

OFFICE ESTIMATE

1@ 35, 1@ 40, 1@ 30' Bridge

Project# 45358.1.24

TIP# _____

Let Date _____

WBS# _____

PREDESIGN-PRESURVEY REPORT

County ALEXANDER (DIV. 12)

Bridge# 010081

Road# SR 1332

Stream LOWER LITTLE RIVER

(LITTLE RIVER)
(CHURCH RD.)

Type Of Request: POC Force Account TIP NCMA

Date 6/27/13 Name Wsh

Checked By MJY 7-16-13

Prior Survey Date 10-69 (attach copy of prior survey)

BAN: 3e30' CO. YES
BK: 10-69 FILE ATTACHED
10-69 10-69

Study By Scour Section NONE

Flood Zone AE Detail Study LIMITED Date 12/18/07 Panel# 3820

B.M. Info N/A

Quad Map TAYLORSVILLE Drainage Area 13.7 Sq. Mi. From QUAD SHEET

Q25 2600 cfs Q50 3200 cfs Q100 3700 cfs Method REG. EQU.
RURAL REGION 1

EXISTING BRIDGE INFORMATION

Location 0.05 MI. E. JCT SR 1333

Average Daily Traffic 600 (2009) 6% TRK.

Length 91' Bed- To Crown 15' Water Depth 1'

Type Structure PRECAST PRESTRESSED CONC. CHANNELS, TIMBER PILES & PPC CAPS

Type Spans 1e 30' 3" 1e 30' 0" 1e 30' 3"

Upstream Structure 010084 SR 1310 (LOWER LITTLE RIVER)

Location 0.5 MI. N. JCT. SR 1334

Bed- To Crown 10' (H2O 1' DEEP) Prior Survey _____

Downstream Structure 010077 SR 1313 (LOWER LITTLE RIVER)

Location 0.8 MI. W. JCT. SR 1328 (DASS = 28.2 Sq. Mi.)

Bed- To Crown 20' (H2O 1' DEEP) Prior Survey _____

SCS Watershed _____

ENVIRONMENTAL

TVA NO ✓

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

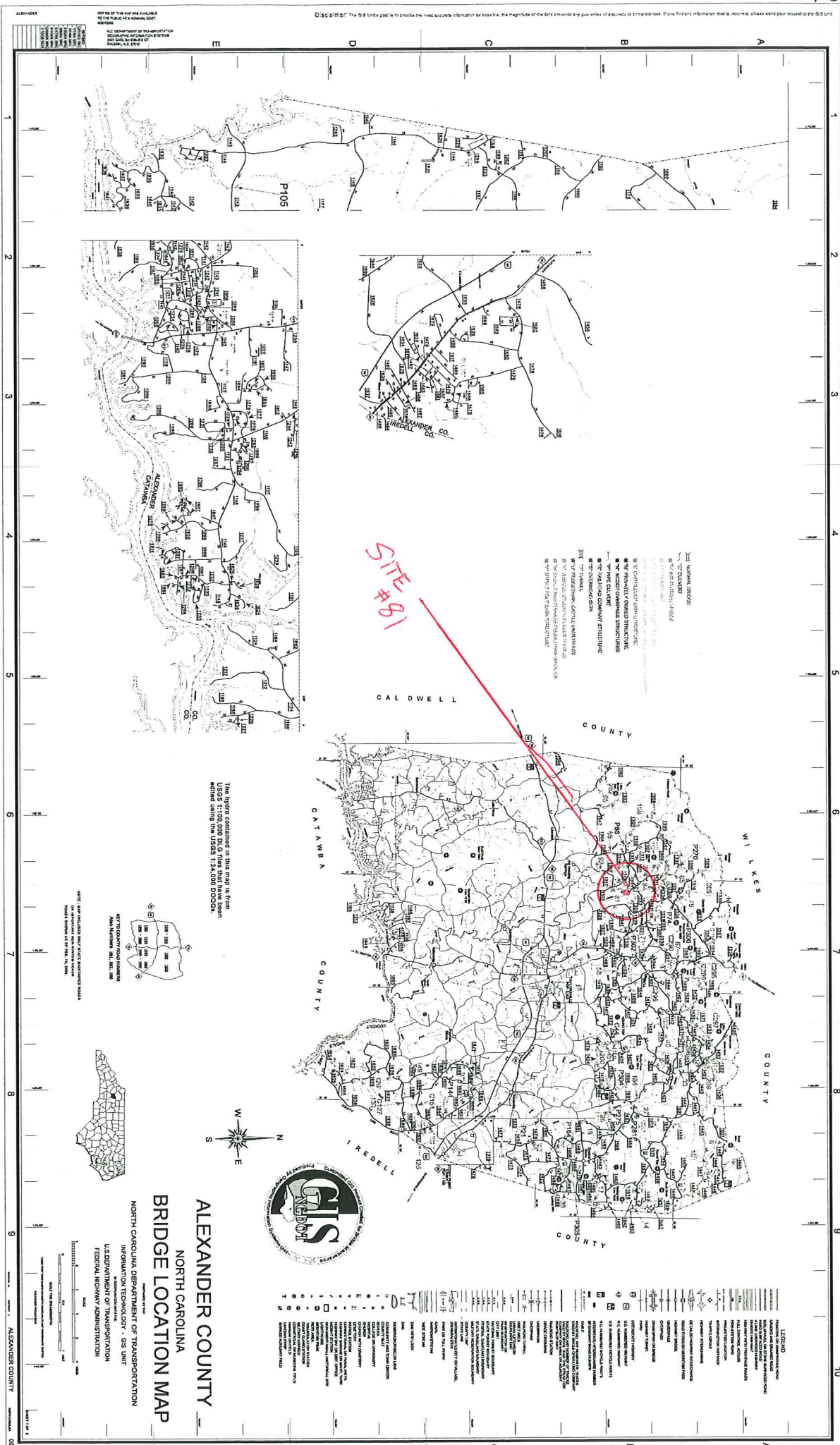
11-69-(0.5) ✓

DENR River Basin Info. CATAWBA ✓

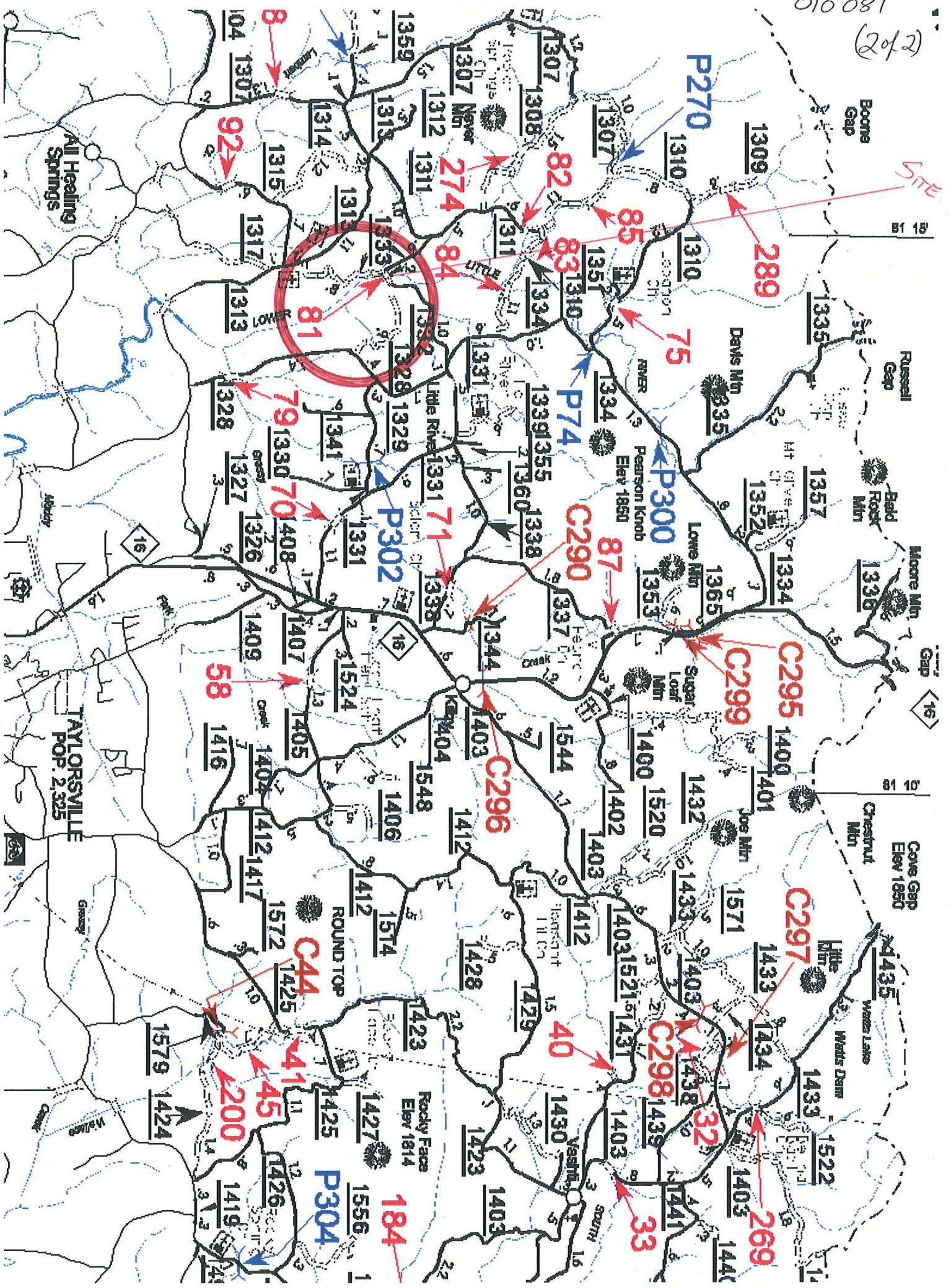
(FROM SOURCE TO A
POINT 0.5 U/S OF
MOUTH OF STIREWALT CRK.)

6/27/13 HAS HEC RAS PROFILE

(1 of 2)



Site #81



010081



4535.81.24 BRC # 010081
SR 1332 LOWER LITTLE RIVER
DA=13.7 SO MILES
QUAD = TAYLORSVILLE

MOUNTAINS

BOONE
ALEXANDER CO

LITTLE RIVER

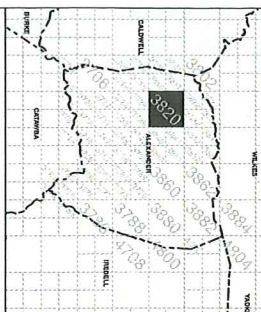
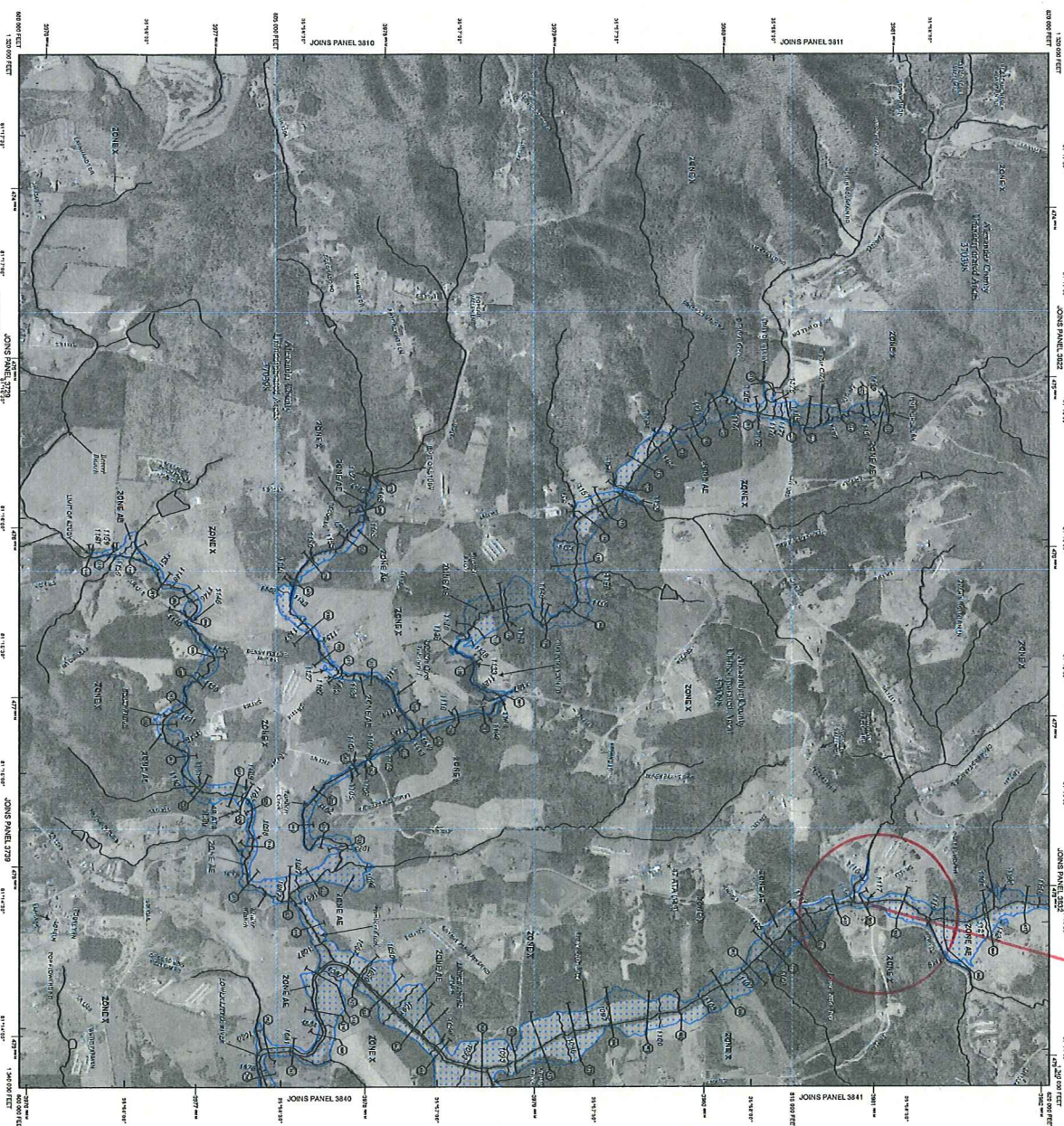
LITTLE RIVER

WILLIAMS CO
ALEXANDER CO



1#28601

16

[illegible]

NOTES TO USERS

[illegible]

Overall, these data suggest that the use of the PBL may be very important to foster student motivation. When a student is motivated, he or she will find it easier to learn. The following table summarizes the findings of the study.

Findings	Implications
1. The use of the PBL was found to be effective in increasing student motivation.	1. The use of the PBL should be encouraged in all schools.
2. The use of the PBL was found to be effective in increasing student achievement.	2. The use of the PBL should be encouraged in all schools.
3. The use of the PBL was found to be effective in increasing student self-esteem.	3. The use of the PBL should be encouraged in all schools.
4. The use of the PBL was found to be effective in increasing student social skills.	4. The use of the PBL should be encouraged in all schools.
5. The use of the PBL was found to be effective in increasing student problem-solving skills.	5. The use of the PBL should be encouraged in all schools.

The findings of this study suggest that the use of the PBL is a very effective way to increase student motivation, achievement, self-esteem, social skills, and problem-solving skills. The use of the PBL should be encouraged in all schools.

the 1990s, a number of studies and randomized surveys showed compelling reasons to show that the use of a condom is the most effective way to prevent HIV infection. The use of a condom is also the only method that can protect against other sexually transmitted diseases. As a result, a United Nations report in 1992 stated that "the use of condoms is the most effective way to prevent HIV infection."

Based on the above information, the following are the reasons why the use of a condom is the most effective way to prevent HIV infection:

- 1. It is the only method that can protect against other sexually transmitted diseases.
- 2. It is the only method that can protect against HIV infection.
- 3. It is the only method that can protect against other sexually transmitted diseases.
- 4. It is the only method that can protect against HIV infection.

As a consequence, the United Nations report in 1992 stated that "the use of condoms is the most effective way to prevent HIV infection."

Condoms are available in a variety of sizes and shapes. They are made of latex, polyurethane, or nitrile. They are used by placing them over the penis and rolling them down to the base of the penis. They are used by placing them over the penis and rolling them down to the base of the penis.

For more information, please contact the National AIDS Institute at 1-800-458-5231 or the National Center for HIV/AIDS at 1-800-458-5231.

[illegible]

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.

ZONE AO
Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
Flood depths of 1 to 3 feet (usually where flow on sloping terrain); Flood depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A1
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently overflooded. Zone A1 indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X
Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

 OTHERWISE PROTECTED AREAS (OPAs)

COBs areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

 the actual source floodplain boundary

513
(PL 287)
Flood Elevation, flood depths or flood velocities.
Base Flood Elevation line and value; elevation in feet.
Base Flood Elevation value where uniform within zone.
Elevation in feet.
Referenced to the North American Vertical Datum of 1920

Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
97°40'39" 32°58'38"
4278 mm
1900-meter Universal Transverse Mercator grid data, zone 17

200-Jahr and values: North Carolina State page coordinator
green@pilotstate.org. Blue Pages NCD 82 West
North Carolina State Survey bench mark (for more information
visit <http://www.ncd.com/ncd/82/82a.html>).

◆ **BN45710**
● **UL5**
Riser Nails
Nails are 2 1/2" on Vertical Center Marks or Contractor's Choice
Nail Up! Branch Nails! for more information visit
<http://www.bushnells.com>

GRID NORTH

MAP SCALE 1" = 1000' (1 : 12,000)

500 0 1000 2000 FEET

NEIP
M
PANEL 3820J
EIPM

INITIAL
FLOOD INSURANCE RATE MAP
NORTH CAROLINA

PANEL 3820
(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM
PANEL LAYOUT)

ANCE

CONTAINS:

COMMUNITY

ALABAMA COUNTY

CD No.

271596

PAGE

3023

2

INSUR

GOOD IN

Notice to Users: The *Map Reader* shown below should be used when plotting map content. The *Community Reader* shown above should be used in insurance applications for the Auto community.

ONAL

EFFECTIVE DATE
DECEMBER 18, 2007

MAP NUMBER
371038200

NATIONAL

State of North Carolina
Federal Emergency Management Agency



010081



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

NUMEROUS REPAIRS OF CHANNEL LEGS IN ALL SPANS...

PMN'S ISSUED FOR CHANNEL LEGS...

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY ALEXANDER BRIDGE NUMBER 010081 INSPECTION CYCLE 2 YRS

ROUTE SR1332 ACROSS LITTLE RIVER M.P. 0

LOCATION 0.05 MI.E.JCT.SR1333

SUPERSTRUCTURE PRECAST PRESTRESSED CONCRETE CHANNELS

SUBSTRUCTURE END&INTBTS:PPC CAPS ON TIMBER PILES

SPANS 1@30'3, 1@30'0, 1@30'3

LONGITUDE 81° 14' 33.32"

LATITUDE 35° 58' 20.55"

PRESENT CONDITION POOR

INVENTORY RATING

INSPECTION DATE 10/04/2012

OPERATING RATING

PRESENT POSTING SV 23 TTST 26 SV 23 TTST 26

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT 4 DELINEATORS



WEST TO EAST

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

<u>No</u>	WEIGHT LIMIT	<u></u>
<u>No</u>	DELINEATORS	<u></u>
<u>No</u>	NARROW BRIDGE	<u></u>
<u>No</u>	ONE LANE BRIDGE	<u></u>
<u>No</u>	LOW CLEARANCE	<u></u>

010081

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 11/06/2012

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :
ALEXANDER	12	2	010081	91 FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1332	LITTLE RIVER

LOCATED :	BRIDGE NAME :	CITY :
0.05 MI.E.JCT.SR1333		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	600 2009	LT 233 RT 233

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1970	BMU	6.782063		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 15 FT		1 FT

SUPERSTRUCTURE :	PRECAST PRESTRESSED CONCRETE CHANNELS
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SUBSTRUCTURE :	END&INTBTS:PPC CAPS ON TIMBER PILES
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SPANS :	1@30'3, 1@30'0, 1@30'3
---------	------------------------

BEAMS OR GIRDERS :	10 SECTIONS OF PRECAST PRESTRESSED CONCRETE CHANNELS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
PPCCH,3 AWS		25.5 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
24 FT	24.917 FT	LT .4585 FT RT .4585 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	25	DATE	11/05/2012
HS-1	HS-1	inch	SV 19				

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

UNDER ROUTES AND CLEARANCES

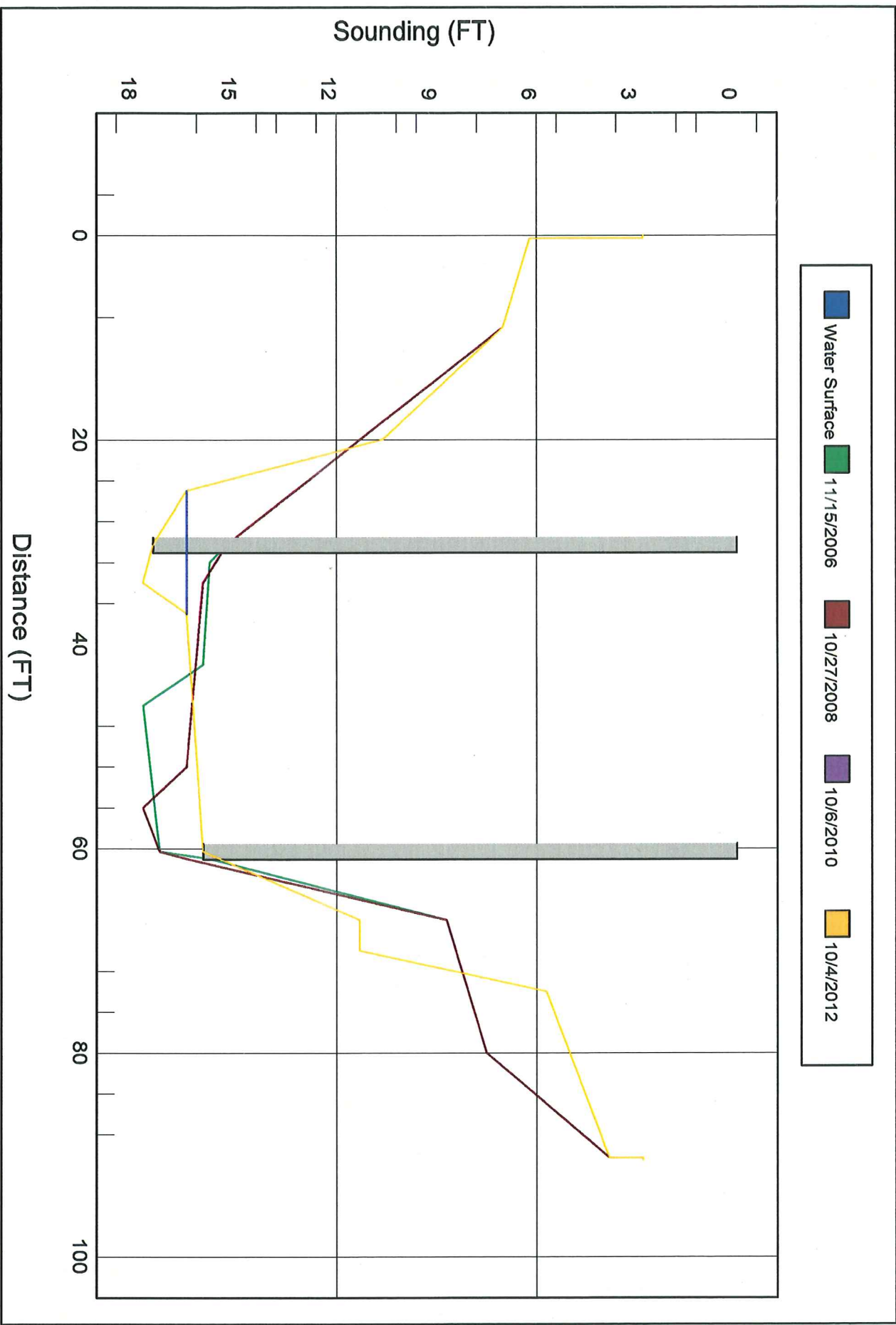
REMARKS :

010081

Bridge: 010081 County ALEXANDER Date: 10/04/2012

Top of Rail = 0 FT (Sounding)

STREAMBED PROFILE (Downstream)





EAST FACE PIER (1) AND ABUT. (A)



SOUTH PROFILE

£1+32.0

3030'
120°5

H.W. Elev. 797.0

BN ELEV. 100.00 (ASSUMED)
2 NAILS IN SIDE OF PINE 35' RT
STA. 1790

79 61011.80.0

D.A. 1550 Miles
MAF 825 CFS
Q50 3960 CFS

SR 1333

SR 1331

ROAD

N. C. STATE HIGHWAY COMMISSION
 ALEXANDER COUNTY
 BRIDGE NO. 8/
 LOWER LITTLE RIVER
 SR NO. 1331

Surveyed By: JWC

Date 10-69

Scale: 1" = 50' Hor., 10' Ver.

10th Oct



ZONE X

SR 1311

SR 1313

OAKWOOD FARMS RD

BUMGARNER
HOLLOW DR

YONDER
VALLEY DR

SCOOTER LN

THURSTON DR

SR 1333

SR 1313

ZONE AE

SR 1333

ZONE AE

SR 1334

ZONE X

Lower Little River

ZONE X

SR 1328

SR 1324

Section 5.0 – Engineering Methods

Table 9—Limited Detailed Flood Hazard Data

Cross Section ¹	Stream Station ²	Flood Discharge (cfs)	1% Annual Chance Water-Surface Elevation (feet NAVD 88)	Non-Encroachment Width (feet) ³
LOWER LITTLE RIVER				
943	94,272	5,140	1,116.9	43 / 138
946	94,608	5,140	1,117.3	50 / 42
951	95,056	4,640	1,118.1	165 / 78
955	95,501	4,640	1,118.5	97 / 134
960	95,988	4,640	1,119.3	318 / 100
965	96,476	4,640	1,119.7	54 / 48
969	96,858	4,640	1,121.1	171 / 99
972	97,185	4,640	1,121.5	32 / 41
977	97,697	4,640	1,123.9	30 / 83
982	98,160	4,640	1,125.8	31 / 31
985	98,492	4,640	1,127.6	34 / 35
991	99,084	4,640	1,129.6	54 / 49
LOWER LITTLE RIVER TRIBUTARY 1				
002	248	1,450	865.2 ⁴	44 / 24
006	628	1,450	865.2 ⁴	58 / 24
010	1,045	1,450	865.2 ⁴	22 / 25
015	1,476	1,450	865.2 ⁴	30 / 23
018	1,820	1,450	866.9	27 / 27
022	2,212	1,180	869.4	29 / 27
025	2,523	1,180	873.2	37 / 20
028	2,816	1,180	876.3	23 / 23
031	3,115	1,180	878.2	25 / 25
034	3,425	1,180	880.3	23 / 17
038	3,781	1,180	885.9	47 / 17
040	3,977	1,180	887.2	19 / 27
042	4,227	1,180	888.9	27 / 27
046	4,579	1,180	890.1	26 / 26
048	4,765	1,180	892.1	24 / 20
050	4,989	1,180	894.1	25 / 22
052	5,242	1,010	896.0	18 / 14
055	5,515	1,010	900.7	16 / 19
058	5,782	1,010	903.4	20 / 32
061	6,075	1,010	905.4	12 / 12
063	6,258	1,010	911.1	20 / 19
065	6,508	1,010	915.1	35 / 22
068	6,758	1,010	918.1	24 / 28
070	7,008	1,010	922.6	25 / 26
073	7,274	931	926.3	24 / 24
075	7,508	931	929.2	60 / 15
078	7,752	931	932.2	22 / 22
080	7,965	931	934.7	22 / 21

STR. STA.
94240.488 -
BR. U.

RIVER STA.: 94240.488 BR. U.

Bridge : 37003-0006 - SR-1332 / Little River Rd

