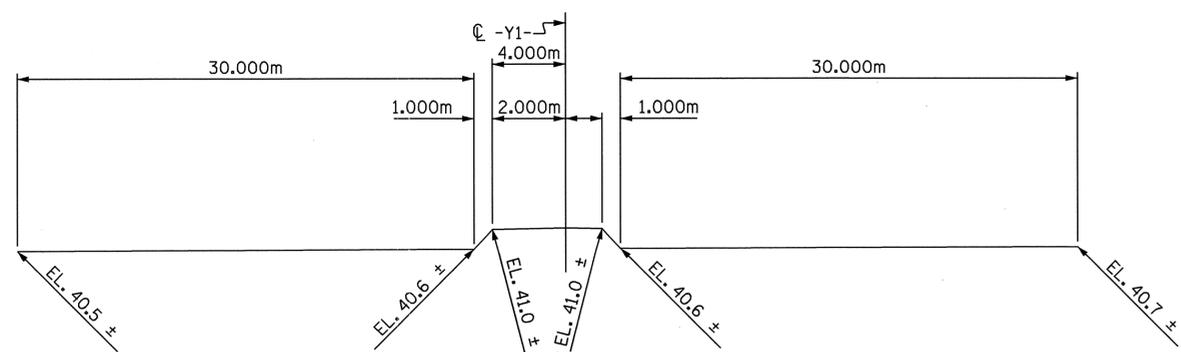


LOCATION SKETCH
FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS



PROFILE ALONG CULVERT

GRADE DATA

+4.5000%

ALONG C -Y1-

PI STATION 14+00 -L-
PI ELEV. 54.071
VC 355m

ROADWAY DATA

@ STA. 12+02.000 -Y1-
GRADE POINT ELEVATION = 45.160
BED ELEVATION = 37.730
ROADWAY SLOPES = 3:1

HYDRAULIC DATA

DESIGN DISCHARGE = 9.50m³/s
FREQUENCY OF DESIGN FLOOD = 50 YRS.
DESIGN HIGH WATER ELEVATION = 40.100
DRAINAGE AREA = 4.40 sq. km
BASIC DISCHARGE (Q100) = 11.50m³/s
BASIC HIGH WATER ELEVATION = 40.430

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 15.60m³/s
FREQUENCY OF OVERTOPPING FLOOD = 200 YRS. +
OVERTOPPING FLOOD ELEVATION = 41.200

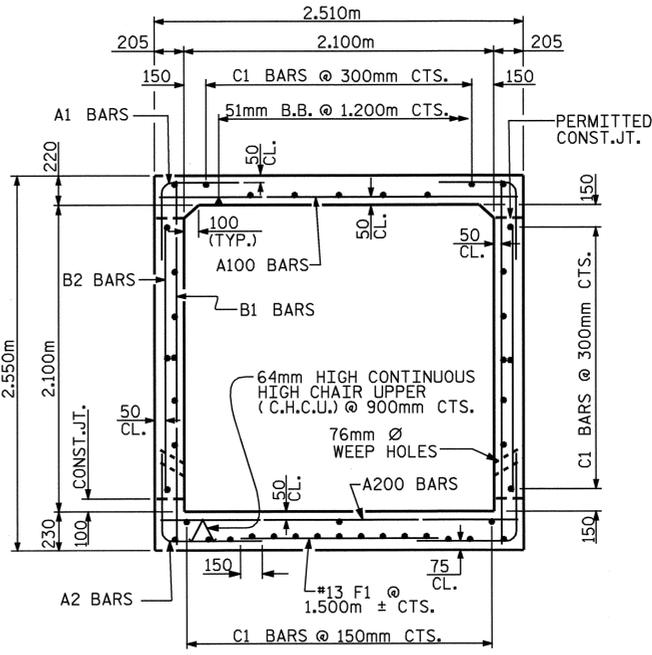
NOTES

ASSUMED LIVE LOAD -----MS18 OR ALTERNATE LOADING.
DESIGN FILL ----- 5.4m
FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
ALL ELEVATIONS ARE IN METERS.
76mm 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 100mm 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 21.0m. LOCATION OF JOINTS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR 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.
NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
A 900mm 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.



TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
BARREL @ 1.98 m ³ /m	105.4 m ³
WINGS ETC.	23.6 m ³
TOTAL	129.0 m³
REINFORCING STEEL	
BARREL	9588 kg
WINGS ETC.	812 kg
TOTAL	10400 kg
CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MAT'L	90.6 METRIC TONS



RIGHT ANGLE SECTION OF BARREL
THERE ARE 43 "C" BARS IN SECTION OF BARREL.

PROJECT NO. R-513C
ROBESON COUNTY
STATION: 12+02.000 -Y1-

SHEET 1 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SINGLE 2.1m X 2.1m
CONCRETE BOX CULVERT**

ASSEMBLED BY : T.A. WALTER	DATE : 01/03/01
CHECKED BY : S.M. RASHIDI	DATE : 11/13/03
DRAWN BY : EEM	6/97
CHECKED BY : ARB	7/97

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					7