FOUNDATION RECOMMENDATIONS

WBS # 17BP.14.R.73

DESCRIPTION Bridge 321 - SR 1424 over Lakey Creek

T.I.P. NO. N/A

COUNTY Macon

STATION 12+91.35 -L-

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 026917 ENGINEER MICHAEL P. WALKO

10-10-12

SIGNATURE

	INITIALS	DATE
DESIGN	MJW	Oct-12
CHECK	WPA	Oct-12
REVISED		

BENT	STATION	FOUNDATION TYPE	FACTORED RESISTANCE	MISCELLANEOUS DETAILS
END BENT 1	12+65.22 -L-	Cap on HP 12X53 Steel Piles	85 Tons/Pile	Ave. BOC Elevation = 2158.9' Avg. Pile Length = 60' ± 5 piles @ 8'-3" spacing
END BENT 2	13+17.48 -L-	Cap on HP 12X53 Steel Piles	85 Tons/Pile	Ave. BOC Elevation = 2161.4' Avg. Pile Length = 35' ± 5 piles @ 8'-3" spacing

NOTES ON PLANS & COMMENTS (See following page)

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENG. UNIT-WRO

___ ACCEPTED

X ACCEPTED AS NOTED

___ RETURNED FOR CORRECTIONS

___ SEE LETTER

BY: Dean Hardister, PE

DATE: 10/17/2012

WBS # 17BP.14.R.73 **County** Macon

FOUNDATION RECOMMENDATION NOTES ON PLANS

1) For Piles, see Section 450 of the Standard Specifications.

2) Piles at End Bent 1 and End Bent 2 are designed for a factored resistance of 85 tons per pile.

3) Drive piles at End Bent 1 and End Bent 2 to a required driving resistance of 145 tons per pile.

4) Steel H-pile points are required for steel H-piles at End Bent 1 and End Bent 2. For steel pile points, see Section 450 of the Standard Specifications.

{INSERT} INSTALL PILES AT END BENT NO. 1 TO A TIP ELEVATION NO HIGHER THAN 2,143 FT.

5) If necessary, predrill pile locations at End Bent 1 to elevation 2,148 feet with equipment that will result in a maximum predrilling diameter of ~~20~~ 12 inches. For predrilling for piles, see Section 450 of the Standard Specifications.

{INSERT} INSTALL PILES AT END BENT NO. 2 TO A TIP ELEVATION NO HIGHER THAN 2,145 FT.

6) If necessary, predrill pile locations at End Bent 2 to elevation 2,150 feet with equipment that will result in a maximum predrilling diameter of ~~20~~ 12 inches. For predrilling for piles, see Section 450 of the Standard Specifications.

7) Testing the first production pile with the PDA during driving, restriking or redriving may be required. The engineer will determine the need for PDA testing. For PDA testing, see Section 450 of the Standard Specifications (and for pile driving criteria, see pile driving criteria provision).

~~8) Temporary steel casings are required for predrilling at End Bent 1 and End Bent 2.~~

FOUNDATION RECOMMENDATION COMMENTS

1) A Delmag D19-32 pile hammer was utilized as a common hammer type to determine potential pile driving stresses. This hammer should provide sufficient energy to drive the piles to the required driving resistance at the end bents. However, the actual hammer to be utilized will be submitted by the contractor and analyzed after letting.

2) 1.5 (H:V) End Slopes with rip rap slope protection are recommended as shown on the preliminary general drawing.

3) The sub-regional approach fill detail should be used at both end bents.

4) No waiting period is required at either end bent prior to construction.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENG. UNIT-WRO

___ ACCEPTED
X ACCEPTED AS NOTED
___ RETURNED FOR CORRECTIONS
___ SEE LETTER

BY: Dean Hardister, PE
DATE: 10/17/2012

BEARING PILE PAY ITEMS

(For 2012 Lettings and Later - Revised 4/18/11)

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENG. UNIT-WRO

___ ACCEPTED
X ACCEPTED AS NOTED
___ RETURNED FOR CORRECTIONS
___ SEE LETTER

BY: Dean Hardister, PE
DATE: 10/17/2012

WBS ELEMENT: 17BP.14.R.73
TIP NO.: N/A
COUNTY: Macon
STATION: 12+91.35 -L-

DATE: Oct-12
DESIGNED BY: MJW
CHECKED BY: WPA

DESCRIPTION: Bridge 321 - SR 1424 over Lakey Creek

NUMBER OF BENTS WITH PILES: ___
NUMBER OF PILES PER BENT: ___
NUMBER OF END BENTS WITH PILES: 2
NUMBER OF PILES PER END BENT: 5

Only required for "Predrilling for Piles" & "Pile Excavation" Pay Items

Bent # or End Bent #	PILE PAY ITEM QUANTITIES						
	Steel Pile Points (yes/no)	Pipe Pile Plates (yes/no/maybe)	Predrilling For Piles (per linear ft)	Pile Redrives (per each)	Pile Excavation (per linear ft)		PDA Testing (per each)
					In Soil	Not In Soil	
End Bent 1	Yes	No	55	0	0	0	*
End Bent 2	Yes	No	60	0	0	0	*
TOTALS			115	0	0	0	1

Notes:

Blanks or "no" represent quantity of zero.

If steel pile points are required, calculate quantity of "Steel Pile Points" as equal to the number of steel piles.

If pipe pile plates are or may be required, calculate the quantity of "Pipe Pile Plates" as equal to the number of pipe piles.

If PDA testing may be required, show quantities of "PDA Testing" on the substructure plans as totals only. If PDA testing is required, show quantities of "PDA Testing" on the substructure plans for each bent or end bent.