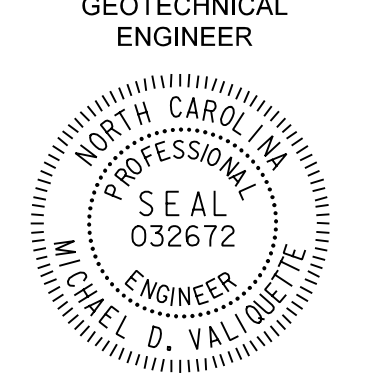


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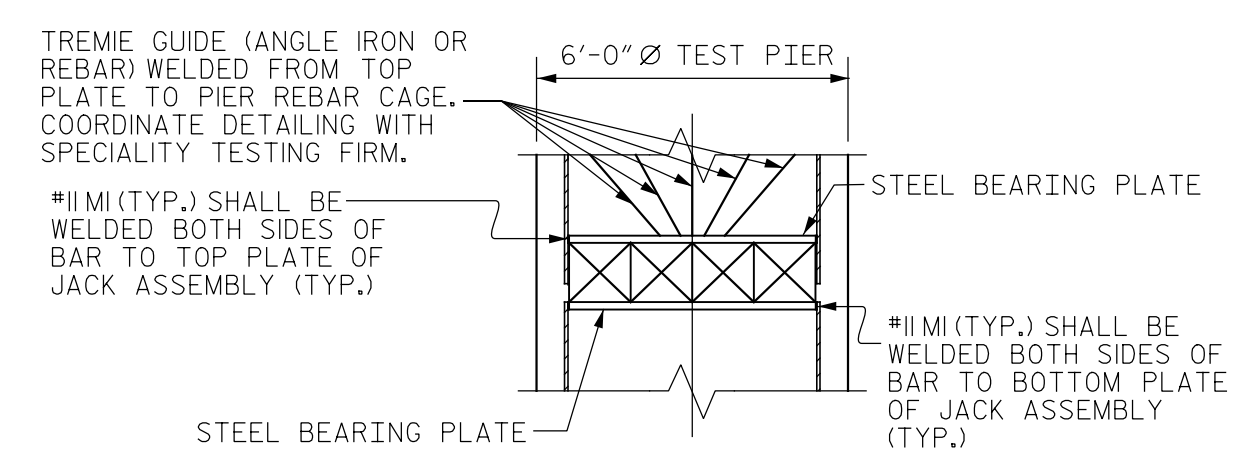
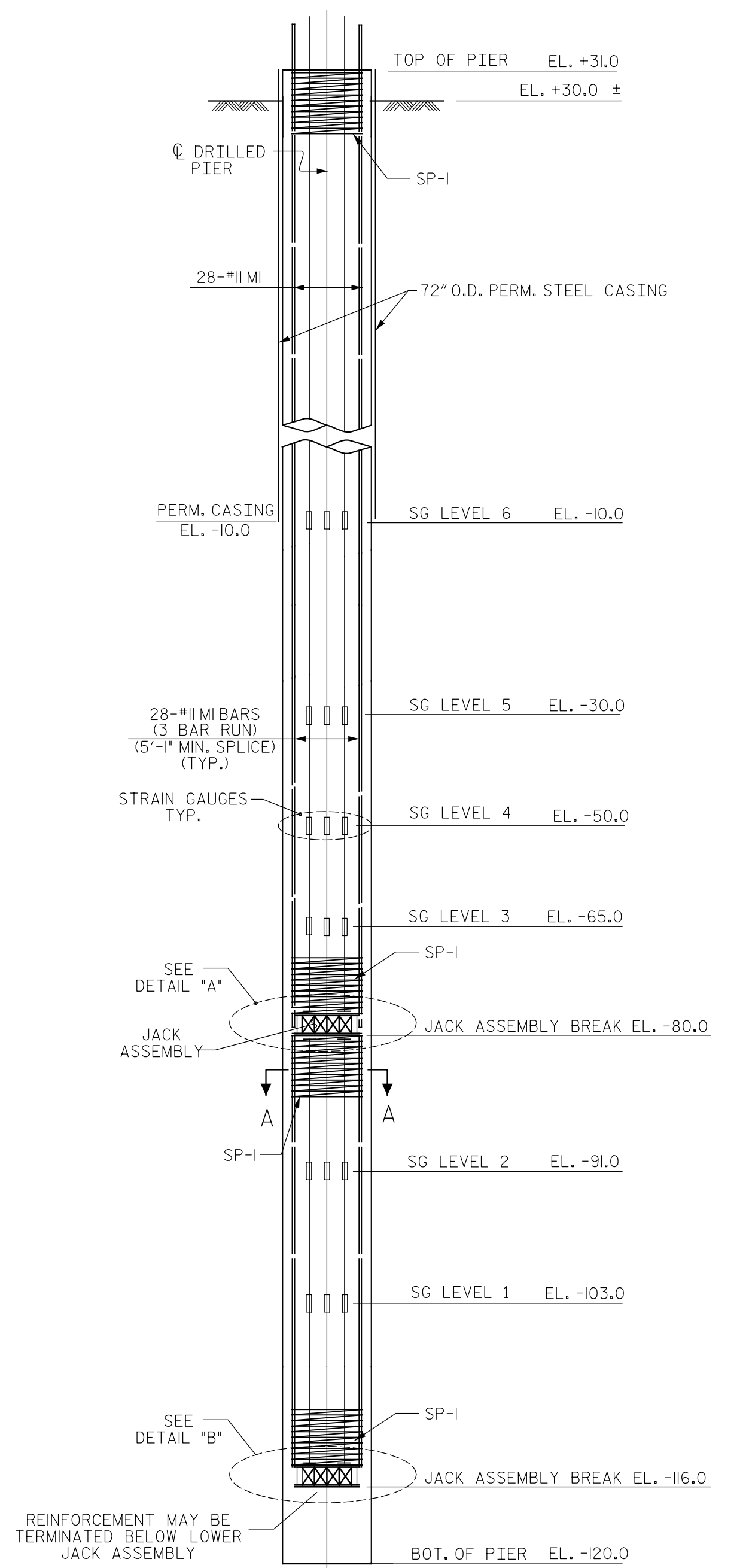
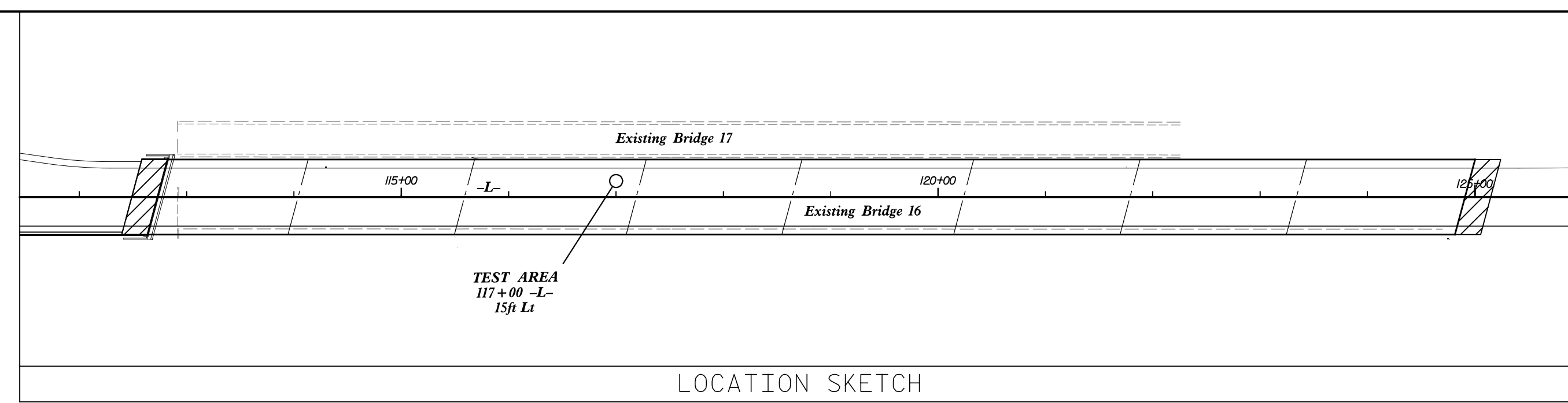
ENGINEER



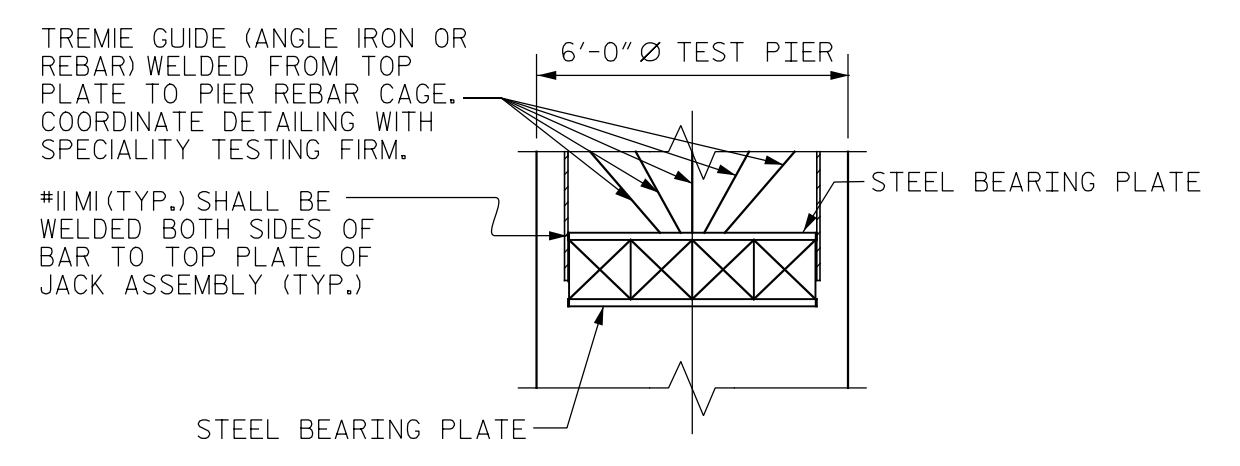
DocuSigned by:
Michael Valiquette 9/2/2020

DATE: _____ SIGNATURE: _____ DATE: _____

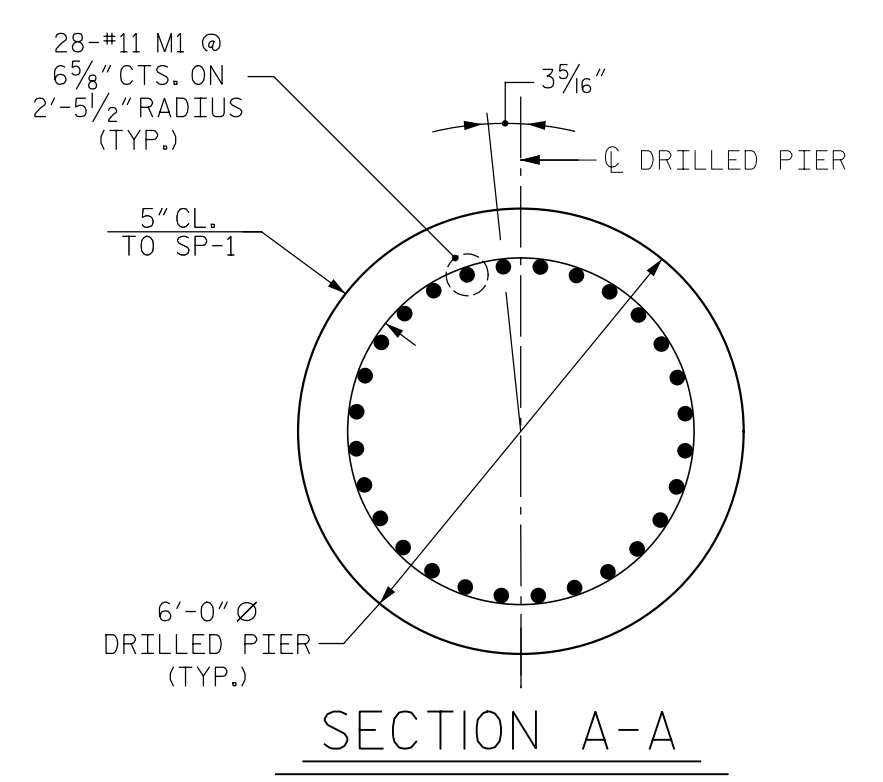
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



- ASSEMBLY STEPS:
1. BI-DIRECTIONAL JACKS FITTED WITH TOP AND BOTTOM STEEL PLATES.
 2. TOP AND BOTTOM STEEL PLATES OF JACK ASSEMBLY WELDED TO NON-CONTINUOUS REINFORCING CAGE. SEE PROJECT SPECIAL PROVISION FOR ADDITIONAL DETAILS.
 3. CONSTRUCT TREMIE GUIDE TO DIRECT TREMIE PAST THE JACK ASSEMBLY.



- ASSEMBLY STEPS:
1. BI-DIRECTIONAL JACKS FITTED WITH TOP AND BOTTOM STEEL PLATE.
 2. TOP STEEL PLATE OF JACK ASSEMBLY WELDED TO NON-CONTINUOUS REINFORCING CAGE. SEE PROJECT SPECIAL PROVISION FOR ADDITIONAL DETAILS.
 3. CONSTRUCT TREMIE GUIDE TO DIRECT TREMIE PAST THE JACK ASSEMBLY.

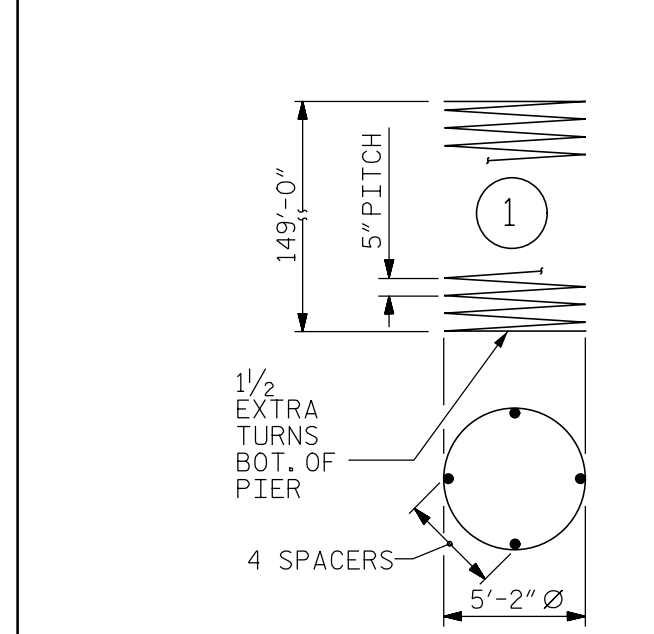


FOR CLARITY, SECTION "A-A" OMITTED DETAILS OF TEST INSTRUMENTATION AND CSL TUBES.

NOTES

- FOR DRILLED PIERS, SEE SECTION 411 OF THE NCDOT STANDARD SPECIFICATIONS.
- SEE AXIAL BI-DIRECTIONAL STATIC LOAD PROJECT TEST SPECIAL PROVISION FOR ADDITIONAL INSTRUMENTATION AND TESTING REQUIREMENTS.
- PERMANENT STEEL CASING IS REQUIRED FOR AXIAL LOAD TEST PIER. DO NOT EXTEND PERMANENT STEEL CASING BELOW ELEVATION -10 FT.
- SLURRY IS REQUIRED FOR THE AXIAL LOAD TEST PIER. SEE SECTION 411 OF THE NCDOT STANDARD SPECIFICATIONS.
- SID INSPECTIONS ARE REQUIRED TO INSPECT THE BOTTOM CLEANLINESS OF THE AXIAL LOAD TEST PIER. SEE SECTION 411 OF THE NCDOT STANDARD SPECIFICATIONS.
- CSL TUBES AND CSL TESTING ARE REQUIRED FOR THE AXIAL LOAD TEST PIER. SEE SECTION 411 OF THE NCDOT STANDARD SPECIFICATIONS.
- AXIAL LOAD TEST PIER SHALL EXTEND TO ELEVATION -120 FT.
- FOR MATERIAL PROPERTIES, SEE SECTION 411 OF THE NCDOT STANDARD SPECIFICATIONS.
- CONSTRUCT AXIAL LOAD TEST PIER IN ACCORDANCE WITH THE SECTION 411 OF THE NCDOT STANDARD SPECIFICATIONS AND THE AXIAL BI-DIRECTIONAL STATIC LOAD TEST PROJECT SPECIAL PROVISION.
- CALIPER LOGGING OF TEST PIER IS REQUIRED TO INSPECT THE VERTICALITY AND DIAMETER OF THE AXIAL LOAD TEST PIER. CALIPER LOGGING OF TEST PIER IS INCIDENTAL TO AXIAL BI-DIRECTIONAL STATIC LOAD TEST. SEE PROJECT SPECIAL PROVISION FOR ADDITIONAL DETAILS.
- FIELD CUT #11 MI BARS AND WELD TO TOP AND BOTTOM PLATES OF JACK ASSEMBLY AS SHOWN IN DETAILS "A" AND "B".
- THE "SP" SPIRAL REINFORCING STEEL SHALL BE W31 OR D31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR.
- ADJUST LOCATION OF CSL ACCESS TUBES AS NECESSARY FOR PROPER PLACEMENT THROUGH THE JACK ASSEMBLIES AND PROPER PLACEMENT OF STRAIN GAUGES. ADJUST LENGTHS AS NECESSARY TO ACCOMMODATE THE JACK ASSEMBLIES.
- SCORE THE CSL ACCESS TUBES AT THE BOTTOM PLATE OF THE JACK ASSEMBLY WITH PIPE CUTTER OR EQUIVALENT, OR SPLICE WITH SHORT SECTION OF PVC PIPE OR FLEXIBLE NEOPRENE SHIELDED COUPLING. THIS IS TO CREATE WEAK POINTS AT THE JACK ASSEMBLIES. COORDINATE WITH THE SPECIALTY TESTING FIRM FOR PREFERRED METHOD. PROTECT THE SCORE AREAS OR COUPLINGS WITH WATERPROOF TAPE.
- SLIP JOINTS OR EQUIVALENT FOR ALL TELLTALE PROTECTION PIPE/CASINGS PASSING THROUGH THE MID-RANGE JACK ASSEMBLY SHALL BE PROVIDED. COORDINATE WITH THE SPECIALTY TESTING FIRM FOR PREFERRED METHOD. PROTECT THE SLIP JOINTS WITH WATERPROOF TAPE, GREASE, OR COMBINATION THEREOF.
- ADJUST DIMENSION AS NECESSARY TO ACCOMMODATE JACK ASSEMBLIES.
- LOWER REINFORCING CAGE INTO EXCAVATION AND SECURE AT REQUIRED ELEVATION.
- PUMP CONCRETE IN A TREMIE PIPE THAT ALLOWS THE PIPE TO PASS THROUGH THE CENTER OF THE JACK ASSEMBLY BEARING PLATES TO THE BOTTOM OF THE AXIAL LOAD TEST PIER. SEE PROJECT SPECIAL PROVISION FOR ADDITIONAL DETAILS.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

DEMONSTRATION PIER					
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT
M1	84	11	STR.	54'-5"	24,286
SP-1	1	5	1	5786'-5"	6,035

REINFORCING STEEL	(LBS.)	24,286
SPIRAL REINFORCING STEEL	(LBS.)	6,035
6'-0" Ø TEST PIER	(L.F.)	151
SID INSPECTIONS	EACH	1
CSL TESTING	EACH	1
CALIPER LOGGING OF TEST PIER	EACH	1*
PERMANENT STEEL CASING	(L.F.)	41
AXIAL BI-DIRECTIONAL STATIC LOAD TEST	LUMP SUM	

* CALIPER LOGGING OF TEST PIER IS INCIDENTAL TO AXIAL LOAD TEST


PROJECT NO.: **48793.3.1**

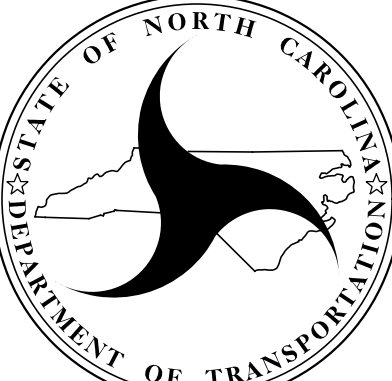
BLADEN COUNTY

STATION: **118+81.78 -L-**

SHEET 1 OF 1

PREPARED BY: M. SNYDER	DATE: 7/20
REVIEWED BY: J. BAILEY	DATE: 7/20


ICE of CAROLINAS, PLLC
 4505 Falls of Neuse Road, Suite 110
 Raleigh, North Carolina 27609
 Phone: 803-822-0333
 License #: P-0999


**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**GEOTECHNICAL
ENGINEERING UNIT**

AXIAL BI-DIRECTIONAL STATIC LOAD TEST					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. S-105