

FOUNDATION LAYOUT
DIMENSIONS LOCATING PILES ARE SHOWN TO THE CENTERLINE OF PILES

NOTES

FOR PILES, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 85 TONS PER PILE.

DRIVE PILES AT END BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 142 TONS PER PILE.

FOR DRILLED PIERS, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 411 OF THE STANDARD SPECIFICATIONS.

DRILLED PIERS AT BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 400.0 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 25.0 TSF.

INSTALL DRILLED PIERS AT BENT 1 TO A TIP ELEVATION NO HIGHER THAN 626.5 FT.(LT) AND 630 FT.(RT) AND WITH THE REQUIRED TIP RESISTANCE AND PENETRATION OF AT LEAST 16 FT. INTO WEATHERED ROCK AND ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 IS ELEVATION 644 FT. THE SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

DRILLED PIERS AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 415 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 25.0 TSF.

INSTALL DRILLED PIERS AT BENT 2 TO A TIP ELEVATION NO HIGHER THAN 604.5 FT.(LT) AND 616.5 FT.(RT) AND WITH THE REQUIRED TIP RESISTANCE AND PENETRATION OF AT LEAST 14 FT. (LT) AND 16 FT. (RT) INTO WEATHERED ROCK AND ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

PERMANENT STEEL CASINGS MAY BE REQUIRED FOR DRILLED PIERS AT BENT 2. IF REQUIRED, DO NOT EXTEND CASINGS BELOW ELEVATION 635.0 FT. WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE ENGINEER WILL DETERMINE THE NEED FOR PERMANENT CASINGS.

INSTALL PERMANENT STEEL CASINGS AT BENT 2 BY VIBRATING, SCREWING OR DRIVING PERMANENT CASING BEFORE EXCAVATING OR DISTURBING ANY MATERIAL BELOW ELEVATION 645.0 FT.

THE SCOUR CRITICAL ELEVATION FOR BENT 2 IS ELEVATION 643.0 FT. THE SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SID INSPECTIONS ARE REQUIRED FOR DRILLED PIERS AT BENTS 1 AND 2. FOR SID INSPECTIONS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR CSL TESTING. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 95 TONS PER PILE.

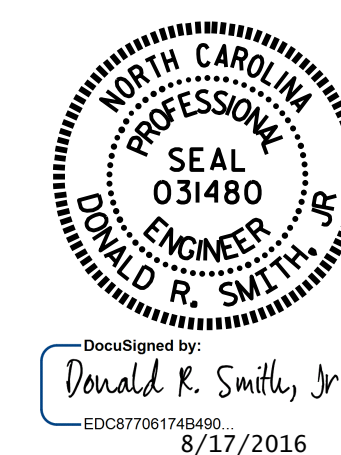
DRIVE PILES AT END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 158 TONS PER PILE.

SPECIAL NOTES

TO VERIFY BEARING STRATA, STANDARD PENETRATION TESTING (SPT) IS REQUIRED FOR DRILLED PIERS AT BENT 1. TO VERIFY TOP OF THE WEATHERED ROCK AND TIP BEARING CAPACITY PERFORM SPTS AT ELEVATION 643± FT. (LT), AND 646± FT. (RT) TO VERIFY TOP OF PARTIALLY WEATHERED ROCK AND AGAIN AT THE FINAL TIP ELEVATION INDICATED. FOR SPT TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

TO VERIFY BEARING STRATA, STANDARD PENETRATION TESTING (SPT) IS REQUIRED FOR DRILLED PIERS AT BENT 2. TO VERIFY TOP OF THE WEATHERED ROCK AND TIP BEARING CAPACITY PERFORM SPTS AT ELEVATION 619± FT. (LT), AND 633± FT. (RT) TO VERIFY TOP OF PARTIALLY WEATHERED ROCK AND AGAIN AT THE FINAL TIP ELEVATION INDICATED. FOR SPT TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

DRAWN BY : H. B. DESAI DATE : 04-05-16
 CHECKED BY : R. P. PATEL DATE : 04-26-16
 DESIGN ENGINEER OF RECORD : T. R. PEIERSON DATE : 06-20-16



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. U-3440
CABARRUS COUNTY
 STATION: 68+25.60 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
GENERAL DRAWING						S1-2
FOR BRIDGE OVER IRISH BUFFALO CREEK ON NC 3 BETWEEN SR 1639 AND SR 1643 (LEFT LANE)						TOTAL SHEETS 37
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			