



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 3, 2006

MEMORANDUM TO: J. Stuart Bourne, P.E.
State Work Zone Traffic Engineer

James A. Speer, P.E.
Project Engineer - Roadway Design Unit

Roy M. Girolami, P.E.
Project Engineer - Structure Design Unit

FROM: Njoroge Wainaina, P.E.
State Geotechnical Engineer

STATE PROJECT: 34960.1.1 (U-3612)
FEDERAL PROJECT: STP-1424 (3)
COUNTY: Guilford County

DESCRIPTION: Greensboro – SR 1424 (Hilltop Road) from east of SR 1546
(Guilford College Road) to Adams Farm Parkway

SUBJECT: Temporary Shoring Headwall

The Geotechnical Engineering Unit has reviewed the proposed staged construction of the culvert at Station 23 + 12.30 -L-. This review addresses the temporary shoring headwall required for the maintenance of traffic. We recommend the following:

Culvert Stage I – Station 14 + 71.68 ± to Station 15 + 21.68 ± -DET- @ 10 ± ft. Left

This location should be shown on the Traffic Control Plans and labeled “Temporary Shoring, Barrier Supported”.

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LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

The following Notes on Plans should be placed on the Traffic Control Plans.

1. "For Design of Temporary Shoring - Barrier Supported, use the following soil parameters:
Unit weight of soil above water table, $\gamma = 120$ pcf
Unit weight of soil below water table, $\gamma' = 60$ pcf
Friction Angle, $\phi = 30^\circ$
Cohesion, $c = 0$ psf."
2. "Shoring embedment may be difficult to obtain due to the presence of weathered rock at shallow depths."
3. "Temporary Shoring shall not impede flow in the proposed temporary pipe".
4. "Temporary Shoring shall include a seal around the proposed temporary pipe to aid in retaining backfill material. The cost for the seal shall be incidental to the cost of the temporary shoring."

The Roadway Design Unit should include the current special provision for the Temporary Shoring for Maintenance of Traffic in the Roadway Plans as well as a quantity of 300 square feet for the "Temporary Shoring, Barrier Supported" pay item.

In addition, the following note on plans should be added to the Structure Plans: "For limits of Temporary Shoring for Maintenance of Traffic, See Traffic Control Plans. For pay item for Temporary Shoring for Maintenance of Traffic, See Roadway Plans."

If you have any questions, please call Charles A. Gove, P.E. or James R. Batts, P.E. at (919) 662-4710.

NWW/JRB/CAG