



FOUNDATION LAYOUT

ALL END BENT PILES ARE HP 12 X 53 STEEL PILES.
 DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE AT THE BOTTOM OF THE CAP.
 ALL END BENT BRACE PILES ARE BATTERED AT 3:12.

NOTES

DRILLED PIERS AT BENT 5 ARE DESIGNED FOR A FACTORED RESISTANCE OF 400 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 10 TSF.

INSTALL DRILLED PIERS AT BENT 5 TO A TIP ELEVATION NO HIGHER THAN -89.0 FEET WITH THE REQUIRED TIP RESISTANCE.

THE SCOUR CRITICAL ELEVATION FOR BENT 5 IS ELEVATION -23.9 FEET. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PERMANENT STEEL CASINGS ARE REQUIRED FOR DRILLED PIERS AT BENT 5. DO NOT EXTEND PERMANENT CASING BELOW ELEVATION -27.0 FEET WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

DRILLED PIERS AT BENT 6 ARE DESIGNED FOR A FACTORED RESISTANCE OF 415 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 10 TSF.

INSTALL DRILLED PIERS AT BENT 6 TO A TIP ELEVATION NO HIGHER THAN -89.0 FEET WITH THE REQUIRED TIP RESISTANCE.

THE SCOUR CRITICAL ELEVATION FOR BENT 6 IS ELEVATION -23.0 FEET. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PERMANENT STEEL CASINGS MAY BE REQUIRED FOR DRILLED PIERS AT BENT 6. IF REQUIRED, DO NOT EXTEND PERMANENT CASING BELOW ELEVATION -26.0 FEET WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE ENGINEER WILL DETERMINE THE NEED FOR PERMANENT CASINGS.

DRILLED PIERS AT BENT 7 ARE DESIGNED FOR A FACTORED RESISTANCE OF 445 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 10 TSF.

INSTALL DRILLED PIERS AT BENT 7 TO A TIP ELEVATION NO HIGHER THAN -93.0 FEET WITH THE REQUIRED TIP RESISTANCE.

THE SCOUR CRITICAL ELEVATION FOR BENT 7 IS ELEVATION -25.9 FEET. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SLURRY CONSTRUCTION IS REQUIRED FOR DRILLED PIERS AT BENT 1 THROUGH BENT 7.

SID INSPECTIONS MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTION. 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.

OBSERVE A ONE MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT TO THE BOTTOM OF CAP ELEVATION BEFORE BEGINNING END BENT CONSTRUCTION AT END BENT 1 AND 2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

THERMAL INTEGRITY PROFILER (TIP) TESTING IS REQUIRED FOR THE FIRST DRILLED PIER CONSTRUCTED AT EACH BENT FROM BENT 1 TO BENT 7. FOR TIP TESTING, SEE GEOTECHNICAL SPECIAL PROVISIONS.

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

Professional Engineer Seal for North Carolina, Seal 20125, Engineer Marshall G. Cheek, Jr., License No. SB0023400413, dated 2/24/2022 7:41 AM EST.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
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 PH (919) 773-8887
 CORP. LICENSE NO.: C-0275

PROJECT NO. B-4786
PITT COUNTY
 STATION: 28+03.00 -L-

SHEET 4 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON US 13
 OVER TAR RIVER
 BETWEEN
 NC 43 AND SR 1530

DRAWN BY :	STM	DATE :	01/19
CHECKED BY :	MGC	DATE :	07/19
DESIGN ENGINEER OF RECORD:	TBE	DATE :	8-19

10/26/2021
 X:\NCDOT\B-4786\Structures\Final plans\DCNs\401.009.B4786.SMU.GD04.004.dgn
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			57