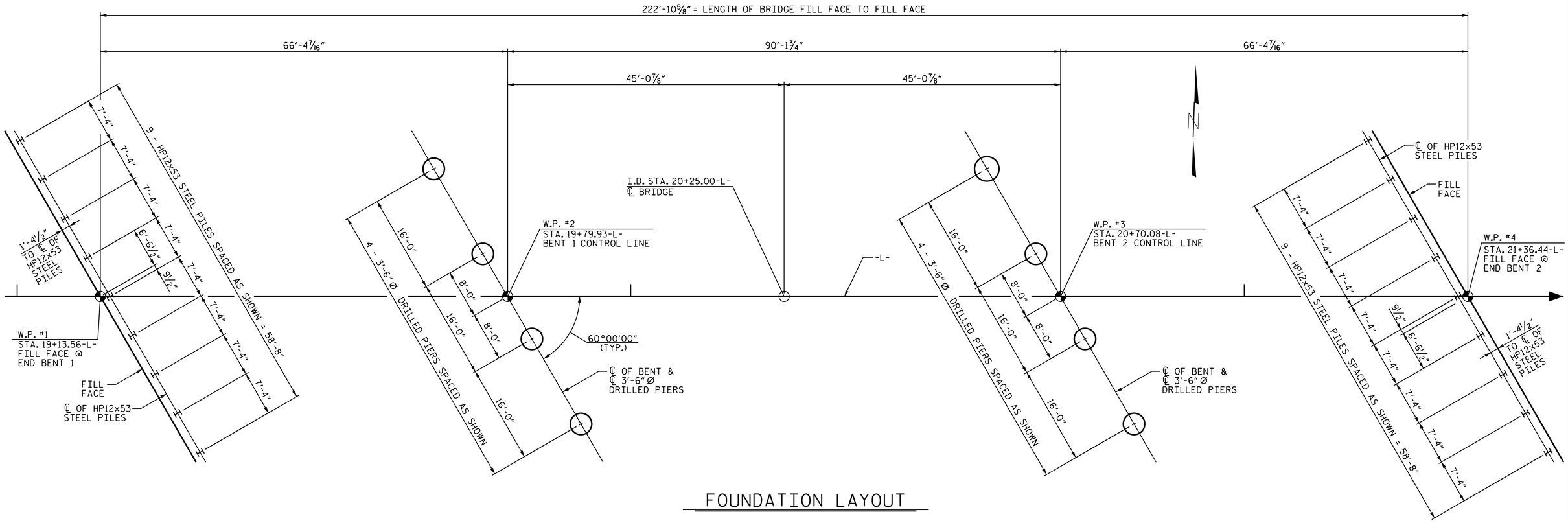
DocuSign Envelope ID: 361D5C0E-80D7-4B29-AA34-6D1BD6B35CC1



FOUNDATION LAYOUT

FOUNDATION RECOMMENDATION NOTES

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

PILES AT END BENT NO.1 AND END BENT NO. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 100 TONS PER PILE.

DRIVE PILES AT END BENT NO. 1 AND END BENT NO. 2 TO A REQUIRED DRIVING RESISTANCE OF 167 TONS PER PILE.

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

DRILLED PIERS AT BENTS NO. 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 520 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 15 TSF.

PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENTS NO 1 AND NO. 2 IF REQUIRED , DO NOT EXTEND PERMANENT CASINGS BELOW ELEVATION 1959 FT. WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE ENGINEER WILL DETERMINE THE NEED FOR THE PERMANENT CASINGS.

INSTALL THE LEFT DRILLED PIER AT BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN 1885 FT AND WITH THE REQUIRED TIP RESISTANCE.

INSTALL THE LEFT MIDDLE DRILLED PIER AT BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN 1896 FT AND WITH THE REQUIRED TIP RESISTANCE.

INSTALL THE RIGHT MIDDLE DRILLED PIER AT BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN 1904 FT AND WITH THE REQUIRED TIP RESISTANCE.

INSTALL THE RIGHT DRILLED PIER AT BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN 1908 FT AND WITH THE REQUIRED TIP RESISTANCE.

LEFT DRILLED PIERS AT BENTS NO. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 500 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 50 TSF.

RIGHT DRILLED PIERS AT BENTS NO. 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 505 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 15 TSF.

INSTALL THE LEFT DRILLED PIER AT BENT NO. 2 TO A TIP ELEVATION NO HIGHER THAN 1920 FT AND WITH THE REQUIRED TIP RESISTANCE AND A PENETRATION OF AT LEAST 1 FT. INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

INSTALL THE LEFT MIDDLE DRILLED PIER AT BENT NO. 2 TO A TIP ELEVATION NO HIGHER THAN 1918 FT AND WITH THE REQUIRED TIP RESISTANCE AND PENETRATION OF AT LEAST 1 FT. INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

INSTALL THE RIGHT MIDDLE DRILLED PIER AT BENT NO. 2 TO A TIP ELEVATION NO HIGHER THAN 1912 FT AND WITH THE REQUIRED TIP RESISTANCE AND A PENETRATION OF AT LEAST 5 FT. INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

INSTALL THE RIGHT DRILLED PIER AT BENT NO. 2 TO A TIP ELEVATION NO HIGHER THAN 1910 FT AND WITH THE REQUIRED TIP RESISTANCE AND PENETRATION OF AT LEAST 5 FT. INTO ROCK AS DEFINED BY ARTICLE 411-1 OF THE STANDARD SPECIFICATIONS.

THE SCOUR CRITICAL ELEVATION FOR BENTS NO. 1 AND NO. 2 IS EL. 1960 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SID INSPECTIONS MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. FOR SID INSPECTIONS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR DRILLED PIERS. OR ONE DRILED PIER PER BENT, WHICHEVER IS GREATER. THE ENGINEER WILL DETERMINE THE NEED FOR CSL TESTING. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

ALL END BENT PILES ARE HP12x53 STEEL PILES. DIMENSIONS LOCATING PILES ARE SHOWN TO THE CENTERLINE OF PILES. ORIENT PILES AS SHOWN. ALL BENT DRILLED PIERS ARE 3'-6" Ø. DIMENSIONS LOCATING DRILLED PIERS ARE SHOWN TO THE CENTERLINE OF THE DRILLED PIER.

DRAWN BY :	JLA	DATE :	8/16
CHECKED BY :	RAR	DATE :	5/17
DESIGN ENGINEER OF RECORD :	RDE	DATE :	5/17

PROJECT NO. U-5866

GRAHAM COUNTY

STATION: 20+25.00-L-

SHEET 2 OF 4

NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER RAY D. ELLIOTT

DocuSigned by: 12/13/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOUNDATION LAYOUT
FOR BRIDGE OVER
CHEOAH RIVER BETWEEN
US HWY 129 AND
ROBBINSVILLE HIGH SCHOOL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			33