

NOT IN FEMA STUDY AREA.

NOT A GOOD CANDIDATE DUE TO PROXIMITY TO INTERSECTION.

PREDESIGN-PRESURVEY REPORT

Project# _____

TIP# _____

Let Date _____

WBS# 17BP.13.R.48

County Madison

Bridge# 560514

Road# SR 1410

Name Ivy Ridge Ch Rd

Stream Long Branch

Type Of Request: POC Force Account TIP NCMA

Date 8/10/2011 Name Sungate Design Assigned To _____

Checked By JGD

Prior Survey Date None (attach copy of prior survey)

Study By Scour Section No

Flood Zone No Detail Study N/A Date N/A Panel# N/A

B.M. Info N/A

Quad Map Sams Gap Drainage Area 2.0 Sq Miles From USGS Quad Map

Q25 660 cfs Q50 790 cfs Q100 940 cfs Method Rural Regression Eqs

EXISTING BRIDGE INFORMATION

Location 0.1 MI. E. Jct. SR 1345

Average Daily Traffic 10

Length 16'-4" Bed- To Crown 9' Water Depth 1'

Type Structure Tim. Floor on I-beams, tim. caps on post and sills

Type Spans 1 @ 16'-4"

Upstream Structure 2 Lines 94"x 66" CM Pipe Arch, 75'-4" Along Centerline Pipe

Location SR 1345

Bed- To Crown 9' Prior Survey _____

Downstream Structure Not Comparable

Location _____

Bed- To Crown _____ Prior Survey _____

SCS Watershed _____

ENVIRONMENTAL

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 C, Tr, ORW

DENR River Basin Info. French Broad

State Stormwater Permit Not Required

Estimated Min. Bridge Length = 40'

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B.M. Info N/A

Quad Map Sams Gap Drainage Area 2.0 Sq Miles From USGS Quad Map
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EXISTING BRIDGE INFORMATION

Location 0.1 MI. E. Jct. SR 1345
Average Daily Traffic 10
Length 16'-4" Bed- To Crown 9' Water Depth 1'
Type Structure Tim. Floor on I-beams, tim. caps on post and sills
Type Spans 1 @ 16'-4"
Upstream Structure N/A
Location _____
Bed- To Crown _____ Prior Survey _____
Downstream Structure Not Comparable
Location _____
Bed- To Crown _____ Prior Survey _____
SCS Watershed _____

ENVIRONMENTAL

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 C, Tr, ORW
DENR River Basin Info. French Broad
State Stormwater Permit Not Required

Estimated Min. Bridge Length = ?



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY MADISON BRIDGE NUMBER 560514 INSPECTION CYCLE 2 YRS
ROUTE SR1410 ACROSS LONG BRANCH CREEK M.P. 0

LOCATION .1 MI.E.JCT.SR1345

SUPERSTRUCTURE TIMBER FLOOR ON TIMBER JOISTS

SUBSTRUCTURE E.BTS:TIMBER CAPS/TIMBER POST&SILLS/CONC.FTGS@VAR.CTS.

SPANS 1@16'4

LONGITUDE 82° 35' 20.8"

LATITUDE 35° 54' 32.0"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 09/16/2008

OPERATING RATING

PRESENT POSTING SV 15 TTST 22

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT DELINEATORS



EAST

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

<u>Yes</u>	WEIGHT LIMIT	<u>2</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>

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

RUN DATE 04/15/2009

COUNTY : MADISON		DIV : 13		DIST : 2		STRUCTURE NUMBER : 560514		LENGTH : 16 FEET	
ROUTE CARRIED : SR1410				FEATURE INTERSECTED : LONG BRANCH CREEK					
LOCATED : .1 MI.E.JCT.SR1345				BRIDGE NAME :					
FUNC. CLASS : 09		SYST.ON : NFA		SYST.UNDER : NFA		ADT & YR : 10 1995		RAIL TYPE : LT 227 RT 227	
BUILT : 1967		BY : BMU		PROJ :		FED.AID PROJ :		DESIGN LOAD : Other or Unknown	
REHAB : 0		BY :		PROJ :		ALIGNMENT : TAN		SKEW : 90	
								LANES : ON 2 UNDER	
NAVIGATION : VC 0.0 FT HC 0.0 FT				HT. CRN. TO BED : 9 FT				WATER DEPTH : 1 FT	
SUPERSTRUCTURE : TIMBER FLOOR ON TIMBER JOISTS									
SUBSTRUCTURE : E.BTS:TIMBER CAPS/TIMBER POST&SILLS/CONC.FTGS.@ VAR.CTS.									
SPANS : 1 @ 16'-4									
BEAMS OR GIRDERS : 10 LNS.6X12 TIM.JSTS.& 2 DBL.LNS.6X12 TIM.JSTS.									
FLOOR : 4X8 TIM/1.5 AWS		ENCROACHMENT :				DECK (OUT TO OUT) : 20.1 FT			
CLEAR ROADWAY : 19.1 FT		BETWEEN RAILS : 19.8 FT				SIDEWALK OR CURB : LT 0.3 FT RT 0.3 FT			
VERT.CL.OVER : 99 FT 99 IN		VERT.CL.UNDER : 00 FT 00 IN				HOR.CL.UNDER : 0.0 FT			
INV.RTG. : HS-9		OPE.RTG. : HS-13		CONTR.MEMBER : int Joist		POSTED : SV 12 TTST 21		DATE 09/13/2006	
SYSTEM : Secondary S.R. Route						GREEN LINE ROUTE : N			
2ND OPENING :		3RD OPENING :		4TH OPENING :		5TH OPENING :			
REMARKS :									

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 560514 County: MADISON Date: 09/16/2008 By: RWS

Record sounding from top of rail. Other location if needed:

Distance from Highwater Mark to top of rail: Location of Highwater Mark:

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	2.8				
0.3	2.8				
0.3	4.3				
1.1	4.3				
1.1	9				
2.1	9				
2.1	10.5	Water Surface/Water Edge (WSWE)			
2.1	11.4				
3.1	11.2				
5	10.3	Water Surface/Water Edge (WSWE)			
14	9.3				
14.001	8.4				
15	8.4				
15.001	4.3				
15.8	4.3				
15.801	2.8				
16.1	2.8				

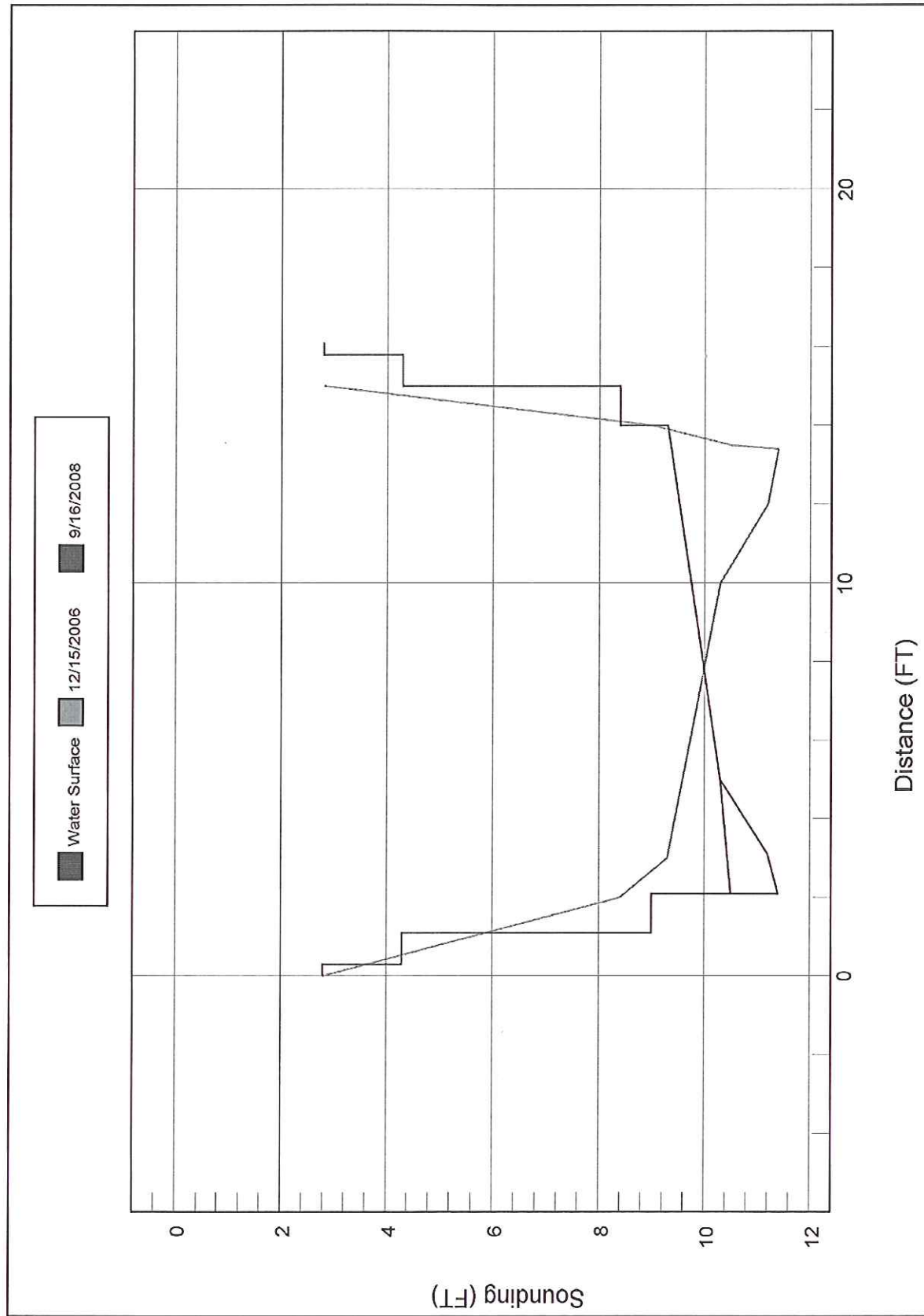
Bridge: 560514

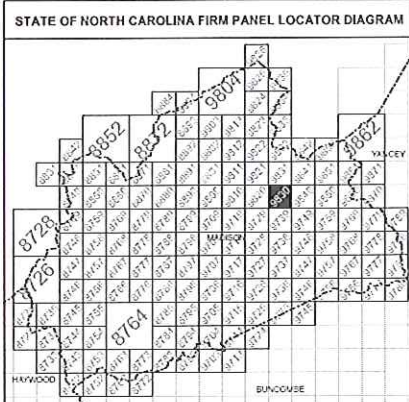
County MADISON

Date: 09/16/2008

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)





DATUM INFORMATION

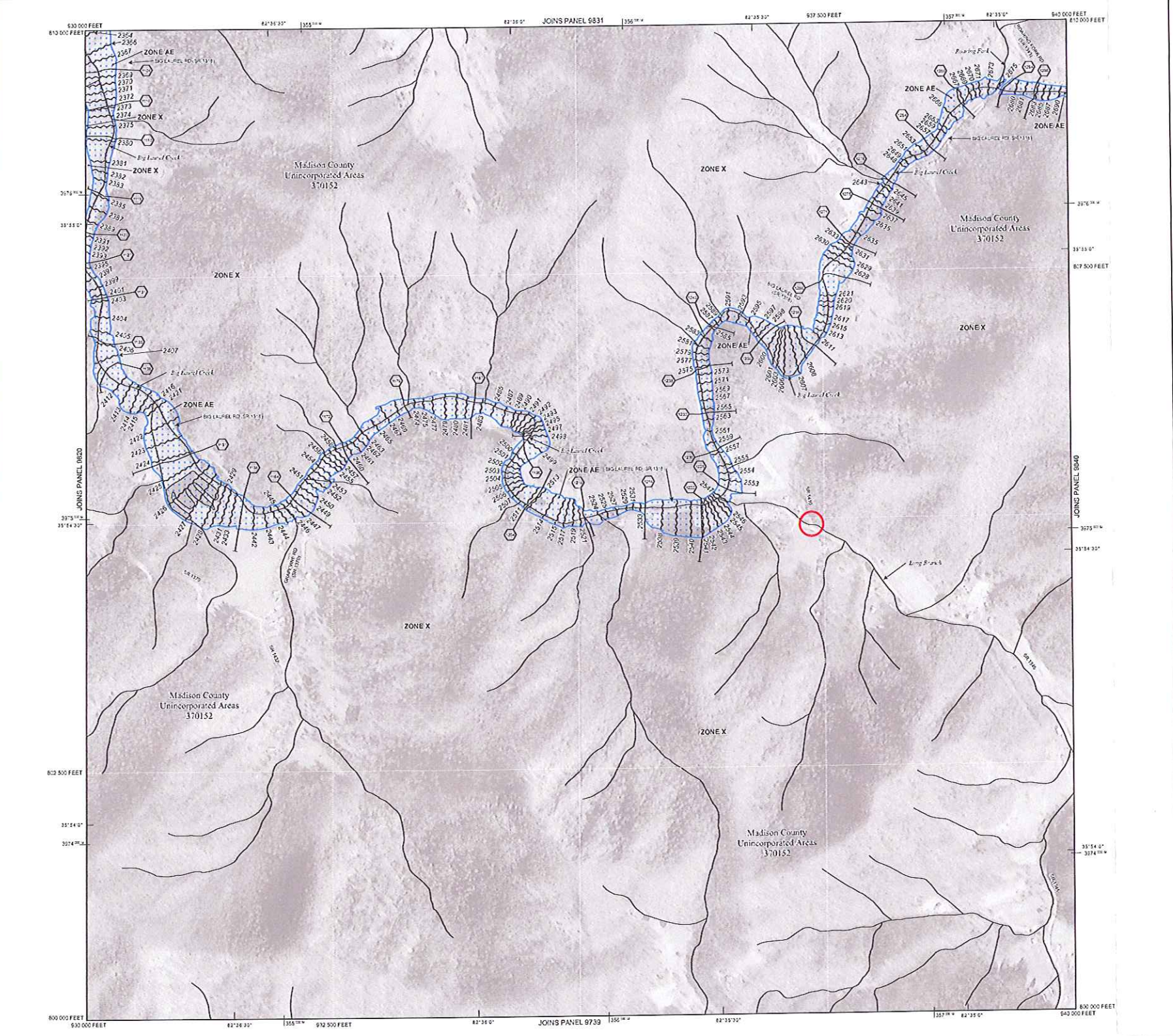
The projection used in the preparation of this map was the North Carolina State Plane (NAD83/2011). The horizontal datum was the North American Datum of 1983 (NAD83) ellipsoid. Differences in datum, ellipsoid, projection, or Universal Transverse Mercator zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdictional boundaries. These differences do not affect the accuracy of this FIRM. All coordinates on this map are in U.S. Survey Feet, where 1 U.S. Survey Foot = 1200/3937 Meters.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 29) has been computed for each North Carolina county. This offset was then applied to the NGVD 29 flood elevations that were not revised during the creation of this statewide format FIRM. The offsets for each county shown on this FIRM panel are shown in the vertical datum offset table below. Where a county boundary and a flooding source with unreviewed NGVD 29 flood elevations are coincident, an individual offset has been calculated and applied during the creation of this statewide format FIRM. See Section 6.1 of the accompanying Flood Insurance Study report to obtain further information on the conversion of elevations between NAVD 88 and NGVD 29. To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the North Carolina Geographic Survey at the address shown below. You may also contact the Information Services Branch of the National Geographic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

North Carolina Geographic Survey
121 West Jones Street
Raleigh, NC 27601
(919) 733-3338
<http://www.ngs.state.nc.us>

County	Vertical Datum Offset Table
Madison	-0.23

County Average Vertical Datum Offset Table
County: Madison
Offset: -0.23
Units: NAVD 88 = NGVD 29 + (-0.23)



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood) also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A: No Base Flood Elevations determined.
ZONE AE: Base Flood Elevations determined.
ZONE AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AD: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR: Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood.
ZONE A99: Area to be protected from 1% annual chance flood by a Federal food protection system under construction; no Base Flood Elevations determined.
ZONE VE: Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X: Areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X: Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D: Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
Base Flood Elevation and values, elevation in feet
Base Flood Elevation value where uniform within zone; elevation in feet
Reference to the North American Vertical Datum of 1988 (NAVD 88)
Cross section line
Traverse line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4278 11W
81° 17' 30", 31° 12' 30"
1477 500 FEET
BUSS10 X
BUSS10
BUSS10
BUSS10
NAD 83
UTM
River Mile

GRID NORTH

MAP SCALE 1" = 500' (1 : 6,000)

250 0 500 1000
FEET
150 0 150 300
METERS

Cooperating Technical State

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

www.ncfloodmaps.com

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles, Floodway Data, Limited Detailed Flood Hazard Data, and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of regulatory floodways shown on the FIRM for flooding sources studied by detailed methods were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data for flooding sources studied by detailed methods as well as non-engineered methods for flooding sources studied by limited detailed methods are provided in the FIS report for this jurisdiction. The FIS report also provides instructions for determining a floodway using non-engineered methods for flooding sources studied by limited detailed methods.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.4 "Flood Protection Measures" of the Flood Insurance Study report for information on the flood control structures in this jurisdiction.

Base map information and geospatial data used to develop this FIRM were obtained from various organizations, including the participating local community(ies), state and federal agencies, and other sources. The primary base for this FIRM is aerial imagery acquired by the State. The time period of collection for the State imagery is 2005 and 2006. Information and geospatial data supplied by the local community(ies) that met FEMA base map specifications were considered the preferred source for development of the base map. Base geospatial metadata for the associated digital FIRM for additional information about base map preparation.

Base map features shown on this map, such as corporate limits, are based on the most up-to-date data available at the time of publication. Changes in the corporate limits may have occurred since this map was published. Map users should consult the appropriate community official or website to verify current conditions of jurisdictional boundaries and base map features. This map may contain roads that were not considered in the hydraulic analysis of streams where no new hydraulic model was created during the production of this statewide format FIRM.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains a narrative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository addresses, and a listing of Communities table containing National Flood Insurance Program data for each community as well as a listing of the panels on which each community is located.

If you have questions about this map, or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-335-2627) or visit the FEMA website at <http://www.fema.gov>.

An accompanying Flood Insurance Study report, Letter of Map Revision (LOMR) or Letter of Map Amendment (LOMA) revising portions of this panel, and digital versions of this FIRM may be available. Visit the North Carolina Floodplain Mapping Program website at <http://www.ncfloodmaps.com> or contact the FEMA Map Service Center at 1-800-358-9616 for information on all related products associated with this FIRM. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.fema.gov>.

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index or visit <http://www.ncfloodmaps.com>

EFFECTIVE DATE OF FLOOD INSURANCE RATE MAP PANEL

JUNE 2, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to statewide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent, the North Carolina Division of Emergency Management or the National Flood Insurance Program at the following phone numbers or website:

NC Division of Emergency Management
(919) 715-5000 <http://www.ncem.org> <http://ncem.org>

National Flood Insurance Program
1-800-638-6422 <http://www.fema.gov/businessinfo>

NFIP

PANEL 9830J

FIRM

FLOOD INSURANCE RATE MAP

NORTH CAROLINA

PANEL 9830

(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY

MADISON COUNTY

CDRS

PANEL 9830J

SHEET

1

Notes to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used in insurance applications for the subject community.

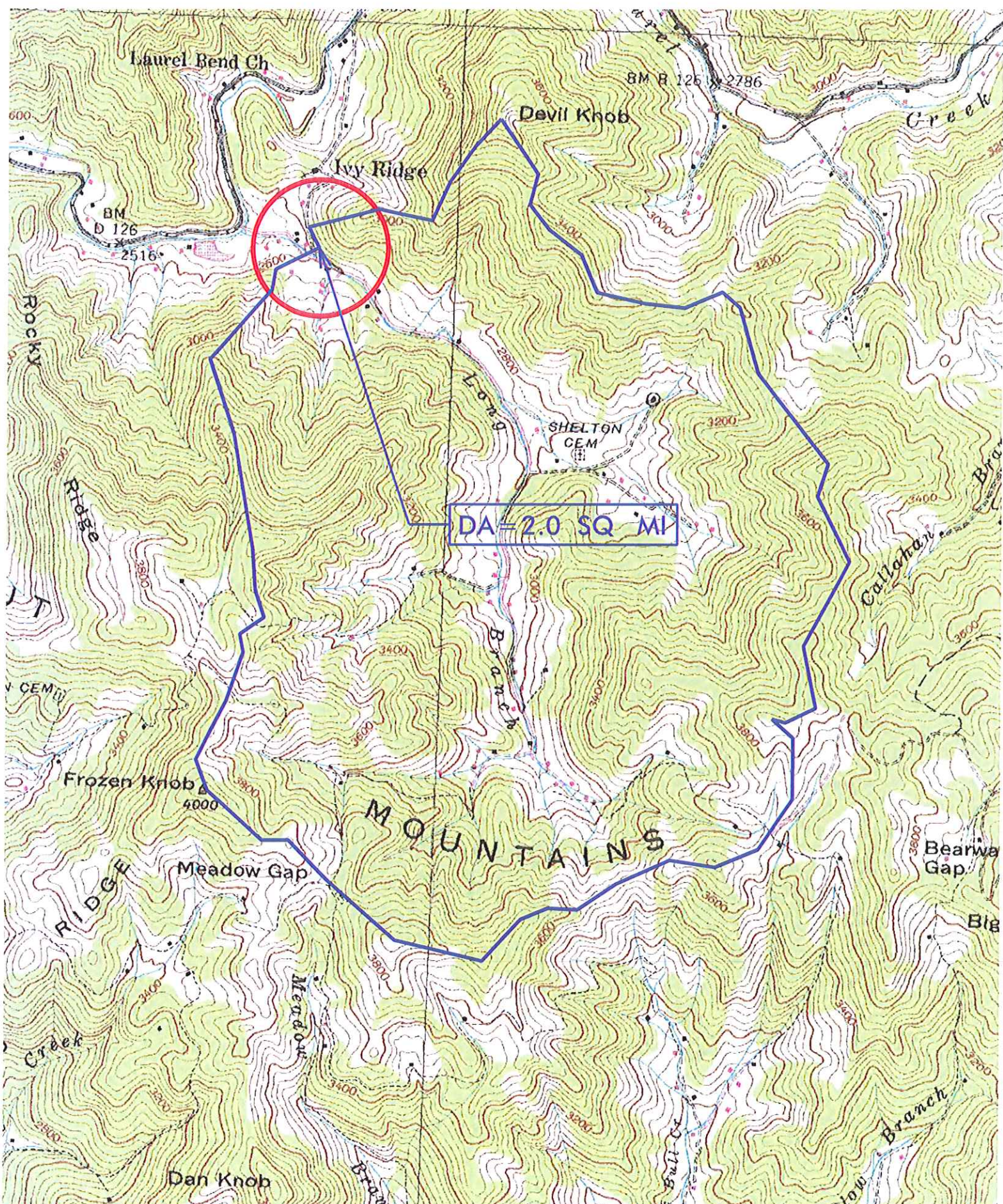
EFFECTIVE DATE

JUNE 2, 2009

MAP NUMBER

3700983000J

State of North Carolina
Federal Emergency Management Agency



Laurel Bend Ch

BM B 126 2786

Devil Knob

Ivy Ridge

BM D 126 2516

Rocky Ridge

Long Branch

SHELTON CEM

DA=2.0 SQ MI

Callahan Branch

Frozen Knob

Meadow Gap

MOUNTAINS

Bearwa Gap

Big

Creek

Dan Knob

Branch