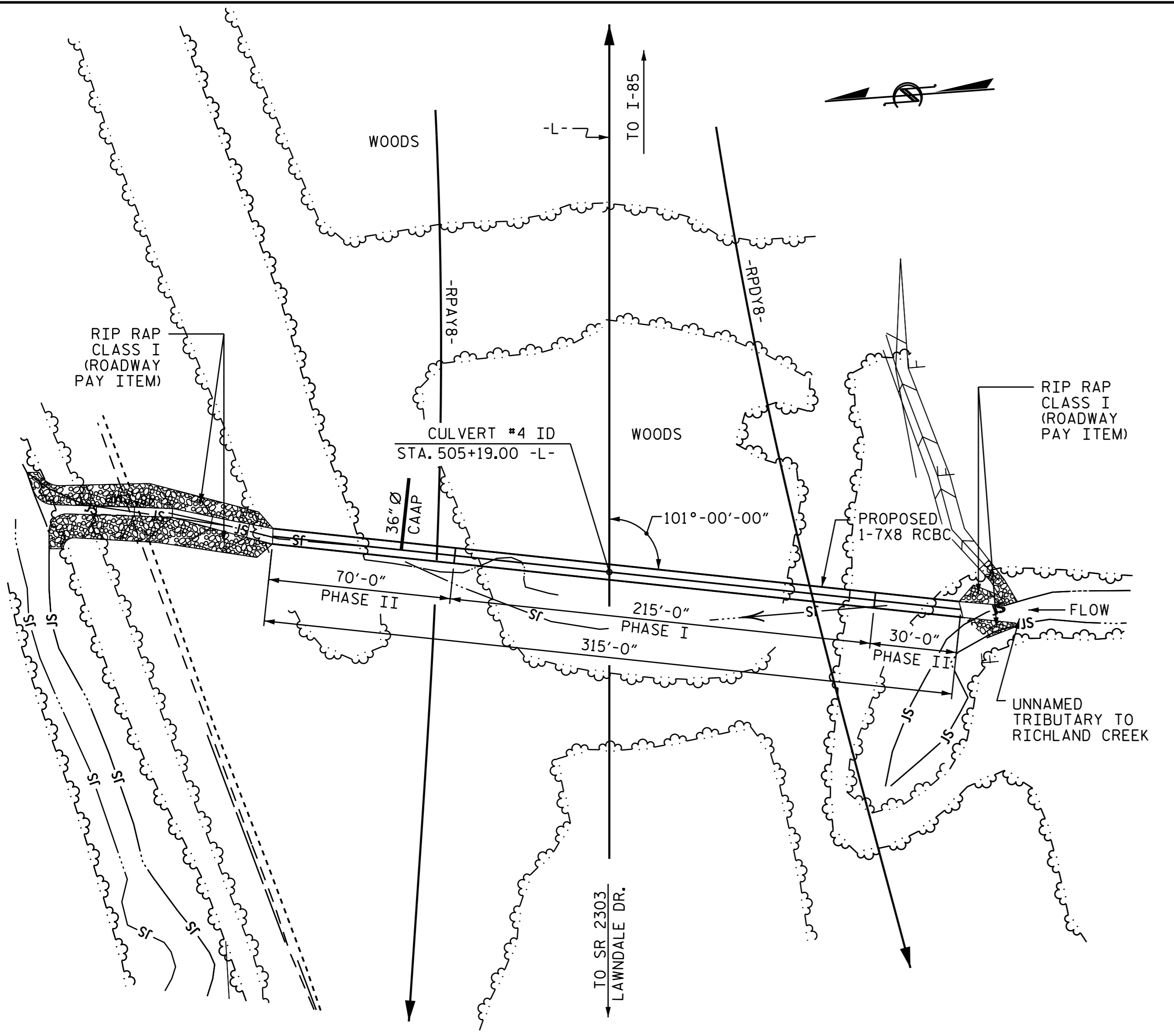


T10-585, NAIL SET 146.93' LT OF -L- STA.503+26.50 EL.761.20

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



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

HYDRAULIC DATA

DESIGN DISCHARGE	= 240 CFS
FREQUENCY OF DESIGN FLOOD	= 50 YRS.
DESIGN HIGH WATER ELEVATION	= 767.7
DRAINAGE AREA	= 0.22 SQ. MI.
BASE DISCHARGE (Q100)	= 260 CFS
BASE HIGH WATER ELEVATION	= 768.02

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 300+ CFS
FREQUENCY OF OVERTOPPING FLOOD	= >500+ YRS.
OVERTOPPING FLOOD ELEVATION	= 774.3

GRADE DATA

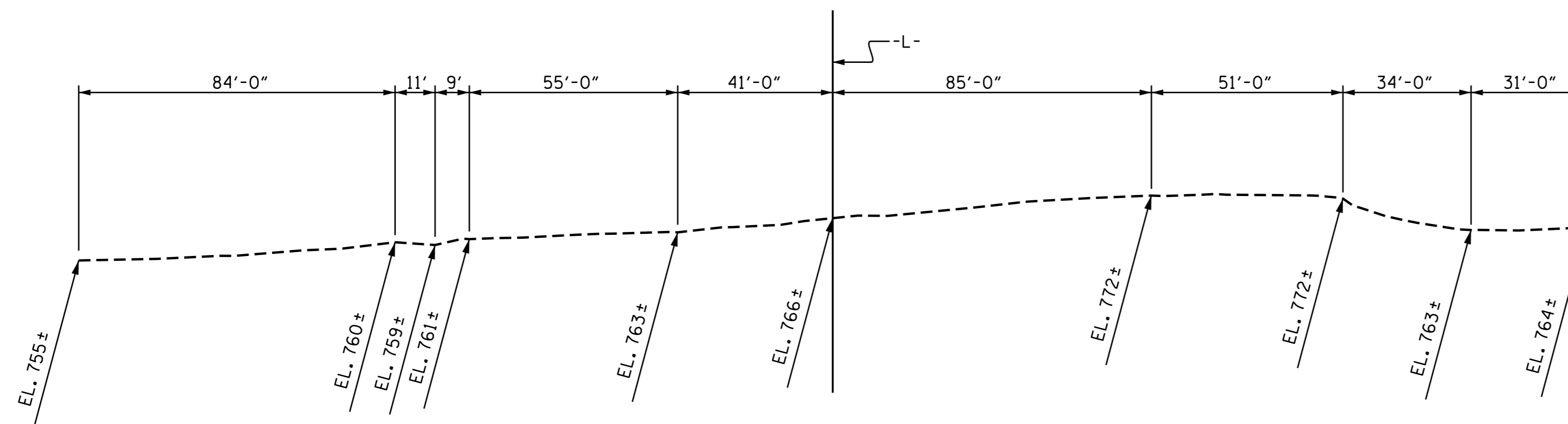
GRADE POINT ELEVATION @ STA. 505+19.00 -L-	= 790.20'
BED ELEVATION @ STA. 505+19.00 -L-	= 758.50'
ROADWAY FILL SLOPES	= 2:1

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE	
PHASE I	212.9 C.Y.
PHASE II	123.4 C.Y.
TOTAL	336.3 C.Y.
REINFORCING STEEL	
PHASE I	27,330 LBS.
PHASE II	14,452 LBS.
TOTAL	41,782 LBS.
FOUNDATION COND. MATERIAL	
PHASE I	187 TONS
PHASE II	87 TONS
TOTAL	274 TONS
CULVERT EXCAVATION (TOTAL)	LUMP SUM

NOTES:

- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.
- DESIGN FILL ----- 24.22'
- 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:
 - WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS.
 - 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.
- THE 36" Ø CAAP THROUGH THE SIDEWALL OF THE CULVERT SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.
- THE CONTRACTOR SHALL FILL THE PROPOSED CULVERT WITH NATURAL BED MATERIAL TO A DEPTH OF 1 FOOT. EXISTING BED MATERIAL SHALL BE STOCKPILED FOR USE IN THE AREA OF PROPOSED CULVERT AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PAY ITEM FOR CULVERT EXCAVATION
- NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.
- 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.



PROFILE ALONG CULVERT

DRAWN BY : REZA KOUCHEKI DATE : 1/29/16
 CHECKED BY : T. H. FANG DATE : 5/30/16
 DESIGN ENGINEER OF RECORD: REZA KOUCHEKI DATE : 4/12/16



DocuSigned by:
 J. M. Bailey 7/15/2016



DocuSigned by:
 Ting Fang 7/14/2016

PROJECT NO. U-2524D
 GUILFORD COUNTY
 STATION: 505+19.00 -L-
 SHEET 1 OF 7

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 CULVERT #4
 SINGLE 7 FT. X 8 FT.
 CONCRETE BOX CULVERT
 101° SKEW

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	DATE:	C-28
1			3		TOTAL SHEETS
2			4		34

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED