

OFFICE ESTIMATE

1 @ 55' Bridge

PREDESIGN-PRESURVEY REPORT

Project# 17 BP. 11. R. 101

TIP#

Let Date

WBS#

County WILKES (DIV. 11)

Bridge# 960713

Road# SR 2486 (E. MEADOWS RD)

Stream CUB CRK. (MORAVIAN CRK)
Esm

Type Of Request: POC Force Account TIP NCMA

Date 4/16/14 Name MJY

Assigned To RCH

Checked By 4/21/14 wsh

Prior Survey Date NO (attach copy of prior survey) BRN BK: NO CD. FILE NO

Study By Scour Section NO

Flood Zone X Detail Study NONE Date 3/2/09 Panel# 3864

B.M. Info N/A

Quad Map MORAVIAN FALLS Drainage Area 2.52 SQ. MI. From STREAM STATS

Q25 800 cfs Q50 950 cfs Q100 1100 cfs Method REG. EQNS.
REGION 2/RURAL

EXISTING BRIDGE INFORMATION

Location 0.8 MILE NE. OF JCT. SR 2483 (EAST BROOKTOWN RD)

Average Daily Traffic 200 (1996) 6% TRK

Length 41' Bed-To Crown 8' Water Depth 1'

Type Structure TIM. FLOOR ON SALVAGED I-BEAMS, TIM. CAPS/POSTS & SILLS.

Type Spans 1 @ 40'-6"

Upstream Structure NO NUMBERED U/S STR.

Location

Bed-To Crown Prior Survey

Downstream Structure 960037 (TIM. FLOOR ON SALVAGED I-BEAMS, REIN. CONCL. ABUT'S; 1 @ 33'-4")

Location 15 FT. W. JCT. SR 2493 (PENNEL RD)

Bed-To Crown 11' (D=1') Prior Survey

SCS Watershed N/A

ESM: YES WILD

ENVIRONMENTAL

TVA NO

Trout Stream NO

Anadromous Fish NO

Primary Nursery Area NO

High Quality Waters NO

Nutrient Sensitive Waters NO

Near Water Supply Intake NO

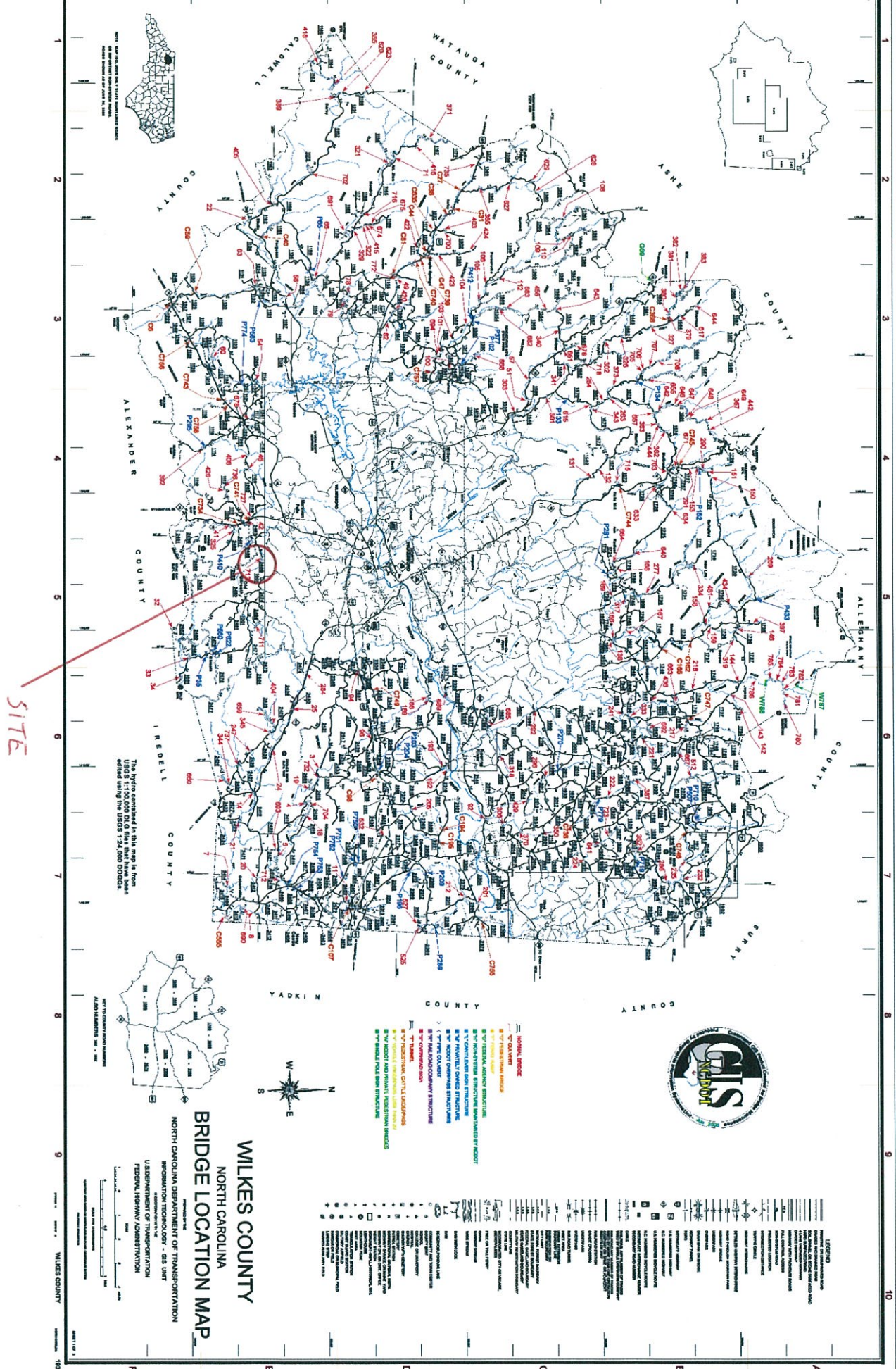
CAMA County NO

Stream Classification C

12-41

DENR River Basin Info.

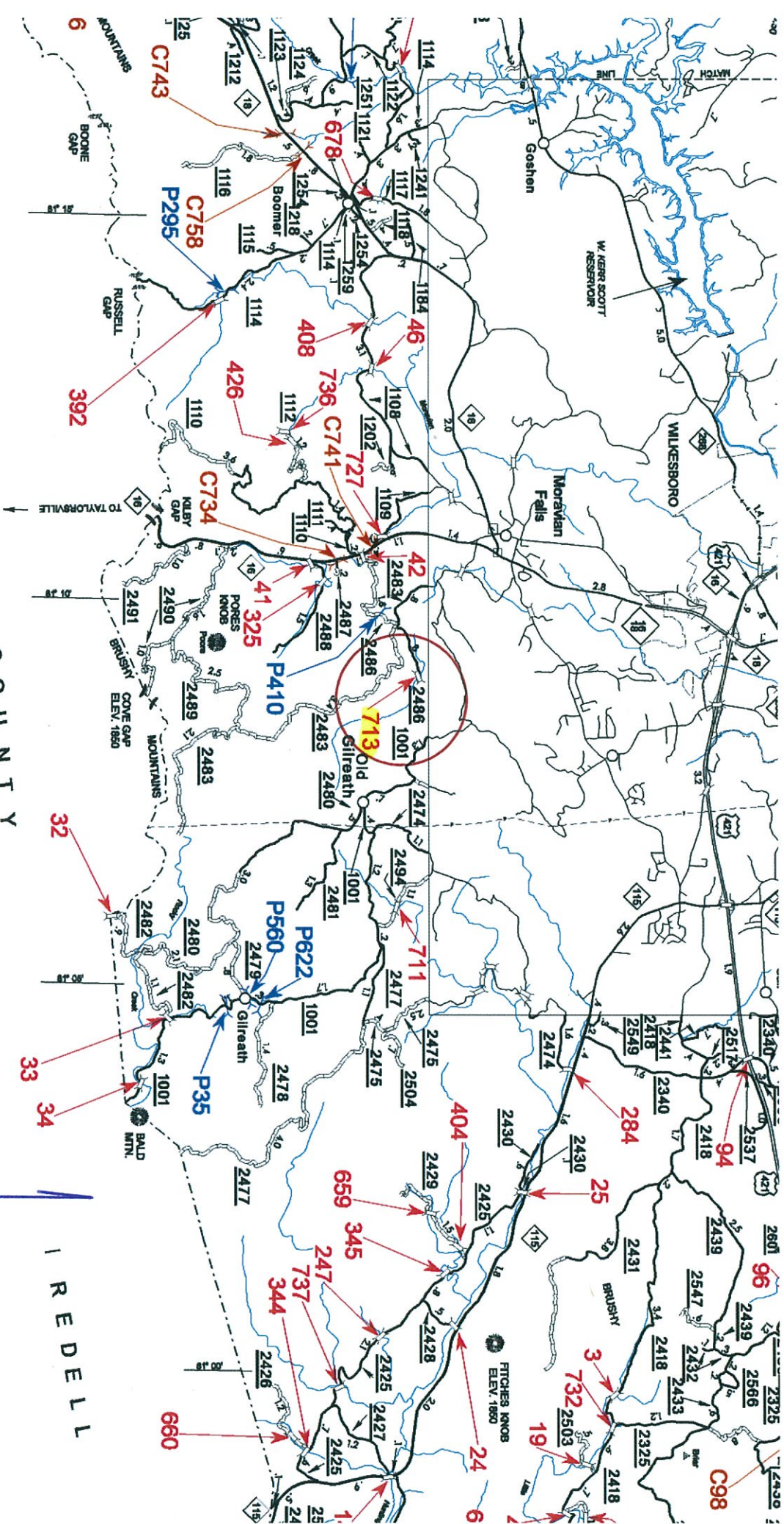
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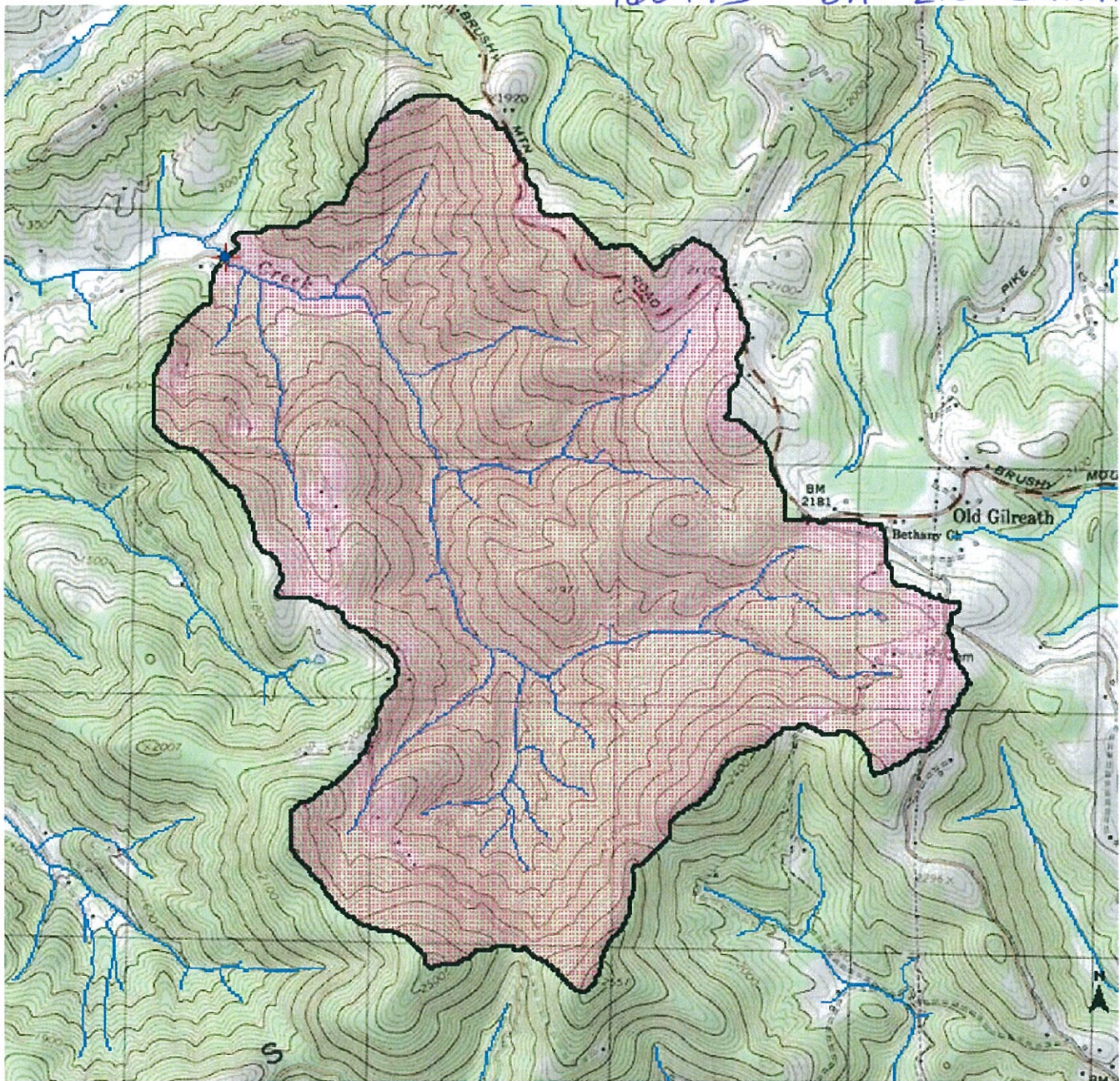
COUNTY

REDELL
The hy
USGS

The hydro con
USGS 1:100,01



960173 DA = 2.5 SQ. M.



0.4 0.2 0 0.4 Miles

713



North Carolina StreamStats

Streamstats Ungaged Site Report

Date: Wed Apr 16 2014 06:16:49 Mountain Daylight Time

Site Location: North_Carolina

NAD27 Latitude: 36.0816 (36 04 54)

NAD27 Longitude: -81.1515 (-81 09 05)

NAD83 Latitude: 36.0817 (36 04 54)

NAD83 Longitude: -81.1513 (-81 09 05)

Drainage Area: 2.52 mi²

Percent Urban: 4.5 %

Percent Impervious: 0.4 %

Peak Flows Region Grid Basin Characteristics			
100% Peak Southeast US 2009 5158 (2.52 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	2.52	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 (2.52 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	2.52	0.04	41
Area of Impervious Surfaces (percent)	0.37 (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	225	35		128	396
PK5	417	34		239	730
PK10	569	35		320	1010
PK25	777	38		421	1440
PK50	929	40		486	1780
PK100	1110	42		562	2200
PK200	1270	44		620	2610
PK500	1520	48		705	3290

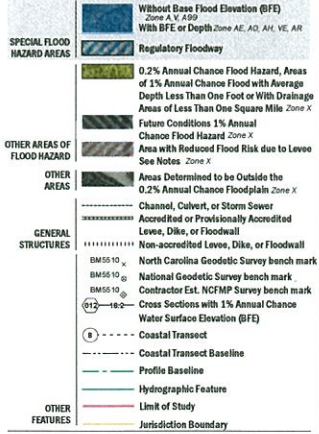
Urban Flows Region Grid Streamflow Statistics					
Statistic	Flow (ft ³ /s)	Standard Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
				Minimum	Maximum
PK2U	33.3				
PK5U	83.8				
PK10U	134				
PK25U	260				
PK50U	348				
PK100U	453				



This digital Flood Insurance Rate Map (FIRM) was produced through a unique cooperative partnership between the State of North Carolina and the Federal Emergency Management Agency (FEMA). The State of North Carolina has implemented a long-term approach to floodplain management to decrease the risks associated with flooding. This is demonstrated by the State's commitment to map flood hazard areas at the local level. As a part of this effort, the State of North Carolina has joined in a Cooperative Technical State agreement with FEMA to produce and maintain the digital FIRM.

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR ZONE DESCRIPTIONS AND INDEX MAP
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTP://FRIS.NC.GOV/FRIS](http://FRIS.NC.GOV/FRIS)



NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please visit the FEMA Map Information eXchange at <http://www.fema.gov> or visit the FEMA Map Service Center website at <http://www.fema.gov>. An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) available portions of this report, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at <http://www.ncfloodmap.org> or contact the FEMA Map Service Center.

Communities assessing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Map Service Center at the number listed above.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6622.

Base map information shown on this FIRM was provided in digital form by the North Carolina Floodplain Mapping Program (NCFMP). The source of this information can be determined from the metadata available in the digital FIRM database and in the Technical Support Data Notebook (TSN).

ACCREDITED LEVEL NOTES TO USERS: If a community has been accredited by FEMA, it is a Provisionally Accredited Level (PAL) and appears on this panel, check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1 percent annual chance level and Emergency Action Plan, on the three systems) shown as protection. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicates the levee system does not comply with Section 65.10 requirements, FEMA will remove the flood hazard and risk information for this area to reflect the accreditation of the levee system. To mitigate flood risk in individual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA website at <http://www.fema.gov/nationalfloodinsurancemap>.

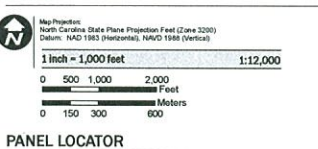
PROVISIONALLY ACCREDITED LEVEL NOTES TO USERS: If a Provisionally Accredited Level (PAL) note appears on this panel, check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1 percent annual chance level and Emergency Action Plan, on the three systems) shown as protection. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicates the levee system does not comply with Section 65.10 requirements, FEMA will remove the flood hazard and risk information for this area to reflect the accreditation of the levee system. To mitigate flood risk in individual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA website at <http://www.fema.gov/nationalfloodinsurancemap>.

LIMIT OF MODERATE WAVE ACTION NOTES TO USERS: For some coastal flooding zones the AE Zone category has been divided by a Limit of Moderate Wave Action (LMWA). The LMWA represents the approximate landward limit of the 1.5-foot breaking waves. The effects of storm hazards between the VE Zone and the LMWA (or between the LMWA and the LOMA for areas where VE Zones are not depicted) will be similar to, but less severe than those in the VE Zone.

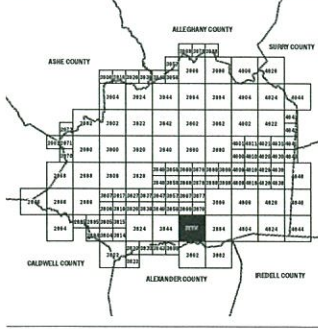
COASTAL BARRIER RESOURCES SYSTEM (CBRS) NOTE
This map may include approximate boundaries of the CBRS for informational purposes only. Flood insurance is not available within CBRS areas unless structures that are ready-built or substantially improved after the date of the map. For more information see <http://www.fema.gov/floodinsurance/faq> or contact the FEMA Map Service Center at 1-800-368-6622.

Legend: CBRS Area, Otherwise Protected Area

SCALE



PANEL LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FEDERAL EMERGENCY MANAGEMENT AGENCY

North Carolina Flood Insurance Program

Panel 3864

Panel Contains:
COMMUNITY
WILKES COUNTY

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

NORTH CAROLINA

Panel 3864

CID PANEL SUFFIX
370256 3864 J

MAP NUMBER
3710386400J

MAP REVISED
3/2/2009

36°4'30"N

36°5'0"N



1 N

SITE



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

TEMPORARY REPAIRS

713

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection - Contract

COUNTY WILKES

BRIDGE NUMBER 960713

INSPECTION CYCLE 0 YRS

ROUTE SR2486

ACROSS MORAVIAN CREEK

M.P. 0

0.8 MILE NORTHEAST OF JUNCTION WITH SR2483

LOCATION .8 MI.NE.JCT.SR2483

SUPERSTRUCTURE TIMBER FLOOR ON SALAVAGE I-BEAMS

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

1 @ 40'-6"

SPANS 1 @ 40'-6"

LONGITUDE 81° 9' 45.75"

81° 9' 4.40"

LATITUDE 36° 4' 53.93"

36° 4' 53.90"

INSPECTION DATE 04/10/2013

PRESENT CONDITION FAIR

PRESENT POSTING SV 30 TTST 30

30 TONS

PROPOSED POSTING

OTHER SIGNS PRESENT (4) DELINEATORS



LOOKING EAST

Fracture Critical	No
Temporary Shoring	Yes
Scour Critical	No
Scour POA	No

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

713

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 05/13/2013

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
WILKES	11	3	960713	41	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR2486	MORAVIAN CREEK

LOCATED :	BRIDGE NAME :	CITY :
.8 MI.NE.JCT.SR2483		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	200 1996	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1962	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
	BMU		TAN	90	ON 2 UNDER 0		

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC	0	FT	8	FT	1		FT

SUPERSTRUCTURE :	TIMBER FLOOR ON SALAVAGE I-BEAMS
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SUBSTRUCTURE :	E.BTS:TIMBER CAPS/TIMBER POST&SILLS @ VAR.CENTERS
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SPANS :	1 @ 40'-6
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BEAMS OR GIRDERS :	9 LNS.24 I-BEAMS @ 2'-3 CTS.
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/1.5 AWS		20.083 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
19.083 FT	19.75 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	30	DATE	10/30/2008
HS-1	HS-1	Cap Ab#2	SV 30				

SYSTEM :	GREEN LINE ROUTE :
Secondary S.R. Route	N

UNDER ROUTES AND CLEARANCES

REMARKS :

713

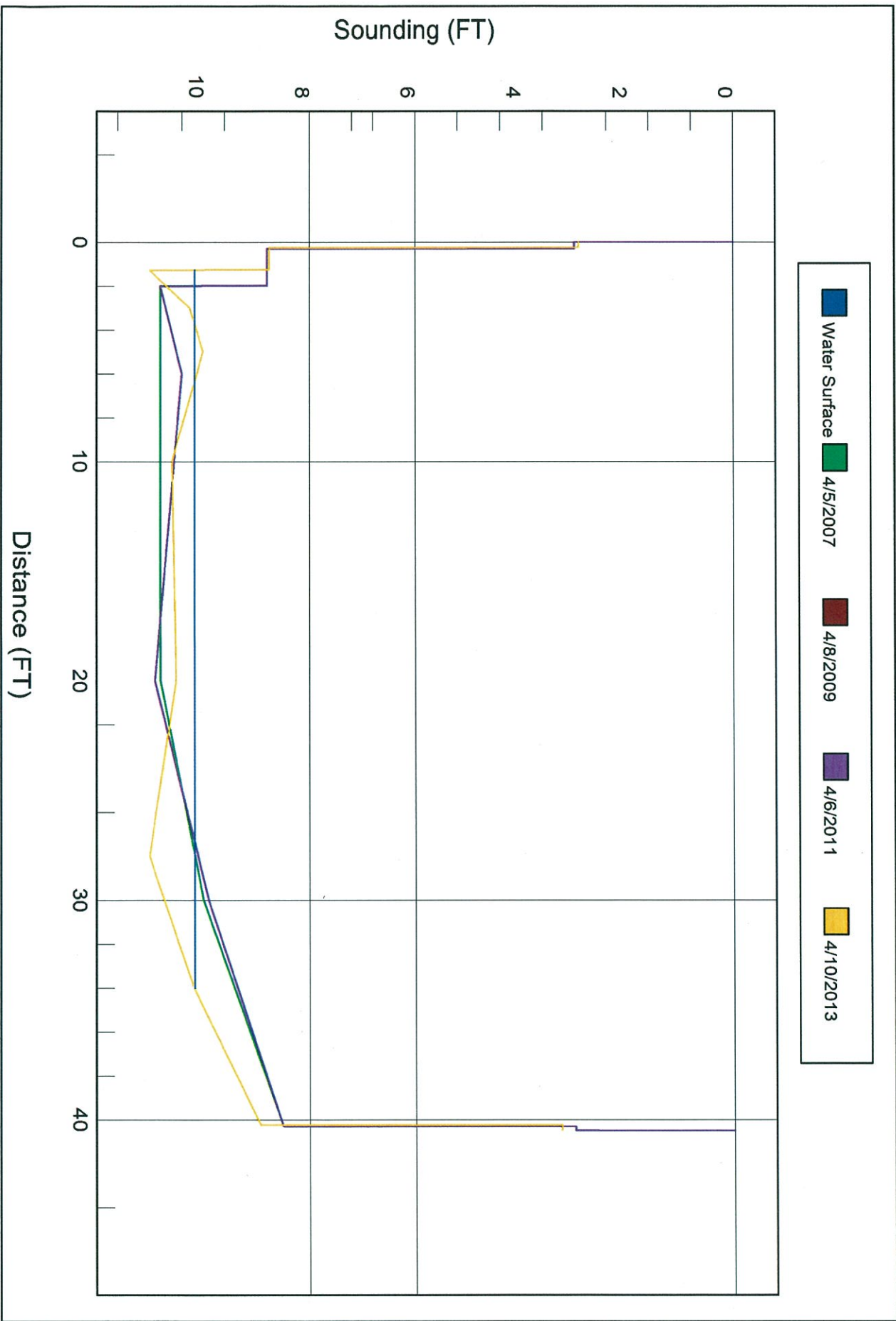
Bridge: 960713

County WILKES

Date: 04/10/2013

Top of Rail = 0 FT (Sounding)

STREAMBED PROFILE (Downstream)





UPSTREAM PROFILE, LOOKING NORTH



DOWNSTREAM PROFILE, LOOKING SOUTH