

Office Estimate	<u>60' Bridge (Potential Culvert Size: 2@8'x5' RCBC)</u>		Project#	<u> </u>
MOA Required	<u>No</u>		TIP#	<u> </u>
	<u>PREDESIGN-PRESURVEY REPORT</u>		Let Date	<u> </u>
			WBS#	<u>17BP.13.R96</u>
			Bridge#	<u>990276</u>
County	<u>Yancey</u>		Road#	<u>SR 1164</u>
			Name	<u>Still Fork Creek Rd.</u>
			Stream	<u>Left Prong of Still Fork Creek</u>
Type Of Request: POC	Force Account	<u>TIP</u>	NCMA	
Date	<u>8/19/11</u>	Name	<u>MLH (Mulkey, Inc.)</u>	
Checked By	<u>KBA/JKS (Mulkey, Inc.)</u>			
Prior Survey Date	<u>N/A</u>	(attach copy of prior survey)		
Study By Scour Section	<u>N/A</u>			
Flood Zone	<u>No</u>	Detail Study	<u>N/A</u>	Date <u>June 2, 2009</u> Panel# <u>0755</u>
B.M. Info	<u>N 128 FB0250</u>			
Quad Map	<u>Celo</u>	Drainage Area	<u>1.1 Sq. Mi.</u>	
	<u>Q25 430 cfs</u>	<u>Q50 500 cfs</u>	<u>Q100 600 cfs</u>	From <u>USGS Quad Map</u>
				Method <u>USGS Regression</u>

EXISTING BRIDGE INFORMATION

Location	<u>0.15 Mi. N. Jct. NC80</u>			
Average Daily Traffic	<u>180 - Yr. 2000</u>			
Length	<u>19 Ft.</u>	Bed- To Crown	<u>6 Ft.</u>	Water Depth <u>1 Ft.</u>
Type Structure	<u>Timber Floor on Timber Joists; E. BTS: Timber Caps/Timber Post & Sills</u>			
Type Spans	<u>1@18'-8"</u>			
Upstream Structure	<u>N/A</u>			
Location	<u> </u>			
Bed- To Crown	<u> </u>	Prior Survey	<u> </u>	
Downstream Structure	<u>N/A</u>			
Location	<u> </u>			
Bed- To Crown	<u> </u>	Prior Survey	<u> </u>	
SCS Watershed	<u>N/A</u>			

ENVIRONMENTAL

Trout Stream	<u>No</u>	Anadromous Fish	<u>No</u>	Primary Nursery Area	<u>No</u>
High Quality Waters	<u>No</u>	Nutrient Sensitive Waters	<u>No</u>		
Near Water Supply Intake	<u>No</u>	CAMA County	<u>No</u>		
Stream Classification	<u>C; ORW</u>				
DENR River Basin Info.	<u>French Broad</u>				
State Stormwater Permit Required	<u>Yes</u>				



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY YANCEY

BRIDGE NUMBER 990276

INSPECTION CYCLE 2 YRS

ROUTE SR1164

ACROSS CREEK

M.P. 0

LOCATION .15 MI.N.JCT.NC80

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE E.BTS:TIM. CAPS/TIM. POST&SILLS @ VAR. CTS.

SPANS 1 @ 18'-8"

LONGITUDE 82° 11' 16.8"

LATITUDE 35° 46' 21.6"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 08/27/2009

OPERATING RATING

PRESENT POSTING Not Posted

SV-22,TTST-32

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT Delineators



EAST

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

Yes

WEIGHT LIMIT

1

Yes

DELINEATORS

1

No

NARROW BRIDGE

No

ONE LANE BRIDGE

No

LOW CLEARANCE

BRIDGE MANAGEMENT UNIT
DATA ON EXISTING STRUCTURE

Run Date: 02/10/2010

COUNTY : YANCEY		DIV : 13		DIST : 2		STRUCTURE NUMBER : 990276		LENGTH : 19 FEET	
ROUTE CARRIED : SR1164				FEATURE INTERSECTED : CREEK					
LOCATED : .15 MI.N.JCT.NC80				BRIDGE NAME :					
FUNC. CLASS : 09		SYST.ON : NFA		SYST.UNDER : NFA		ADT & YR : 180 2000		RAIL TYPE : LT 227 RT 227	
BUILT : 1972		BY : BMU		PROJ :		FED.AID PROJ :		DESIGN LOAD : Other or Unknown	
REHAB :		BY :		PROJ :		ALIGNMENT : TAN 50		LANES : ON 2 UNDER	
NAVIGATION : VC 0.0 FT HC 0.0 FT				HT. CRN. TO BED : 6 FT		WATER DEPTH : 1 FT			
SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS									
SUBSTRUCTURE : E.BTS:TIM. CAPS/TIM. POST&SILLS @ 5' CTS.									
SPANS : 1 @ 18'-8"									
BEAMS OR GIRDERS : 16 LINES 9" I-BEAMS @ 1'-6.375" CTS.									
FLOOR : 3X4 TIM/2.5"AWS		ENCROACHMENT :		DECK (OUT TO OUT) : 25.0 FT					
CLEAR ROADWAY : 24.0 FT		BETWEEN RAILS : 24.7 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-12		OPE.RTG. : HS-20		CONTR.MEMBER : int bm		POSTED : SV 22		TTST 32 DATE 10/10/2008	
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: 990276 County: YANCEY Date: 08/27/2009 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	2.6				
0.3	2.6				
0.3	4.4				
1.6	4.4				
1.6	7.4				
3.9	7.5	Water Surface/Water Edge (WSWE)			
7.3	8.3				
10.3	8				
12.9	7.5	Water Surface/Water Edge (WSWE)			
17	7.2				
17.001	4.4				
18.3	4.4				
18.301	2.6				
18.7	2.6				

Bridge: 990276

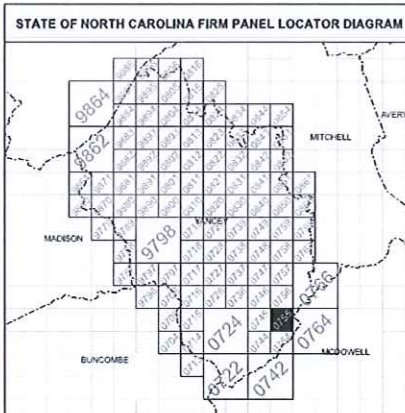
County YANCEY

Date: 08/27/2009

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 FIRM maps 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.

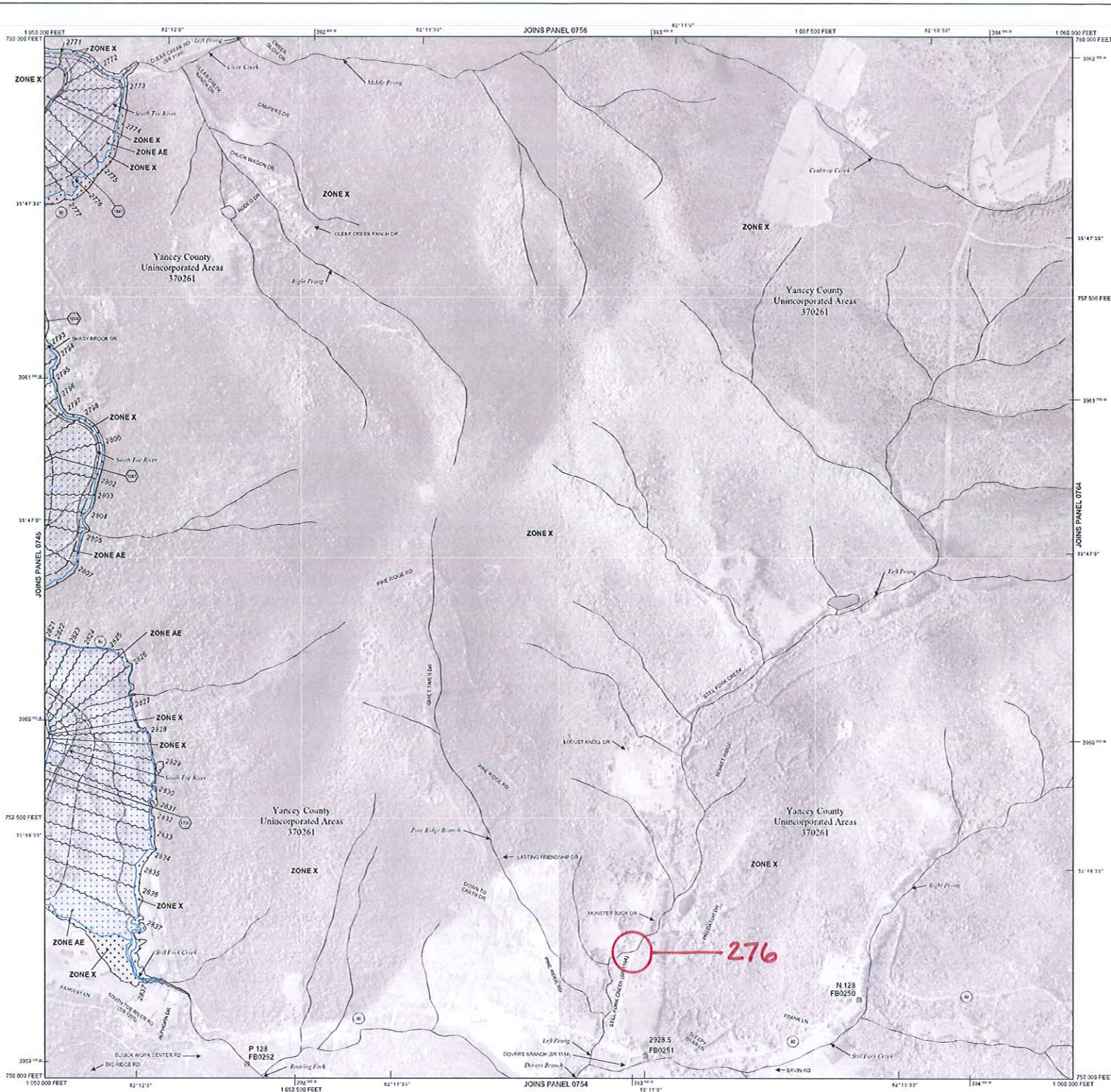
Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. An average offset between NAVD 88 and the National Geodetic Vertical Datum of 1929 (NGVD 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 unvisited 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 (919) 715-3242, or visit its website at <http://www.ngs.noaa.gov>.

North Carolina Geographic Survey
121 West Jones Street
Raleigh, NC 27601
(919) 733-3536
<http://www.ncgs.state.nc.us>

County Average Vertical Datum Offset Table	
County	Vertical Datum Offset (ft)
Yancey	-0.15
Example: NAVD 88 = NGVD 29 + (-0.15)	

All streams listed in the Flood Hazard Data Table below were studied by detailed methods using field survey. Other flood hazard data shown on this map may have been derived using either a coastal analysis or limited detailed riverine analysis. More information on the flooding sources studied by these analyses is contained in the Flood Insurance Study report.

FLOOD HAZARD DATA TABLE				Floodway (width (feet))
Cross Section	Stream Section	Flood Elevation (ft)	1% Annual Chance Flood Elevation (ft)	Left/Right Distance From The Center of Boundary Encroachment Boundary (feet)
SOUTH TOE RIVER				
1247	124.714	NA	2,775.8	525
1238	125.773	NA	2,789.0	250
1287	128.674	NA	2,801.4	450
1330	132.560	NA	2,831.6	250
Foot above mouth				



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 Subarea 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 floodways 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 floodways 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/or 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 2005. 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. See 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 authoritative 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 dates 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-WAP (1-877-336-2627) 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 1-800-358-9515 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.map.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 websites:

NC Division of Emergency Management
(919) 715-8000 <http://www.ncemergency.com>
National Flood Insurance Program
1-800-635-6629 <http://www.fema.gov/business>

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 Zone 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 AO Flood depths of 1 to 3 feet (usually areas of ponding). Base Flood Elevations determined.
- ZONE AR 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 A99 Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decommissioned. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE VE Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

COASTAL FLOOD 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 D Areas determined to be outside the 0.2% annual chance floodplains. Areas in which flood hazards are undetermined, but possible.

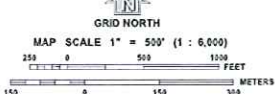
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

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 D 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 line and value elevation in feet
- Base Flood Elevation value, where uniform within zone; elevation in feet
- Reference to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4256 11° 17' 30", 32° 22' 10"
- 1000-meter Universal Transverse Mercator grid index, zone 17
- 2003-foot grid system - North Carolina State Plane coordinate system (FIPS202/NE 3000, State Plane NAD 83 feet)
- North Carolina Geographic Survey bench mark (for more information visit <http://www.ncgs.state.nc.us>)
- National Geographic Survey bench mark (for more information visit <http://www.ngs.noaa.gov>)
- NGS-54 GPS 24 cm Vertical Control Markers or Contractor-Established NGSMP Bench Marks (for more information visit <http://www.ngs.noaa.gov>)
- MTLS River Mile

GRID NORTH



PANEL 0755J

FIRM
FLOOD INSURANCE RATE MAP
NORTH CAROLINA

PANEL 0755

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

CONTAINS

COMMUNITY
YANCEY COUNTY

PANEL
0755

SHEET
2

Notice to User: This Map Number sheet below should be used above should be used as insurance applications for the subject community.

EFFECTIVE DATE
JUNE 2, 2009

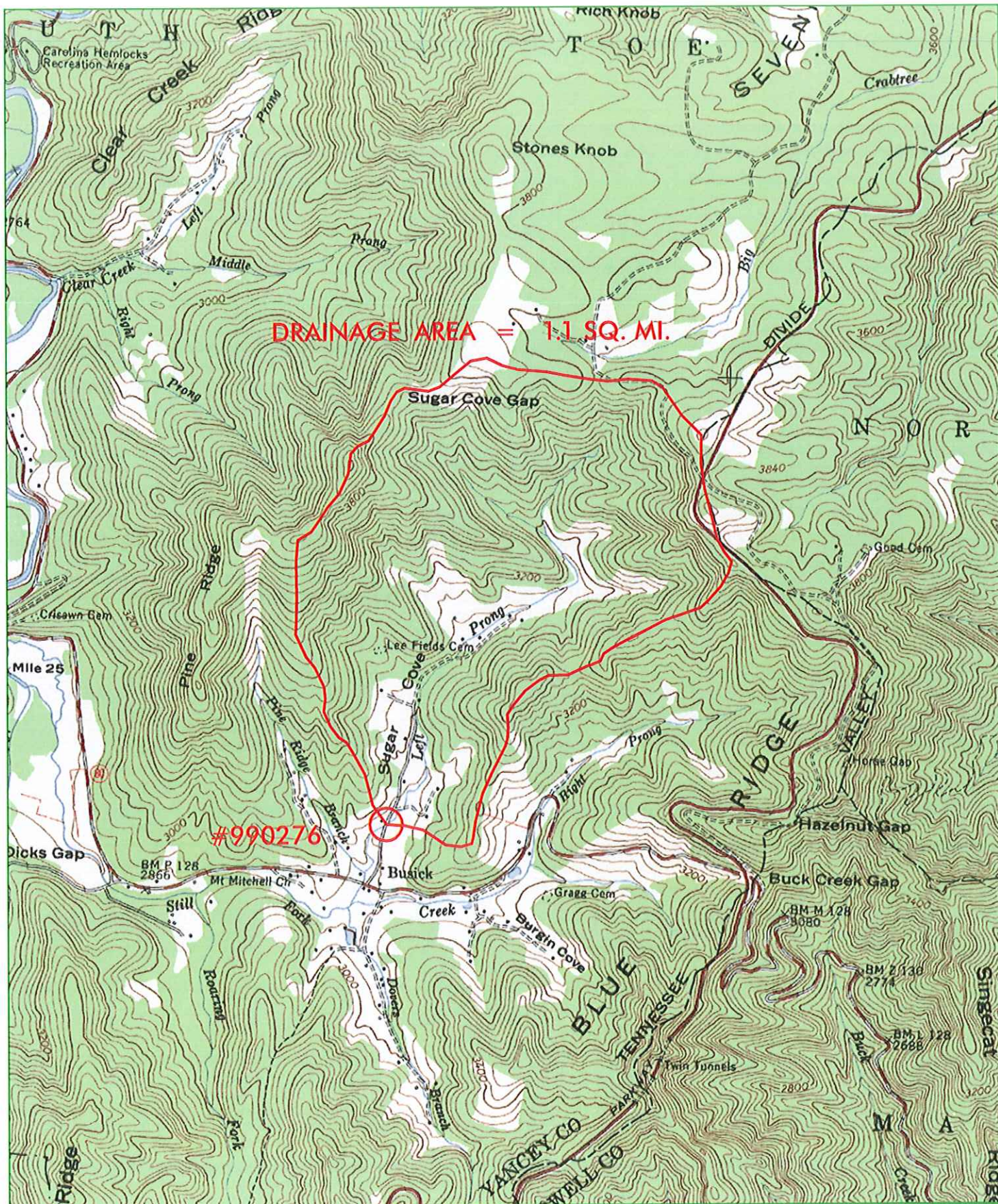
MAP NUMBER
3710075500J

State of North Carolina
Federal Emergency Management Agency



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 Cooperative Technical State agreement with FEMA to produce and maintain this digital FIRM.

www.ncfloodmaps.com



QUAD MAP - BRIDGE #990276

