

DESIGNER: CLARK JONES
PHONE: (309)671-3452

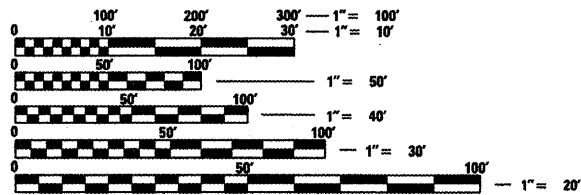
PROJECT ENGINEER: JIM MILLER
PHONE: (309)671-3451

INDEX OF SHEETS:

1. COVER SHEET
2. GENERAL NOTES & COMMITMENTS
SUMMARY OF QUANTITIES
3. EXISTING CROSS SECTIONS
4. SCHEDULE OF QUANTITIES
5. GENERAL LAYOUT
- 6-7. PROPOSED TRAFFIC CONTROL
8. WIDTH RESTRICTION SIGNING
- 9-14. REPAIR DETAILS

STANDARDS:

- 701101-02 701421-03 BLR 22-6
701106-02 701901-01
701201-04



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

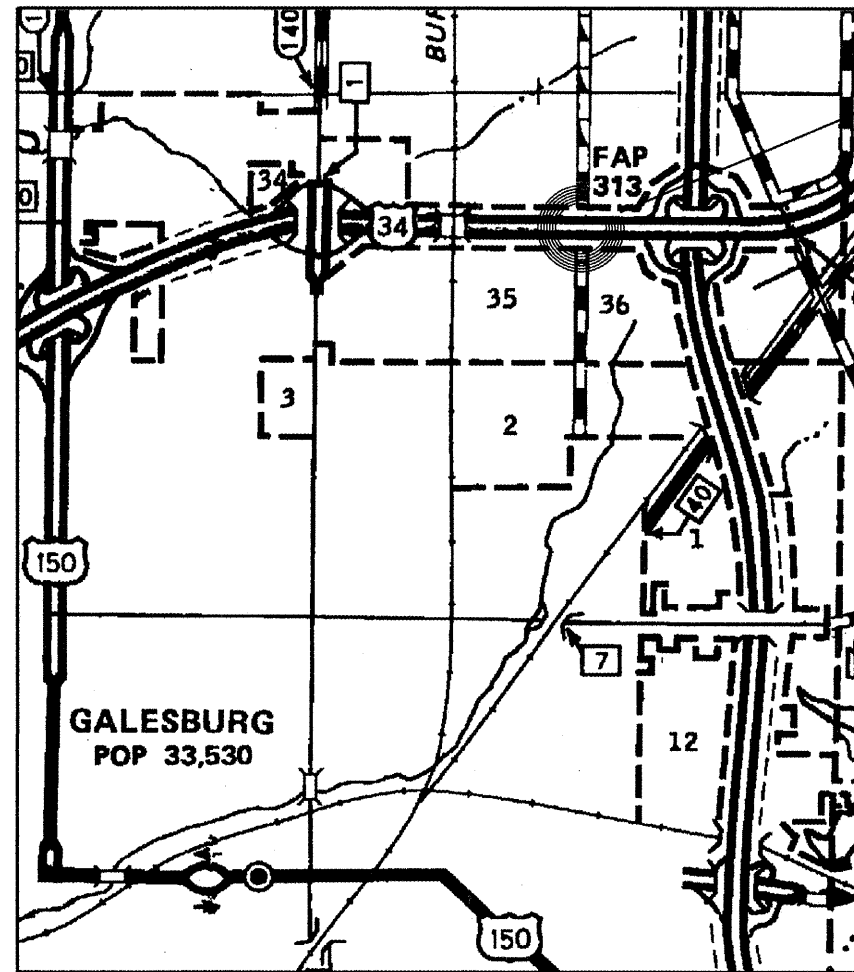
PROJECT ENGINEER- JIM MILLER

CONTRACT NO. 68A08 CATALOG NO. 034497-00D

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

FAP 29 (US 34)
SECTION (21-HB-2)I-5
BRIDGE BEAM REPAIRS
KNOX COUNTY

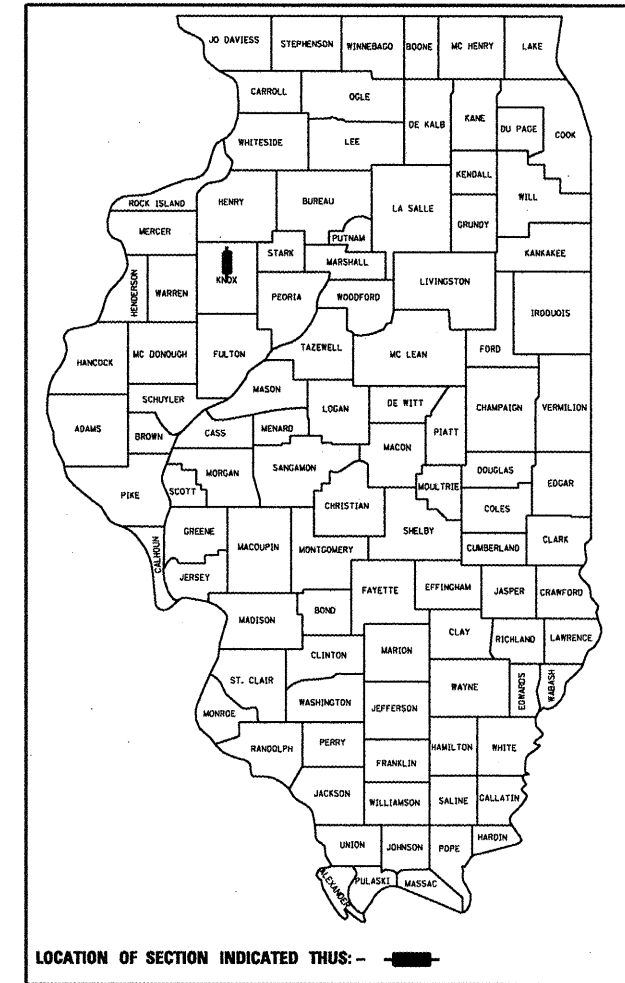
C-94-133-10



LOCATION MAP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-2)I-5	KNOX	14	1
FED. ROAD DIST. NO. 4		ILLINOIS	CONTRACT NO. 68A08	

D-94-073-10



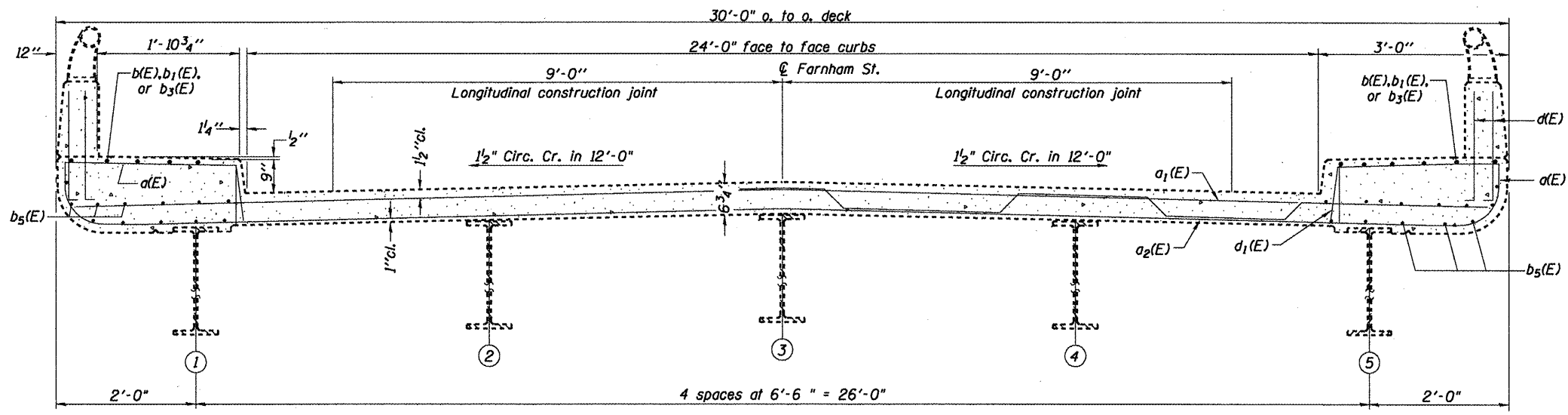
LOCATION OF SECTION INDICATED THUS: -

SN.048-0065

PROJECT CONSISTS OF STRAIGHTENING & REPLACEMENT TO MULTIPLE DAMAGED STEEL BEAMS OF STRUCTURE CARRYING TR74 (FARNHAM ST.) OVER US34 (SN.048-0065), BY GALESBURG. MCHD CLAIM 751531.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED 12/16/10
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Feb 4 2011
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT
Feb 4 2011
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

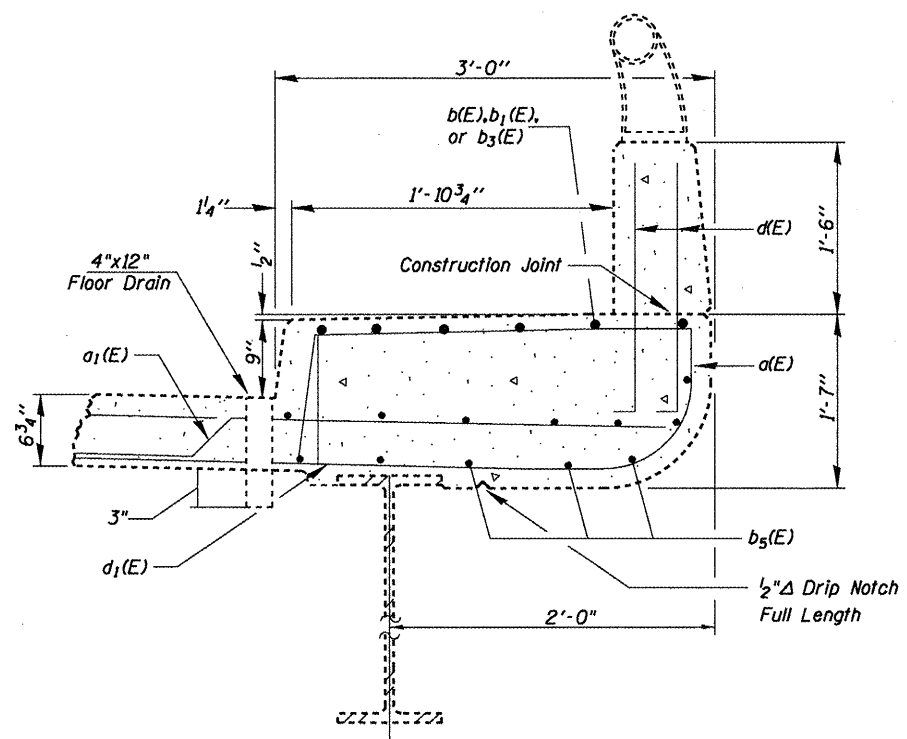
PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS



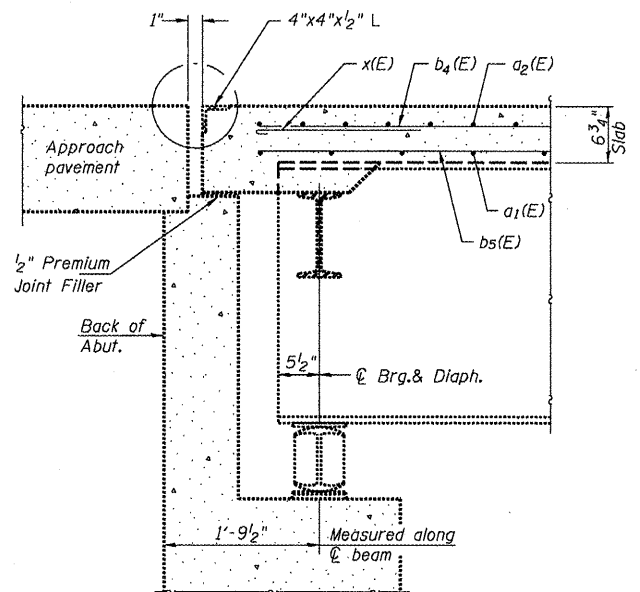
NEAR PIER

CROSS SECTION

NEAR MIDSPAN



CURB DETAIL



SECTION AT
END-OF-SLAB

Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
Section views drawn "FOR INFORMATION ONLY" to be used as reference for beam repair.

**FOR
INFORMATION
ONLY**

S:\GEN\DRAW\STD\PLNS\SOJAD BRIDGES\BRIDGE CONTRACTS\STEEL BEAM REF/68A08 SN048-0065 FARNHAMSTOVRLS34.dgn

FILE NAME = SN048-0065 FarnhamStovrUS34.dgn	USER NAME = jonesoe	DESIGNED - CEJ	REVISED -
		DRAWN - CEJ	REVISED -
	PLOT SCALE = 1/83.7051' / IN.	CHECKED -	REVISED -
	PLOT DATE = 12/16/2010	DATE - 04/30/2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING CROSS SECTIONS
STRUCTURE NO. 048-0065

SCALE: _____ SHEET NO. _____ OF _____ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-211-5	KNOX	14	3
STEEL BEAM REPAIRS			CONTRACT NO. 68A08	
FED. ROAD DIST. NO. 4 (ILLINOIS) FED. AID PROJECT				

SN.048-0065 FARNHAM
ST. OVER US34

SCHEDULE OF QUANTITIES

CONCRETE REMOVAL

LOCATION	CUYD
SN. 048-0065	2
<i>TOTAL</i>	<i>2</i>

STRUCTURAL STEEL REMOVAL

LOCATION	POUND
DECK SUPERSTRUCTURE	10,040
<i>TOTAL</i>	<i>10,040</i>

CONCRETE SUPERSTRUCTURE

LOCATION	CUYD
SN. 048-0065	2
<i>TOTAL</i>	<i>2</i>

MOBILIZATION

LOCATION	LSUM
JOB SITE	1
<i>TOTAL</i>	<i>1</i>

PAVEMENT MARKING TAPE TYPE III, 4" & WORKZONE PAVEMENT MARKING REMOVAL

LOCATION	PVMT. MRKG. TAPE, 4"		PVMT. MRKG. REM.
	WHITE LENGTH (FOOT)	YELLOW LENGTH (FOOT)	WORK ZONE PVMT. MRKG. REM. (SQ.FT.)
EXPRESSWAY STAGE CONSTRUCTION	1300	1300	
<i>TOTAL</i>	<i>2600</i>		<i>867</i>

FURNISHING & ERECTING STRUCTURAL STEEL

LOCATION	POUND
DECK SUPERSTRUCTURE	10,930
<i>TOTAL</i>	<i>10,930</i>

BEAM STRAIGHTENING

LOCATION	LSUM
DECK SUPERSTRUCTURE	1
<i>TOTAL</i>	<i>1</i>

TEMPORARY SHORING AND CRIBBING

LOCATION	LSUM
SEE T.C. SPECIALS	1
<i>TOTAL</i>	<i>1</i>

TRAFFIC CONTROL

LOCATION	T.C.&P. STANDARD 701421 (LSUM)	T.C.&P. STANDARD SPECIAL (LSUM)	T.C.&P. STANDARD B.L.R. 22 (LSUM)	CHANGEABLE MESSAGE SIGN (CAL MO)	WIDTH RESTRICTION SIGNING (LSUM)
Farnham St. US 34	1	1	1	2	1
<i>TOTAL</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>2</i>	<i>1</i>

TEMPORARY SLAB SUPPORT SYSTEM

LOCATION	LSUM
DECK SURFACE	1
<i>TOTAL</i>	<i>1</i>

SN.048-0065 FARNHAM ST. OVER US34

S:\GEN\DRAW\STDS&PLNS\SQUAD BRIDGES\BRIDGE CONTRACTS\STEEL BEAM REF\68A08 SN048-0065\SN048-0065 FARNHAMSTOVRUS34.dgn

FILE NAME = SN048-0065 FarnhamStovrUS34.dgn	USER NAME = jonesce	DESIGNED - C JONES	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES STRUCTURE NO. 048-0065	F.A.P. RTE. 29	SECTION (21-HB-211-5)	COUNTY KNOX	TOTAL SHEETS 14	SHEET NO. 4
PLOT SCALE = 1/83.7051' / IN.		CHECKED - C JONES				STEEL BEAM REPAIRS		CONTRACT NO. 68A08		
PLOT DATE = 12/16/2010		DATE - 09/10/2010				FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				
SCALE: -----		SHEET NO. ___ OF ___ SHEETS		STA. ----- TO STA. -----						

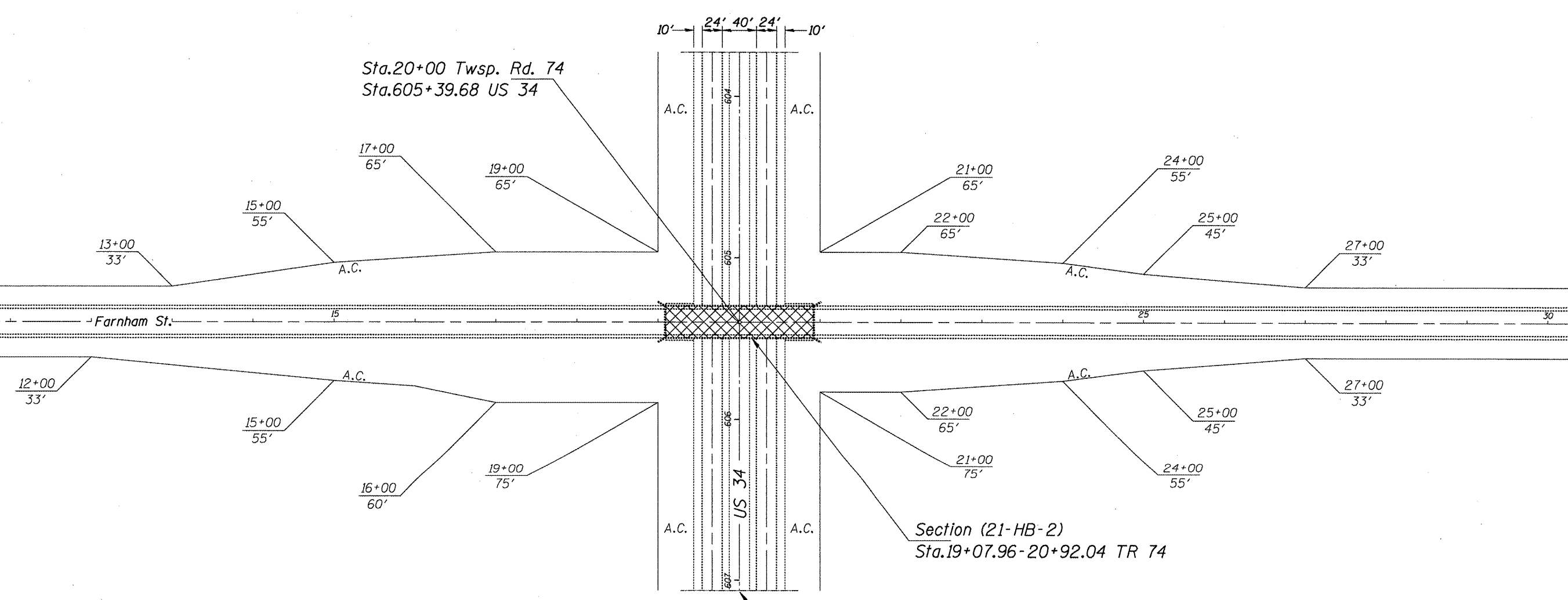
TWSP. RD. 74 (FARNHAM ST.)



CHARLES E. HINCKLEY
SEC.35, T.12N, R.1E, 4th P.M.

DUWAYNE R. JOHNSON
SECTION 35

Sta.20+00 Twsp. Rd. 74
Sta.605+39.68 US 34



FRANK O. & LINDA C. GUSTAFSON
SEC.36, T.12N, R.1E, 4th P.M.

Section (21-HB-2)
Sta.19+07.96-20+92.04 TR 74

BEATRICE DUNBAR
SECTION 36

R and 1/4 Section Line

S:\GEN\DRAWING\STDS&PLNS\SQUAD BRIDGES\BRIDGE CONTRACTS\STEEL BEAM REP\68A08 SN048-0065\SN048-0065 FARNHAMSTOV-US34.dgn

FILE NAME = SN048-0065 FarnhamStovrUS34.dgn	USER NAME = jonesco	DESIGNED - C JONES	REVISED - ---
		DRAWN - C JONES	REVISED - ---
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	PLOT DATE = 12/15/2010	DATE - 08/15/2010	REVISED - ---

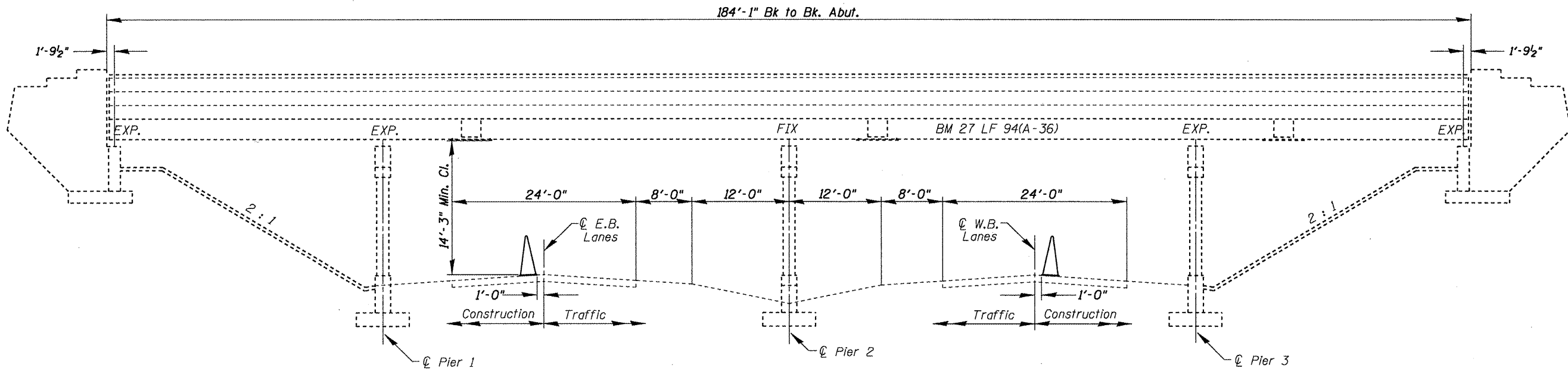
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL LAYOUT STRUCTURE NO. 048-0065			
SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____	

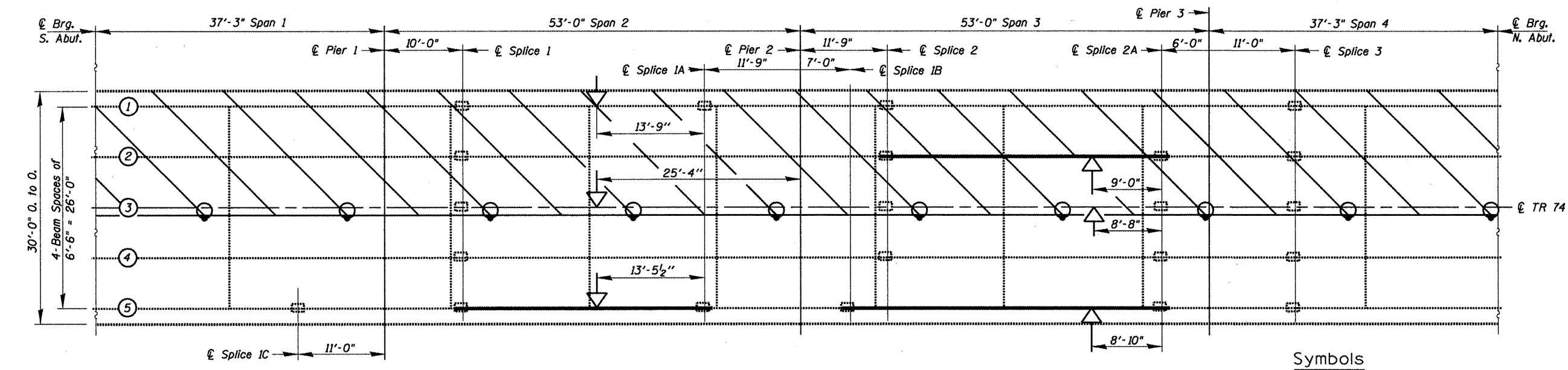
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-21)-5	KNOX	14	5
STEEL BEAM REPL. & REPAIRS			CONTRACT NO. 68A086	
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				

SN.048-0065 FARNHAM
ST. OVER US34

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TRAFFIC CONTROL
(Stage I)



PLAN

Symbols

- Work Area
- Cone, Drum, or Barricade w/ steady burning Light
- Impact Line
- Temporary Slab Support System
(See Details Sheet 3 of 6.)

Notes:
Refer to Highway Standard BLR 22 and 701421 for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of these standards. For the sole purpose of beam or beam section removal and replacement both lanes of one direction of US34 may be temporarily closed. See Special Provisions "US 34 Lane Closures".

FILE NAME = SN048-0065 FarnhamStov.US34.dgn	USER NAME = jonesc	DESIGNED - C JONES	REVISED -
		DRAWN - C JONES	REVISED -
	PLOT SCALE = 1/83.7891' / IN.	CHECKED -	REVISED -
	PLOT DATE = 12/16/2010	DATE - 08/17/2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

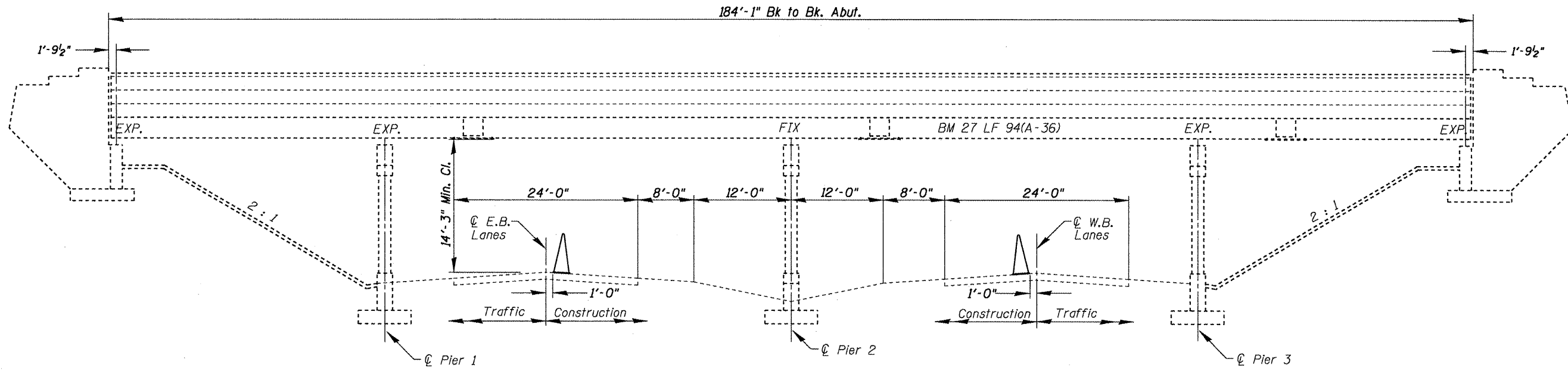
PROPOSED TRAFFIC CONTROL
STRUCTURE NO. 048-0065

SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

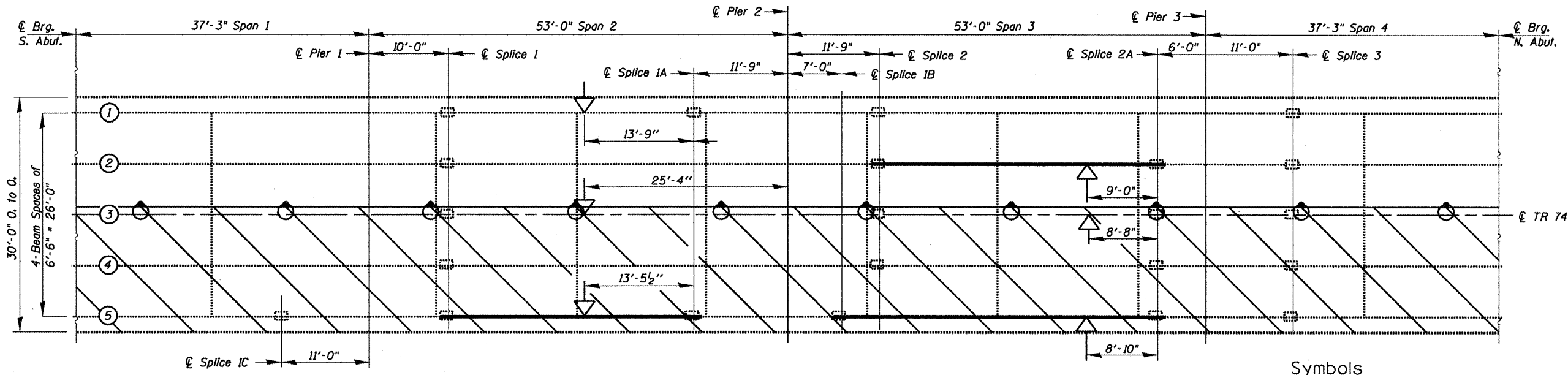
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-211-5	KNOX	14	6
STEEL BEAM REPL. & REPAIRS		CONTRACT NO. 68A08		
FED. ROAD DIST. NO. 4 (ILLINOIS) FED. AID PROJECT				

SN.048-0065 FARNHAM
ST. OVER US34

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TRAFFIC CONTROL
(Stage II)



PLAN

Symbols

- Work Area
- Cone, Drum, or Barricade w/ steady burning light
- Impact Line
- Temporary Slab Support System
(See Details Sheet 3 of 6.)

Notes:
Refer to Highway Standard BLR 22 and 701421 for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of these standards.
For the sole purpose of beam or beam section removal and replacement both lanes of one direction of US34 may be temporarily closed. See Special Provisions "US 34 Lane Closures".

FILE NAME =	USER NAME = jonesca
SN048-0065 FarnhamStovrUS34.dgn	
PLOT SCALE = 103.7051' / IN.	
PLOT DATE = 12/16/2010	

DESIGNED - C JONES	REVISED - ---
DRAWN - C JONES	REVISED - ---
CHECKED - ---	REVISED - ---
DATE - 08/17/2010	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

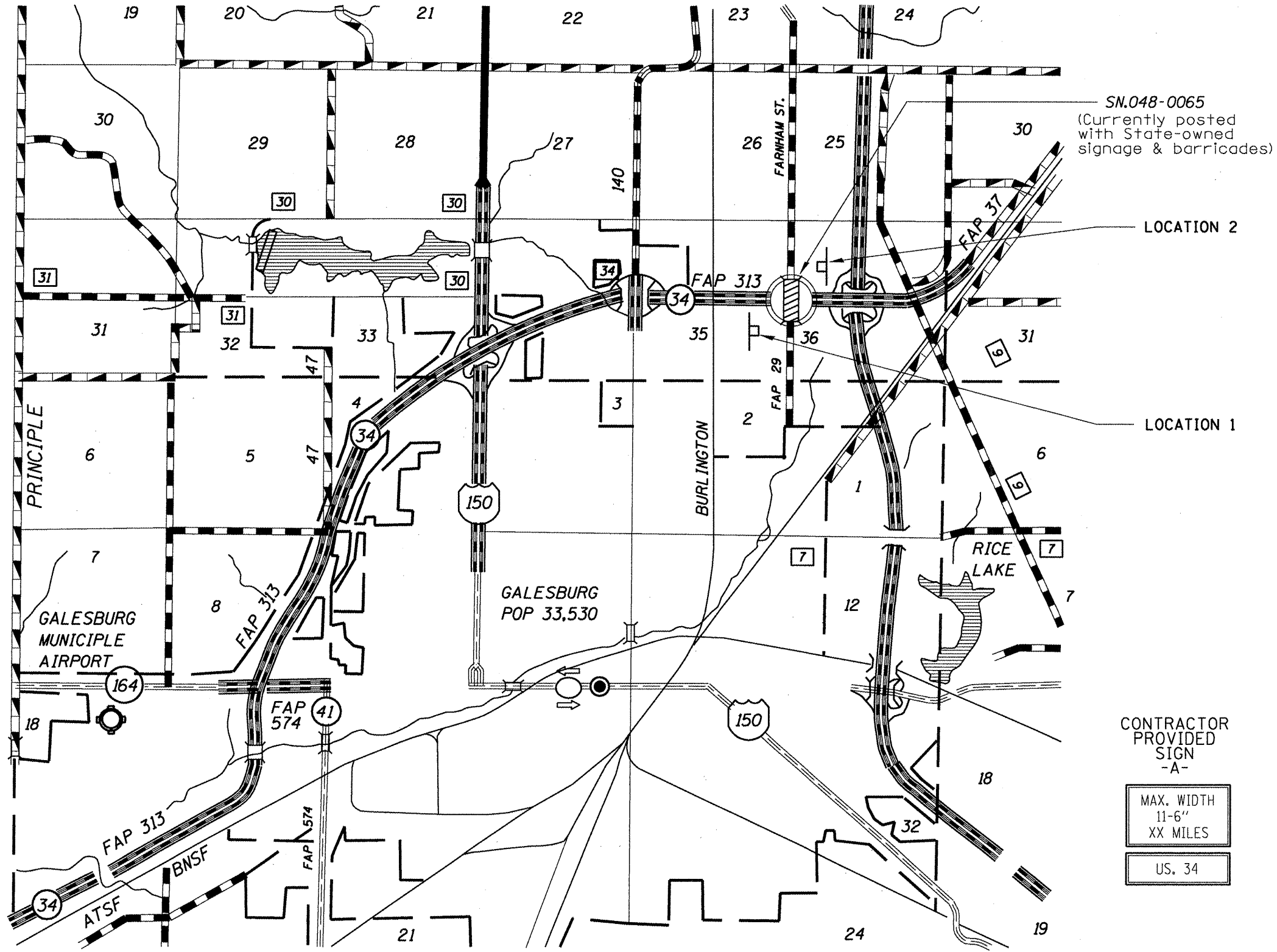
PROPOSED TRAFFIC CONTROL	
STRUCTURE NO. 048-0065	
SCALE: _____	SHEET NO. ___ OF ___ SHEETS
STA. _____	TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-2)I-5	KNOX	14	7
STEEL BEAM REPL. & REPAIRS		CONTRACT NO. 68A08		
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				

SN.048-0065 FARNHAM ST. OVER US34

NOTES

Notification signs shall be posted where shown indicating maximum width ahead of 11'-6" for stage construction. Changeable Message Boards shall be placed facing each traffic direction one week prior to work start date for public safety and awareness. Farnham St. signage and Type 3 Barricades already in-place for posted bridge closure. Contractor shall notify Randy Hartz at (309) 734-2912 at work completion for any State-owned traffic device removals. The detour for WB. US34 closures shall begin at the IL.150 exit off of I-74, for passage Northwest on IL.150 to US34 entrance ramps. The EB. US34 detour shall begin at the IL.150 South exit for passage through Galesburg. The Contractor shall be responsible to set-up detour signage in necessary placements, remove or cover at end of work day, and coordinate all necessary notifications for US34 Sunday closures. See "Traffic Control Plan" in Special Provisions.



SN.048-0065 SIGNING

	SIGN -A-	SIGN -B-
LOCATION 1	1 EA.	NA
LOCATION 2	1 EA.	NA
LOCATION 3		
LOCATION 4		

CONTRACTOR PROVIDED SIGN -A-



SEE SPECIAL PROVISIONS FOR SIGNING DETAILS

SN.048-0065 FARNHAM ST. OVER US34

S:\GEN\DRAWING\STDS&PLNS\SQUAD BRIDGES\BRIDGE CONTRACTS\STEEL BEAM REP\68A08 SN048-0065\SN048-0065 FARNHAMSTOV\US34.dgn

FILE NAME = SN048-0065 FarnhamStovrUS34.dgn	USER NAME = jonesae	DESIGNED - C JONES	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING STRUCTURE NO. 048-0065	F.A.P. RTE. 29	SECTION (21-HB-211-5)	COUNTY KNOX	TOTAL SHEETS 14	SHEET NO. 8		
PLOT SCALE = 103.7051' / IN.	CHECKED -	DATE - 08/15/2010	REVISED -			SCALE: _____	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____	STEEL BEAM REPL. & REPAIRS CONTRACT NO. 68A08			
PLOT DATE = 12/16/2010	DATE -	REVISED -	REVISED -			FED. ROAD DIST. NO. 4 [ILLINOIS] FED. AID PROJECT						

GENERAL NOTES

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

Fasteners shall be high strength bolts. Flange splice holes shall be $\frac{15}{16}$ " ϕ for $\frac{7}{8}$ " ϕ bolts. Web splice holes shall be $\frac{13}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts.

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".

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.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.

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", and "Cleaning and Painting New Metal Structures".

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision "Cleaning and Painting New Metal Structures".

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System."

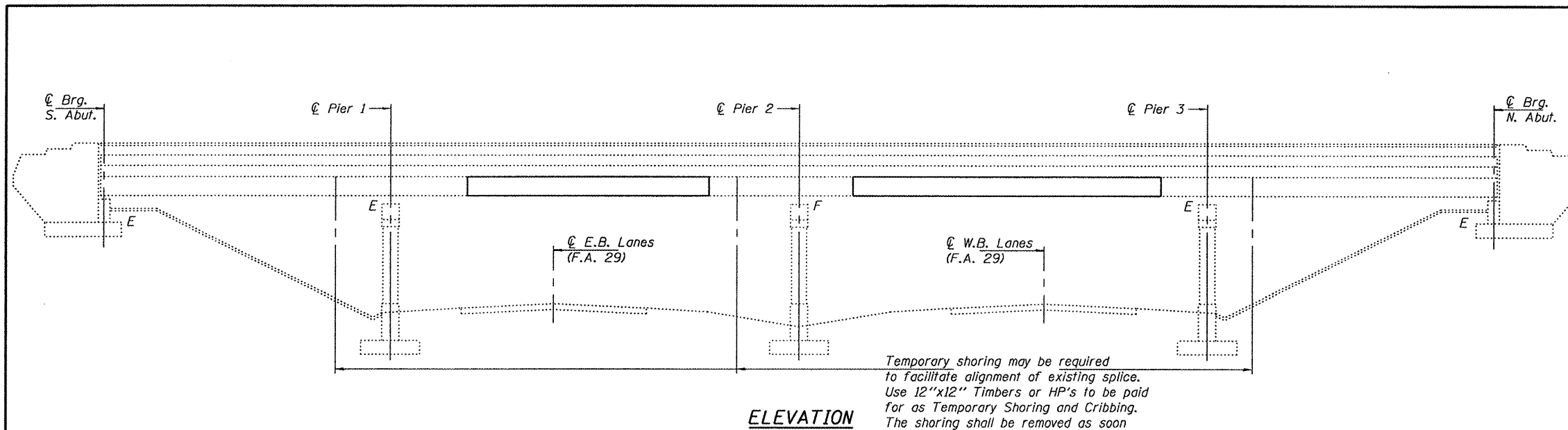
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2. Diaphragm connection holes shall be $\frac{15}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.

Removal and replacement of beam sections on Spans 2 and 3 are not to be done simultaneously.

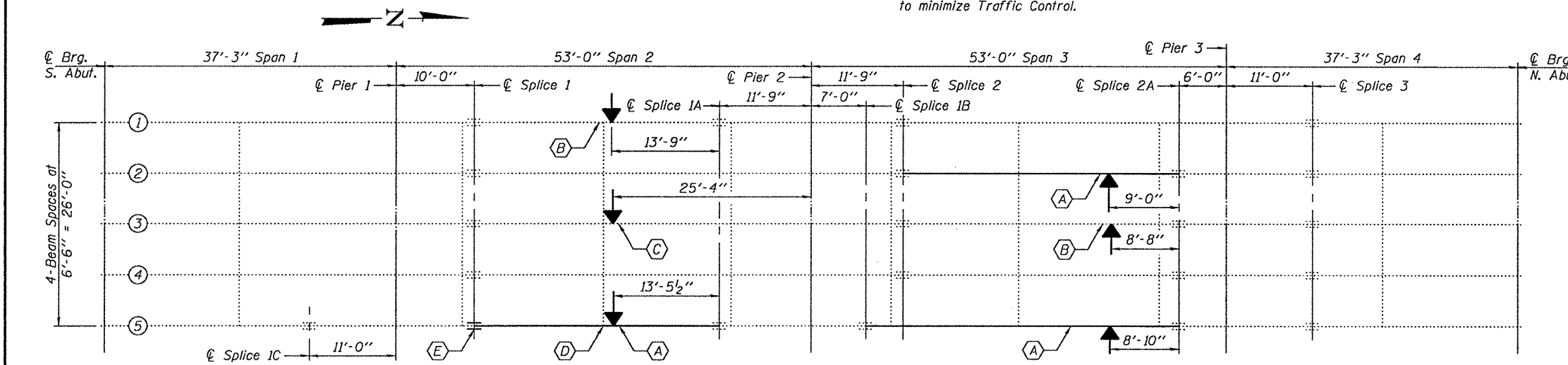
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	10,930
Beam Straightening	L.S.	1
Temporary Slab Support System	L.S.	1
Concrete Removal	Cu. Yd.	2.0
Concrete Superstructure	Cu. Yd.	2.0
Temporary Shoring and Cribbing	L.S.	1
Structural Steel Removal	Pound	10,040



ELEVATION

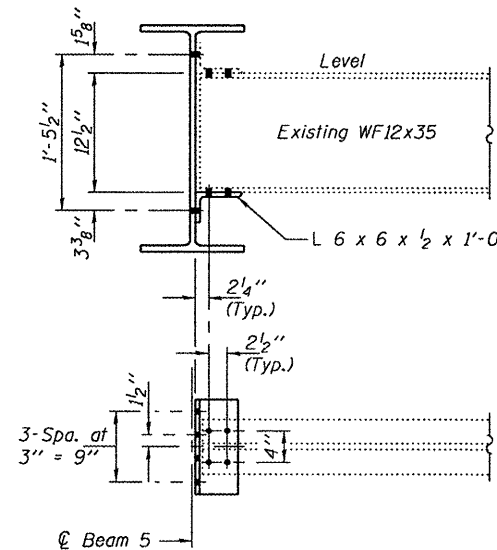
Temporary shoring may be required to facilitate alignment of existing splice. Use 12"x12" Timbers or HP's to be paid for as Temporary Shoring and Cribbing. The shoring shall be removed as soon as possible after the splice is completed to minimize Traffic Control.



PLAN

Impact Line

- (A) - Remove & Replace Beam Section
- (B) - Existing Beam to be Straightened
- (C) - Existing Beam to be Straightened & Strengthened
- (D) - Existing Bottom Diaphragm Clip Angle to be Replaced
- (E) - New Splice to be Created at this Location



DETAILS FOR REPAIR (D)



DESIGNED - *David Carl Puzey*
 CHECKED - *M. Steffen*
 DRAWN - *Kyle M. Steffen*
 CHECKED - *IS*

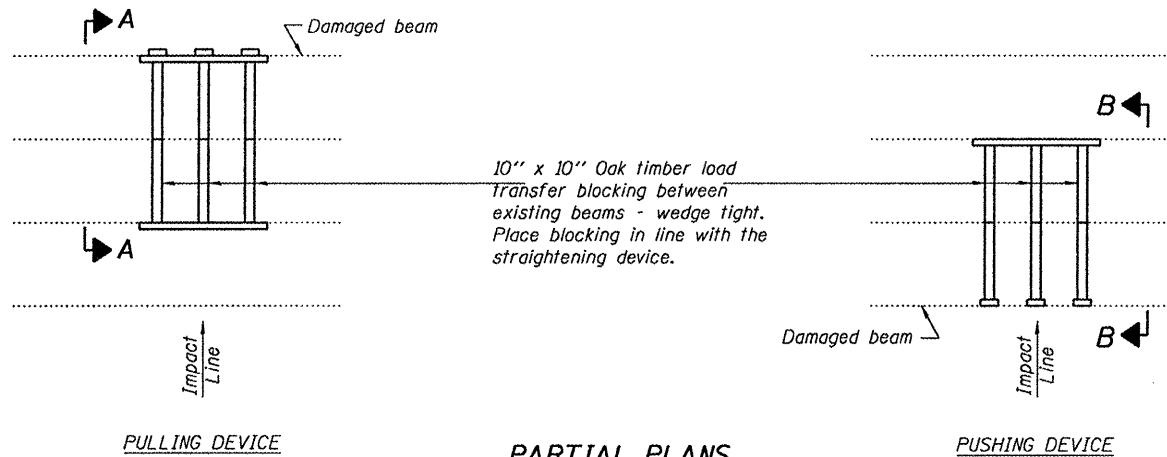
EXAMINED - *Jan F. [Signature]*
 PASSED - *[Signature]*
 DATE - JANUARY 27, 2011

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 SN 048-0065

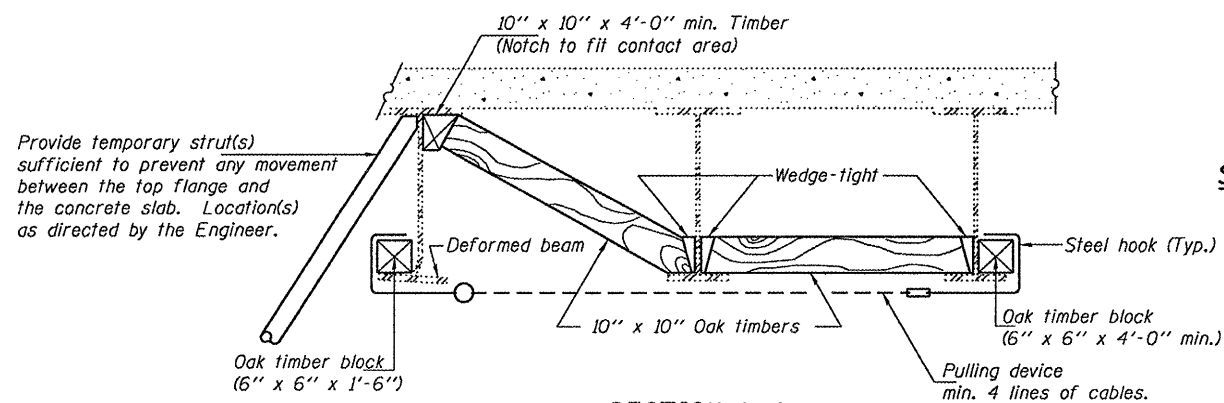
SHEET NO. 1 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-2)-5	KNOX	14	9
CONTRACT NO. 68A08			ILLINOIS FED. AID PROJECT	

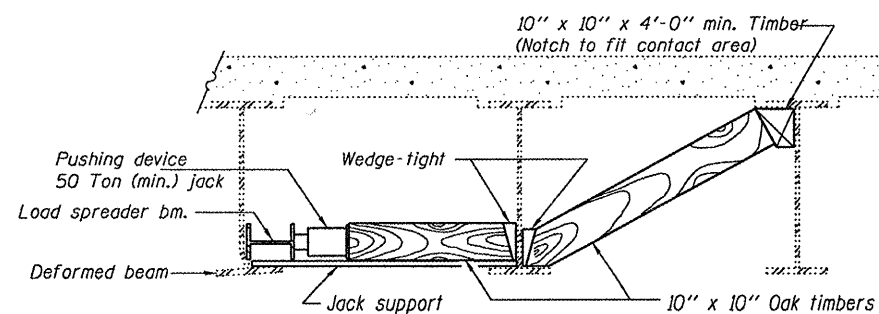


**PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS**

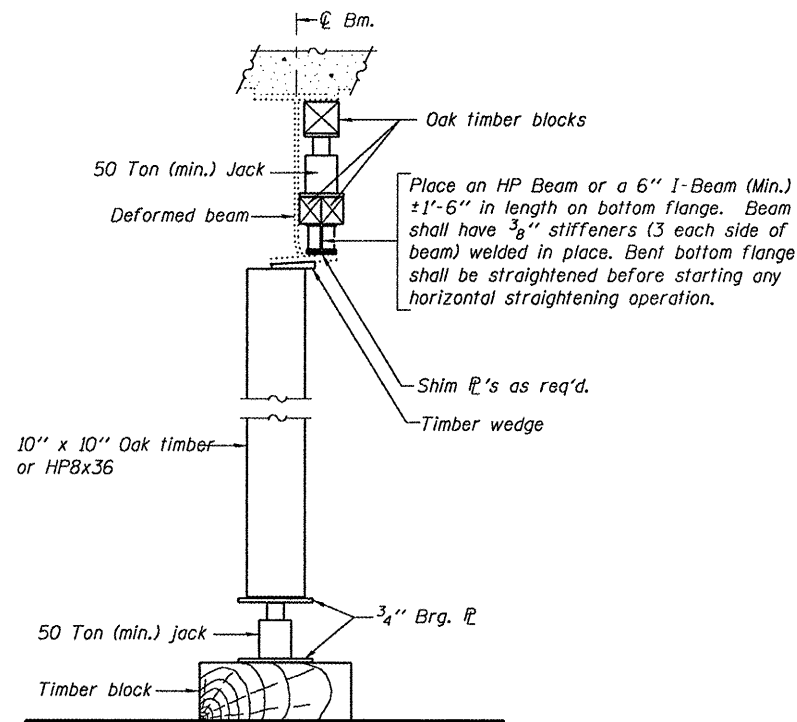
Straightening force shall be maintained on all load transfer blocking during beam straightening.



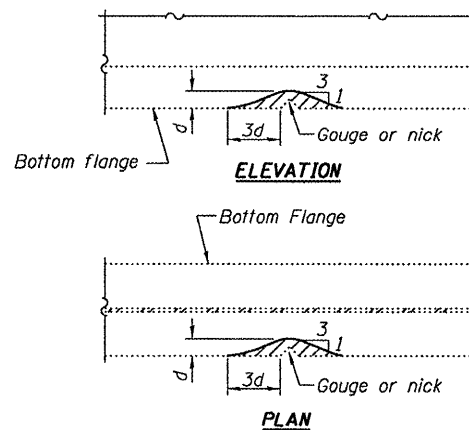
SECTION A-A



SECTION B-B

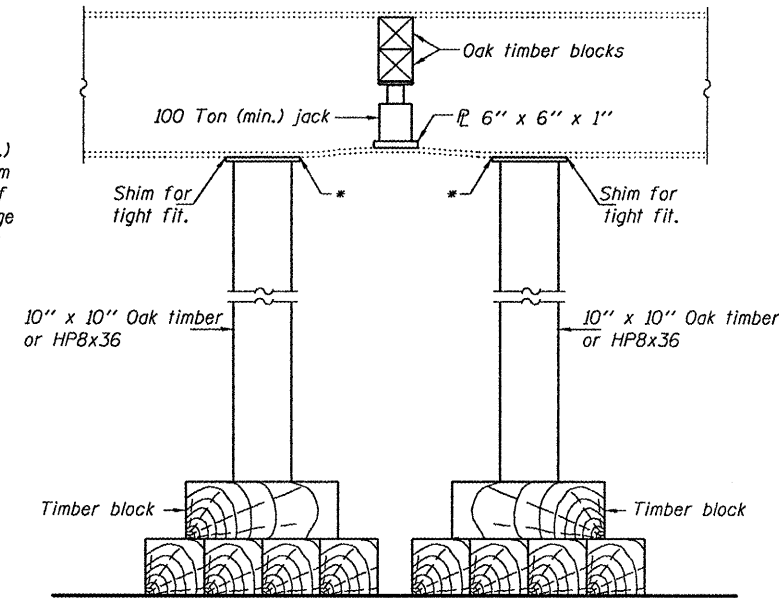


**SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct flange rotation.)**



GRINDING DETAIL

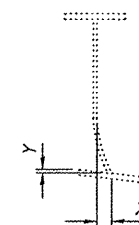
Grind existing nicks, gauges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.



**SUGGESTED VERTICAL STRAIGHTENING DETAIL
(To correct localized vertical flange deformations.)**

* Edge of plate shall line up with edge of deformation.

Note:
Braces and jack assembly shall be placed on same side of web.
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



**EXISTING DEFORMATION
TO BE STRAIGHTENED**

(Looking)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately .

LOCATION	X	Y
Bm. 1 Sp. 2	3/4"	4/16"
Bm. 3 Sp. 2	3/16"	1/4"
Bm. 3 Sp. 3	5/16"	1/2"

REP-1 1-14-2005

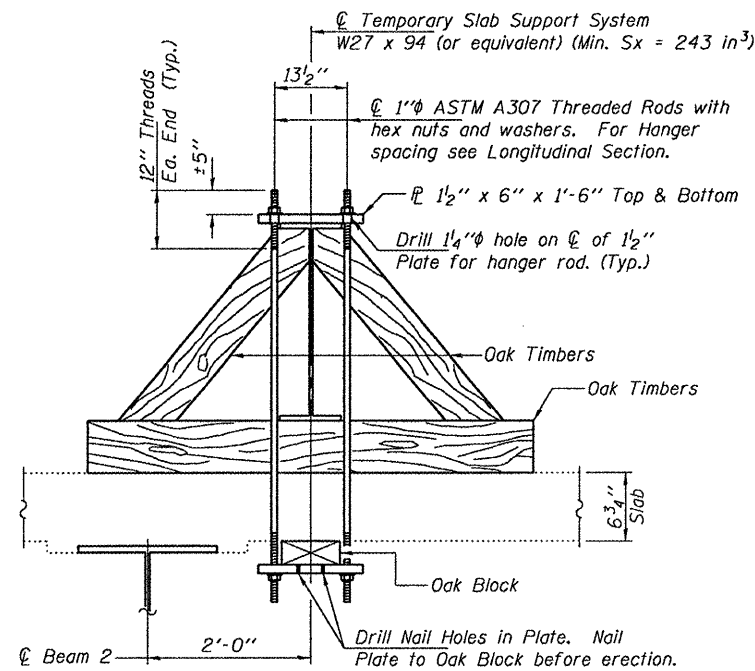
DESIGNED - IJL	EXAMINED - <i>Jayne F. J...</i>	DATE - JANUARY 27, 2011
CHECKED - GGE	PASSED - <i>Jayne F. J...</i>	
DRAWN - Kyle M. Steffen	ACTING ENGINEER OF BRIDGES AND STRUCTURES	
CHECKED - IJL GGE		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

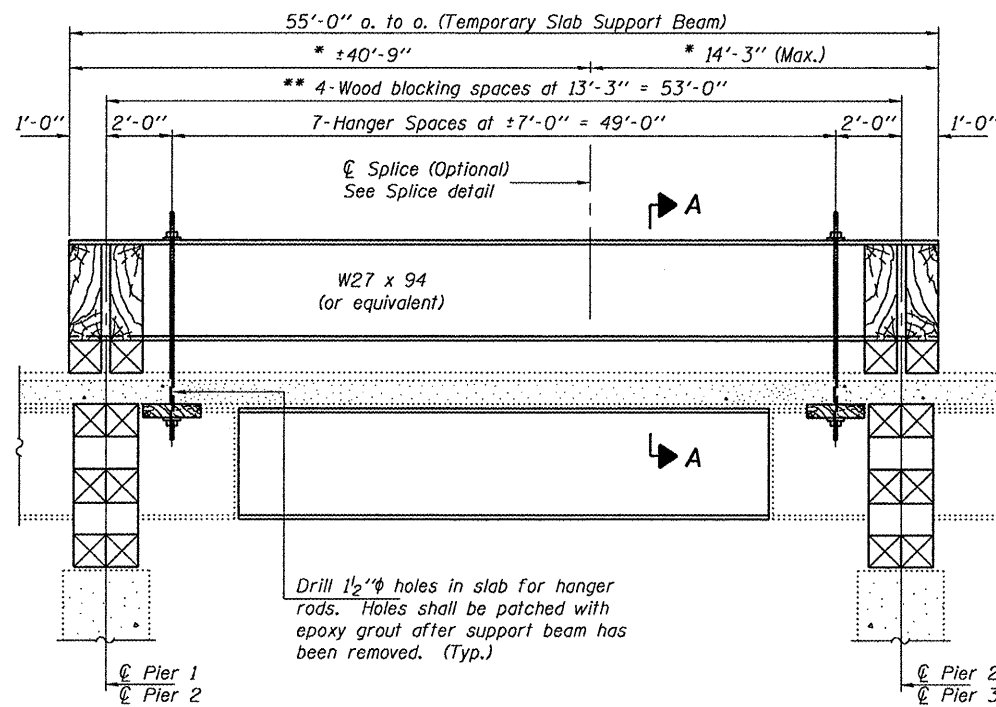
**BEAM STRAIGHTENING DETAILS
SN 048-0065**

SHEET NO. 2 OF 6 SHEETS

F.A.P. RTE. 29	SECTION (21-HB-211-5)	COUNTY KNOX	TOTAL SHEETS 14	SHEET NO. 10
CONTRACT NO. 68A08				ILLINOIS FED. AID PROJECT



SECTION A-A AWAY FROM SIDEWALK

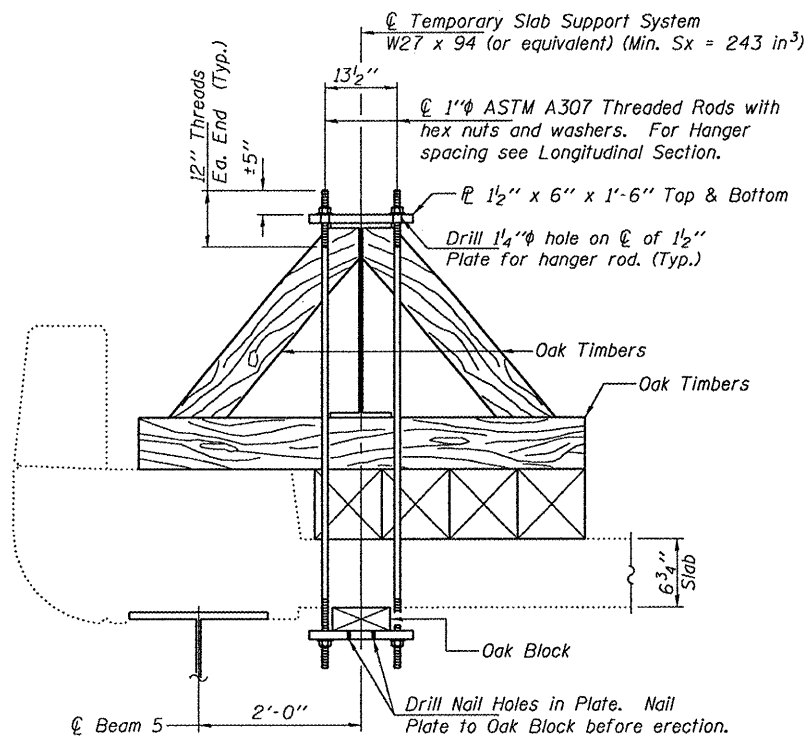


LONGITUDINAL SECTION
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM

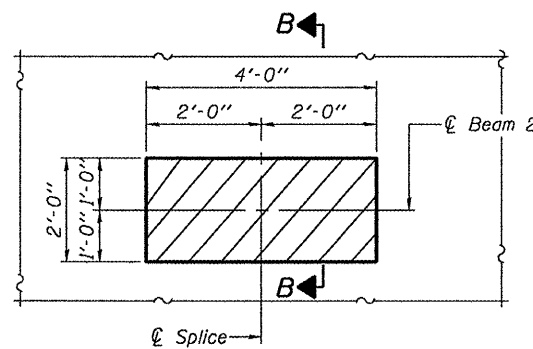
Notes:
Hatched areas indicate concrete sections to be removed and replaced. Perimeters of Concrete Removal areas shall be saw cut 3/4" prior to the removal of concrete.
Existing reinforcement extending into the removed area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
Reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the Engineer. Cost included with Concrete Removal.

* These dimensions may vary for available beams in stock.

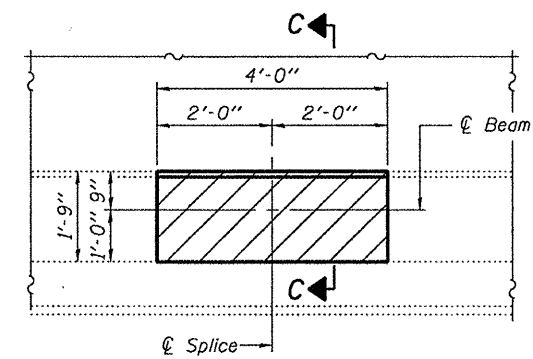
** Wood blocking between supports to be placed after support beam deflects under its own weight.



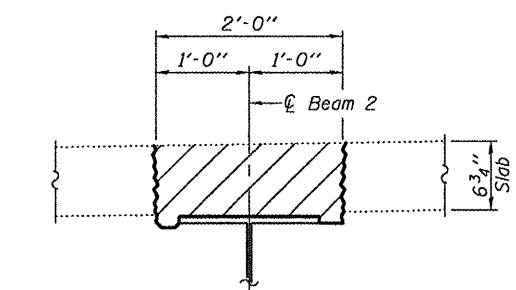
SECTION A-A NEAR SIDEWALK



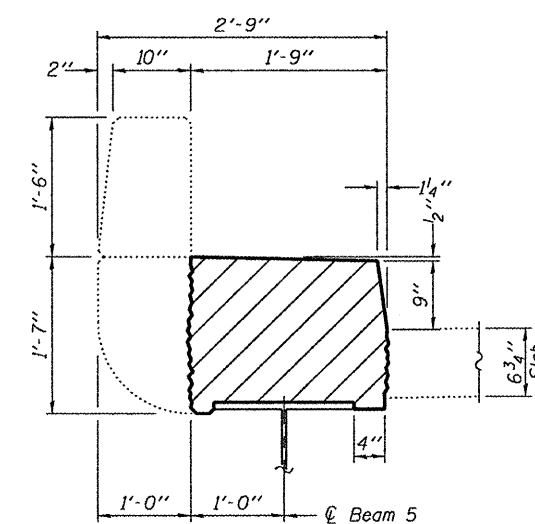
TYPICAL CONCRETE REMOVAL
AWAY FROM SIDEWALK



TYPICAL CONCRETE REMOVAL
NEAR SIDEWALK



SECTION B-B



SECTION C-C

DESIGNED - IJL
CHECKED - GGE
DRAWN - Kyle M. Steffen
CHECKED - IJL GGE

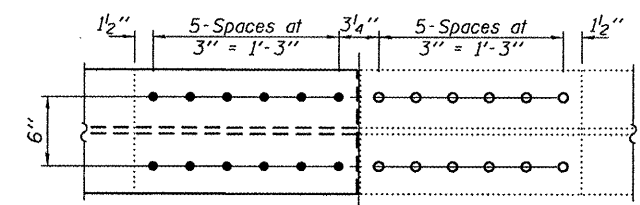
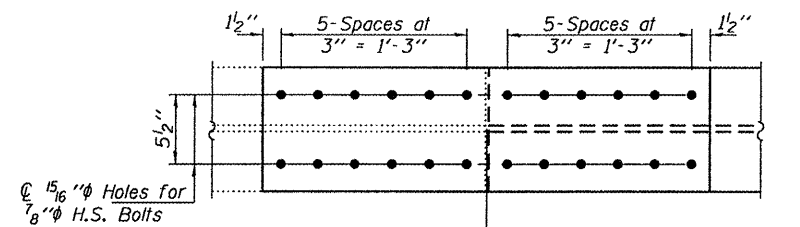
EXAMINED
PASSED
DATE - JANUARY 27, 2011
ACTING ENGINEER OF STRUCTURAL SERVICES
ACTING ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

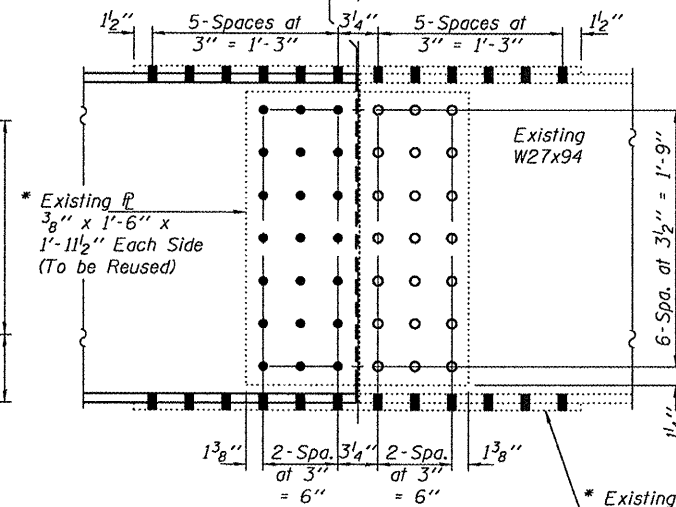
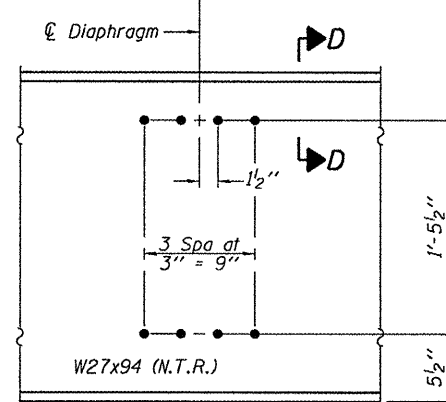
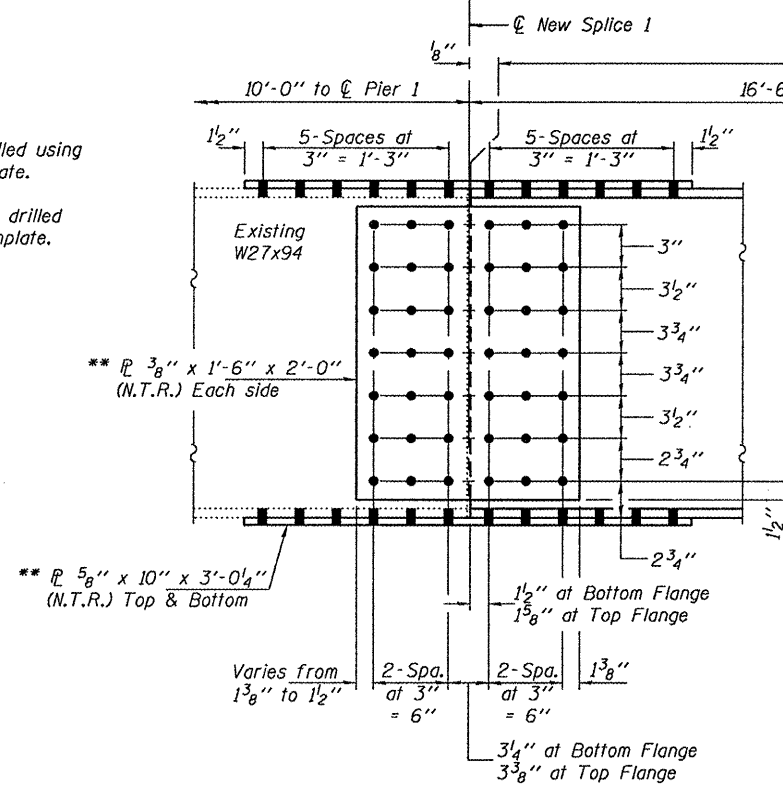
TEMPORARY SLAB SUPPORT SYSTEM & CONCRETE REMOVAL DETAILS
SN 048-0065

F.A.P. RTE. 29
SECTION (21-HB-21)-5
COUNTY KNOX
TOTAL SHEETS 14
SHEET NO. 11
CONTRACT NO. 68A08
ILLINOIS FED. AID PROJECT

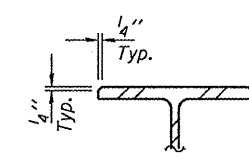
SHEET NO. 3 OF 6 SHEETS



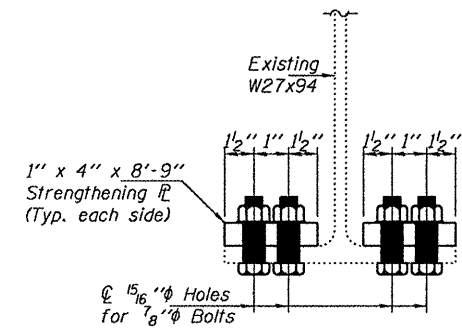
* Holes in new beam shall be field drilled using the existing splice plates as a template.
 ** Holes in existing beam shall be field drilled using the new splice plates as a template.



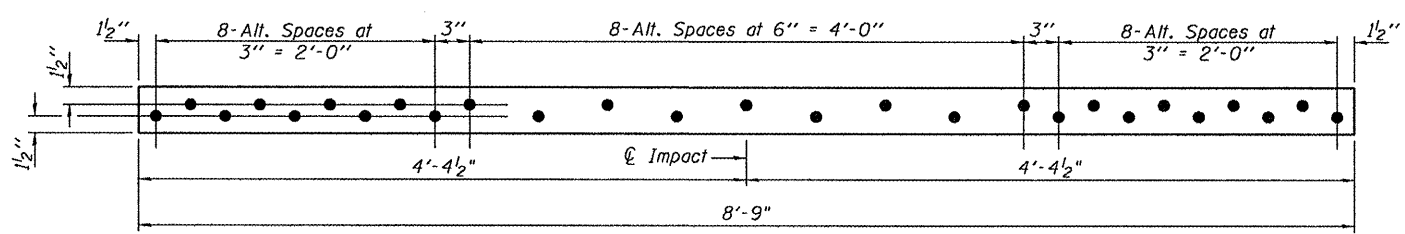
ELEVATION BEAM 5 SPAN 2



SECTION D-D

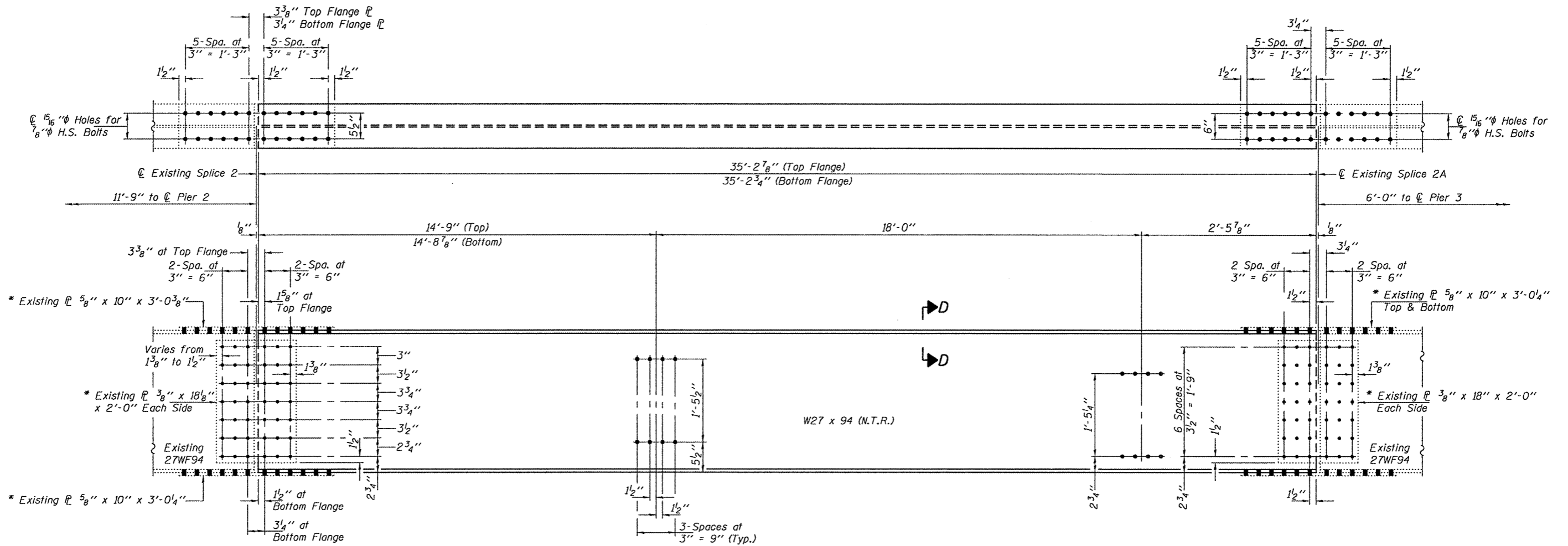


STRENGTHENING DETAIL



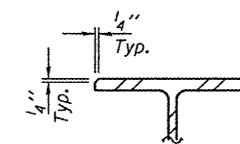
STRENGTHENING PLATE
 PL 1" x 4" x 8'-9" (2 Required)

DESIGNED - IJL	EXAMINED - <i>Joey F. Jaffe</i>	DATE - JANUARY 27, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEAM DETAILS FOR BEAM 5, SPAN 2 & STRENGTHENING DETAILS SN 048-0065		F.A.P. RTE. 29	SECTION (21-HB-21)-5	COUNTY KNOX	TOTAL SHEETS 14	SHEET NO. 12	
CHECKED - GGE	ACTING ENGINEER OF STRUCTURAL SERVICES			SHEET NO. 4 OF 6 SHEETS		CONTRACT NO. 68A08					
DRAWN - Kyle M. Steffen	PASSED - <i>Carl Perry</i>			ILLINOIS FED. AID PROJECT							
CHECKED - IJL GGE	ACTING ENGINEER OF BRIDGES AND STRUCTURES										



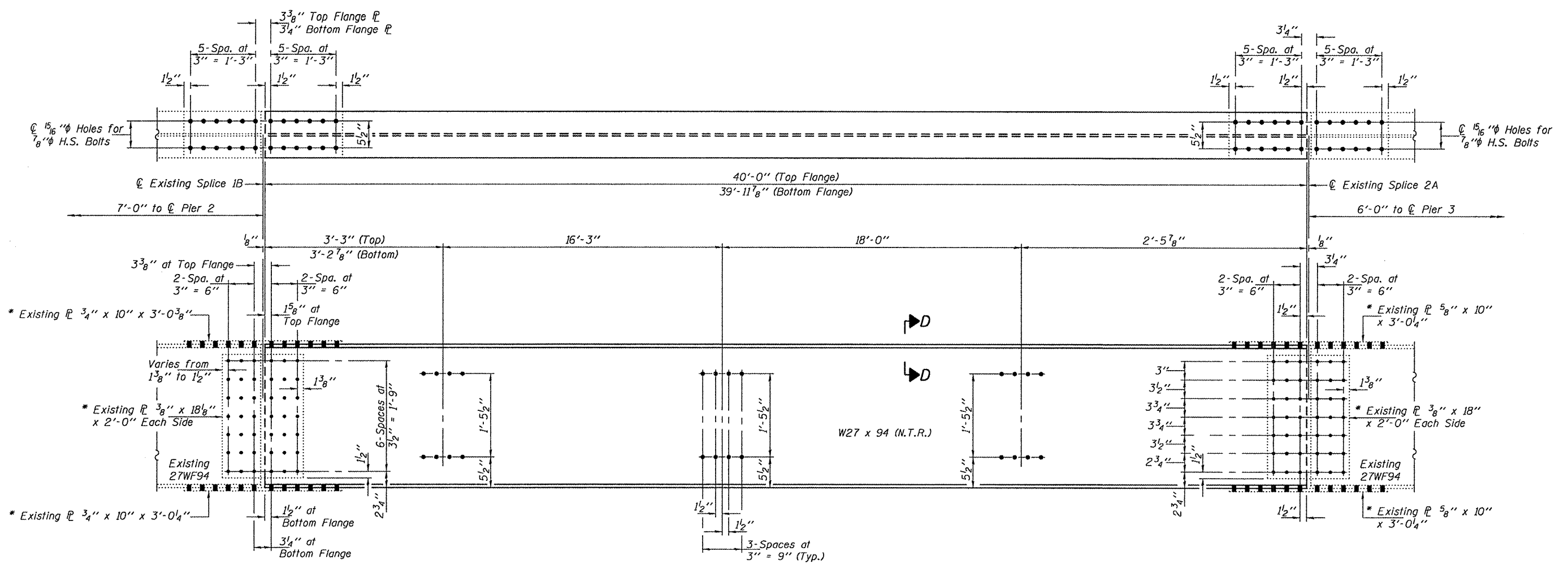
ELEVATION BEAM 2, SPAN 3

* Holes in existing PL shall be used to field drill holes in new beam.



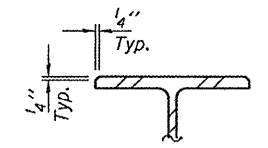
SECTION D-D

DESIGNED - IJL	EXAMINED - <i>Joanne F. J. [Signature]</i>	DATE - JANUARY 27, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BEAM DETAILS FOR BEAM 2, SPAN 3 SN 048-0065		F.A.P. RTE. 29	SECTION (21-HB-211-5)	COUNTY KNOX	TOTAL SHEETS 14	SHEET NO. 13
CHECKED - GGE	ACTING ENGINEER OF STRUCTURAL SERVICES						SHEET NO. 5 OF 6 SHEETS		CONTRACT NO. 68A08		ILLINOIS FED. AID PROJECT
DRAWN - Kyle M. Steffen	PASSED - <i>Carl [Signature]</i>										
CHECKED - IJL GGE	ACTING ENGINEER OF BRIDGES AND STRUCTURES										



* Holes in existing \bar{r} shall be used to field drill holes in new beam.

ELEVATION BEAM 5 SPAN 3



SECTION D-D

DESIGNED - IJL	EXAMINED - <i>Joanne F. [Signature]</i>
CHECKED - GGE	PASSED - <i>[Signature]</i>
DRAWN - Kyle M. Steffen	
CHECKED - IJL GGE	

DATE - JANUARY 27, 2011	ACTING ENGINEER OF STRUCTURAL SERVICES
	ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BEAM DETAILS FOR BEAM 5, SPAN 3
SN 048-0065**

SHEET NO. 6 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-21)-5	KNOX	14	14
CONTRACT NO. 68A08				
ILLINOIS FED. AID PROJECT				