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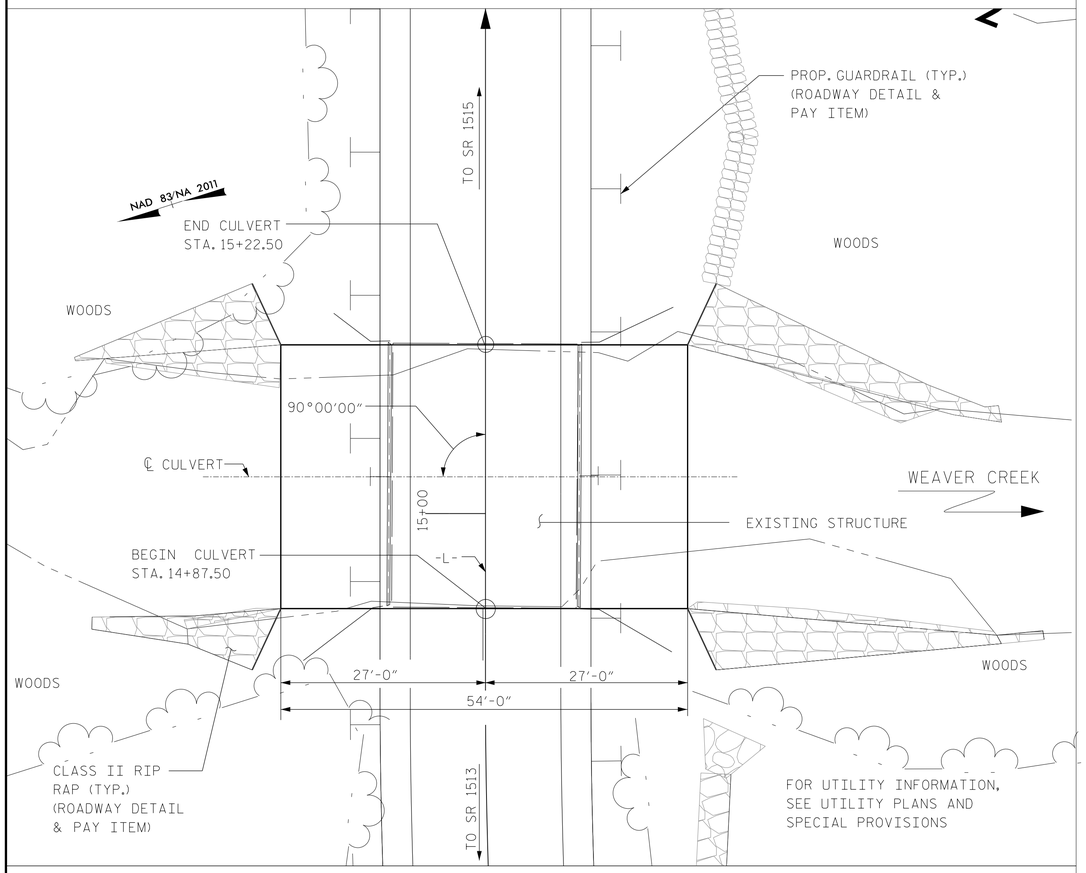
BENCH MARK BM#1: RR SPIKE IN 12" BIRCH 92.09' RT OF -L- STA. 14+68.62 EL. 361.53




LOCATION SKETCH

## ROADWAY DATA

| | |
|---|---|
| GRADE POINT ELEV. @ STA. 15+05.00 -L- | =368.24 |
| BED ELEV. @ STA. 15+05.00 -L- | =354.05 |
| ROADWAY SLOPES | =2.5:1 |

## HYDROGRAPHIC DATA

| | |
|---|---|
| DESIGN DISCHARGE | =1300 C.F.S. |
| FREQUENCY OF DESIGN FLOOD | =25 YR. |
| DESIGN HIGH WATER ELEVATION | =362.6 FT. |
| DRAINAGE AREA | =4.35 SQ.MI. |
| BASE DISCHARGE (Q100) | =1900 C.F.S. |
| BASE HIGH WATER ELEVATION | =364.31 FT. |

## OVERTOPPING FLOOD DATA

| | |
|---|---|
| OVERTOPPING DISCHARGE | =3232 C.F.S. |
| FREQUENCY OF OVERTOPPING FLOOD | =500+ YR. |
| OVERTOPPING FLOOD ELEVAION | =368.46 FT.* |

* OVERTOPPING OCCURS AT APPROXIMATE STA. 15+00 -L-

| TOTAL STRUCTURE QUANTITIES | |
|---|---|
| REMOVAL OF EXISTING STRUCTURE | LUMP SUM |
| ALUMINUM BOX CULVERT | LUMP SUM |
| CULVERT EXCAVATION | LUMP SUM |
| FOUNDATION CONDITIONING MATERIAL | 285 TONS |
| ASBESTOS ASSESSMENT | LUMP SUM |

## NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

DESIGN FILL AT CULVERT CENTERLINE = 3.84 FT. BASED ON 2" ASSUMED ARCH THICKNESS. (1)

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING.

THE EXISTING STRUCTURE CONSISTING OF ONE SPAN @ 35'-6" WITH A TIMBER DECK ON STEEL GIRDER/FLOOR BEAM SYSTEM AND A CLEAR ROADWAY OF 24'-1" ON TIMBER CAPS AND TIMBER PILES AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED IN ITS ENTIRETY.

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.

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 15+05.00 -L-."

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 DIFFERENCE BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR ALUMINUM BOX CULVERT, SEE SPECIAL PROVISIONS.

ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JULY 2012.

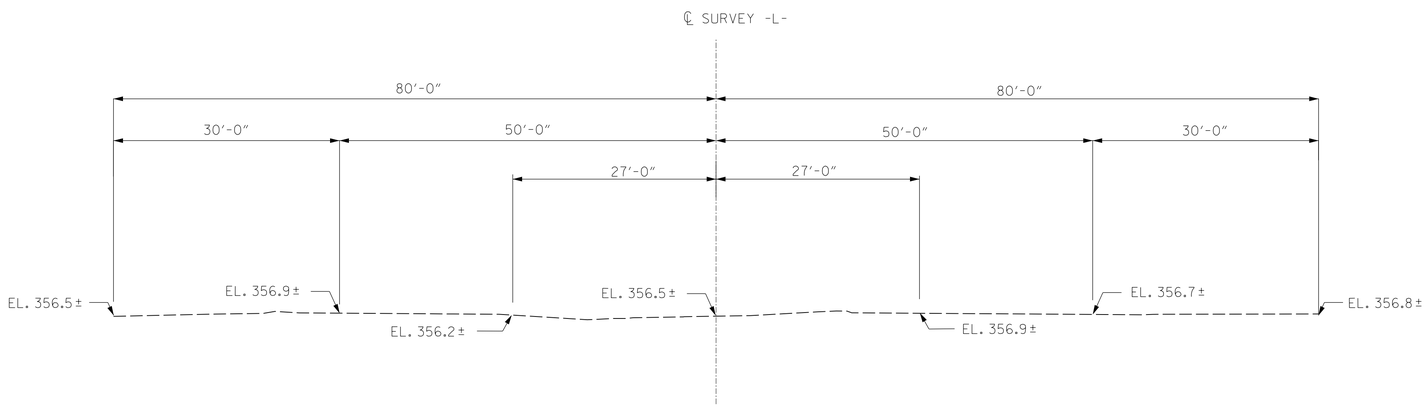
THE DETAILS SHOWN ARE FOR GENERAL LAYOUT ONLY. THE SUPPLIER SHALL PROVIDE DESIGN AND DETAILS THAT MEET THE REQUIREMENTS OF AASHTO SECTION 12, AND ARE SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

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

GUARDRAIL POST LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER TO ENSURE ADEQUATE COVER FOR INSTALLATION.

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

FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.




PROFILE ALONG ℄ CULVERT

(1) MODIFY DESIGN FILL

PROJECT NO. 17BP.5.R.63

VANCE COUNTY

STATION: 15+05.00 -L-

SHEET 1 OF 3 REPLACE BRIDGE NO.52

NORTH CAROLINA PROFESSIONAL SEAL 11725 ENGINEER DAVID R. RUGGLES

DocuSigned by: David Ruggles C462768DF412422...

5/25/2016

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

34'-11" X 10'-4"
ALUMINUM BOX CULVERT
90° SKEW

Firm License No. C-1051
421 Fayetteville St,
Suite 400
Raleigh, NC 27601
T 919.380.8750
www.stewartinc.com
STEWART

| REVISIONS | | | | | | SHEET NO. |
|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | C-1 |
| 1 | HA | 05-25-16 | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 3 |

| | | | |
|---|---|---|---|
| DRAWN BY: | H.ASSFOURA | DATE : | 12/15 |
| CHECKED BY: | D. RUGGLES | DATE : | 01/16 |
| DESIGN ENGINEER OF RECORD: | D. RUGGLES | DATE : | 01/16 |

5/25/2016
...\C-1_LOCATION SKETCH.dgn
USER:default