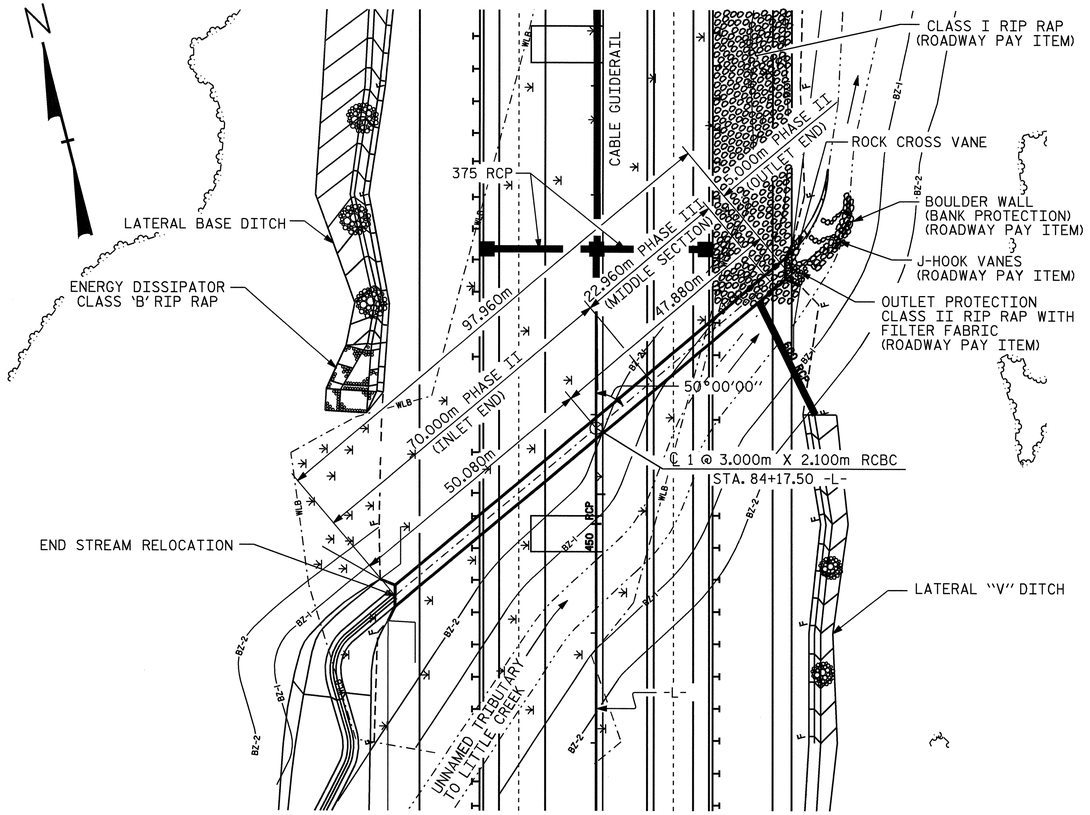
BM BL-2 HORIZONTAL RR SPIKE IN BASE OF 0.305m GUM TREE
90.109m RT -BL- STA. 82+13.433 EL. 123.990m



LOCATION SKETCH

FOR UTILITY INFORMATION, SEE UTILTY PLANS AND SPECIAL PROVISIONS.

ROADWAY DATA

GRADE POINT ELEV. @ STA. 84+17.500 -L-	= 94.461
BED ELEVATION @ STA. 84+17.500 -L-	= 83.830
ROADWAY SLOPE LEFT	= 2 : 1
ROADWAY SLOPE RIGHT	= 1.5 : 1

HYDRAULIC DATA

DESIGN DISCHARGE	= 13.0 m^3/s
FREQUENCY OF DESIGN FLOOD	= 50 YEARS
DESIGN HIGH WATER ELEVATION	= 87.260
DRAINAGE AREA	= 0.65 Sq. km
BASIC DISCHARGE (Q100)	= 14.8 m^3/s
BASIC HIGH WATER ELEVATION	= 87.460

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 58.2 m^3/s
FREQUENCY OF OVERTOPPING FLOOD	= > 500 YEARS
OVERTOPPING FLOOD ELEVATION	= 89.720

TOTAL STRUCTURE QUANTITIES

	CLASS A CONCRETE	REINFORCING STEEL
	m^3	kg
PHASE II (INLET END)	266.1	24996
PHASE II (OUTLET END)	27.6	2298
PHASE III (MIDDLE SECTION)	84.3	8040
TOTAL	378.0	35334
CULVERT EXCAVATION ---------- LUMP SUM		
FOUNDATION COND. MAT'L ---------- 228 METRIC TONS		

NOTES

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

ASSUMED LIVE LOAD ----------MS18 OR ALTERNATE LOADING.

ALL ELEVATIONS ARE IN METERS.

DESIGN FILL---------- 9.72m

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.

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 WALL ABOVE LOWER WALL COSTRUCTION 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 CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

THE 600mm Ø REINFORCED CONCRETE PIPE THROUGH THE SIDEWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.

FOR FALSWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

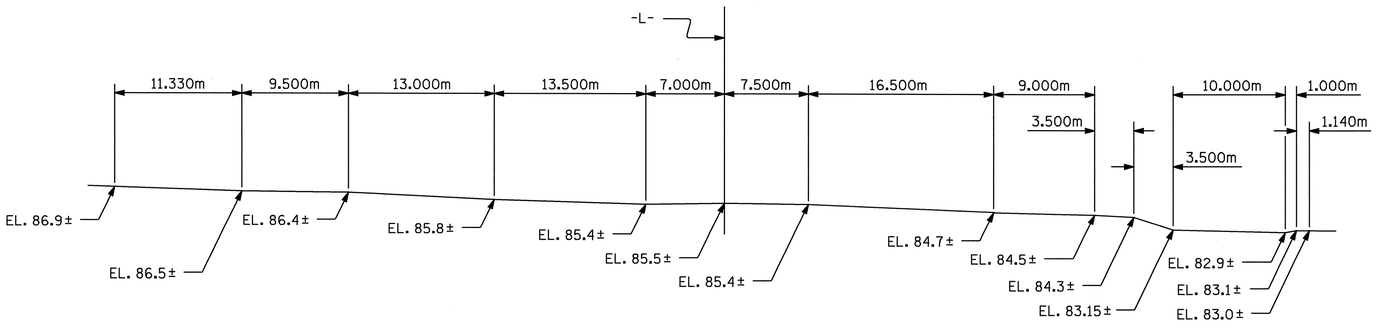
FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR PHASE I CONSTRUCTION, SEE CULVERT CONSTRUCTION SEQUENCE.

A 900mm STRIP OF FILTER FABRIC 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.

BED MATERIAL TO BE PLACED IN CULVERT TO TOP OF SILLS AND PROVIDE CONTINUOUS LOW FLOW CHANNEL BETWEEN THE LOWER SILLS. THE BED MATERIAL SHALL BE MATERIAL THAT WAS EXCAVATED FROM THE SITE FOR BOX CULVERT CONSTRUCTION, STOCKPILED AND LATER PLACED ON THE FLOOR OF THE COMPLETED CULVERT. BED MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER.



PROFILE ALONG ℄ CULVERT

METRIC

PROJECT NO. R-2552B
JOHNSTON COUNTY
STATION: 84+17.500 -L-

SHEET 1 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SINGLE 3.000m X 2.100m CONCRETE BOX CULVERT 50° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			42

NORTH CAROLINA PROFESSIONAL SEAL 13014 ENGINEER QUANG H. NGUYEN
Quang H. Nguyen 3-29-05

NORTH CAROLINA PROFESSIONAL SEAL 20125 ENGINEER MARSHALL G. CHEEK, JR.
Marshall G. Cheek, Jr. 3-24-05

DRAWN BY : D. A. GLADDEN DATE : 1-3-05
CHECKED BY : J. B. WILSON DATE : 2-14-05

STR. #X14 STD. No. CBI45SM