06-11-2021 LETTING ITEM 085

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

* IL 148 (FAP 726) IL 37 (FAS 2887) ** JEFFERSON WILLIAMSON

D-99-048 - 21

SECTION

D9 BRIDGE REPAIR 2021-1

FOR INDEX OF SHEETS, SEE SHEET NO. 3 FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4 & 5

PROPOSED HIGHWAY PLANS

FAP ROUTE 726 (IL 148)/FAS ROUTE 2887 (IL 37) SECTION D9 BRIDGE REPAIR 2021-1 **BRIDGE REPAIRS** JEFFERSON /WILLIAMSON COUNTY

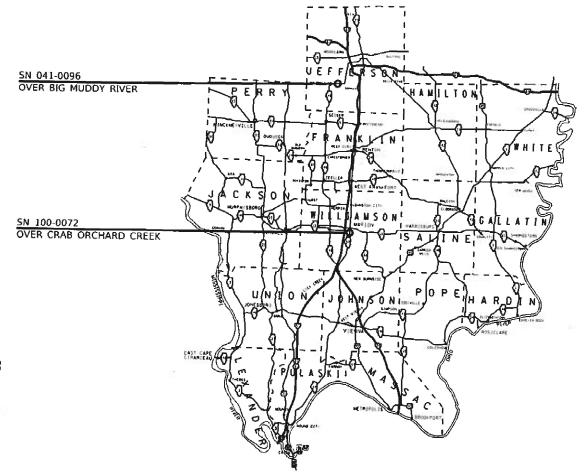
IRAFFIC DATA

5N 041-0096 2019 ADT = 3650 5.2 % TRUCKS SN 100-0072 2019 ADT = 4650 10.8 % TRUCKS

C-99-064-21

TOWNSHIPS

SN 041-0096 ELK PRAIRIE SN 100-0072 WEST MARION



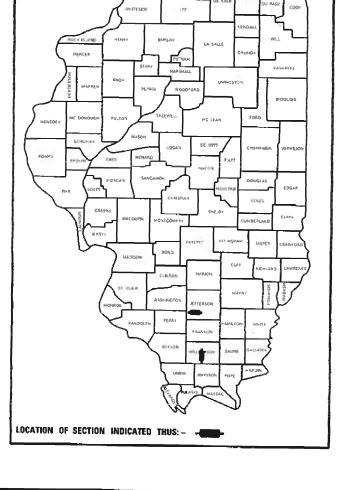
POSTED SPEED : IL 148: 55 MPH

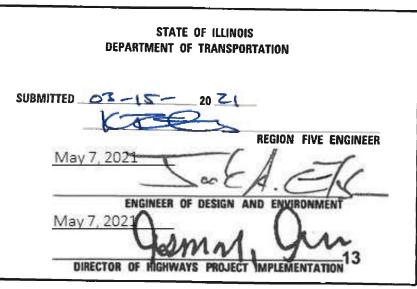
IL 37: 35 MPH SB /55 MPH NB

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

PROJECT ENGINEER: MIKE STEPHENSON PROJECT DESIGNER: NATHANIEL MORRIS

GROSS LENGTH = 491.0 FT. = .09 MILES NET LENGTH = 491.0 FT = .09 MILES





PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 78870

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0

Prepared By: Charles Ste

DISTRICT STUDIES & PLANS ENGINEER

Examined By:

namenthe

DISTRICT LAND ACQUISITION ENGINEER

Examined By:

DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By:

DISTRICT OPERATIONS ENGINEER

Examined By:

DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By:

Examined By:

DISTRICT MATERIALS ENGINEER

* IL 148 (FAP 726) IL 37 (FAS 2887)

DESIGNED -USER NAME = morrisor REVISED REVISED STATE OF ILLINOIS CHECKED . REVISED

REVISED

SIGNATURE SHEET

SCALE:

WILLIAMSON RTE. SECTION 12 2 CONTRACT NO. 78870

OF ___ SHEETS STA._ SHEET ___ TO STA.

PLOT DATE = 2/24/2021

DATE

DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

- COVER SHEET
- SIGNATURE SHEET
- INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES
- SUMMARY OF QUANTITIES
- STAGE CONSTRUCTION PLAN SN 100-0072
- BRIDGE REPAIR PLANS: 100-0072
- SN 100-0072 BRIDGE DECK PATCHING
- SN 100-0072 SUBSTRUCTURE REPAIRS
- 10-11. BRIDGE REPAIR PLANS: 041-0096
- 12. SN 041-0096 SUBSTRUCTURE REPAIRS

GENERAL NOTES

COMMITMENTS: NONE

HIGHWAY STANDARDS

000001-08 STANDARD SYMBOLS ABBREVIATIONS & PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS

701001-02 OFF ROAD OPERATIONS 2L2W MORE THAN 15 FT FROM EOP

701006-05 OFF ROAD OPERATIONS 2L2W LESS THAN 15 FT FROM EOP

701201-05 LANE CLOSURE 2L2W DAY ONLY

701316-13 LANE CLOSURE 2L2W BRIDGE REPAIR SPEEDS 45 MPH OR MORE

701901-08 TRAFFIC CONTROL DEVICES

SHEET ___ OF ___ SHEETS STA. ___

JSER NAME = morrisnr DESIGNED -REVISED -STATE OF ILLINOIS DRAWN -REVISED -CHECKED -REVISED -**DEPARTMENT OF TRANSPORTATION**

* IL 148 (FAP 726) IL 37 (FAS 2887) INDEX OF SHEETS, HIGHWAY STANDARDS, & GENERAL NOTES

SHEETS NO. * D9 BRIDGE REPAIR 2021-1 CONTRACT NO. 78870

** JEFFERSON

COUNTY

WILLIAMSON

PLOT DATE = 4/21/2021

DATE

	SUMMARY OF QUANTITIES		COUNTY: ROUTE: FUNDING: LOCATION:	JEFFERSON CO FAP 726 (IL 148) 100% STATE RURAL	WILLIAMSON CO FAS 2887 (IL 37) 100% STATE RURAL
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SN 041-0096 0013	SN 100-0072 0013
35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SQ YD	244		244
44004250	PAVED SHOULDER REMOVAL	SQ YD	244		244
58700300	CONCRETE SEALER	SQ FT	292	234	58
59000200	EPOXY CRACK INJECTION	FOOT	60	30	30
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	1	1
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1		1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4		4
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	56	28	28
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2,110		2,110
		1			

REV. - MS

* IL 148 (FAP 726) IL 37 (FAS 2887)

** JEFFERSON WILLIAMSON COUNTY TOTAL SHEETS NO.

** 12 4

CONTRACT NO. 78870

SCALE: __

	S	UMMARY OF QUANTITIES - CONT		COUNTY: ROUTE: FUNDING: LOCATION:	JEFFERSON CO FAP 726 (IL 148) 100% STATE RURAL	WILLIAMSON CO FAS 2887 (IL 37) 100% STATE RURAL
	CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	SN 041-0096 0013	SN 100-0072 0013
L						
*[78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,097		1,097
ŀ						
ŀ	78300201	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	365		365
*	86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1		1
	X0325747	BRIDGE DECK CONCRETE CRACK SEALER	FOOT	2,000		2,000
ŀ						
ŀ	X0325748	ACRYLIC COATING	SQ YD	77	40	37
ŀ	X0325749	FIBER WRAP	SQ FT	948	438	510
ŀ	X0326331	CLEANING AND PAINTING BEARINGS	EACH	56	20	36
ŀ	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	696		696
ŀ	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	292	234	58
\mid	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	18		18
	Z0043800	PRECAST PRESTRESSED CONCRETE I-BEAM REPAIR	SQ FT	138	138	
-	Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	8	8	

* SPECIALTY ITEM

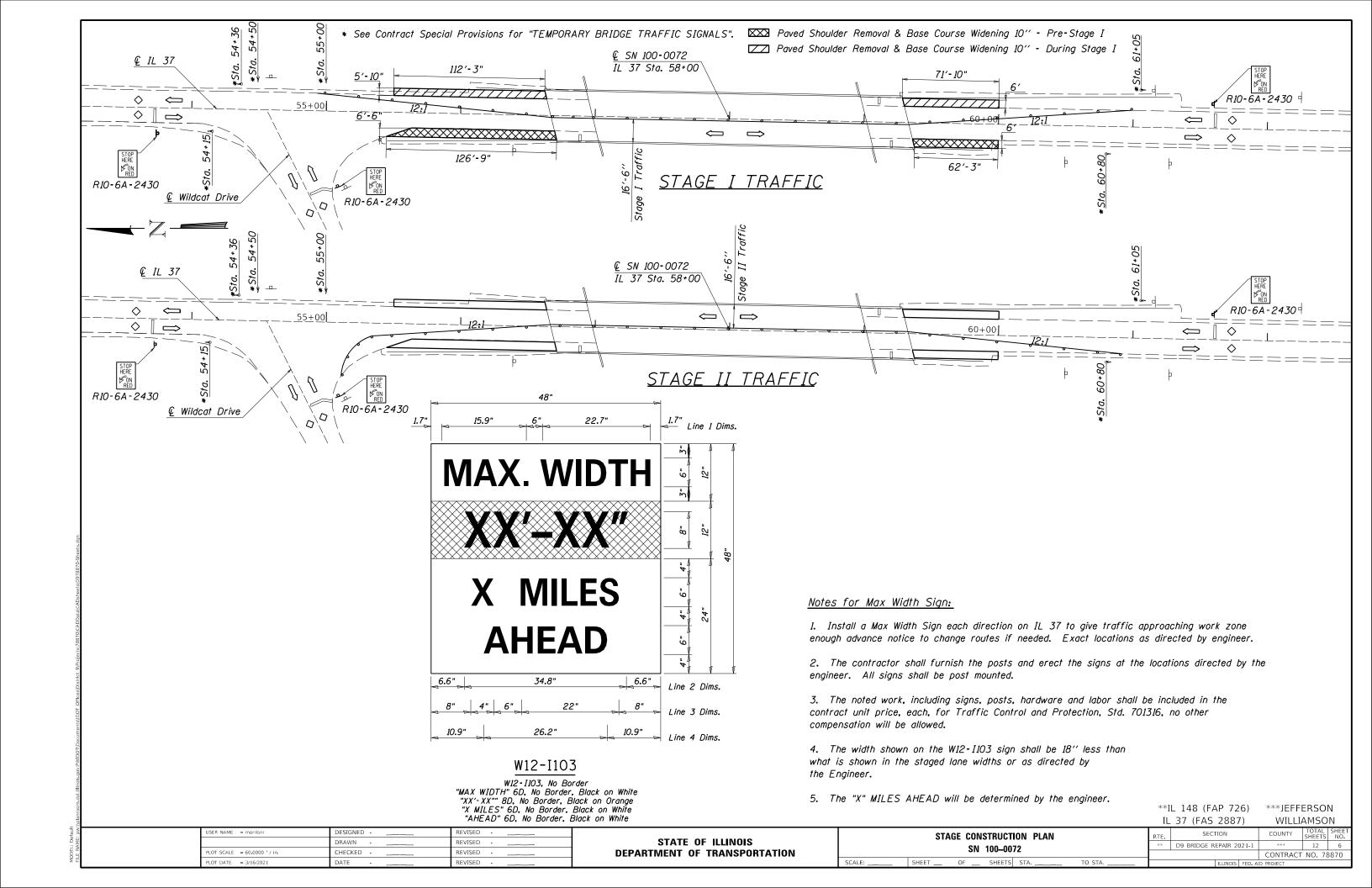
* IL 148 (FAP 726) IL 37 (FAS 2887)

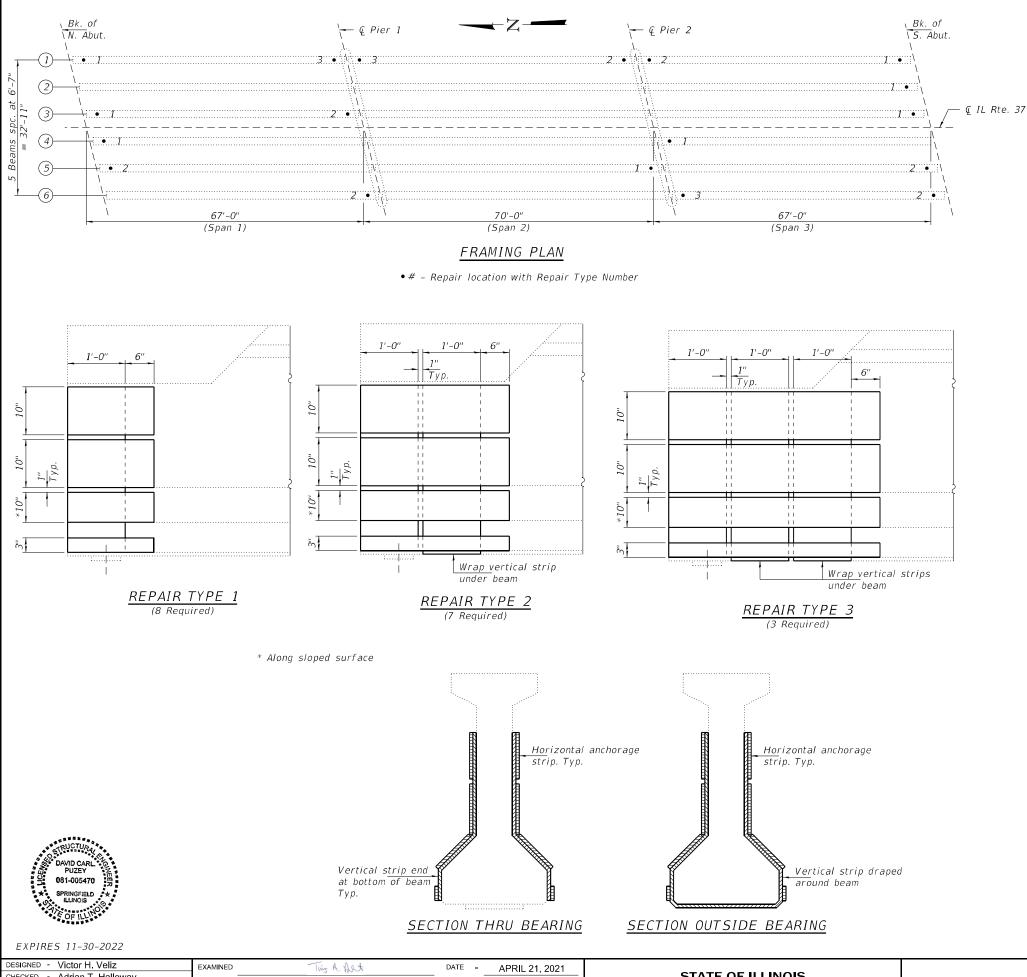
** JEFFERSON WILLIAMSON

REV. - MS

DESIGNED -REVISED -STATE OF ILLINOIS DRAWN -REVISED -REVISED - ___ CHECKED -PLOT DATE = 3/18/2021 DATE

	SUMMAF	RY OF O	UANTITI	ES CONTINUEI)	RT
SCALE:	SHEET	OF	SHEETS	STA	TO STA	





GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

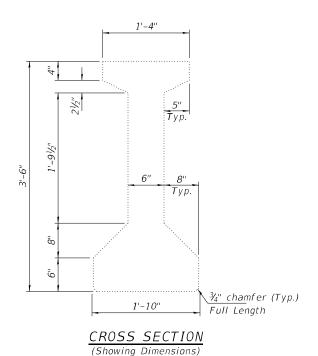
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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

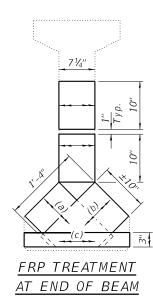
The Contractor shall use extreme care during concrete removal so as not to damage the PPC I-Beam.

The existing concrete surface shall be cleaned and prepared in accordance with the Special Provisions.

See Special Provisions for "FRP Strengthening for PPC I-Beam Repairs". See Special Provisions for "Precast Prestressed Concrete I-Beam Repair". Acrylic coating shall be placed over Fiber Wrap repairs. Two coats shall be applied.

Reinforcement bars designated (E) shall be epoxy coated.





Place FRP in the following

order (a), (b) and (c).

direction FRP

TOTAL BILL OF MATERIAL

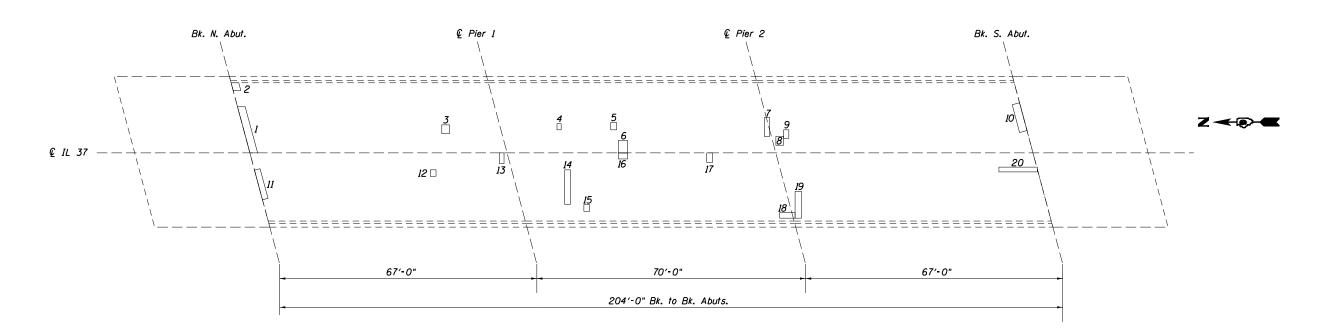
ITEM	UNIT	QUANTITY
Bridge Deck Concrete Crack Sealer	Foot	2000
Concrete Sealer	Sq. Ft.	58
Fiber Wrap	Sq. Ft.	510
Acrylic Coating	Sq. Yd.	37
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	58
Deck Slab Repair (Partial Depth)	Sq. Yd.	18
Cleaning and Painting Bearings	Each	36
Epoxy Crack Injection	Foot	30

DESIGNED -	Victor H. Veliz	EXAMINED	Tim A A Q &	DATE -	APRIL 21.
CHECKED -	Adrian T. Halloway		ENGINEER OF STRUCTURAL SERVICES		70 102 21,
DRAWN -	Venkat Ramana Reddy	PASSED	0010	REVISED	-

CHECKED - VHV ATH

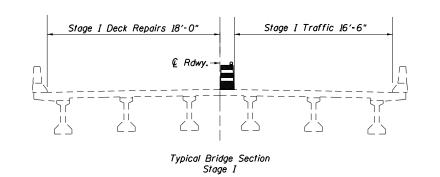
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** FRP REPAIR DETAILS SN 100-0072 SHEET NO. 1 OF 1 SHEETS

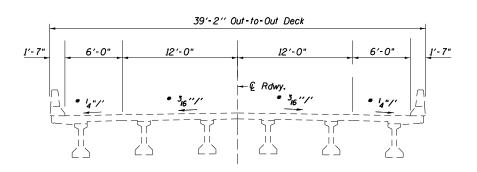
COUNTY TOTAL SHEETS NO.
WILLIAMSON 12 7 SECTION 2887 D9 Bridge Repair 2021-1 CONTRACT NO. - 78870



Deck Slab Repair (Partial Depth)

Deck Sido Nepan Vi di nai Depino							
NUMBER	LENGTH (FT)	WIDTH (FT)	AREA (SQ YD)				
1	2.0	12.0	2.7				
2	2.0	2.0	0.5				
3	2.0	2.3	0.5				
4	1.1	1.6	0.2				
5	1.5	1.9	0.3				
6	2.4	3.3	0.9				
7	1.4	4.9	0.8				
8	2.3	2.0	0.5				
9	1.4	2.2	0.4				
10	2.0	7.5	1.7				
11	1.5	8.0	1.3				
12	1.5	1.7	0.3				
13	1.2	2.8	0.4				
14	1.5	9.0	1.5				
<i>1</i> 5	1.5	1.7	0.3				
<i>1</i> 6	2.4	1.6	0.4				
17	1.5	2.5	0.4				
18	4.0	1.5	0.7				
19	1.7	7.0	1.3				
20	10.0	1.2	1.3				





Typical Bridge Section

Stage II Traffic 16'-6" Stage II Deck Repairs 18'-0"

Typical Bridge Section Stage II

Deck sounding was performed in May 2020 The Resident Engineer will determine final patch locations and quantities in the field before bridge deck patching operations begin.

All sections are Looking South.

BILL OF MATERIAL

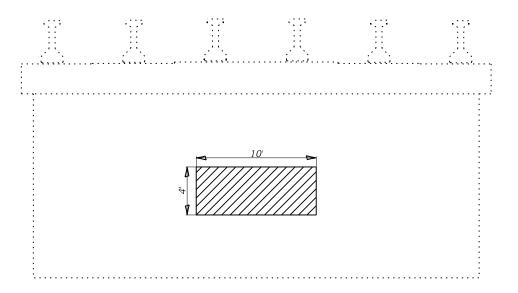
Item	Unit	Total
Deck Slab Repair (Partial Depth)	Sq Yd	16.3
* Bridge Deck Concrete Crack Sealer	Foot	2000

* Estimated Quantity

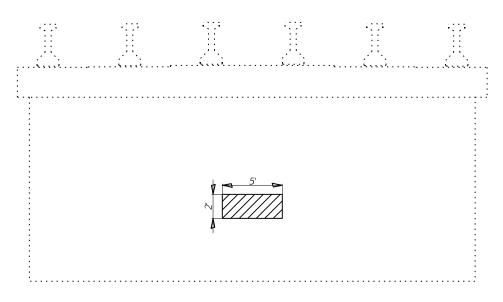
DECK SLAB REPAIRS STRUCTURE NO. 100-0072

*IL 148 (FAP 726) IL 37 (FAS 2887) WILLIAMSON

DESIGNED -REVISED -SN 100-0072 PATCHING SURVEY SHEETS NO. STATE OF ILLINOIS DRAWN -REVISED -* D9 BRIDGE REPAIR 2021-1 TYPICAL SECTION CHECKED -REVISED -**DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 78870 TO STA.



NORTH FACE PIER 1 LOOKING SOUTH NORTH FACE PIER 2 LOOKING SOUTH



SOUTH FACE PIER 1 LOOKING NORTH

BILL OF MATERIAL

BILL OF THITTE	, 117 12	
ITEM	UNIT	TOTAL
Structural repair of concrete (Depth ≤ 5 Inches)	Sq. Ft.	58

STRUCTURAL REPAIR OF CONCRETE ≤ 5"

*IL 148 (FAP 726) IL 37 (FAS 2887 ** JEFFERSON WILLIAMSON

 USER NAME
 = portervic
 DESIGNED
 REVISED

 DRAWN
 REVISED

 PLOT SCALE
 = 8.0000 ' / in.
 CHECKED
 REVISED

 PLOT DATE
 = 3/16/2021
 DATE
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

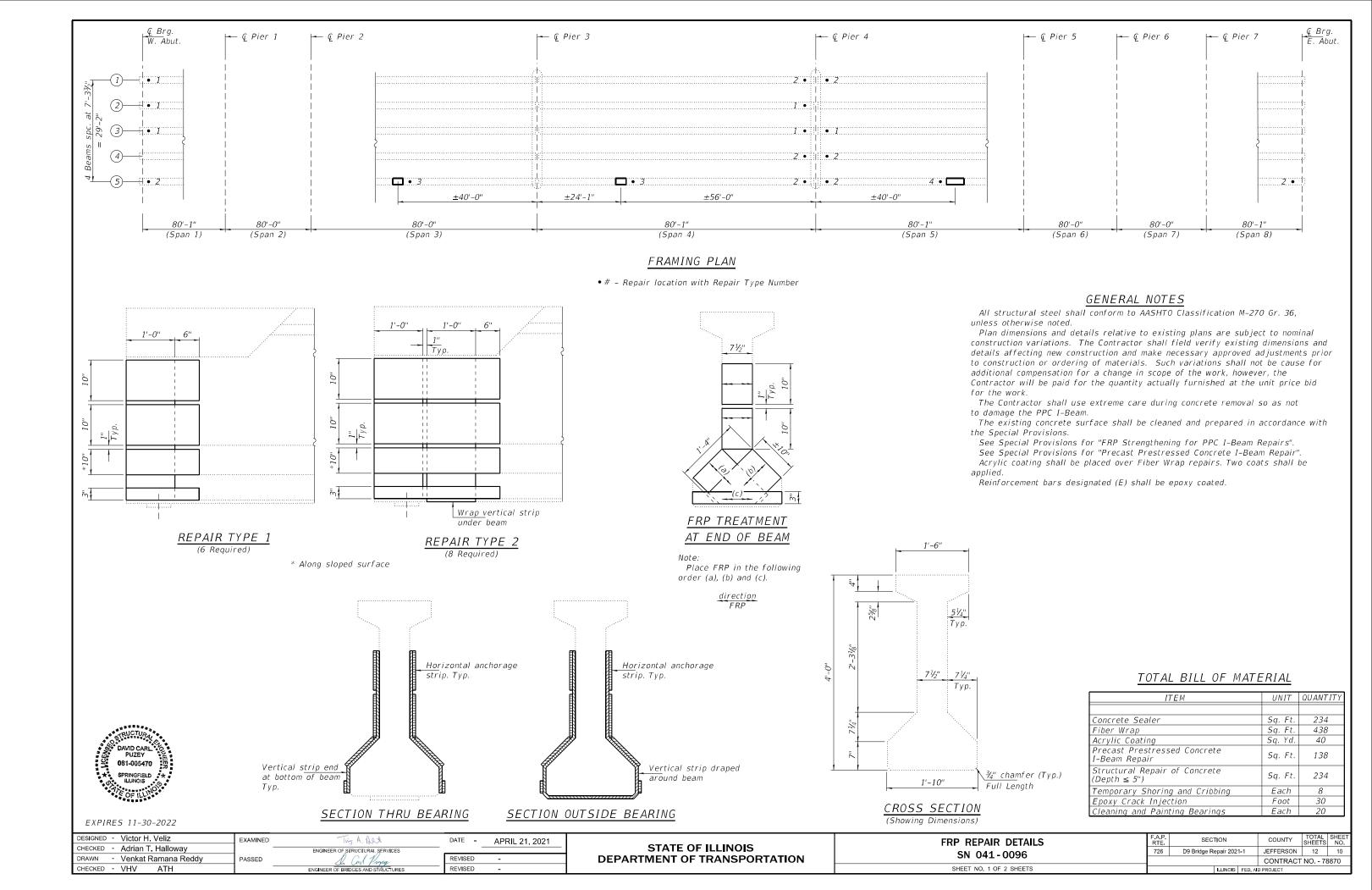
SN 100-0072

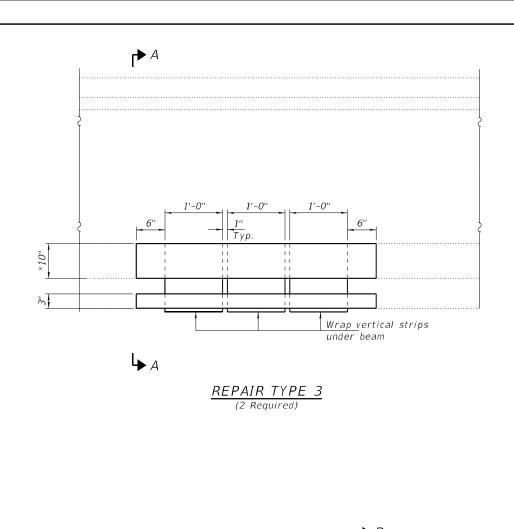
SHEET OF SHEETS STA. TO STA.

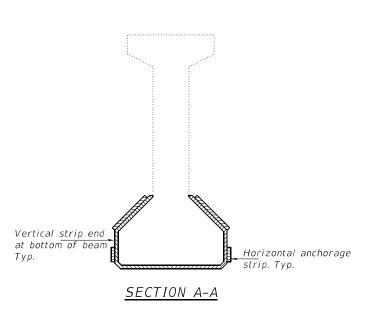
RTE. SECTION COUNTY TOTAL SHEETS NO.

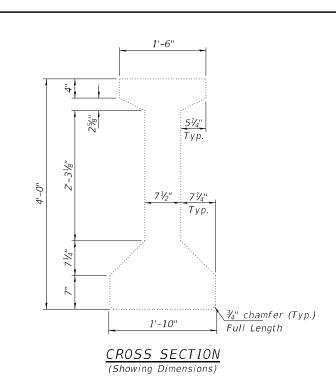
* D9 BRIDGE REPAIR 2021-1 ** 12 9

CONTRACT NO. 78870

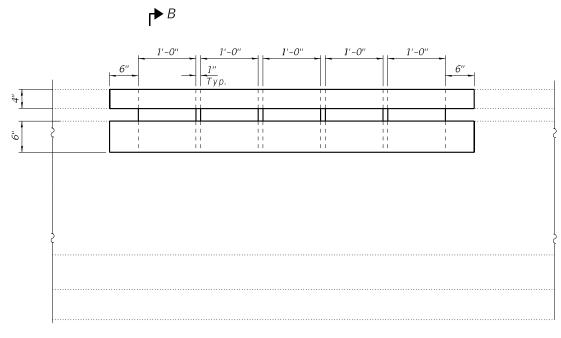




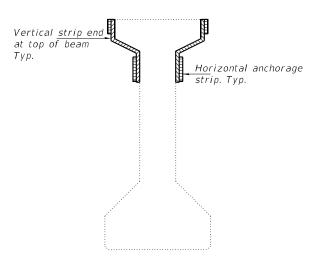




* Along sloped surface



REPAIR TYPE 4
(1 Required)

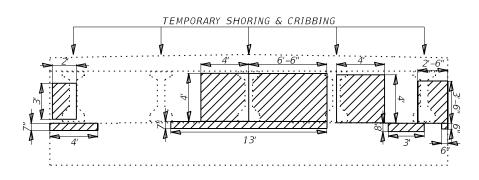


SECTION B-B

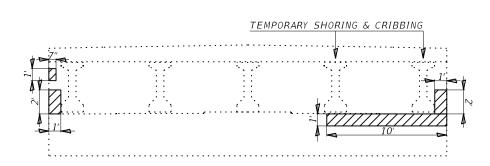
DESIGNED	-	VHV	EXAMINED	I mote of A all	DATE -	APRIL 21, 2021
CHECKED	-	ATH	-	ENGINEER OF STRUCTURAL SERVICES		
DRAWN	-	Venkat Ramana Reddy	PASSED	d Carl Prayer	REVISED	-
CHECKED	-	VHV ATH	-	ENGINEER OF BRIDGES AND STRUCTURES	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRP REPAIR DETAILS		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
SN 041-0096	726	726 D9 Bridge Repair 2021-1		JEFFERSON	12	11
3N 041-0090				CONTRACT	NO 78	3870
SHEET NO. 2 OF 2 SHEETS		ILLINOIS FI	ED, AID	PROJECT		



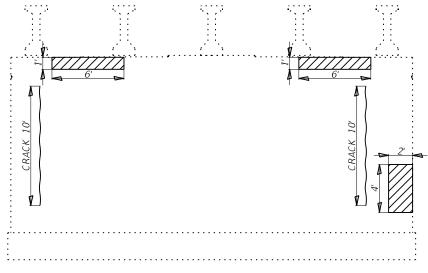
EAST FACE WEST ABUTMENT LOOKING WEST



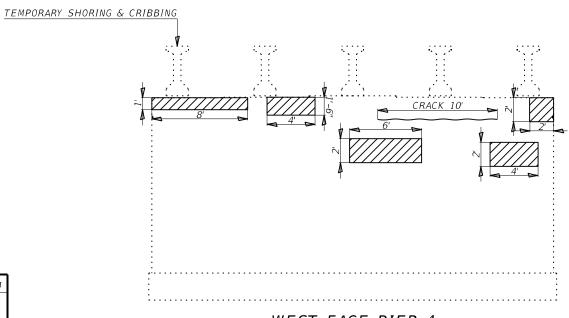
WEST FACE EAST ABUTMENT
LOOKING EAST

REACTIONS

	Abuts.	Pier 4				
R DL (kips)	61.3	62.3				
R LL (kips)	40.7	40.8				
R Imp (kips)	10	10				



EAST FACE PIER 4
LOOKING WEST



WEST FACE PIER 4
LOOKING EAST

BILL OF MATERIAL

DILL OF MATERIAL		
ITEM	UNIT	TOTAL
Structural repair of concrete (Depth ≤ 5 Inches)	Sq. Ft.	253
Epoxy Crack Injection	Foot	30
Temporary Shoring & Cribbing	Each	8

STRUCTURAL REPAIR OF CONCRETE ≤ 5"

*IL 148 (FAP 726) IL 37 (FAS 2887 ** JEFFERSON WILLIAMSON