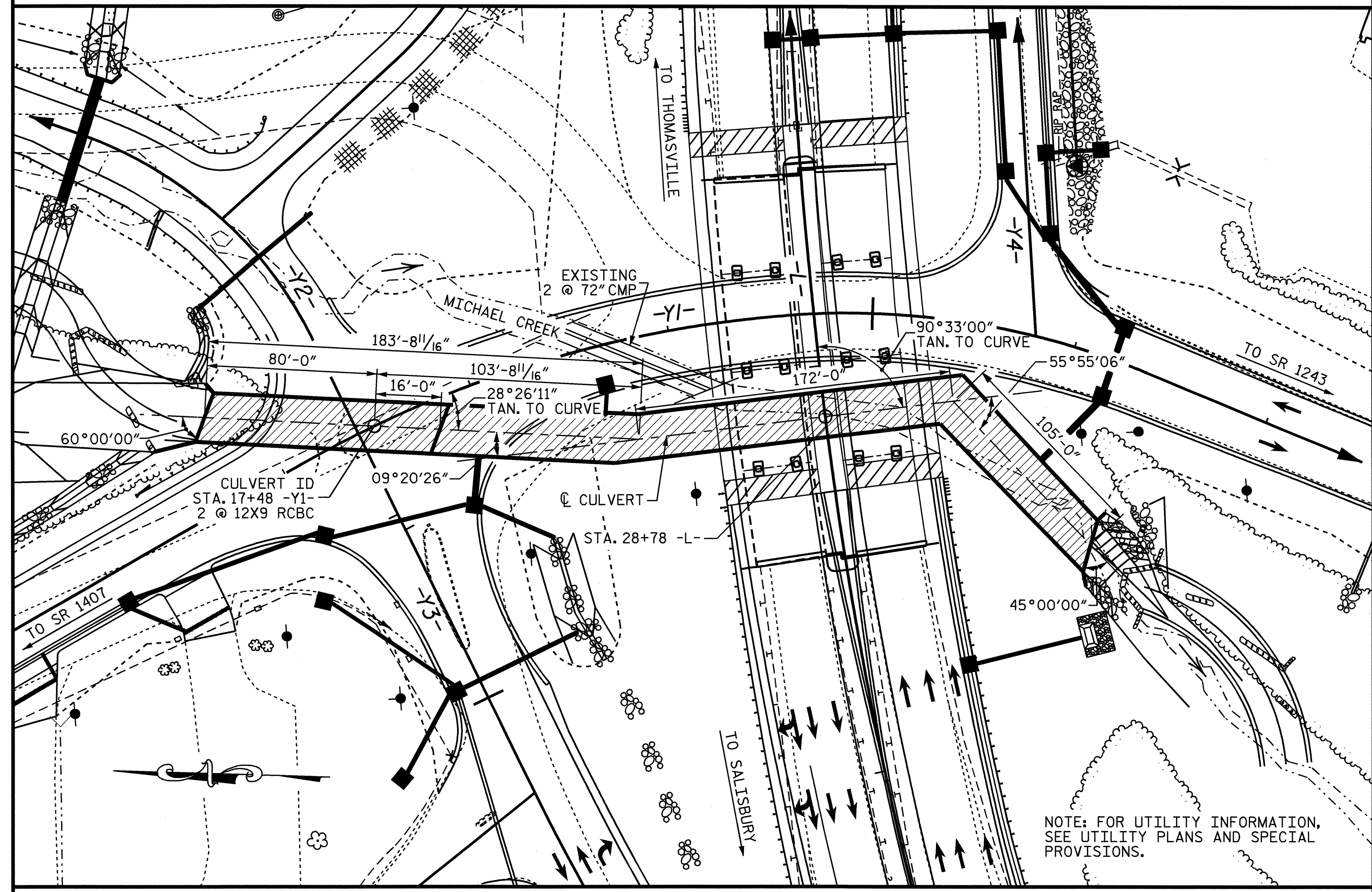


B.M.#100 -L- STA. 21+63.65, 168.31 FT. LEFT NCGS MON. "ROYAL", ELEV. 763.83

F.A. PROJECT NO. STP-BRSTP-29(31)



LOCATION SKETCH

GRADE DATA

GRADE POINT ELEV. @ STA. 17+48.00 -Y1-	=	723.544
BED ELEV. @ STA. 17+48.00 -Y1-	=	710.760
ROADWAY SLOPES	=	2 : 1

HYDRAULIC DATA

DESIGN DISCHARGE	=	1100 CFS
FREQUENCY OF DESIGN FLOOD	=	25 YRS.
DESIGN HIGH WATER ELEVATION	=	722.100 FT.
DRAINAGE AREA	=	1.04 SQ. MI.
BASIC DISCHARGE (Q100)	=	1400 CFS
BASIC HIGH WATER ELEVATION	=	726.500 FT.

OVERTOPPING FLOOD DATA

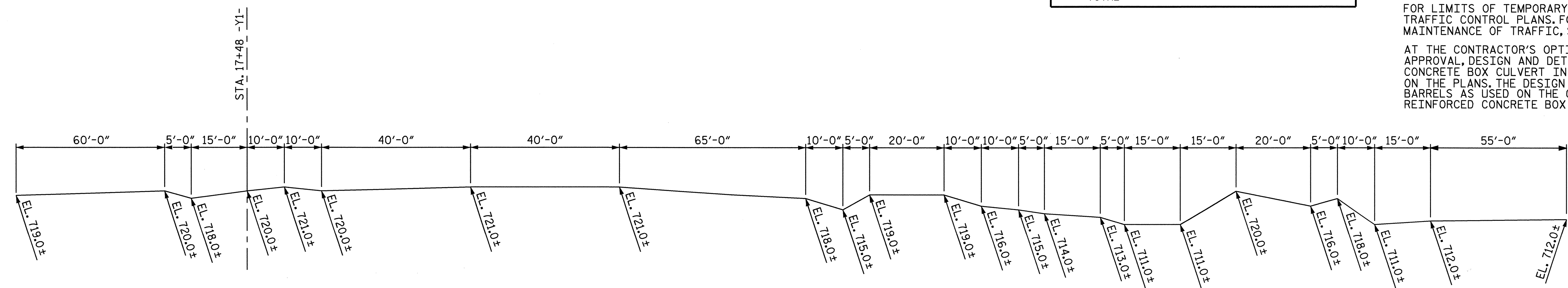
OVERTOPPING DISCHARGE	=	1200 CFS
FREQUENCY OF OVERTOPPING FLOOD	=	50 YRS.
OVERTOPPING FLOOD ELEVATION	=	723.400 FT.

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
STAGE I	278.0 C.Y.
STAGE II	1236.3 C.Y.
TOTAL	1514.3 C.Y.
REINFORCING STEEL	
STAGE I	47376 LBS.
STAGE II	176892 LBS.
TOTAL	224268 LBS.
CULVERT EXCAVATION LUMP SUM	
FOUNDATION CONDITIONING MATERIAL	
STAGE I	176 TONS
STAGE II	669 TONS
TOTAL	845 TONS

NOTES

ASSUMED LIVE LOAD ----- HS20-44 OR ALTERNATE LOADING.
 DESIGN FILL----- 1.70 FT. (STAGE I)
 14.80 FT. (STAGE II)
 FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
 CONCRETE IN STAGES I AND II 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 SHEETS.
 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 AND BOTH FACES OF INTERIOR WALLS 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.
 DOWELS SHALL BE USED TO CONNECT STAGE II OF THE CULVERT TO STAGE I OF THE 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.
 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.
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 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.
 AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.



PROFILE ALONG CULVERT

PROJECT NO. B-3157
DAVIDSON COUNTY
STATION: 17+48.00 -Y1-

SHEET 1 OF 11 CULVERT #498

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
DOUBLE 12 FT. X 9 FT.
CONCRETE BOX CULVERT
(STAGE I & II CONSTRUCTION)

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1	
1			3			TOTAL SHEETS	
2			4			19	



ADDED 10-1-90

ASSEMBLED BY : M. M. PARSONS	DATE : 5/5/03	SPECIAL
CHECKED BY : T.L. AVERETTE	DATE : 7/03	
DRAWN BY : B. WYNN/D.DONOVAN	DATE : SEPT. 1990	STANDARD
CHECKED BY : A.R. BISSETTE	DATE : OCT. 90	