

BM#2 - NAIL IN 22" PINE  
46' LT. OF STA. 60+97.81 -L-  
ELEV. = 9.95

**NOTES**

ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.  
DESIGN FILL ----- MAX. 4.83' ----- MIN. 3.83'  
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.  
FOR ALUMINUM BOX CULVERT, SEE SPECIAL PROVISIONS.  
ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2018.

THIS STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.  
FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.  
NO PRECAST REINFORCED BOX CULVERT OPTION WILL BE ALLOWED.  
BACKFILL SILLS WITH NATIVE MATERIAL.  
NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.

THE DETAILS SHOWN ARE FOR GENERAL LAYOUT ONLY. THE SUPPLIER SHALL PROVIDE DESIGNS AND DETAILS FOR REVIEW AND APPROVAL THAT MEET THE REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12, AND ARE SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

UNLESS OTHERWISE INDICATED, THE SUPPLIER SHALL DESIGN, DETAIL AND FURNISH ALL STRUCTURAL ELEMENTS AND HARDWARE.

THE EXISTING STRUCTURE CONSISTING OF 2 @ 95" X 67" ALUMINUM PLATE ARCH CULVERTS, 41.63' LONG WITH HEADWALLS ON BOTH ENDS SHALL BE REMOVED. THE EXISTING STRUCTURE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE STRUCTURE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

REMOVAL OF THE EXISTING STRUCTURE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE STRUCTURE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE EXISTING STRUCTURE 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 STRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

EXCAVATE ONE FOOT MINIMUM BELOW CULVERT AND REPLACE THE EXCAVATED MATERIAL WITH FOUNDATION CONDITIONING MATERIAL IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

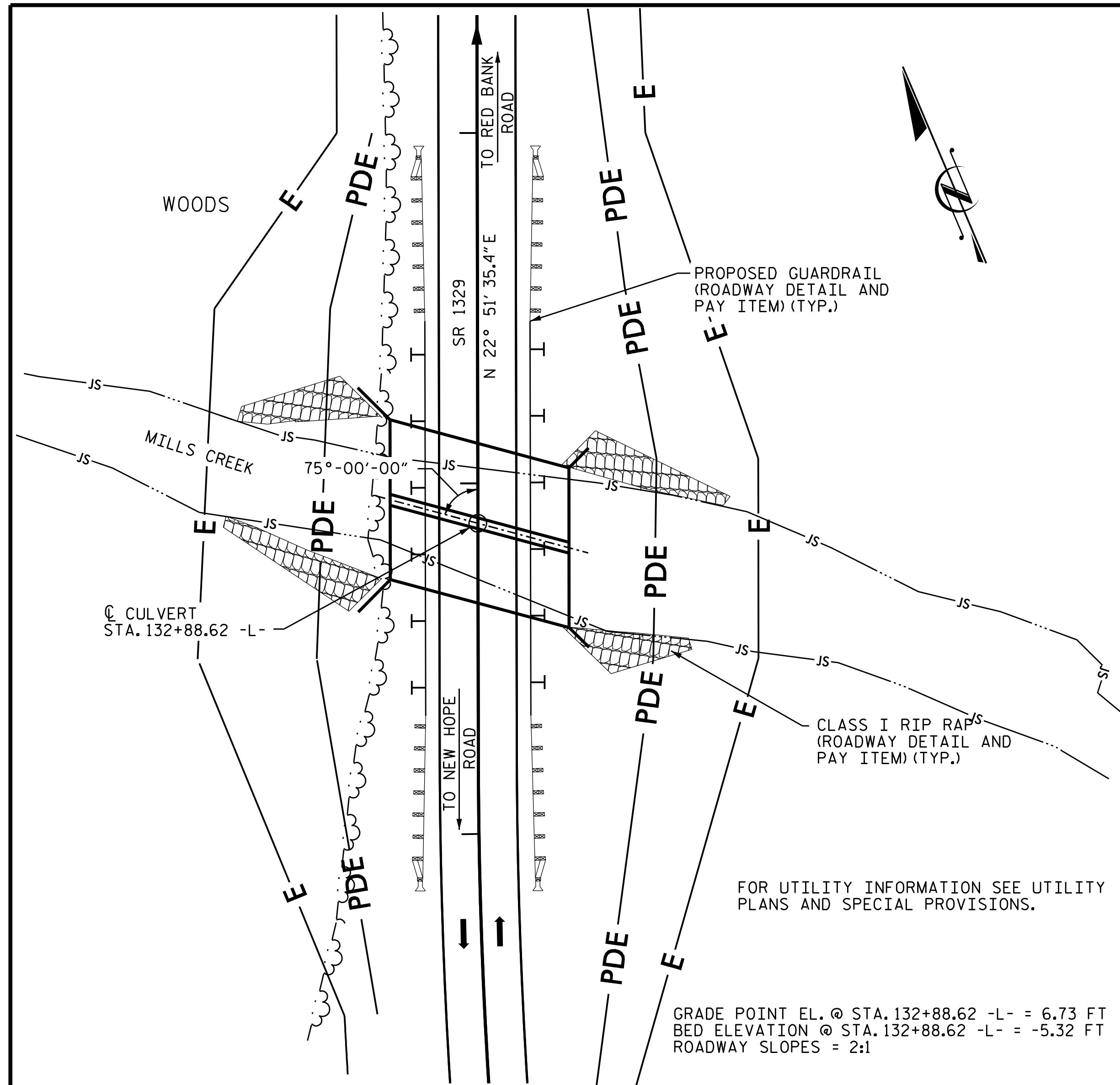
FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

TOTAL STRUCTURE QUANTITIES	
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	180 TONS
ALUMINUM BOX CULVERT @ STA. 132+88.62 -L-	LUMP SUM
MOMENT SLAB	98.0 LIN. FT.



LOCATION SKETCH

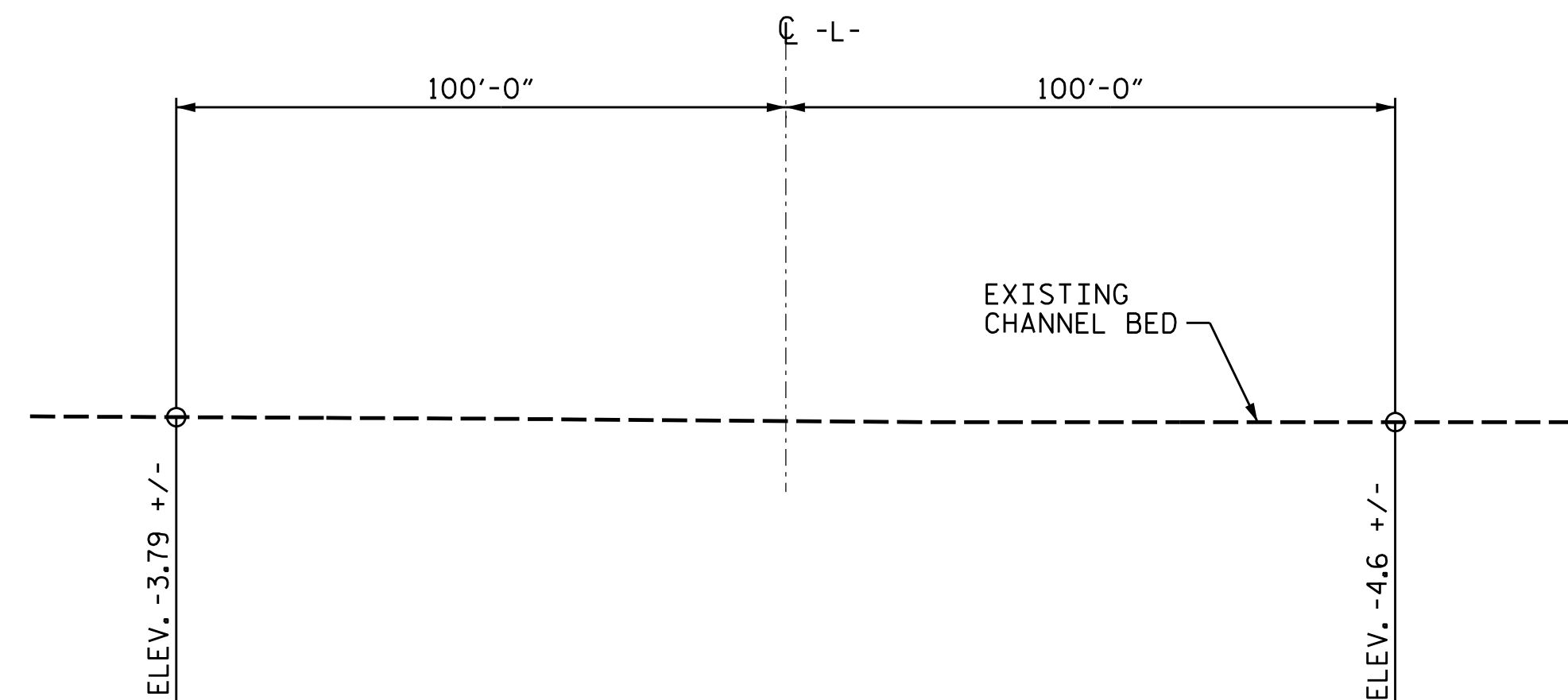
I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE = 817 CFS  
FREQUENCY OF OVERTOPPING FLOOD = 100 ± YR.  
OVERTOPPING FLOOD ELEVATION = 5.9 FT.  
OCCURS @ STA. 134+65 -L-

**HYDRAULIC DATA**

DESIGN DISCHARGE = 523 CFS  
FREQUENCY OF DESIGN FLOOD = 25 YR.  
DESIGN HIGH WATER ELEVATION = 4.6 FT.  
DRAINAGE AREA = 2.99 SQ. MI.  
BASE DISCHARGE (Q<sub>100</sub>) = 847 CFS  
BASE HIGH WATER ELEVATION = 5.9 FT.



PROFILE ALONG CULVERT

PREPARED IN THE OFFICE OF:  
**ATKINS**  
1616 EAST MILLBROOK ROAD, SUITE 160  
RALEIGH, NORTH CAROLINA 27609  
(919) 876-6888 NCBES #F-0326

DRAWN BY : CAB DATE : 11/19  
CHECKED BY : CYL DATE : 11/19  
DESIGN ENGINEER OF RECORD : DRB DATE : 11/19

PROJECT NO. R-5740  
PERQUIMANS COUNTY  
STATION: 132+88.62 -L-

SHEET 1 OF 3 STRUCTURE NO. 712203

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

DOUBLE  
20'-6" x 7'-3"  
ALUMINUM BOX CULVERT  
105° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-5
1			3			TOTAL SHEETS
2			4			7