

**FOUNDATION LAYOUT**

**NOTES:**

THE PILE FOUNDATION TABLES ARE BASED ON THE BRIDGE SUBSTRUCTURE DESIGN AND FOUNDATION RECOMMENDATIONS SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER (STEPHEN C. CROCKETT, 048207) ON 11/08/21.

TOTAL PILE DRIVING EQUIPMENT SETUP QUANTITY (NOT SHOWN IN PILE FOUNDATION TABLES) EQUALS THE NUMBER OF DRIVEN PILES, I.E., THE NUMBER OF PILES WITH A REQUIRED DRIVING RESISTANCE.

THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING WHEN PDA'S MAY BE REQUIRED.

**FOUNDATION NOTES:**

FOR PILES, SEE PILES PROVISION AND SECTION 450 OF THE STANDARD SPECIFICATIONS.

SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS FOR THE SETTLEMENT GAUGES REQUIRED AT END BENT 1 AND END BENT 2.

INSTALL PILE SLEEVES BEFORE CONSTRUCTING THE MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL AT END BENT 1, OBSERVE A 2 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION. THEN, INSTALL PILES THROUGH THE CORRUGATED STEEL PILES AND FILL PILES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAP. FOR PILE SLEEVES, SEE MSE RETAINING WALL PLANS AND PROVISION. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

INSTALL PILE SLEEVES BEFORE CONSTRUCTING THE MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL AT END BENT 2, OBSERVE A 3 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION. THEN, INSTALL PILES THROUGH THE CORRUGATED STEEL PILES AND FILL PILES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAP. FOR PILE SLEEVES, SEE MSE RETAINING WALL PLANS AND PROVISION. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

FOR REINFORCING BRIDGE APPROACH FILL, SEE TYPE A ALTERNATE APPROACH FILL AT MSE WALLS (SPECIAL) PROVISION.

SUMMARY OF PDA/PILE ORDER LENGTHS (BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)					
PILE DRIVING ANALYZER (PDA)			PILE ORDER LENGTHS		
END BENT/ BENT No.	PDA TESTING REQUIRED? (YES OR MAYBE)	PDA TEST PILE LENGTH (FT)	TOTAL PDA TESTING QUANTITY (EACH)	END BENT/ BENT No. (s)	PILE ORDER LENGTH BASIS* (EST OR PDA)
END BENT 1, PILES (1-8)	MAYBE	75	1		
BENT 1, PILES (1-27)	MAYBE	70			
END BENT 2, PILES (1-8)	MAYBE	90			

\*EST = PILE ORDER LENGTHS FROM ESTIMATED PILE LENGTHS; PDA = PILE ORDER LENGTHS BASED ON PDA TESTING. FOR GROUPS OF END BENTS/BENTS WITH PILE ORDER LENGTHS BASED ON PDA TESTING, THE FIRST END BENT/BENT No. LISTED FOR EACH GROUP IS THE REPRESENTATIVE END BENT/BENT WITH THE PDA.

PILE DESIGN INFORMATION (BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)							
END BENT/ BENT No., PILE(S) #-# (E.G., "BENT 1, PILES 1-5")	FACTORED AXIAL LOAD PER PILE (TONS)	FACTORED DOWDRAG LOAD PER PILE (TONS)	FACTORED DEAD LOAD* PER PILE (TONS)	DYNAMIC RESISTANCE FACTOR	NOMINAL DOWDRAG RESISTANCE PER PILE (TONS)	NOMINAL SCOUR RESISTANCE PER PILE (TONS)	SCOUR RESISTANCE FACTOR (DEFAULT = 1.00)
END BENT 1, PILES (1-8)	92			0.60			1.00
BENT 1, PILES (1-27)	88			0.60			1.00
END BENT 2, PILES (1-8)	92			0.60			1.00

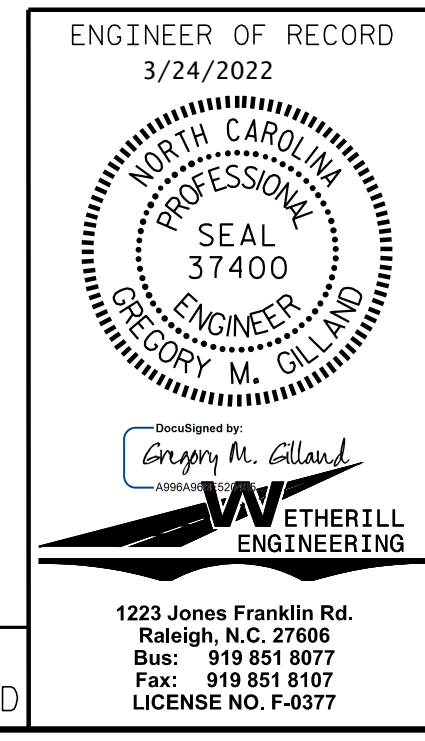
\*FACTORED DEAD LOAD IS FACTORED WEIGHT OF PILE ABOVE GROUND LINE.

SUMMARY OF PILE INFORMATION/INSTALLATION (BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)												
END BENT/ BENT No., PILE(S) #-# (E.G., "BENT 1, PILES 1-5")	FACTORED RESISTANCE PER PILE (TONS)	PILE CUT-OFF (TOP OF PILE) ELEVATION (FT.)	ESTIMATED PILE LENGTH PER PILE (FT)	SCOUR CRITICAL ELEVATION (FT)	DRIVEN PILES			PREDRILLING FOR PILES*			DRILLED IN PILES	
					MIN. PILE TIP (TIP NO HIGHER THAN) ELEV. (FT)	REQUIRED DRIVING RESISTANCE (RDR)** PER PILE (TONS)	TOTAL PILE REDRIVES QUANTITY (EACH)	PREDRILLING LENGTH PER PILE (LIN FT)	PREDRILLING ELEVATION (ELEV NOT TO PREDRILL BELOW) (FT)	MAXIMUM PREDRILLING DIA (INCHES)	PILE EXC NOT IN SOIL PER PILE (LIN FT)	PILE EXC IN SOIL PER PILE (LIN FT)
END BENT 1, PILES (1-8)	95	183.81	70			160	22					
BENT 1, PILES (1-27)	90	163.44	65		150							
END BENT 2, PILES (1-8)	95	185.07	85		160							

\*PREDRILLING FOR PILES IS REQUIRED FOR END BENTS/BENTS WITH A PREDRILLING LENGTH AND AT THE CONTRACTOR'S OPTION FOR END BENTS/BENTS WITH PREDRILLING INFORMATION BUT NO PREDRILLING LENGTH.

\*\*RDR =  $\frac{\text{FACTORED RESISTANCE} + \text{FACTORED DOWDRAG LOAD} + \text{FACTORED DEAD LOAD}}{\text{DYNAMIC RESISTANCE FACTOR}} + \frac{\text{NOMINAL DOWDRAG RESISTANCE}}{\text{SCOUR RESISTANCE FACTOR}}$

PROJECT NO. I-5987B  
ROBESON COUNTY  
 STATION: 30+28.11 -Y6-  
 SHEET 2 OF 3



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**

FOR BRIDGE ON McRAINEY RD.  
 (SR 1726) OVER I-95 BETWEEN  
 HWY 301 AND SR 1980

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-2
1			3			TOTAL SHEETS 28
2			4			

1223 Jones Franklin Rd.  
 Raleigh, N.C. 27606  
 Bus: 919 851 8077  
 Fax: 919 851 8107  
 LICENSE NO. F-0377

DRAWN BY: D. HODGE DATE: 11/21  
 CHECKED BY: G. GILLAND DATE: 12/21

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

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