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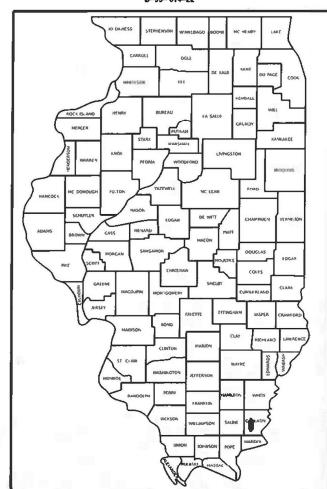
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STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

782 D9 BRIDGE OVERLAY 2023-2 GALLATIN 21 1 RLINOIS CONTRACT NO. 78920

D-99-014-22



PROPOSED HIGHWAY PLANS

FAP ROUTE 782 (IL 1) OVER LAWLER DITCH STRUCTURE NO. 030-0020 FAP ROUTE 782 (IL 1) OVER SALINE RIVER STRUCTURE NO. 030-0021 D9 BRIDGE OVERLAY 2023–2 HBFP-PAAT(046) **BRIDGE REPAIR GALLATIN COUNTY** C-99-026-22

TRAFFIC DATA

FOR INDEX OF SHEETS, SEE SHEET NO. 3

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4-5

2023 ADT = 1840 WITH 28.80% TRUCKS

STRUCTURE NO. 030-0021 2022 ADT = 1840 WITH 28.80% TRUCKS

TOWNSHIPS

EQUALITY

R8E R9E SN 030-0020 ILI OVER LAWLER DITCH SN 030-0021

COORDINATE SYSTEM: STATE PLANE ZONE - ILLINOIS EAST

POSTED SPEED: 55 MPH

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123

PROJECT ENGINEER EHREN KIRBY PROJECT DESIGNER DEREK SNIDER

GROSS LENGTH = 870 FT. = 0.165 MILES NET LENGTH = 870 FT. = 0.165 MILES

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** SUBMITTED REGION FIVE ENGINEER March 22, 202 March 22, 2024

LOCATION OF SECTION INDICATED THUS:

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

REV. - MS

CONTRACT NO. 78920

Prepared By:

DISTRICT STUDIES & PLANS ENGINEER

Examined By:

DISTRICT LAND OCQUISITION ENGINEER

Examined By: Carin Mulseur DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: DISTRICT OPERATIONS ENGINEER

Examined By:

DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:

DISTRICT CONSTRUCTION ENGINEER

Examined By: Aartar

USER NAME - derekanider	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 2/22/2024	DATE -	REVISED -	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

	SIGNATURE SHEET						
SHEET	OF	SHEETS	STA.				

782 D9 BRIDGE OVERLAY 2023-2 GALLATIN 21 2 CONTRACT NO. 78920

INDEX OF SHEETS

COVER SHEET 2 SIGNATURES

GENERAL NOTES, INDEX OF SHEETS, AND STANDARDS

SUMMARY OF QUANTITIES 4-6 SN 030-0020 REPAIR DETAILS 7-15 16-21 SN 030-0021 REPAIR DETAILS

STANDARDS

80-100000 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS AREAS OF REINFORCEMENT BARS 001001-02 DECIMAL OF AN INCH AND OF A FOOT 001006 420001-10 PAVEMENT JOINTS 701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY 701006-05 OFF-ROAD OPERATIONS, 2L, 2W, 15' to 24" FROME PAVEMENT EDGE 701201-05 LANE CLOSURE, 2L, 2W DAY ONLY 701321-18 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER 701326-04 LANE CLOSURE, 2L ,2W, PAVEMENT WIDENING, FOR SPEEDS 2 45 MPH TRAFFIC CONTROL DEVICES 701901-09 TEMPORARY CONCRETE BARRIER 704001-08 TYPICAL PAVEMENT MARKINGS 780001-05 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS 782006-01 862001-01 UNINTERRUPTABLE POWER SUPPLY (UPS)

GENERAL NOTES

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES: ALL HOT MIX ASPHALT 2.016 TONS/CU YD

COMMITMENTS: NONE

Location(s):	Hot-Mix Asphalt Surface Course (IL-34)
Mixture Úse(s):	Hot-Mix Asphalt Surface Course, Mix D, N70
PG:	PG64-22
Design Air Voids:	4.0%, 70 Gyration Design
Mixture Composition:(Gradation Mixture)	IL-9.5mm
Friction Aggregate:	Mix D
Mixture Weight:	112 lbs/sq yd/in
Quality Management Program:	QC/QA
Sublot Size:	3000 tons
Material Transfer Device (Required?):	No

Location(s):	Hot-Mix Asphalt 10" widening (Top Lift)
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, N70
PG:	PG64-22
Design Air Voids:	4.0%, 70 Gyration Design
Mixture Composition:(Gradation Mixture)	IL-9.5mm
Friction Aggregate:	Mix C
Mixture Weight:	112 lbs/sq yd/in
Quality Management Program:	QC/QA
Sublot Size:	3000 tons
Material Transfer Device (Required?):	No

Location(s):	Hot-Mix Asphalt 10" widening (Bottom Lifts)
Mixture Use(s):	Hot-Mix Asphalt Surface Binder, N70
PG:	PG64-22
Design Air Voids:	4.0%, 70 Gyration Design
Mixture Composition:(Gradation Mixture)	IL-19.0mm
Friction Aggregate:	None
Mixture Weight:	112 lbs/sq yd/in
Quality Management Program:	QC/QA
Sublot Size:	3000 tons
Material Transfer Device (Required?):	No

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Lift Thickness:
1 1/2" Surface Course
2 1/4" Binder Course
2 1/4" Binder Course

4" Binder Course

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		DRAWN -	REVISED -	STATE OF ILLINOIS	INDEX	OF SHEE	TS, GEI	NERAL	. Notes	s, standards	782	D9 BRIDGE REPAIR	SALINE	21 3
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SUMMARY OF QUANTITIES

-			
	COUNTY:	GALLATIN CO	GALLATIN CO
	ROUTE:	FAP 782	FAP 782
	FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
	LOCATION:	BRIDGE	BRIDGE
	TOTAL	SN 030-0020	SN 030-0021
	QUANTITY	0047	0047
-			

	-		LOCATION:	BRIDGE	BRIDGE
CODE	ITEM DESCRIPTION	UNIT	TOTAL	SN 030-0020	SN 030-0021
NUMBER			QUANTITY	0047	0047
20200500	EARTH EXCAVATION (WIDENING)	CU YD	46	24	22
35650500	BASE COURSE WIDENING 10"	SQ YD	167	87	80
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	699	345	354
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	570	285	285
40600990	TEMPORARY RAMP	SQ YD	72	36	36
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	128	66	62
50102400	CONCRETE REMOVAL	CU YD	18.6	9.7	8.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	20.3	10.7	9.6
50300260	BRIDGE DECK GROOVING	SQ YD	2,185	705	1,480
50300300	PROTECTIVE COAT	SQ YD	30	16	14
					,
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,620	1,330	1,290
50800515	BAR SPLICERS	EACH	48	24	24
52000110	PREFORMED JOINT STRIP SEAL	FOOT	135	71	64
52100520	ANCHOR BOLT5, 1"	EACH	34	14	20

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 PLOT DATE = 2/2/2024	DATE	REVISED 2		SCALE: 1"=50'	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AID		

SUMMARY OF QUANTITIES - CONT

FRAMES AND GRATES TO BE ADJUSTED

ITEM DESCRIPTION

CODE

NUMBER

60300105

	COUNTY:	GALLATIN CO	GALLATIN CO
	ROUTE:	FAP 782	FAP 782
	FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
	LOCATION:	BRIDGE	BRIDGE
UNIT	TOTAL	SN 030-0020	SN 030-0021
UNII	QUANTITY	0047	0047
EACH	8	4	4
CAL MO	8	4	4
	7.0		
L SUM	1	0.5	0.5
EACH	2	1	1
L SUM	1	0.5	0.5
L SUM	1	0.5	0.5
CAL DA	12	6	6
EACH	2	1	1
EACH	12	6	6
CAL DA	56	28	28
FOOT	175	77	98
SQ FT	59	26	33
FOOT	2,625	1,052	1,573

67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	4	4
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	12	6	6
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	12	6	6
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	56	28	28
70300100	SHORT TERM PAVEMENT MARKING	FOOT	175	77	98
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	59	26	33
70300221	TEMPORARY PAVEMENT MARKING - LINE 4"- PAINT	FOOT	2,625	1,052	1,573
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,200	475	725

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	PLOT DATE = 2/2/2024	DATE	REVISED =
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STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	ı

	SUMMAR	Y OF QUA	NTITIES	782 D9 BRIDGE OVERL	SECTION	COUNTY	TOTAL SHEETS	
		ARY OF QUANTITIES			782	D9 BRIDGE OVERLAY 2023-2	GALLATIN	21
							CONTRACT	Γ NO. 789
SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT	

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SN 030-0020 0047	SN 030-0021 0047
NUMBER			QUANTITI	0047	0047
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,200	475	72
70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	2	
70600352	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	4	2	
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2,625	1,052	1,57
78300200	DAISED DEFLECTIVE DAVEMENT MADVED DEMOVAL	EACH	17	7	1
70300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	17	,	1
78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	1,361	565	79
86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	2	1	
Z0001800	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	0.9	0.9	
Z0001904	STRUCTURAL STEEL REMOVAL	L SUM	1	0	
Z0001905	STRUCTURAL STEEL REPAIR	POUND	364	241	12
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	2,337	754	1,58
Z0012164	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 1/2"	SQ YD	2,337	754	1,58
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	160	20	14
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	8.6	0	8.

SUMMARY OF QUANTITIES - CONT

GALLATIN CO

FAP 782

BRIDGE

80% FEDERAL 20% STATE 80% FEDERAL 20% STATE

COUNTY:

FUNDING: LOCATION:

ROUTE:

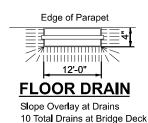
GALLATIN CO

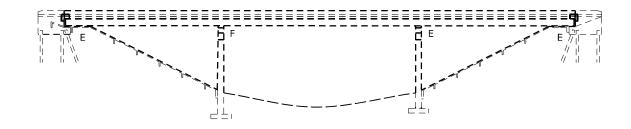
FAP 782

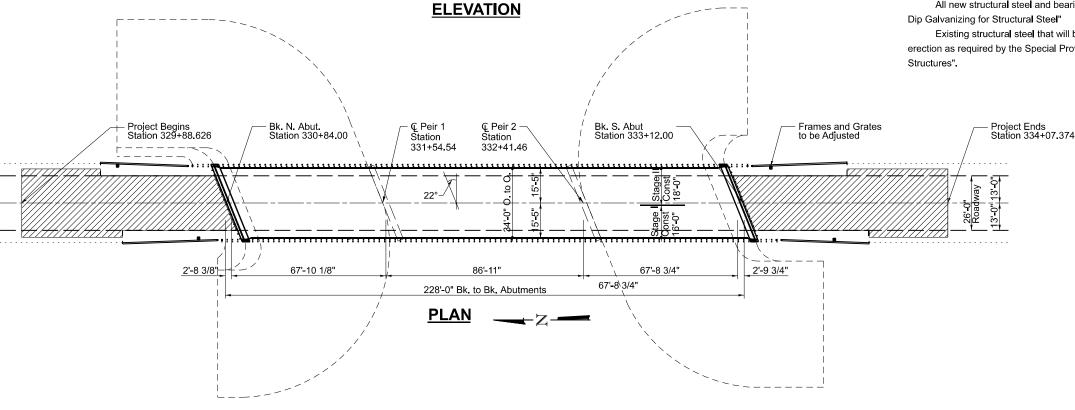
BRIDGE

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PLOT SCALE = \$SCALE\$	CHECKED	REVISED =	DEPARTMENT OF TRANSPORTATION								CONTRAC	T NO. 78920	
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LEGEND:



SCOPE OF WORK

Approach Slab Repair (Partial) Concrete Structual Repair Preformed Joint Strip Seal Microsillica Deck Overlay

DESIGN STRESSES

(From Existing Plans)

Design Loading HS 20-44 Design Stresses f'c=3,500 psi fy=60,000psi (Reinf.) fy=27,000 psi (Structure)

(New)

fc=4,000 psi fy=60,000psi (Reinf.) fy=50,000 psi (M270 Grade 50)

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

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

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

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.

All structural steel shall conform to AASHTO Classification M-270 Gr. 50, unless otherwise noted.

All new structural steel and bearing assembly shall be hot-dip galvanized. See special Provisions for "Hot Dip Galvanizing for Structural Steel"

Existing structural steel that will be in contact with new structual 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".

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANITY
HMA Surface Course, IL-9.5, Mix "D", N70	Ton	66
Hot Mix Asphalt Base Course Widening, 10"	Sq. Yd.	87
Bituminous Material (Tack Coat)	Pound	345
Approch Slab Repair (Partial Depth)	Sq. Yd.	0.9
Bar Splicers	Each	24
Concrete Superstructure	Cu. Yd.	10.7
Concrete Removal	Cu. Yd.	9.7
Reinforcement Bars, Epoxy Coated	Pound	1330
Preformed Joint Strip Seal	Foot	71
Structual Repair of Concrete (Depth < 5")	Sq Ft	20
Protective Coat	Sq. Yd.	16
Bridge Deck Scarification 3/4"	Sq Yd.	754
Bridge Deck Microsilica Concrete Overlay 2 1/2"	Sq Yd.	754
Bridge Deck Grooving	Sq Yd.	705
Frames and Grates to be Adjusted	Each	4
Structural Steel Repair	Pound	241
Anchor Bolts, 1"	Each	14

^{*} On New Concrete Only

GENERAL PLAN & ELEVATION

IL 1 OVER LAWLER DITCH

FAP 782 - D9 BRIDGE OVERLAY 2023-2

GALLATIN COUNTY

STRUCTURE NO. 030-0020

USER NAME = derek.snider	DESIGNED -	REVISED -
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PLOT DATE = 3/19/2024	DATE -	REVISED -

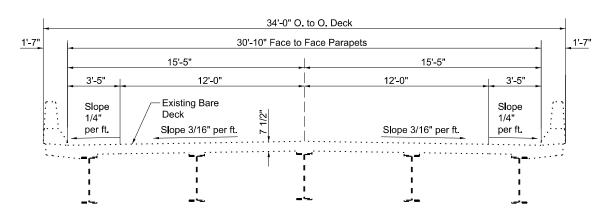
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DEPARTMENT OF TRANSPORTATION

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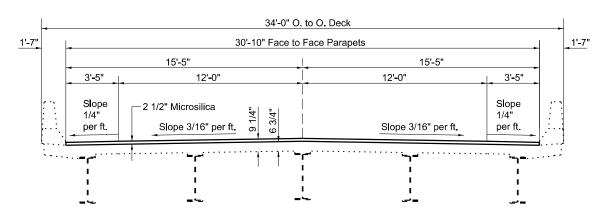
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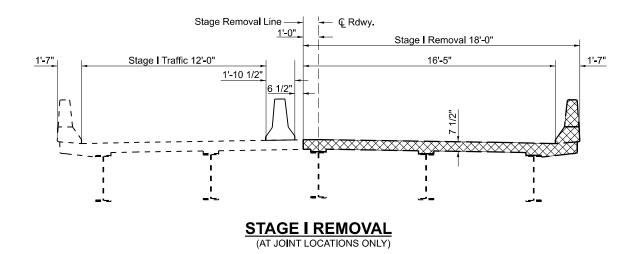
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782	D9 BRIDGE OVERLAY 2023-2	GALLATIN	21	7
		CONTRACT	NO. 78	920
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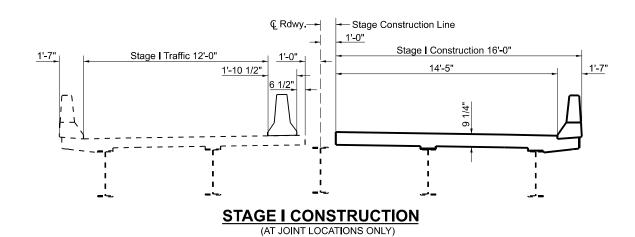


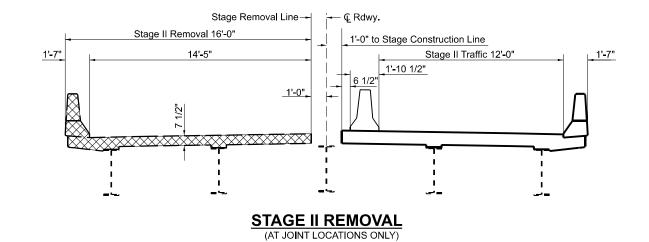
TYPICAL BRIDGE SECTION - EXISTING

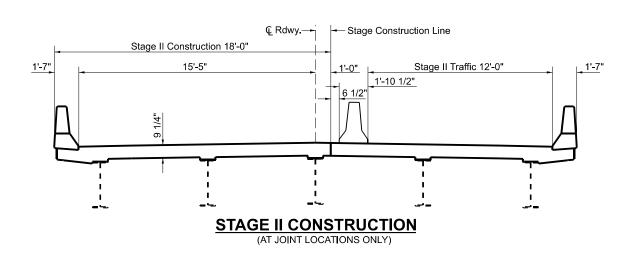


TYPICAL BRIDGE SECTION - PROPOSED





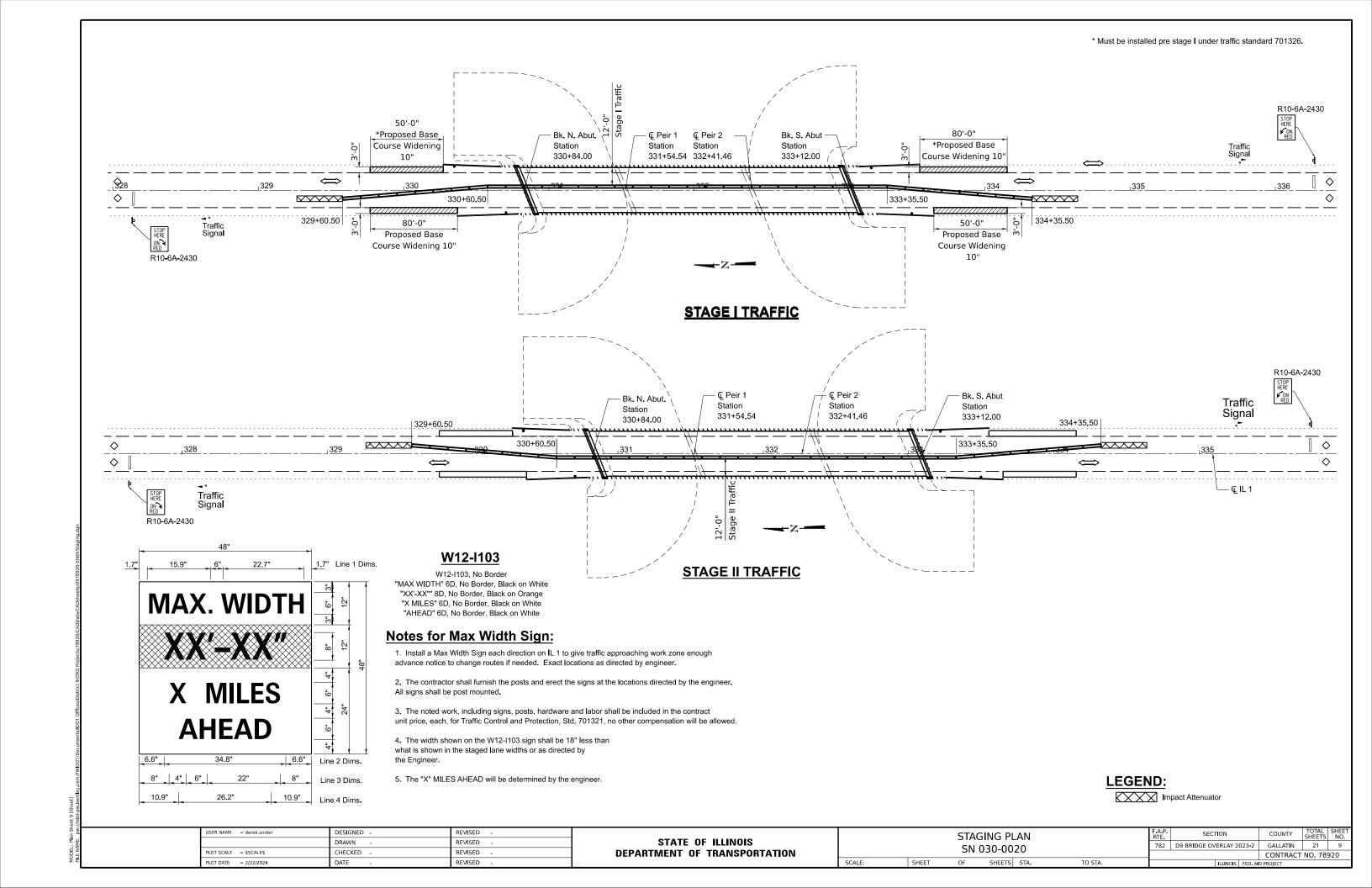


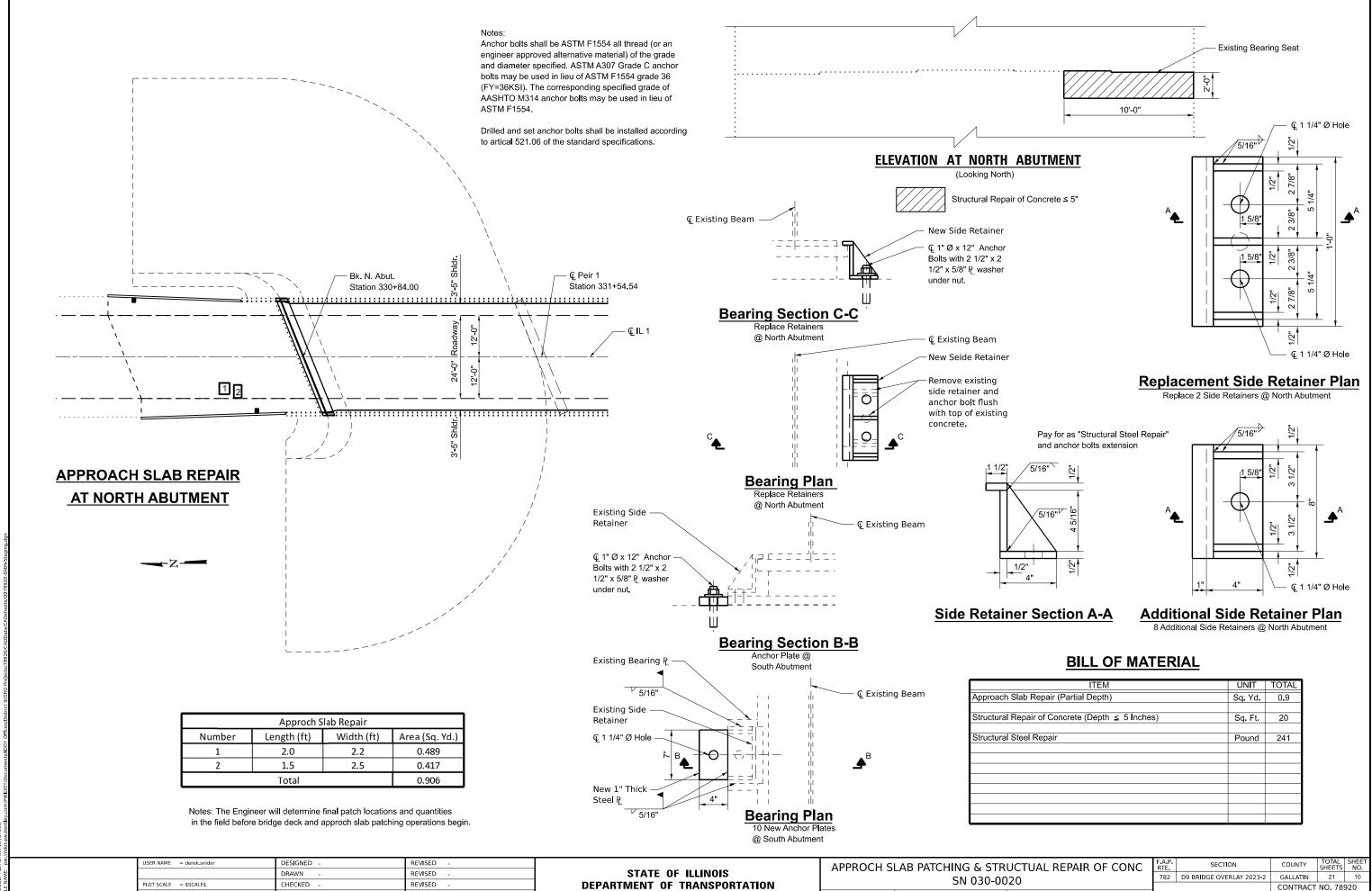




Notes: All Sections Looking South

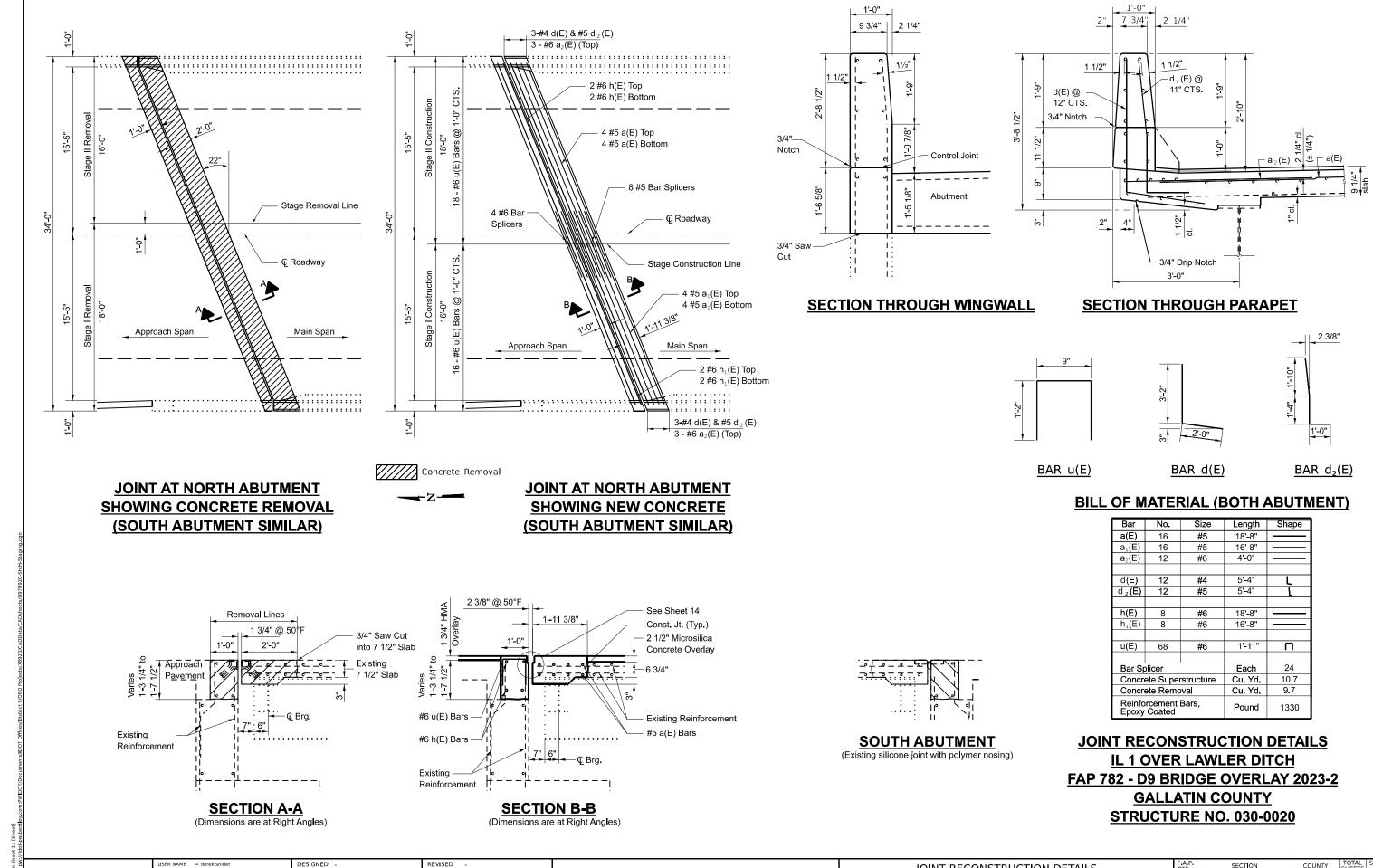
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SHEET SHEETS STA

CONTRACT NO. 78920



STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

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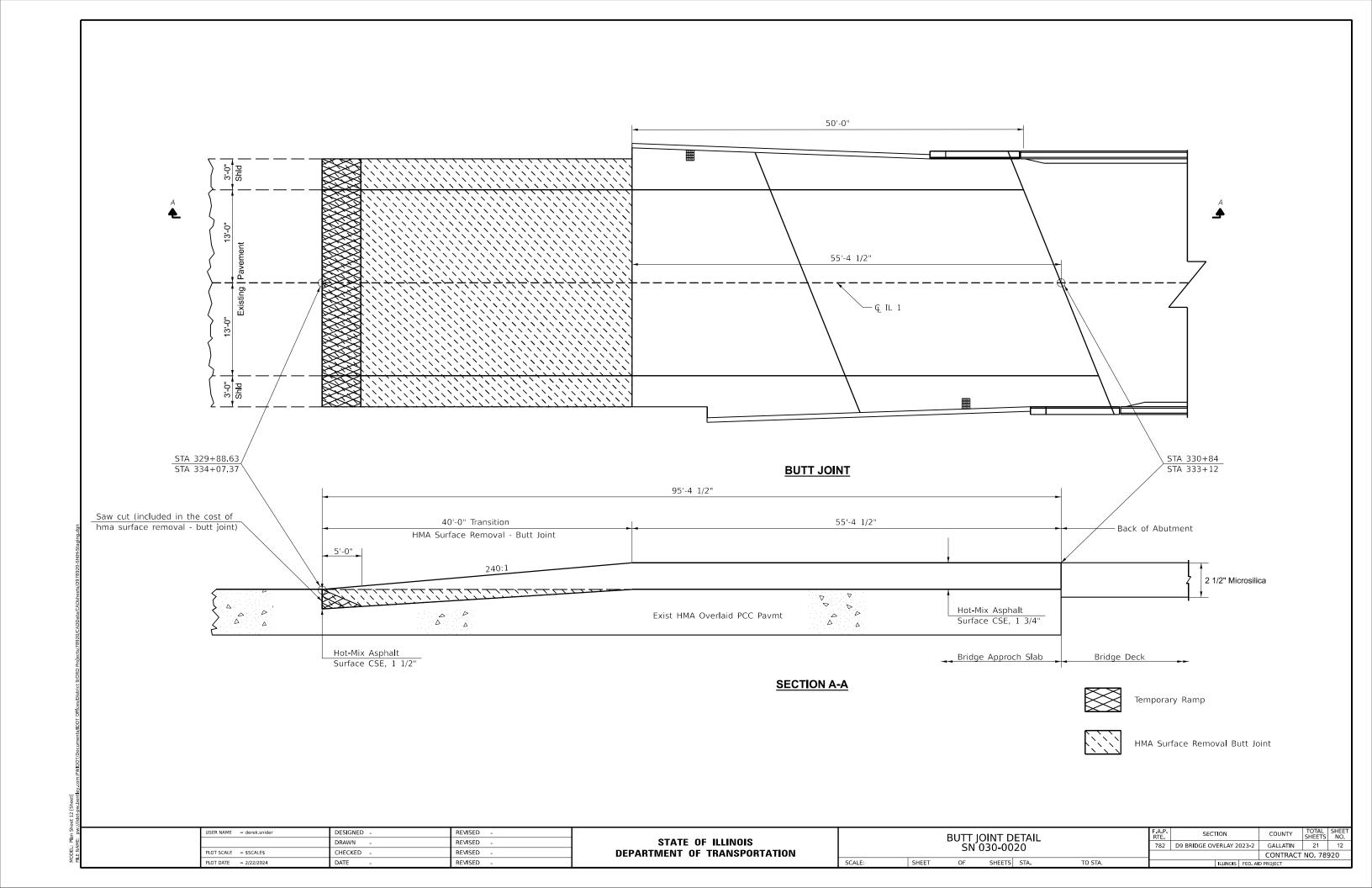
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JOINT RECONSTRUCTION DETAILS SN 030-0020 SHEETS STA

782 D9 BRIDGE OVERLAY 2023-2 GALLATIN 21 CONTRACT NO. 78920



STANDARD BAR SPLICER ASSEMBLY PLAN

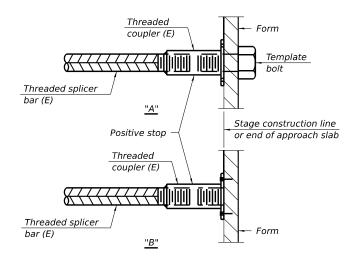
Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

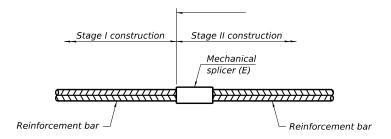
SN 030-0020							
Location	Bar	No. assemblies	Minimum				
Location	size	required	lap length				
Deck	#5	16	3'-6"				
Hatchblock	#6	8	4'-0"				

SN 030-0021								
Location	Bar	No. assemblies	Minimum					
Location	size	required	lap length					
Deck	#5	16	3'-6"					
Hatchblock	#6	8	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

Notes:

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

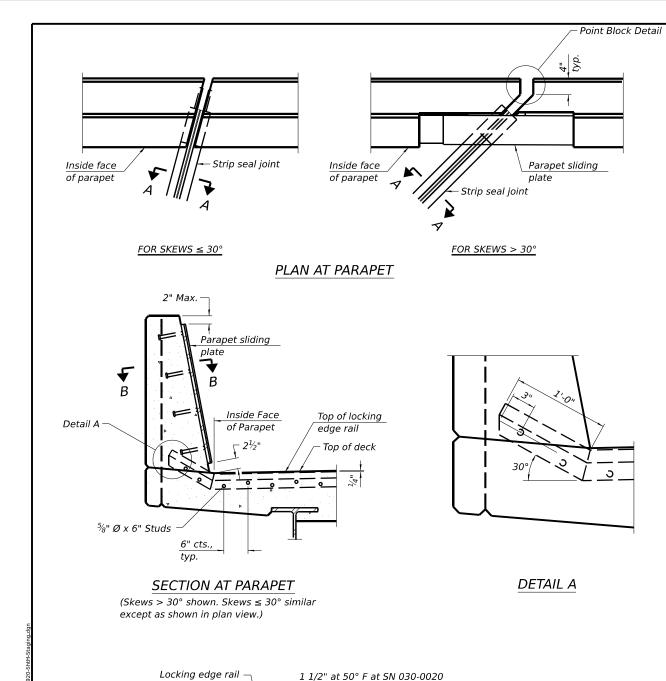
All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications. See approved list of bar splicer assemblies and mechanical splicers for alternatives.

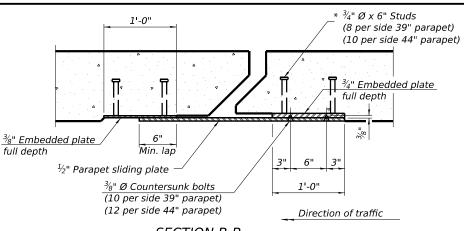
BSD-1

5-15-2023

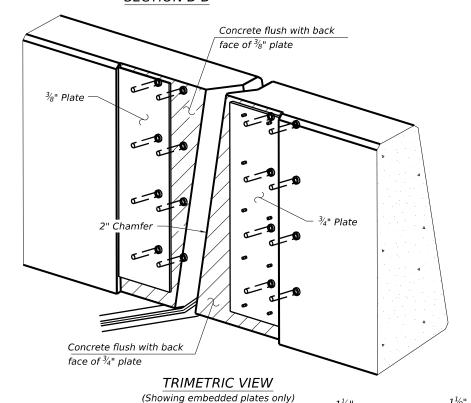
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	DRAWN -	REVISED -
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -
PLOT DATE = 2/22/2024	DATE -	REVISED -

SCALE:





SECTION B-B



Notes:

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". 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 configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the $4\frac{1}{2}$ " maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

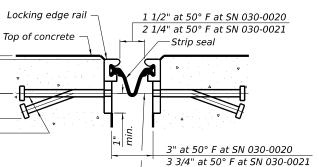
The manufacturer's recommended installation methods shall be followed.

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

The Maximum space between locking edge rail segments shall be c" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal. 39" constant slope barrier shown, 44" constant slope barrier

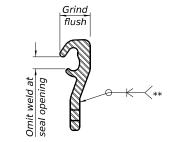
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



11/4" 3/8" 3/8" <u>ROLLED</u> WELDED RAIL (EXTRUDED) RAIL

LOCKING EDGE RAILS

** 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.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	135

the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

* Granular or solid flux filled headed studs

 $\frac{3}{8}$ " Ø threaded rods in $\frac{7}{16}$ " Ø holes at 4'-0" ± cts.

for holding the proper joint opening based on

SECTION A-A

conforming to Article 1006.32 of the Std. Specs., automatically end welded.

* $\frac{5}{8}$ " Ø x 6" studs @ 6" cts. (alternate

angled/bent studs with horizontal studs)

EI-SS 5-15-2023

Top of concrete

2 3/8" at 50° F at SN 030-0020

3 1/8" at 50° F at SN 030-0021

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2 1/4" at 50° F at SN 030-0021

Strip seal

SHOWING ROLLED RAIL JOINT

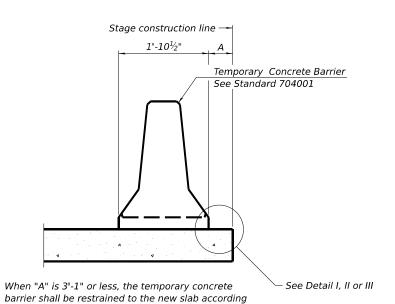
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** PREFORMED JOINT STRIP SEALS SN 030-0020 & SN 030-0021

SHEETS STA.

TO STA.

SECTION 782 D9 BRIDGE OVERLAY 2023-2 GALLATIN 21 14 CONTRACT NO. 78920

SHOWING WELDED RAIL JOINT



Stage removal line Stage removal line 1'-10½' 1'-10½" Temporary Concrete Barrier See Standard 704001 min. min. :....... Drill 3-1 $\frac{1}{4}$ " 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 * When hot-mix asphalt wearing surface is present, embedment

EXISTING SLAB

EXISTING DECK BEAM

shall be 3" plus the wearing surface depth.

1" Ø pin RESTRAINING PIN

US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer

1x8 UNC

NEW SLAB OR NEW DECK BEAM

2-5/8" Ø Bolts

with washers

DETAIL I

to Detail I, II or III. No restraint is required

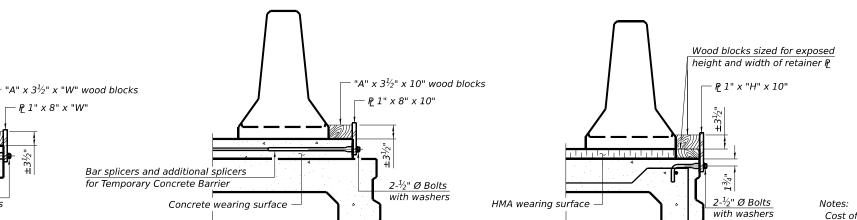
when "A" is greater than 3'-1".

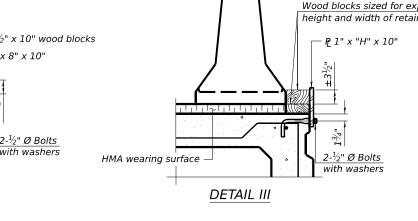
Top Bar Splicers —

SECTIONS THRU SLAB OR DECK BEAM

DETAIL II

is required when "A" is greater than 3'-1".







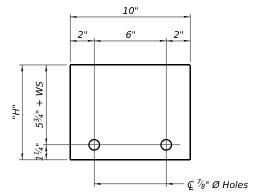
RAILING CRITER	RIA	STEE
NCHRP 350 Test Level		

440

R-27 5-15-2023

Railing Weight (plf)

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



STEEL RETAINER P 1" x "H" x 10"

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate $\c C$ of each temporary

BAR SPLICER FOR #4 BAR - DETAIL III

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 $1\frac{1}{2}$ ", 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.

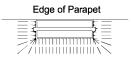
Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the 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.

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PLOT DATE = 2/22/2024	DATE -	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

	TEMPO	RARY (CONCRE	TE BA	ARRIER		F.A.P. RTE	SECT	ΠON		COUNTY	TOTAL SHEETS	SHEET NO.
FOR STAGE CONSTRUCTION					782	D9 BRIDGE OV	GALLATIN	21	15				
		<i></i>									CONTRACT	NO. 789	920
	SHEET	OF	SHEETS	STA.	TO S	TA.			ILLINOIS	FED. All	PROIECT		



FLOOR DRAIN

Preformed Joint Strip Seal

Microsillica Deck Overlay

Slope Overlay at Drains 66 Total Drains at Bridge Deck

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TOTAL BILL OF MATERIAL

GENERAL NOTES

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

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

surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise

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.

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

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs.

All new structural steel and bearing assembly shall be hot-dip galvanized. See

Existing structural steel that will be in contact with new structual steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning

All structural steel shall conform to AASHTO Classification M-270 Gr. 50,

Reinforcement bars designated (E) shall be epoxy coated

or anchorage system. Cost included with Concrete Removal.

special Provisions for "Hot Dip Galvanizing for Structural Steel"

when the deck is poured at an ambient temperature other than 50°F.

concrete.

unless otherwise noted.

ITEM	UNIT	QUANITY
HMA Surface Course, IL-9.5, Mix "D", N70	Ton	62
Hot Mix Asphalt Base Course Widening, 10"	Sq. Yd.	80
Bituminous Material (Tack Coat)	Pound	354
Deck Slab Repair (Partial Depth)	Sq. Yd.	8.6
Bar Splicers	Each	24
Concrete Superstructure	Cu. Yd.	9.6
Concrete Removal	Cu. Yd.	8.9
Reinforcement Bars, Epoxy Coated	Pound	1290
Preformed Joint Strip Seal	Foot	64
Structual Repair of Concrete (Depth < 5")	Sq Ft	140
* Protective Coat	Sq. Yd.	14
Bridge Deck Scarification 3/4"	Sq Yd.	1583
Bridge Deck Microsilica Concrete Overlay 2 1/2"	Sq Yd.	1583
Bridge Deck Grooving	Sq Yd.	1480
Frames and Grates to be Adjusted	Each	4
Structural Steel Repair	Pound	123
Structural Steel Removal	L. Sum	1
Anchor Bolts, 1"	Each	20

GENERAL PLAN & ELEVATION

IL 1 OVER SALINE RIVER

FAP 782 - D9 BRIDGE OVERLAY 2023-2

GALLATIN COUNTY

STRUCTURE NO. 030-0021

* On New Concrete Only

and Painting Contact Surface Areas of Existing Steel Structures". Bk. S. Abut Station 350+65.00 € Peir 1 Station Project Begins Station 345+05.00 Bk. N. Abut. Station 345+95.00 C Peir 2 Project Ends Station 351+55.00 Station 349+19.33 347+40.67 Frames and Grates to be Adjusted 143'-0" 148'-0" 2'-8" 178'-8" 2'-8" 470'-0" Bk. to Bk. Abutments **PLAN** 1 mmn **LEGEND: DESIGN STRESSES** (From Existing Plans) SCHIFF HMA Surface Trim 5 steel beam ends Design Loading HS 20-44 including up to and including top flange to the maximum **Design Stresses** length possible without f'c=3,500 psi encroaching upon the weld between the bottom beam fy=60,000psi (Reinf.) **SCOPE OF WORK** EXPIRES 11-30-2024 fy=50,000 psi (Structure) flange and top of the bearing Approach Slab Repair (Partial) (New) Concrete Structual Repair

JSER NAME = derek.snider DESIGNED -REVISED -DRAWN REVISED . PLOT SCALE = \$SCALE\$ CHECKED -REVISED PLOT DATE = 3/19/2024 DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL PLAN AND ELEVATION SN 030-0021 SHEET SHEETS STA. TO STA.

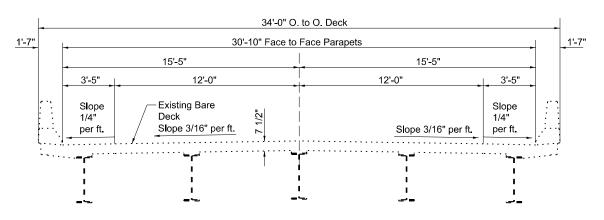
COUNTY 782 D9 BRIDGE OVERLAY 2023-2 GALLATIN 21 16 CONTRACT NO. 78920

OSTRUCTURAL STEEL REMOVAL

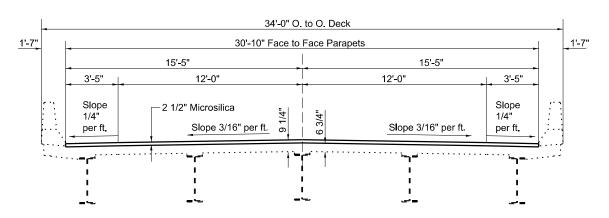
fy=50,000 psi (M270 Grade 50)

f'c=4,000 psi

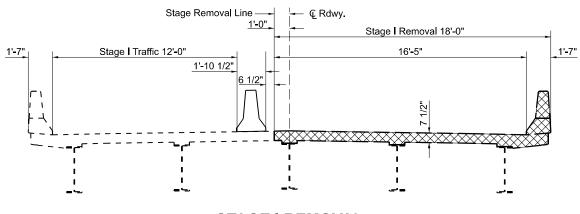
fy=60,000psi (Reinf.)



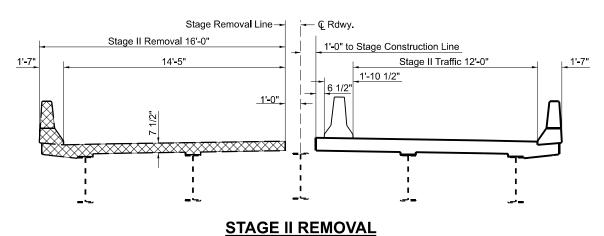
TYPICAL BRIDGE SECTION - EXISTING



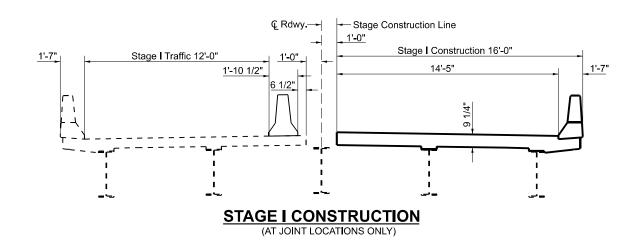
TYPICAL BRIDGE SECTION - PROPOSED

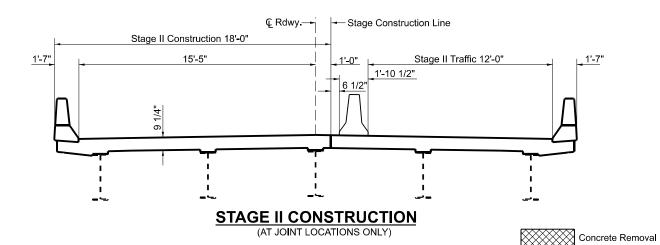


STAGE | REMOVAL (AT JOINT LOCATIONS ONLY)



(AT JOINT LOCATIONS ONLY)

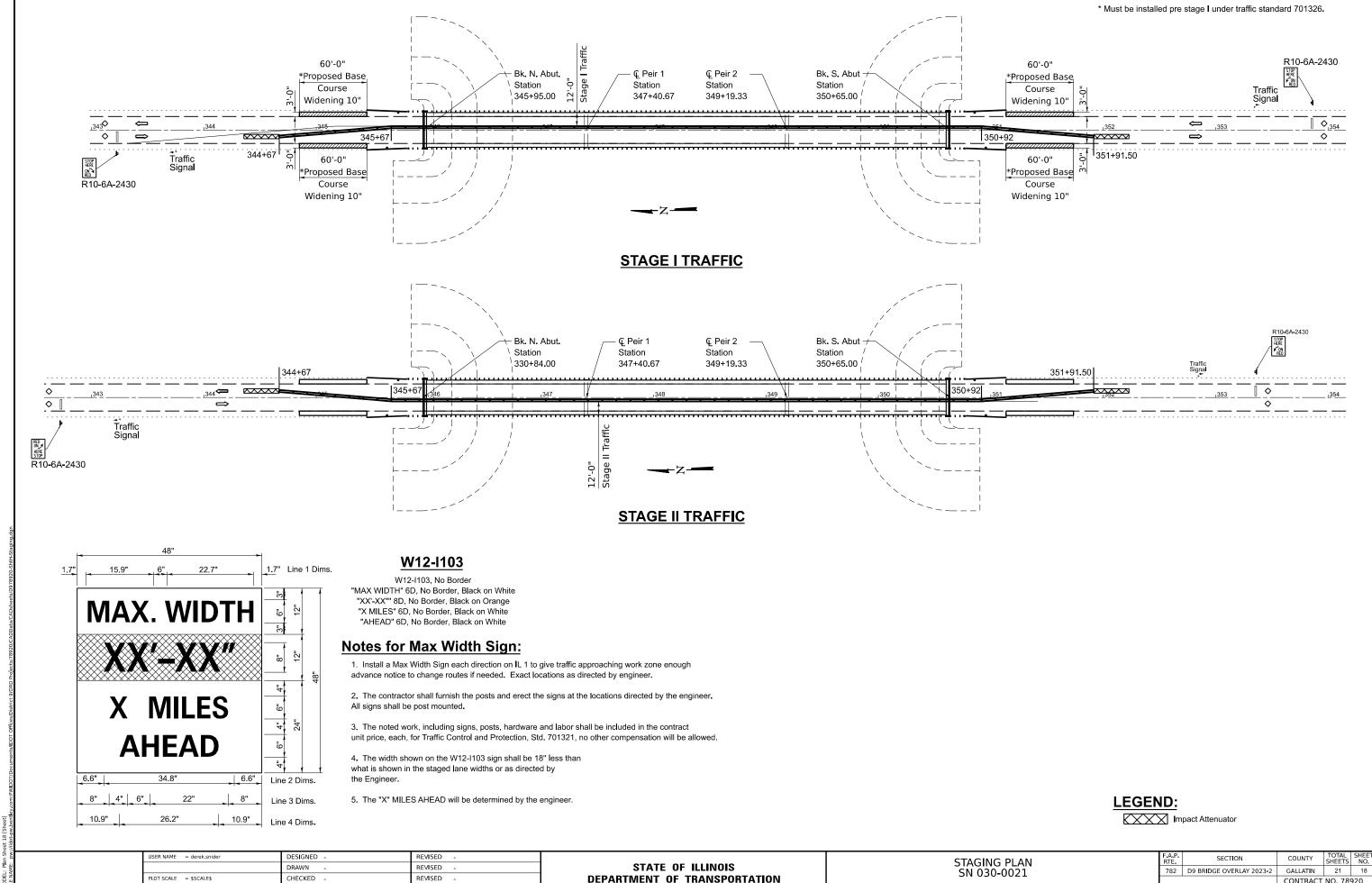




Notes: All Sections Looking South

USER NAME = derek.snider	DESIGNED -	REVISED -				TVDIC	U CECT	IONIC		F.A.P.	SECTION	COUNTY	TOTAL	SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS			CN	030-002	IONS 21		782	D9 BRIDGE OVERLAY 2023-2	GALLATIN	21	17
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION				030-002					CONTRAC	T NO. 78	920
PLOT DATE = 2/22/2024	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AII	PROJECT		

ILE NAME: pw://ildot-pw.bentley.com:PWIDOT/Documents/I



CONTRACT NO. 78920

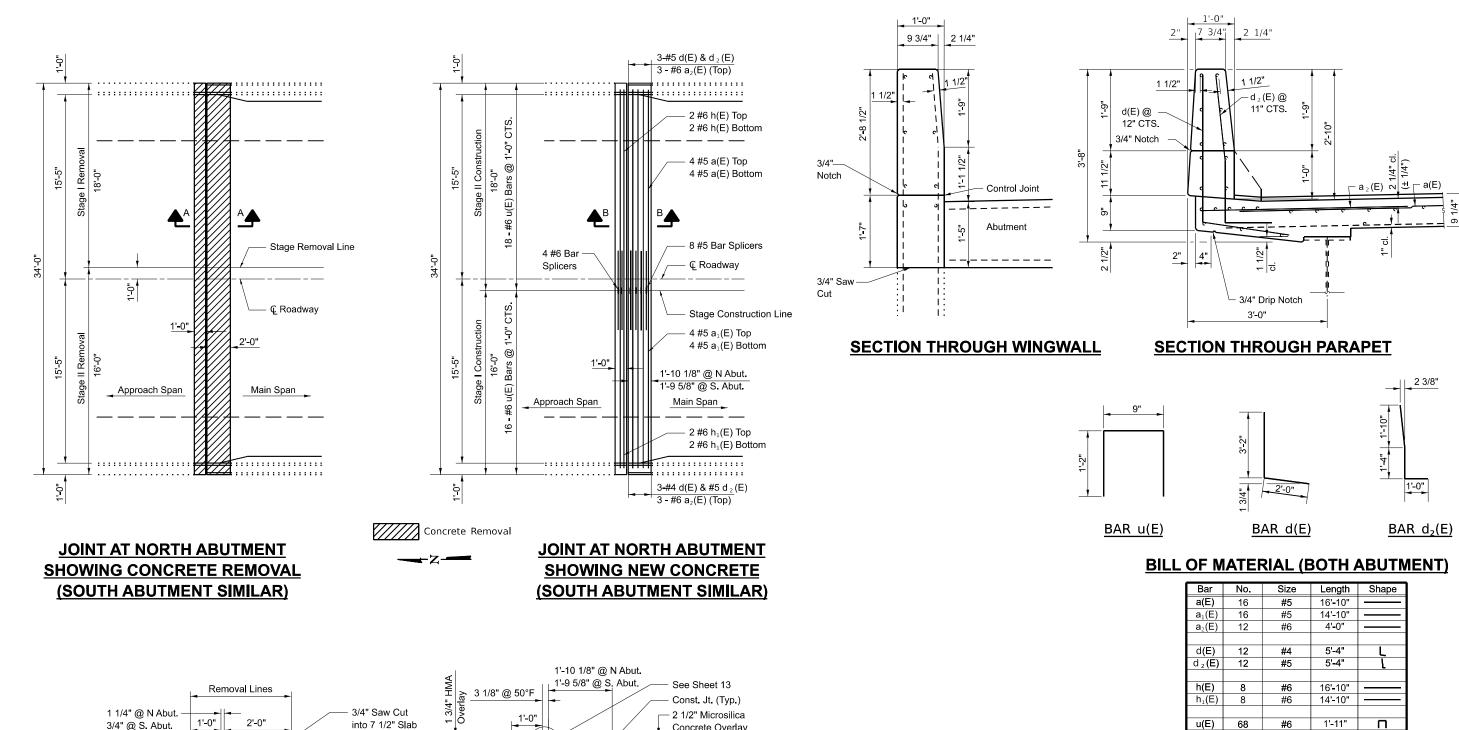
SHEETS STA

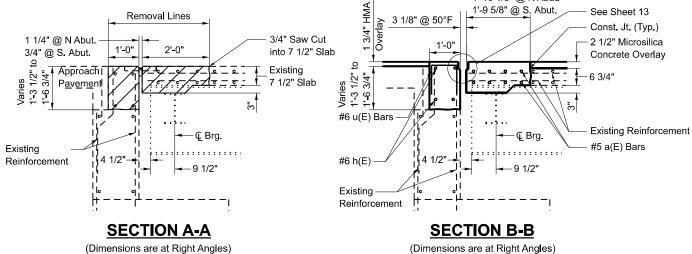
TO STA.

PLOT DATE = 2/22/2024

DATE

REVISED





JOINT RECONSTRUCTION DETAILS

IL 1 OVER SALINE RIVER

FAP 782 - D9 BRIDGE OVERLAY 2023-2

GALLATIN COUNTY

STRUCTURE NO. 030-0021

Each

Cu. Yd.

Cu. Yd.

Pound

9.6

8.9

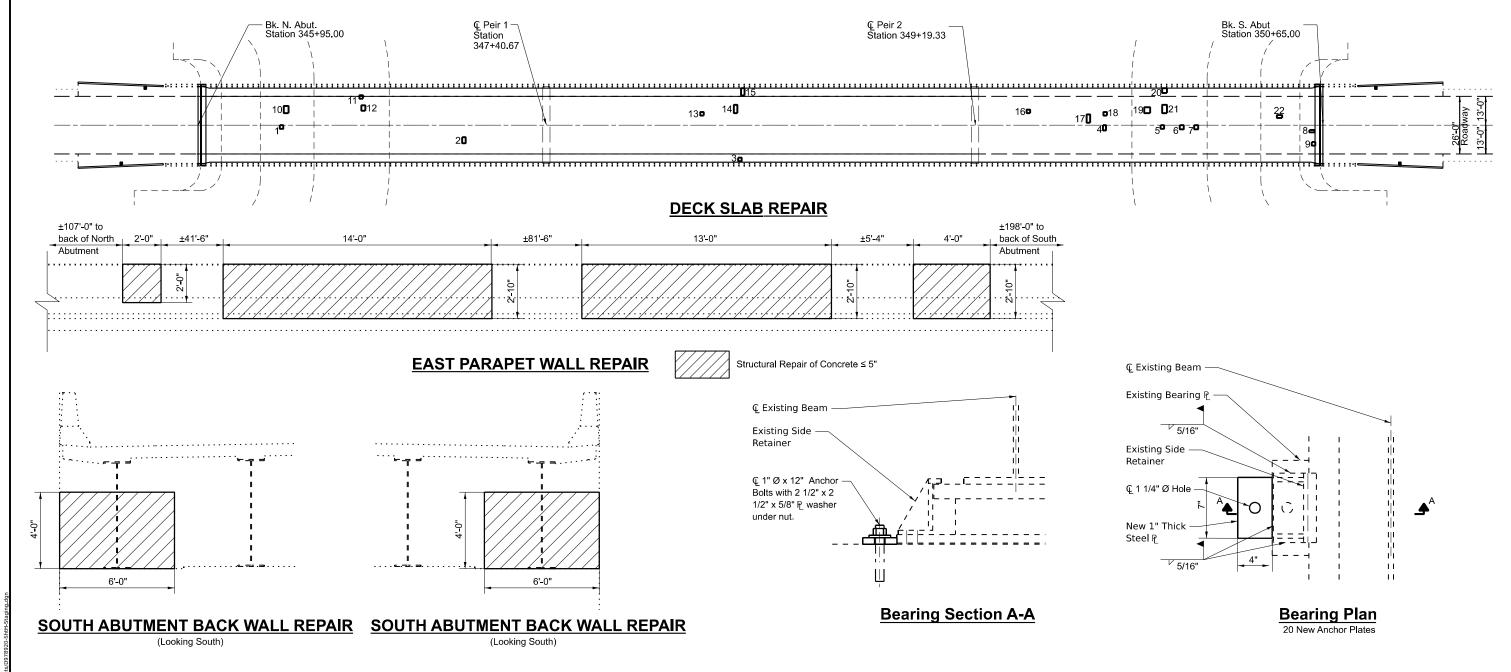
Bar Splicer

Concrete Superstructure

Concrete Removal

Reinforcement Bars, Epoxy Coated

USER NAME = derek.snider	DESIGNED -	REVISED -		DECK SLAB. PARAPET. & SUBSTRUCTURE REPAIR					F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS	DECKS	SN 030-0021		782	D9 BRIDGE OVERLAY 2023-2	GALLATIN	21	19		
PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION		3N 030 - 0021						CONTRACT	NO. 789	20
PLOT DATE = 3/19/2024	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.					ILLINOIS FED. AI	D PROJECT			



South Bound										
Number	Number Length (ft) Width (ft)									
1	1.5	1.5	0.250							
2	1.5	2.5	0.417							
3	1.5	1.5	0.250							
4	1.3	2.2	0.318							
5	1.5	1.5	0.250							
6	1.7	1.7	0.321							
7	1.7	1.7	0.321							
8	2.2	1.0	0.244							
9	1.5	1.5	0.250							
S	South Bound Total 2.621									

Notes: The Engineer will determine final patch locations and quantities in the field before bridge deck and parapet wall patching operations begin.

North Bound					
Number	Length (ft)	Width (ft)	Area (Sq. Yd.)		
10	2.2	1.2	0.293		
11	2.0	3.5	0.778		
12	2.0	2.0	0.444		
13	2.5	2.5	0.694		
14	1.5	1.5	0.250		
15	1.5	3.5	0.583		
16	1.5	1.5	0.250		
17	1.5	3.0	0.500		
18	1.5	3.5	0.583		
19	1.5	1.5	0.250		
20	1.7	2.3	0.434		
21	<u>1</u> .5	1.5	0.250		
22	2.0	3.0	0.667		
	North Bound Total				

BILL OF MATERIAL

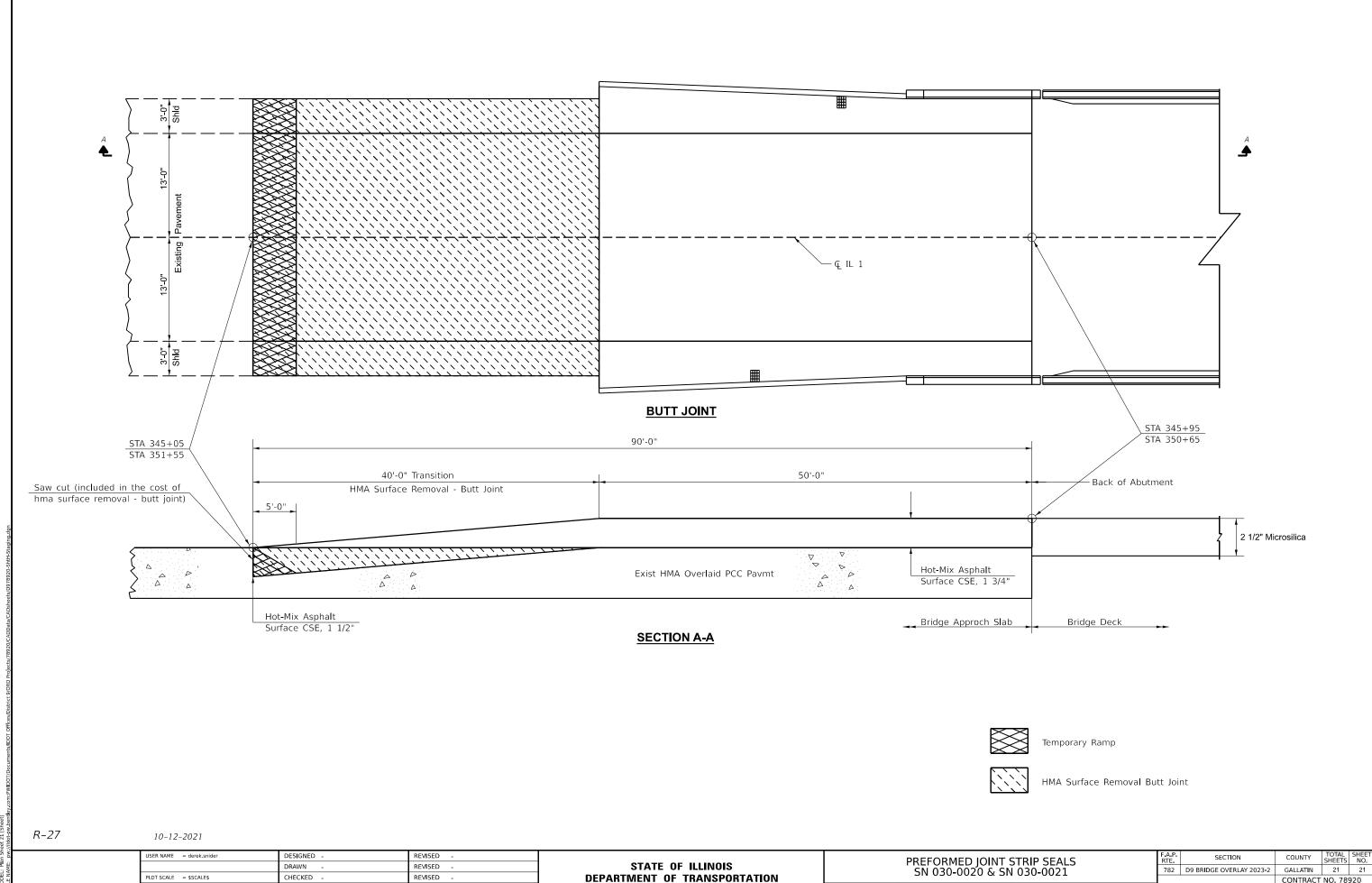
ITEM	UNIT	TOTAL
Deck Slab Repair (Partial Depth)	SQ. YD.	8.6
Bridge Deck Concrete Crack Sealer	Foot	1300
Structural Repair of Concrete (Depth ≤ 5 Inches)	Sq. Ft.	140
Structural Steel Repair	Pound	123

USER NAME = derek.snider	DESIGNED -	REVISED -
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PLOT DATE = 2/22/2024	DATE -	REVISED -

STATE 0	F ILLINOIS
DEPARTMENT OF	TRANSPORTATION

SHEET

BUTT JOINT DETAIL SN 030-0021		F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
		782	D9 BRIDGE OVERLAY 2023-2	GALLATIN	21	20		
		CONTRACT NO. 78920				920		
OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT				



PLOT SCALE = \$SCALE\$ CHECKED -REVISED PLOT DATE = 2/22/2024 DATE REVISED

DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEALS SN 030-0020 & SN 030-0021 OF SHEETS STA. TO STA.

CONTRACT NO. 78920