

SUMMARY OF PILE INFORMATION/INSTALLATION

(Blank entries indicate item is not applicable to structure)

End Bent / Bent No, Pile(s) #(-#) (e.g., "Bent 1, Piles 1-5")	Number of Piles per Line	Factored Resistance per Pile KIPS	Pile Cut-Off (Top of Pile) Elevation FT	Estimated Pile Length per Pile FT	Scour Critical Elevation FT	Driven Piles			Predrilling for Piles **			Drilled-In Piles		
						Minimum Pile Tip (Tip No Higher Than) Elevation FT	Required Driving Resistance (RDR)* per pile KIPS	Pile Redrives Quantity EACH	Predrilling Length per Pile LIN FT	Predrilling Elevation (Elevation Not To Predrill Below) FT	Maximum Predrilling Diameter INCHES	Pile Excavation (Bottom of Hole) Elevation FT	Pile Excavation Not In Soil per Pile LIN FT	Pile Excavation In Soil per Pile LIN FT
End Bent No. 1, Piles 1-7	7	140		20			235							
Bent No. 1, Piles 1-3	3	360		50	1715	1695						1695	33	10
Bent No. 1, Pile 4	1	360		45	1715	1700						1700	28	10
TOTAL QUANTITY:													127	40

* $RDR = \frac{\text{Factored Resistance} + \text{Factored Drag Load} + \text{Factored Dead Load}}{\text{Dynamic Resistance Factor}} + \text{Nominal Drag Load Resistance} + \text{Nominal Resistance from Scourable Material}$

** 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.

*** WR = Weathered Rock

PILE DESIGN INFORMATION

(Blank entries indicate item is not applicable to structure)

End Bent / Bent No, Pile(s) #(-#) (e.g., "Bent 1, Piles 1-5")	Factored Axial Load per Pile KIPS	Factored Drag Load per Pile KIPS	Factored Dead Load * per Pile KIPS	Dynamic Resistance Factor	Nominal Drag Resistance per Pile KIPS	Nominal Scour Resistance per Pile KIPS
End Bent No. 1, Piles 1-7	140			0.6		

* Factored Dead Load is factored weight of pile above the ground line.

SUMMARY OF DRILLED-IN PIPE PILE AND DRILLED PIER INFORMATION/INSTALLATION

(Blank entries indicate item is not applicable to structure)

End Bent / Bent No, Pier(s) #(-#) (e.g., "Bent 1, Piers 1-3")	Number of Piers per Line	Factored Resistance per Pier KIPS	Required Drilled Pier Tip Elevation FT	Required Tip Resistance per Pier KSF	Scour Critical Elevation FT	Minimum Drilled Pier Penetration Into Weathered Rock and/ or Rock per Pier LIN FT	Drilled Pier Length* per Pier LIN FT	Drilled Pier Length Not In Soil* per Pier LIN FT	Drilled Pier Length In Soil* per Pier LIN FT	Permanent Steel Casing Required? YES	Permanent Steel Casing Tip Elevation (Elevation Not To Extend Casing Below) FT	Permanent Steel Casing Length** per Pier LIN FT
Bent No. 1, Piles 1-3	3									YES	1721.00	7
Bent No. 1, Pile 4	1									YES	1716.80	7
Bent No. 2***	4				1715.00							
End Bent No. 2, Piers (1-3)	3	205	1710.00	20		10	28					
End Bent No. 2, Piers (4-6)	3	205	1710.00	20		10	28			Yes	1720.00	18
TOTAL QUANTITY:							168					82

* 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 either "___ Dia. Drilled Piers" or "___ Dia. Drilled Piers Not in Soil" and "___ Dia. Drilled Piers in Soil" in accordance with Article 411-7 of the NCDOT Standard Specifications. For bents with a not in soil pay item, drilled piers through air or water will be paid at the contract unit price for "___ Dia. Drilled Piers in Soil."

** 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 ___ Dia. Drilled Pier" in accordance with Article 411-7 of the NCDOT Standard Specifications.

*** Bent 2 Pipe Piles were designed and previously install for the temporary bridge. Existing Pipe Pile are suitable to support the new lateral and axial loads for the new bridge.

SUMMARY OF DRILLED PIER TESTING

(Blank entries indicate item is not applicable to structure)

End Bent / Bent No, Pier(s) #(-#) (e.g., "Bent 1, Piers 1-3")	Standard Penetration Test (SPT) EACH	Crosshole Sonic Logging (CSL) EACH	Thermal Integrity Profiler (TIP) EACH	Shaft Inspection Device (SID) EACH	Pile Integrity Test (PIT) EACH
End Bent No. 2		1			
TOTAL QUANTITY:		1			

PROJECT NO. DF18314.2045332

HENDERSON COUNTY

STATION: 13+70.81 -L-


SHEET 3 OF 4

NOTES:

- The Pile Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer (Michael H. Stephens, #028893) on 08-12-2025.
- 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 may adjust the quantity for DPT Testing, Pipe Pile Plates, Permanent Steel Casing, SPTs, TIPS, CSL Testing, SID Inspections and PITs when necessary.

DRAWN BY : <u>M. ACOSTA</u>	DATE : <u>08/2025</u>
CHECKED BY : <u>T. R. LAWS</u>	DATE : <u>08/2025</u>
DESIGN ENGINEER OF RECORD: <u>M. ACOSTA</u>	DATE : <u>03/2026</u>

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



4/13/2026

RS&H

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE AND DRILLED PIER
FOUNDATION TABLES

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-3
2			4			TOTAL SHEETS 32