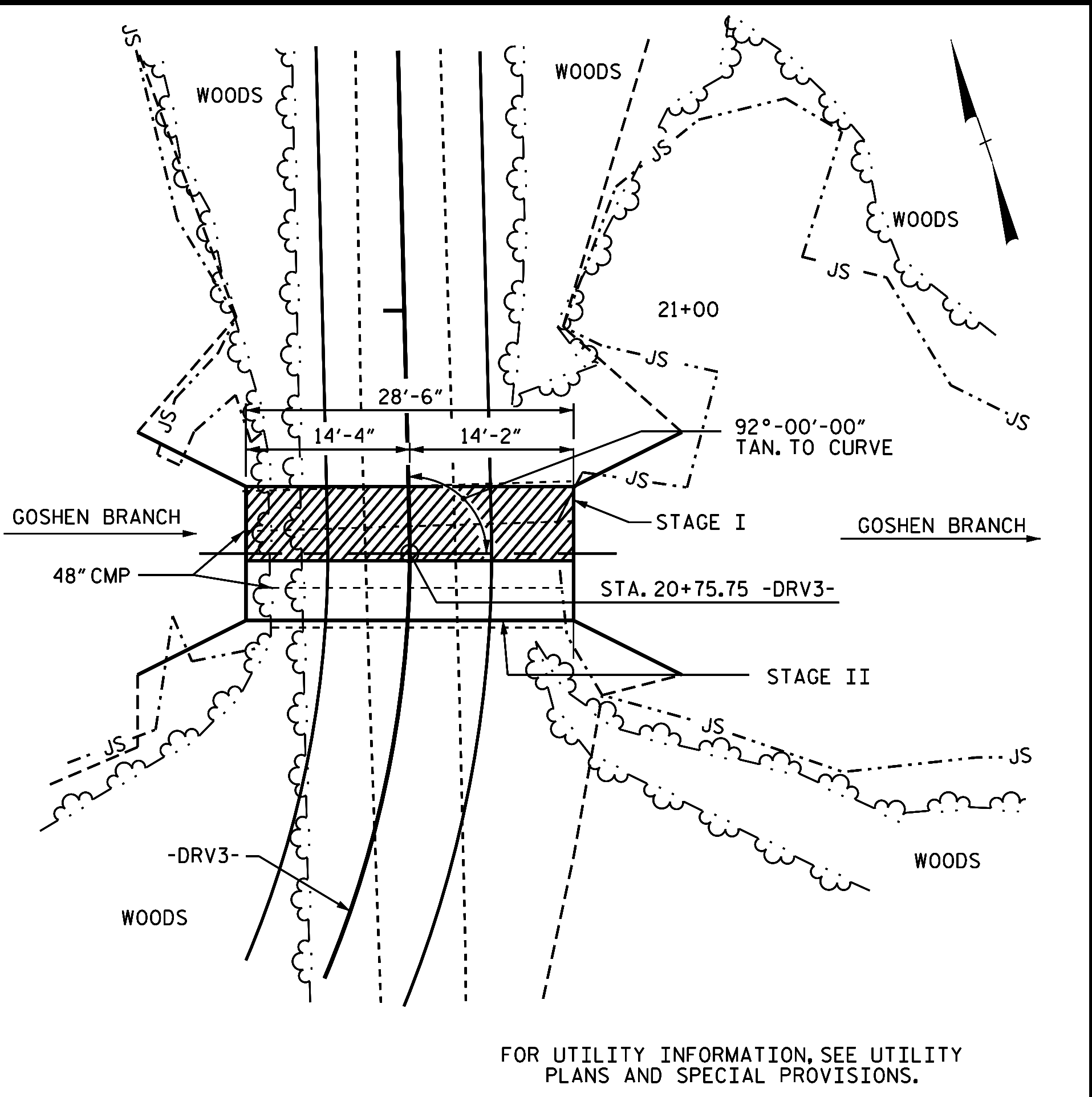


BM #18; RR SPIKE IN GUY POLE (RSQ61), STA. 372+45.00 -L-,  
 127 FT. RIGHT, EL. 9.42'



LOCATION SKETCH

**HYDRAULIC DATA**

DESIGN DISCHARGE = 280 C.F.S.  
 FREQUENCY OF DESIGN FLOOD = 10 YEARS  
 DESIGN HIGH WATER ELEVATION = 2.8  
 DRAINAGE AREA = 2.1 SQ. MI.  
 BASE DISCHARGE (Q100) = 600 C.F.S.  
 BASE HIGH WATER ELEVATION = 4.87

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE = 1100 C.F.S.  
 FREQUENCY OF OVERTOPPING FLOOD = 500 YRS.+  
 OVERTOPPING FLOOD ELEVATION = 7.8  
 OVERTOPPING -DRV3- @ STA. 19+91

**GRADE DATA**

GRADE PT. ELEV. @ STA. 20+75.75 -DRV3- = 7.98  
 BED ELEV. @ STA. 20+75.75 -DRV3- = -2.40  
 ROADWAY FILL SLOPES = 3:1

**NOTES**

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.  
 DESIGN FILL----- 2.41 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 STAGE I & STAGE II TO BE POURED IN THE FOLLOWING ORDER:
1. STAGE I WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS AS INDICATED IN THE CONSTRUCTION SEQUENCE.
  2. THE REMAINING PORTIONS OF THE STAGE I WALLS AND WINGS FULL HEIGHT.
  3. STAGE II WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF VERTICAL WALL AS INDICATED IN THE CONSTRUCTION SEQUENCE.
  4. THE REMAINING PORTION OF THE STAGE II WALLS AND WINGS FULL HEIGHT, FOLLOWED BY ROOF SLAB, 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 THE WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN IN THE WING SHEET.

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 THE 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.

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

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.

SILLS ARE TO BE PLACED ONE FOOT INSIDE EACH END OF THE CULVERT. THE CULVERT SHOULD BE BACKFILLED WITH NATIVE BED MATERIAL. BED MATERIALS SUBJECT TO APPROVAL OF THE ENGINEER.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION SEQUENCE, SEE SHEET 7 OF 8.

**STAGE I STRUCTURE QUANTITIES**

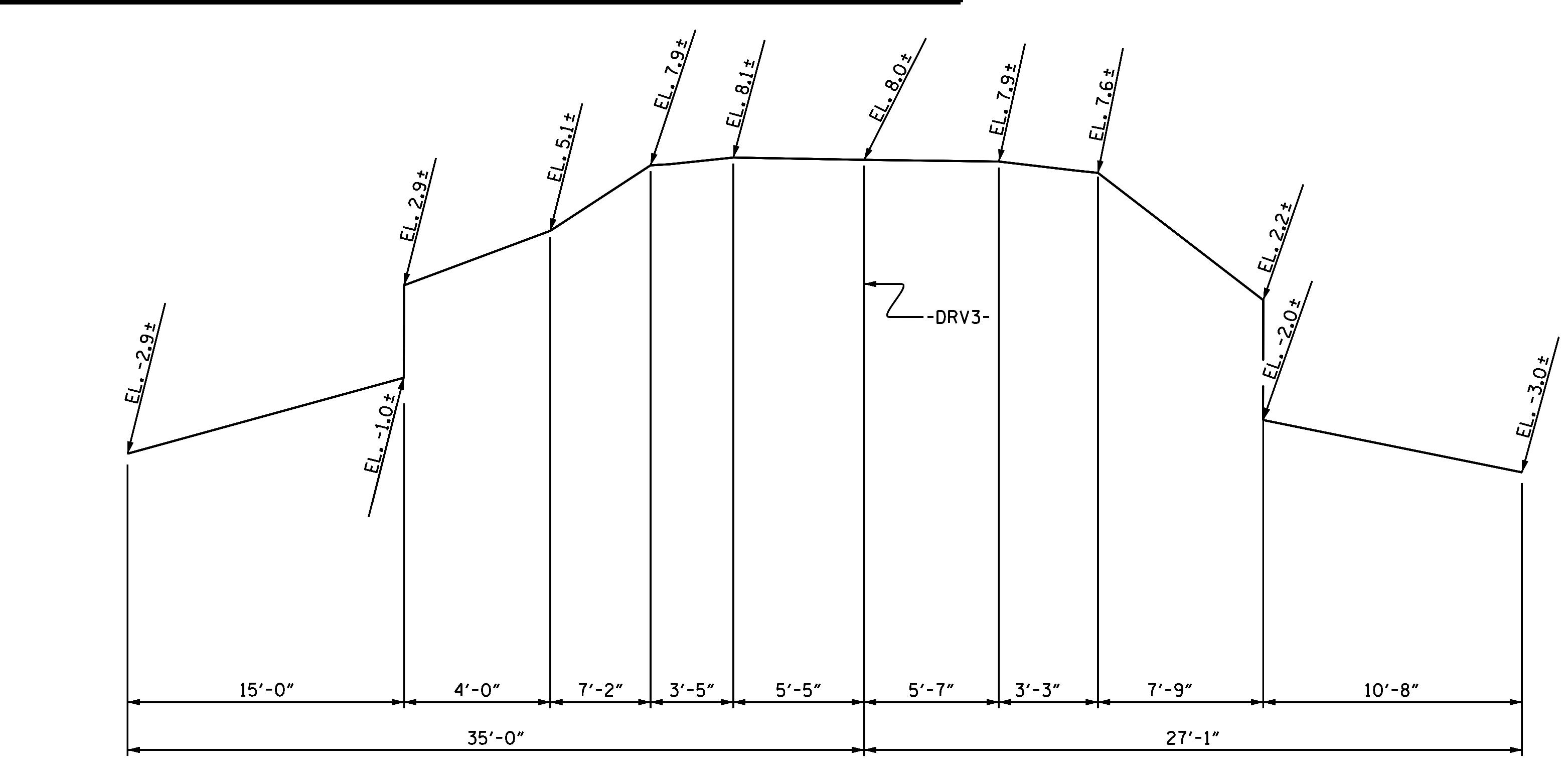
CLASS A CONCRETE	
1 BARREL	19.0 C.Y.
2 WINGS & CURTAIN WALLS	17.6 C.Y.
2 SILLS	1.2 C.Y.
<b>STAGE I CONCRETE</b>	<b>37.8 C.Y.</b>
REINFORCING STEEL	
1 BARREL	2,594 LBS.
2 WINGS	1,153 LBS.
<b>STAGE I REINFORCING STEEL</b>	<b>3,747 LBS.</b>
FOUNDATION CONDITIONING MAT'L.	29.0 TONS
CULVERT EXCAVATION	LUMP SUM

**STAGE II STRUCTURE QUANTITIES**

CLASS A CONCRETE	
1 BARREL & ROOF	33.0 C.Y.
2 WINGS & CURTAIN WALLS	17.4 C.Y.
2 HEADWALLS	1.7 C.Y.
2 SILLS	0.6 C.Y.
<b>STAGE II CONCRETE</b>	<b>52.7 C.Y.</b>
REINFORCING STEEL	
1 BARREL, ROOF, 2 HEADWALLS & 2 SILLS	3,757 LBS.
2 WINGS	1,153 LBS.
<b>STAGE II REINFORCING STEEL</b>	<b>4,910 LBS.</b>
FOUNDATION CONDITIONING MAT'L.	19.0 TONS
CULVERT EXCAVATION	LUMP SUM

**TOTAL STRUCTURE QUANTITIES**

CLASS A CONCRETE	
STAGE I	37.8 C.Y.
STAGE II	52.7 C.Y.
<b>TOTAL</b>	<b>90.5 C.Y.</b>
REINFORCING STEEL	
STAGE I	3,747 LBS.
STAGE II	4,910 LBS.
<b>TOTAL</b>	<b>8,657 LBS.</b>
FOUNDATION CONDITIONING MATERIAL	
STAGE I	29 TONS
STAGE II	19 TONS
<b>TOTAL</b>	<b>48 TONS</b>
CULVERT EXCAVATION	LUMP SUM



PROFILE ALONG CULVERT

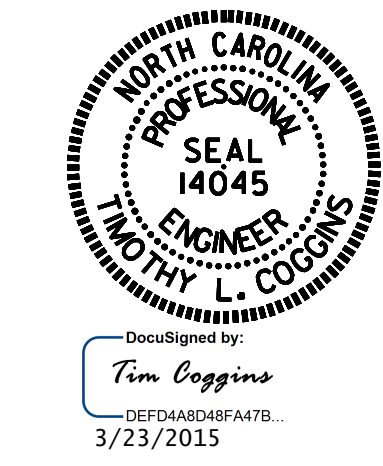
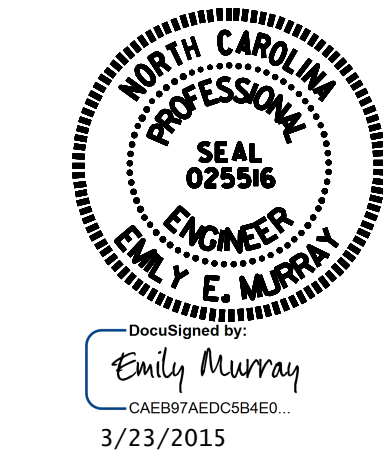
PROJECT NO. R-2514D  
 JONES & CRAVEN COUNTY  
 STATION: 20+75.75 -DRV3-

SHEET 1 OF 8

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**DOUBLE 8 FT. X 8 FT. CONCRETE BOX CULVERT**

92° SKEW



ASSEMBLED BY : M.D. PISO	DATE : 01-09-15	<b>SPECIAL</b>
CHECKED BY : N. RUFFIN	DATE : 01-12-15	
DRAWN BY : R.W. WRIGHT	DATE : JULY, 1990	<b>STANDARD</b>
CHECKED BY : D.A. GLADDEN	DATE : JULY, 1990	

REVISIONS				SHEET NO. C19-001
NO.	BY:	DATE:	NO.	
1			3	TOTAL SHEETS 8
2			4	