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ILLINOIS HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 701101-05 OFF-ROAD, MULTILANE 15' TO 24" FROM PAVEMENT EDGE
- 701400-09 APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
- 701401-10 LANE CLOSURE FREEWAY/EXPRESSWAY
- 701901-06 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 780001-05 TYPICAL PAVEMENT MARKINGS
- 782006 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

BRIDGE DATA

INVENTORY RATING 1.1 (39)
 OPERATING RATING 1.755 (63)
 NO LOAD POSTING

I-57 TRAFFIC DATA

2015 ADT 12,200
 57% TRUCKS

TOWNSHIP

COUNTY UNIT ROAD DISTRICT

DESIGN DESIGNATION : N/A

COORDINATE SYSTEM : N/A

POSTED SPEED : 70 MPH

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

PROJECT ENGINEER RITA GAUTNEY
 PROJECT MANAGER DAVID PICHE

CONTRACT NO. 78536

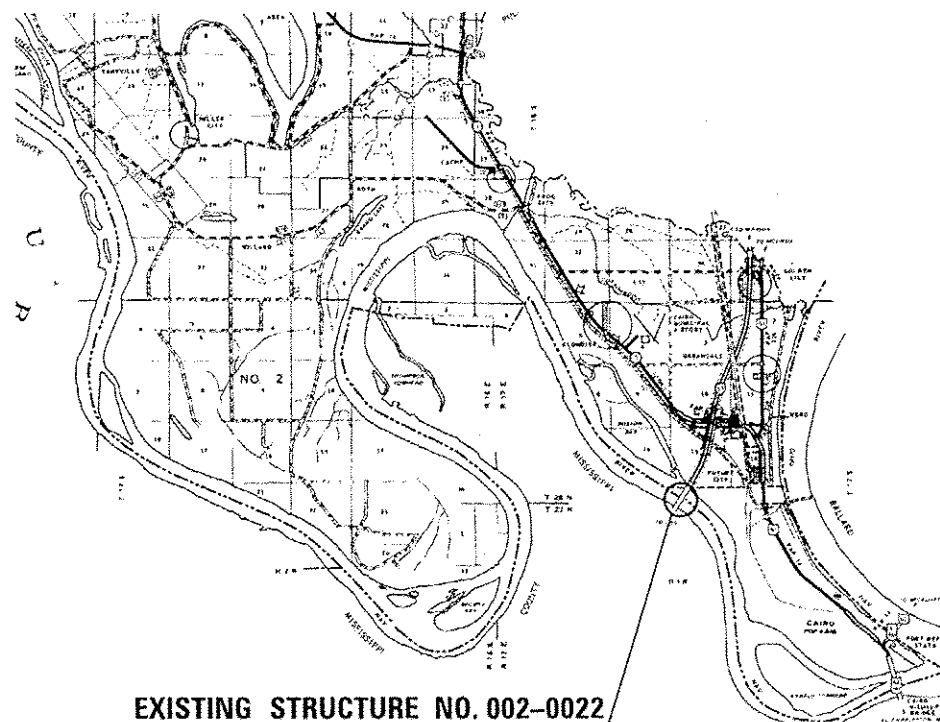
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION
 OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

PROPOSED
 HIGHWAY PLANS

F.A.I. ROUTE 57 (I-57)
 SECTION D9 BRIDGE JOINT REPAIR 2017-1
 PROJECT ACNHPP-0057(326)
 BRIDGE JOINT REPAIR
 ALEXANDER COUNTY, IL & MISSISSIPPI COUNTY, MO

C-99-038-16



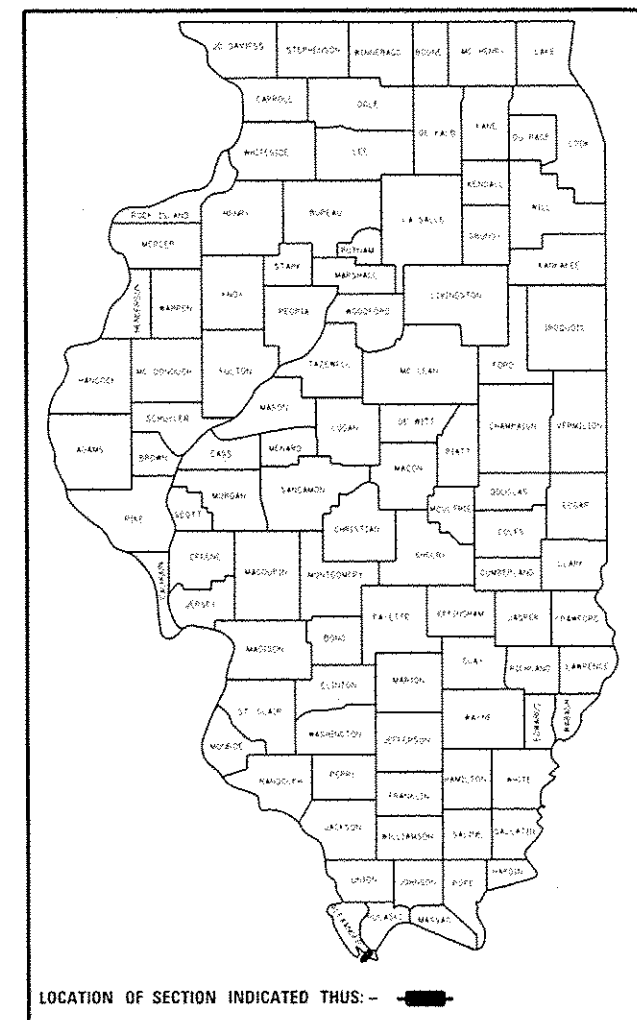
EXISTING STRUCTURE NO. 002-0022
 F.A.I. 57 OVER THE MISSISSIPPI RIVER

BRIDGE LENGTH = 4090.50 FT.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57		ALEXANDER	12	1
		ILLINOIS	CONTRACT NO. 78536	

D9 BRIDGE JOINT REPAIR 2017-1

D-99-038-16



LOCATION OF SECTION INDICATED THUS: - [black rectangle]

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

SUBMITTED Oct 18 2016

Jeffrey L. Kevin
 REGION FIVE ENGINEER

Dec 9 2016
Mawren M. Addis, P.E.
 ENGINEER OF DESIGN AND ENVIRONMENT

Dec 9 2016
[Signature]

DIRECTOR OF PROGRAM DEVELOPMENT

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 OF THE STATE OF ILLINOIS

GENERAL NOTES

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.17 REGARDLESS IF TRACK MOUNTED OR WHEELED.

WHERE STAGE I TRAFFIC DRIVES OVER THE EXISTING SOUTHBOUND AND NORTHBOUND OUTSIDE SHOULDERS, EACH EXISTING ±22" X ±25" DRAINAGE SCUPPER SHALL BE COVERED WITH A METAL PLATE TO ADEQUATELY PROTECT IT FROM CARRYING THE FULL WEIGHT OF TRAFFIC IMPACTS. THE METAL PLATE SHALL BE OFFSET 6" FROM THE TOE OF THE PARAPET TO ALLOW FOR DRAINAGE OF THE ROADWAY. THE METAL PLATE SHALL BE FASTENED TO THE DECK SURROUNDING THE SCUPPER AS APPROVED BY THE ENGINEER. THE COST OF FURNISHING, INSTALLING, MAINTAINING, AND REMOVING THE METAL PLATES IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

THE COST OF TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS ARE PAID SEPARATELY. THE COST OF FURNISHING, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL OTHER MATERIALS, MARKING TAPE, SIGNS, DEVICES AND LABOR FOR TRAFFIC CONTROL IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

THE CONTRACTOR SHALL NOT REDUCE TRAFFIC TO ONE LANE IN EITHER DIRECTION UNTIL A DELIVERY DATE OF STAGE I MATERIALS AND A WORK SCHEDULE HAS BEEN APPROVED BY THE ENGINEER.

COMMITMENTS

NONE AS OF OCTOBER 21, 2016

SUGGESTED SEQUENCE OF CONSTRUCTION

PRE-STAGE I: USING TRAFFIC CONTROL & PROTECTION STANDARD 701401, REMOVE THE EXISTING SOLID WHITE PAVEMENT MARKING EDGE LINES AS DETAILED IN PAVEMENT MARKING SCHEDULE ON SHEET 6 OF 12. THE COST OF TC&P STANDARD 701401 IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

STAGE I REMOVAL/CONSTRUCTION: SET UP TRAFFIC CONTROL & PROTECTION, (SPECIAL) AS SHOWN ON SHEET 4 of 12 FOR THE ENTIRE STRUCTURE IN BOTH DIRECTIONS. PERFORM ALL STAGE I WORK ON ALL JOINTS. REMOVE THE EXISTING SOLID YELLOW PAVEMENT MARKING EDGE LINES AS DETAILED IN PAVEMENT MARKING SCHEDULE ON SHEET 6 OF 12.

STAGE II REMOVAL/CONSTRUCTION: SET UP TRAFFIC CONTROL & PROTECTION, (SPECIAL) AS SHOWN ON SHEET 5 of 12 FOR THE ENTIRE STRUCTURE IN BOTH DIRECTIONS. PERFORM THE REMAINDER OF ALL JOINT WORK.

USING TRAFFIC CONTROL & PROTECTION STANDARD 701401, INSTALL REPLACEMENT PAVEMENT MARKING. THE COST OF TC&P STANDARD 701401 IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

Prepared By: *[Signature]*
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *[Signature]*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *[Signature]*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *[Signature]*
DISTRICT OPERATIONS ENGINEER

Examined By: *[Signature]*
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: *[Signature]*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *[Signature]*
DISTRICT MATERIALS ENGINEER

FILE NAME *	USER NAME * gautneykh	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & SEQUENCE OF CONSTRUCTION SN 002-0022	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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PLOT SCALE * 60.0000' / in.	CHECKED -	REVISOR	REVISION			*D9 BRIDGE JOINT REPAIR 2017-1 CONTRACT NO. 78536					
PLOT DATE * 10/17/2016	DATE -	REVISOR	REVISION			ILLINOIS FED. AID PROJECT					

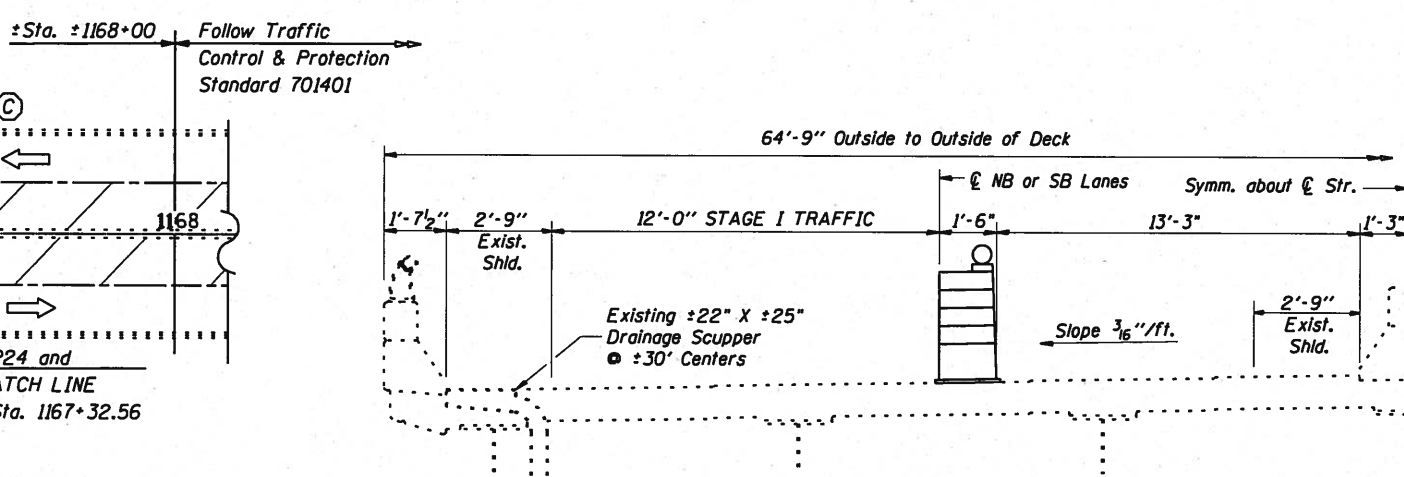
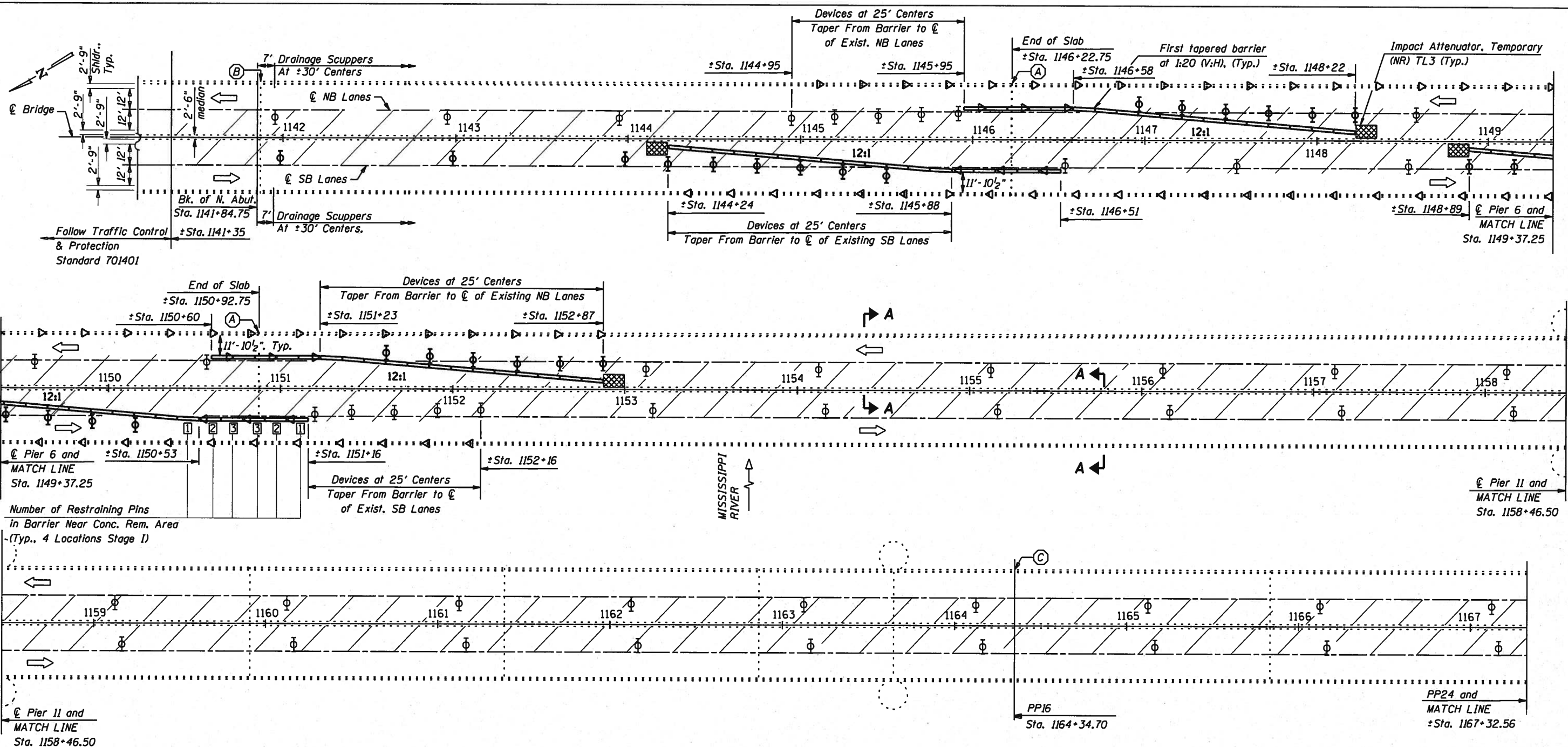
SUMMARY OF QUANTITIES

CONSTRUCTION CODE 0014
50% ILLINOIS
(90% FEDERAL, 10% STATE)
50% MISSOURI
RURAL
FAI ROUTE 57
ALEXANDER COUNTY
STRUCTURE 002-0022

PAY ITEM	DESCRIPTION	UNIT	TOTAL QUANTITY
50102400	CONCRETE REMOVAL	CU YD	36
50300255	CONCRETE SUPERSTRUCTURE	CU YD	34.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7160
50800515	BAR SPLICERS	EACH	96
50800530	MECHANICAL SPLICERS	EACH	464
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3
67100100	MOBILIZATION	LSUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	18
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
70400100	TEMPORARY CONCRETE BARRIER	FOOT	900
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	900
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	3168
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1056
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1
Z0021907	SILICONE JOINT SEALER, 1.75"	FOOT	130
Z0021912	SILICONE JOINT SEALER, 2.5"	FOOT	65
Z0034393	MODULAR EXPANSION JOINT 9"	FOOT	123
Z0041895	POLYMER CONCRETE	CU FT	4.7

20

* SPECIALTY ITEM



NOTES

- Temporary pavement marking tape shall be placed alongside the work area. The edge lines shall be yellow.
- Guardrail/barrier wall reflectors shall be spaced at 25' centers on the temporary concrete barrier and the existing bridge rail, according to Standards 704001 and 782006. Reflectors on the temporary concrete barrier shall be crystal, and reflectors on the rail shall be amber.
- Vertical barricades shall not be used in lane shift taper.
- See Traffic Control and Protection Standard 701400 and 701401 for traffic control details not shown.
- See width restriction signs on Sheet 6 of 12.

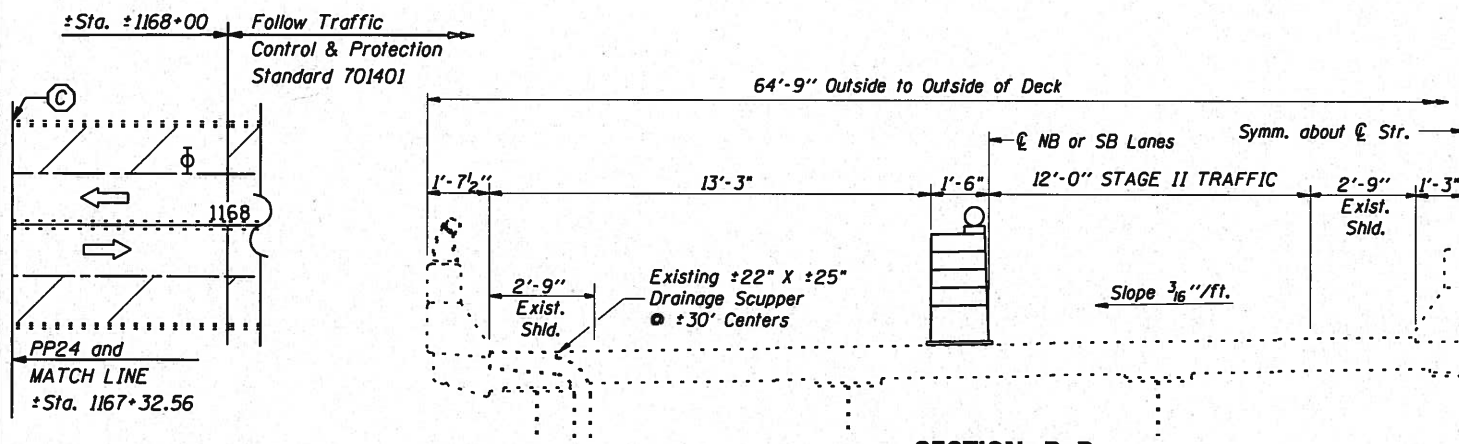
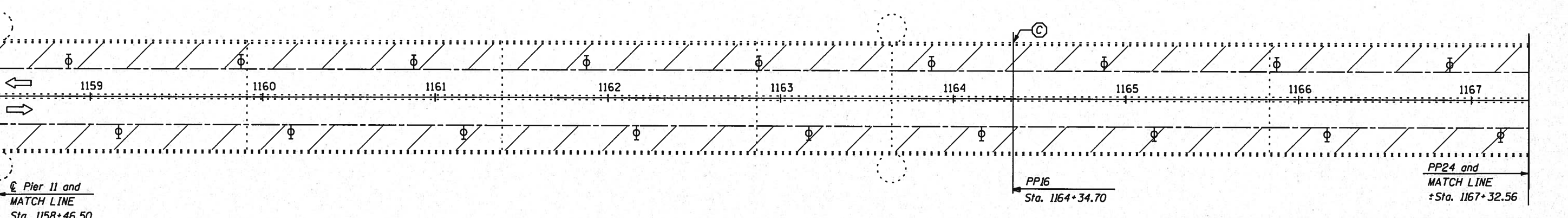
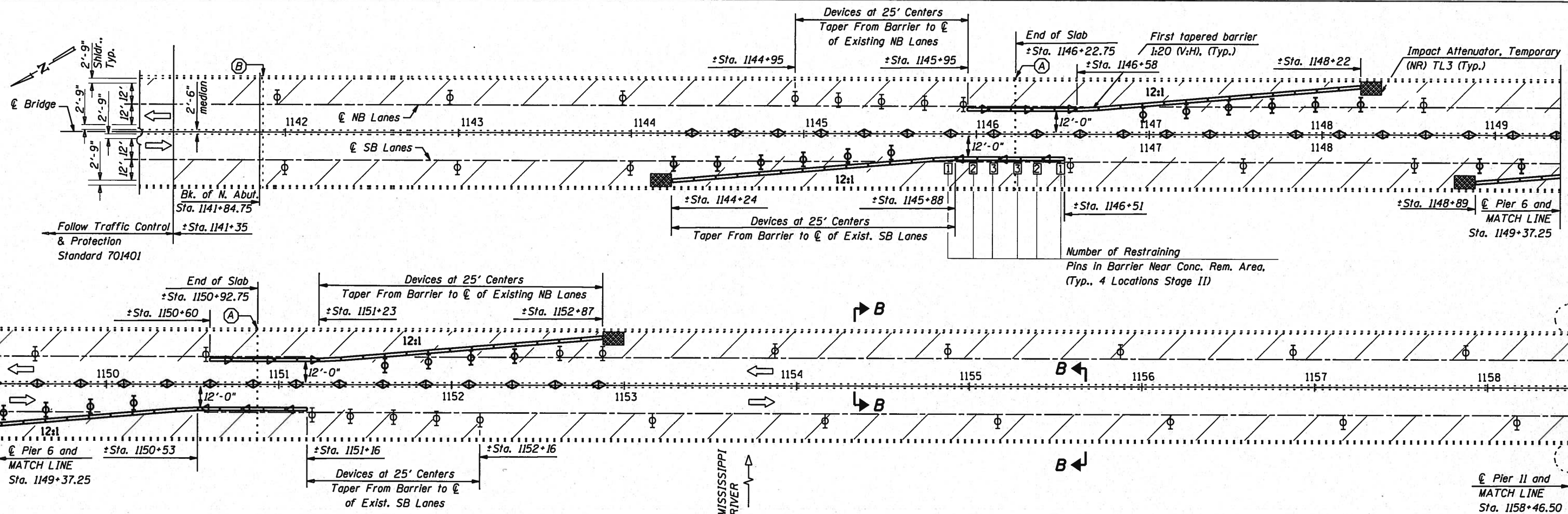
SYMBOLS

- Work area
- Type II barricade, drum, or vertical barricade with steady burn monodirectional light at 100' centers along C of existing lanes except as noted.
- Temporary concrete barrier. See Standard 704001.
- Monodirectional guardrail/barrier wall reflector See Standard 782006.
- Impact attenuator, test level 3, non-redirectional
- Direction of Traffic
- Remove Neoprene Joint & Install Modular Joint
- Remove & Replace Nosing & Silicone Sealer
- Remove & Replace Silicone Sealer

PARTIAL PLAN

SECTION A-A

FILE NAME *	USER NAME * gautnagrk	DESIGNED -	REVISD - 10/18/2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE I TRAFFIC CONTROL LAYOUT SN 002-0022		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
per\\11.084EBID\INTEG\Illinois.gov\PI\DOT\Documents\DOT Offices\District 9\Projects\78536\BRIDGE\Drawings\CAD\Sheets\78536_sht.dgn		CHECKED -	REVISD -		57		ALEXANDER	12	4		
PLOT SCALE * 60,0000 / in.		DATE -	REVISD -		SCALE: _____ SHEET 4 OF _____ SHEETS STA. _____ TO STA. _____		#09 BRIDGE JOINT REPAIR 2017-1		CONTRACT NO. 78536		
#MODELNAME*							ILLINOIS FED. AID PROJECT				



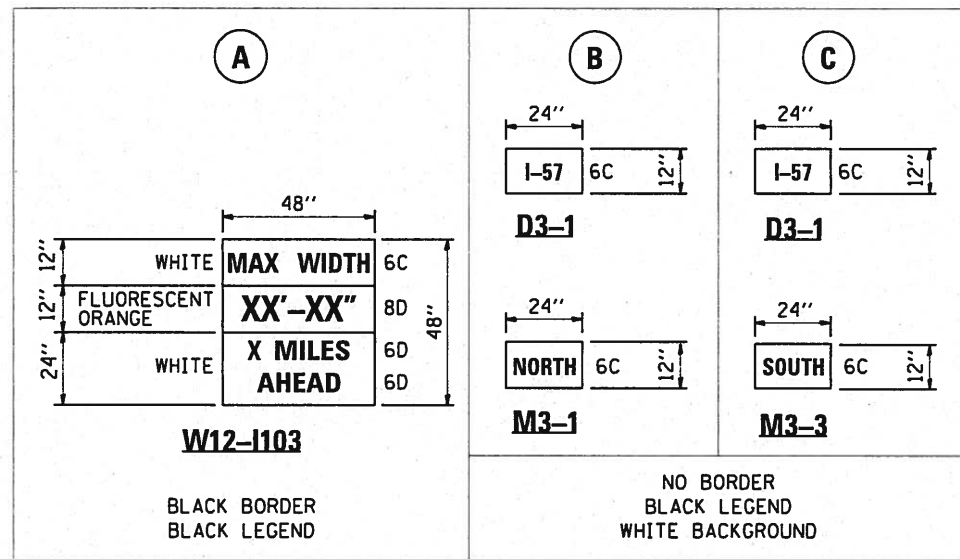
NOTES

- Temporary pavement marking tape shall be placed alongside the work area. The edge lines shall be white.
- Monodirectional Guardrail/barrier wall reflectors shall be spaced at 25' centers on the temporary concrete barrier. Markers shall be crystal. See Standards 704001 and 782006.
- Bidirectional Guardrail/barrier wall reflectors shall be spaced at 25' centers on the concrete median barrier. Markers shall be amber. See Standard 782006.
- Vertical barricades shall not be used in lane shift taper.
- See Traffic Control and Protection Standard 701400 and 701401 for traffic control details not shown.
- See width restriction signs on Sheet 6 of 12.

SYMBOLS

- Work area
- Type II barricade, drum, or vertical barricade with steady burn monodirectional light at 100' centers along centerline of existing lanes except as noted.
- Temporary concrete barrier. See Standard 704001.
- Bidirectional guardrail/barrier wall reflector See Standard 782006.
- Monodirectional guardrail/barrier wall reflector See Standard 782006.
- Impact attenuator, test level 3, non-redirectional
- Direction of Traffic
- Remove Neoprene Joint & Install Modular Joint
- Remove & Replace Nosing & Silicone Sealer
- Remove & Replace Silicone Sealer

FILE NAME: p:\IL084EBID\INTEG\Illinois.gov\PI001\Documents\DOT Offices\District 9\Projects\78536\084EBID\CA\Sheets\78536 shld.dgn	USER NAME: gautneyh	DESIGNED: -	REVISED: 10/18/2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE II TRAFFIC CONTROL LAYOUT SN 002-0022		F.A.I. RTE. 57	SECTION	COUNTY ALEXANDER	TOTAL SHEETS 12	SHEET NO. 5	
PLLOT SCALE: 60.0000' / in.	CHECKED: -	DATE: -	REVISED: -		SCALE: _____	SHEET 5 OF _____ SHEETS	STA. _____ TO STA. _____	*D9 BRIDGE JOINT REPAIR 2017-1 CONTRACT NO. 78536				
PLLOT DATE: 10/18/2016	DATE: -	REVISED: -	REVISED: -		ILLINOIS FED. AID PROJECT							
<p style="text-align: center;">PARTIAL PLAN</p>												



WIDTH RESTRICTION SIGNS

NOTES

STAGE I MAX WIDTH SHALL BE 10' -4" NORTHBOUND AND SOUTHBOUND.
STAGE II MAX WIDTH SHALL BE 10' -6" NORTHBOUND AND SOUTHBOUND.

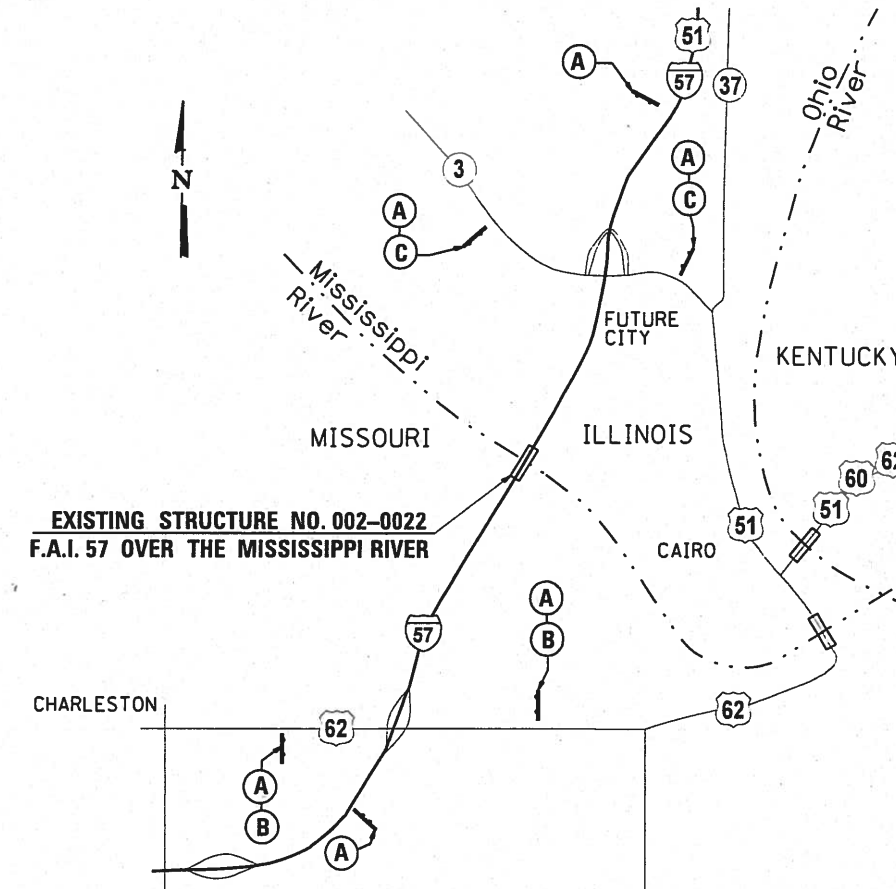
THE DISTANCE "X" ON THE "X MILES AHEAD" SIGN WILL BE DETERMINED BY THE ENGINEER.

ALL WIDTH RESTRICTION SIGNS, POSTS, HARDWARE AND LABOR ARE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL AND PROTECTION, (SPECIAL), AND NO OTHER COMPENSATION WILL BE ALLOWED.

THE CONTRACTOR SHALL ERECT THE SIGNS AT LOCATIONS DETERMINED BY THE ENGINEER.

ALL SIGNS SHALL BE POST MOUNTED.

SEE SECTION 1106.01 OF THE STANDARD SPECIFICATIONS FOR SIGN SHEETING REQUIREMENTS.



WIDTH RESTRICTION SIGNS

MAP NOT TO SCALE

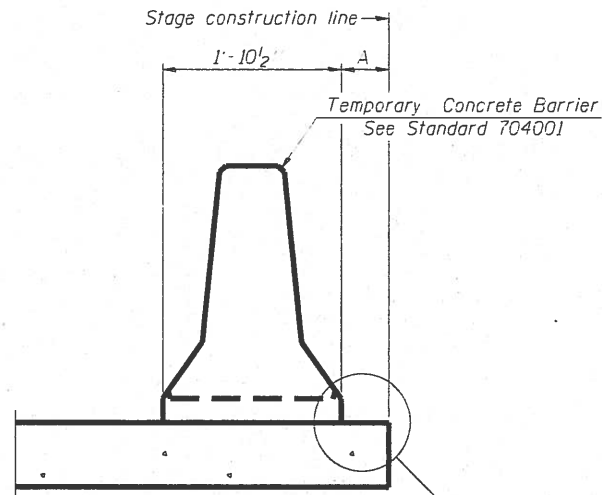
PAVEMENT MARKING REMOVAL & REPLACEMENT

LOCATION	TYPE	MATERIAL
STA. 1144+24 TO STA. 1152+16 SB STA. 1144+95 TO STA. 1152+87 NB	SOLID YELLOW	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"
STA. 1144+24 TO STA. 1152+16 SB STA. 1144+95 TO STA. 1152+87 NB	SOLID WHITE	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"

DRAINAGE SCUPPER PLATES

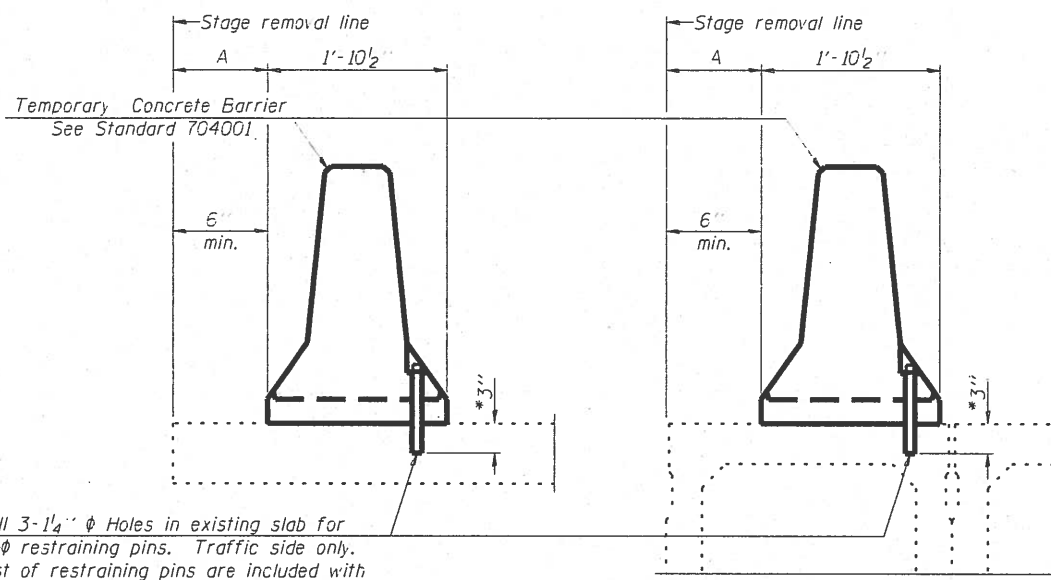
(FOR INFORMATION ONLY)

LOCATION	COUNT (APPROX.)
STA. 1144+24 TO STA. 1152+16 SB	27
STA. 1144+95 TO STA. 1152+87 NB	27
TOTAL	54



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".

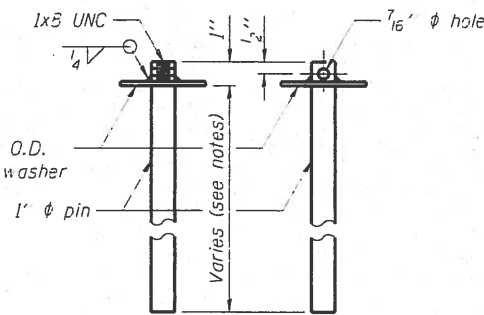
NEW SLAB OR NEW DECK BEAM



Drill 3-1/4" ϕ Holes in existing slab for 1" ϕ 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

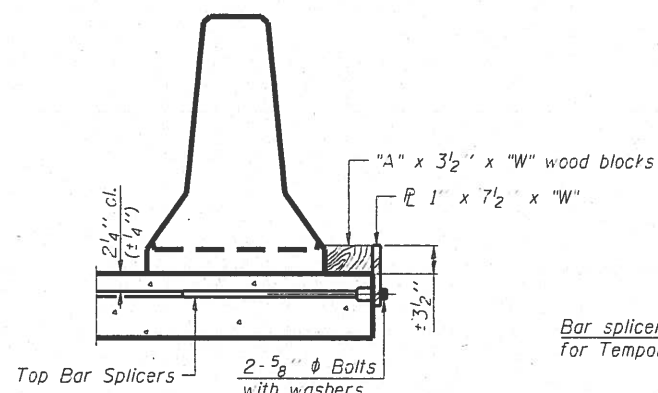
EXISTING DECK BEAM



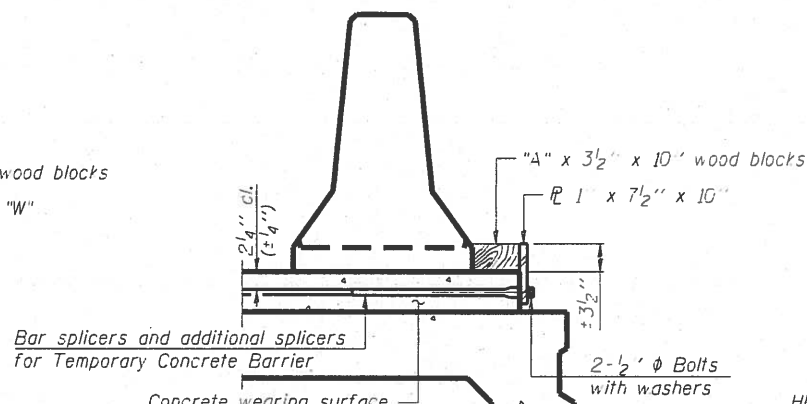
RESTRAINING PIN

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

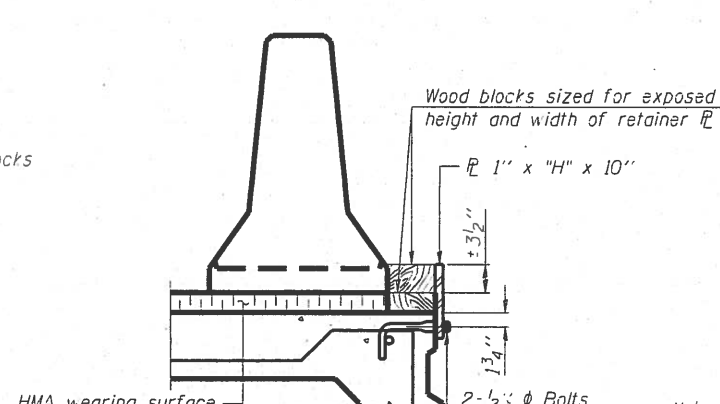
SECTIONS THRU SLAB OR DECK BEAM



DETAIL I

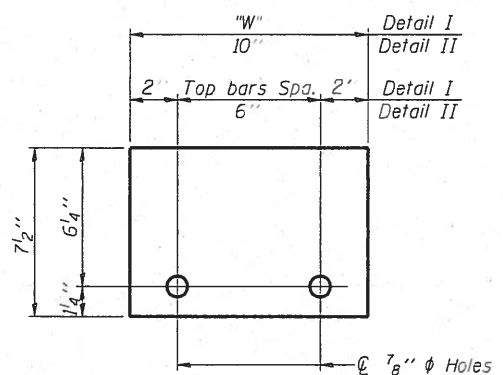
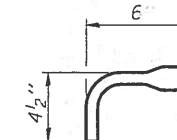


DETAIL II

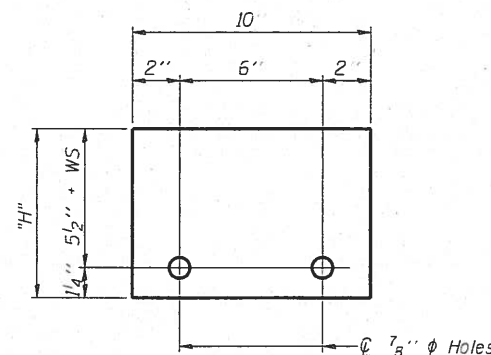


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 7 1/2" x "W"
(Detail I and II)



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

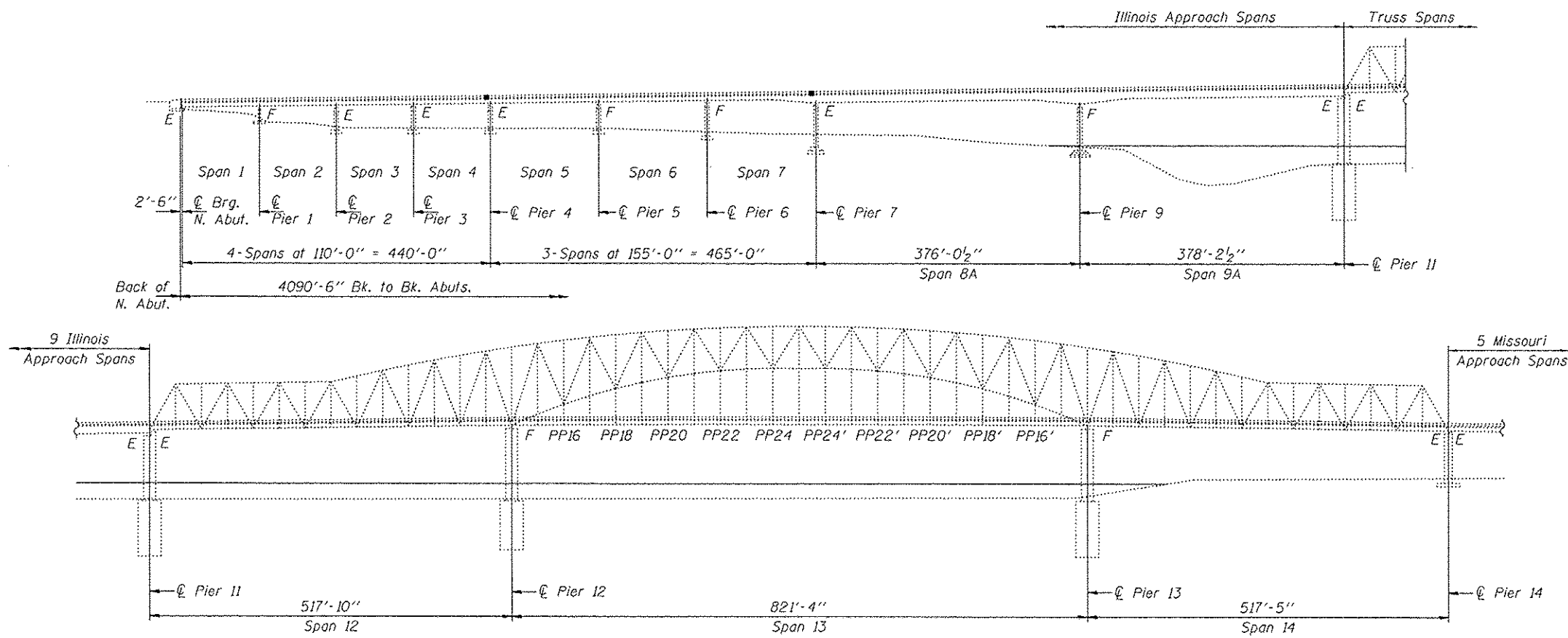
Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate ϕ of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications 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.

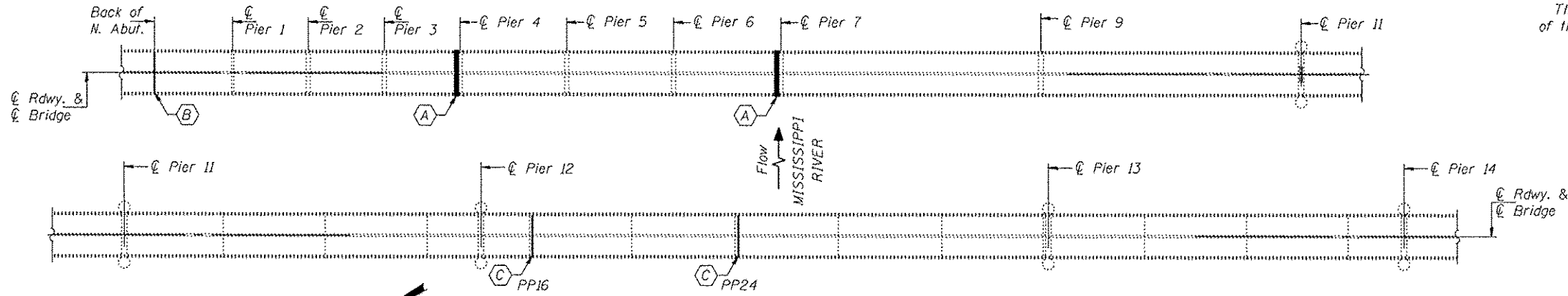
R-27

07-22-16

FILE NAME *	USER NAME * gautmayk	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 002-0022	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DESIGNED BY	PROJECT NO.	CHECKED -	REVISED -			57		ALEXANDER	12	7	
PLOT SCALE * 60.0000' / 1"	DATE	DATE	DATE			-09 BRIDGE JOINT REPAIR 2017-1					
PLOT DATE * 10/17/2016						CONTRACT NO. 78536					
					SCALE: _____	SHEET 7 OF _____ SHEETS		STA. _____ TO STA. _____		ILLINOIS FED. AID PROJECT	

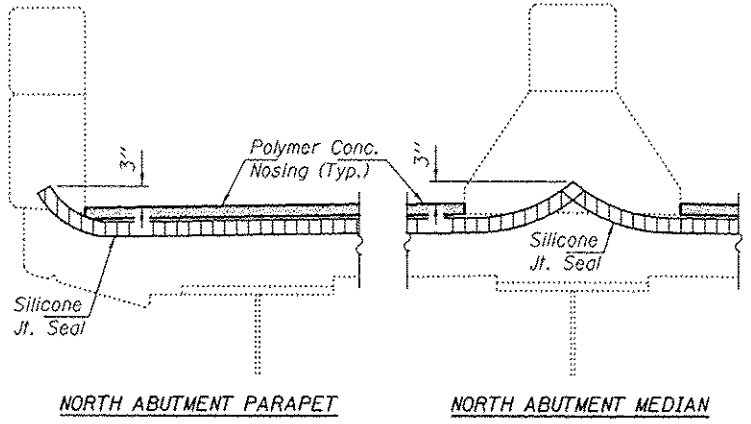


PARTIAL ELEVATION
(Looking East)



PARTIAL PLAN

- (A) - Remove existing Neoprene Expansion Joint and install Modular Expansion Joint.
- (B) - Remove & Replace Polymer Concrete Nosing and Silicone Joint Sealer.
- (C) - Remove & Replace Silicone Joint Sealer.



TYPICAL END OF SEAL TREATMENT

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.

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

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

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

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 structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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

Modular Expansion Joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

Modular Expansion Joints shall be fabricated and installed according to the manufacturer's recommendations and as approved by the Engineer.

Modular Expansion Joints shall be fabricated to conform to the existing cross slopes of the bridge.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel used on the modular joints shall be hot-dipped galvanized. See Special Provision "Hot-Dip Galvanizing for Structural Steel".

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	36
Concrete Superstructure	Cu. Yd.	34.6
Modular Expansion Joint, 9"	Foot	123
Reinforcement Bars, Epoxy Coated	Pound	7160
Bar Splicers	Each	96
Mechanical Splicers	Each	464
Polymer Concrete	Cu. Ft.	4.7
Silicone Joint Sealer, 1 1/4"	Foot	130
Silicone Joint Sealer, 2 1/2"	Foot	65



Expires: November 30, 2018

DESIGNED - *[Signature]*
 CHECKED - *[Signature]*
 DRAWN - Kyle M. Stoffen
 CHECKED - *[Signature]* SMR

PASSED
[Signature]
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

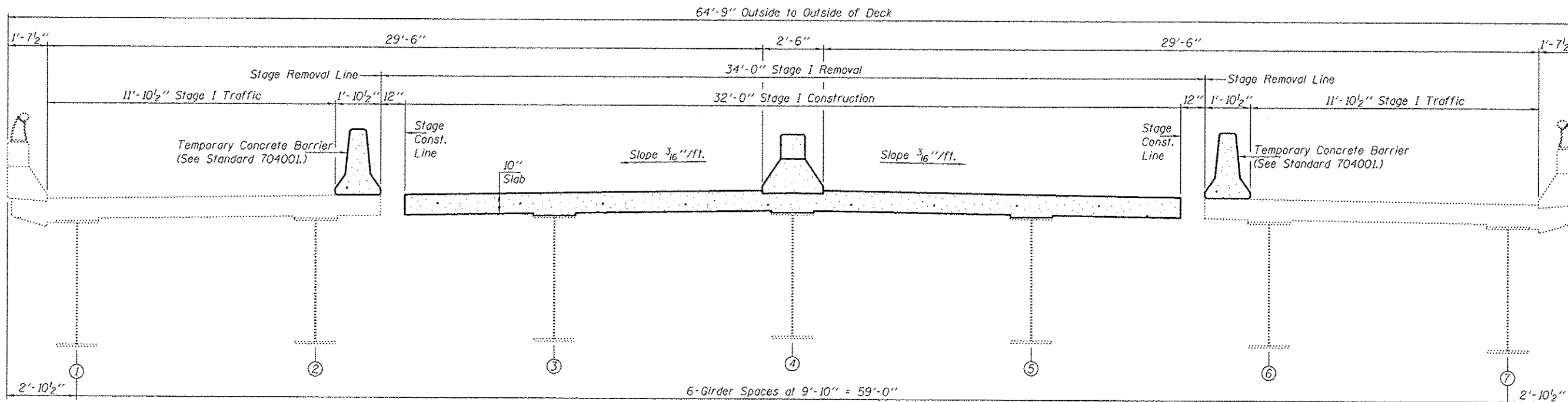
DATE - DECEMBER 8, 2016
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

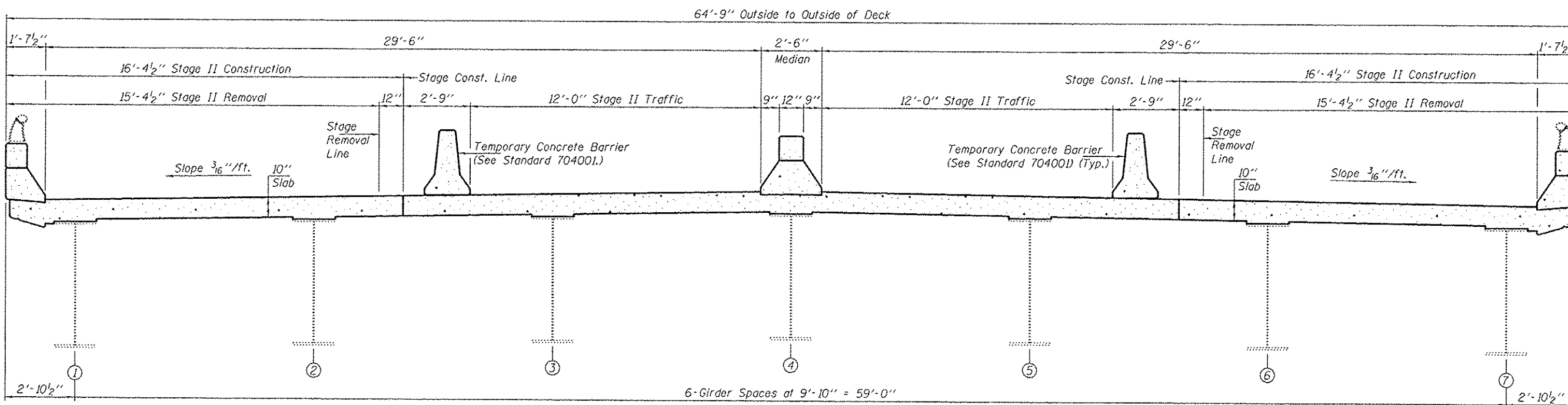
GENERAL PLAN & ELEVATION
 F.A.I. ROUTE 57 OVER THE MISSISSIPPI RIVER
 SN 002-0022

SHEET NO. 1 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT REPAIR 2017-1	ALEXANDER	12	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78536	



STAGE I CONSTRUCTION DETAILS
(Looking South)



STAGE II CONSTRUCTION DETAILS
(Looking South)

DESIGNED - CCC
CHECKED - SMR
DRAWN - Kyle M. Steffon
CHECKED - CCC SMR

PASSED

A. Carl Perry
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - DECEMBER 8, 2016

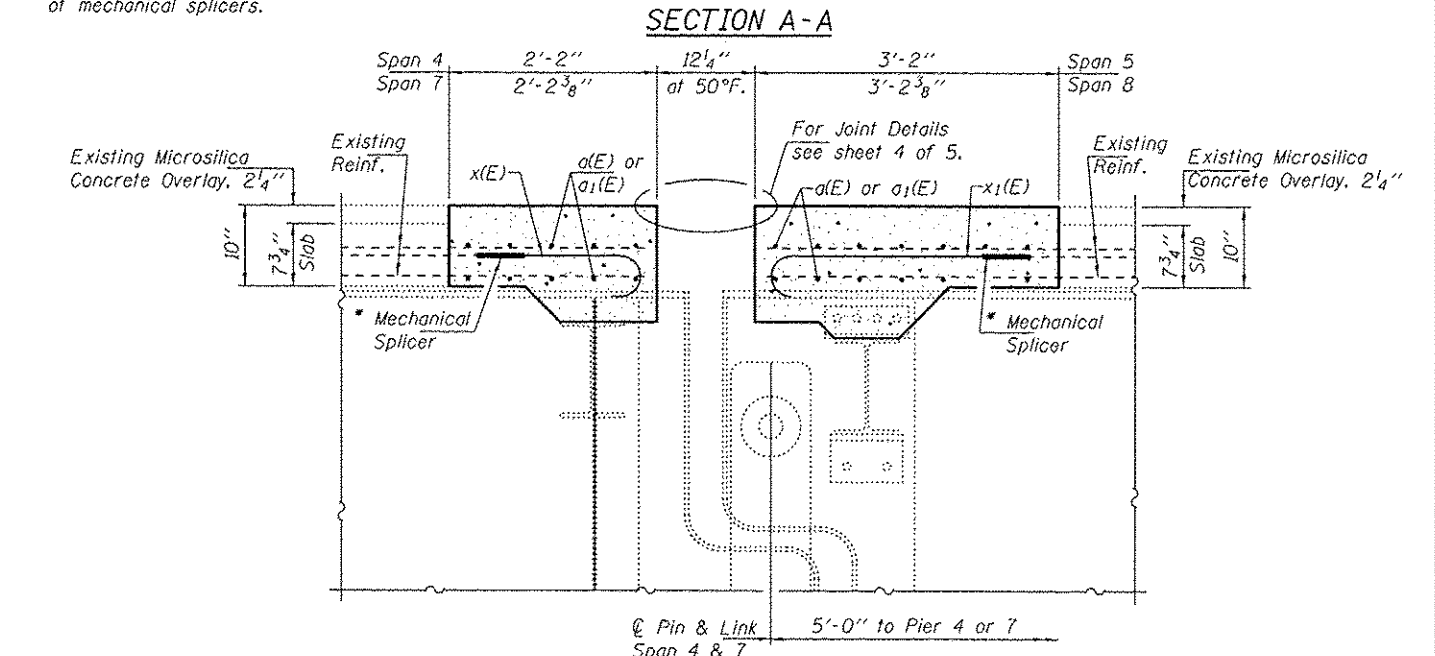
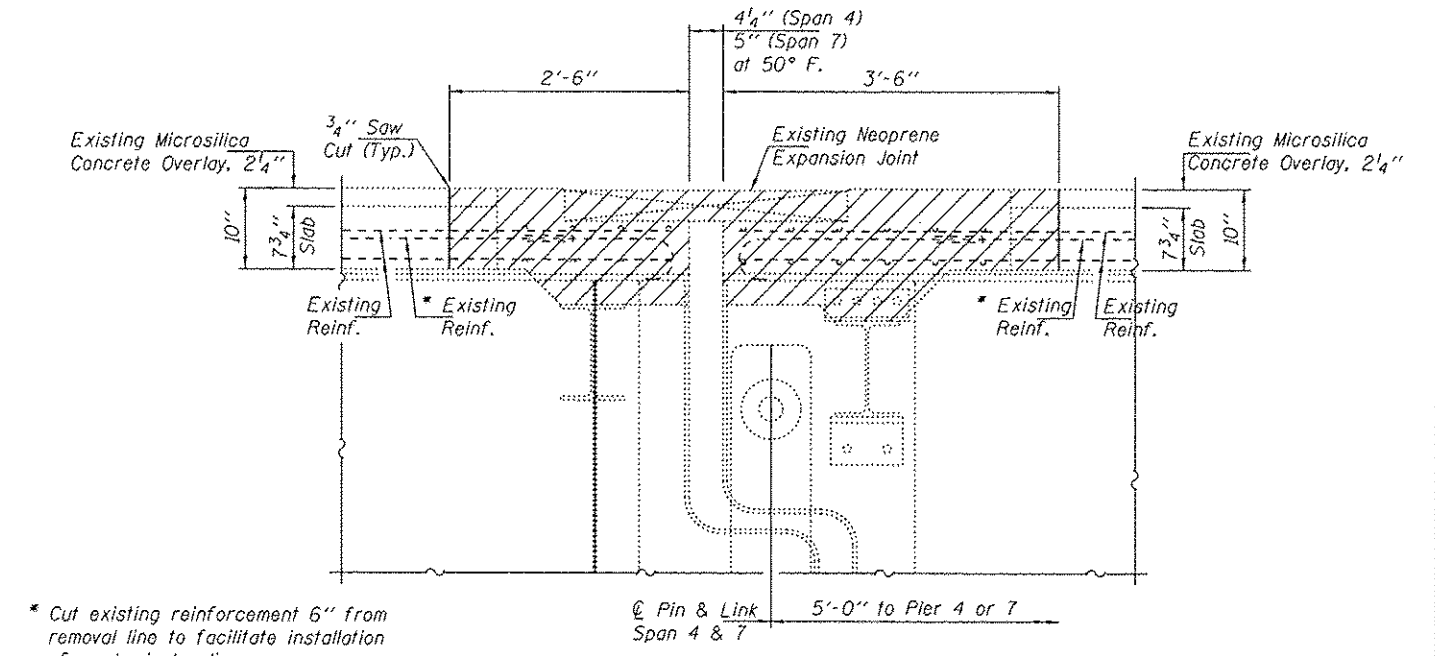
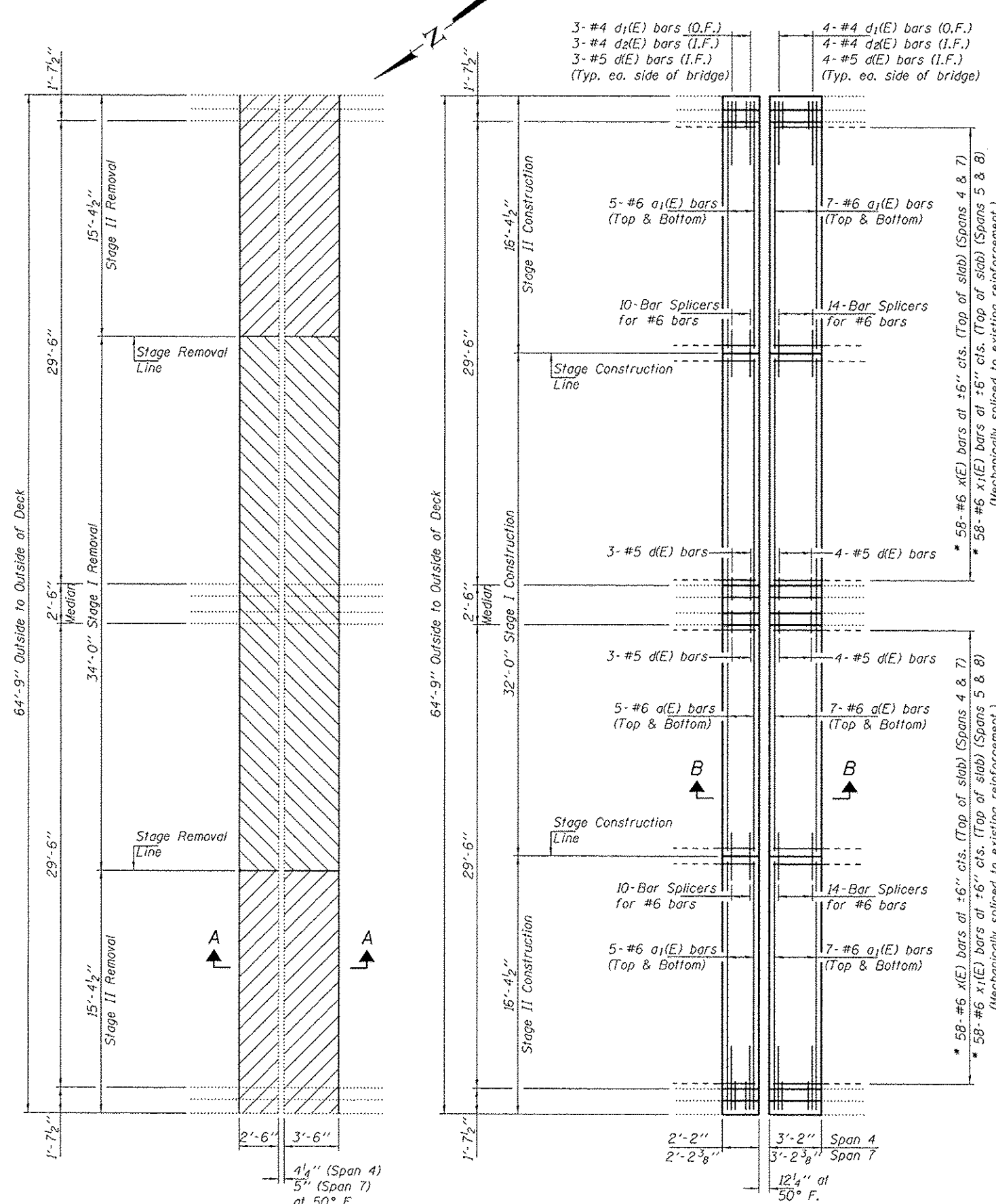
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

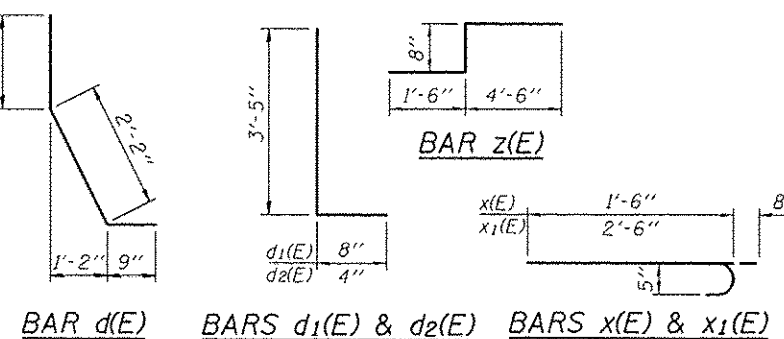
STAGING DETAILS
SN 002-0022

SHEET NO. 2 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT REPAIR 2017-1	ALEXANDER	12	9
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78536	



Notes:
 For median and parapet details see sheet 4 of 5.
 Hatched areas indicate concrete removal.
 For bars xz(E) and z(E), see sheet 4 of 5.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	48	#6	31'-8"	U
a1(E)	96	#6	16'-0"	—
d(E)	56	#5	4'-0"	L
d1(E)	28	#4	4'-1"	L
d2(E)	28	#4	3'-9"	L
x(E)	232	#6	2'-2"	—
x1(E)	232	#6	3'-2"	—
x2(E)	32	#6	1'-10"	—
z(E)	24	#6	6'-8"	—
Concrete Removal			Cu. Yd.	36
Concrete Superstructure			Cu. Yd.	34.6
Bar Splicers			Each	96
Mechanical Splicers			Each	464
Reinforcement Bars, Epoxy Coated			Pound	7160

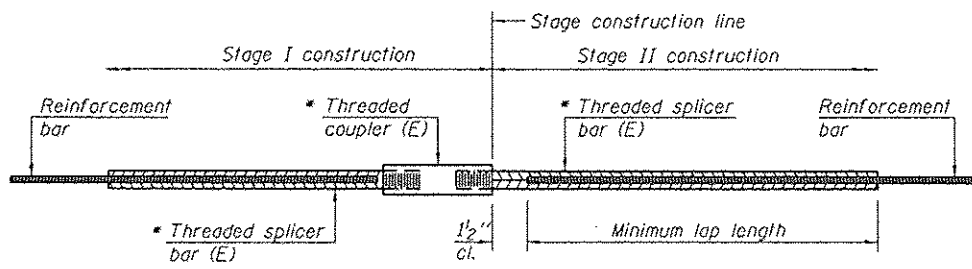
DESIGNED - CCC
 CHECKED - SMR
 DRAWN - Kyle M. Staffen
 CHECKED - CCC SMR

DATE - DECEMBER 8, 2016
 PASSED
 ACTING ENGINEER OF BRIDGES AND STRUCTURES
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL & REPLACEMENT DETAILS FOR SPANS 4 & 7
 SN 002-0022
 SHEET NO. 3 OF 5 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 BRIDGE JOINT REPAIR 2017-1	ALEXANDER	12	10
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78536	

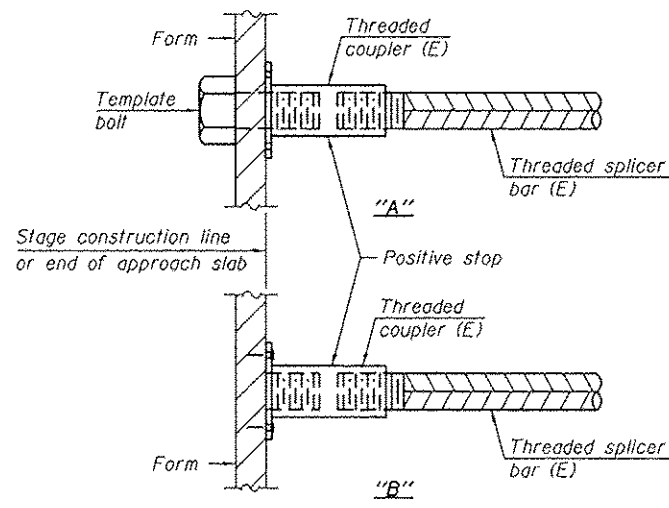


STANDARD BAR SPLICER ASSEMBLY

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

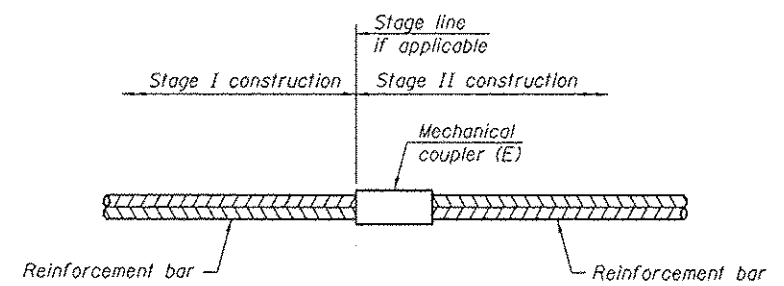
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Deck	#6	96	3'-7"



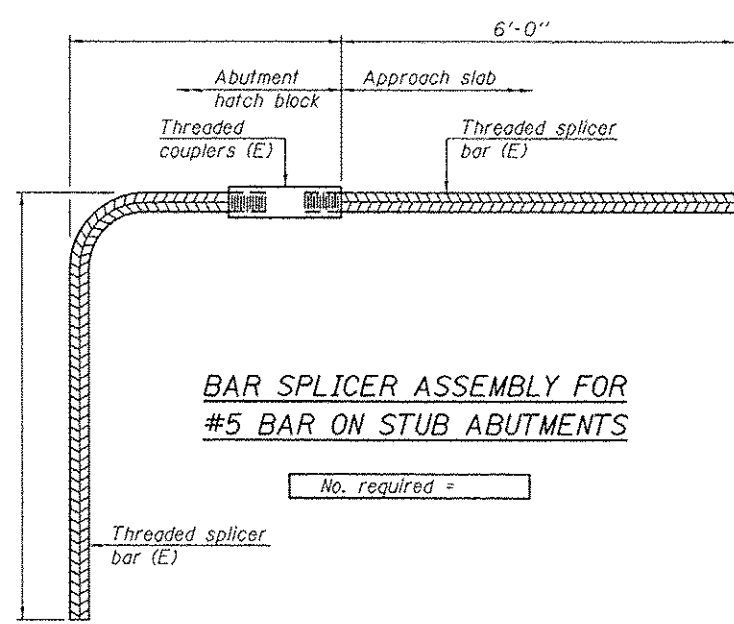
INSTALLATION AND SETTING METHODS

"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
Deck	#6	464



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 6-8-15