

**SUMMARY OF PILE INFORMATION/INSTALLATION**

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

	FACTORED RESISTANCE PER PILE	PILE CUT-OFF (TOP OF PILE) ELEVATION	ESTIMATED PILE LENGTH PER PILE	SCOUR CRITICAL ELEVATION	DRIVEN PILES			PREDRILLING FOR PILES *			DRILLED-IN PILES		
					MIN. PILE TIP (TIP NO HIGHER THAN) ELEV.	REQUIRED DRIVING RESISTANCE (RDR) ** PER PILE	TOTAL PILE REDRIVES QUANTITY	PREDRILLING LENGTH PER PILE	PREDRILLING ELEVATION (ELEV. NOT TO PREDRILL BELOW)	MAXIMUM PREDRILLING DIAMETER	PILE EXCAVATION BOTTOM OF HOLE) ELEV.	PILE EXCAVATION NOT IN SOIL PER PILE	PILE EXCAVATION IN SOIL PER PILE
					FT.	TONS	EA.	LIN.FT.	FT.	INCHES	FT.	LIN.FT.	LIN.FT.
END BENT 1, PILES 1-8	113	868.00	25	-	-	190	7	-	-	-	-	-	-
END BENT 2, PILES 1-6	105	865.20	20	-	-	175		-	-	-	-	-	-

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

**PILE DESIGN INFORMATION**

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

	FACTORED AXIAL LOAD PER PILE	FACTORED DOWNDRAG LOAD PER PILE	FACTORED DEAD LOAD *	DYNAMIC RESISTANCE FACTOR	NOMINAL DOWNDRAG RESISTANCE PER PILE	NOMINAL SCOUR RESISTANCE PER PILE	SCOUR RESISTANCE FACTOR (DEFAULT = 1.00)
	TONS	TONS	TONS		TONS	TONS	
	END BENT 1, PILES 1-8	112.5	-	-	0.6	-	-
END BENT 2, PILES 1-6	105	-	-	0.6	-	-	

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

**SUMMARY OF PDA/PILE ORDER LENGTHS**

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

	PILE DRIVING ANALYZER (DYNAMIC PILE TEST)			PILE ORDER LENGTHS	
	DYNAMIC PILE TESTING REQUIRED	DYNAMIC PILE TEST PILE LENGTH	TOTAL DYNAMIC PILE TESTING QUANTITY		PILE ORDER LENGTH BASIS *
	YES/MAYBE	FT.	EA.		EST./DPT
END BENT 1	MAYBE	25	1		
END BENT 2	MAYBE	20			

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

**SUMMARY OF DRILLED PIER INFORMATION/INSTALLATION**

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

	FACTORED RESISTANCE PER PILE	MINIMUM PIER TIP (TIP NO HIGHER THAN) ELEVATION	REQUIRED TIP RESISTANCE PER PIER	SCOUR CRITICAL ELEVATION	MINIMUM DRILLED PIER PENETRATION INTO ROCK PER PIER	DRILLED PIER LENGTH * PER PIER	DRILLED PIER LENGTH * NOT IN SOIL PER PIER	DRILLED PIER LENGTH * IN SOIL PER PIER	PERMANENT STEEL CASING REQUIRED?	PERMANENT STEEL CASING TIP ELEVATION (ELEV. NOT TO EXTEND CASING BELOW)	PERMANENT STEEL CASING LENGTH ** PER PIER
	TONS	FT.	TSF.	FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	YES/MAYBE	FT.	LIN. FT.
BENT 1, PIERS 1-3	480	832.0	50	838.5	9	-	9	2			

\* DRILLED PIER LENGTH, DRILLED PIER LENGTH NOT IN SOIL AND DRILLED PIER LENGTH IN SOIL REPRESENT ESTIMATED DRILLED PIER QUANTITIES AND ARE MEASURED AND PAID FOR AS "42" DIA. DRILLED PIERS" IN ACCORDANCE WITH ARTICLE 411-7 OF THE NCDOT STANDARD SPECIFICATIONS.

\*\* PERMANENT STEEL CASING LENGTH EQUALS THE DIFFERENCE BETWEEN THE GROUND LINE OR TOP OF DRILLED PIER ELEVATION, WHICHEVER IS HIGHER, AND THE PERMANENT CASING TIP ELEVATION AND IS MEASURED AND PAID FOR AS "PERMANENT STEEL CASING FOR 42" DIA. DRILLED PIER" IN ACCORDANCE WITH ARTICLE 411-7 OF THE NCDOT STANDARD SPECIFICATIONS.

**SUMMARY OF PILE ACCESSORIES**

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

	PIPE PILE PLATES REQUIRED?	STEEL PILE POINTS			STEEL PILE TIPS REQUIRED?
		PIPE PILE CUTTING SHOES REQUIRED?	PIPE PILE CONICAL POINTS REQUIRED?	H-PILE POINTS REQUIRED?	
		YES/MAYBE	YES	YES	
END BENT 1, PILES 1-8				YES	
END BENT 2, PILES 1-6				YES	
TOTAL QTY.:				14	

**FOUNDATION NOTES:**

THE PILE AND DRILLED PIER FOUNDATION TABLES ARE BASED ON THE BRIDGE SUBSTRUCTURE DESIGN AND FOUNDATION RECOMMENDATIONS SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER (ATEFEH ASOUDEH, PE #043747) ON 07-19-2023.

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 DYNAMIC PILE TESTING, SPTS, CSL TESTING, AND SID INSPECTIONS WHEN THESE ITEMS MAY BE REQUIRED.

**SUMMARY OF DRILLED PIER TESTING**

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

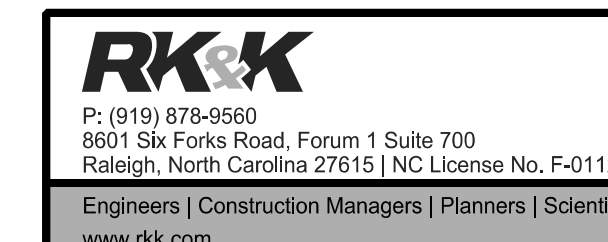
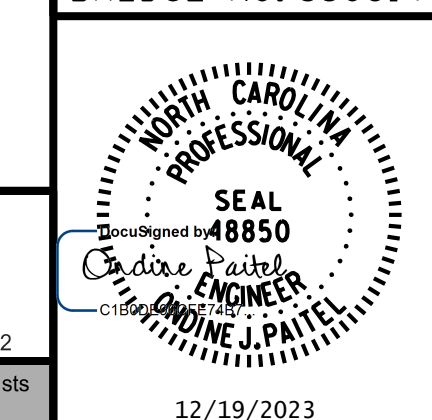
	STANDARD PENETRATION TEST (SPT) REQUIRED?	CROSSHOLE SONIC LOGGING (CSL) REQUIRED? *	TOTAL CSL TUBE LENGTH (FOR ALL TUBES) PER PIER	SHAFT INSPECTION DEVICE (SID) REQUIRED?	PILE INTEGRITY TEST (PIT) REQUIRED?
	YES/MAYBE	YES/MAYBE	LIN. FT.	YES/MAYBE	MAYBE
BENT 1, PIERS 1-3	MAYBE	MAYBE	51.0	MAYBE	
TOTAL QTY.:	1	1	153	1	

\* CSL TUBES ARE REQUIRED IF CSL TESTING IS OR MAY BE REQUIRED. THE NUMBER OF CSL TUBES PER DRILLED PIER IS EQUAL TO ONE TUBE PER FOOT OF DESIGN PIER DIAMETER WITH AT LEAST 4 TUBES PER PIER. THE LENGTH OF EACH CSL TUBE IS EQUAL TO THE DRILLED PIER LENGTH PLUS 1.5 FT.

PROJECT NO. R-2577A  
**FORSYTH** COUNTY  
 STATION: 140+39.50 -L-

SHEET 3 OF 5

BRIDGE NO. 330814



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING**  
 PILE AND DRILLED PIER  
 FOUNDATION TABLES  
**RIGHT LANE**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SR-3
1			3			TOTAL SHEETS
2			4			34

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

12/19/2023 R:\Structures\BRIDGE\RightBridge\DGN\FINAL\R2577A\_SMU\_FL2\_330814.dgn opatel

DRAWN BY : T.K. BOYD DATE : SEP 2023  
 CHECKED BY : L.K. AUSTIN DATE : SEP 2023  
 DESIGN ENGINEER OF RECORD : O.J. PAITEL DATE : SEP 2023