

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 327 (US 50)
SECTION 14-14HB-2

BRIDGE REHAB
CLINTON COUNTY

C-98-054-14

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	1
		ILLINOIS	CONTRACT NO. 76H27	

D-98-053-14



LOCATION OF SECTION INDICATED THUS: - [black rectangle] -

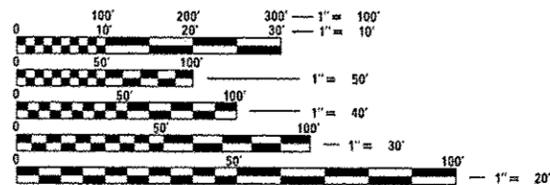
FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

014-0066 ADT: 11,600(2015)
14,200(2035)
SU: 2.9%
MU: 30.7%

014-0067 ADT: 11,500(2015)
14,100(2035)
SU: 3.1%
MU: 33.6%

FUNCTIONAL CLASSIFICATION:
OTHER PRINCIPAL ARTERIAL

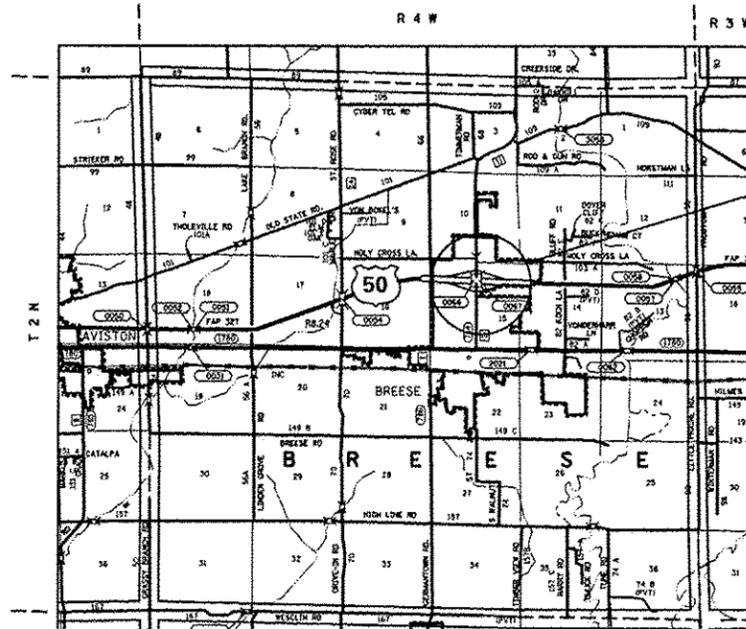


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

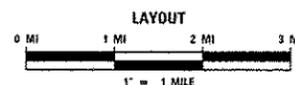
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: MICHAEL PRITCHETT (618) 346-3180
DESIGNER: BO WEDMORE (618) 346-3206

CONTRACT NO. 76H27



TWO US 50 BRIDGES
OVER CH 11 / WALNUT ST.
SN 014-0066 (EB)
STA. 3085 + 00.46
SN 014-0067 (WB)
STA. 3084 + 96.68
155'-9" BK TO BK OF ABUTMENTS



SN 014-0066 - LATITUDE: 38.62176323 LONGITUDE: 89.52572501
SN 014-0067 - LATITUDE: 38.62177037 LONGITUDE: 89.52588119

GROSS LENGTH = N/A
NET LENGTH = N/A

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Oct 31 2014*
John D. Baranzelli
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

John D. Baranzelli
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 30 2015
Cher Osman
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

GENERAL NOTES

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, INDEX OF SHEETS, STANDARDS
- 3-5 SUMMARY OF QUANTITIES
- 6 SCHEDULES OF QUANTITIES
- 7 TYPICAL ROADWAY SECTION
- 8 DETAILS
- 9-17 BRIDGE DETAILS

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701423-08	LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS ≥ 45 MPH TO 55 MPH (SEE GENERAL NOTE 5)
701426-07	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45MPH
701901-04	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

MIXTURE REQUIREMENTS

ROUTE	FAP 327 (US 50)
SECTION	14-14HB-2
COUNTY	CLINTON
CONTRACT	76H27

DESCRIPTION:	BRIDGE REHAB - CONTRACT MAINTENANCE - US 50 OVER CH 11, WALNUT STREET AT BREESE - SN 014-006 & 0067.
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ADT (CONSTRUCTION YR):	3300
MIX:	9.2
SUR:	5.4
20 YR. ESAL'S:	1.85

MIXTURE USE	SURFACE				
AC/PG	PG 64-22				
RAP % (MAX)	SEE SPEC.				
DESIGN AIR Voids	4.0% @ Ndes=70				
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5				
FRICTION AGG	MIXTURE "D"				
QUALITY MGMT PROGRAM	QC/OA				

Plan quantities for Bituminous Concrete Surface Course Items are calculated using a unit weight of 112 lb/sq yd/in (59.8 kg/sq m/25 mm thickness).

1. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - AMEREN ILLINOIS
 - AT&T ILLINOIS
 - CITY OF BREESE
 - CHARTER COMMUNICATIONS, INC.
 - CLINTON COUNTY ELECTRIC COOPERATIVE, INC.
 - ENABLE-MISSISSIPPI RIVER TRANSMISSION LLC
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
3. THE PROPOSED PERMANENT PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
4. ANY MISCELLANEOUS EARTHWORK, SEEDING OR NUTRIENTS REQUIRED TO COMPLETE THE PROJECT SHALL BE DONE ACCORDING TO SECTION 250 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND NOT PAID FOR SEPARATELY.
5. THE "L" DIMENSION FOR THE INITIAL TAPER IN HIGHWAY STANDARD 701423 SHALL BE SHORTENED TO START AT THE PAINTED GORE FOR THE EXIT RAMPS EB & WB AS DIRECTED BY THE ENGINEER.
6. THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING, TOPOGRAPHY, AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
7. PAVEMENT MARKING SHALL BE TEMPORARILY COVERED PRIOR TO APPLICATION OF THE DECK SURFACE TREATMENT, TO PREVENT THE MATERIAL FROM BEING APPLIED TO THE MARKINGS AND TO PROTECT THE REFLECTIVE PROPERTIES OF THE MARKINGS. THE TEMPORARY COVERING MATERIAL USED SHALL BE SUCH THAT IT WILL NOT AFFECT THE MARKING'S REFLECTIVITY WHEN REMOVED AFTER APPLICATION OF THE DECK SURFACE TREATMENT AND PRIOR TO OPENING TO TRAFFIC. COST IS INCLUDED WITH THE BRIDGE DECK CONCRETE SEALER.
8. A QUANTITY OF 34 TON OF AGGREGATE WEDGE SHOULDER, TYPE B HAS BEEN ADDED TO THE PLANS IN ORDER TO REMOVE ANY DROP-OFF AREAS ADJACENT TO THE EXISTING SHOULDERS. LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER.
9. A QUANTITY OF 824 FEET OF TEMPORARY PAVEMENT MARKING LINE 6" WHITE HAS BEEN INCLUDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER.
10. REMOVAL OF THE TEMPORARY PAVEMENT MARKING SHOWN ON THE HIGHWAY STANDARDS WILL BE INCLUDED IN THE COST OF HIGHWAY STANDARD 701423.

FILE NAME =	USER NAME = vedmore_jb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, LIST OF STANDARDS & GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
er:\pwork\pvidot\vedmore_jb\0302748\076h27-sht-plan.dgn	DRAWN -	REVISED -	327			14-14HB-2	CLINTON	17	2	
PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -	CONTRACT NO. 76H27							
PLOT DATE = 10/28/2014	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
						SCALE:	SHEET	OF	SHEETS	STA. TO STA.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				BRIDGE	BRIDGE
				0014	0014
				014-0066	014-0067
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	480	240	240
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	888	444	444
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	234	117	117
44200535	CLASS A PATCHES, TYPE IV, 8 INCH	SQ YD	54	54	
44213000	PATCHING REINFORCEMENT	SQ YD	54	54	
44213200	SAW CUTS	FOOT	312	312	
44213204	TIE BARS 3/4"	EACH	36	36	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	34	17	17
50102400	CONCRETE REMOVAL	CU YD	17	8.5	8.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	18.8	9.4	9.4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2240	1120	1120
50800515	BAR SPLICERS	EACH	44	22	22
52000110	PREFORMED JOINT STRIP SEAL	FOOT	172	86	86
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	1358	679	679

100% STATE

FILE NAME =
 USER NAME = wadmora.jb
 DESIGNED -
 DRAWN -
 CHECKED -
 DATE -
 PLOT SCALE = 100.0000' / 1" / 1"
 PLOT DATE = 10/28/2014

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

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	3
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				BRIDGE	BRIDGE
				0014	0014
100% STATE				014-0066	014-0067
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	2	1	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	2	2
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	2	1	1
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	824	412	412
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1998	999	999
70400100	TEMPORARY CONCRETE BARRIER	FOOT	900	450	450
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	900	450	450
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5994	2997	2997
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	3	3
* 78100300	REPLACEMENT REFLECTOR	EACH	46	23	23
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	34	17	17

* SPECIALTY ITEM

FILE NAME =	USER NAME = vadmore JB	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\p\work\psdot\vadmore JB\08382740\08382740-14H27-shr-plan.dgn	PLOT SCALE = 100.0000' / in	DRAWN -	REVISED -						327	14-14H2-2	CLINTON	17	4
	PLOT DATE = 10/28/2014	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
		DATE -	REVISED -		CONTRACT NO. 76H27								

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE	
				BRIDGE 0014 014-0066	BRIDGE 0014 014-0067
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	112	56	56
78300100	PAVEMENT MARKING REMOVAL	SQ FT	5994	2997	2997
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	52	26	26
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	2454	1227	1227
Z0015802	PLUG EXISTING DECK DRAINS	EACH	8	4	4
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	20	10	10

* SPECIALTY ITEM

FILE NAME =	USER NAME = wadmora_jb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
si\pe\work\pvidat\wadmora_jb\18362740\ds	76h27-sht-plandgn	DRAWN -	REVISED -						327	14-14HB-2	CLINTON	17	5
PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -	SCALE:		SHEET	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 76H27			
PLOT DATE = 10/28/2014	DATE -	REVISED -	ILLINOIS FED. AID PROJECT										

TRAFFIC CONTROL SCHEDULE

BRIDGE LOCATION	STRUCTURE NUMBER	CONSTRUCTION STAGE	TEMPORARY CONCRETE BARRIER FOOT	RELOCATE TEMPORARY CONCRETE BARRIER FOOT	GUARDRAIL MARKERS, TYPE A		BARRIER WALL MARKERS, TYPE C		IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECT IVE), TEST LEVEL 3 EACH	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECT IVE), TEST LEVEL 3 EACH	TEMPORARY PAVEMENT MARKING TAPE 4"	
					CRYSTAL	AMBER	CRYSTAL	AMBER			WHITE	YELLOW
					EACH	EACH	EACH	EACH				
EB US 50 OVER CH 11	SN 014-0066	1	450		6		16	12	1		2068	1244
		2		450		11		12	16	1	2068	1244
WB US 50 OVER CH 11	SN 014-0067	1	450		6		16	12	1		2068	1244
		2		450		11		12	16	1	2068	1244
SUBTOTAL			900	900	12	22	56	56	2	2	8272	4976
TOTAL			900	900	34		112		2	2	13248	

1. THIS ITEM IS INCLUDED IN THE COST FOR THE STANDARD 701423.

RESURFACING & PATCHING SCHEDULE

STATION	ROADWAY WIDTH		HMA SURFACE COURSE MIX "D", N70	PCC SURFACE REMOVAL - BUTT JOINT	BITUMINOUS MATERIAL (PRIME COAT)	CLASS A PATCHES, TYPE IV, 8 INCH	SAW CUTS	PATCHING REINFORCEMENT	TIE BARS 3/4"	
	1	FOOT	2	TON	SQ YD	POUND	SQ YD	FOOT	SQ YD	EACH
SN 014-0066 - EB										
3083+71.34	TO	3084+21.34	40	25	222	100				
3085+77.09	TO	3086+47.09	40	35	222	140				
3085+77.09	TO	3085+97.09	24				54	312	54	36
SUB TOTAL SN 014-0066				60	444	240	54	312	54	36
SN 014-0067 - WB										
3083+67.55	TO	3084+17.55	40	25	222	100				
3085+73.31	TO	3086+43.31	40	35	222	140				
SUB TOTAL SN 014-0067				60	444	240	0	0	0	0
TOTAL				120	888	480	54	312	54	36

- 1 ROADWAY WIDTH OF 40' INCLUDES SHOULDERS
- 2 HMA SURFACE IS FOR BUTT JOINT AREAS AND EASTERN 20' EXTENSION TO AVOID THE INLETS ONLY. ADDITIONAL HMA SURFACE CAN BE FOUND ON SHEET 7 FOR THE BRIDGE DECK.

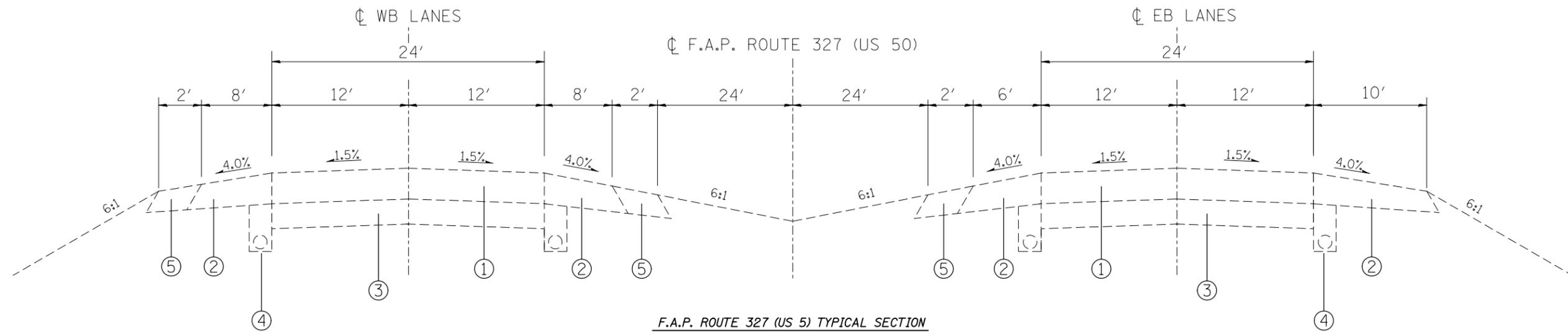
RAISED REFLECTIVE PAVEMENT MARKERS

STATION	LANE	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL		RAISED REFLECTIVE PAVEMENT MARKER	REPLACEMENT REFLECTOR		
		WHOLE	LENS	ONE-WAY CRYSTAL	ONE-WAY CRYSTAL		
		EACH	EACH	EACH	EACH		
SN 014-0066							
3083+71.34	TO	3086+27.09	EB	3	23	3	23
SN 014-0067							
3083+67.55	TO	3086+23.31	WB	3	23	3	23
TOTAL				52	6	46	

1WHOLE - IS THE REMOVAL OF THE ENTIRE MARKER. LENS - IS THE REMOVAL OF THE LENS ONLY. LENSES ARE TO BE REMOVED THAT WOULD CONFLICT WITH THE TRAFFIC STAGING.

PAVEMENT MARKING SCHEDULE

STATION	LANE	4" WHITE SKIP DASH	4" YELLOW EDGELINE	4" WHITE EDGELINE	PAVEMENT MARKING REMOVAL		
		FOOT	FOOT	FOOT	FOOT		
SN 014-0066							
3078+83.84	TO	3091+27.09	EB	1243	1243	2487	EDGELINES CENTERLINES
3065+58.84	TO	3086+27.09	EB	510		510	
SUB-TOTAL SN 014-0066				2997		2997	
SN 014-0067							
3078+67.55	TO	3091+10.81	WB	1243	1243	2487	EDGELINES CENTERLINES
3083+67.55	TO	3104+35.81	WB	510		510	
SUB-TOTAL SN 014-0067				2997		2997	
TOTAL				5994		5994	

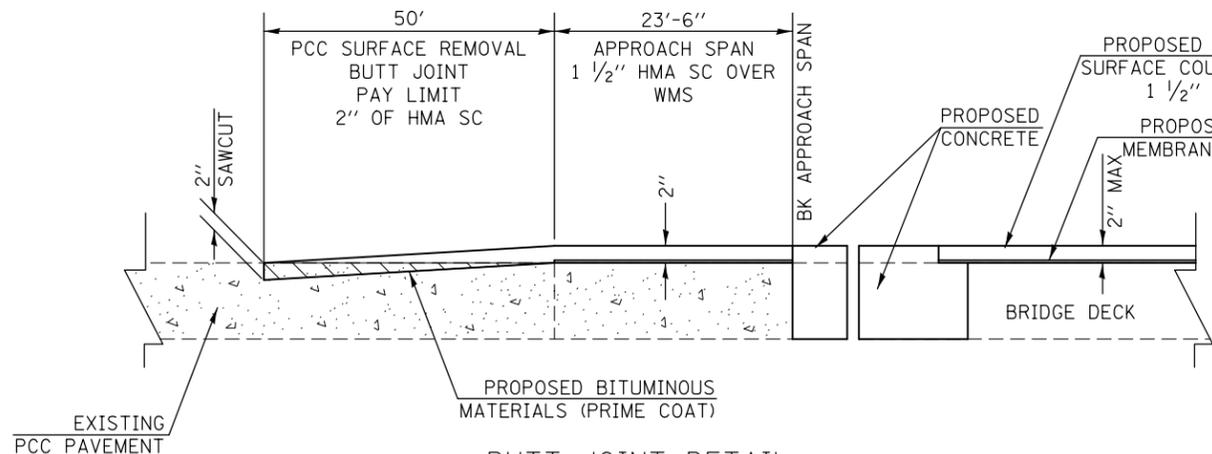


F.A.P. ROUTE 327 (US 5) TYPICAL SECTION

LEGEND FOR US 50

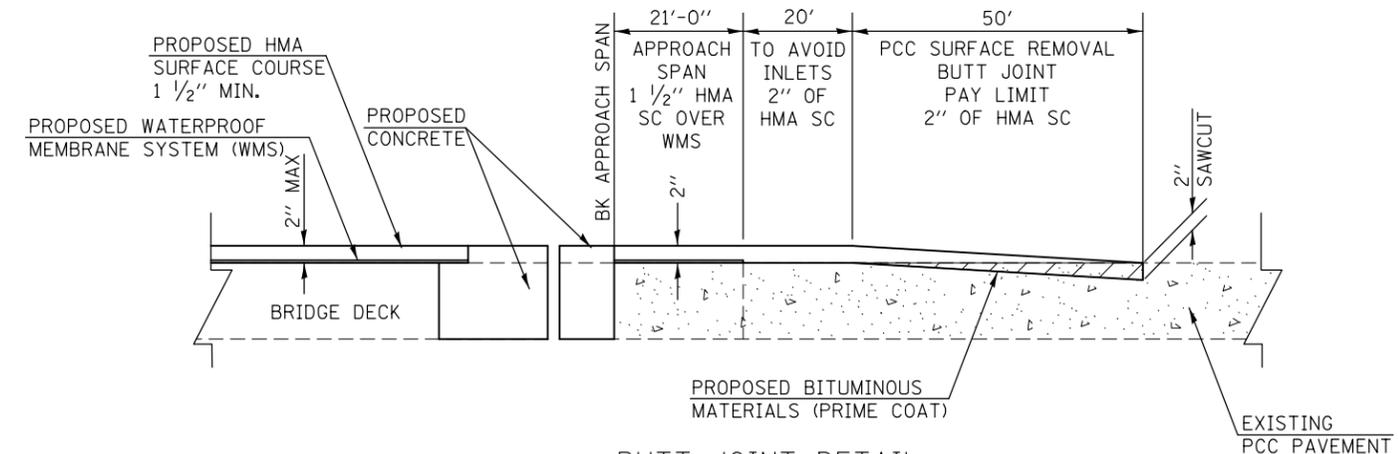
- ① EXISTING PCC PAVEMENT
- ② EXISTING PCC SHOULDER
- ③ EXISTING SUBBASE
- ④ EXISTING PIPE UNDERDRAIN
- ⑤ EXISTING AGGREGATE SHOULDER

FILE NAME =	USER NAME = wedmore_jb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL ROADWAY SECTION				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p\dot\wedmore_jb\d0382740\d076h27-sht-plan.dgn	DRAWN -	REVISED -	REVISED -						327	14-14HB-2	CLINTON	17	7
	PLOT SCALE = 100.0000' / 1" =	CHECKED -	REVISED -						CONTRACT NO. 76H27				
	PLOT DATE = 10/28/2014	DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



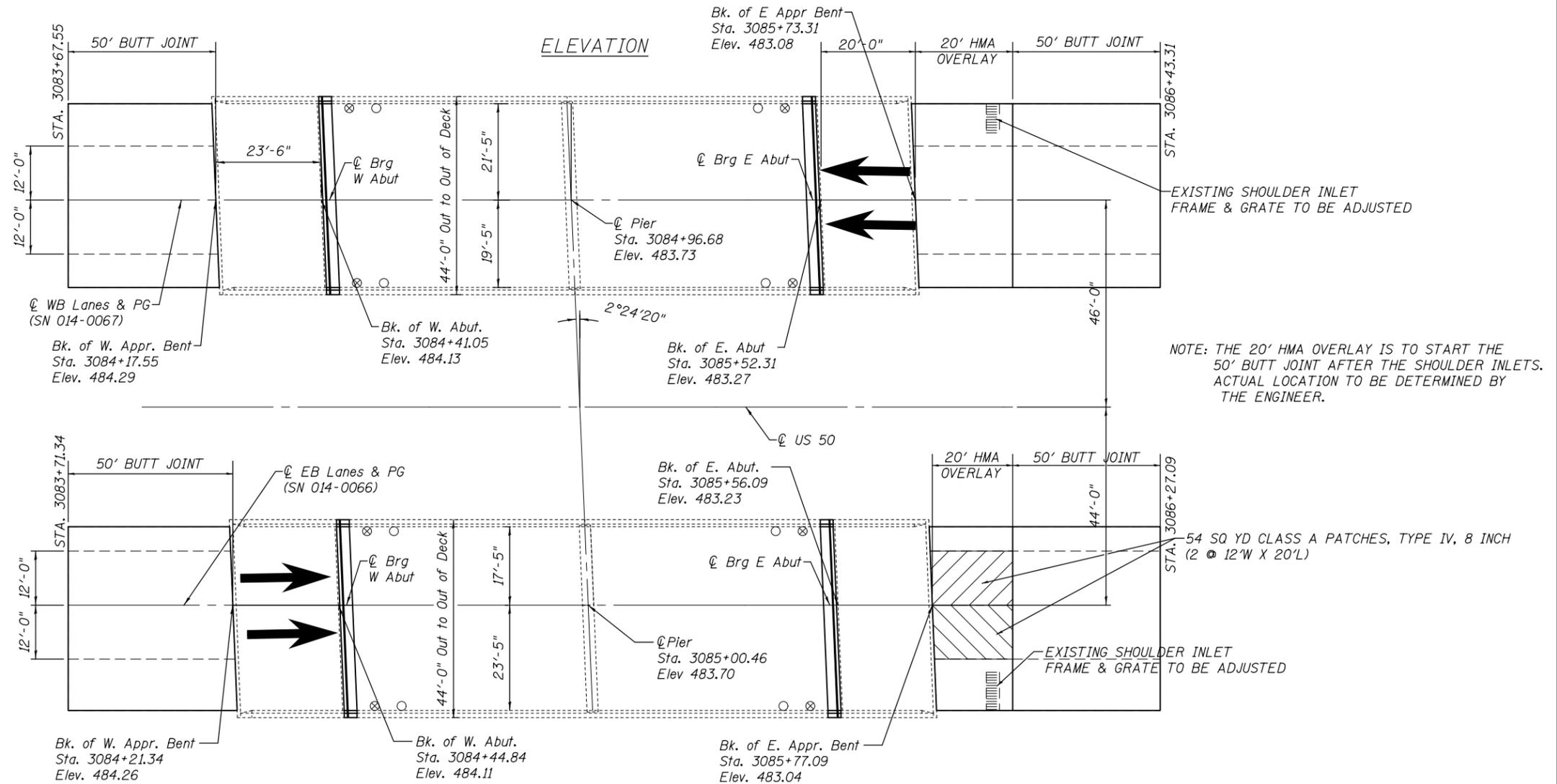
**BUTT JOINT DETAIL
WEST END OF BRIDGES**

SAW CUT TO BE INCLUDED IN THE COST OF
PCC SURFACE REMOVAL- BUTT JOINT



**BUTT JOINT DETAIL
EAST END OF BRIDGES**

SAW CUT TO BE INCLUDED IN THE COST OF
PCC SURFACE REMOVAL- BUTT JOINT



ELEVATION

NOTE: THE 20' HMA OVERLAY IS TO START THE
50' BUTT JOINT AFTER THE SHOULDER INLETS.
ACTUAL LOCATION TO BE DETERMINED BY
THE ENGINEER.

FILE NAME =	USER NAME = wedmore_jb	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et:\pw\work\p\idot\wedmore_jb\d0382740\d076h27-sht-plan.dgn		DRAWN -	REVISD -				327	14-14HB-2	CLINTON	17	8
PLOT SCALE = 100.0000' / 1in.		CHECKED -	REVISD -		CONTRACT NO. 76H27						
PLOT DATE = 10/28/2014		DATE -	REVISD -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.

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.

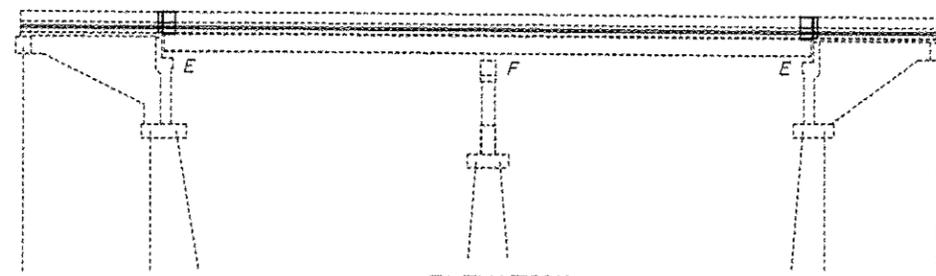
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall 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.

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

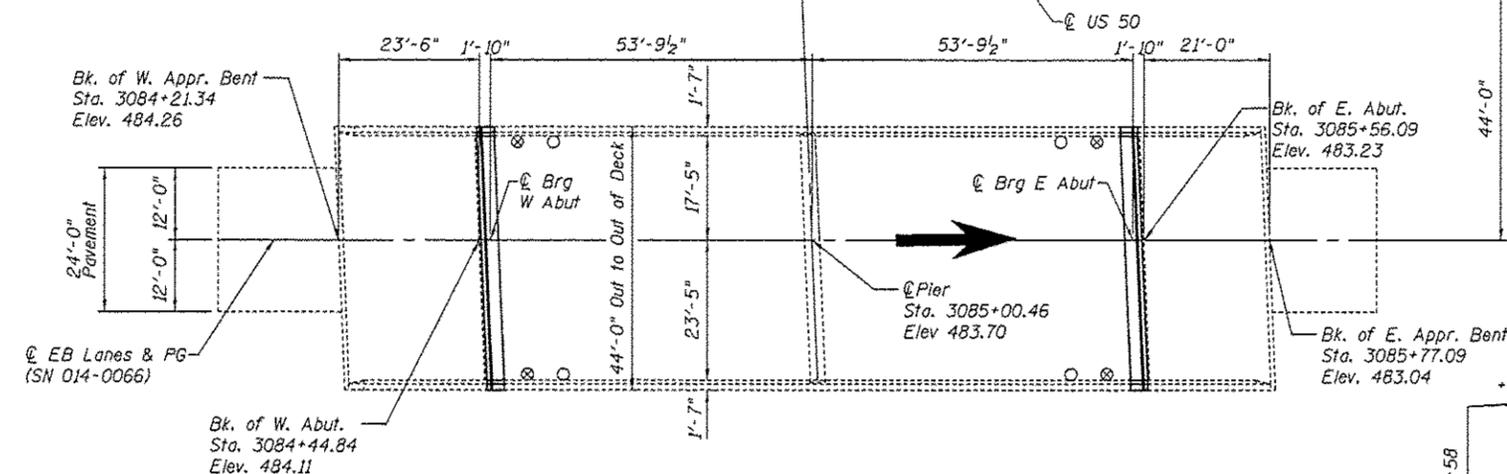
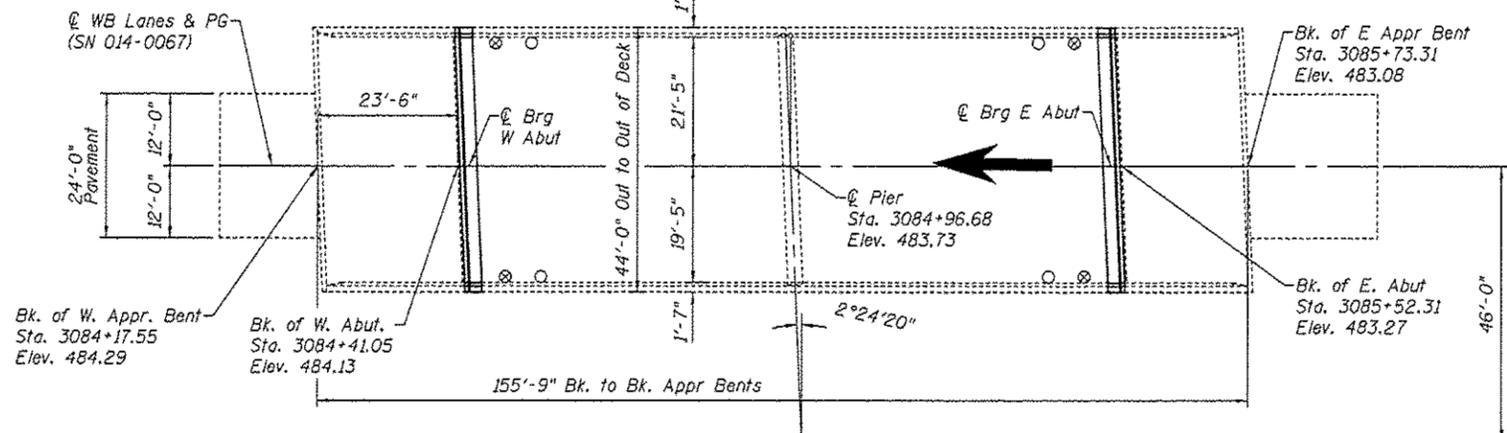
Joint opening shall be adjusted according to Article 520.04 of the Standard Specs. when the deck is poured at an ambient temperature other than 50° F.

Existing reinforcement bars extending into 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.

Bridge deck concrete sealer shall be placed on top/inside faces of curbs (full length) and wingwalls and on top of new concrete at joints.



ELEVATION



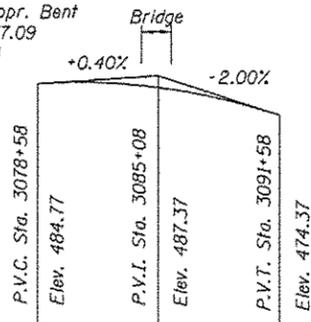
PLAN

SCOPE OF WORK

- Replace deck end & slab end
- Install Preformed Joint Strip Seals
- Plug Existing Drains
- HMA overlay with WMS
- Deck Slab Repair

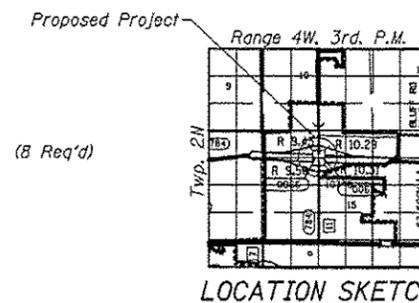
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1. General Plan & Elevation
2. Deck Cross Section & Joint Details (WB Bridge)
3. Deck Cross Section & Joint Details (EB Bridge)
4. Joint Removal & Replacement (WB Bridge)
5. Joint Removal & Replacement (EB Bridge)
6. Drain Details & Waterproofing Staging
7. Strip Seal Details
8. Temporary Concrete Barrier
9. Bar Splicers



PROFILE GRADE

(From existing plans)

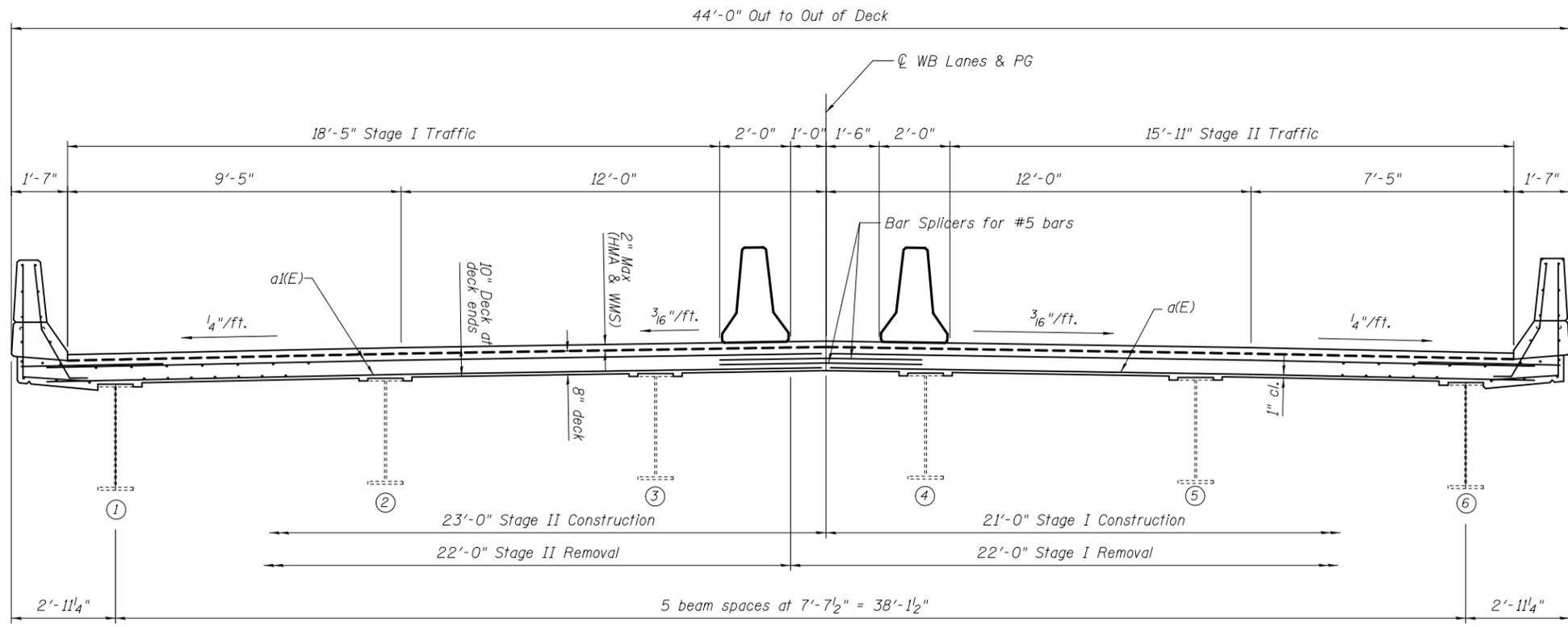


LOCATION SKETCH

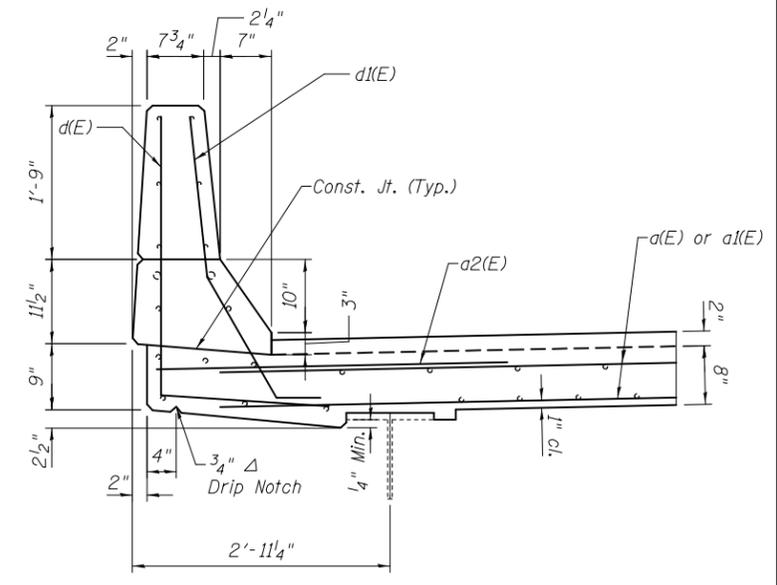
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	17.0
Concrete Superstructure	Cu. Yd.	18.8
Bar Splicers	Each	44
Plug Existing Deck Drains	Each	8
Preformed Joint Strip Seal	Foot	172
Waterproofing Membrane System	Sq. Yd.	135.8
Bridge Deck Concrete Sealer	Sq. Ft.	2454
HMA Surface Course, Mix "D" N70	Ton	114
Reinforcement Bars, Epoxy Coated	Pound	2240
Deck Slab Repair (Partial)	Sq. Yd.	20

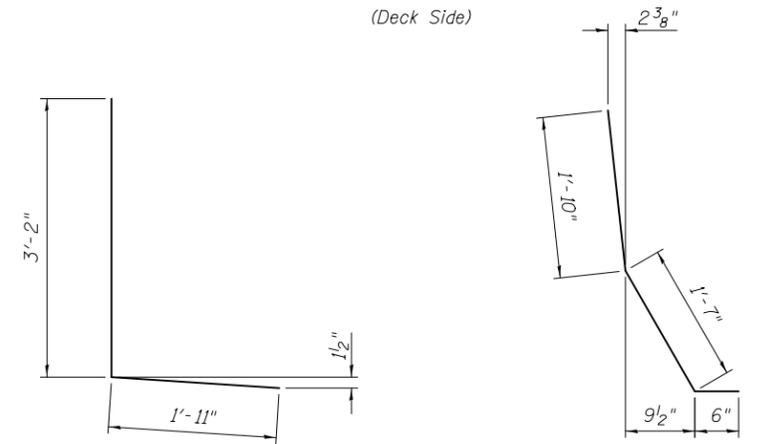




DECK CROSS SECTION (WB)
Looking East @ Joint Locations

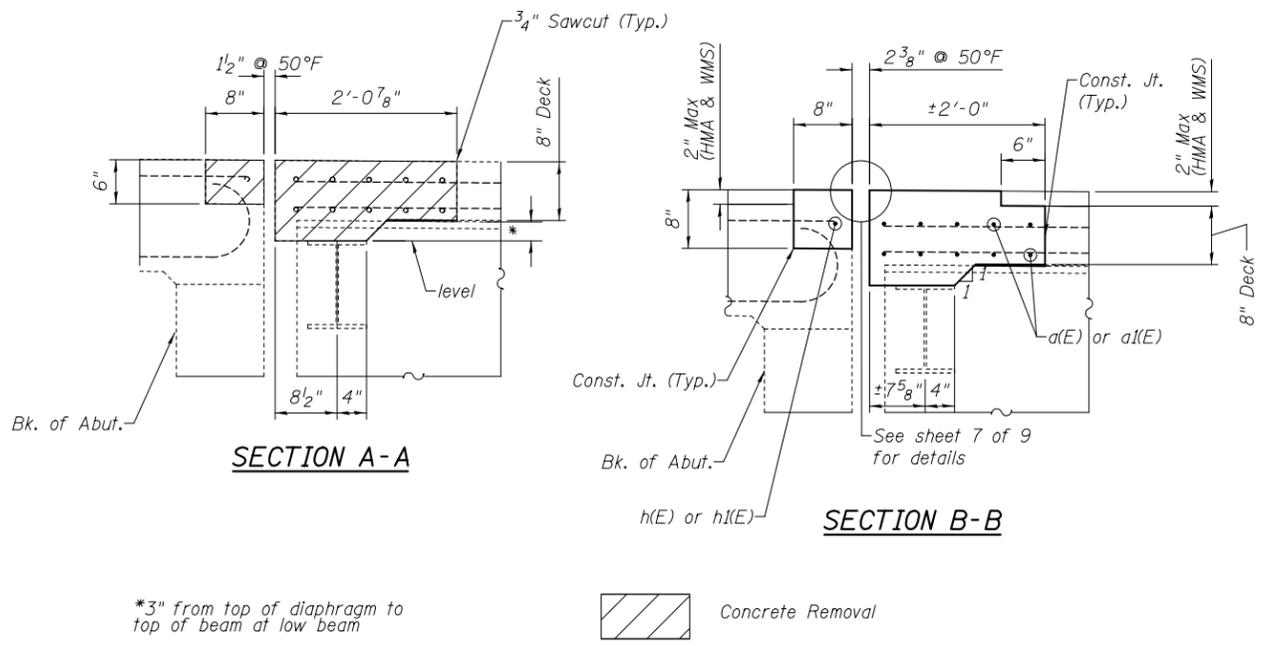


PARAPET SECTION
(Deck Side)



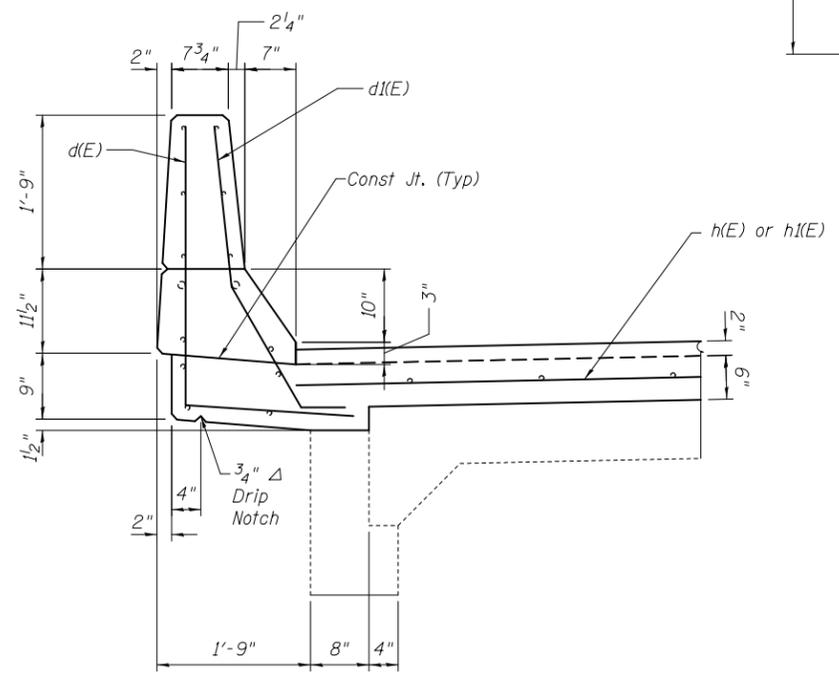
BAR d(E)

BAR d1(E)



SECTION A-A

SECTION B-B



PARAPET SECTION
(Vaulted Side)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	20	#5	19'-11"	—	
a1(E)	20	#5	21'-11"	—	
a2(E)	12	#6	4'-0"	—	
d(E)	12	#4	5'-1"	J	
d1(E)	12	#5	3'-11"	J	
h(E)	2	#5	19'-11"	—	
h1(E)	2	#5	21'-11"	—	
Reinforcement Bars, Epoxy Coated				Pound	1120
Waterproofing Membrane System				Sq. Yd.	679
HMA Surface Course, Mix "D" N70				Ton	57
Bridge Deck Concrete Sealer				Sq. Ft.	1227
Concrete Superstructure				Cu. Yds.	9.4
Concrete Removal Deck Slab Repair (Partial)				Cu. Yds.	8.5
Concrete Removal Deck Slab Repair (Partial)				Sq. Yd.	10

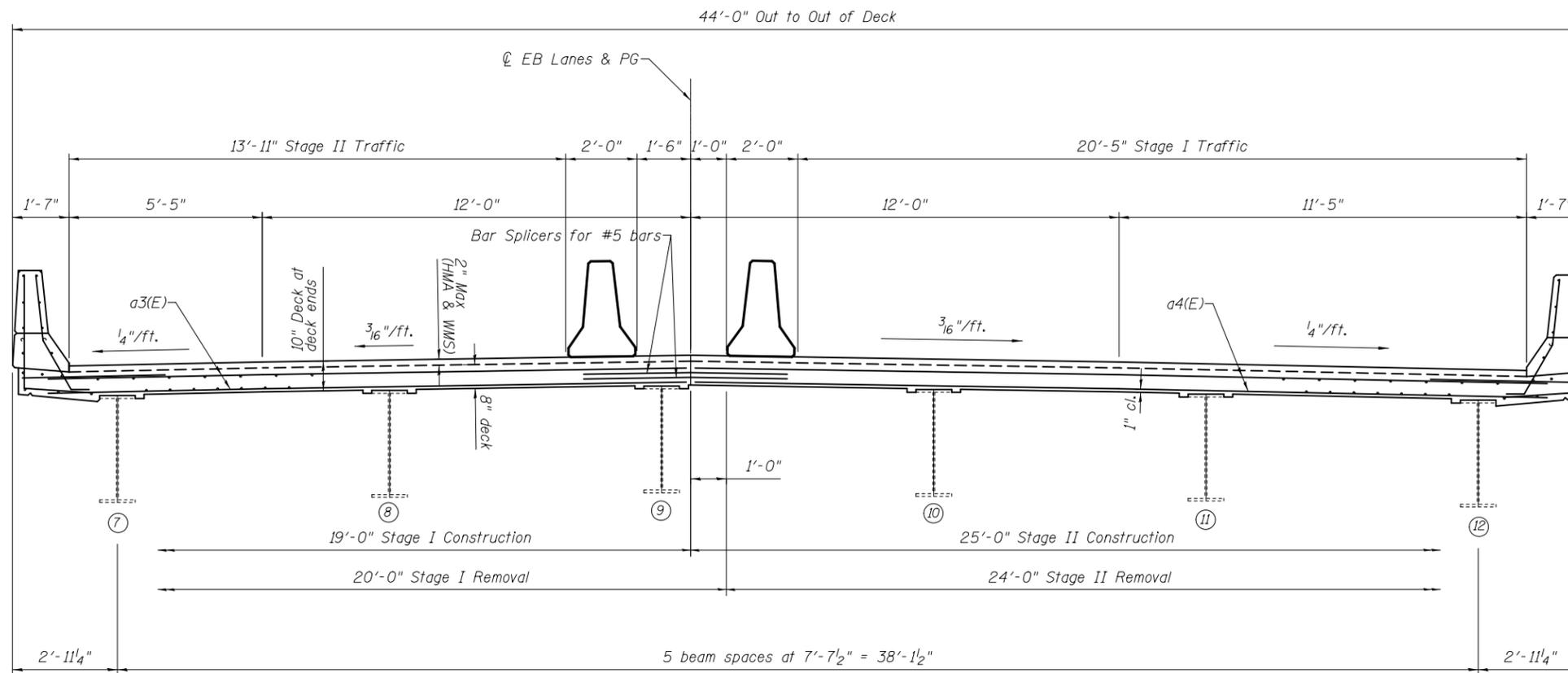
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DRAWN - AYV	PASSED	REVISED
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

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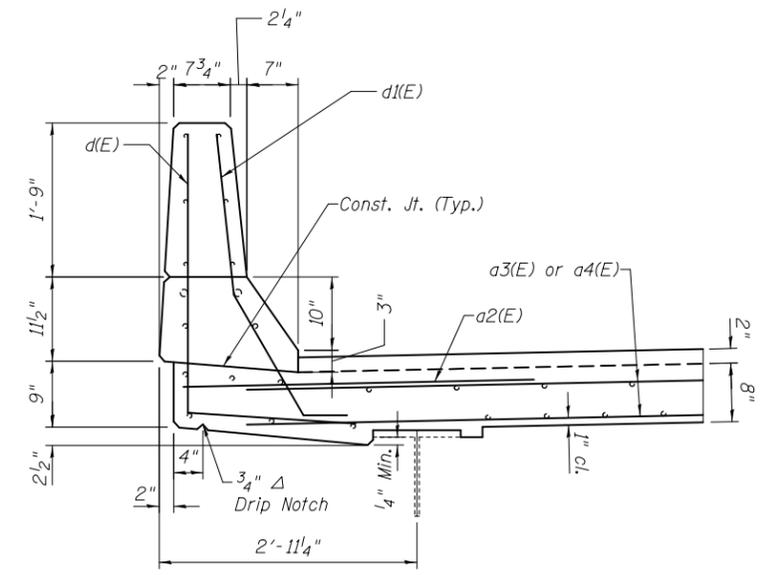
DECK CROSS SECTION & JOINT DETAILS
SN 014-0067 (WB BRIDGE)

SHEET NO. 2 OF 9 SHEETS

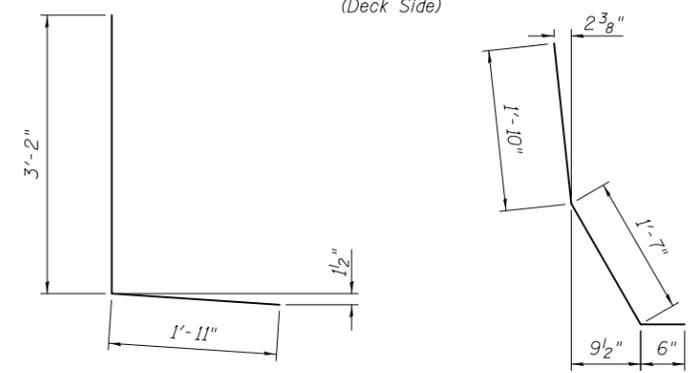
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	10
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				



DECK CROSS SECTION (EB)
Looking East @ Joint Locations

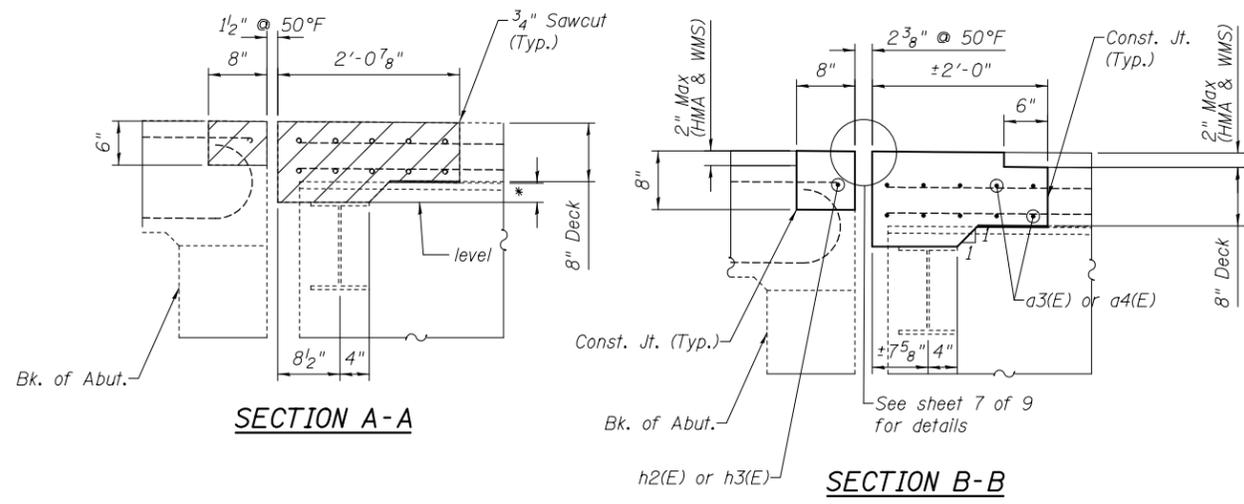


PARAPET SECTION
(Deck Side)



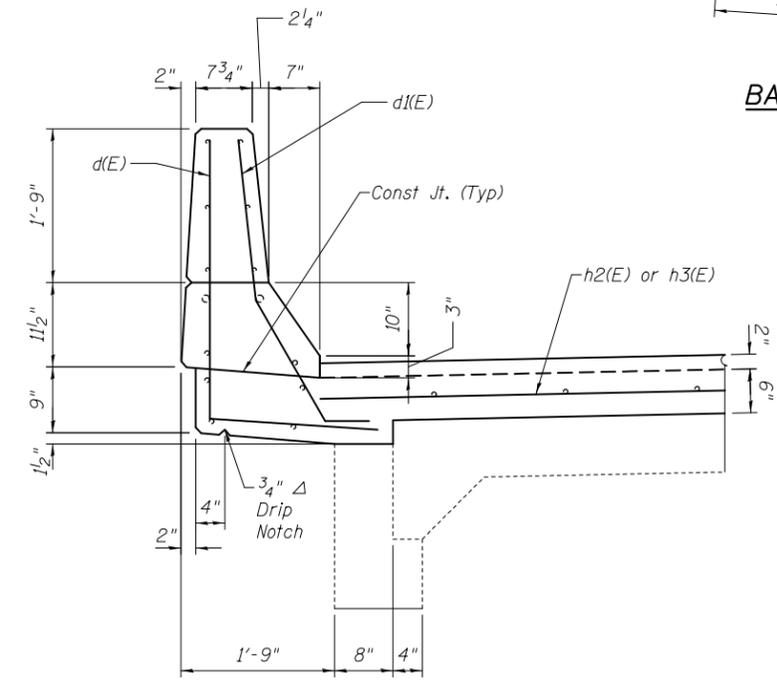
BAR d(E)

BAR d1(E)



*3" from top of diaphragm to top of beam at low beam

Concrete Removal



PARAPET SECTION
(Vaulted Side)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	12	#6	4'-0"	—
a3(E)	20	#5	17'-11"	—
a4(E)	20	#5	23'-11"	—
d(E)	12	#4	5'-1"	J
d1(E)	12	#5	3'-11"	J
h2(E)	2	#5	17'-11"	—
h3(E)	2	#5	23'-11"	—
Reinforcement Bars, Epoxy Coated		Pound	1120	
Waterproofing Membrane System		Sq. Yd.	679	
HMA Surface Course, Mix "D" N70		Ton	57	
Bridge Deck Concrete Sealer		Sq. Ft.	1227	
Concrete Superstructure		Cu. Yds.	9.4	
Deck Slab Repair (Partial)		Sq. Yd.	10	
Concrete Removal		Cu. Yds.	8.5	

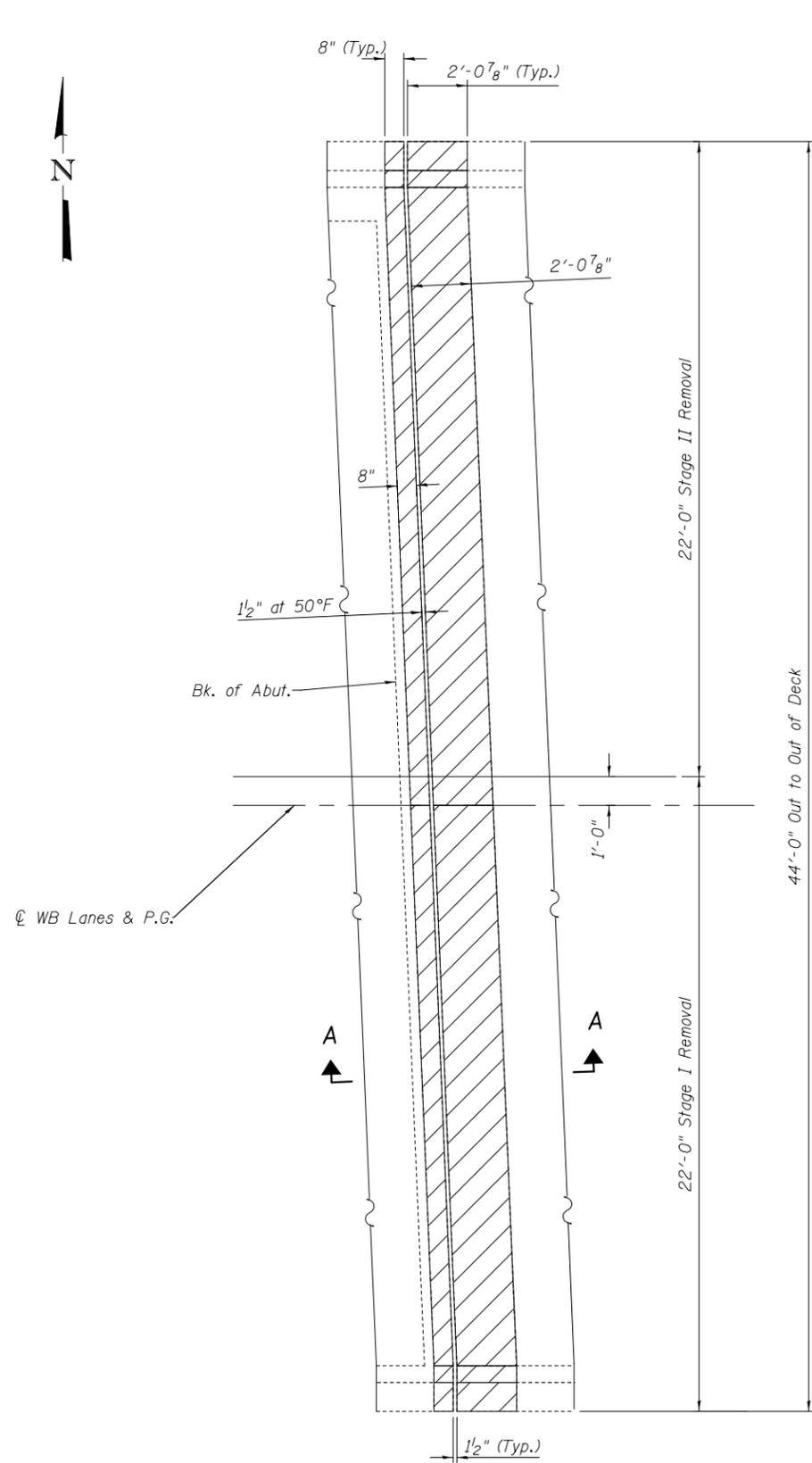
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DECK CROSS SECTION & JOINT DETAILS
SN 014-0066 (EB BRIDGE)

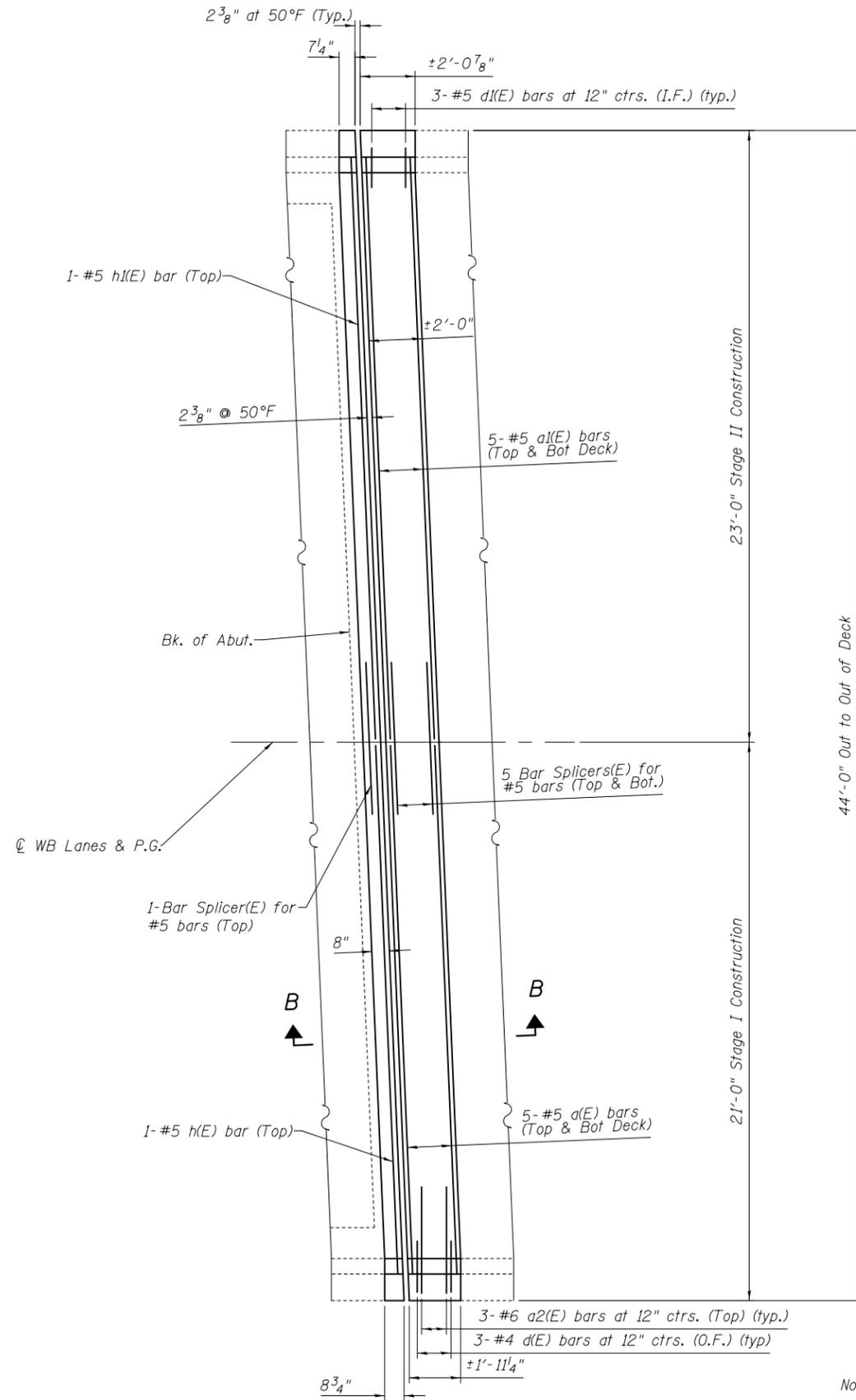
SHEET NO. 3 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	11
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL

W. Abut. shown, E Abut. similar by 180° rotation



CONCRETE REPLACEMENT

W. Abut. shown, E Abut. similar by 180° rotation



Note:

See sheet 2 of 9 for Section A-A & B-B

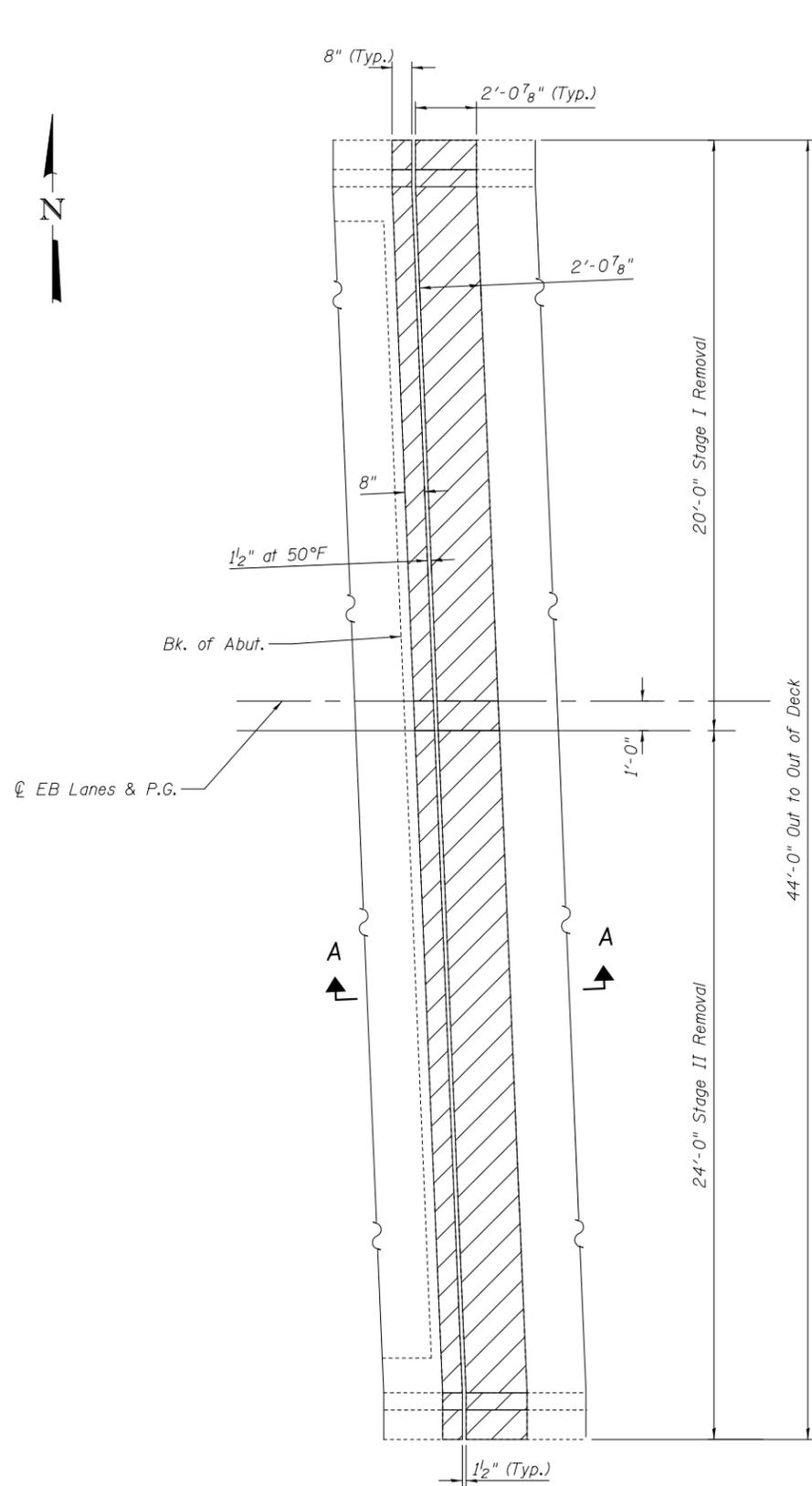
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DEPARTMENT OF TRANSPORTATION**

**JOINT REMOVAL & REPLACEMENT
SN 014-0067 (WB BRIDGE)**

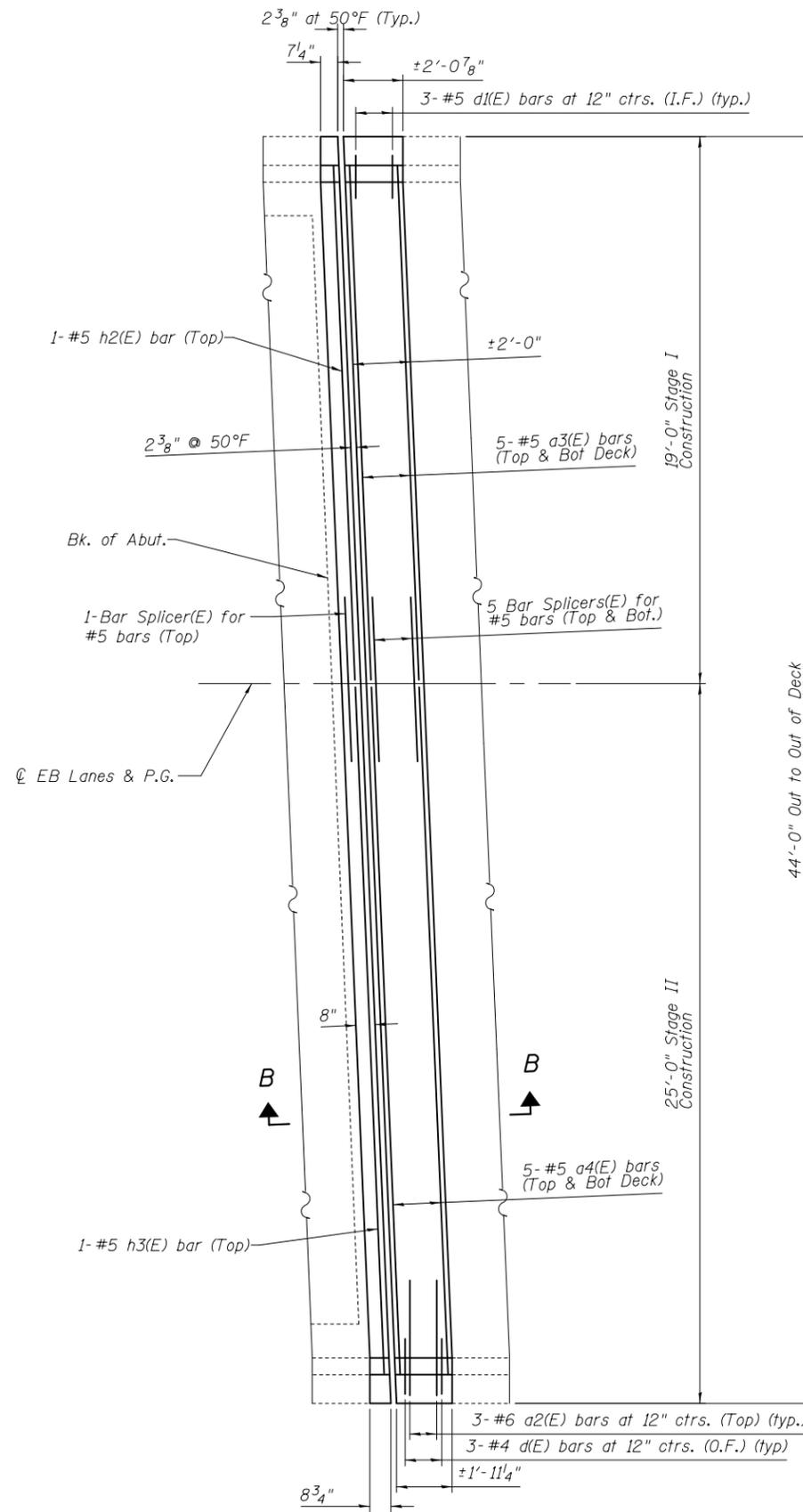
SHEET NO. 4 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	12
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL

W. Abut. shown, E Abut. similar by 180° rotation



CONCRETE REPLACEMENT

W. Abut. shown, E Abut. similar by 180° rotation



Note:

See sheet 3 of 9 for Section A-A & B-B

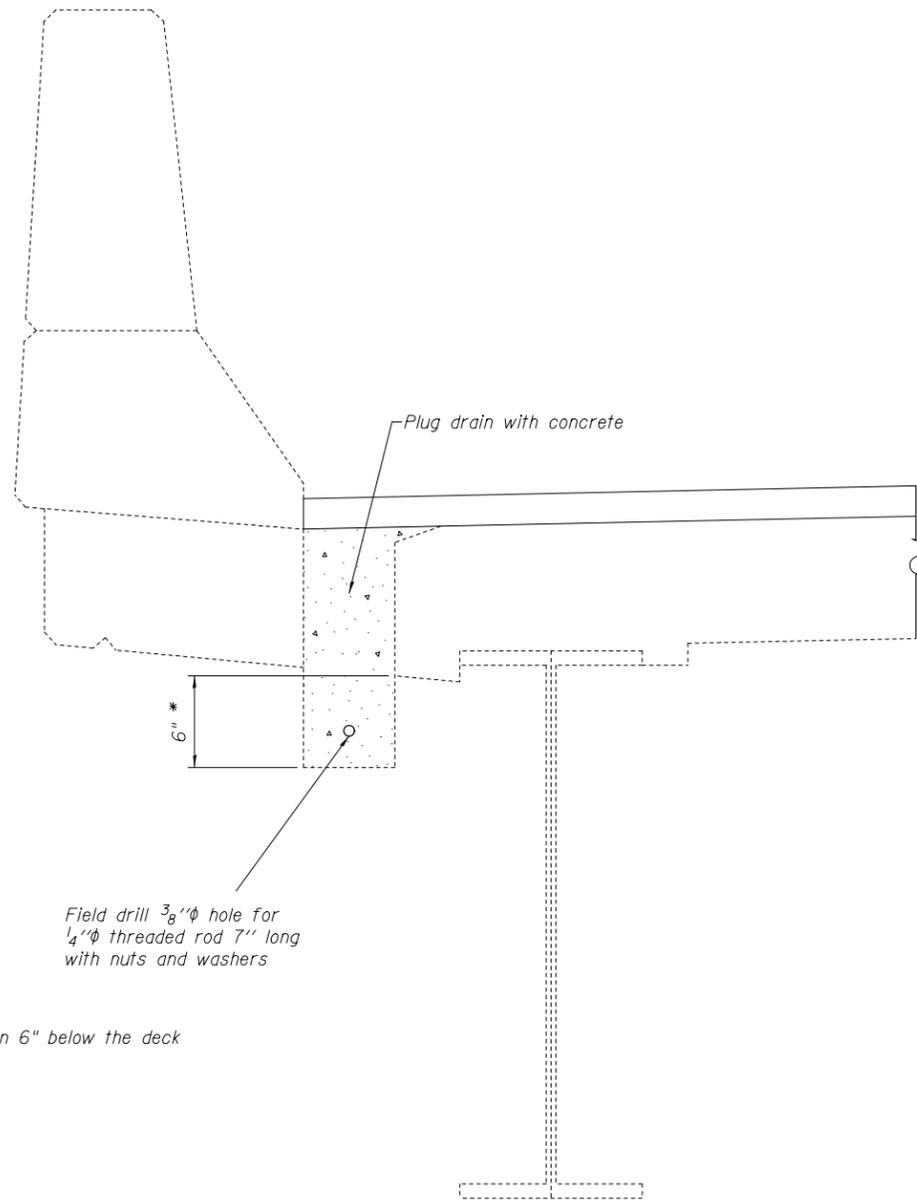
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**JOINT REMOVAL & REPLACEMENT
SN 014-0066 (EB BRIDGE)**

SHEET NO. 5 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	13
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				



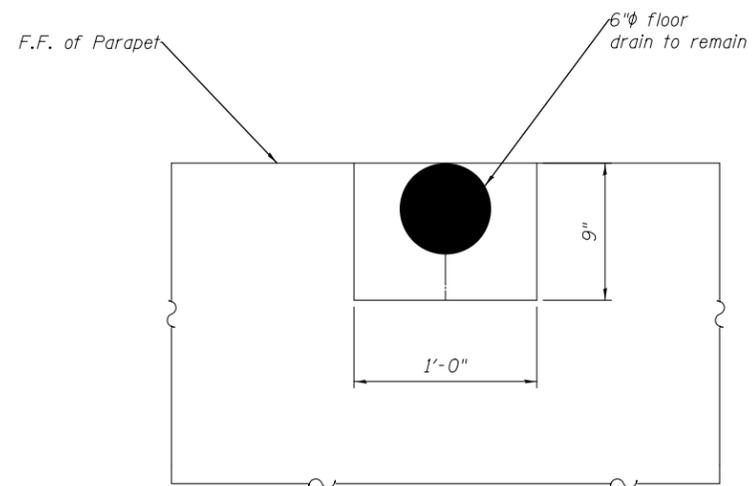
PLUG DRAIN DETAIL

(See sheet 1 of 9 for locations)

* Cut off drain 6" below the deck

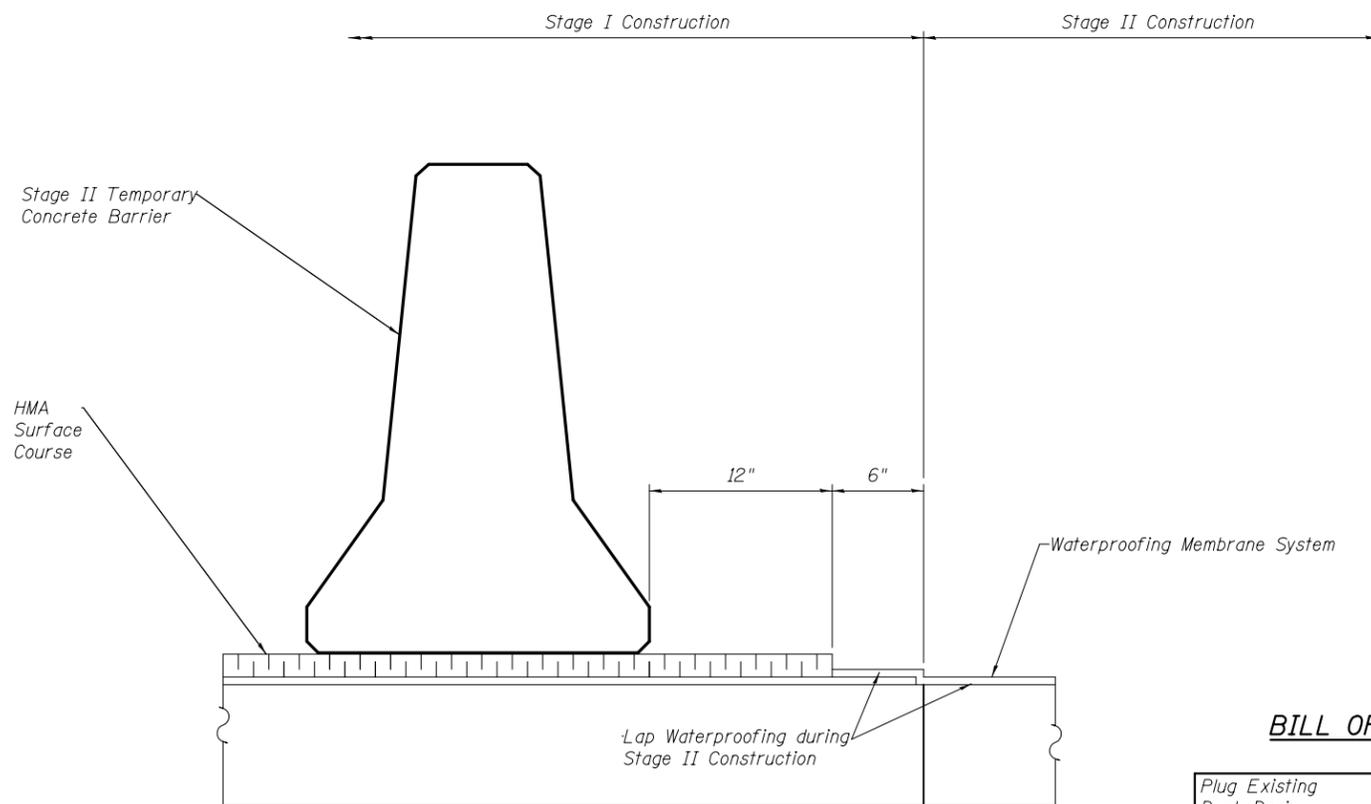
Field drill $\frac{3}{8}$ " ϕ hole for $\frac{1}{4}$ " ϕ threaded rod 7" long with nuts and washers

Plug drain with concrete



DRAIN DETAIL

Slope to drain with 1" minimum HMA at drains edge.
(See sheet 1 of 9 for locations to remain)
(8 Req'd)



WATERPROOFING STAGING

BILL OF MATERIAL

Plug Existing Deck Drain	Each	8

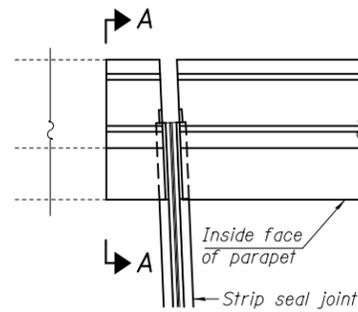
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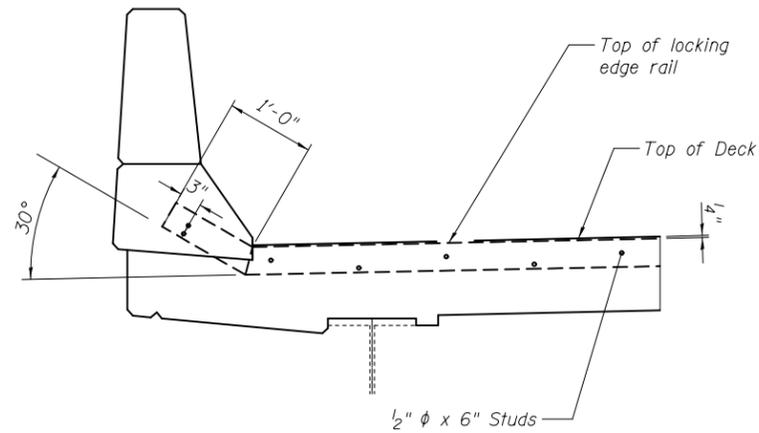
**DRAIN DETAILS & WATERPROOFING STAGING
SN 014-0066 & 0067**

SHEET NO. 6 OF 9 SHEETS

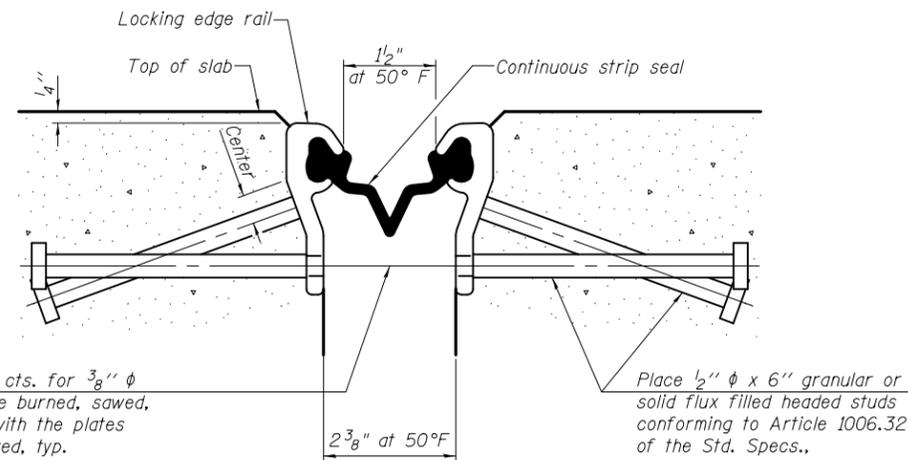
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	14
CONTRACT NO. 76H27				
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PLAN
(For skews < 30°)



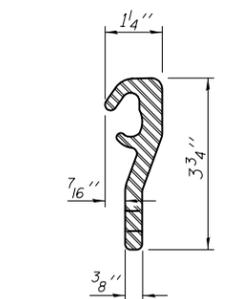
SECTION A-A



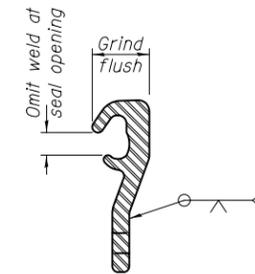
7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Place 1/2" φ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

SECTION THRU STRIP SEAL JOINT



ROLLED (EXTRUDED) RAIL



LOCKING EDGE RAIL SPLICE

* Back gauge not required if complete joint penetration is verified by mock-up.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	172

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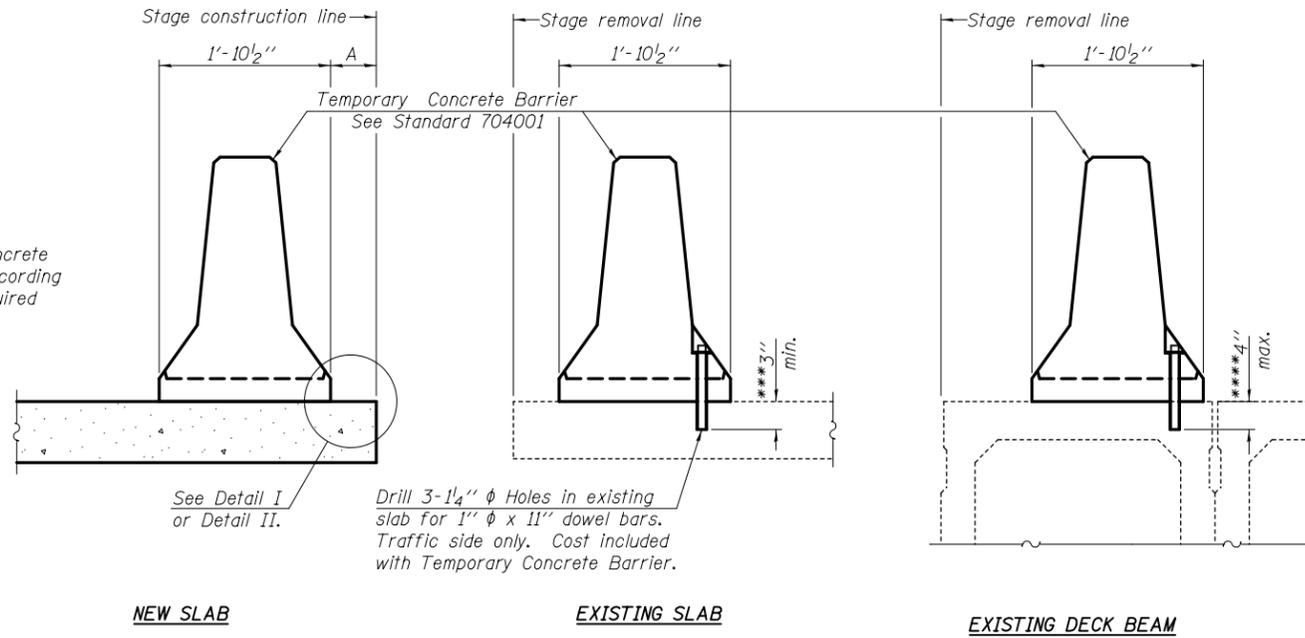
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**PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 014-0066 & 0067**

SHEET NO. 7 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	15
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

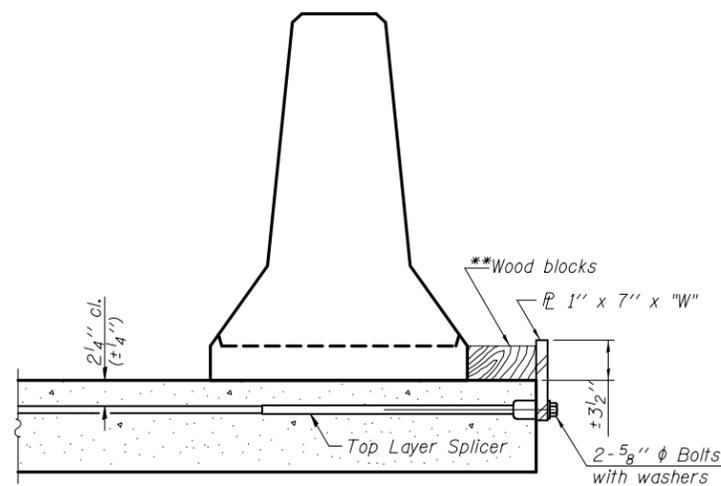
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

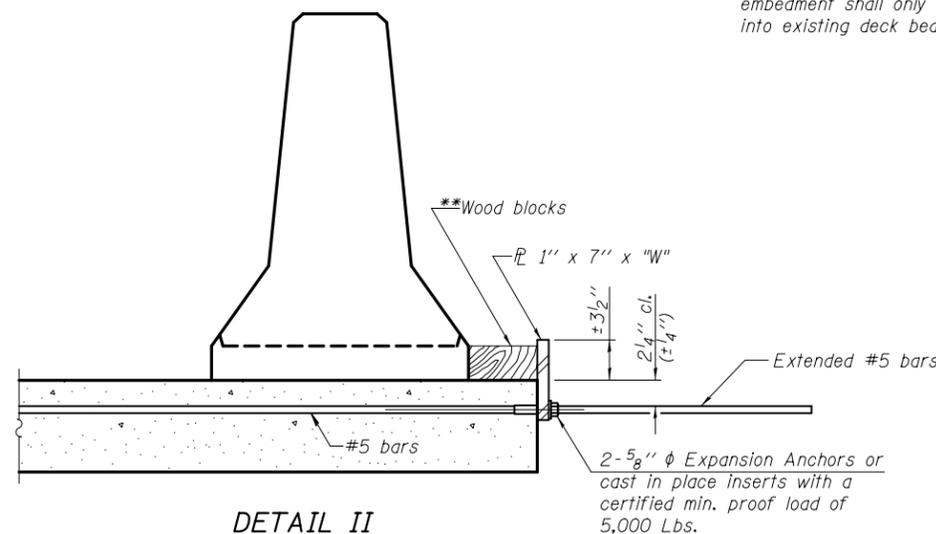
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

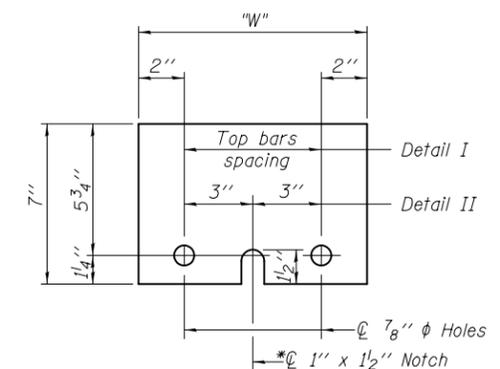
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x "W"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27

7-1-10

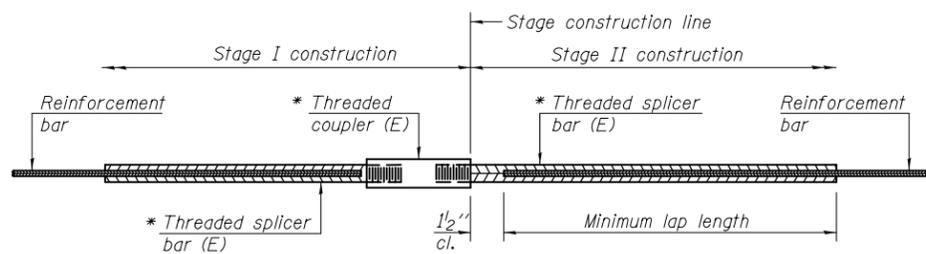
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**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 014-0066 & 0067**

SHEET NO. 8 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	16
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

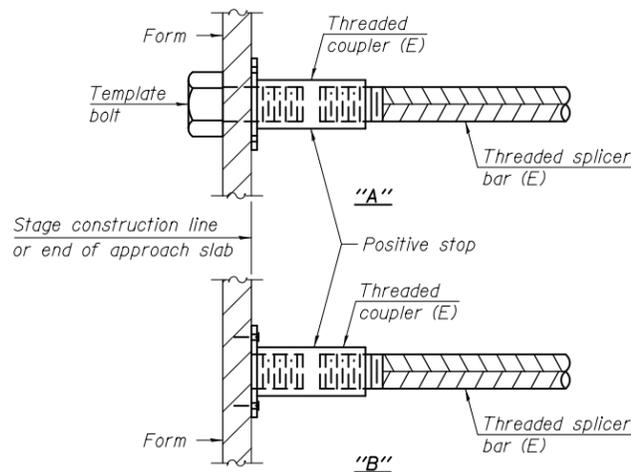
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

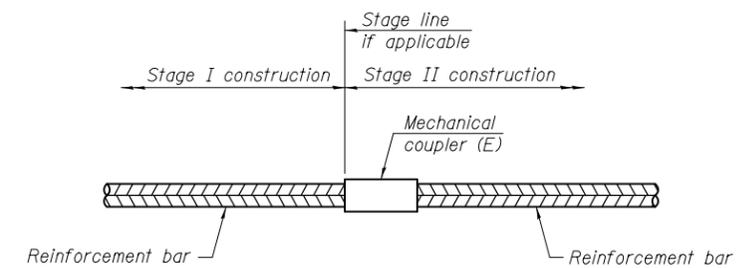
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	40	3
Vaulted Approach	#5	4	3



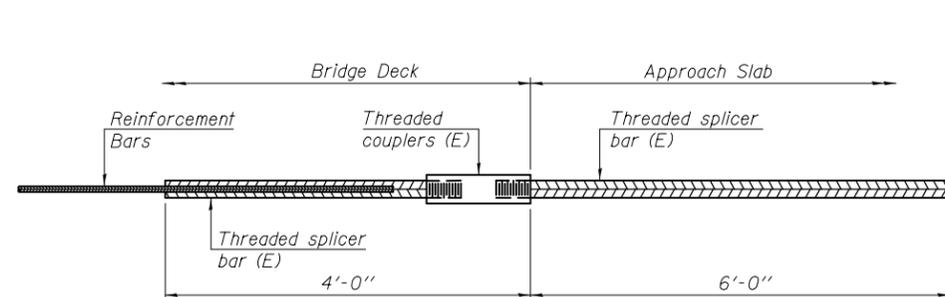
INSTALLATION AND SETTING METHODS

"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.



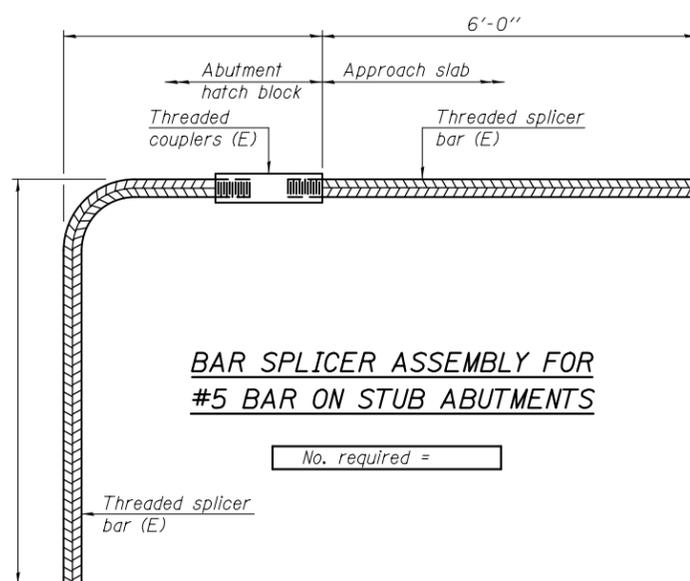
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. 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 1-27-12

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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 014-0066 & 0067

SHEET NO. 9 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
327	14-14HB-2	CLINTON	17	17
CONTRACT NO. 76H27				
ILLINOIS FED. AID PROJECT				