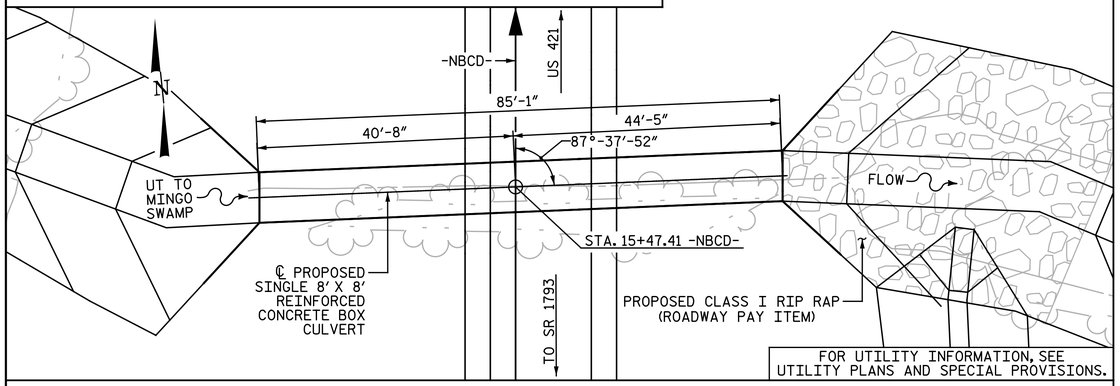
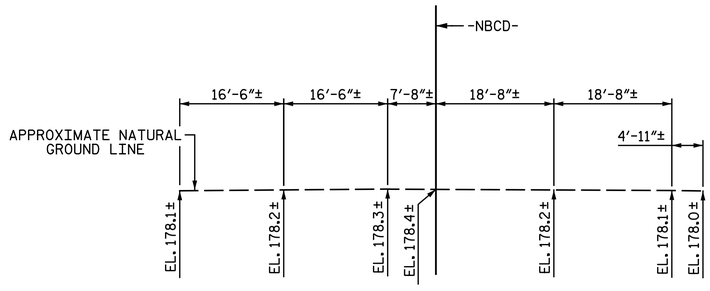
B.M. #62 - BENCH TIE SET IN 24"BEECH, STA. 27+31.89 -Y14-, 28.40' LEFT, EL. 198.28



LOCATION SKETCH



PROFILE ALONG ℄ CULVERT

ROADWAY DATA

GRADE POINT ELEV. @ STATION 15+47.41 -NBCD-	= 192.51
BED ELEV. @ STATION 15+47.41 -NBCD-	= 177.10
ROADWAY SLOPES	= 4:1 (LEFT), 3:1 (RIGHT)

HYDRAULIC DATA

DESIGN DISCHARGE	= 340 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 100 YRS.
DESIGN HIGH WATER ELEVATION	= 184.40
DRAINAGE AREA	= 0.55 SQ. MI.
BASE DISCHARGE (Q100)	= 340 C.F.S.
BASE HIGH WATER ELEVATION	= 184.40

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 754 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 500+ YR.
OVERTOPPING FLOOD ELEVATION	= 189.20

NOTE: OVERTOPS SP @ STA. -NBCD- 18+71.00 LT (SAG)

TOTAL STRUCTURE QUANTITIES

CULVERT EXCAVATION		LUMP SUM
FOUNDATION CONDITIONING MATERIAL		80 TONS
CLASS A CONCRETE		
BARREL @ 0.918 CY/FT	78.1	C.Y.
WINGS ETC.	40.2	C.Y.
TOTAL	118.3	C.Y.
REINFORCING STEEL		
BARREL	11,430	LBS.
WINGS ETC.	2,718	LBS.
TOTAL	14,148	LBS.

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

MAXIMUM DESIGN FILL = 7.56'.

MINIMUM DESIGN FILL = 7.12'.

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:

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.

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.

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.

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

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 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.

PROJECT NO. I-5878

HARNETT COUNTY

STATION: 15+47.41 -NBCD-

SHEET 1 OF 3

NORTH CAROLINA PROFESSIONAL SEAL 043878 ENGINEER AMANDA H. SHARPE

DocuSigned by: Amanda H. Sharpe 81D5FFF4ECEF4D2...

4/27/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SINGLE 8 FT. X 8 FT.
CONCRETE BOX CULVERT
87°-37'-52" SKEW

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Michael Baker INTERNATIONAL

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Cary, North Carolina 27518
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	CI-1
1			3			TOTAL SHEETS
2			4			6

DRAWN BY : N. B. SPEAKS DATE : 1-29-20
CHECKED BY : A. H. SHARPE DATE : 4-26-21