GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 8.2751801 ID: B-3709 COUNTY: WATAUGA

DESCRIPTION(1): BRIDGE NO. 94 ON SR-1111 (OLD DANNER RD.) OVER LAUREL FORK CREEK

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

COUNTY BRIDGE NO. 94 BRIDGE LENGTH 77 NO. BENTS IN: CHANNEL 3 FLOOD PLAIN N/A

FOUNDATION TYPE: STRIP FOOTINGS

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: NONE

INTERIOR BENTS: POSSIBLE SCOUR TENDENCY ON CENTER BENT (B2)

CHANNEL BED: NONE

CHANNEL BANKS: NONE

EXISTING SCOUR PROTECTION:

TYPE(3): NONE EXCEPT NATURALLY OCCURRING LARGE BOULDERS

EXTENT(4):

EFFECTIVENESS(5):

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

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): BOULDERS, COBBLES, AND GRAVEL

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): BOULDERS, COBBLES AND GRAVEL AND ROCK OUTCROP

FOUNDATION BEARING MATERIAL(9): HARD ROCK

CHANNEL BANK COVER(10): TREES AND BOULDERS

FLOOD PLAIN WIDTH(11): N/A

FLOOD PLAIN COVER(12):

DESIGN INFORMATION CONT.

STREAM IS X DEGRADING ____ AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS:

CHANNEL MIGRATION TENDENCY (14): STRAIGHT

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15):

EBI-A	2792.4 FT.	B2-A	2780.0 FT. (ESTIMATED)
EBI-B	2784.9 FT.	B2-B	2780.0 FT. (ESTIMATED)
B1-A	2786.7 FT.	EB2-A	2778.5 FT.
B1-B	2782.5 FT.	EB2-B	2779.5 FT.

REPORTED BY: L. L. ACKER DATE: 2/11/03

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 ELEVEVATION 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.