FIELD SCOUR REPORT

PROJECT: 8.T311002 ID: R-2552B COUNTY: Johnston

DESCRIPTION(1): Relocation of Bridge No. 207 on SR 1560 over Little Creek.

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

COUNTY BRIDGE NO. 207 BRIDGE LENGTH 36.57m NO. BENTS IN: CHANNEL 0 FLOOD PLAIN 4

FOUNDATION TYPE: Precast Prestressed Concrete Piles

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: None

INTERIOR BENTS: None

CHANNEL BED: None

CHANNEL BANKS: None

EXISTING SCOUR PROTECTION:

TYPE(3): Concrete slope protection and rip rap

EXTENT(4): Concrete to the the middle of the slope with rip rap to the toe.

EFFECTIVENESS(5): Satisfactory

OBSTRUCTIONS(6) (DAMS,DEBRIS,ETC.): One meter wide debris (branches and leaves) collecting 7meters downstream of the proposed replacement structure.

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): S-2: 14+70, 3m Lt.(see attached grain size curve)

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): S-1: 14+69, 3m Rt.(see attached grain size curve)
B2-B, SS-4: (A-1-a), S-3: 14+79, 4.5m Lt.(see attached grain size curve)

FOUNDATION BEARING MATERIAL(9): Tan quartz-muscovite schist

CHANNEL BANK COVER(10) Tall grasses and shrubbery.

FLOOD PLAIN WIDTH(11): 95 meters ±

FLOOD PLAIN COVER(12): 2.5 to 4 meter tall shrubbery, vines, and saplings amongst well spaced hardwoods

DESIGN INFORMATION CONT.

STREAM IS ____ DEGRADING X AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS: Relocation of Bridge No. 207 on SR 1560 over Little Creek.

CHANNEL MIGRATION TENDENCY (14): Southwest

CRITICAL SCOUR ELEVATION (15): To be determined by the NCDOT Geotechnical Unit

REPORTED BY: Lydia B. Lidchist DATE: 9/2001

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 CRITICAL 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 CRITICAL SCOUR ELEVATION. IF THE CRITICAL SCOUR ELEVATIONS DEPENDENT ON SCOUR COUNTER MEASURES, EXPLAIN. (RIP RAP ARMORING ON SLOPES, ETC.) THEORETICAL 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.