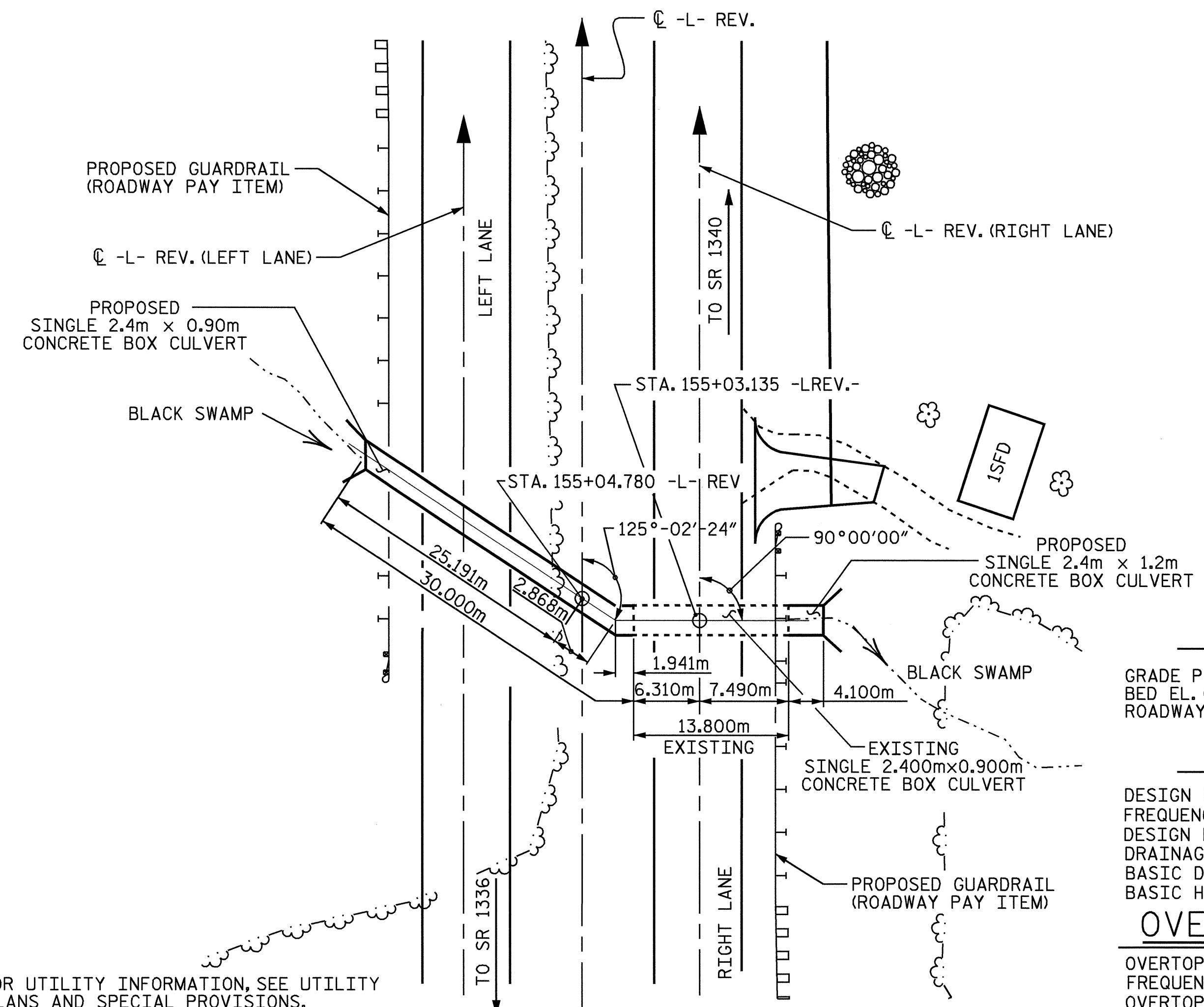


BM#9 ELEV. 46.289m SURVEY BL STA. 56+69 OFFSET 34m LEFT RR SPIKE SET IN ROOT OF 24" PINE TREE

NOTES

ASSUMED LIVE LOAD -----MS18 OR ALTERNATE LOADING.
 DESIGN FILL-----LEFT EXTENSION = 1.55
 DESIGN FILL-----RIGHT EXTENSION = 1.69
 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 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 THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SNSM.
 REMOVAL OF EXISTING CONCRETE AND BONDING OF NEW CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLE 420-11 OF THE STANDARD SPECIFICATIONS, EXCEPT THAT EXISTING REINFORCING STEEL IN THE WINGS SHALL BE CUT OFF FLUSH WITH THE CONCRETE. DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTE REGARDING SETTING OF DOWELS, SEE SHEET SNSM.
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 ALL ELEVATIONS ARE IN METERS.
 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.
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
 FOR EROSION CONTROL DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.



ROADWAY DATA

GRADE POINT EL. @ STA. 155+04.780 -L- REV = 46.070
 BED EL. @ STA. 155+04.780 -L- REV = 43.590
 ROADWAY SLOPES = 3 : 1

HYDRAULIC DATA

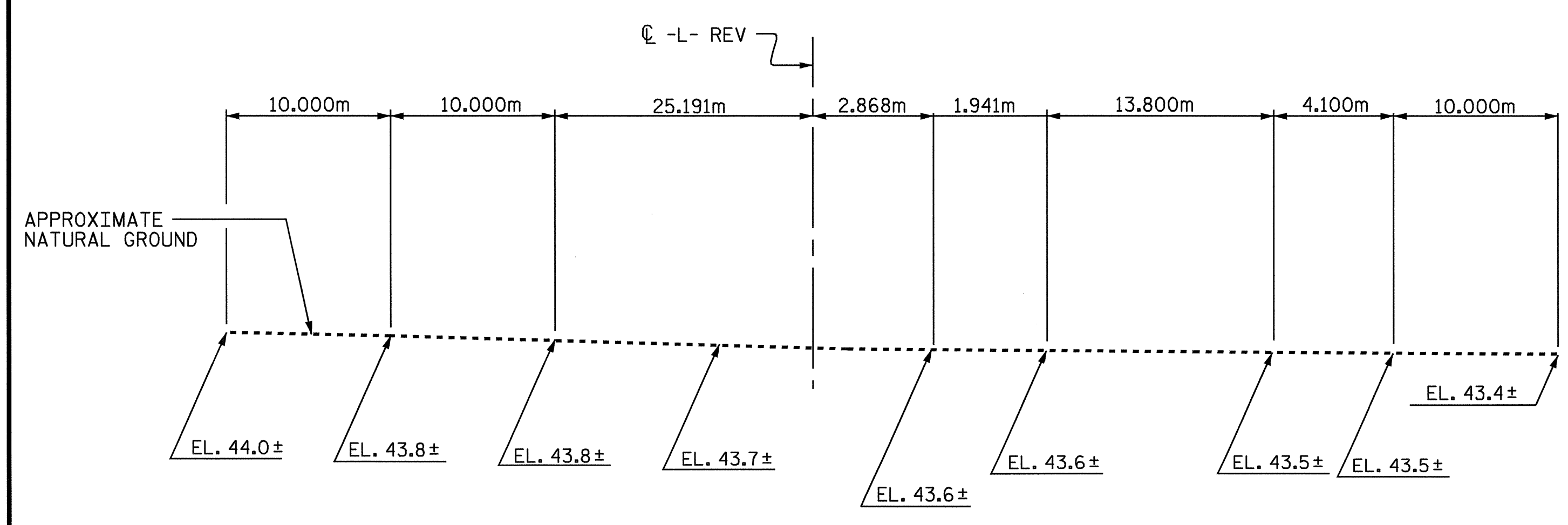
DESIGN DISCHARGE = 4.0 m³/S
 FREQUENCY OF DESIGN FLOOD = 50 yrs.
 DESIGN HIGH WATER ELEVATION = 44.920
 DRAINAGE AREA = 1.72 sq. km
 BASIC DISCHARGE (Q100) = 4.8 m³/S
 BASIC HIGH WATER ELEVATION = 45.010

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = >7.2 m³/S
 FREQUENCY OF OVERTOPPING FLOOD = > 500 yrs.
 OVERTOPPING FLOOD ELEVATION = 45.800

NOTE:- FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

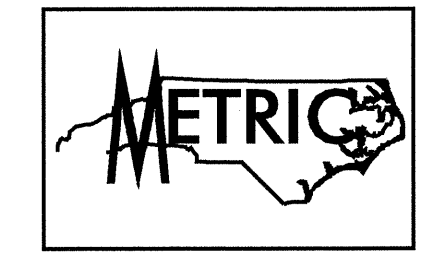
LOCATION SKETCH



PROFILE ALONG CULVERT

TOTAL QUANTITIES

LEFT EXTENSION CLASS A CONCRETE BARREL @ 1.52 m ³ /m 45.6 m ³ WINGS ETC. 4.8 m ³ TOTAL 50.4 m ³	LEFT EXTENSION FOUNDATION COND. MAT'L ---- 58 METRIC TONS
RIGHT EXTENSION CLASS A CONCRETE BARREL @ 1.64 m ³ /m 6.7 m ³ WINGS ETC. 3.5 m ³ TOTAL 10.2 m ³	RIGHT EXTENSION FOUNDATION COND. MAT'L ---- 8 METRIC TONS
GRAND TOTAL CLASS A CONCRETE 60.6 m ³	GRAND TOTAL FOUNDATION COND. MAT'L ---- 66 METRIC TONS
LEFT EXTENSION REINFORCING STEEL BARREL 3957 kg WINGS ETC. 152 kg TOTAL 4109 kg	
RIGHT EXTENSION REINFORCING STEEL BARREL 519 kg WINGS ETC. 111 kg TOTAL 630 kg	
GRAND TOTAL REINFORCING STEEL 4739 kg	
CULVERT EXCAVATION ----- LUMP SUM	

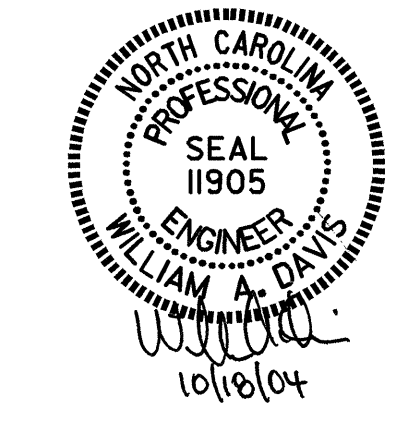


PROJECT NO. R-2562C
 BLADEN COUNTY
 STATION: 155+04.780 -L- REV

SHEET 1 OF 8

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SINGLE
 CONCRETE BOX CULVERT
 LEFT & RIGHT
 EXTENSION**



ASSEMBLED BY : Neil M. Ruffin DATE : 8/3/04
 CHECKED BY : J.D.HAWK DATE : 8/27/04

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-5
1			3			TOTAL SHEETS
2			4			12