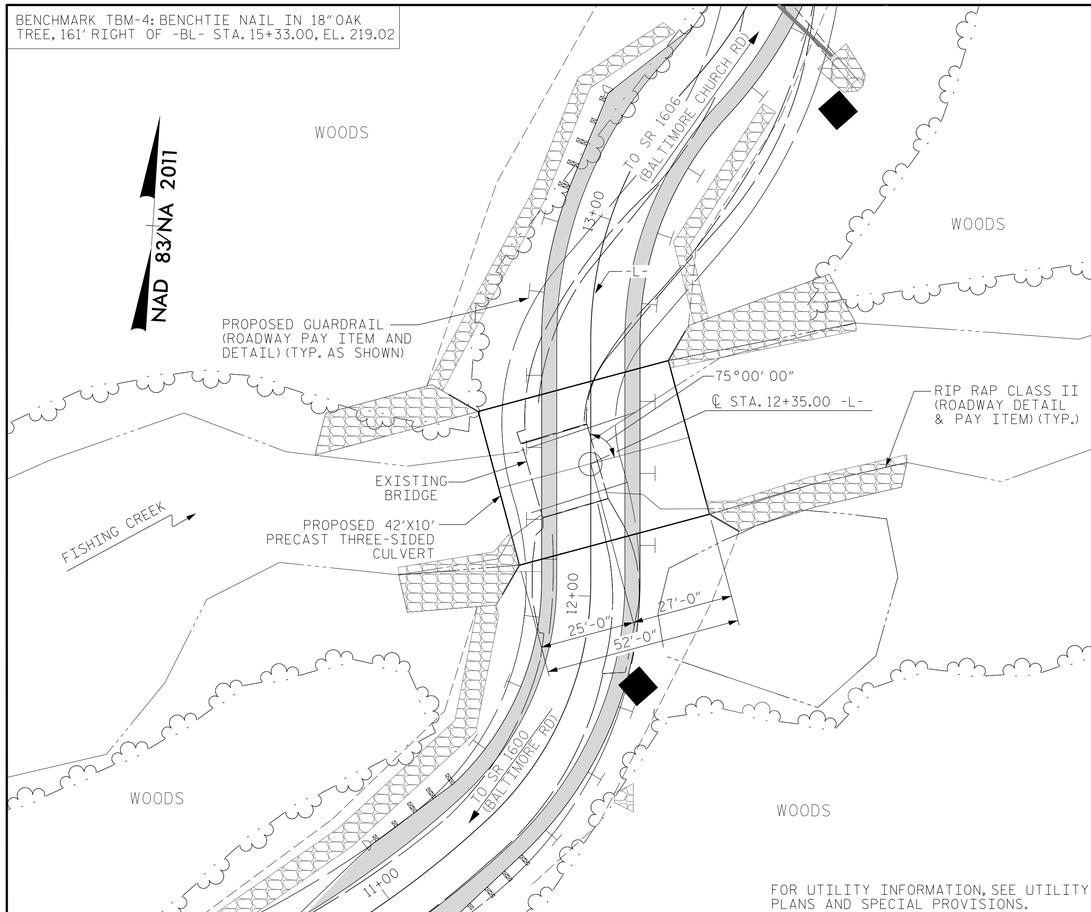


FOR UTILITY INFORMATION, SEE UTILITY PLANS AND SPECIAL PROVISIONS.

LOCATION SKETCH

NOTES:

1. ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
2. DESIGN FILL IS 1.0 FEET.
3. 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.
4. THE SURVEYOR SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.
5. THE EXISTING STRUCTURE CONSISTING OF 1 SPAN @ 20'-8" WITH A TIMBER DECK ON STEEL I-BEAMS AND A CLEAR ROADWAY OF 17'-2" ON TIMBER CAPS ON RUBBLE MASONRY ABUTMENTS AND LOCATED AT THE POSTED SITE SHALL BE REMOVED.
6. REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE EX STING BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
7. THE BOTTOM OF FOOTING ELEVATIONS MAY BE LOWERED IN ORDER TO SATISFY BEARING CAPACITY AND MINIMUM EMBEDMENT REQUIREMENTS.
8. FOR PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT, SEE SPECIAL PROVISIONS.
9. THE PRECAST CULVERT SECTIONS AND WINGS SHALL BE DESIGNED TO HANDLE FULL DEPTH HYDROSTATIC PRESSURE IF WEEP HOLES ARE NOT UTILIZED. IF PROVIDED, WEEP HOLES SHALL BE LOCATED A MINIMUM HEIGHT OF 6 INCHES ABOVE THE NORMAL FLOW LINE AND HAVE A MAXIMUM SPACING OF 10 FEET.
10. INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 12+35.00 -L-."
11. FOR OTHER DESIGN DATA AND NOTES, SEE STANDARD NOTES SHEET.
12. FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
13. FOR CRANE SAFETY, SEE SPECIAL PROVISIONS
14. FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
15. FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
16. FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
17. FOR CONCRETE SLAB BELOW GUARDRAIL, SEE SPECIAL PROVISIONS.
18. FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.
19. NO EQUIPMENT OR COMPONENTS WILL BE PLACED/STAGED IN FISHING CREEK.
20. THE BRIDGE WILL BE REMOVED FROM THE TOP DOWN, FIRST REMOVING THE ASPHALT WITH CONTAINMENT MEASURES IN PLACE TO PREVENT COMPONENTS OF THE BRIDGE DECK FROM DROPPING INTO THE STREAM. THE METHOD OF CONTAINMENT WILL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THIS WILL BE FOLLOWED BY REMOVAL OF THE RAIL, DECKING, GIRDERS, ETC. THE CONTRACTOR WILL THEN COMPLETELY ISOLATE THE MASONRY ABUTMENTS USING AN IMPERVIOUS DIKE IN THE STREAM TO ALLOW FOR COMPLETE REMOVAL OF THE ABUTMENTS. THE CONTRACTOR WILL INSTALL ADDITIONAL IMPERVIOUS DIKES IN THE STREAM AS NECESSARY TO ALLOW FOR CONSTRUCTION IN THE DRY OF THE STRUCTURE FOOTINGS AND FOR INSTALLATION OF THE CLASS II RIP RAP BANK STABILIZATION. ALL CONSTRUCTION EQUIPMENT AND PORTIONS OF THE CULVERT STRUCTURE NECESSARY TO COMPLETE THE PROJECT WILL REMAIN BEHIND THE IMPERVIOUS DIKE WHILE WITHIN THE BANKS OF FISHING CREEK. DECK DRAINS WILL NOT BE ALLOWED TO DISCHARGE DIRECTLY INTO THE STREAM.

FOUNDATION NOTES:

1. CARRY IN FOOTINGS FOR THE 3 SIDED CULVERT AT STATION 12+35.00 -L- AT LEAST 12" INTO ROCK WITH A MINIMUM THICKNESS AS SHOWN IN THE PLANS.

ROADWAY DATA

GRADE POINT ELEV. @ STATION 12+35.00 -L- = 216.01
TOP OF FOOTING ELEV. @ STATION 12+35.00 -L- = 204.00
ROADWAY SLOPES 2:1

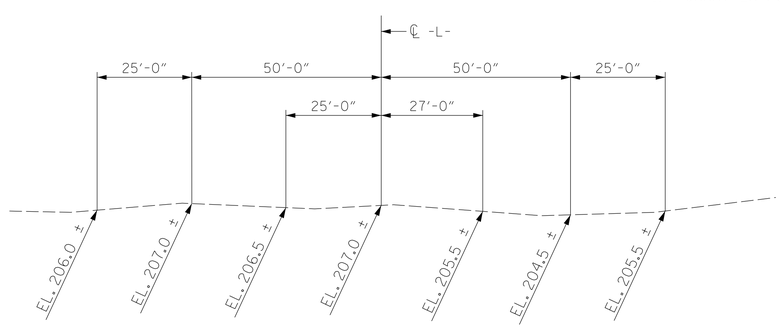
HYDRAULIC DATA

DESIGN DISCHARGE	2600 CFS
FREQUENCY OF DESIGN FLOOD	2 YR.
DESIGN HIGHWATER ELEV.	220.6 FT.
DRAINAGE AREA	75.8 SQ. MI.
BASE DISCHARGE (Q100)	11147 CFS
BASE HIGHWATER ELEV.	229.3 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	824 CFS
FREQUENCY OF OVERTOPPING FLOOD	<2 YR.
OVERTOPPING FLOOD ELEV.	216.1 FT. *

* OVERTOPS AT STA. 12+00 -L-



PROFILE ALONG ℄ OF CULVERT

TOTAL STRUCTURE QUANTITIES

REMOVAL OF EXISTING STRUCTURE @ STA. 12+35.00 -L-	LUMP SUM
ASBESTOS ASSESSMENT	LUMP SUM
CLASS A CONCRETE *	61 CU. YDS.
REINFORCING STEEL *	7487 LBS.
42'X10' PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT @ STA. 12+35.00 -L-	LUMP SUM

* INCLUDES CULVERT FOOTINGS AND GUARDRAIL FOOTINGS

DocuSigned by: David Ruggles C46276BDF412422 3/14/2022

NORTH CAROLINA PROFESSIONAL SEAL 11725 ENGINEER DAVID R. RUGGLES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 17BP.5.R.88
WARREN COUNTY
STATION: 12+35.00 -L-

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRECAST
REINFORCED CONCRETE
THREE-SIDED CULVERT
75° SKEW

STEWART
Firm License No. C-1051
223 S. West St.
Suite 1100
Raleigh, NC 27603
T 919.380.8750
www.stewartinc.com

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

SHEET NO. C-1
TOTAL SHEETS 5

DRAWN BY:	E. PHELPS	DATE :	4/18
CHECKED BY:	D. RUGGLES	DATE :	4/18
DESIGN ENGINEER OF RECORD:	D. RUGGLES	DATE :	4/18

17BP.5.R.88

1/31/2022
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