11-17-2017 LETTING ITEM 051

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STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

D-97-018-14

7353 D7 BRIDGE REPAIRS 2018-3

ILLINOIS CONTRACT NO. 74658

LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROPOSED HIGHWAY PLANS

F.A.U. ROUTE 7353 (CANTRELL ROAD) **SECTION D7 BRIDGE REPAIRS 2018-3**

BRIDGE REPAIR MACON COUNTY

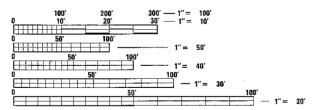
C-97-052-14

GROSS LENGTH = 264 FT. = 0.05 MILE NET LENGTH = 264 FT. = 0.05 MILE

FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT (2015) = 1600

PROJECT LOCATION: SN 058-0100 STA 929 + 45.04



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.

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

PROJECT ENGINEER: MARK DAUGHERTY PROJECT MANAGER: BRIAN BIERMAN

CONTRACT NO. 74658

INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS AND GENERAL NOTES
3 - 4	SUMMARY OF QUANTITIES
5	TYPICAL CROSS SECTIONS
6-9	STAGED TRAFFIC CONTROL
10-18	STRUCTURE REPAIR PLANS
19-22	PAVEMENT MARKING DETAILS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 22:

STD. NO.	DESCRIPTION
000001-06 001001-02	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-ROAD OPERATIONS, 2L2W, 15' MINIMUM AWAY FROM PAVEMENT EDGE
701006-05	OFF-ROAD OPERATIONS, 2L2W, 15' MINIMUM AWAY TO EDGE OF PAVEMENT
701011-04	OFF-ROAD MOVING OPERATION, 2L2W, DAY ONLY
701201-04	LANE CLOSURE, 2L2W, DAY ONLY
701301-04	LANE CLOSURE, 2L2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L,2W, MOVING OPERATIONS - DAY ONLY
701321-16	LANE CLOSURE, 2L,2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L,2W, PAVEMENT WIDENING, FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH
701901-06	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIAL. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. THE CONTRACTOR WILL BE PAID FOR THE QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

THE PROPOSED PROJECT IS LOCATED AT SN 058-0100 IN MACON COUNTY ON CANTRELL ROAD OVER US 51 JUST SOUTH OF THE US 36/US 51 INTERCHANGE.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF BASE COURSE WIDENING, BRIDGE DECK PATCHING, A NEW CONCRETE WEARING SURFACE, TRAFFIC CONTROL, JOINT REPLACEMENT, PAVEMENT MARKING AND ANY OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

THE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH STAGE I & II OF STANDARD 701321 SHALL BE WATER BLASTED OFF. THE REMOVAL WILL BE PAID FOR AS PAVEMENT MARKING REMOVAL-WATER BLASTING.

PAINT PAVEMENT MARKING - 4" SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS, AS SHOWN IN THE PLANS, AND AS DETERMINED BY THE ENGINEER. THE TOTAL QUANTITY CALCULATED CONSISTS OF 1470 FEET OF YELLOW AND 528 FEET OF WHITE.

SYTHETIC FIBERS SHALL BE ADDED TO THE BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE OVERLAY. SEE SPECIAL PROVISIONS.

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STATE OF	ILLINOIS
DEPARTMENT OF	TRANSPORTATION

SCALE: N/A

INDEX OF OUR OF AND OFFICE AND OFFICE	F.A.U. RTE. SECTION COUNTY TOTAL SHEETS NO.
INDEX OF SHEETS AND GENERAL NOTES	7353 D7 BRIDGE REPAIRS 2018-3 MACON 22 2
	CONTRACT NO. 74658
SHEET 1 OF 1 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT

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URBAN 100% STATE

	CUMMARY OF QUANTITIES		STATE	CONS	STRUCTION TYPE CODE		CHANADY OF CHANTITIES	1	STATE	CONSTI	RUCTION TYPE CODE
	SUMMARY OF QUANTITIES		TOTAL	0013			SUMMARY OF QUANTITIES		TOTAL	0013	
ODE NO	ITEM	UNIT	OUANTITIES			CODE NO	ITEM	UNIT	QUANTITIES	3	
0200500	EARTH EXCAVATION (WIDENING)	CU YD	125	125		67100100	MOBILIZATION	L SUM	1	1	
						70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	ı	
5400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING	SQ YD	451	451		70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD	L SUM	1	1	
	10"						701326				
50102400	CONCRETE REMOVAL	CU YD	9.8	9.8		70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	6	6	
0157300	PROTECTIVE SHIELD	SQ YD	386	386		70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
0300225	CONCRETE STRUCTURES	CU YD	6.4	6.4		70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6	
0300255	CONCRETE SUPERSTRUCTURE	CU YD	9.8	9.8		70400100	TEMPORARY CONCRETE BARRIER	FOOT	413	413	
50300260	BRIDGE DECK GROOVING	SQ YD	1070	1070		70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	375	375	
50300300	PROTECTIVE COAT	SQ YD	31	31		70600250		EACH	2	2	
		20,010	0.700	2700			REDIRECTIVE), TEST LEVEL 3				
0800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2700	2100		70600350	IMPACT ATTENUATORS, RELOCATE (NON-	EACH	2	2	
50800515	BAR SPLICERS	EACH	20	20			REDIRECTIVE), TEST LEVEL 3				
52000110	PREFORMED JOINT STRIP SEAL	FOOT	82	82		* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1998	1998	
60300105	FRAMES AND GRATES TO BE ADJUSTED	EACH	6	6	ALIA AAT	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	314	314	
67000500	ENGINEER'S FIELD OFFICE. TYPE B	CAL MO	5	5		X7010202	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	1	1	
							701321 (SPECIAL)				



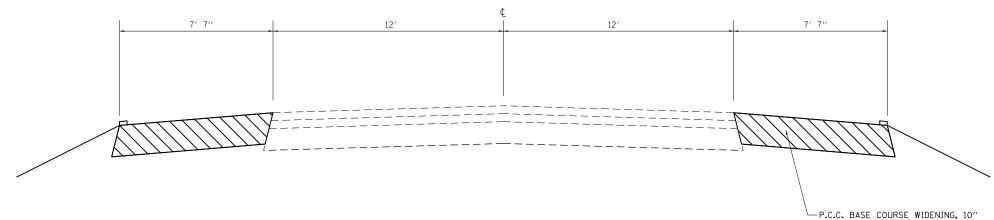
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		PLOT SCALE = 100.0000 / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION			YAY		CONTRA	CT NO. 74658
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	COMPANDY OF COMPANDED			CON	STRUCTION TYPE CODE		CHALADY	^_	OLIANITITIC			CON	STRUCTION TYP	E CODE
	SUMMARY OF QUANTITIES		TOTAL	0013			SUMMARY		QUANTITIES	1	TOTAL			
ODE NO	ITEM	UNIT	QUANTITIES			CODE NO		ITEM		UNIT	QUANTITIES	_		
7015005	CHANGEABLE MESSAGE SIGN	CAL DA	28	28				_						
0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SO YD	1102	1102										
0012112	BRIDGE DECK FLY ASH OR GGBF SLAG CONCRETE OVERLAY, 2 3/4"	SO YD	1102	1102										
0012130	BRIDGE DECK SCARIFICATION 3/4"	SO YD	1102	1102										
2015001	DECK CLAD DEDAID (FILL DEDIL) TYPE I)	50. 70	4											
0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	4	4										
0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE 11)	SO YD	7	7										

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EXISTING TYPICAL CROSS SECTION EXISTING AGGREGATE SHOULDER, TYPE B EXISTING HOT-MIX ASPHALT BINDER COURSE, 8" EXISTING HOT-MIX ASPHALT BINDER COURSE, 1/2" LEXISTING HOT-MIX ASPHALT SURFACE COURSE, CLASS I $(1\frac{1}{2})$ EXISTING TYPICAL STA 925+00 TO STA 928+15.04 BRIDGE OMISSION: STA 928+15.04 TO STA 930+79.04 STA 930+79.04 TO STA 935+00 NOTE: NOT TO SCALE PROPOSED TYPICAL CROSS SECTION



PROPOSED TYPICAL

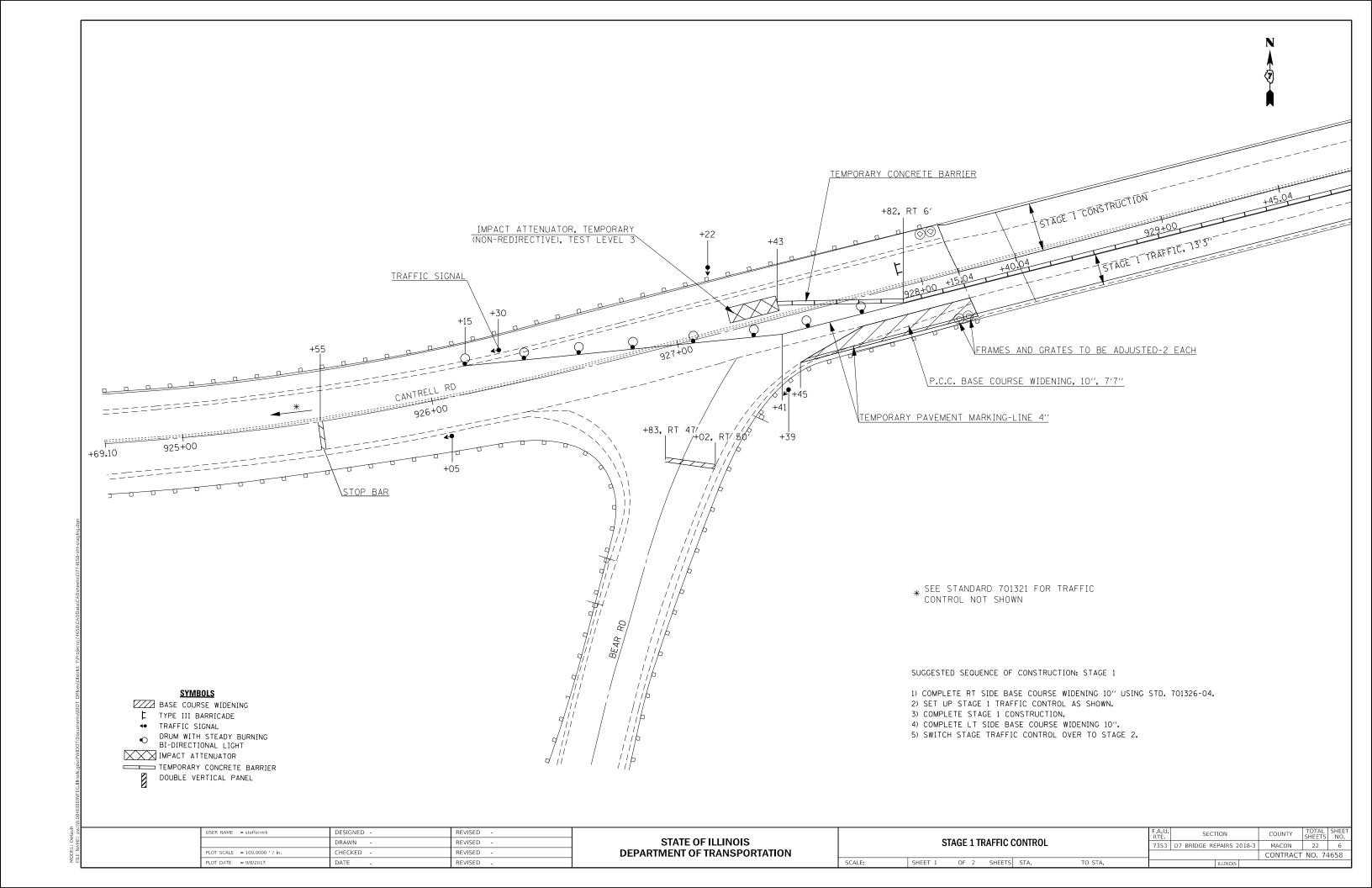
STA 925+00 TO STA 928+15.04

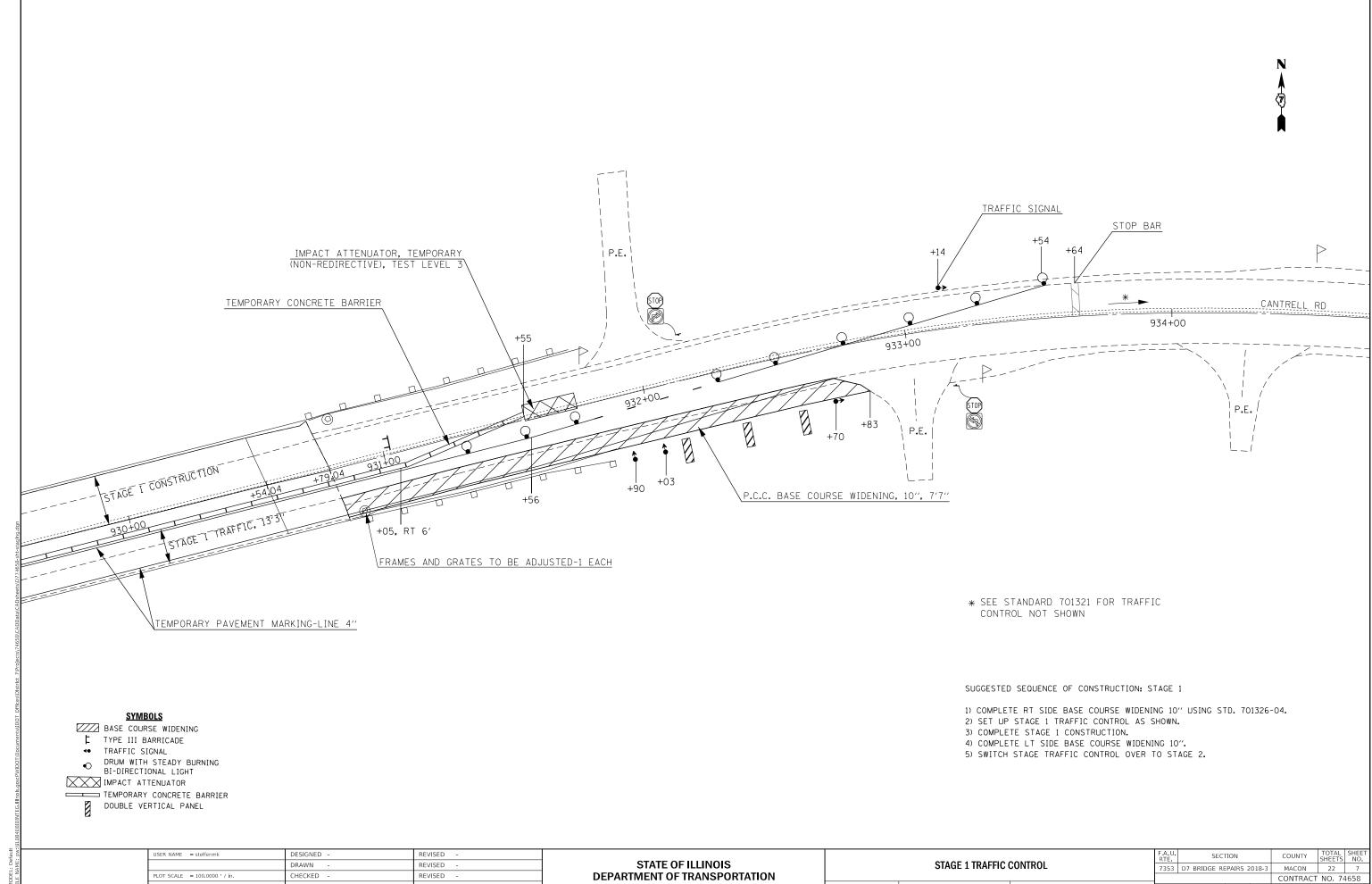
BRIDGE OMISSION: STA 928+15.04 TO STA 930+79.04

STA 930.79.04 TO STA 935+00

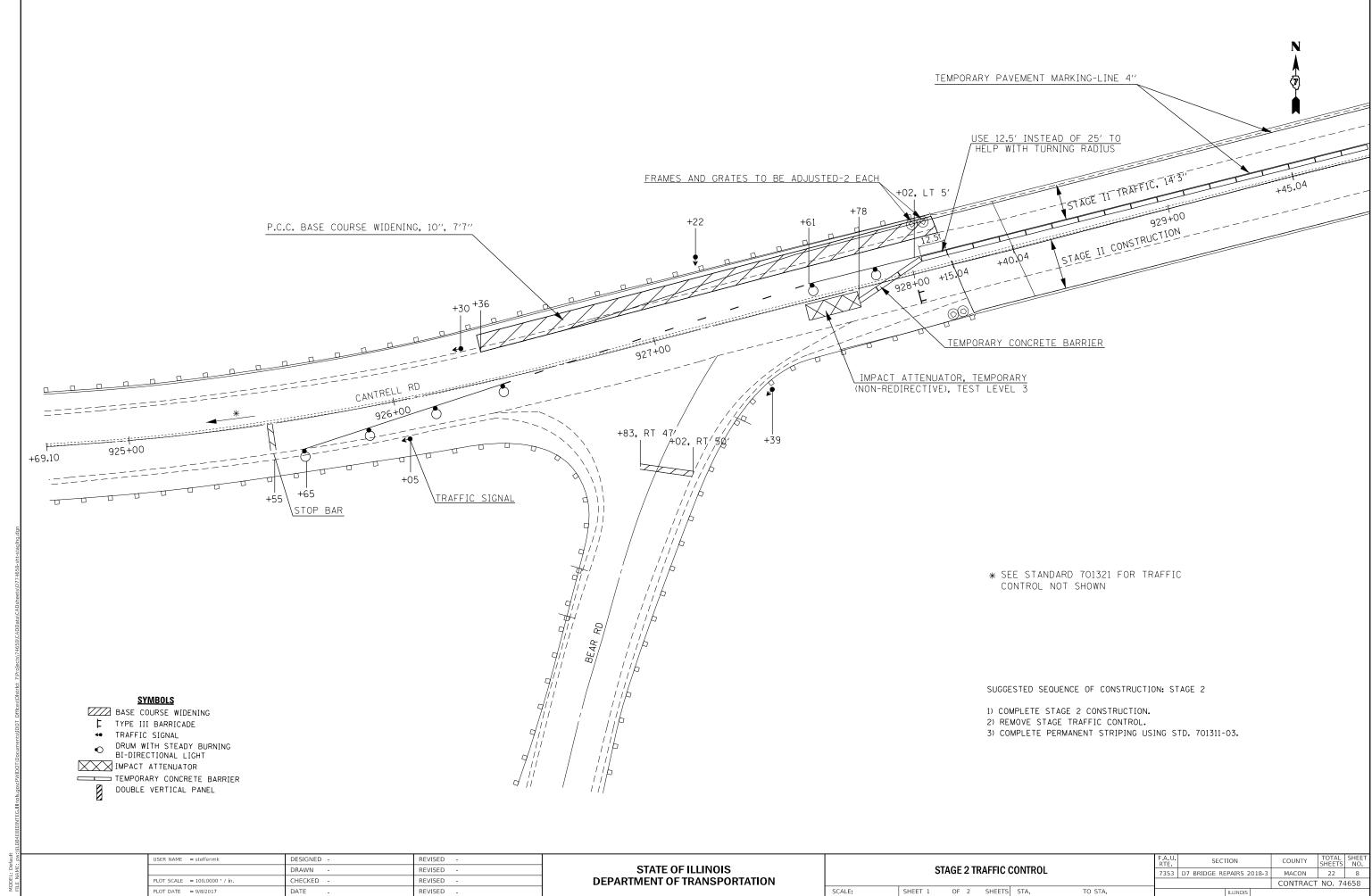
NOTE: NOT TO SCALE

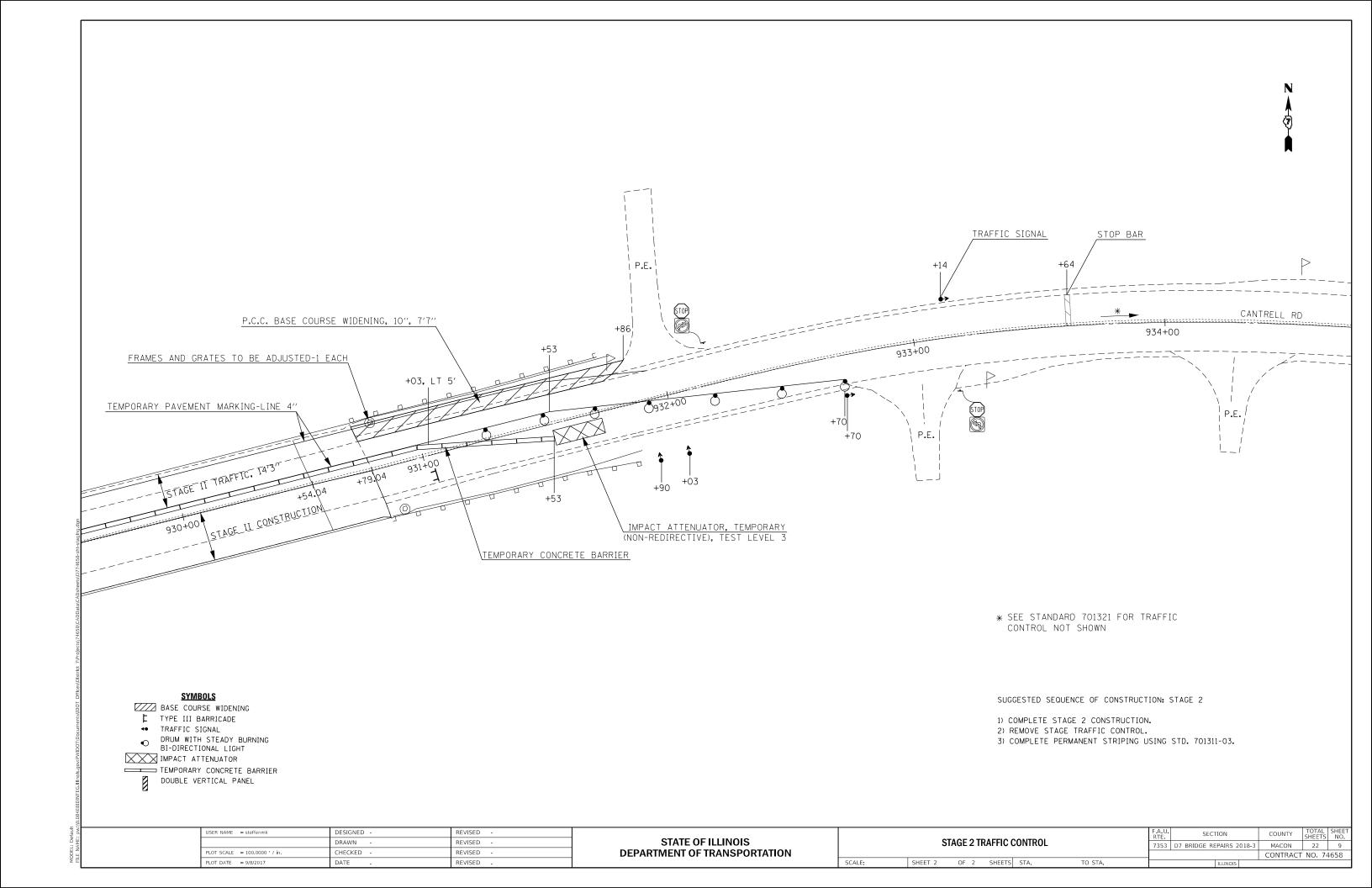
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SHEET 2 OF 2 SHEETS STA.





The existing two span continuous steel multi-beam structure with two sand-filled, vaulted abutments was constructed in 1976 as TR 60C section 58-20-1HB at Sta. 929+45.04. SN. 058-0100 carries Cantrell Road over US 51. The proposed project consists of new expansion joints, deck repairs, and a new concrete wearing surface. € SB US 51 **Q** NB US 51 PUZEY ELEVATION 081-005470 CHACKE S 264'-0" Limits of HMA Surface Removal (Deck), Bridge Deck Scarification, 34" & Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 234" 25'-0" Limits of Protective Shield Limits of Protective Shield 22'-0" 20'-0" **©** Cantrell Rd Sta. 929+45.04 Bk. W. Appr. Bent © Brg. W. Abut. Sta. 928+40.04 Bk. E. Appr. Bent Brg. E. Abut. Sta. 928+15.04 Sto. 930+54.04 Sta. 930+79.04 PLAN FILE NAME : USER NAME = steffenmk DESIGNED - DFZ REVISED -D. Macklin GENERAL PLAN & ELEVATION r:\\ILØ84EBIDINTEG.1111noxs.gov:PW100T\ BRANN ta\CADshee BR 0774658-sht-br BEWISEDgn -STATE OF ILLINOIS SN. 058-0100 PLOT SCALE = 40.0000 '/ in. CHECKED - MEA REVISED **DEPARTMENT OF TRANSPORTATION** PLOT DATE = 9/8/2017 DATE SCALE: SHEET 1 OF 8 SHEETS STA. REVISED TO STA.

GENERAL NOTES

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 work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Removal and reinstallation of aluminum railing sections may be necessary for construction of the expansion joints. All existing embedded anchors that are within the concrete removal area shall be cleaned and incorportated in the new construction or new approved alternatives shall be supplied and installed. This work and all materials shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.

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

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 operations shall be replaced using an approved bar splicer or anchorage system. Cost included in CONCRETE REMOVAL.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than $50^{\circ}F$.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on as-built plans.

Prior to pouring the new concrete deck, all heavy and 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.

Protective Coat shall be applied to areas of Concrete Superstructure consisting of the front face and the top of the wingwall and curb, and the top surface of the exposed expansion joint blockouts.

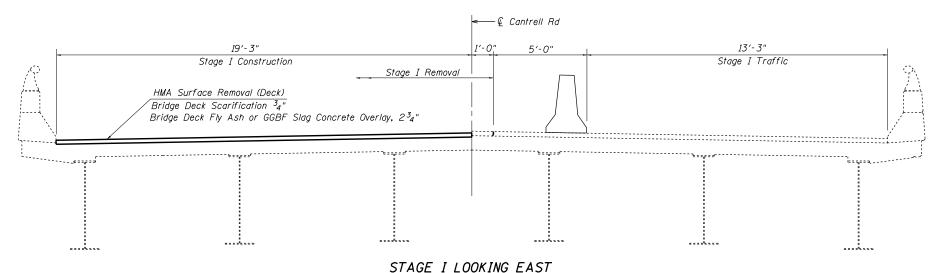
Synthetic fibers should be added to the bridge Deck Fly Ash or GGBF Slag Overlay, $2\frac{3}{4}$ ". See Special Provisions.

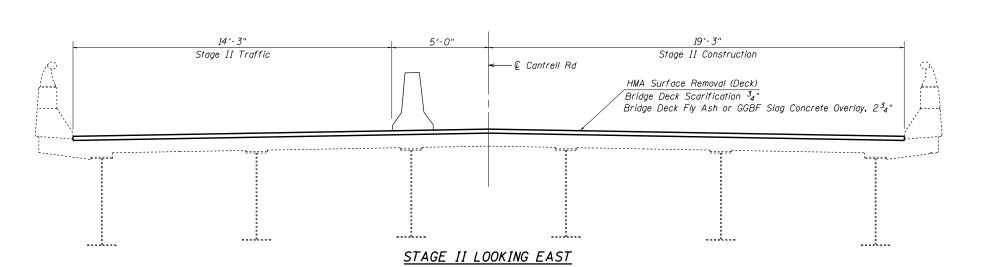
Full depth deck slab repairs performed in the exterior bays of the bridge deck (between the parapet walls and the first interior beams) shall be limited to individual lengths no greater than 10'. In these portions of the deck, repair areas longer than 10' shall be divided into segments not greater than 10' in length, and the segments shall be poured in alternating sequence. Subsequent segments repaired in sequence shall not be removed until 72 hours shall have elapsed from the end of the previous, adjacent pour and the adjacent pour shall have attained a minimum modulus of rupture of 650psi.

TOTAL BILL OF MATERIALS

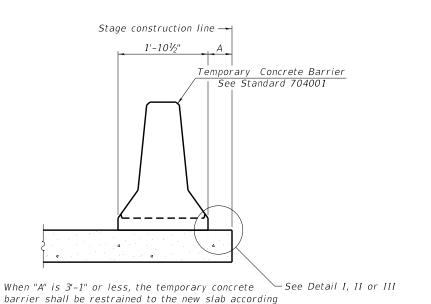
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	9.8
Concrete Superstructure	Cu. Yd.	9.8
Concrete Structures	Cu. Yd.	6.4
Reinforcement Bars, Epoxy Coated	Pound	2700
Bar Splicers	Each	20
Preformed Joint Strip Seal	Foot	82
HMA Surface Removal (Deck)	Sq Yd	1102
Bridge Deck Scarification, $\frac{3}{4}$ "	Sq Yd	1102
Bridge Deck Fly Ash or GGBF Slag Concrete Overlay, 2^{3}_{4} "	Sq Yd	1102
Bridge Deck Grooving	Sq Yd	1070
Protective Shield	Sq Yd	386
Protective Coat	Sq Yd	31
Deck Slab Repair (Full Depth, Type I)	Sq Yd	4
Deck Slab Repair (Full Depth, Type II)	Sq Yd	7

^{*} On new concrete adjacent to joints only.





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Default	PLOT DATE = 10/10/2017	DATE -	REVISED -	SCALE: SHEET 2 OF 8 SHEETS STA.		SHEET 2 OF 8 SHEETS STA. TO STA.		ILLINOIS FED. AI	D PROJECT	



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

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

Drill 3-11/4" 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 st When hot-mix asphalt wearng surface is present, embedment is required when "A" is greater than 3'-1".

EXISTING SLAB

Stage removal line

1'-101/5"

1x8 UNC US Std. $1\frac{1}{16}$ " I.D. x $2\frac{1}{2}$ " O.D. x approx. 8 guage thick washer RESTRAINING PIN

shall be 3" plus the wearing surface depth.

min.

EXISTING DECK BEAM

← Stage removal line

1'-101/5"

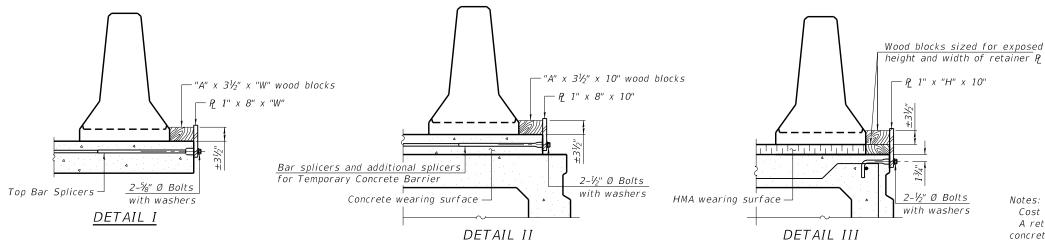
NEW SLAB OR NEW DECK BEAM

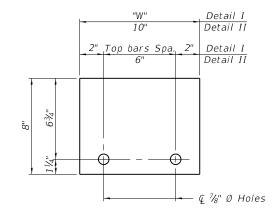
SECTIONS THRU SLAB OR DECK BEAM

Temporary Concrete Barrier

See Standard 704001

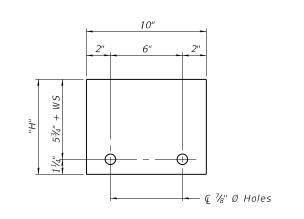
6" min.





STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)



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

SCALE:

BAR SPLICER FOR #4 BAR - DETAIL III

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate Q 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 $1\frac{1}{2}$ ", 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.

SHEET NO.

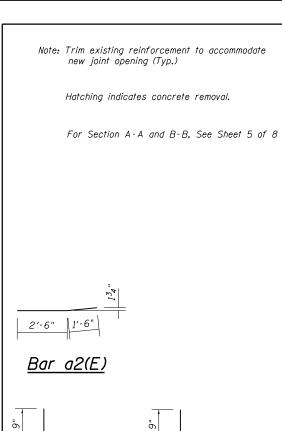
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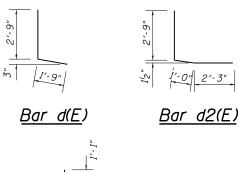
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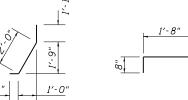
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Default	PLOT DATE = 9/8/2017	DATE -	REVISED -				

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

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TEMPORA	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION				F.A.P. RTE.	SEC	TION		COUNTY	TOTAL SHEETS			
	STRUCTURE NO. 058-0100						332A	D7 BRIDGE RE	PAIRS	2018-3	MACON	22	T
	31NUCTURE NO. 030-0100										CONTRACT	NO.	7
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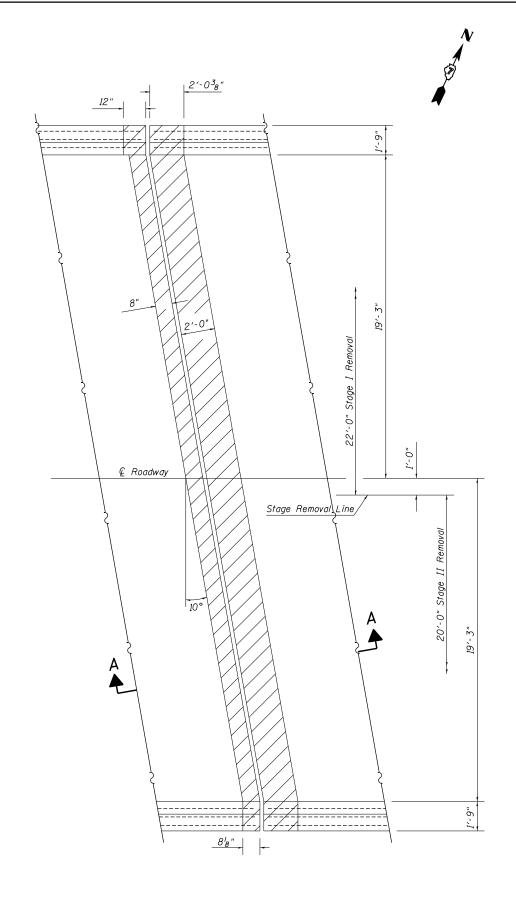


<u>Bar d1(E)</u> Bar X(E)

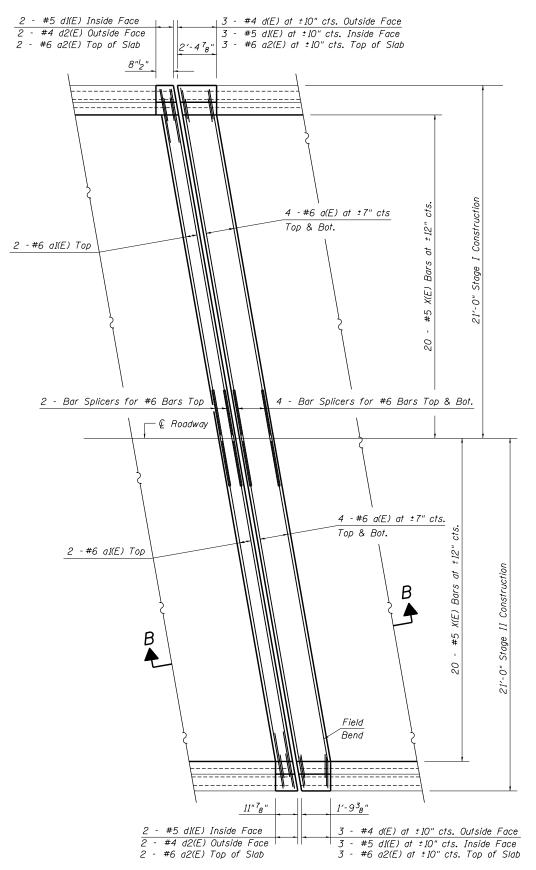
BILL OF MATERIAL

PER ABUTMENT

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BAR	NUMBER	OF BARS	TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a (E)	8 8		16	#6	21'-0"	
a1(E)	2 2		4	#6	21'-0"	
a2(E)	5	5	10	#6	4'-0"	
d (E)	3	3	6	#4	4'-5"	L
d1(E)	5	5	10	#5	3′-6")
d2(E)	2	2	4	#4	6′-0"	
x (E)	20	20	40	#5	2'-4"	
REINFOR	CEMENT BA	ARS (EPOXY	COATED)		POUND	1030
CONCRET	E REMOVAL	CU YD	4.9			
CONCRET	E SUPERS	CU YD	4.9			

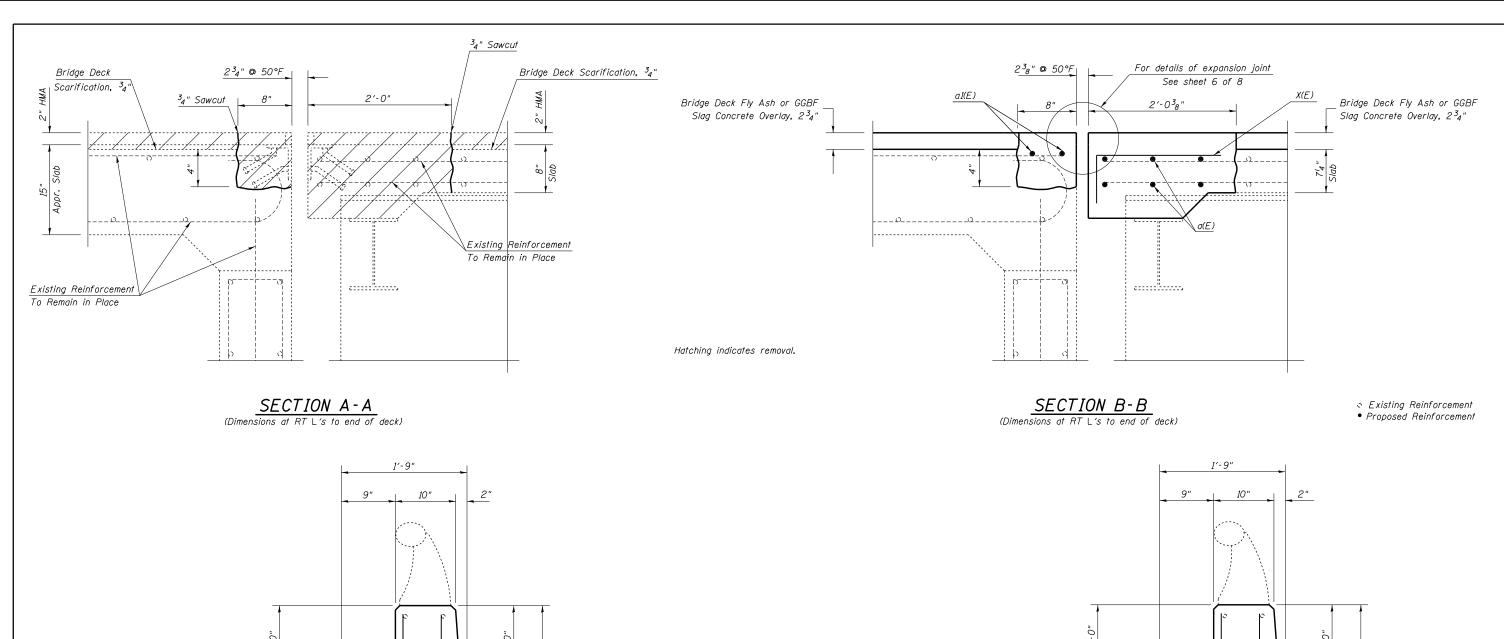


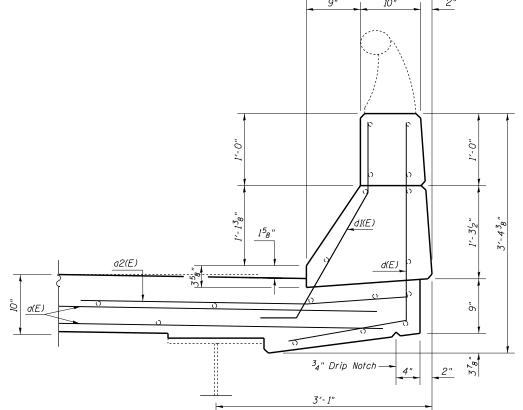
EXISTING PARTIAL PLAN
(West Abutment shown; East Abutment similar)



PROPOSED PARTIAL PLAN
(West Abutment shown; East Abutment similar)

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Default	PLOT DATE = 9/8/2017	DATE -		REVISED -		SCALE:	SHEET 4 OF 8 SHEETS STA.	TO STA.		ILLINOIS FED. AID	PROJECT	



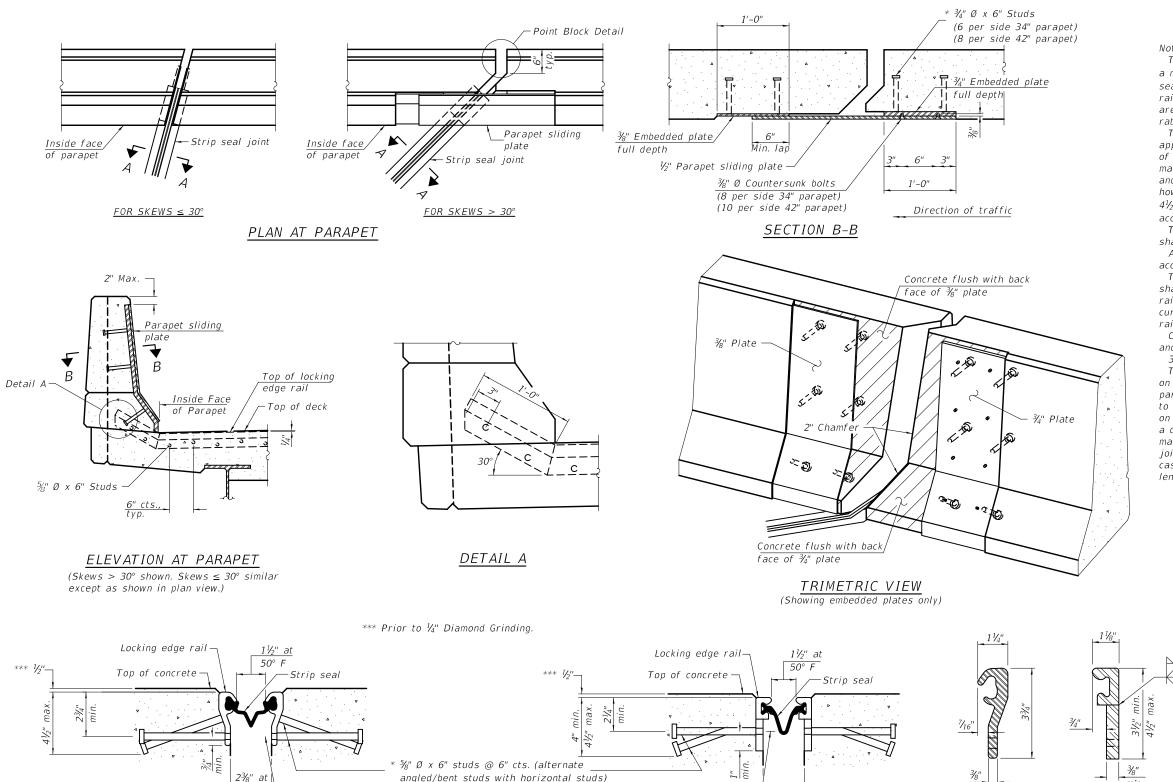


SECTION THRU DECK PARAPET

9" 10" 2" | 158" | dl(E) | dl(E)

SECTION THRU APPROACH PARAPET

FILE NAME =	USER NAME = steffenmk	DESIGNED - DFZ	REVISED -		EXPANSION JOINT REPLACEMENT DETAILS		F.A.P. SECTION	COUNTY TOTAL SHEET
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Default	PLOT DATE = 9/8/2017	DATE -	REVISED -		SCALE:	SHEET 5 OF 8 SHEETS STA. TO STA.	ILLINOIS FED. A	ID PROJECT



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 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 $\frac{3}{16}$ " 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.

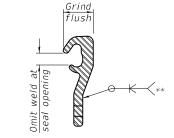
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.

34" F-shape barrier shown, 42" F-shape similar as noted. 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.

<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	82

SECTION A-A

 $\frac{3}{6}$ " ϕ threaded rods in $\frac{7}{16}$ " ϕ holes at ± 4 '-0" cts.

for holding the proper joint opening based on

the temperature during the deck pour. Place to

miss studs. All rods shall be burned, or sawed

off flush with the plates after concrete is set.

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

EJ-SS 8-11-17 DESIGNED DATE - SEPTEMBER 8, 2017 CHECKED DRAWN baliva PASSED REVISED REVISED CHECKED -

50° F

SHOWING ROLLED RAIL JOINT

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SHOWING WELDED RAIL JOINT

50°

PREFORMED JOINT STRIP SEAL SN 058-0100 SHEET NO. 6 OF 8 SHEETS

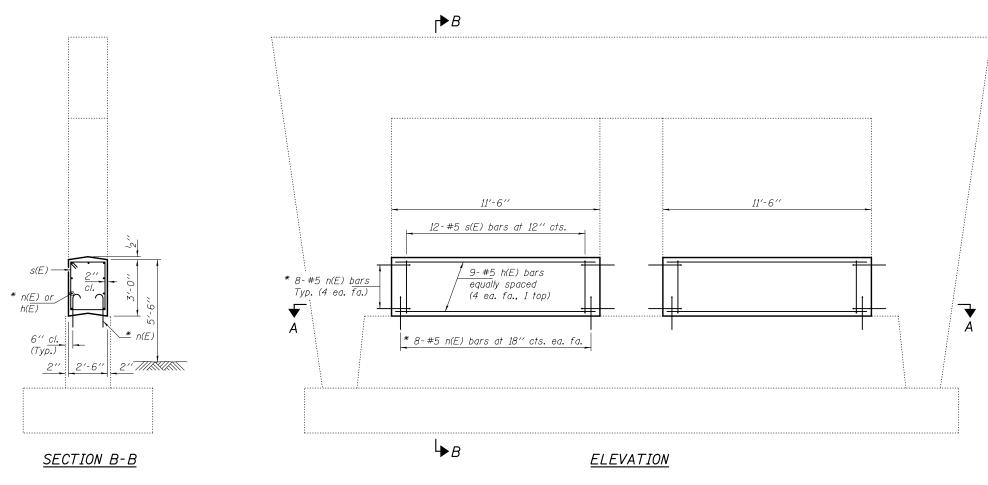
SECTION COUNTY 332A D7 BRIDGE REPAIRS 2018-3 MACON 22 15 CONTRACT NO. 74658

BRIDGE DECK PATCHING

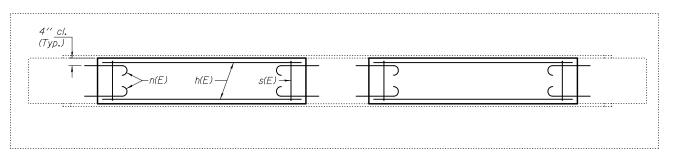
<u>NOTES</u>

The cost of epoxy grouting threaded rods shall be included with Reinforcement Bars, Epoxy Coated.

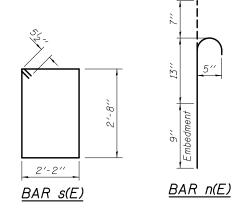
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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



* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



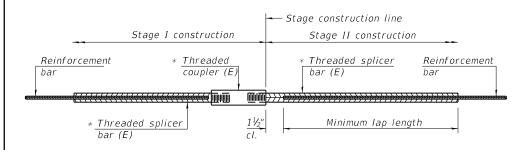
SECTION A-A



BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
h(E)	18	#5	11'-2''		
n(E)	64	#5	2'-5"	٦	
s(E)	24	#5	10'-7''		
Concrete	Structure	S	Cu. Yd.	6.4	
Reinforce Epoxy Co		Pound	640		

DESIGNED DAB		DATE - SEPTEMBER 8, 2017		PIER CRASHWALL EXTENSION	RTE. SECTION	COUNTY SHEET NO.
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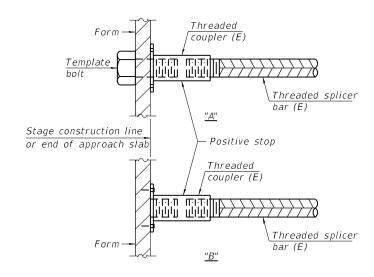


STANDARD BAR SPLICER ASSEMBLY

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.

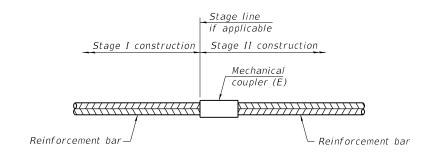
Location	Bar size	No. assemblies required	Minimum lap length
Bridge Deck	#6	20	4'-4"



INSTALLATION AND SETTING METHODS

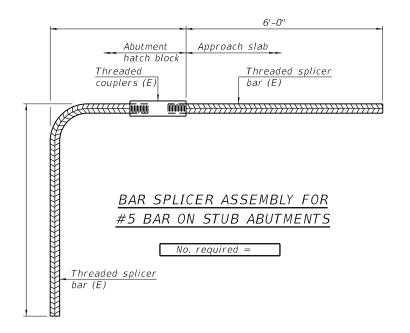
"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(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.

SECTION

COUNTY

CONTRACT NO. 74658

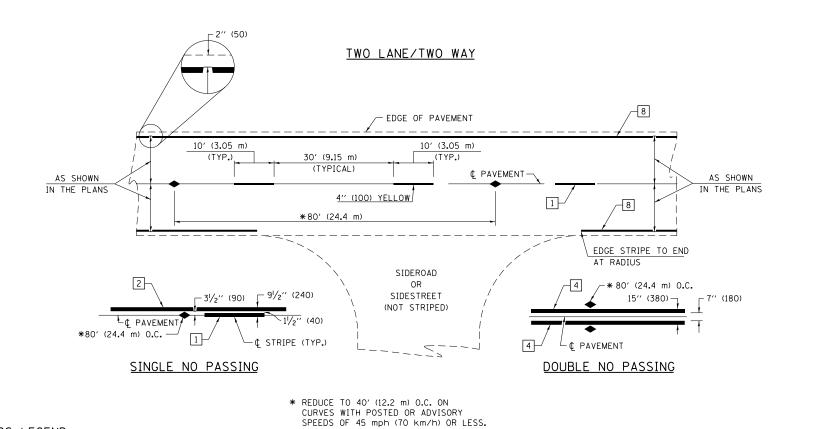
332A D7 BRIDGE REPAIRS 2018-3 MACON 22 18

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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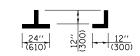


PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- (3.05 m) (9.15 m) (3.05
- 2 4" (100) SOLID (YELLOW)

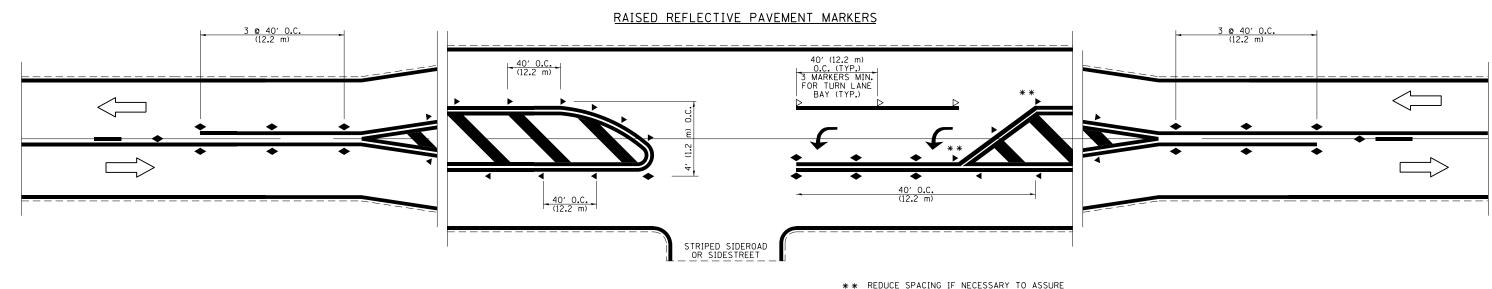
3 12" (300) DIAGONAL (YELLOW)

- 4 4" (100) DOUBLE YELLOW (NARROW)
- DW) = 4" (100) CTS.
- 5 RESERVED
- 6 RESERVED
- 7 6" (150) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) PARKING WHITE



TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ► ONE-WAY AMBER MARKER
- > ONE-WAY CRYSTAL MARKER

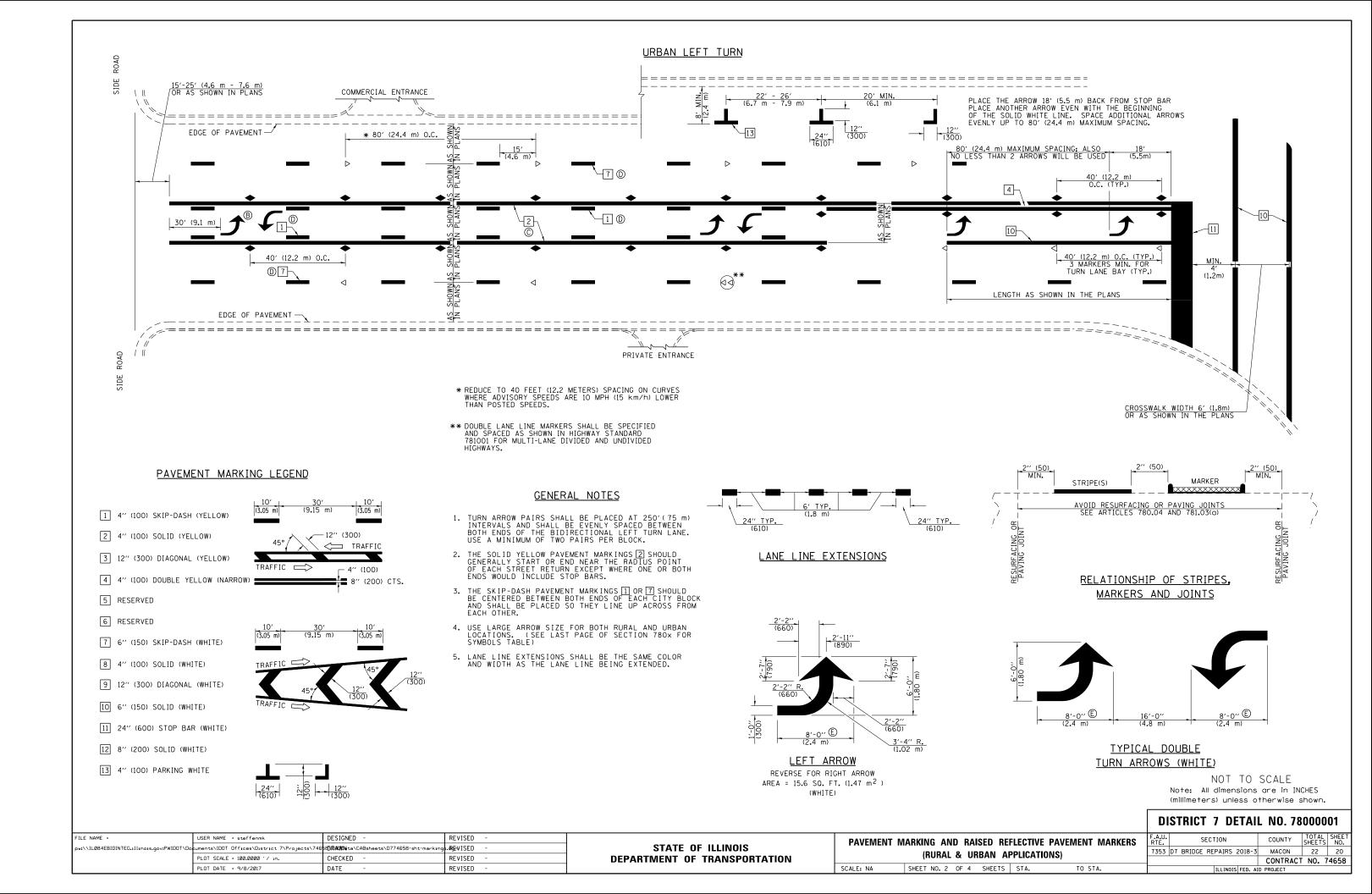


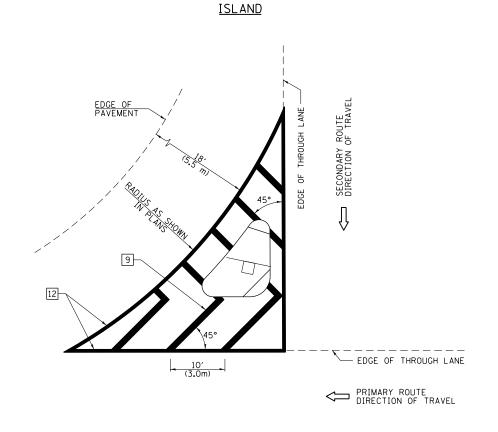
** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

						DISTRICT 7 DETAIL NO. 78000001
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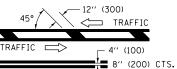




PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)





4 4" (100) DOUBLE YELLOW (NARROW)

5 RESERVED

6 RESERVED

7 6" (150) SKIP-DASH (WHITE)

8 4" (100) SOLID (WHITE)

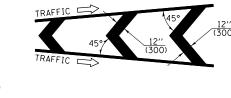
9 12" (300) DIAGONAL (WHITE)

10 6" (150) SOLID (WHITE)

11 24" (600) STOP BAR (WHITE)

12 8" (200) SOLID (WHITE)

13 4" (100) PARKING WHITE





GENERAL NOTES

1. RAISED AND CORRUGATED MEDIANS SHALL BE OUTLINED WITH 2 IF PRESENT.

2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.

4. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.

5. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING

15' (4.5 m)

20' (6.0 m) 30' (9.0 m)

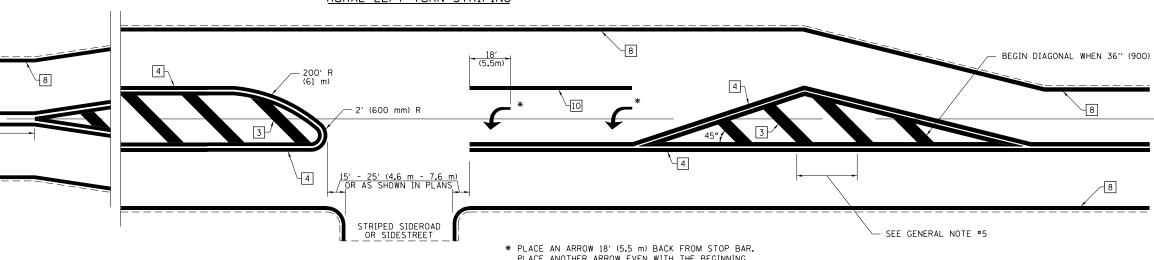
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH

THE DIAGONAL PAVEMENT MARKING SPACING:

OMISSIONS WHEN APPLICABLE.

<30 MPH (<50 km/h)

30-45 MPH (50-75 km/h >45 MPH (>75 km/h



* PLACE AN ARROW 18' (5.5 m) BACK FROM STOP BAR. PLACE ANOTHER ARROW EVEN WITH THE BEGINNING OF THE SOLID WHITE LINE. SPACE ADDITIONAL ARROWS EVENLY UP TO 80' (24.4 m) MAXIMUM SPACING. USE MINIMUM OF 2 ARROWS.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DI	TAIL NO.	78000001
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4

500' (164 m) MIN. NO PASSING ZONE

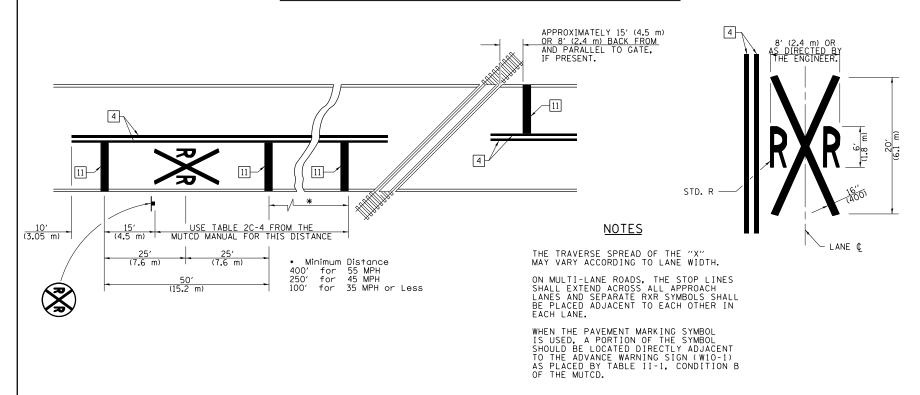
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND RAISED REFLECTIVE PAVEMENT MARKERS (RURAL & URBAN APPLICATIONS)

SCALE: NA SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.U. SECTION COUNTY TOTAL SHEETS NO. 7353 D7 BRIDGE REPAIRS 2018-3 MACON 22 21 CONTRACT NO. 74658

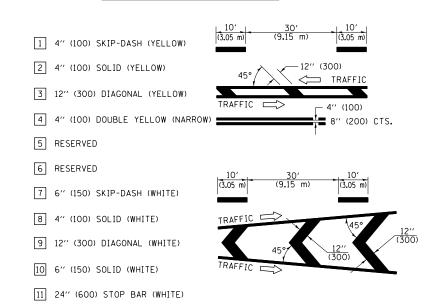
PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING



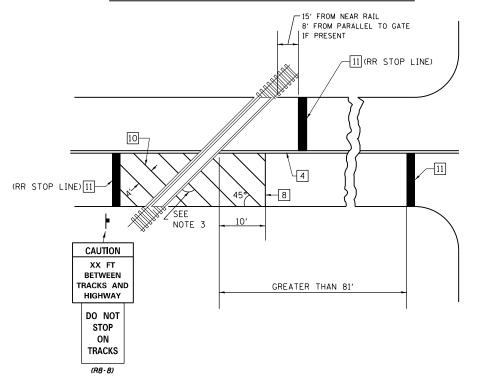
PAVEMENT MARKING LEGEND

12 8" (200) SOLID (WHITE)

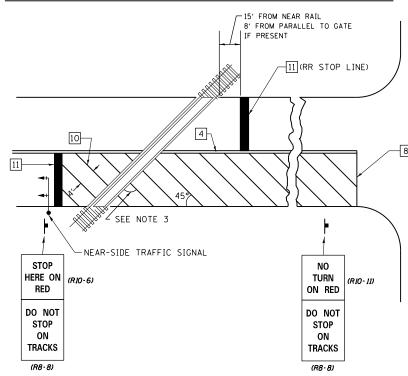
13 4" (100) PARKING WHITE



RAILROAD CROSSING WITH INTERCONNECT ONLY



RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- 2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- 3. WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

						DISTRICT 7 DETAIL NO. 78000001			
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	PLOT DATE = 9/8/2017	DATE -	REVISED -		SCALE: NA SHEET NO. 2 OF 4 SHEETS STA. TO STA.	ILLINOIS FED. AI			