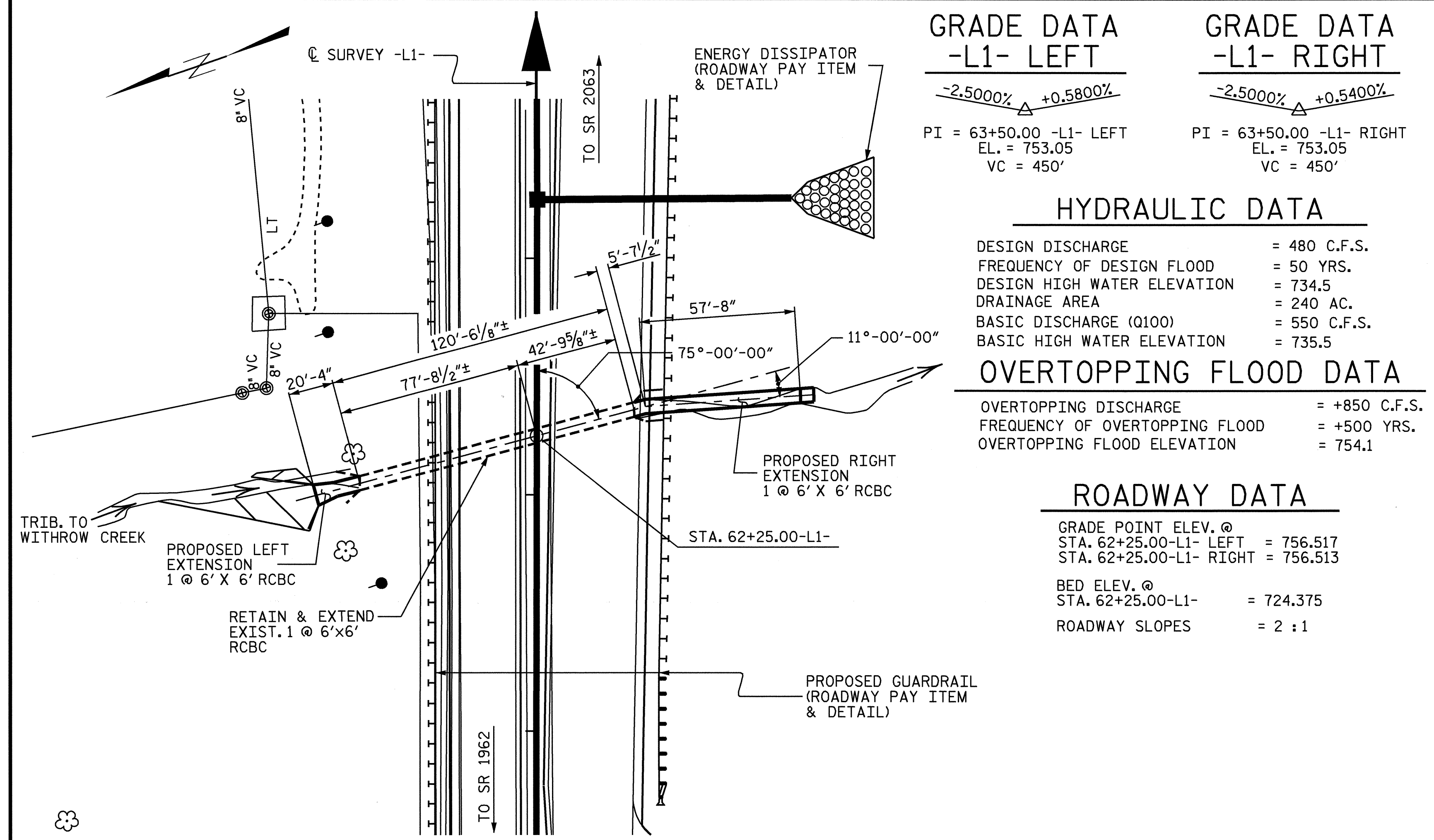


BM# 2 : RR SPIKE IN ROOT OF 12" OAK STA. 64+48.05 -L1-, 536.98' LT. EL. 774.09



GRADE DATA -L1- LEFT		GRADE DATA -L1- RIGHT	
-2.5000%	+0.5800%	-2.5000%	+0.5400%
PI = 63+50.00 -L1- LEFT	PI = 63+50.00 -L1- RIGHT		
EL. = 753.05	EL. = 753.05		
VC = 450'	VC = 450'		

HYDRAULIC DATA	
DESIGN DISCHARGE	= 480 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 734.5
DRAINAGE AREA	= 240 AC.
BASIC DISCHARGE (Q100)	= 550 C.F.S.
BASIC HIGH WATER ELEVATION	= 735.5

OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= +850 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= +500 YRS.
OVERTOPPING FLOOD ELEVATION	= 754.1

ROADWAY DATA	
GRADE POINT ELEV. @	
STA. 62+25.00-L1- LEFT	= 756.517
STA. 62+25.00-L1- RIGHT	= 756.513
BED ELEV. @	
STA. 62+25.00-L1-	= 724.375
ROADWAY SLOPES	= 2 : 1

TOTAL STRUCTURE QUANTITIES	
CLASS A CONCRETE	
LEFT EXTENSION	24.3 C.Y.
RIGHT EXTENSION	53.3 C.Y.
TOTAL	77.6 C.Y.
REINFORCING STEEL	
LEFT EXTENSION	2908 LBS.
RIGHT EXTENSION	7727 LBS.
TOTAL	10635 LBS.
FOUNDATION CONDITIONING MATERIAL	52 TONS
CULVERT EXCAVATION	LUMP SUM

NOTES

ASSUMED LIVE LOAD -----HS20-44 OR ALTERNATE LOADING.

DESIGN FILL-----LEFT EXTENSION = 25.2'
 RIGHT EXTENSION = 26.3'

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.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE USED IN THE BARREL, SPACED TO LIMIT THE POURS TO A MAXIMUM OF 70 FT. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.

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 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.

IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSION SHALL BE POURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI.

DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SN.

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.

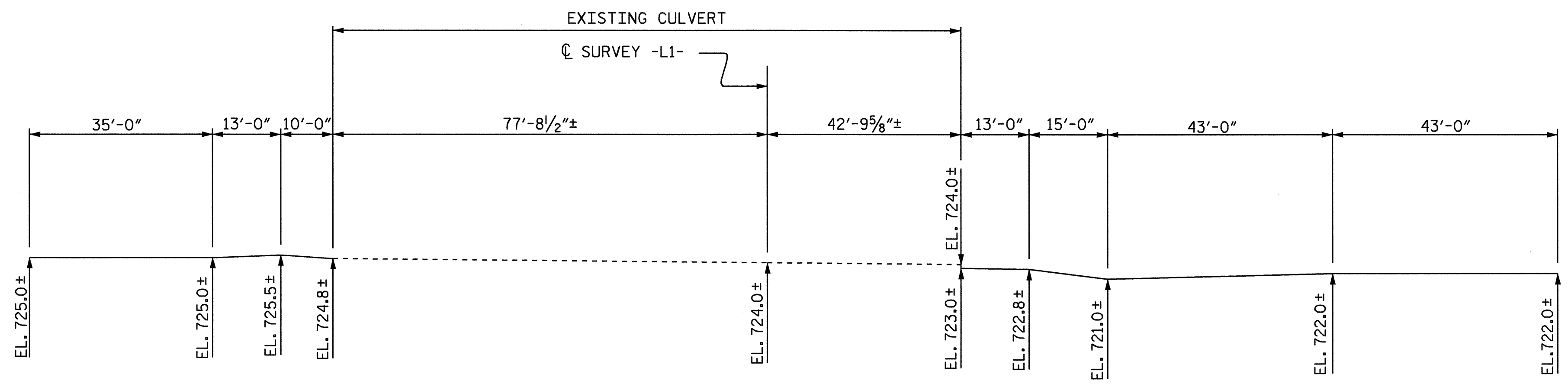
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISION.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

LOCATION SKETCH



PROFILE ALONG CULVERT

PROJECT NO. R-2911C
ROWAN COUNTY
 STATION: 62+25.00-L1-

SHEET 1 OF 7



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SINGLE 6 FT. X 6 FT.
 CONCRETE BOX CULVERT
 EXTENSIONS

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

ASSEMBLED BY : L.L. MURPHY	DATE : 08-04	SPECIAL
CHECKED BY : M.G. CHEEK	DATE : 09-04	
DRAWN BY : R.W. WRIGHT	DATE : AUG. 1989	STANDARD
CHECKED BY : A.R. BISSETTE	DATE : AUG. 1989	

REVISIONS						SHEET NO. C-1
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 20
2			4			