

GEOTECHNICAL ENGINEERING UNIT FIELD SCOUR REPORT

PROJECT: 8.1711401 ID: B-4010 COUNTY: ASHE

DESCRIPTION(1): BRIDGE NO. 7 ON NC 163 OVER SOUTH FORK NEW RIVER

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

COUNTY BRIDGE NO. 7 BRIDGE LENGTH 300 NO. BENTS IN: CHANNEL 3 FLOOD PLAIN 3

FOUNDATION TYPE:

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: NONE

INTERIOR BENTS: SCOUR AROUND 3 BENTS IN CHANNEL

CHANNEL GENERALLY SCoured TO HARD ROCK

CHANNEL BANKS: TENDENCY TO SCOUR SOUTH BANK DURING FLOODS

EXISTING SCOUR PROTECTION:

TYPE(3): PLACED STONE ON END BENT SLOPES

EXTENT(4):

EFFECTIVENESS(5): EFFECTIVE

OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): LOG DEBRIS ON INTERIOR BENT TWO

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): GRAVEL AND BOULDERS AND HARD ROCK

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): SAND

FOUNDATION BEARING MATERIAL(9): HARD ROCK

CHANNEL BANK COVER(10) TREES AND BRUSH ON SOUTH BANK, GRASS ON NORTH BANK

FLOOD PLAIN WIDTH(11): 300 FEET

FLOOD PLAIN COVER(12): GRASS

DESIGN INFORMATION CONT.

STREAM IS X DEGRADING AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS:

CHANNEL MIGRATION TENDENCY (14): SOUTH ON OUTSIDE OF BEND

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15):

Table with 6 columns: EBI-A, 2786.0 FT, BI-C, 2757.0 FT, EB2-A, 2755.0 FT; EB1-B, 2796.0 FT, B2-C, 2754.5 FT, EB2-B, 2755.0 FT

REPORTED BY: L. L. ACKER DATE: 8/28/03

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.