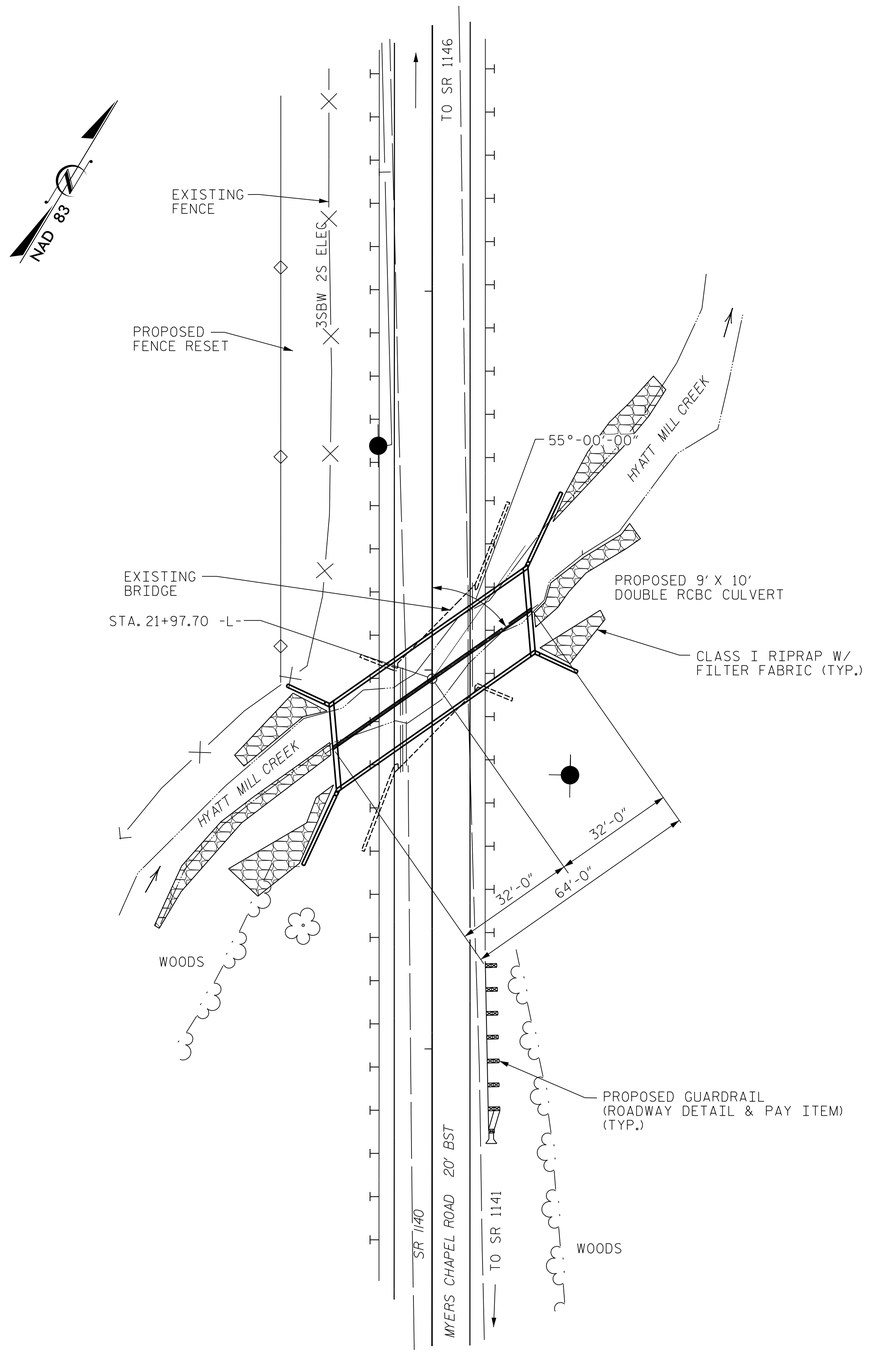
BM #2: 8" SPIKE IN ROOT OF 18" PINE 20.5' LT OF -L- STA. 24+81.21
N 499757, E 562582 EL. 1817.66'



FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES

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

DESIGN FILL----------MAX. = 4.44' MIN. = 3.96'

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.

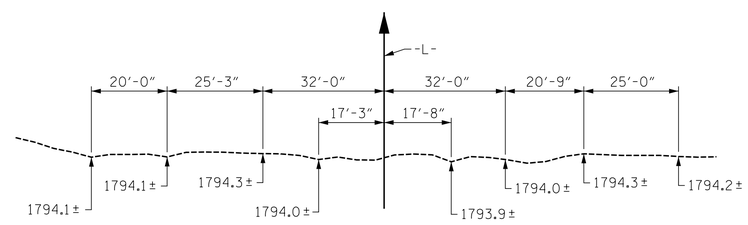
STEEL IN THE BOTTOM SLAB MAY BE SPLICED AT THE PERMITTED CONSTRUCTION JOINT AT THE CONTRACTOR'S OPTION. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL 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 THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

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 ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION ACTIVITIES, SEE SPECIAL PROVISIONS

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.



PROFILE ALONG ℄ CULVERT

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS

THE EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 28'-2", WITH A CLEAR ROADWAY WIDTH OF 17'-2", WITH REINFORCED CONCRETE DECK ON CONCRETE GIRDERS AND ABUTMENTS, AND LOCATED AT THE PROPOSED STRUCTURE, SHALL BE REMOVED.

THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

EXCAVATE 1'-0" MIN. BENEATH CULVERT FOOTING AND REPLACE WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH ARTICLE 414 OF THE STANDARD SPECIFICATIONS.

GRADE DATA

GRADE POINT ELEV. @ STA. 21+97.70 -L- = 1808.4
BED ELEV. @ STA. 21+97.70 -L- = 1793.2 ±
ROADWAY SLOPES 2:1

TOTAL STRUCTURE QUANTITIES

CLASS A CONCRETE			
BARREL @ 2.19 C.Y./FT.		140.2	C.Y.
SILLS		1.5	C.Y.
WINGS, ETC.		40.6	C.Y.
	TOTAL	182.3	C.Y.
REINFORCING STEEL			
BARREL		16,350	LBS.
WINGS		2,781	LBS.
	TOTAL	19,131	LBS.
CULVERT EXCAVATION		LUMP SUM	
FOUNDATION CONDITIONING MATERIAL		151 TONS	
REMOVAL OF EXISTING STRUCTURE		LUMP SUM	
RIP RAP CLASS 1		114 TONS	
GEOTEXTILE MATERIAL UNDER RIP RAP		113.8 S.Y.	
ASBESTOS ASSESSMENT		LUMP SUM	
CHANNEL SUBSTRATE MATERIAL		78 TONS	

HYDRAULIC DATA

DESIGN DISCHARGE	= 1000	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1803.0	FT
DRAINAGE AREA	= 3.5	SQ. MI.
BASE DISCHARGE	= 1626	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1806.53	FT
OVERTOPPING DISCHARGE	= 1830	CFS
OVERTOPPING FREQUENCY	= 200+	YRS
OVERTOPPING ELEVATION	= 1804.4	FT
W.S. ELEVATION AT DATE OF SURVEY	= 1795.00 5-16-2011	FT

NORTH CAROLINA PROFESSIONAL SEAL 20777 ENGINEER HARDY L. WILLIS

DocuSigned by: Hardy Willis CC287FCF0223461...
11/4/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

V&M Vaughn & Melton Consulting Engineers
Asheville, North Carolina 828-253-2796
Tri-Cities, TN 423-467-8401
Knoxville, TN 865-546-5800
Spartanburg, SC 864-574-4775
Charleston, SC 843-974-5650
Middlesboro, KY 606-248-6600
Atlanta, GA 770-627-3509
Charlotte, NC 704-357-0488
Boone, NC 828-355-9933
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PROJECT NO. 14SP.20221.1/.2
CLAY COUNTY
STATION: 21+97.70 -L-

SHEET 1 OF 9 REPLACES BRIDGE NO. 86

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DOUBLE BARREL 9' X 10' RCBC 55° SKEW HYATT MILL CREEK

DWN. BY: MAF DATE: 7/14
CHKD. BY: HLW DATE: 7/14

REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

SHEET NO. C-11
TOTAL SHEETS 19