

PREDESIGN-PRESURVEY REPORT

Project#
TIP# B-5698
Let Date
WBS#

County RUBBSON

Bridge# 770172
Road# SR 116 BACK SWAMP
Stream BACK SWAMP Rd.

Type Of Request: POC Force Account TIP NCMA Put DES/Build
Date Dec 2015 Name JLL Assigned To
Checked By

Prior Survey Date NONE (attach copy of prior survey)

Study By Scour Section No code 2

Flood Zone Yes Detail Study REdefined PRELIMINARY MODEL AVAILABLE
Date 1-1905 Panel# 9360 preliminary
B.M. Info D.T. Road ± 3'

Quad Map MC DONALD Drainage Area 29 sq. miles From STILWATER ST
Q25 1900 Q50 2350 Q100 2800 Method USGS 2009-5158

EXISTING BRIDGE INFORMATION

Location 34,60083, -79.13226 SR 116 0.2 mi. N. US 74
Average Daily Traffic 670 IN 2013
Length 61' Bed- To Crown 13 Water Depth 4
Type Structure PPC CHANNEL
Type Spans 3@20'
Upstream Structure NOT comparable.
Location
Bed- To Crown
Downstream Structure 770013 125' RC Pier on PPC Girders 3040'
Location SR 1207
Bed- To Crown 16' Prior Survey 8.1398104
SCS Watershed

ENVIRONMENTAL

Trout Stream NO 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 WS II, Sw
DENR River Basin Info. LUMBER

OFFICE ESTIMATE 90' BRIDGE LENGTH.



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: TEMPORARY REPAIRS: ENCASED PILES

Structure Safety Report

Routine Element Inspection

COUNTY: ROBESON STRUCTURE NUMBER: 770172 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR1164 MILE POST:

LOCATION: 0.2MI.N.US74

FEATURE INTERSECTED: BACK SWAMP

LATITUDE: 34° 36' 2.98" LONGITUDE: 79° 7' 56.15"

SUPERSTRUCTURE: PPC CHANNELS (STD BMD-13)

SUBSTRUCTURE: E.BTS&INT.BTS:PPC CAPS/TIMBER PILES @ 5"8 CTS.

SPANS: 1@20"7;1@20"1;1@20"7

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

PRESENT CONDITION: Fair INSPECTION DATE: 12/17/2014

POSTED SV: 39 POSTED TTST: 43

OTHER SIGNS PRESENT: 4 DELINEATORS



LOOKING NORTH (BACK SWAMP ROAD)

Sign noticed issued for		Number Required
<u>NO</u>	WEIGHT LIMIT	<u>0</u>
<u>NO</u>	DELINEATORS	<u>0</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 R.D. HEATH	SIGNATURE <i>R.D. Heath</i>	ASSISTED BY R.L. KISNER
----------------------------	--------------------------------	----------------------------

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 03/31/2015

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :
ROBESON	6	1	770172	61 FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1164	BACK SWAMP

LOCATED :	BRIDGE NAME :	CITY :
0.2MI.N.US74		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	670 2013	LT 233 RT 233

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1967	SHC	8037		HS 15

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 13 FT		4 FT

SUPERSTRUCTURE : PPC CHANNELS (STD BMD-13)

SUBSTRUCTURE : E.BTS&INT.BTS:PPC CAPS/TIMBER PILES @ 5'8 CTS.

SPANS : 1@20'7;1@20'1;1@20'7

BEAMS OR GIRDERS : 10 PRESTRESSED CONCRETE CHANNEL SECTIONS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
PPCCH/2 AWS		25.417 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
23.917 FT	24.917 FT	LT .5 FT RT .5 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	LGW	DATE
HS-1	HS-1	Pile2	SV 41			03/30/2015

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

UNDER ROUTES AND CLEARANCES

REMARKS :

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 770172 County: ROBESON Date: By: RDH

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	FILLFACE/ BULKHEAD			
1	4.3	Top of Cap			
1.1	12.2	GROUND AT CAP	1.1	10.5	GROUND AT CAP
3	13	WSWE (EAST)			
10	15				
20.2	15.5	BENT 1	20.2	14	BENT 1
28	15.4				
39	13	WSWE			
39.2	12.6				
40.2	12.2	BENT 2	40.2	14.9	BENT 2
53	10.3				
58	7	GROUND AT CAP	58	7.6	GROUND AT CAP
59	4.3	Top of Cap			
60.5	2.8	FILLFACE/ BULKHEAD			

$$\begin{array}{r}
 15.5 \\
 4.3 \\
 \hline
 11.2 \times 1.5 \times 2 = 33.6 + 20 = 53.6 + \frac{39}{36} = 89.6 \text{ or } 90'
 \end{array}$$

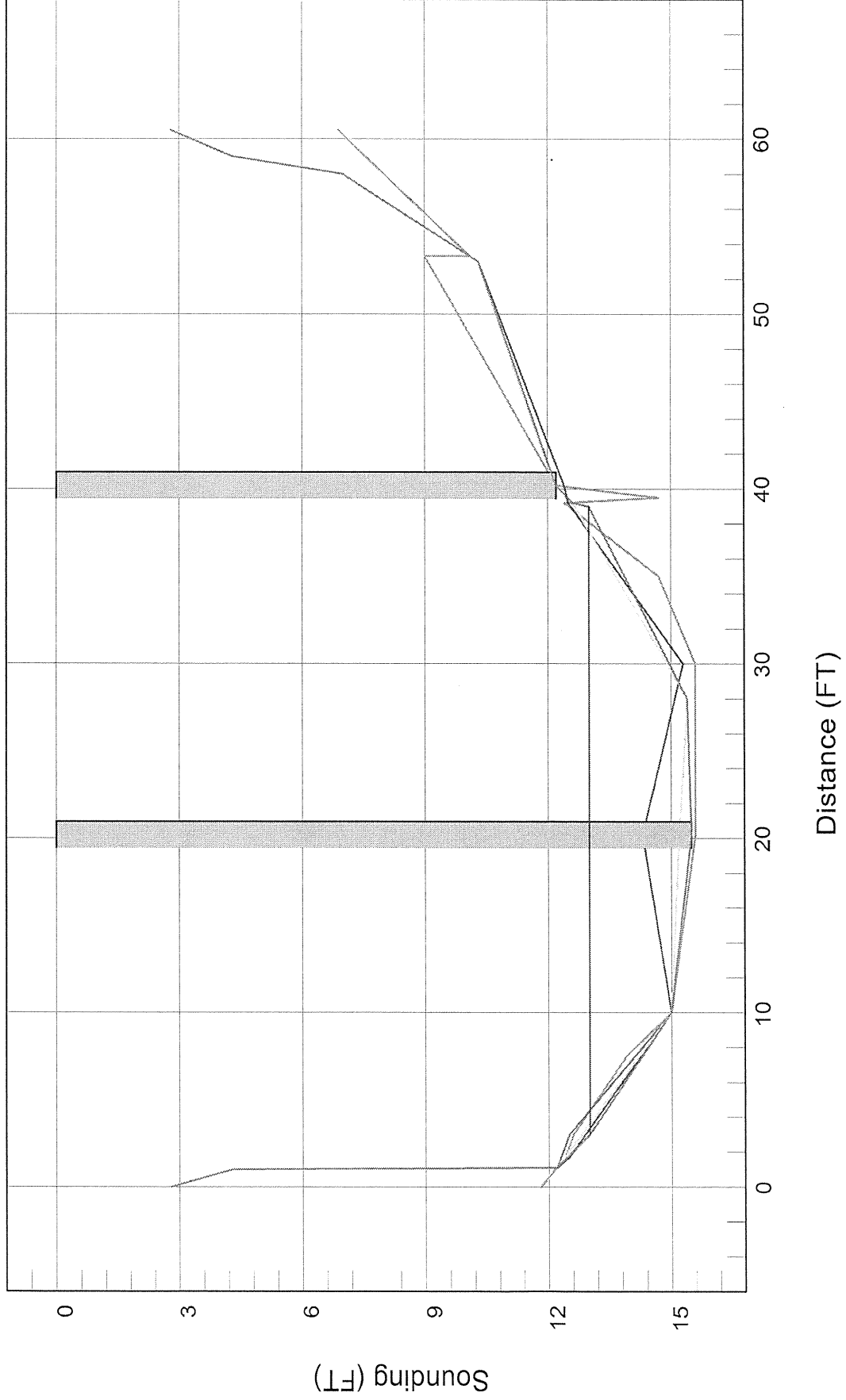
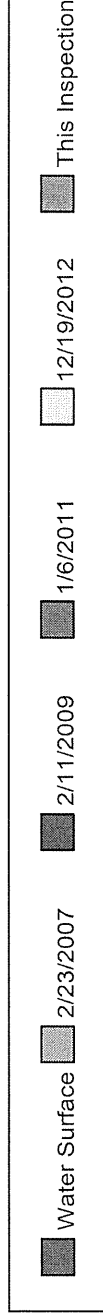
Bridge: 770172

County ROBESON

Date:

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



DOWNSTREAM STRUCTURE

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 06/17/2014

COUNTY : ROBESON DIVISION : 6 DISTRICT : 1 STRUCTURE NUMBER : 770013 LENGTH : 125 FEET

ROUTE CARRIED : SR1207 FEATURE INTERSECTED : BACK SWAMP CREEK

LOCATED : 0.3 MI S JCT US74 BRIDGE NAME : CITY : *LUMBERTON

FUNC. CLASS : 07 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 1100 2012 RAIL TYPE : LT 19 RT 19

BUILT : 1972 BY : DOH PROJ : 8.1398104 FED.AID PROJ : DESIGN LOAD : HS 20 + MOD

REHAB : BY : PROJ : ALIGNMENT : TAN. SKEW : 80 LANES : ON 2 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 16 FT WATER DEPTH : 6 FT

SUPERSTRUCTURE : RC FLOOR ON PPC GIRDERS

SUBSTRUCTURE : EBTS:RC CAP/PPC PILES;BTS:RC CAP/PPC PILES

SPANS : 1@41'7";1@41'3";1@41'9

BEAMS OR GIRDERS : 6 LINES 36" PPC GDRS.@ 8'6 CTS.

FLOOR : 8 RC/3/8"EPOXY AND STONE OVERLAY ENCROACHMENT : DECK (OUT TO OUT) : 46.083 FT

CLEAR ROADWAY : 44.083 FT BETWEEN RAILS : 44.083 FT SIDEWALK OR CURB : LT 0 FT RT 0 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-23 OPE.RTG. : HS-43 CONTR.MEMBER : PSG STD. POSTED : SV TTST DATE

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

UNDER ROUTES AND CLEARANCES

REMARKS :

00 FEET

1960000 FEET



Back Swamp

ZONE AE

34°36'0"N

79°7'30"W

79°7'0"W





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
Back Swamp								
041	4,060	230	883	2.7	130.3	130.3	130.4	0.1
121	12,050	650	1,976	1.2	133.5	133.5	134.5	1.0
142	14,200	1,523	5,123	0.5	134.2	134.2	135.2	1.0
Lumber River								
4030	403,000	2,379	16,855	0.7	128.9	128.9	129.6	0.7

StreamStats Version 3 Beta

Basin Characteristics Ungaged Site Report

Date: Wed Nov 25, 2015 3:13:51 PM GMT-5

NAD 1983 Latitude: 34.6008 (34 36 03)

NAD 1983 Longitude: -79.1321 (-79 07 56)

Label	Value	Units	Definition
DRNAREA	29.1	square miles	Area that drains to a point on a stream
PCTREG1	0	percent	Percentage of drainage area located in Region 1
PCTREG2	0	percent	Percentage of drainage area located in Region 2
PCTREG3	0	percent	Percentage of drainage area located in Region 3
PCTREG4	100	percent	Percentage of drainage area located in Region 4
LC11IMP	1.78	percent	Percentage of impervious area determined from NLCD 2011 impervious dataset

[Accessibility](#) [FOIA](#) [Privacy](#) [Policies and Notices](#)

U.S. Department of the Interior | U.S. Geological Survey

URL: http://streamstatsags.cr.usgs.gov/v3_beta/BCreport.htm

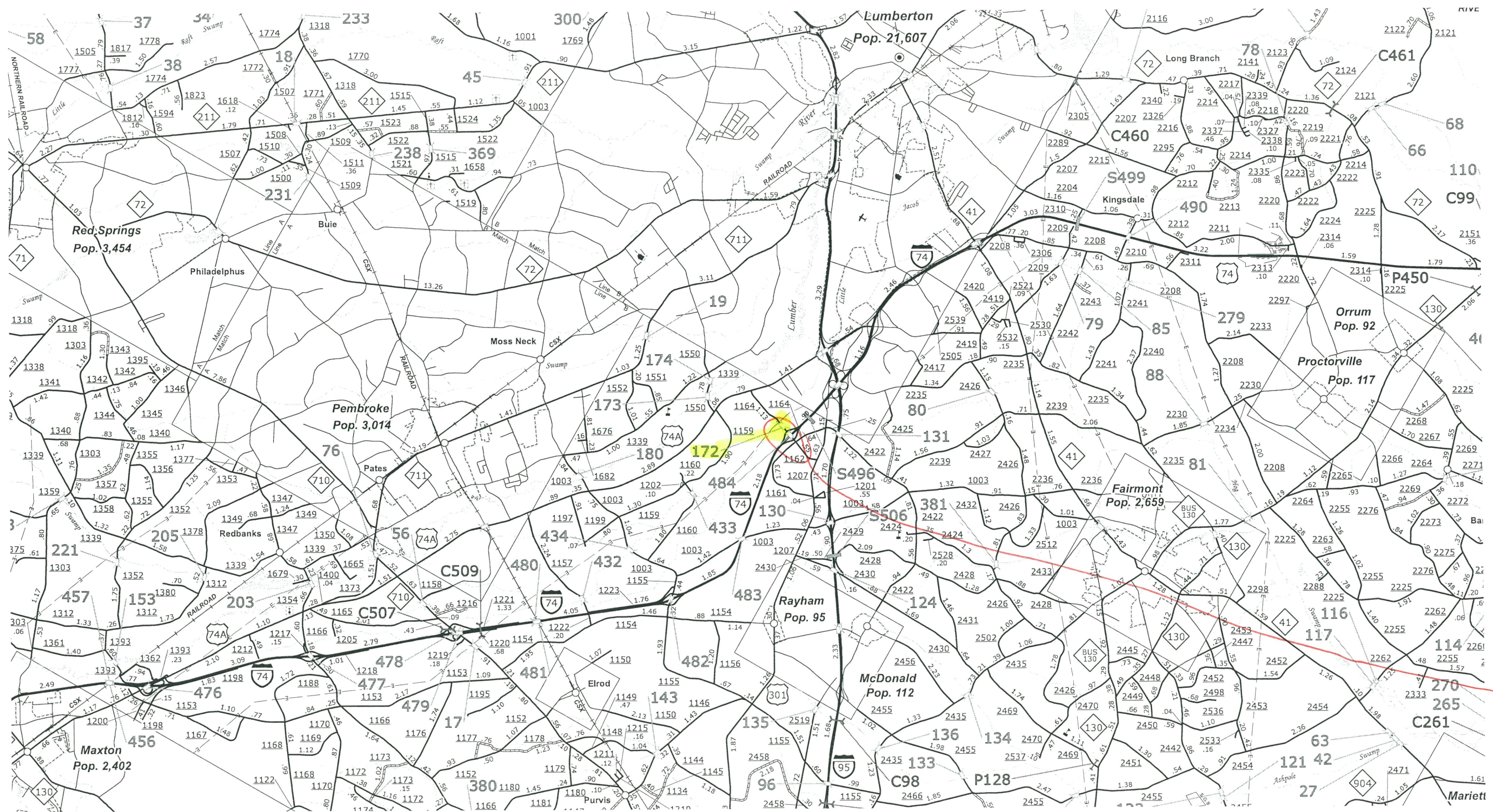
Page Contact Information: [StreamStats Help](#)

[Streamstats Status](#)

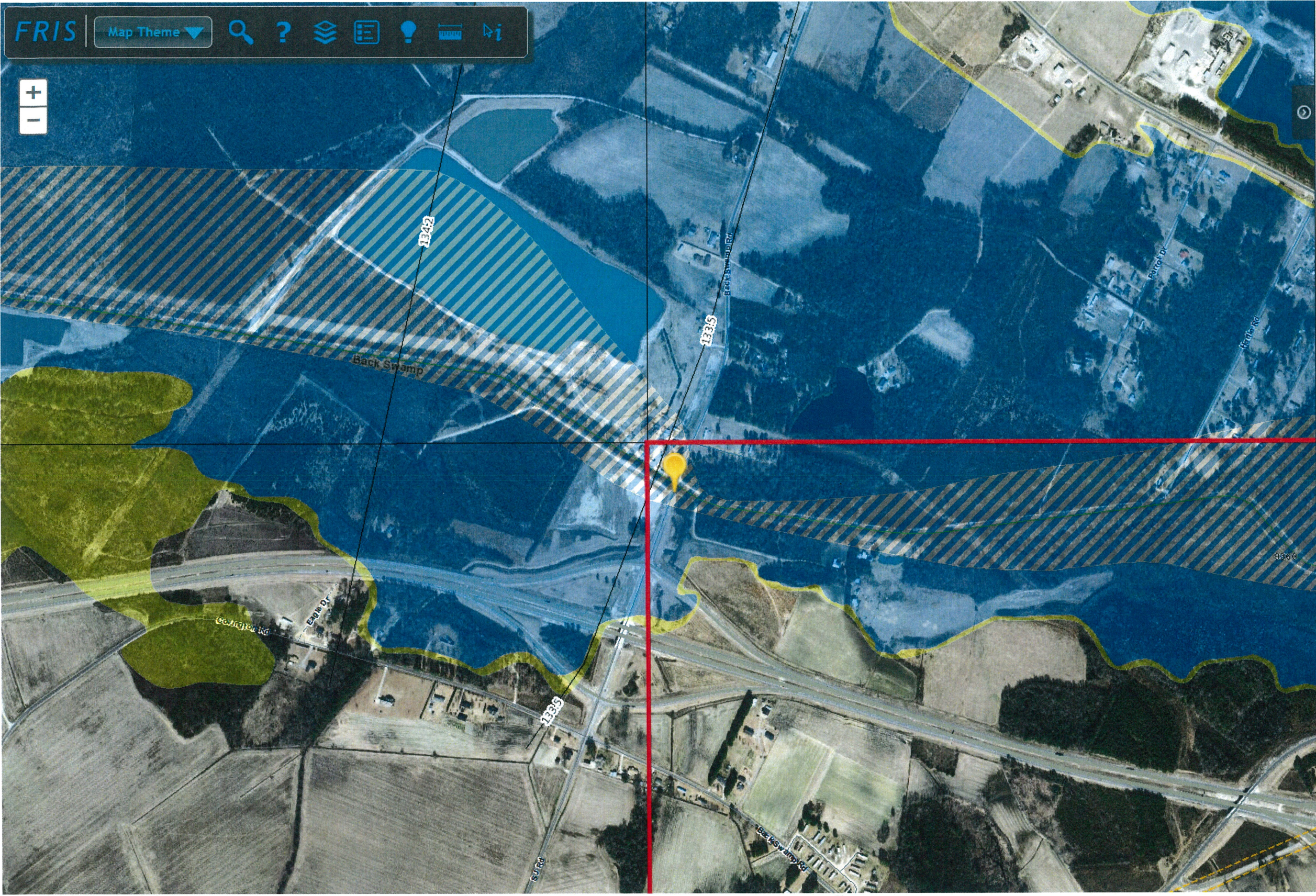
[News](#)

Page Last Modified: 08/24/2015 15:42:48 (Web2)





Roberson 172



Who Am I : General Public

Effective

Flood Information

Click the map to view information.

Map Location

Flood Zone: AE (Floodway)

Flood Source: Back Swamp

Base Flood Elevation: 133.4 ft

County: Robeson

Political Area: Robeson County

CID: 370202

Panel: 9360 Download

Map Number: 3710936000J

Panel Effective Date: 1/19/2005

Latitude: 34.60083

Longitude: -79.13226

Address locations are approximate.
927 Back Swamp Rd, Lumberton, NC

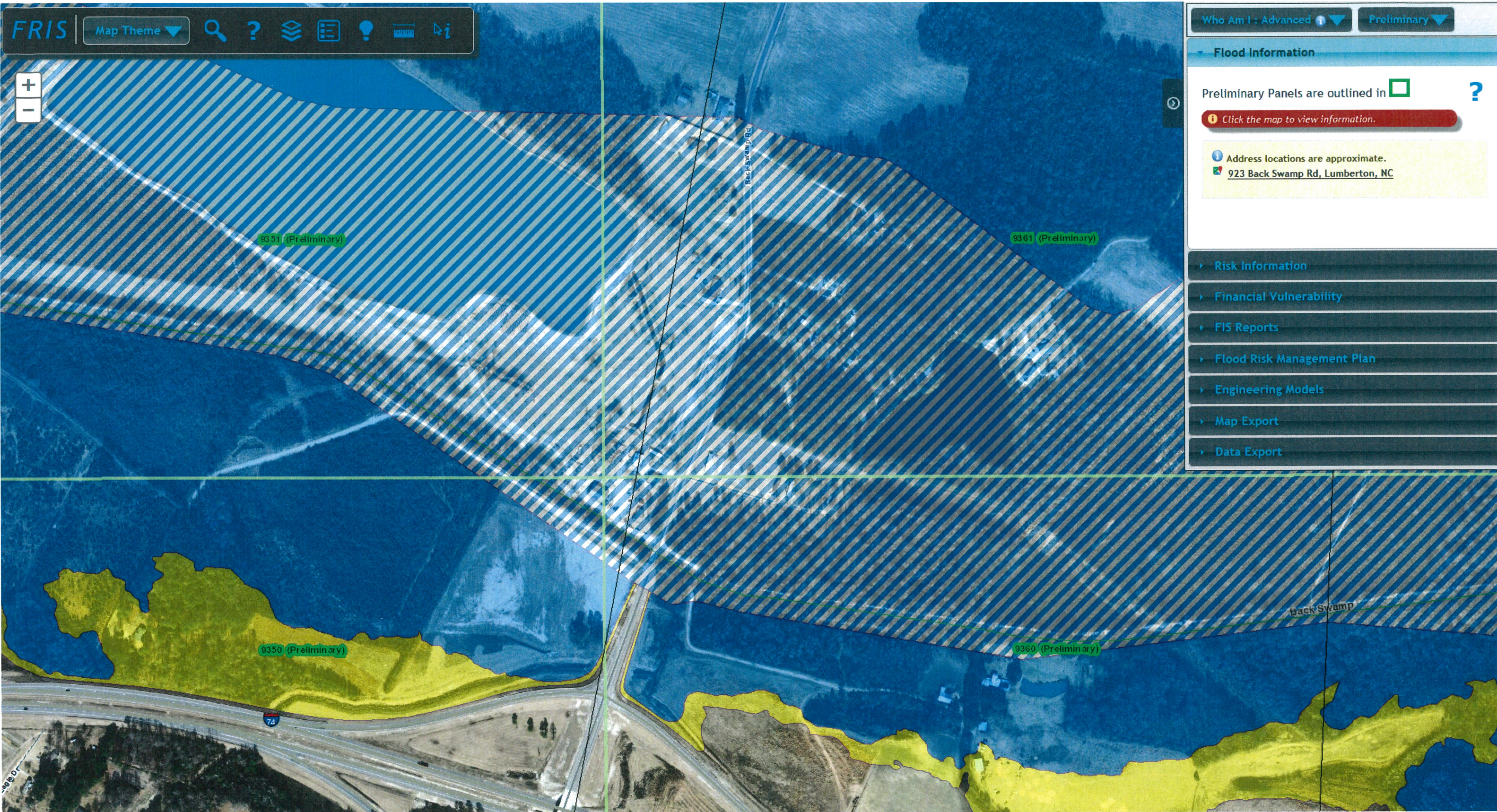
Risk Information

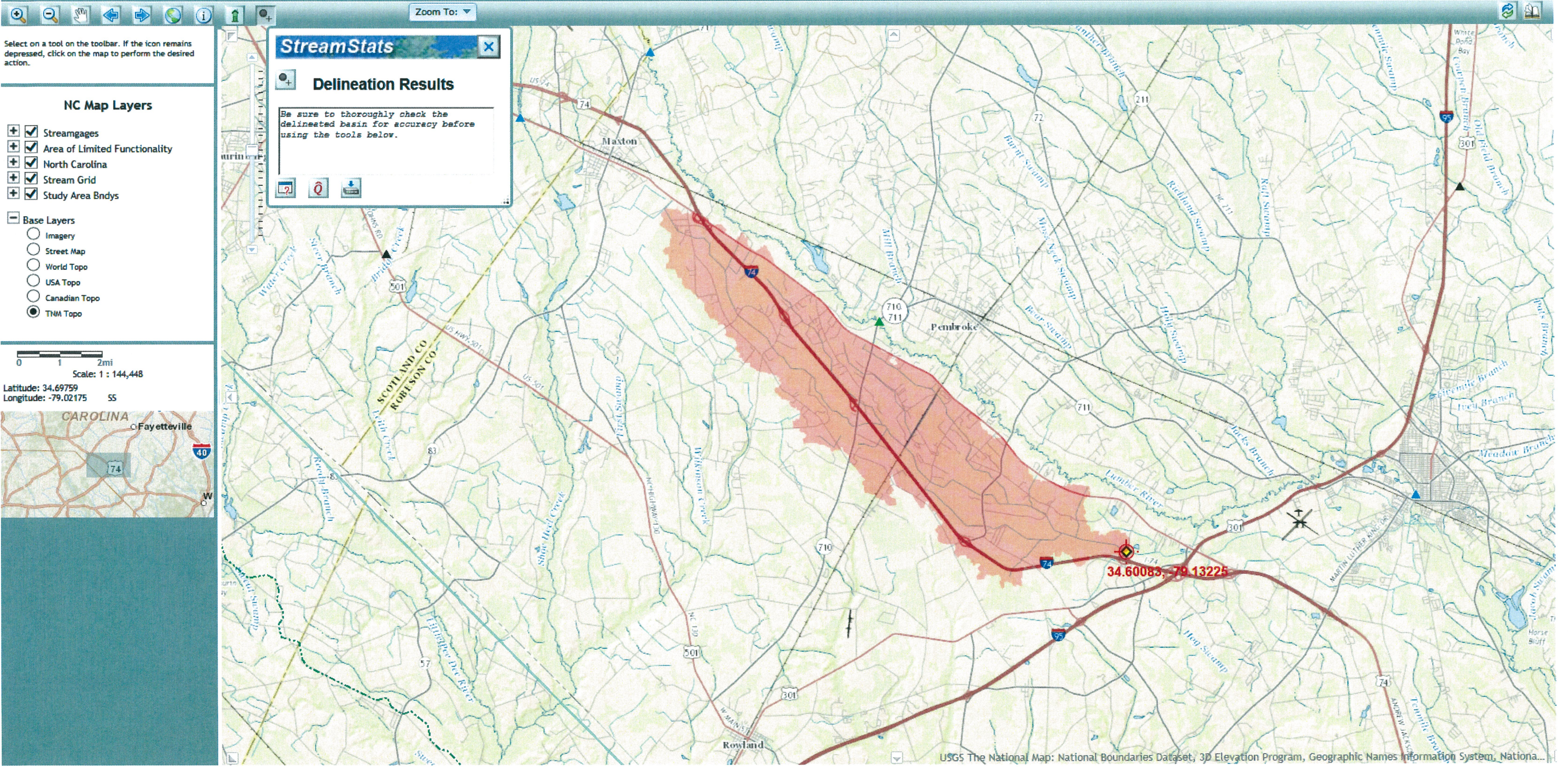
Financial Vulnerability

FIS Reports

Map Export

Data Export





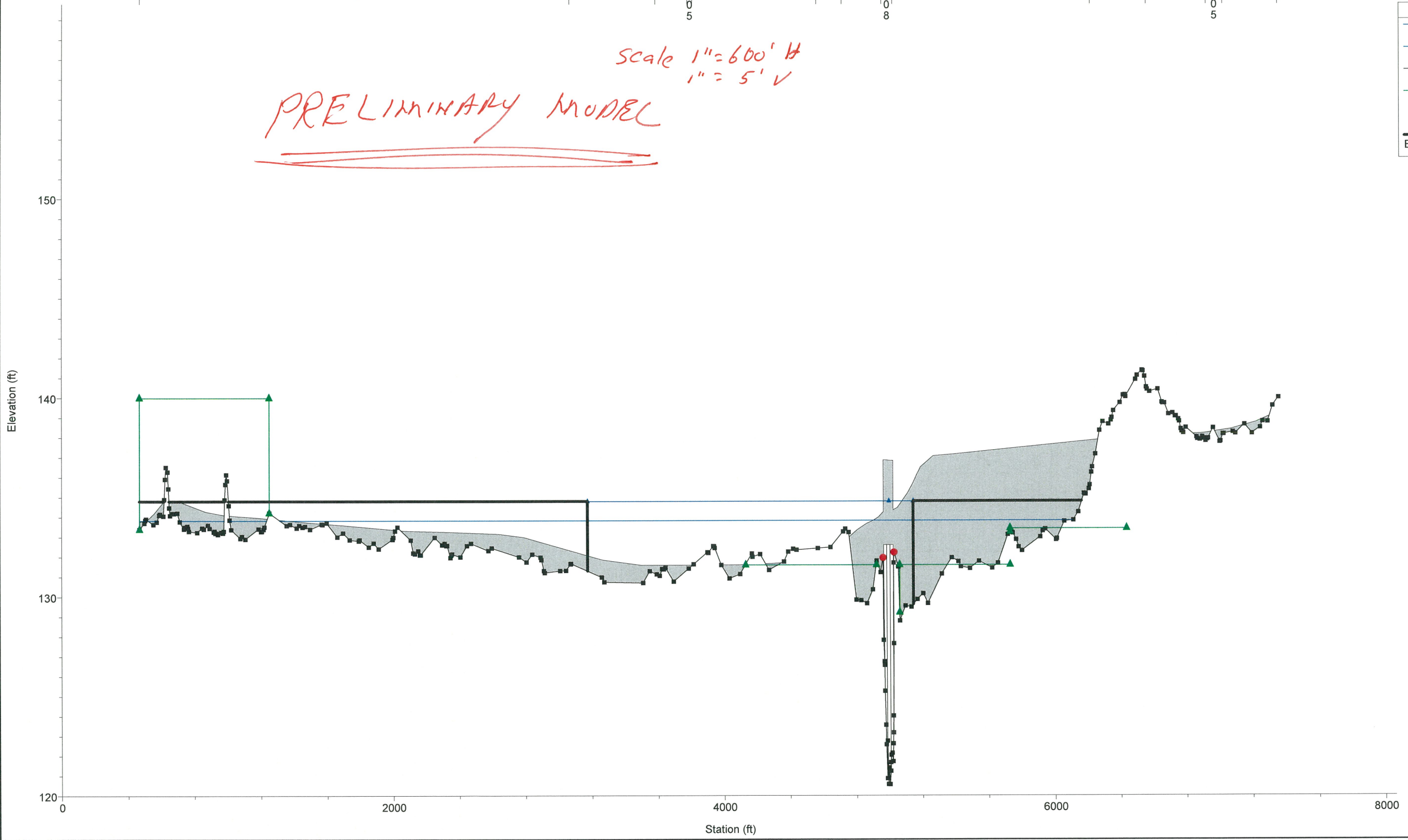
Back Swamp Detailed Study Plan: Floodway Run 5/5/2011
Back Swamp Rd (SR 1164), R_BAS_04



Scale 1" = 600' H
1" = 5' V

PRELIMINARY MODEL

Legend	
WS 1%FW	▲
WS 1%	—
Ground	■
Ineff	▲
Bank Sta	●
Encroachment	—



1 in Horiz. = 600 ft 1 in Vert. = 5 ft