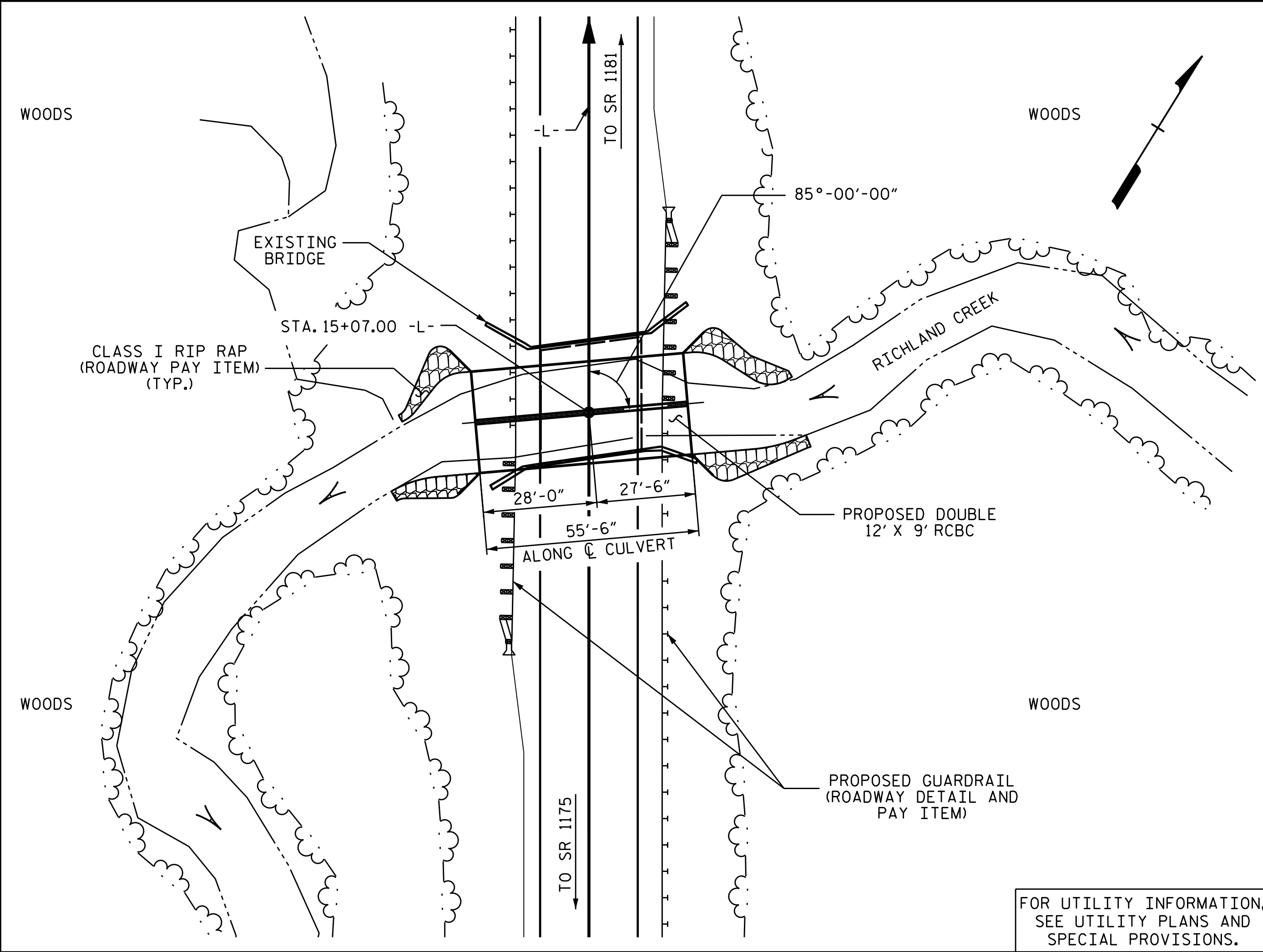


BM #1: RAIL ROAD SPIKE IN BASE OF 8" ELM 118.10' LEFT OF STA. 15+35.64, EL. 281.66

F. A. PROJECT NO. BRZ-1111(8)



LOCATION SKETCH

NOTES

- ASSUMED LIVE LOAD -----HL-93 OR ALTERNATE LOADING.
- DESIGN FILL ----- 4.58'
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:
 1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
 2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.
- THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF FILL.
- DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.
- STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- 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.
- THE EXISTING STRUCTURE CONSISTING OF SINGLE SPAN, 1 @ 29'-3", WITH A CLEAR ROADWAY WIDTH OF 25'-0" WITH DOUBLE TIMBER DECK WITH 4" ASPHALT WEARING SURFACE ON I-BEAMS AND DOUBLE CHANNELS WITH MASS CONCRETE ABUTMENTS AND LOCATED AT THE PROPOSED SITE, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT.

TOTAL STRUCTURE QUANTITIES			
CLASS A CONCRETE			
BARREL @	2.561	CY/FT	142.1 C.Y.
WINGS, ETC.			31.4 C.Y.
		TOTAL	173.5 C.Y.
REINFORCING STEEL			
BARREL		18,613	LBS.
WINGS, ETC.		1,803	LBS.
		TOTAL	20,416 LBS.
FOUNDATION CONDITIONING MATERIAL		121	TONS
CULVERT EXCAVATION			LUMP SUM
REMOVAL OF EXISTING STRUCTURE			LUMP SUM

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.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE 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.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COST RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STA. 15+07.00 -L-."

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

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

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

NO WORK SHALL BE DONE ON THE CULVERT AT STA. 15+07.00 -L- UNTIL THE AREA OF THE CULVERT HAS BEEN EXCAVATED TO COMPETENT MATERIAL AT THE DISCRETION OF THE ENGINEER AND UNSUITABLE MATERIAL REPLACED WITH FOUNDATION CONDITIONING MATERIAL AND PROPERLY COMPACTED TO THE ELEVATION OF THE BOTTOM OF THE PROPOSED CULVERT FLOOR SLAB AND WING FOOTINGS AS REQUIRED TO CONSTRUCT THE PROPOSED CULVERT. PAYMENT FOR EXCAVATION DOWN TO ONE FOOT BELOW THE BOTTOM OF THE CULVERT FLOOR SLAB AND WING FOOTINGS WILL BE FOR ALL WORK INCLUDING FOUNDATION CONDITIONING MATERIAL DOWN TO ONE FOOT BELOW THE CULVERT AND SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR CULVERT EXCAVATION. PAYMENT FOR EXCAVATION BEYOND ONE FOOT BELOW THE BOTTOM OF THE CULVERT FLOOR SLAB AND WING FOOTINGS WILL BE FOR ALL WORK INCLUDING EXCAVATION, ANY TEMPORARY SHEETING, FOUNDATION CONDITIONING MATERIAL, AND ANY OTHER MISCELLANEOUS ITEMS, AND SHALL BE INCLUDED IN THE PRICE PER CUBIC YARD FOR FOUNDATION CONDITIONING MATERIAL.

THE ESTIMATED QUANTITY FOR THE FOUNDATION CONDITIONING MATERIAL THAT IS INCLUDED IN THE LUMP SUM PAYMENT FOR CULVERT EXCAVATION IS 117 TONS. THE ESTIMATED QUANTITY THAT IS FOR THE FOUNDATION CONDITIONING MATERIAL THAT IS PLACED BEYOND ONE FOOT BELOW THE BOTTOM OF THE CULVERT FLOOR SLAB AND WING FOOTINGS IS 121 TONS. THESE QUANTITIES ARE ESTIMATES ONLY.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

HYDRAULIC DATA

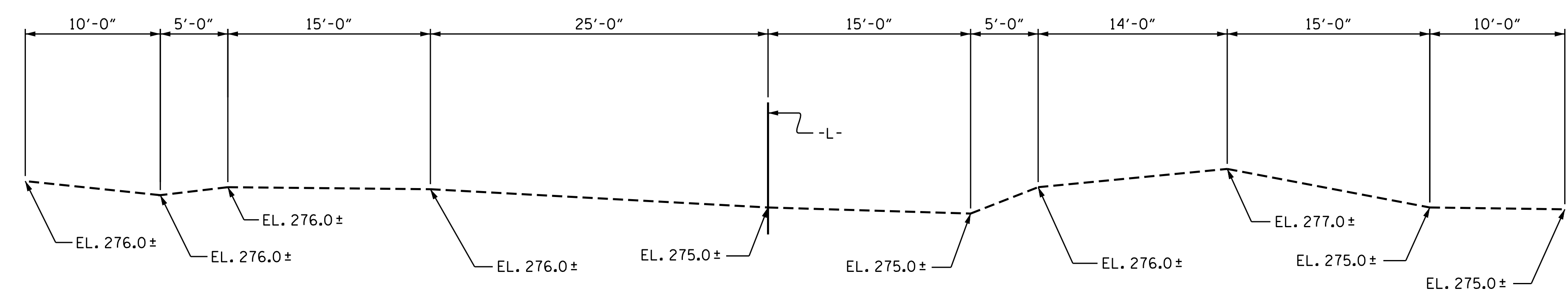
DESIGN DISCHARGE = 1000 CFS
 FREQUENCY OF DESIGN FLOOD = 25 YR.
 DESIGN HIGH WATER ELEVATION = 282.30
 DRAINAGE AREA = 2.9 SQ. MI.
 BASE DISCHARGE (Q100) = 1500 CFS
 BASE HIGH WATER ELEVATION = 283.87

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 2800 CFS
 FREQUENCY OF OVERTOPPING FLOOD = > 500 YR.
 OVERTOPPING FLOOD ELEVATION = 288.50

GRADE DATA

GRADE POINT ELEVATION @ STA. 15+07.00 -L- = 288.52'
 BED ELEVATION @ STA. 15+07.00 -L- = 274.97'
 ROADWAY FILL SLOPES = 2:1



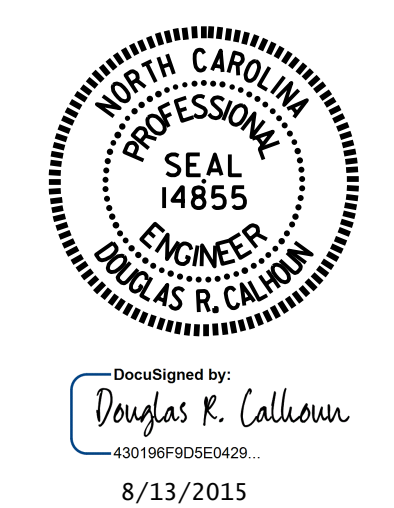
PROFILE ALONG CULVERT

PROJECT NO. B-4780
MONTGOMERY COUNTY
 STATION: 15+07.00 -L-

SHEET 1 OF 6 REPLACES BRIDGE NO. 22

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DOUBLE 12 FT. X 9 FT.
 CONCRETE BOX CULVERT
 85° SKEW



ADDED NOV. 1, 1990

ASSEMBLED BY : <u>A. SORSENGINH</u>	DATE : <u>9/2013</u>	SPECIAL
CHECKED BY : <u>T. KIRSCHBAUM</u>	DATE : <u>10/2013</u>	
DRAWN BY : <u>R.W. WRIGHT</u>	DATE : <u>JULY, 1990</u>	STANDARD
CHECKED BY : <u>D.A. GLADDEN</u>	DATE : <u>JULY, 1990</u>	

REVISIONS						SHEET NO. C-1
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			6