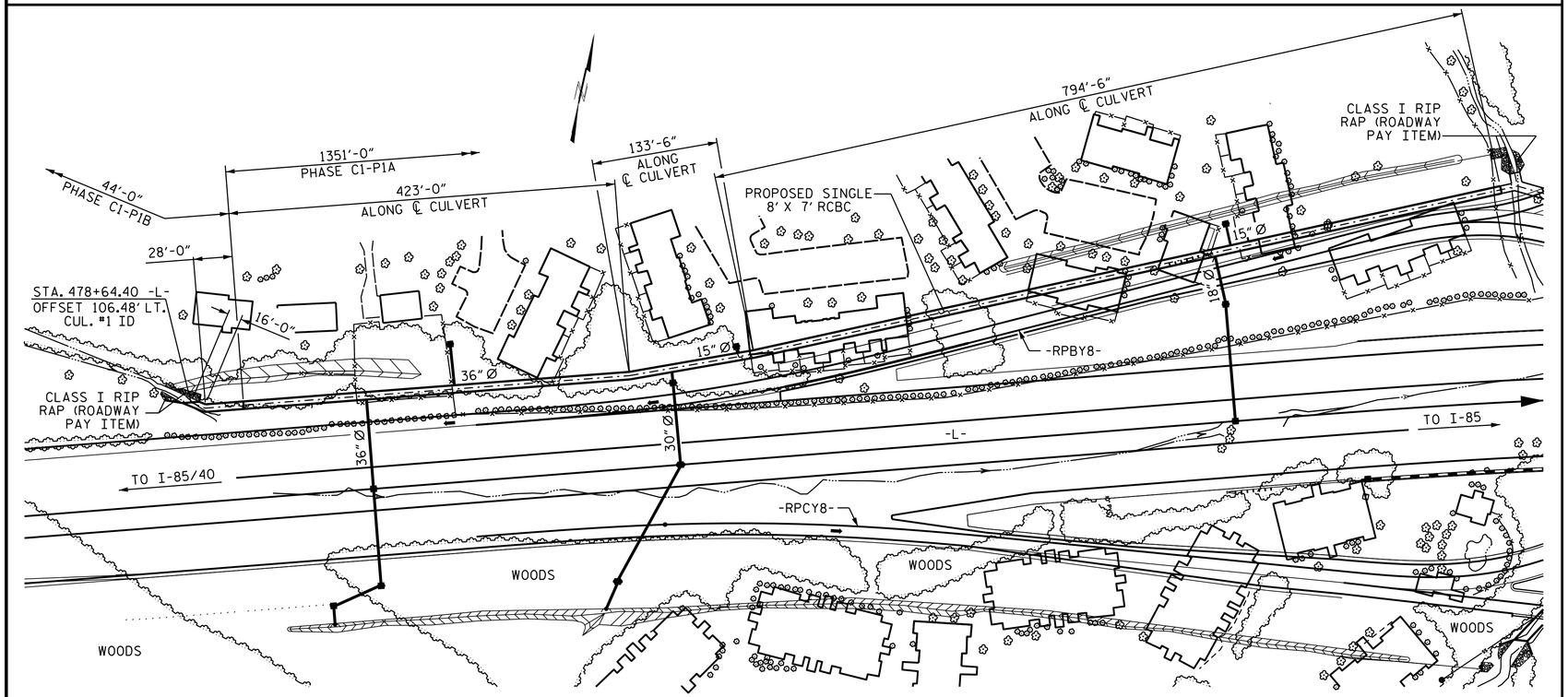
BM #17: RR SPIKE SET IN CHERRY TREE, 270.77' LEFT OF -L- STA. 474+80.76, EL. 797.52'



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

HYDRAULIC DATA

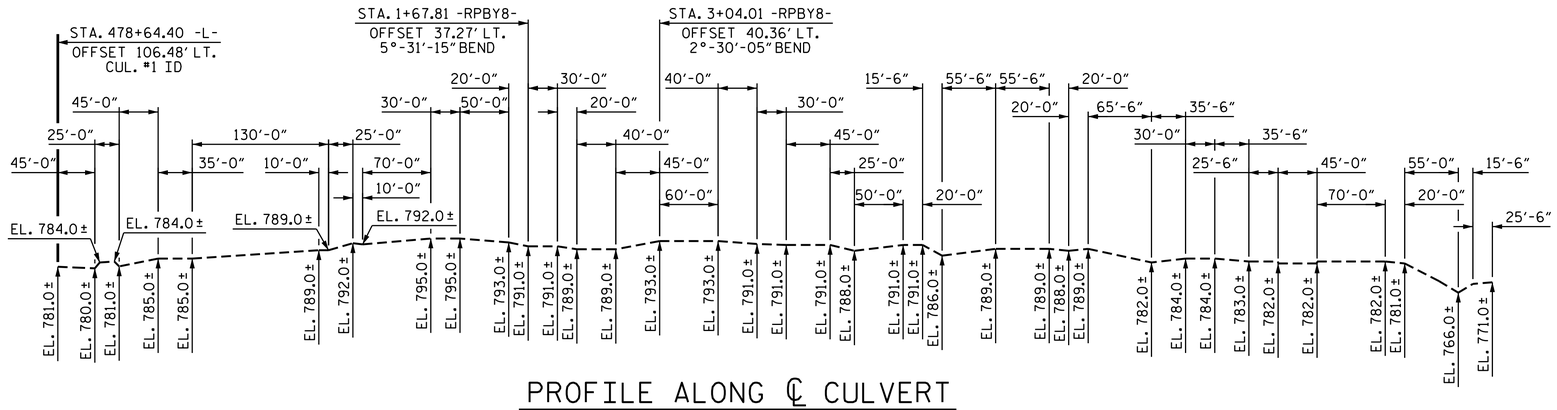
DESIGN DISCHARGE	= 180 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 784.60
DRAINAGE AREA	= 0.15 SQ. MI.
BASE DISCHARGE (Q100)	= 200 CFS
BASE HIGH WATER ELEVATION	= 784.86

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 490 CFS
FREQUENCY OF OVERTOPPING FLOOD	= >500+ YRS.
OVERTOPPING FLOOD ELEVATION	= 790.08

GRADE DATA

GRADE POINT ELEVATION @ STA. 478+64.55 -L- 106.40' LT.	= 798.99'
BED ELEVATION @ STA. 478+64.55 -L- 106.40' LT.	= 780.70'
ROADWAY FILL SLOPES	= 2:1



PROFILE ALONG ℄ CULVERT

NOTES:

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

DESIGN FILL ---------- 13.33'

FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.

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.

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 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.

AT THE CONTRACTORS OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL 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.

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.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

ALL PIPES 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 CULVERT DIVERSION DETAILS & PAY ITEM, SEE EROSION CONTROL PLANS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR CONSTRUCTION SEQUENCE, SEE EROSION CONTROL PLANS.

NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.

F.A. PROJECT NO. NHF-0708(53)

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE		
PHASE C1-P1A	1134.8	C.Y.
PHASE C1-P1B	50.0	C.Y.
TOTAL	1184.8	C.Y.
REINFORCING STEEL		
PHASE C1-P1A	172,429	LBS.
PHASE C1-P1B	6,727	LBS.
TOTAL	179,156	LBS.
FOUNDATION COND. MATERIAL		
PHASE C1-P1A	1270	TONS
PHASE C1-P1B	41	TONS
TOTAL	1311	TONS
CULVERT EXCAVATION (TOTAL)	LUMP SUM	

NORTH CAROLINA PROFESSIONAL SEAL 16301 ENGINEER TING HSIUNG FANG

DocuSigned by: Ting Fang E720884009774... 8/16/2016

PROJECT NO. U-2524D

GUILFORD COUNTY

STATION: 478+64.40 -L-

SHEET 1 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CULVERT #1
SINGLE 8' X 7' RCBC
C1-P1A & C1-P1B
OFFSET 106.48' LEFT

DRAWN BY : A. SORSENGINH DATE : 1/2016
CHECKED BY : T. H. FANG DATE : 5/15/16
DESIGN ENGINEER OF RECORD: A. SORSENGINH DATE : 5/26/16

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			34

16-AUG-2016 11:10
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CUL #1