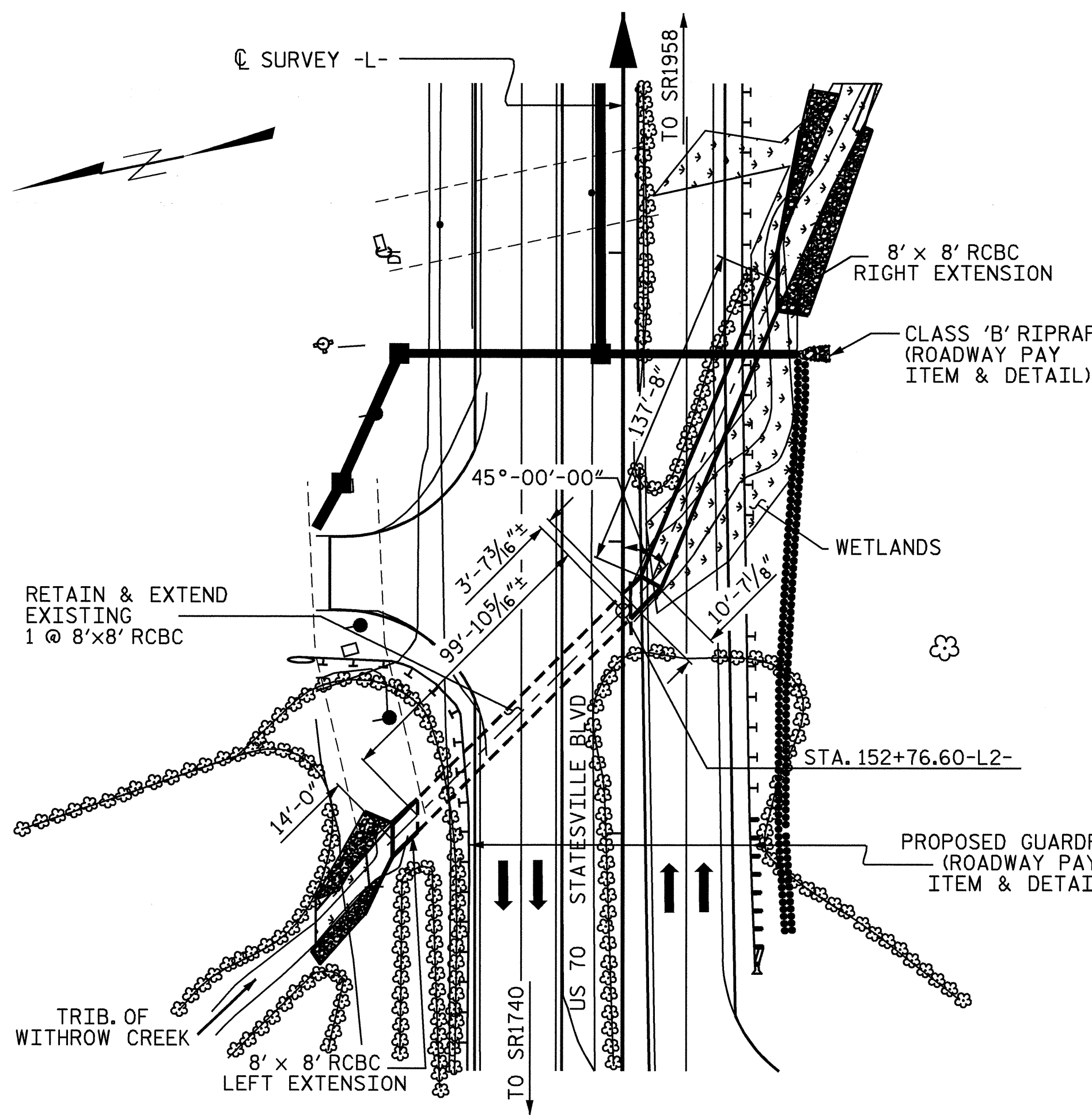


NOTES

- ASSUMED LIVE LOAD -----HS20-44 OR ALTERNATE LOADING.
 DESIGN FILL----- LEFT EXTENSION = 11.7'
 RIGHT EXTENSION = 12.4'
- 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 PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

BM# 4 : CHISELED SQUARE ON SOUTH EAST CORNER OF CONCRETE INSIDE SOUTHERN STATES FENCE STA. 151+69.34-L2-, 836.38' LT. EL. 746.33



GRADE DATA
-L2- LEFT

-3.9200% Δ +1.3500%
 PI = 151+50.00 -L2- LEFT
 EL. = 719.51
 VC = 750'

GRADE DATA
-L2- RIGHT

-3.9200% Δ +1.3200%
 PI = 151+50.00 -L2- RIGHT
 EL. = 719.52
 VC = 750'

HYDRAULIC DATA

DESIGN DISCHARGE = 715 C.F.S.
 FREQUENCY OF DESIGN FLOOD = 50 YRS.
 DESIGN HIGH WATER ELEVATION = 718.67
 DRAINAGE AREA = 465 AC.
 BASIC DISCHARGE (Q100) = 820 C.F.S.
 BASIC HIGH WATER ELEVATION = 721.81

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 885 C.F.S.
 FREQUENCY OF OVERTOPPING FLOOD = 100± YRS.
 OVERTOPPING FLOOD ELEVATION = 723.38

ROADWAY DATA

GRADE POINT ELEV. @
 STA. 152+76.60 -L2- LEFT = 723.387
 STA. 152+76.60 -L2- RIGHT = 723.347

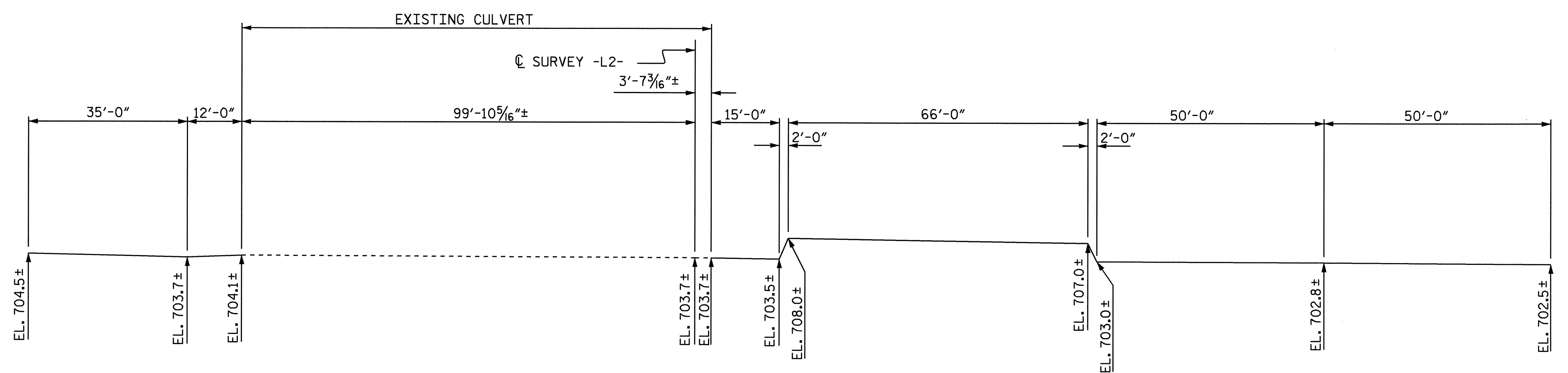
BED ELEV. @
 STA. 152+76.60 -L2- = 703.74

ROADWAY SLOPES = 1.4 : 1 RIGHT EXTENSION
 = 2 : 1 LEFT EXTENSION

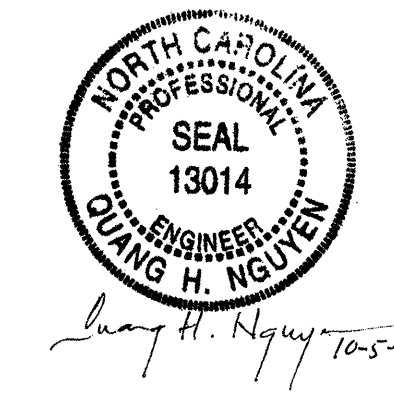
TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
LEFT EXTENSION	34.5 C.Y.
RIGHT EXTENSION	147.0 C.Y.
TOTAL	181.5 C.Y.
REINFORCING STEEL	
LEFT EXTENSION	3568 LBS.
RIGHT EXTENSION	20606 LBS.
TOTAL	24174 LBS.
FOUNDATION CONDITIONING MATERIAL	108 TONS
CULVERT EXCAVATION	LUMP SUM

LOCATION SKETCH



PROFILE ALONG CULVERT



PROJECT NO. R-2911C
 ROWAN COUNTY
 STATION: 152+76.60-L2-

SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SINGLE 8 FT. X 8 FT.
 CONCRETE BOX CULVERT
 EXTENSIONS
 45° SKEW

ASSEMBLED BY : L.L. MURPHY DATE : 08-04
 CHECKED BY : M.G. CHEEK DATE : 08-04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-8
1			3			TOTAL SHEETS
2			4			20