

OFFICE ESTIMATE
1@ 70' Bridge

020046

PREDESIGN-PRESURVEY REPORT

Project# _____
TIP# _____
Let Date _____
WBS# 17BP.11.R.69

County Alleghany

Bridge# 020046
Road# SR 1300 (Allen Rd.)
Stream Prather's Creek

Type Of Request: POC Force Account TIP NCMA

Date 7/11/13 Name M. G. S.

Assigned To _____

Checked By SRH 7-15-13

Prior Survey Date 11-61 (attach copy of prior survey) BRN BK: 1@30' Yes ✓ CO. FILE Yes

Study By Scour Section YES - ATTACHED

Flood Zone NO Detail Study _____ Date _____ Panel# 3020 (No flood zone)

B.M. Info Mouth of Wilson (7360 Ac) (Panel not available)

Quad Map Laurel Springs Drainage Area 11.5 SQ MI From USGS/Stream Stats

Q25 2330 cfs Q50 2760 cfs Q100 3280 cfs Method Regression

EXISTING BRIDGE INFORMATION

Location 0.3 MI. N. JCT. SR 1301

Average Daily Traffic 160 YR 2010

Length 41 ft. Bed- To Crown 10 ft. Water Depth 1 ft.

Type Structure Timber floor on salvaged 1-Beam

Type Spans 1 @ 40'-7" Single span

Upstream Structure N/A

Location

Bed- To Crown Prior Survey

Downstream Structure None N/A

Location N/A

Bed- To Crown Prior Survey

SCS Watershed N/A

ENVIRONMENTAL TVA NO

Trout Stream YES Anadromous Fish NO Primary Nursery Area NO

High Quality Waters NO Nutrient Sensitive Waters NO

Near Water Supply Intake NO CAMA County NO

Stream Classification B, Tr: + 10-1-38

DENR River Basin Info. New

From source to
South Fork New
River



BRC # 020046

SR 1300 (ALLEN RD.)

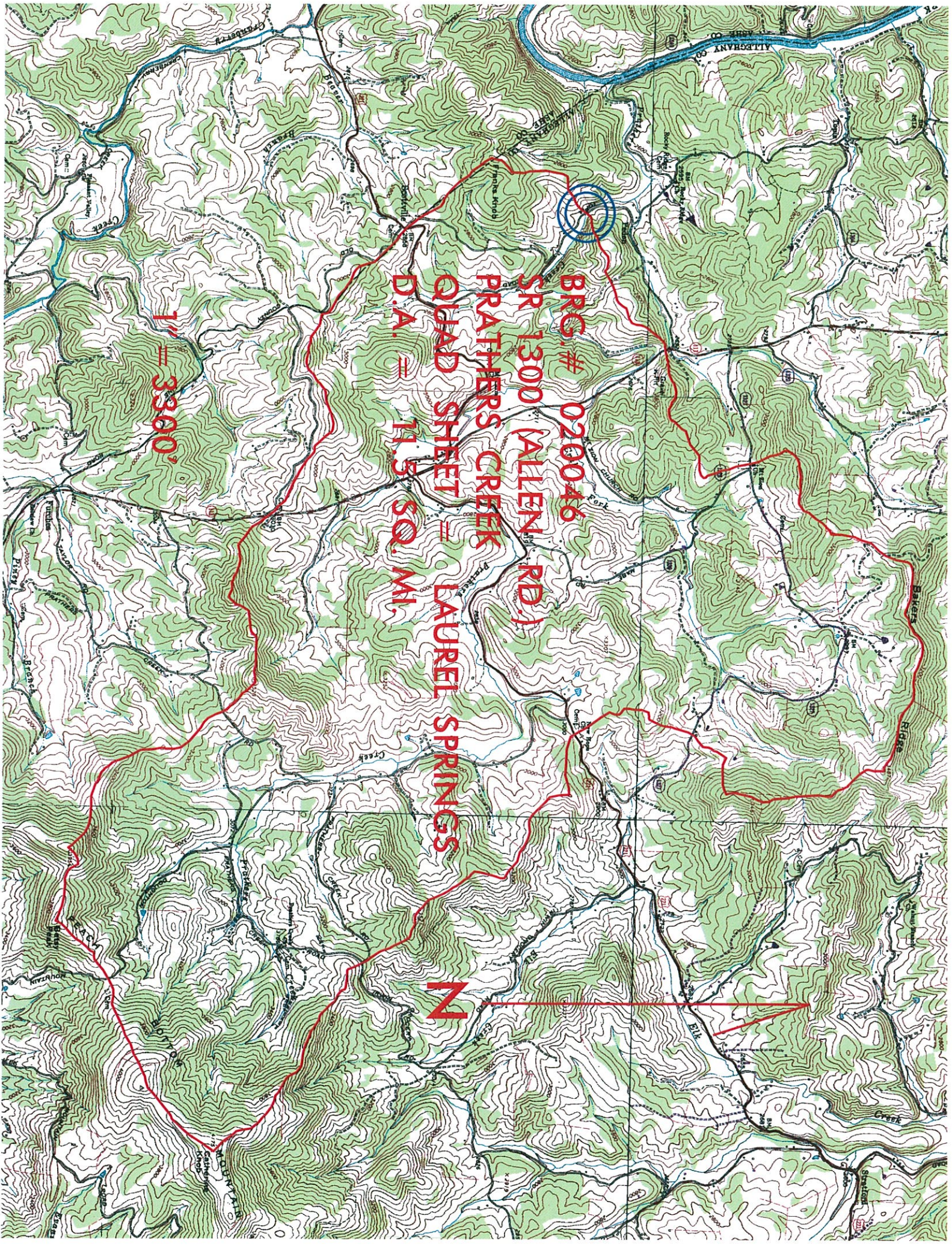
PRAITHERS CREEK

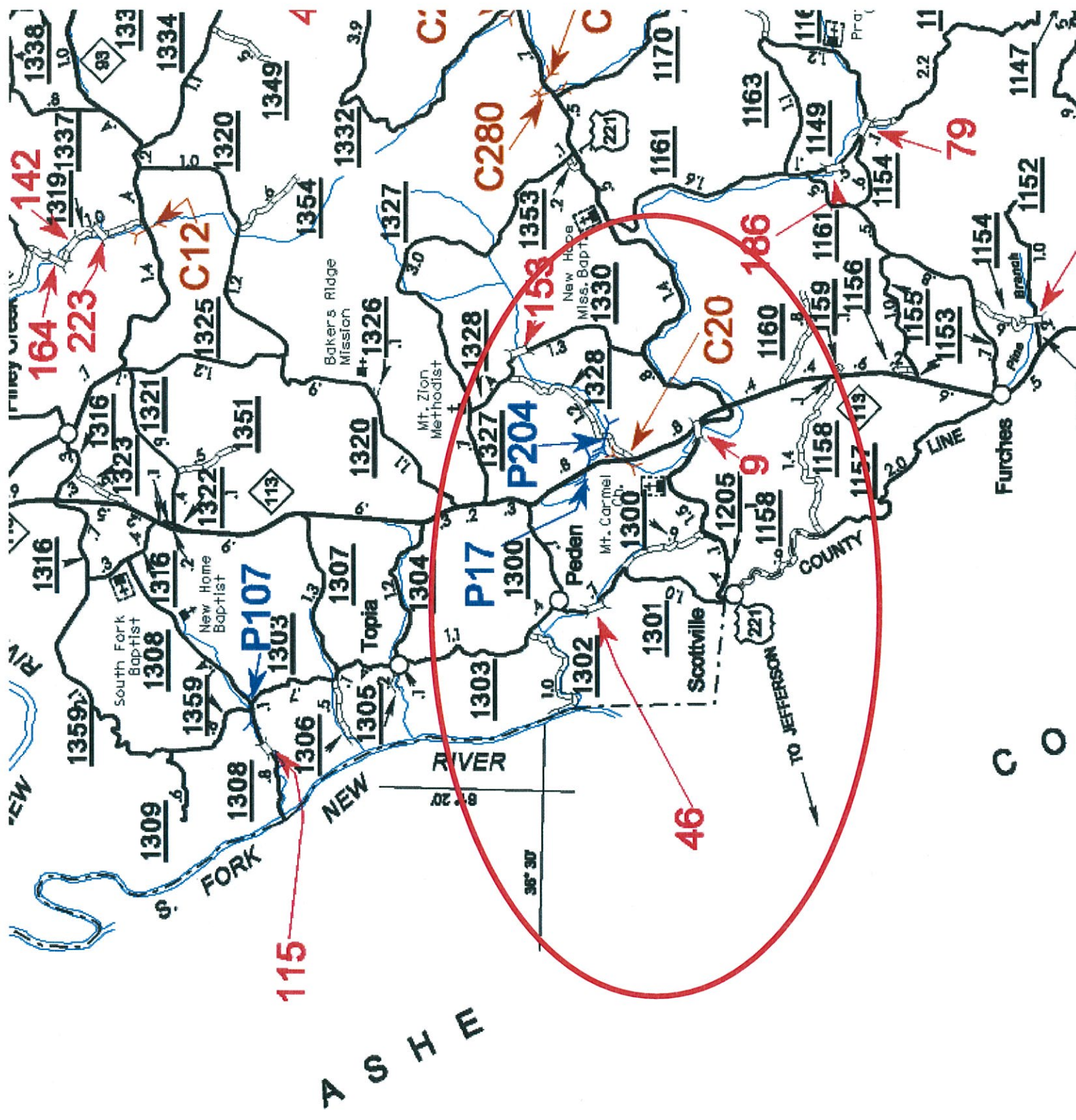
QDAD SHEET = LAUREL SPRINGS

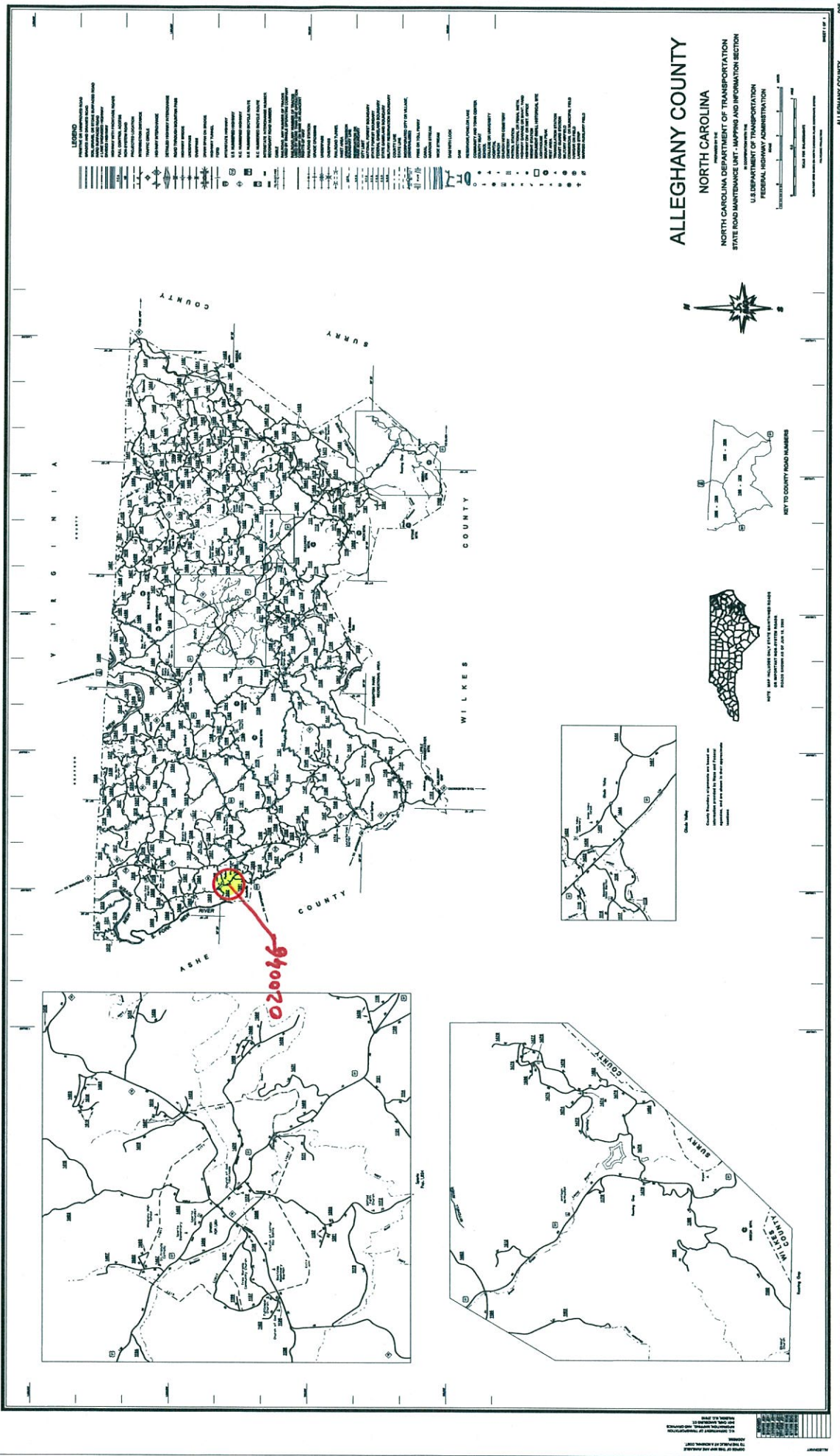
D.A. = 11.5 SQ. MI.

1" = 3300'

N

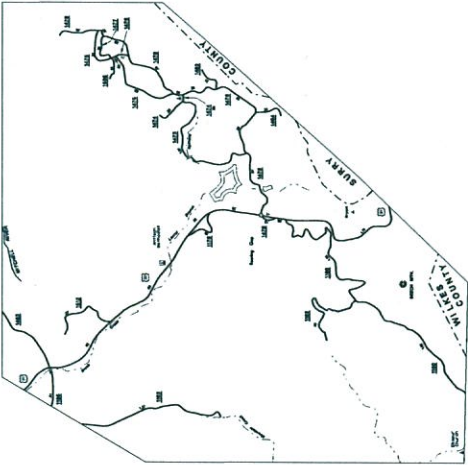
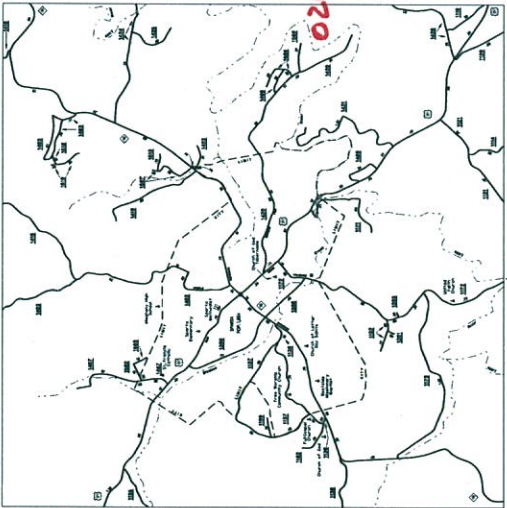






- LEGEND**
- Interstate Highway
 - State Highway
 - County Road
 - Unimproved Road
 - Waterway
 - Settlement
 - Unincorporated Area
 - County Seat
 - City
 - Village
 - Hamlet
 - Post Office
 - Religious Building
 - Public Building
 - Commercial Building
 - Industrial Building
 - Government Building
 - Healthcare Building
 - Education Building
 - Recreation Building
 - Transportation Building
 - Utility Building
 - Other Building
 - Other Structure
 - Other Feature
 - Other Symbol

ALLEGHENY COUNTY
NORTH CAROLINA
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STATE ROAD MAINTENANCE UNIT - MAPPING AND INFORMATION SECTION
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



020046



North Carolina StreamStats

Streamstats Ungaged Site Report

Date: Tue Jul 9 2013 14:03:22 Mountain Daylight Time

Site Location: North_Carolina

NAD27 Latitude: 36.4948 (36 29 41)

NAD27 Longitude: -81.3096 (-81 18 34)

NAD83 Latitude: 36.4949 (36 29 42)

NAD83 Longitude: -81.3094 (-81 18 34)

Drainage Area: 11.5 mi² - 7360 AC

Percent Urban: 6.1 %

Percent Impervious: 0.4 %

Peak Flows Region Grid Basin Characteristics			
100% Peak Southeast US 2009 5158 (11.5 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.5	1	9000
Percent Area in Region 1 (percent)	0.000	0	100
Percent Area in Region 2 (percent)	100.000	0	100
Percent Area in Region 3 (percent)	0.000	0	100
Percent Area in Region 4 (percent)	0.000	0	100
Percent Area in Region 5 (percent)	0.000	0	100

Urban Flows Region Grid Basin Characteristics			
100% Peak urban Blue Ridge-Piedmont FS007-00 (11.5 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	11.5	0.04	41
Area of Impervious Surfaces (percent)	0.39 (below min value 2)	2	54.6

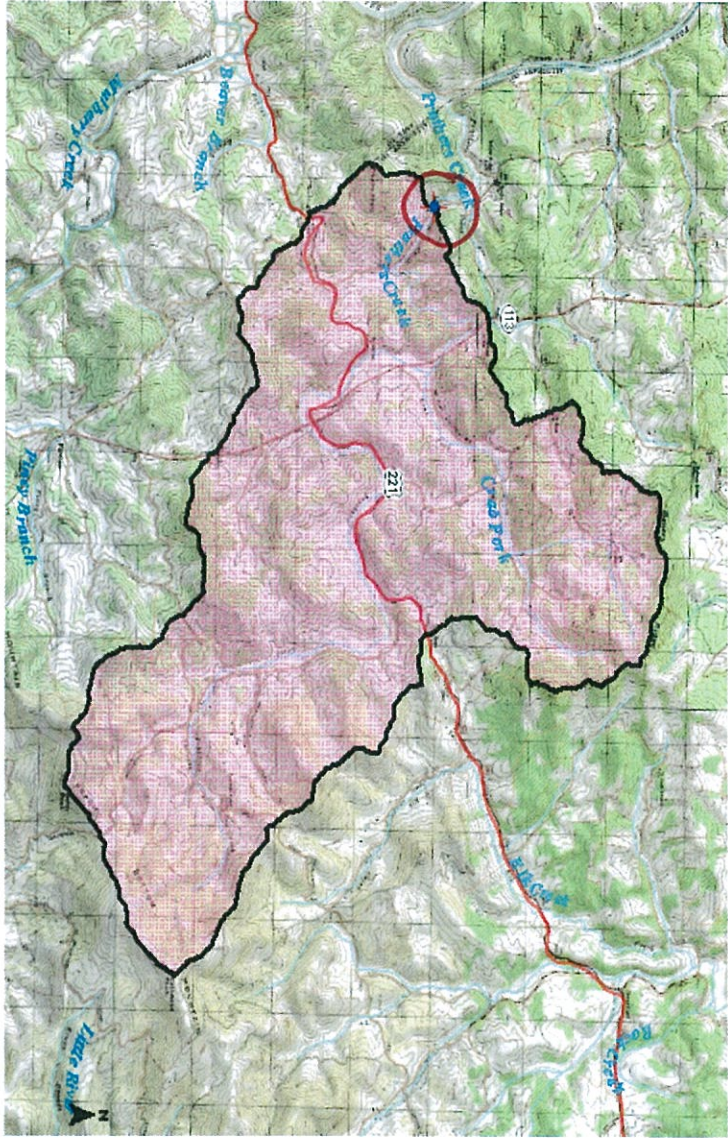
Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Peak Flows Region Grid Streamflow Statistics					
Statistic	Flow (ft ³ /s)	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
PK2	735	35		421	1280
PK5	1300	34		751	2260
PK10	1740	35		987	3070
PK25	2330	38		1280	4270
PK50	2760	40		1460	5220
PK100	3280	42		1680	6420
PK200	3730	44		1840	7570
PK500	4430	48		2080	9440

Urban Flows Region Grid Streamflow Statistics					
Statistic	Flow (ft ³ /s)	Standard Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
PK2U	106				
PK5U	243				
PK10U	372				
PK25U	673				
PK50U	887				
PK100U	1140				



StreamStats Print Page



7/9/2013 2:03:40 PM

- Explanation**
- ★ Globally Attached Point
 - ◆ SPIRIS Point
 - NC DOT Points
 - ▲ Locality
 - ▲ Gauging Station, Continuous Record
 - ▲ Low Flow, Partial Record
 - ▲ Peak Flow, Partial Record
 - ▲ Peak and Low Flow, Partial Record
 - ▲ Stage Only
 - ▲ Low Flow, Partial Record, Stage
 - ▲ Miscellaneous Record
 - ▲ Unknown
 - Local H2
 - Longest Jump at SD
 - Stream Grid
 - Globally Attached
 - Pilot Study Area
 - hucpoly



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

PRIORITY MAINTENANCE
TEMPORARY REPAIRS

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection - Contract

COUNTY ALLEGHANY BRIDGE NUMBER 020046 INSPECTION CYCLE 0 YRS
ROUTE SR1300 ACROSS CREEK M.P. 0

LOCATION .3 MI.N.JCT.SR1301

SUPERSTRUCTURE TIMBER FLOOR ON SALVAGED I-BEAMS

SUBSTRUCTURE E.BTS:TIMBER CAPS/TIMBER POST&SILLS @ VAR CENTERS

SPANS 1 @ 40'-7

LONGITUDE 81° 18' 33.65"

LATITUDE 36° 29' 41.84"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 07/10/2012

OPERATING RATING

PRESENT POSTING SV 14 TTST 17 SV 14 TTST 17

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT FOUR DELINEATORS



SOUTH APPROACH LOOKING NORTH

SIGN NOTICE ISSUED FOR		NUMBERED REQUIRED
<u>No</u>	WEIGHT LIMIT	<u></u>
<u>No</u>	DELINEATORS	<u></u>
<u>No</u>	NARROW BRIDGE	<u></u>
<u>No</u>	ONE LANE BRIDGE	<u></u>
<u>No</u>	LOW CLEARANCE	<u></u>

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL

Run Date: 07/30/2012

IDENTIFICATION				CLASSIFICATION	
(1) STATE NAME -NORTH CAROLINA	BRIDGE	020046	SUFFICIENCY RATING =	21.13	
(8) STRUCTURE NUMBER(FEDERAL)	00000000050046		STATUS =	Structurally Deficient	
(5) INVENTORY ROUTE (ON/UNDER) - ON	31013000				
(2) STATE HIGHWAY DEPARTMENT DISTRICT	1				
(3) COUNTY CODE 5	(4) PLACE CODE	0			
(6) FEATURE INTERSECTED - CREEK			(112)NBIS BRIDGE SYSTEM -	YES	
(7) FACILITY CARRIED SR1300			(104)HIGHWAY SYSTEM Is not on NHS	0	
(9) LOCATION .3 MI.N.JCT.SR1301			(26) FUNCTIONAL CLASS - Local	09	
(11)MILEPOINT	0		(100)STRAHNET HIGHWAY - Not a STRAHNET Route	0	
(16)LAT 36° 29' 41.84"	(17)LONG 81° 18' 33.65"		(101)PARALLEL STRUCTURE - No Parallel Structure	N	
(98)BORDER BRIDGE STATE CODE	PCT SHARE		(102)DIRECTION OF TRAFFIC - 2-way Traffic	2	
(99)BORDER BRIDGE STRUCTURE NO			(103)TEMPORARY STRUCTURE - Temporary Structure/Conditions	T	
			(110)DESIGNATED NATIONAL NETWORK - Not on the National Network	0	
			(20) TOLL On Free Road	3	
			(31) MAINTAIN - State Highway Agency	01	
			(22) OWNER - State Highway Agency	01	
			(37) HISTORICAL SIGNIFICANCE - Not Eligible	5	
STRUCTURE TYPE AND MATERIAL				CONDITION	
(43) STRUCTURE TYPE MAIN: Steel			(58) DECK	7	
TYPE - Stringer Mullbeam or Girder	CODE	302	(59) SUPERSTRUCTURE	5	
(44) STRUCTURE TYPE APPR :			(60) SUBSTRUCTURE	4	
TYPE -	CODE	000	(61) CHANNEL & CHANNEL PROTECTION	7	
(45) NUMBER OF SPANS IN MAIN UNIT	1		(62) CULVERTS	N	
(46) NUMBER OF APPROACH SPANS					
(107)DECK STRUCTURE TYPE - 8	CODE		LOAD RATING AND POSTING		
(108)WEARING SURFACE / PROTECTIVE SYSTEM :			(31) DESIGN LOAD Unknown	0	
(A) TYPE OF WEARING SURFACE -	CODE		(63) OPERATING RATING METHOD - Load Factor		
(B) TYPE OF MEMBRANE -	CODE		(64) OPERATING RATING - HS-1	101	
(C) TYPE OF DECK PROTECTION -	CODE		(65) INVENTORY RATING METHOD - Load Factor		
			(66) INVENTORY RATING - HS-1	101	
			(70) BRIDGE POSTING - Posting Required	0	
			(41) STRUCTURE OPEN, POSTED ,OR CLOSED	P	
			DESCRIPTION - Posted for Load		
AGE AND SERVICE				APPRAISAL	
(27) YEAR BUILT	1962		(67) STRUCTURAL EVALUATION	2	
(106)YEAR RECONSTRUCTED			(68) DECK GEOMETRY	3	
(42) TYPE OF SERVICE : ON - Highway			(69) UNDERCLEARANCES,VERTI & HORIZ	N	
UNDER - Waterway	CODE	15	(71) WATERWAY ADEQUACY	7	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE			(72) APPROACH ROADWAY ALIGNMENT	5	
(29) AVERAGE DAILY TRAFFIC	160		(36) TRAFFIC SAFETY FEATURES	0000	
(30) YEAR OF ADT 2010	(109) TRUCK ADT PCT	6%	(113)SCOUR CRITICAL BRIDGES	5	
(19) BYPASS OR DETOUR LENGTH	6 MI		PROPOSED IMPROVEMENTS		
GEOMETRIC DATA					
(48) LENGTH OF MAXIMUM SPAN	39 FT		(75) TYPE OF WORK -	CODE	
(49) STRUCTURE LENGTH	41 FT		(76) LENGTH OF STRUCTURE IMPROVEMENT		
(50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT			(94) BRIDGE IMPROVEMENT COST		
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	19.3 FT		(95) ROADWAY IMPROVEMENT COST		
(52) DECK WIDTH OUT TO OUT	20.3 FT		(96) TOTAL PROJECT COST		
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	17 FT		(97) YEAR OF IMPROVEMENT COST ESTIMATE		
(33) BRIDGE MEDIAN - No Median	CODE	0	(114)FUTURE ADT 320	(115) YEAR FUTURE ADT	2025
(34) SKEW 30°	(35) STRUCTURE FLARED	0	INSPECTIONS		
(10) INVENTORY ROUTE MIN VERT CLEAR	999.9 FT		(90) INSPECTION DATE	07/10/2012	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	19.3 FT		(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE	
(53) MIN VERT CLEAR OVER BRIDGE RDWY	999.9 FT		A) FRACTURE CRIT DETAIL - NO	A)	
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad	0 FT		B) UNDERWATER INSP - NO	B)	
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad	000 FT		C) OTHER SPECIAL INSP NO	C)	
(56) MIN LAT UNDERCLEAR LT REF -	000 FT		SCOUR		
NAVIGATION DATA					
(38) NAVIGATION CONTROL - No Navigational Control	CODE	0			
(111)PIER PROTECTION -	CODE				
(39) NAVIGATION VERTICAL CLEARANCE	0				
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR	FT				
(40) NAVIGATION HORIZONTAL CLEARANCE	0 FT				

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 07/30/2012

COUNTY : ALLEGHANY	DIVISION : 11	DISTRICT : 1	STRUCTURE NUMBER : 020046	LENGTH : 41	FEET
ROUTE CARRIED : SR1300		FEATURE INTERSECTED : CREEK			
LOCATED : .3 MI.N.JCT.SR1301		BRIDGE NAME :		CITY :	
FUNC. CLASS : 09	SYST.ON : NFA	SYST.UNDER : NFA	ADT & YR : 160 2010	RAIL TYPE : LT 227 RT 227	
BUILT : 1962	BY : BMU	PROJ :	FED.AID PROJ :	DESIGN LOAD : Unknown	
REHAB :	BY : BMU	PROJ :	ALIGNMENT : TAN	SKEW : 120	LANES : ON 2 UNDER
NAVIGATION : VC 0 FT		HC 0 FT	HT. CRN. TO BED : 10 FT		WATER DEPTH : 1 FT
SUPERSTRUCTURE : TIMBER FLOOR ON SALVAGED I-BEAMS					
SUBSTRUCTURE : E.BTS:TIMBER CAPS/TIMBER POST&SILLS @ VAR CENTERS					
SPANS : 1 @ 40'-7					
BEAMS OR GIRDERS : 6 LINES 16 I-BEAMS;7 LINES 14 I-BEAMS @ VARIOUS CENTERS					
FLOOR : 4X8 TIM/2.5 AWS	ENCROACHMENT :		DECK (OUT TO OUT) : 20.3 FT		
CLEAR ROADWAY : 19.3 FT	BETWEEN RAILS : 20 FT		SIDEWALK OR CURB : LT .3 FT RT .3 FT		
VERT.CL.OVER : 999.9 FT					
INV.RTG. : HS-1	OPE.RTG. : HS-1	CONTR.MEMBER : IntBeams	POSTED : SV 12	TTST 16	DATE 07/26/2012
SYSTEM : Secondary S.R. Route			GREEN LINE ROUTE : N		
UNDER ROUTES AND CLEARANCES					

REMARKS :

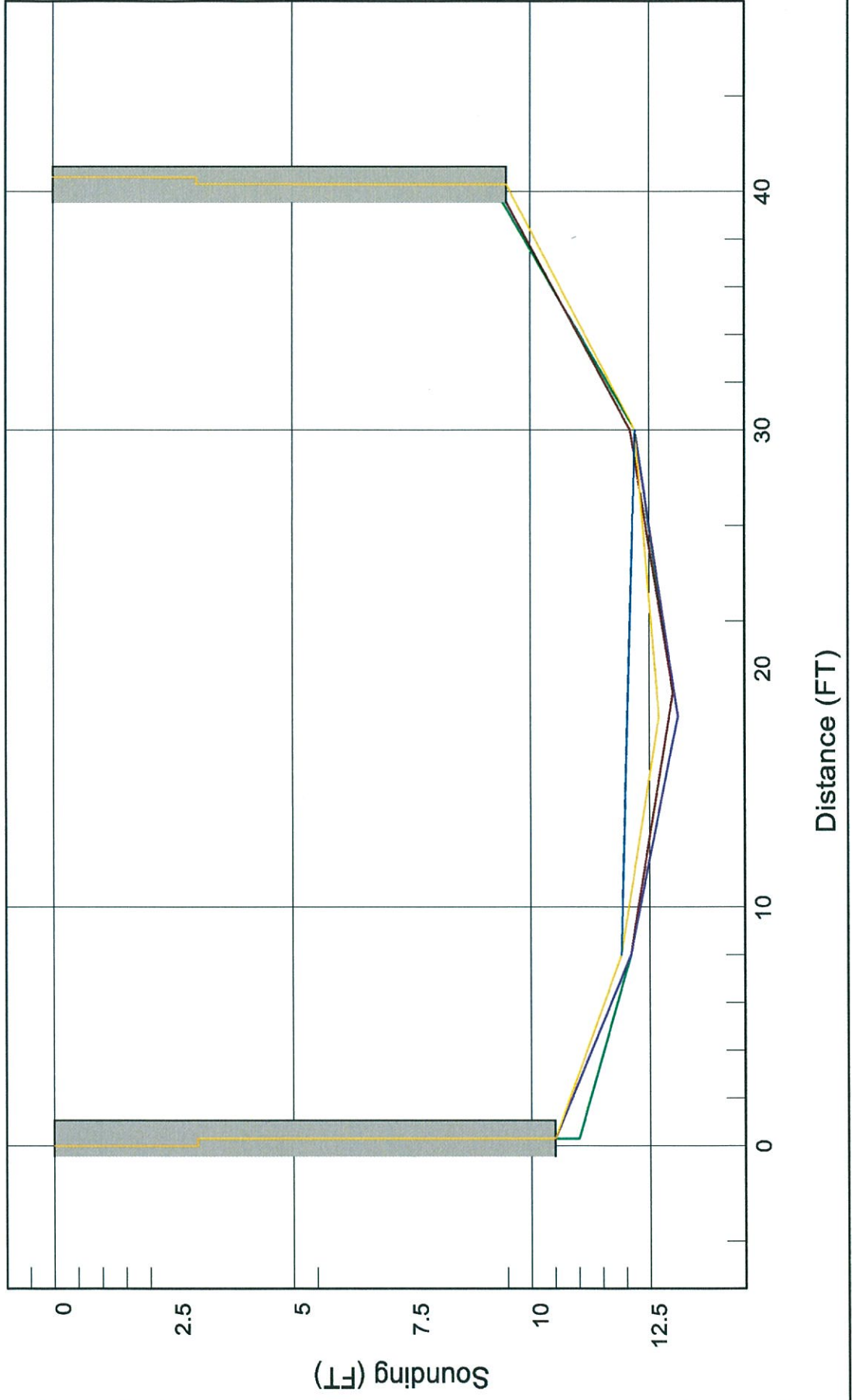
Bridge: 020046

County ALLEGHANY

Date: 07/10/2012

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)

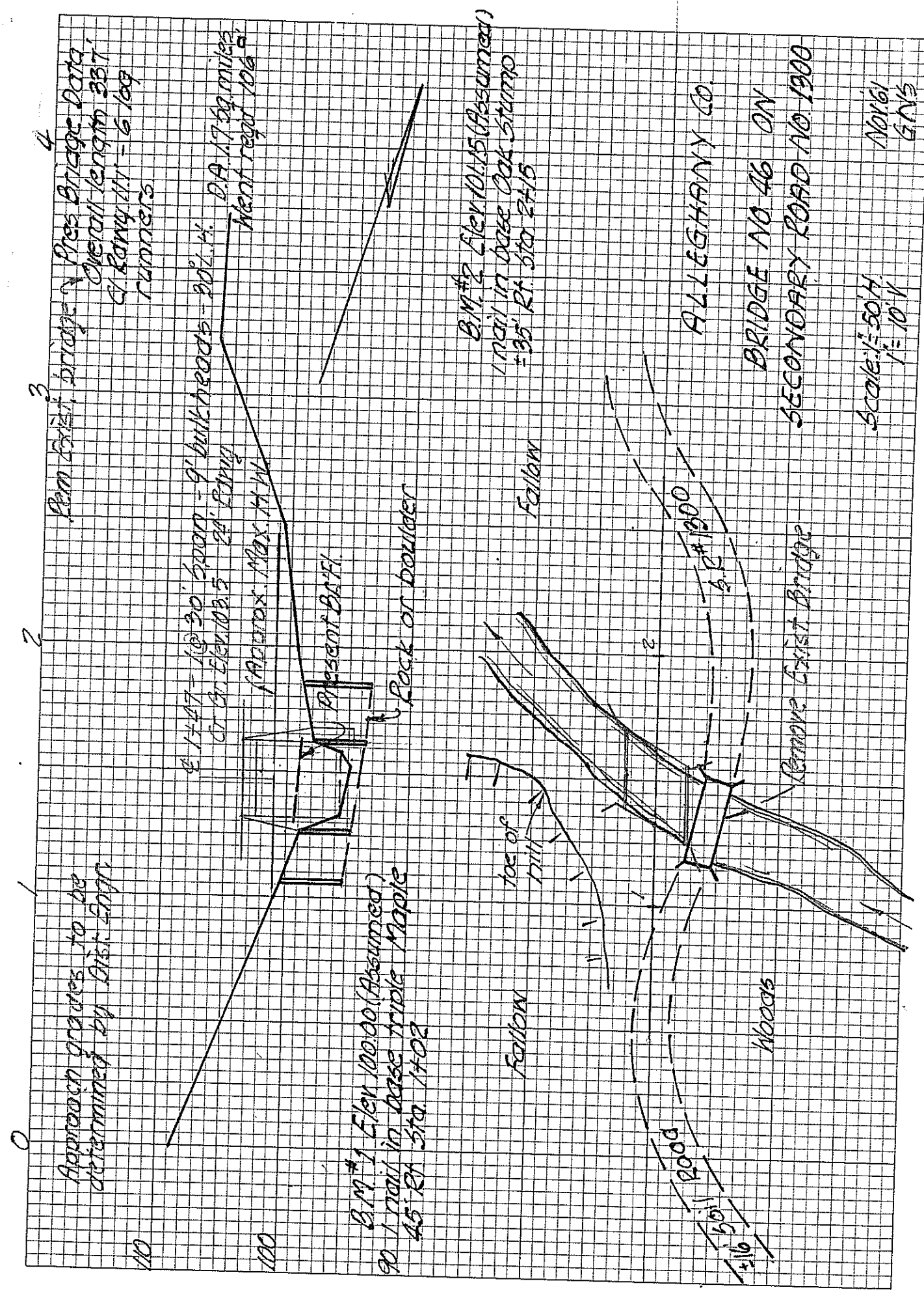




EAST ELEVATION



WEST ELEVATION



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



NCDOT UNITS:
BRIDGE MAINTENANCE UNIT
HYDRAULIC DESIGN UNIT
GEOTECHNICAL UNIT
STRUCTURE DESIGN UNIT
SOILS AND FOUNDATION UNIT

FULL REPORT.

BRIDGE SCOUR REPORT

COUNTY: Alleghany BRIDGE: 020046 ROUTE: SR 1300 STREAM CROSSED: Unnamed Creek

ASSESSMENT: yes EVALUATION: _____ BY: JJB DATE: 3/30/2010

FHWA STRUCTURE INVENTORY & APPRAISAL CODES:

SUBSTRUCTURE CONDITION (ITEM 60)
CHANNEL AND CHANNEL PROTECTION (ITEM 61)
WATERWAY ADEQUACY (ITEM 71)
SCOUR CRITICAL BRIDGE (ITEM 113)

MONITORING:

PLAN REQUIRED? YES _____ NO ✓

- FLOOD MONITORING EVENT (UPSTREAM FACE, FROM TOP OF RAIL):

REQUIRED ACTION: _____

- CRITICAL MONITORING DEPTH (UPSTREAM FACE, FROM TOP OF RAIL):

REQUIRED ACTION: _____

- CRITICAL HIGH WATER DEPTH (UPSTREAM FACE, FROM TOP OF RAIL):

REQUIRED ACTION: _____

- SCOUR CRITICAL DEPTH (UPSTREAM FACE, FROM TOP OF RAIL):

REQUIRED ACTION: _____

INCREASE UNDERWATER INSPECTION CYCLE? YES _____ NO ✓ FREQUENCY _____

COUNTER MEASURES:

PLAN REQUIRED?
SUMMARY OF PLAN:

YES _____ NO ✓

CONSTRUCTION COMPLETE DATE: _____
FINAL CODING AFTER WORK IS COMPLETED (ITEM 113) _____ DATE: _____

BRIDGE MAINTENANCE COMMENTS:



BRIDGE SCOUR EVALUATION ASSESSMENT

AND DATA SUMMARY REPORT

ASSESSED: 3/30/2010
BY: JJB
CODE: 5
CLASSIFIED: Low Risk

SITE IDENTIFICATION:

COUNTY Alleghany CITY/TOWN _____ BRIDGE NO. 020046
 ROUTE SR 1300 STREAM Unnamed Creek ROAD MILE _____
 DUAL BRIDGE NO. _____ IS US/DS _____
 ORIGINAL PROJECT NO. _____ YEAR BUILT 1962
 REHAB PROJECT NO. _____ YEAR BUILT _____
 CURRENT ADT 130 YEAR 2004 FUTURE ADT _____ YEAR _____

INFORMATION RESOURCES AVAILABLE:

HYDRAULIC STUDY REPORT (DATE): _____
 AS-BUILT CONSTRUCTION PLANS (DATE): _____
 FOUNDATION REPORT (DATE): _____
 OTHER AGENCY STUDIES (DATE): _____
 (FEMA, CORPS, T.V.A., SCS)
 QUAD MAPS (NAME & DATE): _____
 AERIAL PHOTOGRAPHY (DATE): _____
 GAGE DATA (TYPE, NO., DRAINAGE AREA): _____
 DISTANCE TO SITE (UP/DOWN STREAM): _____
 BRIDGE INSPECTION REPORT (DATE): 7/29/2008
 UNDERWATER INSPECTION (DATE, CYCLE): _____
 STRUCTURE DATA FILE (DATE): _____
 OTHER _____ (DATE): _____

HYDRAULIC DATA:

DRAINAGE AREA _____ SQ. MILE SOURCE _____
 100 YR. WATERWAY OPENING (NORMAL TO FLOW) _____

HISTORICAL FLOODS

DATE	ELEV. (FT BELOW TOP OF RAIL)	APPROX. FREQ. (YEARS)	APPROX. DISCH.	ADJUSTED TO SITE
	unknown			

SOURCE _____

FLOOD FREQUENCY (YRS)	Q	Q	Q	Q
ELEVATION (FT)				
DISCHARGE (CFS)				
AVG. VELOCITY (Q/A)				

SOURCE _____

COMMENTS: _____

STRUCTURE DATA:

BRIDGE LENGTH: 41'

EST. REMAINING LIFE YRS: DATE: 7/29/2008

SUFFICIENCY RATING 20.2

SPAN LENGTHS 1@40'-7

NO. OF SPANS 1

SIMPLE OR CONTINUOUS

BED TO CROWN 10'

TOP OF RAIL ELEVATION 0' [measured down from] T HALWEG ELEVATION 13'

BENT NO. (W-E, N-S)	EB1	EB1
TYPE	Timber Post &	Timber Post &
SKEW	Timber Sill on	Timber Sill on
FTG./FOUNDATION TYPE	Concrete Footing	Concrete Footing
FOOTING THICKNESS	and rock	and rock
TOP FTG. ELEV.	LT	
	CTR	
	RT	
BOTTOM FTG. ELEV.	LT	
	CTR	
	RT	
TOP SILL ELEV.	LT	
	CTR	
	RT	
BOTTOM SILL ELEV.	LT	
	CTR	not tested
	RT	
CONC./ RIP RAP PROTECTION		
PILE TYPE		
PILE LENGTH (AVERAGE)		
PILE TIP ELEV. (AVERAGE)		
PILE EMBED BELOW THALWEG		
FTG. EMBED BELOW THALWEG		

COMMENTS: Timber Sills on rock and Concrete footings per form 501 dated 7/30/1992

GEOMORPHIC DATA: (LOOKING DOWNSTREAM)**CHANNEL (NORMAL TO FLOW):**

AVG. BASE WIDTH _____ AVG. TOP WIDTH _____ AVG. DEPTH _____

AT CROSSING:STRAIGHT ☒ MILD CURVE _____ SHARP BEND _____**FLOW ANGLE OF APPROACH:**LOW ☒ MILD _____ HIGH _____
(0°-5°) (5°-20°) (20°+)**CROSSING WIDTH COMPARED TO:**

UPSTREAM: WIDER _____ SAME _____ NARROWER _____

DOWNSTREAM: WIDER _____ SAME _____ NARROWER _____

BASED ON COMPARISON OF SECTIONS TAKEN AT DATES _____**CHANNEL HAS:**

WIDENED _____ FT	SAME _____	NARROWED _____ FT
AGGRADATED _____ FT	SAME _____	DEGRADATED _____ FT
SHIFTED LT _____ FT	SAME _____	SHIFTED RT. _____ FT

THALWEG HAS:

SHIFTED LT _____ FT	SAME _____	SHIFTED RT. _____ FT
---------------------	------------	----------------------

REPORTED SITE SCOUR PROBLEM:

	MINOR	MODERATE	SEVERE	UNKNOWN
LT. BANK				
RT. BANK				
LT. SPILL SLOPE				
RT. SPILL SLOPE				
PIER(S)				
DEBRIS	☒			
CHANNEL BED				
OTHER				

IS REPORTED PROBLEM CHANNEL FLOW ASSOCIATED? N/A

BASED ON THE AVAILABLE GEOMORPHIC DATA, THE CHANNEL STABILITY POTENTIAL OVER THE LIFETIME OF THE EXISTING STRUCTURE CAN BEST BE DESCRIBED AS:

1. RELATIVELY STABLE WITH LITTLE EXPECTED CHANGE N/A
2. POTENTIAL FOR SLOW CHANGE OVER TIME. NOT PRONE TO A MAJOR ONE-EVENT CHANGE. N/A
3. UNSTABLE SUBJECT TO RAPID EVOLUTIONARY CHANGE N/A

ASSESSMENT CRITERIA:

- 1) **SPREAD FOOTINGS WITHIN THE POTENTIAL CHANNEL SCOUR AREA ARE INDICATED BY FIELD INVESTIGATION OR BORING LOG ANALYSIS TO BE ON SCOUR RESISTANT MATERIAL.**
GEOTECHNICAL CONCURRENCE BY: _____
- 2) **AS-BUILT PLANS INDICATE THE SPREAD FOOTINGS WITHIN THE POTENTIAL CHANNEL SCOUR AREA TO BE KEYED AT LEAST 6" INTO ROCK.** _____
- 3) **STEEL PILE BENTS WITHIN THE POTENTIAL CHANNEL SCOUR AREA HAVE a) AVERAGE PILE TIPS THAT PENETRATE A MINIMUM OF 12 FEET BELOW STREAM BED OR b) HAVE LESS THAN 22 +/- FEET (LONGER IF BRACING CONSIDERED) OF TOTAL PILE LENGTH AND INDICATED BY: BORINGS LOGS, PILE DRIVE RECORDS, OR ROD SOUNDINGS TO BE TIPPED INTO POINT BEARING MATERIAL.** a) _____
b) _____
- 4) **CONCRETE OR TIMBER BENTS WITHIN THE POTENTIAL CHANNEL SCOUR AREA HAVE a) AVERAGE PILE TIPS THAT PENETRATE A MINIMUM OF 15 FEET BELOW THE STREAM BED OR b) HAVE LESS THAN 18 FEET +/- (LONGER IF BRACING CONSIDERED) OF TOTAL PILE LENGTH AND INDICATED BY BORING LOGS OR ROD SOUNDINGS TO BE TIPPED INTO POINT BEARING MATERIAL.** a) _____
b) _____
- 5) **ALL PIERS AND ABUTMENTS ARE OUTSIDE THE NORMAL CHANNEL SECTION.** _____
- 6) **THE BRIDGE HAS EXPERIENCED A FLOOD GREATER THAN A 50-YEAR MAGNITUDE WITH NO REPORTED OR APPARENT SCOUR PROBLEM.** _____
- 7) **THE BOTTOMS OF THE CHANNEL PIER SPREAD FOOTINGS ARE GREATER THAN 7 FEET BELOW THE STREAM BED.** _____
- 8) **THE APPROACH ROADWAY OR BRIDGE IS OVERTOPPED DURING MINOR FLOODS (<10-YEAR EVENT) REQUIRING CLOSURE AND INSPECTION BEFORE REOPENING.** _____
- 9) **DRILLED PIERS WITHIN THE POTENTIAL CHANNEL SCOUR AREA ARE INDICATED BY FIELD INVESTIGATION OR BORING LOG ANALYSIS TO BE IN SCOUR RESISTANT MATERIAL** _____

THIS STRUCTURE MEETS WHICH OF THE ABOVE LISTED ITEMS FOR CLASSIFICATION AS A LOW RISK STRUCTURE? _____

BASED ON AN ENGINEERING EVALUATION OF THE AVAILABLE DATA AND REPORTS, THE LOW RISK CLASSIFICATION OF THIS STRUCTURE FOR THE REASON(S) LISTED ABOVE APPEARS REASONABLE.

N/A _____

COMMENTS:

ASSESSMENT DATA:

COUNTY: Alleghany
 BRIDGE NO.: 020046

ASSESSMENT DATE: 3/30/2010

	YES OR NO
INSPECTION REPORTS:	
DATE OF INSPECTION REPORT 7/29/2008	
EXISTING SCOUR HOLES PRESENT	N/A
UNDERMINING OF FOOTINGS	NO
72 FIELD SCOUR EVALUATION- SCOUR HAS OCCURRED	N/A
HYDRAULIC DATA:	
HIGH WATER- OVERTOP OF BRIDGE DECK	N/A
CHANNEL SHIFTING OR DEGRADING	N/A
BAD ANGLE OF ATTACK- STREAM CURVES AT BRIDGE	N/A
DEBRIS PROBLEM AT BRIDGE- LEANING TREES ON BANK	YES
GEOTECHNICAL DATA:	
FOUNDATION MATERIAL IS SCOURABLE	N/A
STREAMBED IS SAND W/ NO ARMOR MATERIAL	N/A
STRUCTURAL DATA:	
SMALL ABUTMENTS (NOT MASSIVE)- EASY TO DAMAGE	N/A
WIDE WEBS- ADVERSE ANGLE- CREATES PIER SCOUR	N/A
ROTATION OR SETTLEMENT OF PIERS OR ABUTMENTS	N/A
ADDITIONAL CONSIDERATIONS:	
DAM-UPSTREAM/ DOWNSTREAM	N/A
PREVIOUS COUNTERMEASURES DAMAGED	N/A
RIP RAP ERODE	N/A
SAND OR GRAVEL MINING IN VICINITY OF BRIDGE	N/A

THIS ASSESSMENT WAS CONDUCTED BY AN INTERDISCIPLINARY TEAM OF HYDRAULIC, GEOTECHNICAL, STRUCTURAL, BRIDGE MAINTENANCE, AND FHWA ENGINEERS BASED UPON INFORMATION PROVIDED AND ENGINEERING JUDGMENT.

NOTE:

BRIDGE INSPECTORS TO NOTIFY THE HYDRAULICS UNIT IF ANY OF THE ABOVE CONDITIONS CHANGE ENOUGH TO WARRANT RECORDING OF ITEM 113.

DECISION:**CLASSIFIED AS:**

SCOUR CRITICAL _____

UNKNOWN FOUNDATION _____

LOW RISK _____ ✓

RECOMMENDED SCOUR CODE: 5**ASSESSMENT COMMENTS:**Information on depth of Timber Sill and Concrete footing is unavailable.12x12 Timber Sills on rock and Concrete footings per form 501 dated 7/30/1992**SCHEDULE FOR DETAILED STUDY****SCHEDULE FOR FURTHER IN-HOUSE STUDY****ASSESSED BY:** JJB**FIRM:** NCDOT**DATE:** 3/30/2010**CHECKED BY:** _____**DATE:** _____**FIRM:** _____**APPROVED BY:** JLI**DATE:** 3/30/2010**FINAL COMMENTS:**Scour Committee recommends code 5 based on its review of available bridge documents.