



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

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### Groundwater

Static groundwater was measured in the alluvial deposits at depths between 7 and 8 feet at the time of the investigation.

Respectfully Submitted,

J. W. Mann, L.G.  
Project Engineering Geologist

STATE PROJECT: 33211.1.1 (B-3666)  
F. A. PROJECT: BRZ-1799(1)  
COUNTY: Henderson  
DESCRIPTION: Bridge No. 53 on SR-1799 over North Branch Hungry River  
SUBJECT: Geotechnical Report – Foundation Investigation

### Site Description

This project is located in eastern Henderson County near the Polk County Line. The site is rural, forested, with few residences. The replacement bridge will be constructed approximately 35 feet upstream from the existing crossing. The new structure will consist of a single span of 90 feet erected on a 90-degree skew.

The subsurface investigation was conducted with the use of a CME-550 ORV drill unit. Standard Penetration Tests (SPT's) were performed through NX casing with an automatic drop hammer. NXWL rock coring equipment was also used during the investigation. Rock core and soil samples were collected and submitted for appropriate testing parameters.

### Foundation Materials

Foundation materials will consist of 8 to 11 feet of alluvial or fill soils composed of very loose to dense sand, gravel, and cobbles. Weathered rock and hard rock is situated beneath these deposits at approximate elevation 1889 feet. Retrieved rock core yielded RQD values between 62 and 100 percent.