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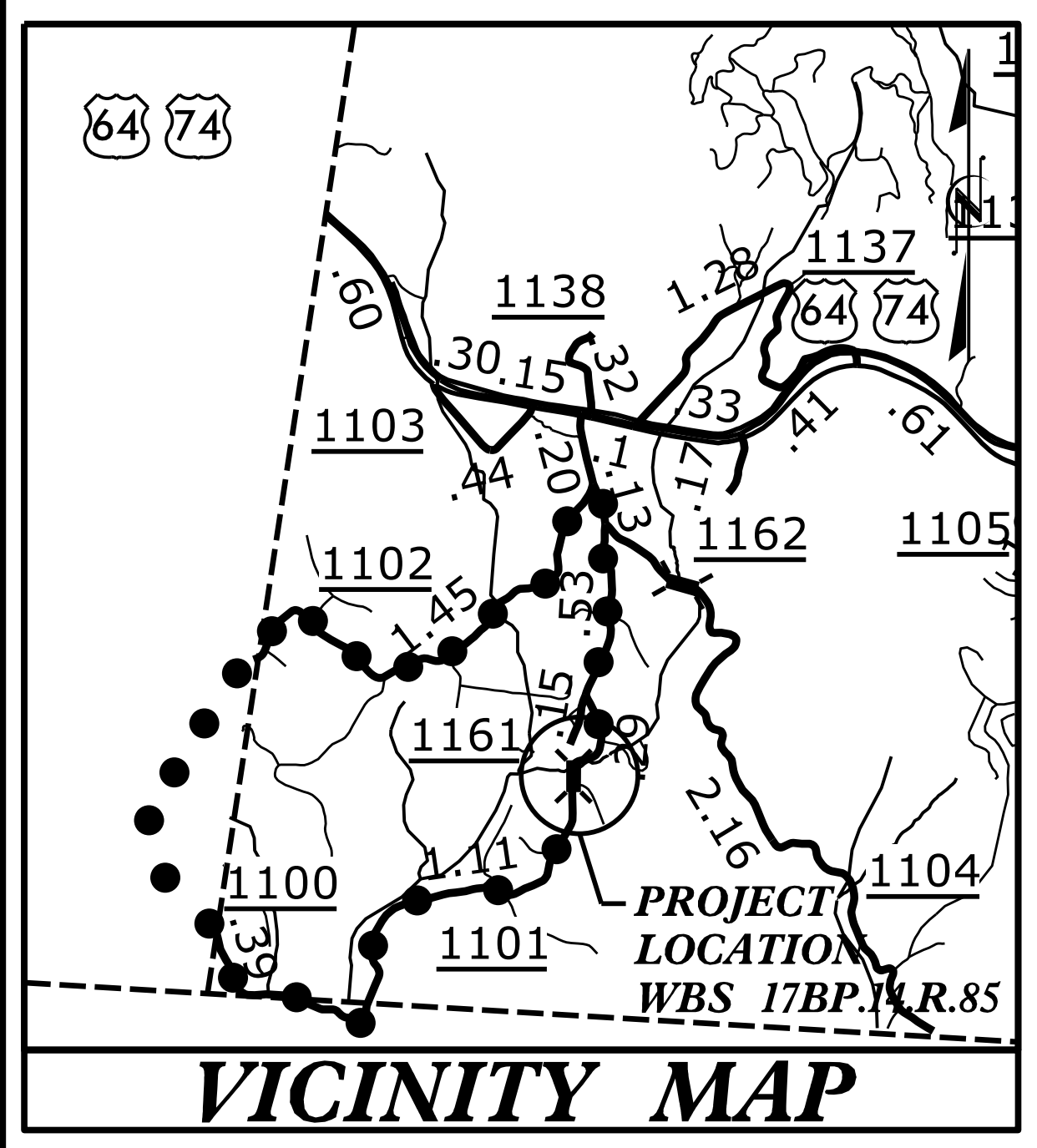
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09/08/19

**TIP PROJECT: 17BP.14.R.85**

**CONTRACT: DN0260**



●●●●● OFFSITE DETOUR

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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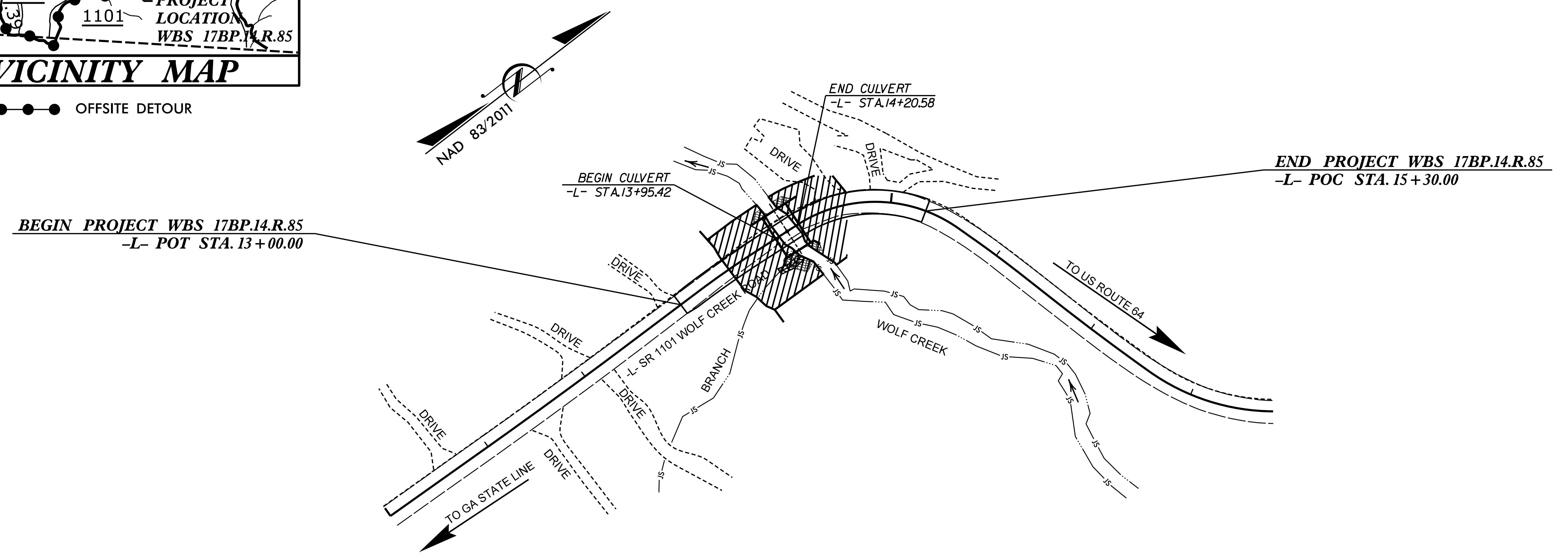
# CHEROKEE COUNTY

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**LOCATION: BRIDGE NO. 65 ON WOLF CREEK ROAD  
(SR 1101) OVER WOLF CREEK  
1.1 MILES SOUTH OF JUNCTION OF US ROUTE 64  
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND CULVERT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.85		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.R.85		P.E., ROW, UTIL	

**CULVERT**



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

**DESIGN DATA**

ADT 2010 =	380
ADT 2023 =	760
K =	N/A %
D =	N/A %
T =	6 % *
V =	20 MPH
* TTST =	DUAL
FUNC CLASS =	LOCAL
SUB-REGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT 17BP.14.R.85 =	0.040 MILES
LENGTH OF STRUCTURE TIP PROJECT 17BP.14.R.85 =	0.004 MILES
TOTAL LENGTH TIP PROJECT 17BP.14.R.85 =	0.044 MILES

**PLANS PREPARED BY:**

**DRMP**  
ENGINEERS - PLANNERS - SCIENTISTS

DRMP, INC.  
5950 FAIRVIEW ROAD, SUITE 320  
CHARLOTTE, NORTH CAROLINA 28210  
(704) 332-2289  
NC LICENSE NO. C-2213

**DIVISION OF HIGHWAYS**

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**2018 STANDARD SPECIFICATIONS**

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**LETTING DATE:**

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**JAMES E. BECK, P.E.**  
PROJECT ENGINEER

**MICHAEL D. HAGE, P.E.**  
PROJECT DESIGN ENGINEER

---

**NCDOT CONTACT:**  
**JOSHUA B. DEYTON, P.E.**  
DIVISION 14 PROJECT MANAGER

**STRUCTURES ENGINEER**

1/3/2019 P.E.

SIGNATURE: \_\_\_\_\_

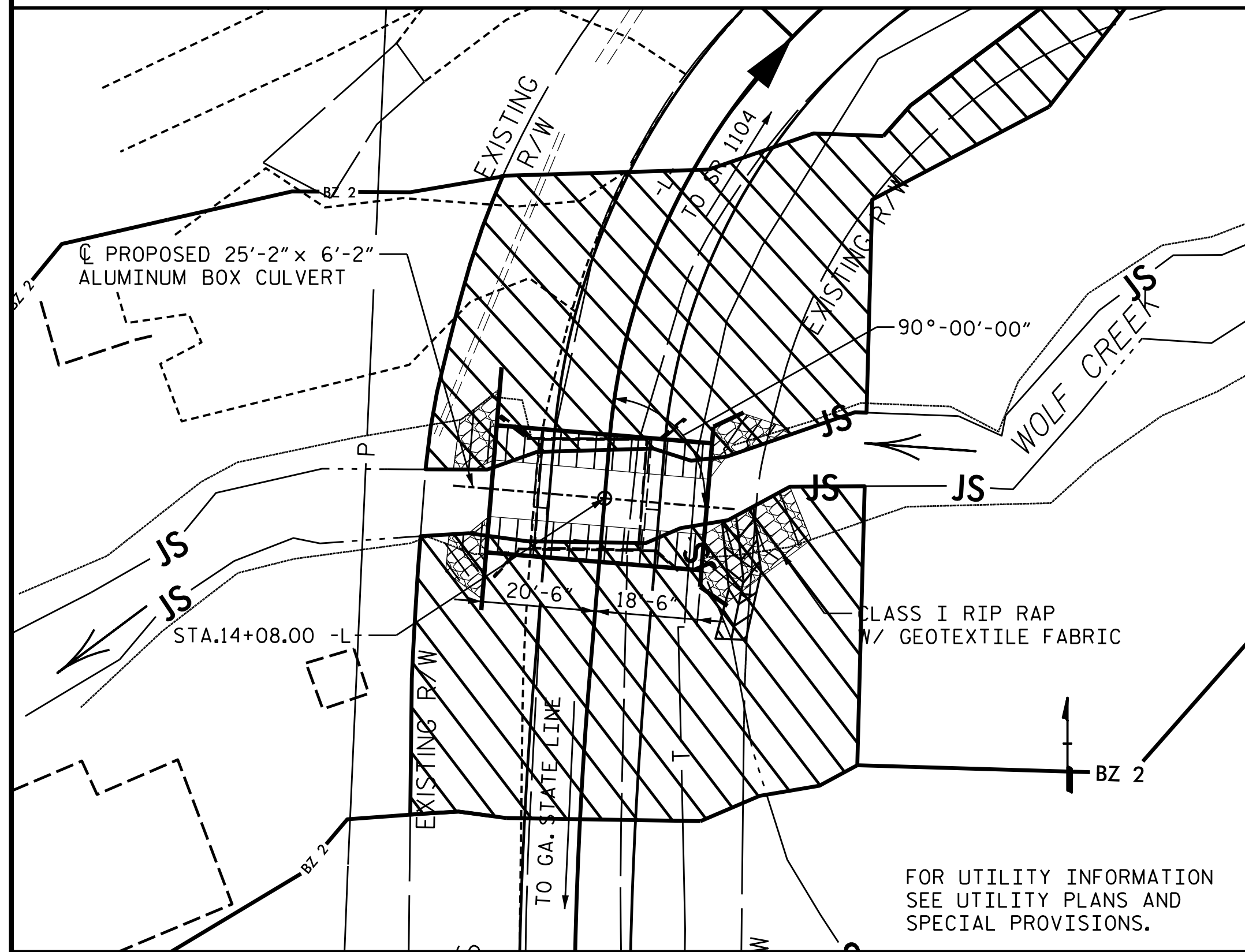
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\$\$\$\$\$ SYSTEMS \$\$\$  
\$\$\$\$\$ DGN \$\$\$  
\$\$\$\$\$ USERNAME \$\$\$



BM-1 -BL- STA 5+00.00 S 35°10'05.57" W DIST.172.52' ELEV.=1778.09' 8" SPIKE SET IN THE ROOT OF A 12" MAPLE TREE



LOCATION SKETCH

**HYDRAULIC DATA**

DESIGN DISCHARGE .....	750 CFS
FREQUENCY OF DESIGN FLOOD .....	25 YR
DESIGN HIGH WATER ELEVATION .....	1738.1 FT
DRAINAGE AREA .....	2.37 SQ MI
BASE DISCHARGE (Q100) .....	1100 CFS
BASE HIGH WATER ELEVATION .....	1739.92 FT

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE .....	850 +/- CFS
FREQUENCY OF OVERTOPPING FLOOD .....	25+ YR
OVERTOPPING FLOOD ELEVATION .....	1739.0 FT

**GRADE DATA**

GRADE POINT ELEVATION .....	1738.95
BOTTOM OF CULVERT	
@ STA.14+08.00 -L- .....	1730.33
ROADWAY SLOPES .....	2:1

DRAWN BY : J. GOODIN DATE : 10/2018  
 CHECKED BY : T. BARTELT DATE : 10/2018

\*\*\*\*\*SYSTEM\*\*\*\*\*  
 \*\*\*\*\*DCN\*\*\*\*\*  
 \*\*\*\*\*USER\*\*\*\*\*

**NOTES**

ASSUMED LIVE LOAD ..... HL-93 OR ALTERNATE LOADING.  
 MAXIMUM DESIGN FILL ..... 3.80'  
 MINIMUM DESIGN FILL ..... 2.00'

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

THE EXISTING STRUCTURE CONSISTING OF 1 @ 20'-6" TIMBER FLOOR ON TIMBER JOISTS SPAN ON TIMBER CAP & POST AND SILL END BENTS WITH 19'-1/2" CLEAR ROADWAY WIDTH SHALL BE REMOVED.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF THE CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2018.

FOR ALUMINUM BOX CULVERT, SEE SPECIAL PROVISIONS.

THE DETAILS SHOWN HERE ARE FOR GENERAL LAYOUT ONLY. THE SUPPLIER SHALL SUPPLY DESIGNS AND DETAILS FOR REVIEW AND APPROVAL THAT MEET THE REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12, AND ARE SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

UNLESS OTHERWISE INDICATED, THE SUPPLIER SHALL DESIGN, DETAIL AND FURNISH ALL STRUCTURAL ELEMENTS AND HARDWARE.

THE CORRUGATED ALUMINUM BOX CULVERT AT STATION 14+08.00 -L- IS DESIGNED FOR A FACTORED RESISTANCE OF 2 TSF. CHECK FIELD CONDITIONS FOR THE REQUIRED RESISTANCE OF 4.5 TSF JUST BEFORE PLACING CULVERT.

EXCAVATE 1 FOOT BELOW CULVERT AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS.

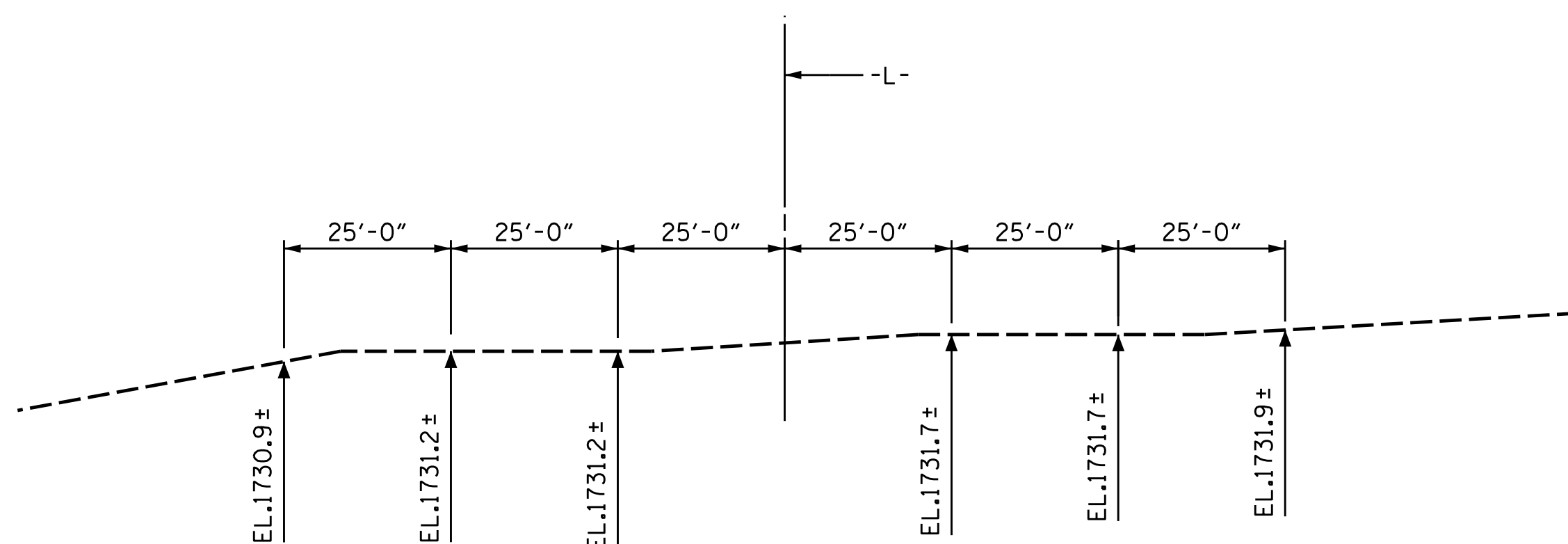
GUARDRAIL POST LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER TO ENSURE ADEQUATE COVER FOR INSTALLATION. FOR CULVERTS 24FT OR LESS, SEE ROADWAY STD. 862.01 SHEET 11 OF 12 AS OPTIONAL GUARDRAIL PLACEMENT.

AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

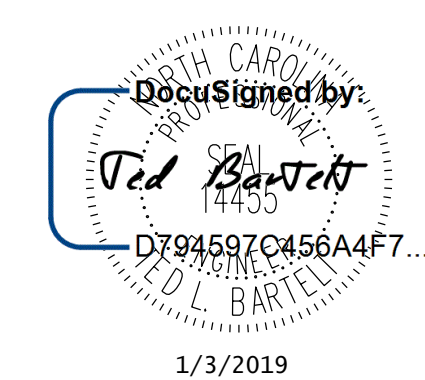
FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

FOR CHANNEL SUBSTRATE MATERIAL FOR NATIVE STONE, SEE SPECIAL PROVISIONS.

TOTAL STRUCTURE QUANTITIES	
ALUMINUM BOX CULVERT	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	77 TONS
REMOVAL OF EXISTING STRUCTURE	LUMP SUM
CLASS I RIP-RAP	21 TONS
GEOTEXTILE FABRIC	56 SY
ASBESTOS ASSESSMENT	LUMP SUM
CHANNEL SUBSTRATE MATERIAL FOR NATIVE STONE	76 TONS



PROFILE ALONG CULVERT



DESIGN ENGINEER OF RECORD  
 Ted Bartelt

DATE: 1/3/2019

PLAN PREPARED BY:



4601 Lake Boone Trail Suite 3C Raleigh, NC 27607  
 Phone 919 981 0310 Fax 919 981 0451  
 www.aogroup.com Firm License No. C-1684  
 A&O PROJECT NO. 2013.060

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
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PROJECT NO. 17BP.14.R.85  
 CHEROKEE COUNTY

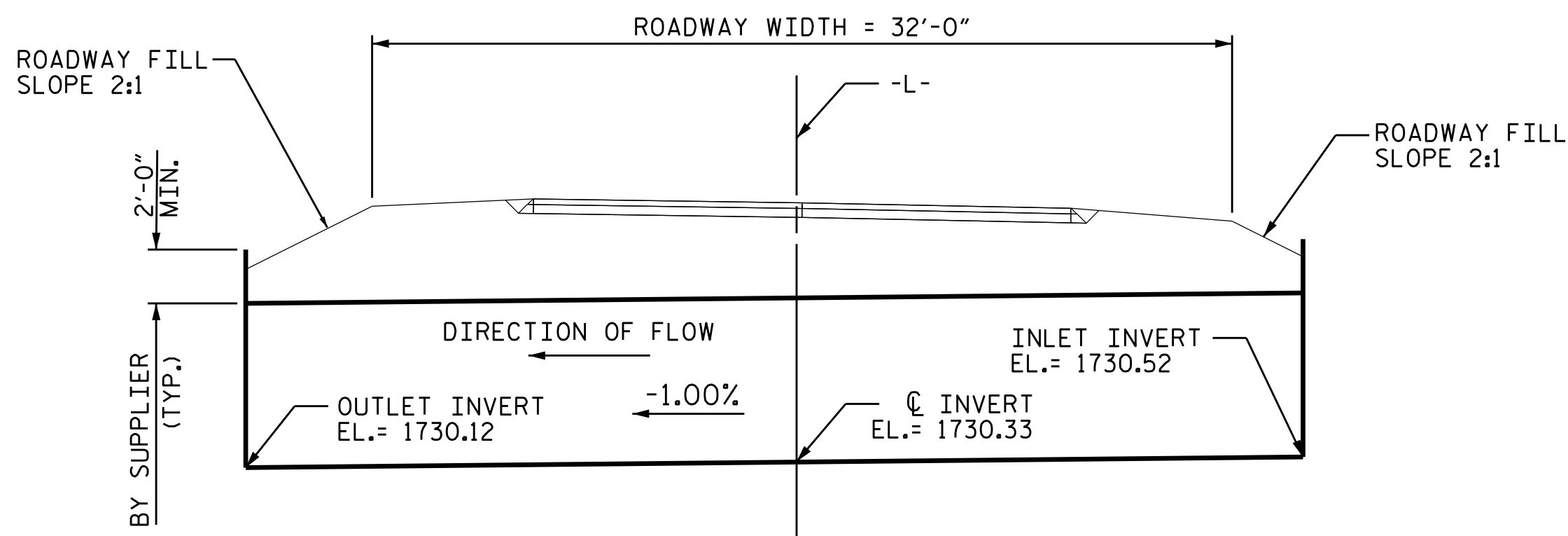
STATION: 14+08.00 -L-

SHEET 1 OF 3 REPLACES BRIDGE NO. 190065

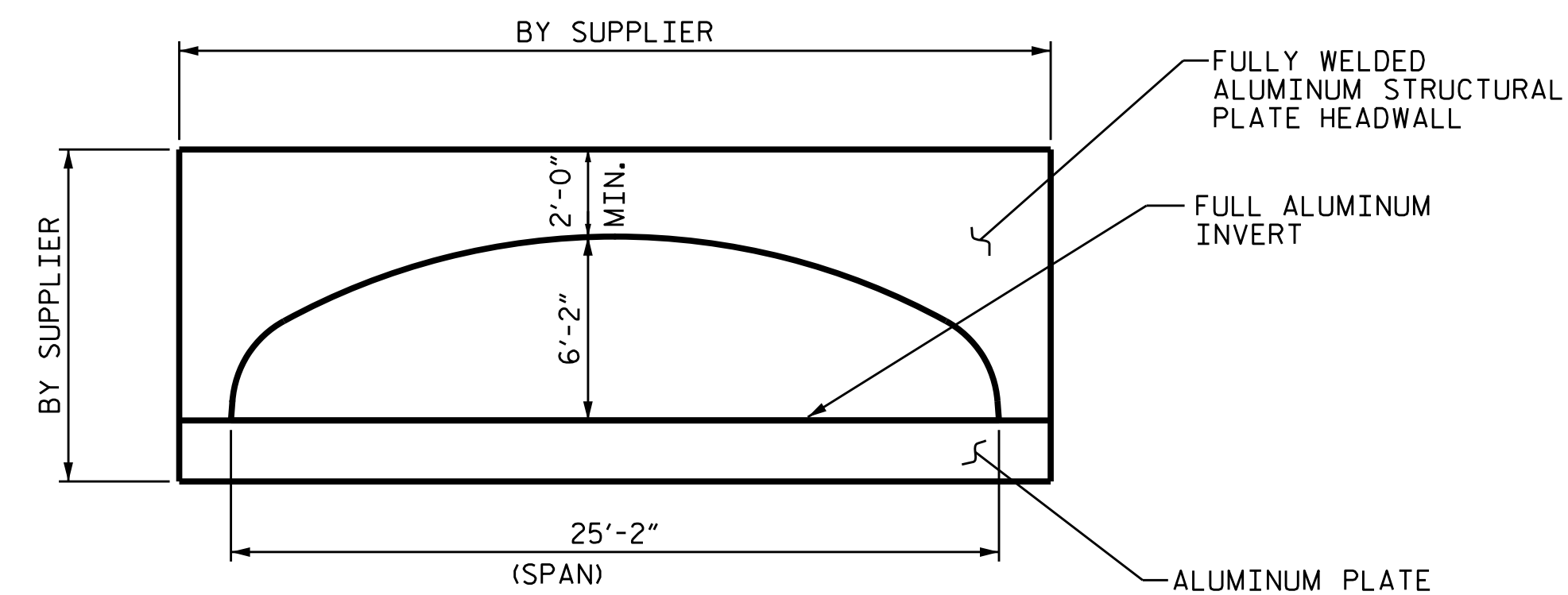
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SINGLE 25'-2" X 6'-2"  
 ALUMINUM BOX CULVERT  
 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			3

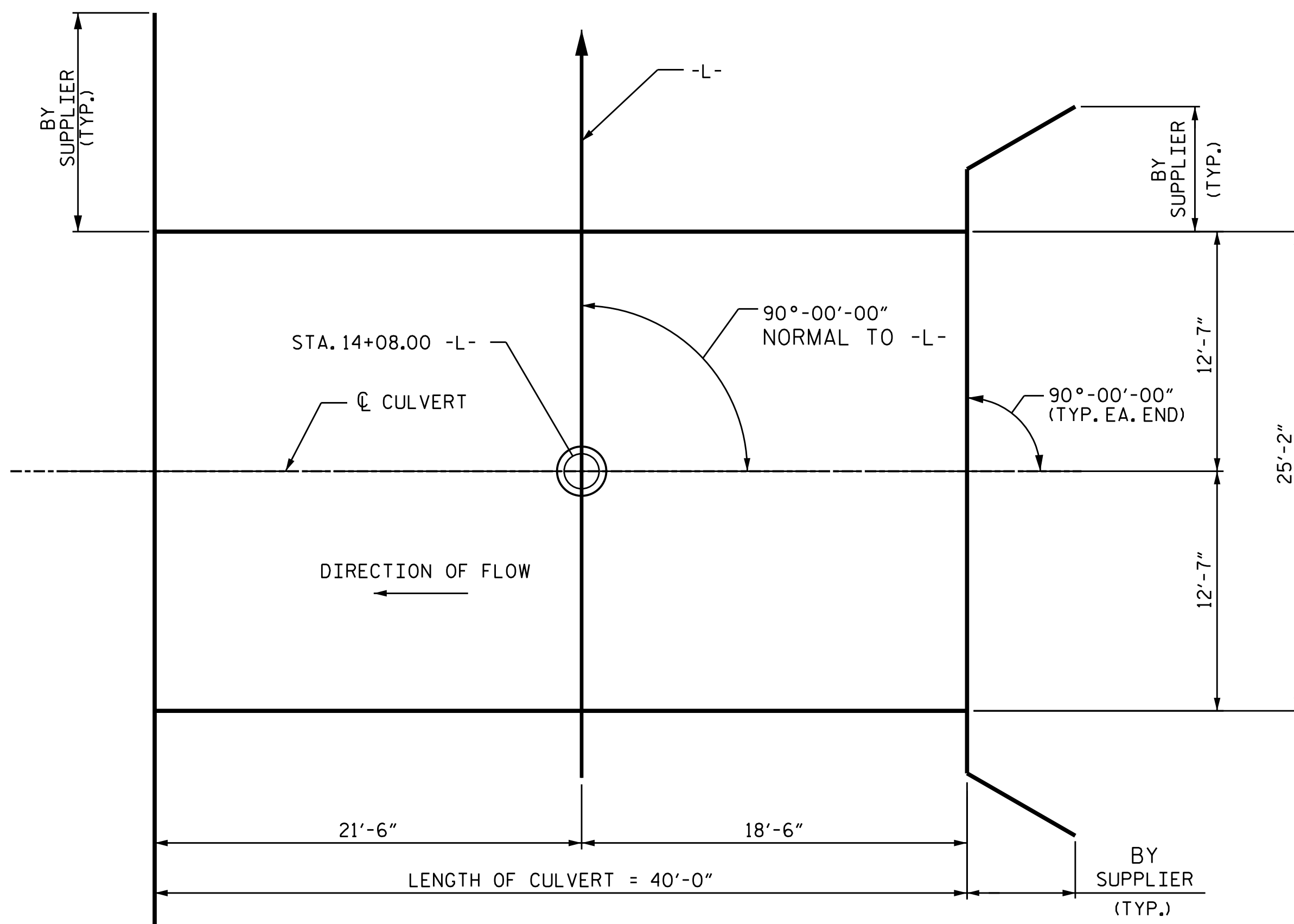


**CULVERT SECTION NORMAL TO ROADWAY**



**END ELEVATION**

(INLET AND OUTLET END)



**PLAN VIEW**

DOCUMENT NOT CONSIDERED  
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SIGNATURES COMPLETED

PROJECT NO. 17BP.14.R.85

CHEROKEE COUNTY

STATION: 14+08.00 -L-

SHEET 2 OF 3 REPLACES BRIDGE NO. 190065

DESIGNED BY:  
*Ted Bartelt*  
14453  
D794597C456A4F7...  
1/3/2019  
DESIGN ENGINEER OF RECORD  
Ted Bartelt  
DATE: 1/3/2019

PLAN PREPARED BY:  
1998 **20** 2018  
**ALPHA & OMEGA GROUP**  
CIVIL | STRUCTURAL | WATER RESOURCES

4601 Lake Boone Trail Suite 3C Raleigh, NC 27607  
Phone 919 981 0310 Fax 919 981 0451  
www.aogroup.com Firm License No. C-1684  
A&O PROJECT NO. 2013.060

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SINGLE 25'-2" X 6'-2"  
ALUMINUM BOX CULVERT  
90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-2
1			3			TOTAL SHEETS
2			4			3

DRAWN BY : J. GOODIN DATE : 10/2018  
CHECKED BY : T. BARTELT DATE : 10/2018

\*\*\*\*\*SYSTEM\*\*\*\*\*  
\*\*\*\*\*DCN\*\*\*\*\*  
\*\*\*\*\*USERNAME\*\*\*\*\*



### NOTES

NATIVE MATERIAL EXCAVATED FROM THE EXISTING STREAM BED OR FLOOD PLAIN SHALL BE STOCKPILED AND LATER PLACED IN THE PROPOSED CULVERT BETWEEN SILLS TO PROVIDE A CONTINUOUS LOW FLOW CHANNEL. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS. SEE SPECIAL PROVISIONS FOR CHANNEL SUBSTRATE MATERIAL FOR NATIVE STONE.

THE STOCKPILED NATIVE MATERIAL SHALL BE PLACED AS SHOWN IN THE "FLOOR SILL LAYOUT" SKETCH TO PROVIDE A 1'-0" DEPTH LOW FLOW CHANNEL BETWEEN LOW FLOW SILLS AND SHALL BE PLACED TO THE DEPTH OF 2'-0" BETWEEN HIGH FLOW SILLS.

SUPPLEMENTAL STONE OF SIMILAR CHARACTERISTICS OF THE NATIVE MATERIAL MAY BE USED AS NECESSARY WITH APPROVAL BY THE ENGINEER.

THE ENTIRE COST OF WORK REQUIRED TO PLACE THE EXCAVATED MATERIAL SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE BID FOR CULVERT EXCAVATION.

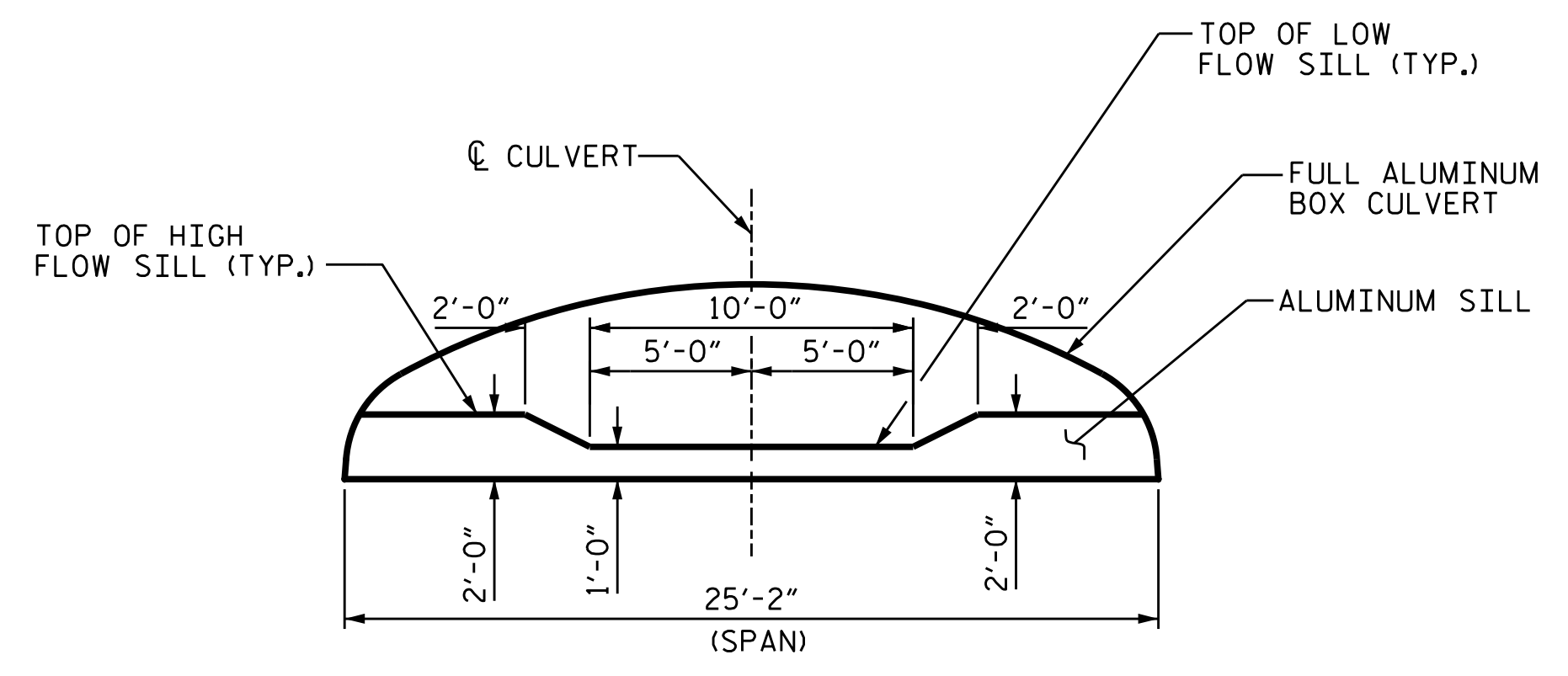
THE SILLS ARE ALUMINUM AND BOLTED INTO THE CULVERT.

THE ENTIRE COST OF THE ALUMINUM SILLS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE ALUMINUM BOX CULVERT.

TOP OF LOW FLOW SILLS SHOULD MATCH STREAM BED ELEVATION IN LOW FLOW CHANNEL OF STREAM (THALWEG.)

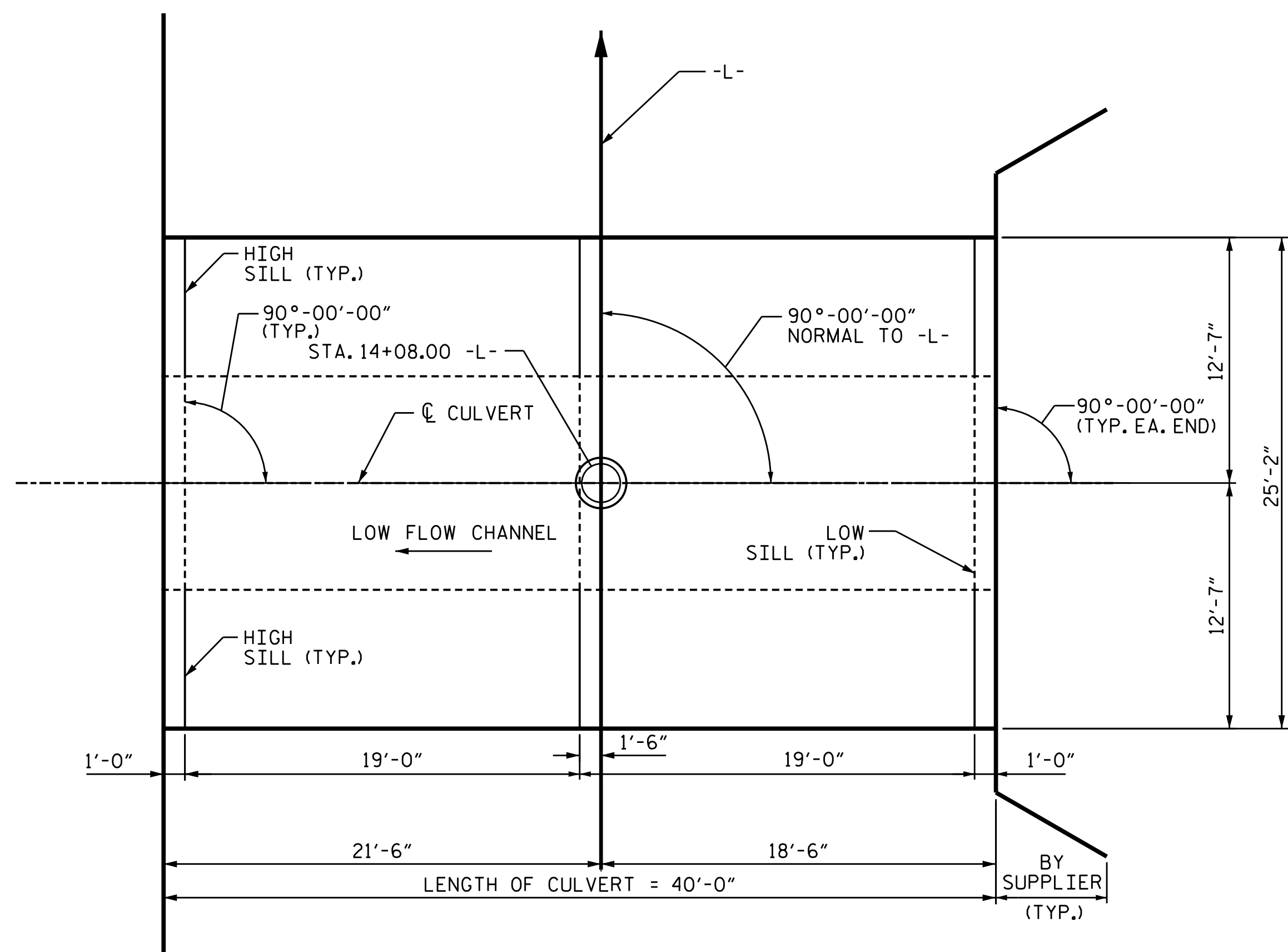
DO NOT SET ELEVATIONS OF HIGH SILL ABOVE BANK FULL.

NUMBER OF SILLS DETERMINED BY THE ENGINEER.



### ELEVATION NORMAL TO SILL

(INLET AND OUTLET END)

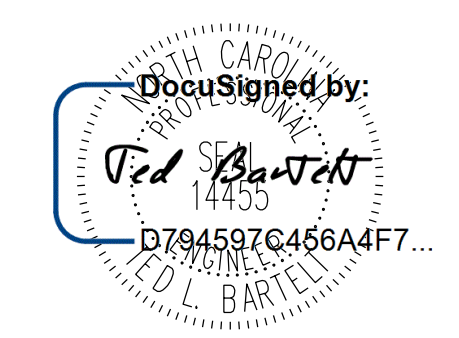


### FLOOR SILL LAYOUT

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PROJECT NO. 17BP.14.R.85  
 CHEROKEE COUNTY  
 STATION: 14+08.00 -L-

SHEET 3 OF 3 REPLACES BRIDGE NO. 190065



DESIGN ENGINEER OF RECORD  
 Ted Bartelt  
 DATE: 1/3/2019

PLAN PREPARED BY:



4601 Lake Boone Trail Suite 3C Raleigh, NC 27607  
 Phone 919 981 0310 Fax 919 981 0451  
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STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SINGLE 25'-2" X 6'-2"  
 ALUMINUM BOX CULVERT  
 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-3
1			3			TOTAL SHEETS
2			4			3

DRAWN BY : J. GOODIN DATE : 10/2018  
 CHECKED BY : T. BARTELT DATE : 10/2018

\*\*\*\*\*SYSTEM\*\*\*\*\*  
 \*\*\*\*\*DCN\*\*\*\*\*  
 \*\*\*\*\*USERNAME\*\*\*\*\*

## STANDARD NOTES

### DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	--	20,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	----	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

### MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

### CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

### CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED  $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO  $\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A  $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A  $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

### DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

### ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

### REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

### STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE  $\frac{7}{8}$ "  $\emptyset$  SHEAR STUDS FOR THE  $\frac{3}{4}$ "  $\emptyset$  STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF  $\frac{7}{8}$ "  $\emptyset$  STUDS ALONG THE BEAM AS SHOWN FOR  $\frac{3}{4}$ "  $\emptyset$  STUDS BASED ON THE RATIO OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST  $\frac{3}{16}$ " IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY  $\frac{1}{16}$ " INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

### HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

### SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

# ENGLISH

JANUARY, 1990

STD. NO. SN