Improving Design Phase Evaluations of High Pile Rebound Soils with an Emphasis on SPT Testing

FDOT Contract BDV 28
Task Work Order 977-05
Final Report

October 23, 2019

Principal Investigator:

Paul J. Cosentino, Ph.D., P.E.
Florida Institute of Technology
150 W University Blvd
Civil Engineering Department
Melbourne, Florida 32901-6975
cosentin@fit.edu
Direct 321-674-7555
Office 321-674-8048

DSR Contact:

Carolyn Lockyer
Director of Contracts
Florida Institute of Technology
150 W University Blvd
Office of Sponsored Programs
Melbourne, Florida 32901-6975
clockyer@fit.edu
321-674-7490

Project Manager:

David Horhota Ph.D., P.E.
Florida Department of Transportation
State Materials Office
State Geotechnical Engineer
5007 NE 39th Ave
Gainesville, Florida 32609
David.Horhota@dot.state.fl.us
352-955-2924

Disclaimer

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the State of Florida Department of Transportation.

Metric Conversion Table

Symbol		Multiply By	To Find	Symbol
LENGTH				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
AREA				
in^2	square inches	645.2	square millimeters	mm^2
ft^2	square feet	0.093	square meters	m^2
yd^2	square yards	0.836	square meters	m^2
VOLUME				
ft^3	cubic feet	0.028	cubic meters	m^3
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2,000 l(b)	0.907	megagrams (“metric ton”)	Mg (or “t”)
UNIT WEIGHT				
pcf	lbf/ft^3	16.02	kilograms/ cubic meter	kg/m^3
TEMPERATURE (exact degrees)				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C
FORCE and PRESSURE or STRESS				
lbf	pound force	4.45	newtons	N
kip	1,000 lbf	4.45	kilonewtons	kN
ton	2,000 lbf	8.90	kilonewtons	kN
lbf/in^2	pound force/ square inch	6.89	kilopascals	kPa
ksi	kips / square inch	6.89	megapascals	MPa
tsf	tons/square foot	95.76	kilopascals	KPa

Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle Improving Design Phase Evaluations for High Pile Rebound Soils with an Emphasis on SPT Testing: Final Report		5. Report Date October 30 2019 6. Performing Organization Code FIT Index 202244
7. Author(s) Paul J. Cosentino and Brian F. Wisnom,		8. Performing Organization Report No.
9. Performing Organization Name and Address Florida Institute of Technology Civil Engineering Department 150 West University Blvd. Melbourne, FL 32901-6975 (321) 674-7555		10. Work Unit No. (TRAIS) 11. Contract or Grant No. Contract Number BDV28-977-05
12. Sponsoring Agency Name and Address Florida Department of Transportation 605 Suwannee Street Tallahassee, Florida 32399-0450		13. Type of Report and Period Covered Final Report April 2017 – October 2019 14. Sponsoring Agency Code
15. Supplementary Notes		

16. Abstract

Pile rebound, which is a complex phenomenon that occurs when large diameter displacement piles are driven into very fine sands with silts and clays, causes serious construction delays and cost overruns. It has been a problem many contractors have faced for well over a decade. Piles driven into thick layers within both the Hawthorn and Alum Bluff Group of soils have caused the problem.

An evaluation of pile rebound related to SPT N values and CPT profiles was undertaken to validate the High Pile Rebound Level 1 Decision Tree developed under FDOT Contract BDV 28 977-01. The data base was increased from 15 piles at eight sites throughout central, north and northwest Florida, to 37 piles at eight additional sites from this same region plus locations in southwestern Florida. Rebound levels ranged from 0.38 to 2.63-inches based on pile driving analyzer data with inspector sets. A thorough evaluation of the SPT/CPT and PDA produced an updated Level I Decision Tree based on 0.5-inches of pile rebound.

A key improvement in this analysis was to eliminate what was termed "early driving" data from the SPT and CPT results. Early driving data was defined as any data within the predrilling elevations and any pile driving conducted up to fuel setting 2 on the hammer. This new analysis produced three additional changes to the Level I Decision Tree. The revised data more clearly produced results that showed poorly graded sands (SP) would not produce rebound above 0.5-inches. Clear dilative soil tendencies were shown for rebound soils based on $N_{1(60)}$ values over 30 and Seed et al. 1985 recommendations based on soil liquefaction. The USCS classifications most likely to produce rebound in excess of 0.5-inches are SM and ML/MH, indicating that silt content of these very fine sands is critical to rebound. CPTu soil behavior type charts were shown to possibly be useful a a "screening-tool" to identify rebound, but must be used in conjunction with other techniques.

17. Key Word	18. Distribution Statement
High Pile Rebound, Bouncing Piles, Pore Water Pressures, Cone Penetrometer Test, Standard Penetration Test, Soil Behavior Chart, Fines Content	Document is available to the U.S. public through the National Technical Information Service, Springfield, Virginia 22161

19. Security Classif. (of this report)	20. Security Classif. (of this pag(e)	21. No. of Pages **175**	22. Price
Unclassified	Unclassified		

Acknowledgements and Dedication

This work was completed under FDOT contract number BDV28-977-05. The authors would like to acknowledge the following people for their invaluable guidance and help in the completion of this study: Dr. David Horhota from FDOT SMO, Mr. Mohamad Hussein Principal GRL Associates Orlando Florida.

This report is dedicated to Dr. Sharaf "Sharif" Eldeen, my colleague who will see the results of his work from above.

Executive Summary

An evaluation of pile rebound related to SPT N values and CPT profiles was undertaken to validate a High Pile Rebound Level 1 Decision Tree from BDV 28 977-01. The data base was increased from evaluation of 15 piles at eight sites throughout central, north and northwest Florida, to 37 piles at eight additional sites which included southwestern Florida. Rebound levels ranged from 0.38 to 2.63-inches based on pile driving analyzer data with inspector sets. This additional data allowed for the analysis of over 1500 data points from the combination of PDA/SPT and CPTu data.

Based on the re-evaluation of data, the following conclusions have been developed. As was the case for the previous evaluation, 0.5-inches of rebound was used as the threshold for all analyses.

1. Excluding early driving (i.e. predrilling and less than fuel setting 2 on the hammer) data clarified the trends.
2. The USCS/AASHTO soil classifications of SP/A-3 with less than 12% fines would produce a low concern for rebound with excessive hammer blows.
3. The contractive and dilative potential based on the Seed et al. (1985) research, (*with recommendations for damage potential and how it relates to contractive and dilative behavior*) produced clear trends that rebound soils are dilative when $N_{1(60)}$ exceeds 30.
4. The USCS soil classifications most likely to produce rebound in excess of 0.5-inches are SM and ML/MH.
5. Although it is believed that rebound occurs when piles penetrate into thick layers of fine sands with silts and clay, when N-values were averaged over 4-foot thick

fine sands with silts and clays layers and correlated to rebound no trends were evident.

6. Robertson's (2016) CPTu soil behavior charts could be used as a screening tool but not for a final determination or identification of rebound soils.

Based on the findings from this research the following recommendations and updates to the Level I High Pile Rebound Decision Tree are presented.

1. Engineers who are evaluating SPT N-values for rebound potential during design phase investigations, should evaluate displacement piles driven at nearby sites in similar soils and elevations, and exclude early driving data (i.e. depths associated with predrilling and less than the hammers' fuel setting 2 depths).
2. The Level I High Pile Rebound Decision Tree has been modified and updated to also indicate that $N_{1(60)}$ values greater than 30 in fine sands with silts and clays produce a high concern for rebound in excess of 0.5-inches.
3. The Level I High Pile Rebound Decision Tree has been modified and updated such that a soil classification of SP/A-3 with less than 12% fines would produce a low concern for rebound with excessive hammer blows.
4. The Level I High Pile Rebound Decision Tree has been modified and updated indicating that USCS soil classifications most likely to produce a high concern of rebound in excess of 0.5-inches are SM and ML/MH.
5. The Level I: Basic Design Phase Information within the High Pile Rebound Decision Tree has been updated.

Table of Contents

List of Figures

List of Tables

1 Introduction

1.1 Background

High pile rebound (HPR) is a complex pile-soil interaction problem. As piles rebound the end bearing capacity diminishes and thus the pile design capacity becomes questionable. Rebound can be determined either visually by the inspector during driving or digitally from Pile Driving Analyzer (PDA) accelerometer data recorded during installation of test piles. PDA accelerometer data is numerically integrated twice to produce pile movements during hammer blows. This double integration, combined with the variability in the inspector-based sets[1], may produce errors.

Findings from two FDOT research projects, BDK81 977-01 and BDV 28 977-01, indicate that relatively thick layers of very fine sands with silts and clays in certain percentages may cause HPR (Cosentino et al., 2010 and Cosentino et al., 2016). During BDV 28 977-01 a dozen FDOT sites throughout central and northern Florida were evaluated using SPT, CPTu and lab testing, some with and some without HPR (Table 1-1). CPTu testing confirmed that pore water pressures can be negative or unusually high positive values in HRP soils. Geologically, these sites were located in the Hawthorn Group unless they were in Walton County, where the Alum Bluff Group replaces the Hawthorn (Scott, 1990).

[1] *Inspector sets are based on the one-foot markings on the piles and determined as 1/(the hammer blows per foot). These one-foot markings can be made in several ways and therefore produce errors. For instance, some marks are not drawn accurately and can be more or much less than the required one-foot spacing.*

As shown in Table 1-1 field testing at these projects included: a) standard penetration tests (SPT) and b) cone penetrometer tests with pore pressure measurements (CPTu), while lab testing with disturbed and undisturbed samples included: *a)* basic index and shear strength testing and *b)* cyclic triaxial tests. Table 1-1 shows which sites included undisturbed thin wall tube sampling. Although HPR correlations have been developed between CPTu data, SPT N values, plus fines, (silt and clay percentages) and sand contents, they are based on rebound that is averaged over one-foot intervals from inspector visual information and not digital movements. This work does not account for layer thicknesses properly and might also be improved with use of digital movements.

Table 1-1 Summary BDV 28 977-01 of High Pile Rebound Testing and Test Sites (Cosentino et al., 2016)

Number	Description	Testing		
		SPT	CPTu	Undisturbed
1	I-4 / US-192 Interchange / Osceola County / Florida.	✔	✔	✔
2	State Road 417 International Parkway / Osceola County / Florida.	✔	✔	✔
3	I-4 / Osceola Parkway / Osceola County / Florida.			✔
4	State Road 50 and State Road 436 / Orange County / Florida.	✔	✔	
5	I-4 / State Road 408 Ramp B / Orange County / Florida.	✔	✔	
6	Anderson Street Overpass at I-4/SR-408 / Orange County / Florida.	✔	✔	
7	I-4 John Young Parkway/ Orange County / Florida	✔		
8	I-4 Widening Daytona / Volusia County / Florida.	✔	✔	
9	SR 528 over Indiam River, Brevard County / Florida	✔		
10	Saint Johns Heritage Parkway, Brevard County / Florida	✔	✔	✔
11	I-10 Chaffee Road, Duval County / Florida	✔		✔
12	State Road 83 over Ramsey Branch Bridge / Walton County / Florida.	✔	✔	✔

FDOT's specification 455-5.10.3 defines excessive rebound in terms of 0.25 inches, however, this movement is difficult for inspectors to consistently and accurately determine. The BDV 28 977-01 final report has correlations and a corresponding three level geotechnical decision tree based on 0.5 inches of rebound (Cosentino et al., 2016). This level was chosen because it produced trends that the 0.25-inch level did not.

Each level of the decision tree was developed to guide geotechnical engineers through the HPR engineering process. The first level of the tree is shown in Figure 1-1. Note, that geologically, only the Hawthorn Group was shown; however, the Alum Bluff Group was found to exist at the Ramsey Branch site in Walton County (Scott, 1990 and Scott et al., 1985). The key factors presented within this tree for geotechnical engineers to consider are: nearby HPR sites, the Hawthorn layer, the classifications and the fines content (FC). The quantity of fines content (FC) data leading to HPR concerns is limited, especially the data showing FC between 30 and 40 %, which may indicate a high concern for rebound. Typical geotechnical reports contain test boring profiles with the corresponding N-values, plus some secondary data on water contents, Atterberg limits and percent passing the # 200 sieve or FC. This secondary information is not commonly investigated nor is it reported at sufficient levels to help geotechnical engineers decide if HPR could be a concern. Additional HPR sites with SPT soil profiles were added to the existing data to clarify the Level I Decision Tree. This effort focused solely on the Level I soil classification data.

There is evidence that HPR may also be affected by the layer thicknesses and analyses for the N values to date have not focused on layer thickness. Figure 1-2 shows CPTu data plotted on the Jeffries and Been (2006) Liquefaction Assessment Chart with a state parameter (ψ) of 0.125 in orange showing most HPR soils plotted above this state parameter line and non-rebound soils below it. This data is based on CPTu tip and friction data averaged over 4 pile diameters (i.e. 4B, where B is the pile diameter). This parameter is related to soil dilatancy and contraction and therefore, may indicate the difference in CPTu behavior between HPR and non-rebound soils in thick layers. When

the same chart is used with CPTu data averaged over 1 pile diameter there was no clear trend. Although this finding is preliminary, and based on a limited amount of CPTu data, it is showing that the layer thickness is critical. Thus, in addition to adding more sites to the data base, re-evaluation of the existing SPT and FC data were performed with layer thickness included as a variable.

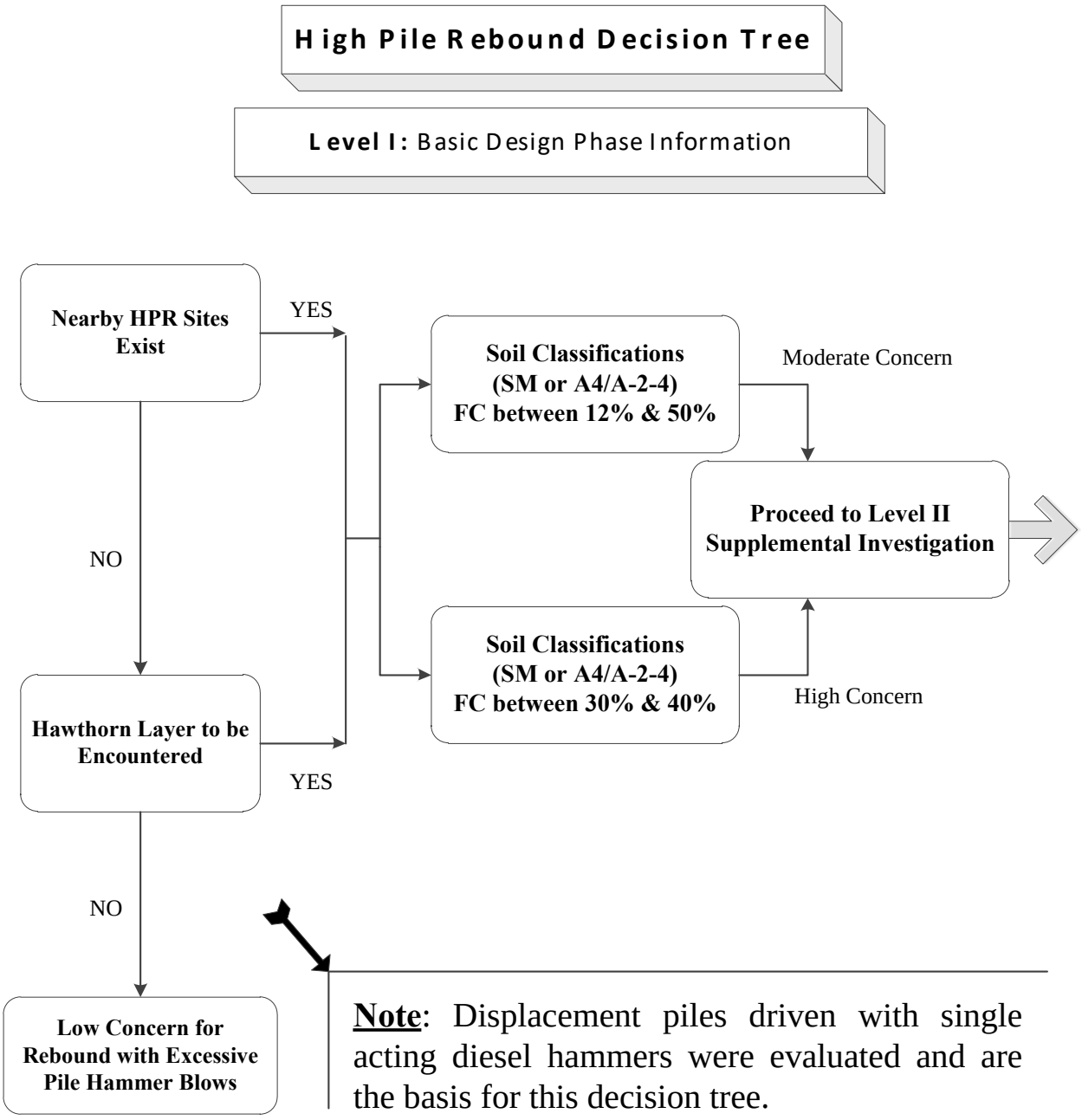

Figure 1-1 BDV 28 977-01 HPR Level I Decision Tree aid for Geotechnical Engineers (Cosentino et al., 2016)

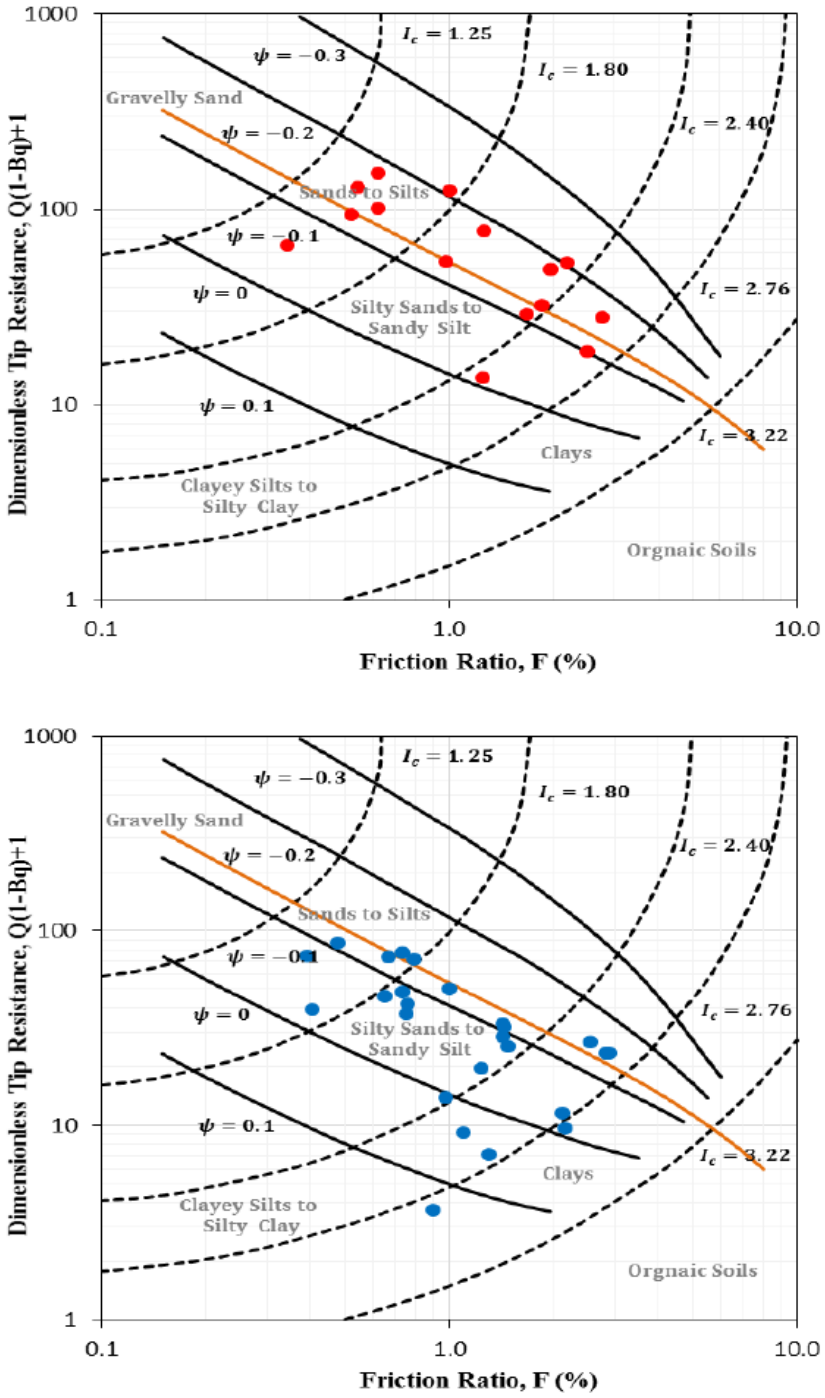

Figure 1-2 Liquefaction Assessment Charts with HPR in Red and Non-rebound CPTu data (Jeffries and Been 2006)

1.2 Objective

The research objective is to refine the BDV28 977-01 Decision Tree Level I soil classification criteria based on rebound level, with N-values, CPTu data and FC.

1.3 Supporting Tasks

This research was accomplished through the completion of the following tasks.

1.3.1 Task 1 Identification and Organization of Additional HPR and Non-rebound sites Based on Rebound Level

With the cooperation of FDOT State Materials Office (SMO) engineers, six new HPR sites were identified. Soil profiles with SPT plus PDA data from these sites were organized and rebound was categorized as follows:

- acceptable (*rebound with acceptable set i.e. the pile advancing without excessive blows and/or experiencing high stresses),*
- no rebound (*less than ¼ inch of rebound allowing pile to be driven*) and
- unacceptable (*rebound greater than one of the three proposed rebound levels ¼-inch, ½-inch and 1-inch and the pile is not successfully advancing without excessive blows and/or experiencing high stresses*).

1.3.2 Task 2 Evaluation of HPR Rebound Trends

Four subtasks were completed to evaluate the HPR rebound trends. Using existing data (i.e. SPT, CPTu, and the available FC data) and the correlations presented in the BDV 28 977-01 final report plus the data from the new sites, new HPR trends will be

investigated and the BDV 28 977-01 rebound, SPT N and FC trends were updated as follows:

a) The CPTu rebound trends and correlations based on pile penetration into the rebound layers of 2B, 4B and 8B or similar will be examined using charts like Jefferies and Been's (2006) liquefaction assessment chart.
b) Correlations will be developed between the CPTu, N-equivalent values and the measured N-values from the sites.
c) SPT-N and FC versus rebound correlations will be investigated using the 2B, 4B and 8B layer thicknesses (i.e. pile penetration) into the rebound layer. This process required engineering judgement if the SPT N values are recorded at intervals larger than the 2B, 4B or 8B zones. For example, if N values are recorded over 5-foot increments and the 2B zone is 4 feet, then the description and USCS classifications near this zone will be evaluated to determine if there is a consistent layer for the evaluations.
d) Conclusions will be developed and the Level I Decision Tree (Figure 1-1) will be updated to reflect the new findings.

1.3.3 Task 3 Reporting and Technology Transfer

Draft final and final reports containing the findings from this work were submitted, revised as necessary and approved for delivery to FDOT. To complete the technology, transfer a close-out business meeting was completed such that the research findings could be clearly disseminated.

2 Literature Review of Pile Rebound

2.1 High Pile Rebound Definition

Pile rebound has been defined as the upward elastic pile displacement that occurs during a hammer blow (Cosentino et al., 2010). It can be expressed as the difference between the pile's maximum displacement and its final displacement or permanent set. Rebound has been referred to differently by multiple authors. Likins (1983) referred to high rebound as "bounce" while this author's previous papers have referred to rebound as High Pile Rebound (HPR). Pile rebound has been linked with soil quake multiple times in past case studies including those by Authier and Fellenius (1980), Likins (1983), Murrell (2008), and Hussein (2006).

Pile rebound has been referred to previously as moderate (Cosentino et al., 2010) when pile penetration per blow results in reasonable blow counts. It has been described as excessive, or as high, when rebound approaches the same magnitude of the pile maximum displacement (Cosentino et al., 2010), and when high tensions stresses are observed as the soil conditions beneath the toe produce an apparent lack of resistance and the pile toe behaves similar to a free end condition. The FDOT considers rebound excessive when it exceeds 0.25 inches as noted in sections 455-5.10.2 and 455-5.10.3 of the FDOT Standard Specification.

2.2 Quakes Influence on Unacceptable Rebound Levels

Smith (1960) presented the wave equation approach for developing static pile capacities based off soil mechanics, pile types, and pile driving equipment. Originally assumptions had to be made to account for the soil mechanics that develop each time the pile is struck. These soil properties were defined as quake and viscous damping. They represent the distance a soil fails elastically before failure proceeds plastically at a constant "ultimate" resistance, and the dynamic soil resistance due to the rate of penetration respectively.

Smith noted that soil quake could be assumed to be 0.10 inches. This was based off experience during the development of the basic wave approach and from a limited number of load tests that were taken to failure. Smith does note that 0.10 inches was acceptable until further review could provide more accurate quake values (1960). In 1963, Forehand and Reese found after analysis of pile static load test results that quake values ranging from 0.05 inches to 0.30 inches were present and the basic wave equation matched well with test results. As noted by Arthier and Fellenius (1980), authors Ramye and Hudgins (1977) concluded Smith's originally proposed quake value of 0.10 inch was sufficiently precise and any variations did not greatly influence capacity estimates.

Historically, it was not until the PDA analyzer and post driving signal matching CAPWAP software could be used iteratively with measured PDA data that more accurate soil properties could be determined. By manipulating the values of side and toe quake, side and toe soil damping, and side and toe resistances, wave equation developed force curves could be compared to actual field curves from PDA readings.

Authier and Felleniius (1980) used dynamic measurements and signal matching to determine actual quake values. They found in two case studies the force and velocity waves did not behave as expected during termination driving criteria for closed end pipe and concrete piles. With the originally assumed quake of 0.1-inches (2.5 mm) they were not able to produce good force curve matches from the PDA data. Only when quake values of 0.80 inches (20 mm) were used within the model did the predicted force curves match the measured. They also documented a lack in toe resistance at time 2L/c (expected time of wave reflection to pile top) followed by a substantial positive reflected force wave.

Likins (1983), referencing many consulting projects and three case studies, noted "high quakes" in the range of 0.4 to 1.0 inches were frequently encountered and could significantly alter the wave equation results. Displacement type piles were typically involved as well as pore water pressure buildup during the cyclic pile driving. They noted dissipation of excessive pore water pressures would usually, but not always, reduced the magnitude of soil quakes and result in higher resistance.

Likins (1983) noted that large toe quakes had complex effects on the pile driving. He found the ultimate capacity a specific hammer produced at refusal driving could be reduced by a factor of three or more when large quake was present, and only when a much larger hammer was used could a pile displacement exceed the increased penetration required to reach the ultimate soil resistance. Additionally, it was found the ultimate load in normal quake soil would equal approximately 1.2 times the input force at refusal. High quake soils would result in ultimate resistances much lower than the input forces, which increased risk to high tension stresses.

These tension stresses would be further increased by the slow response of the high quake soil (Likins, 1983). Likins noted the soil's full resistance effects are mobilized at the time of the first reflections at the pile tip with regular soil quakes because displacements at time of peak input velocity were comparable to the quake. In large quakes soils the displacements are much lower than the soil quake and only a fraction of resistance is mobilized at time of first reflections. Only after the force wave is reflected back in tension does the pile reach full penetration and resistance

The case studies noted above, have been previously referenced by this author as scenarios when rebound or high quake values presented installation problems for multiple sized displacement piles. However, the direct link between rebound and high quake was not made beyond a simple statement that rebound and quake may be related (Cosentino et al., 2010).

There is a commonality between rebound and quake more than they are just related. An important concept of soil quake is that the distance a soil fails or moves elastically is conserved or reversed after the stress or force from the hammer blow is removed. This means that any elastic displacement that has occurred during each blow is recovered or reversed. Cosentino et al. (2010) directly referenced rebound as the "recovered elastic deformation". Rebound is the recovered elastic displacement that is equal to the quake value as seen in Figure 2-1, noted by Cosentino et al. (2010).

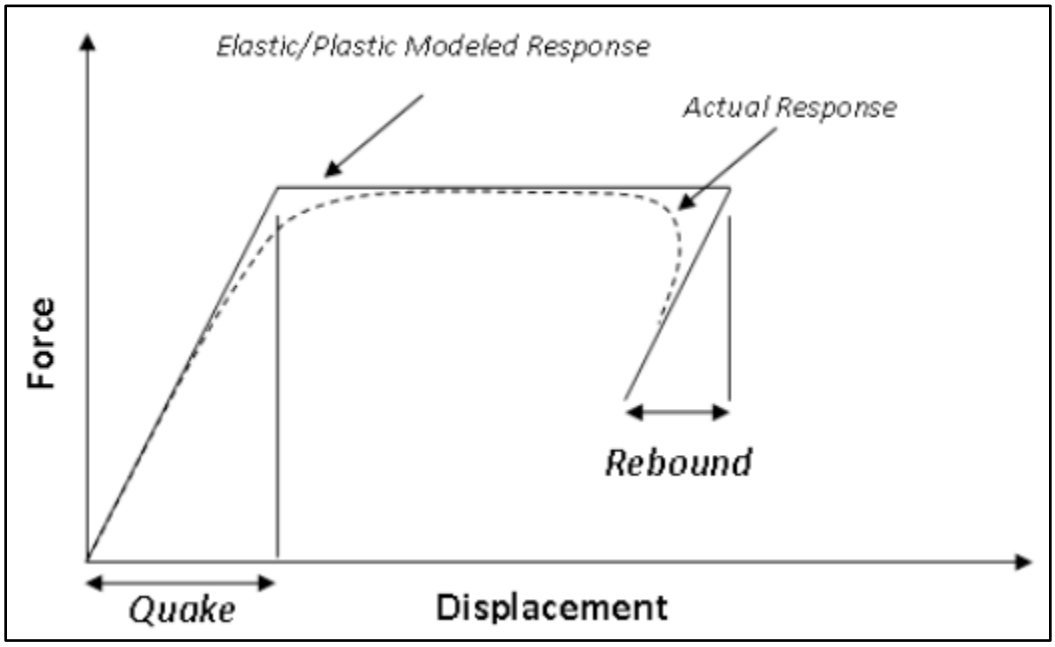

Figure 2-1 Force Displacement Model with Quake and Rebound

FDOT's current specification limits the amount of rebound when determining bearing capacity and refusal at 0.25 inches. Quake along with damping are referenced in FDOT Specification 455-5.14 as "soil variables". The earliest wave equation case studies found that quake magnitudes less than 0.30 inches resulted in acceptable wave equation capacity correlations with static load test. They also noted that quakes above 0.40 inches resulted in capacity reductions by factors of three or higher. The larger the soil quake, the higher the potential for capacity reduction.

Given that quake is the elastic limit displacement and rebound is, at least conceptually, the full elastic recovery of the initial downward displacement, it is very likely the 0.25 inch rebound specified limit by the FDOT represents the approximate 0.30 inch referenced by Forehand and Reese (1963), and 0.40 inches referenced by Likins (1983). It should be noted, rebound is a visually confirmed phenomenon and does not relate specifically to the piles own elastic compression due to each hammer blow. When

the FDOT 0.25-inch rebound limit and the case study data on soil quake are considered together, there does appear to be some implied pile elastic compression would also be accounted for. Thus, pile rebound of 0.25 inches plus elastic compression, would likely relate to quake values in the range of 0.40 inches or higher.

2.3 Determining Acceptable Rebound Levels Based on PDA Data

As previously discussed by Cosentino et al. (2010, 2016), recording pile data during driving can be done in multiple ways. Traditionally inspectors provide pile driving data in a log, which includes the incremental blows per foot, with associated fuel settings and additional information (sometimes including rebound). For more accurate rebound analysis of pile driving (or at least more complete analysis) more data is needed in order to develop correlations with soil test results. This requirement has resulted in using PDA records of test piles. PDA data provides a continuous record of the entire pile installation.

Determining rebound using PDA data can be troublesome. PDA accelerometer and strain gauges provide data that is manipulated to produce displacement values including maximum and final displacement (i.e., DMX and DFN). These values may not be entirely accurate. DMX is derived from measurements near the pile top and does not reflect the elastic compression of the pile which changes with stroke height and depth, or account for the differences in device movement between each blow. DFN is generally taken at the end of the approximate 200 ms time step per blow, which doesn't account for the full time between successive hammer blows (often 1.5 seconds for single acting diesel hammers). Therefore, DFN is often neglected and final displacement or set, is estimated based on one-foot average sets, from the inspectors recorded blow counts.

Rebound as noted by FDOT specification 455.5.10 (FDOT, 2015) is unacceptable for determining bearing capacity and refusal when it exceeds 0.25 inches, but using rebound data determined from PDA and inspector set generally does not present reliable results when only considering a limit of 0.25 inches. For instance, the DMX in a dynamic capacity report is generally is not in agreement with blows per foot, even when the inspector's log notes "no rebound" throughout the test pile driving.

Previous studies referred to rebound greater than 0.25 inches (Cosentino et al, 2010) or adjusted PDA rebound limits to 0.50 inches (Cosentino et al., 2016) to present better correlations given the limitations of the lower limit data. Others likely adjusted rebound limits and set blow count (Dekhn, 2015 and Cosentino et al., 2016) minimums to eliminate false rebound data. A result of blow count manipulation has partially resulted in rebound trends that reference high N values were directly related to the greatest rebound (above 2 inches per blow).

FDOT specification Section 455-5.2 requires the contractor to supply pile driving equipment which produces the required resistance at blow counts ranging from 36 to 120 blows per foot at the end of initial drive (FDOT, 2015). Review of the raw data has shown that rebound is also present during low driving blow counts and low N values (i.e., Chaffee Road) and this rebound, similar to Ramsey Branch, was some of the highest measured (Table 1-1).

Based on the inaccuracies in PDA measured rebound and the effects of considering only high blow count conditions, it is proposed that rebound be reviewed based on the following criteria.

1. A rebound limit of 0.5 inches.
2. Remove early driving data at lower fuel settings with the pile hammer, but also maintain documented inspector log or PDA notes so that rebound is not removed.
3. Remove early driving conditions associated with the predrilled pile installation hole.

These criteria do not eliminate all unknowns or inaccuracies in the data analysis, such as stroke height variations, limited signal matching for PDA force curves, and pile penetration, but is a step towards eliminating as much false data as possible without negatively affecting the overall results.

3 Identification and Organization of Additional HPR and Non-Rebound Sites Based on Rebound Level

Rebound was documented from sites previously reviewed by Cosentino et al. (2010, 2016). The sites included eight rebound sites with 15 test piles in Orlando locations along the I-4 corridor, non-rebound sites along the East coast in Daytona and Palm Bay, and large rebound sites in the panhandle and Jacksonville. These sites are listed in Table 3-1. Extensive work was conducted to identify new sites with sufficient data throughout Florida. As a result, six additional sites (note two sites included two bridges) were identified which included 22 test piles. Figure 3-1 shows a Google Earth Pro® image depicting the original eight sites plus the additional six sites. Table 3-2 lists new sites added as part of the research.

Table 3-1 Summary of Existing Site Rebound Data

Site Description	Test Pile	Visual Rebound (in)	PDA Rebound (In)	Blowcount	Rebound Classification
417 and International	EB1P14	N.A.	0.38	N.A.	No Rebound
	EB2P5	N.A.	0.5	N.A.	No Rebound
Anderson Street Overpass	P6P6	1	1.18	240+	Unacceptable
Heritage Parkway	EB1P14	N.A.	0.67	N.A.	No Rebound
	IB3P1	N.A.	0.67	N.A.	No Rebound
	EB5P1	N.A.	0.5	N.A.	No Rebound
I4 and 192	BD EB1P3	0.50-1.00	1.05	50-391	Unacceptable
	CA P8P4	0.50-0.75	0.96	164	Unacceptable
I4 Widening Daytona	EB 3-1 P5	N.A.	0.47	N.A.	No Rebound
Ramsey Branch	EB1 P1	N.A.	0.93	136	Unacceptable
	B4P5	0.50-0.75	1.47	100+	Unacceptable
	EB5P2	0.50-0.75	1.4	140	Unacceptable
Chaffee and I-10	P2P9	2.00-3.00	2.63	10	Unacceptable
I4 and JYP	RA P2P1	0.75-1.00	1.08	125	Unacceptable
	RA P9P12	0.75-1.00	1.06	227	Unacceptable

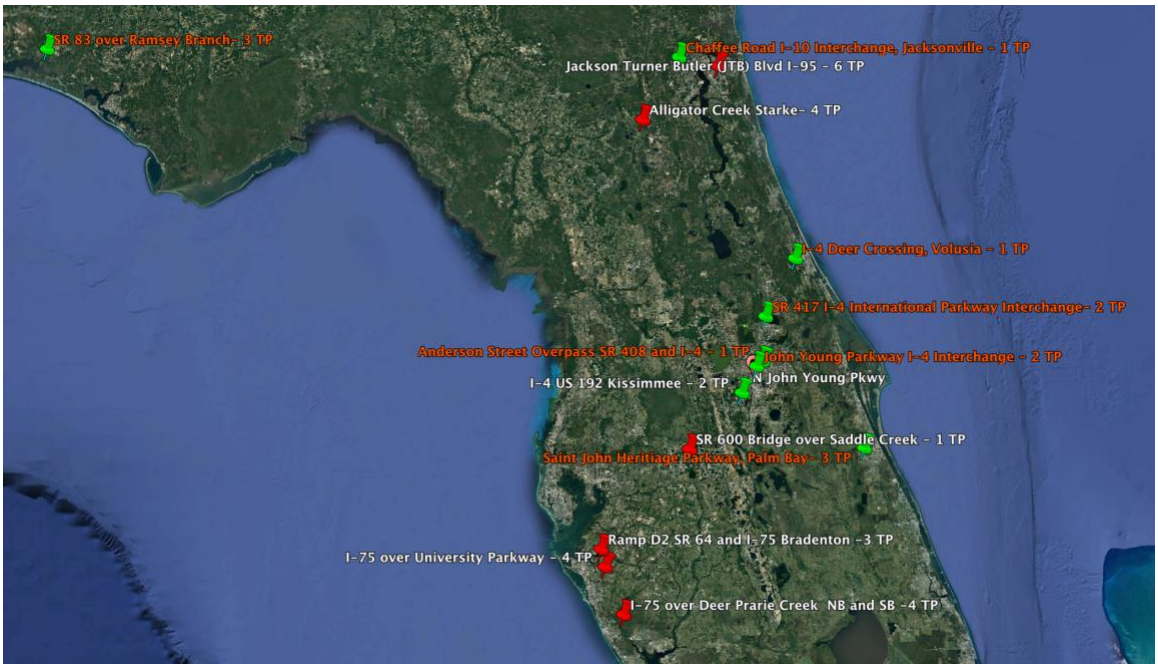

Figure 3-1 Google Earth Pro® Image of original (green locator-red description) and addition (red locator-white description) sites

Table 3-2 Summary of New Site Rebound Data

Site Description	Test Pile	Visual Rebound (in)	PDA Rebound (In)	Blowcount	Rebound Classification
SR 600 Over Saddle Creek	B2 P2	0.25	0.65	210	Unacceptable
I-75 Over University Parkway	B1SB P2	0.25	0.5	126	Acceptable
	B2SB P3	N.A.	0.5	N.A.	No Rebound
	B2NB P3	N.A.	0.59	N.A.	No Rebound
	B3NB P7	0.375	0.55	317	Unacceptable
I-75 over Deer Prairie Creek (170124)	B2 P3	>0.25	1.34	<72	Unacceptable
	B5 P3	>0.25	1.18	<83	Unacceptable
I-75 over Deer Prairie Creek (170125)	B1 P1	>0.25	1.25	<118	Unacceptable
	B4 P1	>0.25	1.4	<83	Unacceptable
SR 64 and I-75	B1 P3	N.A.	0.8	N.A.	Unacceptable
	B2 P9	N.A.	0.87	N.A.	Unacceptable
	B3 P1	0.3	0.8	173	Unacceptable
Alligator Creek	B1SB P5	HR	1	240+	Unacceptable
	B2SB P5	HR	1.05	173	Unacceptable
	B3NB P5	N.A.	0.86	N.A.	Unacceptable
	B4SB P5	HR	0.77	65	Acceptable
JTB Blvd and I-95 (720817)	B1 P9	N.A.	0.5	N.A.	No Rebound
	B2 P1	N.A.	0.38	N.A.	No Rebound
	B4 P9	N.A.	0.5	N.A.	No Rebound
JTB Blvd and I-95 (720816)	B5 P3	1	1.2	122	Unacceptable
	B6 P4	0.50-1.00	1.31	<111	Unacceptable
	B7 P14	0.75	0.95	>120	Unacceptable

Each table briefly notes whether rebound, and associated magnitude, was documented in the field by the inspector or the PDA operator (Visual Rebound). The

PDA rebound is measured similar to previous studies and based on the difference between PDA maximum displacement (DMX) and final set based off the inspector blow counts (iSET). In addition, blow count ranges or maximums were noted for the rebound soils. If rebound was not included in either the driving log or the PDA operator notes, the pile was generally considered not to rebound unless magnitudes were high (+ 0.75 inches) or the site itself was a known rebound site.

3.1 Site Description, Soil Profiles, Pile Driving Operations, and PDA Output

General site descriptions are presented, followed by figures for each test pile detailing PDA displacement data aligned with soil USCS profiles, SPT safety hammer equivalent (N_{ES}) values, and available fines content (FC) percentages. Descriptions included rebound measured using PDA (DMX-iSET) displacements, as noted in construction submittals or PDA operator notes, and in test pile driving logs (if available). It should be noted that slight differences existed between ground surface elevation (GSE) of SPT borings and test pile locations. The descriptions presented were related specifically to the SPT profile elevations. Details of the data from each site are included in the Appendix.

3.1.1 S.R. 600 Over Saddle Creek

The SR 600 Bridge over Saddle Creek is located in Polk County, Florida, roughly five miles east of Lakeland. The project included the replacement of a two-lane roadway bridge spanning Saddle Creek. Construction was completed in 2017 under FDOT project ID 431208-1-52-01. The test pile under investigation is Bent 2 Pile 2 (B2P2).

The SPT GSE is approximately +110 ft. (NAVD88). The ground water table (GWT) was 5 feet below GSE at the time of SPT boring. The bridge bents are supported by 18-inch square prestressed concrete piles (PCP) with required lengths ranging from 50 to 55 feet, and nominal bearing resistances between 150 and 230 tons. The test pile was driven with a Pileco D30/32 single-acting diesel hammer with a rated energy of 69.9 ft-

kips, and included a 10-inch-thick plywood pile cushion and 2-inch ceramic/aluminum hammer cushion. B2P2 was predrilled approximately 29 feet and driven an additional 8 feet to a depth of 37 feet.

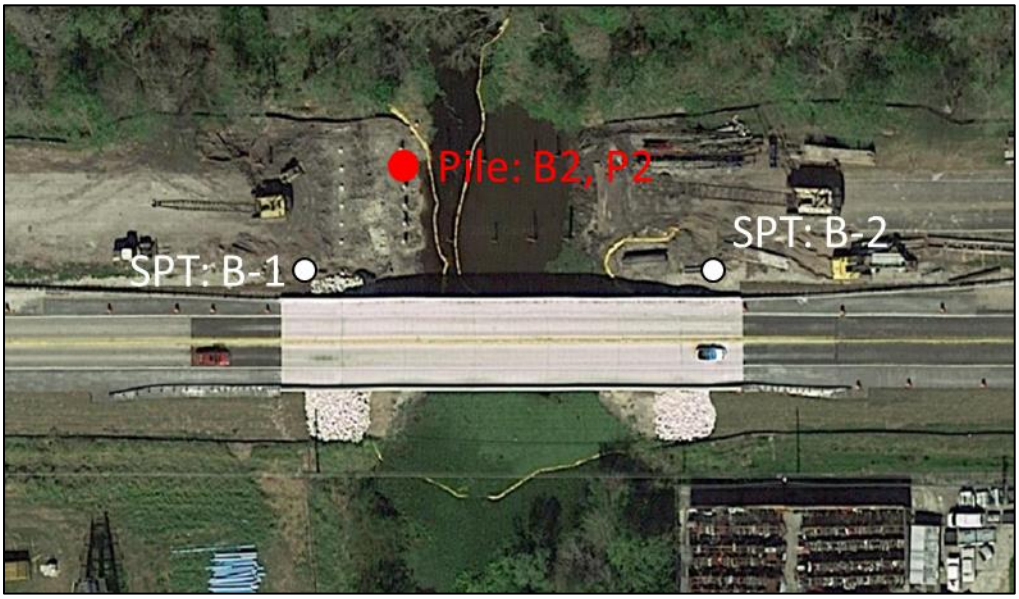

Figure 3-2 Test pile and SPT boring locations for S.R. 600 over Saddle Creek

Figure 3-2 shows the site with the approximate field-testing locations and location of B2P2. SPT's (B-1 and B-2) were performed on both the east and west banks of Saddle Creek. SPT's were performed using CME 75 equipped with automatic hammers. The soils at the site mainly consist of silty sand (SM) mixed with layers of highly compressible silt (MH) and sands with appreciable plastic fines or clay with high plasticity. Given such a small site a soil comparison between boring B-1 and B-2 shows very similar soil layering.

3.1.2 **Results: Bent 2, Pile 2**

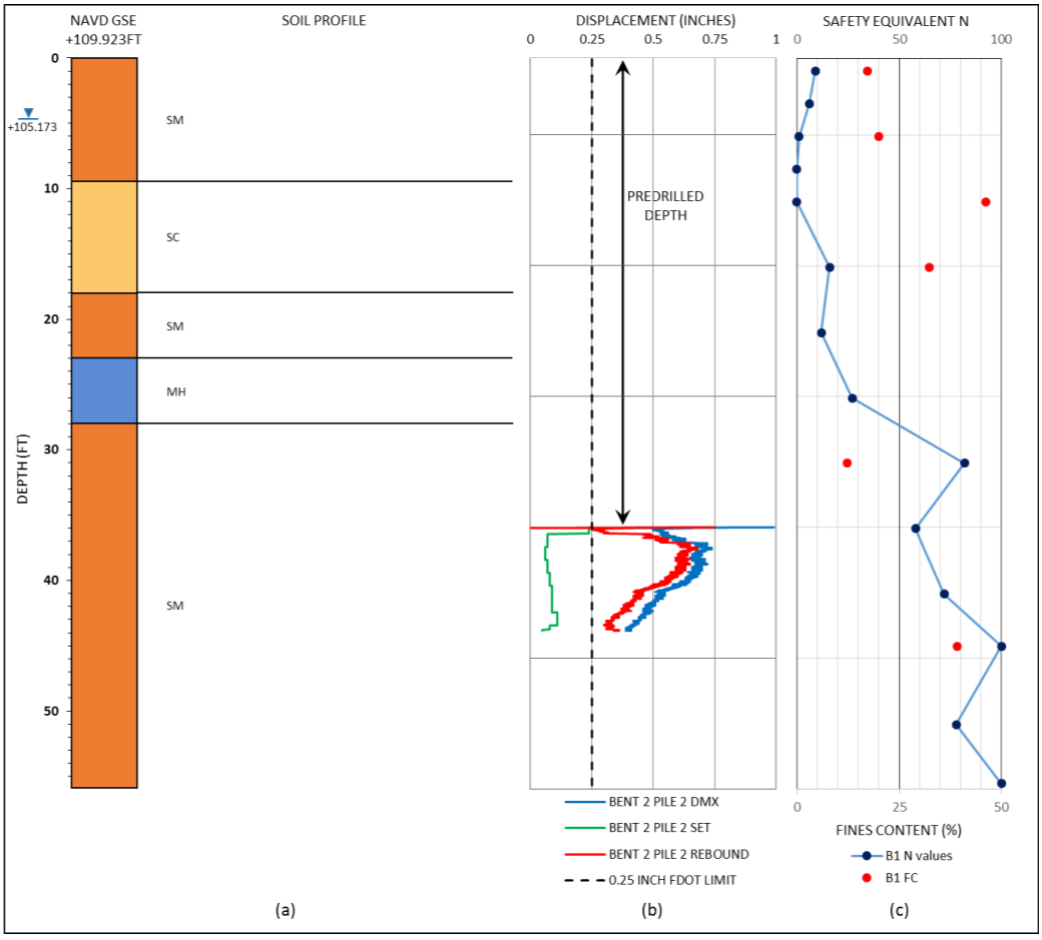

Figure 3-3 (a) B-1 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for S.R. 600 over Saddle Creek Test Pile Bent 2, Pile 2

As seen in Figure 3-3, HPR was identified by PDA throughout the driving of B2P2 with maximum rebound values reaching approximately 3/4 of an inch. Maximum rebound corresponded with a thick layer of very dense silty sands. The driving log did not note rebound, but it was included in the PDA file notes which listed rebound of ¼ inch from blow number 397 to number 760. This blow range corresponds to elevations between +71.62 and +69.45, and PDA measured rebound greater than approximately 0.6 inches. Rebound was not noted at the end of driving or during any set checks.

3.1.3 I- 75 Over University Parkway

The northbound and southbound lanes of I-75 over University Parkway are located on the border of Sarasota and Manatee Counties. The project included the demolition and reconstruction of each overpass. Construction is under FDOT project ID 201032-4-52-01 with completion set for December of 2017. The test piles under investigation are B1 SB (southbound) P2, B2 SB P3, B3 NB (northbound) P7, and B2 NB P3.

The approximate SPT GSE were between +26.5 and +29.6 feet (NGVD29) with two borings located between the existing bridges at higher elevations. The GWT was located 6 to 7 feet below GSE at the time of SPT boring. The bridge bents are supported by 24-inch square PCP with required lengths ranging from 80 to 120 feet, and nominal bearing resistances between 362 and 444 tons. Test piles were driven with an APE D50-42 single-acting diesel hammer with a maximum rated energy of 124 ft-kips, and included use of a 12 to 18 inches of plywood pile cushion and 3.5 inches of ceramic/aluminum hammer cushion. Northbound piles were predrilled to an elevation of - 15 feet and southbound test piles were predrilled between 15 and 20 feet below GSE.

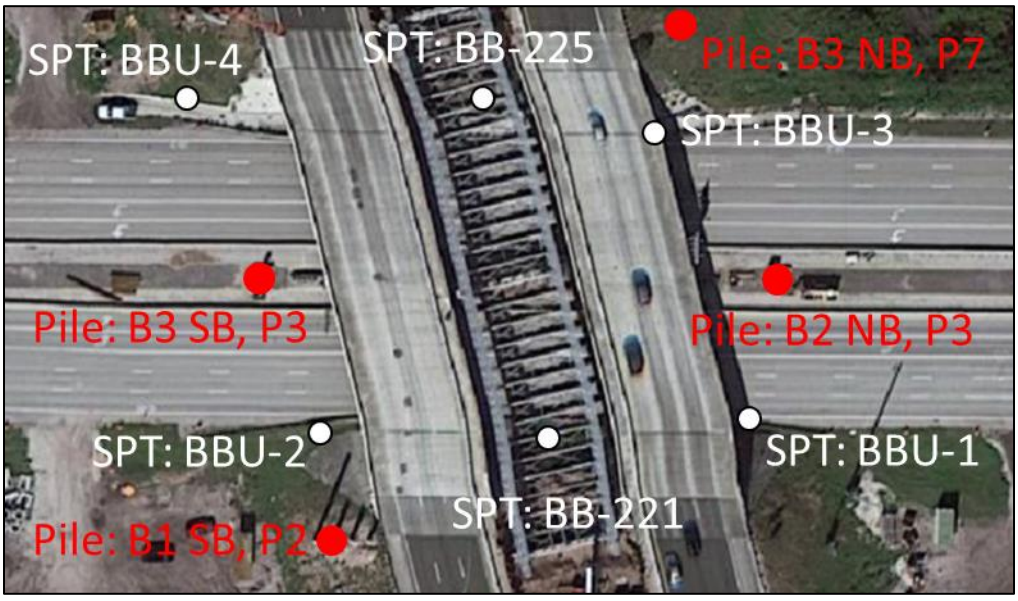

Figure 3-4 Test pile and SPT boring locations for I-75 over University

Figure 3-4 shows the site with approximate locations of SPT field testing and of the four test piles reviewed. The BBU SPT's were performed using a D-25 safety hammer rig and the BB SPT's were driven with automatic hammers. The soils at the site mainly consist of sand and silty sand ranging from loose to very dense with very stiff to hard clay sand to sandy clay layers. In all BBU borings a very loose to very soft layer between +5 and -10 feet (NGVD29) exists and is comprised of silty sands to sandy clays.

3.1.4 **Results: Bent 1 SB Pile 2**

Rebound was identified from the driving log between elevations of -13.5 and - 17.5 feet. This corresponds to pile blows 1277 through 1472 where the PDA operator noted rebound of ¼ inch. This rebound can be seen in Figure 3-5 where PDA-measured rebound was up to approximately ½ inch. Rebound for test pile B1 SB P2 corresponds to a 5-foot layer of very dense sand to sand with silt overlaying a thick layer of hard clayey sand to sandy clay.

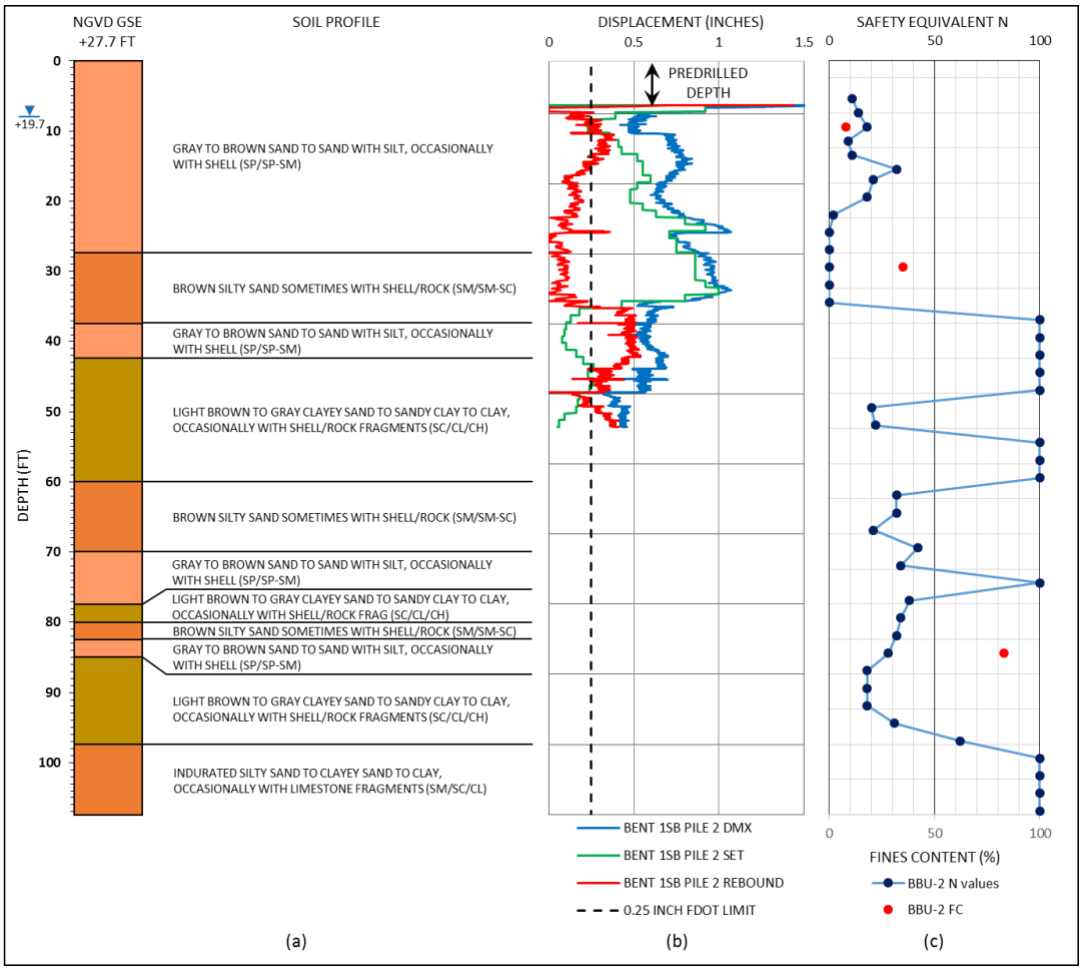

Figure 3-5 (a) BBU-2 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over University Parkway Test Pile Bent 1 SB, Pile 2

3.1.5 **Results: Bent 2 SB Pile 3**

No pile rebound was documented in the inspector log or the notes of the PDA file. The PDA file and print out does indicate rebound in the range of ½ inch, which can be seen in Figure 3-6. This zone corresponds to very dense sand with silt or hard soils with high concentrations of clay. It is likely that any rebound identified in the PDA incorrectly lists pile motions that would not appear as rebound in the field.

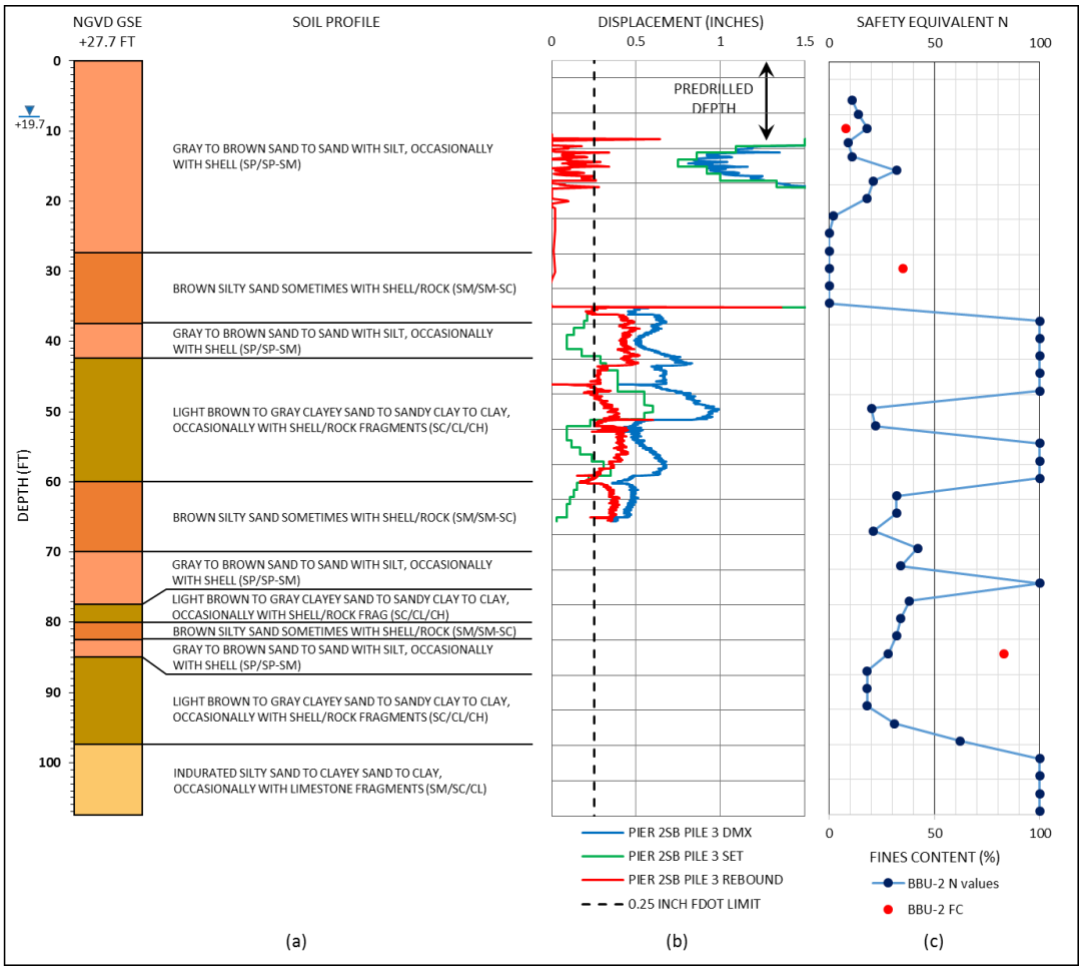

Figure 3-6 (a) BBU-2 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over University Parkway Test Pile Bent 2 SB, Pile 3

3.1.6 **Results: Bent 2 NB Pile 3**

No pile rebound was documented in the inspector log or the notes of the PDA file. The PDA file and print out does display rebound greater than ½ inch which is visible in Figure 3-7. This zone corresponds to dense sand with silt and hard soils with high concentrations of clay. It is likely that any rebound identified in the PDA incorrectly lists pile motions that would not appear as rebound in the field.

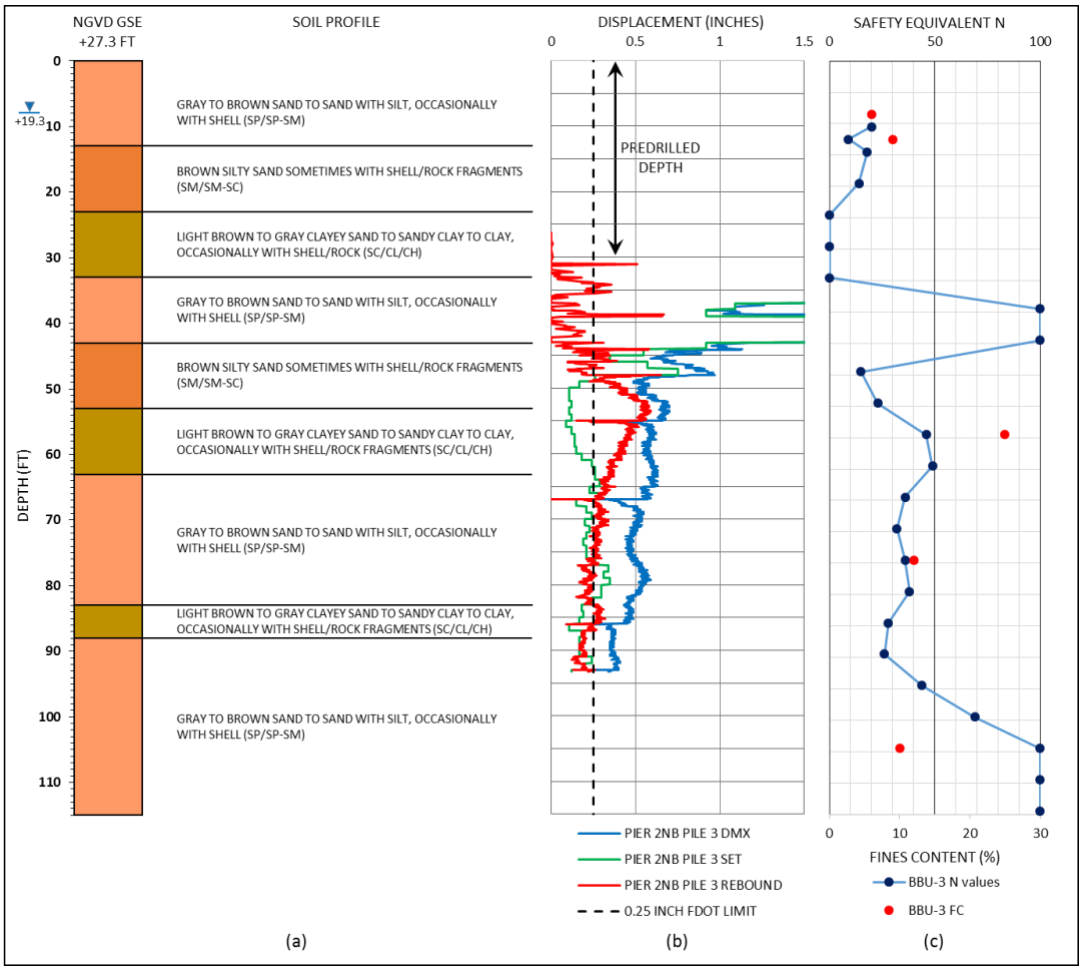

Figure 3-7 (a) BBU-3 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over University Parkway Test Pile Bent 2 NB, Pile 3

3.1.7 **Results: Bent 3 NB Pile 7**

Rebound, as shown in Figure 3-8, was identified by the driving log in two layers. Rebound was first identified between the elevations of -31 feet to -53 feet and reached an approximate maximum of 3/8 inches. This corresponds to a hard layer of clayey sand to sandy clay and a thick layer of dense sand with silt. Rebound of ¼ inch, of was also noted from the elevations -53 feet to -58 feet corresponding to a 5-foot thick layer of very stiff clayey sand to sandy clay.

Rebound was noted by the PDA operator as occurring between blows 294 through 593 and 861 through 3794. These blow ranges correspond to elevations of -20.5 to -23.5 feet and -30 to -57 feet, respectively. Rebound measuring 3/8 of an inch was noted between the elevations of -33.5 to -36 feet, which corresponds with dense to hard layers throughout the soil profile. It is noted that rebound ceases in Figure 3-8 as the pile penetrated very stiff to hard sandy clay to clayey sand to clay layers.

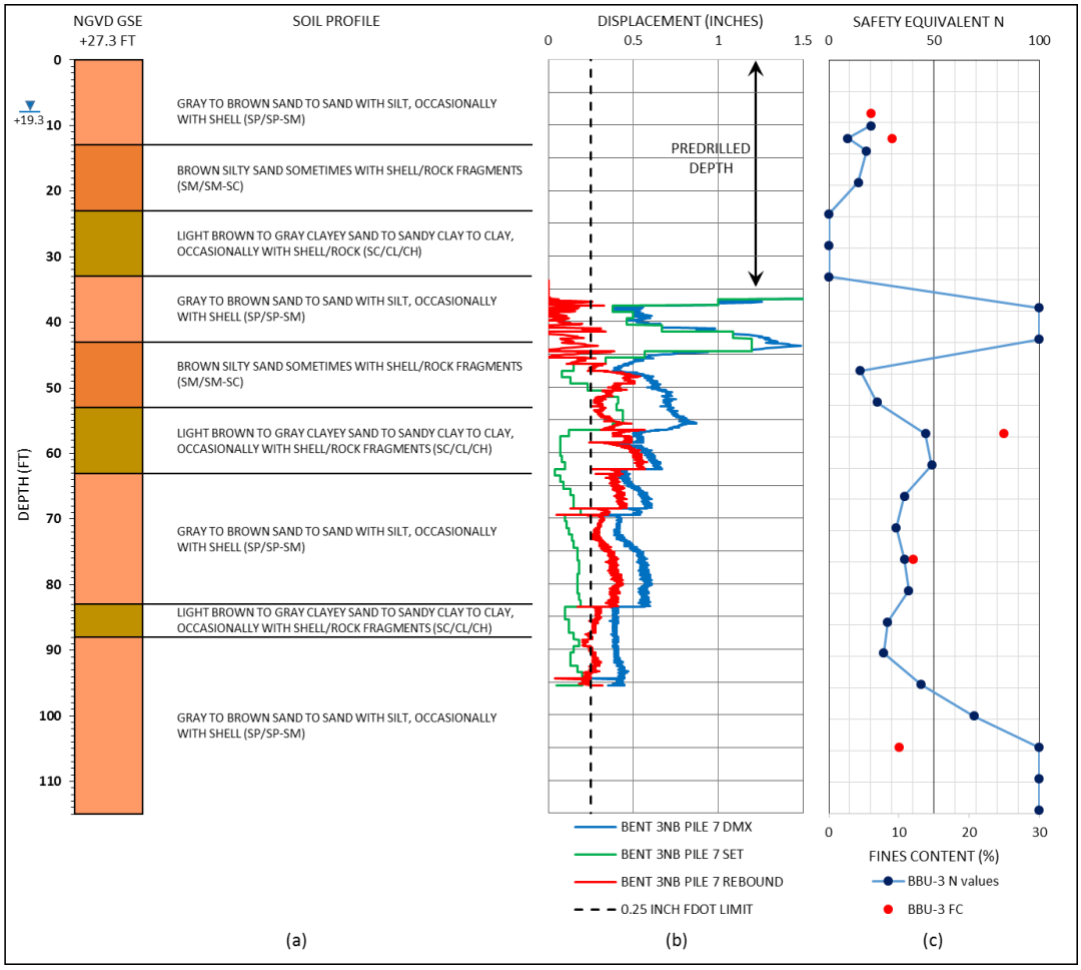

Figure 3-8 (a) BBU-3 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over University Parkway Test Pile Bent 3 NB, Pile 7

3.2 I-75 over Deer Prairie Creek

The widened bridge over Deer Prairie Creek is located 4 miles east of the Myakka River Northeast of Port Charlotte. The project included the rehabilitation of existing pavement and the addition of lanes for a 9 mile stretch of I-75. Construction is complete under FDOT project ID 413044-4-52-01 with completion in 2017. The test piles under

investigation are B2P3 and B5P3 which support the expansion of northbound bridge 170124, and test piles B1P1 and B4P1 for bridge 170125.

The approximate SPT GSE is between +19 and +20 feet (NGVD29). The GWT was found 9 to 10 feet below GSE at the time of SPT boring. The bridge bents are supported by 18-inch square PCP with test pile required lengths ranging from 70 to 80 feet, and nominal bearing resistances up to 125 tons. Test piles were driven with an MKT DE-70B single-acting diesel hammer with a maximum rated energy of 70 ft-kips, and included use of a 9 inches of plywood pile cushion and 3 inches of ceramic/aluminum hammer cushion. Test piles were predrilled approximately 30 feet.

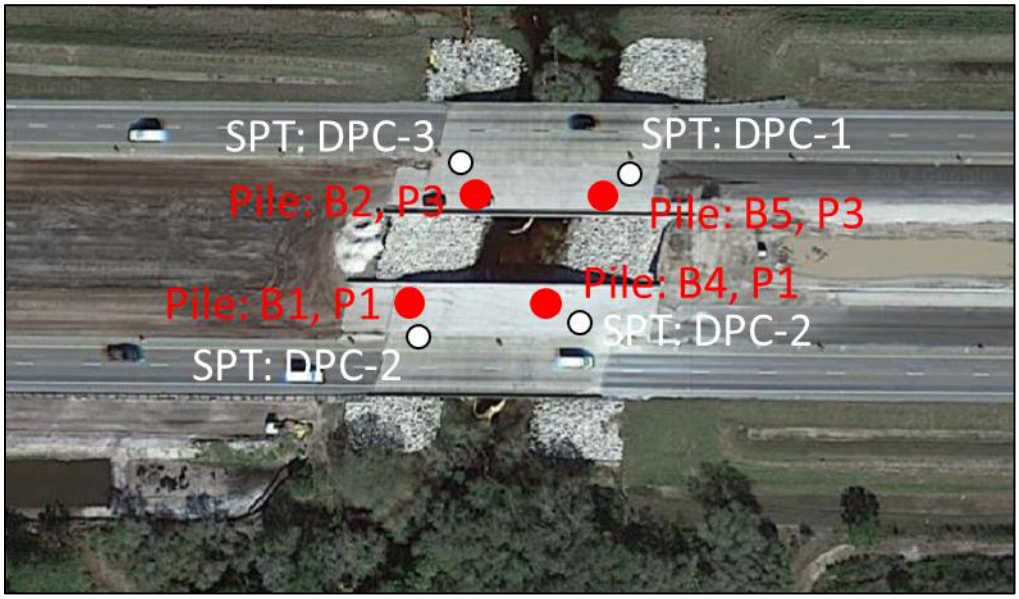

Figure 3-9 Test pile and SPT boring locations for I-75 over Deer Prairie Creek

Figure 3-9 shows the site with approximate locations of SPT field testing and test piles. The SPT borings were all performed using automatic hammer drilling rigs. The soils at the site mainly consist of loose silty to clayey sands that overlay hard layers of weathered limestone and very stiff to hard sandy clay or clayey silt.

3.2.1 **Results: Bent 2, Pile 3 (170124)**

Rebound was identified during driving at length of pile markings from 49 to 58 feet which corresponds, as shown in Figure 3-10, to elevations of -28.5 and -37.5 feet. Rebound magnitude was not noted in the driving log and referred to only as greater than ¼ inch. The PDA data shows rebound exceeding approximately ½ inch and reaching as high as 1.25 inches in the elevation ranges noted in the driving log. Rebound appears to peak at an elevation of -33 feet, corresponding a medium dense to dense silty to clayey sand overlaying hard (SPT refusal condition) sandy clay to clayey silt with phosphate.

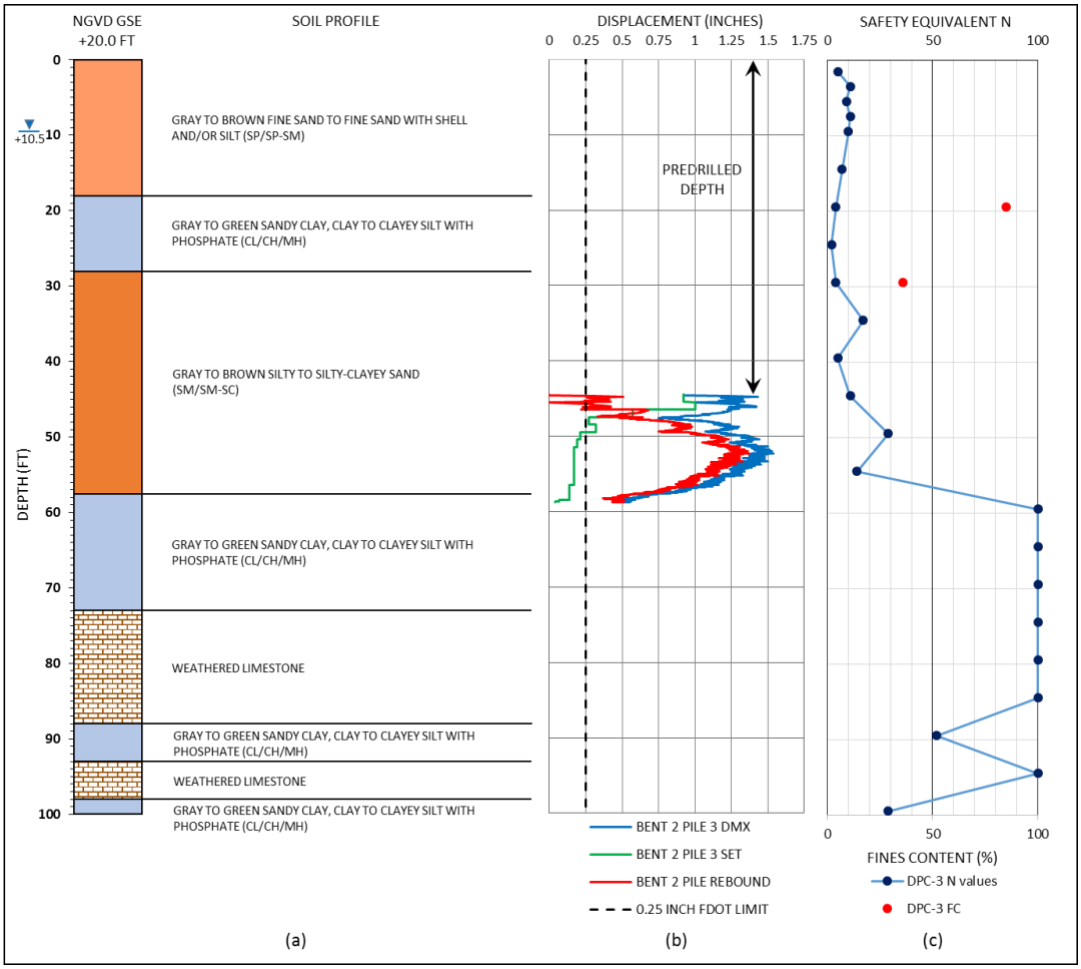

Figure 3-10 (a) DPC-3 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over Deer Prairie Creek Test Pile Bent 2, Pile 3

3.2.2 **Results: Bent 5, Pile 3 (170124)**

Rebound greater than ¼ inch was identified in the driving log between the length of pile (LP) markings of 49 and 55 feet. These depths correspond to elevations of - 28.3 and -34.3 feet. The PDA operator noted that rebound between hammer blows 204 and 652 which matches the elevations of the driving log notes. Rebound as described by the PDA operator was categorized as significant from blow 204 to 466 and noted to be between ¼ and ½ up to blow 652. Blow 466 corresponds with an elevation of -33.5 feet.

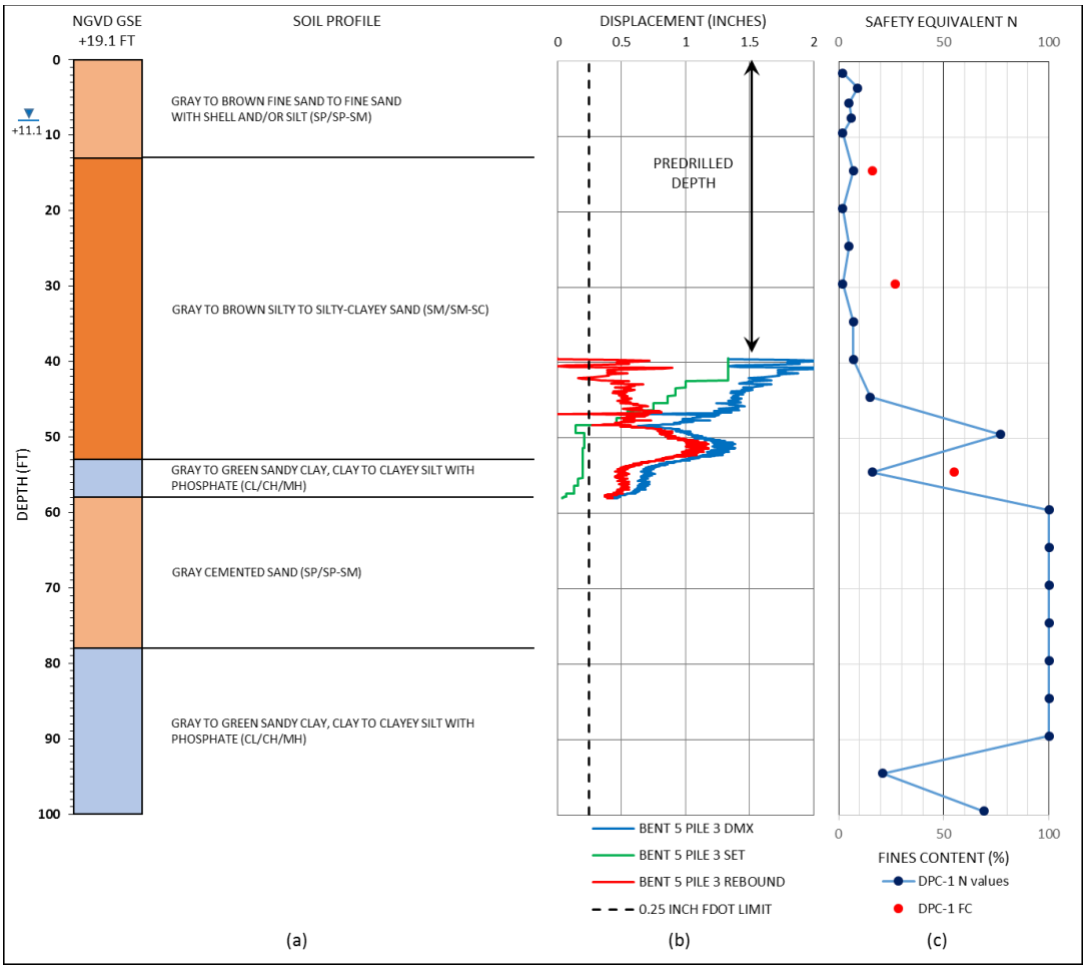

Figure 3-11 (a) DPC-1 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over Deer Prairie Creek Test Pile Bent 5, Pile 3

In reviewing Figure 3-11 it can be seen that rebound corresponds to very dense to hard silty sand to silty-clayey sand, and a very stiff clay to clayey silt with phosphate. The maximum PDA-recorded rebound, referred to as significant, measured over 1 inch. Rebound appeared to decrease after the pile penetrated past the boundary between the two different strata.

3.2.3 **Results: Bent 1, Pile 1 (170125)**

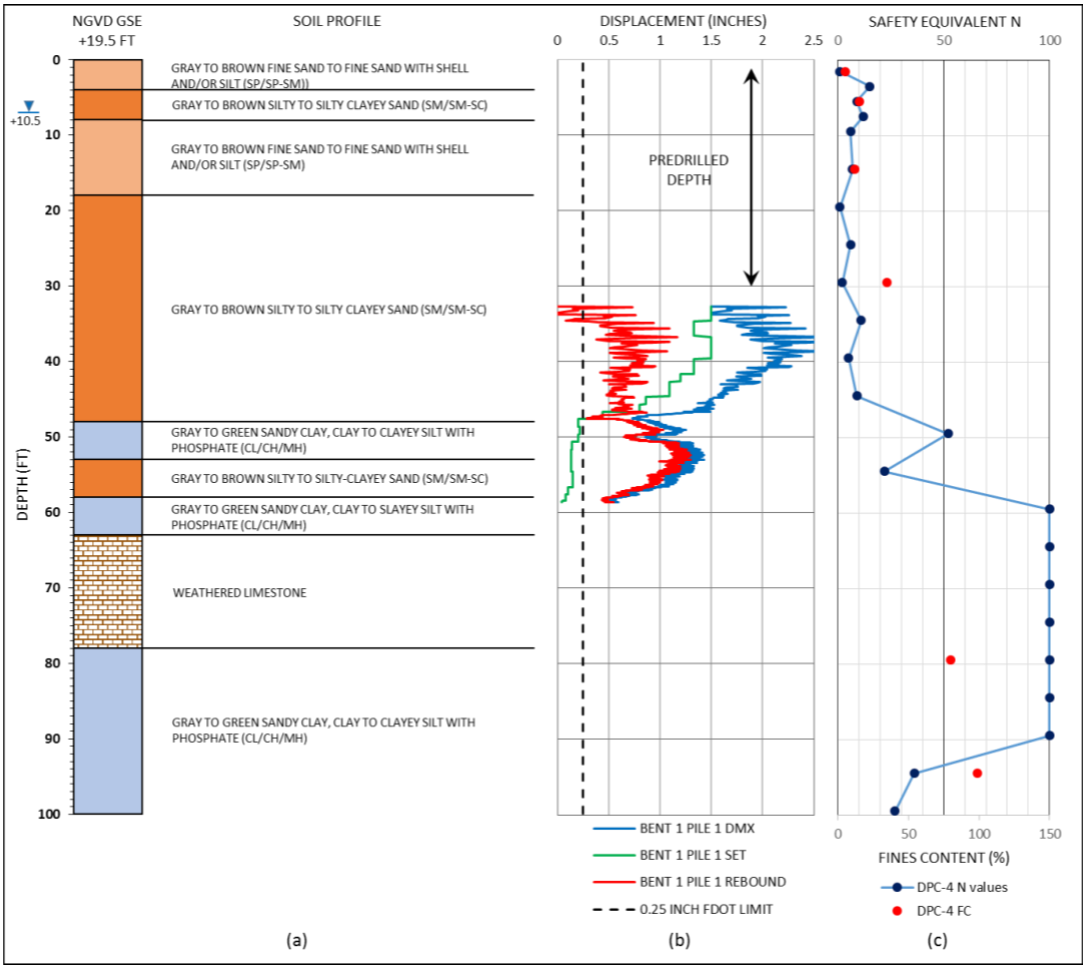

Figure 3-12 (a) DPC-4 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over Deer Prairie Creek Test Pile Bent 1, Pile 1

Rebound was documented at LP readings of 49 and approximately 60 feet in the driving log which relates to a rebound layer between the elevations of -28 and -39 feet. The PDA operator notes match the driving inspector notes, with rebound occurring between hammer blows 137 and 983. Rebound is only referenced as exceeding ¼ inch in the driving log but was likely significant as the PDA records in Figure 3-12 show rebound in excess of 1 inch. Rebound occurs in very stiff to hard clayey soils that correspond to SPT refusal blow counts.

3.2.4 **Results: Bent 4, Pile 1 (170125)**

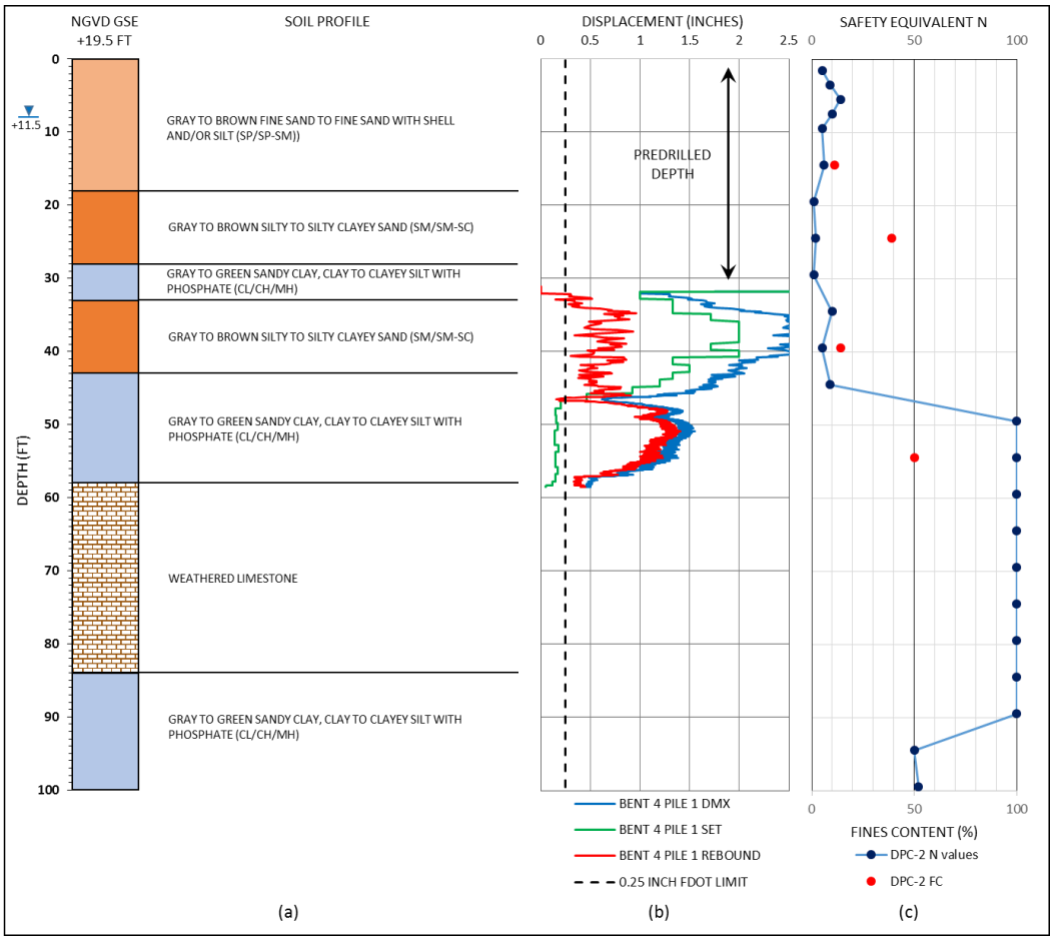

Figure 3-13 (a) DPC-3 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over Deer Prairie Creek Test Pile Bent 4, Pile 1

Rebound was documented at LP readings of 46 and approximately 56 feet in the driving log, which relates to a rebound layer between the elevations of -27.3 and -37.3 feet. The PDA operator notes, match approximately the rebound elevations from the inspector notes, showing rebound occurring between hammer blows 187 and 915. Although the PDA operator does reference a definable rebound measurement, the notes state significant rebound is any rebound that exceeds 1 inch. This rebound is visible in Figure 3-13 where PDA rebound is greater than 1.25 inches. Rebound occurs in a hard-sandy clay to clayey silt with phosphate that lies directly above a 25-foot-thick layer of hard weathered limestone.

3.3 SR 64 and I-75

The intersection between SR 64 and I-75 is located approximately 6 miles east of Bradenton, Florida. The project includes the construction of a new ramp (Ramp D2). Construction is under FDOT project ID 201032-6-52-01 with completion during 2019. The test piles under investigation are B1P3, B2P9, and B3P1.

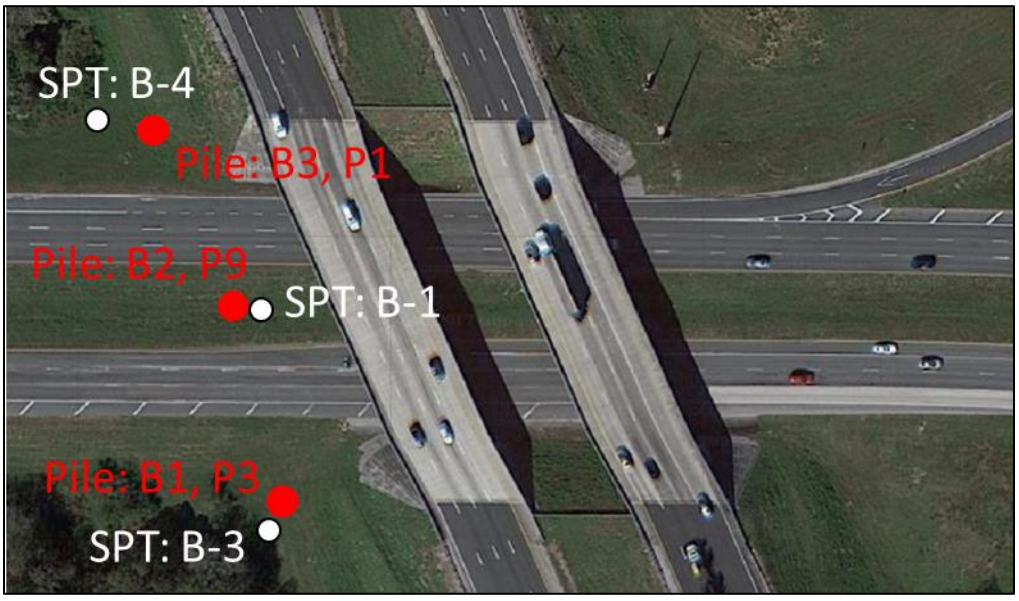

Figure 3-14 Test pile and SPT boring locations for I-75 over SR 64

The approximate SPT GSE were between +17 and +21 feet (NGVD29). The GWT was located approximately 5 feet below GSE at the time of SPT boring. The bridge bents are supported by 18-inch square PCP with required lengths ranging from 65 to 90 feet, and nominal bearing resistances between 228 and 250 tons. Test piles were driven with an APE D36-42 single-acting diesel hammer with a maximum rated energy of 89.3 ft-kips, and included use of a 9 inch of plywood pile cushion and 3.5 inches of ceramic/aluminum hammer cushion. Piles were predrilled approximately 10 feet below GSE.

Figure 3-14 shows the site with approximate locations of SPT field testing and of the three test piles reviewed. The SPT's were performed using a D-25 automatic hammer rig. The soils at the site consist of sands, silty sands, and clayey sands from very loose to medium dense that overlay alternating layers of hard silt and calcareous clay.

3.3.1 **Results: Bent 3, Pile 1**

Rebound of 0.3 inches was identified during driving at LP markings from 43 to 46 feet which corresponds to elevations of -17.72 and -20.72 feet. This corresponds to rebound of approximately 3/4 of an inch measured by PDA and is shown in Figure 3-15. Rebound appears to peak at an elevation of -19 to -20 feet and corresponds with boundary between light brown to brown clayey sand and a 20-foot thick layer of hard (SPT refusal) light gray to gray silt.

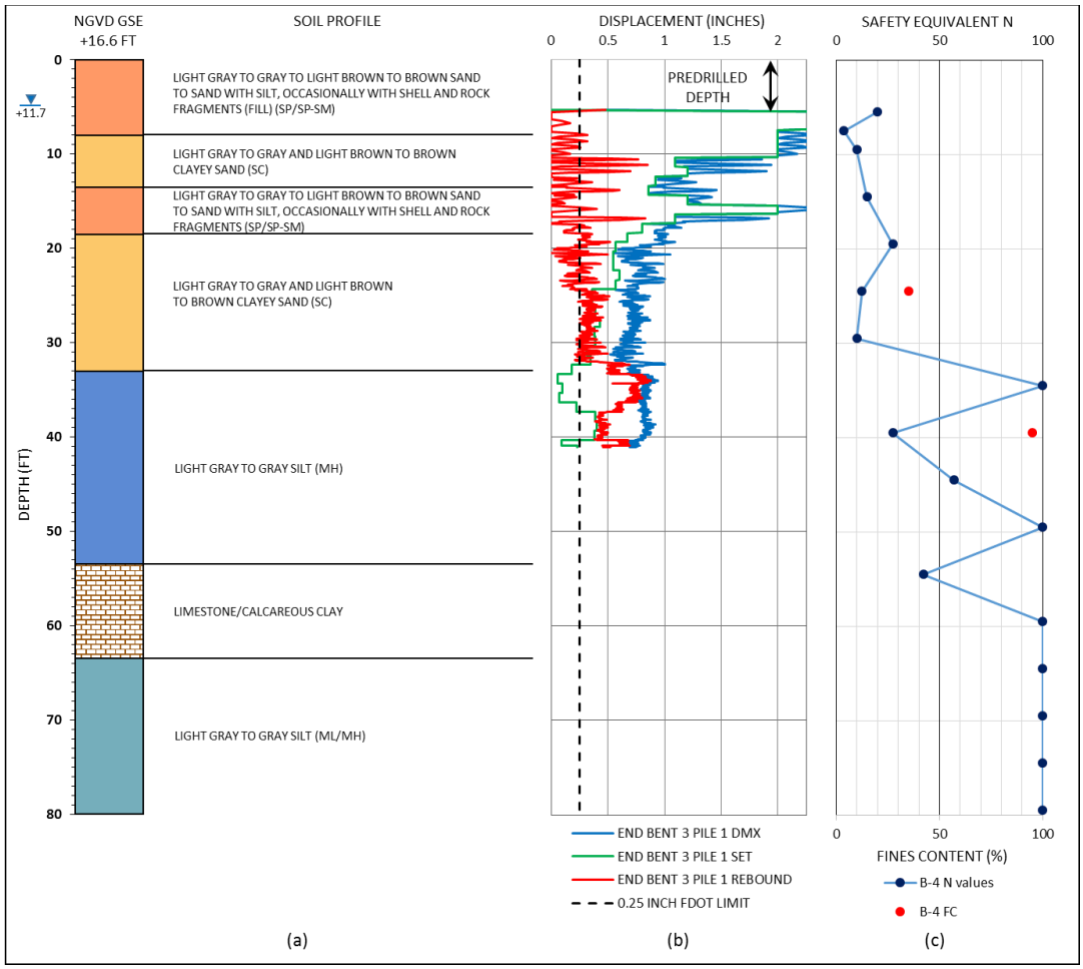

Figure 3-15 (a) BB-4 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over SR 64Test Pile Bent 3, Pile 1

3.3.2 **Results: Bent 1, Pile 3**

Rebound was not identified in the driving log or the PDA operator notes. Rebound measured by PDA displacements can be seen in Figure 3-16. Rebound reached a maximum of 1 inch at an elevation of -7 feet, and then reduced as the pile was driven further. The majority of the pile driving, and any possible rebound, took place in a 30-foot layer of gray silt that is very stiff to hard.

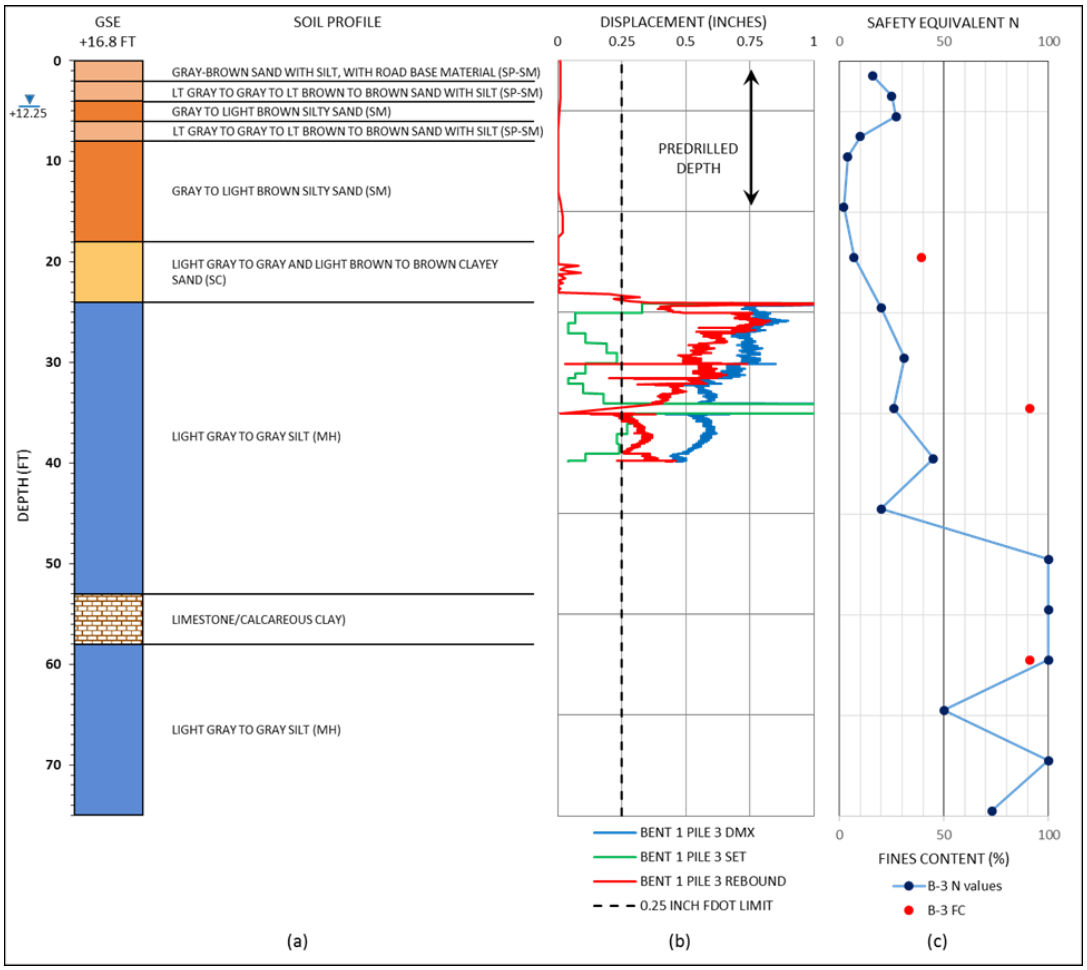

Figure 3-16 (a) BB-4 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over SR 64 Test Pile Bent 1, Pile 3

3.3.3 **Results: Bent 2, Pile 9**

No pile rebound was noted in either the driving log or the PDA operator notes. However, PDA measured rebound, shown in Figure 3-17, reaches a maximum of approximately 7/8ths of an inch. The soil layers corresponding to rebound are a very dense limestone or calcareous clay, and a stiff plastic clay.

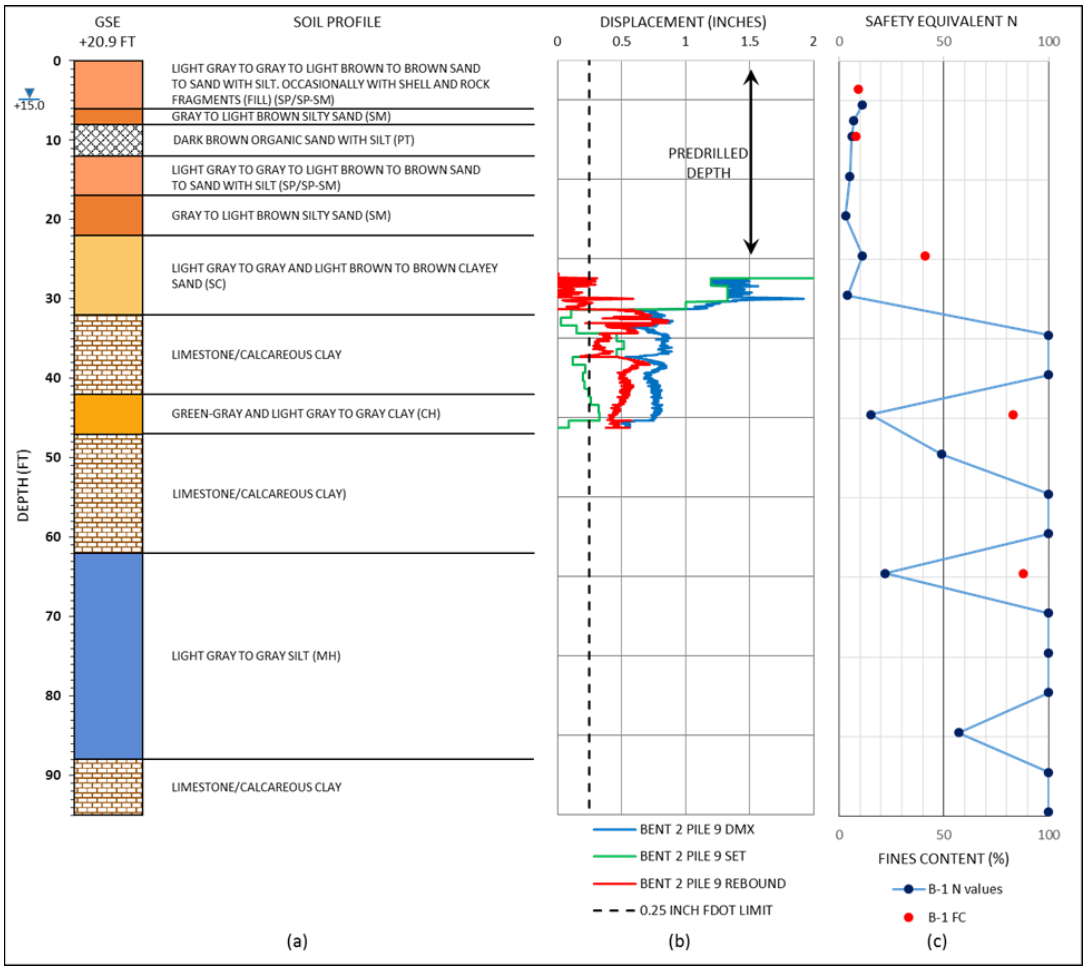

Figure 3-17 (a) BB-4 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for I-75 over SR 64Test Pile Bent 2, Pile 9

3.4 Starke Bypass over Alligator Creek

The Starke Bypass is a 7-mile long, 4-lane trucking route designed to relieve traffic congestion along US 301 within the city limits. The project includes a bridge that spans Alligator Creek. Construction is being completed under FDOT project ID 208001-4-52-01 with completion set for 2019. The test piles under investigation are B1P5 and B2P5 for the southern span, and B1P5 and B3P5 for the northbound span.

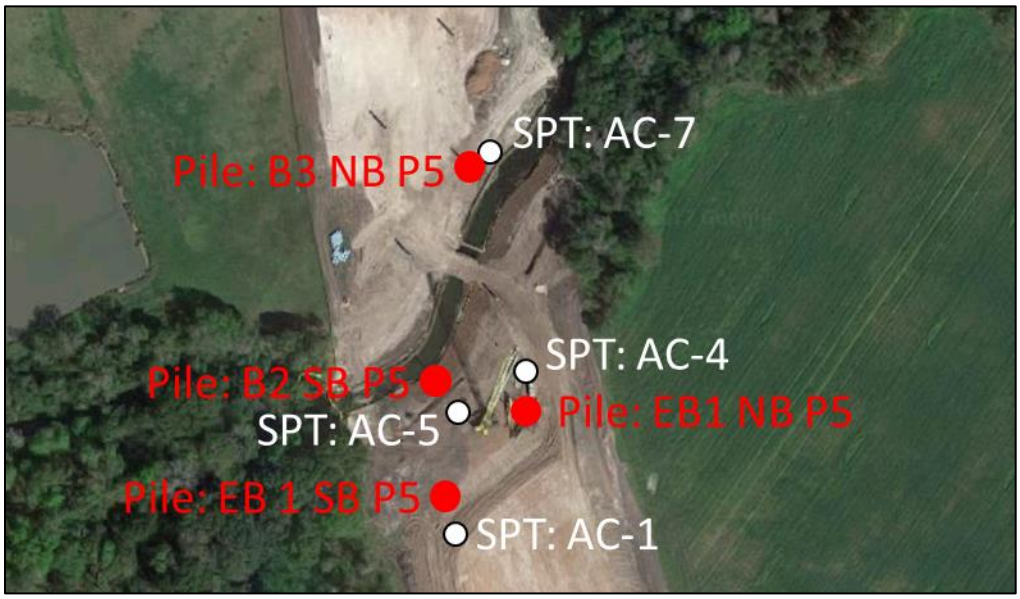

Figure 3-18 Test pile and SPT boring locations for Starke Bypass over Alligator Creek

The approximate SPT GSE's were between +135 and +137 feet. The GWT was between the elevations of +131 and +135 feet at the time of SPT boring. The bridge is supported by 24-inch square PCP's with required lengths ranging from 60 to 85 feet, and nominal bearing resistances between 320 and 370 tons. Test piles were driven with an APE D50-52 single-acting diesel hammer with a maximum rated energy of 124 ft-kips, and included use of a 15-inch plywood pile cushion and 3.5 inches of ceramic/aluminum hammer cushion. Piles were predrilled approximately 8 to 10 feet.

Figure 3-18 shows the site with approximate locations of SPT field testing and of the four test piles reviewed. The SPT's were performed using a safety hammer or an automatic hammer. The upper 10 to 15 feet of soils at the site generally consist of medium dense silts and sands. The soils 15 feet below GSE generally are stiff to hard and are a mix of silts, clays, and clayey sands.

3.4.1 Results: Bent 1 SB, Pile 5

The complete driving log for B1 SB P5 was not available; however, the associated length criteria submittal and PDA operator notes do identify high rebound occurring in multiple layers during driving. In the submittal, the contractor identified rebound as occurring between blows 407 through 1140 and blows 1341 through 1707. The PDA notes indicate high rebound, denoted by a "HR", as well as noting high tension stresses.

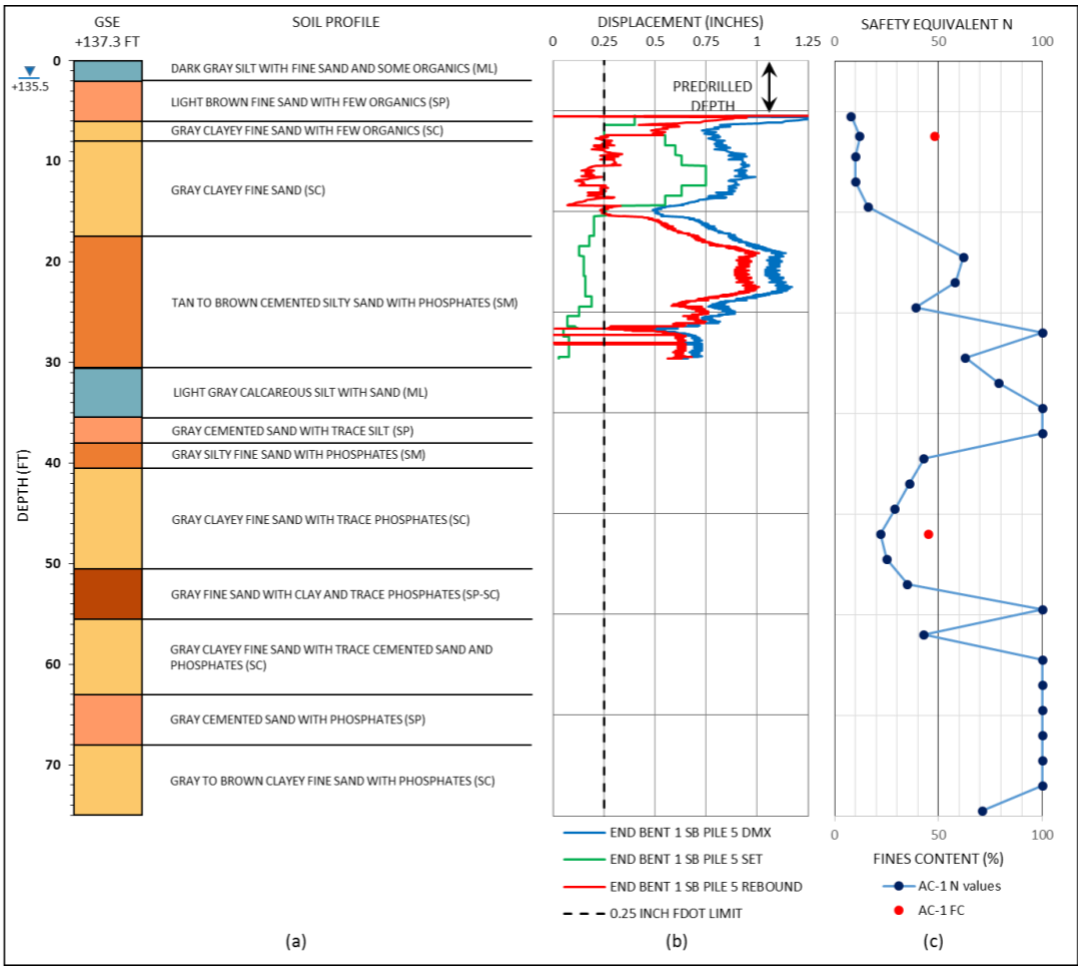

Figure 3-19 (a) AC-1 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for Starke Bypass over Alligator Creek Test Pile Bent 1 SB, Pile 5

The rebound identified in the submittal plus the PDA file, corresponds with the rebound shown in Figure 3-19. Rebound increased up to 1 inch as the pile penetrated elevation +118 feet and remained above ½ inch up to end of driving (EOD). Rebound of an inch measured with the PDA might not have reached these heights but does likely represent actual magnitudes in the range of ½ inch or greater. Rebound almost entirely occurred in a dense to very dense silty sand with phosphate layer that sits on top of a hard-calcareous silt.

3.4.2 Results: Bent 2 SB, Pile 5

Similar to B1, SB P5 rebound was documented in both length criteria submittals and the PDA operator log. Both identify the rebound layer occurring approximately between hammer blows 300 through 900. The PDA does not identify rebound at any greater depths, but does show the possibility of rebound during easy driving conditions as the contractor had to reduce the fuel setting from 4 to 1 as driving progressed. The driving of the pile was ultimately stopped prematurely due to integrity issues 20 feet near the toe.

The rebound identified in the submittal and PDA file correspond with the rebound visible in Figure 3-20. Rebound increased to 1 inch as the pile penetrated below elevation +111 feet. Maximum rebound occurred in a very stiff layer of sandy silt with clay and phosphates. Rebound is noted to stop at an elevation of +105, but the PDA rebound does show magnitudes in the range of ½ inch for much of the pile driving.

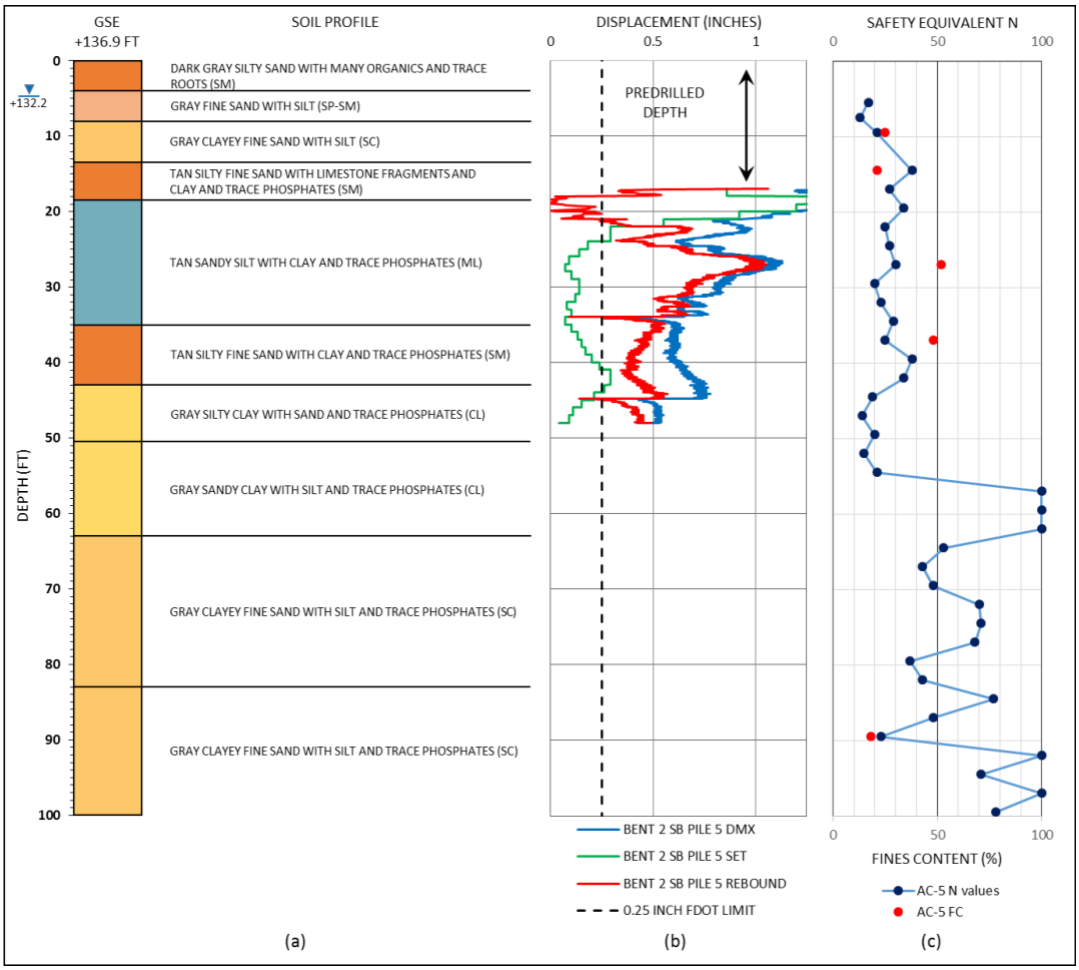

Figure 3-20 (a) AC-5 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for Starke Bypass over Alligator Creek Test Pile Bent 2 SB, Pile 5

3.4.3 **Results: Bent 3 NB, Pile 5**

Although PDA measured rebound reaches magnitudes up to ¾ inches as shown in Figure 3-21, there was no rebound identified in the PDA operator notes, driving log, or the Bent 3 pile criteria submittals. There does appear to have been easy driving conditions between the elevations of +95 and +88 feet. This zone corresponds with medium dense silty sand and sand with silt. The pile was ultimately stopped as the toe penetrated very dense sand with silt.

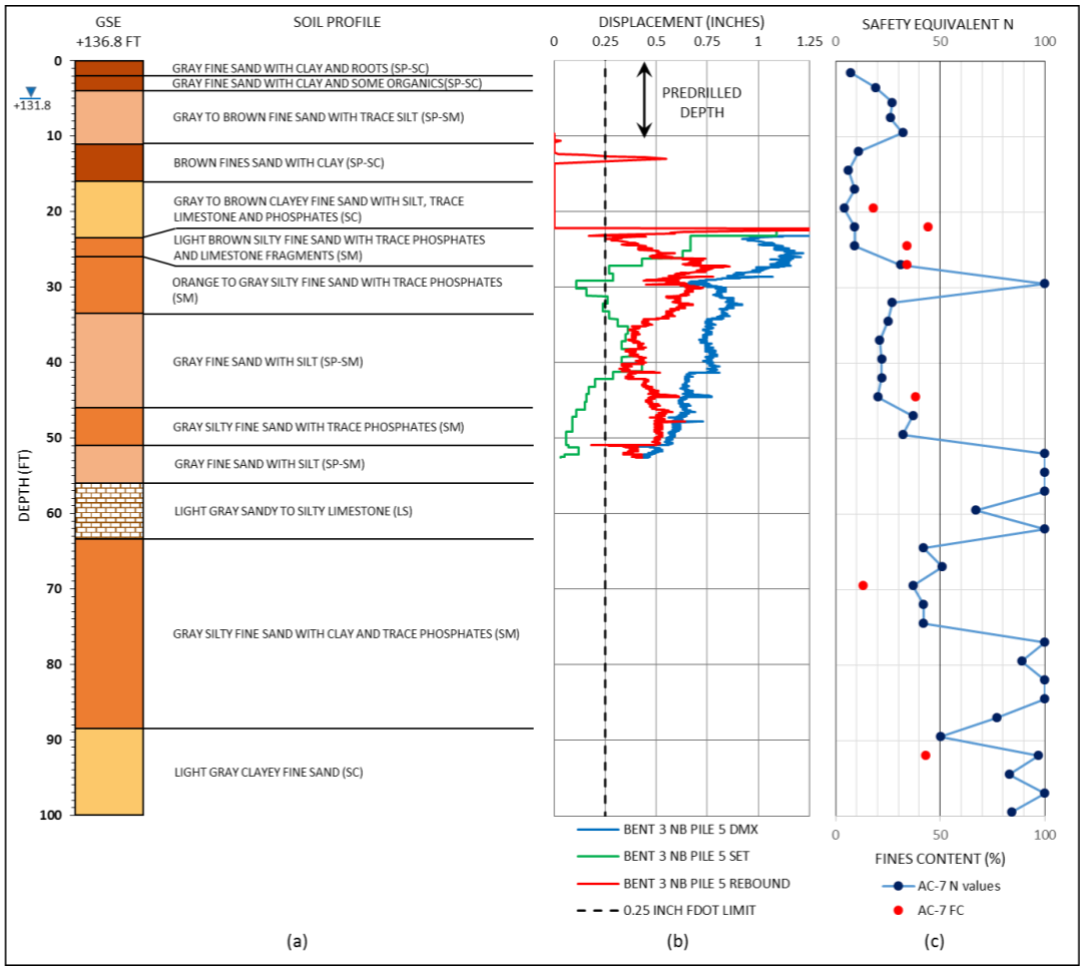

Figure 3-21 (a) AC-7 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for Starke Bypass over Alligator Creek Test Pile Bent 3 NB, Pile 5

3.4.4 **Results: Bent 4 SB, Pile 5**

The PDA operator notes report rebound as occurring at blow 454, corresponding to an approximate elevation of +110 feet, which is highlighted on Figure 3-22 by the peak rebound measured by PDA. This peak rebound is measured at ¾ inches and occurs in silty sands that produced refusal driving during SPT testing. Rebound when driving below the +110-foot elevation, decreased to a less than ½ inch as measured by PDA.

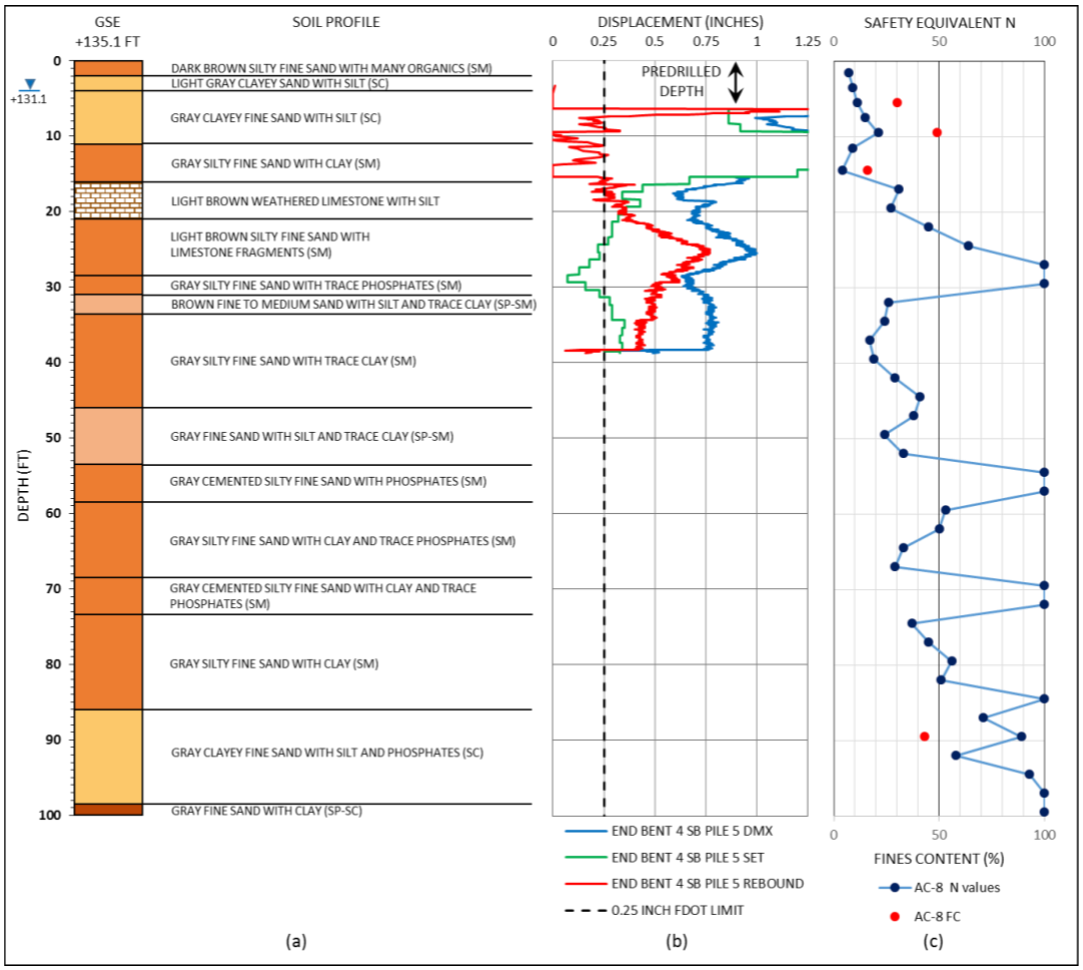

Figure 3-22 (a) AC-5 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for Starke Bypass over Alligator Creek Test Pile Bent 4 SB, Pile 5

3.5 J. Turner Butler Boulevard and I-95

J. Turner Butler (JTB) Boulevard runs East/West from I-95 in Jacksonville to Atlantic Ave in Jacksonville Beach. The project included modification of the exits and ramps at the intersection of I-95 and JTB. The construction includes bridge 720817, used to accommodate JTB eastbound traffic movement, and bridge 720816 which is a flyover off-ramp from I-95 South to eastbound JTB. Construction was under FDOT project ID 416501-4-52-01. The test piles under investigation are B1P9, B2P1, and B4P9 for bridge 720817, and B5P3, P6P4, P7P14 for bridge 720816.

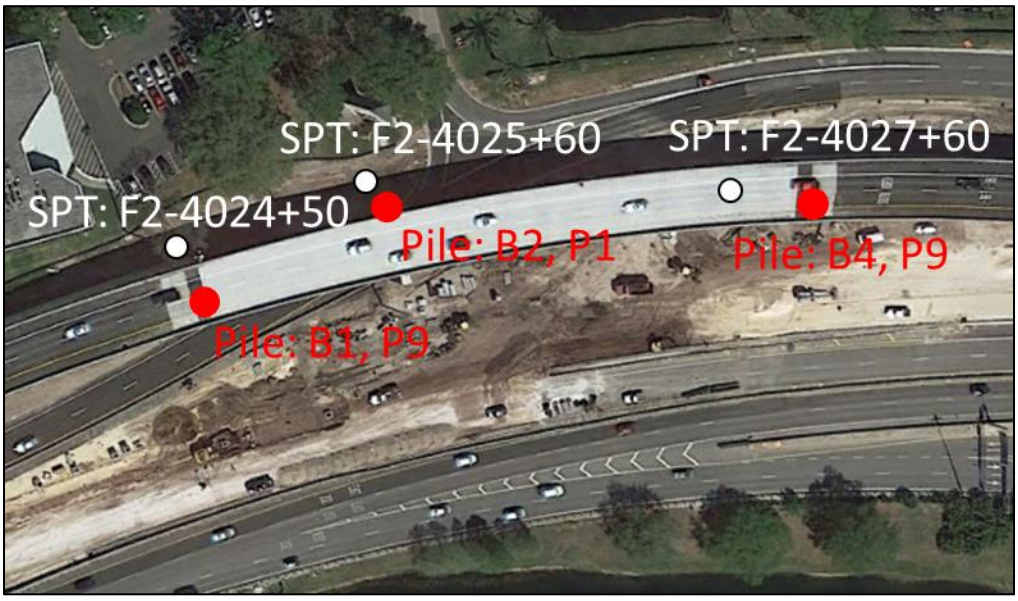

Figure 3-23 Test pile and SPT boring locations for JTB and I-95 (Bridge 720817)

The approximate SPT GSE's were between +21 and +26 feet with two borings made on the existing overpass and at higher elevations. The GWT was located elevations between +14 and +20 feet. Bridge 720817 is supported by 18-inch PCP's with required lengths from 95 to 120 feet and nominal capacities at approximately 230 tones. Bridge 720816 is constructed on 24-inch PCP's with lengths between 95 and 120 feet and nominal bearing capacities above 430 tons.

Figure 3-23 shows the site with approximate locations of SPT field testing and of the three test piles for bridge 720817. Test piles were driven with an APE D36 single-acting diesel hammer with a maximum rated energy of 89 ft-kips, and included use of a 14 inch of plywood pile cushion and 3.5 inches of ceramic/aluminum hammer cushion. Test piles were predrilled between 20 and 25 feet below GSE.

Figure 3-24 shows the site with approximate locations of SPT field testing and of the three test piles for bridge 720816. Test piles were driven with an APE D100 single-acting diesel hammer with a maximum rated energy of 243 ft-kips, and included use of a

24 inch of plywood pile cushion and 3.5 inches of ceramic/aluminum hammer cushion. Test piles were predrilled between 25 and 30 feet below GSE.

The soils at the sites are generally loose to dense sands and silty sands with intermittent layers of clays, silts, and clayey sand to an elevation of -60 feet. Below -60 feet, the fines are more prominent with alternating layers of silts, clayey sands, and clays. Soil consistencies below an elevation of -60 feet range from stiff to hard.

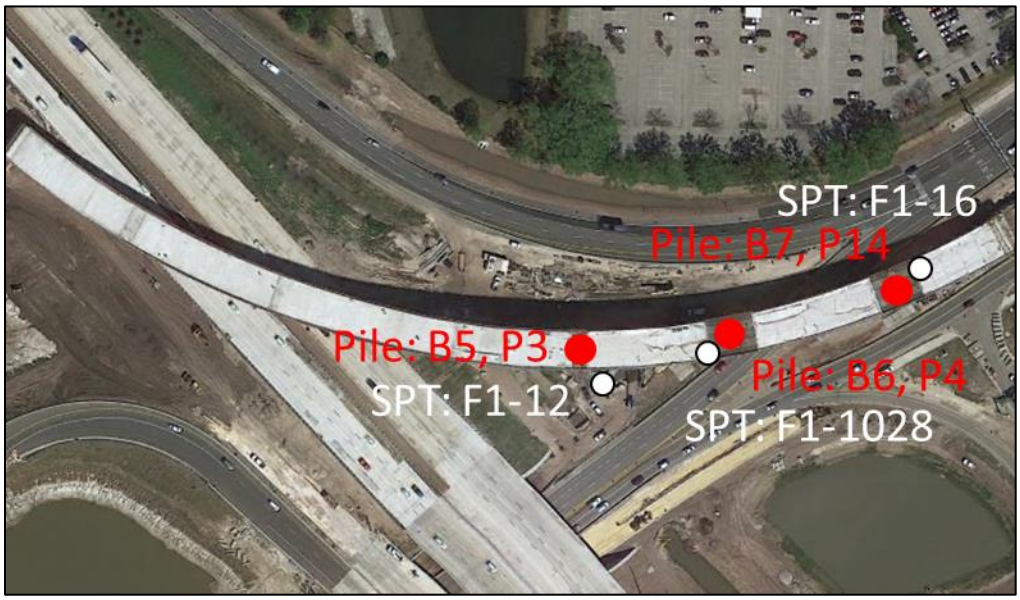

Figure 3-24 Test pile and SPT boring locations for JTB and I-95 (Bridge 720816)

3.5.1 **Results: Bent 1, Pile 9 (Bridge 720817)**

No rebound was identified on the driving log during installation of test pile B1 P9. It is documented in the PDA operator notes, which indicate rebound occurring between hammer blows 3439 and 3600. These blows relate to elevations of -67.33 and - 68 feet, respectively. Following blow number 3600, driving was halted for 30 minutes and then resumed. Rebound decreased immediately after the pause and wasn't noted again. Rebound appears to occur when the pile was driven into dense clayey sands

overlying a hard-clayey silt. No rebound was not noted on the inspector log; however, PDA output in Figure 3-25 shows rebound in the range of ½ inch. The contractor elected to drive all production piles shallower than the rebound zone after capacity was confirmed.

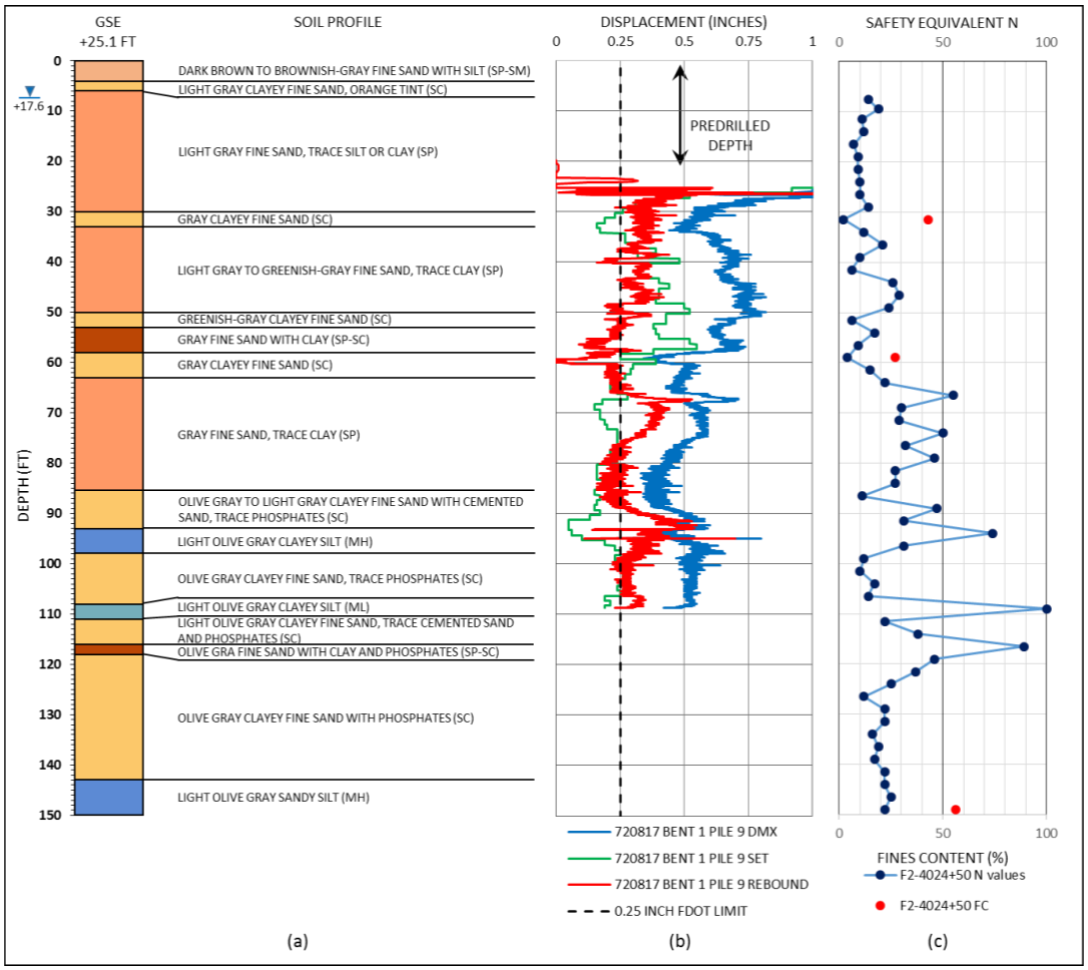

Figure 3-25 (a) F2-4024+50 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC JTB and I-95 (Bridge 720817) Test Pile Bent 1, Pile 9

3.5.2 **Results: Bent 2, Pile 1 (Bridge 720817)**

Test pile B2 P1, as seen in Figure 3-26, was not driven to the same depth as B1 P9 and it is assumed that this was done to avoid the soil rebound layer. The final tip

elevation reached was -65.2 feet which is 2 feet above the rebound zone identified earlier. There is possibly some rebound as the PDA does show maximum values in the range of 0.40 inches that correspond with a dense sand with trace clay. However, no rebound was documented in either the PDA or driving log notes.

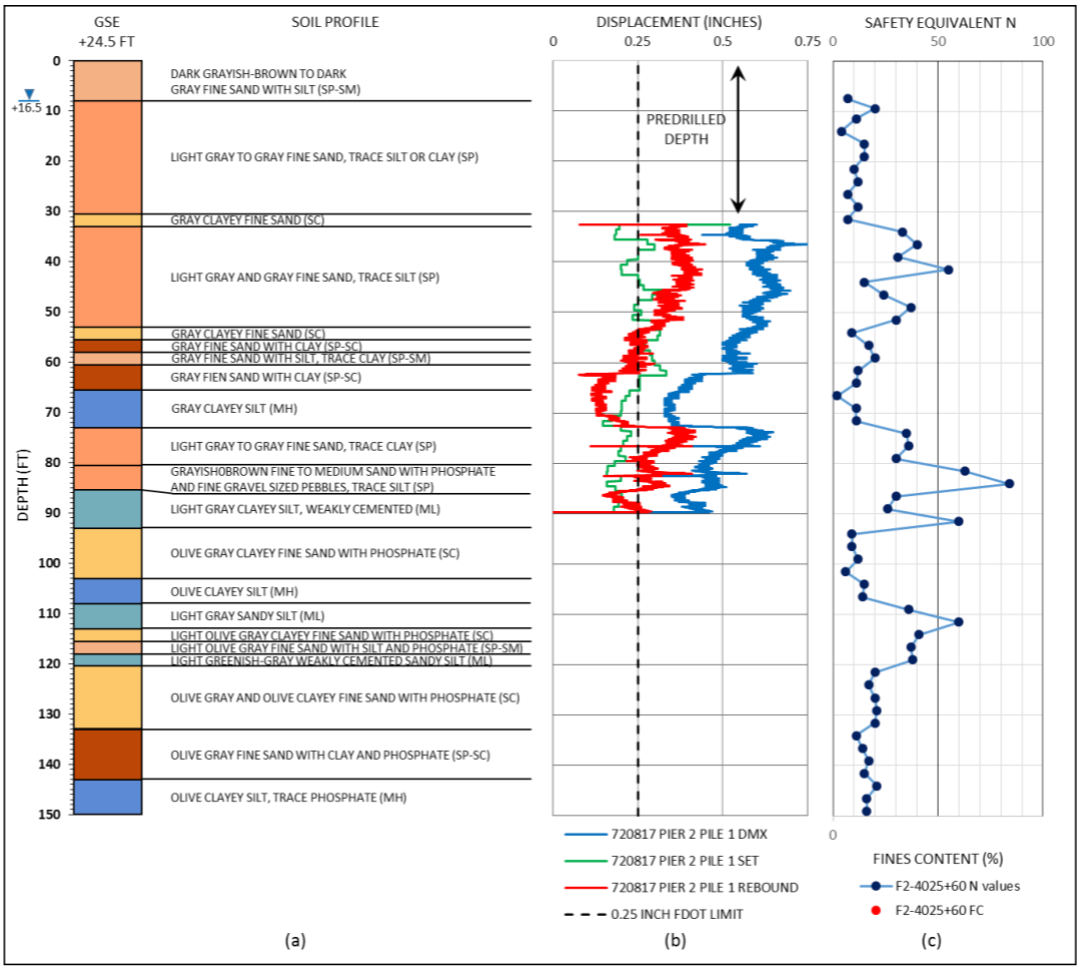

Figure 3-26 (a) F2-4025+60 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC JTB and I-95 (Bridge 720817) Test Pile Bent 2, Pile 1

3.5.3 **Results: Bent 4, Pile 9 (Bridge 720817)**

Test pile B4 P9, as seen in Figure 3-27 and like B2 P1, was not driven to the same depth as B1 P9 and is possible this was done to avoid the soil rebound layer. The final tip

elevation reached was -64.4 feet which is 3 feet above the rebound zone identified earlier. There is possibly some rebound as the PDA does show maximum values in the range of ½ inch that correspond to medium dense to very dense sands and sands with silts. However, no rebound was documented in either the PDA or driving log notes.

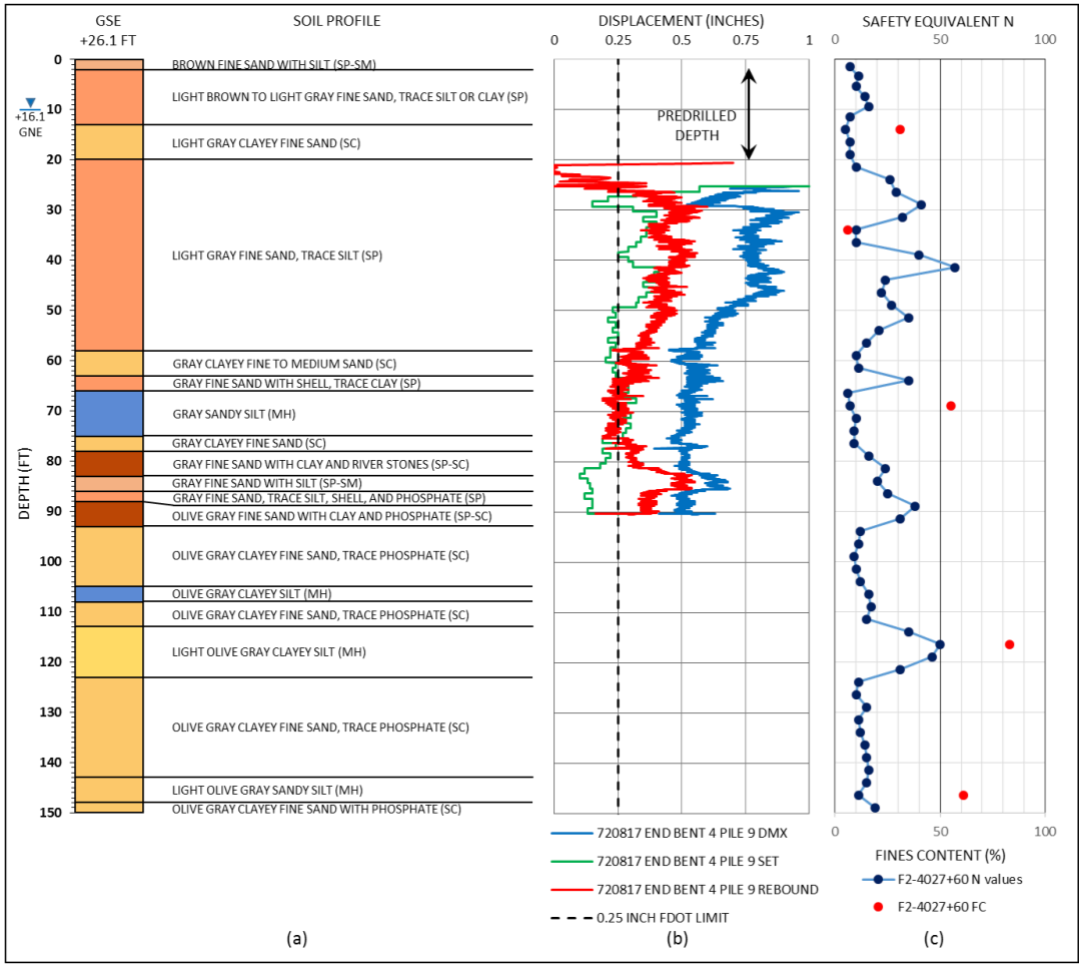

Figure 3-27 (a) F2-4027+60 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC JTB and I-95 (Bridge 720817) Test Pile Bent 4, Pile 9

3.5.4 **Results: Bent 5, Pile 3 (Bridge 720816)**

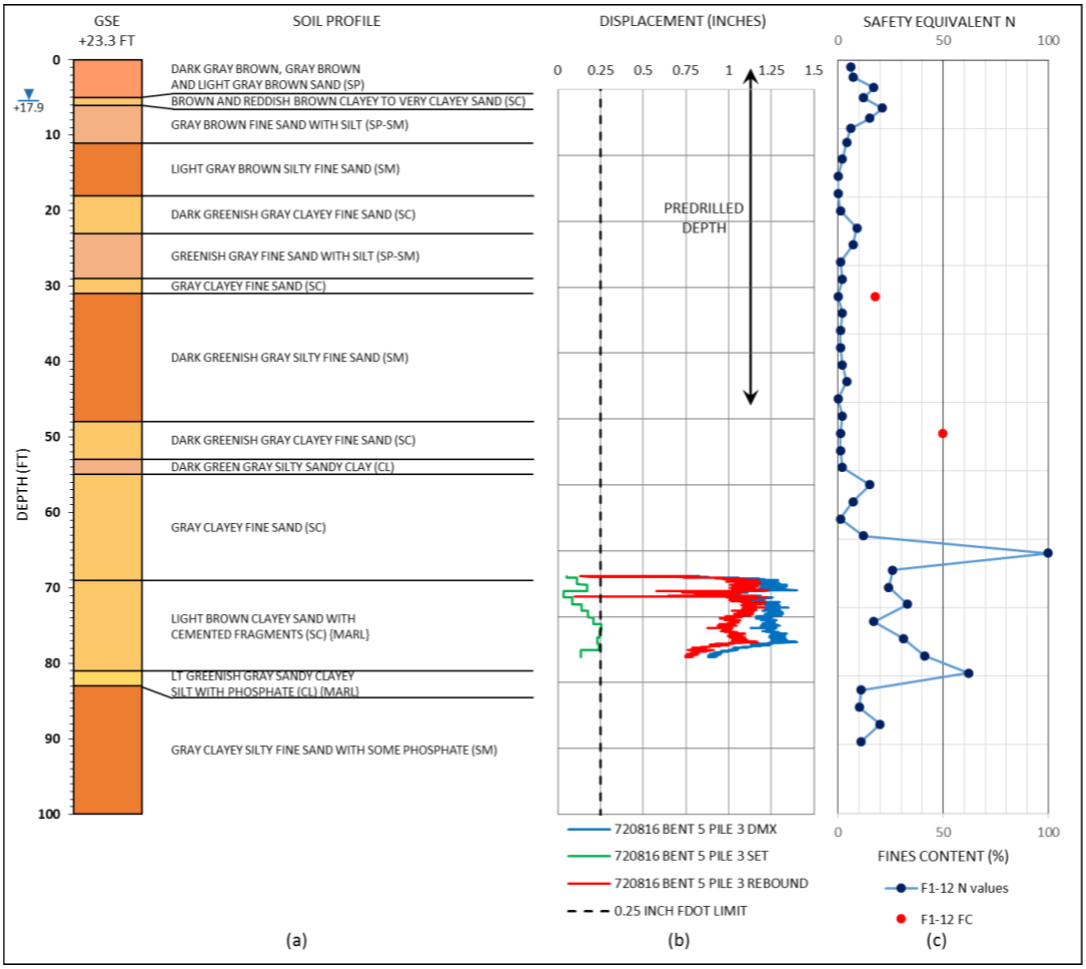

Figure 3-28 (a) F1-12 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for JTB and I-95 (Bridge 720816) Test Pile Bent 5, Pile 3

Test pile B5 P3 was driven over the course of 2 days due to mechanical issues with the hammer, and displayed rebound over 1 inch in magnitude. Rebound increased to ½ inch during the initial 40 to 70 blows each day, and gradually increased until it exceeded 1 inch. Driving began at about 70 feet and rebound occurred throughout the 12-foot thick layer of light brown clayey sand with cemented fragments. N_{ES} values ranged from 20 to 30 blows, as shown in Figure 3-28.

The test pile likely never penetrated through this rebound soil as multiple set checks were required to produce valid bearing capacities. A 4-day set check still produced 3/8 of an inch of rebound. It was not until a 6-day set check was attempted that rebound below ¼ inch was achieved.

3.5.5 Results: Bent 6, Pile 4 (Bridge 720816)

Rebound of approximately 3/8 to ½ inch is noted in both the driving and Bent 6 pile criteria submittal. The PDA operator notes describe rebound as exceeding ½ inch and 1 inch at hammer blow 156 and 541 respectively. These correspond to elevations of -47.7 and -51.6 feet. Rebound was also present during a 4-day set check, but remained below the ¼ inch limit.

As seen in Figure 3-29, rebound coincides with two soil layers. Both layers have clays and silts, and are described as a clayey silt and a clayey sand. N_{ES} for the rebound soils ranges from 30 to refusal and with consistencies described as hard. Rebound does appear to dissipate as the pile neared, then penetrated, into a dense fine to medium sand.

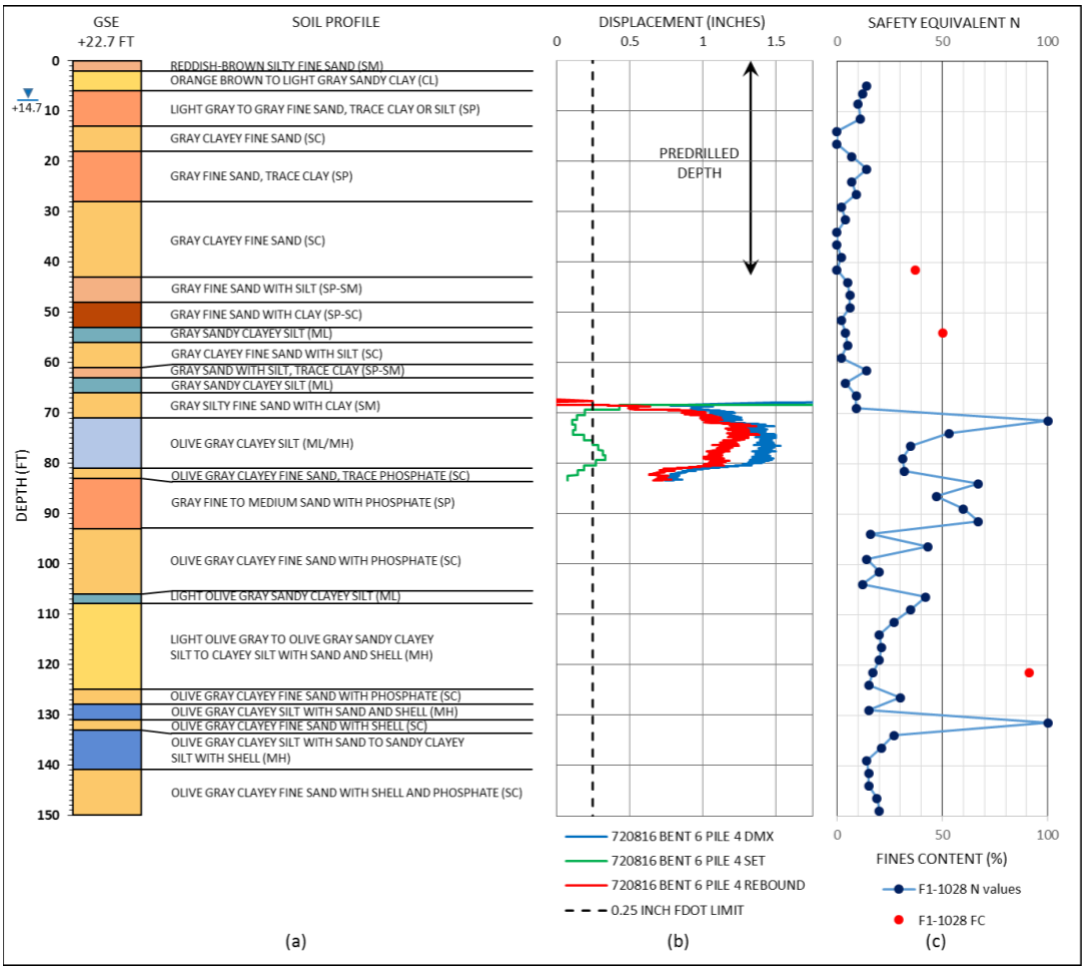

Figure 3-29 (a) F1-1028 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for JTB and I-95 (Bridge 720816) Test Pile Bent 6, Pile 4

3.5.6 **Results: Bent 7, Pile 14 (Bridge 720816)**

Rebound was identified between LP of 70 and 73 with a magnitude of ¾ of an inch. The PDA operator notes lists ¾ inch of rebound beginning at blow number 159, which corresponds to an elevation of approximately -41 feet. This rebound elevation is similar to the rebound elevation shown in the driving log notes. A 2.5-hour set-check was performed and produced practical refusal with rebound at or below ¼ inch. As shown in Figure 3-30, the test pile rebound occurs in soft silty clay and very stiff to hard clayey silt.

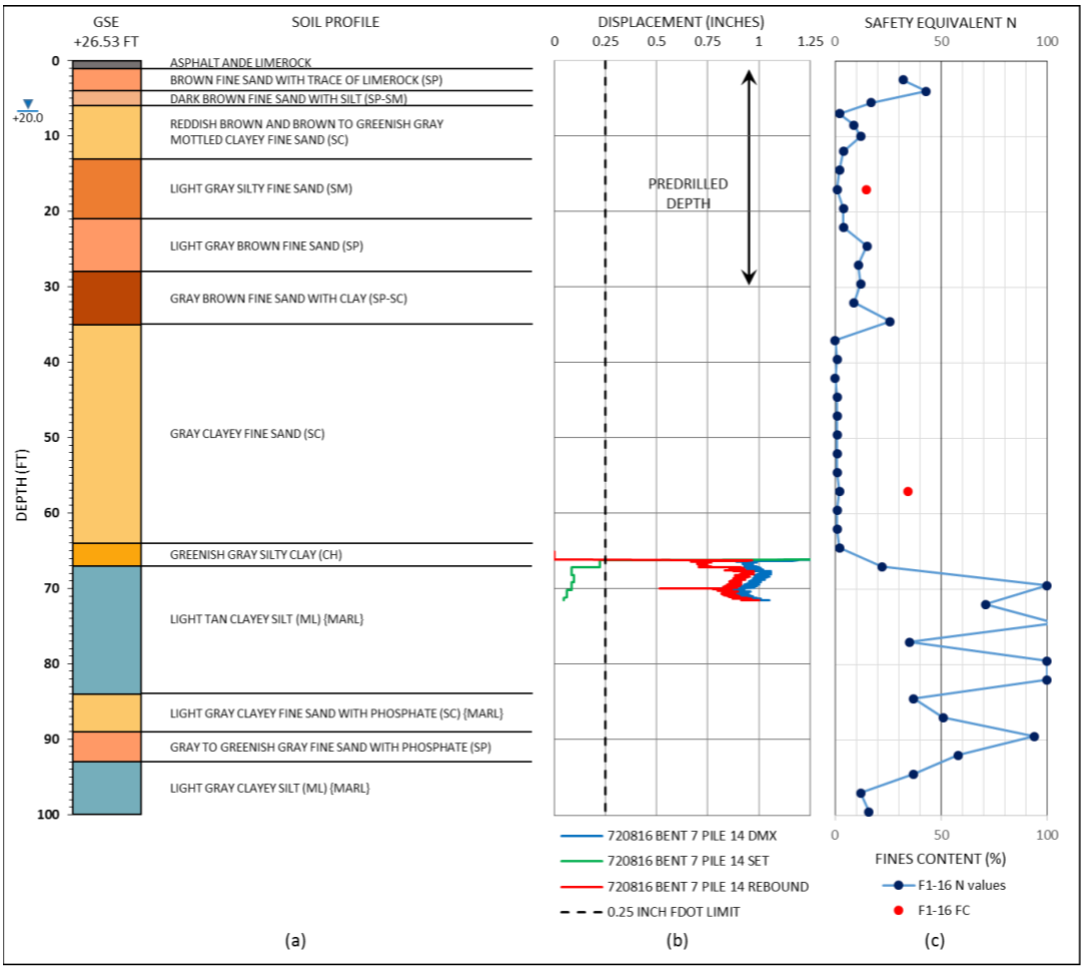

Figure 3-30 (a) F1-16 Soil Profile, (b) PDA diagram, (c) N_{ES} and FC for JTB and I-95 (Bridge 720816) Test Pile Bent 7, Pile 14

3.6 Summary

During the evaluation of pile rebound related to SPT N values, CPT profiles were added and the data base was increased from 15 piles at eight sites throughout central, north and northwest Florida, to 22 piles at six additional sites which included southwestern Florida. Rebound levels ranged from 0.38 to 2.63-inches based on pile driving analyzer data with inspector sets.

4 Results

Analyses of the SPT and CPTu data were performed by adjusting the data to eliminate inconsistencies associated with the beginning of the pile driving. SPT and CPTu data within the elevations associated with the predrilling and pile driving up to fuel setting 2 for the hammers were eliminated. It was assumed that this "early driving" data was not related to the high rebound phenomenon and therefore its elimination is justifiable.

4.1 SPT Evaluations

4.1.1 Rebound versus N_{ES}

SPT N-values were either safety or automatic hammer types, therefore, to make consistent comparisons, all automatic hammer N-values were converted to safety hammer equivalent using $N_{auto} * 1.24$ (FDOT 2015). Under FDOT contract BDV 28 977-01 plots of pile rebound versus the SPT N_{ES} (or the equivalent safety hammer N values) were developed. Sand FC's were grouped as having;

- FC less than 12% when the USCS classification of SP indicated a low percentage of fines,
- FC between 12 and 50 % if silty and clayey qualifiers (SM, SC, SP-SC or SP-SM) were included with the predominant classification material being a sand, and
- FC greater than 50 % fines if the primary classification was silt or clay (ML, MH, CL, CH).

Figure 4-1 shows the results previously obtained under BDV 28 977-01 which was based on data from the 15 piles at eight sites shown in Table 3-1. It was concluded that there may be a linear trend (see dashed lines) from zero to 20 % fines and 1-inch rebound. However, the scatter in the data was so large that no trend line was recommended.

Figure 4-2 shows the updated results, which is based on the 37 piles when the eight sites shown in Table 3-2 are added to the original data. It clearly shows that when FC is below 12 % rebound remains below 0.5-inches. This finding confirms the assumption to eliminate the early driving data from the analyses as acceptable and also confirms that the low FC sands are not a concern for rebound. These results were used to update the Level I Decision Tree such that a soil classification of SP/A-3 with less than 12% fines would produce a low concern for rebound with excessive hammer blows.

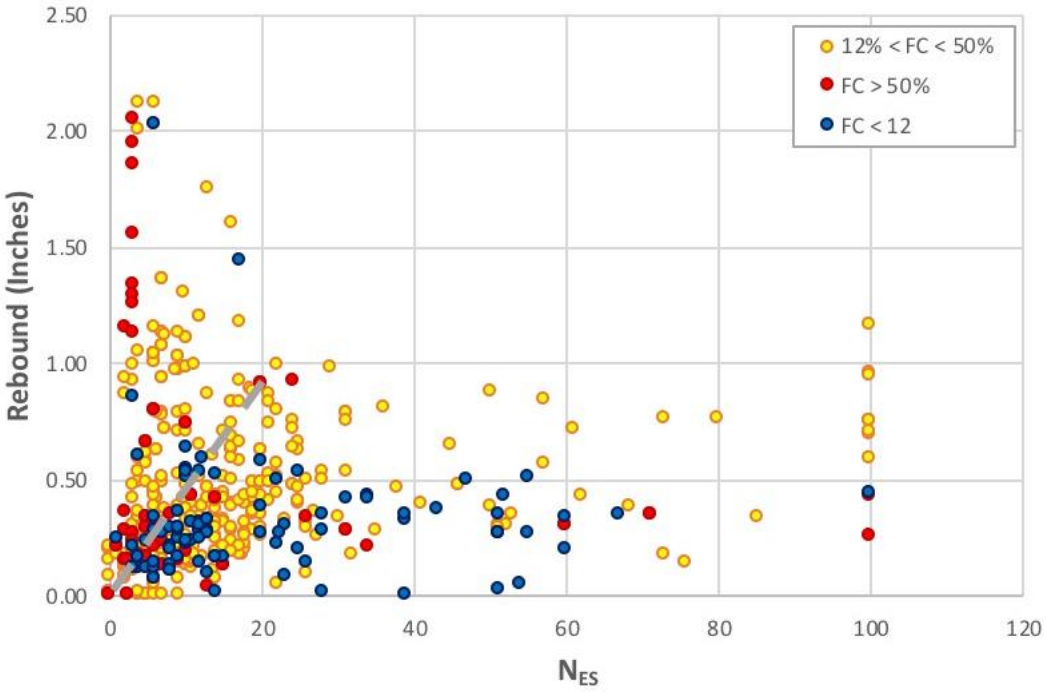

Figure 4-1 BDV 28 977-01 rebound versus N_{ES} based on low, intermediate and high USCS fines descriptions

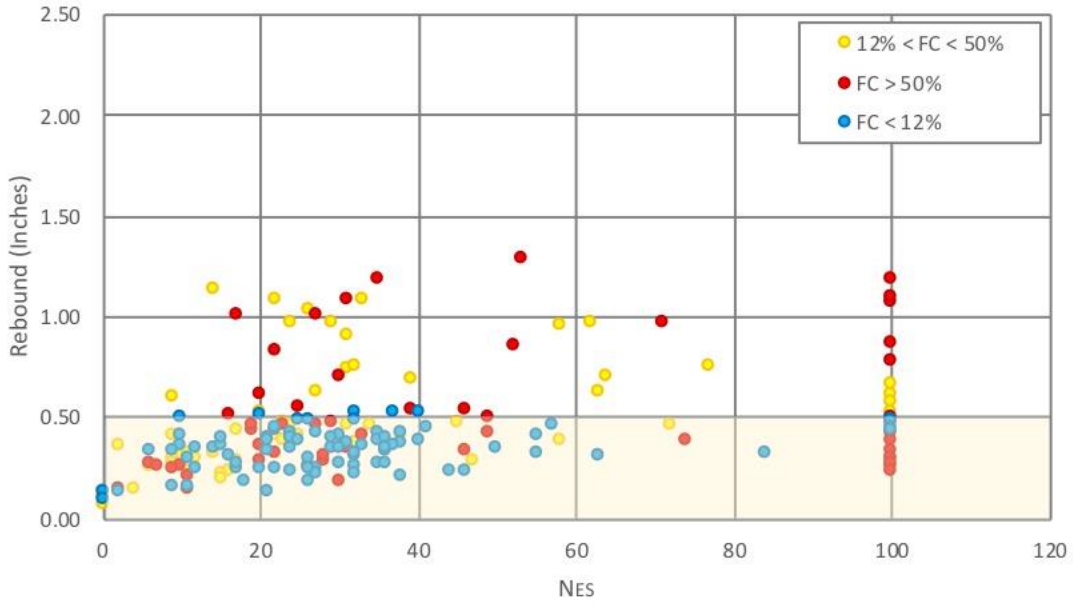

Figure 4-2 Updated rebound versus N_{ES} based on low, intermediate and high USCS fines descriptions

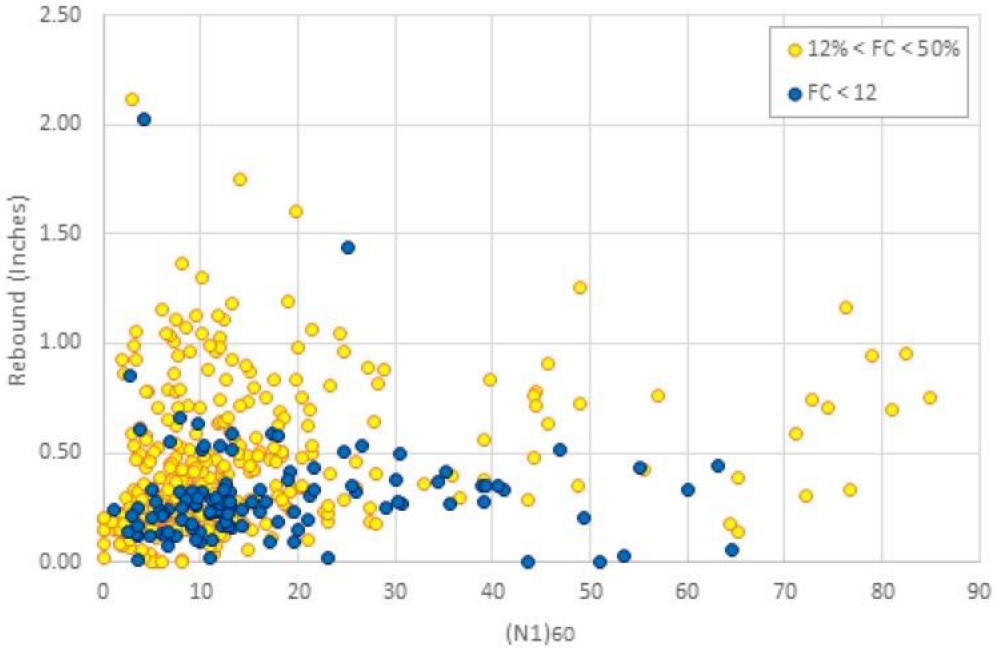

Figure 4-3 BDV 28 977-01 rebound versus $N_{1(60}$ based on low, and intermediate USCS fines descriptions

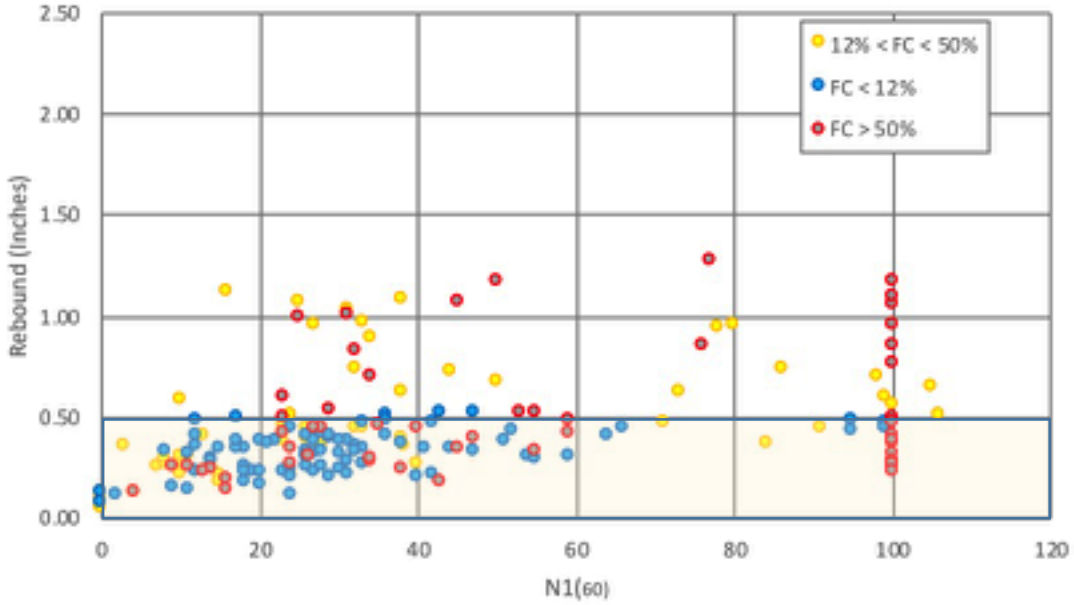

Figure 4-4 Updated rebound versus $N_{1(60)}$ based on low, intermediate and high USCS fines descriptions

In BDV 28 977-01, N-values were adjusted for overburden, producing plots of $N_{1(60)}$ versus rebound, as shown in Figure 4-3. Figure 4-4 shows the updated results, again based on the 37 piles. It mirrors the N_{ES} results, and clearly shows that when FC is below 12 % rebound remains below 0.5-inches. These results are exactly as expected and matched those of the previous section, also allowing the Level I Decision Tree to be updated

4.1.2 Relating $N_{1(60)}$ to Contractive and Dilative Behavior

Data from BDV 28 977-01 indicates that contractive and dilative fine sandy soil behavior can be related to non-rebound and rebound soils. CPTu data used in conjunction with soil behavior type charts developed by Robertson (2016) plus Jeffries and Been (2006) indicated rebound soils are dilative. Negative pore water pressures occurred in HPR soils

during CPTu testing, in addition to very high positive pore water pressures. Previous results from BDV 28 977-01 were grouped based on the Seed et al. (1985) recommended liquification potential to damage potential correlations for sands and silty sands related to $N_{1(60)}$. Their recommendations are based solely on field performance during earthquakes of various sands with less than 5% clay and about 15 to 25 % fines content. There is no mention of the grain size associated with these sands. However, our Florida sands in the rebound type soils are all very fine (Cosentino et al., 2016). Liquefaction occurs in contractive soils and is prevented in dilative soils. The authors proposed three $N_{1(60)}$ groups ranging from high damage potential to no damage potential based on the corresponding liquification potential as follows:

- 0-20 *contractive soil behavior*-- high liquefaction or high damage potential,
- 20-30 *intermediate behavior* -- between high liquefaction and no liquification and
- 30-40 *dilative soil behavior* -- liquefaction resistant or no damage potential.

Table 4-1 was the previous summary of the liquefaction potential in percent from $N_{1(60)}$ values from the research sites investigated presented based on the BDV 28 977-01 findings. The 20% dilative value for the rebound soils is lower than the contractive percentage of 53%. These values suggest that rebound occurs in contractive or liquefaction susceptible soils. These soils should shear more easily and therefore, not cause rebound.

Table 4-1 Liquefaction Potential Based on Rebound ≥ 0.5-inches from Seed et al. (1985)

CPT Behavior Type	Percentage	
	Rebound	Nonrebound
Contractive	53%	72%
Intermediate	27%	17%
Dilative	20%	11%
Total	100%	100%

When the early driving data was removed and the new sites were evaluated using the Seed et al (1985) criteria the results shown in Table 4-2 were produced. They include well over 1000 data points and indicate that 80 % of the rebound soils would fall into the third $N_{1(60)}$ range of dilative behavior. Therefore, dilative behavior of fine sands with mixtures of silts and clays or SM, SC, SP-SC, or SP-SM is much more likely to be associated with rebound (greater than 0.5-inches) than non-rebound.

Table 4-2 Revised Liquefaction Potential Based on Rebound ≥ 0.5-inches from Seed et al. (1985)

CPT Behavior Type	Percentage	
	Rebound	Nonrebound
Contractive	8%	38%
Intermediate	12%	30%
Dilative	80%	32%
Total	100%	100%

4.1.3 PDA Rebound versus FC

Rebound and FC data from BDV 28 977-01 was presented as shown in Figure 4-5. The data is divided below and above 35 % to correspond to the previous findings and since there seems to be a linear relationship between these variables below 35 % FC.

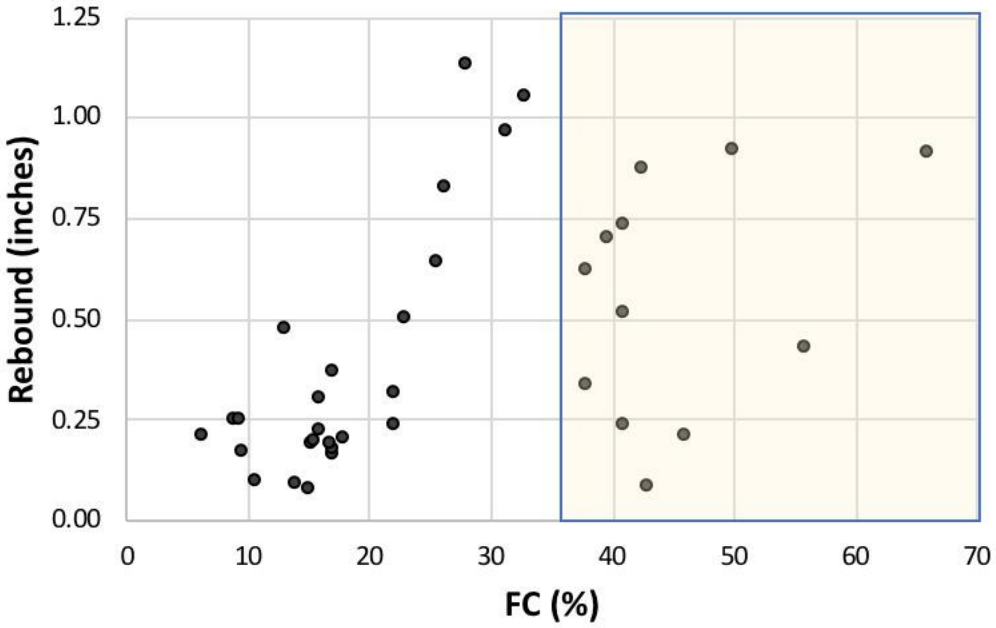

Figure 4-5 BDV 28 977-01 Rebound versus FC

Figure 4-6 shows the data from Figure 4-6 using only data below 35% FC. It yields a nonlinear trend with a relative high-quality regression coefficient. Note that the trend is fairly linear between 20 and 35 % FC. Based on the limited data from BDV 28 977-01 there was a reason to conduct further work in this area.

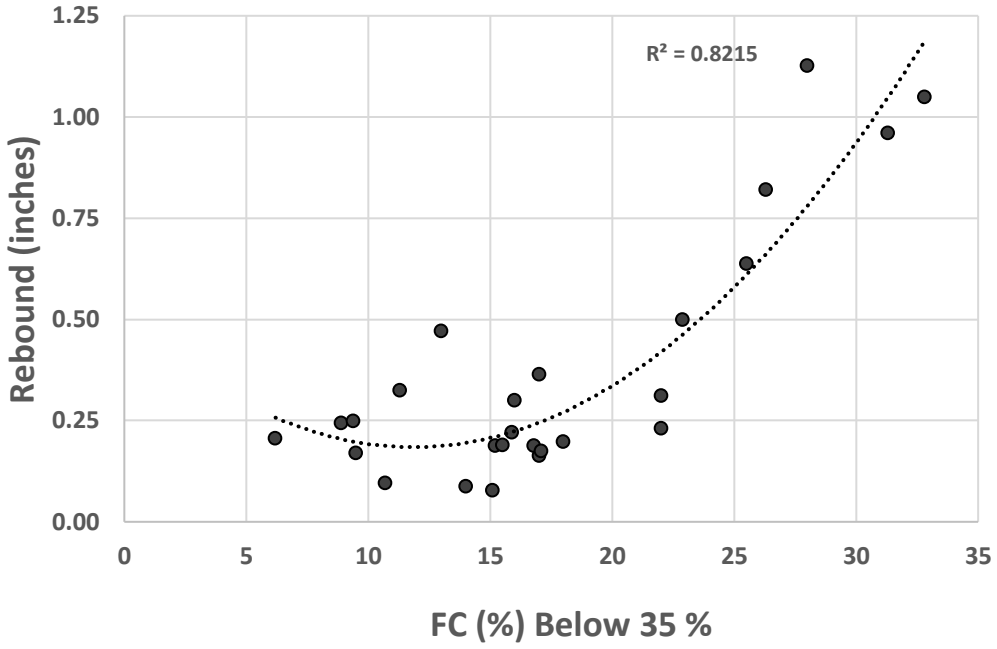

Figure 4-6 BDV 28 977-01 Rebound versus FC Below 35 %

BDV 28 977-01 also includes histograms and tables showing FC percentages for rebound and non-rebound soils. That data was heavily weighted with Anderson street data (63% of the total). Figure 4-7 indicates that rebound FC's were highest between 20 and 50%, however, the non-rebound soils are also high in the 20 to 30 % FC range. Table 4-3 includes the BDV 28 977-01 histogram data in tabular format indicating that the rebound soils with FC between 20 and 40 % include 56 % of the data, while the non-rebound soils in this same range include 31% of the data.

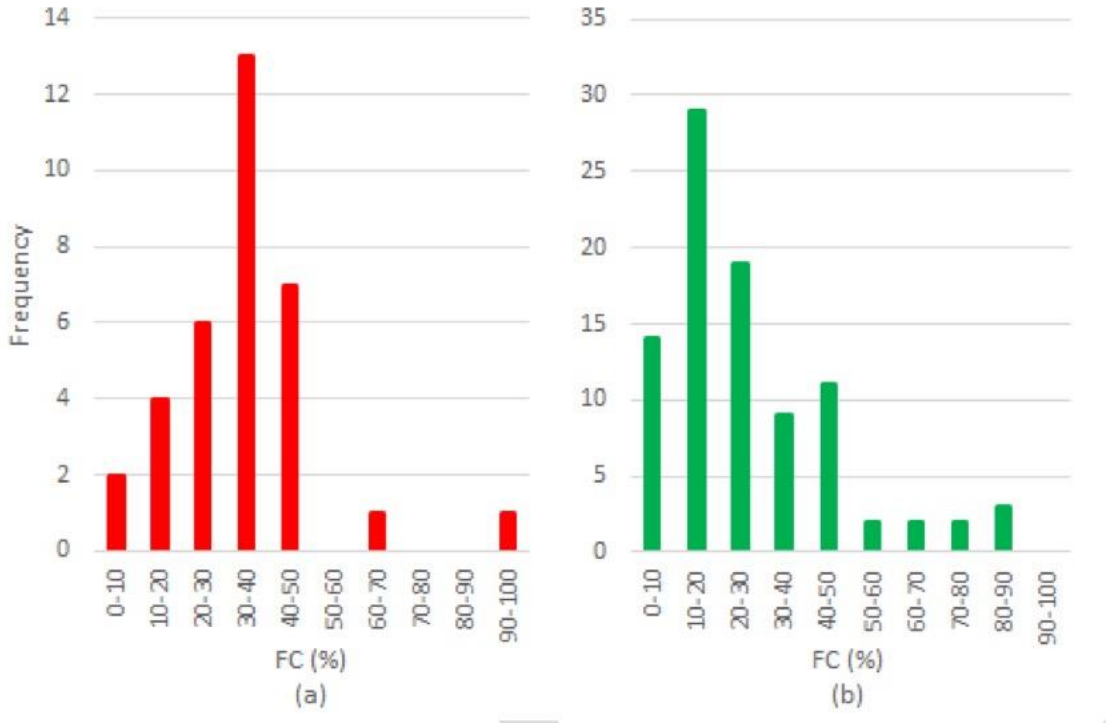

Figure 4-7 BDV 28 977-01 frequency plots of FC for rebound >0.5-inches and b) non-rebound < 0.5-inches

Table 4-3 Tabular Summary of Histograms

Fines Content % Range		Percentages	
Min	Max	Rebound	Nonrebound
0	10	6%	15%
10	20	12%	32%
20	30	18%	21%
30	40	38%	10%
40	50	21%	12%
50	60	0%	2%
60	70	3%	2%
70	80	0%	2%
80	90	0%	3%
90	100	3%	0%
Total %		100%	100%

The tabular data from BDV 28 977-01 was reorganized into histograms with USCS classifications and early driving data eliminated. The new histogram data was then

summarized and organized into a tabular format according to USCS classification. Table 4-4 shows how USCS classification controls rebound and non-rebound behavior. Three groups of USCS classifications dominate the rebound data, i.e. SM, ML/MH and SC/CL/CH. The non-rebound data is uniformly distributed with the exception of the weathered limestone (WL) category. Therefore, based on USCS symbols the soil types most likely to produce rebound in excess of 0.5-inches are SM, and ML/MH, which was added to the Level I Decision Tree as parameters causing a high concern for excessive rebound with excessive hammer blows. This finding substantiates the findings from BDV 28 977-01 that the silt content of these very fine sands is critical to rebound (Cosentino et al., 2016).

Table 4-4 USCS Classification for Rebound and Non-rebound Soils

Soil Classification	Percentages	
	Rebound	Nonrebound
SP	2%	28%
SP-SM	4%	24%
SM	40%	12%
SC	9%	11%
SC/CL/CH	13%	13%
ML/MH	27%	11%
WL	4%	1%
Totals	100%	100%

4.1.4 4-foot Averaged SPT Rebound versus Ratio of Pile Penetration into Layer

Soil layering is believed to affect rebound. Sites with thin layers of rebound soil (i.e. John Young Parkway, Cosentino et al., 2010) displayed lower or no rebound, while sites

with thicker layers of the rebound soils produced higher rebound (Cosentino et al., 2016). Thicker layers are believed to prevent excess pore water pressures from dissipating during driving and therefore can dilate as the pile penetrates the stratum. Thinner layers would allow pore pressures to dissipate quicker and thus limit the dilative response that prohibits driving. For this new research, N values were averaged over 4-foot increments and compared to the ratio that the pile had penetrated into the corresponding layer. This data was then input into histograms that show the frequency of occurrence as the pile progresses through a layer (i.e. ratio of pile penetration into corresponding layer). Figure 4-8, developed from 335 rebound samples, shows that regardless of the pile penetration ratio the frequency of occurrence for rebound was from 25 to 40. It reveals no critical penetration depth. Figure 4-9 which is based on 1284 non-rebound samples produced from 100 to about 150 occurrences and also no critical penetration depth. In summary, using N-values averaged over 4-foot thick layers produced no evidence that rebound, as a ratio of pile penetration into the layer, is a function of layer thickness.

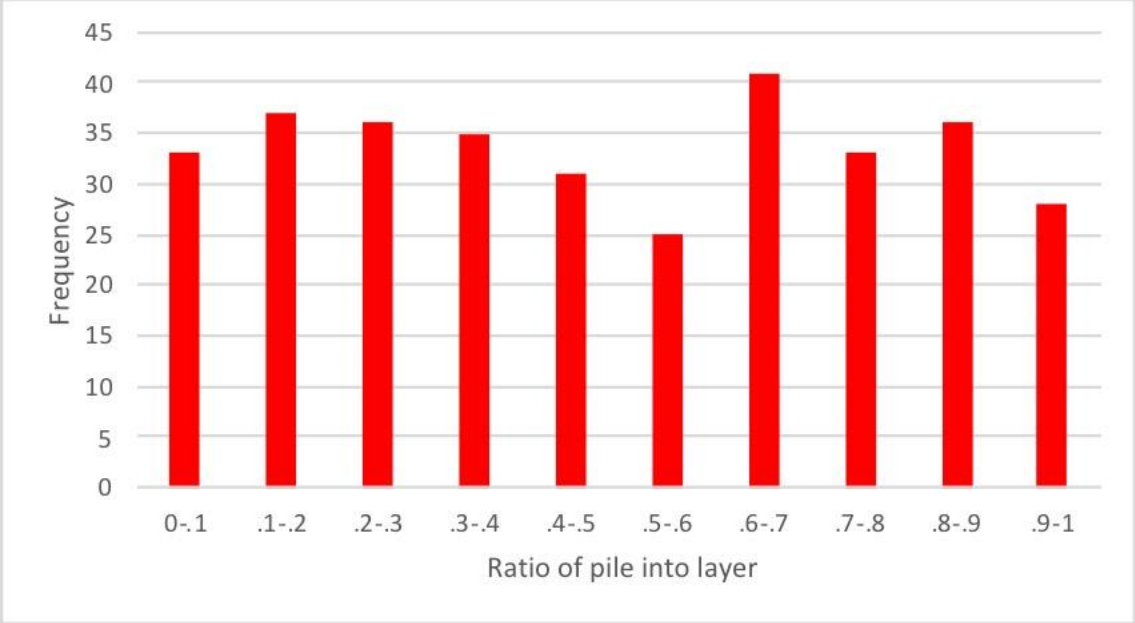

Figure 4-8 Ratio of Pile driven into soil layer histogram for rebound soils

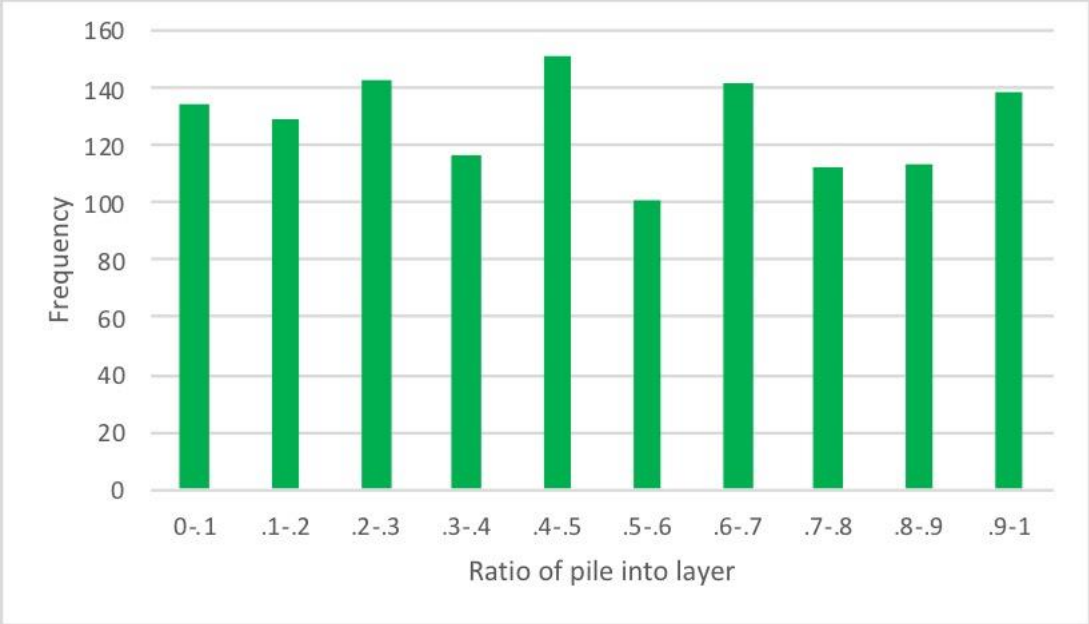

Figure 4-9 Ratio of Pile driven into soil layer histogram for non-rebound soils

4.2 CPTu Evaluations

Robertson's latest modified CPTU behavior charts (2016) were used to plot CPTu data from the sites evaluated. These charts are useful since the contractive and dilative behavior are separated according to the equation $CD = (Q_{tn} - B)(1+0.06Fr)^{17}$; where B is equal to 11 for a recommended upper contractive-dilative boundary of 70 or 9.5 for the recommended lower boundary of 60. Robertson defines the following terms in his charts.

- Sand like Contractive or SC,
- Sand like Dilative or SD,
- Clay like Contractive or CC for Sensitivity < 3,
- Clay like Contractive -Sensitive or CCS if Sensitivity > 3,
- Clay like Dilative or CD,
- Transitional Contractive or TC, and
- Transitional Dilative or TD.

CPTu data was averaged over 1-, 2- and 4-foot increments and the early driving data was eliminated. As shown in the following figures, the number of data points decreases as the CPTu data is averaged over thicker ranges.

Figure 4-10, which contains CPTu data averaged over 1-foot increments, shows the rebound CPTU data as nearly all above the dilative/contractive boundary curve. However, Figure 4-11, also with CPTu data shows the non-rebound soils plot above and below this boundary, with more non-rebound data above the boundary than below. These plots do not present a clear distinction between the rebound and non-rebound soils. Figure 4-12 showing rebound, and Figure 4-13 showing non-rebound soils averaged over

2 foot increments substantiate the results from the 1-foot plots as do Figure 4-14 with rebound and Figure 4-15 with non-rebound averaged over 4-foot increments. In summary, using Robertson's (2016) CPTu soil behavior charts may correctly identify rebound soils as dilative but will also identify non-rebound soils as dilative and contractive. It could be used as a screening tool but not for a final determinization or identification of rebound soils.

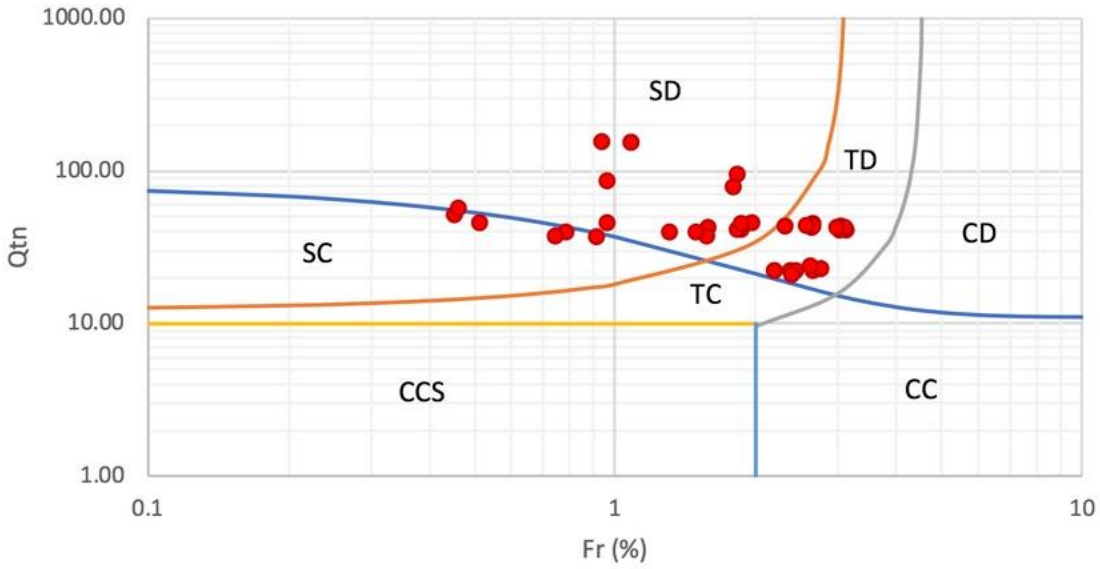

Figure 4-10 CPTu Qtn versus Fr Averaged over 1-foot Increments from the rebound sites

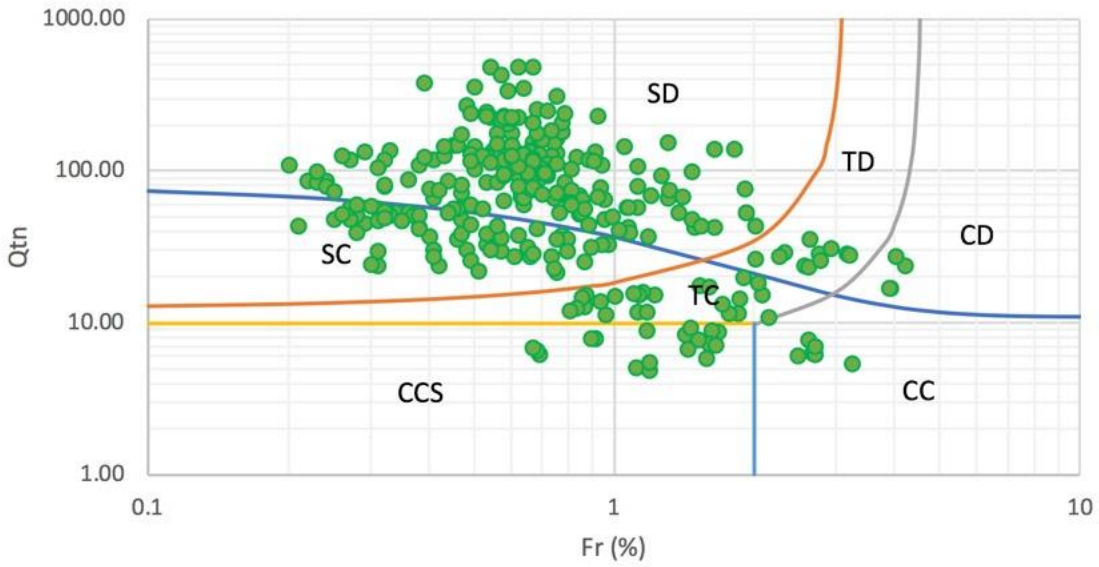

Figure 4-11 CPTu Qtn versus Fr Averaged over 1-foot Increments from the non-rebound sites

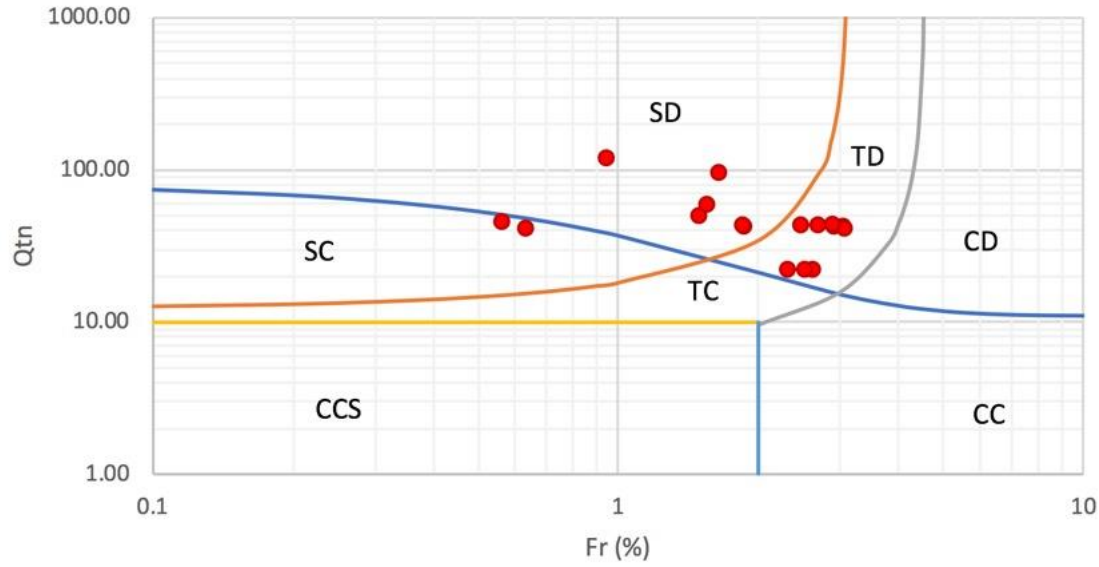

Figure 4-12 CPTu Qtn versus Fr Averaged over 2-foot Increments from the rebound sites

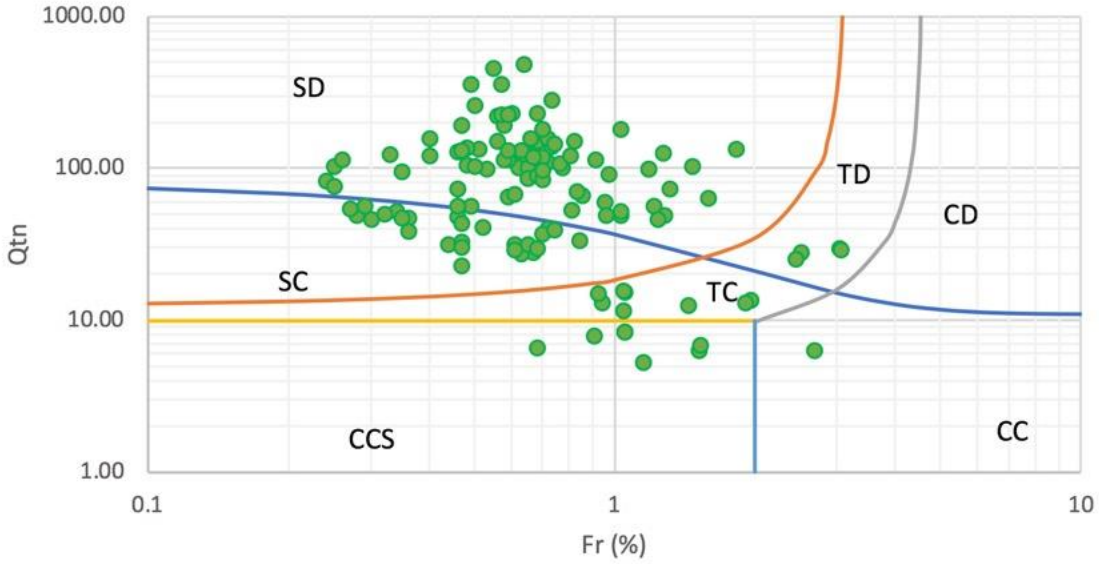

Figure 4-13 CPTu Qtn versus Fr Averaged over 2-foot Increments from the non-rebound sites

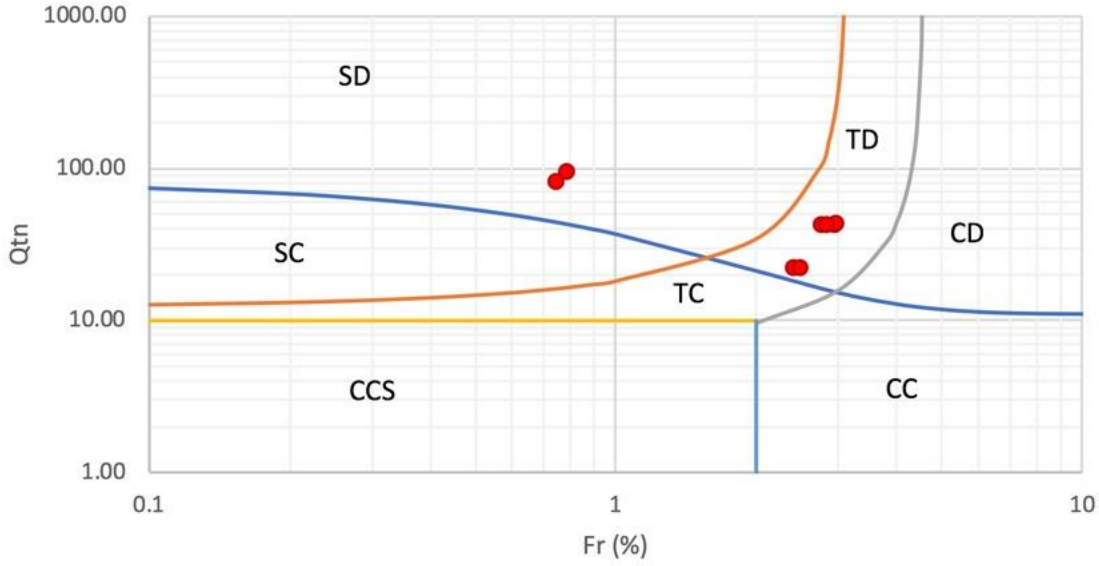

Figure 4-14 CPTu Qtn versus Fr Averaged over 4-foot Increments from the rebound sites

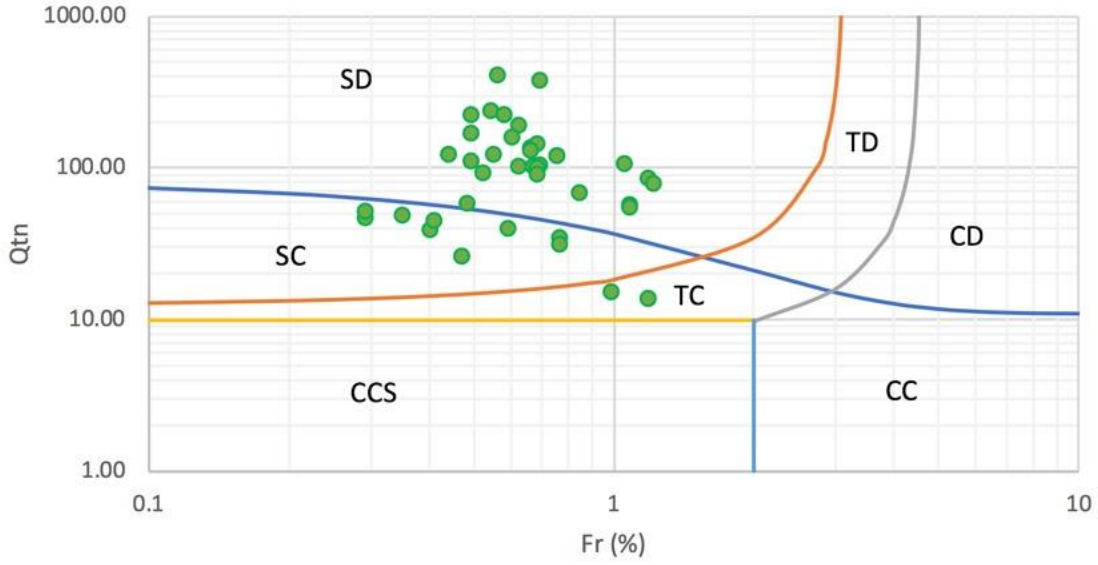

Figure 4-15 CPTu Qtn versus Fr Averaged over 4-foot Increments from the non-rebound sites

5 Conclusions

Based on the re-evaluation of SPT N values, which increased the locations evaluated from 15 to 37 and the sites from eight to 16, the following conclusions have been developed. As was the case for the previous evaluation, 0.5-inches of rebound was used as the threshold for all analyses.

1. Excluding early driving (i.e. predrilling and less than fuel setting 2 on the hammer) data improved the trends.
2. The USCS/AASHTO soil classifications of SP/A-3 with less than 12% fines would produce a low concern for rebound with excessive hammer blows.
3. The contractive and dilative potential of sands and silty sands based on the Seed et al. (1985) damage potential and how it relates to contractive and dilative behavior, produced clear trends indicating that rebound soils (i.e. fine sands with mixtures of silts and clays or SM, SC, SP-SC, or SP-SM) are dilative when $N_{1(60)}$ exceeds 30. Therefore, fine sands with mixtures of silts and clays or SM, SC, SP-SC, or SP-SM classifications with $N_{1(60)} > 30$ tend to be rebound soils.
4. Based on the USCS soil classifications, the soils most likely to produce rebound in excess of 0.5-inches are SM and ML/MH.
5. N-values averaged over 4-foot thick layers produced no trends indicating rebound, as a ratio of pile penetration into the layer, is a function of layer thickness.
6. Robertson's (2016) CPTu soil behavior charts could be used as a screening tool but not for a final determination or identification of rebound soils.

6 Recommendations

1. Engineers who are evaluating N-values for rebound potential during design phase investigations, should evaluate displacement piles driven at nearby sites and exclude early driving data (i.e. depths associated with predrilling and less than the hammers' fuel setting 2 depths).
2. The Level I High Pile Rebound Decision Tree has been modified and updated to include $N_{1(60)}$ values greater than 30 producing a high concern for rebound in excess of 0.5-inches.
3. The Level I High Pile Rebound Decision Tree has been modified and updated such that a soil classification of SP/A-3 with less than 12% fines would produce a low concern for rebound with excessive hammer blows.
4. The Level I High Pile Rebound Decision Tree has been modified and updated indicating that USCS soil classifications most likely to produce a high concern of rebound in excess of 0.5-inches are SM and ML/MH.
5. The Level I: Basic Design Phase Information within the High Pile Rebound Decision Tree has been updated and is included along with Levels II and III as shown in the following figure.

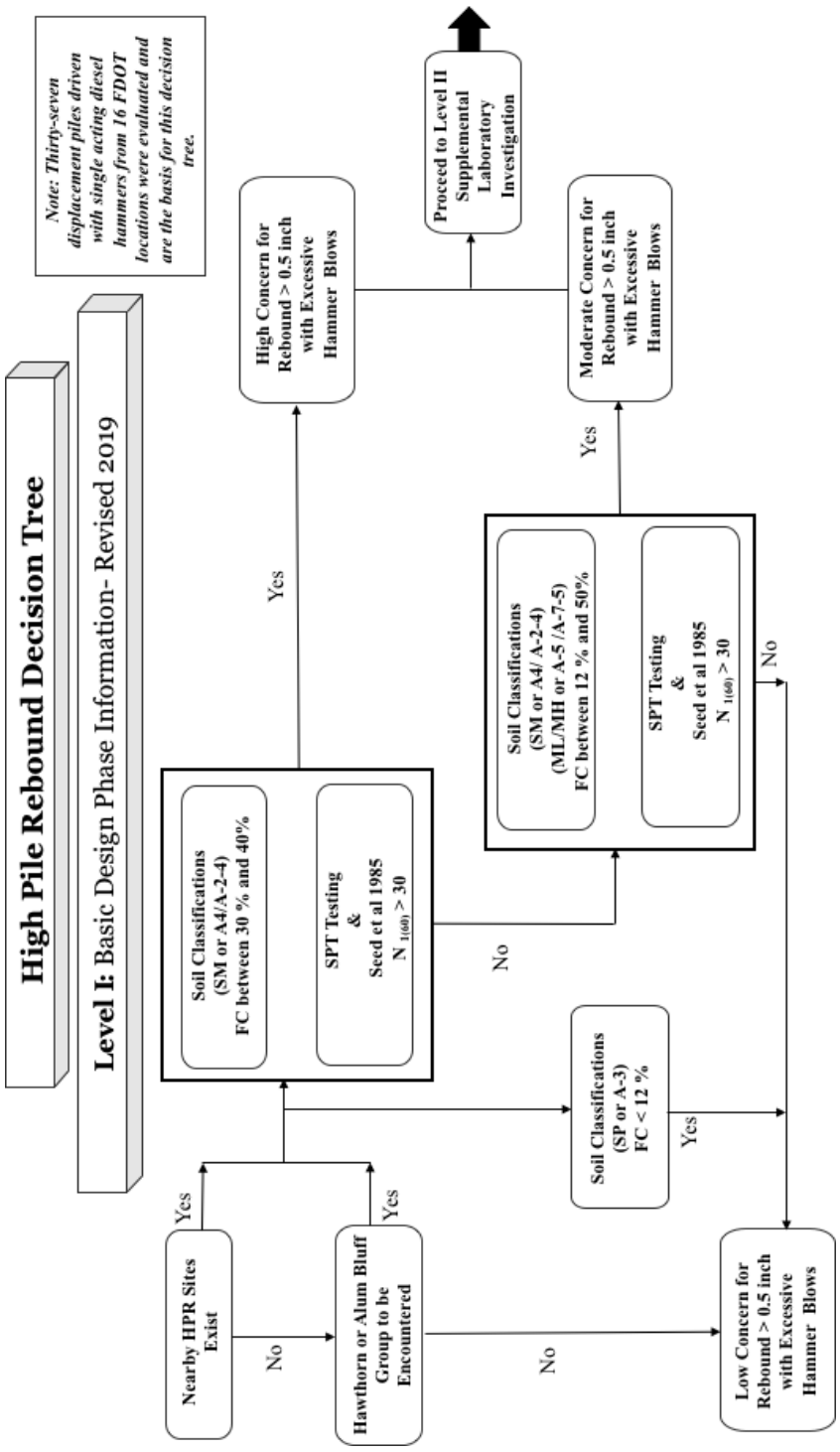

Figure 6-1 Revised High Pile Rebound Decision Tree - Level I

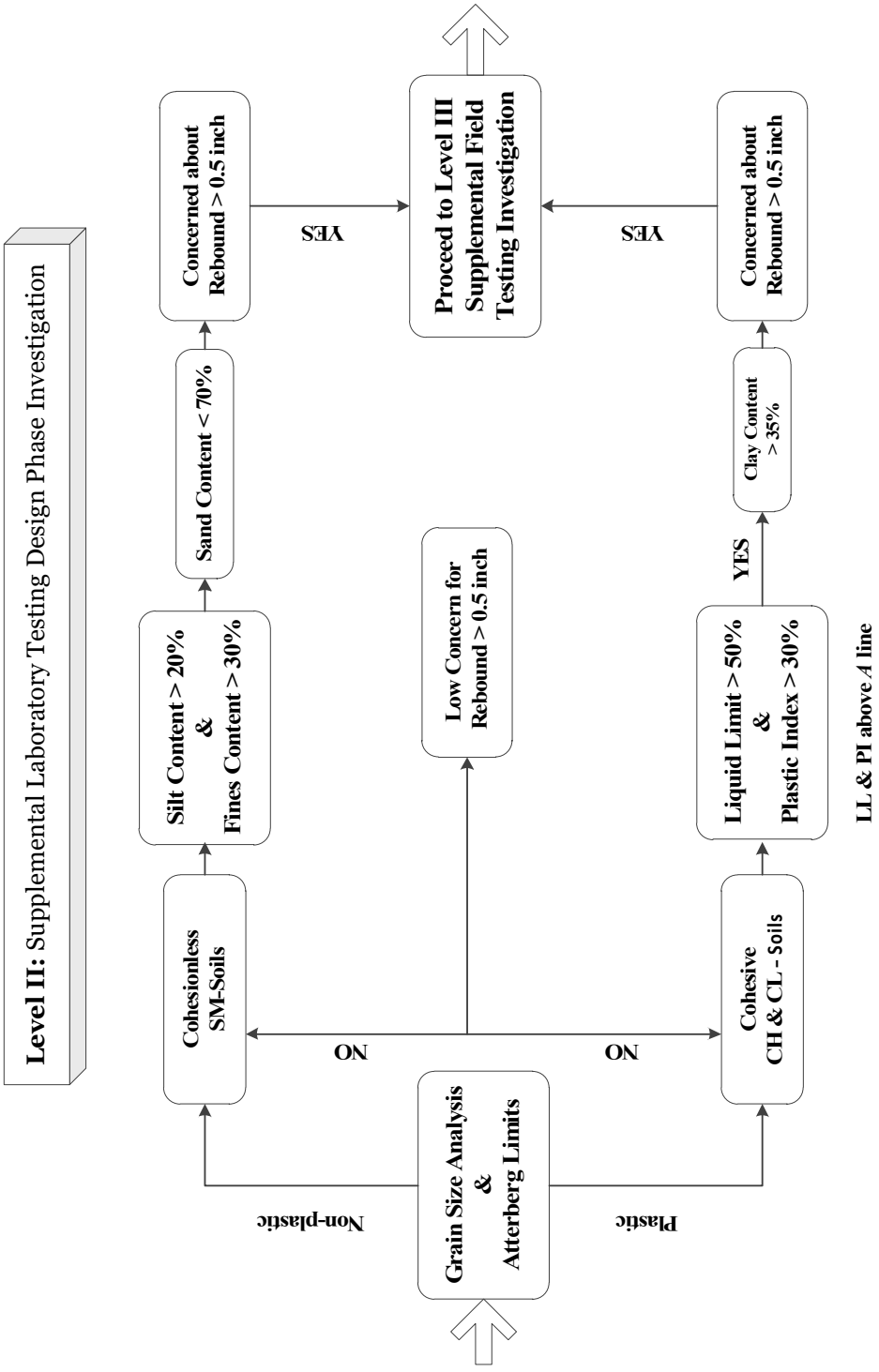

Figure 6-2 High Pile Rebound Decision Tree - Level II

Note that stress-level cyclic triaxial testing with 1000 cycles each at stress levels at 20, 40, 60 and 80% of the failure stress from triaxial tests conducted in accordance with ASTM D4767 indicated that HRP soils required two to three times more cycles to attain 2.5, 5, 10 and 15% strain levels than non HPR soils and are termed more resilient which matches the phenomenon that occurs during driving in theses soils.

Figure 6-3 High Pile Rebound Decision Tree - Level III

7 References

Authier, J., & Fellenius, B. H. (1980). "Quake Values Determined from Dynamic Measurements." 1st International Conference on the Application of Stress-Wave Theory on Piles, Stockholm, 1980, (pp. 197- 216).

Cosentino, P. J., Edward H. Kalajian, Eldeen, Y. S., Bleakley, A. M., Wisnom, B.F., Omar, A., Dekhn, H., Misilo, T. J., Shaban, A.M. (2016), "Improving Design Phase Evaluations for High Pile Rebound Soils" *Report No. FL/DOT/BDV 28 977-01*. Florida Department of Transportation.

Cosentino, P., Kalajian, E., Misilo, T., Chin Fong, Y., Davis, K., Jarushi, F., Bleakley A., Hussein M. H., & Bates, Z. (2010). Design phase identification of high pile rebound soils. *Rep. No. FL/DOT/BDK81 977-01*, Florida Department of Transportation.

Dekhn, H. (2015). Engineering Properties of Pile Rebound Soils based on Cone Penetration Testing, Doctoral dissertation. Florida Institute of Technology, Melbourne FL.

Florida Department of Transportation- FDOT. (2015). "Standard Specification for Road and Bridge Construction".

Forehand and Reese (1963), "Pile Driving Analysis Using the Wave Equation" Master of Science Thesis, Princeton University.

Jefferies, M.G. & Been, K. (2006). "Soil Liquefaction-A Critical State Approach" 2nd Ed, Taylor & Francis Publishers.

Hussein, M. H., Woerner, W. A., Sharp, M., & Hwang, C. (2006). "Pile Driveability and Bearing Capacity in High-rebound Soils." GeoCongress, 63.

Likins, Garland E. (1983). "Pile Installation Difficulties in Soils with Large Quakes." In G.G. Globe, (Ed.), In Symposium 6 at the 1983 ASCE Convention, Philadelphia, PA, 18 May 1983. ASCE Geotechnical Engineering Division.

Murrell, K. L. Canivan, G. J., & Camp, W. M. (2008). "High and Low Strain Testing of Bouncing Piles." In The 33rd Annual and 11th International Conference on Deep Foundations, 18(20).

Ramey, G. E., and Hudgins, A. P., (197)7. Sensitivity and Accuracy of the Pile Wave Equation", Ground Engineering, Foundation Publishing Ltd., London, Vol. 10, No. 7, pp. 45-47.

Robertson P.K., (2016) "Cone Penetration Test (CPT) – Based Soil Behaviour Type (SBT) Classification System-an Update", NRC Press

Scott, Thomas. The Lithostratigraphy of the Hawthorn Group of Peninsular Florida. Open File Report 36. Tallahassee: Florida Geological Survey, 1990.

Scott, Thomas M. and Peter L. MacGill. The Hawthorn Formation of Central Florida. 91. Tallahassee: Bureau of Geologyl Division of Resource Management, 1981

Seed, H. B., Tokimatsu, K., Harder L.F. and Chung R. M., (1985) "Influence of SPT Procedures in Soil Liquefaction Resistance Evaluations," J Geotech. Engrg., Vol 111, No. 12, pp 1425-14445.

Smith, E.A.L. (1960). "Pile Driving Analysis by the Wave Equation." American Society of Civil Engineers, ASCE, Journal of Soil Mechanics and Foundation Engineering, SM4, 86 (1960): p. 35-61.

8 Appendix

8.1 PDA SITE DATA

8.1.1 S.R. 600 Over Saddle Creek – Bent 2 Pile 2 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
74.42	73.92	28.73	29.23		47	5	0.58	0.24	0.24	0.34	18	282
73.92	73.42	29.23	29.73			39	0.54	0.16	0.16	0.38	0	428
73.42	72.92	29.73	30.23			91	0.59	0.07	0.07	0.52	0	493
72.92	72.42	30.23	30.73			94	0.68	0.07	0.07	0.62	0	510
72.42	71.92	30.73	31.23			105	0.70	0.06	0.06	0.64	19	485
71.92	71.42	31.23	31.73			103	0.68	0.06	0.06	0.62	44	455
71.42	70.92	31.73	32.23			91	0.69	0.07	0.06	0.62	76	436
70.92	70.42	32.23	32.73			88	0.68	0.07	0.06	0.61	102	437
70.42	69.92	32.73	33.23	SM		75	0.65	0.08	0.08	0.57	125	454
69.92	69.42	33.23	33.73			74	0.61	0.08	0.08	0.53	127	505
69.42	68.92	33.73	34.23		58	68	0.55	0.09	0.09	0.46	131	595
68.92	68.42	34.23	34.73			68	0.52	0.09	0.09	0.43	152	606
68.42	67.92	34.73	35.23			69	0.50	0.09	0.08	0.41	188	588
67.92	67.42	35.23	35.73			66	0.48	0.09	0.09	0.38	219	601
67.42	66.92	35.73	36.23			53	0.45	0.11	0.11	0.34	238	624
66.92	66.42	36.23	36.73			59	0.43	0.10	0.10	0.32	286	658
66.42	65.92	36.73	37.23			55	0.40	0.07	0.07	0.33	306	727

8.1.2 I-75 Over University Parkway – Bent 1 SB Pile 2 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
21.70	21.20	15	15.9	SP/SP-SM		4	1.42	0.69	0.69	0.73	8	64
21.20	20.70	16	16.4			7	0.97	0.92	0.92	0.05	1	167
20.70	20.20	16	16.9		14	11	0.68	0.53	0.53	0.14	3	207
20.20	19.70	17	17.4			16	0.56	0.39	0.39	0.17	3	247
19.70	19.20	17	17.9			19	0.52	0.31	0.30	0.21	6	274
19.20	18.70	18	18.4			24	0.50	0.26	0.25	0.24	9	302
18.70	18.20	18	18.9		18	25	0.49	0.24	0.24	0.24	11	326
18.20	17.70	19	19.4			26	0.49	0.23	0.23	0.26	13	346
17.70	17.20	19	19.9			21	0.54	0.29	0.29	0.26	12	369
17.20	16.70	20	20.4			16	0.71	0.36	0.36	0.35	7	385
16.70	16.20	20	20.9		9	15	0.71	0.38	0.38	0.33	9	376
16.20	15.70	21	21.4			15	0.72	0.41	0.41	0.31	12	365
15.70	15.20	21	21.9			14	0.74	0.42	0.42	0.32	12	351
15.20	14.70	22	22.4			14	0.75	0.43	0.43	0.32	14	345
14.70	14.20	22	22.9		11	13	0.77	0.47	0.47	0.30	15	341
14.20	13.70	23	23.4			11	0.79	0.52	0.52	0.27	17	332
13.70	13.20	23	23.9			12	0.79	0.54	0.53	0.26	22	321
13.20	12.70	24	24.4			11	0.78	0.55	0.55	0.23	29	314
12.70	12.20	24	24.9		32	11	0.78	0.55	0.54	0.23	41	313
12.20	11.70	25	25.4			11	0.74	0.55	0.54	0.19	46	307
11.70	11.20	25	25.9			10	0.73	0.58	0.57	0.15	60	304
11.20	10.70	26	26.4		21	10	0.71	0.60	0.60	0.11	81	294
10.70	10.20	26	26.9			11	0.68	0.56	0.56	0.12	107	283
10.20	9.70	27	27.4			11	0.65	0.52	0.52	0.13	125	267
9.70	9.20	27	27.9			12	0.65	0.50	0.50	0.15	137	263
9.20	8.70	28	28.4			13	0.64	0.48	0.48	0.16	144	269
8.70	8.20	28	28.9		18	12	0.64	0.48	0.48	0.16	141	268
8.20	7.70	29	29.4			13	0.66	0.48	0.48	0.18	141	261
7.70	7.20	29	29.9			12	0.68	0.52	0.51	0.16	156	237
7.20	6.70	30	30.4			11	0.70	0.55	0.55	0.15	184	201
6.70	6.20	30	30.9			10	0.74	0.59	0.59	0.15	228	160
6.20	5.70	31	31.4		2	9	0.76	0.63	0.63	0.13	260	121
5.70	5.20	31	31.9			9	0.80	0.71	0.71	0.10	276	97
5.20	4.70	32	32.4			7	0.90	0.80	0.80	0.10	276	84
4.70	4.20	32	32.9			7	0.93	0.85	0.85	0.08	266	76
4.20	3.70	33	33.4			7	1.01	0.92	0.92	0.09	252	74
3.70	3.20	33	33.9		WR	7	1.05	0.80	0.80	0.25	251	67
3.20	2.70	34	34.4			9	0.74	0.71	0.71	0.03	155	90
2.70	2.20	34	34.9			8	0.74	0.73	0.73	0.01	133	100
2.20	1.70	35	35.4			8	0.78	0.75	0.75	0.03	110	108
1.70	1.20	35	35.9			8	0.82	0.75	0.75	0.07	108	108
1.20	0.70	36	36.4		WH	8	0.83	0.75	0.75	0.08	79	115
0.70	0.20	36	36.9			7	0.88	0.80	0.80	0.08	88	108

Bent 1 SB Pile 2 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
0.20	-0.30	37	37.4	SM/SM-SC		7	0.91	0.86	0.86	0.05	77	107
-0.30	-0.80	37	37.9			7	0.93	0.86	0.86	0.07	76	105
-0.80	-1.30	38	38.4			7	0.95	0.86	0.86	0.09	73	102
-1.30	-1.80	38	38.9		WH	7	0.95	0.86	0.86	0.09	65	107
-1.80	-2.30	39	39.4			7	0.95	0.86	0.86	0.09	63	108
-2.30	-2.80	39	39.9			7	0.95	0.86	0.85	0.09	67	110
-2.80	-3.30	40	40.4			7	0.97	0.86	0.85	0.11	63	109
-3.30	-3.80	40	40.9			7	0.97	0.89	0.88	0.08	61	110
-3.80	-4.30	41	41.4		WH	7	0.97	0.92	0.92	0.05	56	111
-4.30	-4.80	41	41.9			6	1.02	0.96	0.96	0.06	56	114
-4.80	-5.30	42	42.4			6	1.04	1.00	1.00	0.04	58	114
-5.30	-5.80	42	42.9			7	0.96	0.89	0.88	0.08	66	105
-5.80	-6.30	43	43.4			7	0.91	0.80	0.80	0.11	68	105
-6.30	-6.80	43	43.9		WH	11	0.70	0.56	0.56	0.13	90	158
-6.80	-7.30	44	44.4			14	0.55	0.43	0.43	0.12	45	316
-7.30	-7.80	44	44.9			24	0.66	0.25	0.25	0.41	49	486
-7.80	-8.30	45	45.4			33	0.61	0.18	0.18	0.43	60	575
-8.30	-8.80	45	45.9			40	0.61	0.15	0.15	0.46	82	644
-8.80	-9.30	46	46.4		50/3	47	0.61	0.13	0.13	0.48	86	720
-9.30	-9.80	46	46.9			54	0.58	0.11	0.11	0.47	96	770
-9.80	-10.30	47	47.4	SP/SP-SM		60	0.58	0.10	0.10	0.48	113	832
-10.30	-10.80	47	47.9			66	0.57	0.09	0.09	0.47	143	880
-10.80	-11.30	48	48.4			70	0.55	0.09	0.08	0.46	162	933
-11.30	-11.80	48	48.9		50/3	71	0.56	0.08	0.08	0.48	171	996
-11.80	-12.30	49	49.4			72	0.56	0.08	0.08	0.48	177	1007
-12.30	-12.80	49	49.9			67	0.57	0.09	0.09	0.48	175	941
-12.80	-13.30	50	50.4			63	0.59	0.10	0.09	0.49	160	840
-13.30	-13.80	50	50.9			49	0.62	0.12	0.12	0.50	143	734
-13.80	-14.30	51	51.4		50/2	38	0.66	0.16	0.16	0.50	123	664
-14.30	-14.80	51	51.9			33	0.67	0.18	0.18	0.49	127	596
-14.80	-15.30	52	52.4	SC/CL/CH		29	0.65	0.20	0.20	0.45	138	532
-15.30	-15.80	52	52.9			26	0.65	0.23	0.23	0.43	157	465
-15.80	-16.30	53	53.4			24	0.63	0.26	0.26	0.37	187	400
-16.30	-16.80	53	53.9		50/2	25	0.55	0.24	0.24	0.31	187	374
-16.80	-17.30	54	54.4			26	0.57	0.23	0.23	0.34	210	366
-17.30	-17.80	54	54.9			24	0.58	0.25	0.24	0.34	233	357
-17.80	-18.30	55	55.4			24	0.55	0.26	0.25	0.29	248	340
-18.30	-18.80	55	55.9			24	0.55	0.25	0.25	0.30	244	329
-18.80	-19.30	56	56.4		50/2	24	0.56	0.24	0.24	0.32	245	319
-19.30	-19.80	56	56.9			29	0.40	0.20	0.20	0.19	374	250
-19.80	-20.30	57	57.4			33	0.36	0.18	0.19	0.18	513	188
-20.30	-20.80	57	57.9			34	0.40	0.17	0.17	0.23	484	192
-20.80	-21.30	58	58.4			36	0.39	0.17	0.17	0.22	466	229
-21.30	-21.80	58	58.9		20	37	0.42	0.16	0.16	0.26	487	346
-21.80	-22.30	59	59.4			38	0.45	0.16	0.15	0.29	481	517
-22.30	-22.80	59	59.9			55	0.44	0.11	0.10	0.33	430	673
-22.80	-23.30	60	60.4			68	0.44	0.09	0.08	0.35	406	766
-23.30	-23.80	60	60.9			84	0.44	0.07	0.07	0.37	392	821
-23.80	-24.30	61	61.4		22	97	0.44	0.06	0.06	0.38	376	863
-24.30	-24.80	61	61.9			49	0.44	0.06	0.06	0.38	374	878

8.1.3 I-75 Over University Parkway – Bent 2 SB Pile 3 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
17.20	16.70	11.50	12.00	SP/SP-SM		1	6.00	6.00	6.00	0.00	0	0
16.70	16.20	12.00	12.50		9	4	2.86	2.63	2.63	0.23	0	13
16.20	15.70	12.50	13.00			4	1.50	1.50	1.50	0.00	0	38
15.70	15.20	13.00	13.50			5	1.27	1.17	1.17	0.10	0	82
15.20	14.70	13.50	14.00			6	1.11	1.09	1.09	0.02	0	93
14.70	14.20	14.00	14.50		11	6	1.06	0.90	0.90	0.16	0	110
14.20	13.70	14.50	15.00			7	0.98	0.86	0.86	0.12	0	114
13.70	13.20	15.00	15.50			8	0.89	0.78	0.78	0.11	0	122
13.20	12.70	15.50	16.00			8	0.89	0.75	0.75	0.14	0	132
12.70	12.20	16.00	16.50		32	7	1.02	0.87	0.87	0.15	0	133
12.20	11.70	16.50	17.00			7	1.01	0.92	0.92	0.09	0	125
11.70	11.20	17.00	17.50			6	1.10	0.99	0.99	0.12	0	124
11.20	10.70	17.50	18.00		21	6	1.21	1.00	1.00	0.21	0	126
10.70	10.20	18.00	18.50			4	1.31	1.25	1.25	0.07	0	82
10.20	9.70	18.50	19.00			5	1.41	1.33	1.33	0.08	0	47
9.70	9.20	19.00	19.50			3	1.87	1.78	1.78	0.09	0	1
9.20	8.70	19.50	20.00			3	2.00	2.00	2.00	0.00	0	0
8.70	8.20	20.00	20.50		18	3	2.00	2.00	2.00	0.00	0	0
8.20	7.70	20.50	21.00			3	2.03	2.00	2.00	0.03	0	0
7.70	7.20	21.00	21.50			2	2.55	2.50	2.50	0.05	0	0
7.20	6.70	21.50	22.00			2	3.00	3.00	3.00	0.00	0	0
6.70	6.20	22.00	22.50			1	3.02	3.00	3.00	0.02	0	0
6.20	5.70	22.50	23.00		2	0	-	-	-	-	-	-
5.70	5.20	23.00	23.50			0	-	-	-	-	-	-
5.20	4.70	23.50	24.00			0	-	-	-	-	-	-
4.70	4.20	24.00	24.50			0	-	-	-	-	-	-
4.20	3.70	24.50	25.00			0	-	-	-	-	-	-
3.70	3.20	25.00	25.50		WR	1	36.02	36.00	36.02	0.02	0	-1
3.20	2.70	25.50	26.00			0	-	-	-	-	-	-
2.70	2.20	26.00	26.50			0	-	-	-	-	-	-
2.20	1.70	26.50	27.00			0	-	-	-	-	-	-
1.70	1.20	27.00	27.50			0	-	-	-	-	-	-
1.20	0.70	27.50	28.00		WH	0	-	-	-	-	-	-
0.70	0.20	28.00	28.50			1	36.01	36.00	36.01	0.01	0	-1
0.20	-0.30	28.50	29.00	SM/SM-SC		0	-	-	-	-	-	-
-0.30	-0.80	29.00	29.50			0	-	-	-	-	-	-
-0.80	-1.30	29.50	30.00			0	-	-	-	-	-	-
-1.30	-1.80	30.00	30.50		WH	0	-	-	-	-	-	-
-1.80	-2.30	30.50	31.00			0	-	-	-	-	-	-
-2.30	-2.80	31.00	31.50			1	36.02	36.00	36.02	0.02	0	-1
-2.80	-3.30	31.50	32.00			0	-	-	-	-	-	-
-3.30	-3.80	32.00	32.50			1	12.00	12.00	12.00	0.00	0	0
-3.80	-4.30	32.50	33.00		WH	0	-	-	-	-	-	-
-4.30	-4.80	33.00	33.50			1	11.99	12.00	11.99	-0.01	0	0
-4.80	-5.30	33.50	34.00			0	-	-	-	-	-	-
-5.30	-5.80	34.00	34.50			1	11.99	12.00	11.99	-0.01	0	0
-5.80	-6.30	34.50	35.00			0	-	-	-	-	-	-
-6.30	-6.80	35.00	35.50		WH	1	11.99	12.00	11.99	-0.01	0	-1
-6.80	-7.30	35.50	36.00			0	-	-	-	-	-	-
-7.30	-7.80	36.00	36.50			21	1.19	0.81	0.81	0.39	5	296
-7.80	-8.30	36.50	37.00			24	0.48	0.25	0.25	0.23	27	449
-8.30	-8.80	37.00	37.50			28	0.57	0.22	0.22	0.36	32	549
-8.80	-9.30	37.50	38.00		50/3	28	0.64	0.21	0.21	0.43	33	617
-9.30	-9.80	38.00	38.50			32	0.65	0.19	0.19	0.46	52	656

Bent 2 SB Pile 3 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-9.80	-10.30	38.50	39.00	SP/SP-SM		32	0.61	0.19	0.18	0.42	79	664
-10.30	-10.80	39.00	39.50			43	0.62	0.14	0.14	0.48	83	738
-10.80	-11.30	39.50	40.00			45	0.58	0.13	0.13	0.45	87	835
-11.30	-11.80	40.00	40.50		50/3	63	0.54	0.09	0.09	0.44	123	895
-11.80	-12.30	40.50	41.00			66	0.51	0.09	0.09	0.42	146	921
-12.30	-12.80	41.00	41.50			65	0.51	0.09	0.09	0.42	153	911
-12.80	-13.30	41.50	42.00			65	0.54	0.09	0.09	0.45	127	827
-13.30	-13.80	42.00	42.50			38	0.59	0.16	0.16	0.43	67	727
-13.80	-14.30	42.50	43.00		50/2	34	0.66	0.18	0.17	0.48	59	626
-14.30	-14.80	43.00	43.50			23	0.72	0.26	0.26	0.46	47	501
-14.80	-15.30	43.50	44.00	SC/CL/CH		20	0.75	0.29	0.29	0.46	57	449
-15.30	-15.80	44.00	44.50			19	0.76	0.31	0.31	0.44	67	416
-15.80	-16.30	44.50	45.00			19	0.62	0.32	0.32	0.30	51	378
-16.30	-16.80	45.00	45.50		50/2	16	0.67	0.38	0.38	0.29	56	373
-16.80	-17.30	45.50	46.00			15	0.66	0.39	0.39	0.27	62	358
-17.30	-17.80	46.00	46.50			16	0.67	0.39	0.39	0.28	65	347
-17.80	-18.30	46.50	47.00			15	0.66	0.39	0.39	0.27	66	342
-18.30	-18.80	47.00	47.50			16	0.58	0.39	0.39	0.19	155	351
-18.80	-19.30	47.50	48.00		50/2	16	0.67	0.39	0.38	0.28	158	338
-19.30	-19.80	48.00	48.50			12	0.77	0.51	0.51	0.26	92	357
-19.80	-20.30	48.50	49.00			11	0.82	0.55	0.55	0.27	79	353
-20.30	-20.80	49.00	49.50			11	0.84	0.55	0.55	0.29	82	346
-20.80	-21.30	49.50	50.00			11	0.86	0.55	0.54	0.31	88	334
-21.30	-21.80	50.00	50.50		20	10	0.92	0.59	0.59	0.33	80	322
-21.80	-22.30	50.50	51.00			10	0.96	0.60	0.60	0.36	80	307
-22.30	-22.80	51.00	51.50			11	0.94	0.56	0.55	0.38	83	307
-22.80	-23.30	51.50	52.00			11	0.91	0.55	0.54	0.36	85	307
-23.30	-23.80	52.00	52.50			24	0.62	0.26	0.25	0.36	99	347
-23.80	-24.30	52.50	53.00		22	27	0.50	0.23	0.23	0.27	70	474
-24.30	-24.80	53.00	53.50			58	0.43	0.10	0.10	0.33	96	633
-24.80	-25.30	53.50	54.00			65	0.46	0.09	0.09	0.37	164	741
-25.30	-25.80	54.00	54.50			69	0.50	0.09	0.08	0.41	196	767
-25.80	-26.30	54.50	55.00			71	0.49	0.09	0.08	0.40	204	737
-26.30	-26.80	55.00	55.50		50/1	52	0.52	0.11	0.11	0.41	214	674
-26.80	-27.30	55.50	56.00			49	0.53	0.12	0.12	0.41	189	620
-27.30	-27.80	56.00	56.50			38	0.57	0.16	0.15	0.41	154	574
-27.80	-28.30	56.50	57.00			36	0.60	0.17	0.16	0.43	141	558
-28.30	-28.80	57.00	57.50			27	0.62	0.22	0.22	0.40	125	541
-28.80	-29.30	57.50	58.00		50/2	26	0.64	0.24	0.23	0.40	139	486
-29.30	-29.80	58.00	58.50			20	0.66	0.30	0.29	0.36	142	453
-29.80	-30.30	58.50	59.00			20	0.67	0.31	0.30	0.36	152	430
-30.30	-30.80	59.00	59.50			17	0.64	0.34	0.34	0.30	164	431
-30.80	-31.30	59.50	60.00			17	0.63	0.35	0.35	0.28	192	435
-31.30	-31.80	60.00	60.50		52/0	26	0.48	0.24	0.23	0.25	251	426
-31.80	-32.30	60.50	61.00			27	0.43	0.22	0.22	0.21	349	438
-32.30	-32.80	61.00	61.50			38	0.42	0.16	0.16	0.26	428	537
-32.80	-33.30	61.50	62.00	SM/SM-SC		40	0.48	0.15	0.15	0.33	408	551
-33.30	-33.80	62.00	62.50			44	0.49	0.13	0.13	0.35	406	597
-33.80	-34.30	62.50	63.00		32	45	0.48	0.13	0.13	0.35	420	636
-34.30	-34.80	63.00	63.50			53	0.48	0.11	0.11	0.37	463	645
-34.80	-35.30	63.50	64.00			53	0.48	0.11	0.11	0.37	492	654
-35.30	-35.80	64.00	64.50			67	0.47	0.09	0.09	0.37	529	656
-35.80	-36.30	64.50	65.00			68	0.46	0.09	0.08	0.37	533	669
-36.30	-36.80	65.00	65.50		32	69	0.45	0.09	0.08	0.36	539	678
-36.80	-37.30	65.50	66.00			69	0.45	0.09	0.08	0.36	567	673
-37.30	-37.80	66.00	66.50			215	0.38	0.03	0.02	0.35	684	674
-37.80	-38.30	66.50	67.00			37	0.37	0.03	0.02	0.34	708	619

8.1.4 I-75 Over University Parkway – Bent 2 NB Pile 3 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
1.30	0.80	27.10	27.60	SC/CL/CH		1	4.00	4.00	4.00	0.00	0	0
0.80	0.30	27.60	28.10			2	4.00	4.00	4.00	0.00	0	0
0.30	-0.20	28.10	28.60			1	6.00	6.00	6.00	0.00	0	0
-0.20	-0.70	28.60	29.10			1	6.01	6.00	6.01	0.01	0	0
-0.70	-1.20	29.10	29.60			1	6.00	6.00	6.00	0.00	0	0
-1.20	-1.70	29.60	30.10			1	6.00	6.00	6.00	0.00	0	0
-1.70	-2.20	30.10	30.60		WH	0	-	-	-	-	-	-
-2.20	-2.70	30.60	31.10			1	12.01	12.00	12.01	0.01	0	-1
-2.70	-3.20	31.10	31.60			1	6.00	6.00	6.00	0.00	0	0
-3.20	-3.70	31.60	32.10			1	6.00	6.00	6.00	0.00	0	0
-3.70	-4.20	32.10	32.60			3	2.17	2.00	2.00	0.17	0	0
-4.20	-4.70	32.60	33.10			3	2.00	2.00	2.00	0.00	0	0
-4.70	-5.20	33.10	33.60			3	1.78	1.71	1.71	0.07	0	0
-5.20	-5.70	33.60	34.10			4	1.74	1.71	1.71	0.03	0	0
-5.70	-6.20	34.10	34.60	SP/SP-SM		3	1.82	1.71	1.71	0.11	0	0
-6.20	-6.70	34.60	35.10			4	1.88	1.71	1.71	0.17	0	0
-6.70	-7.20	35.10	35.60		90/10	3	2.02	1.71	1.71	0.31	0	0
-7.20	-7.70	35.60	36.10			4	1.96	1.71	1.71	0.25	0	0
-7.70	-8.20	36.10	36.60			3	2.27	2.00	1.99	0.27	0	0
-8.20	-8.70	36.60	37.10			3	2.05	2.00	2.00	0.05	0	0
-8.70	-9.20	37.10	37.60			3	1.76	1.71	1.71	0.05	0	0
-9.20	-9.70	37.60	38.10			4	1.71	1.71	1.71	0.00	0	13
-9.70	-10.20	38.10	38.60			5	1.23	1.09	1.09	0.14	0	112
-10.20	-10.70	38.60	39.10			6	1.09	1.09	1.09	0.00	0	103
-10.70	-11.20	39.10	39.60			6	1.04	0.92	0.92	0.12	0	98
-11.20	-11.70	39.60	40.10			7	1.30	0.92	0.92	0.38	0	79
-11.70	-12.20	40.10	40.60		50/3	3	1.73	1.71	1.71	0.02	0	0
-12.20	-12.70	40.60	41.10			4	1.73	1.71	1.71	0.02	0	0
-12.70	-13.20	41.10	41.60			3	1.74	1.71	1.71	0.03	0	0
-13.20	-13.70	41.60	42.10			4	1.80	1.71	1.71	0.09	0	0
-13.70	-14.20	42.10	42.60			3	1.88	1.71	1.71	0.17	0	0
-14.20	-14.70	42.60	43.10			4	1.87	1.71	1.71	0.16	0	0
-14.70	-15.20	43.10	43.60			3	1.74	1.71	1.71	0.03	0	10
-15.20	-15.70	43.60	44.10			4	1.71	1.71	1.71	0.00	0	54
-15.70	-16.20	44.10	44.60	SM/SM-SC		6	1.08	0.92	0.92	0.16	0	110
-16.20	-16.70	44.60	45.10			7	1.01	0.92	0.92	0.09	0	135
-16.70	-17.20	45.10	45.60		15	11	0.88	0.55	0.54	0.33	0	188
-17.20	-17.70	45.60	46.10			12	0.77	0.53	0.53	0.24	0	263
-17.70	-18.20	46.10	46.60			17	0.64	0.35	0.35	0.29	0	293
-18.20	-18.70	46.60	47.10			16	0.69	0.35	0.35	0.34	0	258
-18.70	-19.20	47.10	47.60			11	0.74	0.57	0.57	0.17	0	203
-19.20	-19.70	47.60	48.10			10	0.82	0.57	0.57	0.25	0	173
-19.70	-20.20	48.10	48.60			8	0.90	0.75	0.75	0.15	0	155
-20.20	-20.70	48.60	49.10			9	0.94	0.70	0.70	0.25	0	151
-20.70	-21.20	49.10	49.60			23	0.68	0.26	0.26	0.42	0	315
-21.20	-21.70	49.60	50.10			24	0.53	0.25	0.25	0.28	8	483
-21.70	-22.20	50.10	50.60		23	35	0.54	0.17	0.17	0.37	21	476
-22.20	-22.70	50.60	51.10			36	0.55	0.17	0.17	0.39	24	502
-22.70	-23.20	51.10	51.60			56	0.54	0.11	0.11	0.43	33	513
-23.20	-23.70	51.60	52.10			55	0.54	0.11	0.11	0.43	33	547
-23.70	-24.20	52.10	52.60			56	0.60	0.11	0.10	0.49	40	600
-24.20	-24.70	52.60	53.10			56	0.62	0.11	0.10	0.51	57	619
-24.70	-25.20	53.10	53.60			48	0.68	0.12	0.12	0.56	81	646
-25.20	-25.70	53.60	54.10			49	0.67	0.12	0.12	0.55	82	654

Bent 2 NB Pile 3 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-25.70	-26.20	54.10	54.60	SC/CL/CH		55	0.67	0.11	0.10	0.56	94	672
-26.20	-26.70	54.60	55.10			55	0.68	0.11	0.11	0.56	98	695
-26.70	-27.20	55.10	55.60		46	52	0.66	0.12	0.11	0.54	98	718
-27.20	-27.70	55.60	56.10			52	0.63	0.12	0.11	0.51	101	701
-27.70	-28.20	56.10	56.60			69	0.48	0.09	0.09	0.39	146	739
-28.20	-28.70	56.60	57.10			67	0.58	0.09	0.08	0.49	157	708
-28.70	-29.20	57.10	57.60			51	0.59	0.12	0.11	0.47	142	695
-29.20	-29.70	57.60	58.10			51	0.60	0.12	0.11	0.48	146	678
-29.70	-30.20	58.10	58.60			44	0.60	0.14	0.13	0.46	147	660
-30.20	-30.70	58.60	59.10			44	0.59	0.14	0.13	0.45	149	647
-30.70	-31.20	59.10	59.60			44	0.57	0.14	0.13	0.43	166	631
-31.20	-31.70	59.60	60.10			43	0.57	0.14	0.13	0.43	186	612
-31.70	-32.20	60.10	60.60		49	40	0.57	0.15	0.14	0.42	197	589
-32.20	-32.70	60.60	61.10			40	0.57	0.15	0.14	0.41	209	567
-32.70	-33.20	61.10	61.60			34	0.58	0.18	0.17	0.40	209	546
-33.20	-33.70	61.60	62.10			33	0.58	0.18	0.17	0.40	213	523
-33.70	-34.20	62.10	62.60			25	0.60	0.24	0.24	0.36	193	507
-34.20	-34.70	62.60	63.10			24	0.61	0.24	0.24	0.37	196	491
-34.70	-35.20	63.10	63.60			24	0.61	0.26	0.25	0.35	200	481
-35.20	-35.70	63.60	64.10			23	0.62	0.26	0.25	0.36	199	477
-35.70	-36.20	64.10	64.60	SP/SP-SM		23	0.62	0.26	0.26	0.36	200	475
-36.20	-36.70	64.60	65.10			23	0.59	0.26	0.26	0.33	194	472
-36.70	-37.20	65.10	65.60		36	20	0.61	0.29	0.29	0.32	172	474
-37.20	-37.70	65.60	66.10			21	0.61	0.29	0.29	0.33	174	469
-37.70	-38.20	66.10	66.60			27	0.56	0.23	0.22	0.33	183	459
-38.20	-38.70	66.60	67.10			26	0.56	0.23	0.22	0.33	164	470
-38.70	-39.20	67.10	67.60			22	0.57	0.28	0.28	0.29	149	475
-39.20	-39.70	67.60	68.10			22	0.52	0.27	0.27	0.25	169	477
-39.70	-40.20	68.10	68.60			40	0.39	0.15	0.15	0.24	371	448
-40.20	-40.70	68.60	69.10			38	0.43	0.15	0.15	0.28	375	417
-40.70	-41.20	69.10	69.60			28	0.51	0.21	0.21	0.30	398	400
-41.20	-41.70	69.60	70.10			28	0.52	0.21	0.21	0.31	385	396
-41.70	-42.20	70.10	70.60		32	26	0.53	0.24	0.23	0.29	365	396
-42.20	-42.70	70.60	71.10			26	0.52	0.24	0.22	0.29	363	396
-42.70	-43.20	71.10	71.60			30	0.52	0.20	0.19	0.32	368	402
-43.20	-43.70	71.60	72.10			30	0.51	0.20	0.19	0.31	380	404
-43.70	-44.20	72.10	72.60			27	0.50	0.23	0.22	0.27	385	407
-44.20	-44.70	72.60	73.10			26	0.50	0.23	0.22	0.27	395	404
-44.70	-45.20	73.10	73.60			29	0.49	0.21	0.20	0.28	415	397
-45.20	-45.70	73.60	74.10			29	0.47	0.21	0.21	0.26	433	390
-45.70	-46.20	74.10	74.60			31	0.47	0.19	0.18	0.28	453	378
-46.20	-46.70	74.60	75.10			30	0.46	0.19	0.18	0.27	472	366
-46.70	-47.20	75.10	75.60		36	29	0.47	0.21	0.20	0.26	481	354
-47.20	-47.70	75.60	76.10			29	0.47	0.21	0.20	0.26	492	339
-47.70	-48.20	76.10	76.60			29	0.47	0.21	0.20	0.26	495	323
-48.20	-48.70	76.60	77.10			28	0.48	0.21	0.20	0.27	493	307
-48.70	-49.20	77.10	77.60			23	0.50	0.26	0.26	0.24	478	298
-49.20	-49.70	77.60	78.10			23	0.51	0.26	0.26	0.25	467	291
-49.70	-50.20	78.10	78.60			17	0.53	0.34	0.34	0.19	434	286
-50.20	-50.70	78.60	79.10			18	0.54	0.34	0.34	0.21	425	280
-50.70	-51.20	79.10	79.60			19	0.55	0.31	0.30	0.24	421	270
-51.20	-51.70	79.60	80.10			20	0.55	0.31	0.30	0.24	426	265
-51.70	-52.20	80.10	80.60		38	17	0.56	0.35	0.35	0.21	441	248
-52.20	-52.70	80.60	81.10			17	0.54	0.35	0.35	0.20	472	222
-52.70	-53.20	81.10	81.60			20	0.53	0.30	0.29	0.23	511	218
-53.20	-53.70	81.60	82.10			20	0.53	0.30	0.29	0.23	522	222

Bent 2 NB Pile 3 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-53.70	-54.20	82.10	82.60	SP/SP-SM		20	0.51	0.30	0.30	0.21	528	237
-54.20	-54.70	82.60	83.10			20	0.48	0.30	0.30	0.18	531	258
-54.70	-55.20	83.10	83.60			25	0.47	0.24	0.24	0.23	566	277
-55.20	-55.70	83.60	84.10			26	0.46	0.24	0.23	0.22	588	293
-55.70	-56.20	84.10	84.60	SC/CL/CH		33	0.45	0.18	0.18	0.27	622	310
-56.20	-56.70	84.60	85.10			33	0.47	0.18	0.17	0.29	631	321
-56.70	-57.20	85.10	85.60		28	32	0.47	0.19	0.18	0.28	627	324
-57.20	-57.70	85.60	86.10			32	0.47	0.19	0.18	0.28	635	317
-57.70	-58.20	86.10	86.60			36	0.46	0.17	0.16	0.29	644	294
-58.20	-58.70	86.60	87.10			37	0.43	0.17	0.16	0.27	650	271
-58.70	-59.20	87.10	87.60			53	0.34	0.11	0.11	0.23	1081	387
-59.20	-59.70	87.60	88.10			51	0.35	0.11	0.11	0.24	1236	251
-59.70	-60.20	88.10	88.60			32	0.37	0.18	0.17	0.19	1297	189
-60.20	-60.70	88.60	89.10			33	0.37	0.18	0.17	0.19	1275	164
-60.70	-61.20	89.10	89.60	SP/SP-SM		34	0.37	0.17	0.16	0.20	1256	139
-61.20	-61.70	89.60	90.10			35	0.36	0.17	0.16	0.19	1220	125
-61.70	-62.20	90.10	90.60		26	32	0.36	0.18	0.17	0.18	1184	119
-62.20	-62.70	90.60	91.10			33	0.36	0.18	0.17	0.18	1167	110
-62.70	-63.20	91.10	91.60			35	0.36	0.17	0.16	0.19	1158	101
-63.20	-63.70	91.60	92.10			35	0.37	0.17	0.16	0.20	1136	93
-63.70	-64.20	92.10	92.60			25	0.39	0.24	0.23	0.15	1118	90
-64.20	-64.70	92.60	93.10			26	0.40	0.24	0.23	0.16	1104	106
-64.70	-65.20	93.10	93.60			31	0.38	0.19	0.18	0.19	1116	142
-65.20	-65.70	93.60	94.10			33	0.38	0.18	0.17	0.20	1114	173
-65.70	-66.20	94.10	94.60			23	0.35	0.12	0.10	0.23	1535	181

8.1.5 I-75 Over University Parkway – Bent 3 NB Pile 7 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-6.20	-6.70	46.44	46.94	SP/SP-SM		2	3.00	3.00	3.00	0.00	6	0
-6.70	-7.20	46.94	47.44		90/10	2	3.00	3.00	3.00	0.00	0	0
-7.20	-7.70	47.44	47.94			1	4.00	4.00	4.00	0.00	0	0
-7.70	-8.20	47.94	48.44			2	4.00	4.00	4.00	0.00	0	0
-8.20	-8.70	48.44	48.94			3	1.71	1.71	1.71	0.00	0	0
-8.70	-9.20	48.94	49.44			4	1.72	1.71	1.72	0.01	0	0
-9.20	-9.70	49.44	49.94			6	1.08	1.00	1.00	0.08	0	29
-9.70	-10.20	49.94	50.44			6	1.03	1.00	1.00	0.03	0	102
-10.20	-10.70	50.44	50.94			16	0.50	0.38	0.38	0.12	22	170
-10.70	-11.20	50.94	51.44			16	0.48	0.38	0.38	0.10	25	232
-11.20	-11.70	51.44	51.94			12	0.52	0.50	0.50	0.02	23	182
-11.70	-12.20	51.94	52.44		50/3	12	0.56	0.50	0.50	0.06	36	116
-12.20	-12.70	52.44	52.94			13	0.52	0.46	0.46	0.06	26	145
-12.70	-13.20	52.94	53.44			13	0.59	0.46	0.46	0.13	25	121
-13.20	-13.70	53.44	53.94			9	0.68	0.67	0.67	0.01	23	101
-13.70	-14.20	53.94	54.44			9	0.94	0.67	0.67	0.27	0	145
-14.20	-14.70	54.44	54.94			5	1.09	1.09	1.09	0.00	0	98
-14.70	-15.20	54.94	55.44			6	1.24	1.09	1.09	0.15	0	90
-15.20	-15.70	55.44	55.94	SM/SM-SC		5	1.30	1.20	1.20	0.10	0	65
-15.70	-16.20	55.94	56.44			5	1.35	1.20	1.20	0.15	0	65
-16.20	-16.70	56.44	56.94			5	1.40	1.20	1.20	0.20	0	78
-16.70	-17.20	56.94	57.44		15	5	1.23	1.20	1.20	0.03	0	88
-17.20	-17.70	57.44	57.94			11	0.82	0.57	0.57	0.25	0	152
-17.70	-18.20	57.94	58.44			10	0.60	0.57	0.57	0.03	5	244
-18.20	-18.70	58.44	58.94			18	0.55	0.34	0.34	0.21	7	323
-18.70	-19.20	58.94	59.44			19	0.49	0.32	0.32	0.17	16	382
-19.20	-19.70	59.44	59.94			40	0.44	0.15	0.15	0.29	37	522
-19.70	-20.20	59.94	60.44			42	0.41	0.15	0.15	0.26	58	610
-20.20	-20.70	60.44	60.94			72	0.47	0.08	0.08	0.39	50	631
-20.70	-21.20	60.94	61.44			70	0.57	0.08	0.08	0.49	25	579
-21.20	-21.70	61.44	61.94			46	0.60	0.13	0.13	0.47	21	510
-21.70	-22.20	61.94	62.44		23	46	0.62	0.13	0.13	0.49	36	453
-22.20	-22.70	62.44	62.94			26	0.64	0.23	0.23	0.41	42	405
-22.70	-23.20	62.94	63.44			25	0.64	0.23	0.23	0.41	50	394
-23.20	-23.70	63.44	63.94			17	0.69	0.35	0.35	0.34	44	376
-23.70	-24.20	63.94	64.44			17	0.70	0.35	0.35	0.35	48	347
-24.20	-24.70	64.44	64.94			15	0.70	0.41	0.41	0.29	61	309
-24.70	-25.20	64.94	65.44			14	0.70	0.41	0.41	0.29	65	304
-25.20	-25.70	65.44	65.94			15	0.70	0.40	0.40	0.30	65	296
-25.70	-26.20	65.94	66.44	SC/CL/CH		15	0.72	0.40	0.40	0.32	73	292
-26.20	-26.70	66.44	66.94			14	0.74	0.44	0.44	0.30	67	291
-26.70	-27.20	66.94	67.44		46	13	0.75	0.44	0.44	0.31	66	272
-27.20	-27.70	67.44	67.94			14	0.79	0.44	0.44	0.35	58	254
-27.70	-28.20	67.94	68.44			13	0.83	0.44	0.44	0.39	58	253
-28.20	-28.70	68.44	68.94			16	0.79	0.38	0.38	0.41	67	290
-28.70	-29.20	68.94	69.44			18	0.73	0.35	0.35	0.38	75	379
-29.20	-29.70	69.44	69.94			50	0.59	0.12	0.12	0.47	115	557
-29.70	-30.20	69.94	70.44			52	0.52	0.12	0.12	0.41	145	682
-30.20	-30.70	70.44	70.94			89	0.54	0.07	0.07	0.47	164	749
-30.70	-31.20	70.94	71.44			89	0.53	0.07	0.07	0.46	213	780
-31.20	-31.70	71.44	71.94			81	0.46	0.07	0.07	0.39	333	715
-31.70	-32.20	71.94	72.44		49	82	0.54	0.07	0.07	0.47	247	759
-32.20	-32.70	72.44	72.94			87	0.58	0.07	0.07	0.51	188	794
-32.70	-33.20	72.94	73.44			86	0.59	0.07	0.07	0.52	159	814

Bent 3 NB Pile 7 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-33.20	-33.70	73.44	73.94			79	0.61	0.08	0.08	0.53	143	807
-33.70	-34.20	73.94	74.44			79	0.62	0.08	0.08	0.54	139	788
-34.20	-34.70	74.44	74.94	SC/CL/CH		62	0.64	0.10	0.10	0.54	143	767
-34.70	-35.20	74.94	75.44			66	0.61	0.09	0.09	0.52	140	745
-35.20	-35.70	75.44	75.94			153	0.44	0.04	0.04	0.40	181	805
-35.70	-36.20	75.94	76.44			150	0.44	0.04	0.04	0.40	185	809
-36.20	-36.70	76.44	76.94			84	0.45	0.07	0.07	0.38	164	806
-36.70	-37.20	76.94	77.44		36	83	0.46	0.07	0.07	0.39	167	776
-37.20	-37.70	77.44	77.94			65	0.48	0.09	0.09	0.39	170	738
-37.70	-38.20	77.94	78.44			64	0.51	0.09	0.09	0.42	169	710
-38.20	-38.70	78.44	78.94			47	0.53	0.13	0.13	0.40	174	686
-38.70	-39.20	78.94	79.44			47	0.56	0.13	0.13	0.43	177	675
-39.20	-39.70	79.44	79.94			40	0.57	0.15	0.15	0.42	163	677
-39.70	-40.20	79.94	80.44			39	0.57	0.15	0.15	0.42	184	667
-40.20	-40.70	80.44	80.94			40	0.58	0.15	0.15	0.43	194	651
-40.70	-41.20	80.94	81.44			39	0.58	0.15	0.15	0.43	188	637
-41.20	-41.70	81.44	81.94			32	0.51	0.19	0.19	0.32	438	545
-41.70	-42.20	81.94	82.44		32	33	0.50	0.18	0.18	0.32	408	508
-42.20	-42.70	82.44	82.94			61	0.40	0.10	0.10	0.30	446	727
-42.70	-43.20	82.94	83.44			61	0.42	0.10	0.10	0.32	476	666
-43.20	-43.70	83.44	83.94			53	0.41	0.11	0.11	0.30	462	641
-43.70	-44.20	83.94	84.44			52	0.41	0.11	0.11	0.30	433	638
-44.20	-44.70	84.44	84.94			52	0.40	0.12	0.11	0.28	421	633
-44.70	-45.20	84.94	85.44			52	0.40	0.12	0.11	0.28	431	621
-45.20	-45.70	85.44	85.94	SP/SP-SM		42	0.42	0.14	0.14	0.28	441	596
-45.70	-46.20	85.94	86.44			42	0.44	0.14	0.14	0.30	457	573
-46.20	-46.70	86.44	86.94			40	0.47	0.15	0.15	0.32	460	554
-46.70	-47.20	86.94	87.44		36	39	0.48	0.15	0.15	0.33	460	539
-47.20	-47.70	87.44	87.94			35	0.51	0.17	0.17	0.34	453	536
-47.70	-48.20	87.94	88.44			35	0.54	0.17	0.17	0.37	442	540
-48.20	-48.70	88.44	88.94			35	0.54	0.17	0.17	0.37	429	541
-48.70	-49.20	88.94	89.44			35	0.55	0.17	0.17	0.38	414	538
-49.20	-49.70	89.44	89.94			34	0.55	0.18	0.18	0.37	404	545
-49.70	-50.20	89.94	90.44			34	0.56	0.18	0.18	0.38	397	549
-50.20	-50.70	90.44	90.94			34	0.56	0.18	0.18	0.38	379	558
-50.70	-51.20	90.94	91.44			34	0.57	0.18	0.18	0.39	369	567
-51.20	-51.70	91.44	91.94			35	0.57	0.17	0.17	0.40	367	580
-51.70	-52.20	91.94	92.44		38	34	0.58	0.17	0.17	0.41	359	594
-52.20	-52.70	92.44	92.94			36	0.59	0.17	0.17	0.42	362	597
-52.70	-53.20	92.94	93.44			36	0.58	0.17	0.17	0.41	369	602
-53.20	-53.70	93.44	93.94			36	0.56	0.17	0.17	0.39	370	603
-53.70	-54.20	93.94	94.44			36	0.56	0.17	0.17	0.39	369	576
-54.20	-54.70	94.44	94.94			34	0.56	0.18	0.18	0.38	364	544
-54.70	-55.20	94.94	95.44			33	0.57	0.18	0.18	0.39	362	514
-55.20	-55.70	95.44	95.94			32	0.57	0.19	0.19	0.38	354	496
-55.70	-56.20	95.94	96.44			34	0.55	0.18	0.18	0.37	353	486
-56.20	-56.70	96.44	96.94			60	0.39	0.10	0.10	0.29	575	613
-56.70	-57.20	96.94	97.44		28	60	0.40	0.10	0.10	0.30	617	539
-57.20	-57.70	97.44	97.94			60	0.39	0.10	0.10	0.29	594	529
-57.70	-58.20	97.94	98.44	SC/CL/CH		60	0.39	0.10	0.10	0.29	563	542
-58.20	-58.70	98.44	98.94			49	0.39	0.12	0.12	0.27	554	542
-58.70	-59.20	98.94	99.44			50	0.39	0.12	0.12	0.27	563	542
-59.20	-59.70	99.44	99.94			51	0.39	0.12	0.12	0.27	566	538
-59.70	-60.20	99.94	100.44			49	0.39	0.12	0.12	0.27	603	490
-60.20	-60.70	100.44	100.94			39	0.39	0.15	0.15	0.24	623	450

Bent 3 NB Pile 7 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-60.70	-61.20	100.94	101.44	SP/SP-SM		39	0.40	0.15	0.15	0.24	668	407
-61.20	-61.70	101.44	101.94			33	0.40	0.18	0.18	0.22	737	350
-61.70	-62.20	101.94	102.44		26	32	0.40	0.18	0.18	0.22	825	316
-62.20	-62.70	102.44	102.94			39	0.40	0.15	0.15	0.25	814	391
-62.70	-63.20	102.94	103.44			40	0.40	0.15	0.15	0.25	821	453
-63.20	-63.70	103.44	103.94			46	0.40	0.13	0.13	0.27	860	468
-63.70	-64.20	103.94	104.44			46	0.40	0.13	0.13	0.27	895	458
-64.20	-64.70	104.44	104.94			45	0.41	0.13	0.13	0.28	948	405
-64.70	-65.20	104.94	105.44			45	0.42	0.13	0.13	0.29	997	332
-65.20	-65.70	105.44	105.94			36	0.43	0.17	0.17	0.26	1029	286
-65.70	-66.20	105.94	106.44			36	0.44	0.17	0.17	0.27	1058	250
-66.20	-66.70	106.44	106.94			30	0.43	0.20	0.20	0.23	1049	225
-66.70	-67.20	106.94	107.44		44	30	0.43	0.20	0.20	0.23	1056	200
-67.20	-67.70	107.44	107.94			29	0.42	0.20	0.20	0.22	1374	143
-67.70	-68.20	107.94	108.44			34	0.42	0.18	0.18	0.24	1352	150
-68.20	-68.70	108.44	108.94			14	0.37	0.05	0.05	0.32	1757	160

8.1.6 I-75 over Deer Prairie Creek – Bent 2 Pile 3 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-24.00	-24.50	44.58	45.08		9	1	0.92	0.92	0.92	0.00	0	131
-24.50	-25.00	45.08	45.58			6	1.23	0.92	0.92	0.31	0	199
-25.00	-25.50	45.58	46.08			7	1.24	0.93	0.93	0.31	0	163
-25.50	-26.00	46.08	46.58			6	1.30	1.00	1.00	0.30	0	181
-26.00	-26.50	46.58	47.08			6	1.28	0.93	0.93	0.36	0	176
-26.50	-27.00	47.08	47.58			11	1.20	0.57	0.57	0.63	0	195
-27.00	-27.50	47.58	48.08			12	0.96	0.50	0.50	0.47	0	268
-27.50	-28.00	48.08	48.58			22	0.90	0.27	0.27	0.63	0	347
-28.00	-28.50	48.58	49.08			22	1.15	0.28	0.28	0.87	0	250
-28.50	-29.00	49.08	49.58			19	1.23	0.32	0.31	0.91	0	229
-29.00	-29.50	49.58	50.08		23	20	1.15	0.30	0.29	0.85	0	257
-29.50	-30.00	50.08	50.58			28	1.26	0.21	0.21	1.05	0	247
-30.00	-30.50	50.58	51.08			29	1.38	0.21	0.21	1.17	0	225
-30.50	-31.00	51.08	51.58			31	1.33	0.19	0.19	1.14	0	218
-31.00	-31.50	51.58	52.08	SM/SM-SC		32	1.39	0.19	0.19	1.20	0	222
-31.50	-32.00	52.08	52.58			35	1.46	0.17	0.17	1.29	0	207
-32.00	-32.50	52.58	53.08			35	1.45	0.17	0.17	1.28	0	196
-32.50	-33.00	53.08	53.58			36	1.41	0.17	0.17	1.24	0	195
-33.00	-33.50	53.58	54.08			35	1.41	0.17	0.17	1.24	0	195
-33.50	-34.00	54.08	54.58			35	1.37	0.17	0.17	1.20	0	198
-34.00	-34.50	54.58	55.08		11	34	1.31	0.17	0.17	1.14	0	193
-34.50	-35.00	55.08	55.58			35	1.28	0.17	0.17	1.11	1	192
-35.00	-35.50	55.58	56.08			34	1.21	0.17	0.17	1.04	2	193
-35.50	-36.00	56.08	56.58			35	1.16	0.17	0.17	0.99	3	202
-36.00	-36.50	56.58	57.08			36	1.11	0.16	0.16	0.95	4	203
-36.50	-37.00	57.08	57.58			43	1.01	0.14	0.14	0.87	9	229
-37.00	-37.50	57.58	58.08			44	0.89	0.14	0.14	0.75	15	260
-37.50	-38.00	58.08	58.58			42	0.70	0.14	0.14	0.56	49	301
-38.00	-38.50	58.58	59.08			51	0.57	0.12	0.11	0.45	94	417
-38.50	-39.00	59.08	59.58	CL/CH/MH		55	0.52	0.06	0.05	0.46	103	694

8.1.7 I-75 over Deer Prairie Creek – Bent 5 Pile 3 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-19.40	-19.90	38.31	38.81			5	1.70	1.33	1.33	0.37	0	116
-19.90	-20.40	38.81	39.31		6	4	1.69	1.33	1.33	0.36	0	119
-20.40	-20.90	39.31	39.81			5	1.81	1.33	1.33	0.48	0	130
-20.90	-21.40	39.81	40.31			4	1.74	1.33	1.33	0.41	0	127
-21.40	-21.90	40.31	40.81			5	1.74	1.33	1.33	0.41	0	133
-21.90	-22.40	40.81	41.31			4	1.58	1.33	1.33	0.25	0	136
-22.40	-22.90	41.31	41.81			6	1.51	1.00	1.00	0.51	0	160
-22.90	-23.40	41.81	42.31			6	1.56	1.00	1.00	0.56	0	178
-23.40	-23.90	42.31	42.81			7	1.45	0.92	0.92	0.53	0	184
-23.90	-24.40	42.81	43.31			6	1.42	0.92	0.92	0.50	0	186
-24.40	-24.90	43.31	43.81			7	1.40	0.86	0.86	0.54	0	184
-24.90	-25.40	43.81	44.31		12	8	1.37	0.85	0.85	0.53	0	175
-25.40	-25.90	44.31	44.81			8	1.40	0.75	0.75	0.65	0	181
-25.90	-26.40	44.81	45.31	SM/SM-SC		8	1.34	0.73	0.73	0.61	0	170
-26.40	-26.90	45.31	45.81			11	1.15	0.55	0.55	0.60	0	182
-26.90	-27.40	45.81	46.31			11	1.15	0.54	0.54	0.61	0	231
-27.40	-27.90	46.31	46.81			13	1.02	0.46	0.46	0.56	0	206
-27.90	-28.40	46.81	47.31			17	0.82	0.37	0.37	0.45	12	273
-28.40	-28.90	47.31	47.81			41	0.80	0.14	0.14	0.66	4	448
-28.90	-29.40	47.81	48.31			40	0.98	0.15	0.15	0.83	0	369
-29.40	-29.90	48.31	48.81			29	1.06	0.21	0.21	0.85	0	289
-29.90	-30.40	48.81	49.31		62	29	1.19	0.21	0.21	0.98	0	256
-30.40	-30.90	49.31	49.81			29	1.29	0.21	0.21	1.08	0	244
-30.90	-31.40	49.81	50.31			29	1.30	0.21	0.21	1.09	0	229
-31.40	-31.90	50.31	50.81			30	1.26	0.20	0.20	1.06	0	226
-31.90	-32.40	50.81	51.31			30	1.22	0.20	0.20	1.02	0	226
-32.40	-32.90	51.31	51.81			30	1.08	0.20	0.20	0.88	14	219
-32.90	-33.40	51.81	52.31			30	0.92	0.20	0.19	0.72	27	228
-33.40	-33.90	52.31	52.81			30	0.79	0.20	0.20	0.59	41	264
-33.90	-34.40	52.81	53.31			29	0.71	0.20	0.20	0.51	46	298
-34.40	-34.90	53.31	53.81			30	0.70	0.20	0.20	0.50	49	318
-34.90	-35.40	53.81	54.31	CL/CH/MH	13	31	0.68	0.19	0.19	0.49	53	330
-35.40	-35.90	54.31	54.81			37	0.67	0.16	0.16	0.51	56	340
-35.90	-36.40	54.81	55.31			39	0.68	0.16	0.15	0.52	56	333
-36.40	-36.90	55.31	55.81			48	0.65	0.13	0.12	0.52	64	340
-36.90	-37.40	55.81	56.31			52	0.60	0.12	0.11	0.48	74	348
-37.40	-37.90	56.31	56.81			87	0.48	0.07	0.06	0.41	143	523
-37.90	-38.40	56.81	57.31	SP/SP-SM		31	0.45	0.04	0.03	0.41	156	728

8.1.8 I-75 over Deer Prairie Creek – Bent 1 Pile 1 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-13.00	-13.50	33.00	33.50			3	1.79	1.50	1.50	0.29	0	120
-13.50	-14.00	33.50	34.00			4	1.62	1.50	1.50	0.12	0	162
-14.00	-14.50	34.00	34.50			4	1.80	1.50	1.50	0.30	0	137
-14.50	-15.00	34.50	35.00		9	4	1.82	1.50	1.50	0.32	0	114
-15.00	-15.50	35.00	35.50			4	1.80	1.37	1.37	0.43	0	117
-15.50	-16.00	35.50	36.00			5	1.81	1.33	1.33	0.48	0	104
-16.00	-16.50	36.00	36.50			4	2.08	1.33	1.33	0.75	0	82
-16.50	-17.00	36.50	37.00			5	1.94	1.33	1.33	0.61	0	58
-17.00	-17.50	37.00	37.50			4	2.24	1.46	1.46	0.79	0	9
-17.50	-18.00	37.50	38.00			4	2.23	1.50	1.50	0.73	0	0
-18.00	-18.50	38.00	38.50			4	2.20	1.50	1.50	0.70	0	0
-18.50	-19.00	38.50	39.00			4	2.13	1.50	1.50	0.63	0	0
-19.00	-19.50	39.00	39.50			4	2.25	1.50	1.50	0.75	0	0
-19.50	-20.00	39.50	40.00		4	4	2.22	1.50	1.50	0.72	0	0
-20.00	-20.50	40.00	40.50			4	2.16	1.37	1.37	0.79	0	0
-20.50	-21.00	40.50	41.00	SM/SM-SC		5	2.10	1.33	1.33	0.77	0	2
-21.00	-21.50	41.00	41.50			4	2.09	1.33	1.33	0.76	0	10
-21.50	-22.00	41.50	42.00			5	1.94	1.33	1.33	0.61	0	41
-22.00	-22.50	42.00	42.50			5	1.91	1.23	1.23	0.68	0	76
-22.50	-23.00	42.50	43.00			5	1.78	1.20	1.20	0.58	0	101
-23.00	-23.50	43.00	43.50			5	1.84	1.11	1.11	0.73	0	113
-23.50	-24.00	43.50	44.00			5	1.72	1.09	1.09	0.63	0	103
-24.00	-24.50	44.00	44.50			6	1.68	1.09	1.09	0.59	0	99
-24.50	-25.00	44.50	45.00		7	5	1.61	1.09	1.09	0.52	0	96
-25.00	-25.50	45.00	45.50			7	1.56	0.93	0.93	0.64	0	137
-25.50	-26.00	45.50	46.00			7	1.47	0.86	0.86	0.61	0	155
-26.00	-26.50	46.00	46.50			8	1.47	0.82	0.82	0.66	0	165
-26.50	-27.00	46.50	47.00			7	1.42	0.80	0.80	0.62	0	161
-27.00	-27.50	47.00	47.50			12	1.25	0.50	0.50	0.75	0	183
-27.50	-28.00	47.50	48.00			14	0.85	0.44	0.44	0.41	0	305
-28.00	-28.50	48.00	48.50			27	0.86	0.23	0.23	0.63	0	333
-28.50	-29.00	48.50	49.00			30	0.98	0.20	0.20	0.78	0	241
-29.00	-29.50	49.00	49.50			27	1.10	0.22	0.22	0.88	0	244
-29.50	-30.00	49.50	50.00		42	27	1.16	0.22	0.22	0.94	0	217
-30.00	-30.50	50.00	50.50			30	0.98	0.20	0.20	0.77	0	243
-30.50	-31.00	50.50	51.00	CL/CH/MH		31	0.96	0.20	0.20	0.76	0	267
-31.00	-31.50	51.00	51.50			40	1.21	0.15	0.15	1.06	0	225
-31.50	-32.00	51.50	52.00			43	1.26	0.14	0.14	1.12	0	207
-32.00	-32.50	52.00	52.50			47	1.31	0.13	0.12	1.18	0	185
-32.50	-33.00	52.50	53.00			48	1.34	0.13	0.12	1.21	0	184
-33.00	-33.50	53.00	53.50			46	1.33	0.13	0.13	1.20	0	192
-33.50	-34.00	53.50	54.00			44	1.27	0.13	0.13	1.14	0	220
-34.00	-34.50	54.00	54.50			45	1.26	0.13	0.13	1.13	0	217
-34.50	-35.00	54.50	55.00		18	45	1.23	0.13	0.13	1.10	0	224
-35.00	-35.50	55.00	55.50			42	1.18	0.15	0.15	1.04	0	218
-35.50	-36.00	55.50	56.00	SM/SM-SC		41	1.10	0.15	0.15	0.95	0	225
-36.00	-36.50	56.00	56.50			41	1.12	0.15	0.15	0.97	0	227
-36.50	-37.00	56.50	57.00			41	1.07	0.15	0.15	0.92	0	228
-37.00	-37.50	57.00	57.50			55	0.91	0.11	0.11	0.80	8	251
-37.50	-38.00	57.50	58.00			59	0.76	0.10	0.09	0.66	34	317
-38.00	-38.50	58.00	58.50			76	0.68	0.08	0.07	0.59	65	337
-38.50	-39.00	58.50	59.00	CL/CH/MH		86	0.54	0.07	0.06	0.46	93	514
-39.00	-39.50	59.00	59.50			26	0.53	0.04	0.04	0.48	86	606

8.1.9 I-75 over Deer Prairie Creek – Bent 4 Pile 1 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-11.50	-12.00	24.74	25.24	CL/CH/MH		2	4.00	4.00	4.00	0.00	0	129
-12.00	-12.50	25.24	25.74			3	2.00	2.00	2.00	0.00	0	155
-12.50	-13.00	25.74	26.24			6	1.20	1.00	1.00	0.20	1	185
-13.00	-13.50	26.24	26.74			6	1.47	1.11	1.11	0.36	0	163
-13.50	-14.00	26.74	27.24	SM/SM-SC		4	1.69	1.33	1.33	0.36	0	125
-14.00	-14.50	27.24	27.74			5	1.67	1.33	1.33	0.34	0	114
-14.50	-15.00	27.74	28.24		8	4	1.94	1.33	1.33	0.61	0	88
-15.00	-15.50	28.24	28.74			4	2.26	1.43	1.43	0.83	0	9
-15.50	-16.00	28.74	29.24			4	2.50	1.71	1.71	0.79	0	0
-16.00	-16.50	29.24	29.74			3	2.52	1.81	1.81	0.71	0	0
-16.50	-17.00	29.74	30.24			3	2.57	2.00	2.00	0.57	0	0
-17.00	-17.50	30.24	30.74			3	2.49	2.00	2.00	0.49	0	0
-17.50	-18.00	30.74	31.24			3	2.84	2.00	2.00	0.84	0	0
-18.00	-18.50	31.24	31.74			3	2.47	2.00	2.00	0.47	0	0
-18.50	-19.00	31.74	32.24			3	2.71	2.00	2.00	0.71	0	0
-19.00	-19.50	32.24	32.74			3	2.60	1.90	1.90	0.69	0	0
-19.50	-20.00	32.74	33.24		4	4	2.47	1.71	1.71	0.76	0	0
-20.00	-20.50	33.24	33.74			3	2.40	1.81	1.81	0.60	0	0
-20.50	-21.00	33.74	34.24			3	2.53	2.00	2.00	0.53	0	0
-21.00	-21.50	34.24	34.74			4	2.26	1.67	1.67	0.60	0	0
-21.50	-22.00	34.74	35.24			4	2.11	1.33	1.33	0.78	0	22
-22.00	-22.50	35.24	35.74			4	1.99	1.37	1.37	0.61	0	64
-22.50	-23.00	35.74	36.24			4	2.02	1.50	1.50	0.52	0	90
-23.00	-23.50	36.24	36.74			5	1.98	1.43	1.43	0.55	0	108
-23.50	-24.00	36.74	37.24	CL/CH/MH		4	1.84	1.33	1.33	0.51	0	111
-24.00	-24.50	37.24	37.74			5	1.76	1.28	1.28	0.48	0	113
-24.50	-25.00	37.74	38.24		7	5	1.73	1.20	1.20	0.53	0	110
-25.00	-25.50	38.24	38.74			6	1.70	1.06	1.06	0.64	0	114
-25.50	-26.00	38.74	39.24			6	1.58	0.92	0.92	0.66	0	117
-26.00	-26.50	39.24	39.74			10	1.36	0.64	0.64	0.72	0	159
-26.50	-27.00	39.74	40.24			13	0.94	0.46	0.46	0.48	0	257
-27.00	-27.50	40.24	40.74			21	0.72	0.29	0.29	0.43	0	391
-27.50	-28.00	40.74	41.24			31	1.02	0.20	0.20	0.82	0	303
-28.00	-28.50	41.24	41.74			35	1.27	0.17	0.17	1.10	0	242
-28.50	-29.00	41.74	42.24			41	1.36	0.15	0.15	1.21	0	201
-29.00	-29.50	42.24	42.74			39	1.24	0.15	0.15	1.09	0	181
-29.50	-30.00	42.74	43.24		50/5	38	1.27	0.16	0.16	1.11	0	211
-30.00	-30.50	43.24	43.74			37	1.41	0.16	0.16	1.24	0	182
-30.50	-31.00	43.74	44.24			35	1.45	0.17	0.17	1.28	0	168
-31.00	-31.50	44.24	44.74			39	1.47	0.15	0.15	1.32	0	164
-31.50	-32.00	44.74	45.24			41	1.45	0.14	0.14	1.31	0	165
-32.00	-32.50	45.24	45.74			42	1.40	0.14	0.14	1.26	0	159
-32.50	-33.00	45.74	46.24			41	1.34	0.14	0.14	1.20	0	156
-33.00	-33.50	46.24	46.74			38	1.30	0.16	0.16	1.15	0	173
-33.50	-34.00	46.74	47.24			33	1.30	0.18	0.18	1.12	0	173
-34.00	-34.50	47.24	47.74			36	1.28	0.16	0.16	1.11	0	167
-34.50	-35.00	47.74	48.24		50/6	40	1.24	0.15	0.15	1.09	0	167
-35.00	-35.50	48.24	48.74			40	1.24	0.15	0.15	1.09	0	173
-35.50	-36.00	48.74	49.24			40	1.15	0.15	0.15	1.00	0	200
-36.00	-36.50	49.24	49.74			38	1.08	0.16	0.16	0.93	0	216
-36.50	-37.00	49.74	50.24			35	0.96	0.17	0.17	0.79	6	229
-37.00	-37.50	50.24	50.74			38	0.84	0.16	0.16	0.68	18	240
-37.50	-38.00	50.74	51.24			40	0.56	0.15	0.15	0.41	62	376
-38.00	-38.50	51.24	51.74			44	0.52	0.13	0.13	0.38	59	428
-38.50	-39.00	51.74	52.24	WL		72	0.48	0.09	0.08	0.40	104	708
-39.00	-39.50	52.24	52.74			2	0.49	0.05	0.04	0.44	139	772

8.1.10 SR 64 and I-75 – Bent 3 Pile 1 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
11.60	11.10	8.84	9.34			1	0.48	0.00	0.00	0.48	0	10
11.10	10.60	9.34	9.84		16	2	3.00	3.00	3.00	0.00	0	0
10.60	10.10	9.84	10.34	SP-SP-SM		2	3.00	3.00	3.00	0.00	0	0
10.10	9.60	10.34	10.84			3	2.51	2.40	2.40	0.11	0	49
9.60	9.10	10.84	11.34			3	2.27	2.27	2.27	0.00	0	0
9.10	8.60	11.34	11.84		3	3	2.18	2.00	2.00	0.18	0	86
8.60	8.10	11.84	12.34			3	2.09	2.00	2.00	0.09	0	59
8.10	7.60	12.34	12.84			3	2.13	2.00	2.00	0.13	0	72
7.60	7.10	12.84	13.34			3	2.16	2.00	2.00	0.16	0	82
7.10	6.60	13.34	13.84		8	3	2.09	2.00	2.00	0.09	0	74
6.60	6.10	13.84	14.34			4	1.68	1.55	1.55	0.14	0	42
6.10	5.60	14.34	14.84	SC		5	1.32	1.09	1.09	0.23	0	77
5.60	5.10	14.84	15.34			5	1.52	1.11	1.11	0.41	0	130
5.10	4.60	15.34	15.84			5	1.54	1.20	1.20	0.34	0	101
4.60	4.10	15.84	16.34			6	1.14	1.11	1.11	0.03	0	67
4.10	3.60	16.34	16.84			6	1.07	0.92	0.92	0.15	0	115
3.60	3.10	16.84	17.34			7	1.03	0.90	0.90	0.13	0	107
3.10	2.60	17.34	17.84			7	1.21	0.86	0.86	0.35	0	135
2.60	2.10	17.84	18.34			6	1.01	0.92	0.92	0.09	0	89
2.10	1.60	18.34	18.84		12	5	1.31	1.20	1.20	0.11	0	78
1.60	1.10	18.84	19.34			5	1.40	1.36	1.36	0.04	0	50
1.10	0.60	19.34	19.84			3	2.28	2.00	2.00	0.28	0	145
0.60	0.10	19.84	20.34			4	1.55	1.55	1.55	0.00	0	26
0.10	-0.40	20.34	20.84			5	1.50	1.09	1.09	0.41	0	113
-0.40	-0.90	20.84	21.34			6	1.08	0.99	0.99	0.08	0	116
-0.90	-1.40	21.34	21.84			8	1.05	0.80	0.80	0.25	0	147
-1.40	-1.90	21.84	22.34			8	0.95	0.75	0.75	0.20	0	146
-1.90	-2.40	22.34	22.84			9	0.97	0.67	0.67	0.30	0	159
-2.40	-2.90	22.84	23.34			9	0.99	0.64	0.64	0.35	0	176
-2.90	-3.40	23.34	23.84		22	11	0.84	0.57	0.57	0.27	0	168
-3.40	-3.90	23.84	24.34			11	0.71	0.56	0.56	0.15	0	154
-3.90	-4.40	24.34	24.84			11	0.79	0.55	0.55	0.24	1	159
-4.40	-4.90	24.84	25.34			11	0.69	0.55	0.55	0.14	7	143
-4.90	-5.40	25.34	25.84			11	0.83	0.55	0.55	0.28	0	148
-5.40	-5.90	25.84	26.34			10	0.85	0.57	0.56	0.28	0	143
-5.90	-6.40	26.34	26.84			10	0.81	0.60	0.60	0.21	0	133
-6.40	-6.90	26.84	27.34	SP/SP-SM		10	0.86	0.59	0.59	0.27	1	144
-6.90	-7.40	27.34	27.84			11	0.81	0.57	0.57	0.24	3	154
-7.40	-7.90	27.84	28.34			13	0.70	0.47	0.47	0.23	6	185
-7.90	-8.40	28.34	28.84		10	16	0.71	0.36	0.36	0.35	9	211
-8.40	-8.90	28.84	29.34			17	0.77	0.36	0.36	0.41	12	200
-8.90	-9.40	29.34	29.84			16	0.68	0.36	0.36	0.32	7	173
-9.40	-9.90	29.84	30.34			16	0.73	0.37	0.37	0.36	5	167
-9.90	-10.40	30.34	30.84			16	0.73	0.39	0.39	0.34	5	159
-10.40	-10.90	30.84	31.34			15	0.73	0.40	0.40	0.33	6	158
-10.90	-11.40	31.34	31.84			14	0.77	0.43	0.43	0.34	4	152
-11.40	-11.90	31.84	32.34			14	0.73	0.41	0.41	0.32	2	145
-11.90	-12.40	32.34	32.84			16	0.71	0.38	0.37	0.33	1	146
-12.40	-12.90	32.84	33.34			16	0.69	0.38	0.38	0.31	1	143
-12.90	-13.40	33.34	33.84		8	16	0.70	0.39	0.39	0.31	0	148
-13.40	-13.90	33.84	34.34			17	0.68	0.36	0.36	0.32	0	155
-13.90	-14.40	34.34	34.84			19	0.63	0.31	0.31	0.32	1	156
-14.40	-14.90	34.84	35.34			19	0.63	0.32	0.32	0.31	1	164
-14.90	-15.40	35.34	35.84			17	0.64	0.35	0.35	0.29	2	167
-15.40	-15.90	35.84	36.34			23	0.84	0.26	0.26	0.57	22	228
-15.90	-16.40	36.34	36.84			33	0.73	0.18	0.18	0.55	21	437

Bent 3 Pile 1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-16.40	-16.90	36.84	37.34			57	0.77	0.11	0.11	0.66	23	498
-16.90	-17.40	37.34	37.84			97	0.86	0.06	0.06	0.80	44	450
-17.40	-17.90	37.84	38.34			84	0.87	0.07	0.07	0.80	76	394
-17.90	-18.40	38.34	38.84		50/5	62	0.82	0.10	0.10	0.72	73	389
-18.40	-18.90	38.84	39.34			72	0.83	0.09	0.09	0.74	78	381
-18.90	-19.40	39.34	39.84			86	0.81	0.07	0.07	0.74	91	412
-19.40	-19.90	39.84	40.34			65	0.79	0.09	0.09	0.69	63	448
-19.90	-20.40	40.34	40.84			27	0.82	0.22	0.22	0.60	72	400
-20.40	-20.90	40.84	41.34	MH		23	0.82	0.26	0.26	0.56	112	308
-20.90	-21.40	41.34	41.84			16	0.82	0.39	0.39	0.43	132	254
-21.40	-21.90	41.84	42.34			15	0.83	0.39	0.39	0.43	142	238
-21.90	-22.40	42.34	42.84			15	0.86	0.40	0.40	0.46	124	248
-22.40	-22.90	42.84	43.34			15	0.84	0.39	0.39	0.45	142	218
-22.90	-23.40	43.34	43.84		20	16	0.84	0.38	0.37	0.46	123	232
-23.40	-23.90	43.84	44.34			34	0.75	0.18	0.18	0.57	123	358
-23.90	-24.40	44.34	44.84			76	0.72	0.13	0.13	0.59	99	555
-24.40	-24.90	44.84	45.34			16	0.72	0.23	0.22	0.49	109	556

8.1.11 SR 64 and I-75 – Bent 1 Pile 3 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-0.70	-1.20	19.01	19.51			1	6.00	6.00	6.00	0.00	0	-1
-1.20	-1.70	19.51	20.01	SM		1	6.00	6.00	6.00	0.00	0	0
-1.70	-2.20	20.01	20.51			1	6.00	6.00	6.00	0.00	0	0
-2.20	-2.70	20.51	21.01			2	4.50	4.50	4.50	0.00	0	0
-2.70	-3.20	21.01	21.51		7	2	3.00	3.00	3.00	0.00	0	0
-3.20	-3.70	21.51	22.01			3	2.36	2.33	2.33	0.03	12	56
-3.70	-4.20	22.01	22.51			3	2.03	2.00	2.00	0.03	0	80
-4.20	-4.70	22.51	23.01			3	2.30	2.27	2.27	0.04	0	66
-4.70	-5.20	23.01	23.51	sc		2	2.42	2.40	2.40	0.02	0	54
-5.20	-5.70	23.51	24.01			3	2.41	2.40	2.40	0.01	0	43
-5.70	-6.20	24.01	24.51			2	2.41	2.40	2.40	0.01	0	35
-6.20	-6.70	24.51	25.01			4	2.08	1.88	1.88	0.19	0	86
-6.70	-7.20	25.01	25.51			3	1.95	1.71	1.71	0.24	0	121
-7.20	-7.70	25.51	26.01			16	1.13	0.42	0.42	0.71	5	289
-7.70	-8.20	26.01	26.51		20	18	0.76	0.33	0.33	0.43	16	520
-8.20	-8.70	26.51	27.01			79	0.79	0.08	0.08	0.71	44	547
-8.70	-9.20	27.01	27.51			89	0.83	0.07	0.07	0.76	53	525
-9.20	-9.70	27.51	28.01			136	0.80	0.04	0.04	0.75	54	540
-9.70	-10.20	28.01	28.51			143	0.74	0.04	0.04	0.70	55	607
-10.20	-10.70	28.51	29.01			65	0.71	0.09	0.09	0.62	70	551
-10.70	-11.20	29.01	29.51			54	0.74	0.11	0.11	0.63	62	456
-11.20	-11.70	29.51	30.01			34	0.75	0.17	0.17	0.57	63	378
-11.70	-12.20	30.01	30.51			31	0.75	0.19	0.19	0.56	77	349
-12.20	-12.70	30.51	31.01			27	0.75	0.22	0.22	0.52	79	337
-12.70	-13.20	31.01	31.51		31	26	0.75	0.23	0.23	0.52	90	315
-13.20	-13.70	31.51	32.01			53	0.69	0.12	0.12	0.57	131	392
-13.70	-14.20	32.01	32.51			56	0.69	0.11	0.11	0.58	113	487
-14.20	-14.70	32.51	33.01			81	0.67	0.07	0.07	0.59	97	470
-14.70	-15.20	33.01	33.51			139	0.56	0.04	0.04	0.52	253	426
-15.20	-15.70	33.51	34.01	MH		69	0.56	0.08	0.08	0.47	286	375
-15.70	-16.20	34.01	34.51			57	0.57	0.10	0.10	0.47	308	318
-16.20	-16.70	34.51	35.01			36	0.59	0.16	0.16	0.43	306	276
-16.70	-17.20	35.01	35.51			32	0.59	0.18	0.18	0.41	312	252
-17.20	-17.70	35.51	36.01			5	0.58	0.18	0.18	0.40	310	242
-17.70	-18.20	36.01	36.51		26	0	-	-	-	-	-	-
-18.20	-18.70	36.51	37.01			19	1.16	0.91	0.91	0.25	427	231
-18.70	-19.20	37.01	37.51			21	0.58	0.29	0.29	0.29	426	232
-19.20	-19.70	37.51	38.01			22	0.59	0.27	0.27	0.31	404	232
-19.70	-20.20	38.01	38.51			22	0.59	0.27	0.27	0.32	400	229
-20.20	-20.70	38.51	39.01			25	0.59	0.23	0.23	0.35	407	220
-20.70	-21.20	39.01	39.51			26	0.57	0.23	0.23	0.34	409	218
-21.20	-21.70	39.51	40.01			26	0.54	0.24	0.24	0.31	407	246
-21.70	-22.20	40.01	40.51			25	0.51	0.24	0.24	0.27	404	302
-22.20	-22.70	40.51	41.01			49	0.47	0.12	0.12	0.35	436	423
-22.70	-23.20	41.01	41.51		45	48	0.47	0.08	0.08	0.39	425	713
-22.90	-23.40	41.51	42.01			-	-	-	-	-	-	-

8.1.12 SR 64 and I-75 – Bent 2 Pile 9 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-5.60	-6.10	26.56	27.06	SC		1	6.01	6.00	6.01	0.01	0	-1
-6.10	-6.60	27.06	27.56			2	3.76	3.60	3.60	0.16	0	49
-6.60	-7.10	27.56	28.06			5	1.32	1.20	1.20	0.12	0	50
-7.10	-7.60	28.06	28.56			5	1.39	1.23	1.23	0.16	1	77
-7.60	-8.10	28.56	29.06			4	1.39	1.33	1.33	0.06	1	71
-8.10	-8.60	29.06	29.56			5	1.43	1.33	1.33	0.10	5	86
-8.60	-9.10	29.56	30.06		4	4	1.47	1.33	1.33	0.14	3	93
-9.10	-9.60	30.06	30.56			5	1.50	1.26	1.26	0.23	1	108
-9.60	-10.10	30.56	31.06			6	1.21	1.00	1.00	0.21	0	111
-10.10	-10.60	31.06	31.56			20	0.73	0.33	0.33	0.40	20	304
-10.60	-11.10	31.56	32.06			55	0.73	0.11	0.11	0.62	22	489
-11.10	-11.60	32.06	32.56			92	0.64	0.06	0.06	0.58	27	429
-11.60	-12.10	32.56	33.06	LS		186	0.80	0.03	0.03	0.77	29	544
-12.10	-12.60	33.06	33.56			143	0.76	0.04	0.04	0.72	56	574
-12.60	-13.10	33.56	34.06			41	0.67	0.15	0.15	0.52	72	542
-13.10	-13.60	34.06	34.56			33	0.74	0.18	0.17	0.57	86	452
-13.60	-14.10	34.56	35.06		50/5	13	0.84	0.46	0.46	0.38	69	364
-14.10	-14.60	35.06	35.56			13	0.83	0.47	0.47	0.36	72	318
-14.60	-15.10	35.56	36.06			11	0.83	0.52	0.52	0.31	74	292
-15.10	-15.60	36.06	36.56			12	0.82	0.51	0.51	0.32	82	282
-15.60	-16.10	36.56	37.06			13	0.84	0.46	0.46	0.38	91	291
-16.10	-16.60	37.06	37.56			24	0.64	0.26	0.26	0.38	92	490
-16.60	-17.10	37.56	38.06			50	0.71	0.12	0.12	0.59	86	573
-17.10	-17.60	38.06	38.56			43	0.79	0.14	0.14	0.66	67	485
-17.60	-18.10	38.56	39.06			27	0.81	0.22	0.22	0.59	87	411
-18.10	-18.60	39.06	39.56			28	0.74	0.21	0.21	0.53	138	396
-18.60	-19.10	39.56	40.06		50/1	31	0.70	0.20	0.19	0.50	149	395
-19.10	-19.60	40.06	40.56			30	0.73	0.20	0.20	0.53	118	385
-19.60	-20.10	40.56	41.06			29	0.75	0.21	0.21	0.54	112	369
-20.10	-20.60	41.06	41.56			28	0.76	0.22	0.22	0.54	116	354
-20.60	-21.10	41.56	42.06			25	0.77	0.24	0.24	0.53	122	342
-21.10	-21.60	42.06	42.56			25	0.78	0.24	0.24	0.53	127	327
-21.60	-22.10	42.56	43.06	CH		23	0.77	0.26	0.26	0.51	135	311
-22.10	-22.60	43.06	43.56			22	0.76	0.27	0.27	0.49	143	296
-22.60	-23.10	43.56	44.06			19	0.79	0.32	0.32	0.47	148	290
-23.10	-23.60	44.06	44.56			19	0.79	0.32	0.32	0.46	157	279
-23.60	-24.10	44.56	45.06		15	18	0.76	0.33	0.33	0.43	159	280
-24.10	-24.60	45.06	45.56			31	0.66	0.19	0.19	0.47	207	356
-24.60	-25.10	45.56	46.06			66	0.54	0.09	0.09	0.45	222	881
-25.10	-25.60	46.06	46.56			59	0.55	0.06	0.06	0.49	262	1104

8.1.13 Starke Bypass over Alligator Creek – Bent 1 SB Pile 5 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
132.3	131.80	9.44	9.94	SP	8	1	2.17	0.40	0.40	1.77	0	83
131.8	131.30	9.94	10.44			7	1.15	0.40	0.40	0.75	0	99
131.3	130.80	10.44	10.94	SC		9	0.98	0.37	0.37	0.61	4	195
130.8	130.30	10.94	11.44			12	0.79	0.25	0.25	0.54	27	255
130.3	129.80	11.44	11.94		12	12	0.78	0.30	0.30	0.48	43	267
129.8	129.30	11.94	12.44			11	0.80	0.55	0.55	0.25	26	283
129.3	128.80	12.44	12.94	SC		10	0.82	0.56	0.56	0.26	28	266
128.8	128.30	12.94	13.44			10	0.83	0.60	0.60	0.23	34	240
128.3	127.80	13.44	13.94		10	10	0.88	0.60	0.60	0.28	33	235
127.8	127.30	13.94	14.44			10	0.91	0.63	0.63	0.28	38	222
127.3	126.80	14.44	14.94			9	0.94	0.64	0.64	0.29	41	213
126.8	126.30	14.94	15.44			8	0.93	0.75	0.75	0.18	40	207
126.3	125.80	15.44	15.94			8	0.92	0.75	0.75	0.17	42	206
125.8	125.30	15.94	16.44		10	8	0.92	0.75	0.75	0.17	48	203
125.3	124.80	16.44	16.94			8	0.90	0.74	0.74	0.16	41	208
124.8	124.30	16.94	17.44			10	0.88	0.63	0.63	0.25	45	205
124.3	123.80	17.44	17.94			10	0.83	0.61	0.61	0.21	61	195
123.8	123.30	17.94	18.44			11	0.76	0.55	0.54	0.21	86	223
123.3	122.80	18.44	18.94		16	13	0.63	0.46	0.46	0.17	84	296
122.8	122.30	18.94	19.44			23	0.52	0.26	0.25	0.26	142	442
122.3	121.80	19.44	19.94			25	0.52	0.25	0.25	0.28	98	604
121.8	121.30	19.94	20.44			30	0.68	0.20	0.20	0.48	126	742
121.3	120.80	20.44	20.94			30	0.74	0.20	0.20	0.54	118	785
120.8	120.30	20.94	21.44			30	0.78	0.20	0.20	0.58	128	675
120.3	119.80	21.44	21.94	SM		30	0.86	0.20	0.19	0.66	122	565
119.8	119.30	21.94	22.44			34	0.90	0.18	0.17	0.72	144	487
119.3	118.80	22.44	22.94			36	0.97	0.17	0.16	0.80	172	411
118.8	118.30	22.94	23.44			47	1.04	0.13	0.12	0.91	180	424
118.3	117.80	23.44	23.94		62	45	1.10	0.13	0.13	0.97	177	452
117.8	117.30	23.94	24.44			40	1.09	0.15	0.15	0.94	156	459
117.3	116.80	24.44	24.94			39	1.09	0.15	0.15	0.94	163	454
116.8	116.30	24.94	25.44			39	1.07	0.15	0.15	0.92	179	435
116.3	115.80	25.44	25.94			39	1.08	0.15	0.15	0.92	179	437
115.8	115.30	25.94	26.44		58	38	1.09	0.16	0.15	0.93	191	440
115.3	114.80	26.44	26.94			37	1.12	0.16	0.15	0.96	183	455
114.8	114.30	26.94	27.44			37	1.13	0.16	0.16	0.97	197	429
114.3	113.80	27.44	27.94			36	1.04	0.17	0.16	0.88	178	402
113.8	113.30	27.94	28.44			32	0.91	0.19	0.19	0.72	226	402
113.3	112.80	28.44	28.94		39	34	0.81	0.18	0.18	0.63	238	680
112.8	112.30	28.94	29.44			47	0.85	0.13	0.13	0.72	221	675
112.3	111.80	29.44	29.94			55	0.82	0.11	0.11	0.71	214	677
111.8	111.30	29.94	30.44			88	0.77	0.07	0.07	0.70	207	790
111.3	110.80	30.44	30.94			82	0.68	0.07	0.07	0.60	241	541
110.8	110.30	30.94	31.44		50/4	97	0.49	0.06	0.06	0.42	374	661
110.3	109.80	31.44	31.94			107	0.65	0.05	0.05	0.60	363	706
109.8	109.30	31.94	32.44			72	0.71	0.08	0.08	0.63	358	655
109.3	108.80	32.44	32.94			72	0.69	0.08	0.08	0.61	351	582
108.8	108.30	32.94	33.44			79	0.71	0.08	0.07	0.63	378	567
108.3	107.80	33.44	33.94		63	97	0.69	0.06	0.06	0.63	412	529
107.8	107.30	33.94	34.44			33	0.64	0.03	0.03	0.61	462	466

8.1.14 **Starke Bypass over Alligator Creek – Bent 2 SB Pile 5 PDA**

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
119.90	119.40	14.52	15.02		27	7	1.34	0.86	0.86	0.48	0	122
119.40	118.90	15.02	15.52	SM		7	1.32	0.86	0.86	0.46	0	102
118.90	118.40	15.52	16.02			4	1.37	1.33	1.33	0.04	0	90
118.40	117.90	16.02	16.52			5	1.35	1.33	1.33	0.02	0	94
117.90	117.40	16.52	17.02		34	5	1.33	1.20	1.20	0.13	0	97
117.40	116.90	17.02	17.52			5	1.29	1.20	1.20	0.09	0	105
116.90	116.40	17.52	18.02			7	1.11	0.92	0.92	0.19	0	129
116.40	115.90	18.02	18.52			7	1.02	0.87	0.87	0.16	0	142
115.90	115.40	18.52	19.02			11	0.83	0.55	0.55	0.28	0	288
115.40	114.90	19.02	19.52		25	12	0.90	0.51	0.51	0.40	0	309
114.90	114.40	19.52	20.02			20	0.95	0.29	0.29	0.66	0	285
114.40	113.90	20.02	20.52			21	0.92	0.29	0.29	0.63	0	298
113.90	113.40	20.52	21.02			21	0.79	0.29	0.29	0.50	2	344
113.40	112.90	21.02	21.52			22	0.66	0.28	0.27	0.38	42	409
112.90	112.40	21.52	22.02		27	34	0.65	0.18	0.18	0.47	40	551
112.40	111.90	22.02	22.52			34	0.79	0.18	0.17	0.61	53	521
111.90	111.40	22.52	23.02			42	0.80	0.14	0.14	0.66	68	645
111.40	110.90	23.02	23.52			44	0.92	0.13	0.13	0.79	71	533
110.90	110.40	23.52	24.02			65	1.04	0.09	0.09	0.95	69	380
110.40	109.90	24.02	24.52	ML	30	68	1.09	0.09	0.09	1.01	77	339
109.90	109.40	24.52	25.02			87	1.07	0.07	0.07	1.00	101	313
109.40	108.90	25.02	25.52			83	1.02	0.07	0.07	0.94	113	302
108.90	108.40	25.52	26.02			61	0.94	0.10	0.09	0.84	133	308
108.40	107.90	26.02	26.52			59	0.87	0.10	0.10	0.77	158	354
107.90	107.40	26.52	27.02		20	44	0.85	0.14	0.14	0.71	171	377
107.40	106.90	27.02	27.52			44	0.83	0.14	0.13	0.69	190	405
106.90	106.40	27.52	28.02			44	0.82	0.14	0.13	0.68	185	447
106.40	105.90	28.02	28.52			44	0.81	0.14	0.14	0.68	188	487
105.90	105.40	28.52	29.02			49	0.72	0.12	0.12	0.60	194	647
105.40	104.90	29.02	29.52		23	52	0.66	0.11	0.11	0.54	151	834
104.90	104.40	29.52	30.02			75	0.72	0.08	0.08	0.64	166	712
104.40	103.90	30.02	30.52			73	0.65	0.08	0.08	0.57	215	566
103.90	103.40	30.52	31.02			62	0.68	0.10	0.10	0.58	252	538
103.40	102.90	31.02	31.52			65	0.64	0.10	0.09	0.54	267	491
102.90	102.40	31.52	32.02		29	88	0.46	0.07	0.07	0.39	335	694
102.40	101.90	32.02	32.52			84	0.59	0.07	0.07	0.52	355	638
101.90	101.40	32.52	33.02			59	0.62	0.10	0.10	0.52	415	485
101.40	100.90	33.02	33.52			58	0.62	0.10	0.10	0.52	468	404
100.90	100.40	33.52	34.02			47	0.60	0.13	0.12	0.47	445	414
100.40	99.90	34.02	34.52		25	47	0.60	0.13	0.13	0.47	427	430
99.90	99.40	34.52	35.02			40	0.60	0.15	0.15	0.45	395	453
99.40	98.90	35.02	35.52			40	0.61	0.15	0.15	0.45	374	467
98.90	98.40	35.52	36.02			36	0.60	0.17	0.17	0.43	332	490
98.40	97.90	36.02	36.52	SM		35	0.59	0.17	0.17	0.42	310	527
97.90	97.40	36.52	37.02		38	30	0.59	0.20	0.20	0.39	255	584
97.40	96.90	37.02	37.52			29	0.61	0.20	0.20	0.40	196	615
96.90	96.40	37.52	38.02			25	0.63	0.24	0.24	0.39	147	644
96.40	95.90	38.02	38.52			24	0.65	0.24	0.24	0.40	118	686
95.90	95.40	38.52	39.02			21	0.66	0.29	0.29	0.37	116	682
95.40	94.90	39.02	39.52		34	21	0.68	0.29	0.29	0.39	113	664
94.90	94.40	39.52	40.02			21	0.70	0.29	0.28	0.41	118	600

Bent 2 SB Pile 5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
94.40	93.90	40.02	40.52	CL		21	0.73	0.29	0.28	0.44	105	593
93.90	93.40	40.52	41.02			23	0.73	0.26	0.26	0.47	111	582
93.40	92.90	41.02	41.52			24	0.73	0.25	0.25	0.48	114	579
92.90	92.40	41.52	42.02		19	29	0.74	0.21	0.21	0.53	116	593
92.40	91.90	42.02	42.52			30	0.58	0.20	0.20	0.38	231	539
91.90	91.40	42.52	43.02			39	0.49	0.15	0.15	0.34	278	525
91.40	90.90	43.02	43.52			41	0.52	0.15	0.15	0.37	240	540
90.90	90.40	43.52	44.02			54	0.53	0.11	0.11	0.42	249	524
90.40	89.90	44.02	44.52		14	56	0.53	0.11	0.10	0.42	283	493
89.90	89.40	44.52	45.02			67	0.53	0.09	0.08	0.44	309	469
89.40	88.90	45.02	45.52			78	0.53	0.08	0.07	0.45	353	440
88.90	88.40	45.52	46.02			8	0.51	0.04	0.03	0.47	392	413

8.1.15 Starke Bypass over Alligator Creek – Bent 3 NB Pile 5

PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
115.3	114.8	20.17	20.67	SC	7	-	-	-	-	-	-	-
114.8	114.30	20.67	21.17			4	5.14	3.82	3.82	1.33	0	0
114.3	113.80	21.17	21.67			6	1.79	1.09	1.09	0.70	0	47
113.8	113.30	21.67	22.17			7	1.12	0.79	0.79	0.33	0	183
113.3	112.80	22.17	22.67	SM		9	0.97	0.67	0.67	0.30	0	222
112.8	112.30	22.67	23.17		7	9	1.05	0.67	0.67	0.38	0	223
112.3	111.80	23.17	23.67			9	1.11	0.67	0.67	0.44	0	219
111.8	111.30	23.67	24.17			10	1.13	0.65	0.65	0.49	0	213
111.3	110.80	24.17	24.67			9	1.15	0.63	0.63	0.52	0	218
110.8	110.30	24.67	25.17	SM		13	1.14	0.49	0.49	0.65	0	230
110.3	109.80	25.17	25.67		25	14	1.11	0.43	0.43	0.68	0	238
109.8	109.30	25.67	26.17			19	1.07	0.31	0.31	0.76	0	268
109.3	108.80	26.17	26.67			23	1.00	0.27	0.27	0.73	0	285
108.8	108.30	26.67	27.17			21	0.91	0.28	0.28	0.63	0	323
108.3	107.80	27.17	27.67			20	0.90	0.29	0.29	0.61	29	377
107.8	107.30	27.67	28.17		70/11	43	0.71	0.14	0.14	0.57	82	675
107.3	106.80	28.17	28.67			54	0.75	0.11	0.11	0.64	28	815
106.8	106.30	28.67	29.17			42	0.82	0.14	0.14	0.68	56	684
106.3	105.80	29.17	29.67			37	0.81	0.16	0.16	0.65	110	587
105.8	105.30	29.67	30.17			28	0.82	0.21	0.21	0.61	145	531
105.3	104.80	30.17	30.67		22	23	0.87	0.26	0.25	0.61	157	506
104.8	104.30	30.67	31.17			25	0.88	0.25	0.24	0.63	142	458
104.3	103.80	31.17	31.67			26	0.85	0.24	0.23	0.61	139	433
103.8	103.30	31.67	32.17			23	0.83	0.26	0.25	0.57	166	430
103.3	102.80	32.17	32.67	SP-SM		23	0.83	0.27	0.26	0.56	176	413
102.8	102.30	32.67	33.17		20	20	0.79	0.29	0.29	0.49	186	413
102.3	101.80	33.17	33.67			20	0.76	0.31	0.30	0.45	197	405
101.8	101.30	33.67	34.17			17	0.76	0.34	0.34	0.42	179	424
101.3	100.80	34.17	34.67			17	0.75	0.36	0.36	0.39	177	435
100.8	100.30	34.67	35.17			17	0.74	0.35	0.35	0.39	190	439
100.3	99.80	35.17	35.67		17	17	0.74	0.35	0.35	0.39	193	440
99.8	99.30	35.67	36.17			17	0.74	0.34	0.34	0.40	189	436
99.3	98.80	36.17	36.67			18	0.75	0.33	0.33	0.42	179	441
98.8	98.30	36.67	37.17			17	0.77	0.37	0.36	0.40	157	450
98.3	97.80	37.17	37.67			15	0.78	0.39	0.39	0.39	125	468
97.8	97.30	37.67	38.17		18	17	0.77	0.35	0.35	0.42	135	466
97.3	96.80	38.17	38.67			18	0.76	0.33	0.33	0.43	145	470
96.8	96.30	38.67	39.17			16	0.77	0.39	0.39	0.39	131	477
96.3	95.80	39.17	39.67			14	0.78	0.43	0.43	0.35	130	483
95.8	95.30	39.67	40.17	SM		18	0.74	0.33	0.32	0.41	130	487
95.3	94.80	40.17	40.67		18	21	0.66	0.29	0.28	0.37	115	456
94.8	94.30	40.67	41.17			27	0.65	0.23	0.23	0.43	137	447
94.3	93.80	41.17	41.67			30	0.64	0.20	0.20	0.44	172	448
93.8	93.30	41.67	42.17			34	0.64	0.18	0.18	0.46	193	444
93.3	92.80	42.17	42.67			36	0.65	0.17	0.17	0.48	207	443
92.8	92.30	42.67	43.17		16	37	0.69	0.16	0.16	0.53	282	428
92.3	91.80	43.17	43.67			37	0.65	0.16	0.16	0.49	334	382
91.8	91.30	43.67	44.17			38	0.62	0.15	0.15	0.47	347	344
91.3	90.80	44.17	44.67			40	0.64	0.15	0.15	0.49	337	344

Bent 3 NB Pile 5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
90.8	90.30	44.67	45.17	SP-SM		51	0.65	0.12	0.12	0.52	333	341
90.3	89.80	45.17	45.67		30	56	0.64	0.11	0.11	0.53	380	320
89.8	89.3	45.67	46.17			63	0.61	0.10	0.09	0.51	423	282
89.3	88.8	46.17	46.67			67	0.62	0.09	0.09	0.53	440	280
88.8	88.3	46.67	47.17			67	0.60	0.09	0.09	0.51	450	272
88.3	87.8	47.17	47.67			66	0.60	0.09	0.09	0.51	472	272
87.8	87.3	47.67	48.17		26	50	0.58	0.07	0.07	0.51	501	270
87.3	86.8	48.17	48.67			40	0.57	0.06	0.06	0.51	507	278
86.8	86.3	48.67	49.17			40	0.56	0.06	0.06	0.50	507	280
86.3	85.8	49.17	49.67			48	0.50	0.06	0.06	0.44	510	348
85.8	85.3	49.67	50.17	LS		64	0.46	0.09	0.09	0.37	638	563
85.3	84.8	50.17	50.67		50/1	49	0.51	0.12	0.12	0.39	669	576
84.8	84.3	50.67	51.17			90	0.46	0.06	0.06	0.40	647	891
84.3	83.8	51.17	51.67			22	0.44	0.03	0.02	0.41	626	1171

8.1.16 **Starke Bypass over Alligator Creek – Bent 4 SB Pile 5 PDA**

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
131.1	130.6	6.78	7.28			1	12.00	12.00	12.00	0.00	0	0
130.6	130.1	7.28	7.78			1	6.00	6.00	6.00	0.00	0	0
130.1	129.6	7.78	8.28		9	1	6.00	6.00	6.00	0.00	0	0
129.6	129.1	8.28	8.78			1	4.00	4.00	4.00	0.00	0	0
129.1	128.6	8.78	9.28			3	3.39	2.95	2.95	0.44	0	0
128.6	128.1	9.28	9.78			7	1.89	0.86	0.86	1.03	0	0
128.1	127.6	9.78	10.28		12	7	1.40	0.86	0.86	0.54	0	75
127.6	127.1	10.28	10.78	SC		7	1.04	0.86	0.86	0.18	0	161
127.1	126.6	10.78	11.28			7	1.08	0.87	0.87	0.21	0	169
126.6	126.1	11.28	11.78			7	1.13	0.92	0.92	0.21	0	150
126.1	125.6	11.78	12.28		17	6	1.23	0.99	0.99	0.24	0	134
125.6	125.1	12.28	12.78			4	1.34	1.33	1.33	0.01	0	115
125.1	124.6	12.78	13.28			5	1.42	1.36	1.36	0.05	0	93
124.6	124.1	13.28	13.78			4	1.62	1.50	1.50	0.12	0	26
124.1	123.6	13.78	14.28			3	1.73	1.50	1.50	0.23	0	0
123.6	123.1	14.28	14.78		7	4	1.83	1.71	1.71	0.12	0	0
123.1	122.6	14.78	15.28			3	1.93	1.71	1.71	0.22	0	0
122.6	122.1	15.28	15.78			4	1.95	1.71	1.71	0.24	0	0
122.1	121.6	15.78	16.28			4	1.80	1.66	1.66	0.14	0	2
121.6	121.1	16.28	16.78	SM		4	1.55	1.50	1.50	0.05	0	43
121.1	120.6	16.78	17.28		3	4	1.43	1.43	1.43	0.00	0	103
120.6	120.1	17.28	17.78			5	1.20	1.20	1.20	0.00	7	157
120.1	119.6	17.78	18.28			6	1.10	1.02	1.02	0.08	4	182
119.6	119.1	18.28	18.78			9	0.93	0.67	0.67	0.26	5	192
119.1	118.6	18.78	19.28			10	0.87	0.60	0.60	0.27	22	189
118.6	118.1	19.28	19.78		25	14	0.74	0.44	0.44	0.30	47	242
118.1	117.6	19.78	20.28			14	0.65	0.41	0.41	0.24	50	280
117.6	117.1	20.28	20.78			18	0.61	0.34	0.34	0.27	70	279
117.1	116.6	20.78	21.28			16	0.63	0.36	0.36	0.27	74	282
116.6	116.1	21.28	21.78	LS		14	0.76	0.43	0.43	0.33	128	285
116.1	115.6	21.78	22.28		22	15	0.74	0.41	0.41	0.33	132	295
115.6	115.1	22.28	22.78			16	0.71	0.36	0.36	0.35	136	385
115.1	114.6	22.78	23.28			17	0.70	0.35	0.35	0.35	152	424
114.6	114.1	23.28	23.78			19	0.70	0.32	0.32	0.38	194	383
114.1	113.6	23.78	24.28			19	0.70	0.31	0.31	0.38	204	374
113.6	113.1	24.28	24.78		36	21	0.75	0.29	0.29	0.46	211	394
113.1	112.6	24.78	25.28			20	0.77	0.29	0.29	0.48	206	377
112.6	112.1	25.28	25.78			21	0.83	0.29	0.29	0.54	175	335
112.1	111.6	25.78	26.28			21	0.84	0.29	0.28	0.55	186	298
111.6	111.1	26.28	26.78			22	0.89	0.27	0.27	0.62	225	290
111.1	110.6	26.78	27.28		52	24	0.92	0.26	0.26	0.66	235	285
110.6	110.1	27.28	27.78	SM		27	0.95	0.22	0.22	0.73	224	285
110.1	109.6	27.78	28.28			27	0.97	0.22	0.22	0.75	210	298
109.6	109.1	28.28	28.78			26	0.97	0.23	0.23	0.74	220	302
109.1	108.6	28.78	29.28			27	0.91	0.22	0.22	0.70	248	299
108.6	108.1	29.28	29.78		50/3	33	0.84	0.18	0.18	0.66	273	319
108.1	107.6	29.78	30.28			36	0.82	0.16	0.16	0.65	293	389
107.6	107.1	30.28	30.78			45	0.77	0.13	0.13	0.64	311	497
107.1	106.6	30.78	31.28			54	0.68	0.11	0.11	0.57	286	778
106.6	106.1	31.28	31.78			81	0.66	0.07	0.07	0.59	288	859
106.1	105.6	31.78	32.28		50/1	69	0.67	0.08	0.08	0.59	314	778
105.6	105.1	32.28	32.78	SM		37	0.67	0.16	0.16	0.51	327	737
105.1	104.6	32.78	33.28			35	0.69	0.17	0.17	0.52	357	656
104.6	104.1	33.28	33.78			26	0.73	0.23	0.23	0.50	366	602

Bent 4 SB Pile 5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
104.1	103.6	33.78	34.28	SP-SM		24	0.75	0.24	0.24	0.51	390	549
103.6	103.1	34.28	34.78		21	22	0.75	0.28	0.28	0.47	396	507
103.1	102.6	34.78	35.28			21	0.77	0.28	0.28	0.49	399	486
102.6	102.1	35.28	35.78			21	0.78	0.29	0.29	0.49	411	461
102.1	101.6	35.78	36.28			21	0.77	0.29	0.29	0.48	421	446
101.6	101.1	36.28	36.78	SM		21	0.77	0.29	0.29	0.48	414	445
101.1	100.6	36.78	37.28		19	19	0.78	0.30	0.30	0.47	407	433
100.6	100.1	37.28	37.78			17	0.78	0.35	0.35	0.43	402	435
100.1	99.6	37.78	38.28			17	0.78	0.35	0.35	0.43	421	430
99.6	99.1	38.28	38.78			18	0.77	0.34	0.34	0.43	439	421
99.1	98.6	38.78	39.28			17	0.77	0.34	0.34	0.43	435	419
98.6	98.1	39.28	39.78		14	18	0.76	0.33	0.33	0.43	437	417
98.1	97.6	39.78	40.28			18	0.76	0.33	0.33	0.43	438	411
97.6	97.1	40.28	40.78			18	0.77	0.34	0.34	0.43	447	402
97.1	96.6	40.78	41.28			19	0.64	0.31	0.31	0.33	662	357
96.6	96.1	41.28	41.78			8	0.50	0.31	0.31	0.19	1011	292

8.1.17 JTB Blvd and I-95 – Bent 1 Pile 9 (720817) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-4.90	-5.40	29.39	29.89			25	0.57	0.25	0.25	0.33	47	186
-5.40	-5.90	29.89	30.39			26	0.59	0.23	0.23	0.36	50	196
-5.90	-6.40	30.39	30.89	SC	2	29	0.56	0.21	0.21	0.35	49	198
-6.40	-6.90	30.89	31.39			31	0.55	0.19	0.19	0.36	51	202
-6.90	-7.40	31.39	31.89			34	0.51	0.18	0.18	0.34	56	201
-7.40	-7.90	31.89	32.39			37	0.51	0.16	0.16	0.35	58	209
-7.90	-8.40	32.39	32.89			36	0.50	0.16	0.16	0.34	57	214
-8.40	-8.90	32.89	33.39		10	35	0.49	0.17	0.17	0.32	60	218
-8.90	-9.40	33.39	33.89			30	0.57	0.20	0.20	0.37	60	227
-9.40	-9.90	33.89	34.39			22	0.60	0.27	0.27	0.33	60	226
-9.90	-10.40	34.39	34.89			22	0.62	0.27	0.27	0.35	57	227
-10.40	-10.90	34.89	35.39			22	0.63	0.27	0.27	0.36	57	226
-10.90	-11.40	35.39	35.89		17	21	0.62	0.29	0.29	0.33	56	220
-11.40	-11.90	35.89	36.39			18	0.63	0.32	0.32	0.31	54	217
-11.90	-12.40	36.39	36.89			17	0.65	0.34	0.34	0.31	54	207
-12.40	-12.90	36.89	37.39			16	0.67	0.39	0.39	0.28	53	189
-12.90	-13.40	37.39	37.89			17	0.69	0.36	0.35	0.33	54	184
-13.40	-13.90	37.89	38.39		8	19	0.71	0.32	0.31	0.39	57	186
-13.90	-14.40	38.39	38.89			16	0.69	0.37	0.37	0.32	51	183
-14.40	-14.90	38.89	39.39			13	0.70	0.48	0.48	0.22	52	186
-14.90	-15.40	39.39	39.89			14	0.68	0.41	0.41	0.27	55	185
-15.40	-15.90	39.89	40.39			18	0.69	0.34	0.34	0.35	55	185
-15.90	-16.40	40.39	40.89	SP	5	18	0.67	0.33	0.33	0.34	56	181
-16.40	-16.90	40.89	41.39			19	0.64	0.32	0.31	0.32	55	178
-16.90	-17.40	41.39	41.89			19	0.64	0.32	0.32	0.32	54	172
-17.40	-17.90	41.89	42.39			18	0.66	0.32	0.32	0.34	50	185
-17.90	-18.40	42.39	42.89			17	0.67	0.35	0.35	0.32	50	189
-18.40	-18.90	42.89	43.39		21	15	0.67	0.40	0.40	0.27	49	187
-18.90	-19.40	43.39	43.89			15	0.72	0.42	0.42	0.30	50	181
-19.40	-19.90	43.89	44.39			13	0.73	0.44	0.44	0.29	49	176
-19.90	-20.40	44.39	44.89			14	0.74	0.42	0.42	0.31	50	173
-20.40	-20.90	44.89	45.39			15	0.75	0.40	0.40	0.35	50	173
-20.90	-21.40	45.39	45.89		23	15	0.75	0.40	0.40	0.35	49	173
-21.40	-21.90	45.89	46.39			15	0.74	0.40	0.40	0.34	49	174
-21.90	-22.40	46.39	46.89			15	0.75	0.40	0.39	0.36	49	174
-22.40	-22.90	46.89	47.39			16	0.73	0.39	0.39	0.34	50	170
-22.90	-23.40	47.39	47.89			14	0.73	0.43	0.43	0.30	50	167
-23.40	-23.90	47.89	48.39		19	12	0.73	0.50	0.50	0.23	48	165
-23.90	-24.40	48.39	48.89			12	0.74	0.51	0.51	0.23	47	161
-24.40	-24.90	48.89	49.39			11	0.77	0.52	0.52	0.25	47	159
-24.90	-25.40	49.39	49.89			13	0.78	0.48	0.48	0.30	49	153
-25.40	-25.90	49.89	50.39			14	0.77	0.43	0.43	0.34	53	151
-25.90	-26.40	50.39	50.89	SC	5	14	0.69	0.43	0.43	0.26	57	153
-26.40	-26.90	50.89	51.39			14	0.68	0.43	0.43	0.25	60	154
-26.90	-27.40	51.39	51.89			15	0.67	0.41	0.40	0.26	77	148
-27.40	-27.90	51.89	52.39			16	0.64	0.38	0.37	0.26	98	141
-27.90	-28.40	52.39	52.89			15	0.63	0.38	0.38	0.24	111	140
-28.40	-28.90	52.89	53.39		14	16	0.62	0.39	0.39	0.23	120	136
-28.90	-29.40	53.39	53.89			15	0.63	0.39	0.39	0.23	122	133
-29.40	-29.90	53.89	54.39			15	0.63	0.40	0.40	0.23	128	126
-29.90	-30.40	54.39	54.89			14	0.64	0.44	0.44	0.20	131	119
-30.40	-30.90	54.89	55.39	SP-SC		11	0.69	0.52	0.52	0.17	132	117
-30.90	-31.40	55.39	55.89		7	11	0.69	0.53	0.53	0.16	135	109
-31.40	-31.90	55.89	56.39			11	0.70	0.55	0.55	0.15	150	97
-31.90	-32.40	56.39	56.89			14	0.67	0.47	0.46	0.21	169	85
-32.40	-32.90	56.89	57.39			16	0.63	0.38	0.37	0.25	158	78

Bent 1 Pile 9 (720817) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-32.90	-33.40	57.39	57.89	SC		19	0.49	0.31	0.31	0.18	194	43
-33.40	-33.90	57.89	58.39		3	24	0.42	0.25	0.25	0.17	262	21
-33.90	-34.40	58.39	58.89			20	0.38	0.29	0.29	0.09	310	18
-34.40	-34.90	58.89	59.39			16	0.40	0.39	0.39	0.01	331	24
-34.90	-35.40	59.39	59.89			17	0.49	0.35	0.35	0.14	358	27
-35.40	-35.90	59.89	60.39			20	0.52	0.30	0.30	0.22	386	35
-35.90	-36.40	60.39	60.89		12	21	0.52	0.30	0.30	0.22	394	36
-36.40	-36.90	60.89	61.39			20	0.50	0.29	0.29	0.21	398	31
-36.90	-37.40	61.39	61.89			22	0.51	0.28	0.28	0.23	406	30
-37.40	-37.90	61.89	62.39			22	0.49	0.27	0.27	0.22	426	26
-37.90	-38.40	62.39	62.89	SP		23	0.48	0.26	0.26	0.22	446	28
-38.40	-38.90	62.89	63.39		18	24	0.48	0.25	0.25	0.23	451	35
-38.90	-39.40	63.39	63.89			26	0.47	0.23	0.23	0.24	453	39
-39.40	-39.90	63.89	64.39			28	0.46	0.21	0.21	0.25	465	40
-39.90	-40.40	64.39	64.89			27	0.47	0.22	0.22	0.24	470	49
-40.40	-40.90	64.89	65.39			24	0.47	0.24	0.25	0.23	448	64
-40.90	-41.40	65.39	65.89		44	23	0.55	0.26	0.26	0.30	419	86
-41.40	-41.90	65.89	66.39			22	0.60	0.28	0.28	0.32	325	124
-41.90	-42.40	66.39	66.89			26	0.67	0.23	0.22	0.45	166	196
-42.40	-42.90	66.89	67.39			33	0.63	0.18	0.18	0.45	103	231
-42.90	-43.40	67.39	67.89			36	0.54	0.17	0.17	0.37	88	240
-43.40	-43.90	67.89	68.39		24	40	0.55	0.15	0.15	0.40	97	249
-43.90	-44.40	68.39	68.89			38	0.57	0.16	0.16	0.41	102	263
-44.40	-44.90	68.89	69.39			36	0.57	0.17	0.17	0.40	112	268
-44.90	-45.40	69.39	69.89			35	0.56	0.17	0.17	0.39	120	264
-45.40	-45.90	69.89	70.39			36	0.56	0.17	0.17	0.39	131	259
-45.90	-46.40	70.39	70.89		23	33	0.57	0.18	0.18	0.39	140	255
-46.40	-46.90	70.89	71.39			31	0.57	0.19	0.19	0.38	142	248
-46.90	-47.40	71.39	71.89			31	0.58	0.19	0.19	0.38	143	240
-47.40	-47.90	71.89	72.39			29	0.57	0.20	0.20	0.37	146	229
-47.90	-48.40	72.39	72.89			28	0.58	0.22	0.21	0.36	150	217
-48.40	-48.90	72.89	73.39		40	25	0.58	0.24	0.23	0.34	159	205
-48.90	-49.40	73.39	73.89			26	0.57	0.24	0.24	0.33	168	195
-49.40	-49.90	73.89	74.39			24	0.56	0.24	0.24	0.32	211	178
-49.90	-50.40	74.39	74.89			25	0.53	0.24	0.24	0.29	295	150
-50.40	-50.90	74.89	75.39			25	0.51	0.24	0.24	0.27	348	133
-50.90	-51.40	75.39	75.89		26	25	0.49	0.24	0.24	0.25	393	120
-51.40	-51.90	75.89	76.39			24	0.48	0.24	0.25	0.24	431	117
-51.90	-52.40	76.39	76.89			26	0.47	0.23	0.23	0.24	469	116
-52.40	-52.90	76.89	77.39			28	0.46	0.21	0.21	0.25	492	119
-52.90	-53.40	77.39	77.89			28	0.45	0.21	0.21	0.24	495	118
-53.40	-53.90	77.89	78.39		37	27	0.45	0.22	0.22	0.23	496	117
-53.90	-54.40	78.39	78.89			26	0.44	0.23	0.23	0.22	497	114
-54.40	-54.90	78.89	79.39			25	0.44	0.24	0.23	0.20	505	108
-54.90	-55.40	79.39	79.89			31	0.43	0.20	0.19	0.23	524	101
-55.40	-55.90	79.89	80.39			37	0.43	0.16	0.16	0.27	676	92
-55.90	-56.40	80.39	80.89		22	38	0.40	0.16	0.16	0.24	678	89
-56.40	-56.90	80.89	81.39			38	0.40	0.16	0.16	0.24	650	86
-56.90	-57.40	81.39	81.89			37	0.38	0.16	0.16	0.22	633	85
-57.40	-57.90	81.89	82.39			37	0.39	0.16	0.16	0.23	629	87
-57.90	-58.40	82.39	82.89			35	0.39	0.17	0.17	0.22	614	87
-58.40	-58.90	82.89	83.39		22	33	0.39	0.18	0.19	0.21	586	97
-58.90	-59.40	83.39	83.89			32	0.39	0.18	0.19	0.21	582	98
-59.40	-59.90	83.89	84.39			32	0.38	0.19	0.19	0.19	571	100
-59.90	-60.40	84.39	84.89			36	0.38	0.17	0.17	0.21	562	103

Bent 1 Pile 9 (720817) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-60.40	-60.90	84.89	85.39	SC		40	0.39	0.15	0.15	0.24	605	104
-60.90	-61.40	85.39	85.89		9	38	0.38	0.16	0.16	0.22	610	95
-61.40	-61.90	85.89	86.39			35	0.39	0.17	0.17	0.22	605	87
-61.90	-62.40	86.39	86.89			35	0.39	0.17	0.16	0.23	600	93
-62.40	-62.90	86.89	87.39			37	0.39	0.16	0.16	0.23	573	101
-62.90	-63.40	87.39	87.89			38	0.39	0.16	0.15	0.24	541	102
-63.40	-63.90	87.89	88.39		38	40	0.41	0.15	0.15	0.26	502	113
-63.90	-64.40	88.39	88.89			37	0.45	0.16	0.16	0.29	451	125
-64.40	-64.90	88.89	89.39			36	0.49	0.17	0.17	0.32	422	136
-64.90	-65.40	89.39	89.89			40	0.51	0.15	0.15	0.36	396	155
-65.40	-65.90	89.89	90.39			46	0.53	0.13	0.13	0.40	342	196
-65.90	-66.40	90.39	90.89		25	77	0.55	0.08	0.08	0.47	287	224
-66.40	-66.90	90.89	91.39			115	0.49	0.05	0.05	0.44	207	203
-66.90	-67.40	91.39	91.89			122	0.52	0.05	0.05	0.47	224	212
-67.40	-67.90	91.89	92.39			125	0.55	0.05	0.05	0.50	224	196
-67.90	-68.40	92.39	92.89	MH		117	0.42	0.05	0.05	0.36	306	209
-68.40	-68.90	92.89	93.39		60	107	0.43	0.06	0.05	0.37	321	198
-68.90	-69.40	93.39	93.89			85	0.44	0.07	0.07	0.37	318	185
-69.40	-69.90	93.89	94.39			58	0.47	0.10	0.11	0.37	355	174
-69.90	-70.40	94.39	94.89			46	0.49	0.13	0.13	0.36	393	173
-70.40	-70.90	94.89	95.39			32	0.53	0.19	0.19	0.34	381	155
-70.90	-71.40	95.39	95.89		25	29	0.56	0.21	0.20	0.35	376	139
-71.40	-71.90	95.89	96.39			26	0.56	0.23	0.23	0.33	364	125
-71.90	-72.40	96.39	96.89			25	0.58	0.24	0.23	0.35	360	115
-72.40	-72.90	96.89	97.39			24	0.59	0.25	0.25	0.34	351	108
-72.90	-73.40	97.39	97.89	SC		25	0.54	0.24	0.24	0.30	323	106
-73.40	-73.90	97.89	98.39		10	26	0.52	0.23	0.23	0.29	314	102
-73.90	-74.40	98.39	98.89			25	0.53	0.24	0.24	0.29	313	95
-74.40	-74.90	98.89	99.39			24	0.53	0.26	0.26	0.27	305	91
-74.90	-75.40	99.39	99.89			22	0.55	0.26	0.26	0.28	305	87
-75.40	-75.90	99.89	100.39			22	0.54	0.27	0.27	0.27	308	83
-75.90	-76.40	100.39	100.89		8	23	0.53	0.27	0.27	0.27	311	81
-76.40	-76.90	100.89	101.39			23	0.53	0.26	0.26	0.27	317	77
-76.90	-77.40	101.39	101.89			23	0.54	0.26	0.26	0.28	313	79
-77.40	-77.90	101.89	102.39			23	0.53	0.26	0.26	0.27	315	78
-77.90	-78.40	102.39	102.89			23	0.52	0.26	0.26	0.26	315	77
-78.40	-78.90	102.89	103.39		14	24	0.53	0.26	0.26	0.27	310	77
-78.90	-79.40	103.39	103.89			24	0.53	0.25	0.25	0.28	296	80
-79.40	-79.90	103.89	104.39			25	0.53	0.24	0.24	0.29	278	85
-79.90	-80.40	104.39	104.89			25	0.52	0.24	0.24	0.27	249	89
-80.40	-80.90	104.89	105.39			24	0.53	0.25	0.25	0.28	251	94
-80.90	-81.40	105.39	105.89		11	28	0.52	0.22	0.22	0.30	237	96
-81.40	-81.90	105.89	106.39			31	0.52	0.19	0.19	0.33	238	98
-81.90	-82.40	106.39	106.89			31	0.53	0.20	0.20	0.33	236	100
-82.40	-82.90	106.89	107.39			29	0.53	0.21	0.21	0.32	232	102
-82.90	-83.40	107.39	107.89	ML		30	0.51	0.20	0.20	0.31	229	111
-83.40	-83.90	107.89	108.39		88/11	17	0.48	0.19	0.18	0.29	240	134
-83.90	-84.40	108.39	108.89			-	-	-	-	-	-	-

8.1.18 JTB Blvd and I-95 – Bent 2 Pile 1 (720817) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-8.00	-8.50	24.95	25.45	SC		28	0.57	0.21	0.12	0.36	18	254
-8.50	-9.00	25.45	25.95			30	0.55	0.20	0.06	0.35	23	272
-9.00	-9.50	25.95	26.45	SP	27	32	0.54	0.19	0.03	0.35	26	281
-9.50	-10.00	26.45	26.95			32	0.53	0.19	0.01	0.34	22	283
-10.00	-10.50	26.95	27.45			33	0.54	0.18	0.02	0.36	23	289
-10.50	-11.00	27.45	27.95			33	0.56	0.18	0.04	0.38	20	293
-11.00	-11.50	27.95	28.45			23	0.62	0.26	0.12	0.36	17	303
-11.50	-12.00	28.45	28.95		32	21	0.67	0.28	0.20	0.39	13	291
-12.00	-12.50	28.95	29.45			21	0.67	0.30	0.22	0.37	9	280
-12.50	-13.00	29.45	29.95			20	0.64	0.30	0.17	0.34	10	281
-13.00	-13.50	29.95	30.45			23	0.63	0.25	0.14	0.38	10	283
-13.50	-14.00	30.45	30.95			24	0.62	0.25	0.13	0.37	13	281
-14.00	-14.50	30.95	31.45		25	24	0.62	0.25	0.14	0.37	12	282
-14.50	-15.00	31.45	31.95			24	0.62	0.25	0.14	0.37	10	288
-15.00	-15.50	31.95	32.45			27	0.61	0.22	0.12	0.39	10	298
-15.50	-16.00	32.45	32.95			28	0.60	0.22	0.09	0.38	11	302
-16.00	-16.50	32.95	33.45			30	0.59	0.20	0.07	0.39	11	305
-16.50	-17.00	33.45	33.95		44	30	0.60	0.20	0.09	0.40	10	306
-17.00	-17.50	33.95	34.45			29	0.61	0.20	0.10	0.41	12	302
-17.50	-18.00	34.45	34.95			30	0.62	0.20	0.11	0.41	13	296
-18.00	-18.50	34.95	35.45			24	0.63	0.24	0.13	0.39	13	292
-18.50	-19.00	35.45	35.95			24	0.64	0.25	0.14	0.39	15	286
-19.00	-19.50	35.95	36.45		12	24	0.64	0.25	0.14	0.38	18	279
-19.50	-20.00	36.45	36.95			23	0.64	0.26	0.15	0.39	17	277
-20.00	-20.50	36.95	37.45			23	0.65	0.27	0.16	0.38	12	271
-20.50	-21.00	37.45	37.95			22	0.66	0.27	0.18	0.39	13	259
-21.00	-21.50	37.95	38.45			19	0.66	0.32	0.21	0.35	14	255
-21.50	-22.00	38.45	38.95		19	19	0.65	0.32	0.20	0.32	16	245
-22.00	-22.50	38.95	39.45			20	0.64	0.30	0.20	0.34	21	241
-22.50	-23.00	39.45	39.95			20	0.63	0.29	0.19	0.33	32	246
-23.00	-23.50	39.95	40.45			24	0.60	0.26	0.13	0.35	39	254
-23.50	-24.00	40.45	40.95			24	0.59	0.25	0.09	0.34	43	267
-24.00	-24.50	40.95	41.45		30	25	0.59	0.24	0.05	0.35	50	268
-24.50	-25.00	41.45	41.95			25	0.59	0.24	0.12	0.35	53	262
-25.00	-25.50	41.95	42.45			23	0.58	0.26	0.16	0.33	51	266
-25.50	-26.00	42.45	42.95			23	0.58	0.26	0.18	0.32	53	275
-26.00	-26.50	42.95	43.45			25	0.58	0.24	0.18	0.34	51	278
-26.50	-27.00	43.45	43.95		24	26	0.59	0.24	0.17	0.35	56	276
-27.00	-27.50	43.95	44.45			21	0.61	0.29	0.19	0.32	71	266
-27.50	-28.00	44.45	44.95			20	0.61	0.30	0.13	0.31	105	242
-28.00	-28.50	44.95	45.45			20	0.61	0.30	0.23	0.31	148	210
-28.50	-29.00	45.45	45.95	SC		20	0.59	0.30	0.27	0.29	188	184
-29.00	-29.50	45.95	46.45		7	19	0.58	0.31	0.26	0.26	220	167
-29.50	-30.00	46.45	46.95			19	0.57	0.32	0.24	0.25	246	159
-30.00	-30.50	46.95	47.45			19	0.56	0.31	0.23	0.25	268	152
-30.50	-31.00	47.45	47.95			20	0.54	0.31	0.25	0.23	283	145
-31.00	-31.50	47.95	48.45	SP-SC		21	0.54	0.28	0.23	0.26	297	140
-31.50	-32.00	48.45	48.95		14	22	0.53	0.27	0.22	0.25	312	133
-32.00	-32.50	48.95	49.45			23	0.52	0.26	0.18	0.26	328	122
-32.50	-33.00	49.45	49.95			23	0.52	0.26	0.17	0.26	349	105
-33.00	-33.50	49.95	50.45			21	0.53	0.28	0.25	0.24	354	99
-33.50	-34.00	50.45	50.95	SP-SM		21	0.54	0.29	0.19	0.25	373	92
-34.00	-34.50	50.95	51.45		16	21	0.53	0.29	0.17	0.24	406	83
-34.50	-35.00	51.45	51.95			20	0.53	0.29	0.16	0.23	428	71
-35.00	-35.50	51.95	52.45			21	0.53	0.30	0.18	0.23	434	63
-35.50	-36.00	52.45	52.95			20	0.55	0.30	0.21	0.25	456	49

Bent 2 Pile 1 (720817) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-36.00	-36.50	52.95	53.45	SP-SC		19	0.56	0.31	0.20	0.24	472	33
-36.50	-37.00	53.45	53.95		10	19	0.55	0.32	0.19	0.23	489	20
-37.00	-37.50	53.95	54.45			18	0.56	0.33	0.21	0.23	524	7
-37.50	-38.00	54.45	54.95			18	0.48	0.33	0.16	0.15	530	0
-38.00	-38.50	54.95	55.45			23	0.43	0.26	0.10	0.17	533	0
-38.50	-39.00	55.45	55.95			23	0.42	0.26	0.10	0.16	539	0
-39.00	-39.50	55.95	56.45		9	24	0.41	0.26	0.12	0.15	549	0
-39.50	-40.00	56.45	56.95			23	0.40	0.26	0.13	0.14	566	0
-40.00	-40.50	56.95	57.45			24	0.39	0.26	0.13	0.14	571	0
-40.50	-41.00	57.45	57.95			23	0.39	0.26	0.14	0.13	570	0
-41.00	-41.50	57.95	58.45	MH		26	0.38	0.23	0.14	0.15	580	0
-41.50	-42.00	58.45	58.95		2	27	0.36	0.23	0.13	0.13	597	0
-42.00	-42.50	58.95	59.45			28	0.35	0.22	0.13	0.14	620	0
-42.50	-43.00	59.45	59.95			28	0.34	0.21	0.12	0.13	625	0
-43.00	-43.50	59.95	60.45			29	0.34	0.20	0.11	0.14	628	0
-43.50	-44.00	60.45	60.95			30	0.34	0.20	0.15	0.14	628	0
-44.00	-44.50	60.95	61.45		9	29	0.34	0.20	0.17	0.14	622	0
-44.50	-45.00	61.45	61.95			30	0.34	0.20	0.16	0.14	623	0
-45.00	-45.50	61.95	62.45			30	0.34	0.20	0.13	0.14	648	0
-45.50	-46.00	62.45	62.95			30	0.34	0.20	0.16	0.14	661	0
-46.00	-46.50	62.95	63.45			34	0.35	0.18	0.16	0.17	670	0
-46.50	-47.00	63.45	63.95		9	34	0.35	0.17	0.17	0.18	683	0
-47.00	-47.50	63.95	64.45			40	0.36	0.15	0.18	0.21	697	11
-47.50	-48.00	64.45	64.95			40	0.36	0.15	0.16	0.21	616	64
-48.00	-48.50	64.95	65.45			32	0.46	0.19	0.09	0.27	360	145
-48.50	-49.00	65.45	65.95	SP		30	0.57	0.20	0.10	0.37	213	219
-49.00	-49.50	65.95	66.45		28	26	0.61	0.23	0.12	0.38	157	257
-49.50	-50.00	66.45	66.95			26	0.60	0.23	0.14	0.37	138	267
-50.00	-50.50	66.95	67.45			27	0.60	0.22	0.13	0.38	141	266
-50.50	-51.00	67.45	67.95			28	0.58	0.22	0.11	0.37	138	271
-51.00	-51.50	67.95	68.45			29	0.57	0.21	0.16	0.36	138	275
-51.50	-52.00	68.45	68.95		29	29	0.56	0.21	0.19	0.36	143	271
-52.00	-52.50	68.95	69.45			30	0.51	0.20	0.20	0.31	163	283
-52.50	-53.00	69.45	69.95			30	0.52	0.20	0.23	0.32	184	260
-53.00	-53.50	69.95	70.45			30	0.50	0.19	0.22	0.30	203	259
-53.50	-54.00	70.45	70.95			31	0.48	0.19	0.20	0.29	208	270
-54.00	-54.50	70.95	71.45		24	29	0.48	0.21	0.20	0.27	210	277
-54.50	-55.00	71.45	71.95			28	0.47	0.21	0.22	0.26	211	280
-55.00	-55.50	71.95	72.45			32	0.46	0.18	0.20	0.27	198	292
-55.50	-56.00	72.45	72.95			33	0.45	0.18	0.20	0.27	189	305
-56.00	-56.50	72.95	73.45	SP		37	0.45	0.16	0.18	0.28	175	326
-56.50	-57.00	73.45	73.95		51	37	0.45	0.16	0.19	0.28	168	340
-57.00	-57.50	73.95	74.45			37	0.47	0.16	0.21	0.31	168	350
-57.50	-58.00	74.45	74.95			38	0.48	0.16	0.19	0.32	164	352
-58.00	-58.50	74.95	75.45			31	0.46	0.19	0.20	0.27	169	358
-58.50	-59.00	75.45	75.95			30	0.47	0.20	0.21	0.27	153	354
-59.00	-59.50	75.95	76.45		68	37	0.47	0.16	0.20	0.31	148	340
-59.50	-60.00	76.45	76.95			38	0.48	0.16	0.21	0.32	146	327
-60.00	-60.50	76.95	77.45			33	0.48	0.18	0.25	0.30	151	311
-60.50	-61.00	77.45	77.95			32	0.45	0.18	0.24	0.26	178	305
-61.00	-61.50	77.95	78.45	ML		30	0.39	0.20	0.22	0.19	222	310
-61.50	-62.00	78.45	78.95		24	30	0.37	0.20	0.19	0.17	276	302
-62.00	-62.50	78.95	79.45			32	0.37	0.18	0.20	0.18	295	303
-62.50	-63.00	79.45	79.95			33	0.38	0.18	0.18	0.20	271	319
-63.00	-63.50	79.95	80.45			31	0.41	0.19	0.21	0.21	248	325
-63.50	-64.00	80.45	80.95			31	0.43	0.19	0.24	0.24	244	315
-64.00	-64.50	80.95	81.45		21	34	0.42	0.18	0.21	0.24	243	305
-64.50	-65.00	81.45	81.95			33	0.43	0.18	0.21	0.25	253	299
-65.00	-65.50	81.95	82.45			16	0.43	0.18	0.18	0.25	249	283

8.1.19 JTB Blvd and I-95 – Bent 4 Pile 9 (720817) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
5.60	5.10	23.72	24.22			2	3.62	3.00	3.00	0.62	3	0
5.10	4.60	24.22	24.72		8	3	2.67	2.67	2.67	0.00	0	6
4.60	4.10	24.72	25.22	SP-SC		3	2.00	2.00	2.00	0.00	0	21
4.10	3.60	25.22	25.72			3	1.91	1.90	1.90	0.01	0	39
3.60	3.10	25.72	26.22			3	1.74	1.71	1.71	0.03	0	51
3.10	2.60	26.22	26.72			4	1.73	1.66	1.66	0.07	0	61
2.60	2.10	26.72	27.22		21	4	1.67	1.50	1.50	0.17	0	73
2.10	1.60	27.22	27.72			5	1.44	1.34	1.34	0.11	2	89
1.60	1.10	27.72	28.22			5	1.33	1.09	1.09	0.24	3	106
1.10	0.60	28.22	28.72			8	0.98	0.83	0.83	0.15	16	129
0.60	0.10	28.72	29.22			10	0.78	0.57	0.57	0.21	24	160
0.10	-0.40	29.22	29.72		23	14	0.80	0.45	0.45	0.35	17	185
-0.40	-0.90	29.72	30.22			19	0.69	0.32	0.32	0.37	33	193
-0.90	-1.40	30.22	30.72			22	0.67	0.27	0.27	0.40	28	216
-1.40	-1.90	30.72	31.22			29	0.63	0.21	0.21	0.42	24	225
-1.90	-2.40	31.22	31.72			33	0.59	0.18	0.18	0.41	23	231
-2.40	-2.90	31.72	32.22		33	40	0.57	0.15	0.15	0.42	28	232
-2.90	-3.40	32.22	32.72			31	0.65	0.19	0.19	0.47	31	241
-3.40	-3.90	32.72	33.22			20	0.78	0.31	0.31	0.47	28	236
-3.90	-4.40	33.22	33.72			18	0.85	0.34	0.34	0.51	27	225
-4.40	-4.90	33.72	34.22			15	0.89	0.40	0.40	0.49	23	221
-4.90	-5.40	34.22	34.72		26	15	0.86	0.38	0.38	0.48	23	224
-5.40	-5.90	34.72	35.22			17	0.82	0.35	0.35	0.47	23	227
-5.90	-6.40	35.22	35.72			17	0.85	0.37	0.37	0.48	30	224
-6.40	-6.90	35.72	36.22			15	0.82	0.40	0.40	0.42	35	223
-6.90	-7.40	36.22	36.72			15	0.79	0.38	0.38	0.40	29	234
-7.40	-7.90	36.72	37.22		8	17	0.76	0.36	0.36	0.40	45	224
-7.90	-8.40	37.22	37.72			16	0.77	0.36	0.36	0.41	45	220
-8.40	-8.90	37.72	38.22			17	0.76	0.36	0.36	0.40	47	218
-8.90	-9.40	38.22	38.72	SP		17	0.76	0.35	0.35	0.41	47	215
-9.40	-9.90	38.72	39.22			17	0.78	0.34	0.34	0.44	56	204
-9.90	-10.40	39.22	39.72		8	18	0.82	0.33	0.33	0.49	45	216
-10.40	-10.90	39.72	40.22			19	0.81	0.32	0.32	0.49	33	240
-10.90	-11.40	40.22	40.72			19	0.77	0.31	0.31	0.46	41	256
-11.40	-11.90	40.72	41.22			20	0.77	0.29	0.29	0.48	43	260
-11.90	-12.40	41.22	41.72			22	0.77	0.27	0.27	0.50	48	269
-12.40	-12.90	41.72	42.22		32	24	0.78	0.25	0.25	0.53	48	273
-12.90	-13.40	42.22	42.72			23	0.78	0.26	0.26	0.51	48	266
-13.40	-13.90	42.72	43.22			21	0.78	0.29	0.29	0.49	45	258
-13.90	-14.40	43.22	43.72			20	0.78	0.30	0.30	0.48	49	244
-14.40	-14.90	43.72	44.22			20	0.78	0.31	0.31	0.47	48	228
-14.90	-15.40	44.22	44.72		46	17	0.81	0.34	0.34	0.47	40	219
-15.40	-15.90	44.72	45.22			15	0.84	0.41	0.41	0.43	39	207
-15.90	-16.40	45.22	45.72			15	0.87	0.40	0.40	0.47	38	202
-16.40	-16.90	45.72	46.22			15	0.82	0.39	0.39	0.43	41	207
-16.90	-17.40	46.22	46.72			16	0.80	0.39	0.39	0.41	45	205
-17.40	-17.90	46.72	47.22		19	15	0.80	0.40	0.40	0.40	45	207
-17.90	-18.40	47.22	47.72			15	0.80	0.38	0.38	0.42	40	213
-18.40	-18.90	47.72	48.22			17	0.77	0.35	0.35	0.42	41	209
-18.90	-19.40	48.22	48.72			16	0.81	0.38	0.38	0.44	39	209
-19.40	-19.90	48.72	49.22			14	0.85	0.43	0.43	0.42	38	209
-19.90	-20.40	49.22	49.72		18	15	0.83	0.40	0.40	0.43	42	208
-20.40	-20.90	49.72	50.22			17	0.82	0.36	0.36	0.46	46	217
-20.90	-21.40	50.22	50.72			17	0.78	0.35	0.35	0.44	44	214

Bent 4 Pile 9 (720817) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-21.40	-21.90	50.72	51.22			18	0.75	0.33	0.33	0.42	42	204
-21.90	-22.40	51.22	51.72			18	0.73	0.33	0.33	0.41	46	206
-22.40	-22.90	51.72	52.22		22	19	0.73	0.32	0.32	0.41	45	223
-22.90	-23.40	52.22	52.72			22	0.69	0.28	0.28	0.41	46	231
-23.40	-23.90	52.72	53.22			27	0.67	0.23	0.23	0.44	46	237
-23.90	-24.40	53.22	53.72			26	0.68	0.23	0.23	0.45	42	233
-24.40	-24.90	53.72	54.22			25	0.67	0.24	0.24	0.43	43	231
-24.90	-25.40	54.22	54.72		28	27	0.64	0.23	0.22	0.41	53	234
-25.40	-25.90	54.72	55.22			29	0.63	0.21	0.20	0.42	59	235
-25.90	-26.40	55.22	55.72			27	0.63	0.22	0.21	0.41	62	234
-26.40	-26.90	55.72	56.22	SP		25	0.63	0.24	0.23	0.39	63	232
-26.90	-27.40	56.22	56.72			26	0.62	0.24	0.23	0.38	69	235
-27.40	-27.90	56.72	57.22		17	26	0.62	0.23	0.23	0.39	79	241
-27.90	-28.40	57.22	57.72			25	0.61	0.24	0.23	0.37	83	243
-28.40	-28.90	57.72	58.22			24	0.61	0.25	0.24	0.36	90	239
-28.90	-29.40	58.22	58.72			26	0.59	0.23	0.23	0.36	107	231
-29.40	-29.90	58.72	59.22			29	0.58	0.21	0.20	0.37	127	223
-29.90	-30.40	59.22	59.72		12	28	0.57	0.22	0.21	0.35	152	211
-30.40	-30.90	59.72	60.22			24	0.59	0.24	0.24	0.35	185	198
-30.90	-31.40	60.22	60.72			26	0.58	0.23	0.23	0.35	215	186
-31.40	-31.90	60.72	61.22			27	0.48	0.22	0.21	0.26	227	184
-31.90	-32.40	61.22	61.72			28	0.53	0.22	0.22	0.31	251	177
-32.40	-32.90	61.72	62.22		8	27	0.53	0.22	0.22	0.31	288	168
-32.90	-33.40	62.22	62.72			28	0.51	0.21	0.21	0.30	311	165
-33.40	-33.90	62.72	63.22			29	0.49	0.20	0.19	0.29	319	174
-33.90	-34.40	63.22	63.72	SC		28	0.49	0.21	0.21	0.27	321	183
-34.40	-34.90	63.72	64.22			25	0.56	0.24	0.23	0.32	342	184
-34.90	-35.40	64.22	64.72		9	26	0.55	0.24	0.23	0.31	335	196
-35.40	-35.90	64.72	65.22			26	0.55	0.23	0.22	0.32	322	198
-35.90	-36.40	65.22	65.72			26	0.55	0.23	0.23	0.32	330	184
-36.40	-36.90	65.72	66.22			25	0.55	0.24	0.23	0.31	358	157
-36.90	-37.40	66.22	66.72			23	0.56	0.26	0.25	0.30	389	130
-37.40	-37.90	66.72	67.22		28	21	0.55	0.29	0.28	0.26	424	103
-37.90	-38.40	67.22	67.72	SP		21	0.56	0.29	0.28	0.27	486	73
-38.40	-38.90	67.72	68.22			20	0.54	0.29	0.29	0.25	557	41
-38.90	-39.40	68.22	68.72			21	0.55	0.29	0.29	0.26	614	21
-39.40	-39.90	68.72	69.22			21	0.54	0.29	0.28	0.25	658	9
-39.90	-40.40	69.22	69.72		5	22	0.52	0.27	0.27	0.25	694	1
-40.40	-40.90	69.72	70.22			24	0.52	0.25	0.24	0.27	723	0
-40.90	-41.40	70.22	70.72			22	0.51	0.27	0.26	0.24	741	1
-41.40	-41.90	70.72	71.22			19	0.55	0.32	0.32	0.23	751	1
-41.90	-42.40	71.22	71.72			21	0.54	0.30	0.29	0.24	766	0
-42.40	-42.90	71.72	72.22		6	22	0.52	0.27	0.26	0.25	776	0
-42.90	-43.40	72.22	72.72			23	0.53	0.27	0.27	0.26	780	0
-43.40	-43.90	72.72	73.22			22	0.53	0.27	0.27	0.26	762	0
-43.90	-44.40	73.22	73.72			21	0.54	0.28	0.28	0.26	751	0
-44.40	-44.90	73.72	74.22	MH		20	0.55	0.30	0.30	0.25	755	0
-44.90	-45.40	74.22	74.72		8	21	0.53	0.29	0.28	0.24	748	0
-45.40	-45.90	74.72	75.22			22	0.53	0.27	0.26	0.26	739	0
-45.90	-46.40	75.22	75.72			22	0.53	0.28	0.27	0.25	728	0
-46.40	-46.90	75.72	76.22			20	0.53	0.30	0.30	0.23	723	0
-46.90	-47.40	76.22	76.72			20	0.53	0.29	0.29	0.24	725	0
-47.40	-47.90	76.72	77.22		7	22	0.51	0.28	0.27	0.23	715	0
-47.90	-48.40	77.22	77.72			22	0.51	0.28	0.27	0.23	721	0
-48.40	-48.90	77.72	78.22			22	0.48	0.27	0.27	0.21	749	0

Bent 4 Pile 9 (720817) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-48.90	-49.40	78.22	78.72	SC	7	25	0.47	0.23	0.23	0.24	814	0
-49.40	-49.90	78.72	79.22			31	0.47	0.19	0.19	0.28	844	0
-49.90	-50.40	79.22	79.72			29	0.48	0.21	0.21	0.28	834	0
-50.40	-50.90	79.72	80.22			25	0.55	0.24	0.23	0.31	852	3
-50.90	-51.40	80.22	80.72			27	0.53	0.22	0.22	0.31	747	61
-51.40	-51.90	80.72	81.22			32	0.51	0.19	0.19	0.32	696	89
-51.90	-52.40	81.22	81.72	SP-SC	13	31	0.51	0.20	0.19	0.31	655	99
-52.40	-52.90	81.72	82.22			27	0.52	0.22	0.22	0.30	635	105
-52.90	-53.40	82.22	82.72			29	0.51	0.21	0.21	0.30	623	118
-53.40	-53.90	82.72	83.22			29	0.51	0.20	0.20	0.31	587	152
-53.90	-54.40	83.22	83.72			31	0.51	0.19	0.19	0.32	528	209
-54.40	-54.90	83.72	84.22			32	0.51	0.18	0.18	0.33	461	274
-54.90	-55.40	84.22	84.72		19	40	0.51	0.15	0.15	0.36	400	332
-55.40	-55.90	84.72	85.22			49	0.53	0.12	0.11	0.41	319	415
-55.90	-56.40	85.22	85.72			53	0.56	0.11	0.10	0.45	254	505
-56.40	-56.90	85.72	86.22			59	0.60	0.10	0.09	0.50	238	564
-56.90	-57.40	86.22	86.72	SP-SM	16	54	0.61	0.11	0.11	0.50	236	563
-57.40	-57.90	86.72	87.22			46	0.65	0.13	0.13	0.52	218	546
-57.90	-58.40	87.22	87.72			45	0.62	0.13	0.13	0.49	212	498
-58.40	-58.90	87.72	88.22			44	0.63	0.14	0.13	0.49	201	469
-58.90	-59.40	88.22	88.72			42	0.65	0.14	0.14	0.51	206	437
-59.40	-59.90	88.72	89.22			39	0.56	0.15	0.15	0.41	220	415
-59.90	-60.40	89.22	89.72	SP	20	45	0.51	0.14	0.13	0.37	281	439
-60.40	-60.90	89.72	90.22			51	0.49	0.12	0.12	0.37	313	428
-60.90	-61.40	90.22	90.72			47	0.50	0.13	0.13	0.37	308	406
-61.40	-61.90	90.72	91.22			40	0.51	0.15	0.15	0.36	298	386
-61.90	-62.40	91.22	91.72	SP-SC	31	40	0.52	0.15	0.15	0.37	302	369
-62.40	-62.90	91.72	92.22			40	0.51	0.15	0.15	0.36	306	367
-62.90	-63.40	92.22	92.72			42	0.50	0.14	0.14	0.36	309	386
-63.40	-63.90	92.72	93.22			45	0.50	0.13	0.13	0.37	302	398
-63.90	-64.40	93.22	93.72			36	0.52	0.16	0.16	0.36	347	386
-64.40	-64.90	93.72	94.22			1	0.55	0.25	0.24	0.30	459	362

8.1.20 JTB Blvd and I-95 – Bent 5 Pile 3 (720816) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-50.20	-50.70	73	73.1	SC		29	0.49	0.05	0.02	0.44	388	478
-50.70	-51.20	73	73.6		21	64	1.08	0.09	0.08	0.98	52	667
-51.20	-51.70	74	74.1			53	1.20	0.11	0.05	1.08	63	588
-51.70	-52.20	74	74.6			38	1.25	0.16	0.07	1.09	71	572
-52.20	-52.70	75	75.1			35	1.27	0.17	0.11	1.09	73	552
-52.70	-53.20	75	75.6			156	0.97	0.04	0.05	0.93	161	529
-53.20	-53.70	76	76.1		19	180	0.94	0.03	-0.04	0.90	129	398
-53.70	-54.20	76	76.6			89	1.14	0.07	0.05	1.08	148	502
-54.20	-54.70	77	77.1			71	1.20	0.08	0.10	1.12	149	535
-54.70	-55.20	77	77.6			49	1.25	0.12	0.15	1.13	153	571
-55.20	-55.70	78	78.1			43	1.26	0.14	0.19	1.13	151	571
-55.70	-56.20	78	78.6		27	35	1.26	0.17	0.21	1.09	150	575
-56.20	-56.70	79	79.1			34	1.25	0.18	0.19	1.07	148	580
-56.70	-57.20	79	79.6			29	1.22	0.20	0.19	1.01	143	577
-57.20	-57.70	80	80.1			29	1.24	0.21	0.23	1.03	145	573
-57.70	-58.20	80	80.6	CL		24	1.24	0.25	0.23	0.99	143	566
-58.20	-58.70	81	81.1		14	23	1.24	0.26	0.27	0.98	145	562
-58.70	-59.20	81	81.6			25	1.25	0.25	0.29	1.01	149	556
-59.20	-59.70	82	82.1			24	1.28	0.24	0.29	1.04	153	558
-59.70	-60.20	82	82.6	SM		26	1.29	0.23	0.29	1.06	151	568
-60.20	-60.70	83	83.1			26	1.32	0.23	0.26	1.09	154	606
-60.70	-61.20	83	83.6		25	25	1.20	0.24	0.18	0.96	160	645
-61.20	-61.70	84	84.1			25	1.06	0.24	0.11	0.82	164	706
-61.70	-62.20	84	84.6			41	0.98	0.15	0.09	0.83	162	862
-62.20	-62.70	85	85.1			45	0.92	0.13	0.13	0.79	159	1088
-62.70	-63.20	85	85.6			9	0.91	0.13	0.09	0.78	175	1168

8.1.21 JTB Blvd and I-95 – Bent 6 Pile 4 (720816) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-44.30	-44.80	65.72	66.22	SM		1	2.67	2.67	2.67	0.00	0	0
-44.80	-45.30	66.22	66.72			3	2.18	2.40	2.09	-0.22	12	194
-45.30	-45.80	66.72	67.22			5	0.84	1.22	0.24	-0.38	9	280
-45.80	-46.30	67.22	67.72		7	14	0.97	0.43	0.17	0.54	14	431
-46.30	-46.80	67.72	68.22			18	0.97	0.34	-0.08	0.64	11	566
-46.80	-47.30	68.22	68.72			30	1.12	0.20	0.00	0.93	8	564
-47.30	-47.80	68.72	69.22			34	1.13	0.18	0.04	0.95	11	551
-47.80	-48.30	69.22	69.72			43	1.18	0.14	0.10	1.04	23	536
-48.30	-48.80	69.72	70.22	ML/MH	50/3	47	1.19	0.13	0.08	1.06	50	507
-48.80	-49.30	70.22	70.72			55	1.18	0.11	0.20	1.07	56	463
-49.30	-49.80	70.72	71.22			54	1.33	0.11	0.21	1.22	74	502
-49.80	-50.30	71.22	71.72			47	1.38	0.13	0.31	1.25	74	479
-50.30	-50.80	71.72	72.22			48	1.35	0.12	0.32	1.22	76	453
-50.80	-51.30	72.22	72.72		43	52	1.37	0.12	0.37	1.25	77	444
-51.30	-51.80	72.72	73.22			47	1.42	0.13	0.41	1.30	76	455
-51.80	-52.30	73.22	73.72			32	1.44	0.19	0.49	1.26	75	468
-52.30	-52.80	73.72	74.22			30	1.44	0.20	0.50	1.24	83	478
-52.80	-53.30	74.22	74.72			24	1.43	0.25	0.46	1.18	84	484
-53.30	-53.80	74.72	75.22		28	24	1.45	0.26	0.49	1.19	82	492
-53.80	-54.30	75.22	75.72			21	1.44	0.29	0.46	1.16	85	494
-54.30	-54.80	75.72	76.22			20	1.42	0.29	0.47	1.12	87	495
-54.80	-55.30	76.22	76.72			19	1.41	0.32	0.49	1.09	87	497
-55.30	-55.80	76.72	77.22			19	1.39	0.32	0.54	1.07	85	494
-55.80	-56.30	77.22	77.72		25	18	1.40	0.33	0.51	1.07	89	507
-56.30	-56.80	77.72	78.22			19	1.39	0.32	0.46	1.08	90	512
-56.80	-57.30	78.22	78.72			22	1.38	0.27	0.38	1.11	96	527
-57.30	-57.80	78.72	79.22			25	1.30	0.24	0.22	1.06	105	588
-57.80	-58.30	79.22	79.72			32	1.12	0.19	0.10	0.93	115	693
-58.30	-58.80	79.72	80.22	SC	26	34	0.95	0.18	-0.02	0.77	116	911
-58.80	-59.30	80.22	80.72			41	0.87	0.15	0.00	0.72	128	1193
-59.30	-59.80	80.72	81.22			50	0.81	0.12	-0.01	0.69	167	1362
-59.80	-60.30	81.22	81.72			78	0.80	0.08	0.04	0.72	189	1457
-60.30	-60.80	81.72	82.22	SP		60	0.78	0.08	0.16	0.71	233	1494

8.1.22 JTB Blvd and I-95 – Bent 7 Pile 14 (720816) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-38.47	-38.97	64.34	64.84	CH		1	6.05	6.05	5.92	0.00	0	0
-38.97	-39.47	64.84	65.34			1	8.02	8.02	8.01	0.00	0	0
-39.47	-39.97	65.34	65.84			20	1.17	0.45	0.48	0.72	0	688
-39.97	-40.47	65.84	66.34		18	27	0.95	0.22	0.05	0.73	0	1040
-40.47	-40.97	66.34	66.84	ML		56	0.98	0.11	0.05	0.87	0	1036
-40.97	-41.47	66.84	67.34			70	1.01	0.09	0.11	0.92	17	1030
-41.47	-41.97	67.34	67.84			65	1.01	0.09	0.14	0.92	48	1000
-41.97	-42.47	67.84	68.34			62	1.00	0.10	0.12	0.90	87	955
-42.47	-42.97	68.34	68.84		50/3.5	68	0.97	0.09	0.16	0.88	128	870
-42.97	-43.47	68.84	69.34			70	0.92	0.09	0.18	0.83	209	774
-43.47	-43.97	69.34	69.84			87	0.91	0.07	0.11	0.84	201	838
-43.97	-44.47	69.84	70.34			94	0.92	0.06	0.11	0.85	154	890
-44.47	-44.97	70.34	70.84			116	0.97	0.05	0.10	0.91	167	879
-44.97	-45.47	70.84	71.34		57	20	1.01	0.05	0.10	0.96	166	884
-45.47	-45.97	71.34	71.84			-	-	-	-	-	-	-

8.1.23 I-4 and US-192 Interchange – EB1P3 (Ramp BD) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
71.12	70.62	18.38	18.88	SP-SM		1	1.33	1.00	1.09	0.33	0	0
70.62	70.12	18.88	19.38		54	6	1.08	1.00	0.92	0.08	0	145
70.12	69.62	19.38	19.88			6	1.03	1.00	0.78	0.03	0	223
69.62	69.12	19.88	20.38	SP		6	1.07	1.00	0.78	0.07	0	252
69.12	68.62	20.38	20.88			6	0.97	1.00	0.65	-0.04	0	272
68.62	68.12	20.88	21.38			6	0.80	1.00	0.47	-0.20	0	323
68.12	67.62	21.38	21.88		39	8	0.73	0.85	0.36	-0.12	2	339
67.62	67.12	21.88	22.38			10	0.71	0.60	0.32	0.11	3	362
67.12	66.62	22.38	22.88			11	0.70	0.52	0.31	0.18	2	390
66.62	66.12	22.88	23.38			16	0.67	0.38	0.27	0.29	2	426
66.12	65.62	23.38	23.88			18	0.65	0.35	0.25	0.30	0	437
65.62	65.12	23.88	24.38		39	20	0.63	0.30	0.22	0.33	0	429
65.12	64.62	24.38	24.88			21	0.61	0.28	0.21	0.33	0	423
64.62	64.12	24.88	25.38	SP-SM		26	0.59	0.24	0.19	0.35	0	411
64.12	63.62	25.38	25.88			26	0.57	0.23	0.18	0.34	0	401
63.62	63.12	25.88	26.38			28	0.59	0.22	0.19	0.37	0	418
63.12	62.62	26.38	26.88		60	26	0.58	0.23	0.20	0.35	0	404
62.62	62.12	26.88	27.38			25	0.55	0.24	0.19	0.31	0	385
62.12	61.62	27.38	27.88			25	0.53	0.24	0.20	0.30	0	370
61.62	61.12	27.88	28.38			26	0.62	0.23	0.26	0.39	1	408
61.12	60.62	28.38	28.88			24	0.63	0.24	0.27	0.39	0	399
60.62	60.12	28.88	29.38		39	22	0.62	0.27	0.27	0.35	0	389
60.12	59.62	29.38	29.88			22	0.62	0.28	0.27	0.34	0	388
59.62	59.12	29.88	30.38			20	0.60	0.29	0.27	0.31	0	376
59.12	58.62	30.38	30.88			21	0.61	0.29	0.29	0.32	0	374
58.62	58.12	30.88	31.38			20	0.61	0.29	0.30	0.32	0	359
58.12	57.62	31.38	31.88		13	20	0.60	0.31	0.25	0.30	0	343
57.62	57.12	31.88	32.38			17	0.61	0.35	0.24	0.26	0	327
57.12	56.62	32.38	32.88			16	0.59	0.36	0.31	0.23	3	314
56.62	56.12	32.88	33.38			16	0.58	0.39	0.39	0.19	44	278
56.12	55.62	33.38	33.88			16	0.58	0.37	0.40	0.20	125	213
55.62	55.12	33.88	34.38		3	18	0.56	0.33	0.41	0.23	183	168
55.12	54.62	34.38	34.88			17	0.55	0.36	0.42	0.20	214	153
54.62	54.12	34.88	35.38	SM		13	0.56	0.44	0.45	0.12	241	131
54.12	53.62	35.38	35.88			13	0.59	0.45	0.49	0.13	237	114
53.62	53.12	35.88	36.38			12	0.58	0.50	0.48	0.08	254	103
53.12	52.62	36.38	36.88		WH	12	0.60	0.50	0.52	0.10	250	100
52.62	52.12	36.88	37.38			12	0.57	0.50	0.48	0.07	273	91
52.12	51.62	37.38	37.88			12	0.54	0.50	0.43	0.04	311	92
51.62	51.12	37.88	38.38			13	0.52	0.48	0.38	0.04	343	93
51.12	50.62	38.38	38.88			13	0.51	0.46	0.35	0.05	353	89
50.62	50.12	38.88	39.38		3	14	0.52	0.41	0.38	0.11	354	91
50.12	49.62	39.38	39.88			15	0.51	0.41	0.39	0.10	346	97
49.62	49.12	39.88	40.38			14	0.50	0.41	0.38	0.09	347	99
49.12	48.62	40.38	40.88			15	0.51	0.42	0.39	0.09	367	90
48.62	48.12	40.88	41.38			13	0.50	0.44	0.39	0.06	384	78
48.12	47.62	41.38	41.88		WH	13	0.51	0.46	0.39	0.05	398	71
47.62	47.12	41.88	42.38			12	0.51	0.52	0.40	-0.01	407	70
47.12	46.62	42.38	42.88			12	0.49	0.47	0.37	0.02	424	67
46.62	46.12	42.88	43.38			16	0.47	0.38	0.36	0.09	436	66
46.12	45.62	43.38	43.88			17	0.46	0.36	0.36	0.10	428	75

EB1P3 (Ramp BD) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
45.62	45.12	43.88	44.38	SM	7	19	0.46	0.32	0.36	0.14	432	76
45.12	44.62	44.38	44.88			19	0.45	0.32	0.35	0.13	447	79
44.62	44.12	44.88	45.38			19	0.45	0.32	0.34	0.13	461	81
44.12	43.62	45.38	45.88			20	0.45	0.31	0.32	0.14	468	86
43.62	43.12	45.88	46.38			20	0.45	0.29	0.32	0.16	467	93
43.12	42.62	46.38	46.88		12	20	0.45	0.30	0.32	0.15	448	107
42.62	42.12	46.88	47.38			19	0.46	0.32	0.34	0.14	427	117
42.12	41.62	47.38	47.88			19	0.46	0.31	0.35	0.15	401	133
41.62	41.12	47.88	48.38			20	0.46	0.30	0.36	0.16	407	128
41.12	40.62	48.38	48.88			19	0.48	0.31	0.36	0.17	403	138
40.62	40.12	48.88	49.38		11	19	0.48	0.32	0.42	0.16	369	155
40.12	39.62	49.38	49.88			18	0.47	0.32	0.41	0.15	361	157
39.62	39.12	49.88	50.38			19	0.47	0.32	0.39	0.15	359	155
39.12	38.62	50.38	50.88			20	0.47	0.31	0.39	0.16	345	164
38.62	38.12	50.88	51.38			21	0.43	0.29	0.34	0.14	330	149
38.12	37.62	51.38	51.88		10	21	0.47	0.30	0.39	0.17	316	174
37.62	37.12	51.88	52.38			19	0.44	0.31	0.37	0.13	296	168
37.12	36.62	52.38	52.88			20	0.43	0.31	0.35	0.13	294	167
36.62	36.12	52.88	53.38			20	0.63	0.30	0.62	0.33	279	167
36.12	35.62	53.38	53.88			19	0.57	0.31	0.56	0.26	285	171
35.62	35.12	53.88	54.38		7	17	0.57	0.34	0.56	0.23	278	177
35.12	34.62	54.38	54.88			18	0.65	0.33	0.65	0.32	277	181
34.62	34.12	54.88	55.38	SM		19	0.56	0.32	0.55	0.24	275	188
34.12	33.62	55.38	55.88			19	0.51	0.32	0.49	0.19	296	175
33.62	33.12	55.88	56.38			19	0.47	0.32	0.36	0.15	347	231
33.12	32.62	56.38	56.88		9	19	0.46	0.32	0.36	0.14	320	227
32.62	32.12	56.88	57.38			19	0.47	0.32	0.38	0.15	310	218
32.12	31.62	57.38	57.88			19	0.49	0.32	0.39	0.16	305	212
31.62	31.12	57.88	58.38	SM		18	0.51	0.33	0.43	0.18	288	219
31.12	30.62	58.38	58.88			18	0.53	0.33	0.45	0.20	271	227
30.62	30.12	58.88	59.38		10	19	0.56	0.32	0.45	0.24	264	228
30.12	29.62	59.38	59.88			19	0.54	0.33	0.48	0.21	256	216
29.62	29.12	59.88	60.38			17	0.57	0.35	0.50	0.22	231	228
29.12	28.62	60.38	60.88			19	0.63	0.31	0.43	0.31	160	271
28.62	28.12	60.88	61.38			24	0.69	0.25	0.36	0.44	105	301
28.12	27.62	61.38	61.88		17	26	0.74	0.23	0.34	0.51	59	295
27.62	27.12	61.88	62.38			29	0.83	0.20	0.31	0.63	24	298
27.12	26.62	62.38	62.88			34	0.91	0.18	0.26	0.74	12	266
26.62	26.12	62.88	63.38			43	0.97	0.14	0.23	0.83	8	244
26.12	25.62	63.38	63.88			42	1.02	0.15	0.24	0.88	7	255
25.62	25.12	63.88	64.38		17	36	1.07	0.16	0.24	0.91	2	268
25.12	24.62	64.38	64.88			38	1.09	0.16	0.24	0.94	7	269
24.62	24.12	64.88	65.38	CL		39	1.11	0.15	0.23	0.96	12	271
24.12	23.62	65.38	65.88			50	1.10	0.12	0.23	0.98	19	267
23.62	23.12	65.88	66.38			71	1.07	0.08	0.19	0.99	20	265
23.12	22.62	66.38	66.88		20	109	1.00	0.05	0.14	0.95	13	256
22.62	22.12	66.88	67.38			196	0.92	0.03	0.09	0.89	7	235
22.12	21.62	67.38	67.88			151	0.73	0.04	0.11	0.69	28	221

EB1P3 (Ramp BD) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
21.62	21.12	67.88	68.38	SM		55	0.66	0.11	0.21	0.55	79	285
21.12	20.62	68.38	68.88			57	0.69	0.10	0.19	0.59	72	286
20.62	20.12	68.88	69.38		25	64	0.71	0.09	0.19	0.62	68	284
20.12	19.62	69.38	69.88			59	0.79	0.10	0.24	0.69	89	301
19.62	19.12	69.88	70.38			52	0.82	0.12	0.24	0.70	98	301
19.12	18.62	70.38	70.88			48	0.84	0.13	0.25	0.71	92	296
18.62	18.12	70.88	71.38			39	0.82	0.15	0.28	0.67	100	297
18.12	17.62	71.38	71.88		16	38	0.75	0.16	0.29	0.60	108	310
17.62	17.12	71.88	72.38			35	0.84	0.17	0.28	0.67	114	308
17.12	16.62	72.38	72.88			62	0.75	0.10	0.23	0.65	93	285
16.62	16.12	72.88	73.38			120	0.70	0.05	0.16	0.65	68	270
16.12	15.62	73.38	73.88			123	0.72	0.05	0.15	0.67	64	265
15.62	15.12	73.88	74.38		25	128	0.69	0.05	0.12	0.64	53	262
15.12	14.62	74.38	74.88			99	0.66	0.06	0.12	0.60	86	263
14.62	14.12	74.88	75.38			39	0.64	0.15	0.24	0.49	248	430
14.12	13.62	75.38	75.88			38	0.66	0.16	0.26	0.50	204	483
13.62	13.12	75.88	76.38			32	0.67	0.18	0.26	0.49	200	476
13.12	12.62	76.38	76.88		25	30	0.68	0.19	0.26	0.48	197	443
12.62	12.12	76.88	77.38			26	0.68	0.24	0.23	0.44	201	427
12.12	11.62	77.38	77.88			25	0.69	0.24	0.22	0.45	193	424
11.62	11.12	77.88	78.38	CL		26	0.67	0.24	0.09	0.43	184	415
11.12	10.62	78.38	78.88			25	0.68	0.24	0.08	0.44	187	411
10.62	10.12	78.88	79.38		14	25	0.66	0.24	0.09	0.42	185	399
10.12	9.62	79.38	79.88			23	0.67	0.25	0.11	0.42	182	400
9.62	9.12	79.88	80.38	SM		23	0.66	0.26	0.12	0.40	181	397
9.12	8.62	80.38	80.88			23	0.65	0.26	0.12	0.39	183	397
8.62	8.12	80.88	81.38			24	0.66	0.26	0.13	0.40	198	390
8.12	7.62	81.38	81.88		16	23	0.65	0.26	0.16	0.39	197	378
7.62	7.12	81.88	82.38			23	0.65	0.27	0.15	0.38	203	378
7.12	6.62	82.38	82.88			22	0.65	0.27	0.18	0.38	206	375
6.62	6.12	82.88	83.38			24	0.65	0.26	0.20	0.39	208	369
6.12	5.62	83.38	83.88			23	0.66	0.26	0.22	0.40	211	368
5.62	5.12	83.88	84.38		18	22	0.67	0.27	0.22	0.40	219	368
5.12	4.62	84.38	84.88			22	0.66	0.27	0.22	0.39	206	379
4.62	4.12	84.88	85.38			21	0.67	0.28	0.24	0.39	200	375
4.12	3.62	85.38	85.88			22	0.67	0.27	0.23	0.40	198	375
3.62	3.12	85.88	86.38			24	0.67	0.26	0.20	0.41	204	366
3.12	2.62	86.38	86.88		14	25	0.66	0.24	0.19	0.42	203	363
2.62	2.12	86.88	87.38			30	0.63	0.20	0.12	0.43	231	398
2.12	1.62	87.38	87.88	WL		40	0.49	0.15	0.16	0.34	413	514
1.62	1.12	87.88	88.38			65	0.45	0.09	0.16	0.36	385	597
1.12	0.62	88.38	88.88			61	0.46	0.10	0.17	0.37	360	597
0.62	0.12	88.88	89.38		43	52	0.46	0.12	0.17	0.34	340	601
0.12	-0.38	89.38	89.88			54	0.45	0.11	0.16	0.34	332	613
-0.38	-0.88	89.88	90.38			62	0.45	0.10	0.17	0.35	332	631
-0.88	-1.38	90.38	90.88			45	0.45	0.10	0.17	0.35	331	651

8.1.24 I-4 and US-192 Interchange – P8P4 (Ramp CA) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
70.70	70.20	20.14	20.64		51	3	0.52	0.67	0.16	-0.15	1	232
70.20	69.70	20.64	21.14			9	0.79	0.70	0.29	0.09	0	284
69.70	69.20	21.14	21.64			8	0.80	0.71	0.30	0.09	0	294
69.20	68.70	21.64	22.14			11	0.79	0.55	0.28	0.24	0	311
68.70	68.20	22.14	22.64			12	0.77	0.52	0.35	0.25	0	328
68.20	67.70	22.64	23.14		13	11	0.79	0.50	0.39	0.29	0	348
67.70	67.20	23.14	23.64			12	0.76	0.50	0.44	0.26	0	347
67.20	66.70	23.64	24.14			14	0.76	0.45	0.44	0.31	0	352
66.70	66.20	24.14	24.64			14	0.75	0.43	0.41	0.32	1	361
66.20	65.70	24.64	25.14			15	0.72	0.40	0.39	0.32	1	364
65.70	65.20	25.14	25.64		12	16	0.69	0.39	0.37	0.30	0	368
65.20	64.70	25.64	26.14	SP-SM		16	0.68	0.38	0.36	0.30	1	385
64.70	64.20	26.14	26.64			16	0.66	0.38	0.35	0.28	1	392
64.20	63.70	26.64	27.14			19	0.64	0.31	0.33	0.33	4	396
63.70	63.20	27.14	27.64			20	0.61	0.30	0.31	0.31	3	396
63.20	62.70	27.64	28.14		9	20	0.60	0.30	0.29	0.30	4	410
62.70	62.20	28.14	28.64			20	0.57	0.30	0.25	0.27	2	405
62.20	61.70	28.64	29.14			23	0.57	0.26	0.25	0.31	2	409
61.70	61.20	29.14	29.64			24	0.57	0.25	0.24	0.32	2	411
61.20	60.70	29.64	30.14			25	0.58	0.24	0.25	0.34	1	418
60.70	60.20	30.14	30.64		13	25	0.58	0.24	0.24	0.34	2	429
60.20	59.70	30.64	31.14			24	0.58	0.26	0.26	0.32	1	431
59.70	59.20	31.14	31.64			24	0.57	0.26	0.26	0.31	1	429
59.20	58.70	31.64	32.14			24	0.58	0.24	0.25	0.33	1	438
58.70	58.20	32.14	32.64			25	0.56	0.24	0.22	0.32	2	441
58.20	57.70	32.64	33.14		23	23	0.57	0.26	0.24	0.31	15	440
57.70	57.20	33.14	33.64			22	0.57	0.27	0.20	0.30	33	425
57.20	56.70	33.64	34.14	SP		22	0.56	0.27	0.13	0.29	53	415
56.70	56.20	34.14	34.64			22	0.55	0.27	0.19	0.28	70	395
56.20	55.70	34.64	35.14			22	0.55	0.27	0.22	0.28	89	385
55.70	55.20	35.14	35.64		6	22	0.55	0.27	0.29	0.28	124	356
55.20	54.70	35.64	36.14			20	0.56	0.29	0.33	0.27	158	332
54.70	54.20	36.14	36.64			20	0.55	0.30	0.41	0.25	195	294
54.20	53.70	36.64	37.14			18	0.57	0.33	0.42	0.24	263	246
53.70	53.20	37.14	37.64	SP-SM		18	0.55	0.34	0.30	0.21	317	184
53.20	52.70	37.64	38.14		4	16	0.55	0.37	0.44	0.18	342	147
52.70	52.20	38.14	38.64			16	0.54	0.38	0.39	0.16	344	127
52.20	51.70	38.64	39.14			15	0.54	0.39	0.40	0.15	347	118
51.70	51.20	39.14	39.64			16	0.54	0.39	0.39	0.15	361	100
51.20	50.70	39.64	40.14	SM		15	0.55	0.39	0.43	0.16	369	95
50.70	50.20	40.14	40.64		2	16	0.56	0.39	0.44	0.17	366	93
50.20	49.70	40.64	41.14			15	0.55	0.41	0.41	0.14	396	89
49.70	49.20	41.14	41.64			14	0.52	0.41	0.37	0.11	424	80
49.20	48.70	41.64	42.14			16	0.51	0.39	0.35	0.13	461	68
48.70	48.20	42.14	42.64			16	0.45	0.38	0.30	0.07	447	67
48.20	47.70	42.64	43.14	SM	2	15	0.53	0.40	0.40	0.14	466	75
47.70	47.20	43.14	43.64			15	0.53	0.40	0.41	0.13	459	81
47.20	46.70	43.64	44.14			17	0.53	0.36	0.40	0.17	440	89
46.70	46.20	44.14	44.64			17	0.53	0.35	0.40	0.18	427	95

P8P4 (Ramp CA) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
46.20	45.70	44.64	45.14	SM		15	0.52	0.39	0.36	0.13	429	95
45.70	45.20	45.14	45.64		2	15	0.53	0.40	0.38	0.13	415	103
45.20	44.70	45.64	46.14			16	0.53	0.37	0.40	0.17	429	94
44.70	44.20	46.14	46.64			17	0.53	0.36	0.40	0.17	445	89
44.20	43.70	46.64	47.14			17	0.52	0.34	0.37	0.18	453	93
43.70	43.20	47.14	47.64			18	0.51	0.34	0.38	0.17	507	62
43.20	42.70	47.64	48.14		1	17	0.52	0.33	0.37	0.18	509	67
42.70	42.20	48.14	48.64			18	0.51	0.33	0.34	0.18	523	65
42.20	41.70	48.64	49.14			20	0.52	0.31	0.35	0.20	525	77
41.70	41.20	49.14	49.64			19	0.51	0.31	0.36	0.20	499	101
41.20	40.70	49.64	50.14			20	0.51	0.30	0.35	0.21	537	82
40.70	40.20	50.14	50.64		WR	20	0.51	0.30	0.34	0.21	519	102
40.20	39.70	50.64	51.14			19	0.52	0.32	0.36	0.20	525	104
39.70	39.20	51.14	51.64			19	0.53	0.32	0.35	0.21	491	127
39.20	38.70	51.64	52.14			21	0.53	0.30	0.34	0.23	474	133
38.70	38.20	52.14	52.64			21	0.54	0.29	0.32	0.25	448	148
38.20	37.70	52.64	53.14		10	18	0.53	0.32	0.34	0.21	418	159
37.70	37.20	53.14	53.64			18	0.53	0.33	0.33	0.20	419	156
37.20	36.70	53.64	54.14			19	0.53	0.32	0.34	0.21	406	159
36.70	36.20	54.14	54.64			18	0.55	0.32	0.38	0.23	401	168
36.20	35.70	54.64	55.14			18	0.55	0.34	0.36	0.21	394	175
35.70	35.20	55.14	55.64		7	17	0.55	0.35	0.36	0.20	400	166
35.20	34.70	55.64	56.14			17	0.54	0.33	0.38	0.21	396	167
34.70	34.20	56.14	56.64			18	0.54	0.33	0.36	0.21	402	162
34.20	33.70	56.64	57.14	SM		20	0.54	0.31	0.34	0.23	396	168
33.70	33.20	57.14	57.64			20	0.54	0.30	0.36	0.24	404	171
33.20	32.70	57.64	58.14		8	18	0.53	0.32	0.38	0.20	401	175
32.70	32.20	58.14	58.64			18	0.55	0.33	0.40	0.22	396	194
32.20	31.70	58.64	59.14			19	0.55	0.32	0.38	0.23	394	205
31.70	31.20	59.14	59.64			19	0.55	0.32	0.36	0.23	390	207
31.20	30.70	59.64	60.14			19	0.56	0.32	0.35	0.24	385	208
30.70	30.20	60.14	60.64		12	18	0.57	0.32	0.36	0.25	361	227
30.20	29.70	60.64	61.14			20	0.59	0.31	0.36	0.28	336	245
29.70	29.20	61.14	61.64			19	0.62	0.31	0.41	0.31	276	277
29.20	28.70	61.64	62.14			17	0.64	0.35	0.48	0.29	225	300
28.70	28.20	62.14	62.64			17	0.65	0.36	0.31	0.29	188	314
28.20	27.70	62.64	63.14			24	0.45	0.25	0.23	0.21	468	182
27.70	27.20	63.14	63.64			26	0.59	0.23	0.32	0.36	400	225

P8P4 (Ramp CA) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
27.20	26.70	63.64	64.14			25	0.64	0.24	0.34	0.40	254	281
26.70	26.20	64.14	64.64			24	0.71	0.24	0.37	0.47	95	354
26.20	25.70	64.64	65.14			24	0.80	0.26	0.34	0.54	58	341
25.70	25.20	65.14	65.64		16	23	0.86	0.26	0.32	0.60	44	349
25.20	24.70	65.64	66.14			25	0.91	0.24	0.31	0.67	40	354
24.70	24.20	66.14	66.64			25	0.91	0.24	0.27	0.67	40	345
24.20	23.70	66.64	67.14			36	0.90	0.17	0.24	0.73	39	339
23.70	23.20	67.14	67.64			39	0.91	0.16	0.23	0.75	37	333
23.20	22.70	67.64	68.14		17	26	0.91	0.23	0.20	0.67	37	323
22.70	22.20	68.14	68.64			24	0.91	0.26	0.22	0.65	39	319
22.20	21.70	68.64	69.14			40	0.90	0.14	0.18	0.75	41	311
21.70	21.20	69.14	69.64			45	0.89	0.13	0.14	0.76	41	313
21.20	20.70	69.64	70.14			51	0.91	0.12	0.13	0.79	47	326
20.70	20.20	70.14	70.64		17	52	0.95	0.12	0.17	0.83	52	334
20.20	19.70	70.64	71.14			48	0.96	0.13	0.18	0.83	54	343
19.70	19.20	71.14	71.64			47	0.97	0.13	0.19	0.84	57	363
19.20	18.70	71.64	72.14			46	0.97	0.13	0.20	0.84	58	377
18.70	18.20	72.14	72.64			45	1.03	0.13	0.20	0.90	63	398
18.20	17.70	72.64	73.14		20	50	1.04	0.12	0.19	0.92	63	397
17.70	17.20	73.14	73.64			51	1.00	0.12	0.15	0.88	60	391
17.20	16.70	73.64	74.14			63	0.91	0.09	0.14	0.82	62	367
16.70	16.20	74.14	74.64			66	0.80	0.09	0.15	0.71	76	335
16.20	15.70	74.64	75.14			80	0.69	0.07	0.18	0.62	72	322
15.70	15.20	75.14	75.64		22	82	0.71	0.07	0.17	0.64	31	332
15.20	14.70	75.64	76.14			70	0.56	0.09	0.21	0.48	189	333
14.70	14.20	76.14	76.64			67	0.59	0.09	0.21	0.50	195	350
14.20	13.70	76.64	77.14			83	0.60	0.07	0.18	0.53	153	360
13.70	13.20	77.14	77.64			87	0.62	0.07	0.16	0.55	123	337
13.20	12.70	77.64	78.14		26	71	0.66	0.09	0.16	0.57	140	315
12.70	12.20	78.14	78.64	SM		67	0.68	0.09	0.16	0.59	141	315
12.20	11.70	78.64	79.14			47	0.76	0.13	0.22	0.63	159	364
11.70	11.20	79.14	79.64			42	0.83	0.14	0.26	0.69	179	387
11.20	10.70	79.64	80.14			37	0.89	0.16	0.26	0.73	210	359
10.70	10.20	80.14	80.64		24	36	0.90	0.17	0.25	0.73	189	331
10.20	9.70	80.64	81.14			54	0.88	0.11	0.21	0.77	132	327
9.70	9.20	81.14	81.64			58	0.86	0.10	0.18	0.76	134	307
9.20	8.70	81.64	82.14			94	0.80	0.06	0.15	0.74	120	268
8.70	8.20	82.14	82.64			101	0.73	0.06	0.12	0.67	109	245
8.20	7.70	82.64	83.14		22	50	0.56	0.12	0.24	0.45	262	266
7.70	7.20	83.14	83.64			39	0.57	0.15	0.29	0.42	307	284
7.20	6.70	83.64	84.14			38	0.59	0.16	0.29	0.43	271	295
6.70	6.20	84.14	84.64			37	0.59	0.16	0.28	0.43	263	290
6.20	5.70	84.64	85.14			39	0.59	0.15	0.28	0.44	271	279
5.70	5.20	85.14	85.64		18	40	0.59	0.15	0.28	0.44	288	272
5.20	4.70	85.64	86.14			39	0.58	0.15	0.27	0.43	284	272
4.70	4.20	86.14	86.64			40	0.59	0.15	0.28	0.44	299	257
4.20	3.70	86.64	87.14			34	0.62	0.17	0.31	0.44	322	252
3.70	3.20	87.14	87.64			34	0.63	0.18	0.32	0.45	327	246
3.20	2.70	87.64	88.14		14	27	0.63	0.22	0.33	0.41	324	248
2.70	2.20	88.14	88.64			26	0.64	0.23	0.33	0.41	331	250
2.20	1.70	88.64	89.14			25	0.65	0.24	0.34	0.41	333	258
1.70	1.20	89.14	89.64			24	0.65	0.24	0.35	0.41	336	258
1.20	0.70	89.64	90.14			29	0.65	0.21	0.33	0.44	339	269
0.70	0.20	90.14	90.64		19	29	0.65	0.20	0.33	0.45	348	270
0.20	-0.30	90.64	91.14			32	0.63	0.19	0.28	0.44	341	289
-0.30	-0.80	91.14	91.64			31	0.63	0.19	0.28	0.44	369	295
-0.80	-1.30	91.64	92.14			42	0.58	0.15	0.27	0.43	393	335
-1.30	-1.80	92.14	92.64			44	0.53	0.14	0.22	0.39	375	512
-1.80	-2.30	92.64	93.14		19	8	0.50	0.14	0.21	0.36	348	561
-2.30	-2.80	93.14	93.64			-	-	-	-	-	-	-

8.1.25 SR-417 and International – EB1P14 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
66.80	66.30	14	14.7			2	4.00	4.00	4.00	0.00	0	0
66.30	65.80	15	15.2			2	3.20	3.20	3.20	0.00	2	12
65.80	65.30	15	15.7	SP-SM		2	2.40	2.40	2.40	0.00	4	22
65.30	64.80	16	16.2		23	3	2.13	2.04	2.04	0.09	17	30
64.80	64.30	16	16.7			5	1.79	1.33	1.33	0.46	19	59
64.30	63.80	17	17.2			4	1.63	1.33	1.33	0.30	14	95
63.80	63.30	17	17.7			5	1.58	1.33	1.33	0.25	11	120
63.30	62.80	18	18.2		11	5	1.48	1.20	1.20	0.28	22	137
62.80	62.30	18	18.7	SC		6	1.38	1.00	1.00	0.38	31	155
62.30	61.80	19	19.2			5	1.23	1.10	1.10	0.13	25	151
61.80	61.30	19	19.7			4	1.50	1.50	1.50	0.00	17	159
61.30	60.80	20	20.2			5	1.38	1.38	1.38	0.00	18	170
60.80	60.30	20	20.7			5	1.20	1.20	1.20	0.00	17	179
60.30	59.80	21	21.2		7	7	0.91	0.86	0.86	0.06	16	158
59.80	59.30	21	21.7	SM		10	0.81	0.60	0.60	0.21	30	178
59.30	58.80	22	22.2			11	0.80	0.55	0.55	0.25	13	215
58.80	58.30	22	22.7			12	0.76	0.48	0.48	0.28	15	229
58.30	57.80	23	23.2			13	0.71	0.45	0.45	0.26	24	238
57.80	57.30	23	23.7		13	15	0.66	0.41	0.41	0.25	20	256
57.30	56.80	24	24.2			15	0.67	0.41	0.41	0.26	24	266
56.80	56.30	24	24.7			15	0.69	0.40	0.40	0.29	28	274
56.30	55.80	25	25.2			15	0.70	0.40	0.40	0.30	32	280
55.80	55.30	25	25.7			15	0.72	0.40	0.40	0.32	32	285
55.30	54.80	26	26.2		17	15	0.70	0.39	0.39	0.31	30	289
54.80	54.30	26	26.7	SP-SM		16	0.72	0.38	0.37	0.34	34	289
54.30	53.80	27	27.2			16	0.72	0.38	0.38	0.34	35	288
53.80	53.30	27	27.7			16	0.74	0.37	0.38	0.37	38	299
53.30	52.80	28	28.2			17	0.72	0.35	0.36	0.37	39	324
52.80	52.30	28	28.7		30	19	0.69	0.32	0.32	0.37	43	357
52.30	51.80	29	29.2			19	0.70	0.32	0.32	0.38	40	383
51.80	51.30	29	29.7			19	0.71	0.32	0.32	0.39	34	390
51.30	50.80	30	30.2			16	0.72	0.35	0.35	0.37	29	385
50.80	50.30	30	30.7			15	0.74	0.41	0.41	0.33	27	365
50.30	49.80	31	31.2		13	14	0.77	0.43	0.43	0.34	28	337
49.80	49.30	31	31.7	CH		13	0.77	0.46	0.46	0.31	30	306
49.30	48.80	32	32.2			12	0.81	0.48	0.48	0.33	31	295
48.80	48.30	32	32.7			12	0.86	0.52	0.52	0.34	29	278
48.30	47.80	33	33.2			11	0.89	0.53	0.53	0.36	27	262
47.80	47.30	33	33.7		13	11	0.90	0.55	0.55	0.35	32	252
47.30	46.80	34	34.2			10	0.76	0.59	0.58	0.17	30	244
46.80	46.30	34	34.7			9	0.71	0.67	0.67	0.04	30	245
46.30	45.80	35	35.2			13	0.65	0.49	0.49	0.15	43	259
45.80	45.30	35	35.7			17	0.59	0.34	0.34	0.25	55	285
45.30	44.80	36	36.2		33	19	0.55	0.31	0.31	0.24	60	321
44.80	44.30	36	36.7	SP-SM		22	0.55	0.28	0.28	0.27	64	347
44.30	43.80	37	37.2			22	0.55	0.28	0.28	0.27	68	353
43.80	43.30	37	37.7			22	0.60	0.27	0.27	0.33	75	385
43.30	42.80	38	38.2			22	0.59	0.26	0.26	0.33	84	392
42.80	42.30	38	38.7		14	24	0.58	0.25	0.25	0.33	89	401
42.30	41.80	39	39.2			23	0.57	0.27	0.27	0.30	96	414
41.80	41.30	39	39.7			20	0.62	0.30	0.30	0.32	105	423

EB1P14 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
41.30	40.80	40	40.2			22	0.62	0.27	0.27	0.35	117	421
40.80	40.30	40	40.7			24	0.61	0.24	0.24	0.37	126	440
40.30	39.80	41	41.2		8	25	0.59	0.24	0.24	0.36	135	467
39.80	39.30	41	41.7			26	0.58	0.23	0.23	0.35	141	486
39.30	38.80	42	42.2			25	0.59	0.24	0.24	0.34	147	494
38.80	38.30	42	42.7	CH		22	0.60	0.27	0.27	0.33	155	486
38.30	37.80	43	43.2			22	0.61	0.27	0.27	0.34	164	471
37.80	37.30	43	43.7		26	22	0.61	0.27	0.27	0.34	176	450
37.30	36.80	44	44.2			20	0.61	0.29	0.29	0.32	188	434
36.80	36.30	44	44.7			19	0.61	0.32	0.32	0.29	196	422
36.30	35.80	45	45.2			18	0.60	0.32	0.32	0.28	207	403
35.80	35.30	45	45.7			18	0.62	0.33	0.33	0.29	220	378
35.30	34.80	46	46.2		13	16	0.61	0.36	0.36	0.25	231	347
34.80	34.30	46	46.7			15	0.62	0.41	0.41	0.21	252	317
34.30	33.80	47	47.2	SP-SM		14	0.62	0.41	0.41	0.21	294	280
33.80	33.30	47	47.7			15	0.60	0.41	0.41	0.19	365	231
33.30	32.80	48	48.2			15	0.59	0.41	0.40	0.19	426	198
32.80	32.30	48	48.7		10	15	0.58	0.40	0.39	0.18	480	162
32.30	31.80	49	49.2			16	0.58	0.37	0.36	0.22	513	141
31.80	31.30	49	49.7			19	0.41	0.32	0.32	0.09	588	83
31.30	30.80	50	50.2			20	0.46	0.31	0.30	0.15	617	85
30.80	30.30	50	50.7			20	0.46	0.29	0.29	0.17	665	71
30.30	29.80	51	51.2		7	20	0.44	0.30	0.30	0.14	697	66
29.80	29.30	51	51.7			19	0.45	0.32	0.32	0.13	705	66
29.30	28.80	52	52.2			19	0.45	0.31	0.31	0.13	726	61
28.80	28.30	52	52.7			20	0.45	0.30	0.30	0.15	740	57
28.30	27.80	53	53.2			20	0.45	0.30	0.30	0.15	751	47
27.80	27.30	53	53.7		WH	20	0.45	0.30	0.30	0.15	775	33
27.30	26.80	54	54.2			19	0.45	0.30	0.30	0.14	797	30
26.80	26.30	54	54.7			20	0.45	0.31	0.31	0.14	800	30
26.30	25.80	55	55.2			20	0.44	0.30	0.30	0.14	804	27
25.80	25.30	55	55.7			21	0.44	0.29	0.28	0.15	810	31
25.30	24.80	56	56.2	SM	3	21	0.44	0.29	0.29	0.15	818	39
24.80	24.30	56	56.7			21	0.44	0.29	0.28	0.15	843	40
24.30	23.80	57	57.2			22	0.43	0.27	0.27	0.15	861	52
23.80	23.30	57	57.7			24	0.43	0.25	0.25	0.18	884	70
23.30	22.80	58	58.2			25	0.43	0.25	0.24	0.18	863	104
22.80	22.30	58	58.7		4	25	0.46	0.24	0.23	0.22	813	139
22.30	21.80	59	59.2			24	0.46	0.26	0.25	0.20	747	165
21.80	21.30	59	59.7			20	0.48	0.30	0.30	0.18	675	180
21.30	20.80	60	60.2			21	0.49	0.28	0.28	0.21	640	181
20.80	20.30	60	60.7			24	0.50	0.25	0.25	0.25	604	182
20.30	19.80	61	61.2		4	22	0.51	0.27	0.27	0.24	577	183
19.80	19.30	61	61.7			20	0.52	0.31	0.31	0.21	556	184
19.30	18.80	62	62.2			19	0.52	0.32	0.32	0.20	556	178
18.80	18.30	62	62.7			18	0.51	0.33	0.33	0.18	553	173
18.30	17.80	63	63.2			19	0.52	0.32	0.32	0.20	547	165
17.80	17.30	63	63.7		25	20	0.50	0.30	0.30	0.20	546	154
17.30	16.80	64	64.2			18	0.47	0.32	0.31	0.16	554	153
16.80	16.30	64	64.7	SP-SM		17	0.50	0.35	0.35	0.15	539	156
16.30	15.80	65	65.2			18	0.49	0.34	0.34	0.15	548	146
15.80	15.30	65	65.7			19	0.50	0.32	0.32	0.18	536	137
15.30	14.80	66	66.2		13	19	0.48	0.31	0.31	0.17	530	121
14.80	14.30	66	66.7			20	0.44	0.29	0.29	0.15	525	113
14.30	13.80	67	67.2			20	0.45	0.30	0.30	0.15	528	113

EB1P14 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
13.80	13.30	67	67.7	SM		19	0.44	0.32	0.32	0.12	521	112
13.30	12.80	68	68.2			20	0.42	0.30	0.29	0.13	525	112
12.80	12.30	68	68.7		4	22	0.44	0.27	0.26	0.17	525	115
12.30	11.80	69	69.2			22	0.42	0.28	0.27	0.14	513	113
11.80	11.30	69	69.7	CH		20	0.42	0.29	0.29	0.13	511	110
11.30	10.80	70	70.2			21	0.43	0.29	0.29	0.14	513	111
10.80	10.30	70	70.7			20	0.41	0.29	0.29	0.12	509	108
10.30	9.80	71	71.2		7	21	0.43	0.29	0.29	0.14	509	106
9.80	9.30	71	71.7			20	0.42	0.29	0.29	0.13	512	108
9.30	8.80	72	72.2			21	0.42	0.29	0.29	0.13	512	112
8.80	8.30	72	72.7			22	0.41	0.28	0.28	0.13	519	120
8.30	7.80	73	73.2			21	0.42	0.28	0.28	0.14	516	107
7.80	7.30	73	73.7		4	21	0.42	0.29	0.28	0.13	511	99
7.30	6.80	74	74.2			22	0.40	0.28	0.27	0.12	514	99
6.80	6.30	74	74.7			22	0.40	0.27	0.26	0.13	522	98
6.30	5.80	75	75.2			22	0.40	0.27	0.27	0.12	533	93
5.80	5.30	75	75.7			22	0.40	0.28	0.28	0.12	538	93
5.30	4.80	76	76.2		3	24	0.40	0.25	0.25	0.15	547	95
4.80	4.30	76	76.7			29	0.36	0.21	0.21	0.15	553	131
4.30	3.80	77	77.2			30	0.33	0.20	0.20	0.14	581	267
3.80	3.30	77	77.7			34	0.34	0.18	0.18	0.16	552	340
3.30	2.80	78	78.2	ML		32	0.38	0.19	0.19	0.19	547	396
2.80	2.30	78	78.7		34	28	0.39	0.21	0.21	0.18	539	398
2.30	1.80	79	79.2			43	0.38	0.14	0.14	0.24	574	504
1.80	1.30	79	79.7			66	0.39	0.09	0.09	0.30	457	1080
1.30	0.80	80	80.2	ML		121	0.40	0.05	0.05	0.35	370	1472
0.80	0.30	80	80.7			19	0.40	0.03	0.03	0.37	354	1608

8.1.26 SR-417 and International – EB2P5 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
51.30	50.80	26.15	26.65	SM		6	0.71	1.00	0.65	-0.29	1337	61
50.80	50.30	26.65	27.15			6	1.42	1.00	1.35	0.42	1	186
50.30	49.80	27.15	27.65		20	6	1.34	1.00	1.25	0.34	0	183
49.80	49.30	27.65	28.15			6	1.34	1.00	1.22	0.34	0	192
49.30	48.80	28.15	28.65			6	1.25	1.00	1.14	0.25	0	192
48.80	48.30	28.65	29.15	CH		6	1.20	1.00	1.06	0.20	0	195
48.30	47.80	29.15	29.65			6	0.94	1.00	0.65	-0.06	0	173
47.80	47.30	29.65	30.15		13	7	0.75	0.95	0.22	-0.19	0	150
47.30	46.80	30.15	30.65			9	0.85	0.63	0.38	0.22	0	158
46.80	46.30	30.65	31.15	SM		10	0.74	0.63	0.15	0.11	0	153
46.30	45.80	31.15	31.65			9	0.90	0.63	0.47	0.27	0	175
45.80	45.30	31.65	32.15			10	0.81	0.63	0.28	0.18	0	175
45.30	44.80	32.15	32.65		24	9	0.88	0.63	0.38	0.25	0	181
44.80	44.30	32.65	33.15			10	0.84	0.63	0.28	0.21	0	185
44.30	43.80	33.15	33.65			9	0.82	0.63	0.25	0.19	0	209
43.80	43.30	33.65	34.15	SP-SM		12	0.74	0.54	0.16	0.21	0	226
43.30	42.80	34.15	34.65			17	0.71	0.35	0.31	0.36	0	255
42.80	42.30	34.65	35.15		32	16	0.65	0.36	0.45	0.29	0	287
42.30	41.80	35.15	35.65			15	0.66	0.40	0.55	0.26	0	316
41.80	41.30	35.65	36.15	SC		17	0.64	0.36	0.51	0.28	1	338
41.30	40.80	36.15	36.65			21	0.62	0.29	0.50	0.33	1	356
40.80	40.30	36.65	37.15			21	0.65	0.29	0.57	0.36	1	370
40.30	39.80	37.15	37.65		19	20	0.64	0.29	0.53	0.35	1	373
39.80	39.30	37.65	38.15			21	0.64	0.29	0.53	0.35	1	375
39.30	38.80	38.15	38.65			23	0.65	0.27	0.58	0.38	0	364
38.80	38.30	38.65	39.15	SP-SM		18	0.65	0.33	0.57	0.32	1	337
38.30	37.80	39.15	39.65			11	0.76	0.55	0.65	0.21	0	313
37.80	37.30	39.65	40.15		24	10	0.86	0.55	0.71	0.31	0	284
37.30	36.80	40.15	40.65			11	0.91	0.55	0.70	0.36	1	256
36.80	36.30	40.65	41.15	SM		11	0.95	0.54	0.79	0.41	0	253
36.30	35.80	41.15	41.65			12	0.68	0.52	0.53	0.16	1	230
35.80	35.30	41.65	42.15			11	0.59	0.53	0.40	0.06	6	228
35.30	34.80	42.15	42.65		3	10	0.77	0.60	0.65	0.17	12	231
34.80	34.30	42.65	43.15			10	0.75	0.63	0.66	0.12	19	218
34.30	33.80	43.15	43.65			8	0.79	0.71	0.73	0.08	27	209
33.80	33.30	43.65	44.15			9	0.82	0.70	0.76	0.12	44	200
33.30	32.80	44.15	44.65			9	0.80	0.67	0.74	0.13	61	191
32.80	32.30	44.65	45.15		3	9	0.78	0.66	0.71	0.12	82	183
32.30	31.80	45.15	45.65			9	0.78	0.63	0.70	0.15	93	183
31.80	31.30	45.65	46.15			10	0.77	0.61	0.68	0.16	117	176
31.30	30.80	46.15	46.65			11	0.55	0.55	0.50	0.00	141	135
30.80	30.30	46.65	47.15			11	0.46	0.55	0.43	-0.08	171	117
30.30	29.80	47.15	47.65		3	12	0.62	0.50	0.59	0.12	174	140
29.80	29.30	47.65	48.15			12	0.59	0.50	0.58	0.09	186	129
29.30	28.80	48.15	48.65			13	0.57	0.48	0.53	0.09	203	118
28.80	28.30	48.65	49.15			12	0.62	0.48	0.59	0.14	213	113
28.30	27.80	49.15	49.65			13	0.59	0.48	0.57	0.11	218	106
27.80	27.30	49.65	50.15		2	12	0.56	0.48	0.52	0.08	225	100
27.30	26.80	50.15	50.65			13	0.55	0.46	0.51	0.09	230	96
26.80	26.30	50.65	51.15			14	0.56	0.46	0.53	0.10	236	98
26.30	25.80	51.15	51.65			13	0.55	0.46	0.52	0.09	246	97
25.80	25.30	51.65	52.15			13	0.53	0.45	0.52	0.08	258	104
25.30	24.80	52.15	52.65		18	15	0.53	0.41	0.47	0.12	251	133
24.80	24.30	52.65	53.15			17	0.52	0.35	0.32	0.17	197	186
24.30	23.80	53.15	53.65			22	0.53	0.27	0.28	0.26	137	224
23.80	23.30	53.65	54.15			21	0.54	0.28	0.32	0.26	104	232
23.30	22.80	54.15	54.65			20	0.54	0.30	0.33	0.24	93	225

EB2P5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
22.80	22.30	54.65	55.15	SP-SM	8	19	0.56	0.31	0.37	0.25	94	217
22.30	21.80	55.15	55.65			18	0.57	0.35	0.37	0.22	93	214
21.80	21.30	55.65	56.15			17	0.55	0.35	0.37	0.20	98	207
21.30	20.80	56.15	56.65			17	0.51	0.35	0.35	0.16	101	199
20.80	20.30	56.65	57.15			16	0.53	0.36	0.36	0.18	117	194
20.30	19.80	57.15	57.65		3	16	0.52	0.38	0.35	0.14	136	181
19.80	19.30	57.65	58.15			17	0.50	0.37	0.31	0.13	177	166
19.30	18.80	58.15	58.65			18	0.48	0.33	0.29	0.15	230	142
18.80	18.30	58.65	59.15	SM		18	0.48	0.33	0.28	0.15	274	118
18.30	17.80	59.15	59.65			18	0.48	0.33	0.30	0.15	301	99
17.80	17.30	59.65	60.15		5	18	0.48	0.33	0.32	0.14	316	94
17.30	16.80	60.15	60.65			17	0.49	0.35	0.44	0.14	312	96
16.80	16.30	60.65	61.15			16	0.53	0.37	0.48	0.15	308	96
16.30	15.80	61.15	61.65			14	0.52	0.44	0.46	0.08	319	95
15.80	15.30	61.65	62.15			15	0.51	0.40	0.45	0.12	324	100
15.30	14.80	62.15	62.65		4	18	0.50	0.33	0.40	0.17	330	101
14.80	14.30	62.65	63.15			20	0.49	0.31	0.40	0.18	346	105
14.30	13.80	63.15	63.65			21	0.50	0.28	0.38	0.22	344	119
13.80	13.30	63.65	64.15	ML		21	0.50	0.29	0.38	0.21	345	119
13.30	12.80	64.15	64.65			19	0.51	0.31	0.36	0.20	339	124
12.80	12.30	64.65	65.15		8	19	0.51	0.32	0.36	0.19	345	124
12.30	11.80	65.15	65.65			18	0.53	0.33	0.41	0.20	340	119
11.80	11.30	65.65	66.15	CH		18	0.52	0.33	0.40	0.20	351	104
11.30	10.80	66.15	66.65			19	0.52	0.32	0.39	0.20	344	112
10.80	10.30	66.65	67.15			19	0.53	0.32	0.39	0.22	356	109
10.30	9.80	67.15	67.65		10	20	0.51	0.31	0.37	0.20	403	93
9.80	9.30	67.65	68.15			20	0.48	0.30	0.26	0.18	413	93
9.30	8.80	68.15	68.65			21	0.46	0.28	0.26	0.18	430	97
8.80	8.30	68.65	69.15	SM		23	0.49	0.26	0.38	0.23	425	136
8.30	7.80	69.15	69.65			26	0.49	0.23	0.34	0.26	394	197
7.80	7.30	69.65	70.15		24	27	0.49	0.22	0.29	0.26	351	274
7.30	6.80	70.15	70.65			29	0.55	0.21	0.29	0.34	301	333
6.80	6.30	70.65	71.15			27	0.57	0.22	0.29	0.35	241	396
6.30	5.80	71.15	71.65			25	0.64	0.24	0.33	0.40	198	472
5.80	5.30	71.65	72.15			25	0.67	0.24	0.25	0.43	161	519
5.30	4.80	72.15	72.65		19	26	0.69	0.23	0.33	0.46	121	557
4.80	4.30	72.65	73.15			30	0.66	0.20	0.27	0.46	98	530
4.30	3.80	73.15	73.65			37	0.58	0.16	0.18	0.42	89	511
3.80	3.30	73.65	74.15	ML		40	0.64	0.15	0.22	0.49	106	555
3.30	2.80	74.15	74.65			43	0.65	0.14	0.22	0.51	98	475
2.80	2.30	74.65	75.15		50/5	43	0.60	0.14	0.21	0.46	105	445
2.30	1.80	75.15	75.65			42	0.54	0.14	0.19	0.40	145	513
1.80	1.30	75.65	76.15			43	0.51	0.14	0.20	0.37	209	628
1.30	0.80	76.15	76.65			43	0.47	0.14	0.21	0.33	301	1094
0.80	0.30	76.65	77.15			43	0.41	0.14	0.08	0.27	221	1622
0.30	-0.20	77.15	77.65		50/4	18	0.40	0.14	0.07	0.26	213	1725
-0.20	-0.70	77.65	78.15			-	-	-	-	-	-	-

8.1.27 SR-50 and SR-436 – EB4P10 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
73.00	72.50	25.80	26.30			1	3.96	4.00	3.96	-0.04	0	0
72.50	72.00	26.30	26.80		16	1	3.55	4.00	3.51	-0.45	0	0
72.00	71.50	26.80	27.30			2	3.04	4.00	3.01	-0.96	0	10
71.50	71.00	27.30	27.80			1	1.37	4.00	0.90	-2.63	0	16
71.00	70.50	27.80	28.30			2	2.47	4.00	2.34	-1.54	0	25
70.50	70.00	28.30	28.80			3	1.59	2.40	1.19	-0.81	0	36
70.00	69.50	28.80	29.30		52	2	2.21	2.40	1.99	-0.20	0	77
69.50	69.00	29.30	29.80			3	1.44	2.40	1.01	-0.96	0	111
69.00	68.50	29.80	30.30			3	1.15	1.89	0.65	-0.74	0	108
68.50	68.00	30.30	30.80			7	1.41	0.86	0.97	0.55	1	130
68.00	67.50	30.80	31.30			6	0.84	0.86	0.37	-0.03	0	112
67.50	67.00	31.30	31.80		31	5	1.02	1.33	0.50	-0.31	0	122
67.00	66.50	31.80	32.30			5	0.98	1.30	0.43	-0.33	0	119
66.50	66.00	32.30	32.80			5	0.95	1.20	0.40	-0.25	0	111
66.00	65.50	32.80	33.30			5	0.95	1.20	0.39	-0.25	0	113
65.50	65.00	33.30	33.80	SP		5	1.09	1.20	0.52	-0.11	0	127
65.00	64.50	33.80	34.30		26	4	1.12	1.20	0.53	-0.08	0	128
64.50	64.00	34.30	34.80			4	1.10	1.50	0.49	-0.41	0	125
64.00	63.50	34.80	35.30			4	1.26	1.50	0.69	-0.25	0	123
63.50	63.00	35.30	35.80			4	1.11	1.50	0.49	-0.39	0	109
63.00	62.50	35.80	36.30			4	1.23	1.50	0.64	-0.27	0	84
62.50	62.00	36.30	36.80		20	3	1.09	2.00	0.41	-0.91	0	63
62.00	61.50	36.80	37.30			3	1.27	2.00	0.68	-0.73	0	49
61.50	61.00	37.30	37.80			2	3.05	3.00	2.96	0.05	0	71
61.00	60.50	37.80	38.30			2	1.61	3.00	1.15	-1.40	0	35
60.50	60.00	38.30	38.80			3	1.90	2.00	1.51	-0.10	0	112
60.00	59.50	38.80	39.30		27	4	1.22	1.73	0.58	-0.51	0	112
59.50	59.00	39.30	39.80			6	0.82	0.92	0.18	-0.10	0	137
59.00	58.50	39.80	40.30			7	0.82	0.91	0.33	-0.09	0	173
58.50	58.00	40.30	40.80			7	0.76	0.86	0.35	-0.10	0	179
58.00	57.50	40.80	41.30			7	0.84	0.89	0.42	-0.05	0	191
57.50	57.00	41.30	41.80		12	5	1.07	1.09	0.61	-0.02	0	208
57.00	56.50	41.80	42.30	SM		6	0.93	1.05	0.50	-0.12	0	197
56.50	56.00	42.30	42.80			7	0.89	0.86	0.48	0.03	0	195
56.00	55.50	42.80	43.30			7	0.86	0.84	0.46	0.01	0	205
55.50	55.00	43.30	43.80			8	0.79	0.75	0.42	0.04	1	197
55.00	54.50	43.80	44.30		28	8	0.82	0.76	0.44	0.06	1	186
54.50	54.00	44.30	44.80	SP		8	0.77	0.80	0.40	-0.03	1	169
54.00	53.50	44.80	45.30			7	0.83	0.79	0.44	0.04	2	178
53.50	53.00	45.30	45.80			8	0.83	0.75	0.44	0.08	1	193
53.00	52.50	45.80	46.30			8	0.81	0.75	0.43	0.07	2	209
52.50	52.00	46.30	46.80		26	9	0.78	0.71	0.38	0.07	1	221
52.00	51.50	46.80	47.30			8	0.86	0.73	0.44	0.14	0	225
51.50	51.00	47.30	47.80			7	0.87	0.86	0.44	0.01	0	212
51.00	50.50	47.80	48.30			7	0.89	0.84	0.48	0.05	1	214
50.50	50.00	48.30	48.80			8	0.86	0.75	0.46	0.11	0	220
50.00	49.50	48.80	49.30		14	8	0.82	0.75	0.43	0.07	1	229
49.50	49.00	49.30	49.80			8	0.83	0.75	0.45	0.08	2	233
49.00	48.50	49.80	50.30	SM		8	0.84	0.74	0.45	0.10	1	233
48.50	48.00	50.30	50.80			9	0.78	0.67	0.39	0.11	2	222
48.00	47.50	50.80	51.30			10	0.75	0.65	0.35	0.10	3	226
47.50	47.00	51.30	51.80		15	10	0.73	0.57	0.32	0.16	4	231
47.00	46.50	51.80	52.30			10	0.70	0.58	0.29	0.12	1	233
46.50	46.00	52.30	52.80			10	0.70	0.63	0.30	0.07	0	233
46.00	45.50	52.80	53.30			10	0.71	0.61	0.34	0.10	0	229
45.50	45.00	53.30	53.80			11	0.69	0.55	0.35	0.14	2	221

EB4P10 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
45.00	44.50	53.80	54.30	CH	15	11	0.67	0.54	0.36	0.13	8	220
44.50	44.00	54.30	54.80			13	0.60	0.48	0.31	0.12	17	222
44.00	43.50	54.80	55.30			12	0.60	0.49	0.32	0.12	31	244
43.50	43.00	55.30	55.80			11	0.71	0.52	0.41	0.19	38	275
43.00	42.50	55.80	56.30			12	0.69	0.52	0.41	0.17	48	268
42.50	42.00	56.30	56.80		9	11	0.67	0.52	0.41	0.15	69	248
42.00	41.50	56.80	57.30			12	0.69	0.53	0.46	0.16	86	238
41.50	41.00	57.30	57.80			10	0.67	0.57	0.47	0.10	106	212
41.00	40.50	57.80	58.30	SM		10	0.65	0.58	0.46	0.07	121	179
40.50	40.00	58.30	58.80			10	0.71	0.63	0.58	0.08	137	141
40.00	39.50	58.80	59.30		6	10	0.64	0.61	0.47	0.03	158	132
39.50	39.00	59.30	59.80			11	0.63	0.55	0.45	0.08	176	142
39.00	38.50	59.80	60.30			11	0.63	0.54	0.43	0.09	177	153
38.50	38.00	60.30	60.80			12	0.59	0.50	0.38	0.09	195	149
38.00	37.50	60.80	61.30	SP		12	0.60	0.50	0.37	0.10	199	157
37.50	37.00	61.30	61.80		8	13	0.61	0.48	0.38	0.13	208	163
37.00	36.50	61.80	62.30			12	0.61	0.48	0.38	0.14	231	155
36.50	36.00	62.30	62.80			13	0.61	0.46	0.35	0.15	245	149
36.00	35.50	62.80	63.30			13	0.59	0.46	0.34	0.13	240	150
35.50	35.00	63.30	63.80	SM		13	0.61	0.46	0.35	0.15	233	157
35.00	34.50	63.80	64.30		3	15	0.62	0.42	0.36	0.20	233	164
34.50	34.00	64.30	64.80			20	0.46	0.30	0.18	0.16	236	176
34.00	33.50	64.80	65.30			20	0.40	0.30	0.12	0.11	298	163
33.50	33.00	65.30	65.80			22	0.46	0.28	0.16	0.18	318	178
33.00	32.50	65.80	66.30			21	0.49	0.28	0.18	0.20	294	205
32.50	32.00	66.30	66.80		4	20	0.52	0.30	0.20	0.22	273	225
32.00	31.50	66.80	67.30			20	0.51	0.30	0.18	0.21	275	215
31.50	31.00	67.30	67.80			19	0.53	0.31	0.20	0.22	259	222
31.00	30.50	67.80	68.30			19	0.55	0.31	0.22	0.23	251	205
30.50	30.00	68.30	68.80			18	0.56	0.34	0.23	0.22	256	189
30.00	29.50	68.80	69.30		7	17	0.58	0.35	0.25	0.23	247	187
29.50	29.00	69.30	69.80			15	0.61	0.39	0.24	0.22	191	207
29.00	28.50	69.80	70.30			15	0.63	0.40	0.24	0.24	129	220
28.50	28.00	70.30	70.80			14	0.66	0.43	0.27	0.23	112	223
28.00	27.50	70.80	71.30	CH		15	0.66	0.41	0.28	0.25	114	245
27.50	27.00	71.30	71.80		3	17	0.66	0.35	0.28	0.31	125	290
27.00	26.50	71.80	72.30			18	0.58	0.34	0.23	0.24	163	331
26.50	26.00	72.30	72.80			20	0.54	0.29	0.16	0.25	183	365
26.00	25.50	72.80	73.30			21	0.55	0.29	0.15	0.26	183	348
25.50	25.00	73.30	73.80			22	0.58	0.27	0.19	0.31	160	346
25.00	24.50	73.80	74.30		6	21	0.60	0.28	0.22	0.32	164	325
24.50	24.00	74.30	74.80			17	0.60	0.35	0.24	0.25	167	296
24.00	23.50	74.80	75.30			17	0.62	0.36	0.26	0.26	172	274
23.50	23.00	75.30	75.80			15	0.62	0.39	0.28	0.23	187	258
23.00	22.50	75.80	76.30			16	0.60	0.38	0.26	0.22	203	249
22.50	22.00	76.30	76.80		7	18	0.58	0.33	0.26	0.25	229	262
22.00	21.50	76.80	77.30			20	0.52	0.30	0.20	0.22	271	340
21.50	21.00	77.30	77.80			29	0.41	0.21	0.09	0.20	343	485
21.00	20.50	77.80	78.30			54	0.37	0.11	0.11	0.26	313	994
20.50	20.00	78.30	78.80			117	0.40	0.04	0.14	0.36	220	1511

8.1.28 SR-50 and SR-436 – P3 EB P10 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
61.50	61.00	37.30	37.80		9	-	-	-	-	-	-	-
61.00	60.50	37.80	38.30			1	3.00	3.00	3.00	0.00	0	0
60.50	60.00	38.30	38.80	SM		2	3.00	3.00	3.00	0.00	0	0
60.00	59.50	38.80	39.30			2	2.70	2.70	2.70	0.00	0	0
59.50	59.00	39.30	39.80			3	2.42	2.40	2.40	0.02	0	0
59.00	58.50	39.80	40.30		7	2	3.20	3.20	3.20	0.00	0	0
58.50	58.00	40.30	40.80			1	4.00	4.00	4.00	0.00	0	0
58.00	57.50	40.80	41.30	SM/SC		1	4.00	4.00	4.00	0.00	0	0
57.50	57.00	41.30	41.80			1	6.01	6.00	6.01	0.01	0	0
57.00	56.50	41.80	42.30			3	3.34	3.33	3.33	0.01	0	69
56.50	56.00	42.30	42.80		14	3	2.00	2.00	2.00	0.00	0	88
56.00	55.50	42.80	43.30			4	1.44	1.40	1.40	0.04	1	126
55.50	55.00	43.30	43.80			5	1.24	1.20	1.20	0.04	0	162
55.00	54.50	43.80	44.30			6	1.24	1.07	1.07	0.17	0	182
54.50	54.00	44.30	44.80			6	1.12	1.00	1.00	0.12	0	176
54.00	53.50	44.80	45.30		13	7	1.02	0.90	0.90	0.12	0	192
53.50	53.00	45.30	45.80			7	0.93	0.86	0.86	0.07	0	196
53.00	52.50	45.80	46.30	SP		7	0.94	0.82	0.82	0.12	0	195
52.50	52.00	46.30	46.80			7	1.09	0.80	0.80	0.29	0	210
52.00	51.50	46.80	47.30			8	0.99	0.80	0.80	0.19	0	200
51.50	51.00	47.30	47.80		26	7	0.95	0.80	0.80	0.15	0	202
51.00	50.50	47.80	48.30			7	1.01	0.87	0.87	0.14	0	216
50.50	50.00	48.30	48.80			7	1.06	0.92	0.92	0.14	0	224
50.00	49.50	48.80	49.30			7	0.98	0.83	0.83	0.14	0	204
49.50	49.00	49.30	49.80			7	1.01	0.80	0.80	0.21	0	206
49.00	48.50	49.80	50.30		23	7	0.95	0.87	0.87	0.09	0	197
48.50	48.00	50.30	50.80			7	1.02	0.92	0.92	0.10	0	208
48.00	47.50	50.80	51.30			8	1.01	0.76	0.76	0.25	0	216
47.50	47.00	51.30	51.80			8	0.84	0.71	0.71	0.13	0	223
47.00	46.50	51.80	52.30			11	0.71	0.59	0.59	0.12	1	228
46.50	46.00	52.30	52.80		22	11	0.76	0.55	0.55	0.21	10	246
46.00	45.50	52.80	53.30			11	0.79	0.55	0.55	0.24	16	249
45.50	45.00	53.30	53.80			11	0.71	0.55	0.55	0.16	18	249
45.00	44.50	53.80	54.30			12	0.73	0.48	0.48	0.24	21	273
44.50	44.00	54.30	54.80	SP-SM		13	0.77	0.46	0.46	0.31	21	269
44.00	43.50	54.80	55.30		55	12	0.76	0.49	0.49	0.27	15	256
43.50	43.00	55.30	55.80			12	0.77	0.50	0.50	0.27	18	258
43.00	42.50	55.80	56.30			12	0.80	0.51	0.51	0.29	18	278
42.50	42.00	56.30	56.80			11	0.79	0.52	0.52	0.27	23	277
42.00	41.50	56.80	57.30			12	0.74	0.51	0.51	0.24	41	273
41.50	41.00	57.30	57.80		8	12	0.71	0.50	0.50	0.21	65	275
41.00	40.50	57.80	58.30			16	0.61	0.40	0.40	0.22	106	276
40.50	40.00	58.30	58.80			16	0.57	0.36	0.36	0.21	144	277
40.00	39.50	58.80	59.30			18	0.56	0.34	0.34	0.23	179	275
39.50	39.00	59.30	59.80			18	0.56	0.33	0.33	0.23	217	266
39.00	38.50	59.80	60.30		7	17	0.58	0.34	0.34	0.24	254	242
38.50	38.00	60.30	60.80	SC		18	0.59	0.34	0.34	0.25	303	195
38.00	37.50	60.80	61.30			15	0.58	0.40	0.40	0.18	351	163
37.50	37.00	61.30	61.80			14	0.60	0.43	0.43	0.17	380	148

P3 EB P10 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
37.00	36.50	61.80	62.30	SP-SM		15	0.59	0.39	0.39	0.19	405	128
36.50	36.00	62.30	62.80		8	16	0.58	0.38	0.38	0.20	432	120
36.00	35.50	62.80	63.30			17	0.56	0.35	0.35	0.21	469	107
35.50	35.00	63.30	63.80			18	0.53	0.34	0.34	0.19	510	95
35.00	34.50	63.80	64.30			21	0.50	0.29	0.29	0.22	569	101
34.50	34.00	64.30	64.80			22	0.50	0.27	0.27	0.23	594	116
34.00	33.50	64.80	65.30		12	25	0.49	0.25	0.25	0.25	583	138
33.50	33.00	65.30	65.80			25	0.50	0.24	0.24	0.26	548	166
33.00	32.50	65.80	66.30			24	0.51	0.24	0.24	0.27	504	196
32.50	32.00	66.30	66.80			25	0.53	0.24	0.25	0.29	476	213
32.00	31.50	66.80	67.30	CH		22	0.56	0.27	0.27	0.28	461	212
31.50	31.00	67.30	67.80		5	21	0.58	0.29	0.29	0.29	461	195
31.00	30.50	67.80	68.30			19	0.61	0.32	0.32	0.29	435	193
30.50	30.00	68.30	68.80			18	0.64	0.33	0.33	0.31	408	192
30.00	29.50	68.80	69.30			15	0.67	0.38	0.38	0.28	393	183
29.50	29.00	69.30	69.80			15	0.68	0.41	0.41	0.27	381	176
29.00	28.50	69.80	70.30		6	13	0.67	0.46	0.46	0.21	405	150
28.50	28.00	70.30	70.80			12	0.70	0.48	0.48	0.22	434	120
28.00	27.50	70.80	71.30			15	0.66	0.41	0.40	0.26	443	119
27.50	27.00	71.30	71.80			16	0.64	0.38	0.38	0.26	470	148
27.00	26.50	71.80	72.30			18	0.60	0.34	0.34	0.25	523	183
26.50	26.00	72.30	72.80		51	18	0.59	0.33	0.33	0.26	552	205
26.00	25.50	72.80	73.30			19	0.58	0.30	0.30	0.28	534	243
25.50	25.00	73.30	73.80			21	0.58	0.29	0.29	0.29	475	289
25.00	24.50	73.80	74.30			20	0.59	0.29	0.29	0.30	387	328
24.50	24.00	74.30	74.80			21	0.63	0.29	0.29	0.34	304	359
24.00	23.50	74.80	75.30		71	20	0.64	0.30	0.30	0.34	259	376
23.50	23.00	75.30	75.80			19	0.68	0.31	0.31	0.37	230	343
23.00	22.50	75.80	76.30			17	0.68	0.36	0.35	0.32	203	317
22.50	22.00	76.30	76.80			16	0.68	0.38	0.38	0.30	175	297
22.00	21.50	76.80	77.30			17	0.67	0.36	0.36	0.31	186	295
21.50	21.00	77.30	77.80		60	17	0.61	0.35	0.35	0.26	185	320
21.00	20.50	77.80	78.30			26	0.55	0.23	0.23	0.32	231	456
20.50	20.00	78.30	78.80			30	0.43	0.20	0.20	0.23	382	787
20.00	19.50	78.80	79.30			119	0.40	0.05	0.05	0.35	515	1088
19.50	19.00	79.30	79.80			71	0.28	0.04	0.04	0.24	527	758

8.1.29 **Anderson Street Overpass – P6P6 PDA**

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
77.38	76.88	25.50	26.00	SP-SM	17	3	0.78	0.75	0.27	0.03	101	213
76.88	76.38	26.00	26.50			8	0.87	0.75	0.48	0.12	55	222
76.38	75.88	26.50	27.00			8	0.91	0.72	0.60	0.19	42	218
75.88	75.38	27.00	27.50			9	0.92	0.67	0.53	0.25	40	226
75.38	74.88	27.50	28.00			9	0.92	0.68	0.61	0.24	35	220
74.88	74.38	28.00	28.50			8	0.94	0.71	0.54	0.23	43	222
74.38	73.88	28.50	29.00			9	0.94	0.71	0.64	0.23	41	210
73.88	73.38	29.00	29.50			8	0.96	0.71	0.70	0.25	38	210
73.38	72.88	29.50	30.00			9	0.96	0.74	0.64	0.22	40	206
72.88	72.38	30.00	30.50			7	0.97	0.80	0.66	0.17	38	203
72.38	71.88	30.50	31.00		11	8	0.97	0.78	0.67	0.19	45	198
71.88	71.38	31.00	31.50			8	0.97	0.75	0.71	0.22	42	193
71.38	70.88	31.50	32.00			8	0.99	0.77	0.76	0.22	41	192
70.88	70.38	32.00	32.50			7	0.96	0.80	0.61	0.16	48	198
70.38	69.88	32.50	33.00			8	0.98	0.78	0.71	0.20	45	192
69.88	69.38	33.00	33.50			8	0.93	0.75	0.51	0.18	61	195
69.38	68.88	33.50	34.00			8	0.95	0.74	0.62	0.22	54	193
68.88	68.38	34.00	34.50			8	0.90	0.71	0.28	0.19	78	198
68.38	67.88	34.50	35.00			9	0.87	0.70	0.20	0.18	85	201
67.88	67.38	35.00	35.50			9	0.91	0.67	0.42	0.24	77	192
67.38	66.88	35.50	36.00		12	9	0.89	0.70	0.40	0.20	79	194
66.88	66.38	36.00	36.50			8	0.89	0.75	0.33	0.14	85	197
66.38	65.88	36.50	37.00			8	0.85	0.72	0.26	0.13	81	200
65.88	65.38	37.00	37.50			9	0.85	0.67	0.29	0.18	77	205
65.38	64.88	37.50	38.00			10	0.85	0.64	0.27	0.21	68	213
64.88	64.38	38.00	38.50			10	0.89	0.60	0.60	0.29	31	223
64.38	63.88	38.50	39.00			10	0.88	0.60	0.49	0.28	16	245
63.88	63.38	39.00	39.50			10	0.89	0.60	0.52	0.29	3	259
63.38	62.88	39.50	40.00			9	0.93	0.62	0.49	0.31	1	263
62.88	62.38	40.00	40.50			9	0.96	0.67	0.64	0.29	0	250
62.38	61.88	40.50	41.00		14	9	1.02	0.71	0.72	0.30	0	236
61.88	61.38	41.00	41.50			7	0.97	0.80	0.59	0.17	0	232
61.38	60.88	41.50	42.00			8	1.01	0.80	0.76	0.21	0	217
60.88	60.38	42.00	42.50			7	1.00	0.80	0.62	0.20	2	211
60.38	59.88	42.50	43.00			6	1.00	0.89	0.59	0.11	9	198
59.88	59.38	43.00	43.50			5	1.02	1.33	0.79	-0.31	10	174
59.38	58.88	43.50	44.00			5	1.11	1.28	0.86	-0.17	22	158
58.88	58.38	44.00	44.50			5	1.24	1.20	1.12	0.04	19	141
58.38	57.88	44.50	45.00			4	1.35	1.50	1.26	-0.15	14	131
57.88	57.38	45.00	45.50			2	1.42	2.40	1.33	-0.98	12	129
57.38	56.88	45.50	46.00		18	3	1.48	2.27	1.33	-0.79	5	119
56.88	56.38	46.00	46.50			3	1.64	2.00	1.52	-0.36	1	120
56.38	55.88	46.50	47.00	SM		3	1.67	1.90	1.50	-0.24	1	125
55.88	55.38	47.00	47.50			3	1.77	1.71	1.63	0.06	0	120
55.38	54.88	47.50	48.00			4	1.85	1.71	1.71	0.14	0	119
54.88	54.38	48.00	48.50			3	1.76	1.71	1.60	0.05	0	118
54.38	53.88	48.50	49.00			4	1.68	1.78	1.54	-0.10	0	120
53.88	53.38	49.00	49.50			3	1.75	2.00	1.64	-0.25	1	117
53.38	52.88	49.50	50.00			3	1.62	1.83	1.40	-0.21	3	122
52.88	52.38	50.00	50.50			4	1.58	1.50	1.39	0.08	6	115
52.38	51.88	50.50	51.00		5	4	1.64	1.46	1.50	0.18	4	114
51.88	51.38	51.00	51.50			5	1.56	1.33	1.42	0.23	7	114
51.38	50.88	51.50	52.00			4	1.47	1.33	1.28	0.14	12	121
50.88	50.38	52.00	52.50			5	1.34	1.33	1.17	0.01	20	116

P6P6 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
50.38	49.88	52.50	53.00			4	1.28	1.33	1.06	-0.05	31	110
49.88	49.38	53.00	53.50			5	1.40	1.33	1.24	0.07	26	104
49.38	48.88	53.50	54.00			4	1.39	1.37	1.21	0.01	28	100
48.88	48.38	54.00	54.50			4	1.48	1.50	1.36	-0.02	23	98
48.38	47.88	54.50	55.00			4	1.46	1.50	1.33	-0.04	27	95
47.88	47.38	55.00	55.50			4	1.51	1.50	1.38	0.01	24	100
47.38	46.88	55.50	56.00		3	4	1.44	1.50	1.29	-0.06	25	99
46.88	46.38	56.00	56.50			4	1.43	1.50	1.28	-0.07	28	100
46.38	45.88	56.50	57.00			4	1.46	1.50	1.32	-0.05	24	104
45.88	45.38	57.00	57.50	SM		4	1.50	1.50	1.38	-0.01	26	102
45.38	44.88	57.50	58.00			4	1.50	1.50	1.32	0.00	26	105
44.88	44.38	58.00	58.50			4	1.52	1.50	1.39	0.02	26	105
44.38	43.88	58.50	59.00			4	1.55	1.46	1.40	0.09	19	108
43.88	43.38	59.00	59.50			5	1.53	1.33	1.38	0.20	18	108
43.38	42.88	59.50	60.00			4	1.58	1.33	1.49	0.25	16	109
42.88	42.38	60.00	60.50			5	1.44	1.33	1.27	0.11	23	104
42.38	41.88	60.50	61.00		2	4	1.47	1.33	1.35	0.14	18	109
41.88	41.38	61.00	61.50			5	1.38	1.33	1.23	0.05	27	117
41.38	40.88	61.50	62.00			5	1.44	1.28	1.33	0.16	27	117
40.88	40.38	62.00	62.50			5	1.40	1.20	1.34	0.20	22	124
40.38	39.88	62.50	63.00			5	1.37	1.16	1.30	0.22	27	127
39.88	39.38	63.00	63.50			5	1.41	1.09	1.34	0.32	25	123
39.38	38.88	63.50	64.00			6	1.49	1.09	1.45	0.40	23	128
38.88	38.38	64.00	64.50	SP-SM		5	1.37	1.09	1.34	0.28	30	129
38.38	37.88	64.50	65.00			6	1.39	1.09	1.37	0.30	33	132
37.88	37.38	65.00	65.50			5	1.21	1.09	1.13	0.12	42	130
37.38	36.88	65.50	66.00		4	6	1.32	1.03	1.29	0.29	39	135
36.88	36.38	66.00	66.50			7	1.13	0.92	1.06	0.21	50	132
36.38	35.88	66.50	67.00			7	1.07	0.85	0.93	0.22	58	132
35.88	35.38	67.00	67.50			8	1.10	0.75	1.01	0.35	62	131
35.38	34.88	67.50	68.00			7	0.91	0.78	0.74	0.13	72	126
34.88	34.38	68.00	68.50			7	1.01	0.86	0.88	0.15	69	129
34.38	33.88	68.50	69.00			7	0.99	0.86	0.96	0.13	73	135
33.88	33.38	69.00	69.50		13	7	0.99	0.86	0.92	0.13	79	134
33.38	32.88	69.50	70.00			7	0.92	0.90	0.84	0.02	83	130
32.88	32.38	70.00	70.50			6	0.92	1.00	0.84	-0.08	80	133
32.38	31.88	70.50	71.00			7	0.92	0.88	0.87	0.04	81	135
31.88	31.38	71.00	71.50			8	0.87	0.71	0.62	0.16	106	136
31.38	30.88	71.50	72.00			10	0.84	0.65	0.57	0.18	116	141
30.88	30.38	72.00	72.50			10	0.77	0.57	0.34	0.20	143	138
30.38	29.88	72.50	73.00			11	0.75	0.54	0.34	0.20	152	141
29.88	29.38	73.00	73.50			12	0.72	0.50	0.42	0.22	157	144
29.38	28.88	73.50	74.00	SM		13	0.66	0.49	0.27	0.17	172	147
28.88	28.38	74.00	74.50		17	12	0.65	0.48	0.22	0.17	187	151
28.38	27.88	74.50	75.00			12	0.67	0.49	0.31	0.18	187	155
27.88	27.38	75.00	75.50			12	0.67	0.50	0.27	0.17	189	159
27.38	26.88	75.50	76.00			13	0.69	0.49	0.27	0.19	186	164
26.88	26.38	76.00	76.50		33	12	0.66	0.48	0.18	0.18	191	160
26.38	25.88	76.50	77.00			13	0.66	0.46	0.20	0.19	188	162
25.88	25.38	77.00	77.50			14	0.65	0.44	0.22	0.21	191	162
25.38	24.88	77.50	78.00			13	0.63	0.44	0.12	0.19	196	161
24.88	24.38	78.00	78.50		28	14	0.63	0.44	0.16	0.19	200	160
24.38	23.88	78.50	79.00			13	0.63	0.45	0.22	0.19	199	161
23.88	23.38	79.00	79.50			13	0.65	0.46	0.25	0.19	201	160
23.38	22.88	79.50	80.00			13	0.62	0.45	0.21	0.17	206	157
22.88	22.38	80.00	80.50			14	0.63	0.43	0.23	0.20	211	157

P6P6 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
22.38	21.88	80.50	81.00	SM	16	14	0.62	0.43	0.20	0.19	216	154
21.88	21.38	81.00	81.50			14	0.62	0.43	0.28	0.19	218	150
21.38	20.88	81.50	82.00			14	0.62	0.42	0.13	0.19	226	150
20.88	20.38	82.00	82.50			15	0.61	0.41	0.14	0.20	227	148
20.38	19.88	82.50	83.00		9	14	0.60	0.42	0.20	0.18	221	147
19.88	19.38	83.00	83.50			14	0.62	0.44	0.17	0.18	225	151
19.38	18.88	83.50	84.00			13	0.64	0.45	0.20	0.19	228	154
18.88	18.38	84.00	84.50			13	0.64	0.46	0.26	0.18	229	152
18.38	17.88	84.50	85.00		10	14	0.63	0.43	0.24	0.19	232	151
17.88	17.38	85.00	85.50			15	0.62	0.40	0.24	0.22	238	151
17.38	16.88	85.50	86.00	SP-SM		15	0.60	0.39	0.16	0.21	250	153
16.88	16.38	86.00	86.50			16	0.59	0.38	0.19	0.21	253	166
16.38	15.88	86.50	87.00		8	20	0.54	0.31	0.08	0.23	274	198
15.88	15.38	87.00	87.50			25	0.55	0.24	0.17	0.31	243	303
15.38	14.88	87.50	88.00	SM		25	0.59	0.25	0.12	0.34	147	401
14.88	14.38	88.00	88.50			22	0.74	0.27	0.24	0.47	91	445
14.38	13.88	88.50	89.00		59	21	0.81	0.29	0.24	0.53	69	415
13.88	13.38	89.00	89.50			19	0.89	0.32	0.39	0.57	51	375
13.38	12.88	89.50	90.00			21	0.97	0.28	0.45	0.69	41	354
12.88	12.38	90.00	90.50			24	0.98	0.24	0.51	0.74	67	328
12.38	11.88	90.50	91.00		28	34	0.55	0.18	0.21	0.37	287	336
11.88	11.38	91.00	91.50			47	0.61	0.13	0.28	0.48	216	346
11.38	10.88	91.50	92.00			49	0.65	0.13	0.16	0.52	157	396
10.88	10.38	92.00	92.50			49	0.71	0.12	0.11	0.59	140	418
10.38	9.88	92.50	93.00		65	46	0.77	0.13	0.02	0.64	134	418
9.88	9.38	93.00	93.50			42	0.85	0.14	0.31	0.71	115	389
9.38	8.88	93.50	94.00			43	0.88	0.14	0.16	0.74	121	354
8.88	8.38	94.00	94.50			42	0.94	0.14	0.05	0.80	114	344
8.38	7.88	94.50	95.00		33	47	1.00	0.13	-0.03	0.87	106	341
7.88	7.38	95.00	95.50			51	1.06	0.12	0.02	0.94	92	340
7.38	6.88	95.50	96.00			53	1.09	0.12	0.07	0.98	84	329
6.88	6.38	96.00	96.50			55	1.14	0.11	0.15	1.03	81	321
6.38	5.88	96.50	97.00		33	55	1.15	0.11	0.14	1.04	81	312
5.88	5.38	97.00	97.50			54	1.15	0.11	0.12	1.04	82	305
5.38	4.88	97.50	98.00	CL		58	1.16	0.11	0.14	1.05	83	300
4.88	4.38	98.00	98.50			61	1.16	0.10	0.11	1.06	83	307
4.38	3.88	98.50	99.00		24	89	1.08	0.07	-0.02	1.01	77	305
3.88	3.38	99.00	99.50			128	1.02	0.05	0.07	0.97	63	294
3.38	2.88	99.50	100.00	SM		104	0.91	0.06	0.18	0.85	104	294
2.88	2.38	100.00	100.50			71	0.82	0.09	0.16	0.73	183	301
2.38	1.88	100.50	101.00		39	116	0.86	0.05	0.13	0.81	132	298
1.88	1.38	101.00	101.50			183	0.86	0.03	0.06	0.83	123	291
1.38	0.88	101.50	102.00	SC		140	0.85	0.04	0.04	0.80	113	297
0.88	0.38	102.00	102.50			78	0.92	0.08	0.07	0.84	127	330
0.38	-0.12	102.50	103.00		21	68	0.99	0.09	0.24	0.90	124	342
-0.12	-0.62	103.00	103.50			53	1.01	0.11	0.29	0.90	128	335
-0.62	-1.12	103.50	104.00	SM		79	0.92	0.07	0.17	0.84	111	303
-1.12	-1.62	104.00	104.50			119	0.88	0.05	0.16	0.83	104	282
-1.62	-2.12	104.50	105.00		30	110	0.89	0.05	0.16	0.83	108	275
-2.12	-2.62	105.00	105.50			100	0.87	0.06	0.14	0.81	114	268
-2.62	-3.12	105.50	106.00	MH		111	0.65	0.06	-0.07	0.60	192	260
-3.12	-3.62	106.00	106.50			128	0.62	0.05	0.06	0.57	154	232
-3.62	-4.12	106.50	107.00		23	76	0.67	0.05	-0.01	0.62	161	256
-4.12	-4.62	107.00	107.50			-	-	-	-	-	-	-

8.1.30 **I-4 Widening Daytona – EB3-1 P5 PDA**

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
8.50	8.00	37.68	38.18			1	1.33	1.33	1.33	0.00	56	362
8.00	7.50	38.18	38.68		8	5	1.33	1.33	1.33	0.00	45	364
7.50	7.00	38.68	39.18			9	0.83	0.66	0.66	0.16	54	358
7.00	6.50	39.18	39.68			18	0.58	0.33	0.33	0.25	57	355
6.50	6.00	39.68	40.18			19	0.59	0.32	0.32	0.27	57	353
6.00	5.50	40.18	40.68			21	0.58	0.29	0.29	0.29	59	354
5.50	5.00	40.68	41.18		7	20	0.55	0.29	0.29	0.27	67	352
5.00	4.50	41.18	41.68			22	0.54	0.28	0.28	0.26	75	350
4.50	4.00	41.68	42.18			21	0.54	0.29	0.29	0.25	85	349
4.00	3.50	42.18	42.68			20	0.52	0.30	0.30	0.22	92	346
3.50	3.00	42.68	43.18			21	0.51	0.28	0.28	0.22	101	348
3.00	2.50	43.18	43.68		5	23	0.50	0.26	0.26	0.24	111	348
2.50	2.00	43.68	44.18			23	0.49	0.26	0.26	0.24	120	345
2.00	1.50	44.18	44.68			24	0.49	0.25	0.25	0.24	124	349
1.50	1.00	44.68	45.18			24	0.48	0.25	0.25	0.23	128	347
1.00	0.50	45.18	45.68			24	0.49	0.26	0.26	0.23	128	351
0.50	0.00	45.68	46.18		9	24	0.48	0.25	0.25	0.23	124	356
0.00	-0.50	46.18	46.68	SPXSP-SM		27	0.48	0.23	0.23	0.25	127	361
-0.50	-1.00	46.68	47.18			26	0.48	0.23	0.23	0.25	124	364
-1.00	-1.50	47.18	47.68			25	0.48	0.24	0.24	0.24	119	364
-1.50	-2.00	47.68	48.18			27	0.48	0.23	0.23	0.25	121	361
-2.00	-2.50	48.18	48.68		12	28	0.49	0.21	0.21	0.28	133	357
-2.50	-3.00	48.68	49.18			26	0.50	0.23	0.23	0.27	134	362
-3.00	-3.50	49.18	49.68			22	0.55	0.27	0.27	0.28	154	375
-3.50	-4.00	49.68	50.18			22	0.55	0.28	0.28	0.28	161	364
-4.00	-4.50	50.18	50.68			21	0.55	0.29	0.29	0.26	166	356
-4.50	-5.00	50.68	51.18		9	22	0.56	0.28	0.28	0.28	172	348
-5.00	-5.50	51.18	51.68			24	0.55	0.26	0.26	0.29	187	333
-5.50	-6.00	51.68	52.18			23	0.56	0.26	0.26	0.30	202	322
-6.00	-6.50	52.18	52.68			23	0.56	0.26	0.26	0.30	219	308
-6.50	-7.00	52.68	53.18			22	0.57	0.27	0.27	0.30	228	294
-7.00	-7.50	53.18	53.68		8	22	0.58	0.28	0.28	0.30	248	278
-7.50	-8.00	53.68	54.18			21	0.58	0.29	0.29	0.29	288	248
-8.00	-8.50	54.18	54.68			19	0.56	0.31	0.31	0.25	315	227
-8.50	-9.00	54.68	55.18			19	0.58	0.32	0.32	0.25	344	215
-9.00	-9.50	55.18	55.68			17	0.57	0.35	0.35	0.22	375	199
-9.50	-10.00	55.68	56.18		4	18	0.56	0.33	0.33	0.22	400	182
-10.00	-10.50	56.18	56.68			19	0.50	0.31	0.31	0.19	424	161
-10.50	-11.00	56.68	57.18			20	0.48	0.30	0.30	0.18	460	147
-11.00	-11.50	57.18	57.68			21	0.48	0.29	0.29	0.19	495	137
-11.50	-12.00	57.68	58.18			23	0.47	0.27	0.27	0.20	532	129
-12.00	-12.50	58.18	58.68		8	25	0.47	0.24	0.24	0.23	542	140
-12.50	-13.00	58.68	59.18			24	0.48	0.25	0.25	0.23	519	160
-13.00	-13.50	59.18	59.68			22	0.49	0.27	0.27	0.22	526	149
-13.50	-14.00	59.68	60.18			23	0.49	0.27	0.27	0.22	560	124
-14.00	-14.50	60.18	60.68	SM		22	0.48	0.27	0.27	0.21	590	108
-14.50	-15.00	60.68	61.18		0	21	0.48	0.28	0.28	0.20	624	91
-15.00	-15.50	61.18	61.68			21	0.48	0.29	0.29	0.19	663	87
-15.50	-16.00	61.68	62.18			20	0.48	0.29	0.29	0.19	698	75
-16.00	-16.50	62.18	62.68			22	0.46	0.28	0.28	0.18	734	55
-16.50	-17.00	62.68	63.18			21	0.45	0.28	0.28	0.17	770	31
-17.00	-17.50	63.18	63.68		4	21	0.45	0.29	0.29	0.16	778	21
-17.50	-18.00	63.68	64.18			19	0.44	0.30	0.30	0.14	778	18
-18.00	-18.50	64.18	64.68			18	0.47	0.33	0.33	0.14	786	21
-18.50	-19.00	64.68	65.18			19	0.46	0.32	0.32	0.14	790	20
-19.00	-19.50	65.18	65.68			19	0.45	0.31	0.31	0.14	794	18

EB3-1 P5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-19.50	-20.00	65.68	66.18	SM	5	20	0.45	0.31	0.30	0.15	809	16
-20.00	-20.50	66.18	66.68			20	0.45	0.30	0.30	0.15	811	15
-20.50	-21.00	66.68	67.18			20	0.45	0.30	0.30	0.15	804	18
-21.00	-21.50	67.18	67.68			19	0.44	0.31	0.31	0.13	806	16
-21.50	-22.00	67.68	68.18			20	0.44	0.31	0.31	0.13	793	22
-22.00	-22.50	68.18	68.68		5	20	0.45	0.30	0.30	0.15	804	21
-22.50	-23.00	68.68	69.18			20	0.45	0.31	0.31	0.14	792	27
-23.00	-23.50	69.18	69.68			19	0.45	0.32	0.32	0.13	785	30
-23.50	-24.00	69.68	70.18			21	0.44	0.29	0.29	0.15	789	30
-24.00	-24.50	70.18	70.68	SC		24	0.42	0.24	0.24	0.18	795	34
-24.50	-25.00	70.68	71.18		10	23	0.41	0.26	0.26	0.15	792	50
-25.00	-25.50	71.18	71.68			19	0.40	0.31	0.31	0.09	817	80
-25.50	-26.00	71.68	72.18			24	0.37	0.26	0.26	0.11	843	117
-26.00	-26.50	72.18	72.68			30	0.37	0.20	0.20	0.17	825	174
-26.50	-27.00	72.68	73.18	SP-SM		35	0.38	0.17	0.17	0.21	794	232
-27.00	-27.50	73.18	73.68		28	43	0.39	0.14	0.14	0.25	734	303
-27.50	-28.00	73.68	74.18			41	0.46	0.15	0.15	0.31	504	445
-28.00	-28.50	74.18	74.68			36	0.58	0.17	0.17	0.41	182	671
-28.50	-29.00	74.68	75.18			42	0.58	0.14	0.14	0.44	154	747
-29.00	-29.50	75.18	75.68			52	0.56	0.11	0.11	0.45	154	780
-29.50	-30.00	75.68	76.18		52	51	0.55	0.12	0.12	0.43	157	764
-30.00	-30.50	76.18	76.68			46	0.56	0.13	0.13	0.43	155	741
-30.50	-31.00	76.68	77.18			47	0.56	0.13	0.13	0.43	149	721
-31.00	-31.50	77.18	77.68			51	0.57	0.12	0.12	0.45	149	705
-31.50	-32.00	77.68	78.18			59	0.50	0.10	0.10	0.40	173	680
-32.00	-32.50	78.18	78.68	SP-SM	34	59	0.52	0.10	0.10	0.42	186	689
-32.50	-33.00	78.68	79.18			51	0.53	0.12	0.12	0.42	175	659
-33.00	-33.50	79.18	79.68			42	0.54	0.14	0.14	0.40	168	633
-33.50	-34.00	79.68	80.18			40	0.55	0.15	0.15	0.41	165	600
-34.00	-34.50	80.18	80.68			38	0.56	0.16	0.16	0.40	172	566
-34.50	-35.00	80.68	81.18	SM	20	35	0.54	0.17	0.17	0.37	223	508
-35.00	-35.50	81.18	81.68			30	0.53	0.20	0.20	0.33	272	447
-35.50	-36.00	81.68	82.18			31	0.51	0.20	0.20	0.31	338	391
-36.00	-36.50	82.18	82.68			30	0.50	0.20	0.20	0.30	411	333
-36.50	-37.00	82.68	83.18			29	0.49	0.21	0.20	0.29	464	289
-37.00	-37.50	83.18	83.68		13	27	0.49	0.23	0.23	0.26	512	252
-37.50	-38.00	83.68	84.18			26	0.46	0.23	0.23	0.23	580	211
-38.00	-38.50	84.18	84.68			25	0.44	0.24	0.24	0.20	643	177
-38.50	-39.00	84.68	85.18			26	0.42	0.23	0.23	0.19	715	149
-39.00	-39.50	85.18	85.68			28	0.40	0.21	0.21	0.19	774	128
-39.50	-40.00	85.68	86.18		11	28	0.39	0.21	0.21	0.18	798	118
-40.00	-40.50	86.18	86.68			27	0.39	0.22	0.22	0.17	797	123
-40.50	-41.00	86.68	87.18			28	0.39	0.22	0.22	0.17	809	123
-41.00	-41.50	87.18	87.68			28	0.39	0.21	0.21	0.18	786	145
-41.50	-42.00	87.68	88.18			27	0.39	0.22	0.22	0.17	755	180
-42.00	-42.50	88.18	88.68		17	27	0.39	0.23	0.23	0.16	710	227
-42.50	-43.00	88.68	89.18			28	0.40	0.22	0.22	0.19	653	277
-43.00	-43.50	89.18	89.68			30	0.42	0.20	0.20	0.22	615	320
-43.50	-44.00	89.68	90.18			29	0.42	0.20	0.20	0.22	580	354
-44.00	-44.50	90.18	90.68			30	0.43	0.20	0.20	0.23	560	380
-44.50	-45.00	90.68	91.18		11	30	0.43	0.20	0.20	0.23	528	421
-45.00	-45.50	91.18	91.68			30	0.43	0.20	0.20	0.23	439	495
-45.50	-46.00	91.68	92.18			29	0.43	0.20	0.20	0.23	395	545
-46.00	-46.50	92.18	92.68			29	0.43	0.21	0.21	0.22	389	568
-46.50	-47.00	92.68	93.18	WL		31	0.43	0.20	0.19	0.23	383	613
-47.00	-47.50	93.18	93.68		50/6	34	0.43	0.18	0.18	0.25	356	746
-47.50	-48.00	93.68	94.18			39	0.43	0.16	0.16	0.27	344	872
-48.00	-48.50	94.18	94.68			46	0.41	0.13	0.13	0.28	383	897
-48.50	-49.00	94.68	95.18			46	0.41	0.13	0.13	0.28	391	948
-49.00	-49.50	95.18	95.68			46	0.41	0.13	0.13	0.28	375	955
-49.50	-50.00	95.68	96.18		14	30	0.41	0.13	0.13	0.28	372	954
-50.00	-50.50	96.18	96.68			-	-	-	-	-	-	-

8.1.31 SR-83 – EB1P1 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-46.50	-47.00	47.95	48.45			4	1.22	1.20	1.20	0.02	24	183
-47.00	-47.50	48.45	48.95			5	1.20	1.20	1.20	0.00	12	191
-47.50	-48.00	48.95	49.45			6	1.15	1.11	1.11	0.04	10	180
-48.00	-48.50	49.45	49.95		5	5	1.16	1.09	1.09	0.07	7	172
-48.50	-49.00	49.95	50.45			8	1.18	0.79	0.79	0.39	13	183
-49.00	-49.50	50.45	50.95			8	1.15	0.75	0.75	0.40	14	177
-49.50	-50.00	50.95	51.45			7	1.16	0.90	0.90	0.27	7	168
-50.00	-50.50	51.45	51.95			6	1.15	0.92	0.92	0.23	4	160
-50.50	-51.00	51.95	52.45		5	8	1.10	0.77	0.77	0.33	16	167
-51.00	-51.50	52.45	52.95			8	1.06	0.75	0.75	0.31	33	159
-51.50	-52.00	52.95	53.45			9	1.10	0.71	0.71	0.39	39	149
-52.00	-52.50	53.45	53.95			8	1.07	0.71	0.71	0.36	41	147
-52.50	-53.00	53.95	54.45			8	1.04	0.79	0.79	0.25	20	165
-53.00	-53.50	54.45	54.95		5	7	1.04	0.80	0.80	0.24	11	211
-53.50	-54.00	54.95	55.45			12	1.04	0.51	0.51	0.53	21	210
-54.00	-54.50	55.45	55.95			13	1.11	0.48	0.48	0.63	21	207
-54.50	-55.00	55.95	56.45			17	1.08	0.36	0.36	0.72	35	190
-55.00	-55.50	56.45	56.95			17	1.05	0.35	0.35	0.70	35	180
-55.50	-56.00	56.95	57.45		5	15	1.03	0.40	0.40	0.63	38	169
-56.00	-56.50	57.45	57.95	SC		15	1.01	0.40	0.40	0.61	36	168
-56.50	-57.00	57.95	58.45			18	1.03	0.32	0.32	0.71	43	172
-57.00	-57.50	58.45	58.95			19	1.07	0.32	0.32	0.75	37	190
-57.50	-58.00	58.95	59.45			19	1.02	0.32	0.31	0.70	40	187
-58.00	-58.50	59.45	59.95		6	19	0.99	0.32	0.31	0.67	41	194
-58.50	-59.00	59.95	60.45			27	0.97	0.22	0.22	0.74	51	213
-59.00	-59.50	60.45	60.95			27	0.99	0.22	0.22	0.77	43	225
-59.50	-60.00	60.95	61.45			29	0.98	0.21	0.21	0.77	49	232
-60.00	-60.50	61.45	61.95			29	0.96	0.21	0.21	0.75	65	228
-60.50	-61.00	61.95	62.45		13	32	0.86	0.19	0.19	0.67	80	256
-61.00	-61.50	62.45	62.95			32	0.89	0.19	0.19	0.70	70	277
-61.50	-62.00	62.95	63.45			49	0.85	0.12	0.12	0.73	63	276
-62.00	-62.50	63.45	63.95			50	0.89	0.12	0.12	0.77	60	273
-62.50	-63.00	63.95	64.45			68	0.85	0.09	0.09	0.76	56	242
-63.00	-63.50	64.45	64.95		13	68	0.90	0.09	0.09	0.81	64	267
-63.50	-64.00	64.95	65.45			53	0.99	0.12	0.11	0.87	73	317
-64.00	-64.50	65.45	65.95			52	0.95	0.12	0.12	0.83	81	333
-64.50	-65.00	65.95	66.45			46	0.86	0.13	0.13	0.74	88	327
-65.00	-65.50	66.45	66.95			46	0.84	0.13	0.13	0.71	92	344
-65.50	-66.00	66.95	67.45		10	34	0.70	0.18	0.17	0.52	90	379
-66.00	-66.50	67.45	67.95	SP		34	0.83	0.18	0.18	0.65	78	402
-66.50	-67.00	67.95	68.45			36	0.87	0.16	0.16	0.71	79	409
-67.00	-67.50	68.45	68.95			37	0.77	0.16	0.16	0.61	112	389
-67.50	-68.00	68.95	69.45			24	0.68	0.25	0.24	0.43	140	373
-68.00	-68.50	69.45	69.95		12	23	0.71	0.26	0.25	0.45	169	363
-68.50	-69.00	69.95	70.45	SC		20	0.70	0.31	0.31	0.39	204	332
-69.00	-69.50	70.45	70.95			19	0.67	0.32	0.31	0.35	209	302

EB1P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-69.50	-70.00	70.95	71.45	SM		20	0.65	0.29	0.28	0.36	257	281
-70.00	-70.50	71.45	71.95			21	0.60	0.29	0.28	0.31	326	293
-70.50	-71.00	71.95	72.45		6	25	0.54	0.24	0.24	0.29	340	383
-71.00	-71.50	72.45	72.95			24	0.54	0.24	0.24	0.30	350	394
-71.50	-72.00	72.95	73.45			25	0.52	0.24	0.24	0.28	388	385
-72.00	-72.50	73.45	73.95			24	0.52	0.24	0.24	0.28	418	384
-72.50	-73.00	73.95	74.45			33	0.42	0.18	0.18	0.24	395	388
-73.00	-73.50	74.45	74.95		4	34	0.41	0.18	0.18	0.23	432	358
-73.50	-74.00	74.95	75.45			24	0.44	0.24	0.24	0.19	837	295
-74.00	-74.50	75.45	75.95			24	0.43	0.25	0.25	0.18	758	267
-74.50	-75.00	75.95	76.45			29	0.46	0.21	0.21	0.25	768	249
-75.00	-75.50	76.45	76.95			29	0.49	0.21	0.21	0.28	762	251
-75.50	-76.00	76.95	77.45		5	37	0.47	0.16	0.16	0.31	744	280
-76.00	-76.50	77.45	77.95			37	0.46	0.16	0.16	0.30	736	315
-76.50	-77.00	77.95	78.45			37	0.49	0.16	0.16	0.33	670	337
-77.00	-77.50	78.45	78.95			37	0.50	0.16	0.16	0.34	649	332
-77.50	-78.00	78.95	79.45			35	0.52	0.17	0.17	0.35	643	310
-78.00	-78.50	79.45	79.95		55	35	0.56	0.17	0.17	0.39	657	282
-78.50	-79.00	79.95	80.45			31	0.58	0.19	0.19	0.39	647	258
-79.00	-79.50	80.45	80.95			32	0.59	0.19	0.19	0.40	647	229
-79.50	-80.00	80.95	81.45			26	0.60	0.24	0.24	0.36	633	236
-80.00	-80.50	81.45	81.95			25	0.60	0.24	0.24	0.36	651	230
-80.50	-81.00	81.95	82.45		20	2	0.64	0.24	0.24	0.40	644	233
-81.00	-81.50	82.45	82.95			-	-	-	-	-	-	-

8.1.32 **SR-83 – P4P5 PDA**

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-23.00	-23.50	23.00	23.50	SC	5	2	4.10	3.00	4.10	1.10	4	0
-23.50	-24.00	23.50	24.00			2	3.99	3.00	3.99	0.99	0	0
-24.00	-24.50	24.00	24.50			3	3.41	2.40	3.41	1.01	0	4
-24.50	-25.00	24.50	25.00			4	2.64	1.63	2.64	1.01	0	41
-25.00	-25.50	25.00	25.50			7	1.90	0.86	1.86	1.04	0	82
-25.50	-26.00	25.50	26.00		10	7	1.92	0.83	1.73	1.09	4	49
-26.00	-26.50	26.00	26.50			8	2.04	0.75	1.60	1.29	2	24
-26.50	-27.00	26.50	27.00			9	2.11	0.72	1.71	1.38	5	4
-27.00	-27.50	27.00	27.50	SP-SM		9	2.14	0.67	1.60	1.47	4	7
-27.50	-28.00	27.50	28.00			9	2.21	0.65	1.54	1.56	4	7
-28.00	-28.50	28.00	28.50		14	10	2.00	0.60	1.40	1.40	5	6
-28.50	-29.00	28.50	29.00			7	2.09	0.60	1.41	1.49	3	6
-29.00	-29.50	29.00	29.50			2	3.83	3.00	3.83	0.83	0	0
-29.50	-30.00	29.50	30.00			2	3.80	3.00	3.80	0.80	0	0
-30.00	-30.50	30.00	30.50			2	3.84	3.00	3.84	0.84	3	0
-30.50	-31.00	30.50	31.00	SC	25	2	3.78	3.00	3.78	0.78	0	0
-31.00	-31.50	31.00	31.50			2	3.79	3.00	3.79	0.79	0	0
-31.50	-32.00	31.50	32.00			2	3.83	3.00	3.83	0.83	0	0
-32.00	-32.50	32.00	32.50			2	3.84	3.00	3.84	0.84	0	0
-32.50	-33.00	32.50	33.00			3	3.41	2.50	3.34	0.91	1	0
-33.00	-33.50	33.00	33.50		7	4	2.59	1.50	2.30	1.09	2	0
-33.50	-34.00	33.50	34.00			4	2.59	1.63	2.44	0.97	0	0
-34.00	-34.50	34.00	34.50			3	2.90	2.00	2.76	0.90	0	0
-34.50	-35.00	34.50	35.00			3	2.85	2.00	2.73	0.85	1	0
-35.00	-35.50	35.00	35.50			3	2.84	2.00	2.70	0.84	1	0
-35.50	-36.00	35.50	36.00		7	3	2.87	1.90	2.77	0.97	2	0
-36.00	-36.50	36.00	36.50			3	2.67	1.71	2.44	0.96	10	0
-36.50	-37.00	36.50	37.00			4	2.58	1.58	2.46	1.00	2	0
-37.00	-37.50	37.00	37.50			5	2.30	1.20	1.98	1.10	8	0
-37.50	-38.00	37.50	38.00			7	2.05	0.99	1.93	1.06	8	25
-38.00	-38.50	38.00	38.50		6	8	1.81	0.71	1.69	1.10	12	60
-38.50	-39.00	38.50	39.00			8	1.89	0.75	1.70	1.15	17	47
-39.00	-39.50	39.00	39.50			7	1.99	0.86	1.80	1.13	12	22
-39.50	-40.00	39.50	40.00			7	2.05	0.86	1.78	1.19	9	24
-40.00	-40.50	40.00	40.50			7	2.11	0.86	1.74	1.25	2	6
-40.50	-41.00	40.50	41.00		8	6	2.08	0.97	1.87	1.11	7	26
-41.00	-41.50	41.00	41.50			4	2.60	1.50	2.60	1.10	0	55
-41.50	-42.00	41.50	42.00			4	2.45	1.50	2.45	0.95	0	15
-42.00	-42.50	42.00	42.50			4	2.42	1.50	2.42	0.92	1	20
-42.50	-43.00	42.50	43.00			4	2.49	1.55	2.49	0.94	1	32
-43.00	-43.50	43.00	43.50		8	3	2.76	1.71	2.76	1.05	0	26
-43.50	-44.00	43.50	44.00			4	2.64	1.71	2.64	0.93	0	14
-44.00	-44.50	44.00	44.50			3	2.66	1.71	2.66	0.95	0	11
-44.50	-45.00	44.50	45.00			4	2.70	1.71	2.70	0.99	0	23
-45.00	-45.50	45.00	45.50			3	2.74	1.71	2.74	1.03	0	52
-45.50	-46.00	45.50	46.00		5	4	2.68	1.66	2.68	1.02	0	32
-46.00	-46.50	46.00	46.50			4	2.50	1.50	2.50	1.00	0	31
-46.50	-47.00	46.50	47.00			5	2.37	1.34	2.37	1.03	0	70
-47.00	-47.50	47.00	47.50			5	2.16	1.09	2.16	1.07	0	69
-47.50	-48.00	47.50	48.00			6	2.13	1.03	2.13	1.10	0	88
-48.00	-48.50	48.00	48.50		6	6	2.01	0.92	2.01	1.09	0	92
-48.50	-49.00	48.50	49.00			7	1.99	0.92	1.99	1.07	0	103
-49.00	-49.50	49.00	49.50			6	2.02	0.92	2.02	1.10	0	119
-49.50	-50.00	49.50	50.00			9	1.75	0.76	1.70	1.00	8	152

P4P5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-50.00	-50.50	50.00	50.50			11	0.95	0.55	0.55	0.40	34	265
-50.50	-51.00	50.50	51.00		5	10	1.05	0.57	0.57	0.48	18	248
-51.00	-51.50	51.00	51.50			10	1.06	0.63	0.63	0.43	7	230
-51.50	-52.00	51.50	52.00			12	1.08	0.48	0.48	0.60	25	216
-52.00	-52.50	52.00	52.50			19	1.10	0.32	0.32	0.78	31	209
-52.50	-53.00	52.50	53.00			19	1.18	0.31	0.31	0.87	24	207
-53.00	-53.50	53.00	53.50		5	21	1.25	0.29	0.29	0.96	4	219
-53.50	-54.00	53.50	54.00			32	1.27	0.19	0.19	1.08	3	228
-54.00	-54.50	54.00	54.50			52	1.34	0.12	0.12	1.22	4	237
-54.50	-55.00	54.50	55.00			69	1.37	0.09	0.09	1.28	1	227
-55.00	-55.50	55.00	55.50			98	1.37	0.06	0.06	1.31	0	212
-55.50	-56.00	55.50	56.00		6	86	1.41	0.07	0.07	1.34	3	223
-56.00	-56.50	56.00	56.50			65	1.49	0.09	0.09	1.40	6	235
-56.50	-57.00	56.50	57.00			62	1.47	0.10	0.10	1.38	16	220
-57.00	-57.50	57.00	57.50			55	1.48	0.11	0.11	1.37	22	216
-57.50	-58.00	57.50	58.00			65	1.37	0.09	0.09	1.28	48	188
-58.00	-58.50	58.00	58.50		5	81	1.19	0.07	0.08	1.12	41	166
-58.50	-59.00	58.50	59.00			71	1.03	0.08	0.09	0.95	73	206
-59.00	-59.50	59.00	59.50			53	0.74	0.11	0.11	0.63	72	232
-59.50	-60.00	59.50	60.00			66	0.87	0.09	0.09	0.78	47	209
-60.00	-60.50	60.00	60.50			86	0.96	0.07	0.07	0.89	57	205
-60.50	-61.00	60.50	61.00		6	88	1.02	0.07	0.07	0.95	54	214
-61.00	-61.50	61.00	61.50			92	1.01	0.07	0.07	0.94	52	212
-61.50	-62.00	61.50	62.00			75	1.01	0.08	0.08	0.93	54	213
-62.00	-62.50	62.00	62.50	SC		47	1.02	0.13	0.13	0.89	64	219
-62.50	-63.00	62.50	63.00			36	0.85	0.17	0.17	0.68	109	246
-63.00	-63.50	63.00	63.50		6	17	0.81	0.35	0.35	0.46	58	355
-63.50	-64.00	63.50	64.00			17	0.86	0.35	0.35	0.51	56	315
-64.00	-64.50	64.00	64.50			16	0.92	0.36	0.36	0.56	47	307
-64.50	-65.00	64.50	65.00			18	0.92	0.34	0.34	0.58	57	301
-65.00	-65.50	65.00	65.50			19	0.88	0.31	0.31	0.57	63	291
-65.50	-66.00	65.50	66.00		15	20	0.82	0.30	0.30	0.52	103	266
-66.00	-66.50	66.00	66.50			21	0.75	0.29	0.29	0.46	132	245
-66.50	-67.00	66.50	67.00			19	0.70	0.31	0.31	0.40	129	242
-67.00	-67.50	67.00	67.50			17	0.72	0.34	0.34	0.38	96	261
-67.50	-68.00	67.50	68.00			19	0.72	0.33	0.33	0.39	104	247
-68.00	-68.50	68.00	68.50		7	19	0.62	0.32	0.32	0.30	143	279
-68.50	-69.00	68.50	69.00			19	0.58	0.31	0.31	0.27	128	380
-69.00	-69.50	69.00	69.50			20	0.57	0.30	0.30	0.27	145	357
-69.50	-70.00	69.50	70.00			20	0.55	0.30	0.30	0.25	166	333
-70.00	-70.50	70.00	70.50			21	0.55	0.29	0.29	0.26	182	319
-70.50	-71.00	70.50	71.00		11	20	0.57	0.30	0.30	0.27	196	305
-71.00	-71.50	71.00	71.50			19	0.55	0.31	0.31	0.24	202	314
-71.50	-72.00	71.50	72.00			21	0.55	0.29	0.29	0.25	205	369
-72.00	-72.50	72.00	72.50			22	0.54	0.27	0.27	0.27	212	394
-72.50	-73.00	72.50	73.00			22	0.54	0.26	0.26	0.28	218	405
-73.00	-73.50	73.00	73.50		7	24	0.53	0.25	0.25	0.28	231	427
-73.50	-74.00	73.50	74.00			26	0.53	0.23	0.23	0.30	244	453
-74.00	-74.50	74.00	74.50			30	0.52	0.20	0.20	0.32	249	484
-74.50	-75.00	74.50	75.00			32	0.52	0.19	0.19	0.33	247	532
-75.00	-75.50	75.00	75.50			35	0.52	0.17	0.17	0.35	239	588
-75.50	-76.00	75.50	76.00		43	38	0.50	0.16	0.16	0.34	232	619
-76.00	-76.50	76.00	76.50			42	0.50	0.14	0.14	0.36	239	594
-76.50	-77.00	76.50	77.00			40	0.53	0.15	0.15	0.38	234	531
-77.00	-77.50	77.00	77.50	SC		35	0.56	0.17	0.17	0.39	212	492
-77.50	-78.00	77.50	78.00			34	0.57	0.18	0.18	0.39	194	470
-78.00	-78.50	78.00	78.50		7	30	0.58	0.20	0.19	0.38	183	450
-78.50	-79.00	78.50	79.00			29	0.60	0.21	0.20	0.40	173	414

P4P5 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-79.00	-79.50	79.00	79.50			26	0.62	0.23	0.23	0.39	161	373
-79.50	-80.00	79.50	80.00			25	0.63	0.24	0.24	0.39	165	347
-80.00	-80.50	80.00	80.50			23	0.63	0.26	0.26	0.37	157	349
-80.50	-81.00	80.50	81.00		6	22	0.65	0.27	0.27	0.38	160	343
-81.00	-81.50	81.00	81.50			20	0.65	0.30	0.30	0.35	154	325
-81.50	-82.00	81.50	82.00			19	0.65	0.31	0.31	0.34	154	311
-82.00	-82.50	82.00	82.50			17	0.67	0.34	0.34	0.33	154	300
-82.50	-83.00	82.50	83.00			17	0.69	0.35	0.35	0.34	152	308
-83.00	-83.50	83.00	83.50		24	16	0.71	0.38	0.37	0.33	151	313
-83.50	-84.00	83.50	84.00			17	0.71	0.37	0.36	0.34	149	311
-84.00	-84.50	84.00	84.50			18	0.65	0.35	0.35	0.30	121	292
-84.50	-85.00	84.50	85.00	SC		16	0.65	0.36	0.36	0.29	119	285
-85.00	-85.50	85.00	85.50			16	0.65	0.39	0.39	0.26	121	279
-85.50	-86.00	85.50	86.00		13	17	0.62	0.36	0.35	0.27	124	267
-86.00	-86.50	86.00	86.50			19	0.60	0.31	0.31	0.29	124	263
-86.50	-87.00	86.50	87.00			20	0.60	0.31	0.31	0.29	126	258
-87.00	-87.50	87.00	87.50			19	0.58	0.31	0.31	0.27	140	252
-87.50	-88.00	87.50	88.00			20	0.59	0.30	0.30	0.28	149	254
-88.00	-88.50	88.00	88.50		15	21	0.58	0.29	0.28	0.29	142	258
-88.50	-89.00	88.50	89.00			20	0.57	0.30	0.30	0.27	149	252
-89.00	-89.50	89.00	89.50			18	0.59	0.33	0.33	0.26	163	253
-89.50	-90.00	89.50	90.00			19	0.59	0.32	0.32	0.27	155	261
-90.00	-90.50	90.00	90.50			20	0.61	0.30	0.30	0.31	150	276
-90.50	-91.00	90.50	91.00		3	20	0.62	0.31	0.30	0.31	136	287
-91.00	-91.50	91.00	91.50			19	0.62	0.32	0.31	0.30	134	288
-91.50	-92.00	91.50	92.00	SC		19	0.60	0.31	0.31	0.29	122	287
-92.00	-92.50	92.00	92.50			20	0.61	0.30	0.30	0.31	143	289
-92.50	-93.00	92.50	93.00			20	0.61	0.30	0.29	0.32	155	289
-93.00	-93.50	93.00	93.50		10	21	0.61	0.29	0.28	0.32	159	291
-93.50	-94.00	93.50	94.00			21	0.61	0.29	0.29	0.32	172	292
-94.00	-94.50	94.00	94.50			20	0.60	0.30	0.30	0.30	174	280
-94.50	-95.00	94.50	95.00			19	0.62	0.31	0.31	0.31	161	296
-95.00	-95.50	95.00	95.50			19	0.63	0.32	0.32	0.31	146	317
-95.50	-96.00	95.50	96.00		9	19	0.64	0.32	0.32	0.32	146	332
-96.00	-96.50	96.00	96.50			19	0.63	0.32	0.32	0.31	163	324
-96.50	-97.00	96.50	97.00	SP		20	0.62	0.30	0.30	0.32	170	309
-97.00	-97.50	97.00	97.50			22	0.61	0.27	0.27	0.34	157	313
-97.50	-98.00	97.50	98.00			22	0.60	0.27	0.27	0.33	151	315
-98.00	-98.50	98.00	98.50		5	22	0.61	0.27	0.27	0.34	141	329
-98.50	-99.00	98.50	99.00			22	0.60	0.27	0.27	0.33	139	334
-99.00	-99.50	99.00	99.50			22	0.62	0.27	0.27	0.35	139	350
-99.50	-100.00	99.50	100.00			22	0.61	0.27	0.27	0.34	145	346
-100.00	-100.50	100.00	100.50			22	0.61	0.27	0.27	0.34	148	347
-100.50	-101.00	100.50	101.00		5	22	0.62	0.28	0.27	0.35	147	348
-101.00	-101.50	101.00	101.50			21	0.62	0.29	0.29	0.33	150	342
-101.50	-102.00	101.50	102.00			20	0.61	0.29	0.29	0.32	202	314
-102.00	-102.50	102.00	102.50			21	0.60	0.29	0.29	0.31	246	293
-102.50	-103.00	102.50	103.00	SC		20	0.57	0.29	0.29	0.27	256	255
-103.00	-103.50	103.00	103.50		4	20	0.59	0.30	0.30	0.29	260	271
-103.50	-104.00	103.50	104.00			20	0.60	0.30	0.30	0.30	259	277
-104.00	-104.50	104.00	104.50			19	0.60	0.31	0.31	0.29	283	266
-104.50	-105.00	104.50	105.00			13	0.57	0.31	0.31	0.26	307	240

8.1.33 SR-83 – EB5P2 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-21.70	-22.20	29.10	29.60			2	2.25	1.09	1.07	1.16	0	95
-22.20	-22.70	29.60	30.10	SM	15	5	1.94	1.09	1.07	0.85	0	132
-22.70	-23.20	30.10	30.60			5	2.13	1.21	1.19	0.92	0	69
-23.20	-23.70	30.60	31.10			3	2.30	1.71	1.69	0.59	0	33
-23.70	-24.20	31.10	31.60			4	2.38	1.71	1.69	0.67	0	2
-24.20	-24.70	31.60	32.10			3	2.33	1.71	1.69	0.62	0	10
-24.70	-25.20	32.10	32.60		42	4	2.20	1.78	1.76	0.42	0	66
-25.20	-25.70	32.60	33.10	SM		3	2.15	2.00	1.98	0.15	0	80
-25.70	-26.20	33.10	33.60			3	2.20	1.78	1.76	0.42	0	39
-26.20	-26.70	33.60	34.10			5	2.23	1.33	1.31	0.90	0	26
-26.70	-27.20	34.10	34.60			3	2.25	1.33	1.31	0.92	0	3
-27.20	-27.70	34.60	35.10		17	2	3.02	3.00	2.98	0.01	0	0
-27.70	-28.20	35.10	35.60			2	2.98	3.00	2.98	-0.02	0	0
-28.20	-28.70	35.60	36.10			2	2.99	3.00	2.98	-0.01	0	0
-28.70	-29.20	36.10	36.60			3	2.82	2.80	2.78	0.02	0	0
-29.20	-29.70	36.60	37.10			2	2.51	2.40	2.38	0.11	0	0
-29.70	-30.20	37.10	37.60		11	3	2.48	2.40	2.38	0.08	0	0
-30.20	-30.70	37.60	38.10			2	2.55	2.40	2.38	0.15	0	0
-30.70	-31.20	38.10	38.60			3	2.40	2.27	2.25	0.13	0	5
-31.20	-31.70	38.60	39.10			3	2.29	2.00	1.98	0.29	0	25
-31.70	-32.20	39.10	39.60			3	2.22	1.90	1.88	0.31	0	32
-32.20	-32.70	39.60	40.10		8	3	2.23	1.71	1.69	0.52	0	44
-32.70	-33.20	40.10	40.60			4	2.06	1.71	1.69	0.35	0	58
-33.20	-33.70	40.60	41.10			3	1.99	1.71	1.69	0.28	0	65
-33.70	-34.20	41.10	41.60			5	1.82	1.51	1.49	0.32	0	81
-34.20	-34.70	41.60	42.10			5	1.70	1.20	1.18	0.50	0	100
-34.70	-35.20	42.10	42.60		13	4	1.78	1.40	1.38	0.38	0	97
-35.20	-35.70	42.60	43.10			3	1.98	2.00	1.98	-0.02	0	83
-35.70	-36.20	43.10	43.60			4	1.73	1.60	1.58	0.13	0	105
-36.20	-36.70	43.60	44.10			5	1.56	1.20	1.18	0.36	0	130
-36.70	-37.20	44.10	44.60			5	1.46	1.16	1.14	0.31	0	134
-37.20	-37.70	44.60	45.10		7	5	1.44	1.09	1.07	0.35	0	138
-37.70	-38.20	45.10	45.60			6	1.49	1.13	1.11	0.36	0	135
-38.20	-38.70	45.60	46.10			5	1.52	1.20	1.18	0.32	0	126
-38.70	-39.20	46.10	46.60	SM		5	1.52	1.16	1.14	0.36	0	127
-39.20	-39.70	46.60	47.10			5	1.52	1.09	1.07	0.43	0	124
-39.70	-40.20	47.10	47.60		6	6	1.55	1.13	1.11	0.42	0	120
-40.20	-40.70	47.60	48.10			5	1.51	1.20	1.18	0.31	0	115
-40.70	-41.20	48.10	48.60			5	1.41	1.20	1.18	0.21	0	117
-41.20	-41.70	48.60	49.10			5	1.45	1.20	1.18	0.25	0	118
-41.70	-42.20	49.10	49.60			5	1.41	1.20	1.18	0.21	0	128
-42.20	-42.70	49.60	50.10		7	5	1.41	1.20	1.18	0.21	0	154
-42.70	-43.20	50.10	50.60			5	1.42	1.20	1.18	0.22	0	174
-43.20	-43.70	50.60	51.10			5	1.37	1.20	1.18	0.17	0	177
-43.70	-44.20	51.10	51.60			5	1.39	1.16	1.14	0.24	0	182
-44.20	-44.70	51.60	52.10			5	1.36	1.09	1.07	0.27	0	184
-44.70	-45.20	52.10	52.60		5	6	1.33	1.06	1.04	0.27	0	182
-45.20	-45.70	52.60	53.10			6	1.23	1.00	0.98	0.23	2	177
-45.70	-46.20	53.10	53.60			7	1.19	0.91	0.89	0.28	3	186
-46.20	-46.70	53.60	54.10			7	1.10	0.80	0.78	0.30	4	217
-46.70	-47.20	54.10	54.60			11	1.13	0.58	0.56	0.55	1	247
-47.20	-47.70	54.60	55.10		5	15	1.18	0.40	0.38	0.78	2	261
-47.70	-48.20	55.10	55.60			14	1.21	0.42	0.40	0.79	2	257
-48.20	-48.70	55.60	56.10			13	1.15	0.46	0.44	0.69	4	255
-48.70	-49.20	56.10	56.60			17	1.13	0.35	0.33	0.78	6	253

EB5P2 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-49.20	-49.70	56.60	57.10			23	1.11	0.26	0.24	0.85	11	259
-49.70	-50.20	57.10	57.60		7	25	1.15	0.24	0.21	0.91	8	265
-50.20	-50.70	57.60	58.10			29	1.23	0.21	0.18	1.02	6	279
-50.70	-51.20	58.10	58.60			40	1.29	0.16	0.13	1.13	3	285
-51.20	-51.70	58.60	59.10			54	1.32	0.11	0.09	1.21	2	290
-51.70	-52.20	59.10	59.60			61	1.41	0.10	0.08	1.32	0	292
-52.20	-52.70	59.60	60.10		8	71	1.40	0.08	0.06	1.32	1	293
-52.70	-53.20	60.10	60.60			61	1.37	0.09	0.07	1.28	4	297
-53.20	-53.70	60.60	61.10			44	1.42	0.13	0.11	1.29	15	333
-53.70	-54.20	61.10	61.60			43	1.40	0.14	0.11	1.26	17	342
-54.20	-54.70	61.60	62.10			41	1.35	0.15	0.12	1.20	23	341
-54.70	-55.20	62.10	62.60		6	41	1.30	0.15	0.12	1.15	29	354
-55.20	-55.70	62.60	63.10			41	1.22	0.15	0.12	1.07	41	368
-55.70	-56.20	63.10	63.60			39	1.19	0.15	0.12	1.03	38	369
-56.20	-56.70	63.60	64.10	SM		38	1.14	0.16	0.13	0.98	71	369
-56.70	-57.20	64.10	64.60			37	1.13	0.16	0.14	0.97	154	334
-57.20	-57.70	64.60	65.10		9	35	1.13	0.17	0.15	0.96	232	274
-57.70	-58.20	65.10	65.60			44	1.15	0.13	0.11	1.01	264	286
-58.20	-58.70	65.60	66.10			58	0.95	0.10	0.08	0.85	190	262
-58.70	-59.20	66.10	66.60			49	0.96	0.12	0.10	0.84	195	290
-59.20	-59.70	66.60	67.10			36	1.05	0.17	0.14	0.88	224	344
-59.70	-60.20	67.10	67.60		11	32	0.90	0.19	0.16	0.72	298	301
-60.20	-60.70	67.60	68.10			26	0.68	0.23	0.21	0.45	430	239
-60.70	-61.20	68.10	68.60			35	0.77	0.18	0.15	0.59	305	315
-61.20	-61.70	68.60	69.10			46	0.84	0.13	0.10	0.71	250	337
-61.70	-62.20	69.10	69.60			56	0.92	0.11	0.08	0.81	207	338
-62.20	-62.70	69.60	70.10		17	71	0.93	0.09	0.06	0.84	168	318
-62.70	-63.20	70.10	70.60			60	0.93	0.10	0.08	0.83	160	304
-63.20	-63.70	70.60	71.10			44	0.83	0.13	0.11	0.70	219	275
-63.70	-64.20	71.10	71.60			40	0.79	0.15	0.13	0.65	180	378
-64.20	-64.70	71.60	72.10			33	0.91	0.18	0.16	0.73	143	351
-64.70	-65.20	72.10	72.60		13	39	0.91	0.16	0.13	0.75	167	266
-65.20	-65.70	72.60	73.10			48	0.85	0.13	0.10	0.72	190	228
-65.70	-66.20	73.10	73.60			41	0.76	0.15	0.12	0.61	207	264
-66.20	-66.70	73.60	74.10			31	0.70	0.20	0.17	0.50	229	295
-66.70	-67.20	74.10	74.60			27	0.72	0.22	0.20	0.49	198	375
-67.20	-67.70	74.60	75.10		50	22	0.75	0.27	0.25	0.48	187	374
-67.70	-68.20	75.10	75.60			17	0.67	0.32	0.30	0.35	236	332
-68.20	-68.70	75.60	76.10			12	0.62	0.50	0.48	0.12	226	338
-68.70	-69.20	76.10	76.60			12	0.62	0.50	0.48	0.12	221	333
-69.20	-69.70	76.60	77.10			12	0.65	0.50	0.48	0.15	231	320
-69.70	-70.20	77.10	77.60		9	13	0.66	0.47	0.45	0.20	240	310
-70.20	-70.70	77.60	78.10	SM		15	0.63	0.41	0.39	0.22	255	312
-70.70	-71.20	78.10	78.60			14	0.64	0.42	0.39	0.22	258	320
-71.20	-71.70	78.60	79.10			14	0.63	0.43	0.40	0.20	251	329
-71.70	-72.20	79.10	79.60			18	0.51	0.35	0.32	0.17	533	321
-72.20	-72.70	79.60	80.10		61	23	0.38	0.26	0.23	0.12	617	285
-72.70	-73.20	80.10	80.60			27	0.38	0.22	0.19	0.16	529	291
-73.20	-73.70	80.60	81.10			34	0.38	0.18	0.15	0.20	493	300
-73.70	-74.20	81.10	81.60			32	0.38	0.19	0.16	0.19	452	344
-74.20	-74.70	81.60	82.10			27	0.46	0.22	0.19	0.24	453	396
-74.70	-75.20	82.10	82.60		22	28	0.48	0.22	0.19	0.27	425	423
-75.20	-75.70	82.60	83.10			29	0.46	0.21	0.18	0.25	474	461
-75.70	-76.20	83.10	83.60			29	0.48	0.20	0.18	0.28	426	457
-76.20	-76.70	83.60	84.10			31	0.50	0.19	0.16	0.31	399	464
-76.70	-77.20	84.10	84.60			34	0.48	0.18	0.15	0.30	391	508
-77.20	-77.70	84.60	85.10		12	37	0.48	0.16	0.13	0.32	398	491
-77.70	-78.20	85.10	85.60			37	0.49	0.16	0.14	0.33	381	440
-78.20	-78.70	85.60	86.10	SM		35	0.51	0.17	0.15	0.34	364	413
-78.70	-79.20	86.10	86.60			21	0.54	0.17	0.15	0.37	348	382

8.1.34 I-10 and Chaffee Road Overpass – P2P9 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
30.08	29.58	33.15	33.65	SP		3	2.94	1.50	2.93	1.44	1	20
29.58	29.08	33.65	34.15			4	1.68	1.50	1.08	0.18	0	177
29.08	28.58	34.15	34.65		25	4	1.71	1.50	1.04	0.21	0	188
28.58	28.08	34.65	35.15			4	1.68	1.50	1.01	0.18	0	194
28.08	27.58	35.15	35.65			4	1.44	1.50	0.79	-0.06	4	214
27.58	27.08	35.65	36.15			4	1.41	1.50	0.73	-0.09	15	234
27.08	26.58	36.15	36.65	SP-SC		4	1.39	1.50	0.71	-0.12	15	244
26.58	26.08	36.65	37.15		12	4	1.35	1.50	0.66	-0.15	17	250
26.08	25.58	37.15	37.65			7	1.26	0.95	0.49	0.31	21	260
25.58	25.08	37.65	38.15			7	1.23	0.86	0.39	0.37	22	268
25.08	24.58	38.15	38.65			8	1.26	0.81	0.41	0.45	22	265
24.58	24.08	38.65	39.15			7	1.32	0.80	0.50	0.52	18	245
24.08	23.58	39.15	39.65		43	5	1.46	1.12	0.59	0.34	14	226
23.58	23.08	39.65	40.15			5	1.59	1.20	0.67	0.39	11	207
23.08	22.58	40.15	40.65			3	1.85	2.00	1.02	-0.15	5	181
22.58	22.08	40.65	41.15			2	2.01	2.40	1.25	-0.39	5	156
22.08	21.58	41.15	41.65	SC		3	2.07	2.13	1.38	-0.06	1	141
21.58	21.08	41.65	42.15		18	3	2.04	2.00	1.33	0.04	5	129
21.08	20.58	42.15	42.65			4	2.09	1.78	1.36	0.31	4	130
20.58	20.08	42.65	43.15			3	2.36	1.71	1.75	0.65	3	116
20.08	19.58	43.15	43.65			2	2.61	2.86	2.15	-0.25	0	82
19.58	19.08	43.65	44.15			1	2.83	4.00	2.48	-1.17	0	59
19.08	18.58	44.15	44.65		3	2	2.88	4.00	2.60	-1.12	0	43
18.58	18.08	44.65	45.15			1	3.00	4.00	2.83	-1.00	0	19
18.08	17.58	45.15	45.65			2	3.34	4.00	3.27	-0.66	0	0
17.58	17.08	45.65	46.15			1	3.89	4.00	3.89	-0.11	0	0
17.08	16.58	46.15	46.65	CH		2	4.38	4.00	4.38	0.38	0	0
16.58	16.08	46.65	47.15		2	1	4.52	4.00	4.52	0.52	0	0
16.08	15.58	47.15	47.65			2	4.28	4.00	4.27	0.28	0	0
15.58	15.08	47.65	48.15			1	4.34	4.00	4.34	0.34	0	0
15.08	14.58	48.15	48.65			2	4.49	3.50	4.48	0.99	0	0
14.58	14.08	48.65	49.15			2	4.06	3.00	4.05	1.06	0	0
14.08	13.58	49.15	49.65		3	3	3.81	2.60	3.80	1.21	0	0
13.58	13.08	49.65	50.15			2	3.72	2.40	3.72	1.32	0	0
13.08	12.58	50.15	50.65			2	3.84	3.20	3.83	0.64	0	0
12.58	12.08	50.65	51.15			1	4.02	4.00	4.02	0.02	0	0
12.08	11.58	51.15	51.65			3	4.03	2.93	3.98	1.10	0	0
11.58	11.08	51.65	52.15		3	2	3.99	2.40	3.93	1.59	0	0
11.08	10.58	52.15	52.65			4	3.84	1.73	3.84	2.12	0	0
10.58	10.08	52.65	53.15			4	3.49	1.50	3.48	1.99	0	0
10.08	9.58	53.15	53.65			3	3.30	1.83	3.29	1.46	0	0
9.58	9.08	53.65	54.15			3	3.43	2.00	3.41	1.43	0	0
9.08	8.58	54.15	54.65		3	3	3.50	2.27	3.45	1.24	0	0
8.58	8.08	54.65	55.15			2	3.36	2.40	3.33	0.96	0	0
8.08	7.58	55.15	55.65			4	3.37	1.88	3.33	1.49	0	0
7.58	7.08	55.65	56.15	SC		3	3.41	1.71	3.40	1.70	0	0
7.08	6.58	56.15	56.65			3	3.44	1.90	3.43	1.54	0	0
6.58	6.08	56.65	57.15		4	3	3.58	2.00	3.57	1.58	0	0
6.08	5.58	57.15	57.65			6	3.62	1.24	3.62	2.38	0	0
5.58	5.08	57.65	58.15			5	3.49	1.09	3.47	2.40	0	0
5.08	4.58	58.15	58.65	CH		4	3.55	1.40	3.54	2.16	0	0
4.58	4.08	58.65	59.15			4	3.49	1.50	3.48	1.99	0	0
4.08	3.58	59.15	59.65		3	4	3.51	1.50	3.49	2.01	0	0
3.58	3.08	59.65	60.15			4	3.59	1.50	3.59	2.09	0	0

P2P9 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
3.08	2.58	60.15	60.65	SC		4	3.84	1.50	3.81	2.34	0	0
2.58	2.08	60.65	61.15			4	3.74	1.50	3.74	2.24	0	0
2.08	1.58	61.15	61.65			4	3.62	1.66	3.59	1.96	0	0
1.58	1.08	61.65	62.15		6	3	3.43	1.71	3.26	1.72	0	0
1.08	0.58	62.15	62.65			6	3.30	1.12	3.10	2.18	0	0
0.58	0.08	62.65	63.15			6	3.35	1.00	3.15	2.35	0	0
0.08	-0.42	63.15	63.65	SP-SC		5	3.38	1.16	3.18	2.22	0	0
-0.42	-0.92	63.65	64.15			5	3.38	1.20	3.15	2.18	0	0
-0.92	-1.42	64.15	64.65		6	5	3.35	1.30	3.09	2.04	0	0
-1.42	-1.92	64.65	65.15			4	3.34	1.33	3.06	2.01	0	0
-1.92	-2.42	65.15	65.65			3	3.40	2.04	3.12	1.35	0	0
-2.42	-2.92	65.65	66.15			2	3.38	2.40	3.11	0.98	0	0
-2.92	-3.42	66.15	66.65			3	2.79	2.13	2.36	0.66	0	68
-3.42	-3.92	66.65	67.15		10	3	2.65	2.00	2.28	0.65	0	118
-3.92	-4.42	67.15	67.65			3	2.51	2.00	2.05	0.51	0	174
-4.42	-4.92	67.65	68.15			3	2.29	2.00	1.64	0.29	0	184
-4.92	-5.42	68.15	68.65	SC		3	2.14	2.00	1.50	0.14	0	179
-5.42	-5.92	68.65	69.15			3	2.05	2.00	1.43	0.05	0	180
-5.92	-6.42	69.15	69.65		22	3	2.04	2.00	1.43	0.04	0	182
-6.42	-6.92	69.65	70.15			3	2.07	2.00	1.46	0.07	0	181
-6.92	-7.42	70.15	70.65			7	2.13	1.02	1.53	1.11	0	175
-7.42	-7.92	70.65	71.15			7	2.17	0.86	1.53	1.31	0	174
-7.92	-8.42	71.15	71.65			10	2.03	0.63	1.41	1.41	0	170
-8.42	-8.92	71.65	72.15		16	10	1.11	0.60	0.51	0.51	29	203
-8.92	-9.42	72.15	72.65			14	0.93	0.44	0.33	0.49	26	200
-9.42	-9.92	72.65	73.15			14	0.94	0.43	0.37	0.51	37	186
-9.92	-10.42	73.15	73.65			12	0.80	0.49	0.26	0.30	61	203
-10.42	-10.92	73.65	74.15			12	0.70	0.50	0.22	0.20	76	258
-10.92	-11.42	74.15	74.65		15	36	0.63	0.17	0.20	0.46	81	326
-11.42	-11.92	74.65	75.15			38	0.58	0.16	0.13	0.42	101	356
-11.92	-12.42	75.15	75.65			31	0.63	0.19	0.10	0.44	106	375
-12.42	-12.92	75.65	76.15	SP-SC		31	0.67	0.19	0.10	0.48	107	394
-12.92	-13.42	76.15	76.65			33	0.70	0.18	0.10	0.52	111	413
-13.42	-13.92	76.65	77.15		47	34	0.69	0.18	0.13	0.51	127	416
-13.92	-14.42	77.15	77.65			32	0.67	0.19	0.14	0.48	151	411
-14.42	-14.92	77.65	78.15			32	0.65	0.19	0.16	0.46	173	413
-14.92	-15.42	78.15	78.65			30	0.62	0.20	0.15	0.42	211	408
-15.42	-15.92	78.65	79.15			31	0.60	0.20	0.14	0.40	241	413
-15.92	-16.42	79.15	79.65		34	35	0.60	0.17	0.15	0.43	242	432
-16.42	-16.92	79.65	80.15			35	0.61	0.17	0.14	0.44	234	441
-16.92	-17.42	80.15	80.65			31	0.62	0.19	0.18	0.43	218	438
-17.42	-17.92	80.65	81.15			31	0.63	0.19	0.21	0.44	210	425
-17.92	-18.42	81.15	81.65	SP-SC		3	0.65	0.19	0.26	0.46	206	422

8.1.35 I-4 and John Young Parkway – P2P1 (Ramp A) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
76.00	75.50	19.47	19.97	SP-SM	7	2	3.54	4.00	3.47	-0.46	0	0
75.50	75.00	19.97	20.47			1	2.51	4.00	2.35	-1.49	0	0
75.00	74.50	20.47	20.97			3	1.42	2.40	1.10	-0.98	0	0
74.50	74.00	20.97	21.47			2	1.34	2.40	1.04	-1.07	0	0
74.00	73.50	21.47	21.97			2	1.13	3.00	0.79	-1.88	0	0
73.50	73.00	21.97	22.47		9	2	1.73	3.00	1.47	-1.27	0	0
73.00	72.50	22.47	22.97			2	5.00	3.00	5.00	2.00	0	0
72.50	72.00	22.97	23.47			2	4.51	3.00	4.49	1.51	0	0
72.00	71.50	23.47	23.97			2	3.28	3.00	3.10	0.28	0	0
71.50	71.00	23.97	24.47			2	3.69	3.00	3.59	0.69	0	0
71.00	70.50	24.47	24.97	SM	9	2	3.96	3.00	3.89	0.96	0	0
70.50	70.00	24.97	25.47			2	4.30	3.00	4.25	1.30	0	0
70.00	69.50	25.47	25.97			2	4.52	3.00	4.50	1.52	0	0
69.50	69.00	25.97	26.47			2	4.80	3.00	4.77	1.80	0	0
69.00	68.50	26.47	26.97			2	4.87	3.00	4.84	1.87	0	0
68.50	68.00	26.97	27.47		16	2	4.62	3.00	4.61	1.62	0	0
68.00	67.50	27.47	27.97			2	4.58	3.00	4.57	1.58	0	0
67.50	67.00	27.97	28.47			2	4.60	3.00	4.59	1.60	0	0
67.00	66.50	28.47	28.97	CH		2	4.66	3.00	4.66	1.66	0	0
66.50	66.00	28.97	29.47			2	4.36	3.00	4.33	1.36	0	0
66.00	65.50	29.47	29.97		6	2	4.06	3.00	4.03	1.06	0	0
65.50	65.00	29.97	30.47			2	3.54	3.00	3.46	0.54	0	0
65.00	64.50	30.47	30.97			2	3.50	4.00	3.42	-0.50	0	0
64.50	64.00	30.97	31.47			1	3.76	4.00	3.72	-0.24	0	0
64.00	63.50	31.47	31.97			2	3.79	3.00	3.76	0.79	0	0
63.50	63.00	31.97	32.47		5	2	3.56	3.00	3.50	0.56	0	0
63.00	62.50	32.47	32.97			2	3.11	3.00	2.98	0.11	0	0
62.50	62.00	32.97	33.47			2	2.68	3.00	2.45	-0.33	0	0
62.00	61.50	33.47	33.97			2	2.17	3.00	1.77	-0.84	0	8
61.50	61.00	33.97	34.47			2	1.90	3.00	1.39	-1.10	0	46
61.00	60.50	34.47	34.97	SC	5	3	1.96	2.40	1.48	-0.44	0	77
60.50	60.00	34.97	35.47			2	1.94	2.40	1.44	-0.46	0	103
60.00	59.50	35.47	35.97			3	2.05	2.40	1.59	-0.35	0	70
59.50	59.00	35.97	36.47	SP-SM		2	2.37	2.40	2.00	-0.03	0	5
59.00	58.50	36.47	36.97			2	2.76	3.00	2.52	-0.24	0	0
58.50	58.00	36.97	37.47		6	2	3.01	3.00	2.84	0.01	0	0
58.00	57.50	37.47	37.97			2	3.28	3.00	3.16	0.28	0	0
57.50	57.00	37.97	38.47			2	3.67	3.00	3.62	0.67	0	0
57.00	56.50	38.47	38.97	SC		2	3.76	3.00	3.70	0.76	0	0
56.50	56.00	38.97	39.47			2	3.68	3.00	3.62	0.68	0	0
56.00	55.50	39.47	39.97		3	2	3.80	3.00	3.74	0.80	0	0
55.50	55.00	39.97	40.47			2	4.06	3.00	4.02	1.06	0	0
55.00	54.50	40.47	40.97			2	4.11	3.00	4.07	1.11	0	0
54.50	54.00	40.97	41.47	SM		2	4.17	3.00	4.14	1.17	0	0
54.00	53.50	41.47	41.97			2	4.27	3.00	4.24	1.27	0	0
53.50	53.00	41.97	42.47		3	2	4.03	3.00	4.01	1.03	0	0
53.00	52.50	42.47	42.97			2	3.96	3.00	3.92	0.96	0	0
52.50	52.00	42.97	43.47			2	3.88	3.00	3.85	0.88	0	0
52.00	51.50	43.47	43.97			2	3.73	3.00	3.68	0.73	0	0
51.50	51.00	43.97	44.47			2	3.62	3.00	3.55	0.62	0	0
51.00	50.50	44.47	44.97	SC	2	3	3.37	2.40	3.27	0.97	0	0
50.50	50.00	44.97	45.47			2	3.11	2.40	2.94	0.71	0	0
50.00	49.50	45.47	45.97			3	2.68	2.40	2.45	0.28	0	0
49.50	49.00	45.97	46.47			2	2.15	2.40	1.78	-0.26	0	17

P2P1 (Ramp A) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
49.00	48.50	46.47	46.97			2	1.90	3.00	1.44	-1.11	0	66
48.50	48.00	46.97	47.47	SC	2	2	1.74	3.00	1.22	-1.26	0	119
48.00	47.50	47.47	47.97			2	1.68	3.00	1.16	-1.32	0	136
47.50	47.00	47.97	48.47			2	1.85	3.00	1.40	-1.16	0	130
47.00	46.50	48.47	48.97			2	1.90	3.00	1.47	-1.10	0	130
46.50	46.00	48.97	49.47			2	1.95	3.00	1.50	-1.05	0	120
46.00	45.50	49.47	49.97		2	2	2.02	3.00	1.59	-0.99	0	102
45.50	45.00	49.97	50.47			2	2.04	3.00	1.60	-0.97	0	86
45.00	44.50	50.47	50.97			2	2.16	3.00	1.77	-0.85	0	68
44.50	44.00	50.97	51.47			2	2.27	3.00	1.93	-0.73	0	49
44.00	43.50	51.47	51.97			2	2.36	3.00	2.10	-0.64	0	28
43.50	43.00	51.97	52.47		7	2	2.42	3.00	2.17	-0.58	0	10
43.00	42.50	52.47	52.97			3	2.67	2.40	2.46	0.27	0	0
42.50	42.00	52.97	53.47			2	2.74	2.40	2.55	0.34	0	0
42.00	41.50	53.47	53.97			2	2.71	3.00	2.50	-0.30	0	0
41.50	41.00	53.97	54.47			2	2.62	3.00	2.38	-0.39	0	0
41.00	40.50	54.47	54.97		6	2	2.60	3.00	2.38	-0.40	0	0
40.50	40.00	54.97	55.47			2	2.74	3.00	2.55	-0.26	0	0
40.00	39.50	55.47	55.97	SM		2	2.68	4.00	2.48	-1.32	0	0
39.50	39.00	55.97	56.47			1	2.67	4.00	2.48	-1.33	0	0
39.00	38.50	56.47	56.97			2	2.65	3.00	2.45	-0.36	0	0
38.50	38.00	56.97	57.47		4	2	2.72	3.00	2.54	-0.29	0	0
38.00	37.50	57.47	57.97			2	2.77	3.00	2.60	-0.24	0	0
37.50	37.00	57.97	58.47			2	2.76	3.00	2.60	-0.24	0	0
37.00	36.50	58.47	58.97			2	2.81	3.00	2.66	-0.20	0	0
36.50	36.00	58.97	59.47			2	2.96	3.00	2.82	-0.04	0	0
36.00	35.50	59.47	59.97		5	2	2.99	3.00	2.84	-0.01	0	0
35.50	35.00	59.97	60.47			2	3.00	3.00	2.88	0.00	0	0
35.00	34.50	60.47	60.97			2	3.00	3.00	2.86	0.00	0	0
34.50	34.00	60.97	61.47			2	3.02	3.00	2.89	0.01	0	0
34.00	33.50	61.47	61.97			2	2.91	3.00	2.77	-0.10	0	0
33.50	33.00	61.97	62.47		3	2	2.94	3.00	2.81	-0.06	0	0
33.00	32.50	62.47	62.97			2	2.85	3.00	2.70	-0.16	0	0
32.50	32.00	62.97	63.47			2	2.84	3.00	2.69	-0.17	0	0
32.00	31.50	63.47	63.97			3	2.85	2.40	2.72	0.45	0	0
31.50	31.00	63.97	64.47			2	2.88	2.40	2.75	0.48	0	0
31.00	30.50	64.47	64.97		4	3	2.98	2.40	2.88	0.58	0	0
30.50	30.00	64.97	65.47			2	3.04	2.40	2.93	0.64	0	0
30.00	29.50	65.47	65.97	SP-SM		2	2.92	3.00	2.80	-0.08	0	0
29.50	29.00	65.97	66.47			3	2.83	2.67	2.70	0.16	0	0
29.00	28.50	66.47	66.97			3	2.76	2.00	2.62	0.76	0	0
28.50	28.00	66.97	67.47		3	3	2.80	2.00	2.68	0.80	0	0
28.00	27.50	67.47	67.97			3	2.90	2.00	2.79	0.90	0	0
27.50	27.00	67.97	68.47			3	2.78	1.90	2.64	0.88	0	0
27.00	26.50	68.47	68.97			3	2.68	1.71	2.53	0.97	0	0
26.50	26.00	68.97	69.47			4	1.93	1.71	1.57	0.22	0	117
26.00	25.50	69.47	69.97		32	3	1.07	1.71	0.53	-0.64	0	280
25.50	25.00	69.97	70.47	SM		16	0.79	0.46	0.24	0.33	3	604
25.00	24.50	70.47	70.97			35	0.73	0.17	0.15	0.56	26	652
24.50	24.00	70.97	71.47			30	0.86	0.20	0.23	0.67	25	561
24.00	23.50	71.47	71.97			23	0.95	0.27	0.27	0.68	44	495
23.50	23.00	71.97	72.47		50/0.5	32	0.90	0.19	0.20	0.71	51	461
23.00	22.50	72.47	72.97			48	0.92	0.13	0.20	0.79	63	456
22.50	22.00	72.97	73.47			50	0.90	0.12	0.18	0.78	65	470
22.00	21.50	73.47	73.97			53	0.90	0.11	0.15	0.79	51	487
21.50	21.00	73.97	74.47			57	0.96	0.10	0.15	0.86	41	514
21.00	20.50	74.47	74.97	SC	77/9	64	1.02	0.09	0.15	0.93	54	530
20.50	20.00	74.97	75.47			70	1.07	0.09	0.18	0.98	76	531
20.00	19.50	75.47	75.97			77	1.10	0.08	0.19	1.02	85	519
19.50	19.00	75.97	76.47			47	1.14	0.08	0.16	1.06	91	518

8.1.36 I-4 and John Young Parkway – P9P12 (Ramp A) PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
79.82	79.32	16.38	16.88	SM		1	2.64	12.00	2.44	-9.36	6	0
79.32	78.82	16.88	17.38	SP-SM		1	2.55	4.00	2.30	-1.45	0	0
78.82	78.32	17.38	17.88			2	2.94	4.00	2.76	-1.06	0	0
78.32	77.82	17.88	18.38		16	1	2.81	6.00	2.33	-3.19	0	0
77.82	77.32	18.38	18.88			1	3.27	6.00	3.16	-2.73	0	0
77.32	76.82	18.88	19.38			1	3.63	4.00	3.57	-0.37	0	0
76.82	76.32	19.38	19.88	SM		2	3.62	4.00	3.57	-0.39	0	0
76.32	75.82	19.88	20.38			1	3.87	4.00	3.84	-0.13	0	0
75.82	75.32	20.38	20.88		9	2	4.07	4.00	4.05	0.07	0	0
75.32	74.82	20.88	21.38			1	3.95	6.00	3.94	-2.05	0	0
74.82	74.32	21.38	21.88			1	4.28	6.00	4.27	-1.72	0	0
74.32	73.82	21.88	22.38			1	4.68	6.00	4.68	-1.32	0	0
73.82	73.32	22.38	22.88			1	4.49	6.00	4.49	-1.51	0	0
73.32	72.82	22.88	23.38		6	1	4.58	4.00	4.58	0.58	0	0
72.82	72.32	23.38	23.88			2	4.19	4.00	4.19	0.19	0	0
72.32	71.82	23.88	24.38			1	4.23	6.00	4.23	-1.77	0	0
71.82	71.32	24.38	24.88	SC		1	4.17	6.00	4.17	-1.83	0	0
71.32	70.82	24.88	25.38			1	4.39	4.00	4.39	0.39	0	0
70.82	70.32	25.38	25.88		9	2	4.33	4.00	4.33	0.33	0	0
70.32	69.82	25.88	26.38			1	4.42	6.00	4.42	-1.58	0	0
69.82	69.32	26.38	26.88			1	4.59	6.00	4.59	-1.41	0	0
69.32	68.82	26.88	27.38	CH		1	4.27	6.00	4.27	-1.73	0	0
68.82	68.32	27.38	27.88			1	4.55	6.00	4.55	-1.45	0	0
68.32	67.82	27.88	28.38		5	1	4.68	6.00	4.68	-1.32	0	0
67.82	67.32	28.38	28.88			1	4.53	6.00	4.53	-1.47	0	0
67.32	66.82	28.88	29.38			1	4.61	6.00	4.61	-1.39	0	0
66.82	66.32	29.38	29.88	SM		1	4.20	6.00	4.20	-1.80	0	0
66.32	65.82	29.88	30.38			1	4.74	6.00	4.74	-1.26	0	0
65.82	65.32	30.38	30.88		5	1	4.60	6.00	4.60	-1.40	0	0
65.32	64.82	30.88	31.38			1	4.34	6.00	4.34	-1.66	0	0
64.82	64.32	31.38	31.88			1	4.23	6.00	4.23	-1.77	0	0
64.32	63.82	31.88	32.38	CH		2	3.68	3.00	3.67	0.68	0	0
63.82	63.32	32.38	32.88			2	3.85	3.00	3.85	0.85	0	0
63.32	62.82	32.88	33.38		10	2	3.71	3.00	3.69	0.71	0	0
62.82	62.32	33.38	33.88			2	3.67	3.00	3.67	0.67	0	0
62.32	61.82	33.88	34.38			2	3.69	3.00	3.69	0.69	0	0
61.82	61.32	34.38	34.88			2	3.68	3.00	3.67	0.68	0	0
61.32	60.82	34.88	35.38			2	3.82	3.00	3.80	0.82	0	0
60.82	60.32	35.38	35.88		11	2	3.69	3.00	3.66	0.69	0	0
60.32	59.82	35.88	36.38			1	3.61	4.00	3.58	-0.39	0	0
59.82	59.32	36.38	36.88			2	3.70	4.00	3.70	-0.30	0	0
59.32	58.82	36.88	37.38	SC		1	3.53	4.00	3.53	-0.47	0	0
58.82	58.32	37.38	37.88			2	3.50	4.00	3.50	-0.51	0	0
58.32	57.82	37.88	38.38		15	2	3.24	3.00	3.22	0.24	0	0
57.82	57.32	38.38	38.88			2	2.94	3.00	2.79	-0.06	0	0
57.32	56.82	38.88	39.38			2	2.75	3.00	2.57	-0.25	0	0

P9P12 (Ramp A) continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
56.82	56.32	39.38	39.88	SM		2	2.59	3.00	2.35	-0.41	0	0
56.32	55.82	39.88	40.38			2	2.84	2.40	2.68	0.44	0	0
55.82	55.32	40.38	40.88		2	3	3.23	2.40	3.20	0.83	0	0
55.32	54.82	40.88	41.38			2	3.49	2.40	3.45	1.09	0	0
54.82	54.32	41.38	41.88			3	3.86	2.40	3.85	1.46	0	0
54.32	53.82	41.88	42.38			1	4.03	6.00	4.03	-1.97	0	0
53.82	53.32	42.38	42.88			1	4.40	6.00	4.40	-1.60	0	0
53.32	52.82	42.88	43.38		3	1	4.44	4.00	4.44	0.44	0	0
52.82	52.32	43.38	43.88			2	4.80	4.00	4.80	0.80	0	0
52.32	51.82	43.88	44.38			1	4.70	4.00	4.70	0.70	0	0
51.82	51.32	44.38	44.88			2	4.34	4.00	4.34	0.34	0	0
51.32	50.82	44.88	45.38			1	4.19	4.00	4.19	0.19	0	0
50.82	50.32	45.38	45.88		2	2	4.10	4.00	4.10	0.10	0	0
50.32	49.82	45.88	46.38			1	4.03	4.00	4.03	0.03	0	0
49.82	49.32	46.38	46.88			2	3.93	4.00	3.93	-0.08	0	0
49.32	48.82	46.88	47.38	CL		1	3.74	4.00	3.74	-0.26	0	0
48.82	48.32	47.38	47.88			2	3.58	4.00	3.58	-0.42	0	0
48.32	47.82	47.88	48.38		4	1	3.42	4.00	3.42	-0.58	0	0
47.82	47.32	48.38	48.88			2	3.56	4.00	3.56	-0.44	0	0
47.32	46.82	48.88	49.38			2	3.45	3.00	3.45	0.45	0	0
46.82	46.32	49.38	49.88	SM		2	3.37	3.00	3.36	0.37	0	0
46.32	45.82	49.88	50.38			1	3.06	4.00	3.02	-0.94	0	0
45.82	45.32	50.38	50.88		3	2	3.13	4.00	3.10	-0.87	0	0
45.32	44.82	50.88	51.38			1	3.30	4.00	3.30	-0.70	0	0
44.82	44.32	51.38	51.88			2	3.37	4.00	3.37	-0.63	0	0
44.32	43.82	51.88	52.38			2	3.25	3.00	3.24	0.25	0	0
43.82	43.32	52.38	52.88			2	3.20	3.00	3.18	0.20	0	0
43.32	42.82	52.88	53.38		2	1	3.36	4.00	3.36	-0.64	0	0
42.82	42.32	53.38	53.88			2	3.15	4.00	3.11	-0.86	0	0
42.32	41.82	53.88	54.38			1	3.19	4.00	3.16	-0.81	0	0
41.82	41.32	54.38	54.88			2	3.37	4.00	3.37	-0.63	0	0
41.32	40.82	54.88	55.38			2	2.83	3.00	2.73	-0.17	0	0
40.82	40.32	55.38	55.88		3	2	2.97	3.00	2.88	-0.03	0	0
40.32	39.82	55.88	56.38			1	3.11	4.00	3.05	-0.89	0	0
39.82	39.32	56.38	56.88			2	2.84	4.00	2.75	-1.17	0	0
39.32	38.82	56.88	57.38			2	2.87	2.40	2.80	0.47	0	0
38.82	38.32	57.38	57.88			3	2.94	2.40	2.86	0.54	0	0
38.32	37.82	57.88	58.38		3	2	2.79	3.00	2.68	-0.21	0	0
37.82	37.32	58.38	58.88			2	2.74	3.00	2.62	-0.26	0	0
37.32	36.82	58.88	59.38			2	3.03	3.00	2.95	0.03	0	0
36.82	36.32	59.38	59.88			2	2.96	3.00	2.86	-0.04	0	0
36.32	35.82	59.88	60.38			1	2.92	4.00	2.82	-1.08	0	0
35.82	35.32	60.38	60.88		2	2	2.96	4.00	2.87	-1.05	0	0
35.32	34.82	60.88	61.38			1	3.02	4.00	2.95	-0.98	0	0
34.82	34.32	61.38	61.88			2	2.98	4.00	2.89	-1.03	0	0
34.32	33.82	61.88	62.38			2	3.14	3.00	3.07	0.14	0	0
33.82	33.32	62.38	62.88			2	3.27	3.00	3.24	0.27	0	0
33.32	32.82	62.88	63.38		6	2	3.00	3.00	2.90	0.00	0	0
32.82	32.32	63.38	63.88			2	3.33	3.00	3.31	0.33	0	0
32.32	31.82	63.88	64.38			2	3.35	3.00	3.33	0.35	0	0

P9P12 (Ramp A) continued

Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
			Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
64.38	64.88	SC		2	3.17	3.00	3.12	0.17	0	0
64.88	65.38			2	3.14	3.00	3.08	0.14	0	0
65.38	65.88		4	2	3.26	3.00	3.21	0.26	0	0
65.88	66.38			2	3.23	3.00	3.20	0.23	0	0
66.38	66.88			2	3.41	3.00	3.40	0.41	0	0
66.88	67.38			2	3.45	2.40	3.44	1.05	0	0
67.38	67.88			3	3.65	2.40	3.63	1.25	0	0
67.88	68.38		6	1	3.90	4.00	3.89	-0.10	0	0
68.38	68.88			2	3.38	4.00	3.29	-0.63	0	0
68.88	69.38			2	3.66	2.40	3.66	1.26	0	0
69.38	69.88	SM		3	3.31	2.40	3.28	0.91	0	0
69.88	70.38			2	3.21	3.00	3.14	0.21	0	0
70.38	70.88		11	2	2.65	3.00	2.49	-0.35	0	0
70.88	71.38			3	2.19	1.71	1.79	0.48	0	50
71.38	71.88			4	1.51	1.71	0.88	-0.20	4	184
71.88	72.38			11	1.14	0.55	0.66	0.59	22	234
72.38	72.88			11	0.89	0.55	0.28	0.34	48	383
72.88	73.38		72/11	28	0.91	0.21	0.17	0.70	43	434
73.38	73.88			29	0.90	0.21	0.13	0.69	42	420
73.88	74.38			85	0.88	0.07	0.10	0.81	49	415
74.38	74.88			86	0.88	0.07	0.11	0.81	38	427
74.88	75.38			113	0.92	0.05	0.14	0.87	48	435
75.38	75.88		86/11	113	1.00	0.05	0.06	0.95	66	431
75.88	76.38			-	-	-	-	-	-	-

8.1.37 **Heritage Parkway – EB1P1 PDA**

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
2.50	2.00	19.50	20.00	SP		2	0.97	0.67	0.67	0.30	0	266
2.00	1.50	20.00	20.50	SM		9	0.97	0.67	0.67	0.30	0	241
1.50	1.00	20.50	21.00			8	1.04	0.69	0.69	0.35	0	206
1.00	0.50	21.00	21.50		5	8	1.17	0.80	0.80	0.37	0	168
0.50	0.00	21.50	22.00			6	1.35	0.80	0.80	0.55	0	137
0.00	-0.50	22.00	22.50			4	1.76	1.71	1.71	0.05	0	81
-0.50	-1.00	22.50	23.00			3	2.19	1.71	1.71	0.48	0	22
-1.00	-1.50	23.00	23.50			0	-	-	-	-	-	-
-1.50	-2.00	23.50	24.00			1	12.01	12.00	12.01	0.01	0	0
-2.00	-2.50	24.00	24.50	CH		0	-	-	-	-	-	-
-2.50	-3.00	24.50	25.00			1	12.01	12.00	12.01	0.01	0	0
-3.00	-3.50	25.00	25.50			0	-	-	-	-	-	-
-3.50	-4.00	25.50	26.00			1	12.00	12.00	12.00	0.00	0	0
-4.00	-4.50	26.00	26.50		WH	0	-	-	-	-	-	-
-4.50	-5.00	26.50	27.00			1	12.00	12.00	12.00	0.00	0	0
-5.00	-5.50	27.00	27.50			0	-	-	-	-	-	-
-5.50	-6.00	27.50	28.00			1	12.01	12.00	12.01	0.01	0	0
-6.00	-6.50	28.00	28.50			0	-	-	-	-	-	-
-6.50	-7.00	28.50	29.00			1	12.00	12.00	12.00	0.00	0	-1
-7.00	-7.50	29.00	29.50			0	-	-	-	-	-	-
-7.50	-8.00	29.50	30.00			1	12.00	12.00	12.00	0.00	0	0
-8.00	-8.50	30.00	30.50	SM		1	6.00	6.00	6.00	0.00	0	0
-8.50	-9.00	30.50	31.00			1	6.00	6.00	6.00	0.00	0	0
-9.00	-9.50	31.00	31.50		4	1	6.00	6.00	6.00	0.00	0	0
-9.50	-10.00	31.50	32.00			1	6.00	6.00	6.00	0.00	0	0
-10.00	-10.50	32.00	32.50			1	6.00	6.00	6.00	0.00	0	0
-10.50	-11.00	32.50	33.00			1	6.00	6.00	6.00	0.00	0	0
-11.00	-11.50	33.00	33.50			0	-	-	-	-	-	-
-11.50	-12.00	33.50	34.00			1	12.00	12.00	12.00	0.00	0	0
-12.00	-12.50	34.00	34.50			0	-	-	-	-	-	-
-12.50	-13.00	34.50	35.00			1	12.00	12.00	12.00	0.00	0	-1
-13.00	-13.50	35.00	35.50	SC		0	-	-	-	-	-	-
-13.50	-14.00	35.50	36.00			1	12.01	12.00	12.01	0.01	0	-1
-14.00	-14.50	36.00	36.50		4	0	-	-	-	-	-	-
-14.50	-15.00	36.50	37.00			1	12.01	12.00	12.01	0.01	0	-1
-15.00	-15.50	37.00	37.50			1	4.06	4.00	4.00	0.06	0	0
-15.50	-16.00	37.50	38.00			2	4.15	4.00	4.00	0.15	0	0
-16.00	-16.50	38.00	38.50			3	3.26	2.40	2.40	0.86	0	0
-16.50	-17.00	38.50	39.00			2	2.98	2.40	2.40	0.58	0	0
-17.00	-17.50	39.00	39.50			3	2.62	2.40	2.40	0.22	0	0
-17.50	-18.00	39.50	40.00			2	2.51	2.40	2.40	0.11	0	0
-18.00	-18.50	40.00	40.50			3	2.65	2.40	2.40	0.25	0	0
-18.50	-19.00	40.50	41.00			2	2.69	2.40	2.40	0.29	0	0
-19.00	-19.50	41.00	41.50		12	3	2.42	2.00	2.00	0.42	0	0
-19.50	-20.00	41.50	42.00			3	2.41	2.00	2.00	0.41	0	0
-20.00	-20.50	42.00	42.50			4	2.12	1.71	1.71	0.41	0	4
-20.50	-21.00	42.50	43.00			4	1.88	1.53	1.53	0.35	0	54
-21.00	-21.50	43.00	43.50			6	1.48	1.00	1.00	0.48	0	127
-21.50	-22.00	43.50	44.00			8	1.12	0.81	0.81	0.32	0	187
-22.00	-22.50	44.00	44.50			12	0.90	0.48	0.48	0.42	2	263
-22.50	-23.00	44.50	45.00			13	0.85	0.48	0.48	0.37	4	294
-23.00	-23.50	45.00	45.50			13	0.88	0.46	0.46	0.42	5	282

EB1P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-23.50	-24.00	45.50	46.00			12	0.90	0.49	0.49	0.41	5	256
-24.00	-24.50	46.00	46.50		16	9	0.96	0.63	0.63	0.33	6	247
-24.50	-25.00	46.50	47.00			11	0.98	0.56	0.56	0.42	9	263
-25.00	-25.50	47.00	47.50			16	0.88	0.39	0.39	0.49	12	318
-25.50	-26.00	47.50	48.00			16	0.84	0.37	0.37	0.47	10	365
-26.00	-26.50	48.00	48.50			20	0.82	0.31	0.31	0.51	22	411
-26.50	-27.00	48.50	49.00			19	0.95	0.32	0.31	0.63	29	424
-27.00	-27.50	49.00	49.50			17	0.96	0.34	0.34	0.62	28	417
-27.50	-28.00	49.50	50.00			17	0.94	0.35	0.34	0.59	30	403
-28.00	-28.50	50.00	50.50	SP-SM		16	0.96	0.38	0.37	0.58	26	400
-28.50	-29.00	50.50	51.00			17	0.95	0.37	0.37	0.57	33	393
-29.00	-29.50	51.00	51.50		16	17	0.93	0.35	0.35	0.58	35	395
-29.50	-30.00	51.50	52.00			16	0.94	0.36	0.35	0.58	37	396
-30.00	-30.50	52.00	52.50			16	0.99	0.39	0.39	0.60	36	387
-30.50	-31.00	52.50	53.00			14	1.02	0.42	0.42	0.60	36	340
-31.00	-31.50	53.00	53.50			9	1.11	0.63	0.63	0.48	29	289
-31.50	-32.00	53.50	54.00			9	1.23	0.68	0.68	0.55	32	250
-32.00	-32.50	54.00	54.50			5	1.41	1.09	1.09	0.32	37	194
-32.50	-33.00	54.50	55.00			6	1.49	1.13	1.13	0.36	35	175
-33.00	-33.50	55.00	55.50			4	1.65	1.33	1.33	0.32	31	161
-33.50	-34.00	55.50	56.00			5	1.60	1.33	1.33	0.27	41	157
-34.00	-34.50	56.00	56.50		2	4	1.57	1.33	1.33	0.24	45	153
-34.50	-35.00	56.50	57.00			5	1.65	1.33	1.33	0.32	46	149
-35.00	-35.50	57.00	57.50			4	1.62	1.33	1.33	0.29	47	146
-35.50	-36.00	57.50	58.00			4	1.55	1.33	1.33	0.22	47	140
-36.00	-36.50	58.00	58.50			4	1.60	1.50	1.50	0.10	41	137
-36.50	-37.00	58.50	59.00			5	1.66	1.44	1.44	0.22	47	134
-37.00	-37.50	59.00	59.50			5	1.74	1.20	1.20	0.54	53	134
-37.50	-38.00	59.50	60.00			5	1.20	1.14	1.14	0.06	100	108
-38.00	-38.50	60.00	60.50			7	1.07	0.92	0.92	0.15	89	113
-38.50	-39.00	60.50	61.00			6	1.05	0.92	0.92	0.13	70	120
-39.00	-39.50	61.00	61.50		2	7	1.07	0.92	0.92	0.15	75	116
-39.50	-40.00	61.50	62.00			6	1.09	0.93	0.93	0.16	75	116
-40.00	-40.50	62.00	62.50			6	1.14	1.00	1.00	0.14	65	123
-40.50	-41.00	62.50	63.00	CH		6	1.15	1.00	1.00	0.15	59	128
-41.00	-41.50	63.00	63.50			6	1.16	1.00	1.00	0.16	50	133
-41.50	-42.00	63.50	64.00			6	1.14	0.99	0.99	0.16	44	135
-42.00	-42.50	64.00	64.50			7	1.12	0.92	0.92	0.20	47	138
-42.50	-43.00	64.50	65.00			6	1.12	0.92	0.92	0.20	45	133
-43.00	-43.50	65.00	65.50			7	1.14	0.92	0.92	0.22	49	133
-43.50	-44.00	65.50	66.00			6	1.15	0.93	0.93	0.21	46	135
-44.00	-44.50	66.00	66.50		4	6	1.17	1.00	1.00	0.17	41	136
-44.50	-45.00	66.50	67.00			6	1.17	1.00	1.00	0.17	40	135
-45.00	-45.50	67.00	67.50			6	1.17	1.00	1.00	0.17	35	134
-45.50	-46.00	67.50	68.00			6	1.17	0.99	0.99	0.19	40	131
-46.00	-46.50	68.00	68.50			7	1.14	0.92	0.92	0.22	43	133
-46.50	-47.00	68.50	69.00			6	1.12	0.92	0.92	0.20	40	138
-47.00	-47.50	69.00	69.50			7	1.11	0.92	0.92	0.19	40	145
-47.50	-48.00	69.50	70.00			6	1.08	0.91	0.91	0.17	33	150

EB1P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-48.00	-48.50	70.00	70.50	SM/SC		7	1.09	0.86	0.86	0.23	42	152
-48.50	-49.00	70.50	71.00			7	1.09	0.87	0.87	0.23	40	150
-49.00	-49.50	71.00	71.50		7	7	1.15	0.92	0.92	0.23	37	144
-49.50	-50.00	71.50	72.00			6	1.15	0.93	0.93	0.22	35	139
-50.00	-50.50	72.00	72.50			6	1.18	1.00	1.00	0.18	28	137
-50.50	-51.00	72.50	73.00			6	1.21	0.98	0.98	0.23	36	136
-51.00	-51.50	73.00	73.50			7	1.18	0.86	0.86	0.32	43	140
-51.50	-52.00	73.50	74.00			7	1.15	0.87	0.86	0.28	38	152
-52.00	-52.50	74.00	74.50			7	1.18	0.92	0.92	0.26	30	162
-52.50	-53.00	74.50	75.00			6	1.18	0.91	0.91	0.27	27	166
-53.00	-53.50	75.00	75.50			7	1.18	0.86	0.86	0.32	24	162
-53.50	-54.00	75.50	76.00			7	1.18	0.86	0.86	0.32	26	160
-54.00	-54.50	76.00	76.50		9	7	1.19	0.86	0.86	0.33	17	163
-54.50	-55.00	76.50	77.00			7	1.18	0.84	0.84	0.34	16	176
-55.00	-55.50	77.00	77.50			8	1.09	0.75	0.75	0.34	19	189
-55.50	-56.00	77.50	78.00			9	1.02	0.70	0.70	0.32	18	212
-56.00	-56.50	78.00	78.50			12	0.95	0.52	0.52	0.43	14	236
-56.50	-57.00	78.50	79.00			11	0.85	0.53	0.53	0.32	38	239
-57.00	-57.50	79.00	79.50			10	0.87	0.60	0.60	0.27	41	230
-57.50	-58.00	79.50	80.00			10	0.85	0.61	0.60	0.24	73	221
-58.00	-58.50	80.00	80.50			9	0.89	0.63	0.62	0.26	104	216
-58.50	-59.00	80.50	81.00			10	0.93	0.63	0.62	0.30	82	221
-59.00	-59.50	81.00	81.50		16	9	0.92	0.63	0.62	0.29	81	238
-59.50	-60.00	81.50	82.00			11	0.88	0.58	0.58	0.29	103	249
-60.00	-60.50	82.00	82.50			13	0.77	0.46	0.45	0.31	108	237
-60.50	-61.00	82.50	83.00			12	0.77	0.47	0.46	0.30	97	230
-61.00	-61.50	83.00	83.50			12	0.79	0.50	0.50	0.29	90	220
-61.50	-62.00	83.50	84.00			12	0.81	0.52	0.52	0.30	82	198
-62.00	-62.50	84.00	84.50			10	0.84	0.60	0.60	0.24	65	185
-62.50	-63.00	84.50	85.00			10	0.87	0.61	0.61	0.26	61	171
-63.00	-63.50	85.00	85.50			9	0.92	0.63	0.63	0.29	59	164
-63.50	-64.00	85.50	86.00			10	0.92	0.64	0.64	0.28	62	161
-64.00	-64.50	86.00	86.50		13	9	0.95	0.67	0.66	0.28	60	164
-64.50	-65.00	86.50	87.00			9	0.96	0.67	0.66	0.29	54	168
-65.00	-65.50	87.00	87.50			9	0.97	0.67	0.67	0.30	55	171
-65.50	-66.00	87.50	88.00			9	0.95	0.64	0.64	0.31	63	172
-66.00	-66.50	88.00	88.50			11	0.86	0.55	0.54	0.31	78	189
-66.50	-67.00	88.50	89.00			13	0.77	0.48	0.48	0.29	108	243
-67.00	-67.50	89.00	89.50			18	0.69	0.33	0.33	0.36	141	277
-67.50	-68.00	89.50	90.00			18	0.66	0.33	0.33	0.33	152	300
-68.00	-68.50	90.00	90.50			18	0.64	0.33	0.32	0.31	157	300
-68.50	-69.00	90.50	91.00			17	0.64	0.34	0.34	0.30	159	273
-69.00	-69.50	91.00	91.50		0	15	0.68	0.40	0.40	0.28	158	240
-69.50	-70.00	91.50	92.00			15	0.71	0.42	0.42	0.30	155	212
-70.00	-70.50	92.00	92.50			12	0.73	0.48	0.48	0.25	157	192
-70.50	-71.00	92.50	93.00			12	0.73	0.48	0.48	0.25	161	181
-71.00	-71.50	93.00	93.50			12	0.73	0.50	0.50	0.23	165	177
-71.50	-72.00	93.50	94.00			13	0.71	0.49	0.49	0.22	175	177
-72.00	-72.50	94.00	94.50			13	0.70	0.46	0.46	0.24	182	180
-72.50	-73.00	94.50	95.00			13	0.69	0.46	0.46	0.23	191	183
-73.00	-73.50	95.00	95.50			12	0.70	0.48	0.48	0.22	195	183
-73.50	-74.00	95.50	96.00			13	0.70	0.48	0.48	0.22	208	179
-74.00	-74.50	96.00	96.50		8	13	0.70	0.46	0.46	0.24	214	174
-74.50	-75.00	96.50	97.00			12	0.69	0.47	0.47	0.22	224	171
-75.00	-75.50	97.00	97.50			12	0.70	0.50	0.50	0.20	226	171
-75.50	-76.00	97.50	98.00			13	0.70	0.49	0.49	0.21	222	171
-76.00	-76.50	98.00	98.50			13	0.70	0.46	0.46	0.24	227	176
-76.50	-77.00	98.50	99.00			13	0.68	0.45	0.45	0.24	232	183

EB1P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-77.00	-77.50	99.00	99.50			15	0.67	0.41	0.41	0.26	249	186
-77.50	-78.00	99.50	100.00			14	0.66	0.40	0.40	0.25	250	194
-78.00	-78.50	100.00	100.50			17	0.63	0.37	0.38	0.26	268	203
-78.50	-79.00	100.50	101.00			16	0.61	0.36	0.37	0.25	287	217
-79.00	-79.50	101.00	101.50		4	18	0.60	0.33	0.33	0.27	307	236
-79.50	-80.00	101.50	102.00			24	0.55	0.25	0.31	0.30	514	248
-80.00	-80.50	102.00	102.50			44	0.49	0.14	0.27	0.35	654	243
-80.50	-81.00	102.50	103.00			41	0.48	0.15	0.28	0.33	550	240
-81.00	-81.50	103.00	103.50			32	0.48	0.19	0.32	0.29	489	230
-81.50	-82.00	103.50	104.00			30	0.48	0.20	0.33	0.28	464	199
-82.00	-82.50	104.00	104.50			25	0.47	0.24	0.37	0.23	433	179
-82.50	-83.00	104.50	105.00			25	0.46	0.25	0.38	0.21	402	168
-83.00	-83.50	105.00	105.50	SM/SC		21	0.48	0.29	0.42	0.19	367	167
-83.50	-84.00	105.50	106.00			20	0.49	0.29	0.42	0.20	335	167
-84.00	-84.50	106.00	106.50		14	20	0.51	0.31	0.44	0.20	315	167
-84.50	-85.00	106.50	107.00			19	0.53	0.31	0.45	0.22	296	164
-85.00	-85.50	107.00	107.50			18	0.55	0.33	0.47	0.22	283	164
-85.50	-86.00	107.50	108.00			18	0.55	0.33	0.47	0.22	274	161
-86.00	-86.50	108.00	108.50			17	0.57	0.34	0.47	0.23	268	164
-86.50	-87.00	108.50	109.00			18	0.57	0.34	0.47	0.23	261	167
-87.00	-87.50	109.00	109.50			18	0.56	0.33	0.47	0.23	263	179
-87.50	-88.00	109.50	110.00			20	0.52	0.30	0.44	0.22	273	205
-88.00	-88.50	110.00	110.50			25	0.47	0.24	0.37	0.23	290	269
-88.50	-89.00	110.50	111.00			26	0.47	0.23	0.36	0.25	282	324
-89.00	-89.50	111.00	111.50		25	30	0.47	0.20	0.33	0.27	271	333
-89.50	-90.00	111.50	112.00	MH		23	0.48	0.20	0.33	0.28	266	295

8.1.38 Heritage Parkway – B3P1 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-9.00	-9.50	18.00	18.50	SM	5	1	12.01	12.00	12.01	0.01	0	-1
-9.50	-10.00	18.50	19.00			0	-	-	-	-	-	-
-10.00	-10.50	19.00	19.50			1	12.01	12.00	12.01	0.01	0	-1
-10.50	-11.00	19.50	20.00			0	-	-	-	-	-	-
-11.00	-11.50	20.00	20.50			1	12.00	12.00	12.00	0.00	0	-1
-11.50	-12.00	20.50	21.00			0	-	-	-	-	-	-
-12.00	-12.50	21.00	21.50			1	12.00	12.00	12.00	0.00	0	-1
-12.50	-13.00	21.50	22.00			0	-	-	-	-	-	-
-13.00	-13.50	22.00	22.50	SC		1	12.00	12.00	12.00	0.00	0	-1
-13.50	-14.00	22.50	23.00			0	-	-	-	-	-	-
-14.00	-14.50	23.00	23.50		4	1	12.01	12.00	12.01	0.01	0	-1
-14.50	-15.00	23.50	24.00			1	6.00	6.00	6.00	0.00	0	0
-15.00	-15.50	24.00	24.50			1	6.00	6.00	6.00	0.00	0	0
-15.50	-16.00	24.50	25.00			1	6.00	6.00	6.00	0.00	0	0
-16.00	-16.50	25.00	25.50			1	6.00	6.00	6.00	0.00	0	0
-16.50	-17.00	25.50	26.00			2	4.04	4.00	4.00	0.04	0	0
-17.00	-17.50	26.00	26.50			2	3.11	3.00	3.00	0.11	0	0
-17.50	-18.00	26.50	27.00			3	2.77	2.00	2.00	0.77	0	38
-18.00	-18.50	27.00	27.50			3	2.33	1.90	1.90	0.42	0	49
-18.50	-19.00	27.50	28.00			4	1.91	1.71	1.71	0.20	0	57
-19.00	-19.50	28.00	28.50		16	5	1.54	1.28	1.28	0.25	0	76
-19.50	-20.00	28.50	29.00			6	1.43	1.00	1.00	0.43	0	103
-20.00	-20.50	29.00	29.50			8	1.08	0.75	0.75	0.33	0	164
-20.50	-21.00	29.50	30.00			10	0.80	0.60	0.60	0.20	1	223
-21.00	-21.50	30.00	30.50			10	0.72	0.60	0.60	0.12	7	272
-21.50	-22.00	30.50	31.00			10	0.70	0.60	0.60	0.10	9	295
-22.00	-22.50	31.00	31.50			13	0.70	0.45	0.45	0.25	9	300
-22.50	-23.00	31.50	32.00			17	0.73	0.35	0.35	0.38	4	295
-23.00	-23.50	32.00	32.50			17	0.75	0.35	0.35	0.40	3	296
-23.50	-24.00	32.50	33.00			17	0.75	0.35	0.35	0.40	5	320
-24.00	-24.50	33.00	33.50		10	22	0.70	0.28	0.28	0.42	8	369
-24.50	-25.00	33.50	34.00			26	0.68	0.23	0.23	0.45	5	411
-25.00	-25.50	34.00	34.50			27	0.67	0.22	0.22	0.45	13	442
-25.50	-26.00	34.50	35.00			28	0.69	0.21	0.21	0.48	16	444
-26.00	-26.50	35.00	35.50			25	0.82	0.23	0.23	0.58	11	452
-26.50	-27.00	35.50	36.00			23	0.81	0.26	0.26	0.55	14	439
-27.00	-27.50	36.00	36.50			24	0.81	0.25	0.25	0.56	15	427
-27.50	-28.00	36.50	37.00			24	0.80	0.24	0.24	0.56	17	420
-28.00	-28.50	37.00	37.50			25	0.80	0.24	0.24	0.56	15	418
-28.50	-29.00	37.50	38.00			25	0.79	0.24	0.24	0.55	17	414
-29.00	-29.50	38.00	38.50		37	26	0.79	0.24	0.24	0.56	18	410
-29.50	-30.00	38.50	39.00			27	0.84	0.23	0.23	0.61	10	407
-30.00	-30.50	39.00	39.50			19	0.89	0.30	0.30	0.59	6	363
-30.50	-31.00	39.50	40.00			14	0.93	0.44	0.44	0.49	3	307
-31.00	-31.50	40.00	40.50			11	0.97	0.54	0.54	0.43	4	274
-31.50	-32.00	40.50	41.00			8	1.03	0.71	0.71	0.32	6	241
-32.00	-32.50	41.00	41.50			8	1.13	0.79	0.78	0.34	18	206
-32.50	-33.00	41.50	42.00			6	1.18	0.92	0.92	0.26	20	187

B3P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-33.00	-33.50	42.00	42.50			7	1.18	0.95	0.95	0.22	22	176
-33.50	-34.00	42.50	43.00			6	1.18	1.00	1.00	0.18	20	174
-34.00	-34.50	43.00	43.50		2	6	1.14	0.96	0.96	0.18	19	175
-34.50	-35.00	43.50	44.00			6	1.13	0.92	0.92	0.21	23	177
-35.00	-35.50	44.00	44.50			7	1.14	0.89	0.89	0.25	26	180
-35.50	-36.00	44.50	45.00			7	1.12	0.86	0.85	0.26	32	174
-36.00	-36.50	45.00	45.50			7	1.13	0.89	0.88	0.25	28	178
-36.50	-37.00	45.50	46.00			6	1.13	0.92	0.92	0.21	29	183
-37.00	-37.50	46.00	46.50			8	1.19	0.84	0.84	0.36	48	179
-37.50	-38.00	46.50	47.00			8	1.05	0.75	0.75	0.30	66	166
-38.00	-38.50	47.00	47.50			8	0.91	0.73	0.73	0.18	59	169
-38.50	-39.00	47.50	48.00			8	0.92	0.71	0.70	0.21	51	167
-39.00	-39.50	48.00	48.50		4	9	0.93	0.71	0.70	0.22	48	165
-39.50	-40.00	48.50	49.00			8	0.92	0.71	0.70	0.21	47	163
-40.00	-40.50	49.00	49.50			9	0.92	0.69	0.69	0.23	49	163
-40.50	-41.00	49.50	50.00	CH		9	0.89	0.67	0.66	0.22	57	160
-41.00	-41.50	50.00	50.50			9	0.95	0.69	0.68	0.26	49	165
-41.50	-42.00	50.50	51.00			8	0.98	0.71	0.71	0.27	41	164
-42.00	-42.50	51.00	51.50			8	1.04	0.74	0.74	0.30	39	149
-42.50	-43.00	51.50	52.00			8	1.07	0.80	0.80	0.27	26	148
-43.00	-43.50	52.00	52.50			7	1.10	0.89	0.88	0.22	29	143
-43.50	-44.00	52.50	53.00			6	1.11	1.00	1.00	0.11	20	142
-44.00	-44.50	53.00	53.50		3	5	1.22	1.13	1.13	0.09	18	143
-44.50	-45.00	53.50	54.00			4	1.33	1.33	1.33	0.00	16	140
-45.00	-45.50	54.00	54.50			6	1.24	1.17	1.17	0.08	20	141
-45.50	-46.00	54.50	55.00			6	1.13	1.00	1.00	0.13	22	147
-46.00	-46.50	55.00	55.50			6	1.08	0.96	0.96	0.12	22	147
-46.50	-47.00	55.50	56.00			6	1.10	0.92	0.92	0.18	24	147
-47.00	-47.50	56.00	56.50			7	1.05	0.89	0.89	0.16	23	149
-47.50	-48.00	56.50	57.00			7	1.05	0.86	0.86	0.19	24	153
-48.00	-48.50	57.00	57.50			7	1.05	0.86	0.86	0.19	30	155
-48.50	-49.00	57.50	58.00			7	1.07	0.86	0.86	0.21	34	155
-49.00	-49.50	58.00	58.50		9	8	1.00	0.79	0.78	0.21	39	149
-49.50	-50.00	58.50	59.00			8	0.97	0.71	0.71	0.26	44	145
-50.00	-50.50	59.00	59.50			8	1.00	0.74	0.74	0.25	35	151
-50.50	-51.00	59.50	60.00			8	1.04	0.80	0.80	0.24	30	157
-51.00	-51.50	60.00	60.50			7	1.04	0.80	0.80	0.24	26	165
-51.50	-52.00	60.50	61.00			8	1.05	0.80	0.80	0.25	29	169
-52.00	-52.50	61.00	61.50			6	1.11	0.98	0.98	0.14	19	172
-52.50	-53.00	61.50	62.00			4	1.33	1.33	1.33	0.00	9	177
-53.00	-53.50	62.00	62.50			6	1.21	1.10	1.10	0.12	11	171
-53.50	-54.00	62.50	63.00			7	1.10	0.86	0.86	0.24	15	168
-54.00	-54.50	63.00	63.50		13	7	1.07	0.83	0.83	0.24	14	168
-54.50	-55.00	63.50	64.00			8	1.06	0.80	0.80	0.26	11	173
-55.00	-55.50	64.00	64.50	SM/SC		8	0.98	0.72	0.72	0.27	21	182
-55.50	-56.00	64.50	65.00			10	0.92	0.63	0.63	0.29	28	196
-56.00	-56.50	65.00	65.50			10	0.83	0.59	0.59	0.24	35	220
-56.50	-57.00	65.50	66.00			11	0.78	0.55	0.55	0.23	55	225
-57.00	-57.50	66.00	66.50			12	0.76	0.53	0.53	0.24	70	219
-57.50	-58.00	66.50	67.00			12	0.77	0.50	0.50	0.27	73	217
-58.00	-58.50	67.00	67.50			11	0.77	0.51	0.51	0.26	78	215
-58.50	-59.00	67.50	68.00			12	0.76	0.52	0.52	0.24	76	212
-59.00	-59.50	68.00	68.50		16	12	0.74	0.48	0.48	0.26	89	221
-59.50	-60.00	68.50	69.00			14	0.75	0.44	0.44	0.31	98	239
-60.00	-60.50	69.00	69.50			14	0.71	0.42	0.42	0.30	113	257
-60.50	-61.00	69.50	70.00			16	0.69	0.39	0.39	0.30	125	256
-61.00	-61.50	70.00	70.50			16	0.69	0.39	0.39	0.30	123	254
-61.50	-62.00	70.50	71.00			16	0.69	0.38	0.38	0.31	118	243
-62.00	-62.50	71.00	71.50			14	0.73	0.43	0.43	0.30	105	228
-62.50	-63.00	71.50	72.00			12	0.77	0.50	0.50	0.27	91	209

B3P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-63.00	-63.50	72.00	72.50	SM		11	0.77	0.55	0.55	0.22	88	190
-63.50	-64.00	72.50	73.00			10	0.78	0.60	0.60	0.18	86	176
-64.00	-64.50	73.00	73.50		10	9	0.81	0.61	0.61	0.20	85	168
-64.50	-65.00	73.50	74.00			10	0.84	0.63	0.63	0.21	84	170
-65.00	-65.50	74.00	74.50			11	0.78	0.54	0.54	0.24	87	189
-65.50	-66.00	74.50	75.00			13	0.72	0.46	0.46	0.26	101	235
-66.00	-66.50	75.00	75.50			16	0.70	0.39	0.39	0.31	140	287
-66.50	-67.00	75.50	76.00			18	0.65	0.33	0.33	0.32	168	312
-67.00	-67.50	76.00	76.50			19	0.63	0.30	0.30	0.32	181	319
-67.50	-68.00	76.50	77.00			22	0.56	0.28	0.28	0.28	187	301
-68.00	-68.50	77.00	77.50			21	0.51	0.28	0.28	0.23	199	292
-68.50	-69.00	77.50	78.00			22	0.49	0.28	0.28	0.21	213	265
-69.00	-69.50	78.00	78.50	SP-SM	18	19	0.52	0.31	0.31	0.21	202	231
-69.50	-70.00	78.50	79.00			16	0.58	0.36	0.36	0.22	192	204
-70.00	-70.50	79.00	79.50			16	0.57	0.38	0.38	0.19	191	186
-70.50	-71.00	79.50	80.00			15	0.56	0.40	0.40	0.16	211	170
-71.00	-71.50	80.00	80.50			15	0.55	0.40	0.40	0.15	227	162
-71.50	-72.00	80.50	81.00			15	0.57	0.40	0.40	0.17	240	157
-72.00	-72.50	81.00	81.50			15	0.58	0.40	0.40	0.18	258	151
-72.50	-73.00	81.50	82.00			15	0.58	0.40	0.39	0.18	281	140
-73.00	-73.50	82.00	82.50			13	0.57	0.45	0.44	0.12	293	134
-73.50	-74.00	82.50	83.00	SC		12	0.65	0.52	0.52	0.13	284	140
-74.00	-74.50	83.00	83.50		10	13	0.62	0.46	0.46	0.16	299	134
-74.50	-75.00	83.50	84.00			14	0.60	0.41	0.41	0.19	318	131
-75.00	-75.50	84.00	84.50			15	0.58	0.41	0.41	0.17	347	121
-75.50	-76.00	84.50	85.00			14	0.58	0.41	0.41	0.17	362	118
-76.00	-76.50	85.00	85.50			15	0.57	0.40	0.40	0.17	385	116
-76.50	-77.00	85.50	86.00			16	0.56	0.39	0.38	0.17	403	122
-77.00	-77.50	86.00	86.50			16	0.54	0.37	0.36	0.17	412	130
-77.50	-78.00	86.50	87.00			18	0.53	0.34	0.34	0.19	425	137
-78.00	-78.50	87.00	87.50			18	0.52	0.34	0.34	0.19	429	148
-78.50	-79.00	87.50	88.00			18	0.51	0.33	0.33	0.18	428	163
-79.00	-79.50	88.00	88.50		14	19	0.50	0.31	0.31	0.18	416	174
-79.50	-80.00	88.50	89.00			20	0.51	0.30	0.30	0.21	416	181
-80.00	-80.50	89.00	89.50			19	0.51	0.31	0.31	0.19	412	176
-80.50	-81.00	89.50	90.00			18	0.51	0.33	0.33	0.18	414	155
-81.00	-81.50	90.00	90.50			31	0.47	0.19	0.19	0.28	780	99
-81.50	-82.00	90.50	91.00			38	0.45	0.16	0.16	0.29	831	90
-82.00	-82.50	91.00	91.50			35	0.45	0.17	0.17	0.27	753	88
-82.50	-83.00	91.50	92.00			31	0.44	0.19	0.19	0.25	715	80
-83.00	-83.50	92.00	92.50			28	0.44	0.22	0.21	0.23	683	73
-83.50	-84.00	92.50	93.00			24	0.45	0.25	0.25	0.20	655	70
-84.00	-84.50	93.00	93.50		5	23	0.44	0.25	0.25	0.19	623	69
-84.50	-85.00	93.50	94.00			23	0.44	0.26	0.26	0.18	605	67
-85.00	-85.50	94.00	94.50			21	0.45	0.28	0.28	0.17	605	60
-85.50	-86.00	94.50	95.00			20	0.45	0.31	0.31	0.14	593	59
-86.00	-86.50	95.00	95.50			21	0.45	0.29	0.29	0.16	581	60
-86.50	-87.00	95.50	96.00			22	0.46	0.27	0.27	0.19	592	65
-87.00	-87.50	96.00	96.50			24	0.45	0.25	0.24	0.20	600	87
-87.50	-88.00	96.50	97.00			27	0.45	0.23	0.22	0.22	603	124
-88.00	-88.50	97.00	97.50			29	0.46	0.20	0.20	0.26	584	171
-88.50	-89.00	97.50	98.00			33	0.46	0.18	0.18	0.28	544	202
-89.00	-89.50	98.00	98.50		42	30	0.45	0.21	0.20	0.24	506	178
-89.50	-90.00	98.50	99.00			25	0.44	0.24	0.23	0.20	474	131
-90.00	-90.50	99.00	99.50			22	0.44	0.28	0.27	0.17	436	100
-90.50	-91.00	99.50	100.00			18	0.48	0.33	0.33	0.15	426	84
-91.00	-91.50	100.00	100.50			9	0.47	0.33	0.33	0.14	433	75

8.1.39 Heritage Parkway – EB5P1 PDA

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-1.00	-1.50	21.80	22.30	SP-SM		1	6.00	6.00	6.00	0.00	0	0
-1.50	-2.00	22.30	22.80			1	6.01	6.00	6.01	0.01	0	0
-2.00	-2.50	22.80	23.30			1	6.00	6.00	6.00	0.00	0	0
-2.50	-3.00	23.30	23.80			1	6.00	6.00	6.00	0.00	0	0
-3.00	-3.50	23.80	24.30	CH		0	-	-	-	-	-	-
-3.50	-4.00	24.30	24.80			1	12.01	12.00	12.01	0.01	0	0
-4.00	-4.50	24.80	25.30		2	0	-	-	-	-	-	-
-4.50	-5.00	25.30	25.80			1	12.01	12.00	12.01	0.01	0	0
-5.00	-5.50	25.80	26.30			0	-	-	-	-	-	-
-5.50	-6.00	26.30	26.80			1	12.01	12.00	12.01	0.01	0	0
-6.00	-6.50	26.80	27.30			0	-	-	-	-	-	-
-6.50	-7.00	27.30	27.80			1	12.01	12.00	12.01	0.01	0	0
-7.00	-7.50	27.80	28.30			0	-	-	-	-	-	-
-7.50	-8.00	28.30	28.80			1	12.01	12.00	12.01	0.01	0	0
-8.00	-8.50	28.80	29.30	SM		3	2.40	2.40	2.40	0.00	0	6
-8.50	-9.00	29.30	29.80			2	2.57	2.40	2.40	0.17	0	20
-9.00	-9.50	29.80	30.30		5	2	3.38	3.00	3.00	0.38	0	38
-9.50	-10.00	30.30	30.80			2	3.08	3.00	3.00	0.08	0	0
-10.00	-10.50	30.80	31.30			1	4.00	4.00	4.00	0.00	0	0
-10.50	-11.00	31.30	31.80			2	4.07	4.00	4.00	0.07	0	0
-11.00	-11.50	31.80	32.30			1	6.00	6.00	6.00	0.00	0	0
-11.50	-12.00	32.30	32.80			1	6.00	6.00	6.00	0.00	0	0
-12.00	-12.50	32.80	33.30			2	3.09	3.00	3.00	0.09	0	0
-12.50	-13.00	33.30	33.80			2	3.05	3.00	3.00	0.05	0	0
-13.00	-13.50	33.80	34.30	SC		1	4.34	4.00	4.00	0.34	0	0
-13.50	-14.00	34.30	34.80			2	4.46	4.00	4.00	0.46	0	20
-14.00	-14.50	34.80	35.30		4	0	-	-	-	-	-	-
-14.50	-15.00	35.30	35.80			1	12.00	12.00	12.00	0.00	0	0
-15.00	-15.50	35.80	36.30			0	-	-	-	-	-	-
-15.50	-16.00	36.30	36.80			1	12.00	12.00	12.00	0.00	0	0
-16.00	-16.50	36.80	37.30			1	6.00	6.00	6.00	0.00	0	0
-16.50	-17.00	37.30	37.80			1	6.00	6.00	6.00	0.00	0	0
-17.00	-17.50	37.80	38.30			1	4.00	4.00	4.00	0.00	0	0
-17.50	-18.00	38.30	38.80			2	4.00	4.00	4.00	0.00	0	0
-18.00	-18.50	38.80	39.30			1	6.00	6.00	6.00	0.00	0	0
-18.50	-19.00	39.30	39.80			1	6.00	6.00	6.00	0.00	0	45
-19.00	-19.50	39.80	40.30		16	3	2.76	2.40	2.40	0.36	0	6
-19.50	-20.00	40.30	40.80			3	2.93	2.04	2.04	0.89	0	70
-20.00	-20.50	40.80	41.30			4	2.07	1.33	1.33	0.74	0	46
-20.50	-21.00	41.30	41.80			5	2.04	1.22	1.22	0.81	0	100
-21.00	-21.50	41.80	42.30			8	1.32	0.80	0.80	0.52	0	140
-21.50	-22.00	42.30	42.80			10	0.81	0.62	0.62	0.19	0	221
-22.00	-22.50	42.80	43.30			17	0.74	0.34	0.34	0.40	0	302
-22.50	-23.00	43.30	43.80			17	0.73	0.34	0.34	0.39	2	334
-23.00	-23.50	43.80	44.30			17	0.78	0.35	0.35	0.43	1	326
-23.50	-24.00	44.30	44.80			17	0.79	0.36	0.36	0.43	0	293
-24.00	-24.50	44.80	45.30		10	16	0.79	0.39	0.39	0.40	0	280
-24.50	-25.00	45.30	45.80			16	0.74	0.37	0.37	0.37	2	290
-25.00	-25.50	45.80	46.30			20	0.72	0.30	0.30	0.42	4	339
-25.50	-26.00	46.30	46.80			22	0.72	0.28	0.28	0.44	1	366
-26.00	-26.50	46.80	47.30			26	0.70	0.23	0.23	0.47	6	395
-26.50	-27.00	47.30	47.80			27	0.70	0.23	0.23	0.47	11	396
-27.00	-27.50	47.80	48.30			28	0.69	0.21	0.21	0.48	13	393
-27.50	-28.00	48.30	48.80			29	0.69	0.21	0.21	0.48	12	391

EB5P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-28.00	-28.50	48.80	49.30	SC		30	0.67	0.20	0.20	0.47	16	394
-28.50	-29.00	49.30	49.80			31	0.67	0.20	0.20	0.48	17	403
-29.00	-29.50	49.80	50.30		37	34	0.66	0.18	0.18	0.48	17	406
-29.50	-30.00	50.30	50.80			35	0.65	0.18	0.18	0.47	17	400
-30.00	-30.50	50.80	51.30			35	0.66	0.17	0.17	0.49	19	382
-30.50	-31.00	51.30	51.80			32	0.68	0.18	0.18	0.50	23	347
-31.00	-31.50	51.80	52.30			24	0.71	0.25	0.25	0.46	24	307
-31.50	-32.00	52.30	52.80			21	0.73	0.27	0.27	0.46	32	266
-32.00	-32.50	52.80	53.30			12	0.79	0.50	0.50	0.29	25	224
-32.50	-33.00	53.30	53.80			11	0.81	0.52	0.52	0.29	31	194
-33.00	-33.50	53.80	54.30	CH		9	0.91	0.71	0.71	0.20	21	172
-33.50	-34.00	54.30	54.80			8	0.94	0.72	0.72	0.22	27	146
-34.00	-34.50	54.80	55.30		2	8	0.94	0.80	0.80	0.14	37	136
-34.50	-35.00	55.30	55.80			7	0.97	0.81	0.81	0.17	52	126
-35.00	-35.50	55.80	56.30			7	0.98	0.86	0.86	0.12	53	118
-35.50	-36.00	56.30	56.80			7	0.98	0.86	0.86	0.12	63	113
-36.00	-36.50	56.80	57.30			7	0.96	0.86	0.86	0.10	67	113
-36.50	-37.00	57.30	57.80			7	0.99	0.87	0.87	0.12	75	111
-37.00	-37.50	57.80	58.30			6	0.99	0.92	0.92	0.07	66	112
-37.50	-38.00	58.30	58.80			7	1.04	0.92	0.92	0.12	59	115
-38.00	-38.50	58.80	59.30			6	1.04	0.92	0.92	0.12	49	113
-38.50	-39.00	59.30	59.80			7	1.06	0.92	0.92	0.14	49	112
-39.00	-39.50	59.80	60.30		4	6	1.10	0.92	0.92	0.18	46	113
-39.50	-40.00	60.30	60.80			7	1.08	0.93	0.93	0.14	36	114
-40.00	-40.50	60.80	61.30			6	1.11	1.00	1.00	0.11	28	114
-40.50	-41.00	61.30	61.80			6	1.11	0.99	0.99	0.12	31	114
-41.00	-41.50	61.80	62.30			6	1.08	0.92	0.92	0.16	37	112
-41.50	-42.00	62.30	62.80			7	1.05	0.90	0.90	0.14	24	114
-42.00	-42.50	62.80	63.30			8	1.01	0.80	0.80	0.21	33	114
-42.50	-43.00	63.30	63.80			7	1.02	0.80	0.80	0.22	37	117
-43.00	-43.50	63.80	64.30			8	1.02	0.80	0.80	0.22	40	119
-43.50	-44.00	64.30	64.80			7	0.99	0.81	0.81	0.18	40	124
-44.00	-44.50	64.80	65.30		3	7	1.00	0.86	0.86	0.14	38	129
-44.50	-45.00	65.30	65.80			7	1.01	0.86	0.86	0.15	36	128
-45.00	-45.50	65.80	66.30			7	1.01	0.86	0.86	0.15	38	128
-45.50	-46.00	66.30	66.80			7	1.02	0.85	0.85	0.17	42	125
-46.00	-46.50	66.80	67.30			8	1.01	0.80	0.80	0.21	43	127
-46.50	-47.00	67.30	67.80			7	0.98	0.80	0.80	0.18	44	131
-47.00	-47.50	67.80	68.30			8	0.95	0.80	0.80	0.15	45	142
-47.50	-48.00	68.30	68.80			7	0.93	0.79	0.78	0.14	52	148
-48.00	-48.50	68.80	69.30	SM/SC		9	0.90	0.71	0.71	0.19	58	153
-48.50	-49.00	69.30	69.80			9	0.88	0.70	0.70	0.18	62	153
-49.00	-49.50	69.80	70.30		9	9	0.85	0.67	0.66	0.18	64	151
-49.50	-50.00	70.30	70.80			8	0.87	0.68	0.68	0.19	65	152
-50.00	-50.50	70.80	71.30			8	0.89	0.75	0.75	0.14	56	154
-50.50	-51.00	71.30	71.80			9	0.89	0.72	0.72	0.17	52	155
-51.00	-51.50	71.80	72.30			9	0.85	0.63	0.63	0.22	61	156
-51.50	-52.00	72.30	72.80			10	0.82	0.62	0.62	0.20	57	166
-52.00	-52.50	72.80	73.30			10	0.80	0.60	0.60	0.20	55	175
-52.50	-53.00	73.30	73.80			10	0.79	0.60	0.60	0.19	56	177
-53.00	-53.50	73.80	74.30			10	0.80	0.60	0.60	0.20	65	171
-53.50	-54.00	74.30	74.80			10	0.81	0.61	0.61	0.20	65	169
-54.00	-54.50	74.80	75.30		13	9	0.82	0.63	0.63	0.19	61	169
-54.50	-55.00	75.30	75.80			10	0.82	0.62	0.62	0.20	64	168
-55.00	-55.50	75.80	76.30			10	0.80	0.57	0.57	0.23	66	171
-55.50	-56.00	76.30	76.80			11	0.77	0.55	0.55	0.22	67	182
-56.00	-56.50	76.80	77.30			13	0.72	0.46	0.46	0.26	72	201

EB5P1 continued

Elevation range (ft)		Depth range (ft)		USCS	SPT	blows	DMX	SET	DFN	Rebound	SFT	EBR
					Nauto	#/6in	(in)	(in)	(in)	(in)	(kips)	(kips)
-56.50	-57.00	77.30	77.80			14	0.71	0.45	0.45	0.27	82	218
-57.00	-57.50	77.80	78.30			15	0.67	0.40	0.40	0.27	104	230
-57.50	-58.00	78.30	78.80			15	0.66	0.41	0.40	0.25	119	223
-58.00	-58.50	78.80	79.30			14	0.68	0.43	0.43	0.25	120	216
-58.50	-59.00	79.30	79.80			14	0.67	0.43	0.42	0.24	121	213
-59.00	-59.50	79.80	80.30		16	14	0.66	0.41	0.41	0.25	126	207
-59.50	-60.00	80.30	80.80	SM/SC		15	0.66	0.40	0.40	0.26	136	209
-60.00	-60.50	80.80	81.30			16	0.64	0.38	0.37	0.26	142	222
-60.50	-61.00	81.30	81.80			16	0.62	0.37	0.37	0.24	155	233
-61.00	-61.50	81.80	82.30			17	0.60	0.35	0.35	0.25	162	241
-61.50	-62.00	82.30	82.80			17	0.62	0.36	0.35	0.27	169	248
-62.00	-62.50	82.80	83.30			16	0.66	0.38	0.37	0.28	157	252
-62.50	-63.00	83.30	83.80			16	0.64	0.38	0.38	0.26	154	241
-63.00	-63.50	83.80	84.30			16	0.65	0.39	0.38	0.26	140	235
-63.50	-64.00	84.30	84.80			14	0.65	0.40	0.40	0.25	136	225
-64.00	-64.50	84.80	85.30		10	13	0.70	0.46	0.46	0.24	131	211
-64.50	-65.00	85.30	85.80			13	0.73	0.46	0.46	0.27	127	189
-65.00	-65.50	85.80	86.30			13	0.71	0.48	0.48	0.23	124	173
-65.50	-66.00	86.30	86.80			13	0.72	0.46	0.46	0.26	125	179
-66.00	-66.50	86.80	87.30	SM		15	0.69	0.40	0.40	0.29	144	206
-66.50	-67.00	87.30	87.80			16	0.65	0.37	0.37	0.28	151	259
-67.00	-67.50	87.80	88.30			22	0.59	0.28	0.28	0.31	173	325
-67.50	-68.00	88.30	88.80			22	0.56	0.27	0.27	0.28	184	351
-68.00	-68.50	88.80	89.30			24	0.54	0.25	0.25	0.29	194	355
-68.50	-69.00	89.30	89.80			23	0.55	0.26	0.25	0.29	200	349
-69.00	-69.50	89.80	90.30		18	21	0.56	0.29	0.28	0.27	199	326
-69.50	-70.00	90.30	90.80			21	0.57	0.30	0.29	0.27	201	295
-70.00	-70.50	90.80	91.30			18	0.61	0.33	0.33	0.28	189	267
-70.50	-71.00	91.30	91.80			17	0.58	0.33	0.33	0.25	197	243
-71.00	-71.50	91.80	92.30	SP-SM		17	0.58	0.35	0.35	0.23	205	229
-71.50	-72.00	92.30	92.80			17	0.58	0.35	0.35	0.23	227	218
-72.00	-72.50	92.80	93.30			17	0.56	0.35	0.35	0.21	257	208
-72.50	-73.00	93.30	93.80			17	0.55	0.35	0.35	0.20	287	197
-73.00	-73.50	93.80	94.30			17	0.53	0.35	0.35	0.18	319	184
-73.50	-74.00	94.30	94.80			17	0.55	0.36	0.35	0.20	344	168
-74.00	-74.50	94.80	95.30		10	16	0.56	0.38	0.37	0.18	368	153
-74.50	-75.00	95.30	95.80			16	0.53	0.38	0.37	0.15	391	134
-75.00	-75.50	95.80	96.30			16	0.54	0.38	0.37	0.16	407	121
-75.50	-76.00	96.30	96.80			16	0.55	0.38	0.37	0.17	405	118
-76.00	-76.50	96.80	97.30			16	0.54	0.39	0.38	0.15	405	118
-76.50	-77.00	97.30	97.80			15	0.55	0.38	0.38	0.16	410	124
-77.00	-77.50	97.80	98.30			17	0.54	0.36	0.36	0.18	417	134
-77.50	-78.00	98.30	98.80	SC		17	0.52	0.35	0.35	0.17	428	139
-78.00	-78.50	98.80	99.30			18	0.51	0.32	0.32	0.19	431	149
-78.50	-79.00	99.30	99.80			19	0.49	0.32	0.31	0.17	436	167
-79.00	-79.50	99.80	100.30		14	20	0.48	0.30	0.29	0.18	441	190
-79.50	-80.00	100.30	100.80			20	0.48	0.30	0.29	0.18	430	197
-80.00	-80.50	100.80	101.30			20	0.48	0.30	0.29	0.18	428	187
-80.50	-81.00	101.30	101.80			20	0.48	0.31	0.30	0.18	422	169
-81.00	-81.50	101.80	102.30			14	0.52	0.33	0.33	0.19	419	144