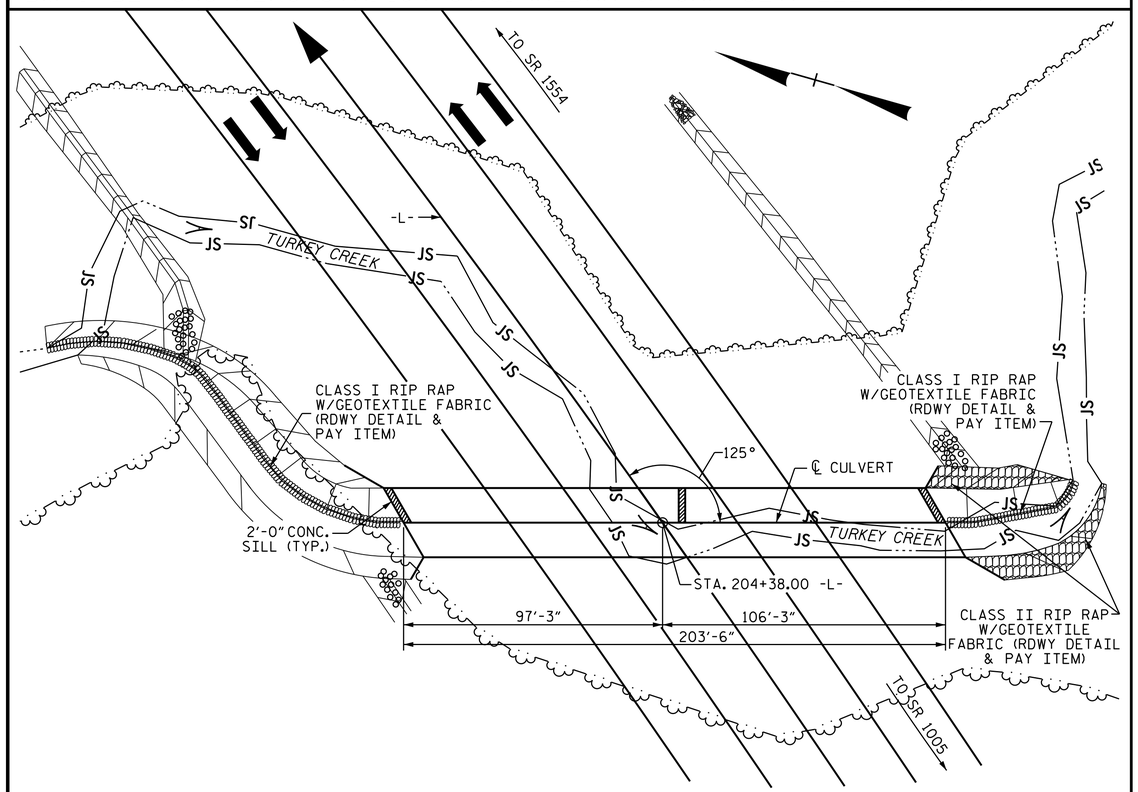
BM : -BL- 545 PINC STA. 164+87.81 (REBAR & CAP SET) ELEV. 484.70



FOR UTILITY INFORMATION, SEE UTILITY PLAN AND SPECIAL PROVISIONS.

LOCATION SKETCH

ROADWAY DATA

GRADE PT. EL. @ STA. 204+38.00 -L-	= 497.36'
BED ELEV. @ STA. 204+38.00 -L-	= 476.84'
ROADWAY SLOPE	= 2 : 1

HYDRAULIC DATA

DESIGN DISCHARGE	= 1100 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 486.3'
DRAINAGE AREA	= 0.79 SQ. MI.
BASE DISCHARGE (Q100)	= 1300 CFS
BASE HIGH WATER ELEVATION	= 488.83'

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 1985 CFS
FREQUENCY OF OVERTOPPING FLOOD	= 200+ YRS.
OVERTOPPING FLOOD ELEVATION	= 497.8'

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE			
BARRELS @ 3.289 CY/FT	669.3	C.Y.	
WINGS	30.4	C.Y.	
SILLS	3.0	C.Y.	
TOTAL	702.7	C.Y.	
REINFORCING STEEL			
BARRELS & SILLS	73,853	LBS.	
WINGS	1,661	LBS.	
TOTAL	75,514	LBS.	
CULVERT EXCAVATION			LUMP SUM
FOUNDATION CONDITIONING MAT'L			431 TONS

NOTES

ASSUMED LIVE LOAD ----------HL-93 OR ALTERNATE LOADING.

DESIGN FILL----------14.64'

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.

3" 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 4" OF ALL VERTICAL WALLS.

2. THE REMAINING PORTIONS OF WALLS AND SILLS WITH NATIVE MATERIAL BACKFILL.

3. FOLLOWED BY THE WING WALLS FULL HEIGHT, 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 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 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.

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 PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

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.

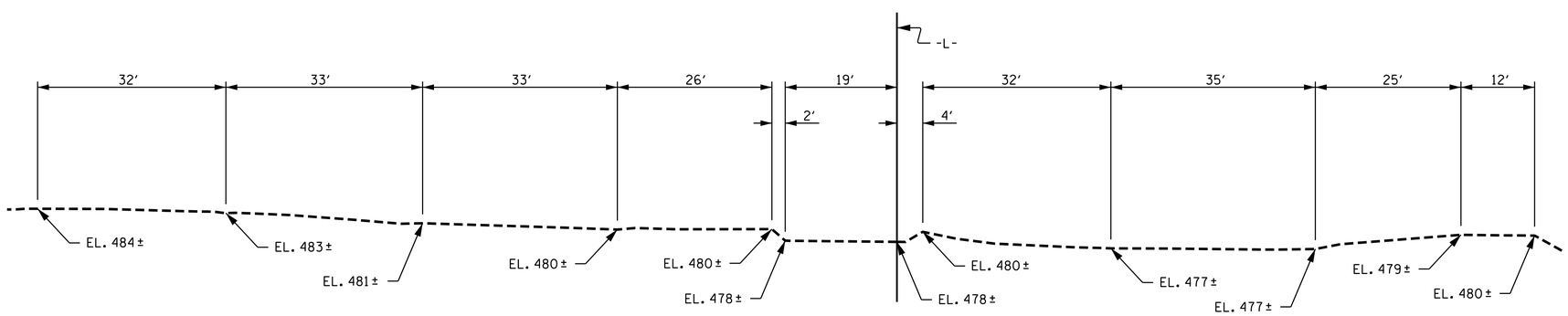
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS



PROFILE ALONG ℄ CULVERT

PROJECT NO. R-0623

MONTGOMERY COUNTY

STATION: 204+38.00 -L-

SHEET 1 OF 5 CUL #269

NORTH CAROLINA PROFESSIONAL SEAL 022506 ENGINEER JESSE McARTHUR BAILEY 9/29/2014

DocuSigned by: J. M. Bailey 9026554D952B471...

NORTH CAROLINA PROFESSIONAL SEAL 16301 ENGINEER TING HSIUNG FANG 9/29/2014

DocuSigned by: Ting H. Fang E72088400977435...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BARREL STANDARD

DOUBLE 12 FT. X 8 FT. CONCRETE BOX CULVERT 125° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-20
1			3			TOTAL SHEETS
2			4			29

CULVERT #4 STD. NO. CB332A

ASSEMBLED BY : T. KIRSCHBAUM DATE : 2/25/13
CHECKED BY : E. OMILE DATE : 2/25/13

DRAWN BY : B.M. MEYERS DATE : AUG. 1989
CHECKED BY : A.R. BISSETTE DATE : AUG. 1989

ADDED 11-90