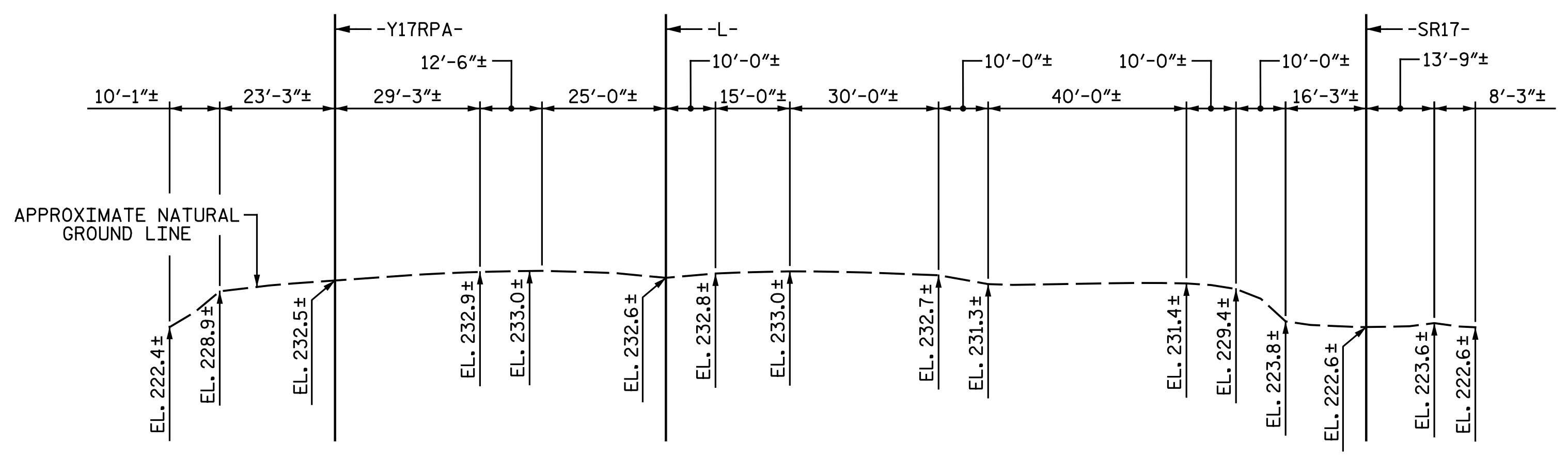


LOCATION SKETCH



PROFILE ALONG CULVERT

ROADWAY DATA	
GRADE POINT ELEV. @ STATION 1220+34.00 -L-	= 234.23
BED ELEV. @ STATION 1220+34.00 -L-	= 223.13
ROADWAY SLOPES	= 3:1

HYDRAULIC DATA	
DESIGN DISCHARGE	= 420 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 230.00
DRAINAGE AREA	= 0.93 SQ. MI.
BASE DISCHARGE (Q100)	= 460 C.F.S.
BASE HIGH WATER ELEVATION	= 230.40

OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	= 1070 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= >500 YRS.
OVERTOPPING FLOOD ELEVATION	= 234.20

NOTE: OVERTOPS ROADWAY @ STA. -L- 1220+87.00

DRAWN BY : N. B. SPEAKS DATE : 3-13-19
 CHECKED BY : A. H. SHARPE DATE : 4-26-21

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
 MAXIMUM DESIGN FILL = 5.46'.
 MINIMUM DESIGN FILL = 2.35'.
 FOR OTHER DESIGN DATA AND NOTES, SEE STANDARD NOTE SHEET.

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

CONCRETE IN STAGE I AND STAGE II OF CULVERT 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 AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS.

CONCRETE IN STAGE III OF CULVERT TO BE POURED IN THE FOLLOWING ORDER:

1. FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
2. THE REMAINING PORTIONS OF THE WALLS FOLLOWED BY ROOF SLAB.

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 FEET. 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 WILL BE PAID FOR BY THE 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.

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.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

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

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE COST FOR REMOVAL OF THE EXISTING TWO 48"Ø RCP SHALL BE INCLUDED IN THE PAY ITEM FOR "CULVERT EXCAVATION".

TOTAL STRUCTURE QUANTITIES

CULVERT EXCAVATION	LUMP SUM
STAGE I	94 TONS
STAGE II	183 TONS
STAGE III	94 TONS
TOTAL	371 TONS

CLASS A CONCRETE	
STAGE I	112.8 C.Y.
STAGE II	207.1 C.Y.
STAGE III	99.8 C.Y.
TOTAL	419.7 C.Y.

REINFORCING STEEL	
STAGE I	14,426 LBS.
STAGE II	27,124 LBS.
STAGE III	13,515 LBS.
TOTAL	55,065 LBS.

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS.

PROJECT NO. I-5883
HARNETT COUNTY
 STATION: 1220+34.00 -L-
 SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DOUBLE 7 FT. X 6 FT.
 CONCRETE BOX CULVERT
 87° SKEW**

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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 NC License No.: F-1084

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