

Hydraulics Unit Pre-Design Report (Pre-Scoping) for Structure #: 250044

Date: _____

County: Cumberland	Stream: Sandy Creek	Assigned to:
Road #: SR 2030	Road Name: Hollow Bridge Rd.	Prepared By: E. Akpuogu
Division: 6	Location: 0.1mi. N. JCT. SR 2028	Hydro Reviewer:
Latitude: 34.98529	Longitude: -78.64383	Project Type: Brg. Replacement

Existing Structure

Structure Type: RC Deck/ Timber Joists	Yr Built: 1969
Span Arrangement: 1@17.667, 1@17.833	OAL (ft): 36.0
Skew: 90	Abutment Type: Vertical -Timber
Number of Barrels: @ Span (ft): x Rise (ft):	
Bed to Crown (ft): 7.0	Clear Roadway (ft): 29.3
Water Depth (ft): 4.0	Superstructure Depth:
ADT: 720	Year ADT: 2010
Scour Code (item113):	Prior Survey Completed: No
Survey Date:	
Drainage Area: 14.0	Sq. Mi.
Drainage Area Source: USGS Stream Stats	Roadway Overtops at Q100: Yes
Discharge Method: USGS Regression Equations	USGS Region: 4- Coastal
Stream Gage Number(if applicable):	
Q10 (cfs): 890.0	Q25 (cfs): 1,215.0
Q50 (cfs): 1,505.0	Q100 (cfs): 1,825.0
QBFE (cfs):	
Structure in Flood Hazard Zone: Yes	Panel #: 1404
Panel Date: 01/05/2007	Type of FIS: LIMITED
Date of FIS: 01/05/2007	

Enviromental

Quad Map: AUTRYVILLE, NC	River Basin: Cape Fear	Buffer Rule: N/A
Primary Stream Classification		Other Stream Classification
☐ Class B	☒ Class C	☐ SA
☐ SB	☐ SC	☐ SWL
☐ WL	☐ WS I	☐ WS II
☐ WS III	☐ WS IV	☐ WS V
Supplemental Stream Classification		
☐ FWS	☐ HQW	☐ NSW
☐ ORW	☐ Sw	☐ Tr
☐ UWL	☐ w/in 0.5mi. of CA	☐ Designated Public Mountain Trout Waters
☐ Anadromous Fish	☐ Area of Environmental Concern	☐ CAMA County
☐ Federal Wild & Scenic Rivers	☐ HSB Required	☐ NC Natural & Scenic Rivers
☐ Primary Nursery Area	☐ Impaired [303d]	☐ TVA
☐ Designated Shellfish Harvesting Area		

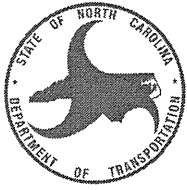
Up/Down Stream Features

Upstream Feature: Nothing	Structure Type:
Location:	Span Arrangement: OAL (ft):
Structure #:	Number of Barrels: @ Span (ft): x Rise (ft):
Route:	
Latitude:	Bed to Crown (ft):
Longitude:	Year Built:
Prior Survey Completed:	Survey Date:
Downstream Feature: Confluence w/ Stream(s)	Structure Type:
Location: Confluence with South River	Span Arrangement: OAL (ft):
Structure #:	Number of Barrels: @ Span (ft): x Rise (ft):
Route:	
Latitude:	Bed to Crown (ft):
Longitude:	Year Built:
Prior Survey Completed:	Survey Date:

Preliminary Structure Estimate [Office Estimate]

Structure Type:	Skew: 90
Dimensions/Spans: <input 109="" 56="" 881="" 895"="" data-label="Section-Header" type="text" value="Office estimated min. brg. length= 76'</input></td> </tr> </table> </div> <div data-bbox="/> Notes	

Notes



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: PRIORITY MAINT; TEMP REPAIRS; SKETCHES
UPDATED; BRIDGE RAIL IS STEEL (NOT CONCRETE);
NO WEARING SURFACE APPLIED; NO BEARINGS
PRESENT (TIMBER JOISTS)

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: CUMBERLAND STRUCTURE NUMBER: 250044 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR2030 MILE POST: _____

LOCATION: 0.1 MI.N.JCT.SR2028

FEATURE INTERSECTED: SANDY CREEK

LATITUDE: 34° 59' 7.06" 34.9853 LONGITUDE: 78° 38' 37.78" -78.6438
34.98529444 -78.64382778

SUPERSTRUCTURE: RC FLOOR ON TIMBER JOISTS, STD BMD-10MR

SUBSTRUCTURE: EBTS&BTS:TIMBER CAPS ON TIMBER PILES @ VAR.CTS.

1@17.75';1@17.67'

SPANS: 1@17.667';1@17.833'

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

PRESENT CONDITION: Fair

INSPECTION DATE: 02/24/2016

POSTED SV: 22

POSTED TTST: 33 31

OTHER SIGNS PRESENT: (4) DELINEATORS



Sign noticed issued for		Number Required
YES	WEIGHT LIMIT	2
NO	DELINEATORS	0
NO	NARROW BRIDGE	0
NO	ONE LANE BRIDGE	0
NO	LOW CLEARANCE	0

SOUTH APPROACH

INSPECTED BY ERIC A. PATTERSON	SIGNATURE 	ASSISTED BY KEITH PROCTOR
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BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 07/14/2016

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
CUMBERLAND	6	2	250044	36	FEET
ROUTE CARRIED :		FEATURE INTERSECTED :			
SR2030		SANDY CREEK			
LOCATED :		BRIDGE NAME :		CITY :	
0.1 MI.N.JCT.SR2028					
FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :	
08	NFA	NFA	720 2010	LT 233 RT 233	
BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :	
1969	BMU	5.4451		Unknown	
REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
			TAN	90	ON 2 UNDER 0
NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :
VC 0 FT	HC 0 FT		7 FT		4 FT
SUPERSTRUCTURE : RC FLOOR ON TIMBER JOISTS, STD BMD-10MR					
SUBSTRUCTURE : EBTS&BTS:TIMBER CAPS ON TIMBER PILES @ VAR.CTS.					
SPANS : 1@17.667';1@17.833'					
BEAMS OR GIRDERS : 23 LINES 6X12 TIMBER JOISTS @ VAR CTS					
FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :			
5 RC/NO AWS		29.33 FT			
CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :			
28 FT	28.75 FT	LT .375 FT RT .375 FT			
VERT.CL.OVER : 999.9 FT					
INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	DATE	
HS-1	HS-1	Int joist	SV 22 TTST 33	03/12/2014	
SYSTEM :			GREEN LINE ROUTE :		
Secondary S.R. Route			N		

UNDER ROUTES AND CLEARANCES

REMARKS :

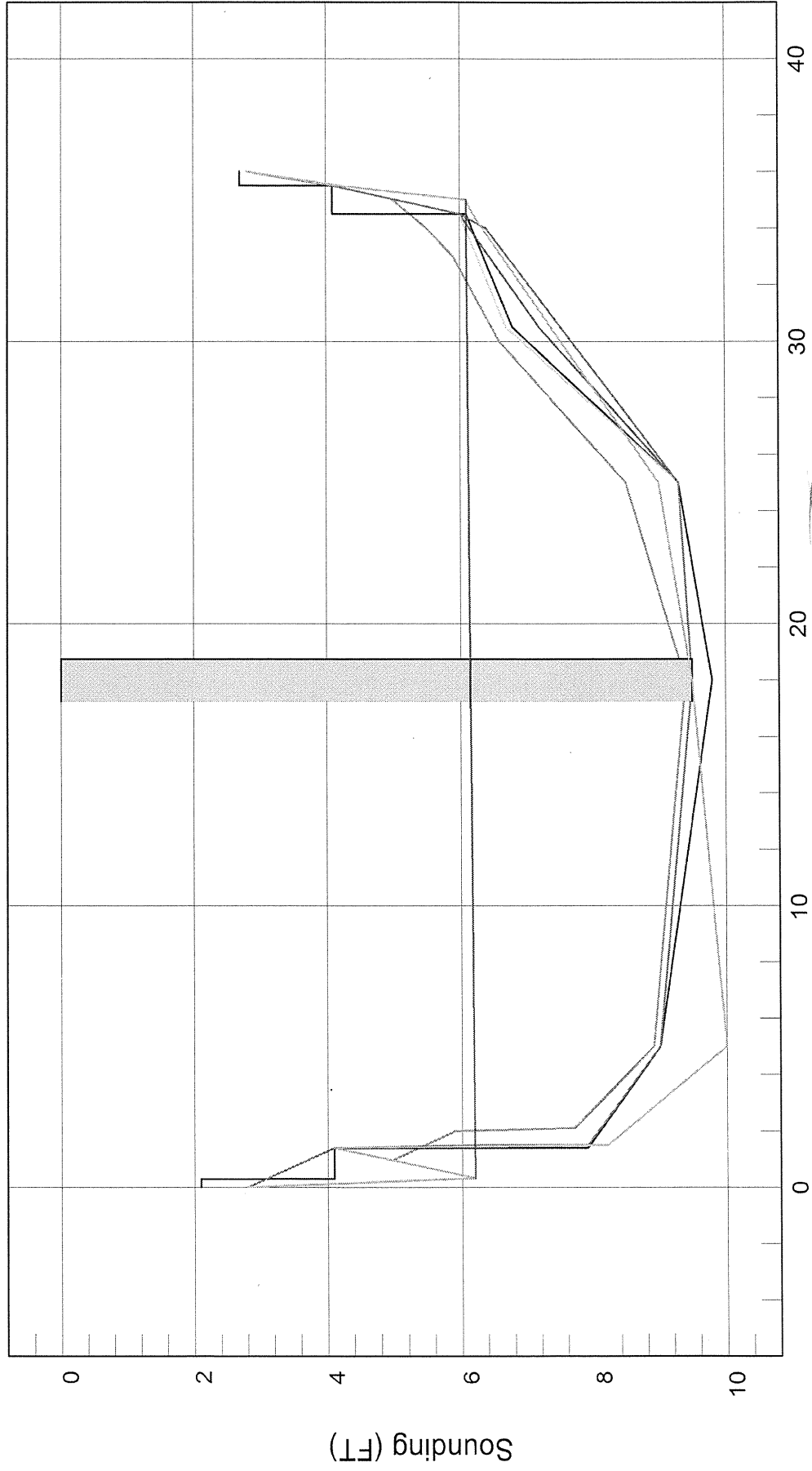
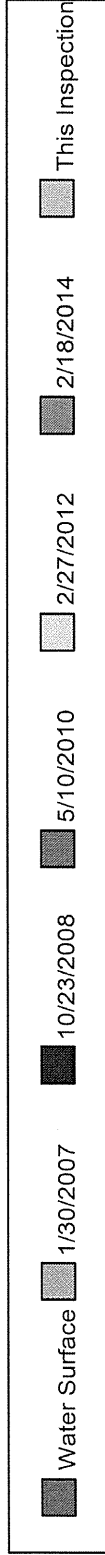
Bridge: 250044

County CUMBERLAND

Date:

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



$$7 \times 1.5 = 10.5 \times 2 = 21 + 20 + 35 = 76'$$

Distance (FT)

ENTER COMMENTS:

Some comments here

StreamStats Report

Region ID:

Workspace ID:

Clicked Point (Latitude, Longitude):

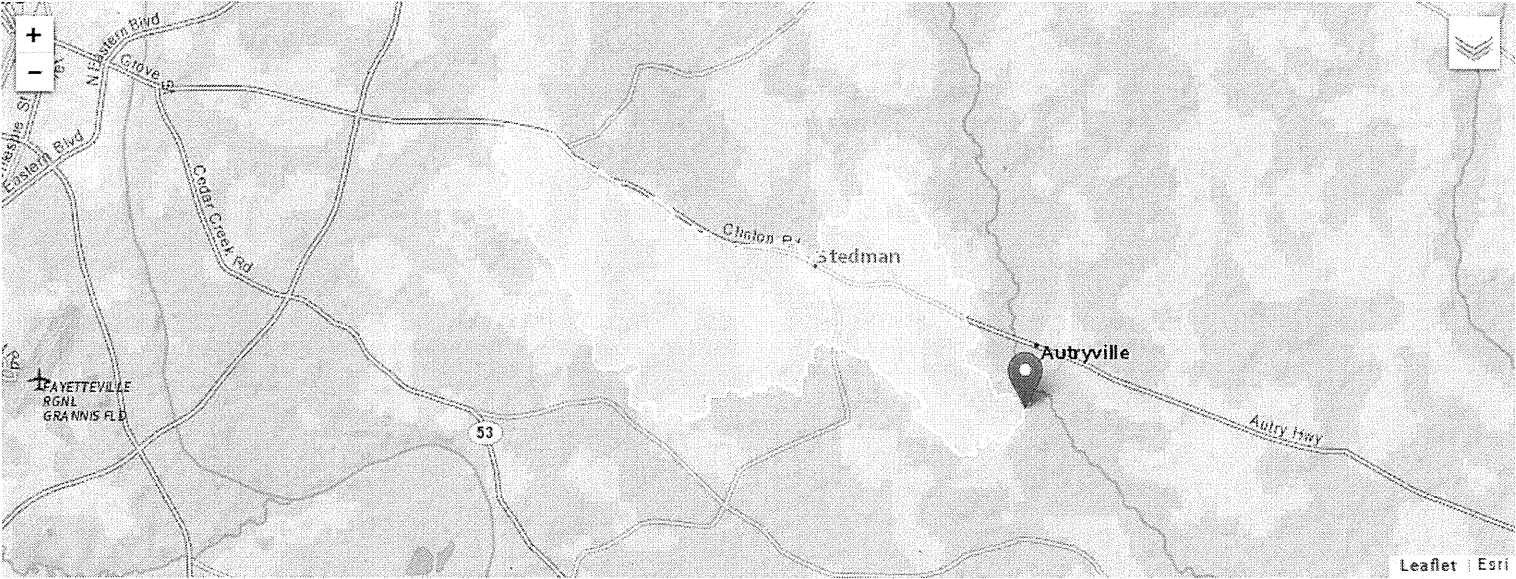
Time:

NC

NC20180612180342088000

34.98535, -78.64381

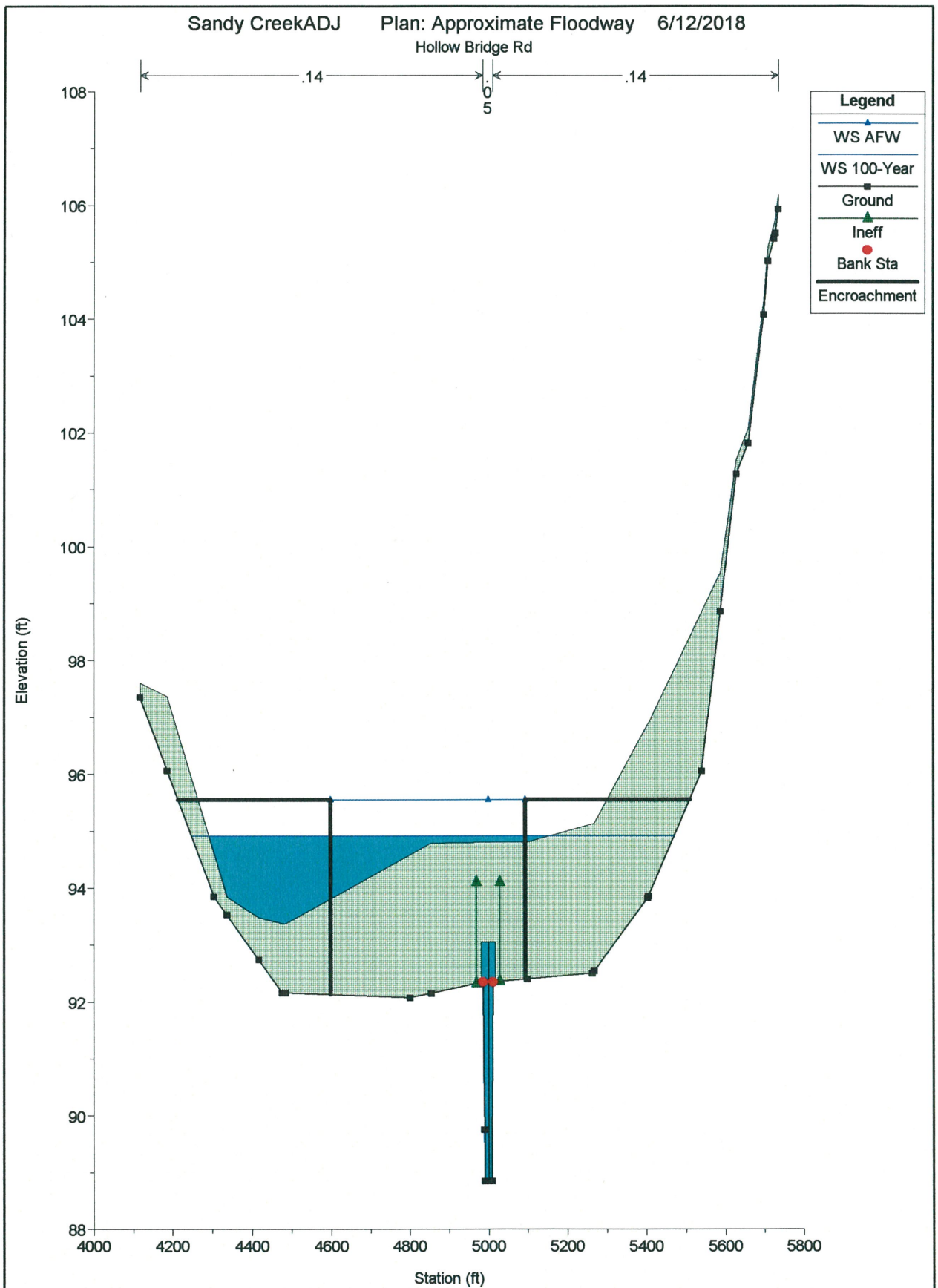
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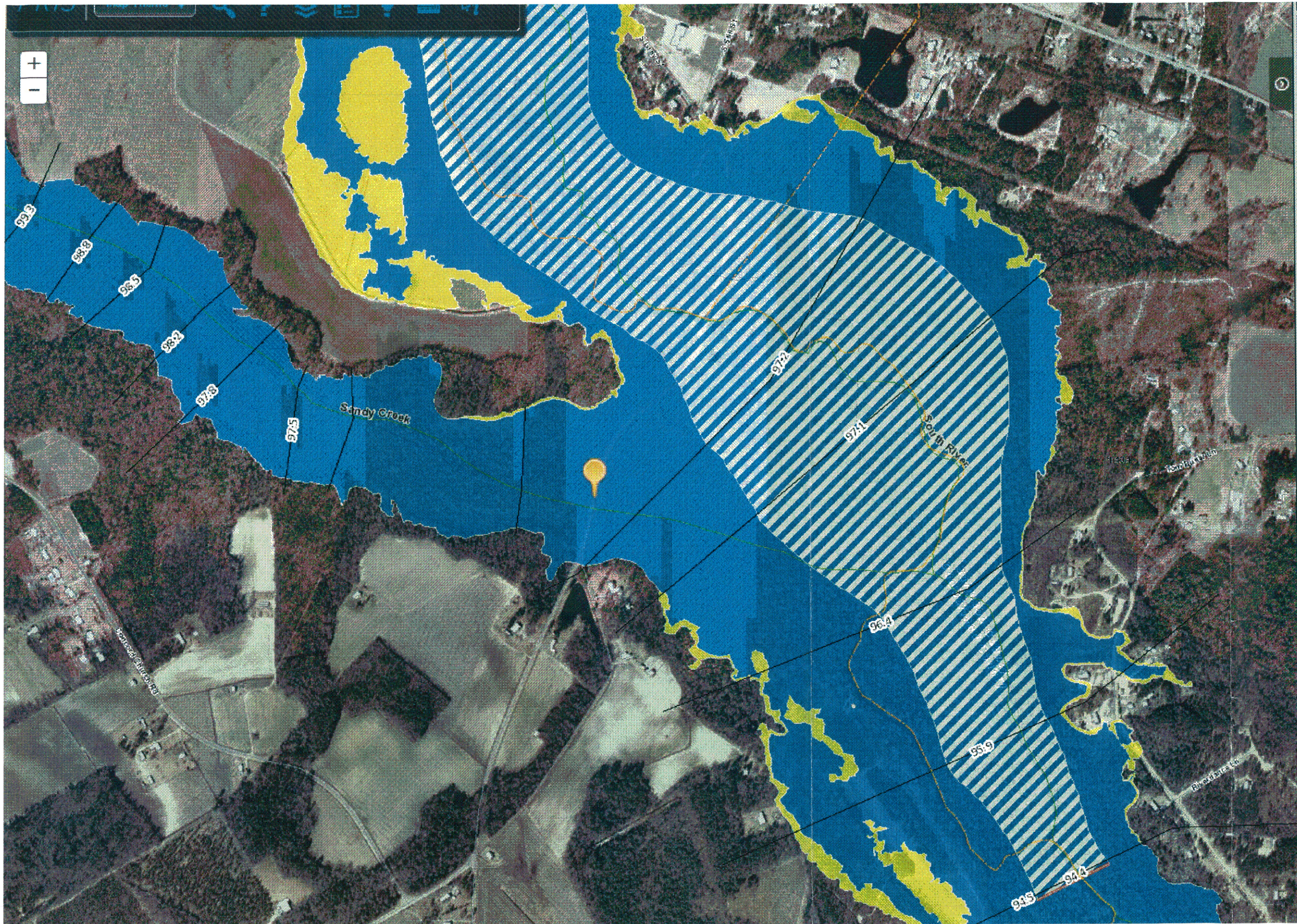


Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	14.2	square miles
I24H50Y	Maximum 24-hour precipitation that occurs on average once in 50 years	7.92	inches
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	1.44	percent

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.





Flood Information

Click the map to view information.

Map Location

Flood Zone: **AE**

Flood Source: Sandy Creek

Base Flood Elevation: 97.2 ft More

County: Cumberland

Political Area: Cumberland County

CID: 370076

Panel: 1404 Download

Map Number: 37201404001

Panel Effective Date: 1/5/2007

Latitude: 34.98529

Longitude: -78.64383

[Risk Information](#)

[Financial Vulnerability](#)

[Flood Insurance](#)

[FIS Reports](#)

[Map Export](#)

[Data Export](#)

