

057

09-20-2019 LETTING ITEM 057

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
705	(134,135)VBR-2	MADISON	22	1
		ILLINOIS	CONTRACT NO. 76M16	

D-98-021-19



FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

LOCATION	IL 140
2018 ADT	4350 (ACTUAL)
2038 ADT	5200 (ESTIMATED)
MU%	7.0
SU%	12.8

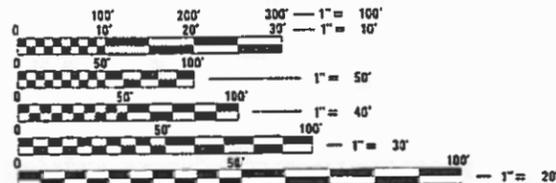
PROPOSED HIGHWAY PLANS

FAP ROUTE 785 (IL 140)
SECTION: (134,135)VBR-2
PROJECT
BRIDGE DECK WATERPROOFING,
JOINT & BEAM END REPAIR
MADISON COUNTY

C-98-026-19

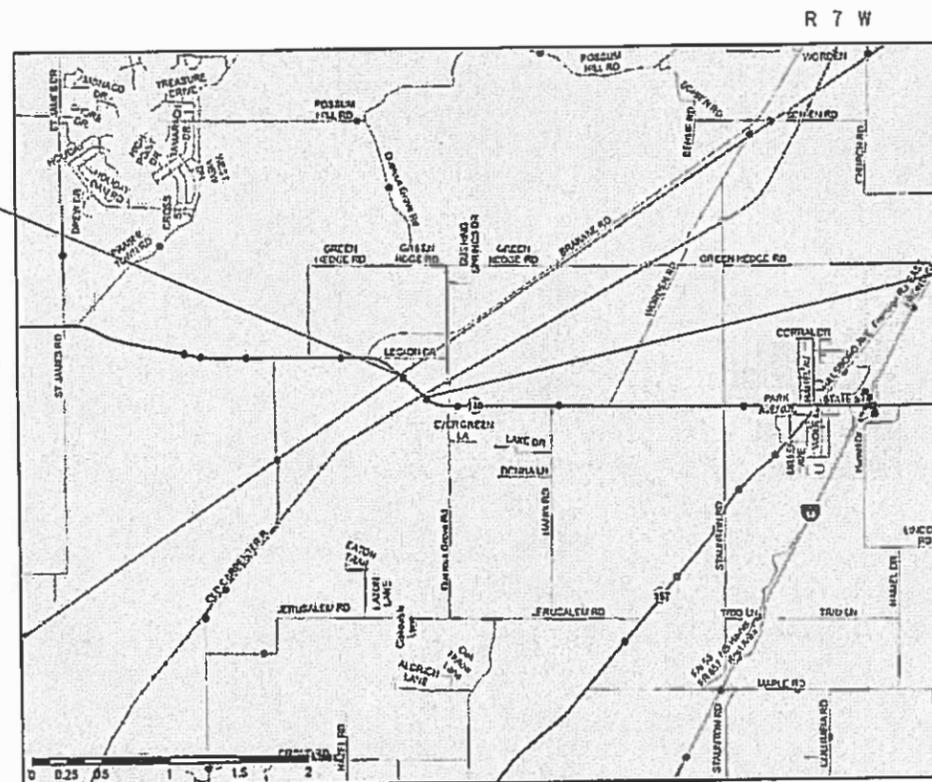
LOCATION #1
IL 140 OVER UP RR 3.1 MI
W OF I-55 SN 060-0226
STA. 685+55.90
LAT: 38.89248
LONG: -89.90058

LOCATION #2
IL 140 OVER NS RR 2.9 MI
W OF I-55 SN 060-0227
STA. 697+38.02
LAT: 38.89030
LONG: -89.89748



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: TIM PADGETT (618) 346-3325
PROJECT MANAGER: RAHSHUN J MILLER (618) 346-3196

GROSS LENGTH = 1190 FT. = 0.22 MILE
NET LENGTH = 138 FT. = 0.02 MILE

TOWNSHIP: HAMEL

CONTRACT NO. 76M16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 21, 2018
Jeffrey Z. Kanon
REGIONAL ENGINEER

Aug 16, 2019
Paul C. Ch...
ENGINEER OF DESIGN AND ENVIRONMENT

Aug 16, 2019
Paul C. Ch...
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, & COMMITMENTS
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7	TYPICAL SECTIONS
8	SCHEDULE OF QUANTITIES
9	DETAILS AND WIDE LOAD SIGNING
10	STAGING DETAILS
11-22	STRUCTURE PLANS

HIGHWAY STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-17	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

GENERAL NOTES

ROADWAY

- 1 ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

UTILITY	TYPE	ABOVE GROUND	BELOW GROUND
*AMEREN ILLINOIS	GAS & ELECTRIC	X	X
*AT&T ILLINOIS	COMMUNICATIONS	X	X
*MARATHON PIPE LINE LLC	PIPELINE		X
*NORTHEAST CENTRAL COUNTY PUBLIC WATER DISTRICT	WATER		X
*SOUTHWESTERN ELECTRIC COOPERATIVE, INC.	ELECTRIC	X	X

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

- 2 THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.
- 3 THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING, TOPOGRAPHY, AND QUANTITIES SHOWN IN THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS. ALL SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

- 4 SHOULDER MILLING AND RESURFACING OPERATIONS SHALL EXTEND TO 1' AWAY FROM THE FACE OF THE EXISTING GUARDRAIL, OR AS APPROVED BY THE ENGINEER.
- 5 TWO CHANGEABLE MESSAGE BOARDS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED TWO WEEKS PRIOR TO ANY LANE CLOSURE. THE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
- 6 A QUANTITY OF 1175 FEET OF TEMPORARY PAVEMENT MARKING LINE-6" YELLOW HAS BEEN INCLUDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER.
- 7 PROPOSED PAVEMENT MARKING SHALL MATCH EXISTING LOCATIONS, AS DIRECTED BY THE ENGINEER.
- 8 THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT.

MIXTURE USE	POLY SURFACE	SHOULDER ≥ 2.25"	SHOULDER ≤ 2.25"
AC/PG	SBS 76-22	PG 64-22	PG 64-22
RAP % (MAX)	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0% @ Ndes=70	4.0% @ Ndes=30	4.0% @ Ndes=30
MIX COMPOSITION (Gradation)	IL 19.5	IL 19.0L	IL 9.5L
FRICTION AGG	MIXTURE "D"		
QUALITY MGMT PROGRAM	QC/QA	QC/QA	QC/QA

PLAN QUANTITIES FOR HMA SURFACE COURSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ YD/IN (59.8 KG/SQ M/25 MM THICKNESS).

COMMITMENTS

NONE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS,
GENERAL NOTES, & COMMITMENTS

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	2
CONTRACT NO. 76M16				
ILLINOIS		FED. AID PROJECT		

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE	
				BRIDGE	BRIDGE
				0047	0047
				060-0226	060-0227
40600295	POLYMERIZED BITUMINOUS MATERIALS (TACK COAT)	POUND	392	187.4	204.6
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	638	314	324
40603540	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	103.4	49.2	54.2
44004250	PAVED SHOULDER REMOVAL	SQ YD	2	0	2
45200300	JOINT OR CRACK FILLING	POUND	48	24	24
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	2	0	2
50102400	CONCRETE REMOVAL	CU YD	15.4	7.5	7.9
50300100	FLOOR DRAINS	EACH	4	2	2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	28.8	13.8	15
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION1	L SUM	1	1	0
50606702	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION2	L SUM	1	0	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2900	1430	1470
50800515	BAR SPLICERS	EACH	30	15	15
52000110	PREFORMED JOINT STRIP SEAL	FOOT	78	38.5	39.5

REV. - MS

USER NAME = millerraj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -					785	(134.135)VBR-2	MADISON	22	3
PLOT DATE = 12/20/2018	CHECKED -	REVISED -		SCALE:	SHEET 1	OF 3	SHEETS	STA.	TO STA.	CONTRACT NO. 76M16	
	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE	
				BRIDGE	BRIDGE
				0047	0047
				060-0226	060-0227
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	466	204	262
58700300	CONCRETE SEALER	SQ FT	845	418	427
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	3	2	1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	2	2
67100100	MOBILIZATION	L SUM	1	0.4	0.6
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.4	0.6
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	0.4	0.6
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	0.5	0.5
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	3	3
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	4054	2115	1939
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	268	134	134
70300100	SHORT TERM PAVEMENT MARKING	FOOT	88	40	48
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	30	14	16

REV. - MS

USER NAME = millerraj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -						785	(134,135)VBR-2	MADISON	22	4
PLOT DATE = 12/20/2018	CHECKED -	REVISED -		SCALE:	SHEET 2	OF 3	SHEETS	STA.	TO STA.	CONTRACT NO. 76M16		
	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE	
				BRIDGE	BRIDGE
				0047	0047
				060-0226	060-0227
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1256	584	672
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	1175	575	600
70400100	TEMPORARY CONCRETE BARRIER	FOOT	587.5	287.5	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	587.5	287.5	300
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2
70600352	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE,NARROW), TEST LEVEL 3	EACH	4	2	2
* 78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE4"	FOOT	1256	584	672
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	2	2
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	2	2
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	419	195	224
X5870015	BRIDGE DECK CONCRETE SEALER	SQ FT	1582	724	858
X7010202	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	0.5	0.5
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	419	195	224
X7200200	WIDE LOAD SIGNING	L SUM	1	0.4	0.6
* X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	1256	584	672

* SPECIALTY ITEM

REV. - MS

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	DRAWN -	REVISED -
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PLOT DATE = 12/20/2018	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	5
				CONTRACT NO. 76M16
ILLINOIS FED. AID PROJECT				

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				100% STATE	
				BRIDGE	BRIDGE
				0047	0047
				060-0226	060-0227
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	2630	1330	1300
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUESNO. 1	L SUM	1	1	0
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUESNO. 2	L SUM	1	0	1
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	52	10	42
Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	131	57	74
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	0.5	0.5

REV. - MS

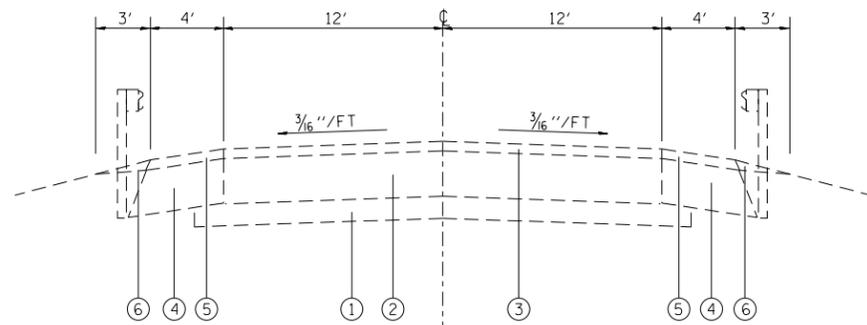
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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 12/20/2018	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

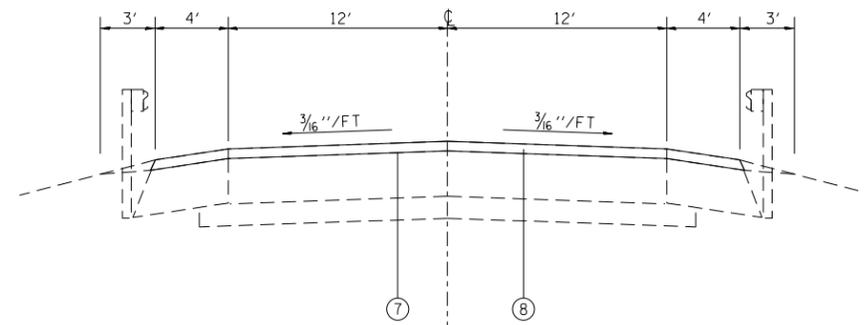
SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134.135)VBR-2	MADISON	22	6
			CONTRACT NO. 76M16	
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION

- STA. 684+82.70 TO STA. 685+26.90
- STA. 685+26.90 TO STA 685+84.90 (BRIDGE)
- STA. 685+84.90 TO STA. 686+29.10
- STA. 696+54.00 TO STA. 696+99.50
- STA. 696+99.50 TO STA 697+76.50 (BRIDGE)
- STA. 697+76.50 TO STA. 698+22.00



PROPOSED TYPICAL SECTION

- STA. 684+82.70 TO STA. 685+26.90
- STA. 685+26.90 TO STA 685+84.90 (BRIDGE)
- STA. 685+84.90 TO STA. 686+29.10
- STA. 696+54.00 TO STA. 696+99.50
- STA. 696+99.50 TO STA 697+76.50 (BRIDGE)
- STA. 697+76.50 TO STA. 698+22.00

LEGEND

- ① EXISTING STABILIZED SUB-BASE, 4"
- ② EXISTING JOINTED PCC PAVEMENT (7-3/4")
- ③ EXISTING HMA SURFACE COURSE (2-1/2")
- ④ EXISTING HMA SHOULDERS (8")
- ⑤ EXISTING HMA SHOULDERS (2")
- ⑥ EXISTING AGGREGATE SHOULDER WEDGE
- ⑦ PROPOSED POLYMERIZED BITUMINOUS MATERIAL (TACK COAT)
- ⑧ PROPOSED POLYMERIZED HMA SURFACE COURSE, MIX D, N70 2"

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	7
CONTRACT NO. 76M16				
		ILLINOIS	FED. AID PROJECT	

PAVEMENT MARKING SCHEDULE																		
LOCATION	LENGTH	PERFORMED PLASTIC PAVEMENT MARKINGS, TYPE B, LINE 4"				GROOVING FOR RECESSED PAVEMENT MARKING 5"	SHORT TERM PAVEMENT MARKING		SHORT TERM PAVEMENT MARKING REMOVAL		TEMPORARY PAVEMENT MARKING LINE - 4"		TEMPORARY PAVEMENT MARKING REMOVAL		RAISED REFLECTIVE PAVEMENT MARKERS (TWO-WAY)		PAVEMENT MARKING REMOVAL - WATERBLASTING	
		WHITE		YELLOW			FOOT		SQFT		FOOT		SQFT		EACH		SQFT	
		FOOT	FOOT	FOOT	FOOT		EB	WB	EB	WB	EB	WB	EB	WB	EB/WB	AMBER	REMOVAL	EB/WB
SN 060-0226																		
684+82.7	TO	686+29.1	146	146	146	146	146	584	20	20	7	7	292	292	195	2	2	195
SN 060-0227																		
696+54.00	TO	698+22.00	168	168	168	168	168	672	24	24	8	8	336	336	224	2	2	224
SUB-TOTAL			314	314	314	314	1256	44	44	15	15	628	628		4	4		
TOTAL			1256				1256	88		30		1,256		419		4		419

STAGING SCHEDULE									
LOCATION	TOTAL LENGTH	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	TEMPORARY RUMBLE STRIPS	TEMPORARY BRIDGE TRAFFIC SIGNALS	BLACKOUT TAPE 5"	SHORT TERM PAVEMENT MARKING REMOVAL
	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	FOOT	SQFT
IL 140 OVER UP RR 060-0226									
STAGE I	551	287.5		2		3	0.5	2115	881.3
STAGE II	551		287.5		2				
IL 140 OVER N&W RR 060-0227									
STAGE I	567	300		2		3	0.5	1939	807.9
STAGE II	567		300		2				
TOTAL		587.5	587.5	4	4	6	1	4054	1689

RESURFACING SCHEDULE								
STATION	LENGTH	ROADWAY WIDTH	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	POLYMERIZED BITUMINOUS MATERIAL (TACK COAT)	HMA SHOULDER 8"	PAVED SHOULDER REMOVAL	
	FOOT	FOOT	TON	SQ YD	POUND	SQ YD	SQ YD	
SN 060-0226								
684+82.50	TO	685+26.90	44.4	32	17.7	157.87	71.04	
685+84.90	TO	686+29.30	44.4	32	17.7	157.87	71.04	
SN 060-0227								
696+54.00	TO	696+99.50	45.5	32	18.1	161.78	72.8	
697+76.50	TO	698+22.00	45.5	32	18.1	161.78	72.8	
697+90						2	2	
TOTAL			*103.4		639	**392	2	2

NOTE: *AN ADDITIONAL QUANTITY OF 32 TONS HAS BEEN ADDED TO THIS ITEM FROM BRIDGE QUANTITIES SN 060-0226=14 TONS, SN 060-0227=18 TONS.
 **AN ADDITIONAL QUANTITY OF 105 POUNDS HAS BEEN ADDED TO THIS ITEM FROM BRIDGE QUANTITIES SN 060-0226=46 POUNDS, SN 060-0227=59 POUNDS.

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USER NAME = millerraj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 1/7/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

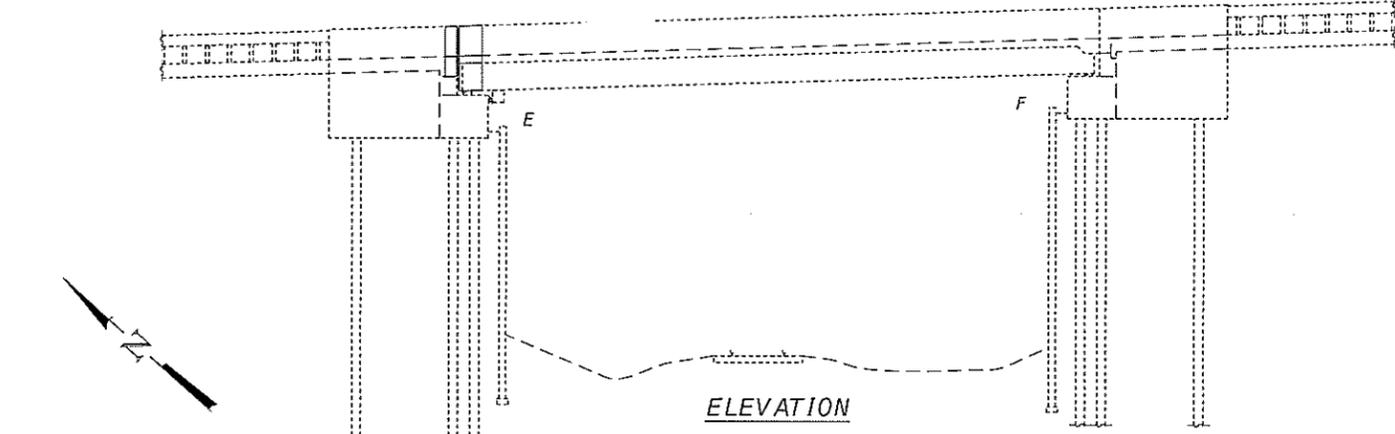
SCHEDULES OF QUANTITIES

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	8
CONTRACT NO. 76M16				
ILLINOIS FED. AID PROJECT				

Existing Structure: 060-0226 was built in 1985 under contract 36760, FA Route 785, Sec 134-VBR.
It is a 1 span WF supported on pile bent abutments, behind MSE walls.

The north deck end and abutment hatchblock shall be replaced with concrete encasement of the beam ends with strip seal joints.
The deck shall be patched and overlaid with waterproofing membrane system and hot-mix asphalt.



SHEET INDEX

- 1) General Plan and Elevation
- 2) North Abutment Section
- 3) Abutment Plan Details
- 4) Preformed Joint Strip Seal
- 5) Bar Splicers
- 6) Temporary Concrete Barrier

GENERAL NOTES

No field welding is permitted except as specified in the contract documents.

All reinforcement bars shall be epoxy coated.

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

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

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

The SSPC-QP1 and SSPC QP2 certifications will be required for all bridges.

After removal of the deck ends and diaphragms, but prior to the encasement of the steel beams, all existing beams, bearings, and other structural steel within 3' of the end of the beams (measured along the beam) at the north abutment of locations 1 and 2 shall be cleaned and painted as specified in the Special Provision "Cleaning and Painting Existing Steel Structures". The beam ends at the south abutment will not be painted. The designated areas shall be cleaned per SSPC-SP15, Commercial Grade Power Tool Cleaning using vacuum shrouded power tools with HEPA filtration. All areas cleaned shall be primed with an organic zinc rich primer between 3.5 and 5.0 mils(90 and 125 microns) dry film thickness.

The use of air monitors will not be required on this project.

The HMA quantities are shown for the bridge only. The quantity is calculated excluding an assumed 1/2" sand & 1/4" waterproofing membrane, for an HMA thickness of 1 1/4" thickness.

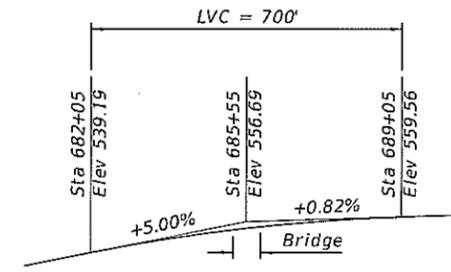
The joints shall be adjusted according to Article 520.04 of the Standard Specs.

The quantity for "Bridge Deck Concrete Sealer" is for the top and inside parapet and wingwall surfaces, and all new concrete.

The quantity for "Concrete Sealer" is for the 2' vertical surface of backwall, 2'-9" wide abutment seat, and 1' vertical surface of both abutment caps. The sealer in these areas shall be a plural component.

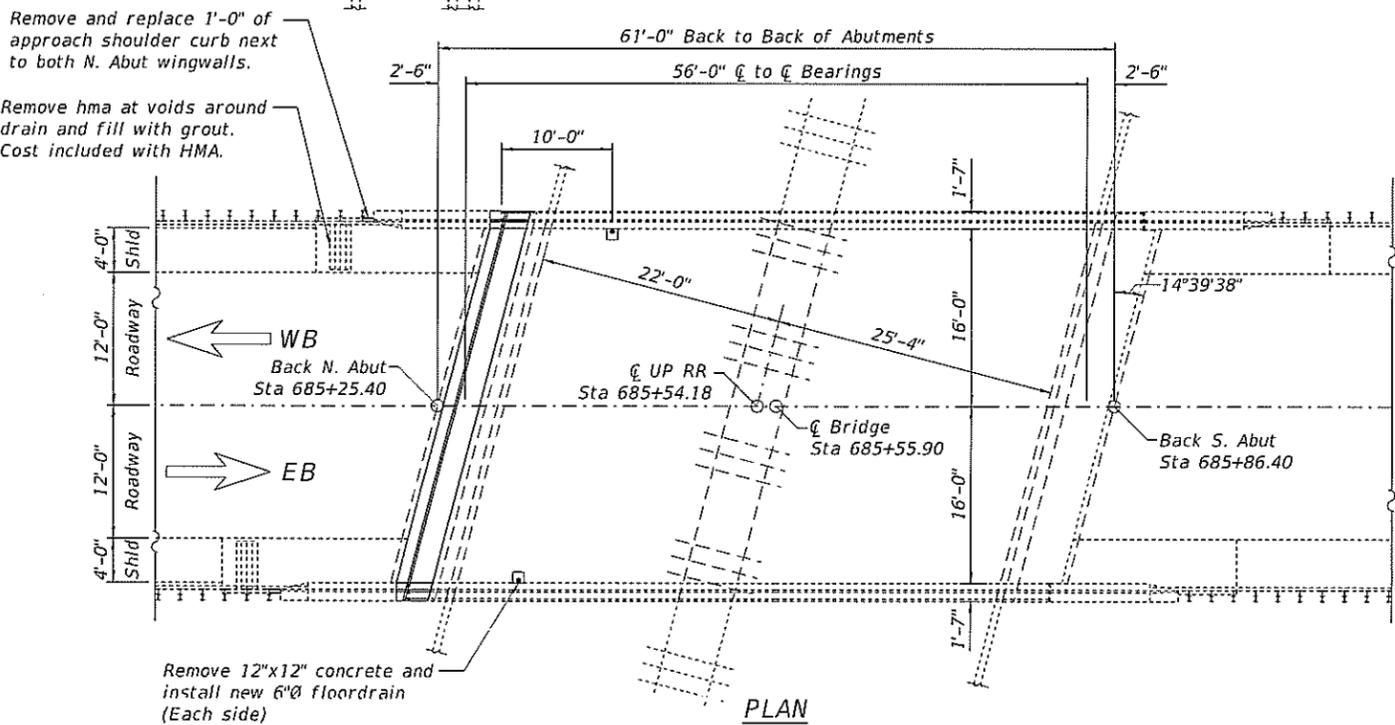
The quantity for "Deck Slab Repair (Partial)" is estimated. The location and sizes of repairs are to be determined by the Engineer in the field.

The quantity for "Joint or Crack Filling" is for filling the gaps between the approach shoulders and the wingwalls at all 4 corners. Quantities were calculated assuming 72.7 pcf x 1" x 1" x 12' x 4 / 144 = 24 lb.



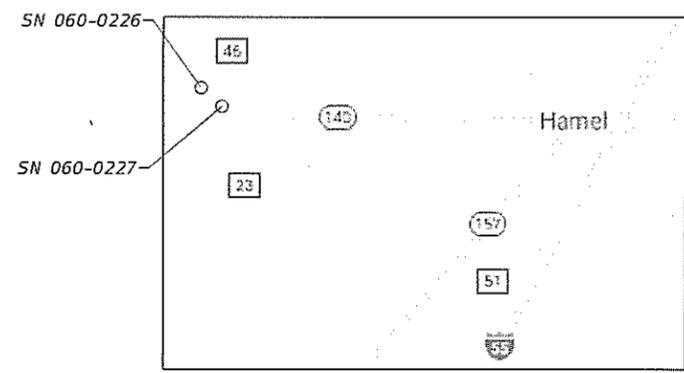
DESIGN STRESSES

FIELD UNITS
 $f'_c = 4,000$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (M270 Grade 36)



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Polymerized Bituminous Materials (Tack Coat)	Pound	46
Polymerized HMA Surface Course, Mix "D", N70	Ton	14
Joint or Crack Filling	Pound	24
Concrete Removal	Cu. Yd.	7.5
Floor Drains	Each	2
Concrete Superstructure	Cu. Yd.	13.8
Cleaning and Painting Structural Steel, Location 1	L Sum	1
Reinforcement Bars, Epoxy Coated	Pound	1430
Bar Splicers	Each	15
Preformed Joint Strip Seal	Foot	38.5
Waterproofing Membrane System	Sq. Yd.	204
Concrete Sealer	Sq. Ft.	418
Bridge Deck Concrete Sealer	Sq. Ft.	724
Structural Steel Removal	Pound	1330
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L Sum	1
Deck Slab Repair (Partial)	Sq. Yd.	10
Longitudinal Joint Sealant	Foot	57



David Carl Pusy 4/22/19
Expires 4/30/20

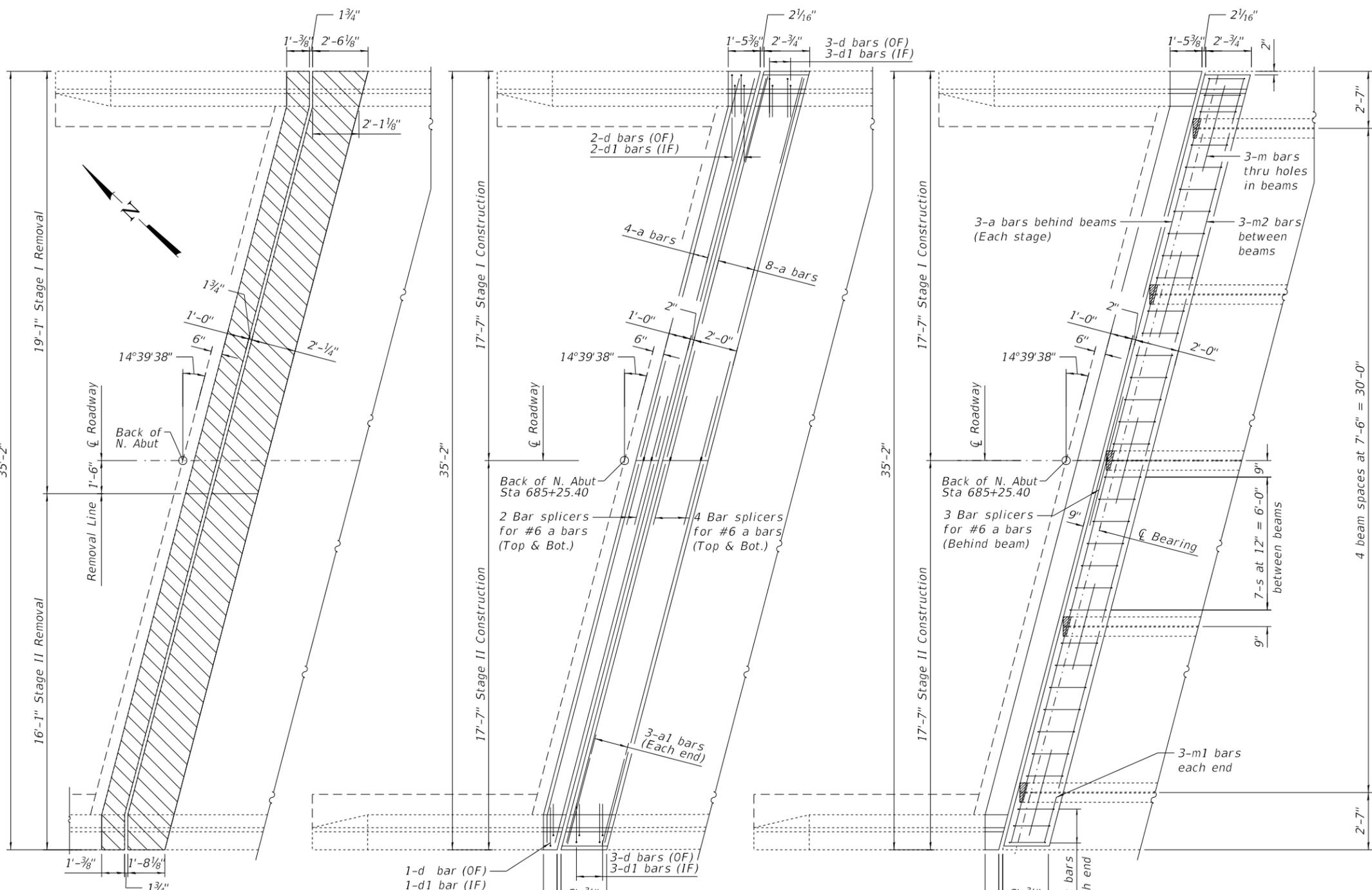
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PLOT DATE = 1/4/2019	CHECKED - J. Uehle	REVISED -
	DATE - M. Davidson	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

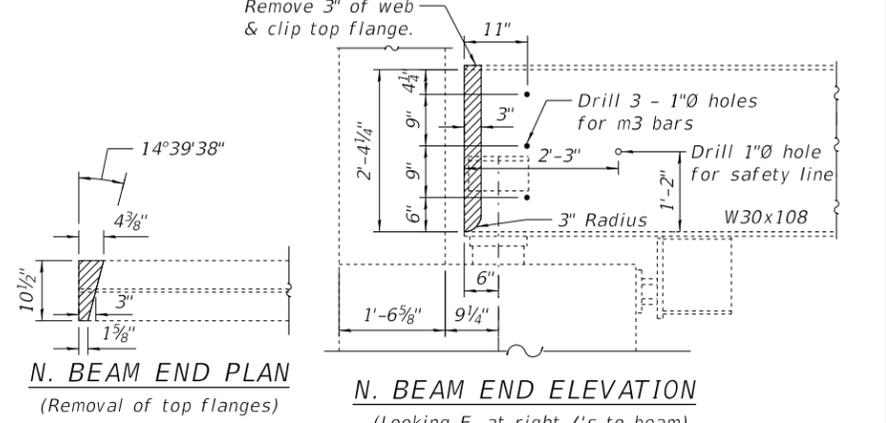
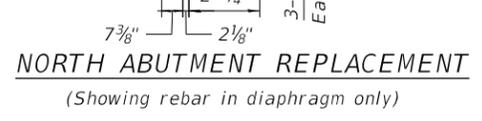
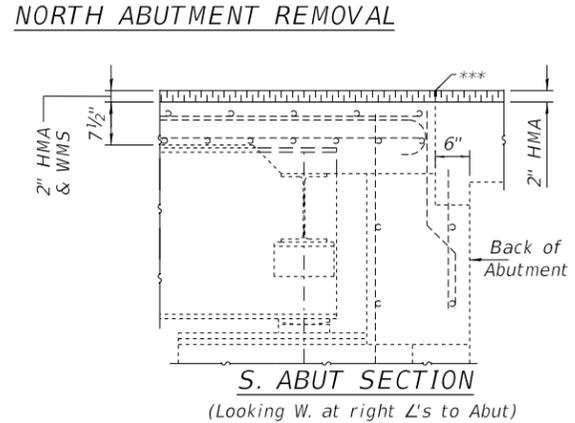
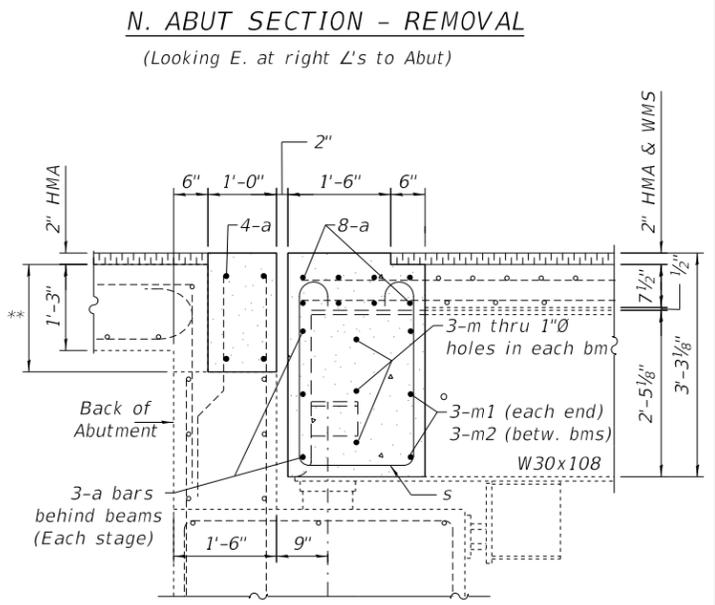
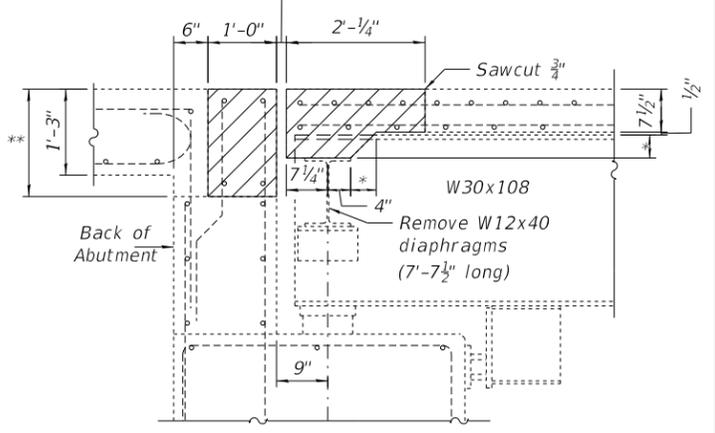
GENERAL PLAN & ELEVATION
SN 060-0226 (IL 140 OVER UP RR)
 SCALE: 1/4"=1' SHEET 1 OF 6 SHEETS STA. 682+25.40 TO STA. 685+86.40

F.A.P. RTE. 785	SECTION (134,135)VBR-2	COUNTY MADISON	TOTAL SHEETS 22	SHEET NO. 11
ILLINOIS			CONTRACT NO. 76M16	
FED. AID PROJECT				

MODEL: 660226-76M16-001
 FILE NAME: s:\11\064\ED\BID\ITEG\Illinois\pvt\DOT\Documents\DOT_Offices\Bridges\Projects\060-0226_060227-76M16.dgn



* Varies 5 3/4" (Bm1) to 7 1/2" (CL) to 3" (Bm 5)
 ** Varies 20" (E. gutter) to 21 3/4" (CL) to 16 7/8" (W. gutter)
 The N. Abutment has tipped inward 2". The bearings, beam ends, and diaphragms are shown 2" closer to the abutment (at right L's to abutment) than in the original plans.



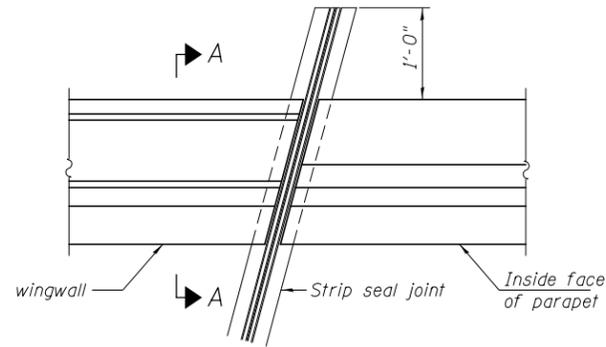
*** Sawcut HMA 1" directly over joint between end of deck and approach pavement, and fill with poured joint filler. Cost included with HMA.

MODEL: 0600226-76M16-003
 FILE NAME: P:\CADD\EDD\DOT\Documents\DOT Office\Drawings\DOT\Projects\0676M16\CADD\Structures\0600226_0600227-76M16.dgn
 PROJECT: 0676M16

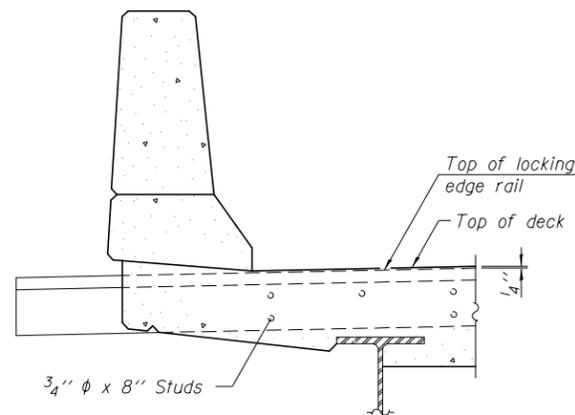
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	DRAWN - MWD	REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

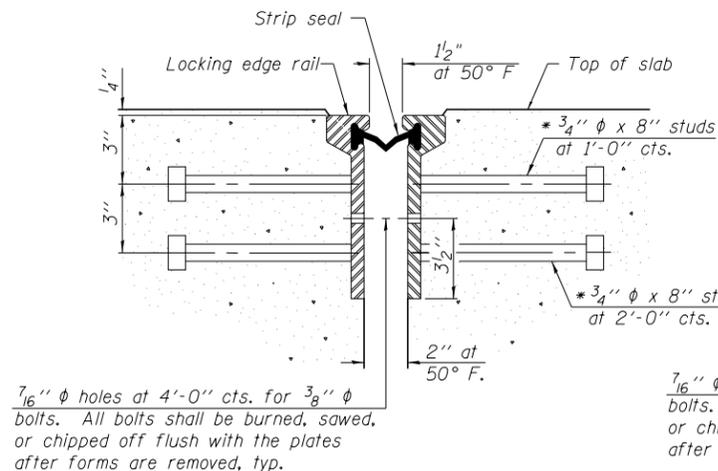
ABUTMENT DETAILS		TOTAL SHEETS 22		SHEET NO. 13	
SN 060-0226		CONTRACT NO. 76M16		ILLINOIS FED. AID PROJECT	
SCALE: 3/8" = 1'	SHEET 3 OF 6 SHEETS	STA. 682+25.40	TO STA. 685+86.40		



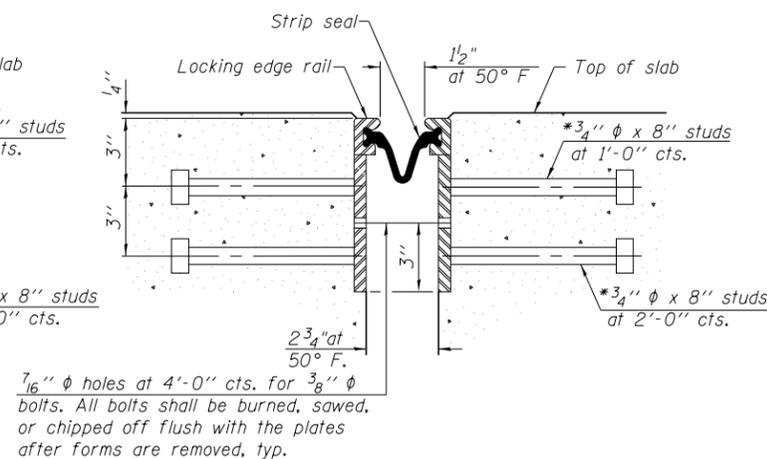
PLAN
(For skew $\leq 30^\circ$)



SECTION A-A

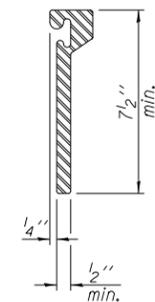


SECTION THRU
ROLLED RAIL JOINT

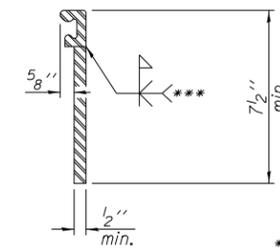


SECTION THRU
WELDED RAIL JOINT

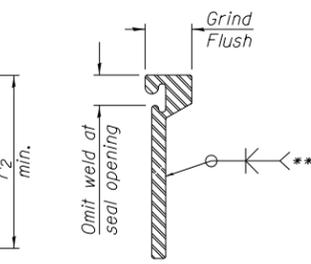
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED
EXTRUDED RAIL



WELDED RAIL



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

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

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. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

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

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	38.5

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EJ-SSJ (MODIFIED)

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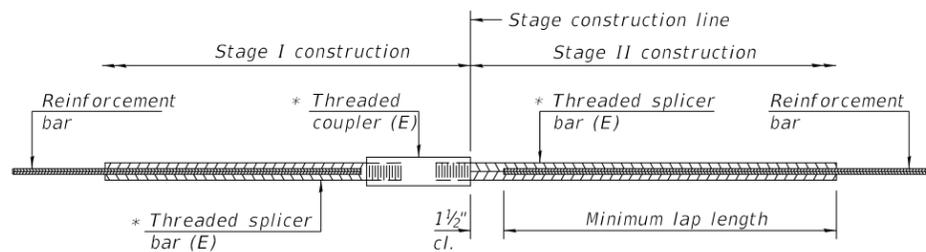
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 060-0226

SCALE: 1"=1' SHEET 4 OF 6 SHEETS STA. 682+25.40 TO STA. 685+86.40

F.A.P. RTE. 785	SECTION (134,135)VBR-2	COUNTY MADISON	TOTAL SHEETS 22	SHEET NO. 14
ILLINOIS				FED. AID PROJECT

CONTRACT NO. 76M16

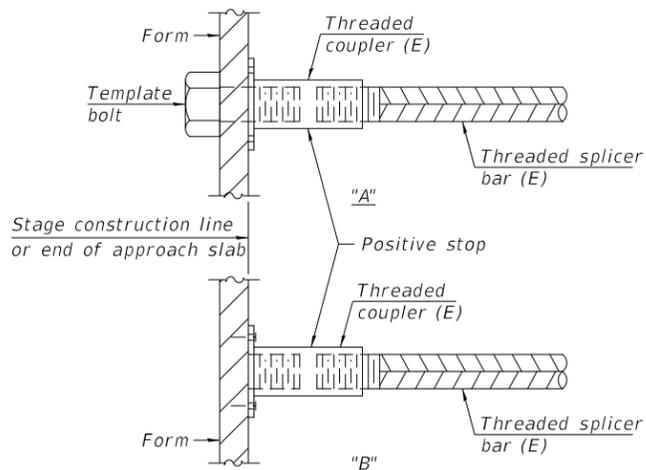


STANDARD BAR SPLICER ASSEMBLY

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

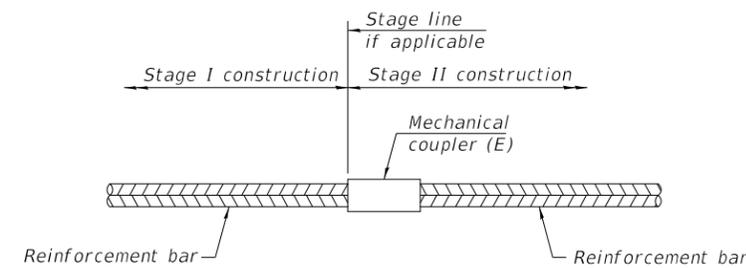
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutment Mudwall	#6	4	4'-0"
Deck End	#6	8	4'-0"
Deck Diaphragm	#6	3	4'-0"



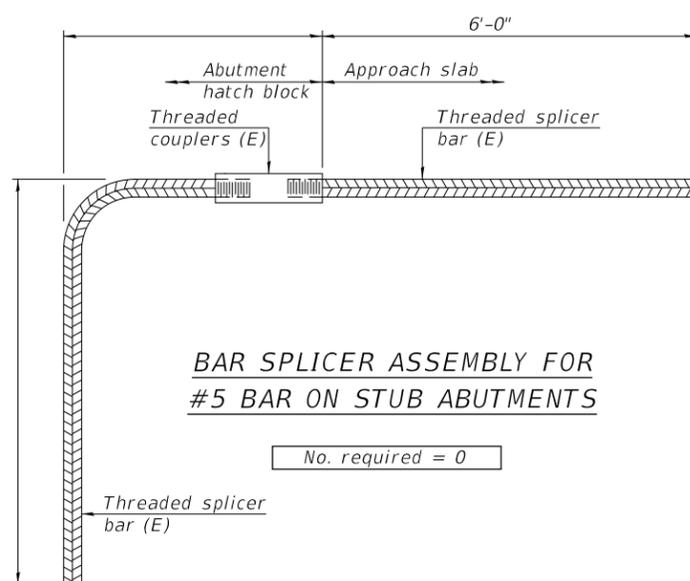
INSTALLATION AND SETTING METHODS

"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
None	None	None



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 0

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.

MODEL: 0600226-76M16.dwg FILE NAME: P:\PROJECTS\0600226\0600226-76M16.dwg

BSD-1

2-17-2017

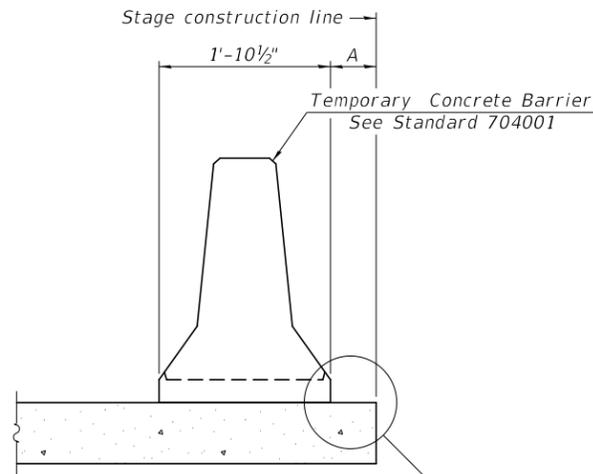
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PLOT DATE = 1/4/2019	DATE - MWD	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICERS
SN 060-0226**

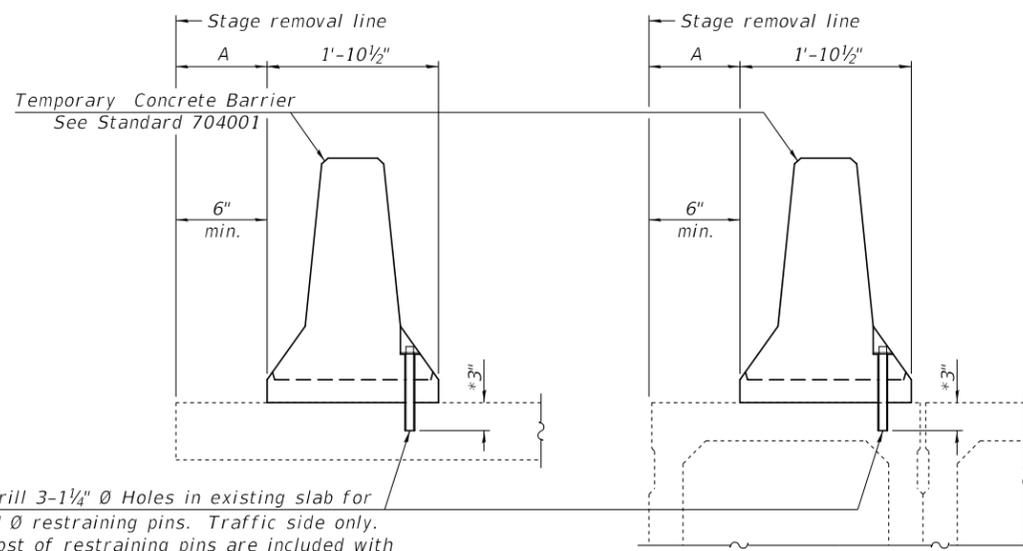
SCALE: None SHEET 5 OF 6 SHEETS STA. 682+25.40 TO STA. 685+86.40

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	15
CONTRACT NO. 76M16				
ILLINOIS FED. AID PROJECT				



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

NEW SLAB OR NEW DECK BEAM

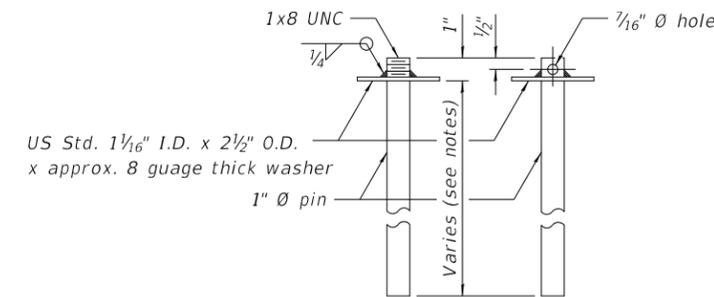


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

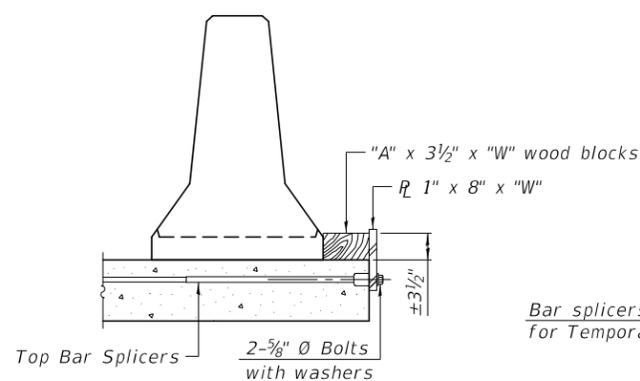
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

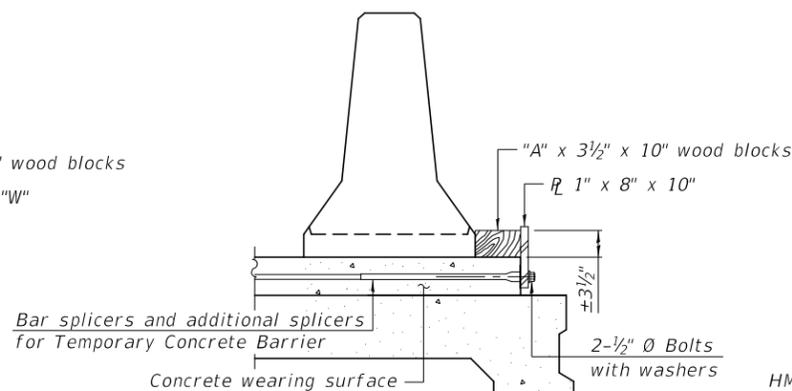


RESTRAINING PIN

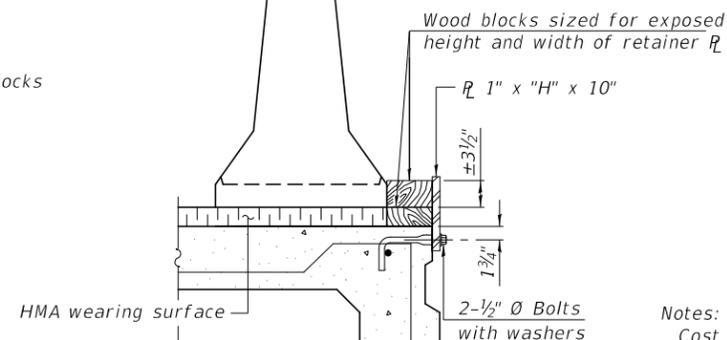
SECTIONS THRU SLAB OR DECK BEAM



DETAIL I

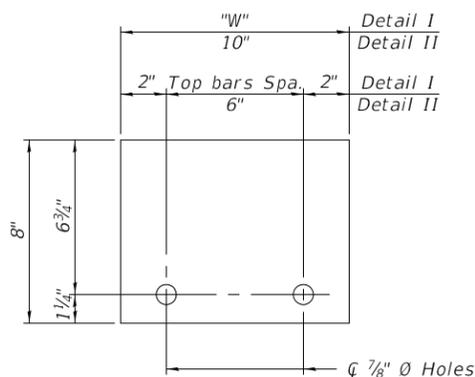


DETAIL II

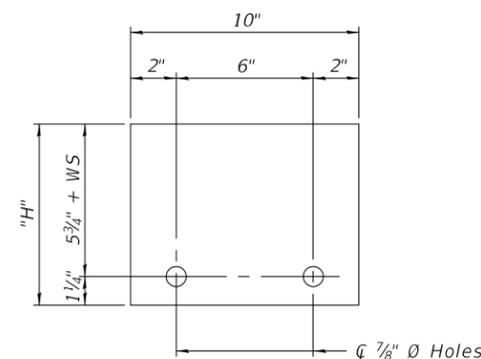


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



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



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

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

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

MODEL: 0600226-76M16-006
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R-27 8-11-2017

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

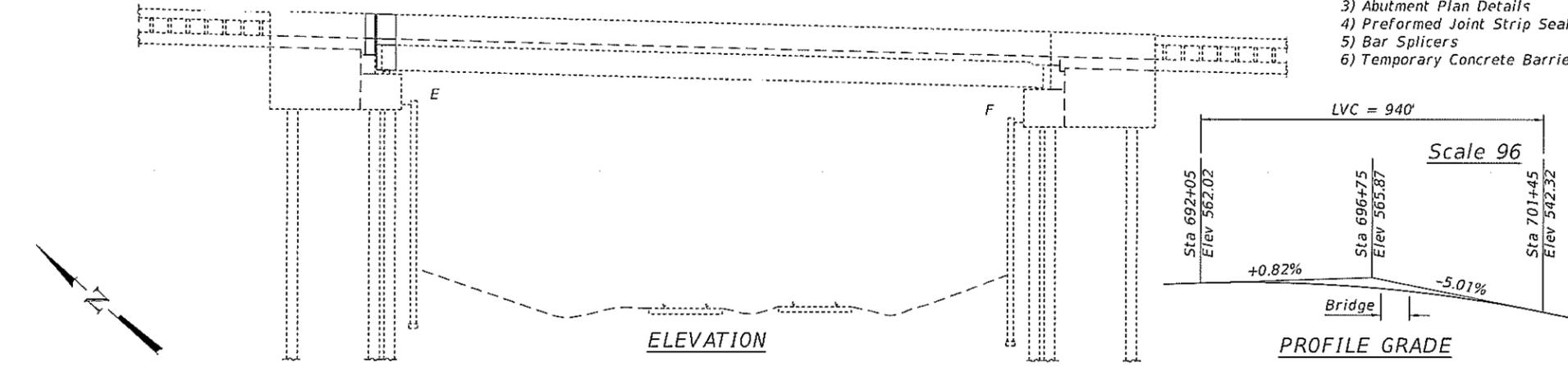
TEMPORARY CONCRETE BARRIER
SN 060-0226

SCALE: 1"=1' SHEET 6 OF 6 SHEETS STA. 682+25.40 TO STA. 685+86.40

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	16
CONTRACT NO. 76M16				
ILLINOIS FED. AID PROJECT				

Existing Structure: 060-0227 was built in 1985 under contract 36760, FA Route 785, Sec 135-VBR.
It is a 1 span WF supported on pile bent abutments, behind MSE walls.

The north deck end and abutment hatchblock shall be replaced with concrete encasement of the beam ends with strip seal joints.
The deck shall be patched and overlaid with waterproofing membrane system and hot-mix asphalt.



SHEET INDEX

- 1) General Plan and Elevation
- 2) North Abutment Section
- 3) Abutment Plan Details
- 4) Preformed Joint Strip Seal
- 5) Bar Splicers
- 6) Temporary Concrete Barrier

GENERAL NOTES

No field welding is permitted except as specified in the contract documents.
All reinforcement bars shall be epoxy coated.
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.
Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with "Concrete Removal".

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

The SSPC-QP1 and SSPC QP2 certifications will be required for all bridges.

After removal of the deck ends and diaphragms, but prior to the encasement of the steel beams, all existing beams, bearings, and other structural steel within 3' of the end of the beams (measured along the beam) at the north abutment of locations 1 and 2 shall be cleaned and painted as specified in the Special Provision "Cleaning and Painting Existing Steel Structures". The beam ends at the south abutment will not be painted. The designated areas shall be cleaned per SSPC-SP15, Commercial Grade Power Tool Cleaning using vacuum shrouded power tools with HEPA filtration. All areas cleaned shall be primed with an organic zinc rich primer between 3.5 and 5.0 mils (90 and 125 microns) dry film thickness.

The use of air monitors will not be required on this project.

The HMA quantities are shown for the bridge only. The quantity is calculated excluding an assumed 1/2" sand & 1/4" waterproofing membrane, for an HMA thickness of 1 1/2" thickness.

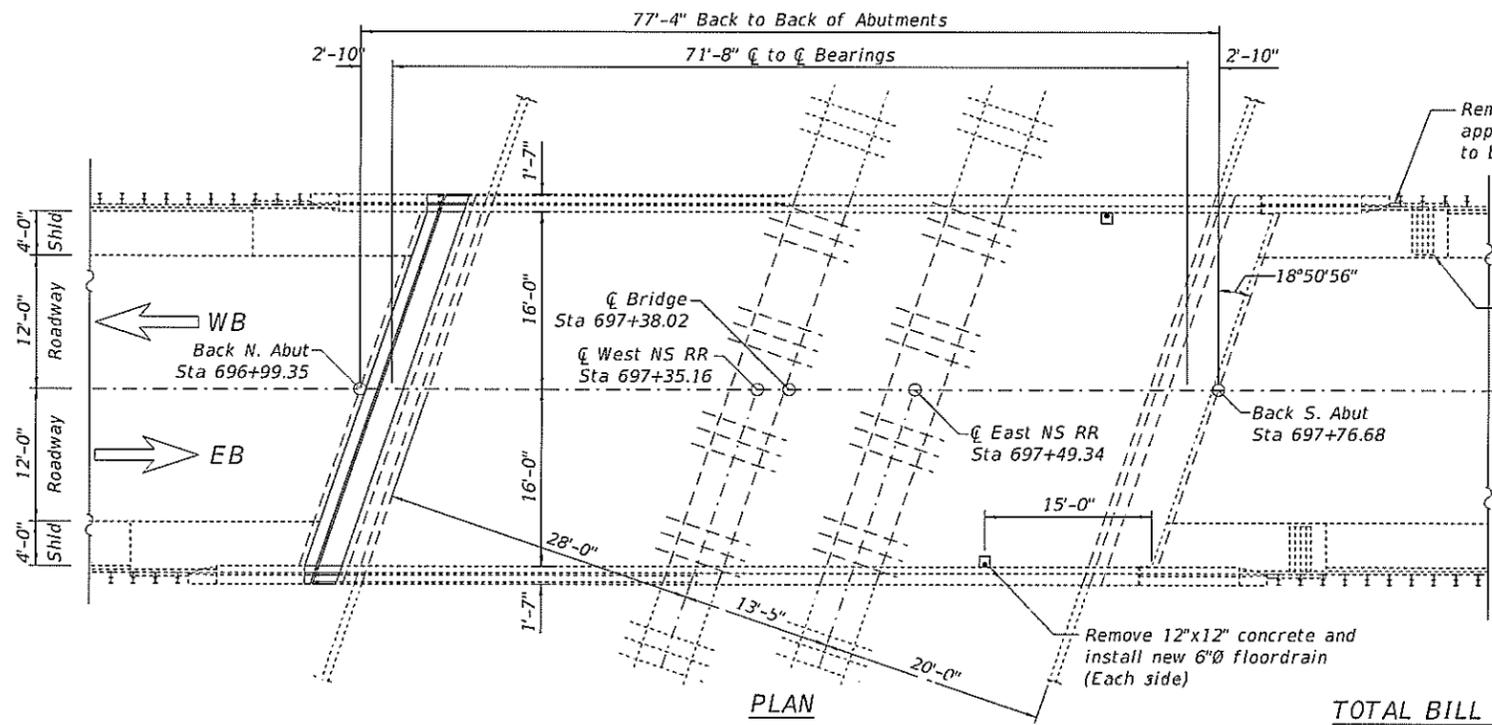
The joints shall be adjusted according to Article 520.04 of the Standard Specs.

The quantity for "Bridge Deck Concrete Sealer" is for the top and inside parapet and wingwall surfaces, and all new concrete.

The quantity for "Concrete Sealer" is for the 2' vertical surface of backwall, 2'-9" wide abutment seat, and 1' vertical surface of both abutment caps. The sealer in these areas shall be a plural component.

The quantity for "Deck Slab Repair (Partial)" is estimated. The location and sizes of repairs are to be determined by the Engineer in the field.

The quantity for "Joint or Crack Filling" is for filling the gaps between the approach shoulders and the wingwalls at all 4 corners. Quantities were calculated assuming 72.7 pcf x 1" x 1" x 12' x 4 / 144 = 24 lb.



Remove and replace 1'-0" of approach shoulder curb next to both S. Abut wingwalls.

Remove hma at voids around drain and fill with HMA. Cost included with HMA.

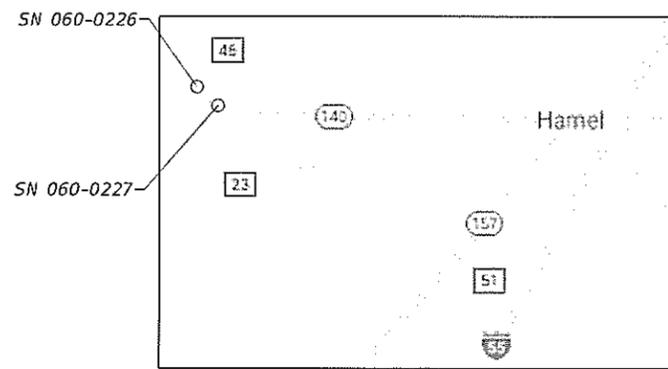
Remove 12"x12" concrete and install new 6"Ø floor drain (Each side)

DESIGN STRESSES

FIELD UNITS
f'c = 4,000 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Polymerized Bituminous Materials (Tack Coat)	Pound	59
Polymerized HMA Surface Course, Mix "D", N70	Ton	18
Joint or Crack Filling	Pound	24
Concrete Removal	Cu. Yd.	7.9
Floor Drains	Each	2
Concrete Superstructure	Cu. Yd.	15.0
Cleaning and Painting Structural Steel, Location 2	L Sum	1
Reinforcement Bars, Epoxy Coated	Pound	1470
Bar Splicers	Each	15
Preformed Joint Strip Seal	Foot	39.5
Waterproofing Membrane System	Sq. Yd.	262
Concrete Sealer	Sq. Ft.	427
Bridge Deck Concrete Sealer	Sq. Ft.	858
Structural Steel Removal	Pound	1300
Containment and Disposal of Lead Paint Cleaning Residues No. 2	L Sum	1
Deck Slab Repair (Partial)	Sq. Yd.	42
Longitudinal Joint Sealant	Foot	74



LOCATION SKETCH



David Carl Puley 11/30/20
Expires 11/30/20

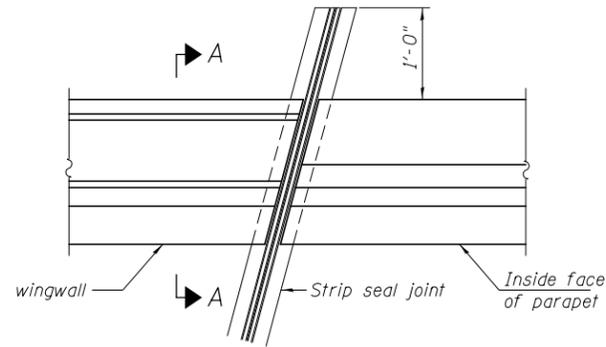
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PLOT DATE = 1/4/2019		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

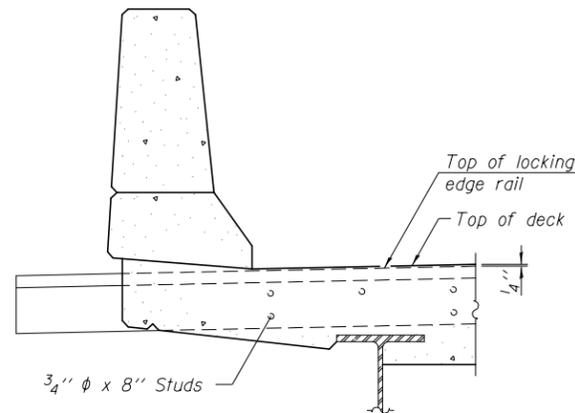
GENERAL PLAN & ELEVATION	
SN 060-0227 (IL 140 OVER NS RR)	
SCALE: 1/4"=1'	SHEET 1 OF 6 SHEETS
STA. 696+99.35	TO STA. 697+76.68

F.A.P. RTE. 785	SECTION (134.135)VBR-2	COUNTY MADISON	TOTAL SHEETS 22	SHEET NO. 17
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76M16	

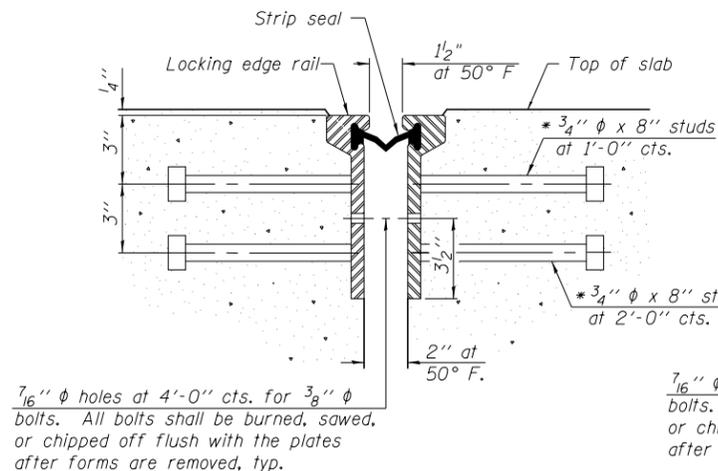
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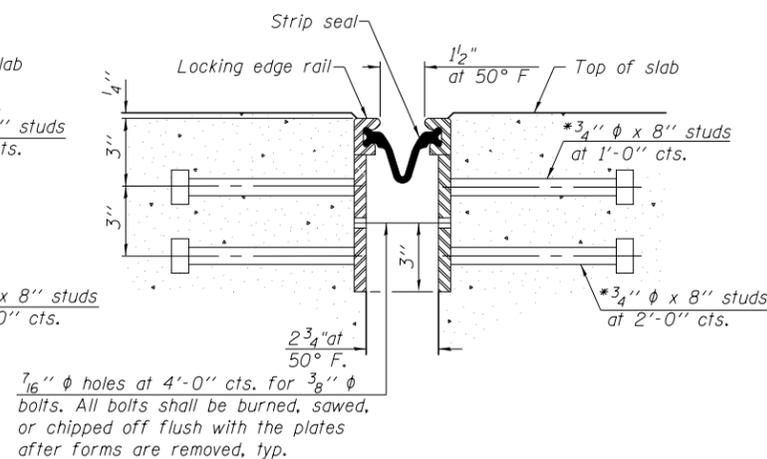
PLAN
(For skews $\leq 30^\circ$)



SECTION A-A

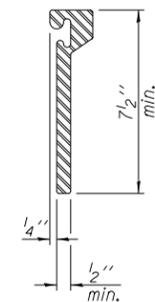


SECTION THRU
ROLLED RAIL JOINT

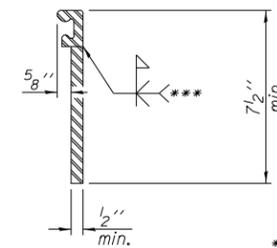


SECTION THRU
WELDED RAIL JOINT

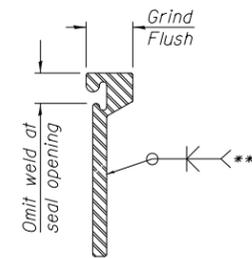
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED
EXTRUDED RAIL



WELDED RAIL



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

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

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. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. 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. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

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

Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	39.5

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EJ-SSJ (MODIFIED)

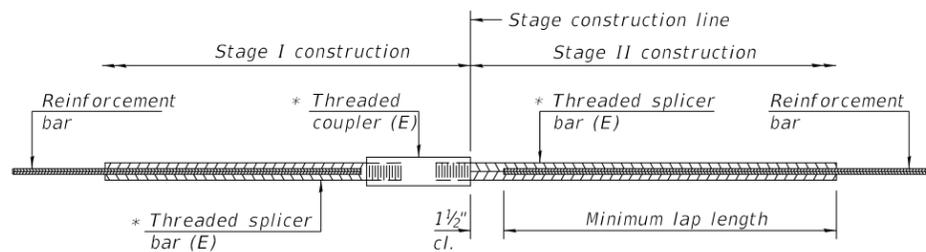
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PLOT DATE = 1/4/2019	CHECKED - JAU	REVISED -
	DATE - MWD	REVISED -

STATE OF ILLINOIS
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PREFORMED JOINT STRIP SEAL
SN 060-0227

SCALE: 1"=1' SHEET 4 OF 6 SHEETS STA. 696+99.35 TO STA. 697+76.68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	20
CONTRACT NO. 76M16				
ILLINOIS FED. AID PROJECT				

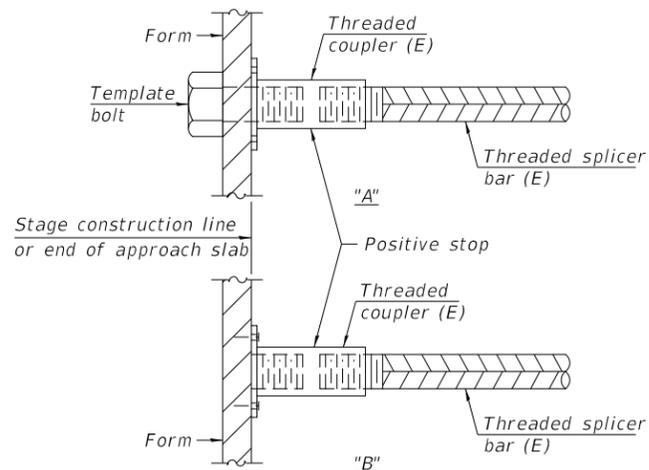


STANDARD BAR SPLICER ASSEMBLY

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

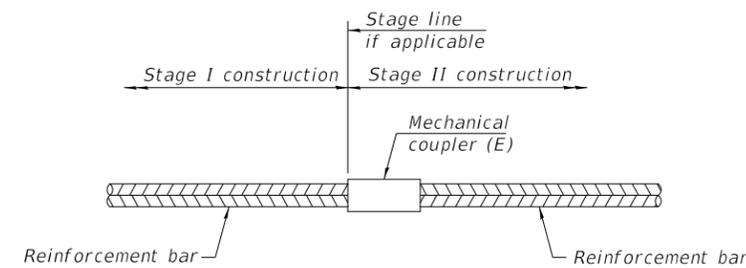
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abutment Mudwall	#6	4	4'-0"
Deck End	#6	8	4'-0"
Deck Diaphragm	#6	3	4'-0"



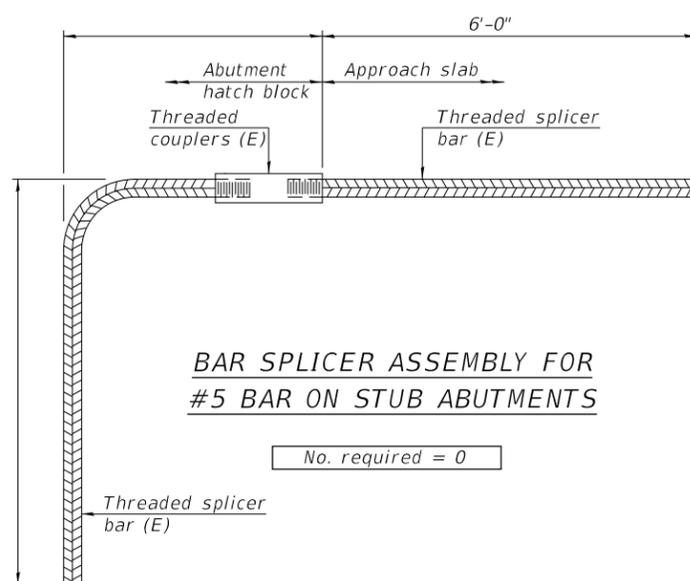
INSTALLATION AND SETTING METHODS

"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
None	None	None



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 0

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

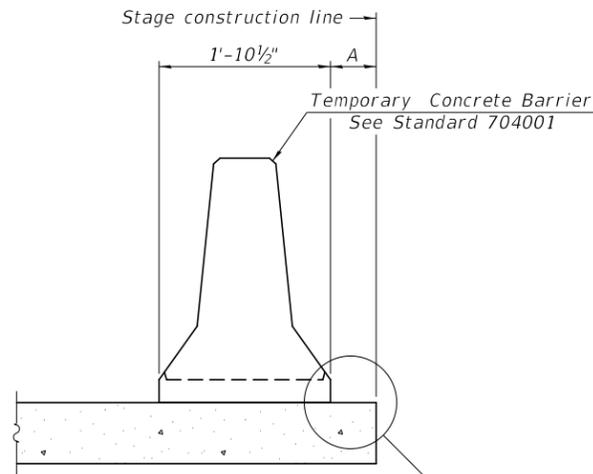
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICERS
SN 060-0227**

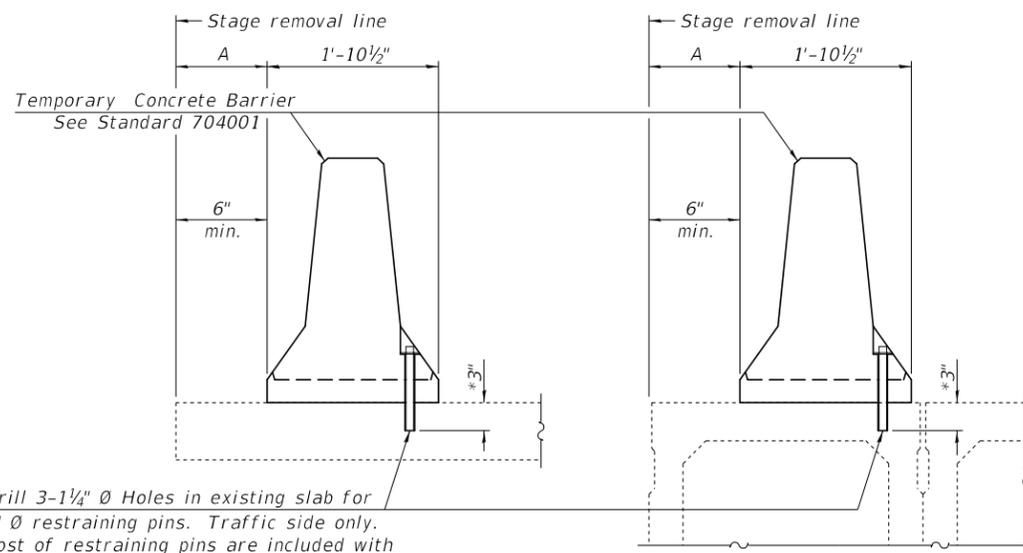
SCALE: None SHEET 5 OF 6 SHEETS STA. 696+99.35 TO STA. 697+76.68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	21
CONTRACT NO. 76M16				
ILLINOIS FED. AID PROJECT				



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

NEW SLAB OR NEW DECK BEAM

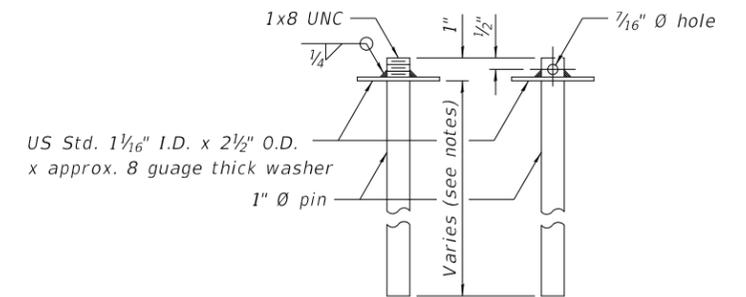


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

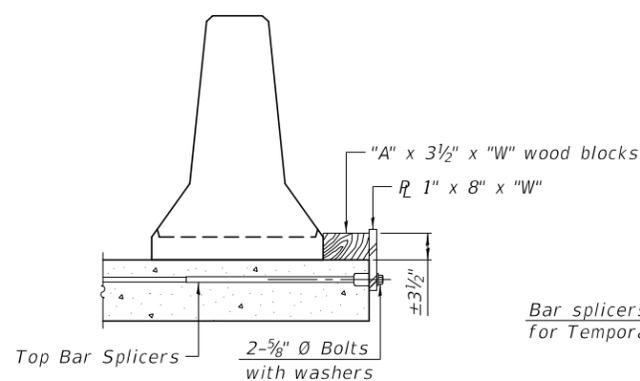
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

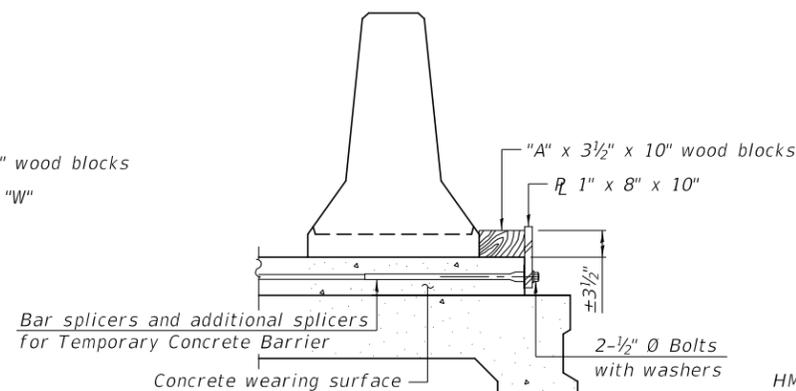


RESTRAINING PIN

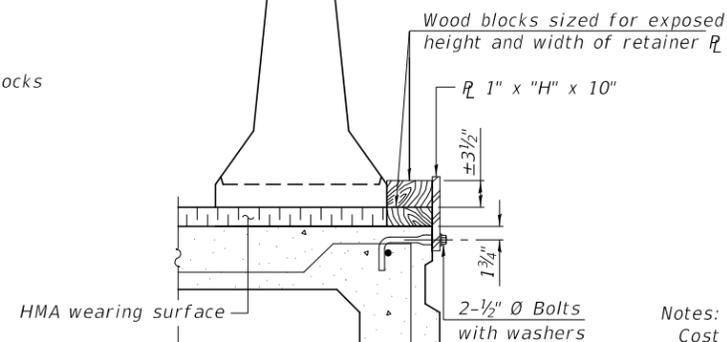
SECTIONS THRU SLAB OR DECK BEAM



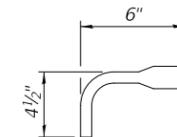
DETAIL I



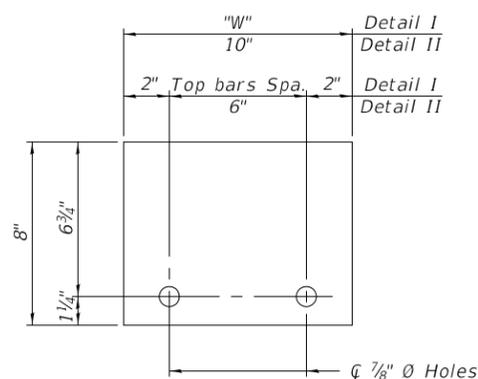
DETAIL II



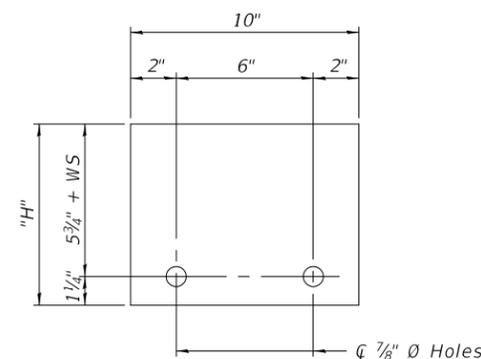
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



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



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

Notes:

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

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

MODEL: 0600227-76M16-006
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R-27 8-11-2017

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	DATE - MWD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER
SN 060-0227

SCALE: 1"=1' SHEET 6 OF 6 SHEETS STA. 696+99.35 TO STA. 697+76.68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
785	(134,135)VBR-2	MADISON	22	22
CONTRACT NO. 76M16				
ILLINOIS FED. AID PROJECT				