



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

December 2, 2002

STATE PROJECT: 8.2572401 (B-3506)  
COUNTY: Randolph  
DESCRIPTION: Bridge No. 226 Over Richland Creek on SR 2832  
SUBJECT: Geotechnical Report – Inventory

**Project Description**

The project is in Randolph County, about 7 miles southeast of Asheboro and about 1.5 miles off of NC 42. SR 2832 (Fairview Farm Road) runs from NC 42 south to SR 2845. It is an 18' asphalt roadway with grassed shoulders. This report addresses the roadway approaches for a bridge replacement project. The proposed roadway is a 22' facility with 6' shoulders. Minor realignment is proposed on the south approach. Improvements will require widening in both cut and fill sections. Maximum embankment height is about 20 feet and maximum cut about 15 feet.

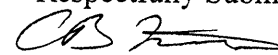
A minimal subsurface investigation was conducted, mostly due to the presence of rock outcrops in the vicinity. Overhead power lines limited access, as did soft, wet surface conditions in residential areas. Four borings were conducted with a CME 550 drill with automatic drop hammer. Two borings were advanced with 8" hollow augers and two with 6" standard augers.

**Areas of Special Geotechnical Interest**

Hard Rock: Rock outcrops were noted in several areas of proposed cut. However, borings conducted nearby advanced 12' to 25'. This would seem to indicate that the rock is erratic; there are either "knots" of hard rock or large boulders, or both. There is likely more hard rock present than the attached cross-sections indicate.

Proposed 1.5:1 slopes: Rock plated 1.5:1 side slopes in the vicinity of Sta. 17 -L- would be founded on a very steep natural slope. The cross-sections do not depict the steepness of the slope as it is nearly parallel to the -L- profile.

Roadway Fill / Artificial Fill: The boring conducted near the end of the proposed structure (18+70 -L-, 12' Lt.) encountered 12.4 feet of fill described as soft to very stiff sandy clay with rock fragments. The fill rests on hard rock. Division maintenance personnel reported that significant erosion has occurred in the area and that soil and rock has been placed as fill and erosion control. The structure investigation should provide more data.

Respectfully Submitted,  
  
Clint Little  
Engineering Geologist