

December 17, 2019

HNTB CORPORATION
One Tampa City Center
201 N. Franklin St., Suite 550
Tampa, FL 33602

Attn: Mr. Al Steward, P.E., DBIA

**RE: Geotechnical Engineering Drilling Services
Test Borings for Twiggs and Nebraska Mast Arms
(62787-DS-444) Task Order Number 32
Hillsborough County, Florida
Tierra Project No. 6511-16-107-TWO 32**

Mr. Steward:

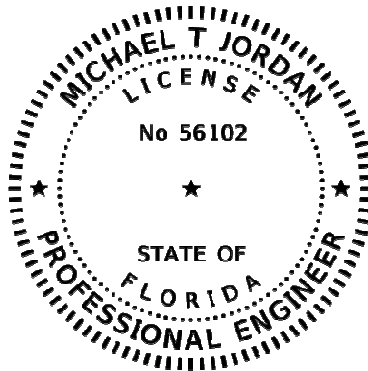
Tierra, Inc. (Tierra) has completed the geotechnical test borings for the referenced project. The geotechnical drilling services and attached Report of Core Borings Sheet were completed to provide subsurface information for a design-build RFP package to construct two mast arm signal poles at the intersection of Twiggs and Nebraska.

Tierra, Inc. appreciates the opportunity to be of service to THEA on this project. If you have any questions or comments regarding this report, please contact our office at your earliest convenience.

Respectfully Submitted,
TIERRA, INC.



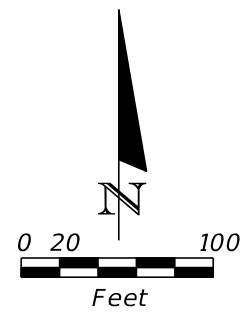
Kevin H. Scott, P.E.
Senior Geotechnical Engineer
Florida License No. 65514



Michael T. Jordan P.E.
Senior Engineer
FL License No. 56102

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Report of Core Borings Sheet



NOTE:
THE BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING OUR HAND-HELD NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) DEVICES. THEREFORE, THE BORING LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

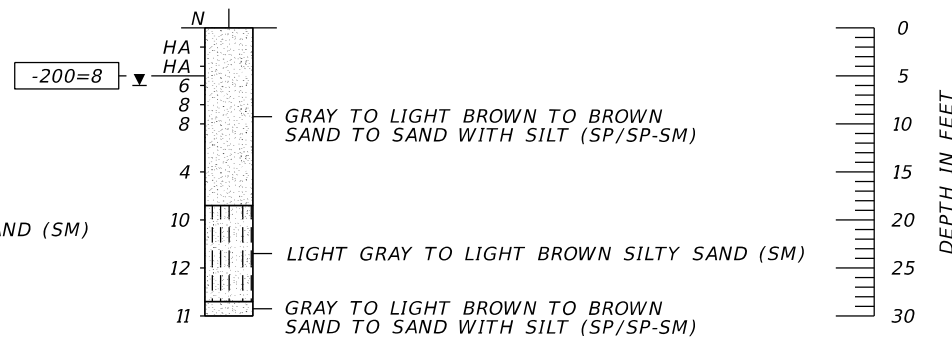
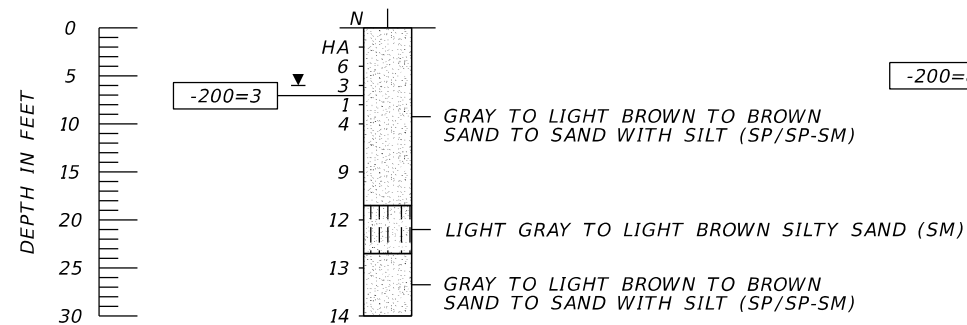
LEGEND

- GRAY TO LIGHT BROWN TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- LIGHT GRAY TO LIGHT BROWN SILTY SAND (SM)
- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCE
- 200 PERCENT PASSING #200 SIEVE
- EASTING EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

BORING LOCATION PLAN

BOR # B-1
EASTING 510590
NORTHING 1315534
DATE 12/7/2019
DRILLER I. POORAN
HAMMER AUTOMATIC
RIG D-25

BOR # B-2
EASTING 510562
NORTHING 1315366
DATE 12/7/2019
DRILLER I. POORAN
HAMMER AUTOMATIC
RIG D-25



	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

REVISIONS				MICHAEL T. JORDAN, P.E. P.E. LICENSE NUMBER 56102 TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION NO. 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					HILLSBOROUGH			REPORT OF CORE BORINGS