

GEOTECHNICAL UNIT FIELD SCOUR REPORT

PROJECT: 34357.1.1 ID: R-0977A COUNTY: CHEROKEE

DESCRIPTION(1): NEW ALIGNMENT BR. ON EBL US-64 AT -LC1B- STA. 24+60.5 OVER MARTIN CREEK

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

COUNTY BRIDGE NO. NA BRIDGE LENGTH 167m NO. BENTS IN: CHANNEL 0 FLOOD PLAIN 1

FOUNDATION TYPE: SHAFT ?

EVIDENCE OF SCOUR(2):

ABUTMENTS OR END BENT SLOPES: NA

INTERIOR BENTS: N/A

CHANNEL BED: BARE ROCK

CHANNEL BANKS: ROCK CUT BANK ON WEST SIDE, 1 METER SILT HIGH BANKS ON EAST SIDE

EXISTING SCOUR PROTECTION:

TYPE(3): NA

EXTENT(4): NA

EFFECTIVENESS(5): NA

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

DESIGN INFORMATION

CHANNEL BED MATERIAL(7) (SAMPLE RESULTS ATTACHED): SKIM OF SAND AND GRAVEL OVER FLAT BEDROCK

CHANNEL BANK MATERIAL(8) (SAMPLE RESULTS ATTACHED): NOT SAMPLED SANDY SILT

FOUNDATION BEARING MATERIAL(9): (PHYLITE) OR CRYSTALLINE ROCK

CHANNEL BANK COVER(10): TREES, BRUSH AND SOME GRASS

FLOOD PLAIN WIDTH(11): 40 - 60 METERS

FLOOD PLAIN COVER(12): FOREST UNDERSTORY

DESIGN INFORMATION CONT.

STREAM IS xxx DEGRADING AGGRADING (13)

OTHER OBSERVATIONS AND COMMENTS: ENTRENCHED GOOSE NECK VALLEY

INTENSE EROSION, LATERAL BEND MIGRATION CONTROLLED BY ROCK STRIKE

CHANNEL MIGRATION TENDENCY (14): WEST BY NORTHWEST

GEOTECHNICALLY ADJUSTED SCOUR ELEVATION (15):

THE GEOTECHNICAL ENGINEERING UNIT AGREES WITH SCOUR CALCULATIONS

ON THE BRIDGE SURVEY AND HYDRAULIC DESIGN REPORT DATED 09-10-03

THAT ALL SCOUR IS NEGLIBLE

REPORTED BY: PQ LOCKAMY LG DATE: 4/26/04

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.