

BOR # B-1
 STA. 655+04
 REF. B/L SURVEY
 OFF. 25 LT
 ELEV. 5.0
 DATE 3/2/2006
 DRILLER A. TORRES
 HAMMER SAFETY
 RIG D-25

BOR # B-2
 STA. 653+45
 REF. B/L SURVEY
 OFF. 35LT
 ELEV. -20.0
 DATE 3/14/2006
 DRILLER AMDRILL
 HAMMER SAFETY
 RIG CME-55

BOR # B-3
 STA. 652+05
 REF. B/L SURVEY
 OFF. 35 LT
 ELEV. -13.5
 DATE 3/7/2006
 DRILLER J. AMES
 HAMMER SAFETY
 RIG CME 55

LEGEND

- LIGHT BROWN TO BROWN FINE SAND TO SAND WITH SILT OCCASIONALLY WITH SHELL FRAGMENTS (SP/SP-SM)
- GRAY TO BROWN SILTY SAND (SM)
- OLIVE GRAY SILTY CLAY TO CLAYEY SILT (CL/ML/MH)
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- 200 PERCENT PASSING #200 SIEVE
- NMC NATURAL MOISTURE CONTENT (%)
- LL LIQUID LIMIT (%)
- PI PLASTICITY INDEX (%)
- WH FELL UNDER WEIGHT OF ROD AND HAMMER
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCE
- NGVD NATIONAL GEODETIC VERTICAL DATUM OF 1929
- NR NO RECOVERY
- ▽ GROUNDWATER TABLE
- || CASING

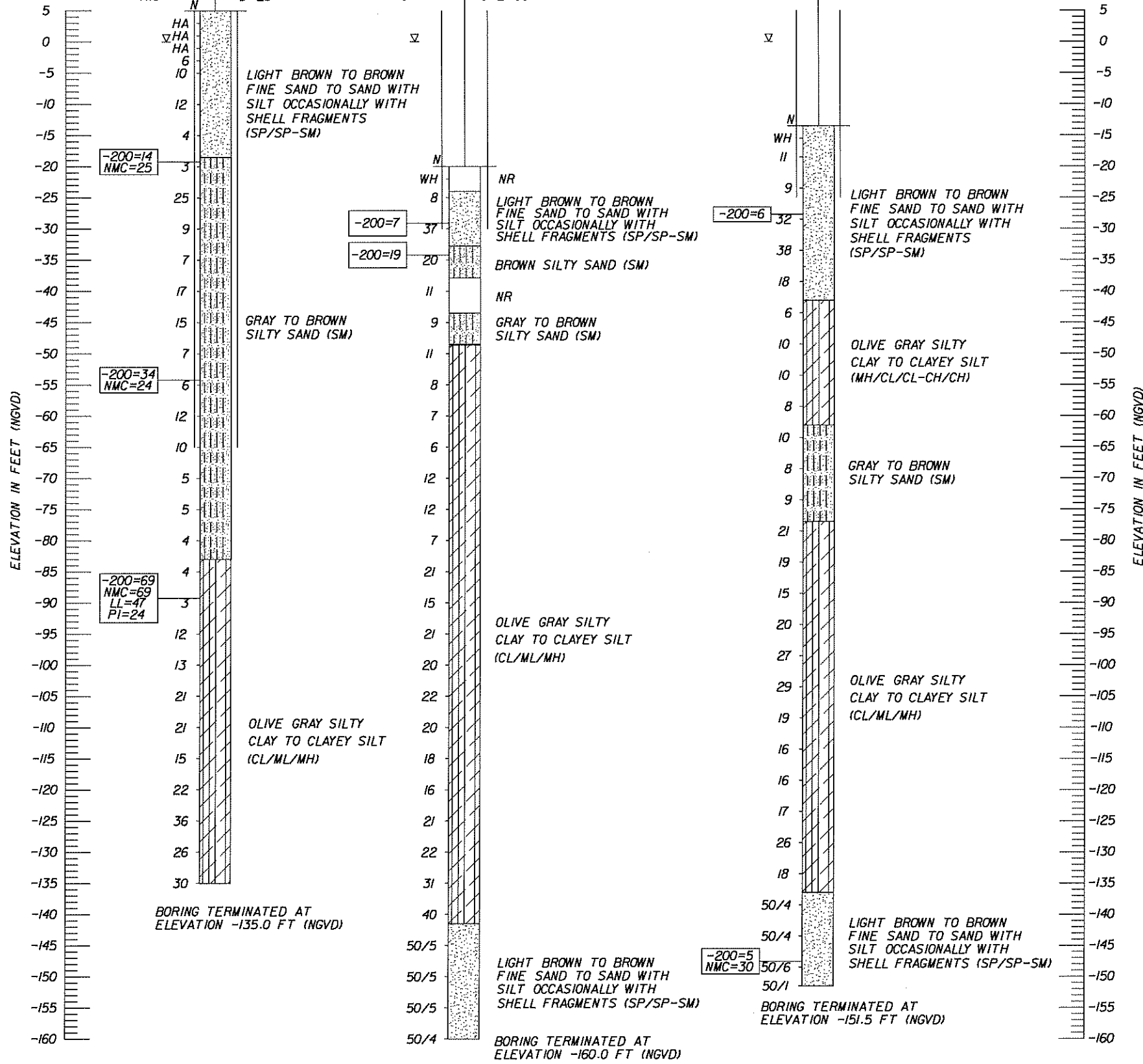
- NOTE: 1. BORINGS B-2 THROUGH B-5 WERE PERFORMED IN WATER.
 2. WATER LEVEL/GROUNDWATER WAS SET TO ELEVATION 0 IN ALL BORINGS.
 3. STATION AND OFFSET OF EACH BORING WERE ESTIMATED USING STATION REFERENCES MARKED IN THE FIELD AT THE TIME OF FIELD ACTIVITIES. SINCE THE BORING LOCATIONS WERE NOT PRECISELY SURVEYED, THEY SHOULD BE CONSIDERED APPROXIMATE.
 4. GROUND ELEVATIONS OF BORINGS B-1 AND B-6 WERE ESTIMATED USING THE ROADWAY CROSS SECTIONS. MUD LINE ELEVATIONS OF BORINGS B-2 THROUGH B-5 WERE MEASURED AT THE TIME OF DRILLING BASED ON THE DISTANCE BETWEEN WATER LEVEL (SET TO ELEVATION 0) AND MUD LINE. SINCE THE ELEVATIONS WERE NOT PRECISELY SURVEYED, THEY SHOULD BE CONSIDERED APPROXIMATE.

SOIL TEST RESULTS: RESISTIVITY 130 - 320 OHM-CM
 CHLORIDES 4,200 - 7,800 PPM
 SULFATES 444 - 1,851 PPM
 pH 9.2 - 9.3

WATER TEST RESULTS: RESISTIVITY 33 OHM-CM
 CHLORIDES 46,000 PPM
 SULFATES 2,850 PPM
 pH 7.0

ENVIRONMENTAL CLASSIFICATION:
 SUBSTRUCTURE CONCRETE: EXTREMELY AGGRESSIVE
 SUBSTRUCTURE STEEL: EXTREMELY AGGRESSIVE
 SUPERSTRUCTURE EXTREMELY AGGRESSIVE

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT (BLOWS/FT.)	SPT (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 (BLOWS/FT.)	SPT (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	16 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24



BORING TERMINATED AT
 ELEVATION -135.0 FT (NGVD)

BORING TERMINATED AT
 ELEVATION -151.5 FT (NGVD)

BORING TERMINATED AT
 ELEVATION -160.0 FT (NGVD)

REVISIONS

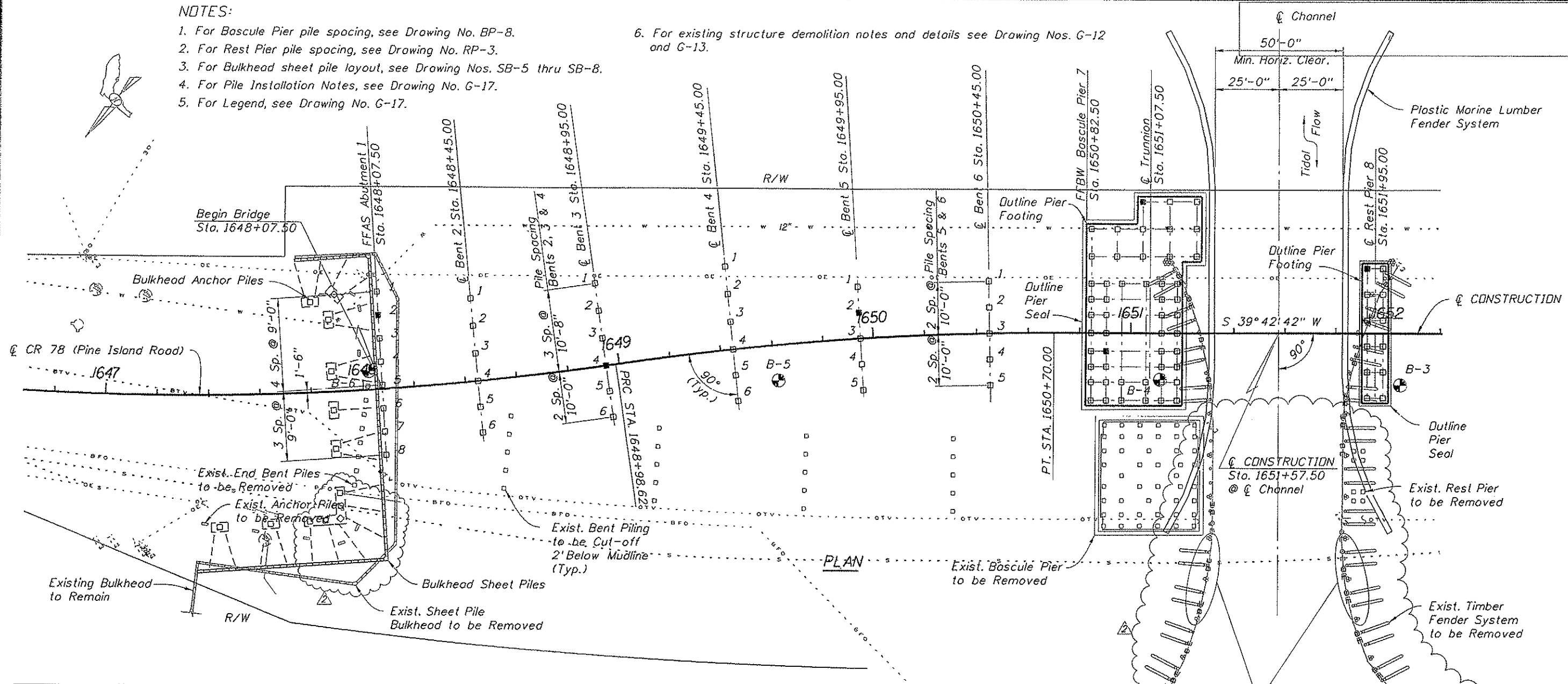
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD: E.O.R.: LARRY P. MOORE, P.E. P.E. LICENSE NUMBER 41673	LEE COUNTY DEPARTMENT OF TRANSPORTATION	
TERRA INC 7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637	ROAD NO. CR 78	COUNTY LEE
CERTIFICATE OF AUTHORIZATION: 6486	COUNTY PROJECT NO. CN-5904	

SHEET TITLE: REPORT OF CORE BORINGS (1 OF 2)	
PROJECT NAME: MATLACHA BRIDGE REPLACEMENT BRIDGE NO. 124134	SHEET NO. B1-26

NOTES:

1. For Bascule Pier pile spacing, see Drawing No. BP-8.
2. For Rest Pier pile spacing, see Drawing No. RP-3.
3. For Bulkhead sheet pile layout, see Drawing Nos. SB-5 thru SB-8.
4. For Pile Installation Notes, see Drawing No. G-17.
5. For Legend, see Drawing No. G-17.
6. For existing structure demolition notes and details see Drawing Nos. G-12 and G-13.



PILE DATA TABLE

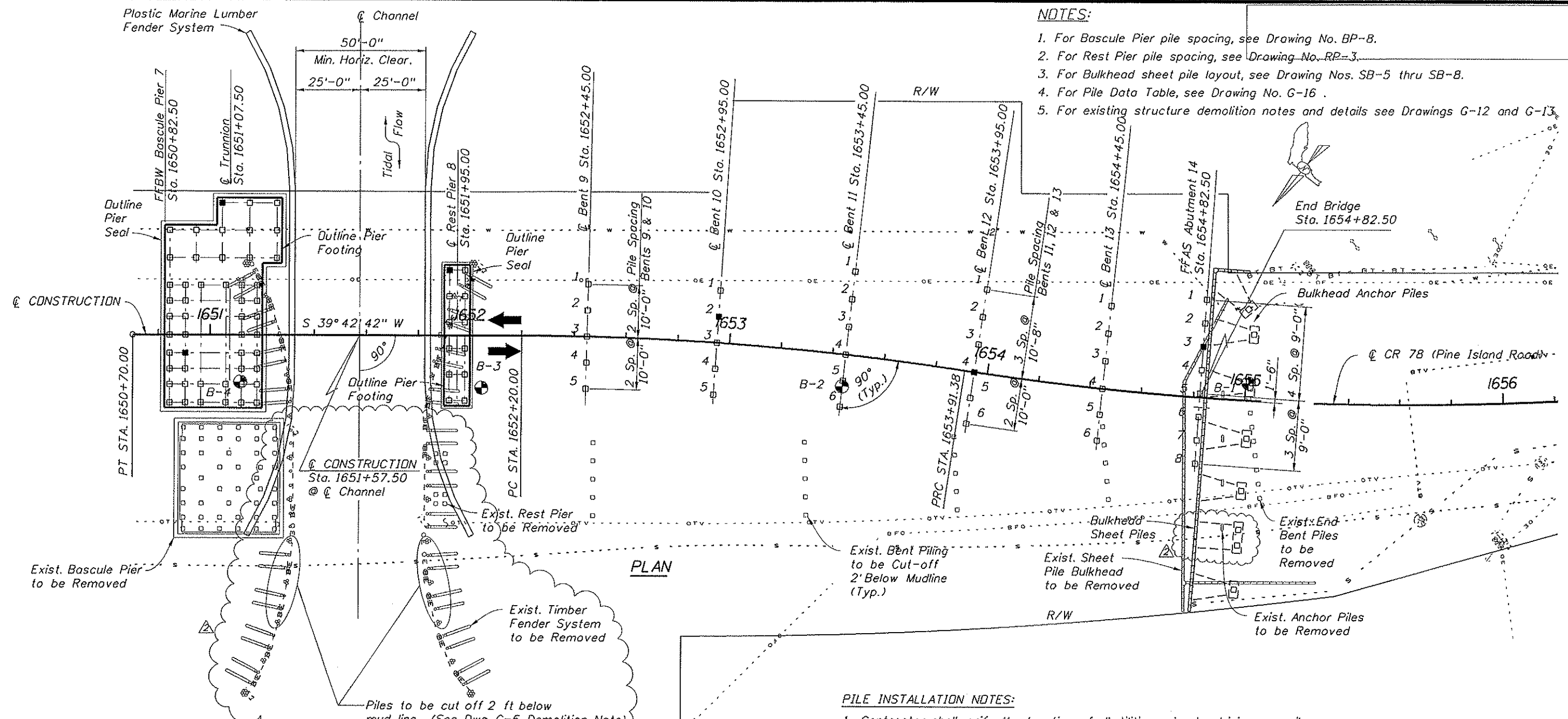
INSTALLATION CRITERIA							DESIGN CRITERIA								
Location	Pile Size (in)	Nominal Bearing Resistance (Tons)	Tension Resistance (Tons)	Pile Cut-off Elev. (ft.)	Min. Tip Elev. (ft.)	Test Pile Length (ft.)	Req'd Jet Elev. (ft.)	Req'd Preform Elev. (ft.)	Factored Design Load (Tons)	Down Drag (Tons)	Total Scour Resist. (Tons)	Net Scour Resist. (Tons)	100 Yr. Scour Elev. (ft.)	Long Term Scour Elev. (ft.)	φ
Abutment 1	24	162	N/A	2.3	-75	85	N/A	-30	105	N/A	N/A	N/A	N/A	N/A	0.65
Bent 2	24	334	N/A	3.3	-75	N/A	N/A	-30	217	N/A	0	0	-20	-14	0.65
Bent 3	24	366	N/A	5.1	-75	125	N/A	-30	238	N/A	0	0	-20	-14	0.65
Bent 4	24	325	N/A	7.3	-72	N/A	N/A	-30	211	N/A	0	0	-20	-14	0.65
Bent 5	24	343	N/A	9.8	-70	130	N/A	-30	223	N/A	0	0	-20	-14	0.65
Bent 6	24	314	N/A	12.0	-68	N/A	N/A	-30	204	N/A	0	0	-20	-14	0.65
Bascule Pier 7	24	275	40	-9.0	-51	125	N/A	-30	179	N/A	6	0	-29	-13	0.65
Rest Pier 8	24	191	40	-1.0	-66	125	N/A	-30	124	N/A	6	0	-26	-19	0.65
Bent 9	24	342	N/A	12.0	-73	N/A	N/A	-30	222	N/A	3	0	-24	-19	0.65
Bent 10	24	342	N/A	9.8	-65	125	N/A	-30	222	N/A	3	0	-24	-19	0.65
Bent 11	24	325	N/A	7.3	-67	N/A	N/A	-30	211	N/A	2	0	-28	-21	0.65
Bent 12	24	366	N/A	5.1	-70	130	N/A	-30	238	N/A	2	0	-28	-21	0.65
Bent 13	24	334	N/A	3.3	-71	N/A	N/A	-30	217	N/A	2	0	-28	-21	0.65
Abutment 14	24	163	N/A	2.3	-73	125	N/A	-30	106	N/A	N/A	N/A	N/A	N/A	0.65

PILE DATA TABLE NOTES:

- Tension Resistance - The Ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile.
- Total Scour Resistance - An estimate of the ultimate static side friction resistance provided by the scourable soil.
- Net Scour Resistance - An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.
- 100-Year Scour - Estimate elevation of scour due to the 100 year storm event.
- Long Term Scour - Estimated elevation of scour used in design for extreme event loading.
- Factored Design Load + Net Scour Resistance + Down Drag ≤ Nominal Bearing Resistance

George C. Patton
1-14-2011

DATE: 1/14/11		BY: G.C.P.		DESCRIPTION: REVISED BRIDGE FENDER, UTILITY LOCATIONS AND BULKHEAD		DRAWN BY: G.C.P.		CHECKED BY: A.P.H.		DESIGNED BY: G.C.P.		CHECKED BY: A.P.H.		APPROVED BY: J. M. Phillips		ENGINEER OF RECORD: GEORGE C. PATTON, P.E. P.E. License No: 45966		E. C. DRIVER & ASSOCIATES, INC. 500 N. Westshore Blvd. Suite 500 Tampa, Florida 33609 Certificate of Authorization No. 3838		LEE COUNTY DEPARTMENT OF TRANSPORTATION		ROAD NO.: CR 78		COUNTY: LEE		COUNTY PROJECT NO.: CN-5904		SHEET TITLE: FOUNDATION LAYOUT, PILE DATA TABLE AND NOTES - SHEET 1 OF 2		PROJECT NAME: MATLACHA BRIDGE REPLACEMENT BRIDGE NO. 124134		DRAWING NO.: G-16		SHEET NO.: BI-16	
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- NOTES:**
1. For Bascule Pier pile spacing, see Drawing No. BP-8.
 2. For Rest Pier pile spacing, see Drawing No. RP-3.
 3. For Bulkhead sheet pile layout, see Drawing Nos. SB-5 thru SB-8.
 4. For Pile Data Table, see Drawing No. G-16.
 5. For existing structure demolition notes and details see Drawings G-12 and G-13.

PLAN

LEGEND

- ⊕ denotes Soil Boring
- denotes Plumb 24" Sq. Prestressed Concrete Pile and No. Designation
- denotes 24" Sq. Prestressed Concrete Test Pile and No. Designation
- ▭ denotes 12" x 30" Concrete Sheet Pile
- ▭ denotes Exist. Bulkhead Sheet Pile
- denotes Exist. 18" Sq. Prestressed Concrete Pile
- denotes Exist. Timber Fender Pile

PILE INSTALLATION NOTES:

1. Contractor shall verify the location of all utilities prior to driving any piles
2. All test piles shall be dynamically monitored using the Pile Driving Analyzer as per Section 455-5.13 of the Standard Specifications, or approved equivalent.
3. Minimum tip elevation is required for lateral stability and shall be in accordance with Section 455 of the FDOT Standard Specifications.
4. Test Piles shall be driven in the position of a permanent plumb pile at locations shown or as directed by the Engineer.
5. The Contractor shall anticipate the use of specialized equipment and/or methods including, but not limited to, core barrels, rock augers, punches, drill bits, etc. to complete performing.
6. No jetting will be allowed below the scour elevation.
7. At each Bent, pile driving is to commence at the center of the Bent and proceed outward.

George C. Patton
 License No. 45966
 1-14-2011

REVISIONS				DATE		DESCRIPTION		NAME		DATE		ENGINEER OF RECORD			LEE COUNTY DEPARTMENT OF TRANSPORTATION			SHEET TITLE	
1/14/11	G.C.P.	2	REVISED BRIDGE FENDER, UTILITY LOCATIONS AND BULKHEAD					DRAWN BY	G.C.P.	2/07		GEORGE C. PATTON, P.E. P.E. License No: 45966			ROAD NO. COUNTY COUNTY PROJECT NO.			FOUNDATION LAYOUT, PILE DATA TABLE AND NOTES - SHEET 2 OF 2	
								CHECKED BY	A.P.H.	10/08		B. C. DRIVER & ASSOCIATES, INC. 500 N. Westshore Blvd. Suite 500 Tampa, Florida 33609 Certificate of Authorization No. 3838			CR 78	LEE	CN-5904	MATLACHA BRIDGE REPLACEMENT BRIDGE NO. 124134	
								DESIGNED BY	G.C.P.	2/07								PROJECT NAME	
								CHECKED BY	A.P.H.	10/08								SHEET NO.	
								APPROVED BY	J. M. Phillips									BI-17	

DRAWING NO.
G-17