



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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STATE PROJECT: 8.2700501 (B-3403)
F. A. PROJECT: BRZ-1422(3)
COUNTY: Alleghany
DESCRIPTION: Approaches to Bridge No. 53 on SR-1422 over Brush Creek
SUBJECT: Geotechnical Report – Inventory

Site Description

This project is located in rural northeastern Alleghany County, approximately 1.2 miles from the Hooker Community. The replacement bridge will be constructed approximately 35 feet upstream from the existing structure.

The channel bank of Brush Creek is composed of silt, sand, cobbles, and boulders and has a cover of grass, bramble, and brush. Brush Creek has developed a floodplain width of approximately 800 feet. With a cover of trees, brush, and grass, its primary use is for pasture and agricultural purposes.

The subsurface investigation was conducted with a CME-550 ORV drill machine. All borings advanced at the site were completed with 8-inch hollow stem augers. Standard Penetration Testing (SPT) was performed with an automatic drive hammer.

Areas of Special Geotechnical Interest

A pond constructed with an earthen dam is located at approximate Station 16+50, 90 ft. LT.

Geotechnical Description of Project

It should be noted that this investigation was completed with the use of preliminary plans available in March 2001. The alignment has since been revised several times following the subsurface investigations. Therefore, the accompanying borings have been superimposed onto the nearest equivalent cross-section.

End Bent One Approach

Embankments of up to 12 feet are proposed along this approach. These fills will toe up on approximately 10 feet of loose alluvial sand, deposited over medium dense to dense saprolitic sand.

End Bent Two Approach

Both fills and cuts to the left and right of the alignment are proposed through this interval. Embankments will approach 15 feet, while cut excavations will be on the order of 10 feet or less. Construction materials will primarily involve loose to dense sandy saprolite and weathered rock.

Respectfully Submitted,

J. W. Mann, TEG-III

JWM:mw