

SECTION 905 -- PROPOSAL (CONTINUED)

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. <u> 1 </u>	DATED <u> 7/16/2019 </u>	ADDENDUM NO. <u> </u>	DATED <u> </u>
ADDENDUM NO. <u> </u>	DATED <u> </u>	ADDENDUM NO. <u> </u>	DATED <u> </u>
ADDENDUM NO. <u> </u>	DATED <u> </u>	ADDENDUM NO. <u> </u>	DATED <u> </u>

Number	Description
1	Revised Plan Sheets Nos. 8001 & 8006; Amendment EBS Download Required.

TOTAL ADDENDA: 1
 (Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

 Contractor

BY _____
 Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

_____ President	_____ Address
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_____ Secretary	_____ Address
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_____ Treasurer	_____ Address
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The following is my (our) itemized proposal.
 STBG-0055-03(095)/ 108028301000
 Carroll County(ies)

Revised 01/26/2016

ADDENDUM

STATE MISS.
PROJECT NO. STBG-0055-03(095)

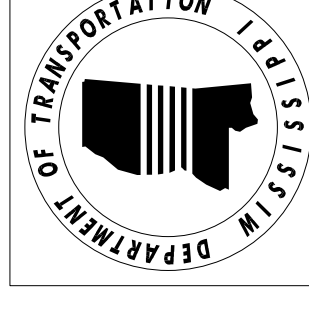
DESCRIPTION OF SHEETS SPECIAL DESIGN SHEETS ~ BRIDGE DRAWINGS

DESCRIPTION	WORKING NUMBER	SHEET NUMBER
DETAILED INDEX (BRIDGE)	DI-BR-1	8001
1-55 ACROSS SLOUGH BRIDGE AT STA. 343+40.00 RT.LN.		
1-55 ACROSS SLOUGH LAYOUT, GENERAL NOTES & ESTIMATED QUANTITIES	1 OF 6	8002
SPAN NO. 1R RAILING REPAIR DETAILS	2 OF 6	8003
SPAN NO. 8R RAILING REPAIR DETAILS	3 OF 6	8004
HYDRODEMOLITION & DECK REPAIR DETAILS FOR SPAN NO. 1R	4 OF 6	8005
FRP & EPOXY BEAM REPAIR DETAILS FOR SPAN NO. 1R	5 OF 6	8006
JOINT REPAIR DETAILS	6 OF 6	8007

SPECIAL DESIGN SHEETS INFORMATION PLANS

DESCRIPTION	WORKING NUMBER	SHEET NUMBER
INFORMATION PLANS ONLY	INFO-1	8008
INFORMATION PLANS ONLY	INFO-2	8009
INFORMATION PLANS ONLY	INFO-3	8010
INFORMATION PLANS ONLY	INFO-4	8011
INFORMATION PLANS ONLY	INFO-5	8012
INFORMATION PLANS ONLY	INFO-6	8013

BRIDGE DIVISION	
REVISIONS	
DATE	SHEET NO.
06/12/2019	8006
	BY
	L. BURT



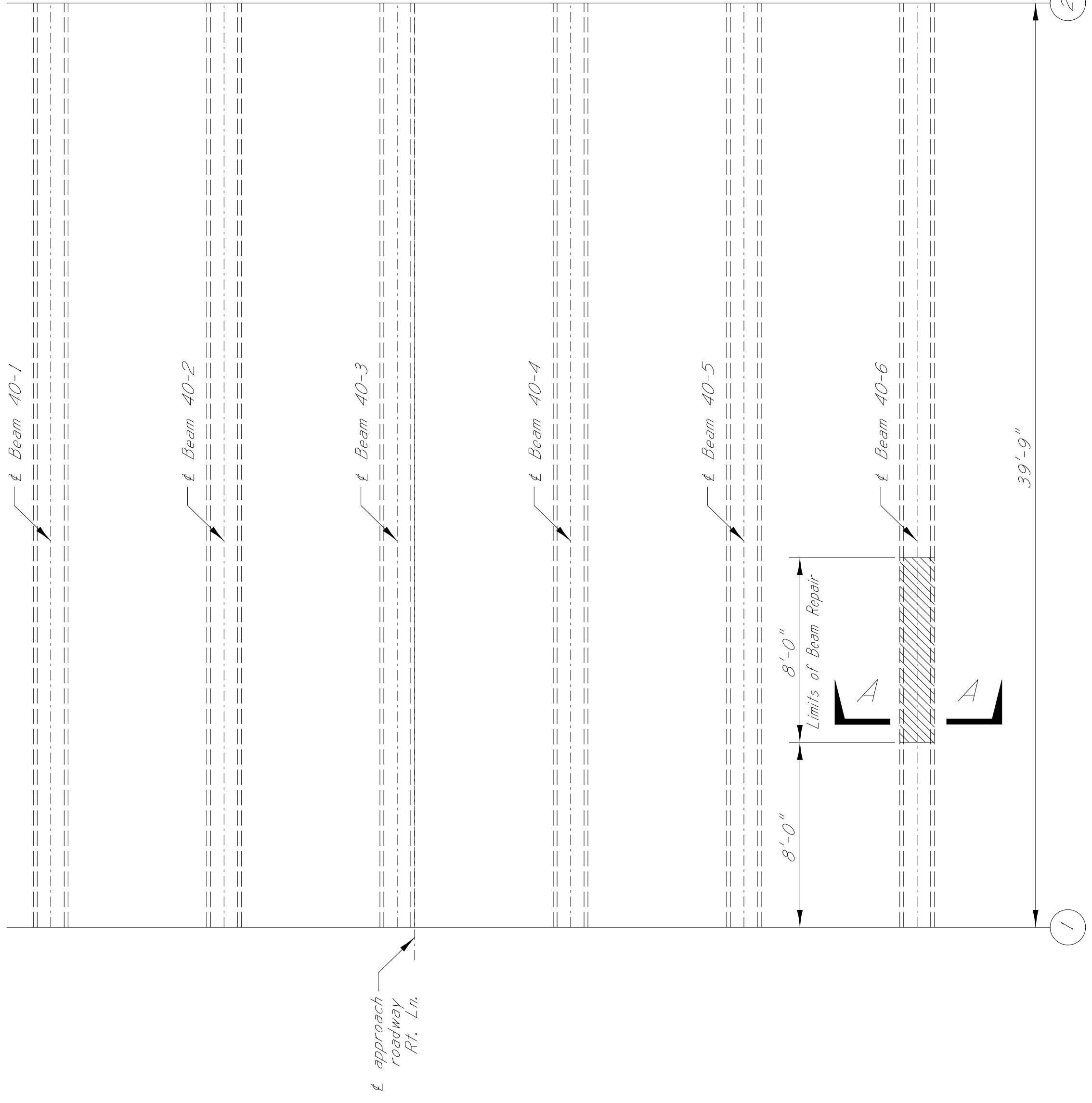
BY	REVISION

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
BRIDGE AT STA. 343+40.00 RT.LN.
DETAILED INDEX
(BRIDGE)

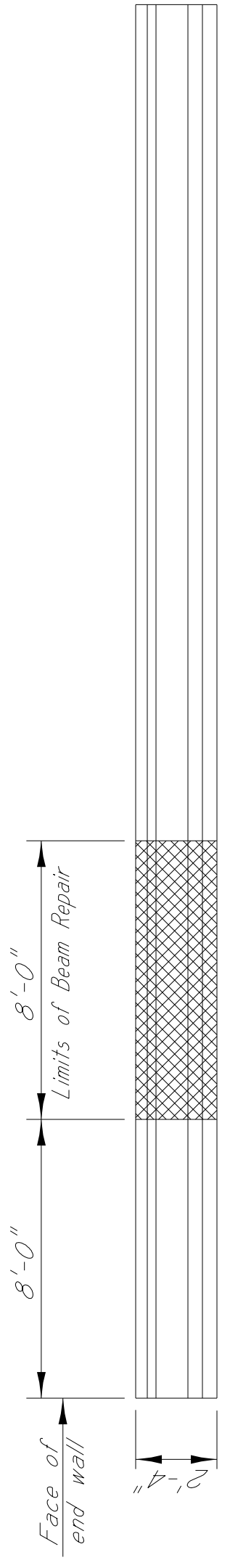
FMS: 108028 / 301000
COUNTY: CARROLL
PROJECT NUMBER: STBG-0055-03(095)

DESIGNER: Lon. Burt
CHECKER: Paul. Davis
ISSUE DATE: 05-08-2019
DATE: 06-12-2019
PROJECT: BRIDGE AT STA. 343+40.00 RT.LN.
DRAWING NO.: STBG-0055-03(095)
DESIGNER: LON. BURTT, P.E.
ENGINEER: PAUL DAVIS, P.E.
ASSISTANT ENGINEER: L. BURT
DEP. DIR. OF TRANSPORTATION, MISS. STATE BRIDGE ENGINEER - SOUTH WESTFIELD, P.E.

WORKING NUMBER
DI-BR-1
SHEET NUMBER
8001



SHOWING PLAN VIEW OF SPAN NO. 1
Showing location and limits of beam repair



SHOWING ELEVATION OF SPAN NO. 1, BEAM NO. 6
Showing limits of beam repair

Epoxy Mortar Repair Notes:

1. Repair damaged concrete and spalled areas on the bridge as directed by the Project Engineer using epoxy mortar.
2. Repair all damaged concrete and spalled areas listed on this page and as directed by the Project Engineer.
3. Repair any additional concrete spalled areas not listed on this page as directed by the Project Engineer.
4. All damaged or unsound concrete shall be removed from the repair area.
5. Damaged or spalled areas where pack rust has developed around or on reinforcement shall be removed by small hand tools or pressure washing (using 3500 psi pressure).
6. Hammers used to remove damaged concrete shall be limited to 15 pounds on beams.
7. All areas where damaged concrete is removed shall be squared up with the 15 pound hammer to prevent feather edges.
8. Area of the beam repaired with epoxy mortar shall be restored to the original dimensions and details as shown in the information plans, unless noted otherwise.
9. Materials:
 - a. Epoxy Resin: Resin shall be approved by the Director of Structures, State Bridge Engineer.
 - b. Silica Sand: Silica sand material shall be bagged general purpose blast cleaning sand.
 - c. Epoxy Mortar Mix: Epoxy mortar mix shall consist of part liquid epoxy and part clean, dry sand mixed in the ratio recommended by the manufacturer.
10. Application:
 - a. A representative of the epoxy manufacturer must be present for sufficient time to ensure the Contractor is properly schooled in the use of the epoxy materials.
 - b. Prior to placement of the mortar mix the prepared surface shall be lightly primed with neat epoxy.
 - c. Curing time shall be in accordance with manufacturer's recommendations.

Locations To Be Repaired:
Area as shown around Span No. 1, Beam No. 6.

FRP WRAP NOTES:

1. FRP wrap shall be one of the following products and shall be applied according to the manufacturer's recommendations:
 - a. FRP Wrap as manufactured by Fyfe Co. LLC, www.fyfe.com/about/our-brands/fyfe
 - b. FRP Wrap as manufactured by BASF Building Systems LLC, www.basf-builders-solutions.basf.us
 - c. FRP Wrap as manufactured by QuakeWrap Inc, www.quakewrap.com
2. The Contractor shall furnish all submittals indicating the materials, tools, equipment, transportation, necessary storage, labor, installation plan and supervision required for the application of the composite or polymer system to the Director of Structures, State Bridge Engineer prior to construction.
3. Products shall be stored according to the manufacturer's requirements and shall avoid contact with moisture, dust and chemical exposure.
4. All FRP composite systems shall be proprietary systems consisting of all associated, fiber, reinforcement and polymer adhesives/resins. FRP composites consisting of fiber reinforcement and polymers provided by more than one manufacturer are not allowed.
5. The FRP composite system shall utilize carbon fiber reinforcement as the primary fiber material (primary structural component).
6. The FRP system shall be top coated with a coating approved by the FRP system supplier.
7. The coating color shall be selected by the Project Engineer. FRP wraps shall not be installed when the ambient temperature is below 40°F or above 130°F. In cold conditions, auxiliary heat may be applied to raise the ambient temperature to a suitable level. Clean heat sources shall be utilized for this purpose (e.g., electric or propane) that do not contaminate the substrate with carbonation.
8. FRP wraps shall not be installed when surface moisture is present on the substrate or when rainfall or condensation is anticipated in the work areas. If water leakage exists through cracks or concrete joints, water flow shall be stopped prior to FRP installation.
9. Resins (including primers and fillers) shall be mixed according to the FRP system manufacturer's installation instructions. All resin components shall be at a proper temperature and mixed in the manufacturer's prescribed mix ratio until there is a uniform and complete mixing of components. Resin components are often contrasting colors, so full mixing is achieved when color streaks are eliminated. Resins should be mixed for the manufacturer's prescribed mixing time and visually inspected for uniformity of color.
10. A representative of the FRP wrap manufacturer must be present for sufficient time to assure that the Contractor is properly schooled in the installation of FRP wrap.
11. Prior to installation of FRP wraps, the Contractor shall repair concrete spall areas in accordance with the notes shown on this sheet.
12. All labor materials, and supplies preparation associated with the installation of FRP wraps, shall be included in pay item 807-824-FR008, Bridge Repair, FRP Wrap.
13. The FRP reinforcement system shall have a minimum tensile force of 3.6 kips/in. in both directions.
14. The fiber wrap shall be bi-directional.

ADDITIONAL FRP WRAP NOTES:

In addition to the Manufacturer's requirements, the Contractor shall ensure the structural integrity and durability of the reinforced fiber wrap system by meeting the following acceptance guidelines:

- Small delaminations, less than 2 in. each, are permissible as long as the delaminated area is less than 5% of the total laminate area and there are no more than 10 such delaminations per 10 ft.
- Large delaminations, greater than 25 in., can affect the performance of the installed system and shall be repaired by selectively cutting away the affected sheet and applying an overlapping sheet patch or equivalent patch; and
- Delaminations less than 25 in. may be repaired by PLY replacement.

Before repairing any delaminated areas, the Contractor shall submit a FRP repair procedure to the Director of Structures, State Bridge Engineer for review and approval.

DATE	06/12/19	DESIGNER	John Burd	CHECKER	Paul Davis
BY		DETAILER	John Burd	ISSUE DATE	05-23-2019
REVISION		PROJECT NUMBER	STBG-0055-03(095)	WORKING NUMBER	5 OF 6
APPROVED & REVISED NOTES		COUNTY	CARROLL	SHEET NUMBER	8006
		FMS:	108028 / 301000		
		MISSISSIPPI DEPARTMENT OF TRANSPORTATION BRIDGE AT STA. 343+40.00 RT.L.N. FRP & EPOXY BEAM REPAIR DETAILS FOR SPAN NO. 1R			

