



Heath & Lineback Engineers, Inc.

WEST GEORGIA OFFICE

209 CORPORATE DRIVE • SUITE 300 • CARROLLTON, GEORGIA 30117

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EMAIL: badams@heath-lineback.com

April 14, 2010

Request for Proposal for Cross Plains Hulett Road Bridge & Horsley Mill Road Bridge RFP# 2009040-044-T

Dear Mr. or Mrs.:

You are invited to submit a proposal for the Cross Plains Hulett Road Bridge & Horsley Mill Road Bridge project in Carroll County, Georgia in accordance with the requirements set forth in the attached *request for proposal* (RFP).

The project consists of two fully engineered vehicular truss bridges. The bridges will have a typical section as shown in the attached drawing and described in the RFP.

The original and 3 copies of your proposal must be received not later than **May 14, 2010, 2:00 p.m. ET**, or your proposal will otherwise be disqualified.

Any questions regarding this RFP must be received in writing not later than **April 27, 2010**. Questions will be responded to and all providers will receive the question and response.

We anticipate that the provider whose proposal is the best solution for this project will be selected shortly after bids are received and Notice to Proceed will be given at that time. We will notify all providers, whether they are disqualified, rejected, or unsuccessful although responsive.

I will be the single point of contact for all inquiries and correspondences.

Thank you for your time, effort, and interest in this project.

Sincerely,

Brian K. Adams, P.E., S.E.

Attachments: RFP # 2009040-044-T
Preliminary Bridge Layout

cc: Charles Pope, Director of Public Works and Solid Waste, Carroll County, Georgia
Russ Benedict, Purchasing Director, Carroll County, Georgia

CORPORATE OFFICE

2390 CANTON ROAD • MARIETTA, GEORGIA 30066

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REQUEST FOR PROPOSAL (RFP #2009040-044-T)

Prefabricated Steel Truss Bridge

1.0 Scope

The work included under this item shall consist of furnishing, fully engineering, fabricating, and transporting steel truss bridge superstructure(s) including bearings, as shown in the plans and described herein. This work shall also include design & detailing of the concrete deck and sidewalk. The intended usage is as a vehicular bridge.

These specifications shall be regarded as minimum standards for design and construction.

Substructures are not included in this item.

2.0 Definitions

Owner - The actual owner, or the engineer, person, or firm designated by the owner to represent the owner.

Plans - Any drawings included in the bid documents related to the specified work.

Contractor - The firm contracting and responsible for the specified work.

Bridge Manufacturer - The firm to manufacture the prefabricated steel truss bridge superstructure.

3.0 Qualifications

The Bridge Manufacturer shall be currently certified by the American Institute of Steel Construction to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for Major Steel Bridges as set forth in the AISC Certification Program.

Pre-approved Bridge Manufacturers are:

- **CONTECH Bridge Solutions, Inc.**
- **US BRIDGE**
- **BIG R BRIDGE**
- **ECHO BRIDGE SOUTH, Inc.**

Bridge Manufacturers other than those listed above may only be used if the Owner provides written approval of the proposed Bridge Manufacturer 5 days prior to the bid. The Owner's ruling shall be final.

Bridge Manufacturers must provide the following documentation:

- Product Literature
- Warranty Information
- AISC Shop Certification
- Welder Certifications

4.0 Product Description

4.1 *Plans and Calculations Certification:*

A. The Bridge Manufacturer shall design the prefabricated bridges and prepare shop drawings in accordance with these minimum requirements. All calculations and shop drawings shall be sealed by a Professional Engineer licensed in the State of Georgia.

4.2 *Applicable Codes:*

A. Design shall be governed by the current design specifications of the American Association of State Highway and Transportation Officials (AASHTO), supplemented with the current edition of American Institute of Steel Construction (AISC) including the Design Specification for Steel Hollow Structural Sections, further supplemented with the current edition of American Welding Society (AWS) D1.1 Structural Welding Code, as modified and further supplemented herein. Structural members shall be designed in accordance with recognized engineering practices and principles.

4.3 *Truss Style:*

A. The truss type shall be Pony Truss with Arched Top Chord.

B. Pratt or Howe style trusses with an odd number of bays shall have crossed diagonals in the middle bay. Any crossed diagonals shall be of equal dimension. Unless specified otherwise, multiple spans or bridges within a project shall have a consistent style, multi-span bridges shall maintain a constant depth, and any bridge depiction shown in the Plans is conceptual only.

C. Overhead (portal) bracing is prohibited.

4.4 *Span Length:*

A. Span length

1. Cross Plains Hulett Road is 124'-0" measured as the horizontal clearance between abutment backwalls. (Total Bridge Length = 126'-0" as measured from back face of backwalls)
(Center-line of Bearing to Center-line of Bearing is 122'-0")

2. Horsley Mill Road Bridge is 87'-8 5/16" measured as the horizontal clearance between abutment backwalls. (Total Bridge Length = 90'-0" as measured from back face of backwalls)
(Center-line of Bearing to Center-line of Bearing is 85'-4 9/16")

4.5 *Camber:*

A. The bridge shall be cambered to offset the calculated dead load deflection plus 1% of the bridge length, and exactly match the profile specified in the Plans.

4.6 *Deck Width:*

A. Bridge clear deck width = 28'-0" as measured between railing elements.

4.7 *Geometry Limitations:*

A. Structure Depth (Top of Deck to Low Steel) = less than 4'-0"

4.8 *Superstructure Loading:*

A. In addition to dead load and wind load as specified by AASHTO, the bridge shall be designed to accommodate the following loads:

Vehicle Load = AASHTO HS20-44 vehicle

B. For occasional slow moving maintenance or emergency vehicles, impact is not required. Impact is required for trucks when structures are serving as vehicular bridges and exceed 12' in width.

C. The bridge shall also be designed for a future wearing surface load of 30 psf.

4.9 *Truss Material:*

A. All members of the truss and deck system shall be fabricated from square/rectangular hollow structural sections (HSS), with the exception that floor beams may be wide flange (W) shapes.

B. Open ends of end posts and floor beams shall be capped. Open shaped (non-tubular) stringers will be allowed only when the Bridge Manufacturer warrants the stringer design for 50% overload.

C. Steel material shall be corrosion resistant high-strength low-alloy material meeting ASTM A709 Grade 50W weathering steel.

1. Minimum yield (F_y) shall be 50,000 psi.

D. Minimum thickness of tubular steel members (not including railings) shall be 5/16".

1. Where water collection inside of structural tubing is possible during construction or service, weep holes shall be provided at low points.

4.10 *Field Splice:*

A. Field splices shall be fully bolted slip critical connections, utilizing tension indicating washers.

1. Tack welding of high strength hardware is prohibited.

B. Splices not immediately at or adjacent to panel points shall be designed for 100% of the member bending moment capacity for primary compression members, and 75% for bracing members or tension members subject to load reversal, including slip resistance, and slip resistance shall further meet the same AASHTO required strength as with other failure modes.

C. Splices for truss members, bracing, and floor beams, when used, shall be made with ASTM A325 or A490 high strength bolts. Type 3 bolts shall be used when the truss is required to be of weathering steel.

4.11 *Railings, General:*

A. The minimum rail height shall be in accordance with AASHTO for the intended bridge usage, unless specified otherwise. Anticipated future wear courses, when mentioned, shall be considered.

B. Bridges designated as vehicular bridges shall be equipped with traffic rails conforming to AASHTO Test Level 1 (TL-1).

C. When bridge structural members support or serve as railing members, the bridge shall be designed for the simultaneous application of rail load plus dead load plus 50% of live load.

D. Vehicular Safety Rails: Continuous rails shall be located on the inside of the trusses and be in accordance with AASHTO section 2.7.

E. The bridge shall have a cantilever sidewalk structure attached to the outside of truss on one side of the bridge and the clear walkway width of this structure shall be 5 feet. Bridge shall be designed and holes provided on opposite side of truss to facilitate addition of future sidewalk of same width.

F. Pedestrian and bicycle railings shall have a smooth inside surface with no protrusions or depressions and shall be in accordance with AASHTO section 2.7. All ends of angles and tubes shall be closed and ground smooth. The railings should be a minimum height of 54" above the floor deck.

G. All rails shall be of a smooth, continuous nature that prevents snagging and scraping.

4.12 *Finishes*

A. Blast Cleaning

1. All Blast Cleaning shall be done in the fabricator's OSHA approved indoor facility.
2. Blast operations shall use Best Management Practices and exercise environmentally friendly blast media recovery systems.
3. To aid in providing a uniformly "weathered" appearance, all exposed surfaces of steel shall be blast cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning, SSPC-SP7 latest edition.
4. Exposed surfaces of steel shall be defined as those surfaces seen from the deck and from outside of the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below deck and bottom face of the bottom chord need not be blasted.

4.13 *Decking:*

A. The bridge deck shall be normal weight reinforced concrete.

1. Dead load deflection due to wet concrete shall be limited to $L/180$ and $3/4$ "
2. Bridge slab concrete shall be 4000 psi normal weight concrete.
3. Aspects of concrete work, including but not limited to material properties, mix designs, plant and field quality control, and rebar placement including support and tying, shall be governed by AASHTO unless specified otherwise.
4. Concrete and surfaces shall be constructed with a cross-slope of 2%.
5. Concrete decks shall be rough broomed transversely.

B. The Bridge Manufacturer shall provide 20 gage (minimum) stay-in-place galvanized metal decking with steel side and end dams.

1. Metal decking shall be secured with fasteners or welds as recommended by the decking manufacturer
2. Consideration of composite action from the metal form is prohibited.
3. Concrete and reinforcement in troughs may be considered as contributing the strength of the deck when it can be shown this assumption is valid.
4. Metal forms shall be designed for a construction live load of either 20 psf or a 200 lb point load.

C. Upper and lower layers of longitudinal reinforcement are required.

1. One layer of transverse reinforcement shall be provided when the deck thickness above ribs is less than six inches, and two layers when six inches or greater.
2. Reinforcing bars shall be placed 2" min clear to top surface, and 1" min clear to all other surfaces or forms.
3. Reinforcing bars, when used, shall conform to AASHTO M31, M42, or M53, grade 60.

4.14 *Welding:*

A. Welding and weld qualification tests shall conform to the provisions of AWS D1.1. The flux core arc welding (FCAW) process, utilizing E80 electrodes with similar weathering characteristics as the base material, shall be used.

B. Welding operators shall be properly accredited experienced operators. Each shall have certification of satisfactorily passing AWS standard qualification test(s) for the 3G and/or 4F position(s), evidence of experience and skill in welding structural steel, and have demonstrated the ability to make acceptable welds of the type required.

C. Nondestructive weld testing is required.

1. Testing will be performed by a qualified ASNT Level II Technician or greater and paid for by the Bridge Manufacturer.

a.. All welds are to be 100% visually inspected.

b. Ten percent (10%) of all fillet and partial penetration welds shall be magnetic particle tested.

c. For arch type bridges, 100% of end of top chord to bottom chord connections shall be tested.

d. Full penetration shop welds shall be Ultrasonic tested in accordance with AWS D1.1; Section 6.

2. Base material certifications are to be supplied by the material suppliers. Inspection test results shall be available on request.

4.15 *Other Requirements:*

A. Self-tapping and self-drilling screws are not acceptable for any portion of the structure, except where specified otherwise.

B. Anchors shall be of the drilled type, installed with a chemical adhesive system, except that when design forces exceed the strength of typical chemical systems, cast-in-place anchors may be used.

C. Anchor systems shall be designed and supplied by the Bridge Manufacturer. Anchor bolts shall conform to ASTM A307, A193, or F1554.

D. Expansion bearings shall include teflon or stainless steel sliding surfaces per AASHTO or elastomeric pads.

1. Consideration of dead load rotation is required in all cases.

E. Cementitious non-shrink grout, when applicable, shall meet ASTM C-1107, 7000 psi minimum.

F. Materials not specified shall conform to applicable ASTM or AASHTO specifications.

5.0 Submittals

5.1 *Shop Drawings:*

A. The Bridge Manufacturer shall prepare and submit shop drawings and structural calculations for approval prior to beginning fabrication. Shop drawings shall be unique drawings prepared to illustrate the specific portion of the work to be done.

B. All relative design information including but not limited to governing codes, design parameters, member sizes, bridge reactions, shop and field connection details, deck details, paint system, dimensions related to substructures and general notes shall be clearly specified on the drawings.

- C. Shop drawings shall be accurately prepared by skilled drafters to be complete in every respect.
- D. Drawings shall have cross-referenced details and sheet numbers.

6.0 Delivery

6.1 Prefabricated Truss Delivery

- A. The Contractor shall coordinate with the Bridge Manufacturer in the delivery and erection schedule.
- B. Hauling permits and freight charges are the responsibility of the Manufacturer.
- C. Delivery to the job site will be by trucks by means of good haul roads unless specified otherwise.
- D. The Bridge Manufacturer shall provide detailed, written instruction procedures for proper lifting and splicing of bridge components.
- E. Manufacturer's representative must be present at the project site during erection of the bridge.
- F. The bridge manufacturer shall provide written inspection and maintenance procedures to be followed by the bridge owner.
- G. The bridge shall be delivered to the project site ready for erection within 12 weeks of NOTICE TO PROCEED (NTP).

7.0 Schedule

The bridge shall be delivered to the project site ready for erection within 12 weeks of NOTICE TO PROCEED (NTP).

8.0 Reserved Rights

Carroll County reserves the right to accept or reject any or all bids, to waive irregularities, informalities, and technicalities, award the contract in the best interest of Carroll County or to request re-bid. **In no way will Carroll County be obligated to awards Bids based solely on price or low bid.**



Affidavit Verifying Status for a Carroll County Public Benefit Application

RFP- NO. 2009040-044-T_CROSS PLAINS HULETT ROAD BRIDGE AND HORSLEY MILL BRIDGE
By executing this affidavit under oath, as a bidder for a **REQUEST FOR PROPOSAL** or other public benefit as referenced in O.C.G.A. Section 50-36-1, I am stating the following with respect to my proposal for **RFP- NO. 2009040-044-T_CROSS PLAINS HULETT ROAD BRIDGE AND HORSLEY MILL BRIDGE** for

_____ [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity], a representative for _____ [Name of business or corporation].

1) _____ I am a United States citizen

OR

2) _____ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

Signature of Applicant: _____ Date: _____

Printed Name: _____

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
_____ DAY OF _____, 20____

* _____
Alien Registration number for non-citizens

Notary Public
My Commission Expires:

***Note:** O.C.G.A. § 50-36-1 (c)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provided their alien registration number. Because legal permanent residents are included in the federal definition of "alien", legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below:



CONTRACTOR AFFIDAVIT AND AGREEMENT (E-VERIFY)

RFP- NO. 2009040-044-T CROSS PLAINS HULETT ROAD BRIDGE AND HORSLEY MILL BRIDGE

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individuals, firm, or corporation which is contracting with the Carroll County Board of Commissioners has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with Carroll County Board of Commissioners, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Carroll County Board of Commissioners at the time the subcontractor(s) is retained to perform such service.

E-Verify * User Identification Number

Company Name

BY: Authorized Officer or Agent
(Contractor Signature)

Date

Printed Name of Authorized Officer or Agent

Title of Authorized Officer or Agent of Contractor

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 20__.

Notary Public
My Commission Expires:



SUBCONTRACTOR AFFIDAVIT AND AGREEMENT (E-VERIFY)
RFP- NO. 2009040-044-T CROSS PLAINS HULETT ROAD BRIDGE AND HORSLEY MILL BRIDGE

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individuals, firm, or corporation which is engaged in the physical performance of services under a contract with _____ on behalf of the Carroll County Board of Commissioners has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

E-Verify * User Identification Number

Company Name

BY: _____
Authorized Officer or Agent
(Contractor Signature)

Date

Printed Name of Authorized Officer or Agent

Title of Authorized Officer or Agent of Contractor

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
_____ DAY OF _____, 20__.

Notary Public
My Commission Expires:

PROJECT NAME	DATE	SCALE	BY
CR 457 - HORSELEY MILL ROAD OVER SNAKE CREEK	03/20/20	1/4" = 1'-0"	1
PROJECT NO.	DATE	SCALE	BY
045-004517X-005-4E	03/20/20	1/4" = 1'-0"	1

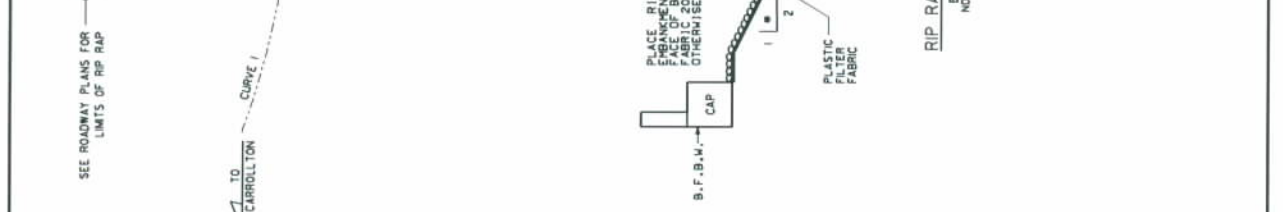
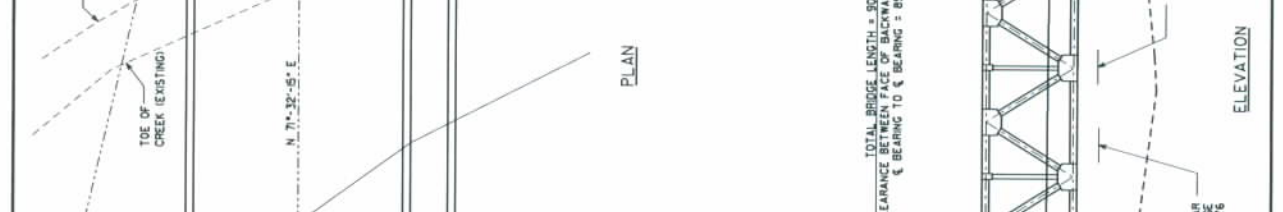
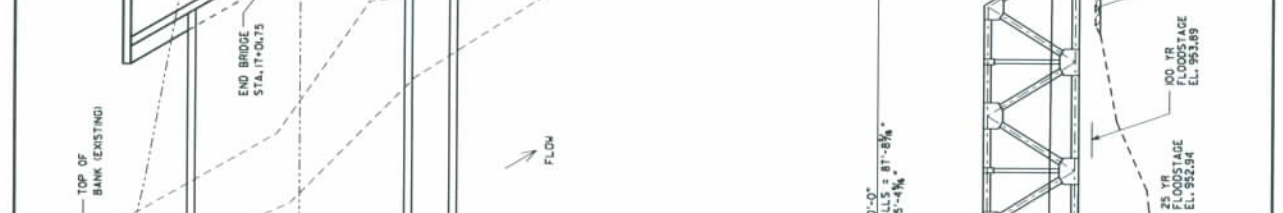
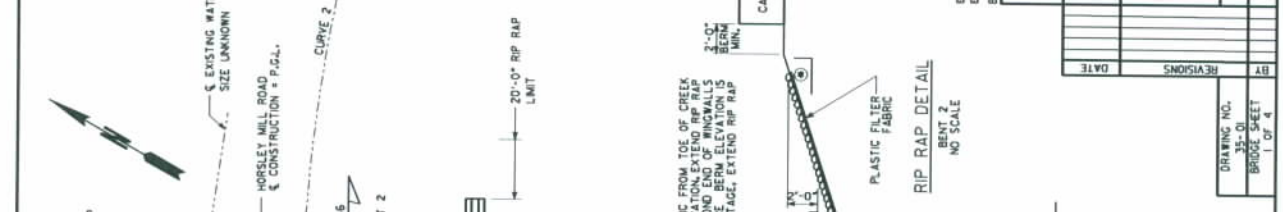
HORIZONTAL CURVE DATA

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 PI STA. 16+50.81
 PVI STA. 17+10.01
 PVI N 03036.5000
 PVI E 2052230.3200
 Δ = 53°-00'-28"
 D = 45°-50'-42"
 T = 63.74
 L = 124.23
 R = 125.00

CURVE 2
 PI STA. 17+10.01
 PVI STA. 18+10.01
 PVI N 03036.5000
 PVI E 2052230.3200
 Δ = 31°-38'-08"
 D = 25°-27'-53"
 T = 63.74
 L = 124.23
 R = 225.00

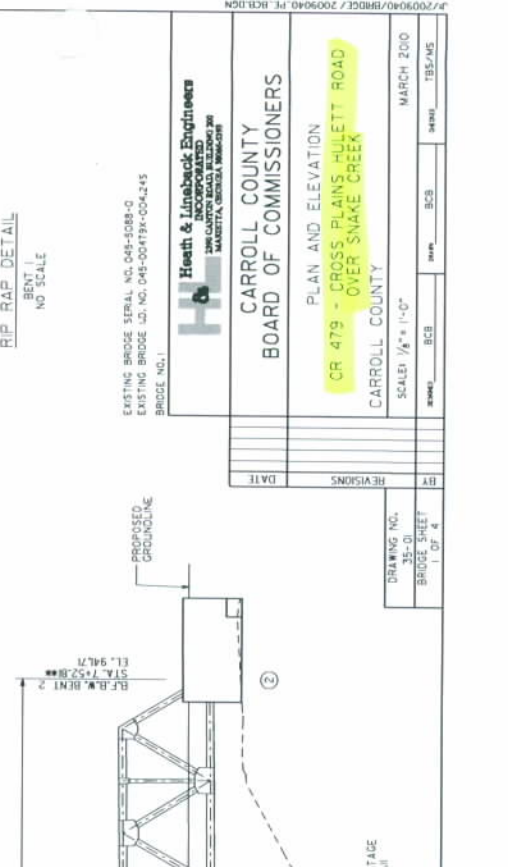
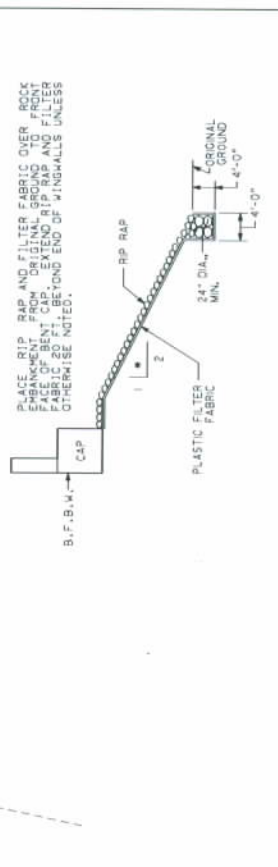
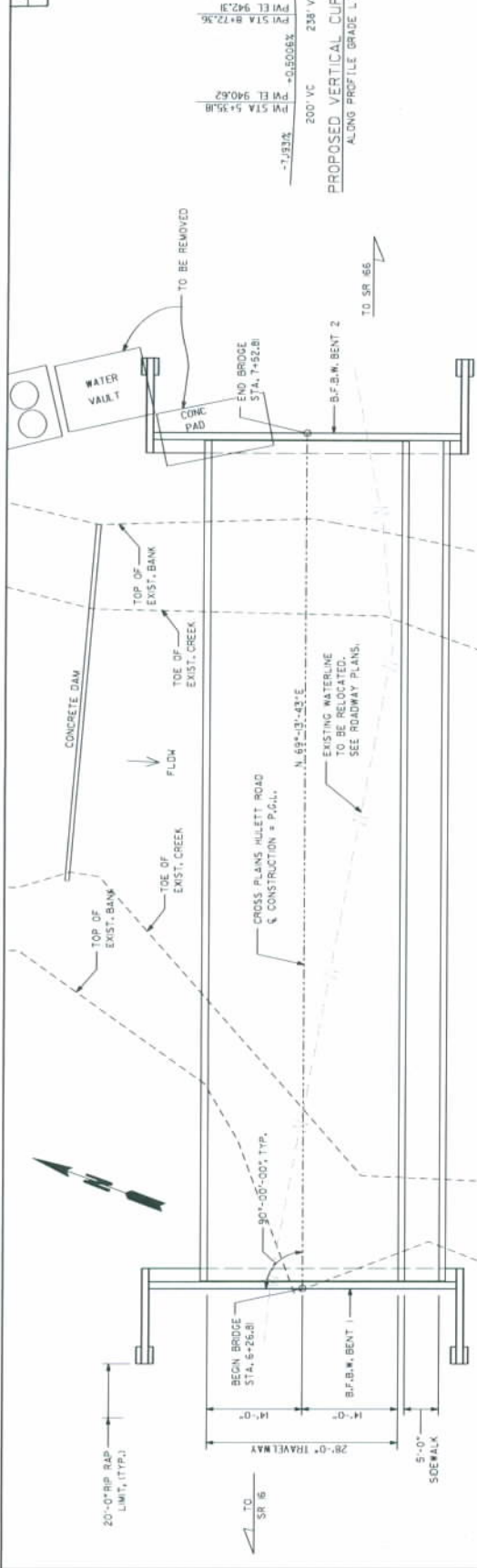
NOTES:

- WORK THESE PLANS WITH THE PRE-FABRICATED STEEL TRUSS BRIDGE PLANS BY "BRIDGE SUPPLIER".
- HORIZONTAL AND VERTICAL DATUM ARE BASED ON LOCAL CONTROL. NORTH ARROW DIRECTION IS APPROXIMATE.
- PROPOSED BRIDGE SHALL HAVE A MINIMUM CHORD ELEVATION NO LOWER THAN 954.94 FT.
- PROPOSED BRIDGE SHALL HAVE A NORMAL CROWN WITH A DECK SLOPE OF 2.0%.
- BENTS ARE PARALLEL.
- SUPERELEVATION IS NOT SHOWN.
- STATIONS SHOWN ARE AT THE INTERSECTION OF HORSELEY MILL ROAD & CONSTRUCTION AND B.F.B.V. ELEVATIONS ARE PROFILE GRADE.



BRIDGE SERIAL NO.	045-0045-0
EXISTING BRIDGE ID. NO.	045-004517X-005-4E
BRIDGE NO. 1	
HEALTH & LINEBACK ENGINEERS	
CARROLL COUNTY BOARD OF COMMISSIONERS	
PLAN AND ELEVATION	
CR 457 - HORSELEY MILL ROAD OVER SNAKE CREEK	
CARROLL COUNTY	
SCALE: 1/4" = 1'-0"	MARCH 2010
DRAWING NO. 35-0	DATE
BRIDGE SHEET 1 OF 4	REVISIONS
	NO. DATE

DATE	BY	CHKD	APP'D



NOTES:

- WORK THESE PLANS WITH THE PRE-FABRICATED STEEL TRUSS BRIDGE PLANS BY "BRIDGE SUPPLIER".
- HORIZONTAL AND VERTICAL DATUM ARE BASED ON LOCAL CONTROL. NORTH ARROW DIRECTION IS APPROXIMATE.
- PROPOSED BRIDGE SHALL HAVE A MINIMUM CHORD ELEVATION NO LOWER THAN 923.88 FT.
- PROPOSED BRIDGE SHALL HAVE A NORMAL CROWN WITH A DECK SLOPE OF 2.0%.
- BENTS ARE PARALLEL.
- END BENT PILES NOT SHOWN.
- SLOPE NORMAL TO END BENT.
- ROCK EMBANKMENT SHALL BE CONSTRUCTION AND CONSTRUCTION SHALL BE TO THE PROPOSED B.F.B.W. ELEVATIONS ARE PROFILE GRADE.

EXISTING BRIDGE SERIAL NO. 048-5088-0
EXISTING BRIDGE (S) NO. 048-00413X-004-245
BRIDGE NO. 1

Heath & Lineback Engineers
INCORPORATED
MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEERS

CARROLL COUNTY
BOARD OF COMMISSIONERS

PLAN AND ELEVATION

CR 479 - CROSS PLAINS - HULETT ROAD
OVER SNAKE CREEK
CARROLL COUNTY

SCALE: 1/8" = 1'-0"

DRAWING NO. 35-01
BRIDGE SHEET 1 OF 4

DATE

REVISIONS

BY

DATE

SCALE: 1/8" = 1'-0"

DATE: MARCH 200

SCALE: 1/8" = 1'-0"

DATE: 185/MS