

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	184-5-2) BDR, BJR	SANGAMON	41	1
		ILLINOIS		CONTRACT NO. 72J20

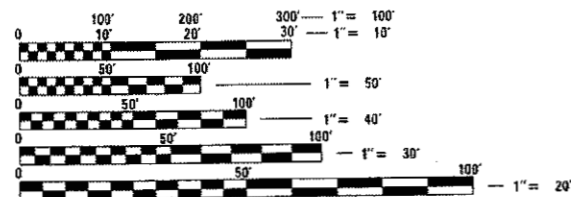
04-27-2018 LETTING ITEM 032

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STANDARDS

000001-06	701426-09
001001-02	701428-01
001006	701446-09
482001-02	701901-07
630001-12	704001-08
631031-15	725001-01
701400-09	780001-05
701402-12	781001-04
701406-11	782006
701411-09	



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

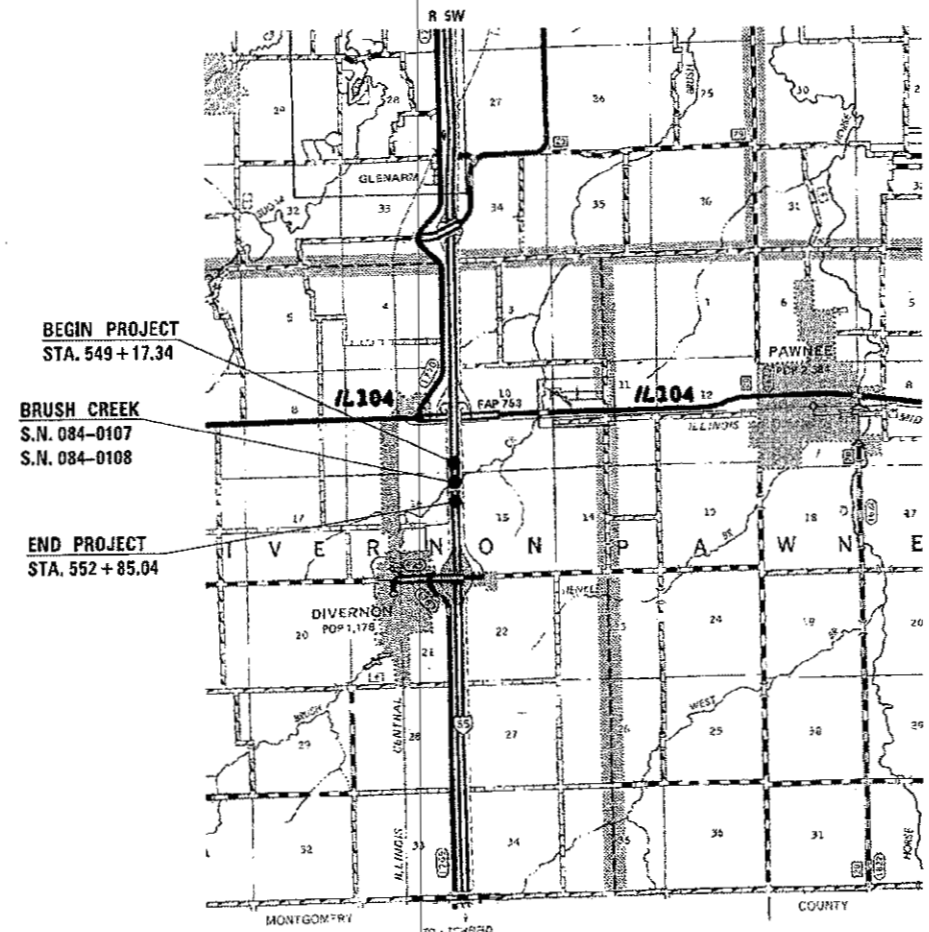
PROJECT ENGINEER: JAY EDWARDS (217) 785-0597
PROJECT MANAGER: JARED MARTIN (217) 524-0064
CONTRACT NO. 72J20

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

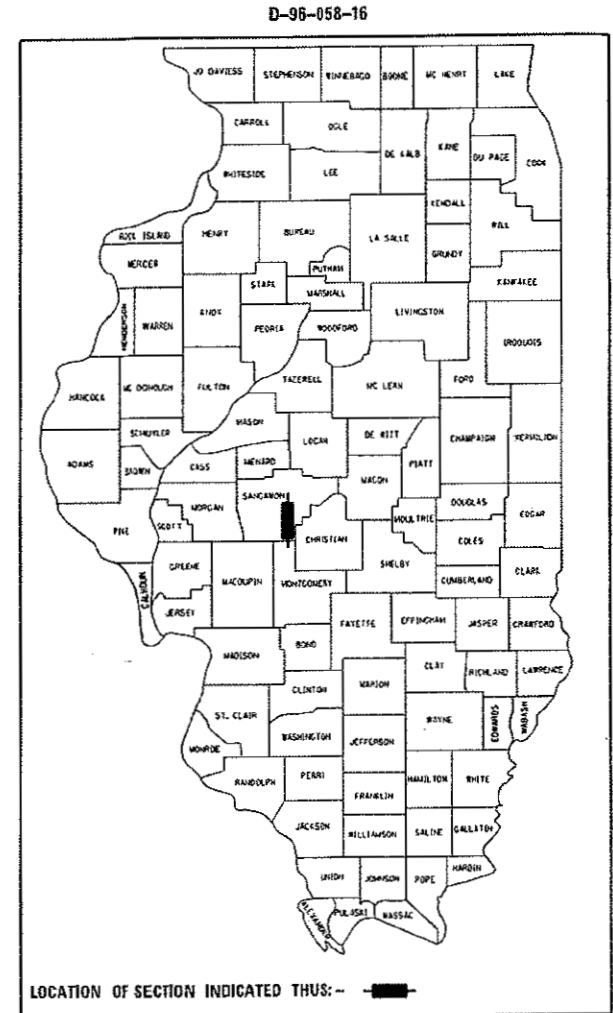
FAI 55 (I-55)
SECTION (84-5-2) BDR, BJR
PROJECT NHPP-FE1(155)
BRIDGE REPAIR
SANGAMON COUNTY

C-96-058-16



LOCATION MAP

GROSS LENGTH = 367 FT. = 0.07 MILES
NET LENGTH = 367 FT. = 0.07 MILES



TRAFFIC COUNT

ADT = 29,500 (2015)
PV = 22,272 (75.5%)
SU = 1,239 (4.2%)
MU = 5,989 (20.3%)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: February 20 18
Regional Engineer
March 23 20 18
Engineer of Design and Environment
March 23 20 18
Director of Highways Project Implementation

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OF THE STATE OF ILLINOIS

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED. ANY DAMAGE TO THE UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE, INCLUDING TEMPORARY REPAIRS WHICH MAY BE REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS.
2. THE THICKNESS OF HOT-MIX ASPHALT SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED
3. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
4. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
5. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
6. IN ADDITION TO FIELD SURVEYS AND AERIAL SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
7. WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE TYPE OF WORK ENCOUNTERED.
8. ANY EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL RE-INSTALL SIGNS AS DIRECTED BY THE ENGINEER. THE COST FOR THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL ITEMS.
9. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
10. THE CONTRACTOR SHALL REMOVE REFLECTORS FROM EXISTING RAISED REFLECTIVE PAVEMENT MARKERS THAT CONFLICT WITH REVISED TRAFFIC PATTERNS. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS TRAFFIC CONTROL AND PROTECTION ITEMS.
11. THE DISTRICT BUREAU OF OPERATIONS SHALL BE NOTIFIED AT LEAST 14 DAYS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS (PH 217-785-7314).

COMMITMENTS

THE RESIDENT ENGINEER SHALL CONTACT STUDIES AND PLANS CONCERNING ANY MAJOR PLAN CHANGE, TO MAKE SURE NO PREVIOUS COMMITMENTS (NOT LISTED) WERE MADE AFFECTING THE DESIGN AND TO ALLOW IMPROVED DESIGN FOR FUTURE PROJECTS.

MIXTURE REQUIREMENTS

MIXTURE NUMBER	1	2	3
MIXTURE USE(S)	INTERSTATE POLYMER HMA SURFACE	HMA BASE COURSE	INTERSTATE SHOULDER SURFACE LIFT
AC/PG:	SBS PG 70-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N90	4.0% @ N70	4.0% @ N50
MIXTURE COMPOSTION: (GRADATION MIXTURE)	IL 9.5	IL 19.0	IL 9.5
FRICTION AGGREGATE	MIX "E"	N/A	MIX "C"
QUALITY MANAGEMENT	QC/OA	QC/OA	QC/OA
SUBLOT SIZE	N/A	N/A	N/A

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE THE PLAN QUANTITIES:

BITUMINOUS MATERIALS (PRIME COAT)	0.025 ILB/SQ. FT. (ON PAVEMENT)
BITUMINOUS MATERIALS (PRIME COAT)	0.05 ILB/SQ. FT. (ON AGGREGATE)
AGGREGATE PRIME COAT	0.002 TON/SQ. YD.
HOT-MIX ASPHALT SURFACE/BINDER/BASE	0.056 TON/SQ. YD./IN
AGGREGATE MATERIAL	2.05 TON/CU. YD.

DISTRICT SIX	
EXAMINED	<u>December 5th</u> 20 <u>17</u>
<i>Ahu C. Wanyanzu</i>	
OPERATIONS ENGINEER	
EXAMINED	<u>Dec 14th</u> 20 <u>17</u>
<i>Justin J. Abraham</i>	
PROJECT IMPLEMENTATION ENGINEER	
EXAMINED	<u>December 6</u> 20 <u>17</u>
<i>Jeffrey P. Meyer</i>	
PROGRAM DEVELOPMENT ENGINEER	

SUMMARY OF QUANTITIES					6-00798-0000	
					90% FEDERAL 10% STATE BRIDGE	90% FEDERAL 10% STATE BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0059 S.N. 084-0107	0059 S.N. 084-0108	
35501336	HOT-MIX ASPHALT BASE COURSE, 13"	SQ YD	1613	800	813	
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1014	504	510	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	106	53	53	
40600990	TEMPORARY RAMP	SQ YD	320	160	160	
40603570	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", N90	TON	63	31.5	31.5	
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	1898	949	949	
44004250	PAVED SHOULDER REMOVAL	SQ YD	1613	799.5	813.5	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	137	68	69	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	31	15.5	15.5	
50102400	CONCRETE REMOVAL	CU YD	34.5	17.1	17.3	
50300100	FLOOR DRAINS	EACH	28	14	14	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	34	17	17	
50300300	PROTECTIVE COAT	SQ YD	1438	719	719	
50500505	STUD SHEAR CONNECTORS	EACH	144	72	72	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4560	2280	2280	
14						

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	3
CONTRACT NO. 72120				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES					6-00798-0000	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE BRIDGE	90% FEDERAL 10% STATE BRIDGE	
				0059 S.N. 084-0107	0059 S.N. 084-0108	
50800515	BAR SPLICERS	EACH	56	28	28	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	244	122	122	
* 63000001	STEEL PLATE BEAM-GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	1225	637.5	587.5	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	2	2	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	2	2	
63200310	GUARDRAIL REMOVAL	FOOT	1520	756	764	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	3	3	
67100100	MOBILIZATION	L SUM	1	0.5	0.5	
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1	1	0	
70100701	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	EACH	2	1	1	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	1955	396.5	1558.5	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	645	131	514	
70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	20132.5	7823.5	12309	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	850	425	425	

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* SPECIALTY ITEM

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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
SCALE:	SHEET	OF	SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	4
CONTRACT NO. 72J20				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES					6-00798-0000	
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	90% FEDERAL 10% STATE BRIDGE	90% FEDERAL 10% STATE BRIDGE	
				0059 S.N. 084-0107	0059 S.N. 084-0108	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	850	425	425	
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL	EACH	2	1	1	
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL	EACH	2	1	1	
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	2	2	
* 78009005	MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	FOOT	26527	4966	21561	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8	4	4	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	12	6	6	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	8	4	4	
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	9623	2302	7321	
X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	832	416	416	
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0	1	
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	0.5	0.5	
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1372	686	686	
Z0012166	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 3/4"	SQ YD	1372	686	686	

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* SPECIALTY ITEM

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	5
CONTRACT NO. 72J20				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES					6-00798-0000	
					90% FEDERAL 10% STATE BRIDGE	90% FEDERAL 10% STATE BRIDGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0059 S.N. 084-0107	0059 S.N. 084-0108	
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	16	8	8	
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	10	0	10	
Z0015802	PLUG EXISTING DECK DRAINS	EACH	72	36	36	
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	9	4.5	4.5	
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	48	14.2	33.8	
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	1372	686	686	

6

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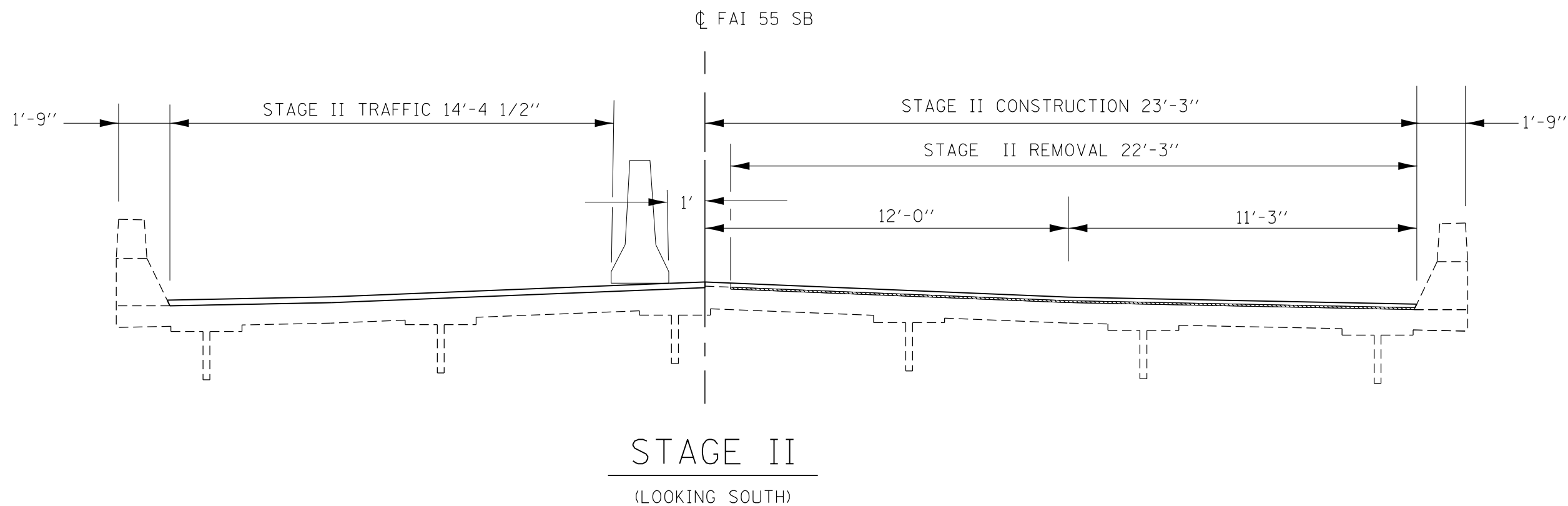
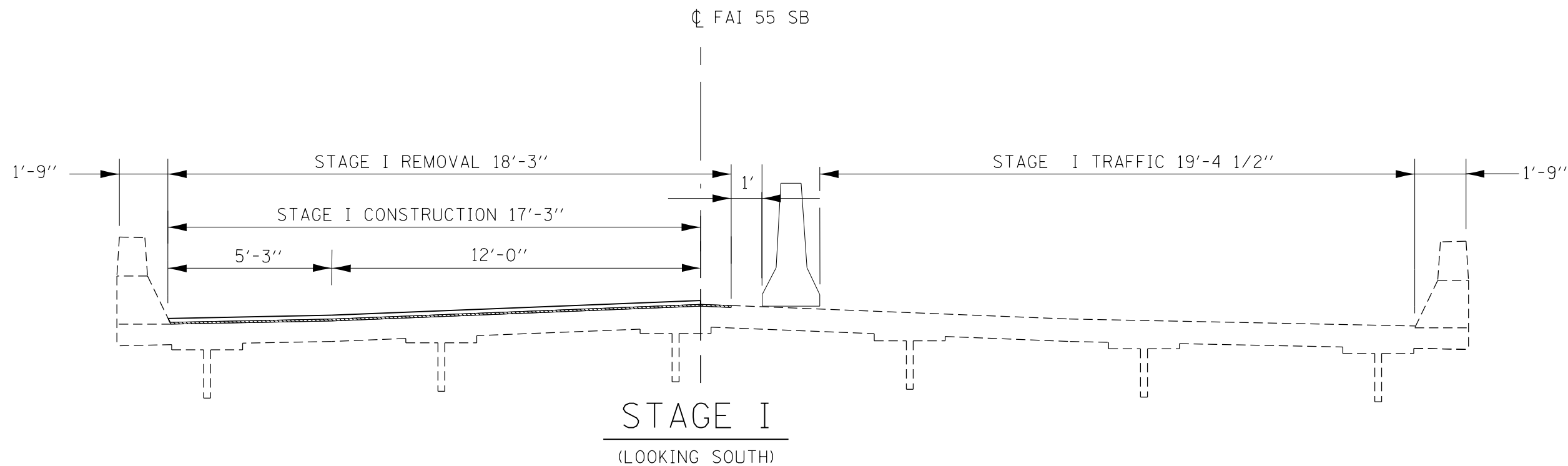
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

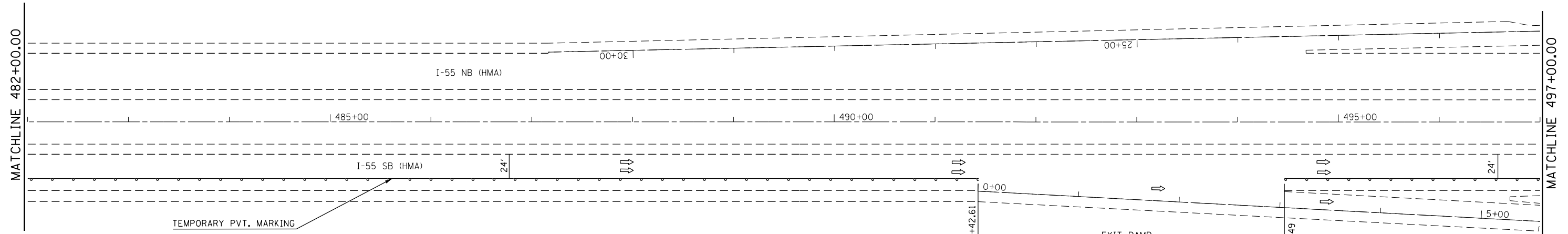
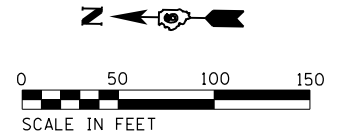
SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

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CONTRACT NO. 72J20				
ILLINOIS FED. AID PROJECT				



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		PLOT DATE = 1/26/2018	DATE -		REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.



TYPE II BARRICADE, DRUM OR
VERTICAL BARRICADE AT 100' (30 M) CENTER

REMAINDER OF SIGNING ACCORDING TO STANDARD
701446 AND AS DIRECTED BY THE ENGINEER
PAID FOR AS TRAFFIC CONTROL (SPECIAL)

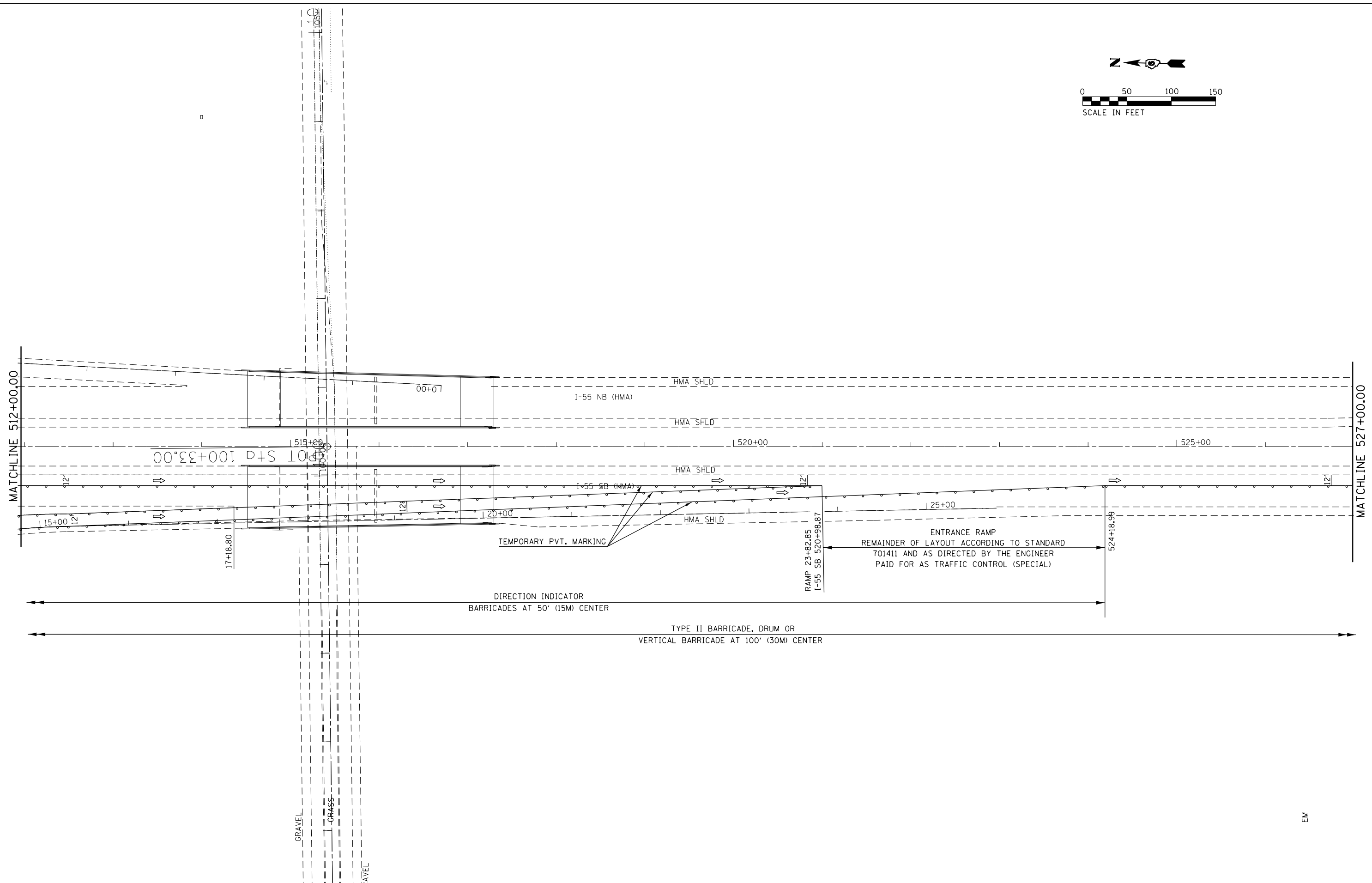
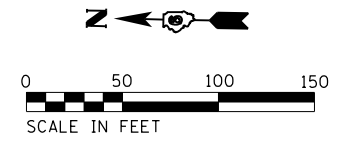
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	PLOT DATE = 1/26/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**I-55 SB TRAFFIC CONTROL PLAN
STAGE 1 & 2**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	14
CONTRACT NO. 72J20			ILLINOIS FED. AID PROJECT	



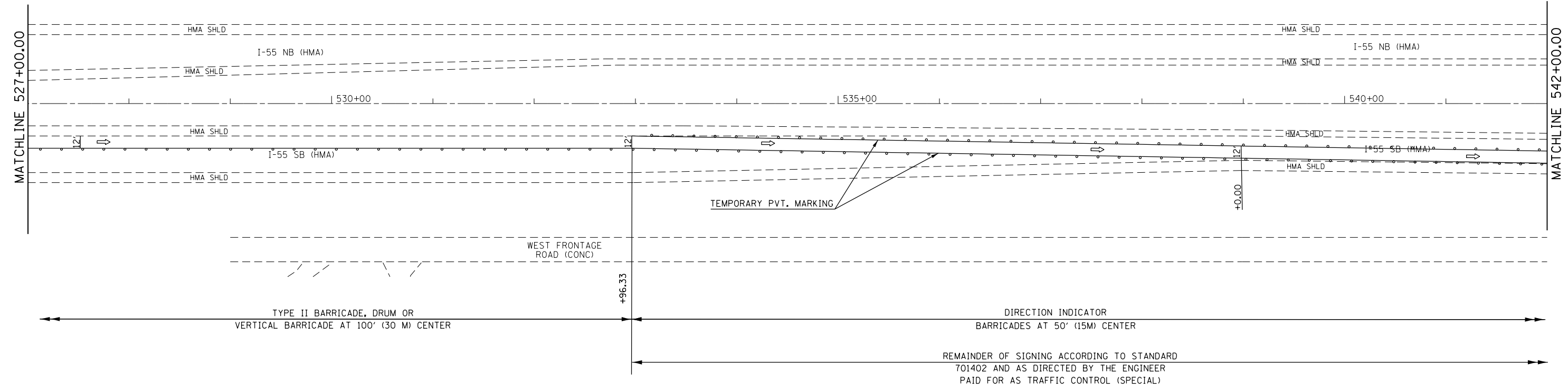
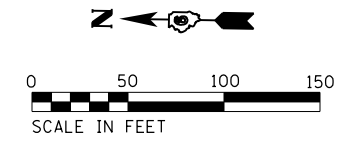
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

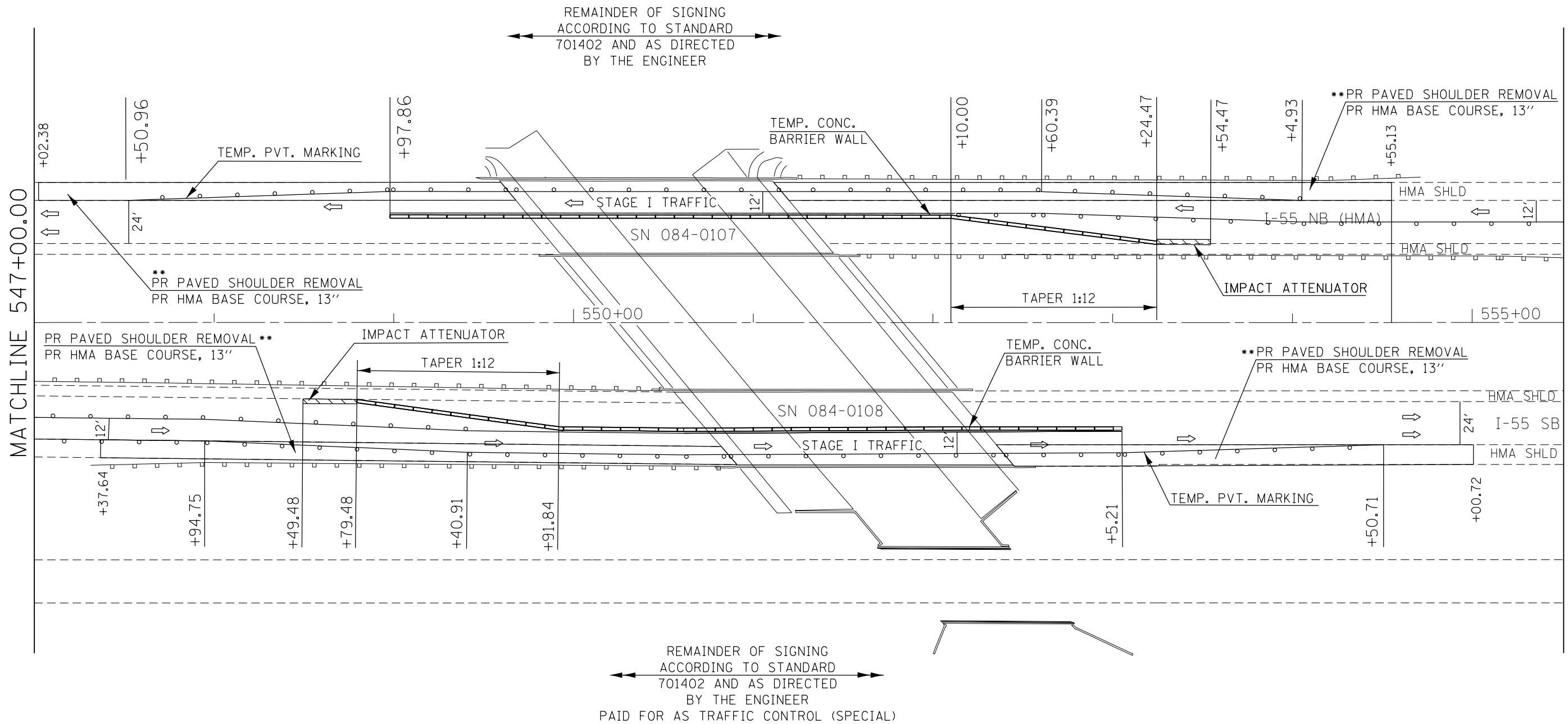
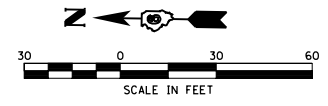
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SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	16
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72J20	

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	PLOT DATE = 1/26/2018	DATE -	REVISED -	SCALE:	SHEET OF SHEETS	STA. TO STA.						



NOTE:
 ** HMA BASE COURSE TO BE COMPLETED PRIOR TO STAGE I & STAGE II CONSTRUCTION

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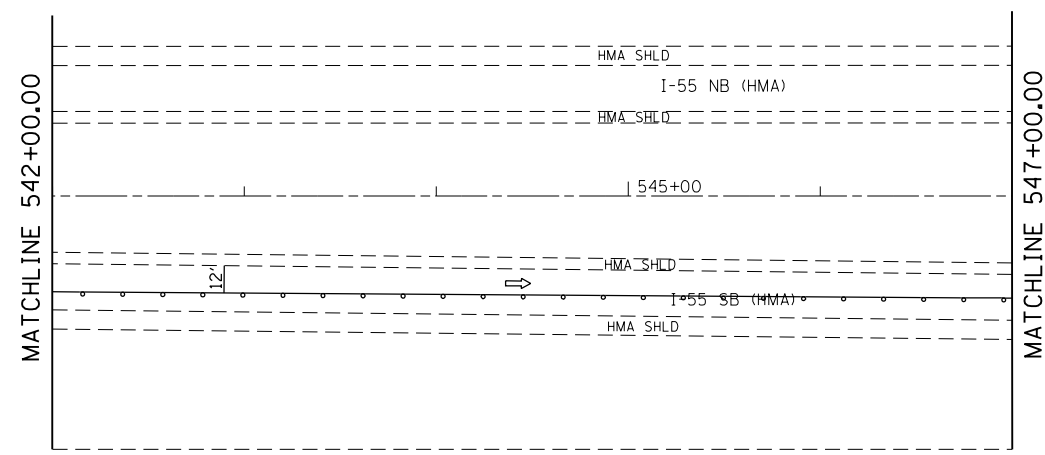
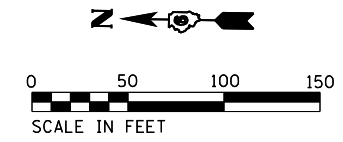
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN-STAGE 1
I-55 NB & SB

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	19
CONTRACT NO. 72J20				
		ILLINOIS	FED. AID PROJECT	



TYPE II BARRICADE, DRUM OR
VERTICAL BARRICADE AT 100' (30 M) CENTER

REMAINDER OF SIGNING ACCORDING TO STANDARD
701402 AND AS DIRECTED BY THE ENGINEER
PAID FOR AS TRAFFIC CONTROL (SPECIAL)

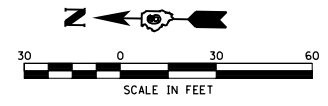
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	PLOT DATE = 1/26/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

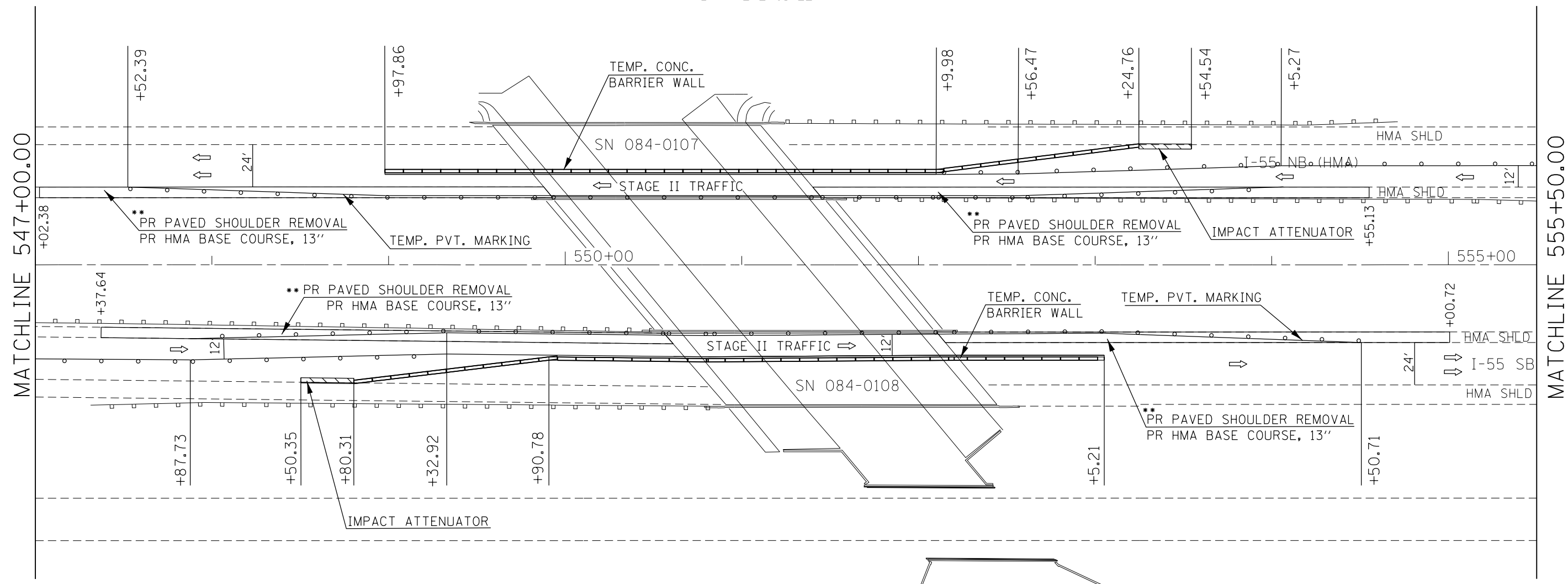
**I-55 SB TRAFFIC CONTROL PLAN
STAGE 2**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	22
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72J20	



REMAINDER OF SIGNING
ACCORDING TO STANDARD
701402 AND AS DIRECTED
BY THE ENGINEER



REMAINDER OF SIGNING
ACCORDING TO STANDARD
701402 AND AS DIRECTED
BY THE ENGINEER
PAID FOR AS TRAFFIC CONTROL (SPECIAL)

NOTE:
** HMA BASE COURSE TO BE COMPLETED PRIOR
TO STAGE I & STAGE II CONSTRUCTION

MODEL: Default
FILE: \\nas0101\B&E\ID\NTEC\Illinois\gov\p\w\DOT\Documents\1\DOT_Offices\Director\6\Projects\0672720\CADD\B&E\ID\NTEC\Illinois\gov\p\w\DOT\Documents\1\DOT_Offices\Director\6\Projects\0672720\st-5\B&E\Structure_30_Scale.dgn

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	DRAWN -	REVISED -
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PLOT DATE = 1/26/2018	DATE -	REVISED -

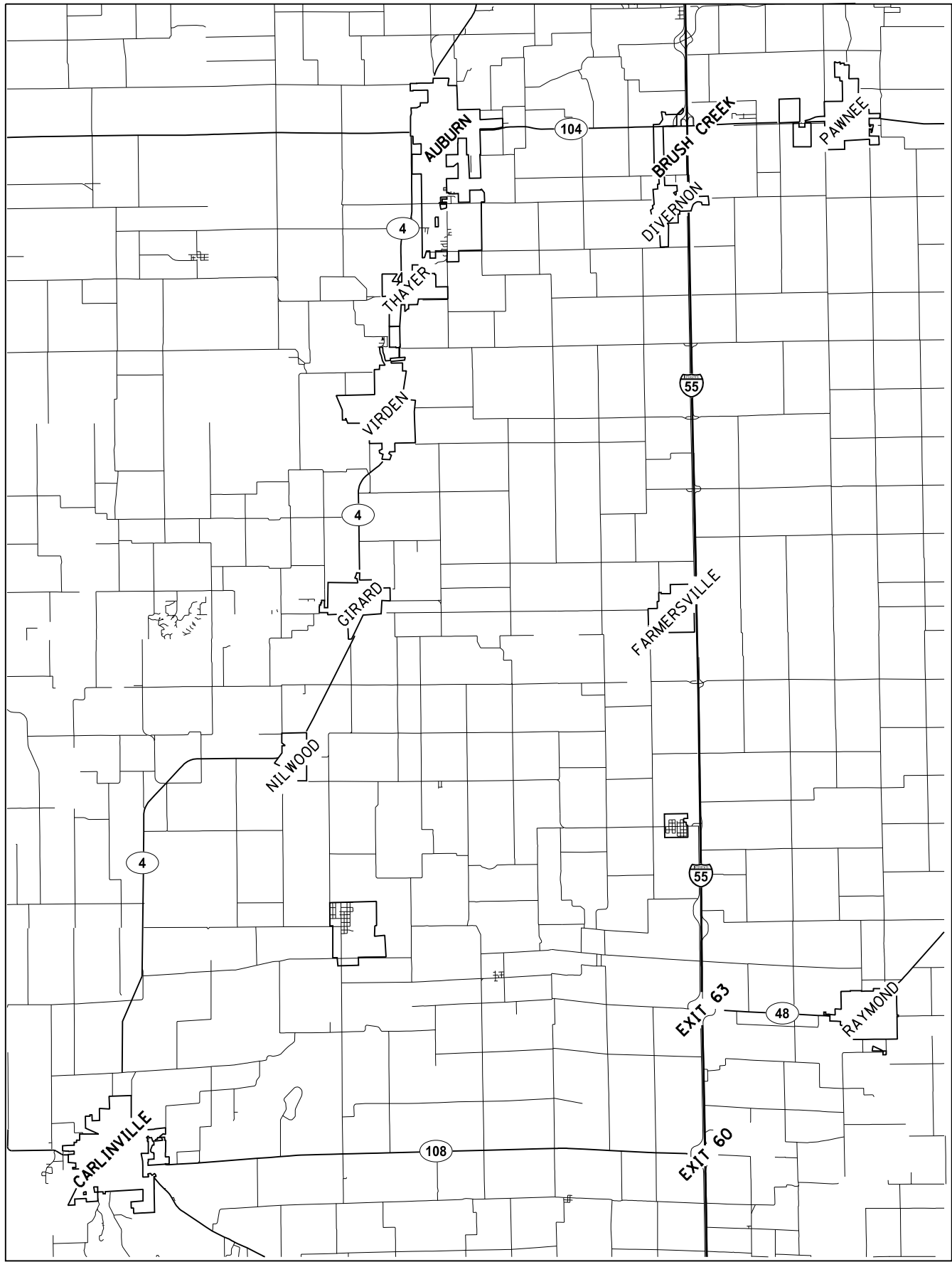
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL PLAN-STAGE 2
I-55 NB & SB**

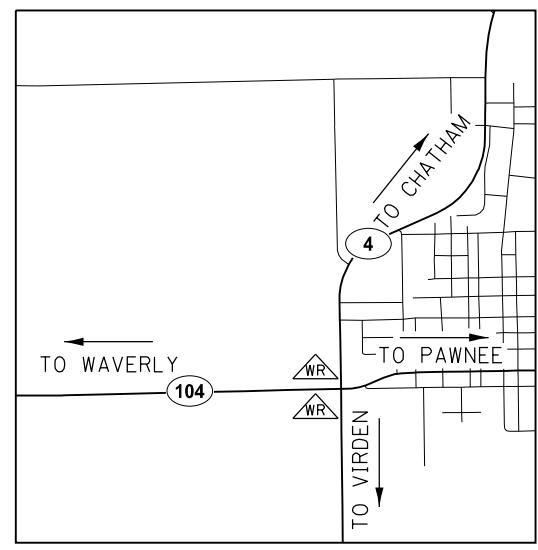
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	23
CONTRACT NO. 72J20				
ILLINOIS FED. AID PROJECT				

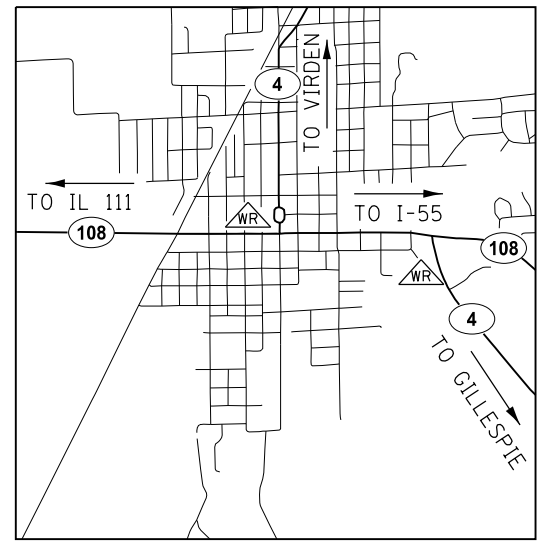
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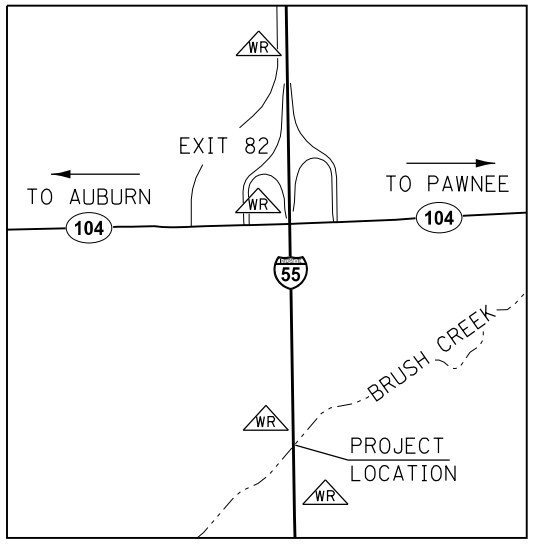
VICINITY MAP
NTS



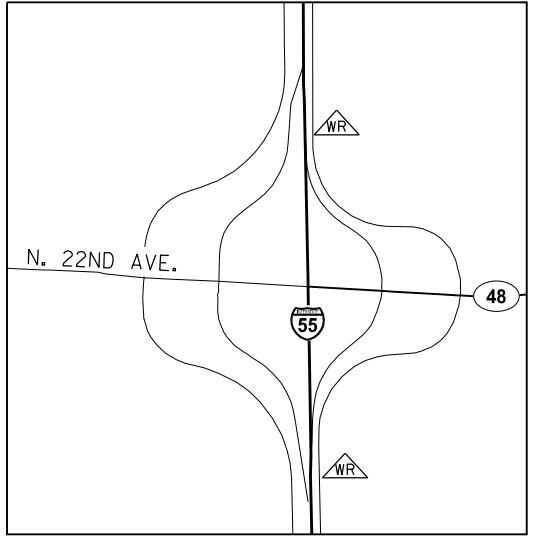
AUBURN INSET



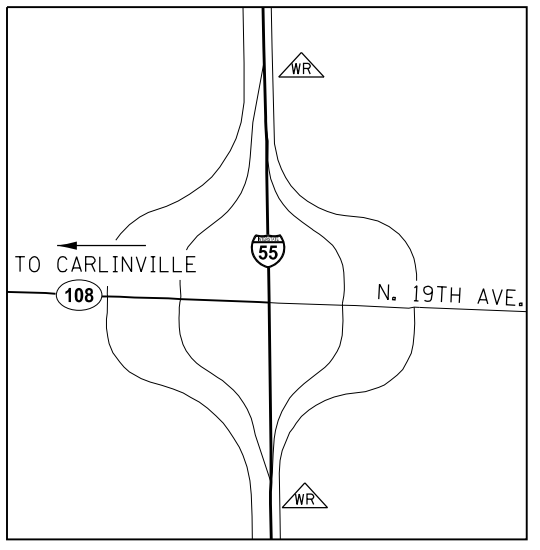
CARLINVILLE INSET



BRUSH CREEK INSET



EXIT 63 INSET



EXIT 60 INSET



NOTES

- SEE SPECIAL PROVISIONS FOR TRAFFIC CONTROL PLAN.
- LOCATION OF WIDTH RESTRICTION SIGNING IS SUBJECT TO THE APPROVAL OF THE ENGINEER.
- DETAILED WIDTH RESTRICTION SIGNING IS REQUIRED ONLY FOR STAGE 2 TRAFFIC.

△WR = LOCATION OF WIDTH RESTRICTION SIGNING

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

USER NAME = coxte	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/26/2018	DATE -	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	25
CONTRACT NO. 72J20				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

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

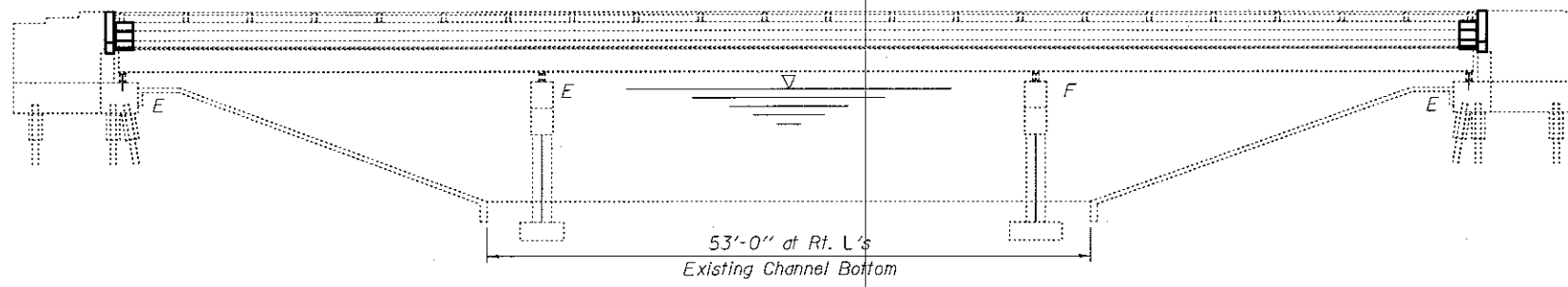
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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

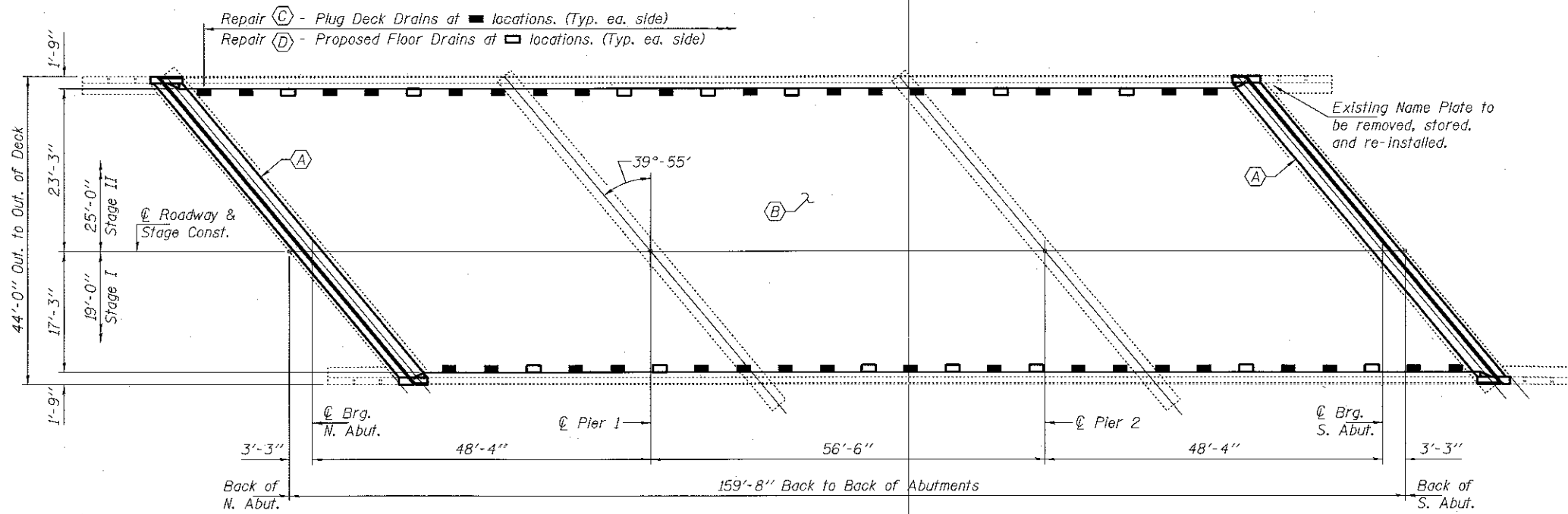
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods 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.



ELEVATION



PLAN - SN 084-0107 (N.B.)

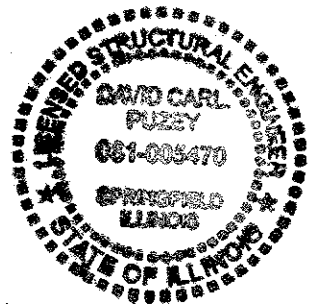
- (A) - Replace existing expansion joint with Preformed Joint Strip Seal.
- (B) - Bridge Deck Scarification, New Microsilica Concrete Overlay & Diamond Grinding.
- (C) - Plug existing Deck Drain with concrete.
- (D) - Proposed 6"φ Floor Drain cast in Full Depth Patch.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
** Concrete Removal	Cu. Yd.	17.3
** Concrete Superstructure	Cu. Yd.	17.0
Microsilica Concrete Overlay	Sq. Yd.	686
Reinforcement Bars, Epoxy Coated	Pound	2280
Bar Splicers	Each	28
Bridge Deck Scarification	Sq. Yd.	686
Diamond Grinding	Sq. Yd.	686
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	416
Preformed Joint Strip Seal	Foot	122
Plug Existing Deck Drains	Each	36
Floor Drains	Each	14
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	4.5
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	14.2
Structural Repair of Concrete ≤ 5 inches	Sq. Ft.	8.0
* Protective Coat	Sq. Yd.	719
Stud Shear Connectors	Each	72

* On new concrete & overlay only.

** Includes cost of Concrete Removal and Concrete Superstructure for installation of new Floor Drains.



Expires: November 30, 2018

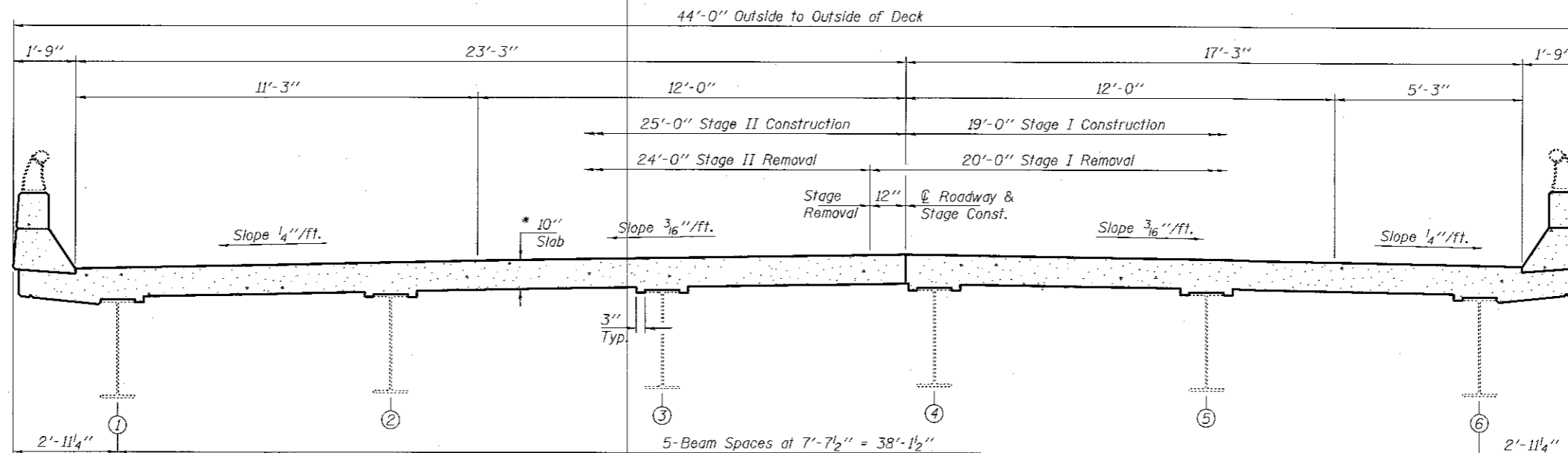
DESIGNED - <i>[Signature]</i>	EXAMINED - <i>[Signature]</i>	DATE - MARCH 8, 2018
CHECKED - <i>[Signature]</i>	PASSED - <i>[Signature]</i>	REVISOR -
DRAWN - Kyle M. Steffen	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR -
CHECKED - N.R.M. ccc		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION
F.A.I. ROUTE 55 (N.B.) OVER BRUSH CREEK
SN 084-0107 (N.B.)**

SHEET NO. 1 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	26
			CONTRACT NO. 72J20	
ILLINOIS FED. AID PROJECT				

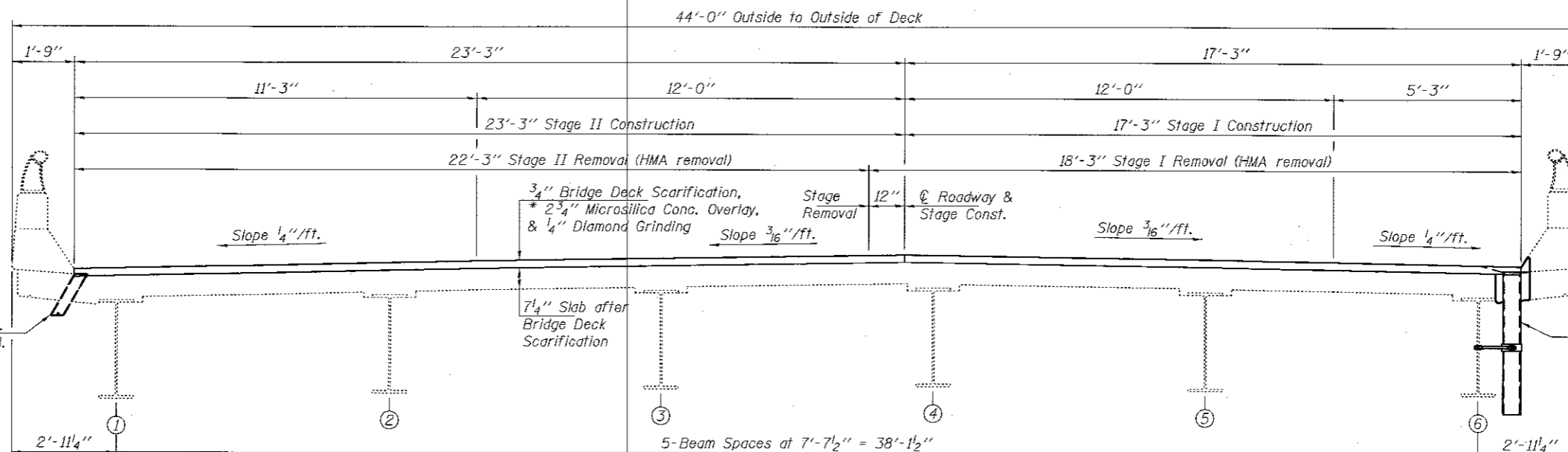


Existing Rail Post to be removed, stored, and re-installed. See details on sheet 5 of 8. (Typ.)

CROSS SECTION AT ABUTMENTS

(Looking South)

* Prior to 1/4" Diamond Grinding.



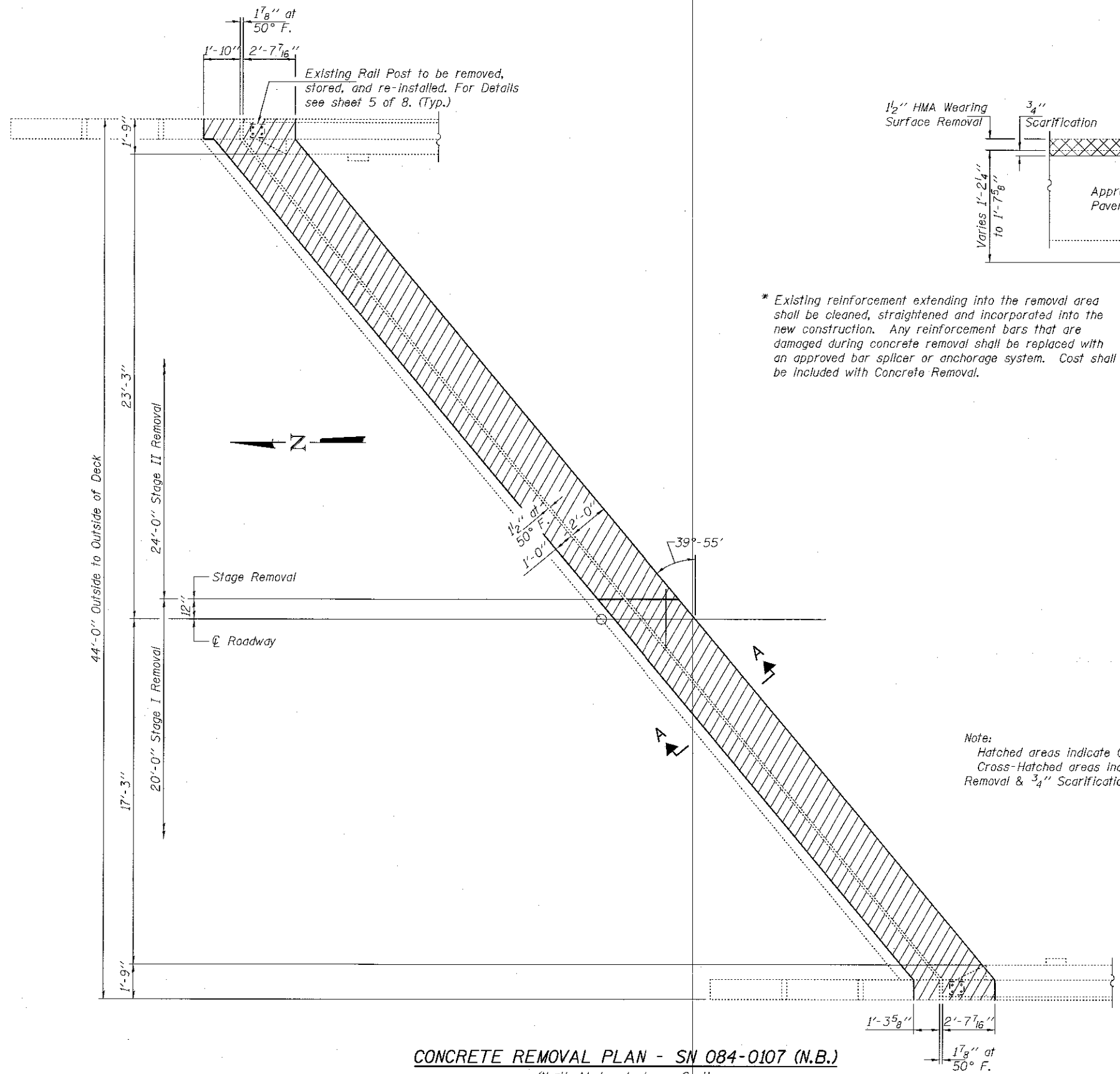
AT PLUGGED DECK DRAINS

AT PROPOSED DECK DRAINS

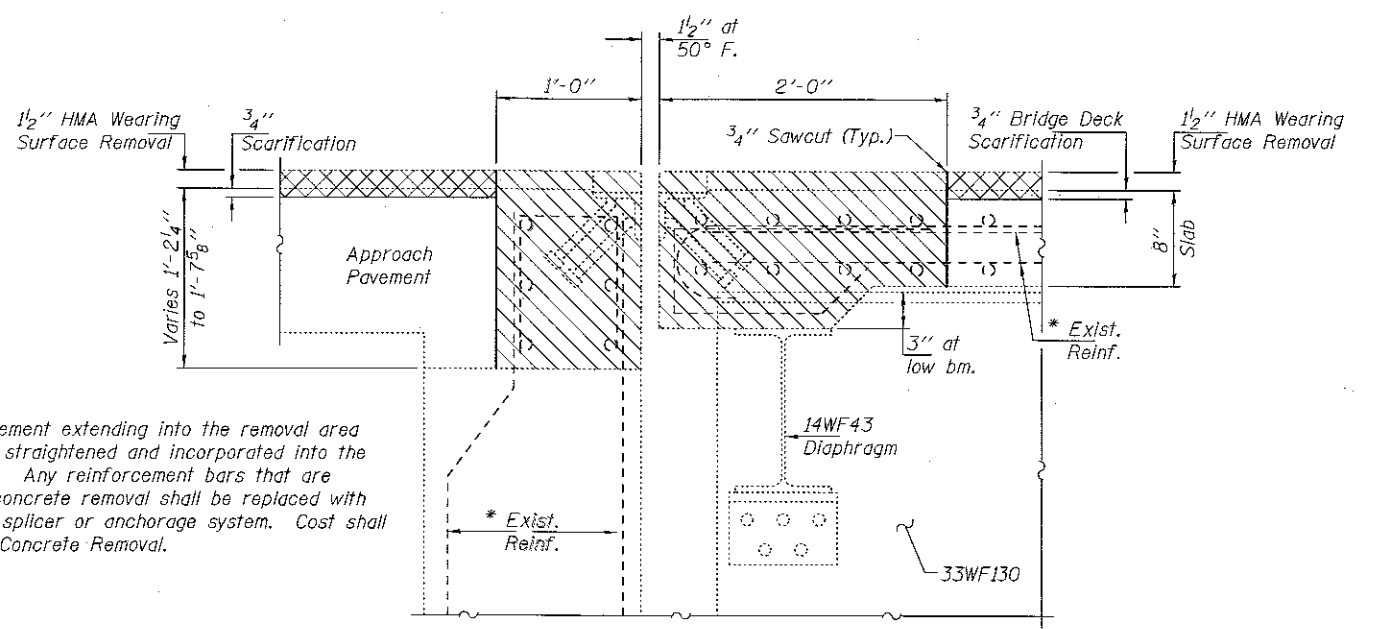
CROSS SECTION AT MID SPANS

(Looking South)

DESIGNED - NRM	EXAMINED	DATE - MARCH 8, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS & STAGING DETAILS SN 084-0107 (N.B.)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	<i>Timothy A. Seltz</i> ENGINEER OF STRUCTURAL SERVICES	REVIS			55	(64-5-2) BDR. BJR	SANGAMON	41	27
DRAWN - Kyle M. Steffen	<i>Carl Perry</i> ENGINEER OF BRIDGES AND STRUCTURES	REVIS			CONTRACT NO. 72J20				
CHECKED - NRM CCC					ILLINOIS FED. AID PROJECT				



CONCRETE REMOVAL PLAN - SN 084-0107 (N.B.)
 (North Abutment shown, South Abutment similar except as noted.)



SECTION A-A
 Dims. at Rt. L's

* Existing reinforcement 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 shall be included with Concrete Removal.

Note:
 Hatched areas indicate Concrete Removal.
 Cross-Hatched areas indicate HMA Surface Removal & 3/4" Scarification.

DESIGNED - NRM	EXAMINED - <i>Timothy A. Dault</i>	DATE - MARCH 6, 2018
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl Perry</i>	REVISOR
CHECKED - NRM CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR

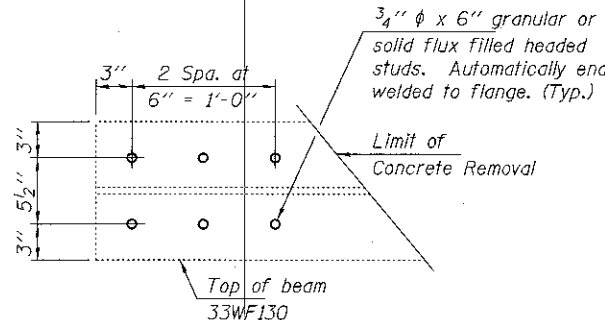
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL DETAILS
SN 084-0107 (N.B.)
 SHEET NO. 3 OF 8 SHEETS

F.A.I. RTE. 55	SECTION (84-5-2) BDR, BJR	COUNTY SANGAMON	TOTAL SHEETS 41	SHEET NO. 28
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72J20	

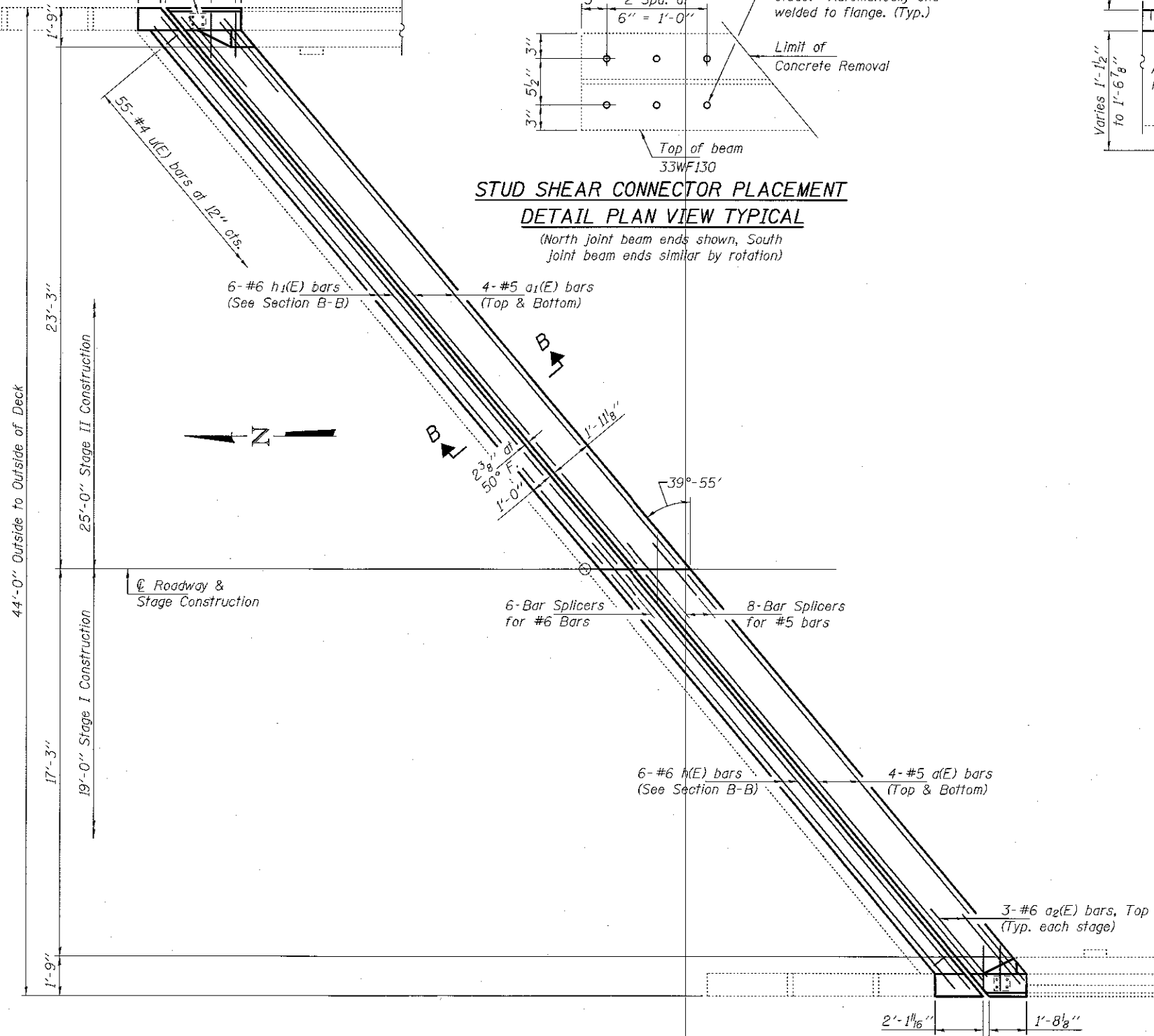
For Rail Post Anchorage Device
Details see sheet 5 of 8. (Typ.)

±12" 3'-4 3/16" 3-#4 d(E) bars, O.F.
1-#5 d1(E) bars, I.F.
3-#4 d2(E) bars, Top
(Typ. each stage)



**STUD SHEAR CONNECTOR PLACEMENT
DETAIL PLAN VIEW TYPICAL**

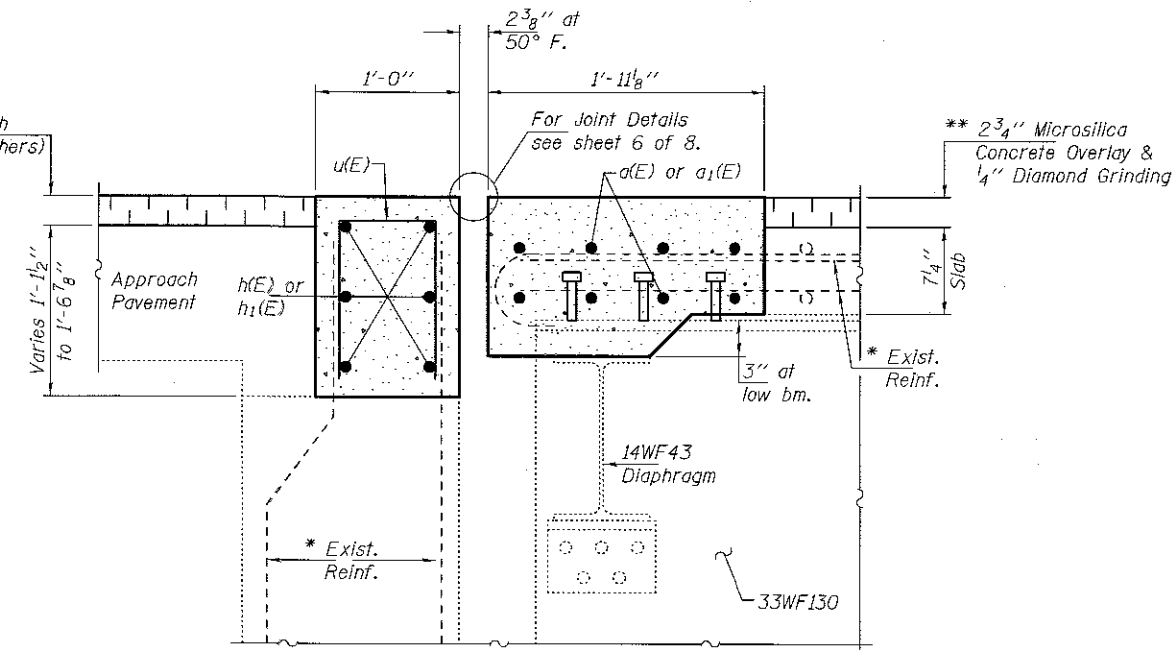
(North joint beam ends shown, South
joint beam ends similar by rotation)



CONCRETE REPLACEMENT PLAN - SN 084-0107 (N.B.)

(North Abutment shown, South
Abutment similar except as noted.)

2 1/2" Approach
Overlay (by others)

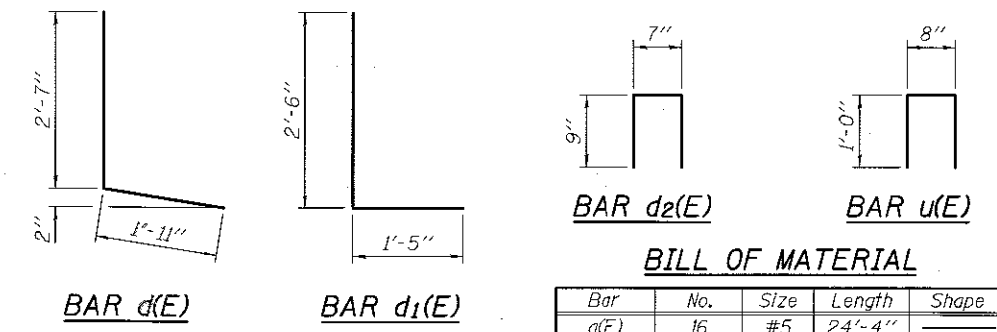


SECTION A-A

Dims. at Rt. L's

* Existing reinforcement 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 shall be included with Concrete Removal.

** Prior to 1/4" Diamond Grinding.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	16	#5	24'-4"	—
a1(E)	16	#5	32'-1"	—
a2(E)	12	#6	4'-0"	—
d(E)	6	#4	4'-6"	L
d1(E)	4	#5	3'-11"	L
d2(E)	8	#4	2'-1"	□
h(E)	12	#6	24'-4"	—
h1(E)	12	#6	32'-1"	—
u(E)	110	#4	2'-8"	□
Concrete Removal			Cu. Yd.	16.1
Concrete Superstructure			Cu. Yd.	15.9
Bar Splicers			Each	28
Reinforcement Bars, Epoxy Coated			Pound	2280
Stud Shear Connectors			Each	72

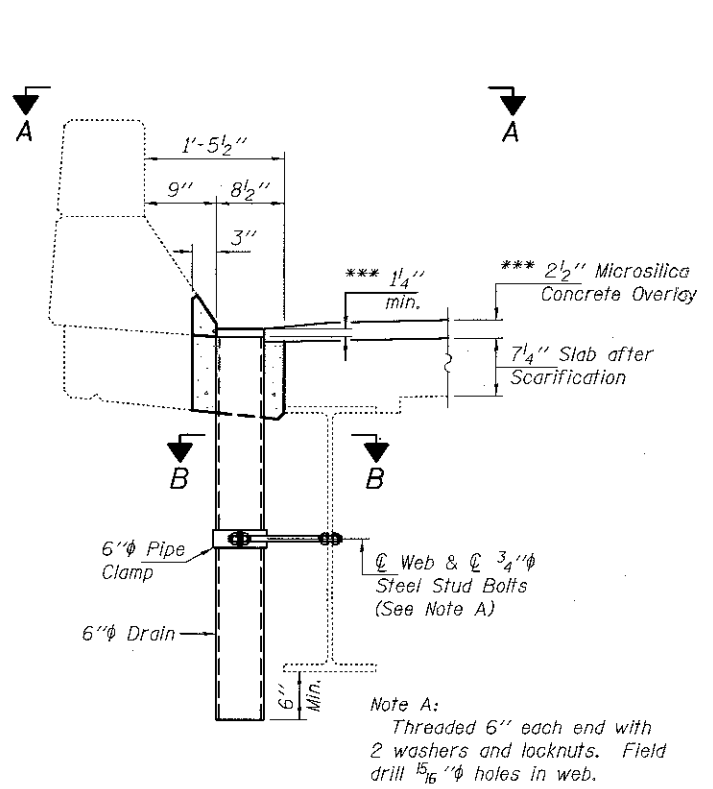
DESIGNED - NRM	EXAMINED - <i>Imot A. Smith</i>	DATE - MARCH 8, 2018
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl King</i>	REVISOR
CHECKED - NRM CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISION

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REPLACEMENT DETAILS
SN 084-0107 (N.B.)**

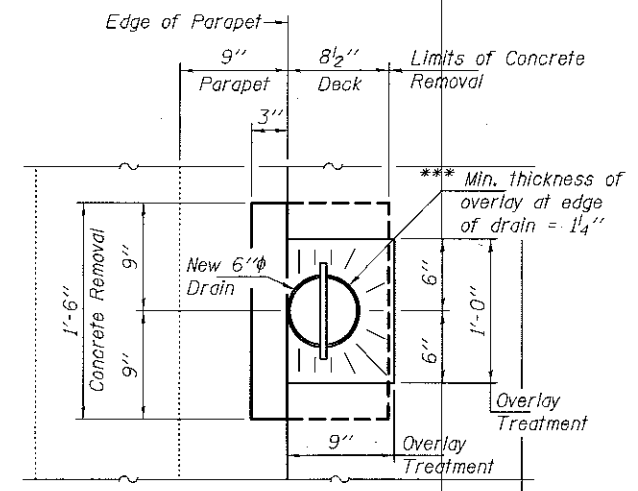
SHEET NO. 4 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	29
			CONTRACT NO. 72J20	
ILLINOIS FED. AID PROJECT				

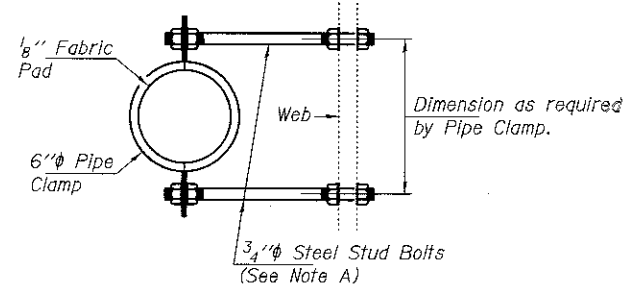


PROPOSED DRAIN DETAIL
(14 Locations)

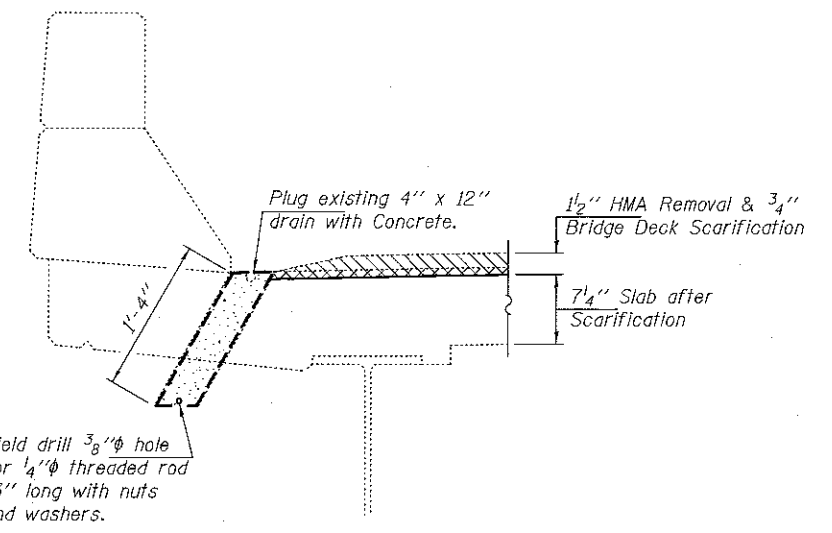
(For locations see General Plan on sheet 1 of 8.)



VIEW A-A

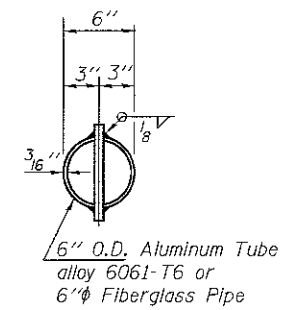


SECTION B-B

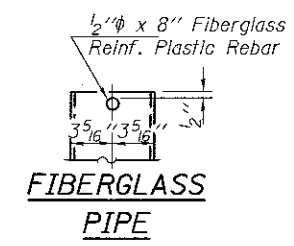
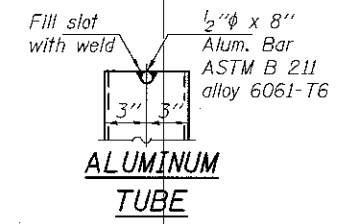


DRAIN ELIMINATION DETAIL
(36 Locations)

(For locations see General Plan on sheet 1 of 8.)



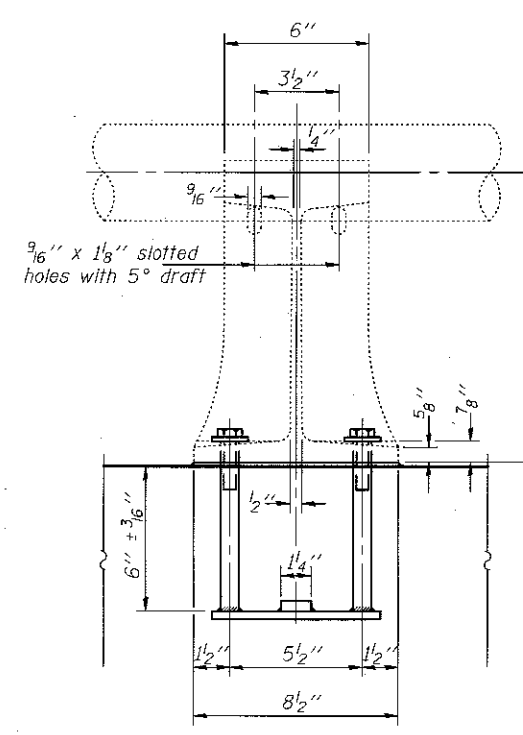
TOP PLAN
(Showing Aluminum Tube)



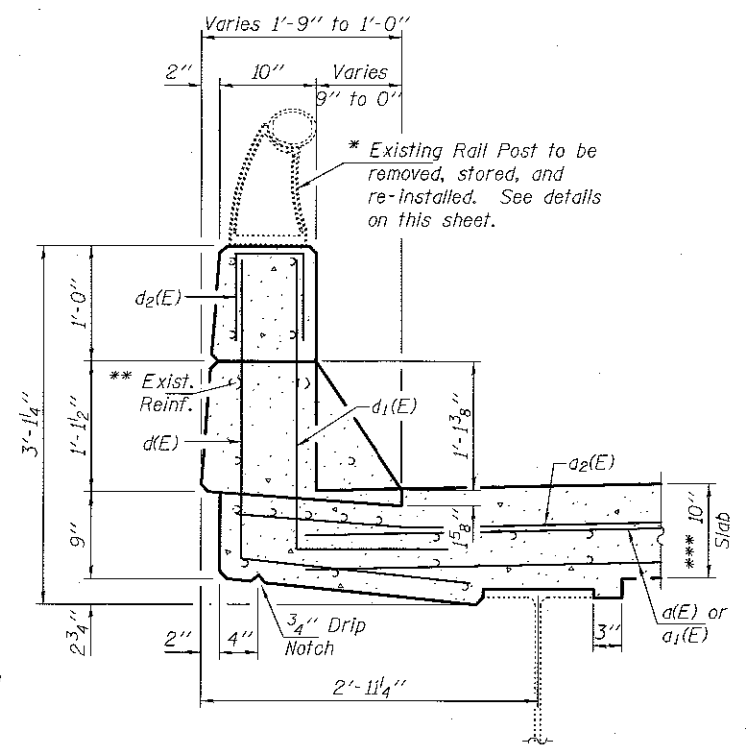
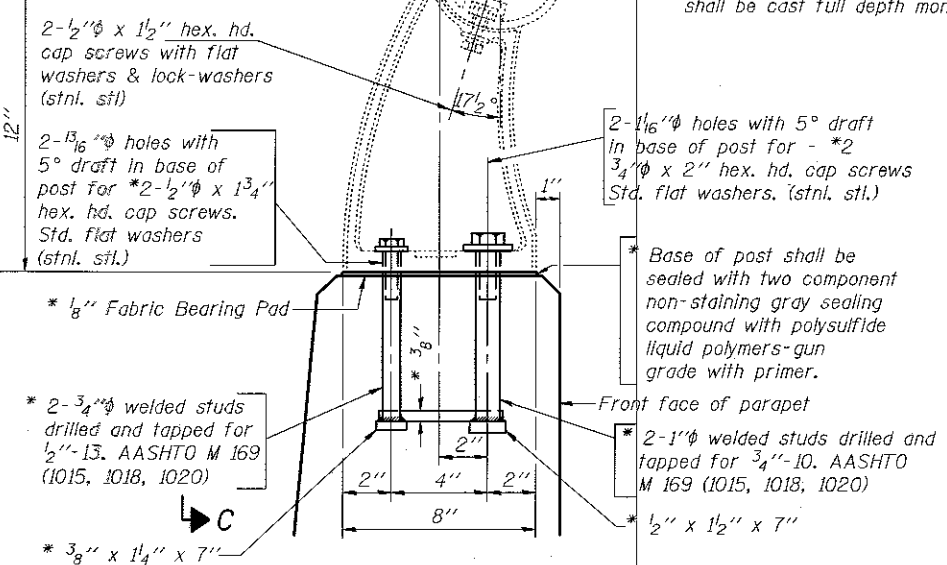
FIBERGLASS PIPE

Notes:

Drains shall be located clear of all diaphragms.
 The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings Spec. SSPC-SP1 prior to painting.
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
 New Floor Drains shall be installed after scarification operations are completed for each stage. Full depth patches approximately 16" square shall be used to removed the existing floor drains and install proposed drains. Cost of existing floor drain removal shall be included with Full Depth Patching and will not be measured for payment separately. The deck patches surrounding the new drains shall be cast full depth monolithically with the overlay.



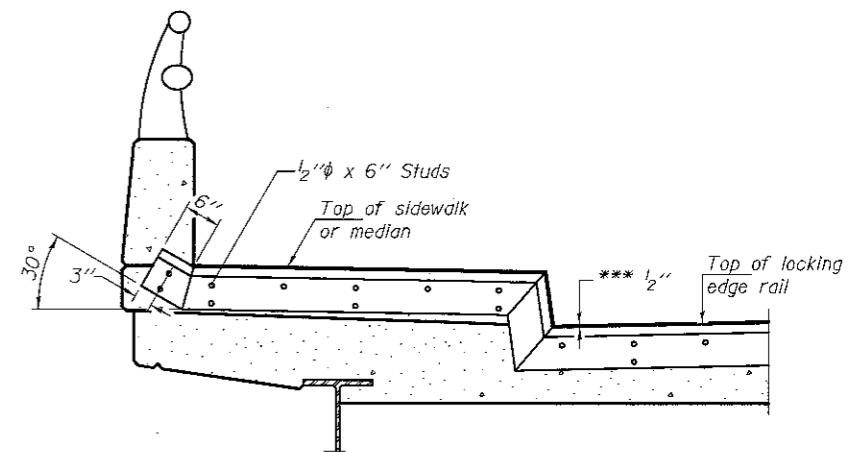
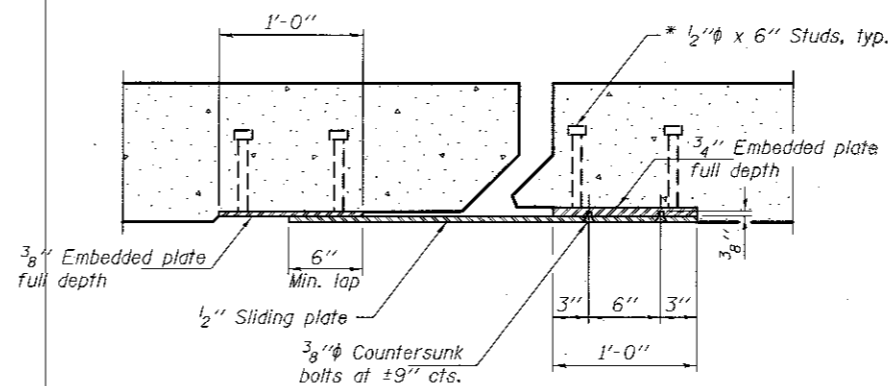
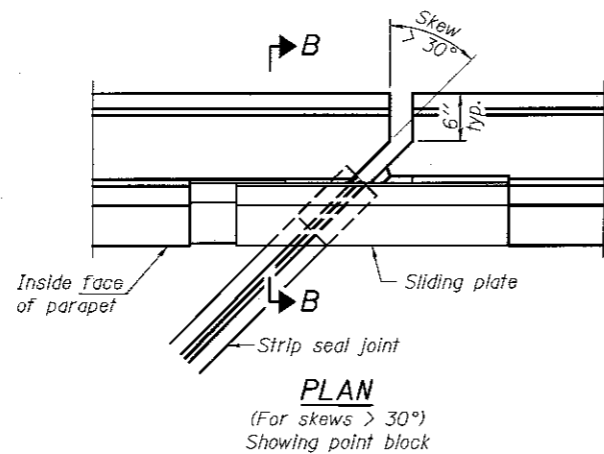
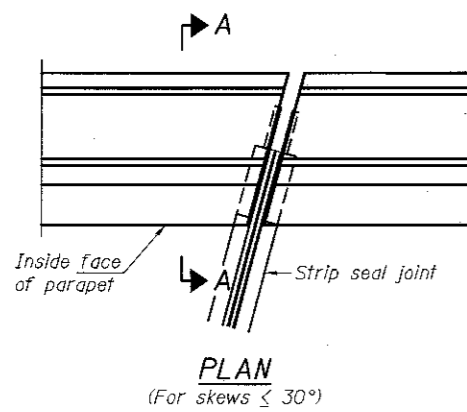
RAIL POST ANCHORAGE DEVICE DETAILS
(4-Required)



BRIDGE PARAPET DETAILS
(New Rail Post Anchorage Device not shown for clarity.)

* New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.
 *** Existing reinforcement 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 shall be included with Concrete Removal.
 *** Prior to 1/4 inch Diamond Grinding.

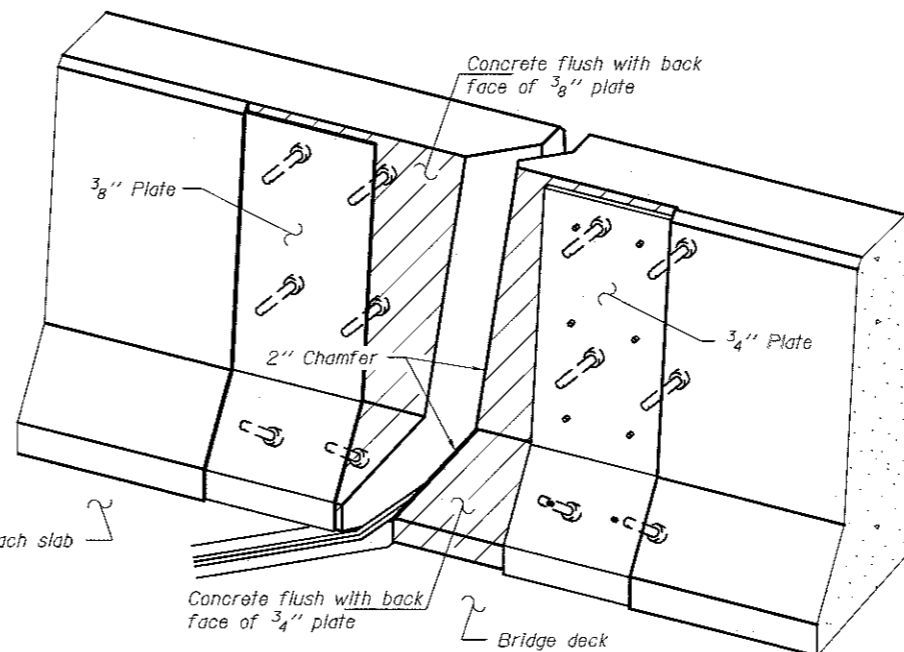
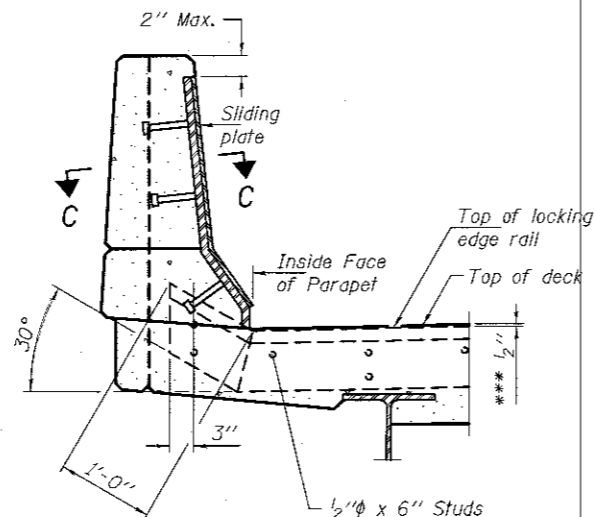
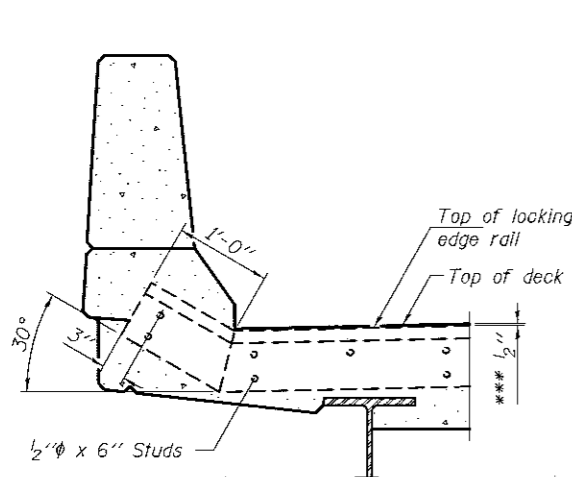
DESIGNED - NRM	EXAMINED - <i>Timothy A. Dault</i>	DATE - MARCH 8, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REPAIR DETAILS SN 084-0107 (N.B.)	F.A.I. RTE. 55	SECTION (84-5-2) BDR, BJR	COUNTY SANGAMON	TOTAL SHEETS 41	SHEET NO. 30
CHECKED - CCC	PASSED - <i>Carl King</i>	REVISOR			SHEET NO. 5 OF 8 SHEETS	CONTRACT NO. 72J20 ILLINOIS FED. AID PROJECT			
DRAWN - Kyle M. Steffen	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR							
CHECKED - NRM CCC		REVISOR							



TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

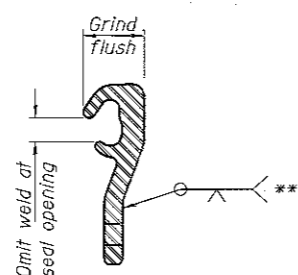
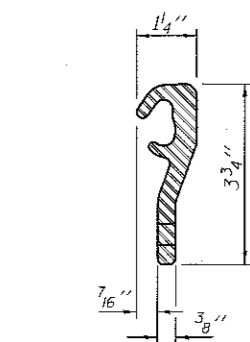
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



SECTION A-A

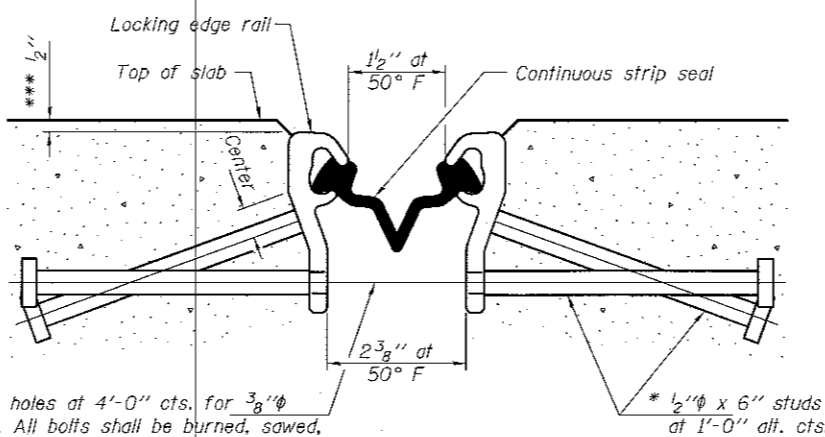
SECTION B-B

TRIMETRIC VIEW
(Showing back plates only)



LOCKING EDGE RAIL

LOCKING EDGE RAIL SPLICE



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.

* 1/2" ϕ x 6" studs at 1'-0" alt. cts.

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

*** Prior to 1/4" Diamond Grinding.

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.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.

The manufacturer's recommended installation methods shall be followed.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	122

DESIGNED - NRM
CHECKED - CCC
DRAWN - Kyle M. Steffen
CHECKED - NRM CCC

EXAMINED	<i>Timothy A. Smith</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 8, 2018
PASSED	<i>Carl Hogg</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED

DATE - MARCH 8, 2018
REVISED
REVISED

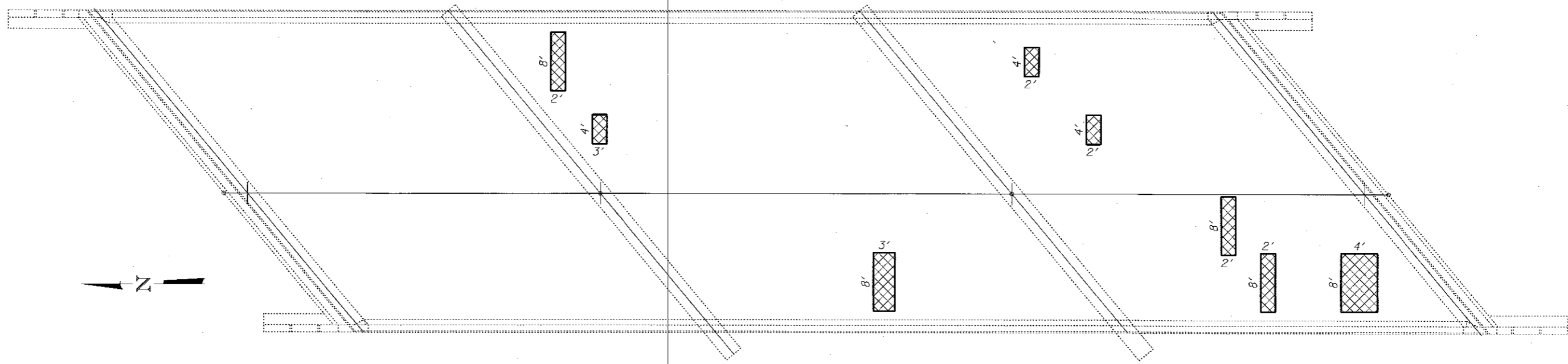
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL DETAILS
SN 084-0107 (N.B.)**




SHEET NO. 6 OF 8 SHEETS

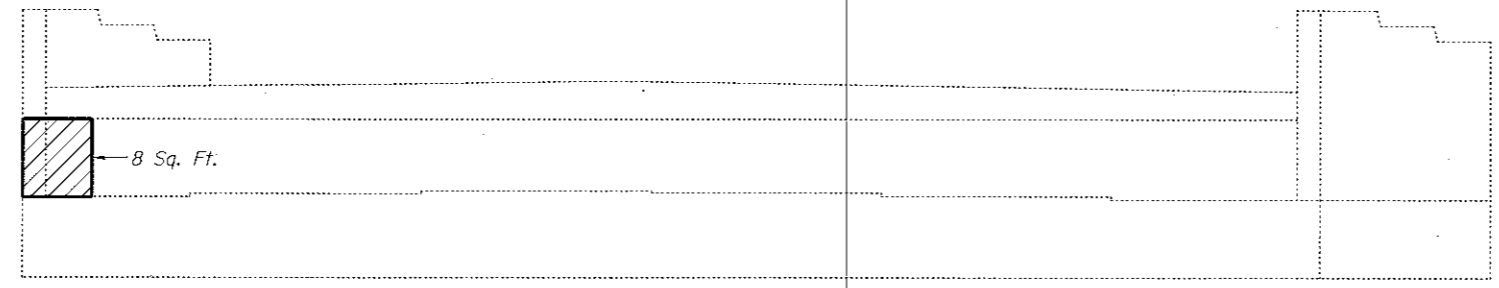
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	31
				CONTRACT NO. 72J20

ILLINOIS FED. AID PROJECT




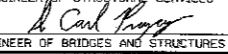
DECK SOFFIT PATCHING PLAN

-  Structural Repair of Concrete ≤ 5 inches
-  Structural Repair of Concrete > 5 inches
-  Deck Slab Repair (Full Depth, Type II)



NORTH ABUTMENT REPAIR DETAILS
(Looking North)

DESIGNED - NRM
CHECKED - CCC
DRAWN - Kyle M. Steffen
CHECKED - NRM CCC

EXAMINED		DATE - MARCH 8, 2018
PASSED		REVISED
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

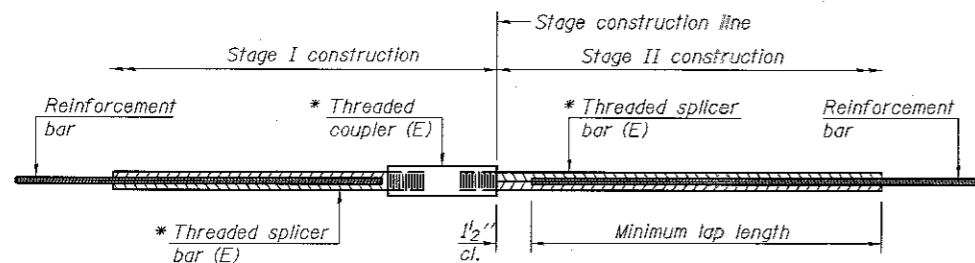
DATE - MARCH 8, 2018
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK PATCHING AND SUBSTRUCTURE REPAIR DETAILS
SN 084-0107 (N.B.)

SHEET NO. 7 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	32
CONTRACT NO. 72J20			ILLINOIS FED. AID PROJECT	

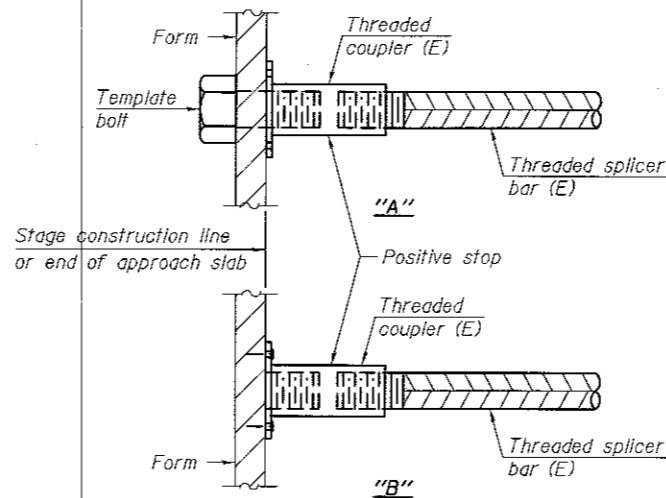


STANDARD BAR SPLICER ASSEMBLY

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

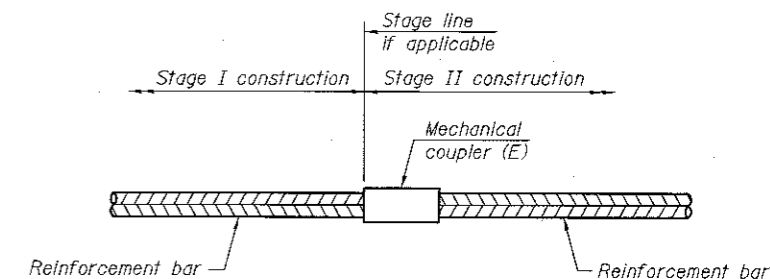
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Bridge Deck	#5	16	3'-6"
Abutment	#6	12	4'-0"



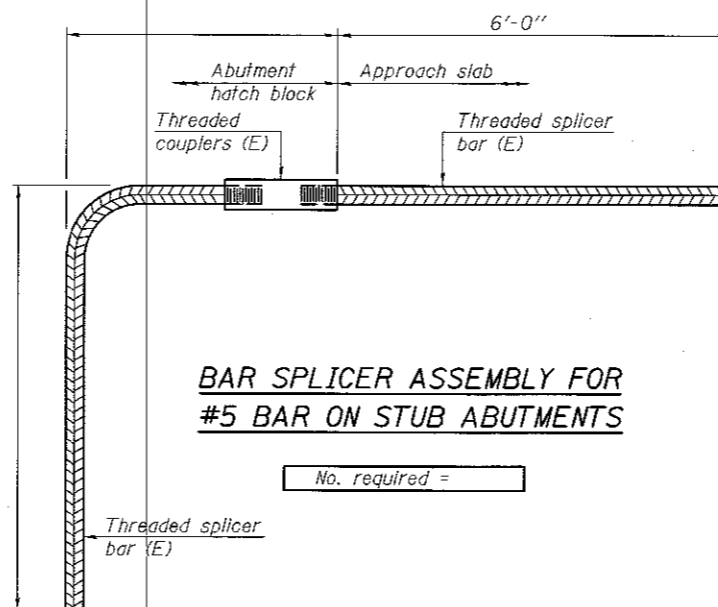
INSTALLATION AND SETTING METHODS

"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



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

11-22-2016

DESIGNED - NRM
 CHECKED - CCC
 DRAWN - Kyle M. Steffen
 CHECKED - NRM CCC

EXAMINED
 PASSED
 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 8, 2018
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 SN 084-0107 (N.B.)

SHEET NO. 8 OF 8 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	33
CONTRACT NO. 72J20			ILLINOIS FED. AID PROJECT	

GENERAL NOTES

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

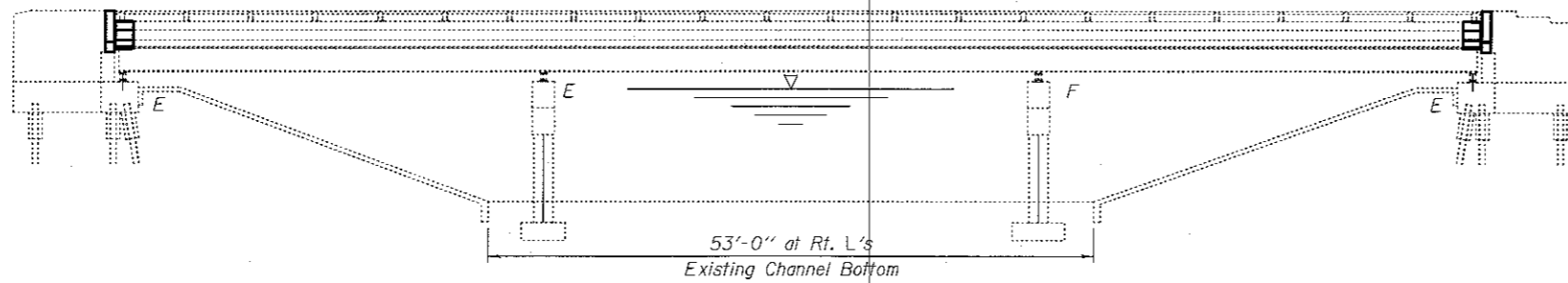
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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

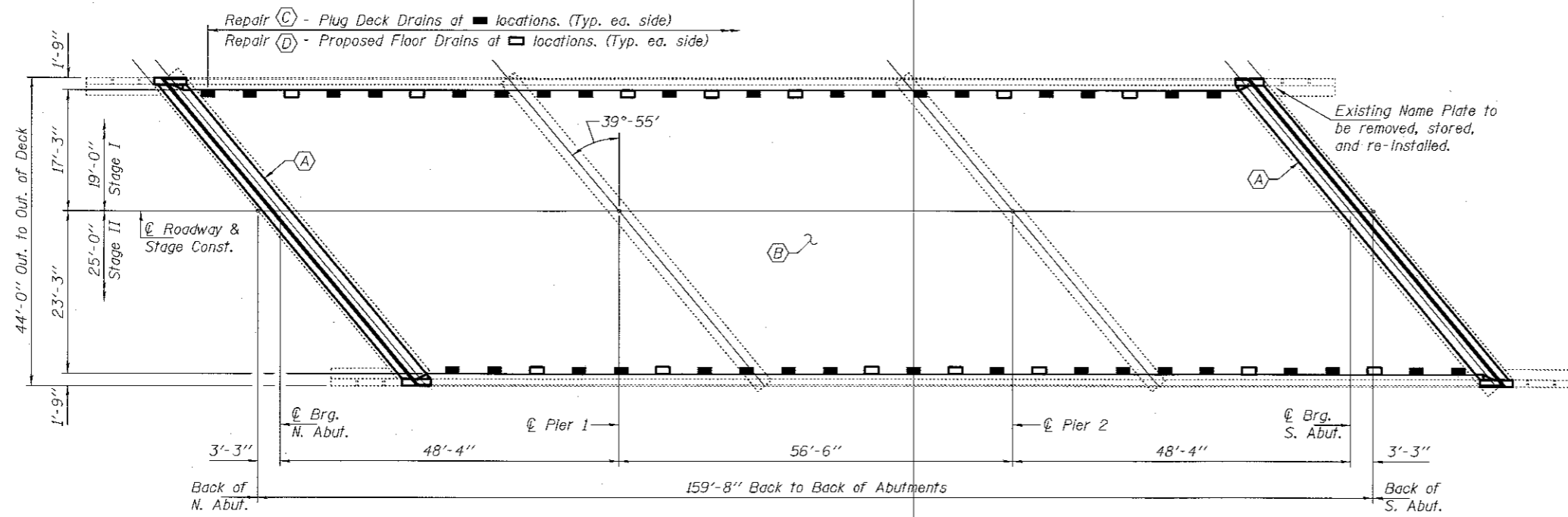
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods 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.



ELEVATION



PLAN - SN 084-0108 (S.B.)

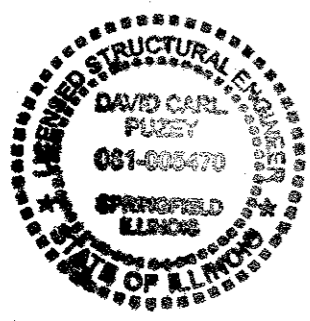
- (A) - Replace existing expansion joint with Preformed Joint Strip Seal.
- (B) - Bridge Deck Scarification, New Microsilica Concrete Overlay & Diamond Grinding.
- (C) - Plug existing deck drain with concrete.
- (D) - Proposed 6"φ Floor Drain cast in Full Depth Patch.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
** Concrete Removal	Cu. Yd.	17.3
** Concrete Superstructure	Cu. Yd.	17.0
Microsilica Concrete Overlay	Sq. Yd.	686
Reinforcement Bars, Epoxy Coated	Pound	2280
Bar Splicers	Each	28
Bridge Deck Scarification	Sq. Yd.	686
Diamond Grinding	Sq. Yd.	686
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	416
Preformed Joint Strip Seal	Foot	122
Plug Existing Deck Drains	Each	36
Floor Drains	Each	14
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	4.5
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	33.8
Structural Repair of Concrete ≤ 5 Inches	Sq. Ft.	8.0
Structural Repair of Concrete > 5 Inches	Sq. Ft.	10.0
Protective Coat	Sq. Yd.	719
* Stud Shear Connectors	Each	72

* On new concrete & overlay only.

** Includes cost of Concrete Removal and Concrete Superstructure for installation of new Floor Drains.



Expires: November 30, 2018

DESIGNED - <i>David Carl Pusey</i>	EXAMINED - <i>Tony A. D...</i>	DATE - MARCH 8, 2018
CHECKED - <i>Kyle M. Steffen</i>	PASSED - <i>David Carl Pusey</i>	REVISED
DRAWN - <i>K.M. Steffen</i>	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

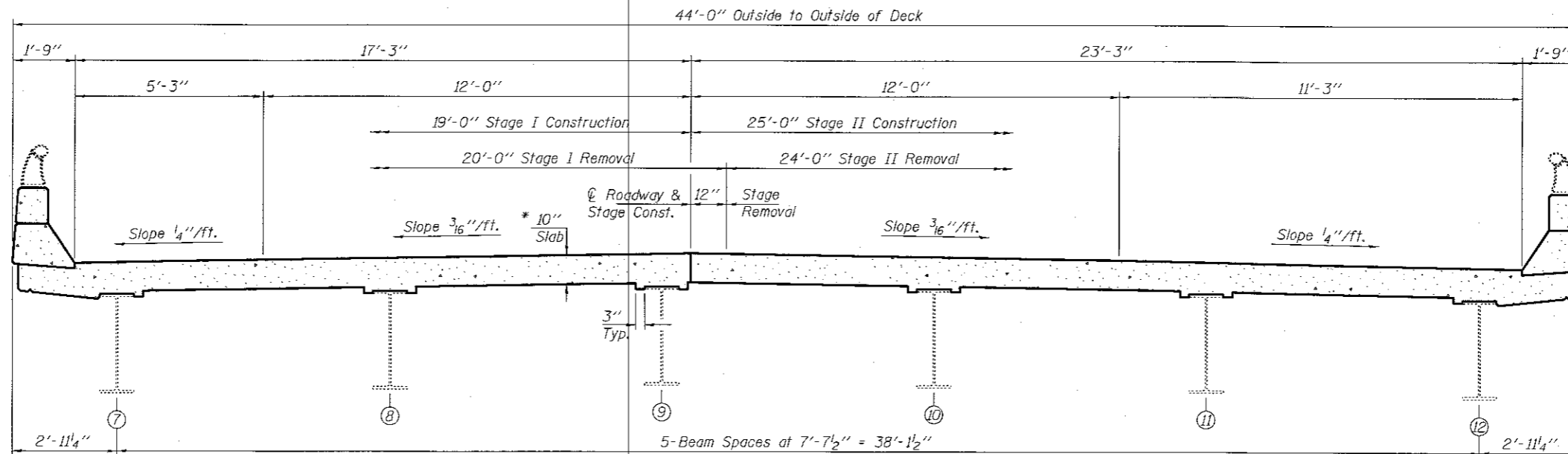
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION
F.A.I. ROUTE 55 (S.B.) OVER BRUSH CREEK
SN 084-0108 (S.B.)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	34
				CONTRACT NO. 72J20

SHEET NO. 1 OF 8 SHEETS

ILLINOIS FED. AID PROJECT

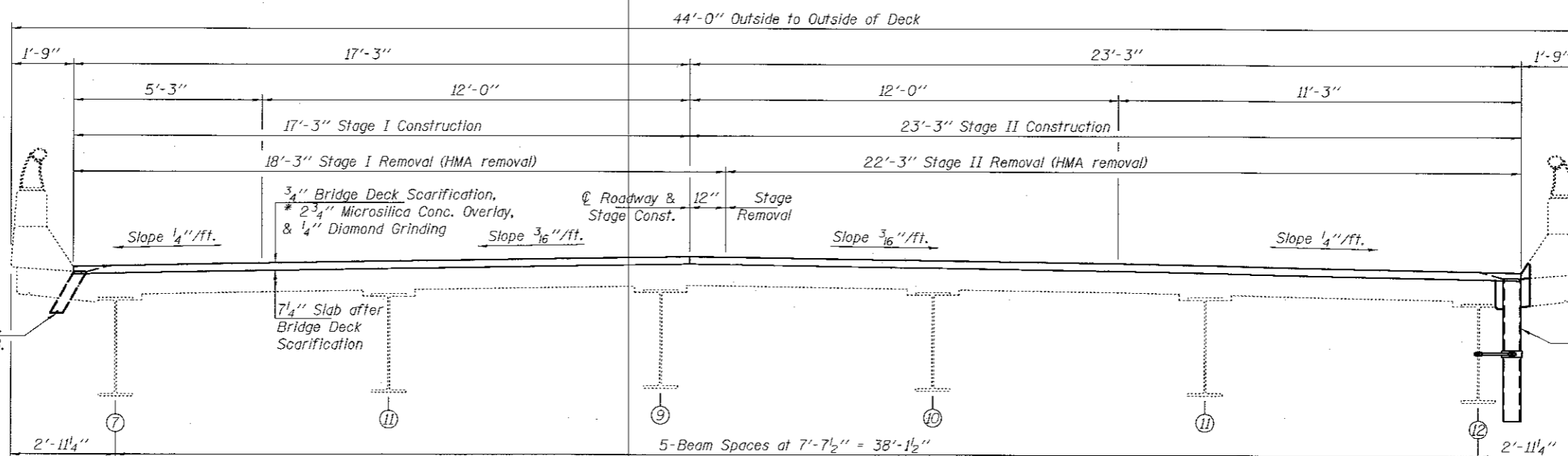


Existing Rail Post to be removed, stored, and re-installed. See details on sheet 5 of 8. (Typ.)

CROSS SECTION AT ABUTMENTS

(Looking South)

* Prior to 1/4" Diamond Grinding.



Existing 4" x 12" Deck Drain. For locations see sheet 1 of 8. For Drain Elimination Details see sheet 5 of 8.

Proposed 6" Floor Drain. For locations see sheet 1 of 8. For Floor Drain Details & Overlay Treatment see sheet 5 of 8.

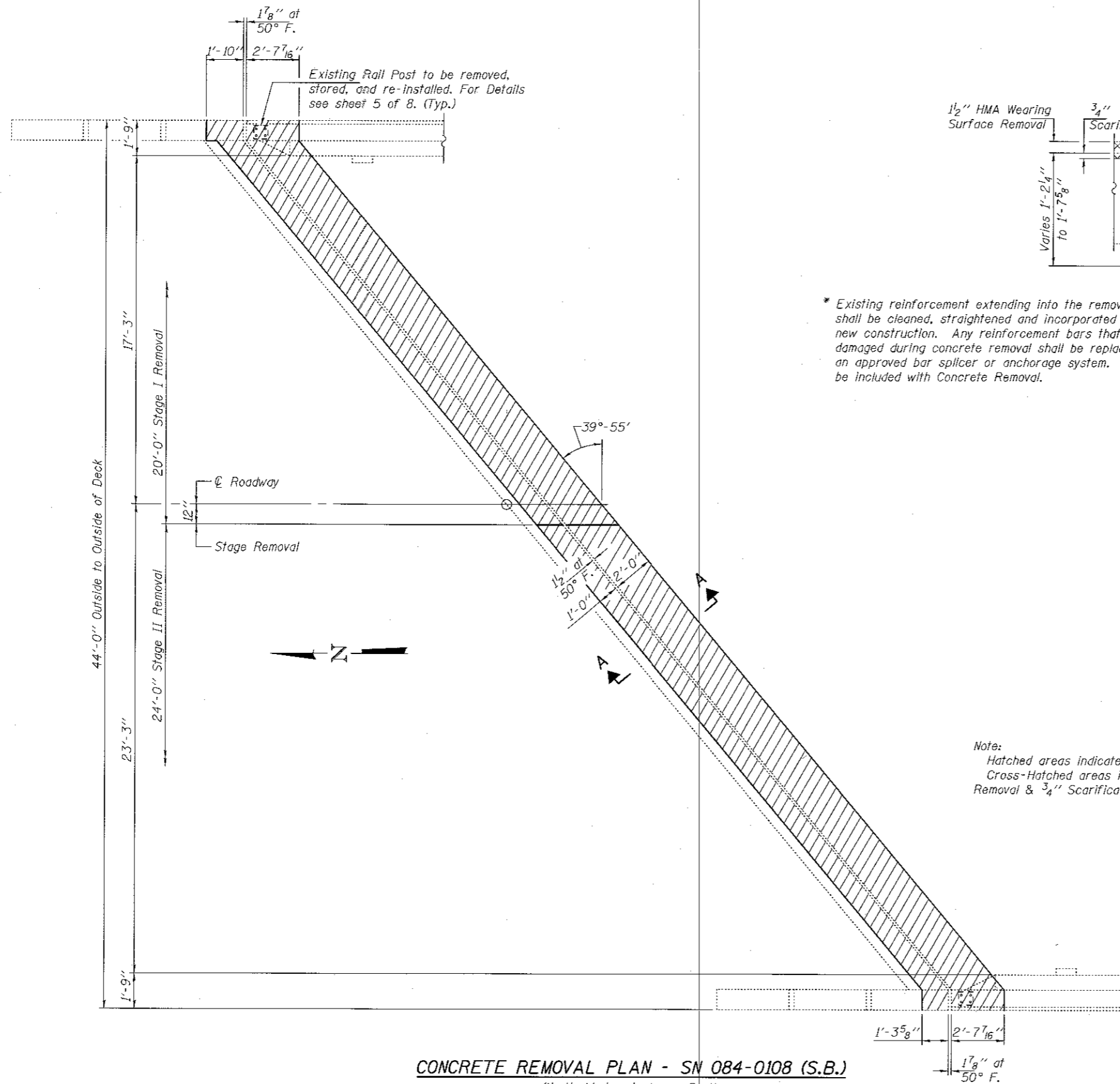
AT PLUGGED DECK DRAINS

AT PROPOSED DECK DRAINS

CROSS SECTION AT MID SPANS

(Looking South)

DESIGNED - NRM	EXAMINED - <i>Timothy A. Anhalt</i>	DATE - MARCH 8, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS & STAGING DETAILS		F.A.I. RTE. 55	SECTION (84-5-2) BDR, 8JR	COUNTY SANGAMON	TOTAL SHEETS 41	SHEET NO. 35
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES			SN 084-0108 (S.B.)						
DRAWN - Kyle M. Steffen	ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 2 OF 8 SHEETS						
CHECKED - NRM CCC		REVISED		ILLINOIS FED. AID PROJECT						

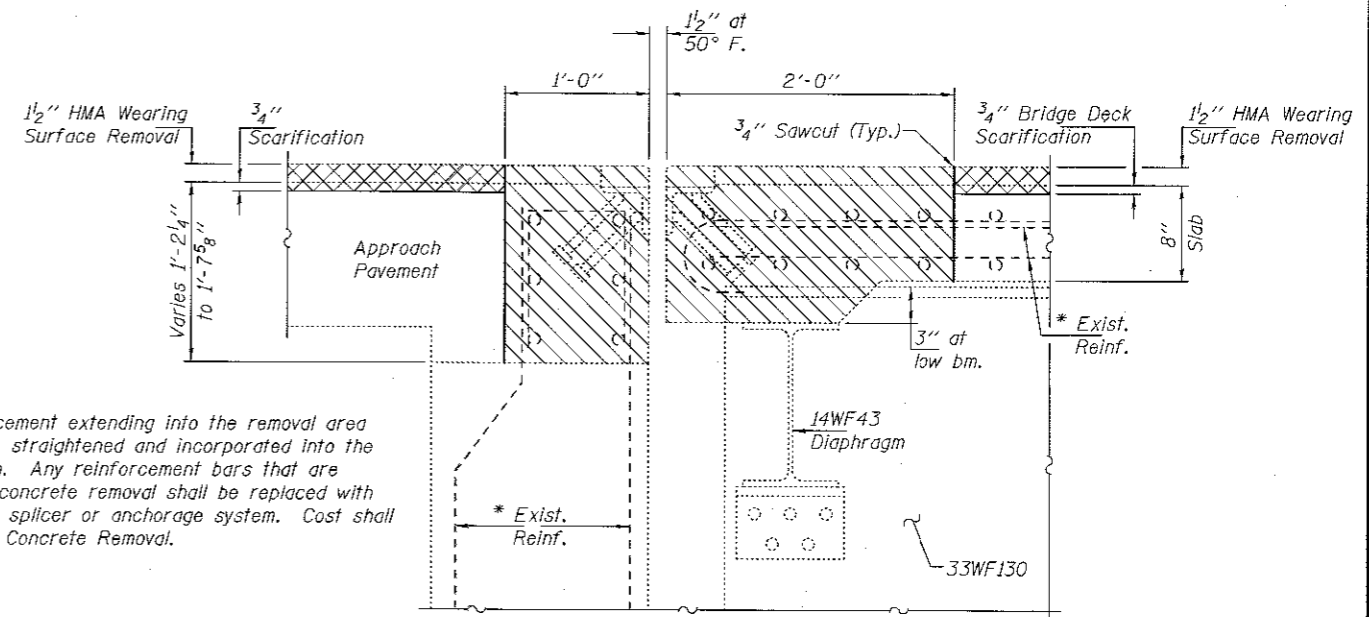


CONCRETE REMOVAL PLAN - SN 084-0108 (S.B.)

(North Abutment shown, South Abutment similar except as noted.)

* Existing reinforcement 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 shall be included with Concrete Removal.

Note:
Hatched areas indicate Concrete Removal.
Cross-Hatched areas indicate HMA Surface Removal & 3/4" Scarification.



SECTION A-A

Dims. at Rt. L's

DESIGNED - NRM
CHECKED - CCC
DRAWN - Kyle M. Steffen
CHECKED - NRM CCC

EXAMINED	<i>Timothy A. [Signature]</i>	DATE - MARCH 8, 2018
PASSED	<i>Carl [Signature]</i>	REVISED
	ENGINEER OF BRIDGES AND STRUCTURES	REVISED

DATE - MARCH 8, 2018
REVISED
REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

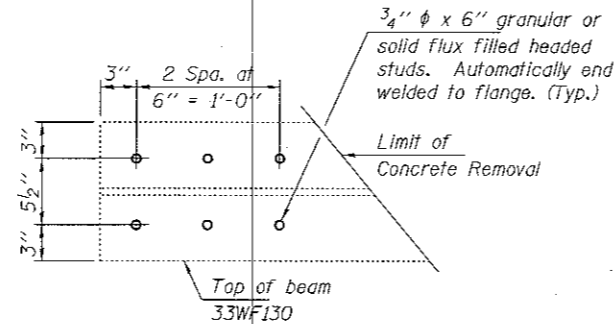
**JOINT REMOVAL DETAILS
SN 084-0108 (S.B.)**

SHEET NO. 3 OF 8 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	36
CONTRACT NO. 72J20			ILLINOIS FED. AID PROJECT	

For Roll Post Anchorage Device
Details see sheet 5 of 8. (Typ.)

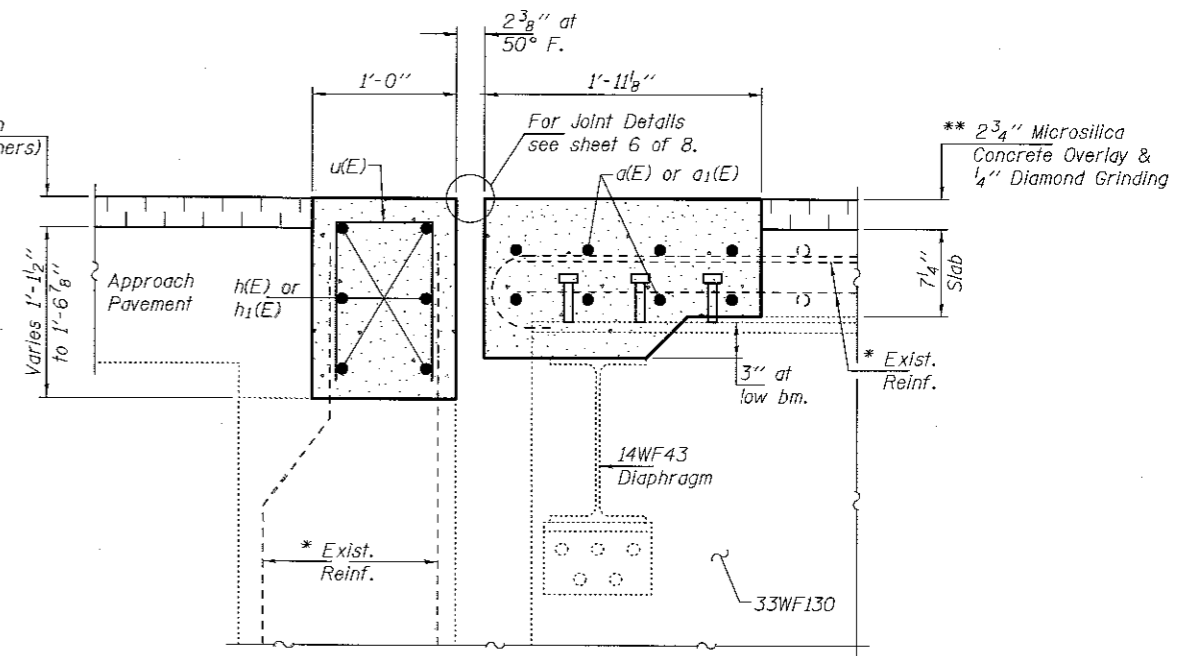
±12" 3'-4 3/16" 3-#4 d(E) bars, O.F.
1-#5 d1(E) bars, I.F.
3-#4 d2(E) bars, Top
(Typ. each stage)



**STUD SHEAR CONNECTOR PLACEMENT
DETAIL PLAN VIEW TYPICAL**

(North joint beam ends shown, South joint beam ends similar by rotation)

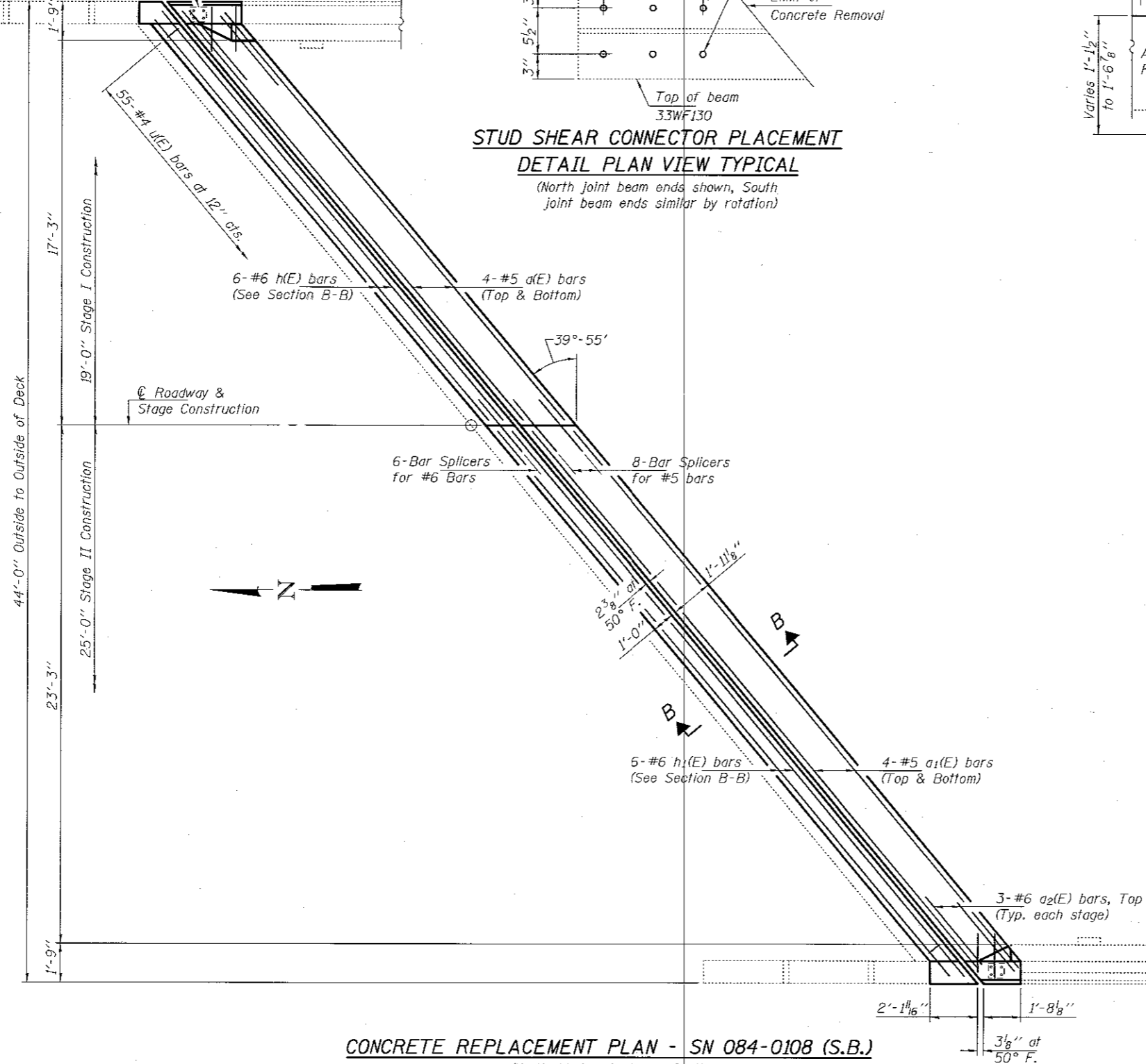
2 1/2" Approach Overlay (by others)



SECTION A-A
Dims. at Rt. L's

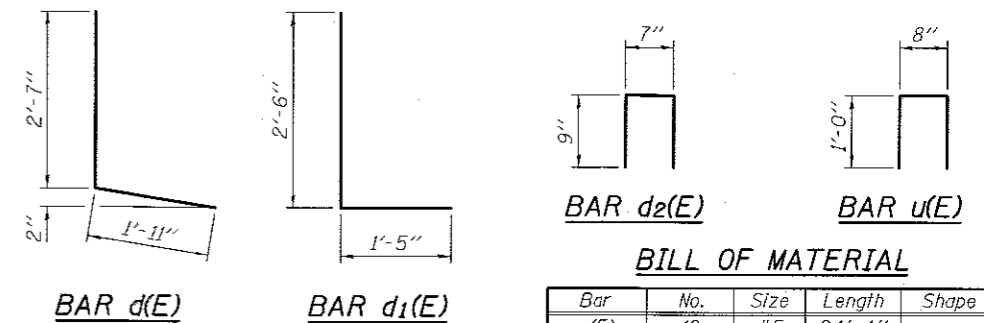
* Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete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

** Prior to 1/4" Diamond Grinding.



CONCRETE REPLACEMENT PLAN - SN 084-0108 (S.B.)

(North Abutment shown, South Abutment similar except as noted.)



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	16	#5	24'-4"	—
a1(E)	16	#5	32'-1"	—
a2(E)	12	#6	4'-0"	—
d(E)	6	#4	4'-6"	L
d1(E)	4	#5	3'-11"	L
d2(E)	8	#4	2'-1"	□
h(E)	12	#6	24'-4"	—
h1(E)	12	#6	32'-1"	—
u(E)	110	#4	2'-8"	□
Concrete Removal			Cu. Yd.	16.1
Concrete Superstructure			Cu. Yd.	15.9
Bar Splicers			Each	28
Reinforcement Bars, Epoxy Coated			Pound	2280
Stud Shear Connectors			Each	72

DESIGNED - NRM
CHECKED - CCC
DRAWN - Kyle M. Steffen
CHECKED - NRM CCC

EXAMINED
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 8, 2018
REVISED

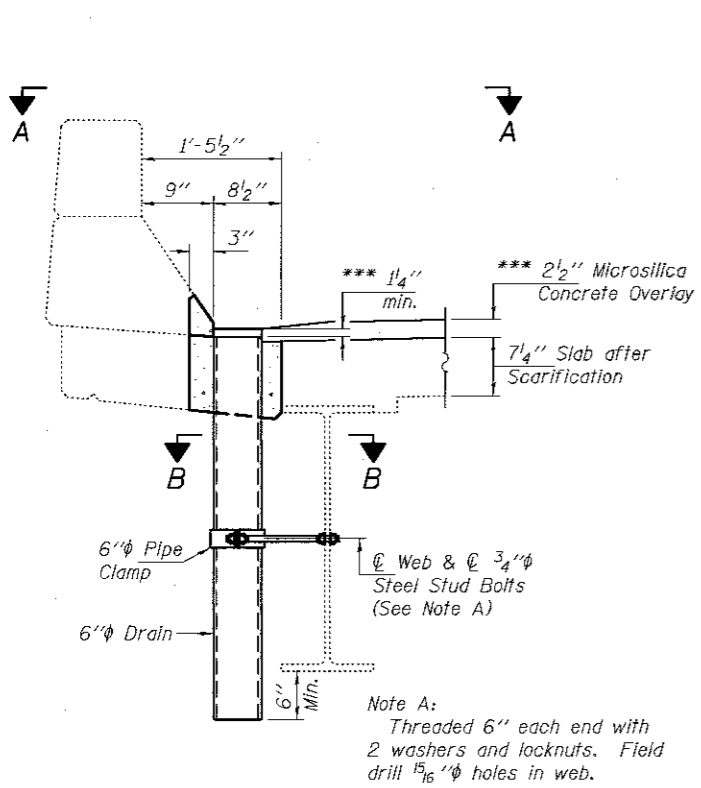
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**JOINT REPLACEMENT DETAILS
SN 084-0108 (S.B.)**

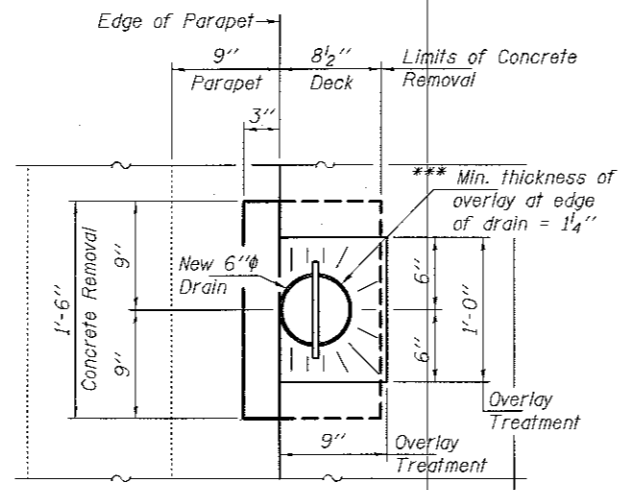
SHEET NO. 4 OF 8 SHEETS

F.A.I. SECTION COUNTY TOTAL SHEETS SHEET NO.
RTE. 55 (84-5-2) BDR, BJR SANGAMON 41 37
CONTRACT NO. 72J20

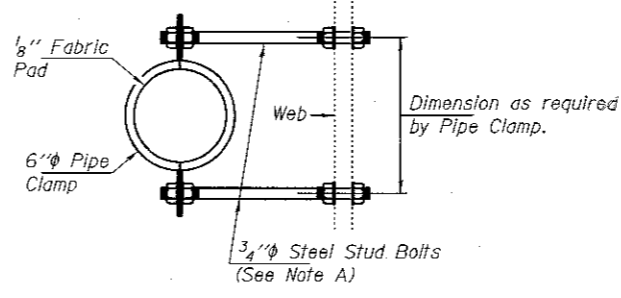
ILLINOIS FED. AID PROJECT



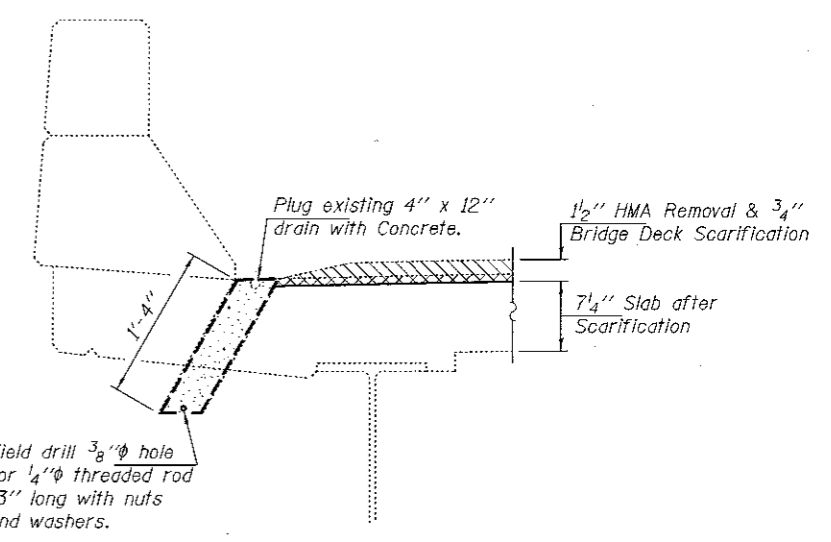
PROPOSED DRAIN DETAIL
(14 Locations)
(For locations see General Plan on sheet 1 of 8.)



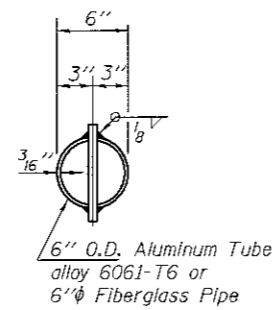
VIEW A-A



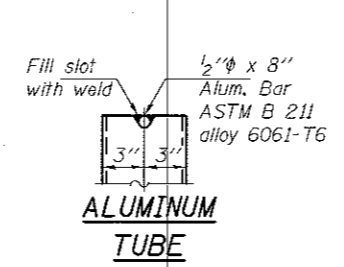
SECTION B-B



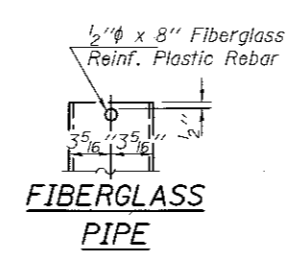
DRAIN ELIMINATION DETAIL
(36 Locations)
(For locations see General Plan on sheet 1 of 8.)



TOP PLAN
(Showing Aluminum Tube)

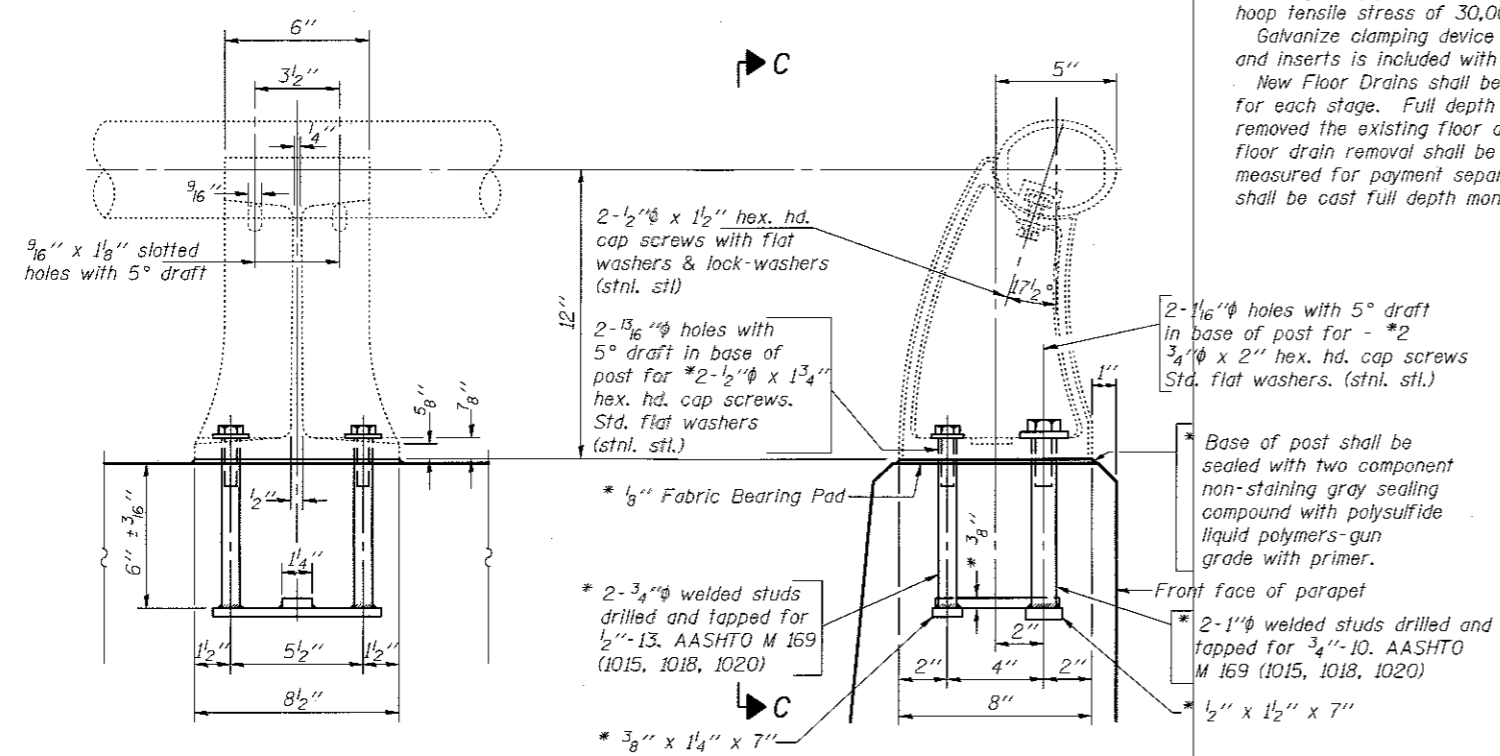


ALUMINUM TUBE

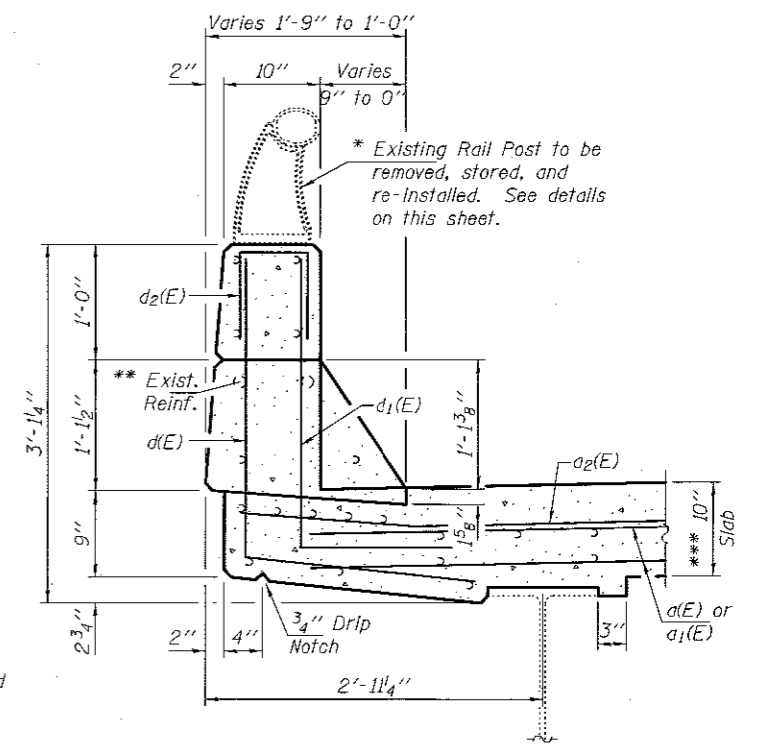


FIBERGLASS PIPE

Notes:
Drains shall be located clear of all diaphragms.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings' Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.
New Floor Drains shall be installed after scarification operations are completed for each stage. Full depth patches approximately 16 inch square shall be used to remove the existing floor drains and install proposed drains. Cost of existing floor drain removal shall be included with Full Depth Patching and will not be measured for payment separately. The deck patches surrounding the new drains shall be cast full depth monolithically with the overlay.



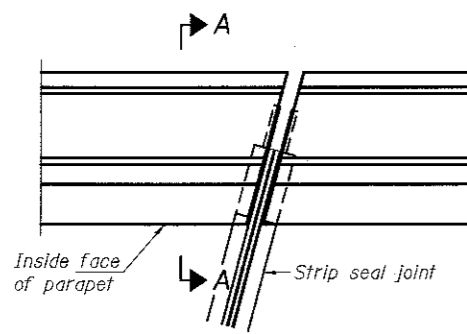
RAIL POST ANCHORAGE DEVICE DETAILS
(4-Required)



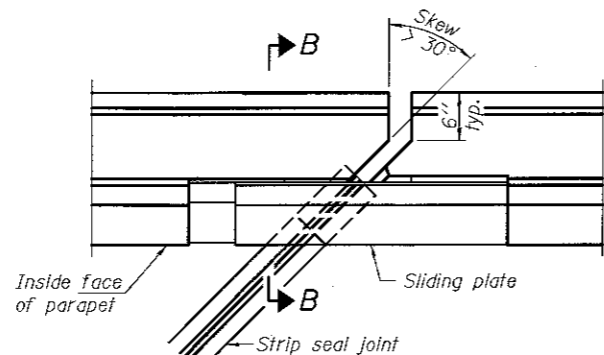
BRIDGE PARAPET DETAILS
(New Rail Post Anchorage Device not shown for clarity.)

* New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.
** Existing reinforcement 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 shall be included with Concrete Removal.
*** Prior to 1/4 inch Diamond Grinding.

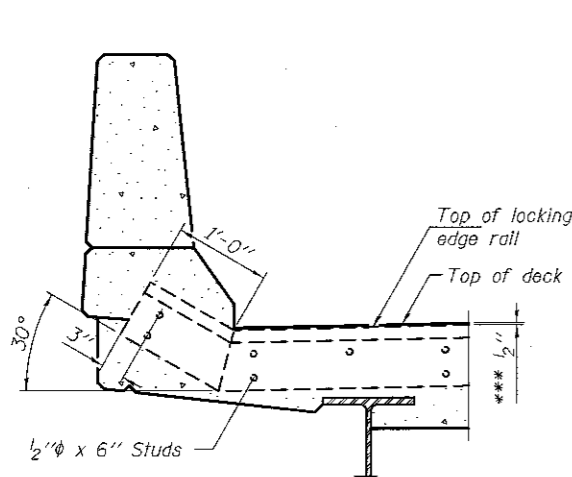
DESIGNED - NRM	EXAMINED - <i>Timothy A. Smith</i>	DATE - MARCH 8, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		REPAIR DETAILS SN 084-0108 (S.B.)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	REVISOR				55	(84-5-2) BDR, BJR	SANGAMON	41	38	
DRAWN - Kyle M. Steffen	PASSED - <i>Carl King</i>	REVISOR	SHEET NO. 5 OF 8 SHEETS		CONTRACT NO. 72J20		ILLINOIS FED. AID PROJECT				
CHECKED - NRM CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR									



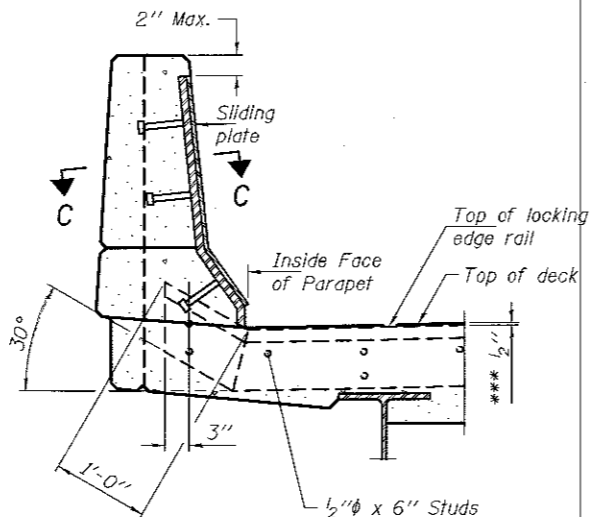
PLAN
(For skews $\leq 30^\circ$)



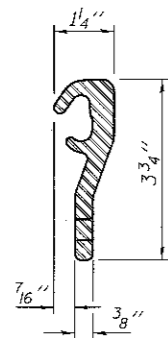
PLAN
(For skews $> 30^\circ$)
Showing point block



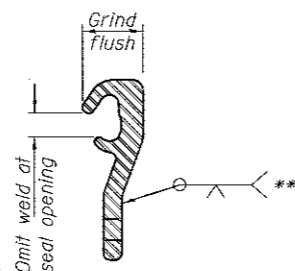
SECTION A-A



SECTION B-B



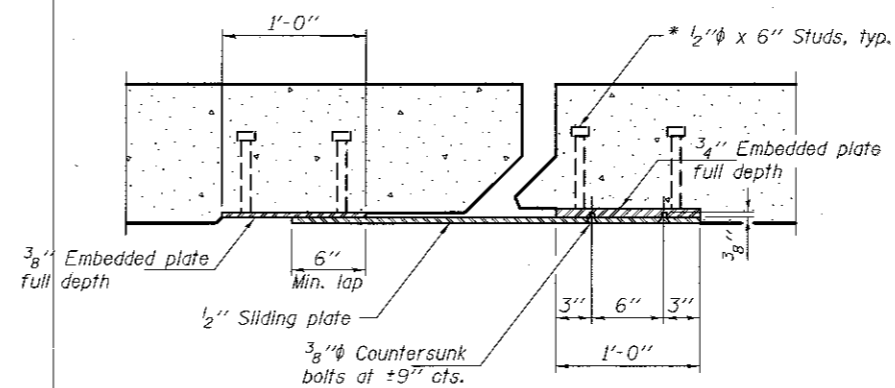
LOCKING EDGE RAIL



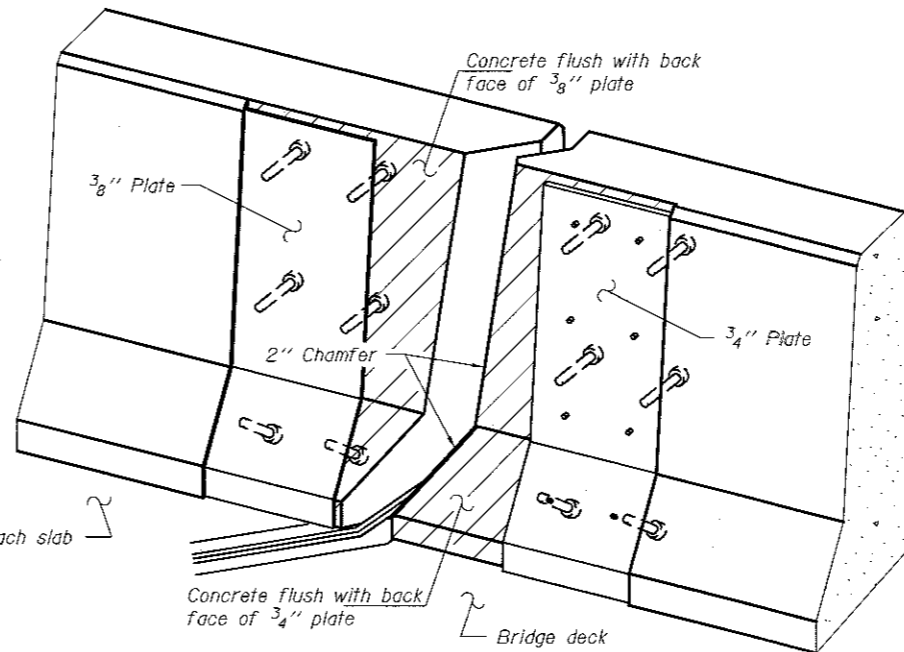
LOCKING EDGE RAIL SPLICE

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

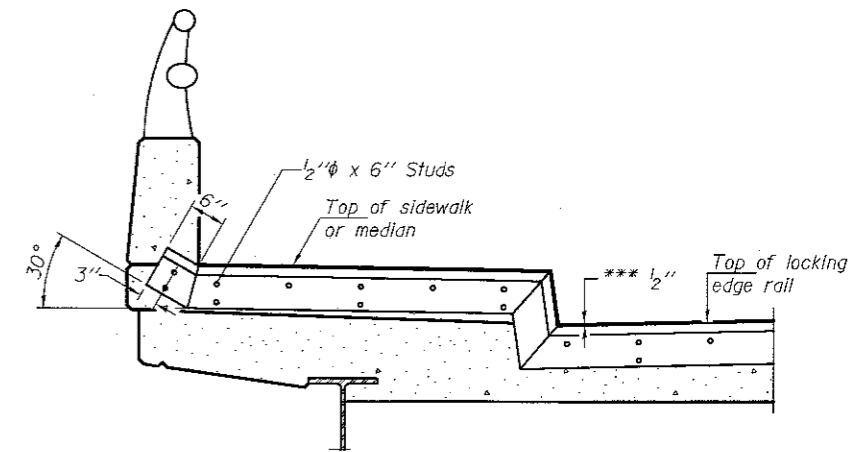
*** Prior to 1/4" Diamond Grinding.



SECTION C-C



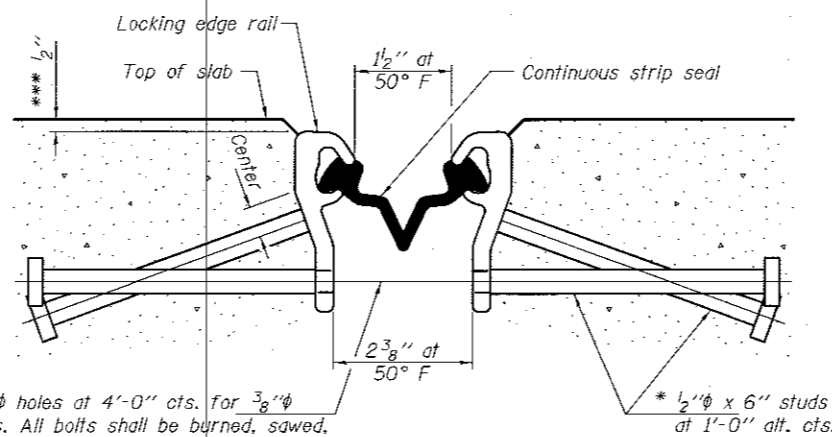
TRIMETRIC VIEW
(Showing back plates only)



TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

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



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.

* 1/2" ϕ x 6" studs at 1'-0" alt. cts.

SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS

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.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.

The manufacturer's recommended installation methods shall be followed.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	122

DESIGNED - NRM
CHECKED - CCC
DRAWN - Kyle M. Steffen
CHECKED - NRM CCC

EXAMINED	<i>Timothy A. Bault</i> ENGINEER OF STRUCTURAL SERVICES	DATE - MARCH 8, 2018
PASSED	<i>D. Carl King</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISED
		REVISED

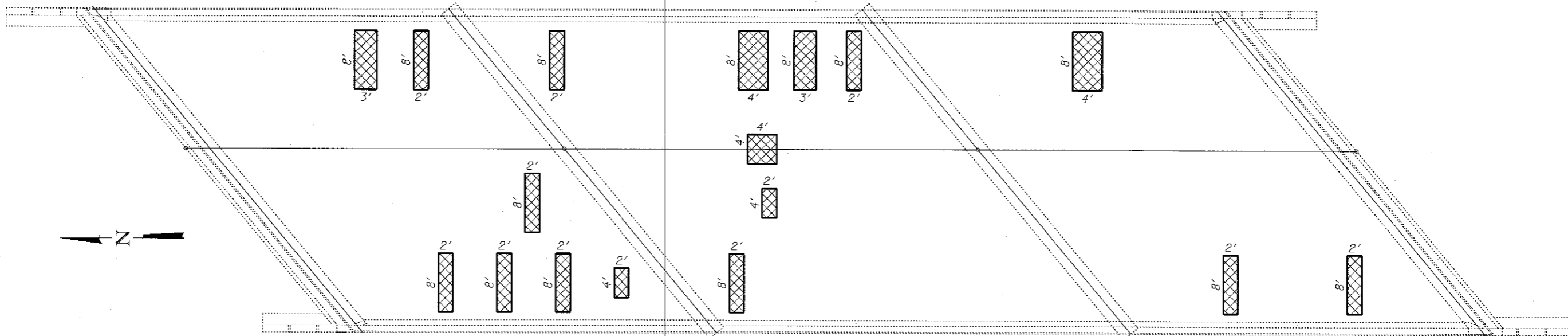
DATE - MARCH 8, 2018
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION




PREFORMED JOINT STRIP SEAL DETAILS
SN 084-0108 (S.B.)

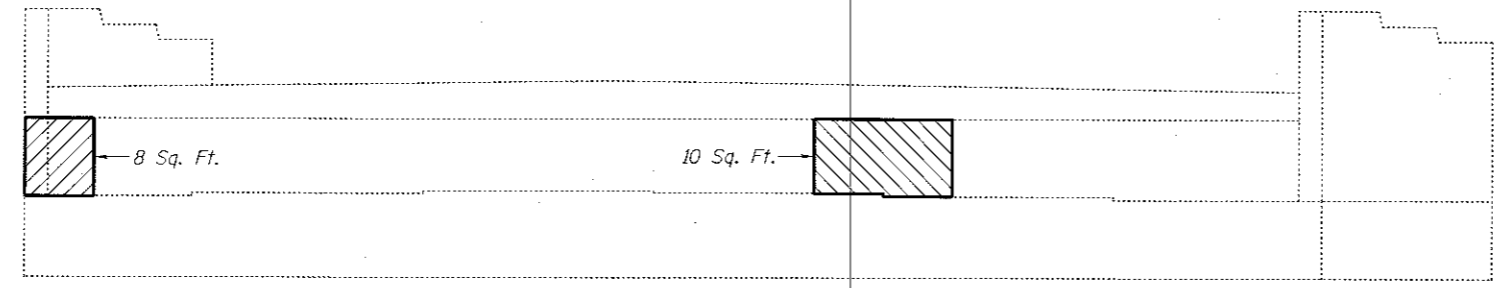
SHEET NO. 6 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	39
CONTRACT NO. 72J20			ILLINOIS FED. AID PROJECT	



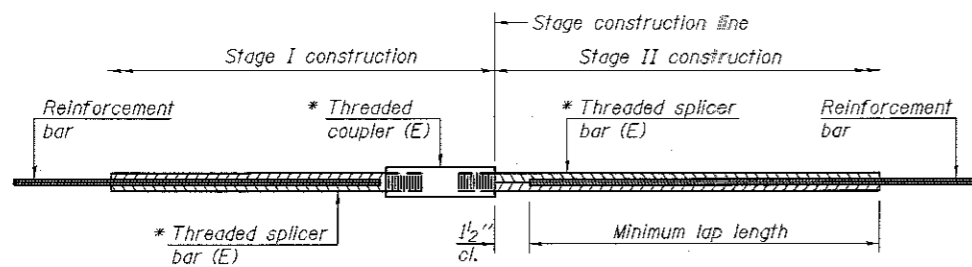
DECK SOFFIT PATCHING PLAN

-  Structural Repair of Concrete ≤ 5 inches
-  Structural Repair of Concrete > 5 inches
-  Deck Slab Repair (Full Depth, Type II)



SOUTH ABUTMENT REPAIR DETAILS
(Looking South)

DESIGNED - NRM	EXAMINED	DATE - MARCH 8, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DECK PATCHING & SUBSTRUCTURE REPAIR DETAILS SN 084-0108 (S.B.)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - CCC	<i>Timothy A. Dault</i> ENGINEER OF STRUCTURAL SERVICES	REVISED			55	(64-5-2) BDR, BJR	SANGAMON	41	40
DRAWN - Kyle M. Steffen	PASSED	REVISOR	SHEET NO. 7 OF 8 SHEETS		CONTRACT NO. 72J20				
CHECKED - NRM CCC	<i>Carl Perry</i> ENGINEER OF BRIDGES AND STRUCTURES	REVISOR			ILLINOIS FED. AID PROJECT				

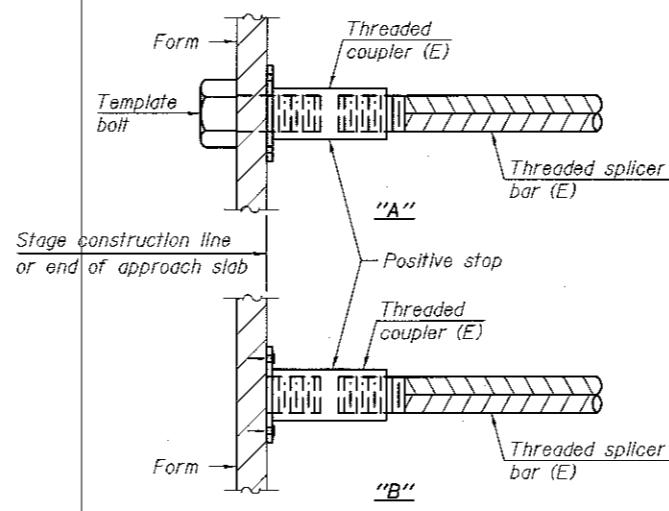


STANDARD BAR SPLICER ASSEMBLY

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

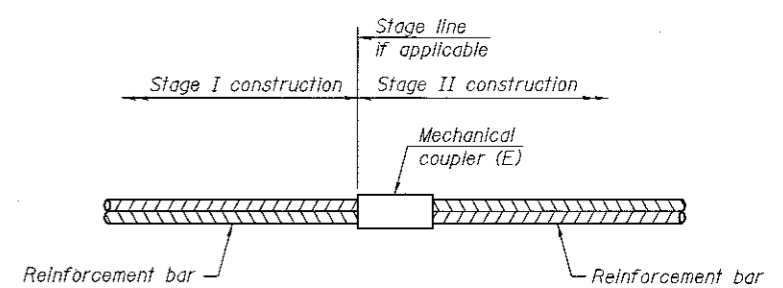
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Bridge Deck	#5	16	3'-6"
Abutment	#6	12	4'-0"



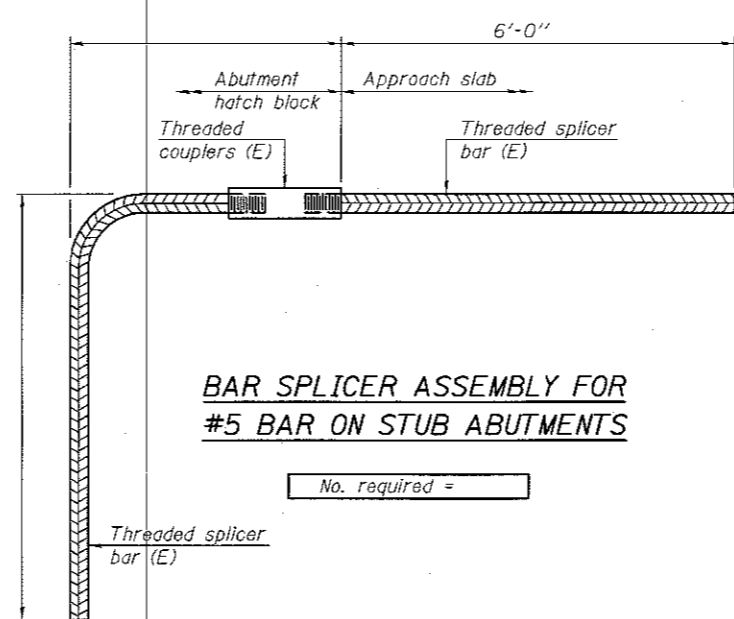
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

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

11-22-2016

DESIGNED - NRM	EXAMINED - <i>Timothy A. Kelly</i>	DATE - MARCH 8, 2018
CHECKED - CCC	PASSED - <i>Carl King</i>	REVISOR
DRAWN - Kyle M. Steffen	ENGINEER OF BRIDGES AND STRUCTURES	REVISOR
CHECKED - NRM CCC		

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 SN 084-0108 (S.B.)

SHEET NO. 8 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(84-5-2) BDR, BJR	SANGAMON	41	41
CONTRACT NO. 72J20			ILLINOIS FED. AID PROJECT	