00	0.00	0.00	0.00
85.18	18.97	2.00	0.00	0.00	0.00	85.27	20.11	2.00	0.00	0.00	0.00
85.32	20.21	2.00	0.00	0.00	0.00	85.38	20.15	2.00	0.00	0.00	0.00
85.45	20.03	2.00	0.00	0.00	0.00	85.52	19.79	2.00	0.00	0.00	0.00
85.57	19.62	2.00	0.00	0.00	0.00	85.65	19.44	2.00	0.00	0.00	0.00
85.71	19.31	2.00	0.00	0.00	0.00	85.77	19.02	2.00	0.00	0.00	0.00
85.83	18.78	2.00	0.00	0.00	0.00	85.91	18.13	2.00	0.00	0.00	0.00
85.99	19.72	2.00	0.00	0.00	0.00	86.05	20.80	2.00	0.00	0.00	0.00
86.11	20.49	2.00	0.00	0.00	0.00	86.18	20.83	2.00	0.00	0.00	0.00
86.24	21.69	2.00	0.00	0.00	0.00	86.30	21.72	2.00	0.00	0.00	0.00
86.36	23.51	2.00	0.00	0.00	0.00	86.43	25.24	2.00	0.00	0.00	0.00
86.50	24.99	2.00	0.00	0.00	0.00	86.56	24.52	2.00	0.00	0.00	0.00
86.62	24.91	2.00	0.00	0.00	0.00	86.69	26.30	2.00	0.00	0.00	0.00
86.75	28.40	2.00	0.00	0.00	0.00	86.84	31.65	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.89	32.95	2.00	0.00	0.00	0.00	86.96	33.68	2.00	0.00	0.00	0.00
87.01	34.10	2.00	0.00	0.00	0.00	87.10	32.81	2.00	0.00	0.00	0.00
87.16	32.21	2.00	0.00	0.00	0.00	87.22	30.88	2.00	0.00	0.00	0.00
87.27	33.23	2.00	0.00	0.00	0.00	87.34	34.34	2.00	0.00	0.00	0.00
87.41	35.16	2.00	0.00	0.00	0.00	87.49	36.10	2.00	0.00	0.00	0.00
87.53	37.05	2.00	0.00	0.00	0.00	87.61	100.87	0.33	0.00	0.00	0.00
87.69	40.07	2.00	0.00	0.00	0.00	87.74	102.59	0.34	0.00	0.00	0.00
87.82	107.46	0.36	0.00	0.00	0.00	87.87	111.50	0.37	0.00	0.00	0.00
87.94	115.82	0.40	0.00	0.00	0.00	88.00	117.27	0.40	0.00	0.00	0.00
88.07	117.49	0.41	0.00	0.00	0.00	88.13	118.89	0.41	0.00	0.00	0.00
88.20	122.84	0.44	0.00	0.00	0.00	88.26	124.08	0.45	0.00	0.00	0.00
88.35	129.04	0.49	0.00	0.00	0.00	88.39	131.11	0.50	0.00	0.00	0.00
88.48	128.15	0.48	0.00	0.00	0.00	88.52	128.60	0.48	0.00	0.00	0.00
88.61	126.13	0.46	0.00	0.00	0.00	88.66	128.34	0.48	0.00	0.00	0.00
88.74	134.76	0.54	0.00	0.00	0.00	88.79	135.02	0.54	0.00	0.00	0.00
88.87	132.79	0.52	0.00	0.00	0.00	88.93	132.11	0.51	0.00	0.00	0.00
88.99	130.71	0.50	0.00	0.00	0.00	89.05	131.02	0.50	0.00	0.00	0.00
89.12	133.10	0.52	0.00	0.00	0.00	89.18	134.84	0.54	0.00	0.00	0.00
89.26	135.74	0.55	0.00	0.00	0.00	89.32	138.29	0.58	0.00	0.00	0.00
89.37	138.51	0.58	0.00	0.00	0.00	89.45	138.52	0.58	0.00	0.00	0.00
89.53	138.56	0.58	0.00	0.00	0.00	89.58	138.82	0.59	0.00	0.00	0.00
89.66	137.66	0.57	0.00	0.00	0.00	89.72	135.77	0.55	0.00	0.00	0.00
89.77	134.56	0.54	0.00	0.00	0.00	89.85	134.29	0.54	0.00	0.00	0.00
89.90	134.82	0.54	0.00	0.00	0.00	89.97	136.85	0.56	0.00	0.00	0.00
90.03	137.52	0.57	0.00	0.00	0.00	90.10	140.49	0.61	0.00	0.00	0.00
90.16	140.86	0.61	0.00	0.00	0.00	90.23	144.82	0.67	0.00	0.00	0.00
90.30	143.44	0.65	0.00	0.00	0.00	90.38	143.09	0.64	0.00	0.00	0.00
90.42	143.29	0.65	0.00	0.00	0.00	90.49	142.10	0.63	0.00	0.00	0.00
90.57	143.72	0.65	0.00	0.00	0.00	90.63	143.30	0.65	0.00	0.00	0.00
90.70	142.79	0.64	0.00	0.00	0.00	90.77	141.99	0.63	0.00	0.00	0.00
90.82	141.40	0.62	0.00	0.00	0.00	90.90	142.21	0.63	0.00	0.00	0.00
90.96	142.06	0.63	0.00	0.00	0.00	91.01	142.01	0.63	0.00	0.00	0.00
91.09	142.80	0.64	0.00	0.00	0.00	91.15	141.97	0.63	0.00	0.00	0.00
91.22	140.23	0.61	0.00	0.00	0.00	91.29	140.51	0.61	0.00	0.00	0.00
91.34	140.90	0.62	0.00	0.00	0.00	91.41	140.67	0.61	0.00	0.00	0.00
91.47	140.04	0.61	0.00	0.00	0.00	91.55	137.44	0.58	0.00	0.00	0.00
91.60	139.76	0.60	0.00	0.00	0.00	91.67	138.11	0.58	0.00	0.00	0.00
91.74	139.16	0.60	0.00	0.00	0.00	91.83	138.28	0.59	0.00	0.00	0.00
91.87	138.28	0.59	0.00	0.00	0.00	91.95	140.42	0.61	0.00	0.00	0.00
92.01	142.81	0.64	0.00	0.00	0.00	92.08	145.22	0.68	0.00	0.00	0.00
92.14	146.03	0.69	0.00	0.00	0.00	92.19	140.78	0.62	0.00	0.00	0.00
92.26	148.54	0.74	0.00	0.00	0.00	92.34	148.03	0.73	0.00	0.00	0.00
92.39	148.41	0.73	0.00	0.00	0.00	92.46	146.95	0.71	0.00	0.00	0.00
92.54	145.51	0.69	0.00	0.00	0.00	92.60	145.57	0.69	0.00	0.00	0.00
92.66	145.50	0.69	0.00	0.00	0.00	92.73	145.72	0.69	0.00	0.00	0.00
92.79	145.22	0.68	0.00	0.00	0.00	92.86	145.56	0.69	0.00	0.00	0.00
92.93	147.17	0.71	0.00	0.00	0.00	92.99	147.12	0.71	0.00	0.00	0.00
93.06	146.05	0.70	0.00	0.00	0.00	93.14	144.93	0.68	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.19	144.58	0.67	0.00	0.00	0.00	93.27	145.28	0.68	0.00	0.00	0.00
93.32	143.01	0.65	0.00	0.00	0.00	93.40	145.78	0.69	0.00	0.00	0.00
93.44	145.55	0.69	0.00	0.00	0.00	93.53	145.56	0.69	0.00	0.00	0.00
93.58	144.94	0.68	0.00	0.00	0.00	93.66	144.38	0.67	0.00	0.00	0.00
93.71	143.33	0.66	0.00	0.00	0.00	93.79	142.22	0.64	0.00	0.00	0.00
93.84	143.38	0.66	0.00	0.00	0.00	93.91	144.83	0.68	0.00	0.00	0.00
93.97	145.47	0.69	0.00	0.00	0.00	94.04	144.34	0.67	0.00	0.00	0.00
94.10	145.24	0.69	0.00	0.00	0.00	94.17	145.11	0.68	0.00	0.00	0.00
94.23	145.82	0.70	0.00	0.00	0.00	94.31	146.92	0.71	0.00	0.00	0.00
94.36	148.65	0.74	0.00	0.00	0.00	94.44	149.17	0.75	0.00	0.00	0.00
94.49	149.67	0.76	0.00	0.00	0.00	94.56	149.33	0.76	0.00	0.00	0.00
94.65	150.36	0.78	0.00	0.00	0.00	94.71	149.69	0.76	0.00	0.00	0.00
94.77	150.09	0.77	0.00	0.00	0.00	94.83	150.21	0.77	0.00	0.00	0.00
94.90	149.46	0.76	0.00	0.00	0.00	94.96	149.81	0.77	0.00	0.00	0.00
95.01	150.18	0.77	0.00	0.00	0.00	95.09	149.36	0.76	0.00	0.00	0.00
95.16	148.85	0.75	0.00	0.00	0.00	95.22	149.60	0.76	0.00	0.00	0.00
95.28	149.12	0.75	0.00	0.00	0.00	95.35	149.06	0.75	0.00	0.00	0.00
95.42	149.00	0.75	0.00	0.00	0.00	95.48	149.10	0.76	0.00	0.00	0.00
95.54	149.72	0.77	0.00	0.00	0.00	95.63	150.55	0.78	0.00	0.00	0.00
95.69	151.40	0.80	0.00	0.00	0.00	95.76	151.75	0.81	0.00	0.00	0.00
95.82	151.87	0.81	0.00	0.00	0.00	95.89	151.83	0.81	0.00	0.00	0.00
95.94	151.78	0.81	0.00	0.00	0.00	96.02	152.25	0.82	0.00	0.00	0.00
96.09	152.60	0.83	0.00	0.00	0.00	96.14	153.50	0.85	0.00	0.00	0.00
96.22	153.15	0.84	0.00	0.00	0.00	96.27	153.29	0.84	0.00	0.00	0.00
96.33	153.24	0.84	0.00	0.00	0.00	96.41	153.24	0.84	0.00	0.00	0.00
96.46	153.15	0.84	0.00	0.00	0.00	96.54	154.88	0.88	0.00	0.00	0.00
96.60	155.40	0.89	0.00	0.00	0.00	96.66	159.50	1.00	0.00	0.00	0.00
96.73	159.13	0.99	0.00	0.00	0.00	96.79	159.43	1.00	0.00	0.00	0.00
96.86	158.58	0.98	0.00	0.00	0.00	96.92	157.59	0.95	0.00	0.00	0.00
96.99	158.63	0.98	0.00	0.00	0.00	97.05	157.72	0.95	0.00	0.00	0.00
97.14	158.61	0.98	0.00	0.00	0.00	97.19	157.20	0.94	0.00	0.00	0.00
97.27	157.57	0.95	0.00	0.00	0.00	97.33	157.32	0.94	0.00	0.00	0.00
97.40	156.90	0.93	0.00	0.00	0.00	97.44	157.23	0.94	0.00	0.00	0.00
97.52	157.17	0.94	0.00	0.00	0.00	97.57	156.90	0.93	0.00	0.00	0.00
97.66	158.06	0.96	0.00	0.00	0.00	97.72	158.52	0.98	0.00	0.00	0.00
97.78	159.76	1.01	0.00	0.00	0.00	97.84	156.20	0.92	0.00	0.00	0.00
97.91	157.22	0.94	0.00	0.00	0.00	97.97	156.51	0.92	0.00	0.00	0.00
98.04	154.70	0.88	0.00	0.00	0.00	98.10	155.34	0.89	0.00	0.00	0.00
98.17	154.67	0.88	0.00	0.00	0.00	98.23	153.33	0.85	0.00	0.00	0.00
98.31	157.05	0.94	0.00	0.00	0.00	98.37	153.87	0.86	0.00	0.00	0.00
98.44	154.37	0.87	0.00	0.00	0.00	98.49	156.24	0.92	0.00	0.00	0.00
98.56	155.74	0.91	0.00	0.00	0.00	98.64	156.55	0.93	0.00	0.00	0.00
98.69	156.61	0.93	0.00	0.00	0.00	98.76	155.96	0.91	0.00	0.00	0.00
98.82	156.73	0.93	0.00	0.00	0.00	98.89	155.32	0.90	0.00	0.00	0.00
98.95	154.64	0.88	0.00	0.00	0.00	99.03	153.15	0.85	0.00	0.00	0.00
99.10	153.14	0.85	0.00	0.00	0.00	99.17	153.03	0.84	0.00	0.00	0.00
99.23	152.95	0.84	0.00	0.00	0.00	99.28	153.04	0.84	0.00	0.00	0.00
99.36	153.51	0.86	0.00	0.00	0.00	99.43	155.38	0.90	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
99.48	156.47	0.93	0.00	0.00	0.00	99.55	158.28	0.98	0.00	0.00	0.00
99.61	157.61	0.96	0.00	0.00	0.00	99.69	152.42	0.83	0.00	0.00	0.00
99.74	137.22	0.59	0.00	0.00	0.00	99.82	84.85	2.00	0.00	0.00	0.00
99.87	86.12	2.00	0.00	0.00	0.00	99.94	85.61	2.00	0.00	0.00	0.00
100.00	84.40	2.00	0.00	0.00	0.00	100.07	83.20	2.00	0.00	0.00	0.00

Total estimated settlement: 0.93

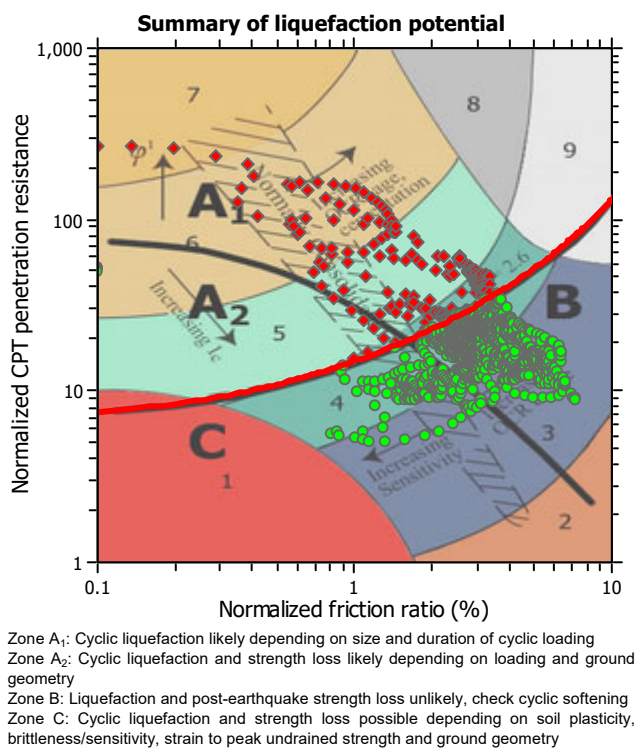
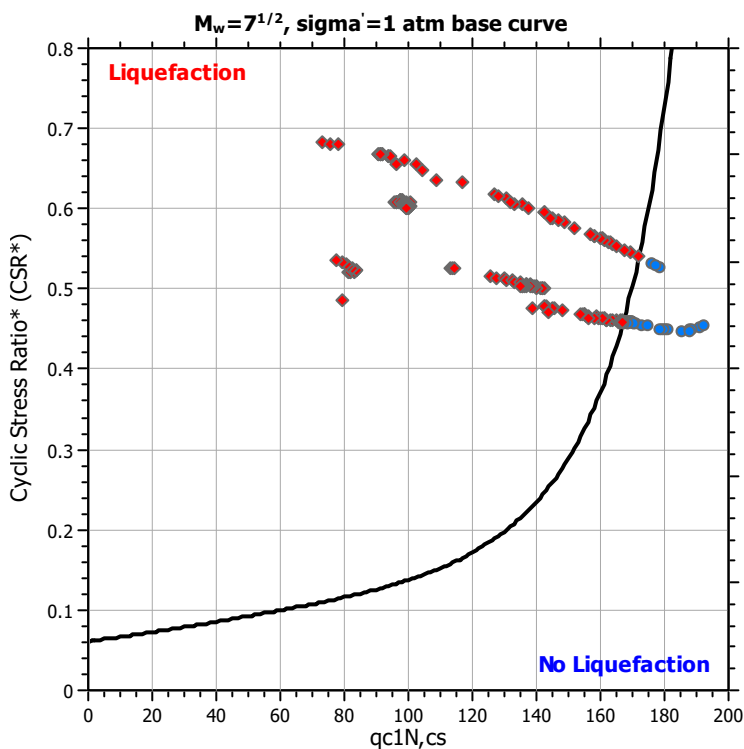
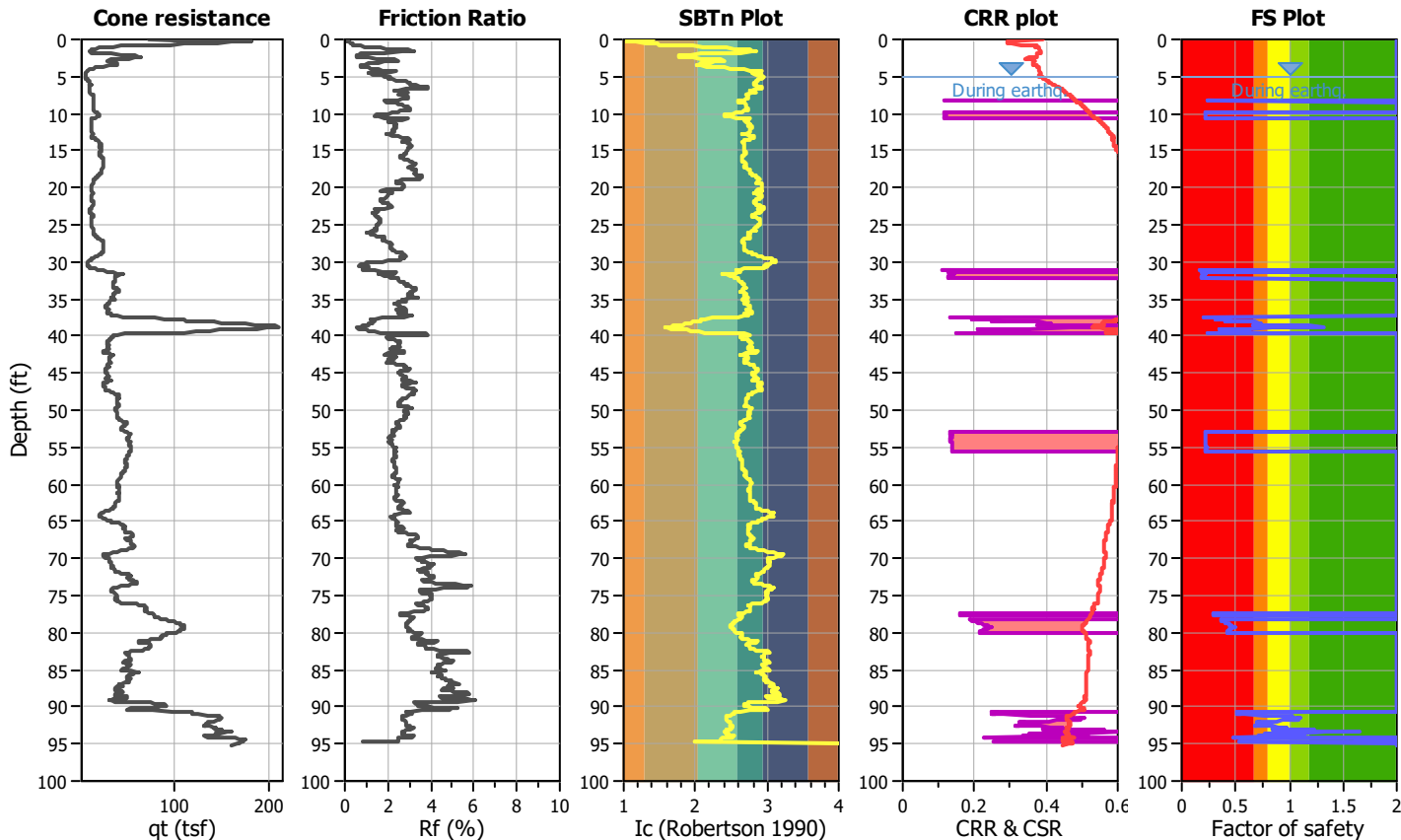
Abbreviations

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

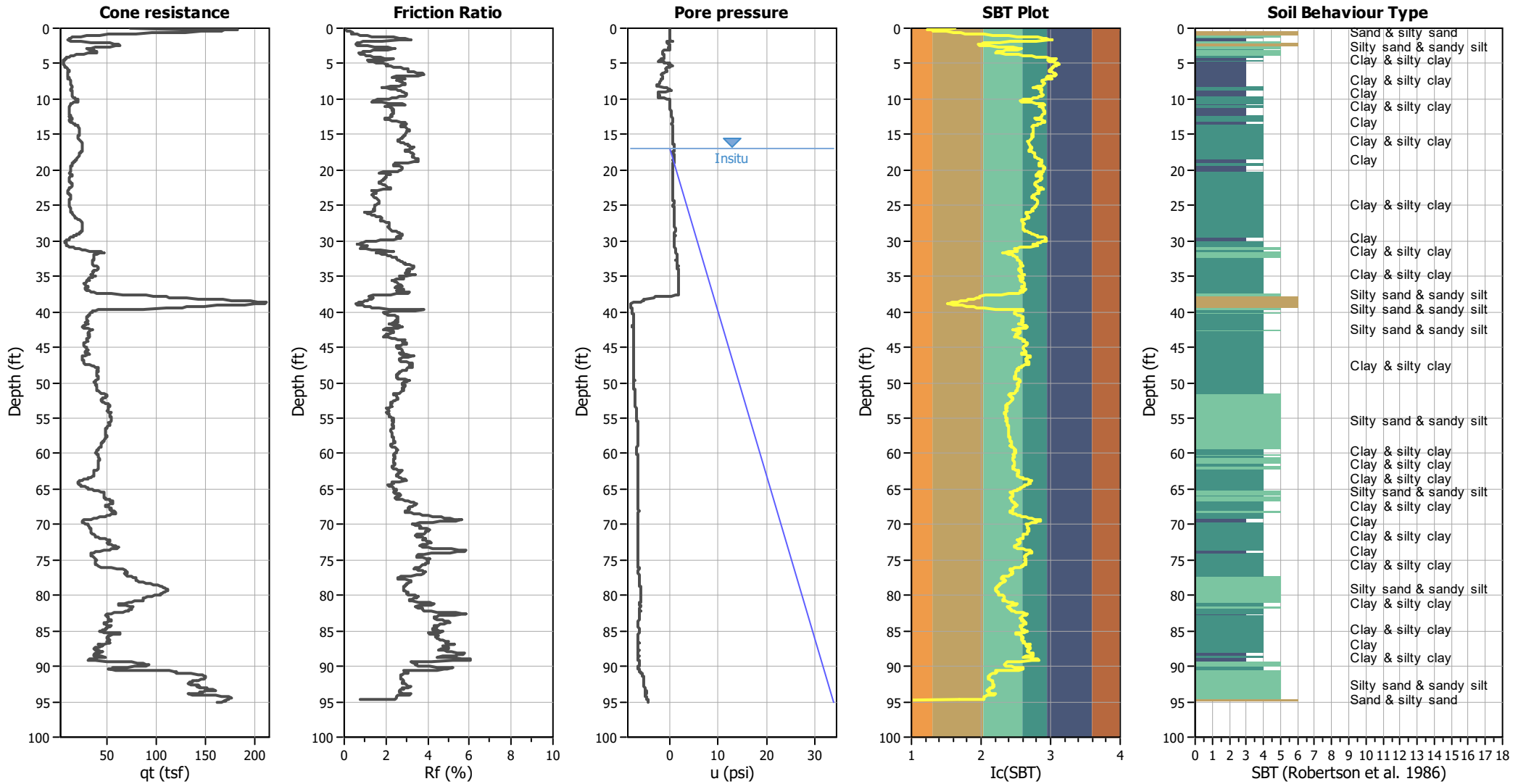
LIQUEFACTION ANALYSIS REPORT

Project title : Victoria Apartments
Location : A9942-88-01
CPT file : C-1
Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.65	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.62	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



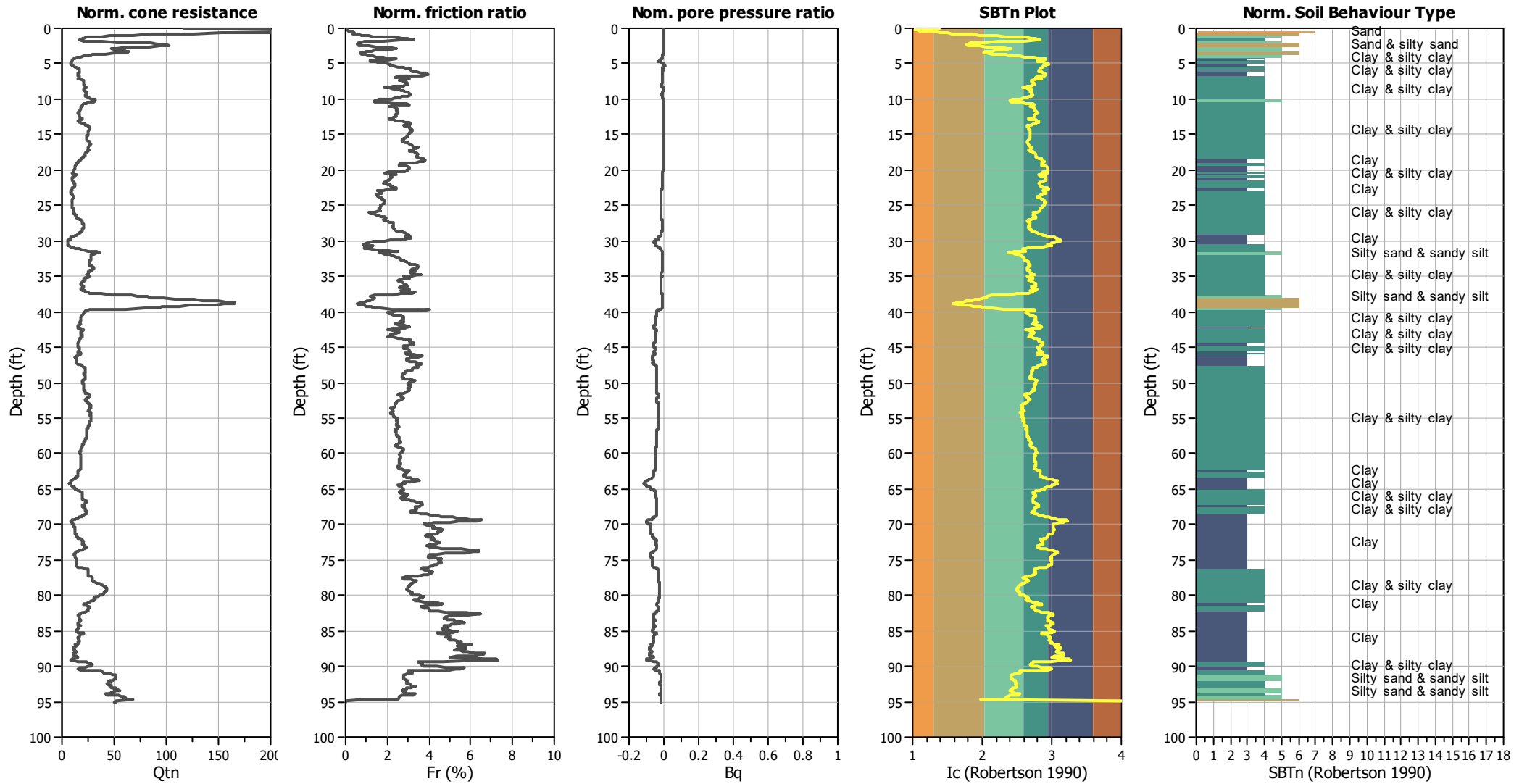
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



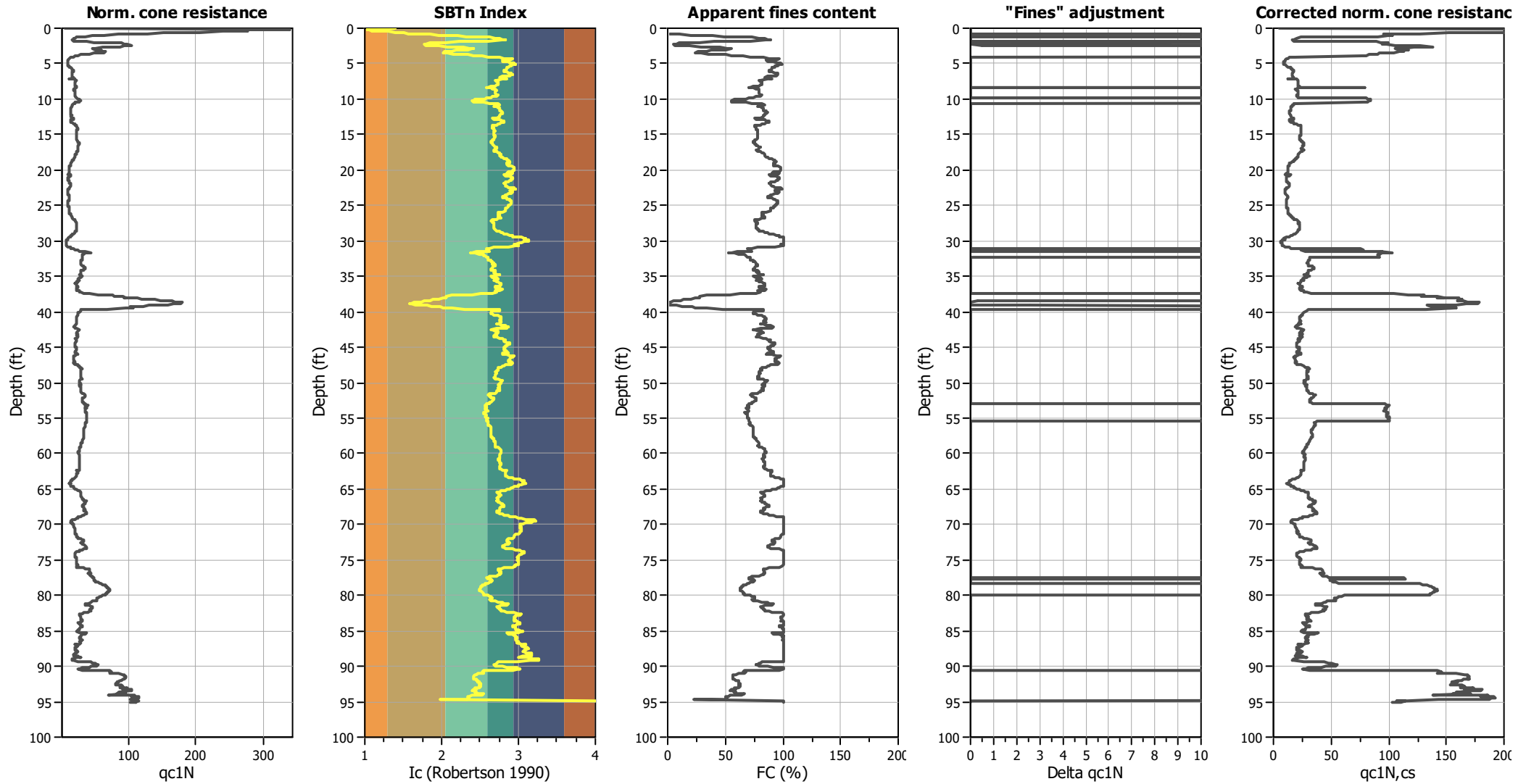
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

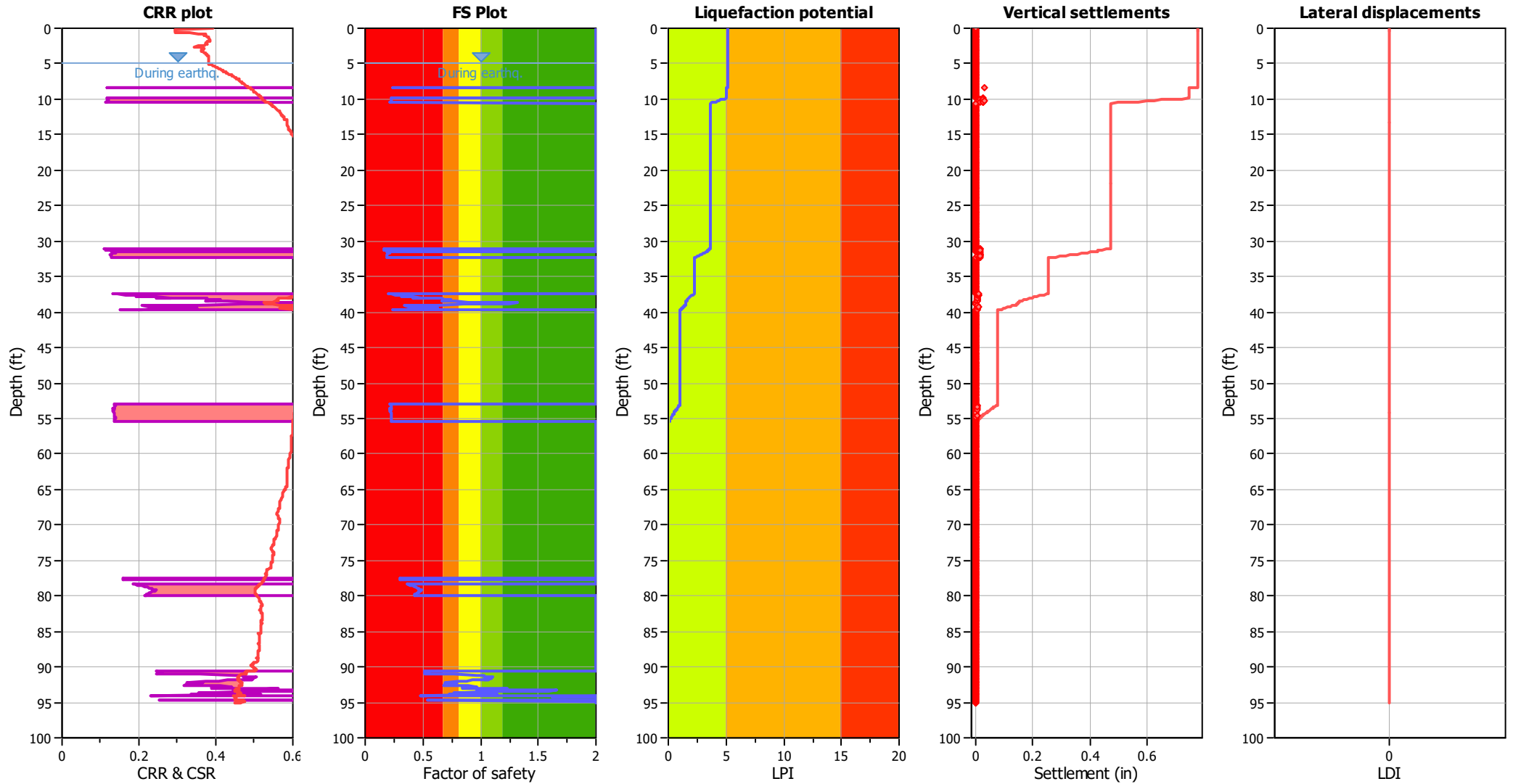
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

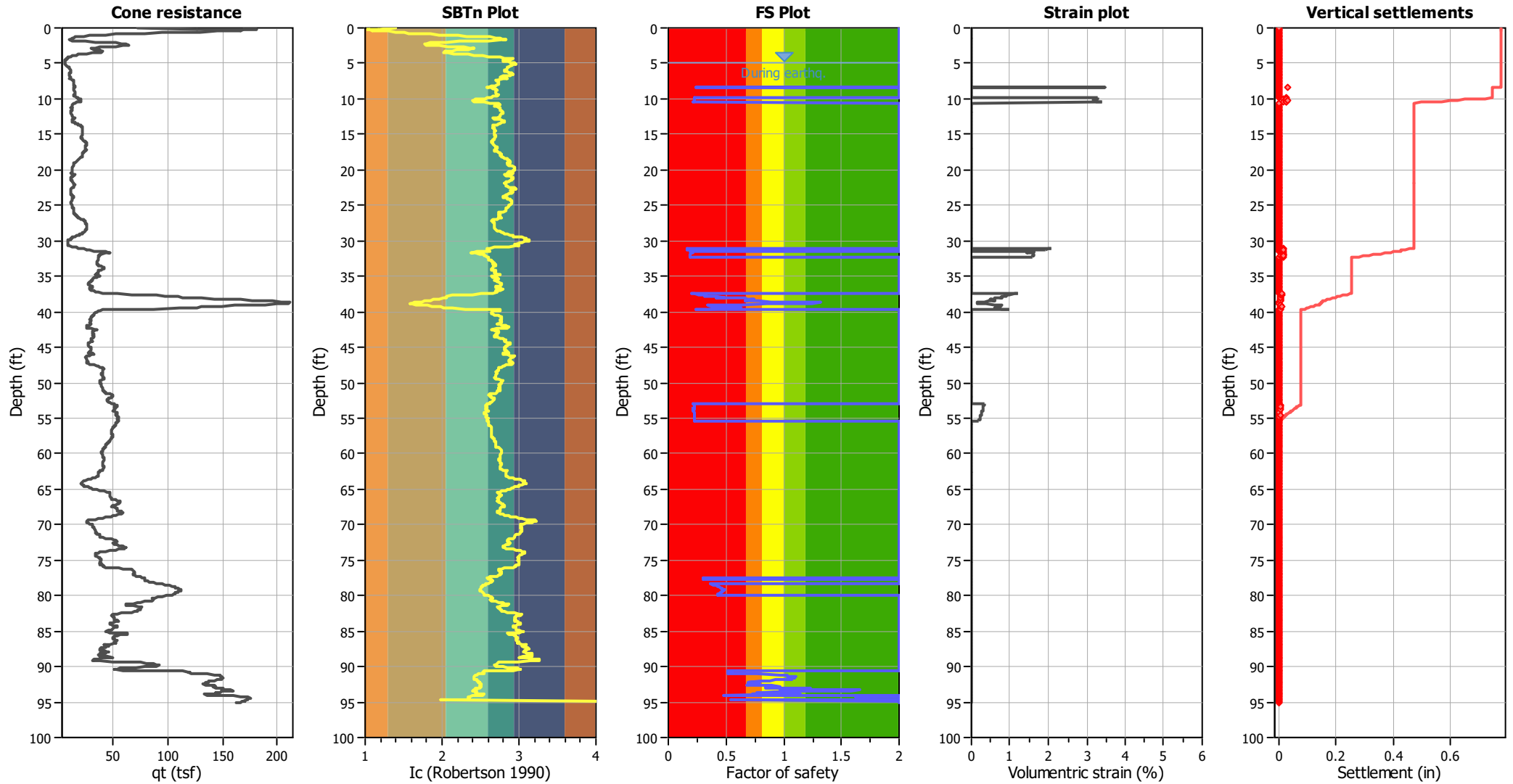
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- q_c: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.02	9.43	2.00	0.00	0.91	0.00	5.08	9.43	2.00	0.00	0.91	0.00
5.14	9.72	2.00	0.00	0.91	0.00	5.20	10.15	2.00	0.00	0.91	0.00
5.27	10.73	2.00	0.00	0.91	0.00	5.33	11.31	2.00	0.00	0.91	0.00
5.39	11.89	2.00	0.00	0.91	0.00	5.46	12.77	2.00	0.00	0.91	0.00
5.52	13.93	2.00	0.00	0.91	0.00	5.59	15.09	2.00	0.00	0.91	0.00
5.66	15.66	2.00	0.00	0.90	0.00	5.73	16.24	2.00	0.00	0.90	0.00
5.79	16.53	2.00	0.00	0.90	0.00	5.87	16.97	2.00	0.00	0.90	0.00
5.93	17.56	2.00	0.00	0.90	0.00	6.00	17.85	2.00	0.00	0.90	0.00
6.07	17.85	2.00	0.00	0.90	0.00	6.13	17.71	2.00	0.00	0.90	0.00
6.20	17.26	2.00	0.00	0.89	0.00	6.27	16.97	2.00	0.00	0.89	0.00
6.32	16.68	2.00	0.00	0.89	0.00	6.37	16.24	2.00	0.00	0.89	0.00
6.45	16.24	2.00	0.00	0.89	0.00	6.51	16.24	2.00	0.00	0.89	0.00
6.58	16.10	2.00	0.00	0.89	0.00	6.64	16.10	2.00	0.00	0.89	0.00
6.71	16.10	2.00	0.00	0.89	0.00	6.77	16.39	2.00	0.00	0.89	0.00
6.84	16.68	2.00	0.00	0.88	0.00	6.91	17.11	2.00	0.00	0.88	0.00
6.99	17.42	2.00	0.00	0.88	0.00	7.02	17.56	2.00	0.00	0.88	0.00
7.09	18.14	2.00	0.00	0.88	0.00	7.18	12.47	2.00	0.00	0.88	0.00
7.25	19.87	2.00	0.00	0.88	0.00	7.32	21.03	2.00	0.00	0.88	0.00
7.35	21.61	2.00	0.00	0.88	0.00	7.43	21.89	2.00	0.00	0.87	0.00
7.50	21.38	2.00	0.00	0.87	0.00	7.57	21.13	2.00	0.00	0.87	0.00
7.64	21.03	2.00	0.00	0.87	0.00	7.71	20.92	2.00	0.00	0.87	0.00
7.75	20.87	2.00	0.00	0.87	0.00	7.83	20.76	2.00	0.00	0.87	0.00
7.89	20.93	2.00	0.00	0.87	0.00	7.97	20.96	2.00	0.00	0.86	0.00
8.01	21.05	2.00	0.00	0.86	0.00	8.08	21.36	2.00	0.00	0.86	0.00
8.15	21.80	2.00	0.00	0.86	0.00	8.22	22.11	2.00	0.00	0.86	0.00
8.30	22.54	2.00	0.00	0.86	0.00	8.37	79.41	0.24	3.47	0.86	0.03
8.41	21.88	2.00	0.00	0.86	0.00	8.47	20.88	2.00	0.00	0.86	0.00
8.55	20.12	2.00	0.00	0.86	0.00	8.62	19.89	2.00	0.00	0.85	0.00
8.69	19.42	2.00	0.00	0.85	0.00	8.73	19.62	2.00	0.00	0.85	0.00
8.81	20.16	2.00	0.00	0.85	0.00	8.87	20.85	2.00	0.00	0.85	0.00
8.94	21.38	2.00	0.00	0.85	0.00	9.01	21.54	2.00	0.00	0.85	0.00
9.09	21.56	2.00	0.00	0.85	0.00	9.16	21.59	2.00	0.00	0.84	0.00
9.19	21.67	2.00	0.00	0.84	0.00	9.26	21.47	2.00	0.00	0.84	0.00
9.33	21.14	2.00	0.00	0.84	0.00	9.41	20.44	2.00	0.00	0.84	0.00
9.48	20.11	2.00	0.00	0.84	0.00	9.52	20.19	2.00	0.00	0.84	0.00
9.58	20.49	2.00	0.00	0.84	0.00	9.67	21.24	2.00	0.00	0.84	0.00
9.73	22.01	2.00	0.00	0.84	0.00	9.80	22.76	2.00	0.00	0.83	0.00
9.87	81.06	0.22	3.30	0.83	0.03	9.94	81.60	0.23	3.27	0.83	0.03
9.98	81.92	0.23	3.26	0.83	0.02	10.05	83.35	0.23	3.20	0.83	0.03
10.12	83.79	0.23	3.18	0.83	0.03	10.19	83.71	0.23	3.17	0.83	0.03
10.26	82.71	0.22	3.21	0.83	0.03	10.34	81.35	0.22	3.25	0.82	0.03
10.38	80.74	0.22	3.27	0.82	0.02	10.44	79.13	0.22	3.33	0.82	0.03
10.51	77.77	0.21	3.39	0.82	0.03	10.58	19.92	2.00	0.00	0.82	0.00
10.66	18.79	2.00	0.00	0.82	0.00	10.73	17.78	2.00	0.00	0.82	0.00
10.76	17.28	2.00	0.00	0.82	0.00	10.83	16.77	2.00	0.00	0.82	0.00
10.91	16.72	2.00	0.00	0.82	0.00	10.98	16.32	2.00	0.00	0.81	0.00
11.05	15.70	2.00	0.00	0.81	0.00	11.11	15.64	2.00	0.00	0.81	0.00
11.18	15.25	2.00	0.00	0.81	0.00	11.24	15.25	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.31	15.26	2.00	0.00	0.81	0.00	11.37	15.21	2.00	0.00	0.81	0.00
11.44	15.28	2.00	0.00	0.81	0.00	11.51	15.23	2.00	0.00	0.80	0.00
11.58	15.17	2.00	0.00	0.80	0.00	11.62	15.04	2.00	0.00	0.80	0.00
11.69	14.65	2.00	0.00	0.80	0.00	11.76	14.27	2.00	0.00	0.80	0.00
11.82	14.01	2.00	0.00	0.80	0.00	11.89	13.85	2.00	0.00	0.80	0.00
11.97	14.02	2.00	0.00	0.80	0.00	12.04	14.20	2.00	0.00	0.80	0.00
12.07	14.29	2.00	0.00	0.80	0.00	12.17	14.88	2.00	0.00	0.79	0.00
12.24	15.15	2.00	0.00	0.79	0.00	12.28	15.34	2.00	0.00	0.79	0.00
12.35	15.51	2.00	0.00	0.79	0.00	12.43	15.25	2.00	0.00	0.79	0.00
12.49	14.88	2.00	0.00	0.79	0.00	12.55	14.84	2.00	0.00	0.79	0.00
12.63	15.75	2.00	0.00	0.79	0.00	12.70	17.63	2.00	0.00	0.78	0.00
12.74	18.14	2.00	0.00	0.78	0.00	12.81	17.55	2.00	0.00	0.78	0.00
12.87	15.80	2.00	0.00	0.78	0.00	12.94	14.17	2.00	0.00	0.78	0.00
13.02	14.12	2.00	0.00	0.78	0.00	13.09	14.08	2.00	0.00	0.78	0.00
13.16	14.03	2.00	0.00	0.78	0.00	13.19	14.64	2.00	0.00	0.78	0.00
13.26	15.85	2.00	0.00	0.78	0.00	13.32	17.06	2.00	0.00	0.77	0.00
13.40	18.03	2.00	0.00	0.77	0.00	13.47	19.10	2.00	0.00	0.77	0.00
13.55	19.98	2.00	0.00	0.77	0.00	13.62	20.93	2.00	0.00	0.77	0.00
13.66	21.40	2.00	0.00	0.77	0.00	13.73	22.55	2.00	0.00	0.77	0.00
13.80	23.31	2.00	0.00	0.77	0.00	13.85	23.46	2.00	0.00	0.77	0.00
13.93	23.69	2.00	0.00	0.76	0.00	14.00	23.62	2.00	0.00	0.76	0.00
14.08	24.24	2.00	0.00	0.76	0.00	14.11	24.31	2.00	0.00	0.76	0.00
14.21	24.51	2.00	0.00	0.76	0.00	14.24	24.38	2.00	0.00	0.76	0.00
14.31	24.01	2.00	0.00	0.76	0.00	14.38	23.85	2.00	0.00	0.76	0.00
14.44	23.79	2.00	0.00	0.76	0.00	14.51	23.44	2.00	0.00	0.75	0.00
14.59	23.70	2.00	0.00	0.75	0.00	14.66	23.69	2.00	0.00	0.75	0.00
14.70	23.75	2.00	0.00	0.75	0.00	14.78	23.68	2.00	0.00	0.75	0.00
14.85	23.62	2.00	0.00	0.75	0.00	14.92	23.56	2.00	0.00	0.75	0.00
15.00	23.49	2.00	0.00	0.75	0.00	15.03	23.46	2.00	0.00	0.75	0.00
15.10	23.30	2.00	0.00	0.74	0.00	15.17	22.96	2.00	0.00	0.74	0.00
15.24	22.52	2.00	0.00	0.74	0.00	15.32	22.45	2.00	0.00	0.74	0.00
15.39	22.39	2.00	0.00	0.74	0.00	15.43	22.36	2.00	0.00	0.74	0.00
15.49	22.41	2.00	0.00	0.74	0.00	15.57	22.53	2.00	0.00	0.74	0.00
15.64	22.58	2.00	0.00	0.73	0.00	15.71	22.52	2.00	0.00	0.73	0.00
15.78	22.93	2.00	0.00	0.73	0.00	15.82	23.28	2.00	0.00	0.73	0.00
15.89	23.96	2.00	0.00	0.73	0.00	15.96	24.75	2.00	0.00	0.73	0.00
16.03	25.44	2.00	0.00	0.73	0.00	16.10	25.65	2.00	0.00	0.73	0.00
16.15	25.70	2.00	0.00	0.73	0.00	16.21	26.11	2.00	0.00	0.73	0.00
16.29	26.50	2.00	0.00	0.72	0.00	16.36	26.34	2.00	0.00	0.72	0.00
16.44	26.18	2.00	0.00	0.72	0.00	16.51	25.84	2.00	0.00	0.72	0.00
16.54	25.63	2.00	0.00	0.72	0.00	16.61	25.39	2.00	0.00	0.72	0.00
16.68	25.15	2.00	0.00	0.72	0.00	16.76	24.89	2.00	0.00	0.72	0.00
16.83	24.83	2.00	0.00	0.71	0.00	16.86	24.90	2.00	0.00	0.71	0.00
16.93	25.11	2.00	0.00	0.71	0.00	17.00	24.51	2.00	0.00	0.71	0.00
17.09	25.47	2.00	0.00	0.71	0.00	17.16	25.81	2.00	0.00	0.71	0.00
17.22	25.33	2.00	0.00	0.71	0.00	17.29	24.77	2.00	0.00	0.71	0.00
17.33	24.48	2.00	0.00	0.71	0.00	17.39	23.92	2.00	0.00	0.71	0.00
17.47	23.44	2.00	0.00	0.70	0.00	17.54	22.96	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.60	22.58	2.00	0.00	0.70	0.00	17.67	22.19	2.00	0.00	0.70	0.00
17.75	21.99	2.00	0.00	0.70	0.00	17.79	21.71	2.00	0.00	0.70	0.00
17.86	21.68	2.00	0.00	0.70	0.00	17.92	21.66	2.00	0.00	0.70	0.00
17.99	21.73	2.00	0.00	0.70	0.00	18.06	21.62	2.00	0.00	0.69	0.00
18.14	20.97	2.00	0.00	0.69	0.00	18.18	20.69	2.00	0.00	0.69	0.00
18.24	20.14	2.00	0.00	0.69	0.00	18.31	19.57	2.00	0.00	0.69	0.00
18.38	18.84	2.00	0.00	0.69	0.00	18.45	18.55	2.00	0.00	0.69	0.00
18.53	18.26	2.00	0.00	0.69	0.00	18.59	17.72	2.00	0.00	0.68	0.00
18.67	17.25	2.00	0.00	0.68	0.00	18.72	17.06	2.00	0.00	0.68	0.00
18.80	16.33	2.00	0.00	0.68	0.00	18.85	15.96	2.00	0.00	0.68	0.00
18.94	15.32	2.00	0.00	0.68	0.00	18.98	14.96	2.00	0.00	0.68	0.00
19.07	14.15	2.00	0.00	0.68	0.00	19.12	13.87	2.00	0.00	0.68	0.00
19.17	13.77	2.00	0.00	0.68	0.00	19.26	13.93	2.00	0.00	0.67	0.00
19.30	14.02	2.00	0.00	0.67	0.00	19.36	13.74	2.00	0.00	0.67	0.00
19.44	13.54	2.00	0.00	0.67	0.00	19.53	12.91	2.00	0.00	0.67	0.00
19.58	12.72	2.00	0.00	0.67	0.00	19.67	12.62	2.00	0.00	0.67	0.00
19.71	12.70	2.00	0.00	0.67	0.00	19.76	12.52	2.00	0.00	0.67	0.00
19.84	12.68	2.00	0.00	0.66	0.00	19.90	12.67	2.00	0.00	0.66	0.00
19.99	12.48	2.00	0.00	0.66	0.00	20.03	12.47	2.00	0.00	0.66	0.00
20.08	12.46	2.00	0.00	0.66	0.00	20.17	12.54	2.00	0.00	0.66	0.00
20.22	12.27	2.00	0.00	0.66	0.00	20.31	12.08	2.00	0.00	0.66	0.00
20.35	11.99	2.00	0.00	0.66	0.00	20.45	11.89	2.00	0.00	0.65	0.00
20.50	11.88	2.00	0.00	0.65	0.00	20.54	11.87	2.00	0.00	0.65	0.00
20.60	9.94	2.00	0.00	0.65	0.00	20.70	14.46	2.00	0.00	0.65	0.00
20.74	14.54	2.00	0.00	0.65	0.00	20.83	13.83	2.00	0.00	0.65	0.00
20.88	13.21	2.00	0.00	0.65	0.00	20.95	11.90	2.00	0.00	0.64	0.00
21.03	11.19	2.00	0.00	0.64	0.00	21.07	11.10	2.00	0.00	0.64	0.00
21.15	10.92	2.00	0.00	0.64	0.00	21.21	11.00	2.00	0.00	0.64	0.00
21.26	10.99	2.00	0.00	0.64	0.00	21.34	10.98	2.00	0.00	0.64	0.00
21.41	10.97	2.00	0.00	0.64	0.00	21.49	11.13	2.00	0.00	0.64	0.00
21.53	11.21	2.00	0.00	0.64	0.00	21.61	11.72	2.00	0.00	0.63	0.00
21.65	11.97	2.00	0.00	0.63	0.00	21.72	12.47	2.00	0.00	0.63	0.00
21.80	12.81	2.00	0.00	0.63	0.00	21.87	13.05	2.00	0.00	0.63	0.00
21.95	13.22	2.00	0.00	0.63	0.00	21.98	13.38	2.00	0.00	0.63	0.00
22.06	13.63	2.00	0.00	0.63	0.00	22.15	13.78	2.00	0.00	0.62	0.00
22.22	13.69	2.00	0.00	0.62	0.00	22.26	13.51	2.00	0.00	0.62	0.00
22.33	13.24	2.00	0.00	0.62	0.00	22.40	12.88	2.00	0.00	0.62	0.00
22.45	12.62	2.00	0.00	0.62	0.00	22.52	11.93	2.00	0.00	0.62	0.00
22.60	11.41	2.00	0.00	0.62	0.00	22.64	11.15	2.00	0.00	0.62	0.00
22.72	10.71	2.00	0.00	0.62	0.00	22.79	10.45	2.00	0.00	0.61	0.00
22.87	10.19	2.00	0.00	0.61	0.00	22.90	10.09	2.00	0.00	0.61	0.00
22.99	10.00	2.00	0.00	0.61	0.00	23.06	9.99	2.00	0.00	0.61	0.00
23.14	9.81	2.00	0.00	0.61	0.00	23.18	10.02	2.00	0.00	0.61	0.00
23.24	10.05	2.00	0.00	0.61	0.00	23.31	10.31	2.00	0.00	0.60	0.00
23.39	10.64	2.00	0.00	0.60	0.00	23.43	10.80	2.00	0.00	0.60	0.00
23.51	11.29	2.00	0.00	0.60	0.00	23.58	11.70	2.00	0.00	0.60	0.00
23.66	12.03	2.00	0.00	0.60	0.00	23.70	12.78	2.00	0.00	0.60	0.00
23.77	13.03	2.00	0.00	0.60	0.00	23.84	12.76	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.90	12.83	2.00	0.00	0.59	0.00	23.97	12.49	2.00	0.00	0.59	0.00
24.02	12.15	2.00	0.00	0.59	0.00	24.09	11.55	2.00	0.00	0.59	0.00
24.16	11.38	2.00	0.00	0.59	0.00	24.23	11.37	2.00	0.00	0.59	0.00
24.31	11.19	2.00	0.00	0.59	0.00	24.34	11.11	2.00	0.00	0.59	0.00
24.41	10.93	2.00	0.00	0.59	0.00	24.48	10.84	2.00	0.00	0.59	0.00
24.56	10.83	2.00	0.00	0.58	0.00	24.63	10.82	2.00	0.00	0.58	0.00
24.71	10.89	2.00	0.00	0.58	0.00	24.76	10.81	2.00	0.00	0.58	0.00
24.84	10.80	2.00	0.00	0.58	0.00	24.88	10.79	2.00	0.00	0.58	0.00
24.96	10.95	2.00	0.00	0.58	0.00	25.02	11.02	2.00	0.00	0.58	0.00
25.11	11.01	2.00	0.00	0.57	0.00	25.15	11.01	2.00	0.00	0.57	0.00
25.20	11.17	2.00	0.00	0.57	0.00	25.28	11.57	2.00	0.00	0.57	0.00
25.33	11.81	2.00	0.00	0.57	0.00	25.41	12.13	2.00	0.00	0.57	0.00
25.47	12.21	2.00	0.00	0.57	0.00	25.55	12.19	2.00	0.00	0.57	0.00
25.60	12.27	2.00	0.00	0.57	0.00	25.69	12.26	2.00	0.00	0.56	0.00
25.73	12.25	2.00	0.00	0.56	0.00	25.79	12.25	2.00	0.00	0.56	0.00
25.87	12.40	2.00	0.00	0.56	0.00	25.96	12.64	2.00	0.00	0.56	0.00
26.01	12.80	2.00	0.00	0.56	0.00	26.06	12.87	2.00	0.00	0.56	0.00
26.14	13.11	2.00	0.00	0.56	0.00	26.18	12.94	2.00	0.00	0.56	0.00
26.27	13.34	2.00	0.00	0.55	0.00	26.33	14.06	2.00	0.00	0.55	0.00
26.41	14.54	2.00	0.00	0.55	0.00	26.47	15.19	2.00	0.00	0.55	0.00
26.51	15.43	2.00	0.00	0.55	0.00	26.58	15.67	2.00	0.00	0.55	0.00
26.65	15.82	2.00	0.00	0.55	0.00	26.73	16.05	2.00	0.00	0.55	0.00
26.79	16.44	2.00	0.00	0.55	0.00	26.86	17.08	2.00	0.00	0.54	0.00
26.93	18.14	2.00	0.00	0.54	0.00	26.99	19.34	2.00	0.00	0.54	0.00
27.07	20.30	2.00	0.00	0.54	0.00	27.14	20.95	2.00	0.00	0.54	0.00
27.18	21.26	2.00	0.00	0.54	0.00	27.24	21.65	2.00	0.00	0.54	0.00
27.31	22.12	2.00	0.00	0.54	0.00	27.40	22.18	2.00	0.00	0.54	0.00
27.46	22.00	2.00	0.00	0.53	0.00	27.53	21.99	2.00	0.00	0.53	0.00
27.56	21.98	2.00	0.00	0.53	0.00	27.66	22.44	2.00	0.00	0.53	0.00
27.70	22.59	2.00	0.00	0.53	0.00	27.77	22.57	2.00	0.00	0.53	0.00
27.84	22.63	2.00	0.00	0.53	0.00	27.91	22.29	2.00	0.00	0.53	0.00
27.99	22.43	2.00	0.00	0.53	0.00	28.03	22.42	2.00	0.00	0.52	0.00
28.11	22.48	2.00	0.00	0.52	0.00	28.16	22.55	2.00	0.00	0.52	0.00
28.23	22.36	2.00	0.00	0.52	0.00	28.29	22.35	2.00	0.00	0.52	0.00
28.37	22.25	2.00	0.00	0.52	0.00	28.42	22.07	2.00	0.00	0.52	0.00
28.51	21.97	2.00	0.00	0.52	0.00	28.55	21.88	2.00	0.00	0.52	0.00
28.65	21.62	2.00	0.00	0.51	0.00	28.68	21.13	2.00	0.00	0.51	0.00
28.75	20.14	2.00	0.00	0.51	0.00	28.84	20.20	2.00	0.00	0.51	0.00
28.87	19.71	2.00	0.00	0.51	0.00	28.97	18.74	2.00	0.00	0.51	0.00
29.00	18.09	2.00	0.00	0.51	0.00	29.10	17.03	2.00	0.00	0.51	0.00
29.14	16.38	2.00	0.00	0.51	0.00	29.22	15.10	2.00	0.00	0.50	0.00
29.28	14.61	2.00	0.00	0.50	0.00	29.36	13.56	2.00	0.00	0.50	0.00
29.41	12.92	2.00	0.00	0.50	0.00	29.49	11.88	2.00	0.00	0.50	0.00
29.54	11.32	2.00	0.00	0.50	0.00	29.63	9.42	2.00	0.00	0.50	0.00
29.68	10.20	2.00	0.00	0.50	0.00	29.76	9.48	2.00	0.00	0.50	0.00
29.80	8.92	2.00	0.00	0.49	0.00	29.88	7.98	2.00	0.00	0.49	0.00
29.93	7.58	2.00	0.00	0.49	0.00	30.00	6.95	2.00	0.00	0.49	0.00
30.06	6.79	2.00	0.00	0.49	0.00	30.15	6.79	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.19	6.78	2.00	0.00	0.49	0.00	30.27	6.78	2.00	0.00	0.49	0.00
30.32	6.93	2.00	0.00	0.49	0.00	30.40	7.32	2.00	0.00	0.48	0.00
30.48	7.47	2.00	0.00	0.48	0.00	30.54	7.54	2.00	0.00	0.48	0.00
30.58	7.54	2.00	0.00	0.48	0.00	30.67	7.77	2.00	0.00	0.48	0.00
30.73	8.54	2.00	0.00	0.48	0.00	30.80	10.02	2.00	0.00	0.48	0.00
30.86	11.88	2.00	0.00	0.48	0.00	30.91	13.75	2.00	0.00	0.48	0.00
31.00	15.31	2.00	0.00	0.47	0.00	31.05	16.23	2.00	0.00	0.47	0.00
31.12	73.19	0.16	2.06	0.47	0.02	31.17	75.37	0.16	2.00	0.47	0.01
31.24	78.06	0.17	1.93	0.47	0.02	31.33	24.20	2.00	0.00	0.47	0.00
31.39	27.18	2.00	0.00	0.47	0.00	31.46	91.03	0.19	1.65	0.47	0.01
31.53	93.89	0.20	1.59	0.47	0.01	31.59	93.71	0.19	1.59	0.46	0.01
31.64	102.71	0.21	1.45	0.46	0.01	31.71	98.45	0.20	1.51	0.46	0.01
31.78	94.34	0.20	1.57	0.46	0.01	31.85	91.79	0.19	1.61	0.46	0.01
31.92	91.58	0.19	1.61	0.46	0.01	31.98	90.55	0.19	1.63	0.46	0.01
32.06	90.79	0.19	1.62	0.46	0.01	32.09	91.13	0.19	1.61	0.46	0.01
32.17	91.58	0.19	1.60	0.45	0.01	32.24	91.19	0.19	1.60	0.45	0.01
32.30	91.46	0.19	1.59	0.45	0.01	32.37	31.19	2.00	0.00	0.45	0.00
32.45	31.48	2.00	0.00	0.45	0.00	32.51	31.46	2.00	0.00	0.45	0.00
32.55	31.44	2.00	0.00	0.45	0.00	32.62	31.42	2.00	0.00	0.45	0.00
32.69	31.01	2.00	0.00	0.45	0.00	32.75	30.04	2.00	0.00	0.45	0.00
32.83	30.34	2.00	0.00	0.44	0.00	32.89	30.08	2.00	0.00	0.44	0.00
32.97	30.37	2.00	0.00	0.44	0.00	33.03	29.56	2.00	0.00	0.44	0.00
33.10	29.69	2.00	0.00	0.44	0.00	33.17	29.75	2.00	0.00	0.44	0.00
33.21	29.81	2.00	0.00	0.44	0.00	33.28	30.03	2.00	0.00	0.44	0.00
33.35	30.08	2.00	0.00	0.43	0.00	33.42	29.98	2.00	0.00	0.43	0.00
33.48	30.74	2.00	0.00	0.43	0.00	33.55	31.88	2.00	0.00	0.43	0.00
33.61	33.34	2.00	0.00	0.43	0.00	33.70	34.23	2.00	0.00	0.43	0.00
33.73	34.68	2.00	0.00	0.43	0.00	33.80	34.89	2.00	0.00	0.43	0.00
33.87	35.02	2.00	0.00	0.43	0.00	33.93	34.83	2.00	0.00	0.42	0.00
34.00	34.49	2.00	0.00	0.42	0.00	34.07	33.15	2.00	0.00	0.42	0.00
34.15	31.34	2.00	0.00	0.42	0.00	34.22	30.09	2.00	0.00	0.42	0.00
34.28	29.61	2.00	0.00	0.42	0.00	34.36	30.04	2.00	0.00	0.42	0.00
34.42	30.17	2.00	0.00	0.42	0.00	34.46	30.00	2.00	0.00	0.42	0.00
34.53	29.36	2.00	0.00	0.41	0.00	34.60	29.26	2.00	0.00	0.41	0.00
34.67	28.40	2.00	0.00	0.41	0.00	34.73	28.46	2.00	0.00	0.41	0.00
34.78	28.68	2.00	0.00	0.41	0.00	34.86	26.42	2.00	0.00	0.41	0.00
34.92	31.30	2.00	0.00	0.41	0.00	34.99	31.50	2.00	0.00	0.41	0.00
35.06	30.64	2.00	0.00	0.41	0.00	35.14	28.85	2.00	0.00	0.40	0.00
35.17	27.78	2.00	0.00	0.40	0.00	35.25	26.16	2.00	0.00	0.40	0.00
35.31	25.00	2.00	0.00	0.40	0.00	35.38	25.36	2.00	0.00	0.40	0.00
35.46	25.86	2.00	0.00	0.40	0.00	35.53	26.37	2.00	0.00	0.40	0.00
35.60	25.52	2.00	0.00	0.40	0.00	35.66	24.52	2.00	0.00	0.40	0.00
35.71	23.83	2.00	0.00	0.39	0.00	35.78	24.12	2.00	0.00	0.39	0.00
35.85	23.57	2.00	0.00	0.39	0.00	35.92	22.43	2.00	0.00	0.39	0.00
35.98	21.74	2.00	0.00	0.39	0.00	36.05	21.95	2.00	0.00	0.39	0.00
36.09	22.09	2.00	0.00	0.39	0.00	36.16	22.15	2.00	0.00	0.39	0.00
36.24	22.58	2.00	0.00	0.39	0.00	36.30	23.69	2.00	0.00	0.38	0.00
36.37	24.87	2.00	0.00	0.38	0.00	36.44	25.45	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.48	25.29	2.00	0.00	0.38	0.00	36.55	24.82	2.00	0.00	0.38	0.00
36.62	23.91	2.00	0.00	0.38	0.00	36.69	22.62	2.00	0.00	0.38	0.00
36.77	22.64	2.00	0.00	0.38	0.00	36.83	22.63	2.00	0.00	0.38	0.00
36.91	22.65	2.00	0.00	0.37	0.00	36.94	23.53	2.00	0.00	0.37	0.00
37.01	25.37	2.00	0.00	0.37	0.00	37.08	26.55	2.00	0.00	0.37	0.00
37.15	26.61	2.00	0.00	0.37	0.00	37.23	27.04	2.00	0.00	0.37	0.00
37.30	28.82	2.00	0.00	0.37	0.00	37.37	32.77	2.00	0.00	0.37	0.00
37.41	96.27	0.20	1.22	0.37	0.01	37.48	104.13	0.22	1.12	0.36	0.01
37.55	116.63	0.26	1.00	0.36	0.01	37.62	126.82	0.30	0.91	0.36	0.01
37.70	130.85	0.33	0.87	0.36	0.01	37.74	128.37	0.31	0.89	0.36	0.00
37.80	135.33	0.36	0.84	0.36	0.01	37.87	142.43	0.41	0.79	0.36	0.01
37.95	149.04	0.48	0.75	0.36	0.01	38.00	142.34	0.41	0.78	0.36	0.00
38.09	160.63	0.67	0.60	0.35	0.01	38.15	160.70	0.67	0.60	0.35	0.00
38.20	162.62	0.72	0.54	0.35	0.00	38.27	163.52	0.74	0.51	0.35	0.00
38.33	162.87	0.72	0.53	0.35	0.00	38.40	160.97	0.68	0.58	0.35	0.01
38.47	160.19	0.66	0.60	0.35	0.01	38.54	165.06	0.78	0.45	0.35	0.00
38.58	169.17	0.90	0.33	0.35	0.00	38.66	176.19	1.18	0.18	0.34	0.00
38.73	178.99	1.33	0.13	0.34	0.00	38.80	177.56	1.25	0.16	0.34	0.00
38.87	171.83	0.99	0.27	0.34	0.00	38.91	167.61	0.85	0.37	0.34	0.00
38.98	158.24	0.63	0.62	0.34	0.01	39.06	145.29	0.44	0.73	0.34	0.01
39.13	133.32	0.34	0.80	0.34	0.01	39.21	137.64	0.37	0.77	0.34	0.01
39.24	146.88	0.46	0.71	0.33	0.00	39.33	144.15	0.43	0.72	0.33	0.01
39.40	151.82	0.52	0.68	0.33	0.01	39.44	158.08	0.62	0.61	0.33	0.00
39.52	156.70	0.60	0.64	0.33	0.01	39.59	131.70	0.33	0.79	0.33	0.01
39.64	108.86	0.24	0.97	0.33	0.01	39.70	36.52	2.00	0.00	0.33	0.00
39.77	30.21	2.00	0.00	0.33	0.00	39.85	29.38	2.00	0.00	0.32	0.00
39.93	29.12	2.00	0.00	0.32	0.00	39.97	28.44	2.00	0.00	0.32	0.00
40.05	26.95	2.00	0.00	0.32	0.00	40.12	25.84	2.00	0.00	0.32	0.00
40.20	25.61	2.00	0.00	0.32	0.00	40.25	25.45	2.00	0.00	0.32	0.00
40.32	25.51	2.00	0.00	0.32	0.00	40.40	24.84	2.00	0.00	0.32	0.00
40.44	24.62	2.00	0.00	0.31	0.00	40.51	24.32	2.00	0.00	0.31	0.00
40.59	23.94	2.00	0.00	0.31	0.00	40.62	23.86	2.00	0.00	0.31	0.00
40.70	23.42	2.00	0.00	0.31	0.00	40.78	23.18	2.00	0.00	0.31	0.00
40.82	23.03	2.00	0.00	0.31	0.00	40.89	22.80	2.00	0.00	0.31	0.00
40.97	22.49	2.00	0.00	0.31	0.00	41.01	22.41	2.00	0.00	0.30	0.00
41.08	22.62	2.00	0.00	0.30	0.00	41.17	23.09	2.00	0.00	0.30	0.00
41.24	23.65	2.00	0.00	0.30	0.00	41.27	23.43	2.00	0.00	0.30	0.00
41.36	22.70	2.00	0.00	0.30	0.00	41.43	22.10	2.00	0.00	0.30	0.00
41.47	22.09	2.00	0.00	0.30	0.00	41.55	22.08	2.00	0.00	0.30	0.00
41.62	21.91	2.00	0.00	0.29	0.00	41.71	23.82	2.00	0.00	0.29	0.00
41.74	23.67	2.00	0.00	0.29	0.00	41.81	22.45	2.00	0.00	0.29	0.00
41.88	21.30	2.00	0.00	0.29	0.00	41.93	20.80	2.00	0.00	0.29	0.00
42.00	20.22	2.00	0.00	0.29	0.00	42.07	19.29	2.00	0.00	0.29	0.00
42.15	19.35	2.00	0.00	0.29	0.00	42.22	19.75	2.00	0.00	0.28	0.00
42.26	19.67	2.00	0.00	0.28	0.00	42.33	19.94	2.00	0.00	0.28	0.00
42.41	22.81	2.00	0.00	0.28	0.00	42.49	26.48	2.00	0.00	0.28	0.00
42.56	26.88	2.00	0.00	0.28	0.00	42.60	26.45	2.00	0.00	0.28	0.00
42.68	25.17	2.00	0.00	0.28	0.00	42.74	23.94	2.00	0.00	0.28	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.80	24.57	2.00	0.00	0.27	0.00	42.86	23.92	2.00	0.00	0.27	0.00
42.93	23.41	2.00	0.00	0.27	0.00	43.00	23.18	2.00	0.00	0.27	0.00
43.06	23.24	2.00	0.00	0.27	0.00	43.13	24.41	2.00	0.00	0.27	0.00
43.20	24.55	2.00	0.00	0.27	0.00	43.26	23.54	2.00	0.00	0.27	0.00
43.34	23.17	2.00	0.00	0.27	0.00	43.40	23.79	2.00	0.00	0.26	0.00
43.44	24.06	2.00	0.00	0.26	0.00	43.54	24.82	2.00	0.00	0.26	0.00
43.57	24.46	2.00	0.00	0.26	0.00	43.65	24.23	2.00	0.00	0.26	0.00
43.73	23.52	2.00	0.00	0.26	0.00	43.80	22.39	2.00	0.00	0.26	0.00
43.84	21.75	2.00	0.00	0.26	0.00	43.91	22.30	2.00	0.00	0.26	0.00
43.97	21.94	2.00	0.00	0.25	0.00	44.04	22.21	2.00	0.00	0.25	0.00
44.12	22.61	2.00	0.00	0.25	0.00	44.19	23.22	2.00	0.00	0.25	0.00
44.24	23.01	2.00	0.00	0.25	0.00	44.31	20.69	2.00	0.00	0.25	0.00
44.39	20.26	2.00	0.00	0.25	0.00	44.43	19.98	2.00	0.00	0.25	0.00
44.50	20.04	2.00	0.00	0.25	0.00	44.59	19.74	2.00	0.00	0.24	0.00
44.62	19.87	2.00	0.00	0.24	0.00	44.70	19.86	2.00	0.00	0.24	0.00
44.77	19.84	2.00	0.00	0.24	0.00	44.82	19.83	2.00	0.00	0.24	0.00
44.88	20.30	2.00	0.00	0.24	0.00	44.95	20.49	2.00	0.00	0.24	0.00
45.02	21.38	2.00	0.00	0.24	0.00	45.08	22.06	2.00	0.00	0.24	0.00
45.15	22.33	2.00	0.00	0.23	0.00	45.22	21.97	2.00	0.00	0.23	0.00
45.28	21.96	2.00	0.00	0.23	0.00	45.36	22.49	2.00	0.00	0.23	0.00
45.43	22.69	2.00	0.00	0.23	0.00	45.50	22.33	2.00	0.00	0.23	0.00
45.56	21.35	2.00	0.00	0.23	0.00	45.63	20.23	2.00	0.00	0.23	0.00
45.71	20.22	2.00	0.00	0.23	0.00	45.75	20.21	2.00	0.00	0.22	0.00
45.81	22.40	2.00	0.00	0.22	0.00	45.89	23.69	2.00	0.00	0.22	0.00
45.97	24.16	2.00	0.00	0.22	0.00	46.01	23.74	2.00	0.00	0.22	0.00
46.08	22.42	2.00	0.00	0.22	0.00	46.16	20.69	2.00	0.00	0.22	0.00
46.20	19.87	2.00	0.00	0.22	0.00	46.27	18.69	2.00	0.00	0.22	0.00
46.35	17.93	2.00	0.00	0.21	0.00	46.42	18.63	2.00	0.00	0.21	0.00
46.50	17.96	2.00	0.00	0.21	0.00	46.54	18.57	2.00	0.00	0.21	0.00
46.61	19.03	2.00	0.00	0.21	0.00	46.69	18.61	2.00	0.00	0.21	0.00
46.72	18.26	2.00	0.00	0.21	0.00	46.81	18.52	2.00	0.00	0.21	0.00
46.88	19.26	2.00	0.00	0.21	0.00	46.94	19.73	2.00	0.00	0.20	0.00
47.02	19.44	2.00	0.00	0.20	0.00	47.07	19.23	2.00	0.00	0.20	0.00
47.16	19.08	2.00	0.00	0.20	0.00	47.20	19.28	2.00	0.00	0.20	0.00
47.29	19.74	2.00	0.00	0.20	0.00	47.33	19.60	2.00	0.00	0.20	0.00
47.42	20.12	2.00	0.00	0.20	0.00	47.46	22.15	2.00	0.00	0.20	0.00
47.51	24.32	2.00	0.00	0.19	0.00	47.60	26.02	2.00	0.00	0.19	0.00
47.65	26.62	2.00	0.00	0.19	0.00	47.74	26.87	2.00	0.00	0.19	0.00
47.78	27.69	2.00	0.00	0.19	0.00	47.87	29.46	2.00	0.00	0.19	0.00
47.91	30.06	2.00	0.00	0.19	0.00	48.00	30.94	2.00	0.00	0.19	0.00
48.06	30.15	2.00	0.00	0.19	0.00	48.10	30.01	2.00	0.00	0.18	0.00
48.20	29.36	2.00	0.00	0.18	0.00	48.23	29.42	2.00	0.00	0.18	0.00
48.33	29.67	2.00	0.00	0.18	0.00	48.36	29.72	2.00	0.00	0.18	0.00
48.43	29.70	2.00	0.00	0.18	0.00	48.49	29.34	2.00	0.00	0.18	0.00
48.56	29.46	2.00	0.00	0.18	0.00	48.62	29.30	2.00	0.00	0.18	0.00
48.69	28.88	2.00	0.00	0.17	0.00	48.76	28.65	2.00	0.00	0.17	0.00
48.82	28.77	2.00	0.00	0.17	0.00	48.89	28.89	2.00	0.00	0.17	0.00
48.95	29.08	2.00	0.00	0.17	0.00	49.02	29.06	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.08	29.59	2.00	0.00	0.17	0.00	49.15	29.64	2.00	0.00	0.17	0.00
49.22	29.56	2.00	0.00	0.17	0.00	49.31	29.53	2.00	0.00	0.16	0.00
49.35	29.86	2.00	0.00	0.16	0.00	49.41	30.47	2.00	0.00	0.16	0.00
49.48	30.46	2.00	0.00	0.16	0.00	49.55	29.22	2.00	0.00	0.16	0.00
49.62	28.12	2.00	0.00	0.16	0.00	49.69	26.94	2.00	0.00	0.16	0.00
49.74	27.04	2.00	0.00	0.16	0.00	49.81	27.11	2.00	0.00	0.16	0.00
49.88	27.03	2.00	0.00	0.15	0.00	49.95	26.81	2.00	0.00	0.15	0.00
50.02	26.92	2.00	0.00	0.15	0.00	50.07	27.31	2.00	0.00	0.15	0.00
50.14	28.25	2.00	0.00	0.15	0.00	50.22	28.23	2.00	0.00	0.15	0.00
50.29	28.41	2.00	0.00	0.15	0.00	50.36	27.79	2.00	0.00	0.15	0.00
50.40	28.39	2.00	0.00	0.15	0.00	50.48	27.49	2.00	0.00	0.14	0.00
50.55	28.35	2.00	0.00	0.14	0.00	50.62	28.74	2.00	0.00	0.14	0.00
50.66	28.93	2.00	0.00	0.14	0.00	50.73	28.30	2.00	0.00	0.14	0.00
50.79	28.96	2.00	0.00	0.14	0.00	50.87	28.47	2.00	0.00	0.14	0.00
50.92	28.46	2.00	0.00	0.14	0.00	51.02	28.44	2.00	0.00	0.14	0.00
51.05	28.77	2.00	0.00	0.13	0.00	51.12	29.15	2.00	0.00	0.13	0.00
51.18	30.01	2.00	0.00	0.13	0.00	51.25	30.33	2.00	0.00	0.13	0.00
51.32	30.11	2.00	0.00	0.13	0.00	51.40	30.15	2.00	0.00	0.13	0.00
51.46	31.01	2.00	0.00	0.13	0.00	51.53	32.41	2.00	0.00	0.13	0.00
51.60	34.36	2.00	0.00	0.13	0.00	51.67	35.69	2.00	0.00	0.12	0.00
51.73	36.01	2.00	0.00	0.12	0.00	51.81	35.18	2.00	0.00	0.12	0.00
51.84	35.10	2.00	0.00	0.12	0.00	51.91	35.49	2.00	0.00	0.12	0.00
51.98	35.34	2.00	0.00	0.12	0.00	52.05	34.03	2.00	0.00	0.12	0.00
52.11	33.34	2.00	0.00	0.12	0.00	52.19	32.50	2.00	0.00	0.12	0.00
52.25	32.08	2.00	0.00	0.11	0.00	52.32	31.79	2.00	0.00	0.11	0.00
52.39	31.29	2.00	0.00	0.11	0.00	52.43	31.35	2.00	0.00	0.11	0.00
52.50	31.39	2.00	0.00	0.11	0.00	52.56	31.37	2.00	0.00	0.11	0.00
52.64	31.35	2.00	0.00	0.11	0.00	52.71	32.00	2.00	0.00	0.11	0.00
52.78	32.58	2.00	0.00	0.11	0.00	52.85	33.10	2.00	0.00	0.10	0.00
52.91	33.97	2.00	0.00	0.10	0.00	52.99	35.36	2.00	0.00	0.10	0.00
53.03	97.31	0.22	0.33	0.10	0.00	53.09	98.42	0.22	0.33	0.10	0.00
53.15	97.91	0.22	0.33	0.10	0.00	53.23	100.74	0.23	0.31	0.10	0.00
53.30	99.67	0.23	0.31	0.10	0.00	53.39	98.27	0.22	0.31	0.10	0.00
53.45	97.69	0.22	0.31	0.09	0.00	53.48	97.52	0.22	0.31	0.09	0.00
53.55	97.20	0.22	0.31	0.09	0.00	53.61	98.44	0.22	0.30	0.09	0.00
53.68	97.38	0.22	0.30	0.09	0.00	53.77	97.50	0.22	0.29	0.09	0.00
53.83	96.96	0.22	0.29	0.09	0.00	53.90	96.07	0.22	0.29	0.09	0.00
53.96	95.82	0.22	0.29	0.09	0.00	54.03	96.23	0.22	0.28	0.08	0.00
54.07	96.49	0.22	0.28	0.08	0.00	54.14	97.78	0.22	0.27	0.08	0.00
54.21	98.86	0.22	0.26	0.08	0.00	54.28	99.25	0.23	0.26	0.08	0.00
54.35	98.85	0.22	0.26	0.08	0.00	54.42	98.38	0.22	0.25	0.08	0.00
54.49	98.15	0.22	0.25	0.08	0.00	54.53	98.05	0.22	0.25	0.08	0.00
54.60	98.27	0.22	0.24	0.07	0.00	54.70	98.73	0.22	0.24	0.07	0.00
54.73	98.68	0.22	0.24	0.07	0.00	54.80	98.78	0.22	0.23	0.07	0.00
54.88	100.35	0.23	0.22	0.07	0.00	54.94	100.62	0.23	0.22	0.07	0.00
55.02	99.51	0.23	0.22	0.07	0.00	55.08	100.02	0.23	0.21	0.07	0.00
55.15	99.46	0.23	0.21	0.07	0.00	55.19	99.12	0.23	0.21	0.06	0.00
55.26	100.17	0.23	0.20	0.06	0.00	55.33	100.13	0.23	0.20	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.39	99.50	0.23	0.20	0.06	0.00	55.45	99.47	0.23	0.19	0.06	0.00
55.52	37.56	2.00	0.00	0.06	0.00	55.58	37.08	2.00	0.00	0.06	0.00
55.65	36.27	2.00	0.00	0.06	0.00	55.71	35.85	2.00	0.00	0.06	0.00
55.81	36.55	2.00	0.00	0.05	0.00	55.84	36.67	2.00	0.00	0.05	0.00
55.94	36.57	2.00	0.00	0.05	0.00	56.01	36.09	2.00	0.00	0.05	0.00
56.04	35.49	2.00	0.00	0.05	0.00	56.11	35.01	2.00	0.00	0.05	0.00
56.18	34.99	2.00	0.00	0.05	0.00	56.25	34.97	2.00	0.00	0.05	0.00
56.32	34.82	2.00	0.00	0.05	0.00	56.38	34.27	2.00	0.00	0.04	0.00
56.45	34.12	2.00	0.00	0.04	0.00	56.50	33.98	2.00	0.00	0.04	0.00
56.58	33.56	2.00	0.00	0.04	0.00	56.64	33.55	2.00	0.00	0.04	0.00
56.72	32.72	2.00	0.00	0.04	0.00	56.79	32.77	2.00	0.00	0.04	0.00
56.83	32.89	2.00	0.00	0.04	0.00	56.89	33.01	2.00	0.00	0.04	0.00
56.98	33.12	2.00	0.00	0.03	0.00	57.03	33.04	2.00	0.00	0.03	0.00
57.09	33.22	2.00	0.00	0.03	0.00	57.18	33.54	2.00	0.00	0.03	0.00
57.24	33.52	2.00	0.00	0.03	0.00	57.29	33.44	2.00	0.00	0.03	0.00
57.37	33.88	2.00	0.00	0.03	0.00	57.43	33.60	2.00	0.00	0.03	0.00
57.50	34.17	2.00	0.00	0.03	0.00	57.56	34.16	2.00	0.00	0.02	0.00
57.62	33.62	2.00	0.00	0.02	0.00	57.69	33.41	2.00	0.00	0.02	0.00
57.75	33.27	2.00	0.00	0.02	0.00	57.82	33.11	2.00	0.00	0.02	0.00
57.88	32.90	2.00	0.00	0.02	0.00	57.94	32.69	2.00	0.00	0.02	0.00
58.04	31.88	2.00	0.00	0.02	0.00	58.10	31.93	2.00	0.00	0.02	0.00
58.17	31.85	2.00	0.00	0.01	0.00	58.23	31.83	2.00	0.00	0.01	0.00
58.29	31.62	2.00	0.00	0.01	0.00	58.36	30.96	2.00	0.00	0.01	0.00
58.42	30.56	2.00	0.00	0.01	0.00	58.48	30.09	2.00	0.00	0.01	0.00
58.53	29.98	2.00	0.00	0.01	0.00	58.61	29.86	2.00	0.00	0.01	0.00
58.67	29.53	2.00	0.00	0.01	0.00	58.73	29.06	2.00	0.00	0.00	0.00
58.79	29.37	2.00	0.00	0.00	0.00	58.89	29.34	2.00	0.00	0.00	0.00
58.95	29.30	2.00	0.00	0.00	0.00	58.99	29.13	2.00	0.00	0.00	0.00
59.06	29.25	2.00	0.00	0.00	0.00	59.12	28.92	2.00	0.00	0.00	0.00
59.19	28.21	2.00	0.00	0.00	0.00	59.27	27.62	2.00	0.00	0.00	0.00
59.34	27.16	2.00	0.00	0.00	0.00	59.41	27.03	2.00	0.00	0.00	0.00
59.46	26.95	2.00	0.00	0.00	0.00	59.54	26.74	2.00	0.00	0.00	0.00
59.62	26.47	2.00	0.00	0.00	0.00	59.66	26.21	2.00	0.00	0.00	0.00
59.74	26.01	2.00	0.00	0.00	0.00	59.79	25.75	2.00	0.00	0.00	0.00
59.87	25.95	2.00	0.00	0.00	0.00	59.91	25.60	2.00	0.00	0.00	0.00
59.98	25.90	2.00	0.00	0.00	0.00	60.06	26.32	2.00	0.00	0.00	0.00
60.12	27.38	2.00	0.00	0.00	0.00	60.18	27.11	2.00	0.00	0.00	0.00
60.25	26.72	2.00	0.00	0.00	0.00	60.31	26.84	2.00	0.00	0.00	0.00
60.38	26.82	2.00	0.00	0.00	0.00	60.44	26.81	2.00	0.00	0.00	0.00
60.50	27.43	2.00	0.00	0.00	0.00	60.57	27.67	2.00	0.00	0.00	0.00
60.63	27.91	2.00	0.00	0.00	0.00	60.70	27.89	2.00	0.00	0.00	0.00
60.77	27.75	2.00	0.00	0.00	0.00	60.85	27.92	2.00	0.00	0.00	0.00
60.92	27.40	2.00	0.00	0.00	0.00	60.98	27.14	2.00	0.00	0.00	0.00
61.06	26.81	2.00	0.00	0.00	0.00	61.10	26.61	2.00	0.00	0.00	0.00
61.16	26.60	2.00	0.00	0.00	0.00	61.24	26.58	2.00	0.00	0.00	0.00
61.30	26.57	2.00	0.00	0.00	0.00	61.39	26.81	2.00	0.00	0.00	0.00
61.42	26.80	2.00	0.00	0.00	0.00	61.49	26.60	2.00	0.00	0.00	0.00
61.56	26.62	2.00	0.00	0.00	0.00	61.63	26.61	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.70	26.62	2.00	0.00	0.00	0.00	61.78	26.98	2.00	0.00	0.00	0.00
61.81	26.97	2.00	0.00	0.00	0.00	61.89	26.95	2.00	0.00	0.00	0.00
61.94	26.94	2.00	0.00	0.00	0.00	62.04	26.92	2.00	0.00	0.00	0.00
62.10	26.66	2.00	0.00	0.00	0.00	62.18	26.84	2.00	0.00	0.00	0.00
62.22	26.77	2.00	0.00	0.00	0.00	62.29	26.33	2.00	0.00	0.00	0.00
62.36	25.52	2.00	0.00	0.00	0.00	62.42	23.83	2.00	0.00	0.00	0.00
62.47	24.88	2.00	0.00	0.00	0.00	62.56	23.99	2.00	0.00	0.00	0.00
62.61	23.98	2.00	0.00	0.00	0.00	62.69	23.97	2.00	0.00	0.00	0.00
62.76	23.89	2.00	0.00	0.00	0.00	62.80	23.76	2.00	0.00	0.00	0.00
62.87	23.69	2.00	0.00	0.00	0.00	62.95	23.55	2.00	0.00	0.00	0.00
63.01	23.42	2.00	0.00	0.00	0.00	63.08	23.35	2.00	0.00	0.00	0.00
63.12	23.22	2.00	0.00	0.00	0.00	63.19	23.08	2.00	0.00	0.00	0.00
63.27	22.52	2.00	0.00	0.00	0.00	63.34	21.60	2.00	0.00	0.00	0.00
63.42	20.61	2.00	0.00	0.00	0.00	63.45	20.31	2.00	0.00	0.00	0.00
63.52	19.46	2.00	0.00	0.00	0.00	63.59	18.19	2.00	0.00	0.00	0.00
63.67	16.93	2.00	0.00	0.00	0.00	63.74	15.60	2.00	0.00	0.00	0.00
63.81	14.59	2.00	0.00	0.00	0.00	63.85	14.29	2.00	0.00	0.00	0.00
63.93	13.70	2.00	0.00	0.00	0.00	64.00	13.51	2.00	0.00	0.00	0.00
64.06	13.33	2.00	0.00	0.00	0.00	64.14	13.15	2.00	0.00	0.00	0.00
64.18	13.09	2.00	0.00	0.00	0.00	64.25	13.20	2.00	0.00	0.00	0.00
64.31	11.62	2.00	0.00	0.00	0.00	64.40	14.12	2.00	0.00	0.00	0.00
64.46	14.59	2.00	0.00	0.00	0.00	64.53	14.88	2.00	0.00	0.00	0.00
64.59	15.22	2.00	0.00	0.00	0.00	64.65	16.46	2.00	0.00	0.00	0.00
64.72	17.51	2.00	0.00	0.00	0.00	64.78	18.09	2.00	0.00	0.00	0.00
64.86	19.04	2.00	0.00	0.00	0.00	64.93	20.22	2.00	0.00	0.00	0.00
64.97	20.64	2.00	0.00	0.00	0.00	65.04	21.53	2.00	0.00	0.00	0.00
65.11	22.60	2.00	0.00	0.00	0.00	65.19	23.98	2.00	0.00	0.00	0.00
65.23	24.70	2.00	0.00	0.00	0.00	65.29	26.27	2.00	0.00	0.00	0.00
65.37	28.28	2.00	0.00	0.00	0.00	65.44	29.68	2.00	0.00	0.00	0.00
65.51	30.03	2.00	0.00	0.00	0.00	65.59	30.27	2.00	0.00	0.00	0.00
65.65	30.07	2.00	0.00	0.00	0.00	65.69	30.20	2.00	0.00	0.00	0.00
65.77	29.94	2.00	0.00	0.00	0.00	65.83	30.30	2.00	0.00	0.00	0.00
65.89	29.91	2.00	0.00	0.00	0.00	65.95	29.90	2.00	0.00	0.00	0.00
66.01	29.57	2.00	0.00	0.00	0.00	66.08	30.04	2.00	0.00	0.00	0.00
66.18	30.64	2.00	0.00	0.00	0.00	66.21	31.06	2.00	0.00	0.00	0.00
66.29	30.80	2.00	0.00	0.00	0.00	66.37	30.85	2.00	0.00	0.00	0.00
66.43	31.64	2.00	0.00	0.00	0.00	66.50	32.96	2.00	0.00	0.00	0.00
66.54	33.45	2.00	0.00	0.00	0.00	66.62	34.43	2.00	0.00	0.00	0.00
66.69	35.85	2.00	0.00	0.00	0.00	66.75	36.98	2.00	0.00	0.00	0.00
66.83	36.39	2.00	0.00	0.00	0.00	66.87	36.20	2.00	0.00	0.00	0.00
66.94	36.12	2.00	0.00	0.00	0.00	67.04	35.66	2.00	0.00	0.00	0.00
67.08	35.41	2.00	0.00	0.00	0.00	67.15	34.45	2.00	0.00	0.00	0.00
67.22	32.88	2.00	0.00	0.00	0.00	67.26	32.13	2.00	0.00	0.00	0.00
67.33	31.11	2.00	0.00	0.00	0.00	67.40	30.66	2.00	0.00	0.00	0.00
67.47	31.19	2.00	0.00	0.00	0.00	67.55	32.73	2.00	0.00	0.00	0.00
67.62	33.64	2.00	0.00	0.00	0.00	67.68	34.30	2.00	0.00	0.00	0.00
67.72	34.54	2.00	0.00	0.00	0.00	67.80	34.71	2.00	0.00	0.00	0.00
67.87	34.19	2.00	0.00	0.00	0.00	67.94	34.58	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
67.99	33.91	2.00	0.00	0.00	0.00	68.06	34.46	2.00	0.00	0.00	0.00
68.12	35.55	2.00	0.00	0.00	0.00	68.18	36.71	2.00	0.00	0.00	0.00
68.25	37.32	2.00	0.00	0.00	0.00	68.34	37.73	2.00	0.00	0.00	0.00
68.40	37.79	2.00	0.00	0.00	0.00	68.47	37.35	2.00	0.00	0.00	0.00
68.52	36.72	2.00	0.00	0.00	0.00	68.57	35.22	2.00	0.00	0.00	0.00
68.66	33.47	2.00	0.00	0.00	0.00	68.73	32.30	2.00	0.00	0.00	0.00
68.79	31.35	2.00	0.00	0.00	0.00	68.84	30.31	2.00	0.00	0.00	0.00
68.90	29.21	2.00	0.00	0.00	0.00	68.98	25.26	2.00	0.00	0.00	0.00
69.05	25.61	2.00	0.00	0.00	0.00	69.10	24.52	2.00	0.00	0.00	0.00
69.18	22.90	2.00	0.00	0.00	0.00	69.24	21.35	2.00	0.00	0.00	0.00
69.30	19.05	2.00	0.00	0.00	0.00	69.36	17.36	2.00	0.00	0.00	0.00
69.43	16.09	2.00	0.00	0.00	0.00	69.49	15.28	2.00	0.00	0.00	0.00
69.56	15.10	2.00	0.00	0.00	0.00	69.62	15.21	2.00	0.00	0.00	0.00
69.69	15.43	2.00	0.00	0.00	0.00	69.77	15.31	2.00	0.00	0.00	0.00
69.83	15.88	2.00	0.00	0.00	0.00	69.89	17.35	2.00	0.00	0.00	0.00
69.96	18.33	2.00	0.00	0.00	0.00	70.03	19.25	2.00	0.00	0.00	0.00
70.10	19.12	2.00	0.00	0.00	0.00	70.17	19.20	2.00	0.00	0.00	0.00
70.23	19.16	2.00	0.00	0.00	0.00	70.30	19.09	2.00	0.00	0.00	0.00
70.37	19.49	2.00	0.00	0.00	0.00	70.42	19.31	2.00	0.00	0.00	0.00
70.48	19.83	2.00	0.00	0.00	0.00	70.54	19.88	2.00	0.00	0.00	0.00
70.61	20.10	2.00	0.00	0.00	0.00	70.68	20.38	2.00	0.00	0.00	0.00
70.74	20.37	2.00	0.00	0.00	0.00	70.81	20.48	2.00	0.00	0.00	0.00
70.88	20.81	2.00	0.00	0.00	0.00	70.95	20.17	2.00	0.00	0.00	0.00
71.00	21.03	2.00	0.00	0.00	0.00	71.08	21.13	2.00	0.00	0.00	0.00
71.15	20.77	2.00	0.00	0.00	0.00	71.22	20.42	2.00	0.00	0.00	0.00
71.30	20.87	2.00	0.00	0.00	0.00	71.35	21.91	2.00	0.00	0.00	0.00
71.42	22.72	2.00	0.00	0.00	0.00	71.49	23.17	2.00	0.00	0.00	0.00
71.53	22.99	2.00	0.00	0.00	0.00	71.59	22.92	2.00	0.00	0.00	0.00
71.69	23.20	2.00	0.00	0.00	0.00	71.76	23.54	2.00	0.00	0.00	0.00
71.79	23.71	2.00	0.00	0.00	0.00	71.86	24.75	2.00	0.00	0.00	0.00
71.93	25.86	2.00	0.00	0.00	0.00	72.00	27.38	2.00	0.00	0.00	0.00
72.06	29.09	2.00	0.00	0.00	0.00	72.13	32.11	2.00	0.00	0.00	0.00
72.21	32.45	2.00	0.00	0.00	0.00	72.27	33.04	2.00	0.00	0.00	0.00
72.33	33.09	2.00	0.00	0.00	0.00	72.40	32.84	2.00	0.00	0.00	0.00
72.46	32.28	2.00	0.00	0.00	0.00	72.53	31.61	2.00	0.00	0.00	0.00
72.60	30.19	2.00	0.00	0.00	0.00	72.66	31.73	2.00	0.00	0.00	0.00
72.73	30.93	2.00	0.00	0.00	0.00	72.79	31.84	2.00	0.00	0.00	0.00
72.86	33.56	2.00	0.00	0.00	0.00	72.93	34.93	2.00	0.00	0.00	0.00
72.97	35.03	2.00	0.00	0.00	0.00	73.03	36.30	2.00	0.00	0.00	0.00
73.13	37.74	2.00	0.00	0.00	0.00	73.17	38.16	2.00	0.00	0.00	0.00
73.23	38.34	2.00	0.00	0.00	0.00	73.33	37.35	2.00	0.00	0.00	0.00
73.39	36.25	2.00	0.00	0.00	0.00	73.44	35.03	2.00	0.00	0.00	0.00
73.51	33.82	2.00	0.00	0.00	0.00	73.57	32.37	2.00	0.00	0.00	0.00
73.63	30.42	2.00	0.00	0.00	0.00	73.70	28.14	2.00	0.00	0.00	0.00
73.76	26.18	2.00	0.00	0.00	0.00	73.83	24.29	2.00	0.00	0.00	0.00
73.91	22.19	2.00	0.00	0.00	0.00	73.97	21.67	2.00	0.00	0.00	0.00
74.02	21.02	2.00	0.00	0.00	0.00	74.09	20.27	2.00	0.00	0.00	0.00
74.17	19.70	2.00	0.00	0.00	0.00	74.23	19.97	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.28	20.13	2.00	0.00	0.00	0.00	74.36	20.07	2.00	0.00	0.00	0.00
74.42	20.23	2.00	0.00	0.00	0.00	74.50	20.73	2.00	0.00	0.00	0.00
74.55	21.64	2.00	0.00	0.00	0.00	74.62	21.91	2.00	0.00	0.00	0.00
74.68	22.31	2.00	0.00	0.00	0.00	74.76	22.24	2.00	0.00	0.00	0.00
74.81	22.74	2.00	0.00	0.00	0.00	74.90	23.37	2.00	0.00	0.00	0.00
74.96	23.41	2.00	0.00	0.00	0.00	75.00	23.41	2.00	0.00	0.00	0.00
75.08	23.39	2.00	0.00	0.00	0.00	75.14	22.63	2.00	0.00	0.00	0.00
75.20	22.63	2.00	0.00	0.00	0.00	75.26	22.73	2.00	0.00	0.00	0.00
75.36	22.58	2.00	0.00	0.00	0.00	75.42	22.53	2.00	0.00	0.00	0.00
75.49	22.87	2.00	0.00	0.00	0.00	75.54	23.04	2.00	0.00	0.00	0.00
75.61	22.28	2.00	0.00	0.00	0.00	75.67	22.27	2.00	0.00	0.00	0.00
75.73	24.27	2.00	0.00	0.00	0.00	75.80	24.71	2.00	0.00	0.00	0.00
75.86	24.47	2.00	0.00	0.00	0.00	75.92	23.89	2.00	0.00	0.00	0.00
75.98	23.92	2.00	0.00	0.00	0.00	76.08	30.00	2.00	0.00	0.00	0.00
76.14	33.65	2.00	0.00	0.00	0.00	76.19	36.43	2.00	0.00	0.00	0.00
76.25	39.00	2.00	0.00	0.00	0.00	76.32	41.46	2.00	0.00	0.00	0.00
76.38	42.74	2.00	0.00	0.00	0.00	76.45	42.67	2.00	0.00	0.00	0.00
76.51	42.23	2.00	0.00	0.00	0.00	76.60	42.83	2.00	0.00	0.00	0.00
76.66	42.94	2.00	0.00	0.00	0.00	76.72	43.16	2.00	0.00	0.00	0.00
76.80	43.94	2.00	0.00	0.00	0.00	76.85	43.01	2.00	0.00	0.00	0.00
76.90	40.64	2.00	0.00	0.00	0.00	76.98	42.59	2.00	0.00	0.00	0.00
77.05	42.19	2.00	0.00	0.00	0.00	77.12	41.98	2.00	0.00	0.00	0.00
77.19	42.01	2.00	0.00	0.00	0.00	77.26	43.33	2.00	0.00	0.00	0.00
77.33	45.13	2.00	0.00	0.00	0.00	77.37	46.25	2.00	0.00	0.00	0.00
77.43	47.46	2.00	0.00	0.00	0.00	77.50	113.38	0.30	0.00	0.00	0.00
77.56	113.61	0.30	0.00	0.00	0.00	77.63	114.49	0.31	0.00	0.00	0.00
77.70	48.65	2.00	0.00	0.00	0.00	77.77	49.35	2.00	0.00	0.00	0.00
77.84	48.59	2.00	0.00	0.00	0.00	77.91	49.33	2.00	0.00	0.00	0.00
77.98	50.31	2.00	0.00	0.00	0.00	78.04	51.36	2.00	0.00	0.00	0.00
78.10	53.24	2.00	0.00	0.00	0.00	78.16	54.47	2.00	0.00	0.00	0.00
78.24	56.42	2.00	0.00	0.00	0.00	78.30	125.65	0.36	0.00	0.00	0.00
78.37	127.51	0.37	0.00	0.00	0.00	78.43	129.96	0.39	0.00	0.00	0.00
78.49	130.84	0.39	0.00	0.00	0.00	78.56	132.54	0.40	0.00	0.00	0.00
78.62	133.41	0.41	0.00	0.00	0.00	78.69	135.22	0.42	0.00	0.00	0.00
78.76	136.58	0.44	0.00	0.00	0.00	78.82	136.77	0.44	0.00	0.00	0.00
78.88	137.90	0.45	0.00	0.00	0.00	78.94	138.89	0.46	0.00	0.00	0.00
79.01	139.88	0.47	0.00	0.00	0.00	79.10	139.98	0.47	0.00	0.00	0.00
79.14	141.59	0.48	0.00	0.00	0.00	79.22	142.36	0.49	0.00	0.00	0.00
79.29	141.21	0.48	0.00	0.00	0.00	79.33	141.65	0.48	0.00	0.00	0.00
79.41	139.88	0.47	0.00	0.00	0.00	79.49	139.15	0.46	0.00	0.00	0.00
79.54	138.80	0.46	0.00	0.00	0.00	79.62	137.84	0.45	0.00	0.00	0.00
79.68	137.13	0.44	0.00	0.00	0.00	79.73	136.31	0.44	0.00	0.00	0.00
79.81	135.88	0.43	0.00	0.00	0.00	79.87	135.73	0.43	0.00	0.00	0.00
79.93	135.01	0.42	0.00	0.00	0.00	80.01	62.01	2.00	0.00	0.00	0.00
80.06	59.48	2.00	0.00	0.00	0.00	80.13	57.60	2.00	0.00	0.00	0.00
80.19	57.17	2.00	0.00	0.00	0.00	80.25	56.73	2.00	0.00	0.00	0.00
80.32	55.05	2.00	0.00	0.00	0.00	80.39	53.37	2.00	0.00	0.00	0.00
80.46	53.28	2.00	0.00	0.00	0.00	80.52	52.49	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.59	53.97	2.00	0.00	0.00	0.00	80.66	53.99	2.00	0.00	0.00	0.00
80.73	53.85	2.00	0.00	0.00	0.00	80.79	51.03	2.00	0.00	0.00	0.00
80.86	47.11	2.00	0.00	0.00	0.00	80.92	44.85	2.00	0.00	0.00	0.00
81.00	44.79	2.00	0.00	0.00	0.00	81.07	43.89	2.00	0.00	0.00	0.00
81.13	40.98	2.00	0.00	0.00	0.00	81.19	37.18	2.00	0.00	0.00	0.00
81.24	36.57	2.00	0.00	0.00	0.00	81.30	35.93	2.00	0.00	0.00	0.00
81.40	37.59	2.00	0.00	0.00	0.00	81.45	41.15	2.00	0.00	0.00	0.00
81.50	44.62	2.00	0.00	0.00	0.00	81.59	46.06	2.00	0.00	0.00	0.00
81.65	46.04	2.00	0.00	0.00	0.00	81.70	45.55	2.00	0.00	0.00	0.00
81.77	45.05	2.00	0.00	0.00	0.00	81.85	44.91	2.00	0.00	0.00	0.00
81.91	45.33	2.00	0.00	0.00	0.00	81.97	45.07	2.00	0.00	0.00	0.00
82.05	42.86	2.00	0.00	0.00	0.00	82.10	42.97	2.00	0.00	0.00	0.00
82.16	43.56	2.00	0.00	0.00	0.00	82.22	42.88	2.00	0.00	0.00	0.00
82.30	42.23	2.00	0.00	0.00	0.00	82.36	39.42	2.00	0.00	0.00	0.00
82.42	37.22	2.00	0.00	0.00	0.00	82.51	32.69	2.00	0.00	0.00	0.00
82.55	31.25	2.00	0.00	0.00	0.00	82.64	29.67	2.00	0.00	0.00	0.00
82.71	28.06	2.00	0.00	0.00	0.00	82.76	28.17	2.00	0.00	0.00	0.00
82.82	28.16	2.00	0.00	0.00	0.00	82.88	27.58	2.00	0.00	0.00	0.00
82.96	29.14	2.00	0.00	0.00	0.00	83.02	29.59	2.00	0.00	0.00	0.00
83.08	29.29	2.00	0.00	0.00	0.00	83.14	29.62	2.00	0.00	0.00	0.00
83.22	29.66	2.00	0.00	0.00	0.00	83.28	29.42	2.00	0.00	0.00	0.00
83.35	29.44	2.00	0.00	0.00	0.00	83.41	29.43	2.00	0.00	0.00	0.00
83.47	29.45	2.00	0.00	0.00	0.00	83.53	31.17	2.00	0.00	0.00	0.00
83.60	32.29	2.00	0.00	0.00	0.00	83.68	31.32	2.00	0.00	0.00	0.00
83.74	29.91	2.00	0.00	0.00	0.00	83.80	28.48	2.00	0.00	0.00	0.00
83.88	26.78	2.00	0.00	0.00	0.00	83.94	25.77	2.00	0.00	0.00	0.00
84.01	26.37	2.00	0.00	0.00	0.00	84.06	27.03	2.00	0.00	0.00	0.00
84.12	26.57	2.00	0.00	0.00	0.00	84.20	28.24	2.00	0.00	0.00	0.00
84.25	30.31	2.00	0.00	0.00	0.00	84.35	31.28	2.00	0.00	0.00	0.00
84.41	31.10	2.00	0.00	0.00	0.00	84.45	29.32	2.00	0.00	0.00	0.00
84.53	28.74	2.00	0.00	0.00	0.00	84.60	28.11	2.00	0.00	0.00	0.00
84.67	27.99	2.00	0.00	0.00	0.00	84.72	27.92	2.00	0.00	0.00	0.00
84.79	27.63	2.00	0.00	0.00	0.00	84.85	26.67	2.00	0.00	0.00	0.00
84.92	25.56	2.00	0.00	0.00	0.00	84.97	24.22	2.00	0.00	0.00	0.00
85.05	23.50	2.00	0.00	0.00	0.00	85.11	23.88	2.00	0.00	0.00	0.00
85.18	26.62	2.00	0.00	0.00	0.00	85.24	29.05	2.00	0.00	0.00	0.00
85.31	35.85	2.00	0.00	0.00	0.00	85.37	38.65	2.00	0.00	0.00	0.00
85.44	35.64	2.00	0.00	0.00	0.00	85.50	34.44	2.00	0.00	0.00	0.00
85.56	31.89	2.00	0.00	0.00	0.00	85.63	29.94	2.00	0.00	0.00	0.00
85.71	28.76	2.00	0.00	0.00	0.00	85.79	29.02	2.00	0.00	0.00	0.00
85.84	29.57	2.00	0.00	0.00	0.00	85.90	28.38	2.00	0.00	0.00	0.00
85.97	27.70	2.00	0.00	0.00	0.00	86.03	28.08	2.00	0.00	0.00	0.00
86.09	27.85	2.00	0.00	0.00	0.00	86.16	28.84	2.00	0.00	0.00	0.00
86.23	29.50	2.00	0.00	0.00	0.00	86.29	30.78	2.00	0.00	0.00	0.00
86.36	30.32	2.00	0.00	0.00	0.00	86.43	28.85	2.00	0.00	0.00	0.00
86.49	28.33	2.00	0.00	0.00	0.00	86.55	28.10	2.00	0.00	0.00	0.00
86.63	29.37	2.00	0.00	0.00	0.00	86.68	29.69	2.00	0.00	0.00	0.00
86.77	29.29	2.00	0.00	0.00	0.00	86.82	26.45	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.89	23.60	2.00	0.00	0.00	0.00	86.96	21.60	2.00	0.00	0.00	0.00
87.01	23.66	2.00	0.00	0.00	0.00	87.09	24.99	2.00	0.00	0.00	0.00
87.16	25.00	2.00	0.00	0.00	0.00	87.22	25.02	2.00	0.00	0.00	0.00
87.28	23.12	2.00	0.00	0.00	0.00	87.34	22.19	2.00	0.00	0.00	0.00
87.41	20.74	2.00	0.00	0.00	0.00	87.50	19.99	2.00	0.00	0.00	0.00
87.54	20.09	2.00	0.00	0.00	0.00	87.60	20.51	2.00	0.00	0.00	0.00
87.67	20.39	2.00	0.00	0.00	0.00	87.73	20.86	2.00	0.00	0.00	0.00
87.81	22.40	2.00	0.00	0.00	0.00	87.88	24.54	2.00	0.00	0.00	0.00
87.93	25.40	2.00	0.00	0.00	0.00	88.00	25.01	2.00	0.00	0.00	0.00
88.06	23.43	2.00	0.00	0.00	0.00	88.15	21.55	2.00	0.00	0.00	0.00
88.20	20.48	2.00	0.00	0.00	0.00	88.27	20.48	2.00	0.00	0.00	0.00
88.34	19.63	2.00	0.00	0.00	0.00	88.39	20.54	2.00	0.00	0.00	0.00
88.47	19.09	2.00	0.00	0.00	0.00	88.53	20.60	2.00	0.00	0.00	0.00
88.59	25.14	2.00	0.00	0.00	0.00	88.66	27.96	2.00	0.00	0.00	0.00
88.72	28.39	2.00	0.00	0.00	0.00	88.79	25.11	2.00	0.00	0.00	0.00
88.85	22.25	2.00	0.00	0.00	0.00	88.92	19.14	2.00	0.00	0.00	0.00
88.98	17.84	2.00	0.00	0.00	0.00	89.05	17.00	2.00	0.00	0.00	0.00
89.11	16.79	2.00	0.00	0.00	0.00	89.18	16.68	2.00	0.00	0.00	0.00
89.24	18.06	2.00	0.00	0.00	0.00	89.31	26.00	2.00	0.00	0.00	0.00
89.37	38.30	2.00	0.00	0.00	0.00	89.44	44.55	2.00	0.00	0.00	0.00
89.50	47.50	2.00	0.00	0.00	0.00	89.58	47.42	2.00	0.00	0.00	0.00
89.65	50.89	2.00	0.00	0.00	0.00	89.72	53.85	2.00	0.00	0.00	0.00
89.78	54.11	2.00	0.00	0.00	0.00	89.85	55.02	2.00	0.00	0.00	0.00
89.92	53.56	2.00	0.00	0.00	0.00	89.98	49.87	2.00	0.00	0.00	0.00
90.05	45.10	2.00	0.00	0.00	0.00	90.10	41.26	2.00	0.00	0.00	0.00
90.16	35.70	2.00	0.00	0.00	0.00	90.23	30.55	2.00	0.00	0.00	0.00
90.29	27.84	2.00	0.00	0.00	0.00	90.36	30.78	2.00	0.00	0.00	0.00
90.42	25.06	2.00	0.00	0.00	0.00	90.50	30.98	2.00	0.00	0.00	0.00
90.56	42.86	2.00	0.00	0.00	0.00	90.62	61.36	2.00	0.00	0.00	0.00
90.68	142.26	0.51	0.00	0.00	0.00	90.76	145.58	0.55	0.00	0.00	0.00
90.82	142.93	0.52	0.00	0.00	0.00	90.89	145.08	0.54	0.00	0.00	0.00
90.95	142.62	0.52	0.00	0.00	0.00	91.02	148.33	0.59	0.00	0.00	0.00
91.09	158.79	0.77	0.00	0.00	0.00	91.16	166.40	0.97	0.00	0.00	0.00
91.21	166.83	0.99	0.00	0.00	0.00	91.29	168.17	1.03	0.00	0.00	0.00
91.34	168.11	1.03	0.00	0.00	0.00	91.42	168.08	1.03	0.00	0.00	0.00
91.48	170.09	1.10	0.00	0.00	0.00	91.55	169.42	1.08	0.00	0.00	0.00
91.61	169.75	1.09	0.00	0.00	0.00	91.67	169.17	1.07	0.00	0.00	0.00
91.74	168.09	1.03	0.00	0.00	0.00	91.80	169.32	1.08	0.00	0.00	0.00
91.88	165.11	0.94	0.00	0.00	0.00	91.93	163.38	0.89	0.00	0.00	0.00
92.01	161.06	0.83	0.00	0.00	0.00	92.09	160.17	0.80	0.00	0.00	0.00
92.14	155.05	0.70	0.00	0.00	0.00	92.19	159.54	0.79	0.00	0.00	0.00
92.28	156.56	0.73	0.00	0.00	0.00	92.33	155.75	0.71	0.00	0.00	0.00
92.39	154.76	0.69	0.00	0.00	0.00	92.47	155.08	0.70	0.00	0.00	0.00
92.53	154.67	0.69	0.00	0.00	0.00	92.60	153.75	0.67	0.00	0.00	0.00
92.66	161.49	0.84	0.00	0.00	0.00	92.72	163.68	0.90	0.00	0.00	0.00
92.79	166.00	0.96	0.00	0.00	0.00	92.85	165.56	0.95	0.00	0.00	0.00
92.93	161.73	0.84	0.00	0.00	0.00	92.98	161.71	0.84	0.00	0.00	0.00
93.05	171.39	1.16	0.00	0.00	0.00	93.12	173.11	1.23	0.00	0.00	0.00

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

Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.20	168.01	1.03	0.00	0.00	0.00	93.26	166.03	0.97	0.00	0.00	0.00
93.31	180.60	1.66	0.00	0.00	0.00	93.39	179.44	1.58	0.00	0.00	0.00
93.44	175.15	1.33	0.00	0.00	0.00	93.51	169.02	1.07	0.00	0.00	0.00
93.58	160.39	0.81	0.00	0.00	0.00	93.64	170.33	1.12	0.00	0.00	0.00
93.71	158.25	0.76	0.00	0.00	0.00	93.77	170.86	1.14	0.00	0.00	0.00
93.85	166.63	0.99	0.00	0.00	0.00	93.90	156.30	0.72	0.00	0.00	0.00
93.97	169.04	1.07	0.00	0.00	0.00	94.03	138.54	0.48	0.00	0.00	0.00
94.10	167.28	1.01	0.00	0.00	0.00	94.16	185.58	2.00	0.00	0.00	0.00
94.26	181.46	1.72	0.00	0.00	0.00	94.31	180.00	1.62	0.00	0.00	0.00
94.36	191.41	2.00	0.00	0.00	0.00	94.44	192.40	2.00	0.00	0.00	0.00
94.49	188.38	2.00	0.00	0.00	0.00	94.57	188.45	2.00	0.00	0.00	0.00
94.62	188.05	2.00	0.00	0.00	0.00	94.69	178.84	1.55	0.00	0.00	0.00
94.76	143.87	0.54	0.00	0.00	0.00	94.82	114.41	2.00	0.00	0.00	0.00
94.89	107.35	2.00	0.00	0.00	0.00	94.95	114.16	2.00	0.00	0.00	0.00
95.02	110.16	2.00	0.00	0.00	0.00	95.08	102.81	2.00	0.00	0.00	0.00

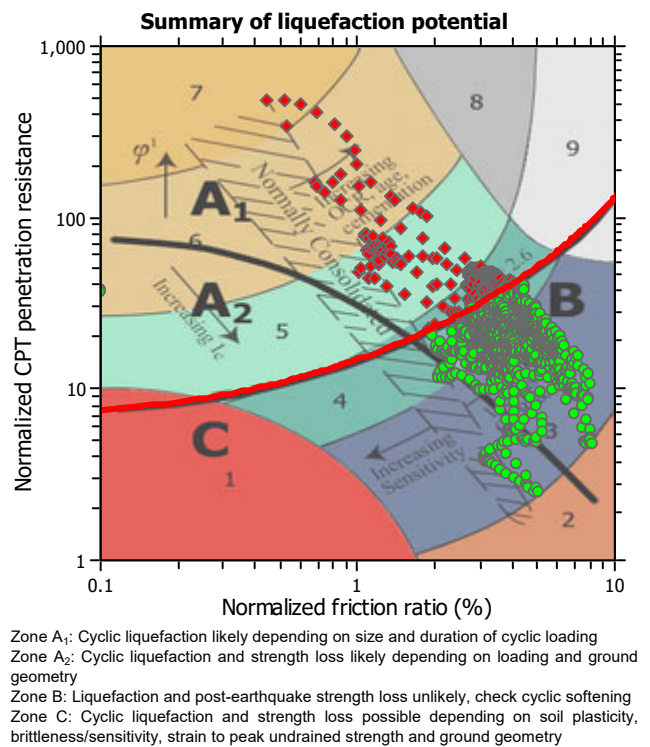
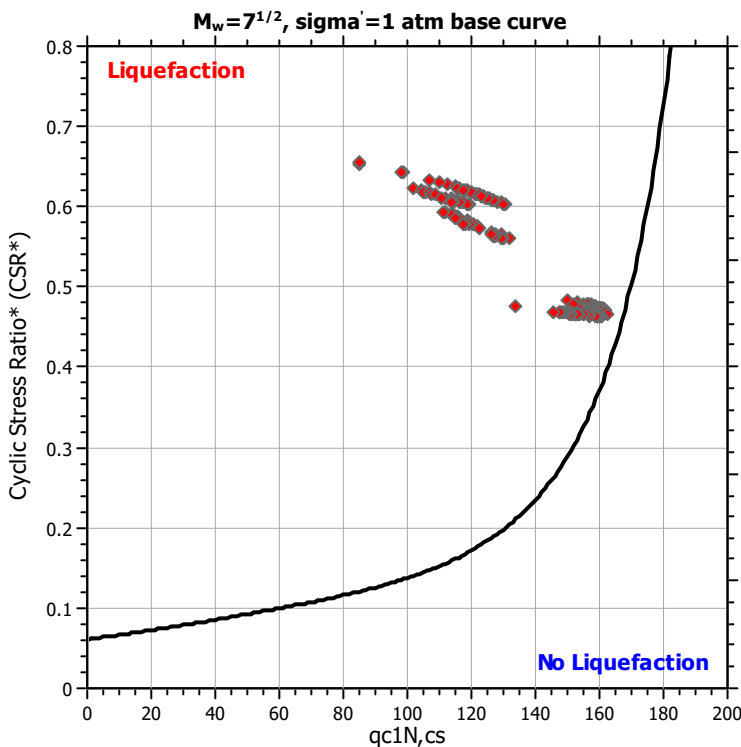
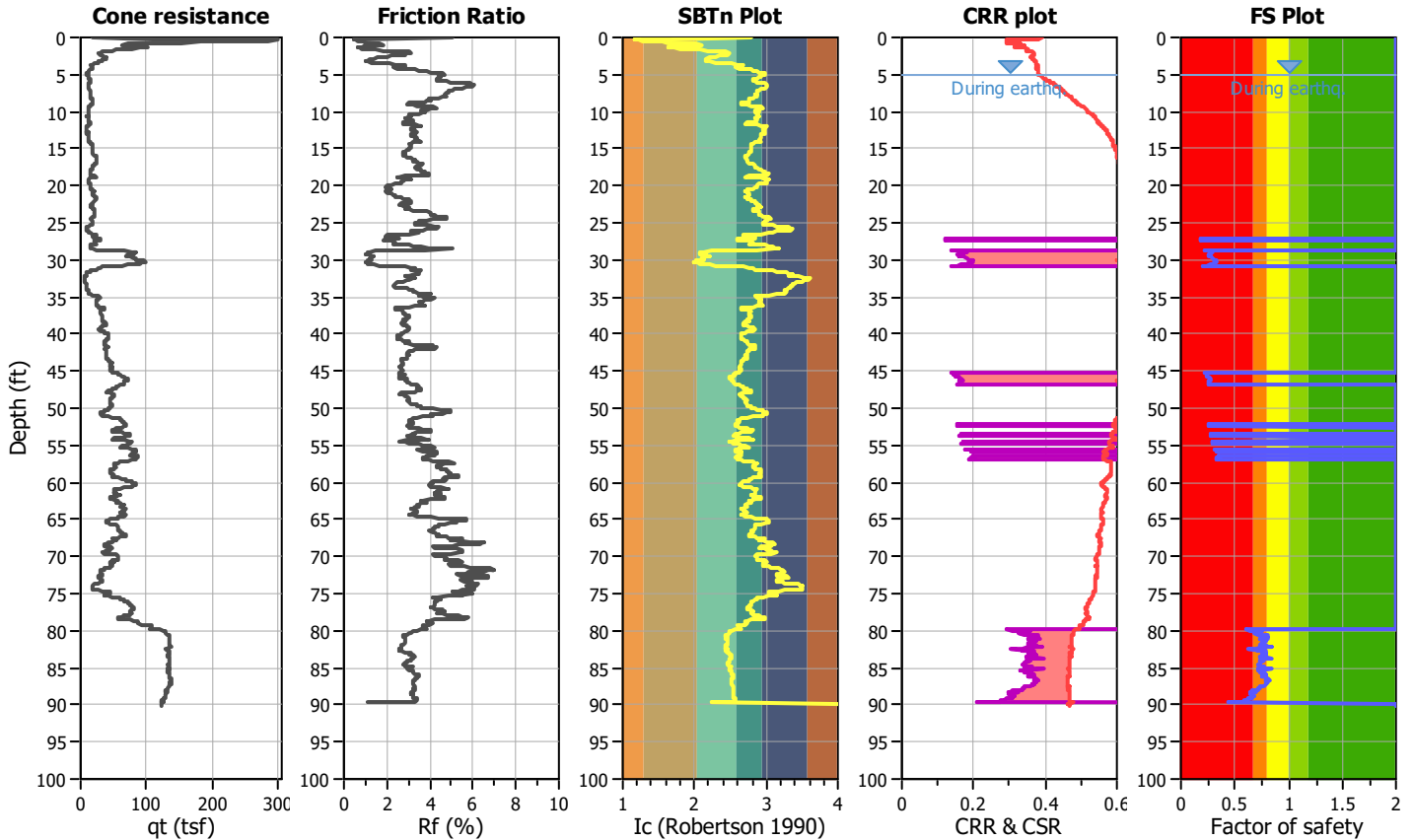
Total estimated settlement: 0.78**Abbreviations**

Q _{tn,cs} :	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e _v (%):	Post-liquefaction volumetric strain
DF:	e _v depth weighting factor
Settlement:	Calculated settlement

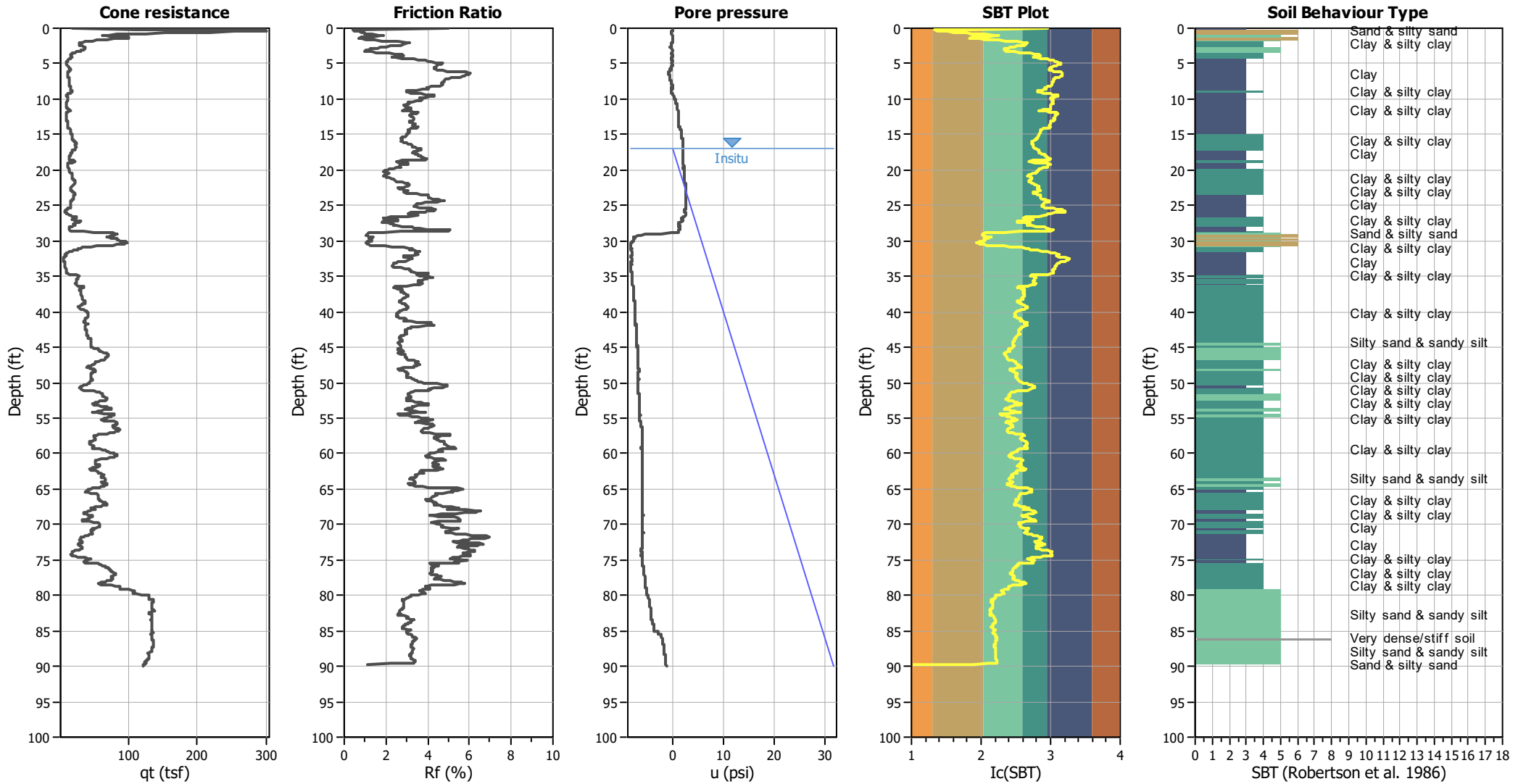
LIQUEFACTION ANALYSIS REPORT

Project title : Victoria Apartments
Location : A9942-88-01
CPT file : C-2
Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.65	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.62	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



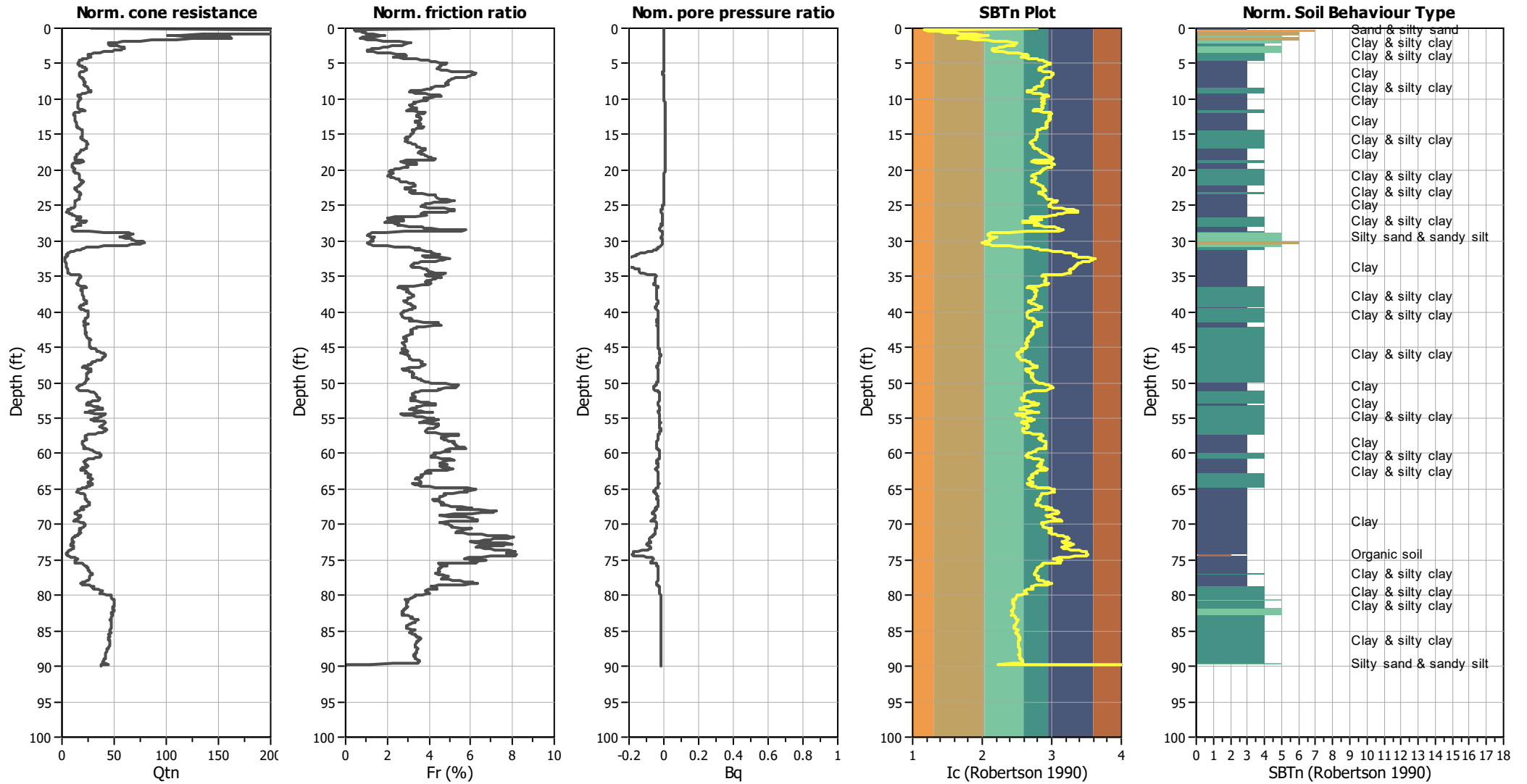
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



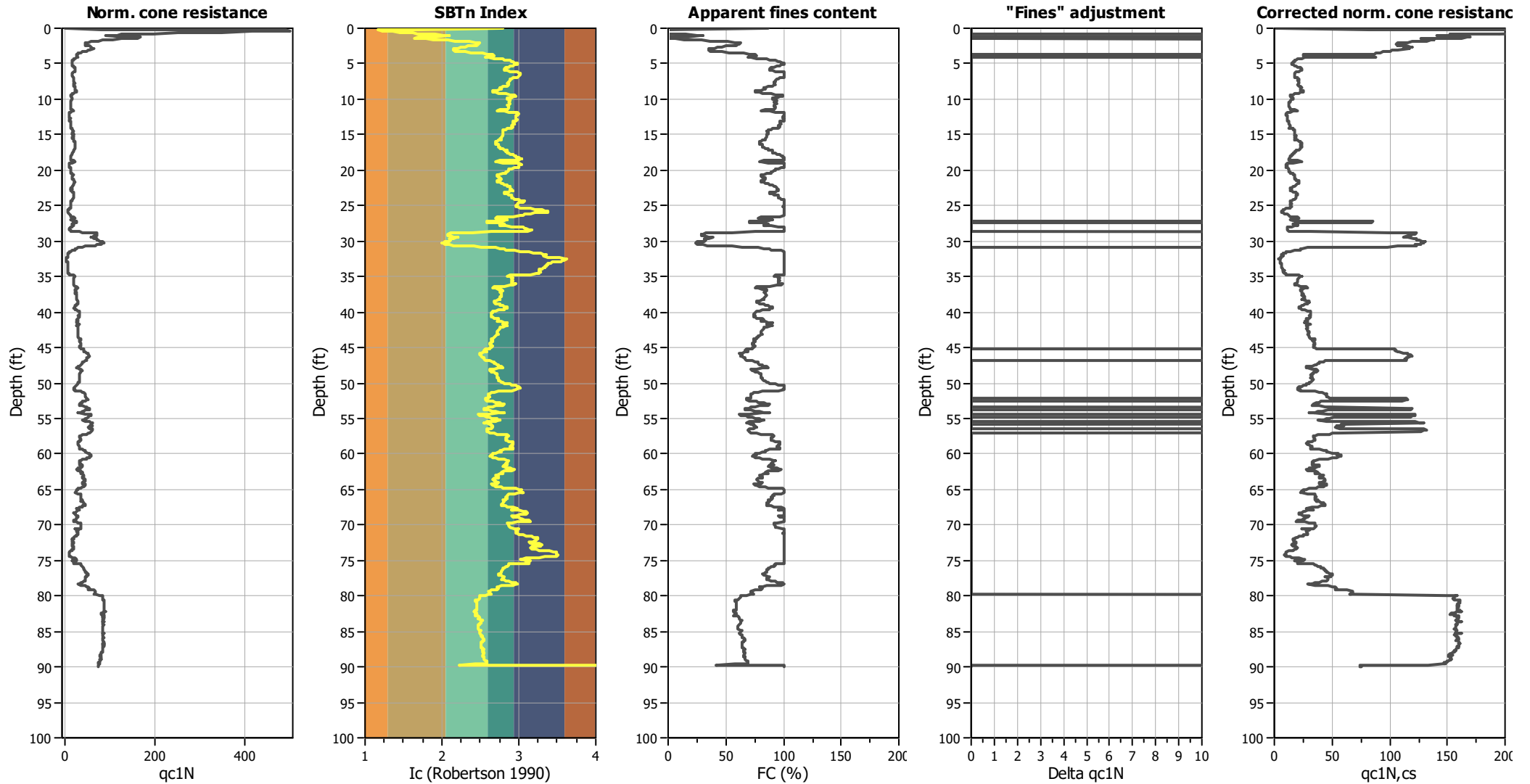
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

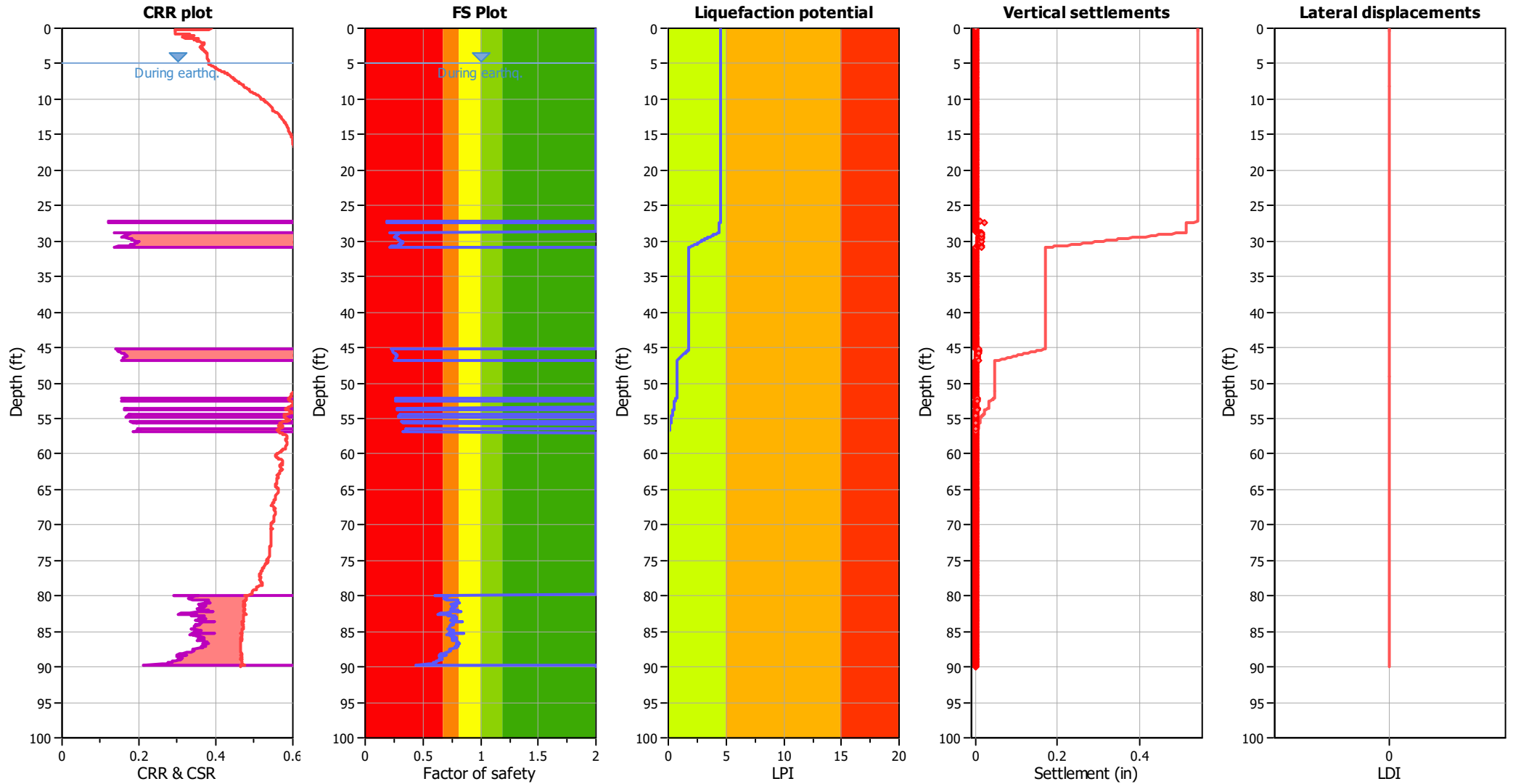
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

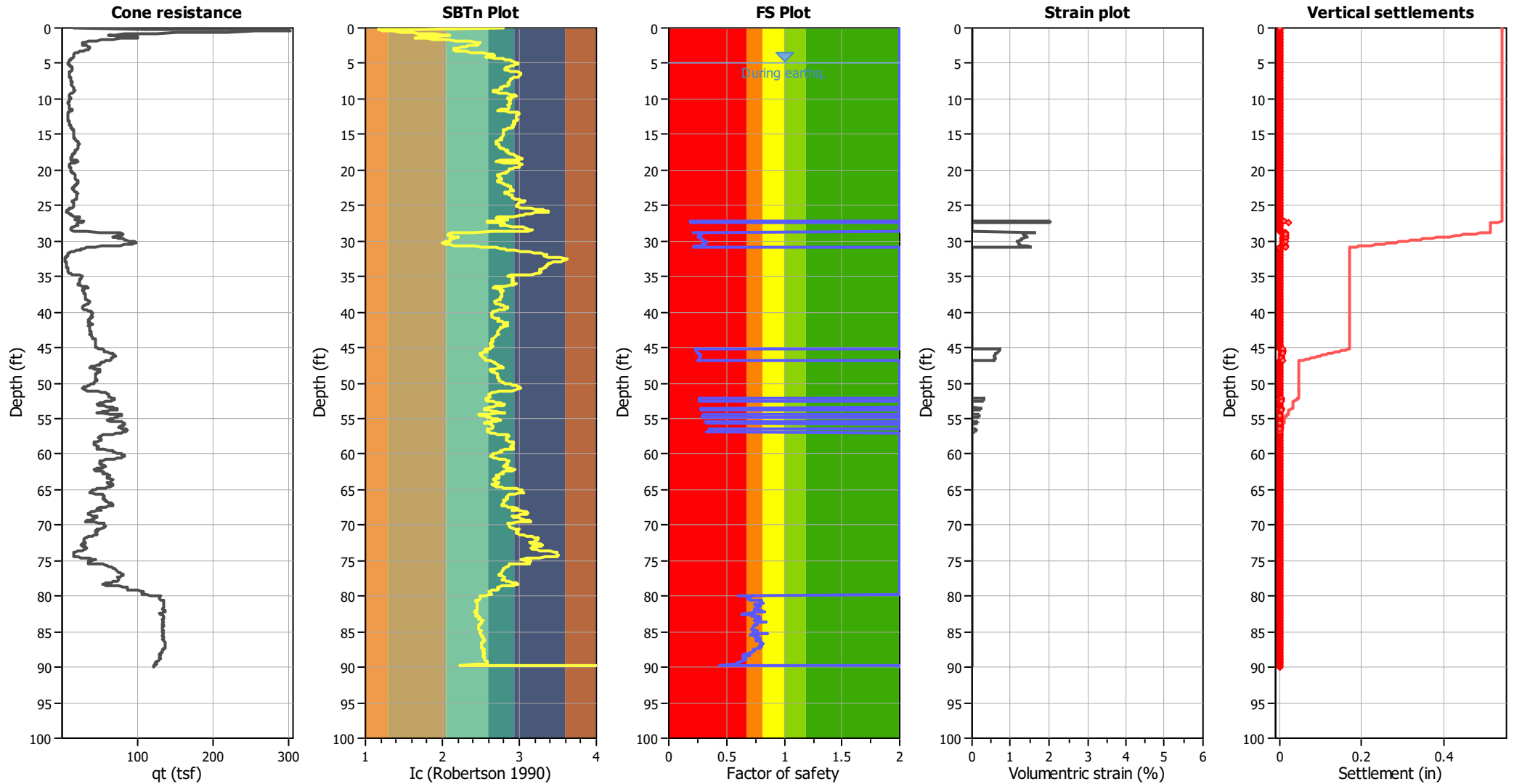
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- q_c: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.06	15.41	2.00	0.00	0.91	0.00	5.12	16.02	2.00	0.00	0.91	0.00
5.19	16.93	2.00	0.00	0.91	0.00	5.28	17.54	2.00	0.00	0.91	0.00
5.34	18.30	2.00	0.00	0.91	0.00	5.40	19.07	2.00	0.00	0.91	0.00
5.47	20.60	2.00	0.00	0.91	0.00	5.54	21.51	2.00	0.00	0.91	0.00
5.59	22.27	2.00	0.00	0.91	0.00	5.66	23.34	2.00	0.00	0.90	0.00
5.72	23.79	2.00	0.00	0.90	0.00	5.79	23.96	2.00	0.00	0.90	0.00
5.85	24.10	2.00	0.00	0.90	0.00	5.93	23.65	2.00	0.00	0.90	0.00
5.98	23.18	2.00	0.00	0.90	0.00	6.05	21.66	2.00	0.00	0.90	0.00
6.11	21.05	2.00	0.00	0.90	0.00	6.17	19.52	2.00	0.00	0.90	0.00
6.24	18.60	2.00	0.00	0.89	0.00	6.31	17.69	2.00	0.00	0.89	0.00
6.39	17.38	2.00	0.00	0.89	0.00	6.43	17.38	2.00	0.00	0.89	0.00
6.52	17.08	2.00	0.00	0.89	0.00	6.56	17.24	2.00	0.00	0.89	0.00
6.65	17.24	2.00	0.00	0.89	0.00	6.72	17.24	2.00	0.00	0.89	0.00
6.78	17.24	2.00	0.00	0.89	0.00	6.85	18.16	2.00	0.00	0.88	0.00
6.91	18.91	2.00	0.00	0.88	0.00	6.96	19.68	2.00	0.00	0.88	0.00
7.03	20.47	2.00	0.00	0.88	0.00	7.10	20.65	2.00	0.00	0.88	0.00
7.16	20.57	2.00	0.00	0.88	0.00	7.24	20.88	2.00	0.00	0.88	0.00
7.29	20.95	2.00	0.00	0.88	0.00	7.37	20.97	2.00	0.00	0.88	0.00
7.42	20.62	2.00	0.00	0.87	0.00	7.49	20.95	2.00	0.00	0.87	0.00
7.57	20.97	2.00	0.00	0.87	0.00	7.61	21.18	2.00	0.00	0.87	0.00
7.70	21.34	2.00	0.00	0.87	0.00	7.75	21.40	2.00	0.00	0.87	0.00
7.83	20.89	2.00	0.00	0.87	0.00	7.88	20.54	2.00	0.00	0.87	0.00
7.96	20.17	2.00	0.00	0.87	0.00	8.01	20.25	2.00	0.00	0.86	0.00
8.09	20.81	2.00	0.00	0.86	0.00	8.14	21.42	2.00	0.00	0.86	0.00
8.21	22.65	2.00	0.00	0.86	0.00	8.29	23.46	2.00	0.00	0.86	0.00
8.34	23.65	2.00	0.00	0.86	0.00	8.40	23.82	2.00	0.00	0.86	0.00
8.47	22.95	2.00	0.00	0.86	0.00	8.55	22.84	2.00	0.00	0.86	0.00
8.61	22.64	2.00	0.00	0.85	0.00	8.67	22.56	2.00	0.00	0.85	0.00
8.73	23.13	2.00	0.00	0.85	0.00	8.81	24.67	2.00	0.00	0.85	0.00
8.86	25.12	2.00	0.00	0.85	0.00	8.93	24.66	2.00	0.00	0.85	0.00
9.02	23.28	2.00	0.00	0.85	0.00	9.07	22.20	2.00	0.00	0.85	0.00
9.12	20.86	2.00	0.00	0.85	0.00	9.21	18.48	2.00	0.00	0.84	0.00
9.27	17.39	2.00	0.00	0.84	0.00	9.35	15.79	2.00	0.00	0.84	0.00
9.41	14.85	2.00	0.00	0.84	0.00	9.47	14.16	2.00	0.00	0.84	0.00
9.54	13.72	2.00	0.00	0.84	0.00	9.60	13.94	2.00	0.00	0.84	0.00
9.66	14.26	2.00	0.00	0.84	0.00	9.72	14.85	2.00	0.00	0.84	0.00
9.78	15.68	2.00	0.00	0.83	0.00	9.86	16.36	2.00	0.00	0.83	0.00
9.92	16.18	2.00	0.00	0.83	0.00	9.98	15.89	2.00	0.00	0.83	0.00
10.06	15.58	2.00	0.00	0.83	0.00	10.12	15.04	2.00	0.00	0.83	0.00
10.17	14.37	2.00	0.00	0.83	0.00	10.26	14.07	2.00	0.00	0.83	0.00
10.33	13.77	2.00	0.00	0.82	0.00	10.40	13.49	2.00	0.00	0.82	0.00
10.46	13.20	2.00	0.00	0.82	0.00	10.52	12.81	2.00	0.00	0.82	0.00
10.59	13.06	2.00	0.00	0.82	0.00	10.65	12.00	2.00	0.00	0.82	0.00
10.71	12.93	2.00	0.00	0.82	0.00	10.78	13.00	2.00	0.00	0.82	0.00
10.84	12.96	2.00	0.00	0.82	0.00	10.92	13.03	2.00	0.00	0.81	0.00
10.99	12.99	2.00	0.00	0.81	0.00	11.05	12.95	2.00	0.00	0.81	0.00
11.12	13.02	2.00	0.00	0.81	0.00	11.18	13.22	2.00	0.00	0.81	0.00
11.26	13.29	2.00	0.00	0.81	0.00	11.29	13.38	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.36	13.70	2.00	0.00	0.81	0.00	11.43	15.15	2.00	0.00	0.81	0.00
11.49	17.41	2.00	0.00	0.81	0.00	11.56	19.64	2.00	0.00	0.80	0.00
11.63	19.58	2.00	0.00	0.80	0.00	11.69	17.94	2.00	0.00	0.80	0.00
11.75	15.96	2.00	0.00	0.80	0.00	11.82	14.32	2.00	0.00	0.80	0.00
11.88	12.45	2.00	0.00	0.80	0.00	11.95	11.15	2.00	0.00	0.80	0.00
12.01	10.32	2.00	0.00	0.80	0.00	12.09	10.18	2.00	0.00	0.80	0.00
12.16	10.15	2.00	0.00	0.79	0.00	12.22	10.35	2.00	0.00	0.79	0.00
12.29	10.54	2.00	0.00	0.79	0.00	12.35	10.85	2.00	0.00	0.79	0.00
12.42	11.14	2.00	0.00	0.79	0.00	12.48	11.11	2.00	0.00	0.79	0.00
12.55	11.08	2.00	0.00	0.79	0.00	12.61	11.05	2.00	0.00	0.79	0.00
12.68	11.46	2.00	0.00	0.79	0.00	12.74	11.77	2.00	0.00	0.78	0.00
12.81	11.52	2.00	0.00	0.78	0.00	12.88	11.15	2.00	0.00	0.78	0.00
12.94	11.12	2.00	0.00	0.78	0.00	13.00	11.31	2.00	0.00	0.78	0.00
13.08	11.61	2.00	0.00	0.78	0.00	13.15	12.22	2.00	0.00	0.78	0.00
13.21	12.63	2.00	0.00	0.78	0.00	13.28	12.70	2.00	0.00	0.77	0.00
13.34	12.66	2.00	0.00	0.77	0.00	13.40	12.63	2.00	0.00	0.77	0.00
13.47	12.59	2.00	0.00	0.77	0.00	13.53	12.78	2.00	0.00	0.77	0.00
13.60	12.96	2.00	0.00	0.77	0.00	13.66	13.25	2.00	0.00	0.77	0.00
13.73	13.42	2.00	0.00	0.77	0.00	13.79	13.60	2.00	0.00	0.77	0.00
13.86	13.67	2.00	0.00	0.77	0.00	13.92	13.74	2.00	0.00	0.76	0.00
13.99	14.01	2.00	0.00	0.76	0.00	14.05	12.73	2.00	0.00	0.76	0.00
14.13	15.30	2.00	0.00	0.76	0.00	14.19	15.98	2.00	0.00	0.76	0.00
14.26	16.56	2.00	0.00	0.76	0.00	14.32	17.25	2.00	0.00	0.76	0.00
14.39	17.83	2.00	0.00	0.76	0.00	14.45	18.09	2.00	0.00	0.76	0.00
14.51	18.15	2.00	0.00	0.75	0.00	14.58	18.20	2.00	0.00	0.75	0.00
14.64	17.96	2.00	0.00	0.75	0.00	14.70	17.91	2.00	0.00	0.75	0.00
14.77	17.87	2.00	0.00	0.75	0.00	14.83	18.03	2.00	0.00	0.75	0.00
14.92	17.97	2.00	0.00	0.75	0.00	14.99	18.03	2.00	0.00	0.75	0.00
15.05	18.19	2.00	0.00	0.74	0.00	15.12	18.25	2.00	0.00	0.74	0.00
15.18	18.20	2.00	0.00	0.74	0.00	15.24	18.27	2.00	0.00	0.74	0.00
15.30	18.12	2.00	0.00	0.74	0.00	15.37	17.88	2.00	0.00	0.74	0.00
15.44	17.84	2.00	0.00	0.74	0.00	15.50	17.80	2.00	0.00	0.74	0.00
15.57	17.95	2.00	0.00	0.74	0.00	15.64	18.50	2.00	0.00	0.73	0.00
15.71	19.05	2.00	0.00	0.73	0.00	15.76	18.03	2.00	0.00	0.73	0.00
15.84	20.53	2.00	0.00	0.73	0.00	15.88	21.08	2.00	0.00	0.73	0.00
15.95	21.71	2.00	0.00	0.73	0.00	16.01	22.54	2.00	0.00	0.73	0.00
16.09	23.15	2.00	0.00	0.73	0.00	16.15	23.49	2.00	0.00	0.73	0.00
16.22	23.92	2.00	0.00	0.73	0.00	16.28	24.06	2.00	0.00	0.72	0.00
16.35	23.71	2.00	0.00	0.72	0.00	16.42	23.18	2.00	0.00	0.72	0.00
16.47	23.14	2.00	0.00	0.72	0.00	16.54	23.09	2.00	0.00	0.72	0.00
16.61	23.32	2.00	0.00	0.72	0.00	16.68	23.55	2.00	0.00	0.72	0.00
16.75	23.39	2.00	0.00	0.72	0.00	16.82	23.25	2.00	0.00	0.71	0.00
16.89	23.01	2.00	0.00	0.71	0.00	16.97	22.47	2.00	0.00	0.71	0.00
17.01	22.07	2.00	0.00	0.71	0.00	17.08	21.11	2.00	0.00	0.71	0.00
17.14	20.24	2.00	0.00	0.71	0.00	17.23	19.18	2.00	0.00	0.71	0.00
17.26	18.71	2.00	0.00	0.71	0.00	17.33	18.40	2.00	0.00	0.71	0.00
17.42	18.38	2.00	0.00	0.70	0.00	17.45	18.09	2.00	0.00	0.70	0.00
17.52	17.13	2.00	0.00	0.70	0.00	17.60	17.21	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.69	16.44	2.00	0.00	0.70	0.00	17.72	16.06	2.00	0.00	0.70	0.00
17.81	15.48	2.00	0.00	0.70	0.00	17.88	14.90	2.00	0.00	0.70	0.00
17.92	14.71	2.00	0.00	0.70	0.00	18.00	14.50	2.00	0.00	0.69	0.00
18.08	14.30	2.00	0.00	0.69	0.00	18.12	14.20	2.00	0.00	0.69	0.00
18.20	13.91	2.00	0.00	0.69	0.00	18.27	13.33	2.00	0.00	0.69	0.00
18.35	12.66	2.00	0.00	0.69	0.00	18.39	12.47	2.00	0.00	0.69	0.00
18.44	12.37	2.00	0.00	0.69	0.00	18.52	13.10	2.00	0.00	0.69	0.00
18.57	13.83	2.00	0.00	0.69	0.00	18.67	17.13	2.00	0.00	0.68	0.00
18.71	20.08	2.00	0.00	0.68	0.00	18.80	23.74	2.00	0.00	0.68	0.00
18.84	22.44	2.00	0.00	0.68	0.00	18.93	16.53	2.00	0.00	0.68	0.00
18.98	13.75	2.00	0.00	0.68	0.00	19.08	10.69	2.00	0.00	0.68	0.00
19.12	10.65	2.00	0.00	0.68	0.00	19.16	10.64	2.00	0.00	0.68	0.00
19.25	10.58	2.00	0.00	0.67	0.00	19.31	10.76	2.00	0.00	0.67	0.00
19.40	10.65	2.00	0.00	0.67	0.00	19.44	10.74	2.00	0.00	0.67	0.00
19.54	10.54	2.00	0.00	0.67	0.00	19.57	10.72	2.00	0.00	0.67	0.00
19.63	10.98	2.00	0.00	0.67	0.00	19.70	11.89	2.00	0.00	0.67	0.00
19.78	13.07	2.00	0.00	0.66	0.00	19.85	12.96	2.00	0.00	0.66	0.00
19.91	12.86	2.00	0.00	0.66	0.00	19.98	12.49	2.00	0.00	0.66	0.00
20.03	12.39	2.00	0.00	0.66	0.00	20.10	12.56	2.00	0.00	0.66	0.00
20.19	12.64	2.00	0.00	0.66	0.00	20.23	12.72	2.00	0.00	0.66	0.00
20.30	13.43	2.00	0.00	0.66	0.00	20.35	13.88	2.00	0.00	0.66	0.00
20.42	14.86	2.00	0.00	0.65	0.00	20.47	15.40	2.00	0.00	0.65	0.00
20.55	16.47	2.00	0.00	0.65	0.00	20.61	16.27	2.00	0.00	0.65	0.00
20.70	18.15	2.00	0.00	0.65	0.00	20.77	17.95	2.00	0.00	0.65	0.00
20.82	17.67	2.00	0.00	0.65	0.00	20.91	17.47	2.00	0.00	0.65	0.00
20.96	17.37	2.00	0.00	0.64	0.00	21.01	17.27	2.00	0.00	0.64	0.00
21.10	17.34	2.00	0.00	0.64	0.00	21.14	17.06	2.00	0.00	0.64	0.00
21.23	17.30	2.00	0.00	0.64	0.00	21.27	17.48	2.00	0.00	0.64	0.00
21.36	18.27	2.00	0.00	0.64	0.00	21.40	18.88	2.00	0.00	0.64	0.00
21.49	20.20	2.00	0.00	0.64	0.00	21.53	20.99	2.00	0.00	0.64	0.00
21.62	21.60	2.00	0.00	0.63	0.00	21.66	21.49	2.00	0.00	0.63	0.00
21.75	21.38	2.00	0.00	0.63	0.00	21.79	21.19	2.00	0.00	0.63	0.00
21.88	20.46	2.00	0.00	0.63	0.00	21.97	19.80	2.00	0.00	0.63	0.00
22.01	19.44	2.00	0.00	0.63	0.00	22.06	18.89	2.00	0.00	0.63	0.00
22.14	18.34	2.00	0.00	0.62	0.00	22.23	17.25	2.00	0.00	0.62	0.00
22.28	16.71	2.00	0.00	0.62	0.00	22.32	16.18	2.00	0.00	0.62	0.00
22.42	15.01	2.00	0.00	0.62	0.00	22.46	14.64	2.00	0.00	0.62	0.00
22.55	14.37	2.00	0.00	0.62	0.00	22.60	14.36	2.00	0.00	0.62	0.00
22.64	14.53	2.00	0.00	0.62	0.00	22.74	14.86	2.00	0.00	0.61	0.00
22.77	14.76	2.00	0.00	0.61	0.00	22.84	13.87	2.00	0.00	0.61	0.00
22.93	15.44	2.00	0.00	0.61	0.00	22.97	15.60	2.00	0.00	0.61	0.00
23.07	16.64	2.00	0.00	0.61	0.00	23.11	17.42	2.00	0.00	0.61	0.00
23.20	18.89	2.00	0.00	0.61	0.00	23.25	19.49	2.00	0.00	0.61	0.00
23.34	19.81	2.00	0.00	0.60	0.00	23.39	19.80	2.00	0.00	0.60	0.00
23.43	19.79	2.00	0.00	0.60	0.00	23.51	18.72	2.00	0.00	0.60	0.00
23.57	18.76	2.00	0.00	0.60	0.00	23.64	18.78	2.00	0.00	0.60	0.00
23.69	18.77	2.00	0.00	0.60	0.00	23.78	18.75	2.00	0.00	0.60	0.00
23.83	18.74	2.00	0.00	0.60	0.00	23.92	18.71	2.00	0.00	0.59	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.96	18.53	2.00	0.00	0.59	0.00	24.05	17.90	2.00	0.00	0.59	0.00
24.09	17.36	2.00	0.00	0.59	0.00	24.18	16.31	2.00	0.00	0.59	0.00
24.24	15.26	2.00	0.00	0.59	0.00	24.28	14.73	2.00	0.00	0.59	0.00
24.36	13.76	2.00	0.00	0.59	0.00	24.44	13.41	2.00	0.00	0.59	0.00
24.48	13.49	2.00	0.00	0.59	0.00	24.56	13.90	2.00	0.00	0.58	0.00
24.63	14.32	2.00	0.00	0.58	0.00	24.71	14.56	2.00	0.00	0.58	0.00
24.75	14.56	2.00	0.00	0.58	0.00	24.83	14.29	2.00	0.00	0.58	0.00
24.87	14.28	2.00	0.00	0.58	0.00	24.94	14.27	2.00	0.00	0.58	0.00
25.03	14.25	2.00	0.00	0.58	0.00	25.07	14.59	2.00	0.00	0.58	0.00
25.14	14.75	2.00	0.00	0.57	0.00	25.23	14.13	2.00	0.00	0.57	0.00
25.27	13.53	2.00	0.00	0.57	0.00	25.34	11.98	2.00	0.00	0.57	0.00
25.42	10.51	2.00	0.00	0.57	0.00	25.52	9.14	2.00	0.00	0.57	0.00
25.55	8.63	2.00	0.00	0.57	0.00	25.60	7.27	2.00	0.00	0.57	0.00
25.69	7.10	2.00	0.00	0.56	0.00	25.73	6.75	2.00	0.00	0.56	0.00
25.81	6.24	2.00	0.00	0.56	0.00	25.88	6.15	2.00	0.00	0.56	0.00
25.95	6.48	2.00	0.00	0.56	0.00	26.00	6.98	2.00	0.00	0.56	0.00
26.07	8.07	2.00	0.00	0.56	0.00	26.14	9.17	2.00	0.00	0.56	0.00
26.22	10.25	2.00	0.00	0.56	0.00	26.26	10.84	2.00	0.00	0.55	0.00
26.33	12.18	2.00	0.00	0.55	0.00	26.42	12.76	2.00	0.00	0.55	0.00
26.45	13.01	2.00	0.00	0.55	0.00	26.52	13.25	2.00	0.00	0.55	0.00
26.61	19.90	2.00	0.00	0.55	0.00	26.66	20.73	2.00	0.00	0.55	0.00
26.72	21.48	2.00	0.00	0.55	0.00	26.81	20.02	2.00	0.00	0.55	0.00
26.85	18.58	2.00	0.00	0.54	0.00	26.93	15.28	2.00	0.00	0.54	0.00
26.97	18.81	2.00	0.00	0.54	0.00	27.05	14.34	2.00	0.00	0.54	0.00
27.13	19.03	2.00	0.00	0.54	0.00	27.20	25.15	2.00	0.00	0.54	0.00
27.24	85.29	0.18	2.03	0.54	0.01	27.32	84.71	0.18	2.04	0.54	0.02
27.39	22.57	2.00	0.00	0.54	0.00	27.44	19.96	2.00	0.00	0.53	0.00
27.52	16.59	2.00	0.00	0.53	0.00	27.59	19.55	2.00	0.00	0.53	0.00
27.64	16.90	2.00	0.00	0.53	0.00	27.71	19.14	2.00	0.00	0.53	0.00
27.80	20.63	2.00	0.00	0.53	0.00	27.84	19.95	2.00	0.00	0.53	0.00
27.90	17.19	2.00	0.00	0.53	0.00	27.96	15.59	2.00	0.00	0.53	0.00
28.03	12.93	2.00	0.00	0.52	0.00	28.11	11.67	2.00	0.00	0.52	0.00
28.15	11.34	2.00	0.00	0.52	0.00	28.22	11.33	2.00	0.00	0.52	0.00
28.31	11.57	2.00	0.00	0.52	0.00	28.38	11.31	2.00	0.00	0.52	0.00
28.43	11.30	2.00	0.00	0.52	0.00	28.51	11.79	2.00	0.00	0.52	0.00
28.55	12.53	2.00	0.00	0.52	0.00	28.63	16.80	2.00	0.00	0.51	0.00
28.70	30.91	2.00	0.00	0.51	0.00	28.74	98.81	0.21	1.67	0.51	0.01
28.82	117.87	0.27	1.38	0.51	0.01	28.90	123.36	0.29	1.32	0.51	0.01
28.98	121.68	0.28	1.33	0.51	0.01	29.02	121.35	0.28	1.33	0.51	0.01
29.10	121.29	0.28	1.33	0.51	0.01	29.14	119.81	0.28	1.35	0.51	0.01
29.21	118.49	0.27	1.36	0.50	0.01	29.29	116.16	0.26	1.38	0.50	0.01
29.36	112.38	0.25	1.43	0.50	0.01	29.40	115.13	0.26	1.39	0.50	0.01
29.48	115.69	0.26	1.38	0.50	0.01	29.54	115.48	0.26	1.38	0.50	0.01
29.62	120.20	0.28	1.32	0.50	0.01	29.69	123.50	0.29	1.28	0.50	0.01
29.74	123.23	0.29	1.28	0.50	0.01	29.81	123.69	0.29	1.27	0.49	0.01
29.89	124.63	0.30	1.26	0.49	0.01	29.94	125.83	0.30	1.24	0.49	0.01
30.00	128.37	0.32	1.21	0.49	0.01	30.09	130.80	0.33	1.18	0.49	0.01
30.13	129.20	0.32	1.20	0.49	0.01	30.20	129.72	0.33	1.19	0.49	0.01

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.28	126.90	0.31	1.22	0.49	0.01	30.32	126.52	0.31	1.22	0.49	0.01
30.40	126.68	0.31	1.21	0.48	0.01	30.48	125.23	0.30	1.23	0.48	0.01
30.55	122.31	0.29	1.25	0.48	0.01	30.58	122.91	0.29	1.25	0.48	0.01
30.67	117.55	0.27	1.30	0.48	0.01	30.74	110.30	0.24	1.39	0.48	0.01
30.78	106.97	0.23	1.43	0.48	0.01	30.86	98.08	0.21	1.56	0.48	0.02
30.93	31.22	2.00	0.00	0.48	0.00	30.98	28.62	2.00	0.00	0.47	0.00
31.05	24.52	2.00	0.00	0.47	0.00	31.12	22.40	2.00	0.00	0.47	0.00
31.17	22.79	2.00	0.00	0.47	0.00	31.25	22.37	2.00	0.00	0.47	0.00
31.32	19.05	2.00	0.00	0.47	0.00	31.37	17.03	2.00	0.00	0.47	0.00
31.44	13.50	2.00	0.00	0.47	0.00	31.51	12.06	2.00	0.00	0.47	0.00
31.59	10.53	2.00	0.00	0.46	0.00	31.63	9.66	2.00	0.00	0.46	0.00
31.71	8.46	2.00	0.00	0.46	0.00	31.76	7.98	2.00	0.00	0.46	0.00
31.83	7.20	2.00	0.00	0.46	0.00	31.90	6.72	2.00	0.00	0.46	0.00
31.97	7.19	2.00	0.00	0.46	0.00	32.03	6.79	2.00	0.00	0.46	0.00
32.09	7.18	2.00	0.00	0.46	0.00	32.16	6.70	2.00	0.00	0.45	0.00
32.22	6.15	2.00	0.00	0.45	0.00	32.29	5.60	2.00	0.00	0.45	0.00
32.36	4.89	2.00	0.00	0.45	0.00	32.43	4.42	2.00	0.00	0.45	0.00
32.48	4.10	2.00	0.00	0.45	0.00	32.55	4.50	2.00	0.00	0.45	0.00
32.63	4.49	2.00	0.00	0.45	0.00	32.71	4.56	2.00	0.00	0.45	0.00
32.75	4.64	2.00	0.00	0.44	0.00	32.83	4.71	2.00	0.00	0.44	0.00
32.90	4.87	2.00	0.00	0.44	0.00	32.97	5.17	2.00	0.00	0.44	0.00
33.01	5.33	2.00	0.00	0.44	0.00	33.08	5.48	2.00	0.00	0.44	0.00
33.15	5.63	2.00	0.00	0.44	0.00	33.21	5.71	2.00	0.00	0.44	0.00
33.28	5.78	2.00	0.00	0.44	0.00	33.34	5.78	2.00	0.00	0.43	0.00
33.42	5.85	2.00	0.00	0.43	0.00	33.48	5.92	2.00	0.00	0.43	0.00
33.56	6.00	2.00	0.00	0.43	0.00	33.63	6.00	2.00	0.00	0.43	0.00
33.69	6.22	2.00	0.00	0.43	0.00	33.76	6.46	2.00	0.00	0.43	0.00
33.83	6.68	2.00	0.00	0.43	0.00	33.90	7.14	2.00	0.00	0.43	0.00
33.93	7.45	2.00	0.00	0.42	0.00	33.99	7.98	2.00	0.00	0.42	0.00
34.07	8.13	2.00	0.00	0.42	0.00	34.13	8.21	2.00	0.00	0.42	0.00
34.20	7.96	2.00	0.00	0.42	0.00	34.26	7.96	2.00	0.00	0.42	0.00
34.33	7.95	2.00	0.00	0.42	0.00	34.40	7.95	2.00	0.00	0.42	0.00
34.47	8.33	2.00	0.00	0.42	0.00	34.55	8.94	2.00	0.00	0.41	0.00
34.61	9.78	2.00	0.00	0.41	0.00	34.66	10.32	2.00	0.00	0.41	0.00
34.75	15.05	2.00	0.00	0.41	0.00	34.78	17.61	2.00	0.00	0.41	0.00
34.85	21.20	2.00	0.00	0.41	0.00	34.91	22.92	2.00	0.00	0.41	0.00
34.98	23.45	2.00	0.00	0.41	0.00	35.04	22.42	2.00	0.00	0.41	0.00
35.11	20.99	2.00	0.00	0.40	0.00	35.21	21.13	2.00	0.00	0.40	0.00
35.24	20.88	2.00	0.00	0.40	0.00	35.31	20.47	2.00	0.00	0.40	0.00
35.37	20.46	2.00	0.00	0.40	0.00	35.44	20.22	2.00	0.00	0.40	0.00
35.50	19.58	2.00	0.00	0.40	0.00	35.59	19.59	2.00	0.00	0.40	0.00
35.65	19.62	2.00	0.00	0.40	0.00	35.71	20.07	2.00	0.00	0.39	0.00
35.77	19.75	2.00	0.00	0.39	0.00	35.84	19.58	2.00	0.00	0.39	0.00
35.93	19.41	2.00	0.00	0.39	0.00	35.99	18.85	2.00	0.00	0.39	0.00
36.06	18.14	2.00	0.00	0.39	0.00	36.09	18.06	2.00	0.00	0.39	0.00
36.18	18.04	2.00	0.00	0.39	0.00	36.24	19.73	2.00	0.00	0.39	0.00
36.31	22.11	2.00	0.00	0.38	0.00	36.37	24.11	2.00	0.00	0.38	0.00
36.43	25.72	2.00	0.00	0.38	0.00	36.49	27.10	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.55	28.72	2.00	0.00	0.38	0.00	36.62	28.16	2.00	0.00	0.38	0.00
36.68	25.96	2.00	0.00	0.38	0.00	36.77	24.47	2.00	0.00	0.38	0.00
36.83	23.29	2.00	0.00	0.38	0.00	36.89	22.43	2.00	0.00	0.37	0.00
36.96	23.15	2.00	0.00	0.37	0.00	37.04	23.01	2.00	0.00	0.37	0.00
37.08	24.00	2.00	0.00	0.37	0.00	37.14	24.45	2.00	0.00	0.37	0.00
37.22	24.39	2.00	0.00	0.37	0.00	37.27	24.38	2.00	0.00	0.37	0.00
37.34	24.33	2.00	0.00	0.37	0.00	37.41	24.93	2.00	0.00	0.37	0.00
37.47	24.68	2.00	0.00	0.36	0.00	37.53	24.86	2.00	0.00	0.36	0.00
37.60	24.50	2.00	0.00	0.36	0.00	37.69	24.78	2.00	0.00	0.36	0.00
37.74	25.93	2.00	0.00	0.36	0.00	37.82	25.52	2.00	0.00	0.36	0.00
37.88	25.66	2.00	0.00	0.36	0.00	37.94	25.72	2.00	0.00	0.36	0.00
38.00	25.78	2.00	0.00	0.36	0.00	38.09	25.83	2.00	0.00	0.35	0.00
38.14	25.35	2.00	0.00	0.35	0.00	38.20	25.80	2.00	0.00	0.35	0.00
38.26	24.48	2.00	0.00	0.35	0.00	38.33	25.77	2.00	0.00	0.35	0.00
38.40	28.20	2.00	0.00	0.35	0.00	38.46	29.72	2.00	0.00	0.35	0.00
38.52	29.78	2.00	0.00	0.35	0.00	38.60	28.98	2.00	0.00	0.35	0.00
38.66	29.97	2.00	0.00	0.34	0.00	38.74	29.33	2.00	0.00	0.34	0.00
38.81	29.09	2.00	0.00	0.34	0.00	38.87	27.38	2.00	0.00	0.34	0.00
38.93	26.45	2.00	0.00	0.34	0.00	39.00	25.59	2.00	0.00	0.34	0.00
39.04	24.98	2.00	0.00	0.34	0.00	39.12	23.66	2.00	0.00	0.34	0.00
39.18	22.51	2.00	0.00	0.34	0.00	39.25	21.51	2.00	0.00	0.33	0.00
39.32	21.28	2.00	0.00	0.33	0.00	39.38	20.96	2.00	0.00	0.33	0.00
39.46	21.70	2.00	0.00	0.33	0.00	39.53	22.29	2.00	0.00	0.33	0.00
39.60	23.33	2.00	0.00	0.33	0.00	39.66	24.14	2.00	0.00	0.33	0.00
39.73	26.77	2.00	0.00	0.33	0.00	39.80	29.18	2.00	0.00	0.33	0.00
39.83	29.40	2.00	0.00	0.32	0.00	39.93	31.05	2.00	0.00	0.32	0.00
39.99	31.33	2.00	0.00	0.32	0.00	40.03	31.17	2.00	0.00	0.32	0.00
40.10	31.52	2.00	0.00	0.32	0.00	40.17	31.65	2.00	0.00	0.32	0.00
40.24	31.63	2.00	0.00	0.32	0.00	40.31	31.84	2.00	0.00	0.32	0.00
40.38	31.36	2.00	0.00	0.32	0.00	40.48	31.40	2.00	0.00	0.31	0.00
40.50	31.40	2.00	0.00	0.31	0.00	40.58	30.76	2.00	0.00	0.31	0.00
40.62	31.51	2.00	0.00	0.31	0.00	40.71	31.64	2.00	0.00	0.31	0.00
40.78	31.24	2.00	0.00	0.31	0.00	40.81	30.70	2.00	0.00	0.31	0.00
40.88	29.55	2.00	0.00	0.31	0.00	40.95	28.10	2.00	0.00	0.31	0.00
41.02	27.26	2.00	0.00	0.30	0.00	41.10	27.84	2.00	0.00	0.30	0.00
41.15	28.42	2.00	0.00	0.30	0.00	41.23	28.40	2.00	0.00	0.30	0.00
41.30	27.85	2.00	0.00	0.30	0.00	41.37	27.02	2.00	0.00	0.30	0.00
41.43	27.05	2.00	0.00	0.30	0.00	41.50	26.70	2.00	0.00	0.30	0.00
41.54	27.07	2.00	0.00	0.30	0.00	41.62	26.67	2.00	0.00	0.29	0.00
41.70	31.47	2.00	0.00	0.29	0.00	41.74	32.05	2.00	0.00	0.29	0.00
41.80	30.75	2.00	0.00	0.29	0.00	41.87	28.47	2.00	0.00	0.29	0.00
41.93	27.40	2.00	0.00	0.29	0.00	42.01	28.13	2.00	0.00	0.29	0.00
42.07	28.78	2.00	0.00	0.29	0.00	42.14	29.12	2.00	0.00	0.29	0.00
42.22	28.43	2.00	0.00	0.28	0.00	42.28	28.33	2.00	0.00	0.28	0.00
42.34	28.32	2.00	0.00	0.28	0.00	42.41	28.22	2.00	0.00	0.28	0.00
42.48	28.50	2.00	0.00	0.28	0.00	42.55	28.55	2.00	0.00	0.28	0.00
42.59	28.77	2.00	0.00	0.28	0.00	42.66	29.20	2.00	0.00	0.28	0.00
42.72	29.25	2.00	0.00	0.28	0.00	42.82	29.60	2.00	0.00	0.27	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.85	29.74	2.00	0.00	0.27	0.00	42.92	29.87	2.00	0.00	0.27	0.00
42.98	29.92	2.00	0.00	0.27	0.00	43.05	29.98	2.00	0.00	0.27	0.00
43.11	28.99	2.00	0.00	0.27	0.00	43.18	28.68	2.00	0.00	0.27	0.00
43.25	28.73	2.00	0.00	0.27	0.00	43.33	30.34	2.00	0.00	0.27	0.00
43.39	30.62	2.00	0.00	0.26	0.00	43.46	30.59	2.00	0.00	0.26	0.00
43.53	30.57	2.00	0.00	0.26	0.00	43.59	30.70	2.00	0.00	0.26	0.00
43.66	31.13	2.00	0.00	0.26	0.00	43.73	32.52	2.00	0.00	0.26	0.00
43.77	33.77	2.00	0.00	0.26	0.00	43.83	34.80	2.00	0.00	0.26	0.00
43.91	35.07	2.00	0.00	0.26	0.00	43.97	34.61	2.00	0.00	0.25	0.00
44.03	33.09	2.00	0.00	0.25	0.00	44.11	34.05	2.00	0.00	0.25	0.00
44.18	34.02	2.00	0.00	0.25	0.00	44.25	33.99	2.00	0.00	0.25	0.00
44.33	34.71	2.00	0.00	0.25	0.00	44.36	35.00	2.00	0.00	0.25	0.00
44.43	34.60	2.00	0.00	0.25	0.00	44.49	34.28	2.00	0.00	0.25	0.00
44.56	34.60	2.00	0.00	0.24	0.00	44.63	34.62	2.00	0.00	0.24	0.00
44.70	34.37	2.00	0.00	0.24	0.00	44.78	33.90	2.00	0.00	0.24	0.00
44.84	33.96	2.00	0.00	0.24	0.00	44.91	34.09	2.00	0.00	0.24	0.00
44.97	34.95	2.00	0.00	0.24	0.00	45.04	35.37	2.00	0.00	0.24	0.00
45.10	36.09	2.00	0.00	0.24	0.00	45.18	38.14	2.00	0.00	0.23	0.00
45.21	101.57	0.22	0.74	0.23	0.00	45.28	104.61	0.23	0.71	0.23	0.01
45.35	105.87	0.24	0.70	0.23	0.01	45.42	105.71	0.24	0.70	0.23	0.01
45.48	104.80	0.23	0.70	0.23	0.01	45.55	106.69	0.24	0.69	0.23	0.01
45.61	107.54	0.24	0.68	0.23	0.00	45.68	108.68	0.24	0.67	0.23	0.01
45.76	111.70	0.25	0.64	0.22	0.01	45.83	113.47	0.26	0.63	0.22	0.01
45.89	115.59	0.27	0.61	0.22	0.00	45.96	115.86	0.27	0.61	0.22	0.00
46.02	116.88	0.27	0.60	0.22	0.00	46.09	117.74	0.28	0.59	0.22	0.00
46.16	118.98	0.28	0.58	0.22	0.00	46.20	119.41	0.28	0.58	0.22	0.00
46.27	118.56	0.28	0.58	0.22	0.00	46.33	116.06	0.27	0.59	0.21	0.00
46.39	114.38	0.26	0.60	0.21	0.00	46.46	114.07	0.26	0.60	0.21	0.01
46.53	114.46	0.26	0.59	0.21	0.00	46.59	113.69	0.26	0.59	0.21	0.00
46.66	114.54	0.26	0.58	0.21	0.00	46.74	113.90	0.26	0.58	0.21	0.01
46.80	110.77	0.25	0.60	0.21	0.00	46.88	43.87	2.00	0.00	0.21	0.00
46.94	42.22	2.00	0.00	0.20	0.00	47.01	40.42	2.00	0.00	0.20	0.00
47.07	38.83	2.00	0.00	0.20	0.00	47.11	38.81	2.00	0.00	0.20	0.00
47.19	38.78	2.00	0.00	0.20	0.00	47.25	38.76	2.00	0.00	0.20	0.00
47.32	38.23	2.00	0.00	0.20	0.00	47.39	36.68	2.00	0.00	0.20	0.00
47.45	35.85	2.00	0.00	0.20	0.00	47.52	34.60	2.00	0.00	0.19	0.00
47.58	33.19	2.00	0.00	0.19	0.00	47.66	31.86	2.00	0.00	0.19	0.00
47.71	28.11	2.00	0.00	0.19	0.00	47.79	27.95	2.00	0.00	0.19	0.00
47.86	27.21	2.00	0.00	0.19	0.00	47.92	29.18	2.00	0.00	0.19	0.00
47.98	32.60	2.00	0.00	0.19	0.00	48.05	34.68	2.00	0.00	0.19	0.00
48.12	37.04	2.00	0.00	0.18	0.00	48.18	38.19	2.00	0.00	0.18	0.00
48.26	37.23	2.00	0.00	0.18	0.00	48.32	37.29	2.00	0.00	0.18	0.00
48.39	37.05	2.00	0.00	0.18	0.00	48.46	36.60	2.00	0.00	0.18	0.00
48.52	35.05	2.00	0.00	0.18	0.00	48.56	34.47	2.00	0.00	0.18	0.00
48.62	33.73	2.00	0.00	0.18	0.00	48.69	33.29	2.00	0.00	0.17	0.00
48.76	32.25	2.00	0.00	0.17	0.00	48.82	31.73	2.00	0.00	0.17	0.00
48.89	32.43	2.00	0.00	0.17	0.00	48.96	32.48	2.00	0.00	0.17	0.00
49.03	32.39	2.00	0.00	0.17	0.00	49.10	32.37	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.16	32.17	2.00	0.00	0.17	0.00	49.23	32.15	2.00	0.00	0.17	0.00
49.30	31.95	2.00	0.00	0.16	0.00	49.36	32.89	2.00	0.00	0.16	0.00
49.44	33.08	2.00	0.00	0.16	0.00	49.48	33.57	2.00	0.00	0.16	0.00
49.58	33.90	2.00	0.00	0.16	0.00	49.61	33.03	2.00	0.00	0.16	0.00
49.68	33.01	2.00	0.00	0.16	0.00	49.74	33.00	2.00	0.00	0.16	0.00
49.83	31.40	2.00	0.00	0.16	0.00	49.89	30.40	2.00	0.00	0.15	0.00
49.96	30.41	2.00	0.00	0.15	0.00	50.01	30.40	2.00	0.00	0.15	0.00
50.07	30.44	2.00	0.00	0.15	0.00	50.16	28.16	2.00	0.00	0.15	0.00
50.22	27.16	2.00	0.00	0.15	0.00	50.29	26.31	2.00	0.00	0.15	0.00
50.33	25.46	2.00	0.00	0.15	0.00	50.41	24.68	2.00	0.00	0.15	0.00
50.47	23.62	2.00	0.00	0.14	0.00	50.53	22.78	2.00	0.00	0.14	0.00
50.61	21.31	2.00	0.00	0.14	0.00	50.66	20.47	2.00	0.00	0.14	0.00
50.73	19.84	2.00	0.00	0.14	0.00	50.80	20.38	2.00	0.00	0.14	0.00
50.86	22.02	2.00	0.00	0.14	0.00	50.93	22.01	2.00	0.00	0.14	0.00
50.99	20.41	2.00	0.00	0.14	0.00	51.06	22.59	2.00	0.00	0.13	0.00
51.13	29.72	2.00	0.00	0.13	0.00	51.20	35.13	2.00	0.00	0.13	0.00
51.27	38.67	2.00	0.00	0.13	0.00	51.33	40.95	2.00	0.00	0.13	0.00
51.40	41.56	2.00	0.00	0.13	0.00	51.46	44.00	2.00	0.00	0.13	0.00
51.53	44.76	2.00	0.00	0.13	0.00	51.61	44.22	2.00	0.00	0.13	0.00
51.64	44.86	2.00	0.00	0.12	0.00	51.71	45.13	2.00	0.00	0.12	0.00
51.78	45.10	2.00	0.00	0.12	0.00	51.84	45.08	2.00	0.00	0.12	0.00
51.91	45.06	2.00	0.00	0.12	0.00	51.98	46.49	2.00	0.00	0.12	0.00
52.06	47.41	2.00	0.00	0.12	0.00	52.13	111.96	0.26	0.33	0.12	0.00
52.19	113.81	0.27	0.32	0.12	0.00	52.24	114.68	0.27	0.32	0.11	0.00
52.31	115.74	0.28	0.31	0.11	0.00	52.37	113.87	0.27	0.32	0.11	0.00
52.46	110.99	0.26	0.32	0.11	0.00	52.53	44.46	2.00	0.00	0.11	0.00
52.56	43.16	2.00	0.00	0.11	0.00	52.63	40.40	2.00	0.00	0.11	0.00
52.69	38.97	2.00	0.00	0.11	0.00	52.78	37.75	2.00	0.00	0.11	0.00
52.84	36.19	2.00	0.00	0.10	0.00	52.91	33.72	2.00	0.00	0.10	0.00
52.98	33.92	2.00	0.00	0.10	0.00	53.04	33.56	2.00	0.00	0.10	0.00
53.10	32.48	2.00	0.00	0.10	0.00	53.17	36.24	2.00	0.00	0.10	0.00
53.22	38.95	2.00	0.00	0.10	0.00	53.31	44.64	2.00	0.00	0.10	0.00
53.35	45.82	2.00	0.00	0.10	0.00	53.41	48.41	2.00	0.00	0.09	0.00
53.49	116.01	0.28	0.26	0.09	0.00	53.55	118.51	0.29	0.25	0.09	0.00
53.62	119.56	0.29	0.24	0.09	0.00	53.68	118.82	0.29	0.24	0.09	0.00
53.74	117.15	0.28	0.24	0.09	0.00	53.83	115.22	0.28	0.24	0.09	0.00
53.88	46.26	2.00	0.00	0.09	0.00	53.96	41.38	2.00	0.00	0.09	0.00
54.03	38.19	2.00	0.00	0.08	0.00	54.09	35.60	2.00	0.00	0.08	0.00
54.16	32.67	2.00	0.00	0.08	0.00	54.22	30.57	2.00	0.00	0.08	0.00
54.29	33.64	2.00	0.00	0.08	0.00	54.36	46.80	2.00	0.00	0.08	0.00
54.43	120.55	0.30	0.20	0.08	0.00	54.47	121.86	0.30	0.20	0.08	0.00
54.53	122.02	0.31	0.20	0.08	0.00	54.60	120.34	0.30	0.20	0.07	0.00
54.67	119.15	0.29	0.20	0.07	0.00	54.73	118.19	0.29	0.20	0.07	0.00
54.80	117.66	0.29	0.19	0.07	0.00	54.87	51.26	2.00	0.00	0.07	0.00
54.94	48.42	2.00	0.00	0.07	0.00	55.00	46.11	2.00	0.00	0.07	0.00
55.08	44.67	2.00	0.00	0.07	0.00	55.15	42.44	2.00	0.00	0.07	0.00
55.21	44.76	2.00	0.00	0.06	0.00	55.28	37.73	2.00	0.00	0.06	0.00
55.34	44.79	2.00	0.00	0.06	0.00	55.40	52.59	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.47	55.01	2.00	0.00	0.06	0.00	55.51	122.40	0.31	0.15	0.06	0.00
55.58	126.12	0.33	0.15	0.06	0.00	55.65	129.08	0.34	0.14	0.06	0.00
55.72	127.68	0.34	0.14	0.06	0.00	55.78	58.11	2.00	0.00	0.05	0.00
55.85	58.19	2.00	0.00	0.05	0.00	55.91	57.78	2.00	0.00	0.05	0.00
55.98	60.36	2.00	0.00	0.05	0.00	56.04	53.92	2.00	0.00	0.05	0.00
56.13	56.02	2.00	0.00	0.05	0.00	56.20	53.50	2.00	0.00	0.05	0.00
56.26	53.37	2.00	0.00	0.05	0.00	56.33	53.22	2.00	0.00	0.05	0.00
56.40	56.53	2.00	0.00	0.04	0.00	56.43	57.81	2.00	0.00	0.04	0.00
56.51	130.15	0.35	0.10	0.04	0.00	56.57	131.68	0.36	0.10	0.04	0.00
56.64	130.19	0.35	0.10	0.04	0.00	56.71	129.30	0.35	0.10	0.04	0.00
56.77	127.45	0.34	0.09	0.04	0.00	56.84	127.16	0.34	0.09	0.04	0.00
56.92	126.03	0.33	0.09	0.04	0.00	56.98	55.94	2.00	0.00	0.03	0.00
57.05	53.69	2.00	0.00	0.03	0.00	57.12	50.66	2.00	0.00	0.03	0.00
57.19	47.59	2.00	0.00	0.03	0.00	57.25	44.04	2.00	0.00	0.03	0.00
57.31	39.56	2.00	0.00	0.03	0.00	57.35	37.46	2.00	0.00	0.03	0.00
57.42	35.39	2.00	0.00	0.03	0.00	57.50	35.02	2.00	0.00	0.03	0.00
57.55	33.64	2.00	0.00	0.02	0.00	57.62	33.68	2.00	0.00	0.02	0.00
57.69	33.80	2.00	0.00	0.02	0.00	57.76	33.36	2.00	0.00	0.02	0.00
57.82	34.71	2.00	0.00	0.02	0.00	57.89	35.23	2.00	0.00	0.02	0.00
57.95	35.08	2.00	0.00	0.02	0.00	58.02	35.00	2.00	0.00	0.02	0.00
58.09	34.91	2.00	0.00	0.02	0.00	58.16	33.53	2.00	0.00	0.01	0.00
58.22	32.31	2.00	0.00	0.01	0.00	58.30	29.99	2.00	0.00	0.01	0.00
58.36	28.58	2.00	0.00	0.01	0.00	58.43	28.57	2.00	0.00	0.01	0.00
58.49	28.75	2.00	0.00	0.01	0.00	58.56	28.14	2.00	0.00	0.01	0.00
58.63	28.65	2.00	0.00	0.01	0.00	58.67	29.44	2.00	0.00	0.01	0.00
58.76	30.02	2.00	0.00	0.00	0.00	58.80	31.08	2.00	0.00	0.00	0.00
58.87	31.82	2.00	0.00	0.00	0.00	58.95	33.07	2.00	0.00	0.00	0.00
59.02	33.13	2.00	0.00	0.00	0.00	59.08	32.10	2.00	0.00	0.00	0.00
59.15	31.22	2.00	0.00	0.00	0.00	59.22	31.97	2.00	0.00	0.00	0.00
59.29	31.85	2.00	0.00	0.00	0.00	59.32	34.72	2.00	0.00	0.00	0.00
59.38	39.09	2.00	0.00	0.00	0.00	59.46	42.18	2.00	0.00	0.00	0.00
59.52	45.71	2.00	0.00	0.00	0.00	59.58	45.90	2.00	0.00	0.00	0.00
59.65	45.45	2.00	0.00	0.00	0.00	59.72	45.99	2.00	0.00	0.00	0.00
59.78	46.79	2.00	0.00	0.00	0.00	59.86	50.41	2.00	0.00	0.00	0.00
59.93	52.98	2.00	0.00	0.00	0.00	60.00	55.53	2.00	0.00	0.00	0.00
60.06	53.84	2.00	0.00	0.00	0.00	60.13	54.09	2.00	0.00	0.00	0.00
60.20	58.16	2.00	0.00	0.00	0.00	60.26	57.68	2.00	0.00	0.00	0.00
60.33	56.50	2.00	0.00	0.00	0.00	60.40	56.40	2.00	0.00	0.00	0.00
60.46	54.02	2.00	0.00	0.00	0.00	60.52	51.81	2.00	0.00	0.00	0.00
60.59	49.69	2.00	0.00	0.00	0.00	60.65	47.02	2.00	0.00	0.00	0.00
60.72	43.61	2.00	0.00	0.00	0.00	60.79	39.19	2.00	0.00	0.00	0.00
60.85	35.48	2.00	0.00	0.00	0.00	60.92	33.40	2.00	0.00	0.00	0.00
60.99	33.44	2.00	0.00	0.00	0.00	61.03	34.09	2.00	0.00	0.00	0.00
61.12	33.26	2.00	0.00	0.00	0.00	61.19	34.05	2.00	0.00	0.00	0.00
61.25	32.24	2.00	0.00	0.00	0.00	61.32	34.01	2.00	0.00	0.00	0.00
61.38	34.58	2.00	0.00	0.00	0.00	61.42	34.12	2.00	0.00	0.00	0.00
61.51	32.90	2.00	0.00	0.00	0.00	61.58	35.67	2.00	0.00	0.00	0.00
61.64	38.39	2.00	0.00	0.00	0.00	61.71	38.43	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.75	38.35	2.00	0.00	0.00	0.00	61.82	38.33	2.00	0.00	0.00	0.00
61.90	35.64	2.00	0.00	0.00	0.00	61.96	33.05	2.00	0.00	0.00	0.00
62.03	30.39	2.00	0.00	0.00	0.00	62.09	29.73	2.00	0.00	0.00	0.00
62.15	27.77	2.00	0.00	0.00	0.00	62.22	27.56	2.00	0.00	0.00	0.00
62.29	28.97	2.00	0.00	0.00	0.00	62.35	30.50	2.00	0.00	0.00	0.00
62.42	34.76	2.00	0.00	0.00	0.00	62.50	37.18	2.00	0.00	0.00	0.00
62.55	37.37	2.00	0.00	0.00	0.00	62.62	35.76	2.00	0.00	0.00	0.00
62.68	35.35	2.00	0.00	0.00	0.00	62.75	35.92	2.00	0.00	0.00	0.00
62.81	36.50	2.00	0.00	0.00	0.00	62.87	39.54	2.00	0.00	0.00	0.00
62.94	40.80	2.00	0.00	0.00	0.00	62.99	43.15	2.00	0.00	0.00	0.00
63.06	42.65	2.00	0.00	0.00	0.00	63.13	40.61	2.00	0.00	0.00	0.00
63.20	39.23	2.00	0.00	0.00	0.00	63.26	39.25	2.00	0.00	0.00	0.00
63.32	39.22	2.00	0.00	0.00	0.00	63.39	39.22	2.00	0.00	0.00	0.00
63.49	43.12	2.00	0.00	0.00	0.00	63.55	44.24	2.00	0.00	0.00	0.00
63.58	44.37	2.00	0.00	0.00	0.00	63.67	43.73	2.00	0.00	0.00	0.00
63.75	43.99	2.00	0.00	0.00	0.00	63.81	43.70	2.00	0.00	0.00	0.00
63.87	42.87	2.00	0.00	0.00	0.00	63.91	41.92	2.00	0.00	0.00	0.00
64.00	39.59	2.00	0.00	0.00	0.00	64.07	39.54	2.00	0.00	0.00	0.00
64.13	39.48	2.00	0.00	0.00	0.00	64.18	41.01	2.00	0.00	0.00	0.00
64.27	44.96	2.00	0.00	0.00	0.00	64.31	45.07	2.00	0.00	0.00	0.00
64.40	45.32	2.00	0.00	0.00	0.00	64.46	44.16	2.00	0.00	0.00	0.00
64.53	42.40	2.00	0.00	0.00	0.00	64.60	40.25	2.00	0.00	0.00	0.00
64.66	38.10	2.00	0.00	0.00	0.00	64.72	36.91	2.00	0.00	0.00	0.00
64.79	36.53	2.00	0.00	0.00	0.00	64.85	33.07	2.00	0.00	0.00	0.00
64.92	30.08	2.00	0.00	0.00	0.00	64.98	27.94	2.00	0.00	0.00	0.00
65.05	26.20	2.00	0.00	0.00	0.00	65.11	25.75	2.00	0.00	0.00	0.00
65.16	24.47	2.00	0.00	0.00	0.00	65.26	25.15	2.00	0.00	0.00	0.00
65.29	24.51	2.00	0.00	0.00	0.00	65.38	22.99	2.00	0.00	0.00	0.00
65.45	22.66	2.00	0.00	0.00	0.00	65.51	23.84	2.00	0.00	0.00	0.00
65.57	29.21	2.00	0.00	0.00	0.00	65.64	33.06	2.00	0.00	0.00	0.00
65.70	34.79	2.00	0.00	0.00	0.00	65.76	34.90	2.00	0.00	0.00	0.00
65.83	35.01	2.00	0.00	0.00	0.00	65.88	35.06	2.00	0.00	0.00	0.00
65.97	36.47	2.00	0.00	0.00	0.00	66.03	35.86	2.00	0.00	0.00	0.00
66.10	35.78	2.00	0.00	0.00	0.00	66.16	35.77	2.00	0.00	0.00	0.00
66.22	34.90	2.00	0.00	0.00	0.00	66.29	34.89	2.00	0.00	0.00	0.00
66.35	34.87	2.00	0.00	0.00	0.00	66.42	35.11	2.00	0.00	0.00	0.00
66.48	36.38	2.00	0.00	0.00	0.00	66.54	37.53	2.00	0.00	0.00	0.00
66.60	37.72	2.00	0.00	0.00	0.00	66.70	36.71	2.00	0.00	0.00	0.00
66.76	38.40	2.00	0.00	0.00	0.00	66.83	40.65	2.00	0.00	0.00	0.00
66.89	42.09	2.00	0.00	0.00	0.00	66.95	42.47	2.00	0.00	0.00	0.00
67.02	42.38	2.00	0.00	0.00	0.00	67.08	42.83	2.00	0.00	0.00	0.00
67.14	44.28	2.00	0.00	0.00	0.00	67.21	44.40	2.00	0.00	0.00	0.00
67.27	42.24	2.00	0.00	0.00	0.00	67.33	39.78	2.00	0.00	0.00	0.00
67.39	37.53	2.00	0.00	0.00	0.00	67.46	35.19	2.00	0.00	0.00	0.00
67.53	32.31	2.00	0.00	0.00	0.00	67.63	28.01	2.00	0.00	0.00	0.00
67.65	27.57	2.00	0.00	0.00	0.00	67.72	30.65	2.00	0.00	0.00	0.00
67.80	33.51	2.00	0.00	0.00	0.00	67.87	33.49	2.00	0.00	0.00	0.00
67.93	31.58	2.00	0.00	0.00	0.00	67.99	28.63	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
68.06	26.61	2.00	0.00	0.00	0.00	68.12	25.41	2.00	0.00	0.00	0.00
68.19	24.65	2.00	0.00	0.00	0.00	68.26	23.71	2.00	0.00	0.00	0.00
68.33	21.12	2.00	0.00	0.00	0.00	68.40	21.97	2.00	0.00	0.00	0.00
68.46	21.47	2.00	0.00	0.00	0.00	68.52	21.46	2.00	0.00	0.00	0.00
68.59	22.79	2.00	0.00	0.00	0.00	68.65	25.50	2.00	0.00	0.00	0.00
68.71	28.84	2.00	0.00	0.00	0.00	68.78	29.71	2.00	0.00	0.00	0.00
68.84	29.51	2.00	0.00	0.00	0.00	68.91	28.75	2.00	0.00	0.00	0.00
68.97	27.49	2.00	0.00	0.00	0.00	69.04	26.79	2.00	0.00	0.00	0.00
69.11	26.47	2.00	0.00	0.00	0.00	69.17	25.46	2.00	0.00	0.00	0.00
69.24	23.48	2.00	0.00	0.00	0.00	69.30	21.34	2.00	0.00	0.00	0.00
69.37	19.88	2.00	0.00	0.00	0.00	69.44	18.92	2.00	0.00	0.00	0.00
69.50	18.79	2.00	0.00	0.00	0.00	69.56	20.76	2.00	0.00	0.00	0.00
69.63	26.18	2.00	0.00	0.00	0.00	69.70	30.77	2.00	0.00	0.00	0.00
69.76	33.92	2.00	0.00	0.00	0.00	69.82	35.36	2.00	0.00	0.00	0.00
69.89	35.73	2.00	0.00	0.00	0.00	69.95	35.47	2.00	0.00	0.00	0.00
70.05	35.63	2.00	0.00	0.00	0.00	70.08	35.75	2.00	0.00	0.00	0.00
70.15	35.74	2.00	0.00	0.00	0.00	70.24	36.10	2.00	0.00	0.00	0.00
70.31	35.51	2.00	0.00	0.00	0.00	70.37	34.92	2.00	0.00	0.00	0.00
70.43	34.91	2.00	0.00	0.00	0.00	70.50	34.16	2.00	0.00	0.00	0.00
70.55	24.35	2.00	0.00	0.00	0.00	70.63	30.99	2.00	0.00	0.00	0.00
70.68	30.08	2.00	0.00	0.00	0.00	70.75	28.88	2.00	0.00	0.00	0.00
70.81	27.44	2.00	0.00	0.00	0.00	70.87	27.05	2.00	0.00	0.00	0.00
70.94	27.66	2.00	0.00	0.00	0.00	71.01	27.95	2.00	0.00	0.00	0.00
71.07	28.56	2.00	0.00	0.00	0.00	71.13	28.92	2.00	0.00	0.00	0.00
71.20	29.10	2.00	0.00	0.00	0.00	71.26	29.14	2.00	0.00	0.00	0.00
71.33	28.57	2.00	0.00	0.00	0.00	71.40	27.08	2.00	0.00	0.00	0.00
71.46	25.78	2.00	0.00	0.00	0.00	71.53	24.85	2.00	0.00	0.00	0.00
71.60	23.26	2.00	0.00	0.00	0.00	71.67	21.27	2.00	0.00	0.00	0.00
71.73	20.60	2.00	0.00	0.00	0.00	71.80	19.59	2.00	0.00	0.00	0.00
71.86	18.93	2.00	0.00	0.00	0.00	71.92	16.58	2.00	0.00	0.00	0.00
72.00	18.21	2.00	0.00	0.00	0.00	72.07	16.97	2.00	0.00	0.00	0.00
72.13	16.96	2.00	0.00	0.00	0.00	72.20	16.95	2.00	0.00	0.00	0.00
72.26	16.83	2.00	0.00	0.00	0.00	72.33	17.70	2.00	0.00	0.00	0.00
72.39	18.80	2.00	0.00	0.00	0.00	72.46	19.44	2.00	0.00	0.00	0.00
72.52	19.14	2.00	0.00	0.00	0.00	72.59	17.67	2.00	0.00	0.00	0.00
72.65	15.86	2.00	0.00	0.00	0.00	72.72	14.82	2.00	0.00	0.00	0.00
72.78	15.94	2.00	0.00	0.00	0.00	72.84	15.26	2.00	0.00	0.00	0.00
72.91	16.01	2.00	0.00	0.00	0.00	72.97	16.17	2.00	0.00	0.00	0.00
73.03	17.26	2.00	0.00	0.00	0.00	73.10	18.47	2.00	0.00	0.00	0.00
73.17	18.82	2.00	0.00	0.00	0.00	73.23	18.93	2.00	0.00	0.00	0.00
73.30	19.56	2.00	0.00	0.00	0.00	73.37	19.09	2.00	0.00	0.00	0.00
73.43	18.15	2.00	0.00	0.00	0.00	73.51	17.56	2.00	0.00	0.00	0.00
73.56	16.05	2.00	0.00	0.00	0.00	73.64	13.94	2.00	0.00	0.00	0.00
73.70	12.24	2.00	0.00	0.00	0.00	73.76	10.56	2.00	0.00	0.00	0.00
73.83	9.84	2.00	0.00	0.00	0.00	73.89	9.73	2.00	0.00	0.00	0.00
73.96	9.56	2.00	0.00	0.00	0.00	74.03	9.61	2.00	0.00	0.00	0.00
74.09	9.55	2.00	0.00	0.00	0.00	74.16	9.33	2.00	0.00	0.00	0.00
74.21	9.51	2.00	0.00	0.00	0.00	74.30	9.27	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.36	9.48	2.00	0.00	0.00	0.00	74.41	10.57	2.00	0.00	0.00	0.00
74.49	13.24	2.00	0.00	0.00	0.00	74.56	14.98	2.00	0.00	0.00	0.00
74.61	17.26	2.00	0.00	0.00	0.00	74.70	21.84	2.00	0.00	0.00	0.00
74.75	25.05	2.00	0.00	0.00	0.00	74.81	26.90	2.00	0.00	0.00	0.00
74.89	26.22	2.00	0.00	0.00	0.00	74.95	24.95	2.00	0.00	0.00	0.00
75.01	17.27	2.00	0.00	0.00	0.00	75.10	23.14	2.00	0.00	0.00	0.00
75.17	22.42	2.00	0.00	0.00	0.00	75.23	21.47	2.00	0.00	0.00	0.00
75.29	20.06	2.00	0.00	0.00	0.00	75.36	20.17	2.00	0.00	0.00	0.00
75.39	21.86	2.00	0.00	0.00	0.00	75.49	30.29	2.00	0.00	0.00	0.00
75.55	34.26	2.00	0.00	0.00	0.00	75.62	34.98	2.00	0.00	0.00	0.00
75.69	35.28	2.00	0.00	0.00	0.00	75.75	35.95	2.00	0.00	0.00	0.00
75.82	38.11	2.00	0.00	0.00	0.00	75.86	39.09	2.00	0.00	0.00	0.00
75.96	40.18	2.00	0.00	0.00	0.00	75.99	40.73	2.00	0.00	0.00	0.00
76.05	41.47	2.00	0.00	0.00	0.00	76.12	43.05	2.00	0.00	0.00	0.00
76.18	43.28	2.00	0.00	0.00	0.00	76.25	43.20	2.00	0.00	0.00	0.00
76.32	43.70	2.00	0.00	0.00	0.00	76.40	44.64	2.00	0.00	0.00	0.00
76.46	45.39	2.00	0.00	0.00	0.00	76.53	45.70	2.00	0.00	0.00	0.00
76.59	45.74	2.00	0.00	0.00	0.00	76.66	46.24	2.00	0.00	0.00	0.00
76.73	46.99	2.00	0.00	0.00	0.00	76.79	48.14	2.00	0.00	0.00	0.00
76.86	49.42	2.00	0.00	0.00	0.00	76.92	50.59	2.00	0.00	0.00	0.00
77.00	50.63	2.00	0.00	0.00	0.00	77.06	50.36	2.00	0.00	0.00	0.00
77.13	49.36	2.00	0.00	0.00	0.00	77.17	49.15	2.00	0.00	0.00	0.00
77.23	48.56	2.00	0.00	0.00	0.00	77.31	43.87	2.00	0.00	0.00	0.00
77.37	46.32	2.00	0.00	0.00	0.00	77.44	46.02	2.00	0.00	0.00	0.00
77.51	46.13	2.00	0.00	0.00	0.00	77.57	46.36	2.00	0.00	0.00	0.00
77.64	46.54	2.00	0.00	0.00	0.00	77.71	46.58	2.00	0.00	0.00	0.00
77.78	46.26	2.00	0.00	0.00	0.00	77.84	45.09	2.00	0.00	0.00	0.00
77.92	43.60	2.00	0.00	0.00	0.00	77.99	41.75	2.00	0.00	0.00	0.00
78.04	38.68	2.00	0.00	0.00	0.00	78.10	36.83	2.00	0.00	0.00	0.00
78.16	35.29	2.00	0.00	0.00	0.00	78.23	33.08	2.00	0.00	0.00	0.00
78.29	35.45	2.00	0.00	0.00	0.00	78.35	28.57	2.00	0.00	0.00	0.00
78.43	35.58	2.00	0.00	0.00	0.00	78.49	41.02	2.00	0.00	0.00	0.00
78.56	46.06	2.00	0.00	0.00	0.00	78.63	49.90	2.00	0.00	0.00	0.00
78.69	52.55	2.00	0.00	0.00	0.00	78.77	53.04	2.00	0.00	0.00	0.00
78.83	53.36	2.00	0.00	0.00	0.00	78.90	53.80	2.00	0.00	0.00	0.00
78.97	53.92	2.00	0.00	0.00	0.00	79.03	52.78	2.00	0.00	0.00	0.00
79.10	53.02	2.00	0.00	0.00	0.00	79.14	55.75	2.00	0.00	0.00	0.00
79.20	63.45	2.00	0.00	0.00	0.00	79.27	68.20	2.00	0.00	0.00	0.00
79.34	68.35	2.00	0.00	0.00	0.00	79.40	68.41	2.00	0.00	0.00	0.00
79.47	68.32	2.00	0.00	0.00	0.00	79.54	67.74	2.00	0.00	0.00	0.00
79.61	67.25	2.00	0.00	0.00	0.00	79.68	66.19	2.00	0.00	0.00	0.00
79.74	65.20	2.00	0.00	0.00	0.00	79.81	69.37	2.00	0.00	0.00	0.00
79.88	150.12	0.60	0.00	0.00	0.00	79.94	153.08	0.64	0.00	0.00	0.00
80.01	158.47	0.75	0.00	0.00	0.00	80.06	157.38	0.72	0.00	0.00	0.00
80.13	156.58	0.71	0.00	0.00	0.00	80.21	156.42	0.71	0.00	0.00	0.00
80.26	156.28	0.70	0.00	0.00	0.00	80.32	156.11	0.70	0.00	0.00	0.00
80.39	155.09	0.68	0.00	0.00	0.00	80.47	156.55	0.71	0.00	0.00	0.00
80.54	157.92	0.74	0.00	0.00	0.00	80.61	158.72	0.75	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.67	160.75	0.80	0.00	0.00	0.00	80.74	160.55	0.80	0.00	0.00	0.00
80.80	160.72	0.80	0.00	0.00	0.00	80.86	160.24	0.79	0.00	0.00	0.00
80.93	160.52	0.80	0.00	0.00	0.00	81.00	161.15	0.81	0.00	0.00	0.00
81.05	160.27	0.79	0.00	0.00	0.00	81.11	158.11	0.74	0.00	0.00	0.00
81.17	160.11	0.79	0.00	0.00	0.00	81.23	159.30	0.77	0.00	0.00	0.00
81.32	160.06	0.79	0.00	0.00	0.00	81.38	158.61	0.75	0.00	0.00	0.00
81.44	160.02	0.79	0.00	0.00	0.00	81.50	159.71	0.78	0.00	0.00	0.00
81.58	159.19	0.77	0.00	0.00	0.00	81.65	158.83	0.76	0.00	0.00	0.00
81.71	158.36	0.75	0.00	0.00	0.00	81.78	158.19	0.75	0.00	0.00	0.00
81.84	157.99	0.74	0.00	0.00	0.00	81.90	158.19	0.75	0.00	0.00	0.00
81.97	159.06	0.77	0.00	0.00	0.00	82.03	160.39	0.80	0.00	0.00	0.00
82.10	160.79	0.81	0.00	0.00	0.00	82.16	160.23	0.79	0.00	0.00	0.00
82.22	161.93	0.84	0.00	0.00	0.00	82.30	158.19	0.75	0.00	0.00	0.00
82.35	155.90	0.70	0.00	0.00	0.00	82.43	153.81	0.66	0.00	0.00	0.00
82.50	153.10	0.65	0.00	0.00	0.00	82.55	151.92	0.63	0.00	0.00	0.00
82.63	157.42	0.73	0.00	0.00	0.00	82.70	157.70	0.74	0.00	0.00	0.00
82.76	156.30	0.71	0.00	0.00	0.00	82.83	159.83	0.79	0.00	0.00	0.00
82.89	158.11	0.75	0.00	0.00	0.00	82.95	158.74	0.76	0.00	0.00	0.00
83.03	159.82	0.79	0.00	0.00	0.00	83.08	158.93	0.77	0.00	0.00	0.00
83.15	159.47	0.78	0.00	0.00	0.00	83.20	160.00	0.79	0.00	0.00	0.00
83.28	158.40	0.76	0.00	0.00	0.00	83.34	157.98	0.75	0.00	0.00	0.00
83.40	159.06	0.77	0.00	0.00	0.00	83.47	157.47	0.74	0.00	0.00	0.00
83.53	158.69	0.76	0.00	0.00	0.00	83.61	158.69	0.76	0.00	0.00	0.00
83.67	162.15	0.85	0.00	0.00	0.00	83.73	158.87	0.77	0.00	0.00	0.00
83.81	158.89	0.77	0.00	0.00	0.00	83.87	158.71	0.76	0.00	0.00	0.00
83.93	158.48	0.76	0.00	0.00	0.00	84.01	158.28	0.75	0.00	0.00	0.00
84.07	157.57	0.74	0.00	0.00	0.00	84.13	158.81	0.77	0.00	0.00	0.00
84.20	157.32	0.74	0.00	0.00	0.00	84.26	157.28	0.73	0.00	0.00	0.00
84.32	157.12	0.73	0.00	0.00	0.00	84.39	157.04	0.73	0.00	0.00	0.00
84.45	157.06	0.73	0.00	0.00	0.00	84.52	156.95	0.73	0.00	0.00	0.00
84.58	157.01	0.73	0.00	0.00	0.00	84.67	156.19	0.71	0.00	0.00	0.00
84.72	157.16	0.73	0.00	0.00	0.00	84.78	158.69	0.77	0.00	0.00	0.00
84.87	158.25	0.76	0.00	0.00	0.00	84.92	158.93	0.77	0.00	0.00	0.00
84.99	157.34	0.74	0.00	0.00	0.00	85.05	157.06	0.73	0.00	0.00	0.00
85.11	157.04	0.73	0.00	0.00	0.00	85.18	156.64	0.72	0.00	0.00	0.00
85.24	162.22	0.85	0.00	0.00	0.00	85.31	156.65	0.72	0.00	0.00	0.00
85.38	155.72	0.71	0.00	0.00	0.00	85.44	157.28	0.74	0.00	0.00	0.00
85.51	156.76	0.73	0.00	0.00	0.00	85.59	157.75	0.75	0.00	0.00	0.00
85.64	158.81	0.77	0.00	0.00	0.00	85.70	158.22	0.76	0.00	0.00	0.00
85.76	158.54	0.77	0.00	0.00	0.00	85.83	159.95	0.80	0.00	0.00	0.00
85.90	158.76	0.77	0.00	0.00	0.00	85.97	158.09	0.76	0.00	0.00	0.00
86.03	159.20	0.78	0.00	0.00	0.00	86.10	158.28	0.76	0.00	0.00	0.00
86.16	159.85	0.80	0.00	0.00	0.00	86.23	157.86	0.75	0.00	0.00	0.00
86.29	159.73	0.79	0.00	0.00	0.00	86.36	159.64	0.79	0.00	0.00	0.00
86.42	160.33	0.81	0.00	0.00	0.00	86.48	160.37	0.81	0.00	0.00	0.00
86.57	160.22	0.81	0.00	0.00	0.00	86.63	160.94	0.82	0.00	0.00	0.00
86.68	159.54	0.79	0.00	0.00	0.00	86.75	160.56	0.81	0.00	0.00	0.00
86.82	159.74	0.79	0.00	0.00	0.00	86.88	159.60	0.79	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.94	160.00	0.80	0.00	0.00	0.00	87.01	159.90	0.80	0.00	0.00	0.00
87.08	160.25	0.81	0.00	0.00	0.00	87.14	159.09	0.78	0.00	0.00	0.00
87.21	159.46	0.79	0.00	0.00	0.00	87.28	159.42	0.79	0.00	0.00	0.00
87.34	159.48	0.79	0.00	0.00	0.00	87.41	158.73	0.77	0.00	0.00	0.00
87.49	156.80	0.73	0.00	0.00	0.00	87.55	157.10	0.74	0.00	0.00	0.00
87.61	157.12	0.74	0.00	0.00	0.00	87.67	156.84	0.73	0.00	0.00	0.00
87.74	156.52	0.73	0.00	0.00	0.00	87.81	157.02	0.74	0.00	0.00	0.00
87.87	156.05	0.72	0.00	0.00	0.00	87.94	156.18	0.72	0.00	0.00	0.00
88.01	155.04	0.70	0.00	0.00	0.00	88.07	153.54	0.67	0.00	0.00	0.00
88.14	152.50	0.66	0.00	0.00	0.00	88.20	152.37	0.65	0.00	0.00	0.00
88.26	151.42	0.64	0.00	0.00	0.00	88.32	154.87	0.70	0.00	0.00	0.00
88.39	154.90	0.70	0.00	0.00	0.00	88.45	151.32	0.64	0.00	0.00	0.00
88.52	152.61	0.66	0.00	0.00	0.00	88.58	152.79	0.66	0.00	0.00	0.00
88.65	153.04	0.67	0.00	0.00	0.00	88.72	153.09	0.67	0.00	0.00	0.00
88.79	153.44	0.67	0.00	0.00	0.00	88.87	153.17	0.67	0.00	0.00	0.00
88.91	152.50	0.66	0.00	0.00	0.00	88.99	151.77	0.65	0.00	0.00	0.00
89.05	153.02	0.67	0.00	0.00	0.00	89.12	150.98	0.63	0.00	0.00	0.00
89.18	150.84	0.63	0.00	0.00	0.00	89.25	149.80	0.62	0.00	0.00	0.00
89.31	149.53	0.61	0.00	0.00	0.00	89.38	148.62	0.60	0.00	0.00	0.00
89.44	147.67	0.59	0.00	0.00	0.00	89.51	148.18	0.59	0.00	0.00	0.00
89.57	147.52	0.58	0.00	0.00	0.00	89.64	145.48	0.56	0.00	0.00	0.00
89.70	133.68	0.44	0.00	0.00	0.00	89.77	74.44	2.00	0.00	0.00	0.00
89.83	74.71	2.00	0.00	0.00	0.00	89.91	74.97	2.00	0.00	0.00	0.00
89.96	74.20	2.00	0.00	0.00	0.00	90.03	74.26	2.00	0.00	0.00	0.00

Total estimated settlement: 0.54

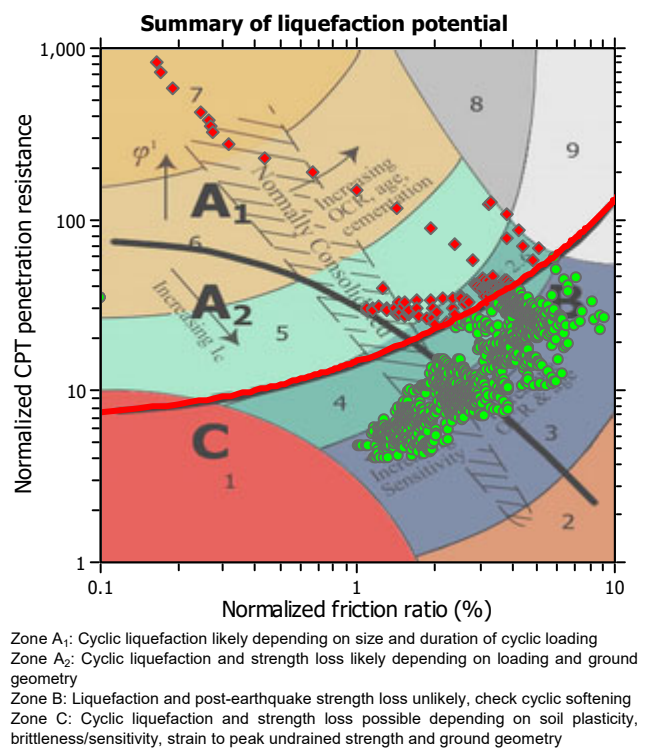
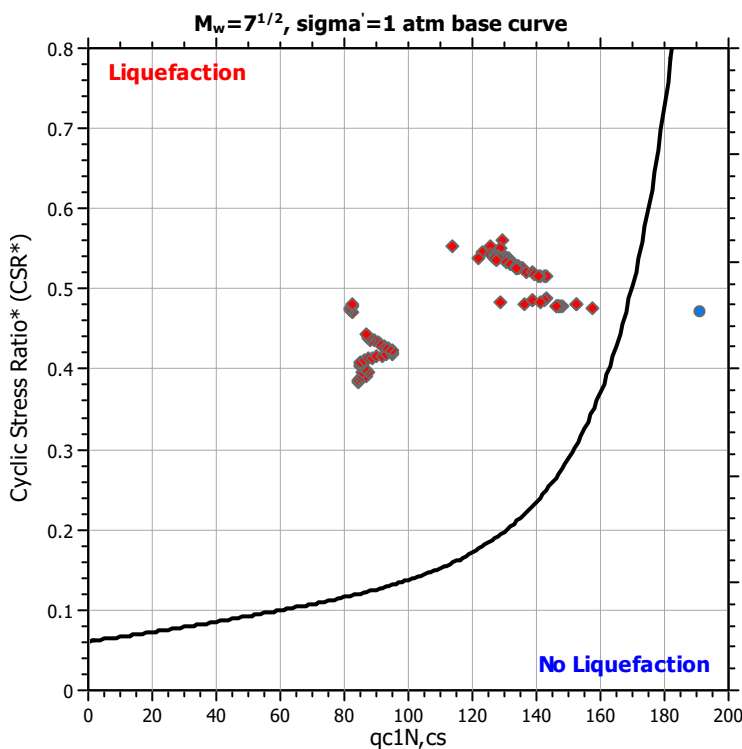
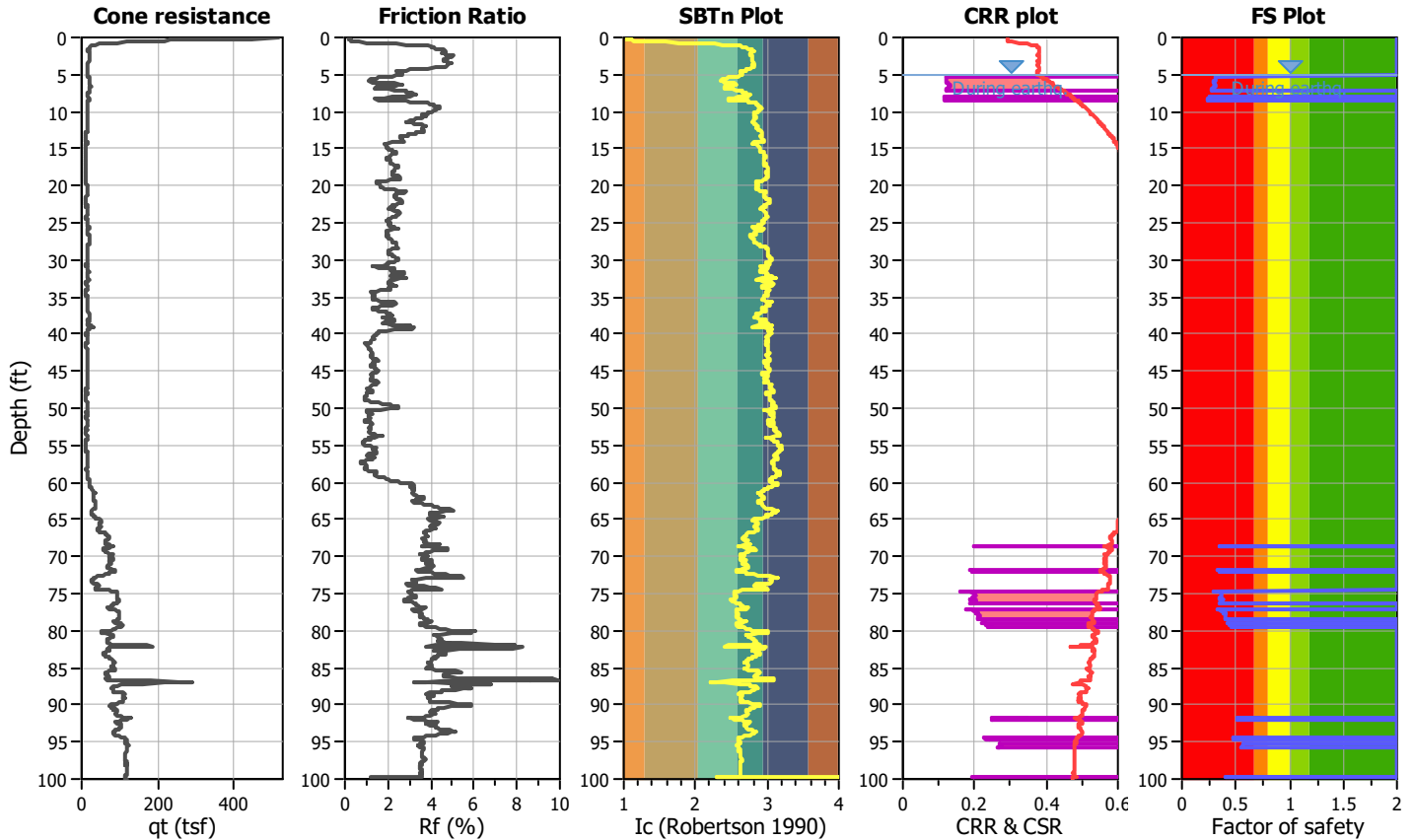
Abbreviations

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

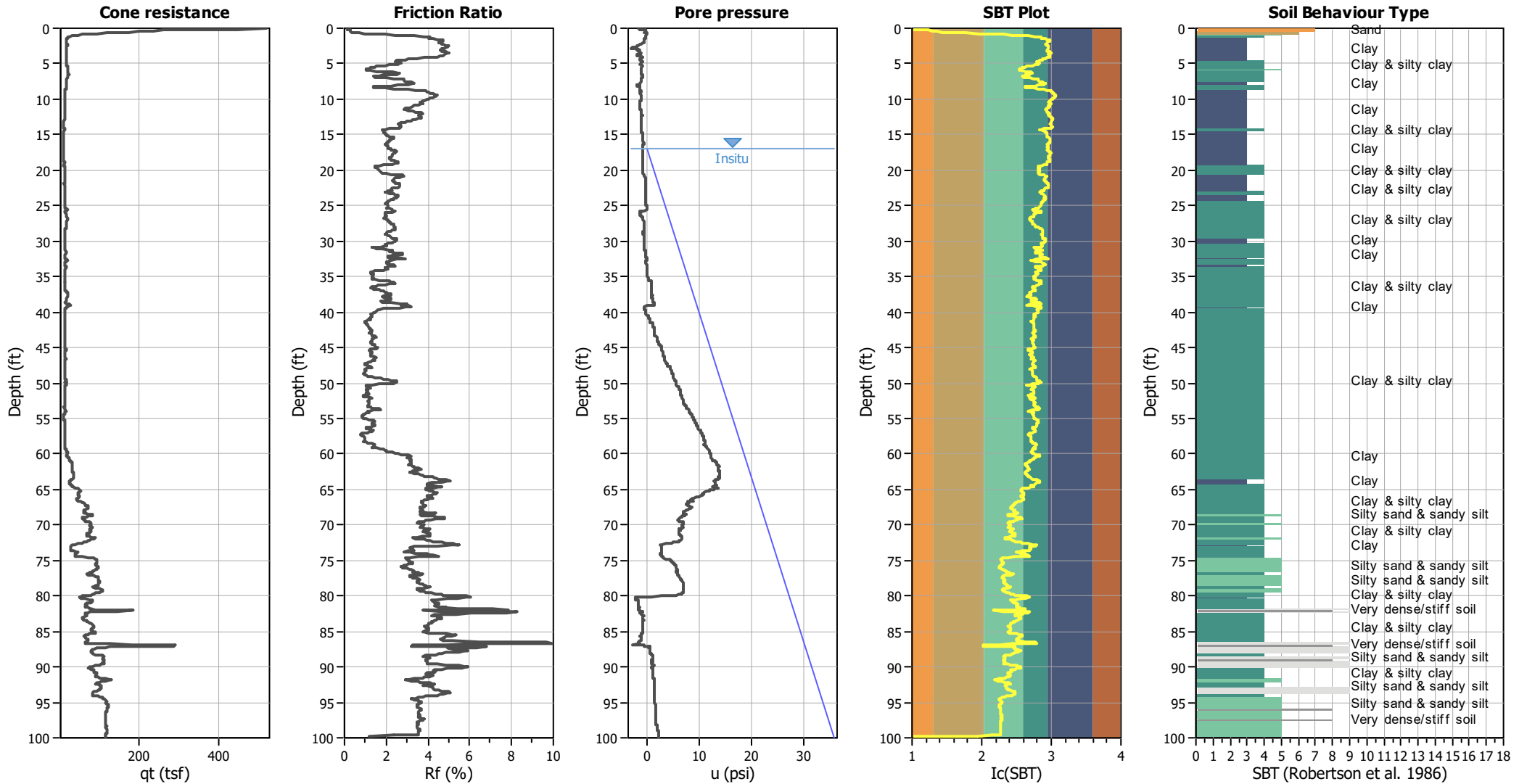
LIQUEFACTION ANALYSIS REPORT

Project title : Victoria Apartments
Location : A9942-88-01
CPT file : C-3
Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.65	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.62	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



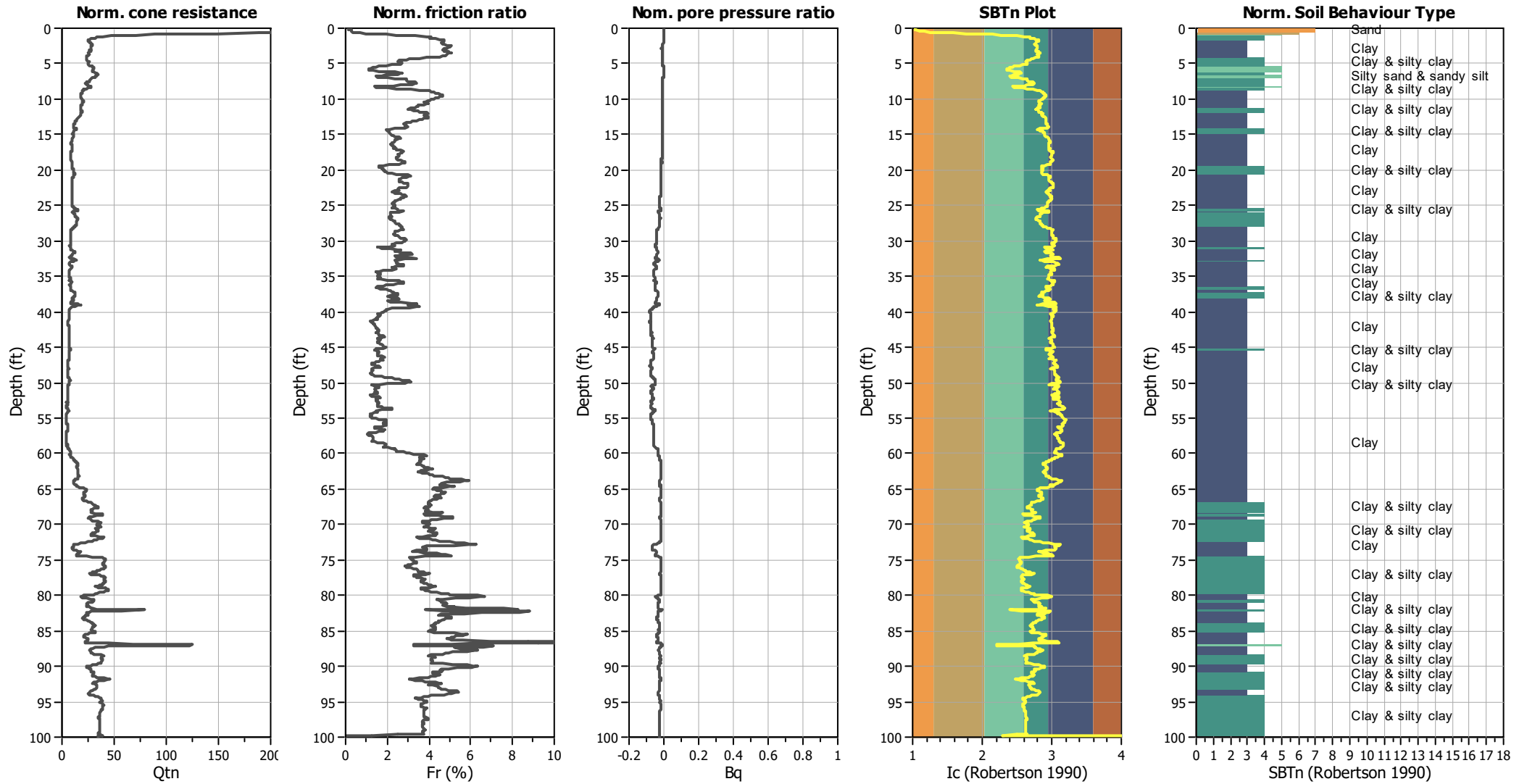
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



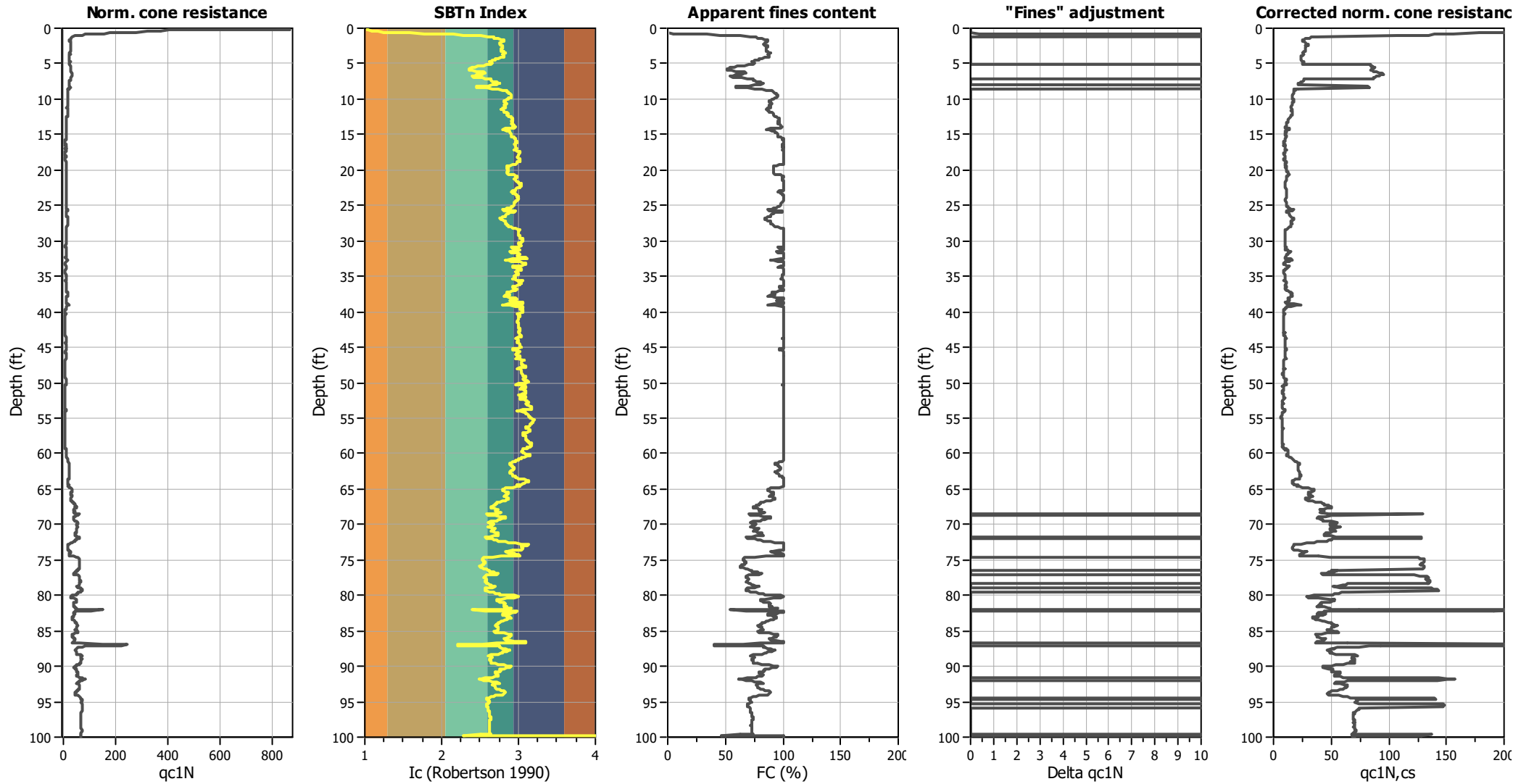
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

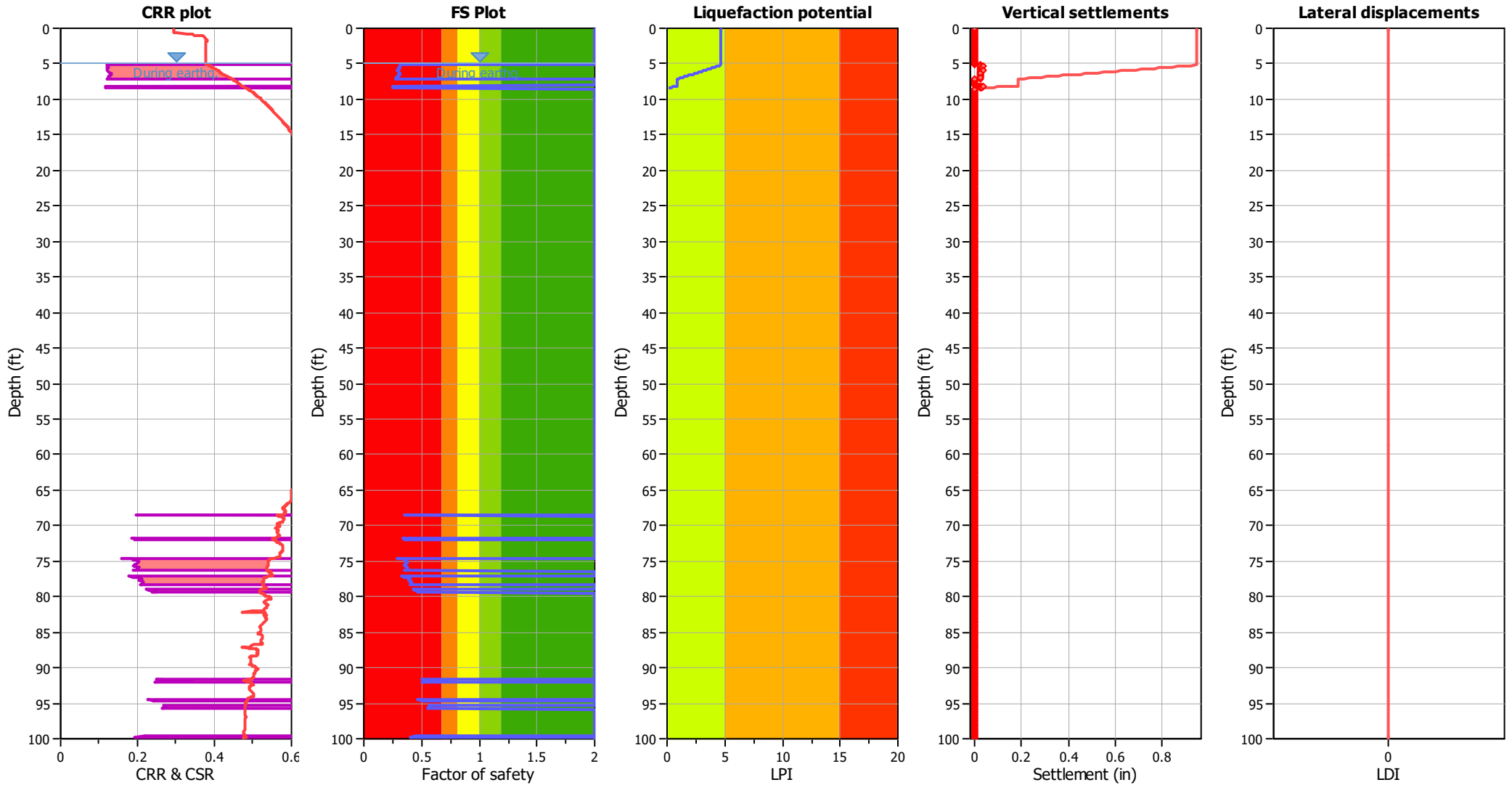
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

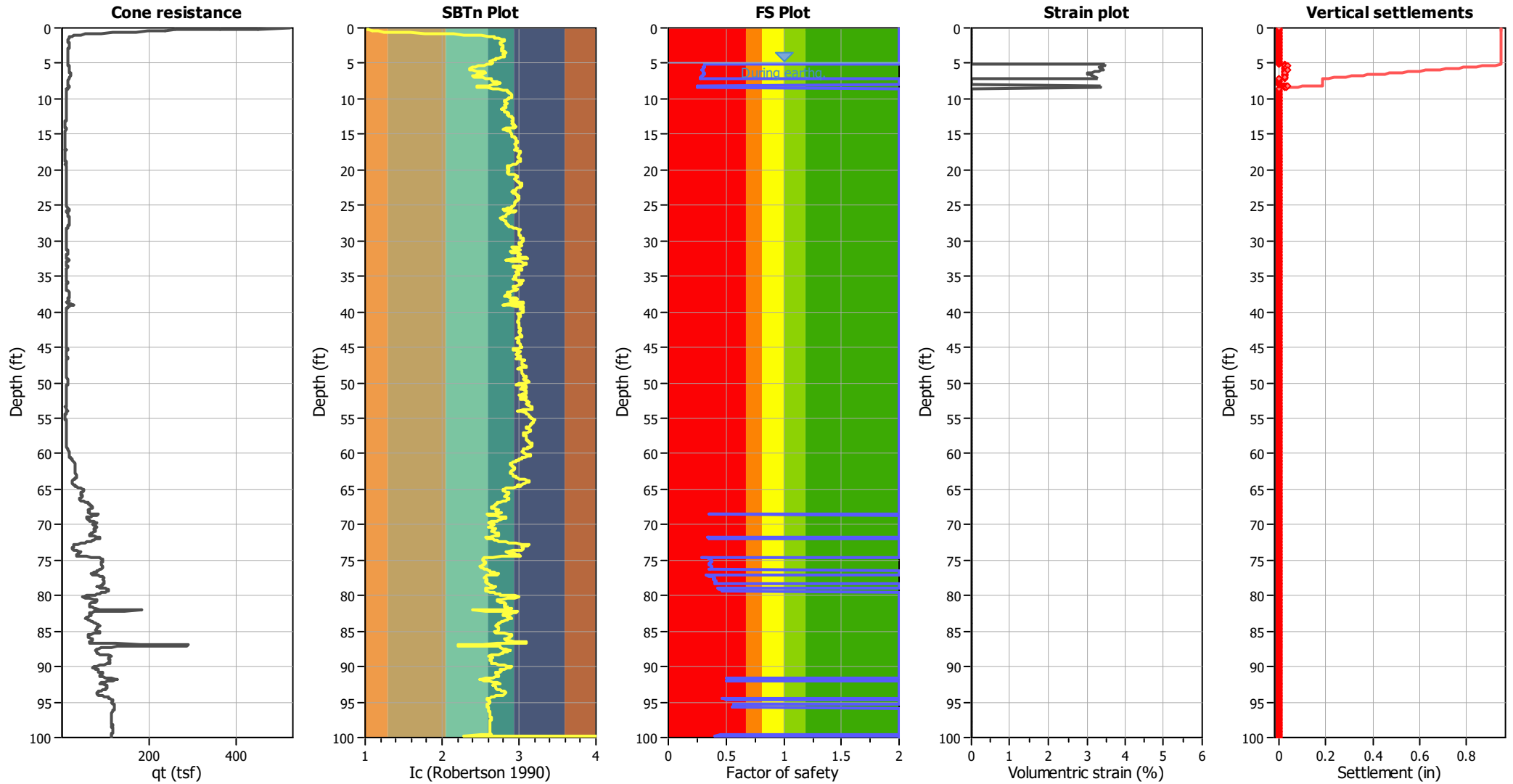
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- qt: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.06	25.27	2.00	0.00	0.91	0.00	5.15	25.27	2.00	0.00	0.91	0.00
5.20	84.10	0.31	3.48	0.91	0.02	5.26	84.58	0.31	3.46	0.91	0.02
5.34	85.18	0.31	3.43	0.91	0.03	5.40	85.74	0.31	3.40	0.91	0.03
5.46	87.04	0.31	3.35	0.91	0.02	5.53	85.64	0.31	3.40	0.91	0.03
5.59	87.62	0.31	3.32	0.91	0.02	5.66	86.94	0.31	3.34	0.90	0.03
5.72	86.28	0.30	3.36	0.90	0.02	5.78	85.21	0.30	3.40	0.90	0.02
5.84	84.73	0.30	3.42	0.90	0.02	5.94	84.92	0.29	3.40	0.90	0.04
6.00	86.16	0.30	3.35	0.90	0.03	6.06	87.22	0.30	3.31	0.90	0.03
6.12	88.72	0.30	3.25	0.90	0.02	6.19	89.81	0.30	3.20	0.90	0.03
6.26	91.88	0.31	3.13	0.89	0.03	6.33	93.38	0.31	3.07	0.89	0.02
6.39	94.89	0.31	3.02	0.89	0.02	6.46	95.10	0.31	3.01	0.89	0.02
6.52	95.11	0.31	3.01	0.89	0.02	6.58	94.06	0.31	3.04	0.89	0.02
6.65	92.50	0.30	3.08	0.89	0.02	6.71	91.54	0.30	3.11	0.89	0.02
6.77	90.66	0.29	3.14	0.89	0.02	6.83	89.45	0.29	3.18	0.88	0.02
6.89	88.38	0.28	3.21	0.88	0.02	6.96	87.74	0.28	3.23	0.88	0.03
7.03	87.38	0.28	3.24	0.88	0.03	7.09	86.63	0.28	3.26	0.88	0.03
7.16	27.60	2.00	0.00	0.88	0.00	7.25	27.00	2.00	0.00	0.88	0.00
7.31	26.34	2.00	0.00	0.88	0.00	7.39	26.36	2.00	0.00	0.87	0.00
7.43	26.15	2.00	0.00	0.87	0.00	7.50	25.74	2.00	0.00	0.87	0.00
7.57	24.67	2.00	0.00	0.87	0.00	7.63	23.47	2.00	0.00	0.87	0.00
7.70	22.41	2.00	0.00	0.87	0.00	7.74	22.27	2.00	0.00	0.87	0.00
7.83	21.81	2.00	0.00	0.87	0.00	7.90	21.99	2.00	0.00	0.87	0.00
7.97	22.86	2.00	0.00	0.86	0.00	8.01	23.22	2.00	0.00	0.86	0.00
8.09	82.36	0.25	3.36	0.86	0.04	8.16	82.07	0.25	3.37	0.86	0.03
8.23	81.97	0.25	3.37	0.86	0.03	8.27	81.84	0.25	3.37	0.86	0.02
8.34	82.42	0.25	3.34	0.86	0.03	8.41	82.25	0.25	3.35	0.86	0.03
8.47	82.74	0.25	3.32	0.86	0.02	8.54	17.53	2.00	0.00	0.86	0.00
8.60	22.00	2.00	0.00	0.85	0.00	8.67	20.62	2.00	0.00	0.85	0.00
8.73	19.36	2.00	0.00	0.85	0.00	8.80	18.61	2.00	0.00	0.85	0.00
8.86	18.16	2.00	0.00	0.85	0.00	8.93	17.69	2.00	0.00	0.85	0.00
9.01	17.49	2.00	0.00	0.85	0.00	9.06	17.43	2.00	0.00	0.85	0.00
9.12	17.37	2.00	0.00	0.85	0.00	9.19	17.17	2.00	0.00	0.84	0.00
9.26	17.09	2.00	0.00	0.84	0.00	9.32	16.66	2.00	0.00	0.84	0.00
9.39	16.21	2.00	0.00	0.84	0.00	9.45	16.03	2.00	0.00	0.84	0.00
9.52	15.97	2.00	0.00	0.84	0.00	9.59	15.79	2.00	0.00	0.84	0.00
9.67	16.09	2.00	0.00	0.84	0.00	9.74	16.02	2.00	0.00	0.83	0.00
9.78	16.11	2.00	0.00	0.83	0.00	9.88	16.40	2.00	0.00	0.83	0.00
9.91	16.38	2.00	0.00	0.83	0.00	10.01	16.66	2.00	0.00	0.83	0.00
10.07	17.10	2.00	0.00	0.83	0.00	10.14	17.41	2.00	0.00	0.83	0.00
10.18	17.49	2.00	0.00	0.83	0.00	10.25	17.80	2.00	0.00	0.83	0.00
10.32	17.85	2.00	0.00	0.83	0.00	10.38	17.55	2.00	0.00	0.82	0.00
10.46	17.49	2.00	0.00	0.82	0.00	10.53	16.83	2.00	0.00	0.82	0.00
10.60	16.16	2.00	0.00	0.82	0.00	10.64	16.02	2.00	0.00	0.82	0.00
10.70	15.96	2.00	0.00	0.82	0.00	10.78	15.90	2.00	0.00	0.82	0.00
10.86	15.84	2.00	0.00	0.82	0.00	10.90	15.92	2.00	0.00	0.82	0.00
10.97	15.64	2.00	0.00	0.81	0.00	11.03	15.47	2.00	0.00	0.81	0.00
11.10	15.19	2.00	0.00	0.81	0.00	11.17	15.02	2.00	0.00	0.81	0.00
11.25	15.19	2.00	0.00	0.81	0.00	11.32	15.61	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.35	15.94	2.00	0.00	0.81	0.00	11.44	16.46	2.00	0.00	0.81	0.00
11.51	16.29	2.00	0.00	0.80	0.00	11.56	15.44	2.00	0.00	0.80	0.00
11.64	16.65	2.00	0.00	0.80	0.00	11.71	16.70	2.00	0.00	0.80	0.00
11.78	16.76	2.00	0.00	0.80	0.00	11.82	16.61	2.00	0.00	0.80	0.00
11.90	16.22	2.00	0.00	0.80	0.00	11.97	15.82	2.00	0.00	0.80	0.00
12.04	15.77	2.00	0.00	0.80	0.00	12.08	15.74	2.00	0.00	0.80	0.00
12.15	15.81	2.00	0.00	0.79	0.00	12.22	15.99	2.00	0.00	0.79	0.00
12.30	15.70	2.00	0.00	0.79	0.00	12.36	15.66	2.00	0.00	0.79	0.00
12.43	15.28	2.00	0.00	0.79	0.00	12.49	15.01	2.00	0.00	0.79	0.00
12.56	14.64	2.00	0.00	0.79	0.00	12.62	13.94	2.00	0.00	0.79	0.00
12.68	13.68	2.00	0.00	0.79	0.00	12.74	13.42	2.00	0.00	0.78	0.00
12.83	13.05	2.00	0.00	0.78	0.00	12.87	12.91	2.00	0.00	0.78	0.00
12.94	12.66	2.00	0.00	0.78	0.00	13.01	12.40	2.00	0.00	0.78	0.00
13.09	12.36	2.00	0.00	0.78	0.00	13.13	12.24	2.00	0.00	0.78	0.00
13.20	11.99	2.00	0.00	0.78	0.00	13.27	11.74	2.00	0.00	0.78	0.00
13.35	11.58	2.00	0.00	0.77	0.00	13.42	11.34	2.00	0.00	0.77	0.00
13.45	11.32	2.00	0.00	0.77	0.00	13.53	10.97	2.00	0.00	0.77	0.00
13.61	11.05	2.00	0.00	0.77	0.00	13.68	11.12	2.00	0.00	0.77	0.00
13.74	11.09	2.00	0.00	0.77	0.00	13.81	11.06	2.00	0.00	0.77	0.00
13.86	10.94	2.00	0.00	0.77	0.00	13.92	10.59	2.00	0.00	0.76	0.00
14.00	10.45	2.00	0.00	0.76	0.00	14.06	10.64	2.00	0.00	0.76	0.00
14.13	11.77	2.00	0.00	0.76	0.00	14.20	13.30	2.00	0.00	0.76	0.00
14.24	13.59	2.00	0.00	0.76	0.00	14.31	13.35	2.00	0.00	0.76	0.00
14.38	12.29	2.00	0.00	0.76	0.00	14.44	11.31	2.00	0.00	0.76	0.00
14.52	10.67	2.00	0.00	0.75	0.00	14.58	10.23	2.00	0.00	0.75	0.00
14.66	10.81	2.00	0.00	0.75	0.00	14.72	10.69	2.00	0.00	0.75	0.00
14.79	10.36	2.00	0.00	0.75	0.00	14.86	10.23	2.00	0.00	0.75	0.00
14.92	10.20	2.00	0.00	0.75	0.00	14.99	10.38	2.00	0.00	0.75	0.00
15.06	10.56	2.00	0.00	0.74	0.00	15.10	10.64	2.00	0.00	0.74	0.00
15.17	10.82	2.00	0.00	0.74	0.00	15.24	10.99	2.00	0.00	0.74	0.00
15.30	10.97	2.00	0.00	0.74	0.00	15.37	11.05	2.00	0.00	0.74	0.00
15.43	10.71	2.00	0.00	0.74	0.00	15.50	10.39	2.00	0.00	0.74	0.00
15.57	10.17	2.00	0.00	0.74	0.00	15.64	9.94	2.00	0.00	0.73	0.00
15.71	9.82	2.00	0.00	0.73	0.00	15.78	9.80	2.00	0.00	0.73	0.00
15.84	9.58	2.00	0.00	0.73	0.00	15.91	9.46	2.00	0.00	0.73	0.00
15.98	9.43	2.00	0.00	0.73	0.00	16.04	9.41	2.00	0.00	0.73	0.00
16.12	9.19	2.00	0.00	0.73	0.00	16.15	9.38	2.00	0.00	0.73	0.00
16.22	9.16	2.00	0.00	0.73	0.00	16.29	9.34	2.00	0.00	0.72	0.00
16.35	9.42	2.00	0.00	0.72	0.00	16.42	9.69	2.00	0.00	0.72	0.00
16.48	9.57	2.00	0.00	0.72	0.00	16.55	9.26	2.00	0.00	0.72	0.00
16.61	9.92	2.00	0.00	0.72	0.00	16.68	9.80	2.00	0.00	0.72	0.00
16.75	9.77	2.00	0.00	0.72	0.00	16.82	9.66	2.00	0.00	0.71	0.00
16.89	9.73	2.00	0.00	0.71	0.00	16.98	9.61	2.00	0.00	0.71	0.00
17.01	9.69	2.00	0.00	0.71	0.00	17.08	10.07	2.00	0.00	0.71	0.00
17.15	10.63	2.00	0.00	0.71	0.00	17.20	10.72	2.00	0.00	0.71	0.00
17.27	10.61	2.00	0.00	0.71	0.00	17.34	10.22	2.00	0.00	0.71	0.00
17.42	9.92	2.00	0.00	0.70	0.00	17.48	9.44	2.00	0.00	0.70	0.00
17.55	9.43	2.00	0.00	0.70	0.00	17.60	9.43	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.70	9.42	2.00	0.00	0.70	0.00	17.74	9.41	2.00	0.00	0.70	0.00
17.78	9.41	2.00	0.00	0.70	0.00	17.87	9.40	2.00	0.00	0.70	0.00
17.93	9.58	2.00	0.00	0.70	0.00	18.00	9.57	2.00	0.00	0.70	0.00
18.05	9.66	2.00	0.00	0.69	0.00	18.12	9.65	2.00	0.00	0.69	0.00
18.18	9.74	2.00	0.00	0.69	0.00	18.25	9.54	2.00	0.00	0.69	0.00
18.34	9.44	2.00	0.00	0.69	0.00	18.37	9.34	2.00	0.00	0.69	0.00
18.47	9.14	2.00	0.00	0.69	0.00	18.53	9.13	2.00	0.00	0.69	0.00
18.59	9.22	2.00	0.00	0.68	0.00	18.65	9.49	2.00	0.00	0.68	0.00
18.72	9.86	2.00	0.00	0.68	0.00	18.77	10.23	2.00	0.00	0.68	0.00
18.84	10.68	2.00	0.00	0.68	0.00	18.91	11.05	2.00	0.00	0.68	0.00
18.97	11.13	2.00	0.00	0.68	0.00	19.03	10.84	2.00	0.00	0.68	0.00
19.10	10.56	2.00	0.00	0.68	0.00	19.17	10.36	2.00	0.00	0.68	0.00
19.23	10.35	2.00	0.00	0.67	0.00	19.31	10.34	2.00	0.00	0.67	0.00
19.38	10.33	2.00	0.00	0.67	0.00	19.44	10.60	2.00	0.00	0.67	0.00
19.51	10.78	2.00	0.00	0.67	0.00	19.58	10.77	2.00	0.00	0.67	0.00
19.63	10.86	2.00	0.00	0.67	0.00	19.70	10.67	2.00	0.00	0.67	0.00
19.77	11.03	2.00	0.00	0.66	0.00	19.83	11.29	2.00	0.00	0.66	0.00
19.89	11.38	2.00	0.00	0.66	0.00	19.97	11.46	2.00	0.00	0.66	0.00
20.03	11.45	2.00	0.00	0.66	0.00	20.09	11.44	2.00	0.00	0.66	0.00
20.15	11.43	2.00	0.00	0.66	0.00	20.24	11.69	2.00	0.00	0.66	0.00
20.30	11.97	2.00	0.00	0.66	0.00	20.36	12.14	2.00	0.00	0.65	0.00
20.42	12.40	2.00	0.00	0.65	0.00	20.48	13.04	2.00	0.00	0.65	0.00
20.57	13.75	2.00	0.00	0.65	0.00	20.62	12.92	2.00	0.00	0.65	0.00
20.68	12.91	2.00	0.00	0.65	0.00	20.74	12.72	2.00	0.00	0.65	0.00
20.82	12.07	2.00	0.00	0.65	0.00	20.88	11.88	2.00	0.00	0.65	0.00
20.94	11.68	2.00	0.00	0.65	0.00	21.02	11.39	2.00	0.00	0.64	0.00
21.08	11.21	2.00	0.00	0.64	0.00	21.14	11.20	2.00	0.00	0.64	0.00
21.23	11.28	2.00	0.00	0.64	0.00	21.28	11.27	2.00	0.00	0.64	0.00
21.34	11.17	2.00	0.00	0.64	0.00	21.39	11.07	2.00	0.00	0.64	0.00
21.48	10.97	2.00	0.00	0.64	0.00	21.55	10.87	2.00	0.00	0.63	0.00
21.60	10.68	2.00	0.00	0.63	0.00	21.66	10.59	2.00	0.00	0.63	0.00
21.72	10.48	2.00	0.00	0.63	0.00	21.80	10.29	2.00	0.00	0.63	0.00
21.86	10.29	2.00	0.00	0.63	0.00	21.92	10.01	2.00	0.00	0.63	0.00
21.98	10.27	2.00	0.00	0.63	0.00	22.07	10.17	2.00	0.00	0.63	0.00
22.13	10.25	2.00	0.00	0.63	0.00	22.18	10.25	2.00	0.00	0.62	0.00
22.27	10.23	2.00	0.00	0.62	0.00	22.33	10.23	2.00	0.00	0.62	0.00
22.41	10.31	2.00	0.00	0.62	0.00	22.46	10.39	2.00	0.00	0.62	0.00
22.52	10.48	2.00	0.00	0.62	0.00	22.58	10.65	2.00	0.00	0.62	0.00
22.67	10.90	2.00	0.00	0.62	0.00	22.72	10.89	2.00	0.00	0.61	0.00
22.78	10.80	2.00	0.00	0.61	0.00	22.84	10.70	2.00	0.00	0.61	0.00
22.91	11.13	2.00	0.00	0.61	0.00	23.00	11.57	2.00	0.00	0.61	0.00
23.04	11.65	2.00	0.00	0.61	0.00	23.11	11.56	2.00	0.00	0.61	0.00
23.18	11.55	2.00	0.00	0.61	0.00	23.24	11.54	2.00	0.00	0.61	0.00
23.30	11.53	2.00	0.00	0.61	0.00	23.37	11.52	2.00	0.00	0.60	0.00
23.43	11.51	2.00	0.00	0.60	0.00	23.52	11.86	2.00	0.00	0.60	0.00
23.57	11.76	2.00	0.00	0.60	0.00	23.62	11.04	2.00	0.00	0.60	0.00
23.71	11.47	2.00	0.00	0.60	0.00	23.77	11.11	2.00	0.00	0.60	0.00
23.84	11.10	2.00	0.00	0.60	0.00	23.89	11.10	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.98	10.99	2.00	0.00	0.59	0.00	24.03	10.73	2.00	0.00	0.59	0.00
24.08	10.46	2.00	0.00	0.59	0.00	24.16	10.45	2.00	0.00	0.59	0.00
24.22	10.44	2.00	0.00	0.59	0.00	24.31	10.43	2.00	0.00	0.59	0.00
24.35	10.60	2.00	0.00	0.59	0.00	24.41	10.68	2.00	0.00	0.59	0.00
24.50	10.84	2.00	0.00	0.58	0.00	24.54	10.84	2.00	0.00	0.58	0.00
24.64	11.00	2.00	0.00	0.58	0.00	24.69	11.08	2.00	0.00	0.58	0.00
24.75	11.07	2.00	0.00	0.58	0.00	24.82	11.15	2.00	0.00	0.58	0.00
24.88	11.23	2.00	0.00	0.58	0.00	24.94	11.22	2.00	0.00	0.58	0.00
25.02	11.38	2.00	0.00	0.58	0.00	25.08	11.64	2.00	0.00	0.57	0.00
25.14	11.89	2.00	0.00	0.57	0.00	25.22	12.32	2.00	0.00	0.57	0.00
25.27	12.57	2.00	0.00	0.57	0.00	25.35	13.16	2.00	0.00	0.57	0.00
25.41	13.59	2.00	0.00	0.57	0.00	25.49	15.14	2.00	0.00	0.57	0.00
25.55	16.95	2.00	0.00	0.57	0.00	25.61	18.15	2.00	0.00	0.57	0.00
25.68	15.80	2.00	0.00	0.56	0.00	25.74	14.92	2.00	0.00	0.56	0.00
25.80	13.44	2.00	0.00	0.56	0.00	25.87	11.88	2.00	0.00	0.56	0.00
25.93	11.43	2.00	0.00	0.56	0.00	26.00	12.12	2.00	0.00	0.56	0.00
26.06	12.71	2.00	0.00	0.56	0.00	26.12	13.22	2.00	0.00	0.56	0.00
26.19	13.81	2.00	0.00	0.56	0.00	26.25	13.98	2.00	0.00	0.56	0.00
26.33	14.30	2.00	0.00	0.55	0.00	26.39	14.46	2.00	0.00	0.55	0.00
26.47	14.45	2.00	0.00	0.55	0.00	26.53	14.70	2.00	0.00	0.55	0.00
26.60	15.29	2.00	0.00	0.55	0.00	26.66	15.54	2.00	0.00	0.55	0.00
26.72	16.47	2.00	0.00	0.55	0.00	26.78	16.80	2.00	0.00	0.55	0.00
26.86	17.13	2.00	0.00	0.54	0.00	26.92	17.20	2.00	0.00	0.54	0.00
26.97	16.84	2.00	0.00	0.54	0.00	27.04	16.58	2.00	0.00	0.54	0.00
27.10	16.22	2.00	0.00	0.54	0.00	27.20	15.61	2.00	0.00	0.54	0.00
27.26	15.60	2.00	0.00	0.54	0.00	27.31	15.59	2.00	0.00	0.54	0.00
27.39	15.58	2.00	0.00	0.54	0.00	27.44	15.65	2.00	0.00	0.53	0.00
27.52	15.81	2.00	0.00	0.53	0.00	27.57	16.05	2.00	0.00	0.53	0.00
27.65	15.86	2.00	0.00	0.53	0.00	27.71	15.69	2.00	0.00	0.53	0.00
27.76	15.42	2.00	0.00	0.53	0.00	27.84	15.24	2.00	0.00	0.53	0.00
27.90	15.23	2.00	0.00	0.53	0.00	27.97	14.88	2.00	0.00	0.53	0.00
28.02	14.45	2.00	0.00	0.53	0.00	28.10	13.76	2.00	0.00	0.52	0.00
28.18	13.07	2.00	0.00	0.52	0.00	28.24	12.48	2.00	0.00	0.52	0.00
28.28	12.05	2.00	0.00	0.52	0.00	28.37	11.45	2.00	0.00	0.52	0.00
28.41	11.03	2.00	0.00	0.52	0.00	28.50	10.68	2.00	0.00	0.52	0.00
28.56	10.42	2.00	0.00	0.52	0.00	28.61	10.33	2.00	0.00	0.52	0.00
28.69	10.32	2.00	0.00	0.51	0.00	28.75	10.32	2.00	0.00	0.51	0.00
28.83	10.14	2.00	0.00	0.51	0.00	28.88	9.97	2.00	0.00	0.51	0.00
28.95	10.22	2.00	0.00	0.51	0.00	29.01	10.21	2.00	0.00	0.51	0.00
29.09	10.28	2.00	0.00	0.51	0.00	29.14	10.27	2.00	0.00	0.51	0.00
29.23	10.26	2.00	0.00	0.50	0.00	29.28	10.34	2.00	0.00	0.50	0.00
29.36	10.33	2.00	0.00	0.50	0.00	29.41	10.32	2.00	0.00	0.50	0.00
29.48	10.57	2.00	0.00	0.50	0.00	29.56	10.47	2.00	0.00	0.50	0.00
29.61	10.30	2.00	0.00	0.50	0.00	29.67	10.30	2.00	0.00	0.50	0.00
29.74	10.21	2.00	0.00	0.50	0.00	29.80	10.20	2.00	0.00	0.49	0.00
29.87	10.12	2.00	0.00	0.49	0.00	29.93	10.11	2.00	0.00	0.49	0.00
30.02	10.10	2.00	0.00	0.49	0.00	30.06	10.10	2.00	0.00	0.49	0.00
30.14	10.17	2.00	0.00	0.49	0.00	30.20	10.49	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.28	10.65	2.00	0.00	0.49	0.00	30.33	10.64	2.00	0.00	0.49	0.00
30.41	10.63	2.00	0.00	0.48	0.00	30.46	10.38	2.00	0.00	0.48	0.00
30.53	9.88	2.00	0.00	0.48	0.00	30.59	9.55	2.00	0.00	0.48	0.00
30.66	9.54	2.00	0.00	0.48	0.00	30.72	9.53	2.00	0.00	0.48	0.00
30.79	9.53	2.00	0.00	0.48	0.00	30.85	10.09	2.00	0.00	0.48	0.00
30.92	10.82	2.00	0.00	0.48	0.00	30.98	10.81	2.00	0.00	0.48	0.00
31.06	10.56	2.00	0.00	0.47	0.00	31.12	10.76	2.00	0.00	0.47	0.00
31.19	10.14	2.00	0.00	0.47	0.00	31.24	10.71	2.00	0.00	0.47	0.00
31.31	11.43	2.00	0.00	0.47	0.00	31.38	11.99	2.00	0.00	0.47	0.00
31.43	12.40	2.00	0.00	0.47	0.00	31.51	13.85	2.00	0.00	0.47	0.00
31.58	14.75	2.00	0.00	0.46	0.00	31.66	14.32	2.00	0.00	0.46	0.00
31.70	13.75	2.00	0.00	0.46	0.00	31.77	12.43	2.00	0.00	0.46	0.00
31.82	12.10	2.00	0.00	0.46	0.00	31.92	11.68	2.00	0.00	0.46	0.00
31.97	11.44	2.00	0.00	0.46	0.00	32.04	11.43	2.00	0.00	0.46	0.00
32.10	11.50	2.00	0.00	0.46	0.00	32.16	11.41	2.00	0.00	0.45	0.00
32.23	10.67	2.00	0.00	0.45	0.00	32.30	9.86	2.00	0.00	0.45	0.00
32.35	9.61	2.00	0.00	0.45	0.00	32.42	9.69	2.00	0.00	0.45	0.00
32.49	10.41	2.00	0.00	0.45	0.00	32.55	14.76	2.00	0.00	0.45	0.00
32.63	16.93	2.00	0.00	0.45	0.00	32.70	16.19	2.00	0.00	0.45	0.00
32.75	15.29	2.00	0.00	0.44	0.00	32.82	13.59	2.00	0.00	0.44	0.00
32.89	12.12	2.00	0.00	0.44	0.00	32.95	11.32	2.00	0.00	0.44	0.00
33.02	10.03	2.00	0.00	0.44	0.00	33.09	9.46	2.00	0.00	0.44	0.00
33.14	9.30	2.00	0.00	0.44	0.00	33.21	8.97	2.00	0.00	0.44	0.00
33.28	8.80	2.00	0.00	0.44	0.00	33.35	9.12	2.00	0.00	0.43	0.00
33.40	9.59	2.00	0.00	0.43	0.00	33.47	10.70	2.00	0.00	0.43	0.00
33.55	12.37	2.00	0.00	0.43	0.00	33.61	13.24	2.00	0.00	0.43	0.00
33.69	12.99	2.00	0.00	0.43	0.00	33.75	12.50	2.00	0.00	0.43	0.00
33.80	12.10	2.00	0.00	0.43	0.00	33.87	11.38	2.00	0.00	0.43	0.00
33.94	10.41	2.00	0.00	0.42	0.00	34.00	9.93	2.00	0.00	0.42	0.00
34.07	9.44	2.00	0.00	0.42	0.00	34.12	9.36	2.00	0.00	0.42	0.00
34.19	9.27	2.00	0.00	0.42	0.00	34.26	9.27	2.00	0.00	0.42	0.00
34.32	9.26	2.00	0.00	0.42	0.00	34.40	9.26	2.00	0.00	0.42	0.00
34.46	9.25	2.00	0.00	0.42	0.00	34.54	9.25	2.00	0.00	0.41	0.00
34.60	9.24	2.00	0.00	0.41	0.00	34.66	8.60	2.00	0.00	0.41	0.00
34.72	9.63	2.00	0.00	0.41	0.00	34.79	9.70	2.00	0.00	0.41	0.00
34.84	9.69	2.00	0.00	0.41	0.00	34.94	9.92	2.00	0.00	0.41	0.00
34.98	9.92	2.00	0.00	0.41	0.00	35.04	9.99	2.00	0.00	0.41	0.00
35.12	9.99	2.00	0.00	0.40	0.00	35.19	9.98	2.00	0.00	0.40	0.00
35.24	10.05	2.00	0.00	0.40	0.00	35.33	10.28	2.00	0.00	0.40	0.00
35.39	10.35	2.00	0.00	0.40	0.00	35.45	10.43	2.00	0.00	0.40	0.00
35.51	10.27	2.00	0.00	0.40	0.00	35.60	10.10	2.00	0.00	0.40	0.00
35.63	9.39	2.00	0.00	0.40	0.00	35.70	10.95	2.00	0.00	0.39	0.00
35.76	11.81	2.00	0.00	0.39	0.00	35.85	11.72	2.00	0.00	0.39	0.00
35.90	11.63	2.00	0.00	0.39	0.00	35.99	11.00	2.00	0.00	0.39	0.00
36.05	10.76	2.00	0.00	0.39	0.00	36.12	10.59	2.00	0.00	0.39	0.00
36.18	10.20	2.00	0.00	0.39	0.00	36.24	9.96	2.00	0.00	0.39	0.00
36.30	9.95	2.00	0.00	0.38	0.00	36.36	10.26	2.00	0.00	0.38	0.00
36.43	10.64	2.00	0.00	0.38	0.00	36.50	10.71	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.56	10.70	2.00	0.00	0.38	0.00	36.63	10.39	2.00	0.00	0.38	0.00
36.71	10.15	2.00	0.00	0.38	0.00	36.78	10.15	2.00	0.00	0.38	0.00
36.85	10.21	2.00	0.00	0.38	0.00	36.90	10.45	2.00	0.00	0.37	0.00
36.97	10.98	2.00	0.00	0.37	0.00	37.05	11.98	2.00	0.00	0.37	0.00
37.09	12.68	2.00	0.00	0.37	0.00	37.16	13.99	2.00	0.00	0.37	0.00
37.25	15.14	2.00	0.00	0.37	0.00	37.28	15.68	2.00	0.00	0.37	0.00
37.35	16.37	2.00	0.00	0.37	0.00	37.44	16.04	2.00	0.00	0.37	0.00
37.47	15.65	2.00	0.00	0.36	0.00	37.53	15.17	2.00	0.00	0.36	0.00
37.63	15.71	2.00	0.00	0.36	0.00	37.68	16.55	2.00	0.00	0.36	0.00
37.77	16.85	2.00	0.00	0.36	0.00	37.82	15.98	2.00	0.00	0.36	0.00
37.88	14.89	2.00	0.00	0.36	0.00	37.94	13.64	2.00	0.00	0.36	0.00
38.00	12.86	2.00	0.00	0.36	0.00	38.06	12.56	2.00	0.00	0.35	0.00
38.15	12.55	2.00	0.00	0.35	0.00	38.21	12.61	2.00	0.00	0.35	0.00
38.27	13.07	2.00	0.00	0.35	0.00	38.33	13.68	2.00	0.00	0.35	0.00
38.39	14.13	2.00	0.00	0.35	0.00	38.45	13.58	2.00	0.00	0.35	0.00
38.53	12.19	2.00	0.00	0.35	0.00	38.60	11.34	2.00	0.00	0.35	0.00
38.65	10.57	2.00	0.00	0.34	0.00	38.72	10.64	2.00	0.00	0.34	0.00
38.79	10.71	2.00	0.00	0.34	0.00	38.88	13.68	2.00	0.00	0.34	0.00
38.91	17.59	2.00	0.00	0.34	0.00	39.00	24.40	2.00	0.00	0.34	0.00
39.07	22.12	2.00	0.00	0.34	0.00	39.11	19.65	2.00	0.00	0.34	0.00
39.20	15.17	2.00	0.00	0.34	0.00	39.27	13.25	2.00	0.00	0.33	0.00
39.35	11.94	2.00	0.00	0.33	0.00	39.38	11.55	2.00	0.00	0.33	0.00
39.45	11.01	2.00	0.00	0.33	0.00	39.52	10.63	2.00	0.00	0.33	0.00
39.60	9.94	2.00	0.00	0.33	0.00	39.66	9.63	2.00	0.00	0.33	0.00
39.70	9.32	2.00	0.00	0.33	0.00	39.77	9.09	2.00	0.00	0.33	0.00
39.84	9.02	2.00	0.00	0.32	0.00	39.90	9.01	2.00	0.00	0.32	0.00
39.98	8.93	2.00	0.00	0.32	0.00	40.05	8.92	2.00	0.00	0.32	0.00
40.12	8.92	2.00	0.00	0.32	0.00	40.18	9.06	2.00	0.00	0.32	0.00
40.26	9.36	2.00	0.00	0.32	0.00	40.32	9.66	2.00	0.00	0.32	0.00
40.37	9.65	2.00	0.00	0.32	0.00	40.44	9.42	2.00	0.00	0.31	0.00
40.49	9.12	2.00	0.00	0.31	0.00	40.57	9.18	2.00	0.00	0.31	0.00
40.65	9.18	2.00	0.00	0.31	0.00	40.69	9.10	2.00	0.00	0.31	0.00
40.77	9.10	2.00	0.00	0.31	0.00	40.84	9.31	2.00	0.00	0.31	0.00
40.89	9.31	2.00	0.00	0.31	0.00	40.97	9.31	2.00	0.00	0.31	0.00
41.03	9.15	2.00	0.00	0.30	0.00	41.11	9.00	2.00	0.00	0.30	0.00
41.15	8.92	2.00	0.00	0.30	0.00	41.23	8.84	2.00	0.00	0.30	0.00
41.30	8.76	2.00	0.00	0.30	0.00	41.34	8.68	2.00	0.00	0.30	0.00
41.42	8.68	2.00	0.00	0.30	0.00	41.50	8.67	2.00	0.00	0.30	0.00
41.54	8.67	2.00	0.00	0.30	0.00	41.61	8.66	2.00	0.00	0.29	0.00
41.68	8.74	2.00	0.00	0.29	0.00	41.75	8.80	2.00	0.00	0.29	0.00
41.82	8.80	2.00	0.00	0.29	0.00	41.88	8.79	2.00	0.00	0.29	0.00
41.94	8.87	2.00	0.00	0.29	0.00	42.01	9.01	2.00	0.00	0.29	0.00
42.07	9.08	2.00	0.00	0.29	0.00	42.13	9.14	2.00	0.00	0.29	0.00
42.20	9.22	2.00	0.00	0.28	0.00	42.26	9.21	2.00	0.00	0.28	0.00
42.35	9.13	2.00	0.00	0.28	0.00	42.42	9.05	2.00	0.00	0.28	0.00
42.48	9.05	2.00	0.00	0.28	0.00	42.54	9.04	2.00	0.00	0.28	0.00
42.61	9.04	2.00	0.00	0.28	0.00	42.67	9.11	2.00	0.00	0.28	0.00
42.73	9.18	2.00	0.00	0.28	0.00	42.79	9.32	2.00	0.00	0.27	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.86	9.39	2.00	0.00	0.27	0.00	42.92	9.46	2.00	0.00	0.27	0.00
42.99	9.38	2.00	0.00	0.27	0.00	43.05	9.30	2.00	0.00	0.27	0.00
43.14	9.22	2.00	0.00	0.27	0.00	43.21	9.21	2.00	0.00	0.27	0.00
43.26	9.21	2.00	0.00	0.27	0.00	43.32	9.21	2.00	0.00	0.27	0.00
43.39	9.20	2.00	0.00	0.26	0.00	43.45	9.57	2.00	0.00	0.26	0.00
43.52	9.71	2.00	0.00	0.26	0.00	43.58	9.85	2.00	0.00	0.26	0.00
43.64	10.21	2.00	0.00	0.26	0.00	43.70	10.72	2.00	0.00	0.26	0.00
43.80	10.56	2.00	0.00	0.26	0.00	43.86	10.12	2.00	0.00	0.26	0.00
43.91	9.83	2.00	0.00	0.26	0.00	43.98	9.74	2.00	0.00	0.25	0.00
44.04	9.67	2.00	0.00	0.25	0.00	44.10	9.67	2.00	0.00	0.25	0.00
44.16	9.66	2.00	0.00	0.25	0.00	44.25	9.65	2.00	0.00	0.25	0.00
44.32	9.72	2.00	0.00	0.25	0.00	44.37	9.64	2.00	0.00	0.25	0.00
44.44	9.56	2.00	0.00	0.25	0.00	44.50	9.64	2.00	0.00	0.25	0.00
44.56	9.63	2.00	0.00	0.24	0.00	44.63	9.62	2.00	0.00	0.24	0.00
44.69	9.69	2.00	0.00	0.24	0.00	44.76	9.68	2.00	0.00	0.24	0.00
44.82	9.68	2.00	0.00	0.24	0.00	44.91	9.82	2.00	0.00	0.24	0.00
44.97	9.81	2.00	0.00	0.24	0.00	45.04	9.88	2.00	0.00	0.24	0.00
45.10	10.32	2.00	0.00	0.24	0.00	45.16	10.82	2.00	0.00	0.23	0.00
45.23	11.10	2.00	0.00	0.23	0.00	45.29	11.39	2.00	0.00	0.23	0.00
45.37	11.23	2.00	0.00	0.23	0.00	45.42	10.79	2.00	0.00	0.23	0.00
45.49	10.21	2.00	0.00	0.23	0.00	45.55	9.55	2.00	0.00	0.23	0.00
45.61	9.55	2.00	0.00	0.23	0.00	45.67	9.55	2.00	0.00	0.23	0.00
45.77	9.54	2.00	0.00	0.22	0.00	45.82	9.89	2.00	0.00	0.22	0.00
45.87	10.18	2.00	0.00	0.22	0.00	45.94	10.46	2.00	0.00	0.22	0.00
46.03	10.17	2.00	0.00	0.22	0.00	46.09	10.16	2.00	0.00	0.22	0.00
46.15	10.16	2.00	0.00	0.22	0.00	46.21	10.01	2.00	0.00	0.22	0.00
46.28	10.15	2.00	0.00	0.22	0.00	46.33	9.79	2.00	0.00	0.21	0.00
46.42	10.13	2.00	0.00	0.21	0.00	46.47	10.63	2.00	0.00	0.21	0.00
46.53	10.99	2.00	0.00	0.21	0.00	46.60	10.99	2.00	0.00	0.21	0.00
46.66	9.97	2.00	0.00	0.21	0.00	46.74	9.10	2.00	0.00	0.21	0.00
46.81	8.95	2.00	0.00	0.21	0.00	46.86	8.95	2.00	0.00	0.21	0.00
46.92	8.95	2.00	0.00	0.20	0.00	46.98	8.94	2.00	0.00	0.20	0.00
47.07	8.87	2.00	0.00	0.20	0.00	47.13	8.72	2.00	0.00	0.20	0.00
47.21	8.43	2.00	0.00	0.20	0.00	47.27	8.36	2.00	0.00	0.20	0.00
47.33	8.36	2.00	0.00	0.20	0.00	47.39	8.35	2.00	0.00	0.20	0.00
47.45	8.27	2.00	0.00	0.20	0.00	47.53	8.20	2.00	0.00	0.19	0.00
47.59	8.20	2.00	0.00	0.19	0.00	47.65	8.19	2.00	0.00	0.19	0.00
47.71	8.33	2.00	0.00	0.19	0.00	47.77	8.33	2.00	0.00	0.19	0.00
47.84	8.39	2.00	0.00	0.19	0.00	47.91	9.24	2.00	0.00	0.19	0.00
47.97	9.16	2.00	0.00	0.19	0.00	48.03	9.59	2.00	0.00	0.19	0.00
48.13	8.52	2.00	0.00	0.18	0.00	48.19	8.37	2.00	0.00	0.18	0.00
48.26	8.37	2.00	0.00	0.18	0.00	48.31	8.36	2.00	0.00	0.18	0.00
48.37	8.36	2.00	0.00	0.18	0.00	48.44	8.36	2.00	0.00	0.18	0.00
48.49	8.29	2.00	0.00	0.18	0.00	48.58	8.21	2.00	0.00	0.18	0.00
48.64	8.14	2.00	0.00	0.18	0.00	48.70	8.13	2.00	0.00	0.17	0.00
48.76	8.13	2.00	0.00	0.17	0.00	48.82	8.13	2.00	0.00	0.17	0.00
48.92	8.12	2.00	0.00	0.17	0.00	48.97	8.19	2.00	0.00	0.17	0.00
49.02	8.32	2.00	0.00	0.17	0.00	49.11	8.46	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.18	8.60	2.00	0.00	0.17	0.00	49.23	8.73	2.00	0.00	0.17	0.00
49.29	8.94	2.00	0.00	0.16	0.00	49.35	9.29	2.00	0.00	0.16	0.00
49.43	10.48	2.00	0.00	0.16	0.00	49.49	10.90	2.00	0.00	0.16	0.00
49.55	10.82	2.00	0.00	0.16	0.00	49.62	11.32	2.00	0.00	0.16	0.00
49.68	11.24	2.00	0.00	0.16	0.00	49.76	10.60	2.00	0.00	0.16	0.00
49.82	10.37	2.00	0.00	0.16	0.00	49.88	10.58	2.00	0.00	0.15	0.00
49.94	10.22	2.00	0.00	0.15	0.00	50.03	10.57	2.00	0.00	0.15	0.00
50.08	11.06	2.00	0.00	0.15	0.00	50.14	11.54	2.00	0.00	0.15	0.00
50.23	10.76	2.00	0.00	0.15	0.00	50.29	9.99	2.00	0.00	0.15	0.00
50.34	9.36	2.00	0.00	0.15	0.00	50.40	8.72	2.00	0.00	0.15	0.00
50.48	8.23	2.00	0.00	0.14	0.00	50.54	8.02	2.00	0.00	0.14	0.00
50.59	8.26	2.00	0.00	0.14	0.00	50.68	8.29	2.00	0.00	0.14	0.00
50.75	8.77	2.00	0.00	0.14	0.00	50.79	9.05	2.00	0.00	0.14	0.00
50.87	9.25	2.00	0.00	0.14	0.00	50.93	8.96	2.00	0.00	0.14	0.00
51.00	8.48	2.00	0.00	0.14	0.00	51.06	8.19	2.00	0.00	0.13	0.00
51.13	7.99	2.00	0.00	0.13	0.00	51.19	7.98	2.00	0.00	0.13	0.00
51.27	7.98	2.00	0.00	0.13	0.00	51.32	7.98	2.00	0.00	0.13	0.00
51.41	7.90	2.00	0.00	0.13	0.00	51.46	8.11	2.00	0.00	0.13	0.00
51.51	8.24	2.00	0.00	0.13	0.00	51.60	8.72	2.00	0.00	0.13	0.00
51.67	8.92	2.00	0.00	0.12	0.00	51.73	8.99	2.00	0.00	0.12	0.00
51.78	8.77	2.00	0.00	0.12	0.00	51.86	8.49	2.00	0.00	0.12	0.00
51.92	8.28	2.00	0.00	0.12	0.00	51.97	8.28	2.00	0.00	0.12	0.00
52.05	8.28	2.00	0.00	0.12	0.00	52.11	8.75	2.00	0.00	0.12	0.00
52.18	9.30	2.00	0.00	0.12	0.00	52.24	9.51	2.00	0.00	0.11	0.00
52.33	9.37	2.00	0.00	0.11	0.00	52.38	8.81	2.00	0.00	0.11	0.00
52.43	8.46	2.00	0.00	0.11	0.00	52.50	8.11	2.00	0.00	0.11	0.00
52.56	8.04	2.00	0.00	0.11	0.00	52.64	7.97	2.00	0.00	0.11	0.00
52.72	7.90	2.00	0.00	0.11	0.00	52.77	7.82	2.00	0.00	0.11	0.00
52.83	7.76	2.00	0.00	0.10	0.00	52.89	8.43	2.00	0.00	0.10	0.00
52.97	8.30	2.00	0.00	0.10	0.00	53.02	8.16	2.00	0.00	0.10	0.00
53.10	8.02	2.00	0.00	0.10	0.00	53.16	7.88	2.00	0.00	0.10	0.00
53.25	7.66	2.00	0.00	0.10	0.00	53.29	7.46	2.00	0.00	0.10	0.00
53.35	7.45	2.00	0.00	0.10	0.00	53.44	7.31	2.00	0.00	0.09	0.00
53.49	7.31	2.00	0.00	0.09	0.00	53.57	8.05	2.00	0.00	0.09	0.00
53.62	8.05	2.00	0.00	0.09	0.00	53.68	8.05	2.00	0.00	0.09	0.00
53.75	8.18	2.00	0.00	0.09	0.00	53.81	8.79	2.00	0.00	0.09	0.00
53.88	9.68	2.00	0.00	0.09	0.00	53.96	10.35	2.00	0.00	0.09	0.00
54.01	10.28	2.00	0.00	0.08	0.00	54.08	9.46	2.00	0.00	0.08	0.00
54.15	8.57	2.00	0.00	0.08	0.00	54.21	8.15	2.00	0.00	0.08	0.00
54.27	8.01	2.00	0.00	0.08	0.00	54.34	7.81	2.00	0.00	0.08	0.00
54.41	7.54	2.00	0.00	0.08	0.00	54.47	7.26	2.00	0.00	0.08	0.00
54.53	7.12	2.00	0.00	0.08	0.00	54.60	7.05	2.00	0.00	0.07	0.00
54.66	6.98	2.00	0.00	0.07	0.00	54.74	6.91	2.00	0.00	0.07	0.00
54.80	6.91	2.00	0.00	0.07	0.00	54.88	6.84	2.00	0.00	0.07	0.00
54.95	6.84	2.00	0.00	0.07	0.00	55.01	6.97	2.00	0.00	0.07	0.00
55.07	7.03	2.00	0.00	0.07	0.00	55.14	7.03	2.00	0.00	0.07	0.00
55.21	7.23	2.00	0.00	0.06	0.00	55.27	7.42	2.00	0.00	0.06	0.00
55.32	7.56	2.00	0.00	0.06	0.00	55.39	7.69	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.46	7.68	2.00	0.00	0.06	0.00	55.52	7.62	2.00	0.00	0.06	0.00
55.58	7.48	2.00	0.00	0.06	0.00	55.65	7.48	2.00	0.00	0.06	0.00
55.72	7.47	2.00	0.00	0.06	0.00	55.78	7.94	2.00	0.00	0.05	0.00
55.85	8.14	2.00	0.00	0.05	0.00	55.93	8.13	2.00	0.00	0.05	0.00
55.99	8.13	2.00	0.00	0.05	0.00	56.04	8.13	2.00	0.00	0.05	0.00
56.12	8.12	2.00	0.00	0.05	0.00	56.18	7.92	2.00	0.00	0.05	0.00
56.25	8.12	2.00	0.00	0.05	0.00	56.31	8.04	2.00	0.00	0.05	0.00
56.37	8.11	2.00	0.00	0.04	0.00	56.43	8.23	2.00	0.00	0.04	0.00
56.51	8.30	2.00	0.00	0.04	0.00	56.57	7.97	2.00	0.00	0.04	0.00
56.64	8.02	2.00	0.00	0.04	0.00	56.70	8.09	2.00	0.00	0.04	0.00
56.77	8.09	2.00	0.00	0.04	0.00	56.83	7.95	2.00	0.00	0.04	0.00
56.91	7.95	2.00	0.00	0.04	0.00	56.96	7.87	2.00	0.00	0.03	0.00
57.03	7.87	2.00	0.00	0.03	0.00	57.10	7.87	2.00	0.00	0.03	0.00
57.16	7.93	2.00	0.00	0.03	0.00	57.24	7.93	2.00	0.00	0.03	0.00
57.29	7.86	2.00	0.00	0.03	0.00	57.36	7.93	2.00	0.00	0.03	0.00
57.42	7.85	2.00	0.00	0.03	0.00	57.48	7.92	2.00	0.00	0.03	0.00
57.55	7.98	2.00	0.00	0.02	0.00	57.62	8.05	2.00	0.00	0.02	0.00
57.70	8.04	2.00	0.00	0.02	0.00	57.77	8.10	2.00	0.00	0.02	0.00
57.83	8.03	2.00	0.00	0.02	0.00	57.88	7.96	2.00	0.00	0.02	0.00
57.95	7.96	2.00	0.00	0.02	0.00	58.02	7.96	2.00	0.00	0.02	0.00
58.09	7.95	2.00	0.00	0.02	0.00	58.14	7.68	2.00	0.00	0.01	0.00
58.21	7.68	2.00	0.00	0.01	0.00	58.27	7.68	2.00	0.00	0.01	0.00
58.34	7.67	2.00	0.00	0.01	0.00	58.40	7.80	2.00	0.00	0.01	0.00
58.47	8.07	2.00	0.00	0.01	0.00	58.53	7.80	2.00	0.00	0.01	0.00
58.62	7.92	2.00	0.00	0.01	0.00	58.68	8.38	2.00	0.00	0.01	0.00
58.74	8.18	2.00	0.00	0.00	0.00	58.80	8.05	2.00	0.00	0.00	0.00
58.87	8.18	2.00	0.00	0.00	0.00	58.94	7.98	2.00	0.00	0.00	0.00
59.00	8.17	2.00	0.00	0.00	0.00	59.06	8.43	2.00	0.00	0.00	0.00
59.13	8.69	2.00	0.00	0.00	0.00	59.19	8.82	2.00	0.00	0.00	0.00
59.28	9.35	2.00	0.00	0.00	0.00	59.33	10.47	2.00	0.00	0.00	0.00
59.40	11.39	2.00	0.00	0.00	0.00	59.47	11.65	2.00	0.00	0.00	0.00
59.52	10.38	2.00	0.00	0.00	0.00	59.59	12.24	2.00	0.00	0.00	0.00
59.65	12.04	2.00	0.00	0.00	0.00	59.72	11.97	2.00	0.00	0.00	0.00
59.79	12.16	2.00	0.00	0.00	0.00	59.86	12.89	2.00	0.00	0.00	0.00
59.93	13.08	2.00	0.00	0.00	0.00	59.98	12.94	2.00	0.00	0.00	0.00
60.06	12.13	2.00	0.00	0.00	0.00	60.11	11.60	2.00	0.00	0.00	0.00
60.19	11.59	2.00	0.00	0.00	0.00	60.24	11.79	2.00	0.00	0.00	0.00
60.31	12.38	2.00	0.00	0.00	0.00	60.39	13.04	2.00	0.00	0.00	0.00
60.44	13.63	2.00	0.00	0.00	0.00	60.51	14.09	2.00	0.00	0.00	0.00
60.57	14.69	2.00	0.00	0.00	0.00	60.64	15.75	2.00	0.00	0.00	0.00
60.70	16.01	2.00	0.00	0.00	0.00	60.78	16.41	2.00	0.00	0.00	0.00
60.86	17.07	2.00	0.00	0.00	0.00	60.90	17.33	2.00	0.00	0.00	0.00
60.98	17.72	2.00	0.00	0.00	0.00	61.04	18.12	2.00	0.00	0.00	0.00
61.11	19.06	2.00	0.00	0.00	0.00	61.18	19.11	2.00	0.00	0.00	0.00
61.24	20.52	2.00	0.00	0.00	0.00	61.31	21.05	2.00	0.00	0.00	0.00
61.37	21.72	2.00	0.00	0.00	0.00	61.43	22.53	2.00	0.00	0.00	0.00
61.49	22.86	2.00	0.00	0.00	0.00	61.55	21.75	2.00	0.00	0.00	0.00
61.63	21.48	2.00	0.00	0.00	0.00	61.69	21.26	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.75	21.05	2.00	0.00	0.00	0.00	61.81	21.04	2.00	0.00	0.00	0.00
61.88	21.03	2.00	0.00	0.00	0.00	61.95	21.02	2.00	0.00	0.00	0.00
62.01	21.01	2.00	0.00	0.00	0.00	62.10	21.33	2.00	0.00	0.00	0.00
62.14	21.66	2.00	0.00	0.00	0.00	62.21	21.58	2.00	0.00	0.00	0.00
62.30	21.50	2.00	0.00	0.00	0.00	62.35	21.48	2.00	0.00	0.00	0.00
62.41	21.87	2.00	0.00	0.00	0.00	62.48	22.07	2.00	0.00	0.00	0.00
62.54	22.19	2.00	0.00	0.00	0.00	62.61	22.45	2.00	0.00	0.00	0.00
62.67	22.77	2.00	0.00	0.00	0.00	62.74	22.83	2.00	0.00	0.00	0.00
62.80	22.82	2.00	0.00	0.00	0.00	62.88	23.08	2.00	0.00	0.00	0.00
62.93	22.53	2.00	0.00	0.00	0.00	63.00	23.54	2.00	0.00	0.00	0.00
63.09	23.79	2.00	0.00	0.00	0.00	63.14	23.51	2.00	0.00	0.00	0.00
63.19	22.89	2.00	0.00	0.00	0.00	63.26	23.01	2.00	0.00	0.00	0.00
63.33	23.07	2.00	0.00	0.00	0.00	63.40	22.85	2.00	0.00	0.00	0.00
63.46	22.71	2.00	0.00	0.00	0.00	63.52	22.02	2.00	0.00	0.00	0.00
63.59	20.53	2.00	0.00	0.00	0.00	63.66	19.05	2.00	0.00	0.00	0.00
63.73	17.57	2.00	0.00	0.00	0.00	63.80	16.71	2.00	0.00	0.00	0.00
63.85	16.30	2.00	0.00	0.00	0.00	63.94	16.03	2.00	0.00	0.00	0.00
63.99	15.96	2.00	0.00	0.00	0.00	64.07	15.95	2.00	0.00	0.00	0.00
64.12	16.47	2.00	0.00	0.00	0.00	64.18	16.86	2.00	0.00	0.00	0.00
64.27	17.36	2.00	0.00	0.00	0.00	64.33	18.22	2.00	0.00	0.00	0.00
64.39	19.86	2.00	0.00	0.00	0.00	64.45	20.99	2.00	0.00	0.00	0.00
64.51	21.18	2.00	0.00	0.00	0.00	64.59	20.36	2.00	0.00	0.00	0.00
64.65	20.55	2.00	0.00	0.00	0.00	64.71	22.88	2.00	0.00	0.00	0.00
64.77	24.94	2.00	0.00	0.00	0.00	64.85	27.97	2.00	0.00	0.00	0.00
64.91	30.67	2.00	0.00	0.00	0.00	64.98	33.00	2.00	0.00	0.00	0.00
65.03	33.39	2.00	0.00	0.00	0.00	65.11	35.31	2.00	0.00	0.00	0.00
65.17	35.29	2.00	0.00	0.00	0.00	65.25	35.27	2.00	0.00	0.00	0.00
65.29	34.85	2.00	0.00	0.00	0.00	65.39	32.90	2.00	0.00	0.00	0.00
65.43	32.48	2.00	0.00	0.00	0.00	65.51	30.80	2.00	0.00	0.00	0.00
65.57	31.27	2.00	0.00	0.00	0.00	65.64	31.04	2.00	0.00	0.00	0.00
65.69	30.00	2.00	0.00	0.00	0.00	65.76	30.25	2.00	0.00	0.00	0.00
65.82	31.47	2.00	0.00	0.00	0.00	65.90	32.68	2.00	0.00	0.00	0.00
65.96	33.28	2.00	0.00	0.00	0.00	66.01	33.47	2.00	0.00	0.00	0.00
66.09	33.11	2.00	0.00	0.00	0.00	66.14	32.55	2.00	0.00	0.00	0.00
66.21	31.10	2.00	0.00	0.00	0.00	66.28	29.79	2.00	0.00	0.00	0.00
66.36	28.28	2.00	0.00	0.00	0.00	66.43	28.20	2.00	0.00	0.00	0.00
66.48	28.18	2.00	0.00	0.00	0.00	66.55	28.09	2.00	0.00	0.00	0.00
66.62	30.51	2.00	0.00	0.00	0.00	66.68	32.05	2.00	0.00	0.00	0.00
66.74	34.42	2.00	0.00	0.00	0.00	66.81	37.07	2.00	0.00	0.00	0.00
66.87	41.22	2.00	0.00	0.00	0.00	66.93	41.89	2.00	0.00	0.00	0.00
67.00	42.43	2.00	0.00	0.00	0.00	67.07	43.38	2.00	0.00	0.00	0.00
67.13	44.06	2.00	0.00	0.00	0.00	67.19	44.04	2.00	0.00	0.00	0.00
67.26	45.43	2.00	0.00	0.00	0.00	67.32	48.38	2.00	0.00	0.00	0.00
67.41	49.55	2.00	0.00	0.00	0.00	67.46	48.51	2.00	0.00	0.00	0.00
67.53	50.91	2.00	0.00	0.00	0.00	67.59	50.10	2.00	0.00	0.00	0.00
67.66	48.44	2.00	0.00	0.00	0.00	67.72	46.09	2.00	0.00	0.00	0.00
67.80	42.71	2.00	0.00	0.00	0.00	67.85	40.18	2.00	0.00	0.00	0.00
67.94	42.36	2.00	0.00	0.00	0.00	68.00	40.90	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
68.07	41.99	2.00	0.00	0.00	0.00	68.12	43.36	2.00	0.00	0.00	0.00
68.19	43.55	2.00	0.00	0.00	0.00	68.25	43.13	2.00	0.00	0.00	0.00
68.32	40.34	2.00	0.00	0.00	0.00	68.39	40.39	2.00	0.00	0.00	0.00
68.45	47.55	2.00	0.00	0.00	0.00	68.51	55.25	2.00	0.00	0.00	0.00
68.59	129.56	0.35	0.00	0.00	0.00	68.65	57.76	2.00	0.00	0.00	0.00
68.72	53.59	2.00	0.00	0.00	0.00	68.77	49.91	2.00	0.00	0.00	0.00
68.84	45.25	2.00	0.00	0.00	0.00	68.91	41.13	2.00	0.00	0.00	0.00
68.98	38.69	2.00	0.00	0.00	0.00	69.03	37.59	2.00	0.00	0.00	0.00
69.11	37.97	2.00	0.00	0.00	0.00	69.17	39.53	2.00	0.00	0.00	0.00
69.24	41.90	2.00	0.00	0.00	0.00	69.30	42.84	2.00	0.00	0.00	0.00
69.36	42.81	2.00	0.00	0.00	0.00	69.44	43.19	2.00	0.00	0.00	0.00
69.50	46.16	2.00	0.00	0.00	0.00	69.56	46.74	2.00	0.00	0.00	0.00
69.62	50.86	2.00	0.00	0.00	0.00	69.69	55.37	2.00	0.00	0.00	0.00
69.77	55.55	2.00	0.00	0.00	0.00	69.84	54.12	2.00	0.00	0.00	0.00
69.90	50.98	2.00	0.00	0.00	0.00	69.96	49.34	2.00	0.00	0.00	0.00
70.03	50.87	2.00	0.00	0.00	0.00	70.10	48.78	2.00	0.00	0.00	0.00
70.17	50.73	2.00	0.00	0.00	0.00	70.23	53.38	2.00	0.00	0.00	0.00
70.31	56.19	2.00	0.00	0.00	0.00	70.35	57.39	2.00	0.00	0.00	0.00
70.41	56.02	2.00	0.00	0.00	0.00	70.48	52.53	2.00	0.00	0.00	0.00
70.54	49.62	2.00	0.00	0.00	0.00	70.61	49.61	2.00	0.00	0.00	0.00
70.68	49.57	2.00	0.00	0.00	0.00	70.74	51.23	2.00	0.00	0.00	0.00
70.81	51.96	2.00	0.00	0.00	0.00	70.89	53.69	2.00	0.00	0.00	0.00
70.94	53.96	2.00	0.00	0.00	0.00	71.01	51.89	2.00	0.00	0.00	0.00
71.09	48.72	2.00	0.00	0.00	0.00	71.14	47.11	2.00	0.00	0.00	0.00
71.22	45.08	2.00	0.00	0.00	0.00	71.27	45.96	2.00	0.00	0.00	0.00
71.34	46.07	2.00	0.00	0.00	0.00	71.40	44.80	2.00	0.00	0.00	0.00
71.47	43.69	2.00	0.00	0.00	0.00	71.53	43.60	2.00	0.00	0.00	0.00
71.59	44.18	2.00	0.00	0.00	0.00	71.66	50.10	2.00	0.00	0.00	0.00
71.73	53.81	2.00	0.00	0.00	0.00	71.79	125.73	0.33	0.00	0.00	0.00
71.87	128.66	0.35	0.00	0.00	0.00	71.94	128.59	0.35	0.00	0.00	0.00
72.00	56.69	2.00	0.00	0.00	0.00	72.06	52.10	2.00	0.00	0.00	0.00
72.13	49.65	2.00	0.00	0.00	0.00	72.19	49.93	2.00	0.00	0.00	0.00
72.25	48.03	2.00	0.00	0.00	0.00	72.31	45.95	2.00	0.00	0.00	0.00
72.38	42.66	2.00	0.00	0.00	0.00	72.45	38.03	2.00	0.00	0.00	0.00
72.51	35.50	2.00	0.00	0.00	0.00	72.58	33.58	2.00	0.00	0.00	0.00
72.64	28.72	2.00	0.00	0.00	0.00	72.71	23.69	2.00	0.00	0.00	0.00
72.79	19.64	2.00	0.00	0.00	0.00	72.85	17.70	2.00	0.00	0.00	0.00
72.92	17.57	2.00	0.00	0.00	0.00	72.99	17.62	2.00	0.00	0.00	0.00
73.04	17.43	2.00	0.00	0.00	0.00	73.12	16.93	2.00	0.00	0.00	0.00
73.16	16.80	2.00	0.00	0.00	0.00	73.24	16.42	2.00	0.00	0.00	0.00
73.31	16.41	2.00	0.00	0.00	0.00	73.36	16.40	2.00	0.00	0.00	0.00
73.44	16.40	2.00	0.00	0.00	0.00	73.51	16.70	2.00	0.00	0.00	0.00
73.56	17.00	2.00	0.00	0.00	0.00	73.63	17.79	2.00	0.00	0.00	0.00
73.71	21.87	2.00	0.00	0.00	0.00	73.77	25.70	2.00	0.00	0.00	0.00
73.84	28.62	2.00	0.00	0.00	0.00	73.90	28.16	2.00	0.00	0.00	0.00
73.97	26.75	2.00	0.00	0.00	0.00	74.03	26.37	2.00	0.00	0.00	0.00
74.09	24.72	2.00	0.00	0.00	0.00	74.15	23.76	2.00	0.00	0.00	0.00
74.23	22.87	2.00	0.00	0.00	0.00	74.28	22.86	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.36	23.03	2.00	0.00	0.00	0.00	74.41	23.26	2.00	0.00	0.00	0.00
74.51	38.65	2.00	0.00	0.00	0.00	74.56	48.53	2.00	0.00	0.00	0.00
74.61	113.93	0.29	0.00	0.00	0.00	74.69	123.41	0.33	0.00	0.00	0.00
74.74	125.87	0.34	0.00	0.00	0.00	74.82	127.08	0.35	0.00	0.00	0.00
74.88	130.17	0.37	0.00	0.00	0.00	74.95	130.71	0.37	0.00	0.00	0.00
75.00	130.79	0.37	0.00	0.00	0.00	75.07	130.83	0.37	0.00	0.00	0.00
75.14	131.42	0.38	0.00	0.00	0.00	75.20	131.18	0.37	0.00	0.00	0.00
75.27	130.86	0.37	0.00	0.00	0.00	75.33	130.36	0.37	0.00	0.00	0.00
75.41	129.61	0.36	0.00	0.00	0.00	75.48	128.30	0.36	0.00	0.00	0.00
75.53	128.22	0.36	0.00	0.00	0.00	75.61	127.75	0.35	0.00	0.00	0.00
75.67	127.56	0.35	0.00	0.00	0.00	75.74	127.05	0.35	0.00	0.00	0.00
75.80	131.11	0.37	0.00	0.00	0.00	75.86	131.42	0.38	0.00	0.00	0.00
75.93	131.33	0.38	0.00	0.00	0.00	75.99	130.87	0.37	0.00	0.00	0.00
76.06	131.11	0.38	0.00	0.00	0.00	76.13	130.81	0.37	0.00	0.00	0.00
76.19	129.74	0.37	0.00	0.00	0.00	76.27	128.18	0.36	0.00	0.00	0.00
76.31	126.93	0.35	0.00	0.00	0.00	76.40	57.35	2.00	0.00	0.00	0.00
76.44	50.81	2.00	0.00	0.00	0.00	76.54	54.88	2.00	0.00	0.00	0.00
76.60	52.56	2.00	0.00	0.00	0.00	76.65	50.78	2.00	0.00	0.00	0.00
76.73	48.79	2.00	0.00	0.00	0.00	76.78	47.70	2.00	0.00	0.00	0.00
76.85	46.27	2.00	0.00	0.00	0.00	76.91	44.58	2.00	0.00	0.00	0.00
76.98	41.37	2.00	0.00	0.00	0.00	77.04	42.51	2.00	0.00	0.00	0.00
77.11	52.07	2.00	0.00	0.00	0.00	77.17	122.17	0.33	0.00	0.00	0.00
77.24	127.61	0.36	0.00	0.00	0.00	77.30	130.38	0.37	0.00	0.00	0.00
77.37	133.01	0.39	0.00	0.00	0.00	77.45	134.12	0.40	0.00	0.00	0.00
77.50	133.72	0.40	0.00	0.00	0.00	77.58	132.25	0.39	0.00	0.00	0.00
77.63	134.03	0.40	0.00	0.00	0.00	77.70	131.82	0.38	0.00	0.00	0.00
77.76	133.81	0.40	0.00	0.00	0.00	77.83	133.76	0.40	0.00	0.00	0.00
77.90	134.23	0.40	0.00	0.00	0.00	77.96	135.34	0.41	0.00	0.00	0.00
78.02	135.35	0.41	0.00	0.00	0.00	78.10	135.47	0.41	0.00	0.00	0.00
78.18	134.59	0.40	0.00	0.00	0.00	78.25	133.73	0.40	0.00	0.00	0.00
78.30	134.02	0.40	0.00	0.00	0.00	78.36	133.58	0.40	0.00	0.00	0.00
78.41	63.79	2.00	0.00	0.00	0.00	78.49	62.43	2.00	0.00	0.00	0.00
78.56	61.35	2.00	0.00	0.00	0.00	78.62	60.93	2.00	0.00	0.00	0.00
78.69	55.97	2.00	0.00	0.00	0.00	78.75	53.43	2.00	0.00	0.00	0.00
78.82	51.68	2.00	0.00	0.00	0.00	78.88	57.33	2.00	0.00	0.00	0.00
78.94	62.84	2.00	0.00	0.00	0.00	79.01	137.08	0.43	0.00	0.00	0.00
79.07	138.71	0.44	0.00	0.00	0.00	79.14	139.67	0.45	0.00	0.00	0.00
79.23	142.49	0.48	0.00	0.00	0.00	79.29	143.05	0.48	0.00	0.00	0.00
79.34	141.24	0.46	0.00	0.00	0.00	79.41	140.67	0.46	0.00	0.00	0.00
79.47	65.39	2.00	0.00	0.00	0.00	79.53	62.16	2.00	0.00	0.00	0.00
79.60	59.58	2.00	0.00	0.00	0.00	79.68	56.25	2.00	0.00	0.00	0.00
79.74	53.37	2.00	0.00	0.00	0.00	79.80	52.48	2.00	0.00	0.00	0.00
79.86	51.64	2.00	0.00	0.00	0.00	79.93	49.02	2.00	0.00	0.00	0.00
80.00	40.93	2.00	0.00	0.00	0.00	80.06	34.68	2.00	0.00	0.00	0.00
80.13	30.67	2.00	0.00	0.00	0.00	80.18	29.04	2.00	0.00	0.00	0.00
80.26	30.37	2.00	0.00	0.00	0.00	80.34	30.06	2.00	0.00	0.00	0.00
80.40	39.50	2.00	0.00	0.00	0.00	80.48	49.33	2.00	0.00	0.00	0.00
80.53	52.46	2.00	0.00	0.00	0.00	80.58	52.16	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.66	52.20	2.00	0.00	0.00	0.00	80.71	52.59	2.00	0.00	0.00	0.00
80.79	52.23	2.00	0.00	0.00	0.00	80.84	51.88	2.00	0.00	0.00	0.00
80.93	49.64	2.00	0.00	0.00	0.00	80.99	45.76	2.00	0.00	0.00	0.00
81.06	41.94	2.00	0.00	0.00	0.00	81.11	39.86	2.00	0.00	0.00	0.00
81.18	39.91	2.00	0.00	0.00	0.00	81.25	41.18	2.00	0.00	0.00	0.00
81.31	41.29	2.00	0.00	0.00	0.00	81.38	40.43	2.00	0.00	0.00	0.00
81.44	39.57	2.00	0.00	0.00	0.00	81.50	40.47	2.00	0.00	0.00	0.00
81.57	38.24	2.00	0.00	0.00	0.00	81.65	40.50	2.00	0.00	0.00	0.00
81.69	43.46	2.00	0.00	0.00	0.00	81.77	47.70	2.00	0.00	0.00	0.00
81.85	48.53	2.00	0.00	0.00	0.00	81.91	49.36	2.00	0.00	0.00	0.00
81.96	74.08	2.00	0.00	0.00	0.00	82.03	241.02	2.00	0.00	0.00	0.00
82.09	231.56	2.00	0.00	0.00	0.00	82.15	191.03	2.00	0.00	0.00	0.00
82.24	49.62	2.00	0.00	0.00	0.00	82.29	43.78	2.00	0.00	0.00	0.00
82.36	45.47	2.00	0.00	0.00	0.00	82.43	43.72	2.00	0.00	0.00	0.00
82.48	39.26	2.00	0.00	0.00	0.00	82.55	38.17	2.00	0.00	0.00	0.00
82.64	41.23	2.00	0.00	0.00	0.00	82.69	44.70	2.00	0.00	0.00	0.00
82.76	42.20	2.00	0.00	0.00	0.00	82.82	40.32	2.00	0.00	0.00	0.00
82.89	37.80	2.00	0.00	0.00	0.00	82.94	38.43	2.00	0.00	0.00	0.00
83.01	37.03	2.00	0.00	0.00	0.00	83.09	34.57	2.00	0.00	0.00	0.00
83.17	33.75	2.00	0.00	0.00	0.00	83.23	33.92	2.00	0.00	0.00	0.00
83.30	34.89	2.00	0.00	0.00	0.00	83.36	36.37	2.00	0.00	0.00	0.00
83.43	38.17	2.00	0.00	0.00	0.00	83.48	39.44	2.00	0.00	0.00	0.00
83.55	43.08	2.00	0.00	0.00	0.00	83.61	44.28	2.00	0.00	0.00	0.00
83.67	43.91	2.00	0.00	0.00	0.00	83.74	43.53	2.00	0.00	0.00	0.00
83.81	47.21	2.00	0.00	0.00	0.00	83.88	49.81	2.00	0.00	0.00	0.00
83.95	50.85	2.00	0.00	0.00	0.00	84.01	50.49	2.00	0.00	0.00	0.00
84.07	51.00	2.00	0.00	0.00	0.00	84.13	51.64	2.00	0.00	0.00	0.00
84.22	54.27	2.00	0.00	0.00	0.00	84.27	55.79	2.00	0.00	0.00	0.00
84.33	54.42	2.00	0.00	0.00	0.00	84.39	52.34	2.00	0.00	0.00	0.00
84.47	50.73	2.00	0.00	0.00	0.00	84.53	50.06	2.00	0.00	0.00	0.00
84.58	50.01	2.00	0.00	0.00	0.00	84.67	49.95	2.00	0.00	0.00	0.00
84.73	49.93	2.00	0.00	0.00	0.00	84.79	49.25	2.00	0.00	0.00	0.00
84.87	46.99	2.00	0.00	0.00	0.00	84.93	48.66	2.00	0.00	0.00	0.00
84.98	52.46	2.00	0.00	0.00	0.00	85.06	55.63	2.00	0.00	0.00	0.00
85.12	55.95	2.00	0.00	0.00	0.00	85.18	56.16	2.00	0.00	0.00	0.00
85.27	53.00	2.00	0.00	0.00	0.00	85.32	50.36	2.00	0.00	0.00	0.00
85.37	46.91	2.00	0.00	0.00	0.00	85.45	41.35	2.00	0.00	0.00	0.00
85.52	39.45	2.00	0.00	0.00	0.00	85.57	36.96	2.00	0.00	0.00	0.00
85.65	37.13	2.00	0.00	0.00	0.00	85.71	37.11	2.00	0.00	0.00	0.00
85.77	37.27	2.00	0.00	0.00	0.00	85.84	37.25	2.00	0.00	0.00	0.00
85.91	37.23	2.00	0.00	0.00	0.00	85.96	38.52	2.00	0.00	0.00	0.00
86.03	41.88	2.00	0.00	0.00	0.00	86.12	43.64	2.00	0.00	0.00	0.00
86.19	45.16	2.00	0.00	0.00	0.00	86.24	43.86	2.00	0.00	0.00	0.00
86.29	43.73	2.00	0.00	0.00	0.00	86.38	43.47	2.00	0.00	0.00	0.00
86.44	41.40	2.00	0.00	0.00	0.00	86.51	39.11	2.00	0.00	0.00	0.00
86.57	38.11	2.00	0.00	0.00	0.00	86.63	37.10	2.00	0.00	0.00	0.00
86.70	40.57	2.00	0.00	0.00	0.00	86.75	63.80	2.00	0.00	0.00	0.00
86.82	245.08	2.00	0.00	0.00	0.00	86.88	261.55	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.95	350.65	2.00	0.00	0.00	0.00	87.02	319.96	2.00	0.00	0.00	0.00
87.08	249.65	2.00	0.00	0.00	0.00	87.14	93.60	2.00	0.00	0.00	0.00
87.21	83.34	2.00	0.00	0.00	0.00	87.29	73.98	2.00	0.00	0.00	0.00
87.35	64.97	2.00	0.00	0.00	0.00	87.41	54.87	2.00	0.00	0.00	0.00
87.48	51.37	2.00	0.00	0.00	0.00	87.55	52.89	2.00	0.00	0.00	0.00
87.62	50.90	2.00	0.00	0.00	0.00	87.68	46.99	2.00	0.00	0.00	0.00
87.73	45.95	2.00	0.00	0.00	0.00	87.81	46.44	2.00	0.00	0.00	0.00
87.87	48.93	2.00	0.00	0.00	0.00	87.94	50.64	2.00	0.00	0.00	0.00
88.00	50.80	2.00	0.00	0.00	0.00	88.09	50.04	2.00	0.00	0.00	0.00
88.13	49.42	2.00	0.00	0.00	0.00	88.21	49.78	2.00	0.00	0.00	0.00
88.28	53.67	2.00	0.00	0.00	0.00	88.33	60.15	2.00	0.00	0.00	0.00
88.40	69.91	2.00	0.00	0.00	0.00	88.48	73.13	2.00	0.00	0.00	0.00
88.54	72.42	2.00	0.00	0.00	0.00	88.60	68.98	2.00	0.00	0.00	0.00
88.67	68.26	2.00	0.00	0.00	0.00	88.72	67.75	2.00	0.00	0.00	0.00
88.80	67.98	2.00	0.00	0.00	0.00	88.87	68.42	2.00	0.00	0.00	0.00
88.92	68.53	2.00	0.00	0.00	0.00	88.99	69.92	2.00	0.00	0.00	0.00
89.06	70.80	2.00	0.00	0.00	0.00	89.11	70.43	2.00	0.00	0.00	0.00
89.18	70.13	2.00	0.00	0.00	0.00	89.24	69.06	2.00	0.00	0.00	0.00
89.31	69.95	2.00	0.00	0.00	0.00	89.39	67.03	2.00	0.00	0.00	0.00
89.44	69.75	2.00	0.00	0.00	0.00	89.53	70.19	2.00	0.00	0.00	0.00
89.58	68.68	2.00	0.00	0.00	0.00	89.67	64.68	2.00	0.00	0.00	0.00
89.73	60.78	2.00	0.00	0.00	0.00	89.79	57.12	2.00	0.00	0.00	0.00
89.85	53.82	2.00	0.00	0.00	0.00	89.90	50.23	2.00	0.00	0.00	0.00
89.97	44.96	2.00	0.00	0.00	0.00	90.03	42.99	2.00	0.00	0.00	0.00
90.11	42.83	2.00	0.00	0.00	0.00	90.16	42.49	2.00	0.00	0.00	0.00
90.23	43.20	2.00	0.00	0.00	0.00	90.31	47.27	2.00	0.00	0.00	0.00
90.38	50.05	2.00	0.00	0.00	0.00	90.43	51.19	2.00	0.00	0.00	0.00
90.51	51.62	2.00	0.00	0.00	0.00	90.58	50.88	2.00	0.00	0.00	0.00
90.63	50.55	2.00	0.00	0.00	0.00	90.70	50.90	2.00	0.00	0.00	0.00
90.76	53.08	2.00	0.00	0.00	0.00	90.81	55.46	2.00	0.00	0.00	0.00
90.89	57.41	2.00	0.00	0.00	0.00	90.96	57.38	2.00	0.00	0.00	0.00
91.03	56.70	2.00	0.00	0.00	0.00	91.08	55.90	2.00	0.00	0.00	0.00
91.15	54.12	2.00	0.00	0.00	0.00	91.24	52.60	2.00	0.00	0.00	0.00
91.28	52.26	2.00	0.00	0.00	0.00	91.35	53.20	2.00	0.00	0.00	0.00
91.43	55.37	2.00	0.00	0.00	0.00	91.49	57.83	2.00	0.00	0.00	0.00
91.55	60.44	2.00	0.00	0.00	0.00	91.63	65.76	2.00	0.00	0.00	0.00
91.67	142.87	0.51	0.00	0.00	0.00	91.73	152.78	0.64	0.00	0.00	0.00
91.81	157.23	0.72	0.00	0.00	0.00	91.87	152.26	0.63	0.00	0.00	0.00
91.94	142.68	0.51	0.00	0.00	0.00	92.01	66.57	2.00	0.00	0.00	0.00
92.07	63.89	2.00	0.00	0.00	0.00	92.13	61.69	2.00	0.00	0.00	0.00
92.20	58.32	2.00	0.00	0.00	0.00	92.27	54.71	2.00	0.00	0.00	0.00
92.34	52.96	2.00	0.00	0.00	0.00	92.40	52.95	2.00	0.00	0.00	0.00
92.47	53.29	2.00	0.00	0.00	0.00	92.53	58.48	2.00	0.00	0.00	0.00
92.59	61.47	2.00	0.00	0.00	0.00	92.67	62.98	2.00	0.00	0.00	0.00
92.72	63.86	2.00	0.00	0.00	0.00	92.81	63.45	2.00	0.00	0.00	0.00
92.85	63.44	2.00	0.00	0.00	0.00	92.94	64.08	2.00	0.00	0.00	0.00
93.00	63.49	2.00	0.00	0.00	0.00	93.05	62.90	2.00	0.00	0.00	0.00
93.14	61.86	2.00	0.00	0.00	0.00	93.20	60.86	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.26	58.73	2.00	0.00	0.00	0.00	93.32	57.54	2.00	0.00	0.00	0.00
93.39	55.38	2.00	0.00	0.00	0.00	93.45	52.78	2.00	0.00	0.00	0.00
93.52	50.66	2.00	0.00	0.00	0.00	93.58	48.80	2.00	0.00	0.00	0.00
93.64	47.89	2.00	0.00	0.00	0.00	93.70	47.93	2.00	0.00	0.00	0.00
93.77	47.96	2.00	0.00	0.00	0.00	93.85	47.81	2.00	0.00	0.00	0.00
93.92	46.39	2.00	0.00	0.00	0.00	93.98	48.19	2.00	0.00	0.00	0.00
94.04	52.03	2.00	0.00	0.00	0.00	94.10	54.30	2.00	0.00	0.00	0.00
94.17	56.65	2.00	0.00	0.00	0.00	94.26	60.34	2.00	0.00	0.00	0.00
94.31	62.75	2.00	0.00	0.00	0.00	94.37	64.64	2.00	0.00	0.00	0.00
94.44	66.86	2.00	0.00	0.00	0.00	94.50	138.49	0.47	0.00	0.00	0.00
94.56	139.06	0.47	0.00	0.00	0.00	94.65	141.43	0.50	0.00	0.00	0.00
94.71	71.25	2.00	0.00	0.00	0.00	94.77	71.84	2.00	0.00	0.00	0.00
94.83	72.59	2.00	0.00	0.00	0.00	94.90	72.85	2.00	0.00	0.00	0.00
94.95	73.13	2.00	0.00	0.00	0.00	95.02	70.26	2.00	0.00	0.00	0.00
95.09	70.04	2.00	0.00	0.00	0.00	95.16	69.98	2.00	0.00	0.00	0.00
95.23	73.67	2.00	0.00	0.00	0.00	95.28	146.91	0.56	0.00	0.00	0.00
95.36	147.13	0.57	0.00	0.00	0.00	95.41	147.89	0.58	0.00	0.00	0.00
95.48	147.50	0.57	0.00	0.00	0.00	95.56	146.88	0.56	0.00	0.00	0.00
95.61	146.60	0.56	0.00	0.00	0.00	95.69	146.44	0.56	0.00	0.00	0.00
95.74	145.97	0.55	0.00	0.00	0.00	95.82	74.06	2.00	0.00	0.00	0.00
95.89	74.08	2.00	0.00	0.00	0.00	95.95	74.22	2.00	0.00	0.00	0.00
96.02	74.05	2.00	0.00	0.00	0.00	96.06	73.69	2.00	0.00	0.00	0.00
96.14	72.40	2.00	0.00	0.00	0.00	96.21	73.28	2.00	0.00	0.00	0.00
96.27	71.93	2.00	0.00	0.00	0.00	96.33	71.64	2.00	0.00	0.00	0.00
96.39	71.13	2.00	0.00	0.00	0.00	96.46	70.21	2.00	0.00	0.00	0.00
96.53	70.54	2.00	0.00	0.00	0.00	96.61	69.68	2.00	0.00	0.00	0.00
96.65	69.95	2.00	0.00	0.00	0.00	96.72	69.51	2.00	0.00	0.00	0.00
96.80	69.28	2.00	0.00	0.00	0.00	96.87	68.99	2.00	0.00	0.00	0.00
96.94	68.69	2.00	0.00	0.00	0.00	96.99	68.86	2.00	0.00	0.00	0.00
97.06	69.58	2.00	0.00	0.00	0.00	97.13	69.08	2.00	0.00	0.00	0.00
97.19	68.80	2.00	0.00	0.00	0.00	97.25	69.11	2.00	0.00	0.00	0.00
97.31	69.13	2.00	0.00	0.00	0.00	97.38	69.30	2.00	0.00	0.00	0.00
97.46	69.33	2.00	0.00	0.00	0.00	97.51	69.44	2.00	0.00	0.00	0.00
97.58	69.94	2.00	0.00	0.00	0.00	97.64	70.59	2.00	0.00	0.00	0.00
97.72	69.86	2.00	0.00	0.00	0.00	97.78	70.45	2.00	0.00	0.00	0.00
97.86	69.59	2.00	0.00	0.00	0.00	97.90	70.34	2.00	0.00	0.00	0.00
97.99	70.58	2.00	0.00	0.00	0.00	98.05	69.26	2.00	0.00	0.00	0.00
98.11	70.54	2.00	0.00	0.00	0.00	98.18	69.81	2.00	0.00	0.00	0.00
98.25	70.47	2.00	0.00	0.00	0.00	98.30	70.54	2.00	0.00	0.00	0.00
98.37	70.62	2.00	0.00	0.00	0.00	98.44	69.92	2.00	0.00	0.00	0.00
98.49	69.49	2.00	0.00	0.00	0.00	98.57	70.27	2.00	0.00	0.00	0.00
98.62	70.04	2.00	0.00	0.00	0.00	98.69	70.72	2.00	0.00	0.00	0.00
98.77	70.48	2.00	0.00	0.00	0.00	98.82	70.60	2.00	0.00	0.00	0.00
98.89	70.92	2.00	0.00	0.00	0.00	98.97	71.17	2.00	0.00	0.00	0.00
99.03	71.75	2.00	0.00	0.00	0.00	99.10	72.32	2.00	0.00	0.00	0.00
99.16	71.69	2.00	0.00	0.00	0.00	99.22	70.98	2.00	0.00	0.00	0.00
99.28	71.03	2.00	0.00	0.00	0.00	99.36	70.73	2.00	0.00	0.00	0.00
99.41	70.44	2.00	0.00	0.00	0.00	99.48	69.40	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
99.54	69.25	2.00	0.00	0.00	0.00	99.62	68.00	2.00	0.00	0.00	0.00
99.68	136.53	0.46	0.00	0.00	0.00	99.74	128.57	0.40	0.00	0.00	0.00
99.81	68.67	2.00	0.00	0.00	0.00	99.87	68.46	2.00	0.00	0.00	0.00
99.94	68.99	2.00	0.00	0.00	0.00	100.01	69.67	2.00	0.00	0.00	0.00
100.07	70.27	2.00	0.00	0.00	0.00						

Total estimated settlement: 0.95

Abbreviations

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

LIQUEFACTION ANALYSIS REPORT

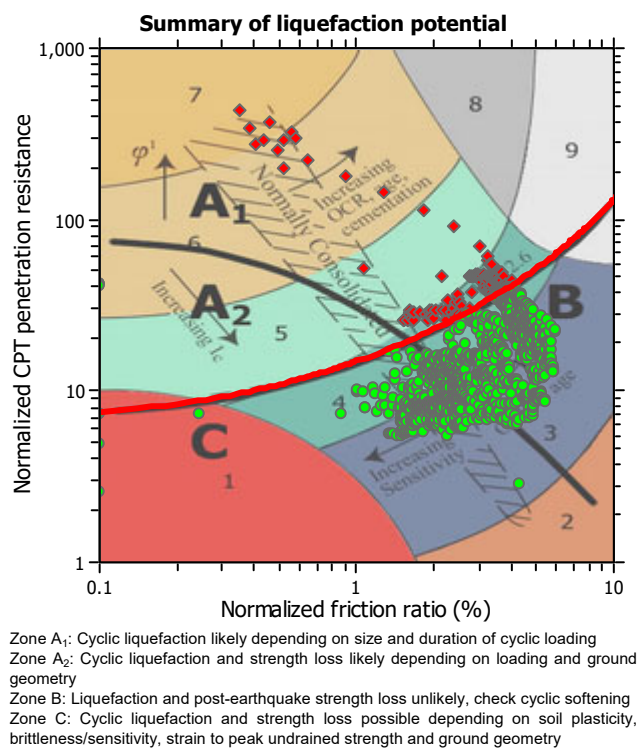
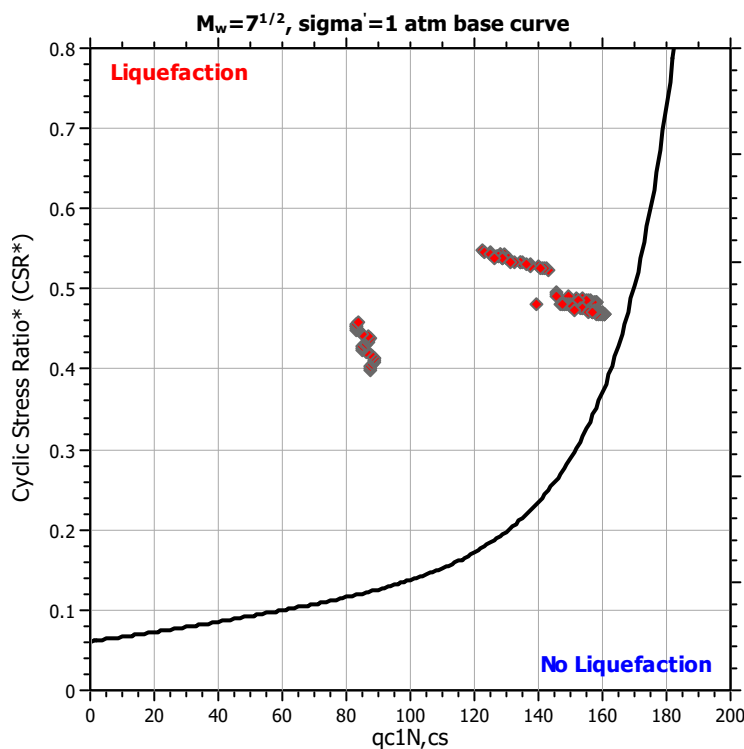
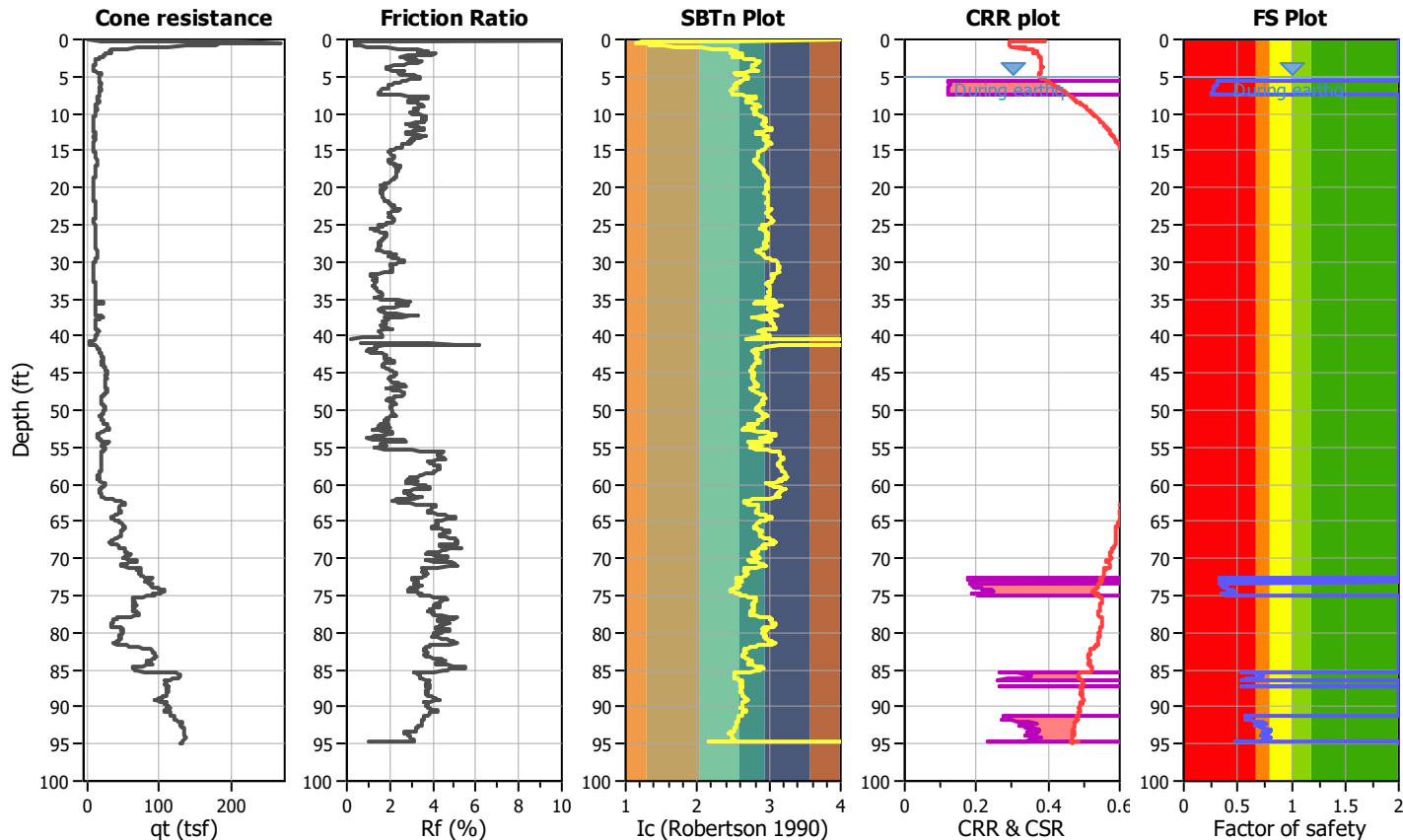
Project title : Victoria Apartments

Location : A9942-88-01

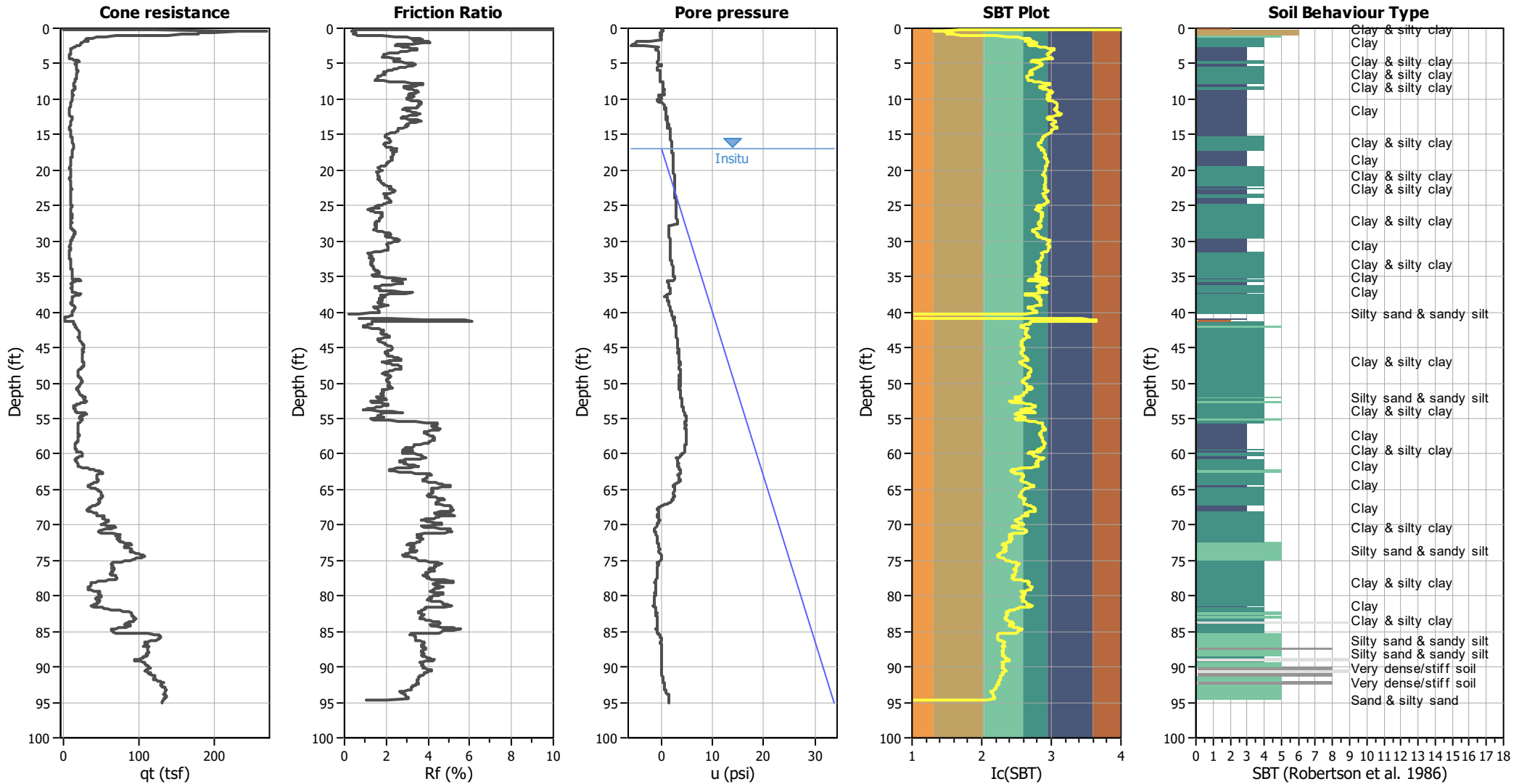
CPT file : C-4

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.65	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.62	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



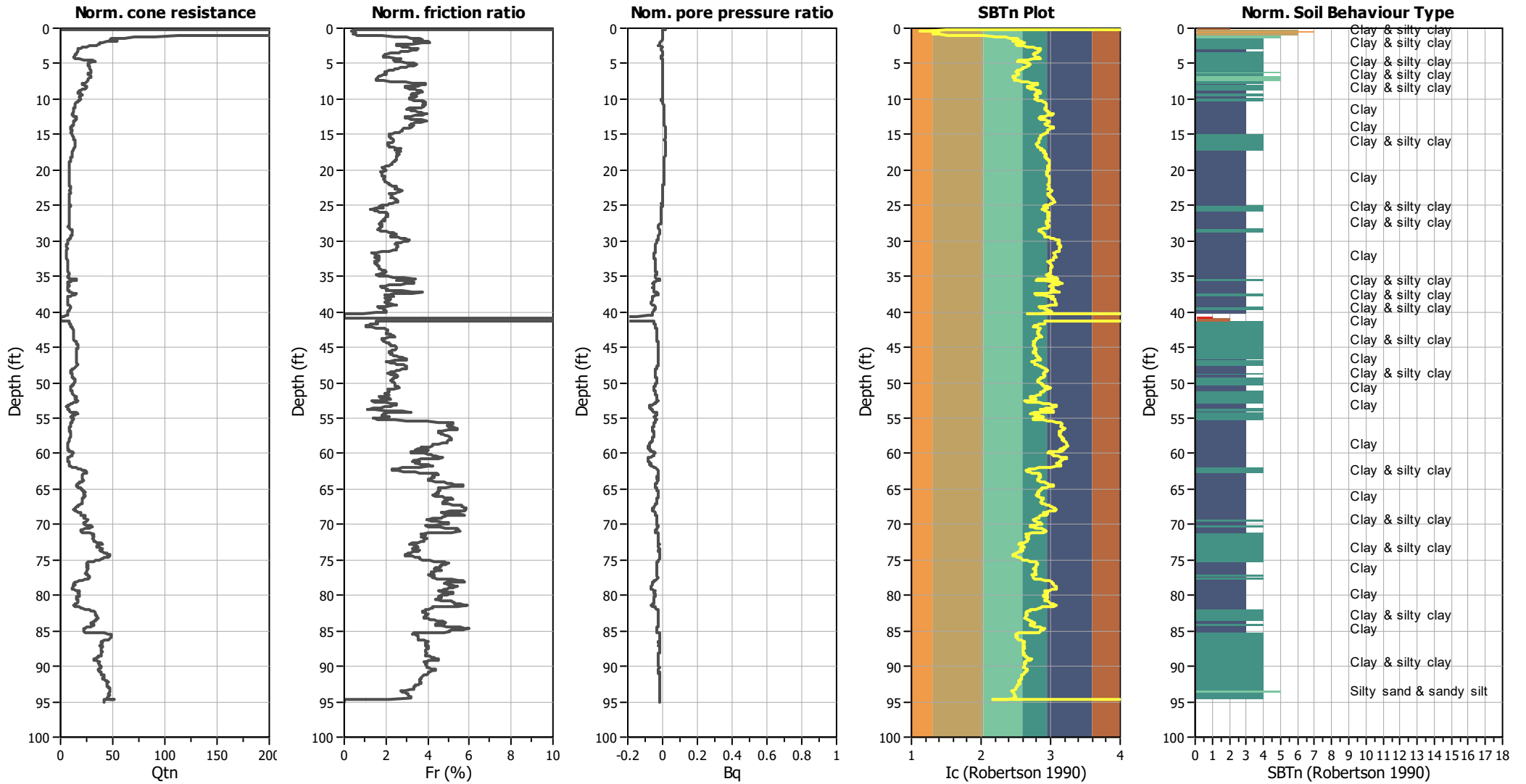
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



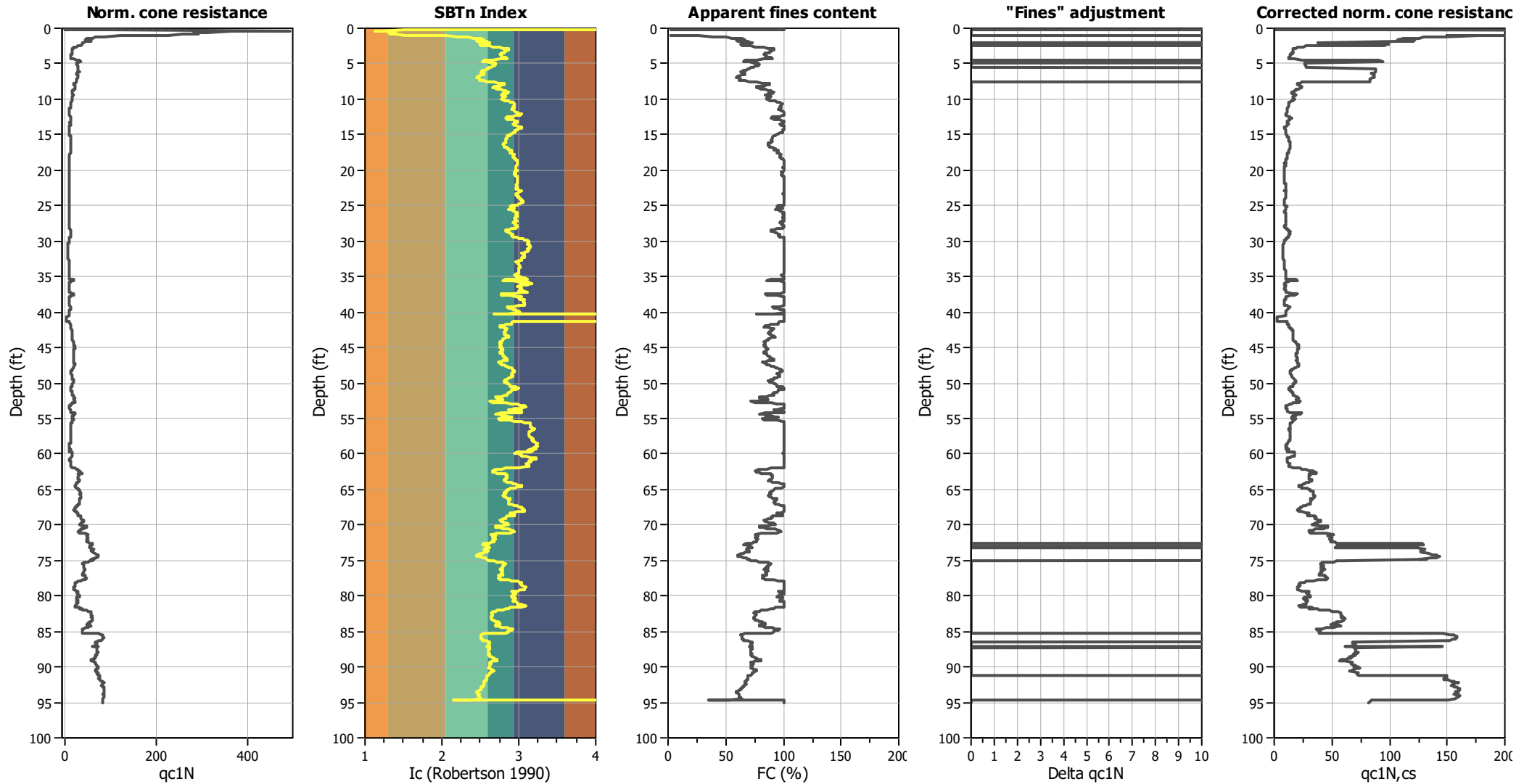
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

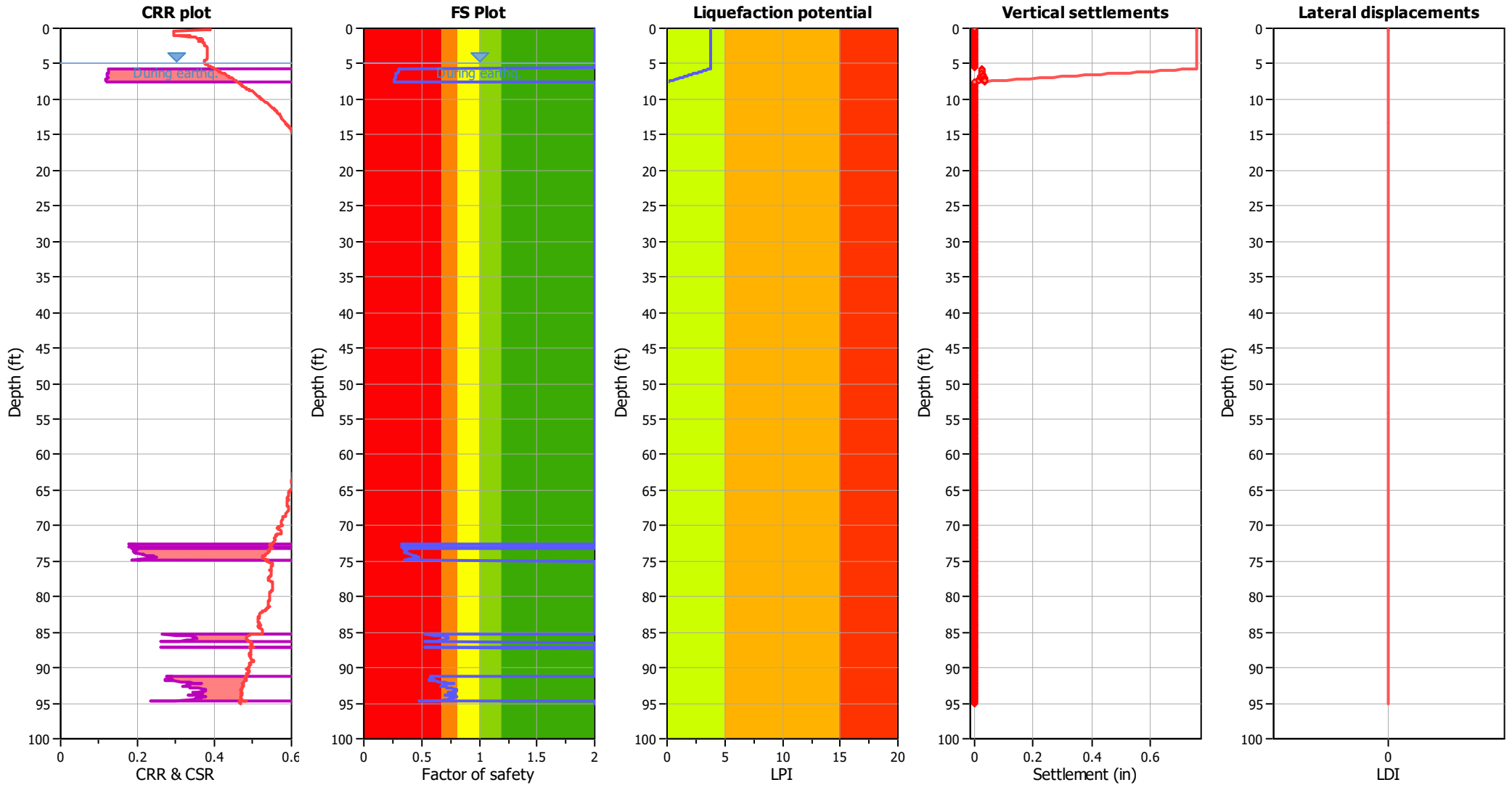
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

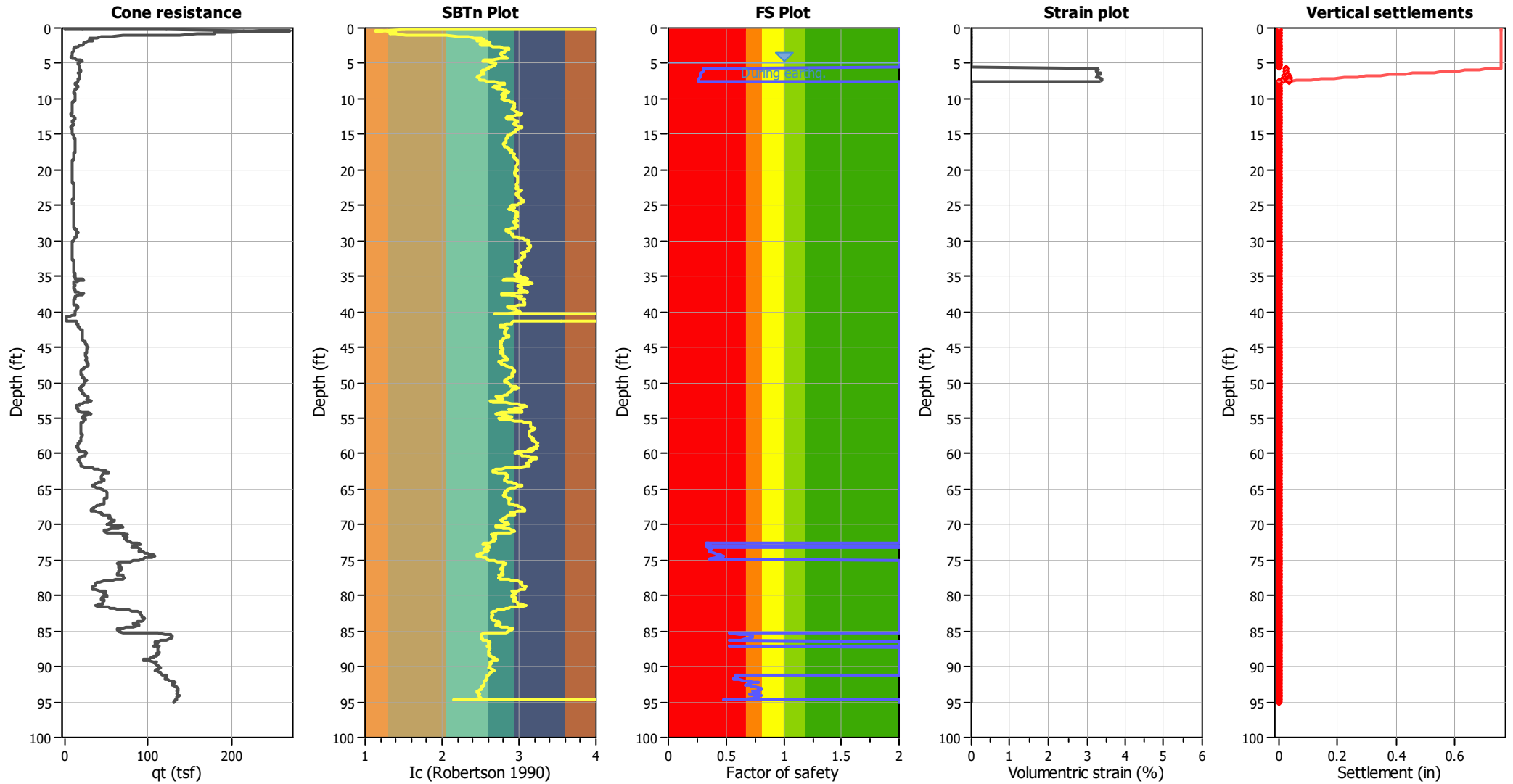
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- q_c: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.01	26.46	2.00	0.00	0.92	0.00	5.07	26.40	2.00	0.00	0.91	0.00
5.13	26.69	2.00	0.00	0.91	0.00	5.19	26.98	2.00	0.00	0.91	0.00
5.25	27.41	2.00	0.00	0.91	0.00	5.32	27.70	2.00	0.00	0.91	0.00
5.38	27.84	2.00	0.00	0.91	0.00	5.45	27.84	2.00	0.00	0.91	0.00
5.54	27.84	2.00	0.00	0.91	0.00	5.61	28.57	2.00	0.00	0.90	0.00
5.67	87.65	0.31	3.32	0.90	0.03	5.73	87.70	0.31	3.31	0.90	0.02
5.80	87.54	0.30	3.31	0.90	0.03	5.86	87.87	0.30	3.30	0.90	0.03
5.93	88.52	0.30	3.27	0.90	0.02	5.99	88.59	0.30	3.26	0.90	0.03
6.06	88.49	0.30	3.26	0.90	0.03	6.12	88.68	0.30	3.25	0.90	0.03
6.18	88.29	0.30	3.26	0.90	0.02	6.25	87.36	0.29	3.29	0.89	0.03
6.31	86.17	0.29	3.33	0.89	0.02	6.38	84.91	0.28	3.38	0.89	0.03
6.44	85.03	0.28	3.37	0.89	0.02	6.50	84.96	0.28	3.36	0.89	0.03
6.58	85.67	0.28	3.33	0.89	0.03	6.64	86.42	0.28	3.30	0.89	0.03
6.72	86.58	0.28	3.29	0.89	0.03	6.77	86.66	0.28	3.28	0.89	0.02
6.84	86.82	0.28	3.27	0.88	0.03	6.91	87.20	0.28	3.25	0.88	0.03
6.96	86.98	0.28	3.26	0.88	0.02	7.04	85.21	0.27	3.32	0.88	0.03
7.13	83.63	0.27	3.38	0.88	0.03	7.16	83.20	0.27	3.39	0.88	0.01
7.24	82.92	0.26	3.40	0.88	0.03	7.32	82.87	0.26	3.39	0.88	0.03
7.36	83.16	0.26	3.38	0.88	0.02	7.43	83.10	0.26	3.38	0.87	0.03
7.51	83.54	0.26	3.35	0.87	0.03	7.55	24.99	2.00	0.00	0.87	0.00
7.63	24.44	2.00	0.00	0.87	0.00	7.68	23.04	2.00	0.00	0.87	0.00
7.77	20.82	2.00	0.00	0.87	0.00	7.83	20.21	2.00	0.00	0.87	0.00
7.88	20.26	2.00	0.00	0.87	0.00	7.96	20.81	2.00	0.00	0.87	0.00
8.02	21.12	2.00	0.00	0.86	0.00	8.09	22.18	2.00	0.00	0.86	0.00
8.15	23.37	2.00	0.00	0.86	0.00	8.23	23.52	2.00	0.00	0.86	0.00
8.27	23.60	2.00	0.00	0.86	0.00	8.34	23.87	2.00	0.00	0.86	0.00
8.42	23.13	2.00	0.00	0.86	0.00	8.50	21.77	2.00	0.00	0.86	0.00
8.54	20.83	2.00	0.00	0.86	0.00	8.62	19.23	2.00	0.00	0.85	0.00
8.69	18.77	2.00	0.00	0.85	0.00	8.73	18.48	2.00	0.00	0.85	0.00
8.80	18.01	2.00	0.00	0.85	0.00	8.88	17.17	2.00	0.00	0.85	0.00
8.96	16.48	2.00	0.00	0.85	0.00	8.99	16.19	2.00	0.00	0.85	0.00
9.07	15.62	2.00	0.00	0.85	0.00	9.15	15.56	2.00	0.00	0.85	0.00
9.22	16.48	2.00	0.00	0.84	0.00	9.27	17.05	2.00	0.00	0.84	0.00
9.34	18.21	2.00	0.00	0.84	0.00	9.42	18.49	2.00	0.00	0.84	0.00
9.49	18.06	2.00	0.00	0.84	0.00	9.53	17.65	2.00	0.00	0.84	0.00
9.60	16.85	2.00	0.00	0.84	0.00	9.65	16.45	2.00	0.00	0.84	0.00
9.72	16.38	2.00	0.00	0.84	0.00	9.80	16.31	2.00	0.00	0.83	0.00
9.91	16.58	2.00	0.00	0.83	0.00	9.95	16.78	2.00	0.00	0.83	0.00
9.98	16.98	2.00	0.00	0.83	0.00	10.07	16.91	2.00	0.00	0.83	0.00
10.14	16.02	2.00	0.00	0.83	0.00	10.18	15.63	2.00	0.00	0.83	0.00
10.26	14.86	2.00	0.00	0.83	0.00	10.33	14.22	2.00	0.00	0.82	0.00
10.37	13.96	2.00	0.00	0.82	0.00	10.45	13.32	2.00	0.00	0.82	0.00
10.52	12.81	2.00	0.00	0.82	0.00	10.60	12.40	2.00	0.00	0.82	0.00
10.64	12.26	2.00	0.00	0.82	0.00	10.71	12.22	2.00	0.00	0.82	0.00
10.79	12.17	2.00	0.00	0.82	0.00	10.83	12.14	2.00	0.00	0.82	0.00
10.90	12.22	2.00	0.00	0.82	0.00	10.99	12.17	2.00	0.00	0.81	0.00
11.06	12.12	2.00	0.00	0.81	0.00	11.09	11.99	2.00	0.00	0.81	0.00
11.17	11.59	2.00	0.00	0.81	0.00	11.25	11.21	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.34	11.05	2.00	0.00	0.81	0.00	11.37	11.04	2.00	0.00	0.81	0.00
11.44	11.00	2.00	0.00	0.81	0.00	11.52	10.96	2.00	0.00	0.80	0.00
11.59	10.92	2.00	0.00	0.80	0.00	11.65	10.89	2.00	0.00	0.80	0.00
11.68	10.99	2.00	0.00	0.80	0.00	11.76	10.95	2.00	0.00	0.80	0.00
11.83	11.02	2.00	0.00	0.80	0.00	11.89	10.88	2.00	0.00	0.80	0.00
11.97	10.29	2.00	0.00	0.80	0.00	12.04	9.93	2.00	0.00	0.80	0.00
12.08	9.80	2.00	0.00	0.80	0.00	12.14	9.78	2.00	0.00	0.79	0.00
12.23	9.74	2.00	0.00	0.79	0.00	12.30	9.92	2.00	0.00	0.79	0.00
12.36	10.65	2.00	0.00	0.79	0.00	12.46	12.01	2.00	0.00	0.79	0.00
12.49	12.43	2.00	0.00	0.79	0.00	12.56	13.77	2.00	0.00	0.79	0.00
12.60	14.17	2.00	0.00	0.79	0.00	12.68	14.54	2.00	0.00	0.79	0.00
12.76	14.39	2.00	0.00	0.78	0.00	12.84	14.13	2.00	0.00	0.78	0.00
12.88	13.89	2.00	0.00	0.78	0.00	12.95	13.01	2.00	0.00	0.78	0.00
13.03	12.44	2.00	0.00	0.78	0.00	13.07	12.11	2.00	0.00	0.78	0.00
13.14	11.45	2.00	0.00	0.78	0.00	13.22	11.41	2.00	0.00	0.78	0.00
13.26	11.39	2.00	0.00	0.78	0.00	13.33	11.36	2.00	0.00	0.77	0.00
13.42	11.73	2.00	0.00	0.77	0.00	13.48	12.01	2.00	0.00	0.77	0.00
13.53	11.99	2.00	0.00	0.77	0.00	13.60	11.85	2.00	0.00	0.77	0.00
13.68	11.61	2.00	0.00	0.77	0.00	13.76	11.26	2.00	0.00	0.77	0.00
13.80	10.84	2.00	0.00	0.77	0.00	13.87	10.09	2.00	0.00	0.76	0.00
13.92	9.77	2.00	0.00	0.76	0.00	13.99	9.13	2.00	0.00	0.76	0.00
14.07	8.60	2.00	0.00	0.76	0.00	14.12	9.24	2.00	0.00	0.76	0.00
14.19	9.36	2.00	0.00	0.76	0.00	14.26	9.84	2.00	0.00	0.76	0.00
14.33	10.22	2.00	0.00	0.76	0.00	14.41	10.39	2.00	0.00	0.76	0.00
14.45	10.47	2.00	0.00	0.76	0.00	14.53	10.34	2.00	0.00	0.75	0.00
14.58	10.32	2.00	0.00	0.75	0.00	14.66	10.10	2.00	0.00	0.75	0.00
14.71	10.08	2.00	0.00	0.75	0.00	14.78	10.05	2.00	0.00	0.75	0.00
14.87	10.31	2.00	0.00	0.75	0.00	14.91	10.49	2.00	0.00	0.75	0.00
14.97	10.57	2.00	0.00	0.75	0.00	15.04	10.84	2.00	0.00	0.75	0.00
15.13	11.28	2.00	0.00	0.74	0.00	15.17	11.46	2.00	0.00	0.74	0.00
15.26	11.81	2.00	0.00	0.74	0.00	15.29	11.89	2.00	0.00	0.74	0.00
15.39	12.04	2.00	0.00	0.74	0.00	15.43	12.12	2.00	0.00	0.74	0.00
15.52	12.37	2.00	0.00	0.74	0.00	15.56	12.54	2.00	0.00	0.74	0.00
15.64	12.89	2.00	0.00	0.73	0.00	15.70	13.05	2.00	0.00	0.73	0.00
15.77	13.11	2.00	0.00	0.73	0.00	15.82	13.09	2.00	0.00	0.73	0.00
15.90	13.15	2.00	0.00	0.73	0.00	15.96	13.12	2.00	0.00	0.73	0.00
16.03	13.28	2.00	0.00	0.73	0.00	16.12	13.43	2.00	0.00	0.73	0.00
16.16	13.51	2.00	0.00	0.73	0.00	16.25	13.47	2.00	0.00	0.72	0.00
16.29	13.45	2.00	0.00	0.72	0.00	16.37	13.50	2.00	0.00	0.72	0.00
16.41	13.58	2.00	0.00	0.72	0.00	16.50	13.54	2.00	0.00	0.72	0.00
16.56	13.51	2.00	0.00	0.72	0.00	16.63	13.48	2.00	0.00	0.72	0.00
16.68	13.46	2.00	0.00	0.72	0.00	16.76	13.42	2.00	0.00	0.72	0.00
16.80	13.40	2.00	0.00	0.72	0.00	16.89	13.36	2.00	0.00	0.71	0.00
16.94	13.34	2.00	0.00	0.71	0.00	17.02	13.31	2.00	0.00	0.71	0.00
17.11	13.11	2.00	0.00	0.71	0.00	17.15	12.92	2.00	0.00	0.71	0.00
17.20	12.72	2.00	0.00	0.71	0.00	17.28	12.25	2.00	0.00	0.71	0.00
17.33	12.06	2.00	0.00	0.71	0.00	17.40	12.05	2.00	0.00	0.71	0.00
17.47	12.09	2.00	0.00	0.70	0.00	17.55	12.12	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.59	12.02	2.00	0.00	0.70	0.00	17.69	11.73	2.00	0.00	0.70	0.00
17.76	11.27	2.00	0.00	0.70	0.00	17.81	11.08	2.00	0.00	0.70	0.00
17.89	11.25	2.00	0.00	0.70	0.00	17.94	11.15	2.00	0.00	0.70	0.00
18.02	11.23	2.00	0.00	0.69	0.00	18.06	11.32	2.00	0.00	0.69	0.00
18.15	11.21	2.00	0.00	0.69	0.00	18.19	11.21	2.00	0.00	0.69	0.00
18.27	10.84	2.00	0.00	0.69	0.00	18.32	10.83	2.00	0.00	0.69	0.00
18.40	10.55	2.00	0.00	0.69	0.00	18.45	10.45	2.00	0.00	0.69	0.00
18.52	10.26	2.00	0.00	0.69	0.00	18.61	10.07	2.00	0.00	0.68	0.00
18.66	9.98	2.00	0.00	0.68	0.00	18.70	9.88	2.00	0.00	0.68	0.00
18.78	9.78	2.00	0.00	0.68	0.00	18.87	9.51	2.00	0.00	0.68	0.00
18.91	9.50	2.00	0.00	0.68	0.00	18.99	9.40	2.00	0.00	0.68	0.00
19.03	9.49	2.00	0.00	0.68	0.00	19.12	9.39	2.00	0.00	0.68	0.00
19.16	9.47	2.00	0.00	0.68	0.00	19.25	9.46	2.00	0.00	0.67	0.00
19.33	9.45	2.00	0.00	0.67	0.00	19.37	9.54	2.00	0.00	0.67	0.00
19.45	9.26	2.00	0.00	0.67	0.00	19.50	9.08	2.00	0.00	0.67	0.00
19.59	8.79	2.00	0.00	0.67	0.00	19.63	8.79	2.00	0.00	0.67	0.00
19.72	8.78	2.00	0.00	0.67	0.00	19.76	8.78	2.00	0.00	0.67	0.00
19.84	8.86	2.00	0.00	0.66	0.00	19.89	8.95	2.00	0.00	0.66	0.00
19.97	9.12	2.00	0.00	0.66	0.00	20.05	9.11	2.00	0.00	0.66	0.00
20.11	9.10	2.00	0.00	0.66	0.00	20.18	9.09	2.00	0.00	0.66	0.00
20.22	9.18	2.00	0.00	0.66	0.00	20.30	9.17	2.00	0.00	0.66	0.00
20.36	9.08	2.00	0.00	0.65	0.00	20.44	9.07	2.00	0.00	0.65	0.00
20.48	9.06	2.00	0.00	0.65	0.00	20.57	9.32	2.00	0.00	0.65	0.00
20.64	9.40	2.00	0.00	0.65	0.00	20.69	9.30	2.00	0.00	0.65	0.00
20.77	9.03	2.00	0.00	0.65	0.00	20.82	9.03	2.00	0.00	0.65	0.00
20.89	8.85	2.00	0.00	0.65	0.00	20.94	8.84	2.00	0.00	0.65	0.00
21.02	8.74	2.00	0.00	0.64	0.00	21.07	8.73	2.00	0.00	0.64	0.00
21.14	8.64	2.00	0.00	0.64	0.00	21.20	8.63	2.00	0.00	0.64	0.00
21.27	8.63	2.00	0.00	0.64	0.00	21.37	8.62	2.00	0.00	0.64	0.00
21.41	8.70	2.00	0.00	0.64	0.00	21.50	8.96	2.00	0.00	0.64	0.00
21.53	8.96	2.00	0.00	0.64	0.00	21.62	9.03	2.00	0.00	0.63	0.00
21.65	9.03	2.00	0.00	0.63	0.00	21.75	9.19	2.00	0.00	0.63	0.00
21.79	9.27	2.00	0.00	0.63	0.00	21.88	9.61	2.00	0.00	0.63	0.00
21.92	9.61	2.00	0.00	0.63	0.00	22.01	9.77	2.00	0.00	0.63	0.00
22.09	9.93	2.00	0.00	0.63	0.00	22.13	9.93	2.00	0.00	0.62	0.00
22.22	10.00	2.00	0.00	0.62	0.00	22.26	10.08	2.00	0.00	0.62	0.00
22.34	10.07	2.00	0.00	0.62	0.00	22.39	10.15	2.00	0.00	0.62	0.00
22.47	10.23	2.00	0.00	0.62	0.00	22.51	10.31	2.00	0.00	0.62	0.00
22.60	10.47	2.00	0.00	0.62	0.00	22.64	10.46	2.00	0.00	0.62	0.00
22.73	10.37	2.00	0.00	0.61	0.00	22.77	10.36	2.00	0.00	0.61	0.00
22.86	10.35	2.00	0.00	0.61	0.00	22.93	9.15	2.00	0.00	0.61	0.00
23.00	10.33	2.00	0.00	0.61	0.00	23.03	9.99	2.00	0.00	0.61	0.00
23.12	10.32	2.00	0.00	0.61	0.00	23.18	10.31	2.00	0.00	0.61	0.00
23.25	10.30	2.00	0.00	0.61	0.00	23.34	10.21	2.00	0.00	0.60	0.00
23.38	10.12	2.00	0.00	0.60	0.00	23.47	10.11	2.00	0.00	0.60	0.00
23.50	10.02	2.00	0.00	0.60	0.00	23.59	9.84	2.00	0.00	0.60	0.00
23.63	9.83	2.00	0.00	0.60	0.00	23.70	9.78	2.00	0.00	0.60	0.00
23.76	9.57	2.00	0.00	0.60	0.00	23.83	9.73	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.90	9.55	2.00	0.00	0.59	0.00	23.98	9.54	2.00	0.00	0.59	0.00
24.02	9.45	2.00	0.00	0.59	0.00	24.08	9.36	2.00	0.00	0.59	0.00
24.15	9.27	2.00	0.00	0.59	0.00	24.23	9.26	2.00	0.00	0.59	0.00
24.30	9.09	2.00	0.00	0.59	0.00	24.37	9.08	2.00	0.00	0.59	0.00
24.44	8.99	2.00	0.00	0.59	0.00	24.48	8.99	2.00	0.00	0.59	0.00
24.54	8.98	2.00	0.00	0.58	0.00	24.62	8.97	2.00	0.00	0.58	0.00
24.69	9.13	2.00	0.00	0.58	0.00	24.76	9.12	2.00	0.00	0.58	0.00
24.83	9.20	2.00	0.00	0.58	0.00	24.87	9.36	2.00	0.00	0.58	0.00
24.94	9.94	2.00	0.00	0.58	0.00	25.01	10.60	2.00	0.00	0.58	0.00
25.09	10.92	2.00	0.00	0.57	0.00	25.17	10.50	2.00	0.00	0.57	0.00
25.20	10.33	2.00	0.00	0.57	0.00	25.28	9.90	2.00	0.00	0.57	0.00
25.35	9.73	2.00	0.00	0.57	0.00	25.42	9.56	2.00	0.00	0.57	0.00
25.46	9.63	2.00	0.00	0.57	0.00	25.55	9.63	2.00	0.00	0.57	0.00
25.61	9.45	2.00	0.00	0.57	0.00	25.69	9.36	2.00	0.00	0.56	0.00
25.73	9.28	2.00	0.00	0.56	0.00	25.81	9.23	2.00	0.00	0.56	0.00
25.87	9.27	2.00	0.00	0.56	0.00	25.94	9.26	2.00	0.00	0.56	0.00
26.00	9.34	2.00	0.00	0.56	0.00	26.06	9.49	2.00	0.00	0.56	0.00
26.13	9.73	2.00	0.00	0.56	0.00	26.25	10.05	2.00	0.00	0.56	0.00
26.28	10.05	2.00	0.00	0.55	0.00	26.32	10.04	2.00	0.00	0.55	0.00
26.38	9.95	2.00	0.00	0.55	0.00	26.45	9.95	2.00	0.00	0.55	0.00
26.54	9.44	2.00	0.00	0.55	0.00	26.59	9.77	2.00	0.00	0.55	0.00
26.66	10.17	2.00	0.00	0.55	0.00	26.71	10.25	2.00	0.00	0.55	0.00
26.78	10.08	2.00	0.00	0.55	0.00	26.85	9.74	2.00	0.00	0.54	0.00
26.92	9.57	2.00	0.00	0.54	0.00	27.00	9.56	2.00	0.00	0.54	0.00
27.04	9.64	2.00	0.00	0.54	0.00	27.10	9.55	2.00	0.00	0.54	0.00
27.18	9.54	2.00	0.00	0.54	0.00	27.25	9.94	2.00	0.00	0.54	0.00
27.32	10.18	2.00	0.00	0.54	0.00	27.39	9.85	2.00	0.00	0.54	0.00
27.44	9.68	2.00	0.00	0.54	0.00	27.51	9.51	2.00	0.00	0.53	0.00
27.58	9.59	2.00	0.00	0.53	0.00	27.66	10.06	2.00	0.00	0.53	0.00
27.70	9.90	2.00	0.00	0.53	0.00	27.77	9.49	2.00	0.00	0.53	0.00
27.84	9.15	2.00	0.00	0.53	0.00	27.92	9.15	2.00	0.00	0.53	0.00
27.96	9.22	2.00	0.00	0.53	0.00	28.03	9.30	2.00	0.00	0.52	0.00
28.10	9.37	2.00	0.00	0.52	0.00	28.19	9.69	2.00	0.00	0.52	0.00
28.22	9.93	2.00	0.00	0.52	0.00	28.29	10.73	2.00	0.00	0.52	0.00
28.36	11.45	2.00	0.00	0.52	0.00	28.44	12.17	2.00	0.00	0.52	0.00
28.51	12.81	2.00	0.00	0.52	0.00	28.55	12.96	2.00	0.00	0.52	0.00
28.62	13.27	2.00	0.00	0.51	0.00	28.70	12.94	2.00	0.00	0.51	0.00
28.75	13.50	2.00	0.00	0.51	0.00	28.82	13.65	2.00	0.00	0.51	0.00
28.91	13.47	2.00	0.00	0.51	0.00	28.98	13.22	2.00	0.00	0.51	0.00
29.01	13.06	2.00	0.00	0.51	0.00	29.08	12.89	2.00	0.00	0.51	0.00
29.16	12.56	2.00	0.00	0.51	0.00	29.23	12.14	2.00	0.00	0.50	0.00
29.27	12.14	2.00	0.00	0.50	0.00	29.35	12.05	2.00	0.00	0.50	0.00
29.42	11.88	2.00	0.00	0.50	0.00	29.50	11.47	2.00	0.00	0.50	0.00
29.53	11.31	2.00	0.00	0.50	0.00	29.61	10.73	2.00	0.00	0.50	0.00
29.69	10.72	2.00	0.00	0.50	0.00	29.73	10.48	2.00	0.00	0.50	0.00
29.79	9.91	2.00	0.00	0.50	0.00	29.86	9.51	2.00	0.00	0.49	0.00
29.94	9.03	2.00	0.00	0.49	0.00	30.02	8.78	2.00	0.00	0.49	0.00
30.05	8.62	2.00	0.00	0.49	0.00	30.14	8.45	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.21	8.37	2.00	0.00	0.49	0.00	30.28	8.20	2.00	0.00	0.49	0.00
30.36	8.20	2.00	0.00	0.49	0.00	30.40	8.12	2.00	0.00	0.48	0.00
30.47	8.11	2.00	0.00	0.48	0.00	30.56	7.86	2.00	0.00	0.48	0.00
30.58	7.78	2.00	0.00	0.48	0.00	30.66	7.77	2.00	0.00	0.48	0.00
30.75	7.76	2.00	0.00	0.48	0.00	30.82	7.76	2.00	0.00	0.48	0.00
30.85	7.83	2.00	0.00	0.48	0.00	30.93	7.92	2.00	0.00	0.48	0.00
31.00	8.15	2.00	0.00	0.47	0.00	31.04	8.14	2.00	0.00	0.47	0.00
31.12	8.14	2.00	0.00	0.47	0.00	31.19	8.05	2.00	0.00	0.47	0.00
31.26	7.97	2.00	0.00	0.47	0.00	31.31	7.89	2.00	0.00	0.47	0.00
31.38	7.79	2.00	0.00	0.47	0.00	31.46	7.63	2.00	0.00	0.47	0.00
31.53	7.55	2.00	0.00	0.47	0.00	31.60	7.47	2.00	0.00	0.46	0.00
31.65	7.46	2.00	0.00	0.46	0.00	31.72	7.38	2.00	0.00	0.46	0.00
31.79	7.38	2.00	0.00	0.46	0.00	31.84	7.37	2.00	0.00	0.46	0.00
31.90	7.06	2.00	0.00	0.46	0.00	31.96	7.44	2.00	0.00	0.46	0.00
32.06	7.51	2.00	0.00	0.46	0.00	32.09	7.51	2.00	0.00	0.46	0.00
32.17	7.51	2.00	0.00	0.45	0.00	32.23	7.50	2.00	0.00	0.45	0.00
32.31	7.57	2.00	0.00	0.45	0.00	32.37	7.65	2.00	0.00	0.45	0.00
32.43	7.72	2.00	0.00	0.45	0.00	32.50	7.80	2.00	0.00	0.45	0.00
32.57	8.11	2.00	0.00	0.45	0.00	32.63	8.26	2.00	0.00	0.45	0.00
32.70	8.48	2.00	0.00	0.45	0.00	32.76	8.94	2.00	0.00	0.44	0.00
32.83	9.09	2.00	0.00	0.44	0.00	32.89	9.16	2.00	0.00	0.44	0.00
32.95	9.24	2.00	0.00	0.44	0.00	33.02	9.08	2.00	0.00	0.44	0.00
33.09	8.84	2.00	0.00	0.44	0.00	33.16	8.68	2.00	0.00	0.44	0.00
33.21	8.60	2.00	0.00	0.44	0.00	33.30	8.59	2.00	0.00	0.44	0.00
33.34	8.59	2.00	0.00	0.44	0.00	33.40	8.58	2.00	0.00	0.43	0.00
33.47	8.58	2.00	0.00	0.43	0.00	33.54	8.57	2.00	0.00	0.43	0.00
33.62	8.57	2.00	0.00	0.43	0.00	33.69	8.64	2.00	0.00	0.43	0.00
33.76	8.79	2.00	0.00	0.43	0.00	33.81	8.86	2.00	0.00	0.43	0.00
33.88	9.01	2.00	0.00	0.43	0.00	33.94	9.15	2.00	0.00	0.42	0.00
34.03	9.38	2.00	0.00	0.42	0.00	34.06	9.45	2.00	0.00	0.42	0.00
34.14	9.52	2.00	0.00	0.42	0.00	34.21	9.59	2.00	0.00	0.42	0.00
34.28	9.58	2.00	0.00	0.42	0.00	34.33	9.66	2.00	0.00	0.42	0.00
34.39	9.73	2.00	0.00	0.42	0.00	34.47	9.87	2.00	0.00	0.42	0.00
34.55	9.86	2.00	0.00	0.41	0.00	34.58	9.86	2.00	0.00	0.41	0.00
34.65	9.93	2.00	0.00	0.41	0.00	34.74	10.00	2.00	0.00	0.41	0.00
34.80	9.99	2.00	0.00	0.41	0.00	34.89	9.76	2.00	0.00	0.41	0.00
34.92	9.75	2.00	0.00	0.41	0.00	35.00	9.82	2.00	0.00	0.41	0.00
35.06	9.82	2.00	0.00	0.41	0.00	35.13	9.81	2.00	0.00	0.40	0.00
35.20	9.88	2.00	0.00	0.40	0.00	35.28	10.10	2.00	0.00	0.40	0.00
35.32	10.56	2.00	0.00	0.40	0.00	35.39	14.74	2.00	0.00	0.40	0.00
35.47	19.38	2.00	0.00	0.40	0.00	35.51	19.84	2.00	0.00	0.40	0.00
35.58	17.53	2.00	0.00	0.40	0.00	35.65	14.39	2.00	0.00	0.40	0.00
35.71	11.57	2.00	0.00	0.39	0.00	35.77	10.51	2.00	0.00	0.39	0.00
35.84	9.59	2.00	0.00	0.39	0.00	35.90	9.05	2.00	0.00	0.39	0.00
35.97	8.82	2.00	0.00	0.39	0.00	36.03	8.74	2.00	0.00	0.39	0.00
36.10	9.18	2.00	0.00	0.39	0.00	36.17	9.70	2.00	0.00	0.39	0.00
36.23	10.15	2.00	0.00	0.39	0.00	36.30	10.29	2.00	0.00	0.38	0.00
36.37	9.99	2.00	0.00	0.38	0.00	36.45	9.45	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.51	8.93	2.00	0.00	0.38	0.00	36.57	8.92	2.00	0.00	0.38	0.00
36.64	8.91	2.00	0.00	0.38	0.00	36.71	9.21	2.00	0.00	0.38	0.00
36.78	9.35	2.00	0.00	0.38	0.00	36.85	9.72	2.00	0.00	0.38	0.00
36.92	10.09	2.00	0.00	0.37	0.00	36.94	10.23	2.00	0.00	0.37	0.00
37.01	10.23	2.00	0.00	0.37	0.00	37.08	10.22	2.00	0.00	0.37	0.00
37.16	10.21	2.00	0.00	0.37	0.00	37.22	10.20	2.00	0.00	0.37	0.00
37.29	11.85	2.00	0.00	0.37	0.00	37.36	16.26	2.00	0.00	0.37	0.00
37.43	19.94	2.00	0.00	0.37	0.00	37.47	20.08	2.00	0.00	0.36	0.00
37.54	17.95	2.00	0.00	0.36	0.00	37.61	15.23	2.00	0.00	0.36	0.00
37.68	13.59	2.00	0.00	0.36	0.00	37.75	11.79	2.00	0.00	0.36	0.00
37.82	10.37	2.00	0.00	0.36	0.00	37.89	9.62	2.00	0.00	0.36	0.00
37.95	9.83	2.00	0.00	0.36	0.00	38.01	10.12	2.00	0.00	0.36	0.00
38.08	10.04	2.00	0.00	0.35	0.00	38.15	9.74	2.00	0.00	0.35	0.00
38.20	9.52	2.00	0.00	0.35	0.00	38.27	9.22	2.00	0.00	0.35	0.00
38.34	9.21	2.00	0.00	0.35	0.00	38.41	9.20	2.00	0.00	0.35	0.00
38.48	9.27	2.00	0.00	0.35	0.00	38.52	9.27	2.00	0.00	0.35	0.00
38.60	8.89	2.00	0.00	0.35	0.00	38.67	8.74	2.00	0.00	0.34	0.00
38.75	8.74	2.00	0.00	0.34	0.00	38.78	8.73	2.00	0.00	0.34	0.00
38.85	8.73	2.00	0.00	0.34	0.00	38.93	8.87	2.00	0.00	0.34	0.00
39.00	9.30	2.00	0.00	0.34	0.00	39.07	10.10	2.00	0.00	0.34	0.00
39.11	10.91	2.00	0.00	0.34	0.00	39.19	12.52	2.00	0.00	0.34	0.00
39.26	13.54	2.00	0.00	0.33	0.00	39.33	13.68	2.00	0.00	0.33	0.00
39.41	12.85	2.00	0.00	0.33	0.00	39.44	12.49	2.00	0.00	0.33	0.00
39.52	12.11	2.00	0.00	0.33	0.00	39.58	11.81	2.00	0.00	0.33	0.00
39.67	11.58	2.00	0.00	0.33	0.00	39.71	11.29	2.00	0.00	0.33	0.00
39.77	10.85	2.00	0.00	0.33	0.00	39.85	10.55	2.00	0.00	0.32	0.00
39.92	10.18	2.00	0.00	0.32	0.00	40.00	9.94	2.00	0.00	0.32	0.00
40.03	9.87	2.00	0.00	0.32	0.00	40.11	9.86	2.00	0.00	0.32	0.00
40.18	9.85	2.00	0.00	0.32	0.00	40.25	9.84	2.00	0.00	0.32	0.00
40.33	9.90	2.00	0.00	0.32	0.00	40.37	9.84	2.00	0.00	0.32	0.00
40.44	9.98	2.00	0.00	0.31	0.00	40.51	10.21	2.00	0.00	0.31	0.00
40.57	9.47	2.00	0.00	0.31	0.00	40.63	2.13	2.00	0.00	0.31	0.00
40.71	2.21	2.00	0.00	0.31	0.00	40.77	2.06	2.00	0.00	0.31	0.00
40.85	2.06	2.00	0.00	0.31	0.00	40.89	2.06	2.00	0.00	0.31	0.00
40.96	2.06	2.00	0.00	0.31	0.00	41.03	2.13	2.00	0.00	0.30	0.00
41.11	2.13	2.00	0.00	0.30	0.00	41.15	2.13	2.00	0.00	0.30	0.00
41.22	2.13	2.00	0.00	0.30	0.00	41.28	2.20	2.00	0.00	0.30	0.00
41.34	10.44	2.00	0.00	0.30	0.00	41.41	11.23	2.00	0.00	0.30	0.00
41.50	11.22	2.00	0.00	0.30	0.00	41.57	11.28	2.00	0.00	0.30	0.00
41.65	11.56	2.00	0.00	0.29	0.00	41.69	11.63	2.00	0.00	0.29	0.00
41.76	11.91	2.00	0.00	0.29	0.00	41.82	12.26	2.00	0.00	0.29	0.00
41.89	12.91	2.00	0.00	0.29	0.00	41.93	12.90	2.00	0.00	0.29	0.00
42.02	12.74	2.00	0.00	0.29	0.00	42.10	13.10	2.00	0.00	0.29	0.00
42.14	13.38	2.00	0.00	0.29	0.00	42.23	13.66	2.00	0.00	0.28	0.00
42.27	13.95	2.00	0.00	0.28	0.00	42.33	13.37	2.00	0.00	0.28	0.00
42.39	14.51	2.00	0.00	0.28	0.00	42.46	15.51	2.00	0.00	0.28	0.00
42.54	16.02	2.00	0.00	0.28	0.00	42.62	16.15	2.00	0.00	0.28	0.00
42.68	16.36	2.00	0.00	0.28	0.00	42.72	16.35	2.00	0.00	0.28	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.80	16.48	2.00	0.00	0.27	0.00	42.87	16.61	2.00	0.00	0.27	0.00
42.94	16.75	2.00	0.00	0.27	0.00	43.02	16.66	2.00	0.00	0.27	0.00
43.06	16.66	2.00	0.00	0.27	0.00	43.13	16.79	2.00	0.00	0.27	0.00
43.20	16.78	2.00	0.00	0.27	0.00	43.28	16.70	2.00	0.00	0.27	0.00
43.32	16.69	2.00	0.00	0.27	0.00	43.39	16.32	2.00	0.00	0.26	0.00
43.46	16.03	2.00	0.00	0.26	0.00	43.54	16.01	2.00	0.00	0.26	0.00
43.57	16.01	2.00	0.00	0.26	0.00	43.64	16.28	2.00	0.00	0.26	0.00
43.72	16.62	2.00	0.00	0.26	0.00	43.80	16.39	2.00	0.00	0.26	0.00
43.87	16.34	2.00	0.00	0.26	0.00	43.91	16.34	2.00	0.00	0.26	0.00
43.98	16.30	2.00	0.00	0.25	0.00	44.05	16.93	2.00	0.00	0.25	0.00
44.12	17.84	2.00	0.00	0.25	0.00	44.16	18.26	2.00	0.00	0.25	0.00
44.24	18.83	2.00	0.00	0.25	0.00	44.31	19.11	2.00	0.00	0.25	0.00
44.39	19.24	2.00	0.00	0.25	0.00	44.43	19.37	2.00	0.00	0.25	0.00
44.50	19.79	2.00	0.00	0.25	0.00	44.57	20.35	2.00	0.00	0.24	0.00
44.64	20.84	2.00	0.00	0.24	0.00	44.72	21.11	2.00	0.00	0.24	0.00
44.75	21.18	2.00	0.00	0.24	0.00	44.82	20.02	2.00	0.00	0.24	0.00
44.90	21.44	2.00	0.00	0.24	0.00	44.95	21.50	2.00	0.00	0.24	0.00
45.03	21.63	2.00	0.00	0.24	0.00	45.09	21.33	2.00	0.00	0.24	0.00
45.15	20.96	2.00	0.00	0.23	0.00	45.23	20.66	2.00	0.00	0.23	0.00
45.28	20.29	2.00	0.00	0.23	0.00	45.34	20.13	2.00	0.00	0.23	0.00
45.42	20.12	2.00	0.00	0.23	0.00	45.49	20.10	2.00	0.00	0.23	0.00
45.54	20.23	2.00	0.00	0.23	0.00	45.60	20.43	2.00	0.00	0.23	0.00
45.69	20.49	2.00	0.00	0.23	0.00	45.75	20.34	2.00	0.00	0.22	0.00
45.83	19.61	2.00	0.00	0.22	0.00	45.89	19.25	2.00	0.00	0.22	0.00
45.97	19.38	2.00	0.00	0.22	0.00	46.00	19.30	2.00	0.00	0.22	0.00
46.08	19.29	2.00	0.00	0.22	0.00	46.15	19.28	2.00	0.00	0.22	0.00
46.21	19.13	2.00	0.00	0.22	0.00	46.27	19.33	2.00	0.00	0.22	0.00
46.34	19.60	2.00	0.00	0.21	0.00	46.42	20.01	2.00	0.00	0.21	0.00
46.49	20.07	2.00	0.00	0.21	0.00	46.55	19.99	2.00	0.00	0.21	0.00
46.62	19.90	2.00	0.00	0.21	0.00	46.69	19.61	2.00	0.00	0.21	0.00
46.75	19.39	2.00	0.00	0.21	0.00	46.81	19.30	2.00	0.00	0.21	0.00
46.88	19.63	2.00	0.00	0.21	0.00	46.96	20.32	2.00	0.00	0.20	0.00
47.00	20.09	2.00	0.00	0.20	0.00	47.06	20.43	2.00	0.00	0.20	0.00
47.13	20.71	2.00	0.00	0.20	0.00	47.20	20.62	2.00	0.00	0.20	0.00
47.26	19.77	2.00	0.00	0.20	0.00	47.33	21.24	2.00	0.00	0.20	0.00
47.39	21.51	2.00	0.00	0.20	0.00	47.46	21.43	2.00	0.00	0.20	0.00
47.52	21.14	2.00	0.00	0.19	0.00	47.59	20.85	2.00	0.00	0.19	0.00
47.65	20.34	2.00	0.00	0.19	0.00	47.72	19.84	2.00	0.00	0.19	0.00
47.78	19.06	2.00	0.00	0.19	0.00	47.86	18.49	2.00	0.00	0.19	0.00
47.90	18.00	2.00	0.00	0.19	0.00	47.99	16.73	2.00	0.00	0.19	0.00
48.06	16.10	2.00	0.00	0.19	0.00	48.13	15.47	2.00	0.00	0.18	0.00
48.19	14.91	2.00	0.00	0.18	0.00	48.26	14.48	2.00	0.00	0.18	0.00
48.32	14.13	2.00	0.00	0.18	0.00	48.36	13.92	2.00	0.00	0.18	0.00
48.43	14.05	2.00	0.00	0.18	0.00	48.52	13.97	2.00	0.00	0.18	0.00
48.58	14.30	2.00	0.00	0.18	0.00	48.65	14.29	2.00	0.00	0.18	0.00
48.71	14.42	2.00	0.00	0.17	0.00	48.79	14.62	2.00	0.00	0.17	0.00
48.82	14.75	2.00	0.00	0.17	0.00	48.92	15.16	2.00	0.00	0.17	0.00
48.95	15.15	2.00	0.00	0.17	0.00	49.02	15.21	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.09	15.27	2.00	0.00	0.17	0.00	49.15	15.61	2.00	0.00	0.17	0.00
49.23	16.21	2.00	0.00	0.17	0.00	49.31	16.67	2.00	0.00	0.16	0.00
49.38	16.94	2.00	0.00	0.16	0.00	49.41	17.00	2.00	0.00	0.16	0.00
49.49	17.26	2.00	0.00	0.16	0.00	49.56	17.94	2.00	0.00	0.16	0.00
49.64	18.82	2.00	0.00	0.16	0.00	49.68	19.08	2.00	0.00	0.16	0.00
49.76	19.14	2.00	0.00	0.16	0.00	49.83	18.65	2.00	0.00	0.16	0.00
49.88	18.44	2.00	0.00	0.15	0.00	49.96	18.02	2.00	0.00	0.15	0.00
50.00	17.60	2.00	0.00	0.15	0.00	50.09	17.10	2.00	0.00	0.15	0.00
50.14	16.69	2.00	0.00	0.15	0.00	50.22	16.13	2.00	0.00	0.15	0.00
50.26	16.13	2.00	0.00	0.15	0.00	50.35	16.12	2.00	0.00	0.15	0.00
50.43	16.04	2.00	0.00	0.15	0.00	50.48	15.90	2.00	0.00	0.14	0.00
50.56	14.87	2.00	0.00	0.14	0.00	50.60	14.33	2.00	0.00	0.14	0.00
50.68	13.64	2.00	0.00	0.14	0.00	50.74	13.23	2.00	0.00	0.14	0.00
50.81	13.02	2.00	0.00	0.14	0.00	50.86	13.15	2.00	0.00	0.14	0.00
50.95	13.81	2.00	0.00	0.14	0.00	51.00	14.00	2.00	0.00	0.14	0.00
51.09	14.26	2.00	0.00	0.13	0.00	51.13	14.60	2.00	0.00	0.13	0.00
51.22	15.13	2.00	0.00	0.13	0.00	51.25	14.99	2.00	0.00	0.13	0.00
51.32	15.72	2.00	0.00	0.13	0.00	51.38	15.97	2.00	0.00	0.13	0.00
51.45	15.96	2.00	0.00	0.13	0.00	51.53	15.95	2.00	0.00	0.13	0.00
51.59	15.94	2.00	0.00	0.13	0.00	51.67	16.47	2.00	0.00	0.12	0.00
51.74	17.14	2.00	0.00	0.12	0.00	51.80	18.21	2.00	0.00	0.12	0.00
51.84	18.94	2.00	0.00	0.12	0.00	51.92	20.07	2.00	0.00	0.12	0.00
51.99	20.26	2.00	0.00	0.12	0.00	52.03	20.72	2.00	0.00	0.12	0.00
52.11	21.18	2.00	0.00	0.12	0.00	52.19	20.57	2.00	0.00	0.12	0.00
52.24	19.75	2.00	0.00	0.11	0.00	52.33	19.40	2.00	0.00	0.11	0.00
52.37	20.00	2.00	0.00	0.11	0.00	52.46	21.80	2.00	0.00	0.11	0.00
52.50	22.39	2.00	0.00	0.11	0.00	52.59	22.84	2.00	0.00	0.11	0.00
52.63	22.63	2.00	0.00	0.11	0.00	52.69	21.68	2.00	0.00	0.11	0.00
52.78	18.31	2.00	0.00	0.11	0.00	52.83	16.84	2.00	0.00	0.10	0.00
52.92	15.11	2.00	0.00	0.10	0.00	52.98	14.51	2.00	0.00	0.10	0.00
53.03	13.70	2.00	0.00	0.10	0.00	53.13	11.78	2.00	0.00	0.10	0.00
53.17	11.05	2.00	0.00	0.10	0.00	53.23	10.39	2.00	0.00	0.10	0.00
53.33	9.54	2.00	0.00	0.10	0.00	53.38	9.60	2.00	0.00	0.10	0.00
53.43	9.66	2.00	0.00	0.09	0.00	53.49	9.79	2.00	0.00	0.09	0.00
53.58	10.50	2.00	0.00	0.09	0.00	53.62	10.82	2.00	0.00	0.09	0.00
53.70	11.46	2.00	0.00	0.09	0.00	53.74	11.79	2.00	0.00	0.09	0.00
53.81	11.71	2.00	0.00	0.09	0.00	53.88	11.72	2.00	0.00	0.09	0.00
53.97	11.71	2.00	0.00	0.09	0.00	54.01	11.84	2.00	0.00	0.08	0.00
54.09	13.33	2.00	0.00	0.08	0.00	54.14	14.52	2.00	0.00	0.08	0.00
54.22	16.08	2.00	0.00	0.08	0.00	54.29	23.75	2.00	0.00	0.08	0.00
54.36	22.50	2.00	0.00	0.08	0.00	54.42	20.55	2.00	0.00	0.08	0.00
54.49	19.61	2.00	0.00	0.08	0.00	54.53	19.13	2.00	0.00	0.08	0.00
54.60	18.00	2.00	0.00	0.07	0.00	54.67	16.74	2.00	0.00	0.07	0.00
54.73	15.35	2.00	0.00	0.07	0.00	54.80	14.69	2.00	0.00	0.07	0.00
54.86	14.68	2.00	0.00	0.07	0.00	54.94	14.67	2.00	0.00	0.07	0.00
55.01	16.28	2.00	0.00	0.07	0.00	55.08	18.25	2.00	0.00	0.07	0.00
55.16	18.18	2.00	0.00	0.07	0.00	55.19	17.27	2.00	0.00	0.06	0.00
55.27	16.21	2.00	0.00	0.06	0.00	55.32	16.21	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.40	16.33	2.00	0.00	0.06	0.00	55.49	16.12	2.00	0.00	0.06	0.00
55.53	15.66	2.00	0.00	0.06	0.00	55.62	14.73	2.00	0.00	0.06	0.00
55.66	14.47	2.00	0.00	0.06	0.00	55.71	14.27	2.00	0.00	0.06	0.00
55.79	13.92	2.00	0.00	0.05	0.00	55.88	13.65	2.00	0.00	0.05	0.00
55.93	13.58	2.00	0.00	0.05	0.00	55.97	13.58	2.00	0.00	0.05	0.00
56.06	13.76	2.00	0.00	0.05	0.00	56.15	13.75	2.00	0.00	0.05	0.00
56.19	13.75	2.00	0.00	0.05	0.00	56.27	13.54	2.00	0.00	0.05	0.00
56.32	13.41	2.00	0.00	0.05	0.00	56.39	13.27	2.00	0.00	0.04	0.00
56.44	13.07	2.00	0.00	0.04	0.00	56.52	13.23	2.00	0.00	0.04	0.00
56.57	12.74	2.00	0.00	0.04	0.00	56.65	13.18	2.00	0.00	0.04	0.00
56.70	13.36	2.00	0.00	0.04	0.00	56.78	13.55	2.00	0.00	0.04	0.00
56.83	13.54	2.00	0.00	0.04	0.00	56.92	13.47	2.00	0.00	0.04	0.00
56.96	13.40	2.00	0.00	0.03	0.00	57.05	13.71	2.00	0.00	0.03	0.00
57.09	13.97	2.00	0.00	0.03	0.00	57.16	13.96	2.00	0.00	0.03	0.00
57.24	13.95	2.00	0.00	0.03	0.00	57.30	14.20	2.00	0.00	0.03	0.00
57.36	14.26	2.00	0.00	0.03	0.00	57.42	14.44	2.00	0.00	0.03	0.00
57.51	14.17	2.00	0.00	0.03	0.00	57.57	14.04	2.00	0.00	0.02	0.00
57.63	13.97	2.00	0.00	0.02	0.00	57.69	13.83	2.00	0.00	0.02	0.00
57.76	13.56	2.00	0.00	0.02	0.00	57.82	13.43	2.00	0.00	0.02	0.00
57.89	13.29	2.00	0.00	0.02	0.00	57.94	13.22	2.00	0.00	0.02	0.00
58.01	13.21	2.00	0.00	0.02	0.00	58.08	13.21	2.00	0.00	0.02	0.00
58.14	13.20	2.00	0.00	0.01	0.00	58.22	12.81	2.00	0.00	0.01	0.00
58.28	12.68	2.00	0.00	0.01	0.00	58.35	12.16	2.00	0.00	0.01	0.00
58.42	11.65	2.00	0.00	0.01	0.00	58.48	11.14	2.00	0.00	0.01	0.00
58.55	10.88	2.00	0.00	0.01	0.00	58.61	10.87	2.00	0.00	0.01	0.00
58.68	10.93	2.00	0.00	0.01	0.00	58.74	10.55	2.00	0.00	0.00	0.00
58.81	10.54	2.00	0.00	0.00	0.00	58.88	10.10	2.00	0.00	0.00	0.00
58.95	10.09	2.00	0.00	0.00	0.00	59.02	10.21	2.00	0.00	0.00	0.00
59.08	10.39	2.00	0.00	0.00	0.00	59.15	10.70	2.00	0.00	0.00	0.00
59.19	10.70	2.00	0.00	0.00	0.00	59.25	10.63	2.00	0.00	0.00	0.00
59.33	9.69	2.00	0.00	0.00	0.00	59.39	12.13	2.00	0.00	0.00	0.00
59.45	12.43	2.00	0.00	0.00	0.00	59.53	11.68	2.00	0.00	0.00	0.00
59.60	11.11	2.00	0.00	0.00	0.00	59.67	11.29	2.00	0.00	0.00	0.00
59.73	13.99	2.00	0.00	0.00	0.00	59.80	17.67	2.00	0.00	0.00	0.00
59.86	17.72	2.00	0.00	0.00	0.00	59.93	17.33	2.00	0.00	0.00	0.00
60.00	17.25	2.00	0.00	0.00	0.00	60.07	17.18	2.00	0.00	0.00	0.00
60.11	17.11	2.00	0.00	0.00	0.00	60.18	17.10	2.00	0.00	0.00	0.00
60.24	17.03	2.00	0.00	0.00	0.00	60.31	16.20	2.00	0.00	0.00	0.00
60.37	14.98	2.00	0.00	0.00	0.00	60.44	13.72	2.00	0.00	0.00	0.00
60.52	12.14	2.00	0.00	0.00	0.00	60.58	11.51	2.00	0.00	0.00	0.00
60.65	11.32	2.00	0.00	0.00	0.00	60.71	11.01	2.00	0.00	0.00	0.00
60.77	11.27	2.00	0.00	0.00	0.00	60.83	10.74	2.00	0.00	0.00	0.00
60.90	11.24	2.00	0.00	0.00	0.00	60.99	11.60	2.00	0.00	0.00	0.00
61.05	11.66	2.00	0.00	0.00	0.00	61.12	11.65	2.00	0.00	0.00	0.00
61.18	11.71	2.00	0.00	0.00	0.00	61.24	11.89	2.00	0.00	0.00	0.00
61.30	12.75	2.00	0.00	0.00	0.00	61.36	13.43	2.00	0.00	0.00	0.00
61.42	13.36	2.00	0.00	0.00	0.00	61.51	12.91	2.00	0.00	0.00	0.00
61.57	13.03	2.00	0.00	0.00	0.00	61.64	13.02	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.71	13.02	2.00	0.00	0.00	0.00	61.77	13.33	2.00	0.00	0.00	0.00
61.82	13.76	2.00	0.00	0.00	0.00	61.88	16.75	2.00	0.00	0.00	0.00
61.95	20.15	2.00	0.00	0.00	0.00	62.01	22.49	2.00	0.00	0.00	0.00
62.08	24.52	2.00	0.00	0.00	0.00	62.15	26.43	2.00	0.00	0.00	0.00
62.21	28.02	2.00	0.00	0.00	0.00	62.28	30.16	2.00	0.00	0.00	0.00
62.34	31.65	2.00	0.00	0.00	0.00	62.43	33.55	2.00	0.00	0.00	0.00
62.50	35.80	2.00	0.00	0.00	0.00	62.56	36.66	2.00	0.00	0.00	0.00
62.64	36.78	2.00	0.00	0.00	0.00	62.70	36.84	2.00	0.00	0.00	0.00
62.74	36.24	2.00	0.00	0.00	0.00	62.80	34.13	2.00	0.00	0.00	0.00
62.87	29.57	2.00	0.00	0.00	0.00	62.93	31.40	2.00	0.00	0.00	0.00
63.00	31.24	2.00	0.00	0.00	0.00	63.06	30.69	2.00	0.00	0.00	0.00
63.13	30.42	2.00	0.00	0.00	0.00	63.19	29.75	2.00	0.00	0.00	0.00
63.29	29.92	2.00	0.00	0.00	0.00	63.32	30.11	2.00	0.00	0.00	0.00
63.40	30.09	2.00	0.00	0.00	0.00	63.47	30.07	2.00	0.00	0.00	0.00
63.54	30.25	2.00	0.00	0.00	0.00	63.59	30.36	2.00	0.00	0.00	0.00
63.66	32.25	2.00	0.00	0.00	0.00	63.73	32.55	2.00	0.00	0.00	0.00
63.79	32.34	2.00	0.00	0.00	0.00	63.85	31.41	2.00	0.00	0.00	0.00
63.92	30.35	2.00	0.00	0.00	0.00	63.99	28.85	2.00	0.00	0.00	0.00
64.05	27.23	2.00	0.00	0.00	0.00	64.12	26.45	2.00	0.00	0.00	0.00
64.18	25.68	2.00	0.00	0.00	0.00	64.25	24.83	2.00	0.00	0.00	0.00
64.32	23.86	2.00	0.00	0.00	0.00	64.40	22.76	2.00	0.00	0.00	0.00
64.46	21.99	2.00	0.00	0.00	0.00	64.53	21.98	2.00	0.00	0.00	0.00
64.59	22.54	2.00	0.00	0.00	0.00	64.66	23.48	2.00	0.00	0.00	0.00
64.72	24.10	2.00	0.00	0.00	0.00	64.79	24.46	2.00	0.00	0.00	0.00
64.86	27.43	2.00	0.00	0.00	0.00	64.92	29.21	2.00	0.00	0.00	0.00
64.96	29.84	2.00	0.00	0.00	0.00	65.03	30.34	2.00	0.00	0.00	0.00
65.13	31.48	2.00	0.00	0.00	0.00	65.16	31.81	2.00	0.00	0.00	0.00
65.23	32.75	2.00	0.00	0.00	0.00	65.30	33.58	2.00	0.00	0.00	0.00
65.36	34.08	2.00	0.00	0.00	0.00	65.43	34.38	2.00	0.00	0.00	0.00
65.49	34.43	2.00	0.00	0.00	0.00	65.56	33.89	2.00	0.00	0.00	0.00
65.64	34.43	2.00	0.00	0.00	0.00	65.71	33.39	2.00	0.00	0.00	0.00
65.78	34.41	2.00	0.00	0.00	0.00	65.82	34.52	2.00	0.00	0.00	0.00
65.89	34.96	2.00	0.00	0.00	0.00	65.97	34.68	2.00	0.00	0.00	0.00
66.04	34.67	2.00	0.00	0.00	0.00	66.08	34.60	2.00	0.00	0.00	0.00
66.16	34.06	2.00	0.00	0.00	0.00	66.22	33.22	2.00	0.00	0.00	0.00
66.29	30.94	2.00	0.00	0.00	0.00	66.37	31.57	2.00	0.00	0.00	0.00
66.42	31.62	2.00	0.00	0.00	0.00	66.51	32.04	2.00	0.00	0.00	0.00
66.55	32.29	2.00	0.00	0.00	0.00	66.62	31.88	2.00	0.00	0.00	0.00
66.68	31.90	2.00	0.00	0.00	0.00	66.75	31.88	2.00	0.00	0.00	0.00
66.81	31.89	2.00	0.00	0.00	0.00	66.87	31.88	2.00	0.00	0.00	0.00
66.95	31.86	2.00	0.00	0.00	0.00	67.00	31.13	2.00	0.00	0.00	0.00
67.06	30.29	2.00	0.00	0.00	0.00	67.13	29.13	2.00	0.00	0.00	0.00
67.20	28.18	2.00	0.00	0.00	0.00	67.28	26.52	2.00	0.00	0.00	0.00
67.33	25.32	2.00	0.00	0.00	0.00	67.40	24.49	2.00	0.00	0.00	0.00
67.47	23.91	2.00	0.00	0.00	0.00	67.54	23.03	2.00	0.00	0.00	0.00
67.61	22.09	2.00	0.00	0.00	0.00	67.67	21.89	2.00	0.00	0.00	0.00
67.74	21.33	2.00	0.00	0.00	0.00	67.82	20.64	2.00	0.00	0.00	0.00
67.86	21.22	2.00	0.00	0.00	0.00	67.93	19.58	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
68.00	21.10	2.00	0.00	0.00	0.00	68.05	21.95	2.00	0.00	0.00	0.00
68.12	24.35	2.00	0.00	0.00	0.00	68.21	27.20	2.00	0.00	0.00	0.00
68.25	28.37	2.00	0.00	0.00	0.00	68.32	29.68	2.00	0.00	0.00	0.00
68.41	29.72	2.00	0.00	0.00	0.00	68.44	28.96	2.00	0.00	0.00	0.00
68.53	28.89	2.00	0.00	0.00	0.00	68.61	28.81	2.00	0.00	0.00	0.00
68.65	32.02	2.00	0.00	0.00	0.00	68.73	35.37	2.00	0.00	0.00	0.00
68.79	34.96	2.00	0.00	0.00	0.00	68.83	35.90	2.00	0.00	0.00	0.00
68.91	35.69	2.00	0.00	0.00	0.00	69.00	34.90	2.00	0.00	0.00	0.00
69.04	34.63	2.00	0.00	0.00	0.00	69.13	35.30	2.00	0.00	0.00	0.00
69.17	36.10	2.00	0.00	0.00	0.00	69.26	38.25	2.00	0.00	0.00	0.00
69.30	38.29	2.00	0.00	0.00	0.00	69.38	39.29	2.00	0.00	0.00	0.00
69.42	40.15	2.00	0.00	0.00	0.00	69.51	40.33	2.00	0.00	0.00	0.00
69.59	38.23	2.00	0.00	0.00	0.00	69.64	37.52	2.00	0.00	0.00	0.00
69.72	36.23	2.00	0.00	0.00	0.00	69.76	35.78	2.00	0.00	0.00	0.00
69.85	34.55	2.00	0.00	0.00	0.00	69.89	34.09	2.00	0.00	0.00	0.00
69.97	33.38	2.00	0.00	0.00	0.00	70.02	33.10	2.00	0.00	0.00	0.00
70.10	38.65	2.00	0.00	0.00	0.00	70.15	42.38	2.00	0.00	0.00	0.00
70.23	46.54	2.00	0.00	0.00	0.00	70.32	46.97	2.00	0.00	0.00	0.00
70.37	46.64	2.00	0.00	0.00	0.00	70.42	45.33	2.00	0.00	0.00	0.00
70.51	42.25	2.00	0.00	0.00	0.00	70.55	40.24	2.00	0.00	0.00	0.00
70.64	35.22	2.00	0.00	0.00	0.00	70.69	33.70	2.00	0.00	0.00	0.00
70.79	31.48	2.00	0.00	0.00	0.00	70.83	30.71	2.00	0.00	0.00	0.00
70.88	30.33	2.00	0.00	0.00	0.00	70.98	29.75	2.00	0.00	0.00	0.00
71.02	30.17	2.00	0.00	0.00	0.00	71.07	32.04	2.00	0.00	0.00	0.00
71.14	35.75	2.00	0.00	0.00	0.00	71.22	45.10	2.00	0.00	0.00	0.00
71.30	51.42	2.00	0.00	0.00	0.00	71.33	50.93	2.00	0.00	0.00	0.00
71.42	47.74	2.00	0.00	0.00	0.00	71.46	46.36	2.00	0.00	0.00	0.00
71.55	46.40	2.00	0.00	0.00	0.00	71.60	46.83	2.00	0.00	0.00	0.00
71.67	49.16	2.00	0.00	0.00	0.00	71.77	50.31	2.00	0.00	0.00	0.00
71.80	49.84	2.00	0.00	0.00	0.00	71.89	47.97	2.00	0.00	0.00	0.00
71.93	47.25	2.00	0.00	0.00	0.00	72.02	47.22	2.00	0.00	0.00	0.00
72.05	47.72	2.00	0.00	0.00	0.00	72.14	49.66	2.00	0.00	0.00	0.00
72.18	49.77	2.00	0.00	0.00	0.00	72.27	49.02	2.00	0.00	0.00	0.00
72.35	49.06	2.00	0.00	0.00	0.00	72.40	50.74	2.00	0.00	0.00	0.00
72.48	52.68	2.00	0.00	0.00	0.00	72.53	54.10	2.00	0.00	0.00	0.00
72.59	122.27	0.32	0.00	0.00	0.00	72.66	128.10	0.35	0.00	0.00	0.00
72.72	129.39	0.36	0.00	0.00	0.00	72.79	128.14	0.35	0.00	0.00	0.00
72.85	124.79	0.34	0.00	0.00	0.00	72.92	123.18	0.33	0.00	0.00	0.00
72.98	55.04	2.00	0.00	0.00	0.00	73.07	53.75	2.00	0.00	0.00	0.00
73.11	53.41	2.00	0.00	0.00	0.00	73.21	52.78	2.00	0.00	0.00	0.00
73.25	53.47	2.00	0.00	0.00	0.00	73.30	124.98	0.34	0.00	0.00	0.00
73.39	130.12	0.37	0.00	0.00	0.00	73.43	130.75	0.37	0.00	0.00	0.00
73.52	127.28	0.35	0.00	0.00	0.00	73.58	126.56	0.35	0.00	0.00	0.00
73.68	127.24	0.35	0.00	0.00	0.00	73.72	127.19	0.35	0.00	0.00	0.00
73.77	127.67	0.35	0.00	0.00	0.00	73.85	128.96	0.36	0.00	0.00	0.00
73.91	128.68	0.36	0.00	0.00	0.00	74.00	134.63	0.40	0.00	0.00	0.00
74.04	135.16	0.40	0.00	0.00	0.00	74.09	134.31	0.40	0.00	0.00	0.00
74.18	137.47	0.42	0.00	0.00	0.00	74.23	140.09	0.45	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.28	141.40	0.46	0.00	0.00	0.00	74.37	142.51	0.47	0.00	0.00	0.00
74.42	142.99	0.47	0.00	0.00	0.00	74.51	141.72	0.46	0.00	0.00	0.00
74.56	140.39	0.45	0.00	0.00	0.00	74.65	137.78	0.43	0.00	0.00	0.00
74.70	136.07	0.41	0.00	0.00	0.00	74.76	126.08	0.35	0.00	0.00	0.00
74.84	132.61	0.39	0.00	0.00	0.00	74.88	131.25	0.38	0.00	0.00	0.00
74.96	59.87	2.00	0.00	0.00	0.00	75.04	55.80	2.00	0.00	0.00	0.00
75.08	54.37	2.00	0.00	0.00	0.00	75.16	51.08	2.00	0.00	0.00	0.00
75.24	47.24	2.00	0.00	0.00	0.00	75.28	44.74	2.00	0.00	0.00	0.00
75.35	41.42	2.00	0.00	0.00	0.00	75.40	41.10	2.00	0.00	0.00	0.00
75.48	39.87	2.00	0.00	0.00	0.00	75.56	40.99	2.00	0.00	0.00	0.00
75.60	40.59	2.00	0.00	0.00	0.00	75.69	40.87	2.00	0.00	0.00	0.00
75.75	42.49	2.00	0.00	0.00	0.00	75.79	42.54	2.00	0.00	0.00	0.00
75.86	42.46	2.00	0.00	0.00	0.00	75.94	41.05	2.00	0.00	0.00	0.00
76.03	40.58	2.00	0.00	0.00	0.00	76.07	41.94	2.00	0.00	0.00	0.00
76.12	43.06	2.00	0.00	0.00	0.00	76.21	44.10	2.00	0.00	0.00	0.00
76.26	44.28	2.00	0.00	0.00	0.00	76.31	43.32	2.00	0.00	0.00	0.00
76.40	41.53	2.00	0.00	0.00	0.00	76.45	40.77	2.00	0.00	0.00	0.00
76.54	40.31	2.00	0.00	0.00	0.00	76.58	40.85	2.00	0.00	0.00	0.00
76.68	41.82	2.00	0.00	0.00	0.00	76.73	41.23	2.00	0.00	0.00	0.00
76.81	39.55	2.00	0.00	0.00	0.00	76.87	39.35	2.00	0.00	0.00	0.00
76.91	39.68	2.00	0.00	0.00	0.00	77.00	39.32	2.00	0.00	0.00	0.00
77.05	40.82	2.00	0.00	0.00	0.00	77.15	44.25	2.00	0.00	0.00	0.00
77.18	44.35	2.00	0.00	0.00	0.00	77.24	44.34	2.00	0.00	0.00	0.00
77.33	44.06	2.00	0.00	0.00	0.00	77.38	45.01	2.00	0.00	0.00	0.00
77.47	45.54	2.00	0.00	0.00	0.00	77.51	46.16	2.00	0.00	0.00	0.00
77.57	46.59	2.00	0.00	0.00	0.00	77.65	44.86	2.00	0.00	0.00	0.00
77.69	42.92	2.00	0.00	0.00	0.00	77.79	37.42	2.00	0.00	0.00	0.00
77.82	33.78	2.00	0.00	0.00	0.00	77.91	32.40	2.00	0.00	0.00	0.00
78.00	27.99	2.00	0.00	0.00	0.00	78.04	26.09	2.00	0.00	0.00	0.00
78.13	24.08	2.00	0.00	0.00	0.00	78.17	23.50	2.00	0.00	0.00	0.00
78.22	22.91	2.00	0.00	0.00	0.00	78.30	21.80	2.00	0.00	0.00	0.00
78.39	21.61	2.00	0.00	0.00	0.00	78.43	21.72	2.00	0.00	0.00	0.00
78.48	21.89	2.00	0.00	0.00	0.00	78.56	22.51	2.00	0.00	0.00	0.00
78.61	22.27	2.00	0.00	0.00	0.00	78.69	20.94	2.00	0.00	0.00	0.00
78.77	20.30	2.00	0.00	0.00	0.00	78.83	20.41	2.00	0.00	0.00	0.00
78.90	19.66	2.00	0.00	0.00	0.00	78.99	19.68	2.00	0.00	0.00	0.00
79.03	19.67	2.00	0.00	0.00	0.00	79.10	19.69	2.00	0.00	0.00	0.00
79.15	20.19	2.00	0.00	0.00	0.00	79.24	21.89	2.00	0.00	0.00	0.00
79.29	24.30	2.00	0.00	0.00	0.00	79.37	29.01	2.00	0.00	0.00	0.00
79.42	29.94	2.00	0.00	0.00	0.00	79.47	29.88	2.00	0.00	0.00	0.00
79.57	28.04	2.00	0.00	0.00	0.00	79.60	27.22	2.00	0.00	0.00	0.00
79.70	28.73	2.00	0.00	0.00	0.00	79.74	29.12	2.00	0.00	0.00	0.00
79.79	29.23	2.00	0.00	0.00	0.00	79.88	30.57	2.00	0.00	0.00	0.00
79.92	30.32	2.00	0.00	0.00	0.00	80.02	30.94	2.00	0.00	0.00	0.00
80.07	31.11	2.00	0.00	0.00	0.00	80.17	29.67	2.00	0.00	0.00	0.00
80.21	28.26	2.00	0.00	0.00	0.00	80.25	26.85	2.00	0.00	0.00	0.00
80.34	25.62	2.00	0.00	0.00	0.00	80.39	26.01	2.00	0.00	0.00	0.00
80.48	26.28	2.00	0.00	0.00	0.00	80.53	26.97	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.58	27.54	2.00	0.00	0.00	0.00	80.67	29.10	2.00	0.00	0.00	0.00
80.72	29.21	2.00	0.00	0.00	0.00	80.80	28.44	2.00	0.00	0.00	0.00
80.84	27.27	2.00	0.00	0.00	0.00	80.95	27.31	2.00	0.00	0.00	0.00
80.99	27.25	2.00	0.00	0.00	0.00	81.06	27.47	2.00	0.00	0.00	0.00
81.11	27.05	2.00	0.00	0.00	0.00	81.19	25.70	2.00	0.00	0.00	0.00
81.23	24.55	2.00	0.00	0.00	0.00	81.32	22.76	2.00	0.00	0.00	0.00
81.40	20.94	2.00	0.00	0.00	0.00	81.44	22.51	2.00	0.00	0.00	0.00
81.53	22.27	2.00	0.00	0.00	0.00	81.57	26.67	2.00	0.00	0.00	0.00
81.66	32.55	2.00	0.00	0.00	0.00	81.70	34.02	2.00	0.00	0.00	0.00
81.76	30.48	2.00	0.00	0.00	0.00	81.84	37.19	2.00	0.00	0.00	0.00
81.90	39.59	2.00	0.00	0.00	0.00	81.96	41.88	2.00	0.00	0.00	0.00
82.03	44.94	2.00	0.00	0.00	0.00	82.10	47.46	2.00	0.00	0.00	0.00
82.17	50.08	2.00	0.00	0.00	0.00	82.23	51.69	2.00	0.00	0.00	0.00
82.30	55.87	2.00	0.00	0.00	0.00	82.35	57.97	2.00	0.00	0.00	0.00
82.42	57.56	2.00	0.00	0.00	0.00	82.50	58.05	2.00	0.00	0.00	0.00
82.56	58.36	2.00	0.00	0.00	0.00	82.61	57.83	2.00	0.00	0.00	0.00
82.70	57.48	2.00	0.00	0.00	0.00	82.76	57.52	2.00	0.00	0.00	0.00
82.83	59.18	2.00	0.00	0.00	0.00	82.89	59.73	2.00	0.00	0.00	0.00
82.95	58.01	2.00	0.00	0.00	0.00	83.02	58.76	2.00	0.00	0.00	0.00
83.08	60.35	2.00	0.00	0.00	0.00	83.17	61.04	2.00	0.00	0.00	0.00
83.23	61.42	2.00	0.00	0.00	0.00	83.29	60.96	2.00	0.00	0.00	0.00
83.35	59.25	2.00	0.00	0.00	0.00	83.41	59.51	2.00	0.00	0.00	0.00
83.47	59.82	2.00	0.00	0.00	0.00	83.54	58.39	2.00	0.00	0.00	0.00
83.60	56.77	2.00	0.00	0.00	0.00	83.66	54.64	2.00	0.00	0.00	0.00
83.76	52.57	2.00	0.00	0.00	0.00	83.82	53.07	2.00	0.00	0.00	0.00
83.89	51.78	2.00	0.00	0.00	0.00	83.95	48.98	2.00	0.00	0.00	0.00
84.01	51.34	2.00	0.00	0.00	0.00	84.08	55.11	2.00	0.00	0.00	0.00
84.12	55.33	2.00	0.00	0.00	0.00	84.21	57.75	2.00	0.00	0.00	0.00
84.26	55.55	2.00	0.00	0.00	0.00	84.32	54.79	2.00	0.00	0.00	0.00
84.40	51.30	2.00	0.00	0.00	0.00	84.47	47.41	2.00	0.00	0.00	0.00
84.52	45.08	2.00	0.00	0.00	0.00	84.60	41.28	2.00	0.00	0.00	0.00
84.65	38.99	2.00	0.00	0.00	0.00	84.73	36.91	2.00	0.00	0.00	0.00
84.79	38.13	2.00	0.00	0.00	0.00	84.86	39.51	2.00	0.00	0.00	0.00
84.93	39.78	2.00	0.00	0.00	0.00	84.97	39.01	2.00	0.00	0.00	0.00
85.04	38.99	2.00	0.00	0.00	0.00	85.11	38.97	2.00	0.00	0.00	0.00
85.18	39.32	2.00	0.00	0.00	0.00	85.25	48.66	2.00	0.00	0.00	0.00
85.30	61.75	2.00	0.00	0.00	0.00	85.38	145.81	0.53	0.00	0.00	0.00
85.44	151.84	0.62	0.00	0.00	0.00	85.50	153.73	0.65	0.00	0.00	0.00
85.57	156.02	0.69	0.00	0.00	0.00	85.65	157.48	0.72	0.00	0.00	0.00
85.73	158.02	0.73	0.00	0.00	0.00	85.78	157.90	0.73	0.00	0.00	0.00
85.83	158.21	0.73	0.00	0.00	0.00	85.91	157.97	0.73	0.00	0.00	0.00
85.98	157.34	0.72	0.00	0.00	0.00	86.04	156.65	0.70	0.00	0.00	0.00
86.09	155.79	0.69	0.00	0.00	0.00	86.16	155.10	0.67	0.00	0.00	0.00
86.24	152.76	0.63	0.00	0.00	0.00	86.29	149.51	0.58	0.00	0.00	0.00
86.36	145.34	0.53	0.00	0.00	0.00	86.43	71.20	2.00	0.00	0.00	0.00
86.50	68.16	2.00	0.00	0.00	0.00	86.55	68.18	2.00	0.00	0.00	0.00
86.62	68.17	2.00	0.00	0.00	0.00	86.68	70.96	2.00	0.00	0.00	0.00
86.77	70.98	2.00	0.00	0.00	0.00	86.81	70.50	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.90	69.09	2.00	0.00	0.00	0.00	86.96	69.69	2.00	0.00	0.00	0.00
87.02	70.20	2.00	0.00	0.00	0.00	87.07	61.55	2.00	0.00	0.00	0.00
87.15	73.95	2.00	0.00	0.00	0.00	87.22	145.52	0.53	0.00	0.00	0.00
87.28	69.63	2.00	0.00	0.00	0.00	87.34	70.43	2.00	0.00	0.00	0.00
87.41	71.47	2.00	0.00	0.00	0.00	87.49	70.83	2.00	0.00	0.00	0.00
87.53	70.48	2.00	0.00	0.00	0.00	87.60	70.74	2.00	0.00	0.00	0.00
87.68	70.54	2.00	0.00	0.00	0.00	87.76	70.62	2.00	0.00	0.00	0.00
87.81	70.33	2.00	0.00	0.00	0.00	87.87	70.43	2.00	0.00	0.00	0.00
87.95	72.27	2.00	0.00	0.00	0.00	88.02	72.92	2.00	0.00	0.00	0.00
88.07	71.10	2.00	0.00	0.00	0.00	88.13	69.31	2.00	0.00	0.00	0.00
88.20	70.77	2.00	0.00	0.00	0.00	88.27	67.40	2.00	0.00	0.00	0.00
88.33	70.39	2.00	0.00	0.00	0.00	88.40	71.02	2.00	0.00	0.00	0.00
88.46	68.51	2.00	0.00	0.00	0.00	88.52	68.05	2.00	0.00	0.00	0.00
88.60	65.81	2.00	0.00	0.00	0.00	88.66	65.47	2.00	0.00	0.00	0.00
88.73	66.11	2.00	0.00	0.00	0.00	88.78	65.90	2.00	0.00	0.00	0.00
88.85	64.71	2.00	0.00	0.00	0.00	88.92	62.38	2.00	0.00	0.00	0.00
88.99	59.36	2.00	0.00	0.00	0.00	89.05	57.38	2.00	0.00	0.00	0.00
89.11	56.85	2.00	0.00	0.00	0.00	89.18	58.70	2.00	0.00	0.00	0.00
89.25	62.01	2.00	0.00	0.00	0.00	89.31	67.98	2.00	0.00	0.00	0.00
89.39	68.31	2.00	0.00	0.00	0.00	89.45	67.51	2.00	0.00	0.00	0.00
89.52	66.85	2.00	0.00	0.00	0.00	89.58	66.38	2.00	0.00	0.00	0.00
89.66	66.86	2.00	0.00	0.00	0.00	89.72	68.89	2.00	0.00	0.00	0.00
89.78	69.91	2.00	0.00	0.00	0.00	89.85	69.92	2.00	0.00	0.00	0.00
89.92	69.94	2.00	0.00	0.00	0.00	89.97	69.05	2.00	0.00	0.00	0.00
90.03	72.62	2.00	0.00	0.00	0.00	90.09	71.69	2.00	0.00	0.00	0.00
90.16	73.96	2.00	0.00	0.00	0.00	90.25	72.20	2.00	0.00	0.00	0.00
90.30	69.62	2.00	0.00	0.00	0.00	90.38	68.82	2.00	0.00	0.00	0.00
90.44	68.42	2.00	0.00	0.00	0.00	90.49	67.32	2.00	0.00	0.00	0.00
90.56	65.86	2.00	0.00	0.00	0.00	90.63	66.42	2.00	0.00	0.00	0.00
90.69	66.81	2.00	0.00	0.00	0.00	90.75	71.22	2.00	0.00	0.00	0.00
90.82	72.68	2.00	0.00	0.00	0.00	90.88	72.45	2.00	0.00	0.00	0.00
90.95	71.96	2.00	0.00	0.00	0.00	91.02	71.14	2.00	0.00	0.00	0.00
91.08	71.31	2.00	0.00	0.00	0.00	91.15	72.65	2.00	0.00	0.00	0.00
91.21	148.14	0.58	0.00	0.00	0.00	91.28	150.13	0.60	0.00	0.00	0.00
91.35	149.15	0.59	0.00	0.00	0.00	91.41	148.34	0.58	0.00	0.00	0.00
91.47	148.91	0.59	0.00	0.00	0.00	91.55	150.22	0.61	0.00	0.00	0.00
91.61	148.31	0.58	0.00	0.00	0.00	91.67	147.12	0.56	0.00	0.00	0.00
91.73	147.39	0.57	0.00	0.00	0.00	91.81	147.77	0.57	0.00	0.00	0.00
91.87	150.88	0.62	0.00	0.00	0.00	91.94	153.35	0.66	0.00	0.00	0.00
92.00	153.74	0.66	0.00	0.00	0.00	92.07	156.09	0.71	0.00	0.00	0.00
92.13	157.28	0.73	0.00	0.00	0.00	92.20	159.50	0.78	0.00	0.00	0.00
92.26	159.24	0.77	0.00	0.00	0.00	92.33	155.33	0.69	0.00	0.00	0.00
92.39	156.16	0.71	0.00	0.00	0.00	92.46	155.61	0.70	0.00	0.00	0.00
92.53	156.11	0.71	0.00	0.00	0.00	92.60	153.85	0.67	0.00	0.00	0.00
92.67	155.99	0.71	0.00	0.00	0.00	92.73	156.27	0.71	0.00	0.00	0.00
92.80	156.41	0.71	0.00	0.00	0.00	92.86	158.38	0.75	0.00	0.00	0.00
92.93	158.53	0.76	0.00	0.00	0.00	93.00	160.12	0.79	0.00	0.00	0.00
93.06	159.69	0.78	0.00	0.00	0.00	93.12	160.41	0.80	0.00	0.00	0.00

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

Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.18	160.17	0.80	0.00	0.00	0.00	93.24	160.49	0.80	0.00	0.00	0.00
93.33	160.39	0.80	0.00	0.00	0.00	93.39	158.22	0.75	0.00	0.00	0.00
93.45	156.90	0.72	0.00	0.00	0.00	93.51	157.13	0.73	0.00	0.00	0.00
93.58	157.46	0.74	0.00	0.00	0.00	93.64	157.82	0.74	0.00	0.00	0.00
93.71	159.92	0.79	0.00	0.00	0.00	93.77	157.04	0.73	0.00	0.00	0.00
93.84	155.94	0.71	0.00	0.00	0.00	93.91	158.01	0.75	0.00	0.00	0.00
93.98	158.71	0.76	0.00	0.00	0.00	94.03	159.92	0.79	0.00	0.00	0.00
94.11	160.67	0.81	0.00	0.00	0.00	94.17	159.93	0.79	0.00	0.00	0.00
94.23	159.61	0.78	0.00	0.00	0.00	94.29	158.89	0.77	0.00	0.00	0.00
94.37	157.89	0.75	0.00	0.00	0.00	94.43	157.48	0.74	0.00	0.00	0.00
94.49	157.24	0.73	0.00	0.00	0.00	94.55	157.00	0.73	0.00	0.00	0.00
94.63	151.51	0.63	0.00	0.00	0.00	94.69	139.63	0.48	0.00	0.00	0.00
94.76	84.30	2.00	0.00	0.00	0.00	94.82	83.53	2.00	0.00	0.00	0.00
94.89	82.89	2.00	0.00	0.00	0.00	94.95	82.40	2.00	0.00	0.00	0.00
95.03	82.11	2.00	0.00	0.00	0.00						

Total estimated settlement: 0.76**Abbreviations**

Q _{tn,cs} :	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e _v (%):	Post-liquefaction volumetric strain
DF:	e _v depth weighting factor
Settlement:	Calculated settlement

LIQUEFACTION ANALYSIS REPORT

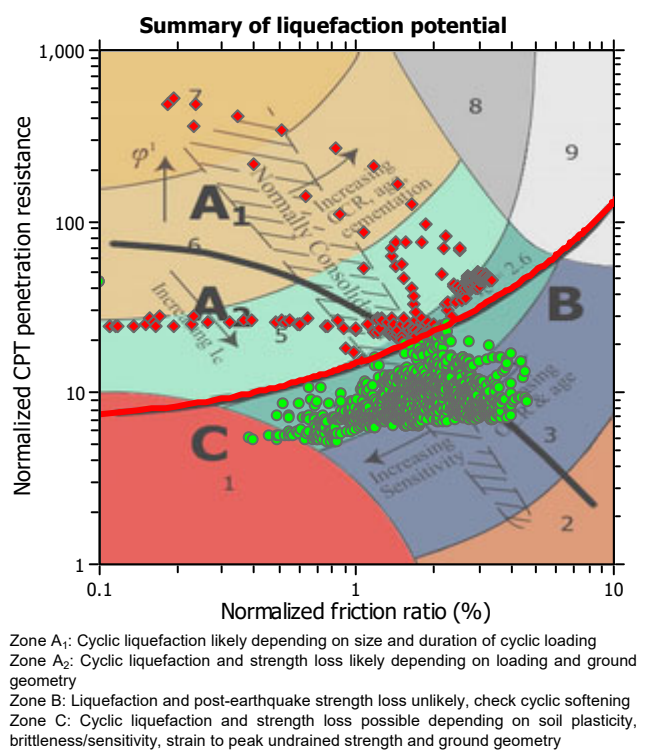
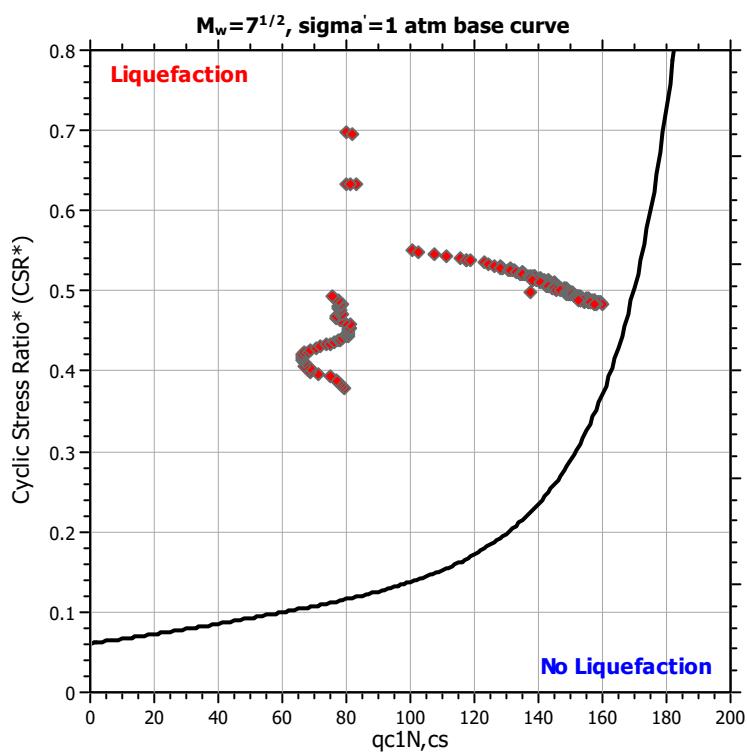
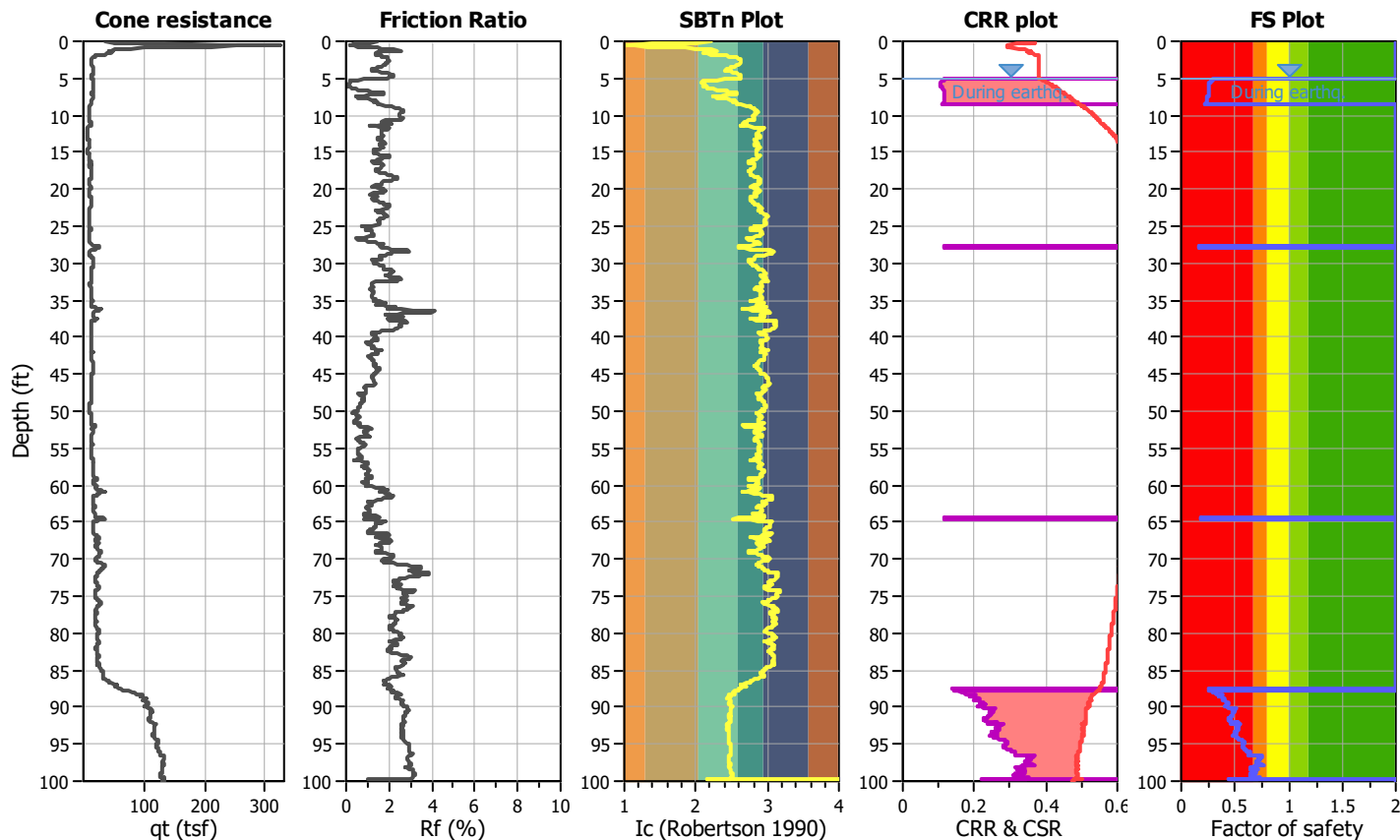
Project title : Victoria Apartments

Location : A9942-88-01

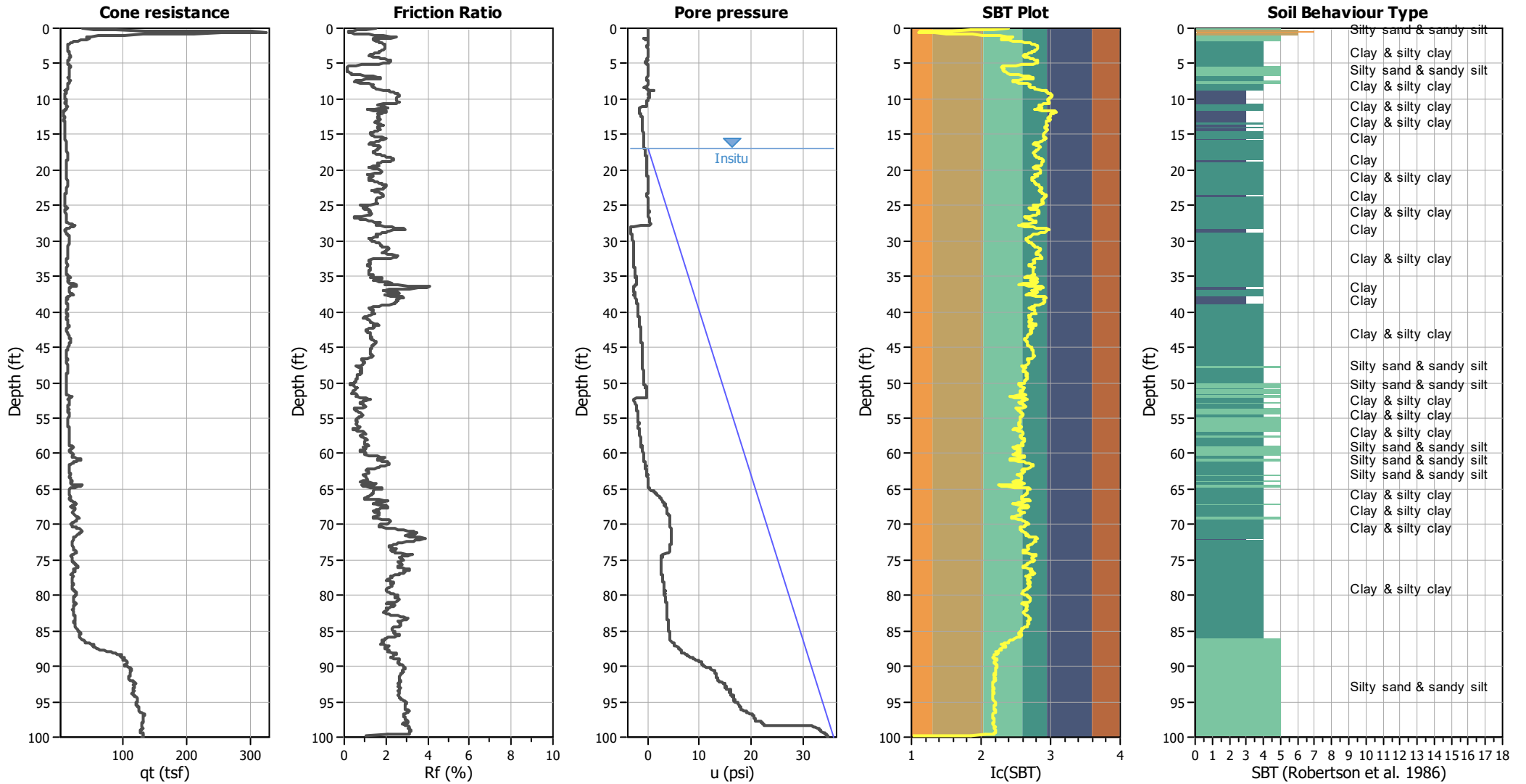
CPT file : C-5

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	17.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.65	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.62	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



CPT basic interpretation plots



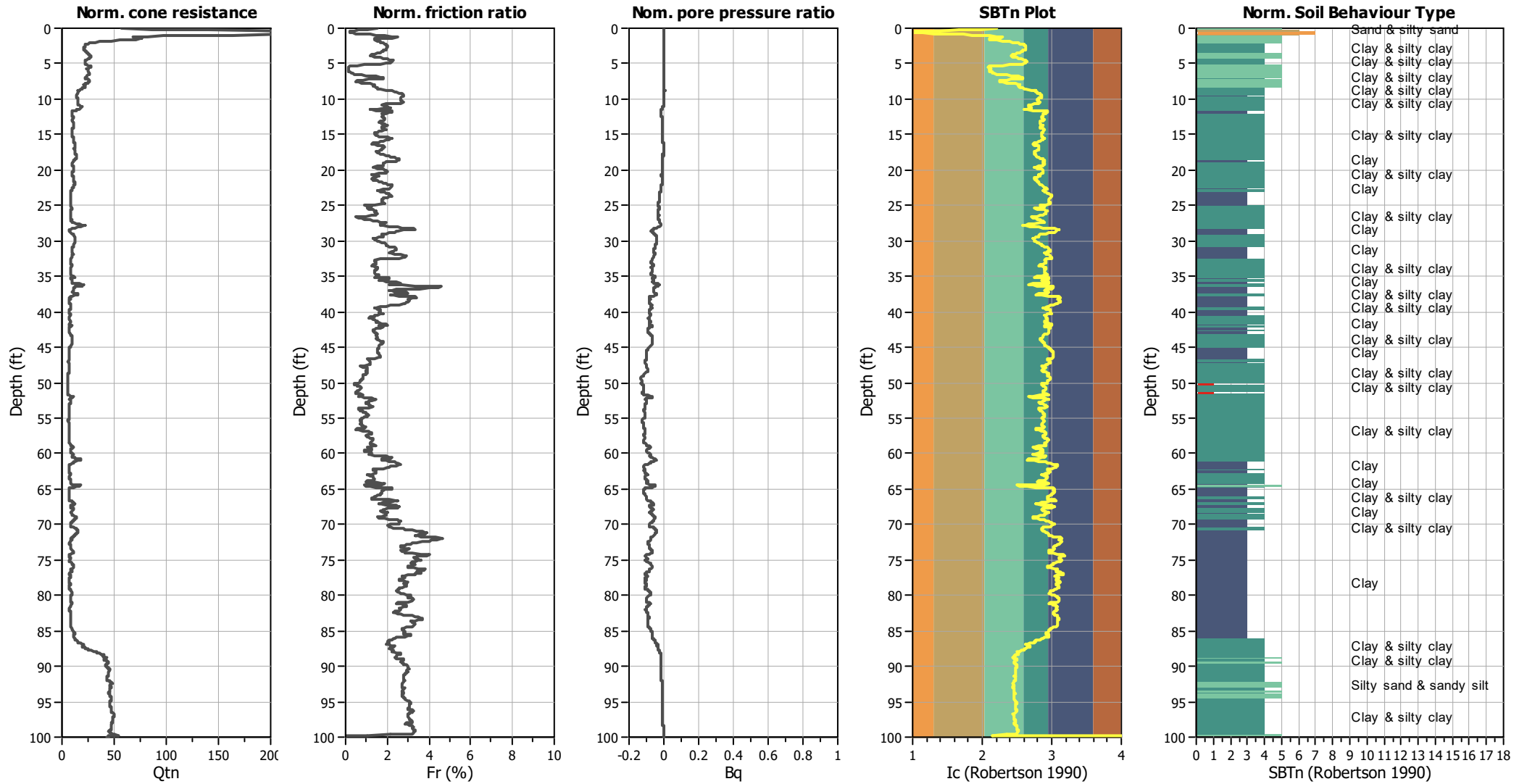
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

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

CPT basic interpretation plots (normalized)



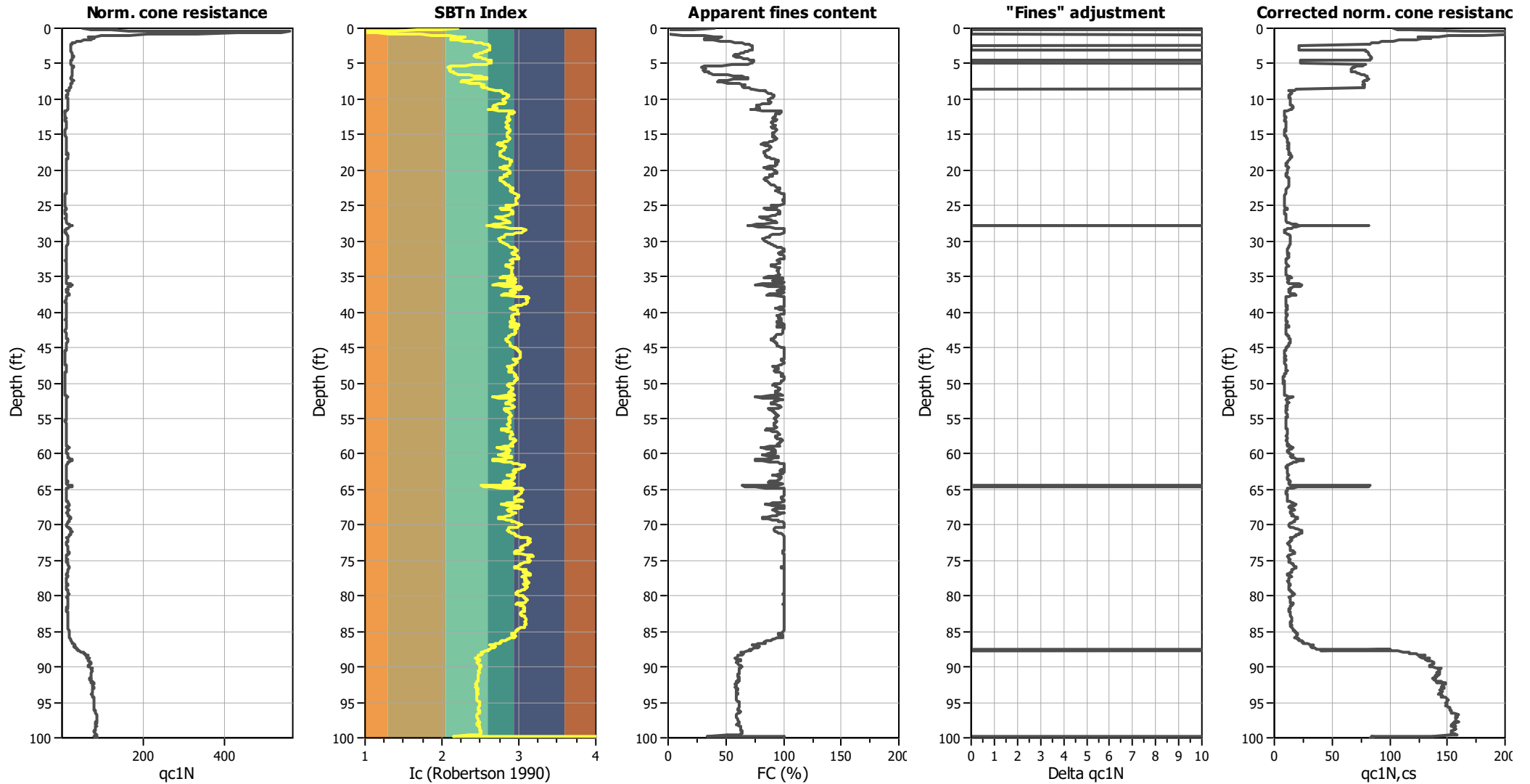
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

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

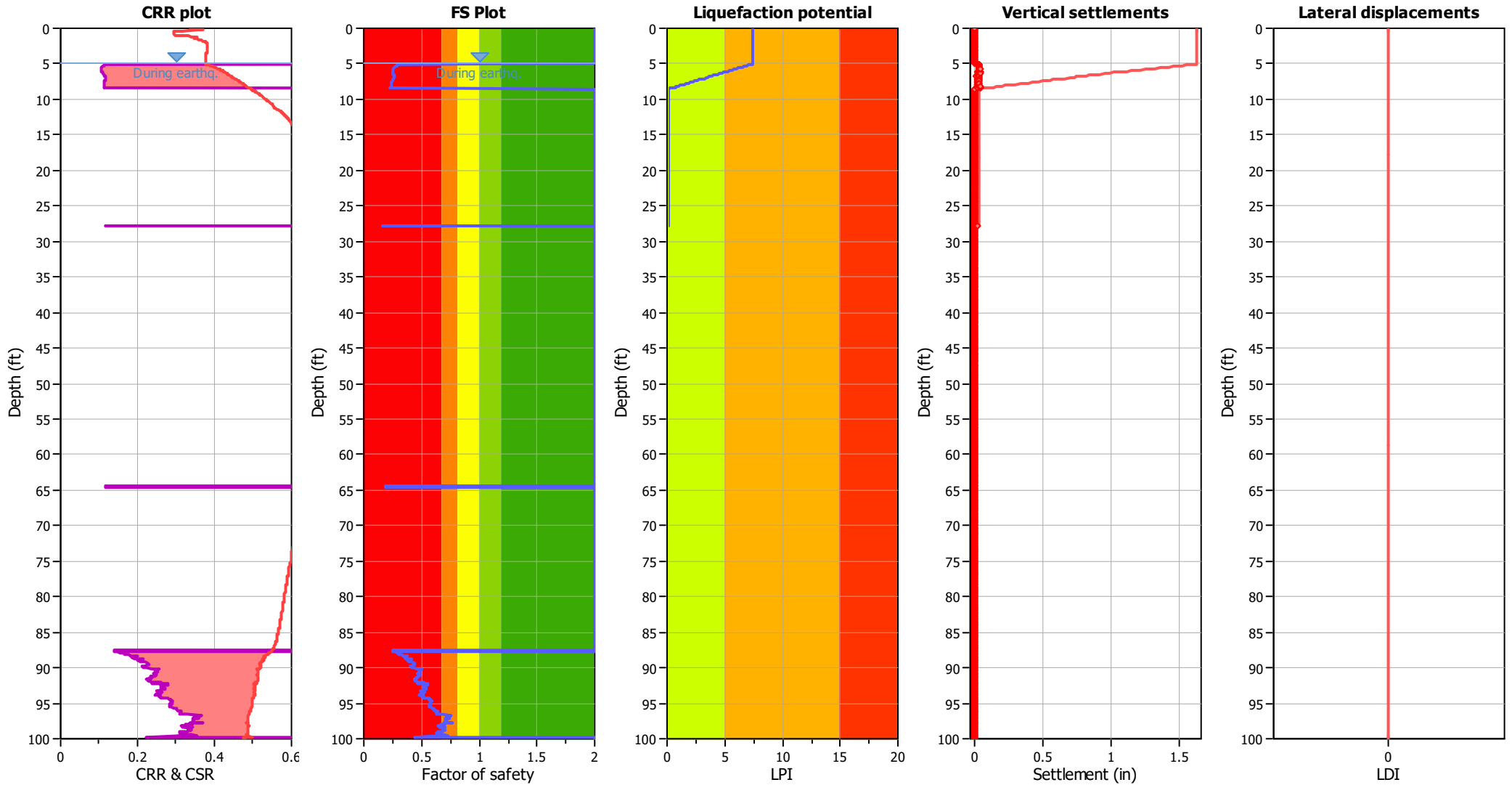
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	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 :	6.65	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.62	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	17.00 ft	Fill height:	N/A	Limit depth:	N/A

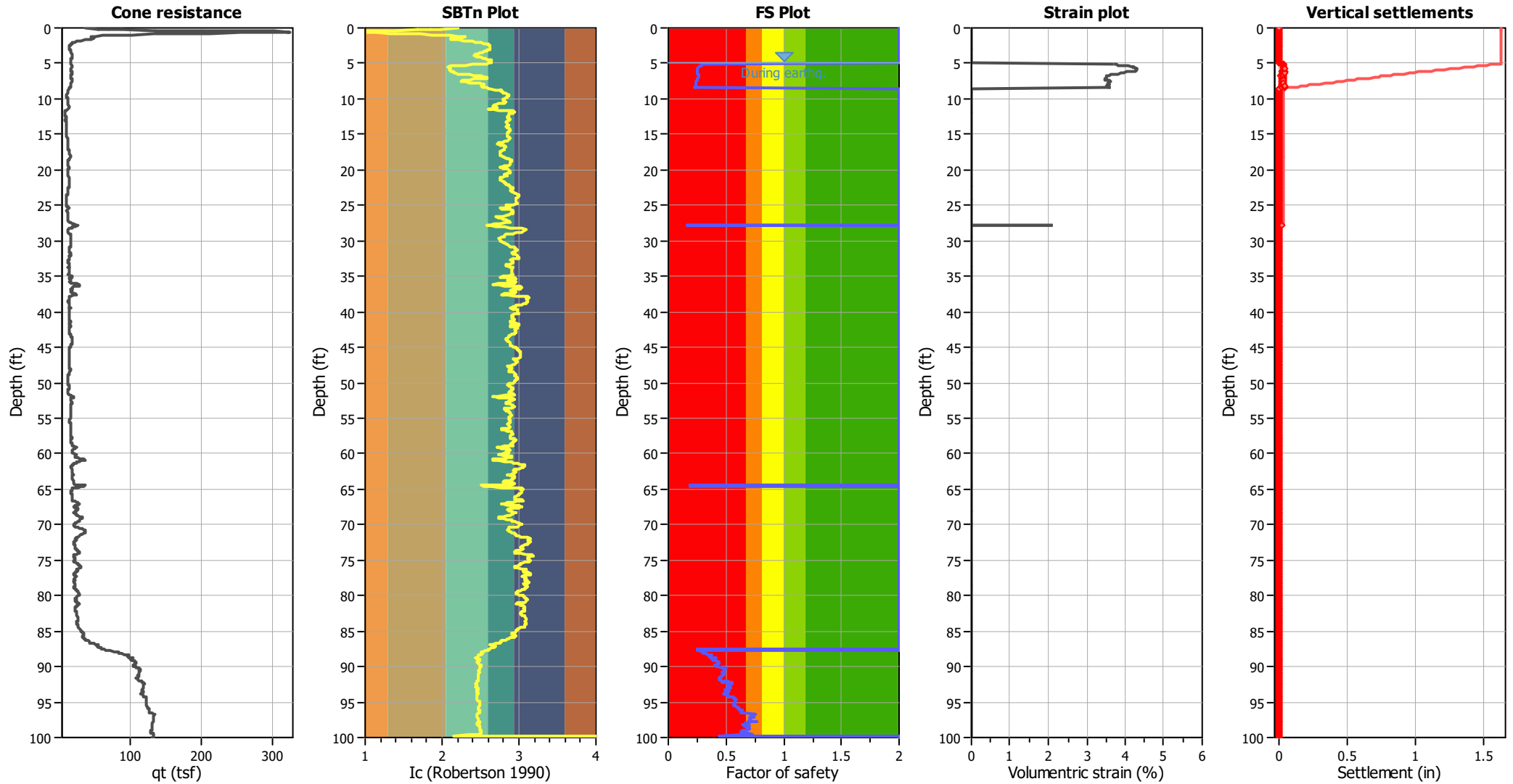
F.S. color scheme

- 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

Estimation of post-earthquake settlements



Abbreviations

- qt: 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
- Volumetric strain: Post-liquefaction volumetric strain

:: Post-earthquake settlement due to soil liquefaction ::											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
5.01	79.11	0.30	3.71	0.92	0.03	5.08	78.46	0.30	3.73	0.91	0.03
5.12	78.19	0.30	3.74	0.91	0.02	5.18	77.77	0.30	3.76	0.91	0.03
5.26	76.89	0.29	3.79	0.91	0.03	5.33	74.77	0.28	3.89	0.91	0.03
5.39	71.26	0.27	4.07	0.91	0.03	5.46	68.76	0.27	4.20	0.91	0.03
5.52	67.88	0.26	4.24	0.91	0.03	5.59	68.56	0.26	4.20	0.91	0.04
5.64	66.68	0.26	4.30	0.90	0.03	5.73	67.02	0.26	4.28	0.90	0.04
5.80	66.27	0.25	4.31	0.90	0.04	5.87	66.21	0.25	4.31	0.90	0.03
5.93	66.04	0.25	4.32	0.90	0.03	6.00	66.34	0.25	4.29	0.90	0.03
6.07	67.06	0.25	4.25	0.90	0.04	6.11	68.18	0.25	4.18	0.90	0.02
6.18	68.90	0.25	4.13	0.90	0.04	6.24	70.47	0.25	4.04	0.89	0.03
6.31	71.64	0.25	3.98	0.89	0.03	6.39	73.57	0.26	3.87	0.89	0.04
6.47	74.87	0.26	3.80	0.89	0.04	6.51	76.52	0.26	3.72	0.89	0.02
6.58	77.19	0.26	3.69	0.89	0.03	6.63	78.35	0.26	3.63	0.89	0.02
6.70	78.96	0.26	3.60	0.89	0.03	6.79	79.88	0.26	3.55	0.88	0.04
6.82	80.54	0.26	3.52	0.88	0.02	6.90	80.41	0.26	3.52	0.88	0.03
6.99	80.41	0.26	3.52	0.88	0.03	7.07	80.40	0.26	3.51	0.88	0.04
7.11	80.61	0.26	3.50	0.88	0.02	7.19	81.26	0.26	3.47	0.88	0.03
7.24	80.64	0.26	3.49	0.88	0.02	7.32	81.04	0.25	3.47	0.88	0.04
7.37	79.44	0.25	3.53	0.88	0.02	7.45	77.85	0.25	3.60	0.87	0.04
7.50	77.11	0.24	3.63	0.87	0.02	7.55	77.15	0.24	3.62	0.87	0.02
7.62	77.10	0.24	3.62	0.87	0.03	7.68	78.20	0.24	3.56	0.87	0.02
7.76	78.49	0.24	3.55	0.87	0.03	7.85	78.09	0.24	3.56	0.87	0.04
7.90	78.11	0.24	3.55	0.87	0.02	7.98	77.55	0.24	3.57	0.86	0.04
8.03	77.33	0.24	3.58	0.86	0.02	8.07	77.95	0.24	3.55	0.86	0.02
8.17	78.48	0.24	3.52	0.86	0.04	8.21	78.32	0.24	3.52	0.86	0.02
8.30	77.65	0.23	3.54	0.86	0.04	8.34	77.41	0.23	3.55	0.86	0.02
8.44	75.96	0.23	3.61	0.86	0.04	8.48	75.58	0.23	3.62	0.86	0.02
8.57	18.71	2.00	0.00	0.85	0.00	8.62	18.25	2.00	0.00	0.85	0.00
8.70	17.87	2.00	0.00	0.85	0.00	8.73	12.88	2.00	0.00	0.85	0.00
8.81	16.58	2.00	0.00	0.85	0.00	8.89	15.48	2.00	0.00	0.85	0.00
8.94	15.30	2.00	0.00	0.85	0.00	9.02	14.97	2.00	0.00	0.85	0.00
9.10	14.89	2.00	0.00	0.85	0.00	9.15	14.72	2.00	0.00	0.84	0.00
9.23	14.52	2.00	0.00	0.84	0.00	9.27	14.23	2.00	0.00	0.84	0.00
9.35	13.78	2.00	0.00	0.84	0.00	9.39	13.62	2.00	0.00	0.84	0.00
9.47	13.06	2.00	0.00	0.84	0.00	9.52	13.02	2.00	0.00	0.84	0.00
9.59	13.09	2.00	0.00	0.84	0.00	9.65	12.93	2.00	0.00	0.84	0.00
9.72	13.12	2.00	0.00	0.84	0.00	9.80	13.68	2.00	0.00	0.83	0.00
9.85	13.77	2.00	0.00	0.83	0.00	9.92	13.96	2.00	0.00	0.83	0.00
10.01	14.39	2.00	0.00	0.83	0.00	10.04	14.36	2.00	0.00	0.83	0.00
10.13	14.41	2.00	0.00	0.83	0.00	10.21	14.35	2.00	0.00	0.83	0.00
10.24	14.33	2.00	0.00	0.83	0.00	10.32	14.26	2.00	0.00	0.83	0.00
10.40	13.85	2.00	0.00	0.82	0.00	10.44	13.70	2.00	0.00	0.82	0.00
10.52	13.52	2.00	0.00	0.82	0.00	10.59	13.47	2.00	0.00	0.82	0.00
10.64	13.44	2.00	0.00	0.82	0.00	10.71	13.41	2.00	0.00	0.82	0.00
10.80	13.83	2.00	0.00	0.82	0.00	10.83	14.16	2.00	0.00	0.82	0.00
10.90	15.15	2.00	0.00	0.82	0.00	10.98	15.91	2.00	0.00	0.81	0.00
11.06	16.53	2.00	0.00	0.81	0.00	11.11	16.73	2.00	0.00	0.81	0.00
11.18	15.98	2.00	0.00	0.81	0.00	11.26	15.45	2.00	0.00	0.81	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
11.30	15.43	2.00	0.00	0.81	0.00	11.37	15.39	2.00	0.00	0.81	0.00
11.45	14.20	2.00	0.00	0.81	0.00	11.49	13.37	2.00	0.00	0.81	0.00
11.57	11.48	2.00	0.00	0.80	0.00	11.62	10.75	2.00	0.00	0.80	0.00
11.68	9.23	2.00	0.00	0.80	0.00	11.75	8.40	2.00	0.00	0.80	0.00
11.82	8.60	2.00	0.00	0.80	0.00	11.89	8.57	2.00	0.00	0.80	0.00
11.98	8.54	2.00	0.00	0.80	0.00	12.01	8.53	2.00	0.00	0.80	0.00
12.08	8.73	2.00	0.00	0.80	0.00	12.15	9.03	2.00	0.00	0.79	0.00
12.23	9.23	2.00	0.00	0.79	0.00	12.27	9.21	2.00	0.00	0.79	0.00
12.35	9.18	2.00	0.00	0.79	0.00	12.42	9.26	2.00	0.00	0.79	0.00
12.49	9.45	2.00	0.00	0.79	0.00	12.56	9.65	2.00	0.00	0.79	0.00
12.61	9.85	2.00	0.00	0.79	0.00	12.68	9.92	2.00	0.00	0.79	0.00
12.76	9.67	2.00	0.00	0.78	0.00	12.83	9.42	2.00	0.00	0.78	0.00
12.87	9.19	2.00	0.00	0.78	0.00	12.94	9.16	2.00	0.00	0.78	0.00
12.99	9.25	2.00	0.00	0.78	0.00	13.07	9.44	2.00	0.00	0.78	0.00
13.14	9.73	2.00	0.00	0.78	0.00	13.22	9.92	2.00	0.00	0.78	0.00
13.26	9.90	2.00	0.00	0.78	0.00	13.33	10.09	2.00	0.00	0.77	0.00
13.41	10.05	2.00	0.00	0.77	0.00	13.48	10.23	2.00	0.00	0.77	0.00
13.56	10.52	2.00	0.00	0.77	0.00	13.60	10.50	2.00	0.00	0.77	0.00
13.68	10.36	2.00	0.00	0.77	0.00	13.74	10.33	2.00	0.00	0.77	0.00
13.79	10.31	2.00	0.00	0.77	0.00	13.86	10.49	2.00	0.00	0.77	0.00
13.93	10.68	2.00	0.00	0.76	0.00	13.98	10.66	2.00	0.00	0.76	0.00
14.06	10.31	2.00	0.00	0.76	0.00	14.14	9.97	2.00	0.00	0.76	0.00
14.18	9.85	2.00	0.00	0.76	0.00	14.25	9.41	2.00	0.00	0.76	0.00
14.32	9.58	2.00	0.00	0.76	0.00	14.40	9.55	2.00	0.00	0.76	0.00
14.44	9.54	2.00	0.00	0.76	0.00	14.51	9.31	2.00	0.00	0.75	0.00
14.59	9.08	2.00	0.00	0.75	0.00	14.66	9.26	2.00	0.00	0.75	0.00
14.73	9.03	2.00	0.00	0.75	0.00	14.81	9.21	2.00	0.00	0.75	0.00
14.84	9.20	2.00	0.00	0.75	0.00	14.90	9.18	2.00	0.00	0.75	0.00
14.98	9.15	2.00	0.00	0.75	0.00	15.05	9.23	2.00	0.00	0.74	0.00
15.11	9.31	2.00	0.00	0.74	0.00	15.16	9.59	2.00	0.00	0.74	0.00
15.24	9.96	2.00	0.00	0.74	0.00	15.30	10.15	2.00	0.00	0.74	0.00
15.37	10.42	2.00	0.00	0.74	0.00	15.43	10.59	2.00	0.00	0.74	0.00
15.51	10.85	2.00	0.00	0.74	0.00	15.56	10.83	2.00	0.00	0.74	0.00
15.64	10.80	2.00	0.00	0.73	0.00	15.69	10.78	2.00	0.00	0.73	0.00
15.77	10.75	2.00	0.00	0.73	0.00	15.82	10.83	2.00	0.00	0.73	0.00
15.89	10.90	2.00	0.00	0.73	0.00	15.97	11.06	2.00	0.00	0.73	0.00
16.03	11.23	2.00	0.00	0.73	0.00	16.08	11.41	2.00	0.00	0.73	0.00
16.16	11.66	2.00	0.00	0.73	0.00	16.23	12.02	2.00	0.00	0.72	0.00
16.28	12.20	2.00	0.00	0.72	0.00	16.35	12.45	2.00	0.00	0.72	0.00
16.42	12.52	2.00	0.00	0.72	0.00	16.50	12.58	2.00	0.00	0.72	0.00
16.54	12.32	2.00	0.00	0.72	0.00	16.61	11.67	2.00	0.00	0.72	0.00
16.67	12.02	2.00	0.00	0.72	0.00	16.74	12.18	2.00	0.00	0.72	0.00
16.83	12.06	2.00	0.00	0.71	0.00	16.88	12.03	2.00	0.00	0.71	0.00
16.95	11.91	2.00	0.00	0.71	0.00	17.01	11.89	2.00	0.00	0.71	0.00
17.07	11.88	2.00	0.00	0.71	0.00	17.13	12.15	2.00	0.00	0.71	0.00
17.19	12.33	2.00	0.00	0.71	0.00	17.26	12.50	2.00	0.00	0.71	0.00
17.35	12.58	2.00	0.00	0.71	0.00	17.42	12.66	2.00	0.00	0.70	0.00
17.48	12.66	2.00	0.00	0.70	0.00	17.54	12.92	2.00	0.00	0.70	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
17.61	13.11	2.00	0.00	0.70	0.00	17.67	13.28	2.00	0.00	0.70	0.00
17.73	13.45	2.00	0.00	0.70	0.00	17.78	12.97	2.00	0.00	0.70	0.00
17.89	14.26	2.00	0.00	0.70	0.00	17.92	14.53	2.00	0.00	0.70	0.00
18.00	14.69	2.00	0.00	0.69	0.00	18.07	14.68	2.00	0.00	0.69	0.00
18.11	14.48	2.00	0.00	0.69	0.00	18.19	14.47	2.00	0.00	0.69	0.00
18.27	14.36	2.00	0.00	0.69	0.00	18.34	13.89	2.00	0.00	0.69	0.00
18.38	13.70	2.00	0.00	0.69	0.00	18.45	13.22	2.00	0.00	0.69	0.00
18.53	12.56	2.00	0.00	0.69	0.00	18.60	12.09	2.00	0.00	0.68	0.00
18.64	11.99	2.00	0.00	0.68	0.00	18.72	11.61	2.00	0.00	0.68	0.00
18.80	11.23	2.00	0.00	0.68	0.00	18.87	11.22	2.00	0.00	0.68	0.00
18.91	11.13	2.00	0.00	0.68	0.00	18.99	10.75	2.00	0.00	0.68	0.00
19.06	10.38	2.00	0.00	0.68	0.00	19.10	10.28	2.00	0.00	0.68	0.00
19.17	10.09	2.00	0.00	0.68	0.00	19.24	10.17	2.00	0.00	0.67	0.00
19.32	10.43	2.00	0.00	0.67	0.00	19.36	10.61	2.00	0.00	0.67	0.00
19.43	11.06	2.00	0.00	0.67	0.00	19.52	11.50	2.00	0.00	0.67	0.00
19.59	12.03	2.00	0.00	0.67	0.00	19.62	12.21	2.00	0.00	0.67	0.00
19.70	12.29	2.00	0.00	0.67	0.00	19.78	11.91	2.00	0.00	0.66	0.00
19.82	11.82	2.00	0.00	0.66	0.00	19.89	10.99	2.00	0.00	0.66	0.00
19.96	11.43	2.00	0.00	0.66	0.00	20.03	11.24	2.00	0.00	0.66	0.00
20.11	11.05	2.00	0.00	0.66	0.00	20.15	11.05	2.00	0.00	0.66	0.00
20.22	11.04	2.00	0.00	0.66	0.00	20.30	11.11	2.00	0.00	0.66	0.00
20.38	10.83	2.00	0.00	0.65	0.00	20.41	10.74	2.00	0.00	0.65	0.00
20.49	10.64	2.00	0.00	0.65	0.00	20.57	10.63	2.00	0.00	0.65	0.00
20.64	10.62	2.00	0.00	0.65	0.00	20.67	10.53	2.00	0.00	0.65	0.00
20.75	10.52	2.00	0.00	0.65	0.00	20.82	10.33	2.00	0.00	0.65	0.00
20.89	11.31	2.00	0.00	0.65	0.00	20.95	11.65	2.00	0.00	0.64	0.00
21.00	11.91	2.00	0.00	0.64	0.00	21.10	12.08	2.00	0.00	0.64	0.00
21.17	12.07	2.00	0.00	0.64	0.00	21.20	12.06	2.00	0.00	0.64	0.00
21.28	11.97	2.00	0.00	0.64	0.00	21.35	12.13	2.00	0.00	0.64	0.00
21.39	12.21	2.00	0.00	0.64	0.00	21.46	12.29	2.00	0.00	0.64	0.00
21.54	12.37	2.00	0.00	0.63	0.00	21.62	12.46	2.00	0.00	0.63	0.00
21.68	12.62	2.00	0.00	0.63	0.00	21.73	12.70	2.00	0.00	0.63	0.00
21.80	12.87	2.00	0.00	0.63	0.00	21.87	13.03	2.00	0.00	0.63	0.00
21.96	13.02	2.00	0.00	0.63	0.00	21.99	13.01	2.00	0.00	0.63	0.00
22.06	12.91	2.00	0.00	0.63	0.00	22.14	12.72	2.00	0.00	0.62	0.00
22.18	12.72	2.00	0.00	0.62	0.00	22.26	12.44	2.00	0.00	0.62	0.00
22.33	12.07	2.00	0.00	0.62	0.00	22.41	11.62	2.00	0.00	0.62	0.00
22.45	11.35	2.00	0.00	0.62	0.00	22.51	10.99	2.00	0.00	0.62	0.00
22.59	10.72	2.00	0.00	0.62	0.00	22.67	10.45	2.00	0.00	0.62	0.00
22.71	10.36	2.00	0.00	0.62	0.00	22.78	10.17	2.00	0.00	0.61	0.00
22.86	10.08	2.00	0.00	0.61	0.00	22.93	9.89	2.00	0.00	0.61	0.00
22.97	9.98	2.00	0.00	0.61	0.00	23.04	9.97	2.00	0.00	0.61	0.00
23.12	9.96	2.00	0.00	0.61	0.00	23.18	9.95	2.00	0.00	0.61	0.00
23.25	9.94	2.00	0.00	0.61	0.00	23.31	9.76	2.00	0.00	0.60	0.00
23.39	9.58	2.00	0.00	0.60	0.00	23.44	9.40	2.00	0.00	0.60	0.00
23.50	9.22	2.00	0.00	0.60	0.00	23.58	9.13	2.00	0.00	0.60	0.00
23.66	9.12	2.00	0.00	0.60	0.00	23.69	9.12	2.00	0.00	0.60	0.00
23.77	9.11	2.00	0.00	0.60	0.00	23.84	9.27	2.00	0.00	0.60	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
23.91	9.26	2.00	0.00	0.59	0.00	23.99	9.00	2.00	0.00	0.59	0.00
24.03	8.99	2.00	0.00	0.59	0.00	24.10	8.99	2.00	0.00	0.59	0.00
24.17	8.98	2.00	0.00	0.59	0.00	24.25	8.97	2.00	0.00	0.59	0.00
24.29	8.97	2.00	0.00	0.59	0.00	24.36	8.96	2.00	0.00	0.59	0.00
24.43	9.04	2.00	0.00	0.59	0.00	24.51	8.95	2.00	0.00	0.58	0.00
24.55	8.94	2.00	0.00	0.58	0.00	24.62	8.94	2.00	0.00	0.58	0.00
24.69	8.93	2.00	0.00	0.58	0.00	24.77	8.92	2.00	0.00	0.58	0.00
24.84	8.91	2.00	0.00	0.58	0.00	24.87	8.91	2.00	0.00	0.58	0.00
24.95	8.99	2.00	0.00	0.58	0.00	25.03	8.98	2.00	0.00	0.58	0.00
25.10	9.06	2.00	0.00	0.57	0.00	25.18	9.22	2.00	0.00	0.57	0.00
25.22	9.39	2.00	0.00	0.57	0.00	25.28	10.58	2.00	0.00	0.57	0.00
25.34	11.84	2.00	0.00	0.57	0.00	25.41	11.75	2.00	0.00	0.57	0.00
25.47	11.23	2.00	0.00	0.57	0.00	25.53	10.12	2.00	0.00	0.57	0.00
25.62	9.10	2.00	0.00	0.57	0.00	25.69	8.92	2.00	0.00	0.56	0.00
25.74	8.92	2.00	0.00	0.56	0.00	25.81	8.99	2.00	0.00	0.56	0.00
25.88	9.16	2.00	0.00	0.56	0.00	25.94	9.15	2.00	0.00	0.56	0.00
26.01	9.23	2.00	0.00	0.56	0.00	26.07	9.39	2.00	0.00	0.56	0.00
26.13	9.39	2.00	0.00	0.56	0.00	26.20	9.63	2.00	0.00	0.56	0.00
26.26	9.88	2.00	0.00	0.55	0.00	26.33	10.21	2.00	0.00	0.55	0.00
26.39	10.29	2.00	0.00	0.55	0.00	26.44	10.45	2.00	0.00	0.55	0.00
26.51	10.36	2.00	0.00	0.55	0.00	26.61	9.93	2.00	0.00	0.55	0.00
26.68	9.92	2.00	0.00	0.55	0.00	26.73	9.83	2.00	0.00	0.55	0.00
26.80	9.83	2.00	0.00	0.55	0.00	26.85	9.65	2.00	0.00	0.54	0.00
26.92	10.23	2.00	0.00	0.54	0.00	26.99	10.40	2.00	0.00	0.54	0.00
27.05	10.47	2.00	0.00	0.54	0.00	27.11	10.47	2.00	0.00	0.54	0.00
27.18	10.38	2.00	0.00	0.54	0.00	27.23	10.54	2.00	0.00	0.54	0.00
27.30	10.70	2.00	0.00	0.54	0.00	27.40	11.35	2.00	0.00	0.54	0.00
27.43	11.69	2.00	0.00	0.54	0.00	27.50	12.68	2.00	0.00	0.53	0.00
27.58	14.75	2.00	0.00	0.53	0.00	27.66	18.42	2.00	0.00	0.53	0.00
27.73	21.40	2.00	0.00	0.53	0.00	27.76	79.70	0.17	2.13	0.53	0.01
27.84	81.92	0.17	2.07	0.53	0.02	27.91	23.02	2.00	0.00	0.53	0.00
27.99	19.34	2.00	0.00	0.53	0.00	28.06	17.65	2.00	0.00	0.52	0.00
28.10	16.82	2.00	0.00	0.52	0.00	28.16	14.81	2.00	0.00	0.52	0.00
28.23	12.15	2.00	0.00	0.52	0.00	28.28	11.06	2.00	0.00	0.52	0.00
28.35	9.90	2.00	0.00	0.52	0.00	28.42	9.15	2.00	0.00	0.52	0.00
28.49	9.06	2.00	0.00	0.52	0.00	28.57	8.97	2.00	0.00	0.52	0.00
28.61	8.97	2.00	0.00	0.52	0.00	28.68	8.96	2.00	0.00	0.51	0.00
28.76	9.28	2.00	0.00	0.51	0.00	28.85	9.85	2.00	0.00	0.51	0.00
28.89	10.25	2.00	0.00	0.51	0.00	28.96	11.14	2.00	0.00	0.51	0.00
29.03	12.05	2.00	0.00	0.51	0.00	29.07	12.53	2.00	0.00	0.51	0.00
29.15	13.26	2.00	0.00	0.51	0.00	29.24	13.49	2.00	0.00	0.50	0.00
29.28	13.40	2.00	0.00	0.50	0.00	29.33	13.56	2.00	0.00	0.50	0.00
29.42	13.79	2.00	0.00	0.50	0.00	29.47	13.94	2.00	0.00	0.50	0.00
29.55	14.18	2.00	0.00	0.50	0.00	29.60	14.33	2.00	0.00	0.50	0.00
29.68	14.32	2.00	0.00	0.50	0.00	29.73	14.15	2.00	0.00	0.50	0.00
29.81	13.89	2.00	0.00	0.49	0.00	29.86	13.93	2.00	0.00	0.49	0.00
29.93	13.96	2.00	0.00	0.49	0.00	30.02	14.19	2.00	0.00	0.49	0.00
30.06	14.26	2.00	0.00	0.49	0.00	30.15	14.17	2.00	0.00	0.49	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
30.22	14.16	2.00	0.00	0.49	0.00	30.30	14.06	2.00	0.00	0.49	0.00
30.34	13.90	2.00	0.00	0.49	0.00	30.41	13.64	2.00	0.00	0.48	0.00
30.46	13.56	2.00	0.00	0.48	0.00	30.54	13.30	2.00	0.00	0.48	0.00
30.62	12.97	2.00	0.00	0.48	0.00	30.66	12.80	2.00	0.00	0.48	0.00
30.73	12.63	2.00	0.00	0.48	0.00	30.79	12.54	2.00	0.00	0.48	0.00
30.86	12.37	2.00	0.00	0.48	0.00	30.94	12.20	2.00	0.00	0.48	0.00
30.98	12.11	2.00	0.00	0.47	0.00	31.06	11.86	2.00	0.00	0.47	0.00
31.14	11.61	2.00	0.00	0.47	0.00	31.18	11.53	2.00	0.00	0.47	0.00
31.26	11.20	2.00	0.00	0.47	0.00	31.30	11.10	2.00	0.00	0.47	0.00
31.38	10.93	2.00	0.00	0.47	0.00	31.46	10.92	2.00	0.00	0.47	0.00
31.54	11.24	2.00	0.00	0.47	0.00	31.58	11.48	2.00	0.00	0.46	0.00
31.65	11.95	2.00	0.00	0.46	0.00	31.71	12.18	2.00	0.00	0.46	0.00
31.78	12.49	2.00	0.00	0.46	0.00	31.83	12.56	2.00	0.00	0.46	0.00
31.91	12.63	2.00	0.00	0.46	0.00	31.96	11.83	2.00	0.00	0.46	0.00
32.04	12.37	2.00	0.00	0.46	0.00	32.11	12.21	2.00	0.00	0.46	0.00
32.17	12.12	2.00	0.00	0.45	0.00	32.24	12.03	2.00	0.00	0.45	0.00
32.30	11.62	2.00	0.00	0.45	0.00	32.37	11.22	2.00	0.00	0.45	0.00
32.43	10.73	2.00	0.00	0.45	0.00	32.49	10.48	2.00	0.00	0.45	0.00
32.56	10.32	2.00	0.00	0.45	0.00	32.62	10.31	2.00	0.00	0.45	0.00
32.70	10.23	2.00	0.00	0.45	0.00	32.77	10.06	2.00	0.00	0.44	0.00
32.82	9.66	2.00	0.00	0.44	0.00	32.89	10.02	2.00	0.00	0.44	0.00
32.94	9.73	2.00	0.00	0.44	0.00	33.01	9.96	2.00	0.00	0.44	0.00
33.08	10.03	2.00	0.00	0.44	0.00	33.14	9.95	2.00	0.00	0.44	0.00
33.23	10.25	2.00	0.00	0.44	0.00	33.31	10.96	2.00	0.00	0.44	0.00
33.36	11.35	2.00	0.00	0.43	0.00	33.43	11.89	2.00	0.00	0.43	0.00
33.47	11.96	2.00	0.00	0.43	0.00	33.55	11.25	2.00	0.00	0.43	0.00
33.64	10.37	2.00	0.00	0.43	0.00	33.68	10.13	2.00	0.00	0.43	0.00
33.76	10.12	2.00	0.00	0.43	0.00	33.81	10.12	2.00	0.00	0.43	0.00
33.89	10.27	2.00	0.00	0.43	0.00	33.93	10.34	2.00	0.00	0.42	0.00
34.01	10.49	2.00	0.00	0.42	0.00	34.06	10.33	2.00	0.00	0.42	0.00
34.13	10.55	2.00	0.00	0.42	0.00	34.22	10.55	2.00	0.00	0.42	0.00
34.25	10.39	2.00	0.00	0.42	0.00	34.34	10.30	2.00	0.00	0.42	0.00
34.42	10.29	2.00	0.00	0.42	0.00	34.47	10.21	2.00	0.00	0.42	0.00
34.55	10.13	2.00	0.00	0.41	0.00	34.59	10.04	2.00	0.00	0.41	0.00
34.68	10.11	2.00	0.00	0.41	0.00	34.73	9.88	2.00	0.00	0.41	0.00
34.82	10.10	2.00	0.00	0.41	0.00	34.86	10.48	2.00	0.00	0.41	0.00
34.95	12.11	2.00	0.00	0.41	0.00	34.99	13.73	2.00	0.00	0.41	0.00
35.08	15.27	2.00	0.00	0.41	0.00	35.13	14.73	2.00	0.00	0.40	0.00
35.21	11.84	2.00	0.00	0.40	0.00	35.24	10.92	2.00	0.00	0.40	0.00
35.33	10.91	2.00	0.00	0.40	0.00	35.38	11.36	2.00	0.00	0.40	0.00
35.46	12.28	2.00	0.00	0.40	0.00	35.51	12.58	2.00	0.00	0.40	0.00
35.60	12.41	2.00	0.00	0.40	0.00	35.65	12.02	2.00	0.00	0.40	0.00
35.74	11.55	2.00	0.00	0.39	0.00	35.78	11.40	2.00	0.00	0.39	0.00
35.83	11.24	2.00	0.00	0.39	0.00	35.91	12.61	2.00	0.00	0.39	0.00
35.96	14.76	2.00	0.00	0.39	0.00	36.05	21.25	2.00	0.00	0.39	0.00
36.10	23.87	2.00	0.00	0.39	0.00	36.19	24.24	2.00	0.00	0.39	0.00
36.23	23.46	2.00	0.00	0.39	0.00	36.32	22.27	2.00	0.00	0.38	0.00
36.36	20.80	2.00	0.00	0.38	0.00	36.45	17.23	2.00	0.00	0.38	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
36.49	15.91	2.00	0.00	0.38	0.00	36.58	14.66	2.00	0.00	0.38	0.00
36.63	14.19	2.00	0.00	0.38	0.00	36.71	13.26	2.00	0.00	0.38	0.00
36.76	13.10	2.00	0.00	0.38	0.00	36.86	13.16	2.00	0.00	0.38	0.00
36.90	13.53	2.00	0.00	0.37	0.00	36.99	13.68	2.00	0.00	0.37	0.00
37.03	13.51	2.00	0.00	0.37	0.00	37.08	13.13	2.00	0.00	0.37	0.00
37.16	12.81	2.00	0.00	0.37	0.00	37.21	12.88	2.00	0.00	0.37	0.00
37.30	13.25	2.00	0.00	0.37	0.00	37.34	13.94	2.00	0.00	0.37	0.00
37.43	16.20	2.00	0.00	0.37	0.00	37.47	17.80	2.00	0.00	0.36	0.00
37.57	19.22	2.00	0.00	0.36	0.00	37.61	18.38	2.00	0.00	0.36	0.00
37.69	14.64	2.00	0.00	0.36	0.00	37.75	12.89	2.00	0.00	0.36	0.00
37.83	10.84	2.00	0.00	0.36	0.00	37.87	9.93	2.00	0.00	0.36	0.00
37.95	9.99	2.00	0.00	0.36	0.00	38.03	10.06	2.00	0.00	0.36	0.00
38.08	10.21	2.00	0.00	0.35	0.00	38.15	10.43	2.00	0.00	0.35	0.00
38.20	10.27	2.00	0.00	0.35	0.00	38.27	10.04	2.00	0.00	0.35	0.00
38.33	9.88	2.00	0.00	0.35	0.00	38.40	9.65	2.00	0.00	0.35	0.00
38.45	9.64	2.00	0.00	0.35	0.00	38.53	9.64	2.00	0.00	0.35	0.00
38.62	9.63	2.00	0.00	0.35	0.00	38.66	9.63	2.00	0.00	0.34	0.00
38.74	9.84	2.00	0.00	0.34	0.00	38.82	9.98	2.00	0.00	0.34	0.00
38.87	10.20	2.00	0.00	0.34	0.00	38.95	10.50	2.00	0.00	0.34	0.00
38.98	10.57	2.00	0.00	0.34	0.00	39.06	11.53	2.00	0.00	0.34	0.00
39.13	11.30	2.00	0.00	0.34	0.00	39.22	10.92	2.00	0.00	0.34	0.00
39.26	10.69	2.00	0.00	0.33	0.00	39.32	10.53	2.00	0.00	0.33	0.00
39.40	11.56	2.00	0.00	0.33	0.00	39.44	11.48	2.00	0.00	0.33	0.00
39.54	11.03	2.00	0.00	0.33	0.00	39.58	10.73	2.00	0.00	0.33	0.00
39.67	9.98	2.00	0.00	0.33	0.00	39.71	9.90	2.00	0.00	0.33	0.00
39.80	9.82	2.00	0.00	0.33	0.00	39.85	9.81	2.00	0.00	0.32	0.00
39.90	9.81	2.00	0.00	0.32	0.00	39.99	9.73	2.00	0.00	0.32	0.00
40.03	9.73	2.00	0.00	0.32	0.00	40.12	9.72	2.00	0.00	0.32	0.00
40.21	9.71	2.00	0.00	0.32	0.00	40.25	9.71	2.00	0.00	0.32	0.00
40.30	9.92	2.00	0.00	0.32	0.00	40.38	10.81	2.00	0.00	0.32	0.00
40.43	11.24	2.00	0.00	0.31	0.00	40.53	11.16	2.00	0.00	0.31	0.00
40.57	10.79	2.00	0.00	0.31	0.00	40.65	10.11	2.00	0.00	0.31	0.00
40.69	9.89	2.00	0.00	0.31	0.00	40.79	9.73	2.00	0.00	0.31	0.00
40.82	9.73	2.00	0.00	0.31	0.00	40.92	9.72	2.00	0.00	0.31	0.00
40.97	9.79	2.00	0.00	0.31	0.00	41.04	9.57	2.00	0.00	0.30	0.00
41.08	10.08	2.00	0.00	0.30	0.00	41.15	10.22	2.00	0.00	0.30	0.00
41.24	10.51	2.00	0.00	0.30	0.00	41.28	10.65	2.00	0.00	0.30	0.00
41.36	11.15	2.00	0.00	0.30	0.00	41.41	11.37	2.00	0.00	0.30	0.00
41.48	11.73	2.00	0.00	0.30	0.00	41.56	11.06	2.00	0.00	0.30	0.00
41.60	10.77	2.00	0.00	0.29	0.00	41.69	10.11	2.00	0.00	0.29	0.00
41.74	10.10	2.00	0.00	0.29	0.00	41.82	10.09	2.00	0.00	0.29	0.00
41.87	10.67	2.00	0.00	0.29	0.00	41.95	11.10	2.00	0.00	0.29	0.00
42.02	12.91	2.00	0.00	0.29	0.00	42.06	12.03	2.00	0.00	0.29	0.00
42.15	10.72	2.00	0.00	0.29	0.00	42.23	10.20	2.00	0.00	0.28	0.00
42.28	10.13	2.00	0.00	0.28	0.00	42.35	9.82	2.00	0.00	0.28	0.00
42.40	9.75	2.00	0.00	0.28	0.00	42.47	9.60	2.00	0.00	0.28	0.00
42.55	9.52	2.00	0.00	0.28	0.00	42.59	9.51	2.00	0.00	0.28	0.00
42.67	9.51	2.00	0.00	0.28	0.00	42.76	9.50	2.00	0.00	0.28	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
42.81	9.64	2.00	0.00	0.27	0.00	42.85	9.71	2.00	0.00	0.27	0.00
42.93	9.92	2.00	0.00	0.27	0.00	42.98	10.07	2.00	0.00	0.27	0.00
43.08	10.56	2.00	0.00	0.27	0.00	43.11	10.92	2.00	0.00	0.27	0.00
43.21	11.56	2.00	0.00	0.27	0.00	43.26	11.77	2.00	0.00	0.27	0.00
43.34	12.19	2.00	0.00	0.27	0.00	43.39	12.11	2.00	0.00	0.26	0.00
43.48	12.25	2.00	0.00	0.26	0.00	43.53	12.24	2.00	0.00	0.26	0.00
43.58	12.45	2.00	0.00	0.26	0.00	43.67	13.03	2.00	0.00	0.26	0.00
43.72	13.16	2.00	0.00	0.26	0.00	43.81	13.37	2.00	0.00	0.26	0.00
43.85	13.44	2.00	0.00	0.26	0.00	43.90	13.43	2.00	0.00	0.26	0.00
43.99	13.35	2.00	0.00	0.25	0.00	44.03	13.49	2.00	0.00	0.25	0.00
44.13	13.62	2.00	0.00	0.25	0.00	44.17	13.40	2.00	0.00	0.25	0.00
44.25	13.54	2.00	0.00	0.25	0.00	44.32	13.24	2.00	0.00	0.25	0.00
44.38	13.09	2.00	0.00	0.25	0.00	44.45	13.01	2.00	0.00	0.25	0.00
44.51	12.86	2.00	0.00	0.25	0.00	44.57	12.49	2.00	0.00	0.24	0.00
44.64	12.20	2.00	0.00	0.24	0.00	44.70	12.33	2.00	0.00	0.24	0.00
44.77	12.11	2.00	0.00	0.24	0.00	44.84	11.68	2.00	0.00	0.24	0.00
44.91	11.10	2.00	0.00	0.24	0.00	44.98	10.60	2.00	0.00	0.24	0.00
45.04	10.38	2.00	0.00	0.24	0.00	45.11	10.24	2.00	0.00	0.24	0.00
45.15	10.09	2.00	0.00	0.23	0.00	45.24	9.94	2.00	0.00	0.23	0.00
45.28	9.87	2.00	0.00	0.23	0.00	45.34	9.71	2.00	0.00	0.23	0.00
45.41	9.57	2.00	0.00	0.23	0.00	45.48	9.42	2.00	0.00	0.23	0.00
45.54	9.28	2.00	0.00	0.23	0.00	45.62	9.27	2.00	0.00	0.23	0.00
45.71	9.26	2.00	0.00	0.23	0.00	45.75	9.26	2.00	0.00	0.22	0.00
45.84	9.25	2.00	0.00	0.22	0.00	45.88	9.25	2.00	0.00	0.22	0.00
45.94	9.32	2.00	0.00	0.22	0.00	46.03	9.38	2.00	0.00	0.22	0.00
46.07	9.31	2.00	0.00	0.22	0.00	46.17	9.44	2.00	0.00	0.22	0.00
46.21	9.44	2.00	0.00	0.22	0.00	46.26	9.43	2.00	0.00	0.22	0.00
46.36	9.43	2.00	0.00	0.21	0.00	46.40	9.42	2.00	0.00	0.21	0.00
46.49	9.28	2.00	0.00	0.21	0.00	46.54	9.27	2.00	0.00	0.21	0.00
46.64	9.48	2.00	0.00	0.21	0.00	46.68	9.54	2.00	0.00	0.21	0.00
46.73	9.54	2.00	0.00	0.21	0.00	46.82	9.39	2.00	0.00	0.21	0.00
46.87	9.39	2.00	0.00	0.21	0.00	46.93	9.04	2.00	0.00	0.20	0.00
47.02	9.10	2.00	0.00	0.20	0.00	47.07	9.10	2.00	0.00	0.20	0.00
47.11	9.09	2.00	0.00	0.20	0.00	47.20	9.16	2.00	0.00	0.20	0.00
47.26	9.29	2.00	0.00	0.20	0.00	47.35	9.64	2.00	0.00	0.20	0.00
47.39	9.71	2.00	0.00	0.20	0.00	47.44	9.77	2.00	0.00	0.20	0.00
47.54	9.77	2.00	0.00	0.19	0.00	47.58	9.83	2.00	0.00	0.19	0.00
47.67	9.96	2.00	0.00	0.19	0.00	47.72	9.82	2.00	0.00	0.19	0.00
47.81	9.81	2.00	0.00	0.19	0.00	47.87	9.81	2.00	0.00	0.19	0.00
47.91	9.81	2.00	0.00	0.19	0.00	47.98	10.08	2.00	0.00	0.19	0.00
48.04	10.49	2.00	0.00	0.19	0.00	48.11	10.55	2.00	0.00	0.18	0.00
48.18	10.69	2.00	0.00	0.18	0.00	48.25	10.89	2.00	0.00	0.18	0.00
48.33	10.67	2.00	0.00	0.18	0.00	48.38	10.53	2.00	0.00	0.18	0.00
48.45	10.11	2.00	0.00	0.18	0.00	48.53	9.63	2.00	0.00	0.18	0.00
48.57	9.48	2.00	0.00	0.18	0.00	48.66	9.20	2.00	0.00	0.18	0.00
48.70	9.06	2.00	0.00	0.17	0.00	48.79	8.85	2.00	0.00	0.17	0.00
48.83	8.71	2.00	0.00	0.17	0.00	48.92	8.70	2.00	0.00	0.17	0.00
48.95	8.70	2.00	0.00	0.17	0.00	49.05	8.56	2.00	0.00	0.17	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
49.09	8.49	2.00	0.00	0.17	0.00	49.18	8.14	2.00	0.00	0.17	0.00
49.22	8.07	2.00	0.00	0.17	0.00	49.31	7.99	2.00	0.00	0.16	0.00
49.35	7.99	2.00	0.00	0.16	0.00	49.44	7.99	2.00	0.00	0.16	0.00
49.48	7.92	2.00	0.00	0.16	0.00	49.57	8.05	2.00	0.00	0.16	0.00
49.62	8.12	2.00	0.00	0.16	0.00	49.69	8.25	2.00	0.00	0.16	0.00
49.74	8.31	2.00	0.00	0.16	0.00	49.82	8.24	2.00	0.00	0.16	0.00
49.87	8.17	2.00	0.00	0.15	0.00	49.95	8.17	2.00	0.00	0.15	0.00
50.04	8.16	2.00	0.00	0.15	0.00	50.09	8.16	2.00	0.00	0.15	0.00
50.17	8.35	2.00	0.00	0.15	0.00	50.22	8.28	2.00	0.00	0.15	0.00
50.30	8.62	2.00	0.00	0.15	0.00	50.34	8.75	2.00	0.00	0.15	0.00
50.42	9.09	2.00	0.00	0.15	0.00	50.49	9.15	2.00	0.00	0.14	0.00
50.54	9.09	2.00	0.00	0.14	0.00	50.62	8.81	2.00	0.00	0.14	0.00
50.67	8.88	2.00	0.00	0.14	0.00	50.75	8.87	2.00	0.00	0.14	0.00
50.80	8.87	2.00	0.00	0.14	0.00	50.89	8.73	2.00	0.00	0.14	0.00
50.93	8.73	2.00	0.00	0.14	0.00	51.02	8.72	2.00	0.00	0.14	0.00
51.06	8.72	2.00	0.00	0.13	0.00	51.15	8.71	2.00	0.00	0.13	0.00
51.19	8.71	2.00	0.00	0.13	0.00	51.31	8.70	2.00	0.00	0.13	0.00
51.35	8.63	2.00	0.00	0.13	0.00	51.39	8.63	2.00	0.00	0.13	0.00
51.48	8.63	2.00	0.00	0.13	0.00	51.53	8.62	2.00	0.00	0.13	0.00
51.61	8.69	2.00	0.00	0.13	0.00	51.66	8.76	2.00	0.00	0.12	0.00
51.74	8.75	2.00	0.00	0.12	0.00	51.79	10.51	2.00	0.00	0.12	0.00
51.87	12.74	2.00	0.00	0.12	0.00	51.92	14.36	2.00	0.00	0.12	0.00
52.00	15.88	2.00	0.00	0.12	0.00	52.05	12.93	2.00	0.00	0.12	0.00
52.13	12.12	2.00	0.00	0.12	0.00	52.18	10.96	2.00	0.00	0.12	0.00
52.26	10.48	2.00	0.00	0.11	0.00	52.30	10.82	2.00	0.00	0.11	0.00
52.38	11.22	2.00	0.00	0.11	0.00	52.43	11.28	2.00	0.00	0.11	0.00
52.52	11.34	2.00	0.00	0.11	0.00	52.56	11.33	2.00	0.00	0.11	0.00
52.65	11.32	2.00	0.00	0.11	0.00	52.74	11.92	2.00	0.00	0.11	0.00
52.78	11.98	2.00	0.00	0.11	0.00	52.86	11.88	2.00	0.00	0.10	0.00
52.92	11.84	2.00	0.00	0.10	0.00	52.99	11.43	2.00	0.00	0.10	0.00
53.03	11.02	2.00	0.00	0.10	0.00	53.11	10.82	2.00	0.00	0.10	0.00
53.20	10.61	2.00	0.00	0.10	0.00	53.24	10.61	2.00	0.00	0.10	0.00
53.33	10.67	2.00	0.00	0.10	0.00	53.37	10.66	2.00	0.00	0.10	0.00
53.45	10.73	2.00	0.00	0.09	0.00	53.49	10.65	2.00	0.00	0.09	0.00
53.58	10.57	2.00	0.00	0.09	0.00	53.62	10.57	2.00	0.00	0.09	0.00
53.71	10.76	2.00	0.00	0.09	0.00	53.75	10.76	2.00	0.00	0.09	0.00
53.84	10.75	2.00	0.00	0.09	0.00	53.88	10.62	2.00	0.00	0.09	0.00
53.94	10.08	2.00	0.00	0.09	0.00	54.03	10.41	2.00	0.00	0.08	0.00
54.07	10.41	2.00	0.00	0.08	0.00	54.16	10.47	2.00	0.00	0.08	0.00
54.24	10.53	2.00	0.00	0.08	0.00	54.29	10.59	2.00	0.00	0.08	0.00
54.38	10.79	2.00	0.00	0.08	0.00	54.42	10.79	2.00	0.00	0.08	0.00
54.46	10.85	2.00	0.00	0.08	0.00	54.55	10.71	2.00	0.00	0.08	0.00
54.60	10.71	2.00	0.00	0.07	0.00	54.68	10.70	2.00	0.00	0.07	0.00
54.73	10.70	2.00	0.00	0.07	0.00	54.82	10.69	2.00	0.00	0.07	0.00
54.87	10.75	2.00	0.00	0.07	0.00	54.96	10.54	2.00	0.00	0.07	0.00
55.00	10.41	2.00	0.00	0.07	0.00	55.06	10.14	2.00	0.00	0.07	0.00
55.13	9.94	2.00	0.00	0.07	0.00	55.22	9.60	2.00	0.00	0.06	0.00
55.30	9.59	2.00	0.00	0.06	0.00	55.35	9.53	2.00	0.00	0.06	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
55.40	9.52	2.00	0.00	0.06	0.00	55.48	9.65	2.00	0.00	0.06	0.00
55.53	9.78	2.00	0.00	0.06	0.00	55.62	9.97	2.00	0.00	0.06	0.00
55.66	10.10	2.00	0.00	0.06	0.00	55.76	10.23	2.00	0.00	0.05	0.00
55.80	10.22	2.00	0.00	0.05	0.00	55.84	10.29	2.00	0.00	0.05	0.00
55.93	10.35	2.00	0.00	0.05	0.00	55.97	10.41	2.00	0.00	0.05	0.00
56.04	10.41	2.00	0.00	0.05	0.00	56.14	10.47	2.00	0.00	0.05	0.00
56.17	10.40	2.00	0.00	0.05	0.00	56.27	10.59	2.00	0.00	0.05	0.00
56.30	10.65	2.00	0.00	0.05	0.00	56.40	10.65	2.00	0.00	0.04	0.00
56.45	10.77	2.00	0.00	0.04	0.00	56.53	10.95	2.00	0.00	0.04	0.00
56.58	10.88	2.00	0.00	0.04	0.00	56.66	10.81	2.00	0.00	0.04	0.00
56.72	10.88	2.00	0.00	0.04	0.00	56.78	10.85	2.00	0.00	0.04	0.00
56.84	10.88	2.00	0.00	0.04	0.00	56.89	11.08	2.00	0.00	0.04	0.00
56.97	11.14	2.00	0.00	0.03	0.00	57.03	11.26	2.00	0.00	0.03	0.00
57.11	11.13	2.00	0.00	0.03	0.00	57.18	11.06	2.00	0.00	0.03	0.00
57.23	10.99	2.00	0.00	0.03	0.00	57.30	10.78	2.00	0.00	0.03	0.00
57.38	10.64	2.00	0.00	0.03	0.00	57.42	10.64	2.00	0.00	0.03	0.00
57.49	10.63	2.00	0.00	0.03	0.00	57.58	11.15	2.00	0.00	0.02	0.00
57.66	11.34	2.00	0.00	0.02	0.00	57.70	11.47	2.00	0.00	0.02	0.00
57.79	11.53	2.00	0.00	0.02	0.00	57.83	11.33	2.00	0.00	0.02	0.00
57.93	11.13	2.00	0.00	0.02	0.00	57.96	10.93	2.00	0.00	0.02	0.00
58.05	10.67	2.00	0.00	0.02	0.00	58.09	10.66	2.00	0.00	0.02	0.00
58.18	10.66	2.00	0.00	0.01	0.00	58.21	10.78	2.00	0.00	0.01	0.00
58.31	10.84	2.00	0.00	0.01	0.00	58.34	10.77	2.00	0.00	0.01	0.00
58.43	10.90	2.00	0.00	0.01	0.00	58.48	10.96	2.00	0.00	0.01	0.00
58.57	11.27	2.00	0.00	0.01	0.00	58.61	11.60	2.00	0.00	0.01	0.00
58.69	11.99	2.00	0.00	0.01	0.00	58.73	11.92	2.00	0.00	0.00	0.00
58.82	11.65	2.00	0.00	0.00	0.00	58.91	12.04	2.00	0.00	0.00	0.00
58.95	12.62	2.00	0.00	0.00	0.00	58.99	13.65	2.00	0.00	0.00	0.00
59.08	16.27	2.00	0.00	0.00	0.00	59.13	16.80	2.00	0.00	0.00	0.00
59.20	15.46	2.00	0.00	0.00	0.00	59.26	14.68	2.00	0.00	0.00	0.00
59.32	13.42	2.00	0.00	0.00	0.00	59.40	12.51	2.00	0.00	0.00	0.00
59.46	12.12	2.00	0.00	0.00	0.00	59.52	11.78	2.00	0.00	0.00	0.00
59.59	11.58	2.00	0.00	0.00	0.00	59.65	11.64	2.00	0.00	0.00	0.00
59.74	12.22	2.00	0.00	0.00	0.00	59.80	12.41	2.00	0.00	0.00	0.00
59.86	12.08	2.00	0.00	0.00	0.00	59.93	13.11	2.00	0.00	0.00	0.00
59.99	13.88	2.00	0.00	0.00	0.00	60.04	15.25	2.00	0.00	0.00	0.00
60.11	16.41	2.00	0.00	0.00	0.00	60.19	16.28	2.00	0.00	0.00	0.00
60.24	14.91	2.00	0.00	0.00	0.00	60.33	14.06	2.00	0.00	0.00	0.00
60.39	13.66	2.00	0.00	0.00	0.00	60.45	14.64	2.00	0.00	0.00	0.00
60.51	16.33	2.00	0.00	0.00	0.00	60.57	17.24	2.00	0.00	0.00	0.00
60.66	18.54	2.00	0.00	0.00	0.00	60.72	20.18	2.00	0.00	0.00	0.00
60.78	22.61	2.00	0.00	0.00	0.00	60.83	24.74	2.00	0.00	0.00	0.00
60.92	25.45	2.00	0.00	0.00	0.00	60.98	23.77	2.00	0.00	0.00	0.00
61.04	21.11	2.00	0.00	0.00	0.00	61.10	18.67	2.00	0.00	0.00	0.00
61.16	16.70	2.00	0.00	0.00	0.00	61.22	16.11	2.00	0.00	0.00	0.00
61.32	15.38	2.00	0.00	0.00	0.00	61.37	14.86	2.00	0.00	0.00	0.00
61.44	13.81	2.00	0.00	0.00	0.00	61.49	12.71	2.00	0.00	0.00	0.00
61.55	11.93	2.00	0.00	0.00	0.00	61.64	11.35	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
61.71	10.95	2.00	0.00	0.00	0.00	61.77	10.69	2.00	0.00	0.00	0.00
61.82	10.69	2.00	0.00	0.00	0.00	61.89	10.68	2.00	0.00	0.00	0.00
61.94	10.74	2.00	0.00	0.00	0.00	62.03	10.92	2.00	0.00	0.00	0.00
62.10	11.17	2.00	0.00	0.00	0.00	62.15	11.50	2.00	0.00	0.00	0.00
62.24	11.49	2.00	0.00	0.00	0.00	62.28	11.35	2.00	0.00	0.00	0.00
62.34	11.15	2.00	0.00	0.00	0.00	62.43	11.15	2.00	0.00	0.00	0.00
62.49	10.70	2.00	0.00	0.00	0.00	62.54	11.27	2.00	0.00	0.00	0.00
62.60	11.46	2.00	0.00	0.00	0.00	62.70	11.45	2.00	0.00	0.00	0.00
62.76	11.45	2.00	0.00	0.00	0.00	62.83	11.82	2.00	0.00	0.00	0.00
62.90	12.63	2.00	0.00	0.00	0.00	62.95	12.88	2.00	0.00	0.00	0.00
63.01	12.75	2.00	0.00	0.00	0.00	63.08	12.11	2.00	0.00	0.00	0.00
63.15	11.41	2.00	0.00	0.00	0.00	63.20	11.09	2.00	0.00	0.00	0.00
63.27	11.47	2.00	0.00	0.00	0.00	63.34	11.21	2.00	0.00	0.00	0.00
63.41	11.52	2.00	0.00	0.00	0.00	63.46	11.64	2.00	0.00	0.00	0.00
63.53	11.70	2.00	0.00	0.00	0.00	63.59	11.95	2.00	0.00	0.00	0.00
63.67	12.19	2.00	0.00	0.00	0.00	63.75	12.56	2.00	0.00	0.00	0.00
63.78	12.87	2.00	0.00	0.00	0.00	63.85	13.49	2.00	0.00	0.00	0.00
63.93	13.74	2.00	0.00	0.00	0.00	64.00	13.48	2.00	0.00	0.00	0.00
64.07	12.91	2.00	0.00	0.00	0.00	64.11	12.66	2.00	0.00	0.00	0.00
64.19	12.47	2.00	0.00	0.00	0.00	64.26	12.53	2.00	0.00	0.00	0.00
64.33	13.98	2.00	0.00	0.00	0.00	64.37	16.04	2.00	0.00	0.00	0.00
64.44	79.87	0.18	0.00	0.00	0.00	64.52	83.14	0.19	0.00	0.00	0.00
64.58	81.15	0.18	0.00	0.00	0.00	64.66	20.23	2.00	0.00	0.00	0.00
64.74	16.78	2.00	0.00	0.00	0.00	64.77	15.20	2.00	0.00	0.00	0.00
64.84	12.85	2.00	0.00	0.00	0.00	64.92	11.53	2.00	0.00	0.00	0.00
64.96	11.27	2.00	0.00	0.00	0.00	65.03	11.20	2.00	0.00	0.00	0.00
65.11	11.07	2.00	0.00	0.00	0.00	65.19	10.87	2.00	0.00	0.00	0.00
65.24	10.37	2.00	0.00	0.00	0.00	65.31	10.61	2.00	0.00	0.00	0.00
65.37	10.48	2.00	0.00	0.00	0.00	65.45	10.48	2.00	0.00	0.00	0.00
65.50	10.48	2.00	0.00	0.00	0.00	65.57	10.66	2.00	0.00	0.00	0.00
65.64	10.84	2.00	0.00	0.00	0.00	65.72	11.15	2.00	0.00	0.00	0.00
65.76	11.21	2.00	0.00	0.00	0.00	65.83	11.14	2.00	0.00	0.00	0.00
65.89	10.88	2.00	0.00	0.00	0.00	65.95	11.82	2.00	0.00	0.00	0.00
66.02	11.69	2.00	0.00	0.00	0.00	66.09	11.56	2.00	0.00	0.00	0.00
66.16	11.37	2.00	0.00	0.00	0.00	66.23	11.24	2.00	0.00	0.00	0.00
66.30	11.04	2.00	0.00	0.00	0.00	66.36	10.98	2.00	0.00	0.00	0.00
66.43	10.98	2.00	0.00	0.00	0.00	66.49	11.09	2.00	0.00	0.00	0.00
66.56	11.28	2.00	0.00	0.00	0.00	66.62	11.64	2.00	0.00	0.00	0.00
66.69	12.63	2.00	0.00	0.00	0.00	66.76	14.13	2.00	0.00	0.00	0.00
66.82	15.25	2.00	0.00	0.00	0.00	66.89	15.74	2.00	0.00	0.00	0.00
66.96	15.98	2.00	0.00	0.00	0.00	67.03	17.22	2.00	0.00	0.00	0.00
67.09	18.92	2.00	0.00	0.00	0.00	67.13	19.43	2.00	0.00	0.00	0.00
67.22	17.15	2.00	0.00	0.00	0.00	67.29	14.45	2.00	0.00	0.00	0.00
67.36	13.25	2.00	0.00	0.00	0.00	67.42	12.38	2.00	0.00	0.00	0.00
67.48	13.30	2.00	0.00	0.00	0.00	67.55	12.49	2.00	0.00	0.00	0.00
67.61	13.36	2.00	0.00	0.00	0.00	67.69	14.72	2.00	0.00	0.00	0.00
67.72	15.52	2.00	0.00	0.00	0.00	67.79	16.64	2.00	0.00	0.00	0.00
67.87	17.00	2.00	0.00	0.00	0.00	67.93	17.00	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
67.99	16.05	2.00	0.00	0.00	0.00	68.06	15.23	2.00	0.00	0.00	0.00
68.14	14.29	2.00	0.00	0.00	0.00	68.21	13.23	2.00	0.00	0.00	0.00
68.28	13.23	2.00	0.00	0.00	0.00	68.31	13.22	2.00	0.00	0.00	0.00
68.37	14.15	2.00	0.00	0.00	0.00	68.44	14.88	2.00	0.00	0.00	0.00
68.51	14.62	2.00	0.00	0.00	0.00	68.59	15.86	2.00	0.00	0.00	0.00
68.65	15.79	2.00	0.00	0.00	0.00	68.72	15.72	2.00	0.00	0.00	0.00
68.79	16.89	2.00	0.00	0.00	0.00	68.86	19.07	2.00	0.00	0.00	0.00
68.91	19.80	2.00	0.00	0.00	0.00	68.98	20.42	2.00	0.00	0.00	0.00
69.05	20.53	2.00	0.00	0.00	0.00	69.10	20.35	2.00	0.00	0.00	0.00
69.17	19.28	2.00	0.00	0.00	0.00	69.24	18.08	2.00	0.00	0.00	0.00
69.33	17.71	2.00	0.00	0.00	0.00	69.36	17.64	2.00	0.00	0.00	0.00
69.43	17.57	2.00	0.00	0.00	0.00	69.51	17.25	2.00	0.00	0.00	0.00
69.56	16.94	2.00	0.00	0.00	0.00	69.62	16.13	2.00	0.00	0.00	0.00
69.70	15.00	2.00	0.00	0.00	0.00	69.78	14.07	2.00	0.00	0.00	0.00
69.85	13.07	2.00	0.00	0.00	0.00	69.89	12.70	2.00	0.00	0.00	0.00
69.97	12.39	2.00	0.00	0.00	0.00	70.04	12.69	2.00	0.00	0.00	0.00
70.09	12.32	2.00	0.00	0.00	0.00	70.16	12.68	2.00	0.00	0.00	0.00
70.25	13.47	2.00	0.00	0.00	0.00	70.29	14.01	2.00	0.00	0.00	0.00
70.37	15.97	2.00	0.00	0.00	0.00	70.41	16.95	2.00	0.00	0.00	0.00
70.50	18.68	2.00	0.00	0.00	0.00	70.58	19.98	2.00	0.00	0.00	0.00
70.61	20.73	2.00	0.00	0.00	0.00	70.70	22.10	2.00	0.00	0.00	0.00
70.74	22.54	2.00	0.00	0.00	0.00	70.82	23.29	2.00	0.00	0.00	0.00
70.90	23.84	2.00	0.00	0.00	0.00	70.95	23.90	2.00	0.00	0.00	0.00
71.02	23.70	2.00	0.00	0.00	0.00	71.08	23.57	2.00	0.00	0.00	0.00
71.14	22.42	2.00	0.00	0.00	0.00	71.21	22.09	2.00	0.00	0.00	0.00
71.26	21.77	2.00	0.00	0.00	0.00	71.34	20.82	2.00	0.00	0.00	0.00
71.41	19.93	2.00	0.00	0.00	0.00	71.46	19.24	2.00	0.00	0.00	0.00
71.53	18.30	2.00	0.00	0.00	0.00	71.62	17.67	2.00	0.00	0.00	0.00
71.66	17.48	2.00	0.00	0.00	0.00	71.75	16.73	2.00	0.00	0.00	0.00
71.79	16.23	2.00	0.00	0.00	0.00	71.86	13.24	2.00	0.00	0.00	0.00
71.92	14.62	2.00	0.00	0.00	0.00	72.01	14.55	2.00	0.00	0.00	0.00
72.07	14.48	2.00	0.00	0.00	0.00	72.14	15.15	2.00	0.00	0.00	0.00
72.20	14.90	2.00	0.00	0.00	0.00	72.26	13.98	2.00	0.00	0.00	0.00
72.33	13.49	2.00	0.00	0.00	0.00	72.39	13.00	2.00	0.00	0.00	0.00
72.46	12.51	2.00	0.00	0.00	0.00	72.52	12.56	2.00	0.00	0.00	0.00
72.58	12.56	2.00	0.00	0.00	0.00	72.65	11.84	2.00	0.00	0.00	0.00
72.72	12.37	2.00	0.00	0.00	0.00	72.79	12.78	2.00	0.00	0.00	0.00
72.84	12.77	2.00	0.00	0.00	0.00	72.93	13.25	2.00	0.00	0.00	0.00
73.00	13.49	2.00	0.00	0.00	0.00	73.03	13.54	2.00	0.00	0.00	0.00
73.12	13.53	2.00	0.00	0.00	0.00	73.21	14.37	2.00	0.00	0.00	0.00
73.25	13.82	2.00	0.00	0.00	0.00	73.32	13.69	2.00	0.00	0.00	0.00
73.37	13.87	2.00	0.00	0.00	0.00	73.44	14.10	2.00	0.00	0.00	0.00
73.49	14.22	2.00	0.00	0.00	0.00	73.57	14.33	2.00	0.00	0.00	0.00
73.66	15.65	2.00	0.00	0.00	0.00	73.70	16.43	2.00	0.00	0.00	0.00
73.78	16.78	2.00	0.00	0.00	0.00	73.83	16.90	2.00	0.00	0.00	0.00
73.90	17.01	2.00	0.00	0.00	0.00	73.98	17.61	2.00	0.00	0.00	0.00
74.02	17.54	2.00	0.00	0.00	0.00	74.11	16.20	2.00	0.00	0.00	0.00
74.18	13.31	2.00	0.00	0.00	0.00	74.22	13.13	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
74.30	12.11	2.00	0.00	0.00	0.00	74.36	11.93	2.00	0.00	0.00	0.00
74.44	11.92	2.00	0.00	0.00	0.00	74.49	11.91	2.00	0.00	0.00	0.00
74.59	12.44	2.00	0.00	0.00	0.00	74.64	12.74	2.00	0.00	0.00	0.00
74.68	12.91	2.00	0.00	0.00	0.00	74.78	13.20	2.00	0.00	0.00	0.00
74.84	13.13	2.00	0.00	0.00	0.00	74.87	13.25	2.00	0.00	0.00	0.00
74.95	12.46	2.00	0.00	0.00	0.00	75.02	12.22	2.00	0.00	0.00	0.00
75.09	12.22	2.00	0.00	0.00	0.00	75.16	12.56	2.00	0.00	0.00	0.00
75.23	12.68	2.00	0.00	0.00	0.00	75.27	12.80	2.00	0.00	0.00	0.00
75.35	13.73	2.00	0.00	0.00	0.00	75.41	14.91	2.00	0.00	0.00	0.00
75.48	15.75	2.00	0.00	0.00	0.00	75.55	15.86	2.00	0.00	0.00	0.00
75.62	16.09	2.00	0.00	0.00	0.00	75.66	16.21	2.00	0.00	0.00	0.00
75.73	16.62	2.00	0.00	0.00	0.00	75.80	17.57	2.00	0.00	0.00	0.00
75.88	18.52	2.00	0.00	0.00	0.00	75.92	18.64	2.00	0.00	0.00	0.00
75.99	18.81	2.00	0.00	0.00	0.00	76.05	18.44	2.00	0.00	0.00	0.00
76.14	17.35	2.00	0.00	0.00	0.00	76.21	16.38	2.00	0.00	0.00	0.00
76.28	15.06	2.00	0.00	0.00	0.00	76.31	14.58	2.00	0.00	0.00	0.00
76.39	14.63	2.00	0.00	0.00	0.00	76.47	15.16	2.00	0.00	0.00	0.00
76.53	15.63	2.00	0.00	0.00	0.00	76.62	14.85	2.00	0.00	0.00	0.00
76.65	14.37	2.00	0.00	0.00	0.00	76.72	13.30	2.00	0.00	0.00	0.00
76.80	12.54	2.00	0.00	0.00	0.00	76.84	12.18	2.00	0.00	0.00	0.00
76.91	11.82	2.00	0.00	0.00	0.00	76.98	11.94	2.00	0.00	0.00	0.00
77.09	11.93	2.00	0.00	0.00	0.00	77.10	11.58	2.00	0.00	0.00	0.00
77.19	13.61	2.00	0.00	0.00	0.00	77.25	14.54	2.00	0.00	0.00	0.00
77.31	14.36	2.00	0.00	0.00	0.00	77.37	13.54	2.00	0.00	0.00	0.00
77.44	13.06	2.00	0.00	0.00	0.00	77.51	12.59	2.00	0.00	0.00	0.00
77.60	12.06	2.00	0.00	0.00	0.00	77.63	12.58	2.00	0.00	0.00	0.00
77.72	12.46	2.00	0.00	0.00	0.00	77.78	12.57	2.00	0.00	0.00	0.00
77.84	12.97	2.00	0.00	0.00	0.00	77.90	12.27	2.00	0.00	0.00	0.00
77.97	11.80	2.00	0.00	0.00	0.00	78.02	12.23	2.00	0.00	0.00	0.00
78.11	11.96	2.00	0.00	0.00	0.00	78.18	12.18	2.00	0.00	0.00	0.00
78.23	12.42	2.00	0.00	0.00	0.00	78.28	12.82	2.00	0.00	0.00	0.00
78.37	13.45	2.00	0.00	0.00	0.00	78.42	13.50	2.00	0.00	0.00	0.00
78.50	13.38	2.00	0.00	0.00	0.00	78.56	13.03	2.00	0.00	0.00	0.00
78.63	12.50	2.00	0.00	0.00	0.00	78.68	12.44	2.00	0.00	0.00	0.00
78.77	12.32	2.00	0.00	0.00	0.00	78.83	12.31	2.00	0.00	0.00	0.00
78.89	12.13	2.00	0.00	0.00	0.00	78.95	12.24	2.00	0.00	0.00	0.00
79.01	12.41	2.00	0.00	0.00	0.00	79.08	12.46	2.00	0.00	0.00	0.00
79.14	12.98	2.00	0.00	0.00	0.00	79.23	13.78	2.00	0.00	0.00	0.00
79.29	14.18	2.00	0.00	0.00	0.00	79.35	14.70	2.00	0.00	0.00	0.00
79.41	15.39	2.00	0.00	0.00	0.00	79.47	15.15	2.00	0.00	0.00	0.00
79.53	15.09	2.00	0.00	0.00	0.00	79.62	16.36	2.00	0.00	0.00	0.00
79.68	17.00	2.00	0.00	0.00	0.00	79.75	16.87	2.00	0.00	0.00	0.00
79.81	16.69	2.00	0.00	0.00	0.00	79.87	16.27	2.00	0.00	0.00	0.00
79.94	15.69	2.00	0.00	0.00	0.00	80.00	15.45	2.00	0.00	0.00	0.00
80.06	14.98	2.00	0.00	0.00	0.00	80.12	14.39	2.00	0.00	0.00	0.00
80.21	14.32	2.00	0.00	0.00	0.00	80.26	13.16	2.00	0.00	0.00	0.00
80.32	13.96	2.00	0.00	0.00	0.00	80.38	13.50	2.00	0.00	0.00	0.00
80.46	13.47	2.00	0.00	0.00	0.00	80.53	13.26	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
80.61	13.42	2.00	0.00	0.00	0.00	80.65	13.59	2.00	0.00	0.00	0.00
80.72	13.41	2.00	0.00	0.00	0.00	80.80	13.40	2.00	0.00	0.00	0.00
80.84	13.40	2.00	0.00	0.00	0.00	80.91	13.39	2.00	0.00	0.00	0.00
80.97	14.36	2.00	0.00	0.00	0.00	81.07	16.09	2.00	0.00	0.00	0.00
81.13	16.31	2.00	0.00	0.00	0.00	81.19	16.08	2.00	0.00	0.00	0.00
81.25	15.72	2.00	0.00	0.00	0.00	81.32	15.25	2.00	0.00	0.00	0.00
81.37	14.73	2.00	0.00	0.00	0.00	81.46	14.20	2.00	0.00	0.00	0.00
81.52	13.74	2.00	0.00	0.00	0.00	81.58	13.39	2.00	0.00	0.00	0.00
81.65	13.21	2.00	0.00	0.00	0.00	81.71	13.27	2.00	0.00	0.00	0.00
81.77	13.20	2.00	0.00	0.00	0.00	81.83	13.09	2.00	0.00	0.00	0.00
81.90	13.19	2.00	0.00	0.00	0.00	81.96	12.90	2.00	0.00	0.00	0.00
82.03	12.73	2.00	0.00	0.00	0.00	82.09	12.72	2.00	0.00	0.00	0.00
82.15	12.95	2.00	0.00	0.00	0.00	82.24	13.28	2.00	0.00	0.00	0.00
82.31	13.56	2.00	0.00	0.00	0.00	82.37	13.72	2.00	0.00	0.00	0.00
82.43	13.72	2.00	0.00	0.00	0.00	82.49	13.94	2.00	0.00	0.00	0.00
82.55	14.22	2.00	0.00	0.00	0.00	82.64	14.04	2.00	0.00	0.00	0.00
82.70	14.09	2.00	0.00	0.00	0.00	82.77	14.26	2.00	0.00	0.00	0.00
82.82	14.31	2.00	0.00	0.00	0.00	82.89	14.31	2.00	0.00	0.00	0.00
82.95	14.70	2.00	0.00	0.00	0.00	83.01	15.03	2.00	0.00	0.00	0.00
83.07	15.03	2.00	0.00	0.00	0.00	83.15	15.02	2.00	0.00	0.00	0.00
83.22	14.95	2.00	0.00	0.00	0.00	83.31	14.78	2.00	0.00	0.00	0.00
83.36	14.66	2.00	0.00	0.00	0.00	83.42	14.59	2.00	0.00	0.00	0.00
83.49	14.70	2.00	0.00	0.00	0.00	83.55	14.53	2.00	0.00	0.00	0.00
83.61	14.46	2.00	0.00	0.00	0.00	83.67	14.29	2.00	0.00	0.00	0.00
83.74	14.17	2.00	0.00	0.00	0.00	83.80	14.04	2.00	0.00	0.00	0.00
83.86	14.21	2.00	0.00	0.00	0.00	83.93	14.38	2.00	0.00	0.00	0.00
83.99	14.03	2.00	0.00	0.00	0.00	84.08	14.59	2.00	0.00	0.00	0.00
84.13	14.98	2.00	0.00	0.00	0.00	84.22	14.69	2.00	0.00	0.00	0.00
84.27	14.57	2.00	0.00	0.00	0.00	84.34	14.39	2.00	0.00	0.00	0.00
84.40	14.61	2.00	0.00	0.00	0.00	84.47	15.00	2.00	0.00	0.00	0.00
84.53	15.51	2.00	0.00	0.00	0.00	84.59	15.90	2.00	0.00	0.00	0.00
84.65	16.29	2.00	0.00	0.00	0.00	84.73	16.74	2.00	0.00	0.00	0.00
84.79	16.96	2.00	0.00	0.00	0.00	84.85	17.18	2.00	0.00	0.00	0.00
84.93	17.69	2.00	0.00	0.00	0.00	84.98	17.62	2.00	0.00	0.00	0.00
85.04	17.79	2.00	0.00	0.00	0.00	85.13	18.35	2.00	0.00	0.00	0.00
85.18	18.97	2.00	0.00	0.00	0.00	85.27	20.11	2.00	0.00	0.00	0.00
85.32	20.21	2.00	0.00	0.00	0.00	85.38	20.15	2.00	0.00	0.00	0.00
85.45	20.03	2.00	0.00	0.00	0.00	85.52	19.79	2.00	0.00	0.00	0.00
85.57	19.62	2.00	0.00	0.00	0.00	85.65	19.44	2.00	0.00	0.00	0.00
85.71	19.31	2.00	0.00	0.00	0.00	85.77	19.02	2.00	0.00	0.00	0.00
85.83	18.78	2.00	0.00	0.00	0.00	85.91	18.13	2.00	0.00	0.00	0.00
85.99	19.72	2.00	0.00	0.00	0.00	86.05	20.80	2.00	0.00	0.00	0.00
86.11	20.49	2.00	0.00	0.00	0.00	86.18	20.83	2.00	0.00	0.00	0.00
86.24	21.69	2.00	0.00	0.00	0.00	86.30	21.72	2.00	0.00	0.00	0.00
86.36	23.51	2.00	0.00	0.00	0.00	86.43	25.24	2.00	0.00	0.00	0.00
86.50	24.99	2.00	0.00	0.00	0.00	86.56	24.52	2.00	0.00	0.00	0.00
86.62	24.91	2.00	0.00	0.00	0.00	86.69	26.30	2.00	0.00	0.00	0.00
86.75	28.40	2.00	0.00	0.00	0.00	86.84	31.65	2.00	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
86.89	32.95	2.00	0.00	0.00	0.00	86.96	33.68	2.00	0.00	0.00	0.00
87.01	34.10	2.00	0.00	0.00	0.00	87.10	32.81	2.00	0.00	0.00	0.00
87.16	32.21	2.00	0.00	0.00	0.00	87.22	30.88	2.00	0.00	0.00	0.00
87.27	33.23	2.00	0.00	0.00	0.00	87.34	34.34	2.00	0.00	0.00	0.00
87.41	35.16	2.00	0.00	0.00	0.00	87.49	36.10	2.00	0.00	0.00	0.00
87.53	37.05	2.00	0.00	0.00	0.00	87.61	100.87	0.25	0.00	0.00	0.00
87.69	40.07	2.00	0.00	0.00	0.00	87.74	102.59	0.26	0.00	0.00	0.00
87.82	107.46	0.27	0.00	0.00	0.00	87.87	111.50	0.28	0.00	0.00	0.00
87.94	115.82	0.30	0.00	0.00	0.00	88.00	117.27	0.31	0.00	0.00	0.00
88.07	117.49	0.31	0.00	0.00	0.00	88.13	118.89	0.31	0.00	0.00	0.00
88.20	122.84	0.33	0.00	0.00	0.00	88.26	124.08	0.34	0.00	0.00	0.00
88.35	129.04	0.37	0.00	0.00	0.00	88.39	131.11	0.38	0.00	0.00	0.00
88.48	128.15	0.36	0.00	0.00	0.00	88.52	128.60	0.37	0.00	0.00	0.00
88.61	126.13	0.35	0.00	0.00	0.00	88.66	128.34	0.36	0.00	0.00	0.00
88.74	134.76	0.41	0.00	0.00	0.00	88.79	135.02	0.41	0.00	0.00	0.00
88.87	132.79	0.39	0.00	0.00	0.00	88.93	132.11	0.39	0.00	0.00	0.00
88.99	130.71	0.38	0.00	0.00	0.00	89.05	131.02	0.38	0.00	0.00	0.00
89.12	133.10	0.40	0.00	0.00	0.00	89.18	134.84	0.41	0.00	0.00	0.00
89.26	135.74	0.42	0.00	0.00	0.00	89.32	138.29	0.44	0.00	0.00	0.00
89.37	138.51	0.44	0.00	0.00	0.00	89.45	138.52	0.44	0.00	0.00	0.00
89.53	138.56	0.44	0.00	0.00	0.00	89.58	138.82	0.44	0.00	0.00	0.00
89.66	137.66	0.43	0.00	0.00	0.00	89.72	135.77	0.42	0.00	0.00	0.00
89.77	134.56	0.41	0.00	0.00	0.00	89.85	134.29	0.41	0.00	0.00	0.00
89.90	134.82	0.41	0.00	0.00	0.00	89.97	136.85	0.43	0.00	0.00	0.00
90.03	137.52	0.43	0.00	0.00	0.00	90.10	140.49	0.46	0.00	0.00	0.00
90.16	140.86	0.46	0.00	0.00	0.00	90.23	144.82	0.50	0.00	0.00	0.00
90.30	143.44	0.49	0.00	0.00	0.00	90.38	143.09	0.49	0.00	0.00	0.00
90.42	143.29	0.49	0.00	0.00	0.00	90.49	142.10	0.48	0.00	0.00	0.00
90.57	143.72	0.49	0.00	0.00	0.00	90.63	143.30	0.49	0.00	0.00	0.00
90.70	142.79	0.48	0.00	0.00	0.00	90.77	141.99	0.48	0.00	0.00	0.00
90.82	141.40	0.47	0.00	0.00	0.00	90.90	142.21	0.48	0.00	0.00	0.00
90.96	142.06	0.48	0.00	0.00	0.00	91.01	142.01	0.48	0.00	0.00	0.00
91.09	142.80	0.48	0.00	0.00	0.00	91.15	141.97	0.48	0.00	0.00	0.00
91.22	140.23	0.46	0.00	0.00	0.00	91.29	140.51	0.46	0.00	0.00	0.00
91.34	140.90	0.47	0.00	0.00	0.00	91.41	140.67	0.46	0.00	0.00	0.00
91.47	140.04	0.46	0.00	0.00	0.00	91.55	137.44	0.43	0.00	0.00	0.00
91.60	139.76	0.46	0.00	0.00	0.00	91.67	138.11	0.44	0.00	0.00	0.00
91.74	139.16	0.45	0.00	0.00	0.00	91.83	138.28	0.44	0.00	0.00	0.00
91.87	138.28	0.44	0.00	0.00	0.00	91.95	140.42	0.46	0.00	0.00	0.00
92.01	142.81	0.49	0.00	0.00	0.00	92.08	145.22	0.51	0.00	0.00	0.00
92.14	146.03	0.52	0.00	0.00	0.00	92.19	140.78	0.47	0.00	0.00	0.00
92.26	148.54	0.56	0.00	0.00	0.00	92.34	148.03	0.55	0.00	0.00	0.00
92.39	148.41	0.55	0.00	0.00	0.00	92.46	146.95	0.54	0.00	0.00	0.00
92.54	145.51	0.52	0.00	0.00	0.00	92.60	145.57	0.52	0.00	0.00	0.00
92.66	145.50	0.52	0.00	0.00	0.00	92.73	145.72	0.52	0.00	0.00	0.00
92.79	145.22	0.51	0.00	0.00	0.00	92.86	145.56	0.52	0.00	0.00	0.00
92.93	147.17	0.54	0.00	0.00	0.00	92.99	147.12	0.54	0.00	0.00	0.00
93.06	146.05	0.53	0.00	0.00	0.00	93.14	144.93	0.51	0.00	0.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)											
Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)	Depth (ft)	q _{c1N,cs}	FS	e _v (%)	DF	Settlement (in)
93.19	144.58	0.51	0.00	0.00	0.00	93.27	145.28	0.52	0.00	0.00	0.00
93.32	143.01	0.49	0.00	0.00	0.00	93.40	145.78	0.52	0.00	0.00	0.00
93.44	145.55	0.52	0.00	0.00	0.00	93.53	145.56	0.52	0.00	0.00	0.00
93.58	144.94	0.51	0.00	0.00	0.00	93.66	144.38	0.51	0.00	0.00	0.00
93.71	143.33	0.50	0.00	0.00	0.00	93.79	142.22	0.48	0.00	0.00	0.00
93.84	143.38	0.50	0.00	0.00	0.00	93.91	144.83	0.51	0.00	0.00	0.00
93.97	145.47	0.52	0.00	0.00	0.00	94.04	144.34	0.51	0.00	0.00	0.00
94.10	145.24	0.52	0.00	0.00	0.00	94.17	145.11	0.52	0.00	0.00	0.00
94.23	145.82	0.52	0.00	0.00	0.00	94.31	146.92	0.54	0.00	0.00	0.00
94.36	148.65	0.56	0.00	0.00	0.00	94.44	149.17	0.57	0.00	0.00	0.00
94.49	149.67	0.58	0.00	0.00	0.00	94.56	149.33	0.57	0.00	0.00	0.00
94.65	150.36	0.59	0.00	0.00	0.00	94.71	149.69	0.58	0.00	0.00	0.00
94.77	150.09	0.58	0.00	0.00	0.00	94.83	150.21	0.58	0.00	0.00	0.00
94.90	149.46	0.57	0.00	0.00	0.00	94.96	149.81	0.58	0.00	0.00	0.00
95.01	150.18	0.58	0.00	0.00	0.00	95.09	149.36	0.57	0.00	0.00	0.00
95.16	148.85	0.57	0.00	0.00	0.00	95.22	149.60	0.58	0.00	0.00	0.00
95.28	149.12	0.57	0.00	0.00	0.00	95.35	149.06	0.57	0.00	0.00	0.00
95.42	149.00	0.57	0.00	0.00	0.00	95.48	149.10	0.57	0.00	0.00	0.00
95.54	149.72	0.58	0.00	0.00	0.00	95.63	150.55	0.59	0.00	0.00	0.00
95.69	151.40	0.60	0.00	0.00	0.00	95.76	151.75	0.61	0.00	0.00	0.00
95.82	151.87	0.61	0.00	0.00	0.00	95.89	151.83	0.61	0.00	0.00	0.00
95.94	151.78	0.61	0.00	0.00	0.00	96.02	152.25	0.62	0.00	0.00	0.00
96.09	152.60	0.62	0.00	0.00	0.00	96.14	153.50	0.64	0.00	0.00	0.00
96.22	153.15	0.63	0.00	0.00	0.00	96.27	153.29	0.63	0.00	0.00	0.00
96.33	153.24	0.63	0.00	0.00	0.00	96.41	153.24	0.63	0.00	0.00	0.00
96.46	153.15	0.63	0.00	0.00	0.00	96.54	154.88	0.66	0.00	0.00	0.00
96.60	155.40	0.67	0.00	0.00	0.00	96.66	159.50	0.75	0.00	0.00	0.00
96.73	159.13	0.75	0.00	0.00	0.00	96.79	159.43	0.75	0.00	0.00	0.00
96.86	158.58	0.73	0.00	0.00	0.00	96.92	157.59	0.71	0.00	0.00	0.00
96.99	158.63	0.74	0.00	0.00	0.00	97.05	157.72	0.72	0.00	0.00	0.00
97.14	158.61	0.74	0.00	0.00	0.00	97.19	157.20	0.71	0.00	0.00	0.00
97.27	157.57	0.71	0.00	0.00	0.00	97.33	157.32	0.71	0.00	0.00	0.00
97.40	156.90	0.70	0.00	0.00	0.00	97.44	157.23	0.71	0.00	0.00	0.00
97.52	157.17	0.71	0.00	0.00	0.00	97.57	156.90	0.70	0.00	0.00	0.00
97.66	158.06	0.73	0.00	0.00	0.00	97.72	158.52	0.74	0.00	0.00	0.00
97.78	159.76	0.76	0.00	0.00	0.00	97.84	156.20	0.69	0.00	0.00	0.00
97.91	157.22	0.71	0.00	0.00	0.00	97.97	156.51	0.70	0.00	0.00	0.00
98.04	154.70	0.66	0.00	0.00	0.00	98.10	155.34	0.67	0.00	0.00	0.00
98.17	154.67	0.66	0.00	0.00	0.00	98.23	153.33	0.64	0.00	0.00	0.00
98.31	157.05	0.71	0.00	0.00	0.00	98.37	153.87	0.65	0.00	0.00	0.00
98.44	154.37	0.66	0.00	0.00	0.00	98.49	156.24	0.69	0.00	0.00	0.00
98.56	155.74	0.68	0.00	0.00	0.00	98.64	156.55	0.70	0.00	0.00	0.00
98.69	156.61	0.70	0.00	0.00	0.00	98.76	155.96	0.69	0.00	0.00	0.00
98.82	156.73	0.70	0.00	0.00	0.00	98.89	155.32	0.67	0.00	0.00	0.00
98.95	154.64	0.66	0.00	0.00	0.00	99.03	153.15	0.64	0.00	0.00	0.00
99.10	153.14	0.64	0.00	0.00	0.00	99.17	153.03	0.64	0.00	0.00	0.00
99.23	152.95	0.63	0.00	0.00	0.00	99.28	153.04	0.64	0.00	0.00	0.00
99.36	153.51	0.64	0.00	0.00	0.00	99.43	155.38	0.68	0.00	0.00	0.00

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

Depth (ft)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (in)	Depth (ft)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (in)
99.48	156.47	0.70	0.00	0.00	0.00	99.55	158.28	0.73	0.00	0.00	0.00
99.61	157.61	0.72	0.00	0.00	0.00	99.69	152.42	0.63	0.00	0.00	0.00
99.74	137.22	0.45	0.00	0.00	0.00	99.82	84.85	2.00	0.00	0.00	0.00
99.87	86.12	2.00	0.00	0.00	0.00	99.94	85.61	2.00	0.00	0.00	0.00
100.00	84.40	2.00	0.00	0.00	0.00	100.07	83.20	2.00	0.00	0.00	0.00

Total estimated settlement: 1.63**Abbreviations**

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