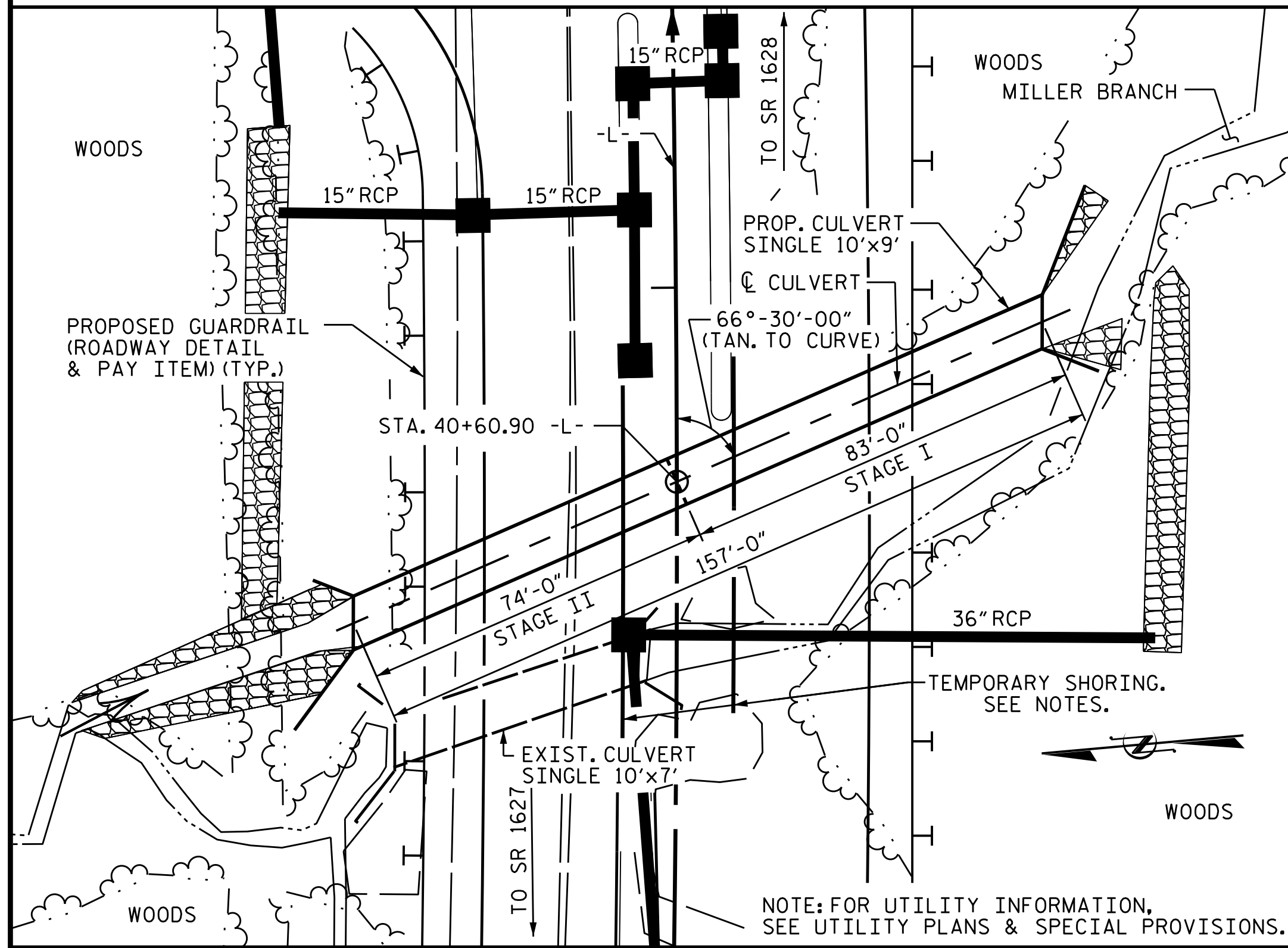


BM #4 (JAS55): STA. 40+21.00 -L-, 7' LEFT, EL.=713.02



LOCATION SKETCH

ROADWAY DATA

GRADE POINT ELEV. @ STA. 40+60.90 -L- = 718.36  
 BED ELEV. @ STA. 40+60.90 -L- = 700.86  
 ROADWAY SLOPES = 2:1

HYDRAULIC DATA

DESIGN DISCHARGE = 800 C.F.S.  
 FREQUENCY OF DESIGN FLOOD = 50 YR.  
 DESIGN HIGH WATER ELEV. = 712.90  
 DRAINAGE AREA = 0.70 SQ. MI.  
 BASE DISCHARGE (Q100) = 900 C.F.S.  
 BASE HIGH WATER ELEV. = 713.70

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 1400 C.F.S.  
 FREQUENCY OF OVERTOPPING FLOOD = 500+ YR.  
 OVERTOPPING FLOOD ELEV. = 719.40

TOTAL STRUCTURE QUANTITIES

REMOVAL OF EXISTING STRUCTURE	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	
STAGE I	90 TONS
STAGE II	80 TONS
TOTAL	170 TONS
CLASS A CONCRETE	
STAGE I	109.4 C.Y.
STAGE II	99.0 C.Y.
TOTAL	208.4 C.Y.
REINFORCING STEEL	
STAGE I	16,214 LBS.
STAGE II	14,520 LBS.
TOTAL	30,734 LBS.
PLACEMENT OF NATURAL STREAM BED MATERIAL	LUMP SUM

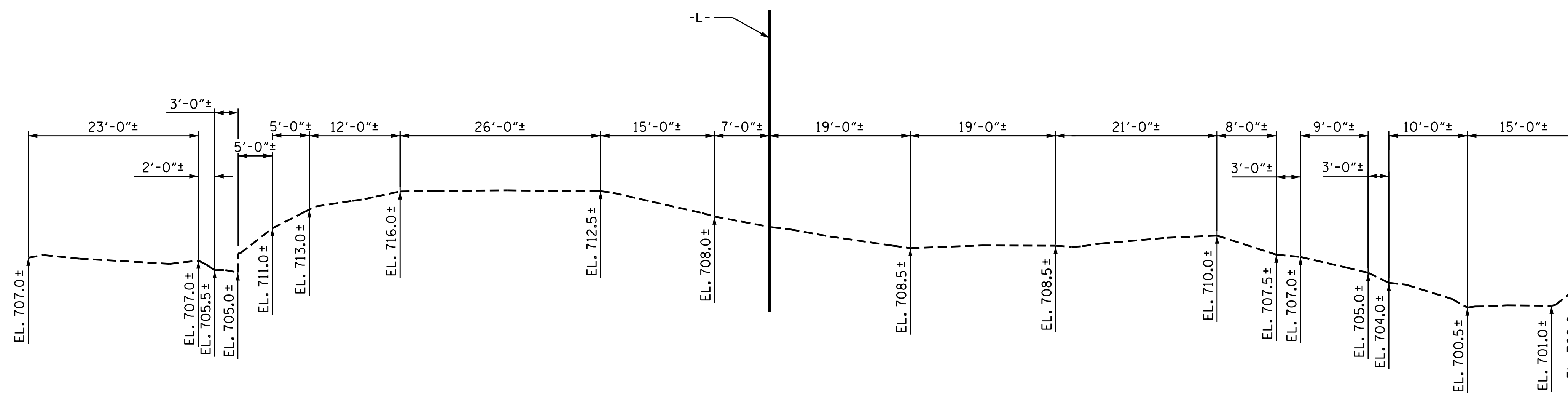
NOTES

- ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
- DESIGN FILL = 10.05 FEET.
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- DURING STAGE I & STAGE II CONSTRUCTION, 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, SILLS, BAFFLES, 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.
- TRAFFIC ON EXISTING ROAD SHALL BE MAINTAINED. IN ORDER TO MAINTAIN TRAFFIC THE CULVERT SHALL BE CONSTRUCTED IN SECTIONS AS DIRECTED BY THE ENGINEER.
- TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FEET. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- AT THE CONTRACTOR'S 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.
- 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.
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- NATURAL STREAM BED MATERIAL SHALL BE USED TO BACKFILL THE CULVERT BETWEEN THE SILLS AND BETWEEN THE BAFFLES. SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.
- FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

PROJECT NO. U-3440  
CABARRUS COUNTY  
 STATION: 40+60.90 -L-

SHEET 1 OF 5



PROFILE ALONG CULVERT



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 BARREL STANDARD  
 SINGLE 10 FT. X 9 FT.  
 CONCRETE BOX CULVERT  
 66°-30'-00" SKEW

ASSEMBLED BY : N.D. AIUTO DATE : 2/16/16  
 CHECKED BY : K.D. LAYNE DATE : 2/20/16  
 DRAWN BY : R.W. WRIGHT DATE : AUG. 1989  
 CHECKED BY : A.R. BISSETTE DATE : AUG. 1989

SPECIAL  
 STANDARD

DESIGN ENGINEER OF RECORD:  
R.P. PATEL DATE : 5/3/16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C1-1
1			3			TOTAL SHEETS
2			4			5

STR. #3 STD. NO. CB31A