

Project Number 45620.1.1
TIP Number B-5665
Let Date _____

PREDESIGN-PRESURVEY REPORT

County Halifax

Bridge Number 410138
Road Number SR 1309 (Spruill's brg)
Stream Little fishing creek Road

Type Of Request: POC Force Account TIP
Date 1/2/16 Name E AKpuogu Assigned To _____
Checked By _____

Prior Survey Date NO (attach copy of prior survey)

Panel : 3904

Study By Scour Section _____

Flood Zone AE Detail Study Limited Date 7/3/2007 (attach copy of flood map)

B.M. Info _____

Quad Map Hollister Drainage Area 47.6 From FIS

Q25 2550 Q50 3140 Q100 3770 Method USGS - Rural Regression eqn
(USGS SI Report 2009-5158)

EXISTING BRIDGE INFORMATION

Location 0.6 mi W SR 1308

Average Daily Traffic 20 (2000)

Length 37 Bed- To Crown 13 Water Depth 3

Type Structure Tim Floor on I-beams, RC Abuts.

Type Spans 1 @ 36'10"

Upstream Structure None

Location _____

Bed- To Crown _____ Prior Survey _____

Downstream Structure (SR 1315) Brg 143

Location 0.2 mi N Jct SR 1316

Bed- To Crown 18 Prior Survey 9-55 ✓

SCS Watershed _____

ENVIRONMENTAL

Trout Stream No Anadromous Fish No Primary Nursery Area No

High Quality Waters No Nutrient Sensitive Waters Yes

Near Water Supply Intake No CAMA County No

Stream Classification C, NSW

DENR River Basin Info. Tar pam

office estimated min brg length = 85'



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION SIGN NOTICE
PRIORITY MAINTENANCE
SCOUR CRITICAL

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection - Contract

COUNTY HALIFAX BRIDGE NUMBER 410138 INSPECTION CYCLE 0 YRS
ROUTE SR1309 ACROSS LITTLE FISHING CREEK M.P. 0
0.6 MILES WEST OF JUNCTION WITH SR 1308
LOCATION 0.6 MI.W.SR1308

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE REINF.CONC.ABUTS.

1 @ 36'-10"

SPANS 1@36'8"

LONGITUDE 77° 55' 6.69" 77° 55' 6.80" LATITUDE 36° 20' 9.43" 36° 20' 9.40"

INSPECTION DATE 09/10/2013 PRESENT CONDITION FAIR

PRESENT POSTING Not Posted PROPOSED POSTING _____

OTHER SIGNS PRESENT NONE



LOOKING EAST

Fracture Critical	<u>No</u>
Temporary Shoring	<u>No</u>
Scour Critical	<u>Yes</u>
Scour POA	<u>Yes</u>

SIGN NOTICE ISSUED FOR		NUMBERED REQUIRED
<u>Yes</u>	WEIGHT LIMIT	<u>2</u>
<u>Yes</u>	DELINEATORS	<u>4</u>
<u>No</u>	NARROW BRIDGE	_____
<u>Yes</u>	ONE LANE BRIDGE	<u>2</u>
<u>No</u>	LOW CLEARANCE	_____

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 09/25/2013

COUNTY : DIVISION : DISTRICT: STRUCTURE NUMBER : LENGTH :
HALIFAX 4 1 410138 37 FEET

ROUTE CARRIED : SR1309 FEATURE INTERSECTED : LITTLE FISHING CREEK

LOCATED : 0.6 MI.W.SR1308 BRIDGE NAME : CITY :

FUNC. CLASS : SYST.ON : SYST.UNDER : ADT & YR : RAIL TYPE :
09 NFA NFA 20 2000 LT 227 RT 227

BUILT : BY : PROJ : FED.AID PROJ : DESIGN LOAD :
1955 BMU Unknown

REHAB : BY : PROJ : ALIGNMENT : SKEW : LANES :
TAN. 90 ON 1 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 13 FT WATER DEPTH : 3 FT

SUPERSTRUCTURE : TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE : REINF.CONC.ABUTS.

SPANS : 1@36'10'

BEAMS OR GIRDERS : 6 LINES W12X25 I-BEAMS @ VAR. CENTERS

FLOOR : 4X8TIM./NO AWS ENCROACHMENT : DECK (OUT TO OUT) : 13.5 FT

CLEAR ROADWAY : 12.5 FT BETWEEN RAILS : 13.33 FT SIDEWALK OR CURB : LT .415 FT RT .415 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : OPE.RTG. : CONTR.MEMBER : POSTED : TTST 12 DATE 08/23/2006
HS-4 HS-7 Ext Bm (sect.loss) SV 9

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

UNDER ROUTES AND CLEARANCES

REMARKS :

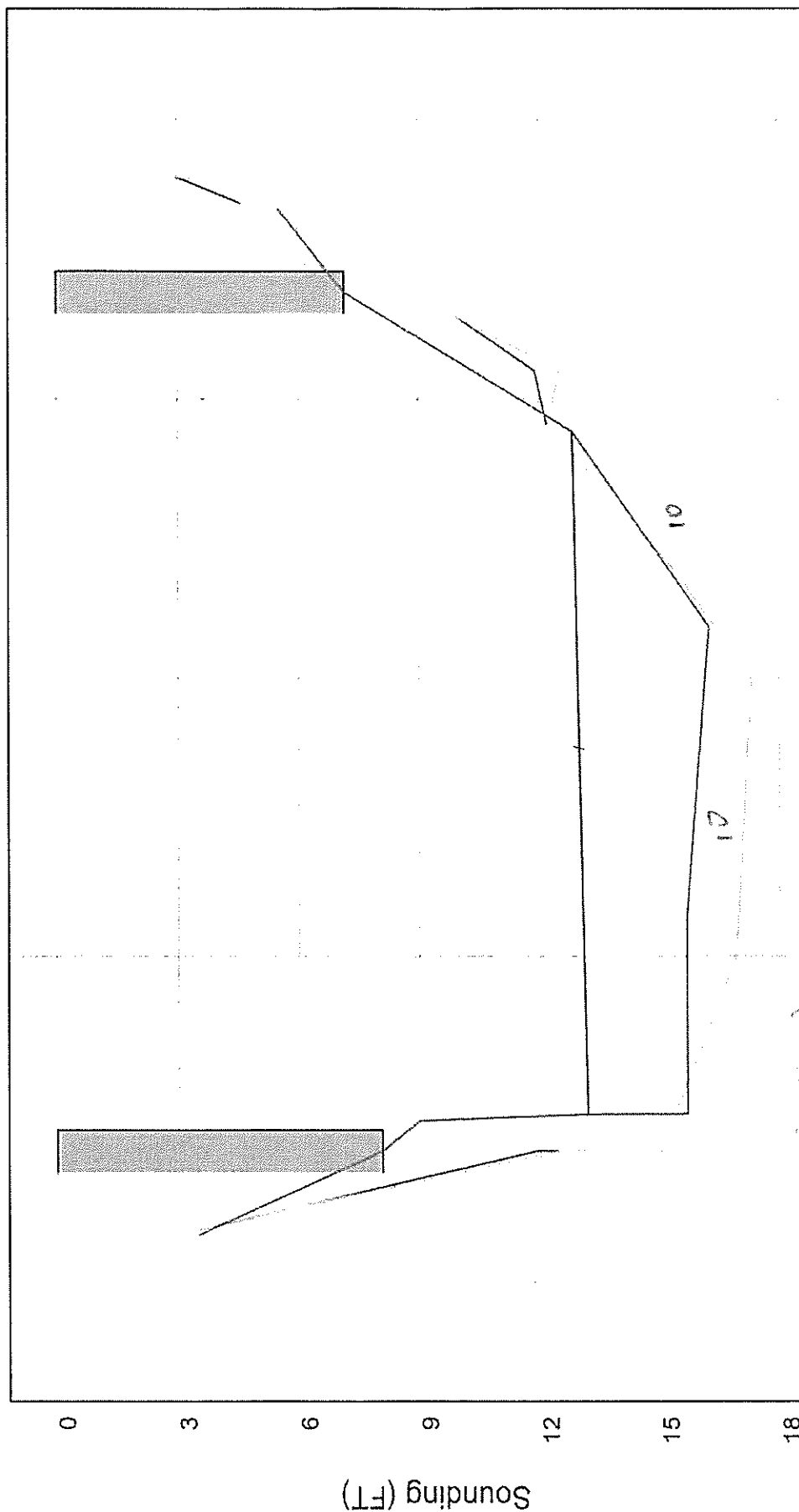
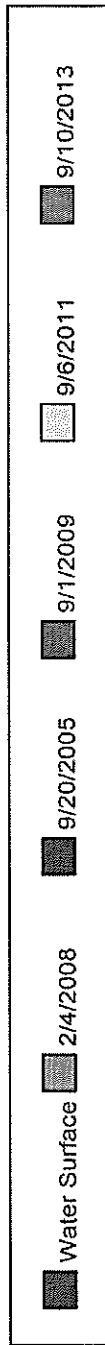
Bridge: 410138

County HALIFAX

Date: 09/10/2013

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



$$13 \times 1.5 = 19.5 \times 2 = 39 + 20 + 26 = 85$$

Distance (FT)

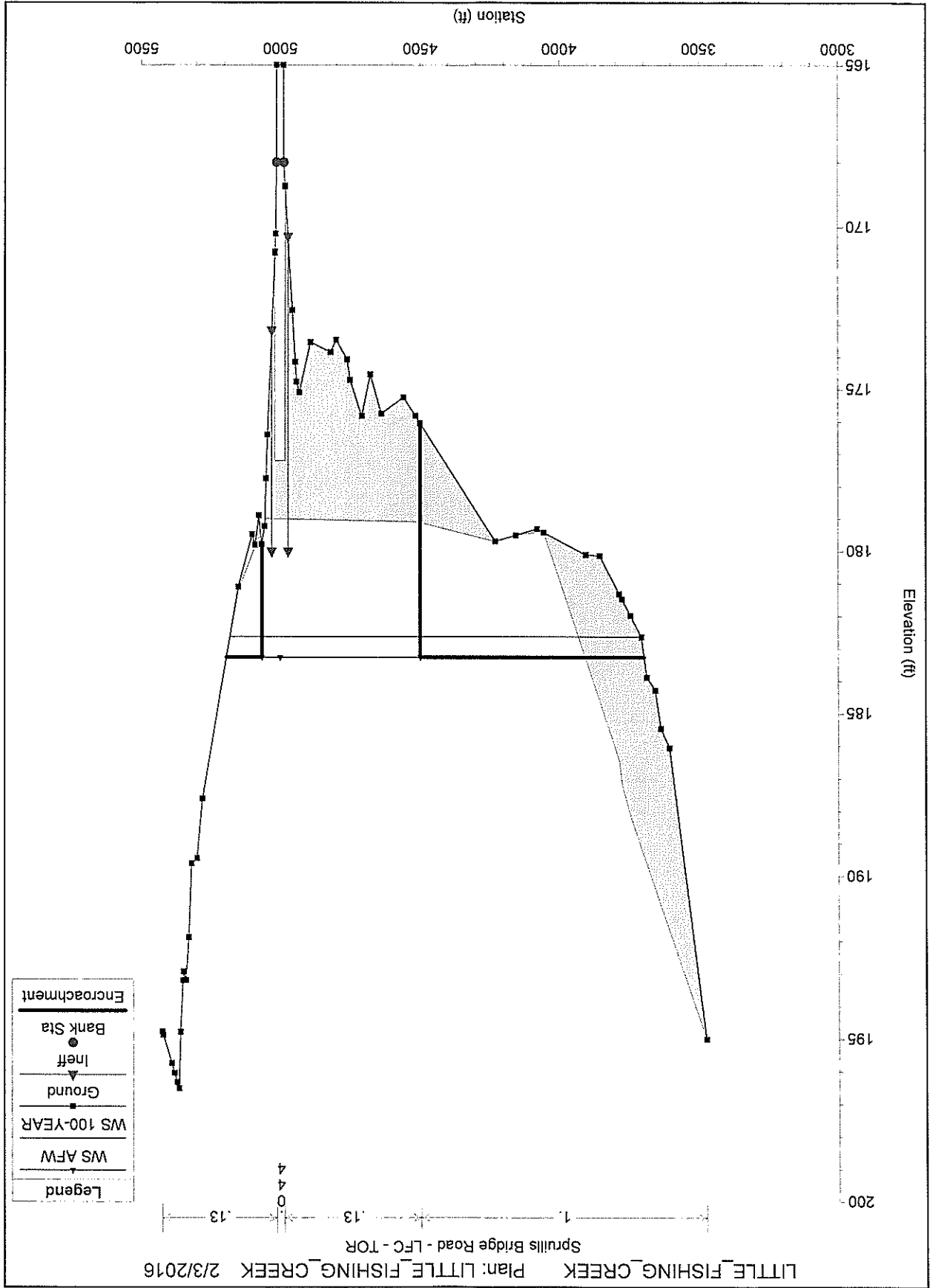
Section 5.0 – Engineering Methods

Table 10—Summary of Discharges

Flooding Source	Location	Drainage Area (square miles)	Discharges (cfs)			
			10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Keehukee Swamp Tributary 2	Approximately 1,320 feet upstream of NC Highway 903	5.18	*	*	1,187	*
	Approximately 0.6 mile upstream of NC Highway 903	4.68	*	*	1,121	*
Little Fishing Creek	At mouth	185	6,570	12,500	15,980	27,300
	USGS gage at SR 1338	175	6,360	12,110	15,490	26,450
	At SR 1002	163	6,100	11,620	14,870	25,400
	Approximately 2.4 miles downstream of the confluence with Little Fishing Creek Tributary 1	119.28	*	*	13,900	*
	Approximately 0.5 mile downstream of the confluence with Porter Creek	108.12	*	*	13,400	*
	Approximately 1.5 miles downstream of the confluence with Little Fishing Creek Tributary 4	102.40	*	*	13,100	*
	Approximately 0.8 mile downstream of the confluence with Little Fishing Creek Tributary 6	90.33	*	*	12,400	*
	Approximately 1.3 miles downstream of the confluence with Reedy Creek	87.51	*	*	12,200	*
	Approximately 200 feet upstream of the confluence with Reedy Creek	51.29	*	*	8,730	*
	Approximately 0.2 mile upstream of the confluence with Reedy Creek	47.62	*	*	8,330	*

HEC-RAS Plan, Base Plan River: Main Stem Reach: Reach - 1

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach - 1	57501.8	8330.00	165.93	184.17		184.54	0.000645	5.89	3994.26	685.65	0.24
Reach - 1	57501.8	8330.00	165.93	184.76		185.18	0.000661	5.88	2754.55	256.33	0.24
Reach - 1	57002.4	8330.00	165.81	184.06		184.23	0.000397	4.32	5565.13	893.27	0.18
Reach - 1	57002.4	8330.00	165.81	184.65		184.86	0.000406	4.46	3960.51	317.23	0.18
Reach - 1	56502.3	8330.00	165.53	183.77		184.01	0.000470	4.62	4881.62	878.16	0.20
Reach - 1	56502.3	8330.00	165.53	184.35		184.63	0.000483	4.79	3295.90	311.55	0.20
Reach - 1	56002.9	8330.00	165.50	183.61		183.79	0.000365	3.99	5914.28	1130.51	0.17
Reach - 1	56002.9	8330.00	165.50	184.17		184.40	0.000399	4.27	3849.84	465.16	0.18
Reach - 1	54683.1	8330.00	165.01	183.01	180.00	183.15	0.000637	5.34	8199.42	1486.97	0.22
Reach - 1	54683.1	8330.00	165.01	183.60	180.00	183.74	0.000580	5.21	5372.52	565.00	0.21
Reach - 1	54664.1	Bridge									
Reach - 1	54645.1	8330.00	164.75	182.54	177.89	182.70	0.000687	5.50	7891.88	1479.49	0.23
Reach - 1	54645.1	8330.00	164.75	183.24	177.89	183.39	0.000597	5.26	5319.14	565.00	0.22
Reach - 1	53500.0	8330.00	164.75	182.20		182.26	0.000199	2.97	10722.19	1199.63	0.13
Reach - 1	53500.0	8330.00	164.75	182.92		182.99	0.000198	3.05	7496.72	762.18	0.13
Reach - 1	53001.7	8330.00	164.72	182.06		182.15	0.000271	3.33	6976.62	815.39	0.15
Reach - 1	53001.7	8330.00	164.72	182.77		182.87	0.000270	3.42	5710.61	487.36	0.15
Reach - 1	52501.8	8330.00	164.55	181.86		181.98	0.000387	3.86	5845.15	680.80	0.17
Reach - 1	52501.8	8330.00	164.55	182.57		182.70	0.000386	3.96	5127.59	468.89	0.17
Reach - 1	52001.6	8330.00	164.53	181.64		181.78	0.000383	4.20	5872.72	740.90	0.18
Reach - 1	52001.6	8330.00	164.53	182.35		182.51	0.000383	4.31	4856.36	436.32	0.18
Reach - 1	51502.0	8330.00	164.52	181.42		181.58	0.000422	4.37	5468.87	672.34	0.19
Reach - 1	51502.0	8330.00	164.52	182.13		182.31	0.000422	4.49	4582.24	413.87	0.19
Reach - 1	51112.1	8330.00	164.51	181.30		181.42	0.000336	3.86	6459.96	733.25	0.17
Reach - 1	51112.1	8330.00	164.51	182.01		182.15	0.000335	3.97	5222.63	467.86	0.17
Reach - 1	48000.0	8730.00	162.30	180.71		180.75	0.000144	2.71	18250.04	1958.76	0.11
Reach - 1	48000.0	8730.00	162.30	181.43		181.47	0.000143	2.77	12397.40	1087.67	0.11



BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 01/28/2016

COUNTY : DIVISION : DISTRICT: STRUCTURE NUMBER : LENGTH :
HALIFAX 4 1 410143 170 FEET

ROUTE CARRIED : SR1315 FEATURE INTERSECTED : LITTLE FISHING CREEK

LOCATED : 0.2 MI. N. JCT. SR1316 BRIDGE NAME : CITY :

FUNC. CLASS : SYST.ON : SYST.UNDER : ADT & YR : RAIL TYPE :
09 NFA NFA 660 2012 LT 71 RT 71

BUILT : BY : PROJ : FED.AID PROJ : DESIGN LOAD :
1965 SHC 8.21467 H 15

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

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 18 FT WATER DEPTH : 1 FT

SUPERSTRUCTURE : RC DECK ON I-BEAMS

SUBSTRUCTURE : END BTS & INT.BT#3:RC CAPS ON PPC PILES, INT.BTS#1&2:RC POST & BEAM, SPREAD FOOTINGS

SPANS : 4@42'6" SIMPLE

BEAMS OR GIRDERS : 4 LINES OF W30X99 I-BEAMS @ 7'0" CENTERS

FLOOR : 8" RC, 1.5" AWS ENCROACHMENT : DECK (OUT TO OUT) :
28.417 FT

CLEAR ROADWAY : BETWEEN RAILS : SIDEWALK OR CURB :
24.083 FT 26.25 FT LT 1.0835 FT RT 1.0835 FT

VERT.CL.OVER :
999.9 FT

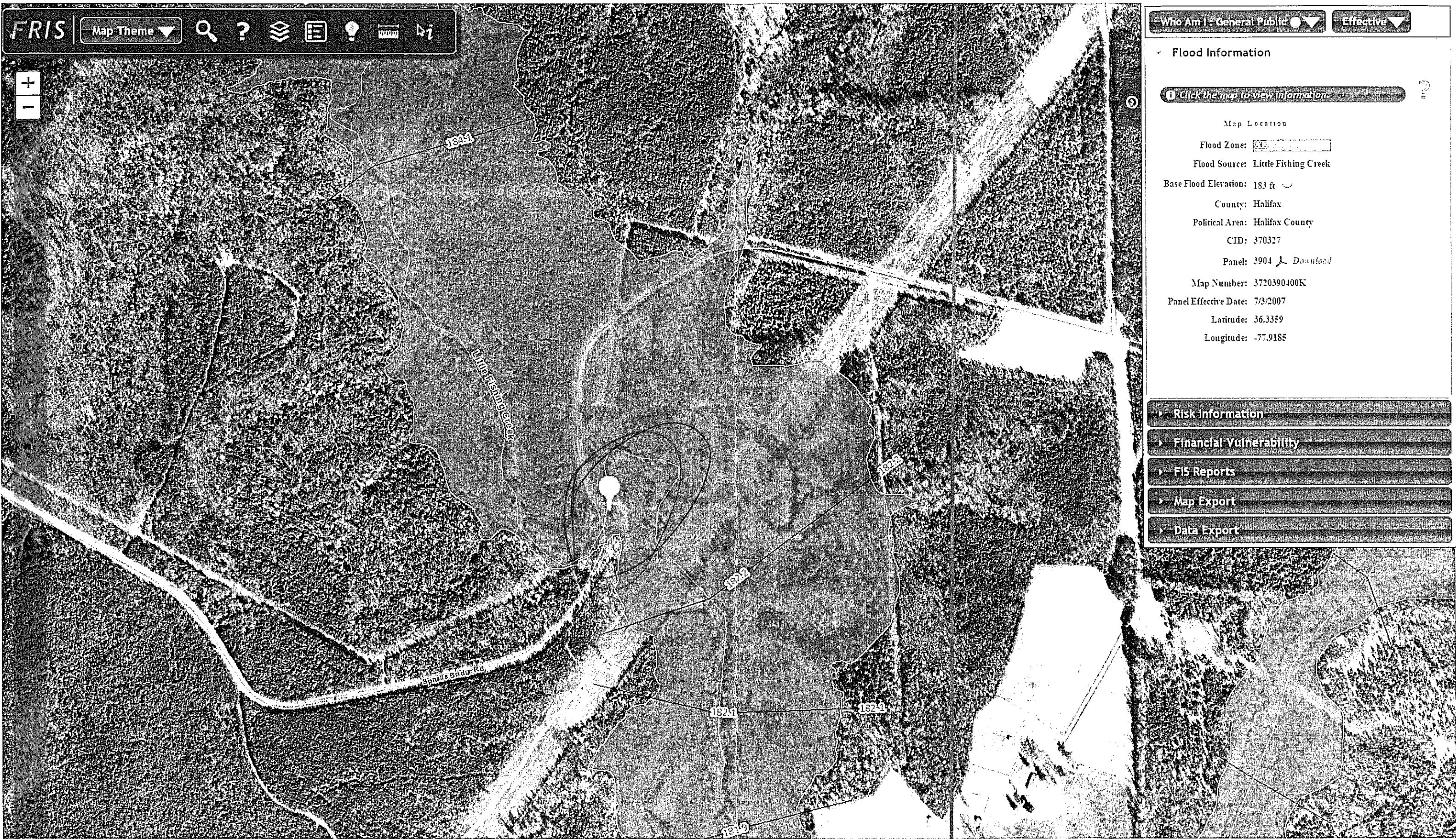
INV.RTG. : OPE.RTG. : CONTR.MEMBER : POSTED :
HS-13 HS-22 Ext Bmb B SV 31 TTST 36 DATE 10/02/2009
or C

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

UNDER ROUTES AND CLEARANCES

Downstream Structure

REMARKS :



Who Am I : General Public Effective

Flood Information

Click the map to view information

Map Location

Flood Zone:

Flood Source: Little Fishing Creek

Base Flood Elevation: 183 ft

County: Halifax

Political Area: Halifax County

CID: 370327

Panel: 3904 Download

Map Number: 3720390400K

Panel Effective Date: 7/3/2007

Latitude: 36.3359

Longitude: -77.9185

Risk Information

Financial Vulnerability

FIS Reports

Map Export

Data Export

5151 370110
42-

Down Stream structure

Drainage Area 98 sq. mi. Obtained from Soil Map
Character of Drainage Area _____
Waterway Required by Formula 1500 Sq. Ft. Formula Used C = 0.4
Maximum Stream Discharge _____ Sec. ft. Date _____
Discharge Data Obtained From _____
Period Covered by Discharge Records _____
Discharge Used for Design of Waterway _____ Sec. Ft.
Waterway Area Considered Necessary _____ Sq. Ft.
Waterway Area Provided by Recommended Structure 1650 Sq. Ft.
Data on Existing Structure _____

Data on other Structures Up or Down Stream A. 561 - 1.5 mi. downstream
5 @ 40' spans - provides - 1800^{sq} D.A. = 110 sq. mi.

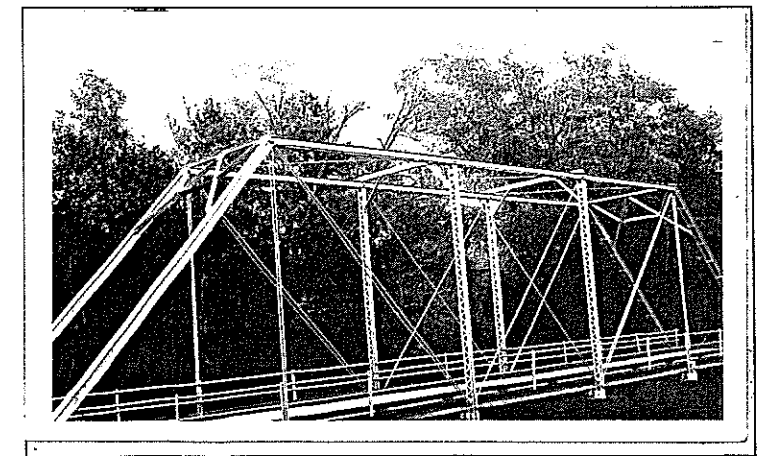
Method Used in Determining Foundation Material _____
Is Additional Foundation Investigation Considered Advisable _____
Other Information _____

5020 pavers
Bridge 113, 160' spans, 100' in Cor. Abutment, 11' clear p.d., 3" gravel
plus 200
provided 6 7' in
Reported by the Office 1159
5-9' to 10' at cor. 11' clear 3" gravel

BRIDGE DEPARTMENT
N. C. STATE HIGHWAY & PUBLIC WORKS COMMISSION
RALEIGH, N. C.

BRIDGE SURVEY REPORT

OBJECT NO. 8.2.1467 Halifax COUNTY, STA. 3+38
BRIDGE OVER Little Fishing Creek Known as Bridge No. 143
Co. Rd. 1315 between Hollister and Arlie
Recommended Width of Roadway 24' V Skew 90°
Recommended Structure 4 @ 42 1/2' I-Pm Spans
15' N. 143
Rip Rap 15 req'd
Temporary Crossing Not req'd
Present Structure is to be removed after using as temp. crossing
New Location is 50 ft Down Stream from Crossing on Present Road
Nearest Shipping Point Littleton On S.A.L. R. R.
Distance from Shipping Point to Bridge Site is South 9.6 miles.
Elevations From B. M. Spk. in Base 20' Pine 76' Lt Sta 2+10 Elev. 100.00
Assumed



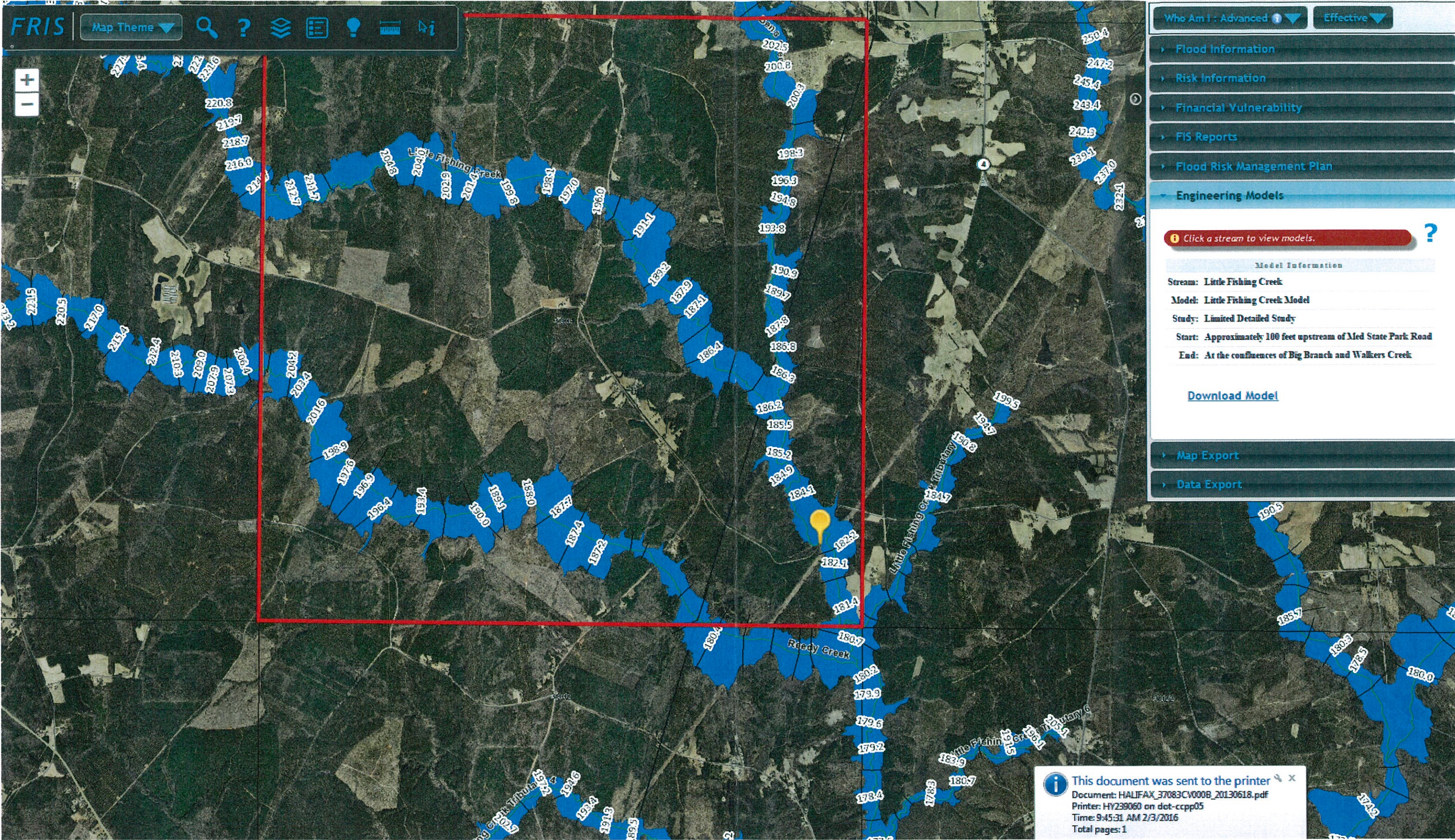
Surveyed by J.A. Parker Assisted by J.W.C. - K.D.H. - L.T.W. Date 28 Sept, 1965

12
41 0143(855) NO TIP STA. 988 LITTLE FISHING CR SR 1315
WO. 821467 PDF

BR 143

LITTLE FISHING CR

1166-12



Who Am I: Advanced Effective

Flood Information

Risk Information

Financial Vulnerability

FIS Reports

Flood Risk Management Plan

Engineering Models

Click a stream to view models.

Model Information

Stream: Little Fishing Creek

Model: Little Fishing Creek Model

Study: Limited Detailed Study

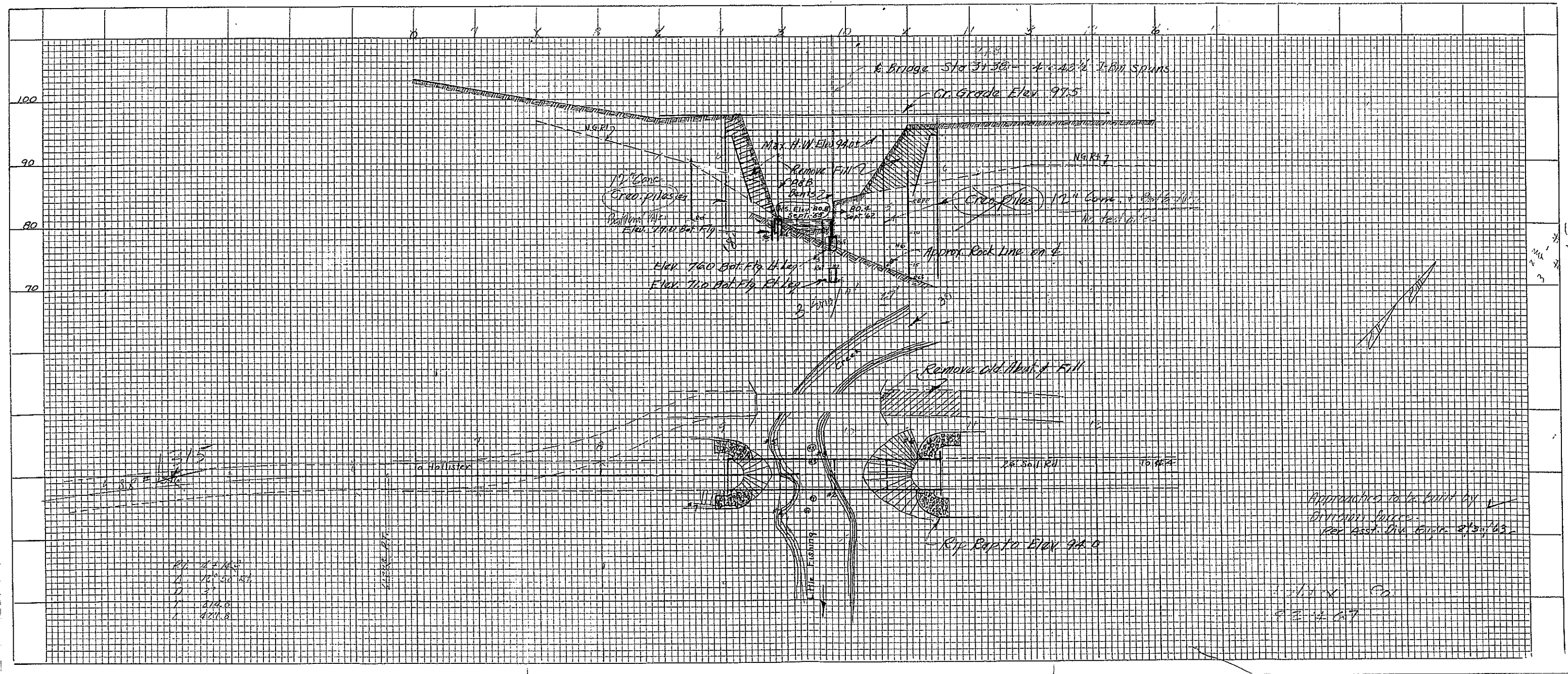
Start: Approximately 100 feet upstream of Med State Park Road

End: At the confluences of Big Branch and Walkers Creek

Download Model

Map Export

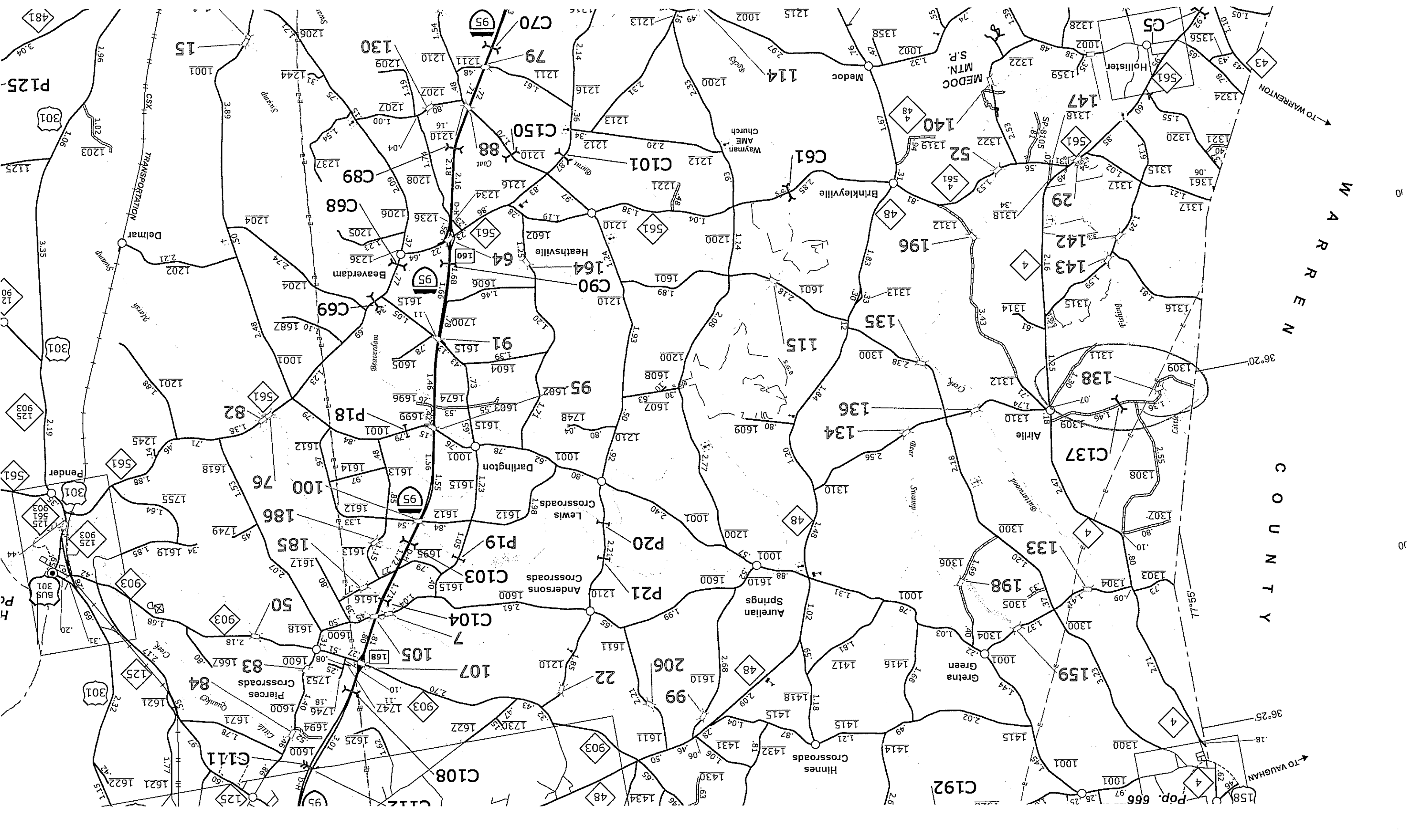
Data Export



RT 4 x 40'
 11 10' 50" 150
 12 3'
 13 174.0
 14 471.8

Approaches to be built by
 Division of Highways
 Per Dist. Div. Eng. 2/24/63

11.1 x 10
 0.3 x 0.7



WARREN COUNTY

WARREN COUNTY

TO VAUGHAN

TO WARRENTON

Pop. 666

BRIDGE SURVEY REPORT

9+88

3+38

OBJECT NO. B.21467 Halifax COUNTY, STA. 3+38

IDGE OVER Little Fishing Creek Known as Bridge No. 143

between Hallister and Artie

commended Width of Roadway 24' V Skew 90°

commended Structure 4 @ 42' I-Bm Spans

H.S.

Br. No. 143

Rip Rap 15' long

Temporary Crossing Not reqd

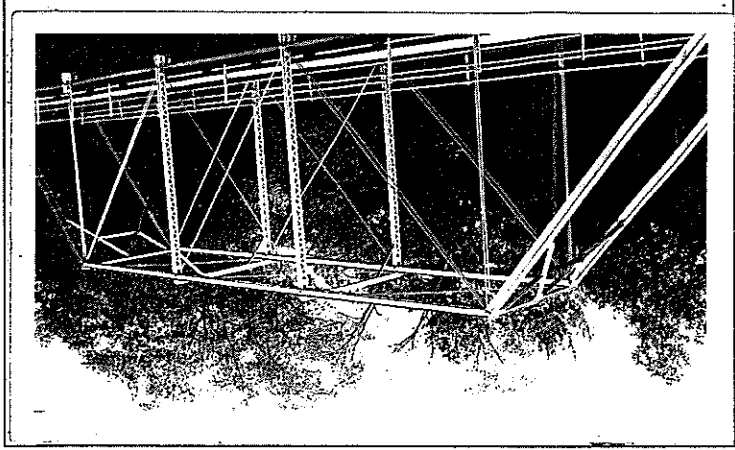
Present Structure is to be removed after using as temp. X-ing

New Location is 30' W Down Stream from Crossing on Present Road

Nearest Shipping Point Littleton On S.A.R. R. R.

Distance from Shipping Point to Bridge Site is South 9.6 miles.

Elevations from B. M. Spk in Base 20' Pine 75 ft Sta. 2+10 Elev. 109.00 Assumed



Surveyed by T.A. Barker Assisted by T.W.C. - K.M.H. - J.W. Date 28 Sept, 1955

166-12

12 0143 1955 NO. 17 STA. 988 LITTLE FISHING CR SR 1315
WO. 221467 .PDF

BR 143

LITTLE FISHING CR

DOWNSTREAM
STRUCTURE

Drainage Area 98 sq. mi. Obtained from Soil Map

Character of Drainage Area 1500 Sq. Ft. Formula Used $C=0.4$

Maximum Stream Discharge Sec. ft. Date 5-9-55

Discharge Data Obtained From 1950

Period Covered by Discharge Records 1950

Discharge Used for Design of Waterway 1650

Waterway Area Considered Necessary 1650

Waterway Area Provided by Recommended Structure 1650

Data on Existing Structure 1650

Data on other Structures Up or Down Stream 4 @ 40' spans - provides - 1800' DR = 110 sq. mi.

Method Used in Determining Foundation Material 1500 pavers

Is Additional Foundation Investigation Considered Advisable Yes

Other Information Br. #143. 100' span. Trestle in Curve. Abutment. R. 110' clear. Paving. 3" vent

Reported by A. H. H. Co. 1954

10 weeks & 7 mos

Downstream
Structure

