

roadway segment on -L- from Station 11+00 to 16+91 and on -DET- from Station 12+50 to 17+50.

Geotechnical Descriptive Analysis

-L- Station 11+00 to 16+91

This segment comprises all of the roadway approach upstream of the bridge. Borings were made at -L- Station 12+50, 25 Right, and 14+50, 8 Right. Soils consist of 10 to 20 feet of colluvium with gravel, cobbles, and boulders overlying saprolite. The colluvial soils are deeper to the right as the surface of the colluvial deposit rises in that direction. A few feet of silty fill soil has been spread over the colluvial surface on the Right Side from the beginning of the project as far as Station 14+50.

Static ground water was found at depths of approximately 3 feet in both borings in this segment of -L-.

-L- Station 17+36 to 20+50

This segment comprises all of the approach downstream of the bridge. Colluvium underlies the thin roadway embankment and the gentle slope beside the creek on the Right Side. The Left Side is a steep residual slope with an existing cut. Several hard rock outcrops are exposed in the cut.

Plans call for a retaining wall to be constructed near the base of the slope 18 feet Left of -L-, from Station 17+92 to Station 19+50. Four borings were made on the existing ditch line 12 feet Left of -L-. The wall position could not be accessed due to the very steep slope there. The borings found hard rock at depths of 2 to 6 feet. The overburden varied from site to site, and included very dense saprolite (A-1-b), weathered rock, colluvium, and roadway embankment. Most of those materials are not present along the line of the proposed wall. Foundation materials for the wall are likely to be hard rock, weathered rock, and, at its eastern end, very dense saprolite.

-DET- Stations 12+50 to 17+50

Plans call for a Right Side cut on this part of the proposed temporary detour, with a maximum depth of 23 feet at ditch line near Station 17+00 and a cut face approximately 30 feet high. The cut will be entirely in colluvium. Two borings were made in the colluvium on the Right Side of -DET- at Stations 16+61 and 17+11 without finding the base of the deposit after 33.5 feet and 42.8 feet of drilling, respectively.

The upper part of the colluvium, which will form the greater part of the exposed cut face, consists of beds or lenses of various composition. They include medium stiff, sandy, silty clay (A-7-5, A-7-6); loose or medium dense, silty sand (A-2-4); and medium dense, silty sand and gravel (A-1-b). The lower part of the colluvium is very bouldery, silty sand and gravel.

The static water table was found in one boring at a depth of 17.9 feet. The other boring caved before the depth to water could be measured. Those findings indicate that ground water may be encountered as much as 12 feet above ditch line in the cut around Station 17+00.

-DET- Stations 17+50 to 20+00

The temporary detour on this segment is to be constructed on new embankment, which will have a maximum depth of approximately 10 feet near the stream crossing. A temporary culvert is to be installed for the crossing. The embankment and the culvert will be placed over bouldery sand and gravel colluvium, which is estimated to be at least 10 feet deep beneath the creek channel.

Respectfully submitted,



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