

**SUMMARY OF 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")	Factored Resistance per Pier TONS	Minimum Pier Tip (Tip No Higher Than) Elev FT	Required Tip Resistance per Pier TSF	Scour Critical Elev FT	Minimum Drilled Pier Penetration Into Rock per Pier Lin FT	Minimum Drilled Pier Penetration Into Weathered 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 or MAYBE	Permanent Steel Casing Tip Elev (Elev Not To Extend Casing Below) FT	Permanent Steel Casing Length* per Pier Lin FT
End Bent No. 1 Piers 1-3	210	2031.5	20		9.0		11.0					
Bent 1 Piers 1-3	290	2012.0	20	2022	12.0		21.0			MAYBE	2025.0	8.0
End Bent No. 2 Piers 1-4	200	1990.0	20	2031	7.0		41.0					
End Bent No. 2 Pier 5-12	200	2010.0	20	2031	7.0		21.0					

\*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.

**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) Required? YES or MAYBE	Crosshole Sonic Logging (CSL) Required? YES or MAYBE	Total CSL Tube Length (For All Tubes) per Pier Lin FT	Shaft Inspection Device (SID) Required? YES or MAYBE	Pile Integrity Test (PIT) Required? MAYBE
End Bent No. 1 Piers 1-3		MAYBE	50	MAYBE	
Bent 1 Piers 1-3		MAYBE	90	MAYBE	
End Bent No. 2 Piers 1-4		MAYBE	170	MAYBE	
End Bent No. 2 Pier 5-12		MAYBE	90	MAYBE	
<b>TOTAL QTY:</b>		5	1820	5	

\*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.

**NOTES**

1. The Pile Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer Michael H. Stephens, P.E., License No. 028893 on 10-17-2022.

2. The Engineer will determine the need for Permanent Steel Casing, SPTs, CSL Testing, SID Inspections and PITs when these items may be required.

**FOUNDATION NOTES**

1) FOR DRILLED PIERS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

**SPECIAL FOUNDATION NOTES**



1) BORINGS INDICATE THE PRESENCE OF BOLDERS IN THE OVERBURDEN ALLUVIAL SOILS. DIFFICULT DRILLING CONDITIONS ARE ANTICIPATED AND DUE TO THE DIFFICULT DRILLING CONDITIONS, WE HAVE USED A SINGLE PAY ITEM FOR THE DRILLED PIER QUANTITIES.

2) SCOUR CRITICAL ELEVATION FOR END BENT 2 IS DEFINED BY THE BOTTOM OF RETAINING WALL (TOP OF DRILLED PIER). ELEVATION MAY VARY, SEE ASBUILT DRAWINGS TO VERIFY THE BOTTOM OF RETAINING WALL. SCOUR CRITICAL ELEVATION FOR END BENT NO. 2 IS TO PROTECT THE ABUTMENT AND WING WALLS BACKFILL.

PROJECT NO. 47845.1.1 (B-5989)

MADISON COUNTY

STATION: 16+18 -L-  
BRIDGE NO. 71

 DocuSigned by:  11/17/2022 SIGNATURE DATE	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH  <b>PILE AND DRILLED PIER                  FOUNDATION                  TABLES</b>		SHEET NO.				
	REVISIONS		TOTAL SHEETS				
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	NO.	BY:	DATE:	NO.	BY:	DATE:	
	1			3			
	2			4			