

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAI ROUTE 72 (I-72)  
SECTION (84-3HB-4)I-1

SANGAMON COUNTY  
C-96-060-09

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-3HB-4)I-1	SANGAMON	17	1
		ILLINOIS	CONTRACT NO. 72C69	

- INDEX OF SHEETS**
1. COVER SHEET
  2. GENERAL NOTES
  3. SUMMARY OF QUANTITIES
  4. STAGE I TRAFFIC CONTROL WB
  5. STAGE I TRAFFIC CONTROL EB
  6. STAGE II TRAFFIC CONTROL EB
  7. STAGE CONSTRUCTION WB
  8. STAGE CONSTRUCTION EB
  9. MESSAGE BOARD PLACEMENT SHEET
  10. DETOUR ROUTE SIGNING PLAN
  - 11.-17. BRIDGE PLANS

**HIGHWAY STANDARDS**

701101-02	701451
701106-02	701901-01
701400-03	704001-05
701402-07	780001-02
701411-05	000001-05



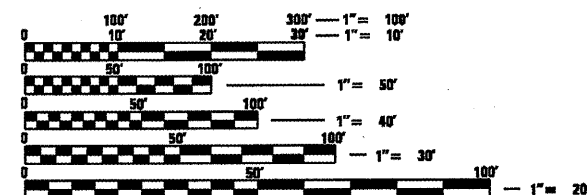
I-72 ADT = 32,800 (2007)  
BUS 55 ADT = 25,700 (2007)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED August 19, 2009  
*Roger E. Dinkell*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 2, 2009  
*Charles G. Ingwersoll*  
ENGINEER OF DESIGN AND ENVIRONMENT

October 2, 2009  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

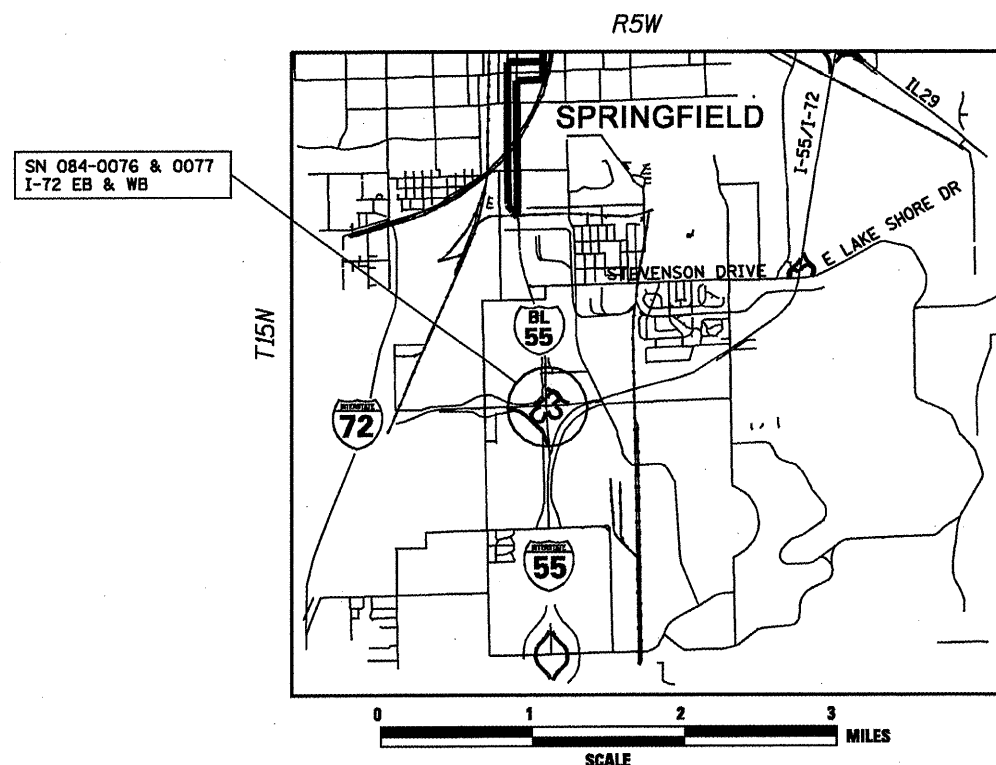


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: SAL MADONIA PH 217-782-4761  
SENIOR SQUAD LEADER: JEFF MYERS PH 217-524-7940

CONTRACT NO. 72C69



TYPE OF IMPROVEMENT:  
STRUCTURAL STEEL REPLACEMENT  
ON STRUCTURES 084-0076, 77

GROSS LENGTH = 189 FT. = 0.036 MILE  
NET LENGTH = 189 FT. = 0.036 MILE

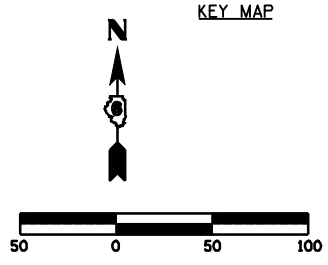
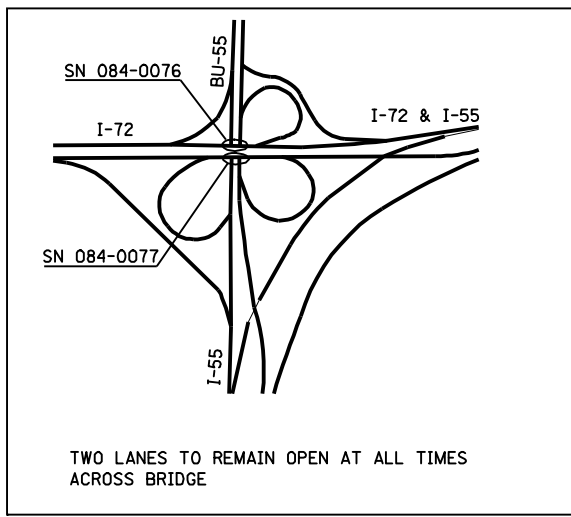
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OF THE STATE OF ILLINOIS



URBAN

SUMMARY OF QUANTITIES			100% MCHD SFTY-2A URBAN
CODE NO	PAY ITEM	UNITS	QUANTITY
50102400	CONCRETE REMOVAL	CU YD	3.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3.5
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	27,350
50501110	STRUCTURAL STEEL REMOVAL	POUND	25,630
67100100	MOBILIZATION	L SUM	1
70100320	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	L SUM	1
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1
70101605	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	2
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12.0
70400100	TEMPORARY CONCRETE BARRIER	FOOT	625
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	387.5
78100200	TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER	EACH	34
78300105	PAVEMENT MARKING REMOVAL	FOOT	7,024
X0324952	DETOUR SIGNING	L SUM	1
X0325702	NIGHTTIME WORK ZONE LIGHTING	L SUM	1
* X7800620	URETHANE PAVEMENT MARKING - LINE 5"	FOOT	5,626
* X7800630	URETHANE PAVEMENT MARKING - LINE 6"	FOOT	1,397
Z0003600	BEAM STRAIGHTENING	L SUM	1
Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2
Z0030330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	1
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1
Z0073351	TEMPORARY SLAB SUPPORT SYSTEM	L SUM	1

\*Specialty Items



**PAVEMENT MARKING REMOVAL**

STATION TO	STATION	FOOT
670+10.00	678+10.00	808
670+10.00	678+10.00	800
670+10.00	678+10.00	200
674+71.00	677+19.00	496
TOTAL		2,304

**WORK ZONE PAVEMENT MARKING REMOVAL FOR INFORMATION ONLY**

STATION TO	STATION	FOOT
670+10.00	678+10.00	200
670+10.00	678+10.00	800
670+10.00	678+10.00	800
TOTAL		1800

**TEMPORARY RAISED REFLECTIVE MARKER**

STATION TO	STATION	EACH
672+10.00	677+60.00	12

**TEMPORARY CONCRETE BARRIER**

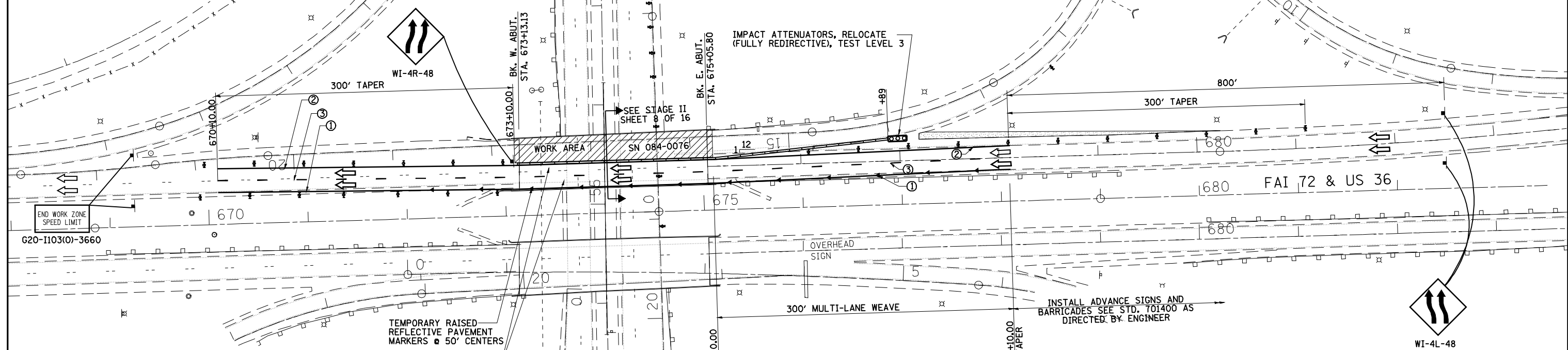
STATION TO	STATION	FOOT
675+10.00	676+89.00	175.00

**IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3**

STATION	EACH
676+89.00	1

**TEMPORARY PAVEMENT MARKING TAPE, TYPE 3 FOR INFORMATION ONLY**

STATION TO	STATION	FOOT
670+10.00	678+10.00	200
670+10.00	678+10.00	800
670+10.00	678+10.00	800
TOTAL		1800



- NOTES**
- BRIDGE REHABILITATION WORK TO BE COMPLETED UTILIZING STAGE CONSTRUCTION WITH TWO LANES OF WB I-72 REMAINING OPEN TO TRAFFIC ON BRIDGE. SEE SPECIAL PROVISIONS FOR DETAILS.
  - THIS SHEET TO BE USED IN CONJUNCTION WITH TRAFFIC CONTROL & PROTECTION STANDARD 701400, 701402, AND 701451.
  - UPON COMPLETION, REMOVE ALL TRAFFIC CONTROL ITEMS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
  - THE USE OF METAL SIGNS ON TYPE III BARRICADES SHALL NOT BE ALLOWED, AS IT IS NOT COMPLIANT WITH NCHRP 350.

- LEGEND**
- WORK AREA
  - DIRECTION OF TRAFFIC
  - TEMPORARY PAVEMENT MARKING TAPE, TYPE 3
  - TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS AND VERTICAL PANELS PER STD. 701402
  - TYPE I BARRICADE DRUM W/ STEADY BURN MONO DIRECTIONAL LIGHT @ 50' CENTERS U.N.O.
  - TYPE III BARRICADE

- ① TEMP. PAVT. MARKING TAPE, TYPE 3, YELLOW
- ② TEMP. PAVT. MARKING TAPE, TYPE 3, WHITE
- ③ TEMP. PAVT. MARKING TAPE, TYPE 3, WHITE (10' DASH, 30' SKIP)

**URETHANE PAVEMENT MARKING - LINE 6"**

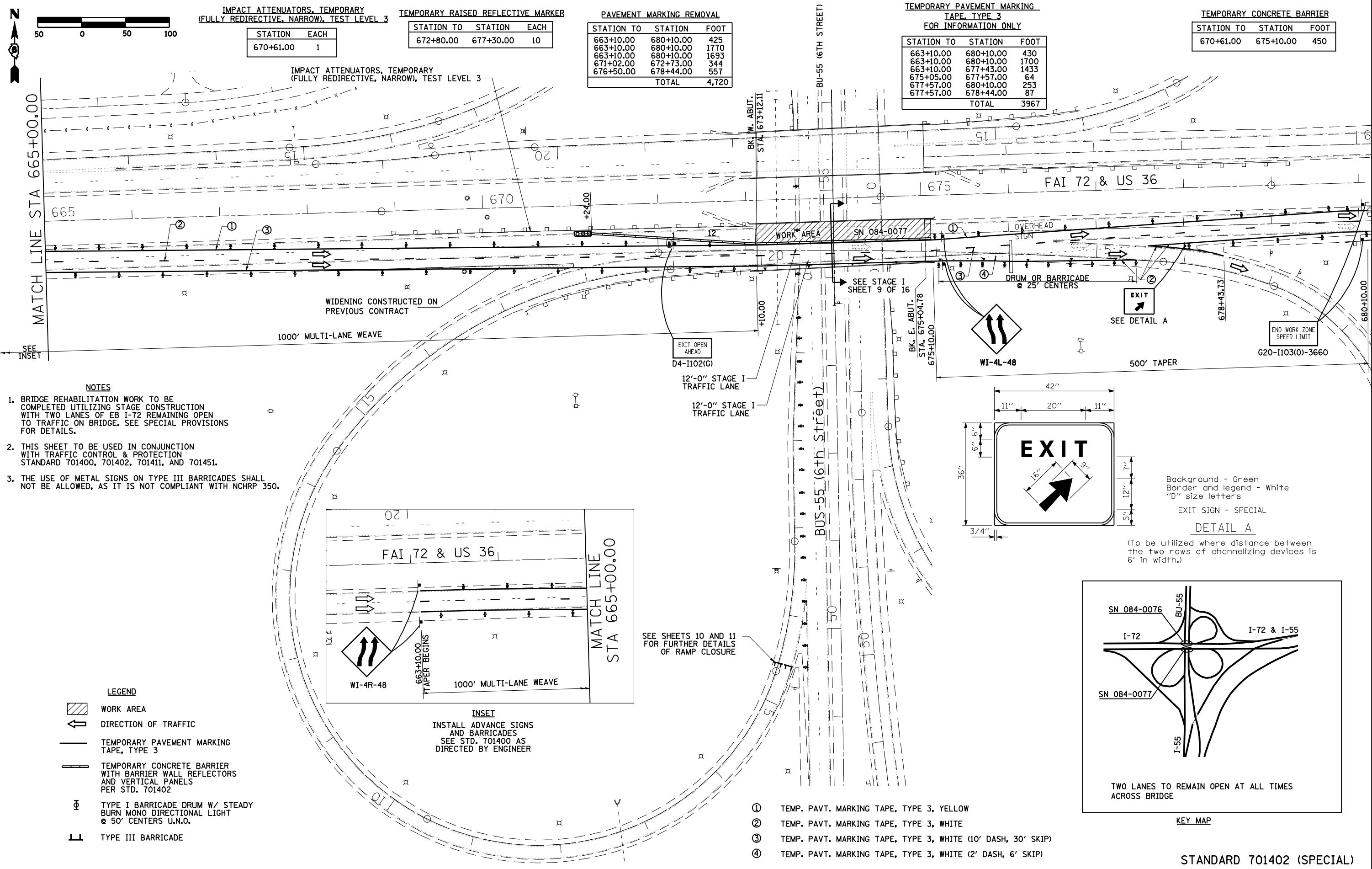
LOCATION	I-72 WB	ENT RAMP GORE	(FOOT)
STA 676+71 TO STA 677+19			496
TOTAL			496

**URETHANE PAVEMENT MARKING - LINE 5"**

LOCATION	YELLOW SOLID (FOOT)	WHITE SOLID (FOOT)	WHITE SKIP-DASH (FOOT)
I-72 WB			
STA 670+10 TO STA 678+10	800	808	200
TOTAL			1,808

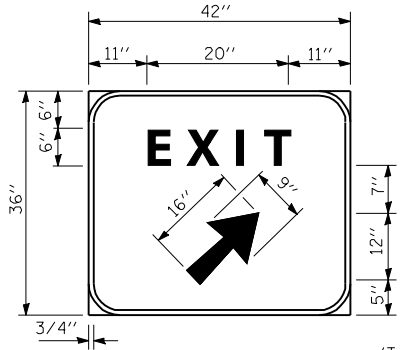
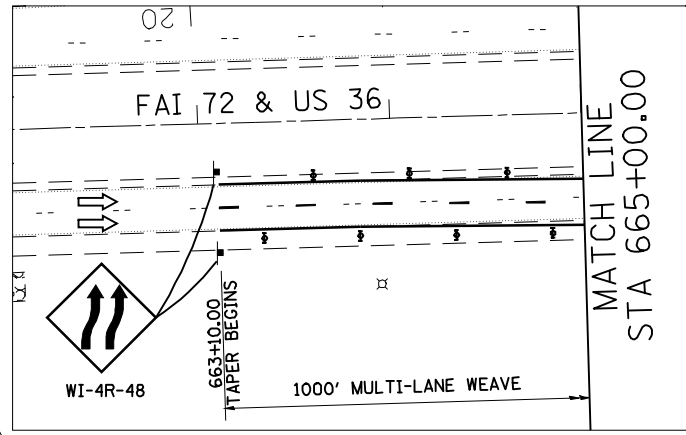
NOTE: THERE IS NOT A STAGE II FOR THIS STRUCTURE. ALL WORK CAN BE PERFORMED UNDER ONE TRAFFIC CONTROL SET UP FOR SN 084-0076.

STANDARD 701402 (SPECIAL)

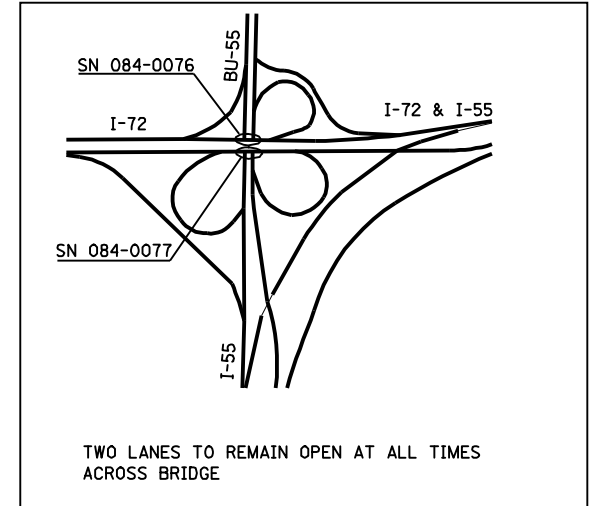


- NOTES**
- BRIDGE REHABILITATION WORK TO BE COMPLETED UTILIZING STAGE CONSTRUCTION WITH TWO LANES OF EB I-72 REMAINING OPEN TO TRAFFIC ON BRIDGE. SEE SPECIAL PROVISIONS FOR DETAILS.
  - THIS SHEET TO BE USED IN CONJUNCTION WITH TRAFFIC CONTROL & PROTECTION STANDARD 701400, 701402, 701411, AND 701451.
  - THE USE OF METAL SIGNS ON TYPE III BARRICADES SHALL NOT BE ALLOWED, AS IT IS NOT COMPLIANT WITH NCHRP 350.

- LEGEND**
- WORK AREA
  - DIRECTION OF TRAFFIC
  - TEMPORARY PAVEMENT MARKING TAPE, TYPE 3
  - TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS AND VERTICAL PANELS PER STD. 701402
  - TYPE I BARRICADE DRUM W/ STEADY BURN MONO DIRECTIONAL LIGHT @ 50' CENTERS U.N.O.
  - TYPE III BARRICADE



Background - Green  
 Border and legend - White  
 "0" size letters  
 EXIT SIGN - SPECIAL  
**DETAIL A**  
 (To be utilized where distance between the two rows of channelizing devices is 6' in width.)



KEY MAP  
 STANDARD 701402 (SPECIAL)



**IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3**

STATION	EACH
670+61.00	1

**TEMPORARY RAISED REFLECTIVE MARKER**

STATION TO	STATION	EACH
672+80.00	677+30.00	10

**PAVEMENT MARKING REMOVAL**

STATION TO	STATION	FOOT
663+10.00	680+10.00	425
663+10.00	680+10.00	1770
663+10.00	680+10.00	1693
671+02.00	672+73.00	344
676+50.00	678+44.00	557
<b>TOTAL</b>		<b>4,720</b>

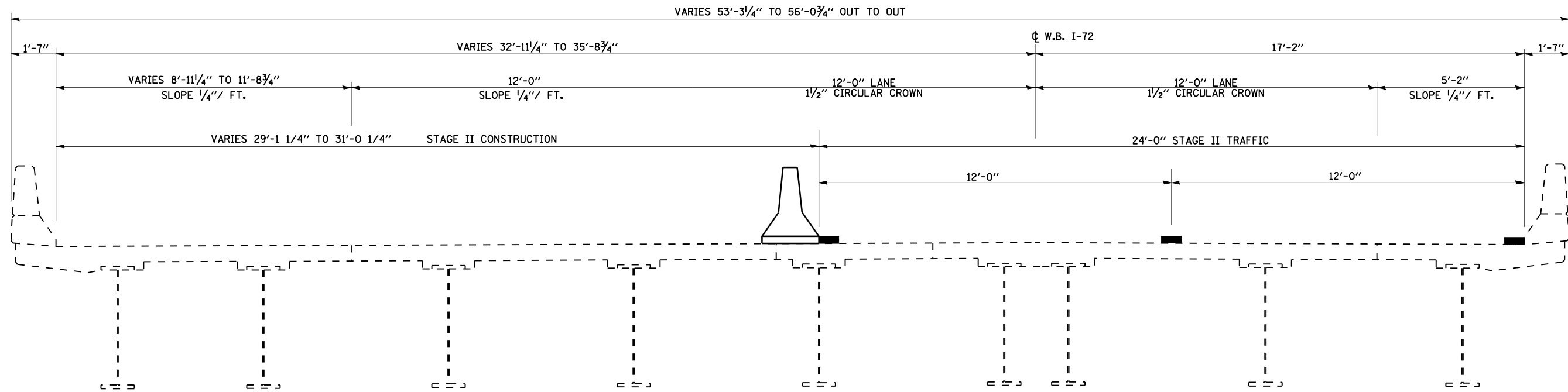
**TEMPORARY PAVEMENT MARKING TAPE, TYPE 3 FOR INFORMATION ONLY**

STATION TO	STATION	FOOT
663+10.00	680+10.00	430
663+10.00	680+10.00	1700
663+10.00	677+43.00	1433
675+05.00	677+57.00	64
677+57.00	680+10.00	253
677+57.00	678+44.00	87
<b>TOTAL</b>		<b>3967</b>

**TEMPORARY CONCRETE BARRIER**

STATION TO	STATION	FOOT
670+61.00	675+10.00	450

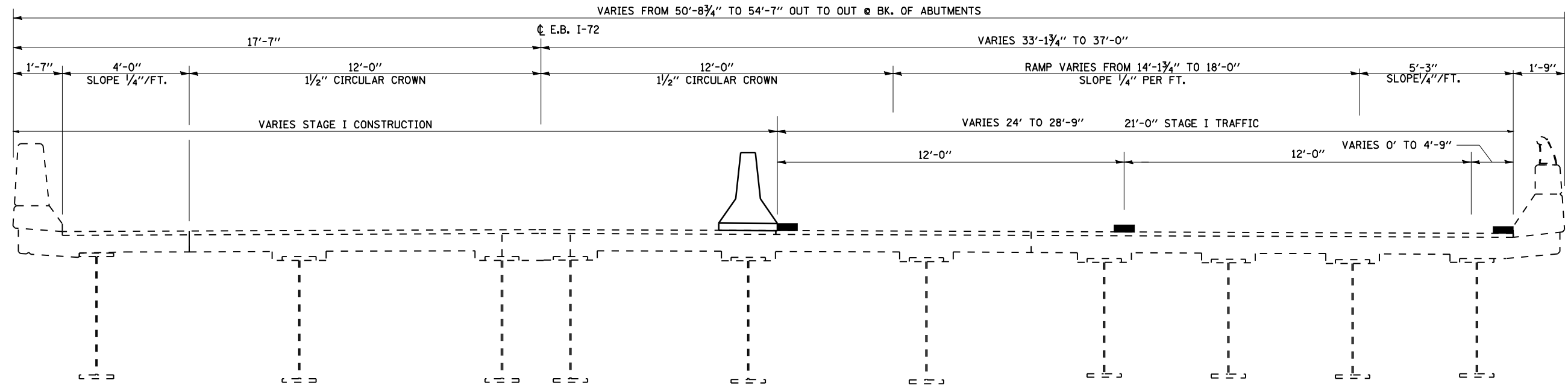




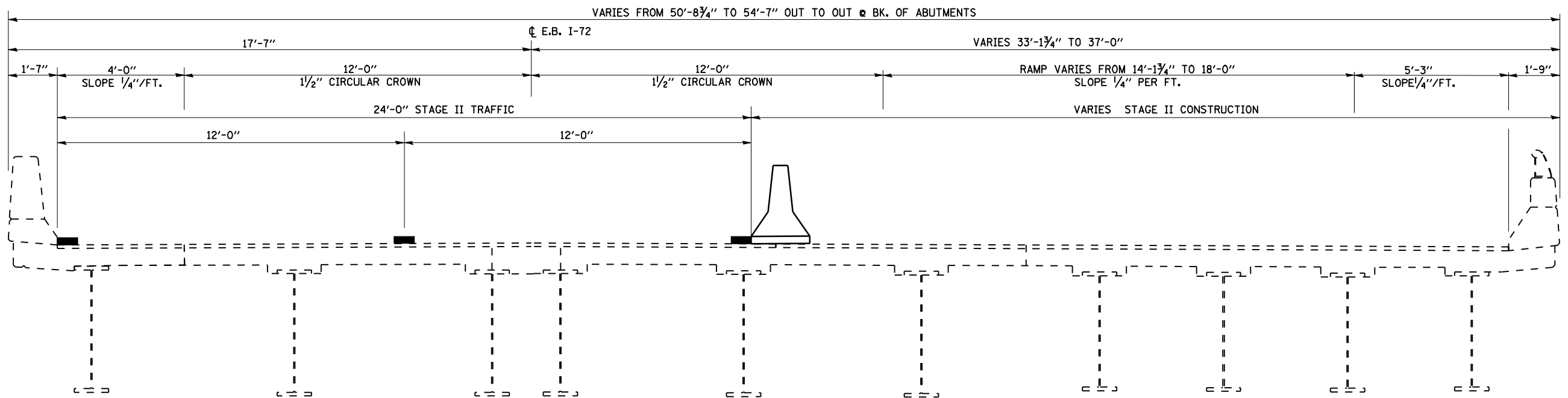
STAGE 1  
(LOOKING EAST)

STANDARD 701402 (SPECIAL)

FILE NAME =	USER NAME = coxte	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE CONSTRUCTION WB TYPICAL SECTIONS SN 084-0076</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
er:\pwork\pwidot\COXTE\123288\0672089-shr-staging.dgn		DRAWN -	REVISED -		72	(84-3HB-4)I-1	SANGAMON	17	7				
PLOT SCALE = 100.0000' / IN.		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 72C69				
PLOT DATE = Aug-12-2009 04:18:54PM		DATE -	REVISED -		ILLINOIS FED. AID PROJECT								



STAGE 1  
(LOOKING EAST)

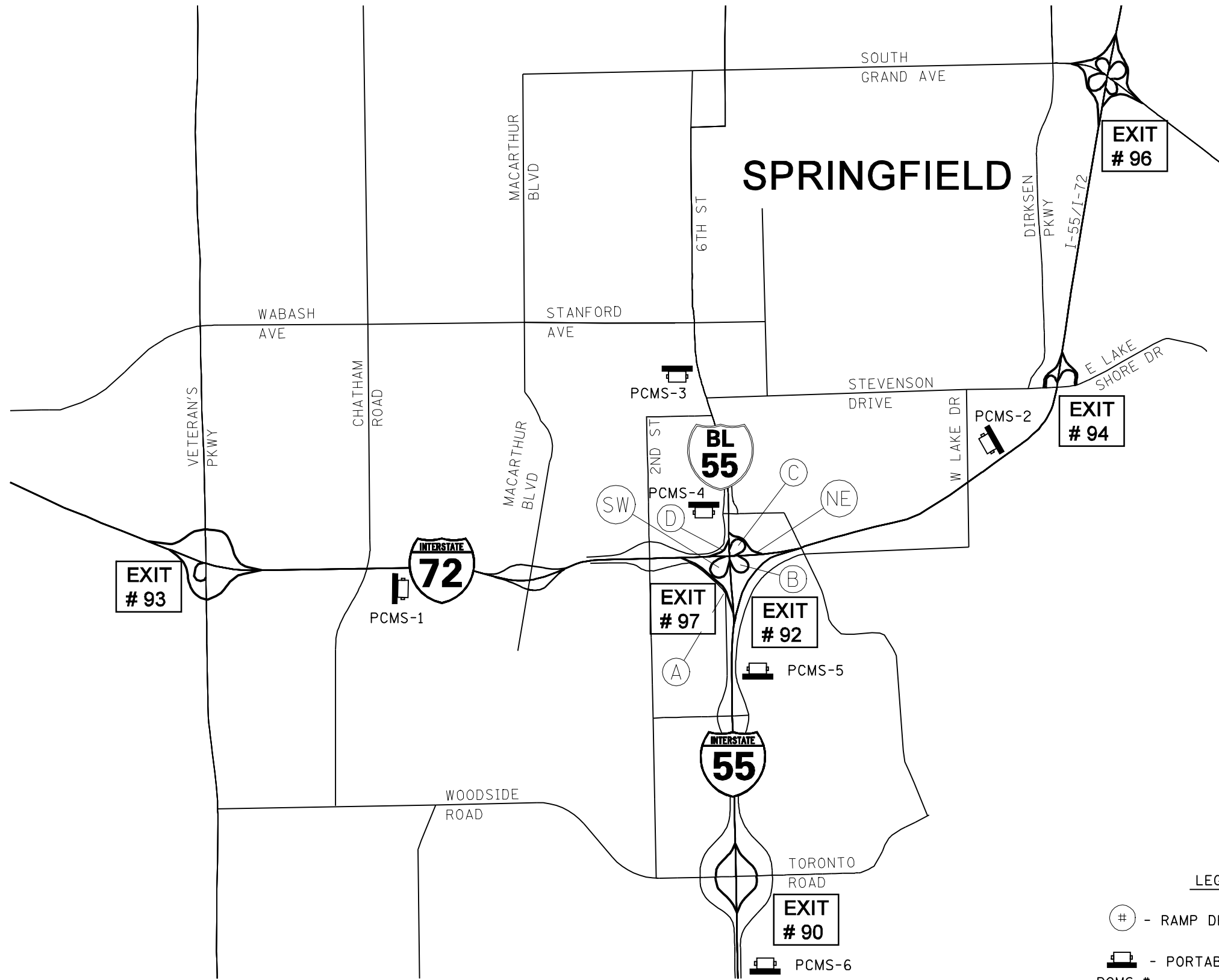


STAGE 2  
(LOOKING EAST)

STANDARD 701402 (SPECIAL)

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	PLOT SCALE = 100.0000' / IN.	CHECKED -	REVISED -					72	(84-3HB-4)I-1	SANGAMON	17	8
PLOT DATE = Aug-12-2009 04:18:57PM	DATE -	REVISED -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
CONTRACT NO. 72C69												





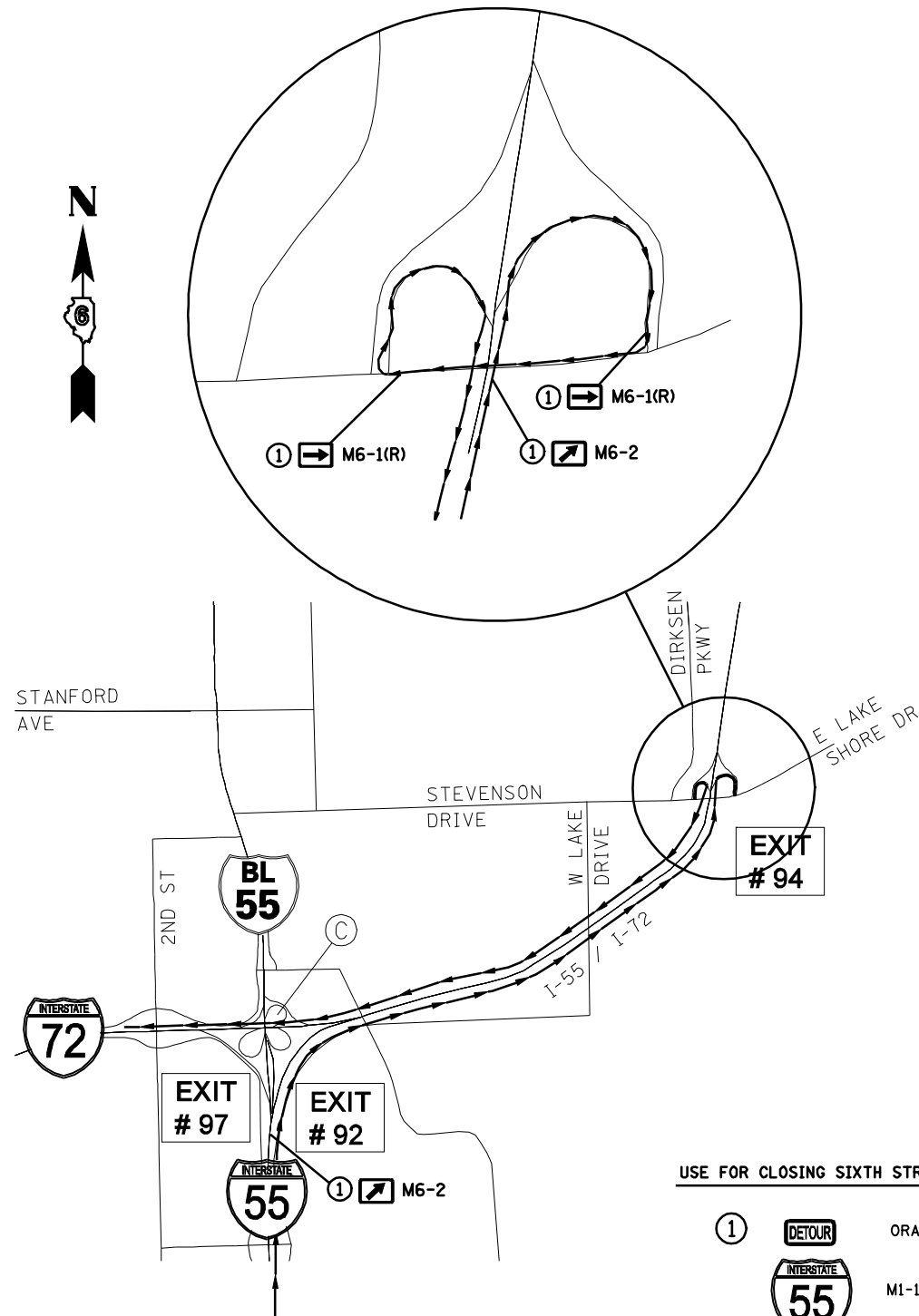
**NOTE:**  
 ALL MESSAGE BOARDS SHALL BY PROTECTED BY THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 50' CENTERS.

- LEGEND**
- Ⓝ - RAMP DESIGNATION
  - ☐ - PORTABLE CHANGEABLE MESSAGE SIGN  
PCMS-#

FILE NAME =	USER NAME = coxte	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MESSAGE BOARD PLACEMENT SHEET</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
er\pwwork\PWIDOT\COXTE\0123288\0672089-shr-tagging.dgn		DRAWN -	REVISED -		72	(84-3HB-4)I-1	SANGAMON	17	9			
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PLOT DATE = Aug-12-2009 04:18:59PM		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							
				SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				

NB I-55 TO WB I-72

NOTE:  
THIS DETOUR ROUTE IS TO BE USED FOR  
THE INTERCHANGE RAMP 'C' CLOSURE.

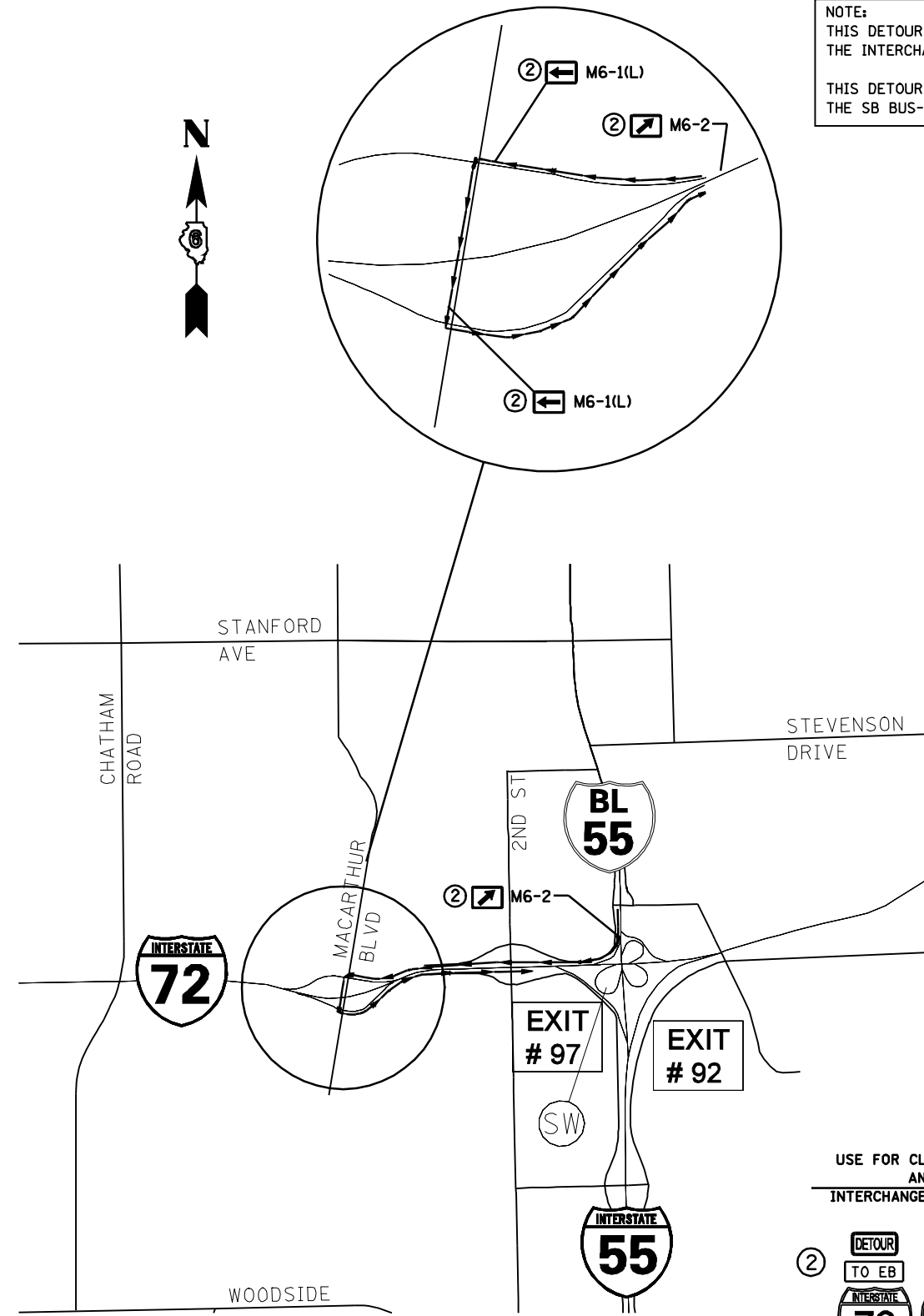


USE FOR CLOSING SIXTH STREET INTERCHANGE RAMP C

- ① DETOUR ORANGE/BLACK M4-8 (30X15)
- MI-1 (48X48)
- TO WB I-72 ORANGE/BLACK (30X15)

6TH ST BL-55 TO SB I-55 OR NB I-55 / EB I-72

NOTE:  
THIS DETOUR ROUTE IS TO BE USED FOR  
THE INTERCHANGE RAMP 'SW' CLOSURE.  
  
THIS DETOUR IS ALSO TO BE USED FOR  
THE SB BUS-55 CLOSURE FOR SETTING BEAMS.



USE FOR CLOSING SIXTH STREET  
AND SB BUS 55  
INTERCHANGE RAMPS SW LOOP RAMP

- ② DETOUR TO NB ORANGE/BLACK M4-8 (30X15)
- TO EB ORANGE/BLACK (30X15)
- TO SB MI-1 (48X48)

FILE NAME =	USER NAME = coxte	DESIGNED -	REVISED -
er\pwwork\PWIDOT\COXTE\0123288\067209-9-9ht-stagimg.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETOUR ROUTE SIGNING PLAN

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-3HB-4)I-1	SANGAMON	17	10
CONTRACT NO. 72C69				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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  $1\frac{1}{8}$ "  $\phi$  for  $7\frac{1}{8}$ "  $\phi$  bolts. Web splice holes shall be  $1\frac{1}{8}$ "  $\phi$  for  $3\frac{1}{4}$ "  $\phi$  bolts.

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."

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".

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Grinding shall be done parallel to the longitudinal axis of the member. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately  $\frac{1}{4}$ " 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.

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.

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 shall be Interstate Green, Munsell No. 7.5G 1/2. See Special Provision "Cleaning and Painting New Metal Structures".

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.

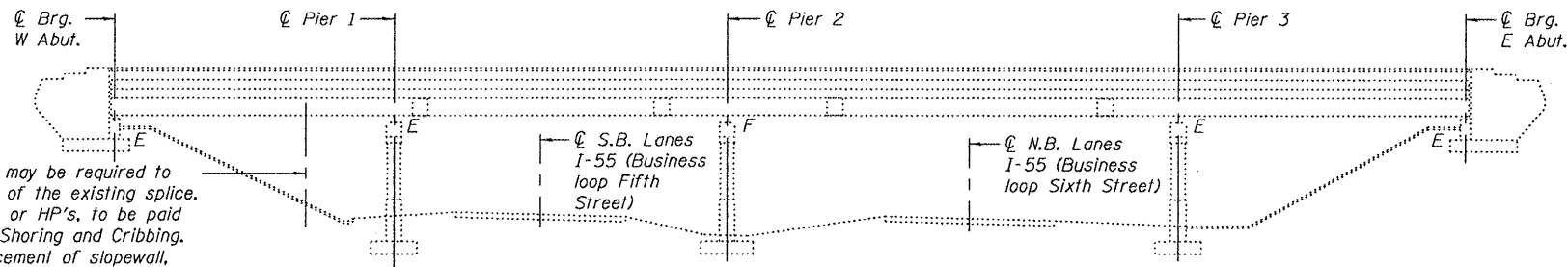
Diaphragm connection holes shall be  $1\frac{1}{8}$ "  $\phi$  for  $3\frac{1}{4}$ "  $\phi$  bolts. Two hardened washers shall be required at diaphragm connections.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

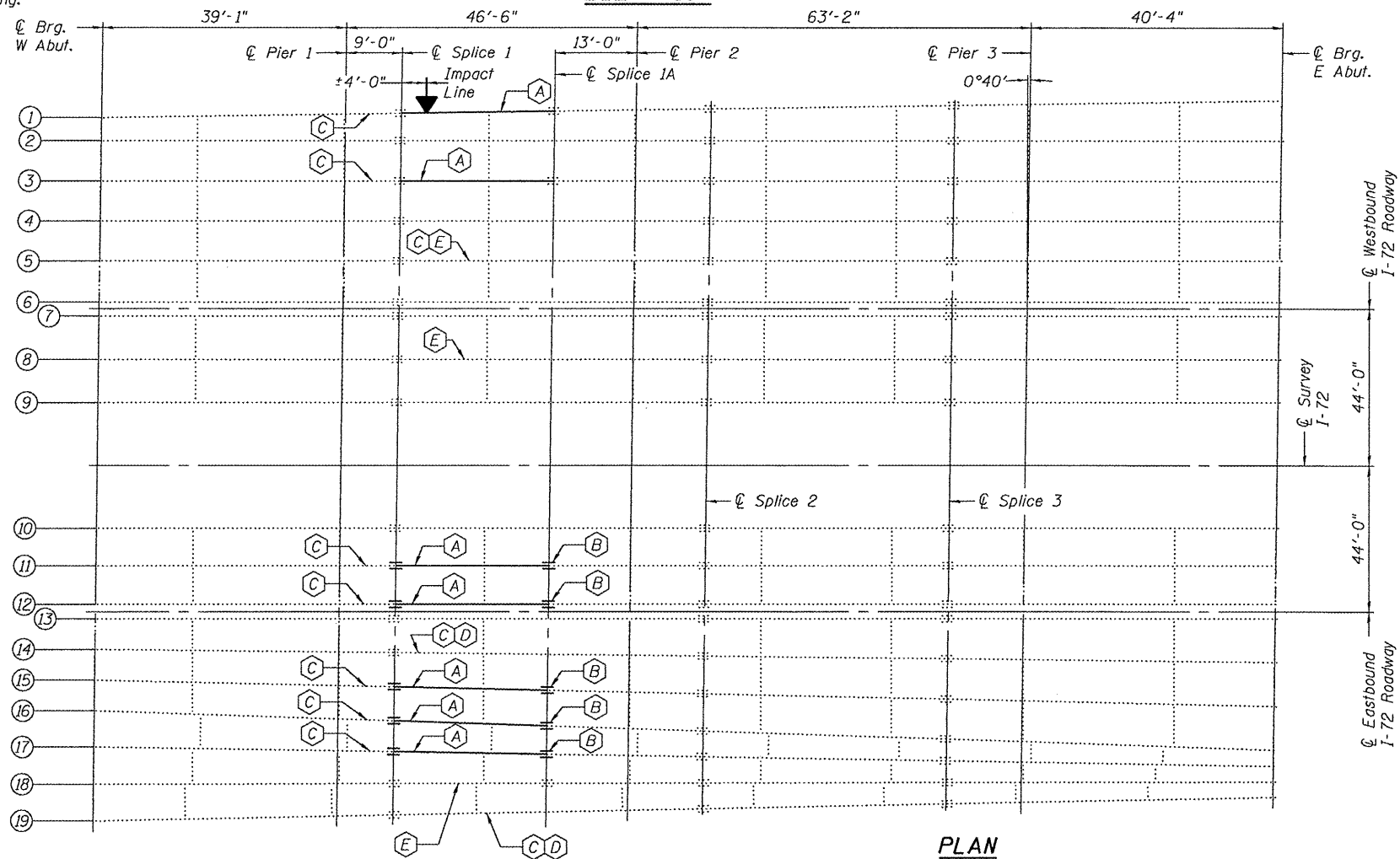
Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

The Contractor should be aware of the presence of stay-in-place steel forms under the deck between beams. The Contractor must take appropriate measures to deal with the presence of these forms while removing beam section to be replace.

Temporary shoring may be required to facilitate alignment of the existing splice. Use 12"x12" timber or HP's, to be paid for as Temporary Shoring and Cribbing. Removal and replacement of slopewall, if required, is included with Temporary Shoring and Cribbing.



ELEVATION



PLAN

- (A) Remove and Replace Existing Beam Segment
- (B) New Splice Location
- (C) Beam Straightening
- (D) Beam Strengthening
- (E) Grind Nicks and Gouges

SN 084-0076

SN 084-0077

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.5
Concrete Superstructure	Cu. Yd.	3.5
Structural Steel Removal	Pound	25,630
Furnishing and Erecting Structural Steel	Pound	27,350
Temporary Slab Support System	L.S.	1
Beam Straightening	L.S.	1
Temporary Shoring and Cribbing	L.S.	1

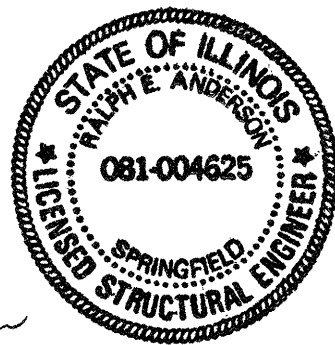
PLAN AND ELEVATION

SN 084-0076 & 0077

DESIGNED *Angelo Borzetti*  
 CHECKED *Adrian J. Holloway*  
 DRAWN *Drew Christopher*  
 CHECKED *AJB ATH*

EXAMINED *Carl R. ...*  
 PASSED *Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES

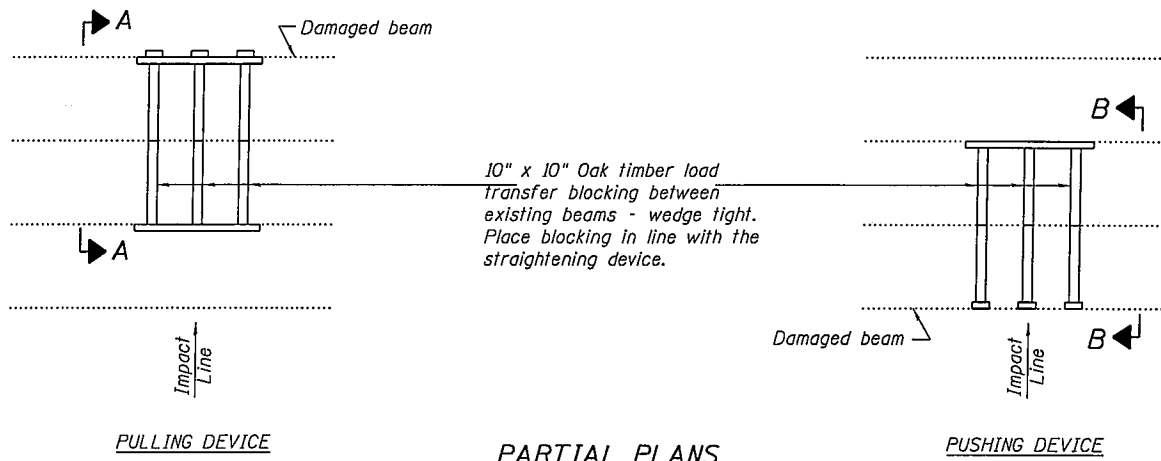
SEPTMBER 16, 2009



Expires: November 30, 2010

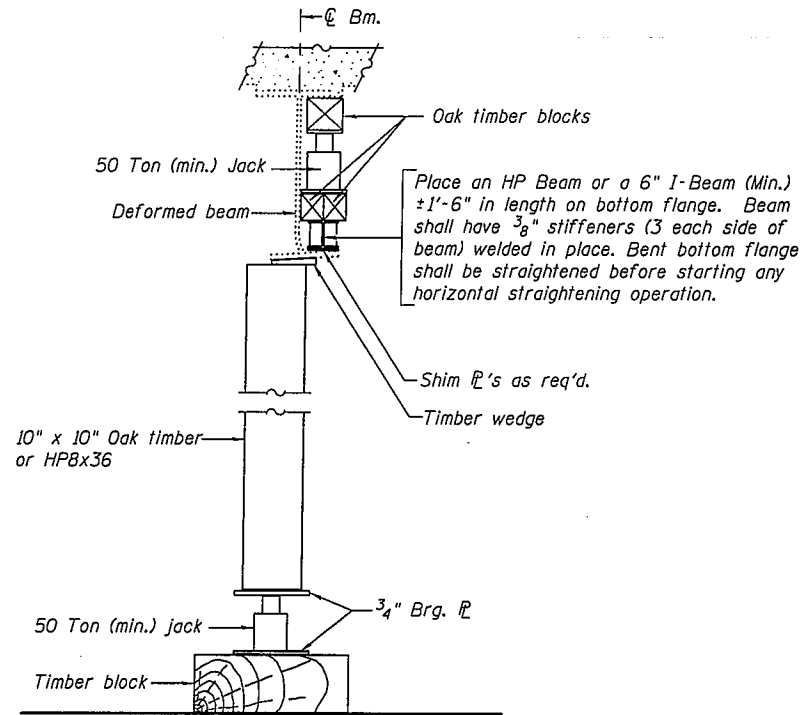
SHEET NO. 1  7 SHEETS	F.A. RTE. 72	SECTION (84-3HB-4)I-1	COUNTY Sangamon	TOTAL SHEETS 17	SHEET NO. 11
	CONTRACT NO. 72C69			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

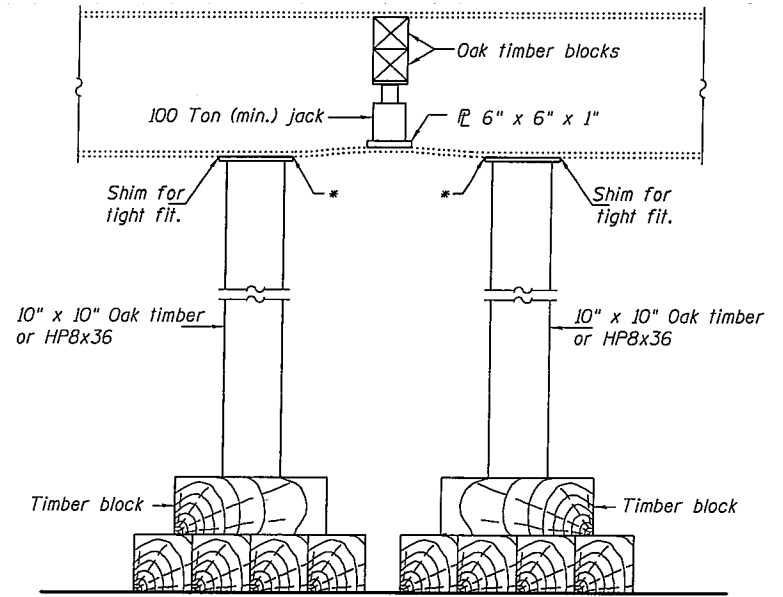


**PARTIAL PLANS**  
**SUGGESTED BEAM STRAIGHTENING METHODS**

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



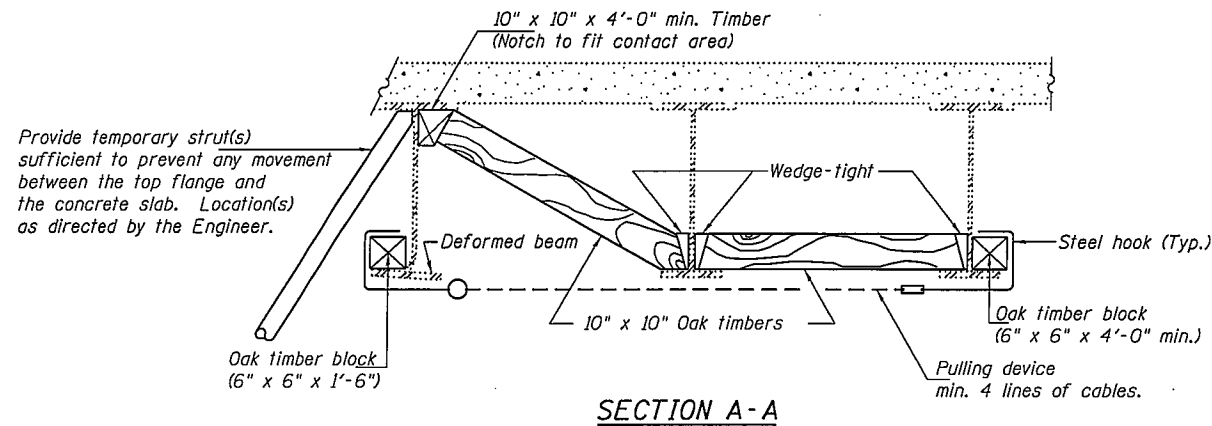
**SUGGESTED VERTICAL STRAIGHTENING DETAIL**  
(To correct flange rotation.)



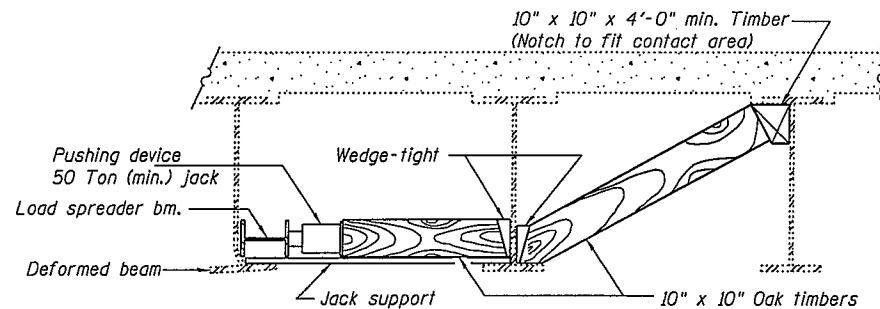
**SUGGESTED VERTICAL STRAIGHTENING DETAIL**  
(To correct localized vertical flange deformations.)

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

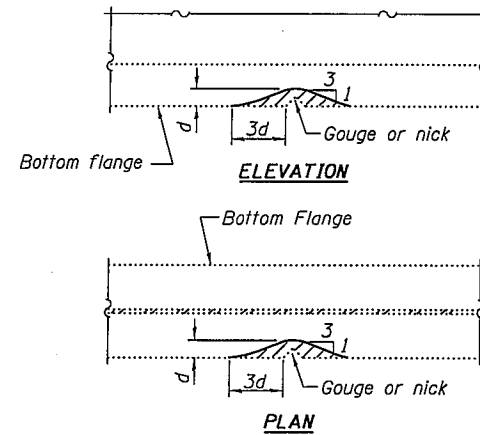
Note:  
Braces and jack assembly shall be placed on same side of web.  
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



**SECTION A-A**



**SECTION B-B**



**GRINDING DETAIL**

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.

**EXISTING DEFORMATION TO BE STRAIGHTENED**

(Looking East)  
(Approximate max. deflections)  
Deflected length of beam to be straightened is approximately 9'-0" at Beams 1, 3, 5, 11, 12, 14, 15, 16 and 17 and 20'-0" at Beam 19. Additionally vertical deformation on Beam 5 over a length of ±4'-0" to be straightened.

**BEAM STRAIGHTENING DETAILS**  
**SN 084-0076 & 0077**

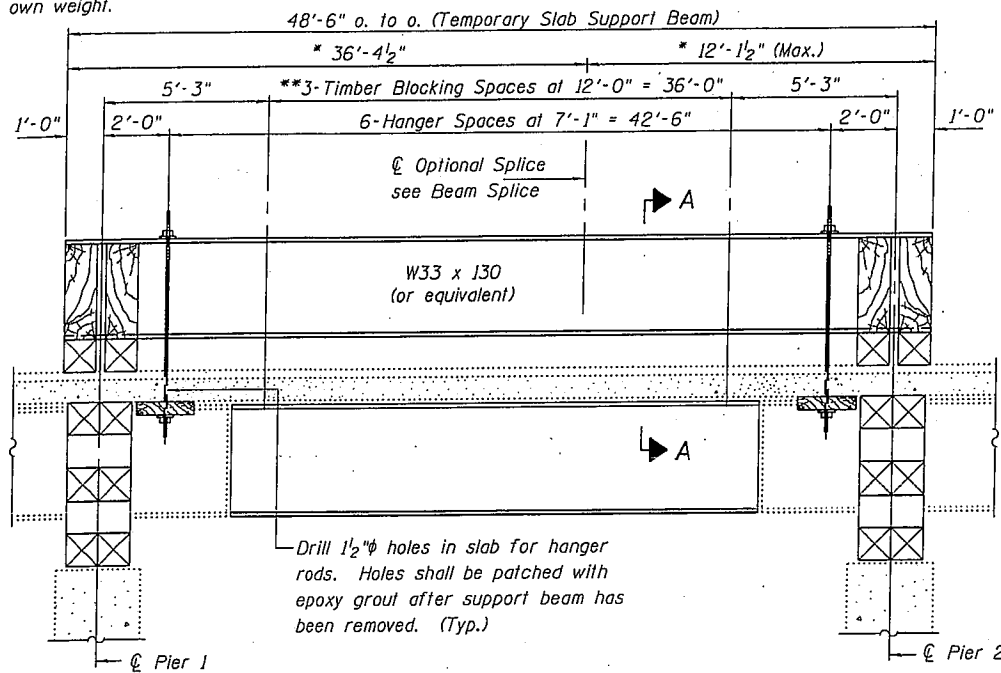
DESIGNED	A.J.B.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	A.J.B. A.T.H.

SEPTMBER 16, 2009
EXAMINED <i>Carl Pursey</i> ENGINEER OF STRUCTURAL SERVICES
PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

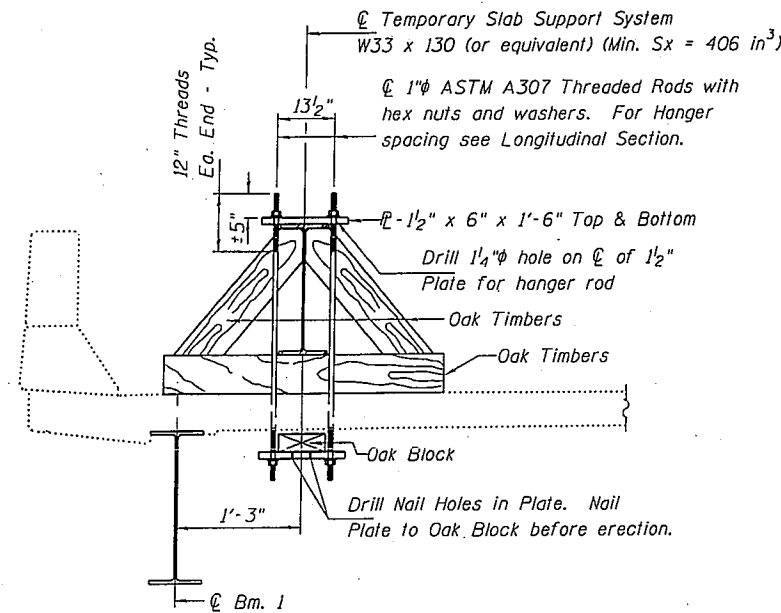
SHEET NO. 2	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(84-3HB-4)I-1	Sangamon	17	12
7 SHEETS	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 72C69

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

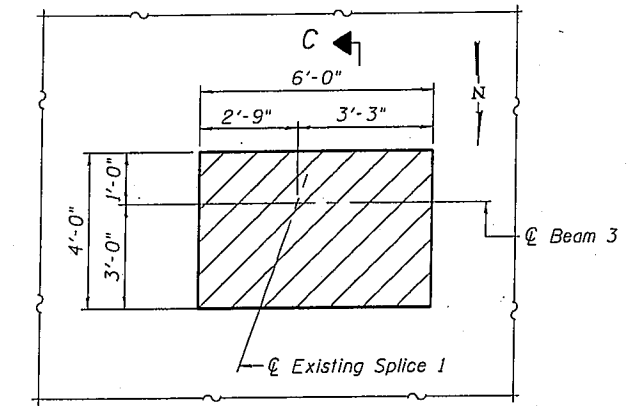
\* These dimensions may vary for available beams in stock.  
\*\* Wood blocking between piers to be placed after support beam is allowed to deflect under its own weight.



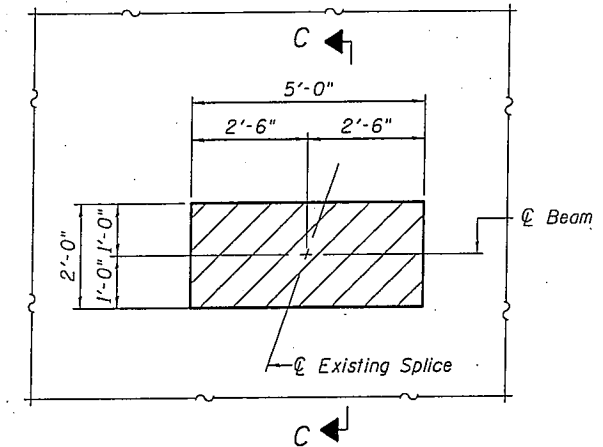
**LONGITUDINAL SECTION**  
**SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM**



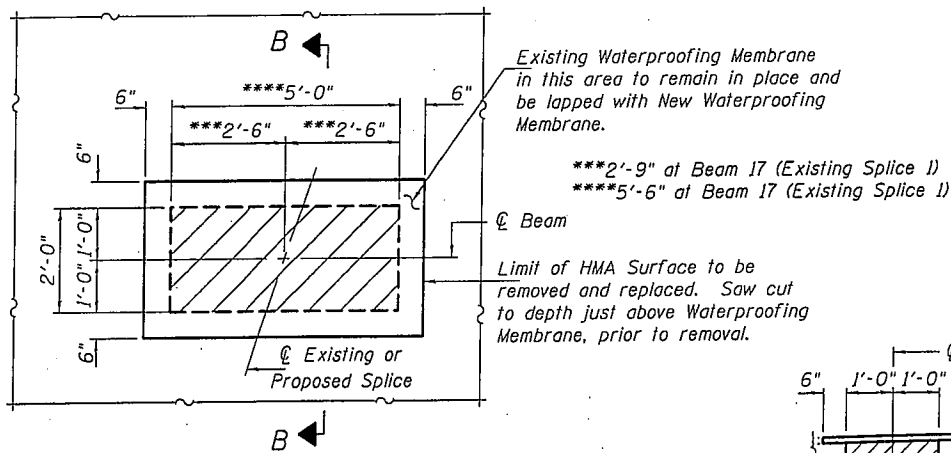
**SECTION A-A**  
Beam 1 Shown,  
Other Locations Typical Without Curb Detail  
Adjacent beams shall not be removed and replaced simultaneously. If more than one beam is to be replaced at one time it must have its own Temporary Slab Support System.



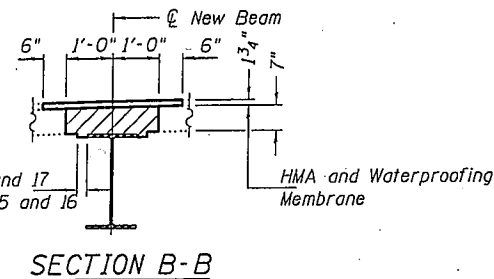
**CONCRETE REMOVAL AND REPLACEMENT**  
**BEAM 3, EXISTING SPLICE 1**  
(S.N. 084-0076)



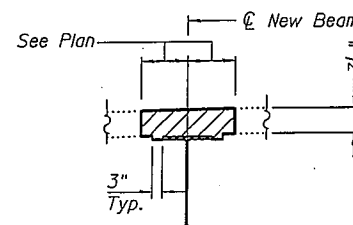
**TYPICAL CONCRETE**  
**REMOVAL AND REPLACEMENT**  
(S.N. 084-0076)



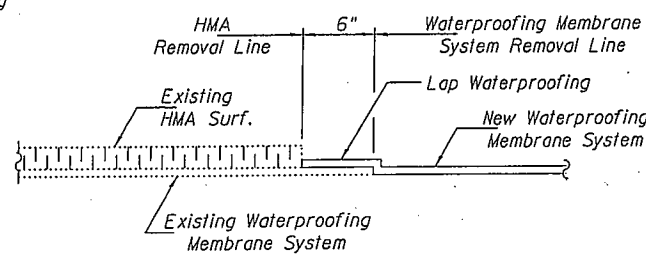
**TYPICAL CONCRETE & HMA**  
**SURFACE REMOVAL AND REPLACEMENT**  
(S.N. 084-0077)



**SECTION B-B**



**SECTION C-C**



**WATERPROOFING TREATMENT**

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.  
Reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the Engineer. Cost shall be included with Concrete Removal.  
The cost of removing and replacing the existing HMA surface, waterproofing membrane, and saw cutting is included with Concrete Removal.

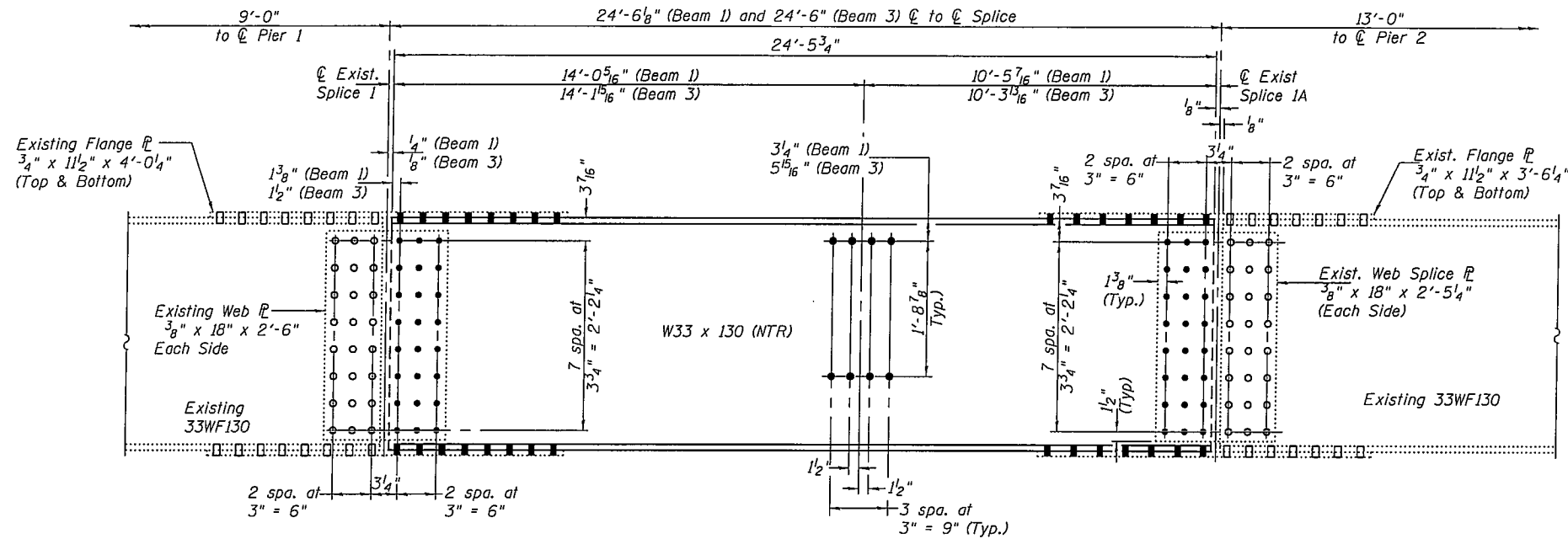
**SUPPORT AND SLAB DETAILS**  
**SN 084-0076 & 0077**

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

EXAMINED	SEPTEMBER 16, 2009
PASSED	

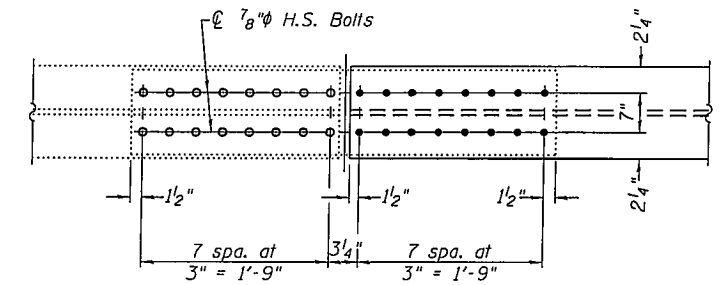
SHEET NO. 3	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(84-3HB-4)I-1	Sangamon	17	13
7 SHEETS	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 72C69		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

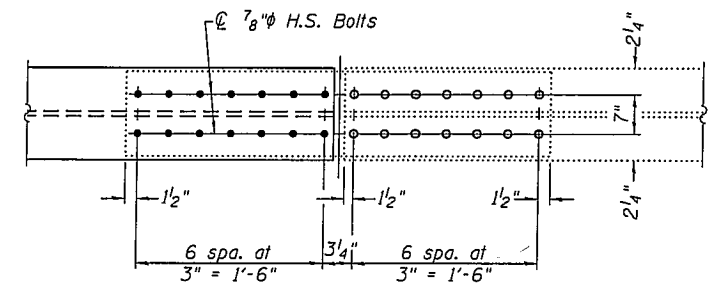


ELEVATION BEAMS 1 AND 3 (SPAN 2)

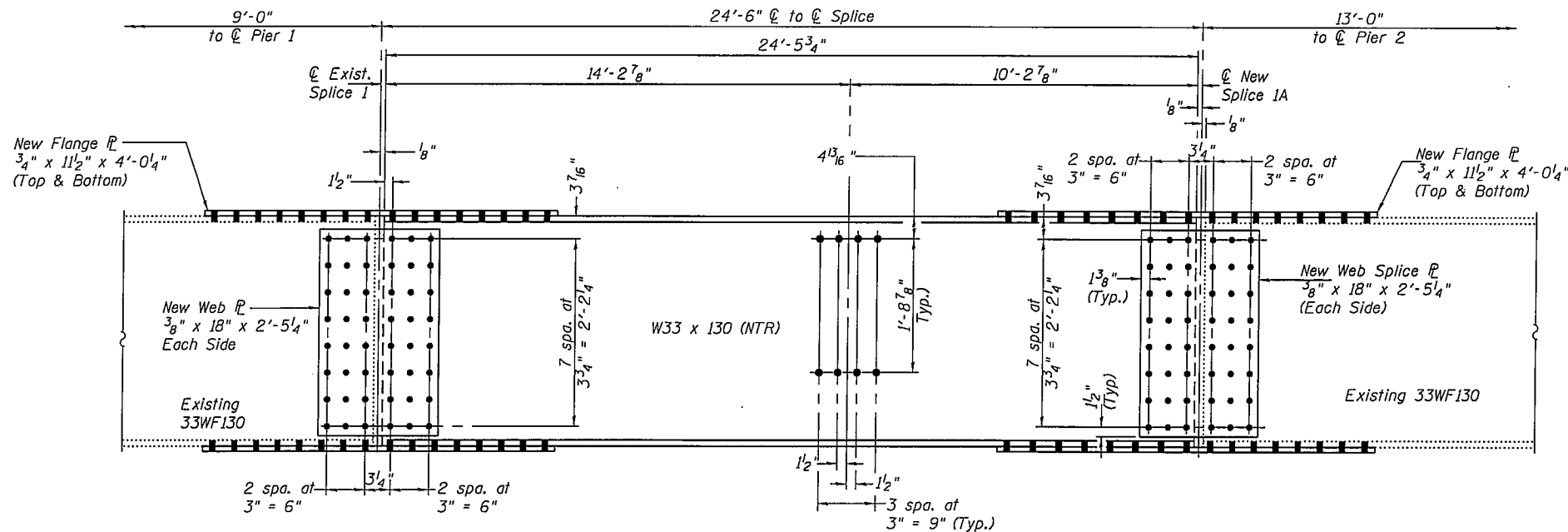
(Looking North)  
(SN 084-0076)



EXISTING SPLICE 1 BEAMS 1 AND 3

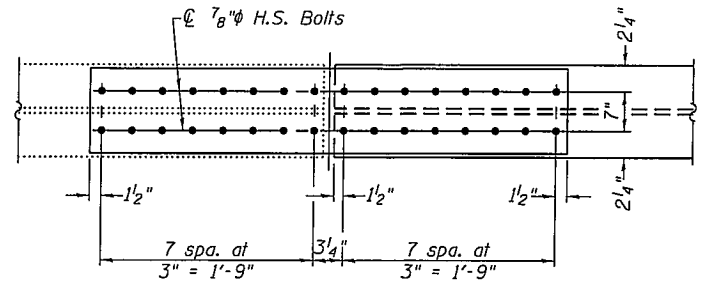


EXISTING SPLICE 1A BEAMS 1 AND 3



ELEVATION BEAM 11 (SPAN 2)

(Looking North)  
(SN 084-0077)



TYPICAL FLANGE SPLICE BEAM 11

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

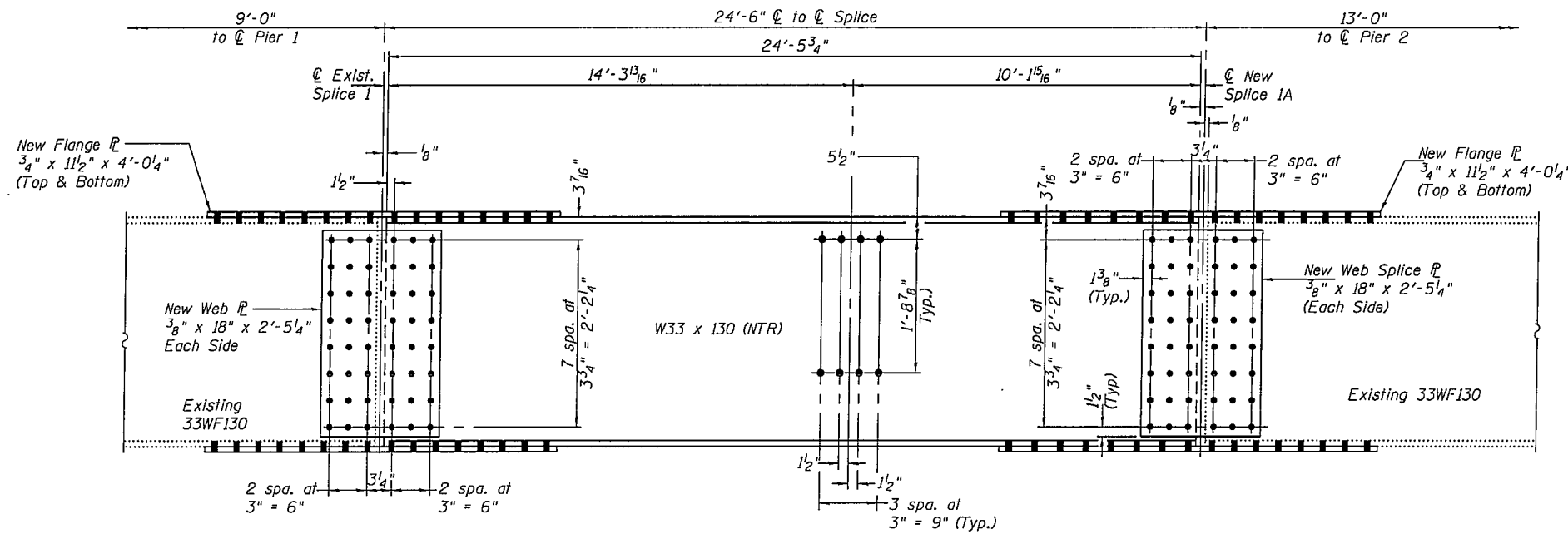
SEPTEMBER 16, 2009
EXAMINED
PASSED

Notes:  
Use existing splice plates as a template to field drill holes in new beam at existing splice location.  
Use existing clip angles as a template to field drill holes in new beam at existing diaphragm location.

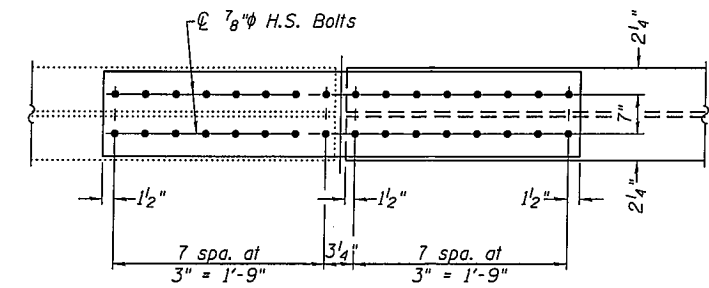
BEAM REPLACEMENT DETAILS  
SN 084-0076 & 0077

SHEET NO. 4 7 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(84-3HB-4)I-1	Sangamon	17	14
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 72C69	

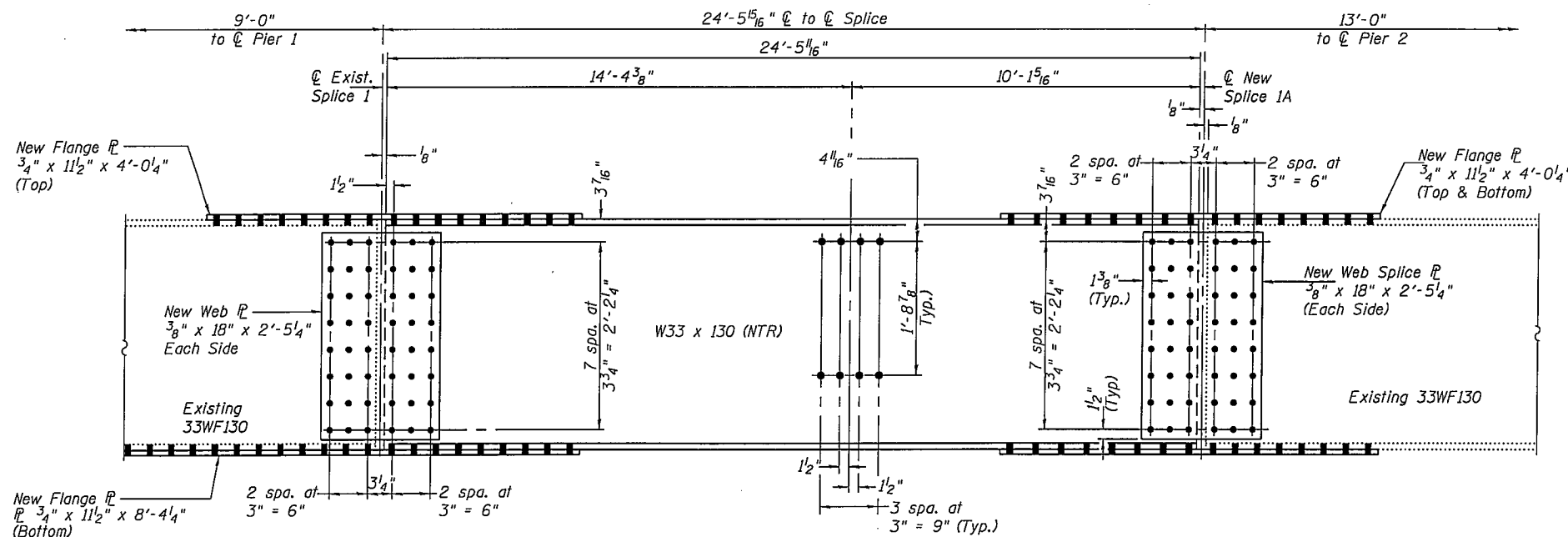
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



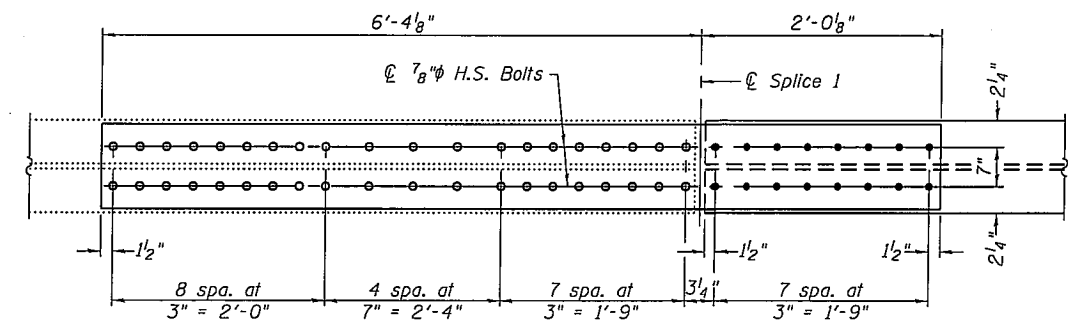
**ELEVATION BEAM 12 (SPAN 2)**  
(Looking North)  
(SN 084-0077)



**TYPICAL FLANGE SPLICE DETAIL**



**ELEVATION BEAM 15 (SPAN 2)**  
(Looking North)  
(SN 084-0077)



**BOTTOM SPLICE R AT SPLICE 1 BEAM 15**

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

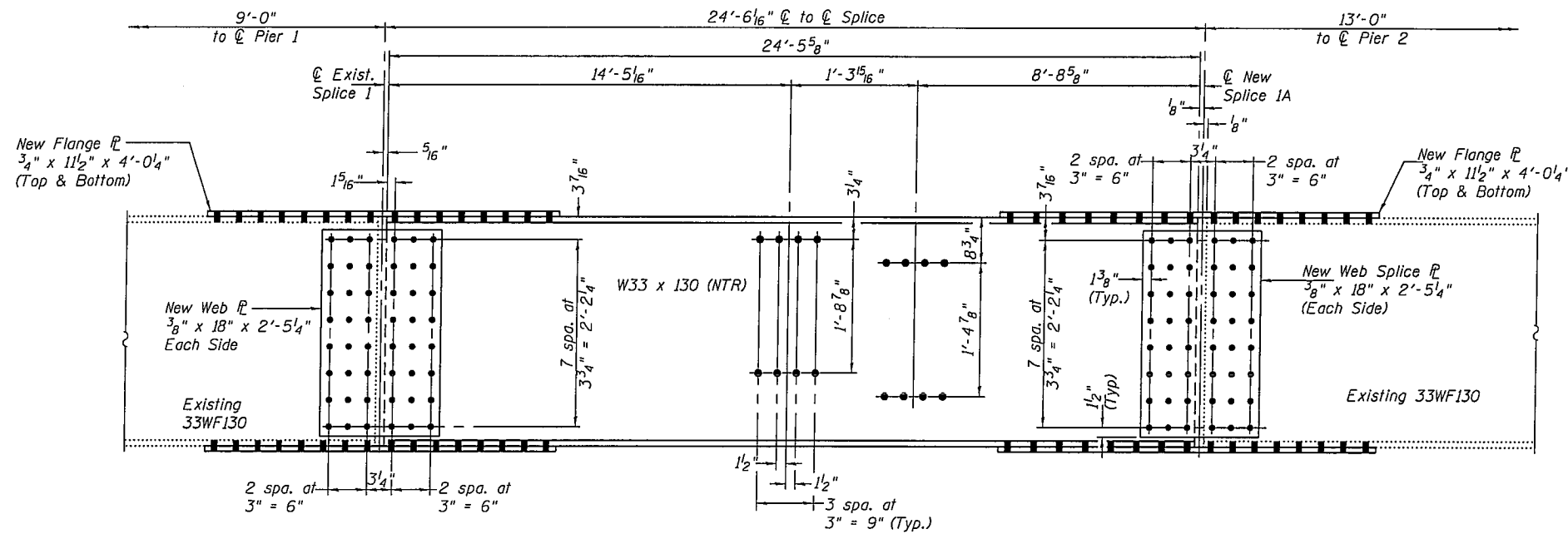
DATE	SEPTEMBER 16, 2009
EXAMINED	<i>Carl Perry</i> ENGINEER OF STRUCTURAL SERVICES
PASSED	<i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

Notes:  
Use existing clip angles as a template to field drill holes in new beam at existing diaphragm location.

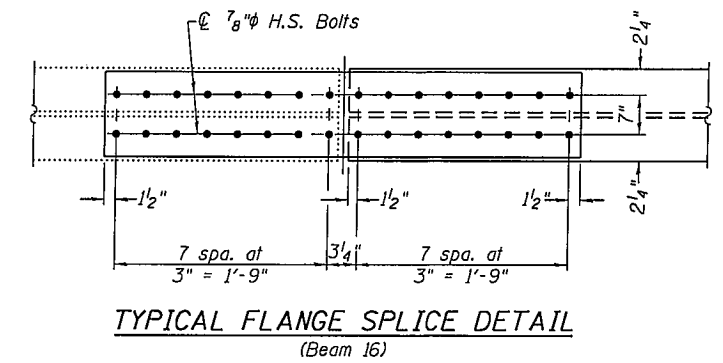
**BEAM REPLACEMENT DETAILS**  
SN 084-0076 & 0077

SHEET NO. 5 7 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(84-3HB-4)I-1	Sangamon	17	15
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 72C69	

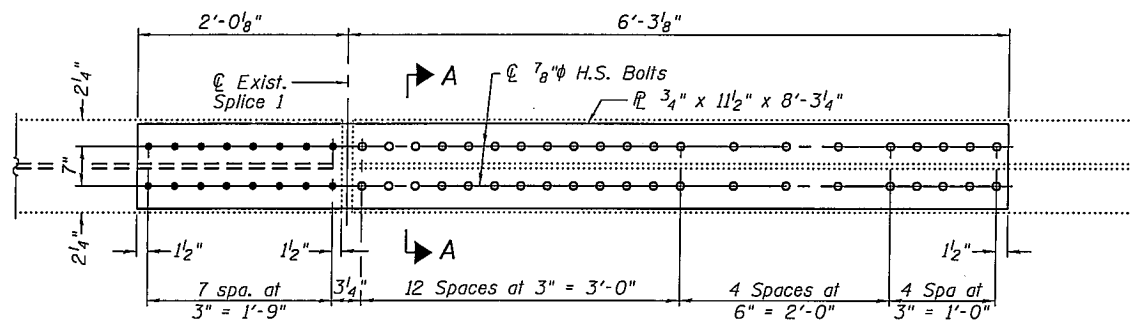
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



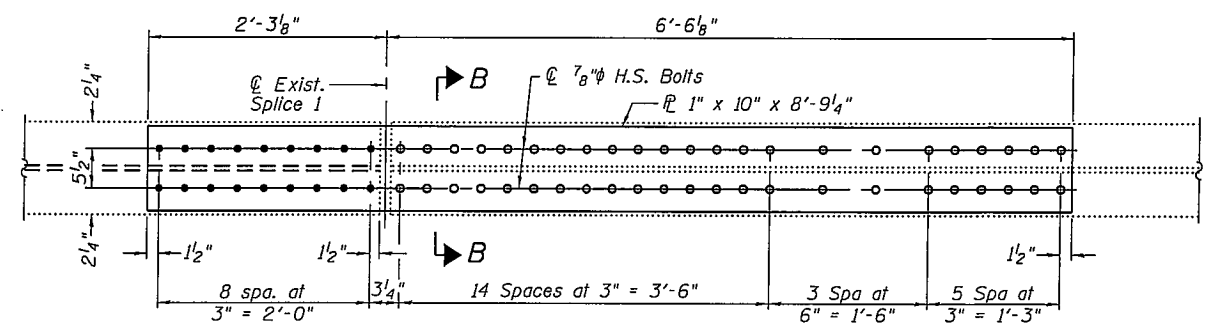
**ELEVATION BEAM 16 (SPAN 2)**  
(Looking North)  
(SN 084-0077)



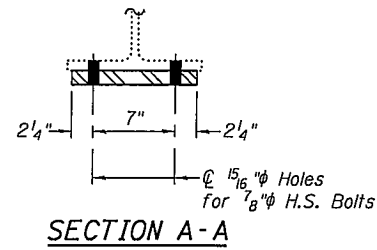
**TYPICAL FLANGE SPLICE DETAIL**  
(Beam 16)



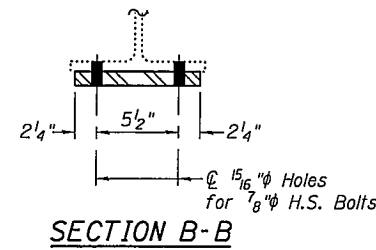
**BEAM 14 STRENGTHENING P**  
(SN 084-0077)



**BEAM 19 STRENGTHENING P**  
(SN 084-0077)



**SECTION A-A**



**SECTION B-B**

Notes:  
Use existing clip angles as a template to field drill holes in new beam at existing diaphragm location.

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

EXAMINED	<i>Carl Perry</i> ENGINEER OF STRUCTURAL SERVICES
PASSED	<i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES

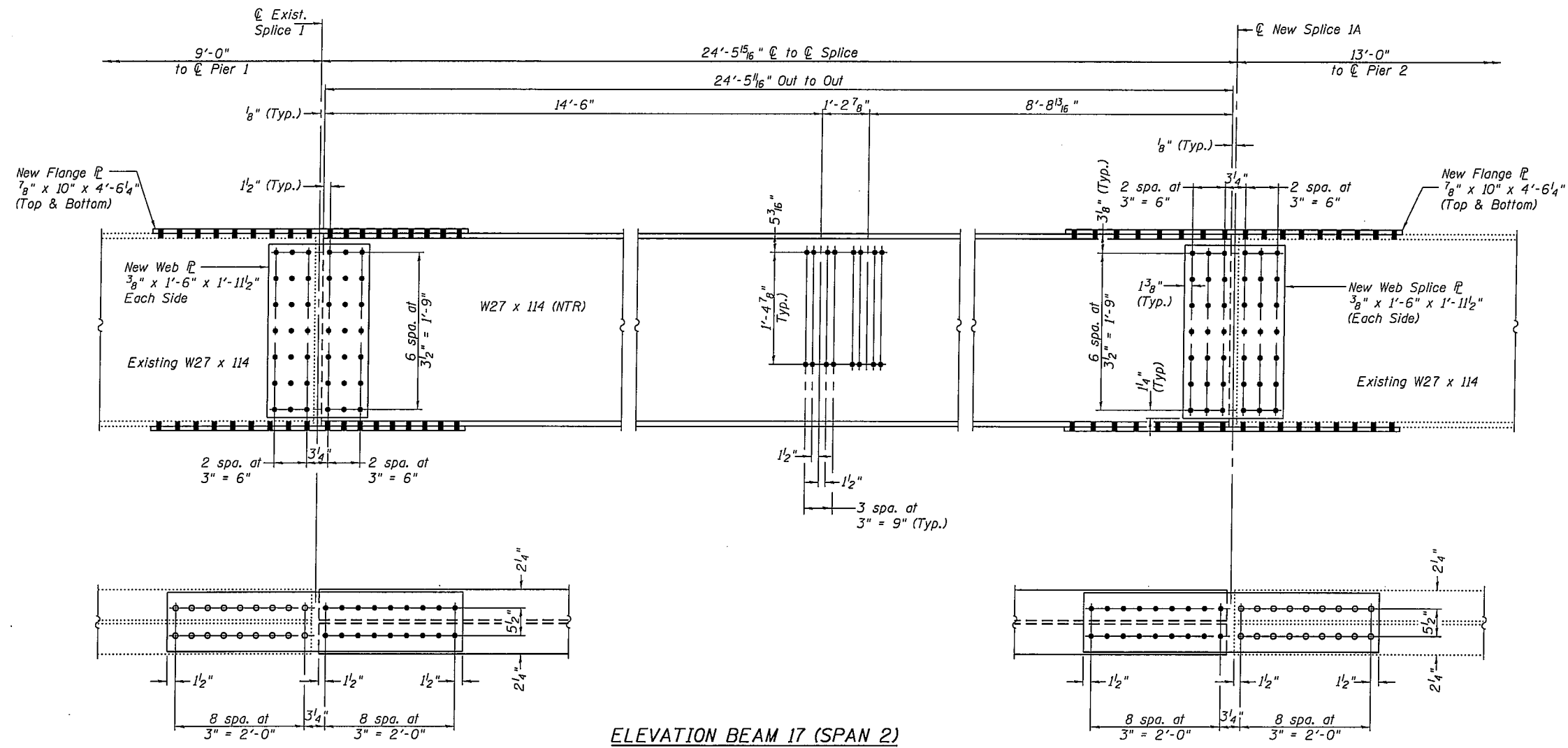
SEPTEMBER 16, 2009

**DETAILS**  
SN 084-0076 & 0077

SHEET NO. 6 7 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(84-3HB-4)I-1	Sangamon	17	16
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
			CONTRACT NO.	72C69	



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**ELEVATION BEAM 17 (SPAN 2)**  
(Looking North)

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

SEPTEMBER 16, 2009  
 EXAMINED *Carl P...*  
 PASSED *Ralph E. Anderson*  
ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES

**DETAILS**  
SN 084-0076 & 0077

SHEET NO. 7 7 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	72	(84-3HB-4)I-1	Sangamon	17	17
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	CONTRACT NO. 72C69	