



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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GOVERNOR

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SECRETARY

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STATE PROJECT: 6.469002T (R-0513A)
F.A. PROJECT: N/A
COUNTY: Robeson

DESCRIPTION: US 74 from Maxton Bypass to 1.87 km east of
SR 1166 (Cabinet Shop Rd.)

SUBJECT: Geotechnical Report – Structure Inventory for Structure No. 2 on -Y2-
(SR 1166, Cabinet Shop Rd.) over -L- (US 74 Bypass)

Project Description

A two-span bridge, 74.7 meters in length with a 120° 32' 44.0" skew, is proposed on -Y2- (SR 1166) over -L- (US 74 Bypass). The project is located in Robeson County about 8 kilometers east of Maxton.

The subsurface investigation was conducted during March of 2003 using an ATV-mounted CME 550 drill machine. One Standard Penetration Test boring was performed at each of the proposed bent locations. All borings were advanced using rotary drilling methods with bentonite fluid. Representative soil samples were obtained for visual classification in the field and selected samples were sent to the Materials and Test Unit for laboratory analysis.

Physiography and Geology

The project is located in flat terrain of the Coastal Plain Physiographic Province. Geologically, the site is underlain by sands and clays of the Duplin and Black Creek Formations. The area consists of a mixture of farm land, woods and sparse homes.

Soil Properties

Subsurface conditions at the site are relatively uniform. Surficial soils belonging to the Duplin Formation generally consist of tan, white, tan-brown and green-gray to dark gray, very loose to medium dense, wet, silty sand and fine to coarse sand.

The Black Creek Formation underlies the Duplin Formation at an elevation of approximately 38 meters and typically consists of light gray to tan-brown, wet, stiff to hard, sandy and silty clay as well as light gray, wet, loose to dense, clayey sand, coarse sand and silty sand. The moisture content of the tested silty clay samples ranged from 14 to 29 percent.

Groundwater

Groundwater was encountered at each bent location. Groundwater elevations ranged from 50.40 to 50.02 meters across the site at the time of this investigation.

Notice

This Geotechnical foundation report is based on the Preliminary General Drawing for Structure No. 2 on -Y2- (SR 1166) over -L- (US 74 Bypass) dated 8/19/02. If significant changes are made in the design or location of the proposed structure, the subsurface information should be reviewed and modified as necessary.

Respectfully submitted,

Handwritten signature of N. T. Roberson in black ink.

N. T. Roberson
Project Geologist