

GENERAL NOTES

The final top four inches of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

All Borrow/Waste/Use sites must be approved by the Department prior to removing any material from the project or initiating any earthmoving activities, including temporary stockpiling outside the limits of construction.

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 2A shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1. Class 2A shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches. This work will be included in the contract unit price per Square Yard for DECK SLAB REPAIR (PARTIAL)

Fertilizer shall be applied to all disturbed areas and incorporated into the seedbed prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be included in the cost of DECK SLAB REPAIR (PARTIAL).

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the DECK SLAB REPAIR (PARTIAL).

NO permits have been obtained to allow for the dropping of debris into the river. If any concrete or debris is dropped in the river, the contractor will be required to procure the proper permit(s) from the required Regulatory Agencies on their own. Any time delay or additional compensation due to the procuring of said permit(s) will not be given.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123.

INDEX OF SHEETS

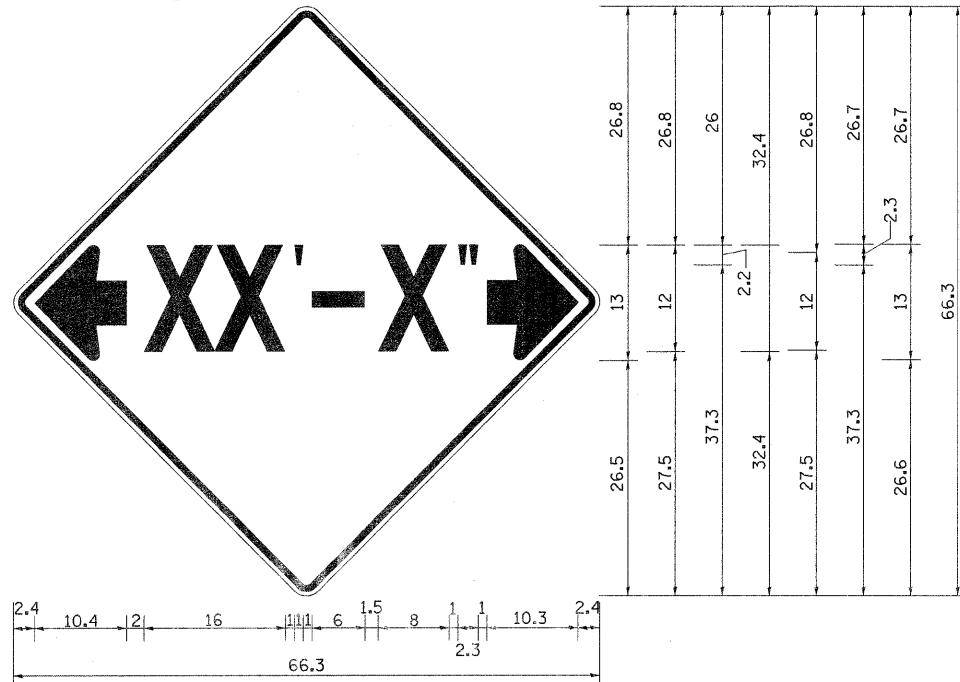
1. Cover Sheet
2. Summary of quantities
3. General notes
4. District Standard 39.2
5. -10. Traffic Control Stage I
11. -16. Traffic Control Stage II
17. -30. Bridge Repair Plans

STANDARDS

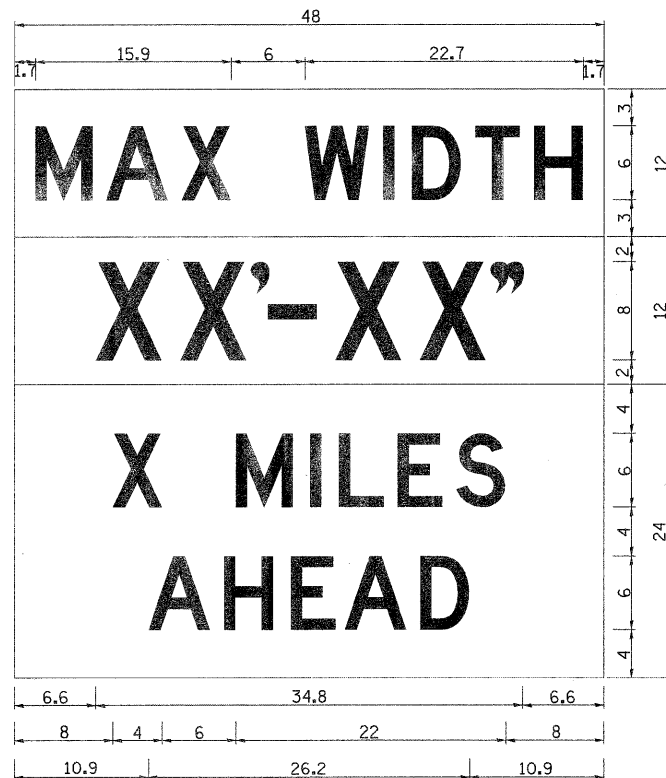
- 701101-02 Off-Road Operations, Multilane, 4.5 m (15') to 600 mm (24") From Pavement Edge
- 701400-05 Approach to Lane Closure, Freeway/Expressway
- 701402-09 Lane Closure, Freeway/Expressway, with Barrier
- 701426-04 Lane Closure, Multilane, Intermittent or Moving Operation, for Speeds > 45 MPH
- 701901-02 Traffic Control Devices
- 704001-07 Temporary Concrete Barrier
- 720001-01 Sign Panel Mounting Details
- 720006-02 Sign Panel Erection Details
- 720011-01 Metal Posts for Signs, Markers and Delineators
- 728001-01 Telescoping Steel Sign Support
- 729001-01 Applications of Types A and B Metal Posts (For Signs & Markers)

FILE NAME =	USER NAME = Iinkd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	General Notes, Index of Sheets, Standards	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\NBR\CADD plans\Rock Island County\231106\PLAN\eng.dgn		DRAWN -	REVISED -			280	181-1B/M-2	Rock Island	30	3	
PLOT SCALE = 50.0000 1/2 in.		CHECKED -	REVISED -			CONTRACT NO. 64F22					
PLOT DATE = Thu Oct 15 09:48:27 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



NOTES
 W12-2 - Horizontal Clearance Sign
 48.0" across sides, 1.9" Radius,
 0.8" Border, 0.5" Indent, Black on
 Orange; Standard Arrow Custom
 10.4" X 8.1" 180° Black 11 Inch
 D Series Lettering; Standard Arrow
 Custom 10.4" X 8.1" 0°



W12-I103 (Width Is 8D);
 No border, Black on White;
 [MAX WIDTH] D;

No border, Black on Orange;
 [XX'-XX"] D;

No border, Black on White;
 [X MILES] D; [AHEAD] D;

All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

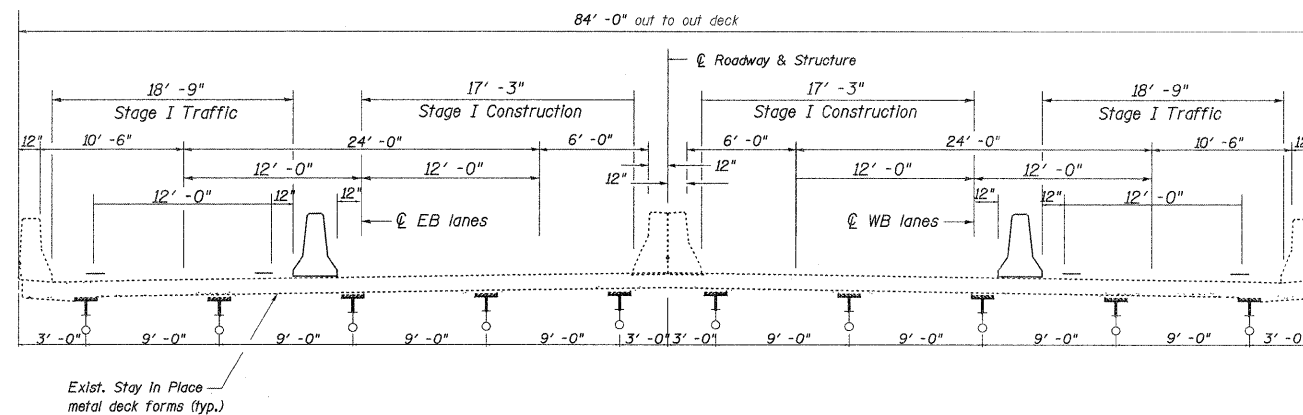
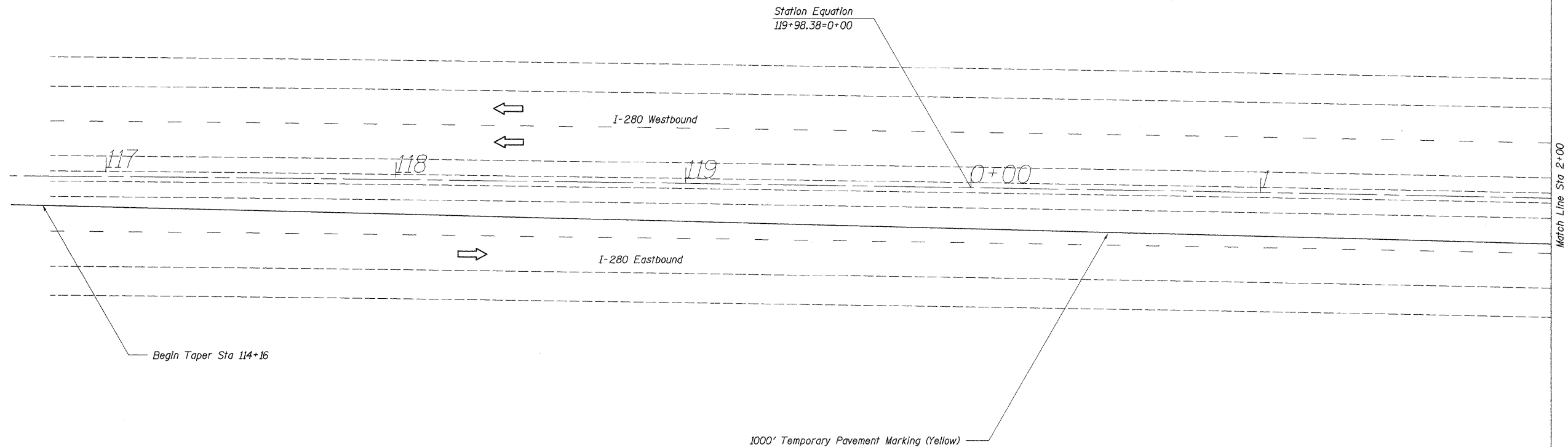
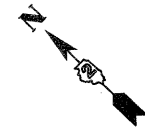
REVISED - 5-15-09

REVISED -	REGION 2 / DISTRICT 2 STANDARD	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -		280	(81-18)M-2	Rock Island	30	4
REVISED -		CONTRACT NO. 64F22				
REVISED -		ILLINOIS FED. AID PROJECT				

Traffic Control Plan Stage I

Iowa approach

Refer to Standard 701402 for additional signs and devices.



TYPICAL CROSS SECTION - STAGE I

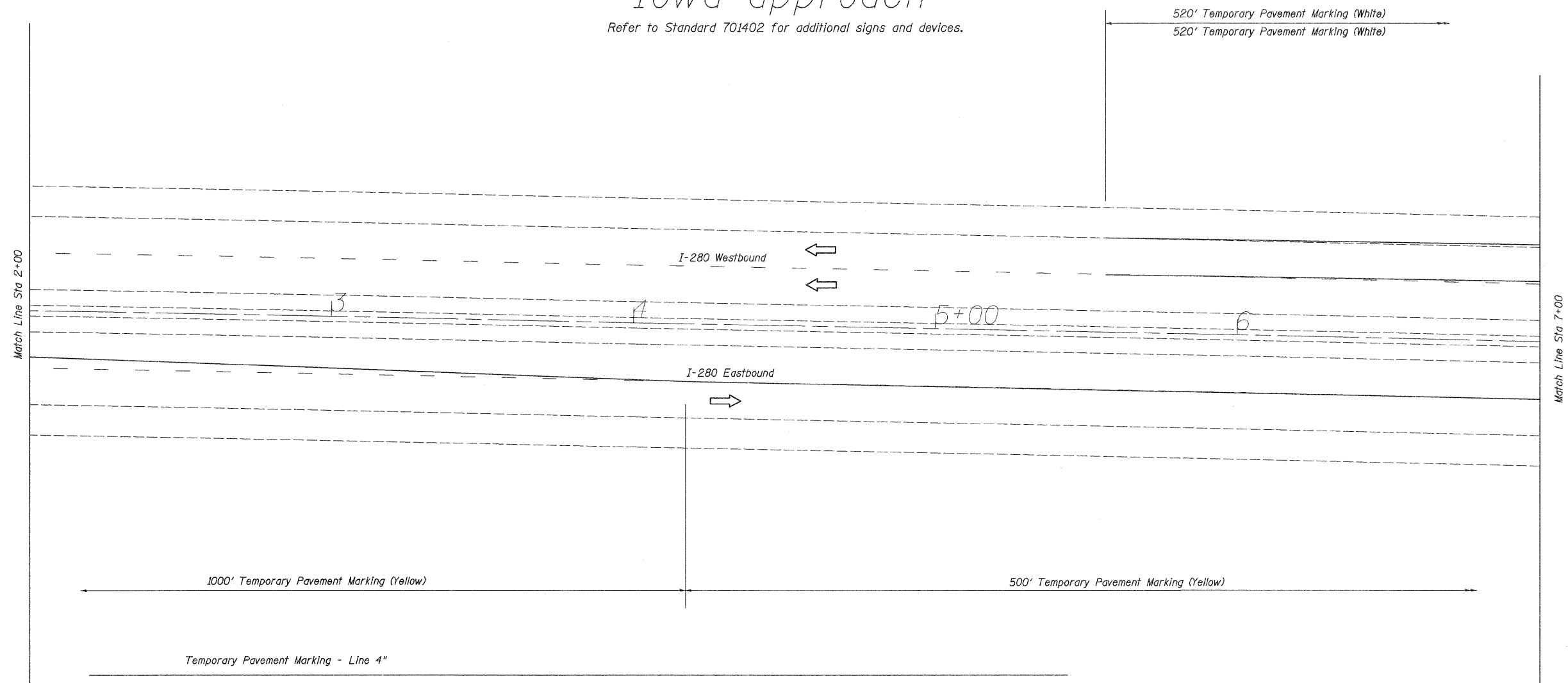
Pavement Marking Removal		Sq Ft
Iowa shift+tangent+Illinois shift		
Stage I		
Eastbound		
Right edgeline	4,610' x 6"	2,305
Westbound		
Right edgeline	4,610' x 6"	2,305
Stage II		
Eastbound		
Left edgeline	4,610' x 6"	2,305
Westbound		
Left edgeline	4,610' x 6"	2,305
		9,220 Sq Ft

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure No. 081-0106 Stage I Iowa Approach	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\NBR\CADD plans\Rock Island County\0810106\PLA\eng.dgn	PLLOT SCALE = 28.0000' / in.	DRAWN -	REVISED -			280	(81-1B)M-2	Rock Island	30	5
PLLOT DATE = Thu Oct 13 09:49:03 2011	DATE -	CHECKED -	REVISED -			CONTRACT NO. 64F22				
						ILLINOIS FED. AID PROJECT				

Traffic Control Plan Stage I

Iowa approach

Refer to Standard 701402 for additional signs and devices.

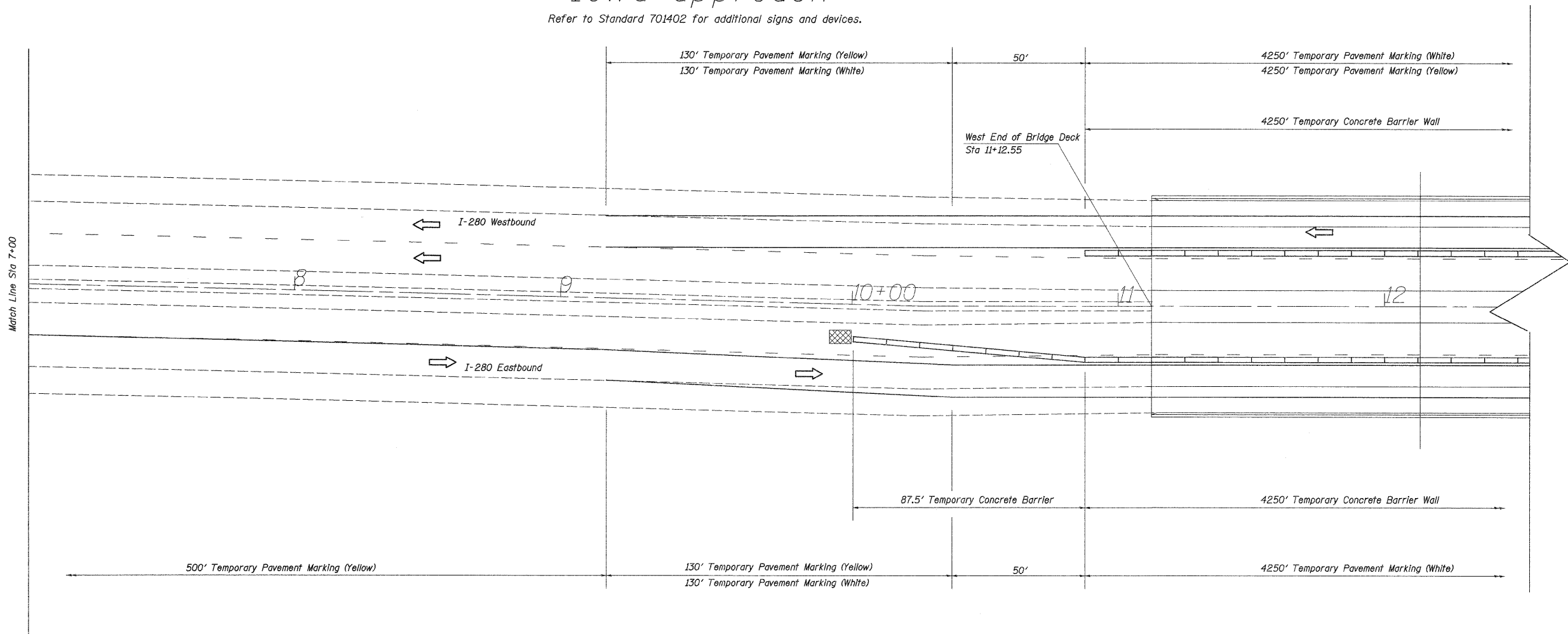


Stage I Eastbound		Stage I Westbound		Stage II Eastbound		Stage II Westbound	
1000' Taper	1000	1000' Taper	1000	1000' Taper	1000	1000' Taper	1000
500' Tangent	500	500' Tangent	500	500' Tangent	500	500' Tangent	500
Lane shift	2x130	Lane shift	2x130	Lane shift	2x130	Lane shift	2x130
50' Ext.	2x50	50' Ext.	2x50	50' Ext.	2x50	50' Ext.	2x50
Bridge	2x4250	Bridge	2x4250	Bridge	2x4250	Bridge	2x4250
50' Ext.	2x50	50' Ext.	2x50	50' Ext.	2x50	50' Ext.	2x50
Lane shift	2x130	Lane shift	2x130	Lane shift	2x130	Lane shift	2x130
10,720		10,720		10,720		10,720	
Total 4x10,720 = 42,880 Ft							

Traffic Control Plan Stage I

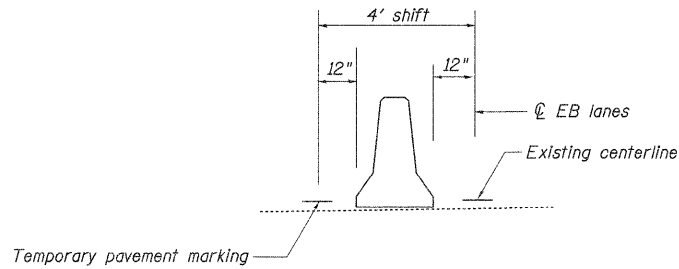
Iowa approach

Refer to Standard 701402 for additional signs and devices.



Temporary Concrete Barrier Wall		Ft
Stage I		
Eastbound	87.5+4250 =	4,337.5
Westbound	87.5+4250 =	4,337.5
Total		8,675 Ft

Temporary Impact Attenuators		Each
Stage I		
Eastbound		1
Westbound		1
Total		2 Each



Barrier wall/Traffic Shift detail

FILE NAME =	USER NAME = lmkdj	DESIGNED -	REVISED -
D:\BR\CADD\plans\Rock Island County\081-181M-2\186VPLAeng.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
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	PLOT DATE = Thu Oct 13 09:49:20 2011		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

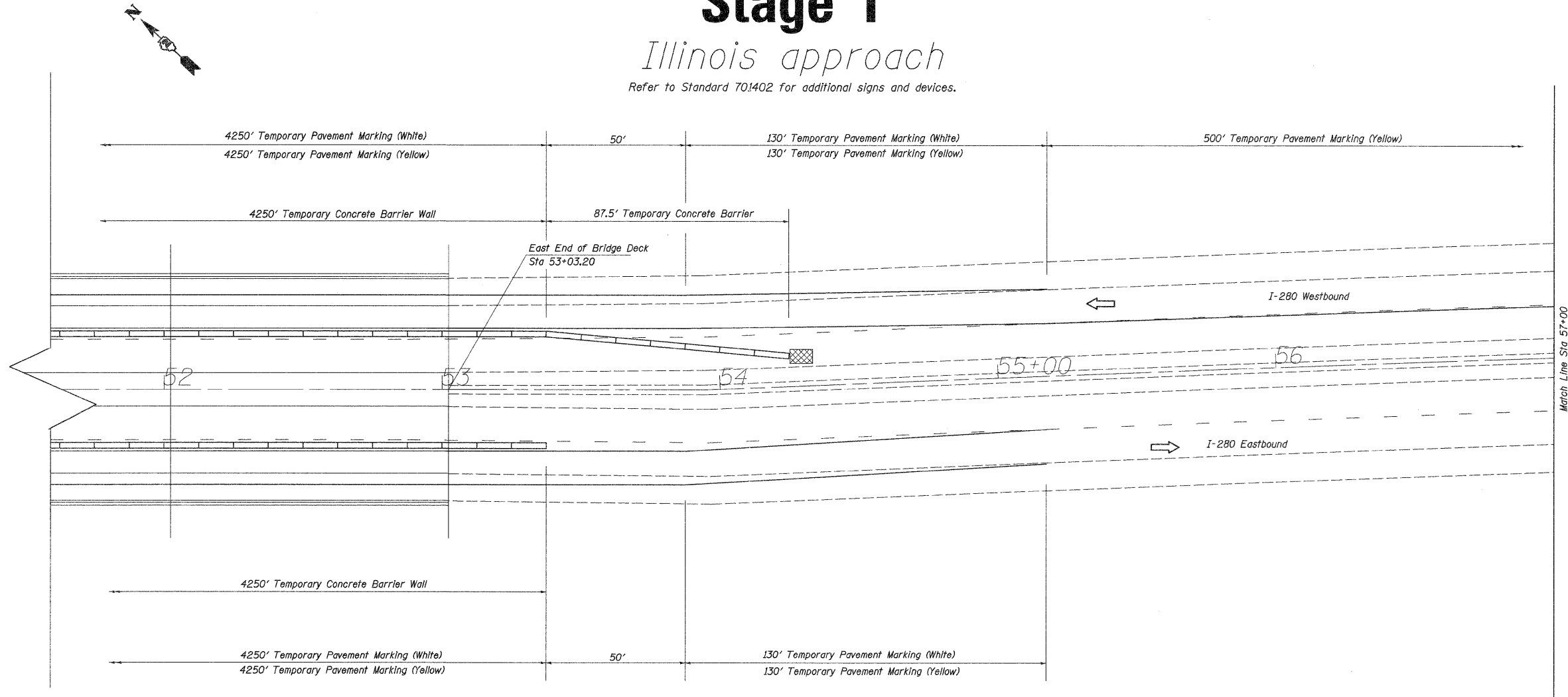
**Traffic Control Plan
Structure No. 081-0106 Stage I Iowa Approach**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
280	(81-181M-2)	Rock Island	30	7
CONTRACT NO. 64F22			ILLINOIS FED. AID PROJECT	

Traffic Control Plan Stage I

Illinois approach

Refer to Standard 701402 for additional signs and devices.

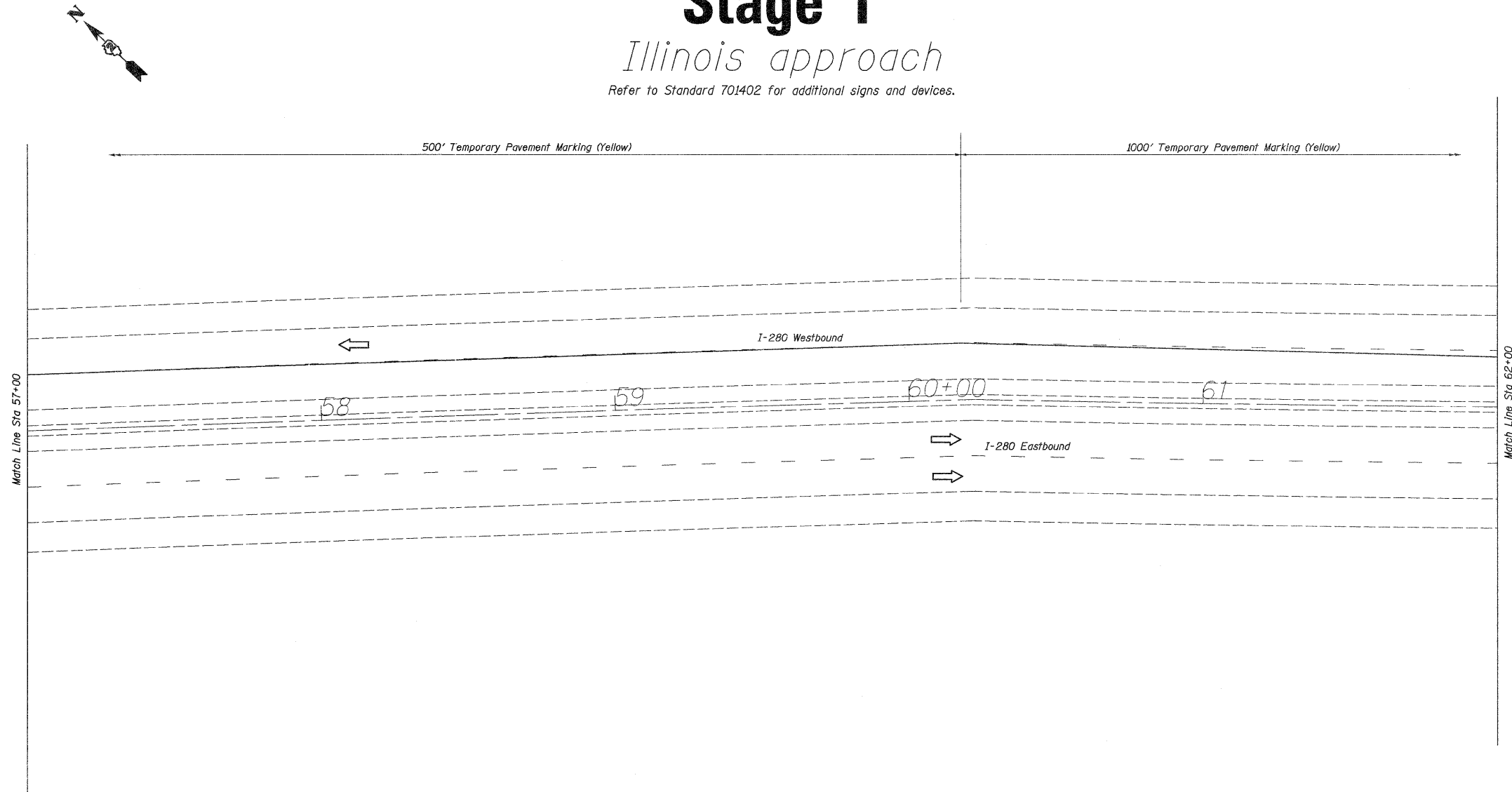


FILE NAME =	USER NAME = linkd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure 081-0106 Stage I Illinois Approach	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = Thu Oct 13 09:49:26 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

Traffic Control Plan Stage I

Illinois approach

Refer to Standard 701402 for additional signs and devices.



FILE NAME =	USER NAME = jinkdj	DESIGNED -	REVISED -
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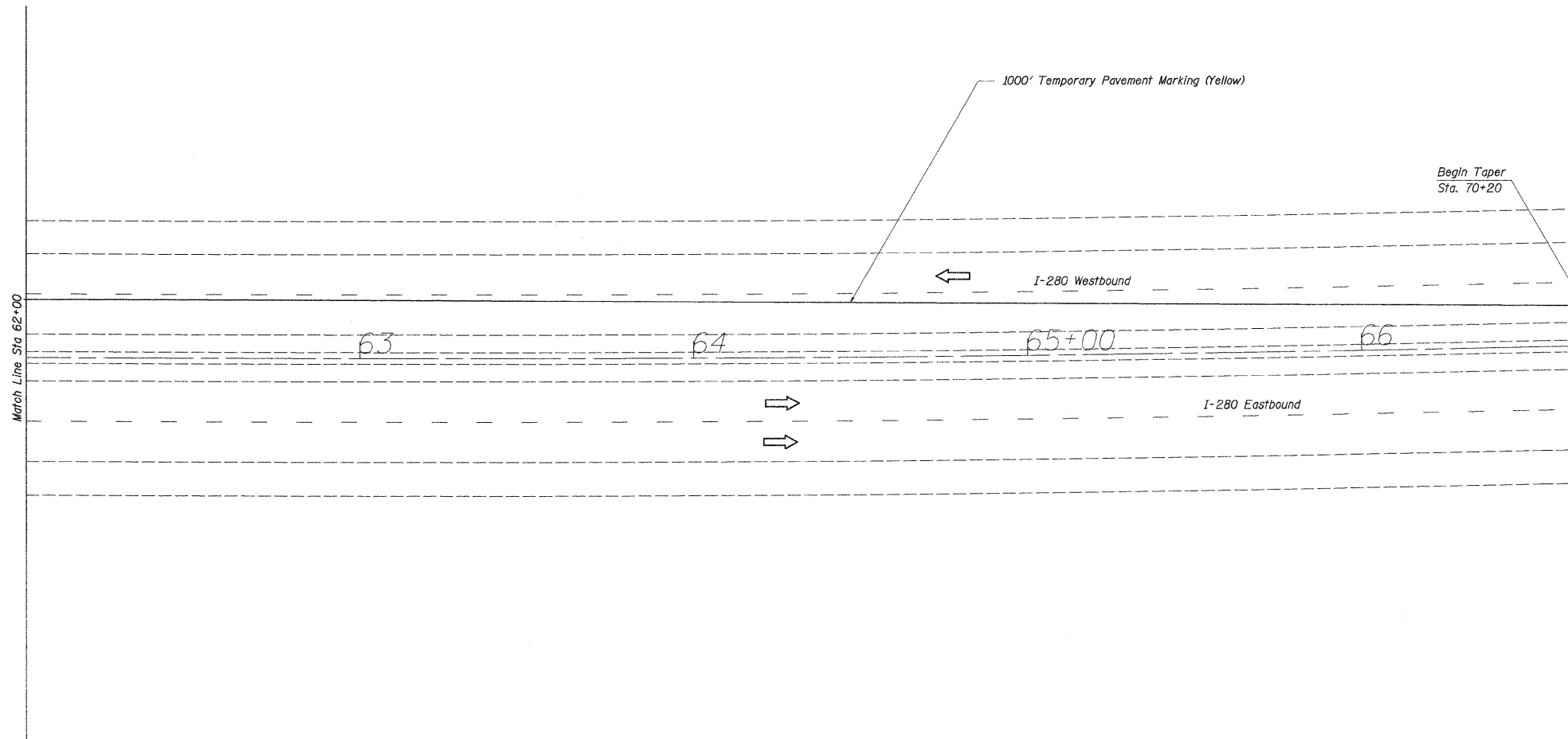
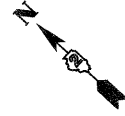
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**Traffic Control Plan
Structure No. 081-0106 Stage I Illinois Approach**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
280	081-1BIM-2	Rock Island	30	9
CONTRACT NO. 64F22			ILLINOIS FED. AID PROJECT	

Traffic Control Plan Stage I

Illinois approach
Refer to Standard 701402 for additional signs and devices.

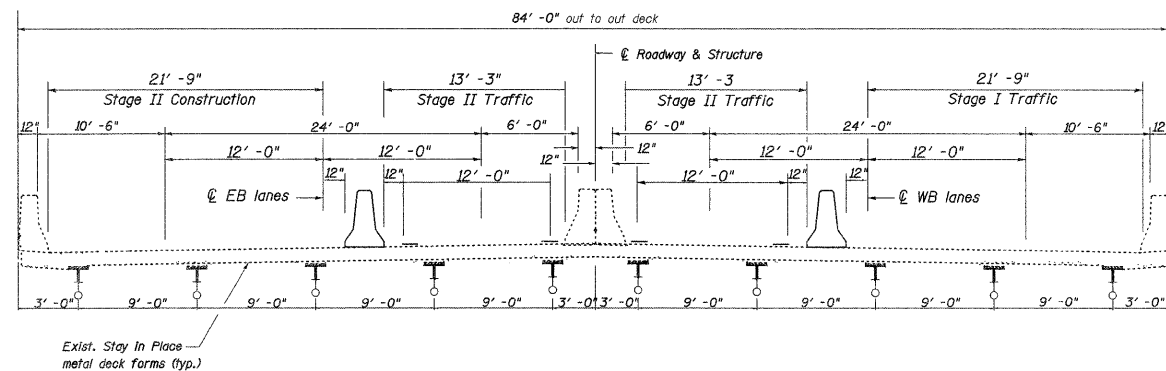
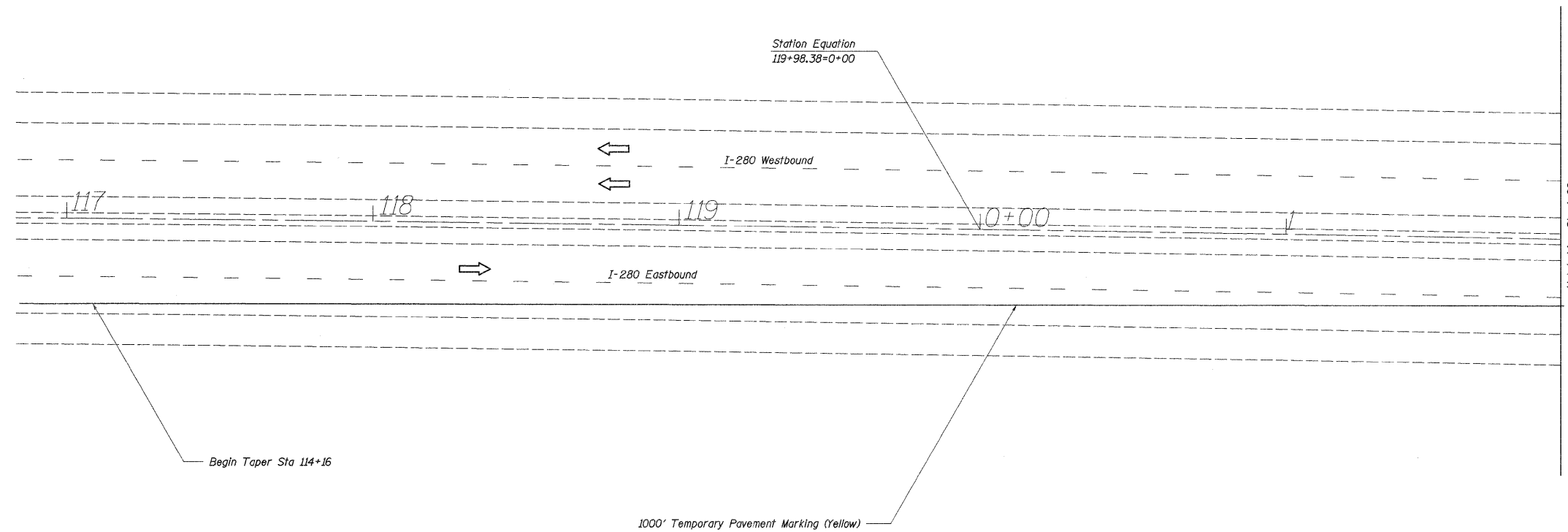


FILE NAME =	USER NAME = jinkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		CHECKED -	REVISED -		SCALE =	SHEET NO. =	OF =	SHEET IS	DATE	TO STA.	CONTRACT NO. 64F22	
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Traffic Control Plan Stage II

Iowa approach

Refer to Standard 701402 for additional signs and devices.



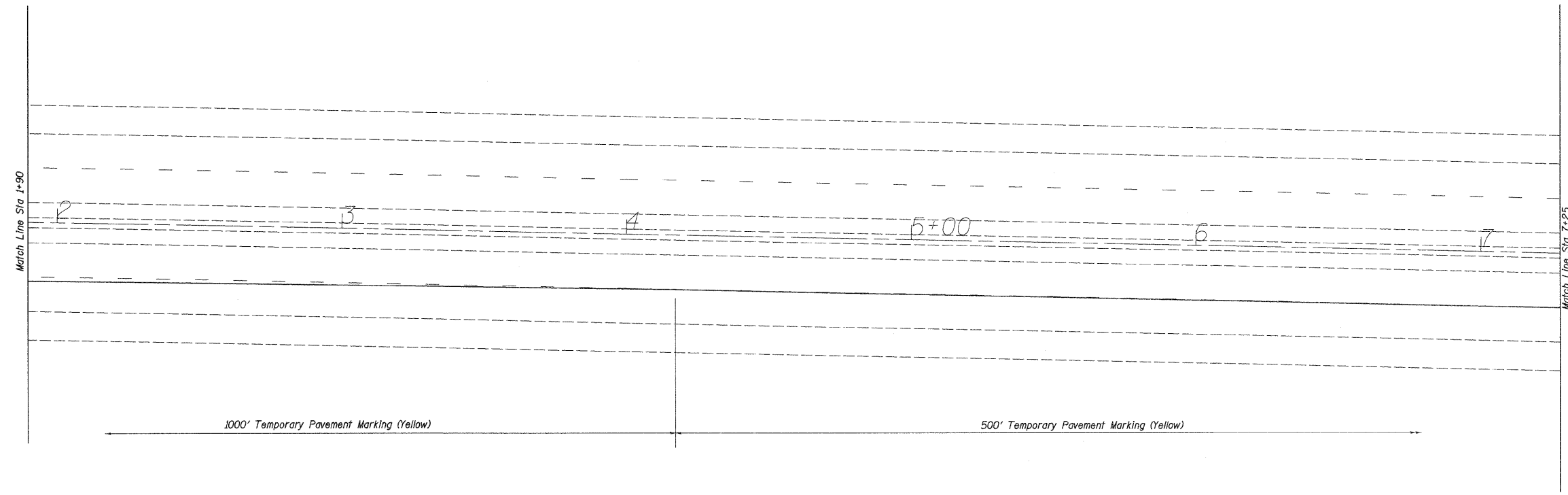
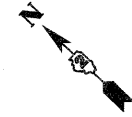
TYPICAL CROSS SECTION - STAGE II

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\CADD plans\Rock Island County\2011\186\PLAN\eng.dgn		DRAWN -	REVISED -		Structure No. 081-0106 Stage II Iowa Approach		280	(81-181M-2	Rock Island	30	11
	PLOT SCALE = 22,4984' / in.	CHECKED -	REVISED -				CONTRACT NO. 64F22				
	PLOT DATE = Thu Oct 13 09:49:56 2011	DATE -	REVISED -				ILLINOIS FED. AID PROJECT				

Traffic Control Plan Stage II

Iowa approach

Refer to Standard 701402 for additional signs and devices.



Workzone Pavement Marking Removal

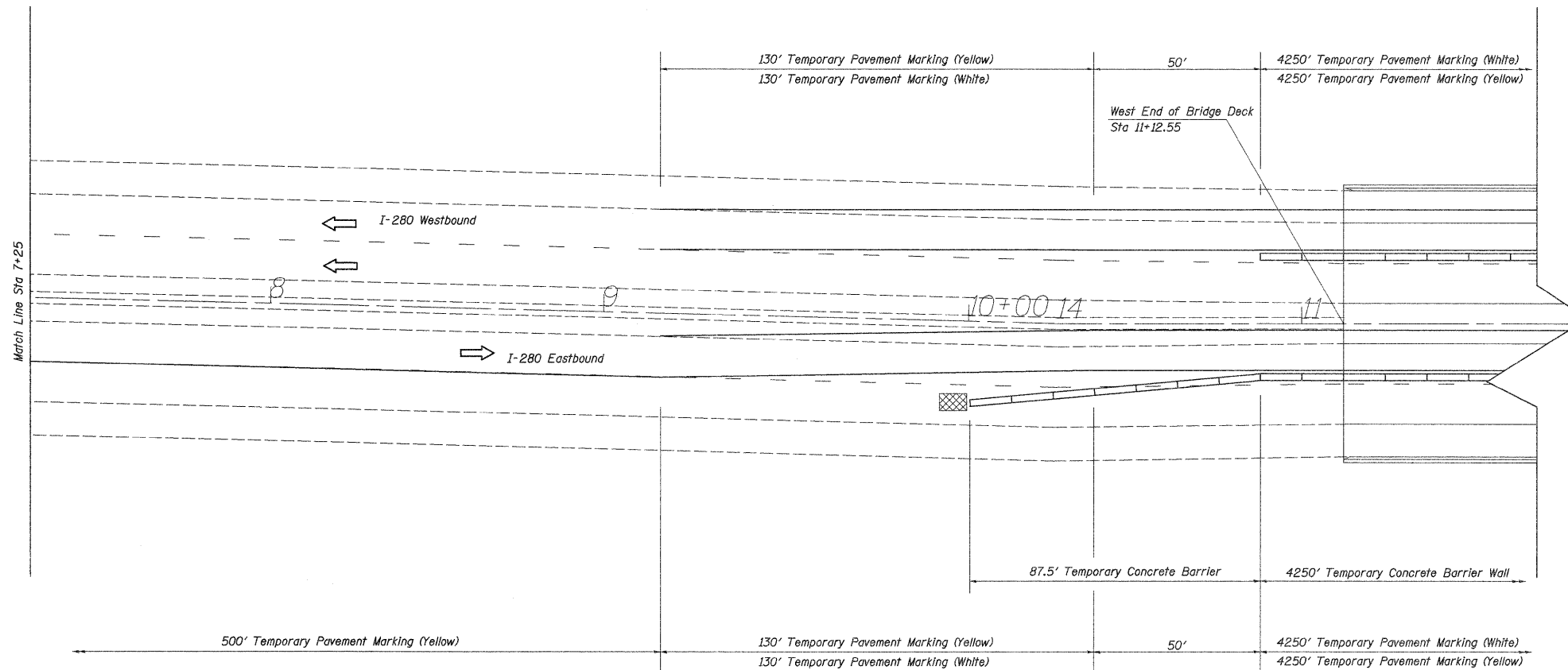
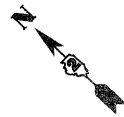
Stage I	Sq Ft
Eastbound	3,575
Westbound	3,575
Stage II	
Eastbound	3,575
Westbound	3,575
Total 14,300 Sq Ft	

FILE NAME =	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure No. 081-0106 Stage II Iowa Approach	F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\BR\CADD\plans\Rock Island County\081-0106\PLAN\ang-dgn		DRAWN -	REVISED -			280	(81-18)M-2	Rock Island	30	12	
PLOT SCALE = 22.4984" / in.		CHECKED -	REVISED -			CONTRACT NO. 64F22					
PLOT DATE = Thu Oct 13 09:50:02 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

Traffic Control Plan Stage II

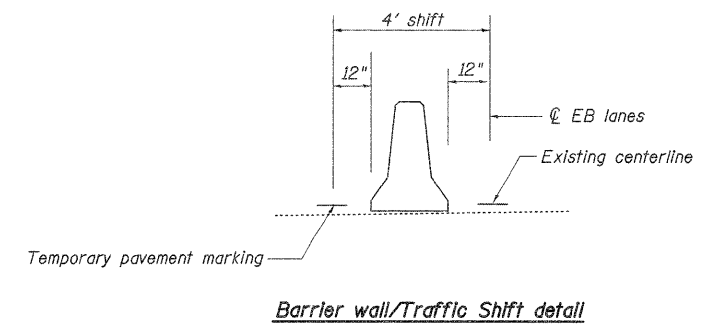
Iowa approach

Refer to Standard 701402 for additional signs and devices.

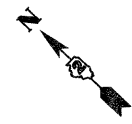


Relocate Temporary Concrete Barrier Wall	
Stage II	Ft
Eastbound	87.5+4250 = 4,337.5
Westbound	87.5+4250 = 4,337.5
Total 8,675 Ft	

Relocate Temporary Impact Attenuators	
Stage II	Each
Eastbound	1
Westbound	1
Total 2 Each	



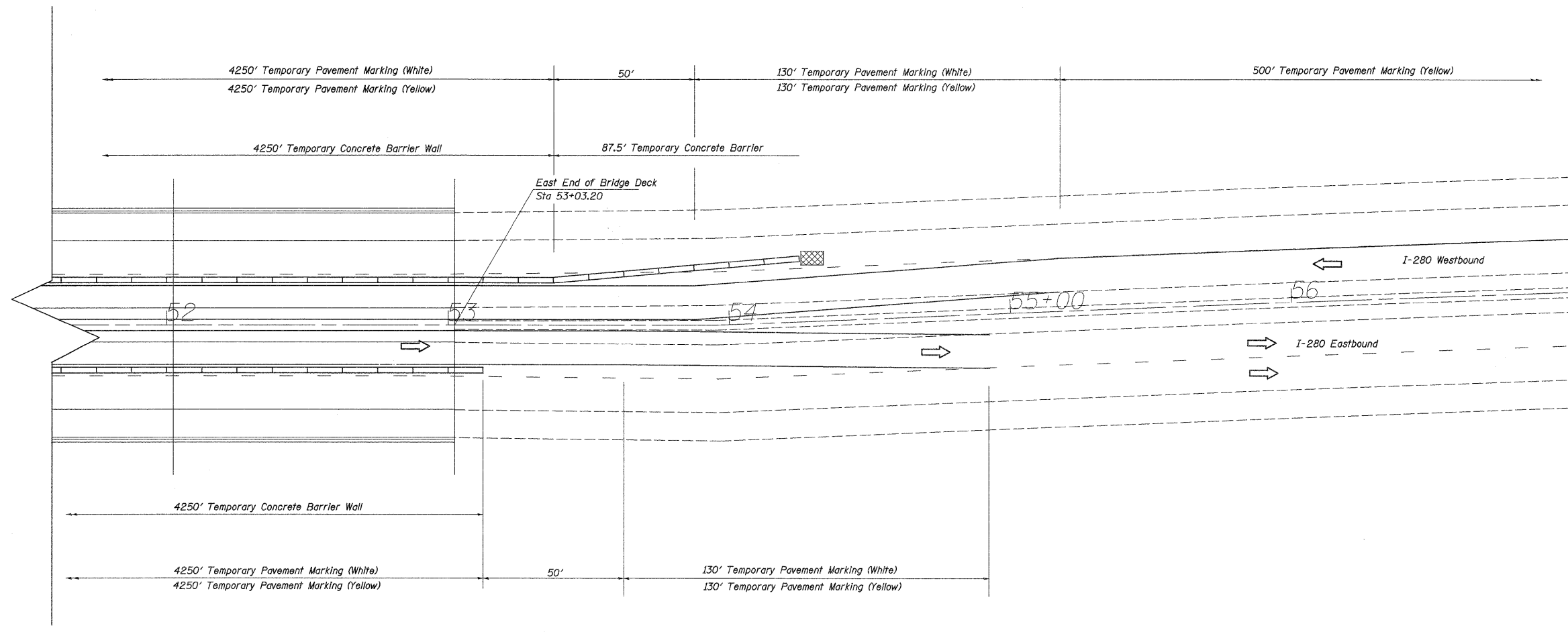
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C:\BR\CADD\plans\Rock Island County\081-0106\PLA\eng.dgn		DRAWN -	REVISED -			280	(81-181M-2)	Rock Island	30	13
PLOT SCALE = 22.4984' / in.		CHECKED -	REVISED -			CONTRACT NO. 64F22				
PLOT DATE = Thu Oct 13 09:58:09 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				



Traffic Control Plan Stage II

Illinois approach

Refer to Standard 701402 for additional signs and devices.

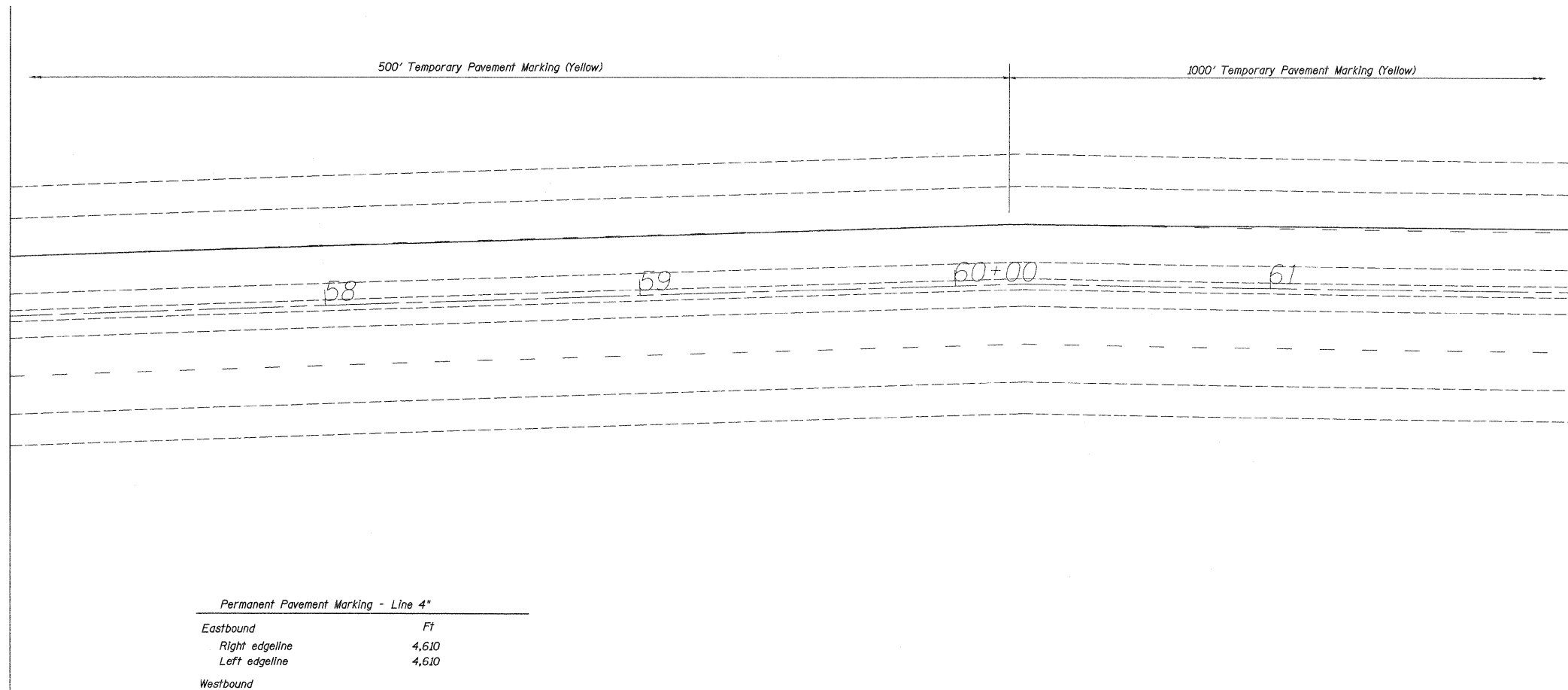


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D:\BR\CADD\plans\Rock Island County\081-0106\PLA\eng.dgn		DRAWN -	REVISED -			280	(81-18)M-2	Rock Island	30	14
PLOT SCALE = 22.4'@84' / in.		CHECKED -	REVISED -			CONTRACT NO. 64F22				
PLOT DATE = Thu Oct 13 09:58:19 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

Traffic Control Plan Stage II

Illinois approach

Refer to Standard 701402 for additional signs and devices.



Permanent Pavement Marking - Line 4"

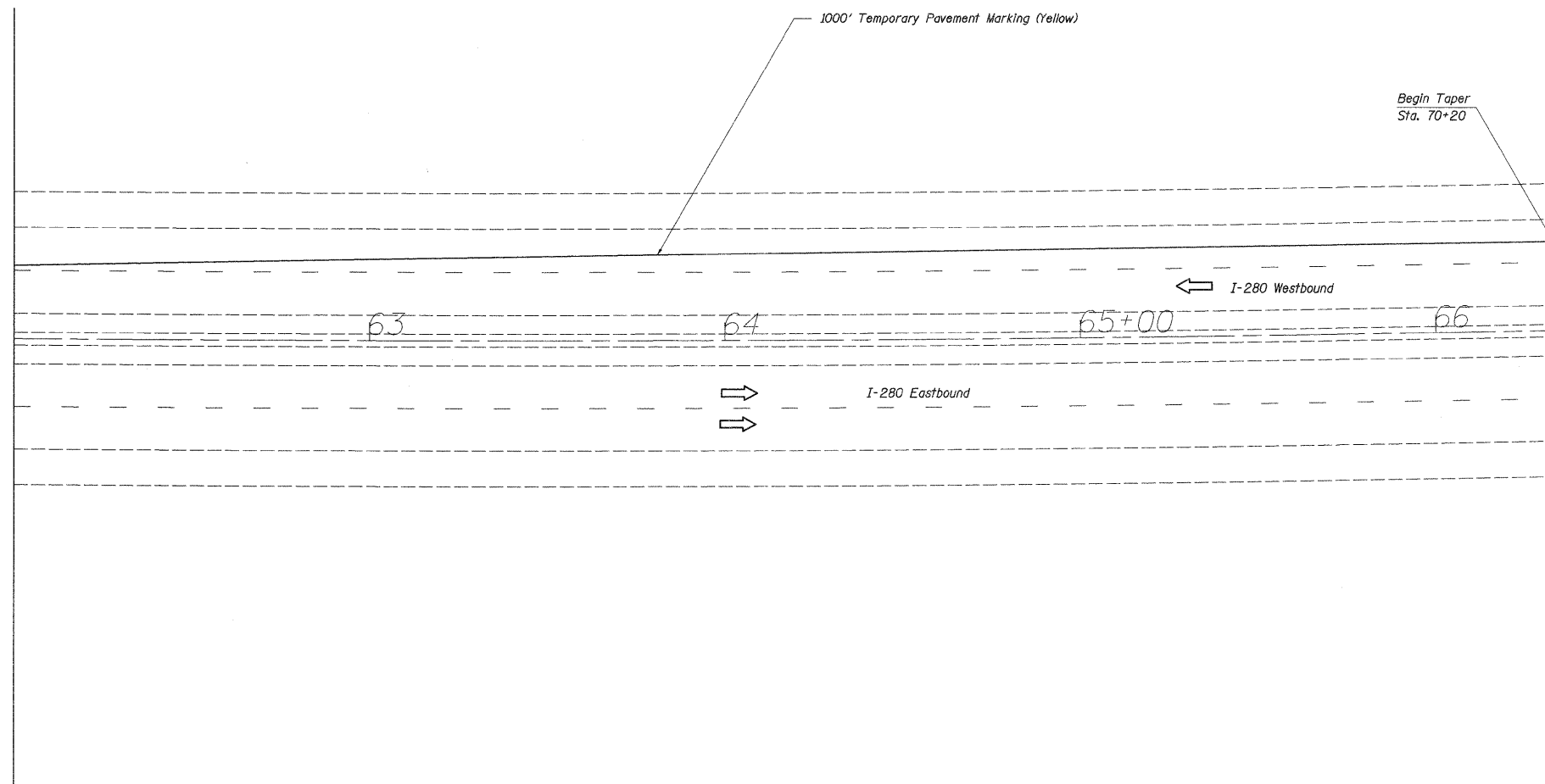
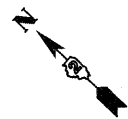
Eastbound	Ft
Right edgeline	4,610
Left edgeline	4,610
Westbound	
Right edgeline	4,610
Left edgeline	4,610
Total 18,440 Ft	

FILE NAME =	USER NAME = lmkidj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure No. 081-0106 Stage II Illinois Approach	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BRYCADD\plans\Rock Island County\081-0106\PLANeng.dgn		DRAWN -	REVISED -			280	(81-181M-2)	Rock Island	30	15
PLOT SCALE = 22,4984' / in.		CHECKED -	REVISED -			CONTRACT NO. 64F22				
PLOT DATE = Thu Oct 13 09:58:25 2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

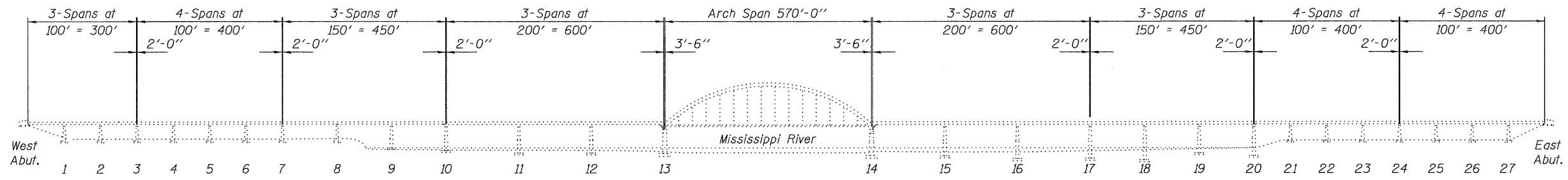
Traffic Control Plan Stage II

Illinois approach

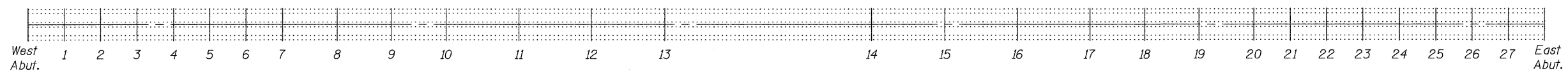
Refer to Standard 701402 for additional signs and devices.



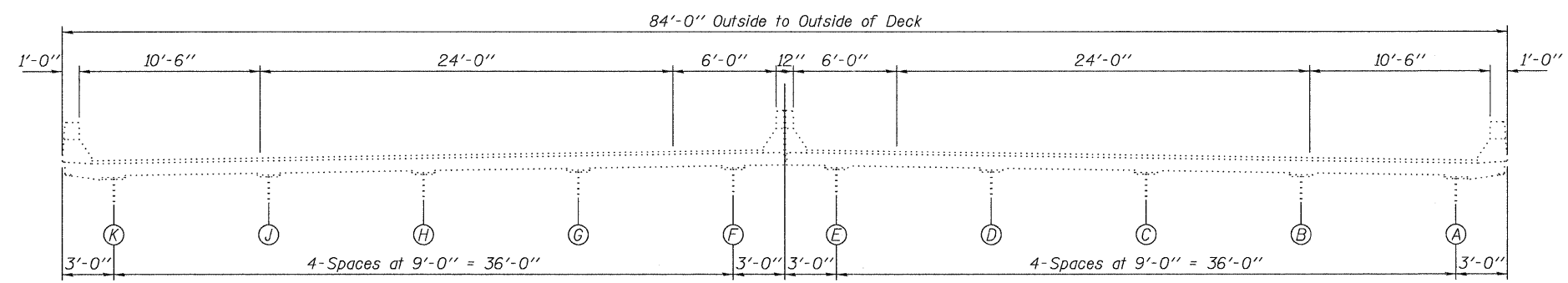
FILE NAME = D:\BRVCADD plans\Rock Island County\081-0106\PLA\engudgn	USER NAME = linkdj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Traffic Control Plan Structure No. 081-0106 Stage II Illinois Approach	F.A.I. RTE. 280	SECTION (81-1BIM-2)	COUNTY Rock Island	TOTAL SHEETS 30	SHEET NO. 16
PLOT SCALE = 22.4984 1/2 in.	CHECKED -	REVISED -	CONTRACT NO. 64F22							
PLOT DATE = Thu Oct 13 09:50:39 2011	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							



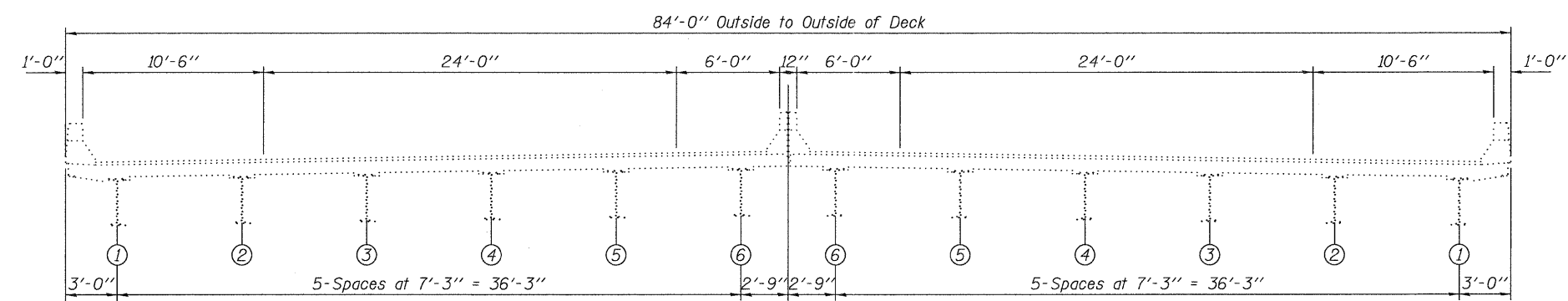
ELEVATION



PLAN



SECTION THRU APPROACH SPANS
(Looking West)



SECTION THRU ARCH SPAN
(Looking West)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Cleaning and Painting Structural Steel Location 1	L.S.	1
Containment and Disposal of Lead Paint Cleaning Residue	L.S.	1
Fabric Reinforced Elastomeric Trough	Foot	540
Silicone Joint Sealer, 1"	Foot	4193
Silicone Joint Sealer, 1/2"	Foot	336
Concrete Removal	Cu. Yd.	18.5
Reinforcement Bars, Epoxy Coated	Pound	210
Concrete Superstructure	Cu. Yd.	18.5
Drainage Scupper, DS-12	Each	2
Structural Steel Repair	Pound	205
Parapet Railing, Special	Foot	7
Deck Slab Repair, Partial Depth	Sq. Yd.	1940.2



Expires: November 30, 2012

DESIGNED - <i>Marcus R. Christensen</i>	EXAMINED - <i>David Carl Puzey</i> ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - NOVEMBER 23, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION I-280 OVER THE MISSISSIPPI RIVER SN 081-0106	F.A.I. RTE. 280	SECTION (81-1B)M-2	COUNTY ROCK ISLAND	TOTAL SHEETS 30	SHEET NO. 17
CHECKED - <i>Kyle M. Steffen</i>	PASSED - <i>David Carl Puzey</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED			CONTRACT NO. 64F22				
DRAWN - <i>Kyle M. Steffen</i>	REVISED	SHEET NO. 1 OF 14 SHEETS							
CHECKED - <i>MAC IJL</i>		ILLINOIS FED. AID PROJECT							

SCOPE OF WORK

1. Install New Finger Plate Troughs at Piers 3, 7, 10, 17, 20 & 24.
See sheet 3 of 14 for details.
2. Replace loose or missing bolts. See table on sheet 4 of 14 for details.
3. Install Silicone Joint Sealer Full length of Median Parapet.
See sheet 4 of 14 for details.
4. Drill Crack Arrestor Holes. See table on sheet 4 of 14.
5. Caulk leaking areas with silicone caulk. See table on sheet 4 of 14 for details.
6. Remove and replace selected deteriorated portions of the parapets.
See sheet 5 of 14 for details.
7. Remove and replace two scuppers within the tied arch span.
See sheets 6 & 7 of 14 for details.
8. Repair a portion of the existing steel walkway. See sheet 8 of 14 for details.
9. Remove and replace a damaged section of the aluminum rail and aluminum post.
See sheet 9 of 14 for details.
10. Clean and paint a portion of the interior of the ties boxes.
See sheet 10 of 14 for details.
11. Perform deck slab repair, partial depth, on the bridge deck.
See sheets 11 thru 14 of 14 for details.
12. Remove selected portions of the joint seals at the relief joints on the tied arch span. See sheet 14 of 14 for details.

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi (Concrete)
 f_y = 36,000 psi (Structural Steel)
 f_y = 60,000 psi (Reinforcement)

GENERAL NOTES

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

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$ " ϕ , open holes $\frac{13}{16}$ " ϕ , unless otherwise noted.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete around the new scuppers, 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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that can not be removed by grinding $\frac{1}{4}$ " inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners, and damaged areas shall be touched up in the field. The final finish coat shall be Blue, Munsell No. 10B 3/6.

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".

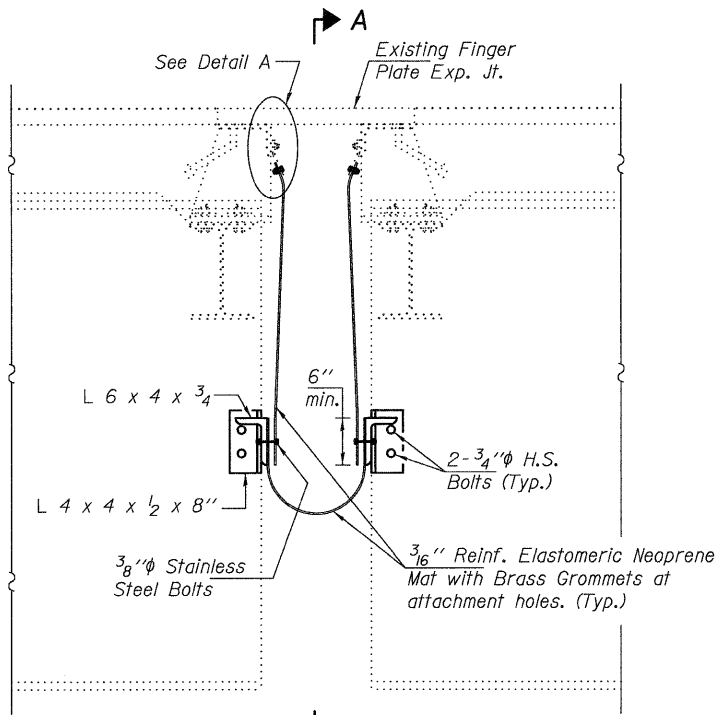
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-built Plans.

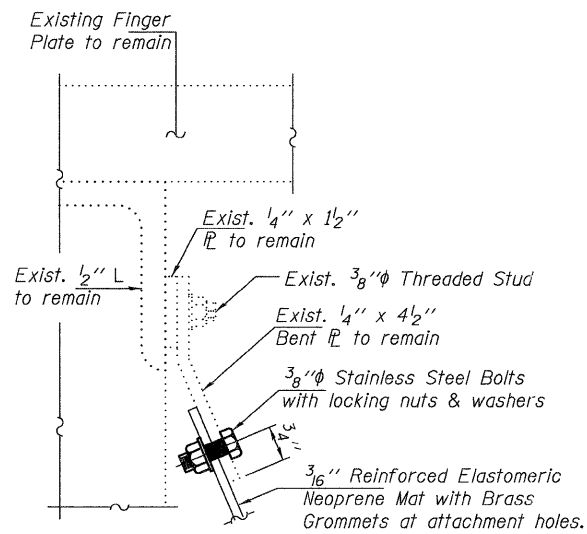
The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

No field welding is permitted except as specified in the contract documents.

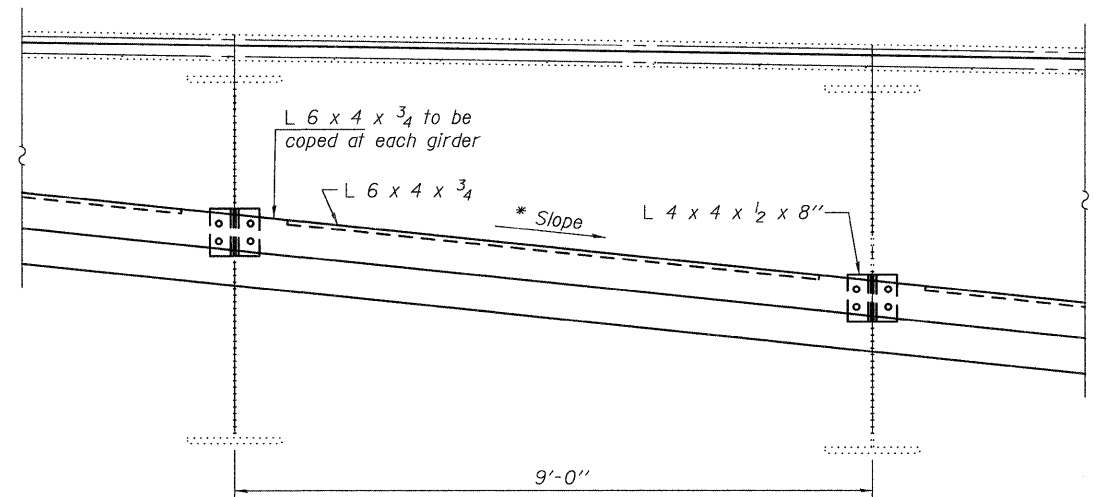
DESIGNED - Marcus K. Christensen	EXAMINED	DATE - NOVEMBER 23, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & SCOPE OF WORK SN 081-0106	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - Irvln J. Lopez	PASSED	ACTING ENGINEER OF STRUCTURAL SERVICES			280	(81-18)M-2	ROCK ISLAND	30	18	
DRAWN - Kyle M. Steffen		REVISOR			CONTRACT NO. 64F22					
CHECKED - MKC IJL		ACTING ENGINEER OF BRIDGES AND STRUCTURES			REVISOR	ILLINOIS FED. AID PROJECT				
SHEET NO. 2 OF 14 SHEETS										



TYPICAL SECTION THRU TROUGH



DETAIL A

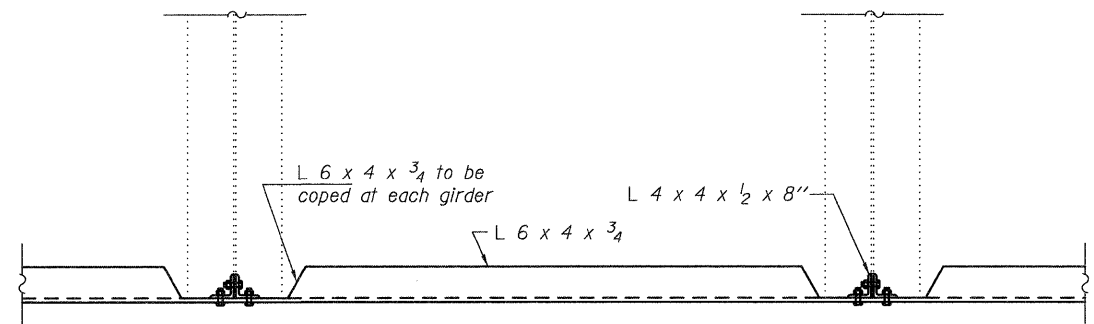


TROUGH DETAILS - PARTIAL ELEVATION

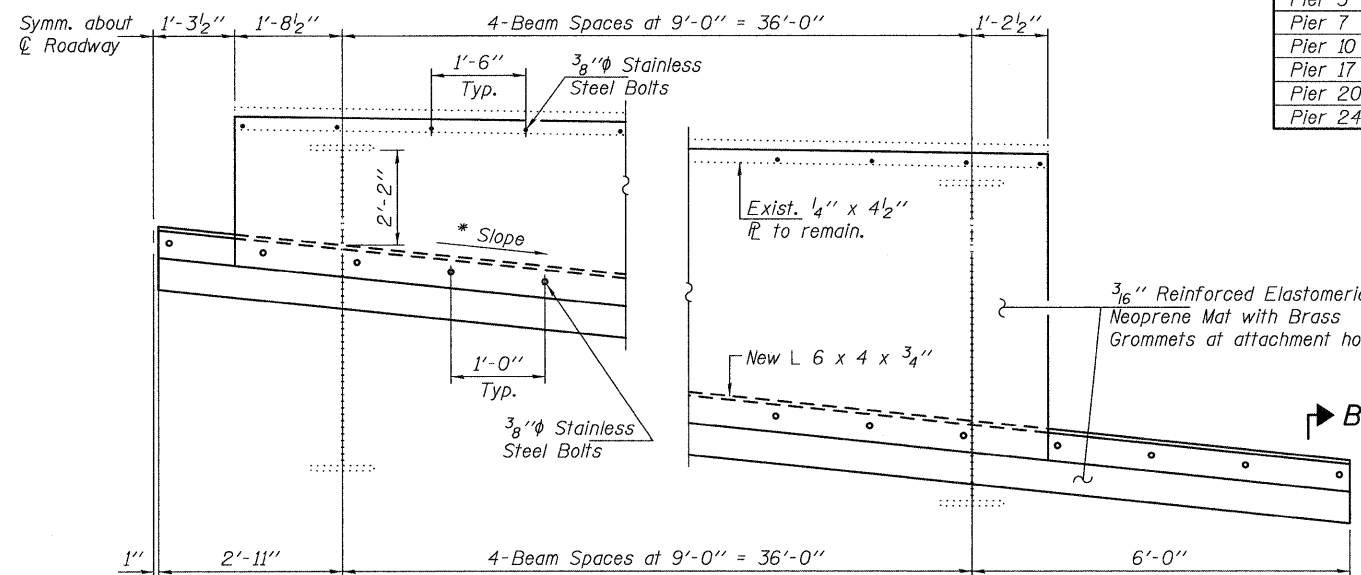
* See table for slope dimension.

SLOPE TABLE

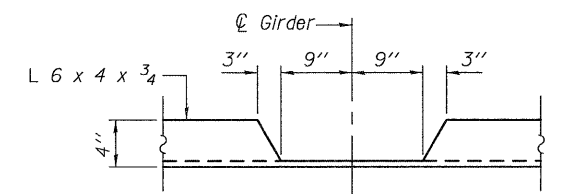
Location	Slope
Pier 3	0.875"/ft.
Pier 7	1.25"/ft.
Pier 10	1.50"/ft.
Pier 17	1.50"/ft.
Pier 20	1.25"/ft.
Pier 24	0.875"/ft.



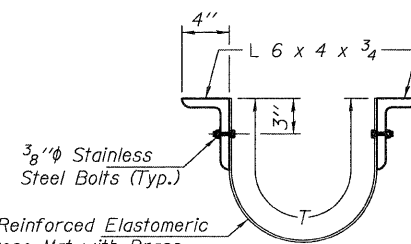
TROUGH DETAILS - PARTIAL PLAN



SECTION A-A



TROUGH DETAILS - COPE DETAIL



SECTION B-B

Notes:
 The Contractor shall remove the existing neoprene mats and the lower existing angles from the steel girders at each pier as noted on this sheet. All debris laying on top of the girder flanges (within 8 feet of the girder ends), angles, and on top of the pier cap, shall be removed by the use of brooms and high pressure water. The cost to remove the existing neoprene mats and the existing angles, and to remove the debris, is included with the pay item Fabric Reinforced Elastomeric Trough.
 The reinforced elastomeric neoprene mat, all associated hardware angles, and plates are included in the pay item "Fabric Reinforced Elastomeric Trough."
 All bolts, other associated hardware, angles, and plates shall be hot dipped galvanized. The hot dipped galvanizing requirement is included in the pay item Fabric Reinforced Elastomeric Trough.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Fabric Reinforced Elastomeric Trough	Foot	540

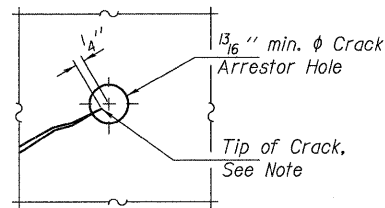
DESIGNED - Marcus K. Christensen	EXAMINED - <i>James F. Jelliff</i>	DATE - NOVEMBER 23, 2011
CHECKED - Irvin J. Lopez	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl P. ...</i>	REVISED
CHECKED - MKC IJL	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TROUGH REPLACEMENT DETAILS
 SN 081-0106

SHEET NO. 3 OF 14 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
280	(81-1B)M-2	ROCK ISLAND	30	19
CONTRACT NO. 64F22			ILLINOIS FED. AID PROJECT	



CRACK ARRESTOR HOLE DETAIL

Note:

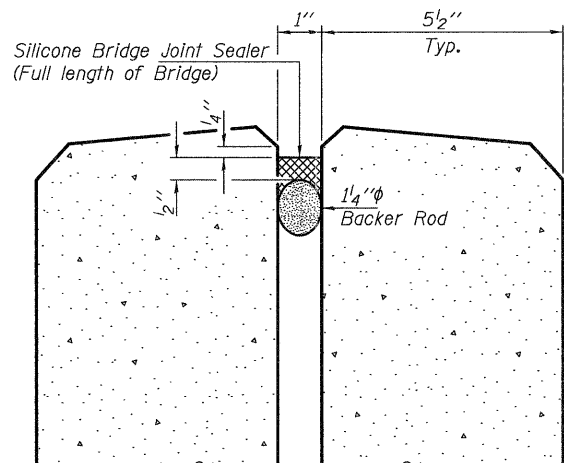
Locate crack tip using liquid dye penetrant or magnetic particle testing. Drill 13/16" min. ϕ Crack Arrestor hole at the crack tip. After crack arrestor hole has been drilled, dye penetrant or magnetic particle testing shall be used to verify that the drilled hole has captured the crack tip.

A high strength bolt with washers shall be installed, when possible, in the crack arrestor hole.

All work and material required to drill the holes shall be included in the pay item "Structural Steel Repair".

TABLE FOR LOCATIONS OF CRACK ARRESTOR HOLE DRILLING

Span	Member	Location	Deficiency
14	F.B. 0	Pier 13, South End	6" Crack, Web to Flange Weld
14	F.B. 0	Pier 13, North End	2 1/2" Crack in Web
14	F.B. 0'	Pier 14, North End	1" Crack in Web
18	Girder J	Pier 17	4 1/2" Crack, Web to Bott. Flange Weld



MEDIAN PARAPET JOINT SEALER DETAILS

Note:

The existing longitudinal joint at the median parapets shall be cleaned and sandblasted prior to the installation of the Backer Rod and the Silicone Bridge Joint Sealer. The new Bridge Joint Sealer shall be installed on the entire length of the bridge. See special provision "Silicone Bridge Joint Sealer".

TABLE FOR LOCATIONS OF SILICONE CAULKING

Span	Member	Location	Deficiency
14	South Arch	Top chamber at splice plate, btwn. T4 & T5	Leaking water causing rust
14	South Tie	2nd & 6th splice plate west to east	Leaking water causing P.R.
14	South Arch	Pier 14, where tie connects to arch	Gap letting water in, plugged drain holes need to be unplugged.

Note:

Surface preparation in advance of silicone caulking shall entail the removal of rust from the surface to be caulked. At a minimum, wire brushes and compressed air shall be utilized to prepare a bondable surface for the silicone caulking. The silicone caulk shall be 100% silicone caulk with a cured color of clear. All drain holes that are plugged shall be unplugged. All work and material necessary to complete the silicone caulking at the locations noted in the table shall be included in the pay item "Structural Steel Repair".

TABLE OF BOLT REPAIRS

Span	Member	Location	Deficiency
9	Girder H	W. Splice, Bott. \bar{P}	1 Loose Bolt
12	Girder J	W. Splice	1 Loose Bolt
13	Cross Girder	Pier 13, below Girder D	1 Missing Bolt
14	Lower Lateral Bracing	FB. 3, below Stringer 6	1 Loose Bolt
14	Lower Lateral Bracing	10' from FB. 7, Pan. 7'	1 Missing Bolt
14	Catwalk	FB. 6', P.P. 5'	1 Missing Bolt
14	FB. 1'	Stringer 2, Pan. 0'	1 Loose Bolt
14	Lower Lateral Bracing	FB. 0', below Stringer 3 T. Conn. \bar{P}	5 Loose Bolts & 1 Missing Nut
14	Wind Bracing Strut	3' N. of \bar{C} of FB. 0' W. Fa. below FB. 0'	1 Broken Bolt at Sliding Connection
15	Cross Frame	3rd C.F. from Pier 14 btwn. Gir. H & J, Gir. H Bott Conn.	3 Loose Bolts
16	Girder G	Splice E. of Pier 15, at Bottom Flange \bar{P}	1 Loose Bolt
16	Cross Frame	3rd C.F. E. of Pier 15 btwn. Girders G & H at Gir. H	3 Loose Bolts
16	Cross Frame	4th C.F. E. of Pier 15 btwn. Girders G & H at Gir. H	3 Loose Bolts
17	Cross Frame	4th C.F. E. of Pier 17 btwn. Girders H & J at Gir. H	2 Loose Bolts
17	Cross Frame	3rd C.F. E. of Pier 17 btwn. Girders H & J at Gir. H	1 Loose Bolt
17	Cross Frame	2nd C.F. E. of Pier 17 btwn. Girders G & H at Gir. H	2 Loose Bolts
18, 19	Bearing	Girder F & G at Pier 18	Missing Bolt conn. Top Sole \bar{P} to Brg.
21	Bearing	Girder J at Pier 20	Missing Shoulder Bolt Nut for Pin
25	Cross Frame	1st C.F. E. of Pier 24 btwn. Girders H & J at Gir. H	6 Loose Bolts (3 top, 3 bott.)

Note:

Loose bolts shall be removed and then replaced with bolts meeting the Standard Specifications. New bolts shall match the diameter and length of the existing bolts. New bolts shall be ASTM 325 High Strength Bolts. All work and material necessary to complete the bolt replacement as noted in the table shall be included in the pay item "Structural Steel Repair".

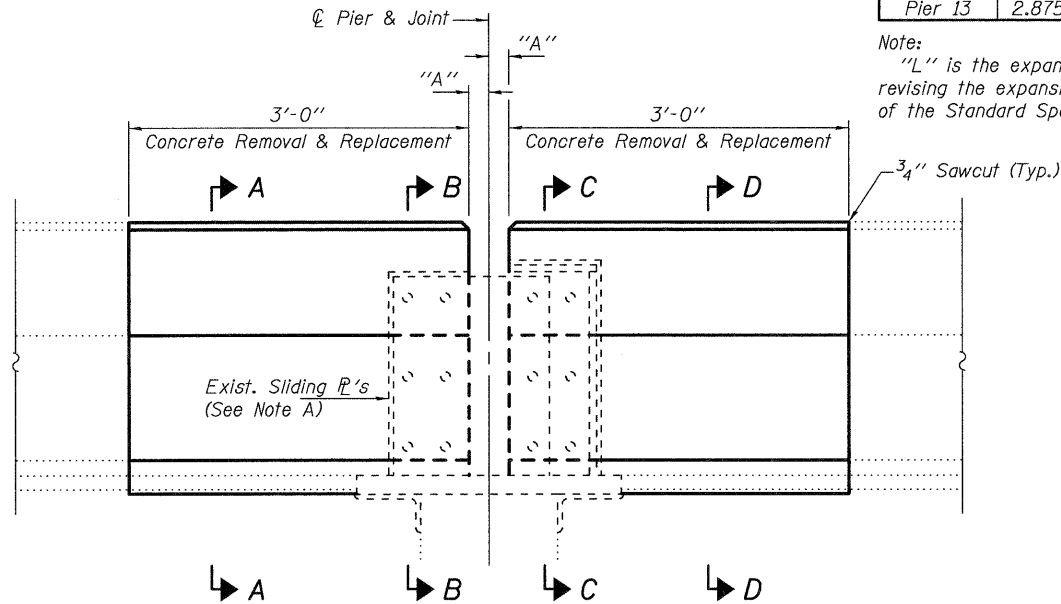
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Silicone Joint Sealer	Foot	4193
Structural Steel Repair	Pound	90

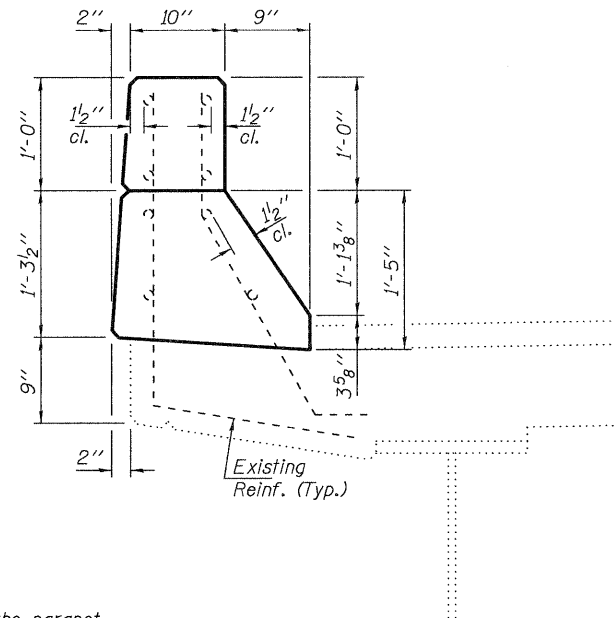
TABLE FOR DIMENSION "A" AT 50°F.

Location	Dim. "A"	"L"	Location	Dim. "A"	"L"
W. Abut.	1.125"	200 ft.	Pier 14	2.875"	770 ft.
Pier 3	1.625"	300 ft.	Pier 17	2.125"	550 ft.
Pier 7	2.125"	500 ft.	Pier 20	2.125"	500 ft.
Pier 10	1.625"	350 ft.	Pier 24	1.625"	400 ft.
Pier 13	2.875"	400 ft.	E. Abut.	1.125"	200 ft.

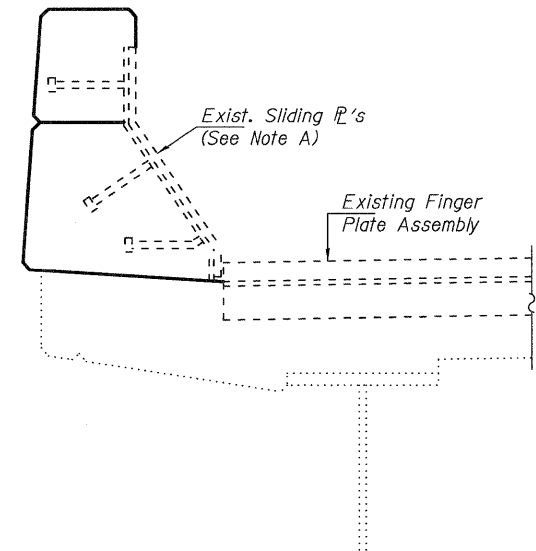
Note:
"L" is the expansion length that is to be utilized when revising the expansion joint opening as per Article 520.04 of the Standard Specifications.



TYPICAL ELEVATION VIEW OF PARAPET AT PIER EXPANSION JOINTS

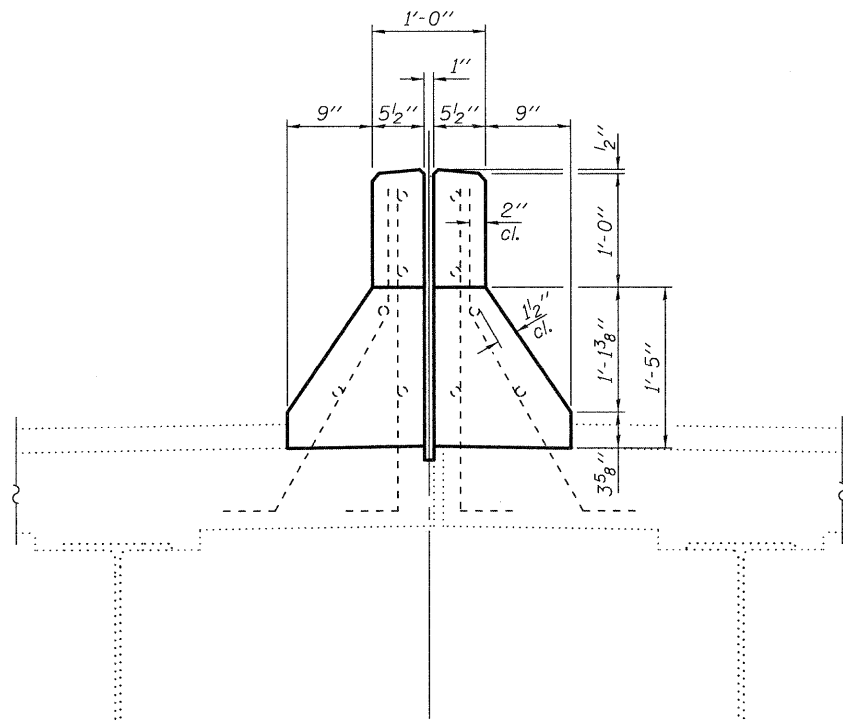


SECTION A-A
(at edge parapet)

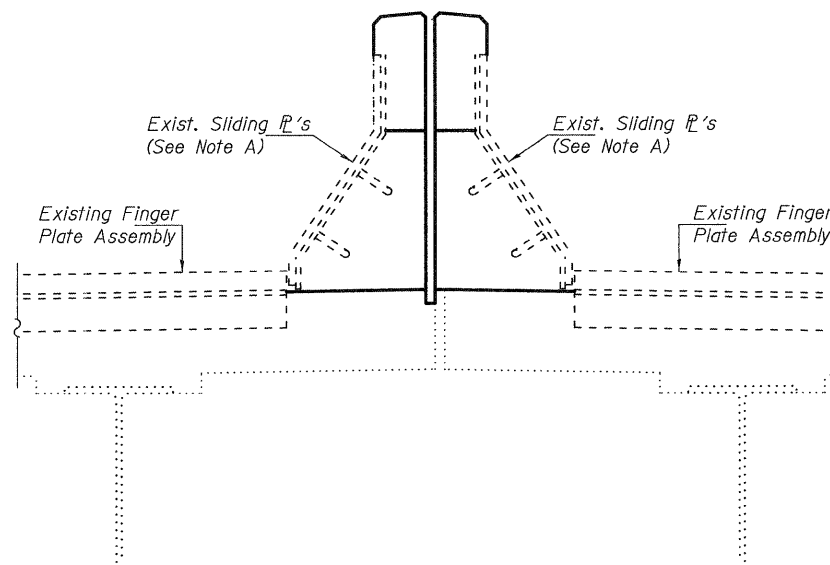


SECTION B-B
(at edge parapet)

Note A:
Existing steel plates and studs embedded in the parapet shall be removed with care and shall be reused in the new construction. If the plates are damaged in the removal process, the Contractor shall replace them at his expense.



SECTION D-D
(at center parapet)



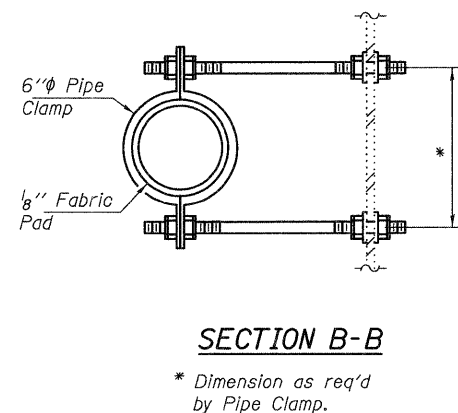
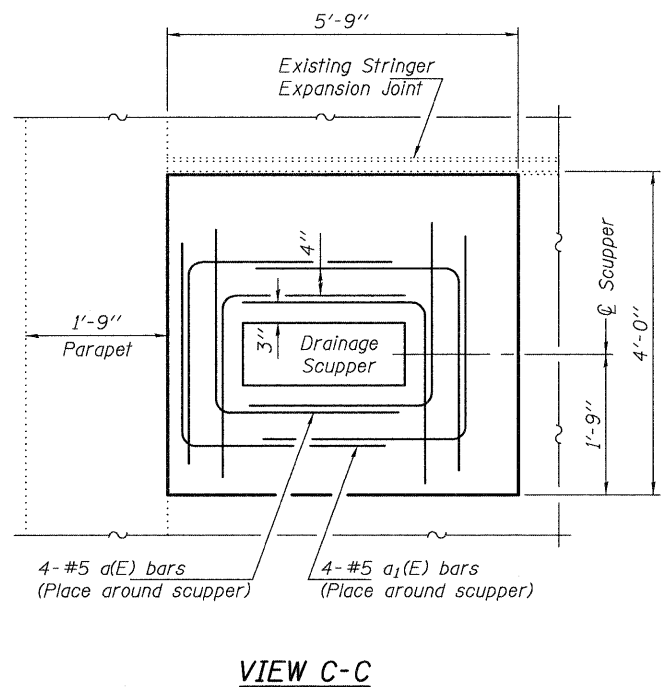
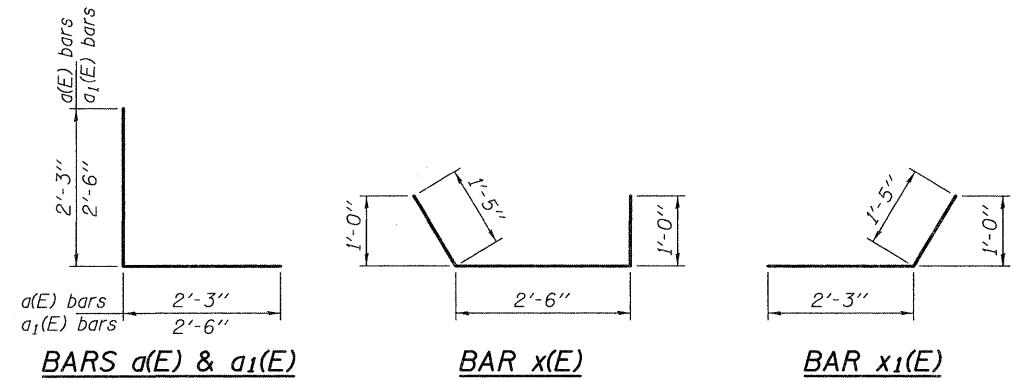
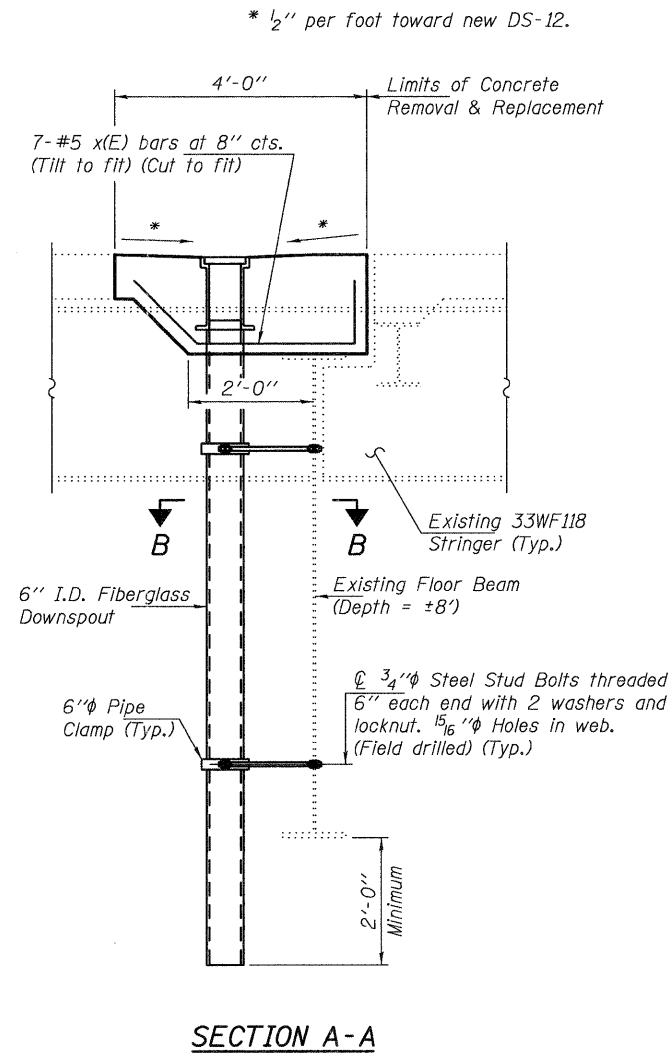
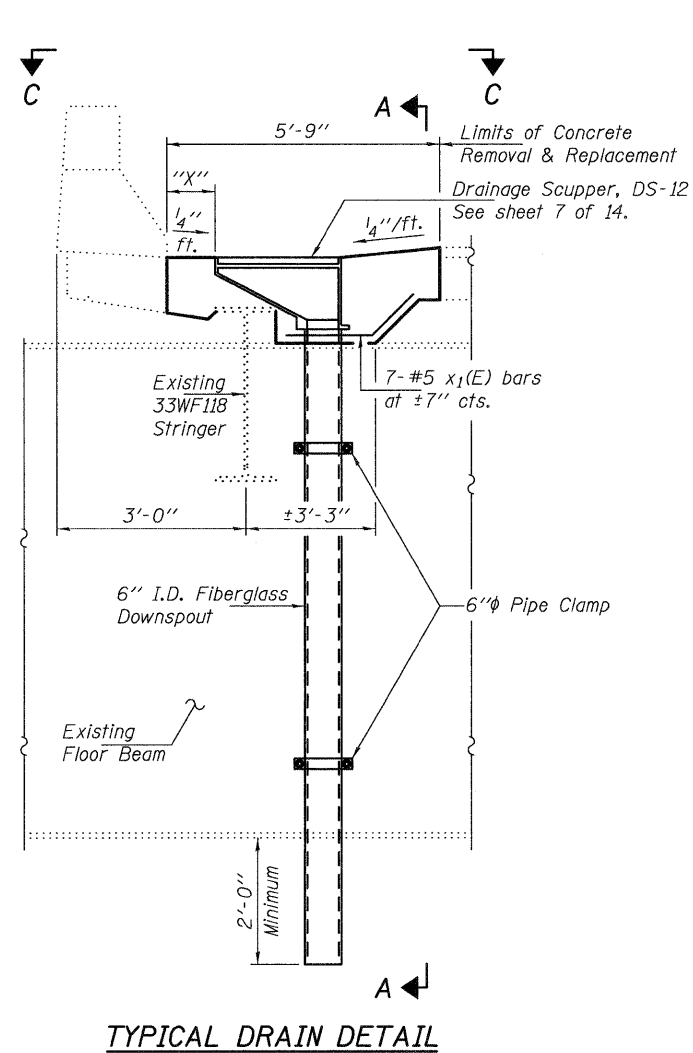
SECTION C-C
(at center parapet)

TABLE OF PARAPET REMOVAL & REPLACEMENT LOCATIONS

Location	North Parapet	Median Parapet	South Parapet
W. Abut.			
Pier 3	Yes	Yes	Yes
Pier 7	Yes	Yes	Yes
Pier 10	Yes	Yes	Yes
Pier 13	Yes	Yes	Yes
Pier 14			
Pier 17	Yes	Yes	Yes
Pier 20	Yes	Yes	Yes
Pier 24	Yes	Yes	Yes
E. Abut.		Yes	
Span 13		Yes	
Span 20			Yes

BILL OF MATERIAL

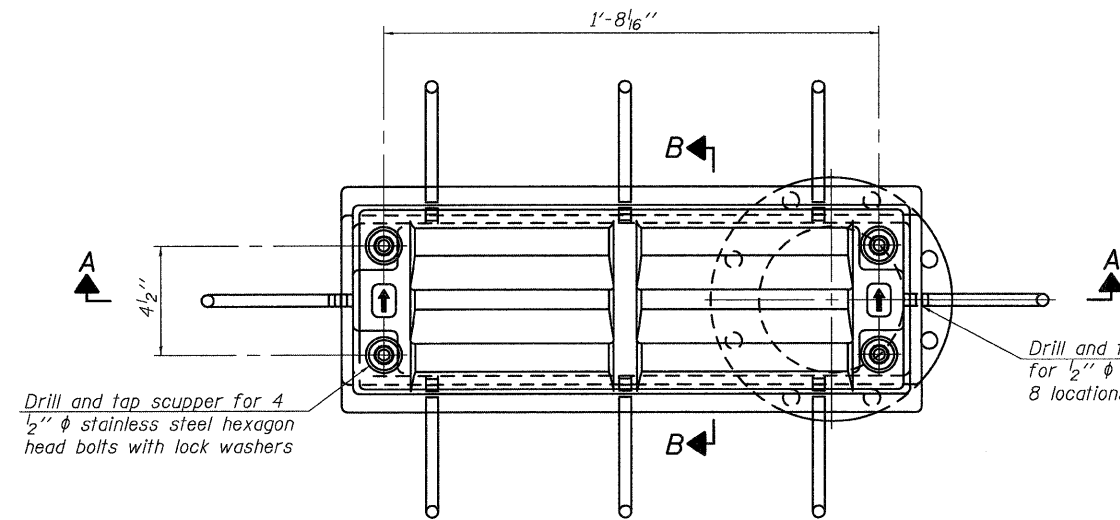
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	16.5
Concrete Superstructure	Cu. Yd.	16.5



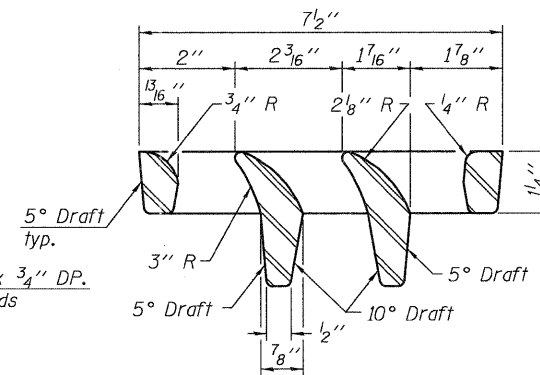
Notes:
 Dimension "X" will be dependent on the actual thickness of the slab & fillet, and the dimension of the flange of the steel stringer.
 A gap of 1/2" shall be maintained between the new drainage scupper and the existing flange of the stringer.
 The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings' Spec. SSPC-SP1 prior to painting. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. Galvanize clamping device according to AASHTO M232. Cost of clamping device and galvanizing included with Drainage Scuppers.
 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.
 In Span 14, two existing deck drains shall be removed. They are located on the south side, adjacent to Floor Beam 6' and Floor Beam 3'. They will be replaced with two Drainage Scuppers, DS-12. See sketches for details of removal and replacement.

BILL OF MATERIAL
(Two Locations)

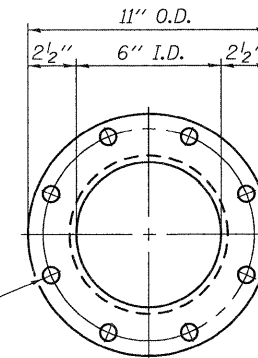
Bar	No.	Size	Length	Shape
a(E)	8	#5	4'-6"	L
a1(E)	8	#5	5'-0"	L
x(E)	14	#5	4'-11"	U
x1(E)	14	#5	3'-8"	U
Concrete Removal			Cu. Yd.	2.0
Concrete Superstructure			Cu. Yd.	2.0
Reinforcement Bars, Epoxy Coated			Pound	210



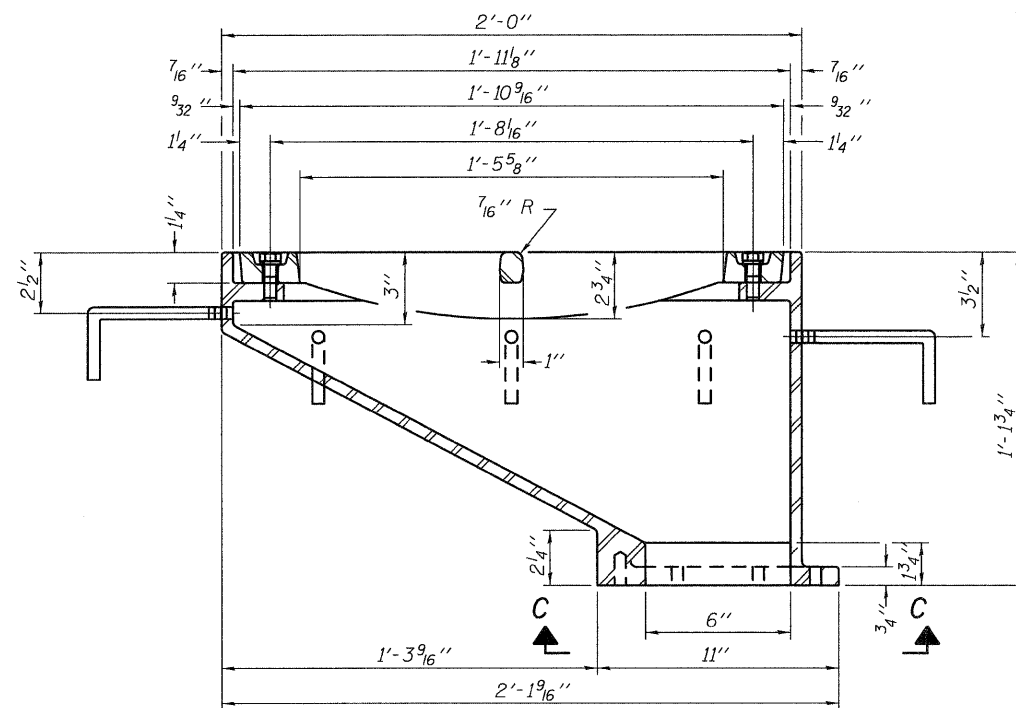
PLAN



VANE GRATE DETAIL

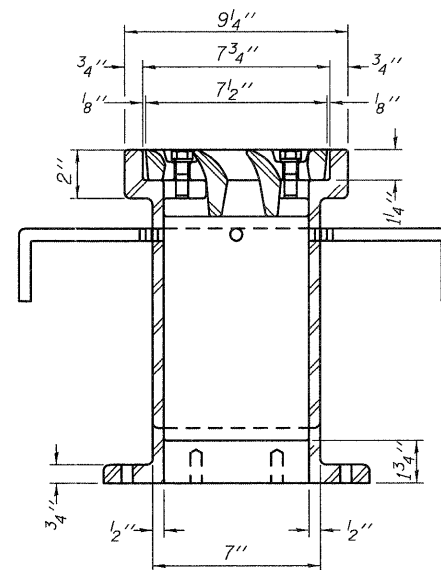


VIEW C-C

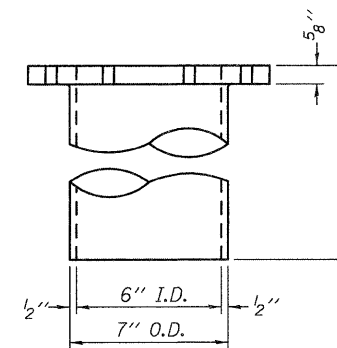


SECTION A-A

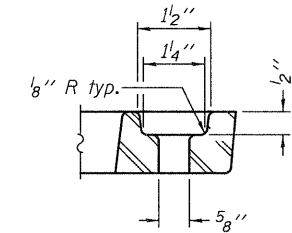
See sheet of for scupper location relative to parapet.



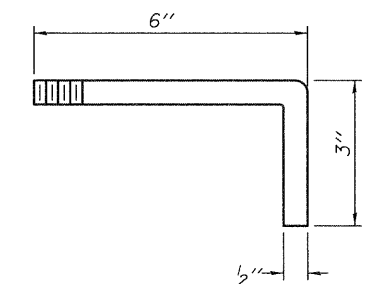
SECTION B-B



DOWNSPOUT



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

Drill and tap 8 holes for 1/2"-13 bolts on a 9 1/2" φ bolt circle. (2 blind holes are 1 1/4" deep, 6 thru holes)

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	2

DS-12

7-1-10

DESIGNED - Marcus K. Christensen
 CHECKED - Irvin J. Lopez
 DRAWN - Kyle M. Steffen
 CHECKED - MKC IJL

EXAMINED - *Joanne F. Jelliff*
 ACTING ENGINEER OF STRUCTURAL SERVICES
 PASSED - *Carl P. ...*
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

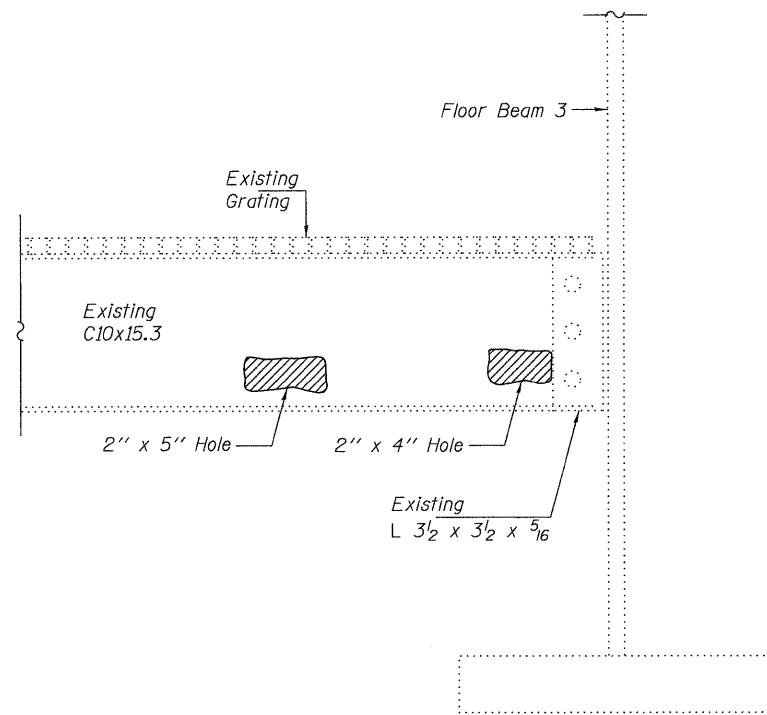
DATE - NOVEMBER 23, 2011
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-12
 SN 081-0106
 SHEET NO. 7 OF 14 SHEETS

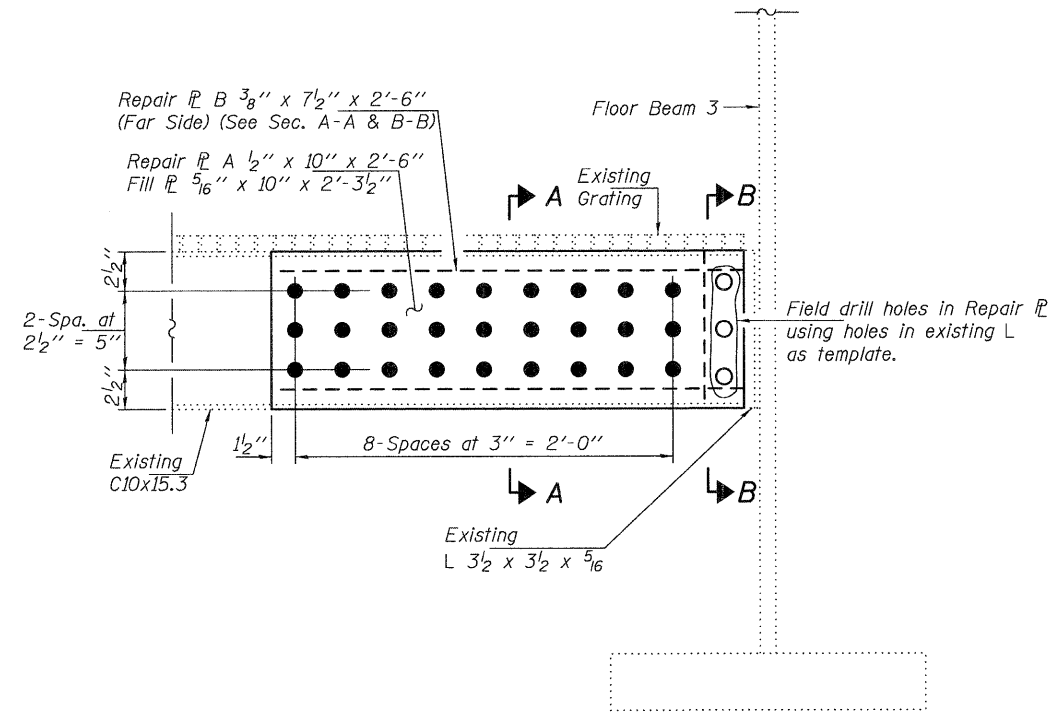
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
280	(81-1B)M-2	ROCK ISLAND	30	23
				CONTRACT NO. 64F22
ILLINOIS FED. AID PROJECT				

Note:
 High strength AASHTO M164 $\frac{3}{4}$ " ϕ bolts shall be used for the indicated repairs on this sheet. Holes shall be $\frac{13}{16}$ " ϕ . All work and material, including steel plate and bolts are included in the pay item "Structural Steel Repair".



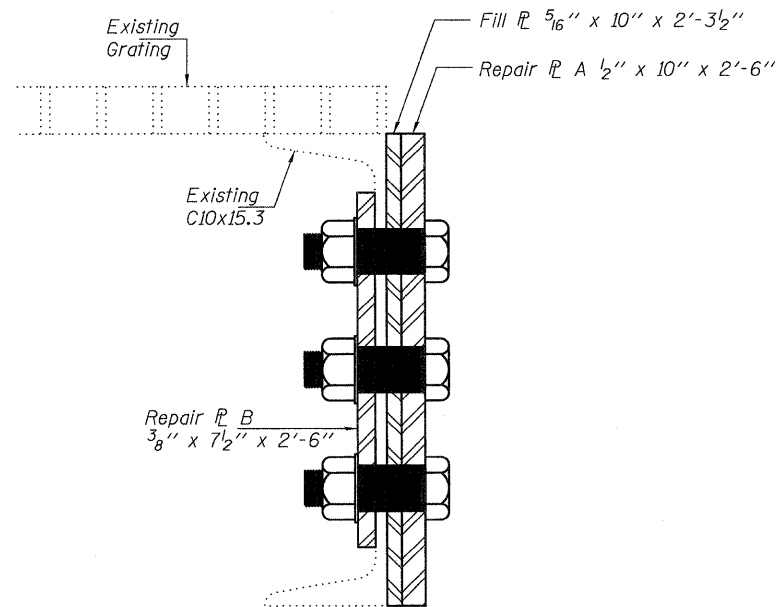
EXISTING CONDITION OF INSPECTION WALKWAY

(Span 14, Between Floor Beam 2 & Floor Beam 3)

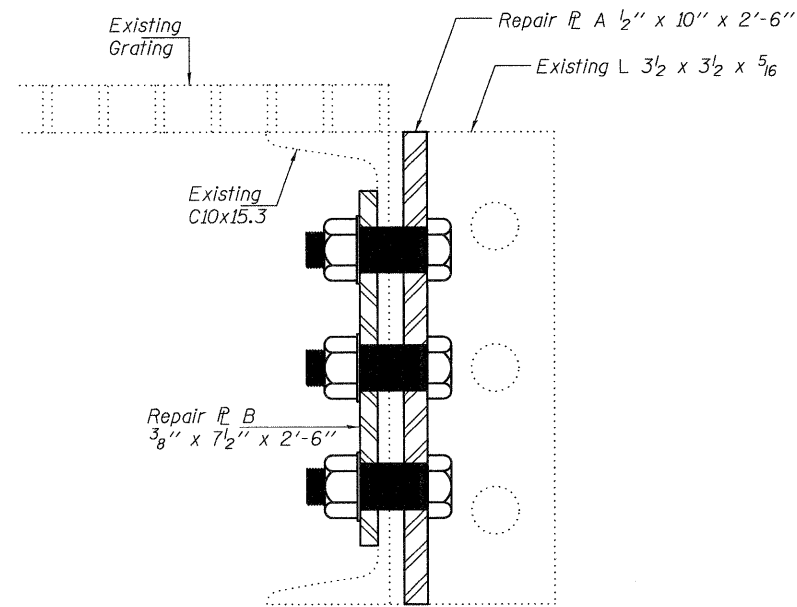


PROPOSED REHABILITATION OF INSPECTION WALKWAY

(Span 14, Between Floor Beam 2 & Floor Beam 3)



SECTION A-A

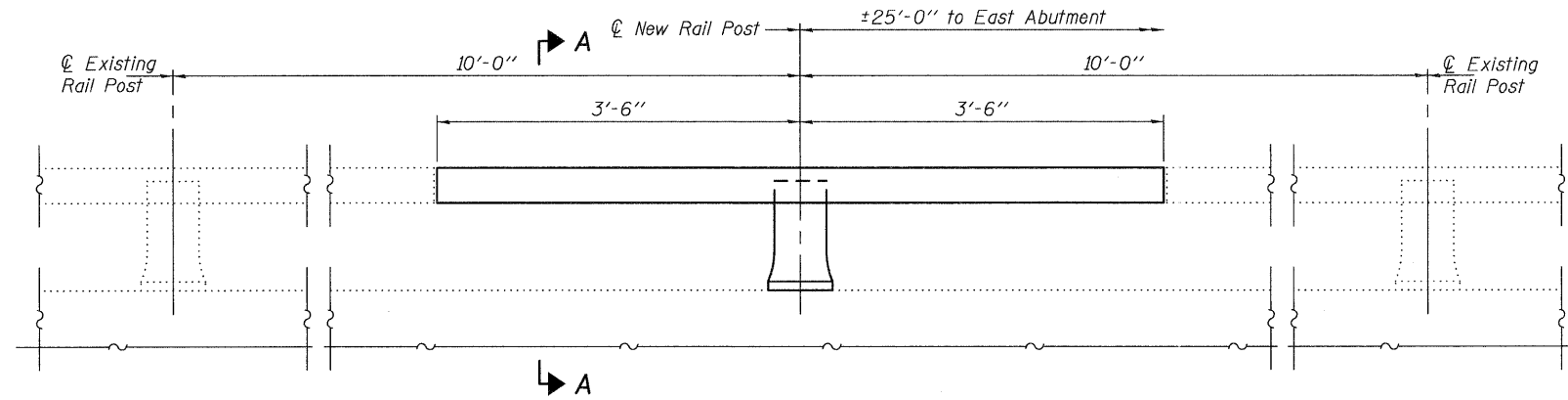


SECTION B-B

BILL OF MATERIAL

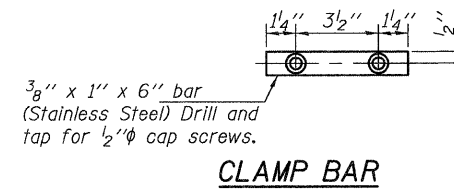
ITEM	UNIT	QUANTITY
Structural Steel Repair	Pounds	115

DESIGNED - Marcus K. Christensen	EXAMINED - <i>Jaime F. Joffe</i> ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - NOVEMBER 23, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INSPECTION WALKWAY REPAIR DETAILS SN 081-0106	F.A.I. RTE. 280	SECTION (81-1B)M-2	COUNTY ROCK ISLAND	TOTAL SHEETS 30	SHEET NO. 24	
CHECKED - Irvin J. Lopez	PASSED - <i>Carl P. ...</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED			SHEET NO. 8 OF 14 SHEETS		CONTRACT NO. 64F22			
DRAWN - Kyle M. Steffen		REVISED			ILLINOIS FED. AID PROJECT					
CHECKED - MKC IJL										

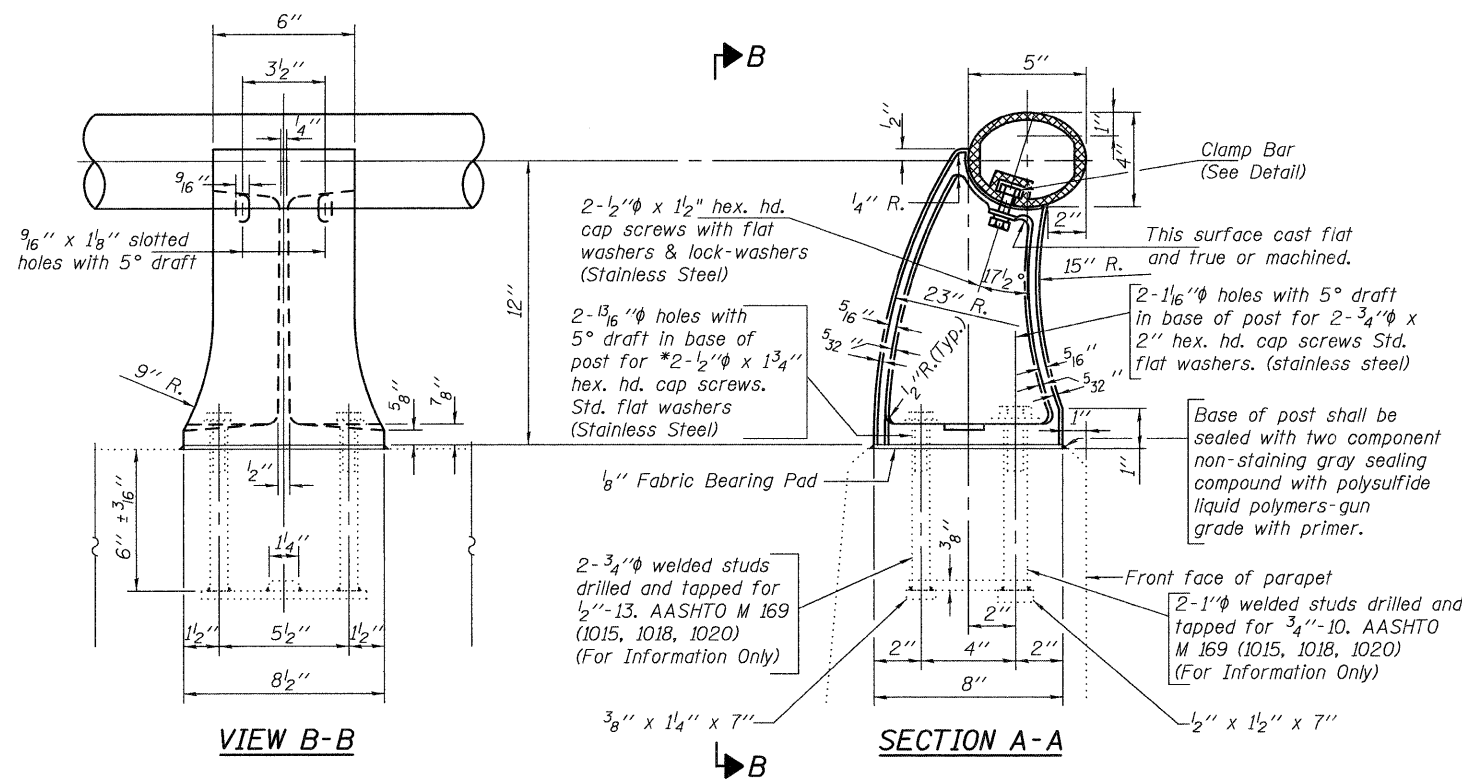


PARTIAL RAILING ELEVATION

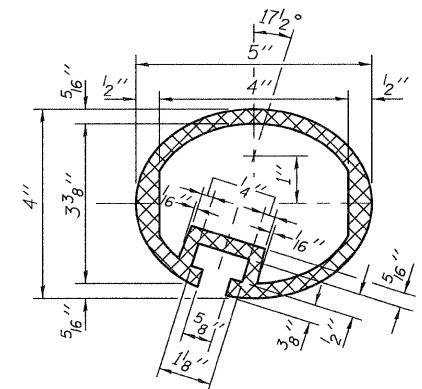
Notes:
 Remove and replace 7'-0" length of aluminum railing and damaged rail post. The existing anchor bolts shall be reused. The existing rail shall be unbolted as needed in order to install the new section of aluminum rail. All bolts that are removed in order to facilitate installation of the new aluminum rail shall be replaced with new bolts.
 All work and material necessary to remove and replace the aluminum railing and aluminum post shall be paid for at the unit cost foot for "Parapet Railing, Special". The damaged rail and post is located on the north side of the bridge in Span 28. It is approximately 25 feet from the East Abutment.



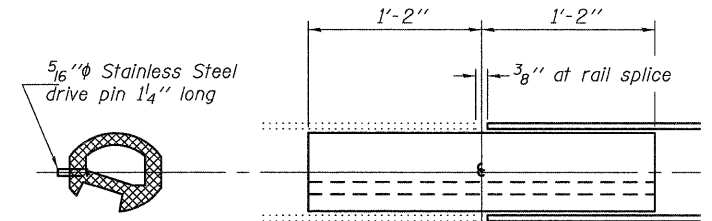
CLAMP BAR



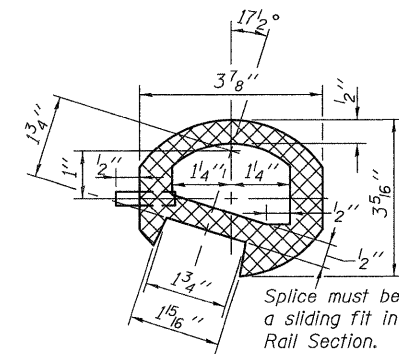
RAIL POST DETAILS



SEC. THRU ELLIPTICAL RAIL SECTION



RAIL SPLICE



SEC. THRU SPLICE

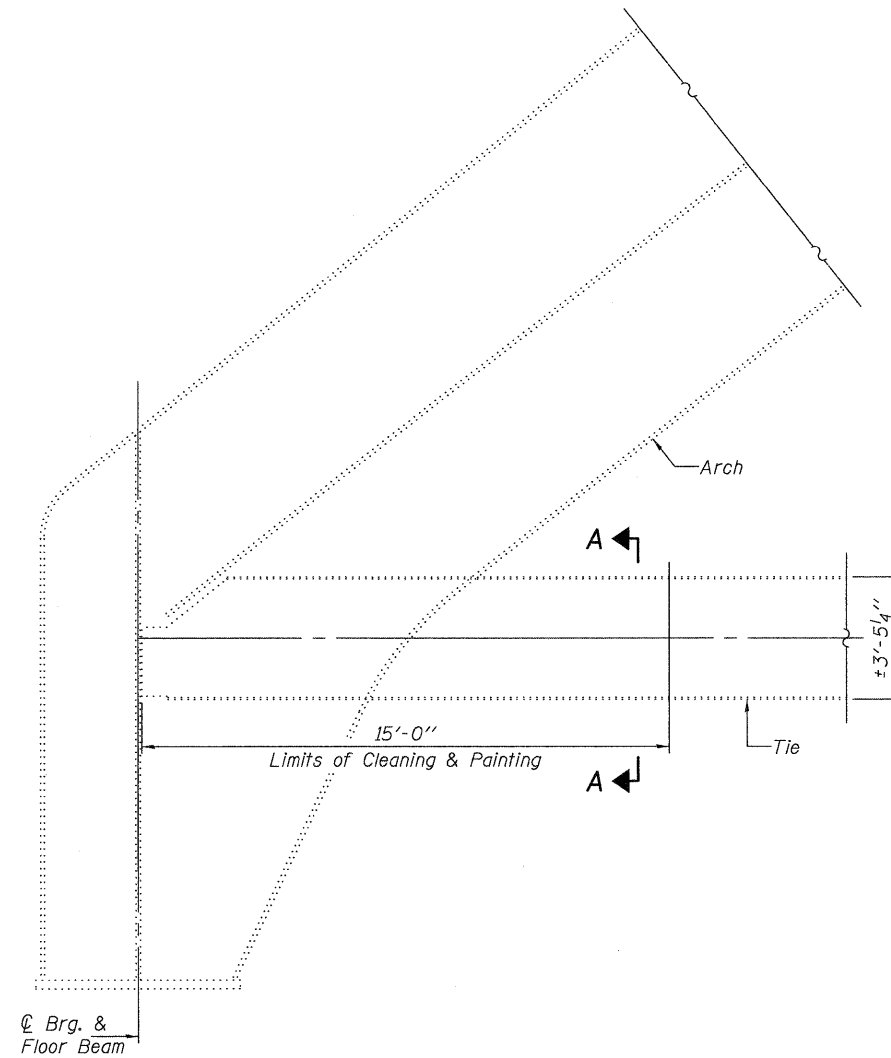
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Parapet Railing, Special	Foot	7

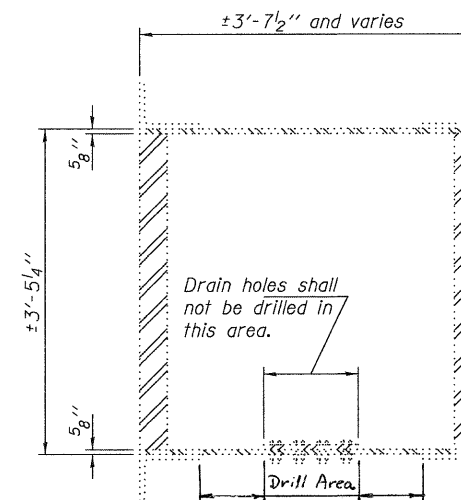
Notes:

Pitting and ponding of water has occurred in the bottom of the ties near the ends of the arches. The Contractor shall clean and paint the interior portion of the ties at all four corners of the two arches. Cleaning and painting in these interior areas shall extend for a distance of 15 feet. The Contractor shall drill two 1"Ø holes for drainage purposes in each of the four tie legs. The exact point of drilling shall be approved by the Engineer prior to drilling the eight holes. Drilling of the holes, and cleaning and painting of the existing steel as noted above, shall be included in the pay item "Cleaning and Painting Structural Steel Location 1". The paint system that shall be utilized on this bridge is System One which is the OZ / E / U which consists of a full coat of organic (epoxy) zinc-rich primer, a full intermediate coat of epoxy, and a full finish coat of aliphatic urethane. See special provisions.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. The basis of payment for lead abatement shall be included in the pay item "Containment and Disposal of Lead Paint Cleaning Residues".



TYPICAL ELEVATION AT INTERSECTION OF TIE & ARCH

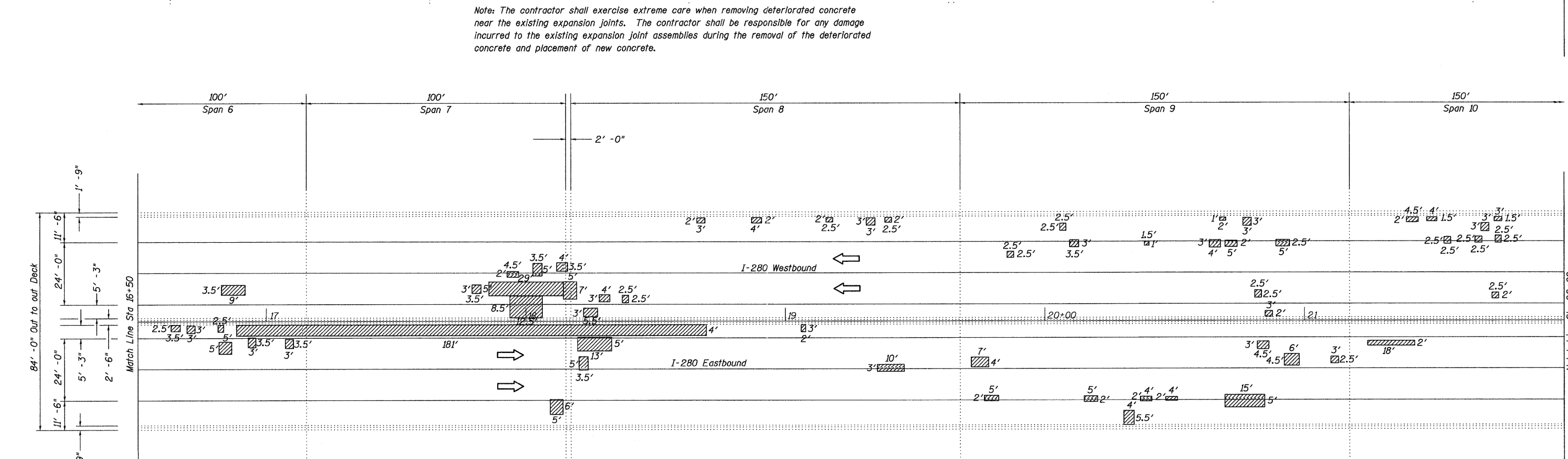
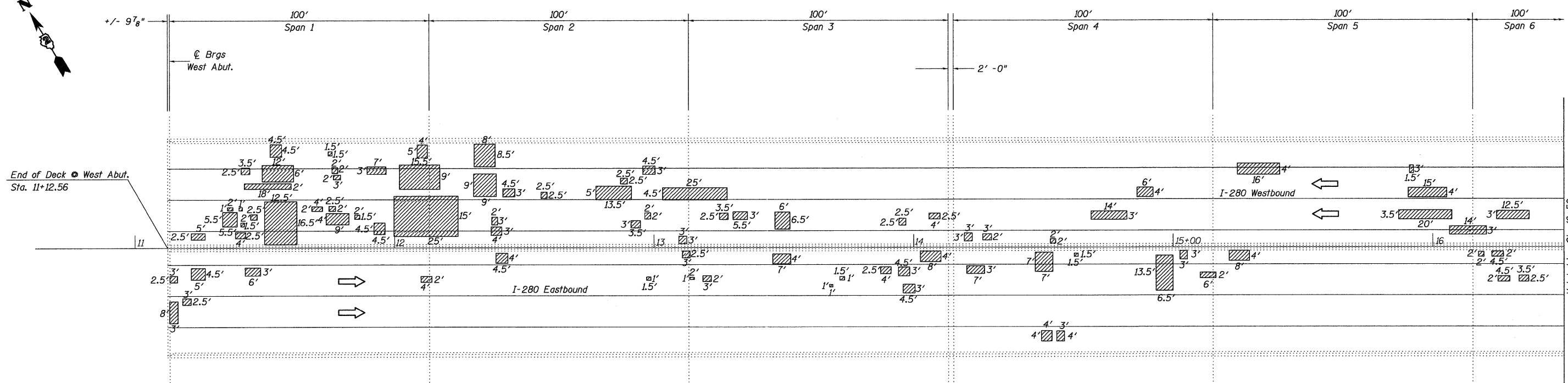
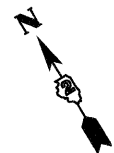


SECTION A-A

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Cleaning and Painting Structural Steel Location 1	L.S.	1
Containment and Disposal of Lead Paint Cleaning Residue	L.S.	1

DESIGNED - Marcus K. Christensen	EXAMINED - <i>Jaime F. Joffe</i> ACTING ENGINEER OF STRUCTURAL SERVICES	DATE - NOVEMBER 23, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAINTING DETAILS SN 081-0106	F.A.I. RTE. 280	SECTION (81-1B)M-2	COUNTY ROCK ISLAND	TOTAL SHEETS 30	SHEET NO. 26
CHECKED - Irvin J. Lopez	PASSED - <i>Carl [Signature]</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED			CONTRACT NO. 64F22				
DRAWN - Kyle M. Steffen	REVISED	ILLINOIS FED. AID PROJECT							
CHECKED - MKC IJL	REVISED	SHEET NO. 10 OF 14 SHEETS							



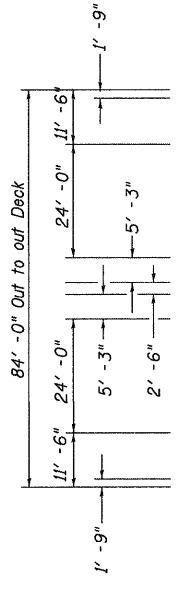
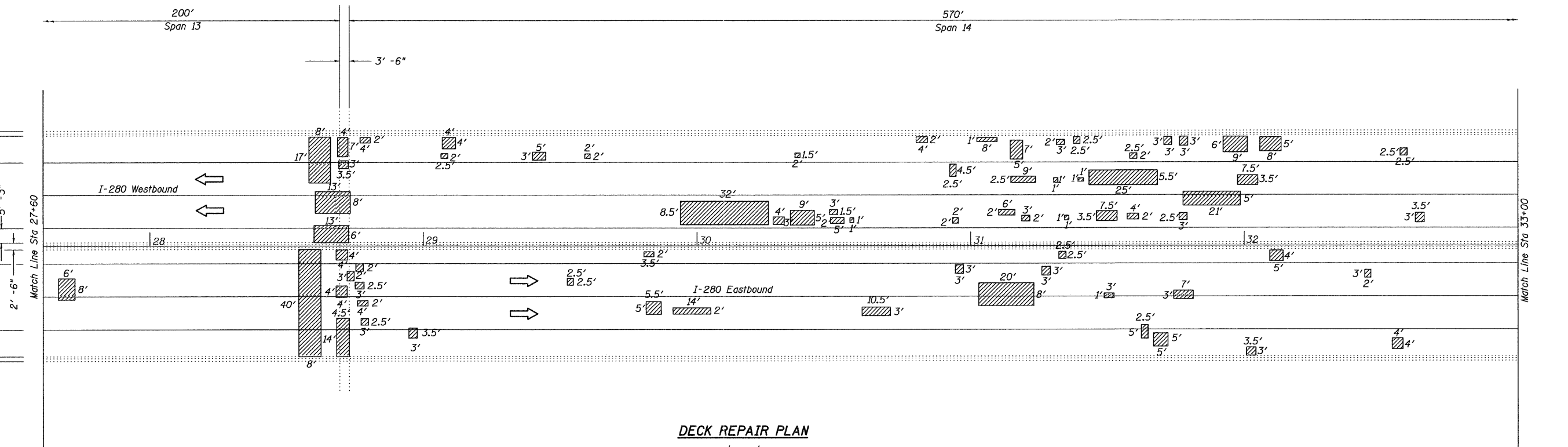
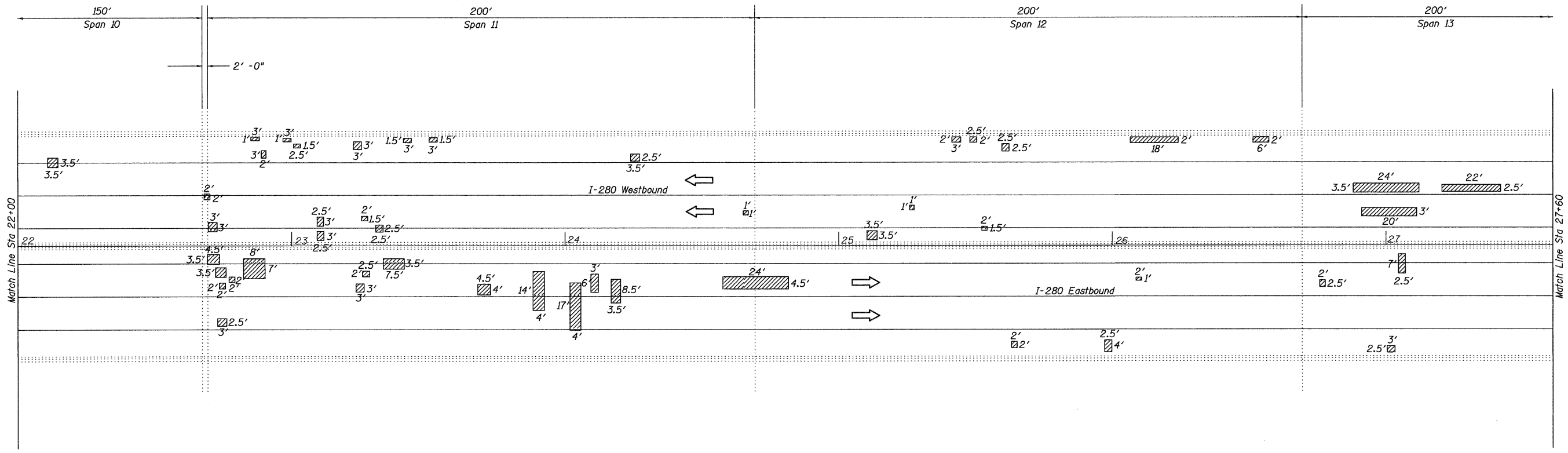
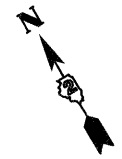
DECK REPAIR PLAN

Legend

- Deck Slab Repair (Partial Depth)
- Patches shown are potential areas of deck slab repair.
- Actual areas to be determined in the field.

Date of Deck Survey: October 2010

FILE NAME =	USER NAME = #USER#	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Deck Repair Plan Structure No. 081-0106			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - _____	REVISED - _____		280	(81-18)M-2	Rock Island	30	27			
	PLOT SCALE = #SCALE#	CHECKED - _____	REVISED - _____		SCALE: _____ SHEET NO. 11 OF 14 SHEETS STA. _____ TO STA. _____			ILLINOIS FED. AID PROJECT				
	PLOT DATE = #DATE#	DATE - _____	REVISED - _____		CONTRACT NO. 64F22							



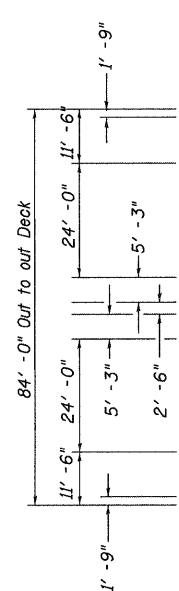
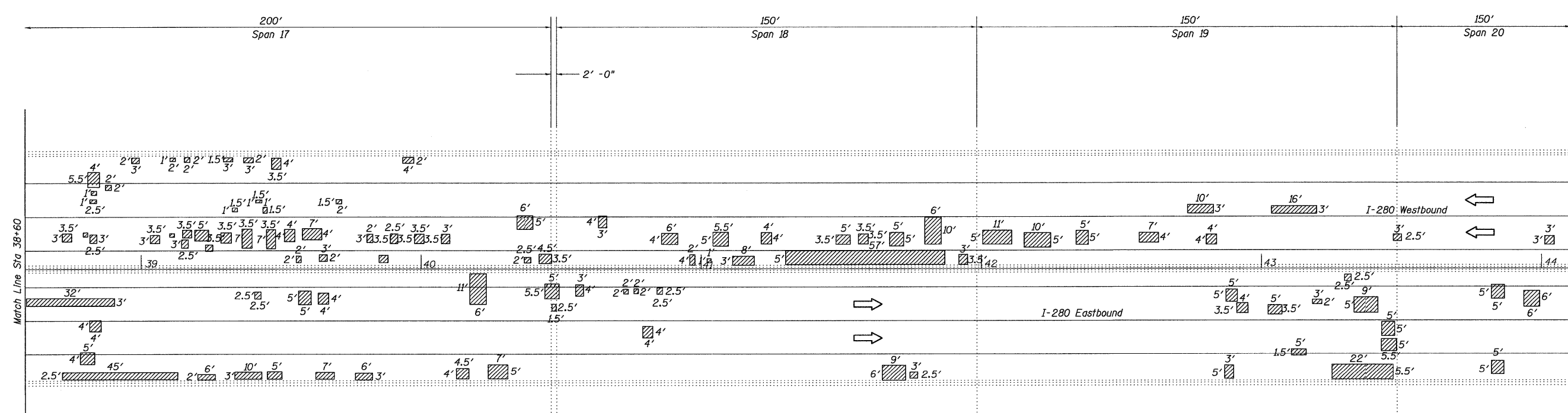
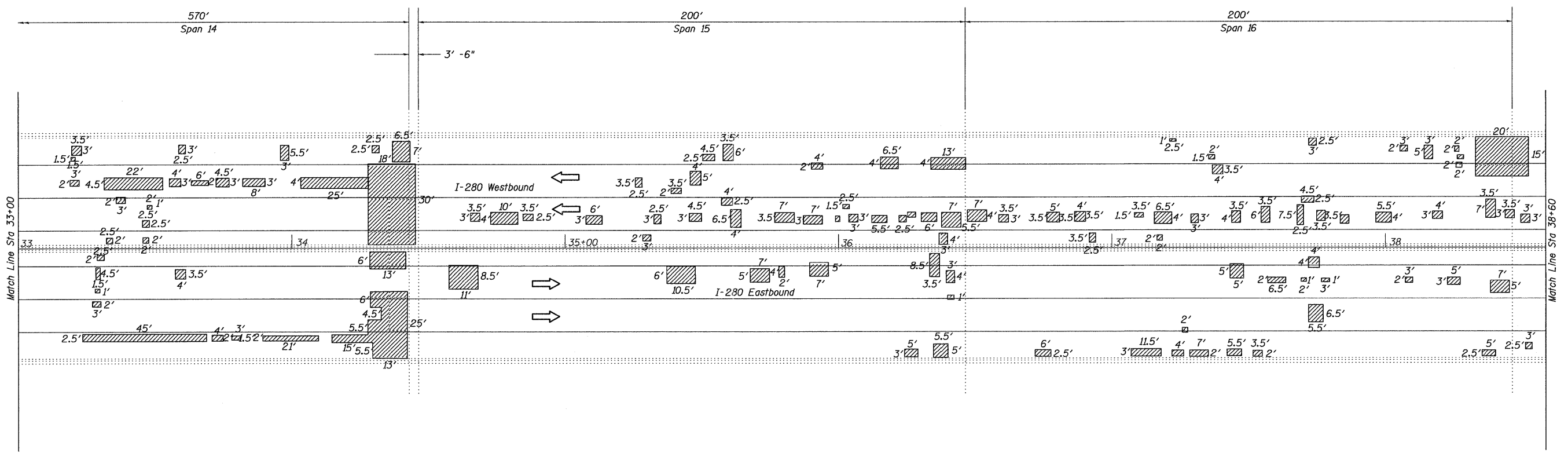
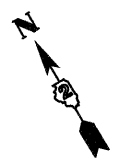
DECK REPAIR PLAN

Legend

▨ Deck Slab Repair (Partial Depth)
 Patches shown are potential areas of deck slab repair.
 Actual areas to be determined in the field.

Date of Deck Survey: October 2010

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Deck Repair Plan Structure No. 081-0106			F.A.I. RTE. 280	SECTION (81-1B)M-2	COUNTY Rock Island	TOTAL SHEETS 30	SHEET NO. 28
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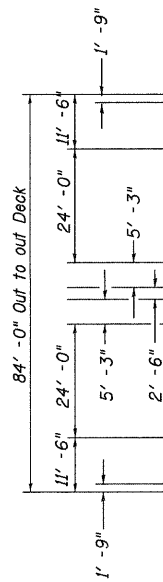
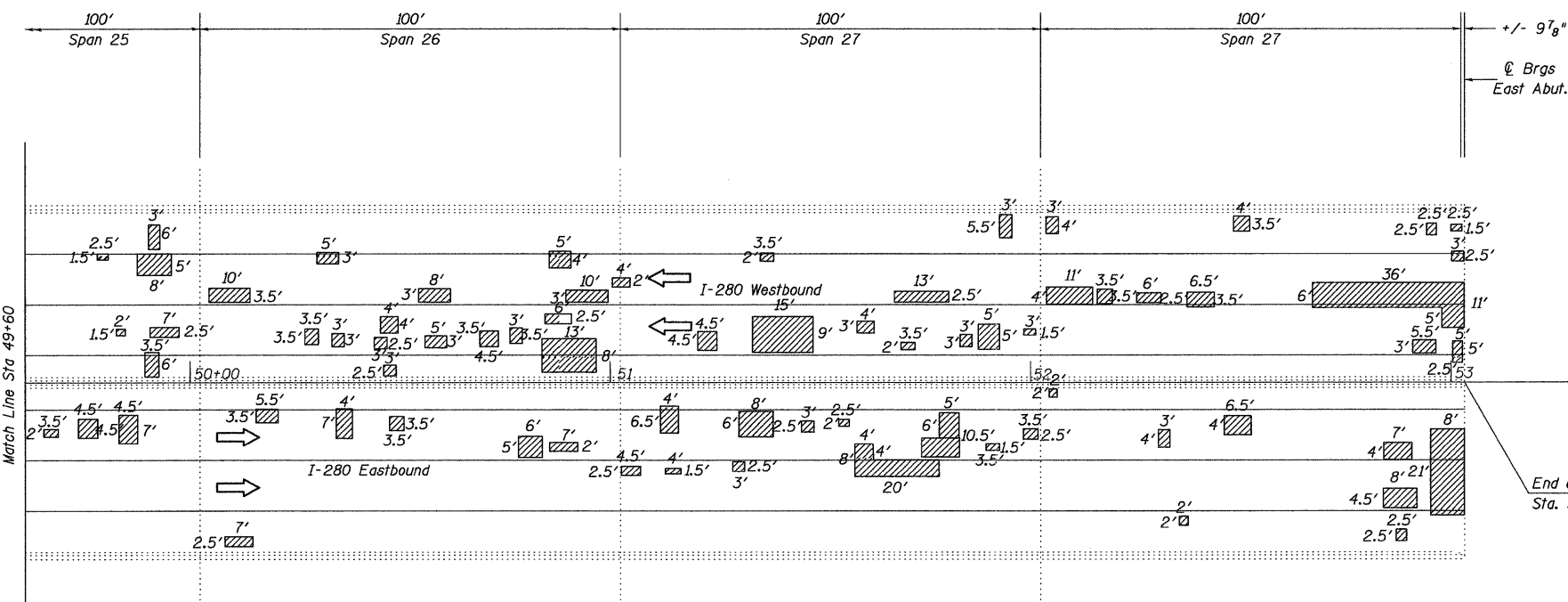
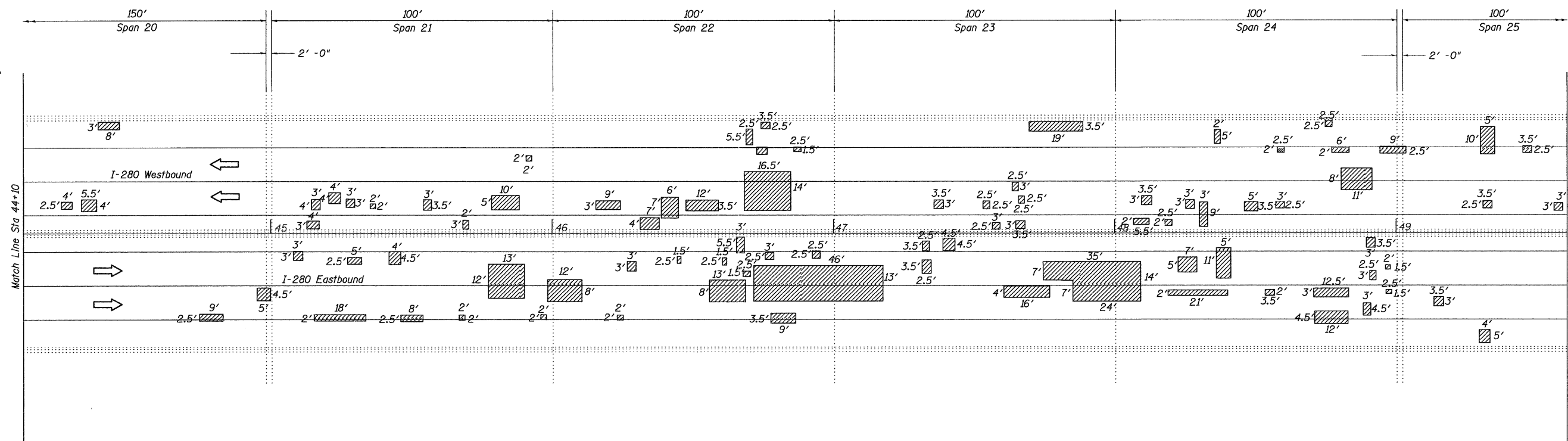
DECK REPAIR PLAN

Legend

▨ Deck Slab Repair (Partial Depth)
 Patches shown are potential areas of deck slab repair.
 Actual areas to be determined in the field.

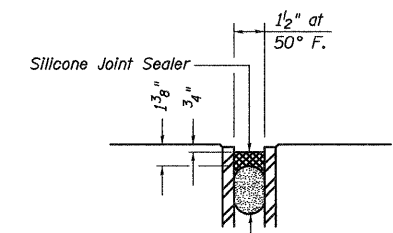
Date of Deck Survey: October 2010

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Deck Repair Plan Structure No. 081-0106		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -		SCALE: _____	SHEET NO. 13 OF 14 SHEETS	STA. _____ TO STA. _____	280	(81-1BIM-2)	Rock Island	30	29
		PLOT SCALE = #SCALE#	REVISED -								CONTRACT NO. 64F22	
		PLOT DATE = #DATE#	REVISED -								ILLINOIS FED. AID PROJECT	



Bill of Material

Item	Quantity	Unit
Deck Slab Repair Partial Depth	1940.2	Sq Yd
Silicone Joint Sealer, 1 1/2"	336	Foot



SILICONE JOINT SEALER DETAIL
Remove deteriorated joint seals in arch span and replace with Silicone Joint Sealer (4 Joints).

DECK REPAIR PLAN

Legend
 Deck Slab Repair (Partial Depth)
 Patches shown are potential areas of deck slab repair. Actual areas to be determined in the field.

Date of Deck Survey: October 2010

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	Deck Repair Plan Structure No. 081-0106		F.A.I. RTE. 280	SECTION (81-1B)M-2	COUNTY Rock Island	TOTAL SHEETS 30	SHEET NO. 30	
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		CHECKED -	REVISED -									
		DATE -	REVISED -									