

Photographs of North Carolina's Beaufort and Morehead Railroad Trestle Bridge



24-inch diameter steel pipe piles in templates prepared for driving by vibratory hammer.



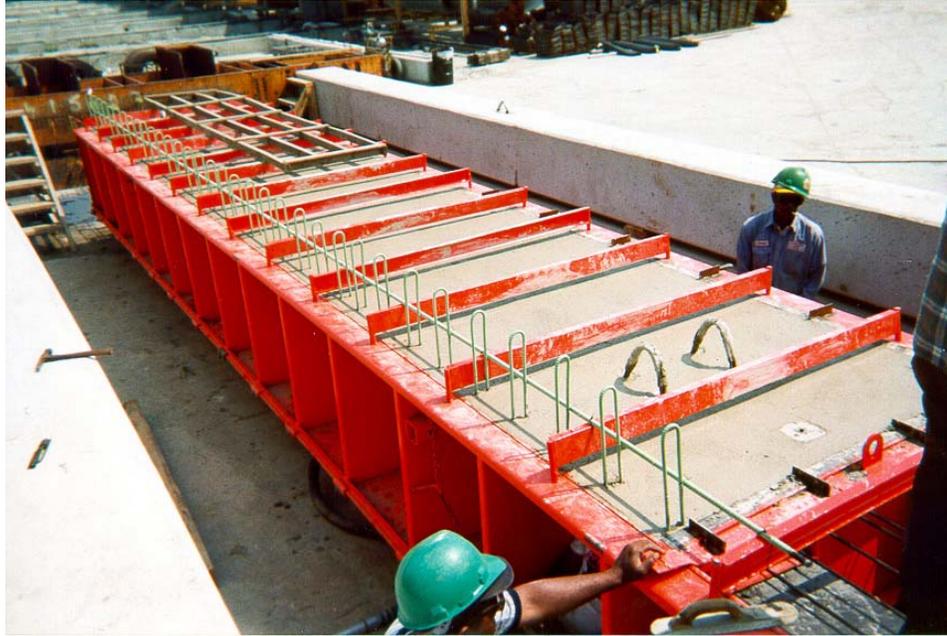
36-inch diameter concrete cylinder piles driven over the steel pipe piles to provide corrosion protection. Concrete cylinder piles were driven 3 feet below the scour calculated by HEC-18. Grout was pumped in the void between the two piles.



Pier caps precast upside down. When placed on-site, the reinforcing shown will be placed inside the steel pipe piles.



Pier cap reinforcing steel being placed in the pipe piles. Tapered voids were cast in the cap in the ring of column reinforcing steel to allow concrete to be pumped into the pipe pile to make the moment connection between the cap and the pile.



Precast prestressed concrete T-beam in casting bed. The T-beam shape was chosen by the contractor for ease of handling and to use available forms. The exposed reinforcing steel is for the concrete parapet, which was cast on the T-beam in the precast yard.



PPC T-beam sitting on pier cap. The T-beams are 36 inches tall with a 36-inch wide bottom flange and a 72-inch wide top flange. The T-beams have 50-1/2-inch-diameter low-relaxation strands with 28-day concrete strength of 5,500 psi.



Precast backwall and wings being set in place atop the previously set precast abutment cap founded on steel pipe piles. Not seen in the picture are embedded structural plates on the backside of abutment cap and wings. These plates overlap and are welded together and then covered by grout to make the abutment a continuous structural element.



Completed west approach trestle carrying railway traffic. Trestle spans are designed for live-load of Cooper E-80 plus Impact. Precast elements included PPC T-beam with parapet, pier caps, abutment caps, backwall and wings, PPC cylinder piles and steel pipe piles. Other precast elements not shown include flat slab transition spans at abutments and at transition to bascule rest piers and precast thrust block ribs.