

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0291	COOK	344	159
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62581

## STRUCTURAL GENERAL NOTES

Plan dimensions and details relative to existing structures have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

Joint lengths provided in these plans are based on existing plans and have not been field verified. It is the Contractor's responsibility to provide joints that fit the actual field conditions.

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 in the note above. These plans are available from the Department as specified in the Special Provisions for Examination of Existing Plans.

Traffic is to be maintained during construction, see Roadway Plans for Stage Construction Details.

All new fasteners shall be high strength bolts. Holes shall be  $\frac{13}{16}$ " dia. for  $\frac{3}{4}$ " dia. bolts, unless otherwise noted, holes shall be  $\frac{5}{16}$ " dia. for  $\frac{7}{8}$ " dia. bolts, unless otherwise noted.

All new structural steel shall conform to AASHTO Classification M-270 Gr. 50.

Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

The roadway expansion plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Expansion joint plates and attached bars shall be shop painted with the inorganic zinc rich primer.

Field welding of construction accessories will not be permitted to beams or girders.

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Calculated weight of Structural Steel used for item "Furnishing & Erecting Structural Steel" = 235,270 Lbs. and itemized as follows:

S.N. 016-1117	=	36,900 Lbs
S.N. 016-1116	=	2,760 Lbs
S.N. 016-1114	=	2,960 Lbs
S.N. 016-1066	=	2,390 Lbs
S.N. 016-1113	=	52,660 Lbs
S.N. 016-1111	=	65,310 Lbs
S.N. 016-1110	=	72,290 Lbs

The Contractor shall exercise care during concrete removal operations not to create spalling beyond the limits of the specified removal. Damage to remaining concrete caused by the Contractor's removal operation shall be repaired, as directed by the Engineer, at no additional cost to the Department.

The Contractor shall use caution when removing concrete joints not to damage items attached to the parapets. Attached items may be removed and re-attached to facilitate concrete removal at Contractor's own expense.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.

All construction joints shall be bonded.

The joints are to be removed in stages. Before starting the removal, the Contractor is required to submit to the Engineer for approval his staging plans and method of removal.

The Contractor shall exercise care during the removal of the existing joints to ensure that the slab, beams & diaphragms integrity will not be detrimentally impacted. The Contractor shall repair any damage(s) to the slab, beams & diaphragms caused by his operation as directed by the Engineer at no additional cost to the Department.

The Contractor shall exercise extra care during the cleaning of the existing downspouts not to damage the pipes. The contractor shall repair any damage(s) caused by his operation as directed by the Engineer at no additional cost to the Department.

The Contractor shall provide a Protective Shield under the deck for the Full Deck Slab repairs as per direction of the Engineer and as shown on the plans.

The Contractor is required to reconnect new FPJ Troughs to the existing drainage system. It has been estimated that 5 feet of drain pipe will require removal and replacement. This includes any required connections. The cost to connect the FPJ troughs to the Drainage System shall be included in the cost for "Cleaning Bridge Scuppers and Downspouts".

The Contractor may have to remove the Name Plate(s) that interfere with the parapet removal for the joint reconstruction. The Contractor shall reinstall the Name Plate(s) as directed by the Engineer. The cost of removal and reinstallation of the Name Plate(s) shall be included in the cost for "Concrete Removal" and "Concrete Superstructure".

Protective coat shall be applied to only the new concrete provided for the reconstruction of the joints (top of deck slab, top and traffic face of parapets).

The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except finger plate expansion joints. The entire system shall be shop applied, with the exception that masked off connections surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all steel surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for Cleaning and Painting New Metal Structures.

At concrete removal locations for joints, the Contractor shall provide a  $\frac{3}{4}$ " saw cut along the removal line at the top of deck, inside, top and outside face of outside parapets and inside and top of median parapets. Cost of saw cuts shall be included in "Concrete Removal." See sheet 194.

The Contractor shall establish the grades to which the expansion devices are to be set and must receive approval from the Engineer of joint grades prior to pouring concrete.

## DESIGN DATA

Design Specifications: 2002 AASHTO  
Design Loading: HS20

## DESIGN STRESSES

$f'_c$  = 3500 psi  
 $f_y$  = 60,000 psi (Reinforcement)  
 $f_y$  = 50,000 psi (Structural Steel AASHTO M270 Gr. 50)

## MIN BAR LAPS

#5 = 2'-2"  
#6 = 2'-7"  
#7 = 3'-6"

## LEGEND

	Overlay Transition Limits
	Protective Shield Limits
	Limits of Stage I (IA & IB)
	Limits of Stage II
	Pier Number
	Concrete Removal / Joint Reconstruction
	Deck Slab Repair Partial Depth
	Deck Slab Repair Full Depth
	Scupper - Type A
	Scupper - Type B
	Scupper - Type C
	Scupper - Special

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
SB DAN RYAN ELEVATED BRIDGE  
REPAIR FROM 15TH TO 28TH STREETS  
STRUCTURAL  
GENERAL NOTES

SCALE: N/A  
DATE: 5/25/2006

DRAWN BY: BDC  
CHECKED BY: BLU

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5/25/2006