

PREDESIGN-PRESURVEY REPORT

Project Number 45619.1.1
TIP Number B-5664
Let Date _____

County Johnston

Bridge Number 500145
Road Number SR 1555 Barber Mill Rd
Stream Swift Creek

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

Prior Survey Date 10-49 (attach copy of prior survey)

Panel 1646

Study By Scour Section _____

Flood Zone AE Detail Study Redeline Date 12/2/2005 (attach copy of flood map)

B.M. Info _____

Quad Map Powhatan Drainage Area 113 SM From Stream stat.
Q25 7660 Q50 8950 Q100 10150 Method USGS - Urban Regression
Coastal plain

EXISTING BRIDGE INFORMATION

Location 0.6 mi N Jct SR 1010
Average Daily Traffic 4700 (2012)
Length 163 Bed- To Crown 17 Water Depth 4
Type Structure RC Floor / 1 Beams
Type Spans 5 @ 32.5'
Upstream Structure None
Location _____
Bed- To Crown _____ Prior Survey _____
Downstream Structure (SR 1562) Brg # 96
Location 0.3 mi N Jct SR 1010
Bed- To Crown 29 Prior Survey _____
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 C, NSW
DENR River Basin Info. Neuse

office estimated min bry length = 180'



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION TEMPORARY PILE REPAIR: CONCRETE COLLAR

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY JOHNSTON

BRIDGE NUMBER 500145

INSPECTION CYCLE 2 YRS

ROUTE SR1555

ACROSS SWIFT CREEK

M.P. 0

LOCATION 0.6 MI N JCT SR1010

SUPERSTRUCTURE RC FLOOR/I-BEAMS

SUBSTRUCTURE EBTS&IBT1:RC CAP/TIM.PILES;IBTS2-4:RCP&BEAM

SPANS 5@32.5'

LONGITUDE 78° 29' 54.58"

LATITUDE 35° 34' 29.72"

INSPECTION DATE 03/11/2014

PRESENT CONDITION FAIR

PRESENT POSTING SV 19 TTST 25

SV 19 TTST 25

PROPOSED POSTING

OTHER SIGNS PRESENT NONE



LOOKING NORTH

Fracture Critical	No
Temporary Shoring	No
Scour Critical	No
Scour POA	No

SIGN NOTICE ISSUED FOR	NUMBERED REQUIRED
No WEIGHT LIMIT	
No DELINEATORS	
No NARROW BRIDGE	
No ONE LANE BRIDGE	
No LOW CLEARANCE	

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 05/14/2014

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :
JOHNSTON	4	3	500145	163 FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1555	SWIFT CREEK

LOCATED :	BRIDGE NAME :	CITY :
0.6 MI N. OF JCT SR1010		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
08	NFA	NFA	4700 2012	LT 181 RT 181

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1955	SHPWC	9-36206		H 15

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
			TAN.	60	ON 2 UNDER 0

NAVIGATION :	HT. CRN. TO BED :	WATER DEPTH :
VC 0 FT HC 0 FT	17 FT	4 FT

SUPERSTRUCTURE : RC FLOOR/I-BEAMS

SUBSTRUCTURE : EBTS&IBT1:RC CAP/TIM.PILES;IBTS2-4:RCP&BEAM

SPANS : 5@32.5'

BEAMS OR GIRDERS : 4 LINES 21IN. I-BEAMS @ 6'6 CTS.

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
5.75 RC/4 AWS		23.417 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
21.75 FT	21.75 FT	LT 0 FT RT 0 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	25	DATE	09/05/2008
HS-1	HS-1	I-Bm,Pile	SV 19				

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

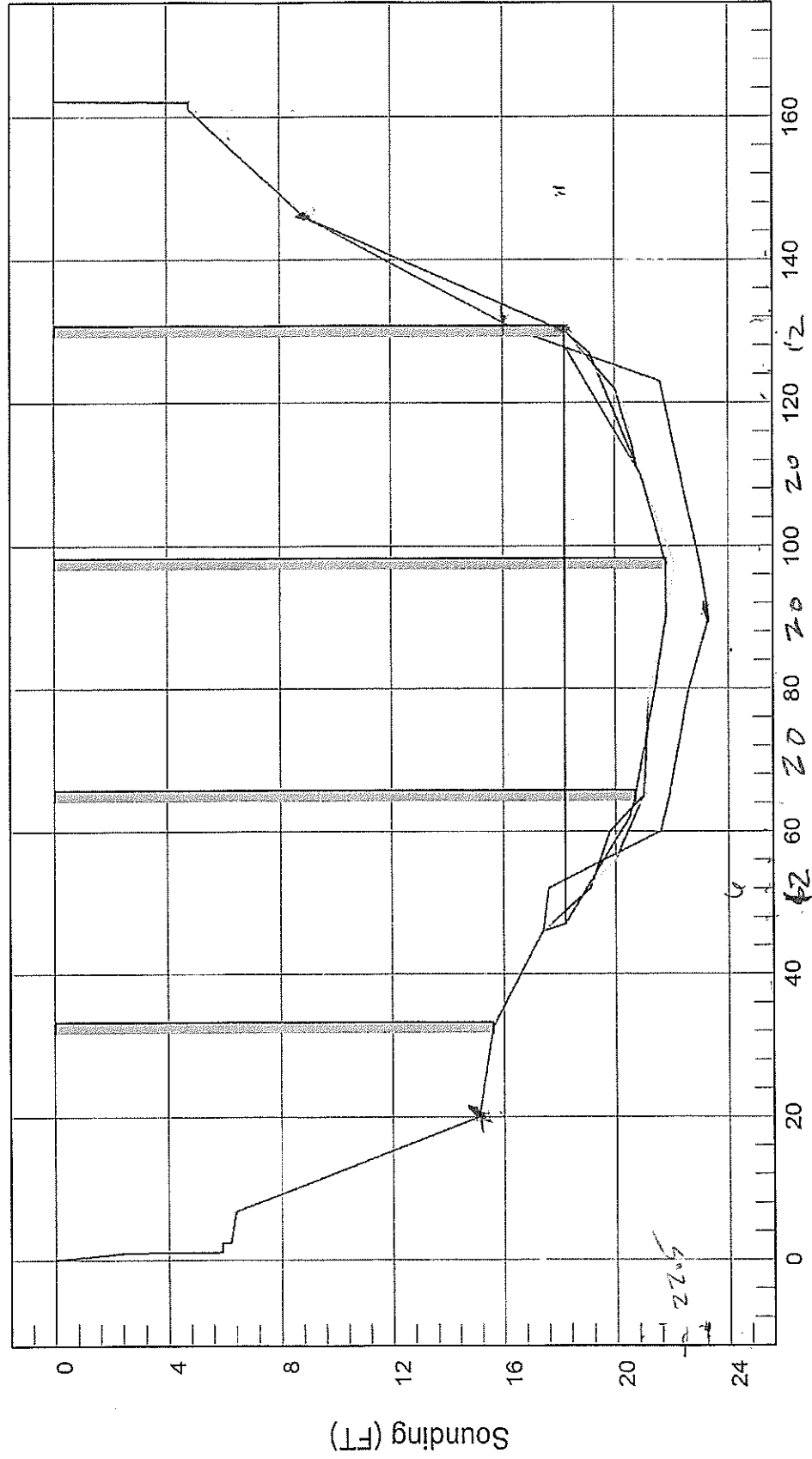
UNDER ROUTES AND CLEARANCES

REMARKS :

Bridge: 500145 County JOHNSTON Date: 03/11/2014

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Distance (FT) 84

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 12/08/2015

COUNTY : JOHNSTON DIVISION : 4 DISTRICT : 3 STRUCTURE NUMBER : 500096 LENGTH : 136 FEET

ROUTE CARRIED : SR1562 FEATURE INTERSECTED : SWIFT CREEK

LOCATED : 0.3M N.JCT SR1010 BRIDGE NAME : CITY :

FUNC. CLASS : 07 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 500 2000 RAIL TYPE : LT 111 RT 111

BUILT : 1964 BY : SHC PROJ : 8.24169 FED.AID PROJ : S-1592(1) DESIGN LOAD : H 15

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

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 29 FT WATER DEPTH : 3 FT

SUPERSTRUCTURE : RC DECK ON PRESTR.CONC.GIRDERS

SUBSTRUCTURE : E.BT.1:RC SPILL THRU;INT.BTS:RCP&B;E.BT.2:RC CAP/PPC PILE

SPANS : 1@45'6"; 1@45'; 1@45'6"

BEAMS OR GIRDERS : 4 LINES 36 PRESTR.CONC.GIRDERS @ 7'CENTERS

FLOOR : RC/NO AWS ENCROACHMENT : DECK (OUT TO OUT) : 28.5 FT

CLEAR ROADWAY : 24 FT BETWEEN RAILS : 26.25 FT SIDEWALK OR CURB : LT 1.125 FT RT 1.125 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-19 OPE.RTG. : HS-41 CONTR.MEMBER : PS Gdr Std POSTED : SV TTST DATE

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

UNDER ROUTES AND CLEARANCES

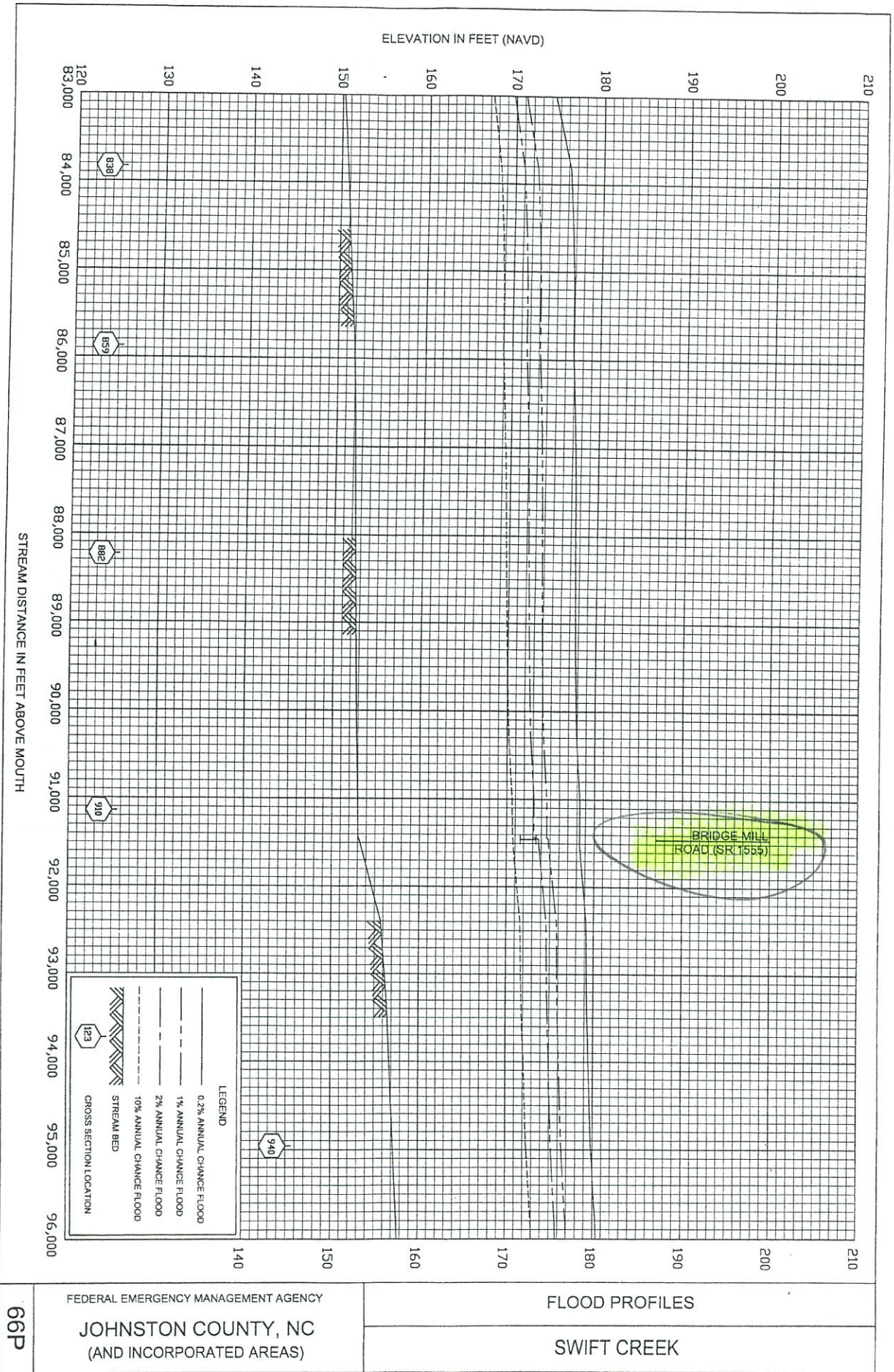
Down Stream Structure

REMARKS :

Section 5.0 – Engineering Methods

Table 8—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
Stony Fork Tributary (continued)	Approximately 0.6 mile downstream of Federal Road	3.4	*	*	1,597	*
	Approximately 0.2 mile downstream of Federal Road	3.1	*	*	1,518	*
	Approximately 0.1 mile upstream of Interstate 40	2.6	*	*	1,368	*
Swift Creek	At the mouth	287.0	8,500	16,100	20,500	34,900
	Above Middle Creek (at North Carolina 210)	157.0	5,970	11,380	14,560	24,900
	Approximately 1.3 miles downstream from confluence of Little Creek	139.1	8,340	12,800	15,200	22,800
	Approximately 2.0 miles downstream of Lee Road	120.8	7,160	10,500	12,500	19,100
	Approximately 1.1 miles downstream of Lee Road	117.9	7,100	10,400	12,400	19,000
	Approximately 1.2 mile downstream of Barber Mill Road	113.9	7,090	10,100	12,200	18,700
	Approximately 0.9 mile upstream of Barber Mill Road	110.1	7,100	9,990	12,100	18,800
	Approximately 2.0 miles upstream of Barber Mill Road	105.3	7,030	9,560	11,700	18,500
	Approximately 0.9 mile downstream of Cornwallis Road	89.4	6,190	8,430	9,540	12,700
	Approximately 0.3 mile upstream of N.C. Route 42	81.2	6,040	8,180	9,290	12,200
Unnamed Tributary (#1) to Swift Creek	At the confluence with Swift Creek	4.7	2,080	3,770	4,670	7,660
	Approximately 100 feet downstream of New Bethel Church Road	4.1	2,020	3,560	4,430	7,380
Unnamed Tributary (#2) to Swift Creek	At the confluence with Swift Creek	2.2	960	1,670	2,050	3,290
	Approximately 1.1 mile downstream of Cornwallis Road	1.5	1,040	1,670	2,010	3,080



i Click the map to view information.

Map Location

Flood Zone: **AE (Floodway)**

Flood Source:

Base Flood Elevation: 174.7 ft

County: Johnston

Political Area: Johnston County

CID: 370138

Panel: 1646 Download

Map Number: 3720164600J

Panel Effective Date: 12/2/2005

Latitude: 35.5749

Longitude: -78.4985

► Risk Information

► Financial Vulnerability

► FIS Reports

► Map Export

Data Export



StreamStats



Delineation Results

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



StreamStats Basin Characteristics Report - Google C...

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

StreamStats Version 3.0

Basin Characteristics Ungaged Site Report

Date: Fri Jan 29, 2016 10:47:11 AM GMT-5

Study Area: North Carolina

NAD 1983 Latitude: 35.5749 (35 34 30)

NAD 1983 Longitude: -78.4985 (-78 29 55)

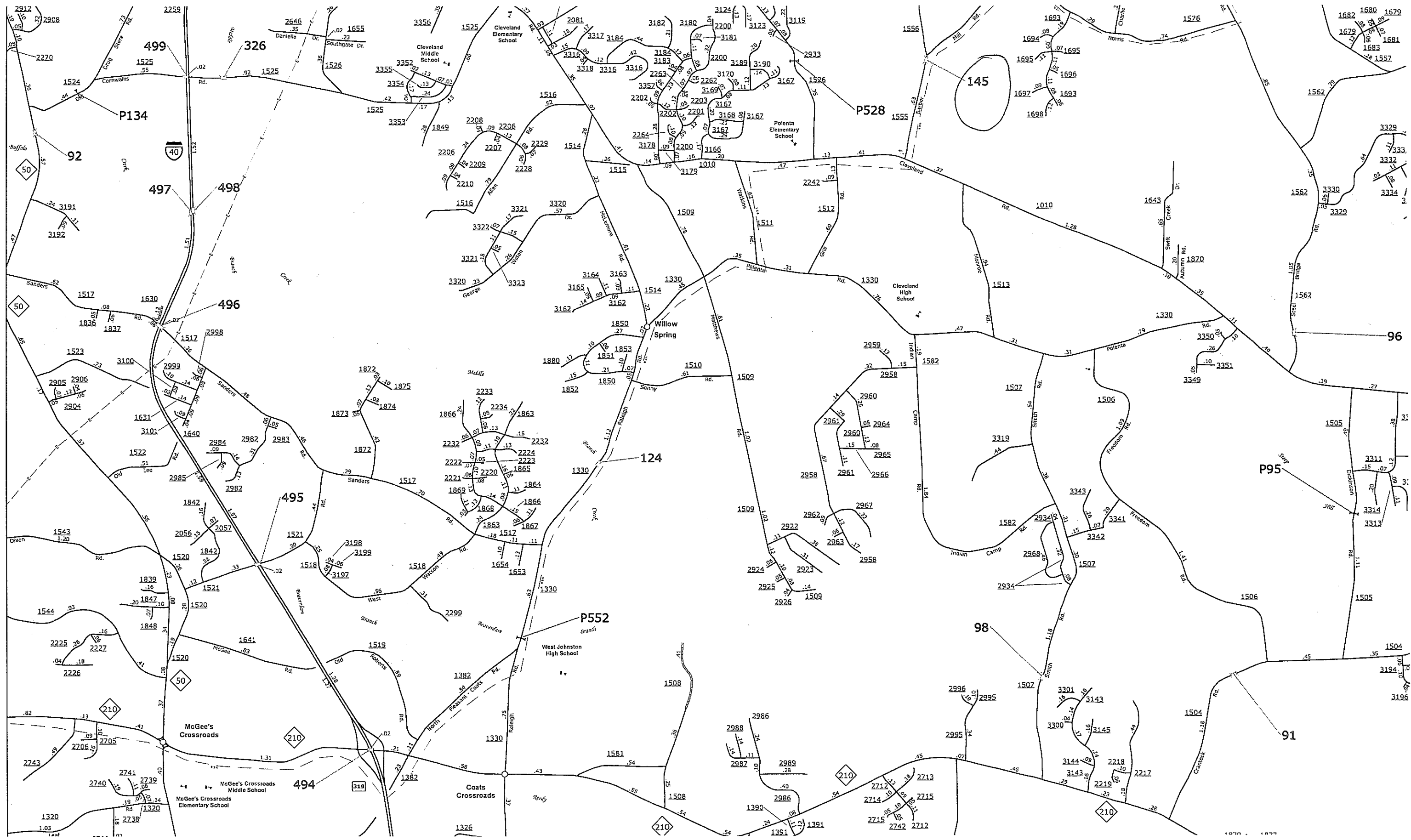
Label	Value	Units	Definition
DRNAREA	113	square miles	Area that drains to a point on a stream
LC11IMP	8.27	percent	Percentage of impervious area determined from NLCD 2011 impervious dataset

NORTH
CAROLINA

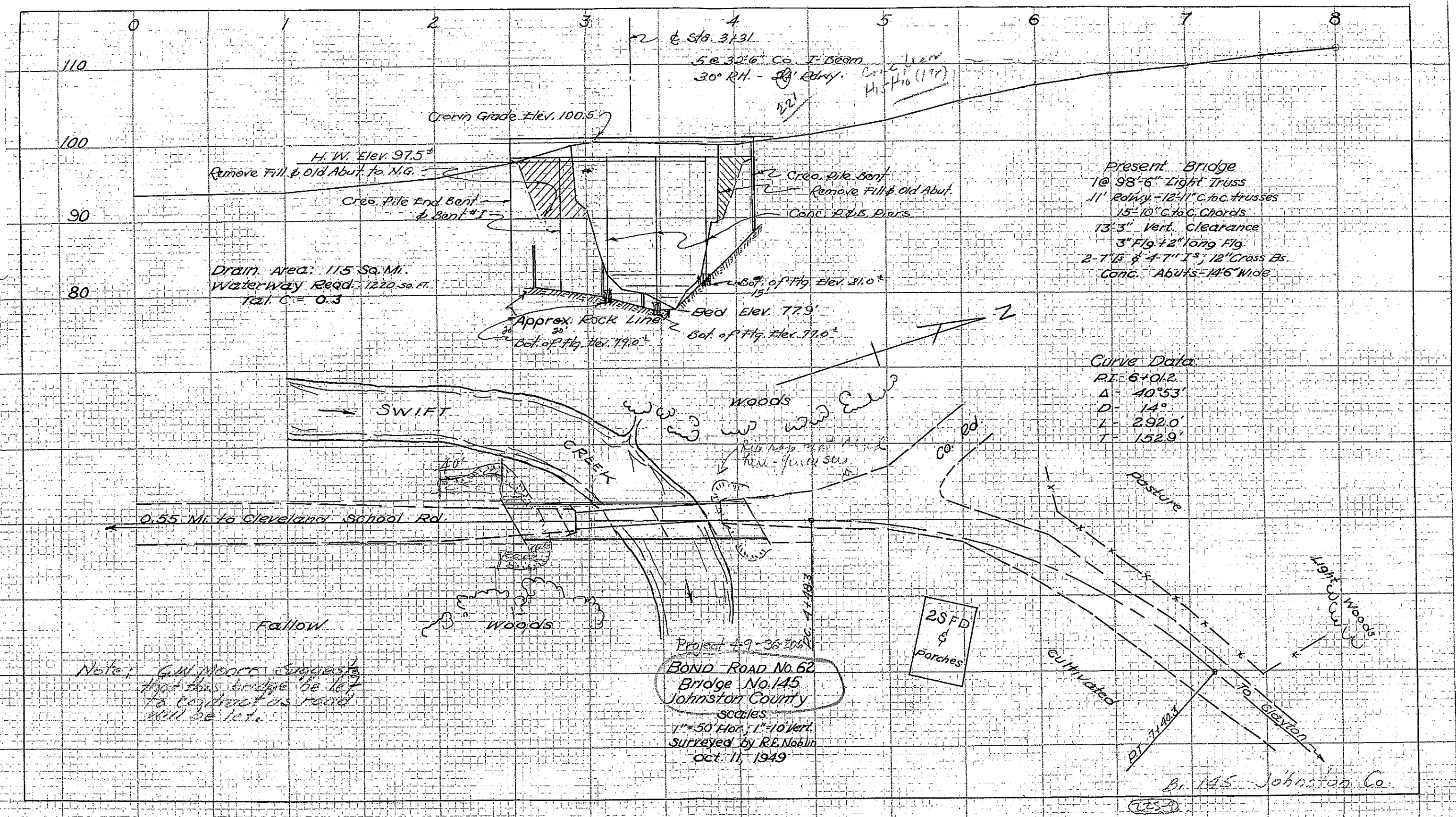
35.57492, -78.49849

NORTH

USGS The National Map: National Boundaries Dataset, 3D Elevation Program, Geographic Names Information System, Nation...



4-9-36-38-3800



Present Bridge
1 @ 98'-6" Light Truss
11' Polysy. - 12" C to C trusses
15'-10" C to C Chords
13'-3" Vert. clearance
3" Fig. 7 2" long Fig.
2-7' 15" & 4-7' 1" I's; 12" Gross Bs.
Conc. Abuts - 14'-6" wide

Curve Data:
PI = 6+01.2
Δ = 40°53'
D = 14°
L = 292.0'
T = 152.9'

Project 4-9-36-3800
Bond Road No. 62
Bridge No. 145
Johnston County
scales:
1" = 50' Hor.; 1" = 10' Vert.
Surveyed by R.E. Noblin
Oct. 11, 1949

Note: G.W. Moore suggests
that this bridge be left
to collapse as road
will be let.

Br. 145 Johnston Co.
(225-1)