

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	02 BJR 2018-4	BOONE	35	1
ILLINOIS CONTRACT NO. 64M65				

INDEX OF SHEETS

04-27-2018 LETTING ITEM 073

- 1 COVER SHEET
- 2 SUMMARY OF QUANTITIES
- 3-27 MAINTENANCE OF TRAFFIC PLANS & STANDARDS
- 28-35 STRUCTURAL REPAIR PLANS (SN 004-0005, SN 004-0006)

HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001006 DECIMAL EQUIVALENTS OF AN INCH AND FOOT
- 701101-05 OFF ROAD OPERATIONS MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
- 701411-09 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45MPH
- 701423-10 LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS > 45MPH TP 55MPH
- 701451-05 RAMP CLOSURE, FREEWAY/EXPRESSWAY
- 701901-07 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 720011-01 METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPES OF A&B METAL POSTS

NOTES:

ALL BORROW WASTE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL CONTACT JULIE A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK AT 800-892-0123.

NO MATERIALS, EQUIPMENT, VEHICLES OR OTHER HAZARDS SHALL BE WITHIN 2'-0" OF THE TEMPORARY CONCRETE BARRIER. EQUIPMENT THAT IS ACTIVELY WORKING WITH 2'-0" OF THE BARRIER WALL MAY BE ALLOWED FOR A SHORT DURATION, IF APPROVED BY THE ENGINEER AND THERE IS NOT ANOTHER METHOD TO COMPLETE THE WORK.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

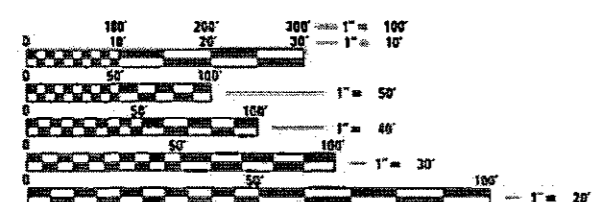
FAP ROUTE 525 (US 20)
SECTION D2 BJR 2018-4
BRIDGE REHABILITATION
S.N. 004-0005, S.N. 004-0006

BOONE COUNTY

C-92-025-18



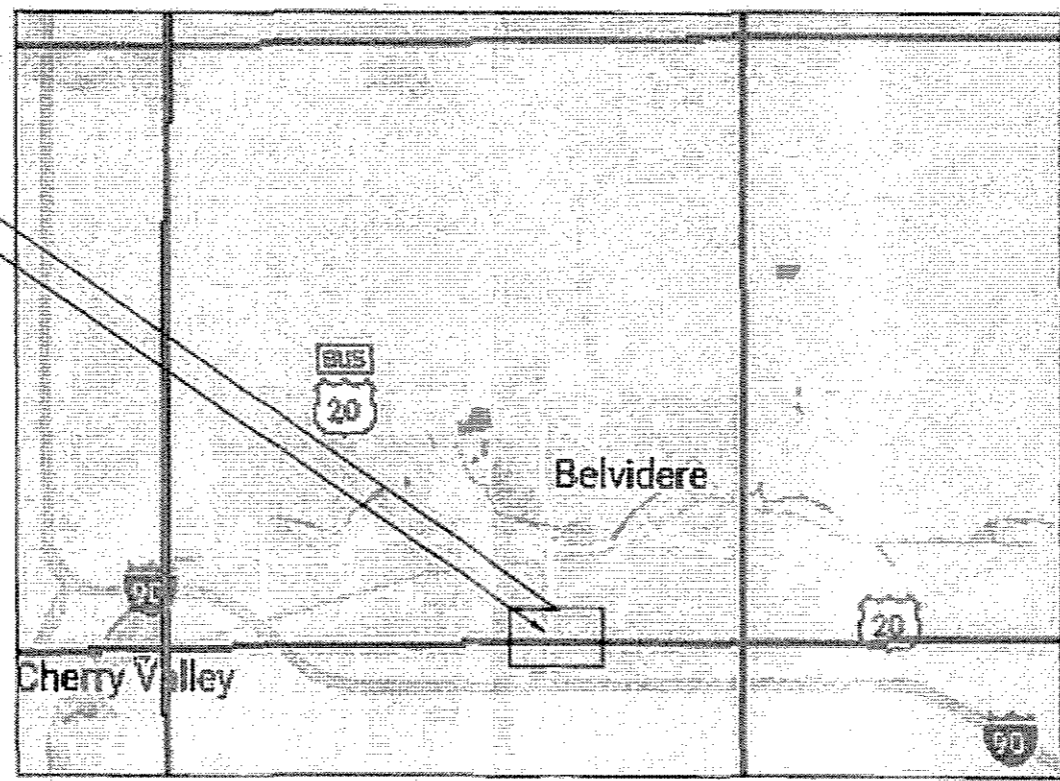
TRAFFIC DATA:
FUNCTIONAL CLASSIFICATION
FEDERAL AID PRIMARY
2017 ADT = 7,750
EST. TRUCK % = 17%



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 LIMITS
 S.N. 004-0005
 S.N. 004-0006



LOCATION MAP **R3E 4th PM**
N.T.S.

GROSS LENGTH = 4,210 FT. = 0.797 MILE
 NET LENGTH = 4,210 FT. = 0.797 MILE



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED 1-25-2018
[Signature]
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Mar 23 2018
[Signature]
 CHIEF ENGINEER OF DESIGN AND ENVIRONMENT

Mar 23 2018
[Signature]
 DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PROJECT ENGINEER: JEFFREY EHRHART, P.E. (312) 256-9090
 PROJECT MANAGER: MAHMOUD ETEMADI, P.E. (815) 284-5359

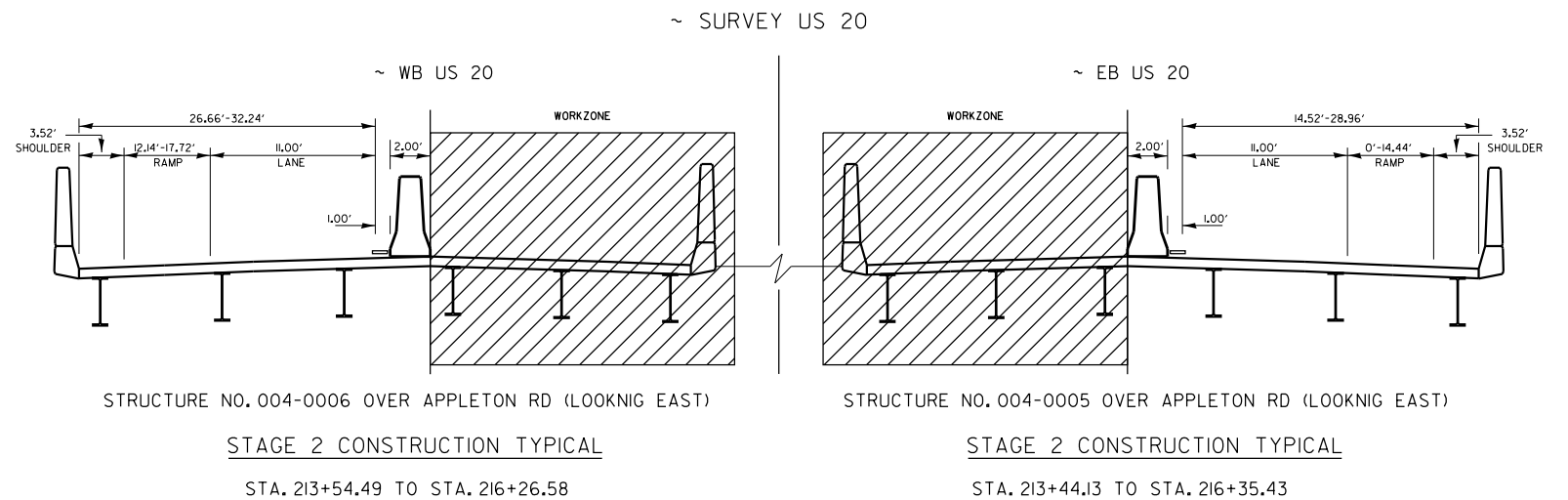
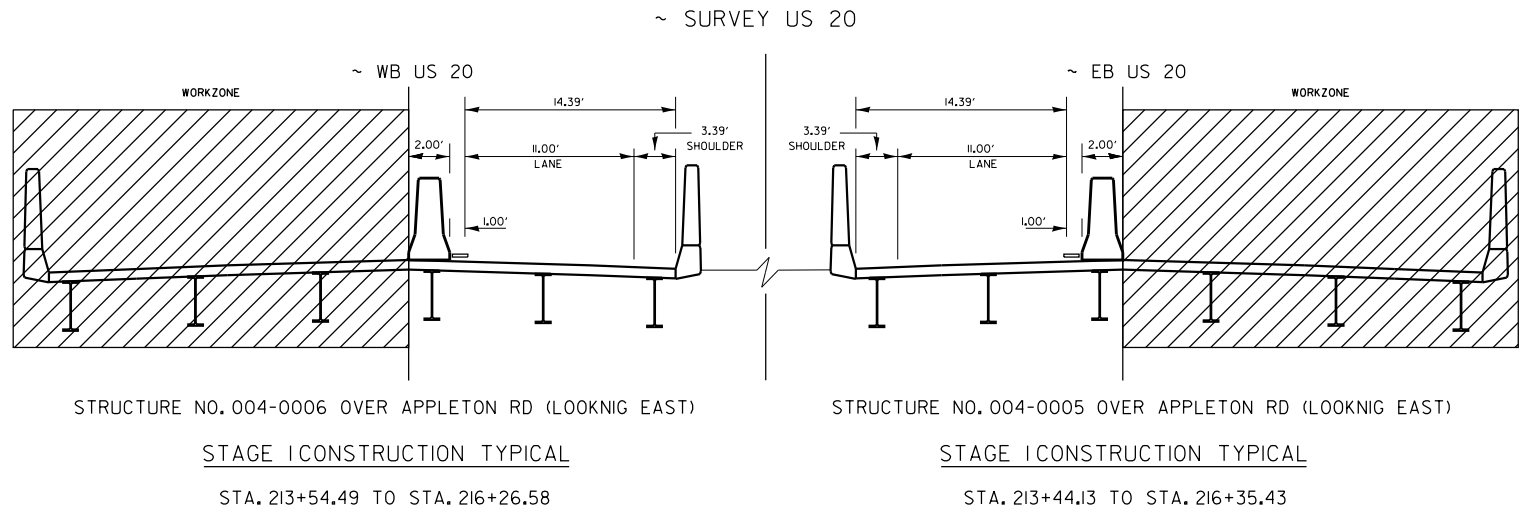
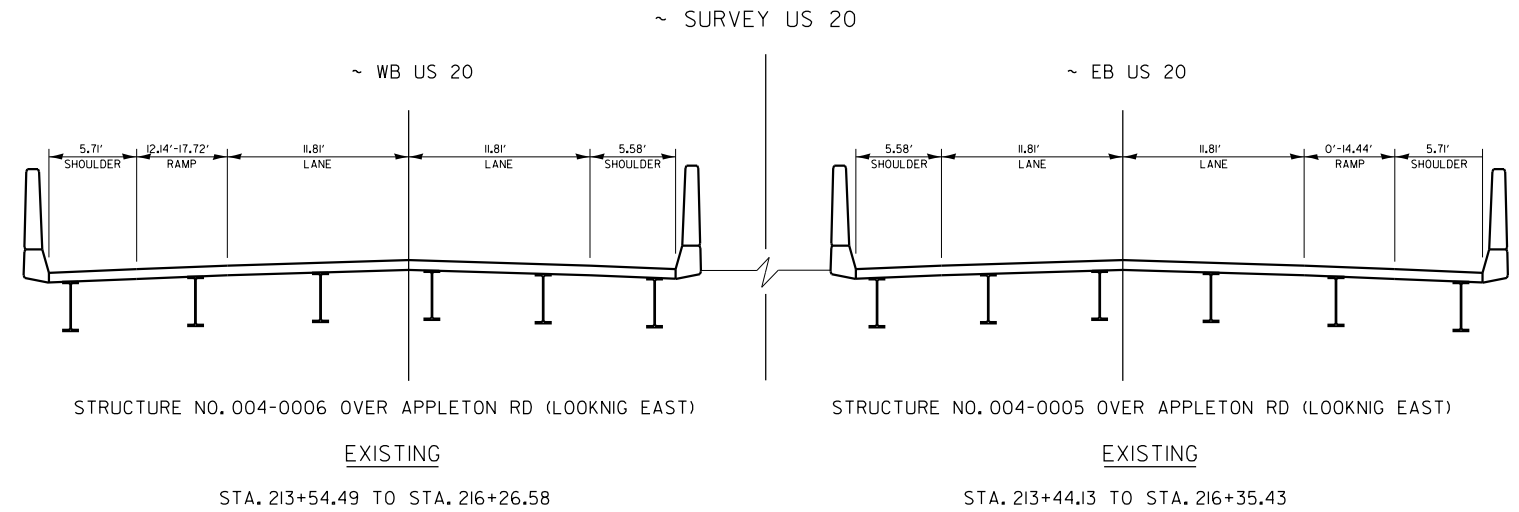
CONTRACT NO. 64M65

CONSTRUCTION STAGING GENERAL NOTES

1. ALL SIGNING MUST BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016, THE DETAILS IN THESE PLANS, THE LATEST EDITION OF THE IDOT BUREAU OF DESIGN AND ENVIRONMENT HIGHWAY STANDARDS AND THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
2. LONGITUDINAL DIMENSIONS SHOWN ON THESE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR MUST BE RESPONSIBLE FOR ENSURING THAT ALL BARRICADES, SIGNS, LIGHTS AND OTHER DEVICES INSTALLED ARE IN PLACE AND OPERATING 24 HOURS EACH DAY INCLUDING SUNDAYS AND HOLIDAYS DURING THE TIME THIS CONSTRUCTION IS IN EFFECT.
4. ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE THE CONSTRUCTION IS IN EFFECT MUST BE COMPLETELY COVERED BY THE CONTRACTOR.
5. THE SIZES OF ALL SIGNS NOT SPECIFIED IN THESE PLANS MUST BE AS REQUIRED BY THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
6. AS A MINIMUM, ALL AMBER FLASHING LIGHTS THAT ARE REQUIRED MUST MEET THE REQUIREMENTS FOR TYPE A - LOW INTENSITY FLASHING LIGHTS IN ARTICLE 702.04 OF THE STANDARD SPECIFICATIONS. ALL LIGHTS SHALL OPERATE DURING HOURS OF DARKNESS. ONLY LIGHTS THAT HAVE BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION MUST BE USED.
7. PROPOSED MAINTENANCE OF TRAFFIC SIGNING MUST BE COVERED OR REMOVED WHEN NOT REQUIRED DURING A SPECIFIC STAGE OF CONSTRUCTION.
8. SEE SUGGESTED MAINTENANCE OF TRAFFIC PLAN FOR ADDITIONAL SIGNING.
9. CHANGEABLE MESSAGE SIGNS TO BE PROVIDED AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
10. THE CONTRACTOR MUST CONDUCT HIS WORK IN SUCH A MANNER THAT EMERGENCY VEHICLES WILL HAVE ACCESS TO THE AREA AT ALL TIMES.
11. THE CONTRACTOR MUST NOTIFY THE IDOT BUREAU OF TRAFFIC AS REQUIRED 72 HOURS IN ADVANCE OF BEGINNING WORK (815) 284-5474.
12. SIGN SPACING SHALL BE PER IDOT STANDARD 701411, 701423, AND 701451.
13. CONTRACTOR TO BE IN ACCORDANCE WITH IDOT STANDARDS 701411, 701423, AND 701451.

SUMMARY OF QUANTITIES

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	1
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	2168
70107009	PAVEMENT MARKING BLACKOUT TAPE, 9"	FOOT	381
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	1032
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	10466
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	3489
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1125
70400200	RELOCATION TEMPORARY CONCRETE BARRIER	FOOT	1100
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2



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








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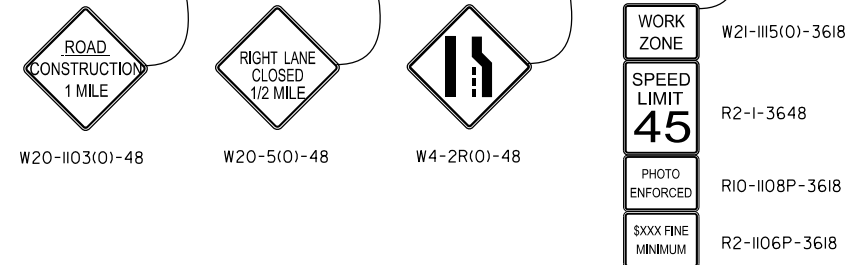
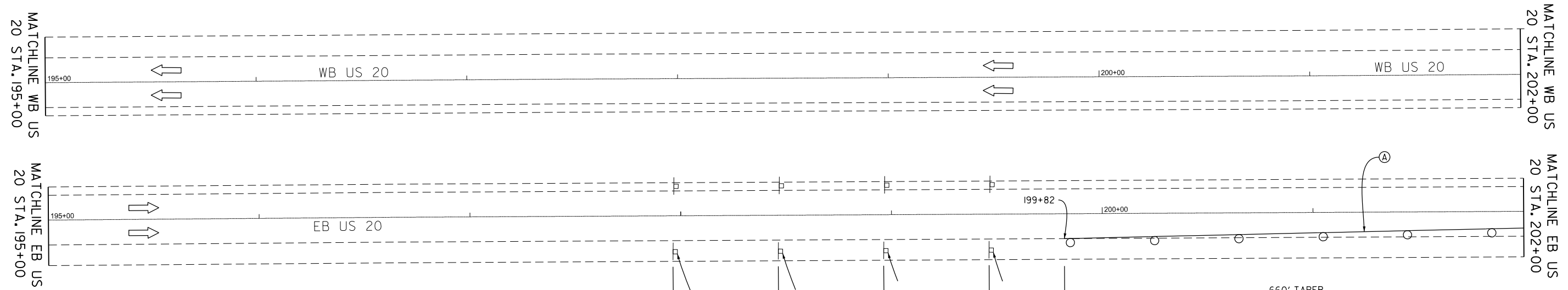
**GENERAL NOTES
TYPICAL CROSS SECTIONS**

SHEET 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	1
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4'
-  - PAVEMENT MARKING BLACKOUT TAPE, 5'
-  - PAVEMENT MARKING BLACKOUT TAPE, 9'
-  - TEMPORARY TRAFFIC SIGN



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





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DEPARTMENT OF TRANSPORTATION**

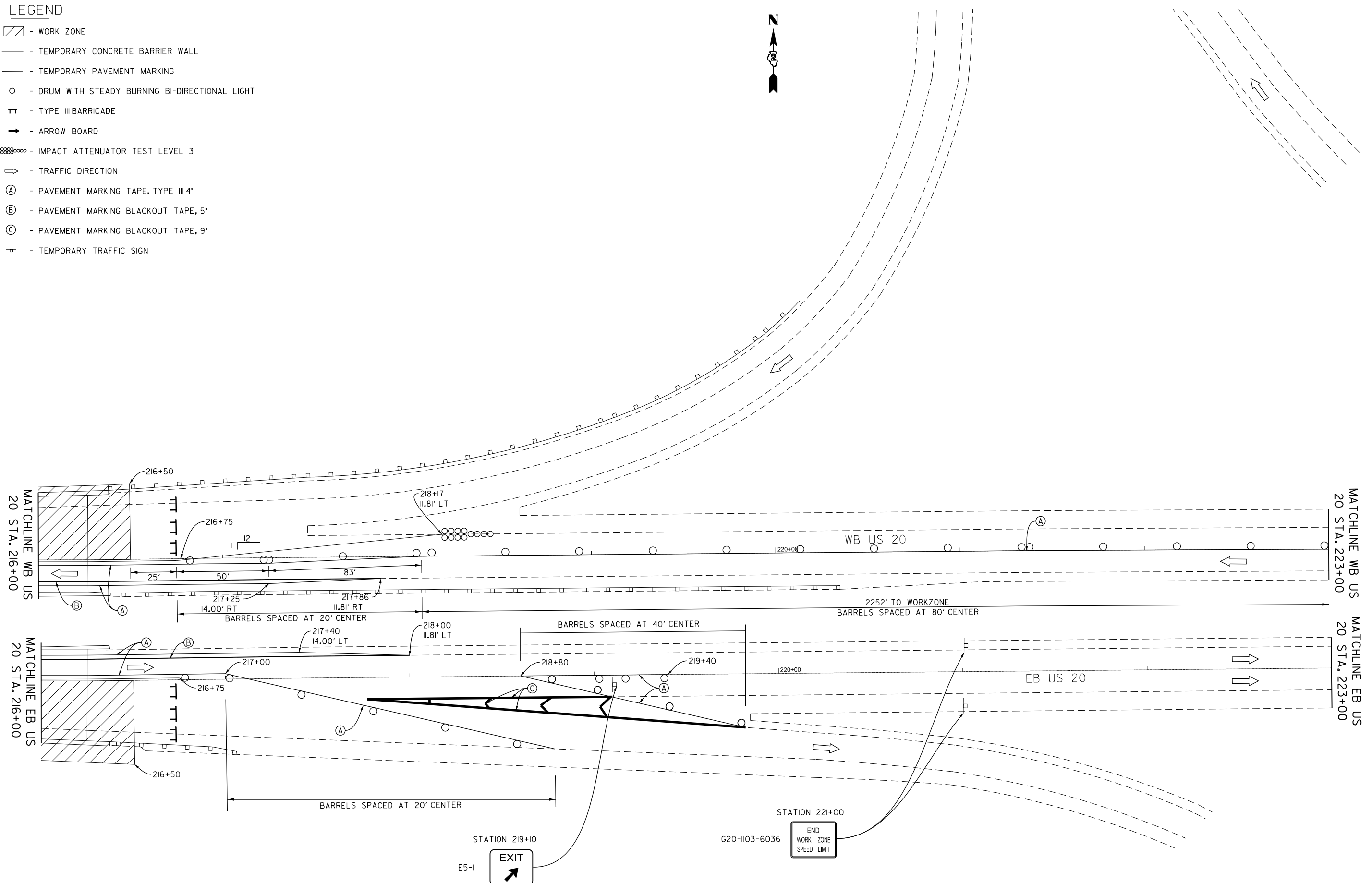
**MAINTENANCE OF TRAFFIC
STAGE 1 PLAN**

SHEET 1 OF 10 SHEETS STA. 195+00 TO STA. 202+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	2
CONTRACT NO. 64M65				
		ILLINOIS	FED. AID PROJECT	

LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4'
-  - PAVEMENT MARKING BLACKOUT TAPE, 5'
-  - PAVEMENT MARKING BLACKOUT TAPE, 9'
-  - TEMPORARY TRAFFIC SIGN



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**







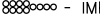





**MAINTENANCE OF TRAFFIC
STAGE 1 PLAN**

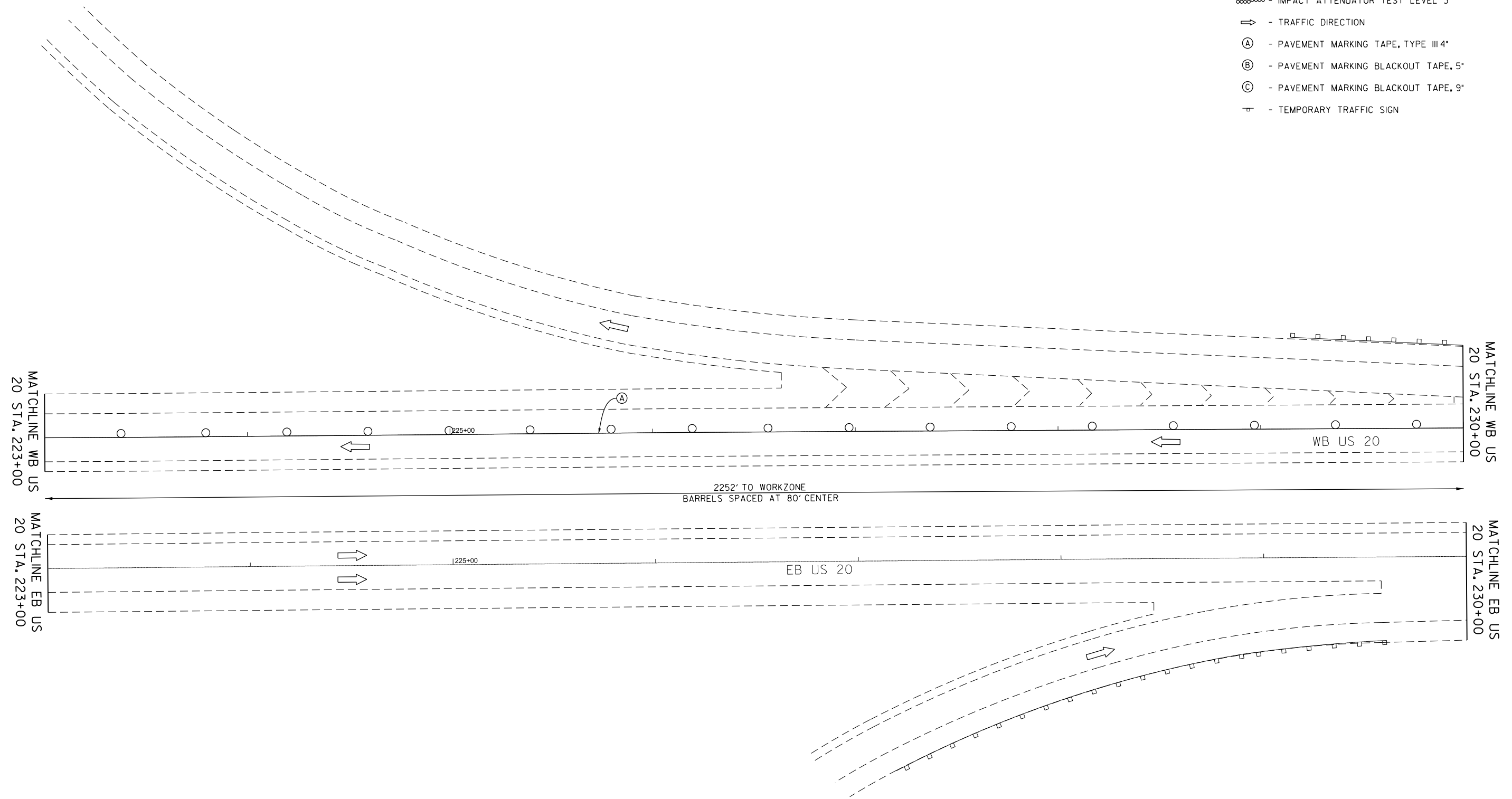
SHEET 4 OF 10 SHEETS STA. 216+00 TO STA. 223+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	5
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				



LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4'
-  - PAVEMENT MARKING BLACKOUT TAPE, 5'
-  - PAVEMENT MARKING BLACKOUT TAPE, 9'
-  - TEMPORARY TRAFFIC SIGN



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








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DEPARTMENT OF TRANSPORTATION**

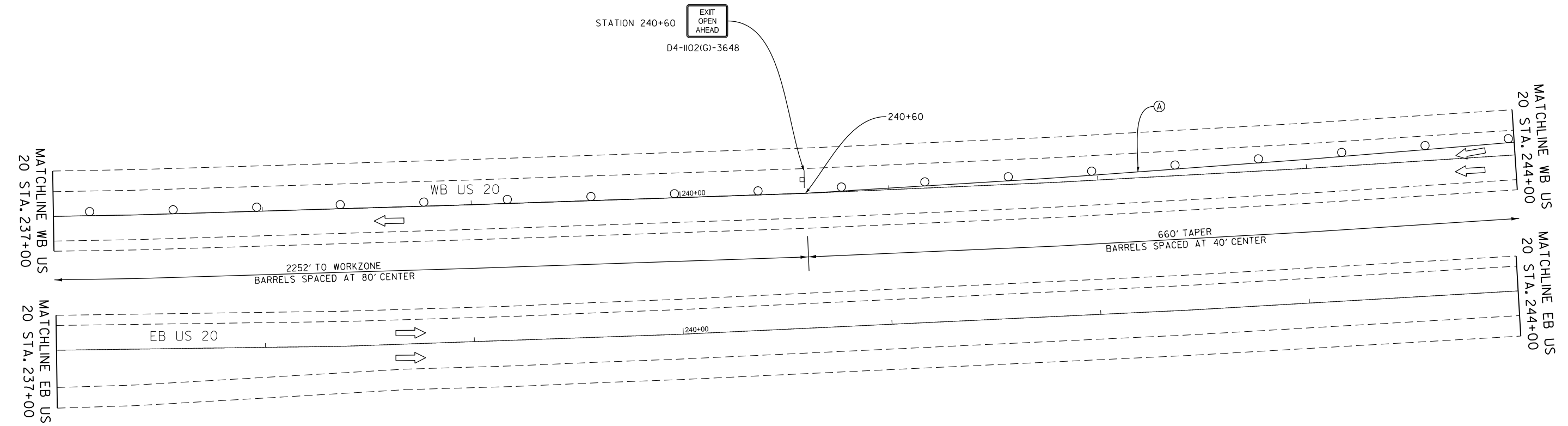
**MAINTENANCE OF TRAFFIC
STAGE 1 PLAN**

SHEET 5 OF 10 SHEETS STA. 223+00 TO STA. 230+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	6
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

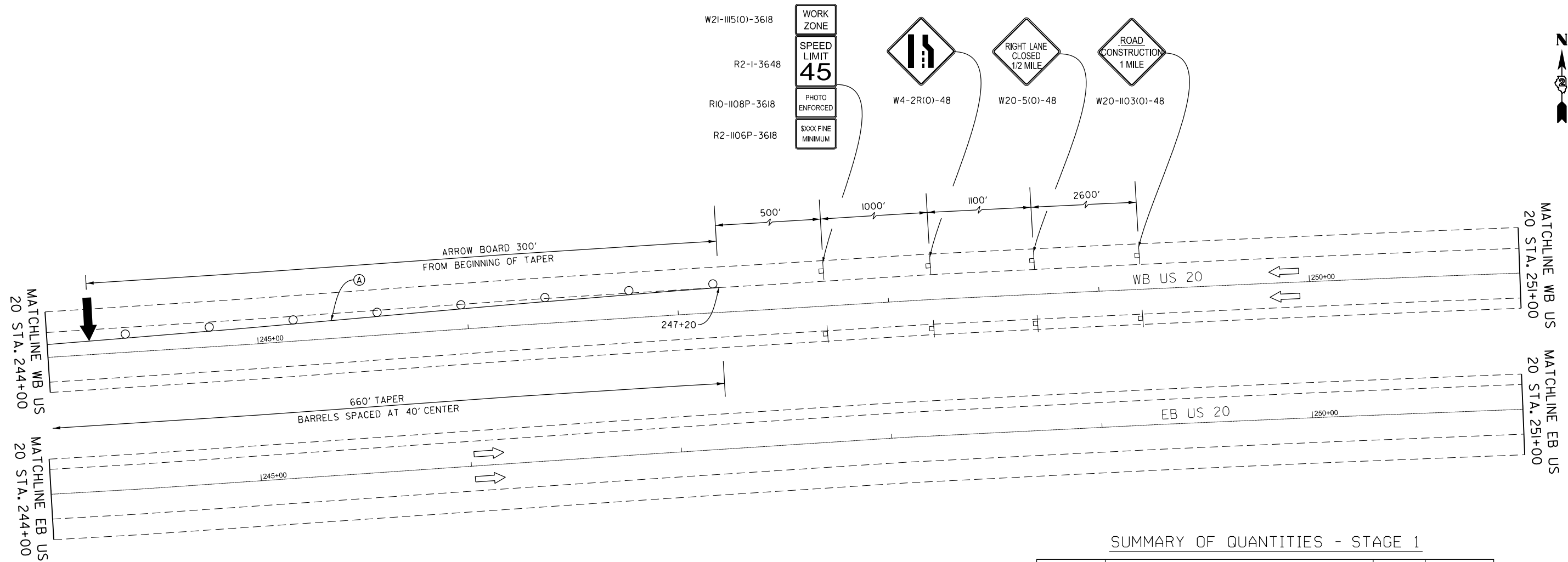
LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4'
-  - PAVEMENT MARKING BLACKOUT TAPE, 5'
-  - PAVEMENT MARKING BLACKOUT TAPE, 9'
-  - TEMPORARY TRAFFIC SIGN



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						ILLINOIS FED. AID PROJECT				



SUMMARY OF QUANTITIES - STAGE 1

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	0.5
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	0.5
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5'	FOOT	1534
70107009	PAVEMENT MARKING BLACKOUT TAPE, 9'	FOOT	381
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	926
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	6617
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SO FT	2206
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1100
70400200	RELOCATION TEMPORARY CONCRETE BARRIER	FOOT	-
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	-

LEGEND

- WORK ZONE
- TEMPORARY CONCRETE BARRIER WALL
- TEMPORARY PAVEMENT MARKING
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TYPE III BARRICADE
- ARROW BOARD
- IMPACT ATTENUATOR TEST LEVEL 3
- TRAFFIC DIRECTION
- PAVEMENT MARKING TAPE, TYPE III 4"
- PAVEMENT MARKING BLACKOUT TAPE, 5'
- PAVEMENT MARKING BLACKOUT TAPE, 9'
- TEMPORARY TRAFFIC SIGN

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











STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
STAGE 1 PLAN

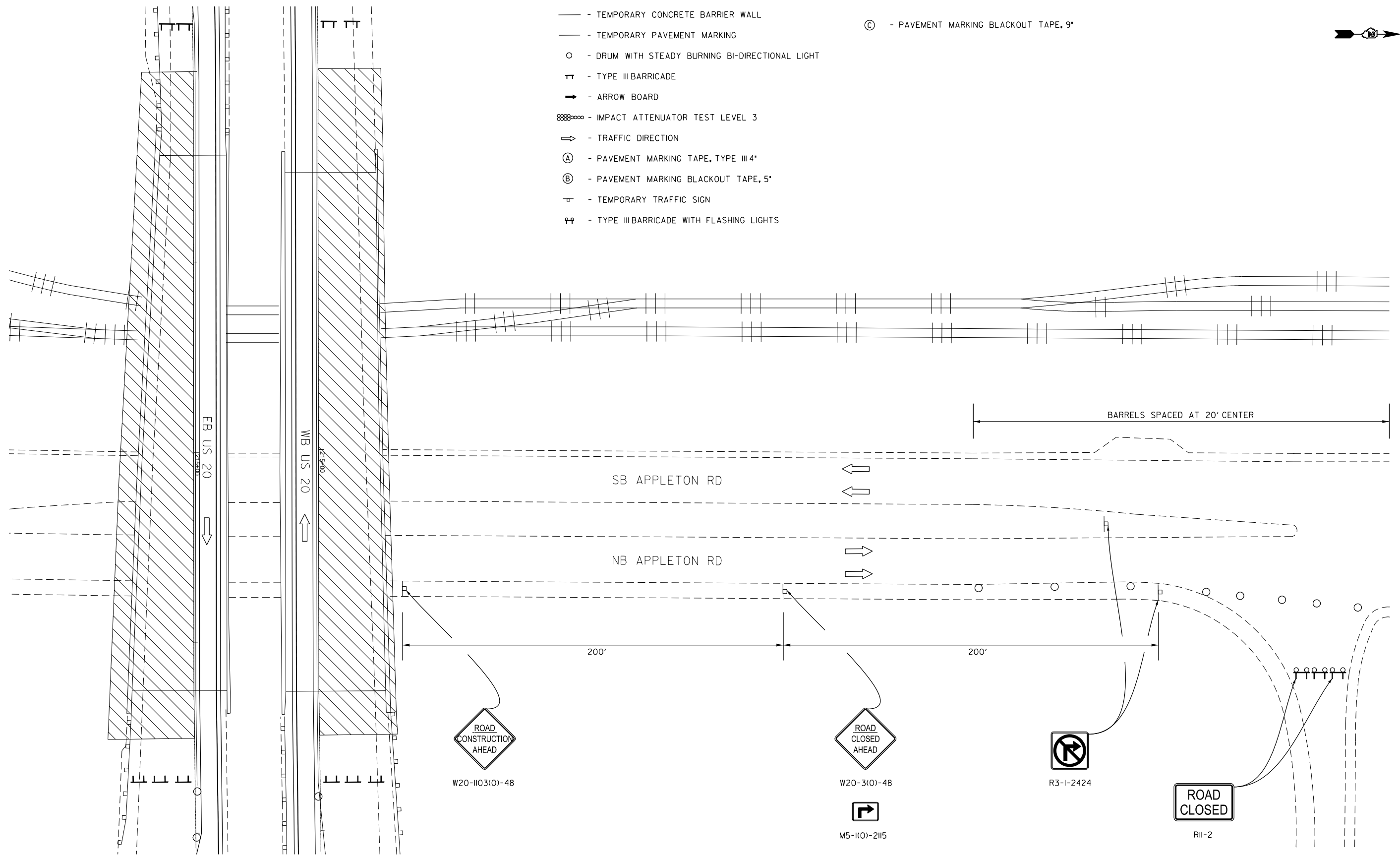
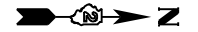
SHEET 8 OF 10 SHEETS STA. 242+00 TO STA. 251+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	9
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4'
-  - PAVEMENT MARKING BLACKOUT TAPE, 5'
-  - TEMPORARY TRAFFIC SIGN
-  - TYPE III BARRICADE WITH FLASHING LIGHTS

Ⓢ - PAVEMENT MARKING BLACKOUT TAPE, 9'



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











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DEPARTMENT OF TRANSPORTATION**

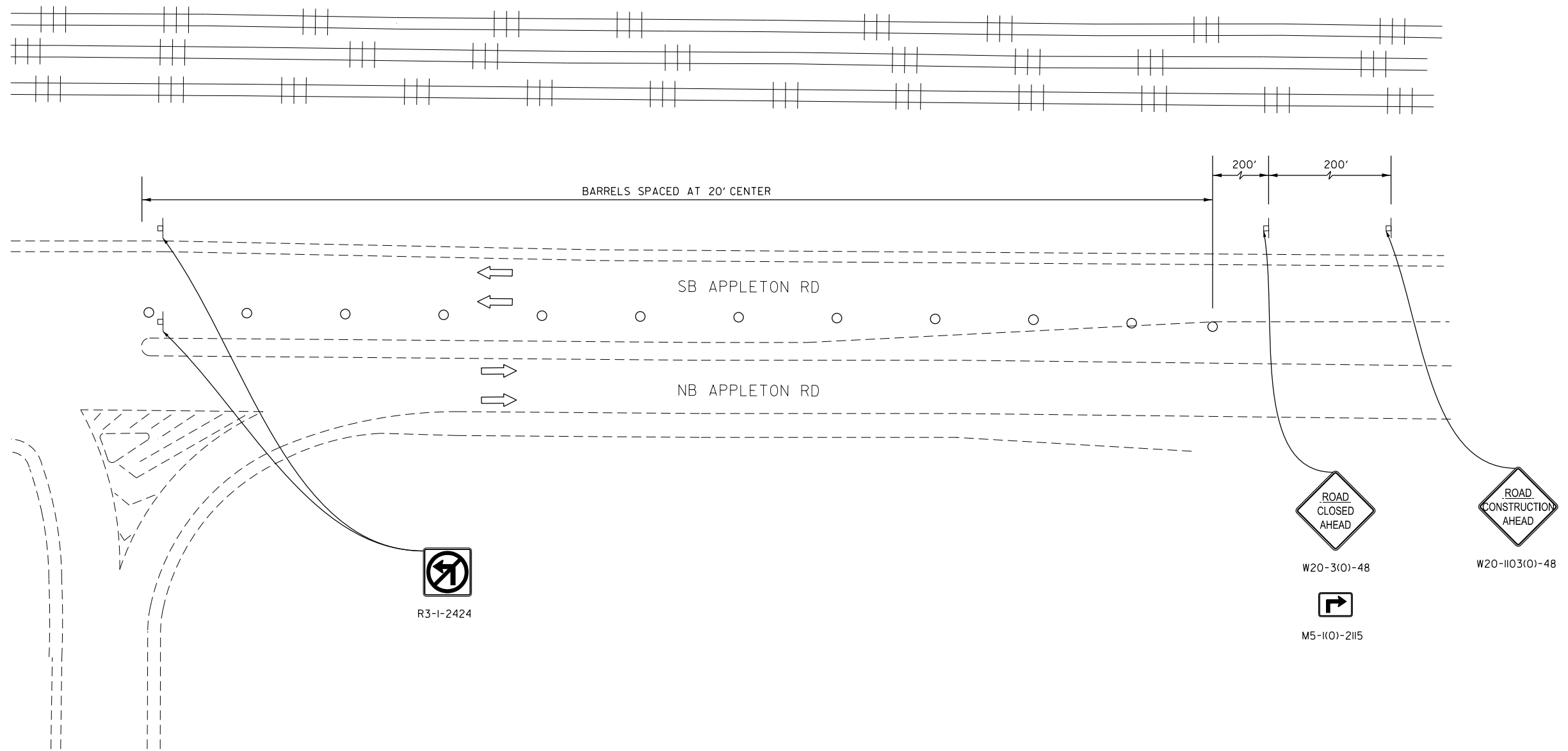
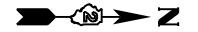
**MAINTENANCE OF TRAFFIC
STAGE 1 RAMP CLOSURE**

SHEET 9 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	10
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4"
-  - PAVEMENT MARKING BLACKOUT TAPE, 5"
-  - TEMPORARY TRAFFIC SIGN
-  - TYPE III BARRICADE WITH FLASHING LIGHTS



MODEL: D:\data\...
 FILE NAME: P:\0355\0355055508 S Appleton Road-4US 20ARRCADD Sheet10255508-11-MOT1.dgn



USER NAME = JSpears	DESIGNED - JS	REVISED -
DRAWN - JS	REVISIONS -	
PLOT SCALE = 1:50	CHECKED - MM	REVISED -
PLOT DATE = 1/25/2018	DATE -	REVISED -













**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

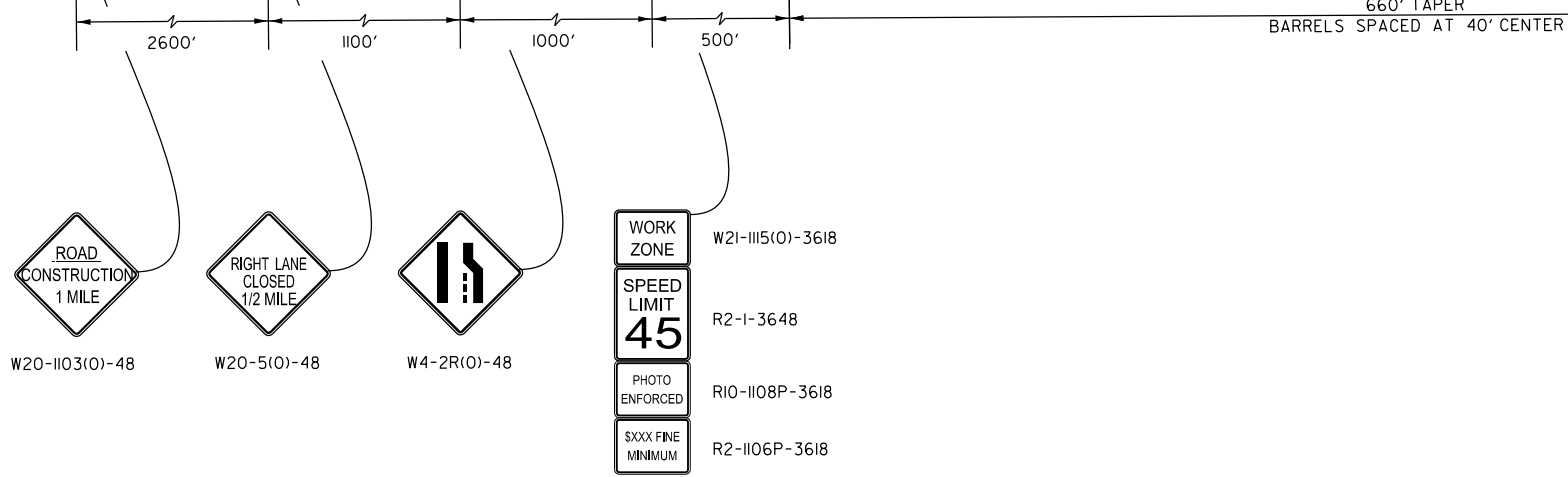
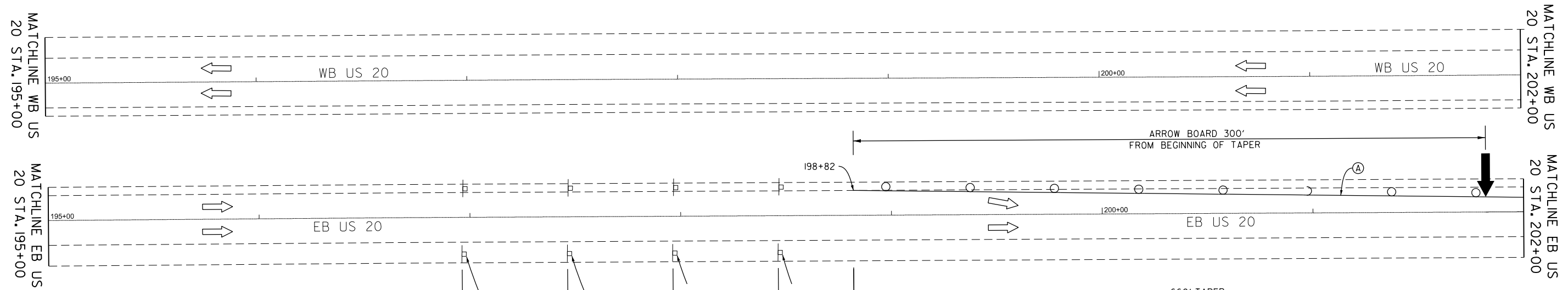
**MAINTENANCE OF TRAFFIC
STAGE 1 RAMP CLOSURE**

SHEET 10 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	11
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

LEGEND

-  - WORK ZONE
-  - TEMPORARY CONCRETE BARRIER WALL
-  - TEMPORARY PAVEMENT MARKING
-  - DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
-  - TYPE III BARRICADE
-  - ARROW BOARD
-  - IMPACT ATTENUATOR TEST LEVEL 3
-  - TRAFFIC DIRECTION
-  - PAVEMENT MARKING TAPE, TYPE III 4'
-  - PAVEMENT MARKING BLACKOUT TAPE, 5'
-  - PAVEMENT MARKING BLACKOUT TAPE, 9'
-  - TEMPORARY TRAFFIC SIGN



MODEL: D:\ch4\...
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USER NAME = JSpears	DESIGNED - JS	REVISED -
DRAWN - JS	REVISIONS -	
PLOT SCALE = 1:50	CHECKED - MM	REVISED -
PLOT DATE = 1/25/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

MAINTENANCE OF TRAFFIC STAGE 2 PLAN		
SHEET 1	OF 5 SHEETS	STA. 195+00 TO STA. 202+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	12
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

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

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

Reinforcement bars designated (E) shall be epoxy coated.

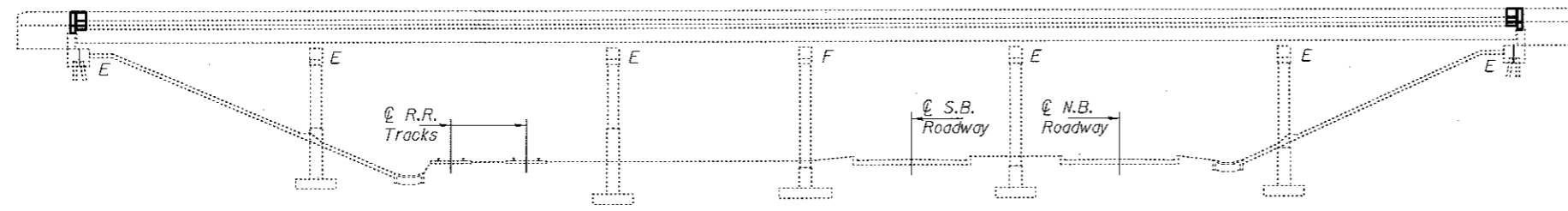
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods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

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

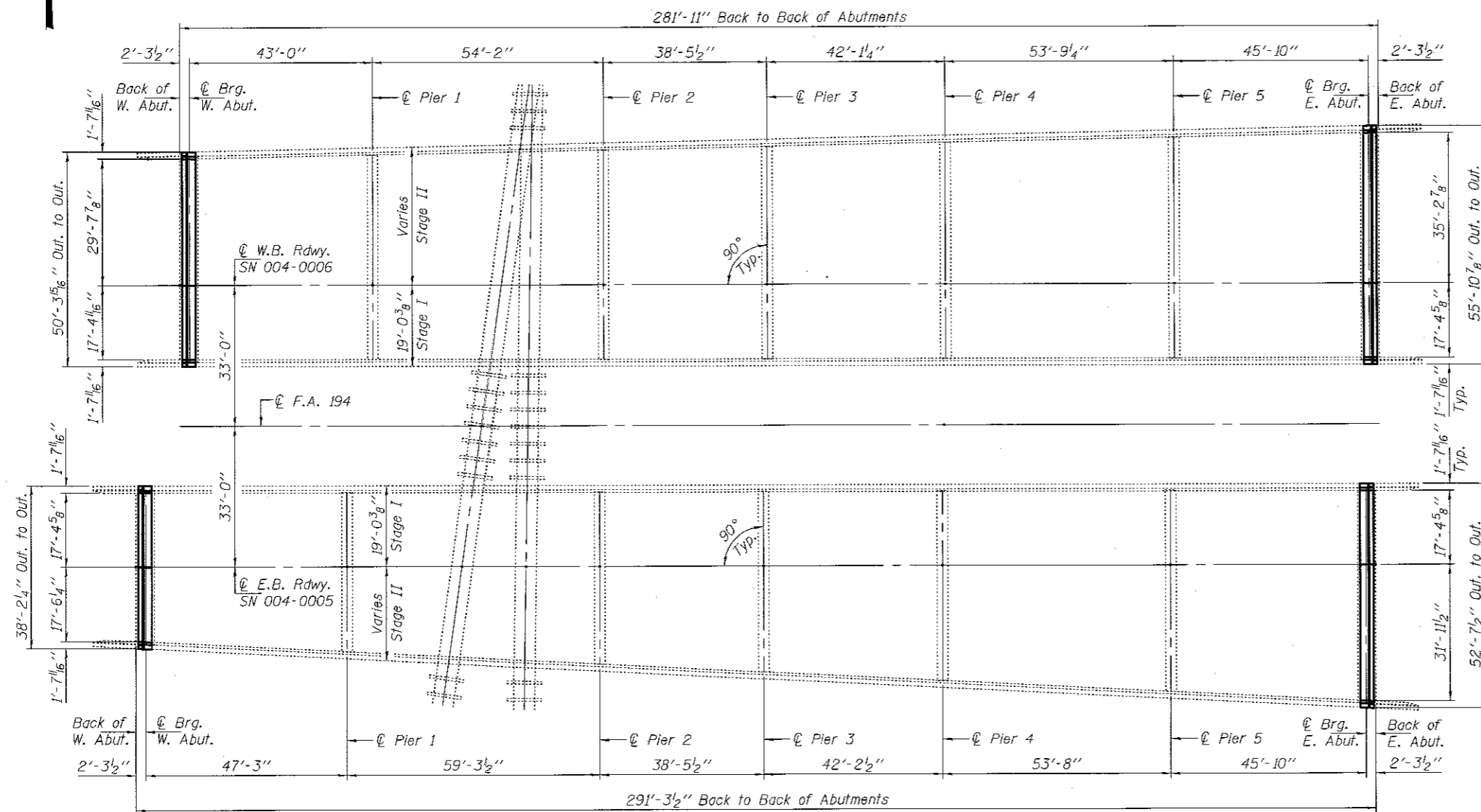
Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

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

Dimensions have been converted from metric.



ELEVATION



PLAN



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	26.4
Concrete Superstructure	Cu. Yd.	26.3
Reinforcement Bars, Epoxy Coated	Pound	3540
Bar Splicers	Each	48
Preformed Joint Strip Seal	Foot	192
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Expires: November 30, 2018

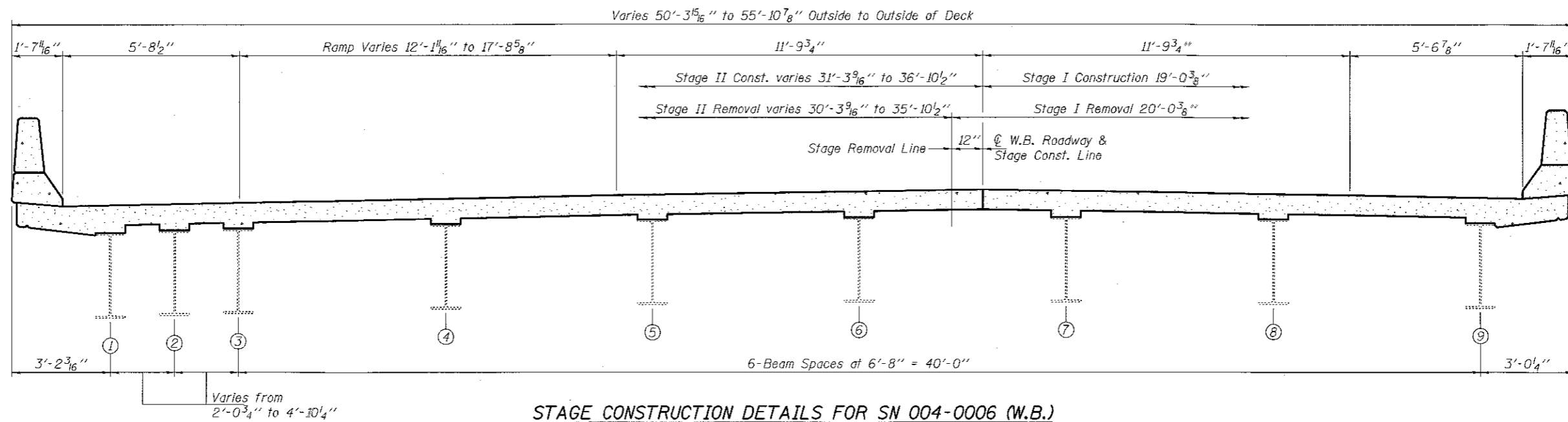
DESIGNED - <i>Michaela Dolbus</i>	EXAMINED - <i>Tony A. Adt</i>	DATE - MARCH 20, 2018
CHECKED - <i>Stephan M. Steffen</i>	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Bob K. Rupp</i>	REVISIED
CHECKED - <i>H.D. S.M.R.</i>	ENGINEER OF BRIDGE STRUCTURES	REVISIED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

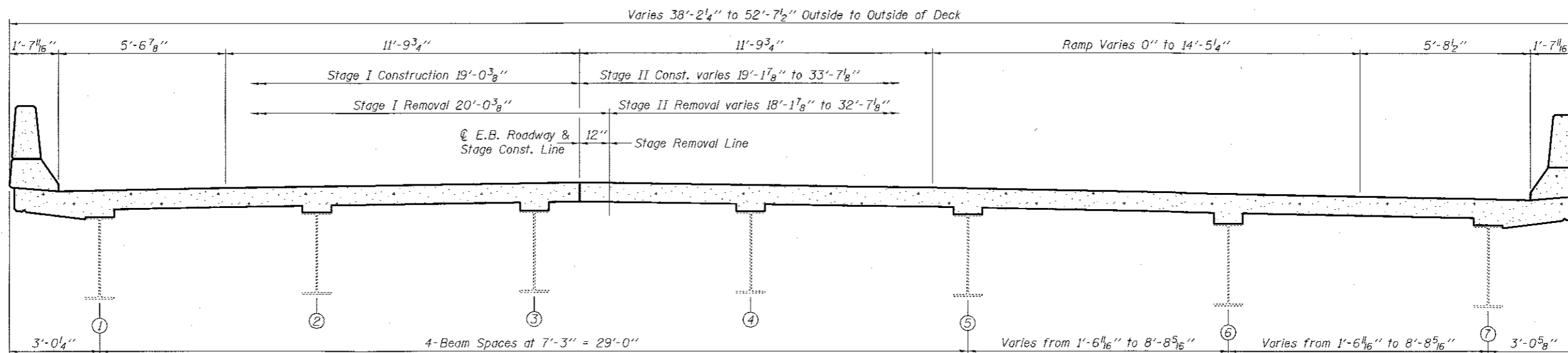
**GENERAL PLAN & ELEVATION
U.S. ROUTE 20 OVER STONE QUARRY ROAD & UNION PACIFIC RAILROAD
SN 004-0005 (E.B.) & -0006 (W.B.)**

F.A.P. RTE. 525	SECTION 02 BJR 2018-4	COUNTY BOONE	TOTAL SHEETS 25	SHEET NO. 18
CONTRACT NO. 64M65			ILLINOIS FED. AID PROJECT	

SHEET NO. 1 OF 8 SHEETS

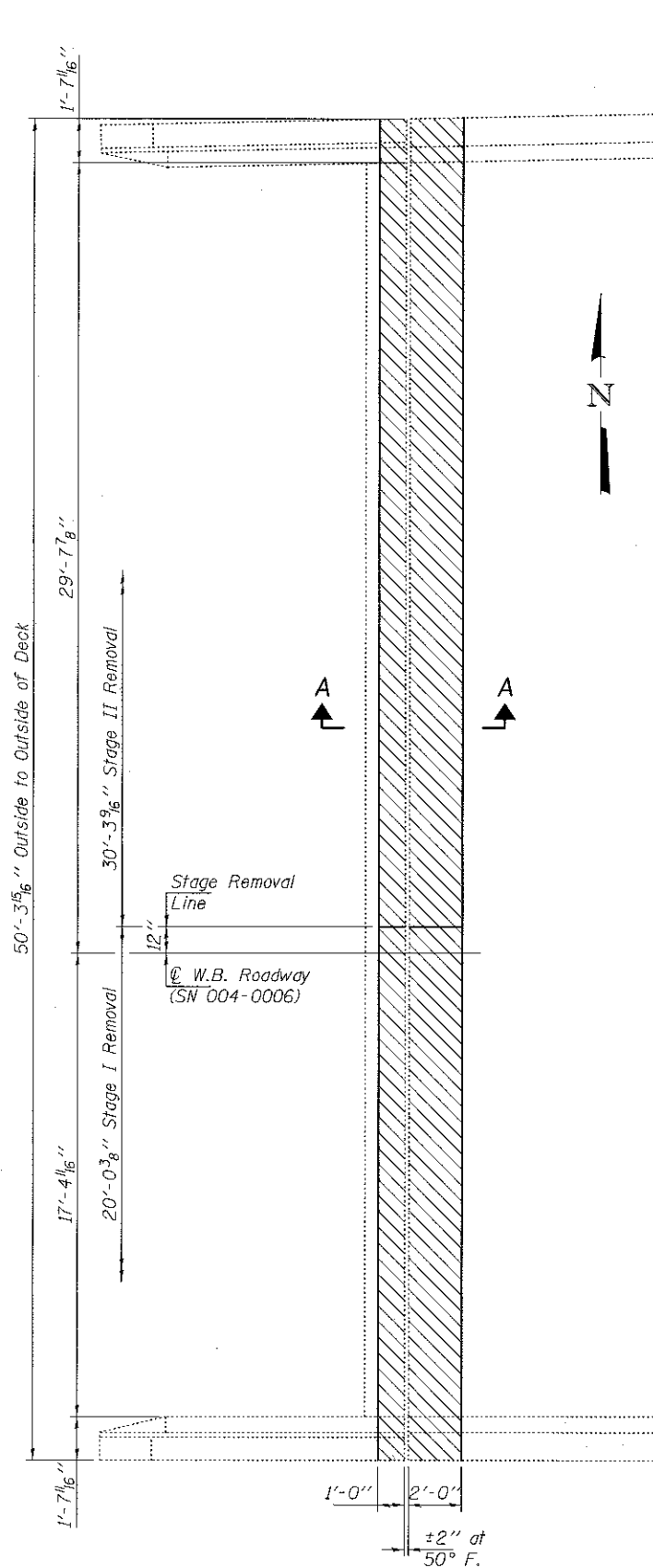


STAGE CONSTRUCTION DETAILS FOR SN 004-0006 (W.B.)
(Looking East)

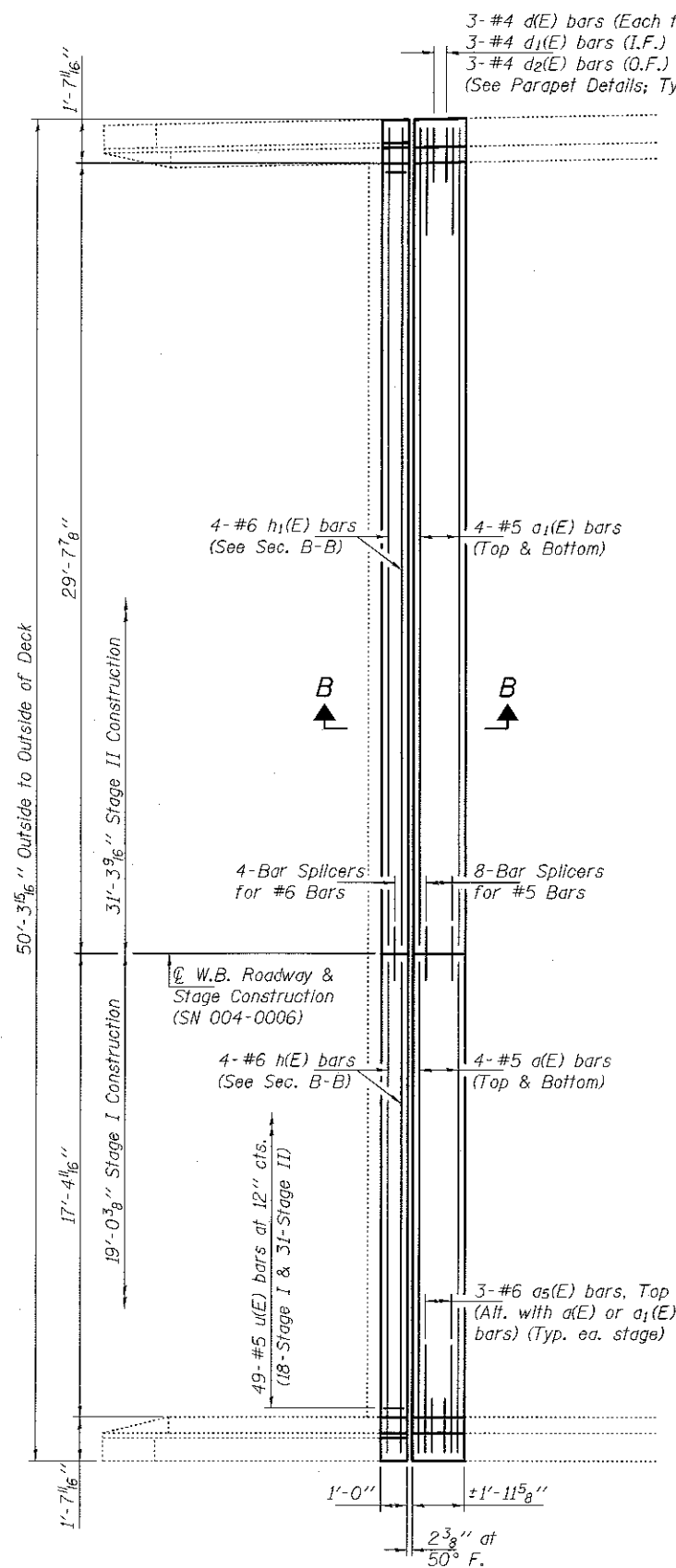


STAGE CONSTRUCTION DETAILS FOR SN 004-0005 (E.B.)
(Looking East)

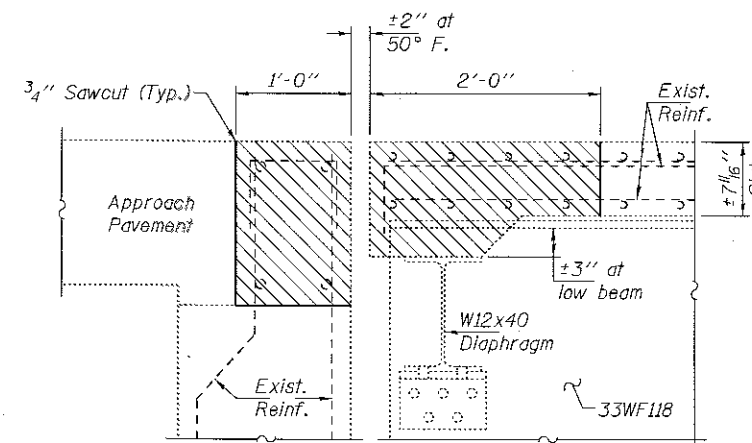
DESIGNED - MLD	EXAMINED - <i>Timothy A. A. [Signature]</i>	DATE - MARCH 20, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS SN 004-0005 (E.B.) & -0006 (W.B.)		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR	ENGINEER OF STRUCTURAL SERVICES					525	D2 BJR 2018-4	BOONE	25	19
DRAWN - Kyle M. Steffen	PASSED - <i>Carl [Signature]</i>	REVISED				CONTRACT NO. 64M65				
CHECKED - MLD SMR	ENGINEER OF BRIDGES AND STRUCTURES	REVISED				ILLINOIS FED. AID PROJECT				
			SHEET NO. 2 OF 8 SHEETS							



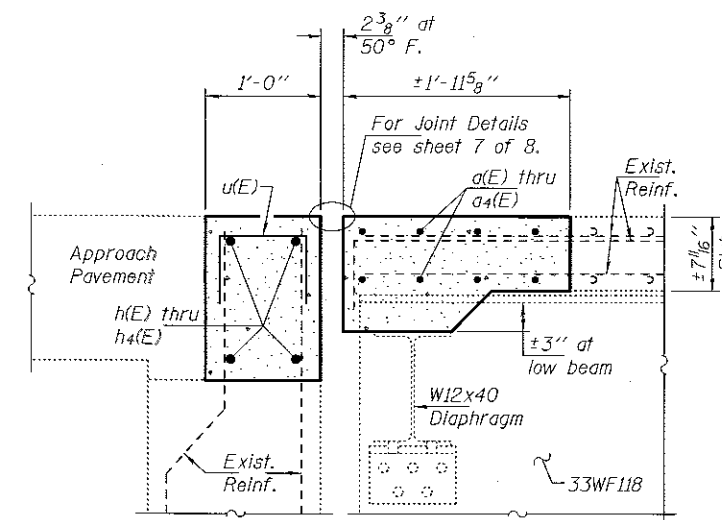
CONCRETE REMOVAL PLAN
W. ABUT. SN 004-0006 (W.B.)



CONCRETE REPLACEMENT PLAN
W. ABUT. SN 004-0006 (W.B.)



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	8	#5	18'-0"	—	
a ₁ (E)	8	#5	30'-4"	—	
a ₅ (E)	6	#6	4'-0"	—	
d(E)	12	#5	3'-0"	L	
d ₁ (E)	6	#5	2'-8"	∩	
d ₂ (E)	6	#5	4'-0"	⌊	
h(E)	4	#6	18'-8"	—	
h ₁ (E)	4	#6	30'-11"	—	
u(E)	49	#5	1'-11"	□	
Concrete Removal				Cu. Yd.	6.7
Concrete Superstructure				Cu. Yd.	6.7
Bar Splicers				Each	12
Reinforcement Bars, Epoxy Coated				Pound	910

Note:
Hatched areas indicate Concrete Removal.
For Parapet details and reinforcement bending details see sheet 4 of 8.

DESIGNED - MLD
CHECKED - SMR
DRAWN - Kyle M. Steffen
CHECKED - MLD SMR

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

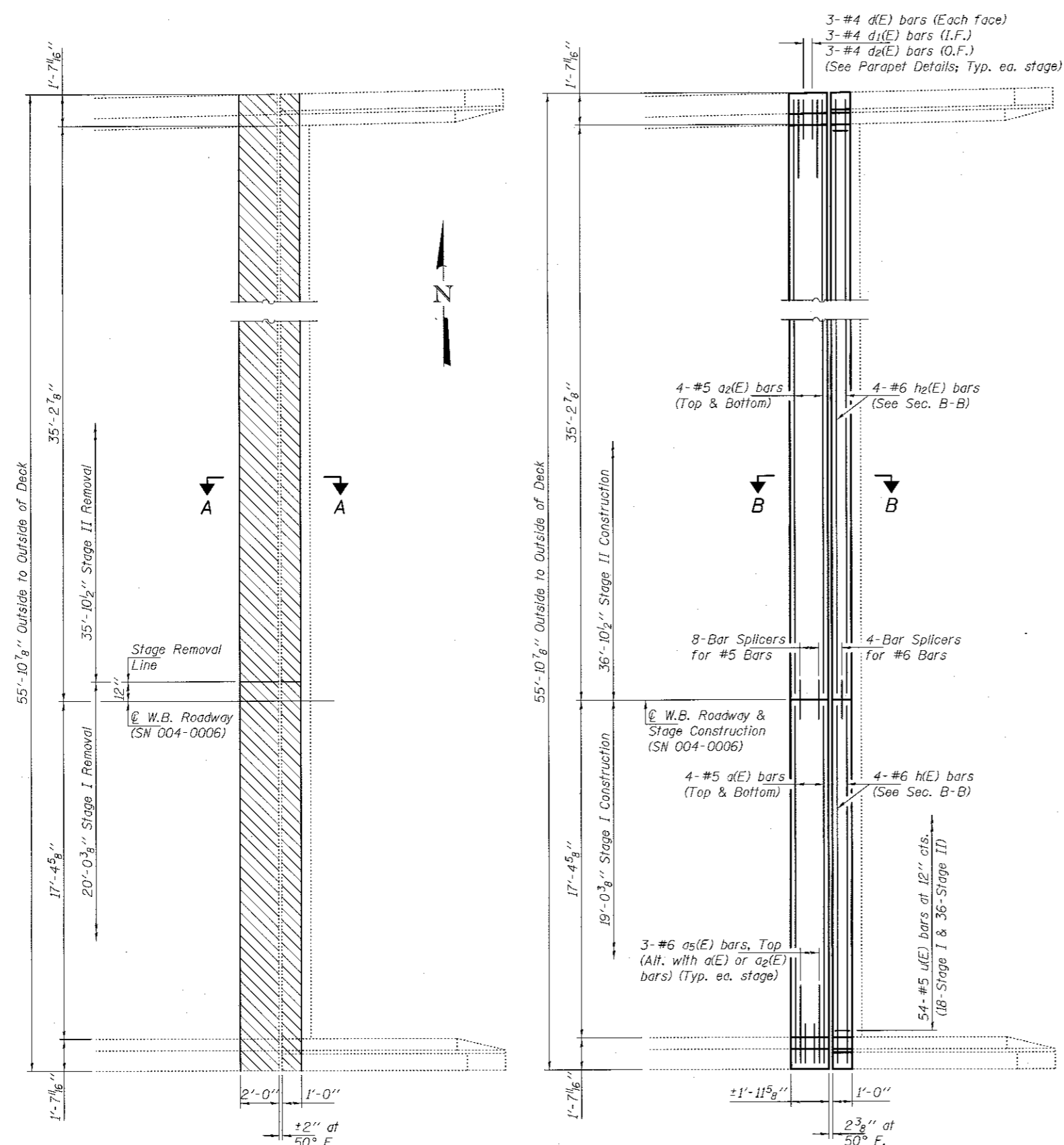
DATE - MARCH 20, 2018
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT JOINT REMOVAL & REPLACEMENT DETAILS
SN 004-0006 (W.B.)

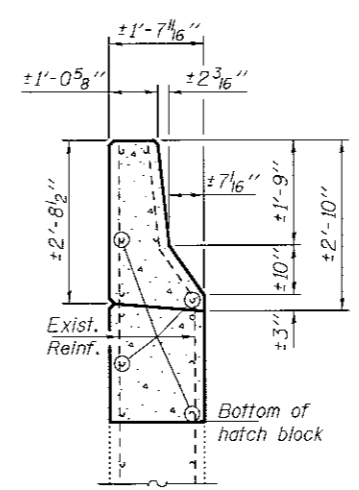
SHEET NO. 3 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	20
				CONTRACT NO. 64M65
ILLINOIS FED. AID PROJECT				

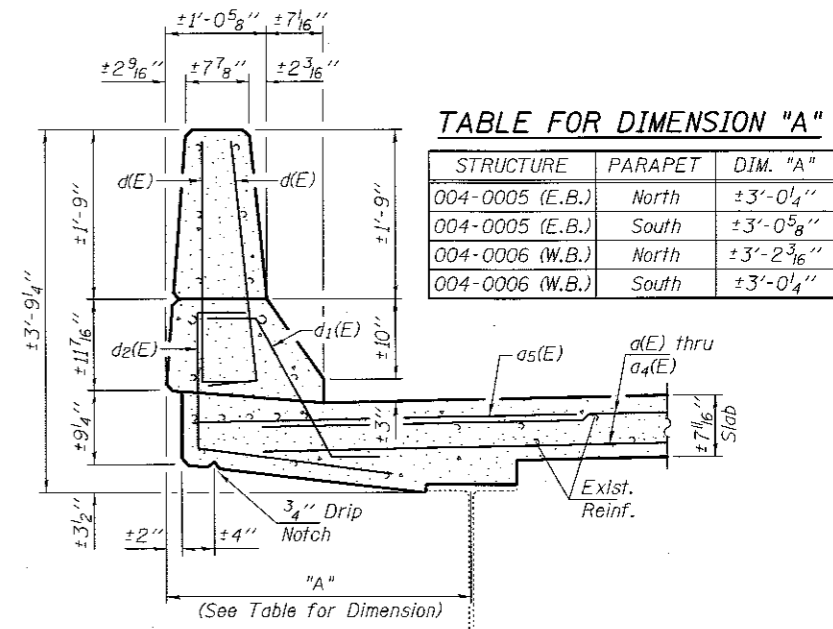


CONCRETE REMOVAL PLAN
E. ABUT. SN 004-0006 (W.B.)

CONCRETE REPLACEMENT PLAN
E. ABUT. SN 004-0006 (W.B.)



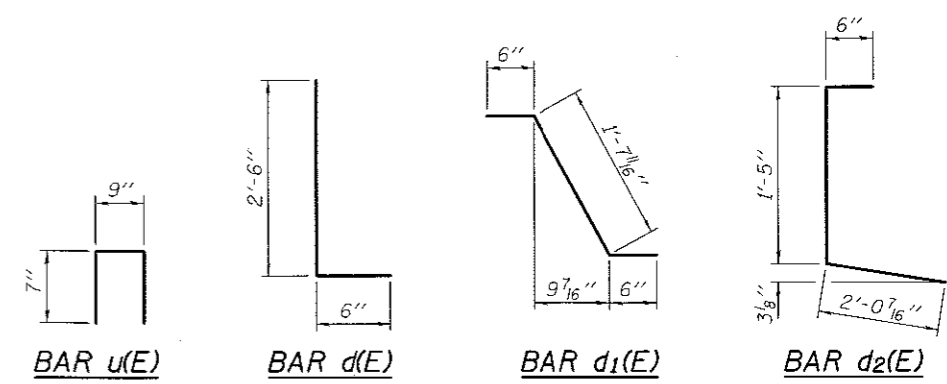
TYPICAL SECTION AT APPROACH PARAPET



TYPICAL SECTION AT BRIDGE PARAPET

TABLE FOR DIMENSION "A"

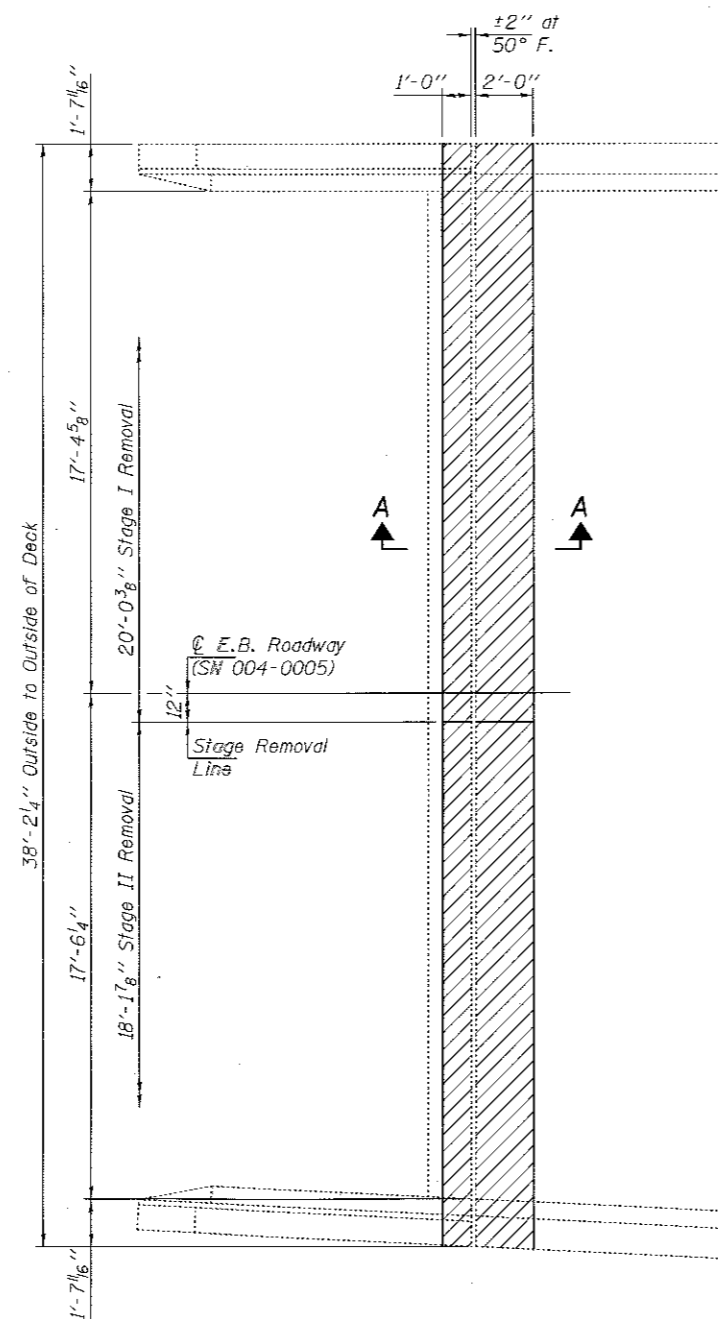
STRUCTURE	PARAPET	DIM. "A"
004-0005 (E.B.)	North	±3'-0 1/4"
004-0005 (E.B.)	South	±3'-0 5/8"
004-0006 (W.B.)	North	±3'-2 3/16"
004-0006 (W.B.)	South	±3'-0 1/4"



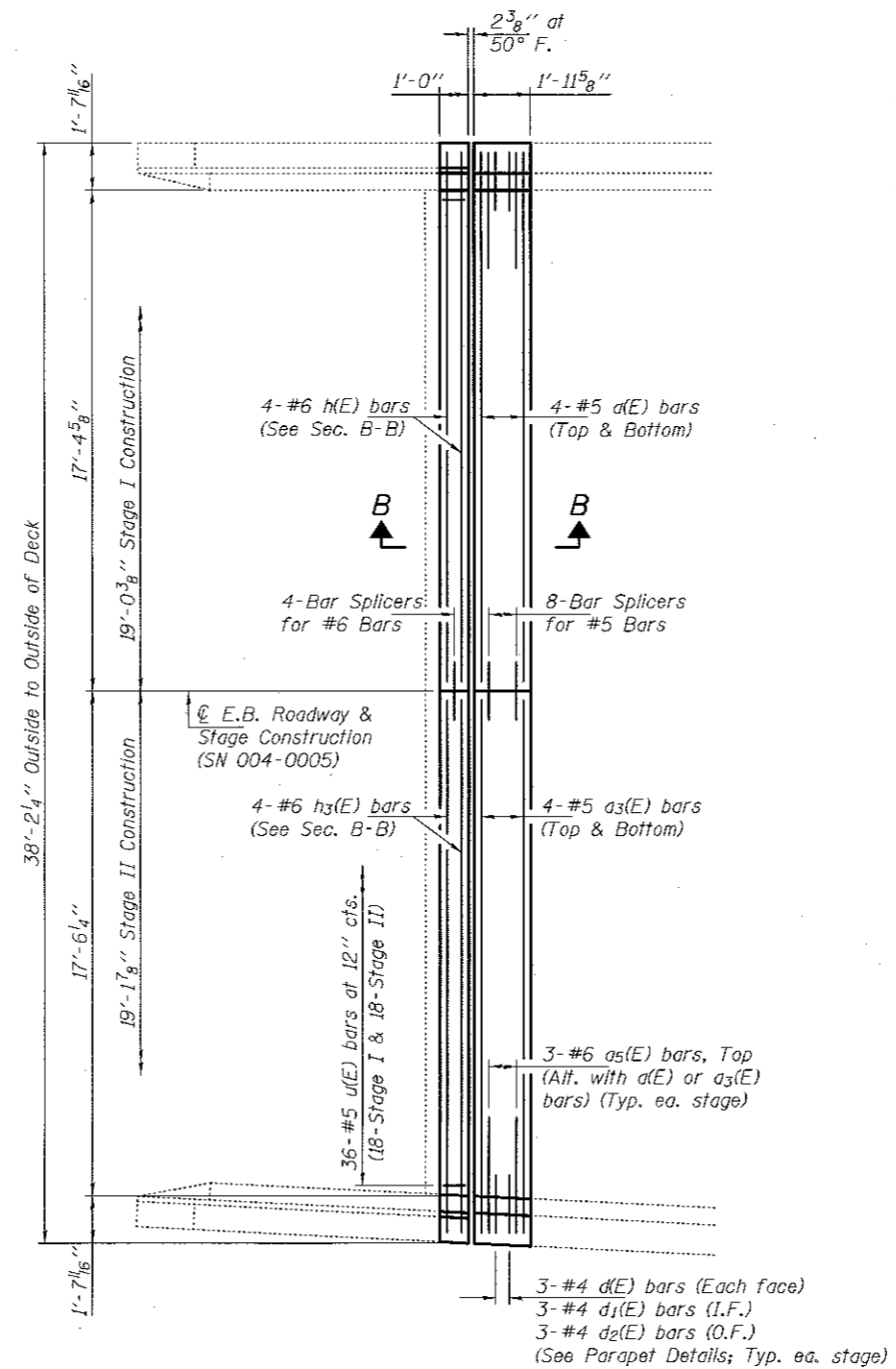
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-0"	—
a2(E)	8	#5	35'-9"	—
a5(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	∩
d2(E)	6	#5	4'-0"	L
h(E)	4	#6	18'-8"	—
h2(E)	4	#6	36'-6"	—
u(E)	54	#5	1'-11"	□
Concrete Removal			Cu. Yd.	7.5
Concrete Superstructure			Cu. Yd.	7.5
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	1000

Note:
Hatched areas indicate Concrete Removal.
For Sections A-A & B-B see sheet 3 of 8.



CONCRETE REMOVAL PLAN
W. ABUT. SN 004-0005 (E.B.)

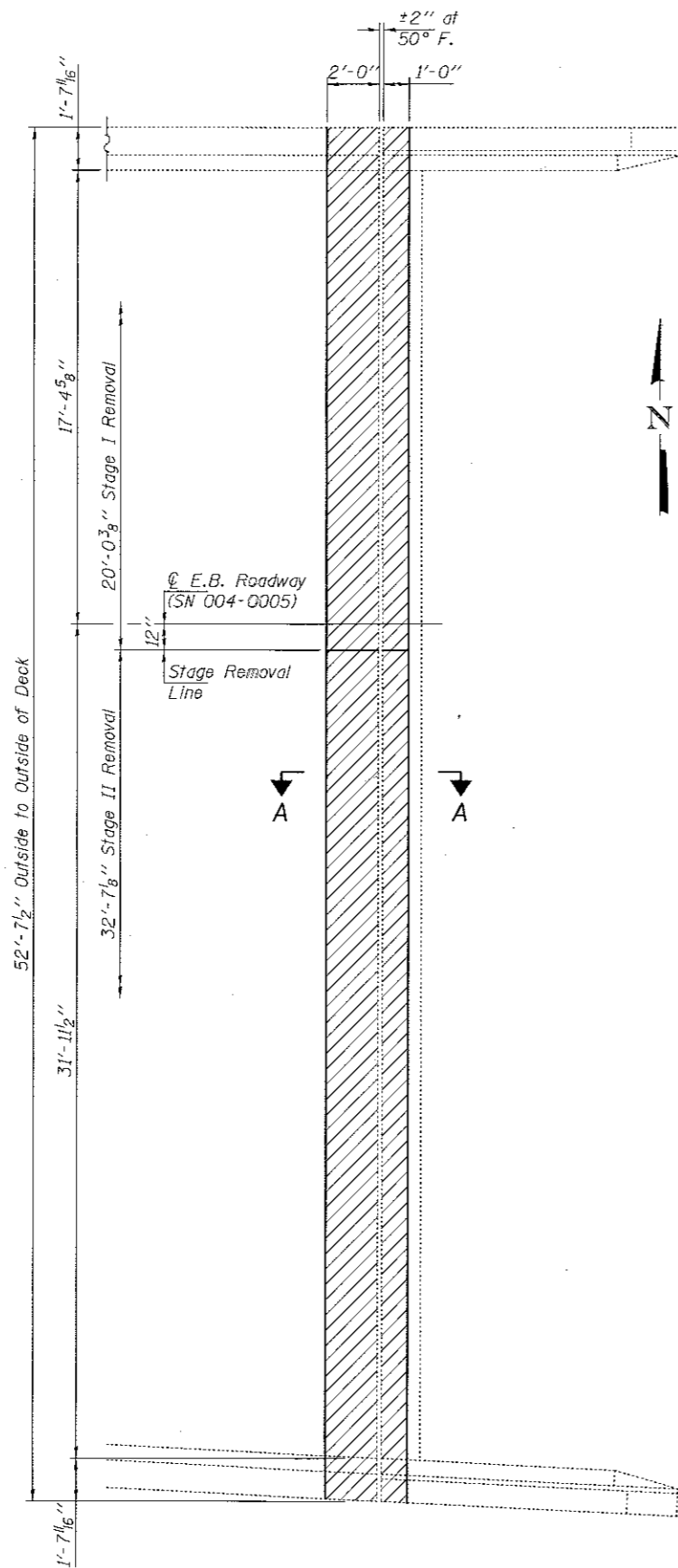


CONCRETE REPLACEMENT PLAN
W. ABUT. SN 004-0005 (E.B.)

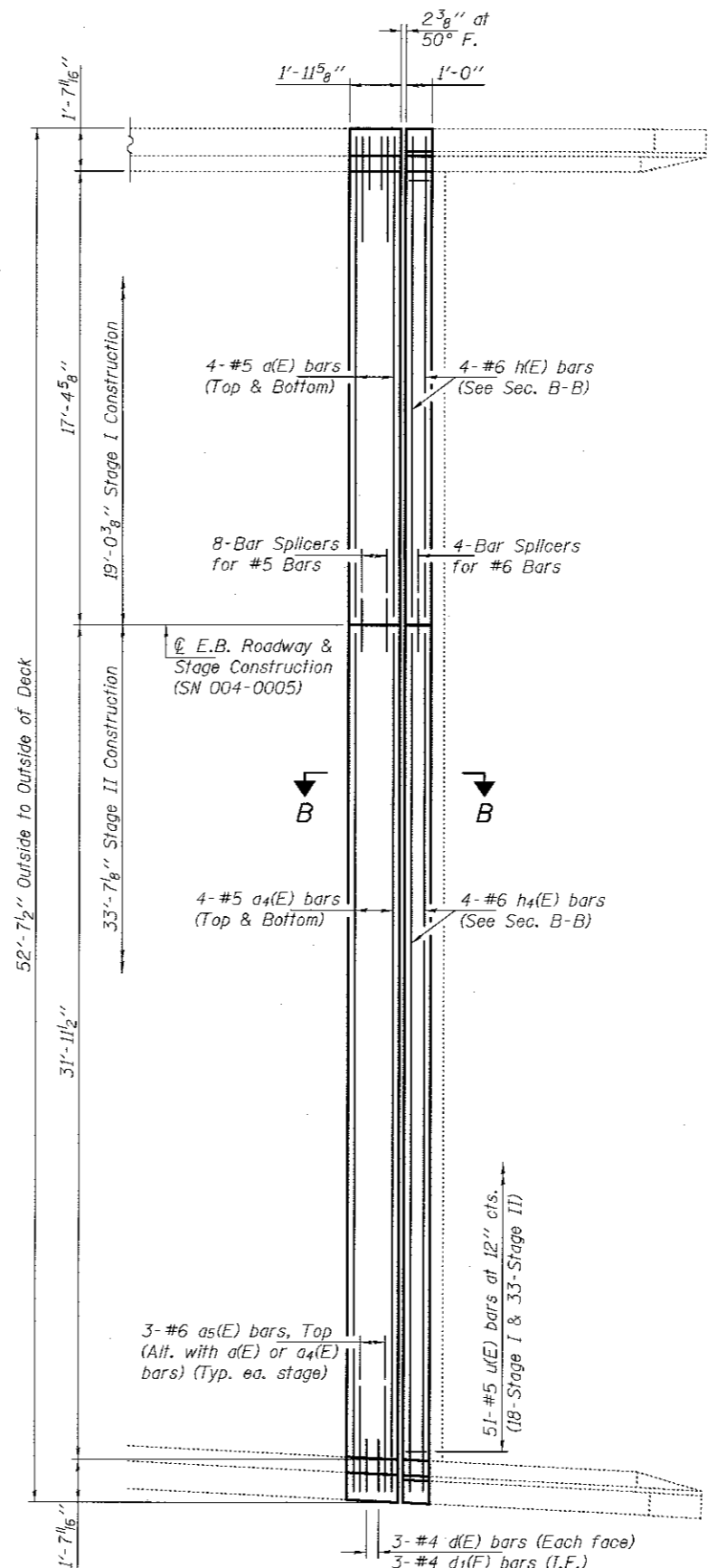
Note:
Hatched areas indicate Concrete Removal.
For Sections A-A & B-B see sheet 3 of 8.
For Parapet Details and Reinforcement Bending Details see sheet 4 of 8.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-0"	—
a3(E)	8	#5	18'-1"	—
a5(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	∩
d2(E)	6	#5	4'-0"	U
h(E)	4	#6	18'-8"	—
h3(E)	4	#6	18'-10"	—
u(E)	36	#5	1'-11"	□
Concrete Removal			Cu. Yd.	5.1
Concrete Superstructure			Cu. Yd.	5.1
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	710



CONCRETE REMOVAL PLAN
E. ABUT. SN 004-0005 (E.B.)



CONCRETE REPLACEMENT PLAN
E. ABUT. SN 004-0005 (E.B.)

Note:
Hatched areas indicate Concrete Removal.
For Sections A-A & B-B see sheet 3 of 8.
For Parapet Details and Reinforcement Bending Details see sheet 4 of 8.

BILL OF MATERIAL

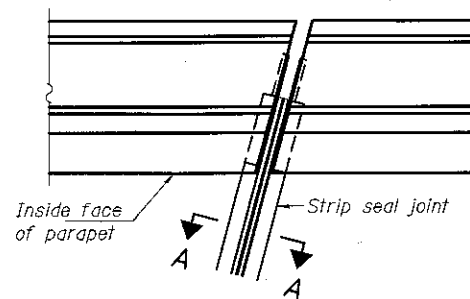
Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-0"	—
a4(E)	8	#5	33'-3"	—
as(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	∩
d2(E)	6	#5	4'-0"	U
h(E)	4	#6	18'-8"	—
h4(E)	4	#6	33'-3"	—
u(E)	51	#5	1'-11"	□
Concrete Removal			Cu. Yd.	7.0
Concrete Superstructure			Cu. Yd.	7.0
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	920

DESIGNED - MLD	EXAMINED - <i>Timothy A. Ancelet</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 20, 2018
CHECKED - SMR	PASSED - <i>Carl Krogger</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED
DRAWN - Kyle M. Steffen		REVISED
CHECKED - MLD SMR		

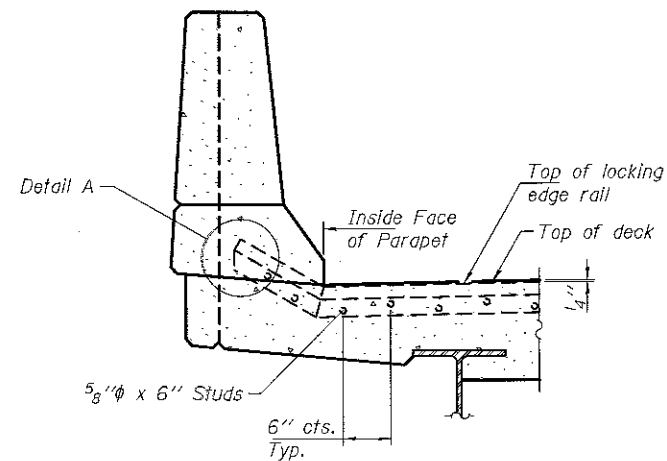
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT JOINT REMOVAL & REPLACEMENT DETAILS
SN 004-0005 (E.B.)

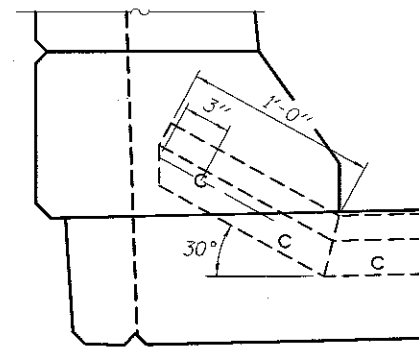
F.A.P. RTE. 525	SECTION D2 BJR 2018-4	COUNTY BOONE	TOTAL SHEETS 25	SHEET NO. 23
CONTRACT NO. 64M65			ILLINOIS FED. AID PROJECT	



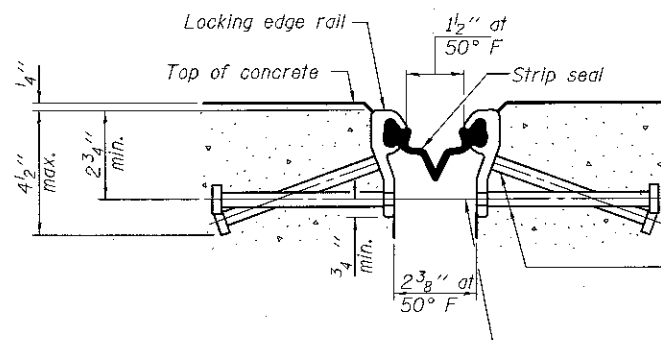
PLAN AT PARAPET



ELEVATION AT PARAPET



DETAIL A



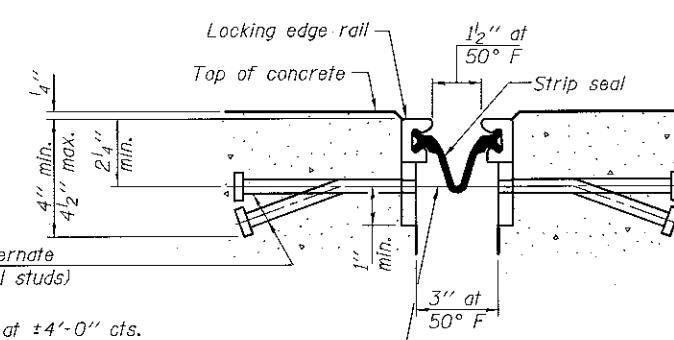
SHOWING ROLLED RAIL JOINT

* 5/8" ϕ x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs)

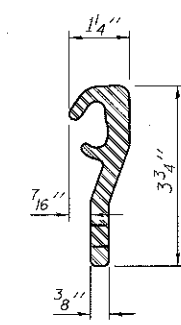
3/8" ϕ threaded rods in 7/16" ϕ holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

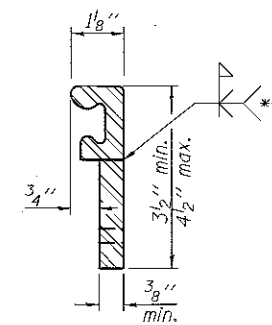
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



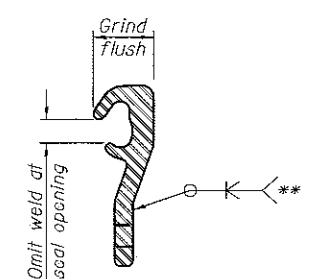
SHOWING WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	192

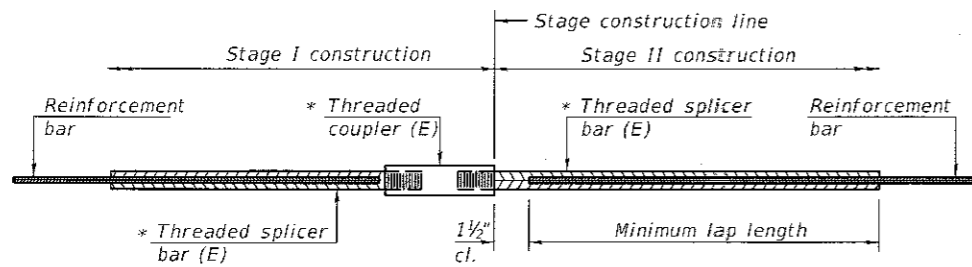
DESIGNED - MLD	EXAMINED - <i>Timothy A. Allet</i>	DATE - MARCH 20, 2018
CHECKED - SMR	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl Perry</i>	REVISED
CHECKED - MLD SMR	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
SN 004-0005 (E.B.) & -0006 (W.B.)

SHEET NO. 7 OF 8 SHEETS

F.A.P. RTE. 525	SECTION D2 BUR 2018-4	COUNTY BOONE	TOTAL SHEETS 25	SHEET NO. 24
				CONTRACT NO. 64M65
ILLINOIS FED. AID PROJECT				

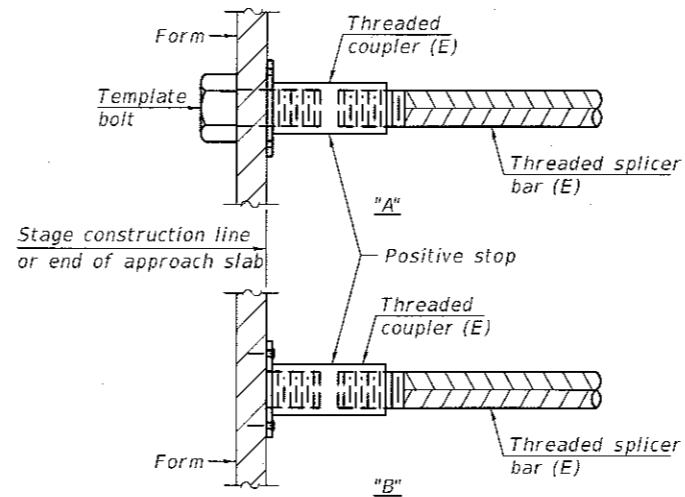


STANDARD BAR SPLICER ASSEMBLY

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
Hatchblock	#6	16	4'-0"
Bridge Deck	#5	32	3'-6"

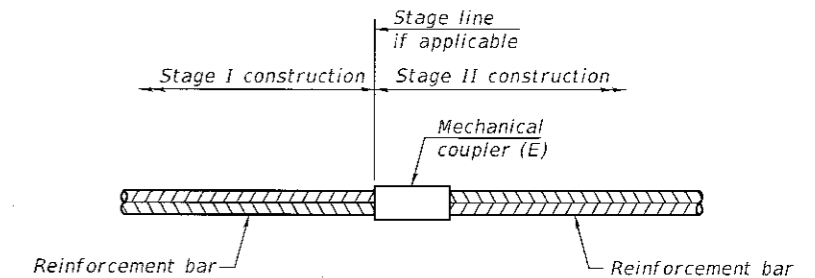


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

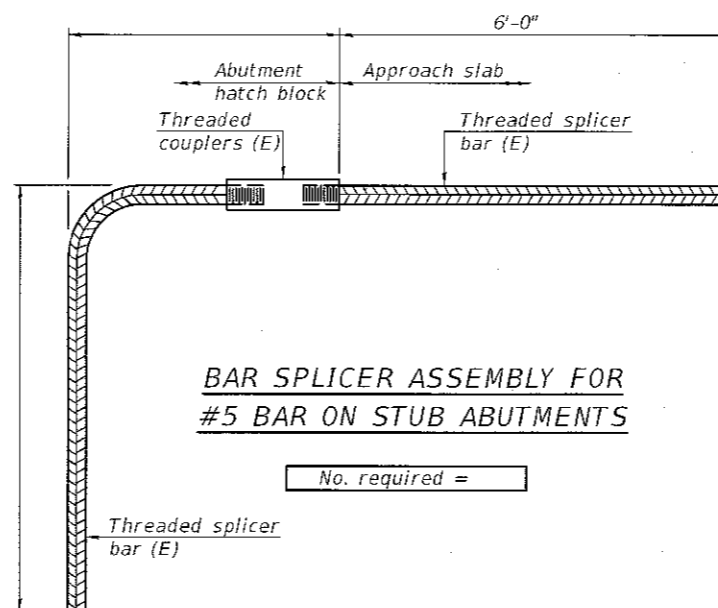
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON 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

2-17-2017

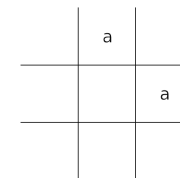
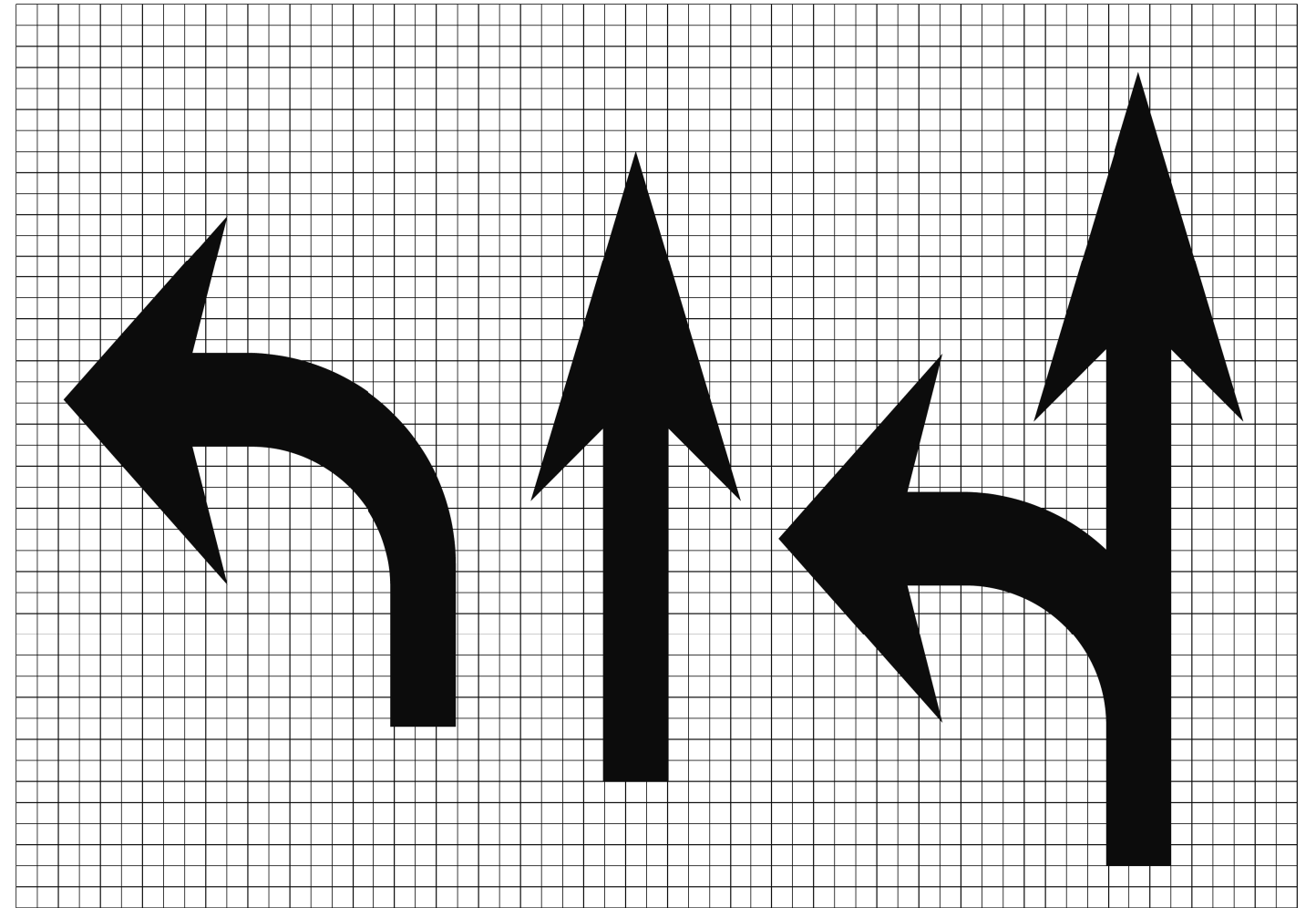
DESIGNED - MLD	EXAMINED - <i>Timothy A. Bolk</i>	DATE - MARCH 20, 2018
CHECKED - SMR	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl King</i>	REVISED
CHECKED - MLD SMR	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 004-0005 (E.B.) & -0006 (W.B.)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	25
			CONTRACT NO. 64M65	
ILLINOIS FED. AID PROJECT				

SHEET NO. 8 OF 8 SHEETS



Legend Height	Arrow Size	a
6' (1.8 m)	Small	2.9 (74)
8' (2.4 m)	Large	3.8 (96)

The space between adjacent letters or numerals should be approximately 3 (75) for 6' (1.8 m) legend and 4 (100) for 8' (2.4 m) legend.

LETTER AND ARROW GRID SCALE

Illinois Department of Transportation
 PASSED January 1, 2015
Janey Allen
 ENGINEER OF OPERATIONS
 APPROVED January 1, 2015
DR
 ENGINEER OF DESIGN AND ENVIRONMENT
 ISSUED 1-1-97

TYPICAL PAVEMENT MARKINGS
 (Sheet 2 of 3)
STANDARD 780001-05

MODEL: D:\mch\1_P003555_00\505508 5 Application Road-4US 204RR\CADD Sheet\2525504-hk-Standards.dgn
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DB STERLIN CONSULTANTS, INC.
 100 N. WICKER DRIVE SUITE 2000
 CHICAGO, ILLINOIS 60606
 TEL. (312)857-1000 FAX. (312)857-1056

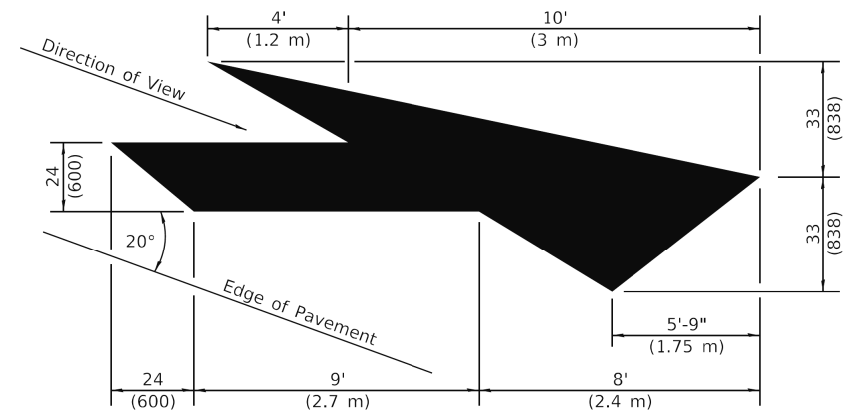
USER NAME = JSpears	DESIGNED - JS	REVISED -
PLOT SCALE = NOT TO SCALE	DRAWN - JS	REVISED -
PLOT DATE = 1/25/2018	CHECKED - MM	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

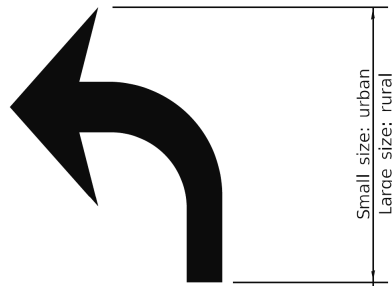
STANDARDS

SHEET 8 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	24
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				



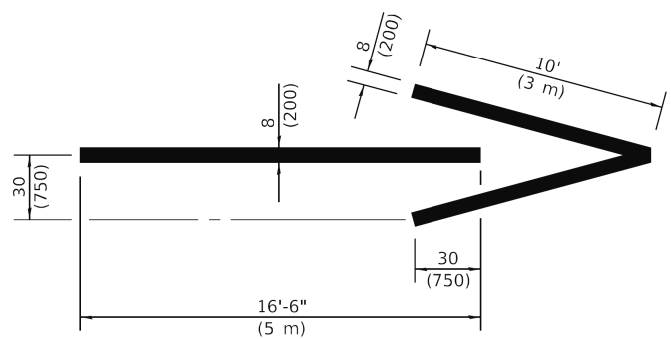
LANE-REDUCTION ARROW
Right lane-reduction arrow shown.
Use mirror image for left lane.



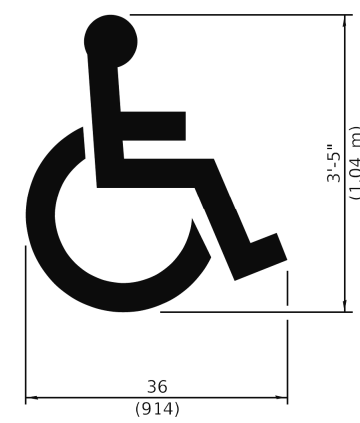
20' (6 m): urban
50' (15 m): rural
(Between arrow
and word or
between words)



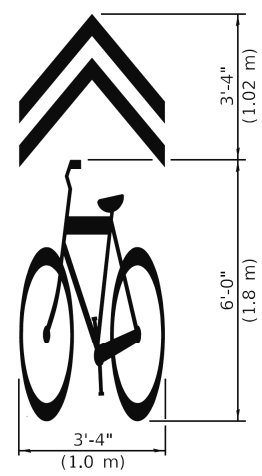
WORD AND ARROW LAYOUT



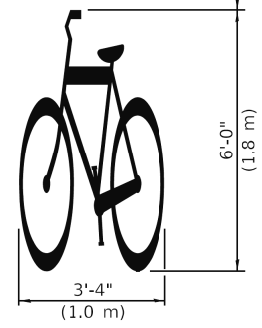
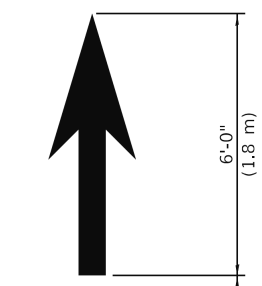
WRONG WAY ARROW



**INTERNATIONAL
SYMBOL OF
ACCESSIBILITY**



**SHARED LANE
SYMBOL**



BIKE SYMBOL
(Arrow is optional.)

Illinois Department of Transportation

PASSED January 1, 2015
ENGINEER OF OPERATIONS

APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

TYPICAL PAVEMENT MARKINGS
(Sheet 3 of 3)

STANDARD 780001-05

MODEL: D:\info\... FILE NAME: P:\0355\0355055058 5 Application Road-JUS 204RR\CADD Sheet\0253505058-01-Standard.dgn

DBS DB STERLIN CONSULTANTS, INC.
100 N. WILCOX DRIVE SUITE 2000
CHICAGO, ILLINOIS 60606
TEL: (312)857-1000 FAX: (312)857-1056

USER NAME = JSpears	DESIGNED - JS	REVISED -
PLOT SCALE = NOT TO SCALE	DRAWN - JS	REVISED -
PLOT DATE = 1/25/2018	CHECKED - MM	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARDS

SHEET 9 OF 9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	D2 BJR 2018-4	BOONE	25	25
CONTRACT NO. 64M65				
ILLINOIS FED. AID PROJECT				

UNIT COPY

GENERAL NOTES

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

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

Reinforcement bars designated (E) shall be epoxy coated.

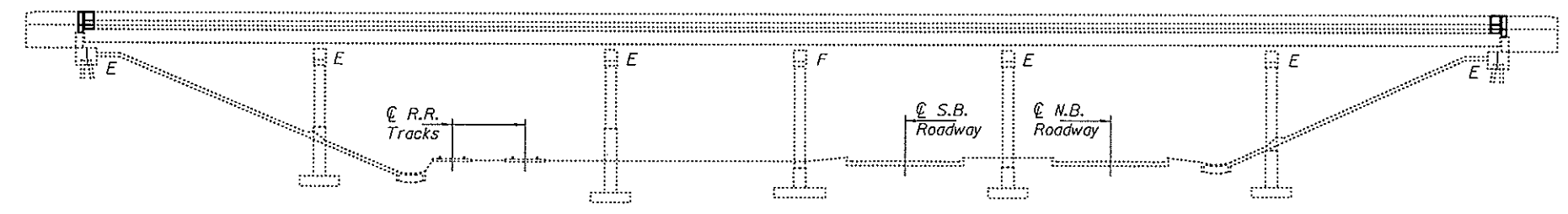
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods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

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

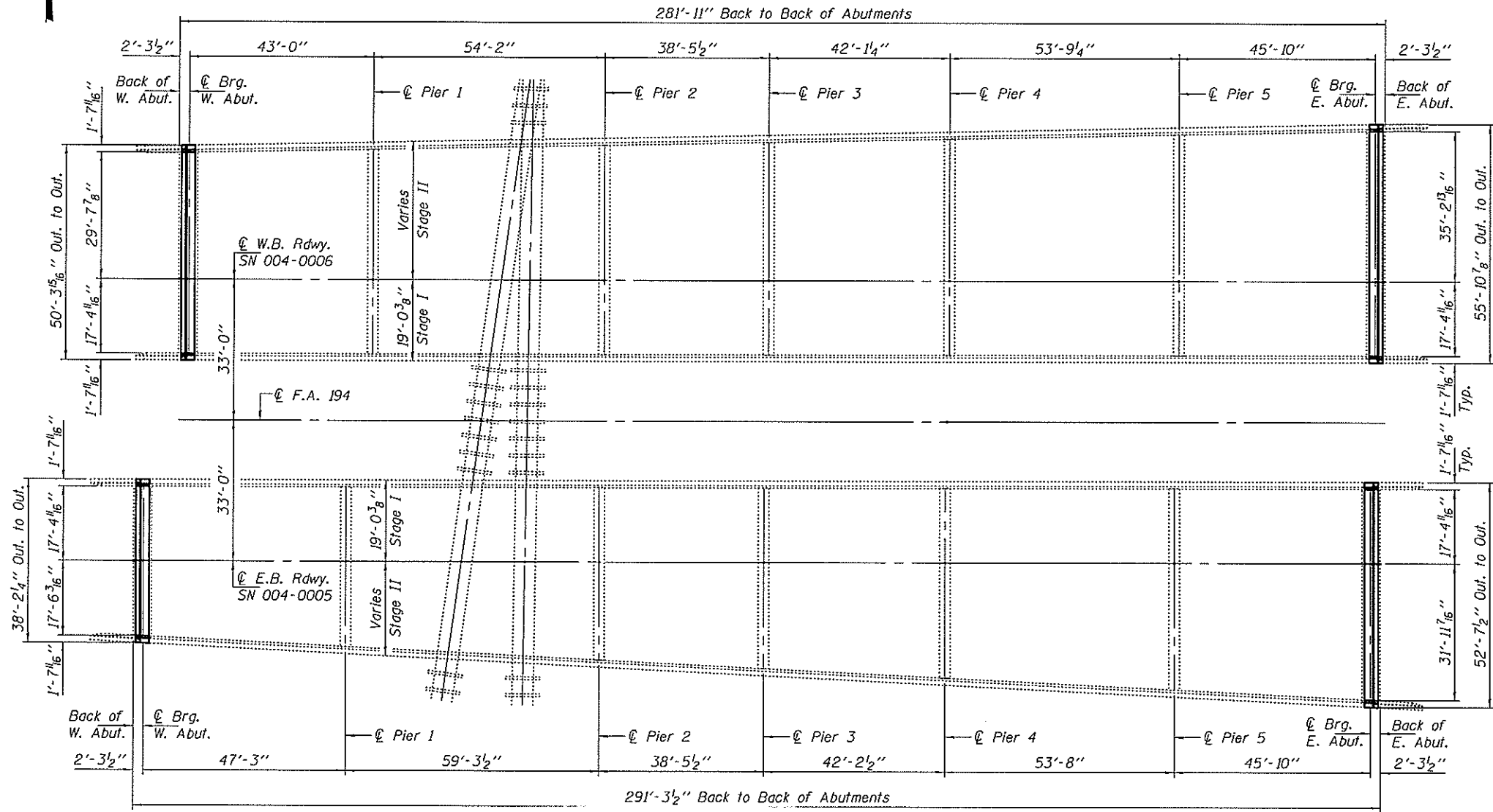
Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

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

Dimensions have been converted from metric.



ELEVATION



PLAN

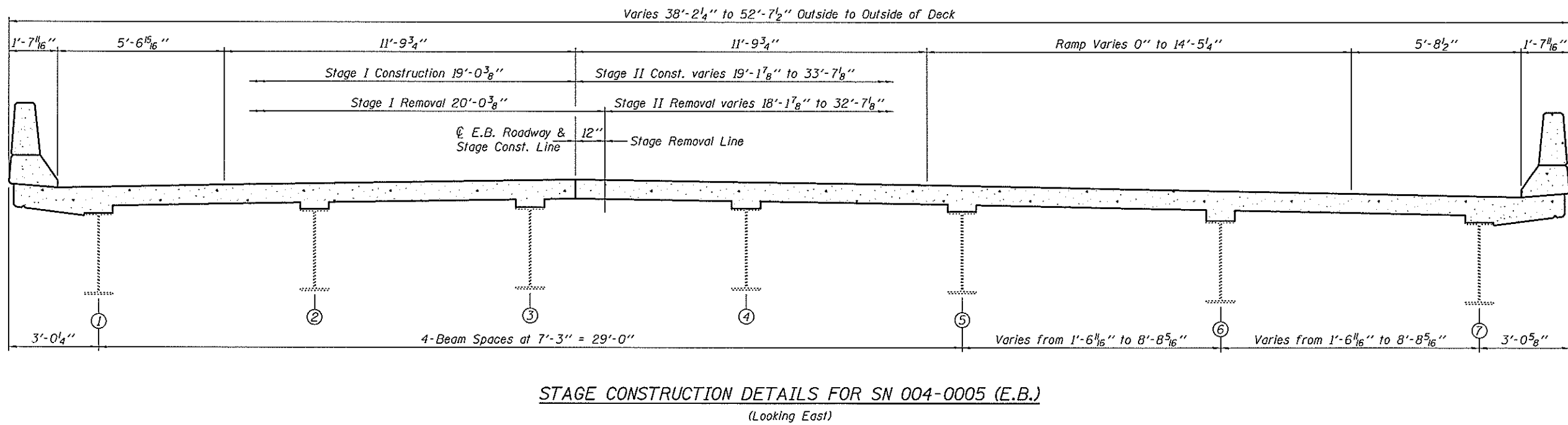
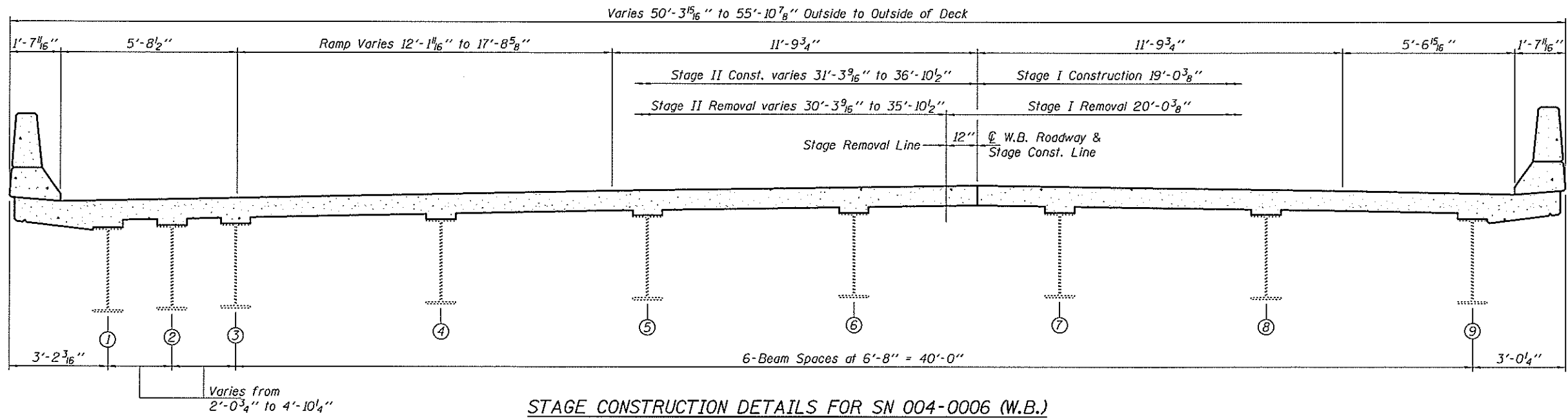
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	30.2
Concrete Superstructure	Cu. Yd.	28.6
Reinforcement Bars, Epoxy Coated	Pound	3600
Bar Splicers	Each	48
Preformed Joint Strip Seal	Foot	206
--	--	--
--	--	--
--	--	--

PRE-FINAL
DATE: 12-19-2017

Expires: November 30, 2018

DESIGNED - MLD	EXAMINED	DATE - DECEMBER 19, 2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION U.S. ROUTE 20 OVER STONE QUARRY ROAD & UNION PACIFIC RAILROAD SN 004-0005 (E.B.) & -0006 (W.B.)	F.A.P. RTE. 525	SECTION -	COUNTY BOONE	TOTAL SHEETS -	SHEET NO. -	
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES	REVISOR			CONTRACT NO.					
DRAWN - Kyle M. Steffen	PASSED	REVISOR			SHEET NO. 1 OF 8 SHEETS					
CHECKED - MLD ---	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR	ILLINOIS FED. AID PROJECT							



PRE-FINAL

DATE: 12-19-2017

DESIGNED - MLD
CHECKED - ---
DRAWN - Kyle M. Steffen
CHECKED - MLD ---

EXAMINED *Timothy A. [Signature]*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Carl [Signature]*
ENGINEER OF BRIDGES AND STRUCTURES

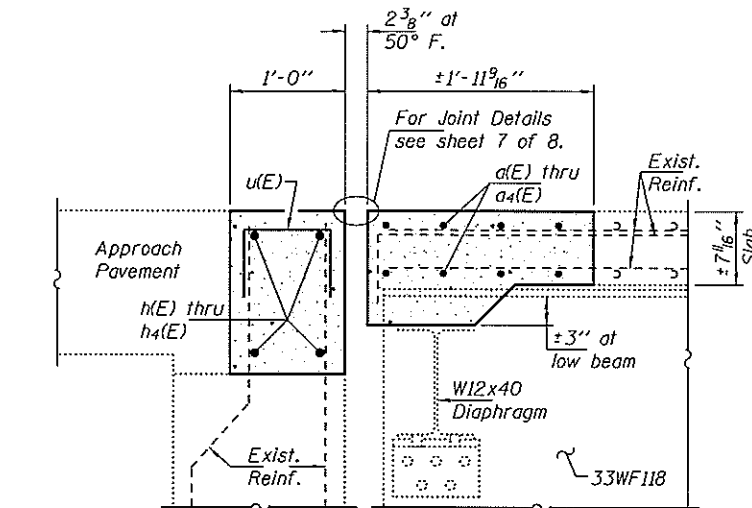
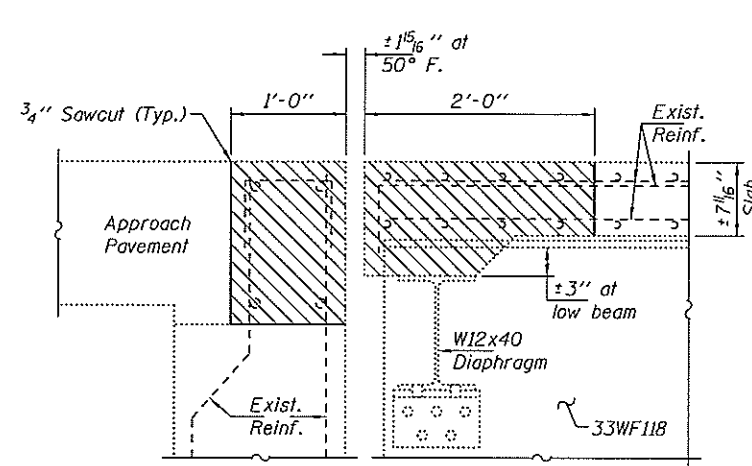
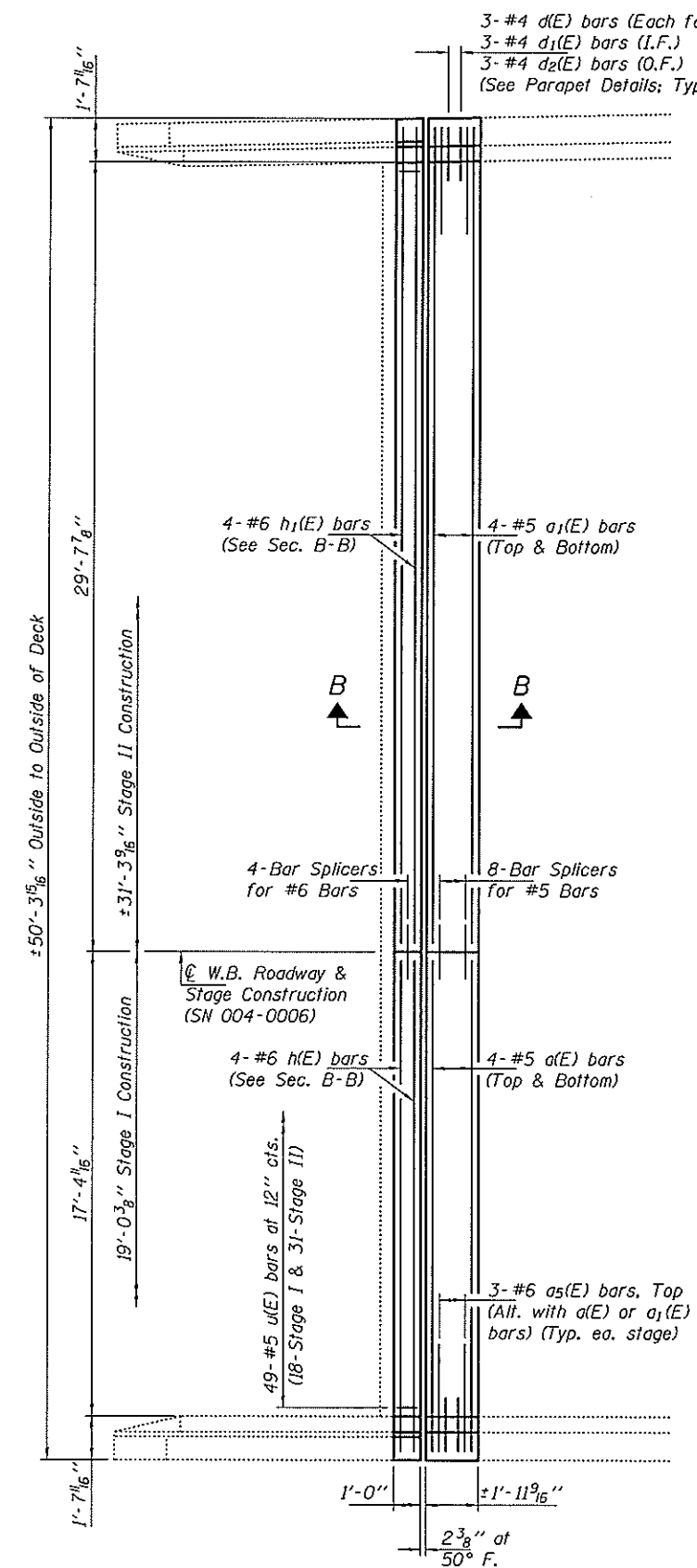
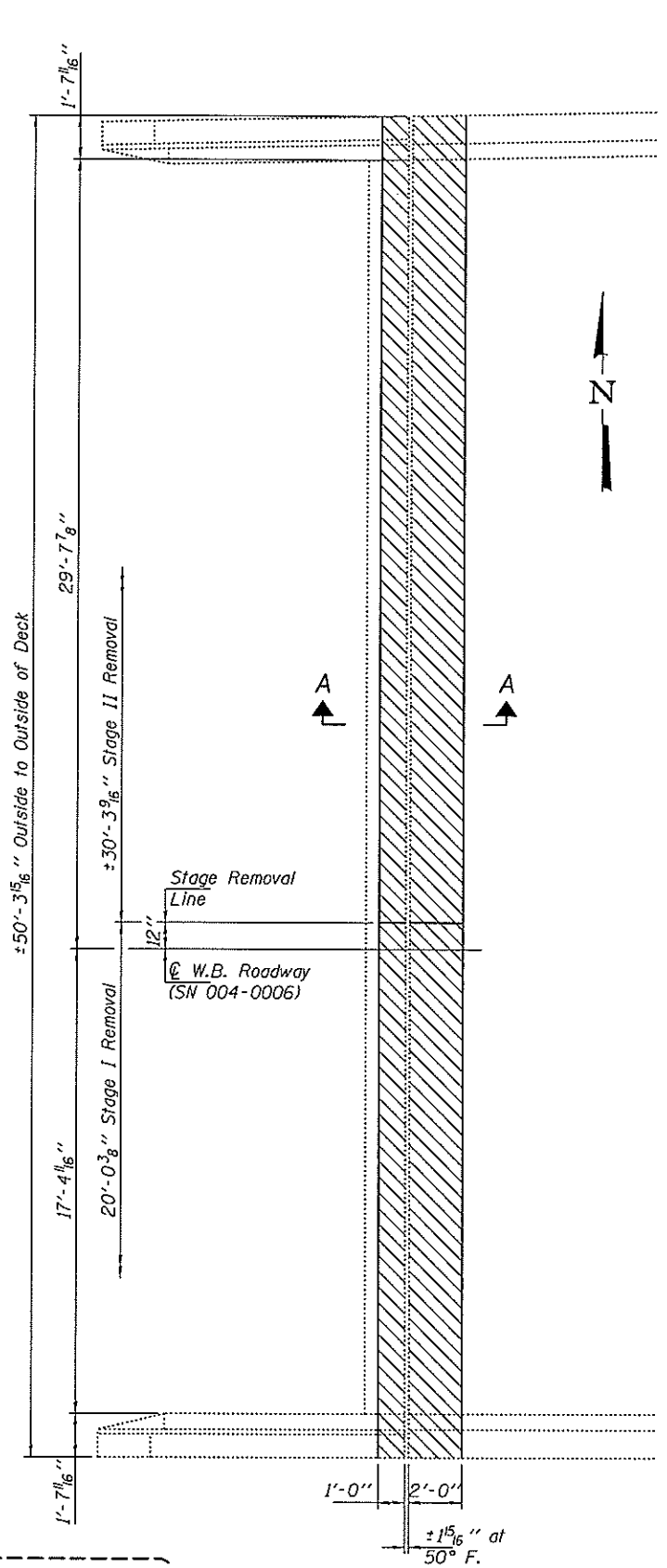
DATE - DECEMBER 19, 2017
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
SN 004-0005 (E.B.) & -0006 (W.B.)

SHEET NO. 2 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	-	BOONE	-	-
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



PRE-FINAL
DATE: 12-19-2017

CONCRETE REMOVAL PLAN
W. ABUT. SN 004-0006 (W.B.)

CONCRETE REPLACEMENT PLAN
W. ABUT. SN 004-0006 (W.B.)

Note:
Hatched areas indicate Concrete Removal.
For Parapet details and reinforcement bending details see sheet 4 of 8.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-8"	—
a1(E)	8	#5	30'-11"	—
a5(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	L
d2(E)	6	#5	4'-0"	L
h(E)	4	#6	18'-8"	—
h1(E)	4	#6	30'-11"	—
u(E)	49	#5	1'-11"	□
Concrete Removal			Cu. Yd.	7.7
Concrete Superstructure			Cu. Yd.	7.3
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	920

DESIGNED - MLD
CHECKED - ---
DRAWN - Kyle M. Steffen
CHECKED - MLD ---

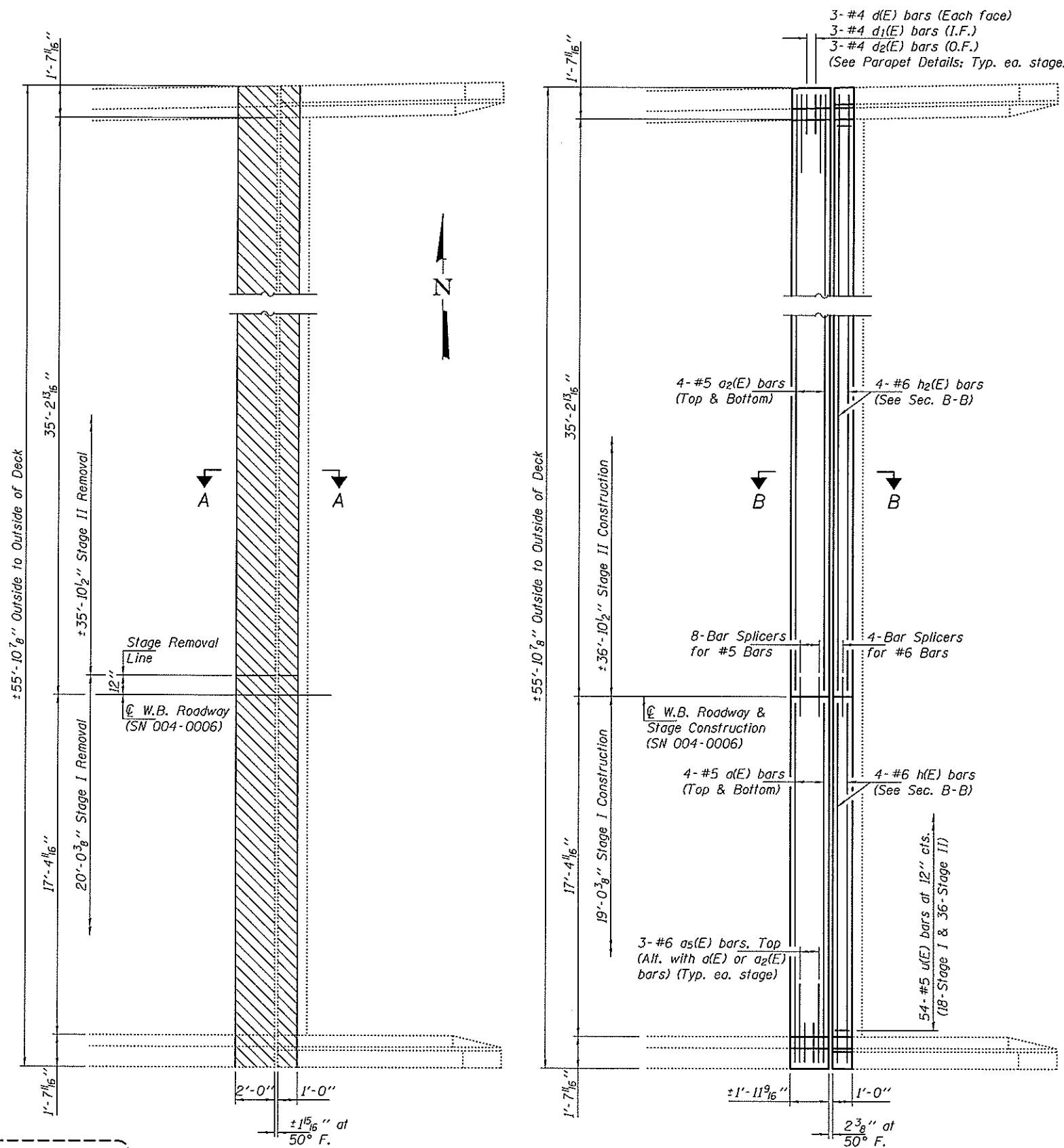
EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 19, 2017
REVISED
REVISED

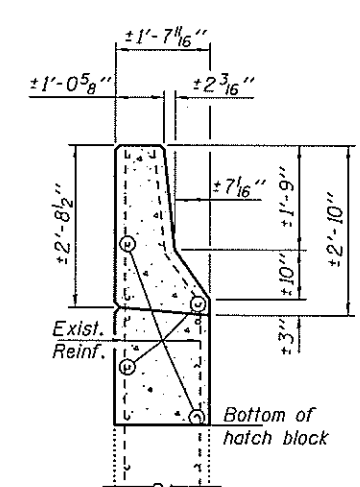
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT JOINT REMOVAL & REPLACEMENT DETAILS
SN 004-0006 (W.B.)
SHEET NO. 3 OF 8 SHEETS

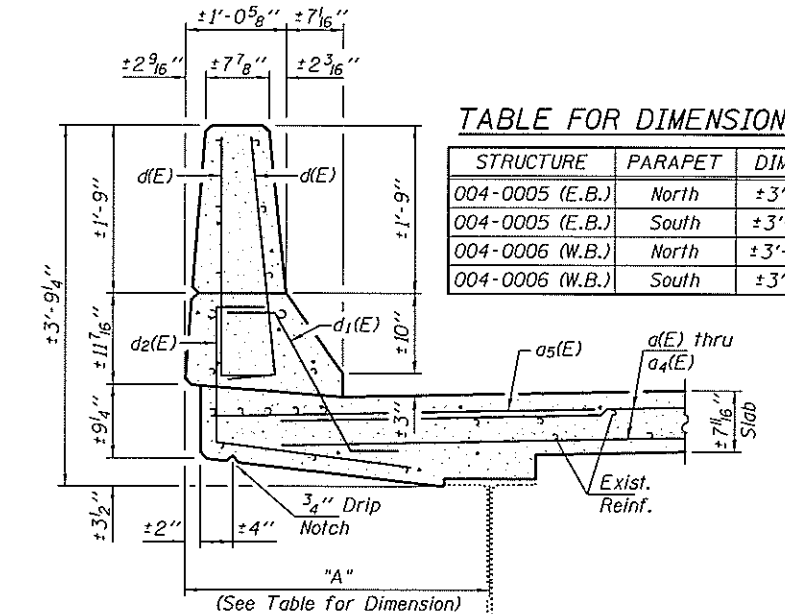
F.A.P. RTE. 525
SECTION -
COUNTY BOONE
TOTAL SHEETS -
SHEET NO. -
CONTRACT NO.
[ILLINOIS] FED. AID PROJECT



3- #4 d(E) bars (Each face)
 3- #4 d1(E) bars (I.F.)
 3- #4 d2(E) bars (O.F.)
 (See Parapet Details; Typ. ea. stage)



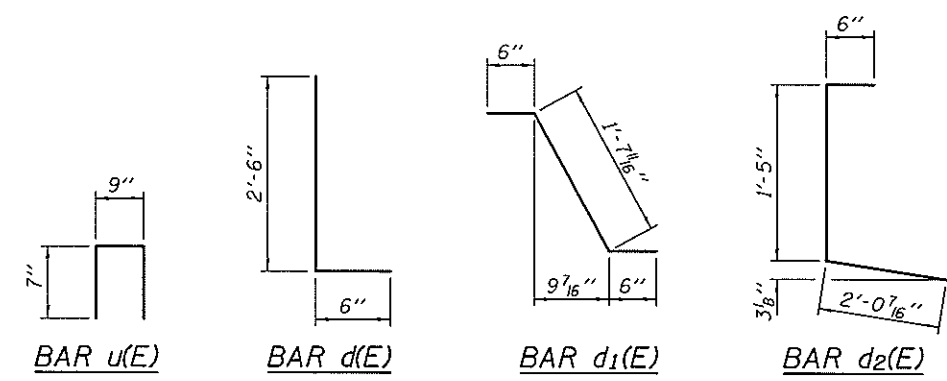
TYPICAL SECTION AT APPROACH PARAPET



TYPICAL SECTION AT BRIDGE PARAPET

TABLE FOR DIMENSION "A"

STRUCTURE	PARAPET	DIM. "A"
004-0005 (E.B.)	North	±3'-0 1/4"
004-0005 (E.B.)	South	±3'-0 5/8"
004-0006 (W.B.)	North	±3'-2 3/16"
004-0006 (W.B.)	South	±3'-0 1/4"



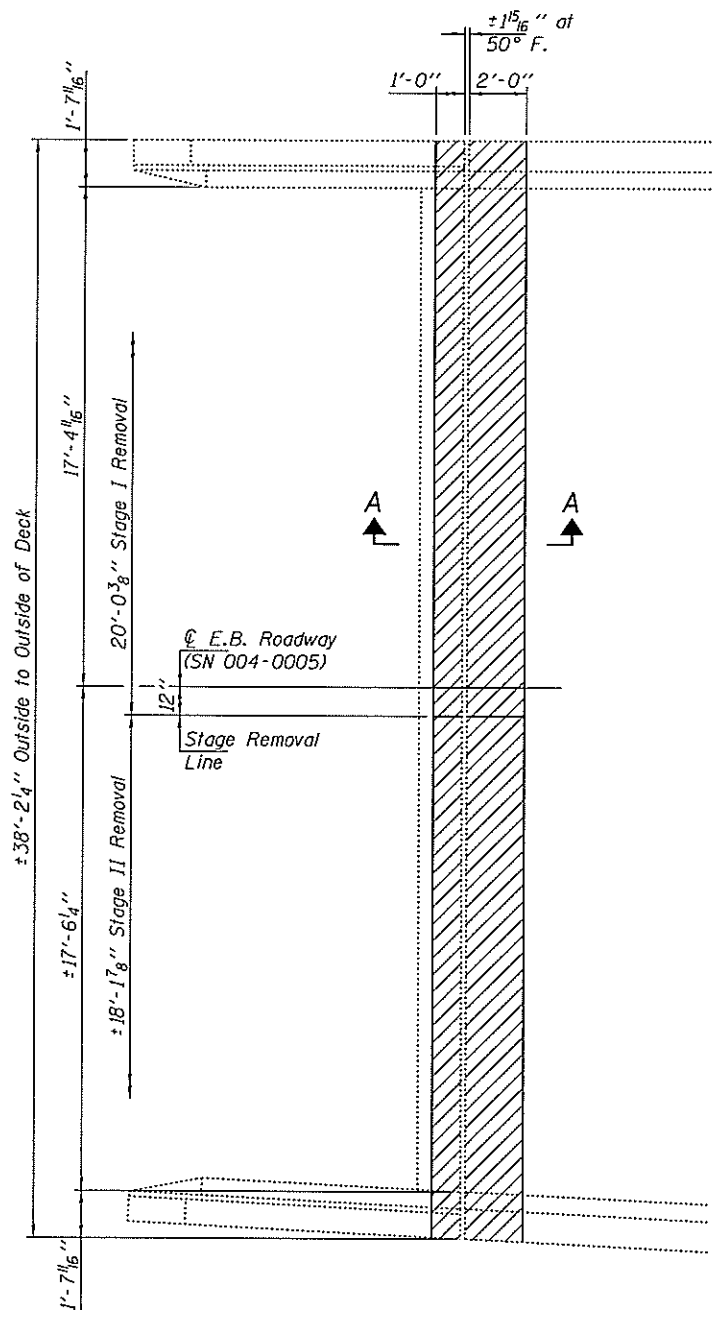
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-8"	—
a2(E)	8	#5	36'-6"	—
as(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	∖
d2(E)	6	#5	4'-0"	L
h(E)	4	#6	18'-8"	—
h2(E)	4	#6	36'-6"	—
u(E)	54	#5	1'-11"	□
Concrete Removal			Cu. Yd.	8.4
Concrete Superstructure			Cu. Yd.	8.0
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	1020

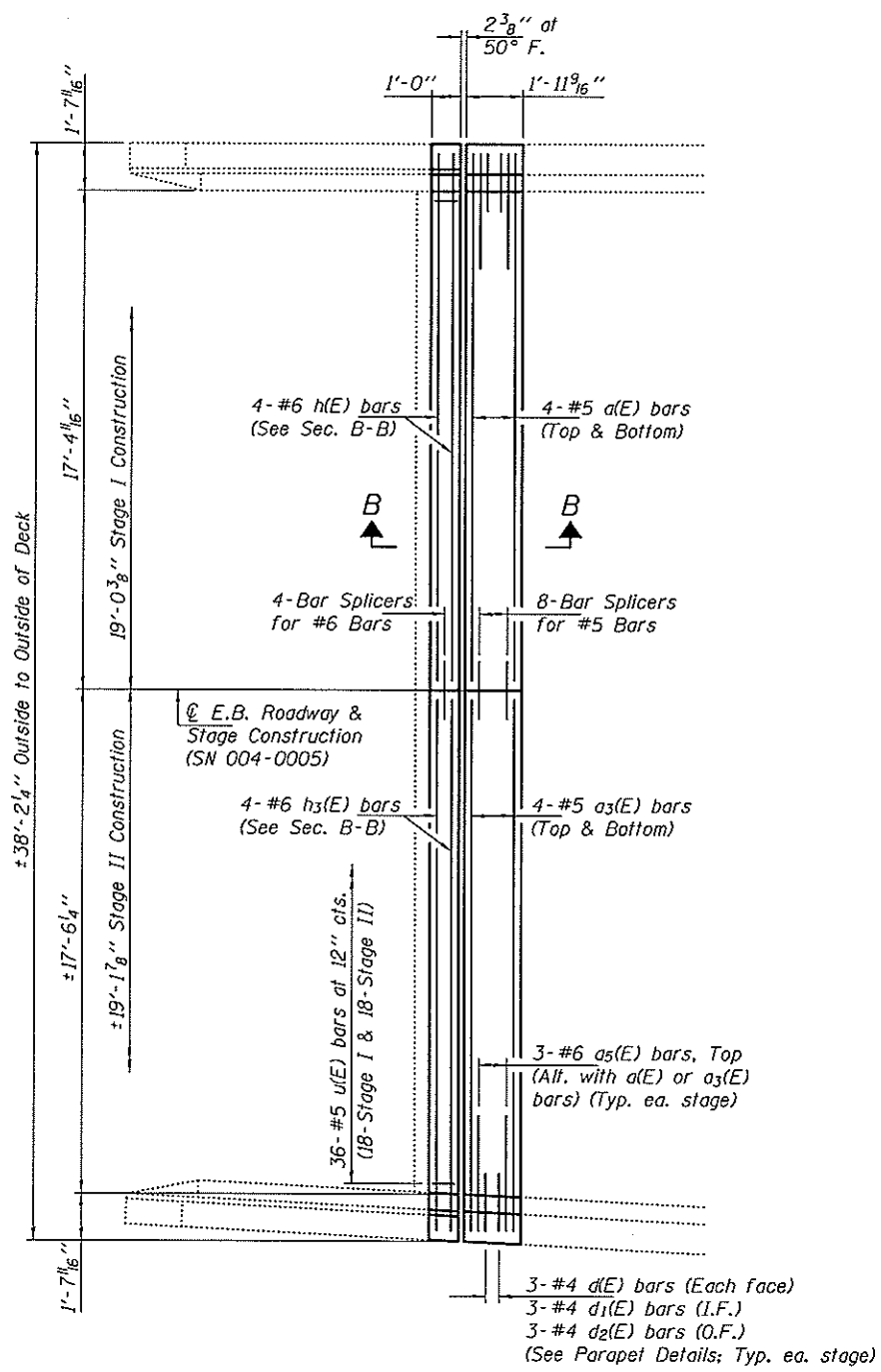
Note:
 Hatched areas indicate Concrete Removal.
 For Sections A-A & B-B see sheet 3 of 8.

PRE-FINAL
 DATE: 12-19-2017
CONCRETE REMOVAL PLAN
 E. ABUT. SN 004-0006 (W.B.)

CONCRETE REPLACEMENT PLAN
 E. ABUT. SN 004-0006 (W.B.)



CONCRETE REMOVAL PLAN
W. ABUT. SN 004-0005 (E.B.)



CONCRETE REPLACEMENT PLAN
W. ABUT. SN 004-0005 (E.B.)

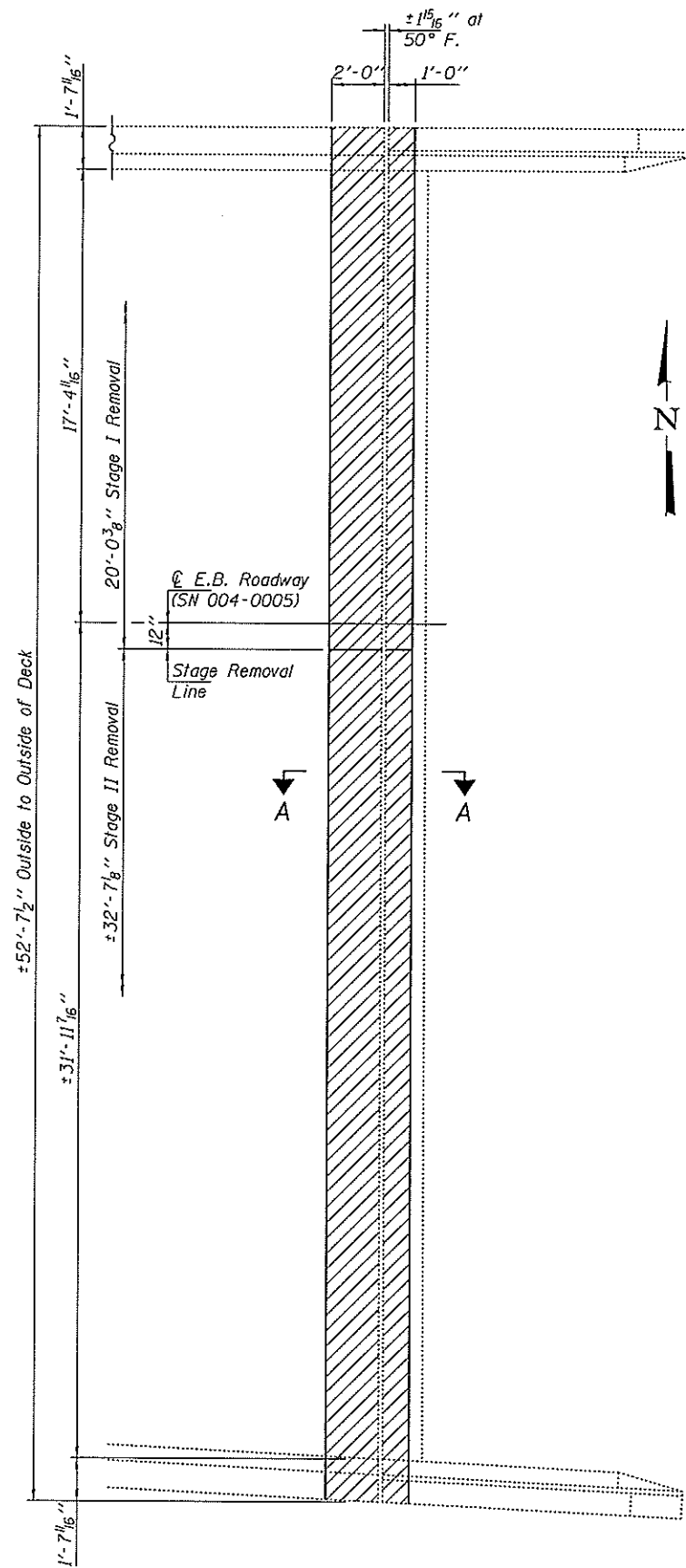
Note:
Hatched areas indicate Concrete Removal.
For Sections A-A & B-B see sheet 3 of 8.
For Parapet Details and Reinforcement Bending Details see sheet 4 of 8.

BILL OF MATERIAL

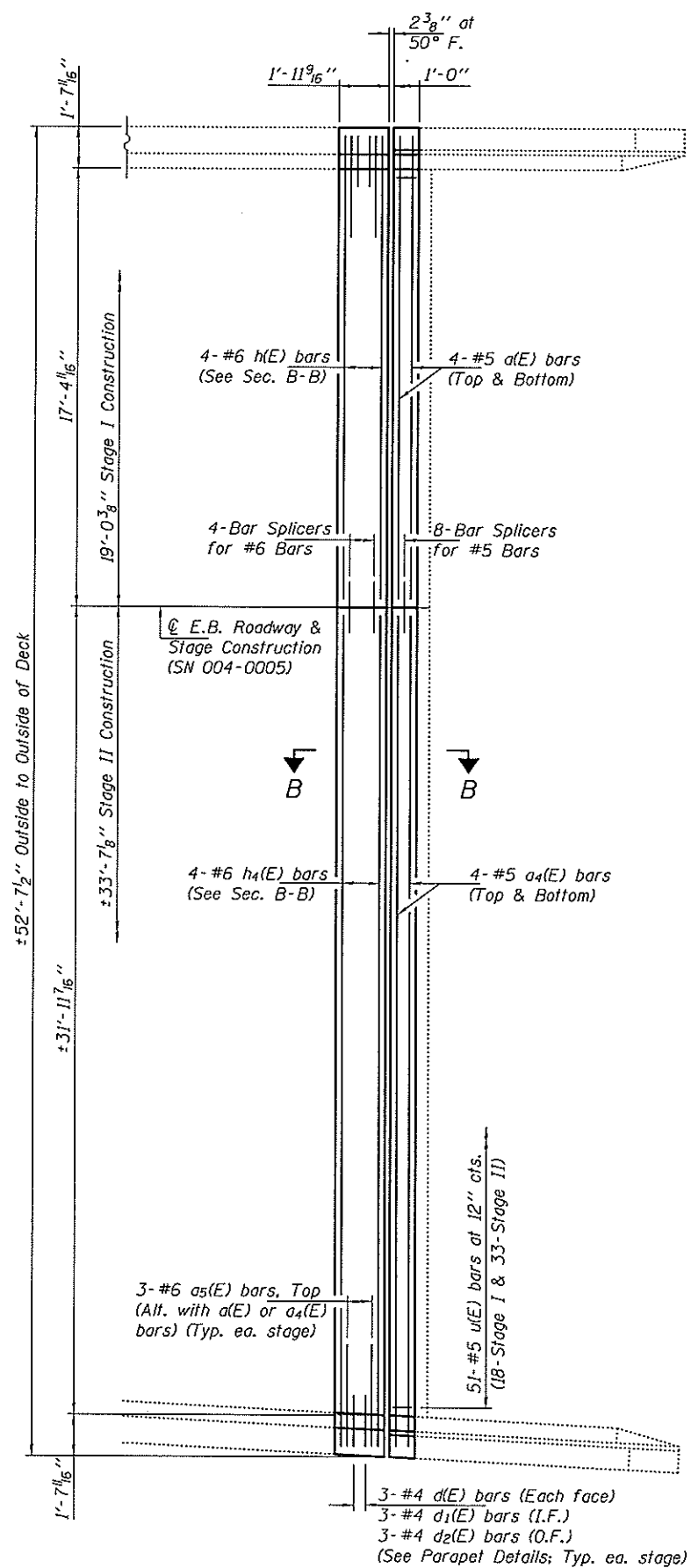
Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-8"	—
a3(E)	8	#5	18'-10"	—
a5(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	∩
d2(E)	6	#5	4'-0"	U
h(E)	4	#6	18'-8"	—
h3(E)	4	#6	18'-10"	—
u(E)	36	#5	1'-11"	□
Concrete Removal			Cu. Yd.	6.1
Concrete Superstructure			Cu. Yd.	5.7
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	730

PRE-FINAL

DATE: 12-19-2017



CONCRETE REMOVAL PLAN
W. ABUT. SN 004-0005 (E.B.)



CONCRETE REPLACEMENT PLAN
E. ABUT. SN 004-0005 (E.B.)

Note:
Hatched areas indicate Concrete Removal.
For Sections A-A & B-B see sheet 3 of 8.
For Parapet Details and Reinforcement
Bending Details see sheet 4 of 8.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	8	#5	18'-8"	—
a4(E)	8	#5	33'-3"	—
as(E)	6	#6	4'-0"	—
d(E)	12	#5	3'-0"	L
d1(E)	6	#5	2'-8"	∟
d2(E)	6	#5	4'-0"	∟
h(E)	4	#6	18'-8"	—
h4(E)	4	#6	33'-3"	—
u(E)	51	#5	1'-11"	□
Concrete Removal			Cu. Yd.	8.0
Concrete Superstructure			Cu. Yd.	7.6
Bar Splicers			Each	12
Reinforcement Bars, Epoxy Coated			Pound	930

PRE-FINAL

DATE: 12-19-2017

DESIGNED - MLD
CHECKED - ---
DRAWN - Kyle M. Steffen
CHECKED - MLD

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 19, 2017
REVISED
REVISED

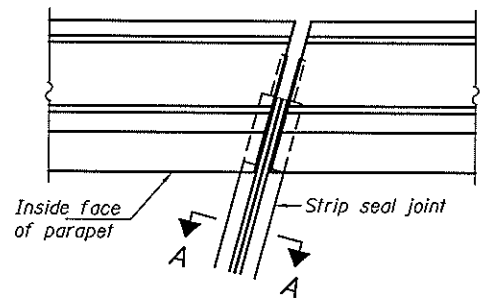
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT JOINT REMOVAL & REPLACEMENT DETAILS
SN 004-0005 (E.B.)

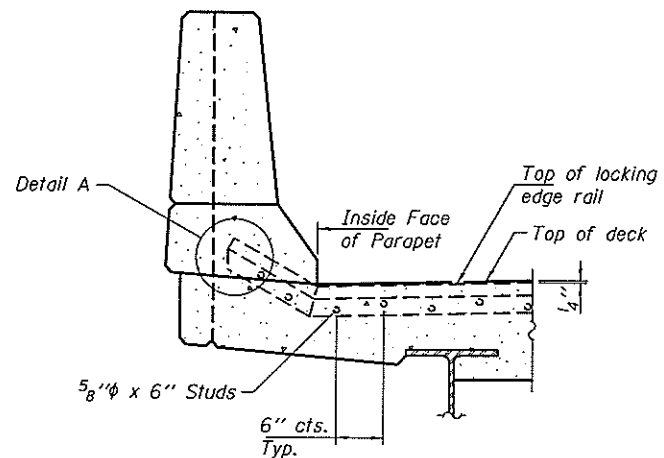
SHEET NO. 6 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S25	-	BOONE	-	-
CONTRACT NO.				

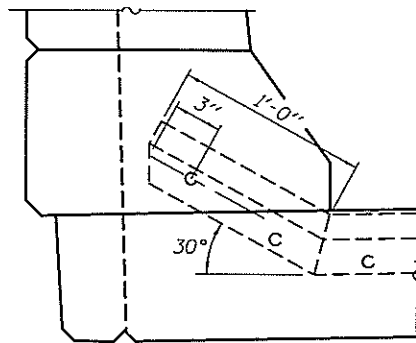
ILLINOIS FED. AID PROJECT



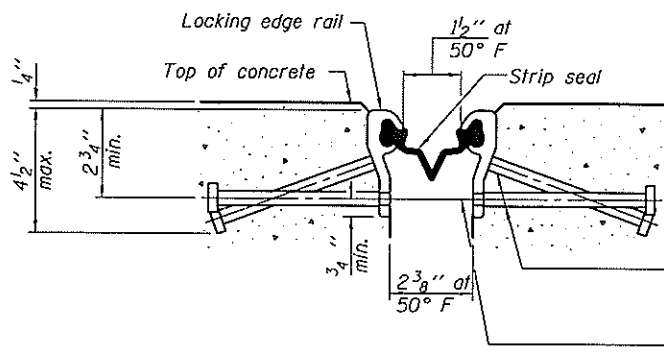
PLAN AT PARAPET



ELEVATION AT PARAPET



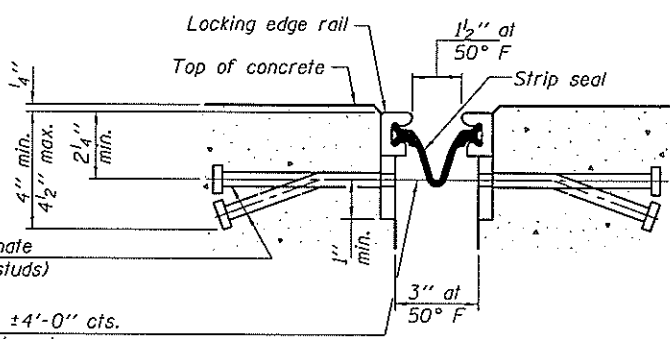
DETAIL A



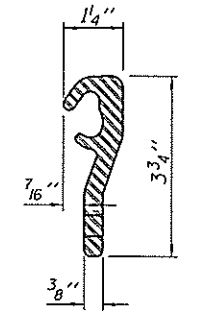
SHOWING ROLLED RAIL JOINT

* 5/8" ϕ x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs)
 3/8" ϕ threaded rods in 7/16" ϕ holes at $\pm 4'-0"$ cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

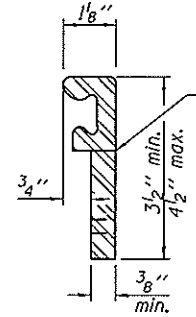
SECTION A-A



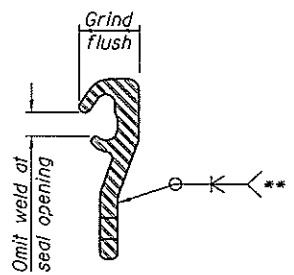
SHOWING WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	206

PRE-FINAL
 DATE: 12-19-2017

DESIGNED - MLD	EXAMINED - <i>Timothy A. Annett</i>
CHECKED - ---	ENGINEER OF STRUCTURAL SERVICES
DRAWN - Kyle M. Steffen	PASSED - <i>Carl Perry</i>
CHECKED - MLD	ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 19, 2017	REVISIONS
REVISIONS	

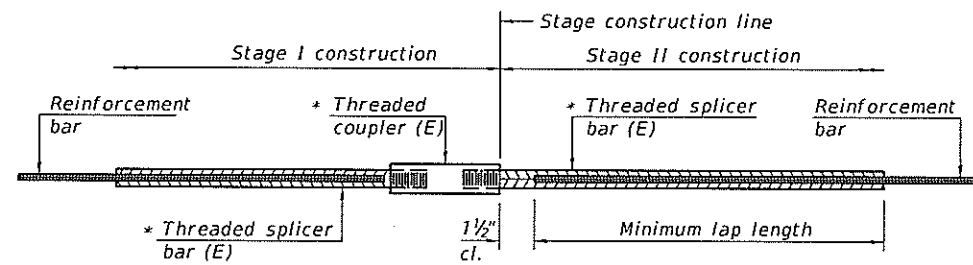
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
 SN 004-0005 (E.B.) & -0006 (W.B.)

SHEET NO. 7 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
525	-	BOONE	-	-
CONTRACT NO.				

ILLINOIS FED. AID PROJECT

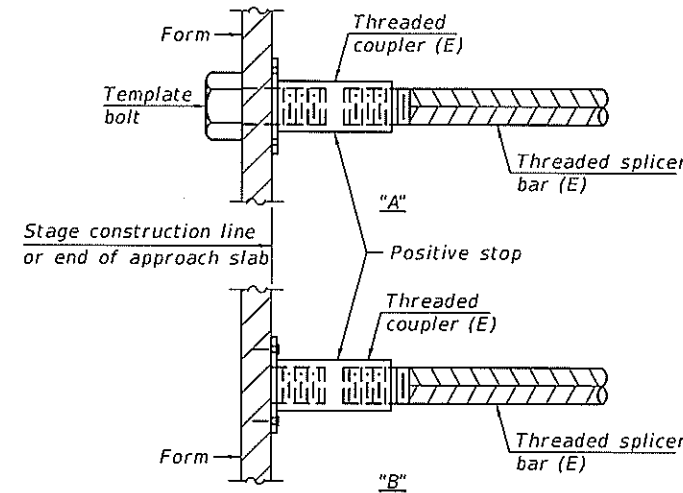


STANDARD BAR SPLICER ASSEMBLY

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

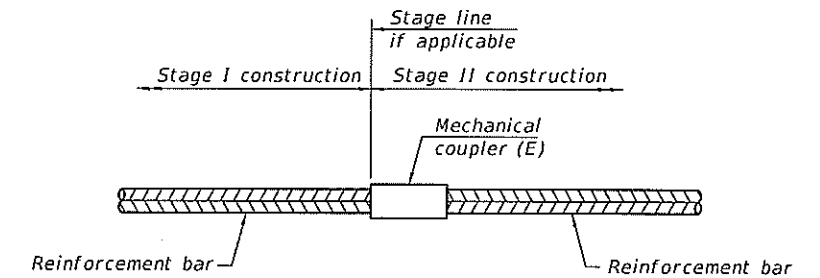
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Hatchblock	#6	16	4'-0"
Bridge Deck	#5	32	3'-6"



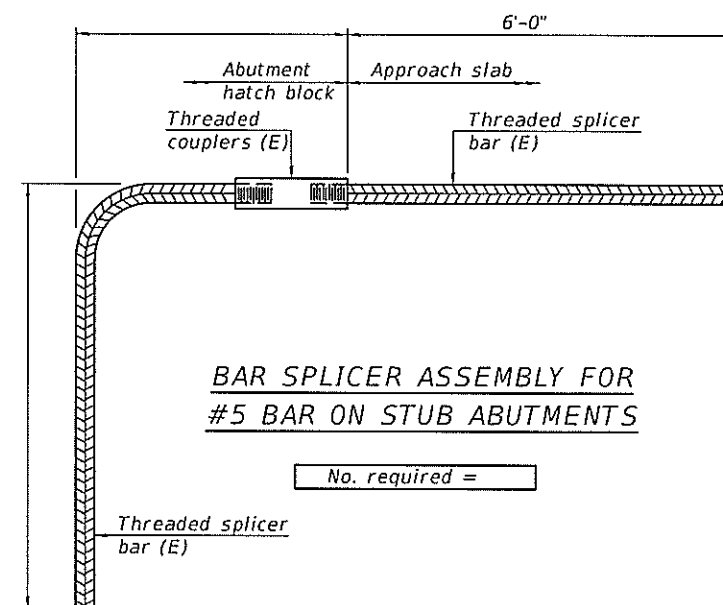
INSTALLATION AND SETTING METHODS

"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 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.

PRE-FINAL

DATE: 12-19-2017

BSD-1 2-17-2017

DESIGNED - MLD	EXAMINED - <i>Timothy A. ...</i>	DATE - DECEMBER 19, 2017	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 004-0005 (E.B.) & -0006 (W.B.)	F.A.P. RTE. 525	SECTION -	COUNTY - BOONE	TOTAL SHEETS	SHEET NO.
CHECKED - ---	PASSED - <i>Carl ...</i>	REVISOR						8	8
DRAWN - Kyle M. Steffen	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR	SHEET NO. 8 OF 8 SHEETS		CONTRACT NO.		ILLINOIS FED. AID PROJECT		