



**FOUNDATION LAYOUT**  
DIMENSIONS LOCATING PILES SHOWN TO THE CENTERLINES OF PILES

**NOTES**

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO.1 AND END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 115 TONS PER PILE.

PILES AT BENT NO.1, BENT NO.2, AND BENT NO.3 ARE DESIGNED FOR A FACTORED RESISTANCE OF 263 TONS PER PILE.

DRIVE PILES AT END BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 155 TONS PER PILE.

DRIVE PILES AT END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 155 TONS PER PILE.

DRIVE PILE AT BENT NO.1, BENT NO.2, AND BENT NO.3 TO A REQUIRED DRIVING RESISTANCE OF 355 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

INSTALL PILES AT BENT NO.1 TO A TIP ELEVATION NO HIGHER THAN -29.0 FT.

INSTALL PILES AT BENT NO.2 TO A TIP ELEVATION NO HIGHER THAN -30.0 FT.

INSTALL PILES AT BENT NO.3 TO A TIP ELEVATION NO HIGHER THAN -30.0 FT.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 20 TO 40 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO.1 AND END BENT NO.2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 66 TO 75 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT NO.1, BENT NO.2, AND BENT NO.3. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT END BENT NO.1 AND END BENT NO.2. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT BENT NO.2 AND BENT NO.3. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PIPE PILE PLATES ARE REQUIRED FOR STEEL PIPE PILES AT BENT NO.1, BENT NO.2, AND BENT NO.3. USE PIPE PILE PLATES WITH A DIAMETER EQUAL TO THE PIPE PILE DIAMETER. FOR STEEL PIPE PILE PLATES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR BENT NO.1, BENT NO.2, AND BENT NO.3 IS ELEVATION -6 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATION FOR THE SETTLEMENT GAUGES REQUIRED AT END BENT NO.1 AND END BENT NO.2.

OBSERVE A 2 MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT TO WITHIN 2 FT OF FINISHED GRADE BEFORE BEGINNING END BENT CONSTRUCTION AT END BENT NO.1. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

OBSERVE A 3 MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT TO WITHIN 2 FT OF FINISHED GRADE BEFORE BEGINNING END BENT CONSTRUCTION AT END BENT NO.2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

TO REDUCE DOWNDRAG AND TO ALLOW ACCESS FOR PILE DRIVING AND PILE CAP CONSTRUCTION, CONSTRUCT EMBANKMENTS AT END BENT NO.1 AND END BENT NO.2 WITH A FRONT SLOPE NO STEEPER THAN 1:1, WITH SLOPE PROTECTION, TO THE BOTTOM OF THE PROPOSED PILE CAP.

PILE CUSHIONS ARE REQUIRED TO DRIVE STEEL PIPE PILES WITHIN THE LIMITS OF THE RIVER. REFER TO PROJECT SPECIAL PROVISIONS FOR MORE INFORMATION.

PROJECT NO. B-4484  
CRAVEN COUNTY  
STATION: 41+45.00 -L1-

SHEET 2 OF 3 REPLACES BRIDGE NO. 240139



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**GENERAL DRAWINGS**  
BRIDGE OVER NEUSE  
RIVER OVERFLOW ON SR 1470  
(MAPLE CYPRESS RD.) BETWEEN  
SR 1472 (BIDDLE RD.)  
AND SR 1400 (RIVER RD.)

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-2	
1			3			TOTAL SHEETS	
2			4			31	

DRAWN BY : NSC DATE : 04/2019  
CHECKED BY : JMR DATE : 05/2019  
DESIGN ENGINEER OF RECORD: PDS DATE : 06/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED