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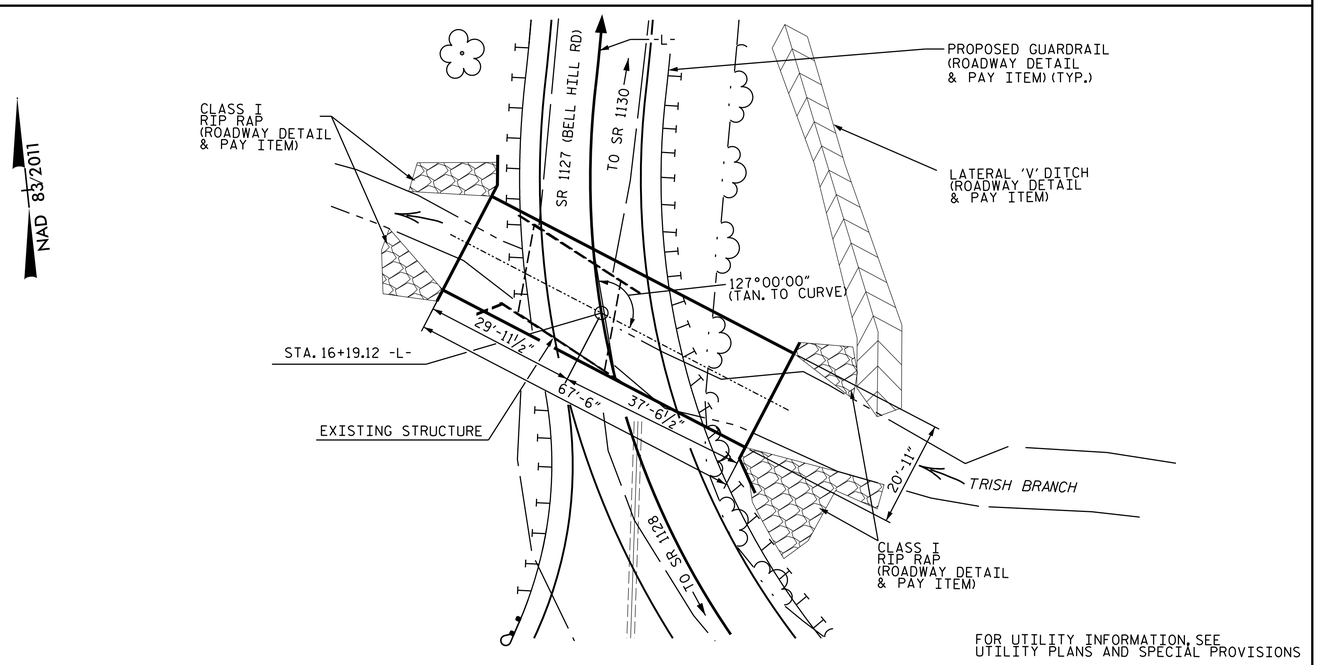
BM#2 RAILROAD SPIKE IN BASE OF 18" WALNUT TREE SOUTH OF BRIDGE; 45' LT OF STA. 15+71 -L-; ELEV. = 1558.83'



LOCATION SKETCH

HYDRAULIC DATA:

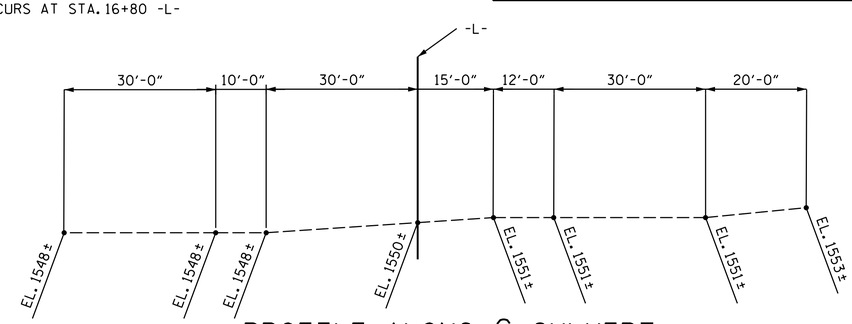
DESIGN DISCHARGE	520 CFS
FREQUENCY OF DESIGN FLOOD	25 YRS.
DESIGN HIGH WATER ELEVATION	1555.9'
DRAINAGE AREA	1.44 SQ. MI.
BASE DISCHARGE	750 CFS
FREQUENCY OF BASE DISCHARGE	100 YRS.
BASE HIGH WATER ELEVATION	1557.2'

OVERTOPPING FLOOD DATA:

OVERTOPPING DISCHARGE	600 CFS
FREQUENCY OF OVERTOPPING FLOOD	50 YRS. ±
OVERTOPPING FLOOD ELEVATION	1556.5'*

* OVERTOPPING OCCURS AT STA. 16+80 -L-

TOTAL STRUCTURE QUANTITIES	
ALUMINUM BOX CULVERT	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	104 TONS
REMOVAL OF EXISTING STRUCTURE	LUMP SUM
ASBESTOS ASSESSMENT	LUMP SUM
MOMENT SLAB	56.00 LIN. FT.



PROFILE ALONG ℄ CULVERT

DRAWN BY :	LAB	DATE :	3/19
CHECKED BY :	MGC	DATE :	4/19
DESIGN ENGINEER OF RECORD :	MGC	DATE :	4/19

NOTES:

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING 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 ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

ASSUMED LIVE LOAD - HL-93 OR ALTERNATE.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

CULVERT SHALL BE DESIGNED FOR A MINIMUM FILL DEPTH OF 1'-6" AND A MAXIMUM FILL DEPTH OF 4'-0".

FOR CULVERT DIVERSION DETAILS, SEE EROSION CONTROL PLANS.

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.

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.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET C-5

THE EXISTING 1 SPAN STRUCTURE (1 @ 18'-6") WITH A CLEAR ROADWAY WIDTH OF 19'-0" WITH A TIMBER DECK ON TIMBER JOISTS AND WITH A 1 ½" ASPHALT WEARING SURFACE; WITH A SUBSTRUCTURE CONSISTING OF TIMBER CAPS & TIMBER POSTS AND SILLS, AND LOCATED AT THE SITE OF THE PROPOSED BRDIGE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FUTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

EXCAVATE AT LEAST 1 FOOT BELOW THE CULVERT AND REPLACE EXCAVATED MATERIAL WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414-4 OF THE STANDARD SPECIFICATIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE ALUMINUM BOX CULVERT SHALL BE PLACED ON THE STANDARD 1.0 FOOT BLANKET OF FOUNDATION CONDITIONING MATERIAL. SEE SECTION 414 OF THE STANDARD SPECIFICATIONS.

UNDERCUT SOFT/LOOSE SOILS THAT MAY BE ENCOUNTERED BENEATH THE BOTTOM OF THE FOUNDATION CONDITIONING MATERIAL. BACKFILL UNDERCUT AREAS WITH FOUNDATION CONDITIONING MATERIAL. IF MORE THAN 1 FOOT OF ADDITIONAL UNDERCUT IS REQUIRED, CONTACT THE GEOTECHNICAL OPERATIONS ENGINEER.

PROJECT NO. 17BP.14.R.205

CHEROKEE COUNTY

STATION: 16+19.12 -L-

SHEET 1 OF 5

REPLACES BR. NO. 190182

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL GRAY CHEEK, JR.

DocuSigned by: Marshall Gray Cheek, Jr.
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6/15/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

TGS ENGINEERS
804-C N. LAFAYETTE ST
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

20'-11" x 6'-1"
ALUMINUM BOX CULVERT
127° SKEW

REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

SHEET NO. C-1

TOTAL SHEETS 5