



**NOTES**

- THE DRILLED PIERS AT BENT No. 1 AND No. 2 HAVE BEEN DESIGNED FOR BOTH SKIN FRICTION AND TIP BEARING. THE REQUIRED TIP BEARING CAPACITY AT BENT No. 1 IS 25 TONS/FT<sup>2</sup> AND 22 TONS/FT<sup>2</sup> AT BENT No. 2.
- THE REQUIRED TIP BEARING CAPACITY AT BENT No. 1 AND BENT No. 2 SHALL BE VERIFIED.
- DRILLED PIERS FOR BENT No. 1 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 215 TONS EACH AT THE TOP OF THE COLUMN.
- DRILLED PIERS FOR BENT No. 2 HAVE BEEN DESIGNED FOR AN APPLIED LOAD OF 188 TONS EACH AT THE TOP OF THE COLUMN.
- PERMANENT STEEL CASING MAY BE REQUIRED FOR DRILLED PIERS AT BENT No. 1 AND No. 2. IF REQUIRED, THE CASING SHALL NOT EXTEND BELOW ELEVATION 2046 FT. FOR BOTH BENTS WITHOUT THE ENGINEER'S PERMISSION. THE NEED FOR PERMANENT STEEL CASING WILL BE DETERMINED BY THE ENGINEER.
- DRILLED PIERS AT BENT No. 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN THE FOLLOWING VALUES AND SATISFY THE REQUIRED TIP BEARING CAPACITY:  
 PIER No. 1 - ELEV. 2040 FT.  
 PIER No. 2 - ELEV. 2032 FT.  
 PIER No. 3 - ELEV. 2023 FT.
- DRILLED PIERS AT BENT No. 2 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 2029 FT. AND SATISFY THE REQUIRED TIP BEARING CAPACITY.
- THE SCOUR CRITICAL ELEVATIONS FOR BENT No. 1 ARE AS FOLLOWS:  
 PIER No. 1 - 2045 FT., PIER No. 2 - 2037 FT. AND PIER No. 3 - 2028 FT.  
 THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- THE SCOUR CRITICAL ELEVATION FOR BENT No. 2 IS 2034 FT. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.
- SID INSPECTIONS MAY BE REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT No. 1 AND BENT No. 2.
- CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR THE DRILLED PIERS AT BENT No. 1 AND BENT No. 2. SEE SPECIAL PROVISION FOR CROSSHOLE SONIC LOGGING.
- SPT TESTING IS REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT No. 1 AND BENT No. 2.
- STEEL PILE POINTS (WITH TEETH) ARE REQUIRED FOR PILES AT BOTH END BENTS. SEE SPECIAL PROVISIONS FOR STEEL PILE POINTS.
- PILES FOR END BENT No. 1 AND END BENT No. 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 60 TONS.
- WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.

**FOUNDATION LAYOUT**

ALL PILES IN END BENTS ARE HP 12 X 53 STEEL PILES.  
 ALL END BENT BRACE PILES ARE BATTERED AT 3:12.  
 DIMENSIONS LOCATING PILES AND DRILLED PIERS ARE SHOWN TO THE PILE AND DRILLED PIER CENTERLINE.

DRAWN BY : CR YARBROUGH    DATE : 05/05  
 CHECKED BY : MG CHEEK    DATE : 05/05

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PROJECT NO. B-3664  
HENDERSON COUNTY  
 STATION: 20+95.00 -L-

SHEET 2 OF 3



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 BRIDGE NO. 21 ON SR 1528  
 OVER MUD CREEK BETWEEN  
 US 25 AND SR 1645

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			27