

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 24 (I-24)
SECTION D9 CM BRIDGE REPAIR 2015-1

BRIDGE REPAIRS
WILLIAMSON COUNTY

C-99-052-14

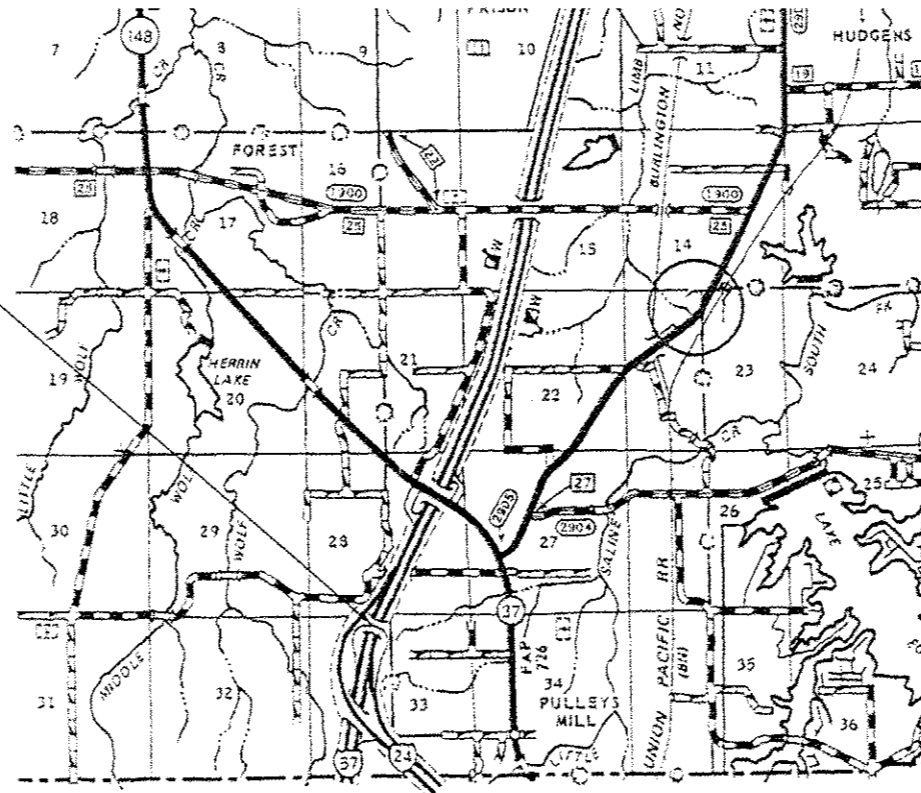
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

TRAFFIC DATA
I-24 RAMP
2013 ADT=50
WITH 32% TRUCKS

I-57
2013 ADT=29100
WITH 28% TRUCKS

TOWNSHIP
COUNTY UNIT ROAD DISTRICT

IMPROVEMENT LOCATION
STRUCTURE NO. 100-0059
I-24 EXIT RAMP WB OVER
I-57 TO I-57 SOUTH BOUND



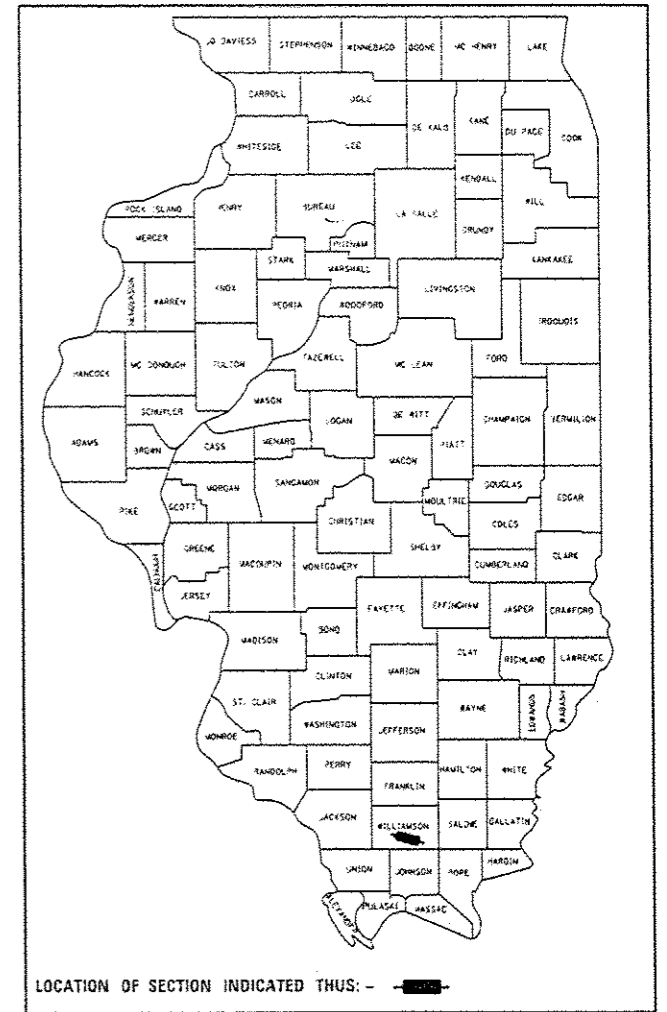
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: JOHN DAHMER
PROJECT MANAGER: DAVID PICHE (618) 351-5227

CONTRACT NO. 78424

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	D9 CM BRIDGE REP. 2015-1	WILLIAMSON	19	1
ILLINOIS			CONTRACT NO. 78424	

D-99-044-14



LOCATION OF SECTION INDICATED THUS: - [thick black line] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 12, 2014
James L. Keenan
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Oct 17, 2014
John D. Baranzoli, PE
 ENGINEER OF DESIGN AND ENVIRONMENT

Oct 17, 2014
Omer Osman, PE
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

GENERAL NOTES

- 1) THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIX ASPHALT MIXTURE IS PLACED.
- 2) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU YD
BITUMINOUS MATERIALS: ON PAVEMENT	0.05 POUND/50 FT
- 3) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 107.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 4) COMMITMENTS: NONE AS OF JULY 2, 2014

INDEX OF SHEETS

- 1 COVER SHEET
- 2 SIGNATURES, INDEX OF SHEETS, GENERAL NOTES, MIXTURE REQUIREMENTS, AND STANDARDS
- 3-4 SUMMARY OF QUANTITIES
- 5-6 TRAFFIC CONTROL AND PROTECTION (SPECIAL) STAGE I
- 7-8 TRAFFIC CONTROL AND PROTECTION (SPECIAL) STAGE II
- 9 GENERAL PLAN AND ELEVATION
- 10 TYPICAL SECTION
- 11-12 DECK SLAB REPAIR
- 13-14 ABUTMENT BEARING DETAILS
- 15 JOINT DETAILS
- 16 STRUCTURAL REPAIR OF CONCRETE
- 17 BUTT JOINT DETAIL
- 18 WEIGHT RESTRICTION DETAILS
- 19 DETOUR SHEET

Suggested Sequence
of Construction

1. Setup Traffic Control Stage I as detailed in the plans and specs
2. Erect Protective Shield with Stage I
3. Setup Traffic Control Stage II as detailed in the plans and specs
4. Erect Protective Shield with Stage II
5. Bridge Repairs
6. Setup Traffic Control Stage I as detailed in the plans and specs
7. Remove Protective Shield with Stage I
8. Setup Traffic Control Stage II as detailed in the plans and specs
9. Remove Protective Shield with Stage II

STANDARDS

- | | |
|-----------|---|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 701101-04 | OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE |
| 701400-08 | APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701401-09 | LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701428 | TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY |
| 701446-06 | TWO LANE CLOSURE FREEWAY/EXPRESSWAY |
| 701451-03 | RAMP CLOSURE FREEWAY/EXPRESSWAY |
| 701901-04 | TRAFFIC CONTROL DEVICES |

MIXTURE REQUIREMENTS

Location(s):	Hot-Mix Asphalt Surface Course
Mixture Use(s):	Polymerized Hot-Mix Asphalt Surface Course, Mix D, N90
AC/PC:	SBS PG76-22
ABR % (Max):	See Special Provision
Design Air Voids:	4.0 %, 90 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm
Friction Aggregate:	D Surface
Quality Management Program:	PPP

Prepared By:	<i>Joe Blankenship</i> DISTRICT STUDIOS & PLANS ENGINEER
Examined By:	<i>John E. ...</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>Casey Nelson</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>Keith ...</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>...</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>Douglas J. ...</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>...</i> DISTRICT MATERIALS ENGINEER

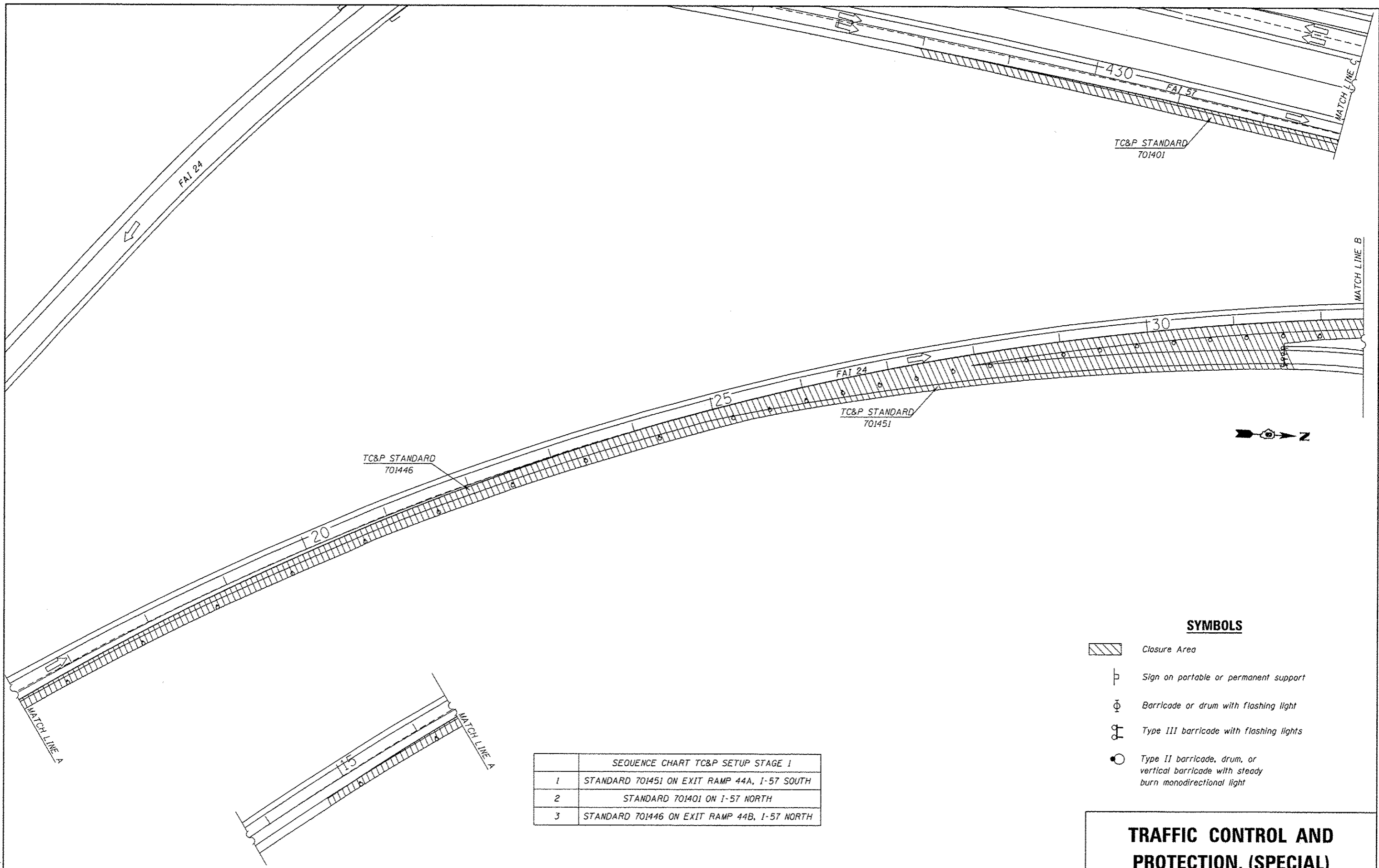
10/1/14

SUMMARY OF QUANTITIES - CONT

FUNDING:	100% STATE
LOCATION:	RURAL
ROUTE:	FAI 24 I-24
TOTAL QUANTITY	SN 100-0059 0014

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	42	42
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	5	5
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	166	166
Z0016702	DETOUR SIGNING	L SUM	1	1
Z0021906	SILICONE JOINT SEALER, 1.5"	FOOT	58	58

5

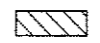






TC&P STANDARD
701446

TC&P STANDARD
701451

TC&P STANDARD
701401

SYMBOLS






-  Closure Area
-  Sign on portable or permanent support
-  Barricade or drum with flashing light
-  Type III barricade with flashing lights
-  Type II barricade, drum, or vertical barricade with steady burn monodirectional light

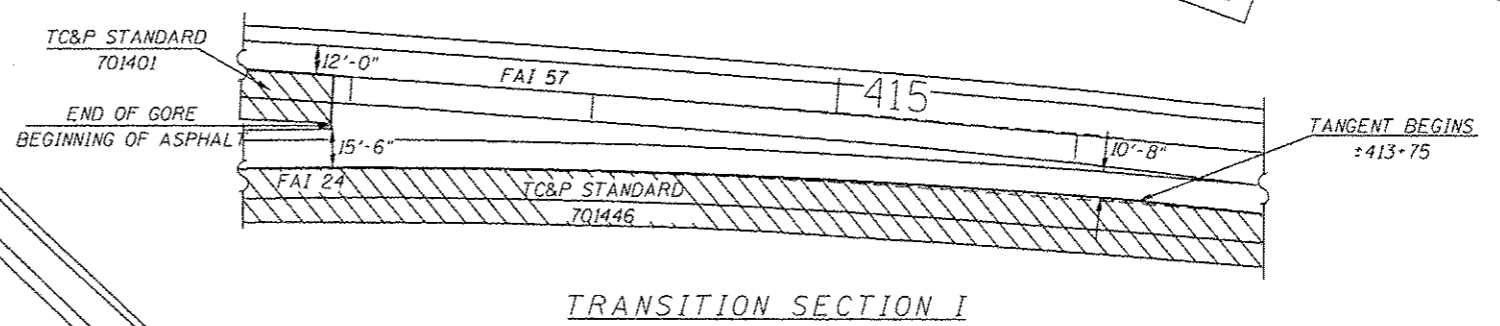
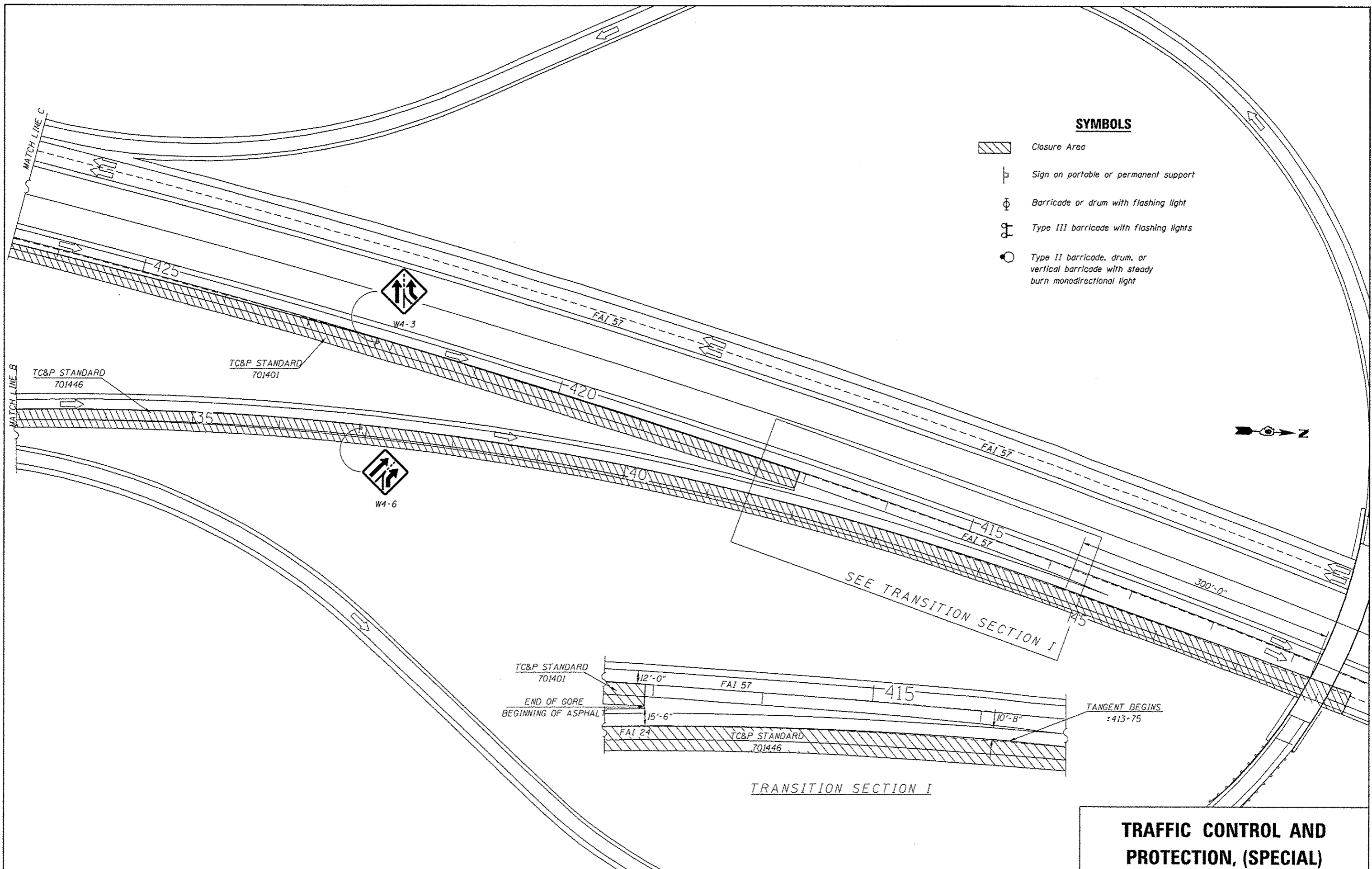
SEQUENCE CHART TC&P SETUP STAGE 1	
1	STANDARD 701451 ON EXIT RAMP 44A, I-57 SOUTH
2	STANDARD 701401 ON I-57 NORTH
3	STANDARD 701446 ON EXIT RAMP 44B, I-57 NORTH

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

FILE NAME =	USER NAME = Dahmar.ja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION, (SPECIAL) STAGE 1 (DAYTIME CLOSURE)			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	Plot Scale = 100.0000 / in.	CHECKED -	REVISED -					24	09 CM BRIDGE REP, 2015-1	WILLIAMSON	19	5	
	PLOT DATE = 8/15/2014	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 78424		
											ILLINOIS FED. AID PROJECT		

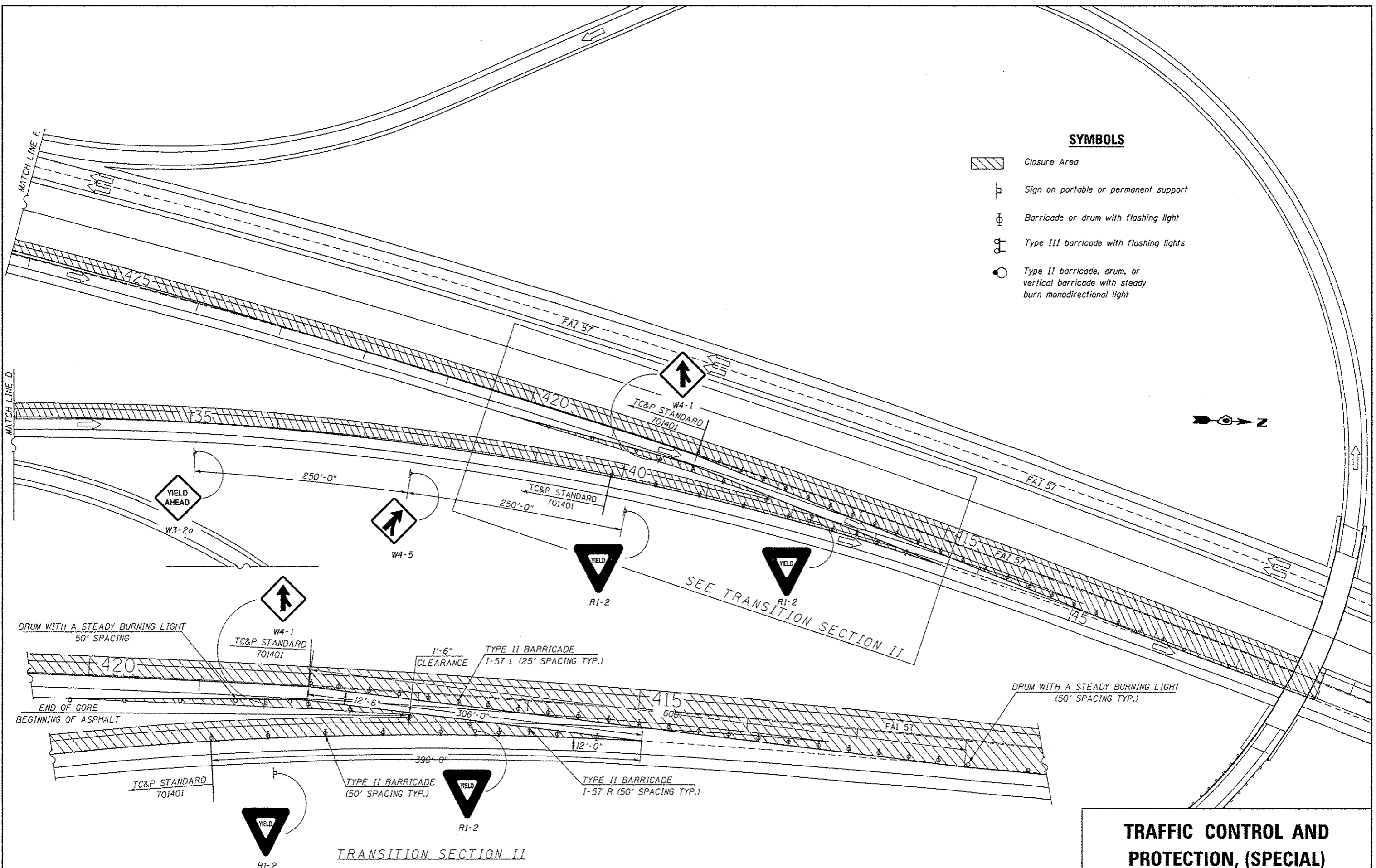
SYMBOLS

-  Closure Area
-  Sign on portable or permanent support
-  Barricade or drum with flashing light
-  Type III barricade with flashing lights
-  Type II barricade, drum, or vertical barricade with steady burn monodirectional light








TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

FILE NAME -	USER NAME - Dahmer.jo	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION, (SPECIAL) STAGE 1 (DAYTIME CLOSURE)				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pvc\work\pvc\idos\dahmer.jo\d8387649\78424-ah1-p1.en.dgn		DRAWN -	REVISED -		24	ID9 CM BRIDGE REP. 2015-1	WILLIAMSON	19	6				
Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.				CONTRACT NO. 78424				
	PLOT DATE = 8/15/2014	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								



SYMBOLS

-  Closure Area
-  Sign on portable or permanent support
-  Barricade or drum with flashing light
-  Type III barricade with flashing lights
-  Type II barricade, drum, or vertical barricade with steady burn monodirectional light

TRAFFIC CONTROL AND PROTECTION, (SPECIAL)

FILE NAME :	USER NAME : Dahmer,ja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION, (SPECIAL) STAGE 2 (NIGHT TIME CLOSURE)			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
at:\pwork\pwork\dahmer\ja\0307649\78424-sht-plan.dgn	PLT SCALE = 100.0000 / 1" = 100'	DRAWN -	REVISED -					24	D9 CM BRIDGE REP. 2015-1	WILLIAMSON	19	8
Default	PLDT DATE = 8/15/2014	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			CONTRACT NO. 78424				
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				

GENERAL NOTES

All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted. No field welding is permitted except as specified in the contract documents.

All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

If the analysis submitted to the Contractor for the jacking/temporary support system to be used show temporary stiffeners are required to prevent web crippling or bulking, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

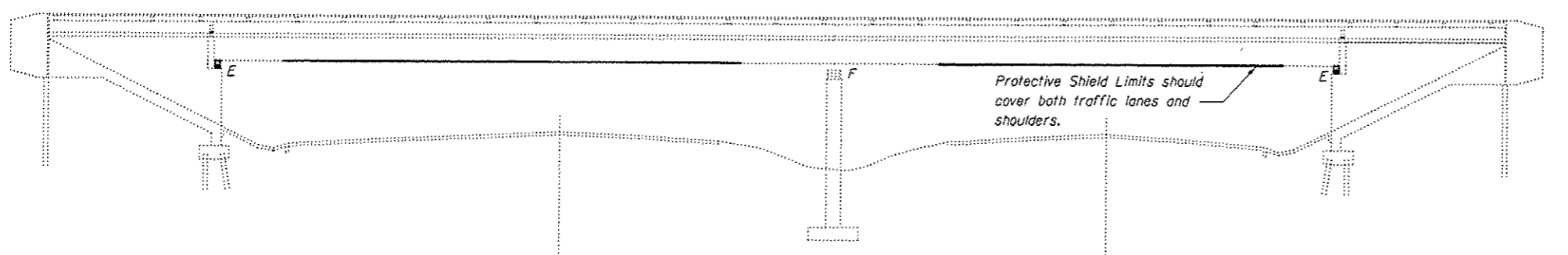
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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

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

Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."

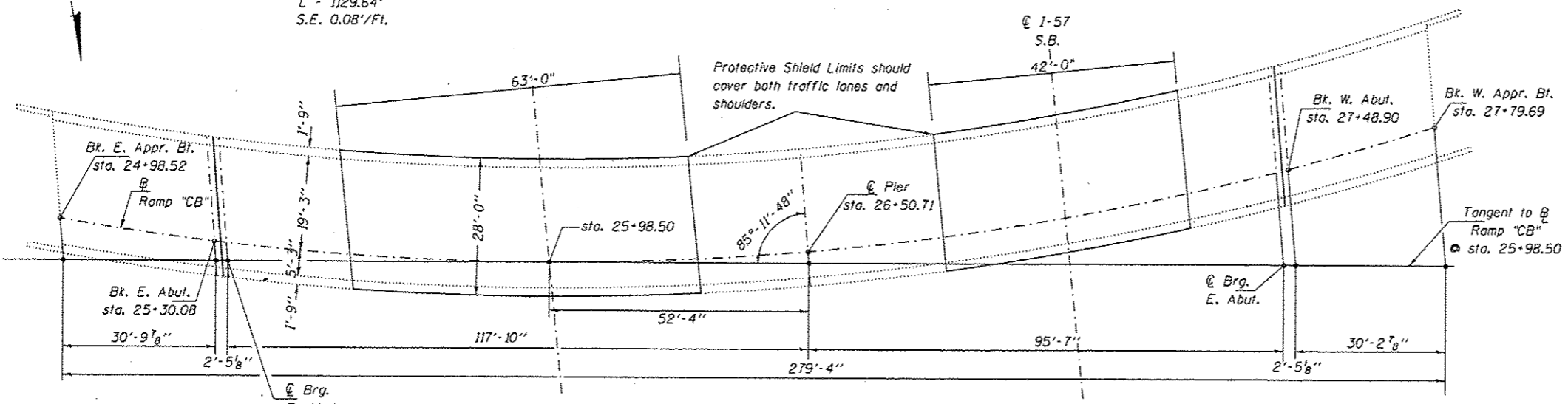
The bearings and any area needing touched up shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the Final Finish Coat for interior beams shall be GRAY, MUNSELL NO. 5B 7/1 and the exterior beams shall be INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

Protective Shield shall be place before any work begins utilizing Traffic Control and Protection (Special) and shall be taken down once the work is completed.



CURVE DATA
 Values from Existing plans
 Δ - 112°-33'-47"
 D - 9°-57'-47"
 R - 575'
 T - 861.58'
 L - 1129.64'
 S.E. 0.08'/Ft.

ELEVATION



PLAN

Scope of Work

- Close Structure
- Setup Traffic Control Special as shown in Plans
- Setup Protective Shield
- Takedown Traffic Control Special
- Complete Deck Slab Patching
- Structural Repair of Concrete ≤ 5 inches
- Silicone Joint and Bearing Replacement
- Install WMS and HMA Overlay
- Setup Traffic Control Special as shown in Plans
- Takedown Protective Shield
- Takedown Traffic Control Special



David Carl Puzey 9/24/14
 Expires 11/30/14

Design Stresses

FIELD UNITS (New Construction)
 fy = 36,000 psi (AASHTO M270 Gr. 36)

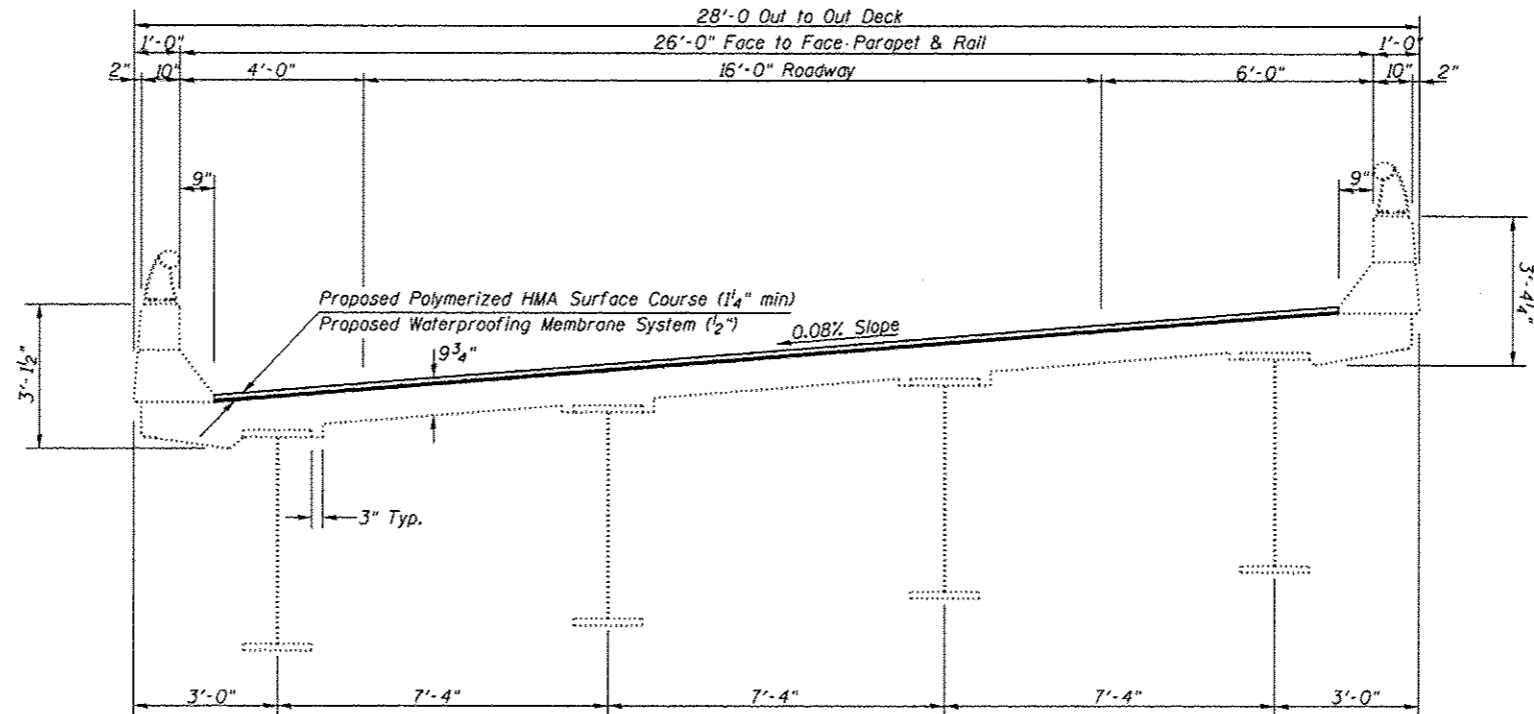
FIELD UNITS (Existing Construction)
 f'c = 1,200 psi (Deck Slab)
 f'c = 1,400 psi (Curb, Parapet, Sub.)
 fy = 20,000 psi (structural steel)
 fy = 20,000 psi (reinforcement)
 Vc = 75 psi (Figs.)
 n = 10

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Waterproofing Membrane System	Sq. Yd.	768
Polymerized Hot-Mix Asphalt Surface Course, Mix "D", N90	Ton	63
Deck Slab Repair (Partial Depth)	Sq. Yd.	166
Deck Slab Repair (Full Depth)	Sq. Yd.	5
Protective Shield	Sq. Yd.	327
Elastomeric Bearing Assembly Type I	Each	8
Anchor Bolts, 1"	Each	32
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	1,713
Silicone Joint Sealer, 1/2"	Foot	58
Structural Repair of Concrete ≤ 5"	Sq. Ft.	42

BRIDGE REPAIRS
FAI 24 OVER FAI 57
WILLIAMSON COUNTY
STA. 25+30.08
S. N. 100-0059

FILE NAME : o:\p\work\p\p\dot\dahmer\ja\0387649\7824-ahc-plan.dgn	USER NAME : Dahmer,ja	DESIGNED - TAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Default	PLOT SCALE : 100.0000' / in.	CHECKED - TLC	REVISED -			24	09 CM BRIDGE REP. 2015-1	WILLIAMSON	19	9	
	PLOT DATE : 8/19/2014	DATE -	REVISED -			CONTRACT NO. 78424					
						ILLINOIS FED. AID PROJECT					



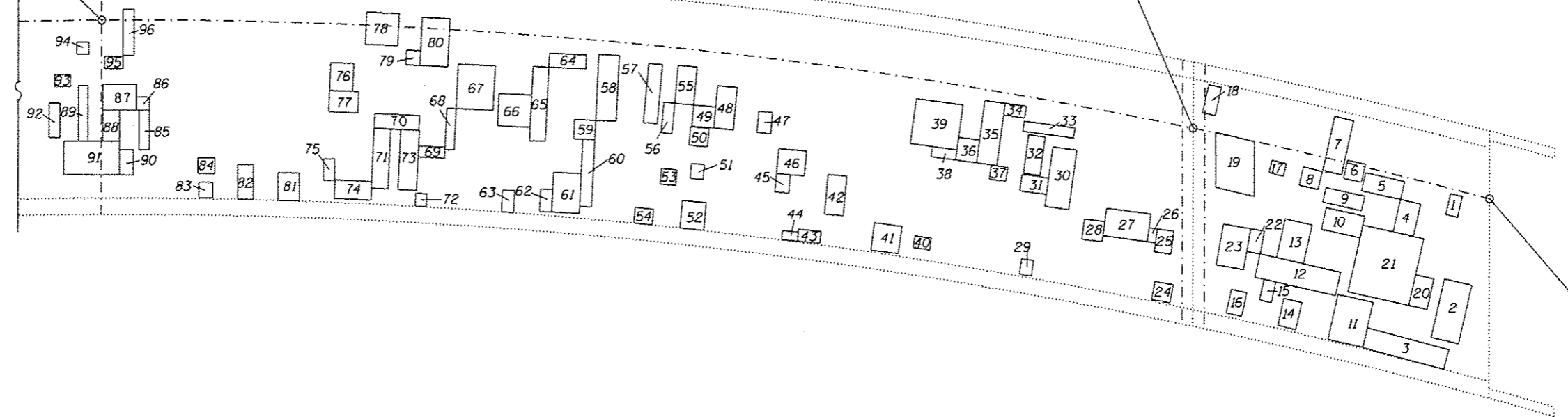
**BRIDGE CROSS-SECTION
SHOWING NEW OVERLAY
LOOKING UP STATION**

FILE NAME :	USER NAME = Dahmer.ja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTION				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\dahmer.ja\d8387649\78424\sh1-plan.dgn		DRAWN -	REVISED -		24	D9 CM BRIDGE REP, 2015-1	WILLIAMSON	19	10				
Default	PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -		SCALE:	SHEET 2	OF 8	SHEETS	STA.	TO STA.	CONTRACT NO. 78424		
	PLOT DATE = 6/15/2014	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

Q Pier
sta. 26+50.71

Bk. E. Abut.
sta. 25+30.08

Bk. E. Appr. Bl.
sta. 24+98.52



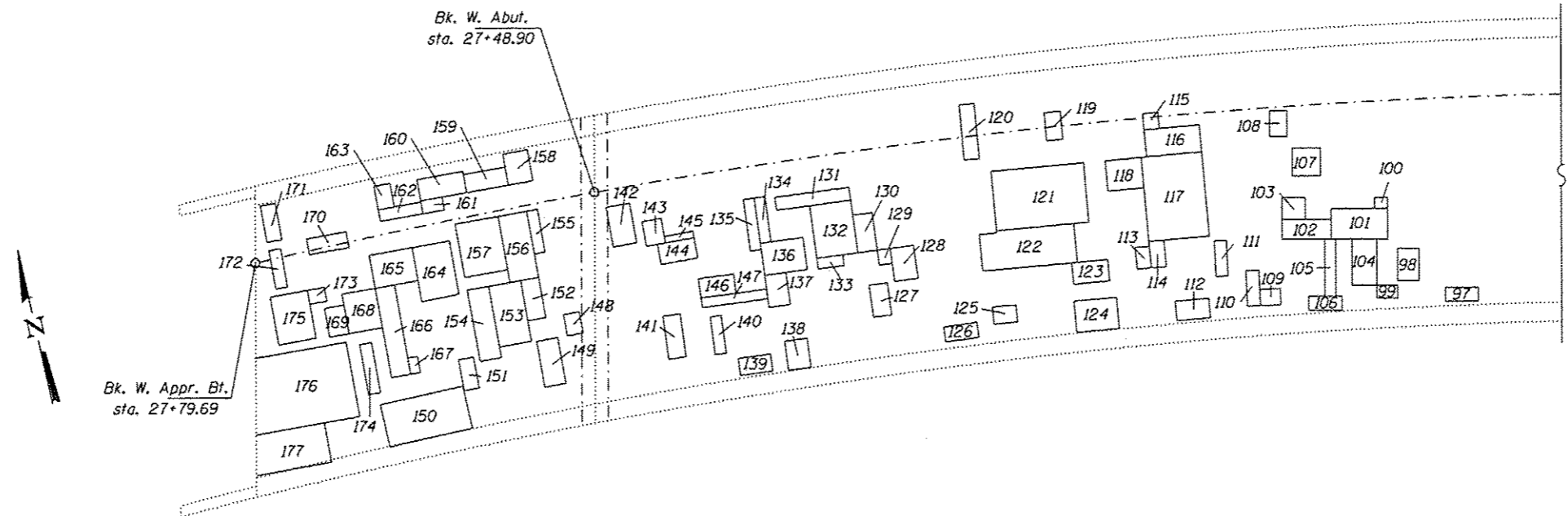
NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)
1	1.6	2.3	0.4
2	3.0	6.5	2.2
3	9.0	2.2	2.2
4	3.6	2.2	0.9
5	2.0	4.3	1.0
6	2.0	2.0	0.4
7	2.1	6.0	1.4
8	2.0	2.1	0.5
9	4.3	1.6	0.8
10	4.3	2.4	1.1
11	5.0	9.3	5.2
12	2.6	9.0	2.6
13	3.0	4.3	1.4
14	2.0	3.0	0.7
15	1.3	2.3	0.3
16	1.7	2.6	0.5
17	1.6	1.4	0.2
18	1.4	3.1	0.5
19	3.3	5.8	2.1
20	2.0	3.4	0.8
21	7.4	6.7	5.5
22	1.5	2.5	0.4
23	4.5	4.5	2.3
24	2.0	2.0	0.4
25	1.8	2.5	0.5
26	0.9	1.5	0.2
27	4.8	3.0	1.6
28	2.2	2.2	0.5
29	1.3	1.7	0.2
30	3.0	6.1	2.0
31	3.4	1.2	0.5
32	1.8	4.2	0.8

NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)
33	1.1	5.5	0.7
34	1.3	2.3	0.3
35	2.6	4.3	1.2
36	2.5	2.3	0.6
37	1.8	1.8	0.4
38	3.5	1.1	0.4
39	5.1	4.9	2.8
40	1.3	1.8	0.3
41	3.0	3.0	1.0
42	4.3	2.0	1.0
43	1.3	2.4	0.3
44	1.7	1.2	0.2
45	1.4	1.5	0.2
46	1.5	4.7	0.8
47	2.3	1.5	0.4
48	6.8	1.9	1.4
49	2.3	2.4	0.6
50	2.0	2.0	0.4
51	1.4	1.6	0.2
52	2.6	3.0	0.9
53	1.7	1.7	0.3
54	2.0	1.7	0.4
55	4.1	2.1	1.0
56	3.3	1.2	0.4
57	1.5	6.4	1.1
58	2.2	7.1	1.7
59	2.1	2.3	0.5
60	1.0	7.3	0.8
61	4.3	3.0	1.4
62	2.4	1.3	0.3
63	2.4	1.4	0.4
64	1.5	4.0	0.7

NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)
65	1.0	8.0	0.9
66	3.5	3.5	1.4
67	4.8	4.0	2.1
68	1.0	4.5	0.5
69	1.2	2.8	0.4
70	1.6	4.8	0.9
71	6.5	1.8	1.3
72	1.2	1.4	0.2
73	6.5	2.0	1.4
74	4.0	2.0	0.9
75	2.3	1.2	0.3
76	3.0	2.5	0.8
77	2.3	3.3	0.8
78	3.5	3.5	1.4
79	1.6	1.5	0.3
80	3.0	2.3	0.8
* 81	1.7	3.8	0.7
82	1.7	1.5	0.3
83	1.7	1.5	0.3
84	1.7	1.8	0.3
85	4.3	1.1	0.5
86	1.4	1.4	0.2
87	2.7	3.6	1.1
88	1.8	3.4	0.7
89	6.0	1.0	0.7
90	2.2	1.4	0.3
91	3.6	6.1	2.4
92	3.7	1.2	0.5
93	1.3	1.7	0.2
94	1.3	1.3	0.2
95	1.3	2.0	0.3
96	5.0	1.2	0.7

Notes: Work this sheet with sheet 12 of 19.
Deck sounding was performed in May 2014
The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin.
* Denotes Deck Slab Repair (Full Depth, Type I).

**DECK SLAB REPAIRS
STRUCTURE NO. 100-0059**



NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)
97	1.3	3.0	0.4
98	3.0	2.0	0.7
99	1.9	1.2	0.3
100	1.0	1.3	0.1
101	2.9	5.3	1.7
102	4.6	1.8	0.9
103	2.0	2.2	0.5
104	2.6	4.3	1.2
105	5.3	1.0	0.6
106	1.3	3.1	0.4
107	2.6	2.6	0.8
108	1.3	2.4	0.3
109	1.5	1.9	0.3
110	1.2	3.3	0.4
111	3.3	1.1	0.4
112	1.8	3.1	0.6
113	1.4	2.0	0.3
114	1.3	1.0	0.1
115	1.5	1.4	0.2
116	2.5	5.1	1.4
117	5.5	7.8	4.8
118	2.8	3.3	1.0
119	1.5	2.6	0.4
120	5.1	1.4	0.8
121	5.5	8.6	5.3
* 122	8.8	3	2.9
123	3.3	3.2	1.2
124	3.8	2.1	0.9

NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)
125	1.6	2.2	0.4
126	1.4	3.1	0.5
127	1.7	3.0	0.6
128	2.5	2.1	0.6
129	1.2	1.4	0.2
130	3.5	1.8	0.7
131	1.2	6.9	0.9
132	4.9	3.1	1.7
133	1.0	1.7	0.2
134	4.2	0.6	0.3
135	4.6	1.0	0.5
136	3.6	3.0	1.2
137	2.0	3.0	0.7
138	2.7	2.1	0.6
139	3.0	1.6	0.5
140	1.0	3.5	0.4
141	1.6	4.0	0.7
142	2.2	3.7	0.9
143	1.8	2.3	0.5
* 144	1.9	3.4	0.7
145	2.3	0.6	0.2
146	1.8	3.2	0.6
147	0.9	6.0	0.6
148	1.5	2.0	0.3
149	2.0	4.3	1.0
150	7.8	4.0	3.5
151	2.9	1.4	0.5
152	1.7	3.8	0.7

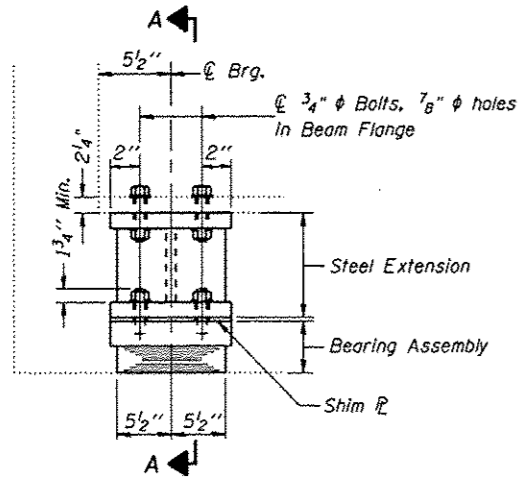
NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)
153	3.0	5.7	1.9
154	2.0	6.7	1.5
155	4.0	1.0	0.4
156	6.2	2.7	1.9
157	4.0	5.0	2.2
158	2.3	2.9	0.7
159	3.9	2.0	0.9
160	2.0	4.3	1.0
161	2.0	1.2	0.3
162	3.2	2.5	0.9
163	1.5	3.3	0.6
164	5.0	3.5	1.9
165	4.0	3.1	1.4
166	1.8	8.4	1.7
167	0.9	1.5	0.2
168	3.1	3.7	1.3
169	1.8	2.7	0.5
170	1.5	3.7	0.6
171	1.4	3.4	0.5
172	3.6	1.1	0.4
173	4.7	1.7	0.9
174	1.6	1.0	0.2
175	3.5	4.5	1.8
176	7	8.6	6.7
177	3.7	7.5	3.1

Notes: Deck sounding was performed in May 2014
 The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin.
 * Denotes Deck Slab Repair (Full Depth, Type I).

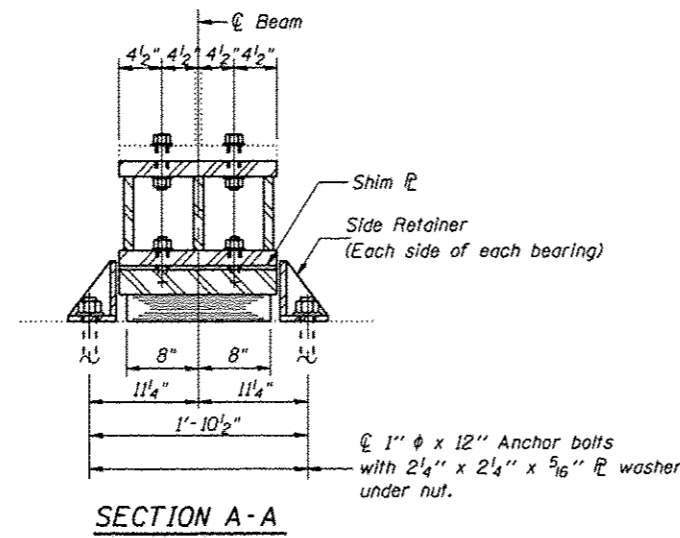
BILL OF MATERIAL

Item	Unit	Total
Deck Slab Repair (Full Depth)	Sq Yd	5
Deck Slab Repair (Partial Depth)	Sq Yd	166

**DECK SLAB REPAIRS
 STRUCTURE NO. 100-0059**



ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 52.106 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

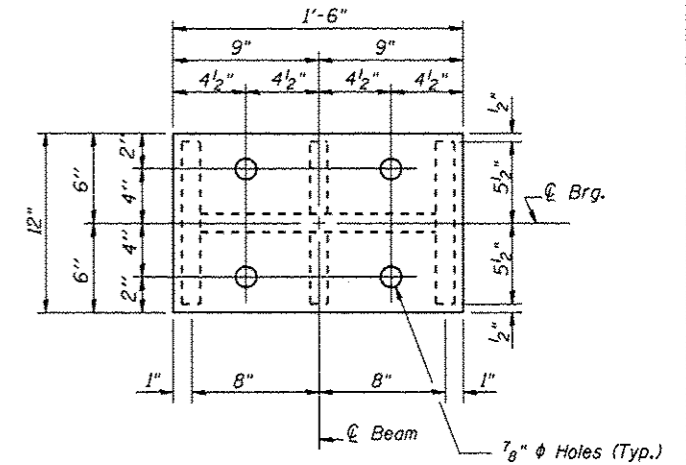
The minimum jack capacity required is 60 Tons.

Existing cross frame removal and reinstallation may be required to facilitate drilling holes, cost to be included with "Jack and Remove Existing Bearings".

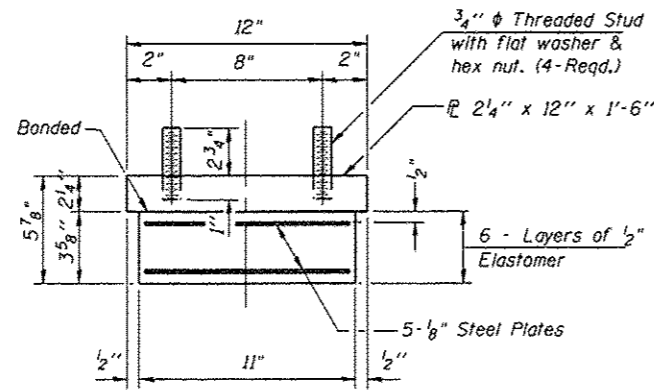
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

New steel extensions, connection bolts, Shim R's are included in "Furnishing and Erecting Structural Steel".



PLAN-TOP & BOTTOM PLATE

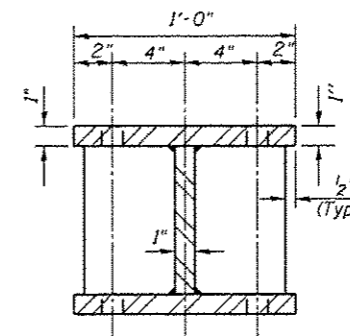


BEARING ASSEMBLY

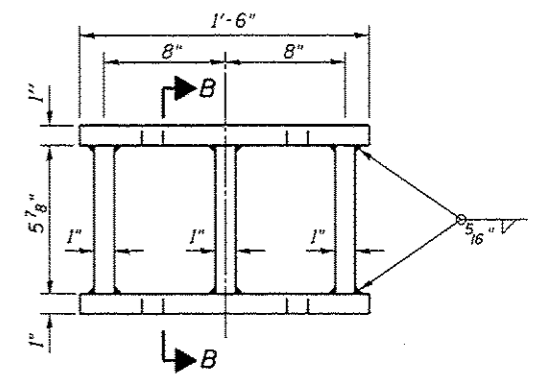
Note: Shim plates shall not be placed under Bearing Assembly.

GIRDER REACTIONS

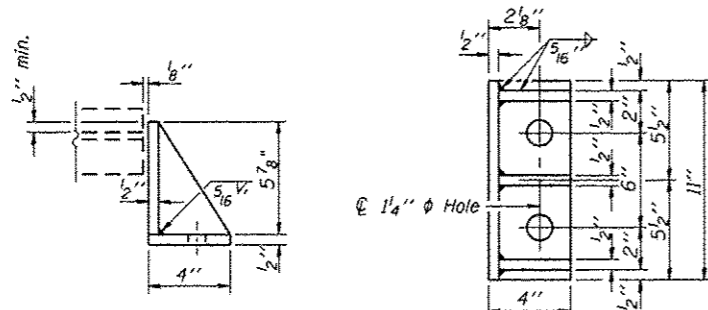
EAST ABUTMENT		
R _D	(K)	78.4
R _L	(K)	56.4
Imp.	(K)	11.6
R (Total)	(K)	146.4



SECTION B-B



STEEL EXTENSION DETAIL

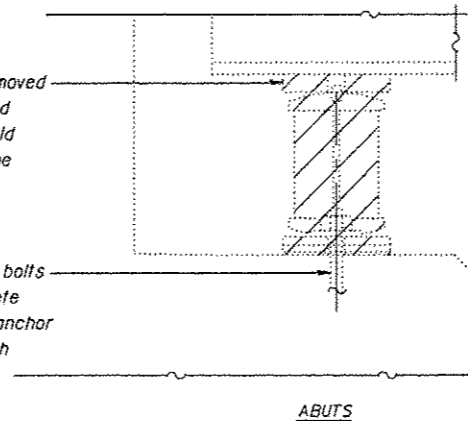


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Existing Plate to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

Burn the existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy.



ABUTS

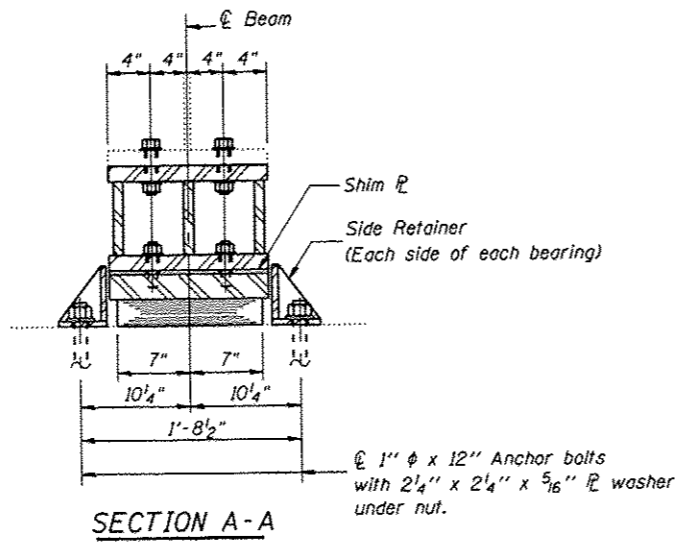
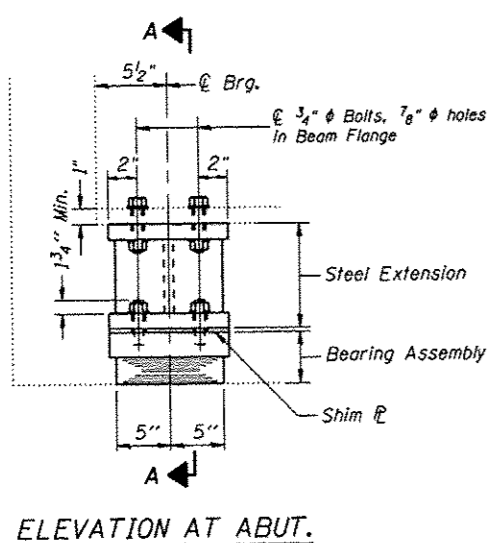
EXISTING BEARING REMOVAL DETAIL

Cost is included with Jack and Remove Existing Bearings

BILL OF MATERIAL EAST ABUT.

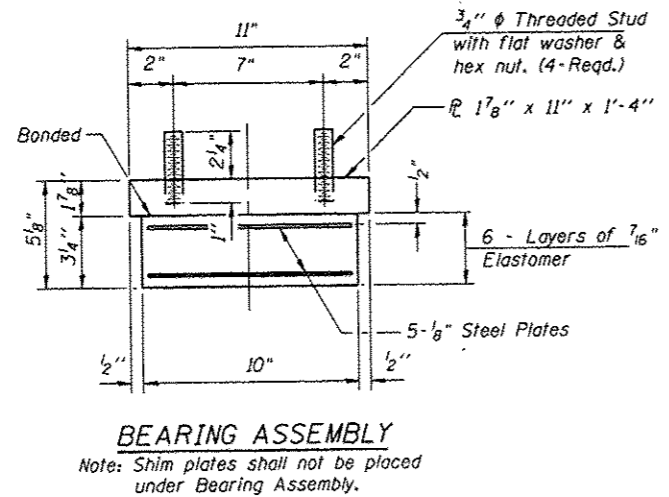
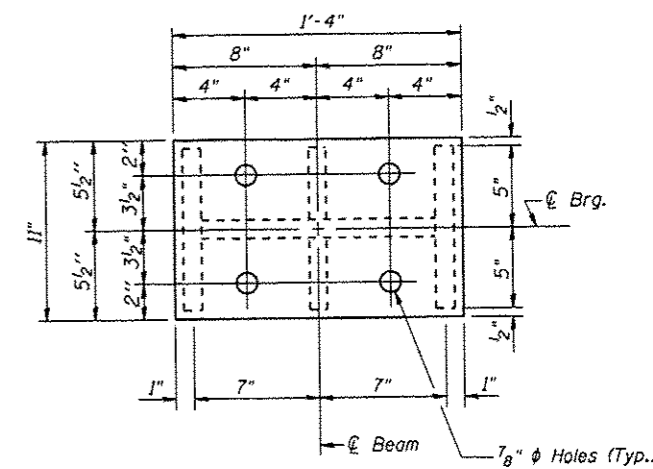
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	4
Anchor Bolts, 1"	Each	16
Jack and Remove Existing Bearings	Each	4
Furnishing and Erecting Structural Steel	Pound	890

BEARING DETAILS
EAST ABUTMENT
STRUCTURE NO. 100-0059



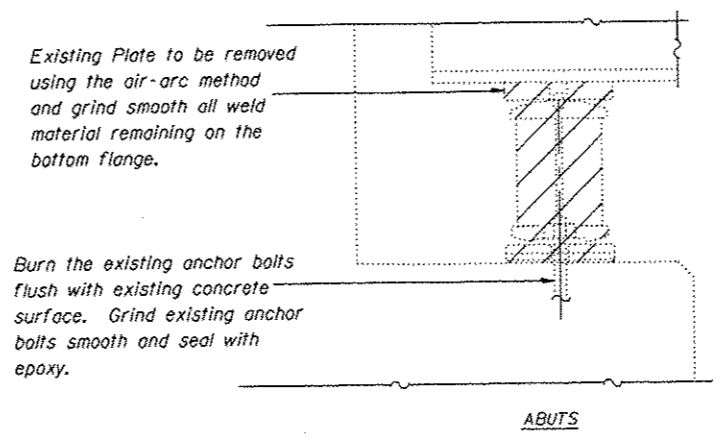
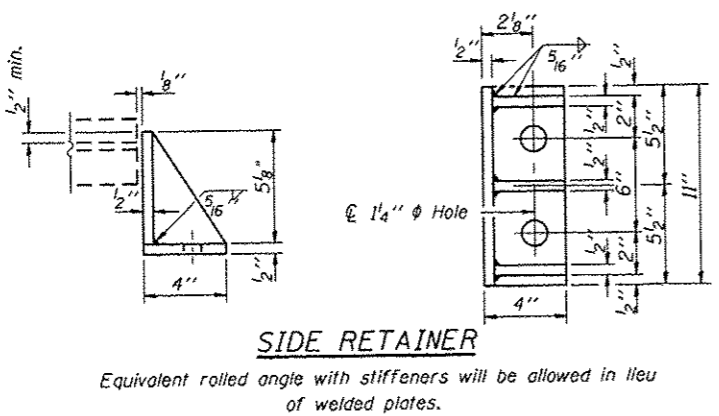
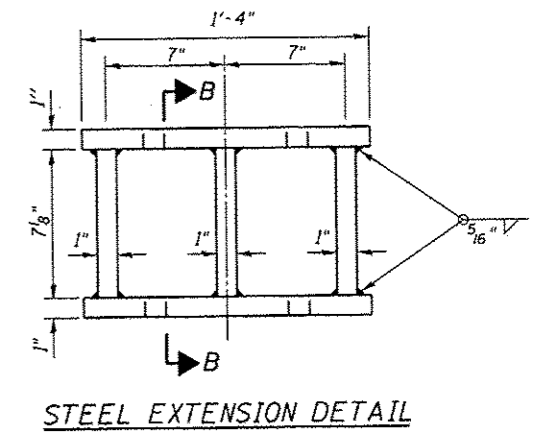
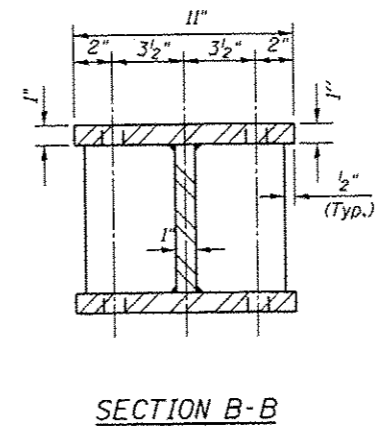
TYPE I ELASTOMERIC EXP. BRG.

Notes:
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
 The minimum jack capacity required is 35 Tons. Existing cross frame removal and reinstallation may be required to facilitate drilling holes, cost to be included with "Jack and Remove Existing Bearings".
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
 New steel extensions, connection bolts, Shim R's are included in "Furnishing and Erecting Structural Steel".



GIRDER REACTIONS

WEST ABUTMENT		
R _D	(K)	46.7
R _L	(K)	51.3
Imp.	(K)	11.6
R (Total)	(K)	109.6



BILL OF MATERIAL WEST ABUT.

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	4
Anchor Bolts, 1"	Each	16
Jack and Remove Existing Bearings	Each	4
Furnishing and Erecting Structural Steel	Pound	823

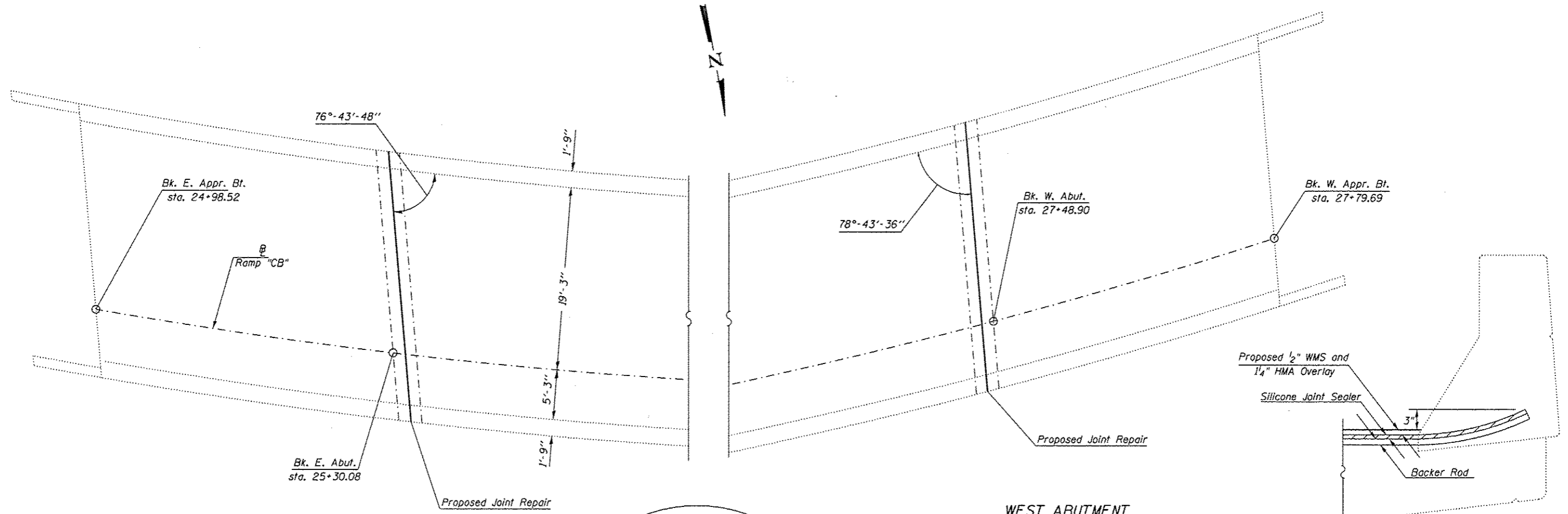
BEARING DETAILS WEST ABUTMENT STRUCTURE NO. 100-0059

FILE NAME =	USER NAME = dahmer_ja	DESIGNED -	REVISED -
or\p\work\p\dat\dahmer_ja\8387649\7824-ah-1-plan.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
Default	PLOT SCALE = 100.0000 / 1 in.		
	PLOT DATE = 6/15/2014		

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BEARING DETAIL WEST ABUTMENT
 SCALE: SHEET 6 OF 8 SHEETS STA. TO STA.

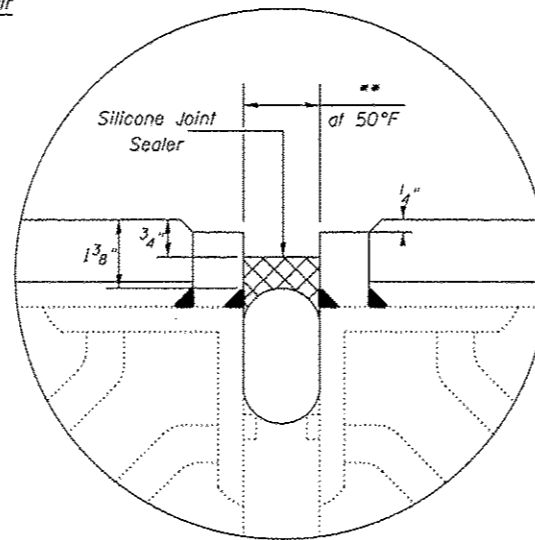
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	09 CM BRIDGE REP. 2015-1	WILLIAMSON	19	14
CONTRACT NO. 78424				
ILLINOIS FED. AID PROJECT				



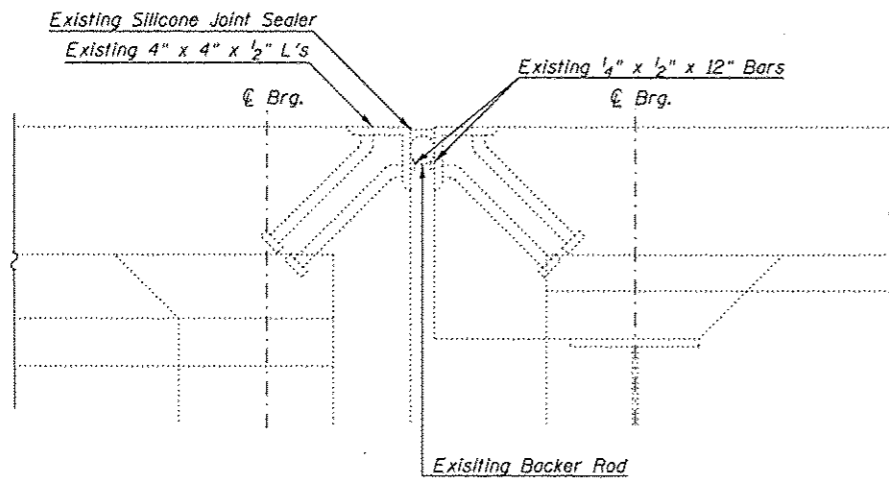
EAST ABUTMENT

WEST ABUTMENT

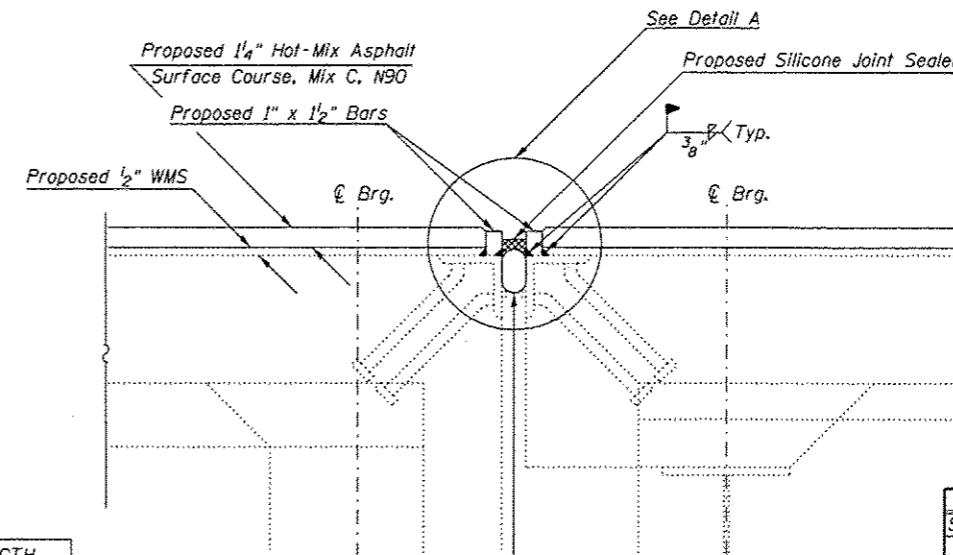
TYPICAL END OF SEAL TREATMENT AT EXPANSION JOINT



DETAIL A



EXISTING JOINT DETAIL



PROPOSED JOINT REPAIR DETAIL

Notes:
The removal of the existing joint and furnishing and erecting of the proposed 1" x 1/2" bars to be included in the cost of Silicone Joint Sealer, 1.5".

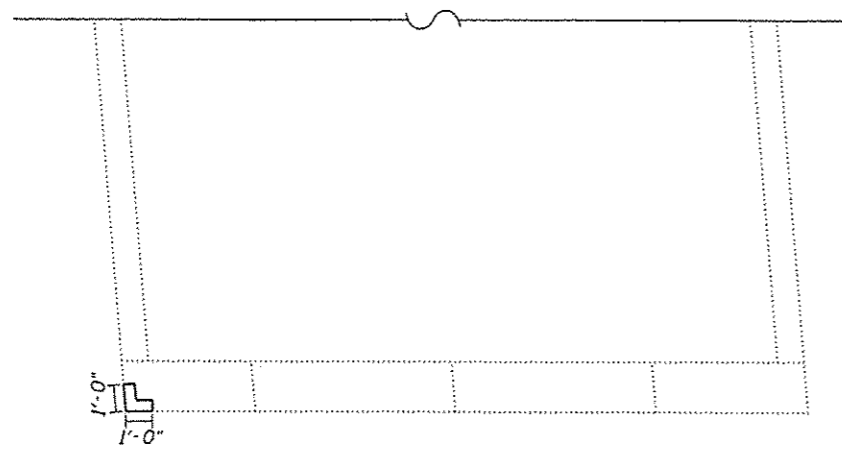
BILL OF MATERIAL

Item	Unit	Total
Silicone Joint Sealer, 1.5"	Foot	58

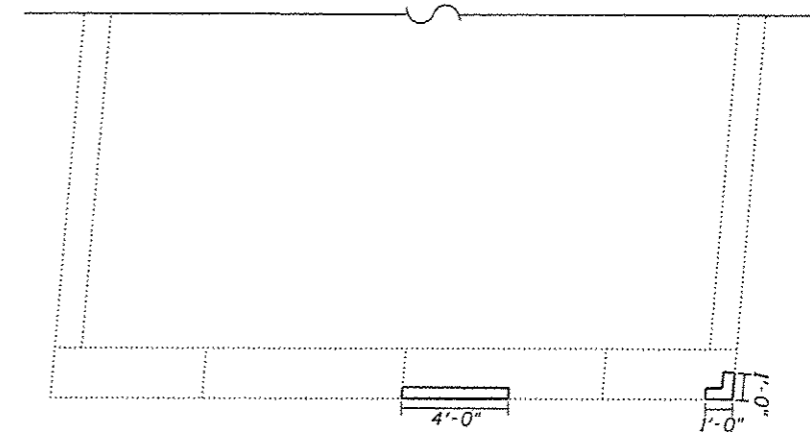
EXISTING OPENING **	LENGTH
	FOOT
WEST	1-1/2" 28.5
EAST	1-1/2" 28.6

Backer Rod having a Diameter of 25% Greater than Joint Opening at the Time of Installation

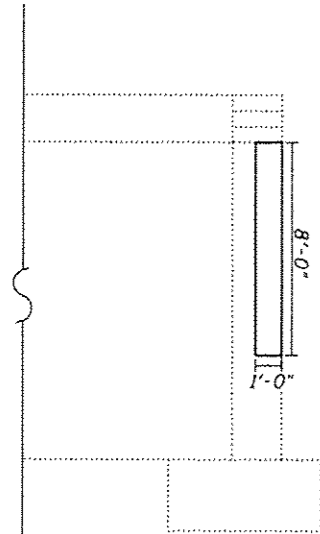
**EXPANSION JOINT REPAIRS
STRUCTURE NO. 100-0059**



PLAN VIEW



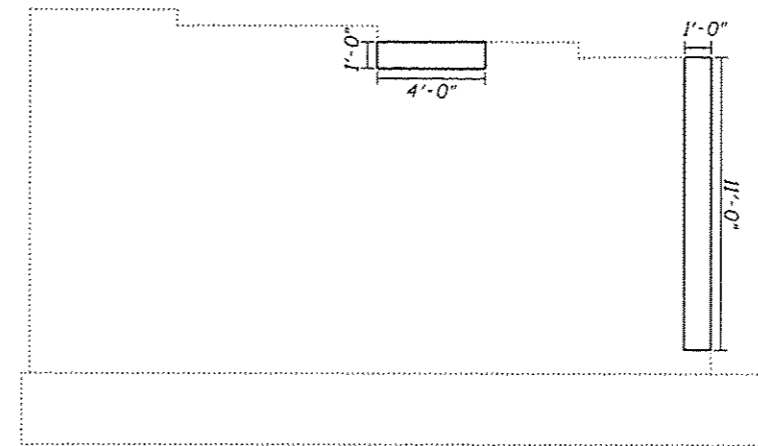
PLAN VIEW



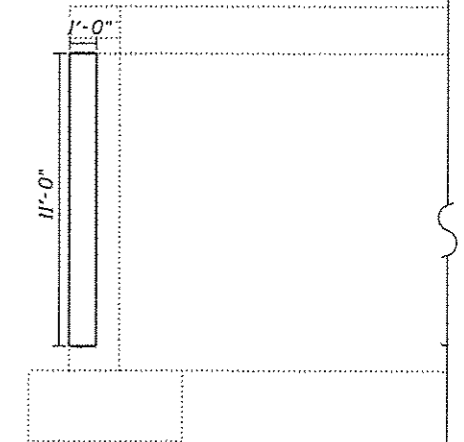
LOOKING NORTH AT ABUTMENT



LOOKING FROM ϕ AT ABUTMENT



LOOKING FROM ϕ AT ABUTMENT



LOOKING NORTH AT ABUTMENT

ELEVATION VIEW
STRUCTURAL REPAIR OF CONCRETE
(DEPTH \leq 5 INCHES)
WEST VAULT

ELEVATION VIEW
STRUCTURAL REPAIR OF CONCRETE
(DEPTH \leq 5 INCHES)
EAST VAULT

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete \leq 5 in	Sq Ft	42

STRUCTURAL REPAIR OF CONCRETE
STRUCTURE NO. 100-0059

FILE NAME :	USER NAME : Dahmer.ja	DESIGNED -	REVISED -
c:\pwworksp\pwworksp\dahmer.ja\d8387649\78424.sht		DRAWN -	REVISED -
Default	PLOT SCALE = 1/8" = 1'-0"	CHECKED -	REVISED -
	PLOT DATE = 8/15/2014	DATE -	REVISED -

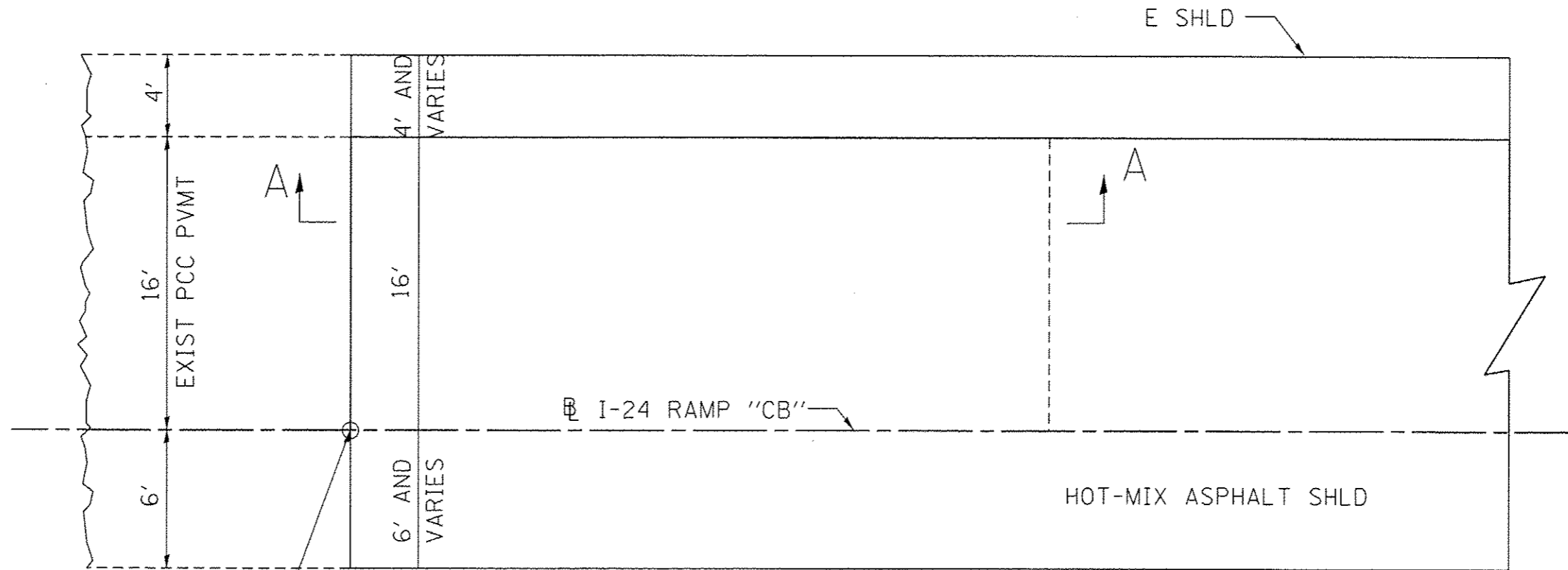
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL REPAIR OF CONCRETE DETAILS

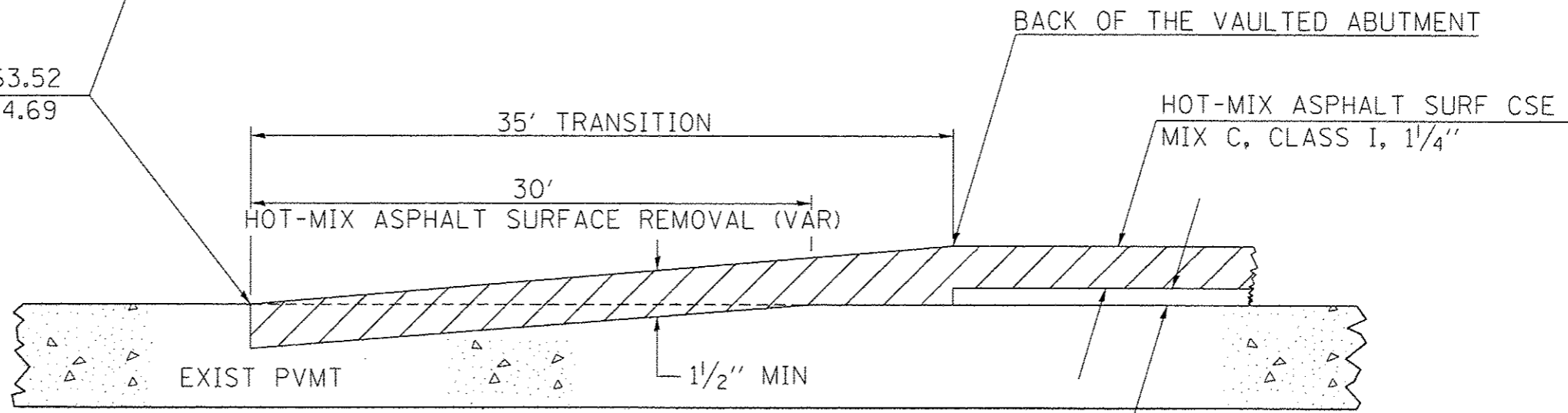
SCALE: SHEET 8 OF 8 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	D9 CM BRIDGE REP. 2015-1	WILLIAMSON	19	16
CONTRACT NO. 78424				
ILLINOIS FED. AID PROJECT				

BUTT JOINT



STA 24+63.52
STA 28+14.69



SECTION A-A

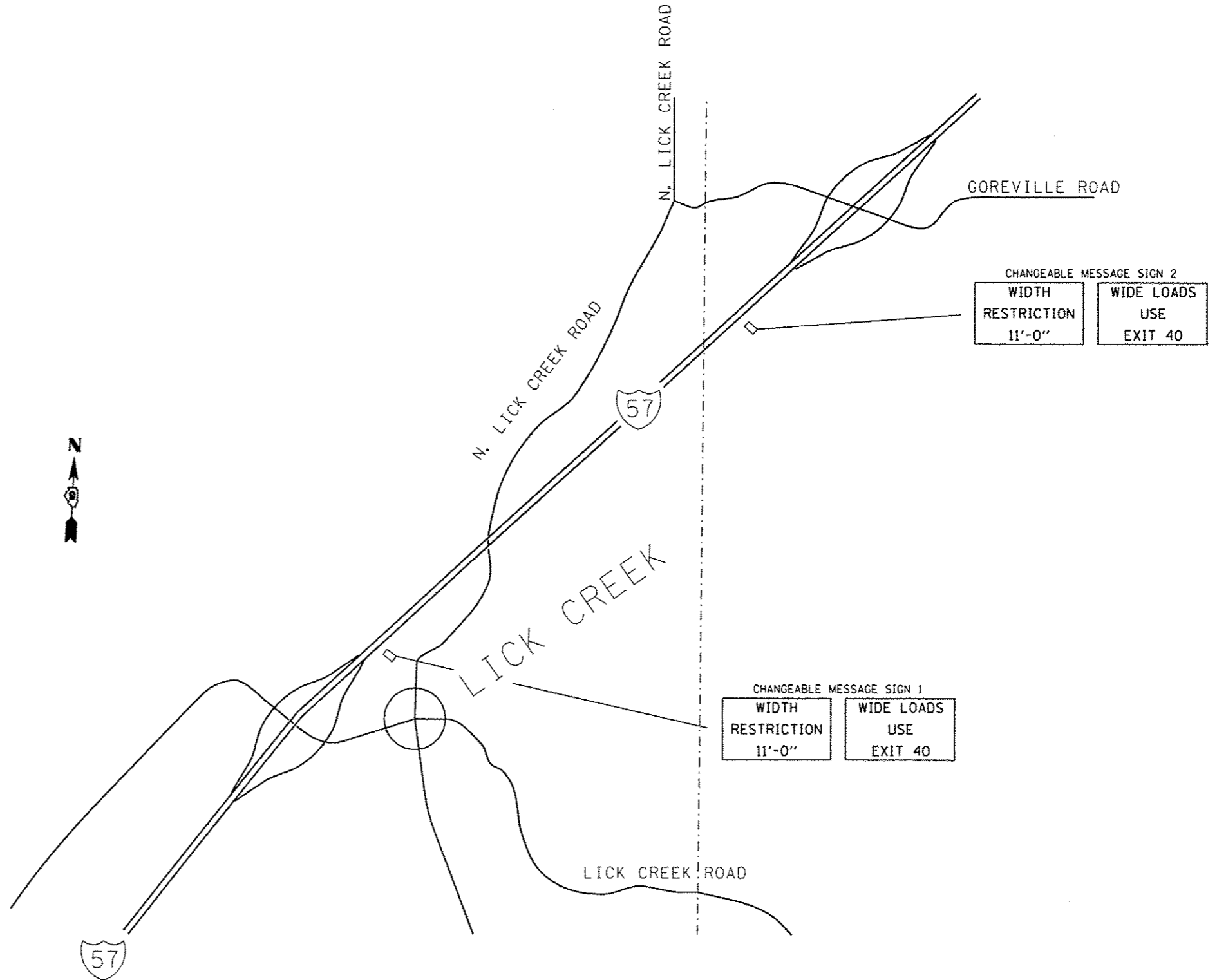
REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	3-25-08
REVISED	5-17-13

STD. 9-86

FILE NAME =	USER NAME = Dahmer.ja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BUTT JOINT DETAIL	P.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\dahmer\ja\d8387649\78424-shd-plan.dgn	PLOT SCALE = 1/80.0000' = 1" =	DRAWN -	REVISED -			24	09 CM BRIDGE REP. 2015-1	WILLIAMSON	19	17
Default	PLOT DATE = 8/15/2014	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	CONTRACT NO. 78424				
ILLINOIS FED. AID PROJECT										

WIDTH RESTRICTION SIGNING

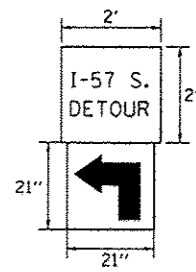
1. THE RELOCATING, MAINTENANCE OR REPLACEMENT OF CHANGEABLE MESSAGE SIGNS SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.
2. EXACT CHANGEABLE MESSAGE SIGN PLACEMENT WILL BE DETERMINED BY THE ENGINEER.
3. THE DISTRICT 9 OPERATIONS ENGINEER SHALL BE CONTACTED 10 DAYS PRIOR TO THE ERECTION OF CHANGEABLE MESSAGE SIGNS.
4. THE CONTRACTOR SHALL DISPLAY THE CHANGEABLE MESSAGE SIGNS TWO WEEKS BEFORE THE CLOSURE SHOWING THE WARNING AND CHANGE THE MESSAGE THE NIGHT OF THE CLOSURE.



FILE NAME :	USER NAME : Dahmer_ja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION DETAILS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pridat\dahmer_ja\0307649\78424-shr-plan.dgn	DRAWN -	REVISED -	REVISED -			24	09 CM BRIDGE REP. 2015-1	WILLIAMSON	19	18
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	PLOT DATE = 8/15/2014	DATE -	REVISED -					CONTRACT NO. 78424		

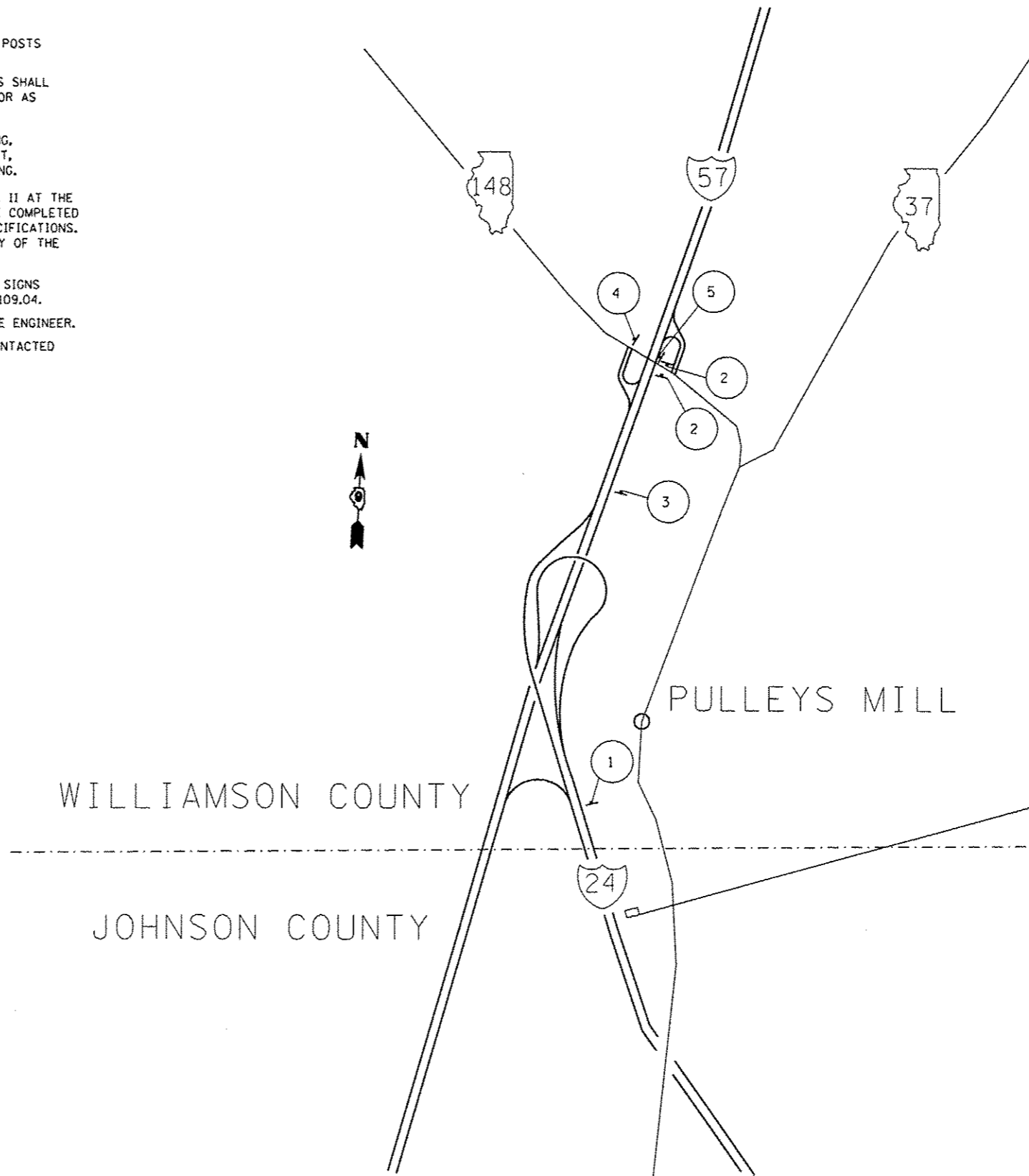
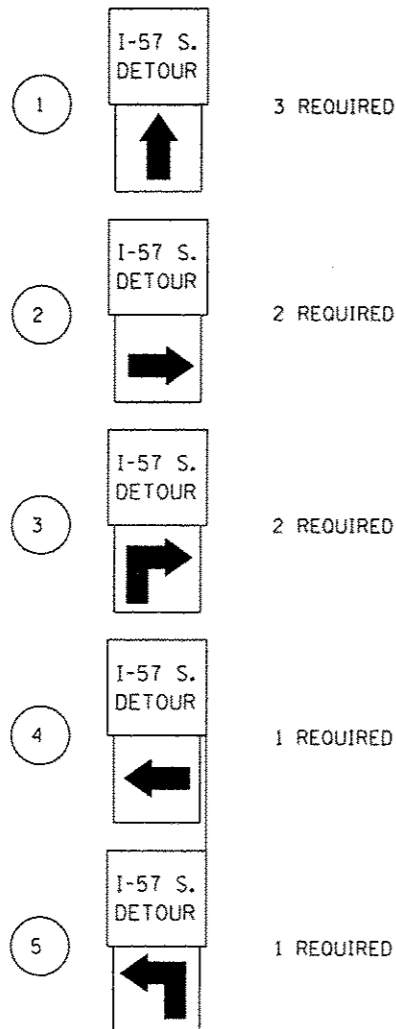
DETOUR SIGNING

SIGN DETAIL



NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING METAL POSTS INSTEAD OF WOOD.
2. ALL SIGNS SHALL BE BLACK ON ORANGE. THE POSTS SHALL BE PLACED 12 FEET FROM THE EDGE OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.
3. THE COST OF FURNISHING, REMOVING, AND INSTALLING, ALL SIGNS, AND HARDWARE AS SHOWN ON THIS SHEET, SHALL BE INCLUDED IN THE COST OF DETOUR SIGNING.
4. SIGNS SHALL BE REMOVED ON COMPLETION OF STAGE II AT THE DIRECTION OF THE ENGINEER. THIS WORK SHALL BE COMPLETED ACCORDING TO SECTION 724 OF THE STANDARD SPECIFICATIONS. THE SIGNS AND POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
5. THE RELOCATING, MAINTENANCE OR REPLACEMENT OF SIGNS SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.
6. EXACT SIGN PLACEMENT WILL BE DETERMINED BY THE ENGINEER.
7. THE DISTRICT 9 OPERATIONS ENGINEER SHALL BE CONTACTED 10 DAYS PRIOR TO THE ERECTION OF SIGNS.



CHANGEABLE MESSAGE SIGN 3	
EXIT 44A CLOSED 2 MI AHD.	DETOUR EXIT 45 NORTH