

- 1 @ 70' - 24" C.S. Existing 18" - WAVE 10' setbacks
- 10 setbacks left looking DS.
- 2' 6" CAPS

- Debris Low Scoping 2-17-16
PREDESIGN-PRESURVEY REPORT

- No Scour Issues (33' out to out)
- NOT Remove old Abutments.

County Halifax

Project Number 33753.1.2
TIP Number B-4537
Let Date _____

Bridge Number 410127
Road Number SR 1002 Ringwood
Stream ~~Jacket Swamp~~
Breches Swamp

Type Of Request: POC Force Account TIP
Date 1/28/16 Name EAKPUGU Assigned To _____
Checked By _____

Prior Survey Date NO (attach copy of prior survey)

Panel: 3879

Study By Scour Section _____

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

B.M. Info _____

Quad Map Enfield Drainage Area 4.31 Smi From Stream stat 4.39 DASS
Q25 595 Q50 745 Q100 905 Method USGS - Rural regression eqn
Region 4
(SI Report 2009-5158)

EXISTING BRIDGE INFORMATION

Location 0.4 mi E Jct SR 1210

Average Daily Traffic 980 (2012)

Length 51 Bed-To Crown 12 Water Depth 6

Type Structure PPC Channels

Type Spans 2 @ 25' 6"

Upstream Structure 2 - Non inventory structures on I-95

Location _____

Bed-To Crown _____ Prior Survey _____

Downstream Structure (SR 1001) Brg # 11, P9,

Location 1.0 mi N Jct NC 481,

Bed-To Crown 12, 12, Prior Survey _____

SCS Watershed NO

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, SW, NSW

DENR River Basin Info. Tar Pam

office estimated min brg length = 90'



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: ENCASED PILES

Structure Safety Report

Routine Element Inspection

COUNTY: HALIFAX STRUCTURE NUMBER: 410127 FREQUENCY: 24 MONTHS
FACILITY CARRIED: SR1002 MILE POST: _____
LOCATION: 0.4 MI. E. JCT. SR1210
FEATURE INTERSECTED: JACKET SWAMP
LATITUDE: 36° 12' 24.34" LONGITUDE: 77° 43' 48.15"
SUPERSTRUCTURE: PPC CHANNELS
SUBSTRUCTURE: EBTS&IBTS:PPC CAPS/TIMBER PILES @ 5'9 CTS.
SPANS: 2@25'6"
☐ FRACTURE CRITICAL ☒ TEMPORARY SHORING ☐ SCOUR CRITICAL ☒ SCOUR PLAN OF ACTION
PRESENT CONDITION: Fair INSPECTION DATE: 07/15/2015
POSTED SV: 25 POSTED TTST: 29
OTHER SIGNS PRESENT: 4 DELINEATORS



LOOKING EAST

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

INSPECTED BY <u>Z.S. DUNLOW</u>	SIGNATURE <u>Z. S. Dunlow</u>	ASSISTED BY <u>G.L. HARRINGTON</u>
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BRIDGE MANAGEMENT UNIT

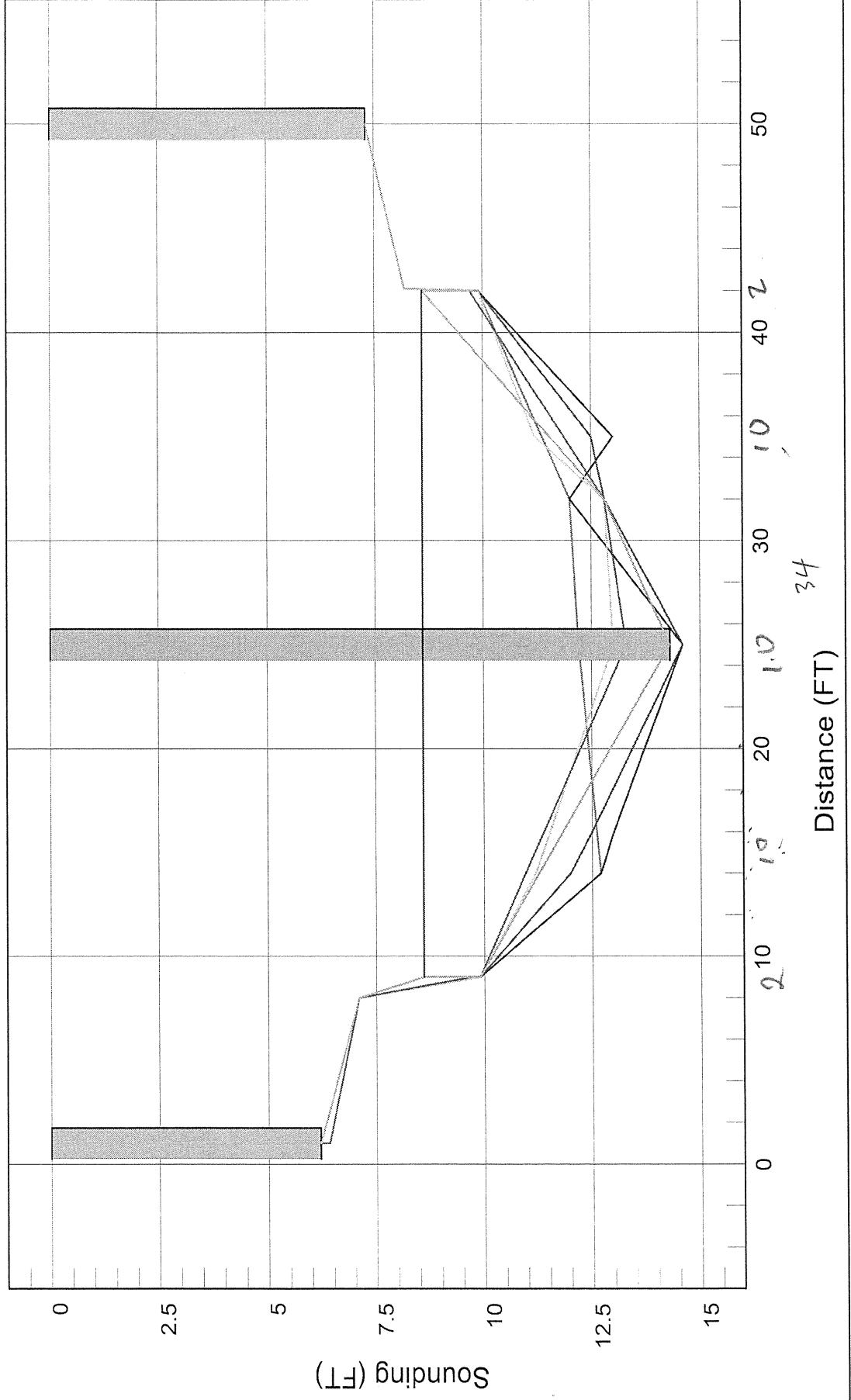
DATA ON EXISTING STRUCTURE

Run Date: 01/15/2016

COUNTY : HALIFAX	DIVISION : 4	DISTRICT : 1	STRUCTURE NUMBER : 410127	LENGTH : 51 FEET
ROUTE CARRIED : SR1002		FEATURE INTERSECTED : JACKET SWAMP		
LOCATED : 0.4 MI.E.JCT.SR1210		BRIDGE NAME :		CITY :
FUNC. CLASS : 07	SYST.ON : FA	SYST.UNDER : NFA	ADT & YR : 980 2012	RAIL TYPE : LT 233 RT 233
BUILT : 1967	BY : BMU	PROJ : 5.3051	FED.AID PROJ :	DESIGN LOAD : Unknown
REHAB :	BY :	PROJ :	ALIGNMENT : TAN.	SKEW : 90
			LANES : ON 2 UNDER 0	
NAVIGATION : VC 0 FT		HC 0 FT	HT. CRN. TO BED : 12 FT	WATER DEPTH : 6 FT
SUPERSTRUCTURE : PPC CHANNELS				
SUBSTRUCTURE : EBTS&IBTS:PPC CAPS/TIMBER PILES @ 5'9 CTS.				
SPANS : 2@25'6				
BEAMS OR GIRDERS : 12 PPC CHANNELS SECTIONS				
FLOOR : PPCCH/4" AWS	ENCROACHMENT :		DECK (OUT TO OUT) : 30.667 FT	
CLEAR ROADWAY : 29.25 FT	BETWEEN RAILS : 30.083 FT		SIDEWALK OR CURB : LT .4165 FT RT .4165 FT	
VERT.CL.OVER : 999.9 FT				
INV.RTG. : HS-1	OPE.RTG. : HS-1	CONTR.MEMBER : Pile	POSTED : SV 25 TTST 29	DATE 08/07/2013
SYSTEM : Secondary S.R. Route			GREEN LINE ROUTE : N	
UNDER ROUTES AND CLEARANCES				
REMARKS :				

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



$$12 \times 1.5 = 18 \times 2 = 36 + 20 + 34 = 90$$

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Update Date: 03/12/2015

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
HALIFAX	4	1	410011	171	FEET
ROUTE CARRIED :		FEATURE INTERSECTED :			
SR1001		JACKET SWAMP			
LOCATED :		BRIDGE NAME :		CITY :	
1.0 MI.N.OF NC481					
FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :	
07	FA	NFA	490 2011	LT 991 RT 991	
BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :	
2013	DOH	33486.3.1	BRSTP-1001(26)	HL 93	
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	12 FT		4 FT	
SUPERSTRUCTURE : PRECAST PRESTRESSED CONCRETE CORED SLAB					
SUBSTRUCTURE : E.BTS:RC CAPS ON H-PILES;BTS:RC CAP ON DRILLED SHAFT PIERS					
SPANS : 1@55';1@59';1@57'					
BEAMS OR GIRDERS : 11 PRECAST PRESTRESSED CONCRETE CORED SLAB SECTIONS					
FLOOR :	ENCROACHMENT :		DECK (OUT TO OUT) :		
PPC C.S/4 AWS			33 FT		
CLEAR ROADWAY :	BETWEEN RAILS :		SIDEWALK OR CURB :		
31 FT	31 FT		LT 0 FT RT 0 FT		
VERT.CL.OVER : 999.9 FT					
INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	DATE	
HS-26	HS-36	PILE, TIM.	SV TTST	09/10/2013	
SYSTEM :				GREEN LINE ROUTE :	
Secondary S.R. Route				N	
UNDER ROUTES AND CLEARANCES					

Downstream Structure

REMARKS :

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 12/01/2015

COUNTY :
HALIFAXDIVISION :
4DISTRICT :
1STRUCTURE NUMBER :
410009LENGTH :
44 FEETROUTE CARRIED :
SR1001FEATURE INTERSECTED :
JACKET SWAMPLOCATED :
0.8 MI.N.OF NC481

BRIDGE NAME :

CITY :

FUNC. CLASS :
07SYST.ON :
FASYST.UNDER :
NFAADT & YR :
1100 2012RAIL TYPE :
LT 0 RT 0BUILT :
1998BY :
BMU

PROJ :

FED.AID PROJ :

DESIGN LOAD :
HS 20 + MOD

REHAB :

BY :
BMUPROJ :
5.3051ALIGNMENT :
TAN.SKEW :
90LANES :
ON 2 UNDER 0NAVIGATION :
VC 0 FT

HC 0 FT

HT. CRN. TO BED :
12 FTWATER DEPTH :
3 FT

SUPERSTRUCTURE : 3 LNS 11.833' X 7.583' CMPA;60'ALONG CENTERLINE PIPE

SUBSTRUCTURE :

SPANS :

BEAMS OR GIRDERS :

FLOOR :

ENCROACHMENT :

DECK (OUT TO OUT) :
0 FT

CLEAR ROADWAY :

0 FT

BETWEEN RAILS :

0 FT

SIDEWALK OR CURB :

LT

0 FT

RT

0 FT

VERT.CL.OVER :
999.9 FTINV.RTG. :
HS-55OPE.RTG. :
HS-55CONTR.MEMBER :
STR.STL.
PL.ARCHPOSTED :
SV TTST

DATE 08/04/1998

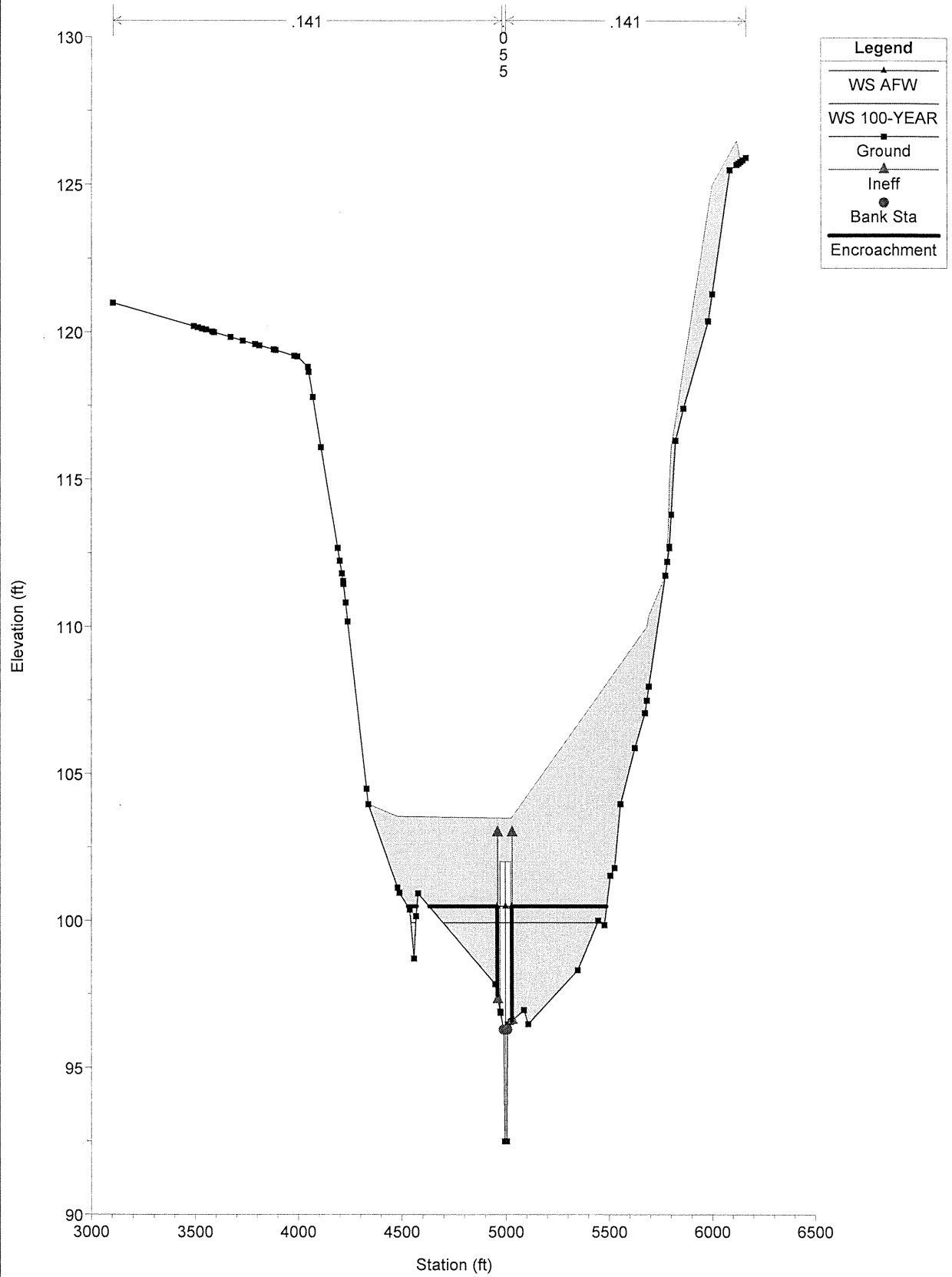
SYSTEM :
Secondary S.R. RouteGREEN LINE ROUTE :
N

UNDER ROUTES AND CLEARANCES

downstream structure

REMARKS :

BREECHES SWAMP Plan: BREECHES SWAMP 1/20/2016
Ringwood Road2-TOR



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	6500.0	1010.00	97.23	103.44		103.46	0.001015	2.29	1464.16	707.34	0.17
Reach - 1	6500.0	1010.00	97.23	104.09		104.11	0.001065	2.51	1045.02	281.88	0.17
Reach - 1	6000.0	1010.00	96.31	102.90		102.92	0.001151	2.54	1213.47	449.02	0.18
Reach - 1	6000.0	1010.00	96.31	103.50		103.53	0.001242	2.81	911.58	230.60	0.19
Reach - 1	5500.0	1010.00	95.38	102.36		102.38	0.001005	2.48	1195.08	412.10	0.17
Reach - 1	5500.0	1010.00	95.38	102.90		102.93	0.001159	2.80	874.86	200.00	0.19
Reach - 1	5001.3	1010.00	95.20	101.95		101.97	0.000702	2.02	1446.94	462.69	0.14
Reach - 1	5001.3	1010.00	95.20	102.42		102.44	0.000834	2.31	1111.60	270.07	0.16
Reach - 1	4500.0	1010.00	94.24	101.67		101.68	0.000472	1.77	1907.88	714.34	0.12
Reach - 1	4500.0	1010.00	94.24	102.07		102.09	0.000600	2.08	1377.88	371.61	0.13
Reach - 1	3852.5	1130.00	92.53	100.34	98.40	100.79	0.005105	6.34	313.83	864.33	0.42
Reach - 1	3852.5	1130.00	92.53	100.64	98.42	101.08	0.004625	6.21	318.90	70.00	0.41
Reach - 1	3830.0	Bridge									
Reach - 1	3807.5	1130.00	92.24	99.10	98.11	99.84	0.009526	7.87	247.96	656.99	0.56
Reach - 1	3807.5	1130.00	92.24	99.78	98.12	100.35	0.006479	6.96	281.24	70.00	0.47
Reach - 1	3500.0	1130.00	92.13	98.41		98.45	0.001714	3.11	1291.33	624.75	0.23
Reach - 1	3500.0	1130.00	92.13	99.11		99.17	0.001719	3.36	953.39	271.00	0.23
Reach - 1	3000.0	1130.00	91.20	97.70		97.73	0.001228	2.70	1417.05	548.09	0.19
Reach - 1	3000.0	1130.00	91.20	98.40		98.44	0.001225	2.90	1034.82	247.38	0.20
Reach - 1	2501.2	1130.00	89.12	97.23		97.25	0.000761	2.48	1584.97	527.66	0.16
Reach - 1	2501.2	1130.00	89.12	97.94		97.98	0.000755	2.62	1145.82	226.23	0.16
Reach - 1	2001.8	1130.00	88.94	96.77		96.80	0.001082	2.89	1442.99	580.83	0.19
Reach - 1	2001.8	1130.00	88.94	97.48		97.53	0.001072	3.05	1060.99	257.35	0.19
Reach - 1	1501.1	1130.00	88.77	96.03		96.10	0.001889	3.62	1261.47	658.26	0.24
Reach - 1	1501.1	1130.00	88.77	96.74		96.83	0.001883	3.86	821.59	221.39	0.25
Reach - 1	998.9	1130.00	88.24	95.07		95.13	0.001958	3.53	1216.60	591.88	0.24
Reach - 1	998.9	1130.00	88.24	95.78		95.87	0.001941	3.77	889.66	270.00	0.25
Reach - 1	500.0	1130.00	88.02	94.31	92.52	94.33	0.001300	2.71	1502.56	659.87	0.20

NOTE: THIS SITE IS IN A 100YR FHZ.
WITHOUT A DETAILED STUDY

DA = 36.9 SQ. MI. } D.A. FROM "SELECTED SITES"
Q₁₀ = 1700 CFS } PAGE 36
Q₂₅ = 2500 CFS } Q'S COMPUTED USING
Q₁₀₀ = 3900 CFS } USGS RURAL REGRESSION EQUATION

HISTORIC HIGHWATER INFORMATION

HAS NOT BEEN OUT OF BANKS IN OVER
10 YEARS.

BRUCE DANIELS BRIDGE MAINT. SUPV. HALIFAX CO.

J. PAUL HARDY JR. ROADWAY MAINT. SUPV. HALIFAX CO.

EXISTING BRIDGE INFORMATION

OAL = 59.73'

CL ROWY = 24.5'

SPANS 1 @ 30' 7", 1 @ 30' 5"

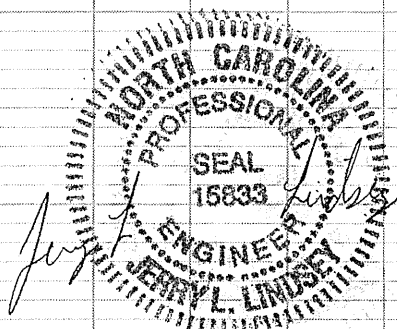
BANKS ARE UNDERCUT

BED MATERIAL: MUCK

DEBRIS POTENTIAL: LOW TO MODERATE

Downstream

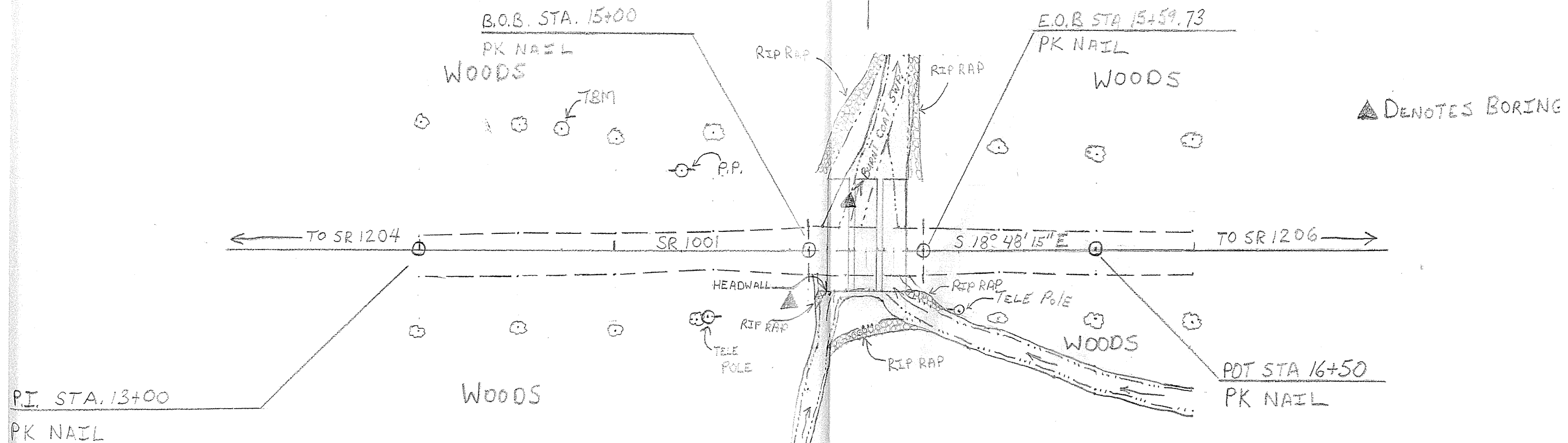
E: ROADWAY WAS PAVED AFTER
SURVEY WAS COMPLETED



7-15-96

NCDOT	
DIVISION OF HIGHWAYS	
HALIFAX CO.	
BR. #009 ON SR 1001	
OVER BURNT COAT SWP.	
SCALE 1" = 50' HORIZ.	
1" = 10' VERT.	
SURVEY BY: MBK, SJS, ARM	
DRAWN BY: ARM	
DESIGN BY: ARM	
CHECKED BY: DRA	
SHEET 1 OF 2	
3-96	

Q STA 15+31
3@ 142" x 91" CSPA W/HEADWALL
90° SKEW



Downstream # P9

PROPOSED AREA: 224 SQ. FT.

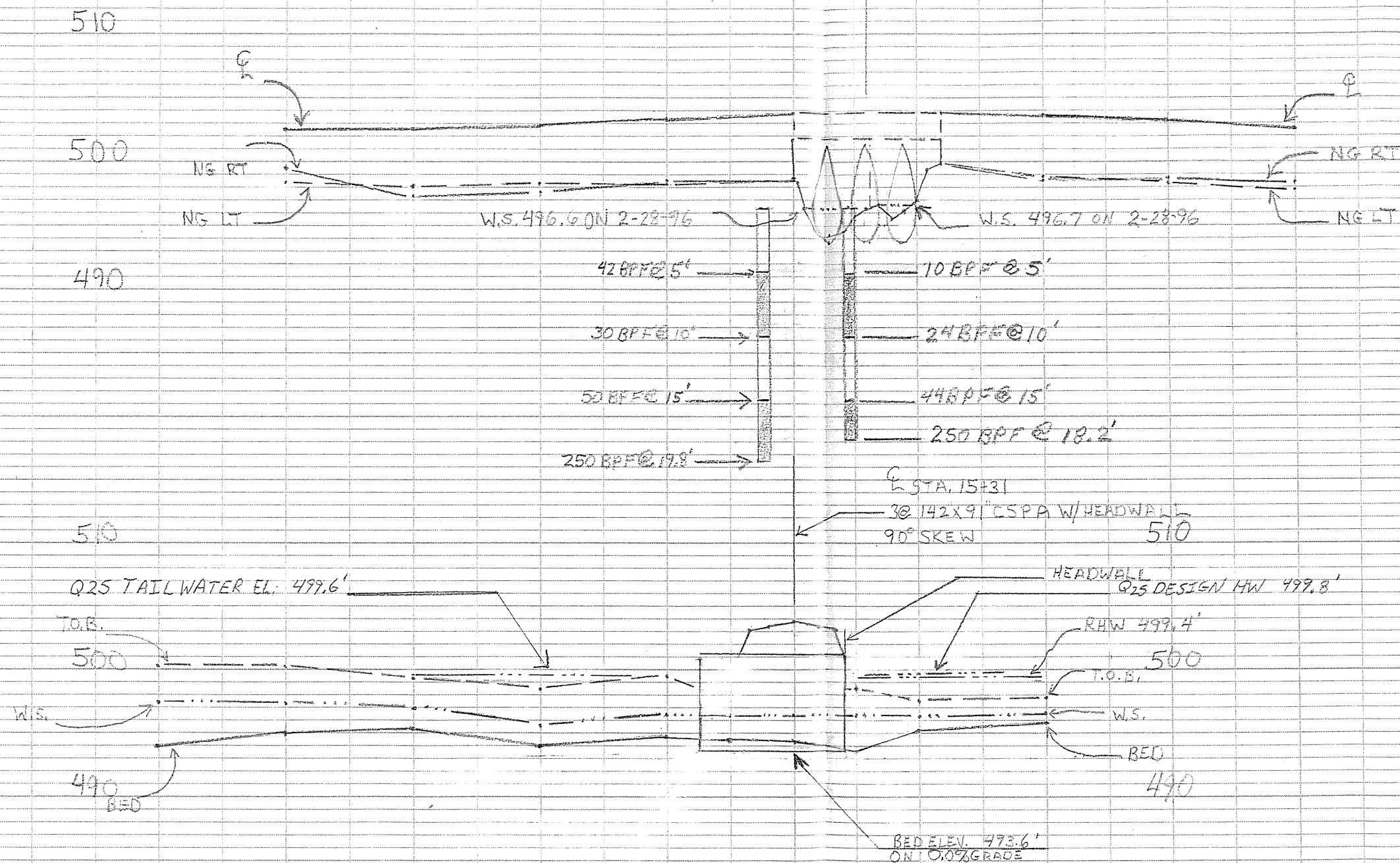
STA. 15+31

3@142"x91" CSPA W/HEADWALL

90° SKEW

NOTE: SEE ATTACHED SHEET
FOR THE COMPLETE
PLAN, INCLUDING
MAIN STRUCTURE.
(BRG # 11)

NOTE: THIS BRIDGE IS AN
STRUCTURE



PERMIT REQUIREMENTS

AVG. DAILY FLOW: INDETERMINATE

FILL IN WETLANDS: NONE

FILL IN WATERS: < 0.01 ACRES

NW # 14 APPLICABLE

EXCAVATION IN WETLANDS .036

OVERTOPPING INFORMATION

ELEV. 501.0'

FREQ. 100 YR

DISCH. 3900 CFS* (OVERFLOW ST)

694 CFS (THROUGH PIPE)

Downstream # P9

StreamStats

Delineation Results

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

StreamStats Basin Characteristics Report - Google Ch...

streamstatsags.cr.usgs.gov/v3_beta/BCreport.htm?rcod...

USStreamStats Version 3.0

Basin Characteristics Ungaged Site Report

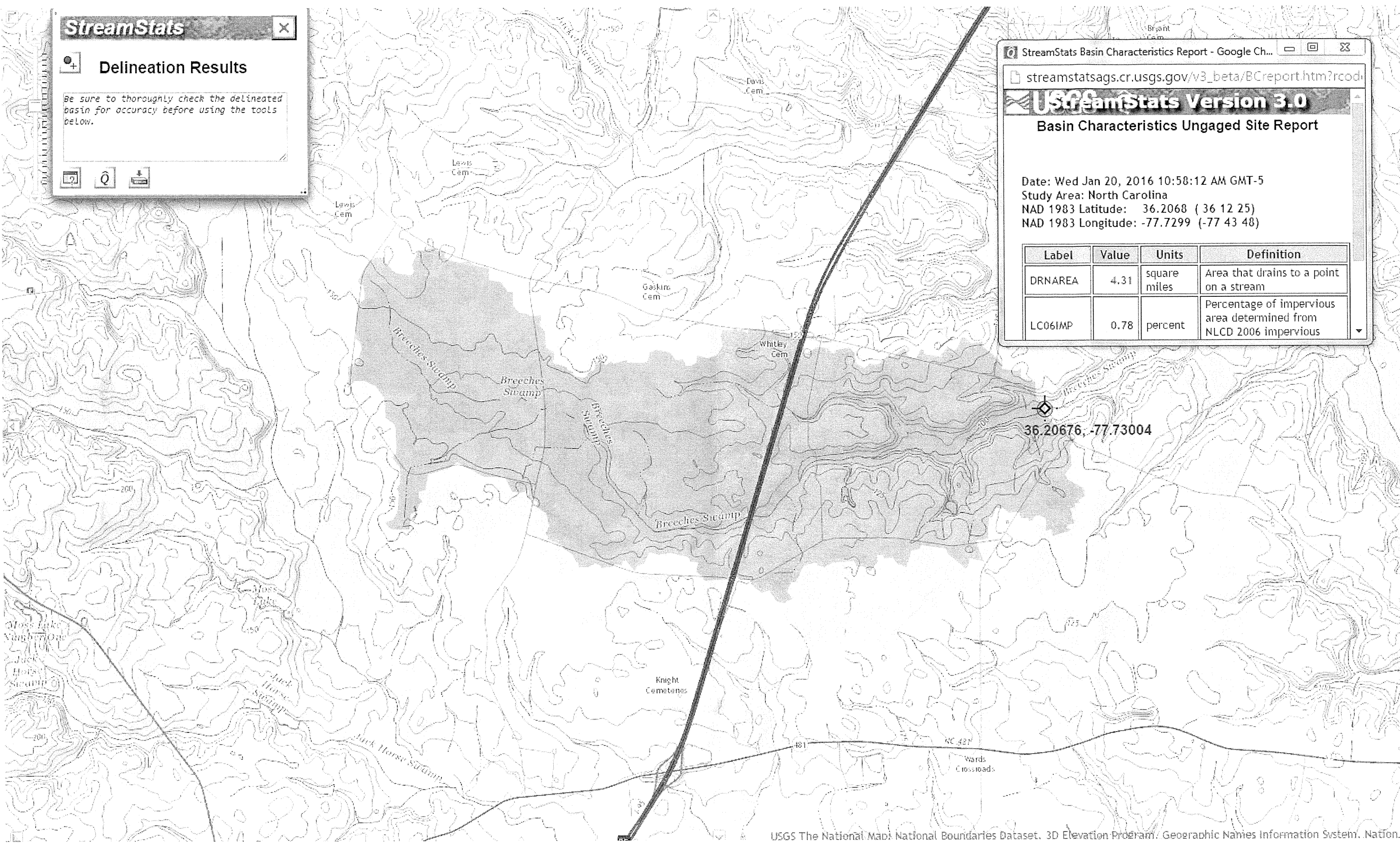
Date: Wed Jan 20, 2016 10:58:12 AM GMT-5

Study Area: North Carolina

NAD 1983 Latitude: 36.2068 (36 12 25)

NAD 1983 Longitude: -77.7299 (-77 43 48)

Label	Value	Units	Definition
DRNAREA	4.31	square miles	Area that drains to a point on a stream
LC06IMP	0.78	percent	Percentage of impervious area determined from NLCD 2006 impervious





Who Am I : General Public Effective

Flood Information

Click the map to view information.

Map Location

Flood Zone: AE

Flood Source: Breeches Swamp

Base Flood Elevation: 100.3 ft

County: Halifax

Political Area: Halifax County

CID: 370327

Panel: 3879 Download

Map Number: 3720387900J

Panel Effective Date: 7/3/2007

Latitude: 36.20677

Longitude: -77.73005

Address locations are approximate.
3521 Ringwood Rd, Enfield, NC

Risk Information

Financial Vulnerability

FIS Reports

Map Export

Data Export

