Project# _____
TIP# B-5872
Let Date _____
WBS# _____

PREDESIGN-PRESURVEY REPORT

County Burke (DIV. 13)

Bridge# 110126
Road# SR 1115 (DENTONS CHAPEL RD.)
Stream DOUBLE BRANCH ✓

Type Of Request: POC Force Account TIP NCMA

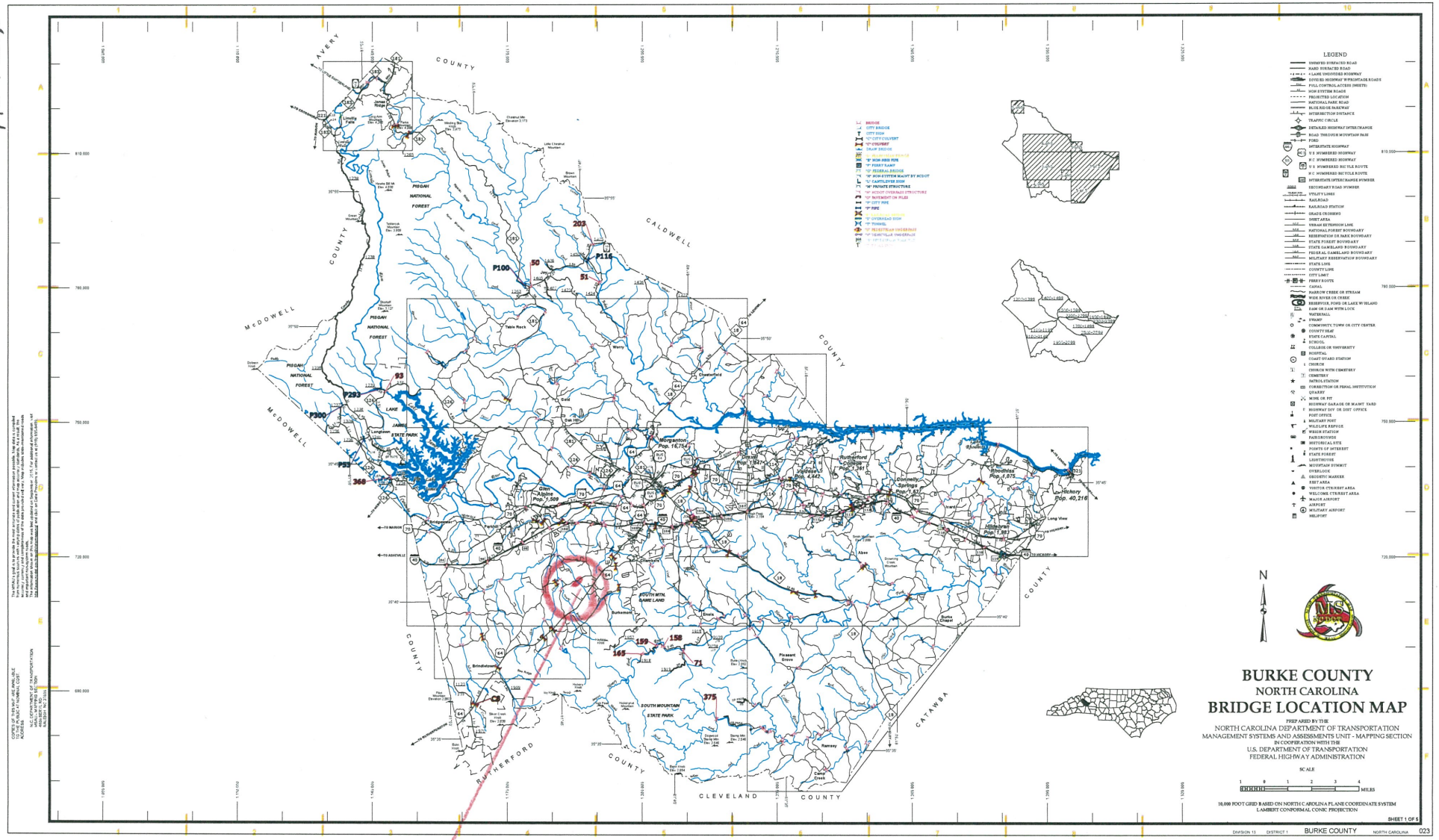
Date 1-22-16 Name wsh Assigned To PFF/MTS
Checked By REL 2-3-16
Prior Survey Date NONE (attach copy of prior survey) BRN. BK.: NONE CO. FILE NONE
Study By Scour Section NONE
Flood Zone X Detail Study NONE Date _____ Panel# 1780
B.M. Info N/A
Quad Map GLEN ALPINE Drainage Area 3.29 SQ M. From STREAM STATS
Q25 1300 cfs Q50 1500 cfs Q100 1800 cfs Method RURAL REGION 1 ✓
LAT: 35.677371 NEW REG. EQU.
LONG: 81.754308

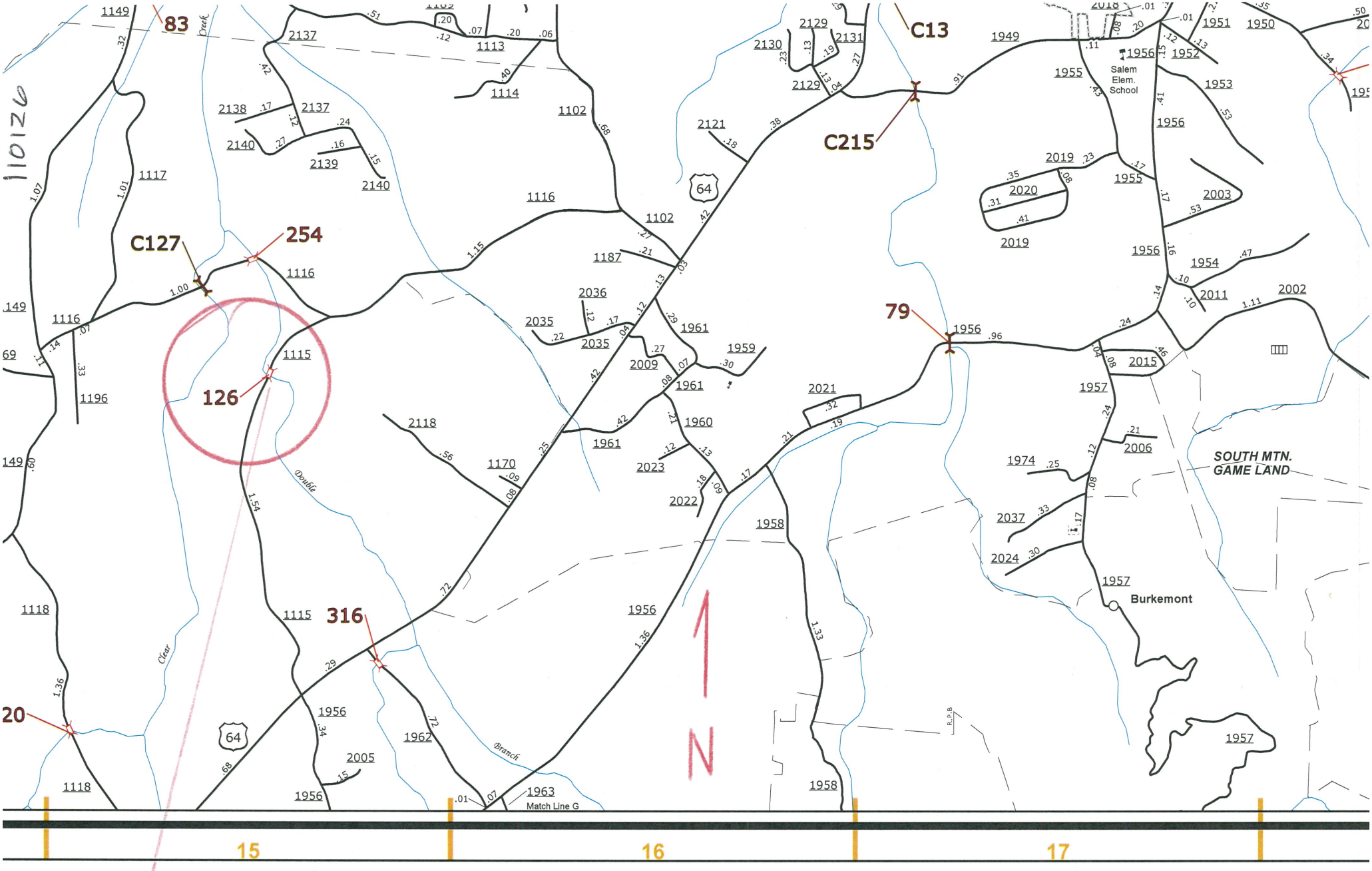
EXISTING BRIDGE INFORMATION BUILT: 1960 ✓

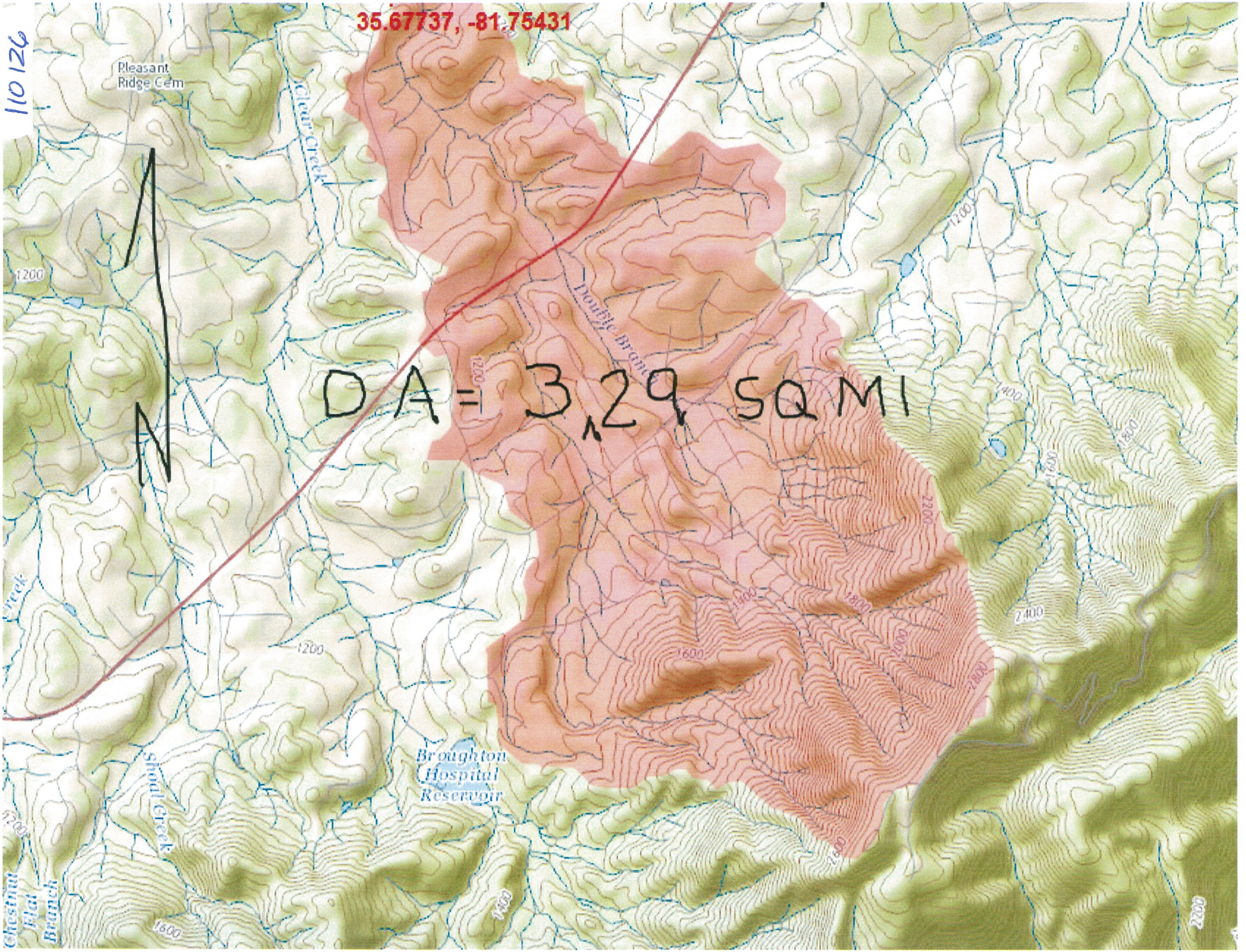
Location 0.3 M S. JCT. SR 1116
Average Daily Traffic 350 2012 6% TRK
Length 36 Bed- To Crown 10' Water Depth 1'
Type Structure TIMBER FLR ON I BEAMS, TIMBER CAPS, POSTS, SILLS
Type Spans 1@35'6"
Upstream Structure STR @ HWY 64 (CULVERT) W/HEADWALL
Location HWY 64
Bed- To Crown UNKNOWN Prior Survey N/A
Downstream Structure 110254 2@17'4" / TIMBER FLR ON I BEAMS
Location JEETER CARSWELL RD. (0.3 M W. JCT SR 1115) SR 1116
Bed- To Crown 10' (1' DEEP) Prior Survey N/A BUILT: 1962
SCS Watershed N/A

ENVIRONMENTAL

UNDESIGNATED H_2O TVA: NO
Trout Stream YES Anadromous Fish NO Primary Nursery Area NO
High Quality Waters NO Nutrient Sensitive Waters NO
Near Water Supply Intake N/A CAMA County NO (#11-34-6-4)
Stream Classification C
DENR River Basin Info. CATAWBA


BURKE COUNTY
NORTH CAROLINA
BRIDGE LOCATION MAP
PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
MANAGEMENT SYSTEMS AND ASSESSMENTS UNIT - MAPPING SECTION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
SCALE
MILES
10,000 FOOT GRID BASED ON NORTH CAROLINA PLANE COORDINATE SYSTEM
LAMBERT CONFORMAL CONIC PROJECTION
SHEET 1 OF 5
LEGEND
AVERY COUNTY
CALDWELL COUNTY
McDOWELL COUNTY
RUTHERFORD COUNTY
CLEVELAND COUNTY
CATAWBA COUNTY
PISGAH NATIONAL FOREST
LAKE JAMES STATE PARK
SOUTH MOUNTAIN STATE PARK
SOUTH MTN. GAME LAND
Morganton Pop. 16,758
Glen Alpine Pop. 1,509
Drexel Pop. 1,827
Valdese Pop. 4,442
Connelly Springs Pop. 1,621
Rutherford College Pop. 1,361
Rhodhiss Pop. 1,075
Hickory Pop. 40,216
Hildebran Pop. 1,883
Long View
Icard
Bridgewater
Table Rock
Warrior
Chesterfield
Jonas Ridge
Linville Falls
Linville
Grandfather Mountain
Little Chestnut Mountain
Brown Mountain
Wilson Creek
Lake James
Paddy Creek
Lake Rhodhiss
Lake Hickory
Lake Rhodhiss
Lake Hickory
Lake James
Lake Tahoma
Lake Tahoma
Lake Tahoma


83
C13
C215
C127
254
126
316
79
20
64
Salem Elem. School
SOUTH MTN. GAME LAND
Burkemont
Double Creek
Clear Branch
Match Line G
15
16
17
N


110 126
35.67737, -81.75431
Pleasant Ridge Cem
Clear Creek
Double Branch
DA = 3.29 SQ MI
N
Broughton Hospital Reservoir
Spout Creek
Chestnut Flat Branch
1200
1400
1600
1800
2000
2200
2400

110126

USGS StreamStats Version 3.0

Flow Statistics Ungaged Site Report

Date: Thurs Jan 21, 2016 2:12:08 PM GMT-5
Study Area: North Carolina
NAD 1983 Latitude: 35.6774 (35 40 39)
NAD 1983 Longitude: -81.7542 (-81 45 16)
Drainage Area: 3.29 mi2

Peak Flows Region Grid Basin Characteristics			
100% Peak Southeast US over 1 sqmi 2009 5158 (3.29 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	3.29	1	9000
Percent Area in Region 1 (percent)	51.048	0	100
Percent Area in Region 2 (percent)	48.952	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			
Area in square miles=3.29			
Percent imperviousness of basin area 2006 NLCD=1.13			
Percentage of impervious area determined from NLCD 2011 impervious dataset=1.13			
51% Region 1 Urban over 3 sqmi 2014 5030 (1.68 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	3.29	3	436
Percent Impervious NLCD2006 (percent)	1.13	0	47.9
49% Region 2 Urban Blue Ridge FS007-00 (1.61 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	3.29	0.04	41
Percent Impervious NLCD2011 (percent)	1.13 (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 Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PK2	309	ft3/s	35		178	538
PK5	565	ft3/s	34		327	976
PK10	760	ft3/s	35		432	1340
PK25	1020	ft3/s	38		561	1860
PK50	1230	ft3/s	40		657	2320
PK100	1460	ft3/s	42		749	2840

110126

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION TEMP. REPAIRS TO POST 4 AB.2 AND SE WING.

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY BURKE BRIDGE NUMBER 110126 INSPECTION CYCLE 2 YRS

ROUTE SR1115 ACROSS DOUBLE BRANCH M.P. 0

LOCATION .3 MI.S.JCT.SR1116

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS (STD.BMD-8)

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

SPANS 1 @ 35'-6

LONGITUDE 81° 45' 15.71" LATITUDE 35° 40' 38.74"

INSPECTION DATE 01/09/2014 PRESENT CONDITION FAIR

PRESENT POSTING Y SV 14, TTST 18 PROPOSED POSTING

OTHER SIGNS PRESENT 4 DELINEATORS, 2 NARROW BRIDGE

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



SOUTH APPROACH

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

110126

Structure 110126 County BURKE Date: 01/09/2014 Structure Photos



NORTH APPROACH



UPSTREAM

110126

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE Run Date: 02/26/2014

COUNTY :	DIVISION :	DISTRICT:	STRUCTURE NUMBER :	LENGTH :
BURKE	13	1	110126	36 FEET

ROUTE CARRIED : SR1115

FEATURE INTERSECTED : DOUBLE BRANCH

LOCATED : .3 MI.S.JCT.SR1116

BRIDGE NAME :

CITY :

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :		RAIL TYPE :	
09	NFA	NFA	350	2012	LT 227	RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1960	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :	
	BMU	5.8551	TAN	90	ON 2	UNDER 0

NAVIGATION :					HT. CRN. TO BED :		WATER DEPTH :	
VC	0	FT	HC	0	FT	10 FT	1	FT

SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS (STD.BMD-8)

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

SPANS : 1 @ 35'-6

BEAMS OR GIRDERS : 8 LINES 16 I-BEAMS @ 2'-7 CENTERS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/2.5 AWS		20.083 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :			
19.167 FT	19.833 FT	LT	.3 FT	RT	.3 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :					
HS-1	HS-1	Int Bm	SV	14	TTST	18	DATE	09/30/2008

SYSTEM : Secondary S.R. Route

GREEN LINE ROUTE : N

UNDER ROUTES AND CLEARANCES

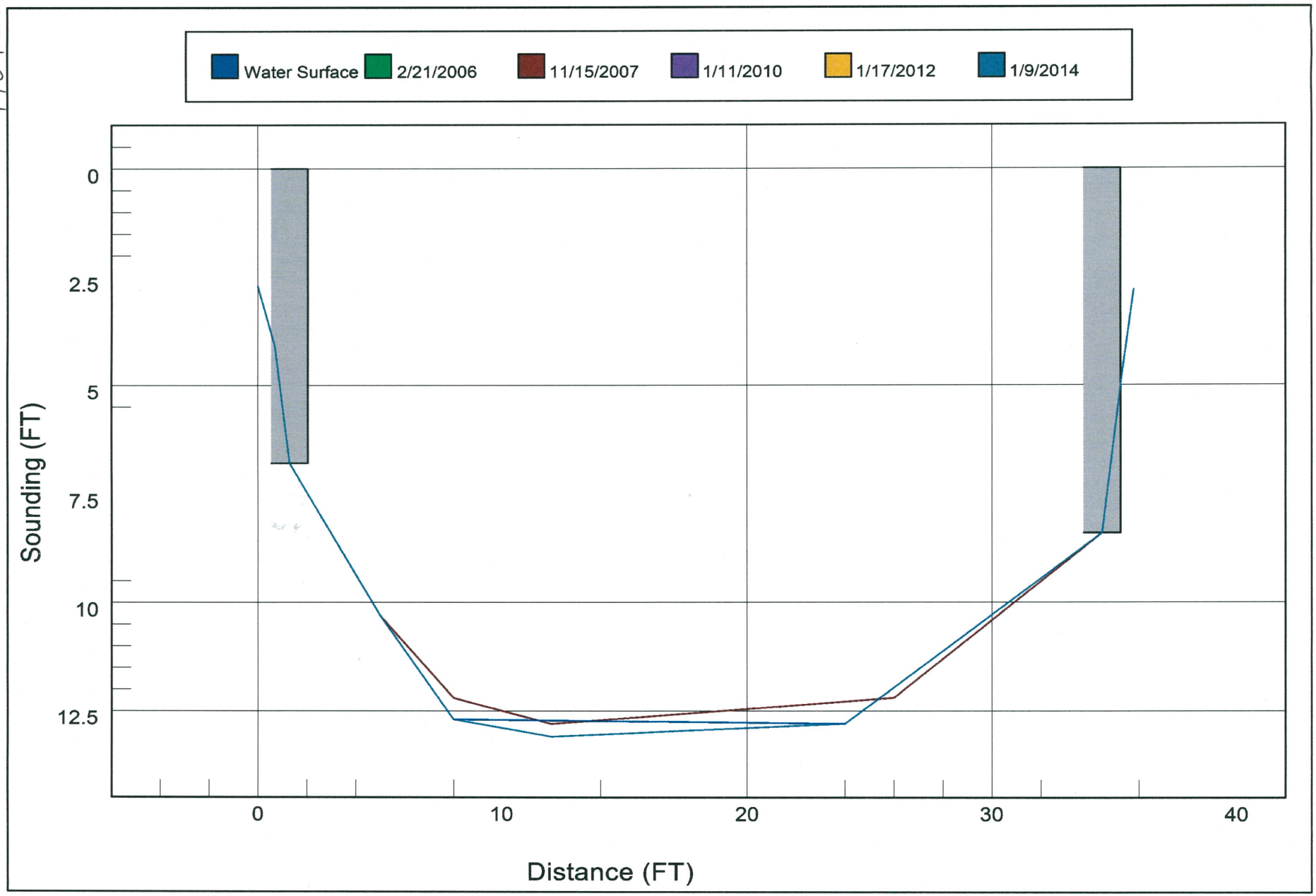
REMARKS :

Bridge: 110126 County BURKE Date: 01/09/2014

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)

110126



110126

126



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 costs 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 Cooperating Technical State agreement with FEMA to produce and maintain this 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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% Annual Chance Flood with Average Depth Less Than One Foot or With Drainage Areas of Less Than One Square Mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes *Zone X*

OTHER AREAS
- Areas Determined to be Outside the 0.2% Annual Chance Floodplain *Zone X*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Accredited or Provisionally Accredited Levee, Dike, or Floodwall
- Non-accredited Levee, Dike, or Floodwall
- BM5510 North Carolina Geodetic Survey bench mark
- BM5510 National Geodetic Survey bench mark
- BM5510 Contractor Est. NCFMP Survey bench mark
- 512 18.2 Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
- B Coastal Transect
- Coastal Transect Baseline
- Profile Baseline

OTHER FEATURES
- Hydrographic Feature
- Limit of Study
- Jurisdiction Boundary

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 call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.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.

Communities annexing 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.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

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

ACCREDITED LEVEE NOTES TO USERS: If an accredited levee 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 levee system(s) shown as providing protection. To mitigate flood risk in residual 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/business/nfip/index.shtm.

PROVISIONALLY ACCREDITED LEVEE NOTES TO USERS: If a Provisionally Accredited Levee (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 levee system(s) shown as providing 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 revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual 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/business/nfip/index.shtm.

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 (LIMWA). The LIMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LIMWA (or between the shoreline and the LIMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Limit of Moderate Wave Action (LIMWA)

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 for structures that are newly built or substantially improved on or after the date(s) indicated on the map. For more information see http://www.fws.gov/habitatconservation/coastal_barrier.html, the FIS Report, or call the U.S. Fish and Wildlife Service Customer Service Center at 1-800-344-WILD.

CBRS Area | Otherwise Protected Area

SCALE

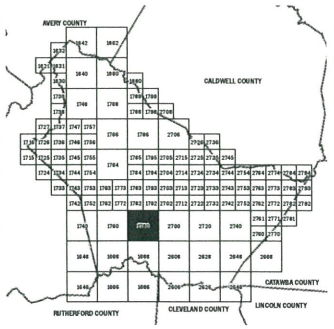
Map Projection:
North Carolina State Plane Projection Feet (Zone 3200)
Datum: NAD 1983 (Horizontal); NAVD 1988 (Vertical)

1 inch = 1,000 feet 1:12,000

0 500 1,000 2,000 Feet

0 150 300 600 Meters

PANEL LOCATOR



FEMA

National Flood Insurance Program

NORTH CAROLINA FLOODPLAIN MAPPING PROGRAM
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

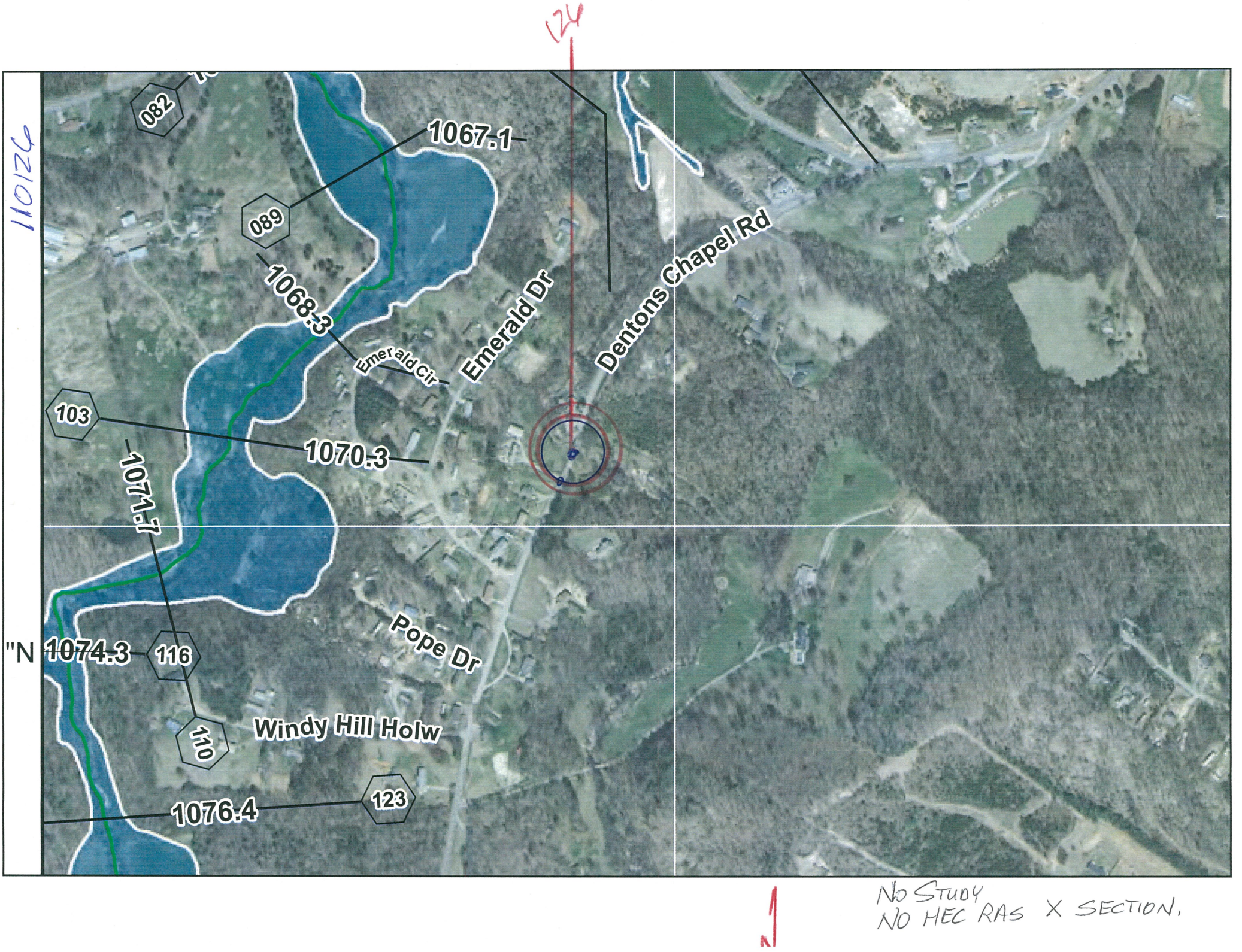
NORTH CAROLINA

PANEL 1780

Panel Contains:

COMMUNITY	CID	PANEL	SUFFIX
BURKE COUNTY	370034	1780	J
MORGANTON,CITY OF	370035	1780	J

MAP NUMBER
3710178000J
MAP REVISED
9/5/2007


124
110124
082
089
1067.1
1068.3
Emerald Cir
Emerald Dr
Dentons Chapel Rd
103
1070.3
1071.7
Pope Dr
"N
1074.3
116
110
Windy Hill Holw
123
1076.4
No Study
No HEC RAS X SECTION.