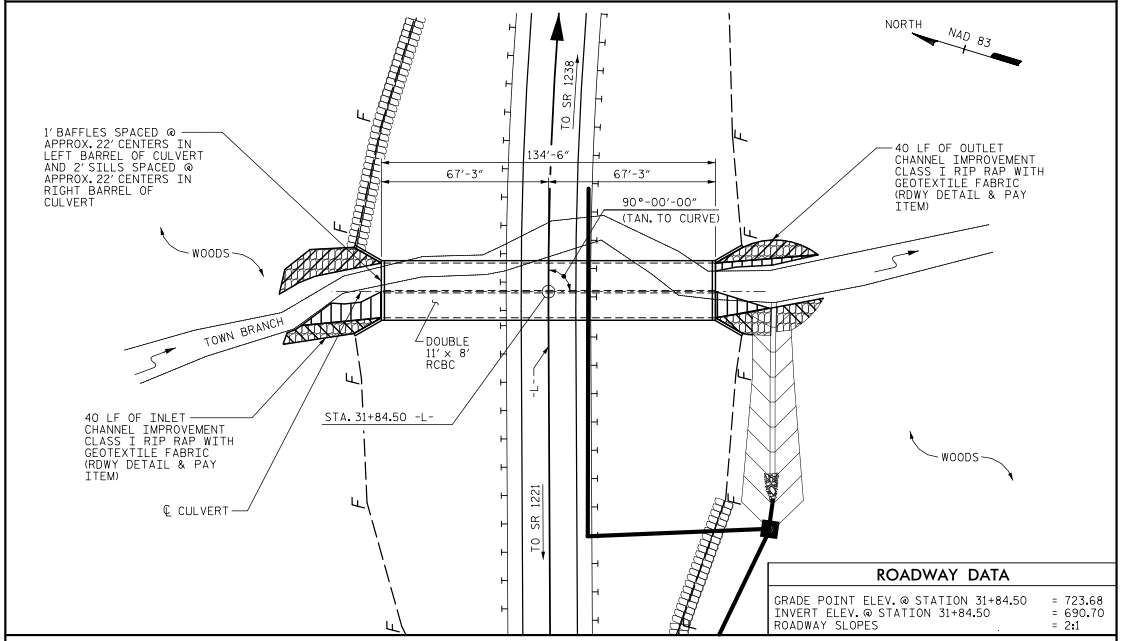
CULVERT AS-BUILT PLAN VIEW EXAMPLE

BENCH MARK #1 CHISELED SQUARE IN NW CORNER OF CONCRETE SIGN PAD: 627.97' LT. OF STA 17+19.28 -L-, EL. 764.18

F.A. PROJECT NO. : HSIP-1221(18)

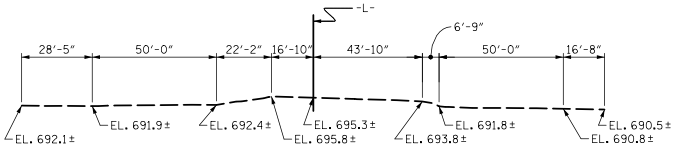


ROADWAY DATA	
GRADE POINT ELEV. @ STATION 31+84.50	= 723.68
INVERT ELEV. @ STATION 31+84.50	= 690.70
ROADWAY SLOPES	= 2:1

LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

VERIFY LOCATION SKETCH



PROFILE ALONG ℄ CULVERT

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
BARREL @ 3.854 CY/FT	518.4	C.Y.
WINGS, ETC.	24.4	C.Y.
SILLS/BAFFLES	8.6	C.Y.
TOTAL	551.4	C.Y.
REINFORCING STEEL		
BARREL, SILLS, BAFFLES	75,844	LBS.
WINGS, ETC.	1,453	LBS.
TOTAL	77,297	LBS.
FOUNDATION CONDITIONING MATERIAL	231	TONS
CULVERT EXCAVATION	LUMP	SUM
PLACEMENT OF NATURAL STREAM BED MATERIAL	LUMP	SUM

HYDRAULIC DATA	
DESIGN DISCHARGE	= 1,000 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YR.
DESIGN HIGH WATER ELEVATION	= 698.2
DRAINAGE AREA	= 1.3 SQ MI
BASE DISCHARGE (Q 100)	= 1,100 CFS
BASE HIGH WATER ELEVATION	= 698.82
OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= 4,700 CFS
FREQUENCY OF OVERTOPPING FLOOD	= 500 YR +
OVERTOPPING FLOOD ELEVATION	= 724.0

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

DESIGN FILL = 24'

DETAILED DRAWINGS FOR FALSEWORK AND FORMS FOR THIS CULVERT SHALL BE SUBMITTED, SEE SHEET SN.

STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

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.

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

A 3 FOOT STRIP OF GEOTEXTILE 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.

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 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.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALLS AND BOTH FACES OF THE INTERIOR 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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.

NATURAL STREAM BED MATERIAL SHALL BE USED TO BACKFILL THE CULVERT BETWEEN SILLS AND BAFFLES. SEE SPECIAL PROVISIONS FOR "PLACEMENT OF NATURAL STREAM BED MATERIAL."

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. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

SEAL, SIGN, AND DATE

PROJECT NO. _____

_____ COUNTY

STATION: _____

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BARREL STANDARD DOUBLE 11 FT. X 8 FT. CONCRETE BOX CULVERT 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			13

STD. NO. CB12A

ADDED NOV. 1, 1990

ASSEMBLED BY : _____ CHECKED BY : _____	DATE : MAY 2015 DATE : MAY 2015	SPECIAL
DRAWN BY : _ CHECKED BY : _____	DATE : JULY. 1990 DATE : JULY. 1990	STANDARD