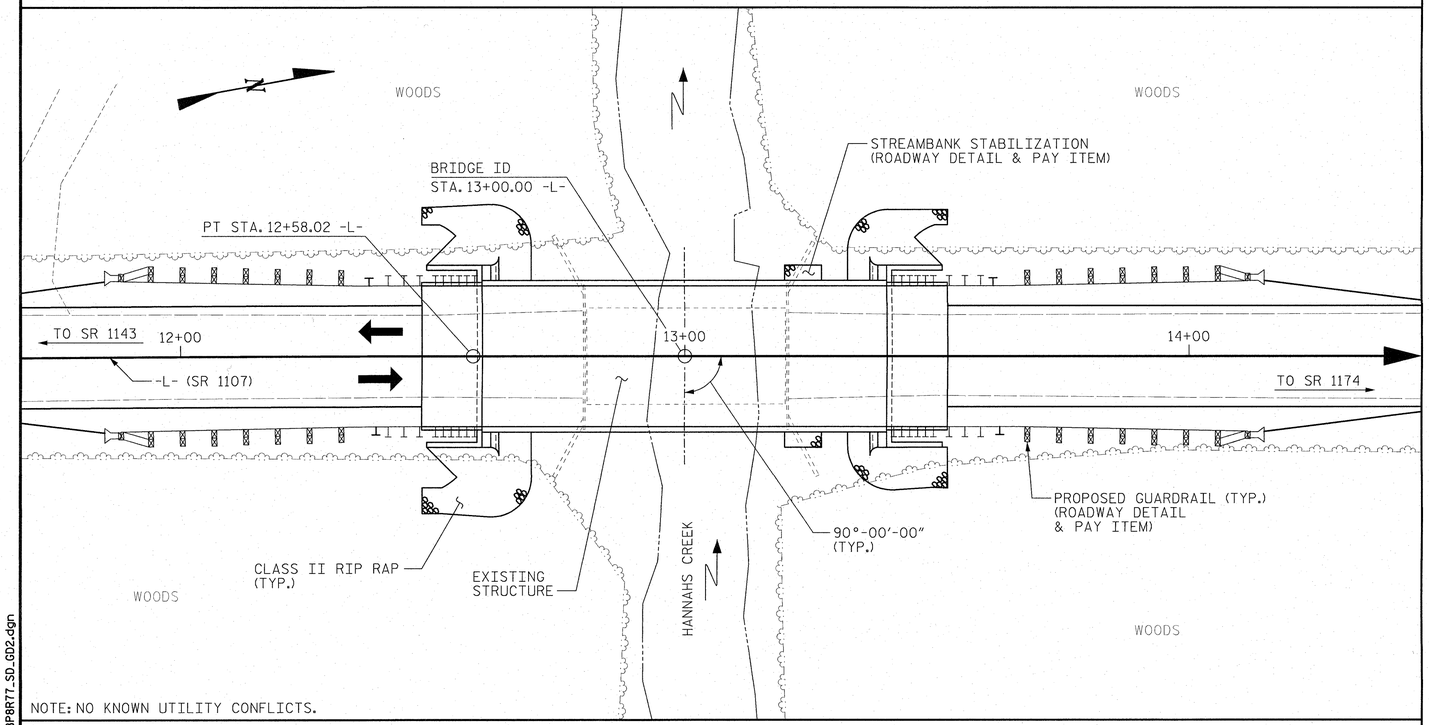
B.M. #1: R/R SPIKE IN BASE OF 15" ASH TREE; 87.34' LT. OF STA. 12+77.75 -L-, EL. 379.87




NOTE: NO KNOWN UTILITY CONFLICTS.

LOCATION SKETCH

## NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

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

FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

THE EXISTING STRUCTURE CONSISTING OF ONE SPAN @ 40'-6", WITH A TIMBER DECK ON I-BEAMS WITH A CLEAR ROADWAY WIDTH OF 19'-2" ON TIMBER CAP WITH TIMBER PILES END BENTS AND LOCATED AT THE SITE OF THE PROPOSED STRUCTURE SHALL BE REMOVED.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS TO NOT ALLOW DEBRIS TO FALL 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.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 30 FT. EACH SIDE OF THE CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. 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 THE DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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 13+00.00 -L-.

ASPHALT WEARING SURFACE IS INCLUDED IN THE ROADWAY QUANTITY. SEE ROADWAY QUANTITIES.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18 - EVALUATING SCOUR AT BRIDGES".

FOR FORMWORK AND FALSEWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 AND END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 120 TONS PER PILE.

DRIVE PILES AT END BENT 1 AND END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 200 TONS PER PILE.

PILE EXCAVATION IS REQUIRED TO INSTALL PILES AT END BENT 1 AND END BENT 2. EXCAVATE HOLES AT PILE LOCATIONS TO EL. 371.6 AT END BENT 1 AND EL. 373.3 AT END BENT 2 (LT.) AND EL. 371.6 AT END BENT 2 (RT.). FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

CONCRETE OR GROUT IS REQUIRED TO FILL HOLES FOR PILE EXCAVATION AT END BENT 1 AND END BENT 2.

ALL PILES ARE TO INSTALLED PLUMB WITH THE STRONG AXIS ORIENTED PARALLEL TO THE BRIDGE DECK ALIGNMENT.

## TOTAL BILL OF MATERIAL

| | REMOVAL OF EXISTING STRUCTURE | PILE EXCAVATION IN SOIL | PILE EXCAVATION NOT IN SOIL | UNCLASSIFIED STRUCTURE EXCAVATION | CLASS A CONCRETE | BRIDGE APPROACH SLABS | REINFORCING STEEL | HP 12 X 53 STEEL PILES | | VERTICAL CONCRETE BARRIER RAIL | RIP RAP CLASS II (2'-0" THICK) | GEOTEXTILE FOR DRAINAGE | ELASTOMERIC BEARINGS | 3'-0" x 2'-9" PRESTRESSED CONCRETE BOX BEAMS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LUMP SUM | LIN. FT. | LIN. FT. | LUMP SUM | CU. YDS. | LUMP SUM | LBS. | NO. | LIN. FT. | LIN. FT. | TON | SQ. YDS | LUMP SUM | NO. | LIN. FT. |
| SUPERSTRUCTURE | | | | | | LUMP SUM | | | | 160.0 | | | LUMP SUM | 10 | 800.00 |
| | | | | | | | | | | | | | | | |
| END BENT 1 | | 50.0 | 25.0 | LUMP SUM | 23.8 | | 3342 | 5 | 75.0 | | 112 | 124 | | | |
| END BENT 2 | | 40.0 | 25.0 | LUMP SUM | 23.8 | | 3342 | 5 | 65.0 | | 85 | 95 | | | |
| | | | | | | | | | | | | | | | |
| TOTAL | LUMP SUM | 90.0 | 50.0 | LUMP SUM | 47.6 | LUMP SUM | 6684 | 10 | 140.0 | 160.0 | 197 | 219 | LUMP SUM | 10 | 800.00 |

PROJECT NO. 17BP.8.R.77

RANDOLPH COUNTY

STATION: 13+00.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON SR 1107
OVER HANNAHS CREEK
BETWEEN SR 1143 & SR 1174

NORTH CAROLINA PROFESSIONAL SEAL 24939 ENGINEER BYRON E. ATKINSON
12/02/14

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

| REVISIONS | | | | | | | SHEET NO. |
|---|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | | S-2 |
| 1 | | | 3 | | | | TOTAL SHEETS |
| 2 | | | 4 | | | | 15 |

DRAWN BY : B.E. LANNING DATE : 10/14
CHECKED BY : B.E. ATKINSON DATE : 11/14
DESIGN ENGINEER OF RECORD : B.E. ATKINSON DATE : 11/14

12/2/2014
12:20:10 PM
User: blanning
Filename: P:\NC Bridges\MI3012 - Div 08 Bridge Replacements_Summit\MI3012.03_Randolph 232\17BP8R77\Structures\17BP8R77_SD_GD2.dgn