

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLUNTON	21	1
ILLINOIS			CONTRACT NO. 76R64	

09-22-2023 LETTING ITEM 057

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**PROPOSED  
HIGHWAY PLANS**

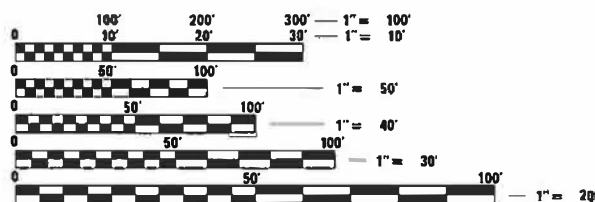
FAP ROUTE 42A (IL 127)  
SECTION BHF-42(65)BJR  
**BRIDGE JOINT REPLACEMENT AND DECK REPAIRS – CM  
CLINTON COUNTY**

C-98-139-22



**PROJECT LOCATION**  
IL 127 AT NS RR  
0.2 MIN OF IL 161  
SN 014-0015  
LATITUDE: 38.536314  
LONGITUDE: -89.352862  
NORFOLK SOUTHERN MILEPOST – 52.42  
DIVISION – MIDWEST

**FUNCTIONAL CLASSIFICATION**  
MINOR ARTERIAL  
2021 ADT = 3750 (ACTUAL)  
2023 ADT = 3800 (ESTIMATED)  
2043 ADT = 4400 (ESTIMATED)  
S.U. = 3.7% M.U. = 6.7%

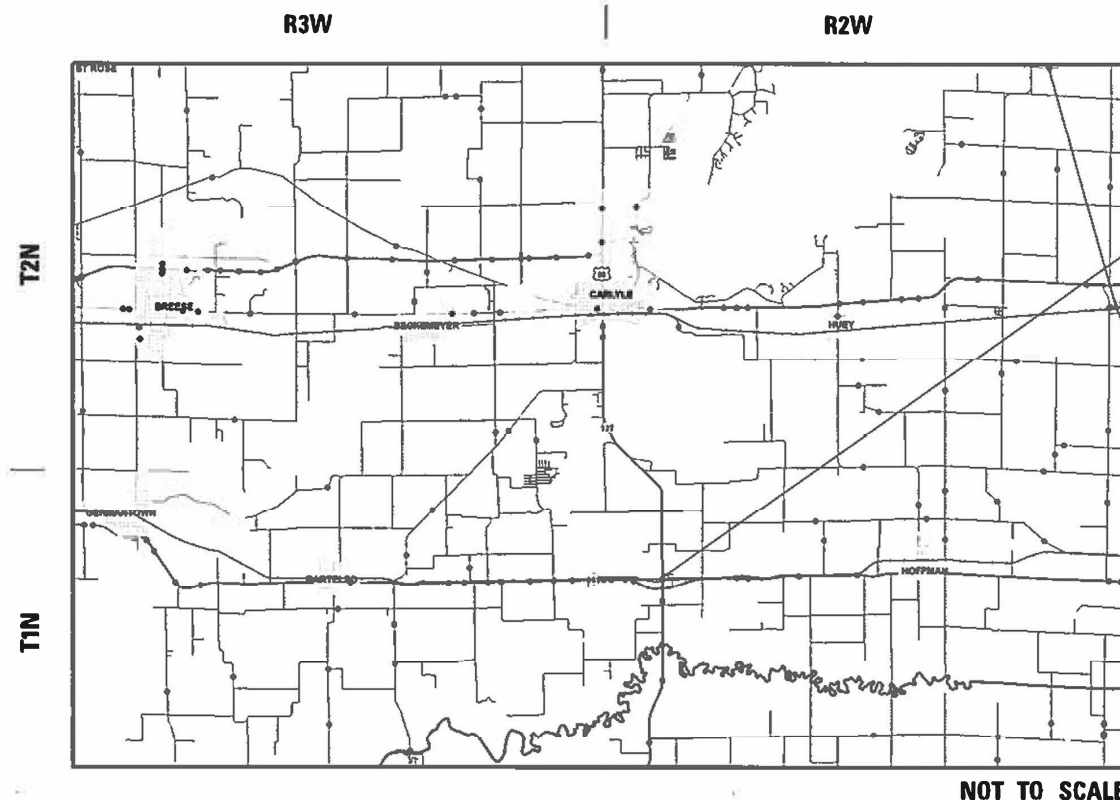


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER CHERYL KEPLAR  
PROJECT MANAGER KAREN CHALLANDES

CONTRACT NO. 76R64



GROSS LENGTH = 52.8 FT. = 0.01 MILE  
NET LENGTH = 52.8 FT. = 0.01 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED Feb 9, 2023  
Karl H. B.  
REGIONAL ENGINEER

May 12, 2023 John A. Etk  
ENGINEER OF DESIGN AND ENVIRONMENT

May 12, 2023 Steph M. Smith  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

## INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS
- 3-4 SUMMARY OF QUANTITIES
- 5 TYPICAL SECTION
- 6 STAGING
- 7 WIDTH RESTRICTION SIGNING
- 8-21 BRIDGE SHEETS

## HIGHWAY STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENTS BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 701321-18 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701901-08 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

## GENERAL NOTES

1. UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA:  
  - AMEREN ILLINOIS
  - AT&T ILLINOIS
  - CLEARWAVE COMMUNICATION
  - HOFFMAN RURAL WATER DISTRICT
2. NO SURVEY WAS PERFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS.
3. FOUR (4) CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED FOR THIS PROJECT AND SHALL BE PLACED TWO (2) WEEKS PRIOR TO ANY LANE CLOSURE. THE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER.

## COMMITMENTS

NONE

REV. - MS

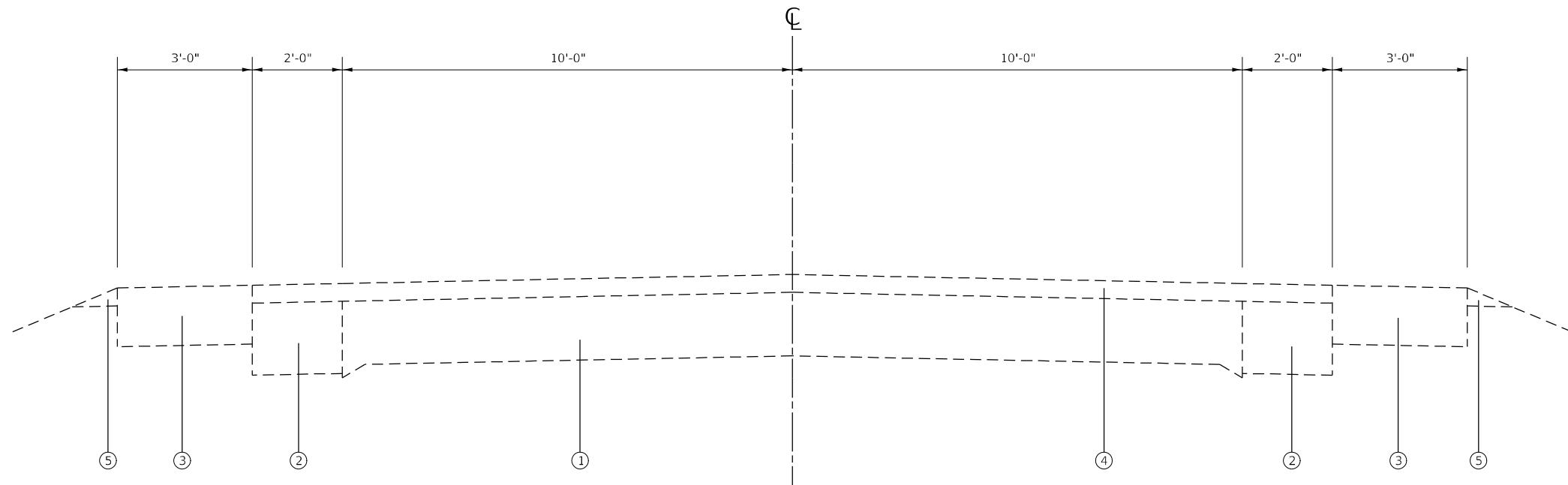
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						SCALE:		SHEET OF SHEETS		STA. TO STA.	
						ILLINOIS		FED. AID PROJECT			
						CONTRACT NO. 76R64					









ROADWAY NORTH AND SOUTH OF THE STRUCTURE  
 STA. 297+62  
 STA. 299+61

LEGEND

- 1 EXISTING CONCRETE PAVEMENT 9-6-9
- 2 EXISTING PCC WIDENING, 8"
- 3 EXISTING HOT-MIX ASPHALT SHOULDER, 9 3/4"
- 4 EXISTING RESURFACING, 5 3/4"
- 5 EXISTING AGGREGATE WEDGE SHOULDER, TYPE B

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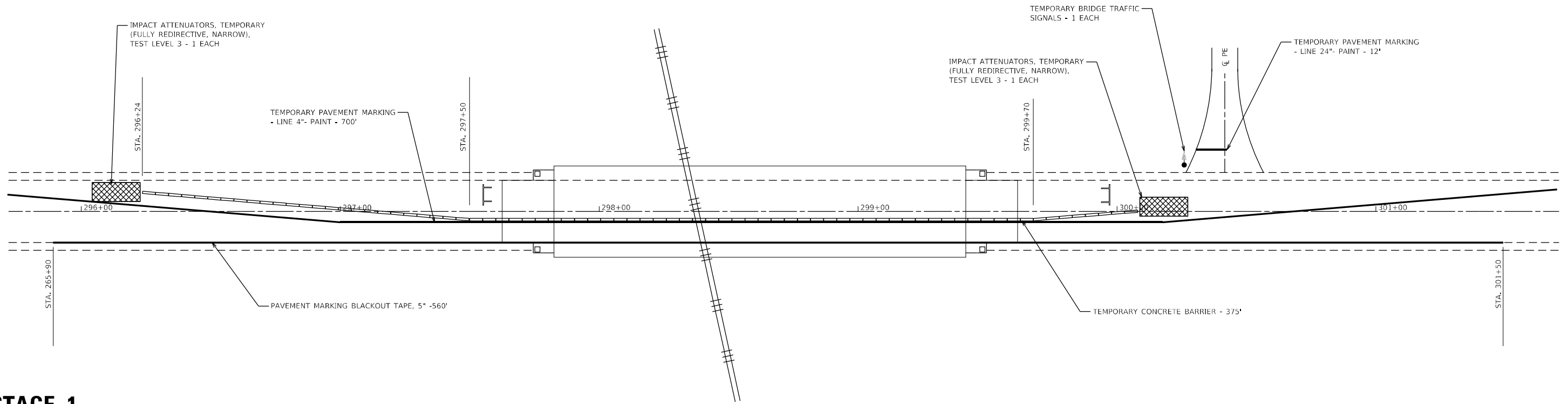
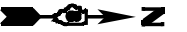
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTION**

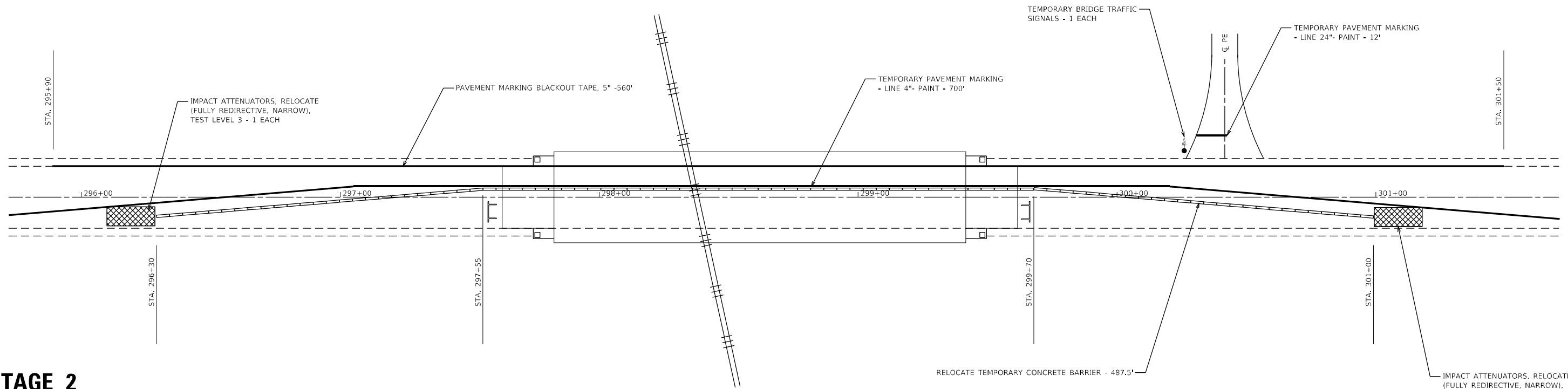
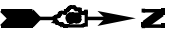
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	5
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### STAGE 1

PLACE 375' OF TEMPORARY BARRIER IN STAGE 1.  
SEE STANDARD 701321 FOR DETAILS NOT SHOWN.



### STAGE 2

PLACE 112.5' OF TEMPORARY CONCRETE BARRIER IN STAGE 2.  
RELOCATE 375' TEMPORARY CONCRETE BARRIER IN STAGE 2.  
SEE STANDARD 701321 FOR DETAILS NOT SHOWN.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGING**

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	6
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				



CARLYLE

MAX WIDTH
10'-6"
5.5 MILES AHEAD

OLD US 50

US 50

127
SOUTH
MAX WIDTH
10'-6"
5.5 MILES AHEAD

MAX WIDTH
10'-6"
1 MILE AHEAD

PROJECT LOCATION

161

161

127
NORTH
MAX WIDTH
10'-6"
1 MILE AHEAD

127
NORTH
MAX WIDTH
10'-6"
1 MILE AHEAD

127

MAX WIDTH
10'-6"
1 MILE AHEAD

**SIGNS REQUIRED**

- |     |
|-----|
| 127 |
|-----|

 (4)
- |       |
|-------|
| NORTH |
|-------|

 (2)
- |       |
|-------|
| SOUTH |
|-------|

 (2)
- |                 |
|-----------------|
| MAX WIDTH       |
| 10'-6"          |
| 5.5 MILES AHEAD |

 (3)
- |              |
|--------------|
| MAX WIDTH    |
| 10'-6"       |
| 1 MILE AHEAD |

 (4)

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WIDTH RESTRICTION SIGNING**

SCALE: NTS    SHEET    OF    SHEETS    STA.    TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	7
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				

Existing Structure: 014-0015 was built in 1936 under F.A. Route 128, Sec 1VB-WPGH. This bridge consisted of 3 continuous wide flange beams supported on pile bent abutments and piers. In 1963 the bridge was reconstructed under Job number 22503, F.A. Route 128, Sec I(W,R5)-1. In 1988 the bridge was reconstructed again under contract 96085, F.A. Route 42, Sec 1-VBR. The existing superstructure, abutment & pier caps, upper footage of pier piling was removed. New piling driven for bridge widening was placed. Existing pier piling was extended. A new superstructure along with new abutment and pier caps were constructed.

The deck end, mudwalls and approach ends shall be removed and replaced solid. Before replacing solid, the beam end shall be cleaned and painted. The deck shall be patched.

Stage Construction shall be used.

**GENERAL NOTES**

Reinforcement bars designated (E) shall be epoxy coated.

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.

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 cannot be removed by grinding ¼ 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.

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.

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

Bridge deck concrete sealer shall be placed on top/inside faces of (parapets & curbs) (full length) and on top of new concrete at joints. In addition, place sealer on the existing deck surface.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". After removal of deck ends and end diaphragms, but prior to encasement of the steel beams, all beams, bearings and other structural steel within 6' (measured along the beam) of the deck joints shall be cleaned per Near White Blast Cleaning- SSPC-SP10.

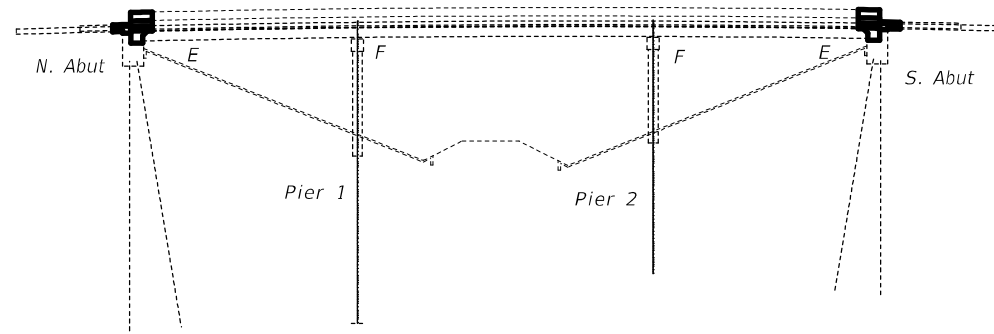
The designated areas cleaned per Near White Blast Cleaning shall be painted according to the requirements of paint system 1- 0Z/E/U. The color of the final finish coat for all steel surfaces shall be Interstate Green (Munsell No. 7.5G 4/8).

Containment of cleaning residue is required to control nuisance dust. See special provisions for Containment and Disposal of Non-Lead Paint Cleaning Residues.

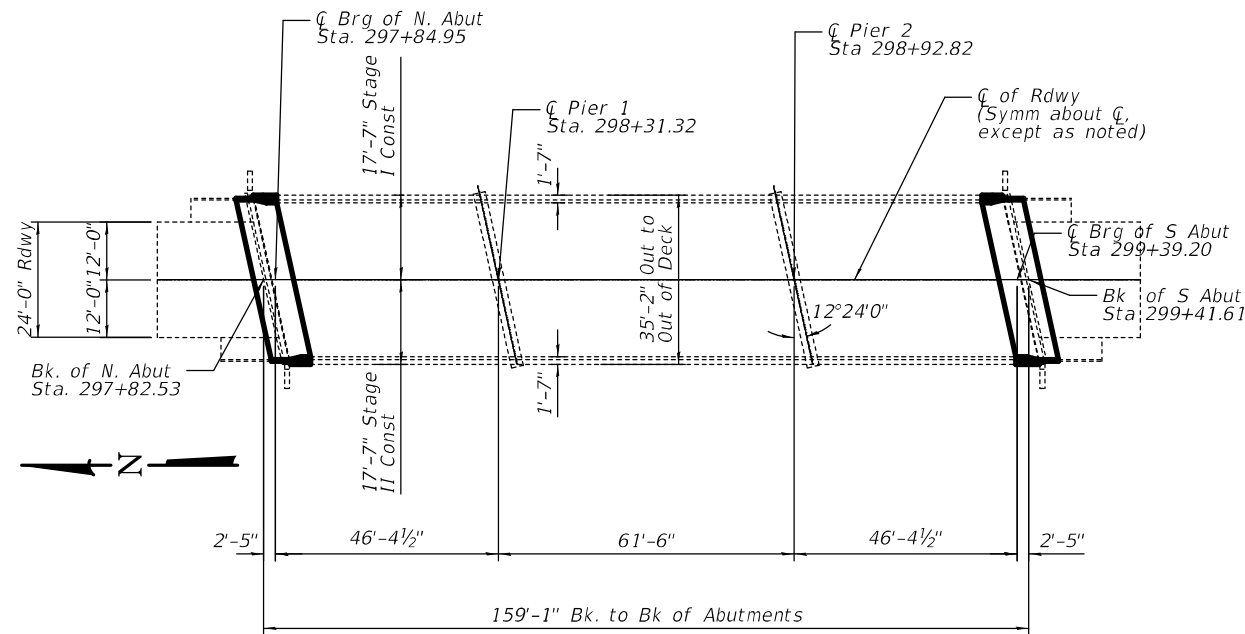
SSPC QP1 Certification is required for this Contract.

Area of deck repairs shown are estimated. The engineer shall show actual locations of deck repairs on as-built plans.

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



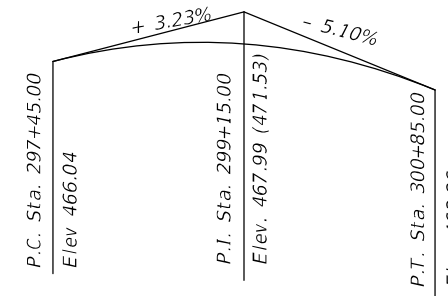
**ELEVATION**



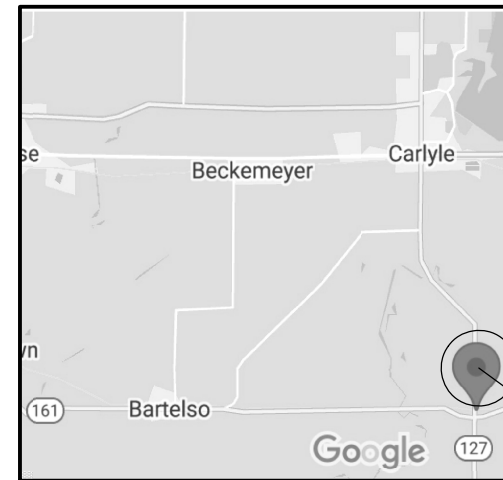
**PLAN**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	22.0
Concrete Superstructure	Cu. Yd.	37.9
Reinforcement Bars, Epoxy Coated	Pound	4982
Bar Splicers	Each	64
Bridge Deck Concrete Sealer	Sq. Ft.	6407.2
Structural Steel Removal	Pound	2070
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	7.4
Deck Slab Repair (Partial)	Sq. Yd.	51.9
Cleaning and Painting Steel Bridge, No. 1	L. Sum	1
Containment & Disposal of Non-Lead Paint	L. Sum	1
Cleaning Residues No. 1		
Protective Shield	Sq. Yd.	356



**EX. PROFILE GRADE**



**LOCATION SKETCH**

**DESIGN STRESSES**  
**FIELD UNITS**

f'c = 4,000 psi  
fy = 60,000 psi (Reinforcement)

**SHEET INDEX**

- 1) General Plan and Elevation
- 2) Deck Section
- 3) Joint Removal & Replacement (S. Abut.)
- 4) Joint Removal & Replacement (N. Abut.)
- 5) X-Sec (Appr. Removal & Replacement)(S Abut)
- 6) X-Sec (Appr Removal & Replacement) (N Abut)
- 7) Existing Joint Details
- 8) Proposed Joint Details
- 9) Diaphragm at Abutment (S Abut)
- 10) Diaphragm at Abutment (N Abut)
- 11) Deck Patching Survey (Sketch)
- 12) Deck Patching Survey (Data)
- 13) Temporary Concrete Barrier
- 14) Bar Splicer



Expires 11-30-2024

*Jayme F. Schiff*

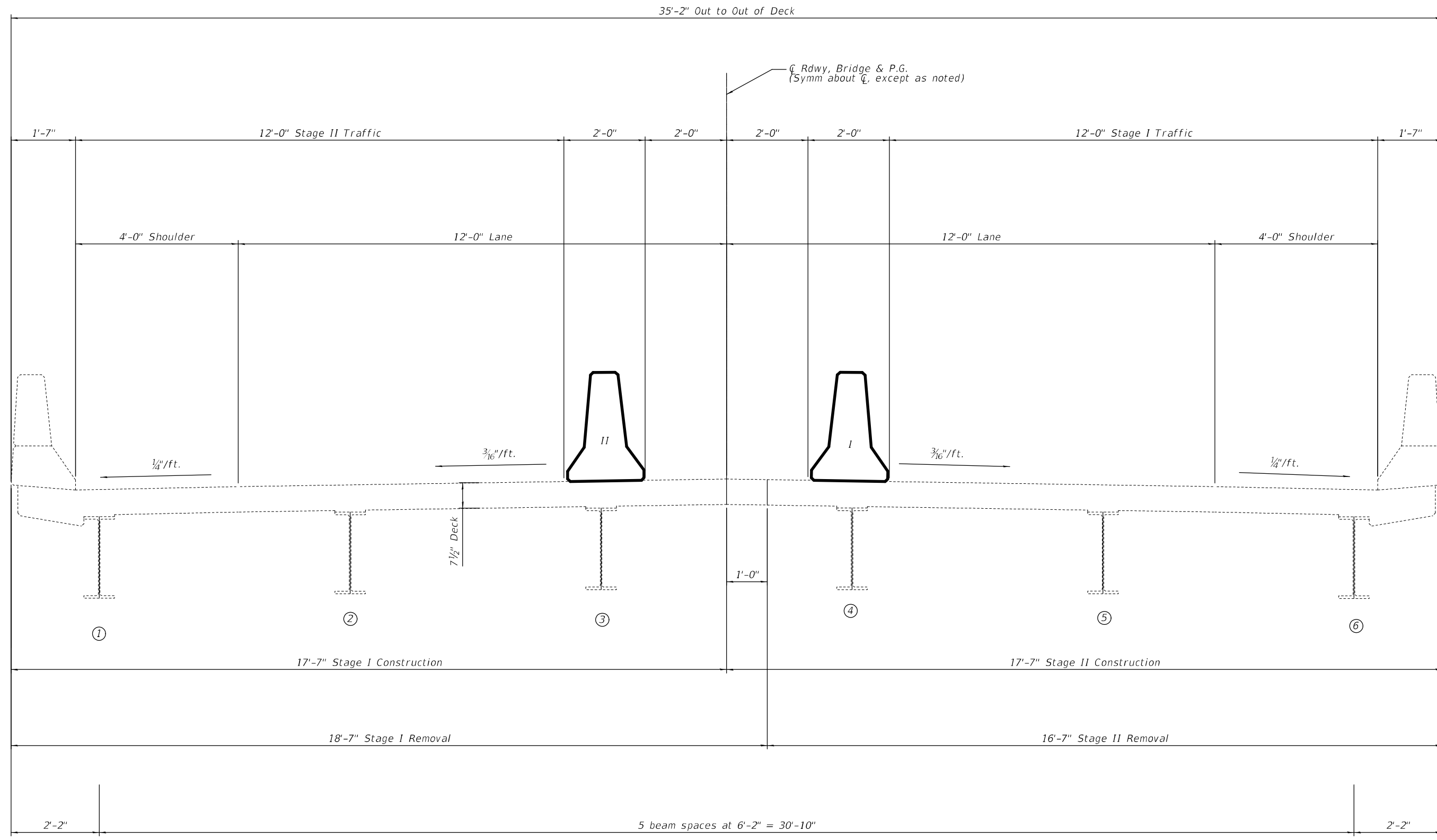
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**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION [IL 127 over NS RR (in Posey)]**  
**SN 014-0015**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)JR	CLINTON	21	8
			CONTRACT NO. 76R64	
ILLINOIS FED. AID PROJECT				

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**DECK SECTION AWAY FROM ABUTMENTS**

(Looking South)

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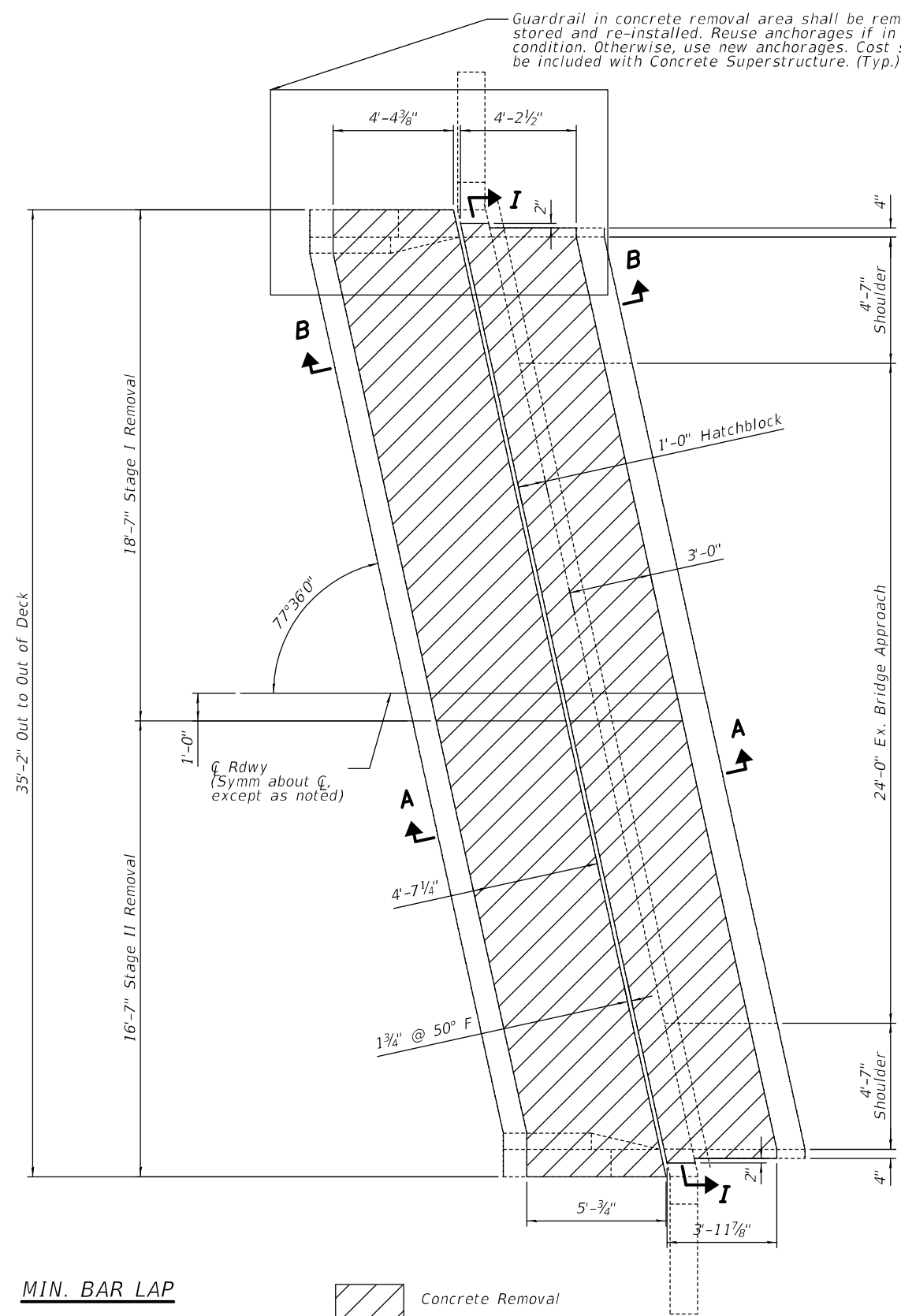
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PLOT DATE = 2/9/2023	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>DECK CROSS SECTION</b>			
<b>SN 014-0015</b>			
SCALE:	SHEET 2	OF 14 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	9
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				

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Guardrail in concrete removal area shall be removed, stored and re-installed. Reuse anchorages if in good condition. Otherwise, use new anchorages. Cost shall be included with Concrete Superstructure. (Typ.)

**MIN. BAR LAP**

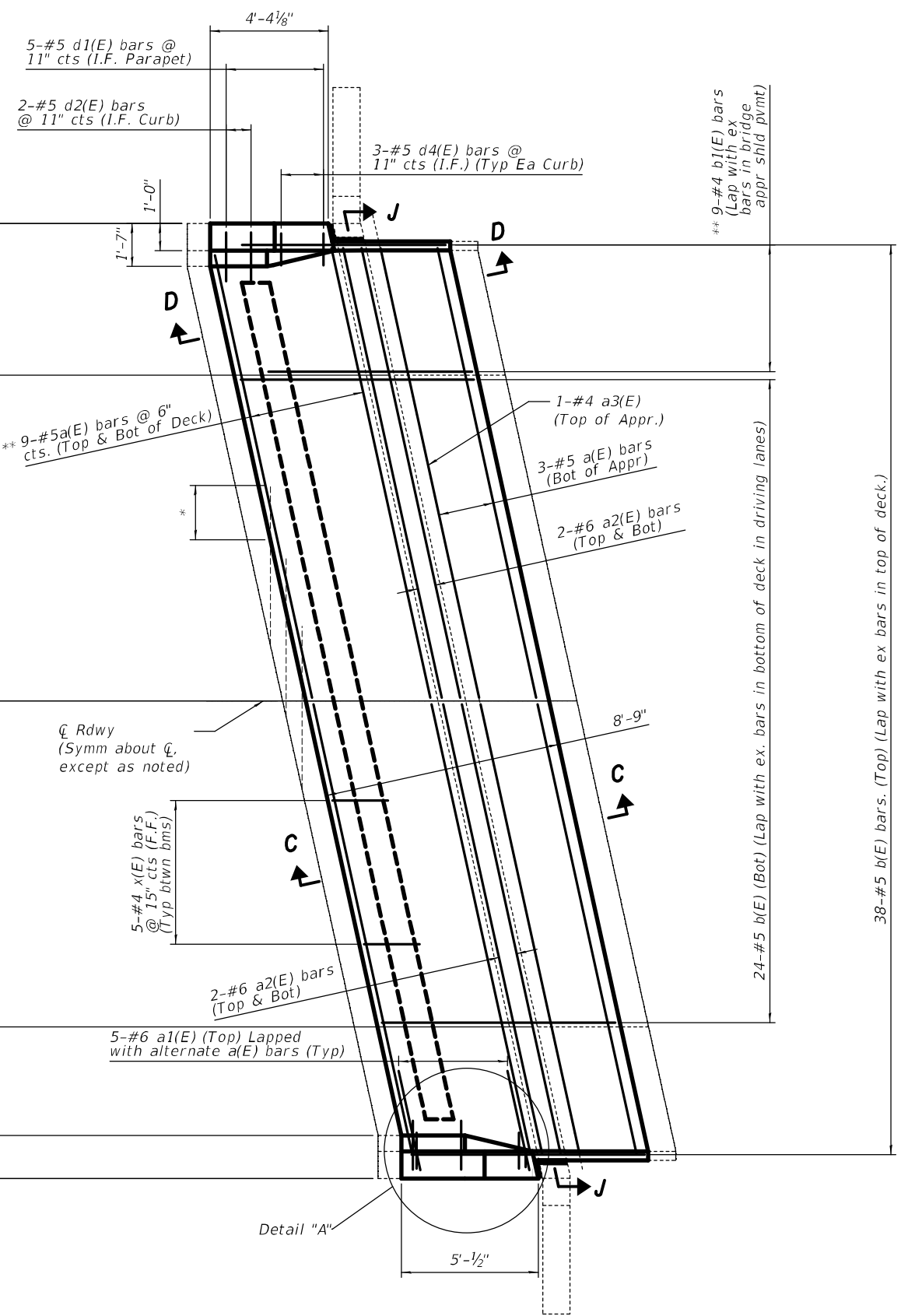


**CONCRETE REMOVAL**

Notes: See sheet 7 of 14 for Bill of Material & Sections A-A & B-B  
 See sheet 5 of 14 for Sections I-I & J-J.  
 See sheet 8 of 14 for Section C-C & D-D.

\* Existing transverse bars extending from deck into removal area shall be cut allowing 2'-0" to extend into the removal area. In addition, these bars shall be cleaned, straighten and incorporated into the new construction.  
 \*\* Cut to fit if necessary

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**



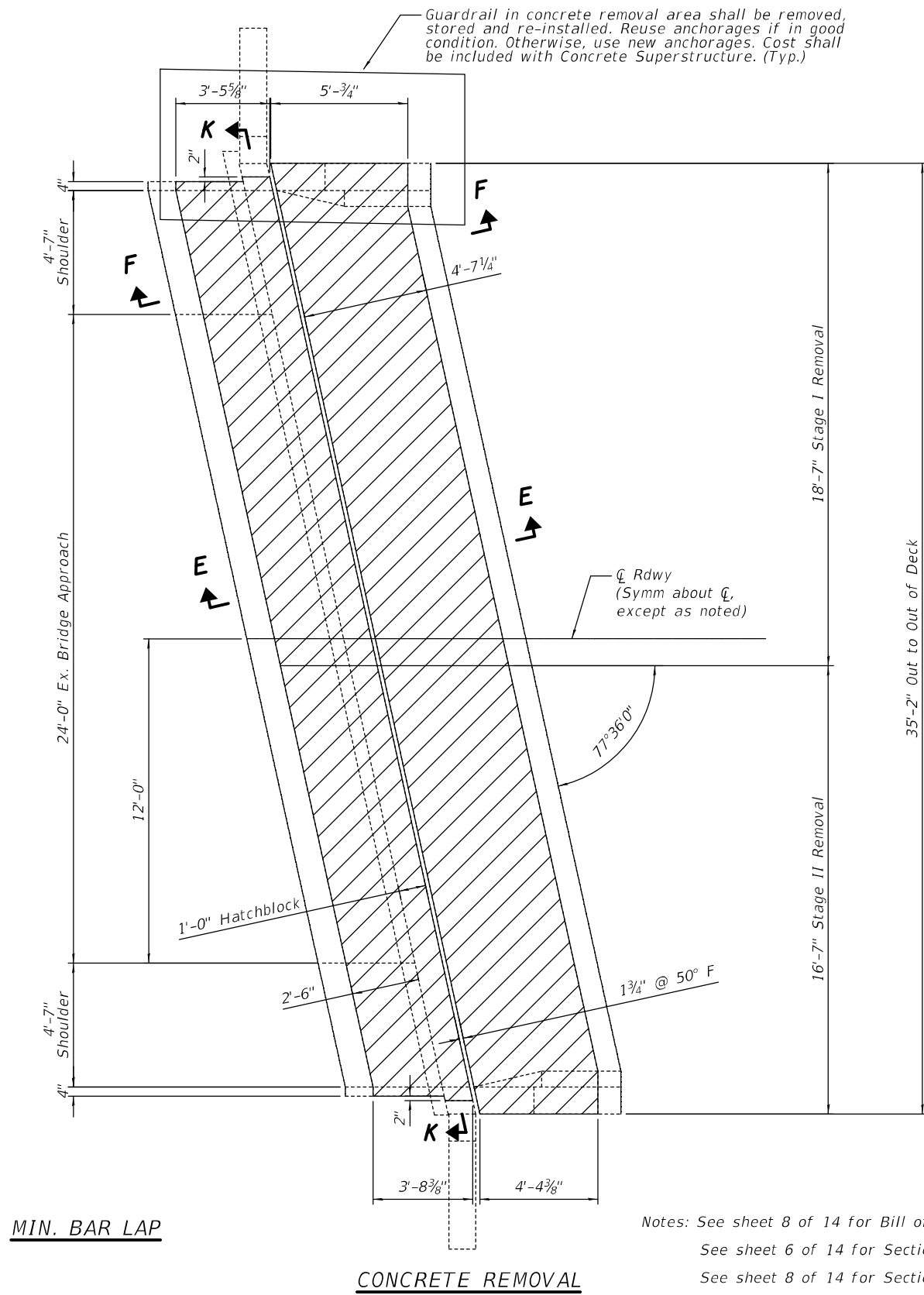
**CONCRETE REPLACEMENT**

**JOINT REMOVAL & REPLACEMENT (S. Abutment)  
 SN 014-0015**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	10
CONTRACT NO. 76R64			ILLINOIS FED. AID PROJECT	

SCALE: SHEET 3 OF 14 SHEETS STA. TO STA.

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MIN. BAR LAP

CONCRETE REMOVAL



Concrete Removal

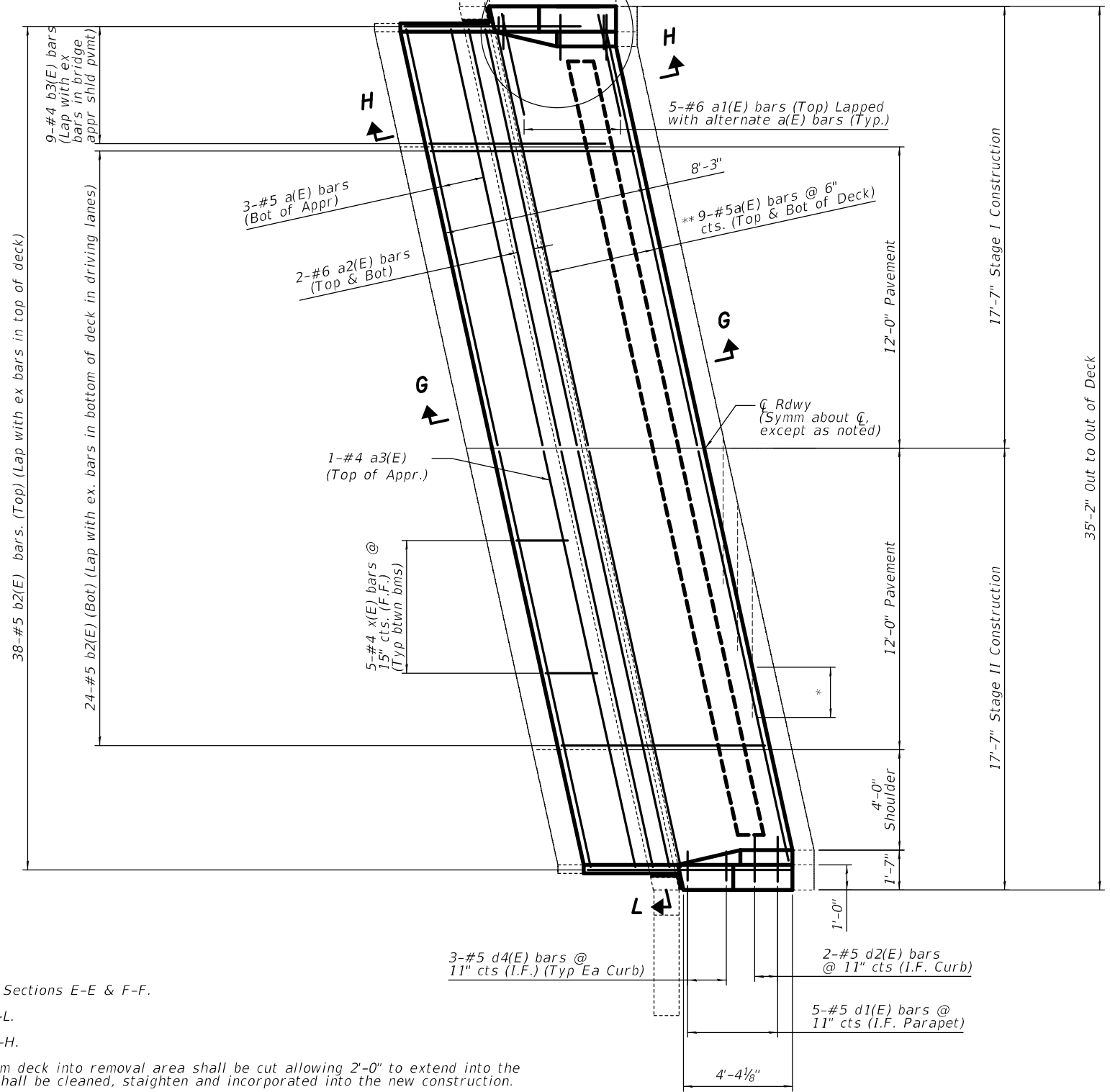
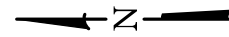
Notes: See sheet 8 of 14 for Bill of Material & Sections E-E & F-F.

See sheet 6 of 14 for Sections K-K & L-L.

See sheet 8 of 14 for Sections G-G & H-H.

\* Existing transverse bars extending from deck into removal area shall be cut allowing 2'-0" to extend into the removal area. In addition, these bars shall be cleaned, straighten and incorporated into the new construction.

\*\* Cut to fit if necessary



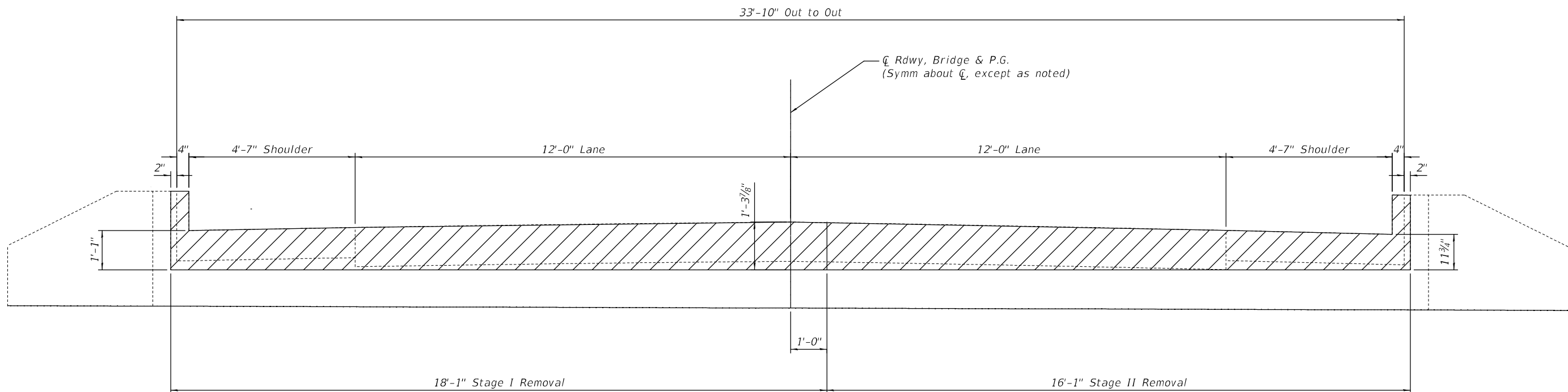
CONCRETE REPLACEMENT

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

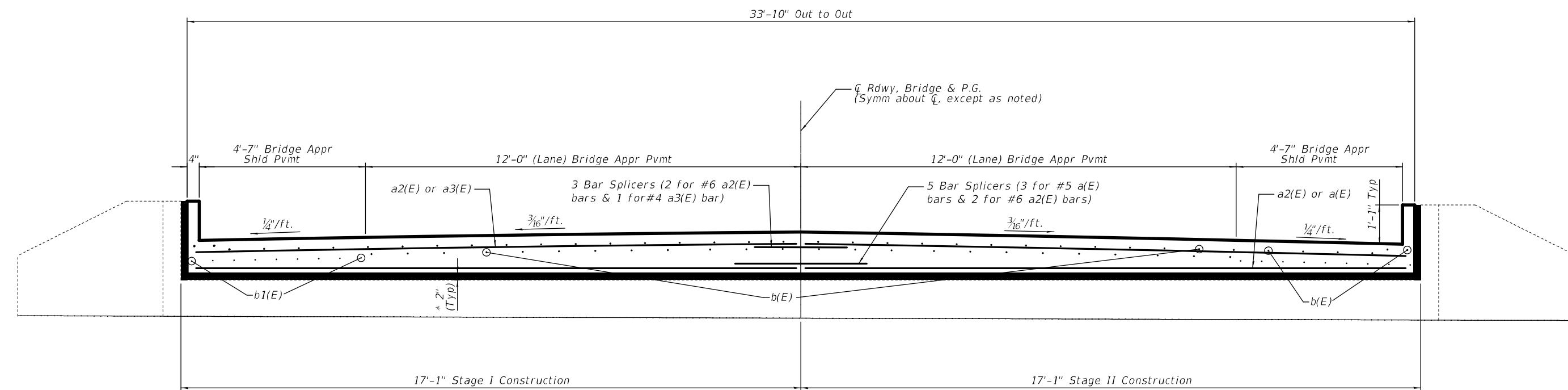
JOINT REMOVAL & REPLACEMENT (N. Abutment)  
 SN 014-0015

SCALE: SHEET 4 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	11
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76R64	



**SECTION I-I**



**SECTION J-J**

\* Prefomed Flexible Foam Expansion Joint Filler  
(Cost included with Concrete Superstructure)

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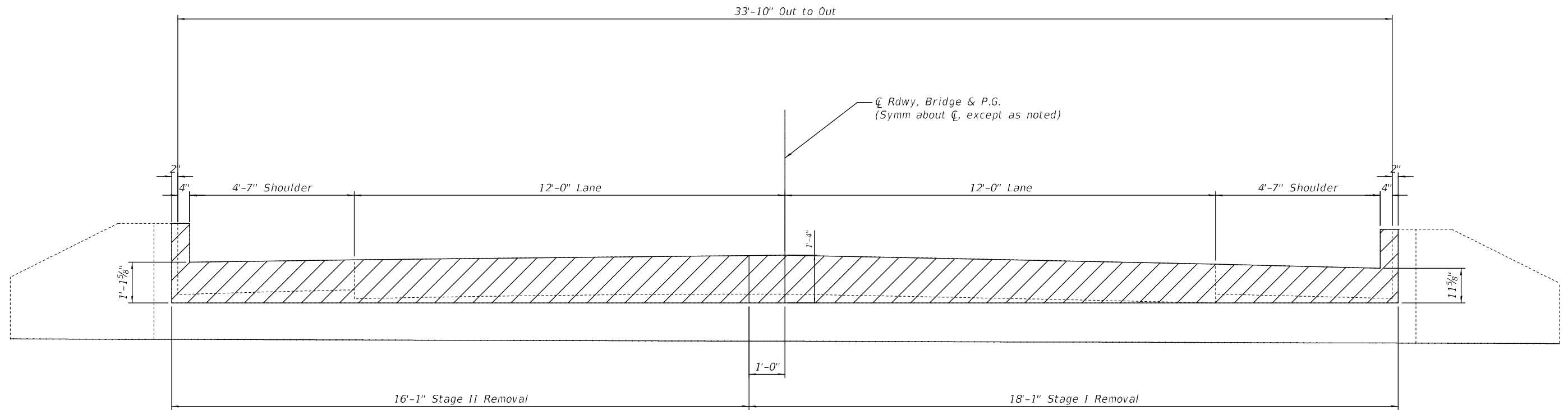
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTION (Appr. Rem & Repl.) (S. Abut.)  
SN 014-0015**

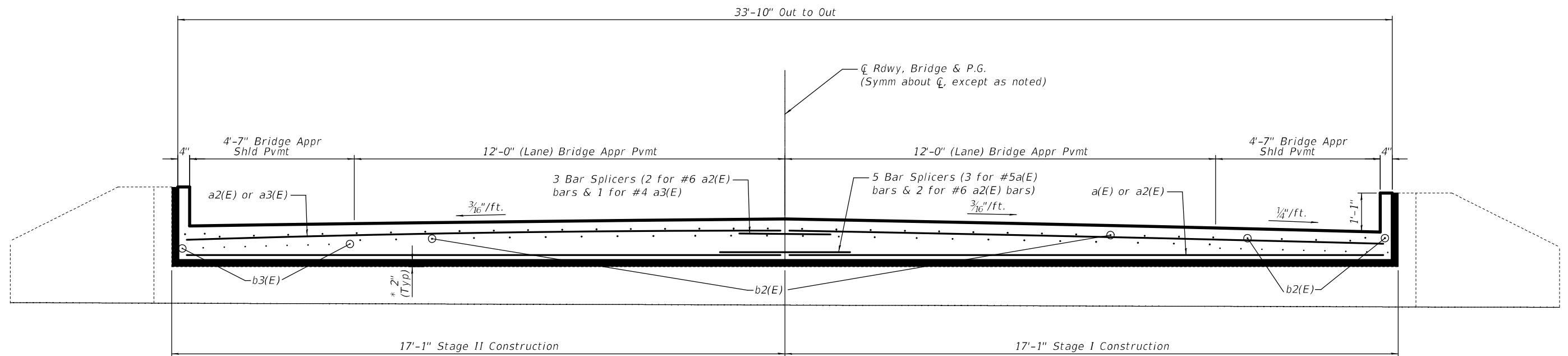
SCALE: SHEET 5 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	12
CONTRACT NO. 76R64			ILLINOIS FED. AID PROJECT	





**SECTION K-K**



**SECTION L-L**

\* Preformed Flexible Foam Expansion Joint Filler  
(Cost included with Concrete Superstructure)

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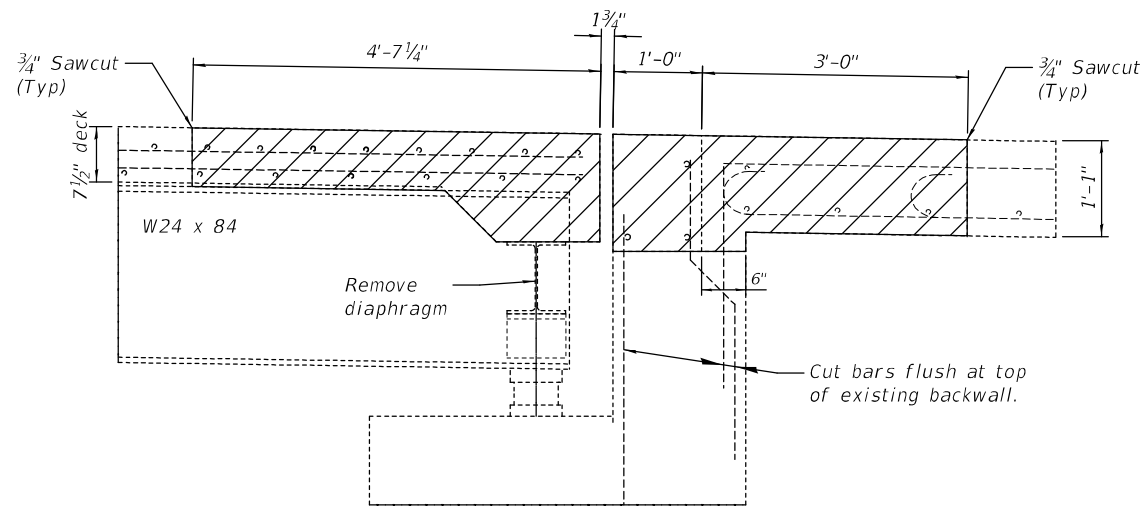
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**STATE OF ILLINOIS  
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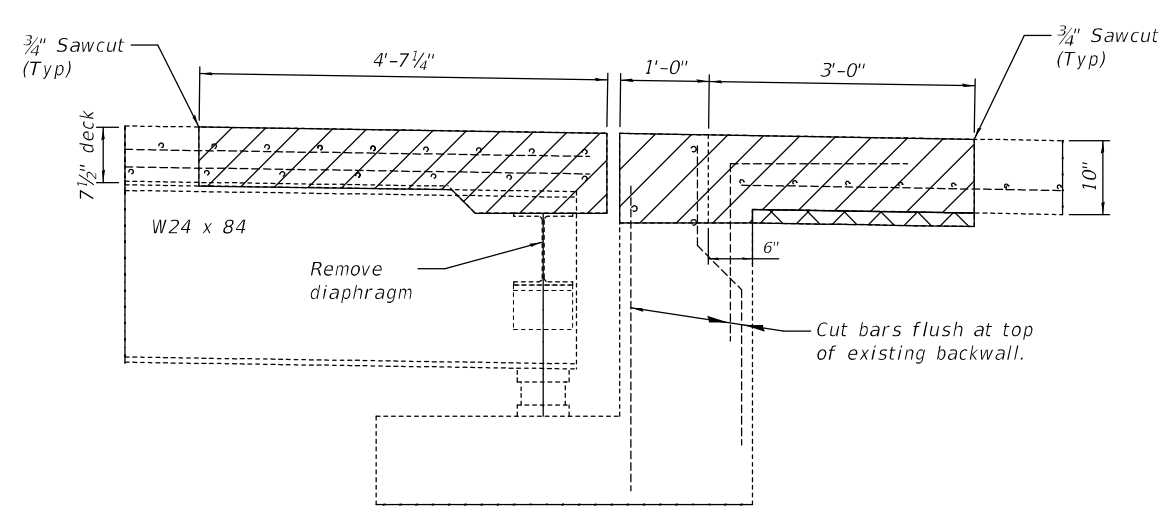
**CROSS SECTION (Appr Rem & Repl) (N Abut)**  
**SN 014-0015**

SCALE: SHEET 6 OF 14 SHEETS STA. TO STA.

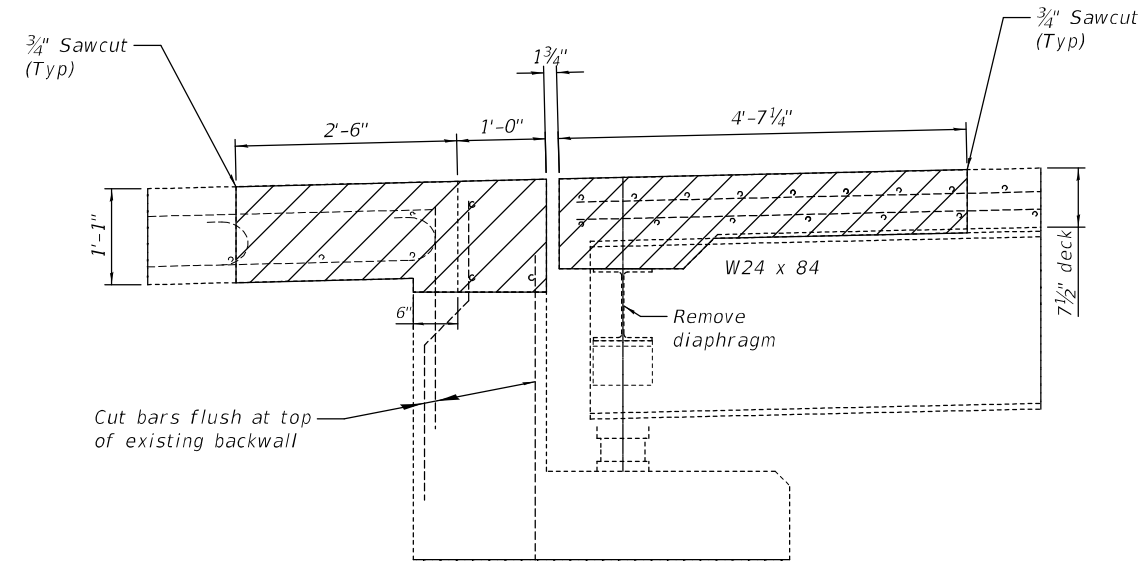
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	13
CONTRACT NO. 76R64			ILLINOIS FED. AID PROJECT	



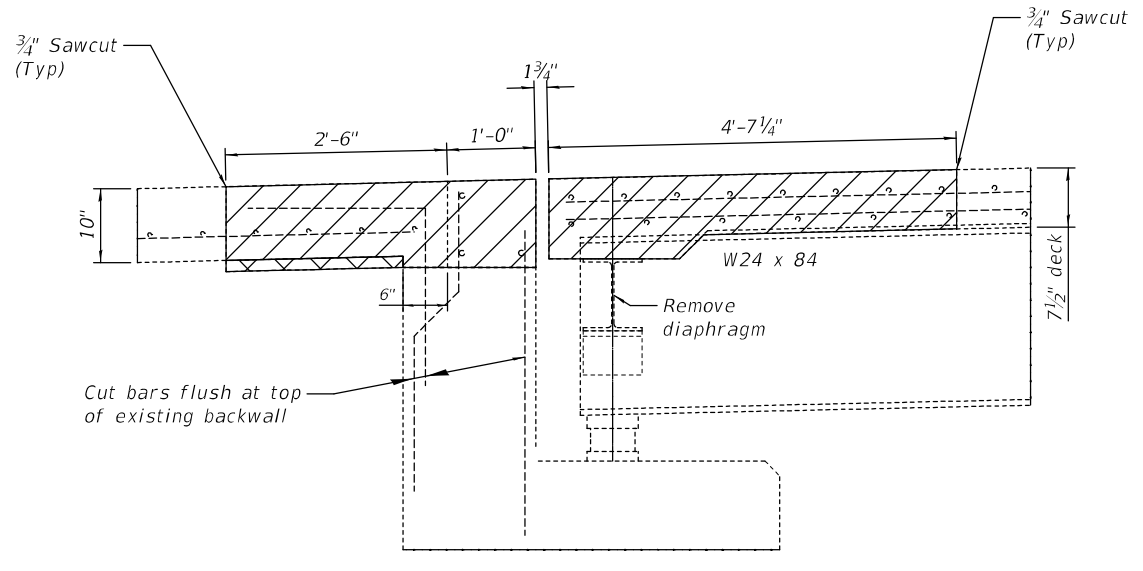
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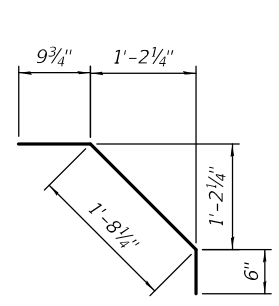
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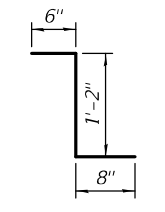
**SECTION E-E**



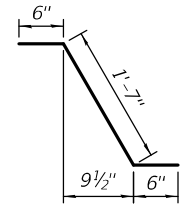
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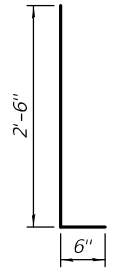
**BAR x(E)**



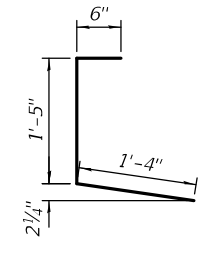
**BAR d4(E)**



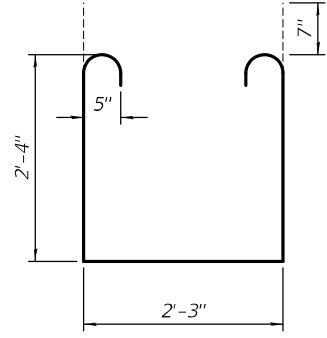
**BAR d2(E)**





**BARS d(E) & d1(E)**



**BAR d3(E)**



**BAR s(E)**

 Concrete Removal  
 Minor excavation at shoulder included with cost of Concrete Removal

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	84	#5	16'-11"	▬
a1(E)	20	#6	4'-0"	▬
a2(E)	16	#6	16'-11"	▬
a3(E)	4	#4	16'-11"	▬
b(E)	62	#5	8'-7"	▬
b1(E)	18	#4	7'-6"	▬
b2(E)	62	#5	8'-1"	▬
b3(E)	18	#4	7'-0"	▬
d(E)	20	#4	3'-0"	└┘
d1(E)	22	#5	3'-0"	└┘
d2(E)	10	#5	2'-7"	└┘
d3(E)	20	#4	3'-3"	└┘
d4(E)	12	#5	2'-4"	└┘
m(E)	48	#6	5'-11"	▬
m1(E)	8	#6	1'-10"	▬
m2(E)	8	#6	2'-3"	▬
s(E)	64	#5	8'-1"	└┘
v(E)	79	#8	1'-8"	▬
x(E)	50	#4	3'-0"	└┘
Concrete Removal			Cu. Yd.	22.0
Concrete Superstructure			Cu. Yd.	37.9
Reinforcement Bars, Epoxy Coated			Pound	4980

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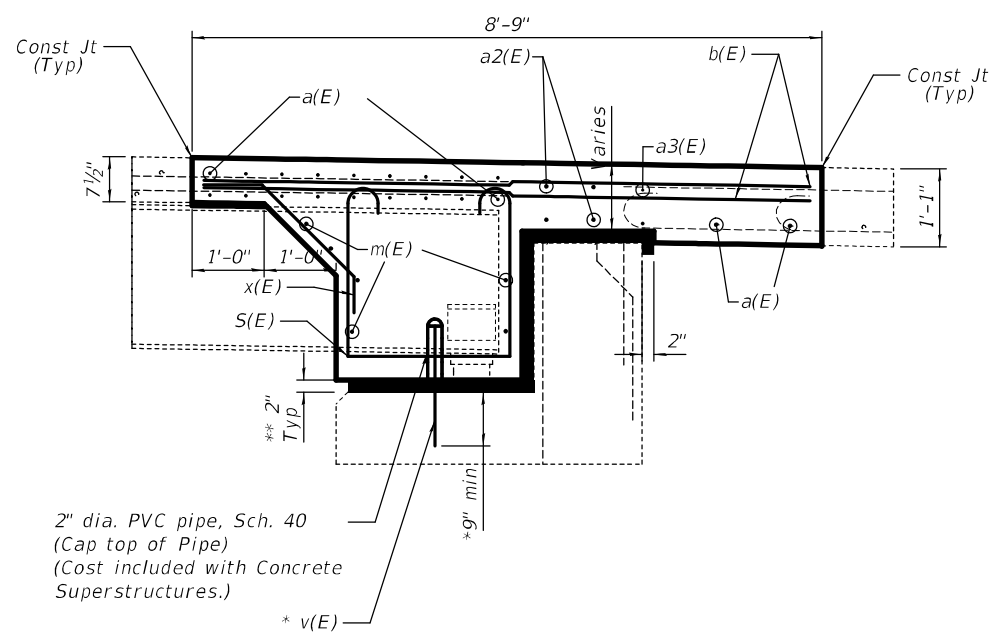
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DRAWN - AYV	REVISIONS -	
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PLOT DATE = 2/9/2023	DATE -	REVISIONS -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

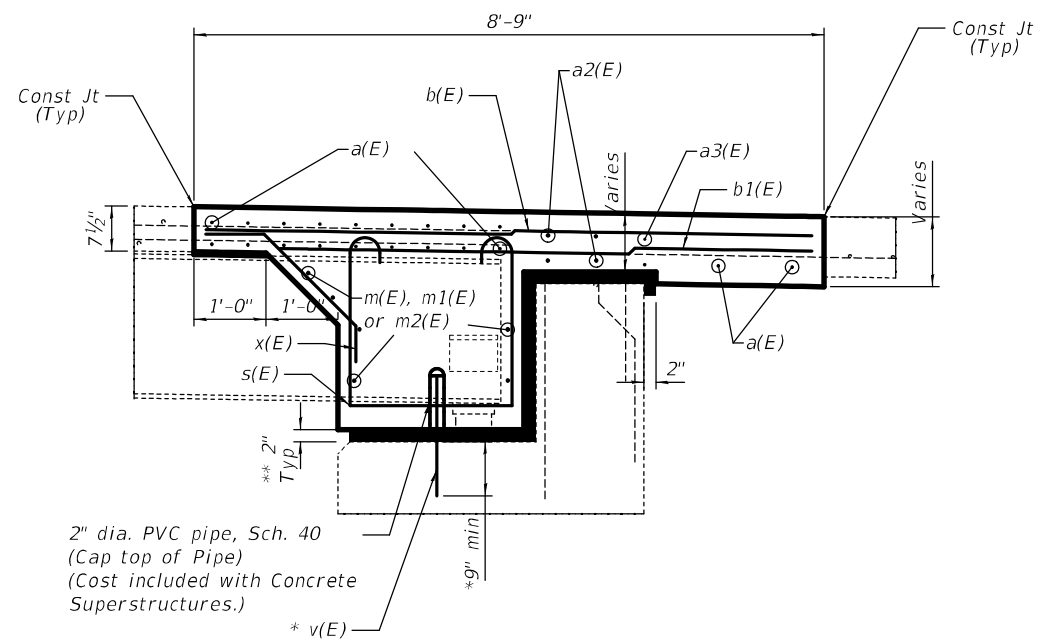
**EXISTING JOINT DETAILS  
SN 014-0015**

SCALE: SHEET 7 OF 14 SHEETS STA. TO STA.

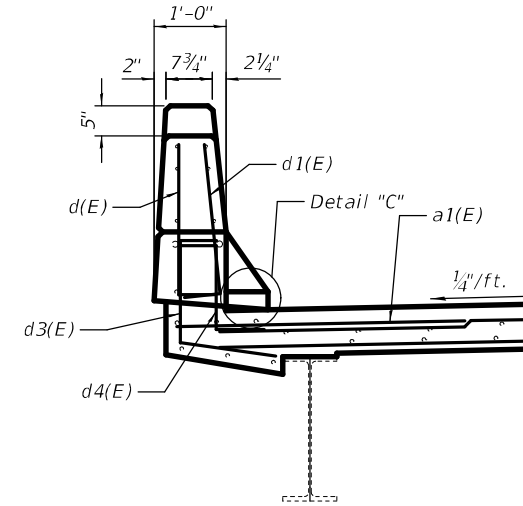
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42A	BHF-42(65)BJR	CLINTON	21	14
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				



**SECTION C-C**

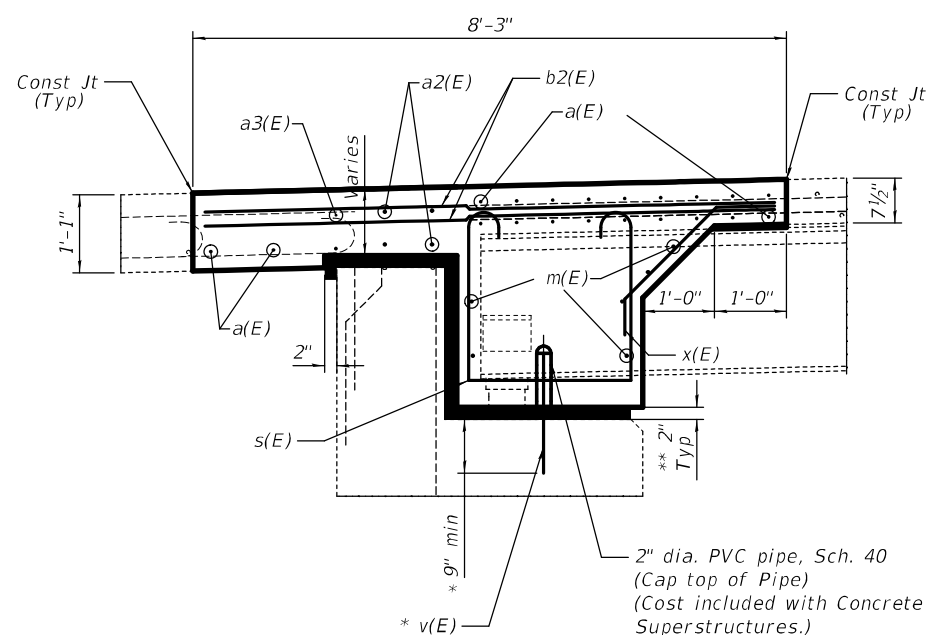


**SECTION D-D**

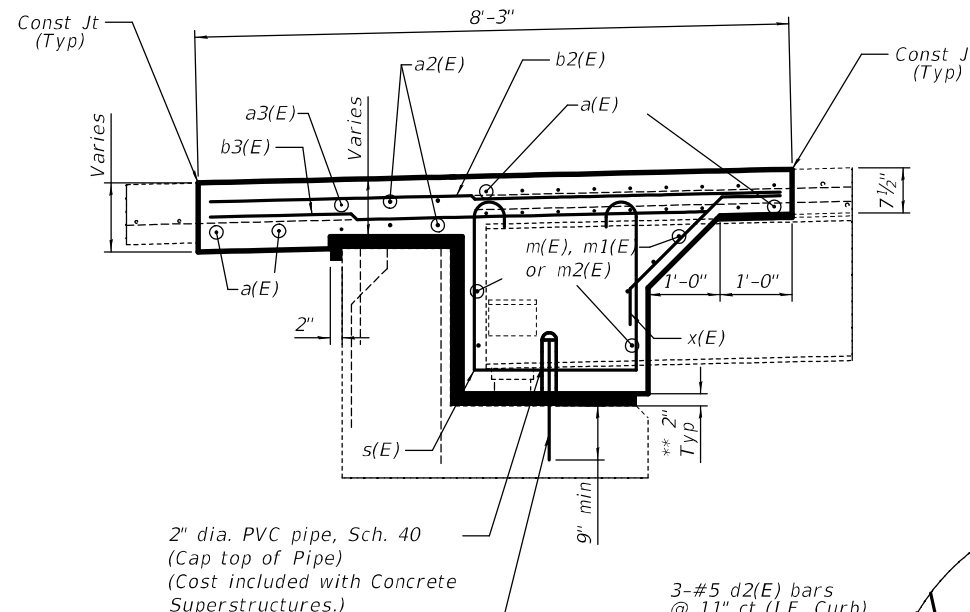


**PARAPET SECTION**

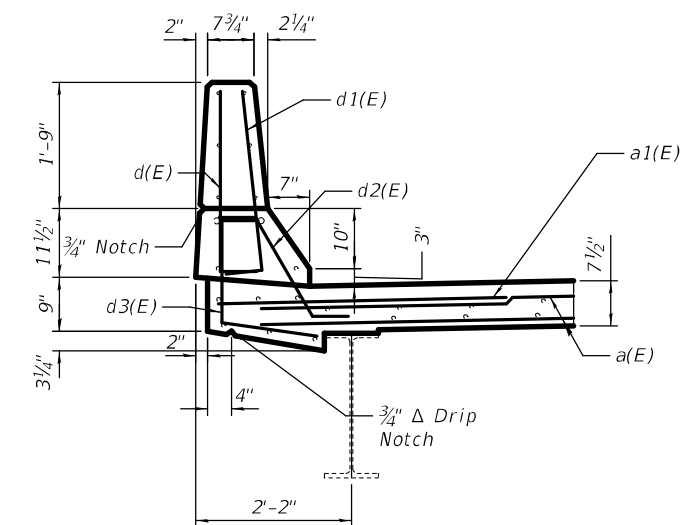
(At Deckend)



**SECTION G-G**

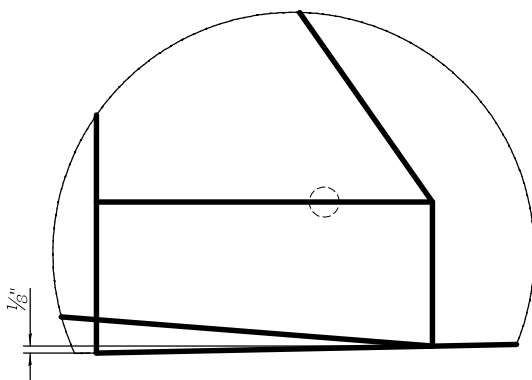


**SECTION H-H**

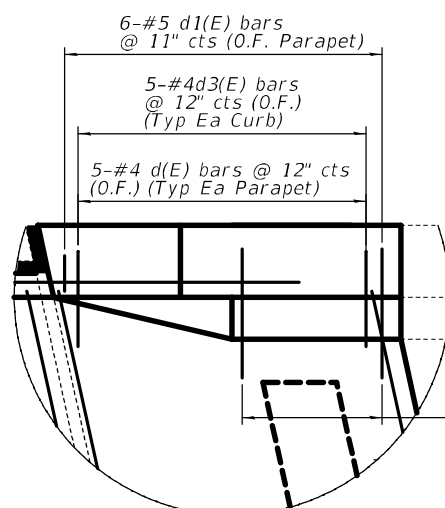


**PARAPET SECTION**

(Away from Deckend)

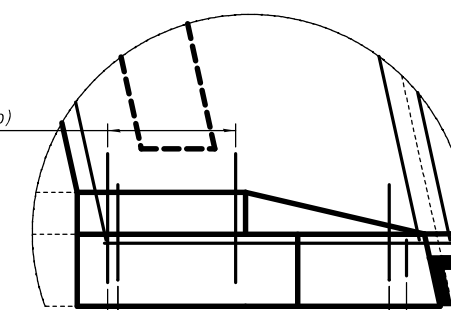


**DETAIL "C"**



**DETAIL "B"**

3-#5 d2(E) bars @ 11" ct (I.F. Curb)



**DETAIL "A"**

\* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications. (Cost included with Concrete Superstructures.)

\*\* Preformed Flexible Foam Expansion Joint Filler. (Cost included with Concrete Superstructure.)

3-#5 d2(E) bars @ 11" ct (I.F. Curb)

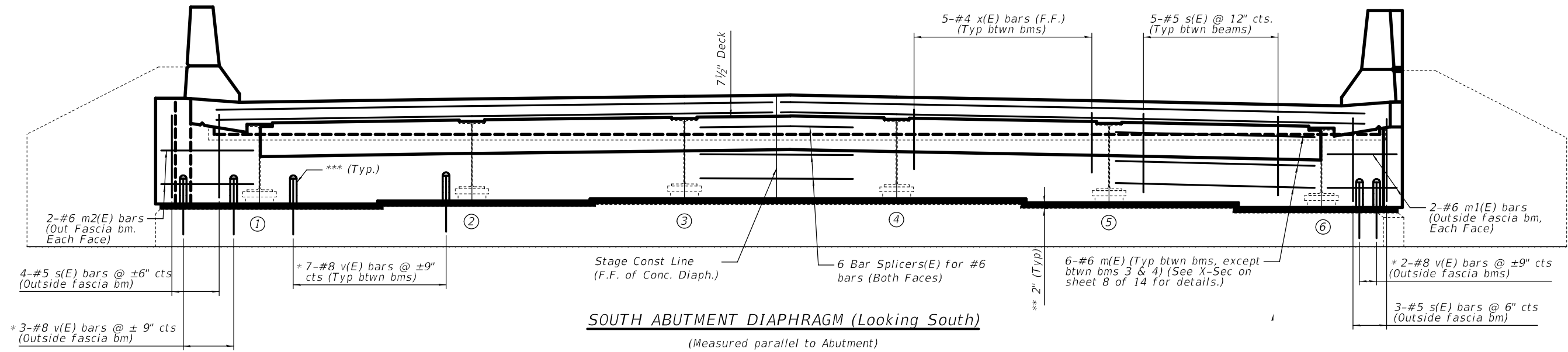
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PROPOSED JOINT DETAILS  
SN 014-0015**

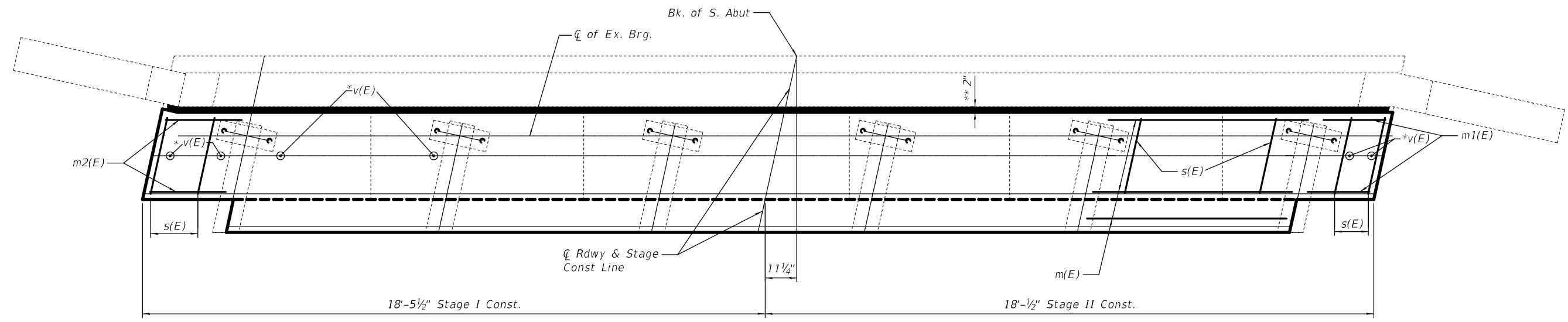
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DRAWN - AYW	REVISED -	
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PLOT DATE = 2/23/2023	DATE -	REVISED -

SCALE: SHEET 8 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	15
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				



**SOUTH ABUTMENT DIAPHRAGM (Looking South)**  
(Measured parallel to Abutment)



\* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications. (Cost included with Concrete Superstructure.)

\*\* Preformed Flexible Foam Expansion Joint Filler. (Cost included with Concrete Superstructure)

**PLAN VIEW THRU DIAPHRAGM**

\*\*\* 2" diam. PVC Pipe, Sch. 40 (Cap top of pipe.) (Cost included w/Conc Superstructure.)

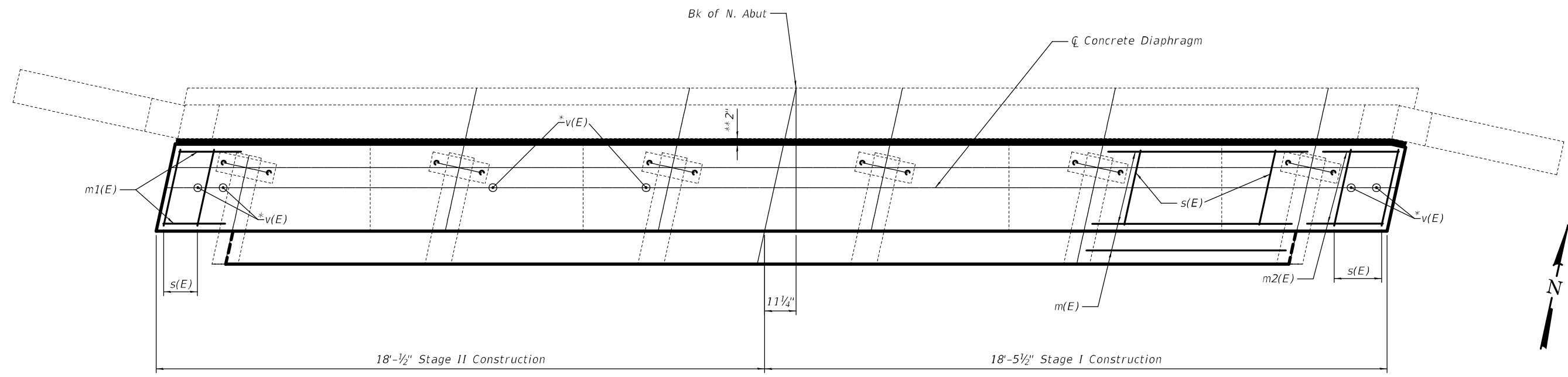
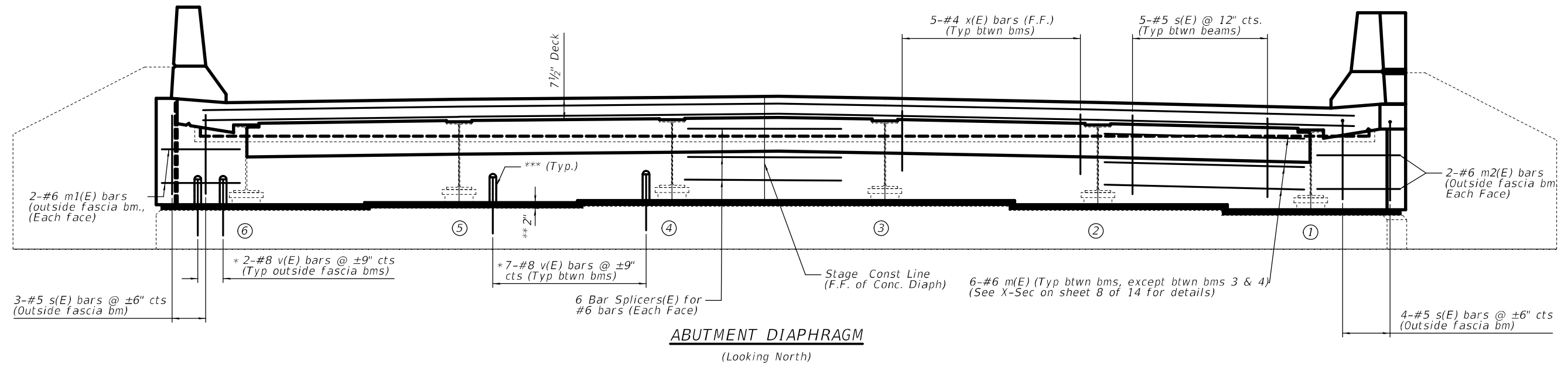
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USER NAME = Anthony.Vinson	DESIGNED - AYV	REVISED -
DRAWN - AYV	REVISIONS -	
PLOT SCALE = 3/4,0000 "/>		

<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	
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<b>DIAPHRAGM AT SOUTH ABUTMENT SN 014-0015</b>			
SCALE:	SHEET 9 OF 14 SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	16
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				



\* Epoxy grout v(E) bars in 9" min. holes according to Article 584 of the Standard Specifications. (Cost included with Concrete Superstructure.)

\*\* Preformed Flexible Foam Expansion Joint Filler. (Cost included with Concrete Superstructure)

\*\*\* 2" diam. PVC Pipe, Sch. 40 (Cap top of pipe) (Cost include w/Conc Superstructure.)

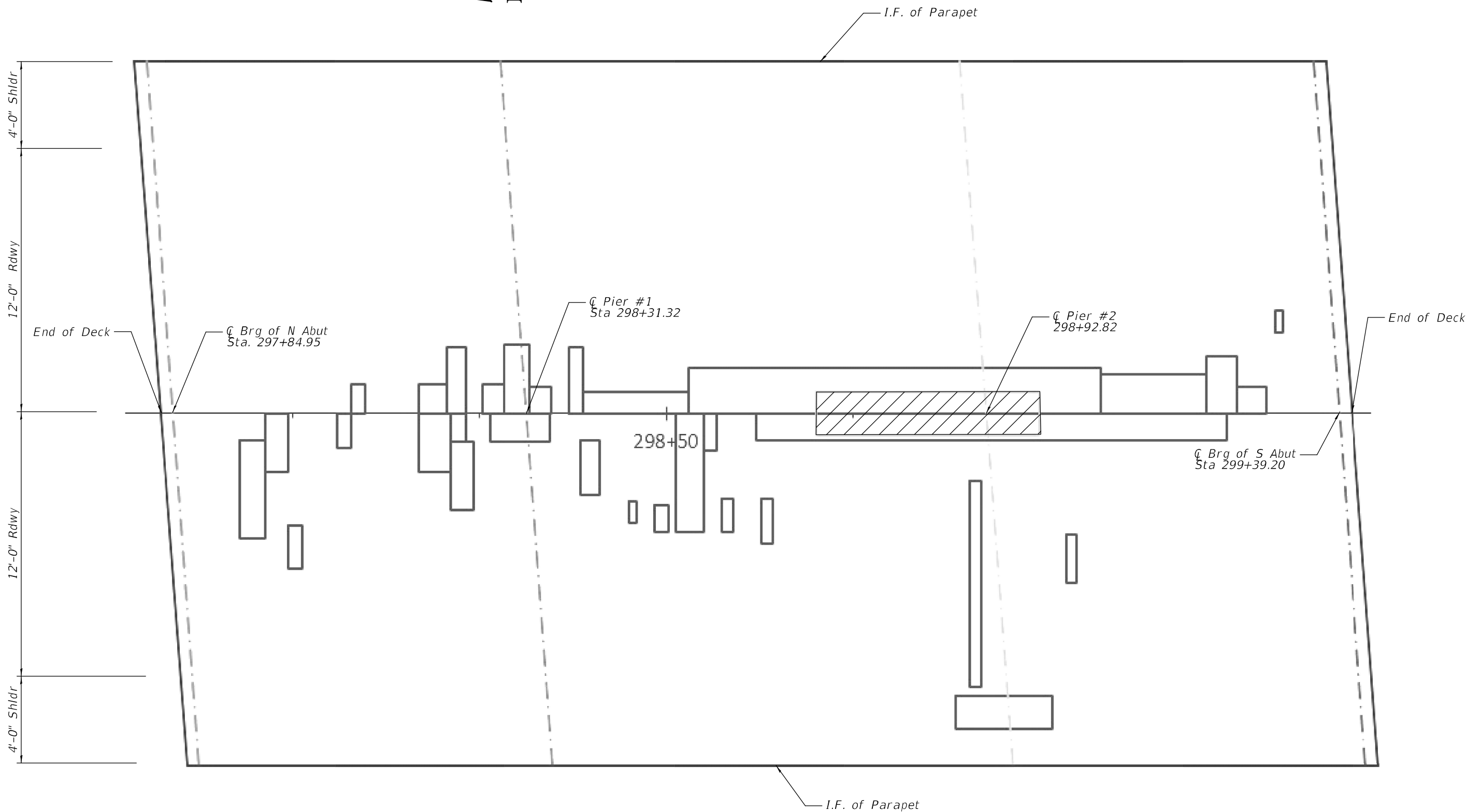
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
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DIAPHRAGM AT NORTH ABUTMENT</b>			
<b>SN 014-0015</b>			
SCALE:	SHEET 10	OF 14 SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	17
CONTRACT NO. 76R64				
ILLINOIS FED. AID PROJECT				



 Deck Slab Repair (Partial) = 51.9 Sq. Yd.

 Deck Slab Repair (Full Depth, Type II) = 7.4 Sq. Yd.

**NOTES**

The area of deck repairs are estimated.

The Engineer shall show actual patch locations on as-built plans.

Deck survey 9-1-22

Protective shield is required between beams 3 & 4 from Pier 1 & Pier 2.

MODEL: 0140015-76R64-011  
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DRAWN - AYV	CHECKED -	REVISED -
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DECK PATCHING SURVEY (SKETCH)  
SN 014-0015**

SCALE: SHEET 11 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	18
CONTRACT NO. 76R64			ILLINOIS FED. AID PROJECT	

Patch # on sketch	23		23		Cell		(Ctrl + U)		Length (ft.)	Width (ft.)	Area (sy)	Full or Partial Depth
	Patch #	Start Sta	End Sta	Offsets (ft)								
				From		To						
10	10	299+08	299+22	0	Lt	1.8	Lt	14.1	1.8	2.82	P	
11	11	299+22	299+26	0	Lt	2.6	Lt	4.1	2.6	1.18	P	
12	12	299+26	299+30	0	Lt	1.2	Lt	4	1.2	0.53	P	
13	13	299+31	299+32	3.7	Lt	4.7	Lt	1	1	0.11	P	
14	14	297+93	297+96	1.2	Rt	5.7	Rt	3.4	4.5	1.70	P	
15	15	297+96	297+99	0	Rt	2.7	Rt	3	2.7	0.90	P	
16	16	297+99	298+01	5.1	Rt	7.1	Rt	2	2	0.44	P	
17	17	298+06	298+08	0	Rt	1.6	Rt	2	1.6	0.36	P	
18	18	298+17	298+21	0	Rt	2.7	Rt	4.3	2.7	1.29	P	
19	19	298+21	298+23	0	Rt	1.3	Rt	2	1.3	0.29	P	
20	20	298+21	298+24	1.3	Rt	4.4	Rt	3	3.1	1.03	P	
21	21	298+27	298+35	0	Rt	1.3	Rt	8	1.3	1.16	P	
22	22	298+39	298+41	1.2	Rt	3.7	Rt	2.7	2.5	0.75	P	
23	23	298+45	298+46	4	Rt	5	Rt	1	1	0.11	P	
24	24	298+49	298+50	4.2	Rt	5.4	Rt	1.8	1.2	0.24	P	
25	25	298+51	298+55	0	Rt	5.4	Rt	3.7	5.4	2.22	P	
26	26	298+55	298+57	0	Rt	1.7	Rt	1.8	1.7	0.34	P	
27	27	298+58	298+59	3.9	Rt	5.4	Rt	1.5	1.5	0.25	P	
28	28	298+62	299+25	0	Rt	1.2	Rt	63	1.2	8.40	P	
29	29	298+63	298+64	3.9	Rt	5.9	Rt	1.5	2	0.33	P	
30	30	298+89	299+02	12.9	Rt	14.4	Rt	13	1.5	2.17	P	
31	31	298+91	298+92	3.1	Rt	12.5	Rt	1.5	9.4	1.57	P	
32	32	299+04	299+05	5.5	Rt	7.7	Rt	1.5	2.2	0.37	P	
33	33	298+70	299+00	1	Lt	1		30	2	6.67	F	

Total 59.3 Sq. Yd.

51.9 Partial

7.4 Full Depth, Type II

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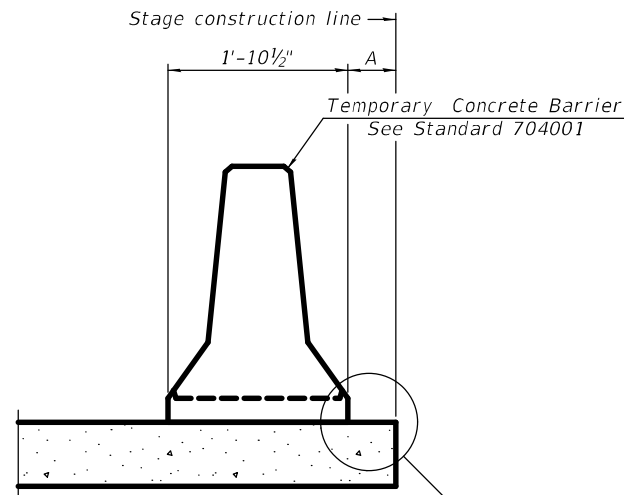
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DRAWN - AYV	CHECKED -	REVISED -
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PLOT DATE = 2/9/2023		

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DECK PATCHING SURVEY (DATA)  
SN 014-0015**

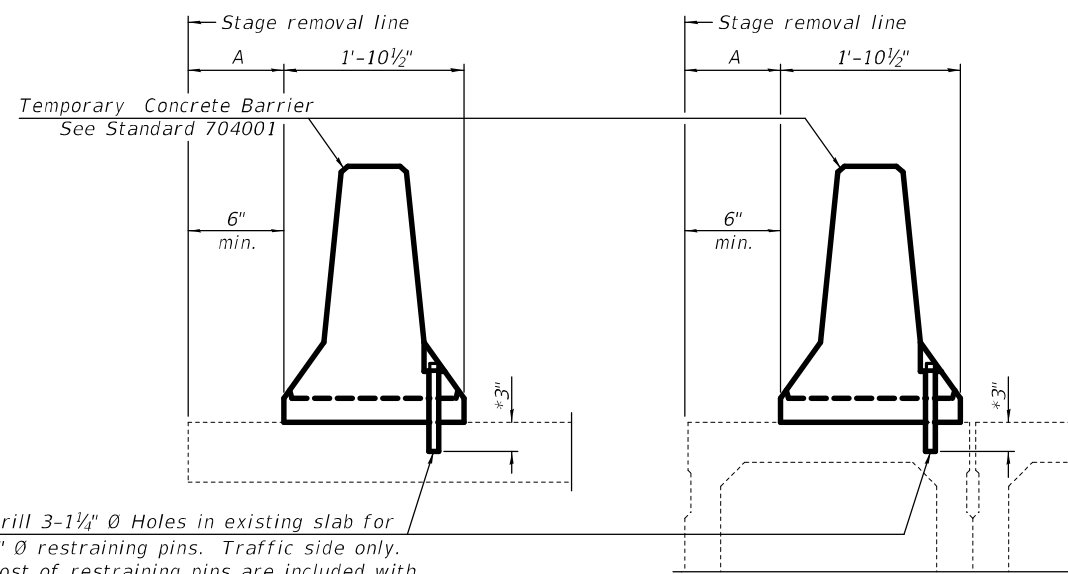
SCALE: SHEET 12 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	19
			CONTRACT NO. 76R64	
		ILLINOIS FED. AID PROJECT		



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



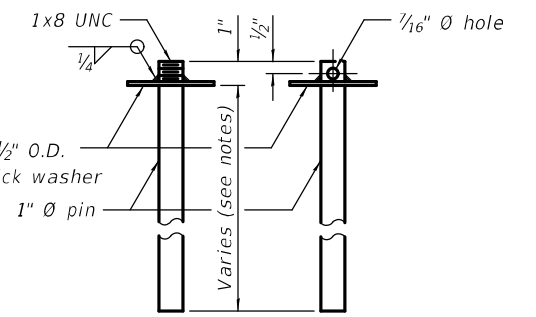
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

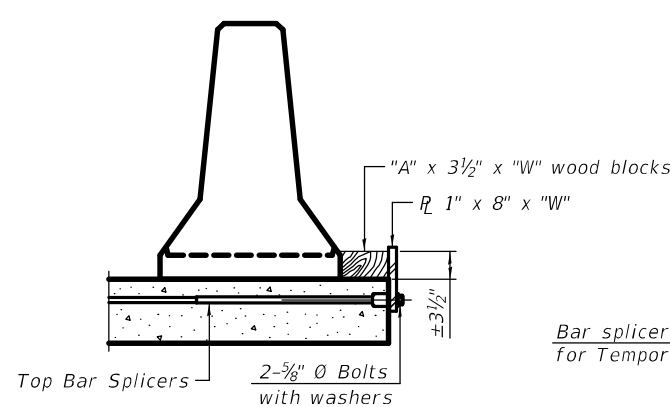
EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

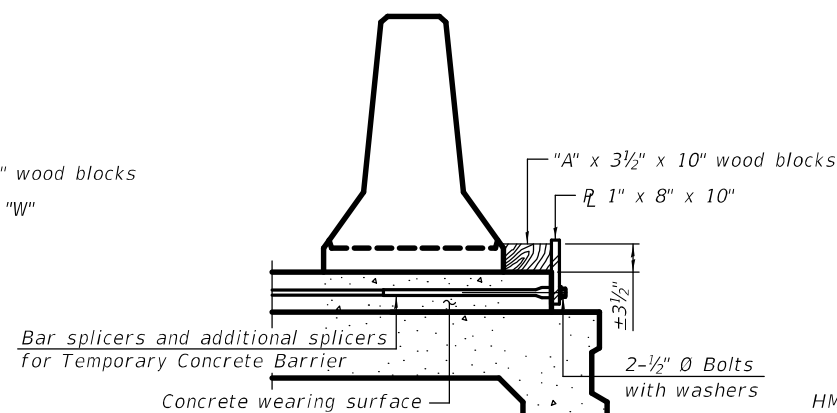


RESTRAINING PIN

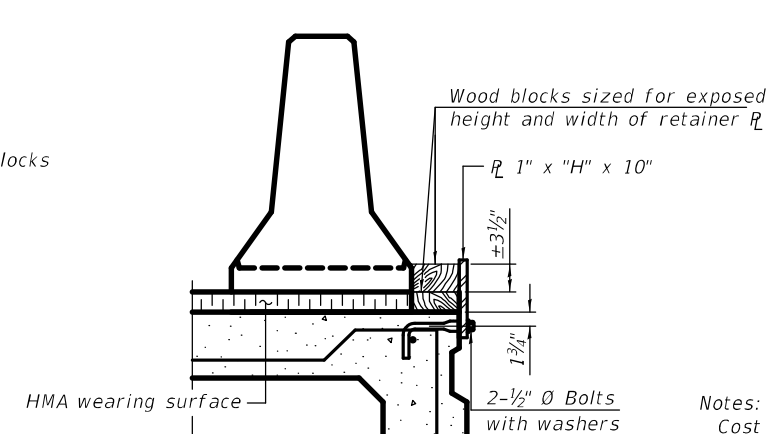
US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer



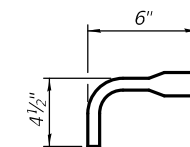
DETAIL I



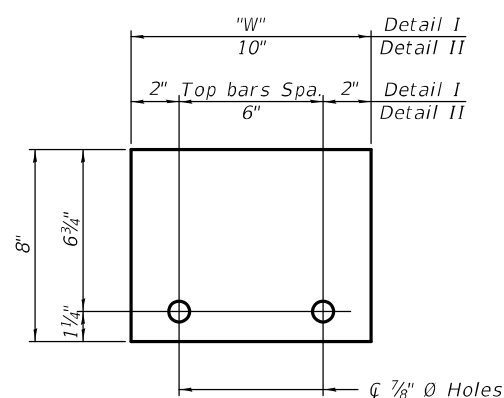
DETAIL II



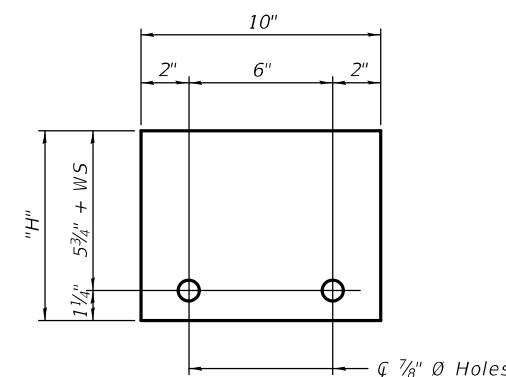
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate center of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6' to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

RAILING CRITERIA

NCHRP 350 Test Level	3
Railing Weight (plf)	440

R-27 10-12-2021

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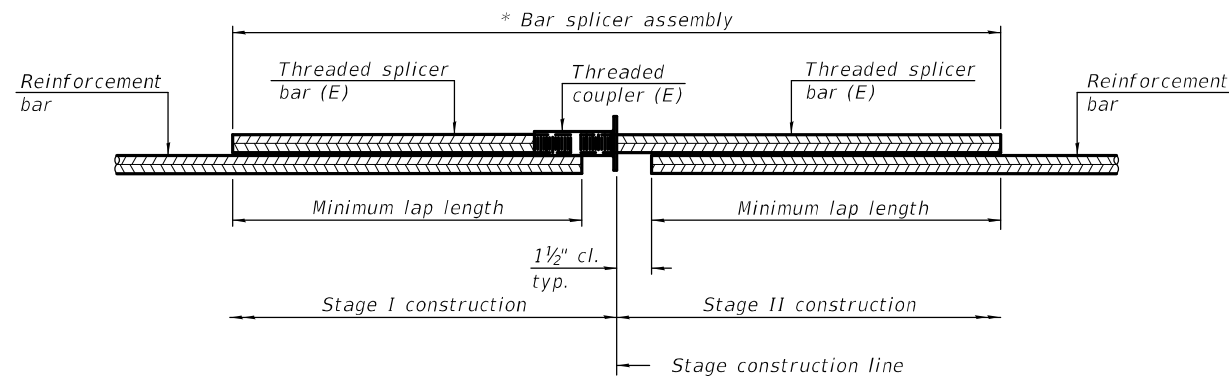
TEMPORARY CONCRETE BARRIER  
STRUCTURE NO. 014-0015

SCALE: SHEET 13 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	20
CONTRACT NO. 76R64			ILLINOIS FED. AID PROJECT	

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DATE: 2/9/2023



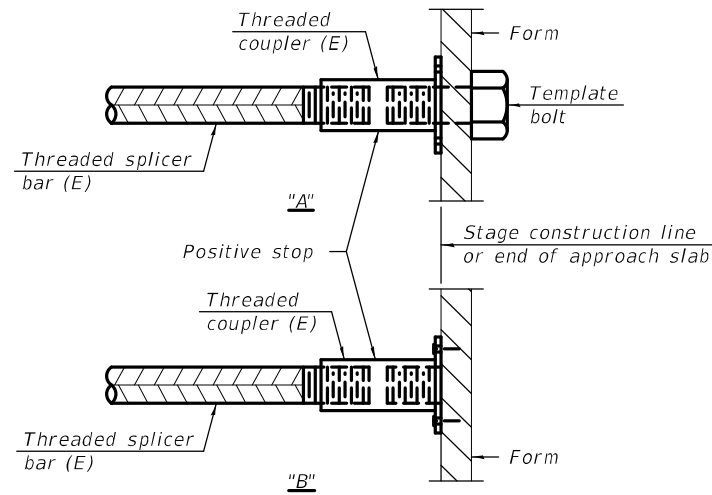


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

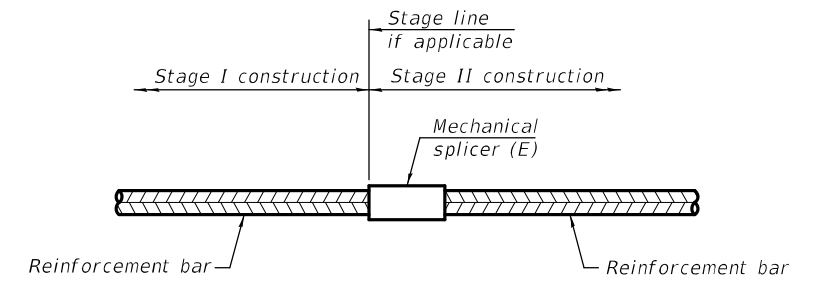
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutments	#4	2	2'-5"
Abutments	#5	42	3'-6"
Abutments	#6	20	4'-0"



**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required

Notes:  
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-1-2020

MODEL: 0140015-76R64-014  
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USER NAME = Anthony.Vinson	DESIGNED - AYW	REVISED -
DRAWN - AYW	REVISIONS -	
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 014-0015**

SCALE: SHEET 14 OF 14 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
42A	BHF-42(65)BJR	CLINTON	21	21
CONTRACT NO. 76R64			ILLINOIS FED. AID PROJECT	