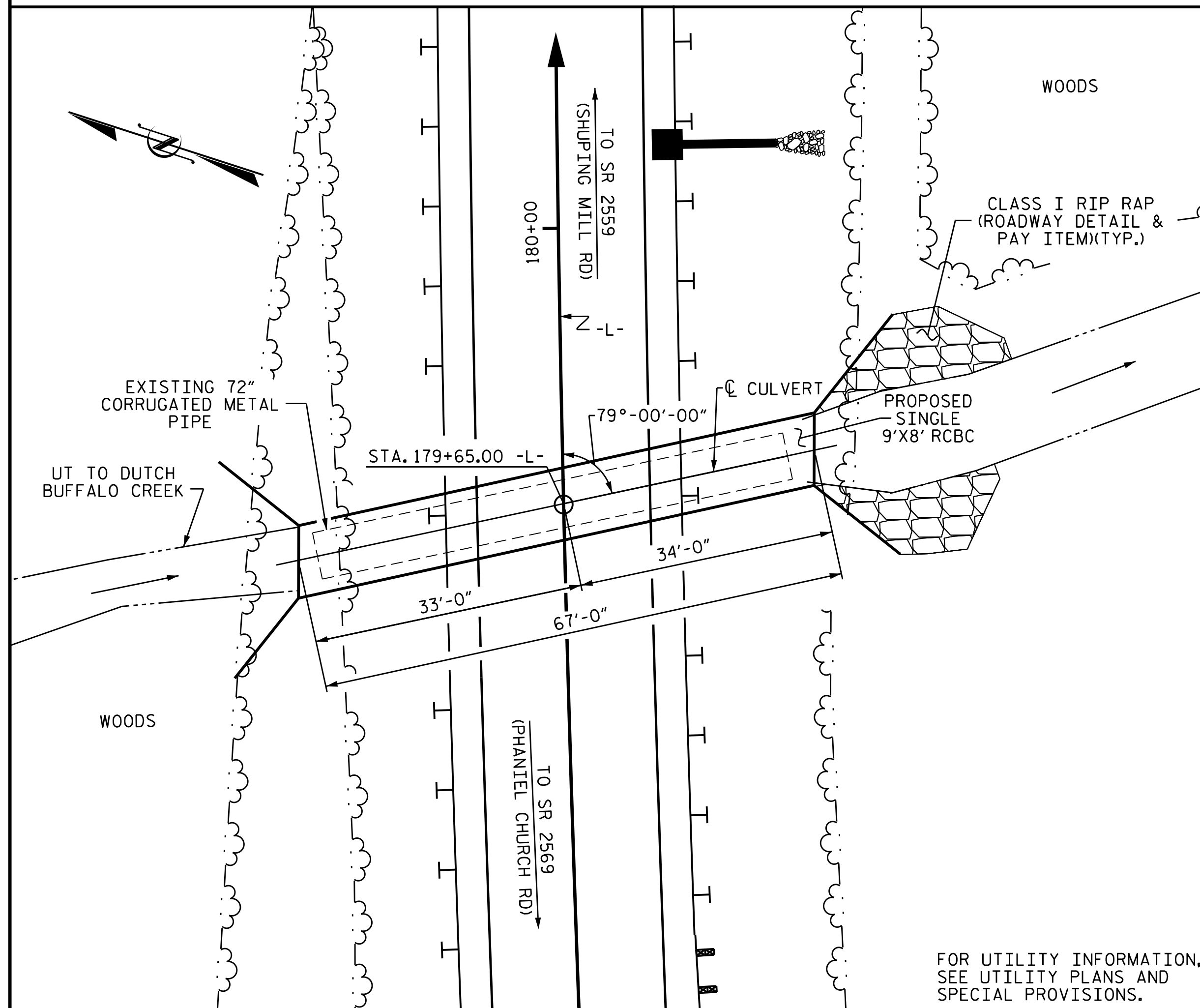
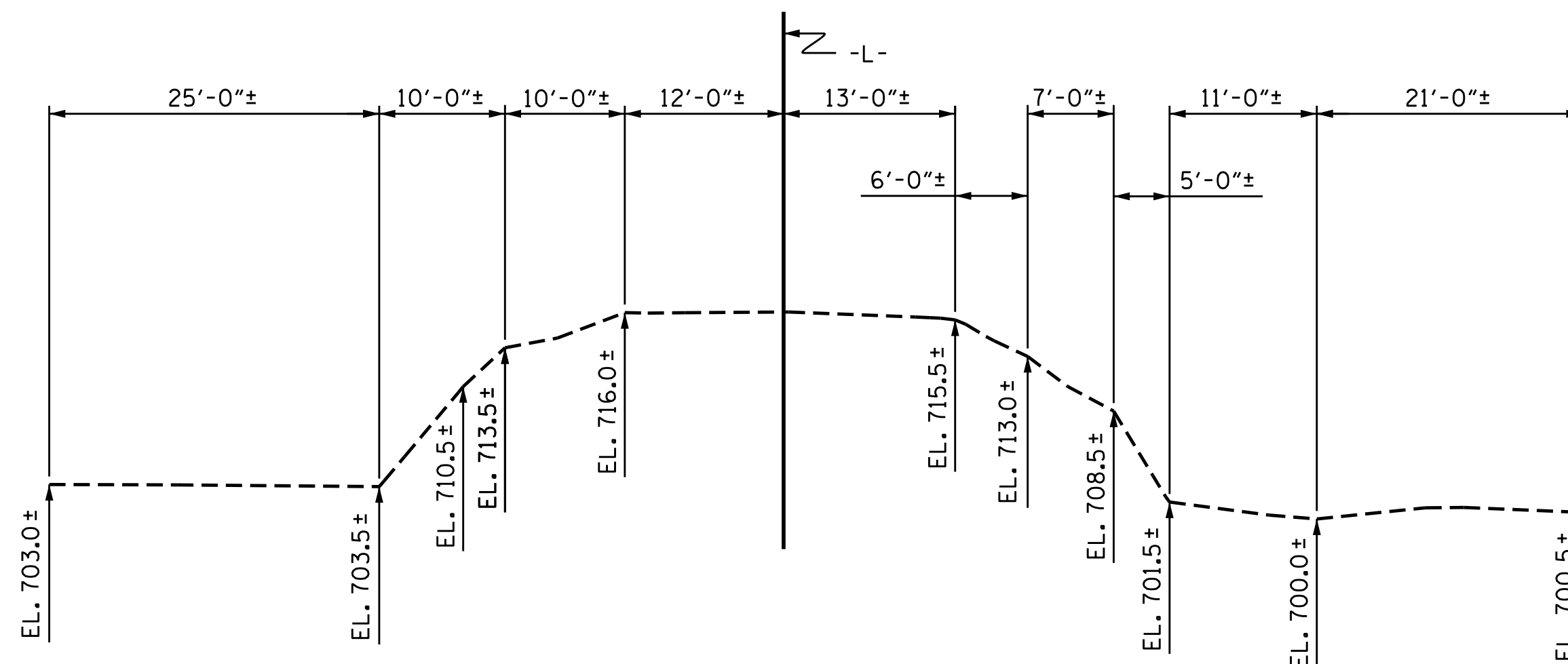


BM #6: RR SPIKE SET IN ROOT OF 24" WILLOW OAK, 111' RIGHT OF STA. 168+76.00 -L-, EL. 775.86



LOCATION SKETCH



PROFILE ALONG CULVERT

ROADWAY DATA	
GRADE POINT EL. @ STA. 179+65.00 -L-	= 717.74
BED ELEVATION @ STA. 179+65.00 -L-	= 701.10
ROADWAY SLOPES	= 2:1

HYDRAULIC DATA	
DESIGN DISCHARGE	= 700 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 25 YRS.
DESIGN HIGH WATER ELEVATION	= 712.2
DRAINAGE AREA	= 1.54 SQ. MI.
BASE DISCHARGE (Q100)	= 1,000 C.F.S.
BASE HIGH WATER ELEVATION	= 717.2

OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= 1,042 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 100 +/- YRS.
OVERTOPPING FLOOD ELEVATION	= 718.1

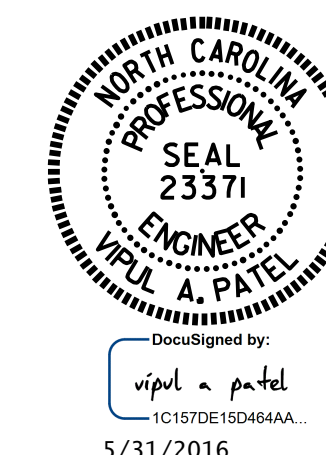
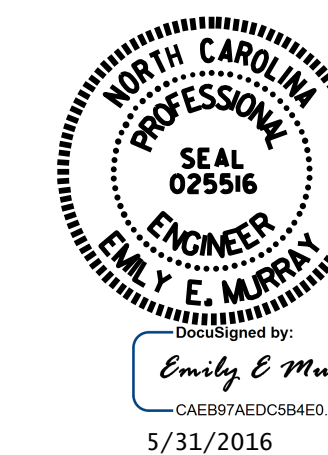
TOTAL STRUCTURE QUANTITIES	
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	68 TONS
CLASS A CONCRETE	
BARREL @ 0.941 CY/FT	63.0 C.Y.
WINGS, ETC.	25.3 C.Y.
TOTAL	88.3 C.Y.
REINFORCING STEEL	
BARREL	9,788 LBS.
WINGS, ETC.	1,547 LBS.
TOTAL	11,335 LBS.
PLACEMENT OF NATURAL STREAM BED MATERIAL	LUMP SUM

NOTES

- ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
- DESIGN FILL = 8.70 FT.
- 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 THE FILL.
- DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.
- AT THE CONTRACTORS OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL 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.
- 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.
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEMS, SEE EROSION CONTROL PLANS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTRIE LENGTH OF THE EXPANSION JOINT.
- NATURAL STREAM BED MATERIAL SHALL BE USED TO BACKFILL THE CULVERT BETWEEN THE SILLS. FOR PLACEMENT OF NATURAL STREAM BED MATERIAL, SEE SPECIAL PROVISIONS.
- THE COST FOR REMOVAL OF EXISTING 72" Ø CMP SHALL BE INCLUDED IN THE PAY ITEM FOR "CULVERT EXCAVATION".

PROJECT NO. W-5313
ROWAN COUNTY
 STATION: 179+65.00 -L-

SHEET 1 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BARREL STANDARD
 SINGLE 9 FT. X 8 FT.
 CONCRETE BOX CULVERT
 79° SKEW

REVISED 11-13-91 BY E.L.R. CHECKED BY G.R.P.
 ADDED 8-22-89

DRAWN BY : N.D'AIUTO DATE : 8/8/14
 CHECKED BY : H.A. LOCKLEAR DATE : 8/20/14
 DESIGN ENGINEER OF RECORD: N.D'AIUTO DATE : 8/20/14

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			15