

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

STRUCTURAL GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " dia., open holes $\frac{13}{16}$ " dia., unless noted otherwise.
- All structural steel shall conform to AASHTO classification M270 Grade 50 for bearing assemblies and extensions (total 144,660 lbs.), and Grade 36 for structural steel repair members (total 58,100 lbs.) unless noted otherwise.
- The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of all new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of final finish coat for steel under the fascia beams shall be reddish brown, Munsell No. 2.5 YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".
- Floating bearings shall be fully shop painted.
- For each bearing, two $\frac{1}{8}$ " adjusting shims shall be provided and placed as detailed in addition to all other plates or shims, if specified.
- Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a charge in scope of work, however, the contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
- As built plan information is provided for information only. Key dimensions have been clarified. Inclusion of these sheets does not relieve the contractor of any responsibility for verifying such dimensions as indicated by Note 16. These plans are available from the Department.
- For additional General Notes, see structural steel repair plans.
- For concrete pier repairs, if the portion of the pier is not shown in the drawing, no deterioration is anticipated to be repaired.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- Contractor shall obtain permits from City of Chicago for operations requiring closure of surface streets.

STRUCTURAL STEEL REPAIR GENERAL NOTES

- All new fasteners shall be $\frac{3}{4}$ " ϕ H.S. bolts and field drill $\frac{13}{16}$ " holes unless otherwise noted. Minimum edge distance for bolts shall be $1\frac{1}{2}$ ".
- Grinding shall be done parallel to the beam direction. Cost of grinding and field drill shall be included with Structural Steel Repair.
- Existing structural steel shall be cleaned and painted in accordance with Guide Bridge Special Provisions for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".
- Cost of removal and disposal of existing steel plates and members shall be included in the cost of "Structural Steel Repair".
- Contractor must exercise extreme care not to damage web or flange of girders while removing stiffener sections.

TOTAL BILL OF MATERIAL

ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
Removal and Disposal of Unsuitable Material	CU. YD.	500
Furnishing and Erecting Structural Steel	POUND	144,660
Jack and Remove Existing Bearings	EACH	337
Structural Steel Repair	POUND	58,100
Reinforcement Bars, Epoxy Coated	POUND	990
Drilled Shaft in Soil	CU. YD.	4.2
Elastomeric Bearing Assembly, Type I	EACH	283
Elastomeric Bearing Assembly, Type II	EACH	32
Anchor Bolts, $1\frac{1}{4}$ "	EACH	100
Anchor Bolts, $1\frac{1}{2}$ "	EACH	614
Epoxy Crack Injection	FOOT	988
Bridge Washing	Each	1
Chain Link Fence, 4' (Bridge)	FOOT	224
Field Measurements	L. SUM	1
Cleaning Bridge Scuppers & Downspouts	Each	65
Fluted Knee Wall	FOOT	28
Column Repair	L. SUM	1
Structural Repair of Concrete (Depth greater than 5 inches)	SQ. FT.	705
Structural Repair of Concrete (Depth equal to or less than 5 inches)	SQ. FT.	12,666
Temporary Concrete Barrier (To Remain Permanently)	FOOT	730
HLMR Bearings, Guided Expansion 400K	EACH	3
Ornamental Fence	FOOT	1,008
Bridge Drainage System Repairs	FOOT	816
Clean Bridge Seats	SQ. FT.	7,890
HLMR Bearings, Guided Expansion 550K	EACH	17
Temporary Shoring and Cribbing	EACH	15

* Special Provisions

DESIGN STRESSES

Strength method (load factored design) is used in the design of all structural elements

REINFORCED CONCRETE

f'_c - Compressive Strength at 28 Days = 4,000 P.S.I.

REINFORCEMENT

f_y - Yield Strength (GRADE 60) = 60,000 P.S.I.




DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS-20 AND ALT. MILITARY

Allow 25 psf for future wearing surface

LEGEND

-  Structural Repair of Concrete Depth equal to or less than 5"
-  Structural Repair of Concrete Depth greater than 5"
-  Epoxy Crack Injection

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR STRUCTURAL GENERAL NOTES & BILL OF MATERIAL
NAME	DATE	
		SCALE: NTS DATE: 8/21/2007 DRAWN BY: LAM CHECKED BY: BLU

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