

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 33304.1.1 ID: B-3857 COUNTY: Henderson

DESCRIPTION(1): Bridge No. 8 on SR-1314 over Boylston Creek

INFORMATION ON EXISTING BRIDGES Information obtained from: field inspection
 microfilm(Reel: _____ Pos: _____)
 other Hydraulics Report

COUNTY BRIDGE NO. 8 BRIDGE LENGTH 42 ft. NO. BENTS IN: CHANNEL 0 FLOOD PLAIN 2

FOUNDATION TYPE: Vertical Abutments

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: EB1-B: downstream EB2-A: upstream

INTERIOR BENTS: N/A

CHANNEL BED: None

CHANNEL BANKS: Minor scour End Bent Two side.

EXISTING SCOUR PROTECTION:

TYPE(3): None other than abutments.

EXTENT(4): N/A

EFFECTIVENESS(5): N/A

OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): None

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): Sand, silt, gravel, cobbles.

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): Sand, silt, gravel, cobbles.

FOUNDATION BEARING MATERIAL(9): N/A

CHANNEL BANK COVER(10): _____

FLOOD PLAIN WIDTH(11): Approximately 1400 ft.

FLOOD PLAIN COVER(12): Grass; corn in summer.

DESIGN INFORMATION CONT.

STREAM IS DEGRADING _____ AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS: _____

CHANNEL MIGRATION TENDENCY (14): Toward End Bent Two.

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15): _____

Elevation: 2048 ft. (Channel Bed)

REPORTED BY: J. W. Mann, L. G., TEG-III DATE: 11/22/2004

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, ATTACH LAB RESULTS.
- (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 RELATIONSHIP BETWEEN THE HYDRAULICS THEORETICAL SCOUR AND THE GEOTECHNICALLY ADJUSTED SCOUR ELEVATION. 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.