

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

**PROPOSED**  
**HIGHWAY PLANS**

FAP ROUTE 22 (IL 78)  
 SECTION (48B-1)I-1  
**BEAM BRACING**  
**KNOX COUNTY**  
 C-94-010-09

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22	(48B-1)I-1	KNOX	8	1
		IL 78	CONTRACT NO. 68852	

**INDEX OF SHEETS**

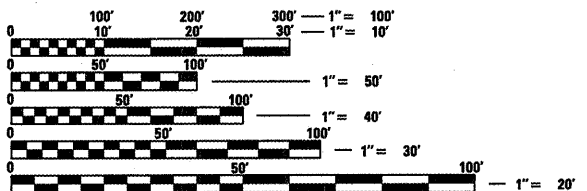
- 1 COVER SHEET
- 2 GENERAL & PROJECT SPECIFIC NOTES
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 SCHEDULE OF QUANTITIES
- 6-8 BRIDGE PLANS

**LIST OF STANDARDS**

- 701006-03
- 701201-03
- 701901-01

**DESIGN DESIGNATION**

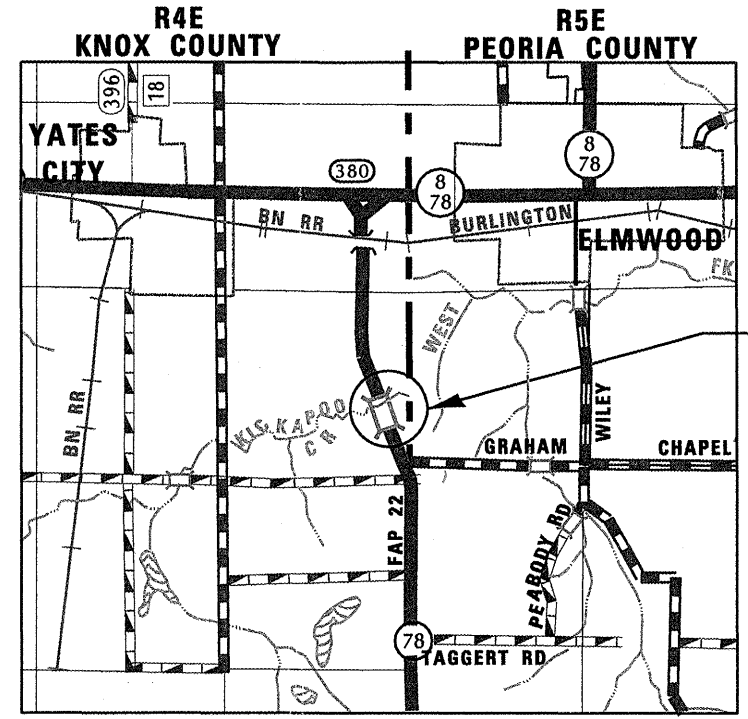
- ADT = 1,700 (2007)
- MU = 70
- SU = 50



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
 1-800-892-0123  
 OR 811

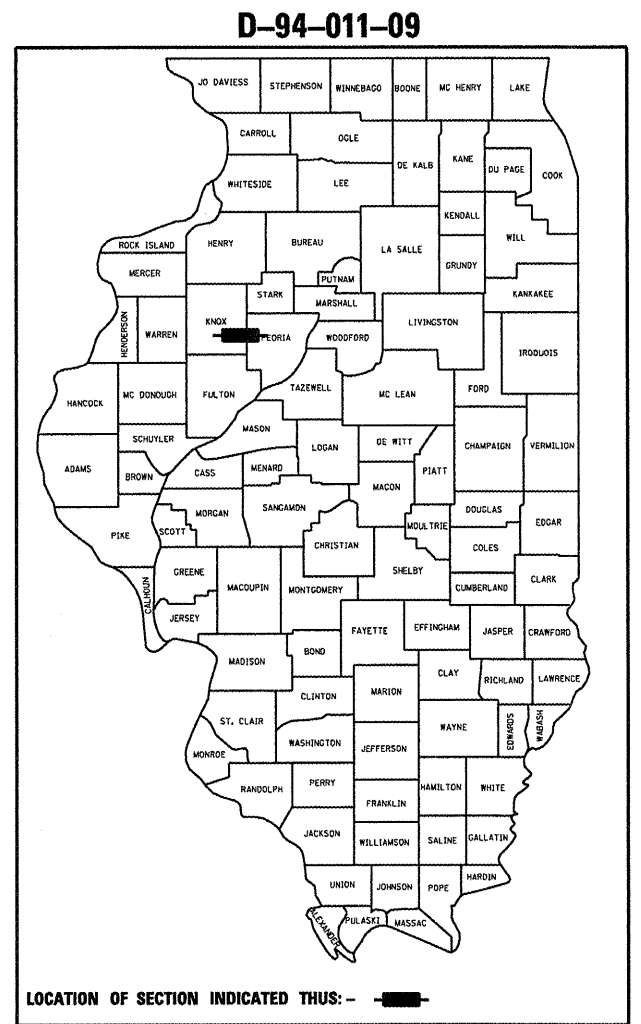
PROJECT ENGINEER RICHARD DOTSON  
 PROJECT DESIGNER TERRISA WORSFOLD  
 CONTRACT NO. 68852  
 CATALOG NO. 034113-00D



**PROPOSED IMPROVEMENT**  
 SN # 048-0018 OVER  
 KICKAPOO CREEK

T  
 9  
 N

GROSS LENGTH = 98.75 FT. = 0.02 MILE  
 NET LENGTH = 98.75 FT. = 0.02 MILE



**DESCRIPTION:**  
 BEAM BRACING OF 8 DECK BEAMS ON STRUCTURE CARRYING IL 78 OVER KICKAPOO CREEK (S.N. 048-0018), 1 MILE SOUTH OF IL 8 JCT

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED *Dec 15, 2008*

*Charles J. Ingersoll*  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
 ENGINEER OF DESIGN AND ENVIRONMENT

*Christine M. Reed*  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

## GENERAL NOTES

Plan dimensions and details relative to the existing structure 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 bid for the work.

### ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental resource documentation shall include the following:

- \* BDE Form 2289 (Environmental Survey Request)
- \* A location map showing the size limits and location of the use area
- \* Signed property owner agreement form-D4 P10100
- \* Color photographs depicting the use area
- \* Borrow Area Entry Agreement form-D4 P10101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

## PROJECT SPECIFIC NOTES

No right of way has been purchased for this project. The contractor shall make the necessary arrangements for access required for their operations.

Any areas disturbed shall be graded, seeded and have erosion control blanket placed at the Contractors expense.

If guardrail is removed for access purposes, barrels with flashing lights shall be placed in the area of the guardrail removal. The guardrail removal and replacement and the barrels shall be the Contractors expense.

No utility investigation has been done for this project. The contractor shall verify the location of all existing utilities.

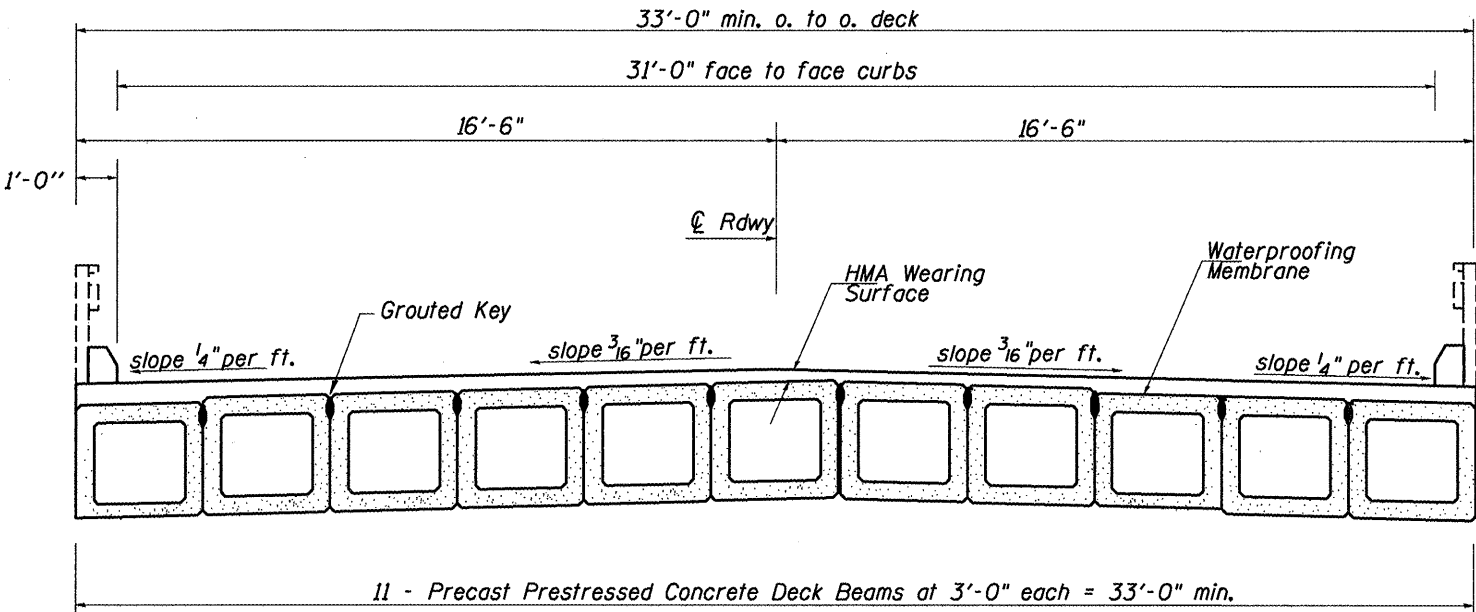
## COMMITMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

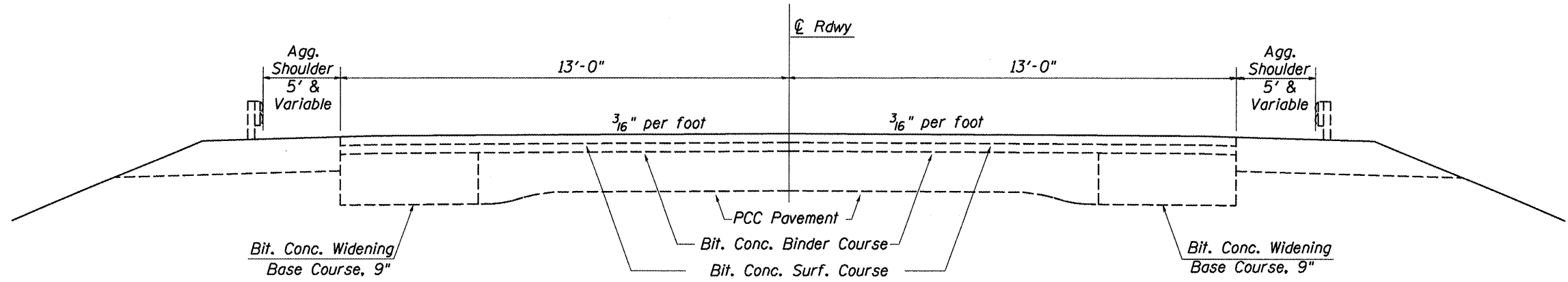
FILE NAME sht-plan.dgn	USER NAME = mcfadden.jk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL, PROJECT SPECIFIC NOTES &amp; COMMITMENTS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100.0000' / IN.	DRAWN -	REVISED -			22	148B-111-1	KNOX	8	2
	PLOT DATE = 12/16/2008	CHECKED -	REVISED -			CONTRACT NO. 68852				
		DATE -	REVISED -			FED. ROAD DIST. NO.   IL 78   FED. AID PROJECT				

<b>SUMMARY OF QUANTITIES</b>		100% STATE SAFETY-2A KNOX COUNTY	
CODE NO	ITEM	UNIT	TOTAL QUANTITIES
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	26600
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1

# TYPICAL SECTIONS



EXISTING BRIDGE DECK



PAVEMENT TYPICAL SECTION

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	PLOT SCALE = 100.0000' / IN.	DRAWN -	REVISED -			22	(48B-1)I-1	KNOX	8	4
	PLOT DATE = 12/16/2008	CHECKED -	REVISED -			CONTRACT NO. 68852				
	DATE -	REVISED -	FED. ROAD DIST. NO. IL 78 FED. AID PROJECT							

# SCHEDULE OF QUANTITIES

FURNISHING AND ERECTING STRUCTURAL STEEL	
LOCATION	POUND
JOB SITE	26600
TOTAL	26600

MOBILIZATION	
LOCATION	L SUM
JOB SITE	1
TOTAL	1

TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	
LOCATION	L SUM
JOB SITE	1
TOTAL	1

FILE NAME sh1-plen.dgn	USER NAME = mofeddenjk	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

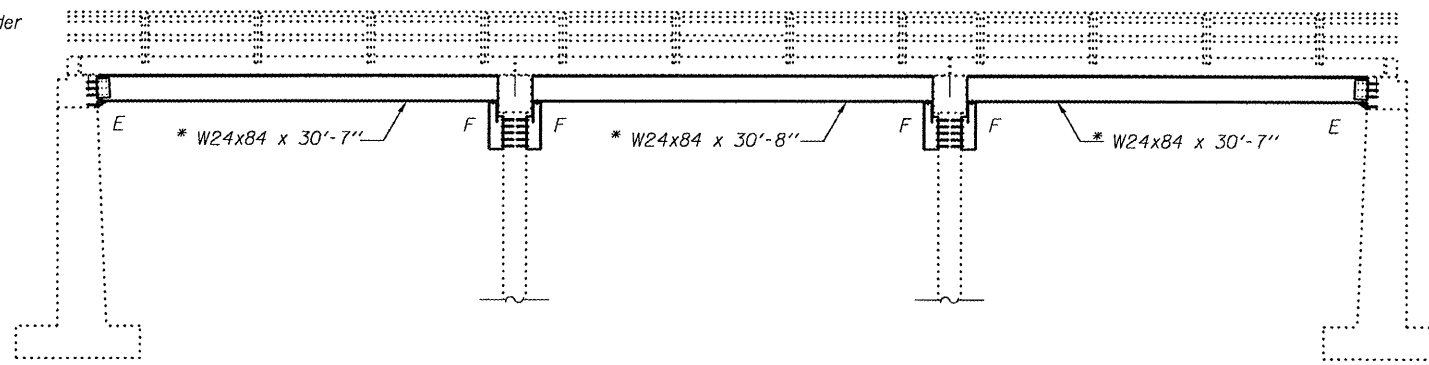
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES**

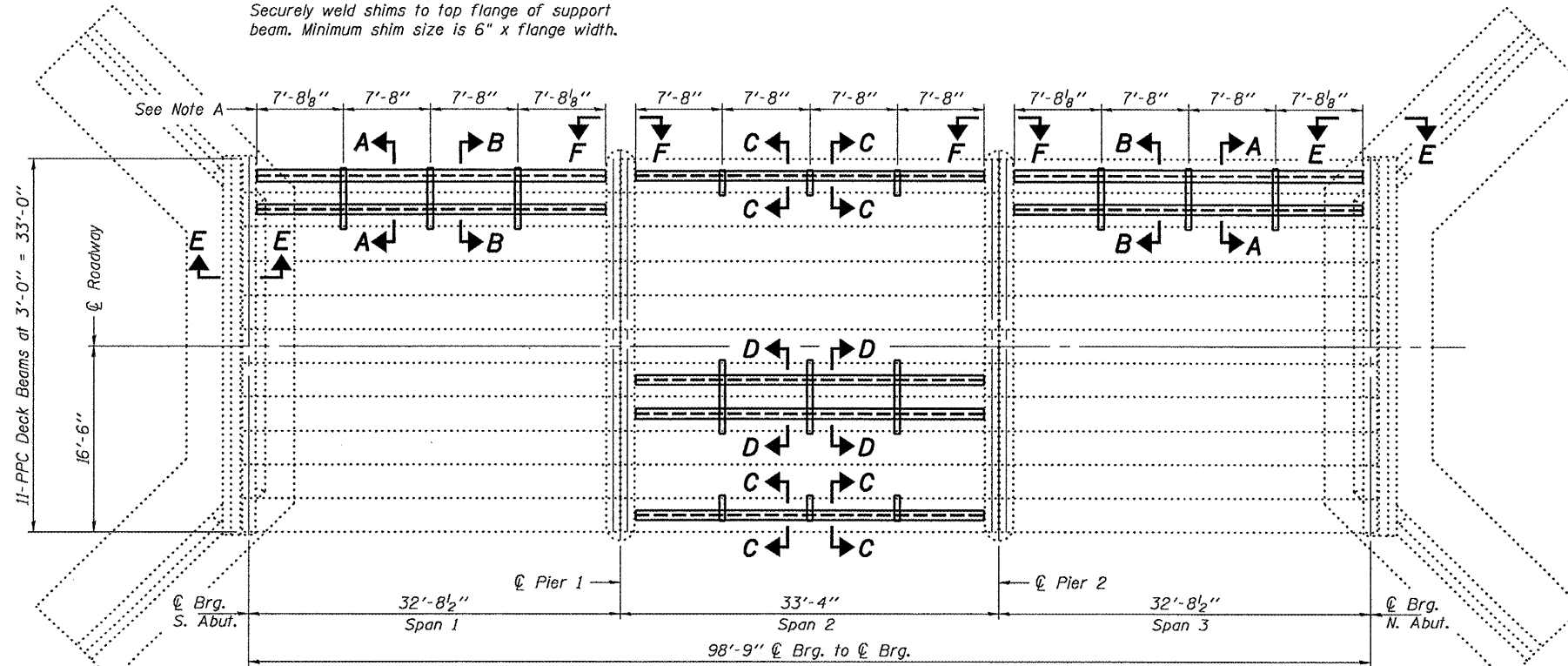
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22	(48B-1)I-1	KNOX	8	5
CONTRACT NO. 68852				
FED. ROAD DIST. NO. IL 78 FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Girder depth = 24". No additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. (Min. Sx = 196 in<sup>3</sup>)



Note A:  
⊕ Transverse Tie P's (3 per span). Place additional shims at midpoints between Tie P's. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.



PLAN

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction 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 change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

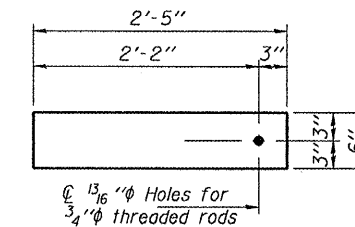
The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures.

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".

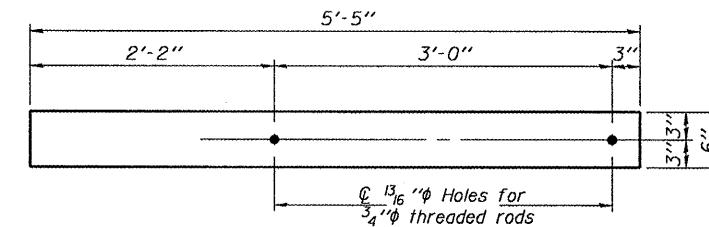
The cost of epoxy grouting threaded rods on the pier cap, abutments and beams shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using used steel. See Special Provisions.



TRANSVERSE TIE P A

P 1/2" x 6" x 2'-5"  
(6 Required)



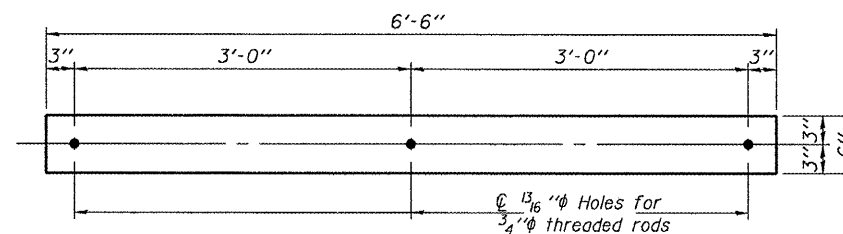
TRANSVERSE TIE P B

P 1/2" x 6" x 5'-5"  
(6 Required)

TOTAL BILL OF MATERIAL

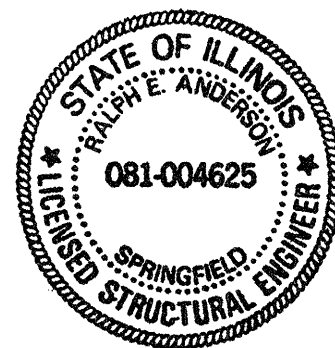
ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	26600

PLAN & ELEVATION  
IL ROUTE 78 OVER  
KICKAPOO CREEK  
SN 048-0018



TRANSVERSE TIE P C

P 1/2" x 6" x 6'-6"  
(3 Required)

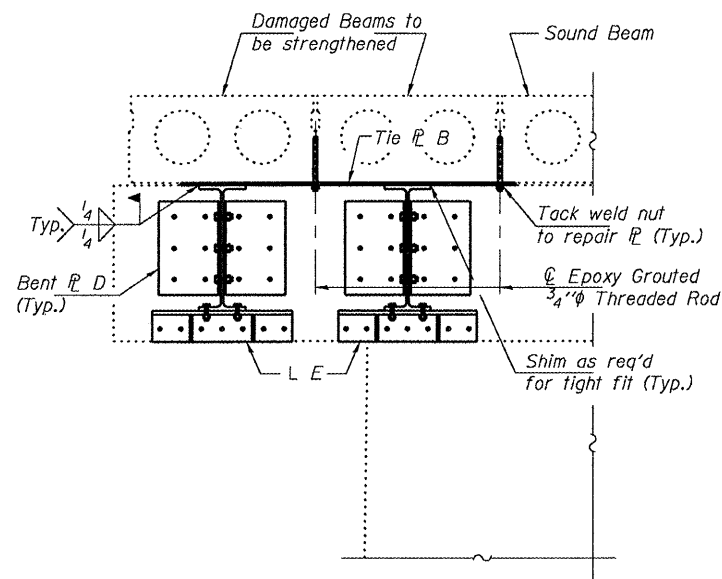


Expires: November 30, 2010

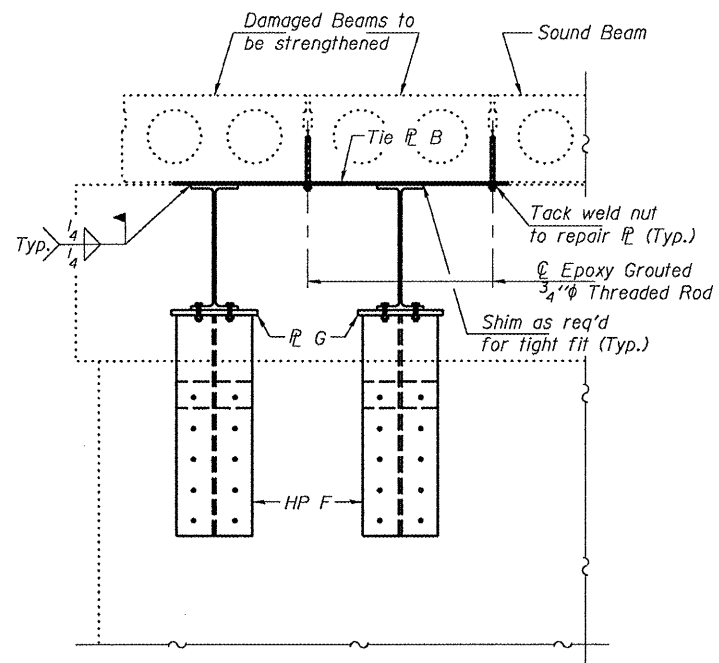
DESIGNED: Adrian T. Holloway  
CHECKED: Victor K. Velt  
DRAWN: Kyle M. Steffen  
CHECKED: VHW ATH  
JANUARY 8, 2009  
EXAMINED: [Signature]  
PASSED: [Signature]

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 68852					

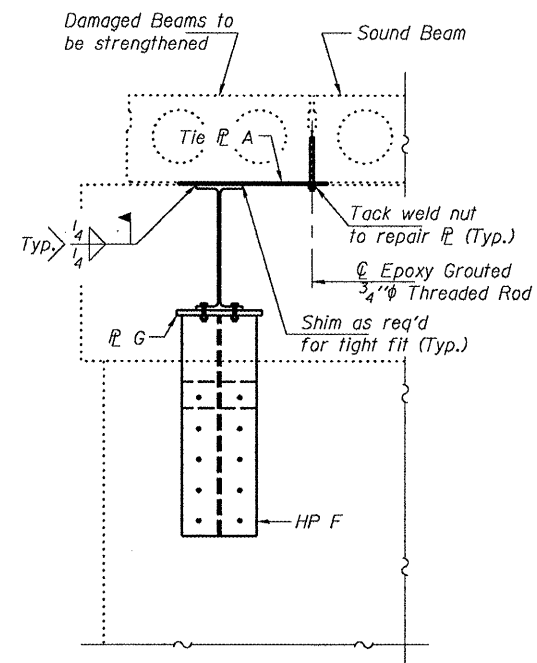
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



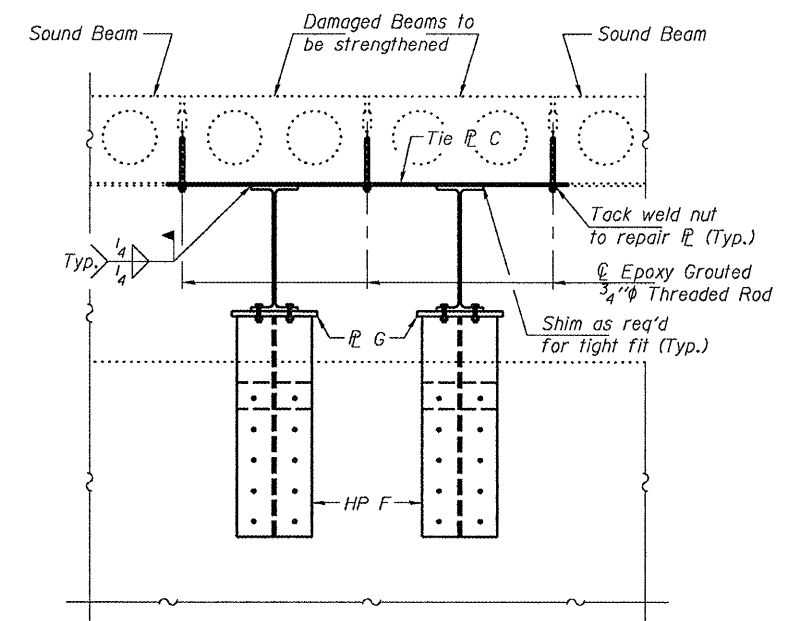
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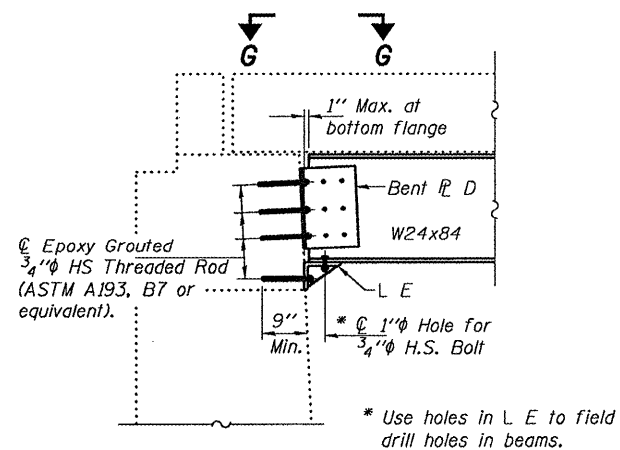
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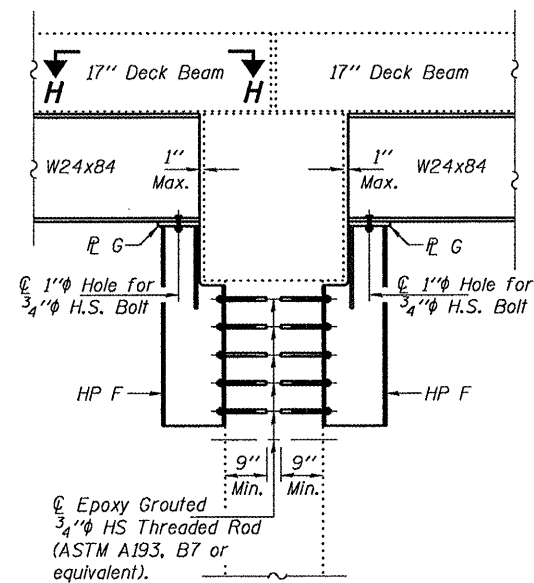
SECTION C-C



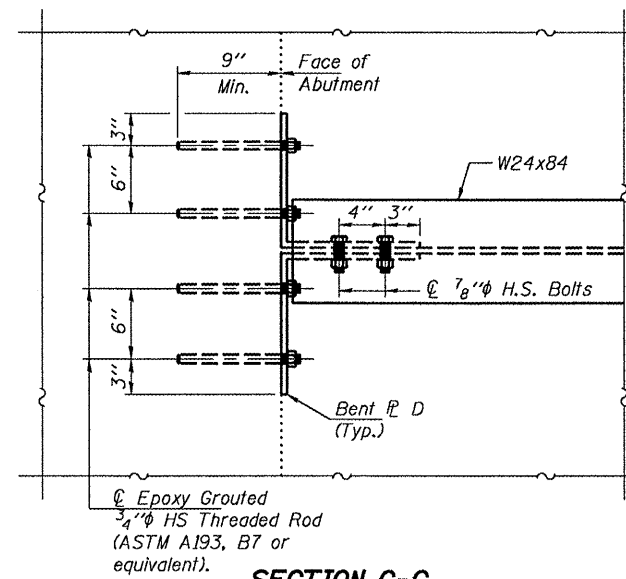
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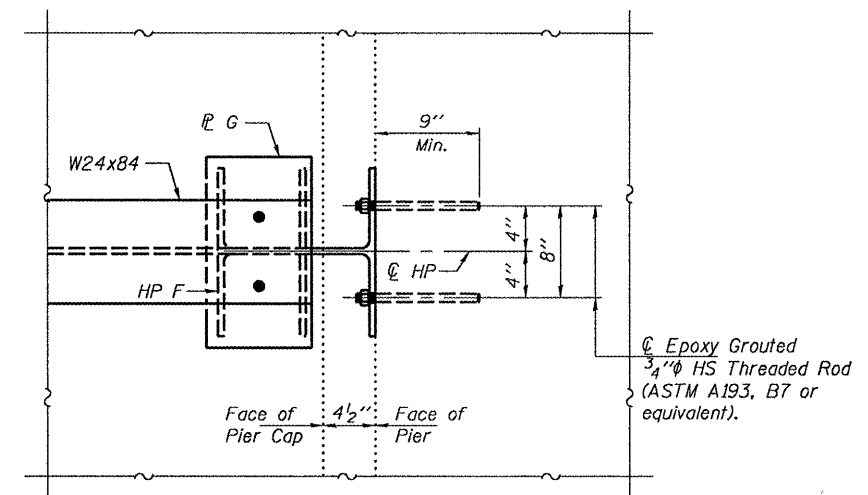
SECTION E-E



SECTION F-F



SECTION G-G



SECTION H-H

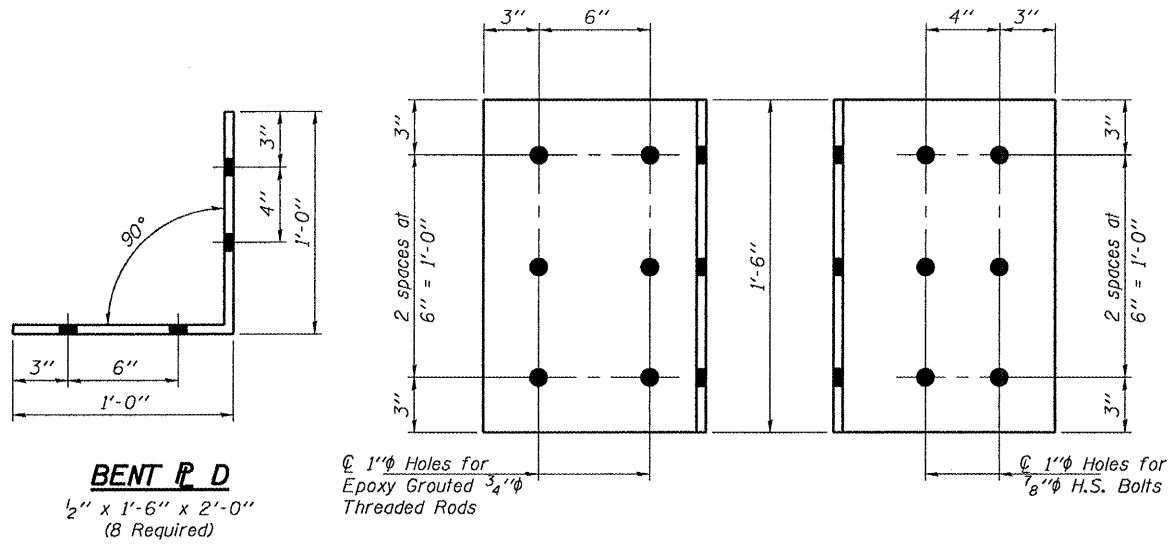
REPAIR DETAILS  
IL ROUTE 78 OVER  
KICKAPOO CREEK  
SN 048-0018

DESIGNED	ATH
CHECKED	VHV
DRAWN	Kyle M. Steffen
CHECKED	ATH VHV

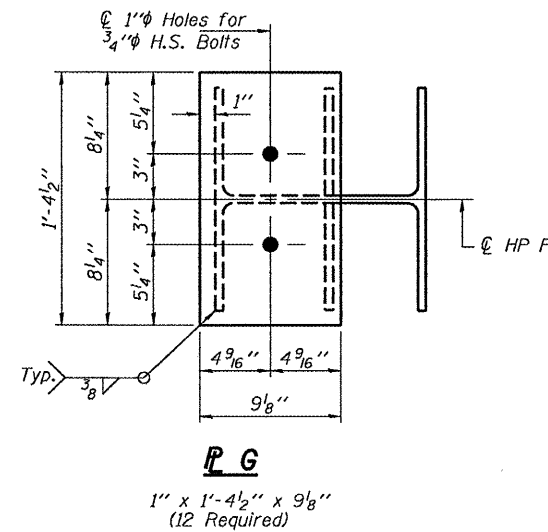
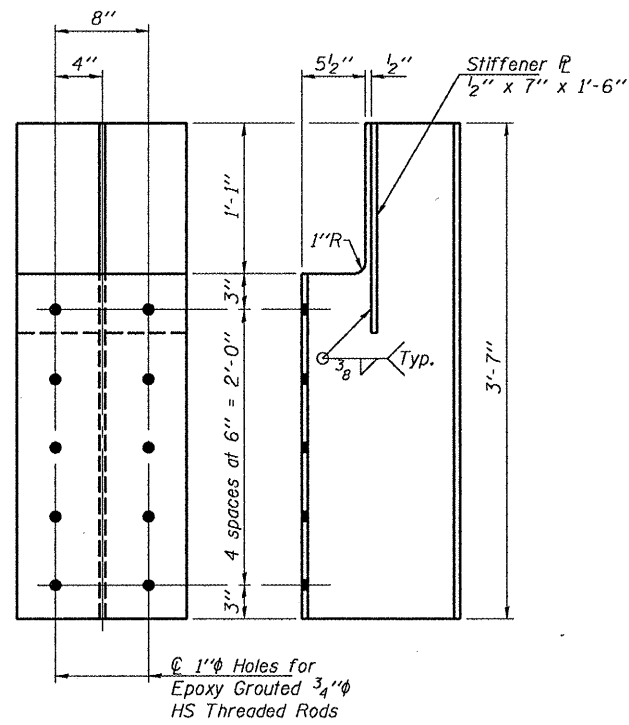
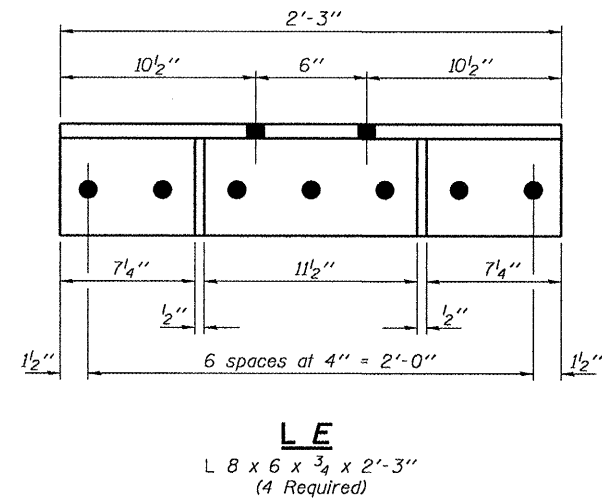
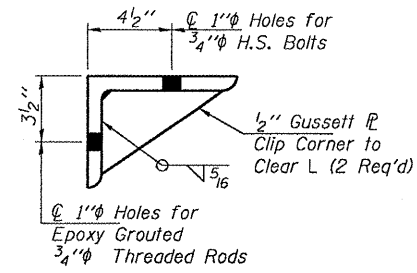
JANUARY 8, 2009  
EXAMINED *Carl Perry*  
PASSED *Ralph E. Anderson*

SHEET NO. 2 3 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	22	(48B-1)I-1	KNOX	8	7
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 68852					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**BENT P D ELEVATIONS**



DESIGNED	ATH
CHECKED	VHV
DRAWN	Kyle M. Steffen
CHECKED	ATH VHV

JANUARY 8, 2009

EXAMINED *Carl Perry*  
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

**REPAIR DETAILS**  
**IL ROUTE 78 OVER**  
**KICKAPOO CREEK**  
**SN 048-0018**

SHEET NO. 3	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	22	(48B-1)I-1	KNOX	8	8
3 SHEETS	CONTRACT NO. 68852				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		