

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 34459.1.6 ID: R-2552 C COUNTY: Johnston

DESCRIPTION(1): New Bridge on -L2RT- (US 70 Bypass) over Little Creek

INFORMATION ON EXISTING BRIDGE

Information obtained from: field inspection
 microfilm (Reel: _____ Pos: _____)
 other: _____

BR. NO.: n/a BR. LENGTH: n/a NO. BENTS: n/a NO. BENTS IN: CHANNEL: n/a FLOODPLAIN: n/a

FOUNDATION TYPE: n/a

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: n/a

INTERIOR BENTS: n/a

CHANNEL BED: No evidence of scour can be seen in the channel.

CHANNEL BANKS: Some along west bank from high water flow.

EXISTING SCOUR PROTECTION:

TYPE(3): None

EXTENT(4): n/a

EFFECTIVENESS(5): n/a

OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): Some large trees have fallen in the creek.

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Alluvial, gray, loose, sand (SS-10)

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Alluvial, gray and brown, loose to medium dense, sand (SS-14 and 58)

CHANNEL BANK COVER(10): Trees, grass, and brush

FLOOD PLAIN WIDTH(11): +/- 100 meters

FLOOD PLAIN COVER(12): Trees, grass, and brush

DESIGN INFORMATION CONT.

STREAM IS: X DEGRADING AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS: _____

CHANNEL MIGRATION TENDENCY (14): None evident.

GEOTECHNICALLY ADJUSTED SCOUR ELEVATIONS(15):

	<u>Bent 1</u>	<u>Bent 2</u>	<u>Bent 3</u>
Elevation (m):	53.1	52.9	53.5

The GASE scour elevations agree with the Hydrualic Unit's predicted scour elevations.

REPORTED BY: *Jaime L. Love* DATE: 7/19/04
Field Inspection By: Jaime Love

INSTRUCTIONS

- (1) GIVE THE DESCRIPTION OF THE SPECIFIC SITE GIVING ROUTE NUMBER AND BODY OF WATER CROSSED.
- (2) NOTE ANY EVIDENCE OF SCOUR AT THE EXISTING END BENTS OR ABUTMENTS (UNDERMINING, SLOUGHING, SCOUR LOCATIONS, DEGRADATIONS, ETC.)
- (3) NOTE ANY EXISTING SCOUR PROTECTION (RIP RAP, ETC.)
- (4) DESCRIBE THE EXTENT OF ANY EXISTING SCOUR PROTECTION.
- (5) DESCRIBE WHETHER OR NOT THE SCOUR PROTECTION APPEARS TO BE WORKING.
- (6) NOTE ANY DAMS, FALLEN TREES, DEBRIS AT BENTS, ETC.
- (7) DESCRIBE THE CHANNEL BED MATERIAL: A SAMPLE SHOULD BE TAKEN FOR GRAIN SIZE DISTRIBUTION.
- (8) DESCRIBE THE CHANNEL BANK MATERIAL: A SAMPLE SHOULD BE TAKEN FOR GRAIN SIZE DISTRIBUTION, ATTACH LAB RESULTS.
- (9) DESCRIBE THE FOUNDATION BEARING MATERIAL,
- (10) DESCRIBE THE BANK COVERING (GRASS, TREES, RIP RAP, NONE, ETC.)
- (11) GIVE THE APPROXIMATE FLOOD PLAIN WIDTH (ESTIMATE).
- (12) DESCRIBE THE FLOOD PLAIN COVERING (GRASS, TREES, CROPS, ETC.)
- (13) CHECK THE APPROPRIATE SPACE AS TO WHETHER THE STREAM IS DEGRADING OR AGGRADING
- (14) DESCRIBE THE POTENTIAL OF THE BODY OF WATER TO MIGRATE Laterally DURING THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS).
- (15) GIVE THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION EXPECTED OVER THE LIFE OF THE BRIDGE (APPROXIMATELY 100 YEARS). THIS CAN BE GIVEN AS AN ELEVATION RANGE ACROSS THE SITE, OR ON A BENT BY BENT BASIS WHERE VARIATIONS EXIST. DISCUSS THE RELATIONSHIP BETWEEN THE HYDRAULICS THEORETICAL SCOUR AND THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION. IF THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION IS DEPENDENT ON SCOUR COUNTER MEASURES, EXPLAIN. (RIPRAP ARMORING ON SLOPES, ETC.) THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION IS BASED ON THE ERODABILITY OF MATERIALS WITH CONSIDERATION FOR JOINTING, FOLIATION, BEDDING ORIENTATION AND FREQUENCY; CORE RECOVERY PERCENTAGE; PERCENTAGE RQD; DIFFERENTIAL WEATHERING, SHEAR STRENGTH; OBSERVATIONS AT EXISTING STRUCTURES; OTHER TESTS DEEMED APPROPRIATE; AND OVERALL GEOLOGIC CONDITIONS AT THE SITE.