

maybe preliminary model

Project Number 45654.1-1
TIP Number B-5700
Let Date _____

PREDESIGN-PRESURVEY REPORT

County Cumberland

Bridge Number 250045
Road Number SR 2030
Stream South River (N. Gray Street)

Type Of Request: POC Force Account TIP
Date 1/5/16 Name EAKpuogu Assigned To _____
Checked By _____

Prior Survey Date None (attach copy of prior survey)

Panel: 1404

Study By Scour Section _____

Flood Zone Yes Detail Study Redelineated Date 1/5/2007 (attach copy of flood map)

B.M. Info _____

Quad Map Autryville Drainage Area 232 s mi From Stream stat
Q25 6650 Q50 8120 Q100 9660 Method USGS-Rural Regression eqn
SI Report 2009-5158

EXISTING BRIDGE INFORMATION

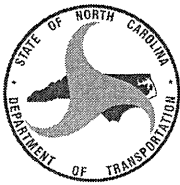
Location 2.3 mi N Jct NC210
Average Daily Traffic 720 (2013)
Length 211 Bed- To Crown 19 Water Depth 11'
Type Structure Steel plank Floor/1 beam
Type Spans 1 @ 35.25', 1 @ 35.17', 2 @ 35', 1 @ 35.17', 1 @ 35.25'
Upstream Structure (NC 24) Brg # 144
Location 0.5 mi E Jct 1853
Bed- To Crown 20 Prior Survey None
Downstream Structure Confluence with South River
Location _____
Bed- To Crown — Prior Survey —
SCS Watershed —

ENVIRONMENTAL

Trout Stream No Anadromous Fish No Primary Nursery Area No
High Quality Waters Yes Nutrient Sensitive Waters Yes
Near Water Supply Intake No CAMA County No
Stream Classification SA, HRW, NSW
DENR River Basin Info. Neuse

office estimated min brg length = 240'

No profile



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: SHORED STRUCTURE

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: CUMBERLAND STRUCTURE NUMBER: 250045 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR2030 MILE POST:

LOCATION: 2.3 MI.N.JCT.NC210

FEATURE INTERSECTED: SOUTH RIVER

LATITUDE: 34° 59' 19.68" LONGITUDE: 78° 38' 27.74"

SUPERSTRUCTURE: STEEL PLANK FLOOR/I-BEAMS

SUBSTRUCTURE: EBTS&IBTS:TIM.CAPS/TIM.PILES W/STL.CRUTCH BTS ADDED @ IBT 1

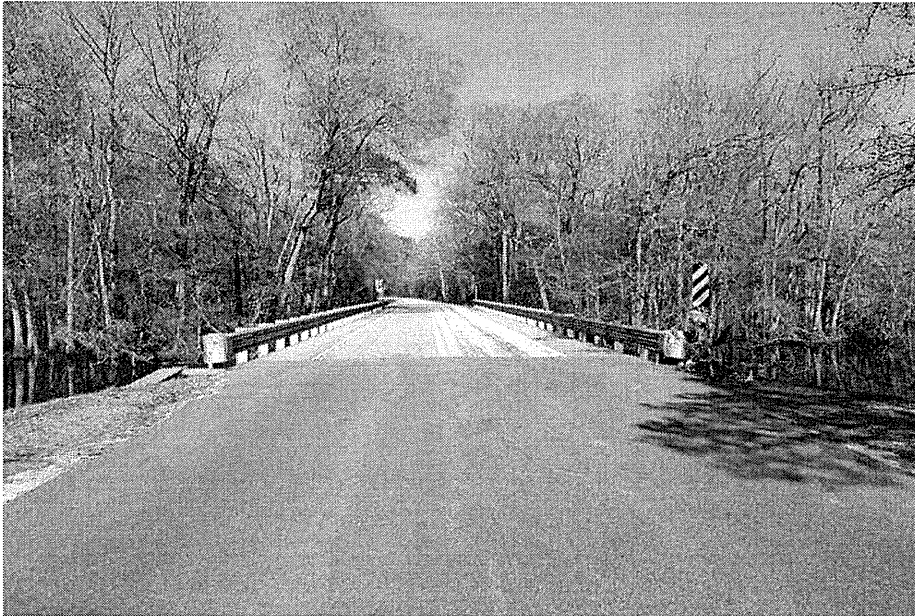
SPANS: 1@35"3;1@35"2;2@35";1@35"2;1@35"3

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

PRESENT CONDITION: Fair INSPECTION DATE: 02/12/2015

POSTED SV: 32 22 POSTED TTST: 35 31

OTHER SIGNS PRESENT: (1) DELINEATOR, (1) WEIGHT LIMIT



SOUTH APPROACH LOOKING NORTH

Sign noticed issued for		Number Required
<u>NO</u>	WEIGHT LIMIT	<u>0</u>
<u>YES</u>	DELINEATORS	<u>3</u>
<u>NO</u>	NARROW BRIDGE	<u>0</u>
<u>NO</u>	ONE LANE BRIDGE	<u>0</u>
<u>NO</u>	LOW CLEARANCE	<u>0</u>

INSPECTED BY
B. ELLIOT

SIGNATURE

B. Elliot

ASSISTED BY T. ENNIS

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Update Date: 07/08/2015

COUNTY : CUMBERLAND DIVISION : 6 DISTRICT : 2 STRUCTURE NUMBER : 250045 LENGTH : 211 FEET

ROUTE CARRIED : SR2030 FEATURE INTERSECTED : SOUTH RIVER

LOCATED : 2.3 MI.N. OF JCT.NC210 BRIDGE NAME : CITY : AUTRYVILLE

FUNC. CLASS : 08 SYST.ON : NFA SYST.UNDER : NFA ADT & YR : 720 2013 RAIL TYPE : LT 253 RT 253

BUILT : 1959 BY : SHC PROJ : FED.AID PROJ : DESIGN LOAD : H 15

REHAB : 1980 BY : BMU PROJ : 5.4451 ALIGNMENT : TAN SKEW : 90 LANES : ON 2 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 19 FT WATER DEPTH : 11 FT

SUPERSTRUCTURE : STEEL PLANK FLOOR/I-BEAMS

SUBSTRUCTURE : EBTS&IBTS:TIM.CAPS/TIM.PILES W/STL.CRUTCH BTS ADDED @ EBT1,IB1 & EB2

SPANS : 1@35.25'; 1@35.17'; 2@35'; 1@35.17'; 1@35.25'

BEAMS OR GIRDERS : 13 LINES W21X55 I-BEAMS@2'3CTS

FLOOR : STL PLK/4.5 AWS ENCROACHMENT : DECK (OUT TO OUT) : 28.3333 FT

CLEAR ROADWAY : 28.1667 FT BETWEEN RAILS : 28.1667 FT SIDEWALK OR CURB : LT 0 FT RT 0 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-8 OPE.RTG. : HS-20 CONTR.MEMBER : Pile 2 POSTED : SV 32 TTST 35 DATE 03/26/2013

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

UNDER ROUTES AND CLEARANCES

REMARKS :

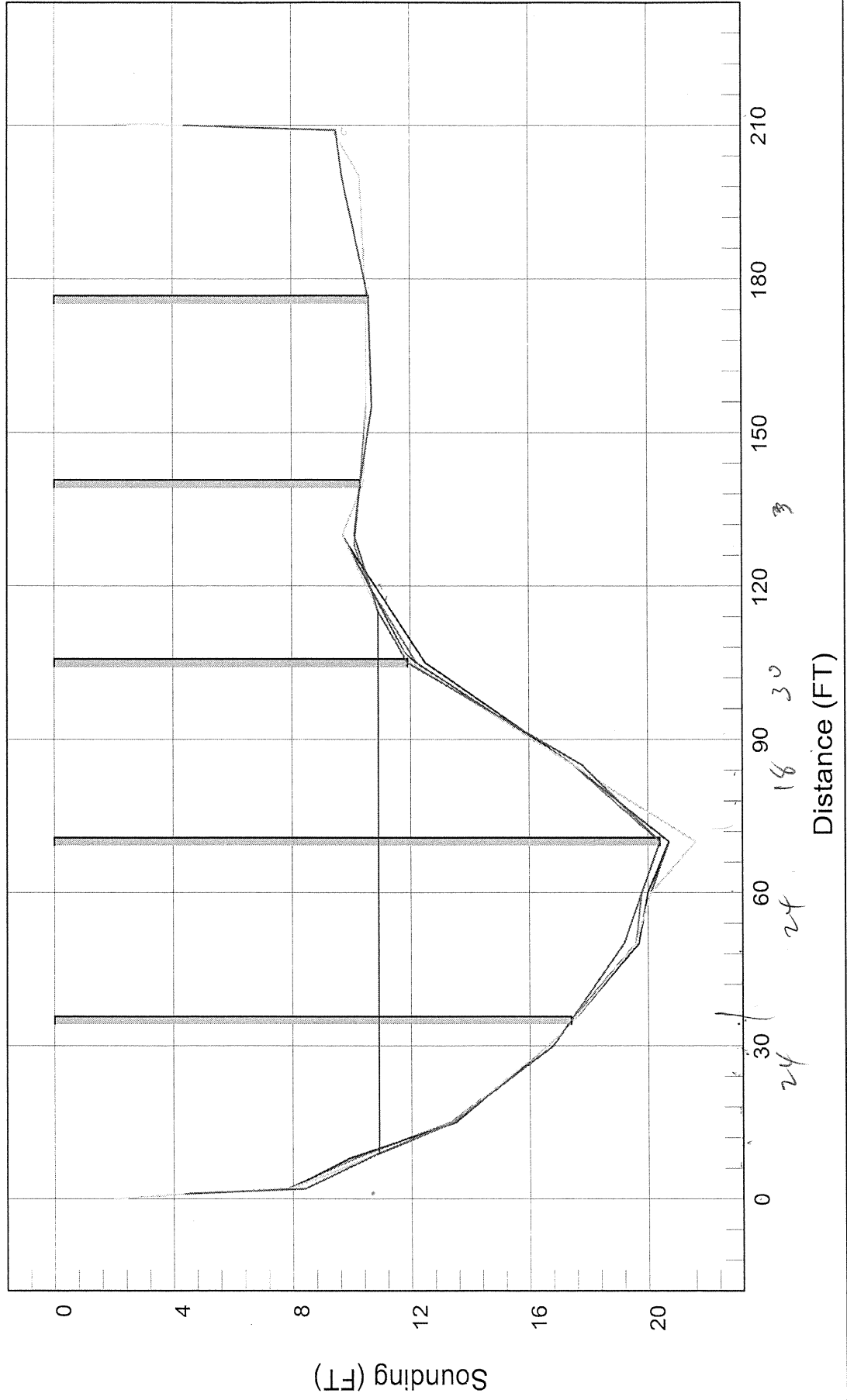
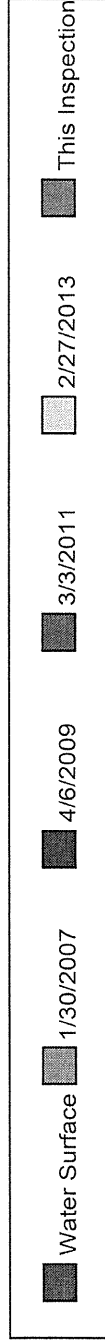
Bridge: 250045

County CUMBERLAND

Date:

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



$$19 \times 1.5 = 28.5 \times 2 = 57 + 20 + 96 = 173$$

Table 22 - Floodway Data

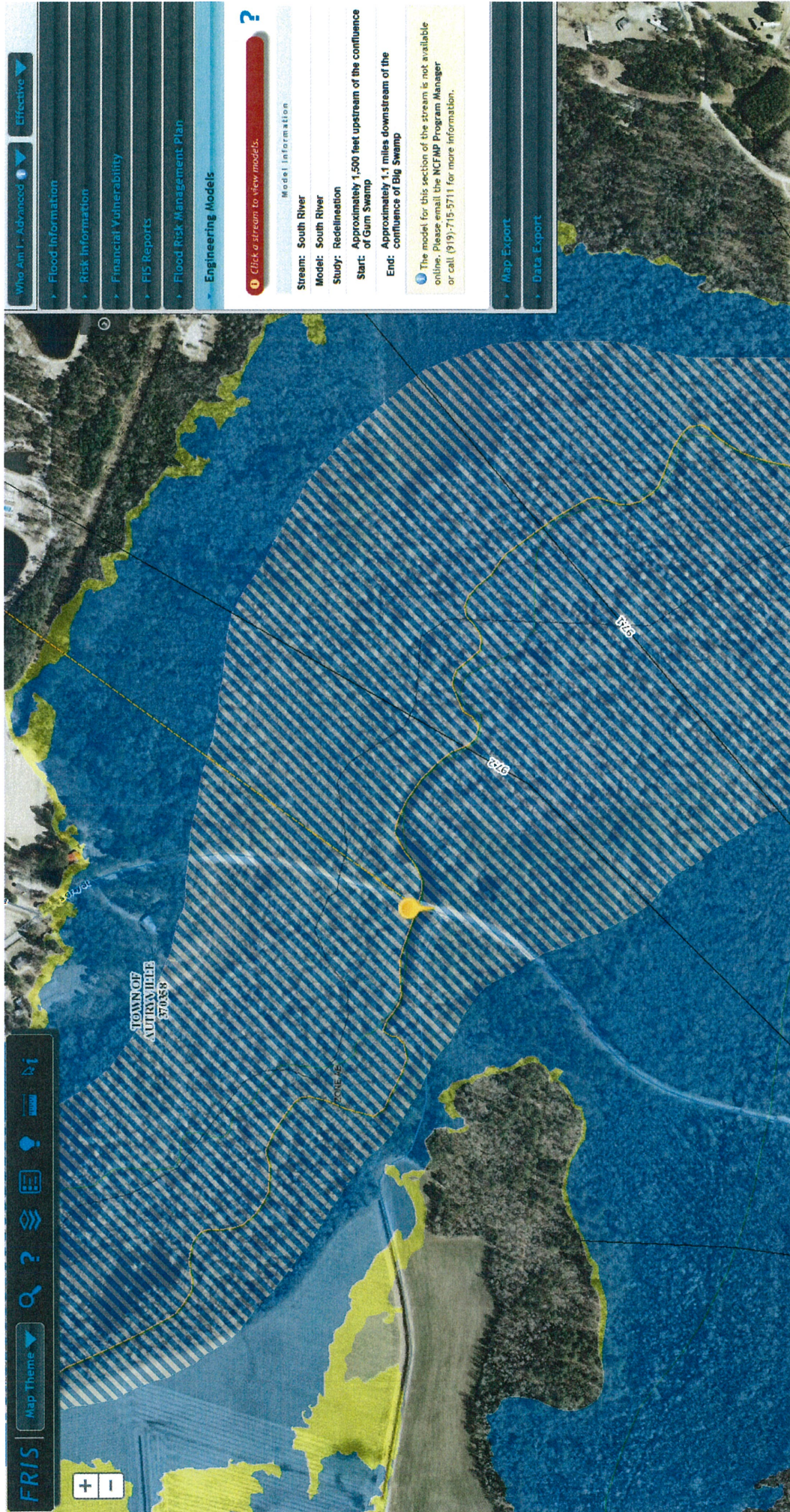
Floodway Source		Floodway			Water Surface Elevation			
Cross Section	Distance (Feet Above Mouth)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory	Without Floodway	With Floodway	Increase
South River								
432	43,200	2,268 ¹	20,632	0.2	97.1	97.1	98.1	1.0
443	44,312	2,071 ¹	18,962	0.3	97.2	97.2	98.2	1.0

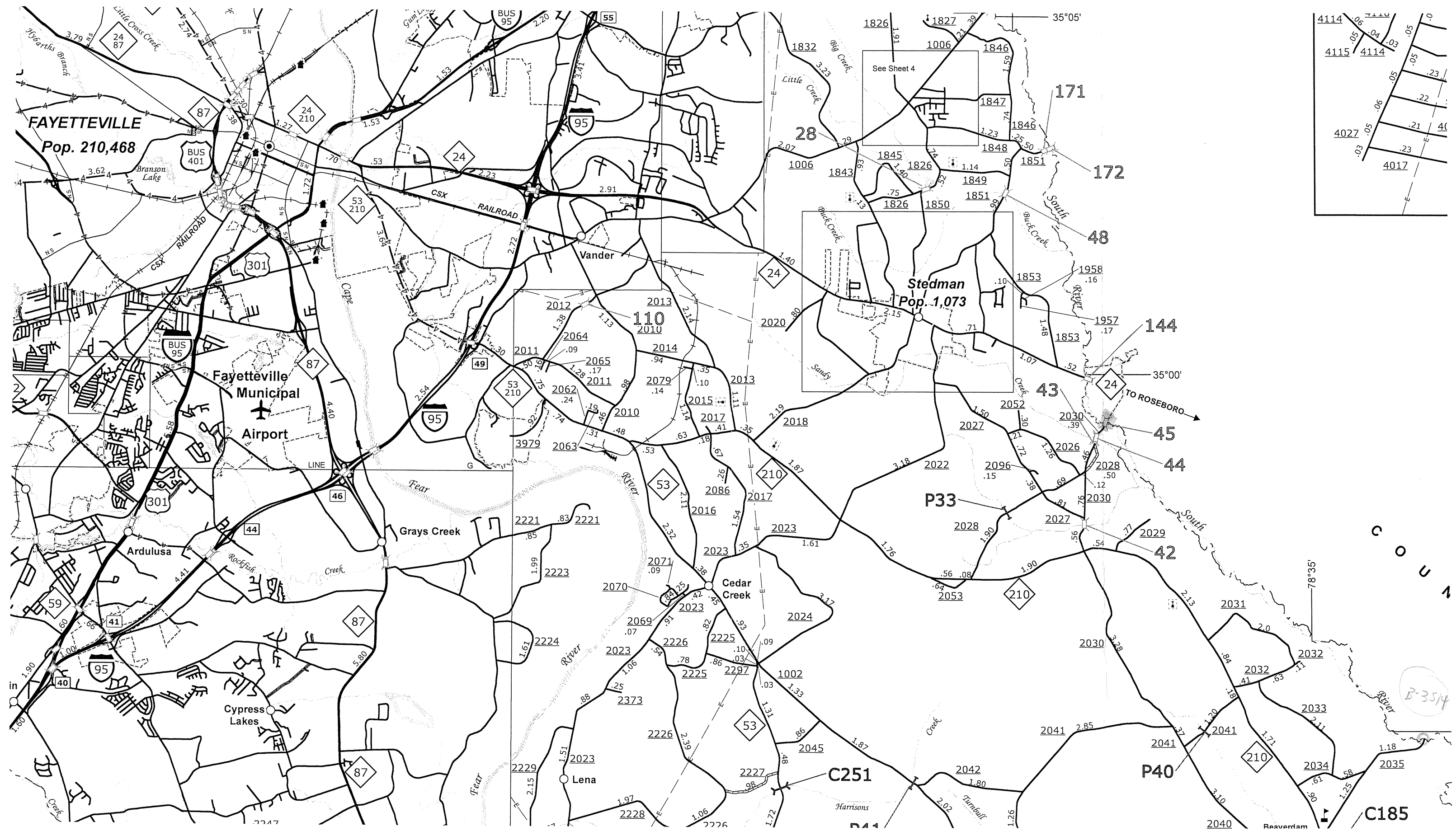
¹This width extends beyond county boundary

Summary of Discharges

confluence of Gum Swamp	202.00			7020	
Approximately 1,110 feet downstream of the confluence of Gum Swamp	262.30	*	*	7019	*
Approximately 1,550 feet upstream of the confluence of Gum Swamp	260.80	*	*	7007	*
Approximately 1.3 miles downstream of the confluence of Big Creek	250.20	*	*	6907	*
Approximately 1.4 miles downstream of North Gray Street	232.00	2846	4353	5078	6857
Approximately 3.2 miles downstream of Faircloth Bridge Road	231.40	*	*	6715	*
Approximately 1100 feet downstream of North Gray Street	228.00	2819	4315	5035	6800
Approximately 0.6 mile downstream of the confluence of Big Creek	227.60	*	*	6673	*
Approximately 915 feet upstream of the confluence of Big Creek	206.30	*	*	6426	*

 Print





StreamStats

Delineation Results

Be sure to thoroughly check the delineated basin for accuracy before using the tools below.

StreamStats Basin Characteristics Report

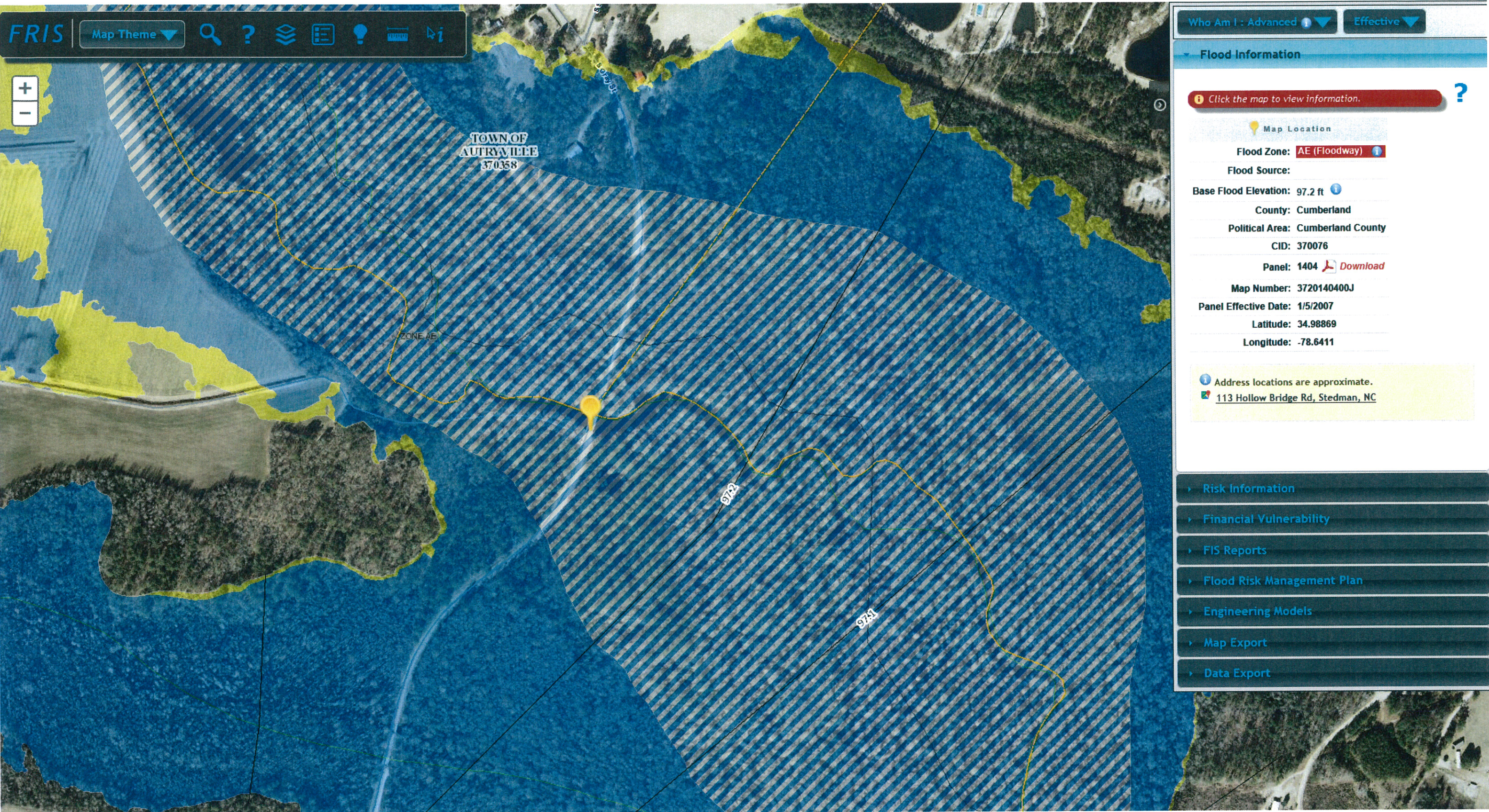
streamstats.cr.usgs.gov/v3_beta/BReport.f

StreamStats Version 3.0

Basin Characteristics Ungaged Site Report

Date: Wed Jan 6, 2016 4:06:55 PM GMT-5
Study Area: North Carolina
NAD 1983 Latitude: 34.989 (34 59 20)
NAD 1983 Longitude: -78.6409 (-78 38 28)

Label	Value	Units	Definition
DRNAREA	232	square miles	Area that drains to a point on a stream
LC06IMP	2.14	percent	Percentage of impervious area determined from NLCD 2006 impervious dataset



Flood Information

Click the map to view information.

Map Location

Flood Zone: AE (Floodway)

Flood Source:

Base Flood Elevation: 97.2 ft

County: Cumberland

Political Area: Cumberland County

CID: 370076

Panel: 1404 Download

Map Number: 3720140400J

Panel Effective Date: 1/5/2007

Latitude: 34.98869

Longitude: -78.6411

Address locations are approximate.
113 Hollow Bridge Rd, Stedman, NC

- Risk Information
- Financial Vulnerability
- FIS Reports
- Flood Risk Management Plan
- Engineering Models
- Map Export
- Data Export