FOR INDEX OF SHEETS, SEE SHEET NO. 2

DEPARTMENT OF TRANSPORTATION



D-97-035-19

LOCATION OF SECTION INDICATED THUS: - -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

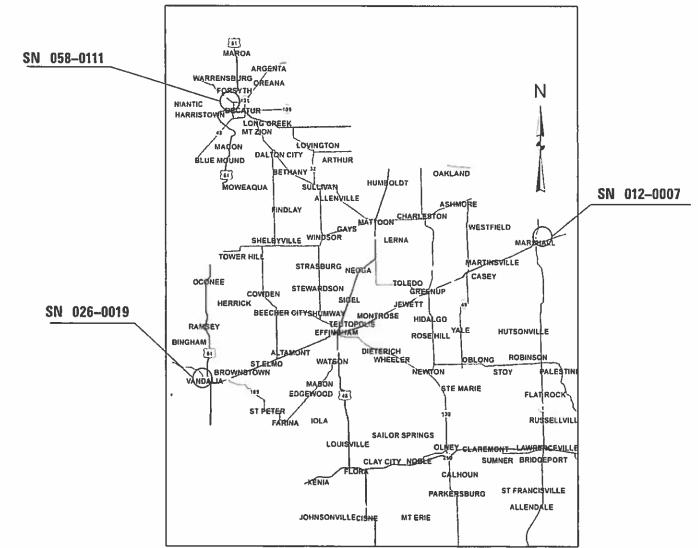
PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROPOSED HIGHWAY PLANS

FAI 70 (I 70) & FAP 320 (IL 121) **SECTION D7 BRIDGE REPAIRS 2020-3**

PARAPET REPAIRS **VARIOUS COUNTIES**

C-97-073-19



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 EXCAVATORS 1-800-892-0123 OR 811

PROJECT ENGINEER BRIAN LEWIS PROJECT MANAGER TRAVIS WALK

CONTRACT NO. 74918

SCHEDULE OF QUANTITES

SUMMARY OF QUANTITIES

4-6 LOCATION MAPS

7 - 14 STRUCTURE PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS

STD. NO. DESCRIPTION

000001-07 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS

001006 DECIMAL OF AN INCH AND OF A FOOT

631031-15 TRAFFIC BARRIER TERMINAL, TYPE 6

701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE

701106-02 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY

701400-09 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY

701402-12 LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER

701601-09 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W, WITH NONTRAVERSABLE MEDIAN

701801-06 LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE

701901-08 TRAFFIC CONTROL DEVICES

704001-08 TEMPORARY CONCRETE BARRIER

DESCRIPTION	STATION	10	STATION	CONCRETE SIER	TENUATORS, ORARY TIVE), TEST EL 3				
				TEMPORARY (IMPACT AT TEMP (NON-DIRC' LEV				
				(FOOT)					
FAYETTE COUNTY I-70									
SN 026-0019	610+50	TO	613+00	250	1				
CLARK COUNTY I-70									
SN 012-0007	213+40	ТО	215+77.50	237.5	1				
ТОТ	AL			487.5	2				

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS; THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016; AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

THIS PROJECT IS LOCATED IN CLARK, FAYETTE, AND MACON COUNTIES. STRUCTURE NUMBER 012-0007 IS IN CLARK COUNTY ON FAI 70 APPROXIMATELY 1.7 MILES EAST OF THE IL ROUTE 1 INTERCHANGE. STRUCTURE NUMBER 026-0019 IS IN FAYETTE COUNTY ON FAI 70 APPROXIMATELY 0.7 MILES EAST OF THE US ROUTE 51 INTERCHANGE. STRUCTURE NUMBER 058-0111 IS IN MACON COUNTY ON FAP 320 (IL 121) APPROXIMATELY 1.5 MILES SOUTHEAST OF THE FAI 72 INTERCHANGE. THE WORK INCLUDED IN SECTION D-7 BRIDGE REPAIRS 2020-3 CONSISTS OF PARAPET REPAIRS, TRAFFIC CONTROL, AND ANY OTHER WORK NECESSARY TO COMPLETE THE SECTION.

AN ADDITIONAL QUANTITY OF PAVEMENT MARKING BLACKOUT TAPE, 7" IS INCLUDED FOR COVERING REFLECTIVE PAVEMENT MARKERS.

A QUANTITY OF GUARDRAIL REMOVAL IS INCLUDED FOR THE REMOVAL OF THE DAMAGED TYPE 6 TRAFFIC BARRIER TERMINAL.

DESCRIPTION	STATION	IQ	STATION	PAVEMENT MARKING BLACKOUT TAPE, 7"
				(FOOT)
FAYETTE COUNTY I-70				
SN 026-0019	595+12	ТО	613+00	492
CLARK COUNTY I-70				
SN 012-0007	197+77	ТО	215+78	496
MACON COUNTY IL-121				
SN 058-0111	981+00	ТО	997+60	457
ТОТ	A L			1445

* CLARK, FAYETTE, & MACON

14 2

CONTRACT NO. 74918

JSER NAME = steffenmk DESIGNED -REVISED DRAWN REVISED HECKED REVISED PLOT DATE = 5/16/2019 REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SCALE:

SECTION **GENERAL NOTES, INDEX OF SHEETS,** VAR. D7 BRIDGE REPAIRS 2020-3 & SCHEDULE OF QUATITIES SHEET 1 OF 1 SHEETS STA. TO STA.

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100% STATE

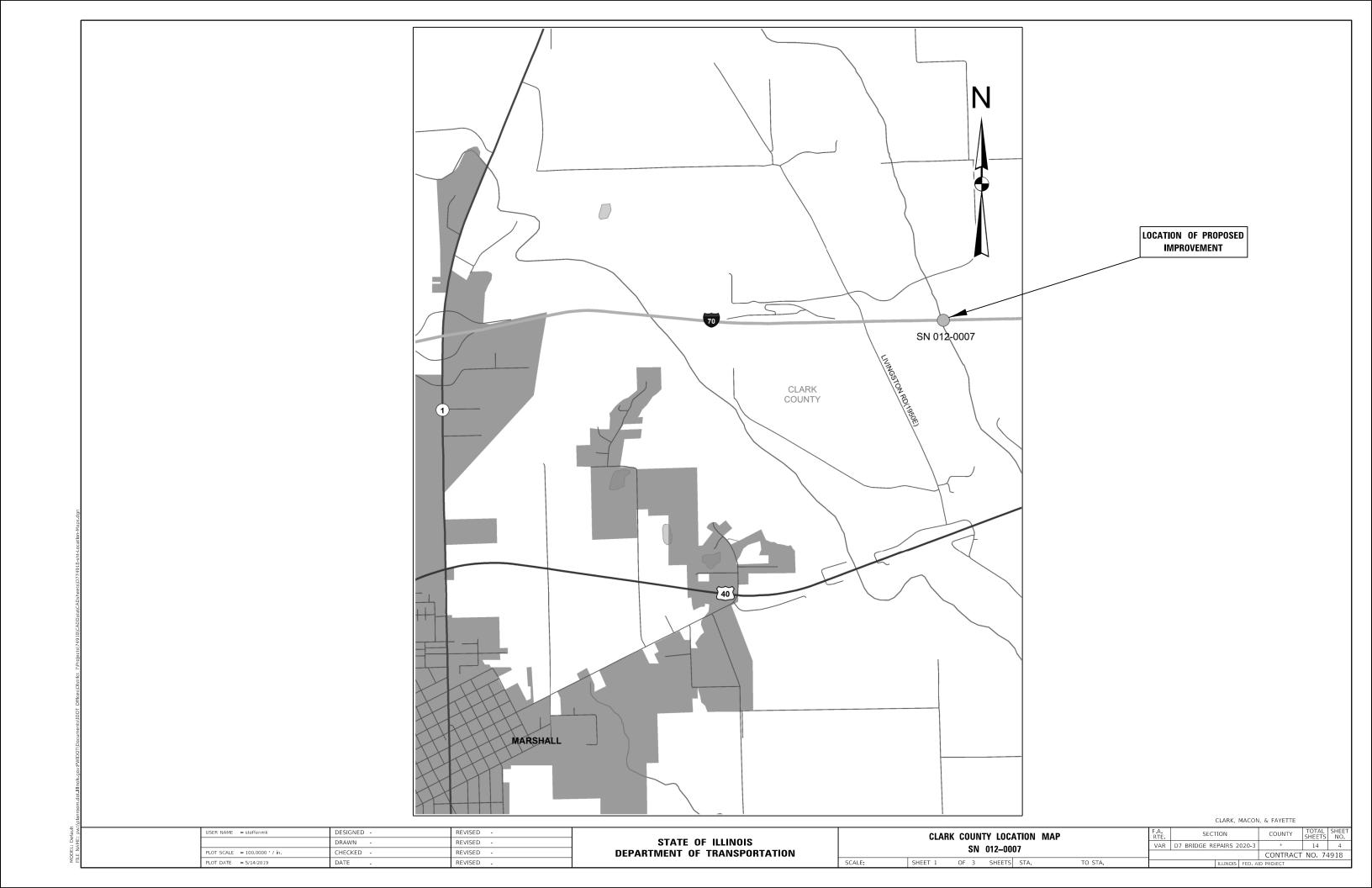
-	CHANADY OF CHANTITIES		JIAIL	CONS	STRUCTION TYPE (CODE			ICC		CONS	TRUCTION TYPE	CODE
	SUMMARY OF QUANTITIES		TOTAL	CLARK	FAYETTE	MACON		SUMMARY OF QUANTIT	IES	TOTAL	CLARK	FAYETTE	MACON
CODE NO	ITEM	UNIT	QUANTITIES	0013	0013	0013	CODE NO	ITEM	UNIT	QUANTITIES	0013	0013	0013
50102400	CONCRETE REMOVAL	CU YD	2.3	0.5	1.5	0.3	70400100	TEMPORARY CONCRETE BARRIER	FOOT	487.5	237.5	250	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	2.3	0.5	1.5	0.3		IMPACT ATTENUATORS, TEMPORARY (NON-	EACH	2	1	1	
50300300	PROTECTIVE COAT	SO YD	15.8	3.5	9.3	3. 0		REDIRECTIVE), TEST LEVEL 3					
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	365	50	290	25	x6330900	VERTICAL ADJUSTMENT OF GUARDRAIL	FOOT	25	25		
							Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH E	QUAL TO SQ FT	10	3		7
50800530	MECHANICAL SPLICERS	EACH	20		20			OR LESS THAN 5 INCHES)					
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1	1									
63200310	GUARDRAIL REMOVAL	FOOT	38	38									
67100100	MOBILIZATION	L SUM	1	0.33	0.33	0.34							
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD	EACH	2	1	1								
	701402												
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1			1							
	701601												
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1			1							
70107007	PAVEMENT MARKING BLACKOUT TAPE, 7"	FOOT	1444	492	495	457							
i i		1	l	I			1			1			

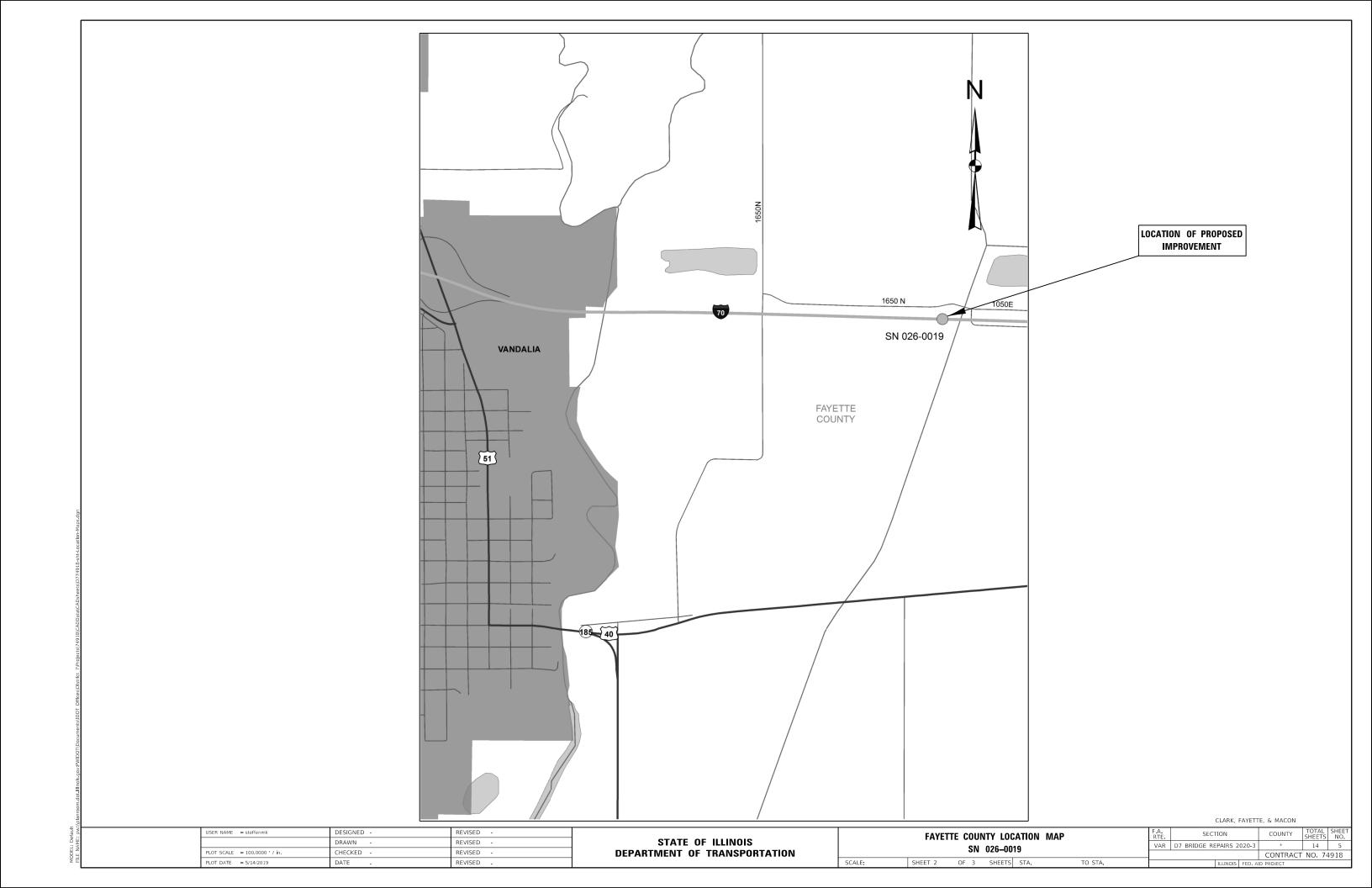
USER NAME = steffenmk	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 5/14/2019	DATE -	REVISED -

STATI	E OF	- ILLINOIS
DEPARTMENT	0F	TRANSPORTATION

SCALE:

	OURANA DV. OF OURANTITIES					F.A. RTE	SECTION		COUNTY	TOTAL SHEETS	SHE
SUMMARY OF QUANTITIES				VAR	D7 BRIDGE REPAIRS	2020-3	*	14	3		
									CONTRACT	NO. 74	4918
	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS	FED. A	ID PROJECT		







PLOT SCALE = 100.0000 ' / in.

PLOT DATE = 5/14/2019

CHECKED -

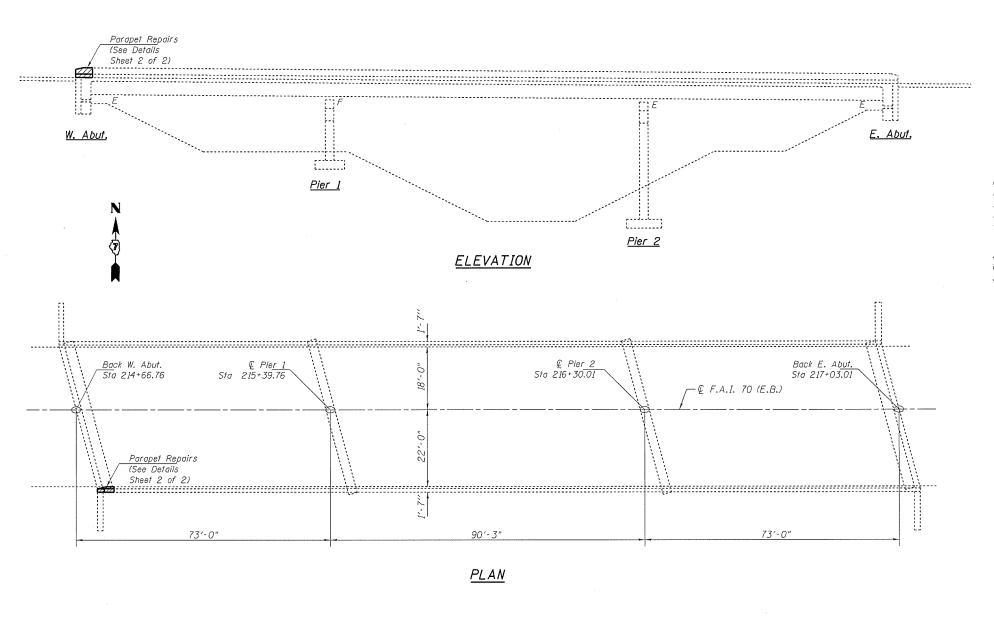
DATE

REVISED -

REVISED -

DEPARTMENT OF TRANSPORTATION

CLARK, FAYETTE, & MACON



DATE

REVISED

REVISED

MARCH 25, 2019

DESIGNED D. Macklin

CHECKED R. Walker

DRAWN D. Macklin

CHECKED R. Walker

STRUCTURE 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 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.

COUNTY TOTAL SHEET NO.

CLARK 14 7

CONTRACT NO. 74918

SECTION

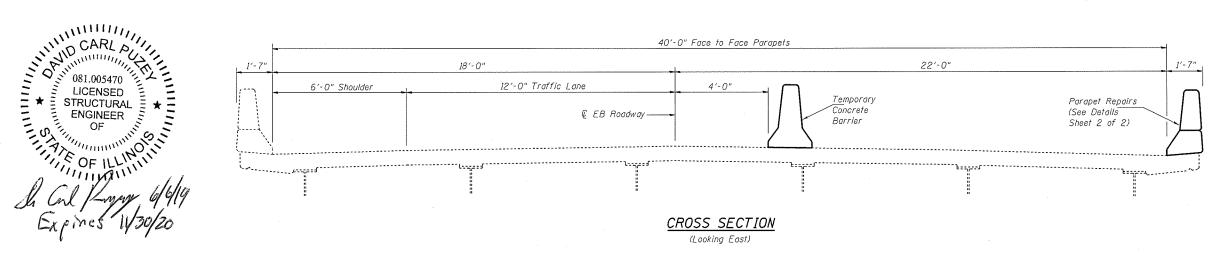
ILLINOIS FED. AID PROJECT

Reinforcement bars designated (E) shall be epoxy coated.

PARAPET REPAIR DETAILS

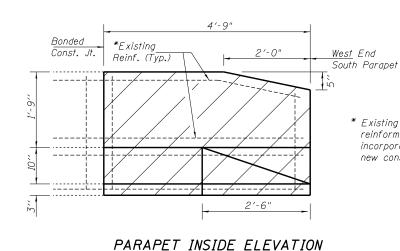
FAI 70 (EB) OVER EAST LITTLE CREEK STRUCTURE 012-0007

SHEET 1 OF 2 SHEETS



STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION



* Existing horizontal reinforment to be incorporated into new construction.

Bonded Const. Jt. 6-#5 d(E) bars at 11" cts. Each Face South Parapet

* Existing Reinforcement (Typ.)

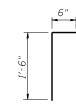
PARTIAL PARAPET PLAN

Showing Concrete Superstructure and Proposed Vertical Reinf. Bars



** BAR d(E)

** Bars may need to be cut to fit. Cuts to be made according to Article 508.04 of Standard Specifications.



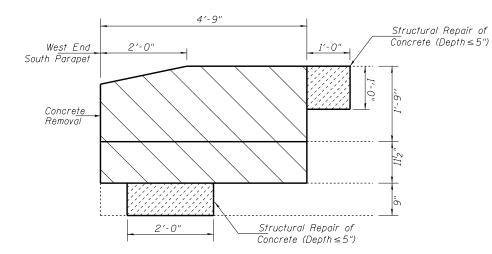
BAR d₂(E)

<u>STRUCTURE 012-0007</u> <u>BILL OF MATERIAL</u>

Dar	Ma	C!=-	1	Chana
Bar	No.	Size	Length	Shape
d(E)	12	#5	3'-0"	L
$d_2(E)$	6	#5	2'-0"	Г
	ITEM		UNIT	QUANTITY
Concre	te -		C., V.	0.5
Remove	7/		Cu. Yd.	0.5
Concre	te -		0. 7.1	0.5
Supers	tructure		Cu. Yd.	0.5
Reinfor	cement	Bars,	0	
Ероху	Coated		Pound	50
Structu	ıral Rep	air of		_
Concre	te (Dept	h≤5")	Sq. Ft.	3
Drotoo	tivo Coa	4		7.5
Proieci	tive Coa	/	Sq. Yd.	3.5

Reinforcement bars designated (E) shall be epoxy coated.

*** On new concrete only.

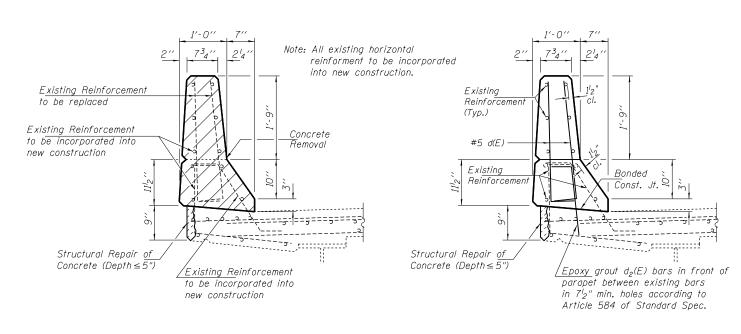


(Looking South)

Hatched Areas Indicate Removal

PARAPET OUTSIDE ELEVATION

(Looking North)



FAI:

SECTION THRU PARAPET

Showing Removal

SECTION THRU PARAPET

Showing Concrete Superstructure

DESIGNED	D.	Macklin	NO	ATE	MARCH 25, 2019
CHECKED	R.	Walker			
DRAWN	D.	Macklin		REVISED	
CHECKED	R.	Walker		REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET REPAIR DETAILS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70 (EB) OVER EAST LITTLE CREEK	70	D7 Bridge Repairs 2020-3	CLARK	14	8
STRUCTURE 012-0007			CONTRACT	NO.	74918
SHEET 2 OF 2 SHEETS		ILLINOIS FED. AI	D PROJECT		

€ Pier 11 Pier 13 -Bk. of E. Abut. Sta 612+14.97 Sta 613+43.10 € F.A.I. 70 (E.B.) € TR 1025E Parapet Repairs (See Details Sheet 2 of 2) ----------40'-712" <u>50'-0"</u>

STRUCTURE 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 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.

PARAPET REPAIR DETAILS

FAI 70 (EB) OVER CAMP CREEK

STRUCTURE 026-0019

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.

SECTION

70 D7 Bridge Repairs 2020-3

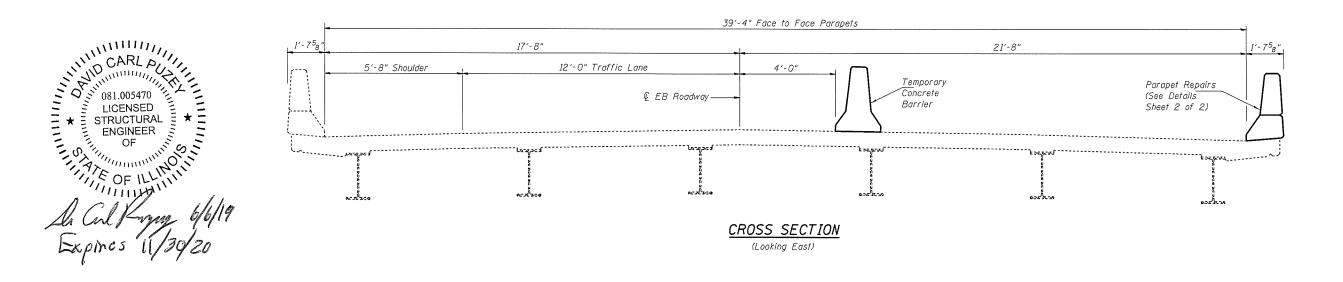
COUNTY

ILLINDIS FED. AID PROJECT

FAYETTE 14 9

CONTRACT NO. 74918





STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

MARCH 25, 2019

REVISED

REVISED

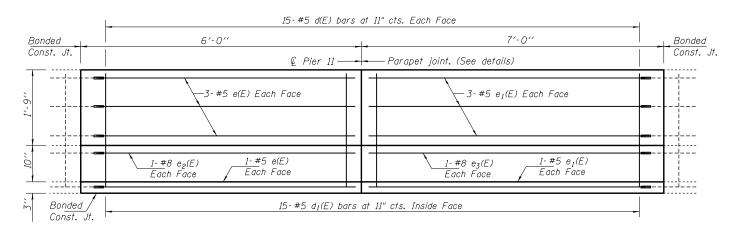
DESIGNED D. Macklin

CHECKED R. Walker

DRAWN D. Macklin

CHECKED R. Walker

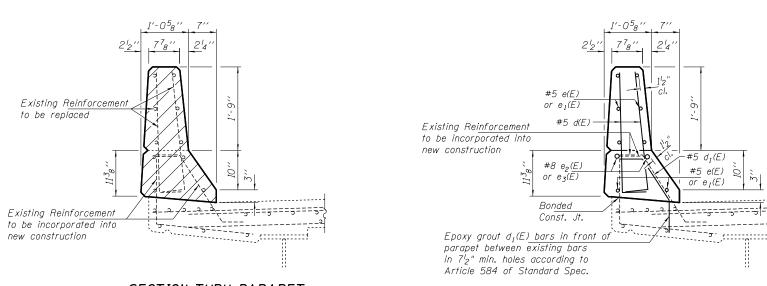
Existing Pier II PARAPET ELEVATION - CONCRETE REMOVAL Hatched Areas Indicate Removal ** Cut existing horizontal reinforment 6" from removal line to facilitate installation of Mechanical Splicers.



(Inside Elevation, looking South)

PARAPET ELEVATION - SUPERSTRUCTURE CONCRETE

(Inside Elevation, looking South)



SECTION THRU PARAPET Hatched area indicates removal SECTION THRU PARAPET

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PARAPET REPAIR DETAILS FAI 70 (EB) OVER CAMP CREEK STRUCTURE 026-0019 SHEFT 2 OF 3 SHEFTS

Bon<u>ded</u> Const. Jt. 6"

BAR d(E)

BAR d1(E)

F.A.I. SECTION COUNTY TOTAL SHEET NO. 70 D7 Bridge Repairs 2020-3 FAYETTE 14 10 CONTRACT NO. 74918

STRUCTURE 026-0019 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	30	#5	3'-0"	L
$d_I(E)$	15	#5	2'-2"	٦
e(E)	8	#5	5′-4"	
$e_I(E)$	8	#5	6'-4"	
e ₂ (E)	2	#8	5′-4"	
e3(E)	2	#8	6′-4"	
	ITEM		UNIT	QUANTITY
Concre			Cu. Yd.	1,5
Remova			Cu. /u.	1.0
Concre			Cu. Yd.	1,5
	tructure		Cu. 70.	1.0
	cement	Bars,	Pound	290
Ероху	Coated		. 53/10	250
Mechan	ical Spl	icers	Each	20
Protect	tive Coa	t	Sq. Yd.	9.3

Reinforcement bars designated (E) shall be epoxy coated.

*On new concrete only

Two component non-staining gray sealing compound with polysulfide liquid polymer gun-grade with primer.
Cost included with Concrete

'2" Preformed Cork Jt.

Filler (In accordance with Articles 1051.06 or

1051.07) Cost included with

Concrete Superstructure.

^l₈" Aluminum Sheet ASTM: B 209

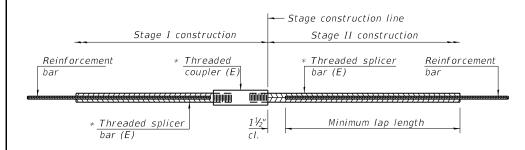
alloy 3003-H14.

PARAPET JOINT DETAILS

Cost included with

Concrete Superstructure

Superstructure.

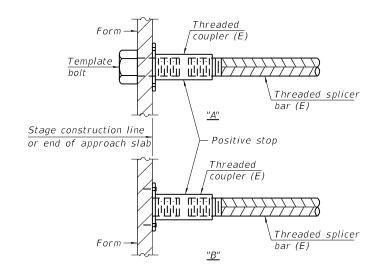


STANDARD BAR SPLICER ASSEMBLY

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.

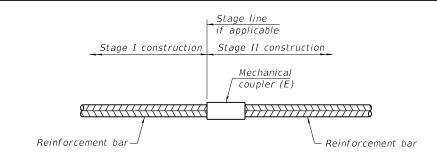
Location	Bar size	No. assemblies required	Minimum lap length



INSTALLATION AND SETTING METHODS

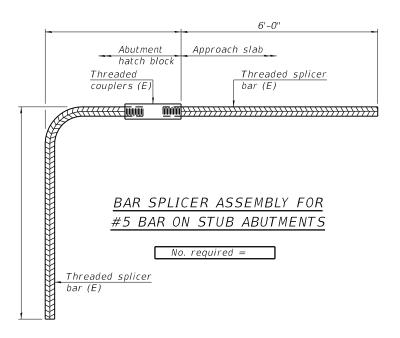
"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E): Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Parapet	#5	16
Parapet	#8	4



NOTES

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

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

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

BSD-1

2-17-2017

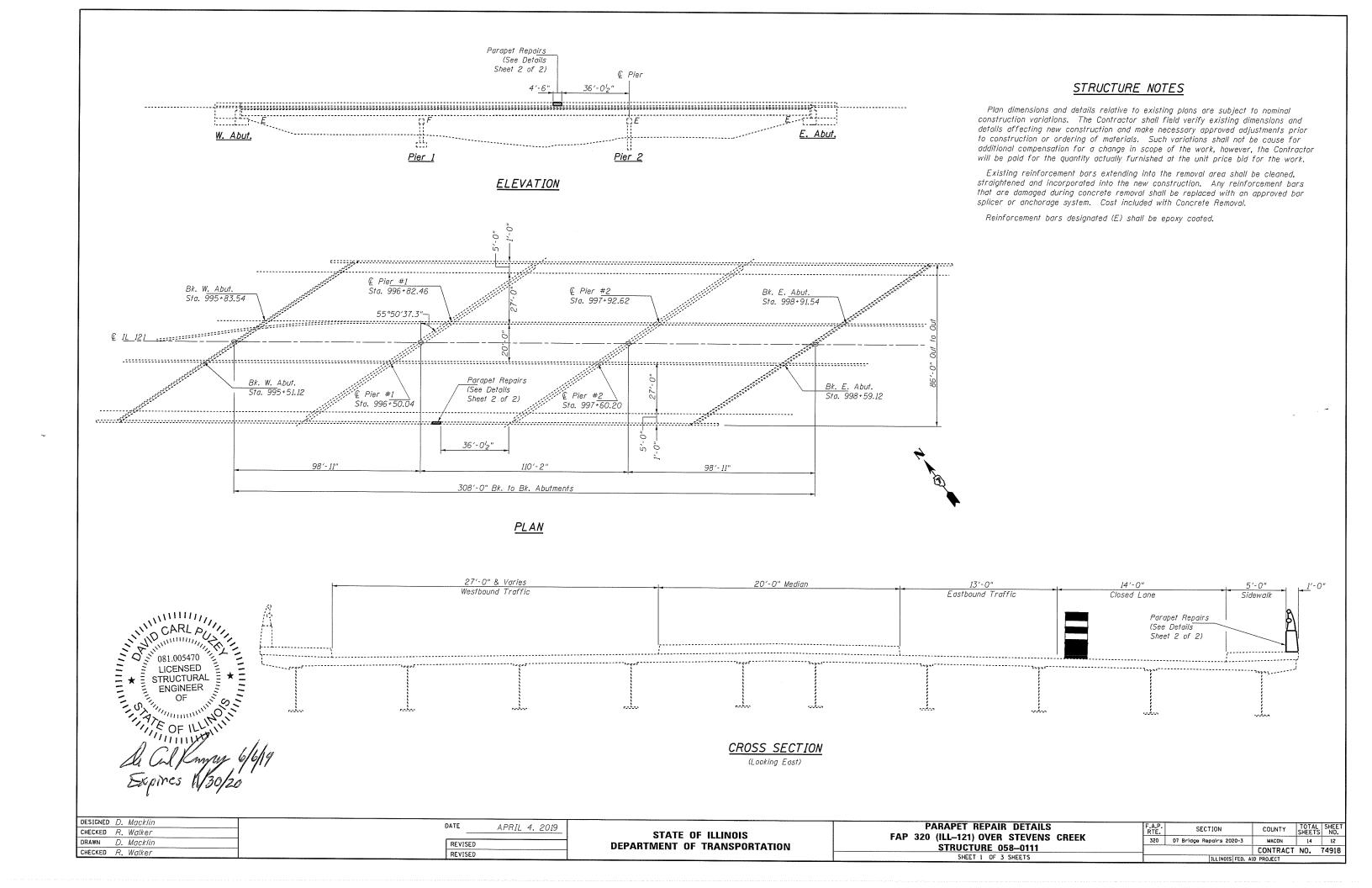
כט		2-17	-2017			
DESIGNED	D.	Macklin		DATE	MARCH 25.	2019
CHECKED	R.	Walker				
DRAWN	D.	Macklin		REVISED		
CHECKED	R.	Walker		REVISED		

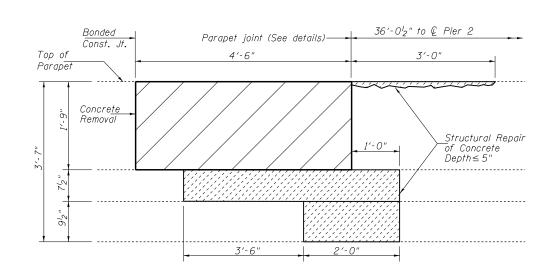
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 026-0019

SHEET 3 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
70	D7 Bridge Repairs 2020-3	FAYETTE	14	11	
		CONTRACT	NO.	74918	
	ILLINOIS FED. A	D PROJECT			





PARAPET OUTSIDE ELEVATION (Looking North)

5'-0" Sidewalk Existing Bar to be replaced <u>Concr</u>ete Removal Existing Reinforcement to be incorporated into new construction 92' Structural Repair of Concrete (Depth≤5")

Aluminum Bridge Rail Repairs (See details Sheet 3 of 3) 5'-0" Sidewalk -1¹2" cl. Typ. Existing $d_5(E)$ Reinf. (Typ.) Epoxy grout $d_4(E)$ bars in 10" min. holes according to Article 584 of Standard Spec. Bonded Const. Jt. ____೨____೨____೨__ Structural Repair of Concrete (Depth $\leq \overline{5}$ ")

SECTION THRU PARAPET

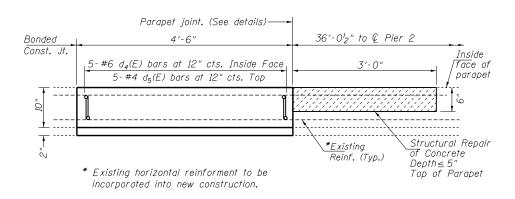
Showing Removal

SECTION THRU PARAPET

Showing Concrete Superstructure

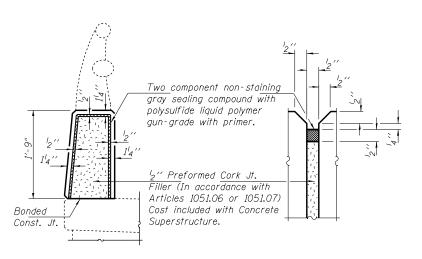


BAR d₅(E)



PARTIAL PARAPET PLAN

Showing Concrete Superstructure and Proposed Vertical Reinf. Bars



PARAPET JOINT DETAILS

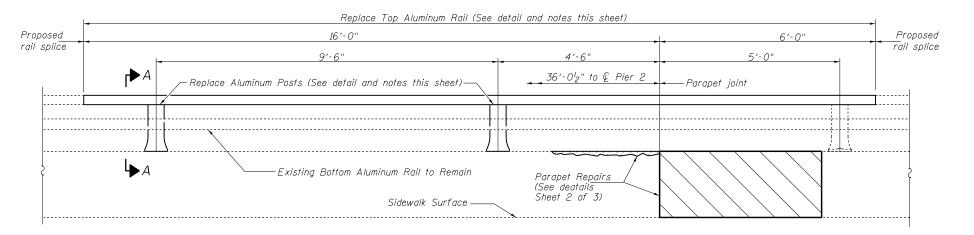
STRUCTURE 058-0111 BILL OF MATERIAL

-							
	Bar	No.	Size	Len	igth	Shape	
	$d_4(E)$	5	#6	2'-	5"		
	d ₅ (E)	5	#4	2'-	0"	П	
		ITEM		UN.	ΙΤ	QUANTIT	Υ
	Concre Remove			Cu.	Yd.	0.3	
	Concre Supers	te tructure	•	Cu.	Yd.	0.3	
	Reinfor Epoxy	cement Coated	Bars,	Pound		25	
		ıral Rep te (Dept		Sq. Ft.		7	
**	Protect	tive Coa	t	Sq.	Yd.	3.0	
		, and the second	·			, and the second	

Reinforcement bars designated (E) shall be epoxy coated.

** On new concrete only

DESIGNED D. Macklin	DATE APRIL 4, 2019	OTATE OF HUMBIO	PARAPET REPAIR DETAILS	F.A.P. SECTION	COUNTY	TOTAL SHEET NO.
CHECKED R. Walker		STATE OF ILLINOIS	FAP 320 (ILL-121) OVER STEVENS CREEK	320 D7 Bridge Repairs 2020-3	MACON	14 13
DRAWN D. Macklin	REVISED	DEPARTMENT OF TRANSPORTATION	STRUCTURE 058-0111		CONTRACT	NO. 74918
CHECKED R. Walker	REVISED		SHEET 2 OF 3 SHEETS	ILLINOIS FED. A	AID PROJECT	



BRIDGE RAIL INSIDE ELEVATION

(Looking South)

ALUMINUM RAIL REPAIR NOTES

Two existing aluminum rail posts and 22'-0" of top aluminum rail have been damaged and must be replaced in-kind. This work shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.

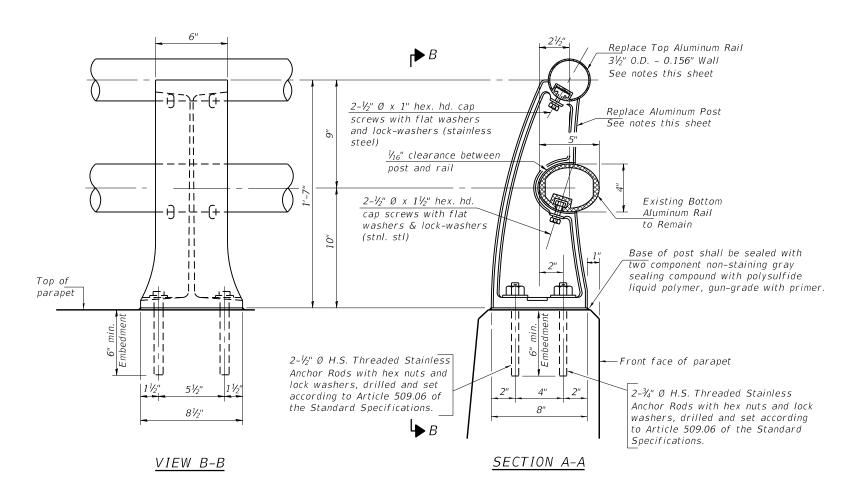
The District 7 Bridge Maintanence Unit shall provide one section of $3\frac{1}{2}$ " O.D. aluminum rail of sufficient length to replace the damaged section of top rail and one rail splicer assembly. The Bridge Maintenance Unit shall also provide two aluminum rail posts of the type specified. The District Bridge Maintenance Engineer may be contacted at (217) 342–8377 for more information.

The top aluminum rail shall be sawed cleanly at the proposed rail splice locations in order to create two new splices. One rail splicer assemly shall be salvaged from the existing rail and one splicer shall be provided by the District 7 Bridge Maintenance Unit to make the two required splices to the section of the top rail to be replaced.

The existing bottom aluminum rail is very slightly damaged, but it is not bent and shall be reused. This existing bottom rail shall be connected to the two replaced posts using appropriate new or salvaged hardware and fasteners.

Some hardware required to complete this work may be salvaged from removed portions of the existing rail, with the approval of the Engineer.

All other hardware and fasteners required to complete this work shall be provided by the Contractor. All new bolts and anchors shall be stainless steel. These materials shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.



RAIL POST DETAILS

DESIGNED D. Macklin	DATE APRIL 4, 2019	OTATE OF HUMOIO	PARAPET REPAIR DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.	
CHECKED R. Walker DRAWN D. Macklin	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FAP 320 (ILL-121) OVER STEVENS CREEK STRUCTURE 058-0111	320 D	07 Bridge Repairs 2020-3	MACON CONTRACT	14 14 T NO. 74918	
CHECKED R. Walker	REVISED		SHEET 3 OF 3 SHEETS		ILLINOIS FED. AID PROJEC			