

Preliminary Geotechnical Engineering Report for Structures

**Wildlife Crossing No. 1 for
Wekiva Parkway (SR 429/SR 46) – Section 6 from
West of Old McDonald Road to River Oaks Circle
Lake and Seminole Counties, Florida**

December 12, 2014

Terracon Project No. H1135080

Prepared for:

GAI Consultants, Inc.

Orlando, Florida

Prepared by:

Terracon Consultants, Inc.

Winter Park, Florida

December 12, 2014

GAI Consultants, Inc.
618 E. South Street, Suite 700
Orlando, FL 32801

Attn: Mr. Stephen A. Boylan, P.E.
P: [407] 423-8398 (ext. 3083)
F: [407] 843-1070

Re: Preliminary Geotechnical Engineering Report for Structures
Wildlife Crossing No. 1 for
Wekiva Parkway (SR 429/SR 46) – Section 6 from
West of Old McDonald Road to River Oaks Circle
Lake and Seminole Counties, Florida
FPID: 238275-7-32-02
Terracon Project Number: H1135080

Dear Mr. Boylan:

Terracon Consultants, Inc. (Terracon) is pleased to present this preliminary geotechnical engineering report for the subject bridge proposed along the referenced project alignment. This evaluation was performed in general accordance with our Agreement dated June 20, 2013.

This preliminary report presents the findings of the subsurface exploration and provides preliminary geotechnical recommendations concerning the design of foundations for the proposed bridge construction. A more detailed evaluation is expected to be performed once loads are finalized and a preferred foundation alternative is selected.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants, Inc.

Certificate of Authorization Number 8830

DRAFT

Elias N. Jammal, P.E.
Senior Geotechnical Engineer
Florida PE #60126

DRAFT

Richard G. Acree, P.E.
Principal
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Geotechnical



Environmental



Construction Materials



Facilities

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**PRELIMINARY GEOTECHNICAL ENGINEERING REPORT
FOR STRUCTURES
WILDLIFE CROSSING NO. 1
FOR WEKIVA PARKWAY (SR 429/SR 46) FROM
WEST OF OLD McDONALD ROAD TO RIVER OAKS CIRCLE
LAKE AND SEMINOLE COUNTIES, FLORIDA
FPID: 238275-7-32-02
Terracon Project No. H1135080
December 12, 2014**

1.0 INTRODUCTION

This preliminary geotechnical engineering report has been prepared for Wildlife Crossing No. 1 which is proposed near Old McDonald Road, along the Wekiva Parkway (SR 429/SR 46) alignment, in Lake County, Florida. This bridge is part of the proposed improvements associated with the construction of Wekiva Parkway (SR 429/SR 46) – Section 6 from West of Old McDonald Road to River Oaks Circle in Lake and Seminole Counties, Florida. The project bridge site is shown on the Topographic Vicinity Map included as Exhibit A-1 in Appendix A. Separate reports are planned to be submitted for other components (roadway, drainage, bridges, and retaining walls) of the project. This preliminary report addresses an initial evaluation of foundations for the proposed bridge described above. The purpose of these services is to provide information and preliminary geotechnical engineering recommendations relative to preliminary foundation design of the bridges.

2.0 PROJECT INFORMATION

2.1 Project Description

Item	Description
Site Layout	See Appendix A, Exhibit A-3 (boring location plans).
Structure	Wildlife Crossing No. 1 consists of the construction of triple multi-span bridges, each approximately 1,800 feet in length.
Pile Loads	Anticipated pile loading for each foundation type evaluated, is presented in Section 4.0 of this report.

2.2 Site Location and Description

Item	Description
Location	Wildlife No. Crossing 1 area is located along proposed State Road 429 from about Station 662+00 to Station 680+00, referencing the centerline of construction of State Road 429.
Existing Topography	The Wildlife Crossing No. 1 area is relatively flat. The USGS topographic quadrangle maps "Sorrento, Florida" and "Sanford SW, Florida" depict the ground surface elevations near +55 to +65 feet, NGVD across the bridge alignment.
Surface Water	The USGS topographic quadrangle maps "Sorrento, Florida" and "Sanford SW, Florida" depict wetland areas to the south of the proposed bridge area.

3.0 SUBSURFACE CONDITIONS

3.1 Soil Survey

The Soil Survey of Lake County, Florida as prepared by the United States Department of Agriculture (USDA), Soil Conservation Service (SCS; later renamed the Natural Resource Conservation Service - NRCS), identifies multiple soil types along the Wildlife Crossing No. 1 bridge site. Descriptions of the mapped soil units are included in Appendix A as Exhibit A-17. It should be noted that the Soil Survey is not intended as a substitute for site-specific geotechnical exploration; rather it is a useful tool in planning a project scope in that it provides information on soil types likely to be encountered. Boundaries between adjacent soil types on the Soil Survey maps are approximate (included in Appendix as Exhibit A-2).

3.2 Fieldwork Program

Standard Penetration Test (SPT) borings were performed within the area of the proposed Wildlife Crossing No. 1 bridge site. This included a total of 35 SPT borings, designated WL1-B1 through WL1-B35, performed to depths of about 85 to 155 feet. Profiles of the borings along with a boring location plan for the bridge site are included in Appendix A of this report.

Nadic Engineering Services (NES) performed borings for the bridge site (designated as borings TB-1 through TB-3), for the Line & Grade Study. These boring profiles are included in Appendix C of this report.

Preliminary Geotechnical Engineering Report

Wildlife Crossing No. 1 ■ Lake and Seminole Counties, Florida
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3.3 Typical Profile

Based on the results of the borings, subsurface conditions at the project areas can be generalized as follows:

Approximate Depth to Bottom of Stratum (feet)	Material Description	Consistency/Density
5 to 20	Fine sand (SP), fine sand with silt (SP-SM)	Very loose to loose
20 to 60	Fine sand (SP), fine sand with silt (SP-SM), silty fine sand (SM), clayey fine sand (SC), with varying amounts of shell fragments and phosphates	Loose to dense
35 to 75	Clayey fine sand (SC), sandy clay and clay (CL)(CH), with varying amounts of phosphates	Very soft to stiff
65 to 95	Fine sand (SP), fine sand with silt (SP-SM), silty fine sand (SM), clayey fine sand (SC), with varying amounts of dolostone and phosphates	Dense to very dense
70 to 125	Fine sand (SP), fine sand with silt (SP-SM), silty fine sand (SM), clayey fine sand (SC), with varying amounts of shell fragments and phosphates	Loose to dense
110 to 155 (maximum boring termination depth)	Weathered Limestone and Limestone	Loose to very dense

Conditions encountered at each boring location are indicated on the individual boring profiles. Stratification boundaries on the boring profiles represent the approximate location of changes in soil types; in-situ, the transition between materials may be gradual. Details for each of the borings can be found on the boring profiles in Appendix A of this report. Descriptions of our field exploration are included as Exhibit A-18 in Appendix A.

3.4 Groundwater

The boreholes were observed during drilling for the presence and level of groundwater. Groundwater was observed in nearly half of the borings ranging between depths of about 4.5 to 11.5 feet below existing grade. Most of the borings did not encounter groundwater to a depth of 10 feet (approximate depth at which driller's mud is typically introduced in the borehole for stabilization purposes), and are designated *GNE-10'* adjacent to the boring profiles.

Preliminary Geotechnical Engineering Report

Wildlife Crossing No. 1 ■ Lake and Seminole Counties, Florida
December 12, 2014 ■ Terracon Project No. H1135080

It should be recognized that fluctuations of the groundwater table will occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the boring was performed. In addition, perched water can develop within higher permeability soils overlying less permeable soils. Therefore, groundwater levels during construction or at other times in the future may be higher or lower than the levels indicated on the boring profiles.

We estimate that during the normal wet season with rainfall and recharge at a maximum, groundwater levels will range between depths of about 4 to 9 feet below existing grade. Our estimates of the seasonal groundwater conditions are based on the USDA Soil Survey, available survey data, the encountered soil types, recent weather conditions, and the encountered water levels.

These seasonal water table estimates do not represent the temporary rise in water table that occurs immediately following a storm event, including adjacent to other stormwater management facilities or water bodies. The seasonal high water table may vary from normal when affected by extreme weather changes, localized or regional flooding, karst activity, future grading, drainage improvements, or other construction that may occur on or around the site following the date of this report.

4.0 PRELIMINARY RECOMMENDATIONS FOR DESIGN

4.1 Geotechnical Considerations

The following preliminary conclusions and recommendations are based on the project characteristics previously described, the data obtained in our field exploration and our experience with similar subsurface conditions and construction types. If final structure locations or grades are significantly different from those previously described in this report, or if subsurface conditions different from those discussed by the borings are encountered during construction, we should be notified immediately so that we might review and modify, if necessary, the following recommendations. Once final loads are known and a preferred pile type is selected, a more detailed foundation evaluation is expected to be performed.

4.2 Foundation Alternatives

Based on the subsurface conditions at the site, deep pile foundation systems appear to be the most feasible foundation alternative for the construction of the proposed bridges, with respect to geotechnical engineering issues. A shallow foundation (spread footings) alternative was not considered for the bridge structures. A drilled shaft foundation was also not considered since drilled shafts are typically used in scenarios where relatively shallow dense soil/rock strata is present, which was not consistently the case at these sites. Thus, the 18 and 24-inch square prestressed concrete pile (PCP), 20-inch steel pipe pile, and the HP14x89 steel H-pile section were evaluated.

4.3 Concrete and Steel Pile Foundations

The FDOT computer model FBDeep was used to evaluate estimated Davisson ultimate capacities for the 18 and 24-inch square prestressed concrete pile (PCP), the 20-inch steel pipe pile, and the HP14x89 steel H-pile section. The input soil parameters were obtained from the SPT borings performed for this preliminary evaluation. The Davisson capacities versus pile tip elevations for the various pile types are presented in **Appendix B**, along with the **FBDeep Computer Outputs**.

The Davisson capacities shown on the curves in **Appendix B** for the various pile sections can be used to find approximate tip elevations and estimate pile lengths for the driven piles using the following formula:

$$\text{Nominal Bearing Resistance (NBR)} \geq \frac{\text{Factored Design Load} + \text{Net Scour} + \text{Downdrag}}{\Phi}$$

Where Φ is a resistance factor and

$\Phi = 0.75$ with static load testing.

$\Phi = 0.65$ with PDA and CAPWAP analysis of test piles.

4.4 Preliminary Pile Tip Estimates

Our estimate of driven pile lengths was based on static pile analysis. The actual driven lengths will be a function of the actual field driving behavior. The driving system used should be a proper type and have sufficient hammer energy in accordance with Specification Section 455.

Test piles with dynamic load tests are anticipated for the bridge structure. Test pile locations should be shown on the foundation layout sheet. We recommend that piles be driven prior to the construction of the proprietary retaining wall system.

The estimated preliminary pile tip elevations are based on review of the borings, our pile capacity analyses, geotechnical engineering judgment, and our understanding of criteria for pile bearing requirements in accordance with the FDOT specifications.

Set-checks and/or restrikes may be required for some of the piles. A note should be added to the plans to alert the Contractor to anticipate that set-checks and re-drives will be required.

Preliminary Geotechnical Engineering Report

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 December 12, 2014 ■ Terracon Project No. H1135080

Based on the FDOT Structures Design Guidelines, the maximum pile driving resistance for an 18-inch PCP should not exceed 300 tons; and the maximum pile driving resistance for a 24-inch PCP should not exceed 450 tons. However, due to potential difficulties with driving the piles and the potential for pile damage, the maximum pile driving resistances for the concrete piles should be limited. For purposes of preliminary design, the following NBR values were evaluated:

- 240 tons for the 18-inch pile;
- 360 tons for the 24-inch pile;
- 240 tons was used for the 20-inch steel pipe pile;
- 175 tons was used for the HP14x89 steel H-pile.

The following table presents estimated pile tip elevations based on potential pile types and loads for the bridges. Once factored design loads and pile types are finalized, a more detailed foundation evaluation is expected to be performed.

Bridge Bent/Pier	Pile Type							
	18-inch PCP		24-inch PCP		20-inch steel pipe pile		HP14x89	
	NBR (tons)	Pile Tip (feet)	NBR (tons)	Pile Tip (feet)	NBR (tons)	Pile Tip (feet)	NBR (tons)	Pile Tip (feet)
1	240	-10 to -80	360	-10 to -80	240	-25 to -85	175	-30 to -90
2	240	-5 to -70	360	-5 to -70	240	-55 to -75	175	-55 to -75
3	240	-5 to -10	360	-5 to -10	240	-25 to -45	175	-25 to -45
4	240	+0 to -45	360	+0 to -45	240	-45 to -70	175	-45 to -70
5	240	-10 to -70	360	-10 to -70	240	-35 to -75	175	-50 to -75
6	240	+0 to -5	360	-5 to -10	240	-10 to -40	175	-15 to -45
7	240	-5 to -25	360	-5 to -25	240	-10 to -30	175	-30 to -40
8	240	-30 to -45	360	-30 to -45	240	-45 to -50	175	-45 to -50
9	240	-10 to -30	360	-10 to -30	240	-45 to -55	175	-55 to -75
10	240	-10 to -35	360	-10 to -35	240	-15 to -60	175	-20 to -65
11	240	-5 to -10	360	-5 to -10	240	-20 to -35	175	-20 to -35
12	240	-30 to -50	360	-30 to -50	240	-45 to -55	175	-45 to -55
13	240	-5 to -35	360	-5 to -35	240	-35 to -45	175	-35 to -45
14	240	-5 to -10	360	-5 to -10	240	-40 to -65	175	-45 to -70
15	240	-5 to -30	360	-10 to -30	240	-30 to -50	175	-30 to -50
16	240	-10 to -40	360	-10 to -40	240	-30 to -75	175	-40 to -80
17	240	-5 to -85	360	-5 to -85	240	-35 to -90	175	-35 to -90

4.5 Downdrag

Downdrag will need to be further evaluated once grades are finalized and a foundation type has been selected.

4.6 High Rebound

The potential for high rebound conditions may need to be evaluated at the bridge site. High rebound typically occurs when driving displacement-type piles (solid concrete, closed-end steel or concrete pile, “plugged” pipes, etc.) into saturated soils (very stiff to hard silts/clays). High rebound conditions may adversely affect pile driveability and may affect the assessment of the pile’s bearing capacity. To avoid or to account for potential high rebound conditions, this may include:

- Preforming to a depth below the high rebound soils,
- Indicating a minimum pile tip elevation below the high rebound soils,
- Using a low-displacement pile such as an H-pile, and/or
- Using a pile driving system with a larger ram and a shorter stroke.

4.7 Noise/Vibration

Noise and vibration caused by pile driving should be considered for this project. All reasonable precautions to prevent damage to nearby, existing structures in accordance with Section 455 of the FDOT Specifications shall be taken.

4.8 Pile Group Effects

No reduction of the individual pile capacities will be required if piles are spaced center to center at three times width or greater. The pile caps usually contribute to the overall bearing capacity of the pile group, provided they are supported on competent soil outside the outer perimeter of the group. However, we do not recommend taking credit for this additional capacity because of potential for loss of soil cover at the pile cap.

4.9 Pile Data Table

Once final loads and pile types are available, information for a pile data table for incorporation into the project plans can be provided.

4.10 Environmental Classification

A total of nine (9) soil samples were obtained from the SPT borings, performed at the bridge site, for corrosion series testing to determine subsurface environmental conditions. Corrosion tests were performed in accordance with FDOT Structures Design Guidelines. Testing included pH, chlorides, sulfates and resistivity tests. The environmental classification for the substructures generally ranged from slightly to moderately aggressive for use of concrete; and moderately to extremely aggressive for use of steel (pH ranged from 5.2 to 7.0). The corrosion series test results are summarized on **Exhibit A-20** in **Appendix A**.

Preliminary Geotechnical Engineering Report

Wildlife Crossing No. 1 ■ Lake and Seminole Counties, Florida

December 12, 2014 ■ Terracon Project No. H1135080

Considering the results of the corrosion series testing, the Structures Design Guidelines indicate that steel piles will either need corrosion protection, a sacrificial steel thickness, or should not be used. This may also need to be coordinated with the State Geotechnical Engineer for use of steel piles.

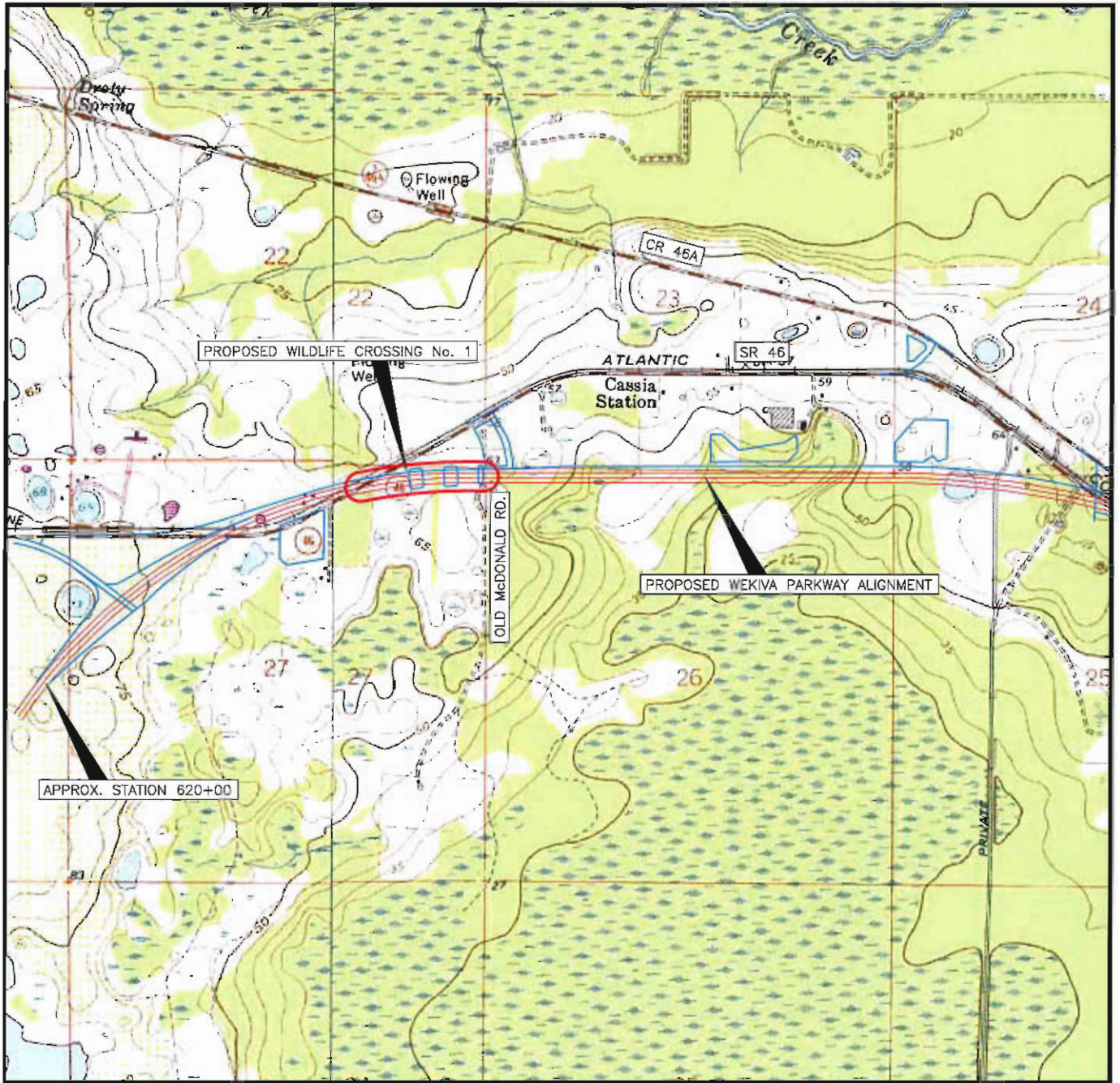
4.11 Artesian Conditions

Based on review of the St. Johns River Water Management District potentiometric maps of the upper Floridan Aquifer for the project area, the potential artesian head elevation is estimated to be near +40 feet, NGVD at the bridge site. The ground surface elevations at the bridge site ranged from about +55 to +65 feet, NGVD. Artesian conditions are not anticipated to be a concern considering use of piles for each bridge foundation system.

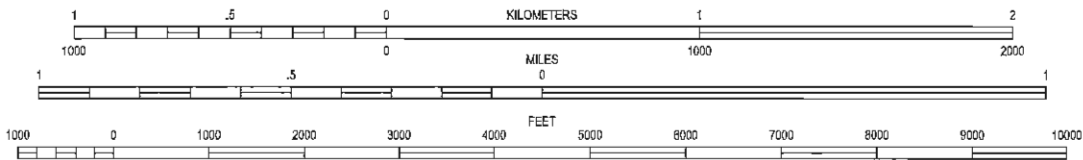
5.0 GENERAL COMMENTS

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

APPENDIX A
FIELD EXPLORATION



SCALE 1:24 000



CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

SECTION: 27 SORRENTO, FLORIDA SANFORD SW, FLORIDA
 TOWNSHIP: 19 SOUTH ISSUED: 1960 REVISED: 1980 ISSUED: 1965 REVISED: 1970
 RANGE: 28 EAST 7.5 MINUTE SERIES (QUADRANGLE)



N:\Projects\2013\H1135080\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Cad\wildlife no1\wildlife 1 usgs.dwg

Dec09, 2014 - 2:17pm

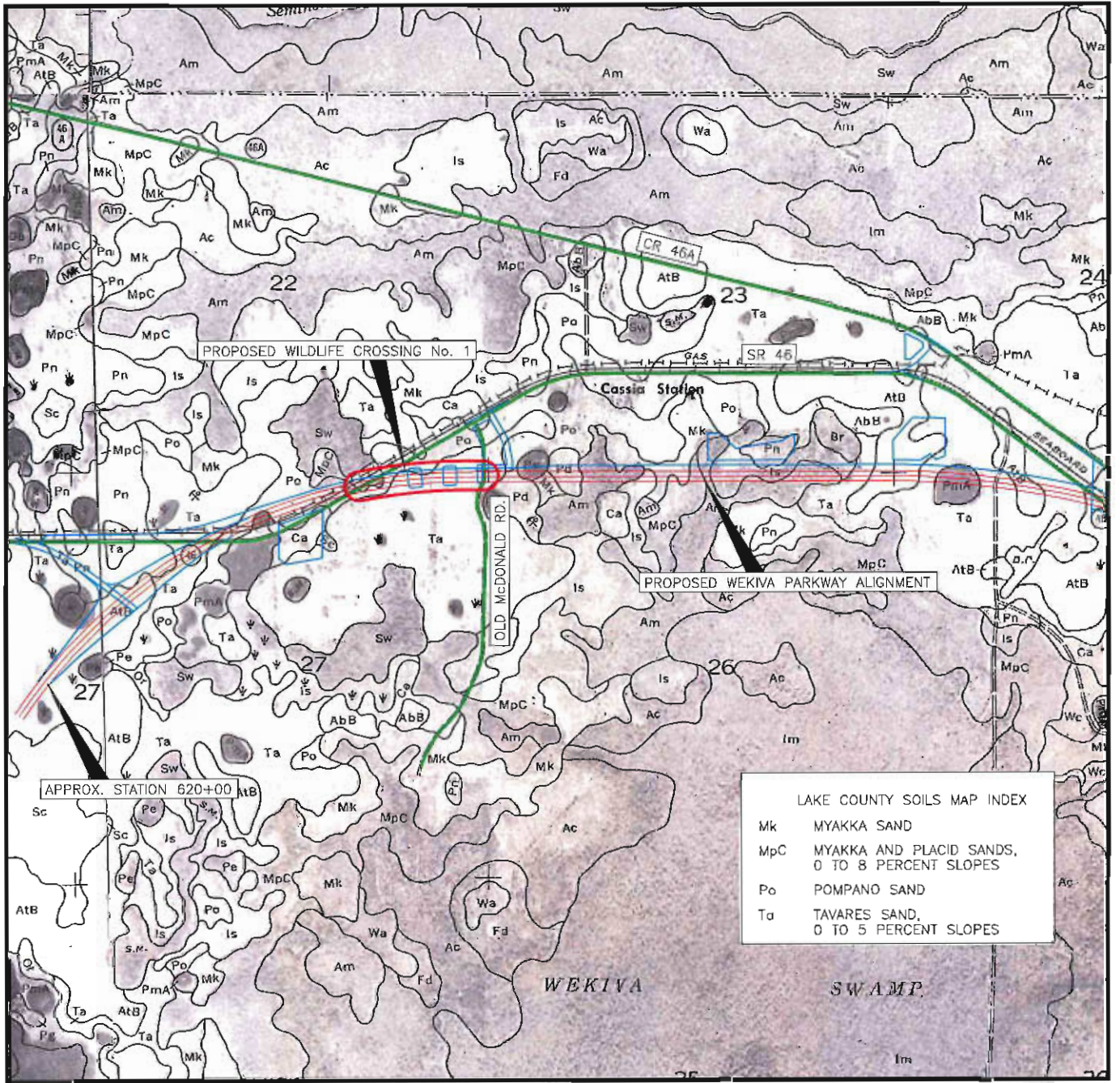
Project Mgr:	ENJ	Project No.	H1135080
Drawn By:	SW	Scale:	AS SHOWN
Checked By:	ENJ	File No.	H1135080-1
Approved By:	RGA	Date:	12-9-14

Terracon
 Consulting Engineers and Scientists
 1675 LEE ROAD WINTER PARK, FLORIDA 32789
 PH. (407) 740-6110 FAX. (407) 740-6112

TOPOGRAPHIC VICINITY MAP
 GEOTECHNICAL ENGINEERING EVALUATION
 WEKIVA PARKWAY (SR 429 / SR 46)
 FROM OLD McDONALD RD. TO RIVER OAKS CIRCLE
 LAKE AND SEMINOLE COUNTIES, FLORIDA

EXHIBIT
A-1

Dec11, 2014-11:20am N:\Projects_2013\H1135080\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Cad\wildlife no1\wildlife 1 usda.dwg




SCALE 1" = 2000'

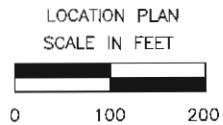


U.S.D.A. SOIL SURVEY FOR LAKE COUNTY, FLORIDA
ISSUED: 1971



SECTION: 27
TOWNSHIP: 19 SOUTH
RANGE: 28 EAST

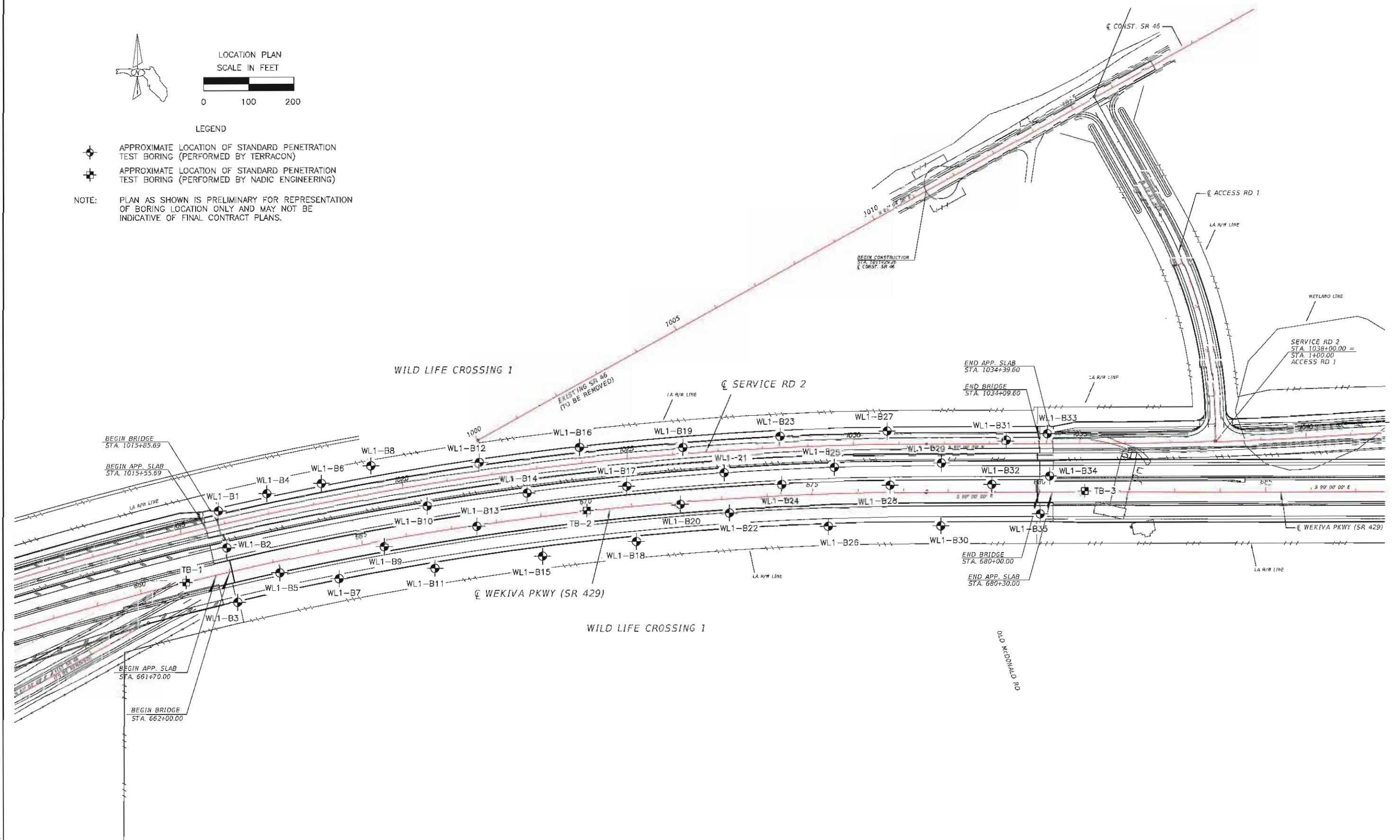
Project Mngnr: ENJ	Project No. H1135080	 Consulting Engineers and Scientists	U.S.D.A. SOILS MAP GEOTECHNICAL ENGINEERING EVALUATION WEKIVA PARKWAY (SR 429 / SR 46) FROM OLD McDONALD RD. TO RIVER OAKS CIRCLE LAKE AND SEMINOLE COUNTIES, FLORIDA	EXHIBIT A-2
Drawn By: SW	Scale: AS SHOWN			
Checked By: ENJ	File No. H1135080-2	1875 LEE ROAD PH. (407) 740-6110	WINTER PARK, FLORIDA 32789 FAX. (407) 740-6112	
Approved By: RGA	Date: 12-9-14			



LEGEND

- APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING (PERFORMED BY TERRACON)
- APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING (PERFORMED BY NADIC ENGINEERING)

NOTE: PLAN AS SHOWN IS PRELIMINARY FOR REPRESENTATION OF BORING LOCATION ONLY AND MAY NOT BE INDICATIVE OF FINAL CONTRACT PLANS.



WILDLIFE CROSSING No. 1

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

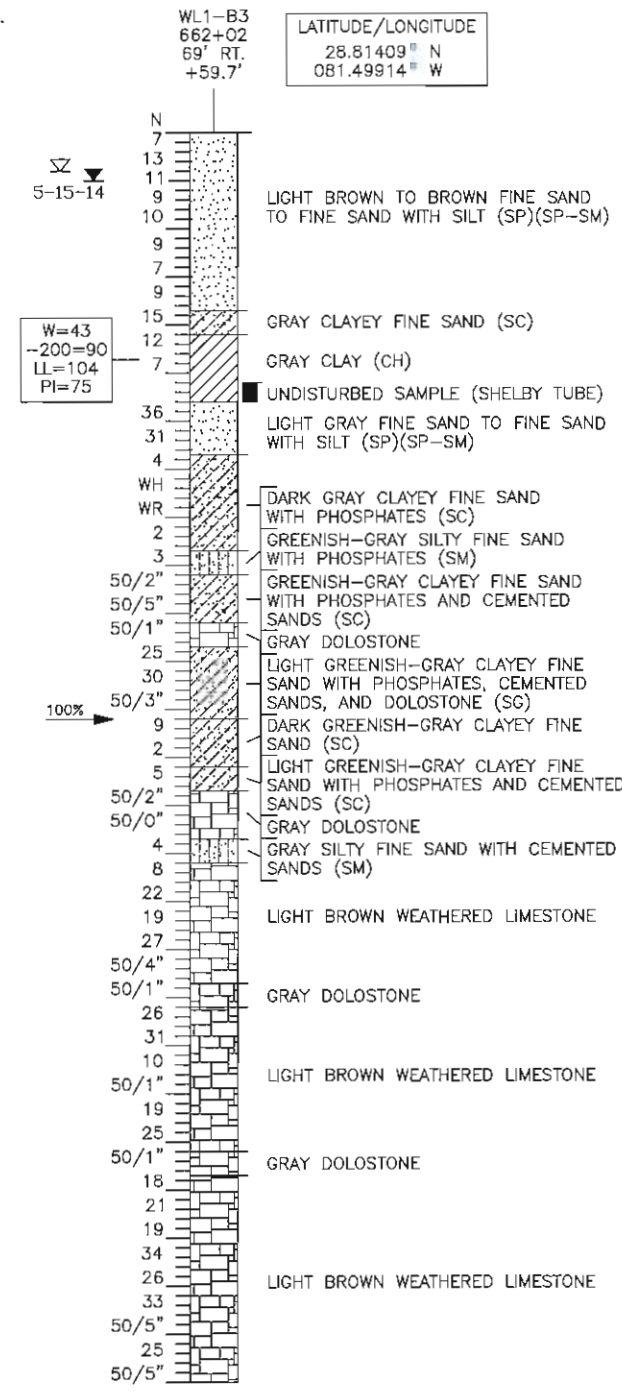
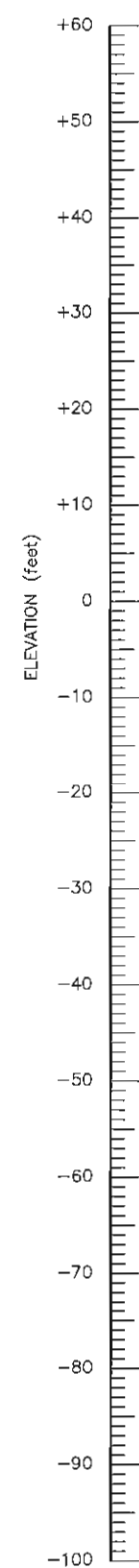
RICHARD G. ACREE, P.E.
P.E. LICENSE NUMBER 53962
1675 LEE ROAD
WINTER PARK, FLORIDA 32789
TERRACON
CERTIFICATE OF AUTHORIZATION No. 8830

DRAWN BY: SW 8-23-14	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	
CHECKED BY: ENJ 8-23-14	ROAD NO.	COUNTY
DESIGNED BY:	SR 429	LAKE SEMINOLE
CHECKED BY:	FINANCIAL PROJECT ID 238275-7-32-02	

SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.
PROJECT NAME: WEKIVA PARKWAY (SR 429/SR 46) SECTION 6	SHEET NO. -

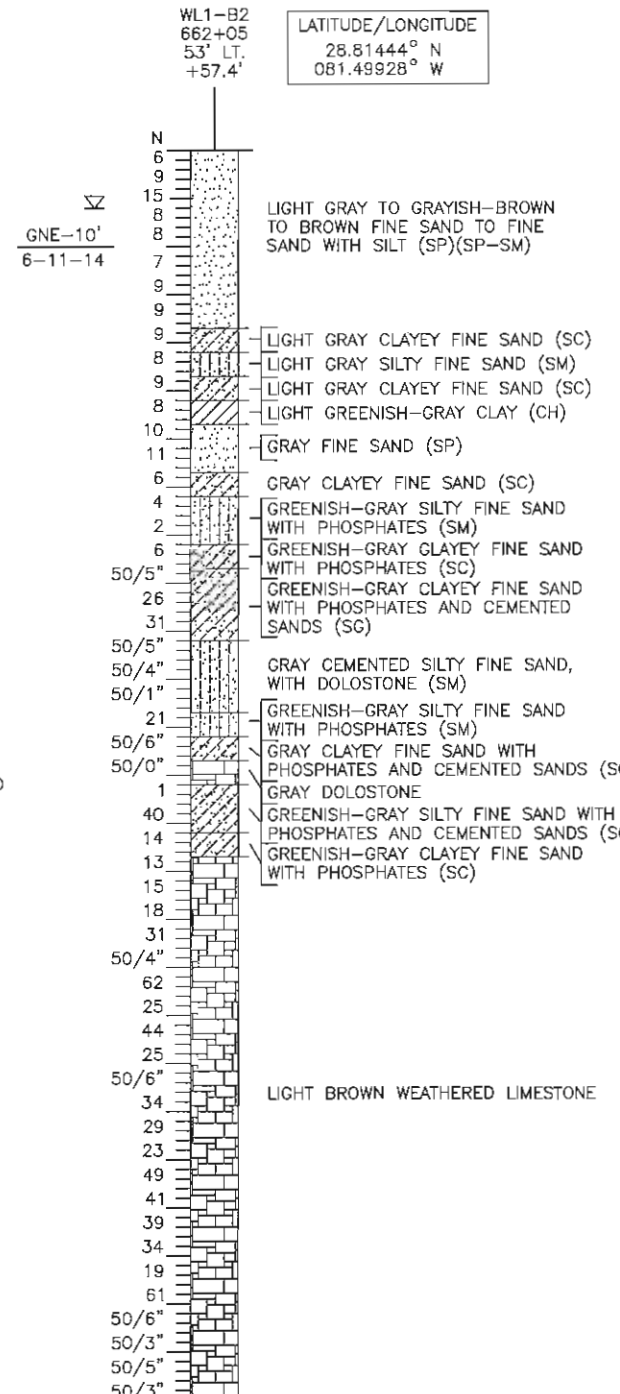
Aug23, 2014 - 11:42am

BORING No.
STATION:
OFFSET:
ELEVATION:
(feet)



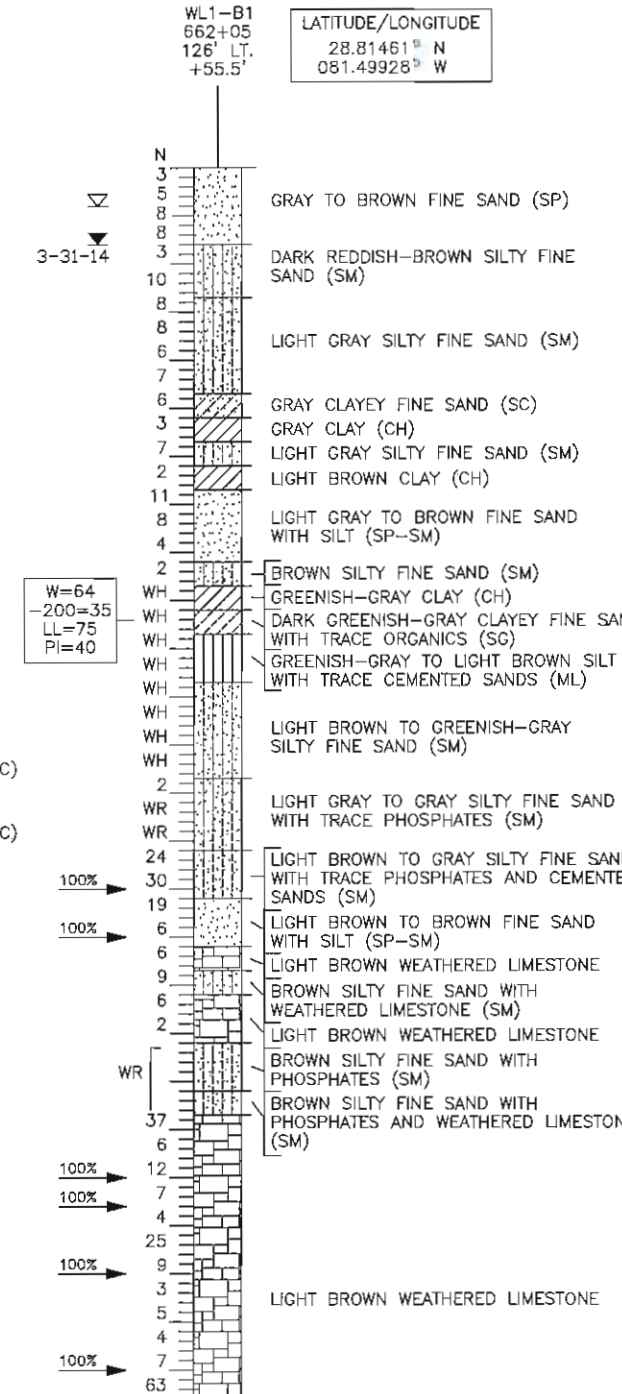
BORING TERM. @ 130'
CASING TO 85'
BORING DRILLED: 5-15-14
RIG TYPE: D-50
HAMMER TYPE: AUTOMATIC

NOTES:
1) SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
2) UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).



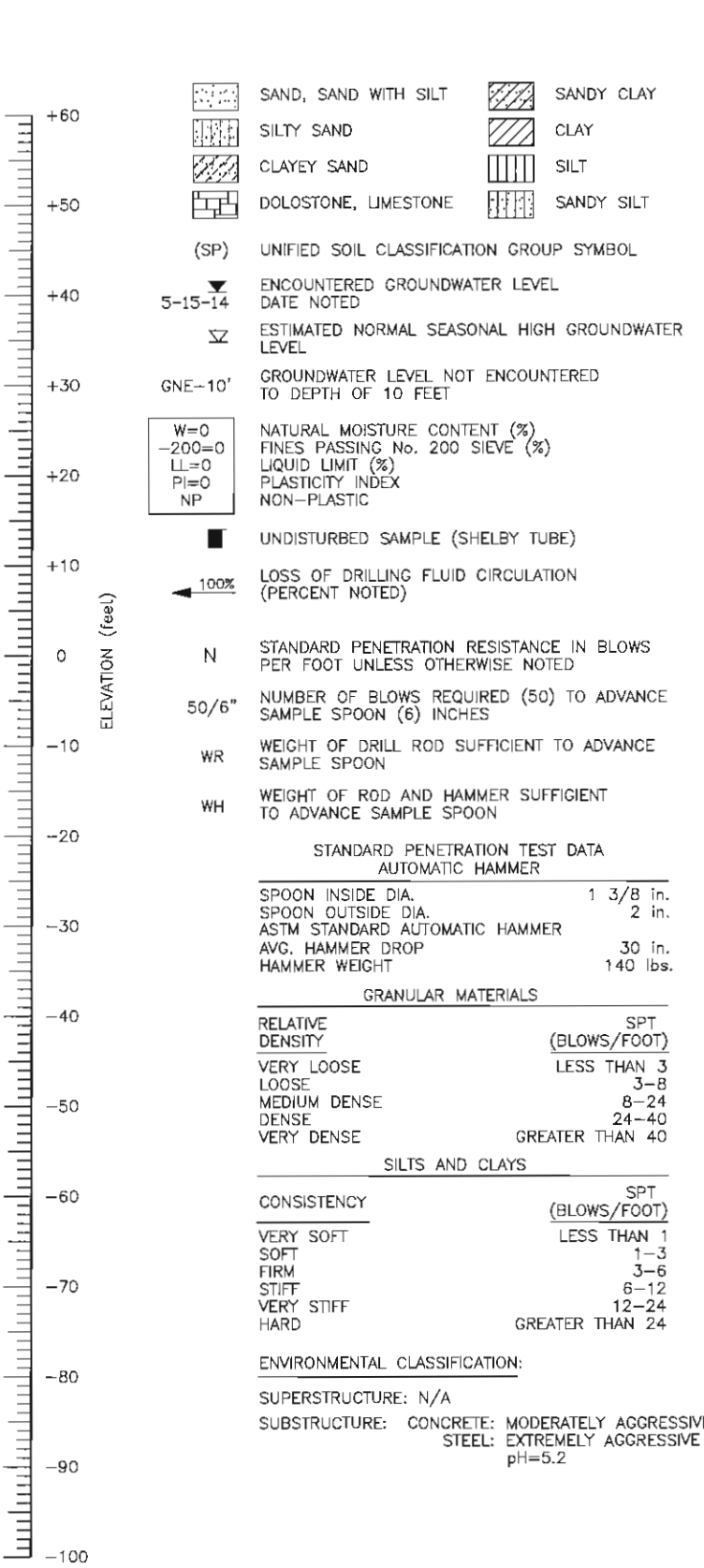
BORING TERM. @ 130'
CASING TO 50'
BORING DRILLED: 6-11-14
RIG TYPE: D-50
HAMMER TYPE: AUTOMATIC

3) STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
4) BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.



BORING TERM. @ 155'
CASING TO 135'
BORING DRILLED: 3-31-14
RIG TYPE: CME-550X
HAMMER TYPE: AUTOMATIC

1) SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.



ENVIRONMENTAL CLASSIFICATION:
SUPERSTRUCTURE: N/A
SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE
STEEL: EXTREMELY AGGRESSIVE
pH=5.2

WILDLIFE CROSSING No. 1

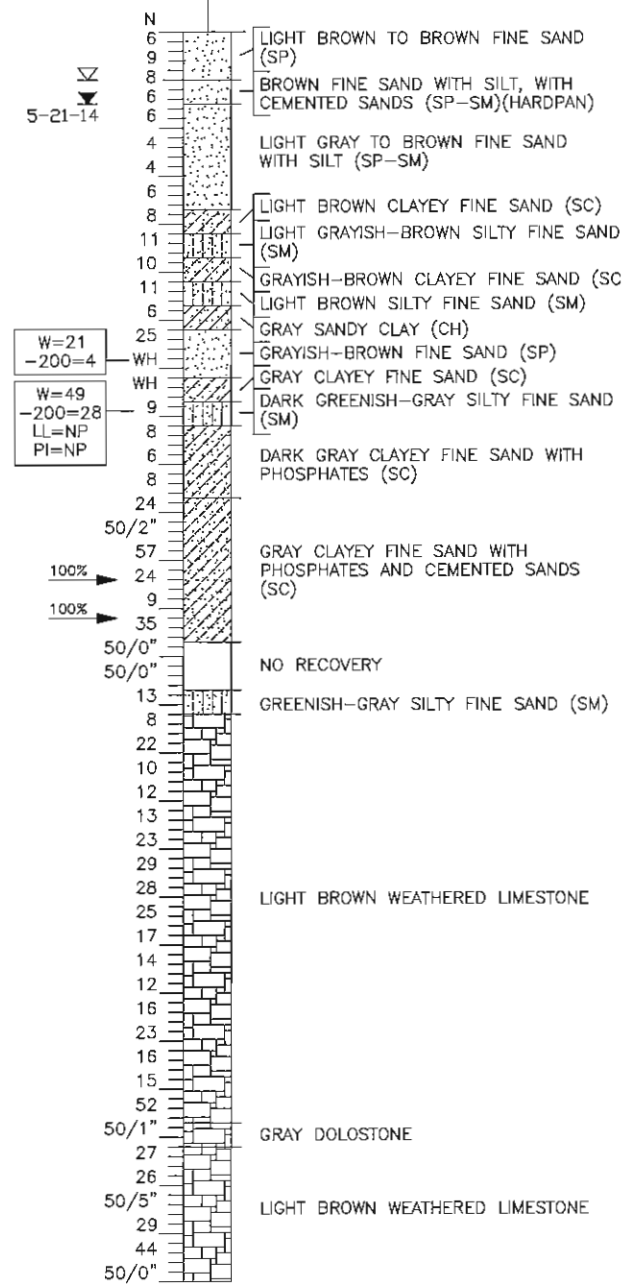
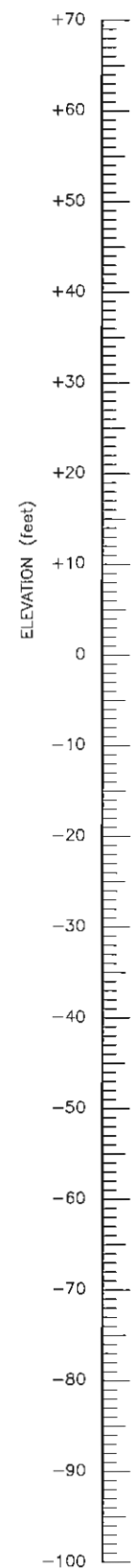
REVISIONS						DRAWN BY: SW 12-3-14 CHECKED BY: ENJ 12-3-14	DESIGNED BY: SR 429	CHECKED BY:	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
									LAKE SEMINOLE	238275-7-32-02	WEKIVA PARKWAY (SR 429/SR 46) SECTION 6		

RICHARD G. ACREE, P.E.
P.E. LICENSE NUMBER 53962
1675 LEE ROAD
WINTER PARK, FLORIDA 32789
TERRACON
CERTIFICATE OF AUTHORIZATION No. 8830

BORING No.
STATION:
OFFSET:
ELEVATION:
(feet)

WL1-B5
663+08
26' RT.
+60.1'
LATITUDE/LONGITUDE
28.81423° N
081.49884° W

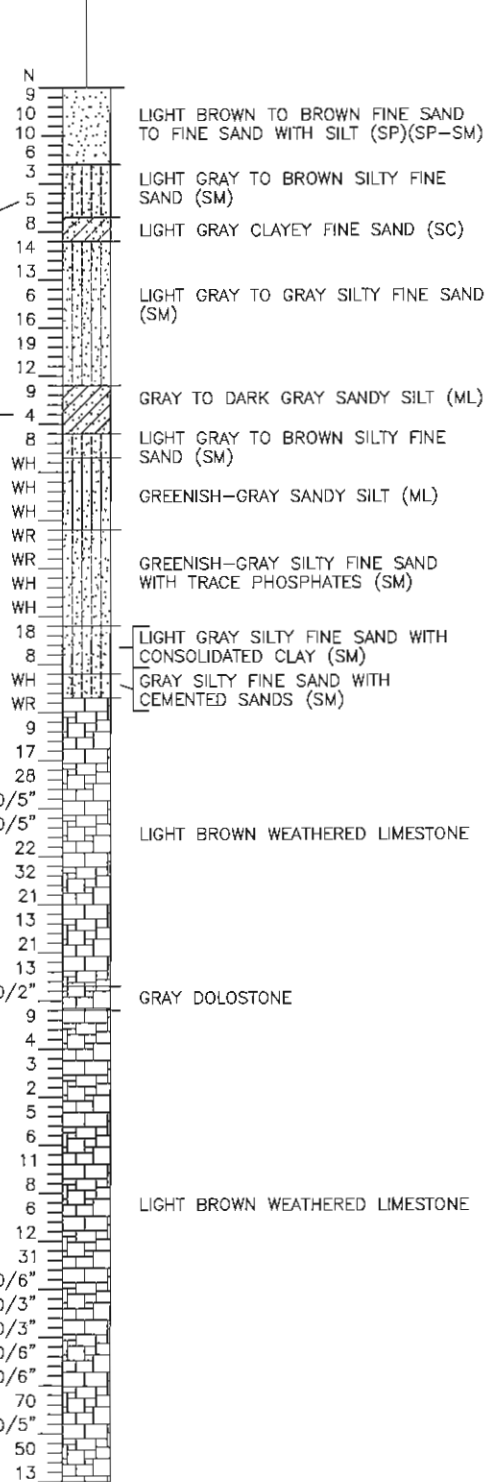
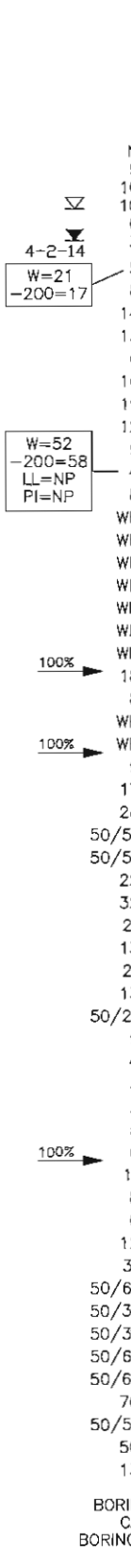
WL1-B4
663+16
150' LT.
+53.9'
LATITUDE/LONGITUDE
28.81476° N
081.49888° W



W=21
-200=4
W=49
-200=28
LL=NP
PI=NP

BORING TERM. @ 130'
CASING TO 65'
BORING DRILLED: 5-21-14

RIG TYPE: D-50
HAMMER TYPE: AUTOMATIC



W=21
-200=17
W=52
-200=58
LL=NP
PI=NP

BORING TERM. @ 145'
CASING TO 125'
BORING DRILLED: 4-2-13

RIG TYPE: CME-550X
HAMMER TYPE: AUTOMATIC

- SAND, SAND WITH SILT
- SILTY SAND
- CLAYEY SAND
- DOLOSTONE, LIMESTONE
- SANDY CLAY
- CLAY
- SILT
- SANDY SILT
- (SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
- ENCOUNTERED GROUNDWATER LEVEL
DATE NOTED
- ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
- GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET
- W=0 NATURAL MOISTURE CONTENT (%)
-200=0 FINES PASSING No. 200 SIEVE (%)
LL=0 LIQUID LIMIT (%)
PI=0 PLASTICITY INDEX
NP NON-PLASTIC

- LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)
- N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED
- 50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES
- WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON
- WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:
SUPERSTRUCTURE: N/A
SUBSTRUCTURE: CONCRETE: SLIGHTLY AGGRESSIVE
STEEL: MODERATELY AGGRESSIVE
pH=7.0

- NOTES:
- SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
 - UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).
 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

Dec02, 2014--3:40pm

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

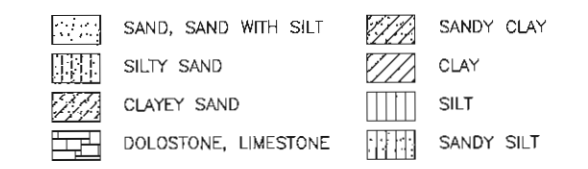
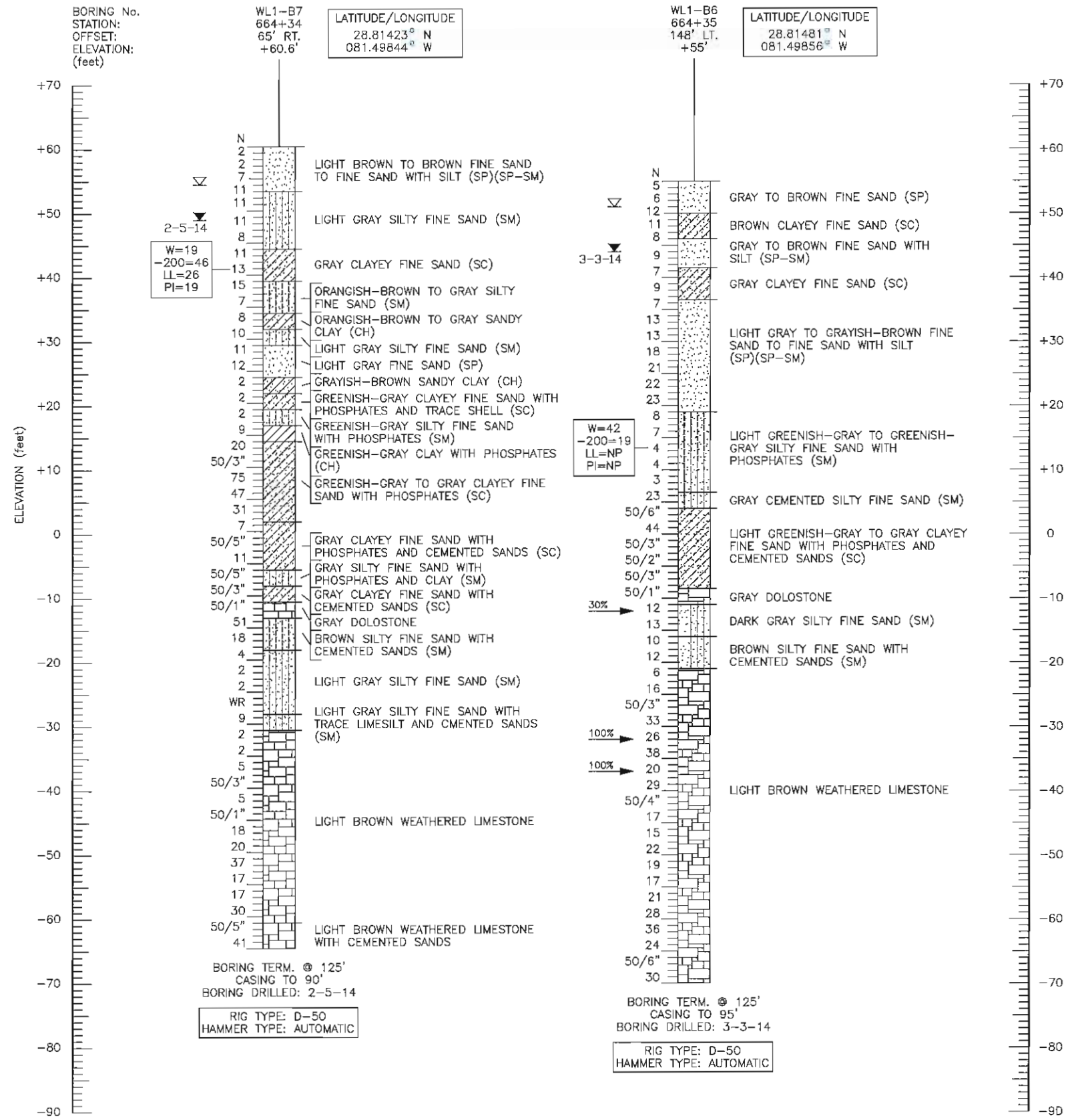
RICHARD G. ACREE, P.E.
P.E. LICENSE NUMBER 53962
1675 LEE ROAD
WINTER PARK, FLORIDA 32789
TERRACON
CERTIFICATE OF AUTHORIZATION No. 8830

DRAWN BY:	SW 12-3-14
CHECKED BY:	ENJ 12-3-14
DESIGNED BY:	
CHECKED BY:	

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	LAKE SEMINOLE	238275-7-32-02

SHEET TITLE:		REF. DWG. NO.
REPORT OF SPT BORINGS FOR STRUCTURES		
PROJECT NAME:		SHEET NO.
WEKIVA PARKWAY (SR 429/SR 46)		
SECTION 6		



(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

ENCOUNTERED GROUNDWATER LEVEL DATE NOTED

ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL

GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET

W=0 NATURAL MOISTURE CONTENT (%)
 -200=0 FINES PASSING No. 200 SIEVE (%)
 LL=0 LIQUID LIMIT (%)
 PI=0 PLASTICITY INDEX
 NP NON-PLASTIC

← 100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)

N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES

WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON

WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:

SUPERSTRUCTURE: N/A

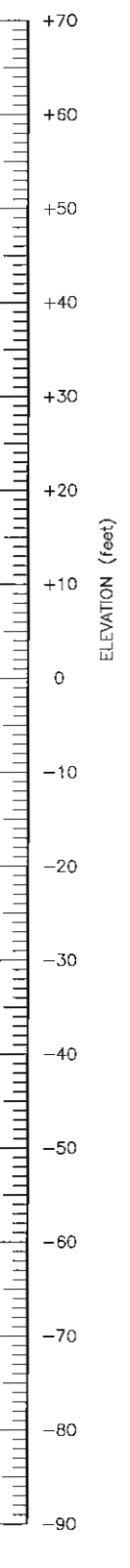
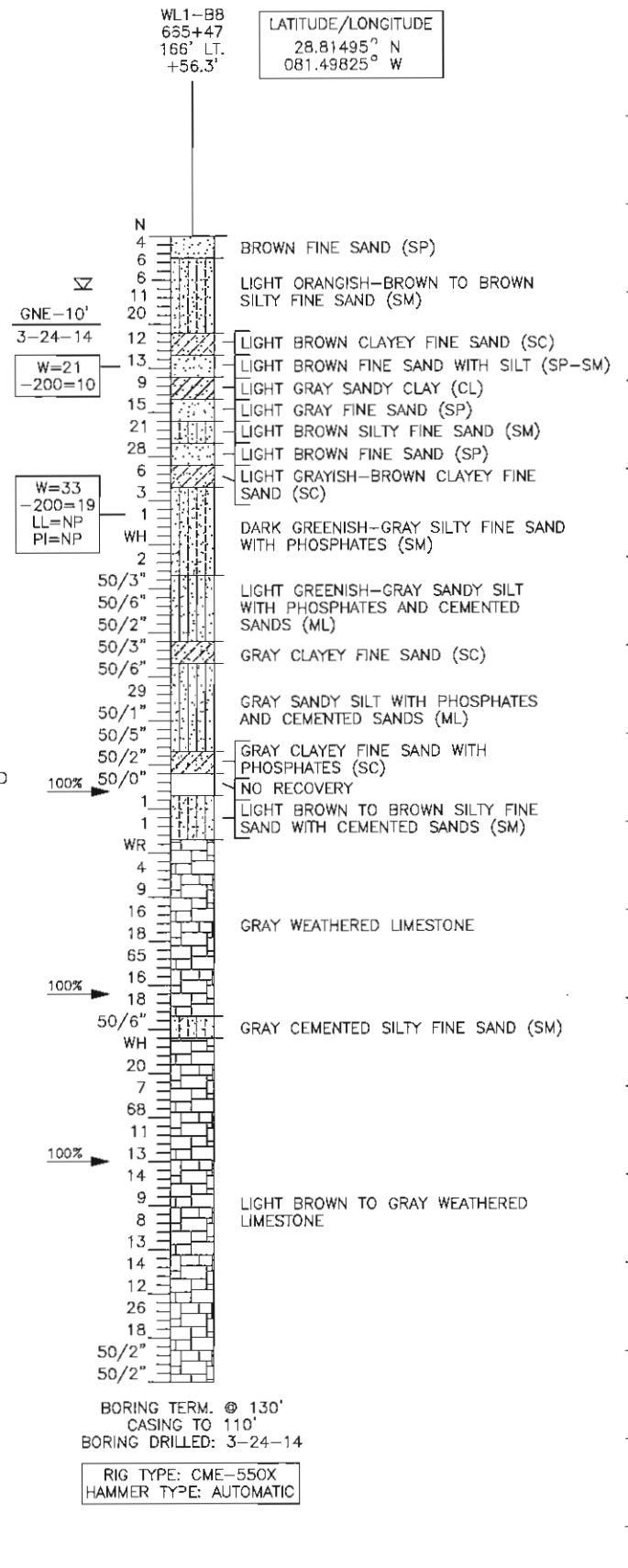
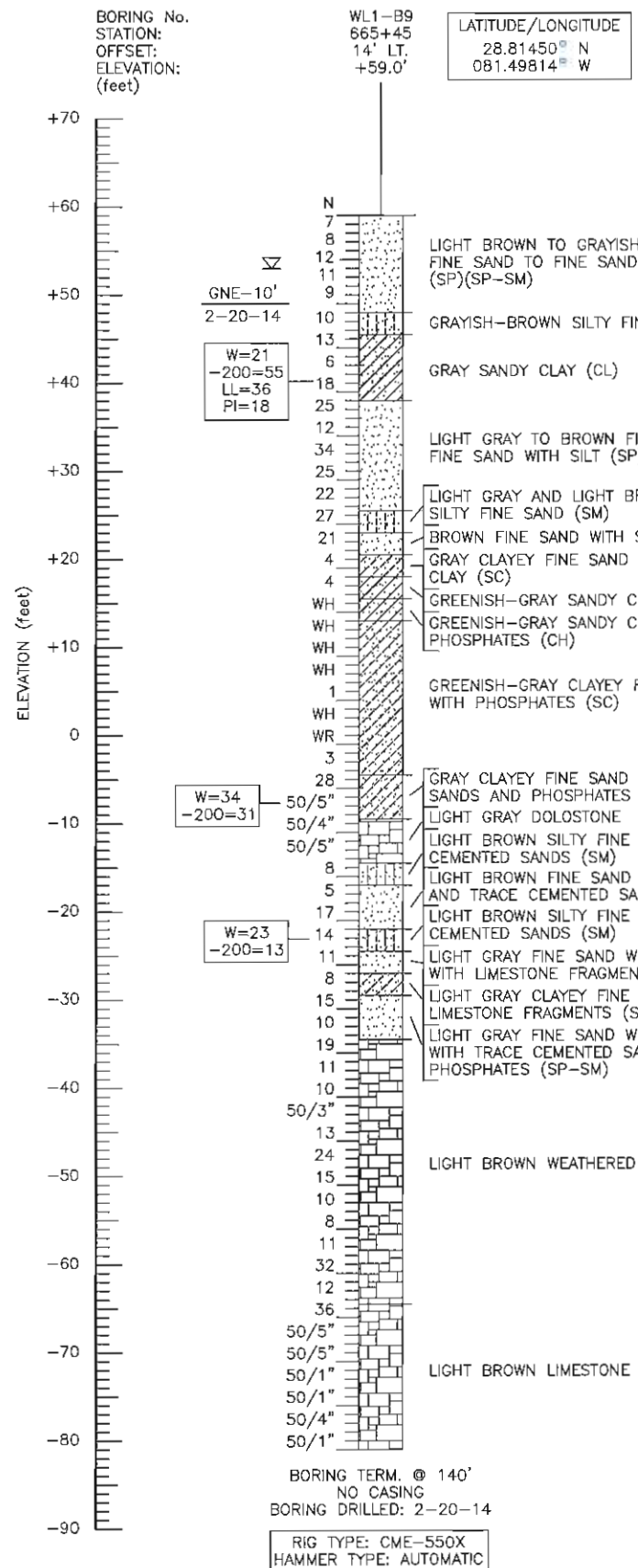
SUBSTRUCTURE: CONCRETE: SLIGHTLY AGGRESSIVE
 STEEL: MODERATELY AGGRESSIVE
 pH=6.4

- NOTES:
- SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
 - UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).
 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

Dec09, 2014-9:17am

<p>REVISIONS</p> <table border="1"> <thead> <tr><th>DATE</th><th>BY</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th><th>DESCRIPTION</th></tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION							<p>RICHARD G. ACREE, P.E. P.E. LICENSE NUMBER 53962 1675 LEE ROAD WINTER PARK, FLORIDA 32789 TERRACON CERTIFICATE OF AUTHORIZATION No. 8830</p>			<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p>		<p>SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES</p>		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION																				
<p>DRAWN BY: SW 12-3-14 CHECKED BY: ENJ 12-3-14 DESIGNED BY: CHECKED BY:</p>						ROAD NO. SR 429	COUNTY LAKE SEMINOLE	FINANCIAL PROJECT ID 238275-7-32-02	PROJECT NAME: WEKIVA PARKWAY (SR 429/SR 46)	SHEET NO. -															
<p>HAMMER TYPE: AUTOMATIC</p>						<p>HAMMER TYPE: AUTOMATIC</p>		<p>SECTION 6</p>																	



	SAND, SAND WITH SILT		SANDY CLAY
	SILTY SAND		CLAY
	CLAYEY SAND		SILT
	DOLOSTONE, LIMESTONE		SANDY SILT

(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

▼ ENCOUNTERED GROUNDWATER LEVEL
 5-15-14 DATE NOTED

▽ ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL

GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET

W=0 NATURAL MOISTURE CONTENT (%)
 -200=0 FINES PASSING No. 200 SIEVE (%)
 LL=0 LIQUID LIMIT (%)
 PI=0 PLASTICITY INDEX
 NP NON-PLASTIC

← 100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)

N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES

WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON

WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
 AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

- NOTES:**
- SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
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 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

DATE	BY	DESCRIPTION

REVISIONS

DATE	BY	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

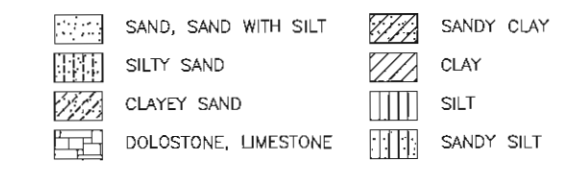
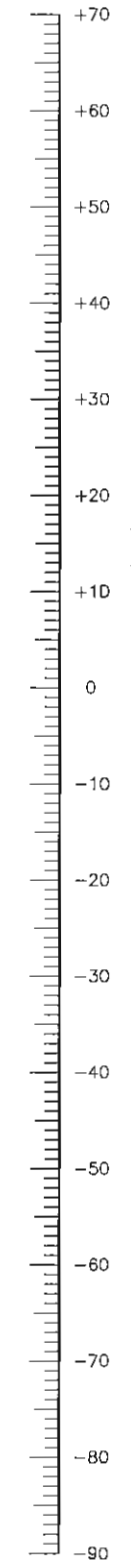
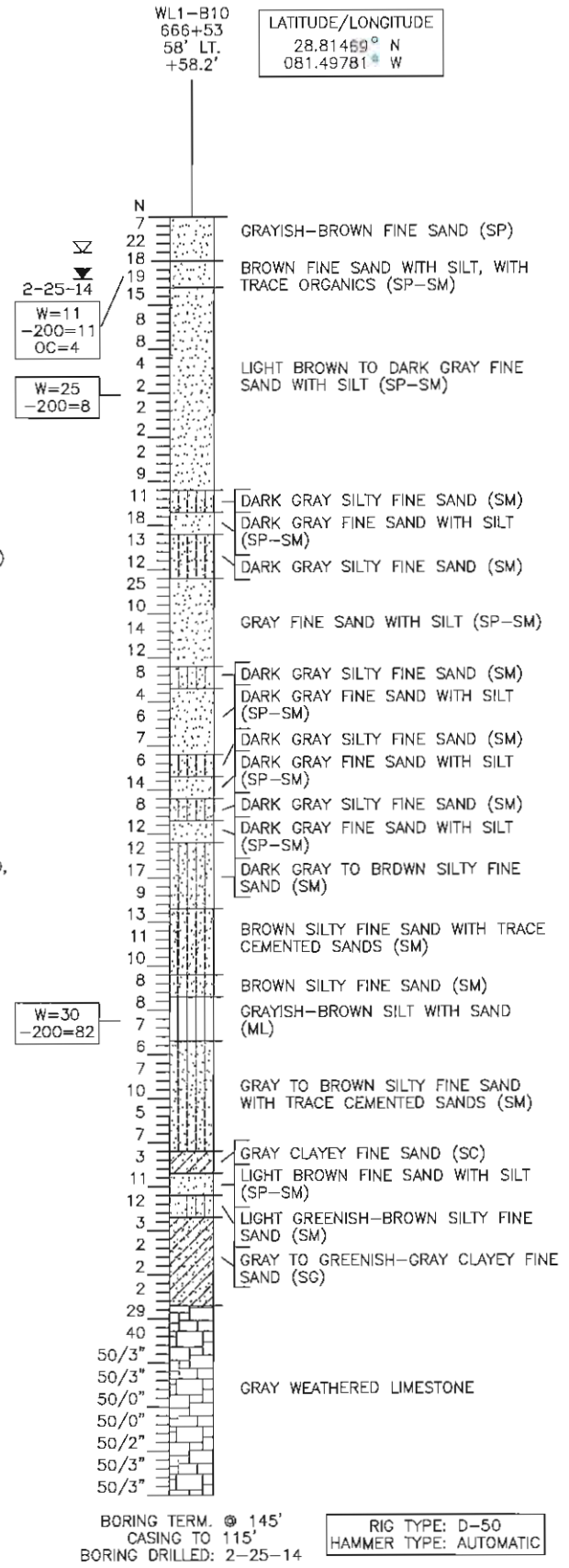
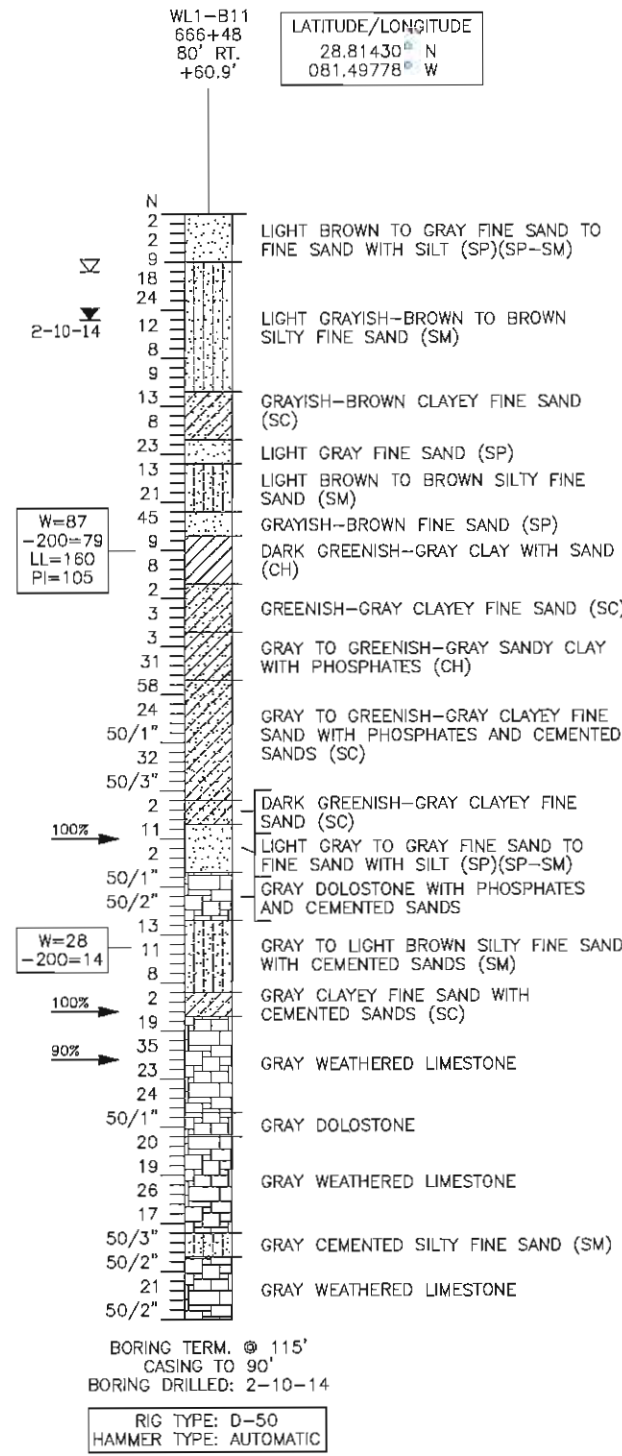
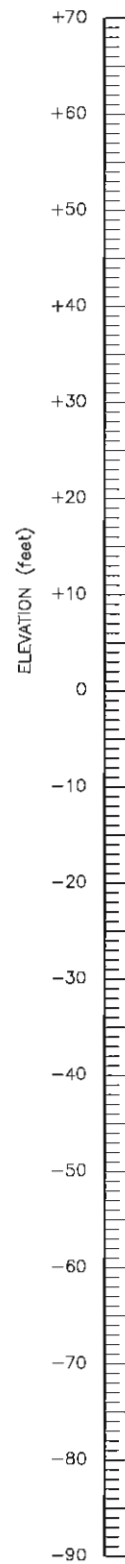
ROAD NO. SR 429 COUNTY LAKE SEMINOLE FINANCIAL PROJECT ID 238275-7-32-02

PROJECT NAME: WEKIVA PARKWAY (SR 429/SR 46)
 SECTION 6

REF. DWG. NO. SHEET NO.

Dec02, 2014-3:43pm

BORING No.
STATION:
OFFSET:
ELEVATION:
(feet)



(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
 5-15-14 ENCOUNTERED GROUNDWATER LEVEL DATE NOTED
 ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
 GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET
 W=0 NATURAL MOISTURE CONTENT (%)
 -200=0 FINES PASSING No. 200 SIEVE (%)
 LL=0 LIQUID LIMIT (%)
 PI=0 PLASTICITY INDEX
 NP NON-PLASTIC
 OC=0 ORGANIC CONTENT (%)

← 100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)
 N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED
 50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES
 WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON
 WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

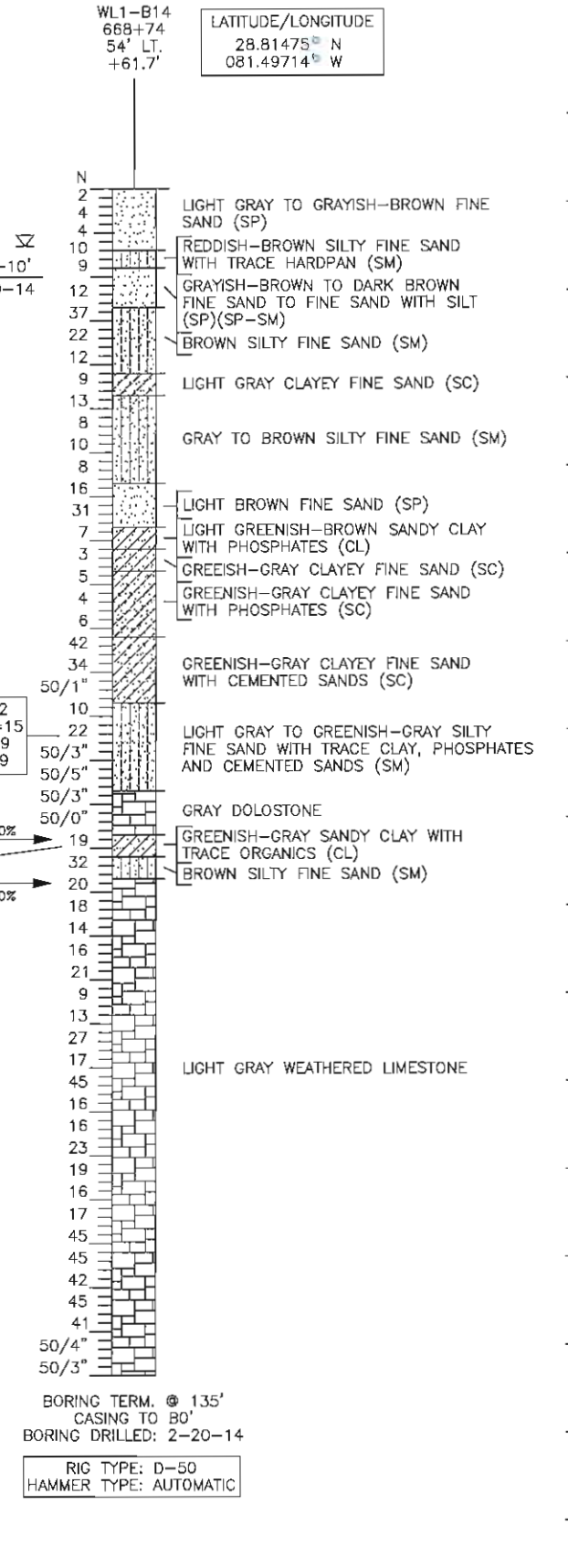
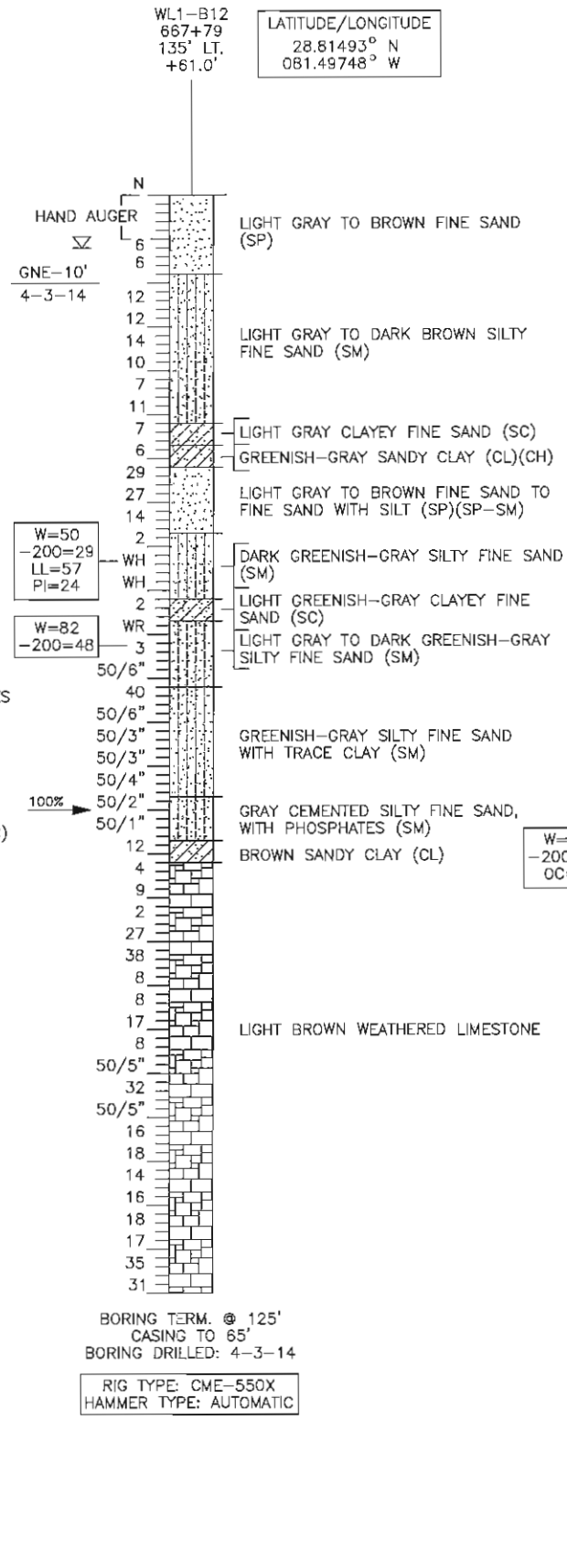
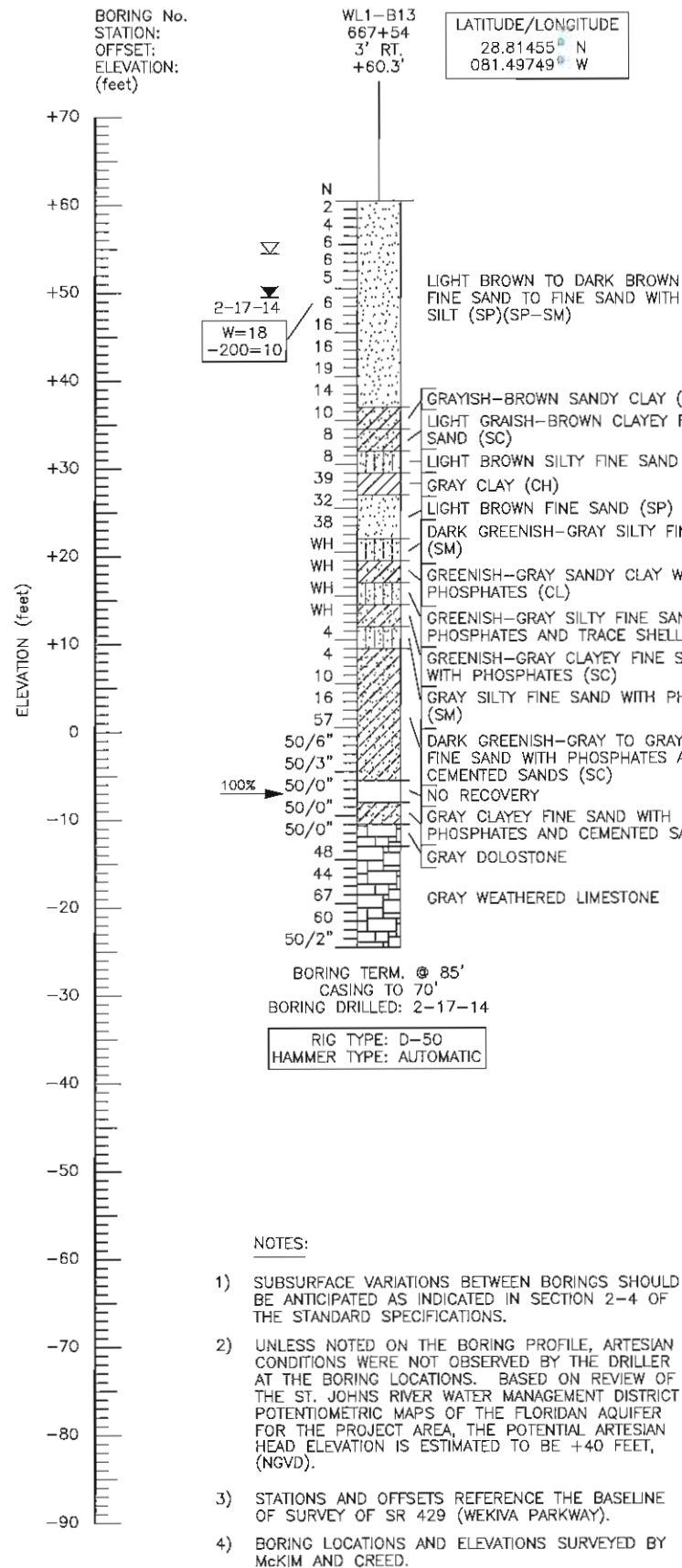
ENVIRONMENTAL CLASSIFICATION:
 SUPERSTRUCTURE: N/A
 SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE
 STEEL: EXTREMELY AGGRESSIVE
 pH=5.7

- NOTES:
- SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
 - UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).
 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

Dec02, 2014, 3:45pm

REVISIONS						DRAWN BY: SW 12-3-14 CHECKED BY: ENJ 12-3-14	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						DESIGNED BY: SR 429	LAKE SEMINOLE	238275-7-32-02	WEKIVA PARKWAY (SR 429/SR 46)	SECTION 6	-
RICHARD G. ACREE, P.E. P.E. LICENSE NUMBER 53962 1675 LEE ROAD WINTER PARK, FLORIDA 32789 TERRACON CERTIFICATE OF AUTHORIZATION No. 8830											



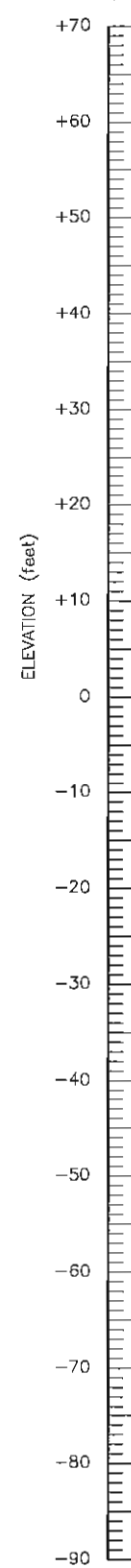
	SAND, SAND WITH SILT		SANDY CLAY
	SILTY SAND		CLAY
	CLAYEY SAND		SILT
	DOLOSTONE, LIMESTONE		SANDY SILT
(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL			
	ENCOUNTERED GROUNDWATER LEVEL	DATE NOTED	
	ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL		
	GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET	GNE-10'	
	NATURAL MOISTURE CONTENT (%)	FINES PASSING No. 200 SIEVE (%)	
	LIQUID LIMIT (%)	PLASTICITY INDEX	
	NON-PLASTIC	ORGANIC CONTENT (%)	
	LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)	← 100%	
	STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED	N	
	NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES	50/6"	
	WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON	WR	
	WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON	WH	
STANDARD PENETRATION TEST DATA AUTOMATIC HAMMER			
SPOON INSIDE DIA.		1 3/8 in.	
SPOON OUTSIDE DIA.		2 in.	
ASTM STANDARD AUTOMATIC HAMMER			
AVG. HAMMER DROP		30 in.	
HAMMER WEIGHT		140 lbs.	
GRANULAR MATERIALS			
RELATIVE DENSITY	SPT (BLOWS/FOOT)		
VERY LOOSE	LESS THAN 3		
LOOSE	3-8		
MEDIUM DENSE	8-24		
DENSE	24-40		
VERY DENSE	GREATER THAN 40		
SILTS AND CLAYS			
CONSISTENCY	SPT (BLOWS/FOOT)		
VERY SOFT	LESS THAN 1		
SOFT	1-3		
FIRM	3-6		
STIFF	6-12		
VERY STIFF	12-24		
HARD	GREATER THAN 24		
ENVIRONMENTAL CLASSIFICATION:			
SUPERSTRUCTURE: N/A			
SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE			
STEEL: EXTREMELY AGGRESSIVE			
pH=5.7			

Dec02, 2014-3:47pm

WILDLIFE CROSSING No. 1

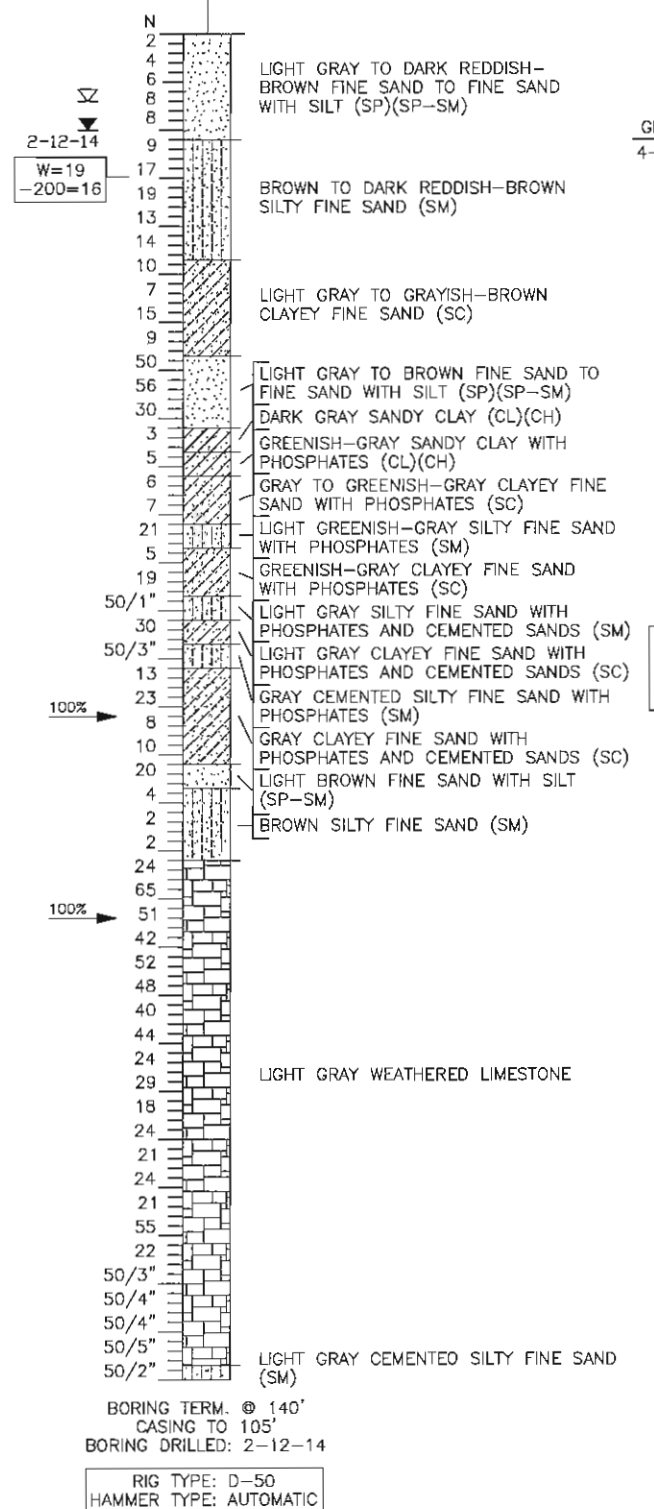
REVISIONS				RICHARD G. ACREE, P.E. P.E. LICENSE NUMBER 53962 1675 LEE ROAD WINTER PARK, FLORIDA 32789 TERRACON CERTIFICATE OF AUTHORIZATION No. 8830	DRAWN BY: SW 12-3-14 CHECKED BY: ENJ 12-3-14 DESIGNED BY: SR 429 CHECKED BY:	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES PROJECT NAME: WEKIVA PARKWAY (SR 429/SR 46) SECTION 6	REF. DWG. NO.	
DATE	BY	DESCRIPTION	DATE			BY	DESCRIPTION			ROAD NO.
							LAKE SEMINOLE	238275-7-32-02		

BORING No.
STATION:
OFFSET:
ELEVATION:
(feet)



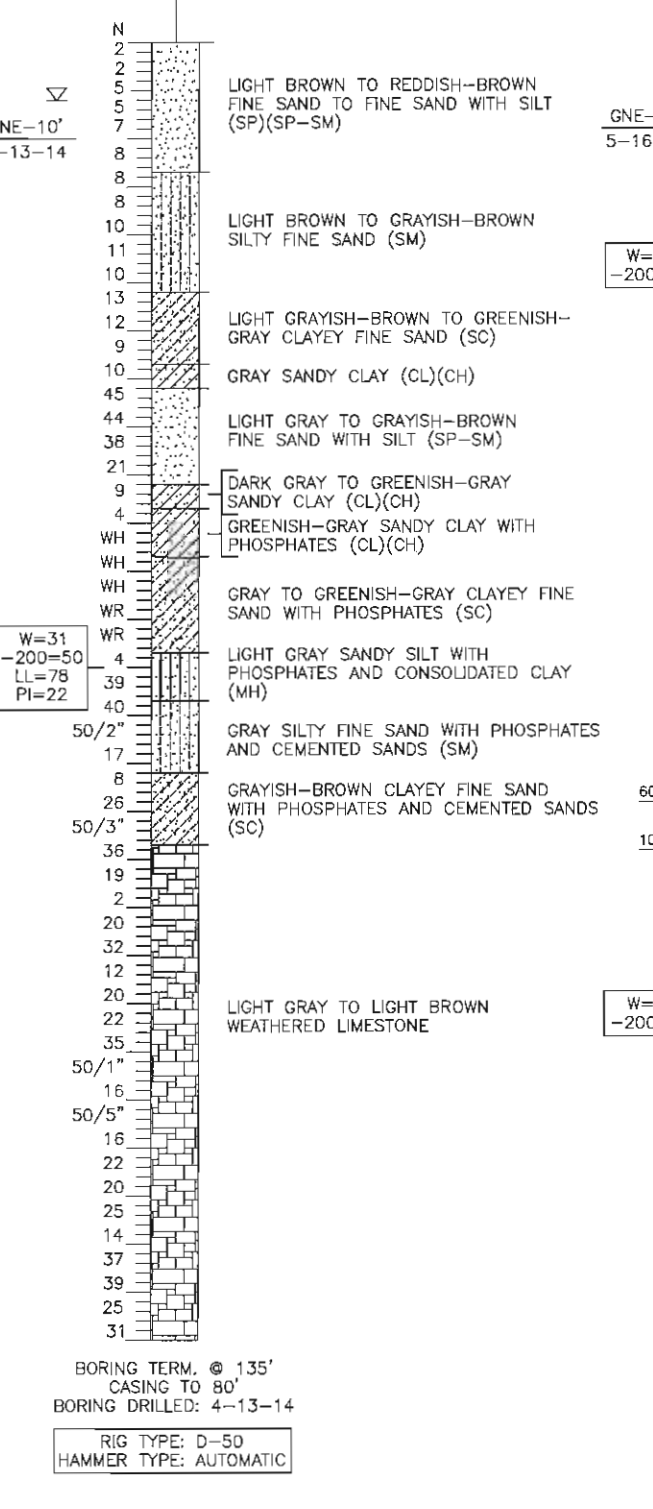
WL1-B15
668+91
88' RT.
+62.5'

LATITUDE/LONGITUDE
28.81437° N
081.49709° W



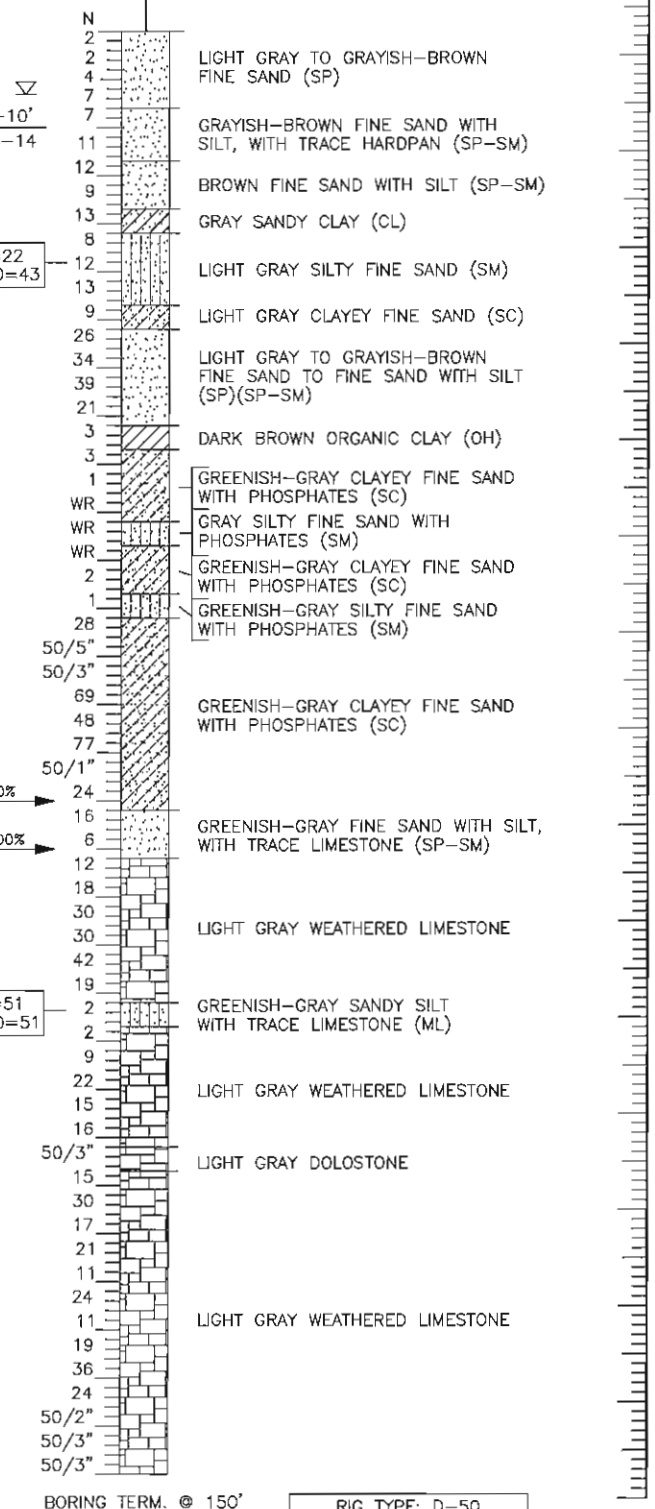
WL1-B16
669+99
140' LT.
+61.4'

LATITUDE/LONGITUDE
28.81503° N
081.49679° W



WL1-B17
670+92
44' LT.
+62.8'

LATITUDE/LONGITUDE
28.81480° N
081.49647° W



- SAND, SAND WITH SILT
- SILTY SAND
- CLAYEY SAND
- DOLOSTONE, LIMESTONE
- SANDY CLAY
- CLAY
- SILT
- SILTY SILT

- (SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
- ENCOUNTERED GROUNDWATER LEVEL
DATE NOTED
- ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
- GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET
- W=0 NATURAL MOISTURE CONTENT (%)
- 200=0 FINES PASSING No. 200 SIEVE (%)
- LL=0 LIQUID LIMIT (%)
- PI=0 PLASTICITY INDEX
- NP NON-PLASTIC

- LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)
- N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED
- 50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES
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- WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:
SUPERSTRUCTURE: N/A
SUBSTRUCTURE: CONCRETE: SLIGHTLY AGGRESSIVE
STEEL: MODERATELY AGGRESSIVE
pH=6.1

- NOTES:
- SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
 - UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDIAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).
 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

Dec02, 2014-3:50pm

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

RICHARD G. ACREE, P.E.
P.E. LICENSE NUMBER 53962
1675 LEE ROAD
WINTER PARK, FLORIDA 32789
TERRACON
CERTIFICATE OF AUTHORIZATION No. 8830

DRAWN BY: SW 12-3-14
CHECKED BY: ENJ 12-3-14
DESIGNED BY: SR 429
CHECKED BY: SR 429

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 429	LAKE SEMINOLE	238275-7-32-02

SHEET TITLE:
REPORT OF SPT BORINGS FOR STRUCTURES

PROJECT NAME:
WEKIVA PARKWAY (SR 429/SR 46)
SECTION 6

REF. DWG. NO.
SHEET NO.
-

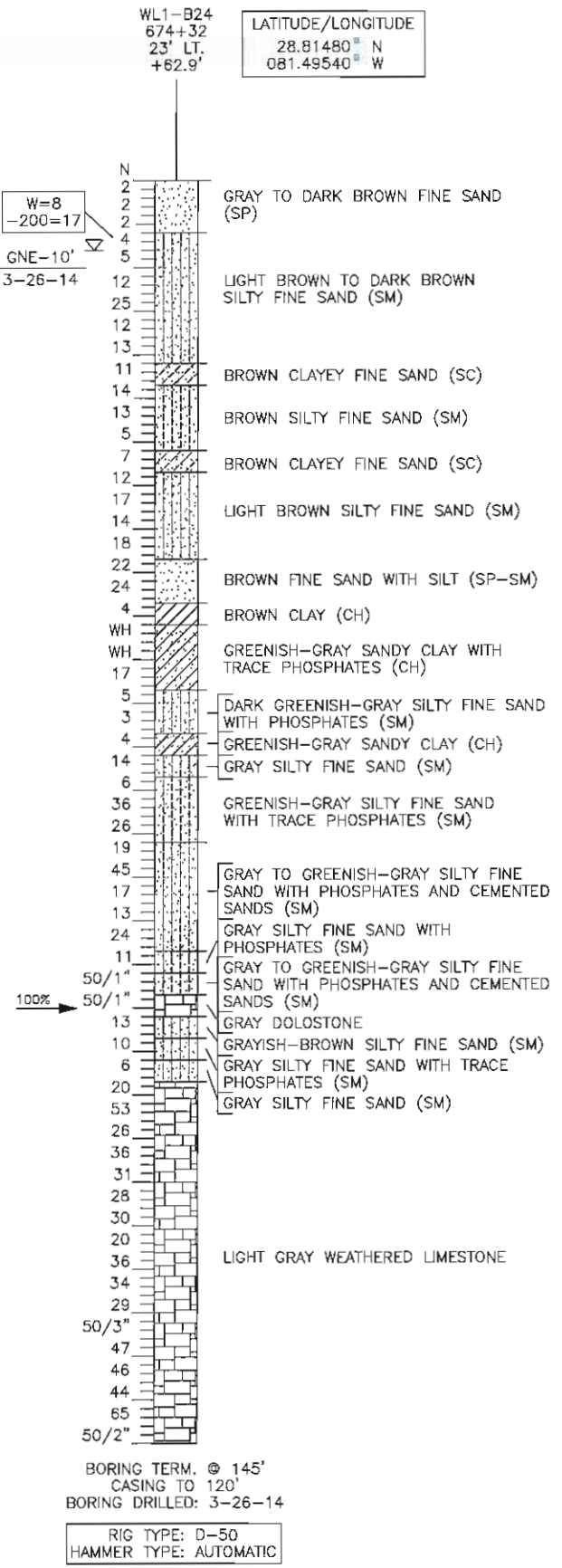
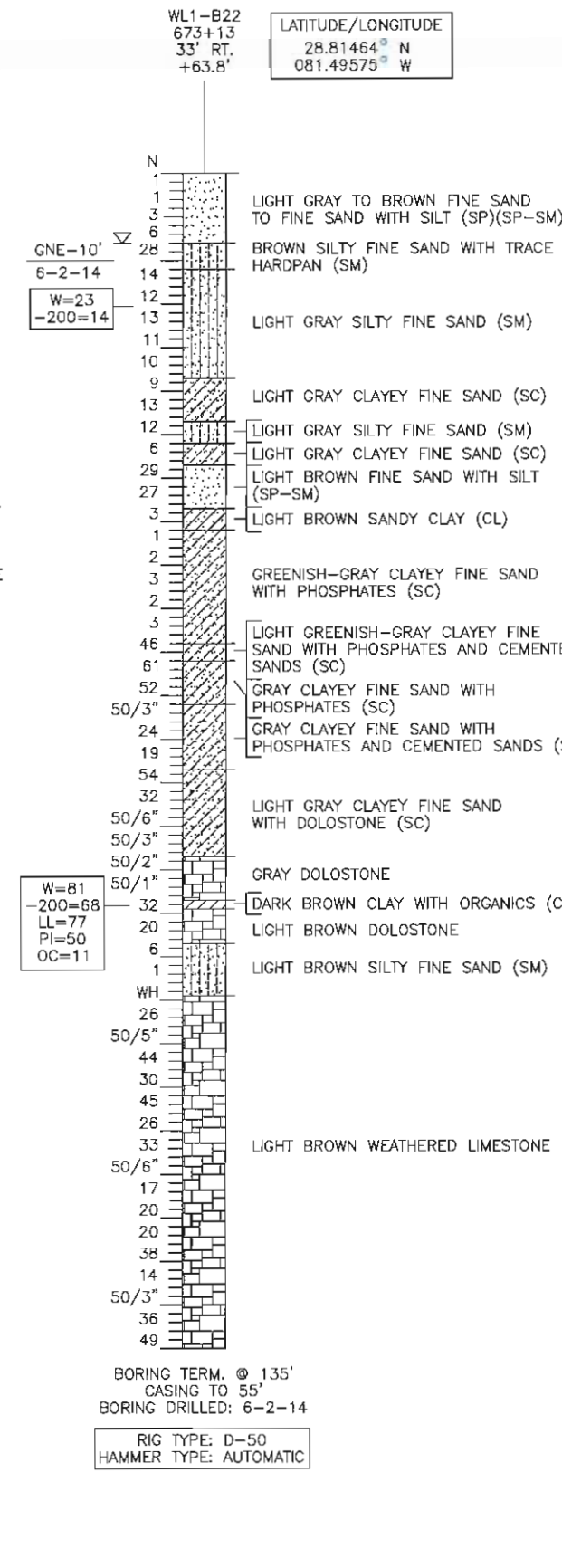
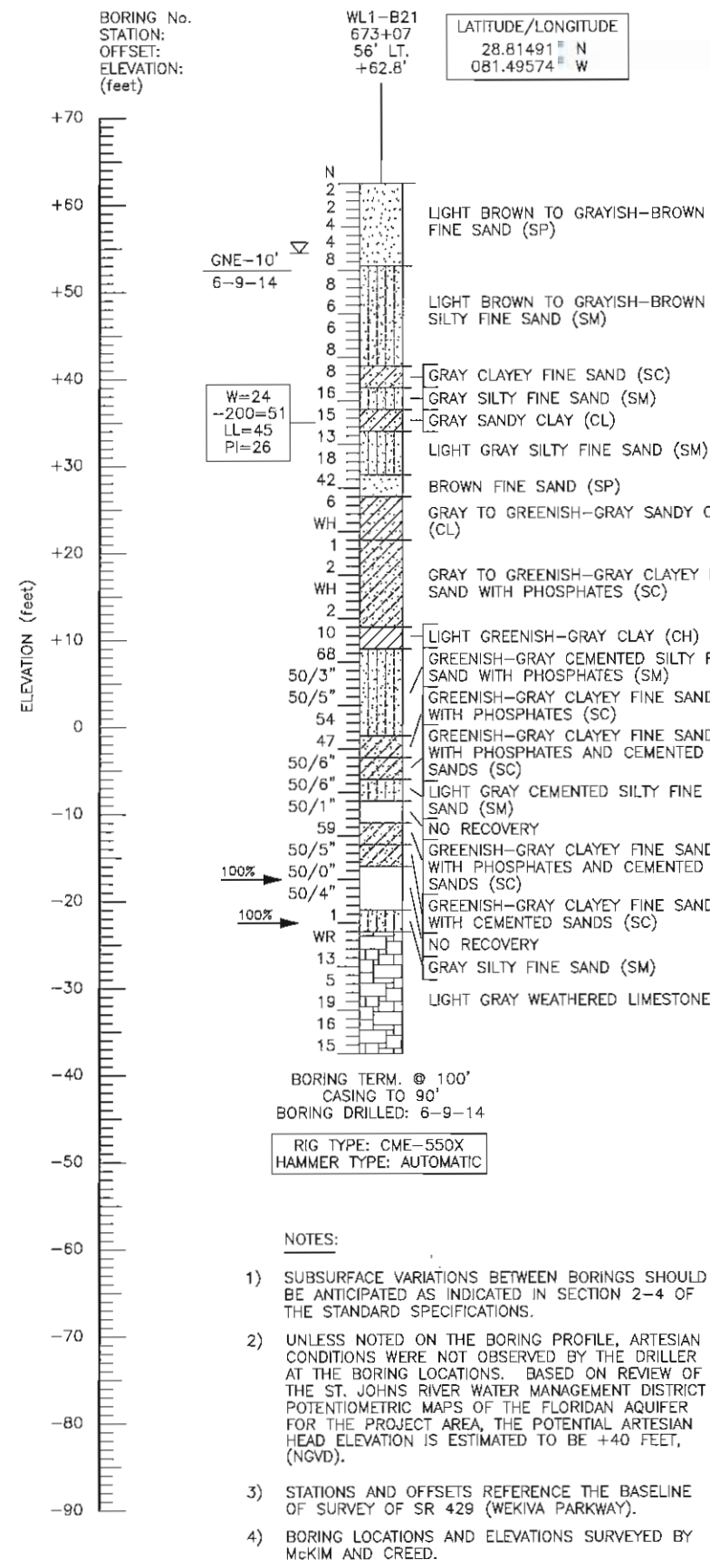


WILDLIFE CROSSING No. 1

REVISIONS						DRAWN BY: SW 12-3-14	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
							SR 429	LAKE SEMINOLE	238275-7-32-02	WEKIVA PARKWAY (SR 429/SR 46) SECTION 6	-

RICHARD G. ACREE, P.E.
P.E. LICENSE NUMBER 53962
1675 LEE ROAD
WINTER PARK, FLORIDA 32789
TERRACON
CERTIFICATE OF AUTHORIZATION No. 8830

CHECKED BY:
ENJ 12-3-14
DESIGNED BY:
CHECKED BY:



LEGEND:

- SAND, SAND WITH SILT
- SILTY SAND
- CLAYEY SAND
- DOLOSTONE, LIMESTONE
- SANDY CLAY
- CLAY
- SILT
- SANDY SILT

(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

ENCOUNTERED GROUNDWATER LEVEL DATE NOTED
 5-15-14

ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
 GNE-10'

GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET
 GNE-10'

TEST DATA:
 W=0
 -200=0
 LL=0
 PI=0
 NP
 OC=0

LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)
 100%

STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED
 N

NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES
 50/6"

WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON
 WR

WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON
 WH

STANDARD PENETRATION TEST DATA AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:
 SUPERSTRUCTURE: N/A
 SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE
 STEEL: EXTREMELY AGGRESSIVE
 pH=5.5

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

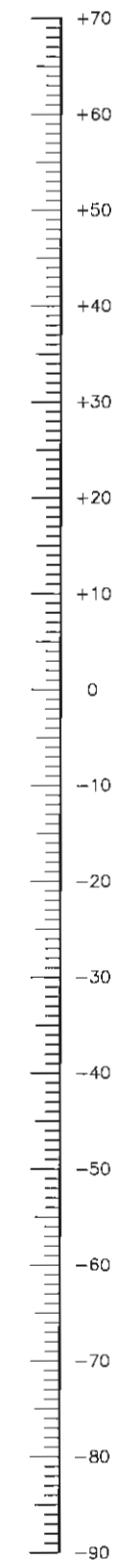
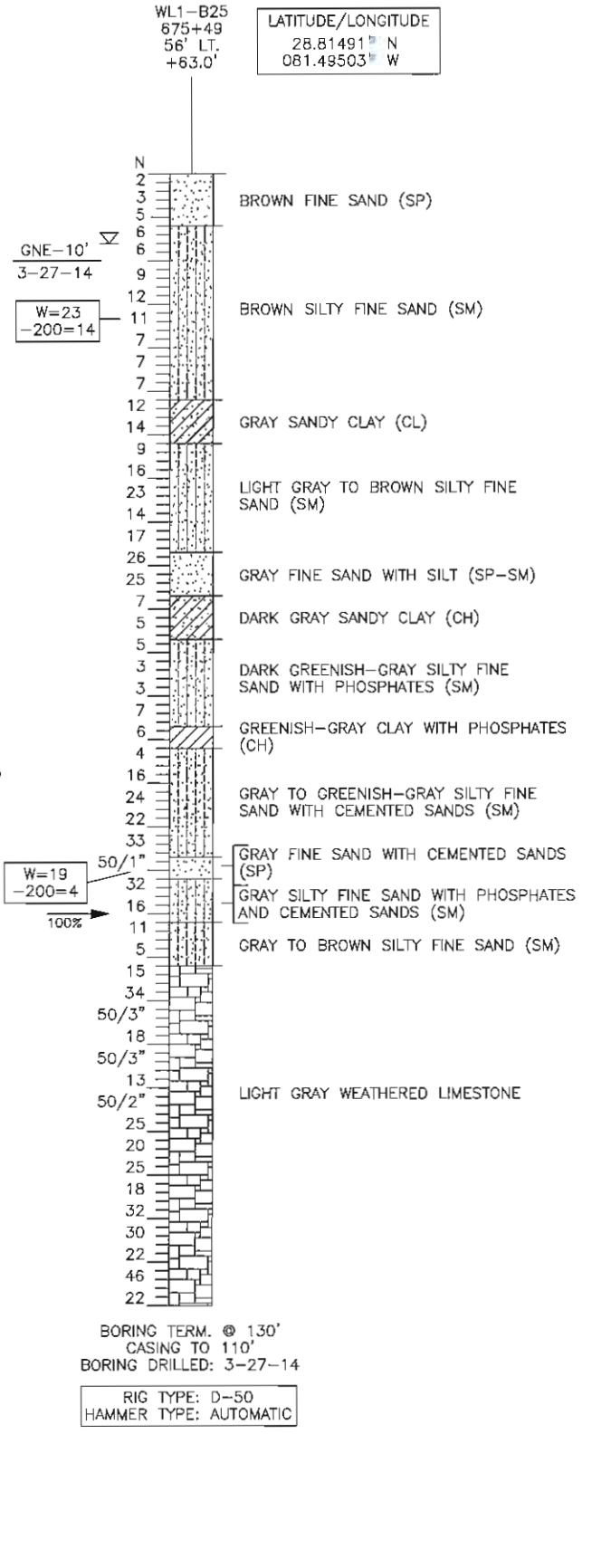
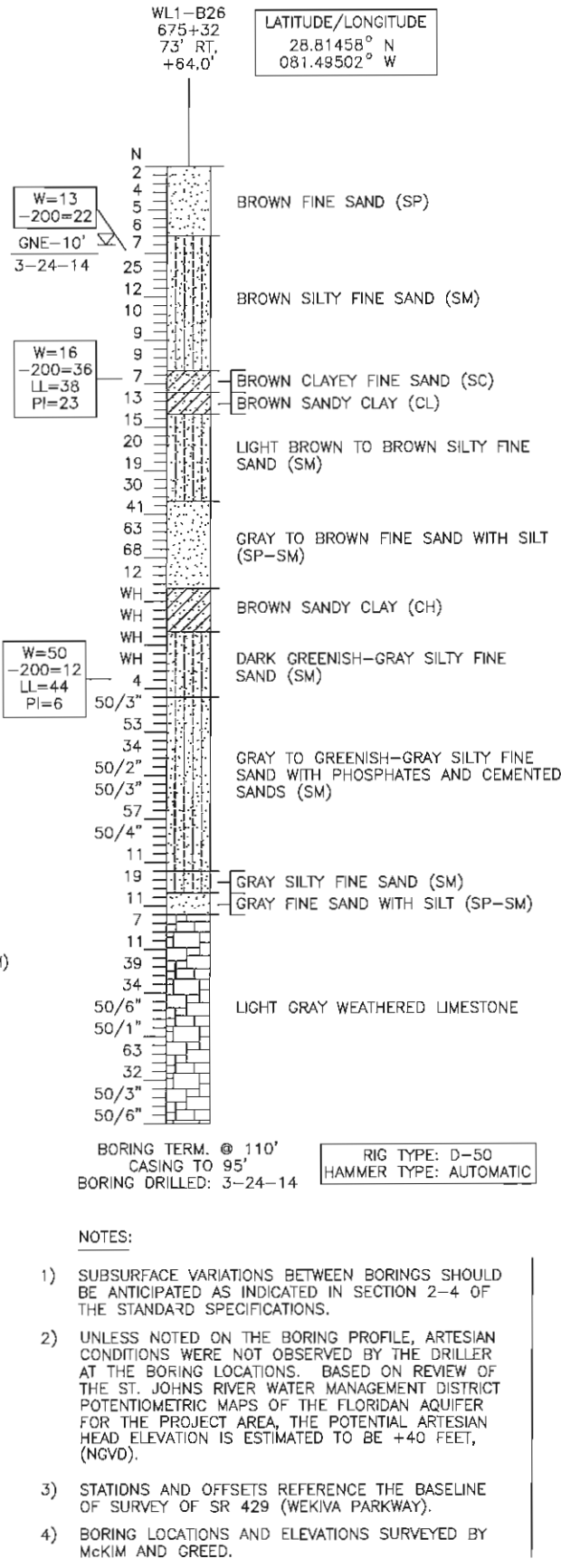
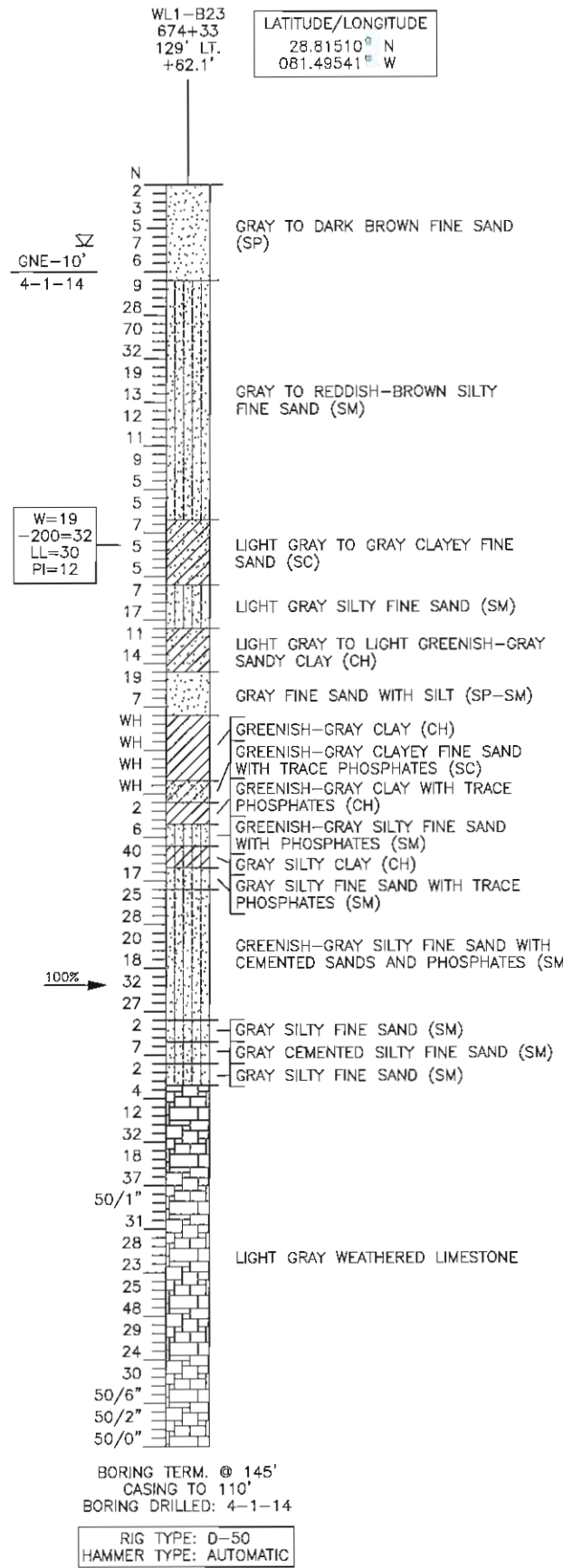
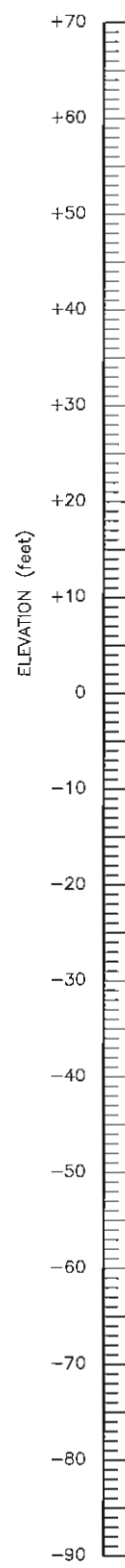
RICHARD G. ACREE, P.E.
 P.E. LICENSE NUMBER 53962
 1675 LEE ROAD
 WINTER PARK, FLORIDA 32789
 TERRACON
 CERTIFICATE OF AUTHORIZATION No. 8830

DRAWN BY:	SW 12-3-14	STATE OF FLORIDA	
CHECKED BY:	ENJ 12-3-14	DEPARTMENT OF TRANSPORTATION	
DESIGNED BY:	SR 429	COUNTY	FINANCIAL PROJECT ID
CHECKED BY:		LAKE SEMINOLE	238275-7-32-02

SHEET TITLE:		REF. DWG. NO.
REPORT OF SPT BORINGS FOR STRUCTURES		
PROJECT NAME:		SHEET NO.
WEKIVA PARKWAY (SR 429/SR 46)		
SECTION 6		

WILDLIFE CROSSING No. 1

BORING No.
STATION:
OFFSET:
ELEVATION:
(feet)



- [Symbol] SAND, SAND WITH SILT
- [Symbol] SILTY SAND
- [Symbol] CLAYEY SAND
- [Symbol] DOLOSTONE, LIMESTONE
- [Symbol] SILTY CLAY
- [Symbol] SANDY CLAY
- [Symbol] CLAY
- [Symbol] SILT
- [Symbol] SANDY SILT
- (SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL
- ENCOUNTERED GROUNDWATER LEVEL DATE NOTED
- ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL
- GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET
- W=0
-200=0
LL=0
PI=0
NP NATURAL MOISTURE CONTENT (%)
FINES PASSING No. 200 SIEVE (%)
LIQUID LIMIT (%)
PLASTICITY INDEX
NON-PLASTIC
- 100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)
- N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED
- 50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES
- WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON
- WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	(BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	(BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:

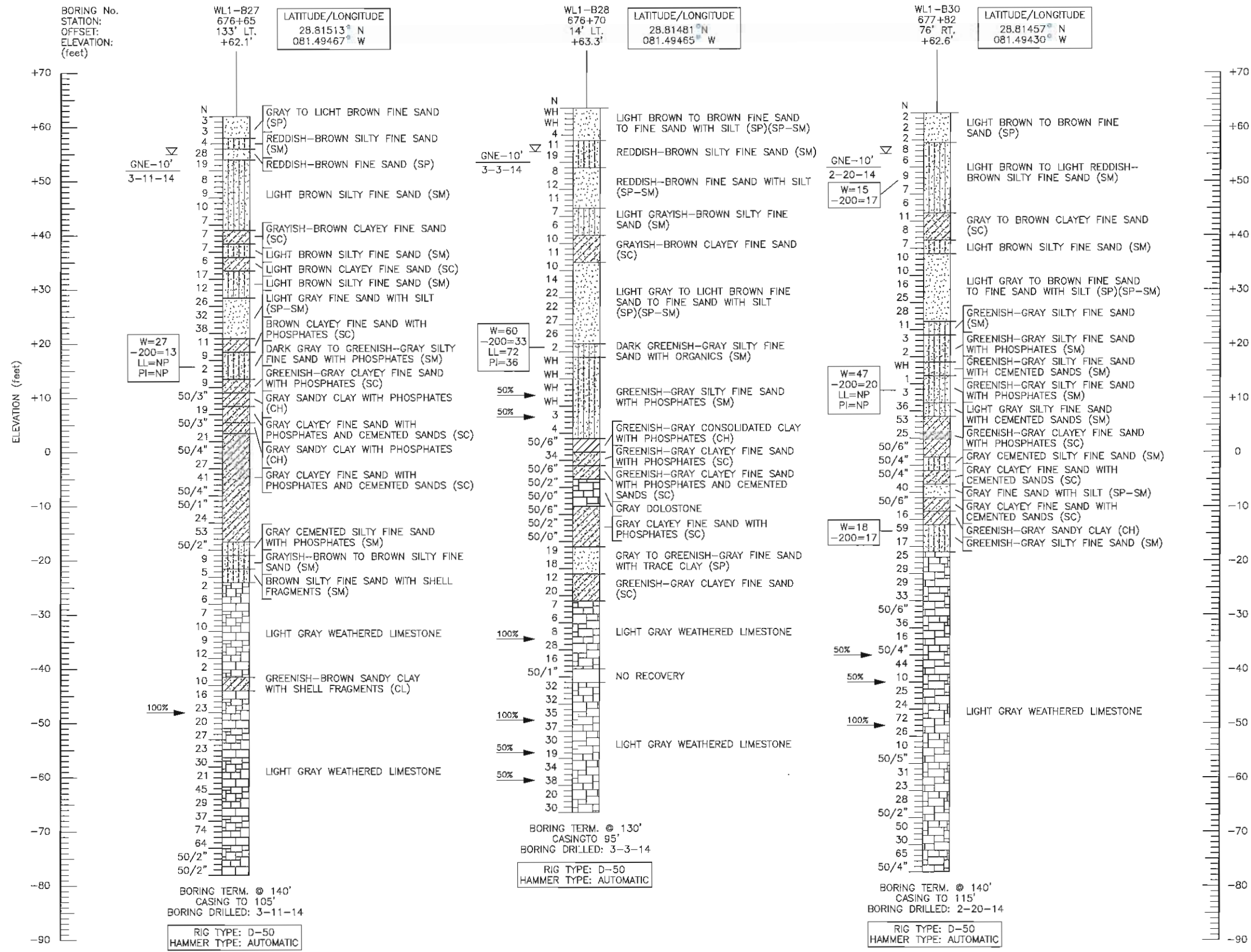
SUPERSTRUCTURE: N/A
SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE
STEEL: EXTREMELY AGGRESSIVE
pH=5.8

- NOTES:
- SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
 - UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).
 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY McKIM AND GREED.

WILDLIFE CROSSING No. 1

REVISIONS				RICHARD G. ACREE, P.E. P.E. LICENSE NUMBER 53962 1675 LEE ROAD WINTER PARK, FLORIDA 32789 TERRACON CERTIFICATE OF AUTHORIZATION No. 8830	DRAWN BY: SW 12-3-14 CHECKED BY: ENJ 12-3-14	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.	
DATE	BY	DESCRIPTION	DATE		BY	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME
							SR 429	LAKE SEMINOLE	238275-7-32-02	WEKIVA PARKWAY (SR 429/SR 46) SECTION 6
									SHEET NO.	
									-	

D:\02_2014-4-33pm



	SAND, SAND WITH SILT		SANDY CLAY
	SILTY SAND		CLAY
	CLAYEY SAND		SILT
	DOLOSTONE, LIMESTONE		SILTY SILT

(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

5-15-14 ENCOUNTERED GROUNDWATER LEVEL DATE NOTED

ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL

GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET

W=0 NATURAL MOISTURE CONTENT (%)
 -200=0 FINES PASSING No. 200 SIEVE (%)
 LL=0 LIQUID LIMIT (%)
 PI=0 PLASTICITY INDEX
 NP NON-PLASTIC

100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)

N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES

WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON

WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
 AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:

SUPERSTRUCTURE: N/A

SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE
 STEEL: EXTREMELY AGGRESSIVE
 pH=5.3

NOTES: 1) SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.

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3) STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).

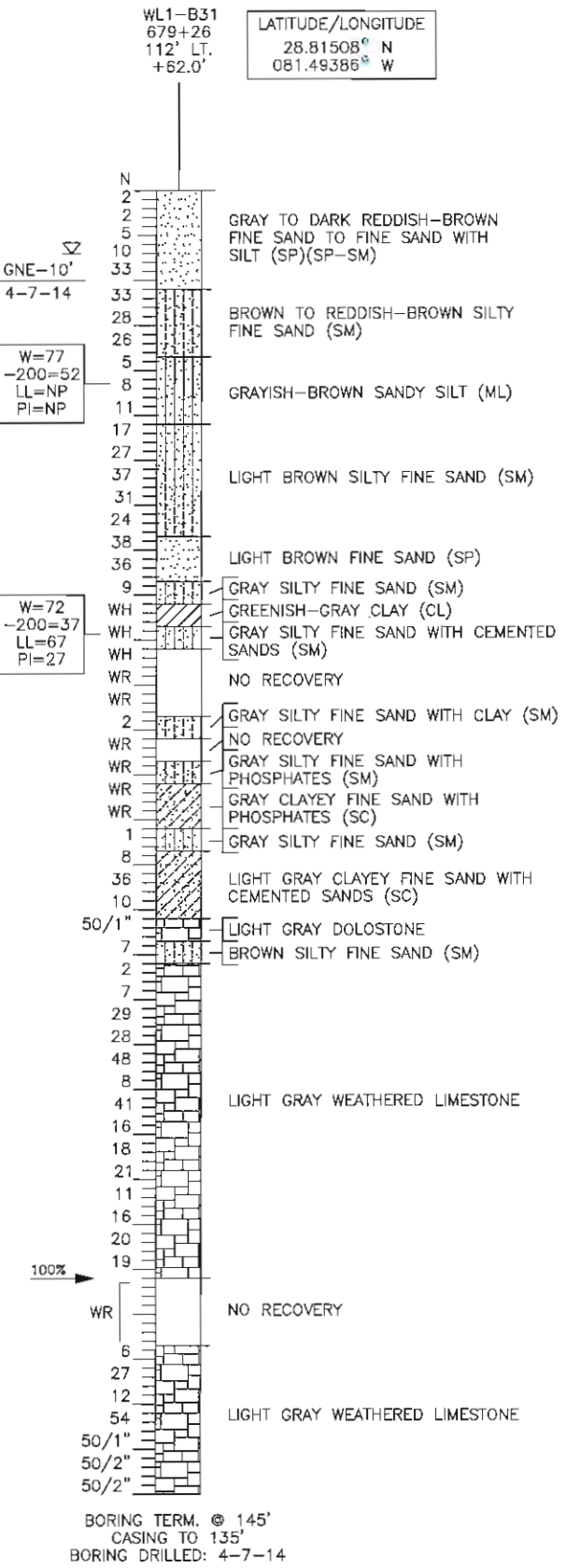
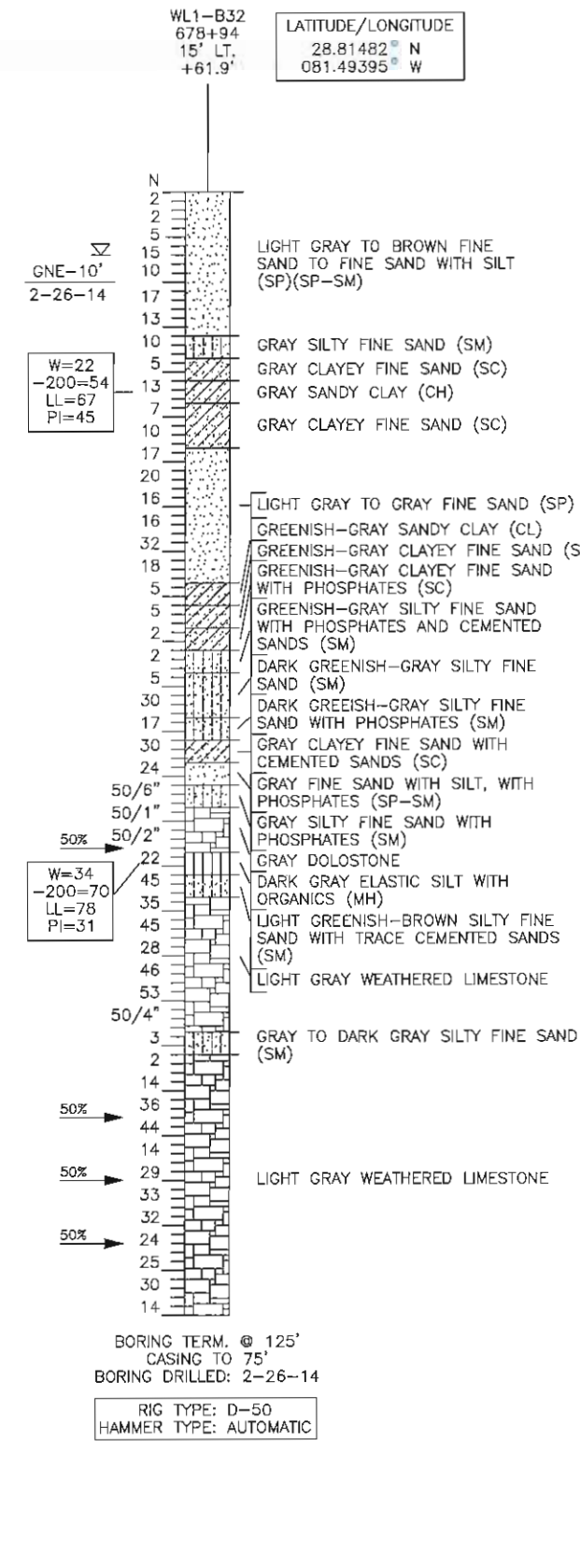
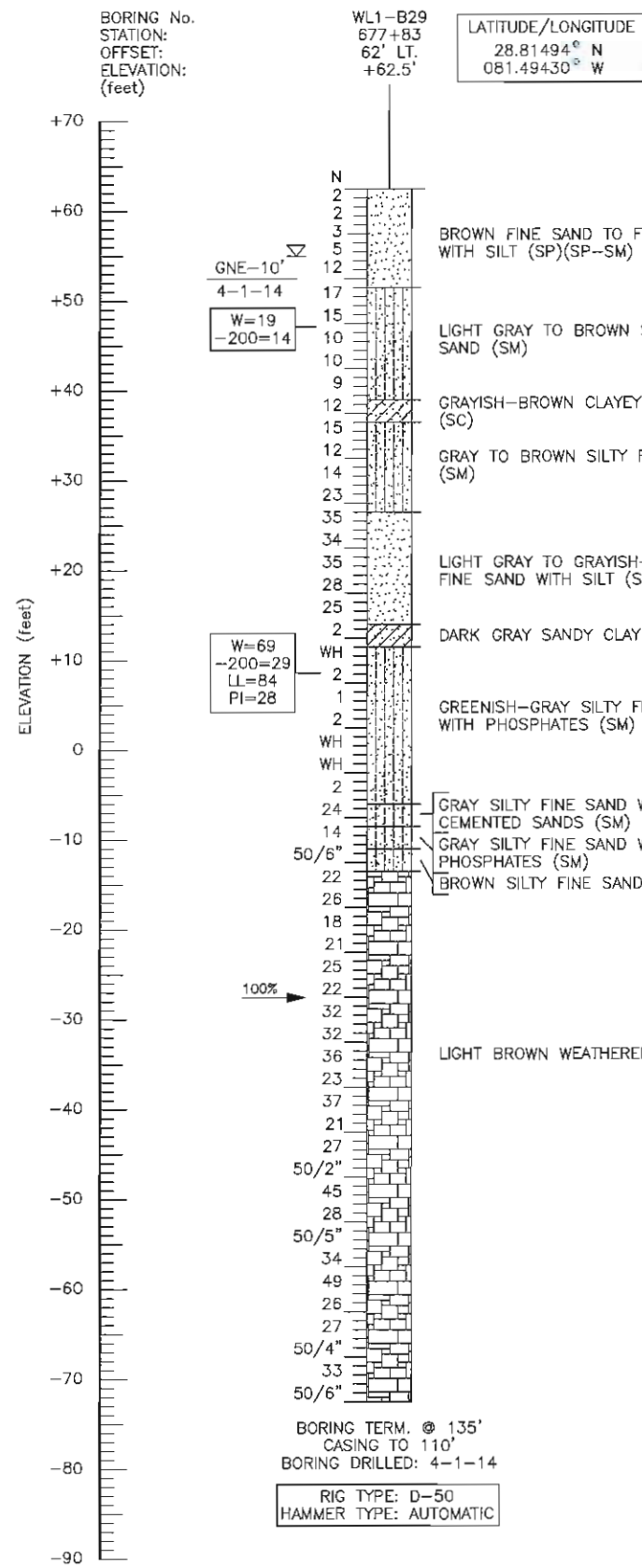
4) BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

REVISIONS					DRAWN BY: SW 12-3-14	STATE OF FLORIDA			SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	DESCRIPTION		DEPARTMENT OF TRANSPORTATION				
					CHECKED BY: ENJ 12-3-14	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME:	SHEET NO.
					DESIGNED BY:	SR 429	LAKE SEMINOLE	238275-7-32-02	WEKIVA PARKWAY (SR 429/SR 46)	-
					CHECKED BY:				SECTION 6	

RICHARD G. ACREE, P.E.
 P.E. LICENSE NUMBER 53962
 1675 LEE ROAD
 WINTER PARK, FLORIDA 32789
 TERRAGON
 CERTIFICATE OF AUTHORIZATION No. 8830

DRAWN BY:
SW 12-3-14
 CHECKED BY:
ENJ 12-3-14
 DESIGNED BY:
SR 429
 CHECKED BY:



	SAND, SAND WITH SILT		SANDY CLAY
	SILTY SAND		CLAY
	CLAYEY SAND		SILT
	DOLOSTONE, LIMESTONE		SANDY SILT

(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

5-15-14 ENCOUNTERED GROUNDWATER LEVEL DATE NOTED

ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL

GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET

W=0 NATURAL MOISTURE CONTENT (%)
-200=0 FINES PASSING No. 200 SIEVE (%)
LL=0 LIQUID LIMIT (%)
PI=0 PLASTICITY INDEX
NP NON-PLASTIC

100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)

N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

50/6" NUMBER OF BLOWS REQUIRED (50) TO ADVANCE SAMPLE SPOON (6) INCHES

WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON

WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:

SUPERSTRUCTURE: N/A

SUBSTRUCTURE: CONCRETE: MODERATELY AGGRESSIVE
STEEL: EXTREMELY AGGRESSIVE
pH=5.3

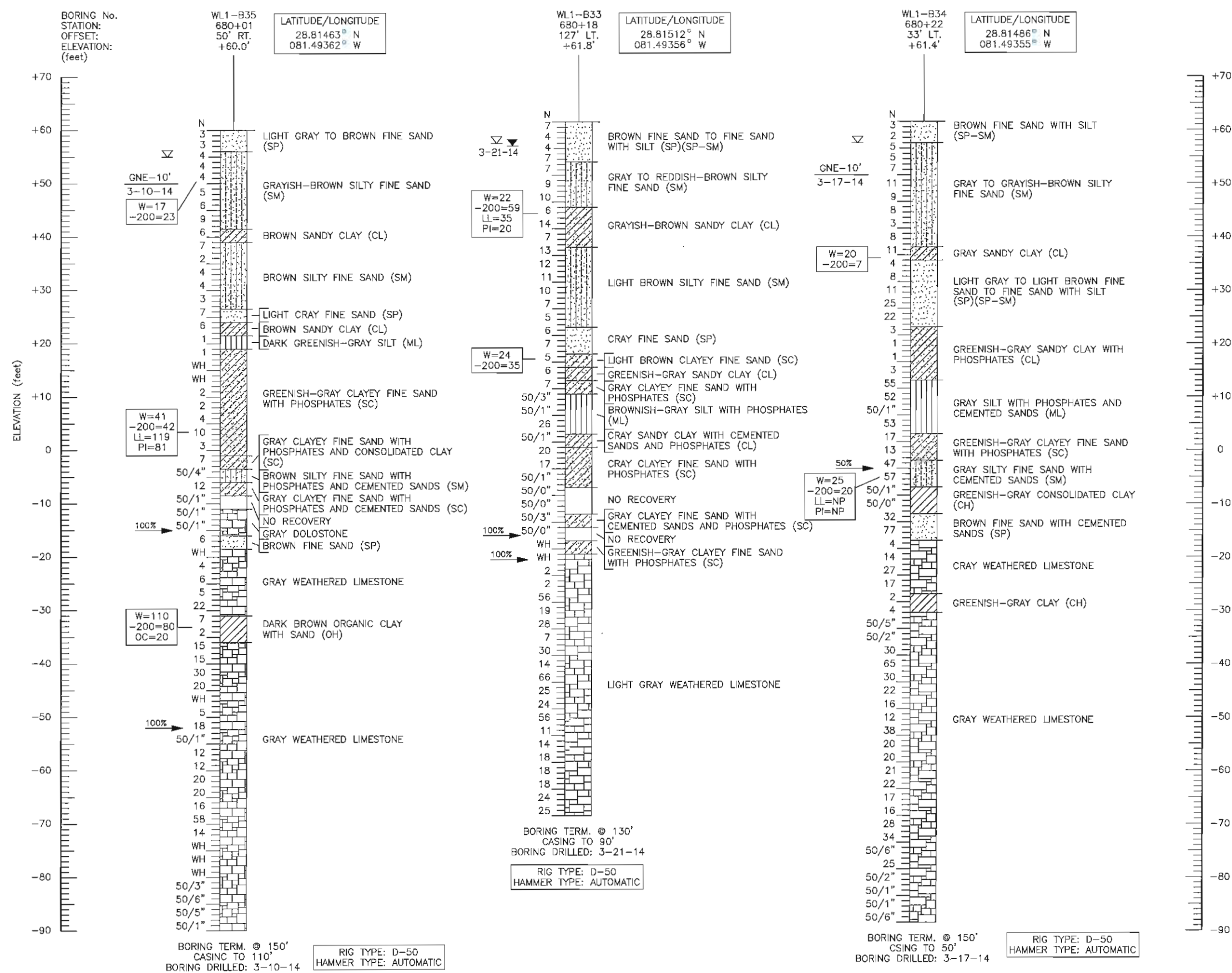
- NOTES:
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 - STATIONS AND OFFSETS REFERENCE THE BASELINE OF SURVEY OF SR 429 (WEKIVA PARKWAY).
 - BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

Dec09, 2014-9:18am

REVISIONS				DRAWN BY: SW 12-3-14	STATE OF FLORIDA			SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES	REF. DWG. NO.
DATE	BY	DESCRIPTION	DESCRIPTION		DEPARTMENT OF TRANSPORTATION				
				CHECKED BY: ENJ 12-3-14	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME: WEKIVA PARKWAY (SR 429/SR 46)	SHEET NO. -
				DESIGNED BY:	SR 429	LAKE SEMINOLE	238275-7-32-02		
				CHECKED BY:					

RICHARD C. ACREE, P.E.
P.E. LICENSE NUMBER 53962
1675 LEE ROAD
WINTER PARK, FLORIDA 32789
TERRACON
CERTIFICATE OF AUTHORIZATION No. 8830



	SAND, SAND WITH SILT		SANDY CLAY
	SILTY SAND		CLAY
	CLAYEY SAND		SILT
	DOLOSTONE, LIMESTONE		SANDY SILT

(SP) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

5-15-14 ▽ ENCOUNTERED GROUNDWATER LEVEL DATE NOTED

▽ ESTIMATED NORMAL SEASONAL HIGH GROUNDWATER LEVEL

GNE-10' GROUNDWATER LEVEL NOT ENCOUNTERED TO DEPTH OF 10 FEET

W=0 NATURAL MOISTURE CONTENT (%)
 -200=0 FINES PASSING No. 200 SIEVE (%)
 LL=0 LIQUID LIMIT (%)
 PI=0 PLASTICITY INDEX
 NP NON-PLASTIC
 OC=0 ORGANIC CONTENT (%)

← 100% LOSS OF DRILLING FLUID CIRCULATION (PERCENT NOTED)

N STANDARD PENETRATION RESISTANCE IN BLOWS PER FOOT UNLESS OTHERWISE NOTED

50/6" NUMBER OF BLOWS REQUIRED (5D) TO ADVANCE SAMPLE SPOON (6) INCHES

WR WEIGHT OF DRILL ROD SUFFICIENT TO ADVANCE SAMPLE SPOON

WH WEIGHT OF ROD AND HAMMER SUFFICIENT TO ADVANCE SAMPLE SPOON

STANDARD PENETRATION TEST DATA
 AUTOMATIC HAMMER

SPOON INSIDE DIA.	1 3/8 in.
SPOON OUTSIDE DIA.	2 in.
ASTM STANDARD AUTOMATIC HAMMER	
AVG. HAMMER DROP	30 in.
HAMMER WEIGHT	140 lbs.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FOOT)
VERY LOOSE	LESS THAN 3
LOOSE	3-8
MEDIUM DENSE	8-24
DENSE	24-40
VERY DENSE	GREATER THAN 40

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FOOT)
VERY SOFT	LESS THAN 1
SOFT	1-3
FIRM	3-6
STIFF	6-12
VERY STIFF	12-24
HARD	GREATER THAN 24

ENVIRONMENTAL CLASSIFICATION:

SUPERSTRUCTURE: N/A
 SUBSTRUCTURE: CONCRETE: SLIGHTLY AGGRESSIVE
 STEEL: MODERATELY AGGRESSIVE
 pH=6.9

NOTES: 1) SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
 2) UNLESS NOTED ON THE BORING PROFILE, ARTESIAN CONDITIONS WERE NOT OBSERVED BY THE DRILLER AT THE BORING LOCATIONS. BASED ON REVIEW OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT POTENTIOMETRIC MAPS OF THE FLORIDIAN AQUIFER FOR THE PROJECT AREA, THE POTENTIAL ARTESIAN HEAD ELEVATION IS ESTIMATED TO BE +40 FEET, (NGVD).
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 4) BORING LOCATIONS AND ELEVATIONS SURVEYED BY MCKIM AND CREED.

WILDLIFE CROSSING No. 1

REVISIONS DATE BY DESCRIPTION DATE BY DESCRIPTION						RICHARD G. ACREE, P.E. P.E. LICENSE NUMBER 53962 1675 LEE ROAD WINTER PARK, FLORIDA 32789 TERRACON CERTIFICATE OF AUTHORIZATION No. 8830	DRAWN BY: SW 12-3-14 CHECKED BY: ENJ 12-3-14 DESIGNED BY: CHECKED BY:	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: REPORT OF SPT BORINGS FOR STRUCTURES PROJECT NAME: WEKIVA PARKWAY (SR 429/SR 46) SECTION 6	REF. DWG. NO. SHEET NO. -
								ROAD NO. COUNTY FINANCIAL PROJECT ID SR 429 SEMINOLE 238275-7-32-02				

Preliminary Geotechnical Engineering Report

Wildlife Crossing No. 1 ■ Lake and Seminole Counties, Florida

December 12, 2014 ■ Terracon Project No. H1135080

Soil Survey Descriptions (Lake County)

Mk / 28 – Myakka sand. This soil map unit consists of areas of poorly drained soils. This soil map unit is typically found on the flatwoods. In its natural state, during years of normal rainfall, the groundwater table is normally between depths of about 6 to 18 inches (0.5 to 1.5 feet) below the ground surface from June through November. This soil type is predominantly sandy throughout the defined profile of 80 inches (6.7 feet).

MpC / 29 – Myakka and Placid sand, 2 to 8 percent slopes. This soil group is nearly level to gently sloping and very poorly drained and poorly drained. It is typically found in low depressional areas. In its natural state and during years of normal precipitation, the water table is at or near the surface most of the year. This soil is predominantly sandy throughout the defined profile of 80 inches (6.7 feet). The upper 20 inches (1.7 feet) of Placid soils have a typical organic content of between 2 and 10 percent. The upper 6 inches of Myakka soils have a typical organic content of between 2 and 7 percent.

Po / 42 – Pompano sand. This soil type is nearly level and poorly drained. It is typically found on broad, low flats and in poorly defined drainageways on the flatwoods. During years of normal precipitation, this soil type has a seasonal high water table within 10 inches (0.8 feet) of the surface for 2 to 6 months, and within a depth of 30 inches (2.5 feet) for more than 9 months. This soil type is predominantly sand throughout the defined profile.

Ta / 45 – Tavares sand, 0 to 5 percent slopes. This soil type is nearly level to gently sloping and moderately well drained. In its natural state and during years of normal precipitation, this soil type has a seasonal high water table between depths of 40 and 60 inches (3.3 and 5.0 feet) of the surface for 6 months. This soil is predominantly sandy throughout the defined profile of 80 inches (6.7 feet).

Preliminary Geotechnical Engineering Report

Wildlife Crossing No. 1 ■ Lake and Seminole Counties, Florida

December 12, 2014 ■ Terracon Project No. H1135080

Field Exploration Description

The boring locations were laid out at the project site by Terracon personnel. The locations indicated on the attached exhibits were surveyed by McKim & Creed. The locations of the borings should be considered accurate only to the degree implied by the means and methods used to define them.

The SPT soil borings were typically drilled with an ATV-mounted, rotary drilling rig. The ATV-mounted drill rig was equipped with a CME automatic SPT hammer.

The boreholes were advanced with a cutting head and stabilized with the use of bentonite (drillers' mud). Soil samples were obtained by the split spoon sampling procedure in general accordance with the Standard Penetration Test (SPT) procedure. In the split spoon sampling procedure, the number of blows required to advance the sampling spoon the last 12 inches of an 18-inch penetration or the middle 12 inches of a 24-inch penetration by means of a 140-pound hammer with a free fall of 30 inches, is the standard penetration resistance value (N). This value is used to estimate the in-situ relative density of cohesionless soils and the consistency of cohesive soils. The sampling depths and penetration distance, plus the standard penetration resistance values, are shown on the boring profiles.

A CME automatic SPT hammer was used to advance the split-barrel sampler in the majority of the borings performed on this site. A significantly greater efficiency is achieved with the automatic hammer compared to the conventional safety hammer operated with a cathead and rope. This higher efficiency has an appreciable effect on the SPT-N value. The effect of the automatic hammer's efficiency has been considered in the interpretation and analysis of the subsurface information for this report. The automatic hammer "N" value shall be multiplied by 1.24 to convert to the equivalent safety hammer "N" value.

Portions of the samples from the borings were sealed in glass jars to reduce moisture loss, and then the jars were taken to our laboratory for further observation and classification. Upon completion, the boreholes were backfilled with the site soil.

Field logs of each boring were prepared by the drill crew. These logs included visual classifications of the materials encountered during drilling as well as the driller's interpretation of the subsurface conditions between samples. The boring profiles included with this report represent an interpretation of the field logs and include modifications based on laboratory observation of the samples.

Preliminary Geotechnical Engineering Report

Wildlife Crossing No. 1 ■ Lake and Seminole Counties, Florida
December 12, 2014 ■ Terracon Project No. H1135080

Laboratory Testing

During the field exploration, a portion of each recovered sample was sealed in a glass jar and transported to our laboratory for further visual observation and laboratory testing. Selected samples retrieved from the borings were tested for moisture (water) content, fines content (soil passing a US standard #200 sieve), organic content, and Atterberg Limits. The test results are included on the respective boring profiles. The visual-manual classifications were modified as appropriate based upon the laboratory testing results.

The soil samples were classified in general accordance with the Unified Soil Classification System based on the material's texture and plasticity. The estimated group symbol for the Unified Soil Classification System is shown on the boring profiles in Appendix A. The results of our laboratory testing are presented on the corresponding borings profiles.

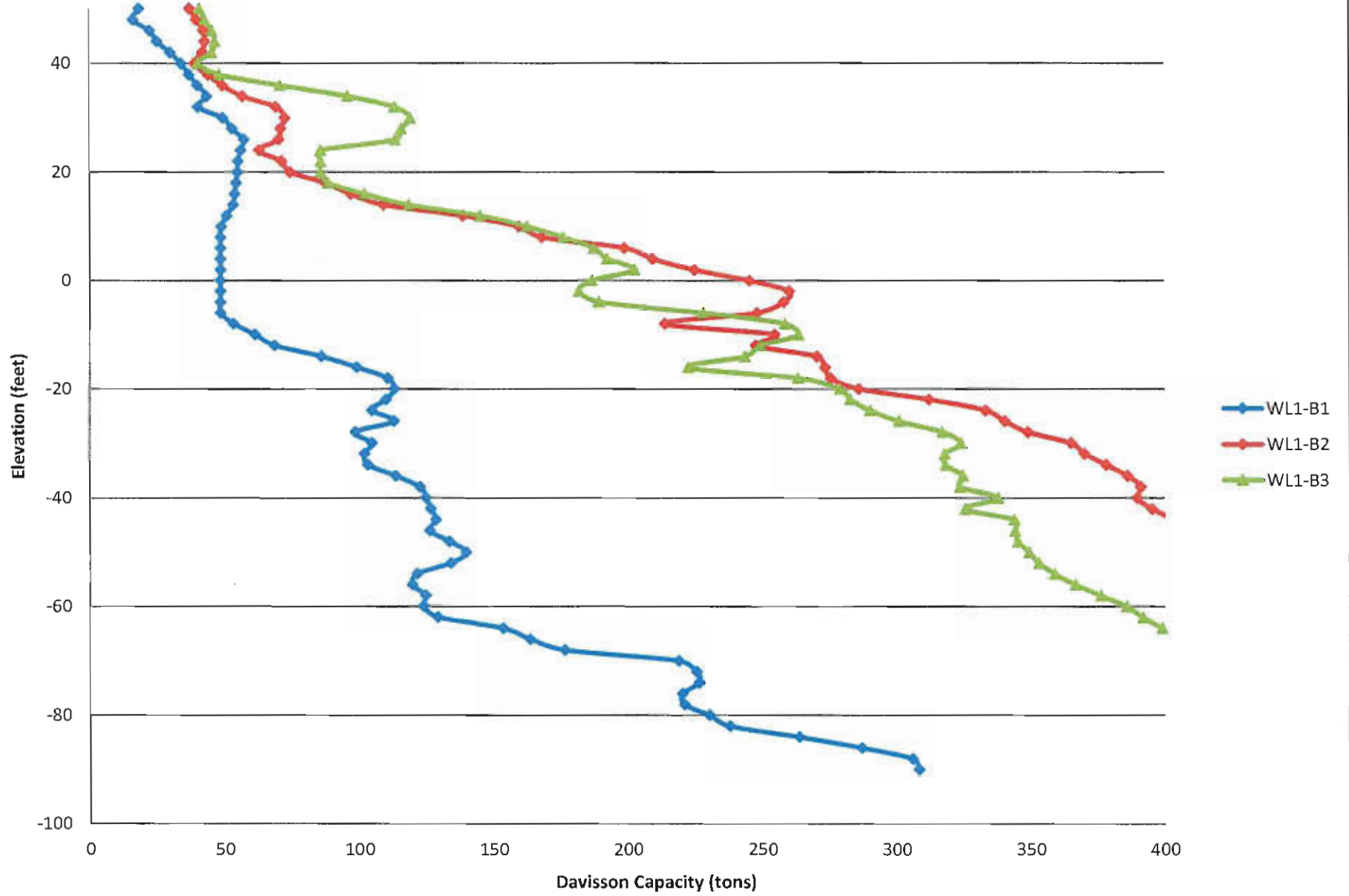
A series of nine (9) corrosion tests were performed on soil samples obtained from the soil borings performed for the proposed bridge. These results indicate that the subsurface environment ranges from slightly to extremely aggressive (pH = 5.2) for use in selection of an appropriate class of concrete or steel in accordance with the Florida Department of Transportation (FDOT) Standards. The environmental classifications are based on the Structures Design Guidelines. The corrosion series test results are summarized on **Exhibit A-20** in the **Appendix**.

EXHIBIT A-20
CORROSION SERIES TESTING RESULTS
WEKIVA PARKWAY (STATE ROAD 429/STATE ROAD 46) - SECTION 6
WILDLIFE CROSSING NO. 1 BRIDGE
LAKE AND SEMINOLE COUNTIES, FLORIDA
FPID: 238275-7-32-02
TERRACON PROJECT NO. H1135080

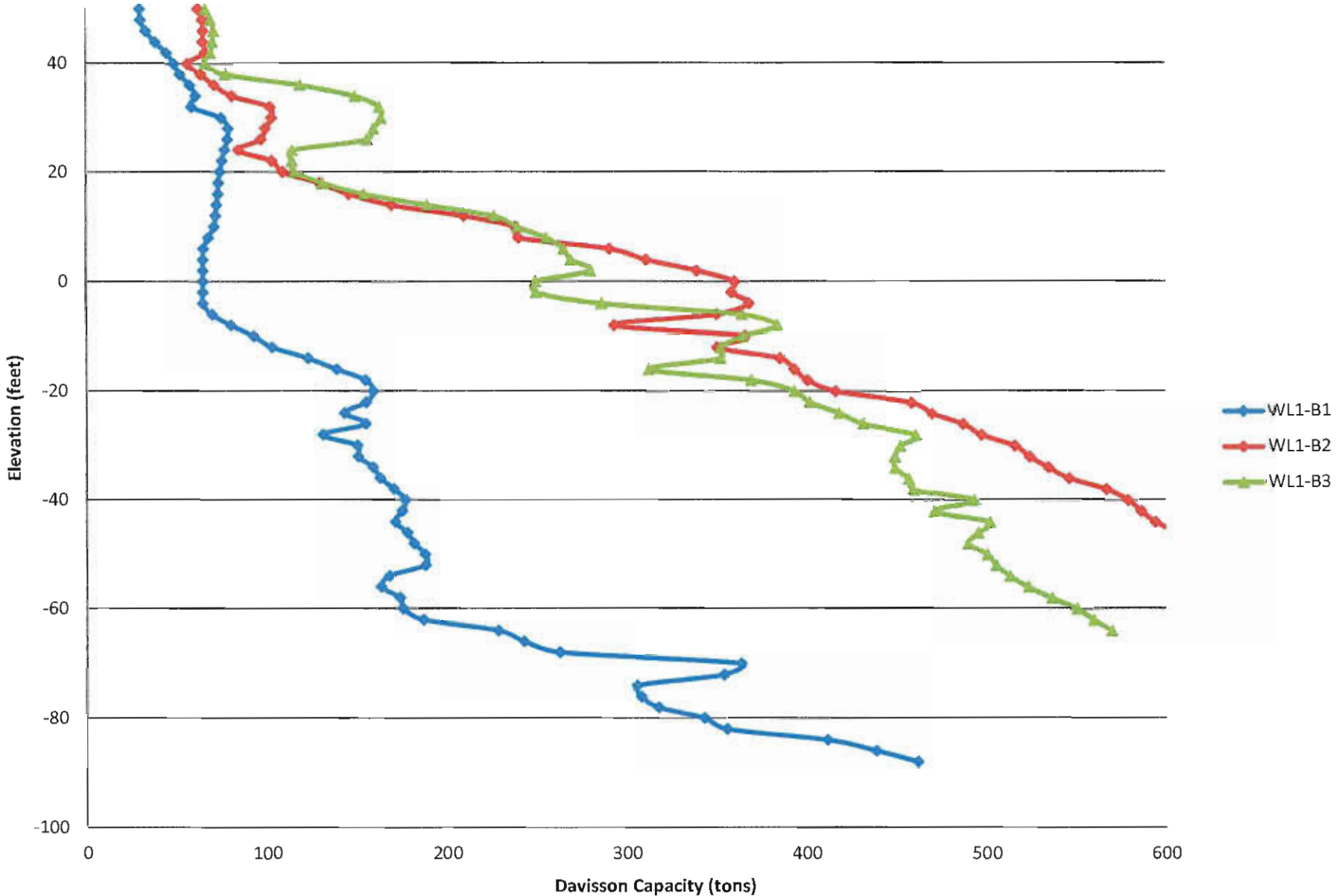
Boring Number	Station & Offset	Sample Depth (feet)	pH	Minimum Resistivity (ohm-cm)	Chlorides (ppm)	Sulfates (ppm)	Substructural Environmental Classification	
							Concrete	Steel
WL1-B1	662+05, 126' LT	1.5	5.2	41,000	60	< 5	Moderately Aggressive	Extremely Aggressive
WL1-B5	663+08, 26' RT	2.0	7.0	26,000	60	< 5	Slightly Aggressive	Moderately Aggressive
WL1-B9	665+45, 14' LT	2.0	6.4	13,000	60	< 5	Slightly Aggressive	Moderately Aggressive
WL1-B13	667+54, 3' RT	2.5	5.7	73,000	60	< 5	Moderately Aggressive	Extremely Aggressive
WL1-B16	669+99, 140' LT	3.0	6.1	48,000	60	19.8	Slightly Aggressive	Moderately Aggressive
WL1-B22	673+13, 33' RT	3.0	5.5	76,000	60	14.7	Moderately Aggressive	Extremely Aggressive
WL1-B25	675+49, 56' LT	2.0	5.8	64,000	60	24.9	Moderately Aggressive	Extremely Aggressive
WL1-B30	677+82, 76' RT	2.0	5.3	92,000	60	< 5	Moderately Aggressive	Extremely Aggressive
WL1-B33	680+18, 127' LT	2.0	6.9	30,000	60	< 5	Slightly Aggressive	Moderately Aggressive

APPENDIX B
PILE CAPACITY CURVES AND COMPUTER OUTPUTS

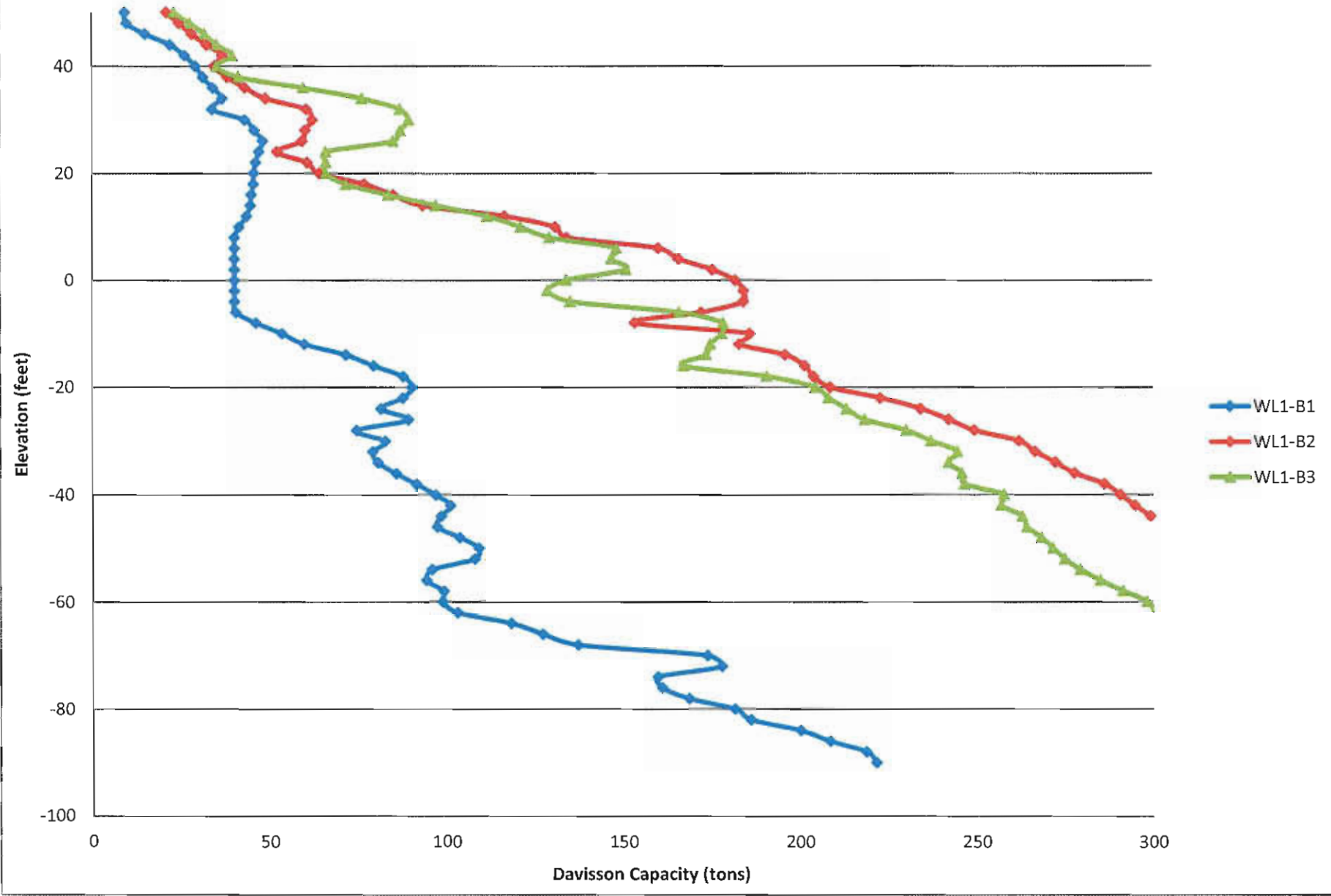
Bent 1 - 18" PCP



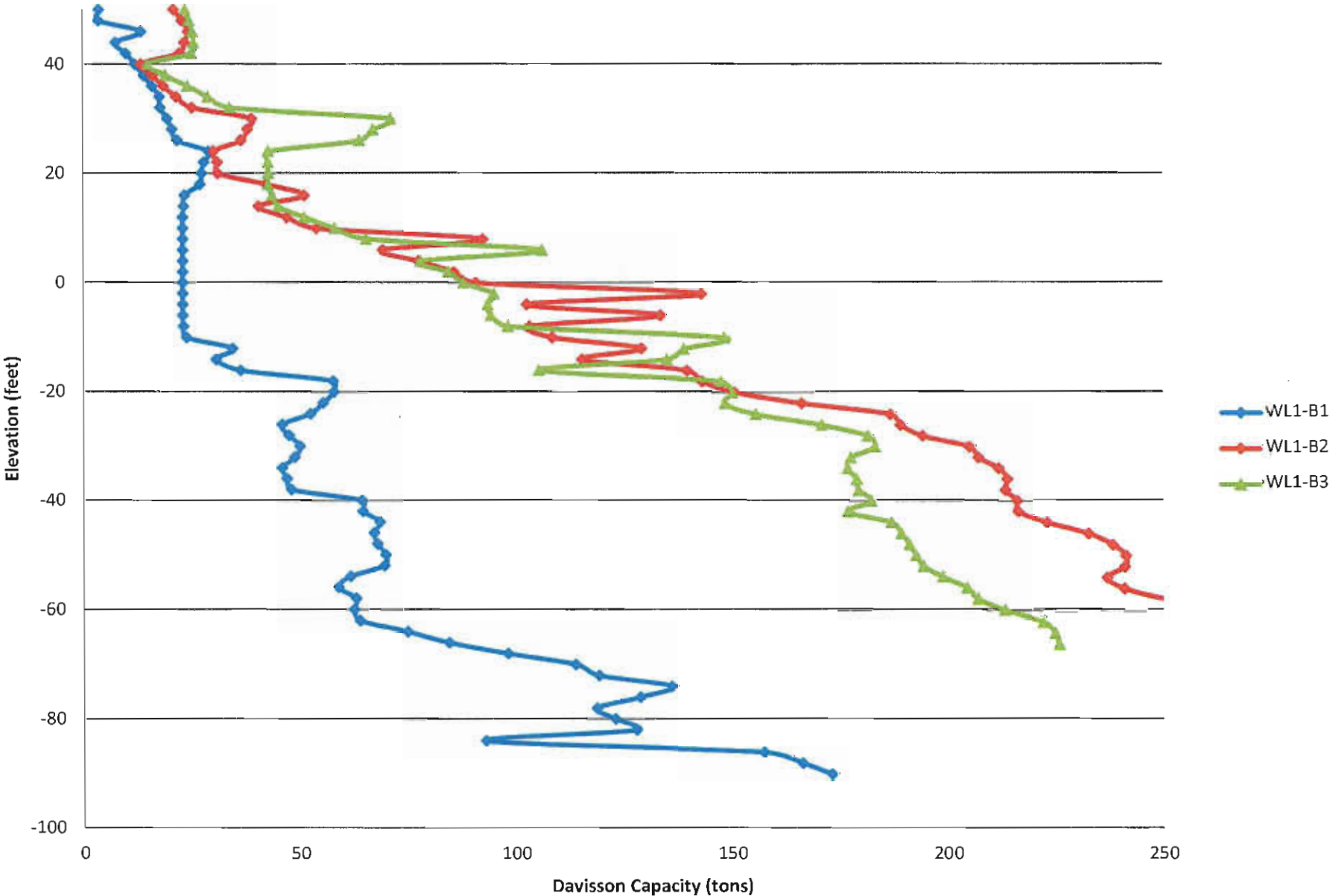
Bent 1 - 24" PCP



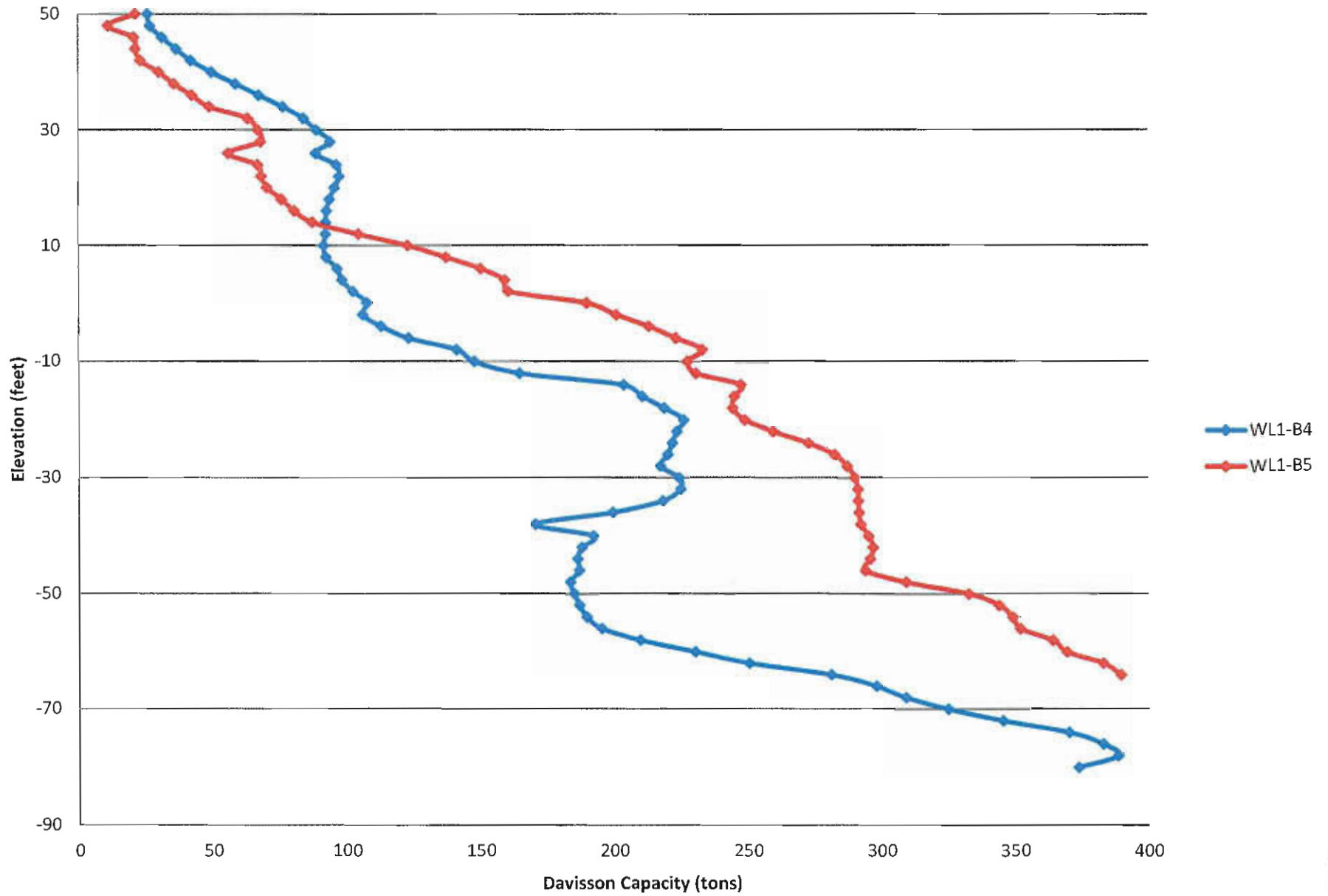
Bent 1 - 20" Pipe Pile



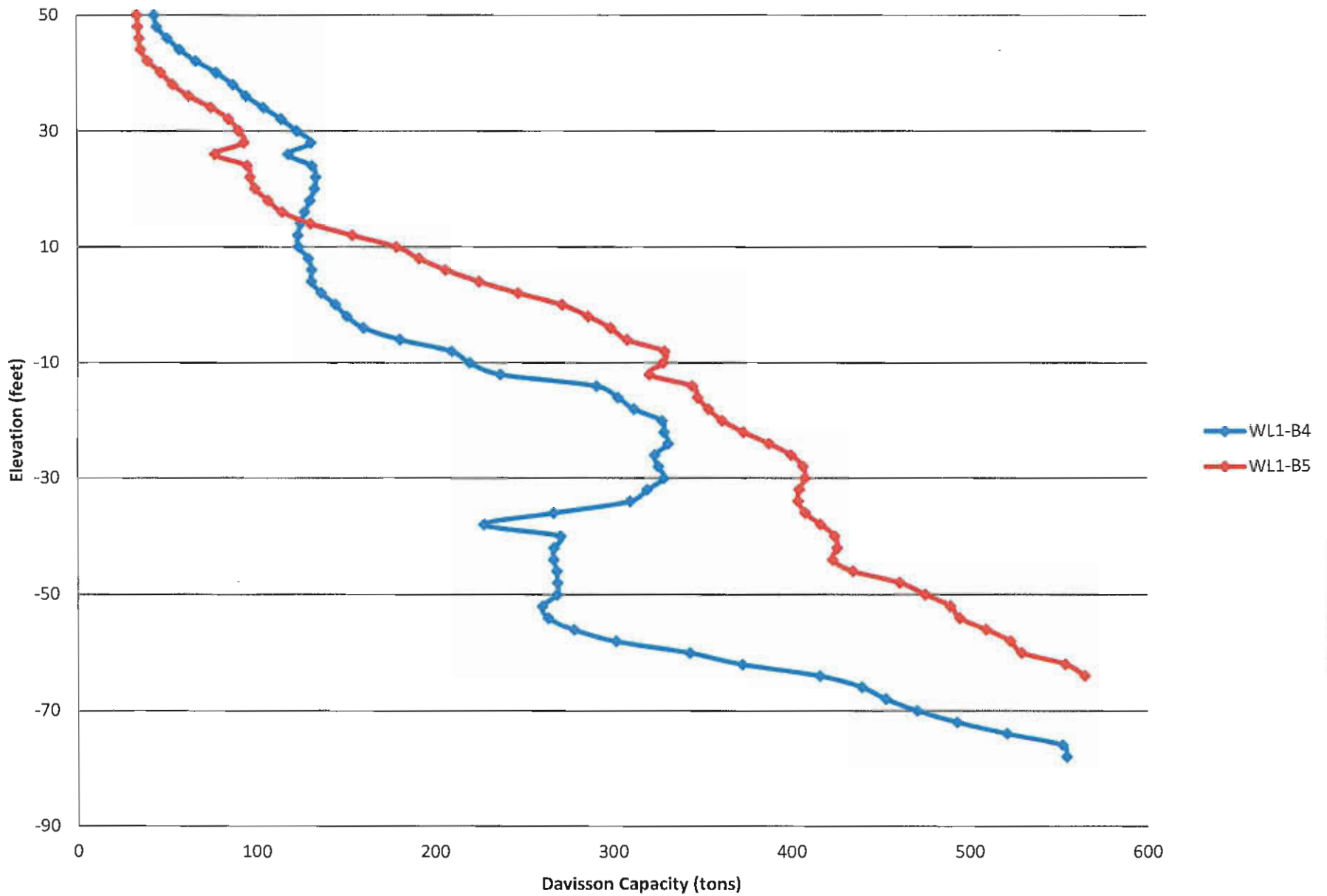
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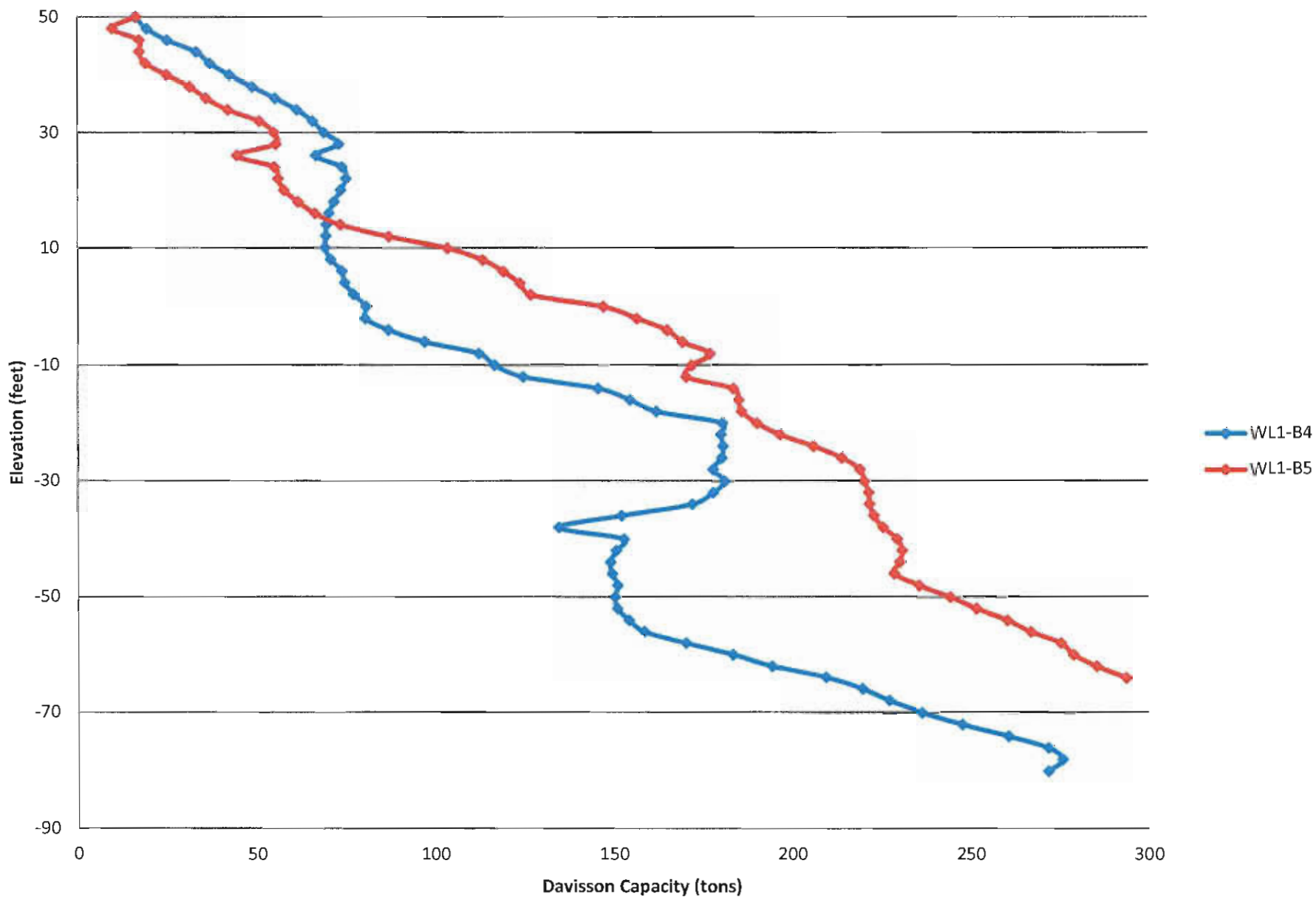
Bent 2 - 18" PCP



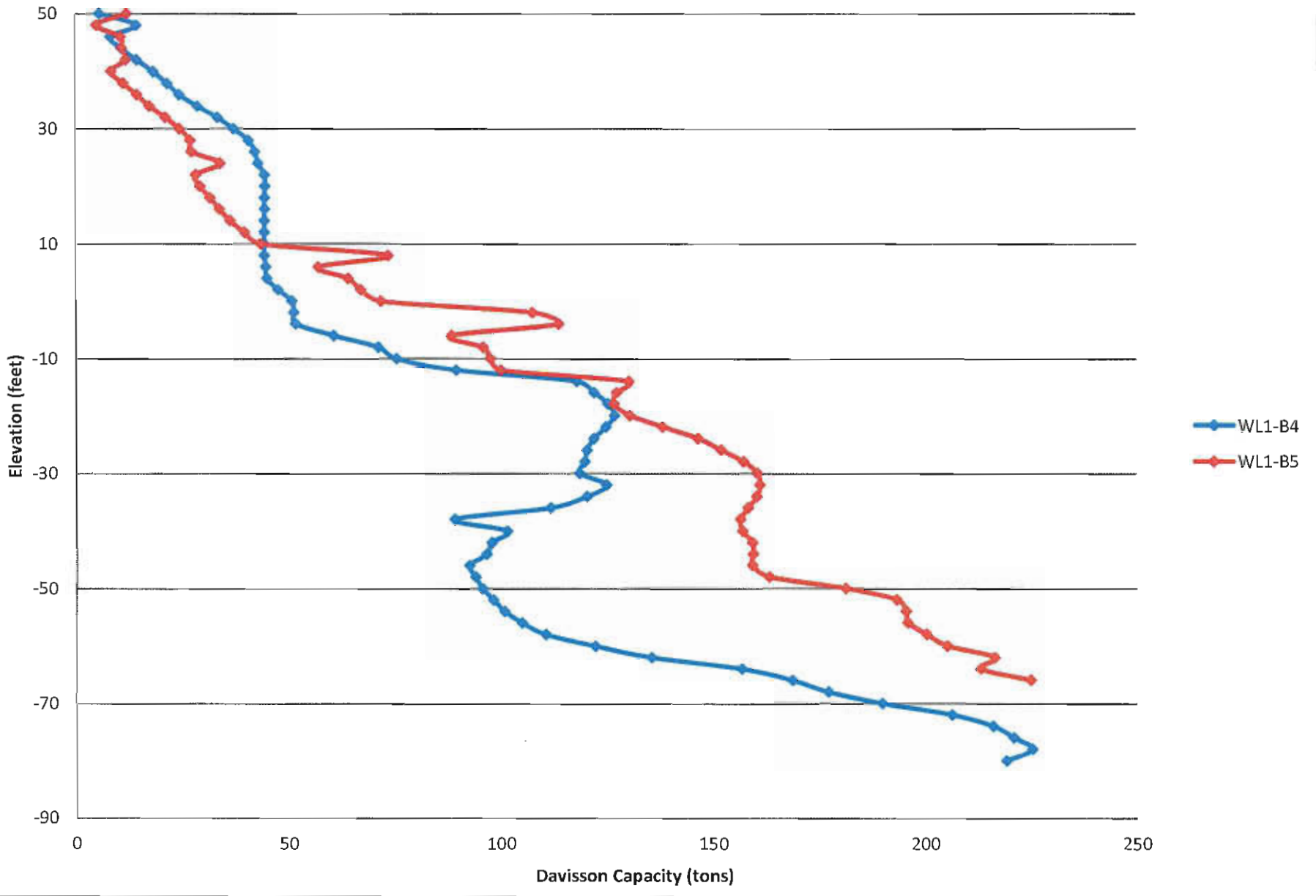
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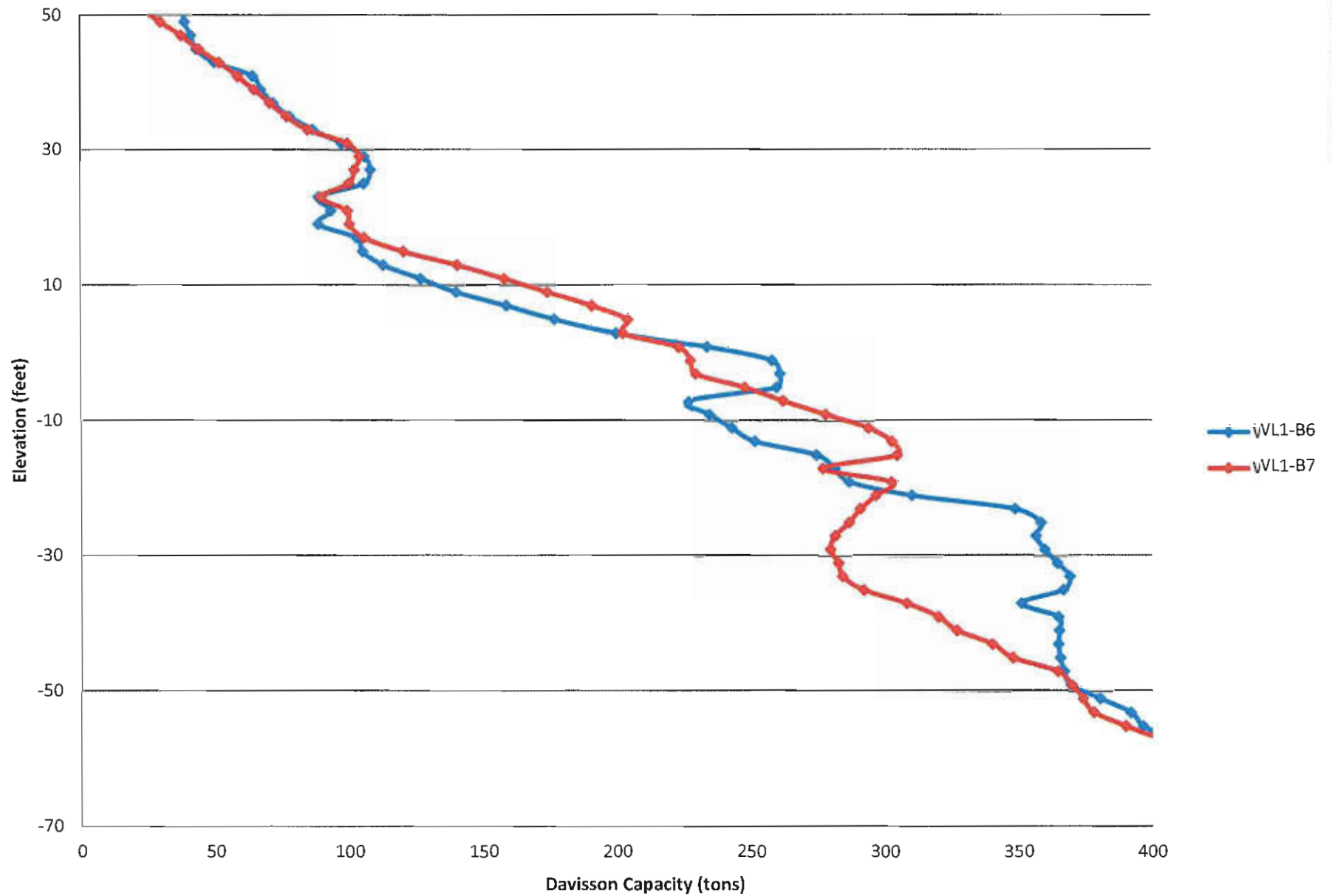
Bent 2 - 20" Pipe Pile



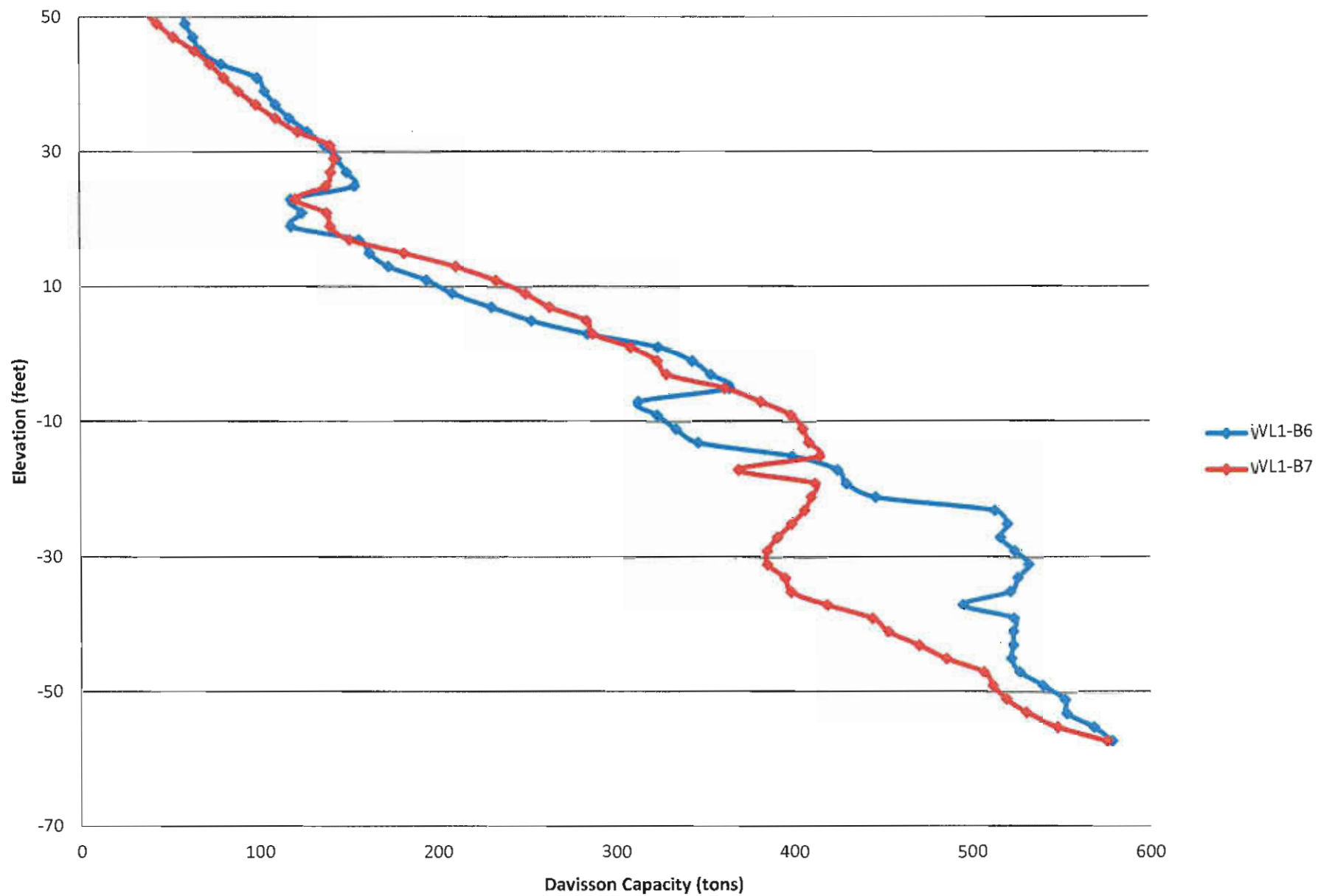
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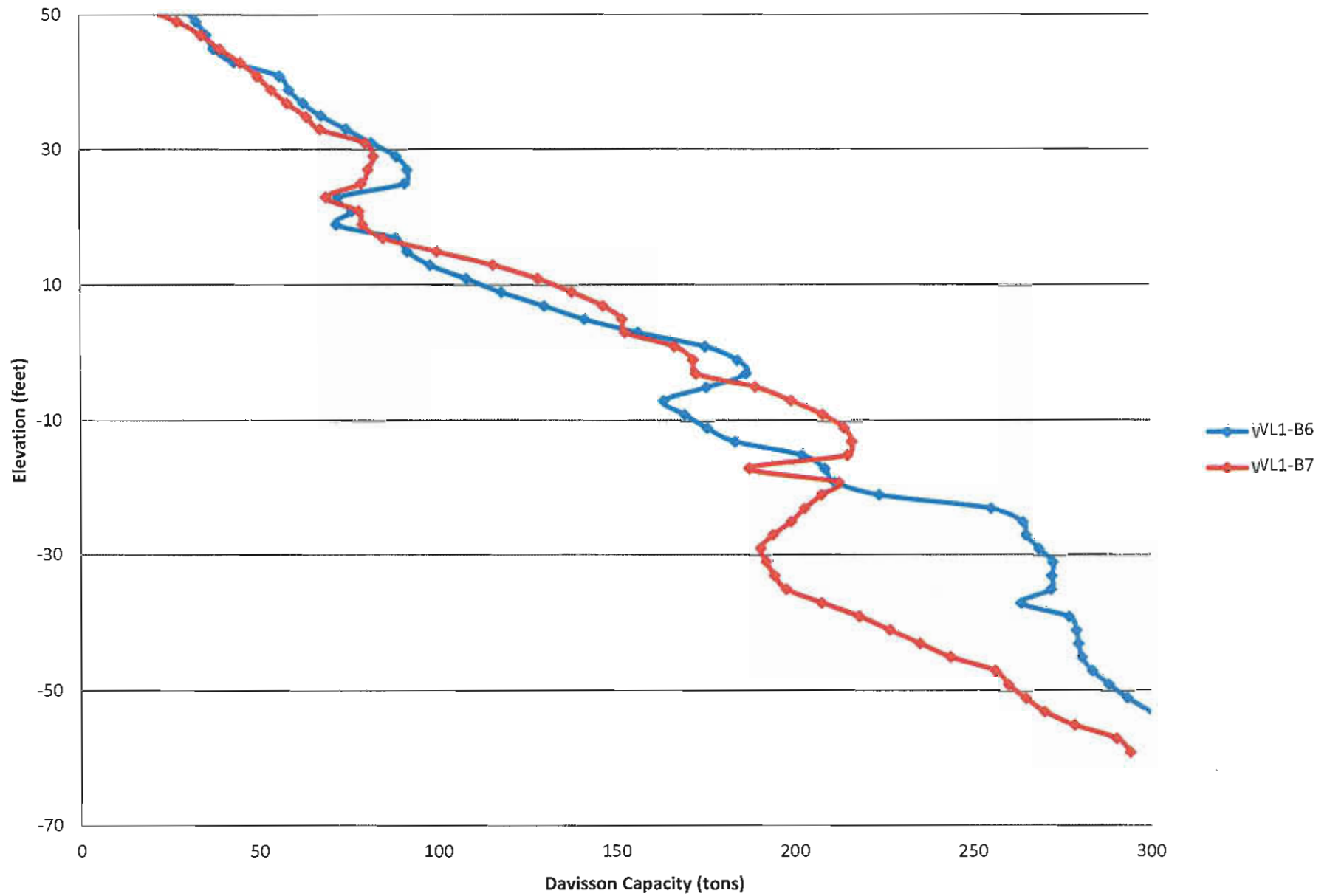
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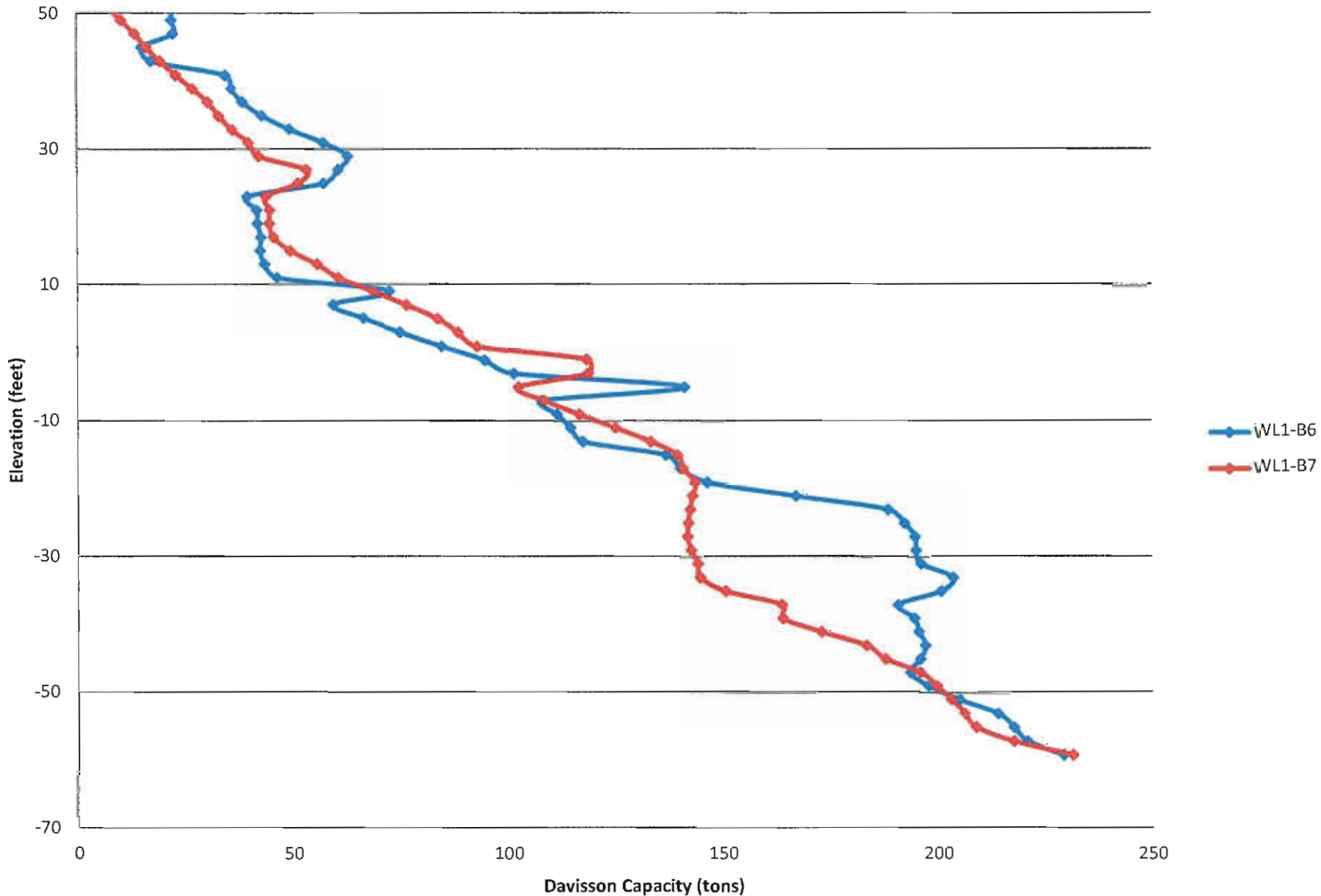
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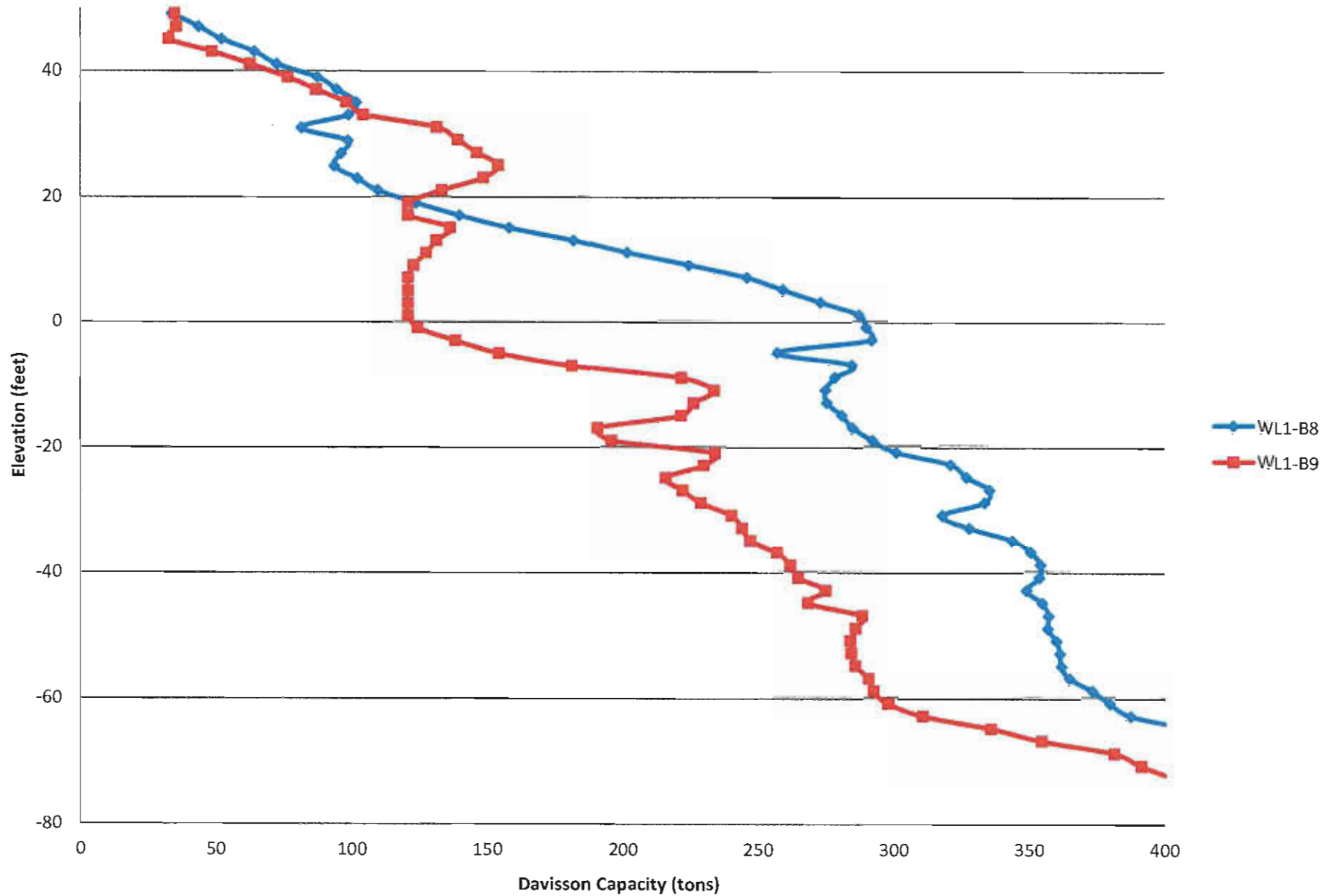
Bent 3 - 20" Pipe Pile



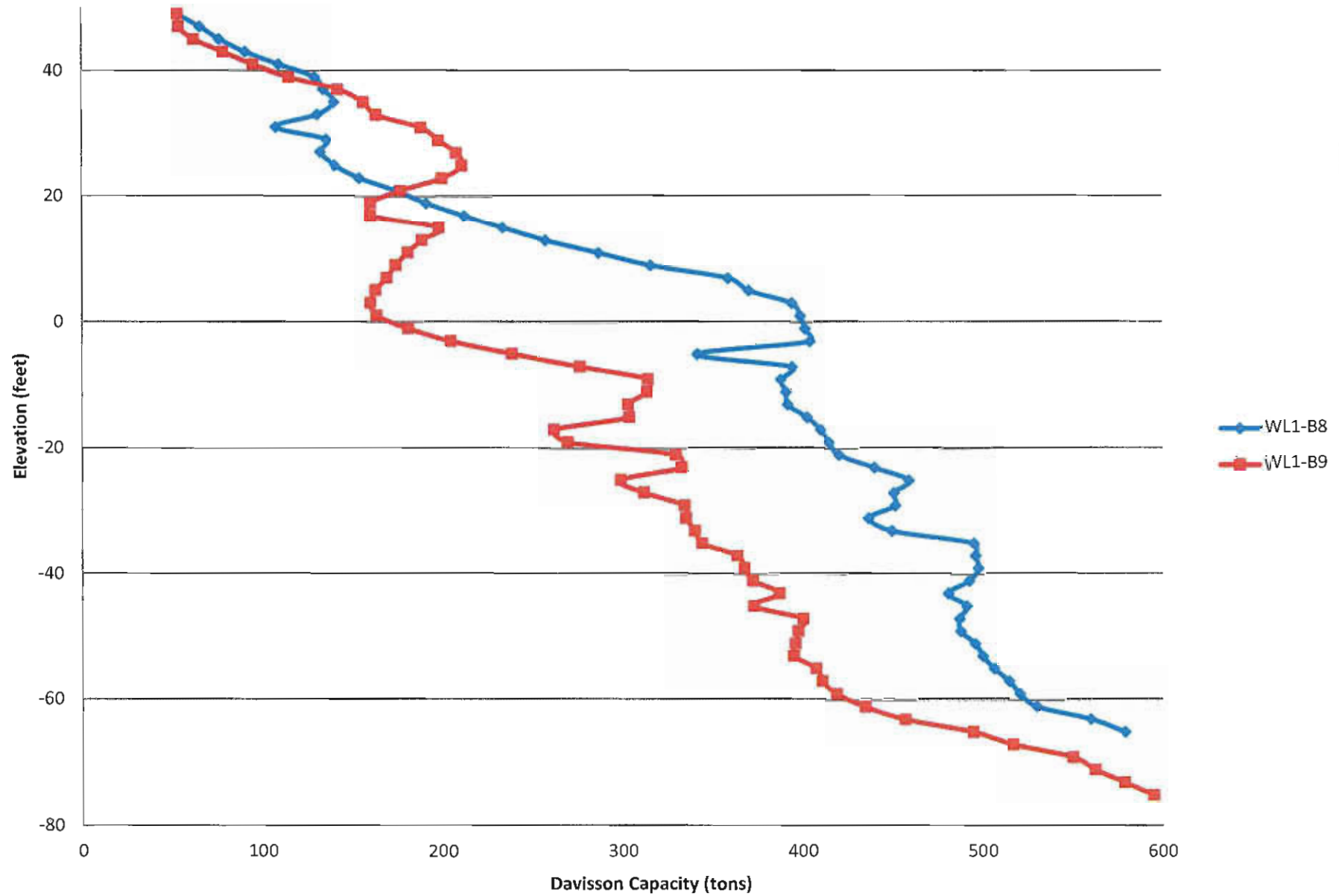
Bent 3 - HP14x89



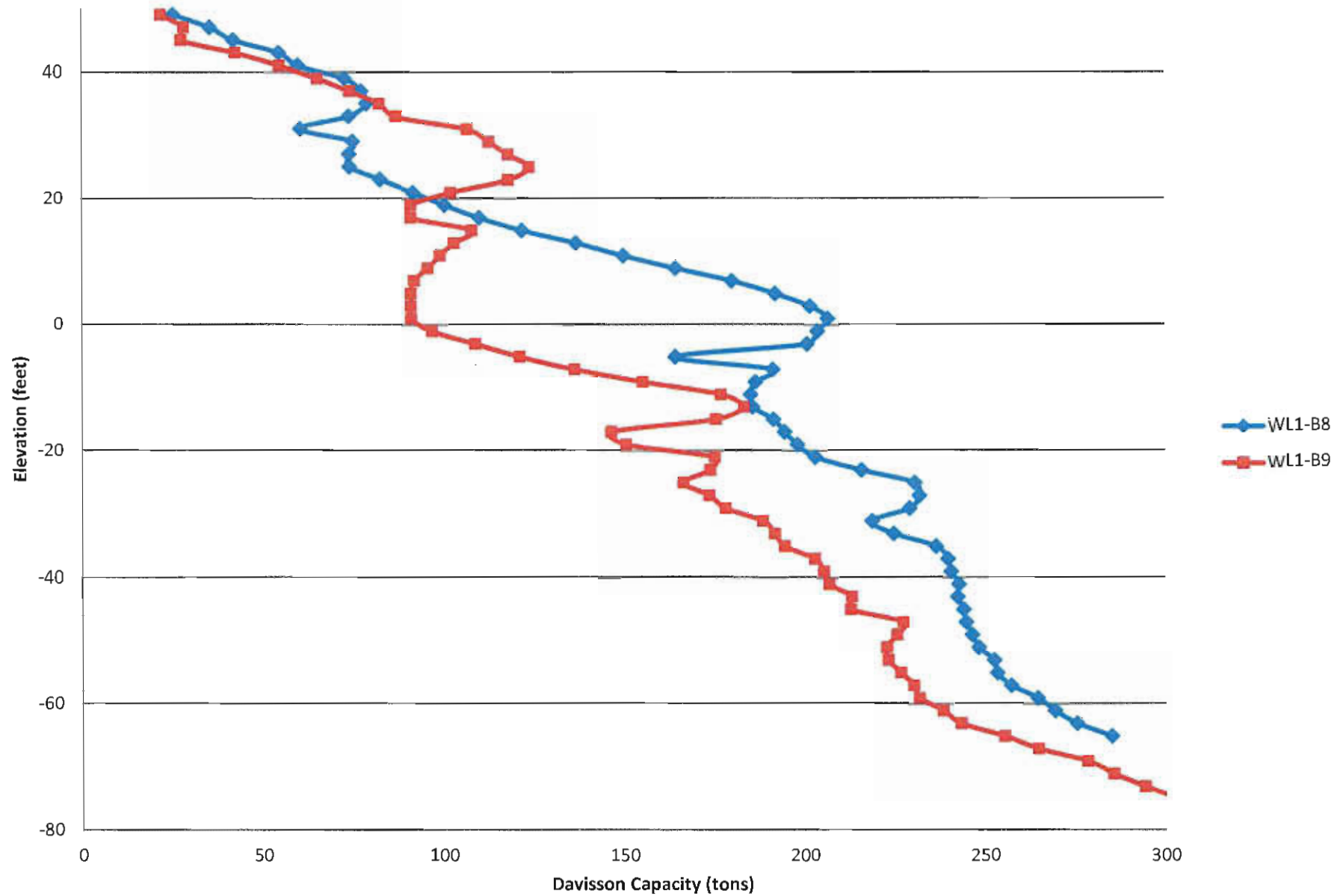
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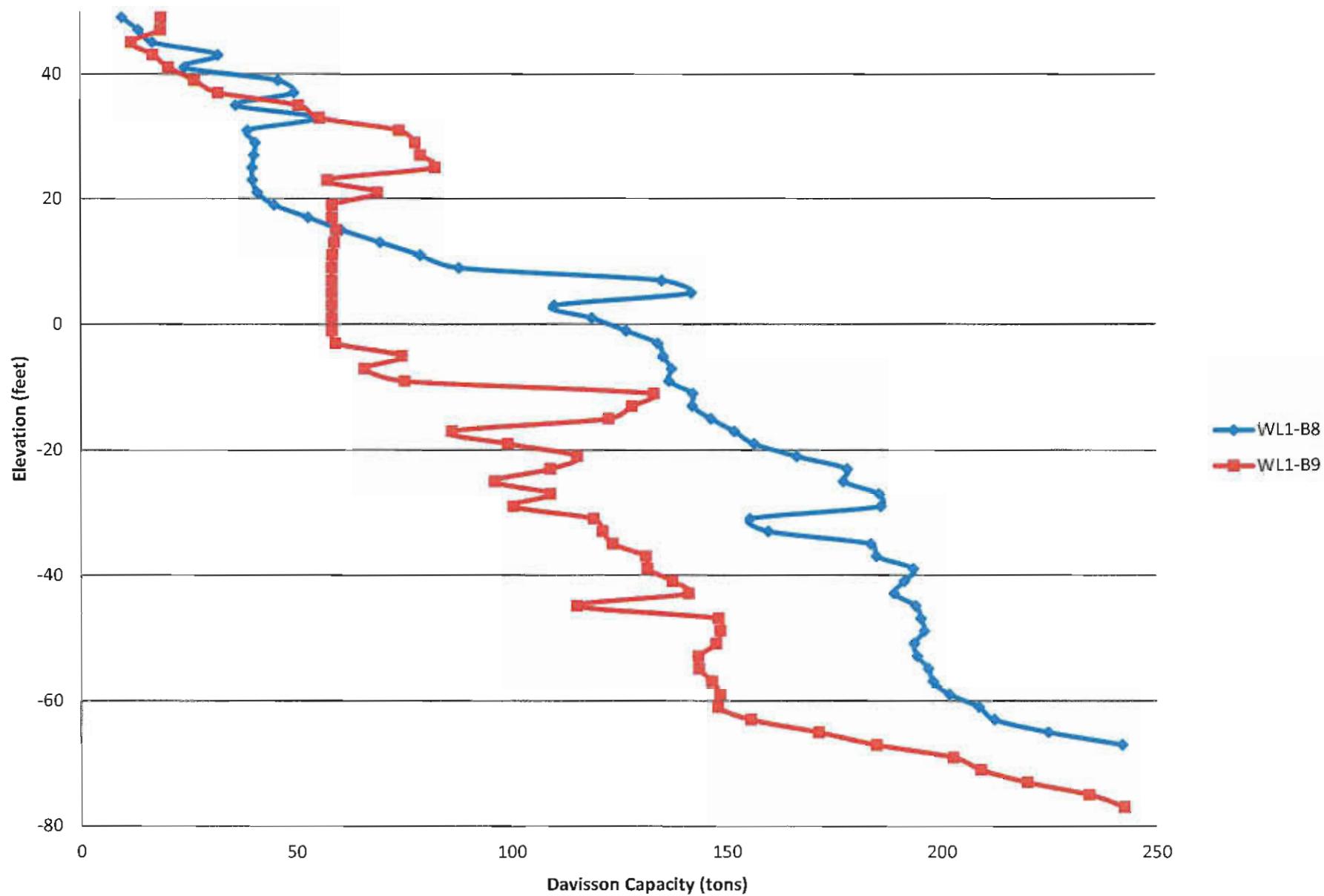
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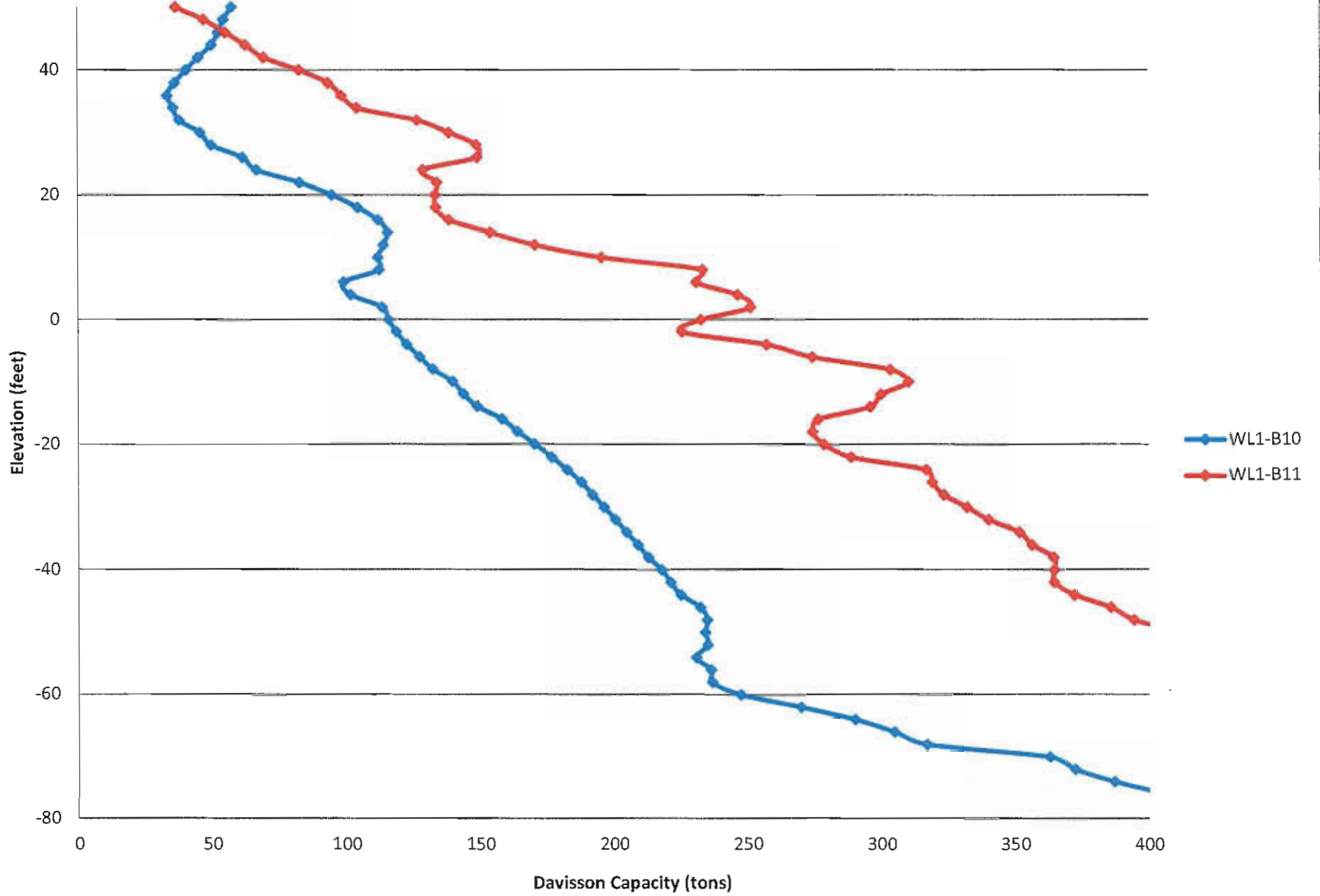
Bent 4 - 20" Pipe Pile



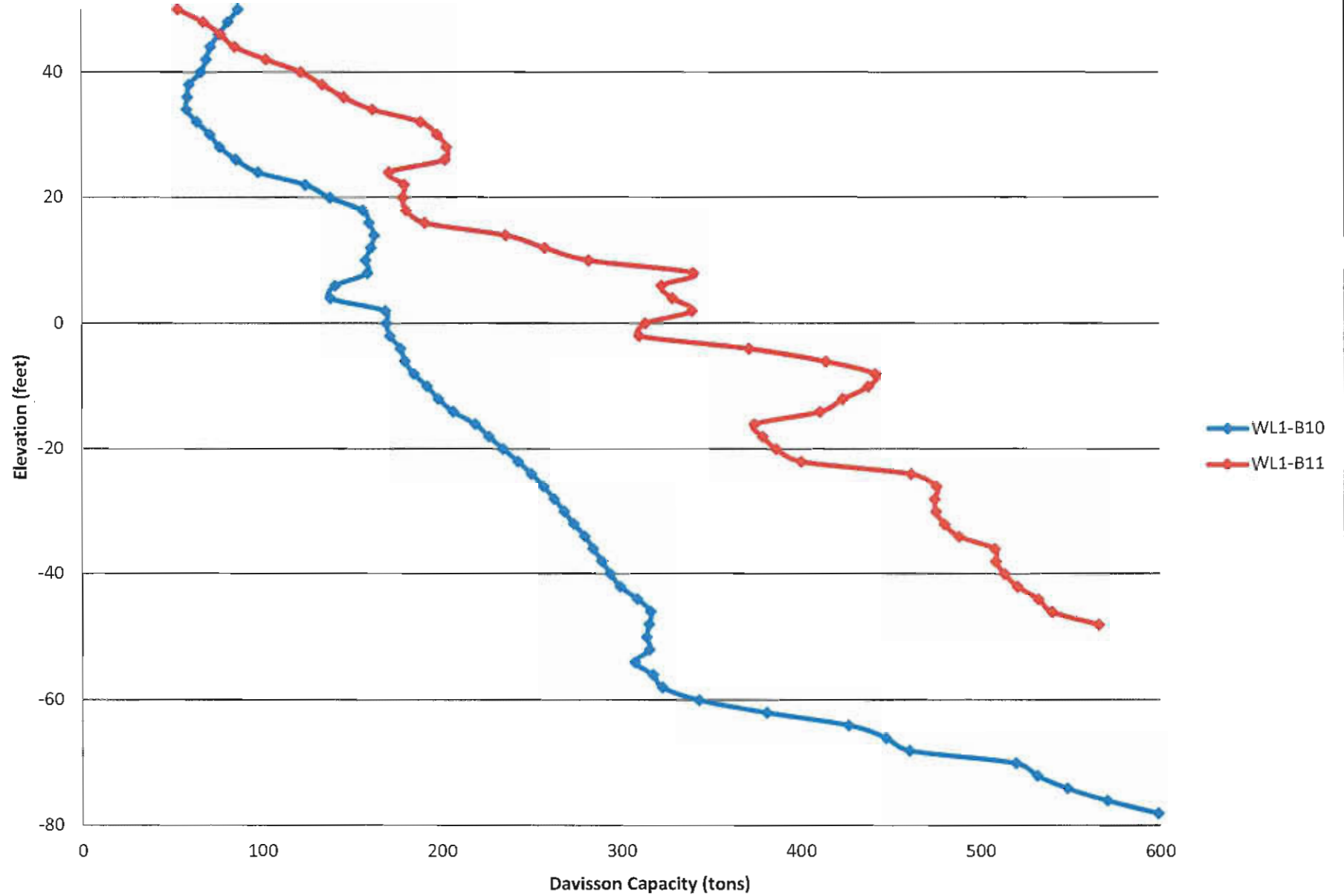
Bent 4 - HP14x89



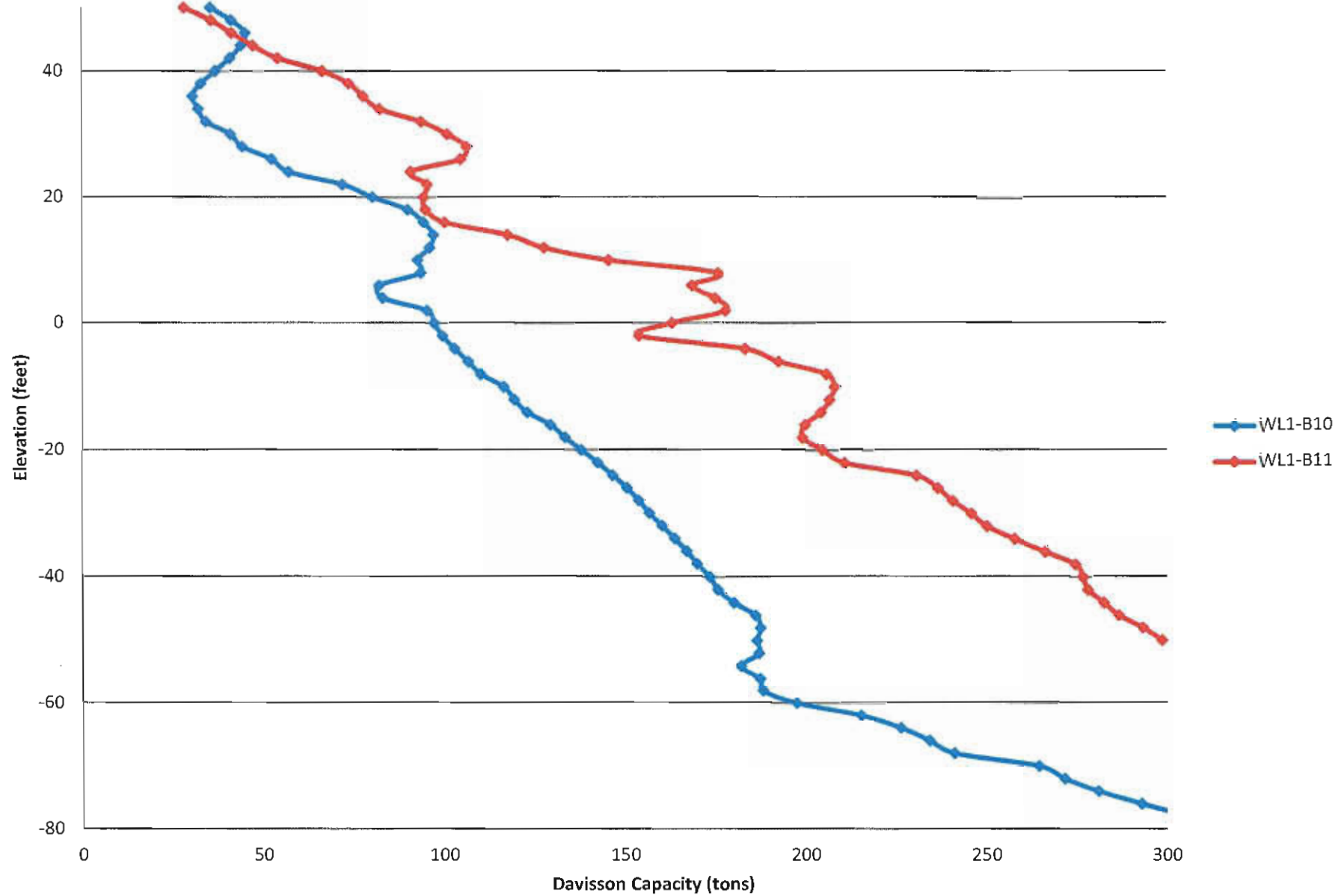
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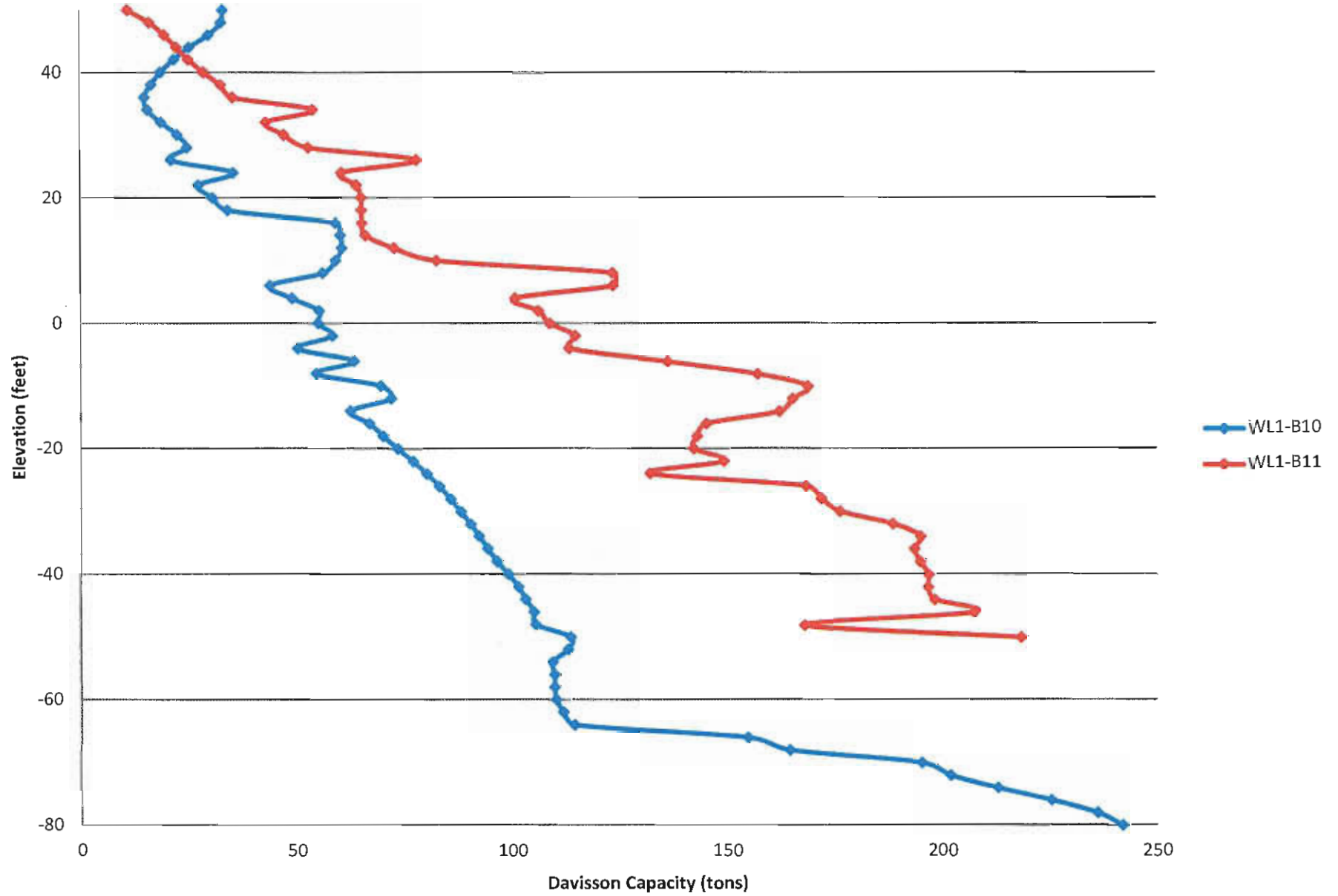
Bent 5 - 24" PCP



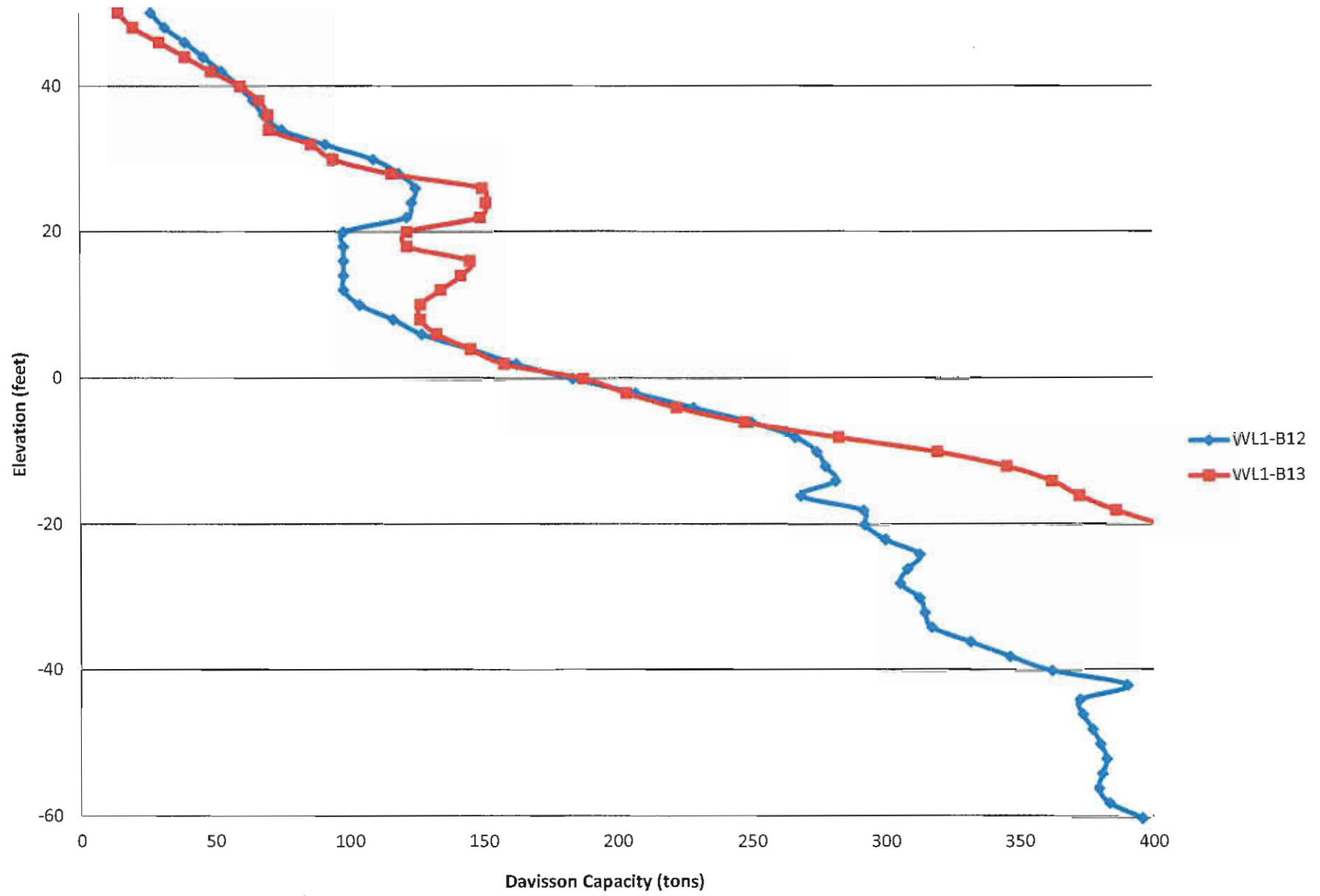
Bent 5 - 20" Pipe Pile



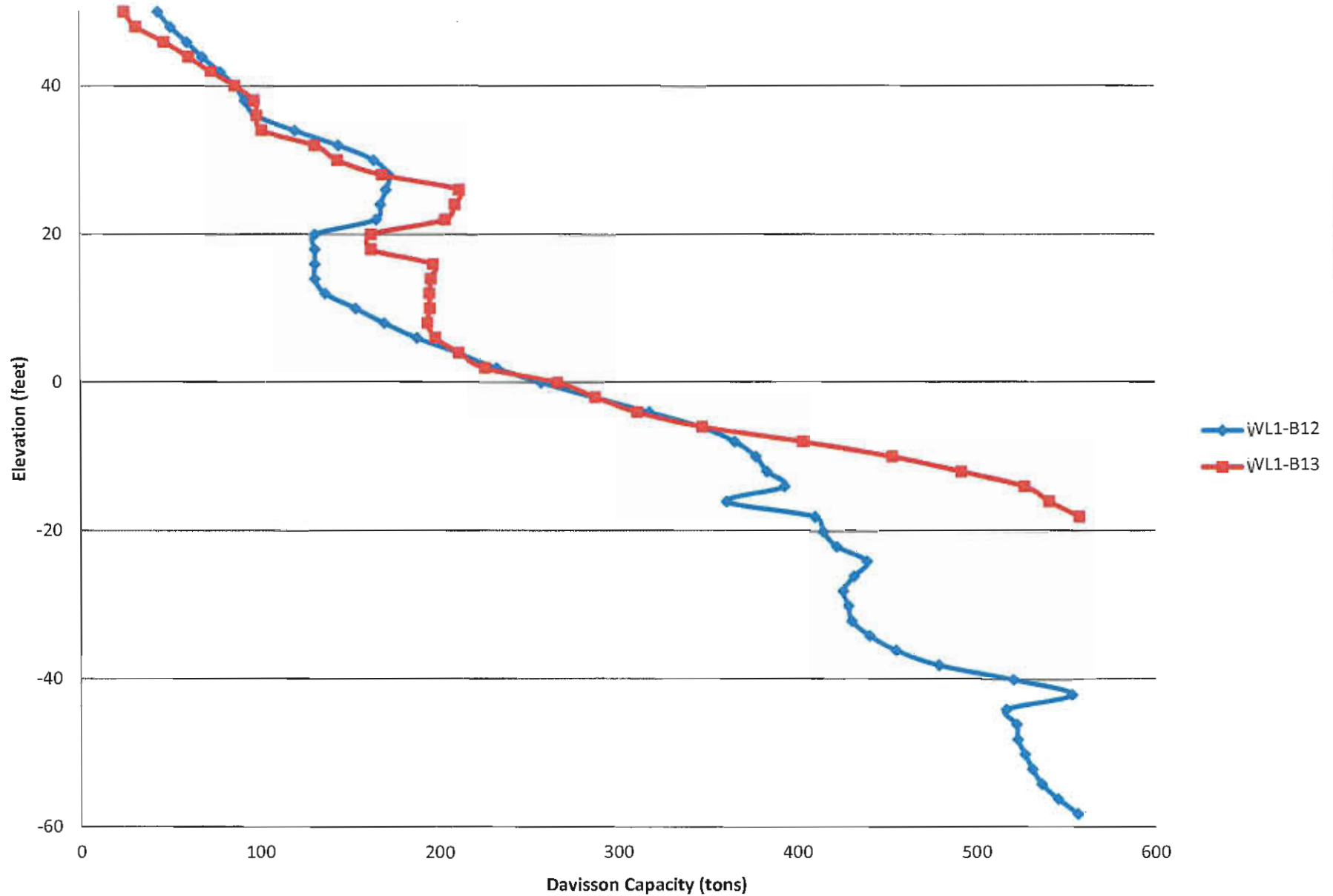
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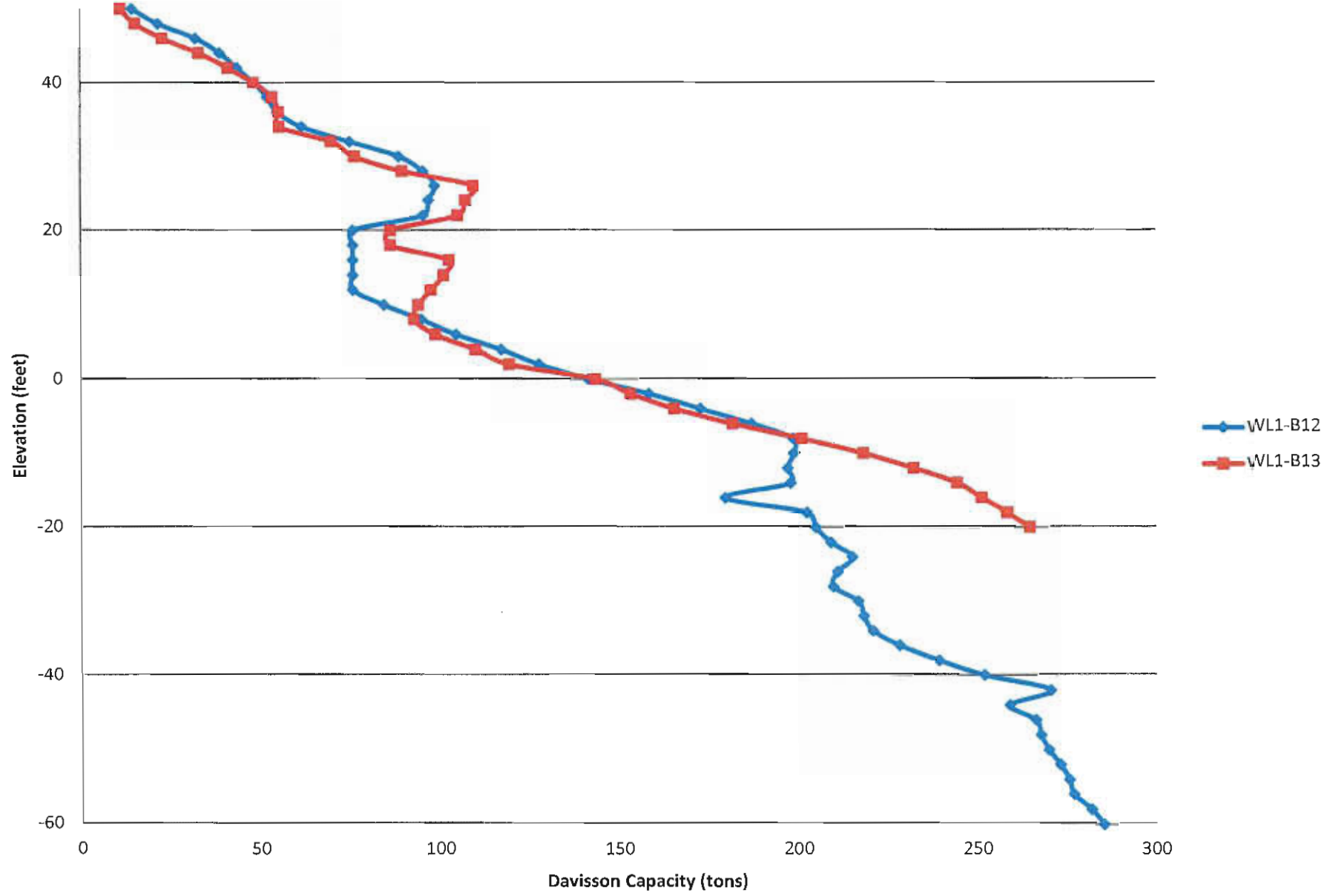
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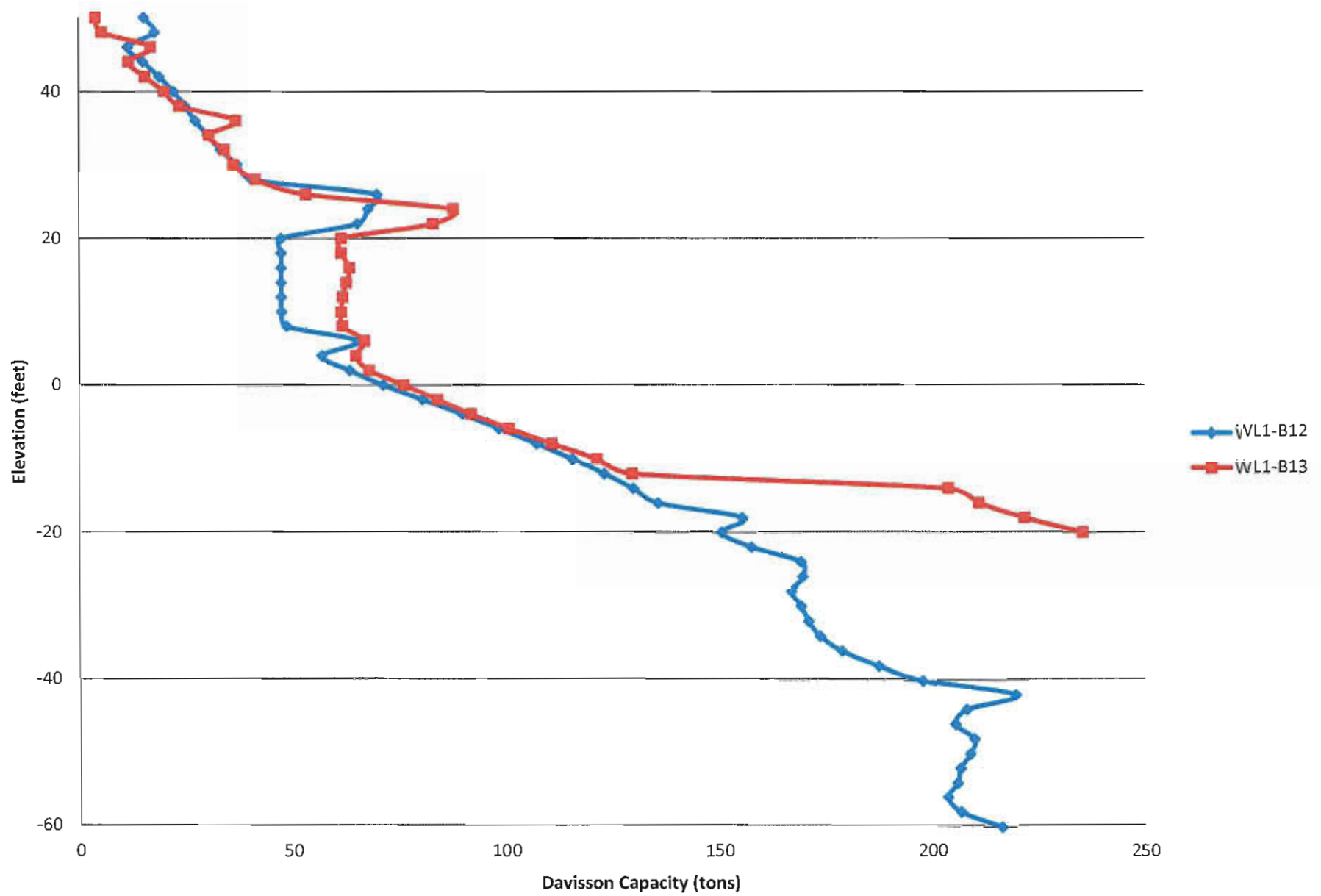
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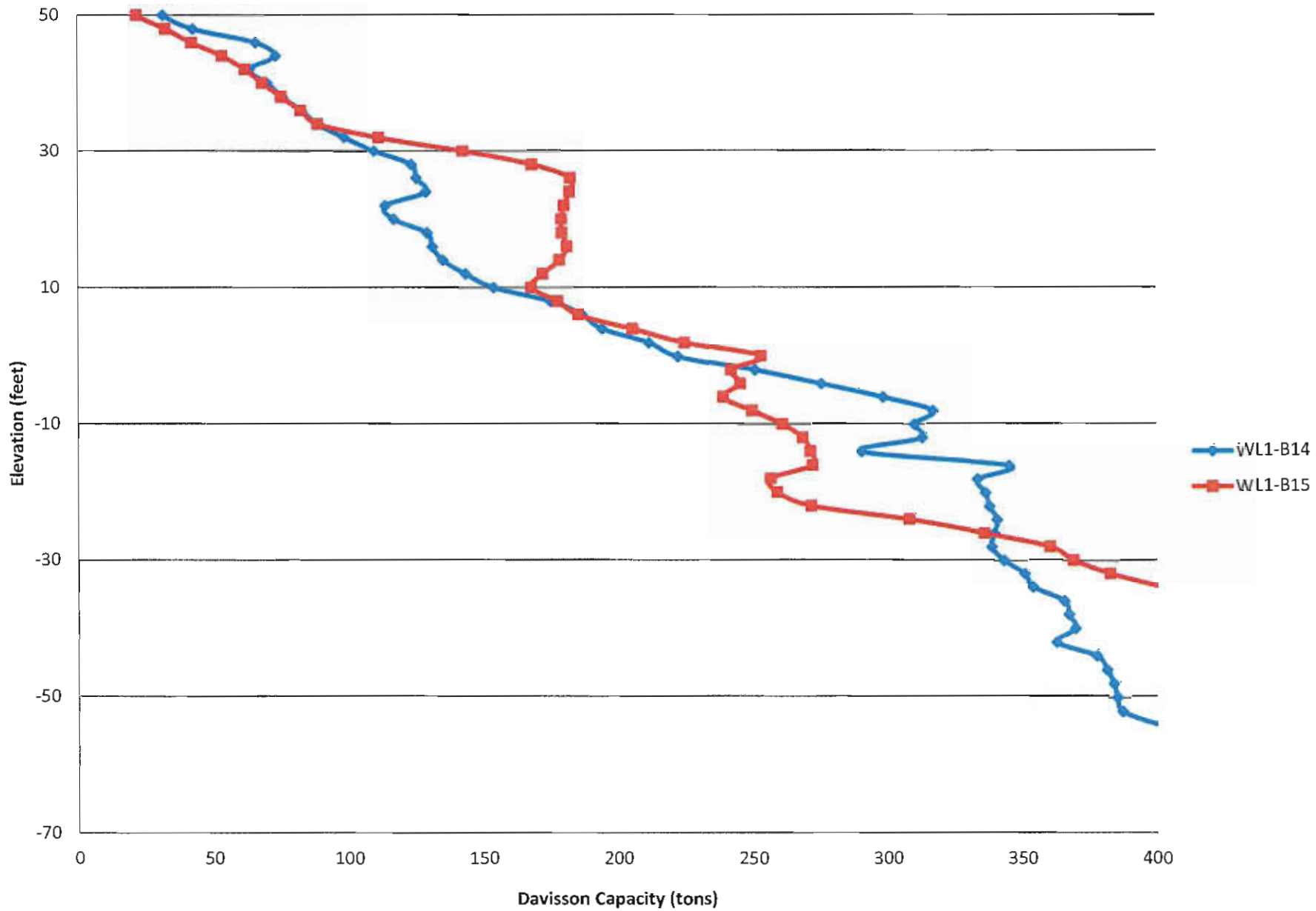
Bent 6 - 20" Pipe Pile



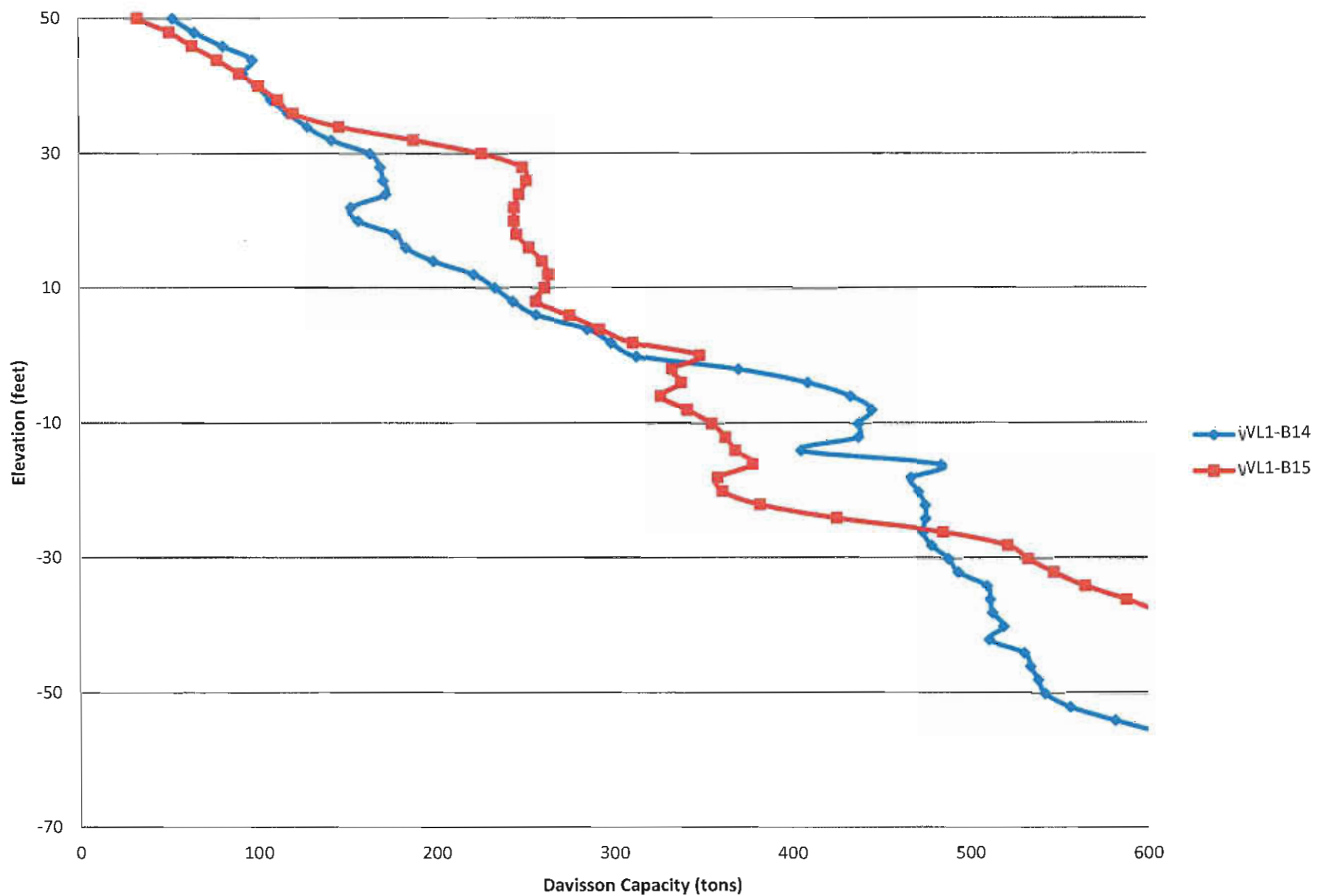
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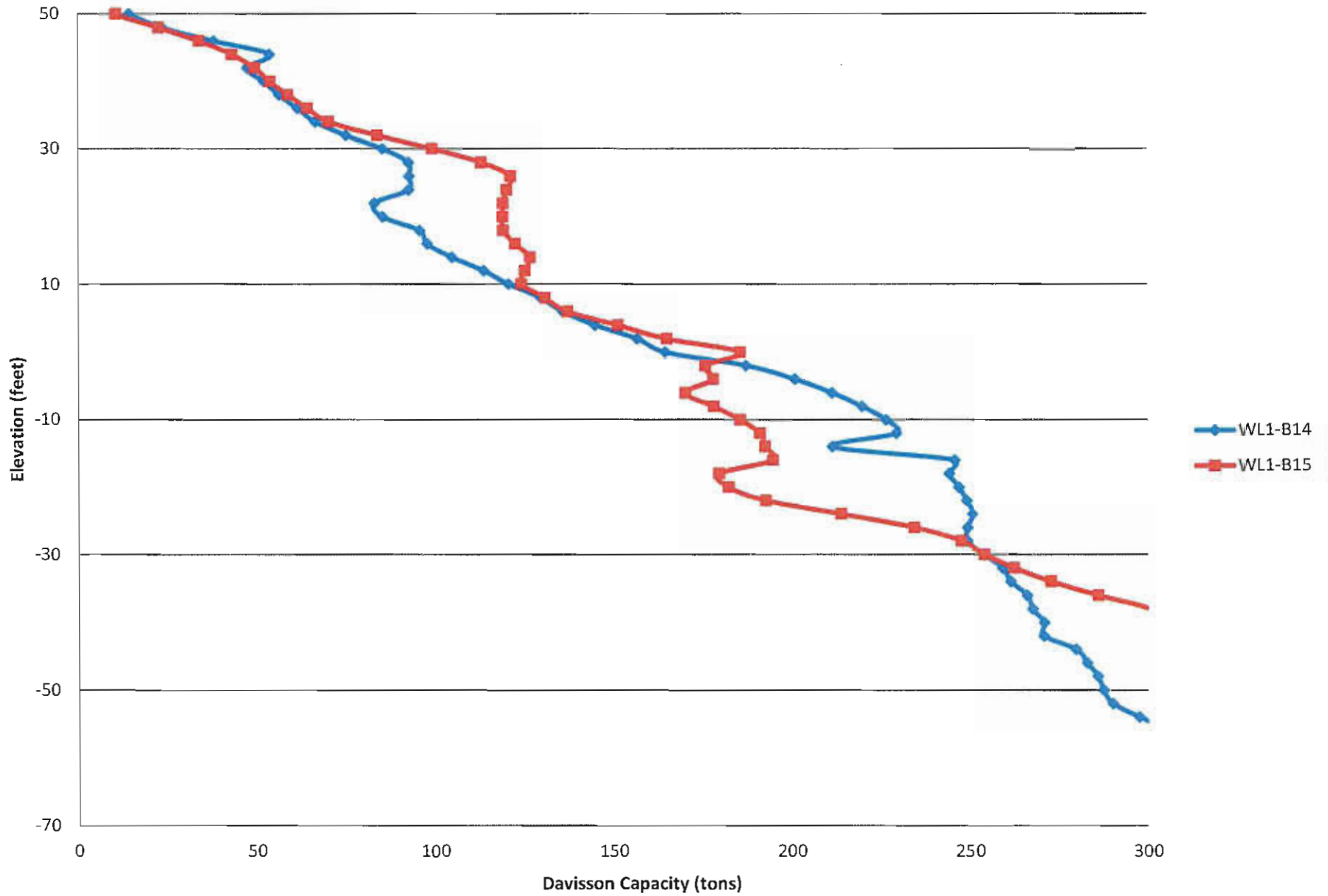
Bent 7 - 18" PCP



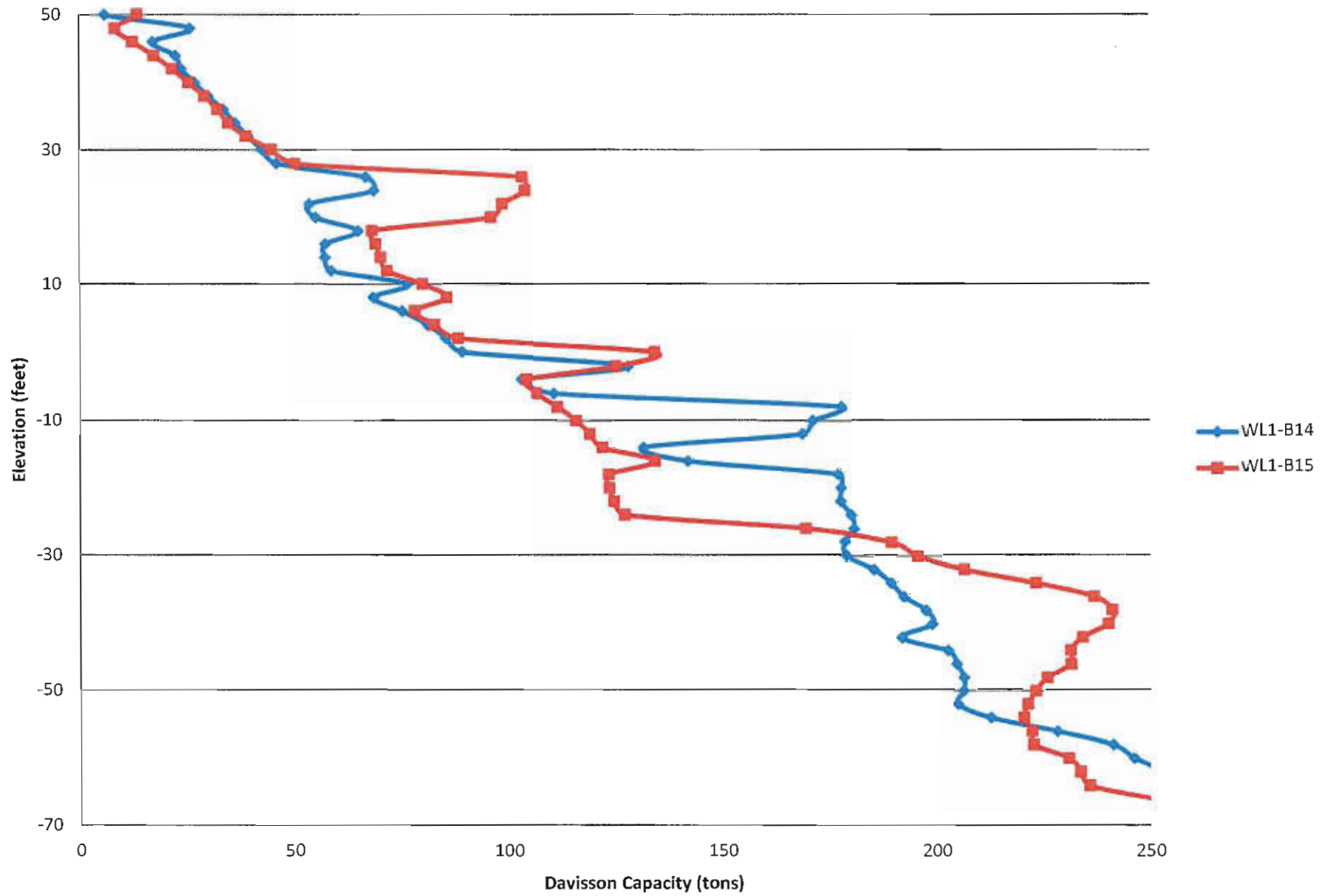
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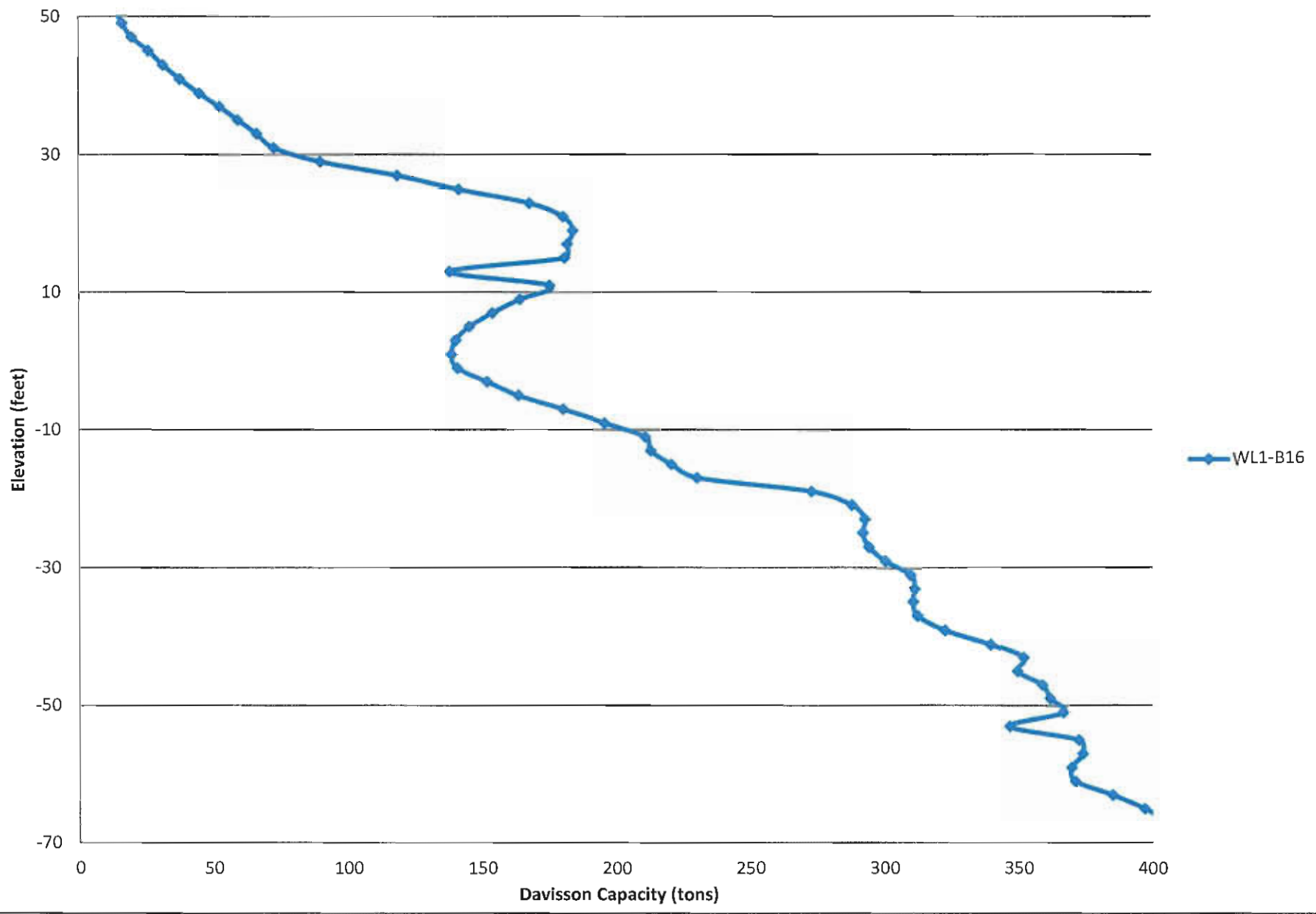
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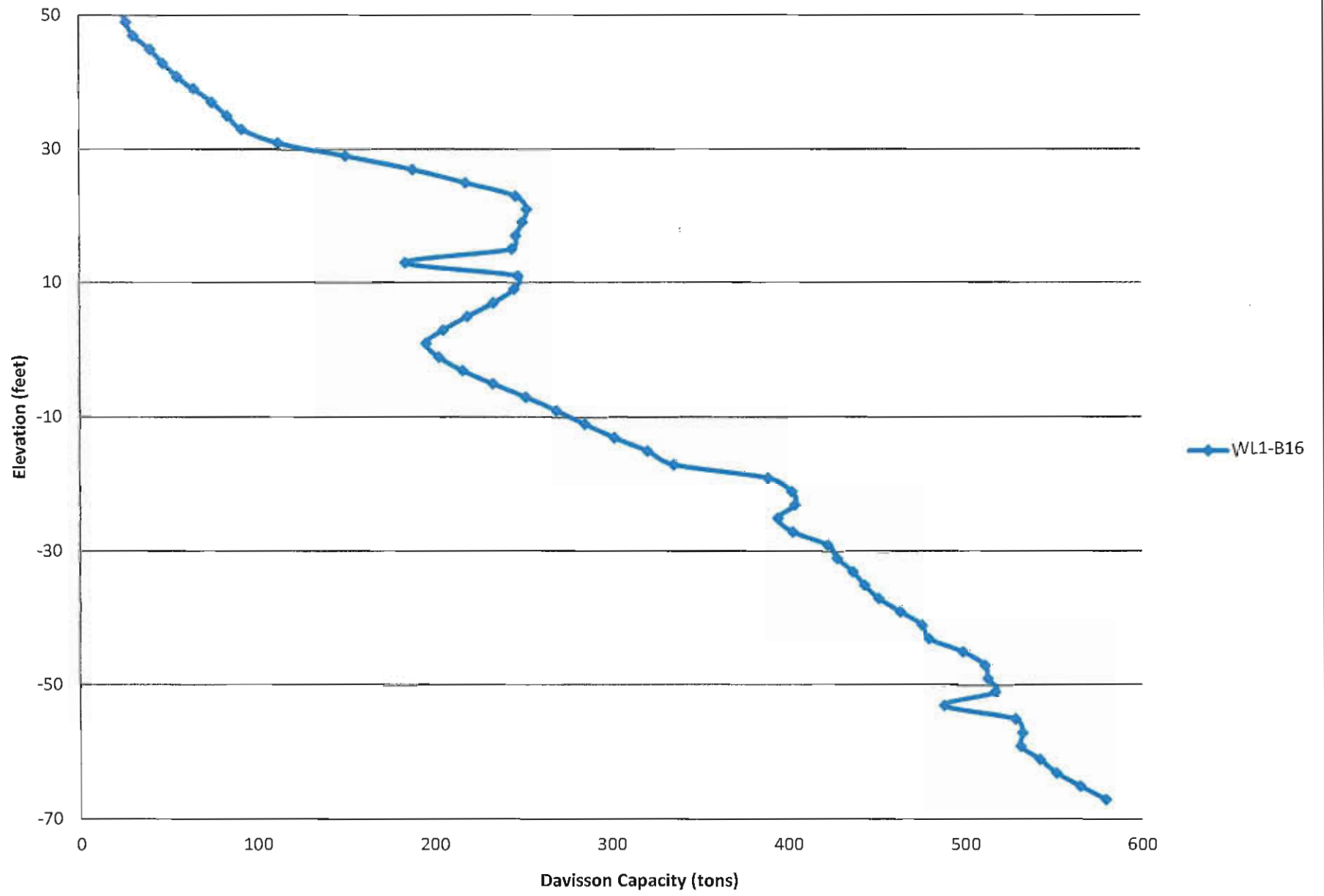
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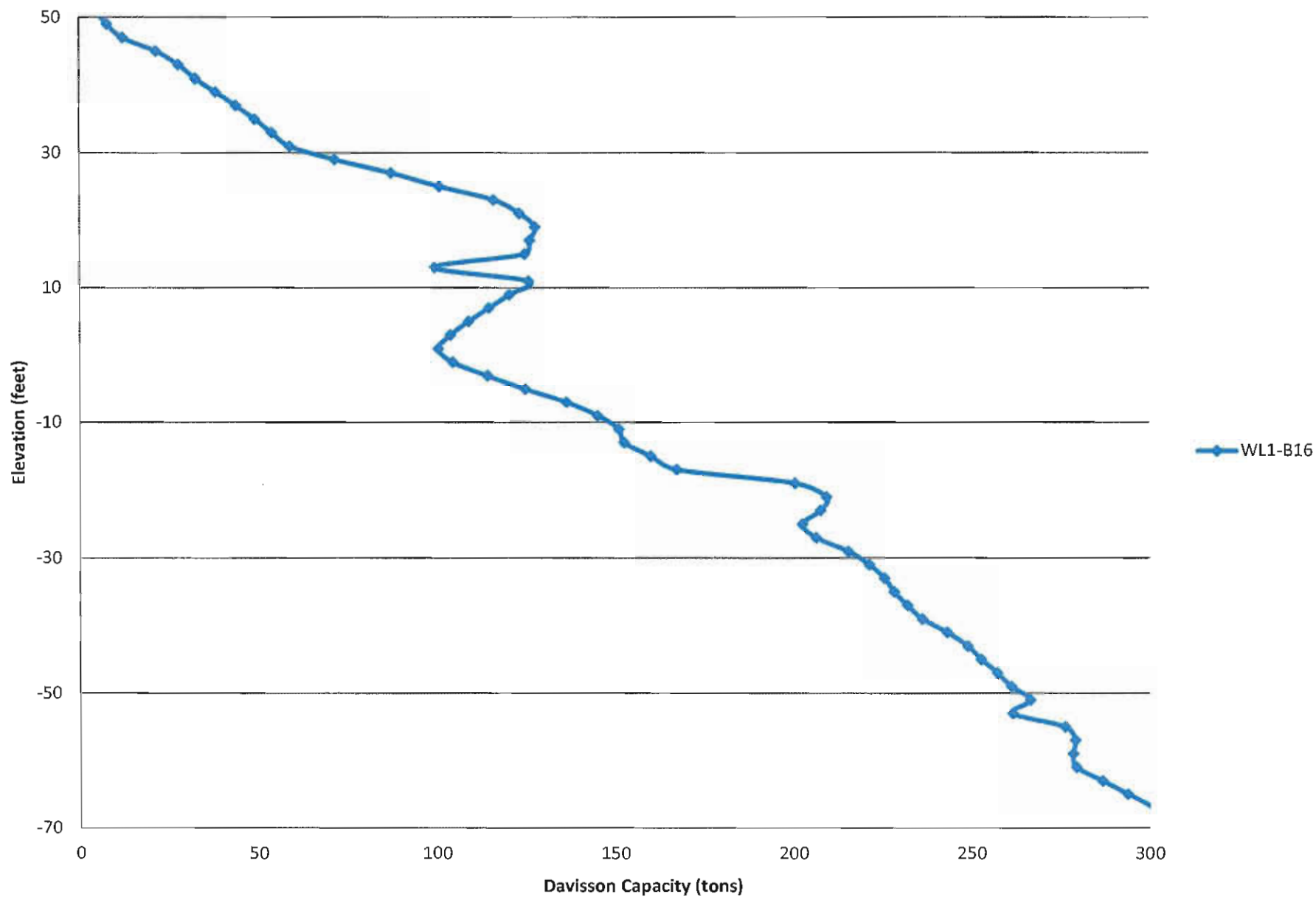
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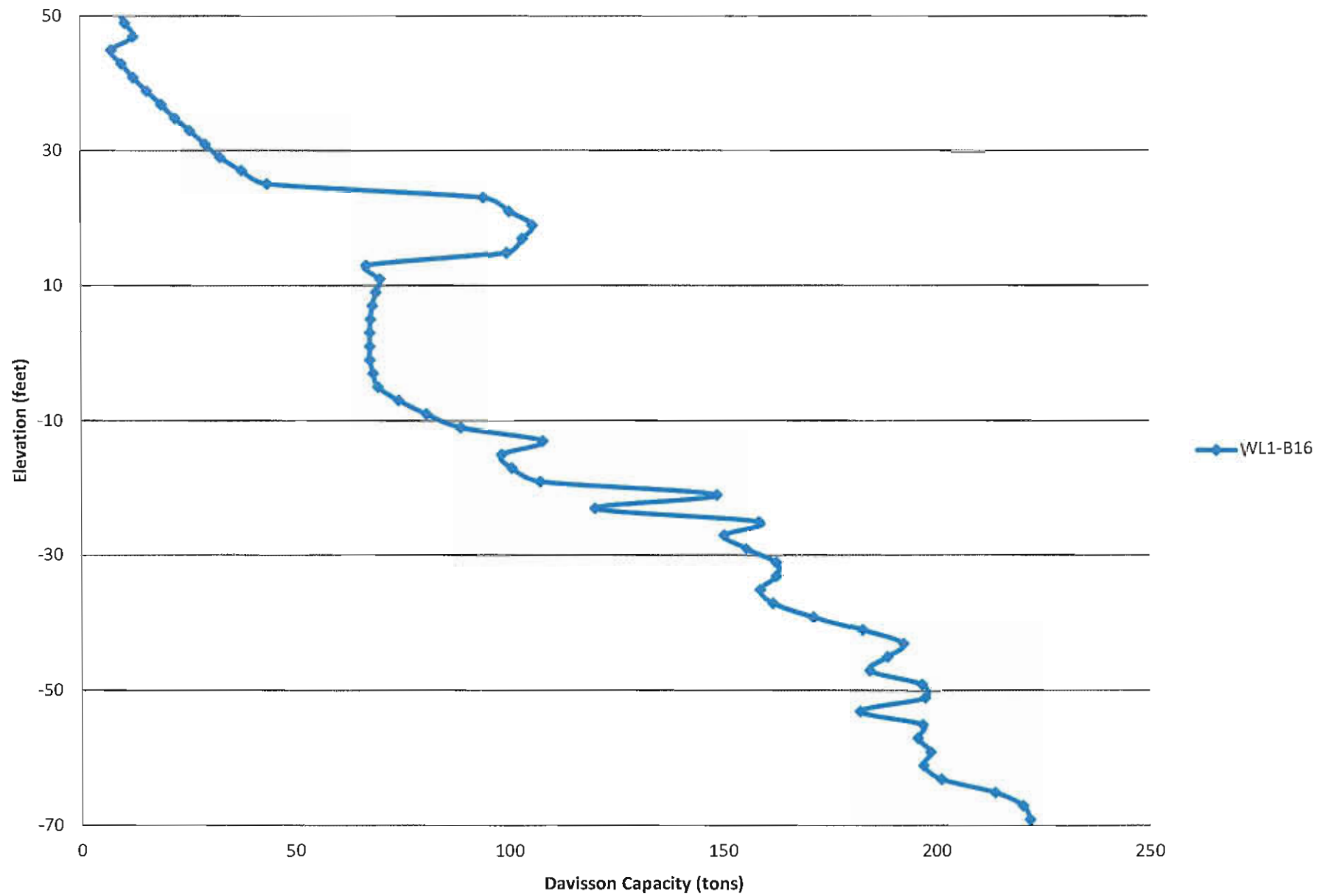
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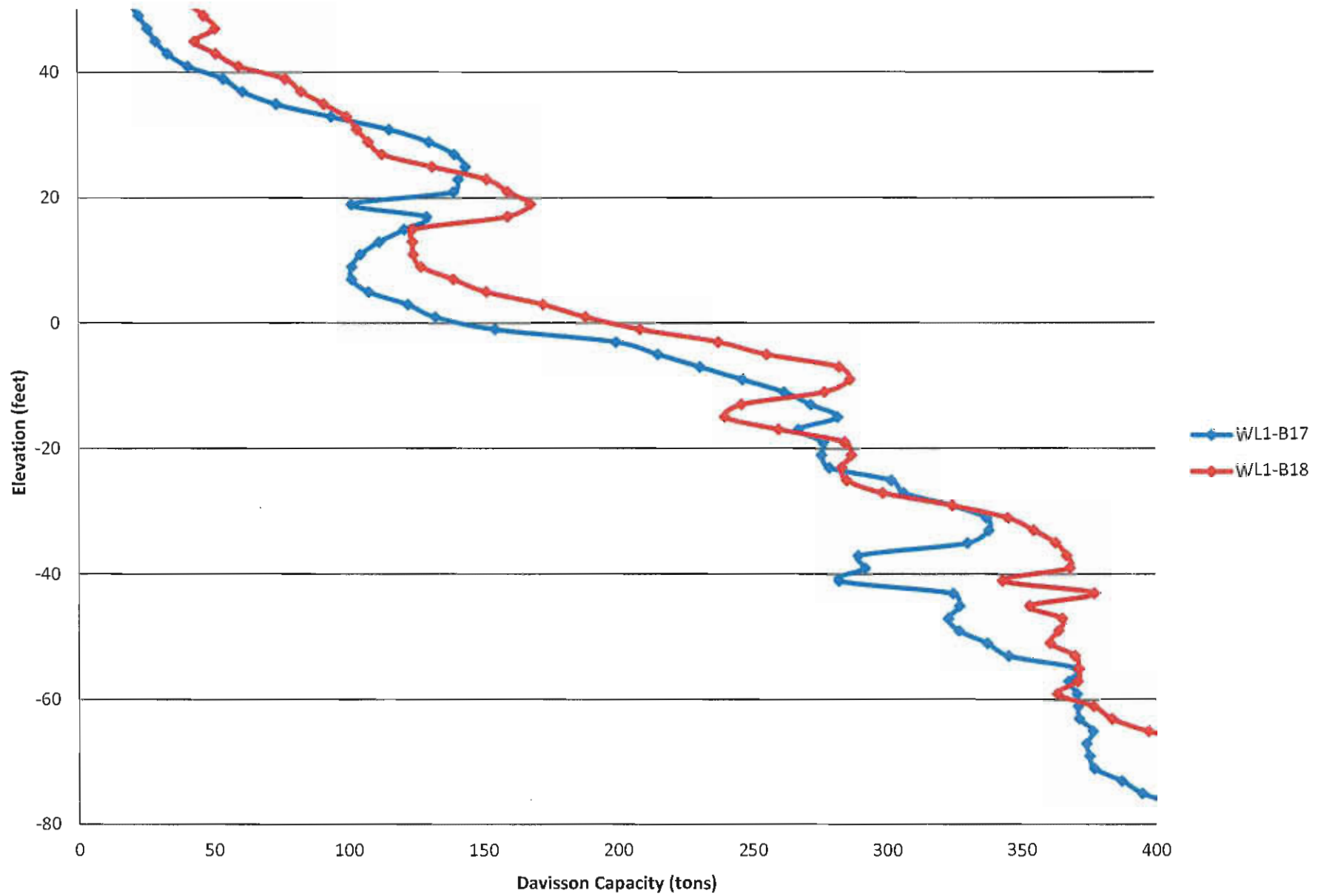
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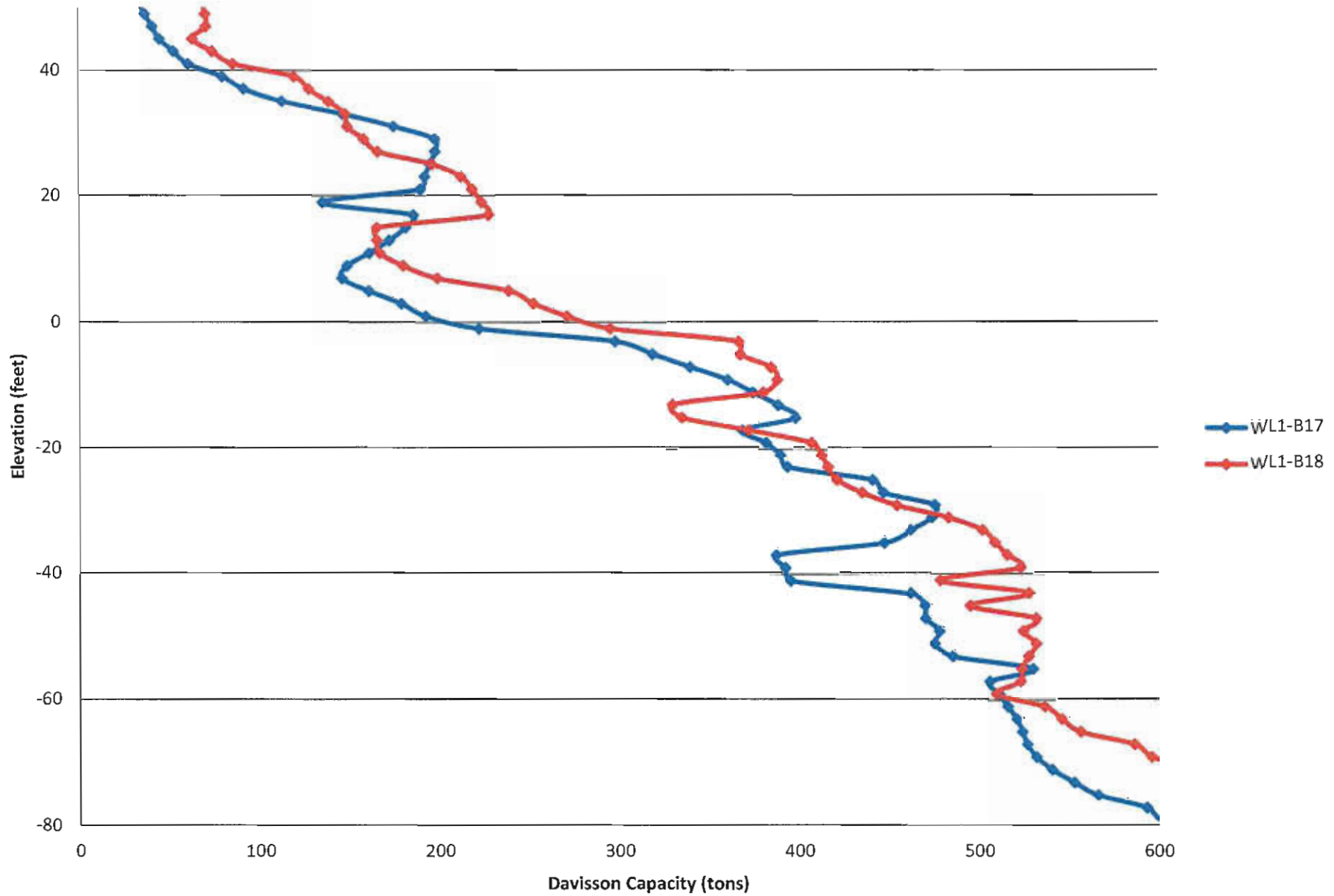
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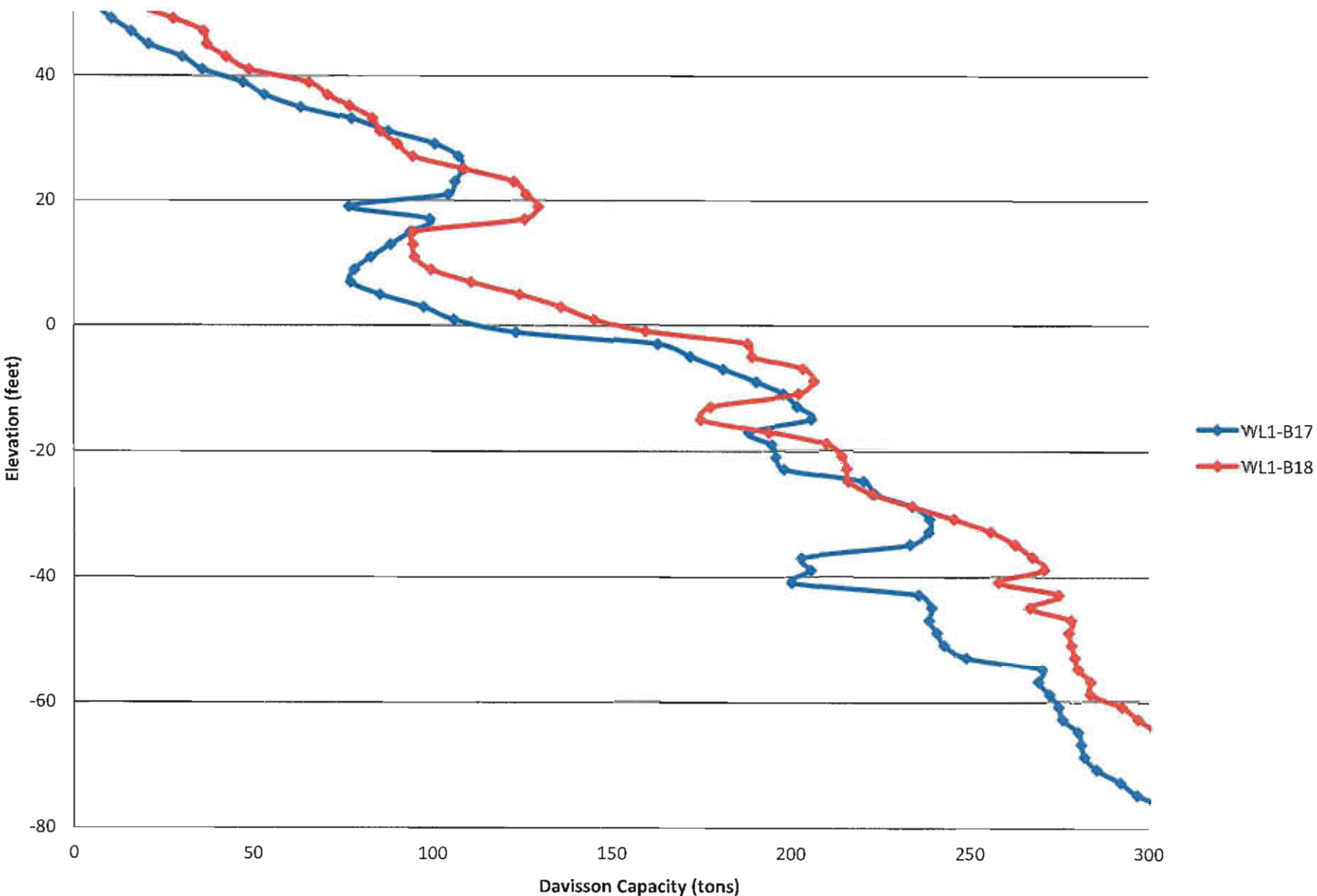
Bent 9 - 18" PCP



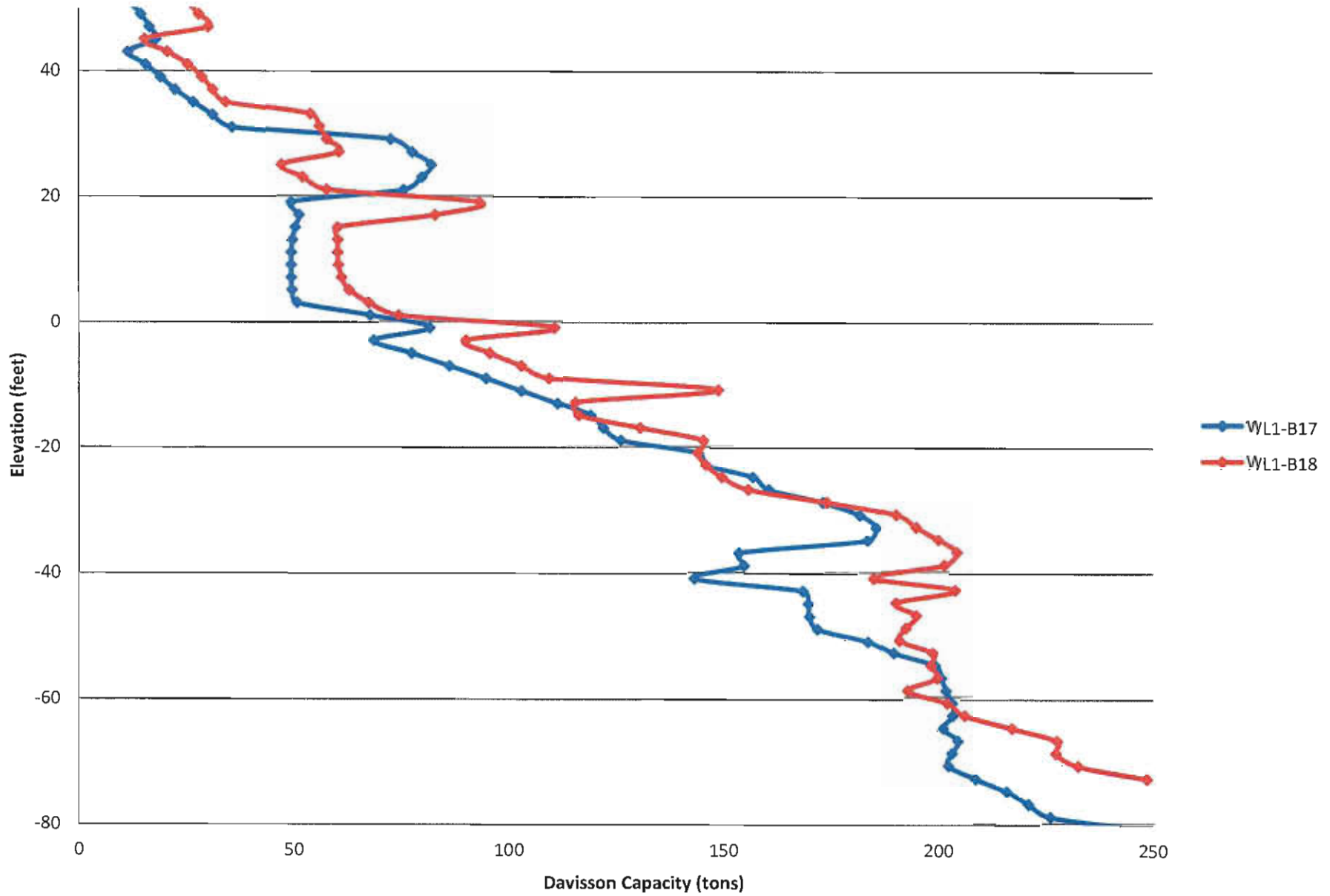
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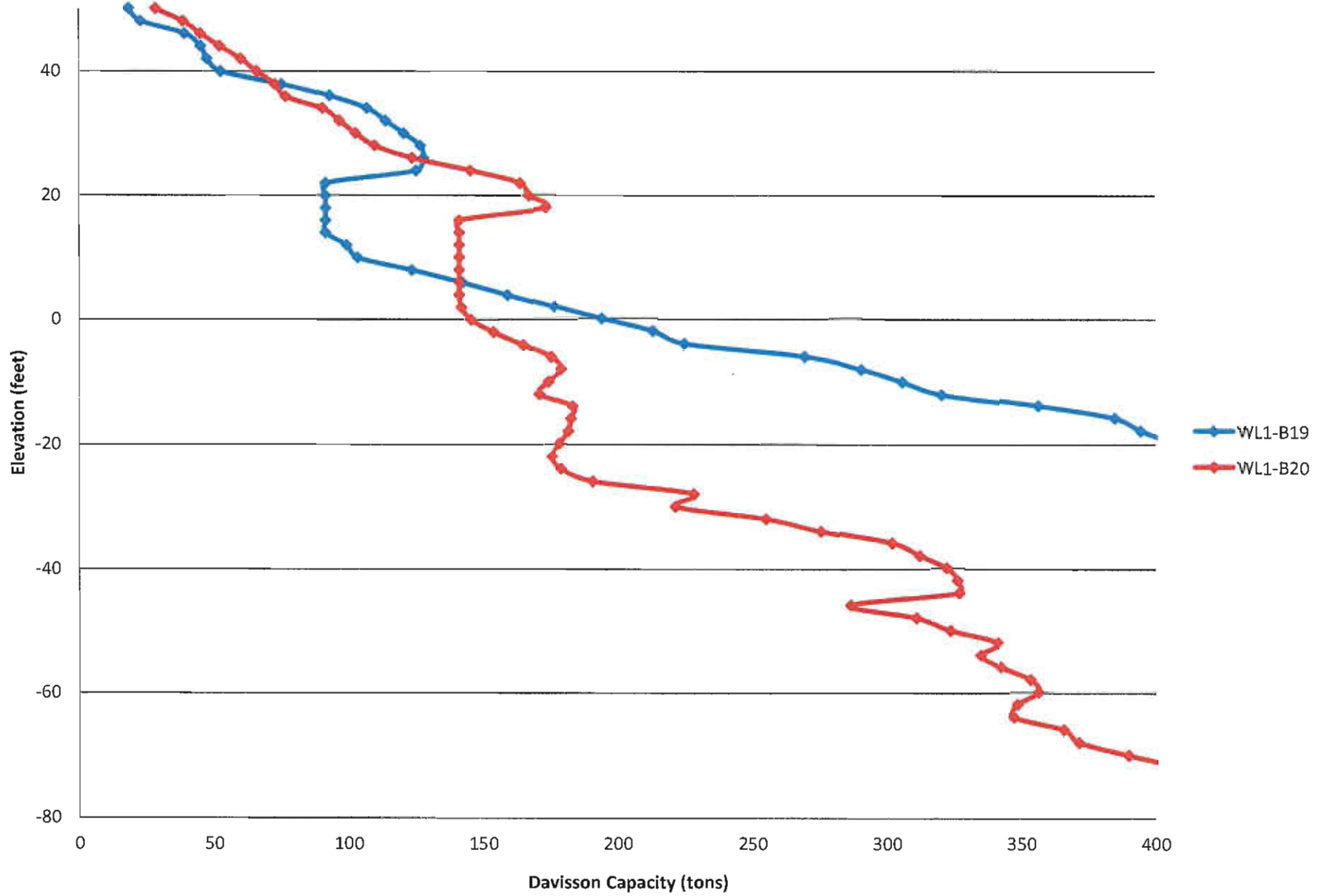
Bent 9 - 20" Pipe Pile



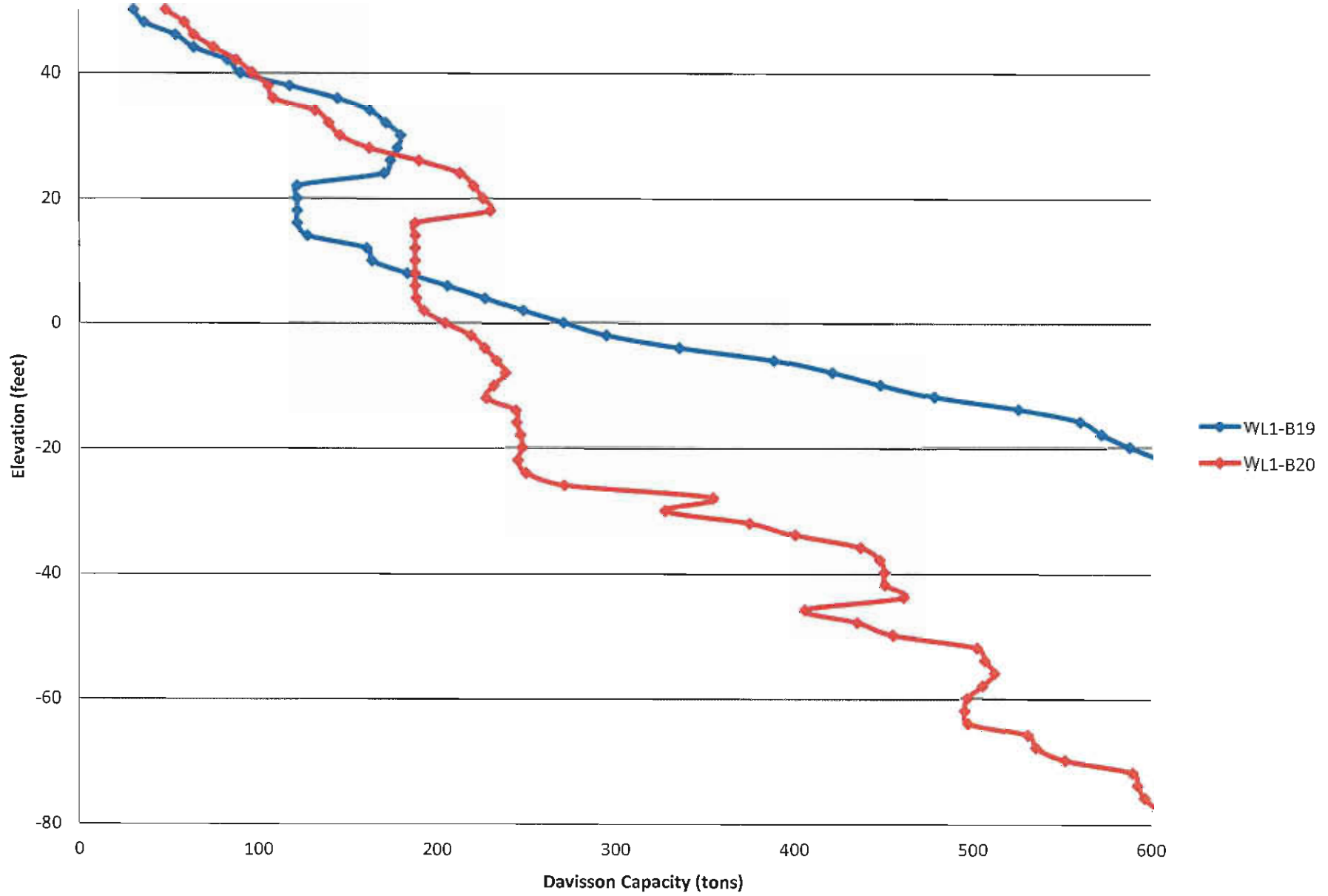
Bent 9 - HP14x89



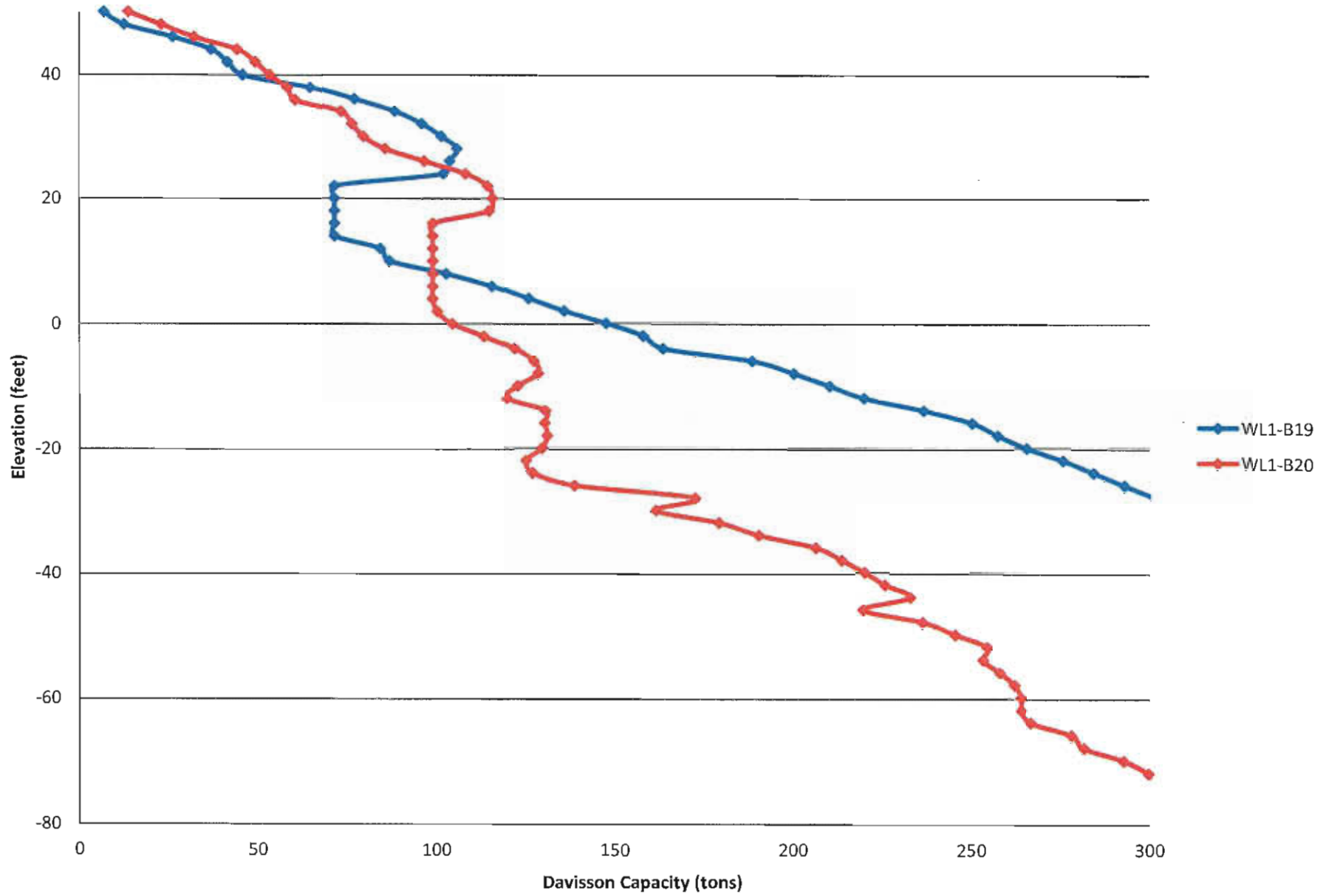
Bent 10 - 18" PCP



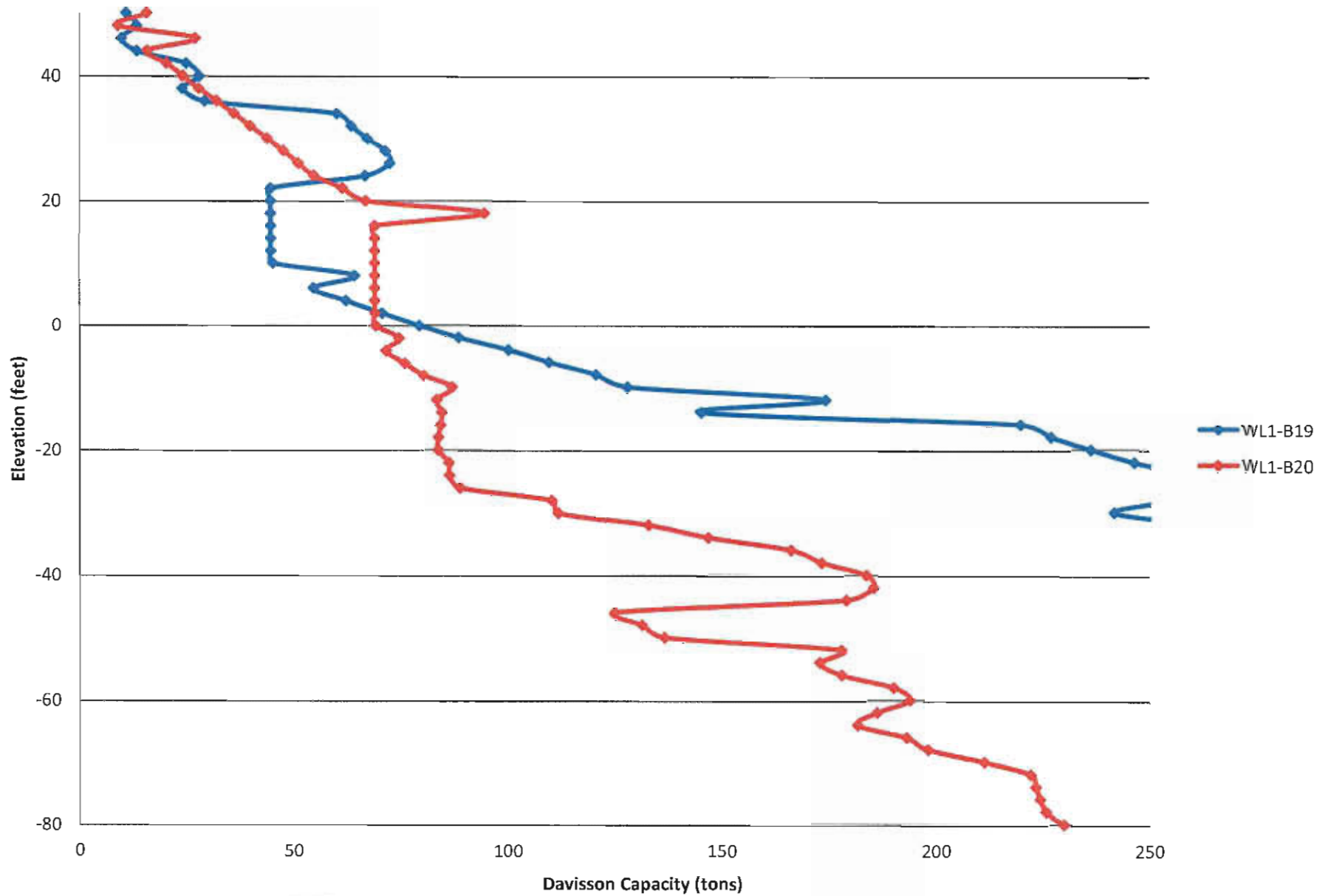
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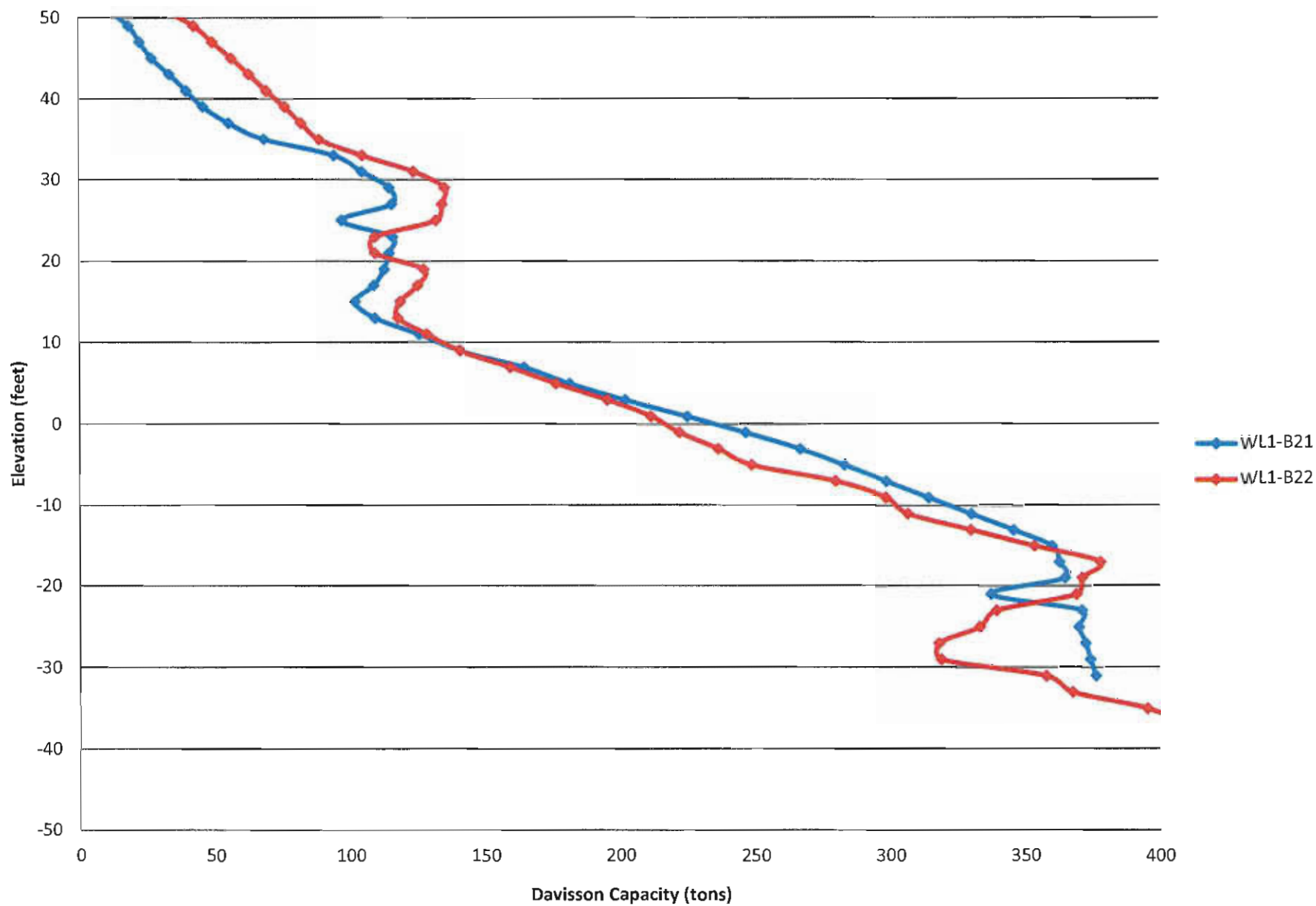
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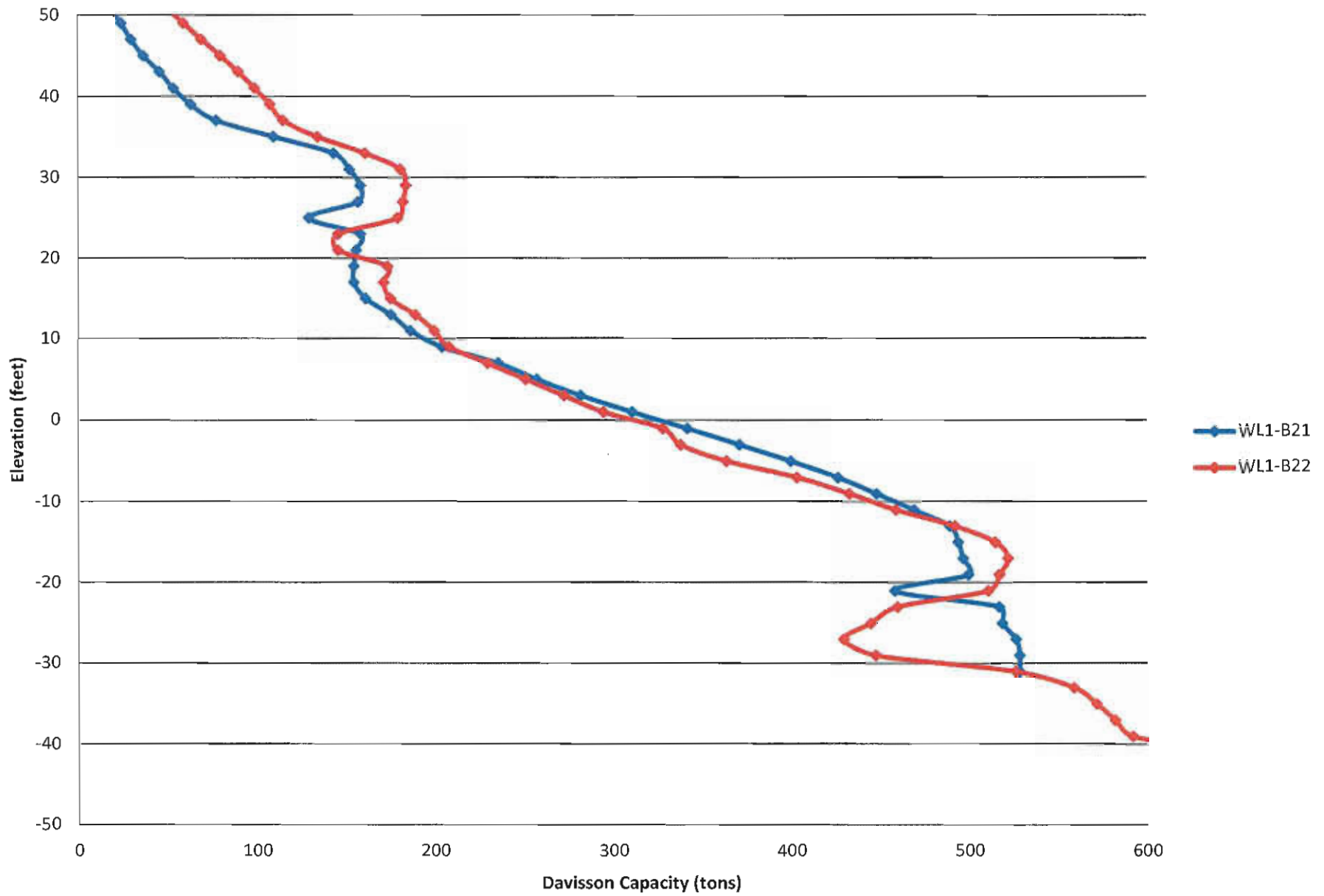
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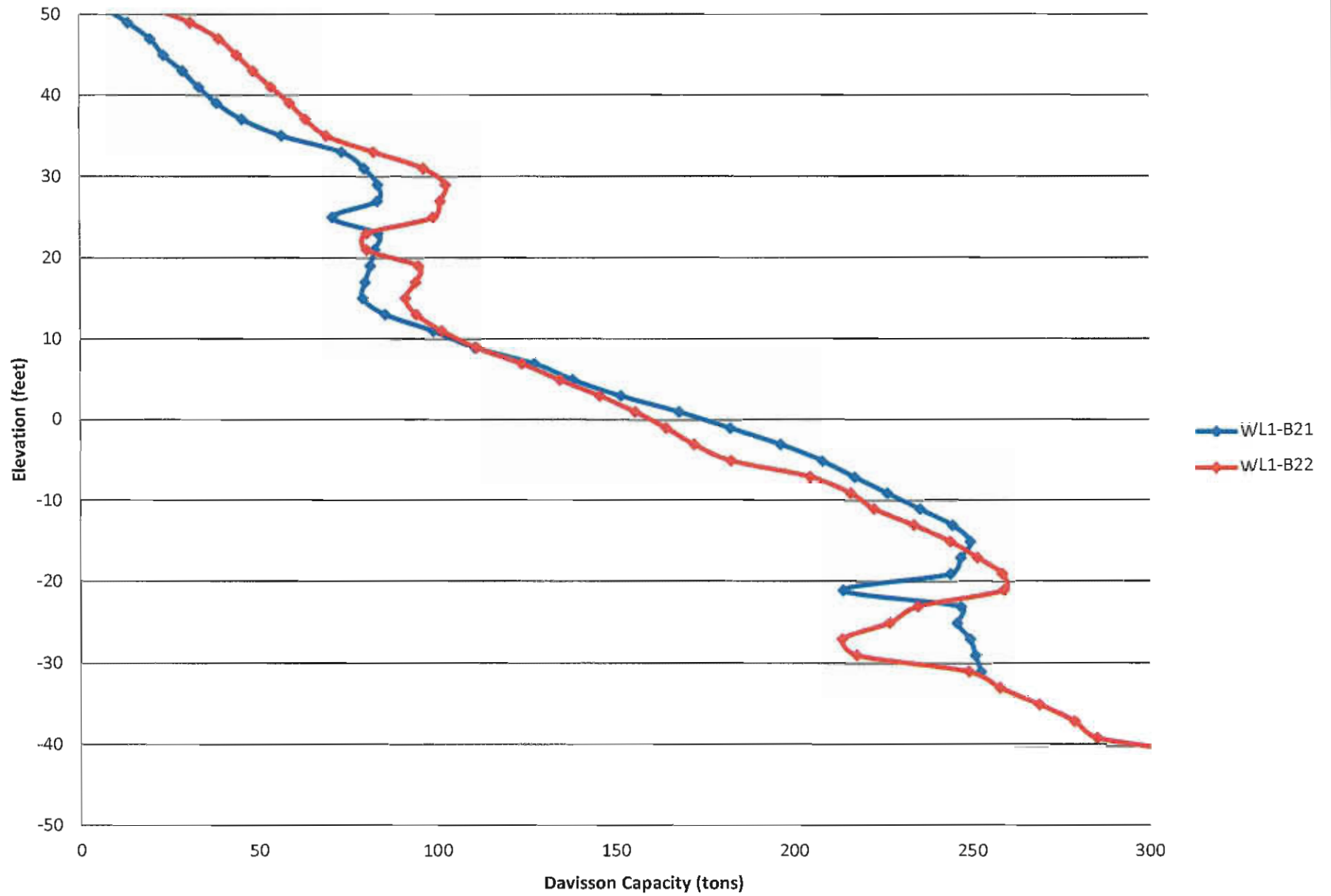
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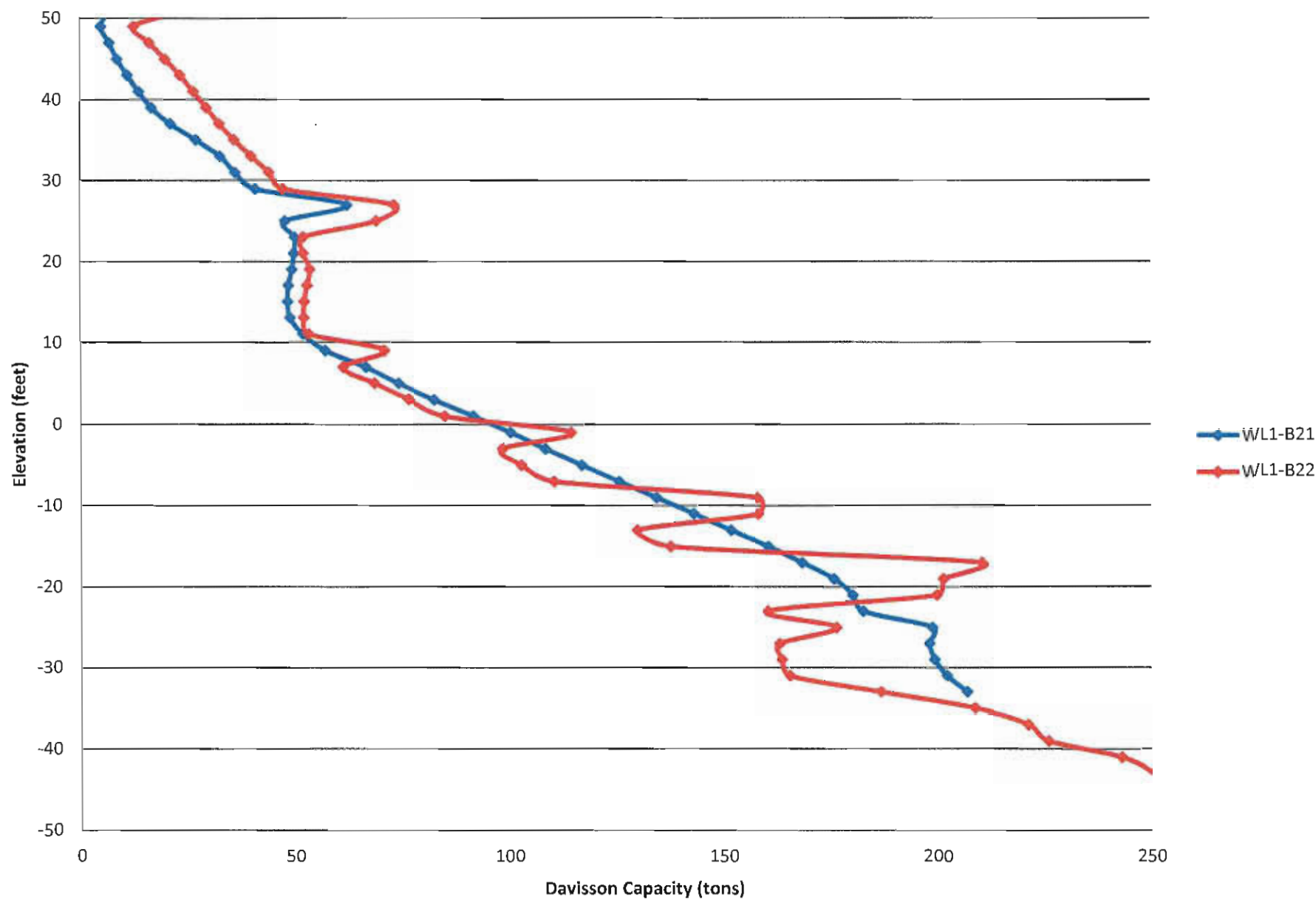
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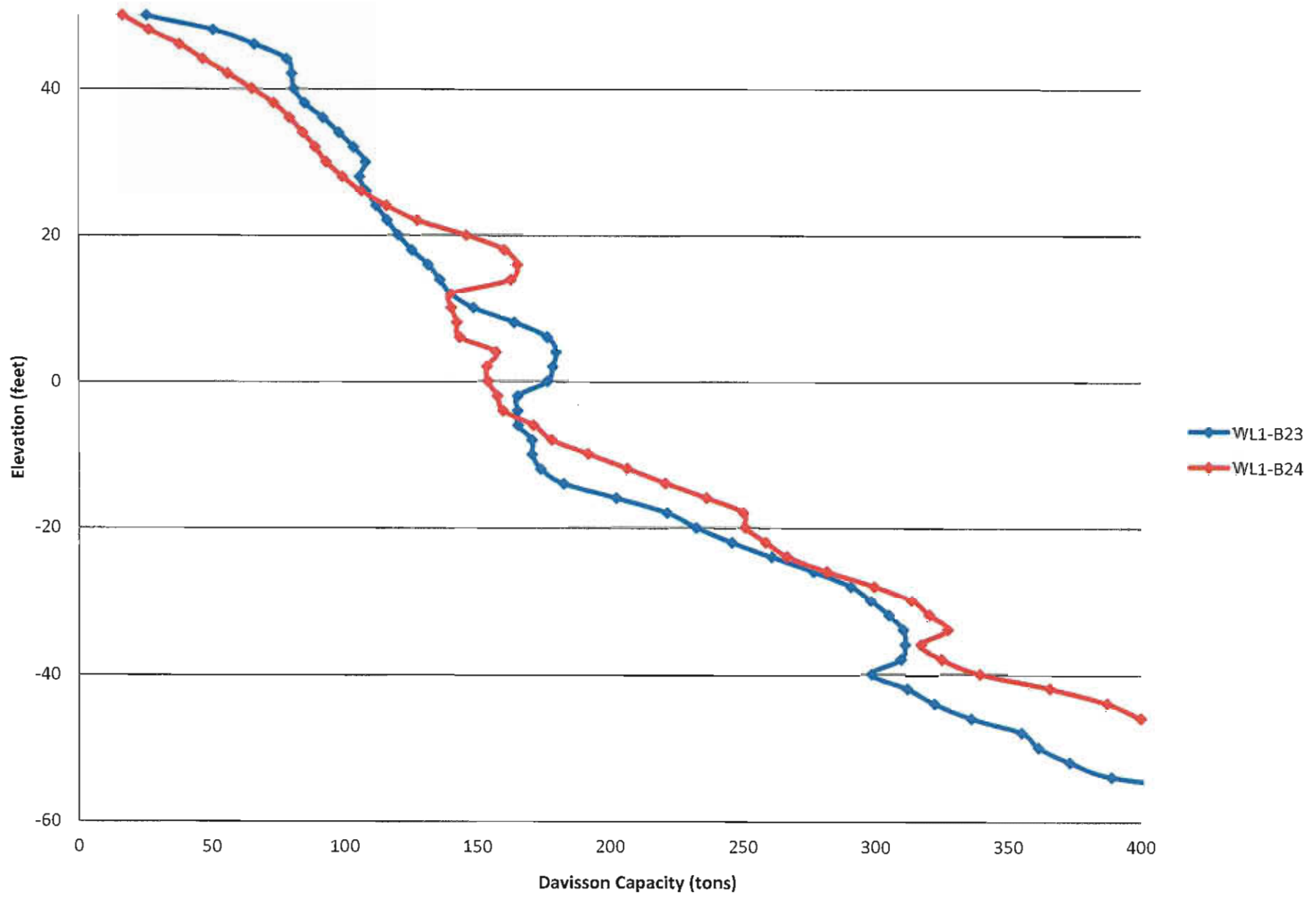
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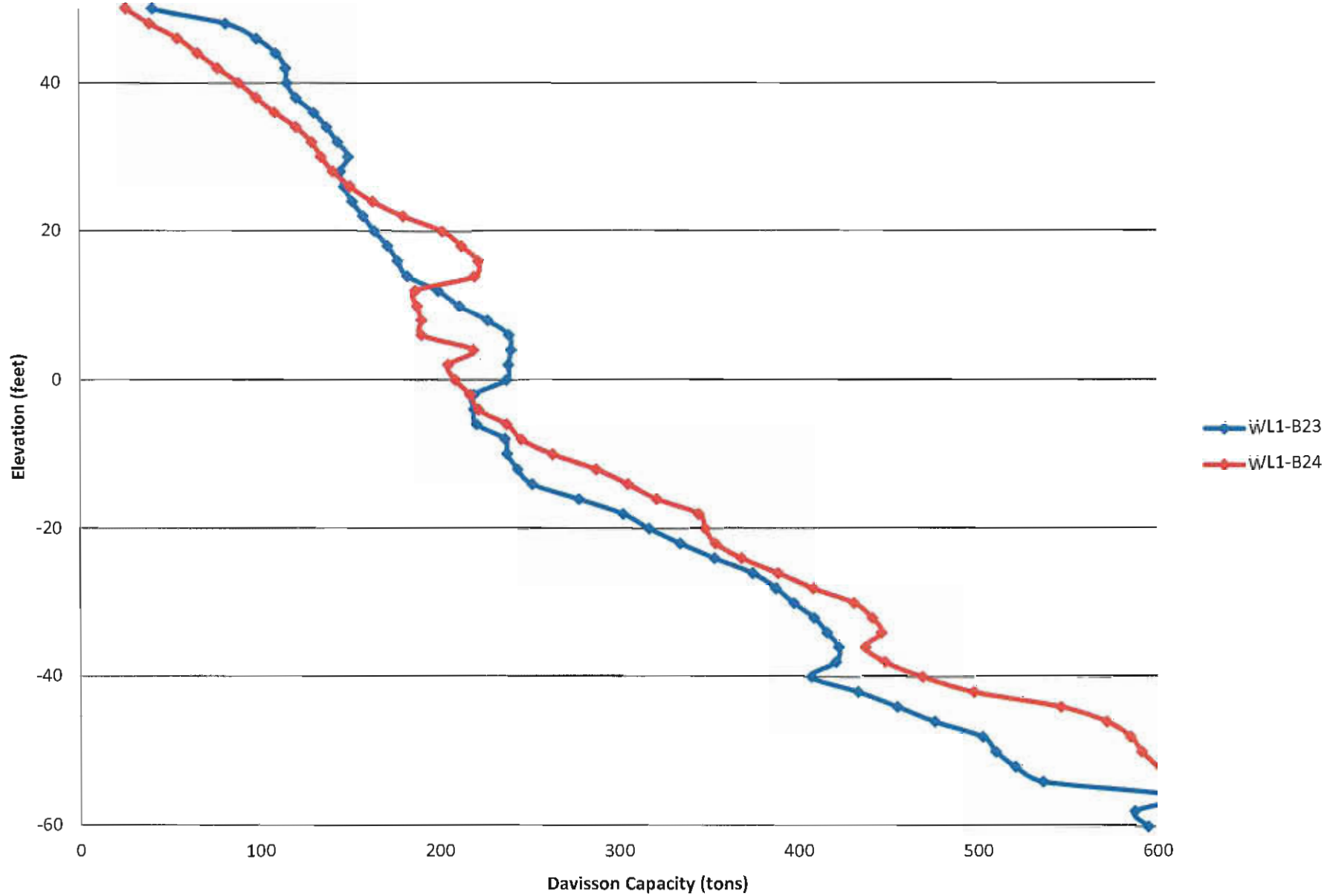
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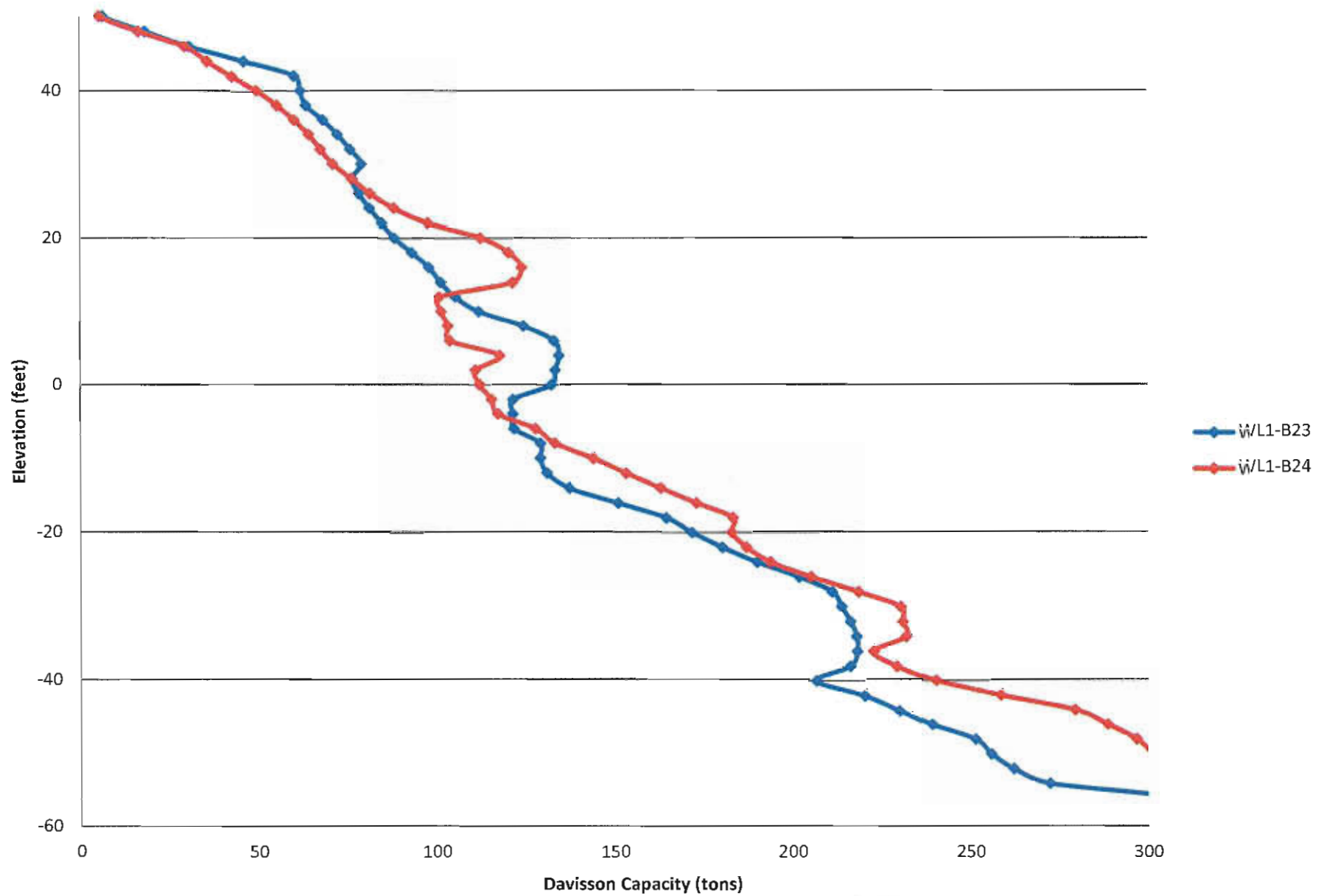
Bent 12 - 18" PCP



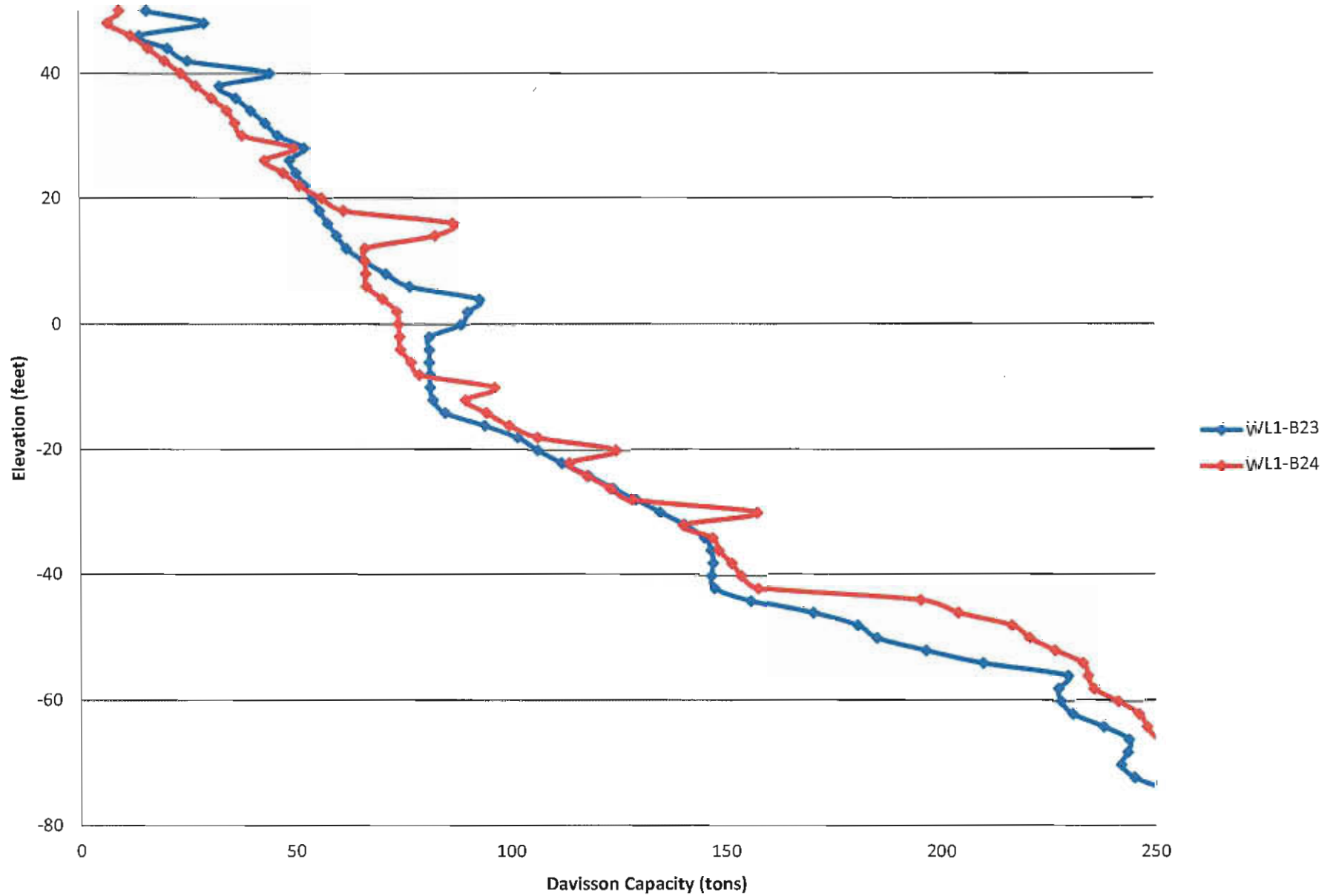
Bent 12 - 24" PCP



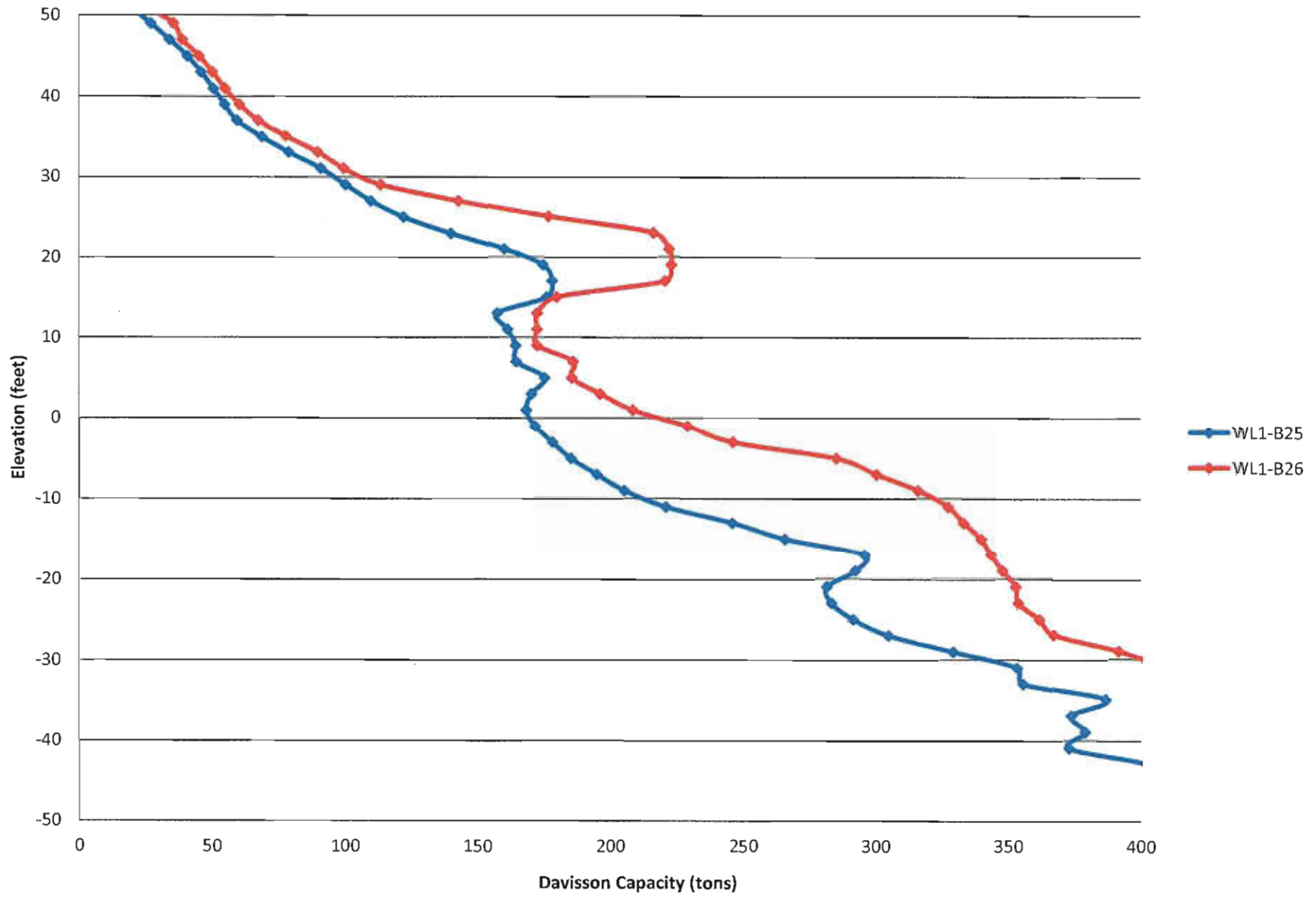
Bent 12 - 20" Pipe Pile



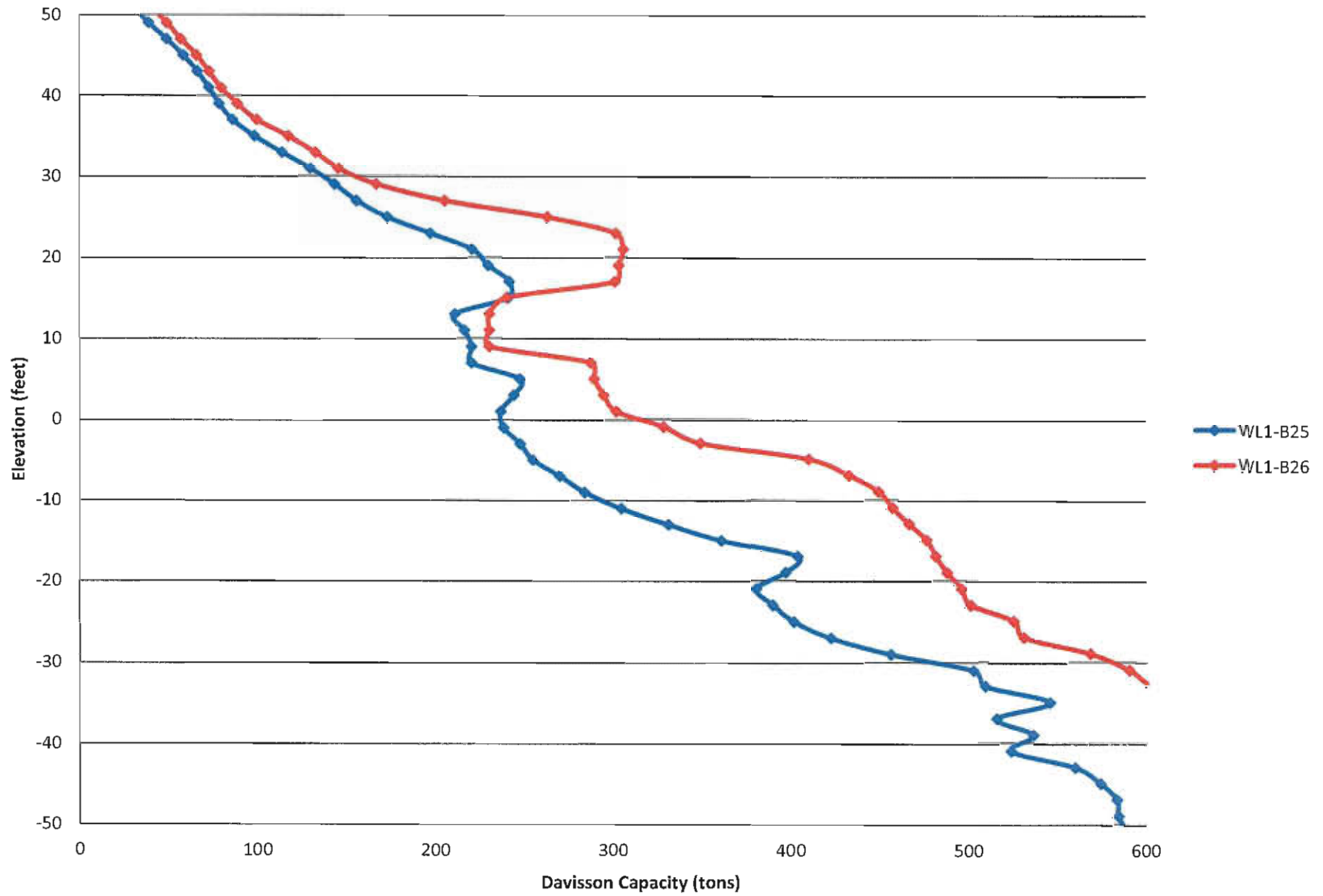
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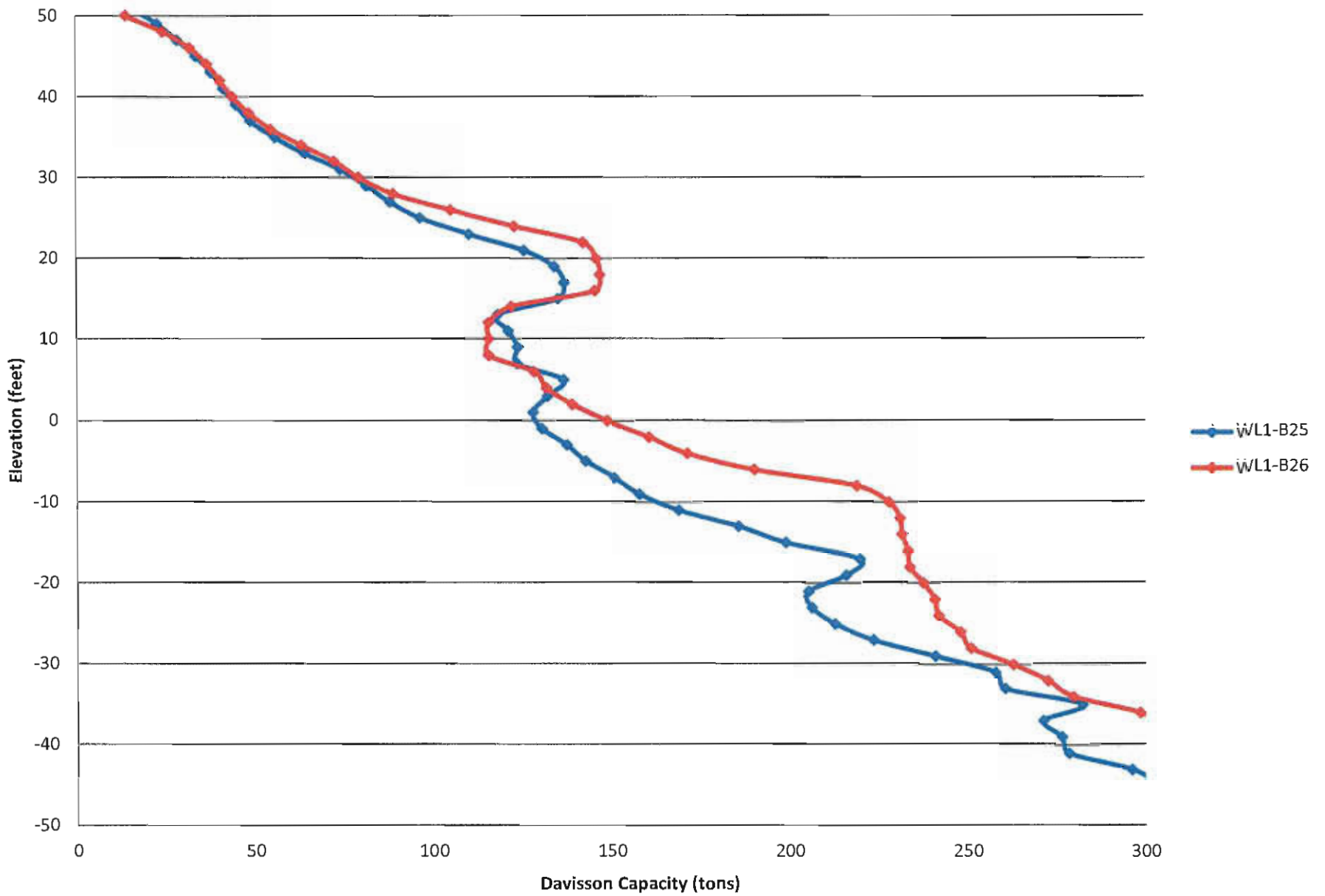
Bent 13 - 18" PCP



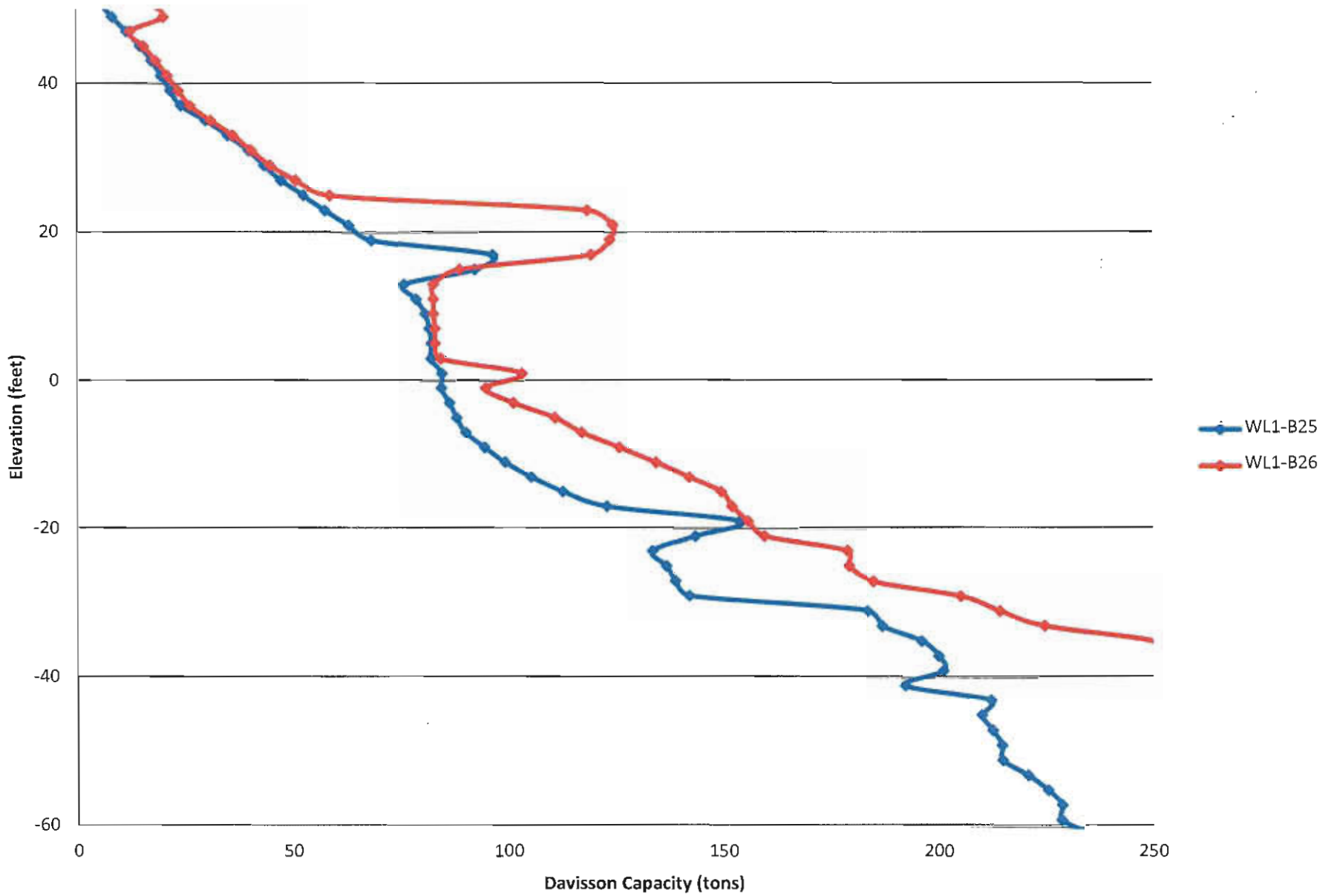
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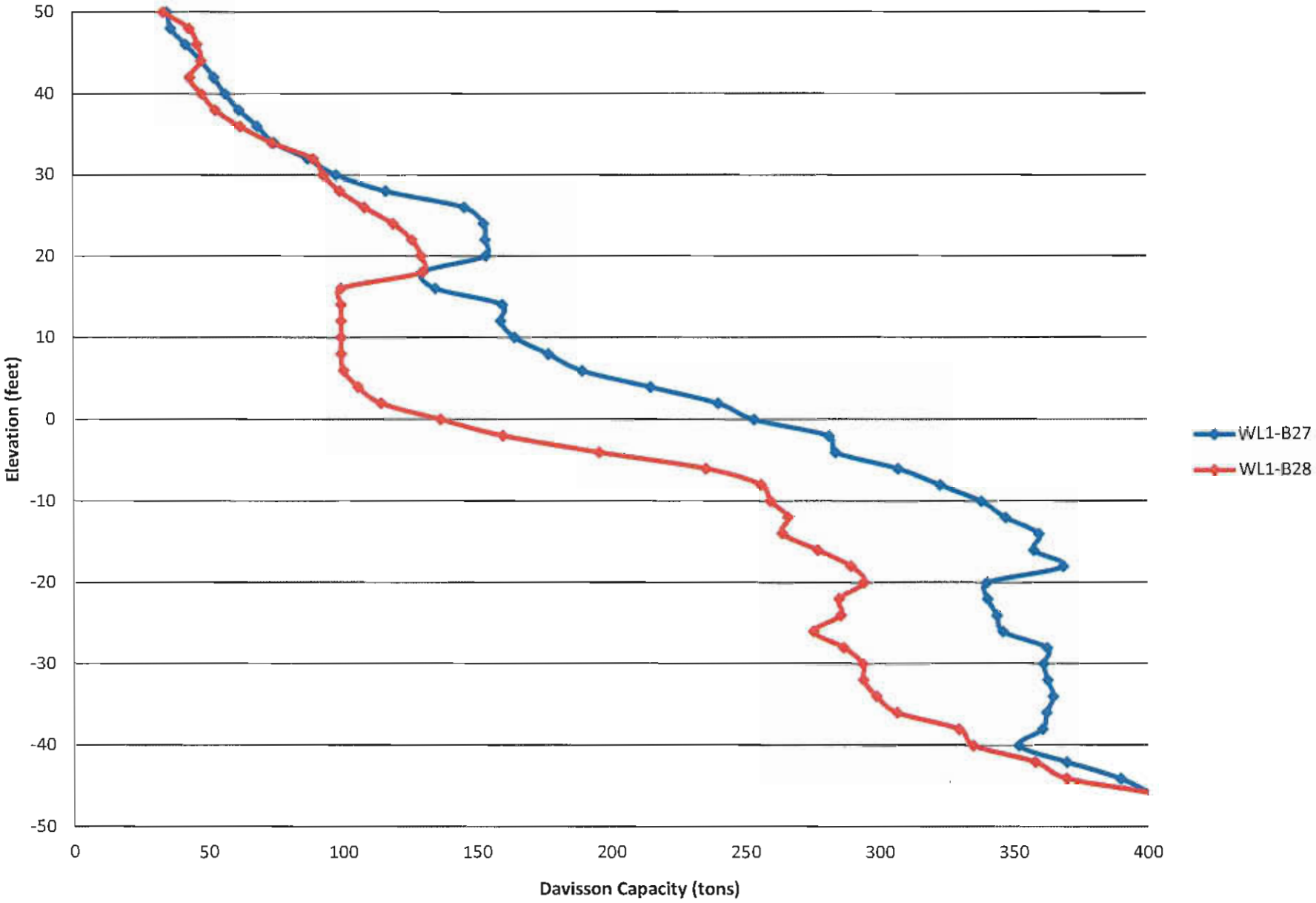
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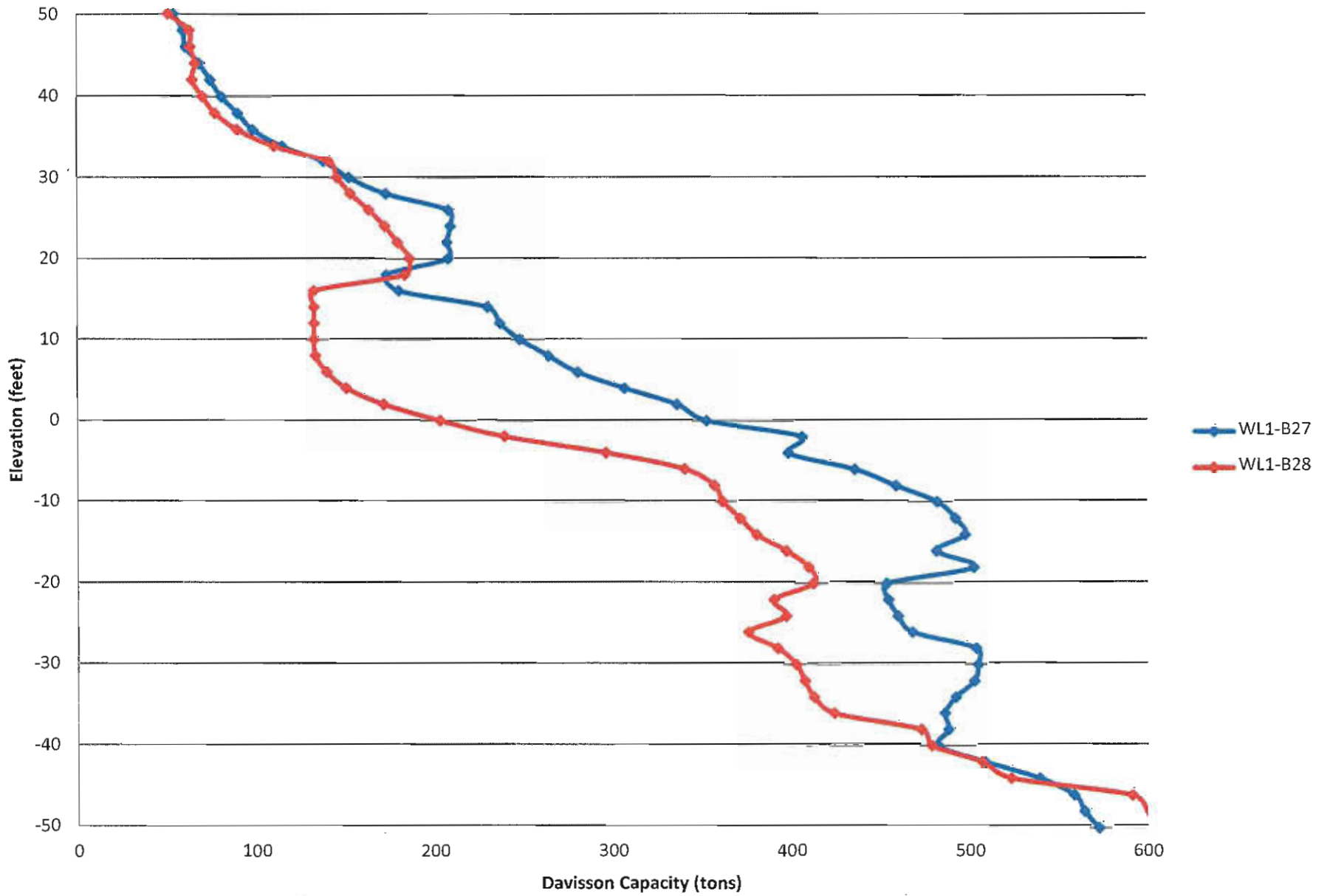
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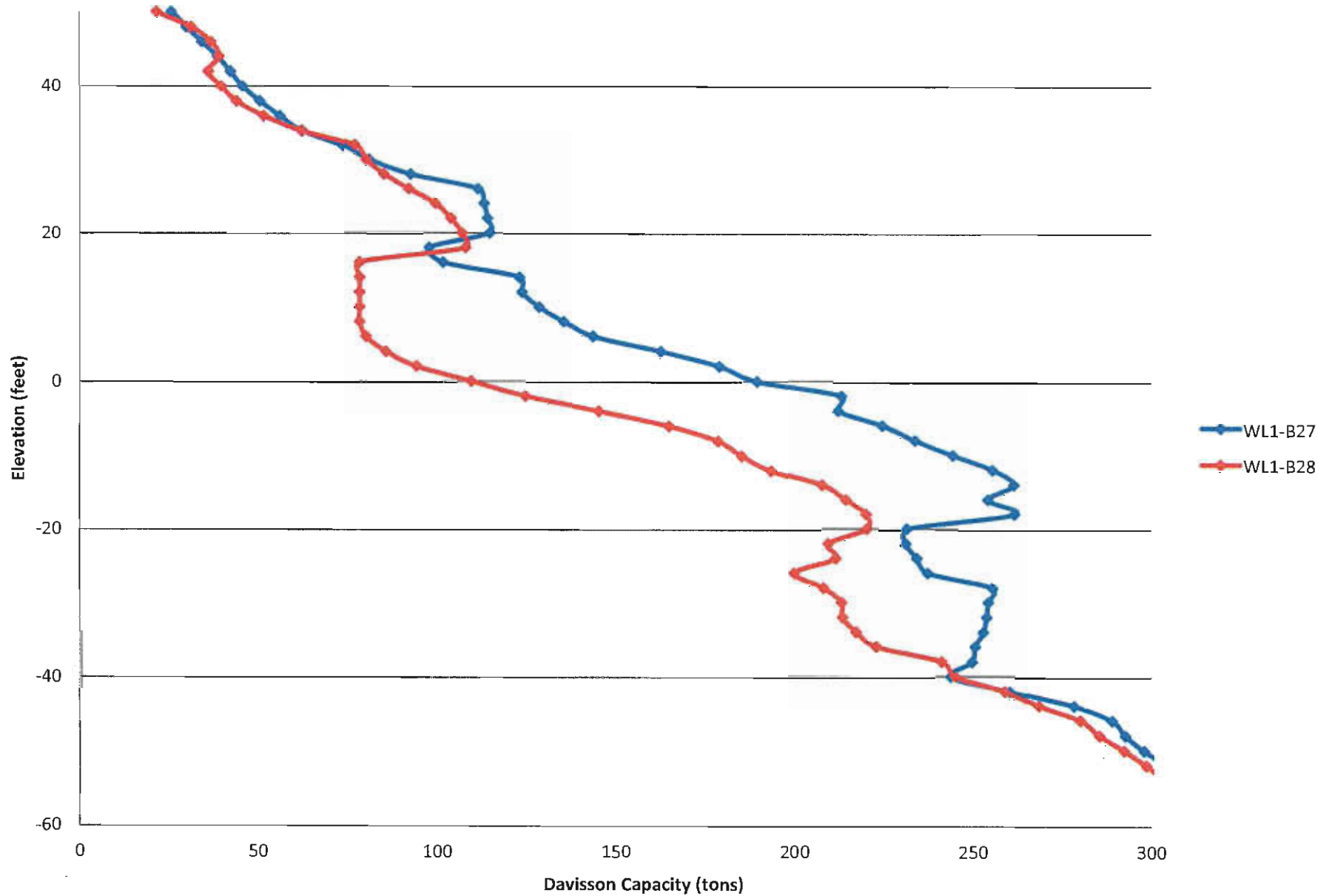
Bent 14 - 18" PCP



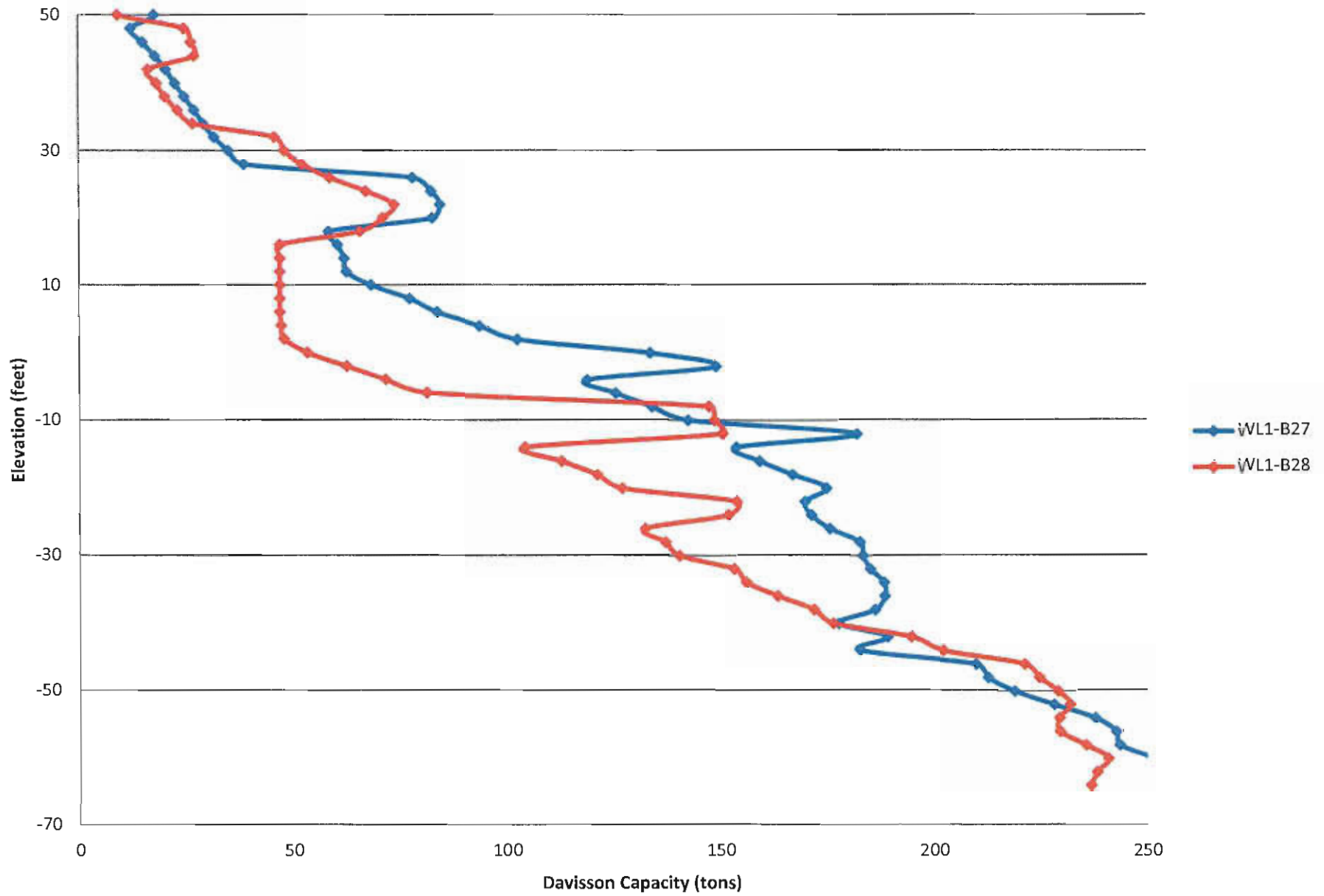
Bent 14 - 24" PCP



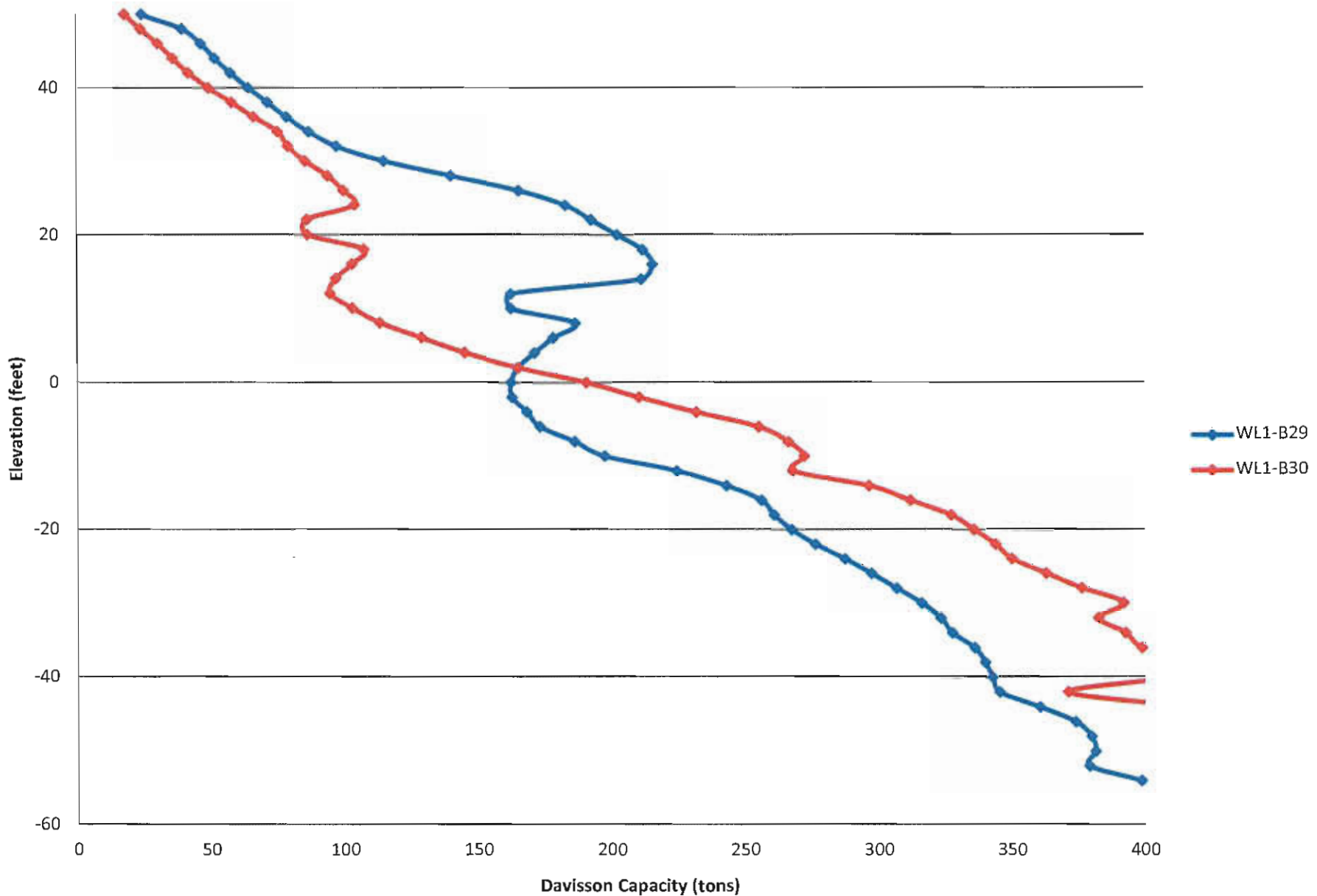
Bent 14 - 20" Pipe Pile



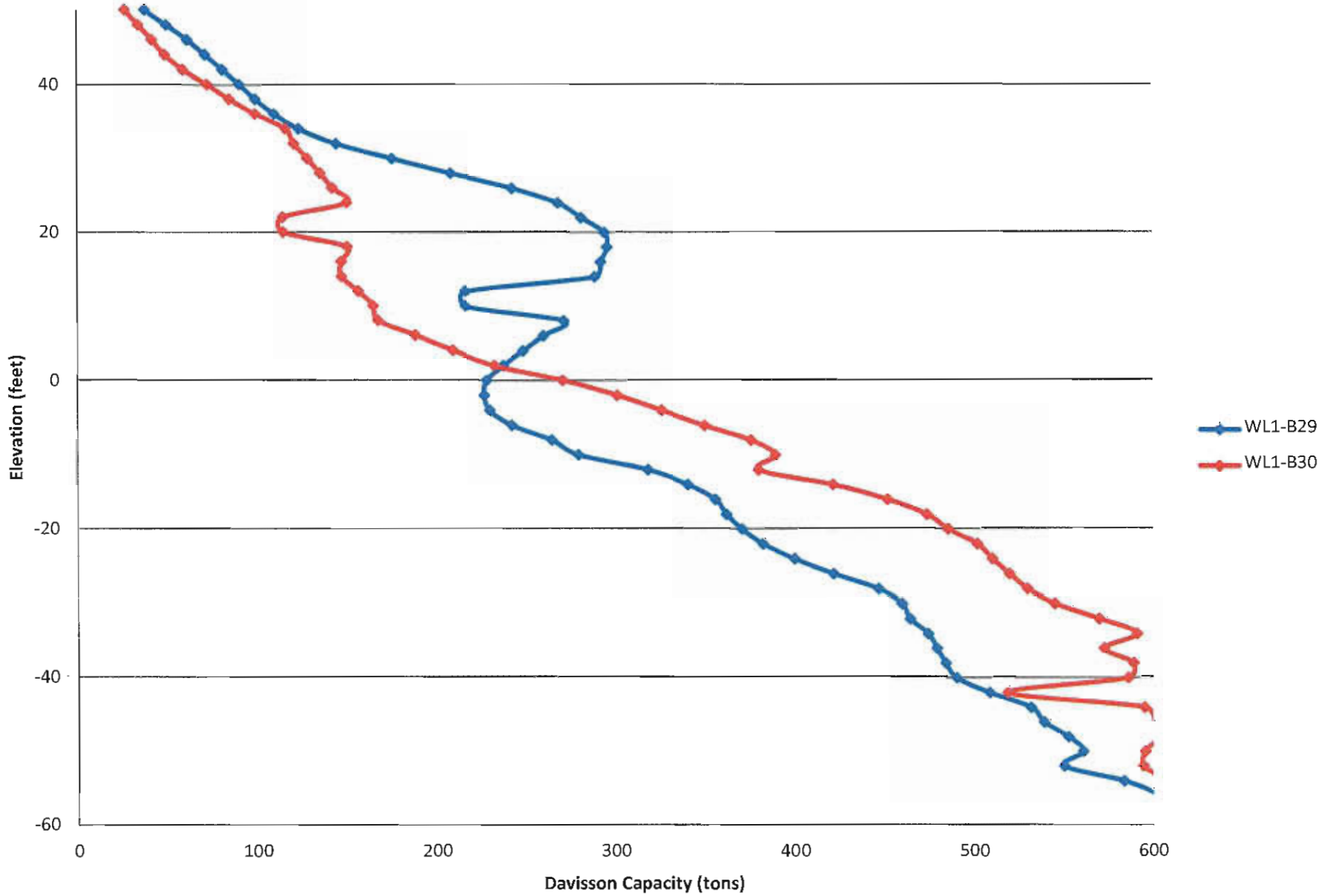
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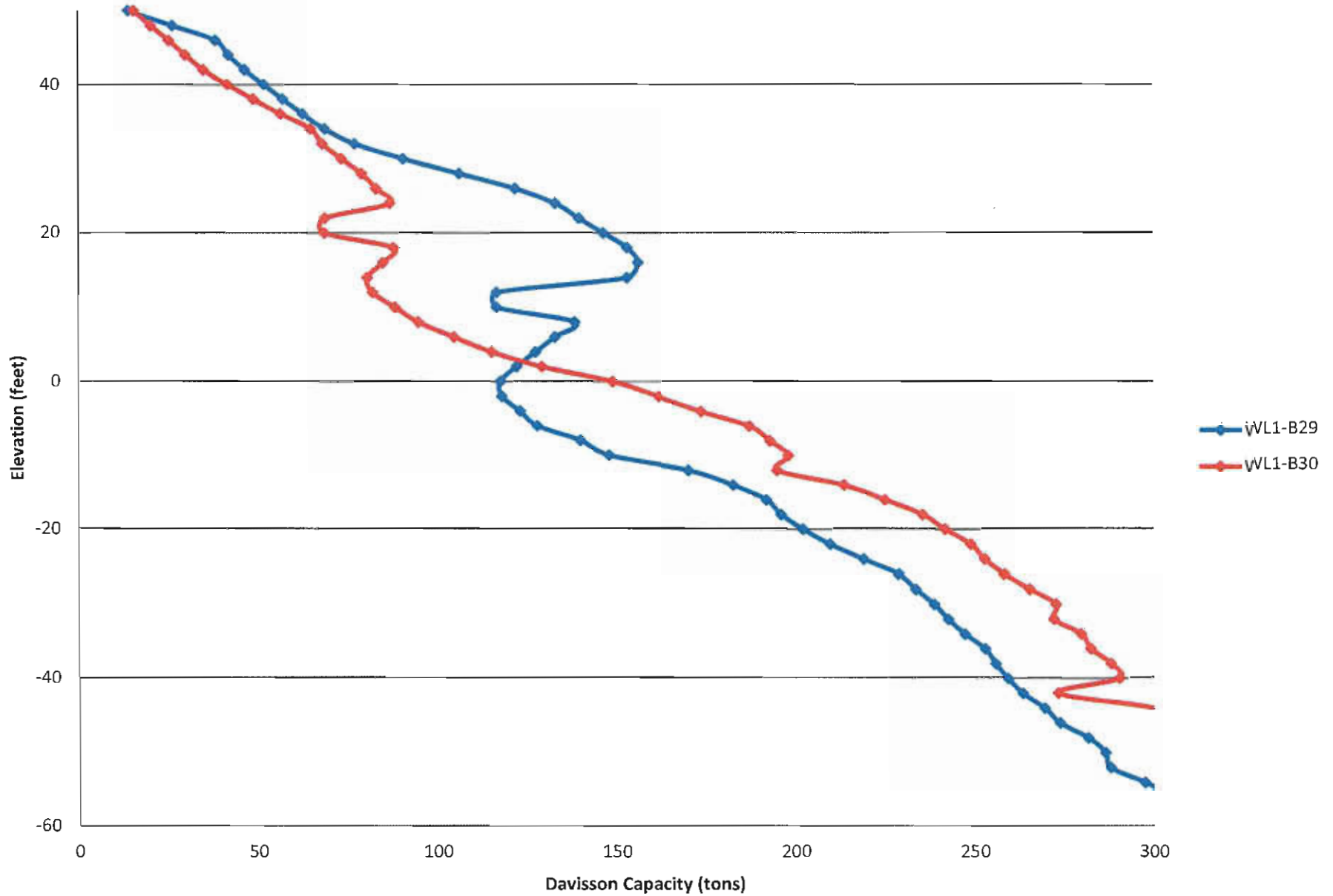
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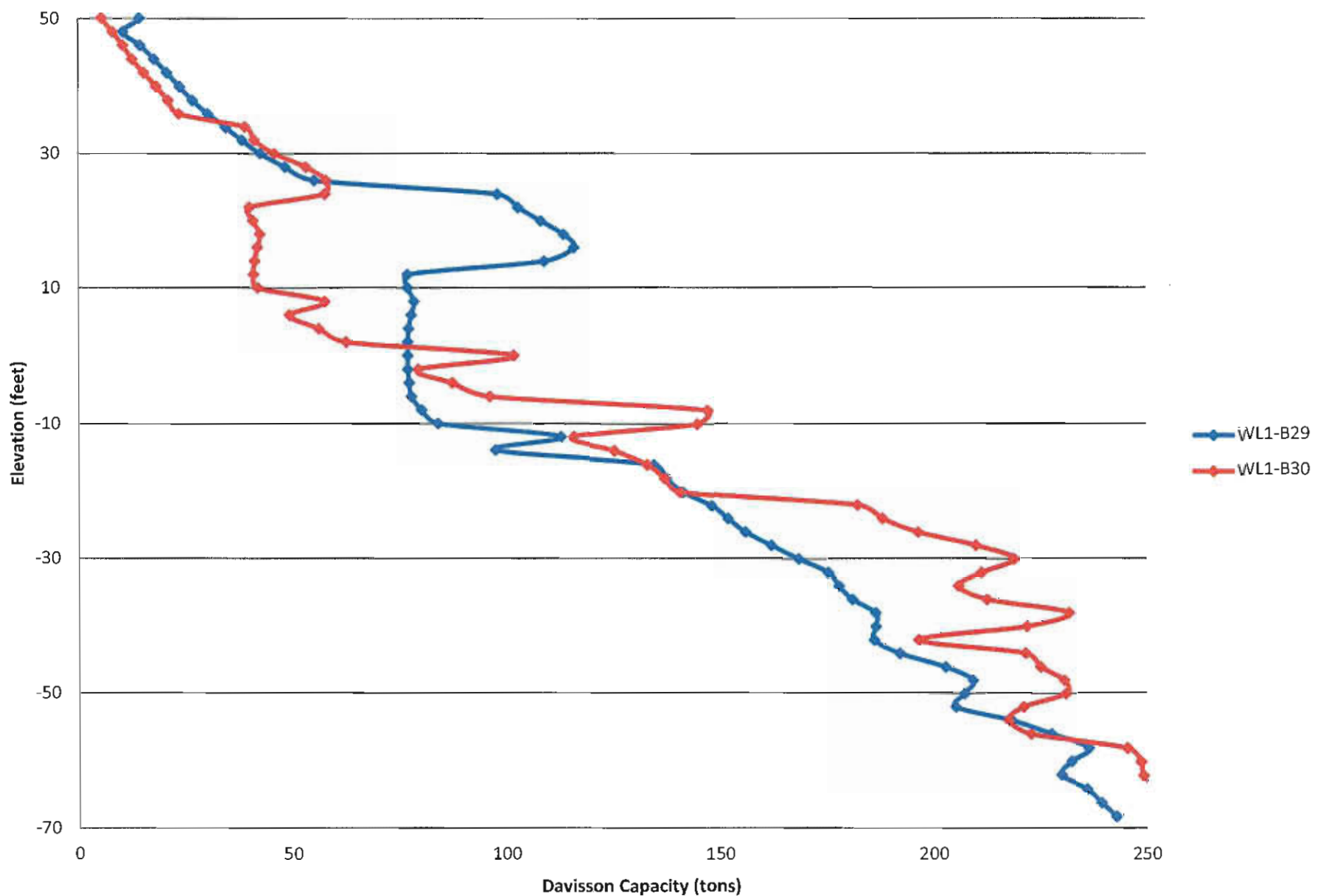
Bent 15 - 24" PCP



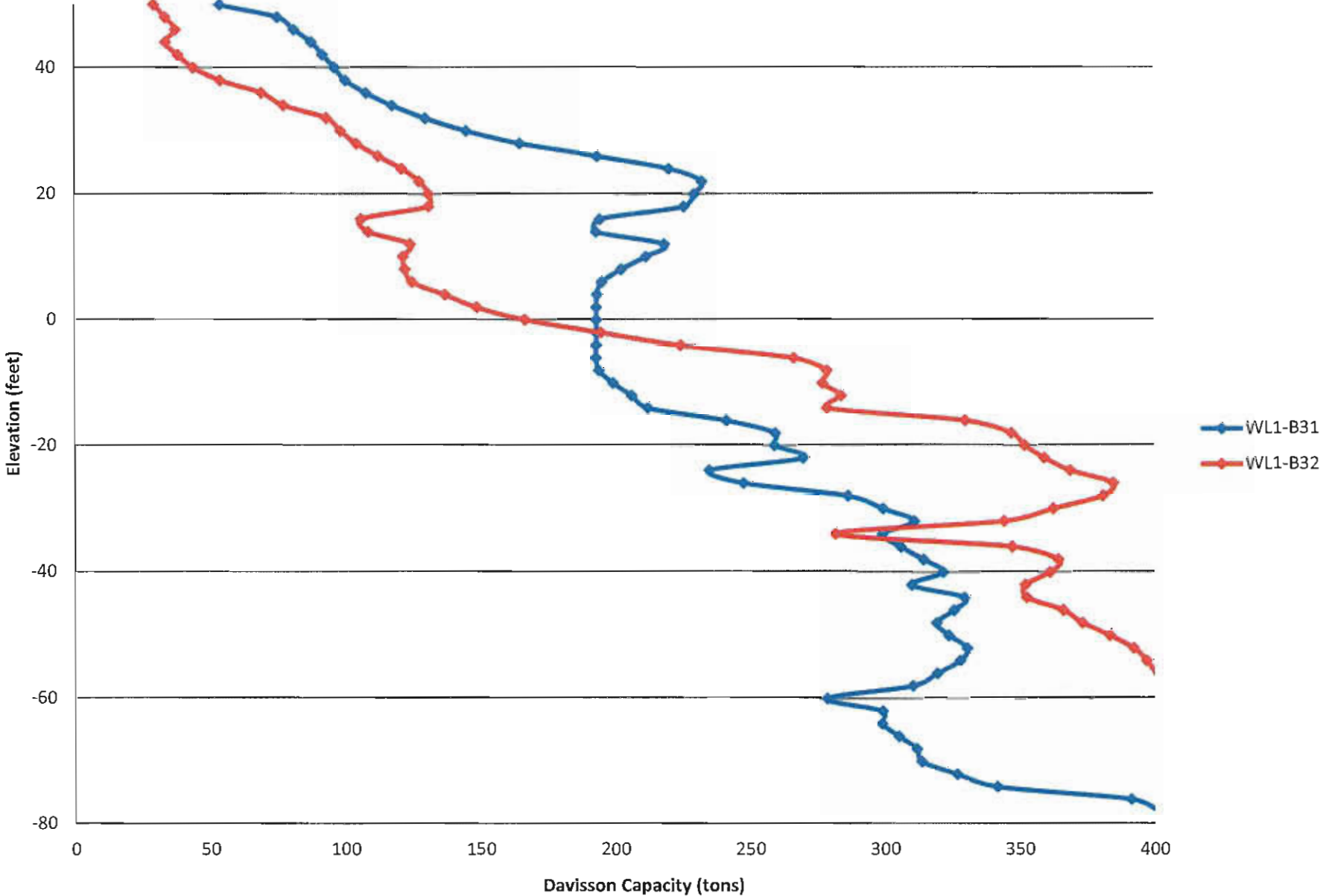
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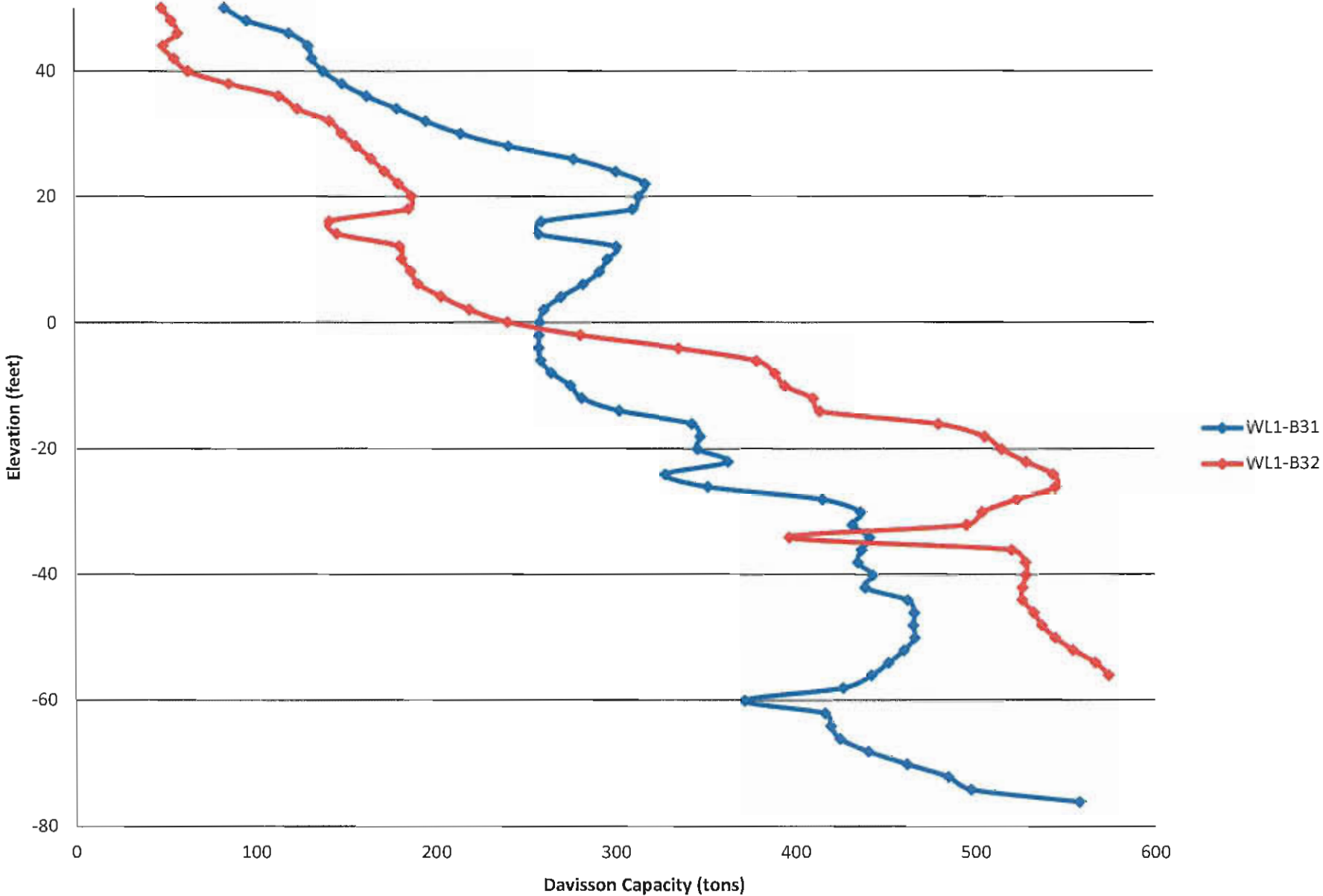
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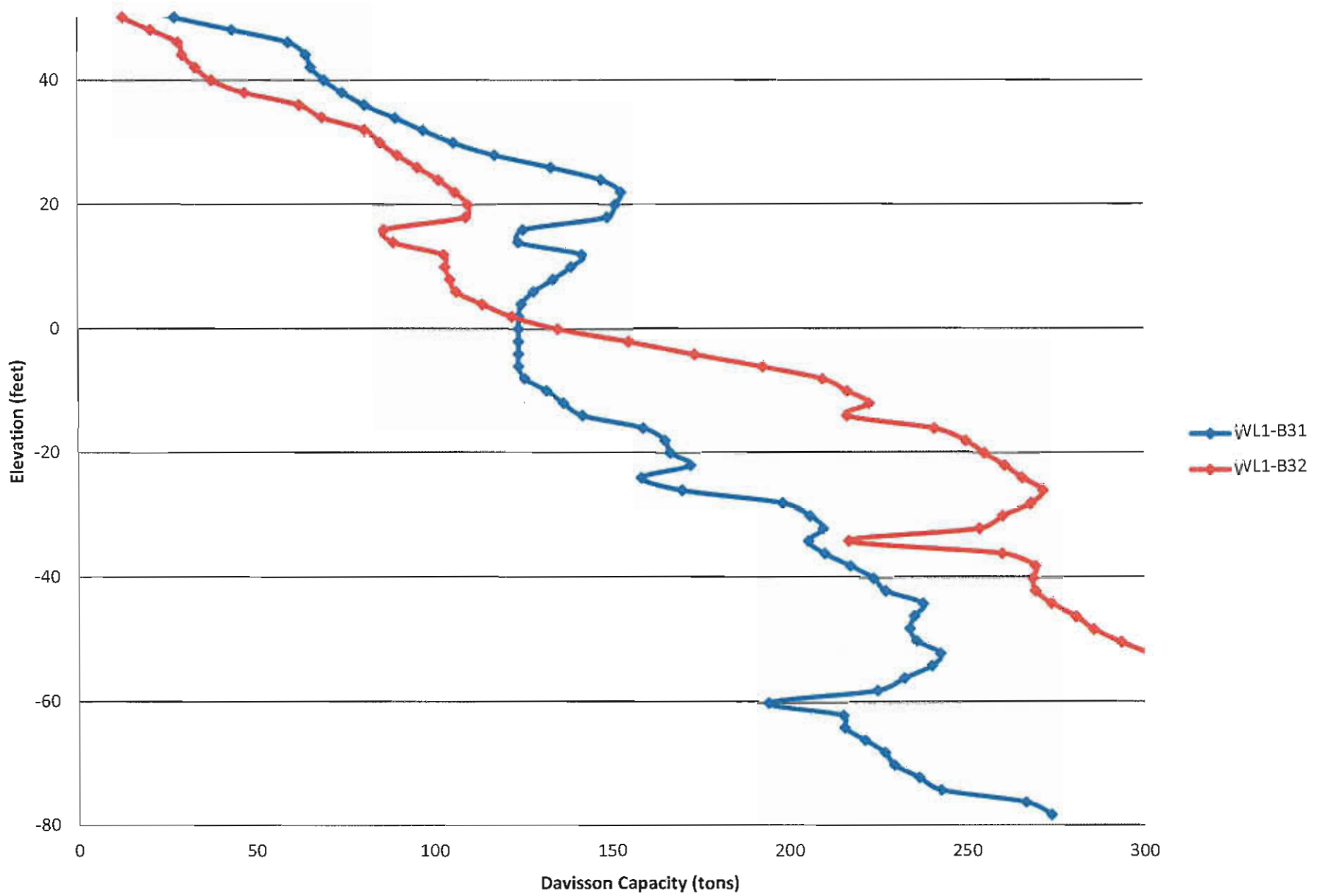
Bent 16 - 18" PCP



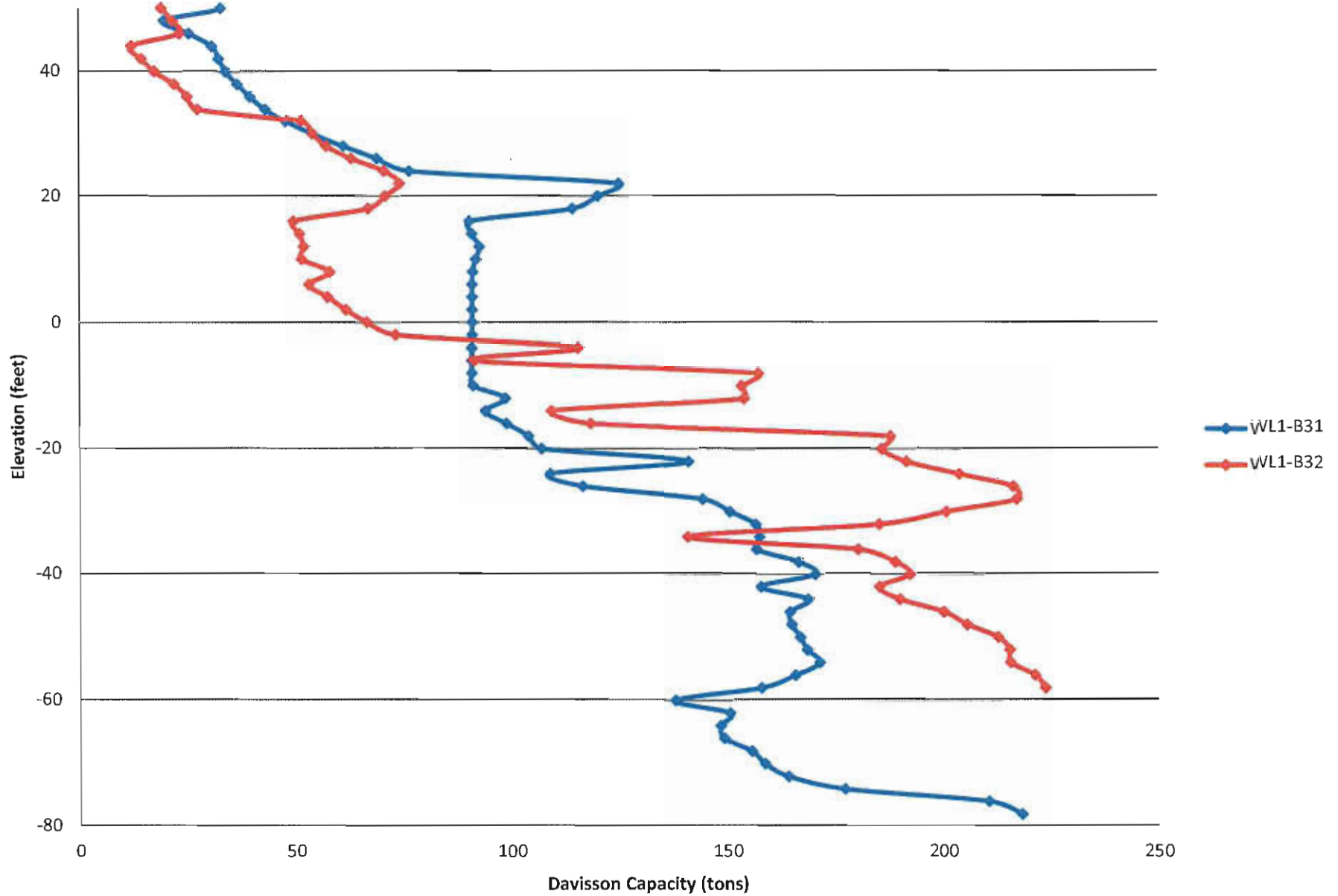
Bent 16 - 24" PCP



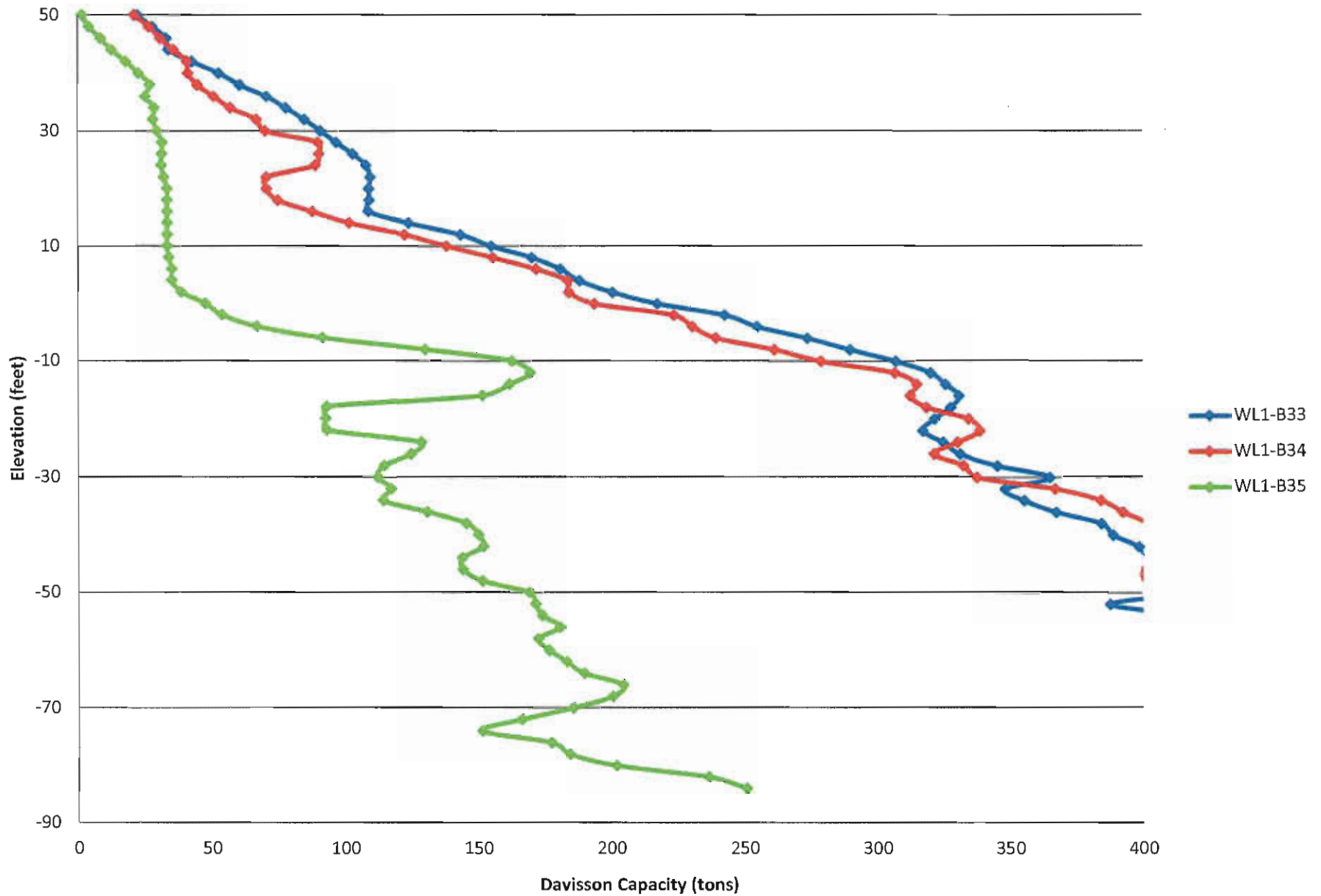
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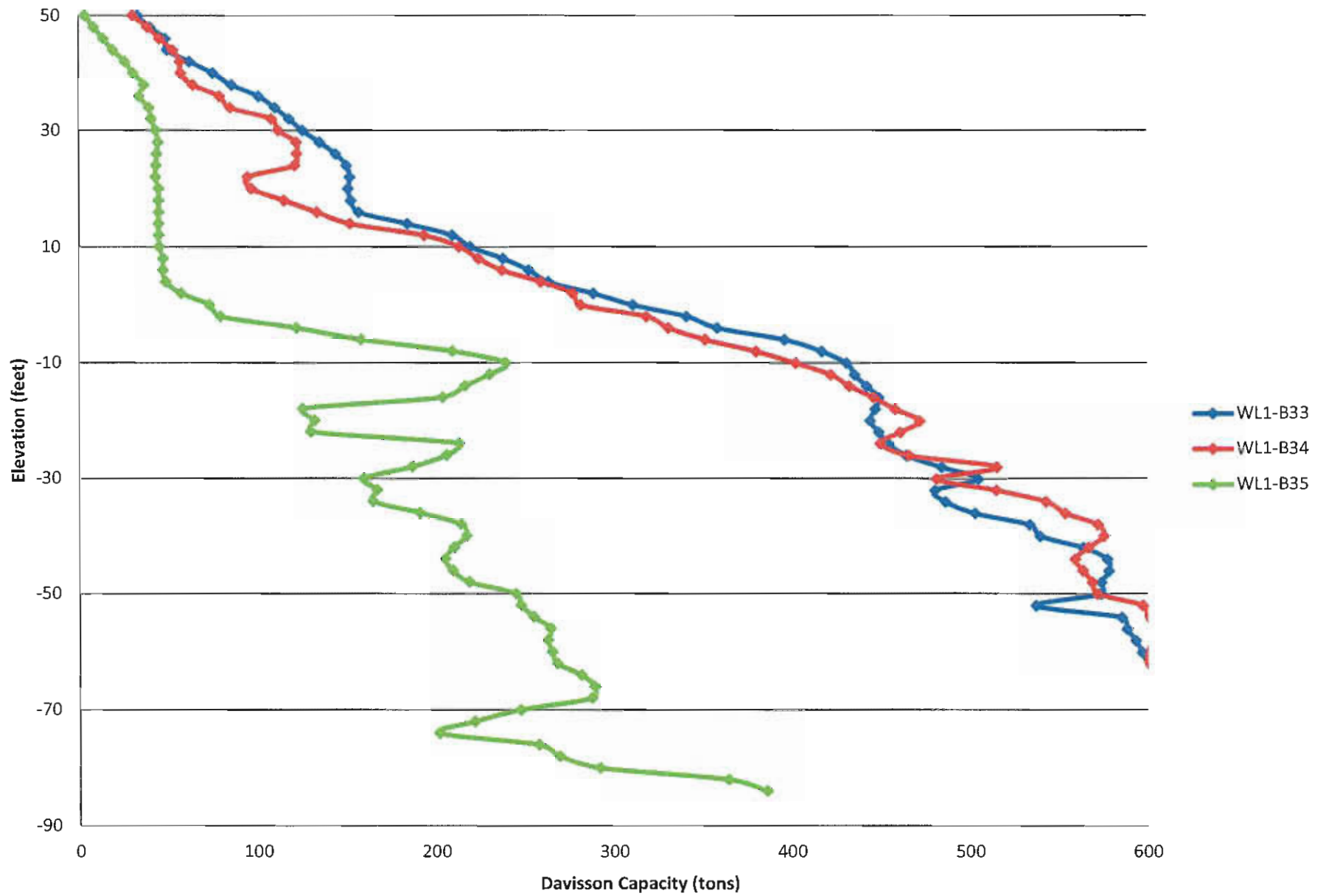
Bent 16 - HP14x89



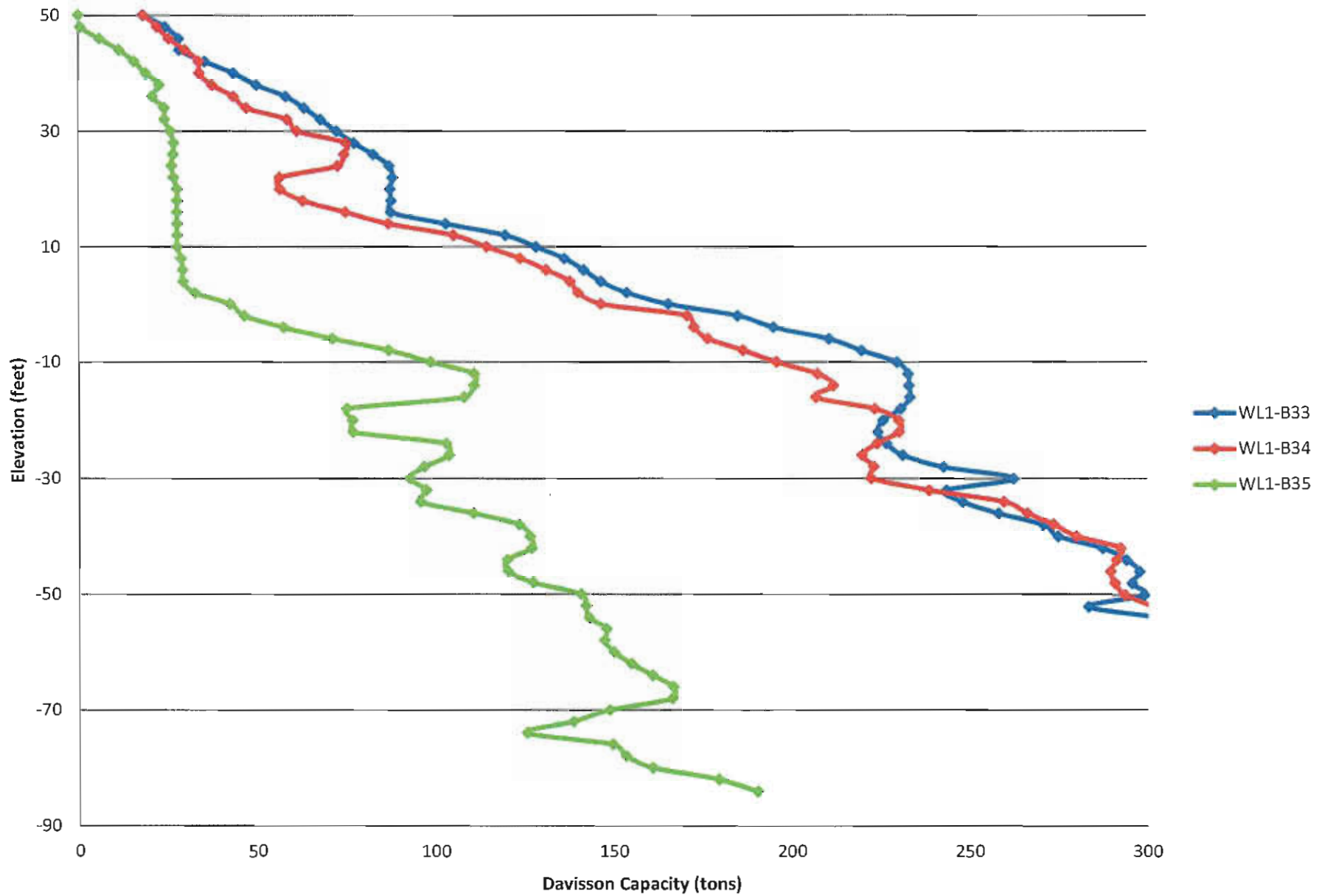
Bent 17 - 18" PCP



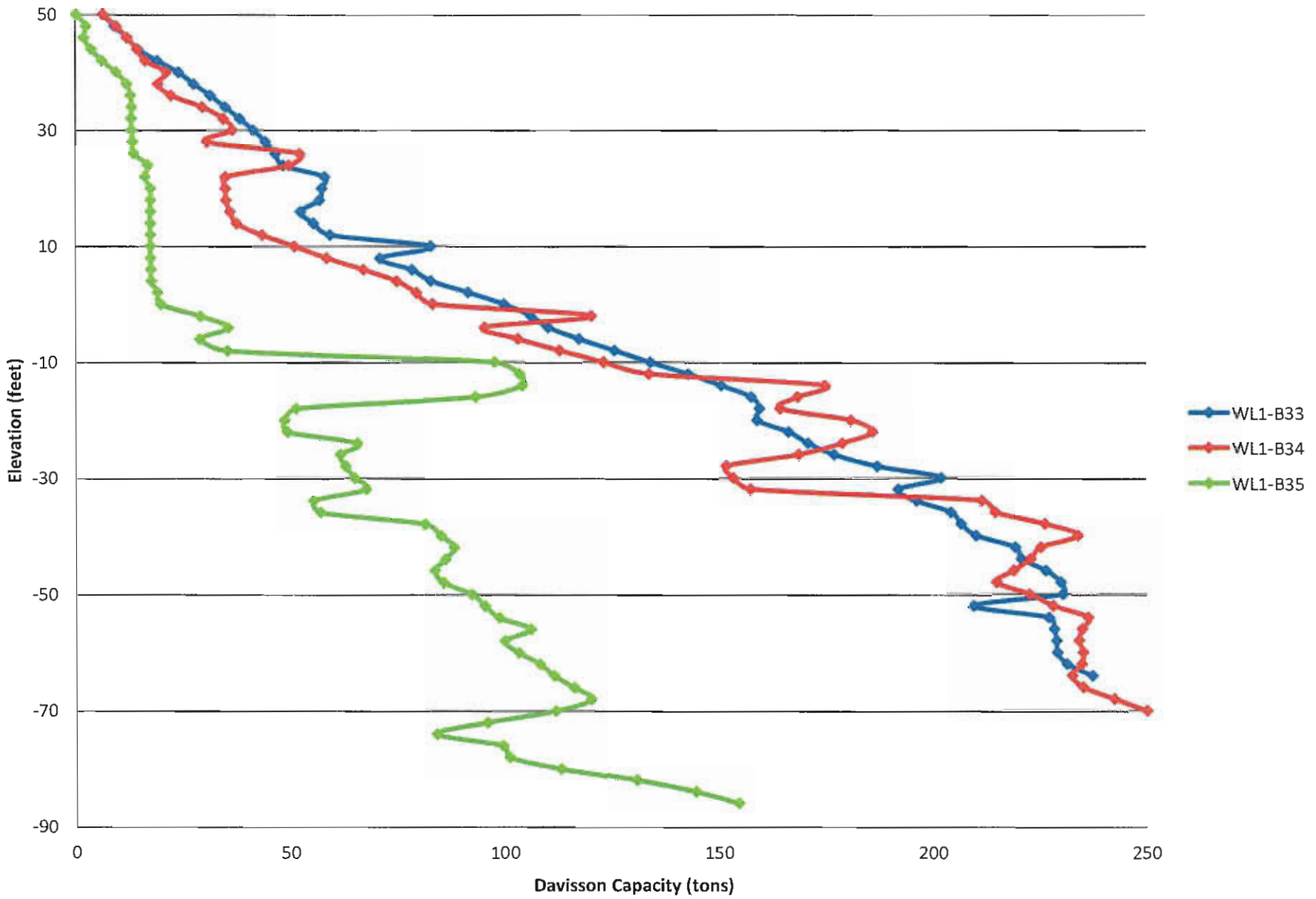
Bent 17 - 24" PCP



Bent 17 - 20" Pipe Pile



Bent 17 - HP14x89



General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B1_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

=====

Boring date: 3-31-14, Boring Number: WL1-B1
 Station number: 662+05 Offset: 126 LT

Ground Elevation: 55.500(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	3.00	3- Clean sand
2	2.00	3.00	3- Clean sand
3	3.00	3.00	2- Clay and silty sand
4	4.00	5.00	3- Clean sand
5	6.00	8.00	3- Clean sand
6	8.00	8.00	3- Clean sand
7	10.00	3.00	2- Clay and silty sand
8	11.25	3.00	2- Clay and silty sand
9	12.50	10.00	3- Clean sand
10	15.00	8.00	2- Clay and silty sand
11	17.50	8.00	2- Clay and silty sand
12	20.00	6.00	2- Clay and silty sand
13	22.50	7.00	2- Clay and silty sand
14	25.00	6.00	2- Clay and silty sand
15	27.50	3.00	1- Plastic Clay
16	30.00	7.00	2- Clay and silty sand
17	32.50	2.00	1- Plastic Clay

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18	35.00	11.00	3- Clean sand
19	37.50	8.00	3- Clean sand
20	38.75	4.00	2- Clay and silty sand
21	40.00	4.00	3- Clean sand
22	42.50	2.00	2- Clay and silty sand
23	45.00	0.00	1- Plastic Clay
24	47.50	0.00	2- Clay and silty sand
25	50.00	0.00	2- Clay and silty sand
26	52.50	0.00	2- Clay and silty sand
27	55.00	0.00	2- Clay and silty sand
28	57.50	0.00	2- Clay and silty sand
29	60.00	0.00	2- Clay and silty sand
30	62.50	0.00	2- Clay and silty sand
31	65.00	2.00	2- Clay and silty sand
32	67.50	0.00	2- Clay and silty sand
33	70.00	0.00	2- Clay and silty sand
34	71.25	0.00	3- Clean sand
35	72.50	24.00	2- Clay and silty sand
36	75.00	30.00	2- Clay and silty sand
37	77.50	19.00	3- Clean sand
38	80.00	6.00	3- Clean sand
39	82.50	6.00	4- Lime Stone/Very shelly sand
40	85.00	9.00	2- Clay and silty sand
41	87.50	6.00	4- Lime Stone/Very shelly sand
42	88.75	2.00	2- Clay and silty sand
43	90.00	2.00	4- Lime Stone/Very shelly sand
44	92.50	0.00	2- Clay and silty sand
45	95.00	0.00	2- Clay and silty sand
46	97.50	0.00	2- Clay and silty sand
47	100.00	37.00	4- Lime Stone/Very shelly sand
48	101.25	6.00	3- Clean sand
49	102.50	6.00	4- Lime Stone/Very shelly sand
50	105.00	12.00	4- Lime Stone/Very shelly sand
51	107.50	7.00	4- Lime Stone/Very shelly sand
52	108.75	4.00	3- Clean sand
53	110.00	4.00	4- Lime Stone/Very shelly sand
54	111.25	4.00	3- Clean sand
55	112.50	25.00	4- Lime Stone/Very shelly sand
56	113.75	9.00	3- Clean sand
57	115.00	9.00	4- Lime Stone/Very shelly sand
58	116.25	3.00	3- Clean sand
59	117.50	3.00	4- Lime Stone/Very shelly sand
60	120.00	5.00	4- Lime Stone/Very shelly sand
61	122.50	4.00	4- Lime Stone/Very shelly sand
62	123.75	4.00	3- Clean sand
63	125.00	7.00	4- Lime Stone/Very shelly sand
64	126.25	7.00	3- Clean sand
65	127.50	63.00	4- Lime Stone/Very shelly sand

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66	128.75	33.00	3- Clean sand
67	130.00	33.00	4- Lime Stone/Very shelly sand
68	132.50	21.00	4- Lime Stone/Very shelly sand
69	133.75	21.00	3- Clean sand
70	135.00	99.00	4- Lime Stone/Very shelly sand
71	137.50	99.00	4- Lime Stone/Very shelly sand
72	138.75	0.00	3- Clean sand
73	140.00	0.00	4- Lime Stone/Very shelly sand
74	142.50	99.00	2- Clay and silty sand
75	145.00	32.00	4- Lime Stone/Very shelly sand
76	146.25	32.00	3- Clean sand
77	147.50	99.00	4- Lime Stone/Very shelly sand
78	150.00	99.00	4- Lime Stone/Very shelly sand
79	152.50	99.00	4- Lime Stone/Very shelly sand
80	155.00	37.00	4- Lime Stone/Very shelly sand
81	156.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	55.50	52.50	3.00	3.00	3-Clean Sand
2	52.50	51.50	1.00	3.00	2-Clay and Silty Sand
3	51.50	45.50	6.00	7.00	3-Clean Sand
4	45.50	43.00	2.50	3.00	2-Clay and Silty Sand
5	43.00	40.50	2.50	10.00	3-Clean Sand
6	40.50	28.00	12.50	7.00	2-Clay and Silty Sand
7	28.00	25.50	2.50	3.00	1-Plastic Clay
8	25.50	23.00	2.50	7.00	2-Clay and Silty Sand
9	23.00	20.50	2.50	2.00	1-Plastic Clay
10	20.50	16.75	3.75	10.00	3-Clean Sand
11	16.75	15.50	1.25	4.00	2-Clay and Silty Sand
12	15.50	13.00	2.50	4.00	3-Clean Sand
13	13.00	10.50	2.50	2.00	2-Clay and Silty Sand
14	10.50	8.00	2.50	0.00	1-Plastic Clay
15	8.00	-15.75	23.75	0.21	2-Clay and Silty Sand
16	-15.75	-17.00	1.25	0.00	3-Clean Sand
17	-17.00	-22.00	5.00	27.00	2-Clay and Silty Sand
18	-22.00	-27.00	5.00	12.50	3-Clean Sand
19	-27.00	-29.50	2.50	6.00	4-Limestone, Very
Shelly Sand					
20	-29.50	-32.00	2.50	9.00	2-Clay and Silty Sand

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21	-32.00	-33.25	1.25	6.00	4-Limestone, Very
Shelly Sand					
22	-33.25	-34.50	1.25	2.00	2-Clay and Silty Sand
23	-34.50	-37.00	2.50	2.00	4-Limestone, Very
Shelly Sand					
24	-37.00	-44.50	7.50	0.00	2-Clay and Silty Sand
25	-44.50	-45.75	1.25	37.00	4-Limestone, Very
Shelly Sand					
26	-45.75	-47.00	1.25	6.00	3-Clean Sand
27	-47.00	-53.25	6.25	8.60	4-Limestone, Very
Shelly Sand					
28	-53.25	-54.50	1.25	4.00	3-Clean Sand
29	-54.50	-55.75	1.25	4.00	4-Limestone, Very
Shelly Sand					
30	-55.75	-57.00	1.25	4.00	3-Clean Sand
31	-57.00	-58.25	1.25	25.00	4-Limestone, Very
Shelly Sand					
32	-58.25	-59.50	1.25	9.00	3-Clean Sand
33	-59.50	-60.75	1.25	9.00	4-Limestone, Very
Shelly Sand					
34	-60.75	-62.00	1.25	3.00	3-Clean Sand
35	-62.00	-68.25	6.25	4.00	4-Limestone, Very
Shelly Sand					
36	-68.25	-69.50	1.25	4.00	3-Clean Sand
37	-69.50	-70.75	1.25	7.00	4-Limestone, Very
Shelly Sand					
38	-70.75	-72.00	1.25	7.00	3-Clean Sand
39	-72.00	-73.25	1.25	63.00	4-Limestone, Very
Shelly Sand					
40	-73.25	-74.50	1.25	33.00	3-Clean Sand
41	-74.50	-78.25	3.75	29.00	4-Limestone, Very
Shelly Sand					
42	-78.25	-79.50	1.25	21.00	3-Clean Sand
43	-79.50	-83.25	3.75	99.00	4-Limestone, Very
Shelly Sand					
44	-83.25	-84.50	1.25	0.00	3-Clean Sand
45	-84.50	-87.00	2.50	0.00	4-Limestone, Very
Shelly Sand					
46	-87.00	-89.50	2.50	99.00	2-Clay and Silty Sand
47	-89.50	-90.75	1.25	32.00	4-Limestone, Very
Shelly Sand					
48	-90.75	-92.00	1.25	32.00	3-Clean Sand
49	-92.00	-100.50	8.50	91.71	4-Limestone, Very
Shelly Sand					
50	-100.50	-100.50	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	45.50
18.00	12.00	43.50
18.00	14.00	41.50
18.00	16.00	39.50
18.00	18.00	37.50
18.00	20.00	35.50
18.00	22.00	33.50
18.00	24.00	31.50
18.00	26.00	29.50
18.00	28.00	27.50
18.00	30.00	25.50
18.00	32.00	23.50
18.00	34.00	21.50
18.00	36.00	19.50
18.00	38.00	17.50
18.00	40.00	15.50
18.00	42.00	13.50
18.00	44.00	11.50
18.00	46.00	9.50
18.00	48.00	7.50
18.00	50.00	5.50
18.00	52.00	3.50
18.00	54.00	1.50
18.00	56.00	-0.50
18.00	58.00	-2.50
18.00	60.00	-4.50
18.00	62.00	-6.50
18.00	64.00	-8.50
18.00	66.00	-10.50
18.00	68.00	-12.50
18.00	70.00	-14.50
18.00	72.00	-16.50
18.00	74.00	-18.50
18.00	76.00	-20.50
18.00	78.00	-22.50
18.00	80.00	-24.50
18.00	82.00	-26.50
18.00	84.00	-28.50
18.00	86.00	-30.50
18.00	88.00	-32.50

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18.00	90.00	-34.50
18.00	92.00	-36.50
18.00	94.00	-38.50
18.00	96.00	-40.50
18.00	98.00	-42.50
18.00	100.00	-44.50
18.00	102.00	-46.50
18.00	104.00	-48.50
18.00	106.00	-50.50
18.00	108.00	-52.50
18.00	110.00	-54.50
18.00	112.00	-56.50
18.00	114.00	-58.50
18.00	116.00	-60.50
18.00	118.00	-62.50
18.00	120.00	-64.50
18.00	122.00	-66.50
18.00	124.00	-68.50
18.00	126.00	-70.50
18.00	128.00	-72.50
18.00	130.00	-74.50
18.00	132.00	-76.50
18.00	134.00	-78.50
18.00	136.00	-80.50
18.00	138.00	-82.50
18.00	140.00	-84.50
18.00	142.00	-86.50
18.00	144.00	-88.50
18.00	146.00	-90.50
18.00	148.00	-92.50
18.00	150.00	-94.50
18.00	152.00	-96.50
18.00	154.00	-98.50
18.00	156.00	-100.50
18.00	158.00	-102.50
18.00	160.00	-104.50

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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WL1-B1_18-PCP.txt

10.00	18.0	5.58	12.89	18.48	9.24	44.26
12.00	18.0	5.90	10.32	16.22	8.11	36.86
14.00	18.0	9.12	13.32	22.44	11.22	49.07
16.00	18.0	14.04	11.09	25.13	12.57	47.31
18.00	18.0	19.25	10.89	30.14	15.07	51.91
20.00	18.0	23.73	10.39	34.12	17.06	54.89
22.00	18.0	27.97	9.19	37.16	18.58	55.54
24.00	18.0	32.42	7.82	40.24	20.12	55.89
26.00	18.0	36.08	7.61	43.69	21.84	58.91
28.00	18.0	37.09	3.30	40.39	20.20	47.00
30.00	18.0	39.85	9.77	49.63	24.81	69.17
32.00	18.0	41.96	11.06	53.03	26.51	75.15
34.00	18.0	43.43	14.03	57.46	28.73	85.52
36.00	18.0	46.15	10.13	56.28	28.14	76.54
38.00	18.0	48.49	6.81	55.30	27.65	68.91
40.00	18.0	48.74	6.33	55.07	27.54	67.74
42.00	18.0	48.74	5.81	54.55	27.28	66.18
44.00	18.0	48.74	5.29	54.03	27.02	64.62
46.00	18.0	48.74	4.66	53.40	26.70	62.71
48.00	18.0	48.74	2.28	51.02	25.51	55.57
50.00	18.0	48.74	0.22	48.96	24.48	49.41
52.00	18.0	48.74	0.00	48.74	24.37	48.74
54.00	18.0	48.74	0.00	48.74	24.37	48.74
56.00	18.0	48.74	0.00	48.74	24.37	48.74
58.00	18.0	48.74	0.00	48.74	24.37	48.74
60.00	18.0	48.74	0.00	48.74	24.37	48.74
62.00	18.0	48.74	0.00	48.74	24.37	48.74
64.00	18.0	48.74	0.00	48.74	24.37	48.74
66.00	18.0	48.74	0.00	48.74	24.37	48.74
68.00	18.0	48.74	4.77	53.51	26.76	63.06
70.00	18.0	48.74	12.77	61.51	30.75	87.05
72.00	18.0	49.94	18.77	68.70	34.35	106.24
74.00	18.0	61.51	24.54	86.05	43.02	135.12
76.00	18.0	74.37	24.92	99.29	49.64	149.13
78.00	18.0	82.45	28.29	110.75	55.37	167.34
80.00	18.0	85.96	27.43	113.39	56.70	168.25
82.00	18.0	87.34	22.95	110.29	55.14	156.18
84.00	18.0	89.35	15.62	104.98	52.49	136.22
86.00	18.0	94.15	19.04	113.19	56.60	151.28
88.00	18.0	95.97	2.73	98.70	49.35	104.16
90.00	18.0	96.20	8.76	104.96	52.48	122.49
92.00	18.0	96.20	5.99	102.18	51.09	114.16
94.00	18.0	96.20	7.23	103.43	51.71	117.89
96.00	18.0	96.20	17.60	113.80	56.90	149.01
98.00	18.0	96.28	26.53	122.80	61.40	175.85
100.00	18.0	99.64	25.45	125.08	62.54	175.98
102.00	18.0	102.44	24.37	126.80	63.40	175.54
104.00	18.0	103.57	25.17	128.74	64.37	179.09

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106.00	18.0	105.19	21.26	126.46	63.23	168.98	
108.00	18.0	106.18	27.50	133.69	66.84	188.69	
110.00	18.0	106.46	33.53	139.99	70.00	207.05	
112.00	18.0	106.88	27.47	134.36	67.18	189.30	
114.00	18.0	109.77	12.00	121.77	60.89	145.77	
116.00	18.0	111.07	8.80	119.88	59.94	137.49	
118.00	18.0	111.24	13.65	124.89	62.44	152.20	
120.00	18.0	111.68	12.35	124.04	62.02	148.75	
122.00	18.0	111.93	17.47	129.39	64.70	164.33	
124.00	18.0	112.16	41.54	153.70	76.85	236.79	
126.00	18.0	113.10	50.73	163.83	81.92	265.29	
128.00	18.0	118.19	58.59	176.78	88.39	293.96	
130.00	18.0	125.90	93.30	219.20	109.60	405.79	
132.00	18.0	129.63	96.28	225.91	112.95	418.47	
134.00	18.0	134.51	92.25	226.76	113.38	411.27	
136.00	18.0	141.46	79.11	220.57	110.29	378.79	
138.00	18.0	148.30	73.05	221.35	110.67	367.45	
140.00	18.0	149.11	81.34	230.45	115.22	393.12	
142.00	18.0	154.84	83.32	238.16	119.08	404.81	
144.00	18.0	167.40	96.60	264.00	132.00	457.21	
146.00	18.0	174.78	112.63	287.40	143.70	512.66	
148.00	18.0	182.91	123.36	306.27	153.14	552.99	
150.00	18.0	190.11	118.63	308.74	154.37	546.00	
152.00	18.0	***** Not enough soil data *****					
154.00	18.0	0.00	0.00	0.00	0.00	0.00	
156.00	18.0	0.00	0.00	0.00	0.00	0.00	
158.00	18.0	0.00	0.00	0.00	0.00	0.00	
160.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B2_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 6-11-14, Boring Number: WL1-B2
 Station number: 662+05 Offset: 53 LT

Ground Elevation: 57.400(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	6.00	3- Clean sand
2	2.00	6.00	3- Clean sand
3	4.00	9.00	3- Clean sand
4	6.00	15.00	3- Clean sand
5	8.00	8.00	3- Clean sand
6	10.00	8.00	3- Clean sand
7	12.50	7.00	3- Clean sand
8	15.00	9.00	3- Clean sand
9	17.50	9.00	3- Clean sand
10	20.00	9.00	2- Clay and silty sand
11	22.50	8.00	2- Clay and silty sand
12	25.00	9.00	2- Clay and silty sand
13	27.50	8.00	1- Plastic Clay
14	30.00	10.00	3- Clean sand
15	32.50	11.00	3- Clean sand
16	35.00	6.00	2- Clay and silty sand
17	36.25	4.00	3- Clean sand

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18	37.50	4.00	2- Clay and silty sand
19	40.00	2.00	2- Clay and silty sand
20	41.25	2.00	3- Clean sand
21	42.50	6.00	2- Clay and silty sand
22	43.75	6.00	3- Clean sand
23	45.00	99.00	2- Clay and silty sand
24	46.25	26.00	3- Clean sand
25	47.50	26.00	2- Clay and silty sand
26	50.00	31.00	2- Clay and silty sand
27	51.25	31.00	3- Clean sand
28	52.50	99.00	2- Clay and silty sand
29	55.00	99.00	2- Clay and silty sand
30	57.50	99.00	2- Clay and silty sand
31	58.75	21.00	3- Clean sand
32	60.00	21.00	2- Clay and silty sand
33	61.25	21.00	3- Clean sand
34	62.50	99.00	2- Clay and silty sand
35	65.00	99.00	4- Lime Stone/Very shelly sand
36	67.50	1.00	2- Clay and silty sand
37	68.75	1.00	3- Clean sand
38	70.00	40.00	2- Clay and silty sand
39	71.25	14.00	3- Clean sand
40	72.50	14.00	2- Clay and silty sand
41	75.00	13.00	4- Lime Stone/Very shelly sand
42	77.50	15.00	4- Lime Stone/Very shelly sand
43	80.00	18.00	4- Lime Stone/Very shelly sand
44	81.25	18.00	3- Clean sand
45	82.50	31.00	4- Lime Stone/Very shelly sand
46	83.75	31.00	3- Clean sand
47	85.00	99.00	4- Lime Stone/Very shelly sand
48	87.50	62.00	4- Lime Stone/Very shelly sand
49	88.75	25.00	3- Clean sand
50	90.00	25.00	4- Lime Stone/Very shelly sand
51	92.50	44.00	4- Lime Stone/Very shelly sand
52	95.00	25.00	4- Lime Stone/Very shelly sand
53	96.25	25.00	3- Clean sand
54	97.50	99.00	4- Lime Stone/Very shelly sand
55	98.75	34.00	3- Clean sand
56	100.00	34.00	4- Lime Stone/Very shelly sand
57	102.50	29.00	4- Lime Stone/Very shelly sand
58	105.00	23.00	4- Lime Stone/Very shelly sand
59	107.50	49.00	4- Lime Stone/Very shelly sand
60	110.00	41.00	4- Lime Stone/Very shelly sand
61	112.50	39.00	4- Lime Stone/Very shelly sand
62	115.00	34.00	4- Lime Stone/Very shelly sand
63	116.25	19.00	3- Clean sand
64	117.50	19.00	4- Lime Stone/Very shelly sand
65	118.75	19.00	3- Clean sand

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66	120.00	61.00	4- Lime Stone/Very shelly sand
67	122.50	99.00	4- Lime Stone/Very shelly sand
68	125.00	99.00	4- Lime Stone/Very shelly sand
69	127.50	99.00	4- Lime Stone/Very shelly sand
70	130.00	99.00	4- Lime Stone/Very shelly sand
71	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	57.40	37.40	20.00	8.53	3-Clean Sand
2	37.40	29.90	7.50	8.67	2-Clay and Silty Sand
3	29.90	27.40	2.50	8.00	1-Plastic Clay
4	27.40	22.40	5.00	10.50	3-Clean Sand
5	22.40	21.15	1.25	6.00	2-Clay and Silty Sand
6	21.15	19.90	1.25	4.00	3-Clean Sand
7	19.90	16.15	3.75	3.33	2-Clay and Silty Sand
8	16.15	14.90	1.25	2.00	3-Clean Sand
9	14.90	13.65	1.25	6.00	2-Clay and Silty Sand
10	13.65	12.40	1.25	6.00	3-Clean Sand
11	12.40	11.15	1.25	99.00	2-Clay and Silty Sand
12	11.15	9.90	1.25	26.00	3-Clean Sand
13	9.90	6.15	3.75	27.67	2-Clay and Silty Sand
14	6.15	4.90	1.25	31.00	3-Clean Sand
15	4.90	-1.35	6.25	99.00	2-Clay and Silty Sand
16	-1.35	-2.60	1.25	21.00	3-Clean Sand
17	-2.60	-3.85	1.25	21.00	2-Clay and Silty Sand
18	-3.85	-5.10	1.25	21.00	3-Clean Sand
19	-5.10	-7.60	2.50	99.00	2-Clay and Silty Sand
20	-7.60	-10.10	2.50	99.00	4-Limestone, Very Shelly Sand
21	-10.10	-11.35	1.25	1.00	2-Clay and Silty Sand
22	-11.35	-12.60	1.25	1.00	3-Clean Sand
23	-12.60	-13.85	1.25	40.00	2-Clay and Silty Sand
24	-13.85	-15.10	1.25	14.00	3-Clean Sand
25	-15.10	-17.60	2.50	14.00	2-Clay and Silty Sand
26	-17.60	-23.85	6.25	14.80	4-Limestone, Very Shelly Sand
27	-23.85	-25.10	1.25	18.00	3-Clean Sand
28	-25.10	-26.35	1.25	31.00	4-Limestone, Very Shelly Sand

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29	-26.35	-27.60	1.25	31.00	3-Clean Sand
30	-27.60	-31.35	3.75	86.67	4-Limestone, Very
Shelly Sand					
31	-31.35	-32.60	1.25	25.00	3-Clean Sand
32	-32.60	-38.85	6.25	32.60	4-Limestone, Very
Shelly Sand					
33	-38.85	-40.10	1.25	25.00	3-Clean Sand
34	-40.10	-41.35	1.25	99.00	4-Limestone, Very
Shelly Sand					
35	-41.35	-42.60	1.25	34.00	3-Clean Sand
36	-42.60	-58.85	16.25	35.69	4-Limestone, Very
Shelly Sand					
37	-58.85	-60.10	1.25	19.00	3-Clean Sand
38	-60.10	-61.35	1.25	19.00	4-Limestone, Very
Shelly Sand					
39	-61.35	-62.60	1.25	19.00	3-Clean Sand
40	-62.60	-73.60	11.00	90.36	4-Limestone, Very
Shelly Sand					
41	-73.60	-73.60	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	47.40
18.00	12.00	45.40
18.00	14.00	43.40
18.00	16.00	41.40
18.00	18.00	39.40
18.00	20.00	37.40
18.00	22.00	35.40
18.00	24.00	33.40
18.00	26.00	31.40
18.00	28.00	29.40
18.00	30.00	27.40
18.00	32.00	25.40
18.00	34.00	23.40
18.00	36.00	21.40
18.00	38.00	19.40
18.00	40.00	17.40
18.00	42.00	15.40
18.00	44.00	13.40

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18.00	46.00	11.40
18.00	48.00	9.40
18.00	50.00	7.40
18.00	52.00	5.40
18.00	54.00	3.40
18.00	56.00	1.40
18.00	58.00	-0.60
18.00	60.00	-2.60
18.00	62.00	-4.60
18.00	64.00	-6.60
18.00	66.00	-8.60
18.00	68.00	-10.60
18.00	70.00	-12.60
18.00	72.00	-14.60
18.00	74.00	-16.60
18.00	76.00	-18.60
18.00	78.00	-20.60
18.00	80.00	-22.60
18.00	82.00	-24.60
18.00	84.00	-26.60
18.00	86.00	-28.60
18.00	88.00	-30.60
18.00	90.00	-32.60
18.00	92.00	-34.60
18.00	94.00	-36.60
18.00	96.00	-38.60
18.00	98.00	-40.60
18.00	100.00	-42.60
18.00	102.00	-44.60
18.00	104.00	-46.60
18.00	106.00	-48.60
18.00	108.00	-50.60
18.00	110.00	-52.60
18.00	112.00	-54.60
18.00	114.00	-56.60
18.00	116.00	-58.60
18.00	118.00	-60.60
18.00	120.00	-62.60
18.00	122.00	-64.60
18.00	124.00	-66.60
18.00	126.00	-68.60
18.00	128.00	-70.60
18.00	130.00	-72.60

Driven Pile Capacity:

WL1-B2_18-PCP.txt

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	12.28	25.01	37.29	18.64	87.31
12.00	18.0	14.44	25.46	39.89	19.95	90.81
14.00	18.0	16.56	25.91	42.47	21.23	94.28
16.00	18.0	19.05	23.89	42.94	21.47	90.72
18.00	18.0	21.67	20.41	42.08	21.04	82.90
20.00	18.0	26.58	12.66	39.24	19.62	64.57
22.00	18.0	32.13	12.06	44.19	22.10	68.32
24.00	18.0	37.47	12.03	49.50	24.75	73.56
26.00	18.0	41.85	15.14	56.98	28.49	87.26
28.00	18.0	49.00	20.38	69.38	34.69	110.13
30.00	18.0	53.11	19.58	72.69	36.34	111.85
32.00	18.0	56.05	15.04	71.09	35.55	101.17
34.00	18.0	59.35	11.05	70.40	35.20	92.50
36.00	18.0	61.79	1.34	63.13	31.56	65.80
38.00	18.0	62.51	8.98	71.49	35.75	89.45
40.00	18.0	62.51	12.10	74.62	37.31	98.82
42.00	18.0	62.91	24.86	87.77	43.88	137.48
44.00	18.0	65.92	31.34	97.26	48.63	159.94
46.00	18.0	76.81	32.49	109.31	54.65	174.29
48.00	18.0	87.90	51.09	138.99	69.49	241.17
50.00	18.0	101.79	58.08	159.87	79.93	276.02
52.00	18.0	112.98	55.48	168.46	84.23	279.42
54.00	18.0	128.46	70.68	199.14	99.57	340.51
56.00	18.0	144.17	65.45	209.62	104.81	340.52
58.00	18.0	159.39	65.85	225.24	112.62	356.95
60.00	18.0	168.15	77.53	245.68	122.84	400.73
62.00	18.0	176.91	83.60	260.50	130.25	427.70
64.00	18.0	190.21	68.23	258.44	129.22	394.89
66.00	18.0	196.44	52.06	248.51	124.25	352.63
68.00	18.0	199.16	15.02	214.18	107.09	244.21
70.00	18.0	204.07	51.05	255.12	127.56	357.22
72.00	18.0	212.15	35.81	247.97	123.98	319.60
74.00	18.0	218.79	52.09	270.87	135.44	375.04
76.00	18.0	221.54	52.29	273.83	136.92	378.40
78.00	18.0	223.72	52.17	275.89	137.95	380.24
80.00	18.0	225.43	60.93	286.36	143.18	408.22
82.00	18.0	230.35	82.14	312.49	156.25	476.78
84.00	18.0	236.93	96.58	333.51	166.75	526.66
86.00	18.0	244.45	96.28	340.73	170.37	533.30
88.00	18.0	251.20	98.07	349.27	174.64	545.42
90.00	18.0	257.68	107.60	365.28	182.64	580.47

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92.00	18.0	262.47	107.93	370.40	185.20	586.25	
94.00	18.0	267.89	110.51	378.40	189.20	599.41	
96.00	18.0	272.18	114.21	386.39	193.19	614.80	
98.00	18.0	280.26	111.02	391.28	195.64	613.31	
100.00	18.0	288.18	101.82	390.00	195.00	593.65	
102.00	18.0	292.78	102.72	395.50	197.75	600.93	
104.00	18.0	296.22	108.17	404.39	202.20	620.73	
106.00	18.0	299.56	115.26	414.82	207.41	645.35	
108.00	18.0	305.37	121.79	427.16	213.58	670.73	
110.00	18.0	311.78	120.97	432.75	216.38	674.70	
112.00	18.0	317.70	110.45	428.15	214.07	649.04	
114.00	18.0	323.32	100.26	423.58	211.79	624.10	
116.00	18.0	328.53	109.96	438.49	219.24	658.40	
118.00	18.0	334.69	123.31	457.99	229.00	704.60	
120.00	18.0	340.37	136.33	476.70	238.35	749.36	
122.00	18.0	347.51	136.60	484.12	242.06	757.32	
124.00	18.0	354.49	137.89	492.38	246.19	768.17	
126.00	18.0	***** Not enough soil data *****					
128.00	18.0	0.00	0.00	0.00	0.00	0.00	
130.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B3_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 5-15-14, Boring Number: WL1-B3
 Station number: 662+02 Offset: 69 RT

Ground Elevation: 59.700(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	7.00	3- Clean sand
2	2.00	7.00	3- Clean sand
3	4.00	13.00	3- Clean sand
4	6.00	11.00	3- Clean sand
5	8.00	9.00	3- Clean sand
6	10.00	10.00	3- Clean sand
7	12.50	9.00	3- Clean sand
8	15.00	7.00	3- Clean sand
9	17.50	9.00	3- Clean sand
10	20.00	15.00	2- Clay and silty sand
11	22.50	12.00	1- Plastic Clay
12	25.00	7.00	1- Plastic Clay
13	30.00	36.00	3- Clean sand
14	32.50	31.00	3- Clean sand
15	35.00	4.00	2- Clay and silty sand
16	37.50	0.00	2- Clay and silty sand
17	40.00	0.00	2- Clay and silty sand

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18	42.50	2.00	2- Clay and silty sand
19	45.00	3.00	2- Clay and silty sand
20	46.25	3.00	3- Clean sand
21	47.50	99.00	2- Clay and silty sand
22	50.00	99.00	2- Clay and silty sand
23	52.50	99.00	4- Lime Stone/Very shelly sand
24	55.00	25.00	2- Clay and silty sand
25	57.50	30.00	2- Clay and silty sand
26	58.75	30.00	3- Clean sand
27	60.00	99.00	2- Clay and silty sand
28	61.25	9.00	3- Clean sand
29	62.50	9.00	2- Clay and silty sand
30	63.75	2.00	3- Clean sand
31	65.00	2.00	2- Clay and silty sand
32	66.25	2.00	3- Clean sand
33	67.50	5.00	2- Clay and silty sand
34	70.00	99.00	4- Lime Stone/Very shelly sand
35	72.50	99.00	4- Lime Stone/Very shelly sand
36	75.00	4.00	2- Clay and silty sand
37	77.50	8.00	4- Lime Stone/Very shelly sand
38	78.75	8.00	3- Clean sand
39	80.00	22.00	4- Lime Stone/Very shelly sand
40	82.50	19.00	4- Lime Stone/Very shelly sand
41	85.00	27.00	4- Lime Stone/Very shelly sand
42	86.25	27.00	3- Clean sand
43	87.50	99.00	4- Lime Stone/Very shelly sand
44	90.00	99.00	4- Lime Stone/Very shelly sand
45	91.25	26.00	3- Clean sand
46	92.50	26.00	4- Lime Stone/Very shelly sand
47	95.00	31.00	4- Lime Stone/Very shelly sand
48	97.50	10.00	4- Lime Stone/Very shelly sand
49	98.75	10.00	3- Clean sand
50	100.00	99.00	4- Lime Stone/Very shelly sand
51	101.25	19.00	3- Clean sand
52	102.50	19.00	4- Lime Stone/Very shelly sand
53	105.00	25.00	4- Lime Stone/Very shelly sand
54	106.25	25.00	3- Clean sand
55	107.50	99.00	4- Lime Stone/Very shelly sand
56	108.75	18.00	3- Clean sand
57	110.00	18.00	4- Lime Stone/Very shelly sand
58	112.50	21.00	4- Lime Stone/Very shelly sand
59	115.00	19.00	4- Lime Stone/Very shelly sand
60	117.50	34.00	4- Lime Stone/Very shelly sand
61	120.00	26.00	4- Lime Stone/Very shelly sand
62	122.50	33.00	4- Lime Stone/Very shelly sand
63	123.75	33.00	3- Clean sand
64	125.00	99.00	4- Lime Stone/Very shelly sand
65	126.25	25.00	3- Clean sand

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66	127.50	25.00	4- Lime Stone/Very shelly sand
67	128.75	25.00	3- Clean sand
68	130.00	99.00	4- Lime Stone/Very shelly sand
69	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	59.70	39.70	20.00	9.07	3-Clean Sand
2	39.70	37.20	2.50	15.00	2-Clay and Silty Sand
3	37.20	29.70	7.50	8.67	1-Plastic Clay
4	29.70	24.70	5.00	33.50	3-Clean Sand
5	24.70	13.45	11.25	1.67	2-Clay and Silty Sand
6	13.45	12.20	1.25	3.00	3-Clean Sand
7	12.20	7.20	5.00	99.00	2-Clay and Silty Sand
8	7.20	4.70	2.50	99.00	4-Limestone, Very
Shelly Sand					
9	4.70	0.95	3.75	26.67	2-Clay and Silty Sand
10	0.95	-0.30	1.25	30.00	3-Clean Sand
11	-0.30	-1.55	1.25	99.00	2-Clay and Silty Sand
12	-1.55	-2.80	1.25	9.00	3-Clean Sand
13	-2.80	-4.05	1.25	9.00	2-Clay and Silty Sand
14	-4.05	-5.30	1.25	2.00	3-Clean Sand
15	-5.30	-6.55	1.25	2.00	2-Clay and Silty Sand
16	-6.55	-7.80	1.25	2.00	3-Clean Sand
17	-7.80	-10.30	2.50	5.00	2-Clay and Silty Sand
18	-10.30	-15.30	5.00	99.00	4-Limestone, Very
Shelly Sand					
19	-15.30	-17.80	2.50	4.00	2-Clay and Silty Sand
20	-17.80	-19.05	1.25	8.00	4-Limestone, Very
Shelly Sand					
21	-19.05	-20.30	1.25	8.00	3-Clean Sand
22	-20.30	-26.55	6.25	21.80	4-Limestone, Very
Shelly Sand					
23	-26.55	-27.80	1.25	27.00	3-Clean Sand
24	-27.80	-31.55	3.75	99.00	4-Limestone, Very
Shelly Sand					
25	-31.55	-32.80	1.25	26.00	3-Clean Sand
26	-32.80	-39.05	6.25	24.80	4-Limestone, Very
Shelly Sand					
27	-39.05	-40.30	1.25	10.00	3-Clean Sand

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28	-40.30	-41.55	1.25	99.00	4-Limestone, Very
Shelly Sand					
29	-41.55	-42.80	1.25	19.00	3-Clean Sand
30	-42.80	-46.55	3.75	21.00	4-Limestone, Very
Shelly Sand					
31	-46.55	-47.80	1.25	25.00	3-Clean Sand
32	-47.80	-49.05	1.25	99.00	4-Limestone, Very
Shelly Sand					
33	-49.05	-50.30	1.25	18.00	3-Clean Sand
34	-50.30	-64.05	13.75	24.45	4-Limestone, Very
Shelly Sand					
35	-64.05	-65.30	1.25	33.00	3-Clean Sand
36	-65.30	-66.55	1.25	99.00	4-Limestone, Very
Shelly Sand					
37	-66.55	-67.80	1.25	25.00	3-Clean Sand
38	-67.80	-69.05	1.25	25.00	4-Limestone, Very
Shelly Sand					
39	-69.05	-70.30	1.25	25.00	3-Clean Sand
40	-70.30	-71.30	1.00	99.00	4-Limestone, Very
Shelly Sand					
41	-71.30	-71.30	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	49.70
18.00	12.00	47.70
18.00	14.00	45.70
18.00	16.00	43.70
18.00	18.00	41.70
18.00	20.00	39.70
18.00	22.00	37.70
18.00	24.00	35.70
18.00	26.00	33.70
18.00	28.00	31.70
18.00	30.00	29.70
18.00	32.00	27.70
18.00	34.00	25.70
18.00	36.00	23.70
18.00	38.00	21.70
18.00	40.00	19.70

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18.00	42.00	17.70
18.00	44.00	15.70
18.00	46.00	13.70
18.00	48.00	11.70
18.00	50.00	9.70
18.00	52.00	7.70
18.00	54.00	5.70
18.00	56.00	3.70
18.00	58.00	1.70
18.00	60.00	-0.30
18.00	62.00	-2.30
18.00	64.00	-4.30
18.00	66.00	-6.30
18.00	68.00	-8.30
18.00	70.00	-10.30
18.00	72.00	-12.30
18.00	74.00	-14.30
18.00	76.00	-16.30
18.00	78.00	-18.30
18.00	80.00	-20.30
18.00	82.00	-22.30
18.00	84.00	-24.30
18.00	86.00	-26.30
18.00	88.00	-28.30
18.00	90.00	-30.30
18.00	92.00	-32.30
18.00	94.00	-34.30
18.00	96.00	-36.30
18.00	98.00	-38.30
18.00	100.00	-40.30
18.00	102.00	-42.30
18.00	104.00	-44.30
18.00	106.00	-46.30
18.00	108.00	-48.30
18.00	110.00	-50.30
18.00	112.00	-52.30
18.00	114.00	-54.30
18.00	116.00	-56.30
18.00	118.00	-58.30
18.00	120.00	-60.30
18.00	122.00	-62.30
18.00	124.00	-64.30
18.00	126.00	-66.30
18.00	128.00	-68.30
18.00	130.00	-70.30

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	13.71	27.34	41.05	20.52	95.72
12.00	18.0	16.43	26.40	42.83	21.42	95.64
14.00	18.0	18.85	26.77	45.62	22.81	99.16
16.00	18.0	20.94	25.80	46.74	23.37	98.33
18.00	18.0	23.52	21.99	45.51	22.76	89.49
20.00	18.0	29.88	10.46	40.34	20.17	61.25
22.00	18.0	36.06	12.34	48.40	24.20	73.07
24.00	18.0	45.17	25.77	70.94	35.47	122.47
26.00	18.0	49.78	46.28	96.06	48.03	188.62
28.00	18.0	56.92	56.59	113.51	56.75	226.68
30.00	18.0	68.64	50.58	119.22	59.61	220.37
32.00	18.0	78.25	37.73	115.98	57.99	191.43
34.00	18.0	85.08	28.65	113.73	56.86	171.03
36.00	18.0	85.96	0.00	85.96	42.98	85.96
38.00	18.0	85.96	0.00	85.96	42.98	85.96
40.00	18.0	85.96	0.00	85.96	42.98	85.96
42.00	18.0	85.96	2.74	88.70	44.35	94.18
44.00	18.0	85.96	16.29	102.24	51.12	134.81
46.00	18.0	85.96	32.68	118.63	59.32	183.99
48.00	18.0	94.48	50.97	145.45	72.72	247.38
50.00	18.0	107.67	55.27	162.95	81.47	273.49
52.00	18.0	120.24	56.19	176.43	88.21	288.82
54.00	18.0	131.39	56.34	187.73	93.86	300.40
56.00	18.0	143.88	48.85	192.74	96.37	290.44
58.00	18.0	157.47	45.48	202.95	101.47	293.90
60.00	18.0	168.85	18.14	186.99	93.50	223.27
62.00	18.0	175.23	6.98	182.21	91.10	196.17
64.00	18.0	178.96	10.70	189.66	94.83	211.06
66.00	18.0	178.96	49.44	228.41	114.20	327.29
68.00	18.0	180.90	78.12	259.03	129.51	415.27
70.00	18.0	186.62	77.45	264.07	132.04	418.96
72.00	18.0	193.82	56.07	249.89	124.95	362.03
74.00	18.0	199.40	44.56	243.96	121.98	333.08
76.00	18.0	200.24	22.64	222.88	111.44	268.16
78.00	18.0	201.21	62.57	263.78	131.89	388.92
80.00	18.0	203.68	75.72	279.39	139.70	430.82
82.00	18.0	206.67	76.38	283.05	141.52	435.80
84.00	18.0	209.19	81.34	290.53	145.26	453.22
86.00	18.0	213.06	88.27	301.34	150.67	477.88

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88.00	18.0	221.84	95.62	317.46	158.73	508.71	
90.00	18.0	229.04	95.26	324.30	162.15	514.81	
92.00	18.0	235.96	82.37	318.33	159.16	483.07	
94.00	18.0	240.17	78.38	318.55	159.27	475.31	
96.00	18.0	244.17	80.93	325.10	162.55	486.97	
98.00	18.0	246.65	77.31	323.96	161.98	478.59	
100.00	18.0	250.69	87.41	338.11	169.05	512.93	
102.00	18.0	256.35	69.66	326.01	163.01	465.34	
104.00	18.0	259.49	84.75	344.24	172.12	513.74	
106.00	18.0	263.81	80.75	344.55	172.28	506.04	
108.00	18.0	270.32	75.30	345.62	172.81	496.22	
110.00	18.0	275.37	74.36	349.74	174.87	498.47	
112.00	18.0	278.10	75.27	353.36	176.68	503.89	
114.00	18.0	280.77	78.47	359.24	179.62	516.19	
116.00	18.0	283.42	83.52	366.94	183.47	533.99	
118.00	18.0	287.54	88.81	376.35	188.17	553.97	
120.00	18.0	291.74	94.21	385.95	192.98	574.37	
122.00	18.0	295.98	96.09	392.07	196.03	584.24	
124.00	18.0	304.30	94.92	399.22	199.61	589.06	
126.00	18.0	***** Not enough soil data *****					
128.00	18.0	0.00	0.00	0.00	0.00	0.00	
130.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B4_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 4-2-14, Boring Number: WL1-B4
 Station number: 663+16 Offset: 150 LT

Ground Elevation: 53.900(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	9.00	3- Clean sand
2	2.00	9.00	3- Clean sand
3	4.00	10.00	3- Clean sand
4	6.00	10.00	3- Clean sand
5	8.00	6.00	3- Clean sand
6	10.00	3.00	2- Clay and silty sand
7	11.25	3.00	3- Clean sand
8	12.50	5.00	2- Clay and silty sand
9	15.00	8.00	2- Clay and silty sand
10	17.50	14.00	2- Clay and silty sand
11	20.00	13.00	2- Clay and silty sand
12	22.50	6.00	2- Clay and silty sand
13	25.00	16.00	2- Clay and silty sand
14	27.50	19.00	2- Clay and silty sand
15	30.00	12.00	2- Clay and silty sand
16	32.50	9.00	1- Plastic Clay
17	33.75	4.00	2- Clay and silty sand

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18	35.00	4.00	1- Plastic Clay
19	37.50	8.00	2- Clay and silty sand
20	38.75	0.00	3- Clean sand
21	40.00	0.00	2- Clay and silty sand
22	42.50	0.00	2- Clay and silty sand
23	45.00	0.00	2- Clay and silty sand
24	47.50	0.00	2- Clay and silty sand
25	50.00	0.00	2- Clay and silty sand
26	52.50	0.00	2- Clay and silty sand
27	55.00	0.00	2- Clay and silty sand
28	56.25	0.00	3- Clean sand
29	57.50	18.00	2- Clay and silty sand
30	60.00	8.00	2- Clay and silty sand
31	61.25	0.00	3- Clean sand
32	62.50	0.00	2- Clay and silty sand
33	65.00	0.00	4- Lime Stone/Very shelly sand
34	66.25	0.00	3- Clean sand
35	67.50	9.00	4- Lime Stone/Very shelly sand
36	70.00	17.00	4- Lime Stone/Very shelly sand
37	72.50	28.00	4- Lime Stone/Very shelly sand
38	73.75	28.00	3- Clean sand
39	75.00	99.00	4- Lime Stone/Very shelly sand
40	77.50	99.00	4- Lime Stone/Very shelly sand
41	78.75	22.00	3- Clean sand
42	80.00	22.00	4- Lime Stone/Very shelly sand
43	82.50	32.00	4- Lime Stone/Very shelly sand
44	85.00	21.00	4- Lime Stone/Very shelly sand
45	87.50	13.00	4- Lime Stone/Very shelly sand
46	90.00	21.00	4- Lime Stone/Very shelly sand
47	92.50	13.00	4- Lime Stone/Very shelly sand
48	93.75	13.00	3- Clean sand
49	95.00	99.00	4- Lime Stone/Very shelly sand
50	96.25	9.00	3- Clean sand
51	97.50	9.00	4- Lime Stone/Very shelly sand
52	98.75	4.00	3- Clean sand
53	100.00	4.00	4- Lime Stone/Very shelly sand
54	102.50	3.00	4- Lime Stone/Very shelly sand
55	105.00	2.00	4- Lime Stone/Very shelly sand
56	106.25	2.00	3- Clean sand
57	107.50	5.00	4- Lime Stone/Very shelly sand
58	110.00	6.00	4- Lime Stone/Very shelly sand
59	112.50	11.00	4- Lime Stone/Very shelly sand
60	115.00	8.00	4- Lime Stone/Very shelly sand
61	117.50	6.00	4- Lime Stone/Very shelly sand
62	120.00	12.00	4- Lime Stone/Very shelly sand
63	121.25	12.00	3- Clean sand
64	122.50	31.00	4- Lime Stone/Very shelly sand
65	123.75	31.00	3- Clean sand

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66	125.00	99.00	4- Lime Stone/Very shelly sand
67	127.50	99.00	4- Lime Stone/Very shelly sand
68	130.00	99.00	4- Lime Stone/Very shelly sand
69	132.50	99.00	4- Lime Stone/Very shelly sand
70	135.00	99.00	4- Lime Stone/Very shelly sand
71	137.50	70.00	4- Lime Stone/Very shelly sand
72	140.00	99.00	4- Lime Stone/Very shelly sand
73	142.50	50.00	4- Lime Stone/Very shelly sand
74	143.75	13.00	3- Clean sand
75	145.00	13.00	4- Lime Stone/Very shelly sand
76	146.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	53.90	43.90	10.00	8.80	3-Clean Sand
2	43.90	42.65	1.25	3.00	2-Clay and Silty Sand
3	42.65	41.40	1.25	3.00	3-Clean Sand
4	41.40	21.40	20.00	11.63	2-Clay and Silty Sand
5	21.40	20.15	1.25	9.00	1-Plastic Clay
6	20.15	18.90	1.25	4.00	2-Clay and Silty Sand
7	18.90	16.40	2.50	4.00	1-Plastic Clay
8	16.40	15.15	1.25	8.00	2-Clay and Silty Sand
9	15.15	13.90	1.25	0.00	3-Clean Sand
10	13.90	-2.35	16.25	0.00	2-Clay and Silty Sand
11	-2.35	-3.60	1.25	0.00	3-Clean Sand
12	-3.60	-7.35	3.75	14.67	2-Clay and Silty Sand
13	-7.35	-8.60	1.25	0.00	3-Clean Sand
14	-8.60	-11.10	2.50	0.00	2-Clay and Silty Sand
15	-11.10	-12.35	1.25	0.00	4-Limestone, Very Shelly Sand
16	-12.35	-13.60	1.25	0.00	3-Clean Sand
17	-13.60	-19.85	6.25	16.00	4-Limestone, Very Shelly Sand
18	-19.85	-21.10	1.25	28.00	3-Clean Sand
19	-21.10	-24.85	3.75	99.00	4-Limestone, Very Shelly Sand
20	-24.85	-26.10	1.25	22.00	3-Clean Sand
21	-26.10	-39.85	13.75	21.00	4-Limestone, Very Shelly Sand
22	-39.85	-41.10	1.25	13.00	3-Clean Sand

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23	-41.10	-42.35	1.25	99.00	4-Limestone, Very
Shelly Sand					
24	-42.35	-43.60	1.25	9.00	3-Clean Sand
25	-43.60	-44.85	1.25	9.00	4-Limestone, Very
Shelly Sand					
26	-44.85	-46.10	1.25	4.00	3-Clean Sand
27	-46.10	-52.35	6.25	3.20	4-Limestone, Very
Shelly Sand					
28	-52.35	-53.60	1.25	2.00	3-Clean Sand
29	-53.60	-67.35	13.75	7.64	4-Limestone, Very
Shelly Sand					
30	-67.35	-68.60	1.25	12.00	3-Clean Sand
31	-68.60	-69.85	1.25	31.00	4-Limestone, Very
Shelly Sand					
32	-69.85	-71.10	1.25	31.00	3-Clean Sand
33	-71.10	-89.85	18.75	91.87	4-Limestone, Very
Shelly Sand					
34	-89.85	-91.10	1.25	13.00	3-Clean Sand
35	-91.10	-92.10	1.00	13.00	4-Limestone, Very
Shelly Sand					
36	-92.10	-92.10	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	43.90
18.00	12.00	41.90
18.00	14.00	39.90
18.00	16.00	37.90
18.00	18.00	35.90
18.00	20.00	33.90
18.00	22.00	31.90
18.00	24.00	29.90
18.00	26.00	27.90
18.00	28.00	25.90
18.00	30.00	23.90
18.00	32.00	21.90
18.00	34.00	19.90
18.00	36.00	17.90
18.00	38.00	15.90
18.00	40.00	13.90

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18.00	42.00	11.90
18.00	44.00	9.90
18.00	46.00	7.90
18.00	48.00	5.90
18.00	50.00	3.90
18.00	52.00	1.90
18.00	54.00	-0.10
18.00	56.00	-2.10
18.00	58.00	-4.10
18.00	60.00	-6.10
18.00	62.00	-8.10
18.00	64.00	-10.10
18.00	66.00	-12.10
18.00	68.00	-14.10
18.00	70.00	-16.10
18.00	72.00	-18.10
18.00	74.00	-20.10
18.00	76.00	-22.10
18.00	78.00	-24.10
18.00	80.00	-26.10
18.00	82.00	-28.10
18.00	84.00	-30.10
18.00	86.00	-32.10
18.00	88.00	-34.10
18.00	90.00	-36.10
18.00	92.00	-38.10
18.00	94.00	-40.10
18.00	96.00	-42.10
18.00	98.00	-44.10
18.00	100.00	-46.10
18.00	102.00	-48.10
18.00	104.00	-50.10
18.00	106.00	-52.10
18.00	108.00	-54.10
18.00	110.00	-56.10
18.00	112.00	-58.10
18.00	114.00	-60.10
18.00	116.00	-62.10
18.00	118.00	-64.10
18.00	120.00	-66.10
18.00	122.00	-68.10
18.00	124.00	-70.10
18.00	126.00	-72.10
18.00	128.00	-74.10
18.00	130.00	-76.10
18.00	132.00	-78.10
18.00	134.00	-80.10
18.00	136.00	-82.10

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18.00	138.00	-84.10
18.00	140.00	-86.10
18.00	142.00	-88.10
18.00	144.00	-90.10
18.00	146.00	-92.10
18.00	148.00	-94.10
18.00	150.00	-96.10

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	11.17	14.79	25.96	12.98	55.55
12.00	18.0	11.53	15.33	26.86	13.43	57.51
14.00	18.0	15.08	16.25	31.33	15.67	63.84
16.00	18.0	20.42	16.26	36.67	18.34	69.19
18.00	18.0	28.18	14.03	42.21	21.10	70.26
20.00	18.0	36.30	13.58	49.88	24.94	77.04
22.00	18.0	42.66	16.17	58.83	29.41	91.16
24.00	18.0	47.96	19.53	67.49	33.74	106.54
26.00	18.0	56.92	19.57	76.49	38.24	115.63
28.00	18.0	67.21	17.00	84.21	42.10	118.20
30.00	18.0	75.92	13.14	89.06	44.53	115.34
32.00	18.0	83.01	11.21	94.23	47.11	116.65
34.00	18.0	86.75	2.13	88.87	44.44	93.13
36.00	18.0	87.27	9.37	96.64	48.32	115.38
38.00	18.0	91.04	6.55	97.59	48.79	110.68
40.00	18.0	91.62	4.15	95.78	47.89	104.08
42.00	18.0	91.62	2.32	93.94	46.97	98.58
44.00	18.0	91.62	1.23	92.85	46.43	95.31
46.00	18.0	91.62	0.93	92.55	46.28	94.41
48.00	18.0	91.62	0.83	92.45	46.23	94.12
50.00	18.0	91.62	0.11	91.73	45.87	91.96
52.00	18.0	91.62	1.02	92.64	46.32	94.68
54.00	18.0	91.62	5.19	96.81	48.41	107.19
56.00	18.0	91.62	6.91	98.53	49.27	112.35
58.00	18.0	97.26	5.33	102.60	51.30	113.26
60.00	18.0	104.48	3.42	107.90	53.95	114.74
62.00	18.0	106.10	0.23	106.33	53.17	106.79
64.00	18.0	106.10	7.02	113.13	56.56	127.18
66.00	18.0	106.10	17.30	123.40	61.70	158.00

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68.00	18.0	106.86	34.50	141.36	70.68	210.36	
70.00	18.0	108.18	39.80	147.98	73.99	227.57	
72.00	18.0	109.83	55.03	164.86	82.43	274.91	
74.00	18.0	117.88	86.07	203.95	101.98	376.10	
76.00	18.0	125.23	85.64	210.87	105.43	382.16	
78.00	18.0	132.23	86.84	219.07	109.53	392.75	
80.00	18.0	137.79	88.58	226.36	113.18	403.52	
82.00	18.0	141.65	82.07	223.73	111.86	387.88	
84.00	18.0	146.01	76.03	222.04	111.02	374.10	
86.00	18.0	149.18	71.22	220.40	110.20	362.84	
88.00	18.0	151.41	66.23	217.64	108.82	350.11	
90.00	18.0	154.06	70.54	224.61	112.30	365.69	
92.00	18.0	156.71	68.44	225.15	112.57	362.02	
94.00	18.0	159.48	59.01	218.49	109.25	336.52	
96.00	18.0	163.90	35.87	199.77	99.88	271.50	
98.00	18.0	166.71	4.09	170.81	85.40	178.99	
100.00	18.0	167.05	25.45	192.50	96.25	243.39	
102.00	18.0	167.05	21.12	188.17	94.08	230.40	
104.00	18.0	167.05	19.49	186.55	93.27	225.54	
106.00	18.0	167.05	20.15	187.20	93.60	227.50	
108.00	18.0	167.47	16.35	183.82	91.91	216.52	
110.00	18.0	168.27	17.05	185.32	92.66	219.42	
112.00	18.0	169.31	17.88	187.19	93.60	222.95	
114.00	18.0	170.61	19.32	189.93	94.96	228.56	
116.00	18.0	171.40	24.11	195.51	97.76	243.74	
118.00	18.0	172.29	37.64	209.93	104.97	285.22	
120.00	18.0	173.68	56.90	230.58	115.29	344.39	
122.00	18.0	177.51	73.18	250.69	125.35	397.05	
124.00	18.0	183.98	97.56	281.54	140.77	476.66	
126.00	18.0	191.36	107.08	298.44	149.22	512.60	
128.00	18.0	197.50	112.02	309.53	154.76	533.58	
130.00	18.0	203.19	122.19	325.39	162.69	569.78	
132.00	18.0	208.98	136.90	345.88	172.94	619.67	
134.00	18.0	215.22	155.36	370.58	185.29	681.29	
136.00	18.0	222.42	160.84	383.26	191.63	704.94	
138.00	18.0	229.62	159.36	388.98	194.49	707.70	
140.00	18.0	236.82	137.32	374.14	187.07	648.78	
142.00	18.0	***** Not enough soil data *****					
144.00	18.0	0.00	0.00	0.00	0.00	0.00	
146.00	18.0	0.00	0.00	0.00	0.00	0.00	
148.00	18.0	0.00	0.00	0.00	0.00	0.00	
150.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA,

WL1-B4_18-PCP.txt

AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.

3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B5_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 5-21-14, Boring Number: WL1-B5
 Station number: 663+08 Offset: 26 RT

Ground Elevation: 60.100(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	6.00	3- Clean sand
2	2.00	6.00	3- Clean sand
3	4.00	9.00	3- Clean sand
4	6.00	8.00	3- Clean sand
5	8.00	6.00	3- Clean sand
6	10.00	6.00	3- Clean sand
7	11.25	4.00	2- Clay and silty sand
8	12.50	4.00	3- Clean sand
9	15.00	4.00	3- Clean sand
10	16.25	4.00	2- Clay and silty sand
11	17.50	6.00	3- Clean sand
12	20.00	8.00	2- Clay and silty sand
13	22.50	11.00	2- Clay and silty sand
14	25.00	10.00	2- Clay and silty sand
15	27.50	11.00	2- Clay and silty sand
16	30.00	6.00	1- Plastic Clay
17	32.50	25.00	3- Clean sand

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18	33.75	0.00	2- Clay and silty sand
19	35.00	0.00	3- Clean sand
20	37.50	0.00	2- Clay and silty sand
21	38.75	0.00	3- Clean sand
22	40.00	9.00	2- Clay and silty sand
23	42.50	8.00	2- Clay and silty sand
24	45.00	6.00	2- Clay and silty sand
25	47.50	8.00	2- Clay and silty sand
26	48.75	8.00	3- Clean sand
27	50.00	24.00	2- Clay and silty sand
28	51.25	24.00	3- Clean sand
29	52.50	99.00	2- Clay and silty sand
30	55.00	57.00	2- Clay and silty sand
31	56.25	24.00	3- Clean sand
32	57.50	24.00	2- Clay and silty sand
33	58.75	9.00	3- Clean sand
34	60.00	9.00	2- Clay and silty sand
35	61.25	9.00	3- Clean sand
36	62.50	35.00	2- Clay and silty sand
37	63.75	35.00	3- Clean sand
38	65.00	99.00	2- Clay and silty sand
39	67.50	99.00	2- Clay and silty sand
40	68.75	13.00	3- Clean sand
41	70.00	13.00	2- Clay and silty sand
42	72.50	8.00	4- Lime Stone/Very shelly sand
43	75.00	22.00	4- Lime Stone/Very shelly sand
44	77.50	10.00	4- Lime Stone/Very shelly sand
45	80.00	12.00	4- Lime Stone/Very shelly sand
46	82.50	13.00	4- Lime Stone/Very shelly sand
47	85.00	23.00	4- Lime Stone/Very shelly sand
48	87.50	29.00	4- Lime Stone/Very shelly sand
49	90.00	28.00	4- Lime Stone/Very shelly sand
50	92.50	25.00	4- Lime Stone/Very shelly sand
51	95.00	17.00	4- Lime Stone/Very shelly sand
52	97.50	14.00	4- Lime Stone/Very shelly sand
53	100.00	12.00	4- Lime Stone/Very shelly sand
54	102.50	16.00	4- Lime Stone/Very shelly sand
55	105.00	23.00	4- Lime Stone/Very shelly sand
56	107.50	16.00	4- Lime Stone/Very shelly sand
57	110.00	15.00	4- Lime Stone/Very shelly sand
58	111.25	15.00	3- Clean sand
59	112.50	52.00	4- Lime Stone/Very shelly sand
60	115.00	99.00	4- Lime Stone/Very shelly sand
61	116.25	27.00	3- Clean sand
62	117.50	27.00	4- Lime Stone/Very shelly sand
63	120.00	26.00	4- Lime Stone/Very shelly sand
64	121.25	26.00	3- Clean sand
65	122.50	99.00	4- Lime Stone/Very shelly sand

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66	123.75	29.00	3- Clean sand
67	125.00	29.00	4- Lime Stone/Very shelly sand
68	126.25	29.00	3- Clean sand
69	127.50	44.00	4- Lime Stone/Very shelly sand
70	130.00	99.00	4- Lime Stone/Very shelly sand
71	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	60.10	48.85	11.25	6.89	3-Clean Sand
2	48.85	47.60	1.25	4.00	2-Clay and Silty Sand
3	47.60	43.85	3.75	4.00	3-Clean Sand
4	43.85	42.60	1.25	4.00	2-Clay and Silty Sand
5	42.60	40.10	2.50	6.00	3-Clean Sand
6	40.10	30.10	10.00	10.00	2-Clay and Silty Sand
7	30.10	27.60	2.50	6.00	1-Plastic Clay
8	27.60	26.35	1.25	25.00	3-Clean Sand
9	26.35	25.10	1.25	0.00	2-Clay and Silty Sand
10	25.10	22.60	2.50	0.00	3-Clean Sand
11	22.60	21.35	1.25	0.00	2-Clay and Silty Sand
12	21.35	20.10	1.25	0.00	3-Clean Sand
13	20.10	11.35	8.75	7.71	2-Clay and Silty Sand
14	11.35	10.10	1.25	8.00	3-Clean Sand
15	10.10	8.85	1.25	24.00	2-Clay and Silty Sand
16	8.85	7.60	1.25	24.00	3-Clean Sand
17	7.60	3.85	3.75	85.00	2-Clay and Silty Sand
18	3.85	2.60	1.25	24.00	3-Clean Sand
19	2.60	1.35	1.25	24.00	2-Clay and Silty Sand
20	1.35	0.10	1.25	9.00	3-Clean Sand
21	0.10	-1.15	1.25	9.00	2-Clay and Silty Sand
22	-1.15	-2.40	1.25	9.00	3-Clean Sand
23	-2.40	-3.65	1.25	35.00	2-Clay and Silty Sand
24	-3.65	-4.90	1.25	35.00	3-Clean Sand
25	-4.90	-8.65	3.75	99.00	2-Clay and Silty Sand
26	-8.65	-9.90	1.25	13.00	3-Clean Sand
27	-9.90	-12.40	2.50	13.00	2-Clay and Silty Sand
28	-12.40	-51.15	38.75	17.77	4-Limestone, Very Shelly Sand
29	-51.15	-52.40	1.25	15.00	3-Clean Sand
30	-52.40	-56.15	3.75	67.67	4-Limestone, Very

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Shelly Sand					
31	-56.15	-57.40	1.25	27.00	3-Clean Sand
32	-57.40	-61.15	3.75	26.67	4-Limestone, Very
Shelly Sand					
33	-61.15	-62.40	1.25	26.00	3-Clean Sand
34	-62.40	-63.65	1.25	99.00	4-Limestone, Very
Shelly Sand					
35	-63.65	-64.90	1.25	29.00	3-Clean Sand
36	-64.90	-66.15	1.25	29.00	4-Limestone, Very
Shelly Sand					
37	-66.15	-67.40	1.25	29.00	3-Clean Sand
38	-67.40	-70.90	3.50	59.71	4-Limestone, Very
Shelly Sand					
39	-70.90	-70.90	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	50.10
18.00	12.00	48.10
18.00	14.00	46.10
18.00	16.00	44.10
18.00	18.00	42.10
18.00	20.00	40.10
18.00	22.00	38.10
18.00	24.00	36.10
18.00	26.00	34.10
18.00	28.00	32.10
18.00	30.00	30.10
18.00	32.00	28.10
18.00	34.00	26.10
18.00	36.00	24.10
18.00	38.00	22.10
18.00	40.00	20.10
18.00	42.00	18.10
18.00	44.00	16.10
18.00	46.00	14.10
18.00	48.00	12.10
18.00	50.00	10.10
18.00	52.00	8.10
18.00	54.00	6.10

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18.00	56.00	4.10
18.00	58.00	2.10
18.00	60.00	0.10
18.00	62.00	-1.90
18.00	64.00	-3.90
18.00	66.00	-5.90
18.00	68.00	-7.90
18.00	70.00	-9.90
18.00	72.00	-11.90
18.00	74.00	-13.90
18.00	76.00	-15.90
18.00	78.00	-17.90
18.00	80.00	-19.90
18.00	82.00	-21.90
18.00	84.00	-23.90
18.00	86.00	-25.90
18.00	88.00	-27.90
18.00	90.00	-29.90
18.00	92.00	-31.90
18.00	94.00	-33.90
18.00	96.00	-35.90
18.00	98.00	-37.90
18.00	100.00	-39.90
18.00	102.00	-41.90
18.00	104.00	-43.90
18.00	106.00	-45.90
18.00	108.00	-47.90
18.00	110.00	-49.90
18.00	112.00	-51.90
18.00	114.00	-53.90
18.00	116.00	-55.90
18.00	118.00	-57.90
18.00	120.00	-59.90
18.00	122.00	-61.90
18.00	124.00	-63.90
18.00	126.00	-65.90
18.00	128.00	-67.90
18.00	130.00	-69.90

Driven Pile Capacity:

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Test Pile Length	Pile Width	Ultimate Side Friction	Mobilized End Bearing	Estimated Davisson Capacity	Allowable Pile Capacity	Ultimate Pile Capacity
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(ft)	(in)	(tons)	(tons)	(tons)	(tons)	(tons)
10.00	18.0	9.90	11.48	21.37	10.69	44.33
12.00	18.0	10.43	0.68	11.11	5.55	12.47
14.00	18.0	10.43	10.44	20.86	10.43	41.73
16.00	18.0	10.43	10.91	21.34	10.67	43.17
18.00	18.0	11.47	11.75	23.22	11.61	46.73
20.00	18.0	15.26	14.88	30.15	15.07	59.92
22.00	18.0	21.14	14.66	35.79	17.90	65.10
24.00	18.0	27.85	14.57	42.42	21.21	71.56
26.00	18.0	34.30	14.72	49.02	24.51	78.45
28.00	18.0	41.00	22.30	63.30	31.65	107.90
30.00	18.0	46.50	20.72	67.22	33.61	108.67
32.00	18.0	52.07	16.09	68.16	34.08	100.35
34.00	18.0	55.98	0.07	56.05	28.02	56.18
36.00	18.0	55.98	11.17	67.15	33.57	89.48
38.00	18.0	55.98	12.49	68.47	34.24	93.46
40.00	18.0	57.79	12.81	70.60	35.30	96.23
42.00	18.0	63.33	12.69	76.02	38.01	101.39
44.00	18.0	68.27	12.45	80.73	40.36	105.64
46.00	18.0	70.77	16.77	87.54	43.77	121.07
48.00	18.0	75.57	29.18	104.75	52.37	163.10
50.00	18.0	83.08	40.09	123.17	61.59	203.34
52.00	18.0	92.61	44.91	137.52	68.76	227.34
54.00	18.0	107.92	42.57	150.49	75.24	235.62
56.00	18.0	121.85	37.56	159.41	79.70	234.53
58.00	18.0	131.14	29.48	160.62	80.31	219.57
60.00	18.0	136.14	53.99	190.13	95.07	298.11
62.00	18.0	141.01	60.19	201.20	100.60	321.59
64.00	18.0	153.40	59.89	213.28	106.64	333.06
66.00	18.0	167.51	55.90	223.41	111.70	335.21
68.00	18.0	183.05	50.28	233.33	116.67	333.90
70.00	18.0	189.41	38.31	227.72	113.86	304.33
72.00	18.0	194.64	36.27	230.90	115.45	303.44
74.00	18.0	196.46	51.25	247.71	123.86	350.21
76.00	18.0	199.35	45.95	245.30	122.65	337.21
78.00	18.0	201.25	43.39	244.64	122.32	331.43
80.00	18.0	202.92	46.25	249.17	124.58	341.67
82.00	18.0	204.65	55.35	260.00	130.00	370.70
84.00	18.0	206.91	66.31	273.22	136.61	405.83
86.00	18.0	210.26	72.70	282.96	141.48	428.35
88.00	18.0	214.36	73.33	287.69	143.84	434.35
90.00	18.0	218.57	71.98	290.55	145.27	434.50
92.00	18.0	222.55	69.12	291.68	145.84	429.92
94.00	18.0	226.01	65.86	291.88	145.94	423.60
96.00	18.0	228.62	63.46	292.08	146.04	419.00
98.00	18.0	230.80	61.96	292.76	146.38	416.69
100.00	18.0	232.71	62.94	295.65	147.82	421.52

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102.00	18.0	234.73	62.57	297.31	148.65	422.45	
104.00	18.0	237.33	58.86	296.20	148.10	413.92	
106.00	18.0	240.55	53.89	294.44	147.22	402.22	
108.00	18.0	243.16	66.58	309.74	154.87	442.91	
110.00	18.0	245.45	87.64	333.09	166.55	508.37	
112.00	18.0	249.52	94.95	344.46	172.23	534.36	
114.00	18.0	256.60	92.96	349.56	174.78	535.48	
116.00	18.0	263.89	88.52	352.40	176.20	529.44	
118.00	18.0	269.45	95.11	364.56	182.28	554.77	
120.00	18.0	273.15	96.66	369.81	184.90	563.12	
122.00	18.0	279.58	103.76	383.35	191.67	590.88	
124.00	18.0	287.25	102.76	390.01	195.00	595.52	
126.00	18.0	***** Not enough soil data *****					
128.00	18.0	0.00	0.00	0.00	0.00	0.00	
130.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B6_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-3-14, Boring Number: WL1-B6
 Station number: 664+35 Offset: 148 LT

Ground Elevation: 55.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	5.00	3- Clean sand
2	2.00	5.00	3- Clean sand
3	4.00	6.00	3- Clean sand
4	6.00	12.00	2- Clay and silty sand
5	8.00	11.00	2- Clay and silty sand
6	10.00	8.00	3- Clean sand
7	12.50	9.00	3- Clean sand
8	15.00	7.00	2- Clay and silty sand
9	17.50	9.00	2- Clay and silty sand
10	20.00	7.00	3- Clean sand
11	22.50	13.00	3- Clean sand
12	25.00	13.00	3- Clean sand
13	27.50	18.00	3- Clean sand
14	30.00	21.00	3- Clean sand
15	32.50	22.00	3- Clean sand
16	35.00	23.00	3- Clean sand
17	37.50	8.00	2- Clay and silty sand

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18	40.00	7.00	2- Clay and silty sand
19	41.25	4.00	3- Clean sand
20	42.50	4.00	2- Clay and silty sand
21	45.00	4.00	2- Clay and silty sand
22	47.50	3.00	2- Clay and silty sand
23	48.75	3.00	3- Clean sand
24	50.00	23.00	2- Clay and silty sand
25	51.25	23.00	3- Clean sand
26	52.50	99.00	2- Clay and silty sand
27	55.00	44.00	2- Clay and silty sand
28	57.50	99.00	2- Clay and silty sand
29	60.00	99.00	2- Clay and silty sand
30	62.50	99.00	2- Clay and silty sand
31	65.00	99.00	4- Lime Stone/Very shelly sand
32	67.50	12.00	2- Clay and silty sand
33	70.00	13.00	2- Clay and silty sand
34	72.50	10.00	2- Clay and silty sand
35	75.00	12.00	3- Clean sand
36	77.50	6.00	4- Lime Stone/Very shelly sand
37	80.00	16.00	4- Lime Stone/Very shelly sand
38	81.25	16.00	3- Clean sand
39	82.50	99.00	4- Lime Stone/Very shelly sand
40	83.75	33.00	3- Clean sand
41	85.00	33.00	4- Lime Stone/Very shelly sand
42	87.50	26.00	4- Lime Stone/Very shelly sand
43	90.00	38.00	4- Lime Stone/Very shelly sand
44	92.50	20.00	4- Lime Stone/Very shelly sand
45	95.00	29.00	4- Lime Stone/Very shelly sand
46	96.25	29.00	3- Clean sand
47	97.50	99.00	4- Lime Stone/Very shelly sand
48	98.75	17.00	3- Clean sand
49	100.00	17.00	4- Lime Stone/Very shelly sand
50	102.50	15.00	4- Lime Stone/Very shelly sand
51	105.00	22.00	4- Lime Stone/Very shelly sand
52	107.50	19.00	4- Lime Stone/Very shelly sand
53	110.00	17.00	4- Lime Stone/Very shelly sand
54	112.50	21.00	4- Lime Stone/Very shelly sand
55	115.00	28.00	4- Lime Stone/Very shelly sand
56	117.50	36.00	4- Lime Stone/Very shelly sand
57	120.00	24.00	4- Lime Stone/Very shelly sand
58	121.25	24.00	3- Clean sand
59	122.50	99.00	4- Lime Stone/Very shelly sand
60	123.75	30.00	3- Clean sand
61	125.00	30.00	4- Lime Stone/Very shelly sand
62	126.00	0.00	5- Cavity layer

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 Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	55.00	49.00	6.00	5.33	3-Clean Sand
2	49.00	45.00	4.00	11.50	2-Clay and Silty Sand
3	45.00	40.00	5.00	8.50	3-Clean Sand
4	40.00	35.00	5.00	8.00	2-Clay and Silty Sand
5	35.00	17.50	17.50	16.71	3-Clean Sand
6	17.50	13.75	3.75	7.67	2-Clay and Silty Sand
7	13.75	12.50	1.25	4.00	3-Clean Sand
8	12.50	6.25	6.25	3.80	2-Clay and Silty Sand
9	6.25	5.00	1.25	3.00	3-Clean Sand
10	5.00	3.75	1.25	23.00	2-Clay and Silty Sand
11	3.75	2.50	1.25	23.00	3-Clean Sand
12	2.50	-10.00	12.50	88.00	2-Clay and Silty Sand
13	-10.00	-12.50	2.50	99.00	4-Limestone, Very
Shelly Sand					
14	-12.50	-20.00	7.50	11.67	2-Clay and Silty Sand
15	-20.00	-22.50	2.50	12.00	3-Clean Sand
16	-22.50	-26.25	3.75	9.33	4-Limestone, Very
Shelly Sand					
17	-26.25	-27.50	1.25	16.00	3-Clean Sand
18	-27.50	-28.75	1.25	99.00	4-Limestone, Very
Shelly Sand					
19	-28.75	-30.00	1.25	33.00	3-Clean Sand
20	-30.00	-41.25	11.25	29.22	4-Limestone, Very
Shelly Sand					
21	-41.25	-42.50	1.25	29.00	3-Clean Sand
22	-42.50	-43.75	1.25	99.00	4-Limestone, Very
Shelly Sand					
23	-43.75	-45.00	1.25	17.00	3-Clean Sand
24	-45.00	-66.25	21.25	22.00	4-Limestone, Very
Shelly Sand					
25	-66.25	-67.50	1.25	24.00	3-Clean Sand
26	-67.50	-68.75	1.25	99.00	4-Limestone, Very
Shelly Sand					
27	-68.75	-70.00	1.25	30.00	3-Clean Sand
28	-70.00	-71.00	1.00	30.00	4-Limestone, Very
Shelly Sand					
29	-71.00	-71.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	45.00
18.00	12.00	43.00
18.00	14.00	41.00
18.00	16.00	39.00
18.00	18.00	37.00
18.00	20.00	35.00
18.00	22.00	33.00
18.00	24.00	31.00
18.00	26.00	29.00
18.00	28.00	27.00
18.00	30.00	25.00
18.00	32.00	23.00
18.00	34.00	21.00
18.00	36.00	19.00
18.00	38.00	17.00
18.00	40.00	15.00
18.00	42.00	13.00
18.00	44.00	11.00
18.00	46.00	9.00
18.00	48.00	7.00
18.00	50.00	5.00
18.00	52.00	3.00
18.00	54.00	1.00
18.00	56.00	-1.00
18.00	58.00	-3.00
18.00	60.00	-5.00
18.00	62.00	-7.00
18.00	64.00	-9.00
18.00	66.00	-11.00
18.00	68.00	-13.00
18.00	70.00	-15.00
18.00	72.00	-17.00
18.00	74.00	-19.00
18.00	76.00	-21.00
18.00	78.00	-23.00
18.00	80.00	-25.00
18.00	82.00	-27.00
18.00	84.00	-29.00
18.00	86.00	-31.00
18.00	88.00	-33.00

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18.00	90.00	-35.00
18.00	92.00	-37.00
18.00	94.00	-39.00
18.00	96.00	-41.00
18.00	98.00	-43.00
18.00	100.00	-45.00
18.00	102.00	-47.00
18.00	104.00	-49.00
18.00	106.00	-51.00
18.00	108.00	-53.00
18.00	110.00	-55.00
18.00	112.00	-57.00
18.00	114.00	-59.00
18.00	116.00	-61.00
18.00	118.00	-63.00
18.00	120.00	-65.00
18.00	122.00	-67.00
18.00	124.00	-69.00
18.00	126.00	-71.00
18.00	128.00	-73.00
18.00	130.00	-75.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	19.24	19.33	38.57	19.29	77.24
12.00	18.0	21.62	17.48	39.10	19.55	74.07
14.00	18.0	24.62	16.76	41.38	20.69	74.89
16.00	18.0	29.13	14.38	43.51	21.76	72.26
18.00	18.0	33.18	17.12	50.30	25.15	84.54
20.00	18.0	38.05	26.51	64.55	32.28	117.56
22.00	18.0	40.38	27.11	67.49	33.75	121.72
24.00	18.0	43.02	29.07	72.09	36.04	130.22
26.00	18.0	45.40	32.87	78.27	39.13	144.00
28.00	18.0	48.40	38.53	86.93	43.47	164.00
30.00	18.0	52.19	45.54	97.74	48.87	188.82
32.00	18.0	57.43	48.77	106.20	53.10	203.73
34.00	18.0	64.10	44.39	108.48	54.24	197.26
36.00	18.0	70.14	35.88	106.03	53.01	177.79
38.00	18.0	82.40	6.72	89.13	44.56	102.57

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40.00	18.0	87.54	6.20	93.74	46.87	106.14
42.00	18.0	88.98	0.00	88.98	44.49	88.98
44.00	18.0	88.98	14.28	103.25	51.63	131.81
46.00	18.0	88.98	16.59	105.57	52.79	138.76
48.00	18.0	88.98	24.25	113.22	56.61	161.72
50.00	18.0	92.78	34.48	127.26	63.63	196.23
52.00	18.0	101.93	38.61	140.53	70.27	217.75
54.00	18.0	116.35	42.91	159.25	79.63	245.07
56.00	18.0	129.06	48.25	177.32	88.66	273.82
58.00	18.0	141.78	58.49	200.26	100.13	317.24
60.00	18.0	156.61	77.73	234.34	117.17	389.79
62.00	18.0	172.32	86.25	258.57	129.29	431.08
64.00	18.0	186.29	75.18	261.47	130.73	411.83
66.00	18.0	202.20	58.01	260.21	130.10	376.22
68.00	18.0	209.56	17.78	227.34	113.67	262.90
70.00	18.0	216.37	18.79	235.16	117.58	272.75
72.00	18.0	222.57	20.92	243.49	121.74	285.32
74.00	18.0	227.84	24.25	252.09	126.05	300.60
76.00	18.0	233.74	41.41	275.15	137.58	357.97
78.00	18.0	235.21	46.72	281.93	140.97	375.36
80.00	18.0	236.58	50.75	287.34	143.67	388.84
82.00	18.0	241.10	69.67	310.77	155.39	450.12
84.00	18.0	249.12	100.14	349.25	174.63	549.53
86.00	18.0	254.78	104.10	358.88	179.44	567.08
88.00	18.0	258.95	98.14	357.09	178.54	553.36
90.00	18.0	263.89	96.41	360.30	180.15	553.12
92.00	18.0	268.48	96.52	365.00	182.50	558.05
94.00	18.0	271.82	97.91	369.73	184.86	565.55
96.00	18.0	276.78	90.46	367.24	183.62	548.16
98.00	18.0	283.71	67.88	351.59	175.80	487.36
100.00	18.0	288.61	76.74	365.35	182.68	518.84
102.00	18.0	291.02	74.74	365.76	182.88	515.25
104.00	18.0	293.50	71.92	365.42	182.71	509.26
106.00	18.0	296.62	69.43	366.05	183.03	504.91
108.00	18.0	299.54	67.98	367.52	183.76	503.47
110.00	18.0	302.19	67.82	370.01	185.01	505.66
112.00	18.0	304.96	76.13	381.09	190.55	533.36
114.00	18.0	308.30	84.13	392.43	196.22	560.70
116.00	18.0	312.48	84.62	397.10	198.55	566.34
118.00	18.0	317.53	90.51	408.03	204.02	589.05
120.00	18.0	321.81	93.03	414.84	207.42	600.90
122.00	18.0	*****	Not enough soil data	*****		
124.00	18.0	0.00	0.00	0.00	0.00	0.00
126.00	18.0	0.00	0.00	0.00	0.00	0.00
128.00	18.0	0.00	0.00	0.00	0.00	0.00
130.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSEON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA,
AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSEON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B7_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-5-14, Boring Number: WL1-B7
 Station number: 664+34 Offset: 65 RT

Ground Elevation: 60.600(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	5.00	2.00	2- Clay and silty sand
5	6.00	7.00	3- Clean sand
6	8.00	11.00	2- Clay and silty sand
7	10.00	11.00	2- Clay and silty sand
8	12.50	11.00	2- Clay and silty sand
9	15.00	8.00	2- Clay and silty sand
10	17.50	11.00	2- Clay and silty sand
11	20.00	13.00	2- Clay and silty sand
12	22.50	15.00	2- Clay and silty sand
13	25.00	7.00	2- Clay and silty sand
14	27.50	8.00	1- Plastic Clay
15	30.00	10.00	2- Clay and silty sand
16	32.50	11.00	3- Clean sand
17	35.00	12.00	3- Clean sand

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18	37.50	2.00	1- Plastic Clay
19	40.00	2.00	2- Clay and silty sand
20	42.50	2.00	2- Clay and silty sand
21	45.00	9.00	1- Plastic Clay
22	47.50	20.00	2- Clay and silty sand
23	49.90	20.00	3- Clean sand
24	50.00	99.00	2- Clay and silty sand
25	52.50	75.00	2- Clay and silty sand
26	55.00	47.00	2- Clay and silty sand
27	56.25	31.00	3- Clean sand
28	57.50	31.00	2- Clay and silty sand
29	58.75	7.00	3- Clean sand
30	60.00	7.00	2- Clay and silty sand
31	61.25	7.00	3- Clean sand
32	62.50	99.00	2- Clay and silty sand
33	63.75	11.00	3- Clean sand
34	65.00	11.00	2- Clay and silty sand
35	66.25	11.00	3- Clean sand
36	67.50	99.00	2- Clay and silty sand
37	70.00	99.00	2- Clay and silty sand
38	72.50	99.00	2- Clay and silty sand
39	75.00	51.00	2- Clay and silty sand
40	76.25	18.00	3- Clean sand
41	77.50	18.00	2- Clay and silty sand
42	78.75	4.00	3- Clean sand
43	80.00	4.00	2- Clay and silty sand
44	82.50	2.00	2- Clay and silty sand
45	85.00	2.00	2- Clay and silty sand
46	87.50	0.00	2- Clay and silty sand
47	88.75	0.00	3- Clean sand
48	90.00	9.00	2- Clay and silty sand
49	92.50	2.00	4- Lime Stone/Very shelly sand
50	95.00	2.00	4- Lime Stone/Very shelly sand
51	96.25	2.00	3- Clean sand
52	97.50	5.00	4- Lime Stone/Very shelly sand
53	98.75	5.00	3- Clean sand
54	100.00	99.00	4- Lime Stone/Very shelly sand
55	101.25	5.00	3- Clean sand
56	102.50	5.00	4- Lime Stone/Very shelly sand
57	103.75	5.00	3- Clean sand
58	105.00	99.00	4- Lime Stone/Very shelly sand
59	106.25	18.00	3- Clean sand
60	107.50	18.00	4- Lime Stone/Very shelly sand
61	110.00	20.00	4- Lime Stone/Very shelly sand
62	112.50	37.00	4- Lime Stone/Very shelly sand
63	115.00	17.00	4- Lime Stone/Very shelly sand
64	117.50	17.00	4- Lime Stone/Very shelly sand
65	120.00	30.00	4- Lime Stone/Very shelly sand

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66	121.25	30.00	3- Clean sand
67	122.50	99.00	4- Lime Stone/Very shelly sand
68	125.00	41.00	4- Lime Stone/Very shelly sand
69	126.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	60.60	55.60	5.00	2.00	3-Clean Sand
2	55.60	54.60	1.00	2.00	2-Clay and Silty Sand
3	54.60	52.60	2.00	7.00	3-Clean Sand
4	52.60	33.10	19.50	10.87	2-Clay and Silty Sand
5	33.10	30.60	2.50	8.00	1-Plastic Clay
6	30.60	28.10	2.50	10.00	2-Clay and Silty Sand
7	28.10	23.10	5.00	11.50	3-Clean Sand
8	23.10	20.60	2.50	2.00	1-Plastic Clay
9	20.60	15.60	5.00	2.00	2-Clay and Silty Sand
10	15.60	13.10	2.50	9.00	1-Plastic Clay
11	13.10	10.70	2.40	20.00	2-Clay and Silty Sand
12	10.70	10.60	0.10	20.00	3-Clean Sand
13	10.60	4.35	6.25	79.00	2-Clay and Silty Sand
14	4.35	3.10	1.25	31.00	3-Clean Sand
15	3.10	1.85	1.25	31.00	2-Clay and Silty Sand
16	1.85	0.60	1.25	7.00	3-Clean Sand
17	0.60	-0.65	1.25	7.00	2-Clay and Silty Sand
18	-0.65	-1.90	1.25	7.00	3-Clean Sand
19	-1.90	-3.15	1.25	99.00	2-Clay and Silty Sand
20	-3.15	-4.40	1.25	11.00	3-Clean Sand
21	-4.40	-5.65	1.25	11.00	2-Clay and Silty Sand
22	-5.65	-6.90	1.25	11.00	3-Clean Sand
23	-6.90	-15.65	8.75	92.14	2-Clay and Silty Sand
24	-15.65	-16.90	1.25	18.00	3-Clean Sand
25	-16.90	-18.15	1.25	18.00	2-Clay and Silty Sand
26	-18.15	-19.40	1.25	4.00	3-Clean Sand
27	-19.40	-28.15	8.75	2.29	2-Clay and Silty Sand
28	-28.15	-29.40	1.25	0.00	3-Clean Sand
29	-29.40	-31.90	2.50	9.00	2-Clay and Silty Sand
30	-31.90	-35.65	3.75	2.00	4-Limestone, Very Shelly Sand
31	-35.65	-36.90	1.25	2.00	3-Clean Sand
32	-36.90	-38.15	1.25	5.00	4-Limestone, Very Shelly Sand

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Shelly Sand					
33	-38.15	-39.40	1.25	5.00	3-Clean Sand
34	-39.40	-40.65	1.25	99.00	4-Limestone, Very
Shelly Sand					
35	-40.65	-41.90	1.25	5.00	3-Clean Sand
36	-41.90	-43.15	1.25	5.00	4-Limestone, Very
Shelly Sand					
37	-43.15	-44.40	1.25	5.00	3-Clean Sand
38	-44.40	-45.65	1.25	99.00	4-Limestone, Very
Shelly Sand					
39	-45.65	-46.90	1.25	18.00	3-Clean Sand
40	-46.90	-60.65	13.75	22.55	4-Limestone, Very
Shelly Sand					
41	-60.65	-61.90	1.25	30.00	3-Clean Sand
42	-61.90	-65.40	3.50	82.43	4-Limestone, Very
Shelly Sand					
43	-65.40	-65.40	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	50.60
18.00	12.00	48.60
18.00	14.00	46.60
18.00	16.00	44.60
18.00	18.00	42.60
18.00	20.00	40.60
18.00	22.00	38.60
18.00	24.00	36.60
18.00	26.00	34.60
18.00	28.00	32.60
18.00	30.00	30.60
18.00	32.00	28.60
18.00	34.00	26.60
18.00	36.00	24.60
18.00	38.00	22.60
18.00	40.00	20.60
18.00	42.00	18.60
18.00	44.00	16.60
18.00	46.00	14.60
18.00	48.00	12.60

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18.00	50.00	10.60
18.00	52.00	8.60
18.00	54.00	6.60
18.00	56.00	4.60
18.00	58.00	2.60
18.00	60.00	0.60
18.00	62.00	-1.40
18.00	64.00	-3.40
18.00	66.00	-5.40
18.00	68.00	-7.40
18.00	70.00	-9.40
18.00	72.00	-11.40
18.00	74.00	-13.40
18.00	76.00	-15.40
18.00	78.00	-17.40
18.00	80.00	-19.40
18.00	82.00	-21.40
18.00	84.00	-23.40
18.00	86.00	-25.40
18.00	88.00	-27.40
18.00	90.00	-29.40
18.00	92.00	-31.40
18.00	94.00	-33.40
18.00	96.00	-35.40
18.00	98.00	-37.40
18.00	100.00	-39.40
18.00	102.00	-41.40
18.00	104.00	-43.40
18.00	106.00	-45.40
18.00	108.00	-47.40
18.00	110.00	-49.40
18.00	112.00	-51.40
18.00	114.00	-53.40
18.00	116.00	-55.40
18.00	118.00	-57.40
18.00	120.00	-59.40
18.00	122.00	-61.40
18.00	124.00	-63.40
18.00	126.00	-65.40
18.00	128.00	-67.40
18.00	130.00	-69.40

Driven Pile Capacity:

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WL1-B7_18-PCP.txt

Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	11.58	11.26	22.85	11.42	45.37
12.00	18.0	16.17	13.91	30.09	15.04	57.91
14.00	18.0	22.32	15.50	37.83	18.91	68.83
16.00	18.0	27.99	16.40	44.39	22.20	77.19
18.00	18.0	34.51	17.52	52.03	26.02	87.07
20.00	18.0	41.95	16.97	58.92	29.46	92.86
22.00	18.0	50.16	14.90	65.06	32.53	94.85
24.00	18.0	58.02	13.00	71.01	35.51	97.01
26.00	18.0	63.27	13.79	77.06	38.53	104.65
28.00	18.0	71.82	13.22	85.04	42.52	111.49
30.00	18.0	78.00	21.87	99.87	49.94	143.62
32.00	18.0	83.04	21.40	104.45	52.22	147.25
34.00	18.0	86.30	16.20	102.50	51.25	134.90
36.00	18.0	89.32	11.16	100.48	50.24	122.80
38.00	18.0	90.09	0.02	90.11	45.05	90.15
40.00	18.0	90.09	9.69	99.78	49.89	119.15
42.00	18.0	90.09	10.51	100.60	50.30	121.63
44.00	18.0	91.13	14.99	106.11	53.06	136.08
46.00	18.0	97.40	23.45	120.85	60.42	167.75
48.00	18.0	107.74	33.20	140.95	70.47	207.35
50.00	18.0	115.83	42.66	158.48	79.24	243.80
52.00	18.0	129.63	45.07	174.71	87.35	264.85
54.00	18.0	144.80	46.44	191.24	95.62	284.12
56.00	18.0	161.42	43.05	204.48	102.24	290.58
58.00	18.0	172.53	30.24	202.77	101.38	263.25
60.00	18.0	177.24	46.30	223.54	111.77	316.14
62.00	18.0	181.56	46.37	227.92	113.96	320.66
64.00	18.0	191.14	38.89	230.03	115.01	307.80
66.00	18.0	196.39	51.98	248.37	124.18	352.32
68.00	18.0	206.76	55.84	262.60	131.30	374.28
70.00	18.0	222.38	56.21	278.59	139.29	391.02
72.00	18.0	237.87	56.67	294.54	147.27	407.88
74.00	18.0	253.88	49.51	303.39	151.70	402.41
76.00	18.0	267.47	37.85	305.32	152.66	381.02
78.00	18.0	273.67	3.86	277.53	138.77	285.26
80.00	18.0	276.23	27.06	303.29	151.65	357.41
82.00	18.0	276.23	21.06	297.29	148.65	339.41
84.00	18.0	276.23	15.19	291.42	145.71	321.79
86.00	18.0	276.23	11.05	287.28	143.64	309.39
88.00	18.0	276.23	5.76	281.99	141.00	293.51
90.00	18.0	278.04	2.19	280.23	140.12	284.62
92.00	18.0	281.50	1.72	283.22	141.61	286.66
94.00	18.0	281.65	3.15	284.80	142.40	291.09

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96.00	18.0	281.65	11.01	292.65	146.33	314.67	
98.00	18.0	282.10	26.72	308.81	154.41	362.24	
100.00	18.0	285.25	35.33	320.58	160.29	391.24	
102.00	18.0	288.39	39.10	327.49	163.74	405.68	
104.00	18.0	289.53	51.23	340.76	170.38	443.22	
106.00	18.0	295.06	53.32	348.39	174.19	455.03	
108.00	18.0	298.89	66.24	365.13	182.56	497.60	
110.00	18.0	301.35	69.01	370.37	185.18	508.39	
112.00	18.0	305.24	69.46	374.70	187.35	513.62	
114.00	18.0	310.13	68.66	378.79	189.40	516.12	
116.00	18.0	312.02	78.64	390.67	195.33	547.96	
118.00	18.0	314.52	90.19	404.72	202.36	585.11	
120.00	18.0	318.19	103.57	421.77	210.88	628.91	
122.00	18.0	***** Not enough soil data *****					
124.00	18.0	0.00	0.00	0.00	0.00	0.00	
126.00	18.0	0.00	0.00	0.00	0.00	0.00	
128.00	18.0	0.00	0.00	0.00	0.00	0.00	
130.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B8_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-24-14, Boring Number: WL1-B8
 Station number: 665+47 Offset: 166 LT

Ground Elevation: 56.300(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	4.00	3- Clean sand
2	2.00	4.00	3- Clean sand
3	4.00	6.00	2- Clay and silty sand
4	6.00	6.00	2- Clay and silty sand
5	7.00	6.00	3- Clean sand
6	8.00	11.00	2- Clay and silty sand
7	10.00	20.00	2- Clay and silty sand
8	12.50	12.00	2- Clay and silty sand
9	15.00	13.00	3- Clean sand
10	17.50	9.00	1- Plastic Clay
11	20.00	15.00	3- Clean sand
12	22.50	21.00	2- Clay and silty sand
13	25.00	28.00	3- Clean sand
14	27.50	6.00	2- Clay and silty sand
15	28.75	3.00	3- Clean sand
16	30.00	3.00	2- Clay and silty sand
17	32.50	1.00	2- Clay and silty sand

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18	35.00	0.00	2- Clay and silty sand
19	37.50	2.00	2- Clay and silty sand
20	38.75	2.00	3- Clean sand
21	40.00	99.00	2- Clay and silty sand
22	42.50	99.00	2- Clay and silty sand
23	45.00	99.00	2- Clay and silty sand
24	47.50	99.00	2- Clay and silty sand
25	50.00	99.00	2- Clay and silty sand
26	51.25	29.00	3- Clean sand
27	52.50	29.00	2- Clay and silty sand
28	53.75	29.00	3- Clean sand
29	55.00	99.00	2- Clay and silty sand
30	57.50	99.00	2- Clay and silty sand
31	60.00	99.00	2- Clay and silty sand
32	62.50	99.00	2- Clay and silty sand
33	63.75	1.00	3- Clean sand
34	65.00	1.00	2- Clay and silty sand
35	67.50	1.00	2- Clay and silty sand
36	70.00	0.00	4- Lime Stone/Very shelly sand
37	72.50	4.00	4- Lime Stone/Very shelly sand
38	73.75	4.00	3- Clean sand
39	75.00	9.00	4- Lime Stone/Very shelly sand
40	77.50	16.00	4- Lime Stone/Very shelly sand
41	80.00	18.00	4- Lime Stone/Very shelly sand
42	81.25	18.00	3- Clean sand
43	82.50	65.00	4- Lime Stone/Very shelly sand
44	83.75	16.00	3- Clean sand
45	85.00	16.00	4- Lime Stone/Very shelly sand
46	87.50	18.00	4- Lime Stone/Very shelly sand
47	90.00	99.00	2- Clay and silty sand
48	92.50	0.00	4- Lime Stone/Very shelly sand
49	93.75	0.00	3- Clean sand
50	95.00	20.00	4- Lime Stone/Very shelly sand
51	96.25	7.00	3- Clean sand
52	97.50	7.00	4- Lime Stone/Very shelly sand
53	98.75	7.00	3- Clean sand
54	100.00	68.00	4- Lime Stone/Very shelly sand
55	101.25	11.00	3- Clean sand
56	102.50	11.00	4- Lime Stone/Very shelly sand
57	105.00	13.00	4- Lime Stone/Very shelly sand
58	107.50	14.00	4- Lime Stone/Very shelly sand
59	110.00	9.00	4- Lime Stone/Very shelly sand
60	112.50	8.00	4- Lime Stone/Very shelly sand
61	115.00	13.00	4- Lime Stone/Very shelly sand
62	117.50	14.00	4- Lime Stone/Very shelly sand
63	120.00	12.00	4- Lime Stone/Very shelly sand
64	122.50	26.00	4- Lime Stone/Very shelly sand
65	125.00	18.00	4- Lime Stone/Very shelly sand

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66	126.25	18.00	3- Clean sand
67	127.50	99.00	4- Lime Stone/Very shelly sand
68	130.00	99.00	4- Lime Stone/Very shelly sand
69	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	56.30	52.30	4.00	4.00	3-Clean Sand
2	52.30	49.30	3.00	6.00	2-Clay and Silty Sand
3	49.30	48.30	1.00	6.00	3-Clean Sand
4	48.30	41.30	7.00	14.57	2-Clay and Silty Sand
5	41.30	38.80	2.50	13.00	3-Clean Sand
6	38.80	36.30	2.50	9.00	1-Plastic Clay
7	36.30	33.80	2.50	15.00	3-Clean Sand
8	33.80	31.30	2.50	21.00	2-Clay and Silty Sand
9	31.30	28.80	2.50	28.00	3-Clean Sand
10	28.80	27.55	1.25	6.00	2-Clay and Silty Sand
11	27.55	26.30	1.25	3.00	3-Clean Sand
12	26.30	17.55	8.75	1.43	2-Clay and Silty Sand
13	17.55	16.30	1.25	2.00	3-Clean Sand
14	16.30	5.05	11.25	99.00	2-Clay and Silty Sand
15	5.05	3.80	1.25	29.00	3-Clean Sand
16	3.80	2.55	1.25	29.00	2-Clay and Silty Sand
17	2.55	1.30	1.25	29.00	3-Clean Sand
18	1.30	-7.45	8.75	99.00	2-Clay and Silty Sand
19	-7.45	-8.70	1.25	1.00	3-Clean Sand
20	-8.70	-13.70	5.00	1.00	2-Clay and Silty Sand
21	-13.70	-17.45	3.75	1.33	4-Limestone, Very Shelly Sand
22	-17.45	-18.70	1.25	4.00	3-Clean Sand
23	-18.70	-24.95	6.25	13.60	4-Limestone, Very Shelly Sand
24	-24.95	-26.20	1.25	18.00	3-Clean Sand
25	-26.20	-27.45	1.25	65.00	4-Limestone, Very Shelly Sand
26	-27.45	-28.70	1.25	16.00	3-Clean Sand
27	-28.70	-33.70	5.00	17.00	4-Limestone, Very Shelly Sand
28	-33.70	-36.20	2.50	99.00	2-Clay and Silty Sand
29	-36.20	-37.45	1.25	0.00	4-Limestone, Very Shelly Sand

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Shelly Sand					
30	-37.45	-38.70	1.25	0.00	3-Clean Sand
31	-38.70	-39.95	1.25	20.00	4-Limestone, Very
Shelly Sand					
32	-39.95	-41.20	1.25	7.00	3-Clean Sand
33	-41.20	-42.45	1.25	7.00	4-Limestone, Very
Shelly Sand					
34	-42.45	-43.70	1.25	7.00	3-Clean Sand
35	-43.70	-44.95	1.25	68.00	4-Limestone, Very
Shelly Sand					
36	-44.95	-46.20	1.25	11.00	3-Clean Sand
37	-46.20	-69.95	23.75	13.58	4-Limestone, Very
Shelly Sand					
38	-69.95	-71.20	1.25	18.00	3-Clean Sand
39	-71.20	-74.70	3.50	99.00	4-Limestone, Very
Shelly Sand					
40	-74.70	-74.70	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	46.30
18.00	12.00	44.30
18.00	14.00	42.30
18.00	16.00	40.30
18.00	18.00	38.30
18.00	20.00	36.30
18.00	22.00	34.30
18.00	24.00	32.30
18.00	26.00	30.30
18.00	28.00	28.30
18.00	30.00	26.30
18.00	32.00	24.30
18.00	34.00	22.30
18.00	36.00	20.30
18.00	38.00	18.30
18.00	40.00	16.30
18.00	42.00	14.30
18.00	44.00	12.30
18.00	46.00	10.30
18.00	48.00	8.30

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18.00	50.00	6.30
18.00	52.00	4.30
18.00	54.00	2.30
18.00	56.00	0.30
18.00	58.00	-1.70
18.00	60.00	-3.70
18.00	62.00	-5.70
18.00	64.00	-7.70
18.00	66.00	-9.70
18.00	68.00	-11.70
18.00	70.00	-13.70
18.00	72.00	-15.70
18.00	74.00	-17.70
18.00	76.00	-19.70
18.00	78.00	-21.70
18.00	80.00	-23.70
18.00	82.00	-25.70
18.00	84.00	-27.70
18.00	86.00	-29.70
18.00	88.00	-31.70
18.00	90.00	-33.70
18.00	92.00	-35.70
18.00	94.00	-37.70
18.00	96.00	-39.70
18.00	98.00	-41.70
18.00	100.00	-43.70
18.00	102.00	-45.70
18.00	104.00	-47.70
18.00	106.00	-49.70
18.00	108.00	-51.70
18.00	110.00	-53.70
18.00	112.00	-55.70
18.00	114.00	-57.70
18.00	116.00	-59.70
18.00	118.00	-61.70
18.00	120.00	-63.70
18.00	122.00	-65.70
18.00	124.00	-67.70
18.00	126.00	-69.70
18.00	128.00	-71.70
18.00	130.00	-73.70

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	17.19	16.24	33.44	16.72	65.93
12.00	18.0	25.54	17.82	43.36	21.68	78.99
14.00	18.0	31.67	20.13	51.80	25.90	92.05
16.00	18.0	38.83	25.06	63.88	31.94	114.00
18.00	18.0	44.95	27.23	72.18	36.09	126.65
20.00	18.0	50.22	36.87	87.09	43.54	160.82
22.00	18.0	56.90	37.26	94.16	47.08	168.68
24.00	18.0	67.82	33.63	101.45	50.72	168.71
26.00	18.0	74.28	24.23	98.50	49.25	146.96
28.00	18.0	79.82	1.29	81.11	40.55	83.68
30.00	18.0	80.82	17.38	98.21	49.10	132.97
32.00	18.0	80.82	14.96	95.78	47.89	125.69
34.00	18.0	80.82	12.37	93.19	46.59	117.93
36.00	18.0	80.82	20.93	101.75	50.88	143.62
38.00	18.0	80.82	28.76	109.58	54.79	167.09
40.00	18.0	85.73	37.96	123.69	61.84	199.61
42.00	18.0	99.67	39.93	139.60	69.80	219.47
44.00	18.0	112.14	45.90	158.05	79.02	249.85
46.00	18.0	125.06	56.73	181.79	90.89	295.24
48.00	18.0	140.77	60.72	201.49	100.75	322.94
50.00	18.0	156.48	67.85	224.33	112.16	360.02
52.00	18.0	175.39	70.30	245.69	122.85	386.30
54.00	18.0	186.70	72.29	259.00	129.50	403.59
56.00	18.0	200.91	72.00	272.91	136.46	416.91
58.00	18.0	216.62	70.46	287.08	143.54	427.99
60.00	18.0	232.33	57.43	289.76	144.88	404.61
62.00	18.0	248.04	43.71	291.75	145.88	379.18
64.00	18.0	256.87	0.00	256.87	128.44	256.87
66.00	18.0	256.87	27.61	284.49	142.24	339.71
68.00	18.0	256.87	21.38	278.25	139.12	321.00
70.00	18.0	256.87	17.91	274.79	137.39	310.62
72.00	18.0	256.87	18.35	275.23	137.61	311.93
74.00	18.0	256.89	23.84	280.73	140.36	328.41
76.00	18.0	258.00	26.71	284.70	142.35	338.12
78.00	18.0	259.18	32.92	292.10	146.05	357.94
80.00	18.0	260.89	39.77	300.66	150.33	380.19
82.00	18.0	267.32	53.34	320.66	160.33	427.34
84.00	18.0	273.25	53.26	326.51	163.26	433.03
86.00	18.0	276.05	58.87	334.93	167.46	452.67
88.00	18.0	279.03	54.11	333.14	166.57	441.35
90.00	18.0	289.52	28.08	317.61	158.80	373.77
92.00	18.0	297.73	29.80	327.53	163.77	387.13
94.00	18.0	299.38	44.03	343.40	171.70	431.46

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96.00	18.0	301.50	48.70	350.20	175.10	447.60	
98.00	18.0	303.07	50.76	353.83	176.91	455.34	
100.00	18.0	306.58	46.79	353.37	176.68	446.96	
102.00	18.0	310.80	37.91	348.71	174.36	424.53	
104.00	18.0	312.57	41.86	354.43	177.21	438.16	
106.00	18.0	314.41	42.32	356.74	178.37	441.39	
108.00	18.0	316.53	39.93	356.46	178.23	436.32	
110.00	18.0	318.16	41.41	359.57	179.79	442.39	
112.00	18.0	319.35	41.50	360.85	180.42	443.84	
114.00	18.0	320.72	40.62	361.33	180.67	442.56	
116.00	18.0	322.59	42.04	364.63	182.31	448.70	
118.00	18.0	324.63	48.41	373.04	186.52	469.87	
120.00	18.0	326.53	53.04	379.57	189.79	485.65	
122.00	18.0	329.15	58.25	387.39	193.70	503.88	
124.00	18.0	332.69	77.89	410.58	205.29	566.36	
126.00	18.0	***** Not enough soil data *****					
128.00	18.0	0.00	0.00	0.00	0.00	0.00	
130.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:alculations-Analyses\FB-Deep\Wildlife No 1\WL1-B9_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-20-14, Boring Number: WL1-B9
 Station number: 665+45 Offset: 14 LT

Ground Elevation: 59.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	7.00	3- Clean sand
2	2.00	7.00	3- Clean sand
3	4.00	8.00	3- Clean sand
4	6.00	12.00	3- Clean sand
5	8.00	11.00	3- Clean sand
6	10.00	9.00	3- Clean sand
7	12.50	10.00	2- Clay and silty sand
8	15.00	13.00	1- Plastic Clay
9	17.50	6.00	1- Plastic Clay
10	20.00	18.00	1- Plastic Clay
11	22.50	25.00	3- Clean sand
12	25.00	12.00	3- Clean sand
13	26.25	12.00	2- Clay and silty sand
14	27.50	34.00	3- Clean sand
15	30.00	25.00	3- Clean sand
16	32.50	22.00	3- Clean sand
17	35.00	27.00	2- Clay and silty sand

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18	37.50	21.00	3- Clean sand
19	40.00	4.00	2- Clay and silty sand
20	42.50	4.00	1- Plastic Clay
21	45.00	0.00	1- Plastic Clay
22	47.50	0.00	2- Clay and silty sand
23	50.00	0.00	2- Clay and silty sand
24	52.50	0.00	2- Clay and silty sand
25	55.00	1.00	2- Clay and silty sand
26	57.50	0.00	2- Clay and silty sand
27	60.00	0.00	2- Clay and silty sand
28	62.50	3.00	2- Clay and silty sand
29	63.75	3.00	3- Clean sand
30	65.00	28.00	2- Clay and silty sand
31	66.25	28.00	3- Clean sand
32	67.50	99.00	2- Clay and silty sand
33	70.00	99.00	4- Lime Stone/Very shelly sand
34	72.50	99.00	4- Lime Stone/Very shelly sand
35	75.00	8.00	2- Clay and silty sand
36	77.50	5.00	3- Clean sand
37	78.75	5.00	2- Clay and silty sand
38	80.00	17.00	3- Clean sand
39	82.50	14.00	2- Clay and silty sand
40	85.00	11.00	3- Clean sand
41	87.50	8.00	2- Clay and silty sand
42	90.00	15.00	3- Clean sand
43	92.50	10.00	3- Clean sand
44	95.00	19.00	4- Lime Stone/Very shelly sand
45	97.50	11.00	4- Lime Stone/Very shelly sand
46	100.00	10.00	4- Lime Stone/Very shelly sand
47	101.25	10.00	3- Clean sand
48	102.50	99.00	4- Lime Stone/Very shelly sand
49	103.75	13.00	2- Clay and silty sand
50	105.00	13.00	4- Lime Stone/Very shelly sand
51	107.50	24.00	4- Lime Stone/Very shelly sand
52	110.00	15.00	4- Lime Stone/Very shelly sand
53	112.50	10.00	4- Lime Stone/Very shelly sand
54	115.00	8.00	4- Lime Stone/Very shelly sand
55	117.50	11.00	4- Lime Stone/Very shelly sand
56	118.75	11.00	3- Clean sand
57	120.00	32.00	4- Lime Stone/Very shelly sand
58	121.25	12.00	3- Clean sand
59	122.50	12.00	4- Lime Stone/Very shelly sand
60	123.75	12.00	3- Clean sand
61	125.00	36.00	4- Lime Stone/Very shelly sand
62	126.25	36.00	3- Clean sand
63	127.50	99.00	4- Lime Stone/Very shelly sand
64	130.00	99.00	4- Lime Stone/Very shelly sand
65	132.50	99.00	4- Lime Stone/Very shelly sand

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66	135.00	99.00	4- Lime Stone/Very shelly sand
67	137.50	99.00	4- Lime Stone/Very shelly sand
68	140.00	99.00	4- Lime Stone/Very shelly sand
69	141.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	59.00	46.50	12.50	9.00	3-Clean Sand
2	46.50	44.00	2.50	10.00	2-Clay and Silty Sand
3	44.00	36.50	7.50	12.33	1-Plastic Clay
4	36.50	32.75	3.75	20.67	3-Clean Sand
5	32.75	31.50	1.25	12.00	2-Clay and Silty Sand
6	31.50	24.00	7.50	27.00	3-Clean Sand
7	24.00	21.50	2.50	27.00	2-Clay and Silty Sand
8	21.50	19.00	2.50	21.00	3-Clean Sand
9	19.00	16.50	2.50	4.00	2-Clay and Silty Sand
10	16.50	11.50	5.00	2.00	1-Plastic Clay
11	11.50	-4.75	16.25	0.38	2-Clay and Silty Sand
12	-4.75	-6.00	1.25	3.00	3-Clean Sand
13	-6.00	-7.25	1.25	28.00	2-Clay and Silty Sand
14	-7.25	-8.50	1.25	28.00	3-Clean Sand
15	-8.50	-11.00	2.50	99.00	2-Clay and Silty Sand
16	-11.00	-16.00	5.00	99.00	4-Limestone, Very Shelly Sand
17	-16.00	-18.50	2.50	8.00	2-Clay and Silty Sand
18	-18.50	-19.75	1.25	5.00	3-Clean Sand
19	-19.75	-21.00	1.25	5.00	2-Clay and Silty Sand
20	-21.00	-23.50	2.50	17.00	3-Clean Sand
21	-23.50	-26.00	2.50	14.00	2-Clay and Silty Sand
22	-26.00	-28.50	2.50	11.00	3-Clean Sand
23	-28.50	-31.00	2.50	8.00	2-Clay and Silty Sand
24	-31.00	-36.00	5.00	12.50	3-Clean Sand
25	-36.00	-42.25	6.25	14.00	4-Limestone, Very Shelly Sand
26	-42.25	-43.50	1.25	10.00	3-Clean Sand
27	-43.50	-44.75	1.25	99.00	4-Limestone, Very Shelly Sand
28	-44.75	-46.00	1.25	13.00	2-Clay and Silty Sand
29	-46.00	-59.75	13.75	13.73	4-Limestone, Very Shelly Sand

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30	-59.75	-61.00	1.25	11.00	3-Clean Sand
31	-61.00	-62.25	1.25	32.00	4-Limestone, Very
Shelly Sand					
32	-62.25	-63.50	1.25	12.00	3-Clean Sand
33	-63.50	-64.75	1.25	12.00	4-Limestone, Very
Shelly Sand					
34	-64.75	-66.00	1.25	12.00	3-Clean Sand
35	-66.00	-67.25	1.25	36.00	4-Limestone, Very
Shelly Sand					
36	-67.25	-68.50	1.25	36.00	3-Clean Sand
37	-68.50	-82.00	13.50	99.00	4-Limestone, Very
Shelly Sand					
38	-82.00	-82.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	49.00
18.00	12.00	47.00
18.00	14.00	45.00
18.00	16.00	43.00
18.00	18.00	41.00
18.00	20.00	39.00
18.00	22.00	37.00
18.00	24.00	35.00
18.00	26.00	33.00
18.00	28.00	31.00
18.00	30.00	29.00
18.00	32.00	27.00
18.00	34.00	25.00
18.00	36.00	23.00
18.00	38.00	21.00
18.00	40.00	19.00
18.00	42.00	17.00
18.00	44.00	15.00
18.00	46.00	13.00
18.00	48.00	11.00
18.00	50.00	9.00
18.00	52.00	7.00
18.00	54.00	5.00
18.00	56.00	3.00

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18.00	58.00	1.00
18.00	60.00	-1.00
18.00	62.00	-3.00
18.00	64.00	-5.00
18.00	66.00	-7.00
18.00	68.00	-9.00
18.00	70.00	-11.00
18.00	72.00	-13.00
18.00	74.00	-15.00
18.00	76.00	-17.00
18.00	78.00	-19.00
18.00	80.00	-21.00
18.00	82.00	-23.00
18.00	84.00	-25.00
18.00	86.00	-27.00
18.00	88.00	-29.00
18.00	90.00	-31.00
18.00	92.00	-33.00
18.00	94.00	-35.00
18.00	96.00	-37.00
18.00	98.00	-39.00
18.00	100.00	-41.00
18.00	102.00	-43.00
18.00	104.00	-45.00
18.00	106.00	-47.00
18.00	108.00	-49.00
18.00	110.00	-51.00
18.00	112.00	-53.00
18.00	114.00	-55.00
18.00	116.00	-57.00
18.00	118.00	-59.00
18.00	120.00	-61.00
18.00	122.00	-63.00
18.00	124.00	-65.00
18.00	126.00	-67.00
18.00	128.00	-69.00
18.00	130.00	-71.00
18.00	132.00	-73.00
18.00	134.00	-75.00
18.00	136.00	-77.00
18.00	138.00	-79.00
18.00	140.00	-81.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	12.90	21.62	34.53	17.26	77.78
12.00	18.0	16.96	18.16	35.12	17.56	71.44
14.00	18.0	23.32	9.03	32.35	16.17	50.40
16.00	18.0	31.96	16.36	48.32	24.16	81.04
18.00	18.0	36.08	26.25	62.32	31.16	114.82
20.00	18.0	44.66	31.49	76.16	38.08	139.14
22.00	18.0	54.32	32.33	86.65	43.32	151.30
24.00	18.0	62.43	35.29	97.72	48.86	168.29
26.00	18.0	65.21	38.64	103.85	51.92	181.14
28.00	18.0	76.20	55.09	131.29	65.65	241.48
30.00	18.0	84.29	54.79	139.08	69.54	248.66
32.00	18.0	90.71	55.38	146.09	73.05	256.86
34.00	18.0	98.88	55.00	153.88	76.94	263.88
36.00	18.0	110.83	37.73	148.56	74.28	224.02
38.00	18.0	117.58	15.55	133.13	66.56	164.22
40.00	18.0	120.67	0.00	120.67	60.34	120.67
42.00	18.0	120.67	0.00	120.67	60.34	120.67
44.00	18.0	120.67	15.49	136.16	68.08	167.14
46.00	18.0	120.67	10.49	131.16	65.58	152.14
48.00	18.0	120.67	6.74	127.42	63.71	140.90
50.00	18.0	120.67	2.08	122.76	61.38	126.92
52.00	18.0	120.67	0.00	120.67	60.34	120.67
54.00	18.0	120.67	0.00	120.67	60.34	120.67
56.00	18.0	120.67	0.00	120.67	60.34	120.67
58.00	18.0	120.67	0.00	120.67	60.34	120.67
60.00	18.0	120.67	3.57	124.25	62.12	131.39
62.00	18.0	120.67	17.42	138.10	69.05	172.95
64.00	18.0	120.83	33.37	154.20	77.10	220.93
66.00	18.0	129.60	51.54	181.14	90.57	284.21
68.00	18.0	142.62	78.83	221.46	110.73	379.13
70.00	18.0	153.40	80.13	233.54	116.77	393.81
72.00	18.0	160.60	65.33	225.93	112.97	356.59
74.00	18.0	167.35	54.03	221.39	110.69	329.45
76.00	18.0	172.37	18.17	190.54	95.27	226.88
78.00	18.0	174.74	20.96	195.70	97.85	237.62
80.00	18.0	178.34	55.55	233.89	116.95	345.00
82.00	18.0	184.59	45.16	229.75	114.87	320.07
84.00	18.0	191.67	24.10	215.77	107.88	263.96
86.00	18.0	195.44	26.44	221.88	110.94	274.75
88.00	18.0	200.23	28.49	228.73	114.36	285.72
90.00	18.0	204.90	35.05	239.95	119.98	310.05
92.00	18.0	208.26	35.58	243.84	121.92	315.01

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94.00	18.0	210.98	35.99	246.97	123.48	318.96	
96.00	18.0	214.01	42.84	256.84	128.42	342.51	
98.00	18.0	215.46	46.25	261.71	130.85	354.21	
100.00	18.0	216.95	47.74	264.68	132.34	360.15	
102.00	18.0	220.47	54.31	274.78	137.39	383.40	
104.00	18.0	227.72	40.49	268.21	134.10	349.18	
106.00	18.0	231.02	57.31	288.32	144.16	402.94	
108.00	18.0	234.19	51.67	285.86	142.93	389.21	
110.00	18.0	236.95	46.94	283.90	141.95	377.78	
112.00	18.0	238.89	45.44	284.32	142.16	375.20	
114.00	18.0	240.33	45.42	285.75	142.88	376.59	
116.00	18.0	241.59	49.16	290.75	145.38	389.08	
118.00	18.0	243.20	49.24	292.44	146.22	390.92	
120.00	18.0	246.66	51.13	297.79	148.90	400.05	
122.00	18.0	250.30	60.06	310.36	155.18	430.48	
124.00	18.0	252.88	82.77	335.65	167.83	501.19	
126.00	18.0	258.56	95.85	354.41	177.20	546.11	
128.00	18.0	267.23	114.02	381.25	190.62	609.29	
130.00	18.0	273.65	117.59	391.24	195.62	626.41	
132.00	18.0	279.69	124.96	404.65	202.32	654.57	
134.00	18.0	285.68	136.12	421.80	210.90	694.04	
136.00	18.0	***** Not enough soil data *****					
138.00	18.0	0.00	0.00	0.00	0.00	0.00	
140.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B10_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: GEG
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-25-14, Boring Number: WL1-B10
 Station number: 666+53 Offset: 58 LT

Ground Elevation: 58.200(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	7.00	3- Clean sand
2	2.00	7.00	3- Clean sand
3	3.00	7.00	2- Clay and silty sand
4	4.00	22.00	3- Clean sand
5	6.00	18.00	3- Clean sand
6	8.00	19.00	3- Clean sand
7	10.00	15.00	3- Clean sand
8	12.50	8.00	3- Clean sand
9	15.00	8.00	3- Clean sand
10	16.25	4.00	2- Clay and silty sand
11	17.50	4.00	3- Clean sand
12	20.00	2.00	3- Clean sand
13	22.50	2.00	3- Clean sand
14	25.00	2.00	3- Clean sand
15	27.50	2.00	3- Clean sand
16	28.75	2.00	2- Clay and silty sand
17	30.00	9.00	3- Clean sand

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18	32.50	11.00	2- Clay and silty sand
19	35.00	18.00	3- Clean sand
20	37.50	13.00	2- Clay and silty sand
21	40.00	12.00	2- Clay and silty sand
22	42.50	25.00	3- Clean sand
23	45.00	10.00	3- Clean sand
24	47.50	14.00	3- Clean sand
25	50.00	12.00	3- Clean sand
26	52.50	8.00	2- Clay and silty sand
27	55.00	4.00	3- Clean sand
28	56.25	4.00	2- Clay and silty sand
29	57.50	6.00	3- Clean sand
30	60.00	7.00	3- Clean sand
31	62.50	6.00	2- Clay and silty sand
32	65.00	14.00	3- Clean sand
33	67.50	8.00	2- Clay and silty sand
34	70.00	12.00	3- Clean sand
35	72.50	12.00	2- Clay and silty sand
36	75.00	17.00	2- Clay and silty sand
37	77.50	9.00	2- Clay and silty sand
38	80.00	13.00	2- Clay and silty sand
39	82.50	11.00	2- Clay and silty sand
40	85.00	10.00	2- Clay and silty sand
41	87.50	8.00	2- Clay and silty sand
42	90.00	8.00	2- Clay and silty sand
43	92.50	7.00	2- Clay and silty sand
44	95.00	6.00	2- Clay and silty sand
45	97.50	7.00	2- Clay and silty sand
46	100.00	10.00	2- Clay and silty sand
47	102.50	5.00	2- Clay and silty sand
48	105.00	7.00	2- Clay and silty sand
49	106.25	3.00	3- Clean sand
50	107.50	3.00	2- Clay and silty sand
51	110.00	11.00	3- Clean sand
52	112.50	12.00	2- Clay and silty sand
53	113.75	3.00	3- Clean sand
54	115.00	3.00	2- Clay and silty sand
55	117.50	2.00	2- Clay and silty sand
56	120.00	2.00	2- Clay and silty sand
57	122.50	2.00	2- Clay and silty sand
58	125.00	29.00	4- Lime Stone/Very shelly sand
59	127.50	40.00	4- Lime Stone/Very shelly sand
60	128.75	40.00	3- Clean sand
61	130.00	99.00	4- Lime Stone/Very shelly sand
62	132.50	99.00	4- Lime Stone/Very shelly sand
63	135.00	99.00	4- Lime Stone/Very shelly sand
64	137.50	99.00	4- Lime Stone/Very shelly sand
65	140.00	99.00	4- Lime Stone/Very shelly sand

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66	142.50	99.00	4- Lime Stone/Very shelly sand
67	145.00	99.00	4- Lime Stone/Very shelly sand
68	146.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	58.20	55.20	3.00	7.00	3-Clean Sand
2	55.20	54.20	1.00	7.00	2-Clay and Silty Sand
3	54.20	41.95	12.25	15.14	3-Clean Sand
4	41.95	40.70	1.25	4.00	2-Clay and Silty Sand
5	40.70	29.45	11.25	2.44	3-Clean Sand
6	29.45	28.20	1.25	2.00	2-Clay and Silty Sand
7	28.20	25.70	2.50	9.00	3-Clean Sand
8	25.70	23.20	2.50	11.00	2-Clay and Silty Sand
9	23.20	20.70	2.50	18.00	3-Clean Sand
10	20.70	15.70	5.00	12.50	2-Clay and Silty Sand
11	15.70	5.70	10.00	15.25	3-Clean Sand
12	5.70	3.20	2.50	8.00	2-Clay and Silty Sand
13	3.20	1.95	1.25	4.00	3-Clean Sand
14	1.95	0.70	1.25	4.00	2-Clay and Silty Sand
15	0.70	-4.30	5.00	6.50	3-Clean Sand
16	-4.30	-6.80	2.50	6.00	2-Clay and Silty Sand
17	-6.80	-9.30	2.50	14.00	3-Clean Sand
18	-9.30	-11.80	2.50	8.00	2-Clay and Silty Sand
19	-11.80	-14.30	2.50	12.00	3-Clean Sand
20	-14.30	-48.05	33.75	9.37	2-Clay and Silty Sand
21	-48.05	-49.30	1.25	3.00	3-Clean Sand
22	-49.30	-51.80	2.50	3.00	2-Clay and Silty Sand
23	-51.80	-54.30	2.50	11.00	3-Clean Sand
24	-54.30	-55.55	1.25	12.00	2-Clay and Silty Sand
25	-55.55	-56.80	1.25	3.00	3-Clean Sand
26	-56.80	-66.80	10.00	2.25	2-Clay and Silty Sand
27	-66.80	-70.55	3.75	32.67	4-Limestone, Very
Shelly Sand					
28	-70.55	-71.80	1.25	40.00	3-Clean Sand
29	-71.80	-87.80	16.00	99.00	4-Limestone, Very
Shelly Sand					
30	-87.80	-87.80	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	48.20
18.00	12.00	46.20
18.00	14.00	44.20
18.00	16.00	42.20
18.00	18.00	40.20
18.00	20.00	38.20
18.00	22.00	36.20
18.00	24.00	34.20
18.00	26.00	32.20
18.00	28.00	30.20
18.00	30.00	28.20
18.00	32.00	26.20
18.00	34.00	24.20
18.00	36.00	22.20
18.00	38.00	20.20
18.00	40.00	18.20
18.00	42.00	16.20
18.00	44.00	14.20
18.00	46.00	12.20
18.00	48.00	10.20
18.00	50.00	8.20
18.00	52.00	6.20
18.00	54.00	4.20
18.00	56.00	2.20
18.00	58.00	0.20
18.00	60.00	-1.80
18.00	62.00	-3.80
18.00	64.00	-5.80
18.00	66.00	-7.80
18.00	68.00	-9.80
18.00	70.00	-11.80
18.00	72.00	-13.80
18.00	74.00	-15.80
18.00	76.00	-17.80
18.00	78.00	-19.80
18.00	80.00	-21.80
18.00	82.00	-23.80
18.00	84.00	-25.80
18.00	86.00	-27.80

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18.00	88.00	-29.80
18.00	90.00	-31.80
18.00	92.00	-33.80
18.00	94.00	-35.80
18.00	96.00	-37.80
18.00	98.00	-39.80
18.00	100.00	-41.80
18.00	102.00	-43.80
18.00	104.00	-45.80
18.00	106.00	-47.80
18.00	108.00	-49.80
18.00	110.00	-51.80
18.00	112.00	-53.80
18.00	114.00	-55.80
18.00	116.00	-57.80
18.00	118.00	-59.80
18.00	120.00	-61.80
18.00	122.00	-63.80
18.00	124.00	-65.80
18.00	126.00	-67.80
18.00	128.00	-69.80
18.00	130.00	-71.80
18.00	132.00	-73.80
18.00	134.00	-75.80
18.00	136.00	-77.80
18.00	138.00	-79.80
18.00	140.00	-81.80
18.00	142.00	-83.80
18.00	144.00	-85.80

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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10.00	18.0	22.02	35.61	57.63	28.81	128.84
12.00	18.0	25.47	29.08	54.55	27.27	112.70
14.00	18.0	27.78	24.73	52.52	26.26	101.98
16.00	18.0	29.59	20.46	50.05	25.03	90.97
18.00	18.0	29.62	15.47	45.09	22.54	76.03
20.00	18.0	29.62	10.88	40.50	20.25	62.26
22.00	18.0	29.62	6.67	36.29	18.14	49.62

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24.00	18.0	29.62	3.89	33.51	16.76	41.30
26.00	18.0	29.62	6.08	35.71	17.85	47.87
28.00	18.0	29.62	8.32	37.94	18.97	54.59
30.00	18.0	30.42	15.40	45.81	22.91	76.60
32.00	18.0	33.80	16.06	49.86	24.93	81.99
34.00	18.0	40.97	20.53	61.50	30.75	102.55
36.00	18.0	46.51	20.25	66.76	33.38	107.26
38.00	18.0	53.89	28.93	82.82	41.41	140.68
40.00	18.0	61.51	33.41	94.91	47.46	161.72
42.00	18.0	67.91	36.58	104.49	52.25	177.66
44.00	18.0	74.90	37.14	112.05	56.02	186.33
46.00	18.0	78.27	37.42	115.69	57.85	190.54
48.00	18.0	81.96	32.24	114.20	57.10	178.68
50.00	18.0	85.58	26.60	112.18	56.09	165.39
52.00	18.0	89.69	22.94	112.63	56.32	158.51
54.00	18.0	92.90	6.51	99.42	49.71	112.45
56.00	18.0	94.20	7.79	101.99	51.00	117.58
58.00	18.0	95.16	18.63	113.78	56.89	151.04
60.00	18.0	97.00	19.13	116.13	58.06	154.38
62.00	18.0	99.73	19.28	119.00	59.50	157.56
64.00	18.0	103.74	19.16	122.90	61.45	161.23
66.00	18.0	107.76	19.99	127.75	63.88	167.73
68.00	18.0	112.71	19.86	132.57	66.28	172.29
70.00	18.0	116.82	23.19	140.02	70.01	186.40
72.00	18.0	121.82	22.18	144.00	72.00	188.36
74.00	18.0	129.67	19.50	149.17	74.58	188.16
76.00	18.0	138.84	19.51	158.36	79.18	197.39
78.00	18.0	145.58	18.57	164.15	82.08	201.30
80.00	18.0	152.65	17.87	170.52	85.26	206.26
82.00	18.0	160.16	16.86	177.02	88.51	210.75
84.00	18.0	166.94	15.82	182.77	91.38	214.41
86.00	18.0	173.22	14.83	188.05	94.02	217.71
88.00	18.0	178.67	13.55	192.22	96.11	219.32
90.00	18.0	183.87	12.71	196.58	98.29	222.00
92.00	18.0	188.83	11.93	200.76	100.38	224.62
94.00	18.0	193.32	11.57	204.89	102.44	228.04
96.00	18.0	197.43	11.81	209.24	104.62	232.86
98.00	18.0	201.95	11.16	213.10	106.55	235.42
100.00	18.0	207.59	10.49	218.08	109.04	239.07
102.00	18.0	212.74	8.62	221.36	110.68	238.61
104.00	18.0	216.46	8.70	225.16	112.58	242.56
106.00	18.0	220.02	12.44	232.46	116.23	257.34
108.00	18.0	220.16	14.82	234.98	117.49	264.62
110.00	18.0	222.02	12.25	234.27	117.14	258.76
112.00	18.0	226.85	8.28	235.14	117.57	251.71
114.00	18.0	230.92	0.00	230.92	115.46	230.92
116.00	18.0	230.92	5.49	236.40	118.20	247.37
118.00	18.0	230.92	5.85	236.77	118.38	248.47

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120.00	18.0	230.92	16.52	247.43	123.72	280.47
122.00	18.0	230.92	39.02	269.93	134.97	347.96
124.00	18.0	231.63	58.72	290.35	145.18	407.80
126.00	18.0	235.66	69.44	305.11	152.55	443.99
128.00	18.0	239.85	77.42	317.27	158.63	472.10
130.00	18.0	251.21	112.00	363.20	181.60	587.19
132.00	18.0	257.72	115.00	372.71	186.36	602.70
134.00	18.0	263.43	124.00	387.43	193.71	635.42
136.00	18.0	269.11	137.78	406.89	203.45	682.46
138.00	18.0	275.45	151.63	427.08	213.54	730.35
140.00	18.0	282.46	159.20	441.66	220.83	760.05
142.00	18.0	*****	Not enough soil data	*****		
144.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B11_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-10-14, Boring Number: WL1-B11
 Station number: 666+48 Offset: 80 RT

Ground Elevation: 60.900(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	9.00	2- Clay and silty sand
5	8.00	18.00	2- Clay and silty sand
6	10.00	24.00	2- Clay and silty sand
7	12.50	12.00	2- Clay and silty sand
8	15.00	8.00	2- Clay and silty sand
9	17.50	9.00	2- Clay and silty sand
10	20.00	13.00	2- Clay and silty sand
11	22.50	8.00	2- Clay and silty sand
12	25.00	23.00	3- Clean sand
13	27.50	13.00	2- Clay and silty sand
14	30.00	21.00	2- Clay and silty sand
15	32.50	45.00	3- Clean sand
16	35.00	9.00	1- Plastic Clay
17	37.50	8.00	1- Plastic Clay

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18	40.00	2.00	2- Clay and silty sand
19	42.50	3.00	2- Clay and silty sand
20	45.00	3.00	1- Plastic Clay
21	46.25	3.00	2- Clay and silty sand
22	47.50	31.00	1- Plastic Clay
23	50.00	58.00	2- Clay and silty sand
24	51.25	24.00	3- Clean sand
25	52.50	24.00	2- Clay and silty sand
26	53.75	24.00	3- Clean sand
27	55.00	99.00	2- Clay and silty sand
28	56.25	32.00	3- Clean sand
29	57.50	32.00	2- Clay and silty sand
30	58.75	32.00	3- Clean sand
31	60.00	99.00	2- Clay and silty sand
32	61.25	2.00	3- Clean sand
33	62.50	2.00	2- Clay and silty sand
34	65.00	11.00	3- Clean sand
35	66.25	2.00	2- Clay and silty sand
36	67.50	2.00	3- Clean sand
37	70.00	99.00	4- Lime Stone/Very shelly sand
38	72.50	99.00	4- Lime Stone/Very shelly sand
39	75.00	13.00	3- Clean sand
40	77.50	11.00	3- Clean sand
41	80.00	8.00	3- Clean sand
42	82.50	2.00	2- Clay and silty sand
43	85.00	19.00	4- Lime Stone/Very shelly sand
44	87.50	35.00	4- Lime Stone/Very shelly sand
45	90.00	23.00	4- Lime Stone/Very shelly sand
46	92.50	24.00	4- Lime Stone/Very shelly sand
47	93.75	24.00	3- Clean sand
48	95.00	99.00	4- Lime Stone/Very shelly sand
49	96.25	20.00	3- Clean sand
50	97.50	20.00	4- Lime Stone/Very shelly sand
51	100.00	19.00	4- Lime Stone/Very shelly sand
52	102.50	26.00	4- Lime Stone/Very shelly sand
53	105.00	17.00	4- Lime Stone/Very shelly sand
54	107.50	99.00	2- Clay and silty sand
55	110.00	99.00	4- Lime Stone/Very shelly sand
56	111.25	21.00	3- Clean sand
57	112.50	21.00	4- Lime Stone/Very shelly sand
58	113.75	21.00	3- Clean sand
59	115.00	99.00	4- Lime Stone/Very shelly sand
60	116.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

WL1-B11_18-PCP.txt

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	60.90	54.90	6.00	2.00	3-Clean Sand
2	54.90	35.90	19.00	12.58	2-Clay and Silty Sand
3	35.90	33.40	2.50	23.00	3-Clean Sand
4	33.40	28.40	5.00	17.00	2-Clay and Silty Sand
5	28.40	25.90	2.50	45.00	3-Clean Sand
6	25.90	20.90	5.00	8.50	1-Plastic Clay
7	20.90	15.90	5.00	2.50	2-Clay and Silty Sand
8	15.90	14.65	1.25	3.00	1-Plastic Clay
9	14.65	13.40	1.25	3.00	2-Clay and Silty Sand
10	13.40	10.90	2.50	31.00	1-Plastic Clay
11	10.90	9.65	1.25	58.00	2-Clay and Silty Sand
12	9.65	8.40	1.25	24.00	3-Clean Sand
13	8.40	7.15	1.25	24.00	2-Clay and Silty Sand
14	7.15	5.90	1.25	24.00	3-Clean Sand
15	5.90	4.65	1.25	99.00	2-Clay and Silty Sand
16	4.65	3.40	1.25	32.00	3-Clean Sand
17	3.40	2.15	1.25	32.00	2-Clay and Silty Sand
18	2.15	0.90	1.25	32.00	3-Clean Sand
19	0.90	-0.35	1.25	99.00	2-Clay and Silty Sand
20	-0.35	-1.60	1.25	2.00	3-Clean Sand
21	-1.60	-4.10	2.50	2.00	2-Clay and Silty Sand
22	-4.10	-5.35	1.25	11.00	3-Clean Sand
23	-5.35	-6.60	1.25	2.00	2-Clay and Silty Sand
24	-6.60	-9.10	2.50	2.00	3-Clean Sand
25	-9.10	-14.10	5.00	99.00	4-Limestone, Very
Shelly Sand					
26	-14.10	-21.60	7.50	10.67	3-Clean Sand
27	-21.60	-24.10	2.50	2.00	2-Clay and Silty Sand
28	-24.10	-32.85	8.75	25.43	4-Limestone, Very
Shelly Sand					
29	-32.85	-34.10	1.25	24.00	3-Clean Sand
30	-34.10	-35.35	1.25	99.00	4-Limestone, Very
Shelly Sand					
31	-35.35	-36.60	1.25	20.00	3-Clean Sand
32	-36.60	-46.60	10.00	20.50	4-Limestone, Very
Shelly Sand					
33	-46.60	-49.10	2.50	99.00	2-Clay and Silty Sand
34	-49.10	-50.35	1.25	99.00	4-Limestone, Very
Shelly Sand					
35	-50.35	-51.60	1.25	21.00	3-Clean Sand
36	-51.60	-52.85	1.25	21.00	4-Limestone, Very
Shelly Sand					

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37	-52.85	-54.10	1.25	21.00	3-Clean Sand
38	-54.10	-55.10	1.00	99.00	4-Limestone, Very
Shelly Sand					
39	-55.10	-55.10	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	50.90
18.00	12.00	48.90
18.00	14.00	46.90
18.00	16.00	44.90
18.00	18.00	42.90
18.00	20.00	40.90
18.00	22.00	38.90
18.00	24.00	36.90
18.00	26.00	34.90
18.00	28.00	32.90
18.00	30.00	30.90
18.00	32.00	28.90
18.00	34.00	26.90
18.00	36.00	24.90
18.00	38.00	22.90
18.00	40.00	20.90
18.00	42.00	18.90
18.00	44.00	16.90
18.00	46.00	14.90
18.00	48.00	12.90
18.00	50.00	10.90
18.00	52.00	8.90
18.00	54.00	6.90
18.00	56.00	4.90
18.00	58.00	2.90
18.00	60.00	0.90
18.00	62.00	-1.10
18.00	64.00	-3.10
18.00	66.00	-5.10
18.00	68.00	-7.10
18.00	70.00	-9.10
18.00	72.00	-11.10
18.00	74.00	-13.10

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18.00	76.00	-15.10
18.00	78.00	-17.10
18.00	80.00	-19.10
18.00	82.00	-21.10
18.00	84.00	-23.10
18.00	86.00	-25.10
18.00	88.00	-27.10
18.00	90.00	-29.10
18.00	92.00	-31.10
18.00	94.00	-33.10
18.00	96.00	-35.10
18.00	98.00	-37.10
18.00	100.00	-39.10
18.00	102.00	-41.10
18.00	104.00	-43.10
18.00	106.00	-45.10
18.00	108.00	-47.10
18.00	110.00	-49.10
18.00	112.00	-51.10
18.00	114.00	-53.10

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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10.00	18.0	21.15	15.54	36.69	18.35	67.78
12.00	18.0	32.74	14.39	47.13	23.57	75.91
14.00	18.0	39.78	15.47	55.25	27.63	86.19
16.00	18.0	45.26	17.51	62.77	31.39	97.80
18.00	18.0	50.96	18.63	69.60	34.80	106.86
20.00	18.0	58.03	24.82	82.85	41.43	132.50
22.00	18.0	64.86	28.83	93.69	46.84	151.34
24.00	18.0	70.42	28.23	98.65	49.32	155.10
26.00	18.0	76.70	27.52	104.22	52.11	159.27
28.00	18.0	84.44	42.24	126.68	63.34	211.16
30.00	18.0	92.97	45.63	138.60	69.30	229.85
32.00	18.0	106.31	42.55	148.86	74.43	233.95
34.00	18.0	117.94	31.11	149.05	74.52	211.26
36.00	18.0	124.85	4.00	128.85	64.43	136.86
38.00	18.0	131.04	3.09	134.13	67.07	140.32
40.00	18.0	133.42	0.00	133.42	66.71	133.42

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42.00	18.0	133.42	0.26	133.67	66.84	134.19
44.00	18.0	133.42	5.06	138.48	69.24	148.59
46.00	18.0	133.42	20.62	154.04	77.02	195.27
48.00	18.0	142.47	28.34	170.81	85.40	227.49
50.00	18.0	158.68	37.10	195.78	97.89	269.98
52.00	18.0	168.90	64.52	233.42	116.71	362.46
54.00	18.0	178.71	52.37	231.08	115.54	335.81
56.00	18.0	191.32	55.22	246.54	123.27	356.99
58.00	18.0	203.30	48.01	251.32	125.66	347.35
60.00	18.0	215.06	17.77	232.83	116.41	268.36
62.00	18.0	219.97	5.85	225.81	112.91	237.50
64.00	18.0	220.60	36.70	257.30	128.65	330.70
66.00	18.0	222.68	51.76	274.43	137.22	377.95
68.00	18.0	223.05	80.67	303.73	151.86	465.07
70.00	18.0	227.38	83.13	310.51	155.26	476.78
72.00	18.0	234.58	65.69	300.27	150.14	431.66
74.00	18.0	240.99	55.15	296.14	148.07	406.45
76.00	18.0	244.91	31.66	276.57	138.28	339.88
78.00	18.0	248.18	26.26	274.44	137.22	326.97
80.00	18.0	250.78	27.98	278.76	139.38	334.72
82.00	18.0	250.98	38.08	289.07	144.53	365.23
84.00	18.0	252.80	64.39	317.20	158.60	445.98
86.00	18.0	255.61	63.78	319.39	159.70	446.96
88.00	18.0	260.24	63.44	323.68	161.84	450.55
90.00	18.0	263.68	68.70	332.38	166.19	469.79
92.00	18.0	266.58	73.94	340.53	170.26	488.41
94.00	18.0	272.83	79.14	351.97	175.99	510.25
96.00	18.0	279.05	77.59	356.64	178.32	511.82
98.00	18.0	283.80	80.92	364.72	182.36	526.57
100.00	18.0	286.69	78.29	364.99	182.49	521.57
102.00	18.0	289.94	75.00	364.93	182.47	514.92
104.00	18.0	293.48	78.88	372.35	186.18	530.10
106.00	18.0	296.71	89.31	386.02	193.01	564.64
108.00	18.0	309.99	84.69	394.68	197.34	564.06
110.00	18.0	320.59	91.82	412.42	206.21	596.06
112.00	18.0	*****	Not enough soil data	*****		
114.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS

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3 x THE MOBILIZED END BEARING.

EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:culations-Analyses\FB-Deep\Wildlife No 1\WL1-B12_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 4-3-14, Boring Number: WL1-B12
 Station number: 667+79 Offset: 135 LT

Ground Elevation: 61.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	6.00	3- Clean sand
2	7.00	6.00	3- Clean sand
3	9.00	6.00	3- Clean sand
4	12.50	12.00	2- Clay and silty sand
5	15.00	12.00	2- Clay and silty sand
6	17.50	14.00	2- Clay and silty sand
7	20.00	10.00	2- Clay and silty sand
8	22.50	7.00	2- Clay and silty sand
9	25.00	11.00	2- Clay and silty sand
10	27.50	7.00	2- Clay and silty sand
11	30.00	6.00	1- Plastic Clay
12	32.50	29.00	3- Clean sand
13	35.00	27.00	3- Clean sand
14	37.50	14.00	3- Clean sand
15	40.00	2.00	2- Clay and silty sand
16	42.50	0.00	2- Clay and silty sand
17	45.00	0.00	2- Clay and silty sand

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18	47.50	2.00	2-	Clay and silty sand
19	50.00	0.00	2-	Clay and silty sand
20	52.50	3.00	2-	Clay and silty sand
21	53.75	3.00	3-	Clean sand
22	55.00	99.00	2-	Clay and silty sand
23	57.50	40.00	2-	Clay and silty sand
24	60.00	99.00	2-	Clay and silty sand
25	62.50	99.00	2-	Clay and silty sand
26	65.00	99.00	2-	Clay and silty sand
27	67.50	99.00	2-	Clay and silty sand
28	70.00	99.00	2-	Clay and silty sand
29	72.50	99.00	2-	Clay and silty sand
30	75.00	12.00	1-	Plastic Clay
31	77.50	4.00	4-	Lime Stone/Very shelly sand
32	80.00	9.00	4-	Lime Stone/Very shelly sand
33	82.50	2.00	4-	Lime Stone/Very shelly sand
34	83.75	2.00	3-	Clean sand
35	85.00	27.00	4-	Lime Stone/Very shelly sand
36	87.50	38.00	4-	Lime Stone/Very shelly sand
37	88.75	8.00	3-	Clean sand
38	90.00	8.00	4-	Lime Stone/Very shelly sand
39	92.50	8.00	4-	Lime Stone/Very shelly sand
40	95.00	17.00	4-	Lime Stone/Very shelly sand
41	97.50	8.00	4-	Lime Stone/Very shelly sand
42	98.75	8.00	3-	Clean sand
43	100.00	99.00	4-	Lime Stone/Very shelly sand
44	101.25	32.00	3-	Clean sand
45	102.50	32.00	4-	Lime Stone/Very shelly sand
46	103.75	32.00	3-	Clean sand
47	105.00	99.00	4-	Lime Stone/Very shelly sand
48	106.25	16.00	3-	Clean sand
49	107.50	16.00	4-	Lime Stone/Very shelly sand
50	110.00	18.00	4-	Lime Stone/Very shelly sand
51	112.50	14.00	4-	Lime Stone/Very shelly sand
52	115.00	16.00	4-	Lime Stone/Very shelly sand
53	117.50	18.00	4-	Lime Stone/Very shelly sand
54	120.00	17.00	4-	Lime Stone/Very shelly sand
55	121.25	17.00	3-	Clean sand
56	122.50	35.00	4-	Lime Stone/Very shelly sand
57	125.00	31.00	4-	Lime Stone/Very shelly sand
58	126.00	0.00	5-	Cavity layer

Blowcount Average Per Soil Layer

Layer	Starting	Bottom	Thickness	Average	Soil Type
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WL1-B12_18-PCP.txt					
Num.	Elevation (ft)	Elevation (ft)	(ft)	Blowcount (Blows/ft)	
1	61.00	48.50	12.50	6.00	3-Clean Sand
2	48.50	31.00	17.50	10.43	2-Clay and Silty Sand
3	31.00	28.50	2.50	6.00	1-Plastic Clay
4	28.50	21.00	7.50	23.33	3-Clean Sand
5	21.00	7.25	13.75	1.00	2-Clay and Silty Sand
6	7.25	6.00	1.25	3.00	3-Clean Sand
7	6.00	-14.00	20.00	91.63	2-Clay and Silty Sand
8	-14.00	-16.50	2.50	12.00	1-Plastic Clay
9	-16.50	-22.75	6.25	5.60	4-Limestone, Very
Shelly Sand					
10	-22.75	-24.00	1.25	2.00	3-Clean Sand
11	-24.00	-27.75	3.75	30.67	4-Limestone, Very
Shelly Sand					
12	-27.75	-29.00	1.25	8.00	3-Clean Sand
13	-29.00	-37.75	8.75	10.57	4-Limestone, Very
Shelly Sand					
14	-37.75	-39.00	1.25	8.00	3-Clean Sand
15	-39.00	-40.25	1.25	99.00	4-Limestone, Very
Shelly Sand					
16	-40.25	-41.50	1.25	32.00	3-Clean Sand
17	-41.50	-42.75	1.25	32.00	4-Limestone, Very
Shelly Sand					
18	-42.75	-44.00	1.25	32.00	3-Clean Sand
19	-44.00	-45.25	1.25	99.00	4-Limestone, Very
Shelly Sand					
20	-45.25	-46.50	1.25	16.00	3-Clean Sand
21	-46.50	-60.25	13.75	16.45	4-Limestone, Very
Shelly Sand					
22	-60.25	-61.50	1.25	17.00	3-Clean Sand
23	-61.50	-65.00	3.50	33.86	4-Limestone, Very
Shelly Sand					
24	-65.00	-65.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
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18.00	10.00	51.00
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WL1-B12_18-PCP.txt

18.00	12.00	49.00
18.00	14.00	47.00
18.00	16.00	45.00
18.00	18.00	43.00
18.00	20.00	41.00
18.00	22.00	39.00
18.00	24.00	37.00
18.00	26.00	35.00
18.00	28.00	33.00
18.00	30.00	31.00
18.00	32.00	29.00
18.00	34.00	27.00
18.00	36.00	25.00
18.00	38.00	23.00
18.00	40.00	21.00
18.00	42.00	19.00
18.00	44.00	17.00
18.00	46.00	15.00
18.00	48.00	13.00
18.00	50.00	11.00
18.00	52.00	9.00
18.00	54.00	7.00
18.00	56.00	5.00
18.00	58.00	3.00
18.00	60.00	1.00
18.00	62.00	-1.00
18.00	64.00	-3.00
18.00	66.00	-5.00
18.00	68.00	-7.00
18.00	70.00	-9.00
18.00	72.00	-11.00
18.00	74.00	-13.00
18.00	76.00	-15.00
18.00	78.00	-17.00
18.00	80.00	-19.00
18.00	82.00	-21.00
18.00	84.00	-23.00
18.00	86.00	-25.00
18.00	88.00	-27.00
18.00	90.00	-29.00
18.00	92.00	-31.00
18.00	94.00	-33.00
18.00	96.00	-35.00
18.00	98.00	-37.00
18.00	100.00	-39.00
18.00	102.00	-41.00
18.00	104.00	-43.00
18.00	106.00	-45.00

WL1-B12_18-PCP.txt

18.00	108.00	-47.00
18.00	110.00	-49.00
18.00	112.00	-51.00
18.00	114.00	-53.00
18.00	116.00	-55.00
18.00	118.00	-57.00
18.00	120.00	-59.00
18.00	122.00	-61.00
18.00	124.00	-63.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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10.00	18.0	8.89	17.86	26.75	13.37	62.47
12.00	18.0	13.85	18.14	31.99	16.00	68.28
14.00	18.0	21.16	18.36	39.52	19.76	76.24
16.00	18.0	28.67	17.75	46.43	23.21	81.93
18.00	18.0	36.82	16.48	53.30	26.65	86.26
20.00	18.0	43.99	15.76	59.75	29.87	91.26
22.00	18.0	49.63	15.26	64.89	32.45	95.42
24.00	18.0	54.79	14.15	68.94	34.47	97.23
26.00	18.0	61.22	14.33	75.55	37.77	104.21
28.00	18.0	66.34	25.50	91.83	45.92	142.83
30.00	18.0	70.92	38.74	109.66	54.83	187.14
32.00	18.0	76.39	42.89	119.28	59.64	205.07
34.00	18.0	84.92	40.55	125.47	62.74	206.57
36.00	18.0	92.25	31.75	123.99	62.00	187.49
38.00	18.0	96.93	25.20	122.13	61.06	172.52
40.00	18.0	98.52	0.00	98.52	49.26	98.52
42.00	18.0	98.52	0.00	98.52	49.26	98.52
44.00	18.0	98.52	0.00	98.52	49.26	98.52
46.00	18.0	98.52	0.00	98.52	49.26	98.52
48.00	18.0	98.52	0.00	98.52	49.26	98.52
50.00	18.0	98.52	5.99	104.50	52.25	116.47
52.00	18.0	98.52	18.51	117.03	58.51	154.05
54.00	18.0	98.70	29.00	127.70	63.85	185.71
56.00	18.0	110.68	35.43	146.11	73.05	216.96
58.00	18.0	123.00	39.97	162.97	81.48	242.91
60.00	18.0	135.27	48.80	184.07	92.03	281.66
62.00	18.0	149.89	57.58	207.47	103.73	322.62

WL1-B12_18-PCP.txt

64.00	18.0	165.60	63.58	229.17	114.59	356.32
66.00	18.0	181.31	69.50	250.81	125.40	389.81
68.00	18.0	197.02	70.12	267.13	133.57	407.36
70.00	18.0	212.72	62.40	275.13	137.56	399.94
72.00	18.0	228.43	49.85	278.28	139.14	377.99
74.00	18.0	242.61	39.45	282.06	141.03	360.96
76.00	18.0	259.36	9.74	269.10	134.55	288.57
78.00	18.0	261.30	31.16	292.46	146.23	354.77
80.00	18.0	262.11	30.80	292.90	146.45	354.50
82.00	18.0	262.60	38.16	300.77	150.38	377.09
84.00	18.0	262.99	50.52	313.51	156.76	414.56
86.00	18.0	266.37	42.62	308.99	154.50	394.23
88.00	18.0	271.49	34.73	306.22	153.11	375.69
90.00	18.0	273.80	39.68	313.47	156.74	392.82
92.00	18.0	274.90	40.47	315.37	157.69	396.32
94.00	18.0	276.26	41.73	317.99	159.00	401.46
96.00	18.0	277.53	54.97	332.50	166.25	442.44
98.00	18.0	278.66	68.54	347.20	173.60	484.27
100.00	18.0	283.97	79.00	362.96	181.48	520.95
102.00	18.0	291.96	98.99	390.94	195.47	588.91
104.00	18.0	298.78	74.44	373.22	186.61	522.10
106.00	18.0	305.18	69.04	374.23	187.11	512.32
108.00	18.0	309.18	68.70	377.88	188.94	515.28
110.00	18.0	311.71	69.05	380.76	190.38	518.86
112.00	18.0	314.17	68.88	383.06	191.53	520.82
114.00	18.0	316.34	65.18	381.53	190.76	511.89
116.00	18.0	318.72	61.43	380.15	190.08	503.01
118.00	18.0	321.33	62.88	384.21	192.10	509.96
120.00	18.0	323.92	72.50	396.42	198.21	541.41
122.00	18.0	*****	Not enough soil data	*****		
124.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B13_18&24PCP.spc
Project number: H1135080
Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
Engineer: EJ
Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-17-14, Boring Number: WL1-B13
Station number: 667+54 Offset: 3 RT

Ground Elevation: 60.300(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	3.00	2.00	2- Clay and silty sand
4	4.00	4.00	3- Clean sand
5	6.00	6.00	3- Clean sand
6	8.00	6.00	2- Clay and silty sand
7	10.00	5.00	2- Clay and silty sand
8	12.50	6.00	2- Clay and silty sand
9	13.75	6.00	3- Clean sand
10	15.00	16.00	2- Clay and silty sand
11	17.50	16.00	2- Clay and silty sand
12	20.00	19.00	2- Clay and silty sand
13	22.50	14.00	3- Clean sand
14	25.00	10.00	1- Plastic Clay
15	27.50	8.00	2- Clay and silty sand
16	30.00	8.00	2- Clay and silty sand
17	32.50	39.00	1- Plastic Clay

WL1-B13_18-PCP.txt

18	35.00	32.00	3- Clean sand
19	37.50	38.00	3- Clean sand
20	40.00	0.00	2- Clay and silty sand
21	42.50	0.00	1- Plastic Clay
22	45.00	0.00	2- Clay and silty sand
23	47.50	0.00	2- Clay and silty sand
24	50.00	4.00	2- Clay and silty sand
25	52.50	4.00	2- Clay and silty sand
26	53.75	4.00	3- Clean sand
27	55.00	10.00	2- Clay and silty sand
28	57.50	16.00	2- Clay and silty sand
29	58.75	16.00	3- Clean sand
30	60.00	57.00	2- Clay and silty sand
31	62.50	99.00	2- Clay and silty sand
32	65.00	99.00	2- Clay and silty sand
33	67.50	99.00	2- Clay and silty sand
34	70.00	99.00	2- Clay and silty sand
35	72.50	99.00	4- Lime Stone/Very shelly sand
36	75.00	48.00	4- Lime Stone/Very shelly sand
37	77.50	44.00	4- Lime Stone/Very shelly sand
38	80.00	67.00	4- Lime Stone/Very shelly sand
39	82.50	60.00	4- Lime Stone/Very shelly sand
40	85.00	99.00	4- Lime Stone/Very shelly sand
41	86.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	60.30	57.30	3.00	2.00	3-Clean Sand
2	57.30	56.30	1.00	2.00	2-Clay and Silty Sand
3	56.30	52.30	4.00	5.00	3-Clean Sand
4	52.30	46.55	5.75	5.57	2-Clay and Silty Sand
5	46.55	45.30	1.25	6.00	3-Clean Sand
6	45.30	37.80	7.50	17.00	2-Clay and Silty Sand
7	37.80	35.30	2.50	14.00	3-Clean Sand
8	35.30	32.80	2.50	10.00	1-Plastic Clay
9	32.80	27.80	5.00	8.00	2-Clay and Silty Sand
10	27.80	25.30	2.50	39.00	1-Plastic Clay
11	25.30	20.30	5.00	35.00	3-Clean Sand
12	20.30	17.80	2.50	0.00	2-Clay and Silty Sand
13	17.80	15.30	2.50	0.00	1-Plastic Clay

WL1-B13_18-PCP.txt

14	15.30	6.55	8.75	1.71	2-Clay and Silty Sand
15	6.55	5.30	1.25	4.00	3-Clean Sand
16	5.30	1.55	3.75	12.00	2-Clay and Silty Sand
17	1.55	0.30	1.25	16.00	3-Clean Sand
18	0.30	-12.20	12.50	90.60	2-Clay and Silty Sand
19	-12.20	-25.70	13.50	66.22	4-Limestone, Very
Shelly Sand					
20	-25.70	-25.70	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	50.30
18.00	12.00	48.30
18.00	14.00	46.30
18.00	16.00	44.30
18.00	18.00	42.30
18.00	20.00	40.30
18.00	22.00	38.30
18.00	24.00	36.30
18.00	26.00	34.30
18.00	28.00	32.30
18.00	30.00	30.30
18.00	32.00	28.30
18.00	34.00	26.30
18.00	36.00	24.30
18.00	38.00	22.30
18.00	40.00	20.30
18.00	42.00	18.30
18.00	44.00	16.30
18.00	46.00	14.30
18.00	48.00	12.30
18.00	50.00	10.30
18.00	52.00	8.30
18.00	54.00	6.30
18.00	56.00	4.30
18.00	58.00	2.30
18.00	60.00	0.30
18.00	62.00	-1.70
18.00	64.00	-3.70
18.00	66.00	-5.70

WL1-B13_18-PCP.txt

18.00	68.00	-7.70
18.00	70.00	-9.70
18.00	72.00	-11.70
18.00	74.00	-13.70
18.00	76.00	-15.70
18.00	78.00	-17.70
18.00	80.00	-19.70
18.00	82.00	-21.70
18.00	84.00	-23.70
18.00	86.00	-25.70
18.00	88.00	-27.70
18.00	90.00	-29.70

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	6.58	7.96	14.54	7.27	30.47
12.00	18.0	8.67	11.47	20.15	10.07	43.09
14.00	18.0	14.06	15.84	29.90	14.95	61.58
16.00	18.0	21.50	18.03	39.54	19.77	75.61
18.00	18.0	28.75	20.56	49.31	24.65	90.43
20.00	18.0	38.34	21.90	60.24	30.12	104.03
22.00	18.0	47.01	20.20	67.21	33.61	107.61
24.00	18.0	53.52	16.93	70.46	35.23	104.32
26.00	18.0	61.01	9.92	70.92	35.46	90.76
28.00	18.0	66.60	19.86	86.46	43.23	126.17
30.00	18.0	69.94	24.72	94.65	47.33	144.09
32.00	18.0	76.02	40.51	116.53	58.27	197.55
34.00	18.0	97.10	53.29	150.38	75.19	256.96
36.00	18.0	107.78	43.96	151.74	75.87	239.66
38.00	18.0	117.88	31.69	149.57	74.78	212.96
40.00	18.0	122.17	0.00	122.17	61.09	122.17
42.00	18.0	122.17	0.00	122.17	61.09	122.17
44.00	18.0	122.17	23.52	145.70	72.85	192.74
46.00	18.0	122.17	20.13	142.30	71.15	182.55
48.00	18.0	122.17	12.62	134.80	67.40	160.04
50.00	18.0	122.17	5.02	127.19	63.60	137.23
52.00	18.0	122.17	4.94	127.11	63.55	136.98
54.00	18.0	122.24	10.97	133.21	66.61	155.16
56.00	18.0	126.84	19.07	145.91	72.95	184.05

WL1-B13_18-PCP.txt

58.00	18.0	131.71	26.69	158.40	79.20	211.77
60.00	18.0	144.63	43.38	188.01	94.00	274.76
62.00	18.0	158.75	45.38	204.13	102.06	294.88
64.00	18.0	171.51	51.38	222.89	111.44	325.64
66.00	18.0	184.16	64.04	248.20	124.10	376.28
68.00	18.0	199.87	83.42	283.29	141.65	450.14
70.00	18.0	215.58	104.46	320.04	160.02	528.97
72.00	18.0	228.16	117.85	346.00	173.00	581.70
74.00	18.0	242.71	120.03	362.74	181.37	602.80
76.00	18.0	249.05	123.97	373.02	186.51	620.96
78.00	18.0	254.70	131.96	386.66	193.33	650.58
80.00	18.0	260.68	142.94	403.62	201.81	689.49
82.00	18.0	*****	Not enough soil data	*****		
84.00	18.0	0.00	0.00	0.00	0.00	0.00
86.00	18.0	0.00	0.00	0.00	0.00	0.00
88.00	18.0	0.00	0.00	0.00	0.00	0.00
90.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSEON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSEON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B14_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-20-14, Boring Number: WL1-B14
 Station number: 668+74 Offset: 54 LT

Ground Elevation: 61.700(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	4.00	3- Clean sand
4	6.00	4.00	3- Clean sand
5	7.00	4.00	2- Clay and silty sand
6	8.00	10.00	3- Clean sand
7	10.00	9.00	2- Clay and silty sand
8	12.50	12.00	3- Clean sand
9	15.00	37.00	2- Clay and silty sand
10	17.50	22.00	2- Clay and silty sand
11	18.75	12.00	3- Clean sand
12	20.00	12.00	2- Clay and silty sand
13	22.50	9.00	2- Clay and silty sand
14	25.00	13.00	2- Clay and silty sand
15	27.50	8.00	2- Clay and silty sand
16	30.00	10.00	2- Clay and silty sand
17	32.50	8.00	2- Clay and silty sand

WL1-B14_18-PCP.txt

18	35.00	16.00	3- Clean sand
19	36.25	16.00	2- Clay and silty sand
20	37.50	31.00	3- Clean sand
21	40.00	7.00	1- Plastic Clay
22	42.50	3.00	2- Clay and silty sand
23	43.75	3.00	3- Clean sand
24	45.00	5.00	2- Clay and silty sand
25	46.25	4.00	3- Clean sand
26	47.50	4.00	2- Clay and silty sand
27	48.75	4.00	3- Clean sand
28	50.00	6.00	2- Clay and silty sand
29	51.25	6.00	3- Clean sand
30	52.50	42.00	2- Clay and silty sand
31	55.00	34.00	2- Clay and silty sand
32	56.25	34.00	3- Clean sand
33	57.50	99.00	2- Clay and silty sand
34	58.75	10.00	3- Clean sand
35	60.00	10.00	2- Clay and silty sand
36	62.50	22.00	2- Clay and silty sand
37	63.75	22.00	3- Clean sand
38	65.00	99.00	2- Clay and silty sand
39	67.50	99.00	2- Clay and silty sand
40	70.00	99.00	4- Lime Stone/Very shelly sand
41	72.50	99.00	4- Lime Stone/Very shelly sand
42	75.00	19.00	1- Plastic Clay
43	77.50	32.00	2- Clay and silty sand
44	80.00	20.00	4- Lime Stone/Very shelly sand
45	82.50	18.00	4- Lime Stone/Very shelly sand
46	85.00	14.00	4- Lime Stone/Very shelly sand
47	87.50	16.00	4- Lime Stone/Very shelly sand
48	90.00	21.00	4- Lime Stone/Very shelly sand
49	92.50	9.00	4- Lime Stone/Very shelly sand
50	95.00	13.00	4- Lime Stone/Very shelly sand
51	97.50	27.00	4- Lime Stone/Very shelly sand
52	100.00	17.00	4- Lime Stone/Very shelly sand
53	101.25	17.00	3- Clean sand
54	102.50	45.00	4- Lime Stone/Very shelly sand
55	103.75	16.00	3- Clean sand
56	105.00	16.00	4- Lime Stone/Very shelly sand
57	107.50	16.00	4- Lime Stone/Very shelly sand
58	110.00	23.00	4- Lime Stone/Very shelly sand
59	112.50	19.00	4- Lime Stone/Very shelly sand
60	115.00	16.00	4- Lime Stone/Very shelly sand
61	117.50	17.00	4- Lime Stone/Very shelly sand
62	118.75	17.00	3- Clean sand
63	120.00	45.00	4- Lime Stone/Very shelly sand
64	122.50	45.00	4- Lime Stone/Very shelly sand
65	125.00	42.00	4- Lime Stone/Very shelly sand

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66	127.50	45.00	4- Lime Stone/Very shelly sand
67	130.00	41.00	4- Lime Stone/Very shelly sand
68	132.50	99.00	4- Lime Stone/Very shelly sand
69	135.00	99.00	4- Lime Stone/Very shelly sand
70	136.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	61.70	54.70	7.00	2.86	3-Clean Sand
2	54.70	53.70	1.00	4.00	2-Clay and Silty Sand
3	53.70	51.70	2.00	10.00	3-Clean Sand
4	51.70	49.20	2.50	9.00	2-Clay and Silty Sand
5	49.20	46.70	2.50	12.00	3-Clean Sand
6	46.70	42.95	3.75	32.00	2-Clay and Silty Sand
7	42.95	41.70	1.25	12.00	3-Clean Sand
8	41.70	26.70	15.00	10.00	2-Clay and Silty Sand
9	26.70	25.45	1.25	16.00	3-Clean Sand
10	25.45	24.20	1.25	16.00	2-Clay and Silty Sand
11	24.20	21.70	2.50	31.00	3-Clean Sand
12	21.70	19.20	2.50	7.00	1-Plastic Clay
13	19.20	17.95	1.25	3.00	2-Clay and Silty Sand
14	17.95	16.70	1.25	3.00	3-Clean Sand
15	16.70	15.45	1.25	5.00	2-Clay and Silty Sand
16	15.45	14.20	1.25	4.00	3-Clean Sand
17	14.20	12.95	1.25	4.00	2-Clay and Silty Sand
18	12.95	11.70	1.25	4.00	3-Clean Sand
19	11.70	10.45	1.25	6.00	2-Clay and Silty Sand
20	10.45	9.20	1.25	6.00	3-Clean Sand
21	9.20	5.45	3.75	39.33	2-Clay and Silty Sand
22	5.45	4.20	1.25	34.00	3-Clean Sand
23	4.20	2.95	1.25	99.00	2-Clay and Silty Sand
24	2.95	1.70	1.25	10.00	3-Clean Sand
25	1.70	-2.05	3.75	14.00	2-Clay and Silty Sand
26	-2.05	-3.30	1.25	22.00	3-Clean Sand
27	-3.30	-8.30	5.00	99.00	2-Clay and Silty Sand
28	-8.30	-13.30	5.00	99.00	4-Limestone, Very Shelly Sand
29	-13.30	-15.80	2.50	19.00	1-Plastic Clay
30	-15.80	-18.30	2.50	32.00	2-Clay and Silty Sand
31	-18.30	-39.55	21.25	17.24	4-Limestone, Very Shelly Sand

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Shelly Sand					
32	-39.55	-40.80	1.25	17.00	3-Clean Sand
33	-40.80	-42.05	1.25	45.00	4-Limestone, Very
Shelly Sand					
34	-42.05	-43.30	1.25	16.00	3-Clean Sand
35	-43.30	-57.05	13.75	17.91	4-Limestone, Very
Shelly Sand					
36	-57.05	-58.30	1.25	17.00	3-Clean Sand
37	-58.30	-74.30	16.00	55.72	4-Limestone, Very
Shelly Sand					
38	-74.30	-74.30	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	51.70
18.00	12.00	49.70
18.00	14.00	47.70
18.00	16.00	45.70
18.00	18.00	43.70
18.00	20.00	41.70
18.00	22.00	39.70
18.00	24.00	37.70
18.00	26.00	35.70
18.00	28.00	33.70
18.00	30.00	31.70
18.00	32.00	29.70
18.00	34.00	27.70
18.00	36.00	25.70
18.00	38.00	23.70
18.00	40.00	21.70
18.00	42.00	19.70
18.00	44.00	17.70
18.00	46.00	15.70
18.00	48.00	13.70
18.00	50.00	11.70
18.00	52.00	9.70
18.00	54.00	7.70
18.00	56.00	5.70
18.00	58.00	3.70
18.00	60.00	1.70

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18.00	62.00	-0.30
18.00	64.00	-2.30
18.00	66.00	-4.30
18.00	68.00	-6.30
18.00	70.00	-8.30
18.00	72.00	-10.30
18.00	74.00	-12.30
18.00	76.00	-14.30
18.00	78.00	-16.30
18.00	80.00	-18.30
18.00	82.00	-20.30
18.00	84.00	-22.30
18.00	86.00	-24.30
18.00	88.00	-26.30
18.00	90.00	-28.30
18.00	92.00	-30.30
18.00	94.00	-32.30
18.00	96.00	-34.30
18.00	98.00	-36.30
18.00	100.00	-38.30
18.00	102.00	-40.30
18.00	104.00	-42.30
18.00	106.00	-44.30
18.00	108.00	-46.30
18.00	110.00	-48.30
18.00	112.00	-50.30
18.00	114.00	-52.30
18.00	116.00	-54.30
18.00	118.00	-56.30
18.00	120.00	-58.30
18.00	122.00	-60.30
18.00	124.00	-62.30
18.00	126.00	-64.30
18.00	128.00	-66.30
18.00	130.00	-68.30
18.00	132.00	-70.30
18.00	134.00	-72.30

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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WL1-B14_18-PCP.txt

10.00	18.0	5.01	20.84	25.85	12.92	67.52
12.00	18.0	8.99	22.67	31.66	15.83	76.99
14.00	18.0	15.72	27.14	42.87	21.43	97.15
16.00	18.0	29.17	36.92	66.10	33.05	139.94
18.00	18.0	42.03	31.48	73.52	36.76	136.48
20.00	18.0	47.63	16.14	63.77	31.88	96.04
22.00	18.0	54.39	16.02	70.41	35.20	102.44
24.00	18.0	60.69	15.33	76.02	38.01	106.69
26.00	18.0	68.12	15.04	83.17	41.58	113.26
28.00	18.0	73.96	14.85	88.81	44.41	118.52
30.00	18.0	79.85	18.98	98.82	49.41	136.78
32.00	18.0	85.73	24.29	110.02	55.01	158.60
34.00	18.0	90.80	33.10	123.90	61.95	190.10
36.00	18.0	96.36	29.33	125.69	62.84	184.34
38.00	18.0	104.18	25.09	129.27	64.63	179.44
40.00	18.0	111.91	2.29	114.20	57.10	118.78
42.00	18.0	115.07	2.27	117.35	58.67	121.89
44.00	18.0	115.24	14.48	129.72	64.86	158.68
46.00	18.0	117.26	14.35	131.61	65.81	160.30
48.00	18.0	117.31	18.22	135.53	67.76	171.97
50.00	18.0	118.56	25.33	143.88	71.94	194.53
52.00	18.0	122.30	31.97	154.27	77.13	218.21
54.00	18.0	137.24	38.19	175.43	87.72	251.82
56.00	18.0	151.45	35.86	187.31	93.65	259.02
58.00	18.0	162.85	31.79	194.63	97.32	258.21
60.00	18.0	169.29	42.60	211.89	105.94	297.09
62.00	18.0	176.35	46.31	222.65	111.33	315.26
64.00	18.0	187.14	64.23	251.37	125.69	379.83
66.00	18.0	200.19	75.89	276.08	138.04	427.86
68.00	18.0	212.03	87.02	299.04	149.52	473.07
70.00	18.0	227.08	90.46	317.54	158.77	498.46
72.00	18.0	234.28	76.33	310.61	155.30	463.26
74.00	18.0	242.60	70.90	313.50	156.75	455.30
76.00	18.0	254.54	36.41	290.96	145.48	363.78
78.00	18.0	268.32	77.39	345.71	172.85	500.49
80.00	18.0	275.95	58.05	334.00	167.00	450.09
82.00	18.0	278.79	58.15	336.93	168.47	453.23
84.00	18.0	281.36	57.01	338.37	169.18	452.38
86.00	18.0	283.53	57.72	341.25	170.62	456.68
88.00	18.0	285.86	54.25	340.12	170.06	448.62
90.00	18.0	288.69	50.49	339.18	169.59	440.15
92.00	18.0	291.10	52.65	343.75	171.88	449.05
94.00	18.0	292.62	58.84	351.46	175.73	469.15
96.00	18.0	294.70	59.86	354.56	177.28	474.29
98.00	18.0	298.22	67.85	366.07	183.03	501.78
100.00	18.0	301.34	66.50	367.84	183.92	500.83
102.00	18.0	305.65	64.56	370.21	185.10	499.32

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104.00	18.0	311.27	52.03	363.30	181.65	467.36
106.00	18.0	314.04	64.07	378.11	189.05	506.25
108.00	18.0	316.26	65.55	381.81	190.90	512.91
110.00	18.0	319.33	65.04	384.37	192.19	514.45
112.00	18.0	322.68	63.03	385.71	192.86	511.78
114.00	18.0	325.42	62.22	387.64	193.82	512.08
116.00	18.0	327.86	74.50	402.36	201.18	551.37
118.00	18.0	330.47	92.74	423.21	211.61	608.70
120.00	18.0	335.61	106.76	442.38	221.19	655.90
122.00	18.0	341.99	108.09	450.08	225.04	666.26
124.00	18.0	347.86	112.10	459.95	229.98	684.15
126.00	18.0	353.30	119.16	472.46	236.23	710.79
128.00	18.0	358.77	131.90	490.68	245.34	754.48
130.00	18.0	364.65	145.49	510.14	255.07	801.11
132.00	18.0	*****	Not enough soil data	*****		
134.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 X THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 X THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B15_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-12-14, Boring Number: WL1-B15
 Station number: 668+91 Offset: 88 RT

Ground Elevation: 62.500(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	4.00	3- Clean sand
4	5.00	4.00	2- Clay and silty sand
5	6.00	6.00	3- Clean sand
6	8.00	8.00	3- Clean sand
7	10.00	8.00	3- Clean sand
8	12.50	9.00	2- Clay and silty sand
9	15.00	17.00	2- Clay and silty sand
10	17.50	19.00	2- Clay and silty sand
11	20.00	13.00	2- Clay and silty sand
12	22.50	14.00	2- Clay and silty sand
13	25.00	10.00	2- Clay and silty sand
14	27.50	7.00	2- Clay and silty sand
15	30.00	15.00	2- Clay and silty sand
16	32.50	9.00	2- Clay and silty sand
17	35.00	50.00	3- Clean sand

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18	37.50	56.00	3- Clean sand
19	40.00	30.00	3- Clean sand
20	42.50	3.00	1- Plastic Clay
21	43.75	3.00	2- Clay and silty sand
22	45.00	5.00	1- Plastic Clay
23	47.50	6.00	2- Clay and silty sand
24	50.00	7.00	2- Clay and silty sand
25	51.25	7.00	3- Clean sand
26	52.50	21.00	2- Clay and silty sand
27	53.75	5.00	3- Clean sand
28	55.00	5.00	2- Clay and silty sand
29	56.25	5.00	3- Clean sand
30	57.50	19.00	2- Clay and silty sand
31	58.75	19.00	3- Clean sand
32	60.00	99.00	2- Clay and silty sand
33	61.25	30.00	3- Clean sand
34	62.50	30.00	2- Clay and silty sand
35	63.75	30.00	3- Clean sand
36	65.00	99.00	2- Clay and silty sand
37	66.25	13.00	3- Clean sand
38	67.50	13.00	2- Clay and silty sand
39	70.00	23.00	2- Clay and silty sand
40	72.50	8.00	2- Clay and silty sand
41	75.00	10.00	2- Clay and silty sand
42	77.50	20.00	3- Clean sand
43	80.00	4.00	2- Clay and silty sand
44	82.50	2.00	2- Clay and silty sand
45	85.00	2.00	2- Clay and silty sand
46	87.50	24.00	4- Lime Stone/Very shelly sand
47	88.75	24.00	3- Clean sand
48	90.00	65.00	4- Lime Stone/Very shelly sand
49	92.50	51.00	4- Lime Stone/Very shelly sand
50	95.00	42.00	4- Lime Stone/Very shelly sand
51	97.50	52.00	4- Lime Stone/Very shelly sand
52	100.00	48.00	4- Lime Stone/Very shelly sand
53	102.50	40.00	4- Lime Stone/Very shelly sand
54	105.00	44.00	4- Lime Stone/Very shelly sand
55	106.25	24.00	3- Clean sand
56	107.50	24.00	4- Lime Stone/Very shelly sand
57	110.00	29.00	4- Lime Stone/Very shelly sand
58	112.50	18.00	4- Lime Stone/Very shelly sand
59	115.00	24.00	4- Lime Stone/Very shelly sand
60	117.50	21.00	4- Lime Stone/Very shelly sand
61	120.00	24.00	4- Lime Stone/Very shelly sand
62	122.50	21.00	4- Lime Stone/Very shelly sand
63	123.75	21.00	3- Clean sand
64	125.00	55.00	4- Lime Stone/Very shelly sand
65	126.25	22.00	3- Clean sand

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66	127.50	22.00	4- Lime Stone/Very shelly sand
67	128.75	22.00	3- Clean sand
68	130.00	99.00	4- Lime Stone/Very shelly sand
69	132.50	99.00	4- Lime Stone/Very shelly sand
70	135.00	99.00	4- Lime Stone/Very shelly sand
71	137.50	99.00	4- Lime Stone/Very shelly sand
72	140.00	99.00	4- Lime Stone/Very shelly sand
73	141.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.50	57.50	5.00	2.40	3-Clean Sand
2	57.50	56.50	1.00	4.00	2-Clay and Silty Sand
3	56.50	50.00	6.50	7.38	3-Clean Sand
4	50.00	27.50	22.50	12.56	2-Clay and Silty Sand
5	27.50	20.00	7.50	45.33	3-Clean Sand
6	20.00	18.75	1.25	3.00	1-Plastic Clay
7	18.75	17.50	1.25	3.00	2-Clay and Silty Sand
8	17.50	15.00	2.50	5.00	1-Plastic Clay
9	15.00	11.25	3.75	6.33	2-Clay and Silty Sand
10	11.25	10.00	1.25	7.00	3-Clean Sand
11	10.00	8.75	1.25	21.00	2-Clay and Silty Sand
12	8.75	7.50	1.25	5.00	3-Clean Sand
13	7.50	6.25	1.25	5.00	2-Clay and Silty Sand
14	6.25	5.00	1.25	5.00	3-Clean Sand
15	5.00	3.75	1.25	19.00	2-Clay and Silty Sand
16	3.75	2.50	1.25	19.00	3-Clean Sand
17	2.50	1.25	1.25	99.00	2-Clay and Silty Sand
18	1.25	0.00	1.25	30.00	3-Clean Sand
19	0.00	-1.25	1.25	30.00	2-Clay and Silty Sand
20	-1.25	-2.50	1.25	30.00	3-Clean Sand
21	-2.50	-3.75	1.25	99.00	2-Clay and Silty Sand
22	-3.75	-5.00	1.25	13.00	3-Clean Sand
23	-5.00	-15.00	10.00	13.50	2-Clay and Silty Sand
24	-15.00	-17.50	2.50	20.00	3-Clean Sand
25	-17.50	-25.00	7.50	2.67	2-Clay and Silty Sand
26	-25.00	-26.25	1.25	24.00	4-Limestone, Very Shelly Sand
27	-26.25	-27.50	1.25	24.00	3-Clean Sand
28	-27.50	-43.75	16.25	49.23	4-Limestone, Very Shelly Sand

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Shelly Sand					
29	-43.75	-45.00	1.25	24.00	3-Clean Sand
30	-45.00	-61.25	16.25	23.15	4-Limestone, Very
Shelly Sand					
31	-61.25	-62.50	1.25	21.00	3-Clean Sand
32	-62.50	-63.75	1.25	55.00	4-Limestone, Very
Shelly Sand					
33	-63.75	-65.00	1.25	22.00	3-Clean Sand
34	-65.00	-66.25	1.25	22.00	4-Limestone, Very
Shelly Sand					
35	-66.25	-67.50	1.25	22.00	3-Clean Sand
36	-67.50	-78.50	11.00	99.00	4-Limestone, Very
Shelly Sand					
37	-78.50	-78.50	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.50
18.00	12.00	50.50
18.00	14.00	48.50
18.00	16.00	46.50
18.00	18.00	44.50
18.00	20.00	42.50
18.00	22.00	40.50
18.00	24.00	38.50
18.00	26.00	36.50
18.00	28.00	34.50
18.00	30.00	32.50
18.00	32.00	30.50
18.00	34.00	28.50
18.00	36.00	26.50
18.00	38.00	24.50
18.00	40.00	22.50
18.00	42.00	20.50
18.00	44.00	18.50
18.00	46.00	16.50
18.00	48.00	14.50
18.00	50.00	12.50
18.00	52.00	10.50
18.00	54.00	8.50

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18.00	56.00	6.50
18.00	58.00	4.50
18.00	60.00	2.50
18.00	62.00	0.50
18.00	64.00	-1.50
18.00	66.00	-3.50
18.00	68.00	-5.50
18.00	70.00	-7.50
18.00	72.00	-9.50
18.00	74.00	-11.50
18.00	76.00	-13.50
18.00	78.00	-15.50
18.00	80.00	-17.50
18.00	82.00	-19.50
18.00	84.00	-21.50
18.00	86.00	-23.50
18.00	88.00	-25.50
18.00	90.00	-27.50
18.00	92.00	-29.50
18.00	94.00	-31.50
18.00	96.00	-33.50
18.00	98.00	-35.50
18.00	100.00	-37.50
18.00	102.00	-39.50
18.00	104.00	-41.50
18.00	106.00	-43.50
18.00	108.00	-45.50
18.00	110.00	-47.50
18.00	112.00	-49.50
18.00	114.00	-51.50
18.00	116.00	-53.50
18.00	118.00	-55.50
18.00	120.00	-57.50
18.00	122.00	-59.50
18.00	124.00	-61.50
18.00	126.00	-63.50
18.00	128.00	-65.50
18.00	130.00	-67.50
18.00	132.00	-69.50
18.00	134.00	-71.50
18.00	136.00	-73.50
18.00	138.00	-75.50
18.00	140.00	-77.50

Driven Pile Capacity:

WL1-B15_18-PCP.txt

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	4.03	13.01	17.04	8.52	43.05
12.00	18.0	6.77	15.08	21.85	10.92	52.00
14.00	18.0	14.43	18.22	32.65	16.32	69.08
16.00	18.0	22.75	19.64	42.40	21.20	81.68
18.00	18.0	32.35	21.28	53.63	26.82	96.18
20.00	18.0	41.47	20.59	62.06	31.03	103.24
22.00	18.0	49.64	18.88	68.52	34.26	106.28
24.00	18.0	57.63	17.84	75.47	37.73	111.15
26.00	18.0	64.09	18.73	82.82	41.41	120.28
28.00	18.0	69.31	19.65	88.96	44.48	128.27
30.00	18.0	76.51	35.30	111.81	55.91	182.42
32.00	18.0	84.17	58.81	142.98	71.49	260.61
34.00	18.0	91.81	76.78	168.59	84.29	322.15
36.00	18.0	106.75	76.06	182.81	91.40	334.94
38.00	18.0	120.30	62.19	182.48	91.24	306.86
40.00	18.0	130.86	49.58	180.43	90.22	279.59
42.00	18.0	135.95	43.53	179.48	89.74	266.55
44.00	18.0	136.21	43.44	179.65	89.82	266.54
46.00	18.0	139.30	42.17	181.48	90.74	265.83
48.00	18.0	143.28	35.42	178.70	89.35	249.54
50.00	18.0	147.64	24.87	172.51	86.26	222.25
52.00	18.0	151.51	16.66	168.17	84.08	201.48
54.00	18.0	158.12	19.85	177.96	88.98	217.66
56.00	18.0	160.43	25.25	185.68	92.84	236.17
58.00	18.0	166.97	38.82	205.80	102.90	283.44
60.00	18.0	176.28	48.81	225.09	112.55	322.71
62.00	18.0	187.57	66.08	253.65	126.83	385.81
64.00	18.0	199.15	43.39	242.54	121.27	329.32
66.00	18.0	209.96	35.94	245.91	122.95	317.79
68.00	18.0	217.33	22.17	239.51	119.75	283.86
70.00	18.0	227.80	22.48	250.28	125.14	295.24
72.00	18.0	237.13	24.39	261.52	130.76	310.30
74.00	18.0	241.30	27.73	269.03	134.51	324.48
76.00	18.0	247.55	24.38	271.93	135.96	320.68
78.00	18.0	254.64	18.06	272.70	136.35	308.82
80.00	18.0	256.90	0.19	257.09	128.54	257.47
82.00	18.0	256.90	2.71	259.61	129.80	265.03
84.00	18.0	256.90	15.31	272.20	136.10	302.82
86.00	18.0	257.08	51.59	308.67	154.33	411.84
88.00	18.0	260.12	76.36	336.48	168.24	489.19
90.00	18.0	266.74	94.17	360.91	180.45	549.25

WL1-B15_18-PCP.txt

92.00	18.0	273.35	96.28	369.63	184.81	562.18	
94.00	18.0	278.73	104.57	383.30	191.65	592.43	
96.00	18.0	283.43	119.30	402.73	201.37	641.34	
98.00	18.0	289.27	135.63	424.89	212.45	696.15	
100.00	18.0	296.13	145.48	441.61	220.81	732.57	
102.00	18.0	302.83	137.85	440.68	220.34	716.39	
104.00	18.0	309.04	125.87	434.91	217.45	686.64	
106.00	18.0	315.60	115.97	431.57	215.79	663.52	
108.00	18.0	325.82	108.35	434.18	217.09	650.88	
110.00	18.0	329.84	99.69	429.53	214.77	628.92	
112.00	18.0	333.50	91.78	425.28	212.64	608.85	
114.00	18.0	336.42	86.23	422.65	211.33	595.12	
116.00	18.0	339.86	81.38	421.24	210.62	583.99	
118.00	18.0	343.09	76.20	419.29	209.65	571.69	
120.00	18.0	346.49	81.58	428.06	214.03	591.22	
122.00	18.0	349.88	82.33	432.21	216.10	596.86	
124.00	18.0	354.26	81.64	435.90	217.95	599.18	
126.00	18.0	360.81	87.04	447.84	223.92	621.91	
128.00	18.0	365.70	105.22	470.92	235.46	681.36	
130.00	18.0	371.93	123.61	495.54	247.77	742.75	
132.00	18.0	378.78	125.19	503.97	251.99	754.36	
134.00	18.0	385.17	129.95	515.12	257.56	775.03	
136.00	18.0	***** Not enough soil data *****					
138.00	18.0	0.00	0.00	0.00	0.00	0.00	
140.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B16_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 4-13-14, Boring Number: WL1-B16
 Station number: 669+99 Offset: 140 LT

Ground Elevation: 61.400(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	5.00	2.00	2- Clay and silty sand
5	6.00	5.00	3- Clean sand
6	8.00	5.00	3- Clean sand
7	10.00	7.00	3- Clean sand
8	12.50	8.00	3- Clean sand
9	15.00	8.00	2- Clay and silty sand
10	17.50	8.00	2- Clay and silty sand
11	20.00	10.00	2- Clay and silty sand
12	22.50	11.00	2- Clay and silty sand
13	25.00	10.00	2- Clay and silty sand
14	27.50	13.00	2- Clay and silty sand
15	30.00	12.00	2- Clay and silty sand
16	32.50	9.00	2- Clay and silty sand
17	35.00	10.00	1- Plastic Clay

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18	37.50	45.00	3- Clean sand
19	40.00	44.00	3- Clean sand
20	42.50	38.00	3- Clean sand
21	45.00	21.00	3- Clean sand
22	47.50	9.00	1- Plastic Clay
23	48.75	4.00	2- Clay and silty sand
24	50.00	4.00	1- Plastic Clay
25	52.50	0.00	1- Plastic Clay
26	55.00	0.00	2- Clay and silty sand
27	57.50	0.00	2- Clay and silty sand
28	60.00	0.00	2- Clay and silty sand
29	62.50	0.00	2- Clay and silty sand
30	65.00	4.00	2- Clay and silty sand
31	66.25	4.00	3- Clean sand
32	67.50	39.00	2- Clay and silty sand
33	70.00	40.00	2- Clay and silty sand
34	72.50	99.00	2- Clay and silty sand
35	73.75	17.00	3- Clean sand
36	75.00	17.00	2- Clay and silty sand
37	77.50	8.00	2- Clay and silty sand
38	78.75	8.00	3- Clean sand
39	80.00	26.00	2- Clay and silty sand
40	81.25	26.00	3- Clean sand
41	82.50	99.00	2- Clay and silty sand
42	85.00	36.00	4- Lime Stone/Very shelly sand
43	87.50	19.00	4- Lime Stone/Very shelly sand
44	88.75	2.00	3- Clean sand
45	90.00	2.00	4- Lime Stone/Very shelly sand
46	91.25	2.00	3- Clean sand
47	92.50	20.00	4- Lime Stone/Very shelly sand
48	95.00	32.00	4- Lime Stone/Very shelly sand
49	97.50	12.00	4- Lime Stone/Very shelly sand
50	100.00	20.00	4- Lime Stone/Very shelly sand
51	102.50	22.00	4- Lime Stone/Very shelly sand
52	105.00	35.00	4- Lime Stone/Very shelly sand
53	106.25	35.00	3- Clean sand
54	107.50	99.00	4- Lime Stone/Very shelly sand
55	108.75	16.00	3- Clean sand
56	110.00	16.00	4- Lime Stone/Very shelly sand
57	111.25	16.00	3- Clean sand
58	112.50	99.00	4- Lime Stone/Very shelly sand
59	113.75	16.00	3- Clean sand
60	115.00	16.00	4- Lime Stone/Very shelly sand
61	117.50	22.00	4- Lime Stone/Very shelly sand
62	120.00	20.00	4- Lime Stone/Very shelly sand
63	122.50	25.00	4- Lime Stone/Very shelly sand
64	125.00	14.00	4- Lime Stone/Very shelly sand
65	126.25	14.00	3- Clean sand

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66	127.50	37.00	4- Lime Stone/Very shelly sand
67	130.00	39.00	4- Lime Stone/Very shelly sand
68	132.50	25.00	4- Lime Stone/Very shelly sand
69	135.00	31.00	4- Lime Stone/Very shelly sand
70	136.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	61.40	56.40	5.00	2.00	3-Clean Sand
2	56.40	55.40	1.00	2.00	2-Clay and Silty Sand
3	55.40	46.40	9.00	6.39	3-Clean Sand
4	46.40	26.40	20.00	10.13	2-Clay and Silty Sand
5	26.40	23.90	2.50	10.00	1-Plastic Clay
6	23.90	13.90	10.00	37.00	3-Clean Sand
7	13.90	12.65	1.25	9.00	1-Plastic Clay
8	12.65	11.40	1.25	4.00	2-Clay and Silty Sand
9	11.40	6.40	5.00	2.00	1-Plastic Clay
10	6.40	-4.85	11.25	0.44	2-Clay and Silty Sand
11	-4.85	-6.10	1.25	4.00	3-Clean Sand
12	-6.10	-12.35	6.25	51.40	2-Clay and Silty Sand
13	-12.35	-13.60	1.25	17.00	3-Clean Sand
14	-13.60	-17.35	3.75	14.00	2-Clay and Silty Sand
15	-17.35	-18.60	1.25	8.00	3-Clean Sand
16	-18.60	-19.85	1.25	26.00	2-Clay and Silty Sand
17	-19.85	-21.10	1.25	26.00	3-Clean Sand
18	-21.10	-23.60	2.50	99.00	2-Clay and Silty Sand
19	-23.60	-27.35	3.75	30.33	4-Limestone, Very Shelly Sand
20	-27.35	-28.60	1.25	2.00	3-Clean Sand
21	-28.60	-29.85	1.25	2.00	4-Limestone, Very Shelly Sand
22	-29.85	-31.10	1.25	2.00	3-Clean Sand
23	-31.10	-44.85	13.75	22.45	4-Limestone, Very Shelly Sand
24	-44.85	-46.10	1.25	35.00	3-Clean Sand
25	-46.10	-47.35	1.25	99.00	4-Limestone, Very Shelly Sand
26	-47.35	-48.60	1.25	16.00	3-Clean Sand
27	-48.60	-49.85	1.25	16.00	4-Limestone, Very Shelly Sand

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28	-49.85	-51.10	1.25	16.00	3-Clean Sand
29	-51.10	-52.35	1.25	99.00	4-Limestone, Very
Shelly Sand					
30	-52.35	-53.60	1.25	16.00	3-Clean Sand
31	-53.60	-64.85	11.25	20.00	4-Limestone, Very
Shelly Sand					
32	-64.85	-66.10	1.25	14.00	3-Clean Sand
33	-66.10	-74.60	8.50	33.35	4-Limestone, Very
Shelly Sand					
34	-74.60	-74.60	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	51.40
18.00	12.00	49.40
18.00	14.00	47.40
18.00	16.00	45.40
18.00	18.00	43.40
18.00	20.00	41.40
18.00	22.00	39.40
18.00	24.00	37.40
18.00	26.00	35.40
18.00	28.00	33.40
18.00	30.00	31.40
18.00	32.00	29.40
18.00	34.00	27.40
18.00	36.00	25.40
18.00	38.00	23.40
18.00	40.00	21.40
18.00	42.00	19.40
18.00	44.00	17.40
18.00	46.00	15.40
18.00	48.00	13.40
18.00	50.00	11.40
18.00	52.00	9.40
18.00	54.00	7.40
18.00	56.00	5.40
18.00	58.00	3.40
18.00	60.00	1.40
18.00	62.00	-0.60

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18.00	64.00	-2.60
18.00	66.00	-4.60
18.00	68.00	-6.60
18.00	70.00	-8.60
18.00	72.00	-10.60
18.00	74.00	-12.60
18.00	76.00	-14.60
18.00	78.00	-16.60
18.00	80.00	-18.60
18.00	82.00	-20.60
18.00	84.00	-22.60
18.00	86.00	-24.60
18.00	88.00	-26.60
18.00	90.00	-28.60
18.00	92.00	-30.60
18.00	94.00	-32.60
18.00	96.00	-34.60
18.00	98.00	-36.60
18.00	100.00	-38.60
18.00	102.00	-40.60
18.00	104.00	-42.60
18.00	106.00	-44.60
18.00	108.00	-46.60
18.00	110.00	-48.60
18.00	112.00	-50.60
18.00	114.00	-52.60
18.00	116.00	-54.60
18.00	118.00	-56.60
18.00	120.00	-58.60
18.00	122.00	-60.60
18.00	124.00	-62.60
18.00	126.00	-64.60
18.00	128.00	-66.60
18.00	130.00	-68.60
18.00	132.00	-70.60
18.00	134.00	-72.60

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)

WL1-B16_18-PCP.txt

10.00	18.0	2.73	11.23	13.97	6.98	36.43
12.00	18.0	4.64	11.67	16.31	8.16	39.66
14.00	18.0	7.24	12.59	19.82	9.91	44.99
16.00	18.0	13.38	12.66	26.03	13.02	51.35
18.00	18.0	18.30	13.11	31.41	15.70	57.62
20.00	18.0	23.71	13.90	37.61	18.80	65.40
22.00	18.0	30.03	14.84	44.87	22.44	74.55
24.00	18.0	36.74	15.67	52.41	26.20	83.74
26.00	18.0	43.27	16.14	59.41	29.71	91.68
28.00	18.0	50.79	15.69	66.48	33.24	97.87
30.00	18.0	58.38	14.51	72.89	36.44	101.91
32.00	18.0	65.13	25.02	90.15	45.08	140.20
34.00	18.0	71.28	47.64	118.92	59.46	214.19
36.00	18.0	79.58	62.22	141.79	70.90	266.23
38.00	18.0	91.51	76.62	168.13	84.06	321.37
40.00	18.0	104.08	76.61	180.69	90.34	333.90
42.00	18.0	115.86	68.39	184.25	92.13	321.04
44.00	18.0	125.57	56.67	182.23	91.12	295.56
46.00	18.0	132.05	49.04	181.09	90.54	279.16
48.00	18.0	137.31	0.99	138.30	69.15	140.29
50.00	18.0	138.92	36.58	175.50	87.75	248.66
52.00	18.0	138.92	25.57	164.49	82.24	215.62
54.00	18.0	138.92	15.25	154.17	77.09	184.67
56.00	18.0	138.92	6.74	145.66	72.83	159.13
58.00	18.0	138.92	1.58	140.50	70.25	143.66
60.00	18.0	138.92	0.05	138.97	69.49	139.08
62.00	18.0	138.92	2.21	141.13	70.57	145.55
64.00	18.0	138.92	13.21	152.13	76.07	178.56
66.00	18.0	138.92	24.91	163.83	81.91	213.64
68.00	18.0	147.54	32.95	180.49	90.25	246.39
70.00	18.0	162.12	34.02	196.14	98.07	264.17
72.00	18.0	179.05	32.32	211.38	105.69	276.02
74.00	18.0	189.83	23.57	213.40	106.70	260.54
76.00	18.0	197.83	23.20	221.03	110.51	267.43
78.00	18.0	201.61	29.07	230.68	115.34	288.83
80.00	18.0	210.49	62.95	273.43	136.72	399.32
82.00	18.0	220.55	68.01	288.55	144.28	424.57
84.00	18.0	233.54	59.72	293.27	146.63	412.71
86.00	18.0	239.08	53.47	292.55	146.27	399.48
88.00	18.0	242.78	52.00	294.78	147.39	398.78
90.00	18.0	243.26	57.63	300.89	150.44	416.15
92.00	18.0	243.58	66.53	310.11	155.05	443.16
94.00	18.0	246.82	64.71	311.53	155.77	440.96
96.00	18.0	251.11	60.12	311.22	155.61	431.45
98.00	18.0	253.59	59.26	312.85	156.42	431.36
100.00	18.0	256.09	66.88	322.97	161.48	456.72
102.00	18.0	258.40	81.36	339.76	169.88	502.48
104.00	18.0	262.08	90.33	352.41	176.20	533.07

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106.00	18.0	267.93	82.19	350.12	175.06	514.49
108.00	18.0	276.61	82.72	359.33	179.67	524.77
110.00	18.0	281.18	81.04	362.22	181.11	524.30
112.00	18.0	285.34	81.79	367.12	183.56	530.70
114.00	18.0	291.20	56.01	347.22	173.61	459.24
116.00	18.0	294.10	78.77	372.87	186.43	530.40
118.00	18.0	297.17	77.24	374.41	187.20	528.89
120.00	18.0	300.26	69.92	370.18	185.09	510.01
122.00	18.0	303.54	68.10	371.63	185.82	507.82
124.00	18.0	306.87	78.66	385.52	192.76	542.84
126.00	18.0	309.49	87.90	397.39	198.69	573.18
128.00	18.0	314.30	91.47	405.78	202.89	588.72
130.00	18.0	319.99	90.31	410.30	205.15	590.92
132.00	18.0	*****	Not enough soil data	*****		
134.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSEON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSEON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B17_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 5-16-14, Boring Number: WL1-B17
 Station number: 670+92 Offset: 44 LT

Ground Elevation: 62.800(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	4.00	3- Clean sand
5	7.00	4.00	2- Clay and silty sand
6	8.00	7.00	3- Clean sand
7	10.00	7.00	3- Clean sand
8	12.50	11.00	3- Clean sand
9	15.00	12.00	3- Clean sand
10	17.50	9.00	3- Clean sand
11	20.00	13.00	1- Plastic Clay
12	22.50	8.00	2- Clay and silty sand
13	25.00	12.00	2- Clay and silty sand
14	27.50	13.00	2- Clay and silty sand
15	30.00	9.00	2- Clay and silty sand
16	32.50	26.00	3- Clean sand
17	35.00	34.00	3- Clean sand

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18	37.50	39.00	3- Clean sand
19	40.00	21.00	3- Clean sand
20	42.50	3.00	1- Plastic Clay
21	45.00	3.00	2- Clay and silty sand
22	47.50	1.00	2- Clay and silty sand
23	50.00	0.00	2- Clay and silty sand
24	52.50	0.00	2- Clay and silty sand
25	55.00	0.00	2- Clay and silty sand
26	57.50	2.00	2- Clay and silty sand
27	60.00	1.00	2- Clay and silty sand
28	61.25	1.00	3- Clean sand
29	62.50	28.00	2- Clay and silty sand
30	63.75	28.00	3- Clean sand
31	65.00	99.00	2- Clay and silty sand
32	67.50	99.00	2- Clay and silty sand
33	70.00	69.00	2- Clay and silty sand
34	72.50	48.00	2- Clay and silty sand
35	75.00	77.00	2- Clay and silty sand
36	77.50	99.00	2- Clay and silty sand
37	78.75	24.00	3- Clean sand
38	80.00	24.00	2- Clay and silty sand
39	82.50	16.00	3- Clean sand
40	85.00	6.00	3- Clean sand
41	87.50	12.00	4- Lime Stone/Very shelly sand
42	90.00	18.00	4- Lime Stone/Very shelly sand
43	91.25	18.00	3- Clean sand
44	92.50	30.00	4- Lime Stone/Very shelly sand
45	95.00	30.00	4- Lime Stone/Very shelly sand
46	97.50	42.00	4- Lime Stone/Very shelly sand
47	98.75	19.00	3- Clean sand
48	100.00	19.00	4- Lime Stone/Very shelly sand
49	102.50	2.00	2- Clay and silty sand
50	105.00	2.00	4- Lime Stone/Very shelly sand
51	106.25	2.00	3- Clean sand
52	107.50	9.00	4- Lime Stone/Very shelly sand
53	110.00	22.00	4- Lime Stone/Very shelly sand
54	112.50	15.00	4- Lime Stone/Very shelly sand
55	115.00	16.00	4- Lime Stone/Very shelly sand
56	116.25	16.00	3- Clean sand
57	117.50	99.00	4- Lime Stone/Very shelly sand
58	118.75	15.00	3- Clean sand
59	120.00	15.00	4- Lime Stone/Very shelly sand
60	122.50	30.00	4- Lime Stone/Very shelly sand
61	125.00	17.00	4- Lime Stone/Very shelly sand
62	127.50	21.00	4- Lime Stone/Very shelly sand
63	130.00	11.00	4- Lime Stone/Very shelly sand
64	132.50	24.00	4- Lime Stone/Very shelly sand
65	135.00	11.00	4- Lime Stone/Very shelly sand

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66	137.50	19.00	4- Lime Stone/Very shelly sand
67	138.75	19.00	3- Clean sand
68	140.00	36.00	4- Lime Stone/Very shelly sand
69	142.50	24.00	4- Lime Stone/Very shelly sand
70	143.75	24.00	3- Clean sand
71	145.00	99.00	4- Lime Stone/Very shelly sand
72	147.50	99.00	4- Lime Stone/Very shelly sand
73	150.00	99.00	4- Lime Stone/Very shelly sand
74	151.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.80	55.80	7.00	2.29	3-Clean Sand
2	55.80	54.80	1.00	4.00	2-Clay and Silty Sand
3	54.80	42.80	12.00	9.29	3-Clean Sand
4	42.80	40.30	2.50	13.00	1-Plastic Clay
5	40.30	30.30	10.00	10.50	2-Clay and Silty Sand
6	30.30	20.30	10.00	30.00	3-Clean Sand
7	20.30	17.80	2.50	3.00	1-Plastic Clay
8	17.80	1.55	16.25	1.00	2-Clay and Silty Sand
9	1.55	0.30	1.25	1.00	3-Clean Sand
10	0.30	-0.95	1.25	28.00	2-Clay and Silty Sand
11	-0.95	-2.20	1.25	28.00	3-Clean Sand
12	-2.20	-15.95	13.75	80.27	2-Clay and Silty Sand
13	-15.95	-17.20	1.25	24.00	3-Clean Sand
14	-17.20	-19.70	2.50	24.00	2-Clay and Silty Sand
15	-19.70	-24.70	5.00	11.00	3-Clean Sand
16	-24.70	-28.45	3.75	14.00	4-Limestone, Very Shelly Sand
17	-28.45	-29.70	1.25	18.00	3-Clean Sand
18	-29.70	-35.95	6.25	32.40	4-Limestone, Very Shelly Sand
19	-35.95	-37.20	1.25	19.00	3-Clean Sand
20	-37.20	-39.70	2.50	19.00	4-Limestone, Very Shelly Sand
21	-39.70	-42.20	2.50	2.00	2-Clay and Silty Sand
22	-42.20	-43.45	1.25	2.00	4-Limestone, Very Shelly Sand
23	-43.45	-44.70	1.25	2.00	3-Clean Sand
24	-44.70	-53.45	8.75	15.43	4-Limestone, Very Shelly Sand

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Shelly Sand					
25	-53.45	-54.70	1.25	16.00	3-Clean Sand
26	-54.70	-55.95	1.25	99.00	4-Limestone, Very
Shelly Sand					
27	-55.95	-57.20	1.25	15.00	3-Clean Sand
28	-57.20	-75.95	18.75	18.47	4-Limestone, Very
Shelly Sand					
29	-75.95	-77.20	1.25	19.00	3-Clean Sand
30	-77.20	-80.95	3.75	32.00	4-Limestone, Very
Shelly Sand					
31	-80.95	-82.20	1.25	24.00	3-Clean Sand
32	-82.20	-88.20	6.00	99.00	4-Limestone, Very
Shelly Sand					
33	-88.20	-88.20	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.80
18.00	12.00	50.80
18.00	14.00	48.80
18.00	16.00	46.80
18.00	18.00	44.80
18.00	20.00	42.80
18.00	22.00	40.80
18.00	24.00	38.80
18.00	26.00	36.80
18.00	28.00	34.80
18.00	30.00	32.80
18.00	32.00	30.80
18.00	34.00	28.80
18.00	36.00	26.80
18.00	38.00	24.80
18.00	40.00	22.80
18.00	42.00	20.80
18.00	44.00	18.80
18.00	46.00	16.80
18.00	48.00	14.80
18.00	50.00	12.80
18.00	52.00	10.80
18.00	54.00	8.80

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18.00	56.00	6.80
18.00	58.00	4.80
18.00	60.00	2.80
18.00	62.00	0.80
18.00	64.00	-1.20
18.00	66.00	-3.20
18.00	68.00	-5.20
18.00	70.00	-7.20
18.00	72.00	-9.20
18.00	74.00	-11.20
18.00	76.00	-13.20
18.00	78.00	-15.20
18.00	80.00	-17.20
18.00	82.00	-19.20
18.00	84.00	-21.20
18.00	86.00	-23.20
18.00	88.00	-25.20
18.00	90.00	-27.20
18.00	92.00	-29.20
18.00	94.00	-31.20
18.00	96.00	-33.20
18.00	98.00	-35.20
18.00	100.00	-37.20
18.00	102.00	-39.20
18.00	104.00	-41.20
18.00	106.00	-43.20
18.00	108.00	-45.20
18.00	110.00	-47.20
18.00	112.00	-49.20
18.00	114.00	-51.20
18.00	116.00	-53.20
18.00	118.00	-55.20
18.00	120.00	-57.20
18.00	122.00	-59.20
18.00	124.00	-61.20
18.00	126.00	-63.20
18.00	128.00	-65.20
18.00	130.00	-67.20
18.00	132.00	-69.20
18.00	134.00	-71.20
18.00	136.00	-73.20
18.00	138.00	-75.20
18.00	140.00	-77.20
18.00	142.00	-79.20
18.00	144.00	-81.20
18.00	146.00	-83.20
18.00	148.00	-85.20
18.00	150.00	-87.20

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	2.00	14.05	16.05	8.03	44.15
12.00	18.0	3.57	15.55	19.12	9.56	50.23
14.00	18.0	5.87	16.87	22.74	11.37	56.47
16.00	18.0	8.94	16.97	25.92	12.96	59.86
18.00	18.0	11.78	17.28	29.06	14.53	63.61
20.00	18.0	20.69	12.79	33.47	16.74	59.05
22.00	18.0	28.13	12.92	41.05	20.52	66.88
24.00	18.0	34.00	20.12	54.12	27.06	94.36
26.00	18.0	41.24	20.02	61.26	30.63	101.29
28.00	18.0	46.11	27.56	73.68	36.84	128.80
30.00	18.0	52.04	42.06	94.10	47.05	178.22
32.00	18.0	58.51	57.26	115.76	57.88	230.28
34.00	18.0	69.33	61.12	130.45	65.23	252.70
36.00	18.0	78.34	61.56	139.90	69.95	263.03
38.00	18.0	89.96	53.96	143.92	71.96	251.85
40.00	18.0	97.94	43.40	141.33	70.67	228.13
42.00	18.0	101.50	38.06	139.56	69.78	215.69
44.00	18.0	101.65	0.00	101.65	50.82	101.65
46.00	18.0	101.65	27.89	129.53	64.77	185.31
48.00	18.0	101.65	19.53	121.18	60.59	160.24
50.00	18.0	101.65	10.25	111.90	55.95	132.39
52.00	18.0	101.65	3.26	104.90	52.45	111.41
54.00	18.0	101.65	0.13	101.78	50.89	102.04
56.00	18.0	101.65	0.00	101.65	50.82	101.65
58.00	18.0	101.65	6.35	108.00	54.00	120.69
60.00	18.0	101.65	20.88	122.53	61.26	164.29
62.00	18.0	102.98	29.71	132.69	66.35	192.11
64.00	18.0	113.75	41.02	154.77	77.38	236.81
66.00	18.0	127.91	71.98	199.90	99.95	343.86
68.00	18.0	143.62	71.90	215.52	107.76	359.31
70.00	18.0	159.33	71.86	231.19	115.60	374.92
72.00	18.0	175.05	71.87	246.92	123.46	390.67
74.00	18.0	190.78	71.51	262.29	131.15	405.32
76.00	18.0	206.49	65.74	272.23	136.11	403.71
78.00	18.0	221.75	60.43	282.18	141.09	403.04
80.00	18.0	231.33	36.33	267.66	133.83	340.32

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82.00	18.0	240.64	36.22	276.86	138.43	349.30
84.00	18.0	244.37	31.92	276.29	138.15	340.14
86.00	18.0	245.96	33.19	279.15	139.57	345.53
88.00	18.0	248.49	53.71	302.19	151.10	409.61
90.00	18.0	250.45	56.29	306.75	153.37	419.34
92.00	18.0	254.97	69.86	324.82	162.41	464.54
94.00	18.0	259.56	78.08	337.64	168.82	493.80
96.00	18.0	264.23	74.14	338.36	169.18	486.64
98.00	18.0	270.03	60.46	330.49	165.25	451.41
100.00	18.0	274.71	15.15	289.85	144.93	320.14
102.00	18.0	276.01	16.34	292.35	146.18	325.04
104.00	18.0	276.47	6.18	282.66	141.33	295.02
106.00	18.0	276.47	48.62	325.09	162.55	422.32
108.00	18.0	277.28	50.20	327.47	163.74	427.87
110.00	18.0	279.77	43.55	323.33	161.66	410.43
112.00	18.0	282.63	44.63	327.27	163.63	416.53
114.00	18.0	284.64	53.17	337.82	168.91	444.16
116.00	18.0	286.93	58.77	345.70	172.85	463.24
118.00	18.0	293.13	78.04	371.18	185.59	527.27
120.00	18.0	297.52	70.53	368.05	184.02	509.11
122.00	18.0	300.64	70.43	371.07	185.53	511.92
124.00	18.0	304.62	66.91	371.53	185.77	505.36
126.00	18.0	307.40	64.58	371.98	185.99	501.14
128.00	18.0	310.35	66.67	377.02	188.51	510.35
130.00	18.0	312.58	62.02	374.61	187.30	498.65
132.00	18.0	314.99	60.81	375.81	187.90	497.43
134.00	18.0	318.08	59.45	377.53	188.76	496.42
136.00	18.0	320.03	67.69	387.72	193.86	523.10
138.00	18.0	322.72	72.65	395.37	197.68	540.67
140.00	18.0	327.80	80.06	407.86	203.93	567.99
142.00	18.0	331.77	83.50	415.28	207.64	582.28
144.00	18.0	337.45	111.43	448.89	224.44	671.75
146.00	18.0	*****	Not enough soil data	*****		
148.00	18.0	0.00	0.00	0.00	0.00	0.00
150.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE

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ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 X THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B18_18&24PCP.spc
 Project number: H113S080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: GEG
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 5-21-14, Boring Number: WL1-B18
 Station number: 671+02 Offset: 79 RT

Ground Elevation: 63.700(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	1.00	3- Clean sand
2	2.00	1.00	3- Clean sand
3	4.00	0.00	3- Clean sand
4	6.00	2.00	3- Clean sand
5	7.00	2.00	2- Clay and silty sand
6	8.00	25.00	3- Clean sand
7	10.00	13.00	3- Clean sand
8	12.50	21.00	3- Clean sand
9	15.00	17.00	3- Clean sand
10	17.50	14.00	2- Clay and silty sand
11	20.00	15.00	1- Plastic Clay
12	22.50	9.00	2- Clay and silty sand
13	25.00	7.00	2- Clay and silty sand
14	27.50	11.00	2- Clay and silty sand
15	30.00	17.00	3- Clean sand
16	32.50	13.00	3- Clean sand
17	35.00	13.00	3- Clean sand

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18	37.50	13.00	2- Clay and silty sand
19	38.75	13.00	3- Clean sand
20	40.00	32.00	2- Clay and silty sand
21	42.50	31.00	3- Clean sand
22	45.00	20.00	3- Clean sand
23	47.50	2.00	2- Clay and silty sand
24	50.00	4.00	2- Clay and silty sand
25	52.50	4.00	2- Clay and silty sand
26	55.00	3.00	2- Clay and silty sand
27	56.25	3.00	3- Clean sand
28	57.50	5.00	2- Clay and silty sand
29	58.75	5.00	3- Clean sand
30	60.00	50.00	2- Clay and silty sand
31	62.50	37.00	2- Clay and silty sand
32	63.75	37.00	3- Clean sand
33	65.00	99.00	2- Clay and silty sand
34	66.25	24.00	3- Clean sand
35	67.50	24.00	2- Clay and silty sand
36	68.75	24.00	3- Clean sand
37	70.00	99.00	2- Clay and silty sand
38	72.50	99.00	4- Lime Stone/Very shelly sand
39	75.00	99.00	2- Clay and silty sand
40	76.25	8.00	3- Clean sand
41	77.50	8.00	2- Clay and silty sand
42	80.00	4.00	4- Lime Stone/Very shelly sand
43	81.25	4.00	3- Clean sand
44	82.50	10.00	4- Lime Stone/Very shelly sand
45	85.00	15.00	4- Lime Stone/Very shelly sand
46	87.50	20.00	4- Lime Stone/Very shelly sand
47	90.00	17.00	4- Lime Stone/Very shelly sand
48	92.50	19.00	4- Lime Stone/Very shelly sand
49	93.75	19.00	3- Clean sand
50	95.00	48.00	4- Lime Stone/Very shelly sand
51	97.50	99.00	4- Lime Stone/Very shelly sand
52	98.75	30.00	3- Clean sand
53	100.00	30.00	4- Lime Stone/Very shelly sand
54	102.50	43.00	4- Lime Stone/Very shelly sand
55	103.75	16.00	3- Clean sand
56	105.00	16.00	4- Lime Stone/Very shelly sand
57	106.25	16.00	3- Clean sand
58	107.50	99.00	4- Lime Stone/Very shelly sand
59	108.75	14.00	3- Clean sand
60	110.00	14.00	4- Lime Stone/Very shelly sand
61	112.50	16.00	4- Lime Stone/Very shelly sand
62	115.00	17.00	4- Lime Stone/Very shelly sand
63	117.50	15.00	4- Lime Stone/Very shelly sand
64	118.75	15.00	3- Clean sand
65	120.00	99.00	4- Lime Stone/Very shelly sand

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66	121.25	14.00	3- Clean sand
67	122.50	14.00	4- Lime Stone/Very shelly sand
68	125.00	17.00	4- Lime Stone/Very shelly sand
69	127.50	22.00	4- Lime Stone/Very shelly sand
70	128.75	22.00	3- Clean sand
71	130.00	34.00	4- Lime Stone/Very shelly sand
72	132.50	44.00	4- Lime Stone/Very shelly sand
73	133.75	24.00	3- Clean sand
74	135.00	24.00	4- Lime Stone/Very shelly sand
75	136.25	24.00	3- Clean sand
76	137.50	99.00	4- Lime Stone/Very shelly sand
77	140.00	99.00	4- Lime Stone/Very shelly sand
78	141.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	63.70	56.70	7.00	0.86	3-Clean Sand
2	56.70	55.70	1.00	2.00	2-Clay and Silty Sand
3	55.70	46.20	9.50	18.68	3-Clean Sand
4	46.20	43.70	2.50	14.00	2-Clay and Silty Sand
5	43.70	41.20	2.50	15.00	1-Plastic Clay
6	41.20	33.70	7.50	9.00	2-Clay and Silty Sand
7	33.70	26.20	7.50	14.33	3-Clean Sand
8	26.20	24.95	1.25	13.00	2-Clay and Silty Sand
9	24.95	23.70	1.25	13.00	3-Clean Sand
10	23.70	21.20	2.50	32.00	2-Clay and Silty Sand
11	21.20	16.20	5.00	25.50	3-Clean Sand
12	16.20	7.45	8.75	3.29	2-Clay and Silty Sand
13	7.45	6.20	1.25	3.00	3-Clean Sand
14	6.20	4.95	1.25	5.00	2-Clay and Silty Sand
15	4.95	3.70	1.25	5.00	3-Clean Sand
16	3.70	-0.05	3.75	45.67	2-Clay and Silty Sand
17	-0.05	-1.30	1.25	37.00	3-Clean Sand
18	-1.30	-2.55	1.25	99.00	2-Clay and Silty Sand
19	-2.55	-3.80	1.25	24.00	3-Clean Sand
20	-3.80	-5.05	1.25	24.00	2-Clay and Silty Sand
21	-5.05	-6.30	1.25	24.00	3-Clean Sand
22	-6.30	-8.80	2.50	99.00	2-Clay and Silty Sand
23	-8.80	-11.30	2.50	99.00	4-Limestone, Very Shelly Sand

Shelly Sand

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24	-11.30	-12.55	1.25	99.00	2-Clay and Silty Sand
25	-12.55	-13.80	1.25	8.00	3-Clean Sand
26	-13.80	-16.30	2.50	8.00	2-Clay and Silty Sand
27	-16.30	-17.55	1.25	4.00	4-Limestone, Very
Shelly Sand					
28	-17.55	-18.80	1.25	4.00	3-Clean Sand
29	-18.80	-30.05	11.25	15.89	4-Limestone, Very
Shelly Sand					
30	-30.05	-31.30	1.25	19.00	3-Clean Sand
31	-31.30	-35.05	3.75	65.00	4-Limestone, Very
Shelly Sand					
32	-35.05	-36.30	1.25	30.00	3-Clean Sand
33	-36.30	-40.05	3.75	34.33	4-Limestone, Very
Shelly Sand					
34	-40.05	-41.30	1.25	16.00	3-Clean Sand
35	-41.30	-42.55	1.25	16.00	4-Limestone, Very
Shelly Sand					
36	-42.55	-43.80	1.25	16.00	3-Clean Sand
37	-43.80	-45.05	1.25	99.00	4-Limestone, Very
Shelly Sand					
38	-45.05	-46.30	1.25	14.00	3-Clean Sand
39	-46.30	-55.05	8.75	15.57	4-Limestone, Very
Shelly Sand					
40	-55.05	-56.30	1.25	15.00	3-Clean Sand
41	-56.30	-57.55	1.25	99.00	4-Limestone, Very
Shelly Sand					
42	-57.55	-58.80	1.25	14.00	3-Clean Sand
43	-58.80	-65.05	6.25	16.80	4-Limestone, Very
Shelly Sand					
44	-65.05	-66.30	1.25	22.00	3-Clean Sand
45	-66.30	-70.05	3.75	37.33	4-Limestone, Very
Shelly Sand					
46	-70.05	-71.30	1.25	24.00	3-Clean Sand
47	-71.30	-72.55	1.25	24.00	4-Limestone, Very
Shelly Sand					
48	-72.55	-73.80	1.25	24.00	3-Clean Sand
49	-73.80	-77.30	3.50	99.00	4-Limestone, Very
Shelly Sand					
50	-77.30	-77.30	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width Length Tip Elev.

(in)	(ft)	(ft)
18.00	10.00	53.70
18.00	12.00	51.70
18.00	14.00	49.70
18.00	16.00	47.70
18.00	18.00	45.70
18.00	20.00	43.70
18.00	22.00	41.70
18.00	24.00	39.70
18.00	26.00	37.70
18.00	28.00	35.70
18.00	30.00	33.70
18.00	32.00	31.70
18.00	34.00	29.70
18.00	36.00	27.70
18.00	38.00	25.70
18.00	40.00	23.70
18.00	42.00	21.70
18.00	44.00	19.70
18.00	46.00	17.70
18.00	48.00	15.70
18.00	50.00	13.70
18.00	52.00	11.70
18.00	54.00	9.70
18.00	56.00	7.70
18.00	58.00	5.70
18.00	60.00	3.70
18.00	62.00	1.70
18.00	64.00	-0.30
18.00	66.00	-2.30
18.00	68.00	-4.30
18.00	70.00	-6.30
18.00	72.00	-8.30
18.00	74.00	-10.30
18.00	76.00	-12.30
18.00	78.00	-14.30
18.00	80.00	-16.30
18.00	82.00	-18.30
18.00	84.00	-20.30
18.00	86.00	-22.30
18.00	88.00	-24.30
18.00	90.00	-26.30
18.00	92.00	-28.30
18.00	94.00	-30.30
18.00	96.00	-32.30
18.00	98.00	-34.30
18.00	100.00	-36.30

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18.00	102.00	-38.30
18.00	104.00	-40.30
18.00	106.00	-42.30
18.00	108.00	-44.30
18.00	110.00	-46.30
18.00	112.00	-48.30
18.00	114.00	-50.30
18.00	116.00	-52.30
18.00	118.00	-54.30
18.00	120.00	-56.30
18.00	122.00	-58.30
18.00	124.00	-60.30
18.00	126.00	-62.30
18.00	128.00	-64.30
18.00	130.00	-66.30
18.00	132.00	-68.30
18.00	134.00	-70.30
18.00	136.00	-72.30
18.00	138.00	-74.30
18.00	140.00	-76.30

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	6.45	30.18	36.63	18.31	96.98
12.00	18.0	10.47	30.99	41.46	20.73	103.43
14.00	18.0	16.53	30.42	46.95	23.48	107.78
16.00	18.0	22.63	28.45	51.07	25.54	107.96
18.00	18.0	29.92	13.66	43.58	21.79	70.91
20.00	18.0	39.76	11.69	51.45	25.72	74.83
22.00	18.0	48.09	11.81	59.90	29.95	83.52
24.00	18.0	53.78	23.31	77.09	38.54	123.71
26.00	18.0	58.04	24.97	83.01	41.50	132.94
28.00	18.0	63.64	27.72	91.36	45.68	146.81
30.00	18.0	70.70	29.25	99.95	49.98	158.45
32.00	18.0	75.06	28.68	103.74	51.87	161.11
34.00	18.0	78.72	29.30	108.02	54.01	166.63
36.00	18.0	81.39	31.65	113.04	56.52	176.34
38.00	18.0	89.62	41.98	131.60	65.80	215.57
40.00	18.0	97.19	54.60	151.79	75.90	261.00

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42.00	18.0	109.46	50.18	159.64	79.82	260.01
44.00	18.0	117.24	50.78	168.02	84.01	269.59
46.00	18.0	123.07	36.46	159.53	79.76	232.44
48.00	18.0	124.34	0.00	124.34	62.17	124.34
50.00	18.0	124.34	0.00	124.34	62.17	124.34
52.00	18.0	124.34	0.21	124.56	62.28	124.98
54.00	18.0	124.34	3.02	127.37	63.68	133.42
56.00	18.0	124.34	15.01	139.35	69.68	169.37
58.00	18.0	126.08	25.46	151.54	75.77	202.45
60.00	18.0	132.24	40.55	172.79	86.40	253.89
62.00	18.0	146.33	42.31	188.64	94.32	273.26
64.00	18.0	161.14	47.79	208.93	104.47	304.52
66.00	18.0	173.48	64.44	237.92	118.96	366.79
68.00	18.0	183.65	72.22	255.87	127.93	400.31
70.00	18.0	194.07	88.68	282.75	141.37	460.11
72.00	18.0	206.37	80.37	286.74	143.37	447.48
74.00	18.0	215.70	61.59	277.29	138.64	400.47
76.00	18.0	225.99	20.51	246.50	123.25	287.52
78.00	18.0	231.57	8.65	240.23	120.11	257.53
80.00	18.0	233.90	26.35	260.24	130.12	312.94
82.00	18.0	234.06	50.67	284.73	142.36	386.06
84.00	18.0	235.65	51.69	287.33	143.67	390.71
86.00	18.0	237.88	45.83	283.71	141.85	375.36
88.00	18.0	240.68	44.90	285.58	142.79	375.39
90.00	18.0	243.07	55.89	298.96	149.48	410.73
92.00	18.0	244.45	80.39	324.85	162.42	485.64
94.00	18.0	249.98	95.53	345.51	172.75	536.56
96.00	18.0	256.76	98.41	355.18	177.59	552.00
98.00	18.0	263.73	99.51	363.23	181.62	562.25
100.00	18.0	271.12	96.22	367.33	183.67	559.77
102.00	18.0	276.35	92.17	368.52	184.26	552.85
104.00	18.0	281.86	61.64	343.49	171.75	466.77
106.00	18.0	285.09	92.54	377.63	188.81	562.70
108.00	18.0	290.36	63.17	353.53	176.76	479.86
110.00	18.0	294.67	70.93	365.60	182.80	507.45
112.00	18.0	296.87	67.41	364.28	182.14	499.10
114.00	18.0	299.28	61.88	361.16	180.58	484.92
116.00	18.0	301.76	68.67	370.43	185.22	507.77
118.00	18.0	304.16	67.62	371.78	185.89	507.01
120.00	18.0	309.10	62.25	371.35	185.68	495.85
122.00	18.0	313.86	49.96	363.83	181.91	463.75
124.00	18.0	316.07	61.17	377.24	188.62	499.57
126.00	18.0	318.07	66.09	384.16	192.08	516.34
128.00	18.0	320.34	77.34	397.68	198.84	552.35
130.00	18.0	327.48	89.97	417.45	208.73	597.39
132.00	18.0	333.13	86.91	420.04	210.02	593.86
134.00	18.0	339.71	93.40	433.11	216.55	619.91
136.00	18.0	*****	Not enough soil data	*****		

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138.00	18.0	0.00	0.00	0.00	0.00	0.00
140.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSEON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSEON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B19_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 5-28-14, Boring Number: WL1-B19
 Station number: 672+21 Offset: 118 LT

Ground Elevation: 62.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	4.00	3- Clean sand
4	6.00	4.00	3- Clean sand
5	7.00	4.00	2- Clay and silty sand
6	8.00	6.00	3- Clean sand
7	10.00	7.00	3- Clean sand
8	12.50	12.00	3- Clean sand
9	15.00	14.00	2- Clay and silty sand
10	17.50	12.00	2- Clay and silty sand
11	20.00	11.00	3- Clean sand
12	22.50	13.00	1- Plastic Clay
13	25.00	14.00	2- Clay and silty sand
14	27.50	25.00	3- Clean sand
15	30.00	23.00	3- Clean sand
16	32.50	22.00	3- Clean sand
17	35.00	20.00	3- Clean sand

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18	37.50	18.00	3- Clean sand
19	40.00	1.00	1- Plastic Clay
20	42.50	0.00	1- Plastic Clay
21	45.00	0.00	1- Plastic Clay
22	47.50	0.00	1- Plastic Clay
23	50.00	0.00	2- Clay and silty sand
24	52.50	0.00	2- Clay and silty sand
25	53.75	0.00	3- Clean sand
26	55.00	99.00	2- Clay and silty sand
27	57.50	99.00	2- Clay and silty sand
28	60.00	99.00	2- Clay and silty sand
29	62.50	99.00	2- Clay and silty sand
30	65.00	37.00	1- Plastic Clay
31	67.50	42.00	2- Clay and silty sand
32	70.00	32.00	1- Plastic Clay
33	72.50	55.00	4- Lime Stone/Very shelly sand
34	75.00	99.00	1- Plastic Clay
35	77.50	99.00	4- Lime Stone/Very shelly sand
36	80.00	99.00	4- Lime Stone/Very shelly sand
37	82.50	99.00	4- Lime Stone/Very shelly sand
38	85.00	99.00	4- Lime Stone/Very shelly sand
39	87.50	68.00	4- Lime Stone/Very shelly sand
40	90.00	51.00	4- Lime Stone/Very shelly sand
41	91.25	33.00	3- Clean sand
42	92.50	33.00	4- Lime Stone/Very shelly sand
43	95.00	37.00	4- Lime Stone/Very shelly sand
44	96.25	37.00	3- Clean sand
45	97.50	99.00	4- Lime Stone/Very shelly sand
46	100.00	47.00	4- Lime Stone/Very shelly sand
47	101.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.00	55.00	7.00	2.86	3-Clean Sand
2	55.00	54.00	1.00	4.00	2-Clay and Silty Sand
3	54.00	47.00	7.00	8.50	3-Clean Sand
4	47.00	42.00	5.00	13.00	2-Clay and Silty Sand
5	42.00	39.50	2.50	11.00	3-Clean Sand
6	39.50	37.00	2.50	13.00	1-Plastic Clay
7	37.00	34.50	2.50	14.00	2-Clay and Silty Sand

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8	34.50	22.00	12.50	21.60	3-Clean Sand
9	22.00	12.00	10.00	0.25	1-Plastic Clay
10	12.00	8.25	3.75	0.00	2-Clay and Silty Sand
11	8.25	7.00	1.25	0.00	3-Clean Sand
12	7.00	-3.00	10.00	99.00	2-Clay and Silty Sand
13	-3.00	-5.50	2.50	37.00	1-Plastic Clay
14	-5.50	-8.00	2.50	42.00	2-Clay and Silty Sand
15	-8.00	-10.50	2.50	32.00	1-Plastic Clay
16	-10.50	-13.00	2.50	55.00	4-Limestone, Very
Shelly Sand					
17	-13.00	-15.50	2.50	99.00	1-Plastic Clay
18	-15.50	-29.25	13.75	89.00	4-Limestone, Very
Shelly Sand					
19	-29.25	-30.50	1.25	33.00	3-Clean Sand
20	-30.50	-34.25	3.75	34.33	4-Limestone, Very
Shelly Sand					
21	-34.25	-35.50	1.25	37.00	3-Clean Sand
22	-35.50	-39.00	3.50	84.14	4-Limestone, Very
Shelly Sand					
23	-39.00	-39.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.00
18.00	12.00	50.00
18.00	14.00	48.00
18.00	16.00	46.00
18.00	18.00	44.00
18.00	20.00	42.00
18.00	22.00	40.00
18.00	24.00	38.00
18.00	26.00	36.00
18.00	28.00	34.00
18.00	30.00	32.00
18.00	32.00	30.00
18.00	34.00	28.00
18.00	36.00	26.00
18.00	38.00	24.00
18.00	40.00	22.00
18.00	42.00	20.00

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18.00	44.00	18.00
18.00	46.00	16.00
18.00	48.00	14.00
18.00	50.00	12.00
18.00	52.00	10.00
18.00	54.00	8.00
18.00	56.00	6.00
18.00	58.00	4.00
18.00	60.00	2.00
18.00	62.00	0.00
18.00	64.00	-2.00
18.00	66.00	-4.00
18.00	68.00	-6.00
18.00	70.00	-8.00
18.00	72.00	-10.00
18.00	74.00	-12.00
18.00	76.00	-14.00
18.00	78.00	-16.00
18.00	80.00	-18.00
18.00	82.00	-20.00
18.00	84.00	-22.00
18.00	86.00	-24.00
18.00	88.00	-26.00
18.00	90.00	-28.00
18.00	92.00	-30.00
18.00	94.00	-32.00
18.00	96.00	-34.00
18.00	98.00	-36.00
18.00	100.00	-38.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	1.95	13.81	15.76	7.88	43.37
12.00	18.0	4.05	14.37	18.42	9.21	47.16
14.00	18.0	7.64	15.25	22.88	11.44	53.38
16.00	18.0	17.11	21.99	39.11	19.55	83.10
18.00	18.0	24.64	20.42	45.06	22.53	85.89
20.00	18.0	29.47	17.90	47.38	23.69	83.19
22.00	18.0	33.50	18.98	52.48	26.24	90.43

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24.00	18.0	43.74	31.23	74.96	37.48	137.41
26.00	18.0	51.79	41.11	92.90	46.45	175.11
28.00	18.0	59.42	47.38	106.80	53.40	201.56
30.00	18.0	65.69	47.94	113.63	56.82	209.52
32.00	18.0	71.49	48.86	120.34	60.17	218.06
34.00	18.0	77.77	48.70	126.48	63.24	223.88
36.00	18.0	84.32	43.37	127.68	63.84	214.41
38.00	18.0	89.41	35.55	124.95	62.48	196.05
40.00	18.0	91.44	0.00	91.44	45.72	91.44
42.00	18.0	91.44	0.00	91.44	45.72	91.44
44.00	18.0	91.44	0.00	91.44	45.72	91.44
46.00	18.0	91.44	0.00	91.44	45.72	91.44
48.00	18.0	91.44	0.00	91.44	45.72	91.44
50.00	18.0	91.44	7.79	99.23	49.61	114.80
52.00	18.0	91.44	11.76	103.21	51.60	126.73
54.00	18.0	91.63	31.74	123.37	61.68	186.84
56.00	18.0	103.68	38.37	142.05	71.03	218.80
58.00	18.0	116.68	42.12	158.80	79.40	243.04
60.00	18.0	131.55	44.71	176.26	88.13	265.68
62.00	18.0	147.34	46.61	193.95	96.97	287.16
64.00	18.0	163.45	49.48	212.93	106.46	311.88
66.00	18.0	184.72	39.77	224.49	112.24	304.03
68.00	18.0	200.95	68.25	269.20	134.60	405.69
70.00	18.0	217.30	73.06	290.36	145.18	436.48
72.00	18.0	229.74	75.83	305.57	152.78	457.22
74.00	18.0	239.35	80.77	320.12	160.06	481.65
76.00	18.0	255.26	100.90	356.16	178.08	557.96
78.00	18.0	265.47	119.09	384.56	192.28	622.75
80.00	18.0	272.01	122.21	394.22	197.11	638.63
82.00	18.0	278.00	130.00	408.00	204.00	668.00
84.00	18.0	284.16	140.01	424.17	212.09	704.20
86.00	18.0	291.22	145.49	436.71	218.36	727.70
88.00	18.0	298.50	145.36	443.86	221.93	734.57
90.00	18.0	305.70	139.73	445.43	222.71	724.88
92.00	18.0	316.87	110.38	427.26	213.63	648.02
94.00	18.0	322.05	138.80	460.86	230.43	738.47
96.00	18.0	*****	Not enough soil data	*****		
98.00	18.0	0.00	0.00	0.00	0.00	0.00
100.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.

4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B20_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 5-27-14, Boring Number: WL1-B20
 Station number: 672+06 Offset: 6 RT

Ground Elevation: 63.300(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	4.00	3- Clean sand
5	7.00	4.00	2- Clay and silty sand
6	8.00	5.00	3- Clean sand
7	9.00	5.00	2- Clay and silty sand
8	10.00	18.00	3- Clean sand
9	12.50	9.00	2- Clay and silty sand
10	15.00	18.00	3- Clean sand
11	17.50	18.00	2- Clay and silty sand
12	20.00	16.00	2- Clay and silty sand
13	22.50	12.00	2- Clay and silty sand
14	25.00	11.00	1- Plastic Clay
15	27.50	11.00	2- Clay and silty sand
16	30.00	14.00	2- Clay and silty sand
17	32.50	15.00	2- Clay and silty sand

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18	35.00	10.00	2- Clay and silty sand
19	37.50	5.00	1- Plastic Clay
20	40.00	27.00	2- Clay and silty sand
21	42.50	53.00	3- Clean sand
22	45.00	4.00	2- Clay and silty sand
23	47.50	4.00	2- Clay and silty sand
24	50.00	3.00	2- Clay and silty sand
25	52.50	0.00	2- Clay and silty sand
26	55.00	0.00	2- Clay and silty sand
27	57.50	0.00	2- Clay and silty sand
28	60.00	2.00	2- Clay and silty sand
29	62.50	3.00	2- Clay and silty sand
30	63.75	3.00	3- Clean sand
31	65.00	6.00	2- Clay and silty sand
32	66.25	6.00	3- Clean sand
33	67.50	22.00	2- Clay and silty sand
34	68.75	22.00	3- Clean sand
35	70.00	54.00	2- Clay and silty sand
36	71.25	9.00	3- Clean sand
37	72.50	9.00	2- Clay and silty sand
38	73.75	2.00	3- Clean sand
39	75.00	2.00	2- Clay and silty sand
40	77.50	0.00	2- Clay and silty sand
41	80.00	0.00	2- Clay and silty sand
42	82.50	0.00	2- Clay and silty sand
43	83.75	0.00	3- Clean sand
44	85.00	11.00	2- Clay and silty sand
45	87.50	6.00	1- Plastic Clay
46	90.00	0.00	4- Lime Stone/Very shelly sand
47	91.25	0.00	3- Clean sand
48	92.50	17.00	4- Lime Stone/Very shelly sand
49	93.75	17.00	3- Clean sand
50	95.00	35.00	4- Lime Stone/Very shelly sand
51	96.25	35.00	3- Clean sand
52	97.50	55.00	4- Lime Stone/Very shelly sand
53	100.00	99.00	4- Lime Stone/Very shelly sand
54	102.50	43.00	4- Lime Stone/Very shelly sand
55	105.00	67.00	4- Lime Stone/Very shelly sand
56	107.50	19.00	2- Clay and silty sand
57	110.00	34.00	2- Clay and silty sand
58	112.50	29.00	4- Lime Stone/Very shelly sand
59	115.00	20.00	4- Lime Stone/Very shelly sand
60	117.50	12.00	4- Lime Stone/Very shelly sand
61	120.00	17.00	4- Lime Stone/Very shelly sand
62	121.25	17.00	3- Clean sand
63	122.50	99.00	4- Lime Stone/Very shelly sand
64	123.75	31.00	3- Clean sand
65	125.00	31.00	4- Lime Stone/Very shelly sand

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66	126.25	11.00	3- Clean sand
67	127.50	11.00	4- Lime Stone/Very shelly sand
68	130.00	22.00	4- Lime Stone/Very shelly sand
69	131.25	22.00	3- Clean sand
70	132.50	40.00	4- Lime Stone/Very shelly sand
71	135.00	26.00	4- Lime Stone/Very shelly sand
72	137.50	28.00	4- Lime Stone/Very shelly sand
73	140.00	31.00	4- Lime Stone/Very shelly sand
74	142.50	24.00	4- Lime Stone/Very shelly sand
75	145.00	34.00	4- Lime Stone/Very shelly sand
76	146.25	34.00	3- Clean sand
77	147.50	44.00	4- Lime Stone/Very shelly sand
78	150.00	99.00	4- Lime Stone/Very shelly sand
79	151.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	63.30	56.30	7.00	2.29	3-Clean Sand
2	56.30	55.30	1.00	4.00	2-Clay and Silty Sand
3	55.30	54.30	1.00	5.00	3-Clean Sand
4	54.30	53.30	1.00	5.00	2-Clay and Silty Sand
5	53.30	50.80	2.50	18.00	3-Clean Sand
6	50.80	48.30	2.50	9.00	2-Clay and Silty Sand
7	48.30	45.80	2.50	18.00	3-Clean Sand
8	45.80	38.30	7.50	15.33	2-Clay and Silty Sand
9	38.30	35.80	2.50	11.00	1-Plastic Clay
10	35.80	25.80	10.00	12.50	2-Clay and Silty Sand
11	25.80	23.30	2.50	5.00	1-Plastic Clay
12	23.30	20.80	2.50	27.00	2-Clay and Silty Sand
13	20.80	18.30	2.50	53.00	3-Clean Sand
14	18.30	-0.45	18.75	1.93	2-Clay and Silty Sand
15	-0.45	-1.70	1.25	3.00	3-Clean Sand
16	-1.70	-2.95	1.25	6.00	2-Clay and Silty Sand
17	-2.95	-4.20	1.25	6.00	3-Clean Sand
18	-4.20	-5.45	1.25	22.00	2-Clay and Silty Sand
19	-5.45	-6.70	1.25	22.00	3-Clean Sand
20	-6.70	-7.95	1.25	54.00	2-Clay and Silty Sand
21	-7.95	-9.20	1.25	9.00	3-Clean Sand
22	-9.20	-10.45	1.25	9.00	2-Clay and Silty Sand
23	-10.45	-11.70	1.25	2.00	3-Clean Sand

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24	-11.70	-20.45	8.75	0.57	2-Clay and Silty Sand
25	-20.45	-21.70	1.25	0.00	3-Clean Sand
26	-21.70	-24.20	2.50	11.00	2-Clay and Silty Sand
27	-24.20	-26.70	2.50	6.00	1-Plastic Clay
28	-26.70	-27.95	1.25	0.00	4-Limestone, Very
Shelly Sand					
29	-27.95	-29.20	1.25	0.00	3-Clean Sand
30	-29.20	-30.45	1.25	17.00	4-Limestone, Very
Shelly Sand					
31	-30.45	-31.70	1.25	17.00	3-Clean Sand
32	-31.70	-32.95	1.25	35.00	4-Limestone, Very
Shelly Sand					
33	-32.95	-34.20	1.25	35.00	3-Clean Sand
34	-34.20	-44.20	10.00	66.00	4-Limestone, Very
Shelly Sand					
35	-44.20	-49.20	5.00	26.50	2-Clay and Silty Sand
36	-49.20	-57.95	8.75	19.86	4-Limestone, Very
Shelly Sand					
37	-57.95	-59.20	1.25	17.00	3-Clean Sand
38	-59.20	-60.45	1.25	99.00	4-Limestone, Very
Shelly Sand					
39	-60.45	-61.70	1.25	31.00	3-Clean Sand
40	-61.70	-62.95	1.25	31.00	4-Limestone, Very
Shelly Sand					
41	-62.95	-64.20	1.25	11.00	3-Clean Sand
42	-64.20	-67.95	3.75	14.67	4-Limestone, Very
Shelly Sand					
43	-67.95	-69.20	1.25	22.00	3-Clean Sand
44	-69.20	-82.95	13.75	30.18	4-Limestone, Very
Shelly Sand					
45	-82.95	-84.20	1.25	34.00	3-Clean Sand
46	-84.20	-87.70	3.50	59.71	4-Limestone, Very
Shelly Sand					
47	-87.70	-87.70	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	53.30
18.00	12.00	51.30
18.00	14.00	49.30

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18.00	16.00	47.30
18.00	18.00	45.30
18.00	20.00	43.30
18.00	22.00	41.30
18.00	24.00	39.30
18.00	26.00	37.30
18.00	28.00	35.30
18.00	30.00	33.30
18.00	32.00	31.30
18.00	34.00	29.30
18.00	36.00	27.30
18.00	38.00	25.30
18.00	40.00	23.30
18.00	42.00	21.30
18.00	44.00	19.30
18.00	46.00	17.30
18.00	48.00	15.30
18.00	50.00	13.30
18.00	52.00	11.30
18.00	54.00	9.30
18.00	56.00	7.30
18.00	58.00	5.30
18.00	60.00	3.30
18.00	62.00	1.30
18.00	64.00	-0.70
18.00	66.00	-2.70
18.00	68.00	-4.70
18.00	70.00	-6.70
18.00	72.00	-8.70
18.00	74.00	-10.70
18.00	76.00	-12.70
18.00	78.00	-14.70
18.00	80.00	-16.70
18.00	82.00	-18.70
18.00	84.00	-20.70
18.00	86.00	-22.70
18.00	88.00	-24.70
18.00	90.00	-26.70
18.00	92.00	-28.70
18.00	94.00	-30.70
18.00	96.00	-32.70
18.00	98.00	-34.70
18.00	100.00	-36.70
18.00	102.00	-38.70
18.00	104.00	-40.70
18.00	106.00	-42.70
18.00	108.00	-44.70
18.00	110.00	-46.70

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18.00	112.00	-48.70
18.00	114.00	-50.70
18.00	116.00	-52.70
18.00	118.00	-54.70
18.00	120.00	-56.70
18.00	122.00	-58.70
18.00	124.00	-60.70
18.00	126.00	-62.70
18.00	128.00	-64.70
18.00	130.00	-66.70
18.00	132.00	-68.70
18.00	134.00	-70.70
18.00	136.00	-72.70
18.00	138.00	-74.70
18.00	140.00	-76.70
18.00	142.00	-78.70
18.00	144.00	-80.70
18.00	146.00	-82.70
18.00	148.00	-84.70
18.00	150.00	-86.70

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	3.66	19.64	23.31	11.65	62.59
12.00	18.0	8.33	20.12	28.45	14.22	68.69
14.00	18.0	14.40	24.11	38.51	19.25	86.72
16.00	18.0	20.31	24.68	44.99	22.49	94.36
18.00	18.0	29.24	22.90	52.14	26.07	97.94
20.00	18.0	39.09	20.77	59.86	29.93	101.39
22.00	18.0	47.67	18.07	65.74	32.87	101.88
24.00	18.0	55.24	17.24	72.47	36.24	106.95
26.00	18.0	62.97	13.40	76.36	38.18	103.16
28.00	18.0	70.11	20.14	90.25	45.12	130.53
30.00	18.0	77.92	18.63	96.54	48.27	133.79
32.00	18.0	86.53	15.97	102.50	51.25	134.45
34.00	18.0	94.84	14.77	109.61	54.81	139.14
36.00	18.0	101.19	22.27	123.45	61.73	167.98
38.00	18.0	105.71	39.33	145.04	72.52	223.69
40.00	18.0	115.43	48.05	163.48	81.74	259.57

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42.00	18.0	128.95	37.71	166.66	83.33	242.07
44.00	18.0	137.11	35.86	172.96	86.48	244.68
46.00	18.0	140.92	0.00	140.92	70.46	140.92
48.00	18.0	140.92	0.00	140.92	70.46	140.92
50.00	18.0	140.92	0.00	140.92	70.46	140.92
52.00	18.0	140.92	0.00	140.92	70.46	140.92
54.00	18.0	140.92	0.00	140.92	70.46	140.92
56.00	18.0	140.92	0.00	140.92	70.46	140.92
58.00	18.0	140.92	0.00	140.92	70.46	140.92
60.00	18.0	140.92	0.77	141.68	70.84	143.21
62.00	18.0	140.92	4.39	145.31	72.65	154.10
64.00	18.0	140.96	12.60	153.56	76.78	178.77
66.00	18.0	143.49	21.07	164.57	82.28	206.71
68.00	18.0	150.84	24.16	175.01	87.50	223.34
70.00	18.0	160.66	18.14	178.79	89.40	215.07
72.00	18.0	167.04	6.92	173.96	86.98	187.81
74.00	18.0	170.77	0.00	170.77	85.38	170.77
76.00	18.0	170.77	12.34	183.11	91.55	207.79
78.00	18.0	170.77	11.60	182.36	91.18	205.56
80.00	18.0	170.77	10.64	181.40	90.70	202.67
82.00	18.0	170.77	7.25	178.01	89.01	192.51
84.00	18.0	170.85	4.47	175.32	87.66	184.27
86.00	18.0	176.13	2.56	178.69	89.34	183.81
88.00	18.0	181.10	9.37	190.48	95.24	209.22
90.00	18.0	182.93	45.07	228.00	114.00	318.13
92.00	18.0	183.16	37.99	221.15	110.58	297.12
94.00	18.0	186.59	68.16	254.75	127.38	391.07
96.00	18.0	192.36	82.75	275.11	137.55	440.61
98.00	18.0	200.96	100.87	301.83	150.92	503.57
100.00	18.0	207.25	104.67	311.92	155.96	521.26
102.00	18.0	213.49	108.52	322.01	161.01	539.05
104.00	18.0	220.88	105.05	325.93	162.96	536.03
106.00	18.0	229.15	97.42	326.56	163.28	521.40
108.00	18.0	239.14	47.38	286.52	143.26	381.29
110.00	18.0	252.39	58.39	310.78	155.39	427.56
112.00	18.0	262.15	61.14	323.30	161.65	445.58
114.00	18.0	267.39	73.56	340.95	170.47	488.08
116.00	18.0	270.38	64.27	334.64	167.32	463.17
118.00	18.0	272.45	69.77	342.22	171.11	481.75
120.00	18.0	274.68	78.50	353.19	176.59	510.19
122.00	18.0	279.05	77.16	356.20	178.10	510.51
124.00	18.0	286.55	61.76	348.32	174.16	471.84
126.00	18.0	291.61	55.41	347.02	173.51	457.83
128.00	18.0	294.22	71.36	365.58	182.79	508.31
130.00	18.0	296.46	74.70	371.16	185.58	520.57
132.00	18.0	302.09	87.46	389.56	194.78	564.48
134.00	18.0	307.40	101.26	408.66	204.33	611.18
136.00	18.0	311.72	100.23	411.95	205.97	612.41

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138.00	18.0	315.84	96.98	412.83	206.41	606.80
140.00	18.0	320.28	97.66	417.94	208.97	613.26
142.00	18.0	324.47	100.61	425.09	212.54	626.31
144.00	18.0	328.41	111.68	440.08	220.04	663.43
146.00	18.0	***** Not enough soil data *****				
148.00	18.0	0.00	0.00	0.00	0.00	0.00
150.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B21_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 6-9-14, Boring Number: WL1-B21
 Station number: 673+07 Offset: 56 LT

Ground Elevation: 62.800(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	4.00	3- Clean sand
5	8.00	4.00	3- Clean sand
6	9.00	4.00	2- Clay and silty sand
7	10.00	8.00	3- Clean sand
8	12.50	8.00	2- Clay and silty sand
9	15.00	6.00	2- Clay and silty sand
10	17.50	6.00	2- Clay and silty sand
11	20.00	8.00	2- Clay and silty sand
12	22.50	8.00	2- Clay and silty sand
13	25.00	16.00	2- Clay and silty sand
14	27.50	15.00	1- Plastic Clay
15	30.00	13.00	2- Clay and silty sand
16	32.50	18.00	2- Clay and silty sand
17	35.00	42.00	3- Clean sand

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18	37.50	6.00	1- Plastic Clay
19	38.75	0.00	2- Clay and silty sand
20	40.00	0.00	1- Plastic Clay
21	42.50	1.00	2- Clay and silty sand
22	45.00	2.00	2- Clay and silty sand
23	47.50	0.00	2- Clay and silty sand
24	50.00	2.00	2- Clay and silty sand
25	52.50	10.00	1- Plastic Clay
26	55.00	68.00	2- Clay and silty sand
27	57.50	99.00	2- Clay and silty sand
28	60.00	99.00	2- Clay and silty sand
29	62.50	54.00	2- Clay and silty sand
30	65.00	47.00	2- Clay and silty sand
31	67.50	99.00	2- Clay and silty sand
32	70.00	99.00	2- Clay and silty sand
33	72.50	99.00	2- Clay and silty sand
34	75.00	59.00	2- Clay and silty sand
35	77.50	99.00	2- Clay and silty sand
36	80.00	99.00	2- Clay and silty sand
37	82.50	99.00	2- Clay and silty sand
38	83.75	1.00	3- Clean sand
39	85.00	1.00	2- Clay and silty sand
40	87.50	0.00	4- Lime Stone/Very shelly sand
41	88.75	0.00	3- Clean sand
42	90.00	13.00	4- Lime Stone/Very shelly sand
43	92.50	5.00	4- Lime Stone/Very shelly sand
44	95.00	19.00	4- Lime Stone/Very shelly sand
45	97.50	16.00	4- Lime Stone/Very shelly sand
46	100.00	15.00	4- Lime Stone/Very shelly sand
47	101.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.80	53.80	9.00	2.67	3-Clean Sand
2	53.80	52.80	1.00	4.00	2-Clay and Silty Sand
3	52.80	50.30	2.50	8.00	3-Clean Sand
4	50.30	35.30	15.00	8.67	2-Clay and Silty Sand
5	35.30	32.80	2.50	15.00	1-Plastic Clay
6	32.80	27.80	5.00	15.50	2-Clay and Silty Sand
7	27.80	25.30	2.50	42.00	3-Clean Sand

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8	25.30	24.05	1.25	6.00	1-Plastic Clay
9	24.05	22.80	1.25	0.00	2-Clay and Silty Sand
10	22.80	20.30	2.50	0.00	1-Plastic Clay
11	20.30	10.30	10.00	1.25	2-Clay and Silty Sand
12	10.30	7.80	2.50	10.00	1-Plastic Clay
13	7.80	-20.95	28.75	84.39	2-Clay and Silty Sand
14	-20.95	-22.20	1.25	1.00	3-Clean Sand
15	-22.20	-24.70	2.50	1.00	2-Clay and Silty Sand
16	-24.70	-25.95	1.25	0.00	4-Limestone, Very
Shelly Sand					
17	-25.95	-27.20	1.25	0.00	3-Clean Sand
18	-27.20	-38.20	11.00	13.41	4-Limestone, Very
Shelly Sand					
19	-38.20	-38.20	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.80
18.00	12.00	50.80
18.00	14.00	48.80
18.00	16.00	46.80
18.00	18.00	44.80
18.00	20.00	42.80
18.00	22.00	40.80
18.00	24.00	38.80
18.00	26.00	36.80
18.00	28.00	34.80
18.00	30.00	32.80
18.00	32.00	30.80
18.00	34.00	28.80
18.00	36.00	26.80
18.00	38.00	24.80
18.00	40.00	22.80
18.00	42.00	20.80
18.00	44.00	18.80
18.00	46.00	16.80
18.00	48.00	14.80
18.00	50.00	12.80
18.00	52.00	10.80
18.00	54.00	8.80

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18.00	56.00	6.80
18.00	58.00	4.80
18.00	60.00	2.80
18.00	62.00	0.80
18.00	64.00	-1.20
18.00	66.00	-3.20
18.00	68.00	-5.20
18.00	70.00	-7.20
18.00	72.00	-9.20
18.00	74.00	-11.20
18.00	76.00	-13.20
18.00	78.00	-15.20
18.00	80.00	-17.20
18.00	82.00	-19.20
18.00	84.00	-21.20
18.00	86.00	-23.20
18.00	88.00	-25.20
18.00	90.00	-27.20
18.00	92.00	-29.20
18.00	94.00	-31.20
18.00	96.00	-33.20
18.00	98.00	-35.20
18.00	100.00	-37.20

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	0.57	7.54	8.10	4.05	23.18
12.00	18.0	4.00	7.10	11.10	5.55	25.30
14.00	18.0	8.68	9.78	18.47	9.23	38.03
16.00	18.0	12.69	9.95	22.64	11.32	42.54
18.00	18.0	16.39	10.58	26.97	13.48	48.14
20.00	18.0	20.90	12.60	33.50	16.75	58.69
22.00	18.0	26.07	13.73	39.80	19.90	67.27
24.00	18.0	32.15	13.76	45.92	22.96	73.44
26.00	18.0	41.07	14.37	55.44	27.72	84.19
28.00	18.0	51.81	16.68	68.49	34.24	101.84
30.00	18.0	60.85	33.65	94.50	47.25	161.80
32.00	18.0	68.15	36.65	104.80	52.40	178.09
34.00	18.0	79.12	35.82	114.94	57.47	186.57

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36.00	18.0	91.24	24.64	115.89	57.94	165.18
38.00	18.0	96.63	0.66	97.29	48.65	98.61
40.00	18.0	97.74	18.42	116.16	58.08	152.99
42.00	18.0	97.74	17.12	114.87	57.43	149.11
44.00	18.0	97.74	15.26	113.01	56.50	143.53
46.00	18.0	97.74	11.40	109.14	54.57	131.94
48.00	18.0	97.74	4.56	102.30	51.15	111.42
50.00	18.0	97.74	11.87	109.62	54.81	133.36
52.00	18.0	100.64	25.27	125.91	62.96	176.46
54.00	18.0	108.39	32.63	141.02	70.51	206.29
56.00	18.0	123.98	40.93	164.91	82.45	246.77
58.00	18.0	136.98	44.92	181.89	90.95	271.73
60.00	18.0	149.79	52.68	202.47	101.24	307.84
62.00	18.0	164.47	60.94	225.41	112.70	347.29
64.00	18.0	180.19	66.77	246.96	123.48	380.50
66.00	18.0	195.96	71.19	267.15	133.57	409.52
68.00	18.0	211.68	71.79	283.47	141.73	427.04
70.00	18.0	227.39	71.79	299.18	149.59	442.75
72.00	18.0	243.10	71.79	314.89	157.44	458.46
74.00	18.0	258.81	71.79	330.60	165.30	474.17
76.00	18.0	274.52	71.82	346.35	173.17	489.99
78.00	18.0	290.23	70.42	360.65	180.32	501.49
80.00	18.0	305.94	57.43	363.37	181.68	478.23
82.00	18.0	321.65	43.71	365.36	182.68	452.79
84.00	18.0	337.63	0.21	337.84	168.92	338.27
86.00	18.0	337.63	34.03	371.66	185.83	439.73
88.00	18.0	337.63	32.84	370.47	185.23	436.14
90.00	18.0	338.23	34.75	372.98	186.49	442.49
92.00	18.0	339.63	35.12	374.75	187.37	444.98
94.00	18.0	340.78	35.94	376.72	188.36	448.60
96.00	18.0	*****	Not enough soil data	*****		
98.00	18.0	0.00	0.00	0.00	0.00	0.00
100.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B22_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: GEG
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 6-2-14, Boring Number: WL1-B22
 Station number: 673+13 Offset: 33 RT

Ground Elevation: 63.800(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	1.00	3- Clean sand
2	2.00	1.00	3- Clean sand
3	4.00	1.00	3- Clean sand
4	6.00	3.00	3- Clean sand
5	7.00	3.00	2- Clay and silty sand
6	8.00	6.00	3- Clean sand
7	10.00	28.00	2- Clay and silty sand
8	11.25	14.00	3- Clean sand
9	12.50	14.00	2- Clay and silty sand
10	15.00	12.00	2- Clay and silty sand
11	17.50	13.00	2- Clay and silty sand
12	20.00	11.00	2- Clay and silty sand
13	22.50	10.00	2- Clay and silty sand
14	25.00	9.00	2- Clay and silty sand
15	27.50	13.00	2- Clay and silty sand
16	30.00	12.00	2- Clay and silty sand
17	32.50	6.00	2- Clay and silty sand

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18	35.00	29.00	3- Clean sand
19	37.50	27.00	3- Clean sand
20	40.00	3.00	1- Plastic Clay
21	42.50	1.00	2- Clay and silty sand
22	45.00	2.00	2- Clay and silty sand
23	47.50	3.00	2- Clay and silty sand
24	50.00	2.00	2- Clay and silty sand
25	52.50	3.00	2- Clay and silty sand
26	53.75	3.00	3- Clean sand
27	55.00	46.00	2- Clay and silty sand
28	57.50	61.00	2- Clay and silty sand
29	60.00	52.00	2- Clay and silty sand
30	62.50	99.00	2- Clay and silty sand
31	63.75	24.00	3- Clean sand
32	65.00	24.00	2- Clay and silty sand
33	67.50	19.00	2- Clay and silty sand
34	68.75	19.00	3- Clean sand
35	70.00	54.00	2- Clay and silty sand
36	71.25	32.00	3- Clean sand
37	72.50	32.00	2- Clay and silty sand
38	73.75	32.00	3- Clean sand
39	75.00	99.00	2- Clay and silty sand
40	77.50	99.00	2- Clay and silty sand
41	80.00	99.00	4- Lime Stone/Very shelly sand
42	82.50	99.00	4- Lime Stone/Very shelly sand
43	85.00	32.00	1- Plastic Clay
44	87.50	20.00	4- Lime Stone/Very shelly sand
45	90.00	6.00	2- Clay and silty sand
46	91.25	1.00	3- Clean sand
47	92.50	1.00	2- Clay and silty sand
48	95.00	0.00	4- Lime Stone/Very shelly sand
49	96.25	0.00	3- Clean sand
50	97.50	26.00	4- Lime Stone/Very shelly sand
51	98.75	26.00	3- Clean sand
52	100.00	99.00	4- Lime Stone/Very shelly sand
53	102.50	44.00	4- Lime Stone/Very shelly sand
54	103.75	30.00	3- Clean sand
55	105.00	30.00	4- Lime Stone/Very shelly sand
56	107.50	45.00	4- Lime Stone/Very shelly sand
57	110.00	26.00	4- Lime Stone/Very shelly sand
58	112.50	33.00	4- Lime Stone/Very shelly sand
59	113.75	33.00	3- Clean sand
60	115.00	99.00	4- Lime Stone/Very shelly sand
61	116.25	17.00	3- Clean sand
62	117.50	17.00	4- Lime Stone/Very shelly sand
63	120.00	20.00	4- Lime Stone/Very shelly sand
64	122.50	20.00	4- Lime Stone/Very shelly sand
65	125.00	38.00	4- Lime Stone/Very shelly sand

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66	127.50	14.00	4- Lime Stone/Very shelly sand
67	128.75	14.00	3- Clean sand
68	130.00	99.00	4- Lime Stone/Very shelly sand
69	131.25	36.00	3- Clean sand
70	132.50	36.00	4- Lime Stone/Very shelly sand
71	135.00	49.00	4- Lime Stone/Very shelly sand
72	136.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	63.80	56.80	7.00	1.29	3-Clean Sand
2	56.80	55.80	1.00	3.00	2-Clay and Silty Sand
3	55.80	53.80	2.00	6.00	3-Clean Sand
4	53.80	52.55	1.25	28.00	2-Clay and Silty Sand
5	52.55	51.30	1.25	14.00	3-Clean Sand
6	51.30	28.80	22.50	11.11	2-Clay and Silty Sand
7	28.80	23.80	5.00	28.00	3-Clean Sand
8	23.80	21.30	2.50	3.00	1-Plastic Clay
9	21.30	10.05	11.25	2.11	2-Clay and Silty Sand
10	10.05	8.80	1.25	3.00	3-Clean Sand
11	8.80	0.05	8.75	59.57	2-Clay and Silty Sand
12	0.05	-1.20	1.25	24.00	3-Clean Sand
13	-1.20	-4.95	3.75	22.33	2-Clay and Silty Sand
14	-4.95	-6.20	1.25	19.00	3-Clean Sand
15	-6.20	-7.45	1.25	54.00	2-Clay and Silty Sand
16	-7.45	-8.70	1.25	32.00	3-Clean Sand
17	-8.70	-9.95	1.25	32.00	2-Clay and Silty Sand
18	-9.95	-11.20	1.25	32.00	3-Clean Sand
19	-11.20	-16.20	5.00	99.00	2-Clay and Silty Sand
20	-16.20	-21.20	5.00	99.00	4-Limestone, Very Shelly Sand
21	-21.20	-23.70	2.50	32.00	1-Plastic Clay
22	-23.70	-26.20	2.50	20.00	4-Limestone, Very Shelly Sand
23	-26.20	-27.45	1.25	6.00	2-Clay and Silty Sand
24	-27.45	-28.70	1.25	1.00	3-Clean Sand
25	-28.70	-31.20	2.50	1.00	2-Clay and Silty Sand
26	-31.20	-32.45	1.25	0.00	4-Limestone, Very Shelly Sand
27	-32.45	-33.70	1.25	0.00	3-Clean Sand

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28	-33.70	-34.95	1.25	26.00	4-Limestone, Very
Shelly Sand					
29	-34.95	-36.20	1.25	26.00	3-Clean Sand
30	-36.20	-39.95	3.75	80.67	4-Limestone, Very
Shelly Sand					
31	-39.95	-41.20	1.25	30.00	3-Clean Sand
32	-41.20	-49.95	8.75	33.57	4-Limestone, Very
Shelly Sand					
33	-49.95	-51.20	1.25	33.00	3-Clean Sand
34	-51.20	-52.45	1.25	99.00	4-Limestone, Very
Shelly Sand					
35	-52.45	-53.70	1.25	17.00	3-Clean Sand
36	-53.70	-64.95	11.25	22.67	4-Limestone, Very
Shelly Sand					
37	-64.95	-66.20	1.25	14.00	3-Clean Sand
38	-66.20	-67.45	1.25	99.00	4-Limestone, Very
Shelly Sand					
39	-67.45	-68.70	1.25	36.00	3-Clean Sand
40	-68.70	-72.20	3.50	39.71	4-Limestone, Very
Shelly Sand					
41	-72.20	-72.20	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	53.80
18.00	12.00	51.80
18.00	14.00	49.80
18.00	16.00	47.80
18.00	18.00	45.80
18.00	20.00	43.80
18.00	22.00	41.80
18.00	24.00	39.80
18.00	26.00	37.80
18.00	28.00	35.80
18.00	30.00	33.80
18.00	32.00	31.80
18.00	34.00	29.80
18.00	36.00	27.80
18.00	38.00	25.80
18.00	40.00	23.80

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18.00	42.00	21.80
18.00	44.00	19.80
18.00	46.00	17.80
18.00	48.00	15.80
18.00	50.00	13.80
18.00	52.00	11.80
18.00	54.00	9.80
18.00	56.00	7.80
18.00	58.00	5.80
18.00	60.00	3.80
18.00	62.00	1.80
18.00	64.00	-0.20
18.00	66.00	-2.20
18.00	68.00	-4.20
18.00	70.00	-6.20
18.00	72.00	-8.20
18.00	74.00	-10.20
18.00	76.00	-12.20
18.00	78.00	-14.20
18.00	80.00	-16.20
18.00	82.00	-18.20
18.00	84.00	-20.20
18.00	86.00	-22.20
18.00	88.00	-24.20
18.00	90.00	-26.20
18.00	92.00	-28.20
18.00	94.00	-30.20
18.00	96.00	-32.20
18.00	98.00	-34.20
18.00	100.00	-36.20
18.00	102.00	-38.20
18.00	104.00	-40.20
18.00	106.00	-42.20
18.00	108.00	-44.20
18.00	110.00	-46.20
18.00	112.00	-48.20
18.00	114.00	-50.20
18.00	116.00	-52.20
18.00	118.00	-54.20
18.00	120.00	-56.20
18.00	122.00	-58.20
18.00	124.00	-60.20
18.00	126.00	-62.20
18.00	128.00	-64.20
18.00	130.00	-66.20
18.00	132.00	-68.20
18.00	134.00	-70.20

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Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	8.12	17.14	25.25	12.63	59.52
12.00	18.0	14.83	16.92	31.75	15.87	65.58
14.00	18.0	23.52	19.04	42.56	21.28	80.64
16.00	18.0	31.15	18.36	49.51	24.75	86.22
18.00	18.0	38.93	17.60	56.53	28.27	91.74
20.00	18.0	46.23	16.71	62.94	31.47	96.37
22.00	18.0	52.90	16.53	69.42	34.71	102.48
24.00	18.0	59.12	17.04	76.16	38.08	110.25
26.00	18.0	65.17	17.07	82.24	41.12	116.38
28.00	18.0	72.60	16.42	89.01	44.51	121.84
30.00	18.0	80.21	24.78	104.99	52.50	154.55
32.00	18.0	86.26	37.66	123.92	61.96	199.23
34.00	18.0	91.29	44.12	135.41	67.70	223.65
36.00	18.0	99.01	35.41	134.42	67.21	205.25
38.00	18.0	106.58	25.70	132.28	66.14	183.67
40.00	18.0	109.63	0.00	109.63	54.82	109.63
42.00	18.0	109.63	0.00	109.63	54.82	109.63
44.00	18.0	109.63	18.03	127.66	63.83	163.72
46.00	18.0	109.63	15.82	125.45	62.72	157.08
48.00	18.0	109.63	9.32	118.95	59.47	137.59
50.00	18.0	109.63	8.39	118.02	59.01	134.79
52.00	18.0	109.63	19.08	128.72	64.36	166.88
54.00	18.0	109.82	31.10	140.92	70.46	203.13
56.00	18.0	121.91	37.89	159.79	79.90	235.56
58.00	18.0	134.70	41.97	176.67	88.33	260.61
60.00	18.0	148.29	47.47	195.76	97.88	290.71
62.00	18.0	164.08	47.88	211.96	105.98	307.71
64.00	18.0	181.28	41.10	222.38	111.19	304.57
66.00	18.0	192.68	44.12	236.80	118.40	325.05
68.00	18.0	201.99	47.15	249.14	124.57	343.43
70.00	18.0	212.69	67.54	280.23	140.12	415.32
72.00	18.0	224.31	74.60	298.91	149.46	448.11
74.00	18.0	236.41	70.71	307.12	153.56	448.55
76.00	18.0	250.09	80.36	330.45	165.23	491.18
78.00	18.0	261.90	92.18	354.07	177.04	538.43
80.00	18.0	276.90	101.58	378.48	189.24	581.63
82.00	18.0	284.10	87.73	371.83	185.92	547.29

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84.00	18.0	293.44	76.21	369.65	184.82	522.06
86.00	18.0	307.83	32.18	340.02	170.01	404.38
88.00	18.0	313.56	20.14	333.70	166.85	373.97
90.00	18.0	317.51	1.06	318.58	159.29	320.70
92.00	18.0	318.76	0.66	319.42	159.71	320.73
94.00	18.0	318.76	39.54	358.30	179.15	437.37
96.00	18.0	318.76	49.43	368.20	184.10	467.07
98.00	18.0	321.07	74.88	395.95	197.98	545.72
100.00	18.0	328.02	80.34	408.37	204.18	569.05
102.00	18.0	334.63	81.35	415.98	207.99	578.67
104.00	18.0	342.32	105.63	447.95	223.98	659.21
106.00	18.0	347.74	100.62	448.37	224.18	649.62
108.00	18.0	353.39	103.07	456.46	228.23	662.61
110.00	18.0	357.58	109.26	466.83	233.42	685.34
112.00	18.0	362.12	108.99	471.12	235.56	689.10
114.00	18.0	370.01	98.60	468.61	234.30	665.80
116.00	18.0	376.55	72.85	449.40	224.70	595.09
118.00	18.0	380.73	86.26	466.98	233.49	639.50
120.00	18.0	383.45	87.06	470.51	235.26	644.64
122.00	18.0	386.38	87.57	473.95	236.97	649.09
124.00	18.0	390.08	81.64	471.71	235.86	634.99
126.00	18.0	395.11	85.75	480.85	240.43	652.35
128.00	18.0	398.09	90.84	488.93	244.46	670.61
130.00	18.0	402.85	105.59	508.44	254.22	719.62
132.00	18.0	*****	Not enough soil data	*****		
134.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B23_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 4-1-14, Boring Number: WL1-B23
 Station number: 674+33 Offset: 129 LT

Ground Elevation: 62.100(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	3.00	3- Clean sand
4	5.00	3.00	2- Clay and silty sand
5	6.00	5.00	3- Clean sand
6	8.00	7.00	3- Clean sand
7	10.00	6.00	3- Clean sand
8	12.50	9.00	2- Clay and silty sand
9	13.75	9.00	3- Clean sand
10	15.00	28.00	2- Clay and silty sand
11	16.25	28.00	3- Clean sand
12	17.50	70.00	2- Clay and silty sand
13	18.75	32.00	3- Clean sand
14	20.00	32.00	2- Clay and silty sand
15	21.25	19.00	3- Clean sand
16	22.50	19.00	2- Clay and silty sand
17	25.00	13.00	2- Clay and silty sand

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18	27.50	12.00	2- Clay and silty sand
19	30.00	11.00	2- Clay and silty sand
20	32.50	9.00	2- Clay and silty sand
21	33.75	5.00	3- Clean sand
22	35.00	5.00	2- Clay and silty sand
23	37.50	5.00	2- Clay and silty sand
24	40.00	7.00	2- Clay and silty sand
25	42.50	5.00	2- Clay and silty sand
26	45.00	5.00	2- Clay and silty sand
27	47.50	7.00	2- Clay and silty sand
28	48.75	7.00	3- Clean sand
29	50.00	17.00	2- Clay and silty sand
30	52.50	11.00	1- Plastic Clay
31	55.00	14.00	1- Plastic Clay
32	57.50	19.00	3- Clean sand
33	60.00	7.00	3- Clean sand
34	62.50	0.00	1- Plastic Clay
35	65.00	0.00	1- Plastic Clay
36	67.50	0.00	1- Plastic Clay
37	70.00	0.00	2- Clay and silty sand
38	72.50	2.00	1- Plastic Clay
39	75.00	6.00	2- Clay and silty sand
40	77.50	40.00	1- Plastic Clay
41	80.00	17.00	2- Clay and silty sand
42	82.50	25.00	2- Clay and silty sand
43	85.00	28.00	2- Clay and silty sand
44	87.50	20.00	2- Clay and silty sand
45	90.00	18.00	2- Clay and silty sand
46	92.50	32.00	2- Clay and silty sand
47	95.00	27.00	2- Clay and silty sand
48	96.25	2.00	3- Clean sand
49	97.50	2.00	2- Clay and silty sand
50	98.75	2.00	3- Clean sand
51	100.00	7.00	2- Clay and silty sand
52	101.25	2.00	3- Clean sand
53	102.50	2.00	2- Clay and silty sand
54	105.00	4.00	4- Lime Stone/Very shelly sand
55	106.25	4.00	3- Clean sand
56	107.50	12.00	4- Lime Stone/Very shelly sand
57	108.75	12.00	3- Clean sand
58	110.00	32.00	4- Lime Stone/Very shelly sand
59	112.50	18.00	4- Lime Stone/Very shelly sand
60	115.00	37.00	4- Lime Stone/Very shelly sand
61	116.25	37.00	3- Clean sand
62	117.50	99.00	4- Lime Stone/Very shelly sand
63	118.75	31.00	3- Clean sand
64	120.00	31.00	4- Lime Stone/Very shelly sand
65	122.50	28.00	4- Lime Stone/Very shelly sand

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66	125.00	23.00	4- Lime Stone/Very shelly sand
67	127.50	25.00	4- Lime Stone/Very shelly sand
68	130.00	48.00	4- Lime Stone/Very shelly sand
69	132.50	29.00	4- Lime Stone/Very shelly sand
70	135.00	24.00	4- Lime Stone/Very shelly sand
71	137.50	30.00	4- Lime Stone/Very shelly sand
72	138.75	30.00	3- Clean sand
73	140.00	99.00	4- Lime Stone/Very shelly sand
74	142.50	99.00	4- Lime Stone/Very shelly sand
75	145.00	99.00	4- Lime Stone/Very shelly sand
76	146.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.10	57.10	5.00	2.20	3-Clean Sand
2	57.10	56.10	1.00	3.00	2-Clay and Silty Sand
3	56.10	49.60	6.50	6.00	3-Clean Sand
4	49.60	48.35	1.25	9.00	2-Clay and Silty Sand
5	48.35	47.10	1.25	9.00	3-Clean Sand
6	47.10	45.85	1.25	28.00	2-Clay and Silty Sand
7	45.85	44.60	1.25	28.00	3-Clean Sand
8	44.60	43.35	1.25	70.00	2-Clay and Silty Sand
9	43.35	42.10	1.25	32.00	3-Clean Sand
10	42.10	40.85	1.25	32.00	2-Clay and Silty Sand
11	40.85	39.60	1.25	19.00	3-Clean Sand
12	39.60	28.35	11.25	13.22	2-Clay and Silty Sand
13	28.35	27.10	1.25	5.00	3-Clean Sand
14	27.10	13.35	13.75	5.55	2-Clay and Silty Sand
15	13.35	12.10	1.25	7.00	3-Clean Sand
16	12.10	9.60	2.50	17.00	2-Clay and Silty Sand
17	9.60	4.60	5.00	12.50	1-Plastic Clay
18	4.60	-0.40	5.00	13.00	3-Clean Sand
19	-0.40	-7.90	7.50	0.00	1-Plastic Clay
20	-7.90	-10.40	2.50	0.00	2-Clay and Silty Sand
21	-10.40	-12.90	2.50	2.00	1-Plastic Clay
22	-12.90	-15.40	2.50	6.00	2-Clay and Silty Sand
23	-15.40	-17.90	2.50	40.00	1-Plastic Clay
24	-17.90	-34.15	16.25	23.62	2-Clay and Silty Sand
25	-34.15	-35.40	1.25	2.00	3-Clean Sand
26	-35.40	-36.65	1.25	2.00	2-Clay and Silty Sand

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27	-36.65	-37.90	1.25	2.00	3-Clean Sand
28	-37.90	-39.15	1.25	7.00	2-Clay and Silty Sand
29	-39.15	-40.40	1.25	2.00	3-Clean Sand
30	-40.40	-42.90	2.50	2.00	2-Clay and Silty Sand
31	-42.90	-44.15	1.25	4.00	4-Limestone, Very
Shelly Sand					
32	-44.15	-45.40	1.25	4.00	3-Clean Sand
33	-45.40	-46.65	1.25	12.00	4-Limestone, Very
Shelly Sand					
34	-46.65	-47.90	1.25	12.00	3-Clean Sand
35	-47.90	-54.15	6.25	27.40	4-Limestone, Very
Shelly Sand					
36	-54.15	-55.40	1.25	37.00	3-Clean Sand
37	-55.40	-56.65	1.25	99.00	4-Limestone, Very
Shelly Sand					
38	-56.65	-57.90	1.25	31.00	3-Clean Sand
39	-57.90	-76.65	18.75	29.73	4-Limestone, Very
Shelly Sand					
40	-76.65	-77.90	1.25	30.00	3-Clean Sand
41	-77.90	-83.90	6.00	99.00	4-Limestone, Very
Shelly Sand					
42	-83.90	-83.90	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.10
18.00	12.00	50.10
18.00	14.00	48.10
18.00	16.00	46.10
18.00	18.00	44.10
18.00	20.00	42.10
18.00	22.00	40.10
18.00	24.00	38.10
18.00	26.00	36.10
18.00	28.00	34.10
18.00	30.00	32.10
18.00	32.00	30.10
18.00	34.00	28.10
18.00	36.00	26.10
18.00	38.00	24.10

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18.00	40.00	22.10
18.00	42.00	20.10
18.00	44.00	18.10
18.00	46.00	16.10
18.00	48.00	14.10
18.00	50.00	12.10
18.00	52.00	10.10
18.00	54.00	8.10
18.00	56.00	6.10
18.00	58.00	4.10
18.00	60.00	2.10
18.00	62.00	0.10
18.00	64.00	-1.90
18.00	66.00	-3.90
18.00	68.00	-5.90
18.00	70.00	-7.90
18.00	72.00	-9.90
18.00	74.00	-11.90
18.00	76.00	-13.90
18.00	78.00	-15.90
18.00	80.00	-17.90
18.00	82.00	-19.90
18.00	84.00	-21.90
18.00	86.00	-23.90
18.00	88.00	-25.90
18.00	90.00	-27.90
18.00	92.00	-29.90
18.00	94.00	-31.90
18.00	96.00	-33.90
18.00	98.00	-35.90
18.00	100.00	-37.90
18.00	102.00	-39.90
18.00	104.00	-41.90
18.00	106.00	-43.90
18.00	108.00	-45.90
18.00	110.00	-47.90
18.00	112.00	-49.90
18.00	114.00	-51.90
18.00	116.00	-53.90
18.00	118.00	-55.90
18.00	120.00	-57.90
18.00	122.00	-59.90
18.00	124.00	-61.90
18.00	126.00	-63.90
18.00	128.00	-65.90
18.00	130.00	-67.90
18.00	132.00	-69.90
18.00	134.00	-71.90

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18.00	136.00	-73.90
18.00	138.00	-75.90
18.00	140.00	-77.90
18.00	142.00	-79.90
18.00	144.00	-81.90

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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10.00	18.0	2.87	12.22	15.09	7.55	39.53
12.00	18.0	4.30	21.11	25.41	12.70	67.63
14.00	18.0	11.60	38.98	50.58	25.29	128.54
16.00	18.0	21.70	44.48	66.19	33.09	155.15
18.00	18.0	33.96	44.43	78.39	39.20	167.26
20.00	18.0	45.49	34.75	80.25	40.12	149.75
22.00	18.0	53.74	27.30	81.04	40.52	135.65
24.00	18.0	63.81	21.31	85.13	42.56	127.75
26.00	18.0	72.28	19.77	92.05	46.03	131.60
28.00	18.0	79.79	18.21	98.00	49.00	134.41
30.00	18.0	86.89	16.65	103.54	51.77	136.84
32.00	18.0	93.33	14.69	108.01	54.01	137.39
34.00	18.0	97.20	8.65	105.85	52.93	123.16
36.00	18.0	100.22	8.06	108.28	54.14	124.40
38.00	18.0	103.62	8.16	111.78	55.89	128.10
40.00	18.0	107.74	8.17	115.91	57.95	132.25
42.00	18.0	111.85	8.26	120.11	60.05	136.63
44.00	18.0	115.25	9.86	125.11	62.55	144.83
46.00	18.0	118.74	12.52	131.26	65.63	156.31
48.00	18.0	122.94	12.70	135.63	67.82	161.03
50.00	18.0	127.66	12.15	139.81	69.91	164.11
52.00	18.0	134.28	14.07	148.35	74.17	176.49
54.00	18.0	143.98	19.62	163.59	81.80	202.82
56.00	18.0	152.21	23.68	175.89	87.95	223.26
58.00	18.0	160.29	18.84	179.13	89.57	216.82
60.00	18.0	163.63	14.22	177.85	88.93	206.30
62.00	18.0	164.82	11.13	175.95	87.97	198.20
64.00	18.0	164.87	0.00	164.87	82.43	164.87
66.00	18.0	164.87	0.00	164.87	82.43	164.87
68.00	18.0	164.87	0.10	164.96	82.48	165.15
70.00	18.0	164.87	5.31	170.17	85.09	180.79

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72.00	18.0	164.87	5.44	170.31	85.15	181.19
74.00	18.0	165.56	7.94	173.51	86.75	189.40
76.00	18.0	170.27	11.70	181.98	90.99	205.38
78.00	18.0	185.11	16.92	202.03	101.01	235.86
80.00	18.0	198.43	22.77	221.19	110.60	266.73
82.00	18.0	208.20	23.96	232.16	116.08	280.08
84.00	18.0	219.50	26.12	245.62	122.81	297.86
86.00	18.0	231.67	29.09	260.76	130.38	318.95
88.00	18.0	243.37	33.18	276.55	138.28	342.92
90.00	18.0	254.05	36.33	290.38	145.19	363.04
92.00	18.0	266.04	31.96	298.01	149.00	361.94
94.00	18.0	280.17	24.69	304.86	152.43	354.24
96.00	18.0	291.07	19.15	310.23	155.11	348.53
98.00	18.0	295.18	15.76	310.94	155.47	342.47
100.00	18.0	296.62	12.72	309.34	154.67	334.77
102.00	18.0	298.06	0.30	298.36	149.18	298.97
104.00	18.0	298.06	13.68	311.74	155.87	339.10
106.00	18.0	298.06	23.87	321.93	160.96	369.67
108.00	18.0	299.12	36.54	335.66	167.83	408.74
110.00	18.0	302.78	52.05	354.83	177.42	458.94
112.00	18.0	305.98	55.10	361.09	180.54	471.29
114.00	18.0	308.06	64.81	372.88	186.44	502.51
116.00	18.0	312.63	75.81	388.45	194.22	540.08
118.00	18.0	324.66	106.10	430.76	215.38	642.97
120.00	18.0	332.23	93.78	426.00	213.00	613.56
122.00	18.0	336.66	93.52	430.18	215.09	617.21
124.00	18.0	340.46	95.17	435.63	217.81	625.97
126.00	18.0	343.02	104.58	447.60	223.80	656.77
128.00	18.0	346.54	109.64	456.18	228.09	675.45
130.00	18.0	352.37	102.67	455.04	227.52	660.39
132.00	18.0	358.29	96.76	455.05	227.53	648.57
134.00	18.0	362.53	96.88	459.41	229.70	653.16
136.00	18.0	366.29	109.65	475.95	237.97	695.26
138.00	18.0	370.76	123.68	494.44	247.22	741.80
140.00	18.0	379.77	134.91	514.68	257.34	784.50
142.00	18.0	*****	Not enough soil data	*****		
144.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS

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3 x THE MOBILIZED END BEARING.

EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B24_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-26-14, Boring Number: WL1-B24
 Station number: 674+32 Offset: 23 LT

Ground Elevation: 62.900(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	2.00	3- Clean sand
5	8.00	4.00	2- Clay and silty sand
6	10.00	5.00	2- Clay and silty sand
7	11.25	0.00	3- Clean sand
8	12.50	12.00	2- Clay and silty sand
9	15.00	25.00	2- Clay and silty sand
10	17.50	12.00	2- Clay and silty sand
11	20.00	13.00	2- Clay and silty sand
12	22.50	11.00	2- Clay and silty sand
13	25.00	14.00	2- Clay and silty sand
14	27.50	13.00	2- Clay and silty sand
15	28.75	5.00	3- Clean sand
16	30.00	5.00	2- Clay and silty sand
17	32.50	7.00	2- Clay and silty sand

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18	33.75	7.00	3- Clean sand
19	35.00	12.00	2- Clay and silty sand
20	37.50	17.00	2- Clay and silty sand
21	40.00	14.00	2- Clay and silty sand
22	42.50	18.00	2- Clay and silty sand
23	45.00	22.00	3- Clean sand
24	47.50	24.00	3- Clean sand
25	50.00	4.00	1- Plastic Clay
26	52.50	0.00	1- Plastic Clay
27	55.00	0.00	1- Plastic Clay
28	56.25	0.00	2- Clay and silty sand
29	57.50	17.00	1- Plastic Clay
30	60.00	5.00	2- Clay and silty sand
31	61.25	3.00	3- Clean sand
32	62.50	3.00	2- Clay and silty sand
33	65.00	4.00	2- Clay and silty sand
34	66.25	4.00	3- Clean sand
35	67.50	14.00	2- Clay and silty sand
36	70.00	6.00	2- Clay and silty sand
37	71.25	6.00	3- Clean sand
38	72.50	36.00	2- Clay and silty sand
39	75.00	26.00	2- Clay and silty sand
40	77.50	19.00	2- Clay and silty sand
41	78.75	19.00	3- Clean sand
42	80.00	45.00	2- Clay and silty sand
43	81.25	17.00	3- Clean sand
44	82.50	17.00	2- Clay and silty sand
45	85.00	13.00	2- Clay and silty sand
46	87.50	24.00	2- Clay and silty sand
47	90.00	11.00	2- Clay and silty sand
48	91.25	11.00	3- Clean sand
49	92.50	99.00	2- Clay and silty sand
50	95.00	99.00	2- Clay and silty sand
51	96.25	13.00	3- Clean sand
52	97.50	13.00	2- Clay and silty sand
53	100.00	10.00	2- Clay and silty sand
54	102.50	6.00	2- Clay and silty sand
55	105.00	20.00	4- Lime Stone/Very shelly sand
56	106.25	20.00	3- Clean sand
57	107.50	53.00	4- Lime Stone/Very shelly sand
58	108.75	26.00	3- Clean sand
59	110.00	26.00	4- Lime Stone/Very shelly sand
60	112.50	36.00	4- Lime Stone/Very shelly sand
61	115.00	31.00	4- Lime Stone/Very shelly sand
62	117.50	28.00	4- Lime Stone/Very shelly sand
63	120.00	30.00	4- Lime Stone/Very shelly sand
64	122.50	20.00	4- Lime Stone/Very shelly sand
65	125.00	36.00	4- Lime Stone/Very shelly sand

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66	127.50	34.00	4- Lime Stone/Very shelly sand
67	130.00	29.00	4- Lime Stone/Very shelly sand
68	131.25	29.00	3- Clean sand
69	132.50	99.00	4- Lime Stone/Very shelly sand
70	135.00	47.00	4- Lime Stone/Very shelly sand
71	137.50	46.00	4- Lime Stone/Very shelly sand
72	140.00	44.00	4- Lime Stone/Very shelly sand
73	142.50	65.00	4- Lime Stone/Very shelly sand
74	145.00	99.00	4- Lime Stone/Very shelly sand
75	146.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.90	54.90	8.00	2.00	3-Clean Sand
2	54.90	51.65	3.25	4.38	2-Clay and Silty Sand
3	51.65	50.40	1.25	0.00	3-Clean Sand
4	50.40	34.15	16.25	14.38	2-Clay and Silty Sand
5	34.15	32.90	1.25	5.00	3-Clean Sand
6	32.90	29.15	3.75	5.67	2-Clay and Silty Sand
7	29.15	27.90	1.25	7.00	3-Clean Sand
8	27.90	17.90	10.00	15.25	2-Clay and Silty Sand
9	17.90	12.90	5.00	23.00	3-Clean Sand
10	12.90	6.65	6.25	1.60	1-Plastic Clay
11	6.65	5.40	1.25	0.00	2-Clay and Silty Sand
12	5.40	2.90	2.50	17.00	1-Plastic Clay
13	2.90	1.65	1.25	5.00	2-Clay and Silty Sand
14	1.65	0.40	1.25	3.00	3-Clean Sand
15	0.40	-3.35	3.75	3.33	2-Clay and Silty Sand
16	-3.35	-4.60	1.25	4.00	3-Clean Sand
17	-4.60	-8.35	3.75	11.33	2-Clay and Silty Sand
18	-8.35	-9.60	1.25	6.00	3-Clean Sand
19	-9.60	-15.85	6.25	28.60	2-Clay and Silty Sand
20	-15.85	-17.10	1.25	19.00	3-Clean Sand
21	-17.10	-18.35	1.25	45.00	2-Clay and Silty Sand
22	-18.35	-19.60	1.25	17.00	3-Clean Sand
23	-19.60	-28.35	8.75	17.00	2-Clay and Silty Sand
24	-28.35	-29.60	1.25	11.00	3-Clean Sand
25	-29.60	-33.35	3.75	99.00	2-Clay and Silty Sand
26	-33.35	-34.60	1.25	13.00	3-Clean Sand
27	-34.60	-42.10	7.50	9.67	2-Clay and Silty Sand

WL1-B24_18-PCP.txt					
28	-42.10	-43.35	1.25	20.00	4-Limestone, Very
Shelly Sand					
29	-43.35	-44.60	1.25	20.00	3-Clean Sand
30	-44.60	-45.85	1.25	53.00	4-Limestone, Very
Shelly Sand					
31	-45.85	-47.10	1.25	26.00	3-Clean Sand
32	-47.10	-68.35	21.25	30.06	4-Limestone, Very
Shelly Sand					
33	-68.35	-69.60	1.25	29.00	3-Clean Sand
34	-69.60	-83.10	13.50	63.07	4-Limestone, Very
Shelly Sand					
35	-83.10	-83.10	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.90
18.00	12.00	50.90
18.00	14.00	48.90
18.00	16.00	46.90
18.00	18.00	44.90
18.00	20.00	42.90
18.00	22.00	40.90
18.00	24.00	38.90
18.00	26.00	36.90
18.00	28.00	34.90
18.00	30.00	32.90
18.00	32.00	30.90
18.00	34.00	28.90
18.00	36.00	26.90
18.00	38.00	24.90
18.00	40.00	22.90
18.00	42.00	20.90
18.00	44.00	18.90
18.00	46.00	16.90
18.00	48.00	14.90
18.00	50.00	12.90
18.00	52.00	10.90
18.00	54.00	8.90
18.00	56.00	6.90
18.00	58.00	4.90

WL1-B24_18-PCP.txt

18.00	60.00	2.90
18.00	62.00	0.90
18.00	64.00	-1.10
18.00	66.00	-3.10
18.00	68.00	-5.10
18.00	70.00	-7.10
18.00	72.00	-9.10
18.00	74.00	-11.10
18.00	76.00	-13.10
18.00	78.00	-15.10
18.00	80.00	-17.10
18.00	82.00	-19.10
18.00	84.00	-21.10
18.00	86.00	-23.10
18.00	88.00	-25.10
18.00	90.00	-27.10
18.00	92.00	-29.10
18.00	94.00	-31.10
18.00	96.00	-33.10
18.00	98.00	-35.10
18.00	100.00	-37.10
18.00	102.00	-39.10
18.00	104.00	-41.10
18.00	106.00	-43.10
18.00	108.00	-45.10
18.00	110.00	-47.10
18.00	112.00	-49.10
18.00	114.00	-51.10
18.00	116.00	-53.10
18.00	118.00	-55.10
18.00	120.00	-57.10
18.00	122.00	-59.10
18.00	124.00	-61.10
18.00	126.00	-63.10
18.00	128.00	-65.10
18.00	130.00	-67.10
18.00	132.00	-69.10
18.00	134.00	-71.10
18.00	136.00	-73.10
18.00	138.00	-75.10
18.00	140.00	-77.10
18.00	142.00	-79.10
18.00	144.00	-81.10

Driven Pile Capacity:

WL1-B24_18-PCP.txt

Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	0.84	5.56	6.40	3.20	17.53
12.00	18.0	3.49	12.75	16.25	8.12	41.76
14.00	18.0	11.54	14.69	26.23	13.12	55.61
16.00	18.0	22.93	14.94	37.87	18.94	67.75
18.00	18.0	30.74	15.98	46.72	23.36	78.69
20.00	18.0	38.25	17.82	56.07	28.03	91.70
22.00	18.0	45.83	19.39	65.21	32.61	103.99
24.00	18.0	53.13	20.29	73.43	36.71	114.02
26.00	18.0	61.36	18.01	79.38	39.69	115.41
28.00	18.0	69.09	15.27	84.36	42.18	114.91
30.00	18.0	73.38	15.65	89.03	44.51	120.32
32.00	18.0	76.94	16.19	93.13	46.57	125.51
34.00	18.0	80.74	18.64	99.37	49.69	136.65
36.00	18.0	87.24	19.10	106.33	53.17	144.52
38.00	18.0	95.82	19.78	115.61	57.80	155.17
40.00	18.0	101.81	25.43	127.24	63.62	178.09
42.00	18.0	109.42	36.17	145.59	72.80	217.93
44.00	18.0	118.67	41.09	159.77	79.88	241.96
46.00	18.0	130.65	33.96	164.61	82.30	232.52
48.00	18.0	137.14	25.04	162.18	81.09	212.26
50.00	18.0	139.85	0.00	139.85	69.93	139.85
52.00	18.0	139.85	0.28	140.13	70.07	140.70
54.00	18.0	139.85	2.29	142.14	71.07	146.73
56.00	18.0	139.85	3.30	143.16	71.58	149.77
58.00	18.0	145.97	10.72	156.69	78.35	178.13
60.00	18.0	152.49	0.89	153.37	76.69	155.14
62.00	18.0	153.54	0.16	153.70	76.85	154.01
64.00	18.0	153.54	3.74	157.28	78.64	164.76
66.00	18.0	153.54	5.88	159.42	79.71	171.19
68.00	18.0	157.92	12.79	170.71	85.35	196.29
70.00	18.0	161.52	16.02	177.55	88.77	209.59
72.00	18.0	167.80	23.59	191.40	95.70	238.58
74.00	18.0	180.91	25.19	206.10	103.05	256.47
76.00	18.0	189.97	30.51	220.48	110.24	281.50
78.00	18.0	199.36	36.58	235.94	117.97	309.11
80.00	18.0	215.28	34.62	249.89	124.95	319.13
82.00	18.0	223.59	27.00	250.60	125.30	304.60
84.00	18.0	233.23	25.09	258.32	129.16	308.50
86.00	18.0	241.80	24.73	266.53	133.26	315.98
88.00	18.0	250.22	31.23	281.45	140.72	343.90
90.00	18.0	258.65	40.58	299.23	149.61	380.39

WL1-B24_18-PCP.txt

92.00	18.0	267.97	45.35	313.32	156.66	404.01
94.00	18.0	283.05	36.91	319.96	159.98	393.78
96.00	18.0	296.36	30.51	326.87	163.43	387.89
98.00	18.0	302.27	14.58	316.85	158.42	346.00
100.00	18.0	307.06	17.56	324.62	162.31	359.73
102.00	18.0	309.73	29.19	338.91	169.46	397.28
104.00	18.0	312.78	52.63	365.41	182.70	470.67
106.00	18.0	322.26	64.54	386.81	193.40	515.90
108.00	18.0	328.83	70.70	399.53	199.76	540.93
110.00	18.0	335.09	80.03	415.12	207.56	575.19
112.00	18.0	339.25	81.51	420.76	210.38	583.79
114.00	18.0	343.77	85.13	428.89	214.45	599.15
116.00	18.0	347.72	91.02	438.75	219.37	620.80
118.00	18.0	351.95	93.84	445.79	222.89	633.47
120.00	18.0	356.26	95.50	451.76	225.88	642.76
122.00	18.0	360.18	101.00	461.18	230.59	663.18
124.00	18.0	363.77	104.79	468.56	234.28	678.14
126.00	18.0	368.83	100.89	469.72	234.86	671.50
128.00	18.0	373.91	106.17	480.08	240.04	692.43
130.00	18.0	378.51	117.28	495.79	247.90	730.35
132.00	18.0	386.98	124.84	511.83	255.91	761.51
134.00	18.0	394.14	130.22	524.36	262.18	784.80
136.00	18.0	400.65	132.95	533.61	266.80	799.52
138.00	18.0	406.94	137.48	544.42	272.21	819.39
140.00	18.0	413.00	144.28	557.28	278.64	845.83
142.00	18.0	*****	Not enough soil data	*****		
144.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:culations-Analyses\FB-Deep\Wildlife No 1\WL1-B25_18&24PCP.spc
Project number: H1135080
Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
Engineer: EJ
Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-27-14, Boring Number: WL1-B25
Station number: 675+49 Offset: 56 LT

Ground Elevation: 63.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	3.00	3- Clean sand
4	5.00	3.00	2- Clay and silty sand
5	6.00	5.00	3- Clean sand
6	8.00	6.00	2- Clay and silty sand
7	10.00	6.00	2- Clay and silty sand
8	12.50	9.00	2- Clay and silty sand
9	15.00	12.00	2- Clay and silty sand
10	17.50	11.00	2- Clay and silty sand
11	20.00	7.00	2- Clay and silty sand
12	22.50	7.00	2- Clay and silty sand
13	25.00	7.00	2- Clay and silty sand
14	27.50	12.00	1- Plastic Clay
15	30.00	14.00	1- Plastic Clay
16	32.50	9.00	2- Clay and silty sand
17	35.00	16.00	2- Clay and silty sand

WL1-B25_18-PCP.txt

18	37.50	23.00	2- Clay and silty sand
19	40.00	14.00	2- Clay and silty sand
20	42.50	17.00	2- Clay and silty sand
21	45.00	26.00	3- Clean sand
22	47.50	25.00	3- Clean sand
23	50.00	7.00	1- Plastic Clay
24	52.50	5.00	1- Plastic Clay
25	55.00	5.00	2- Clay and silty sand
26	56.25	3.00	3- Clean sand
27	57.50	3.00	2- Clay and silty sand
28	60.00	3.00	2- Clay and silty sand
29	61.25	3.00	3- Clean sand
30	62.50	7.00	2- Clay and silty sand
31	65.00	6.00	1- Plastic Clay
32	67.50	4.00	2- Clay and silty sand
33	68.75	4.00	3- Clean sand
34	70.00	16.00	2- Clay and silty sand
35	72.50	24.00	2- Clay and silty sand
36	75.00	22.00	2- Clay and silty sand
37	77.50	33.00	2- Clay and silty sand
38	78.75	33.00	3- Clean sand
39	80.00	99.00	2- Clay and silty sand
40	81.25	32.00	3- Clean sand
41	82.50	32.00	2- Clay and silty sand
42	83.75	16.00	3- Clean sand
43	85.00	16.00	2- Clay and silty sand
44	87.50	11.00	2- Clay and silty sand
45	90.00	5.00	2- Clay and silty sand
46	92.50	15.00	4- Lime Stone/Very shelly sand
47	93.75	15.00	3- Clean sand
48	95.00	34.00	4- Lime Stone/Very shelly sand
49	96.25	34.00	3- Clean sand
50	97.50	99.00	4- Lime Stone/Very shelly sand
51	98.75	18.00	3- Clean sand
52	100.00	18.00	4- Lime Stone/Very shelly sand
53	101.25	18.00	3- Clean sand
54	102.50	99.00	4- Lime Stone/Very shelly sand
55	103.75	13.00	3- Clean sand
56	105.00	13.00	4- Lime Stone/Very shelly sand
57	106.25	13.00	3- Clean sand
58	107.50	99.00	4- Lime Stone/Very shelly sand
59	108.75	25.00	3- Clean sand
60	110.00	25.00	4- Lime Stone/Very shelly sand
61	112.50	20.00	4- Lime Stone/Very shelly sand
62	115.00	25.00	4- Lime Stone/Very shelly sand
63	117.50	18.00	4- Lime Stone/Very shelly sand
64	120.00	32.00	4- Lime Stone/Very shelly sand
65	122.50	30.00	4- Lime Stone/Very shelly sand

WL1-B25_18-PCP.txt

66	125.00	22.00	4- Lime Stone/Very shelly sand
67	126.25	22.00	3- Clean sand
68	127.50	46.00	4- Lime Stone/Very shelly sand
69	128.75	22.00	3- Clean sand
70	130.00	22.00	4- Lime Stone/Very shelly sand
71	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	63.00	58.00	5.00	2.20	3-Clean Sand
2	58.00	57.00	1.00	3.00	2-Clay and Silty Sand
3	57.00	55.00	2.00	5.00	3-Clean Sand
4	55.00	35.50	19.50	8.18	2-Clay and Silty Sand
5	35.50	30.50	5.00	13.00	1-Plastic Clay
6	30.50	18.00	12.50	15.80	2-Clay and Silty Sand
7	18.00	13.00	5.00	25.50	3-Clean Sand
8	13.00	8.00	5.00	6.00	1-Plastic Clay
9	8.00	6.75	1.25	5.00	2-Clay and Silty Sand
10	6.75	5.50	1.25	3.00	3-Clean Sand
11	5.50	1.75	3.75	3.00	2-Clay and Silty Sand
12	1.75	0.50	1.25	3.00	3-Clean Sand
13	0.50	-2.00	2.50	7.00	2-Clay and Silty Sand
14	-2.00	-4.50	2.50	6.00	1-Plastic Clay
15	-4.50	-5.75	1.25	4.00	2-Clay and Silty Sand
16	-5.75	-7.00	1.25	4.00	3-Clean Sand
17	-7.00	-15.75	8.75	22.43	2-Clay and Silty Sand
18	-15.75	-17.00	1.25	33.00	3-Clean Sand
19	-17.00	-18.25	1.25	99.00	2-Clay and Silty Sand
20	-18.25	-19.50	1.25	32.00	3-Clean Sand
21	-19.50	-20.75	1.25	32.00	2-Clay and Silty Sand
22	-20.75	-22.00	1.25	16.00	3-Clean Sand
23	-22.00	-29.50	7.50	10.67	2-Clay and Silty Sand
24	-29.50	-30.75	1.25	15.00	4-Limestone, Very Shelly Sand
25	-30.75	-32.00	1.25	15.00	3-Clean Sand
26	-32.00	-33.25	1.25	34.00	4-Limestone, Very Shelly Sand
27	-33.25	-34.50	1.25	34.00	3-Clean Sand
28	-34.50	-35.75	1.25	99.00	4-Limestone, Very Shelly Sand

WL1-B25_18-PCP.txt

29	-35.75	-37.00	1.25	18.00	3-Clean Sand
30	-37.00	-38.25	1.25	18.00	4-Limestone, Very
Shelly Sand					
31	-38.25	-39.50	1.25	18.00	3-Clean Sand
32	-39.50	-40.75	1.25	99.00	4-Limestone, Very
Shelly Sand					
33	-40.75	-42.00	1.25	13.00	3-Clean Sand
34	-42.00	-43.25	1.25	13.00	4-Limestone, Very
Shelly Sand					
35	-43.25	-44.50	1.25	13.00	3-Clean Sand
36	-44.50	-45.75	1.25	99.00	4-Limestone, Very
Shelly Sand					
37	-45.75	-47.00	1.25	25.00	3-Clean Sand
38	-47.00	-63.25	16.25	24.77	4-Limestone, Very
Shelly Sand					
39	-63.25	-64.50	1.25	22.00	3-Clean Sand
40	-64.50	-65.75	1.25	46.00	4-Limestone, Very
Shelly Sand					
41	-65.75	-67.00	1.25	22.00	3-Clean Sand
42	-67.00	-68.00	1.00	22.00	4-Limestone, Very
Shelly Sand					
43	-68.00	-68.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	53.00
18.00	12.00	51.00
18.00	14.00	49.00
18.00	16.00	47.00
18.00	18.00	45.00
18.00	20.00	43.00
18.00	22.00	41.00
18.00	24.00	39.00
18.00	26.00	37.00
18.00	28.00	35.00
18.00	30.00	33.00
18.00	32.00	31.00
18.00	34.00	29.00
18.00	36.00	27.00
18.00	38.00	25.00

WL1-B25_18-PCP.txt

18.00	40.00	23.00
18.00	42.00	21.00
18.00	44.00	19.00
18.00	46.00	17.00
18.00	48.00	15.00
18.00	50.00	13.00
18.00	52.00	11.00
18.00	54.00	9.00
18.00	56.00	7.00
18.00	58.00	5.00
18.00	60.00	3.00
18.00	62.00	1.00
18.00	64.00	-1.00
18.00	66.00	-3.00
18.00	68.00	-5.00
18.00	70.00	-7.00
18.00	72.00	-9.00
18.00	74.00	-11.00
18.00	76.00	-13.00
18.00	78.00	-15.00
18.00	80.00	-17.00
18.00	82.00	-19.00
18.00	84.00	-21.00
18.00	86.00	-23.00
18.00	88.00	-25.00
18.00	90.00	-27.00
18.00	92.00	-29.00
18.00	94.00	-31.00
18.00	96.00	-33.00
18.00	98.00	-35.00
18.00	100.00	-37.00
18.00	102.00	-39.00
18.00	104.00	-41.00
18.00	106.00	-43.00
18.00	108.00	-45.00
18.00	110.00	-47.00
18.00	112.00	-49.00
18.00	114.00	-51.00
18.00	116.00	-53.00
18.00	118.00	-55.00
18.00	120.00	-57.00
18.00	122.00	-59.00
18.00	124.00	-61.00
18.00	126.00	-63.00
18.00	128.00	-65.00
18.00	130.00	-67.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	6.36	7.96	14.32	7.16	30.24
12.00	18.0	9.83	9.74	19.58	9.79	39.06
14.00	18.0	14.90	12.20	27.10	13.55	51.50
16.00	18.0	21.75	12.40	34.15	17.08	58.95
18.00	18.0	28.52	12.30	40.82	20.41	65.42
20.00	18.0	34.07	11.92	45.98	22.99	69.82
22.00	18.0	38.77	11.79	50.56	25.28	74.15
24.00	18.0	43.45	11.35	54.80	27.40	77.50
26.00	18.0	48.47	10.92	59.39	29.70	81.24
28.00	18.0	59.36	9.36	68.71	34.36	87.42
30.00	18.0	67.49	11.61	79.10	39.55	102.31
32.00	18.0	75.23	15.91	91.14	45.57	122.96
34.00	18.0	82.80	17.63	100.42	50.21	135.68
36.00	18.0	91.07	18.83	109.90	54.95	147.55
38.00	18.0	101.38	20.75	122.13	61.06	163.62
40.00	18.0	110.62	29.27	139.89	69.94	198.42
42.00	18.0	119.64	40.58	160.22	80.11	241.39
44.00	18.0	128.88	45.83	174.70	87.35	266.36
46.00	18.0	139.72	38.40	178.13	89.06	254.94
48.00	18.0	146.81	29.27	176.08	88.04	234.61
50.00	18.0	152.80	4.73	157.52	78.76	166.97
52.00	18.0	157.50	3.90	161.40	80.70	169.19
54.00	18.0	161.28	3.14	164.42	82.21	170.70
56.00	18.0	163.46	1.11	164.58	82.29	166.80
58.00	18.0	164.07	11.27	175.34	87.67	197.88
60.00	18.0	164.07	6.28	170.35	85.17	182.91
62.00	18.0	164.59	3.82	168.40	84.20	176.04
64.00	18.0	168.95	2.81	171.76	85.88	177.38
66.00	18.0	172.73	5.40	178.13	89.06	188.92
68.00	18.0	174.10	11.02	185.12	92.56	207.17
70.00	18.0	177.03	17.87	194.90	97.45	230.65
72.00	18.0	185.80	19.45	205.25	102.62	244.15
74.00	18.0	192.89	28.05	220.94	110.47	277.03
76.00	18.0	201.63	44.37	246.00	123.00	334.75
78.00	18.0	215.00	50.80	265.80	132.90	367.40
80.00	18.0	237.90	57.87	295.77	147.88	411.51
82.00	18.0	248.66	43.61	292.28	146.14	379.50
84.00	18.0	259.43	22.18	281.61	140.80	325.97

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86.00	18.0	267.11	16.21	283.32	141.66	315.74	
88.00	18.0	272.58	18.89	291.47	145.73	329.25	
90.00	18.0	274.90	29.80	304.70	152.35	364.30	
92.00	18.0	277.66	51.24	328.90	164.45	431.37	
94.00	18.0	285.98	66.99	352.97	176.48	486.94	
96.00	18.0	291.78	63.34	355.12	177.56	481.81	
98.00	18.0	299.49	87.00	386.49	193.25	560.50	
100.00	18.0	304.45	69.02	373.47	186.73	511.51	
102.00	18.0	308.92	69.79	378.72	189.36	518.30	
104.00	18.0	314.55	58.09	372.64	186.32	488.82	
106.00	18.0	317.14	85.21	402.35	201.17	572.77	
108.00	18.0	322.81	82.32	405.13	202.57	569.78	
110.00	18.0	328.85	77.08	405.93	202.96	560.08	
112.00	18.0	332.27	76.88	409.15	204.58	562.92	
114.00	18.0	335.38	77.42	412.80	206.40	567.64	
116.00	18.0	338.69	79.33	418.02	209.01	576.68	
118.00	18.0	340.97	87.57	428.55	214.27	603.70	
120.00	18.0	344.76	86.35	431.10	215.55	603.79	
122.00	18.0	349.33	84.05	433.38	216.69	601.47	
124.00	18.0	353.51	87.21	440.72	220.36	615.14	
126.00	18.0	***** Not enough soil data *****					
128.00	18.0	0.00	0.00	0.00	0.00	0.00	
130.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:culations-Analyses\FB-Deep\Wildlife No 1\WL1-B26_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-24-14, Boring Number: WL1-B26
 Station number: 675+32 Offset: 73 RT

Ground Elevation: 64.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	4.00	3- Clean sand
4	5.00	4.00	2- Clay and silty sand
5	6.00	5.00	3- Clean sand
6	8.00	6.00	3- Clean sand
7	10.00	7.00	2- Clay and silty sand
8	11.25	7.00	3- Clean sand
9	12.50	25.00	2- Clay and silty sand
10	13.75	12.00	3- Clean sand
11	15.00	12.00	2- Clay and silty sand
12	17.50	10.00	2- Clay and silty sand
13	20.00	9.00	2- Clay and silty sand
14	22.50	9.00	2- Clay and silty sand
15	25.00	7.00	2- Clay and silty sand
16	27.50	13.00	1- Plastic Clay
17	30.00	15.00	2- Clay and silty sand

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18	32.50	20.00	2- Clay and silty sand
19	35.00	19.00	2- Clay and silty sand
20	37.50	30.00	2- Clay and silty sand
21	40.00	41.00	3- Clean sand
22	42.50	63.00	3- Clean sand
23	45.00	68.00	3- Clean sand
24	46.25	12.00	2- Clay and silty sand
25	47.50	12.00	3- Clean sand
26	50.00	0.00	1- Plastic Clay
27	52.50	0.00	1- Plastic Clay
28	55.00	0.00	2- Clay and silty sand
29	57.50	0.00	2- Clay and silty sand
30	60.00	4.00	2- Clay and silty sand
31	61.25	4.00	3- Clean sand
32	62.50	99.00	2- Clay and silty sand
33	65.00	53.00	2- Clay and silty sand
34	66.25	34.00	3- Clean sand
35	67.50	34.00	2- Clay and silty sand
36	68.75	34.00	3- Clean sand
37	70.00	99.00	2- Clay and silty sand
38	72.50	99.00	2- Clay and silty sand
39	75.00	57.00	2- Clay and silty sand
40	77.50	99.00	2- Clay and silty sand
41	78.75	11.00	3- Clean sand
42	80.00	11.00	2- Clay and silty sand
43	82.50	19.00	2- Clay and silty sand
44	85.00	11.00	3- Clean sand
45	87.50	7.00	4- Lime Stone/Very shelly sand
46	90.00	11.00	4- Lime Stone/Very shelly sand
47	91.25	11.00	3- Clean sand
48	92.50	39.00	4- Lime Stone/Very shelly sand
49	95.00	34.00	4- Lime Stone/Very shelly sand
50	96.25	34.00	3- Clean sand
51	97.50	99.00	4- Lime Stone/Very shelly sand
52	100.00	99.00	4- Lime Stone/Very shelly sand
53	102.50	63.00	4- Lime Stone/Very shelly sand
54	103.75	32.00	3- Clean sand
55	105.00	32.00	4- Lime Stone/Very shelly sand
56	106.25	32.00	3- Clean sand
57	107.50	99.00	4- Lime Stone/Very shelly sand
58	110.00	99.00	4- Lime Stone/Very shelly sand
59	111.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

WL1-B26_18-PCP.txt

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	64.00	59.00	5.00	2.40	3-Clean Sand
2	59.00	58.00	1.00	4.00	2-Clay and Silty Sand
3	58.00	54.00	4.00	5.50	3-Clean Sand
4	54.00	52.75	1.25	7.00	2-Clay and Silty Sand
5	52.75	51.50	1.25	7.00	3-Clean Sand
6	51.50	50.25	1.25	25.00	2-Clay and Silty Sand
7	50.25	49.00	1.25	12.00	3-Clean Sand
8	49.00	36.50	12.50	9.40	2-Clay and Silty Sand
9	36.50	34.00	2.50	13.00	1-Plastic Clay
10	34.00	24.00	10.00	21.00	2-Clay and Silty Sand
11	24.00	17.75	6.25	55.20	3-Clean Sand
12	17.75	16.50	1.25	12.00	2-Clay and Silty Sand
13	16.50	14.00	2.50	12.00	3-Clean Sand
14	14.00	9.00	5.00	0.00	1-Plastic Clay
15	9.00	2.75	6.25	0.80	2-Clay and Silty Sand
16	2.75	1.50	1.25	4.00	3-Clean Sand
17	1.50	-2.25	3.75	83.67	2-Clay and Silty Sand
18	-2.25	-3.50	1.25	34.00	3-Clean Sand
19	-3.50	-4.75	1.25	34.00	2-Clay and Silty Sand
20	-4.75	-6.00	1.25	34.00	3-Clean Sand
21	-6.00	-14.75	8.75	87.00	2-Clay and Silty Sand
22	-14.75	-16.00	1.25	11.00	3-Clean Sand
23	-16.00	-21.00	5.00	15.00	2-Clay and Silty Sand
24	-21.00	-23.50	2.50	11.00	3-Clean Sand
25	-23.50	-27.25	3.75	8.33	4-Limestone, Very
Shelly Sand					
26	-27.25	-28.50	1.25	11.00	3-Clean Sand
27	-28.50	-32.25	3.75	37.33	4-Limestone, Very
Shelly Sand					
28	-32.25	-33.50	1.25	34.00	3-Clean Sand
29	-33.50	-39.75	6.25	91.80	4-Limestone, Very
Shelly Sand					
30	-39.75	-41.00	1.25	32.00	3-Clean Sand
31	-41.00	-42.25	1.25	32.00	4-Limestone, Very
Shelly Sand					
32	-42.25	-43.50	1.25	32.00	3-Clean Sand
33	-43.50	-47.00	3.50	99.00	4-Limestone, Very
Shelly Sand					
34	-47.00	-47.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	54.00
18.00	12.00	52.00
18.00	14.00	50.00
18.00	16.00	48.00
18.00	18.00	46.00
18.00	20.00	44.00
18.00	22.00	42.00
18.00	24.00	40.00
18.00	26.00	38.00
18.00	28.00	36.00
18.00	30.00	34.00
18.00	32.00	32.00
18.00	34.00	30.00
18.00	36.00	28.00
18.00	38.00	26.00
18.00	40.00	24.00
18.00	42.00	22.00
18.00	44.00	20.00
18.00	46.00	18.00
18.00	48.00	16.00
18.00	50.00	14.00
18.00	52.00	12.00
18.00	54.00	10.00
18.00	56.00	8.00
18.00	58.00	6.00
18.00	60.00	4.00
18.00	62.00	2.00
18.00	64.00	0.00
18.00	66.00	-2.00
18.00	68.00	-4.00
18.00	70.00	-6.00
18.00	72.00	-8.00
18.00	74.00	-10.00
18.00	76.00	-12.00
18.00	78.00	-14.00
18.00	80.00	-16.00
18.00	82.00	-18.00
18.00	84.00	-20.00
18.00	86.00	-22.00
18.00	88.00	-24.00
18.00	90.00	-26.00

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18.00	92.00	-28.00
18.00	94.00	-30.00
18.00	96.00	-32.00
18.00	98.00	-34.00
18.00	100.00	-36.00
18.00	102.00	-38.00
18.00	104.00	-40.00
18.00	106.00	-42.00
18.00	108.00	-44.00
18.00	110.00	-46.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	5.06	16.69	21.75	10.87	55.12
12.00	18.0	9.08	17.15	26.23	13.12	60.54
14.00	18.0	17.15	18.43	35.58	17.79	72.44
16.00	18.0	23.64	15.28	38.92	19.46	69.47
18.00	18.0	30.35	14.83	45.18	22.59	74.83
20.00	18.0	36.35	13.89	50.24	25.12	78.03
22.00	18.0	42.13	12.88	55.00	27.50	80.75
24.00	18.0	47.64	12.65	60.29	30.15	85.60
26.00	18.0	52.81	14.63	67.44	33.72	96.70
28.00	18.0	60.77	17.13	77.91	38.95	112.17
30.00	18.0	69.83	20.19	90.02	45.01	130.40
32.00	18.0	78.53	21.21	99.74	49.87	142.16
34.00	18.0	85.43	28.07	113.49	56.75	169.63
36.00	18.0	92.01	50.79	142.80	71.40	244.38
38.00	18.0	104.72	72.09	176.81	88.40	321.00
40.00	18.0	127.53	88.69	216.22	108.11	393.61
42.00	18.0	139.95	82.17	222.12	111.06	386.45
44.00	18.0	153.58	69.37	222.95	111.47	361.68
46.00	18.0	166.01	54.59	220.59	110.30	329.77
48.00	18.0	170.75	9.07	179.82	89.91	197.97
50.00	18.0	172.51	0.00	172.51	86.25	172.51
52.00	18.0	172.51	0.00	172.51	86.25	172.51
54.00	18.0	172.51	0.00	172.51	86.25	172.51
56.00	18.0	172.51	13.47	185.98	92.99	212.92
58.00	18.0	172.51	13.00	185.51	92.76	211.51
60.00	18.0	172.51	23.58	196.09	98.05	243.25

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62.00	18.0	174.08	34.38	208.46	104.23	277.21	
64.00	18.0	187.76	41.30	229.06	114.53	311.66	
66.00	18.0	199.24	46.96	246.20	123.10	340.11	
68.00	18.0	216.13	69.09	285.22	142.61	423.41	
70.00	18.0	228.25	72.00	300.25	150.12	444.25	
72.00	18.0	243.96	72.00	315.96	157.98	459.96	
74.00	18.0	259.67	67.64	327.31	163.65	462.58	
76.00	18.0	275.38	57.75	333.12	166.56	448.61	
78.00	18.0	290.46	49.24	339.70	169.85	438.17	
80.00	18.0	296.16	47.05	343.21	171.61	437.31	
82.00	18.0	304.56	42.94	347.50	173.75	433.37	
84.00	18.0	313.43	39.09	352.52	176.26	430.69	
86.00	18.0	317.09	36.36	353.44	176.72	426.16	
88.00	18.0	318.59	42.78	361.36	180.68	446.91	
90.00	18.0	319.59	47.37	366.96	183.48	461.70	
92.00	18.0	322.84	68.47	391.31	195.66	528.26	
94.00	18.0	327.97	80.63	408.59	204.30	569.84	
96.00	18.0	332.34	89.57	421.91	210.96	601.05	
98.00	18.0	342.68	117.57	460.25	230.13	695.40	
100.00	18.0	349.79	117.96	467.76	233.88	703.68	
102.00	18.0	356.81	118.92	475.74	237.87	713.58	
104.00	18.0	365.06	112.32	477.38	238.69	702.01	
106.00	18.0	***** Not enough soil data *****					
108.00	18.0	0.00	0.00	0.00	0.00	0.00	
110.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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 Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B27_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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 Analysis Type: SPT

Soil Information:

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 Boring date: 3-11-14, Boring Number: WL1-B27
 Station number: 676+65 Offset: 133 LT

 Ground Elevation: 62.100(ft)

 Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	3.00	3- Clean sand
2	2.00	3.00	3- Clean sand
3	4.00	3.00	3- Clean sand
4	6.00	4.00	2- Clay and silty sand
5	8.00	28.00	3- Clean sand
6	10.00	19.00	2- Clay and silty sand
7	11.25	8.00	3- Clean sand
8	12.50	8.00	2- Clay and silty sand
9	15.00	9.00	2- Clay and silty sand
10	17.50	10.00	2- Clay and silty sand
11	20.00	7.00	2- Clay and silty sand
12	22.50	7.00	2- Clay and silty sand
13	25.00	7.00	2- Clay and silty sand
14	27.50	6.00	2- Clay and silty sand
15	28.75	6.00	3- Clean sand
16	30.00	17.00	2- Clay and silty sand
17	32.50	12.00	2- Clay and silty sand

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18	35.00	26.00	3- Clean sand
19	37.50	32.00	3- Clean sand
20	40.00	38.00	3- Clean sand
21	42.50	11.00	2- Clay and silty sand
22	45.00	9.00	2- Clay and silty sand
23	46.25	2.00	3- Clean sand
24	47.50	2.00	2- Clay and silty sand
25	48.75	2.00	3- Clean sand
26	50.00	9.00	2- Clay and silty sand
27	52.50	99.00	1- Plastic Clay
28	55.00	19.00	2- Clay and silty sand
29	57.50	99.00	1- Plastic Clay
30	60.00	21.00	2- Clay and silty sand
31	61.25	21.00	3- Clean sand
32	62.50	99.00	2- Clay and silty sand
33	63.75	27.00	3- Clean sand
34	65.00	27.00	2- Clay and silty sand
35	66.25	27.00	3- Clean sand
36	67.50	41.00	2- Clay and silty sand
37	70.00	99.00	2- Clay and silty sand
38	72.50	99.00	2- Clay and silty sand
39	73.75	24.00	3- Clean sand
40	75.00	24.00	2- Clay and silty sand
41	76.25	24.00	3- Clean sand
42	77.50	53.00	2- Clay and silty sand
43	80.00	99.00	2- Clay and silty sand
44	81.25	9.00	3- Clean sand
45	82.50	9.00	2- Clay and silty sand
46	85.00	5.00	2- Clay and silty sand
47	87.50	2.00	4- Lime Stone/Very shelly sand
48	88.75	2.00	3- Clean sand
49	90.00	6.00	4- Lime Stone/Very shelly sand
50	92.50	7.00	4- Lime Stone/Very shelly sand
51	95.00	10.00	4- Lime Stone/Very shelly sand
52	97.50	9.00	4- Lime Stone/Very shelly sand
53	100.00	12.00	4- Lime Stone/Very shelly sand
54	101.25	2.00	3- Clean sand
55	102.50	2.00	4- Lime Stone/Very shelly sand
56	105.00	10.00	1- Plastic Clay
57	107.50	16.00	4- Lime Stone/Very shelly sand
58	110.00	23.00	4- Lime Stone/Very shelly sand
59	112.50	20.00	4- Lime Stone/Very shelly sand
60	115.00	27.00	4- Lime Stone/Very shelly sand
61	117.50	23.00	4- Lime Stone/Very shelly sand
62	120.00	30.00	4- Lime Stone/Very shelly sand
63	122.50	21.00	4- Lime Stone/Very shelly sand
64	123.75	21.00	3- Clean sand
65	125.00	45.00	4- Lime Stone/Very shelly sand

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66	126.25	29.00	3- Clean sand
67	127.50	29.00	4- Lime Stone/Very shelly sand
68	130.00	37.00	4- Lime Stone/Very shelly sand
69	131.25	37.00	3- Clean sand
70	132.50	74.00	4- Lime Stone/Very shelly sand
71	135.00	64.00	4- Lime Stone/Very shelly sand
72	137.50	99.00	4- Lime Stone/Very shelly sand
73	140.00	99.00	4- Lime Stone/Very shelly sand
74	141.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.10	56.10	6.00	3.00	3-Clean Sand
2	56.10	54.10	2.00	4.00	2-Clay and Silty Sand
3	54.10	52.10	2.00	28.00	3-Clean Sand
4	52.10	50.85	1.25	19.00	2-Clay and Silty Sand
5	50.85	49.60	1.25	8.00	3-Clean Sand
6	49.60	33.35	16.25	7.85	2-Clay and Silty Sand
7	33.35	32.10	1.25	6.00	3-Clean Sand
8	32.10	27.10	5.00	14.50	2-Clay and Silty Sand
9	27.10	19.60	7.50	32.00	3-Clean Sand
10	19.60	15.85	3.75	10.33	2-Clay and Silty Sand
11	15.85	14.60	1.25	2.00	3-Clean Sand
12	14.60	13.35	1.25	2.00	2-Clay and Silty Sand
13	13.35	12.10	1.25	2.00	3-Clean Sand
14	12.10	9.60	2.50	9.00	2-Clay and Silty Sand
15	9.60	7.10	2.50	99.00	1-Plastic Clay
16	7.10	4.60	2.50	19.00	2-Clay and Silty Sand
17	4.60	2.10	2.50	99.00	1-Plastic Clay
18	2.10	0.85	1.25	21.00	2-Clay and Silty Sand
19	0.85	-0.40	1.25	21.00	3-Clean Sand
20	-0.40	-1.65	1.25	99.00	2-Clay and Silty Sand
21	-1.65	-2.90	1.25	27.00	3-Clean Sand
22	-2.90	-4.15	1.25	27.00	2-Clay and Silty Sand
23	-4.15	-5.40	1.25	27.00	3-Clean Sand
24	-5.40	-11.65	6.25	75.80	2-Clay and Silty Sand
25	-11.65	-12.90	1.25	24.00	3-Clean Sand
26	-12.90	-14.15	1.25	24.00	2-Clay and Silty Sand
27	-14.15	-15.40	1.25	24.00	3-Clean Sand
28	-15.40	-19.15	3.75	68.33	2-Clay and Silty Sand

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29	-19.15	-20.40	1.25	9.00	3-Clean Sand
30	-20.40	-25.40	5.00	7.00	2-Clay and Silty Sand
31	-25.40	-26.65	1.25	2.00	4-Limestone, Very
Shelly Sand					
32	-26.65	-27.90	1.25	2.00	3-Clean Sand
33	-27.90	-39.15	11.25	8.44	4-Limestone, Very
Shelly Sand					
34	-39.15	-40.40	1.25	2.00	3-Clean Sand
35	-40.40	-42.90	2.50	2.00	4-Limestone, Very
Shelly Sand					
36	-42.90	-45.40	2.50	10.00	1-Plastic Clay
37	-45.40	-61.65	16.25	23.00	4-Limestone, Very
Shelly Sand					
38	-61.65	-62.90	1.25	21.00	3-Clean Sand
39	-62.90	-64.15	1.25	45.00	4-Limestone, Very
Shelly Sand					
40	-64.15	-65.40	1.25	29.00	3-Clean Sand
41	-65.40	-69.15	3.75	31.67	4-Limestone, Very
Shelly Sand					
42	-69.15	-70.40	1.25	37.00	3-Clean Sand
43	-70.40	-78.90	8.50	81.35	4-Limestone, Very
Shelly Sand					
44	-78.90	-78.90	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.10
18.00	12.00	50.10
18.00	14.00	48.10
18.00	16.00	46.10
18.00	18.00	44.10
18.00	20.00	42.10
18.00	22.00	40.10
18.00	24.00	38.10
18.00	26.00	36.10
18.00	28.00	34.10
18.00	30.00	32.10
18.00	32.00	30.10
18.00	34.00	28.10
18.00	36.00	26.10

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18.00	38.00	24.10
18.00	40.00	22.10
18.00	42.00	20.10
18.00	44.00	18.10
18.00	46.00	16.10
18.00	48.00	14.10
18.00	50.00	12.10
18.00	52.00	10.10
18.00	54.00	8.10
18.00	56.00	6.10
18.00	58.00	4.10
18.00	60.00	2.10
18.00	62.00	0.10
18.00	64.00	-1.90
18.00	66.00	-3.90
18.00	68.00	-5.90
18.00	70.00	-7.90
18.00	72.00	-9.90
18.00	74.00	-11.90
18.00	76.00	-13.90
18.00	78.00	-15.90
18.00	80.00	-17.90
18.00	82.00	-19.90
18.00	84.00	-21.90
18.00	86.00	-23.90
18.00	88.00	-25.90
18.00	90.00	-27.90
18.00	92.00	-29.90
18.00	94.00	-31.90
18.00	96.00	-33.90
18.00	98.00	-35.90
18.00	100.00	-37.90
18.00	102.00	-39.90
18.00	104.00	-41.90
18.00	106.00	-43.90
18.00	108.00	-45.90
18.00	110.00	-47.90
18.00	112.00	-49.90
18.00	114.00	-51.90
18.00	116.00	-53.90
18.00	118.00	-55.90
18.00	120.00	-57.90
18.00	122.00	-59.90
18.00	124.00	-61.90
18.00	126.00	-63.90
18.00	128.00	-65.90
18.00	130.00	-67.90
18.00	132.00	-69.90

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18.00	134.00	-71.90
18.00	136.00	-73.90
18.00	138.00	-75.90
18.00	140.00	-77.90

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	13.25	18.30	31.55	15.78	68.16
12.00	18.0	18.47	16.82	35.29	17.64	68.94
14.00	18.0	23.65	13.01	36.66	18.33	62.67
16.00	18.0	29.42	12.79	42.21	21.10	67.78
18.00	18.0	35.59	12.29	47.88	23.94	72.46
20.00	18.0	40.89	11.78	52.67	26.33	76.22
22.00	18.0	45.49	11.35	56.84	28.42	79.54
24.00	18.0	50.10	11.91	62.01	31.00	85.82
26.00	18.0	54.64	14.22	68.86	34.43	97.30
28.00	18.0	58.66	16.32	74.98	37.49	107.63
30.00	18.0	63.15	24.35	87.51	43.75	136.21
32.00	18.0	69.43	28.70	98.13	49.07	155.53
34.00	18.0	73.65	42.99	116.64	58.32	202.62
36.00	18.0	86.80	59.01	145.81	72.90	263.83
38.00	18.0	95.70	57.35	153.05	76.53	267.76
40.00	18.0	105.76	47.89	153.65	76.83	249.42
42.00	18.0	114.96	38.83	153.79	76.89	231.44
44.00	18.0	121.13	9.01	130.14	65.07	148.15
46.00	18.0	125.88	9.11	135.00	67.50	153.23
48.00	18.0	126.50	33.47	159.96	79.98	226.89
50.00	18.0	128.30	30.96	159.26	79.63	221.17
52.00	18.0	138.95	25.61	164.56	82.28	215.78
54.00	18.0	154.98	22.14	177.12	88.56	221.40
56.00	18.0	166.54	23.20	189.73	94.87	236.13
58.00	18.0	182.96	32.27	215.23	107.61	279.76
60.00	18.0	197.32	43.06	240.38	120.19	326.51
62.00	18.0	205.94	47.95	253.89	126.94	349.78
64.00	18.0	217.75	63.98	281.74	140.87	409.70
66.00	18.0	228.71	55.46	284.18	142.09	395.10
68.00	18.0	241.21	66.20	307.42	153.71	439.82
70.00	18.0	256.94	66.24	323.18	161.59	455.67
72.00	18.0	272.65	66.02	338.67	169.33	470.70

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74.00	18.0	284.49	63.20	347.69	173.84	474.09
76.00	18.0	294.74	65.37	360.12	180.06	490.87
78.00	18.0	306.14	52.07	358.21	179.11	462.36
80.00	18.0	322.33	46.92	369.25	184.62	463.09
82.00	18.0	329.00	11.59	340.59	170.29	363.76
84.00	18.0	334.00	6.97	340.98	170.49	354.93
86.00	18.0	336.62	7.81	344.43	172.21	360.04
88.00	18.0	338.45	8.16	346.61	173.31	362.93
90.00	18.0	338.73	24.36	363.10	181.55	411.83
92.00	18.0	339.68	22.13	361.81	180.91	406.07
94.00	18.0	340.82	22.43	363.25	181.63	408.11
96.00	18.0	342.25	23.08	365.33	182.66	411.49
98.00	18.0	343.64	19.20	362.84	181.42	401.25
100.00	18.0	345.24	16.11	361.35	180.67	393.56
102.00	18.0	345.80	6.71	352.51	176.25	365.92
104.00	18.0	347.05	23.30	370.36	185.18	416.96
106.00	18.0	353.14	37.02	390.16	195.08	464.19
108.00	18.0	356.96	45.17	402.13	201.06	492.47
110.00	18.0	359.55	47.11	406.66	203.33	500.88
112.00	18.0	362.11	51.27	413.39	206.69	515.94
114.00	18.0	364.49	59.24	423.74	211.87	542.23
116.00	18.0	367.47	71.69	439.16	219.58	582.54
118.00	18.0	370.89	77.86	448.75	224.38	604.47
120.00	18.0	374.84	83.64	458.48	229.24	625.77
122.00	18.0	378.71	87.84	466.55	233.27	642.23
124.00	18.0	386.24	93.39	479.63	239.82	666.41
126.00	18.0	393.06	96.99	490.04	245.02	684.01
128.00	18.0	399.09	105.42	504.51	252.26	715.36
130.00	18.0	403.48	109.48	512.96	256.48	731.93
132.00	18.0	412.60	127.54	540.14	270.07	795.22
134.00	18.0	419.89	133.31	553.19	276.60	819.81
136.00	18.0	*****	Not enough soil data	*****		
138.00	18.0	0.00	0.00	0.00	0.00	0.00
140.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS

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2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B28_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-3-14, Boring Number: WL1-B28
 Station number: 676+70 Offset: 14 LT

Ground Elevation: 63.300(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	0.00	3- Clean sand
2	2.00	0.00	3- Clean sand
3	4.00	0.00	3- Clean sand
4	6.00	4.00	3- Clean sand
5	8.00	11.00	2- Clay and silty sand
6	10.00	19.00	2- Clay and silty sand
7	12.50	8.00	3- Clean sand
8	15.00	12.00	3- Clean sand
9	17.50	11.00	3- Clean sand
10	20.00	7.00	2- Clay and silty sand
11	22.50	6.00	2- Clay and silty sand
12	25.00	10.00	2- Clay and silty sand
13	27.50	11.00	2- Clay and silty sand
14	30.00	10.00	3- Clean sand
15	32.50	14.00	3- Clean sand
16	35.00	22.00	3- Clean sand
17	37.50	22.00	3- Clean sand

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18	40.00	27.00	3- Clean sand
19	42.50	26.00	3- Clean sand
20	45.00	2.00	2- Clay and silty sand
21	47.50	0.00	2- Clay and silty sand
22	50.00	0.00	2- Clay and silty sand
23	52.50	0.00	2- Clay and silty sand
24	55.00	0.00	2- Clay and silty sand
25	57.50	3.00	2- Clay and silty sand
26	60.00	4.00	2- Clay and silty sand
27	62.50	99.00	1- Plastic Clay
28	65.00	34.00	2- Clay and silty sand
29	66.25	34.00	3- Clean sand
30	67.50	99.00	2- Clay and silty sand
31	70.00	99.00	4- Lime Stone/Very shelly sand
32	72.50	99.00	4- Lime Stone/Very shelly sand
33	75.00	99.00	2- Clay and silty sand
34	77.50	99.00	2- Clay and silty sand
35	80.00	99.00	2- Clay and silty sand
36	82.50	19.00	3- Clean sand
37	85.00	18.00	3- Clean sand
38	87.50	12.00	2- Clay and silty sand
39	90.00	20.00	2- Clay and silty sand
40	92.50	7.00	4- Lime Stone/Very shelly sand
41	95.00	6.00	4- Lime Stone/Very shelly sand
42	97.50	8.00	4- Lime Stone/Very shelly sand
43	98.75	8.00	3- Clean sand
44	100.00	28.00	4- Lime Stone/Very shelly sand
45	102.50	16.00	4- Lime Stone/Very shelly sand
46	103.75	16.00	3- Clean sand
47	105.00	99.00	4- Lime Stone/Very shelly sand
48	106.25	32.00	3- Clean sand
49	107.50	32.00	4- Lime Stone/Very shelly sand
50	110.00	32.00	4- Lime Stone/Very shelly sand
51	112.50	35.00	4- Lime Stone/Very shelly sand
52	115.00	37.00	4- Lime Stone/Very shelly sand
53	117.50	30.00	4- Lime Stone/Very shelly sand
54	120.00	19.00	4- Lime Stone/Very shelly sand
55	122.50	34.00	4- Lime Stone/Very shelly sand
56	125.00	38.00	4- Lime Stone/Very shelly sand
57	127.50	20.00	4- Lime Stone/Very shelly sand
58	130.00	30.00	4- Lime Stone/Very shelly sand
59	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

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Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	63.30	55.30	8.00	1.00	3-Clean Sand
2	55.30	50.80	4.50	15.44	2-Clay and Silty Sand
3	50.80	43.30	7.50	10.33	3-Clean Sand
4	43.30	33.30	10.00	8.50	2-Clay and Silty Sand
5	33.30	18.30	15.00	20.17	3-Clean Sand
6	18.30	0.80	17.50	1.29	2-Clay and Silty Sand
7	0.80	-1.70	2.50	99.00	1-Plastic Clay
8	-1.70	-2.95	1.25	34.00	2-Clay and Silty Sand
9	-2.95	-4.20	1.25	34.00	3-Clean Sand
10	-4.20	-6.70	2.50	99.00	2-Clay and Silty Sand
11	-6.70	-11.70	5.00	99.00	4-Limestone, Very
Shelly Sand					
12	-11.70	-19.20	7.50	99.00	2-Clay and Silty Sand
13	-19.20	-24.20	5.00	18.50	3-Clean Sand
14	-24.20	-29.20	5.00	16.00	2-Clay and Silty Sand
15	-29.20	-35.45	6.25	6.80	4-Limestone, Very
Shelly Sand					
16	-35.45	-36.70	1.25	8.00	3-Clean Sand
17	-36.70	-40.45	3.75	24.00	4-Limestone, Very
Shelly Sand					
18	-40.45	-41.70	1.25	16.00	3-Clean Sand
19	-41.70	-42.95	1.25	99.00	4-Limestone, Very
Shelly Sand					
20	-42.95	-44.20	1.25	32.00	3-Clean Sand
21	-44.20	-67.70	23.50	30.74	4-Limestone, Very
Shelly Sand					
22	-67.70	-67.70	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	53.30
18.00	12.00	51.30
18.00	14.00	49.30
18.00	16.00	47.30
18.00	18.00	45.30

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18.00	20.00	43.30
18.00	22.00	41.30
18.00	24.00	39.30
18.00	26.00	37.30
18.00	28.00	35.30
18.00	30.00	33.30
18.00	32.00	31.30
18.00	34.00	29.30
18.00	36.00	27.30
18.00	38.00	25.30
18.00	40.00	23.30
18.00	42.00	21.30
18.00	44.00	19.30
18.00	46.00	17.30
18.00	48.00	15.30
18.00	50.00	13.30
18.00	52.00	11.30
18.00	54.00	9.30
18.00	56.00	7.30
18.00	58.00	5.30
18.00	60.00	3.30
18.00	62.00	1.30
18.00	64.00	-0.70
18.00	66.00	-2.70
18.00	68.00	-4.70
18.00	70.00	-6.70
18.00	72.00	-8.70
18.00	74.00	-10.70
18.00	76.00	-12.70
18.00	78.00	-14.70
18.00	80.00	-16.70
18.00	82.00	-18.70
18.00	84.00	-20.70
18.00	86.00	-22.70
18.00	88.00	-24.70
18.00	90.00	-26.70
18.00	92.00	-28.70
18.00	94.00	-30.70
18.00	96.00	-32.70
18.00	98.00	-34.70
18.00	100.00	-36.70
18.00	102.00	-38.70
18.00	104.00	-40.70
18.00	106.00	-42.70
18.00	108.00	-44.70
18.00	110.00	-46.70
18.00	112.00	-48.70
18.00	114.00	-50.70

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18.00	116.00	-52.70
18.00	118.00	-54.70
18.00	120.00	-56.70
18.00	122.00	-58.70
18.00	124.00	-60.70
18.00	126.00	-62.70
18.00	128.00	-64.70
18.00	130.00	-66.70

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
-----	-----	-----	-----	-----	-----	-----
10.00	18.0	10.56	14.60	25.16	12.58	54.35
12.00	18.0	15.80	18.00	33.81	16.90	69.82
14.00	18.0	22.15	21.38	43.52	21.76	86.27
16.00	18.0	25.50	20.95	46.45	23.22	88.36
18.00	18.0	28.71	19.24	47.95	23.98	86.44
20.00	18.0	32.71	10.99	43.70	21.85	65.67
22.00	18.0	36.91	11.16	48.07	24.04	70.39
24.00	18.0	40.48	12.70	53.19	26.59	78.60
26.00	18.0	44.99	17.42	62.41	31.21	97.26
28.00	18.0	51.42	22.75	74.17	37.08	119.66
30.00	18.0	58.88	30.71	89.58	44.79	150.99
32.00	18.0	61.58	31.77	93.35	46.67	156.88
34.00	18.0	64.47	35.05	99.52	49.76	169.63
36.00	18.0	68.12	40.53	108.66	54.33	189.73
38.00	18.0	72.16	47.21	119.37	59.69	213.80
40.00	18.0	78.62	47.77	126.38	63.19	221.92
42.00	18.0	87.87	41.83	129.71	64.85	213.37
44.00	18.0	96.40	33.91	130.31	65.16	198.14
46.00	18.0	99.87	0.00	99.87	49.94	99.87
48.00	18.0	99.87	0.00	99.87	49.94	99.87
50.00	18.0	99.87	0.00	99.87	49.94	99.87
52.00	18.0	99.87	0.00	99.87	49.94	99.87
54.00	18.0	99.87	0.00	99.87	49.94	99.87
56.00	18.0	99.87	0.94	100.81	50.40	102.68
58.00	18.0	99.87	6.20	106.08	53.04	118.49
60.00	18.0	99.87	14.85	114.72	57.36	144.42
62.00	18.0	107.06	29.73	136.79	68.40	196.26
64.00	18.0	121.25	38.80	160.05	80.03	237.64

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66.00	18.0	137.11	58.91	196.03	98.01	313.85
68.00	18.0	150.82	84.95	235.77	117.88	405.66
70.00	18.0	161.61	94.71	256.32	128.16	445.74
72.00	18.0	168.81	91.07	259.88	129.94	442.01
74.00	18.0	177.93	88.54	266.47	133.23	443.55
76.00	18.0	192.78	71.54	264.32	132.16	407.40
78.00	18.0	208.49	69.02	277.52	138.76	415.57
80.00	18.0	224.20	65.64	289.85	144.92	421.14
82.00	18.0	235.78	59.03	294.80	147.40	412.86
84.00	18.0	241.26	44.22	285.47	142.74	373.91
86.00	18.0	246.69	39.40	286.09	143.05	364.89
88.00	18.0	253.67	22.26	275.93	137.96	320.44
90.00	18.0	263.28	23.90	287.18	143.59	334.99
92.00	18.0	270.33	23.94	294.27	147.14	342.16
94.00	18.0	271.57	22.92	294.48	147.24	340.32
96.00	18.0	272.07	27.28	299.35	149.68	353.91
98.00	18.0	272.81	34.20	307.01	153.50	375.40
100.00	18.0	276.44	53.68	330.12	165.06	437.47
102.00	18.0	279.38	56.06	335.44	167.72	447.56
104.00	18.0	283.28	75.32	358.59	179.30	509.23
106.00	18.0	290.22	80.06	370.28	185.14	530.39
108.00	18.0	296.94	109.12	406.06	203.03	624.30
110.00	18.0	301.61	110.54	412.15	206.08	633.24
112.00	18.0	306.42	111.50	417.92	208.96	640.92
114.00	18.0	311.90	108.89	420.79	210.40	638.57
116.00	18.0	317.27	100.94	418.21	209.10	620.08
118.00	18.0	321.93	100.43	422.36	211.18	623.23
120.00	18.0	325.41	106.17	431.59	215.79	643.93
122.00	18.0	329.13	106.77	435.90	217.95	649.44
124.00	18.0	334.27	99.90	434.17	217.09	633.98
126.00	18.0	*****	Not enough soil data	*****		
128.00	18.0	0.00	0.00	0.00	0.00	0.00
130.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B29_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 4-1-14, Boring Number: WL1-B29
 Station number: 677+83 Offset: 62 LT

Ground Elevation: 62.500(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	3.00	3- Clean sand
5	7.00	3.00	2- Clay and silty sand
6	8.00	5.00	3- Clean sand
7	9.00	5.00	2- Clay and silty sand
8	10.00	12.00	3- Clean sand
9	12.50	17.00	2- Clay and silty sand
10	15.00	15.00	2- Clay and silty sand
11	17.50	10.00	2- Clay and silty sand
12	20.00	10.00	2- Clay and silty sand
13	22.50	9.00	2- Clay and silty sand
14	25.00	12.00	2- Clay and silty sand
15	27.50	15.00	2- Clay and silty sand
16	30.00	12.00	2- Clay and silty sand
17	32.50	14.00	2- Clay and silty sand

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18	35.00	23.00	2- Clay and silty sand
19	37.50	35.00	3- Clean sand
20	40.00	34.00	3- Clean sand
21	42.50	35.00	3- Clean sand
22	45.00	28.00	3- Clean sand
23	47.50	25.00	3- Clean sand
24	50.00	2.00	1- Plastic Clay
25	52.50	0.00	2- Clay and silty sand
26	55.00	2.00	2- Clay and silty sand
27	57.50	1.00	2- Clay and silty sand
28	60.00	2.00	2- Clay and silty sand
29	62.50	0.00	2- Clay and silty sand
30	65.00	0.00	2- Clay and silty sand
31	67.50	2.00	2- Clay and silty sand
32	68.75	2.00	3- Clean sand
33	70.00	24.00	2- Clay and silty sand
34	72.50	14.00	2- Clay and silty sand
35	73.75	14.00	3- Clean sand
36	75.00	99.00	2- Clay and silty sand
37	77.50	22.00	4- Lime Stone/Very shelly sand
38	80.00	26.00	4- Lime Stone/Very shelly sand
39	82.50	18.00	4- Lime Stone/Very shelly sand
40	85.00	21.00	4- Lime Stone/Very shelly sand
41	87.50	25.00	4- Lime Stone/Very shelly sand
42	90.00	22.00	4- Lime Stone/Very shelly sand
43	92.50	32.00	4- Lime Stone/Very shelly sand
44	95.00	32.00	4- Lime Stone/Very shelly sand
45	97.50	36.00	4- Lime Stone/Very shelly sand
46	100.00	23.00	4- Lime Stone/Very shelly sand
47	102.50	37.00	4- Lime Stone/Very shelly sand
48	105.00	21.00	4- Lime Stone/Very shelly sand
49	107.50	27.00	4- Lime Stone/Very shelly sand
50	108.75	27.00	3- Clean sand
51	110.00	99.00	4- Lime Stone/Very shelly sand
52	112.50	45.00	4- Lime Stone/Very shelly sand
53	113.75	28.00	3- Clean sand
54	115.00	28.00	4- Lime Stone/Very shelly sand
55	116.25	28.00	3- Clean sand
56	117.50	99.00	4- Lime Stone/Very shelly sand
57	118.75	34.00	3- Clean sand
58	120.00	34.00	4- Lime Stone/Very shelly sand
59	122.50	49.00	4- Lime Stone/Very shelly sand
60	125.00	26.00	4- Lime Stone/Very shelly sand
61	127.50	27.00	4- Lime Stone/Very shelly sand
62	128.75	27.00	3- Clean sand
63	130.00	99.00	4- Lime Stone/Very shelly sand
64	131.25	33.00	3- Clean sand
65	132.50	33.00	4- Lime Stone/Very shelly sand

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66	133.75	33.00	3- Clean sand
67	135.00	99.00	4- Lime Stone/Very shelly sand
68	136.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.50	55.50	7.00	2.14	3-Clean Sand
2	55.50	54.50	1.00	3.00	2-Clay and Silty Sand
3	54.50	53.50	1.00	5.00	3-Clean Sand
4	53.50	52.50	1.00	5.00	2-Clay and Silty Sand
5	52.50	50.00	2.50	12.00	3-Clean Sand
6	50.00	25.00	25.00	13.70	2-Clay and Silty Sand
7	25.00	12.50	12.50	31.40	3-Clean Sand
8	12.50	10.00	2.50	2.00	1-Plastic Clay
9	10.00	-6.25	16.25	0.92	2-Clay and Silty Sand
10	-6.25	-7.50	1.25	2.00	3-Clean Sand
11	-7.50	-11.25	3.75	20.67	2-Clay and Silty Sand
12	-11.25	-12.50	1.25	14.00	3-Clean Sand
13	-12.50	-15.00	2.50	99.00	2-Clay and Silty Sand
14	-15.00	-46.25	31.25	26.28	4-Limestone, Very Shelly Sand
15	-46.25	-47.50	1.25	27.00	3-Clean Sand
16	-47.50	-51.25	3.75	81.00	4-Limestone, Very Shelly Sand
17	-51.25	-52.50	1.25	28.00	3-Clean Sand
18	-52.50	-53.75	1.25	28.00	4-Limestone, Very Shelly Sand
19	-53.75	-55.00	1.25	28.00	3-Clean Sand
20	-55.00	-56.25	1.25	99.00	4-Limestone, Very Shelly Sand
21	-56.25	-57.50	1.25	34.00	3-Clean Sand
22	-57.50	-66.25	8.75	35.00	4-Limestone, Very Shelly Sand
23	-66.25	-67.50	1.25	27.00	3-Clean Sand
24	-67.50	-68.75	1.25	99.00	4-Limestone, Very Shelly Sand
25	-68.75	-70.00	1.25	33.00	3-Clean Sand
26	-70.00	-71.25	1.25	33.00	4-Limestone, Very Shelly Sand
27	-71.25	-72.50	1.25	33.00	3-Clean Sand

			WL1-B29_18-PCP.txt		
28	-72.50	-73.50	1.00	99.00	4-Limestone, Very
Shelly Sand					
29	-73.50	-73.50	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.50
18.00	12.00	50.50
18.00	14.00	48.50
18.00	16.00	46.50
18.00	18.00	44.50
18.00	20.00	42.50
18.00	22.00	40.50
18.00	24.00	38.50
18.00	26.00	36.50
18.00	28.00	34.50
18.00	30.00	32.50
18.00	32.00	30.50
18.00	34.00	28.50
18.00	36.00	26.50
18.00	38.00	24.50
18.00	40.00	22.50
18.00	42.00	20.50
18.00	44.00	18.50
18.00	46.00	16.50
18.00	48.00	14.50
18.00	50.00	12.50
18.00	52.00	10.50
18.00	54.00	8.50
18.00	56.00	6.50
18.00	58.00	4.50
18.00	60.00	2.50
18.00	62.00	0.50
18.00	64.00	-1.50
18.00	66.00	-3.50
18.00	68.00	-5.50
18.00	70.00	-7.50
18.00	72.00	-9.50
18.00	74.00	-11.50
18.00	76.00	-13.50

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18.00	78.00	-15.50
18.00	80.00	-17.50
18.00	82.00	-19.50
18.00	84.00	-21.50
18.00	86.00	-23.50
18.00	88.00	-25.50
18.00	90.00	-27.50
18.00	92.00	-29.50
18.00	94.00	-31.50
18.00	96.00	-33.50
18.00	98.00	-35.50
18.00	100.00	-37.50
18.00	102.00	-39.50
18.00	104.00	-41.50
18.00	106.00	-43.50
18.00	108.00	-45.50
18.00	110.00	-47.50
18.00	112.00	-49.50
18.00	114.00	-51.50
18.00	116.00	-53.50
18.00	118.00	-55.50
18.00	120.00	-57.50
18.00	122.00	-59.50
18.00	124.00	-61.50
18.00	126.00	-63.50
18.00	128.00	-65.50
18.00	130.00	-67.50
18.00	132.00	-69.50
18.00	134.00	-71.50

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	3.24	15.46	18.70	9.35	49.63
12.00	18.0	9.20	15.29	24.49	12.25	55.07
14.00	18.0	18.54	21.00	39.54	19.77	81.54
16.00	18.0	27.39	19.19	46.58	23.29	84.97
18.00	18.0	34.30	17.52	51.82	25.91	86.86
20.00	18.0	40.64	17.06	57.70	28.85	91.83
22.00	18.0	46.75	17.66	64.42	32.21	99.74

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24.00	18.0	52.91	18.58	71.49	35.75	108.66
26.00	18.0	60.31	18.32	78.63	39.31	115.26
28.00	18.0	68.84	18.25	87.08	43.54	123.58
30.00	18.0	76.84	20.58	97.43	48.71	138.59
32.00	18.0	84.66	30.48	115.14	57.57	176.11
34.00	18.0	93.90	46.33	140.23	70.11	232.88
36.00	18.0	105.47	60.25	165.71	82.86	286.20
38.00	18.0	115.81	67.28	183.09	91.55	317.66
40.00	18.0	124.67	68.06	192.74	96.37	328.86
42.00	18.0	133.20	69.32	202.53	101.26	341.17
44.00	18.0	142.67	69.39	212.06	106.03	350.83
46.00	18.0	152.79	62.94	215.73	107.87	341.62
48.00	18.0	159.87	51.63	211.50	105.75	314.77
50.00	18.0	162.70	0.00	162.70	81.35	162.70
52.00	18.0	162.70	0.00	162.70	81.35	162.70
54.00	18.0	162.70	24.02	186.72	93.36	234.75
56.00	18.0	162.70	15.74	178.43	89.22	209.90
58.00	18.0	162.70	8.69	171.39	85.70	188.77
60.00	18.0	162.70	2.48	165.18	82.59	170.14
62.00	18.0	162.70	0.00	162.70	81.35	162.70
64.00	18.0	162.70	0.34	163.04	81.52	163.72
66.00	18.0	162.70	5.93	168.63	84.32	180.50
68.00	18.0	162.70	10.79	173.49	86.74	195.07
70.00	18.0	166.61	19.86	186.47	93.23	226.20
72.00	18.0	174.31	23.42	197.73	98.87	244.58
74.00	18.0	184.17	40.72	224.90	112.45	306.34
76.00	18.0	195.87	47.58	243.46	121.73	338.62
78.00	18.0	202.38	54.22	256.60	128.30	365.03
80.00	18.0	205.70	55.56	261.26	130.63	372.38
82.00	18.0	208.46	59.46	267.91	133.96	386.83
84.00	18.0	210.62	66.21	276.83	138.42	409.25
86.00	18.0	213.28	74.64	287.93	143.96	437.21
88.00	18.0	216.72	81.13	297.85	148.93	460.12
90.00	18.0	220.16	87.10	307.26	153.63	481.45
92.00	18.0	223.98	92.64	316.63	158.31	501.91
94.00	18.0	228.60	95.30	323.90	161.95	514.49
96.00	18.0	233.33	94.94	328.27	164.13	518.14
98.00	18.0	238.41	98.20	336.61	168.30	533.01
100.00	18.0	242.58	97.92	340.51	170.25	536.35
102.00	18.0	246.82	96.50	343.31	171.66	536.31
104.00	18.0	251.68	94.28	345.97	172.98	534.53
106.00	18.0	255.16	105.87	361.03	180.52	572.78
108.00	18.0	259.16	115.28	374.43	187.22	604.99
110.00	18.0	268.89	111.47	380.36	190.18	603.30
112.00	18.0	275.89	106.00	381.89	190.94	593.88
114.00	18.0	283.09	96.46	379.55	189.78	572.48
116.00	18.0	288.68	110.49	399.17	199.58	620.14
118.00	18.0	296.32	120.76	417.08	208.54	658.59

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120.00	18.0	304.26	123.92	428.18	214.09	676.02
122.00	18.0	310.18	117.64	427.82	213.91	663.10
124.00	18.0	316.57	106.02	422.59	211.29	634.62
126.00	18.0	320.79	111.03	431.81	215.91	653.87
128.00	18.0	324.95	114.06	439.02	219.51	667.14
130.00	18.0	332.04	115.87	447.91	223.96	679.64
132.00	18.0	*****	Not enough soil data	*****		
134.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:culations-Analyses\FB-Deep\Wildlife No 1\WL1-B30_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-20-14, Boring Number: WL1-B30
 Station number: 677+82 Offset: 76 RT

Ground Elevation: 62.600(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	2.00	3- Clean sand
5	8.00	8.00	2- Clay and silty sand
6	10.00	6.00	2- Clay and silty sand
7	12.50	9.00	2- Clay and silty sand
8	15.00	7.00	2- Clay and silty sand
9	17.50	6.00	2- Clay and silty sand
10	20.00	11.00	2- Clay and silty sand
11	22.50	8.00	2- Clay and silty sand
12	25.00	7.00	2- Clay and silty sand
13	27.50	10.00	3- Clean sand
14	30.00	10.00	3- Clean sand
15	32.50	16.00	3- Clean sand
16	35.00	25.00	3- Clean sand
17	37.50	28.00	3- Clean sand

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18	40.00	11.00	2- Clay and silty sand
19	41.25	3.00	3- Clean sand
20	42.50	3.00	2- Clay and silty sand
21	45.00	2.00	2- Clay and silty sand
22	47.50	0.00	2- Clay and silty sand
23	50.00	1.00	2- Clay and silty sand
24	52.50	3.00	2- Clay and silty sand
25	53.75	3.00	3- Clean sand
26	55.00	36.00	2- Clay and silty sand
27	57.50	53.00	2- Clay and silty sand
28	60.00	25.00	2- Clay and silty sand
29	61.25	25.00	3- Clean sand
30	62.50	99.00	2- Clay and silty sand
31	65.00	99.00	2- Clay and silty sand
32	67.50	99.00	2- Clay and silty sand
33	70.00	40.00	3- Clean sand
34	72.50	99.00	2- Clay and silty sand
35	75.00	16.00	1- Plastic Clay
36	77.50	59.00	2- Clay and silty sand
37	78.75	17.00	3- Clean sand
38	80.00	17.00	2- Clay and silty sand
39	82.50	25.00	4- Lime Stone/Very shelly sand
40	85.00	29.00	4- Lime Stone/Very shelly sand
41	87.50	29.00	4- Lime Stone/Very shelly sand
42	90.00	33.00	4- Lime Stone/Very shelly sand
43	91.25	33.00	3- Clean sand
44	92.50	99.00	4- Lime Stone/Very shelly sand
45	93.75	36.00	3- Clean sand
46	95.00	36.00	4- Lime Stone/Very shelly sand
47	97.50	16.00	4- Lime Stone/Very shelly sand
48	98.75	16.00	3- Clean sand
49	100.00	99.00	4- Lime Stone/Very shelly sand
50	102.50	44.00	4- Lime Stone/Very shelly sand
51	103.75	10.00	3- Clean sand
52	105.00	10.00	4- Lime Stone/Very shelly sand
53	107.50	25.00	4- Lime Stone/Very shelly sand
54	110.00	24.00	4- Lime Stone/Very shelly sand
55	111.25	24.00	3- Clean sand
56	112.50	72.00	4- Lime Stone/Very shelly sand
57	113.75	26.00	3- Clean sand
58	115.00	26.00	4- Lime Stone/Very shelly sand
59	117.50	10.00	4- Lime Stone/Very shelly sand
60	118.75	10.00	3- Clean sand
61	120.00	99.00	4- Lime Stone/Very shelly sand
62	121.25	31.00	3- Clean sand
63	122.50	31.00	4- Lime Stone/Very shelly sand
64	125.00	23.00	4- Lime Stone/Very shelly sand
65	127.50	28.00	4- Lime Stone/Very shelly sand

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66	128.75	28.00	3- Clean sand
67	130.00	99.00	4- Lime Stone/Very shelly sand
68	132.50	50.00	4- Lime Stone/Very shelly sand
69	133.75	30.00	3- Clean sand
70	135.00	30.00	4- Lime Stone/Very shelly sand
71	136.25	30.00	3- Clean sand
72	137.50	65.00	4- Lime Stone/Very shelly sand
73	140.00	99.00	4- Lime Stone/Very shelly sand
74	141.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.60	54.60	8.00	2.00	3-Clean Sand
2	54.60	35.10	19.50	7.74	2-Clay and Silty Sand
3	35.10	22.60	12.50	17.80	3-Clean Sand
4	22.60	21.35	1.25	11.00	2-Clay and Silty Sand
5	21.35	20.10	1.25	3.00	3-Clean Sand
6	20.10	8.85	11.25	1.67	2-Clay and Silty Sand
7	8.85	7.60	1.25	3.00	3-Clean Sand
8	7.60	1.35	6.25	40.60	2-Clay and Silty Sand
9	1.35	0.10	1.25	25.00	3-Clean Sand
10	0.10	-7.40	7.50	99.00	2-Clay and Silty Sand
11	-7.40	-9.90	2.50	40.00	3-Clean Sand
12	-9.90	-12.40	2.50	99.00	2-Clay and Silty Sand
13	-12.40	-14.90	2.50	16.00	1-Plastic Clay
14	-14.90	-16.15	1.25	59.00	2-Clay and Silty Sand
15	-16.15	-17.40	1.25	17.00	3-Clean Sand
16	-17.40	-19.90	2.50	17.00	2-Clay and Silty Sand
17	-19.90	-28.65	8.75	28.43	4-Limestone, Very Shelly Sand
18	-28.65	-29.90	1.25	33.00	3-Clean Sand
19	-29.90	-31.15	1.25	99.00	4-Limestone, Very Shelly Sand
20	-31.15	-32.40	1.25	36.00	3-Clean Sand
21	-32.40	-36.15	3.75	29.33	4-Limestone, Very Shelly Sand
22	-36.15	-37.40	1.25	16.00	3-Clean Sand
23	-37.40	-41.15	3.75	80.67	4-Limestone, Very Shelly Sand
24	-41.15	-42.40	1.25	10.00	3-Clean Sand

WL1-B30_18-PCP.txt					
25	-42.40	-48.65	6.25	18.80	4-Limestone, Very
Shelly Sand					
26	-48.65	-49.90	1.25	24.00	3-Clean Sand
27	-49.90	-51.15	1.25	72.00	4-Limestone, Very
Shelly Sand					
28	-51.15	-52.40	1.25	26.00	3-Clean Sand
29	-52.40	-56.15	3.75	20.67	4-Limestone, Very
Shelly Sand					
30	-56.15	-57.40	1.25	10.00	3-Clean Sand
31	-57.40	-58.65	1.25	99.00	4-Limestone, Very
Shelly Sand					
32	-58.65	-59.90	1.25	31.00	3-Clean Sand
33	-59.90	-66.15	6.25	27.20	4-Limestone, Very
Shelly Sand					
34	-66.15	-67.40	1.25	28.00	3-Clean Sand
35	-67.40	-71.15	3.75	82.67	4-Limestone, Very
Shelly Sand					
36	-71.15	-72.40	1.25	30.00	3-Clean Sand
37	-72.40	-73.65	1.25	30.00	4-Limestone, Very
Shelly Sand					
38	-73.65	-74.90	1.25	30.00	3-Clean Sand
39	-74.90	-78.40	3.50	74.71	4-Limestone, Very
Shelly Sand					
40	-78.40	-78.40	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.60
18.00	12.00	50.60
18.00	14.00	48.60
18.00	16.00	46.60
18.00	18.00	44.60
18.00	20.00	42.60
18.00	22.00	40.60
18.00	24.00	38.60
18.00	26.00	36.60
18.00	28.00	34.60
18.00	30.00	32.60
18.00	32.00	30.60
18.00	34.00	28.60

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18.00	36.00	26.60
18.00	38.00	24.60
18.00	40.00	22.60
18.00	42.00	20.60
18.00	44.00	18.60
18.00	46.00	16.60
18.00	48.00	14.60
18.00	50.00	12.60
18.00	52.00	10.60
18.00	54.00	8.60
18.00	56.00	6.60
18.00	58.00	4.60
18.00	60.00	2.60
18.00	62.00	0.60
18.00	64.00	-1.40
18.00	66.00	-3.40
18.00	68.00	-5.40
18.00	70.00	-7.40
18.00	72.00	-9.40
18.00	74.00	-11.40
18.00	76.00	-13.40
18.00	78.00	-15.40
18.00	80.00	-17.40
18.00	82.00	-19.40
18.00	84.00	-21.40
18.00	86.00	-23.40
18.00	88.00	-25.40
18.00	90.00	-27.40
18.00	92.00	-29.40
18.00	94.00	-31.40
18.00	96.00	-33.40
18.00	98.00	-35.40
18.00	100.00	-37.40
18.00	102.00	-39.40
18.00	104.00	-41.40
18.00	106.00	-43.40
18.00	108.00	-45.40
18.00	110.00	-47.40
18.00	112.00	-49.40
18.00	114.00	-51.40
18.00	116.00	-53.40
18.00	118.00	-55.40
18.00	120.00	-57.40
18.00	122.00	-59.40
18.00	124.00	-61.40
18.00	126.00	-63.40
18.00	128.00	-65.40
18.00	130.00	-67.40

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18.00	132.00	-69.40
18.00	134.00	-71.40
18.00	136.00	-73.40
18.00	138.00	-75.40
18.00	140.00	-77.40

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	6.64	6.66	13.31	6.65	26.64
12.00	18.0	10.72	7.30	18.02	9.01	32.62
14.00	18.0	15.42	8.58	24.00	12.00	41.16
16.00	18.0	20.10	10.35	30.46	15.23	51.17
18.00	18.0	24.36	11.73	36.09	18.04	59.54
20.00	18.0	30.02	11.89	41.91	20.96	65.69
22.00	18.0	36.16	13.29	49.44	24.72	76.01
24.00	18.0	41.26	16.79	58.05	29.02	91.62
26.00	18.0	45.78	20.60	66.37	33.19	107.57
28.00	18.0	50.96	24.36	75.31	37.66	124.03
30.00	18.0	52.88	26.18	79.06	39.53	131.43
32.00	18.0	54.67	31.01	85.68	42.84	147.69
34.00	18.0	57.71	36.41	94.13	47.06	166.95
36.00	18.0	63.53	36.43	99.96	49.98	172.81
38.00	18.0	72.33	31.84	104.17	52.08	167.84
40.00	18.0	84.28	1.95	86.23	43.11	90.12
42.00	18.0	86.43	0.00	86.43	43.21	86.43
44.00	18.0	86.43	21.14	107.57	53.79	149.86
46.00	18.0	86.43	16.71	103.14	51.57	136.56
48.00	18.0	86.43	10.66	97.09	48.54	118.41
50.00	18.0	86.43	8.51	94.94	47.47	111.95
52.00	18.0	86.43	16.87	103.30	51.65	137.04
54.00	18.0	86.61	26.95	113.56	56.78	167.47
56.00	18.0	98.33	30.75	129.08	64.54	190.58
58.00	18.0	110.34	34.96	145.30	72.65	215.22
60.00	18.0	120.46	44.92	165.37	82.69	255.21
62.00	18.0	138.10	52.76	190.86	95.43	296.39
64.00	18.0	152.35	58.19	210.55	105.27	326.94
66.00	18.0	164.09	68.17	232.27	116.13	368.62
68.00	18.0	178.05	77.55	255.60	127.80	410.70
70.00	18.0	197.90	68.80	266.70	133.35	404.31

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72.00	18.0	210.96	61.66	272.62	136.31	395.93
74.00	18.0	224.35	43.98	268.33	134.17	356.29
76.00	18.0	237.15	59.85	297.00	148.50	416.70
78.00	18.0	251.15	61.35	312.50	156.25	435.20
80.00	18.0	258.79	68.87	327.66	163.83	465.39
82.00	18.0	265.76	70.51	336.27	168.13	477.29
84.00	18.0	270.12	74.24	344.35	172.18	492.83
86.00	18.0	273.96	76.53	350.49	175.24	503.54
88.00	18.0	277.05	86.27	363.32	181.66	535.87
90.00	18.0	280.97	95.70	376.67	188.34	568.08
92.00	18.0	291.14	101.17	392.31	196.16	594.65
94.00	18.0	299.54	83.58	383.12	191.56	550.27
96.00	18.0	305.38	87.83	393.21	196.60	568.87
98.00	18.0	308.18	91.24	399.42	199.71	581.90
100.00	18.0	313.99	103.05	417.05	208.52	623.16
102.00	18.0	320.93	88.73	409.66	204.83	587.11
104.00	18.0	325.85	45.82	371.67	185.83	463.30
106.00	18.0	327.83	84.51	412.34	206.17	581.36
108.00	18.0	330.80	86.85	417.64	208.82	591.33
110.00	18.0	334.17	89.30	423.47	211.74	602.08
112.00	18.0	340.50	88.42	428.93	214.46	605.77
114.00	18.0	347.57	57.99	405.56	202.78	521.53
116.00	18.0	351.84	67.45	419.29	209.64	554.19
118.00	18.0	353.75	69.42	423.17	211.58	562.01
120.00	18.0	358.16	90.45	448.62	224.31	629.52
122.00	18.0	365.90	89.92	455.82	227.91	635.67
124.00	18.0	370.42	88.65	459.07	229.53	636.36
126.00	18.0	373.45	93.07	466.52	233.26	652.67
128.00	18.0	376.62	103.61	480.23	240.12	687.46
130.00	18.0	385.60	114.18	499.78	249.89	728.14
132.00	18.0	392.80	111.07	503.86	251.93	726.00
134.00	18.0	400.51	107.59	508.10	254.05	723.27
136.00	18.0	*****	Not enough soil data	*****		
138.00	18.0	0.00	0.00	0.00	0.00	0.00
140.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

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1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
 2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
 3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
 4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 X THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE

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ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 X THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B31_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 4-7-14, Boring Number: WL1-B31
 Station number: 679+26 Offset: 112 LT

Ground Elevation: 62.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	5.00	2.00	2- Clay and silty sand
5	6.00	5.00	3- Clean sand
6	8.00	10.00	3- Clean sand
7	9.00	10.00	2- Clay and silty sand
8	10.00	33.00	3- Clean sand
9	12.50	33.00	2- Clay and silty sand
10	15.00	28.00	2- Clay and silty sand
11	17.50	26.00	2- Clay and silty sand
12	18.75	5.00	3- Clean sand
13	20.00	5.00	2- Clay and silty sand
14	22.50	8.00	2- Clay and silty sand
15	25.00	11.00	2- Clay and silty sand
16	26.25	11.00	3- Clean sand
17	27.50	17.00	2- Clay and silty sand

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18	30.00	27.00	2- Clay and silty sand
19	32.50	37.00	2- Clay and silty sand
20	35.00	31.00	2- Clay and silty sand
21	37.50	24.00	2- Clay and silty sand
22	40.00	38.00	3- Clean sand
23	42.50	36.00	3- Clean sand
24	45.00	9.00	2- Clay and silty sand
25	47.50	0.00	1- Plastic Clay
26	50.00	0.00	2- Clay and silty sand
27	52.50	0.00	2- Clay and silty sand
28	55.00	0.00	2- Clay and silty sand
29	57.50	0.00	2- Clay and silty sand
30	60.00	2.00	2- Clay and silty sand
31	62.50	0.00	2- Clay and silty sand
32	65.00	0.00	2- Clay and silty sand
33	67.50	0.00	2- Clay and silty sand
34	70.00	0.00	2- Clay and silty sand
35	72.50	1.00	2- Clay and silty sand
36	73.75	1.00	3- Clean sand
37	75.00	8.00	2- Clay and silty sand
38	76.25	8.00	3- Clean sand
39	77.50	36.00	2- Clay and silty sand
40	78.75	10.00	3- Clean sand
41	80.00	10.00	2- Clay and silty sand
42	82.50	99.00	4- Lime Stone/Very shelly sand
43	85.00	7.00	2- Clay and silty sand
44	87.50	2.00	4- Lime Stone/Very shelly sand
45	88.75	2.00	3- Clean sand
46	90.00	7.00	4- Lime Stone/Very shelly sand
47	91.25	7.00	3- Clean sand
48	92.50	29.00	4- Lime Stone/Very shelly sand
49	95.00	28.00	4- Lime Stone/Very shelly sand
50	97.50	48.00	4- Lime Stone/Very shelly sand
51	98.75	8.00	3- Clean sand
52	100.00	8.00	4- Lime Stone/Very shelly sand
53	101.25	8.00	3- Clean sand
54	102.50	41.00	4- Lime Stone/Very shelly sand
55	103.75	16.00	3- Clean sand
56	105.00	16.00	4- Lime Stone/Very shelly sand
57	107.50	18.00	4- Lime Stone/Very shelly sand
58	110.00	21.00	4- Lime Stone/Very shelly sand
59	112.50	11.00	4- Lime Stone/Very shelly sand
60	115.00	16.00	4- Lime Stone/Very shelly sand
61	117.50	20.00	4- Lime Stone/Very shelly sand
62	120.00	19.00	4- Lime Stone/Very shelly sand
63	121.25	0.00	3- Clean sand
64	122.50	0.00	4- Lime Stone/Very shelly sand
65	125.00	0.00	4- Lime Stone/Very shelly sand

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66	127.50	0.00	4- Lime Stone/Very shelly sand
67	128.75	0.00	3- Clean sand
68	130.00	6.00	4- Lime Stone/Very shelly sand
69	131.25	6.00	3- Clean sand
70	132.50	27.00	4- Lime Stone/Very shelly sand
71	135.00	12.00	4- Lime Stone/Very shelly sand
72	136.25	12.00	3- Clean sand
73	137.50	54.00	4- Lime Stone/Very shelly sand
74	140.00	99.00	4- Lime Stone/Very shelly sand
75	142.50	99.00	4- Lime Stone/Very shelly sand
76	145.00	99.00	4- Lime Stone/Very shelly sand
77	146.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	62.00	57.00	5.00	2.00	3-Clean Sand
2	57.00	56.00	1.00	2.00	2-Clay and Silty Sand
3	56.00	53.00	3.00	6.67	3-Clean Sand
4	53.00	52.00	1.00	10.00	2-Clay and Silty Sand
5	52.00	49.50	2.50	33.00	3-Clean Sand
6	49.50	43.25	6.25	29.60	2-Clay and Silty Sand
7	43.25	42.00	1.25	5.00	3-Clean Sand
8	42.00	35.75	6.25	7.40	2-Clay and Silty Sand
9	35.75	34.50	1.25	11.00	3-Clean Sand
10	34.50	22.00	12.50	27.20	2-Clay and Silty Sand
11	22.00	17.00	5.00	37.00	3-Clean Sand
12	17.00	14.50	2.50	9.00	2-Clay and Silty Sand
13	14.50	12.00	2.50	0.00	1-Plastic Clay
14	12.00	-11.75	23.75	0.26	2-Clay and Silty Sand
15	-11.75	-13.00	1.25	1.00	3-Clean Sand
16	-13.00	-14.25	1.25	8.00	2-Clay and Silty Sand
17	-14.25	-15.50	1.25	8.00	3-Clean Sand
18	-15.50	-16.75	1.25	36.00	2-Clay and Silty Sand
19	-16.75	-18.00	1.25	10.00	3-Clean Sand
20	-18.00	-20.50	2.50	10.00	2-Clay and Silty Sand
21	-20.50	-23.00	2.50	99.00	4-Limestone, Very Shelly Sand
22	-23.00	-25.50	2.50	7.00	2-Clay and Silty Sand
23	-25.50	-26.75	1.25	2.00	4-Limestone, Very Shelly Sand

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24	-26.75	-28.00	1.25	2.00	3-Clean Sand
25	-28.00	-29.25	1.25	7.00	4-Limestone, Very
Shelly Sand					
26	-29.25	-30.50	1.25	7.00	3-Clean Sand
27	-30.50	-36.75	6.25	32.40	4-Limestone, Very
Shelly Sand					
28	-36.75	-38.00	1.25	8.00	3-Clean Sand
29	-38.00	-39.25	1.25	8.00	4-Limestone, Very
Shelly Sand					
30	-39.25	-40.50	1.25	8.00	3-Clean Sand
31	-40.50	-41.75	1.25	41.00	4-Limestone, Very
Shelly Sand					
32	-41.75	-43.00	1.25	16.00	3-Clean Sand
33	-43.00	-59.25	16.25	17.15	4-Limestone, Very
Shelly Sand					
34	-59.25	-60.50	1.25	0.00	3-Clean Sand
35	-60.50	-66.75	6.25	0.00	4-Limestone, Very
Shelly Sand					
36	-66.75	-68.00	1.25	0.00	3-Clean Sand
37	-68.00	-69.25	1.25	6.00	4-Limestone, Very
Shelly Sand					
38	-69.25	-70.50	1.25	6.00	3-Clean Sand
39	-70.50	-74.25	3.75	22.00	4-Limestone, Very
Shelly Sand					
40	-74.25	-75.50	1.25	12.00	3-Clean Sand
41	-75.50	-84.00	8.50	85.76	4-Limestone, Very
Shelly Sand					
42	-84.00	-84.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	52.00
18.00	12.00	50.00
18.00	14.00	48.00
18.00	16.00	46.00
18.00	18.00	44.00
18.00	20.00	42.00
18.00	22.00	40.00
18.00	24.00	38.00
18.00	26.00	36.00

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18.00	28.00	34.00
18.00	30.00	32.00
18.00	32.00	30.00
18.00	34.00	28.00
18.00	36.00	26.00
18.00	38.00	24.00
18.00	40.00	22.00
18.00	42.00	20.00
18.00	44.00	18.00
18.00	46.00	16.00
18.00	48.00	14.00
18.00	50.00	12.00
18.00	52.00	10.00
18.00	54.00	8.00
18.00	56.00	6.00
18.00	58.00	4.00
18.00	60.00	2.00
18.00	62.00	0.00
18.00	64.00	-2.00
18.00	66.00	-4.00
18.00	68.00	-6.00
18.00	70.00	-8.00
18.00	72.00	-10.00
18.00	74.00	-12.00
18.00	76.00	-14.00
18.00	78.00	-16.00
18.00	80.00	-18.00
18.00	82.00	-20.00
18.00	84.00	-22.00
18.00	86.00	-24.00
18.00	88.00	-26.00
18.00	90.00	-28.00
18.00	92.00	-30.00
18.00	94.00	-32.00
18.00	96.00	-34.00
18.00	98.00	-36.00
18.00	100.00	-38.00
18.00	102.00	-40.00
18.00	104.00	-42.00
18.00	106.00	-44.00
18.00	108.00	-46.00
18.00	110.00	-48.00
18.00	112.00	-50.00
18.00	114.00	-52.00
18.00	116.00	-54.00
18.00	118.00	-56.00
18.00	120.00	-58.00
18.00	122.00	-60.00

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18.00	124.00	-62.00
18.00	126.00	-64.00
18.00	128.00	-66.00
18.00	130.00	-68.00
18.00	132.00	-70.00
18.00	134.00	-72.00
18.00	136.00	-74.00
18.00	138.00	-76.00
18.00	140.00	-78.00
18.00	142.00	-80.00
18.00	144.00	-82.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	8.68	35.88	44.56	22.28	116.32
12.00	18.0	20.20	34.02	54.22	27.11	122.27
14.00	18.0	34.61	40.94	75.55	37.78	157.43
16.00	18.0	48.36	33.27	81.62	40.81	148.15
18.00	18.0	61.02	27.09	88.11	44.06	142.29
20.00	18.0	64.37	27.94	92.31	46.16	148.20
22.00	18.0	68.34	28.30	96.64	48.32	153.23
24.00	18.0	74.00	26.78	100.78	50.39	154.35
26.00	18.0	79.78	28.61	108.39	54.19	165.61
28.00	18.0	86.90	31.08	117.99	58.99	180.15
30.00	18.0	97.81	32.42	130.24	65.12	195.09
32.00	18.0	110.67	34.75	145.42	72.71	214.92
34.00	18.0	124.32	40.92	165.23	82.62	247.07
36.00	18.0	138.58	55.46	194.03	97.02	304.95
38.00	18.0	151.51	69.15	220.66	110.33	358.97
40.00	18.0	166.94	65.96	232.91	116.45	364.83
42.00	18.0	177.46	52.53	229.99	114.99	335.04
44.00	18.0	186.66	39.46	226.13	113.06	305.05
46.00	18.0	191.32	3.65	194.97	97.48	202.26
48.00	18.0	193.60	0.00	193.60	96.80	193.60
50.00	18.0	193.60	25.29	218.89	109.45	269.47
52.00	18.0	193.60	18.45	212.05	106.02	248.94
54.00	18.0	193.60	9.22	202.82	101.41	221.26
56.00	18.0	193.60	2.04	195.64	97.82	199.71
58.00	18.0	193.60	0.25	193.85	96.93	194.35

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60.00	18.0	193.60	0.00	193.60	96.80	193.60
62.00	18.0	193.60	0.00	193.60	96.80	193.60
64.00	18.0	193.60	0.00	193.60	96.80	193.60
66.00	18.0	193.60	0.00	193.60	96.80	193.60
68.00	18.0	193.60	0.00	193.60	96.80	193.60
70.00	18.0	193.60	1.02	194.62	97.31	196.66
72.00	18.0	193.60	6.24	199.84	99.92	212.31
74.00	18.0	193.66	13.09	206.75	103.38	232.93
76.00	18.0	196.80	15.98	212.78	106.39	244.73
78.00	18.0	205.86	36.02	241.88	120.94	313.92
80.00	18.0	211.56	48.41	259.97	129.98	356.78
82.00	18.0	218.24	41.50	259.74	129.87	342.74
84.00	18.0	223.44	46.88	270.32	135.16	364.07
86.00	18.0	228.80	6.75	235.55	117.77	249.05
88.00	18.0	230.28	17.95	248.23	124.11	284.12
90.00	18.0	230.60	56.35	286.95	143.47	399.64
92.00	18.0	232.45	67.54	299.99	150.00	435.08
94.00	18.0	236.72	74.86	311.58	155.79	461.29
96.00	18.0	241.20	58.57	299.77	149.88	416.91
98.00	18.0	247.42	59.13	306.55	153.28	424.81
100.00	18.0	249.90	65.06	314.96	157.48	445.08
102.00	18.0	252.24	69.98	322.22	161.11	462.17
104.00	18.0	257.45	53.16	310.61	155.31	416.94
106.00	18.0	260.29	69.80	330.09	165.04	469.69
108.00	18.0	262.91	63.27	326.18	163.09	452.72
110.00	18.0	265.86	53.84	319.70	159.85	427.39
112.00	18.0	268.39	55.88	324.27	162.13	436.03
114.00	18.0	270.23	60.86	331.09	165.54	452.80
116.00	18.0	272.60	55.82	328.41	164.21	440.05
118.00	18.0	275.43	44.55	319.99	159.99	409.09
120.00	18.0	278.32	32.68	311.00	155.50	376.35
122.00	18.0	279.20	0.00	279.20	139.60	279.20
124.00	18.0	279.20	20.47	299.68	149.84	340.62
126.00	18.0	279.20	20.28	299.49	149.74	340.05
128.00	18.0	279.20	26.43	305.63	152.82	358.48
130.00	18.0	279.48	32.78	312.27	156.13	377.84
132.00	18.0	281.11	33.02	314.13	157.06	380.17
134.00	18.0	283.92	43.36	327.29	163.64	414.01
136.00	18.0	284.92	57.18	342.10	171.05	456.47
138.00	18.0	292.38	99.44	391.82	195.91	590.71
140.00	18.0	298.54	103.81	402.34	201.17	609.96
142.00	18.0	*****	Not enough soil data	*****		
144.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.

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2. DAVISSEON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA,
AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSEON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B32_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 2-26-14, Boring Number: WL1-B32
 Station number: 678+94 Offset: 15 LT

Ground Elevation: 61.900(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	2.00	3- Clean sand
2	2.00	2.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	5.00	2.00	2- Clay and silty sand
5	6.00	5.00	3- Clean sand
6	8.00	15.00	3- Clean sand
7	10.00	10.00	3- Clean sand
8	12.50	17.00	3- Clean sand
9	15.00	13.00	3- Clean sand
10	17.50	10.00	2- Clay and silty sand
11	20.00	5.00	2- Clay and silty sand
12	22.50	13.00	1- Plastic Clay
13	25.00	7.00	2- Clay and silty sand
14	27.50	10.00	2- Clay and silty sand
15	30.00	17.00	3- Clean sand
16	32.50	20.00	3- Clean sand
17	35.00	16.00	3- Clean sand

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18	37.50	16.00	3- Clean sand
19	40.00	32.00	3- Clean sand
20	42.50	18.00	3- Clean sand
21	45.00	5.00	2- Clay and silty sand
22	47.50	5.00	2- Clay and silty sand
23	48.75	2.00	3- Clean sand
24	50.00	2.00	2- Clay and silty sand
25	52.50	2.00	2- Clay and silty sand
26	53.75	2.00	3- Clean sand
27	55.00	5.00	2- Clay and silty sand
28	56.25	5.00	3- Clean sand
29	57.50	30.00	2- Clay and silty sand
30	60.00	17.00	2- Clay and silty sand
31	62.50	30.00	2- Clay and silty sand
32	65.00	24.00	3- Clean sand
33	67.50	99.00	2- Clay and silty sand
34	70.00	99.00	4- Lime Stone/Very shelly sand
35	72.50	99.00	4- Lime Stone/Very shelly sand
36	75.00	22.00	2- Clay and silty sand
37	76.25	22.00	3- Clean sand
38	77.50	45.00	2- Clay and silty sand
39	80.00	35.00	4- Lime Stone/Very shelly sand
40	82.50	45.00	4- Lime Stone/Very shelly sand
41	85.00	28.00	4- Lime Stone/Very shelly sand
42	87.50	46.00	4- Lime Stone/Very shelly sand
43	90.00	53.00	4- Lime Stone/Very shelly sand
44	92.50	99.00	4- Lime Stone/Very shelly sand
45	95.00	3.00	2- Clay and silty sand
46	97.50	2.00	4- Lime Stone/Very shelly sand
47	98.75	2.00	3- Clean sand
48	100.00	14.00	4- Lime Stone/Very shelly sand
49	101.25	14.00	3- Clean sand
50	102.50	36.00	4- Lime Stone/Very shelly sand
51	105.00	44.00	4- Lime Stone/Very shelly sand
52	106.25	14.00	3- Clean sand
53	107.50	14.00	4- Lime Stone/Very shelly sand
54	110.00	29.00	4- Lime Stone/Very shelly sand
55	112.50	33.00	4- Lime Stone/Very shelly sand
56	115.00	32.00	4- Lime Stone/Very shelly sand
57	117.50	24.00	4- Lime Stone/Very shelly sand
58	120.00	25.00	4- Lime Stone/Very shelly sand
59	122.50	30.00	4- Lime Stone/Very shelly sand
60	125.00	14.00	4- Lime Stone/Very shelly sand
61	126.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	61.90	56.90	5.00	2.00	3-Clean Sand
2	56.90	55.90	1.00	2.00	2-Clay and Silty Sand
3	55.90	44.40	11.50	12.17	3-Clean Sand
4	44.40	39.40	5.00	7.50	2-Clay and Silty Sand
5	39.40	36.90	2.50	13.00	1-Plastic Clay
6	36.90	31.90	5.00	8.50	2-Clay and Silty Sand
7	31.90	16.90	15.00	19.83	3-Clean Sand
8	16.90	13.15	3.75	5.00	2-Clay and Silty Sand
9	13.15	11.90	1.25	2.00	3-Clean Sand
10	11.90	8.15	3.75	2.00	2-Clay and Silty Sand
11	8.15	6.90	1.25	2.00	3-Clean Sand
12	6.90	5.65	1.25	5.00	2-Clay and Silty Sand
13	5.65	4.40	1.25	5.00	3-Clean Sand
14	4.40	-3.10	7.50	25.67	2-Clay and Silty Sand
15	-3.10	-5.60	2.50	24.00	3-Clean Sand
16	-5.60	-8.10	2.50	99.00	2-Clay and Silty Sand
17	-8.10	-13.10	5.00	99.00	4-Limestone, Very
Shelly Sand					
18	-13.10	-14.35	1.25	22.00	2-Clay and Silty Sand
19	-14.35	-15.60	1.25	22.00	3-Clean Sand
20	-15.60	-18.10	2.50	45.00	2-Clay and Silty Sand
21	-18.10	-33.10	15.00	51.00	4-Limestone, Very
Shelly Sand					
22	-33.10	-35.60	2.50	3.00	2-Clay and Silty Sand
23	-35.60	-36.85	1.25	2.00	4-Limestone, Very
Shelly Sand					
24	-36.85	-38.10	1.25	2.00	3-Clean Sand
25	-38.10	-39.35	1.25	14.00	4-Limestone, Very
Shelly Sand					
26	-39.35	-40.60	1.25	14.00	3-Clean Sand
27	-40.60	-44.35	3.75	38.67	4-Limestone, Very
Shelly Sand					
28	-44.35	-45.60	1.25	14.00	3-Clean Sand
29	-45.60	-64.10	18.50	26.03	4-Limestone, Very
Shelly Sand					
30	-64.10	-64.10	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	51.90
18.00	12.00	49.90
18.00	14.00	47.90
18.00	16.00	45.90
18.00	18.00	43.90
18.00	20.00	41.90
18.00	22.00	39.90
18.00	24.00	37.90
18.00	26.00	35.90
18.00	28.00	33.90
18.00	30.00	31.90
18.00	32.00	29.90
18.00	34.00	27.90
18.00	36.00	25.90
18.00	38.00	23.90
18.00	40.00	21.90
18.00	42.00	19.90
18.00	44.00	17.90
18.00	46.00	15.90
18.00	48.00	13.90
18.00	50.00	11.90
18.00	52.00	9.90
18.00	54.00	7.90
18.00	56.00	5.90
18.00	58.00	3.90
18.00	60.00	1.90
18.00	62.00	-0.10
18.00	64.00	-2.10
18.00	66.00	-4.10
18.00	68.00	-6.10
18.00	70.00	-8.10
18.00	72.00	-10.10
18.00	74.00	-12.10
18.00	76.00	-14.10
18.00	78.00	-16.10
18.00	80.00	-18.10
18.00	82.00	-20.10
18.00	84.00	-22.10
18.00	86.00	-24.10
18.00	88.00	-26.10
18.00	90.00	-28.10
18.00	92.00	-30.10

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18.00	94.00	-32.10
18.00	96.00	-34.10
18.00	98.00	-36.10
18.00	100.00	-38.10
18.00	102.00	-40.10
18.00	104.00	-42.10
18.00	106.00	-44.10
18.00	108.00	-46.10
18.00	110.00	-48.10
18.00	112.00	-50.10
18.00	114.00	-52.10
18.00	116.00	-54.10
18.00	118.00	-56.10
18.00	120.00	-58.10
18.00	122.00	-60.10
18.00	124.00	-62.10

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
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10.00	18.0	4.67	20.68	25.35	12.68	66.72
12.00	18.0	7.43	22.19	29.62	14.81	73.99
14.00	18.0	11.70	22.17	33.86	16.93	78.19
16.00	18.0	16.17	21.48	37.65	18.83	80.61
18.00	18.0	24.30	9.68	33.98	16.99	53.34
20.00	18.0	28.89	9.70	38.59	19.29	57.99
22.00	18.0	34.30	9.99	44.29	22.14	64.27
24.00	18.0	42.10	12.18	54.28	27.14	78.65
26.00	18.0	47.66	21.83	69.49	34.75	113.16
28.00	18.0	51.98	25.80	77.78	38.89	129.39
30.00	18.0	59.23	34.40	93.63	46.82	162.44
32.00	18.0	64.07	34.76	98.83	49.41	168.34
34.00	18.0	68.15	36.63	104.78	52.39	178.05
36.00	18.0	70.35	42.38	112.73	56.36	197.49
38.00	18.0	73.48	47.90	121.38	60.69	217.18
40.00	18.0	80.53	47.36	127.89	63.94	222.61
42.00	18.0	90.31	41.04	131.35	65.68	213.43
44.00	18.0	98.08	33.24	131.32	65.66	197.79
46.00	18.0	101.84	4.56	106.40	53.20	115.52
48.00	18.0	105.27	3.76	109.03	54.51	116.54

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50.00	18.0	105.65	18.88	124.54	62.27	162.30
52.00	18.0	105.65	16.22	121.87	60.94	154.31
54.00	18.0	105.70	16.88	122.58	61.29	156.34
56.00	18.0	107.94	17.30	125.24	62.62	159.84
58.00	18.0	116.35	20.98	137.32	68.66	179.27
60.00	18.0	124.50	24.63	149.13	74.57	198.40
62.00	18.0	131.72	35.17	166.89	83.44	237.23
64.00	18.0	141.71	53.52	195.23	97.61	302.27
66.00	18.0	159.82	65.09	224.91	112.46	355.09
68.00	18.0	173.80	93.22	267.01	133.51	453.45
70.00	18.0	184.55	94.71	279.26	139.63	468.68
72.00	18.0	191.75	85.88	277.63	138.82	449.39
74.00	18.0	199.99	84.57	284.56	142.28	453.69
76.00	18.0	210.23	69.15	279.37	139.69	417.67
78.00	18.0	221.56	108.79	330.34	165.17	547.92
80.00	18.0	231.12	116.40	347.52	173.76	580.32
82.00	18.0	236.92	115.51	352.43	176.21	583.44
84.00	18.0	242.96	116.69	359.65	179.83	593.03
86.00	18.0	246.90	122.43	369.33	184.67	614.20
88.00	18.0	252.19	133.07	385.26	192.63	651.39
90.00	18.0	259.44	121.99	381.43	190.72	625.41
92.00	18.0	266.59	96.54	363.13	181.57	556.21
94.00	18.0	272.19	72.66	344.85	172.42	490.16
96.00	18.0	274.51	7.83	282.34	141.17	298.01
98.00	18.0	274.51	73.42	347.92	173.96	494.76
100.00	18.0	275.16	89.83	364.99	182.50	544.66
102.00	18.0	278.69	83.17	361.86	180.93	528.20
104.00	18.0	284.24	68.38	352.62	176.31	489.37
106.00	18.0	290.15	63.04	353.19	176.59	479.26
108.00	18.0	293.12	73.62	366.73	183.37	513.97
110.00	18.0	295.95	77.89	373.84	186.92	529.62
112.00	18.0	299.65	84.31	383.96	191.98	552.59
114.00	18.0	304.06	88.77	392.83	196.42	570.38
116.00	18.0	308.91	88.74	397.66	198.83	575.14
118.00	18.0	312.86	88.15	401.01	200.51	577.31
120.00	18.0	316.56	87.31	403.86	201.93	578.48
122.00	18.0	*****	Not enough soil data	*****		
124.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.

WL1-B32_18-PCP.txt

4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE
ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS
2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B33_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-21-14, Boring Number: WL1-B33
 Station number: 680+18 Offset: 127 LT

Ground Elevation: 61.800(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	7.00	3- Clean sand
2	2.00	7.00	3- Clean sand
3	3.00	4.00	2- Clay and silty sand
4	4.00	4.00	3- Clean sand
5	6.00	4.00	3- Clean sand
6	7.00	4.00	2- Clay and silty sand
7	8.00	7.00	3- Clean sand
8	10.00	7.00	2- Clay and silty sand
9	12.50	9.00	2- Clay and silty sand
10	15.00	10.00	2- Clay and silty sand
11	17.50	6.00	1- Plastic Clay
12	20.00	14.00	1- Plastic Clay
13	22.50	7.00	1- Plastic Clay
14	25.00	13.00	2- Clay and silty sand
15	27.50	12.00	2- Clay and silty sand
16	30.00	11.00	2- Clay and silty sand
17	32.50	10.00	2- Clay and silty sand

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18	35.00	7.00	2- Clay and silty sand
19	37.50	5.00	2- Clay and silty sand
20	40.00	6.00	3- Clean sand
21	42.50	7.00	3- Clean sand
22	45.00	5.00	2- Clay and silty sand
23	47.50	6.00	1- Plastic Clay
24	50.00	7.00	2- Clay and silty sand
25	51.25	7.00	3- Clean sand
26	52.50	99.00	2- Clay and silty sand
27	55.00	99.00	2- Clay and silty sand
28	56.25	26.00	3- Clean sand
29	57.50	26.00	2- Clay and silty sand
30	60.00	99.00	1- Plastic Clay
31	62.50	20.00	2- Clay and silty sand
32	65.00	17.00	2- Clay and silty sand
33	66.25	17.00	3- Clean sand
34	67.50	99.00	2- Clay and silty sand
35	70.00	99.00	2- Clay and silty sand
36	72.50	99.00	2- Clay and silty sand
37	75.00	99.00	2- Clay and silty sand
38	77.50	99.00	2- Clay and silty sand
39	78.75	0.00	3- Clean sand
40	80.00	0.00	2- Clay and silty sand
41	82.50	0.00	4- Lime Stone/Very shelly sand
42	85.00	2.00	4- Lime Stone/Very shelly sand
43	87.50	2.00	4- Lime Stone/Very shelly sand
44	88.75	2.00	3- Clean sand
45	90.00	56.00	4- Lime Stone/Very shelly sand
46	91.25	19.00	3- Clean sand
47	92.50	19.00	4- Lime Stone/Very shelly sand
48	95.00	28.00	4- Lime Stone/Very shelly sand
49	96.25	7.00	3- Clean sand
50	97.50	7.00	4- Lime Stone/Very shelly sand
51	98.75	7.00	3- Clean sand
52	100.00	30.00	4- Lime Stone/Very shelly sand
53	102.50	14.00	4- Lime Stone/Very shelly sand
54	103.75	14.00	3- Clean sand
55	105.00	66.00	4- Lime Stone/Very shelly sand
56	106.25	25.00	3- Clean sand
57	107.50	25.00	4- Lime Stone/Very shelly sand
58	110.00	24.00	4- Lime Stone/Very shelly sand
59	111.25	24.00	3- Clean sand
60	112.50	56.00	4- Lime Stone/Very shelly sand
61	113.75	11.00	3- Clean sand
62	115.00	11.00	4- Lime Stone/Very shelly sand
63	117.50	14.00	4- Lime Stone/Very shelly sand
64	120.00	18.00	4- Lime Stone/Very shelly sand
65	122.50	18.00	4- Lime Stone/Very shelly sand

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66	125.00	18.00	4- Lime Stone/Very shelly sand
67	127.50	24.00	4- Lime Stone/Very shelly sand
68	130.00	25.00	4- Lime Stone/Very shelly sand
69	131.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	61.80	58.80	3.00	7.00	3-Clean Sand
2	58.80	57.80	1.00	4.00	2-Clay and Silty Sand
3	57.80	54.80	3.00	4.00	3-Clean Sand
4	54.80	53.80	1.00	4.00	2-Clay and Silty Sand
5	53.80	51.80	2.00	7.00	3-Clean Sand
6	51.80	44.30	7.50	8.67	2-Clay and Silty Sand
7	44.30	36.80	7.50	9.00	1-Plastic Clay
8	36.80	21.80	15.00	9.67	2-Clay and Silty Sand
9	21.80	16.80	5.00	6.50	3-Clean Sand
10	16.80	14.30	2.50	5.00	2-Clay and Silty Sand
11	14.30	11.80	2.50	6.00	1-Plastic Clay
12	11.80	10.55	1.25	7.00	2-Clay and Silty Sand
13	10.55	9.30	1.25	7.00	3-Clean Sand
14	9.30	5.55	3.75	99.00	2-Clay and Silty Sand
15	5.55	4.30	1.25	26.00	3-Clean Sand
16	4.30	1.80	2.50	26.00	2-Clay and Silty Sand
17	1.80	-0.70	2.50	99.00	1-Plastic Clay
18	-0.70	-4.45	3.75	19.00	2-Clay and Silty Sand
19	-4.45	-5.70	1.25	17.00	3-Clean Sand
20	-5.70	-16.95	11.25	99.00	2-Clay and Silty Sand
21	-16.95	-18.20	1.25	0.00	3-Clean Sand
22	-18.20	-20.70	2.50	0.00	2-Clay and Silty Sand
23	-20.70	-26.95	6.25	1.20	4-Limestone, Very
Shelly Sand					
24	-26.95	-28.20	1.25	2.00	3-Clean Sand
25	-28.20	-29.45	1.25	56.00	4-Limestone, Very
Shelly Sand					
26	-29.45	-30.70	1.25	19.00	3-Clean Sand
27	-30.70	-34.45	3.75	22.00	4-Limestone, Very
Shelly Sand					
28	-34.45	-35.70	1.25	7.00	3-Clean Sand
29	-35.70	-36.95	1.25	7.00	4-Limestone, Very
Shelly Sand					

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30	-36.95	-38.20	1.25	7.00	3-Clean Sand
31	-38.20	-41.95	3.75	24.67	4-Limestone, Very
Shelly Sand					
32	-41.95	-43.20	1.25	14.00	3-Clean Sand
33	-43.20	-44.45	1.25	66.00	4-Limestone, Very
Shelly Sand					
34	-44.45	-45.70	1.25	25.00	3-Clean Sand
35	-45.70	-49.45	3.75	24.67	4-Limestone, Very
Shelly Sand					
36	-49.45	-50.70	1.25	24.00	3-Clean Sand
37	-50.70	-51.95	1.25	56.00	4-Limestone, Very
Shelly Sand					
38	-51.95	-53.20	1.25	11.00	3-Clean Sand
39	-53.20	-69.20	16.00	17.66	4-Limestone, Very
Shelly Sand					
40	-69.20	-69.20	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	51.80
18.00	12.00	49.80
18.00	14.00	47.80
18.00	16.00	45.80
18.00	18.00	43.80
18.00	20.00	41.80
18.00	22.00	39.80
18.00	24.00	37.80
18.00	26.00	35.80
18.00	28.00	33.80
18.00	30.00	31.80
18.00	32.00	29.80
18.00	34.00	27.80
18.00	36.00	25.80
18.00	38.00	23.80
18.00	40.00	21.80
18.00	42.00	19.80
18.00	44.00	17.80
18.00	46.00	15.80
18.00	48.00	13.80
18.00	50.00	11.80

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18.00	52.00	9.80
18.00	54.00	7.80
18.00	56.00	5.80
18.00	58.00	3.80
18.00	60.00	1.80
18.00	62.00	-0.20
18.00	64.00	-2.20
18.00	66.00	-4.20
18.00	68.00	-6.20
18.00	70.00	-8.20
18.00	72.00	-10.20
18.00	74.00	-12.20
18.00	76.00	-14.20
18.00	78.00	-16.20
18.00	80.00	-18.20
18.00	82.00	-20.20
18.00	84.00	-22.20
18.00	86.00	-24.20
18.00	88.00	-26.20
18.00	90.00	-28.20
18.00	92.00	-30.20
18.00	94.00	-32.20
18.00	96.00	-34.20
18.00	98.00	-36.20
18.00	100.00	-38.20
18.00	102.00	-40.20
18.00	104.00	-42.20
18.00	106.00	-44.20
18.00	108.00	-46.20
18.00	110.00	-48.20
18.00	112.00	-50.20
18.00	114.00	-52.20
18.00	116.00	-54.20
18.00	118.00	-56.20
18.00	120.00	-58.20
18.00	122.00	-60.20
18.00	124.00	-62.20
18.00	126.00	-64.20
18.00	128.00	-66.20
18.00	130.00	-68.20

Driven Pile Capacity:

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Test	Pile	Ultimate	Mobilized	Estimated	Allowable	Ultimate
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Pile Length (ft)	Width (in)	Side Friction (tons)	End Bearing (tons)	Davisson Capacity (tons)	Pile Capacity (tons)	Pile Capacity (tons)
10.00	18.0	6.26	11.23	17.49	8.74	39.95
12.00	18.0	11.09	11.46	22.55	11.27	45.47
14.00	18.0	17.21	10.89	28.10	14.05	49.89
16.00	18.0	23.31	10.01	33.32	16.66	53.34
18.00	18.0	28.41	5.66	34.07	17.04	45.40
20.00	18.0	35.02	7.92	42.94	21.47	58.79
22.00	18.0	42.48	10.51	53.00	26.50	74.02
24.00	18.0	48.54	12.48	61.03	30.51	85.99
26.00	18.0	57.48	13.61	71.09	35.55	98.31
28.00	18.0	65.00	13.36	78.36	39.18	105.07
30.00	18.0	72.09	13.24	85.33	42.67	111.81
32.00	18.0	78.76	12.66	91.42	45.71	116.75
34.00	18.0	84.72	12.59	97.31	48.66	122.50
36.00	18.0	89.37	14.17	103.55	51.77	131.89
38.00	18.0	92.98	15.54	108.51	54.26	139.59
40.00	18.0	95.34	14.75	110.10	55.05	139.60
42.00	18.0	97.15	12.38	109.53	54.77	134.28
44.00	18.0	99.44	10.29	109.73	54.86	130.31
46.00	18.0	102.58	6.82	109.40	54.70	123.04
48.00	18.0	106.93	17.44	124.37	62.18	159.24
50.00	18.0	111.68	32.22	143.90	71.95	208.35
52.00	18.0	115.91	39.55	155.46	77.73	234.56
54.00	18.0	131.05	39.65	170.70	85.35	250.01
56.00	18.0	145.09	36.37	181.46	90.73	254.20
58.00	18.0	155.71	32.89	188.59	94.30	254.37
60.00	18.0	171.95	29.02	200.97	100.48	259.00
62.00	18.0	185.79	32.03	217.82	108.91	281.87
64.00	18.0	197.23	45.89	243.13	121.56	334.91
66.00	18.0	204.67	50.70	255.37	127.68	356.76
68.00	18.0	218.05	56.21	274.26	137.13	386.67
70.00	18.0	233.40	56.82	290.23	145.11	403.87
72.00	18.0	247.85	59.61	307.46	153.73	426.69
74.00	18.0	264.09	56.45	320.53	160.27	433.42
76.00	18.0	279.80	46.33	326.13	163.06	418.79
78.00	18.0	294.73	36.44	331.17	165.58	404.04
80.00	18.0	297.58	30.38	327.95	163.98	388.70
82.00	18.0	297.58	24.38	321.95	160.98	370.70
84.00	18.0	297.58	19.92	317.50	158.75	357.33
86.00	18.0	297.58	27.60	325.18	162.59	380.38
88.00	18.0	297.58	33.98	331.56	165.78	399.52
90.00	18.0	299.83	45.85	345.67	172.84	437.37
92.00	18.0	305.49	59.93	365.42	182.71	485.28
94.00	18.0	308.74	39.77	348.51	174.26	428.06
96.00	18.0	311.76	43.98	355.74	177.87	443.71

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98.00	18.0	313.85	53.95	367.80	183.90	475.70
100.00	18.0	316.51	68.26	384.77	192.39	521.29
102.00	18.0	319.80	69.41	389.21	194.61	528.04
104.00	18.0	323.02	75.97	398.99	199.50	550.93
106.00	18.0	329.55	72.63	402.18	201.09	547.44
108.00	18.0	334.71	78.47	413.18	206.59	570.13
110.00	18.0	338.37	77.48	415.85	207.92	570.81
112.00	18.0	344.19	72.58	416.77	208.39	561.93
114.00	18.0	349.56	38.48	388.05	194.02	465.01
116.00	18.0	351.52	66.73	418.25	209.13	551.72
118.00	18.0	353.54	64.92	418.46	209.23	548.29
120.00	18.0	355.98	63.82	419.80	209.90	547.43
122.00	18.0	358.66	63.94	422.60	211.30	550.49
124.00	18.0	361.34	65.93	427.27	213.63	559.13
126.00	18.0	*****	Not enough soil data	*****		
128.00	18.0	0.00	0.00	0.00	0.00	0.00
130.00	18.0	0.00	0.00	0.00	0.00	0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:culations-Analyses\FB-Deep\Wildlife No 1\WL1-B34_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-17-14, Boring Number: WL1-B34
 Station number: 680+22 Offset: 33 LT

Ground Elevation: 61.400(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	3.00	3- Clean sand
2	2.00	3.00	3- Clean sand
3	4.00	2.00	3- Clean sand
4	6.00	5.00	2- Clay and silty sand
5	8.00	5.00	2- Clay and silty sand
6	10.00	7.00	2- Clay and silty sand
7	12.50	11.00	2- Clay and silty sand
8	15.00	9.00	2- Clay and silty sand
9	17.50	8.00	2- Clay and silty sand
10	18.75	3.00	3- Clean sand
11	20.00	3.00	2- Clay and silty sand
12	21.25	3.00	3- Clean sand
13	22.50	8.00	2- Clay and silty sand
14	25.00	11.00	1- Plastic Clay
15	27.50	4.00	3- Clean sand
16	28.75	4.00	2- Clay and silty sand
17	30.00	8.00	3- Clean sand

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18	32.50	11.00	3- Clean sand
19	33.75	11.00	2- Clay and silty sand
20	35.00	25.00	3- Clean sand
21	37.50	22.00	3- Clean sand
22	40.00	3.00	1- Plastic Clay
23	42.50	1.00	1- Plastic Clay
24	45.00	1.00	1- Plastic Clay
25	47.50	3.00	1- Plastic Clay
26	50.00	55.00	2- Clay and silty sand
27	52.50	52.00	2- Clay and silty sand
28	55.00	99.00	2- Clay and silty sand
29	57.50	53.00	2- Clay and silty sand
30	58.75	17.00	3- Clean sand
31	60.00	17.00	2- Clay and silty sand
32	62.50	13.00	2- Clay and silty sand
33	63.75	13.00	3- Clean sand
34	65.00	47.00	2- Clay and silty sand
35	67.50	57.00	2- Clay and silty sand
36	70.00	99.00	1- Plastic Clay
37	72.50	99.00	1- Plastic Clay
38	75.00	32.00	3- Clean sand
39	76.25	32.00	2- Clay and silty sand
40	77.50	77.00	3- Clean sand
41	80.00	4.00	4- Lime Stone/Very shelly sand
42	81.25	4.00	3- Clean sand
43	82.50	14.00	4- Lime Stone/Very shelly sand
44	85.00	27.00	4- Lime Stone/Very shelly sand
45	87.50	17.00	4- Lime Stone/Very shelly sand
46	90.00	2.00	1- Plastic Clay
47	92.50	4.00	1- Plastic Clay
48	95.00	99.00	4- Lime Stone/Very shelly sand
49	97.50	99.00	4- Lime Stone/Very shelly sand
50	98.75	30.00	3- Clean sand
51	100.00	30.00	4- Lime Stone/Very shelly sand
52	101.25	30.00	3- Clean sand
53	102.50	65.00	4- Lime Stone/Very shelly sand
54	103.75	30.00	3- Clean sand
55	105.00	30.00	4- Lime Stone/Very shelly sand
56	107.50	22.00	4- Lime Stone/Very shelly sand
57	110.00	16.00	4- Lime Stone/Very shelly sand
58	112.50	12.00	4- Lime Stone/Very shelly sand
59	113.75	12.00	3- Clean sand
60	115.00	38.00	4- Lime Stone/Very shelly sand
61	117.50	20.00	4- Lime Stone/Very shelly sand
62	120.00	20.00	4- Lime Stone/Very shelly sand
63	122.50	21.00	4- Lime Stone/Very shelly sand
64	125.00	22.00	4- Lime Stone/Very shelly sand
65	127.50	17.00	4- Lime Stone/Very shelly sand

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66	130.00	16.00	4- Lime Stone/Very shelly sand
67	132.50	28.00	4- Lime Stone/Very shelly sand
68	135.00	34.00	4- Lime Stone/Very shelly sand
69	136.25	34.00	3- Clean sand
70	137.50	99.00	4- Lime Stone/Very shelly sand
71	138.75	25.00	3- Clean sand
72	140.00	25.00	4- Lime Stone/Very shelly sand
73	141.25	25.00	3- Clean sand
74	142.50	99.00	4- Lime Stone/Very shelly sand
75	145.00	99.00	4- Lime Stone/Very shelly sand
76	147.50	99.00	4- Lime Stone/Very shelly sand
77	150.00	99.00	4- Lime Stone/Very shelly sand
78	151.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	61.40	55.40	6.00	2.67	3-Clean Sand
2	55.40	42.65	12.75	7.65	2-Clay and Silty Sand
3	42.65	41.40	1.25	3.00	3-Clean Sand
4	41.40	40.15	1.25	3.00	2-Clay and Silty Sand
5	40.15	38.90	1.25	3.00	3-Clean Sand
6	38.90	36.40	2.50	8.00	2-Clay and Silty Sand
7	36.40	33.90	2.50	11.00	1-Plastic Clay
8	33.90	32.65	1.25	4.00	3-Clean Sand
9	32.65	31.40	1.25	4.00	2-Clay and Silty Sand
10	31.40	27.65	3.75	9.00	3-Clean Sand
11	27.65	26.40	1.25	11.00	2-Clay and Silty Sand
12	26.40	21.40	5.00	23.50	3-Clean Sand
13	21.40	11.40	10.00	2.00	1-Plastic Clay
14	11.40	2.65	8.75	66.43	2-Clay and Silty Sand
15	2.65	1.40	1.25	17.00	3-Clean Sand
16	1.40	-2.35	3.75	15.67	2-Clay and Silty Sand
17	-2.35	-3.60	1.25	13.00	3-Clean Sand
18	-3.60	-8.60	5.00	52.00	2-Clay and Silty Sand
19	-8.60	-13.60	5.00	99.00	1-Plastic Clay
20	-13.60	-14.85	1.25	32.00	3-Clean Sand
21	-14.85	-16.10	1.25	32.00	2-Clay and Silty Sand
22	-16.10	-18.60	2.50	77.00	3-Clean Sand
23	-18.60	-19.85	1.25	4.00	4-Limestone, Very

Shelly Sand

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24	-19.85	-21.10	1.25	4.00	3-Clean Sand
25	-21.10	-28.60	7.50	19.33	4-Limestone, Very
Shelly Sand					
26	-28.60	-33.60	5.00	3.00	1-Plastic Clay
27	-33.60	-37.35	3.75	99.00	4-Limestone, Very
Shelly Sand					
28	-37.35	-38.60	1.25	30.00	3-Clean Sand
29	-38.60	-39.85	1.25	30.00	4-Limestone, Very
Shelly Sand					
30	-39.85	-41.10	1.25	30.00	3-Clean Sand
31	-41.10	-42.35	1.25	65.00	4-Limestone, Very
Shelly Sand					
32	-42.35	-43.60	1.25	30.00	3-Clean Sand
33	-43.60	-52.35	8.75	21.14	4-Limestone, Very
Shelly Sand					
34	-52.35	-53.60	1.25	12.00	3-Clean Sand
35	-53.60	-74.85	21.25	23.41	4-Limestone, Very
Shelly Sand					
36	-74.85	-76.10	1.25	34.00	3-Clean Sand
37	-76.10	-77.35	1.25	99.00	4-Limestone, Very
Shelly Sand					
38	-77.35	-78.60	1.25	25.00	3-Clean Sand
39	-78.60	-79.85	1.25	25.00	4-Limestone, Very
Shelly Sand					
40	-79.85	-81.10	1.25	25.00	3-Clean Sand
41	-81.10	-89.60	8.50	99.00	4-Limestone, Very
Shelly Sand					
42	-89.60	-89.60	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	51.40
18.00	12.00	49.40
18.00	14.00	47.40
18.00	16.00	45.40
18.00	18.00	43.40
18.00	20.00	41.40
18.00	22.00	39.40
18.00	24.00	37.40
18.00	26.00	35.40

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18.00	28.00	33.40
18.00	30.00	31.40
18.00	32.00	29.40
18.00	34.00	27.40
18.00	36.00	25.40
18.00	38.00	23.40
18.00	40.00	21.40
18.00	42.00	19.40
18.00	44.00	17.40
18.00	46.00	15.40
18.00	48.00	13.40
18.00	50.00	11.40
18.00	52.00	9.40
18.00	54.00	7.40
18.00	56.00	5.40
18.00	58.00	3.40
18.00	60.00	1.40
18.00	62.00	-0.60
18.00	64.00	-2.60
18.00	66.00	-4.60
18.00	68.00	-6.60
18.00	70.00	-8.60
18.00	72.00	-10.60
18.00	74.00	-12.60
18.00	76.00	-14.60
18.00	78.00	-16.60
18.00	80.00	-18.60
18.00	82.00	-20.60
18.00	84.00	-22.60
18.00	86.00	-24.60
18.00	88.00	-26.60
18.00	90.00	-28.60
18.00	92.00	-30.60
18.00	94.00	-32.60
18.00	96.00	-34.60
18.00	98.00	-36.60
18.00	100.00	-38.60
18.00	102.00	-40.60
18.00	104.00	-42.60
18.00	106.00	-44.60
18.00	108.00	-46.60
18.00	110.00	-48.60
18.00	112.00	-50.60
18.00	114.00	-52.60
18.00	116.00	-54.60
18.00	118.00	-56.60
18.00	120.00	-58.60
18.00	122.00	-60.60

WL1-B34_18-PCP.txt

18.00	124.00	-62.60
18.00	126.00	-64.60
18.00	128.00	-66.60
18.00	130.00	-68.60
18.00	132.00	-70.60
18.00	134.00	-72.60
18.00	136.00	-74.60
18.00	138.00	-76.60
18.00	140.00	-78.60
18.00	142.00	-80.60
18.00	144.00	-82.60
18.00	146.00	-84.60
18.00	148.00	-86.60
18.00	150.00	-88.60

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	6.93	7.76	14.69	7.34	30.20
12.00	18.0	11.52	9.76	21.28	10.64	40.80
14.00	18.0	17.69	9.09	26.78	13.39	44.96
16.00	18.0	23.39	7.64	31.02	15.51	46.30
18.00	18.0	28.45	7.59	36.04	18.02	51.22
20.00	18.0	32.62	8.46	41.07	20.54	57.99
22.00	18.0	33.20	8.25	41.45	20.73	57.96
24.00	18.0	38.74	6.32	45.07	22.53	57.71
26.00	18.0	44.88	6.36	51.24	25.62	63.96
28.00	18.0	47.33	10.14	57.47	28.73	77.74
30.00	18.0	48.04	19.23	67.27	33.63	105.72
32.00	18.0	49.80	20.75	70.55	35.27	112.05
34.00	18.0	55.38	35.08	90.46	45.23	160.62
36.00	18.0	62.33	28.47	90.80	45.40	147.75
38.00	18.0	68.58	20.84	89.43	44.71	131.11
40.00	18.0	71.07	0.00	71.07	35.54	71.07
42.00	18.0	71.07	0.00	71.07	35.54	71.07
44.00	18.0	71.07	4.20	75.27	37.64	83.67
46.00	18.0	71.07	17.14	88.21	44.11	122.50
48.00	18.0	71.39	30.74	102.13	51.06	163.61
50.00	18.0	80.89	41.93	122.82	61.41	206.69
52.00	18.0	95.51	43.20	138.71	69.36	225.12

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54.00	18.0	109.21	46.79	156.00	78.00	249.57
56.00	18.0	125.62	46.68	172.30	86.15	265.67
58.00	18.0	140.80	43.36	184.16	92.08	270.89
60.00	18.0	150.78	33.80	184.58	92.29	252.19
62.00	18.0	159.09	35.04	194.13	97.07	264.21
64.00	18.0	166.10	57.95	224.05	112.02	339.94
66.00	18.0	179.46	51.53	230.99	115.50	334.06
68.00	18.0	195.24	44.66	239.90	119.95	329.22
70.00	18.0	212.31	49.48	261.79	130.89	360.75
72.00	18.0	230.28	49.05	279.32	139.66	377.42
74.00	18.0	244.33	62.70	307.03	153.51	432.43
76.00	18.0	257.29	58.03	315.32	157.66	431.38
78.00	18.0	269.49	43.32	312.80	156.40	399.44
80.00	18.0	276.44	42.49	318.93	159.46	403.90
82.00	18.0	276.66	58.12	334.78	167.39	451.02
84.00	18.0	279.09	59.92	339.00	169.50	458.84
86.00	18.0	282.76	47.85	330.61	165.30	426.30
88.00	18.0	285.56	36.22	321.78	160.89	394.22
90.00	18.0	286.58	46.29	332.86	166.43	425.43
92.00	18.0	286.58	51.43	338.00	169.00	440.86
94.00	18.0	288.00	79.34	367.34	183.67	526.02
96.00	18.0	294.68	89.91	384.59	192.29	564.42
98.00	18.0	301.94	91.03	392.96	196.48	575.02
100.00	18.0	309.02	93.55	402.58	201.29	589.68
102.00	18.0	316.07	96.45	412.53	206.26	605.44
104.00	18.0	323.85	83.40	407.24	203.62	574.04
106.00	18.0	328.88	74.94	403.81	201.91	553.69
108.00	18.0	332.55	67.91	400.45	200.23	536.27
110.00	18.0	335.28	66.00	401.28	200.64	533.28
112.00	18.0	337.43	71.43	408.86	204.43	551.73
114.00	18.0	339.96	80.48	420.44	210.22	581.41
116.00	18.0	344.57	82.70	427.27	213.63	592.67
118.00	18.0	348.47	80.19	428.66	214.33	589.04
120.00	18.0	351.45	76.23	427.67	213.84	580.13
122.00	18.0	354.48	73.69	428.17	214.09	575.56
124.00	18.0	357.64	70.05	427.68	213.84	567.78
126.00	18.0	360.82	67.39	428.21	214.11	562.99
128.00	18.0	363.51	69.82	433.34	216.67	572.99
130.00	18.0	365.95	77.71	443.67	221.83	599.09
132.00	18.0	369.05	86.74	455.79	227.90	629.28
134.00	18.0	373.37	92.04	465.42	232.71	649.51
136.00	18.0	379.25	89.61	468.86	234.43	648.08
138.00	18.0	387.13	102.88	490.01	245.01	695.77
140.00	18.0	393.48	111.70	505.18	252.59	728.57
142.00	18.0	399.40	123.05	522.45	261.22	768.54
144.00	18.0	406.51	132.20	538.72	269.36	803.12
146.00	18.0	*****	Not enough soil data	*****		
148.00	18.0	0.00	0.00	0.00	0.00	0.00

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150.00 18.0 0.00 0.00 0.00 0.00 0.00

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

General Information:

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Input file:lculations-Analyses\FB-Deep\Wildlife No 1\WL1-B35_18&24PCP.spc
 Project number: H1135080
 Job name: Wekiva Parkway Section 6 - Wildlife Crossing No. 1
 Engineer: EJ
 Units: English

Analysis Information:

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Analysis Type: SPT

Soil Information:

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Boring date: 3-10-14, Boring Number: WL1-B35
 Station number: 680+01 Offset: 50 RT

Ground Elevation: 60.000(ft)

Hammer type: Automatic Hammer, Correction factor = 1.24

ID	Depth (ft)	No. of Blows (Blows/ft)	Soil Type
1	0.00	3.00	3- Clean sand
2	2.00	3.00	3- Clean sand
3	4.00	3.00	3- Clean sand
4	6.00	4.00	2- Clay and silty sand
5	8.00	4.00	2- Clay and silty sand
6	10.00	4.00	2- Clay and silty sand
7	11.25	4.00	3- Clean sand
8	12.50	5.00	2- Clay and silty sand
9	15.00	6.00	2- Clay and silty sand
10	17.50	9.00	2- Clay and silty sand
11	20.00	6.00	1- Plastic Clay
12	22.50	7.00	2- Clay and silty sand
13	23.75	2.00	3- Clean sand
14	25.00	2.00	2- Clay and silty sand
15	27.50	4.00	2- Clay and silty sand
16	30.00	4.00	2- Clay and silty sand
17	32.50	3.00	2- Clay and silty sand

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18	35.00	7.00	3- Clean sand
19	37.50	6.00	1- Plastic Clay
20	40.00	1.00	2- Clay and silty sand
21	42.50	1.00	2- Clay and silty sand
22	45.00	0.00	2- Clay and silty sand
23	47.50	0.00	2- Clay and silty sand
24	50.00	2.00	2- Clay and silty sand
25	52.50	2.00	2- Clay and silty sand
26	55.00	4.00	2- Clay and silty sand
27	56.25	4.00	3- Clean sand
28	57.50	10.00	2- Clay and silty sand
29	58.75	3.00	3- Clean sand
30	60.00	3.00	2- Clay and silty sand
31	61.25	3.00	3- Clean sand
32	62.50	7.00	2- Clay and silty sand
33	63.75	7.00	3- Clean sand
34	65.00	99.00	2- Clay and silty sand
35	66.25	12.00	3- Clean sand
36	67.50	12.00	2- Clay and silty sand
37	70.00	99.00	4- Lime Stone/Very shelly sand
38	72.50	99.00	4- Lime Stone/Very shelly sand
39	75.00	99.00	4- Lime Stone/Very shelly sand
40	77.50	6.00	3- Clean sand
41	80.00	0.00	4- Lime Stone/Very shelly sand
42	82.50	4.00	4- Lime Stone/Very shelly sand
43	83.75	4.00	3- Clean sand
44	85.00	6.00	4- Lime Stone/Very shelly sand
45	87.50	5.00	4- Lime Stone/Very shelly sand
46	88.75	5.00	3- Clean sand
47	90.00	22.00	4- Lime Stone/Very shelly sand
48	92.50	7.00	1- Plastic Clay
49	93.75	2.00	2- Clay and silty sand
50	95.00	2.00	1- Plastic Clay
51	97.50	15.00	4- Lime Stone/Very shelly sand
52	100.00	15.00	4- Lime Stone/Very shelly sand
53	102.50	30.00	4- Lime Stone/Very shelly sand
54	105.00	20.00	4- Lime Stone/Very shelly sand
55	106.25	0.00	3- Clean sand
56	107.50	0.00	4- Lime Stone/Very shelly sand
57	108.75	0.00	3- Clean sand
58	110.00	5.00	4- Lime Stone/Very shelly sand
59	112.50	18.00	4- Lime Stone/Very shelly sand
60	113.75	18.00	3- Clean sand
61	115.00	99.00	4- Lime Stone/Very shelly sand
62	116.25	12.00	3- Clean sand
63	117.50	12.00	4- Lime Stone/Very shelly sand
64	120.00	12.00	4- Lime Stone/Very shelly sand
65	122.50	20.00	4- Lime Stone/Very shelly sand

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66	125.00	20.00	4- Lime Stone/Very shelly sand
67	127.50	16.00	4- Lime Stone/Very shelly sand
68	128.75	16.00	3- Clean sand
69	130.00	58.00	4- Lime Stone/Very shelly sand
70	131.25	14.00	3- Clean sand
71	132.50	14.00	4- Lime Stone/Very shelly sand
72	133.75	0.00	3- Clean sand
73	135.00	0.00	4- Lime Stone/Very shelly sand
74	137.50	0.00	4- Lime Stone/Very shelly sand
75	140.00	0.00	4- Lime Stone/Very shelly sand
76	141.25	0.00	3- Clean sand
77	142.50	99.00	4- Lime Stone/Very shelly sand
78	145.00	99.00	4- Lime Stone/Very shelly sand
79	147.50	99.00	4- Lime Stone/Very shelly sand
80	150.00	99.00	4- Lime Stone/Very shelly sand
81	151.00	0.00	5- Cavity layer

Blowcount Average Per Soil Layer

Layer Num.	Starting Elevation (ft)	Bottom Elevation (ft)	Thickness (ft)	Average Blowcount (Blows/ft)	Soil Type
1	60.00	54.00	6.00	3.00	3-Clean Sand
2	54.00	48.75	5.25	4.00	2-Clay and Silty Sand
3	48.75	47.50	1.25	4.00	3-Clean Sand
4	47.50	40.00	7.50	6.67	2-Clay and Silty Sand
5	40.00	37.50	2.50	6.00	1-Plastic Clay
6	37.50	36.25	1.25	7.00	2-Clay and Silty Sand
7	36.25	35.00	1.25	2.00	3-Clean Sand
8	35.00	25.00	10.00	3.25	2-Clay and Silty Sand
9	25.00	22.50	2.50	7.00	3-Clean Sand
10	22.50	20.00	2.50	6.00	1-Plastic Clay
11	20.00	3.75	16.25	1.23	2-Clay and Silty Sand
12	3.75	2.50	1.25	4.00	3-Clean Sand
13	2.50	1.25	1.25	10.00	2-Clay and Silty Sand
14	1.25	0.00	1.25	3.00	3-Clean Sand
15	0.00	-1.25	1.25	3.00	2-Clay and Silty Sand
16	-1.25	-2.50	1.25	3.00	3-Clean Sand
17	-2.50	-3.75	1.25	7.00	2-Clay and Silty Sand
18	-3.75	-5.00	1.25	7.00	3-Clean Sand
19	-5.00	-6.25	1.25	99.00	2-Clay and Silty Sand
20	-6.25	-7.50	1.25	12.00	3-Clean Sand
21	-7.50	-10.00	2.50	12.00	2-Clay and Silty Sand

WL1-B35_18-PCP.txt					
22	-10.00	-17.50	7.50	99.00	4-Limestone, Very
Shelly Sand					
23	-17.50	-20.00	2.50	6.00	3-Clean Sand
24	-20.00	-23.75	3.75	1.33	4-Limestone, Very
Shelly Sand					
25	-23.75	-25.00	1.25	4.00	3-Clean Sand
26	-25.00	-28.75	3.75	5.67	4-Limestone, Very
Shelly Sand					
27	-28.75	-30.00	1.25	5.00	3-Clean Sand
28	-30.00	-32.50	2.50	22.00	4-Limestone, Very
Shelly Sand					
29	-32.50	-33.75	1.25	7.00	1-Plastic Clay
30	-33.75	-35.00	1.25	2.00	2-Clay and Silty Sand
31	-35.00	-37.50	2.50	2.00	1-Plastic Clay
32	-37.50	-46.25	8.75	20.00	4-Limestone, Very
Shelly Sand					
33	-46.25	-47.50	1.25	0.00	3-Clean Sand
34	-47.50	-48.75	1.25	0.00	4-Limestone, Very
Shelly Sand					
35	-48.75	-50.00	1.25	0.00	3-Clean Sand
36	-50.00	-53.75	3.75	9.33	4-Limestone, Very
Shelly Sand					
37	-53.75	-55.00	1.25	18.00	3-Clean Sand
38	-55.00	-56.25	1.25	99.00	4-Limestone, Very
Shelly Sand					
39	-56.25	-57.50	1.25	12.00	3-Clean Sand
40	-57.50	-68.75	11.25	16.00	4-Limestone, Very
Shelly Sand					
41	-68.75	-70.00	1.25	16.00	3-Clean Sand
42	-70.00	-71.25	1.25	58.00	4-Limestone, Very
Shelly Sand					
43	-71.25	-72.50	1.25	14.00	3-Clean Sand
44	-72.50	-73.75	1.25	14.00	4-Limestone, Very
Shelly Sand					
45	-73.75	-75.00	1.25	0.00	3-Clean Sand
46	-75.00	-81.25	6.25	0.00	4-Limestone, Very
Shelly Sand					
47	-81.25	-82.50	1.25	0.00	3-Clean Sand
48	-82.50	-91.00	8.50	99.00	4-Limestone, Very
Shelly Sand					
49	-91.00	-91.00	0.00	0.00	5-

Driven Pile Data:

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Pile unit weight = 150.00(pcf), Section Type: Square

Pile Geometry:

Width (in)	Length (ft)	Tip Elev. (ft)
18.00	10.00	50.00
18.00	12.00	48.00
18.00	14.00	46.00
18.00	16.00	44.00
18.00	18.00	42.00
18.00	20.00	40.00
18.00	22.00	38.00
18.00	24.00	36.00
18.00	26.00	34.00
18.00	28.00	32.00
18.00	30.00	30.00
18.00	32.00	28.00
18.00	34.00	26.00
18.00	36.00	24.00
18.00	38.00	22.00
18.00	40.00	20.00
18.00	42.00	18.00
18.00	44.00	16.00
18.00	46.00	14.00
18.00	48.00	12.00
18.00	50.00	10.00
18.00	52.00	8.00
18.00	54.00	6.00
18.00	56.00	4.00
18.00	58.00	2.00
18.00	60.00	0.00
18.00	62.00	-2.00
18.00	64.00	-4.00
18.00	66.00	-6.00
18.00	68.00	-8.00
18.00	70.00	-10.00
18.00	72.00	-12.00
18.00	74.00	-14.00
18.00	76.00	-16.00
18.00	78.00	-18.00
18.00	80.00	-20.00
18.00	82.00	-22.00
18.00	84.00	-24.00
18.00	86.00	-26.00
18.00	88.00	-28.00
18.00	90.00	-30.00
18.00	92.00	-32.00
18.00	94.00	-34.00
18.00	96.00	-36.00

WL1-B35_18-PCP.txt

18.00	98.00	-38.00
18.00	100.00	-40.00
18.00	102.00	-42.00
18.00	104.00	-44.00
18.00	106.00	-46.00
18.00	108.00	-48.00
18.00	110.00	-50.00
18.00	112.00	-52.00
18.00	114.00	-54.00
18.00	116.00	-56.00
18.00	118.00	-58.00
18.00	120.00	-60.00
18.00	122.00	-62.00
18.00	124.00	-64.00
18.00	126.00	-66.00
18.00	128.00	-68.00
18.00	130.00	-70.00
18.00	132.00	-72.00
18.00	134.00	-74.00
18.00	136.00	-76.00
18.00	138.00	-78.00
18.00	140.00	-80.00
18.00	142.00	-82.00
18.00	144.00	-84.00
18.00	146.00	-86.00
18.00	148.00	-88.00
18.00	150.00	-90.00

Driven Pile Capacity:

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Test Pile Length (ft)	Pile Width (in)	Ultimate Side Friction (tons)	Mobilized End Bearing (tons)	Estimated Davisson Capacity (tons)	Allowable Pile Capacity (tons)	Ultimate Pile Capacity (tons)
10.00	18.0	0.00	1.74	1.74	0.87	5.22
12.00	18.0	0.32	3.92	4.24	2.12	12.09
14.00	18.0	3.43	5.29	8.72	4.36	19.30
16.00	18.0	7.19	5.57	12.76	6.38	23.89
18.00	18.0	12.05	6.07	18.13	9.06	30.27
20.00	18.0	18.23	4.65	22.88	11.44	32.18
22.00	18.0	22.82	4.34	27.16	13.58	35.84
24.00	18.0	25.40	0.00	25.40	12.70	25.40
26.00	18.0	25.40	3.44	28.84	14.42	35.73

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28.00	18.0	25.40	2.89	28.30	14.15	34.09
30.00	18.0	25.40	4.47	29.88	14.94	38.83
32.00	18.0	25.40	6.33	31.73	15.87	44.39
34.00	18.0	25.80	5.82	31.62	15.81	43.26
36.00	18.0	27.89	3.56	31.45	15.73	38.57
38.00	18.0	31.25	1.12	32.37	16.18	34.60
40.00	18.0	33.59	0.00	33.59	16.80	33.59
42.00	18.0	33.59	0.00	33.59	16.80	33.59
44.00	18.0	33.59	0.00	33.59	16.80	33.59
46.00	18.0	33.59	0.00	33.59	16.80	33.59
48.00	18.0	33.59	0.00	33.59	16.80	33.59
50.00	18.0	33.59	0.00	33.59	16.80	33.59
52.00	18.0	33.59	0.57	34.16	17.08	35.29
54.00	18.0	33.59	1.77	35.36	17.68	38.91
56.00	18.0	33.59	1.77	35.36	17.68	38.91
58.00	18.0	36.66	2.20	38.86	19.43	43.25
60.00	18.0	37.55	10.41	47.96	23.98	68.78
62.00	18.0	38.02	16.15	54.17	27.08	86.47
64.00	18.0	41.43	25.75	67.18	33.59	118.67
66.00	18.0	50.78	41.20	91.99	45.99	174.40
68.00	18.0	57.62	72.89	130.51	65.25	276.28
70.00	18.0	65.05	98.04	163.09	81.55	359.17
72.00	18.0	72.25	97.67	169.93	84.96	365.27
74.00	18.0	79.45	82.75	162.20	81.10	327.70
76.00	18.0	86.10	65.87	151.97	75.99	283.71
78.00	18.0	88.79	4.54	93.33	46.67	102.41
80.00	18.0	89.68	3.34	93.02	46.51	99.70
82.00	18.0	89.68	3.75	93.42	46.71	100.92
84.00	18.0	89.69	39.25	128.94	64.47	207.44
86.00	18.0	90.39	34.78	125.16	62.58	194.72
88.00	18.0	91.20	23.44	114.64	57.32	161.52
90.00	18.0	93.12	19.28	112.40	56.20	150.97
92.00	18.0	96.00	21.37	117.37	58.69	160.11
94.00	18.0	100.10	14.35	114.45	57.22	143.15
96.00	18.0	100.29	30.84	131.13	65.57	192.81
98.00	18.0	102.02	43.84	145.86	72.93	233.54
100.00	18.0	103.82	46.59	150.41	75.21	243.59
102.00	18.0	107.16	45.02	152.18	76.09	242.22
104.00	18.0	111.48	32.86	144.35	72.17	210.07
106.00	18.0	114.01	30.53	144.54	72.27	205.61
108.00	18.0	114.05	37.77	151.82	75.91	227.36
110.00	18.0	114.28	55.26	169.54	84.77	280.07
112.00	18.0	115.71	56.14	171.85	85.92	284.12
114.00	18.0	119.51	54.81	174.32	87.16	283.95
116.00	18.0	124.73	56.22	180.95	90.47	293.39
118.00	18.0	128.05	44.78	172.83	86.41	262.38
120.00	18.0	129.50	47.45	176.95	88.47	271.84
122.00	18.0	131.24	52.45	183.69	91.85	288.58

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124.00	18.0	133.79	56.41	190.21	95.10	303.04	
126.00	18.0	135.98	68.91	204.89	102.45	342.71	
128.00	18.0	138.65	62.33	200.98	100.49	325.64	
130.00	18.0	145.72	40.37	186.08	93.04	266.81	
132.00	18.0	149.99	16.70	166.69	83.35	200.09	
134.00	18.0	151.74	0.00	151.74	75.87	151.74	
136.00	18.0	151.74	25.99	177.73	88.87	229.72	
138.00	18.0	151.74	33.10	184.84	92.42	251.04	
140.00	18.0	151.74	50.52	202.26	101.13	303.29	
142.00	18.0	152.50	84.41	236.91	118.46	405.74	
144.00	18.0	159.07	92.23	251.30	125.65	435.77	
146.00	18.0	***** Not enough soil data *****					
148.00	18.0	0.00	0.00	0.00	0.00	0.00	
150.00	18.0	0.00	0.00	0.00	0.00	0.00	

NOTES

1. MOBILIZED END BEARING IS 1/3 OF THE ORIGINAL RB-121 VALUES.
2. DAVISSON PILE CAPACITY IS AN ESTIMATE BASED ON FAILURE CRITERIA, AND EQUALS ULTIMATE SIDE FRICTION PLUS MOBILIZED END BEARING.
3. ALLOWABLE PILE CAPACITY IS 1/2 THE DAVISSON PILE CAPACITY.
4. ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 3 x THE MOBILIZED END BEARING.
EXCEPTION: FOR H-PILES TIPPED IN SAND OR LIMESTONE, THE ULTIMATE PILE CAPACITY IS ULTIMATE SIDE FRICTION PLUS 2 x THE MOBILIZED END BEARING.

APPENDIX C
SOIL BORING PROFILES
(Reported by NES for Line and Grade Study)

Z:\Roadways\GN\ad\Wekiva Parkway\TKINS Lake County\Bridges\Acad



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAMES	DATES
Drawn by:	AGA	5-15-12
Checked by:	GNN	5-15-12
Designed by:	N/A	N/A
Checked by:	N/A	N/A
Approved by:		

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	
COUNTY	FPID PROJECT NO.
LAKE	431081-3-32-01

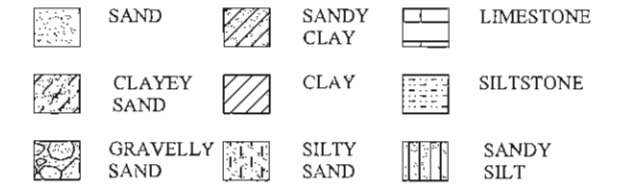
TITLE: BORING LOCATION MAP	
SR 429 over Wildlife Crossing No. 1 & Old McDonald	
PROJECT NAME:	SHEET NO.
WEKIVA PARKWAY LINE & GRADE - Lake County East Section	

NOTICE: The official record of this plan sheet is the electronic file signed and sealed under rule 61G15-23.003, F.A.C.

FIGURE 5A

SR 429 over Wildlife Crossing No. 1 and Old McDonald Road

LEGEND



- (SP) Unified soil classification group symbol
- ▽ Estimated seasonal high groundwater level
- GNE Groundwater not encountered in top 10 feet
- 115.0' Depth to which NW casing was driven in feet
- 100% Percent Loss of Circulation of Drilling Fluid
- Undisturbed Sample (Shelby Tube)

- W = Natural moisture content (%) (FM 1-T 265)
- 200 = Percent passing no. 200 U.S. standard sieve (%) (FM1-T 088)
- LL = Liquid Limit (%) (FM 1-T 089)
- PI = Plasticity Index (%) (FM 1-T 090)
- p_d = Dry Density (pcf)
- C_c = Compression Index
- e_o = Initial Void Ratio

- N Standard penetration resistance in blows per foot
- Standard Penetration Test Data
- | | |
|--------------------------------|-----------|
| Spoon Inside Dia. | 1 3/8 in. |
| Spoon Outside Dia. | 2 in. |
| ASTM Standard Automatic Hammer | |
| Avg. Hammer Drop | 30 in. |
| Hammer Weight | 140 lbs. |

NOTES

- Plan view is preliminary for showing boring locations only and may not be indicative of final plans.
- Subsurface variations between borings should be anticipated as indicated in Section 2-4 of the Standard Specifications.

GRANULAR MATERIALS

RELATIVE DENSITY	SPT (BLOWS/FT.)
Very loose	Less than 3
Loose	3-7
Medium Dense	7-21
Dense	21-35
Very Dense	

SILTS AND CLAYS

CONSISTENCY	SPT (BLOWS/FT.)
Very soft	Less than 1
Soft	1-3
Firm	3-6
Stiff	6-11
Very Stiff	11-21
Hard	

ENVIRONMENTAL CLASSIFICATION

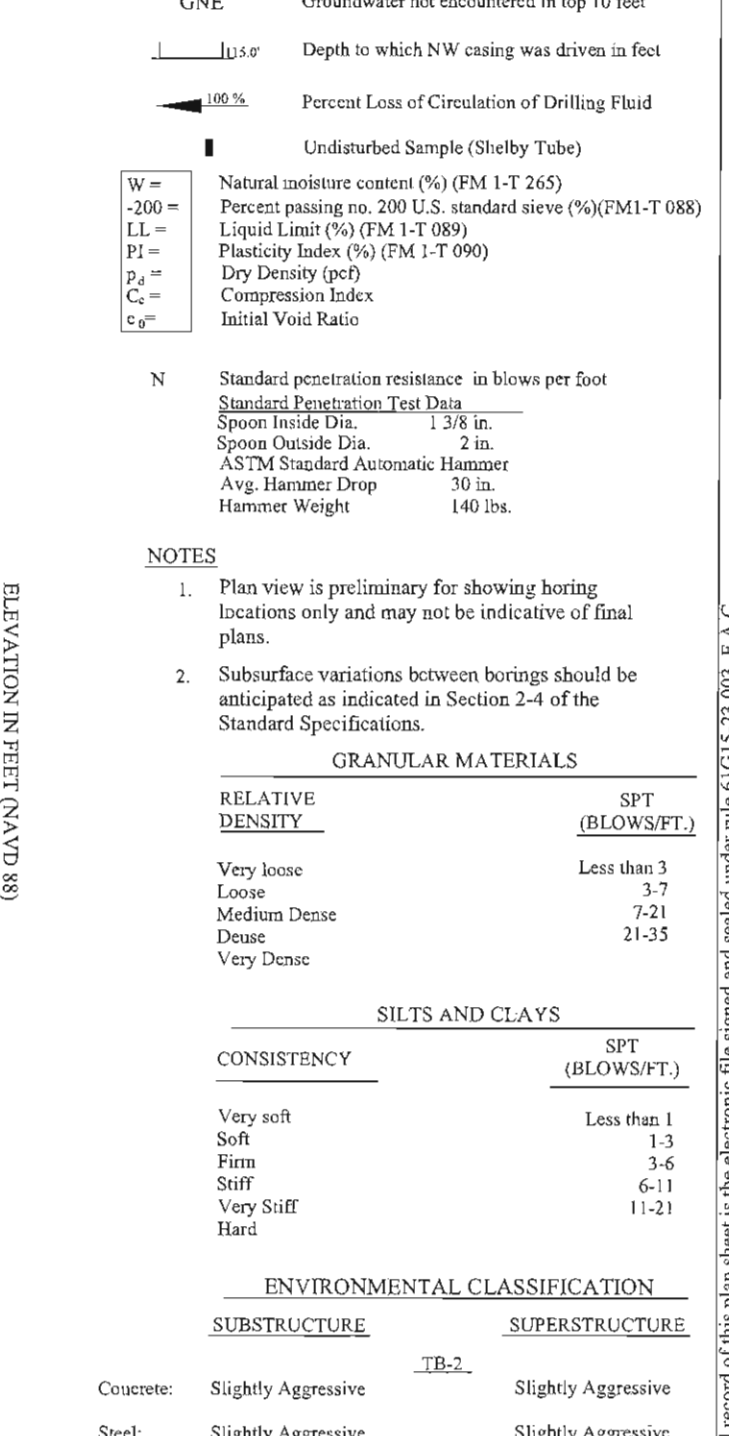
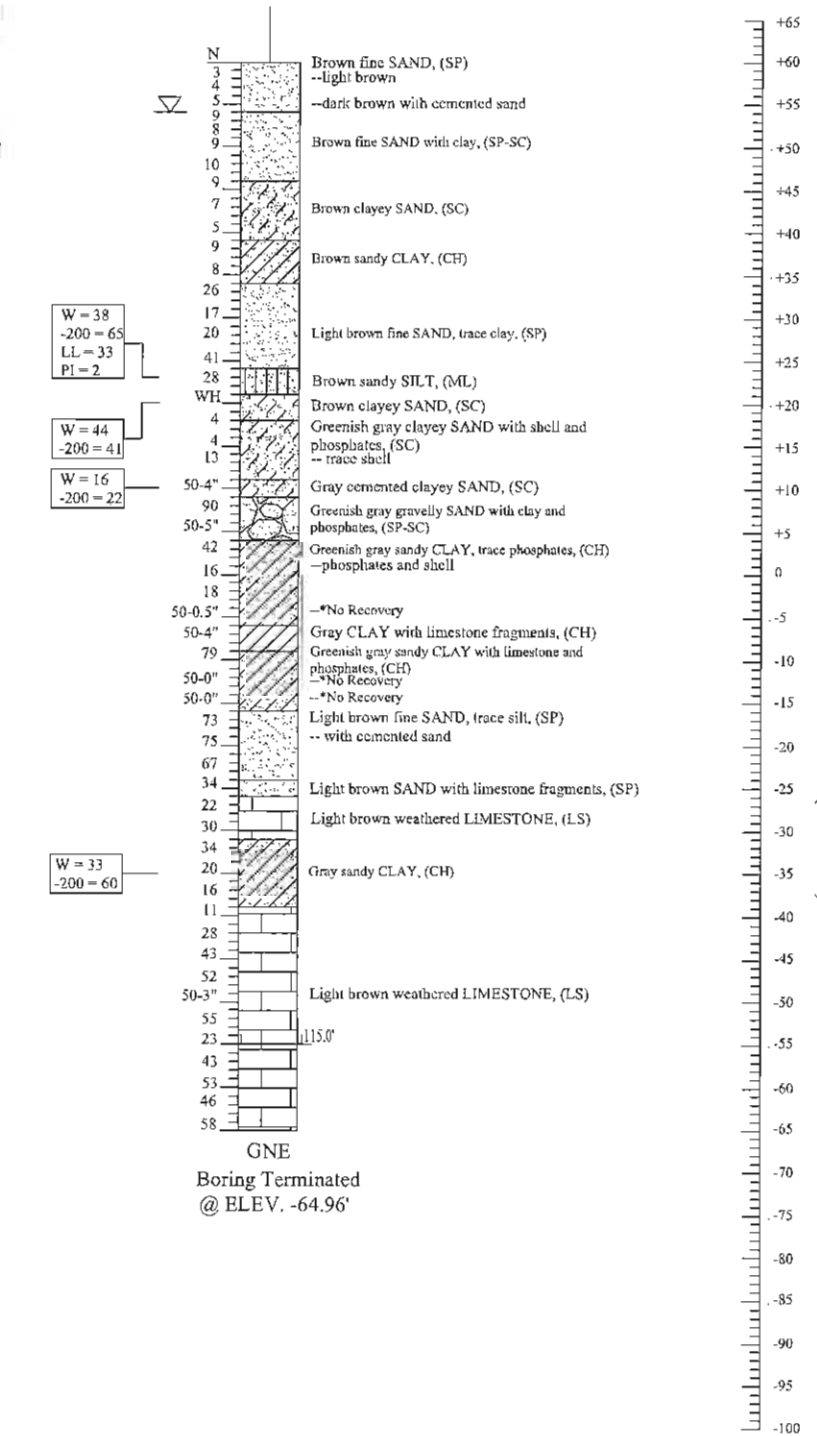
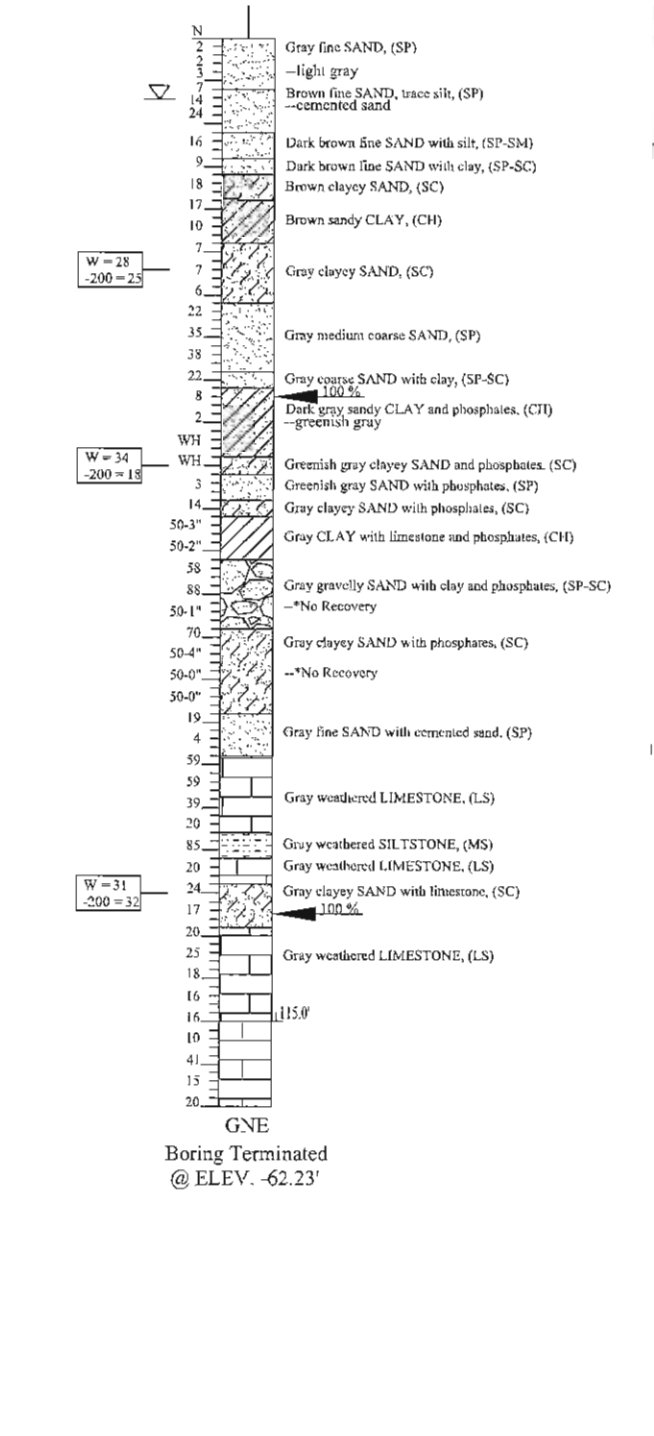
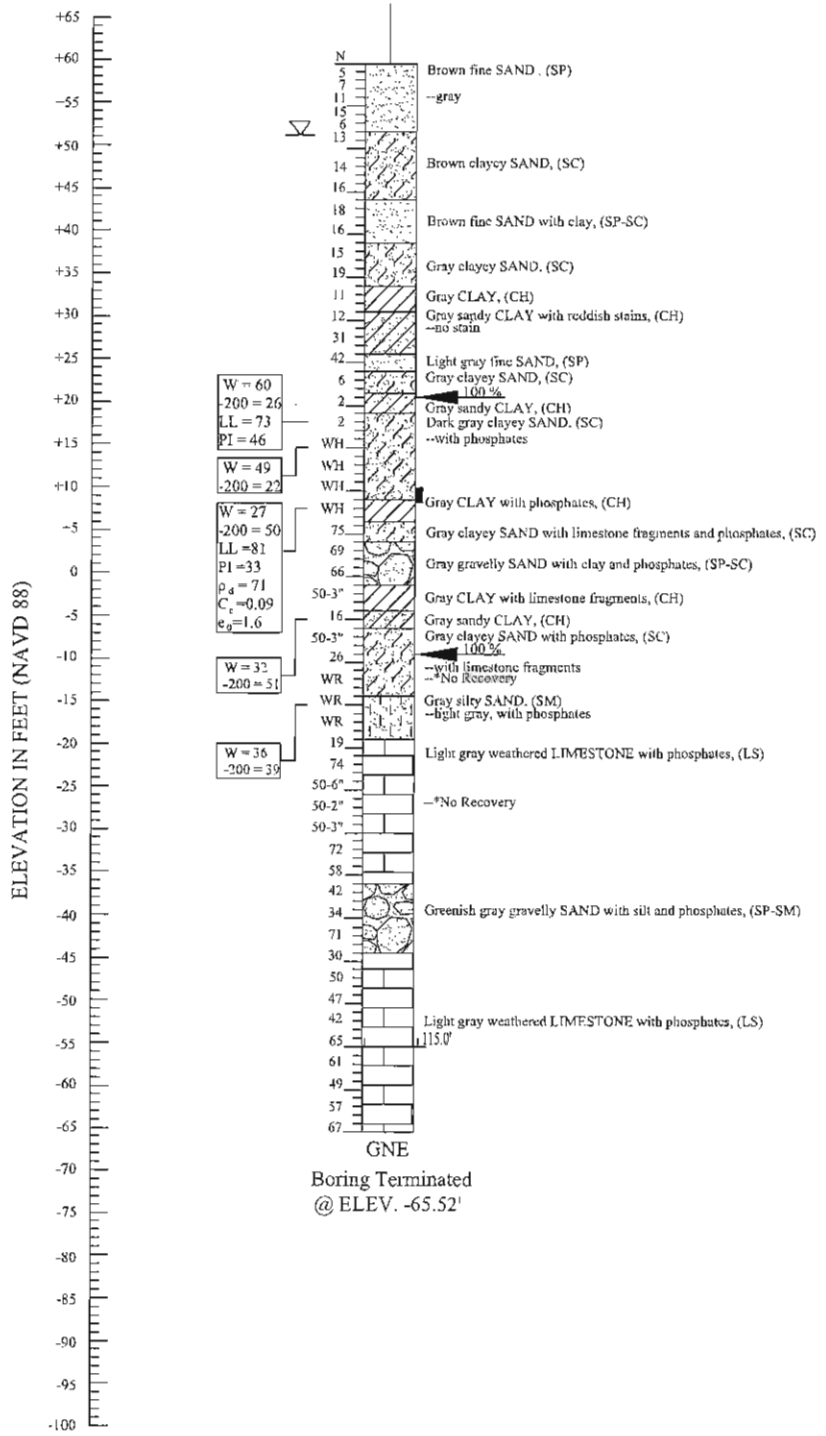
SUBSTRUCTURE	TB-2	SUPERSTRUCTURE
Concrete:	Slightly Aggressive	Slightly Aggressive
Steel:	Slightly Aggressive	Slightly Aggressive

Boring No:
Approximate Station:
Offset:
Elevation:
Date Drilled:

TB-1
661+00
0.12' LT
59.48'
02/14/2012
LATITUDE: N28°48'51.12"
LONGITUDE: W81°29'58.22"

TB-2
670+02
3.54' RT
62.77'
02/16/2012
LATITUDE: N28°48'52.67"
LONGITUDE: W81°29'48.24"

TB-3
681+01
0.45' RT
60.04'
02/16/2012
LATITUDE: N28°48'53.15"
LONGITUDE: W81°29'35.91"



REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

NAMES	DATES
Drawn by: AGA	05-14-12
Checked by: GNN	05-14-12
Designed by: N/A	N/A
Checked by: N/A	N/A
Approved by: GNN	

ENGINEER OF RECORD:
NES
NADIC ENGINEERING SERVICES, INC.
601 N. HART BLVD.
ORLANDO, FL 32818
CERTIFICATE OF AUTHORIZATION NO. 00008214
DR. GODWIN N. NNADI P.E. NO. 50637

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
COUNTY: LAKE
FPID PROJECT NO.: 431081-3-32-01

SHEET TITLE:
REPORT OF SPT BORINGS FOR STRUCTURES
PROJECT NAME:
WEKIVA PARKWAY LINE & GRADE
- LAKE COUNTY
SHEET NO.:

NOTICE: The official record of this plan sheet is the electronic file signed and sealed under rule 61G15-23.003, F.A.C.