

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP 29 (US 34)
SECTION (21-HB-2)I-4
BRIDGE BEAM REPAIRS
KNOX COUNTY

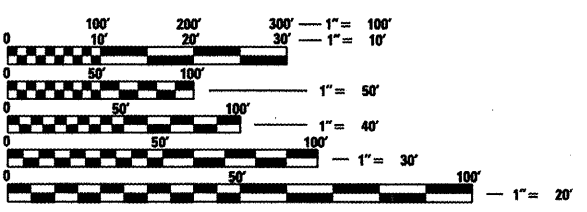
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-2)I-4	KNOX	16	1
FED. ROAD DIST. NO. 4		ILLINOIS	CONTRACT NO. 68856	

INDEX OF SHEETS:

1. COVER SHEET
2. COMMITMENTS & GENERAL NOTES
SUMMARY OF QUANTITIES
3. EXISTING CROSS SECTIONS
4. SCHEDULE OF QUANTITIES
5. GENERAL LAYOUT
- 6-7. PROPOSED TRAFFIC CONTROL
8. WIDTH RESTRICTION SIGNING
- 9-16. REPAIR DETAILS

STANDARDS:

- | | | |
|-----------|-----------|---------|
| 701001-02 | 701400-03 | BLR22-6 |
| 701006-03 | 701401-05 | |
| 701201-03 | 701901-01 | |

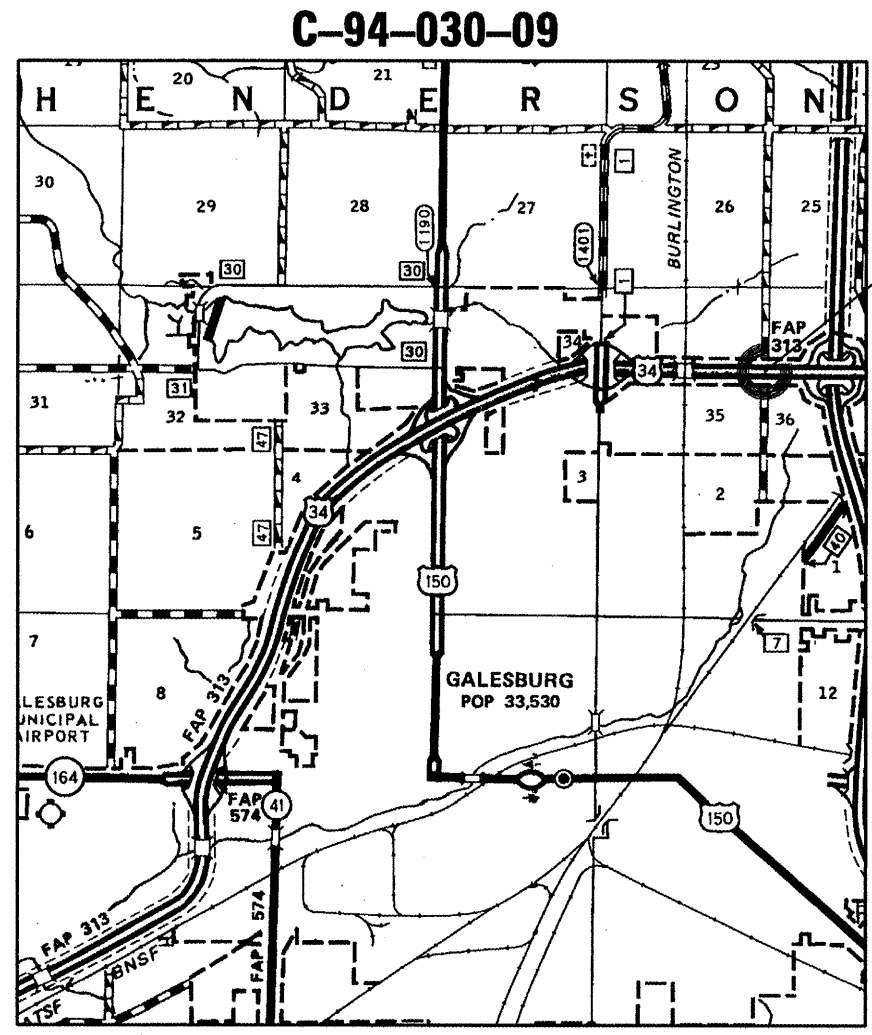


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

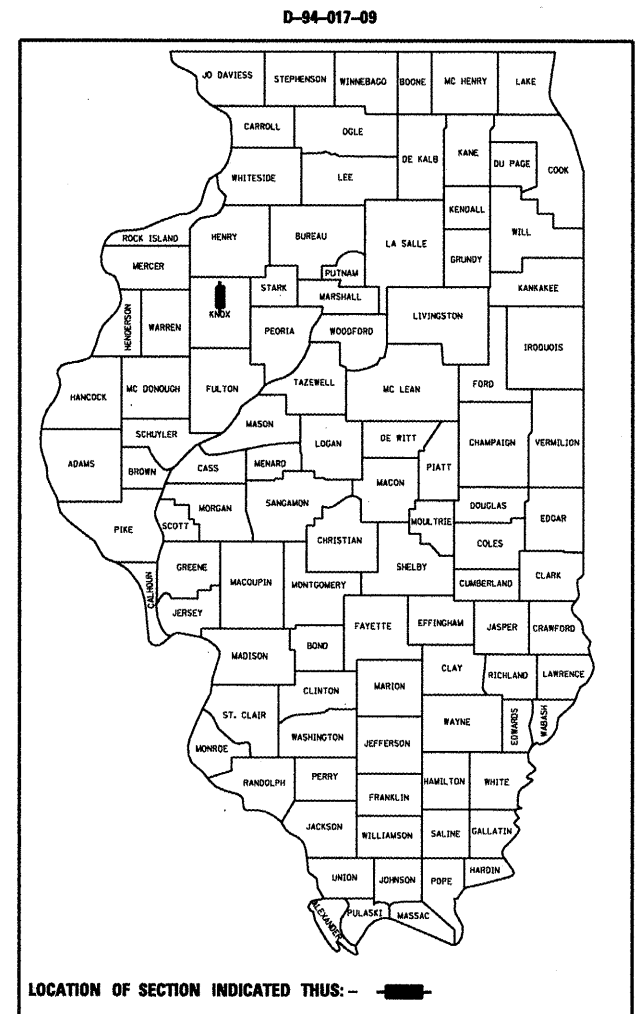
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER- JIM MILLER
PROJECT MANAGER- MAUREEN ADDIS

CONTRACT NO. 68856 CATALOG NO. 034174-00D



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



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 21, 2009

[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 26, 2009
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

June 26, 2009
[Signature]
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

**100% STATE SFTY-2A
KNOX COUNTY**

COMMITMENTS

No commitments have been made for this project.

GENERAL NOTES

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 change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

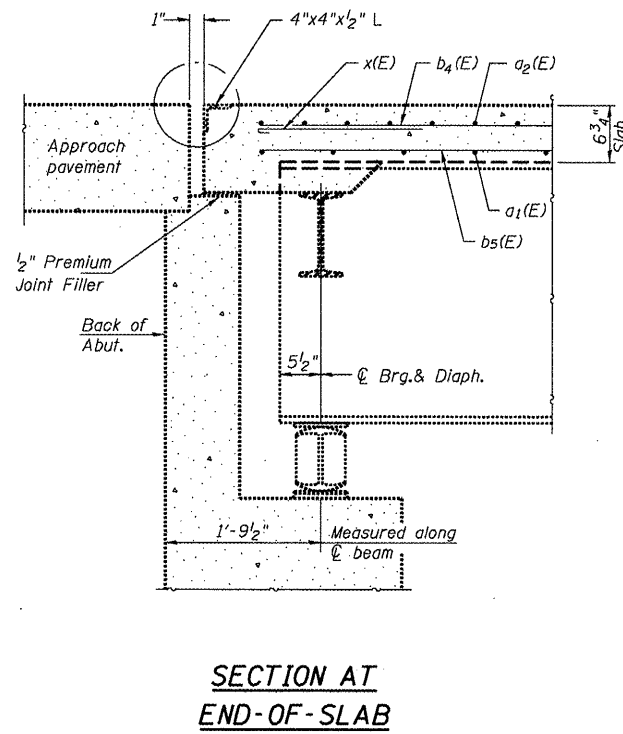
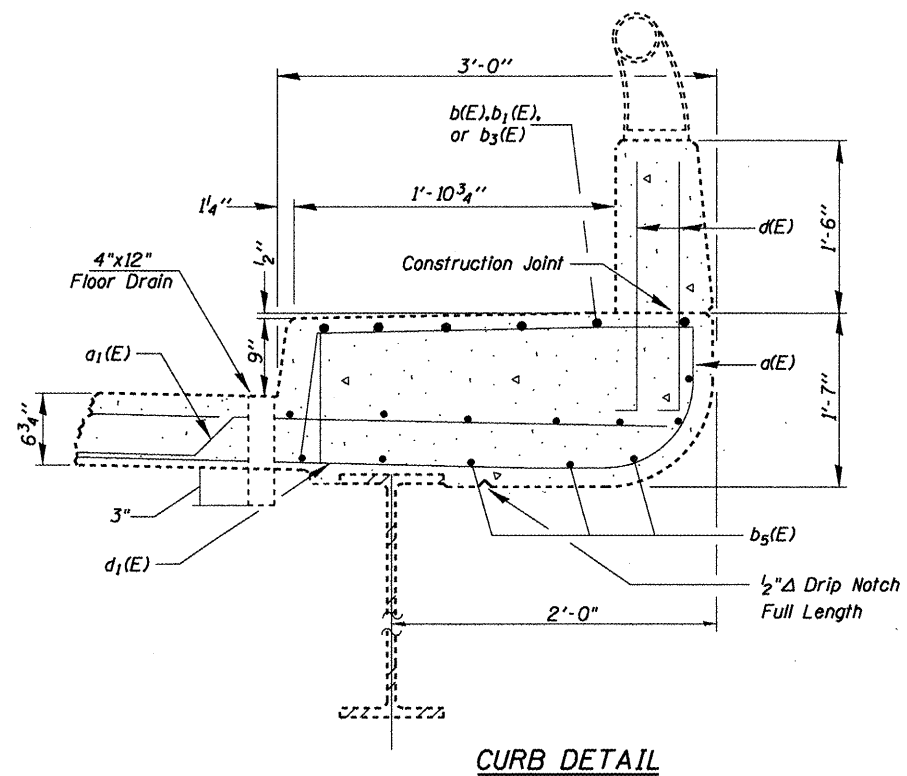
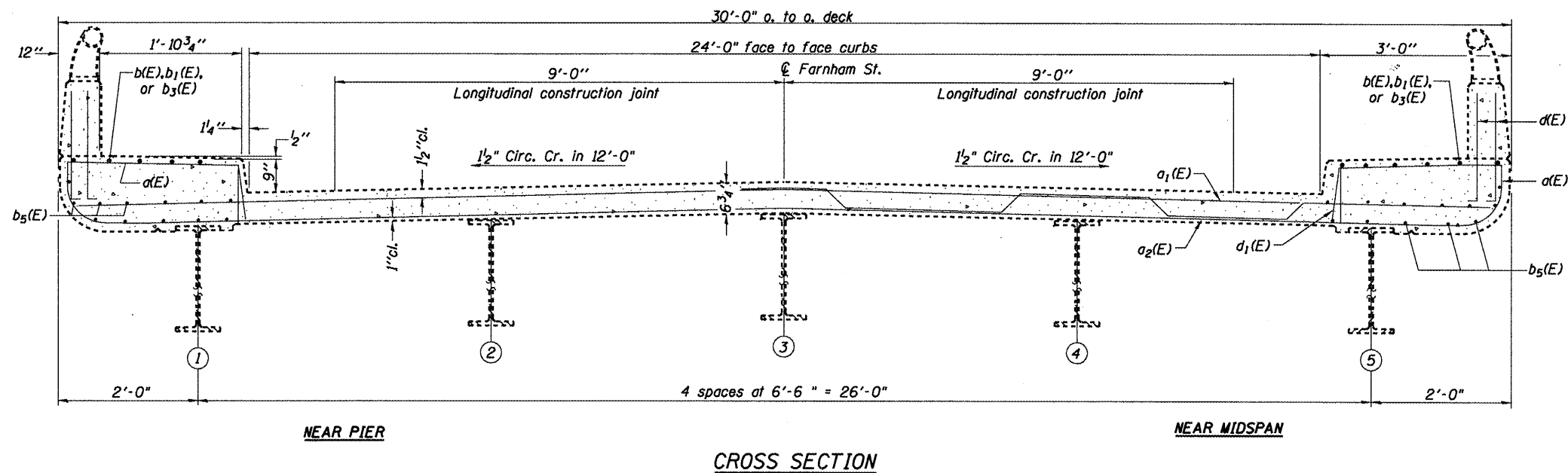
Reinforcement bars designated (E) shall be epoxy coated.

The Contractor will submit to the Engineer a satisfactory progress schedule and critical path schedule which shall show the proposed sequence of work at the time of the pre-construction conference.

CODE NO.	ITEM	UNIT	URBAN	TOTAL
50102400	CONCRETE REMOVAL	CUYD	4.3	4.3
50300255	CONCRETE SUPERSTRUCTURE	CUYD	4.3	4.3
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	29,440	29,440
50501110	STRUCTURAL STEEL REMOVAL	POUND	27,740	27,740
67100100	MOBILIZATION	LSUM	1	1
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	LSUM	1	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1	1
70101835	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	LSUM	1	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	2
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	2600	2600
70301000	WORKZONE PAVEMENT MARKING REMOVAL	SOFT	867	867
X7200201	WIDTH RESTRICTION SIGNING	LSUM	1	1
Z0003600	BEAM STRAIGHTENING	LSUM	1	1
Z0073300	TEMPORARY SHORING AND CRIBBING	LSUM	1	1
Z0073351	TEMPORARY SLAB SUPPORT SYSTEM	LSUM	1	1

SN.048-0065 FARNHAM
ST. OVER US34

FILE NAME = SN.048-0065 FarnhamSt overUS34.dgn	USER NAME = jonesce	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & COMMITMENTS SUMMARY OF QUANTITIES	<table border="1" style="width: 100%;"> <tr> <td>F.A.P. RTE. 29</td> <td>SECTION (21-HB-211-4)</td> <td>COUNTY KNOX</td> <td>TOTAL SHEETS 16</td> <td>SHEET NO. 2</td> </tr> <tr> <td colspan="2">STEEL BEAM REPAIRS</td> <td colspan="3">CONTRACT NO. 68856</td> </tr> <tr> <td colspan="5">FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT</td> </tr> </table>	F.A.P. RTE. 29	SECTION (21-HB-211-4)	COUNTY KNOX	TOTAL SHEETS 16	SHEET NO. 2	STEEL BEAM REPAIRS		CONTRACT NO. 68856			FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				
F.A.P. RTE. 29	SECTION (21-HB-211-4)	COUNTY KNOX	TOTAL SHEETS 16	SHEET NO. 2																	
STEEL BEAM REPAIRS		CONTRACT NO. 68856																			
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT																					
PLOT SCALE = 1/8" = 1'-0"	CHECKED - ---	REVISIONS - ---	DATE - ---		SCALE: _____ SHEET NO. ____ OF ____ SHEETS STA. _____ TO STA. _____																



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

FILE NAME = SN.048-0065 FarnhamSt over US34.dgn	USER NAME = jonesoe	DESIGNED - CEJ	REVISED - ---
		DRAWN - CEJ	REVISED - ---
		CHECKED - ---	REVISED - ---
		DATE - 04/30/2009	REVISED - ---
PLOT SCALE = 1/83.7051' / IN.			
PLOT DATE = 5/21/2009			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING CROSS SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-2)I-4	KNOX	16	3
STEEL BEAM REPAIRS			CONTRACT NO. 68856	
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	4.3
<i>TOTAL</i>	4.3

STRUCTURAL STEEL REMOVAL

LOCATION	SOYD
DECK SUPERSTRUCTURE	27,740
<i>TOTAL</i>	27,740

CONCRETE SUPERSTRUCTURE

LOCATION	CUYD
SN. 048-0065	4.3
<i>TOTAL</i>	4.3

MOBILIZATION

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

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

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

FURNISHING & ERECTING STRUCTURAL STEEL

LOCATION	LSUM
DECK SUPERSTRUCTURE	29,440
<i>TOTAL</i>	29,440

BEAM STRAIGHTENING

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

TEMPORARY SHORING AND CRIBBING

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

TRAFFIC CONTROL

LOCATION	T.C.&P. STANDARD 701401 (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>	1	1	1	2	1

TEMPORARY SLAB SUPPORT SYSTEM

LOCATION	SOYD
DECK SURFACE	590
VERTICAL SIDES	45
<i>TOTAL</i>	635

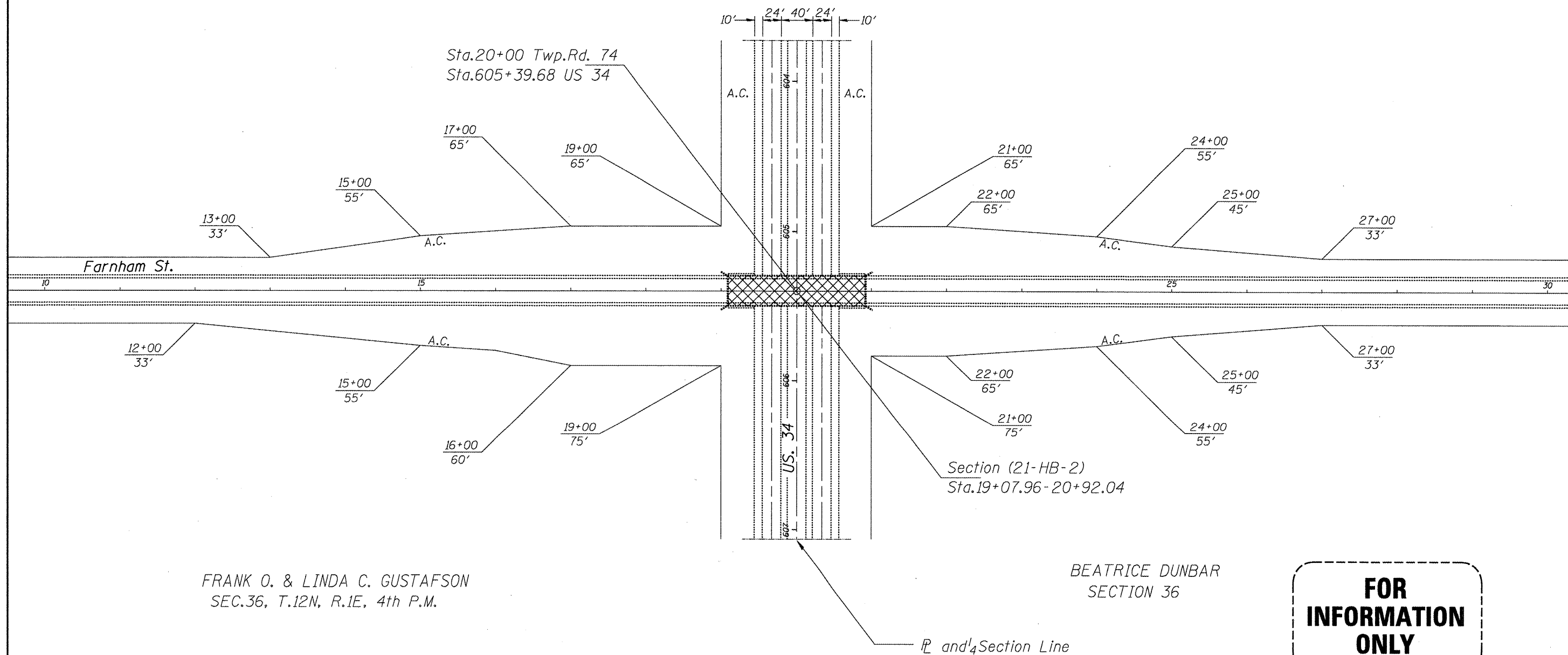
SN.048-0065 FARNHAM ST. OVER US34

TWSP. RD. 74 (FARNHAM ST.)



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

DUWAYNE R. JOHNSON
SECTION 35



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

BEATRICE DUNBAR
SECTION 36

**FOR
INFORMATION
ONLY**

SN.048-0065 FARNHAM
ST. OVER US34

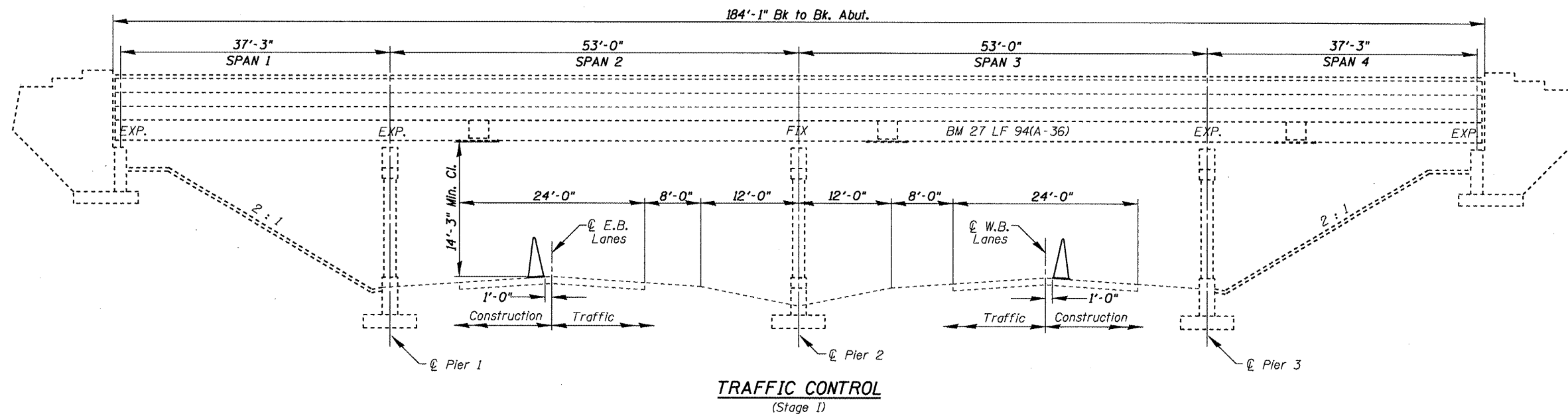
FILE NAME = SN.048-0065 FarnhamSt overUS34.dgn	USER NAME = jonesce	DESIGNED - CEJ	REVISED - ---
		DRAWN - CEJ	REVISED - ---
	PLOT SCALE = 1/83.7091' / IN.	CHECKED - ---	REVISED - ---
	PLOT DATE = 5/21/2009	DATE - ---	REVISED - ---

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

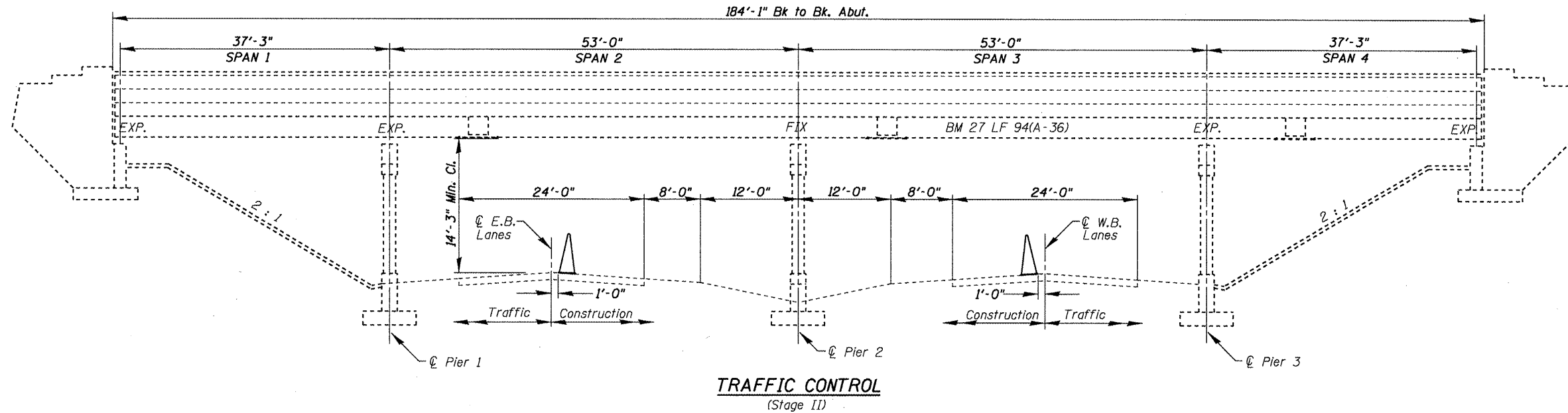
GENERAL LAYOUT

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-2)-4	KNOX	16	5
STEEL BEAM REPAIRS		CONTRACT NO. 68856		
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				



TRAFFIC CONTROL
(Stage I)

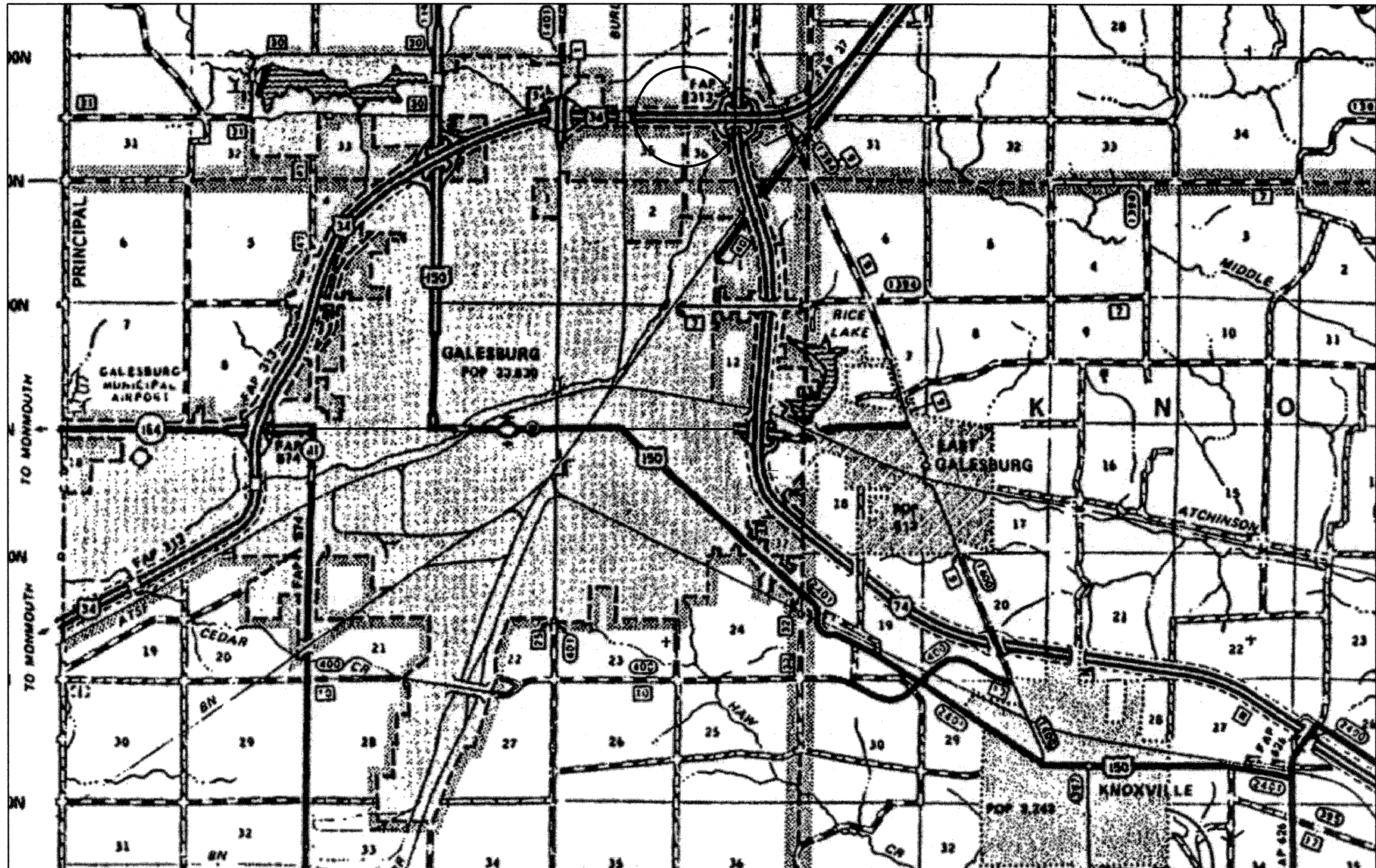


TRAFFIC CONTROL
(Stage II)

Notes:
 Refer to Highway Standard BLR 22 and 701401 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".

SN.048-0065 FARNHAM
ST. OVER US34

FILE NAME = SN.048-0065 FarnhamSt overUS34.dgn	USER NAME = jonesce	DESIGNED - CEJ	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROPOSED TRAFFIC CONTROL	F.A.P. RTE. 29	SECTION (21-HB-211-4	COUNTY KNOX	TOTAL SHEETS 16	SHEET NO. 6
PLOT SCALE = 1/8" = 1'-0"	CHECKED - ---	DATE - 05/20/2009	REVISED - ---			STEEL BEAM REPAIRS	CONTRACT NO. 68856			
PLOT DATE = 5/21/2009	DATE - 05/20/2009	REVISED - ---	REVISED - ---			FED. ROAD DIST. NO. 4 (ILLINOIS) FED. AID PROJECT				
SCALE: _____ SHEET NO. ___ OF ___ SHEETS		STA. _____ TO STA. _____								



FILE NAME : SN:048-0065 ParnhamSt over US34.dgn
 USER NAME : jonesc
 PLOT SCALE = 103.7051' / IN.
 PLOT DATE = 5/22/2009

DESIGNED -	---	REVISED -	---
DRAWN -	---	REVISED -	---
CHECKED -	---	REVISED -	---
DATE -	---	REVISED -	---

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

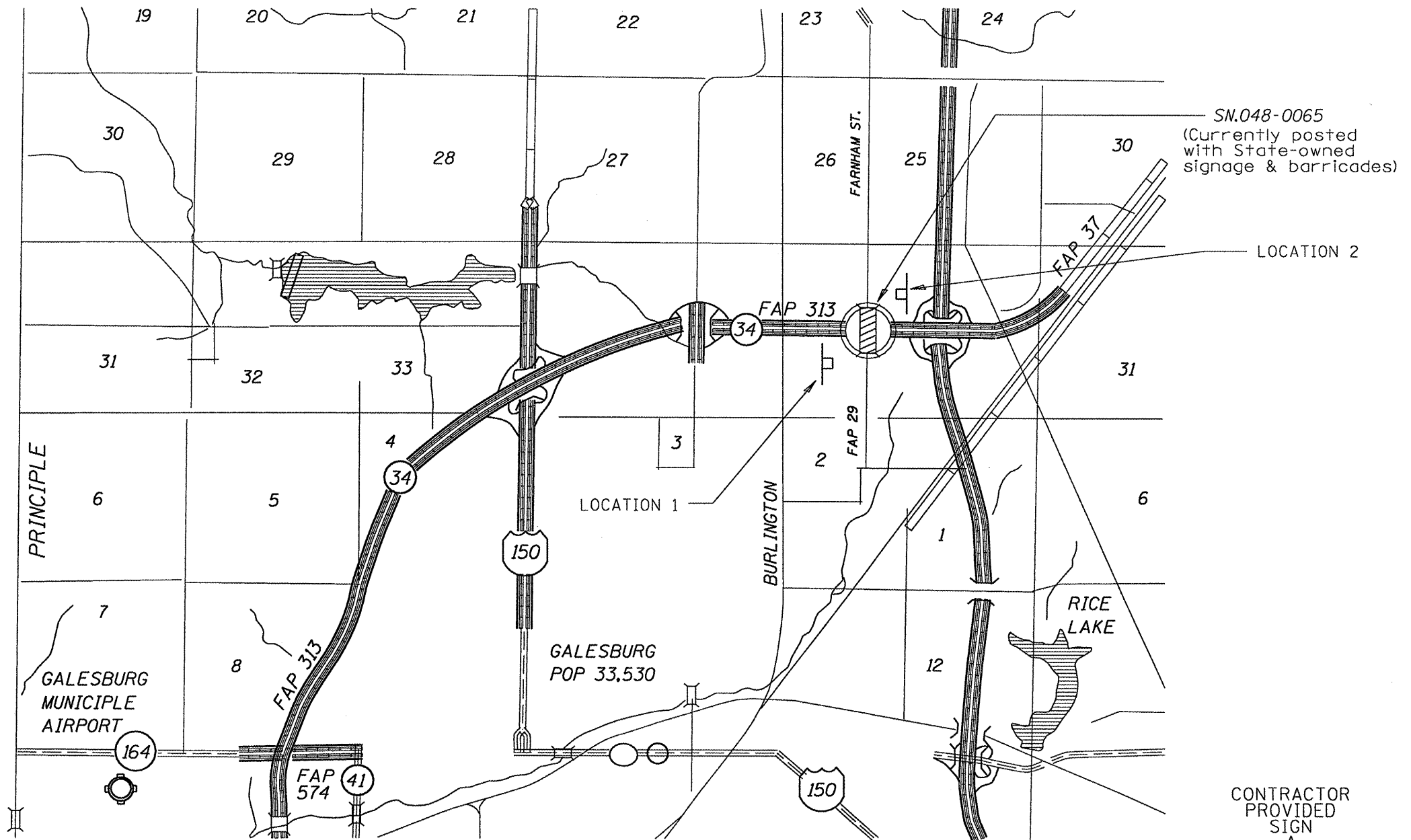
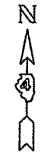
PROPOSED DETOUR ROUTE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	(21-HB-211-4	KNOX	16	7
STEEL BEAM REPAIRS		CONTRACT NO. 68856		
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				

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 State-owned traffic device removals. The detour for WB. US34 closures shall begin at the IL150 exit off of I-74, for passage Northwest on IL150 to US34 entrance ramps. The EB. US34 detour shall begin at the IL150 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-

MAX. WIDTH
11'-6"
XX MILES

US. 34

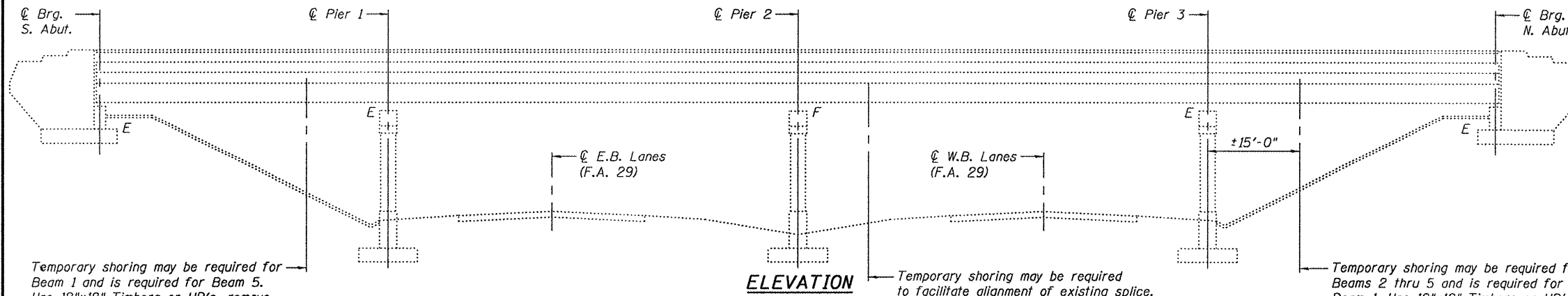
SEE SPECIAL PROVISIONS FOR SIGNING DETAILS

SN.048-0065 Farnham St. over US 34

FILE NAME =	USER NAME = #USER#	DESIGNED -- CEJ	REVISED - - -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - CEJ	REVISED - - -			29	(21-HB-2)1-4	KNOX	16	8
		CHECKED - - -	REVISED - - -			STEEL BEAM REPAIRS				CONTRACT NO. 68856
		DATE - - - - -	REVISED - - -			FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				
				SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____						

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.	SHEET NO. 1 8 SHEETS
FAP 29	ΔΔ	Knox	16	9	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract Number: 68856 ΔΔ (21-HB-2)1-4		



Temporary shoring may be required for Beam 1 and is required for Beam 5. Use 12"x12" Timbers or HP's, remove and replace slopewall if required. Cost included with Temporary Shoring and Cribbing.

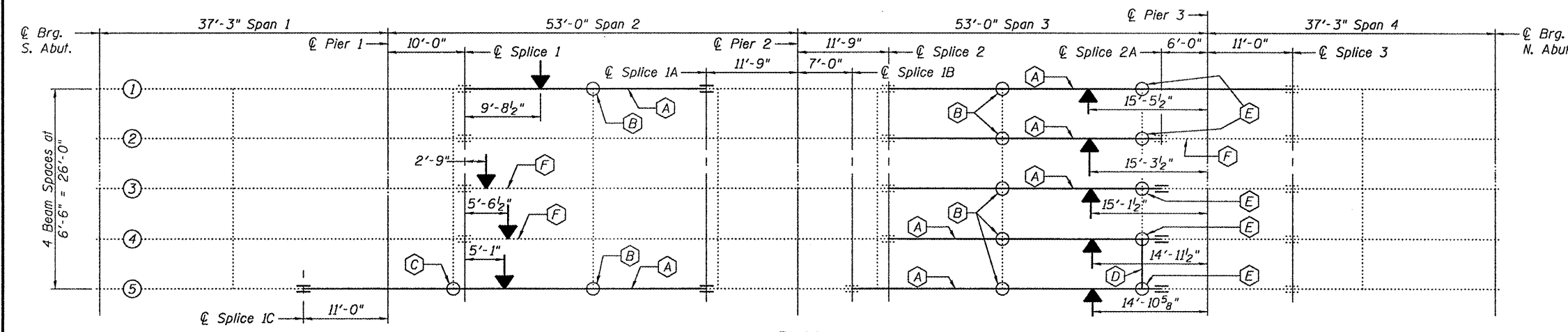
Temporary shoring may be required to facilitate alignment of existing splice. Use 12"x12" Timbers or HP's to be paid for as Temporary Shoring and Cribbing. The shoring shall be removed as soon as possible after the splice is completed to minimize Traffic Control.

Temporary shoring may be required for Beams 2 thru 5 and is required for Beam 1. Use 12"x12" Timbers or HP's, remove and replace slopewall if required. Cost included with Temporary Shoring and Cribbing.

ELEVATION

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.



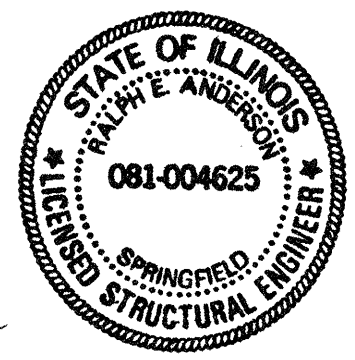
PLAN

- (A) Remove and Replace Beam Segment
 - (B) Remove and Replace Clip Angles
 - (C) Remove and Replace Bottom Clip Angle
 - (D) Remove and Replace Diaphragm
 - (E) Remove and Replace Clip Angles
 - (F) Straighten Beam
- Impact Line →

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	29,440
Structural Steel Removal	Pound	27,740
Beam Straightening	L.S.	1
Temporary Slab Support System	L.S.	1
Concrete Removal	Cu. Yd.	4.3
Concrete Superstructure	Cu. Yd.	4.3
Temporary Shoring and Cribbing	L.S.	1

PLAN AND ELEVATION
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065



DESIGNED: *Virebo H. Velez*
CHECKED: *Angie Bryant*
DRAWN: *[Signature]*
CHECKED: *VHV ASB*

EXAMINED: *[Signature]*
PASSED: *Ralph E. Anderson*

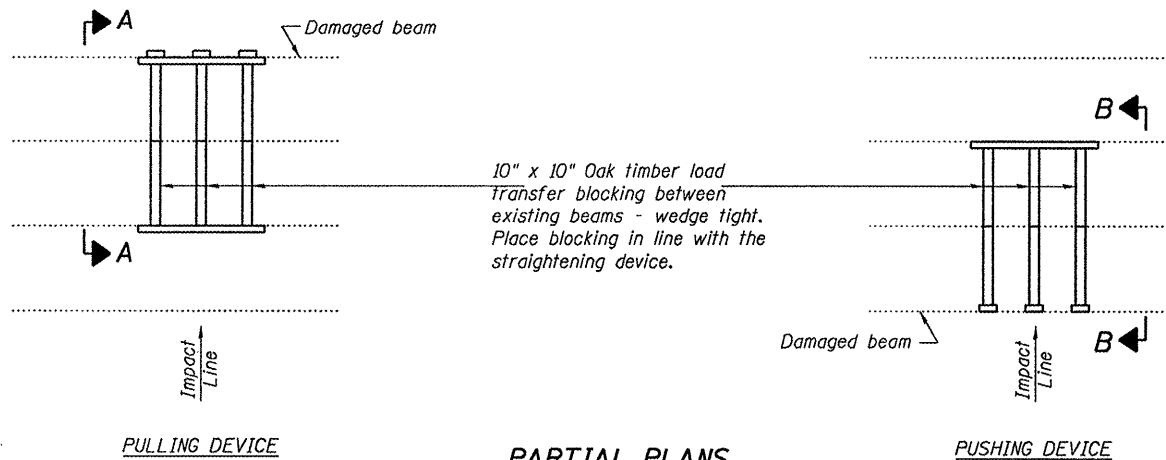
June 18, 2009

Expires: November 30, 2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

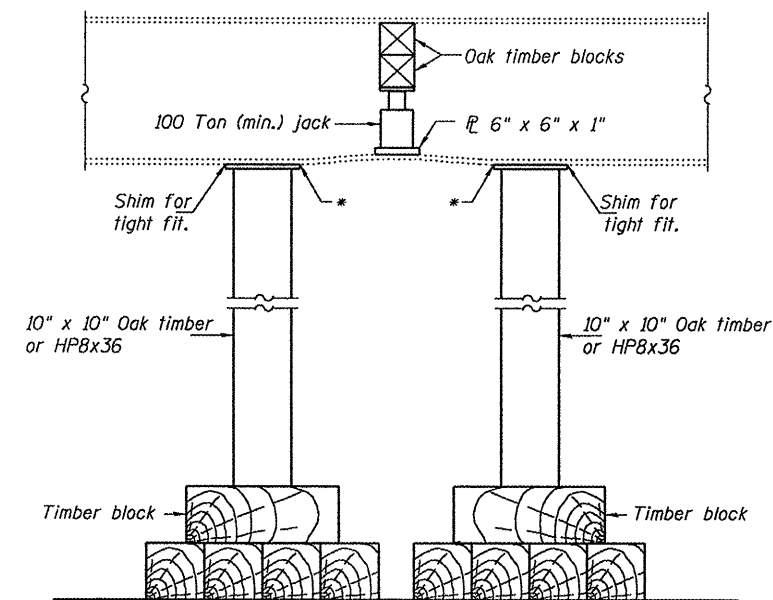
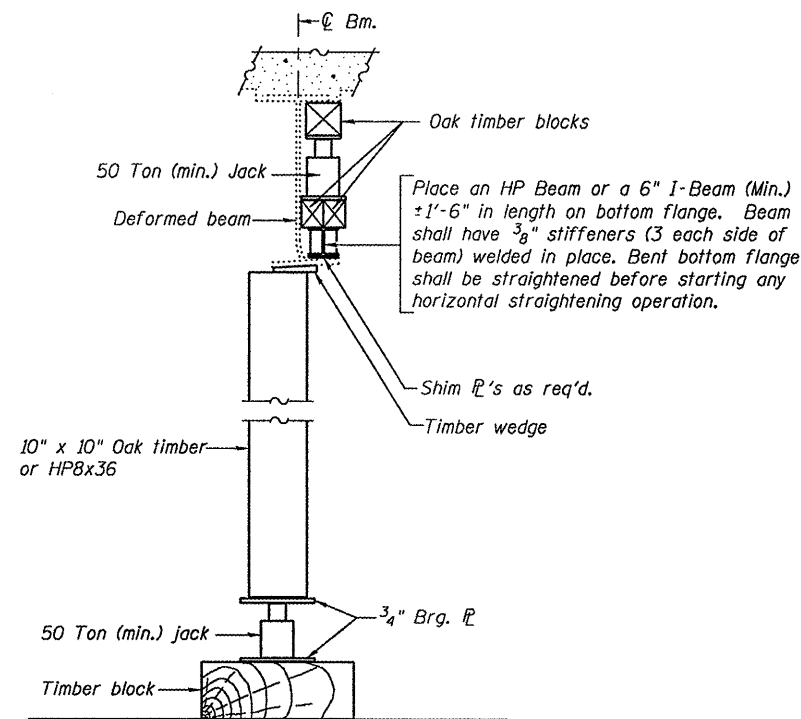
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 29	ΔΔ	Knox	16	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract Number: 68856 ΔΔ (21-HB-2)I-4



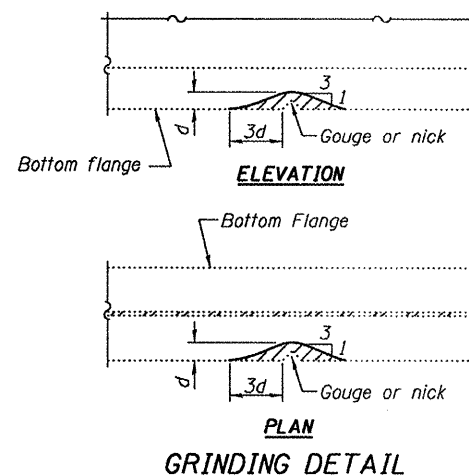
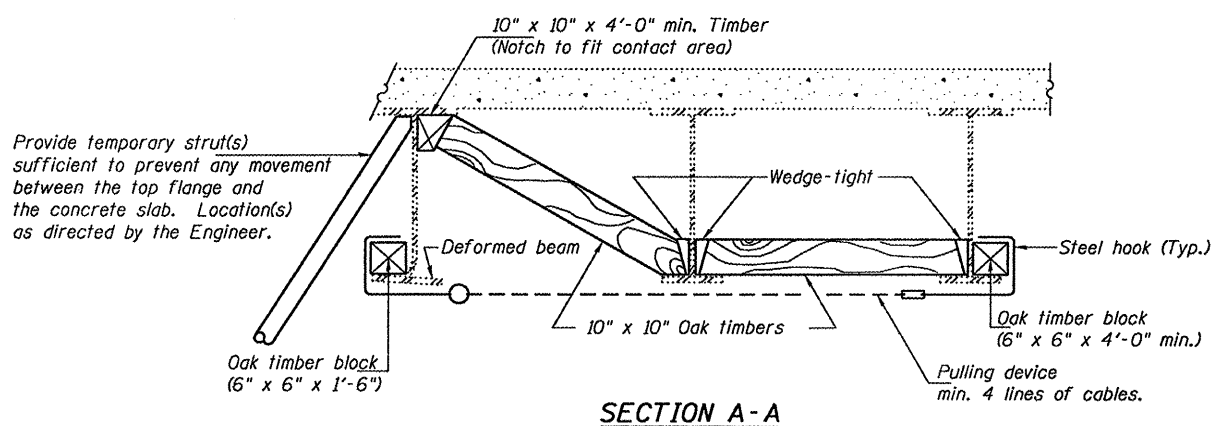
PARTIAL PLANS
SUGGESTED BEAM STRAIGHTENING METHODS

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

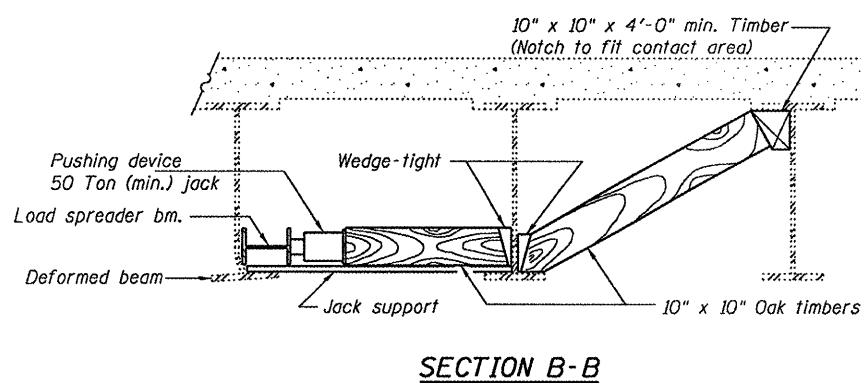


* Edge of plate shall line up with edge of deformation.

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.



Grind existing nicks, gouges 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.



Location	X	Y
Bm. 2 Sp. 3	2 3/4"	1 5/8"
Bm. 5 Sp. 3	2 1/6"	1 5/16"
Bm. 3 Sp. 2	5/16"	1"
Bm. 4 Sp. 2	3/16"	1/4"

EXISTING DEFORMATION TO BE STRAIGHTENED
(Looking South)
(Approximate max. deflections)
Deflected length of beam to be straightened is approximately 14'-0" Span 3 and 4'-0" Span 2.

BEAM STRAIGHTENING DETAILS
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065

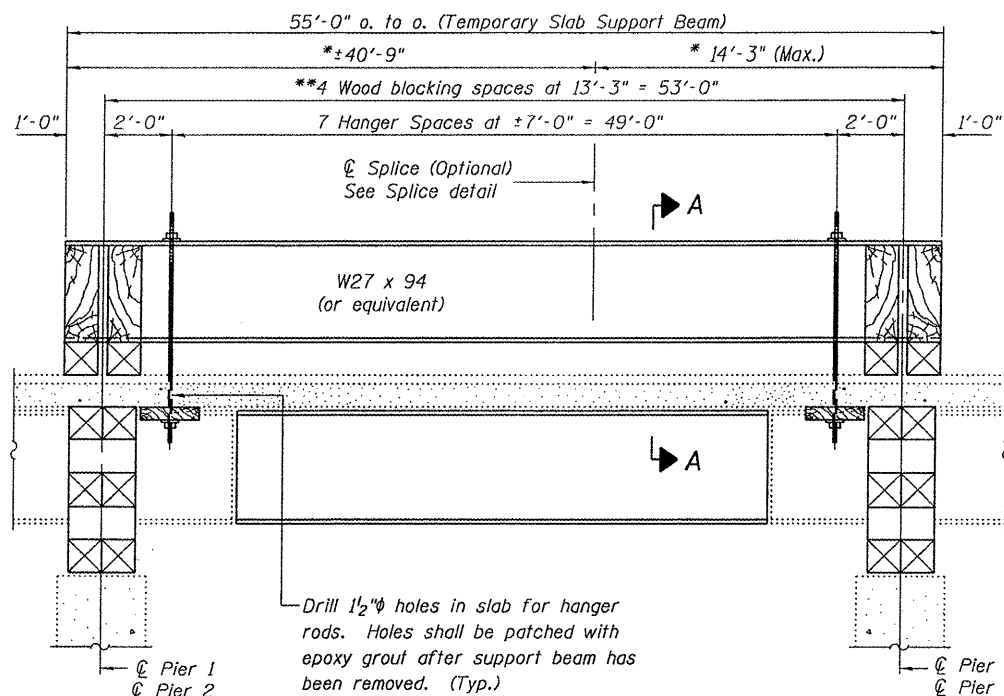
DESIGNED	V.H.V.	June 18, 2009
CHECKED	A.J.B.	EXAMINED <i>Carl Prosser</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	Drew Christopher	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	V.H.V. A.J.B.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

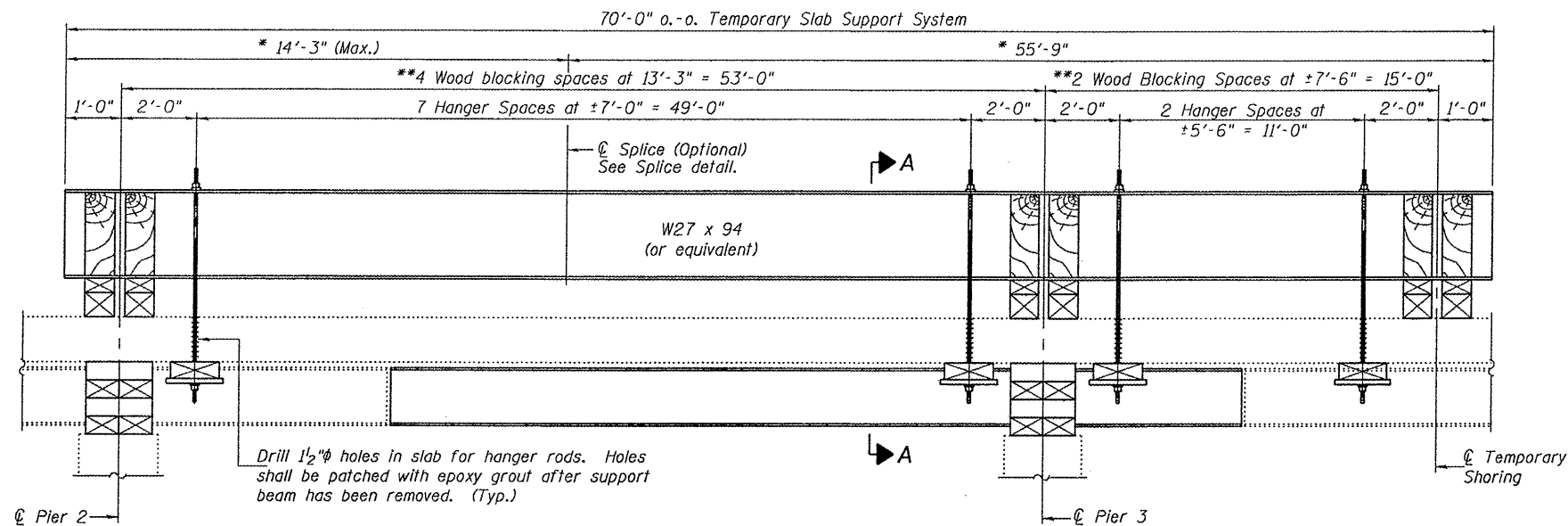
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 29	ΔΔ	KNOX	16	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
8 SHEETS

Contract Number: 68856 ΔΔ (21-HB-2)1-4

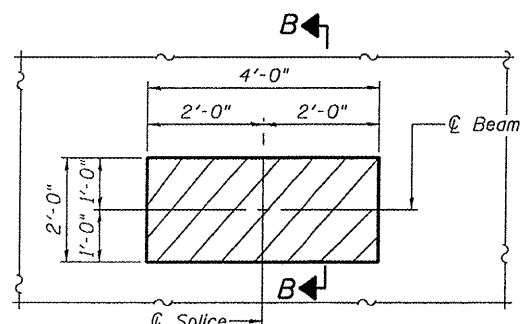


**LONGITUDINAL SECTION SUGGESTED
TEMPORARY SLAB SUPPORT SYSTEM
BEAM 1 SPAN 2, AND BEAMS 2 THRU 5 SPAN 3**

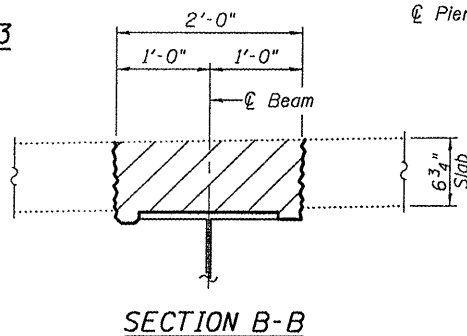


**LONGITUDINAL SECTION SUGGESTED
TEMPORARY SLAB SUPPORT SYSTEM SPAN 3**
(Span 1 Similar by rotation about Pier 2)

If work on adjacent beam is to be done simultaneously, each beam line will be required to have it's own Temporary Slab Support System.



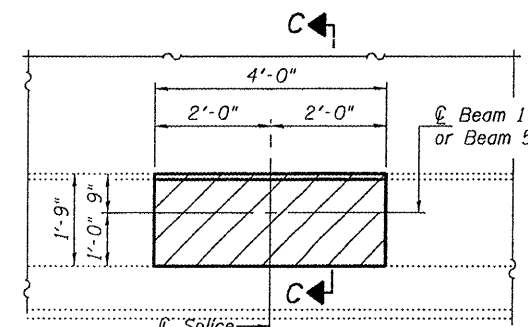
**TYPICAL CONCRETE REMOVAL
AWAY FROM SIDEWALK**



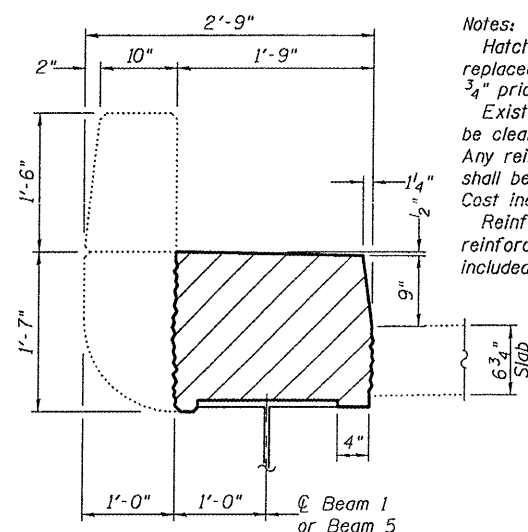
SECTION B-B

* These dimensions may vary for available beams in stock.

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

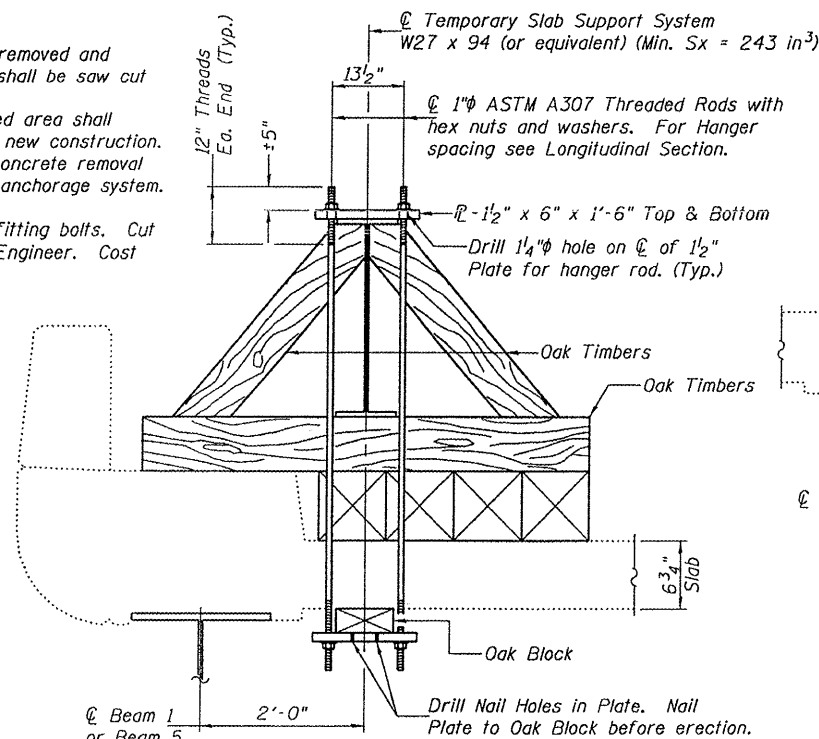


**TYPICAL CONCRETE REMOVAL
NEAR SIDEWALK**

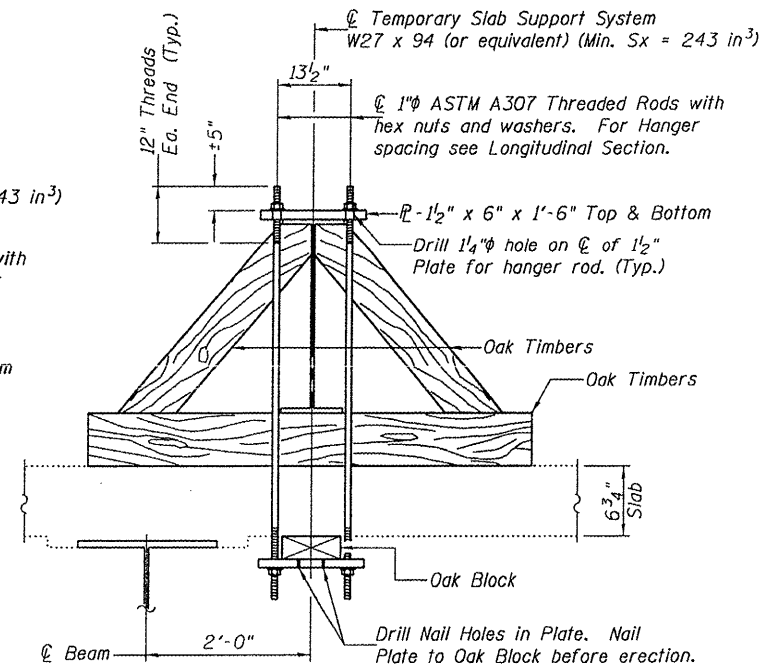


SECTION C-C

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.



SECTION A-A NEAR SIDEWALK



SECTION A-A AWAY FROM SIDEWALK

**CONCRETE REMOVAL & REPLACEMENT
& SLAB SUPPORT SYSTEM**
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065

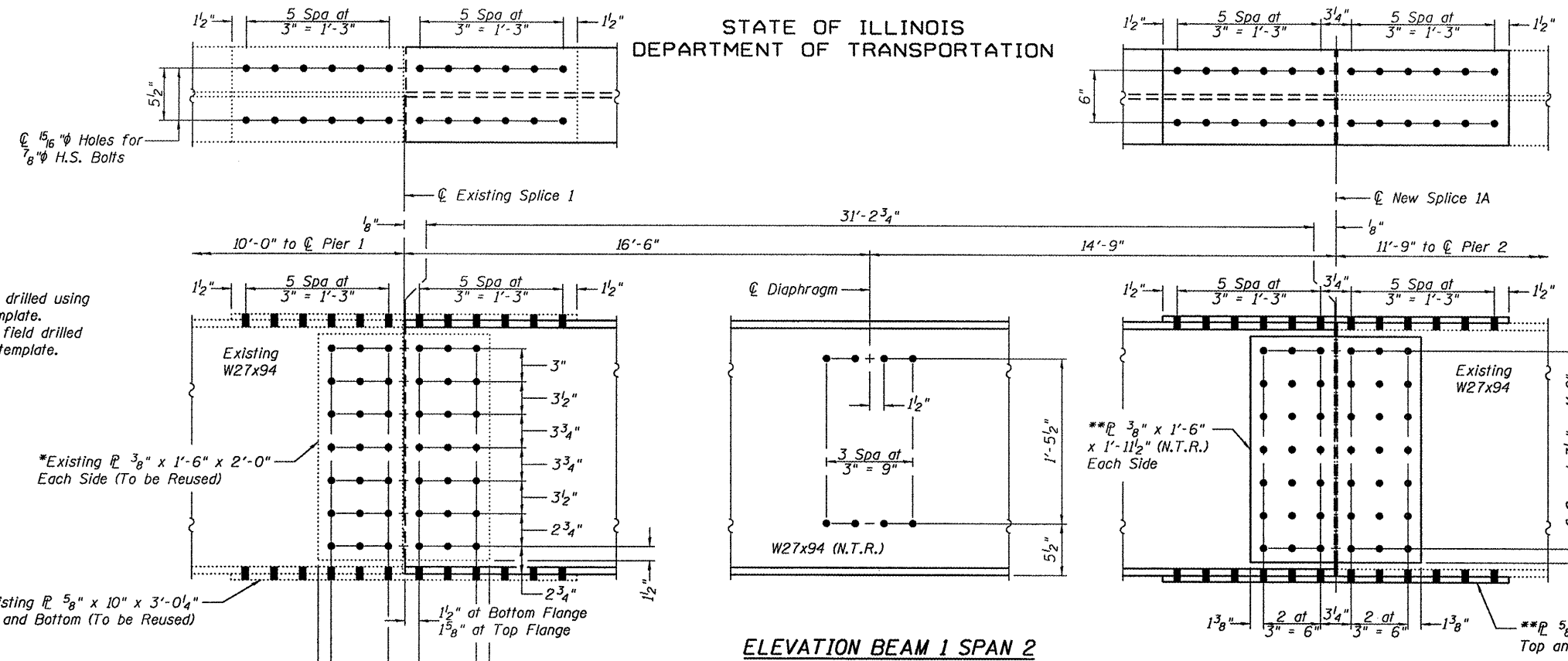
DESIGNED	V.H.V.
CHECKED	A.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.J.B.

EXAMINED	June 18, 2009 <i>Carl Prosser</i> ENGINEER OF STRUCTURAL SERVICES
PASSED	<i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

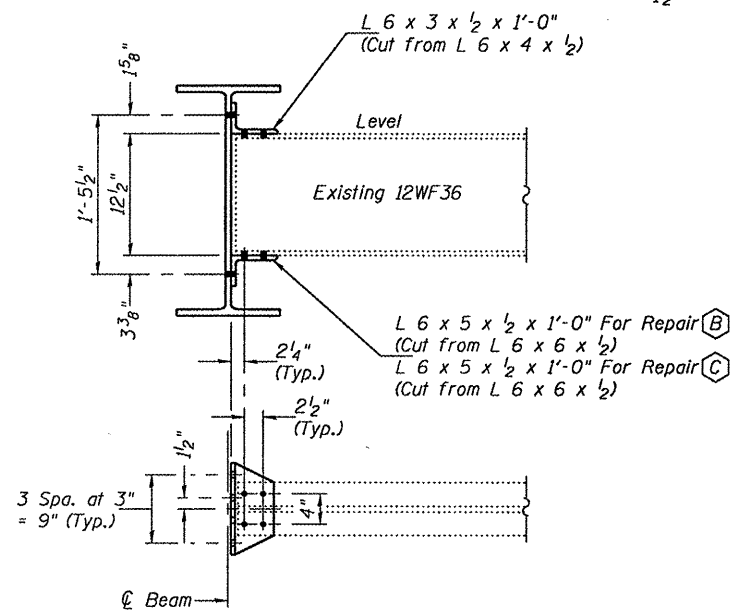
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 29	ΔΔ	Knox	16	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		
Contract Number: 68856 ΔΔ (21-HB-2)I-4				

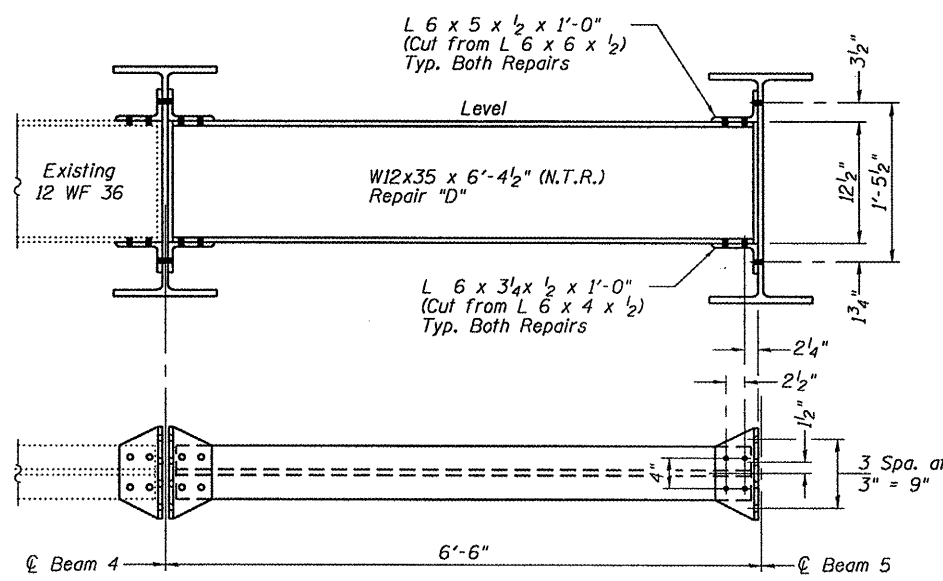
8 SHEETS



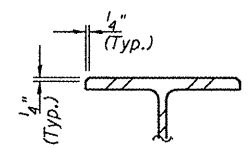
ELEVATION BEAM 1 SPAN 2



REPAIRS B AND C



REPAIRS D AND E



SECTION A-A

DESIGNED	V.H.V.
CHECKED	A.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.J.B.

June 18, 2009

EXAMINED *Carl Perry*
ENGINEER OF STRUCTURAL SERVICES

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

BEAM DETAILS
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065

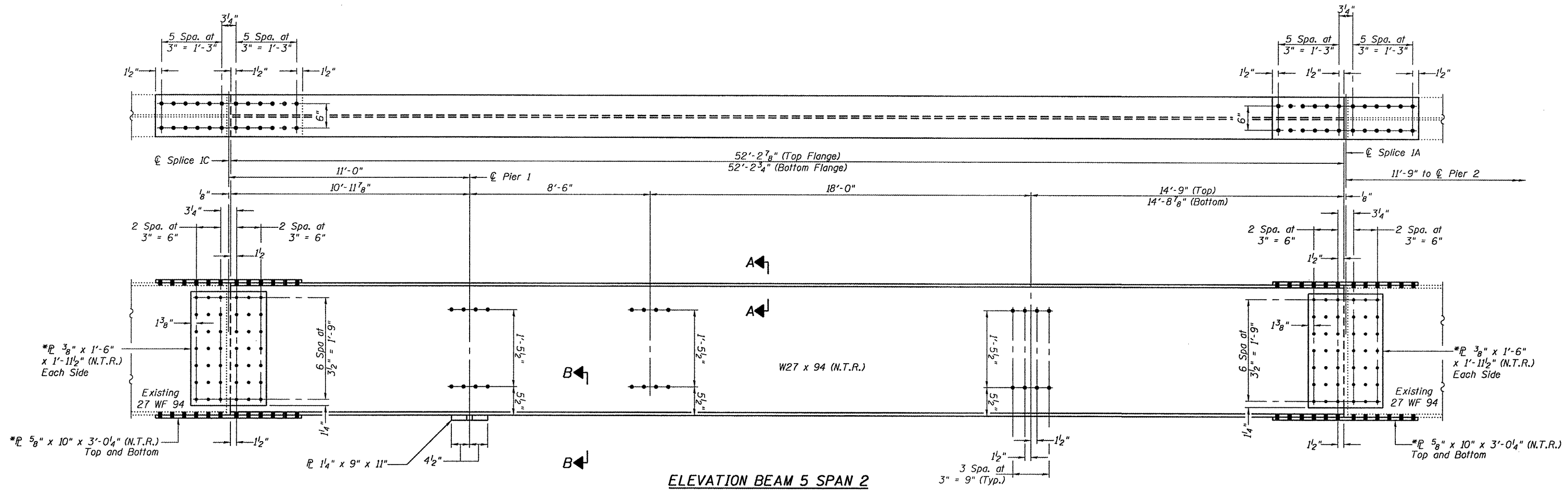
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 29	ΔΔ	KNOX	16	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5

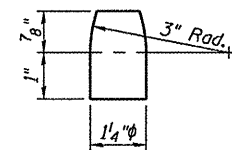
8 SHEETS

Contract Number: 68856 ΔΔ (21-HB-2)1-4

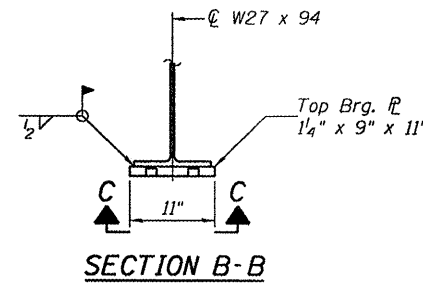


ELEVATION BEAM 5 SPAN 2

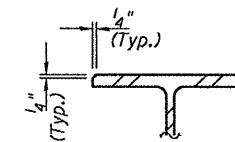
*Holes in existing beam shall be field drilled using the new splice plates as a template.



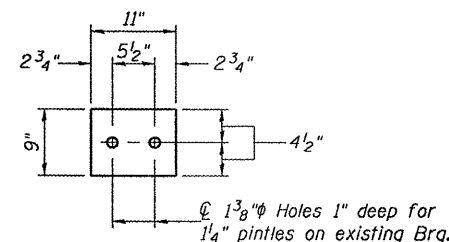
DETAIL OF PINTLE
(For Information Only)



SECTION B-B



SECTION A-A



SECTION C-C

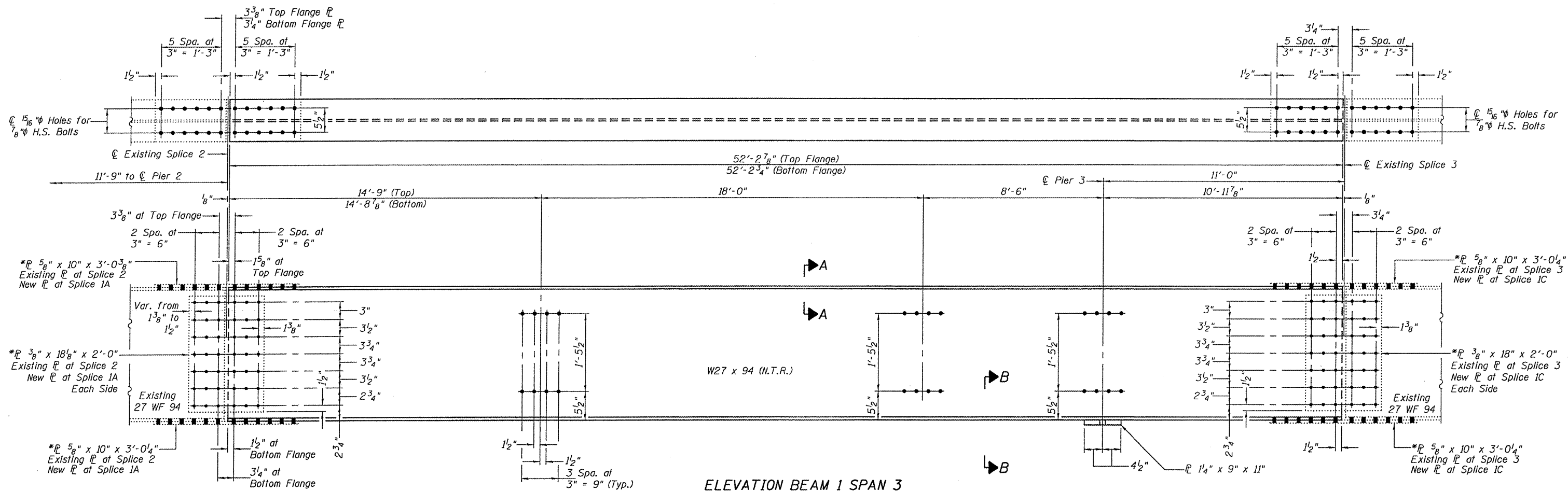
DESIGNED	V.H.V.
CHECKED	A.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.J.B.

June 18, 2009
EXAMINED *Carl Proyer*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

BEAM DETAILS
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065

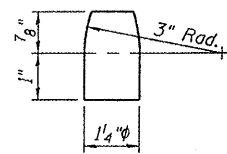
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	EDMITY	DATE	SHEET	SHEET NO. 6 8 SHEETS
FAP 29	ΔΔ	Knox	16	14	
FED. ROAD DIST. NO. 7		ILL. PROJ. NO.	FED. AID PROJECT NO.		
Contract Number: 68856 ΔΔ (21-HB-2)1-4					

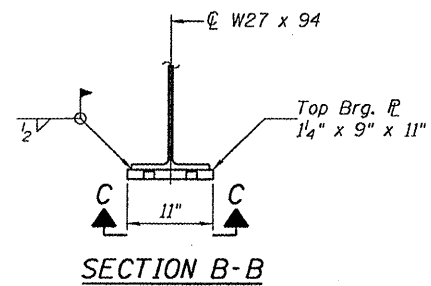


ELEVATION BEAM 1 SPAN 3

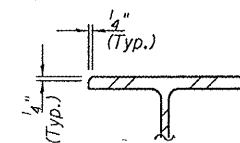
* Holes in existing R shall be used to field drill new beam and holes in new R shall be used to field drill existing beam.



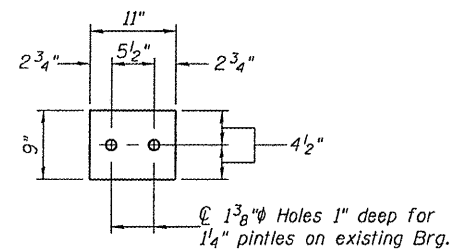
DETAIL OF
PINTLE
(For Information Only)



SECTION B-B



SECTION A-A



SECTION C-C

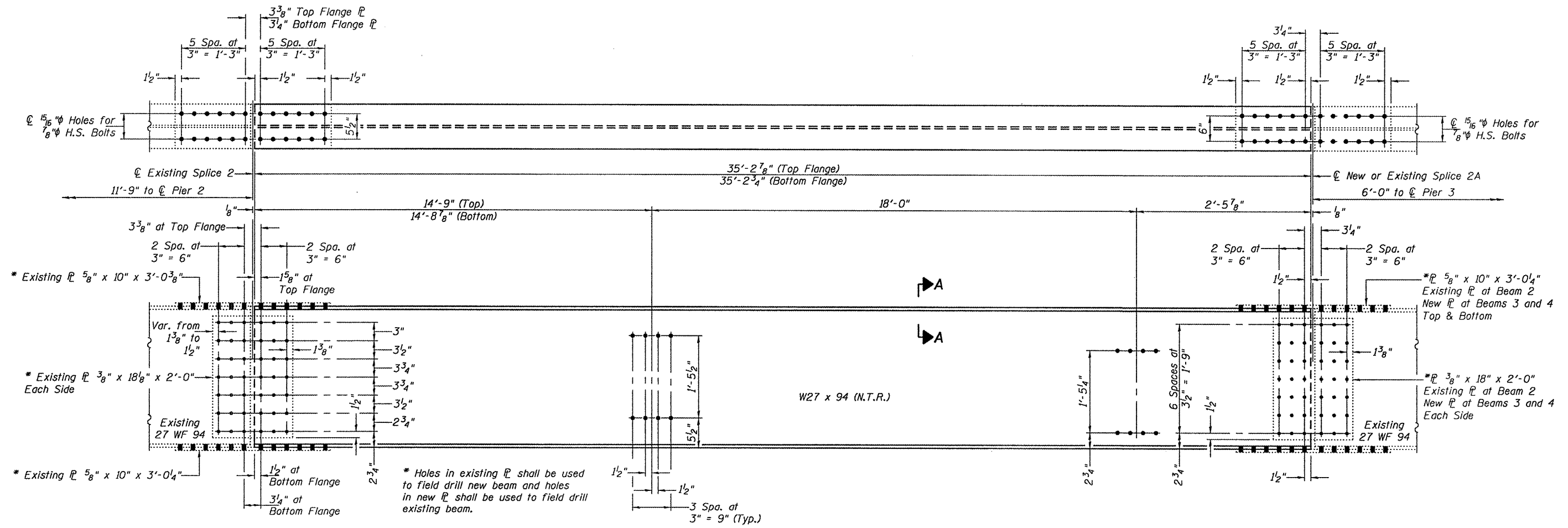
DESIGNED	V.H.V.
CHECKED	A.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.J.B.

EXAMINED	June 18, 2009
PASSED	Carl Proyer ENGINEER OF STRUCTURAL SERVICES
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

BEAM DETAILS
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 29	ΔΔ	Knox	16	15
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	
Contract Number: 68856 ΔΔ (21-HB-2)I-4				



ELEVATION BEAMS 2, 3 AND 4 SPAN 3

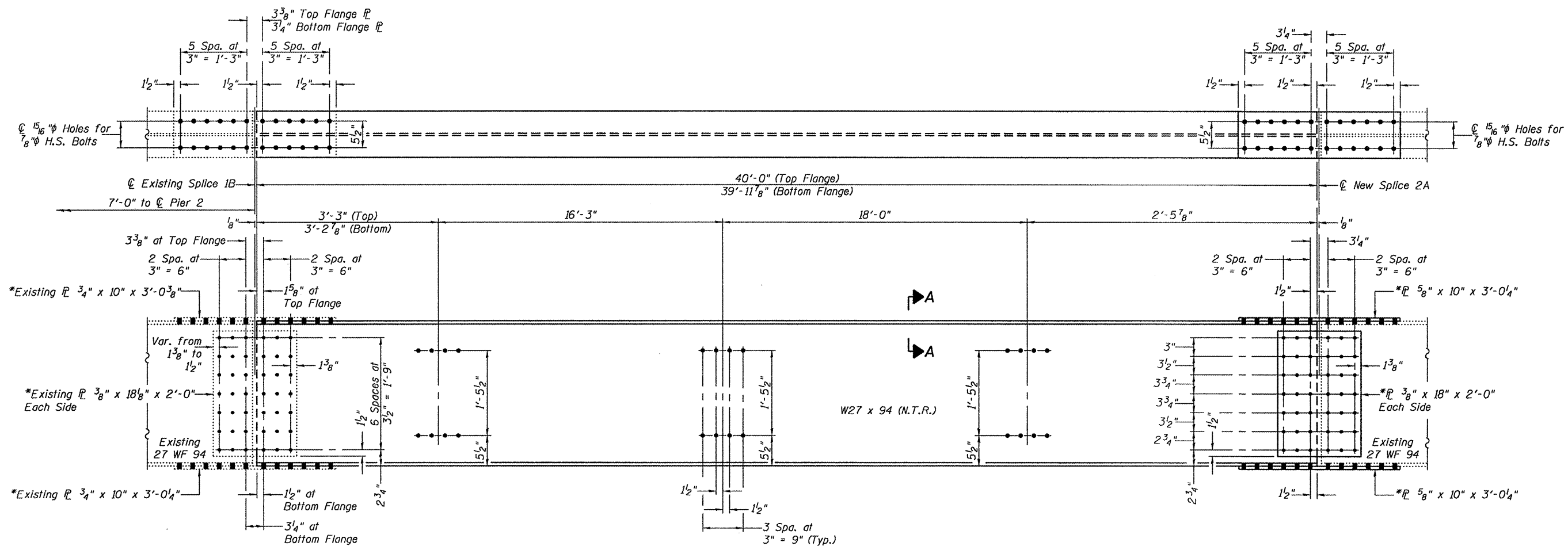
DESIGNED	V.H.V.
CHECKED	A.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.J.B.

June 18, 2009
 EXAMINED *Carl Hoyer*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

BEAM DETAILS
 F.A. ROUTE 29
 KNOX COUNTY
 S.N. 048-0065

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 29	ΔΔ	Knox	16	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
Contract Number: 68856 ΔΔ (21-HB-2)I-4				



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

ELEVATION BEAM 5 SPAN 3

DESIGNED	V.H.V.
CHECKED	A.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.J.B.

June 18, 2009
 EXAMINED *Carl Hoyer*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

BEAM DETAILS
F.A. ROUTE 29
KNOX COUNTY
S.N. 048-0065