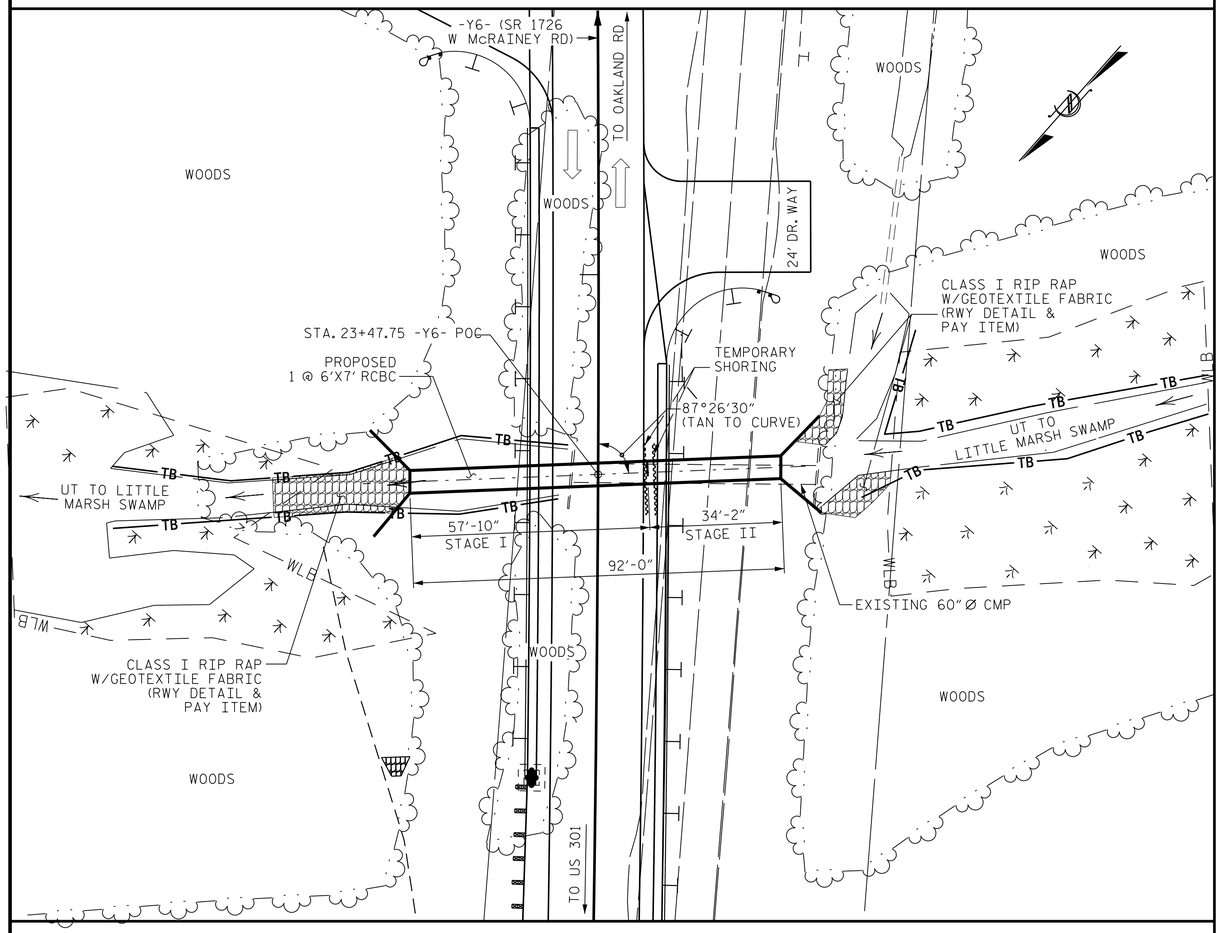
BM 65: -Y6- STA. 8+66.00; 105.17' LT.; TIE SPIKE SET IN 36" PECAN, EL. 171.21'



LOCATION SKETCH

ROADWAY DATA

GRADE PT. EL. @ STA. 23+47.75 -Y6-	= 172.79'
BED ELEV. @ STA. 23+47.75 -Y6-	= 155.51'
ROADWAY SLOPE (LEFT)	= 3 : 1
ROADWAY SLOPE (RIGHT)	= 3 : 1

HORIZONTAL CURVE DATA

P.I. STA. = 20+25.89 -Y6-
Δ = 4°-58'-32.9" (LT.)
D = 0°-30'-58.2"
L = 963.97'
T = 482.29'
R = 11,000.00'

HYDRAULIC DATA

DESIGN DISCHARGE	= 230 CFS
FREQUENCY OF DESIGN FLOOD	= 25 YRS.
DESIGN HIGH WATER ELEVATION	= 162.8'
DRAINAGE AREA	= 0.63 SQ. MI.
BASE DISCHARGE (Q100)	= 310 CFS
BASE HIGH WATER ELEVATION	= 164.1'

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 400+ CFS
FREQUENCY OF OVERTOPPING FLOOD	= 500+ YRS.
OVERTOPPING FLOOD ELEVATION	= 167.0' *

* AT SAG STA. 19+81.00 -Y6-

TOTAL STRUCTURE QUANTITIES

CULVERT EXCAVATION	LUMP SUM
FOUNDATION COND. MATERIAL	
STAGE I	46 TONS
STAGE II	27 TONS
TOTAL	73 TONS
CLASS A CONCRETE	
STAGE I	59.7 C.Y.
STAGE II	40.7 C.Y.
TOTAL	100.4 C.Y.
REINFORCING STEEL	
STAGE I	6,833 LBS.
STAGE II	4,391 LBS.
TOTAL	11,224 LBS.

NOTES

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

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

FOR CONSTRUCTION SEQUENCE, EROSION CONTROL AND MEASURES, SEE EROSION CONTROL PLANS.

DESIGN FILL---------- 9.48'

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:

STAGE I - CONSTRUCT RCBC NORTH SIDE SECTION (OUTLET END).

1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF BOTH VERTICAL WALLS.
2. FILL WITH NATIVE MATERIAL BACKFILL.
3. FOLLOWED BY THE WING WALLS FULL HEIGHT. ROOF SLAB AND HEADWALL.

STAGE II - CONSTRUCT RCBC REMAINING SECTION (INLET END).

1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF BOTH VERTICAL WALLS.
2. FILL WITH NATIVE MATERIAL BACKFILL.
3. FOLLOWED BY THE WING WALLS FULL HEIGHT. ROOF SLAB AND HEADWALL.

THE CONTRACTOR 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 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 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.

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 OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

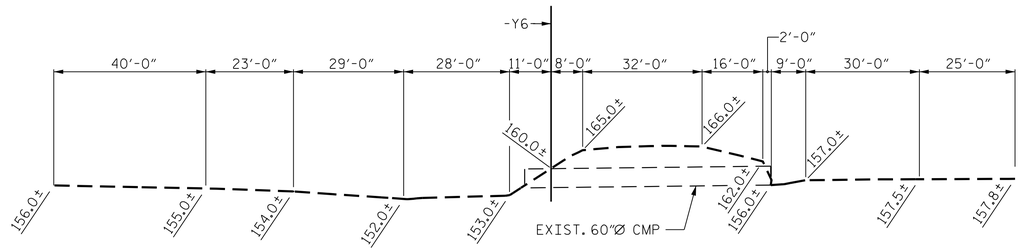
FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR TRAFFIC PHASING, LIMITS OF TEMPORARY SHORING, SEE TRAFFIC CONTROL PLANS.

FOR PAY ITEM FOR TEMPORARY SHORING, SEE ROADWAY PLANS.



PROFILE ALONG ℄ CULVERT

FOUNDATION NOTES

EXCAVATE FOUNDATION A MINIMUM OF 12" BELOW CULVERT BEARING ELEVATION. PLACE 12" OF CLASS VI FOUNDATION CONDITIONING MATERIAL ENCAPSULATED IN TYPE II GEOTEXTILE IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS.

FOR AREAS WITH NEW FILL BELOW CULVERT BEARING ELEVATION, PLACE A MINIMUM OF 12" OF CLASS VI FOUNDATION CONDITIONING MATERIAL ENCAPSULATED IN TYPE II GEOTEXTILE IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS.

AT THE CONTRACTOR'S OPTION, USE ADDITIONAL CLASS VI FOUNDATION CONDITIONING MATERIAL FOR FILL BENEATH CULVERT BEARING ELEVATION. ENCAPSULATE ALL CLASS VI FOUNDATION CONDITIONING MATERIAL IN TYPE II GEOTEXTILE IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS.

OVER EXCAVATE ADDITIONAL LOOSE/SOFT OR ORGANIC MATERIAL IF PRESENT TO SUITABLE BEARING MATERIALS AND REPLACE WITH ADDITIONAL CLASS IV FOUNDATION CONDITIONING MATERIAL.

PROJECT NO. I-5987B
ROBESON COUNTY
STATION: 23+47.75-Y6-POC

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BARREL STANDARD

SINGLE 6 FT. X 7 FT. CONCRETE BOX CULVERT 87°-26'-30" SKEW

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CDM Smith
CDM SMITH
5400 Glenwood Ave, Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

DRAWN BY :	JJR	DATE :	4/21
CHECKED BY :	THF	DATE :	5/21
DESIGN ENGINEER :	VDK	DATE :	6/21

DWG. No.

NORTH CAROLINA PROFESSIONAL SEAL 16301 ENGINEER TING-HSIUNG FANG
Ting Fang
4/4/2022

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C17-1
1			3			TOTAL SHEETS
2			4			5

SITE 17