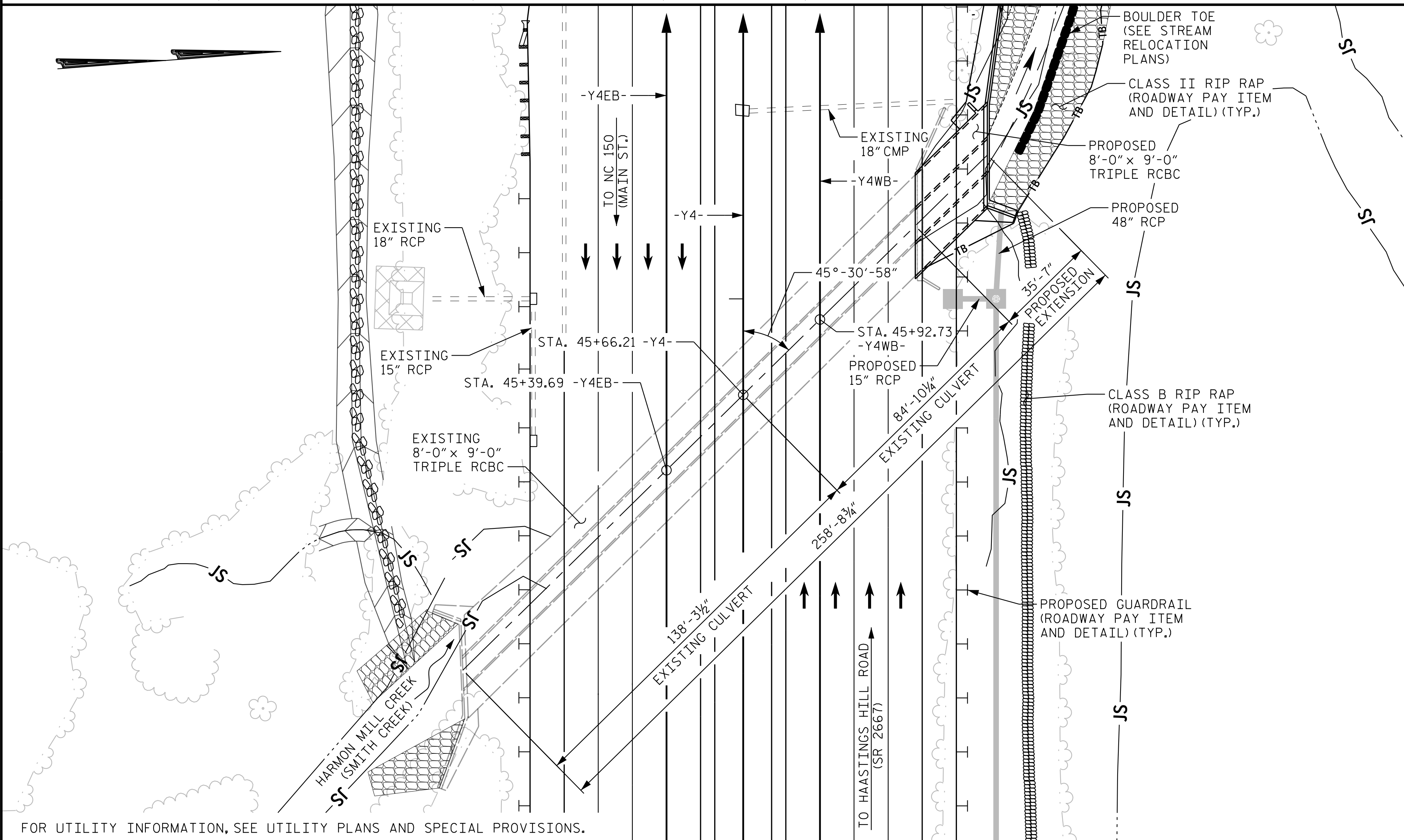


BENCHMARK: BM#10, -BY17- STA. 8+83.00, OFFSET 14' RT., EL. 935.89', RR SPIKE IN ROOT OF 30" WILLOW OAK



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING
- DESIGN FILL ----- 5'-6" (MAX.), 2'-0" (MIN.)
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- 3" Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- THE REINFORCED CONCRETE BOX CULVERT SHALL BE PLACED ON THE STANDARD 1.0 FT. BLANKET OF FOUNDATION CONDITIONING MATERIAL. SEE SECTION 414 OF STANDARD SPECIFICATIONS.
- DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING WALL SHEETS.
- THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF THE CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF FILL.
- THE 48" R.C. PIPE THROUGH STEM OF W1 SHALL BE LOCATED BY THE ENGINEER. THE REINFORCING STEEL SHALL BE FIELD BENT AS NECESSARY TO CLEAR PIPE.
- 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.
- 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 FACES OF EXTERIOR WALLS 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 SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.
- IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY USE THE EXISTING WINGS AS TEMPORARY SHORING FOR THE CONSTRUCTION OF THE CULVERT EXTENSIONS. IN THIS CASE, THE BOTTOM SLAB OF THE EXTENSION SHALL BE CURED AT LEAST 72 HOURS PRIOR TO CUTTING THE WINGS. THE WINGS MAY BE CUT EARLIER PROVIDED THE SLAB CONCRETE STRENGTH HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI.
- DOWELS SHALL BE USED TO CONNECT THE CULVERT EXTENSION TO THE EXISTING CULVERT AS SHOWN. FOR NOTES REGARDING SETTING OF DOWELS, SEE SHEET SN.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- NO PRECAST REINFORCED CULVERT OPTION WILL BE ALLOWED.

HYDRAULIC DATA

DESIGN DISCHARGE -----1,810 CFS
 FREQUENCY OF DESIGN FLOOD -----50 YR.
 DESIGN HIGH WATER ELEVATION-----854.2 FT.
 DRAINAGE AREA -----2.9 SQ. MI.
 BASE DISCHARGE (Q100) -----2,090 CFS
 BASE HIGH WATER ELEVATION -----856.0 FT.

OVERTOPPING FLOOD DATA

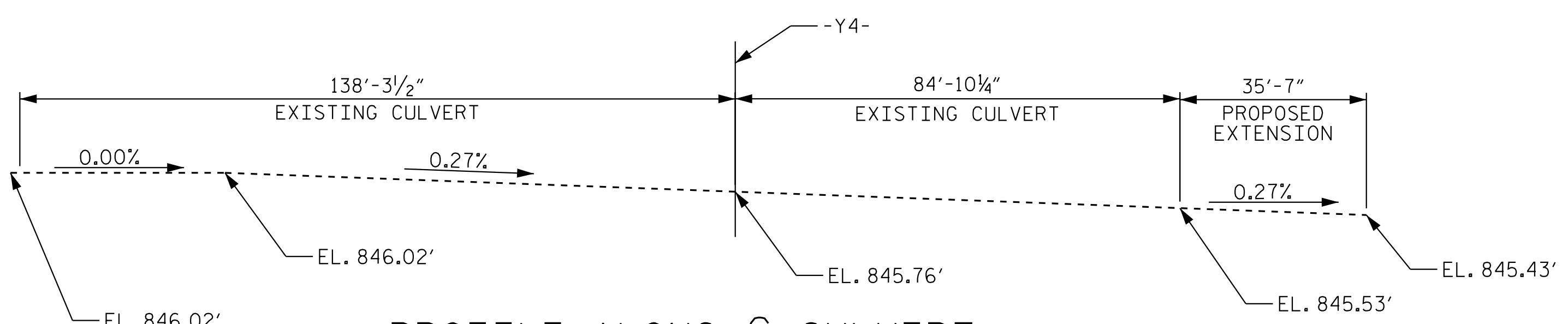
OVERTOPPING DISCHARGE -----2,800 CFS
 FREQUENCY OF OVERTOPPING FLOOD ---50 YR.<<100 YR.
 OVERTOPPING FLOOD ELEVATION -----856.06 FT.

ROADWAY DATA

GRADE POINT EL. @ STA. 45+65.83 -Y4- = 860.92'
 BED ELEVATION @ STA. 45+65.83 -Y4- = 845.76'
 ROADWAY SLOPES 2 : 1

TOTAL STRUCTURE QUANTITIES

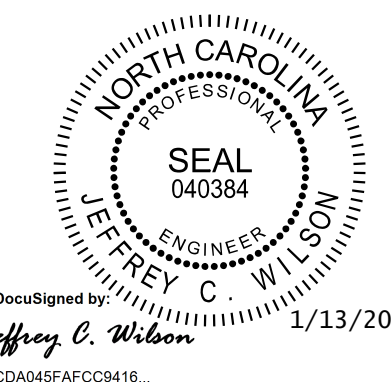
CULVERT EXCAVATION STA. 45+66.21 -Y4- LUMP SUM	
FOUNDATION CONDITIONING MATERIAL	77 TONS
CLASS A CONCRETE	
BARREL @ 2.877 CY/FT	102.4 C.Y.
WINGS ETC.	57.6 C.Y.
EDGE BEAMS	2.8 C.Y.
TOTAL	162.8 C.Y.
REINFORCING STEEL	
BARREL	17,081 LBS.
WINGS ETC.	7,183 LBS.
TOTAL	24,326 LBS.



PROFILE ALONG CULVERT

PROJECT NO. U-2579BA
FORSYTH COUNTY
 STATION: 45+66.21 -Y4-

SHEET 1 OF 8 EXTENDS STR. NO. 367



Kimley»Horn
 421 Fayetteville Street, Suite 600
 Raleigh, NC 27601-1772
 Phone (919) 677-2000 NC LICENSE # F-0102

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TRIPLE 8 FT. X 9 FT.
 CONCRETE BOX CULVERT
 45° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			8

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

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DRAWN BY: J.I.KIMBLE DATE: 1/20
 CHECKED BY: C.I.POOLE DATE: 1/20
 DESIGN ENGINEER OF RECORD: J.C.WILSON DATE: 1/20