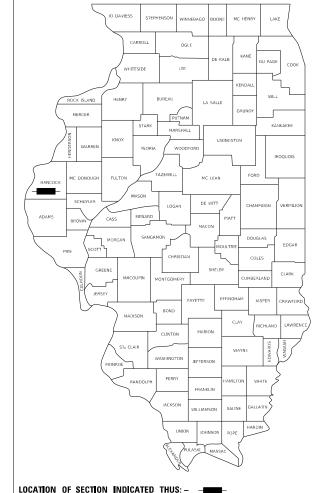
# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

### D-96-032-15



#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SUBMITTED July 18 20 23

REGIONAL EI

Sor EA. CK\_

October 13, 2023

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

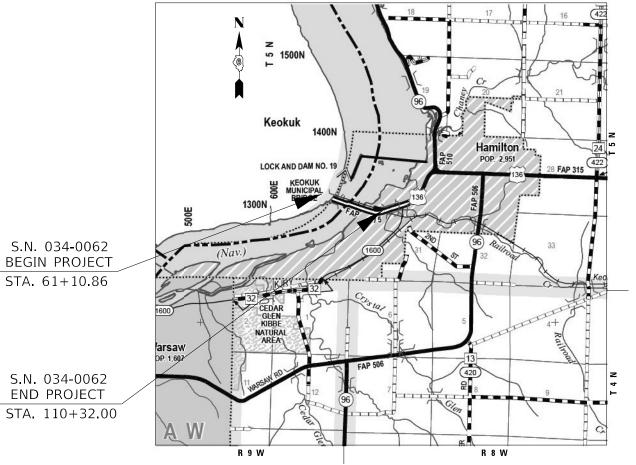
#### HIGHWAY CLASSIFICATION

FAP 315 (US 136)
ADT: 10,825 (PV = 90.97%)
600 (SU = 5.04%)
475 (MU = 3.99%)
CRS = 6.9 (2021)

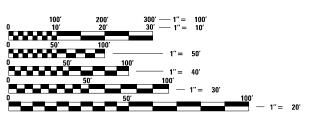
PROPOSED HIGHWAY PLANS

FAP 315 (US 136)
SECTION (22B)BDR,BJR1,BRR1
PROJECT HBFP-NHPP-2CQ0(353)
BRIDGE DECK REPAIR-OVERLAY
HANCOCK COUNTY

C-96-032-15



U-3U-U3Z-1



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,

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

PROJECT ENGINEER: JAY EDWARDS (217–785–0596)
PROJECT MANAGER: ROBERT MILES (217–524–8911)

GROSS LENGTH = 4,921.14 FT. = 0.932 MILE NET LENGTH = 4,921.14 FT. = 0.932 MILE

CONTRACT NO. 72H57

 $\circ$ 

REV. - MS

#### **GENERAL NOTES**

- 1. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 6 BUREAU OF OPERATIONS AT (217) 785-5306 THREE WEEKS PRIOR TO IMPLEMENTING ANY TRAFFIC CONTROL.
- 2. THE DISTRICT 6 BUREAU OF OPERATIONS SHALL BE NOTIFIED AT LEAST 14 DAYS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS (PH: 217-785-5306).
- 3. ALL TEMPORARY PAVEMENT MARKING TAPE THAT IS TO REMAIN IN PLACE LONGER THAN 14 DAYS SHALL BE TYPE IV TAPE. TYPE I TEMPORARY PAVEMENT MARKING TAPE MAY BE USED FOR APPLICATIONS OF 14 DAYS OR LESS.
- 4. SYNTHETIC FIBERS ARE NOT REQUIRED FOR THE BRIDGE DECK MICROSILICA CONCRETE OVERLAY

#### **COMMITMENTS**

NONE

#### **INDEX OF SHEETS**

1 COVER SHEET

2 GENERAL NOTES, LIST OF STANDARDS, INDEX OF SHEETS, MIX REQUIREMENTS

3-6 SUMMARY OF QUANTITIES

7-10 TYPICAL SECTIONS

11 SCHEDULES OF QUANTITIES

12-16 PLAN SHEETS

17-28 STAGING PLANS

29 WIDTH RESTRICTION SIGNING DETAIL

30-34 MISCELLANEOUS DETAIL SHEETS

35-46 STRUCTURE PLANS

#### **STANDARDS**

000001-08	701606-10
001001-02	701701-10
001006	701901-08
420001-10	704001-08
606301-04	720001-01
610001-09	720006-04
643001-02	780001-05
701101-05	782006-01
701106-02	BLR 22-7
701426-09	
701431-13	
701601-09	

#### THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE THE PLAN QUANTITIES:

BITUMINOUS MATERIALS (TACK COAT) HMA SURFACE/BINDER 0.05 LB/SQ. FT. (EXISTING HMA, MILLED SURFACE, CONCRETE, MILLED/TINED CONCRETE) 0.056 TONS/(SQ. YD.\*IN.)

#### **MIXTURE REQUIREMENTS**

MIXTURE NUMBER	1				
MINTORE NOTIBER	ξ <sup>7</sup>				
MIXTURE USE(S)	HMA SURFACE COURSE				
AC/PG:	SBS PG 70-28				
DESIGN AIR VOIDS	4.0% @ N70				
MIXTURE COMPOSTION: (GRADATION MIXTURE)	IL-9.5				
FRICTION AGGREGATE	MIX "D"				
QUALITY MANAGEMENT	QC/QA				
SUBLOT SIZE	N/A				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED June, 14 20 23

ENGINEER OF OPERATIONS

EXAMINED June, 27 20 23

ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED JUly, 5 20 23

ENGINEER OF PROGRAM DEVELOPMENT

REV. - MS

USER NAME = Robert.Miles	DESIGNED	REVISED =		GENERAL NOTES, LIST OF STANDARDS,		F.A.P.	SECTION	COUNTY	TOTAL SHEET		
	DRAWN	REVISED =	STATE OF ILLINOIS	INDEX OF SHEETS, AND MIX REQUIREMENTS				315	(22B)BDR,BJR1,BRR1	HANCOCK	46 2
PLOT SCALE = 100.0000 ' / in.	CHECKED	REVISED -	DEPARTMENT OF TRANSPORTATION								T NO. 72H57
PLOT DATE = 7/17/2023	DATE	REVISED =		SCALE: N/A	SHEET 1 OF	1 SHEETS STA. N/A	TO STA. N/A		ILLINOIS FED. A	ID PROJECT	

			6-0048	34-0000	0-0129	3-6001	
				80% FED 20% STATE	100% IOWA	80% FED 20% STATE	100% IOWA
				BR I DGE	BRIDGE	BR I DGE	BR I DGE
CODE			TOTAL	0047	0047	0047	0047
NO.	ITEM	UNIT	QUANTITY	S.N. 034-0062	S.N. 034-0062	S.N. 034-0062	S.N. 034-0062
							ĺ
31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	359	179.5	179.5		
31101200	SUBBASE GRANULAN WATERIAL, TIFE B 4	30 10	359	1/9.5	179.5		
35300410	PORTLAND CEMENT CONCRETE BASE COURSE 9 1/2"	SQ YD	211	105.5	105.5		
35300410	FORTEAND CEMENT CONCRETE BASE COORSE 9 1/2	30 10	211	105.5	105.5		
35300730	PORTLAND CEMENT CONCRETE BASE COURSE 14 1/4"	SQ YD	148	74	74		
33300730	FORTEAND CEMENT CONCRETE BASE COURSE 14 1/4	30 10	148	74	74		
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	495	247.5	247.5		
40000290	BITOWINGOS WATERIALS (TACK SOAT)	FOOND	495	247.5	247.5		
40600985	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT	SQ YD	267	133.5	133.5		
40000983	ONTEAND CEMENT CONCRETE SON AGE NEMOVAE - BOTT SON	30 15	207	155.5	155.5		
40604162	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	109	54.5	54.5		
40004102	OCTIVICATION AST HACT SOM AGE COOKSE, IL-9.5, WINC D , 1970	1014	109	34,3	54.5		
44000100	PAVEMENT REMOVAL	SQ YD	228	114	114		
44000100	FAVENIENT NEWOVAL	30 10	220	114	114		
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	694	347	347		
44000100	THO TWINN THE TOTAL MEMORY AC, 1 1/2	00 15	094	347	547		
44001980	CONCRETE BARRIER REMOVAL	FOOT	312	156	156		
			312	130	130		
50102400	CONCRETE REMOVAL	CU YD	73.1	36.55	36.55		
			1				
50300255	CONCRETE SUPERSTRUCTURE	CU YD	77.2	38.6	38.6		
		-	- · · · -				
50300300	PROTECTIVE COAT	SQ YD	24,865	12,432.5	12,432.5		
			•	<u>'</u>			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	24,210	12,105	12,105		
			1				
			•	•			-

REV. - MS

USER NAME = Robert-Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 2.0000 / in	CHECKED -	REVISED -
PLOT DATE = 7/18/2023	DATE -	REVISED -

SCALE: N/A

					F.A.P. RTE.	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
SUI	VIIVIAKY	OF QU	ANTITIES		315	(22B)BDR,B	JR1,BRF	R1	HANCOCK	46	3
									CONTRACT	NO. 72	2H57
SHEET 1	OF 4	SHEETS	STA. N/A	TO STA. N/A			ILLINOIS	FED. AI	D PROJECT		

					6-00484-0000		0-01293-6001	
		<u></u>			80% FED 20% STATE	100% IOWA	80% FED 20% STATE	100% IOWA
					BRIDGE	BRIDGE	BRIDGE	BRIDGE
	CODE NO.	ITEM	UNIT	TOTAL	0047 S N 034 0063	0047 S.N. 034-0062	0047	0047
-	NO.	11514	UNII	QUANTITY	3.N. 034-0062	3.N. 034-0062	5.N. 034-0062	5.N. 034-0062
-								
	50800515	BAR SPLICERS	EACH	300	150	150		
	50800530	MECHANICAL SPLICERS	EACH	1,976	988	988		
F								
ŀ								
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	132	66	66		
	59200101	BRIDGE WASHING NO. 1	EACH	1			0.5	0.5
f								
ŀ	64300750	IMPACT ATTENUATORS (SEVERE USE, NARROW), TEST LEVEL 2	EACH	1	0.5	0.5		
-	04300730	INFACTATIENDATORS (SEVERE USE, NARROW), TEST LEVEL 2	EACH	1	0.5	0.5		
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	6	6		
-	67100100	MOBILIZATION	L SUM	1	0.5	0.5		
-				-	0.3	0.13		
-								
	70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	0.5	0.5		
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.5	0.5		
ŀ								
-			241.54					
-	70107025	CHANGEABLE MESSAGE SIGN	CAL DA	354	177	177		
	70600255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	1	0.5	0.5		
Ī								
*	78009005	MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	FOOT	18146	9073	9073		
-	78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	124	62	62		
	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	2424	1212	1212		
	78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	124	62	62		
	X4403300	CONCRETE MEDIAN REMOVAL	SQ FT	1185	592.5	592.5		
*	X0327739	MISCELLANEOUS ELECTRICAL WORK	L SUM	1	0.5	0.5		

#### \* SPECIALTY ITEM

USER NAME = Robert Miles DESIGNED -REVISED STATE OF ILLINOIS SUMMARY OF QUANTITIES DRAWN REVISED -PLOT SCALE = 2.0000 ' / in.

PLOT DATE = 7/18/2023 CHECKED REVISED **DEPARTMENT OF TRANSPORTATION** DATE REVISED

SECTION COUNTY TOTAL SHEET NO.

315 (22B)BDR,BJR1,BRR1 HANCOCK 46 4

CONTRACT NO. 72H57

ILLINOIS FED. AID PROJECT SCALE: N/A SHEET 2 OF 4 SHEETS STA. N/A TO STA. N/A

REV. - MS

						0-0129	3-6001
				80% FED	100% IOWA	80% FED	100% IOWA
				20% STATE		20% STATE	
				BR I DGE	BRIDGE	BR I DGE	BR I DGE
CODE			TOTAL	0047	0047	0047	0047
NO.	ITEM	UNIT	QUANTITY	S.N. 034-0062	S.N. 034-0062	S.N. 034-0062	S.N. 034-0062
X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	17,813	8,906.5	8,905.6		
			2.,222	5,5 5 5 5	2,2 2212		
X6024503	INLETS TO BE ADJUSTED WITH NEW FRAME AND GRATE (SPECIAL)	EACH	1	0.5	0.5		
X6061702	CONCRETE MEDIAN, TYPE SM (DOWELLED)	SQ FT	1381	690.5	690.5		
X6430130	REMOVE IMPACT ATTENUATORS, STATE OWNED	EACH	1	0.5	0.5		
X7010214	TRAFFIC CONTROL AND PROTECTION, STANDARD 701431 (SPECIAL)	EACH	1	0.5	0.5		
X7011801	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	L SUM	1	0.5	0.5		
7/011601	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	L SOW	1	0.5	0.5		
X7040012	TEMPORARY CONCRETE BARRIER (TO REMAIN PERMANENTLY)	FOOT	312	156	156		
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	0.5	0.5		
7/7 200201	WID IT TREE IT NO TION O ICINING	L GOIVI	1	0.5	0.5		
Z0001906	STRUCTURAL STEEL REPAIR	L SUM	1	0.5	0.5		
Z0012136	BRIDGE DECK SCARIFICATION 1 1/2"	SQ YD	5,170	2,585	2,585		
Z0012138	BRIDGE DECK SCARIFICATION 1 3/4"	SQ YD	17,620	8,810	8,810		
			1 ,	,	,		
Z0012166	BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 3/4"	SQ YD	22,790	11,395	11,395		
Z0013798	CONSTRUCTION LAYOUT	LSUM	1	0.5	0.5		
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10	5	5		

REV. - MS

USER NAME = Robert-Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 2.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 7/18/2023	DATE -	REVISED -

SCALE: N/A

	SUMMARY OF QUANTITIES	F.A.P. RTE.	SECTION	TOTAL SHEETS	SHEET NO.					
SUMMARY OF QUANTITIES			315	(22B)BDR,BJR1,BRR1	HANCOCK	46	5			
								CONTRAC	T NO. 7	2H57
	SHEET 3	OF 4	SHEETS	STA. N/A	TO STA. N/A		ILLINOIS FE	D. AID PROJECT		

6-00484-0000

80% FED

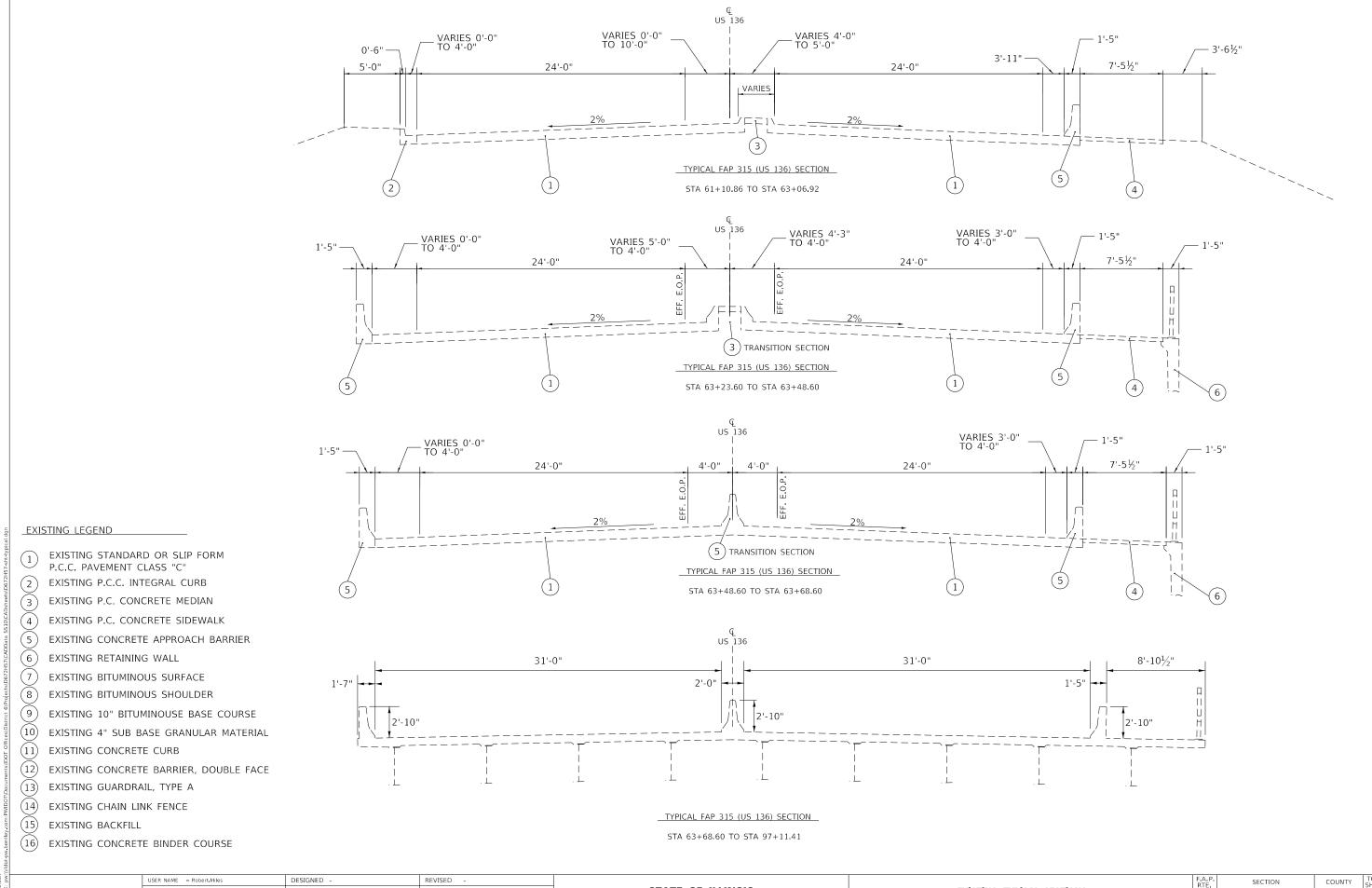
Ø 0042

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

REV. - MS

0-01293-6001

80% FED



MODEL: Default

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

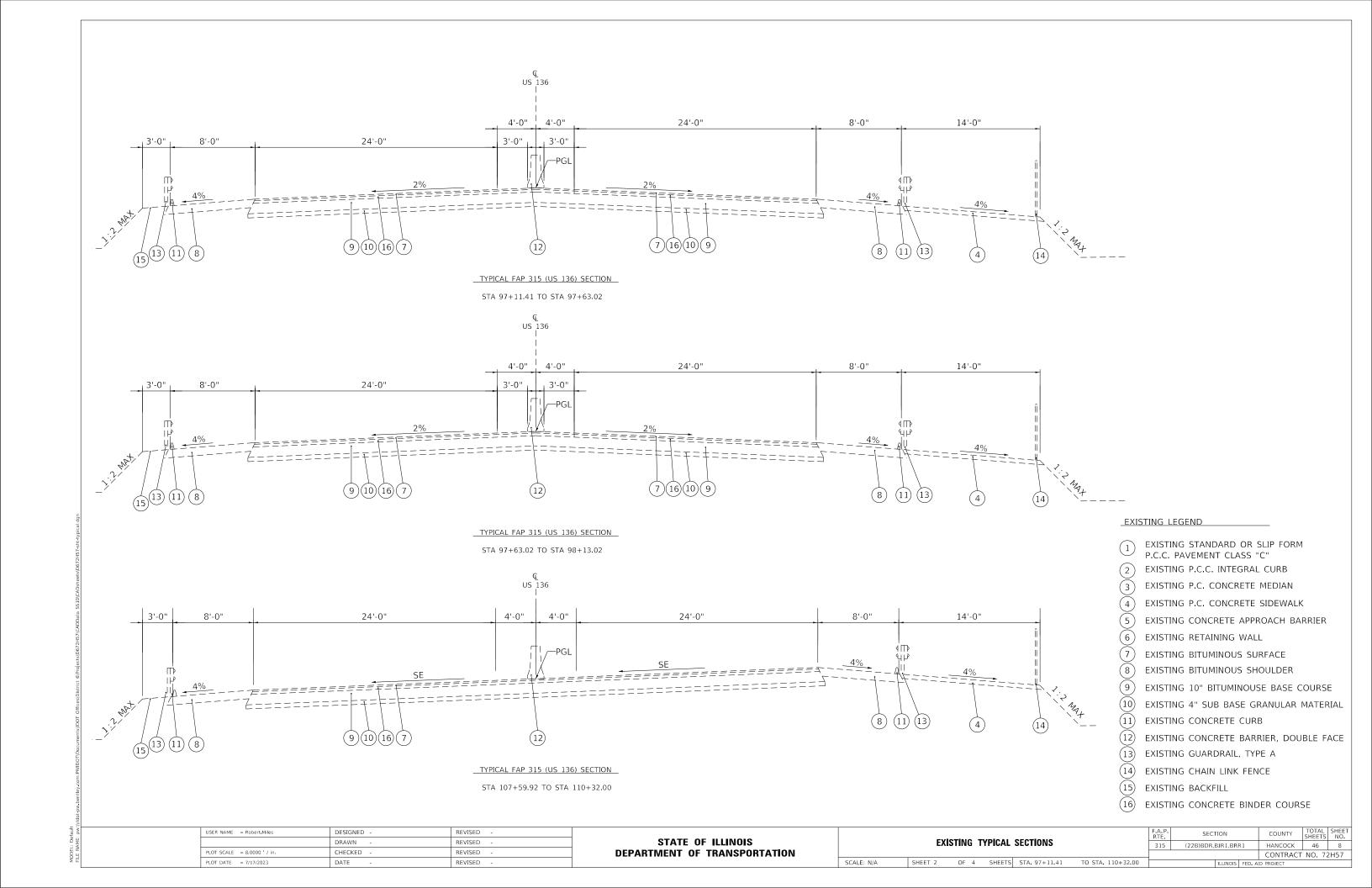
SCALE: N/A

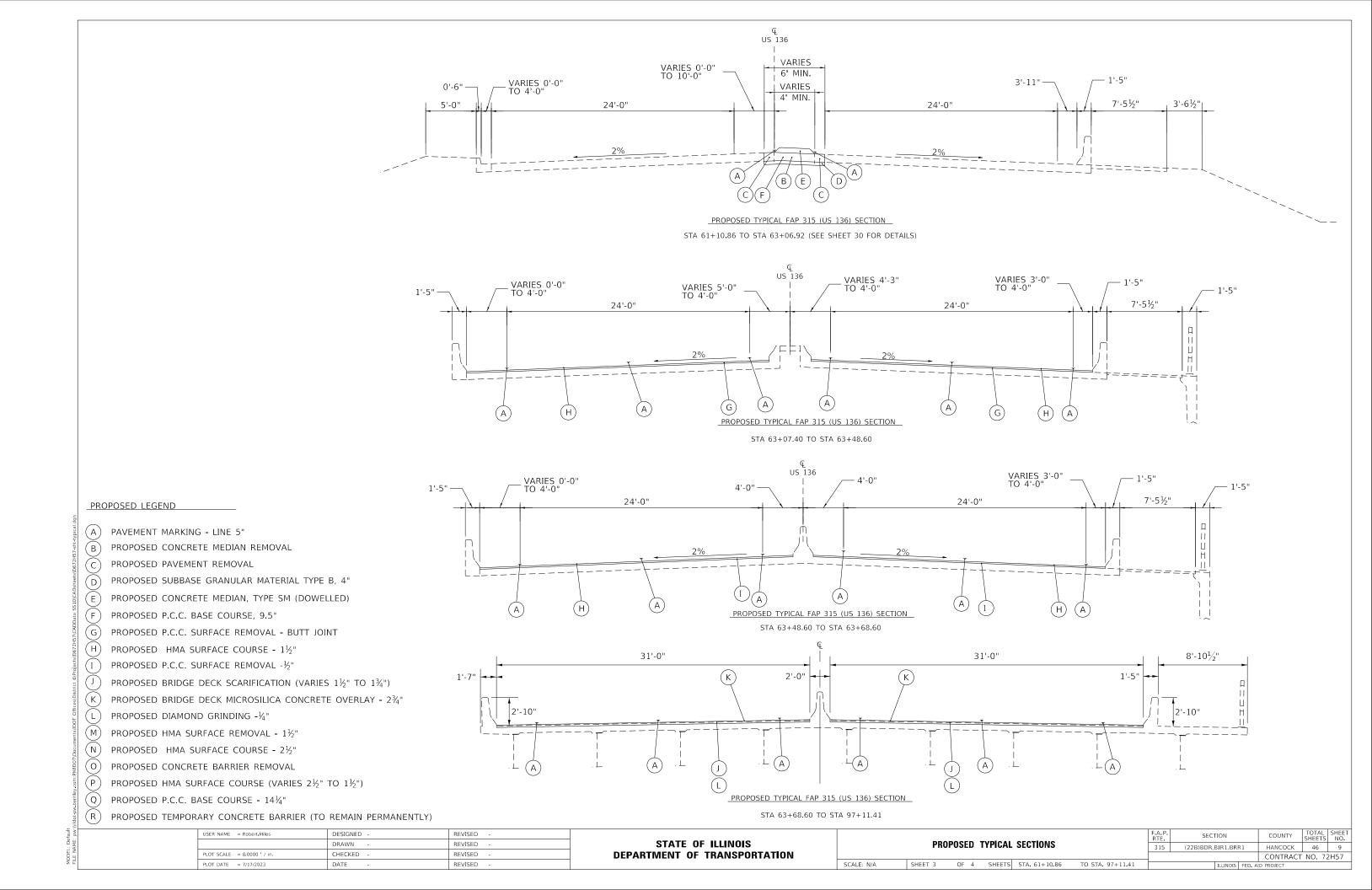
| SHEET 1 OF 4 SHEETS STA. 61+10.86 TO STA. 97+11.41

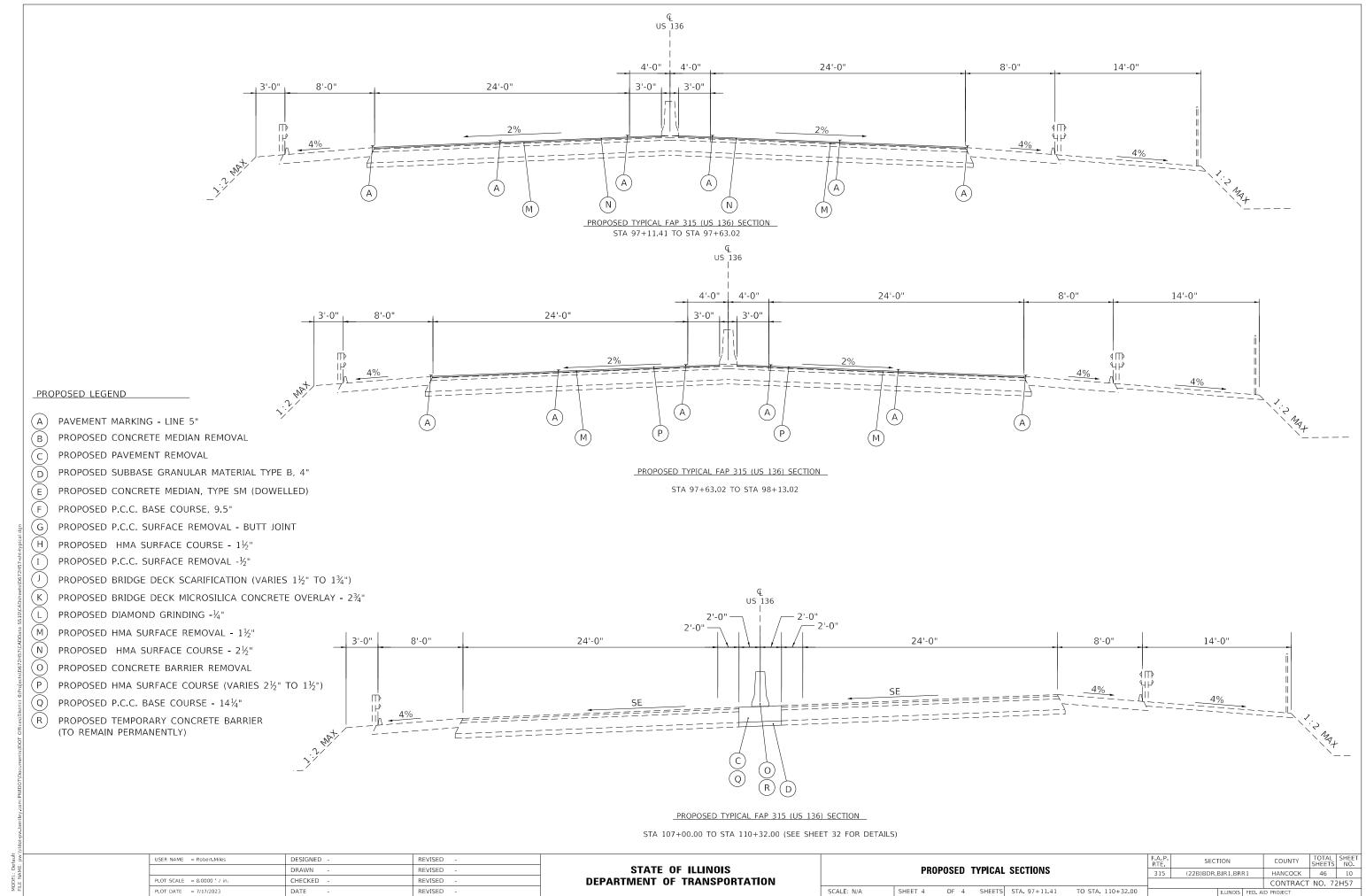
 RTE.
 SECTION
 COUNTY
 SHEETS
 NO.

 315
 (22B)BDR,BJR1,BR1
 HANCOCK
 46
 7

 CONTRACT
 NO.
 72H57







				НМ	A AND PCC S	CHEDULE			
			40600290	40600985	Z0038115	44000155	40604162	Z0041895	
LOCATION			BITUMINOUS MATERIALS (TACK COAT)	PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT		SURFACE	POLYMERIZED HMA SURFACE COURSE. IL 9.5 MIX"D", N70	POLYMER CONCRETE	NOTES
			POUND	SQ YD	SQ YD	SQ YD	TON	CU FT	
	US 136 E	В							
STA	63+06.9 TO	63+07.4 RT						1.7	6" WIDE X 1.5" THICK
STA	63+07.4 TO	63+48.6 RT	60	134			11.3		
STA	63+48.6 TO	63+68.6 RT	31		69		5 . 8		
STA	97+11.4 TO	97+63.0 RT	79			176	24.7		
STA	97+63.0 TO	98+13.0 RT	77			171	17.9		
	US 136 W	В							
STA	63+06.9 TO	63+07.4 LT						1.7	6" WIDE X 1.5" THICK
STA	63+07.4 TO	63+48.6 LT	60	133			11.2		
STA	63+48.6 TO	63+68.6 LT	31		69		5 . 8		
STA	97+11.4 TO	97+63.0 LT	79			176	14.8		
STA	97+63.0 TO	98+13.0 LT	77			171	17.9		
·	TOTAL	·	495	267	138	694	109	3.4	

		PA	VEMENT MARK	INGS SCHEDU	JLE
			78009005	78300202	
	LOCATION		MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	PAVEMENT MARKING REMOVAL - WATER BLASTING	NOTES
			FOOT	SQ FT	-
	US 136 EB			•	•
STA	61+13.9 TO 63+06.9	RT	193		5" MEDIAN EDGE LINE (YELLOW) EB
STA	63+06.9 TO 98+13.0	RT	3506		FINAL EDGE LINE (WHITE) EB
STA	63+06.9 TO 98+13.0	RT	1424		CENTERLINE SKIP DASH (WHITE) EB
STA	63+06.9 TO 98+13.0	RT	3506		FINAL EDGE LINE (YELLOW) EB
	US 136 WB	·			
STA	61+13.9 TO 63+06.9	LT	194		5" MEDIAN EDGE LINE (YELLOW) WB
STA	63+06.9 TO 120+00.0	LT		593	X. 5" CENTERLINE SKIP DASH (WHITE) W
STA	63+06.9 TO 107+00.0	LT		1831	EX. 5" MEDIAN EDGE LINE (YELLOW) WB
STA	63+06.9 TO 98+13.0	LT	3506		FINAL EDGE LINE (WHITE) WB
STA	63+06.9 TO 120+00.0	LT	1424		CENTERLINE SKIP DASH (WHITE) WB
STA	63+06.9 TO 107+00.0	LT	4393		FINAL EDGE LINE (YELLOW) WB
	TOTAL		18146	2424	

	IMPACT ATTENUATOR SCHEDULE							
			70600255	64300750	X6430130			
			IMPACT ATTENUATORS, TEMPORARY	IMPACT ATTENUATORS	REMOVE IMPACT			
	LOCATION		(FULLY REDIRECTIVE, NARROW),	(SEVERE USE, NARROW),	ATTENUATORS, STATE			
			TEST LEVEL 2	TEST LEVEL 2	OWNED			
			E ACH	E ACH	EACH			
STA	STA 107+00.0 CL		1					
STA	STA 110+12.0 CL			1	1			
	TOTA	\L	1	1	1			

	CONCRETE MEDIAN SCHEDULE									
			X4403300	44000100	31101200	35300410	X6061702			
LOCATION		CONCRETE MEDIAN REMOVAL	PAVEMENT REMOVAL	SUBBASE GRANULAR MATERIAL, TYPE B 4"	PORTLAND CEMENT CONCRETE BASE COURSE 9 1/2"	CONCRETE MEDIAN, TYPE SM (DOWELLED)	NOTES			
					SQ FT	SQ YD	SQ YD	SQ YD	SQ FT	
STA	61+10.9	ΤO	63+06.9	RT/LT	1185	80	211	211		PRIOR TO STAGED CONSTRUCTION
STA	61+11.9	TO	63+06.9	RT/LT					1381	POST STAGED CONSTRUCTION
	TOTAL				1185	80	211	211	1381	

	CONCRETE BARRIER SCHEDULE									
LOCATION			44001980	44000100	31101200	35300730	X7040012			
			CONCRETE BARRIER REMOVAL	PAVEMENT REMOVAL	SUBBASE GRANULAR MATERIAL, TYPE B 4"	PORTLAND CEMENT CONCRETE BASE COURSE 14 1/4"	TEMPORARY CONCRETE BARRIER (TO REMAIN PERMANENTLY)	NOTES		
					FOOT	SQ YD	SQ YD	SQ YD	FOOT	
STA	107+00.0	ΤO	110+32.0	CL	312	148	148	148		PRIOR TO STAGED CONSTRUCTION
STA	107+00.0	ΤO	110+12.0	CL					312	POST STAGED CONSTRUCTION
	TOTAL				312	148	148	148	312	

USER NAME = Robert-Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 2.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 8/4/2023	DATE -	REVISED -

						F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			SCHEDU	.ES		315	(22B)BDR,BJR1,BRR1	HANCOCK	46	11
								CONTRACT	NO. 72	2H57
SCALE: N/A	SHEET 1	OF	1 SHEE	rs Sta. N/A	TO STA. N/A		ILLINOIS FED	AID PROJECT		

BARRIER WALL REFLECTORS

BARRIER WALL

REFLECTORS, TYPE C

E ACH

62

62

US 136 EB

LOCATION

STA 110+11.90 CL/LT STA 109+31.90 CL/LT

STA 108+51.90 CL/LT

STA 106+91.90 CL/LT

STA 105+21.90 CL/LT STA 104+31.90 CL/LT STA 103+41.90 CL/LT

 STA
 102+51.90
 CL/LT

 STA
 100+66.90
 CL/LT

 STA
 98+66.90
 CL/LT

 STA
 96+66.90
 CL/LT

STA 92+66.90 CL/LT

STA 84+66.90 CL/LT

STA 80+66.90 CL/LT STA 77+95.64 CL/LT

STA 75+95.64 CL/LT STA 73+95.64 CL/LT STA 72+10.64 CL/LT STA 71+20.64 CL/LT

 STA
 70+30.64
 CL/LT

 STA
 69+40.64
 CL/LT

STA 68+50.64 CL/LT

STA 67+60.64 CL/LT

STA 66+70.64 CL/LT

STA 65+80.64 CL/LT

STA 64+90.64 CL/LT

 STA
 64+00.64
 CL/LT

 STA
 63+70.00
 CL/LT

WB TOTAL

78200010 78200011

BARRIER WALL

REFLECTORS, TYPE C

E ACH

BARRIER WALL

TYPE B

EACH

62

US 136 EB

LOCATION

 STA
 64+00.00
 CL/RT

 STA
 64+80.00
 CL/RT

STA 65+60.00 CL/RT

STA 66+40.00 CL/RT STA 67+20.00 CL/RT

 STA
 68+00.00
 CL/RT

 STA
 68+90.00
 CL/RT

 STA
 69+80.00
 CL/RT

 STA
 70+70.00
 CL/RT

 STA
 71+60.00
 CL/RT

 STA
 71+60.00
 CL/RT

 STA
 72+50.00
 CL/RT

 STA
 74+35.00
 CL/RT

 STA
 76+35.00
 CL/RT

STA 78+35.00 CL/RT

STA 82+35.00 CL/RT STA 86+35.00 CL/RT

 STA
 90+35.00
 CL/RT

 STA
 94+35.00
 CL/RT

STA 94+35.00 CL/RT STA 96+71.29 CL/RT STA 98+71.29 CL/RT STA 100+71.29 CL/RT STA 102+56.29 CL/RT

STA 103+46.29 CL/RT STA 104+36.29 CL/RT

STA 105+26.29 CL/RT

STA 106+16.29 CL/RT

STA 107+06.29 CL/RT

STA 107+96.29 CL/RT

STA 108+86.29 CL/RT

STA 109+76.29 CL/RT

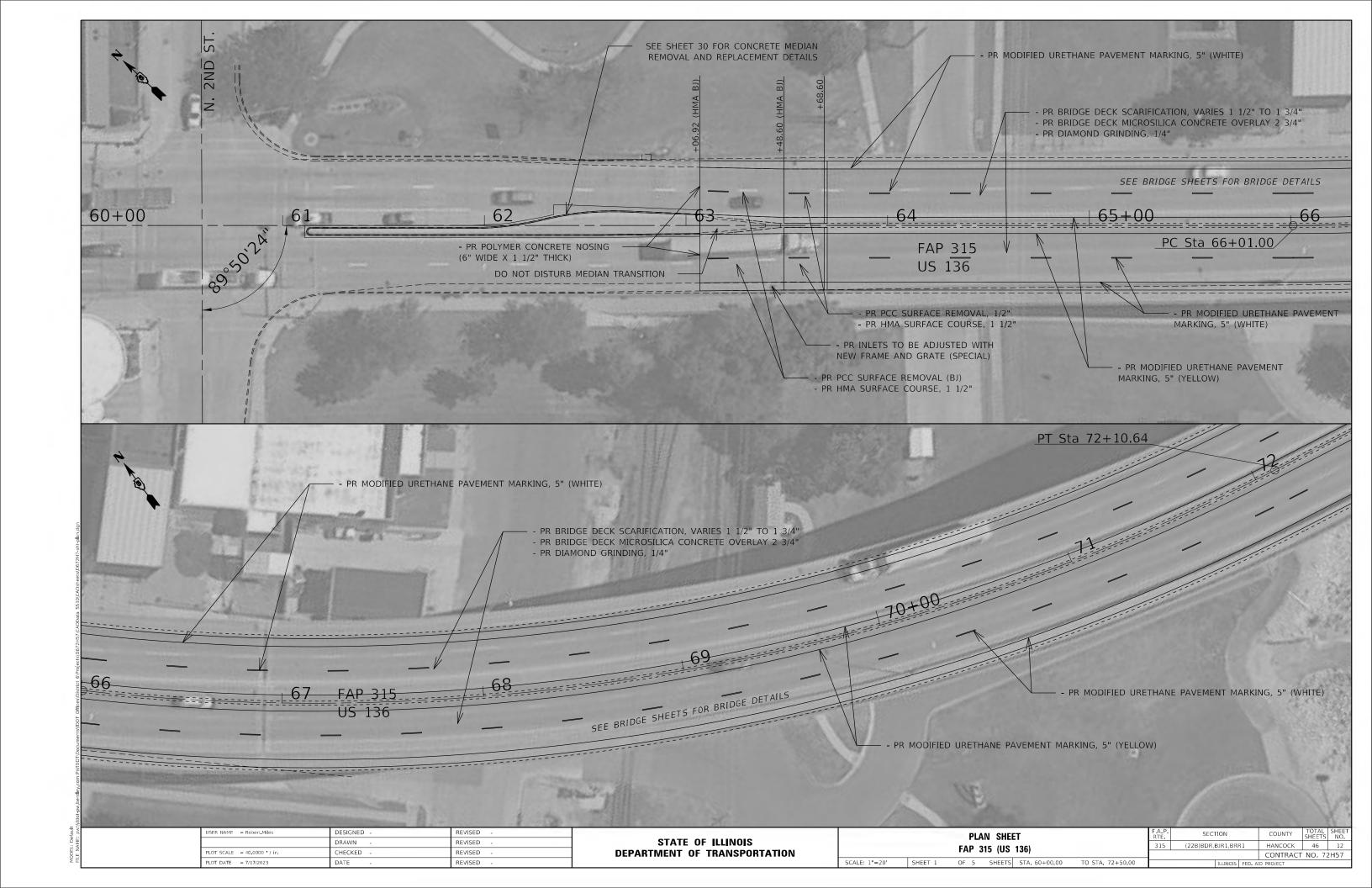
STA 110+11.90 CL/RT **EB TOTAL**  78200010

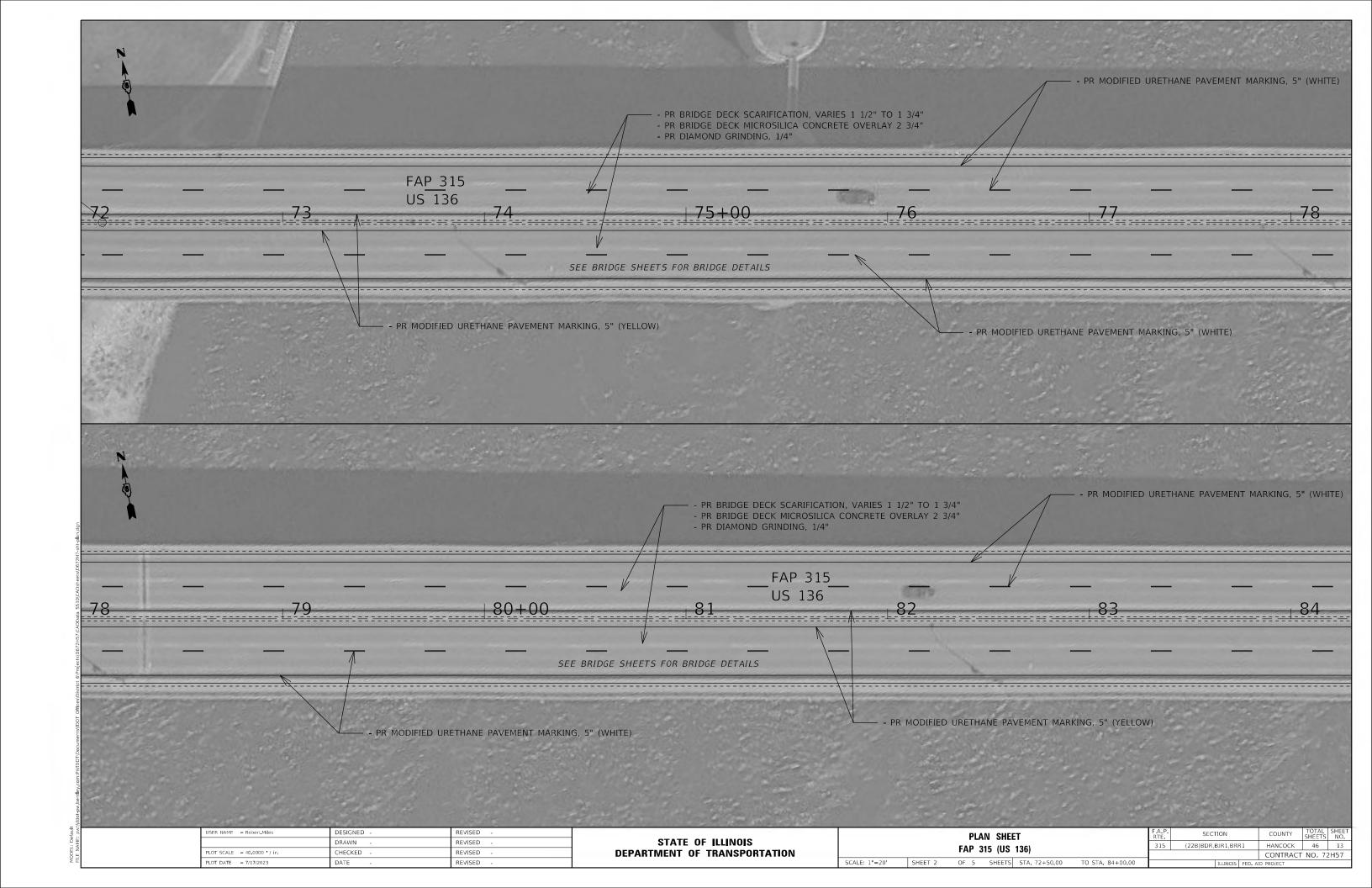
BARRIER WALL

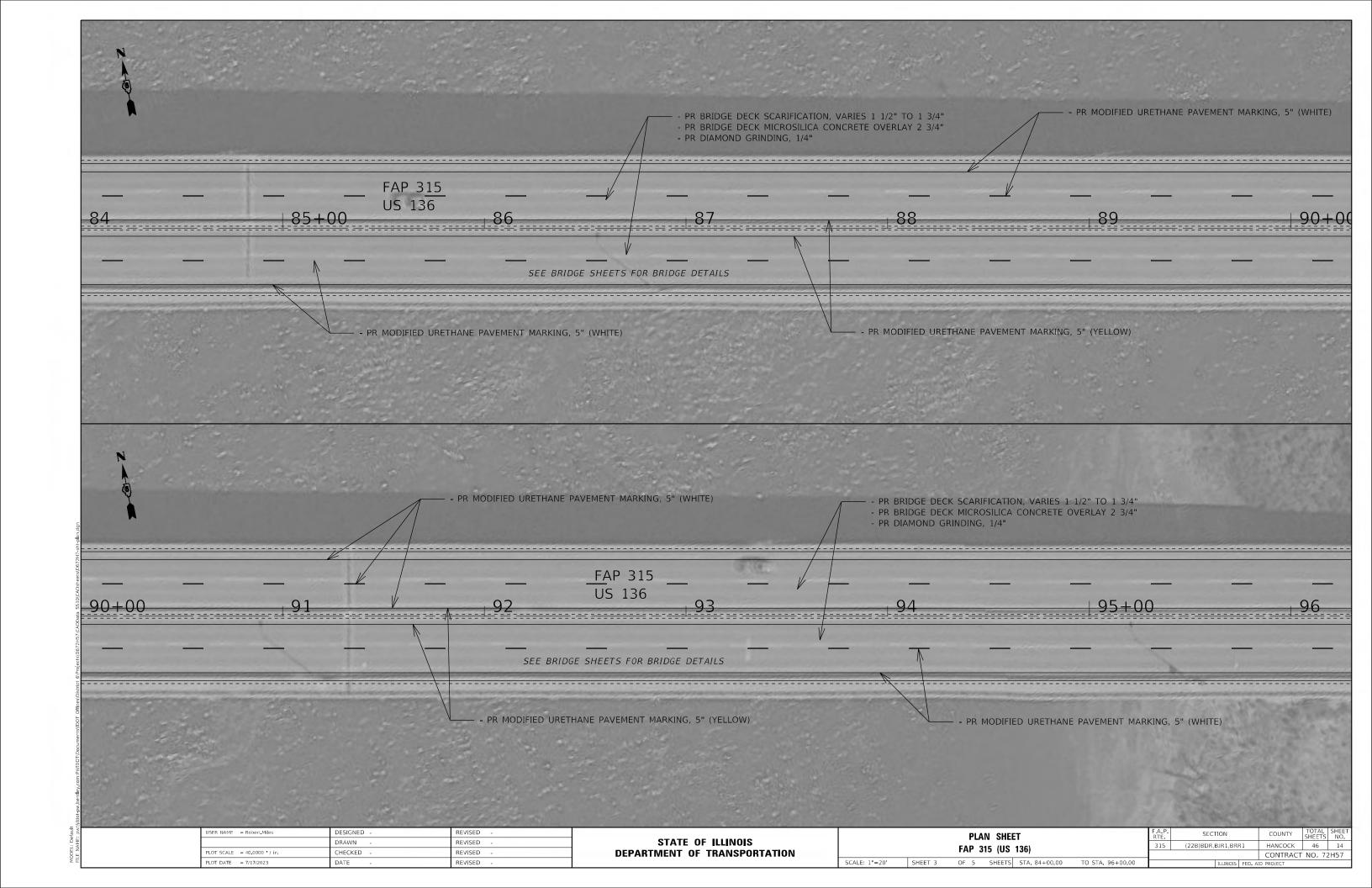
TYPE B

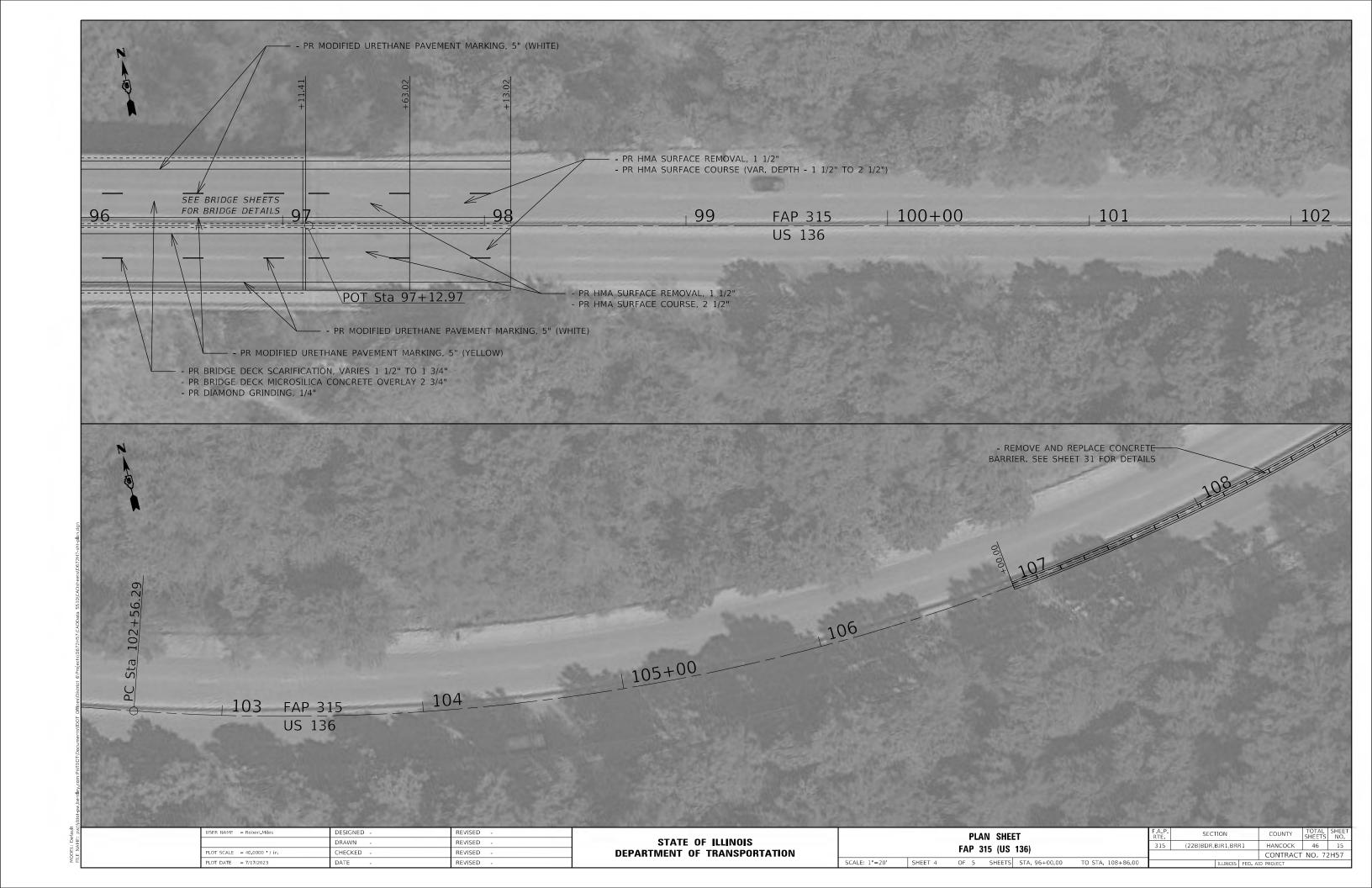
E ACH

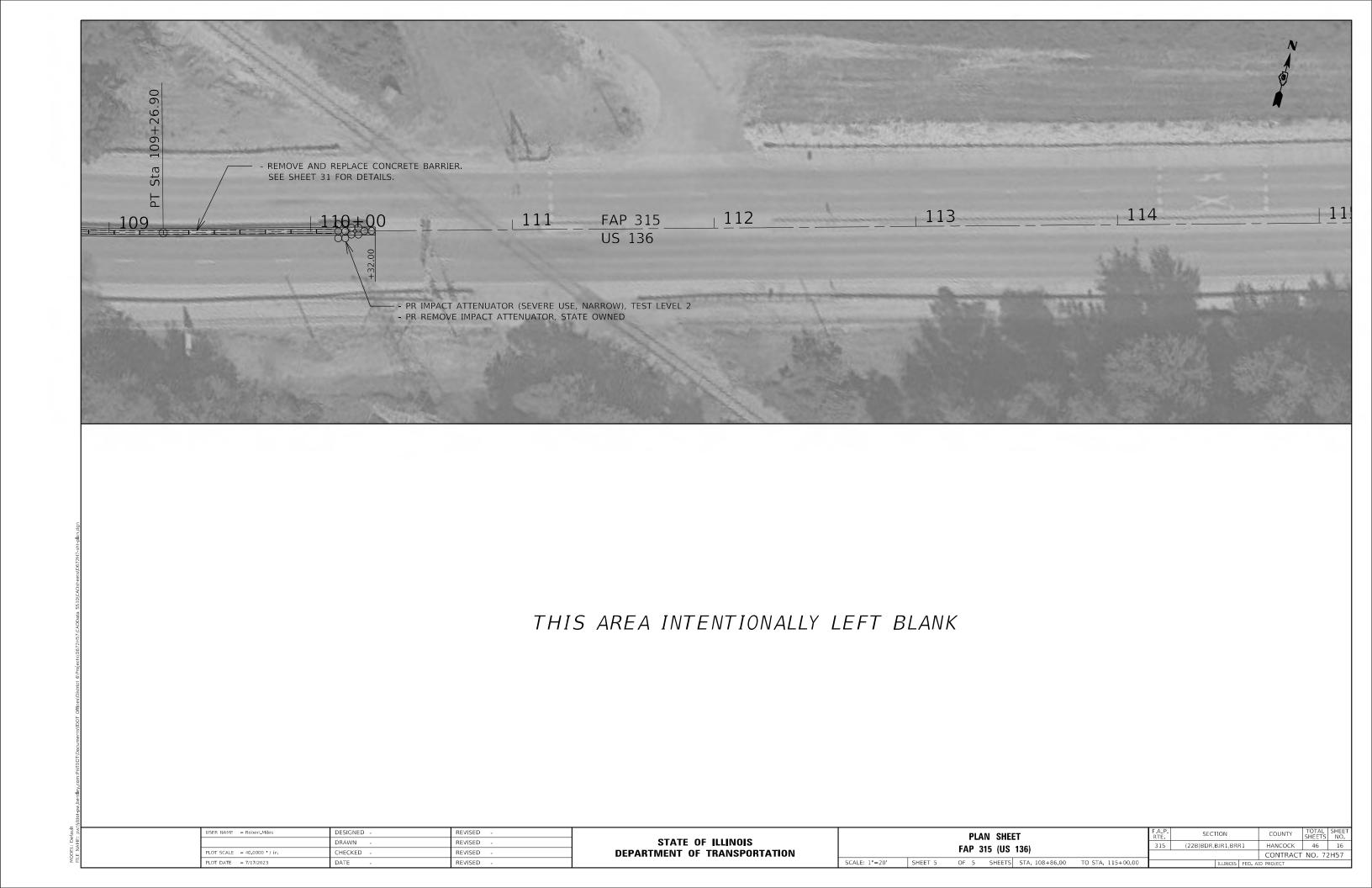
.com:PWIDOT\Documents\IDOT Offices\District 6\Projects\D672H57\CADBata SS10\CADsheets\D

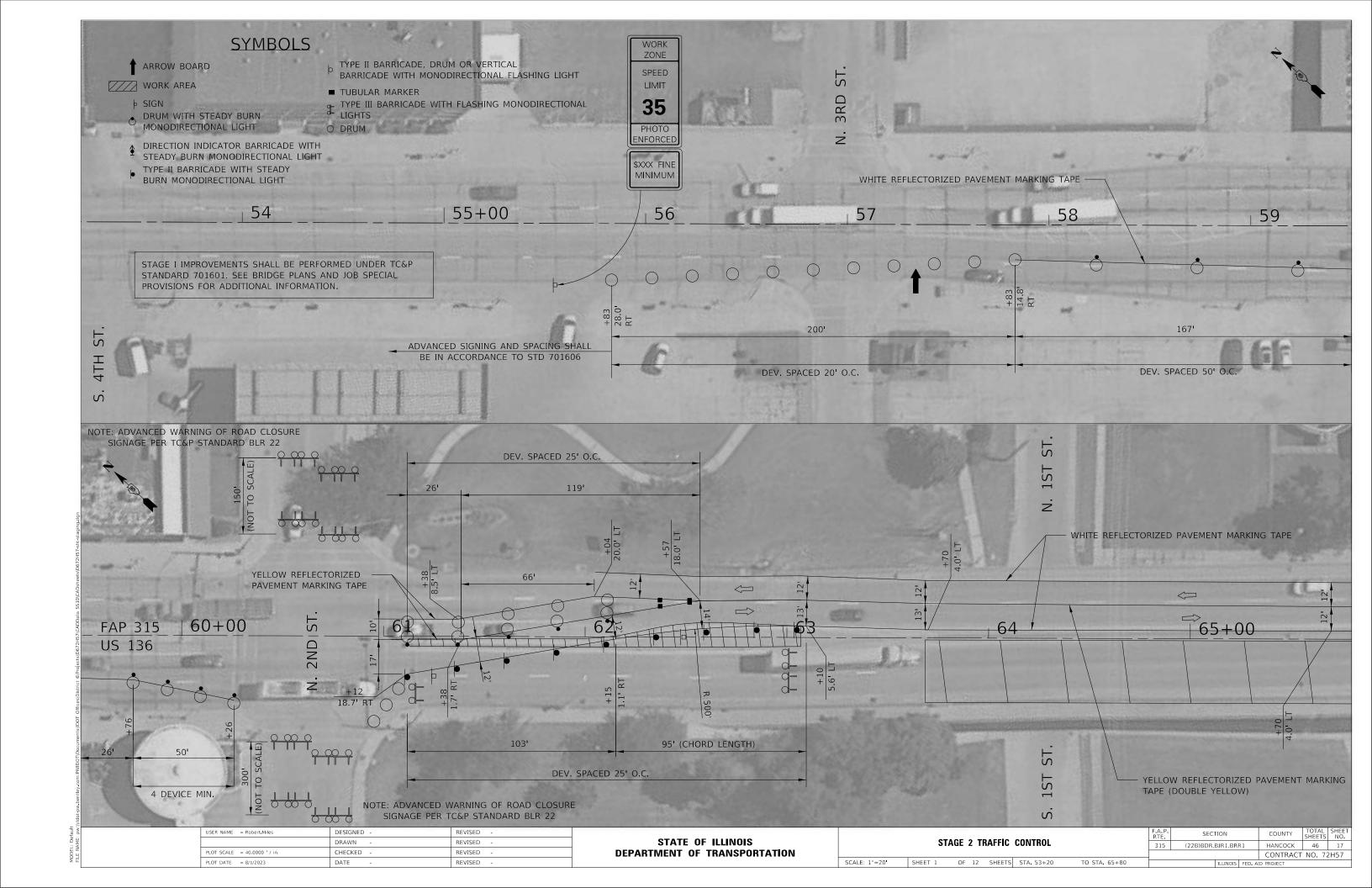


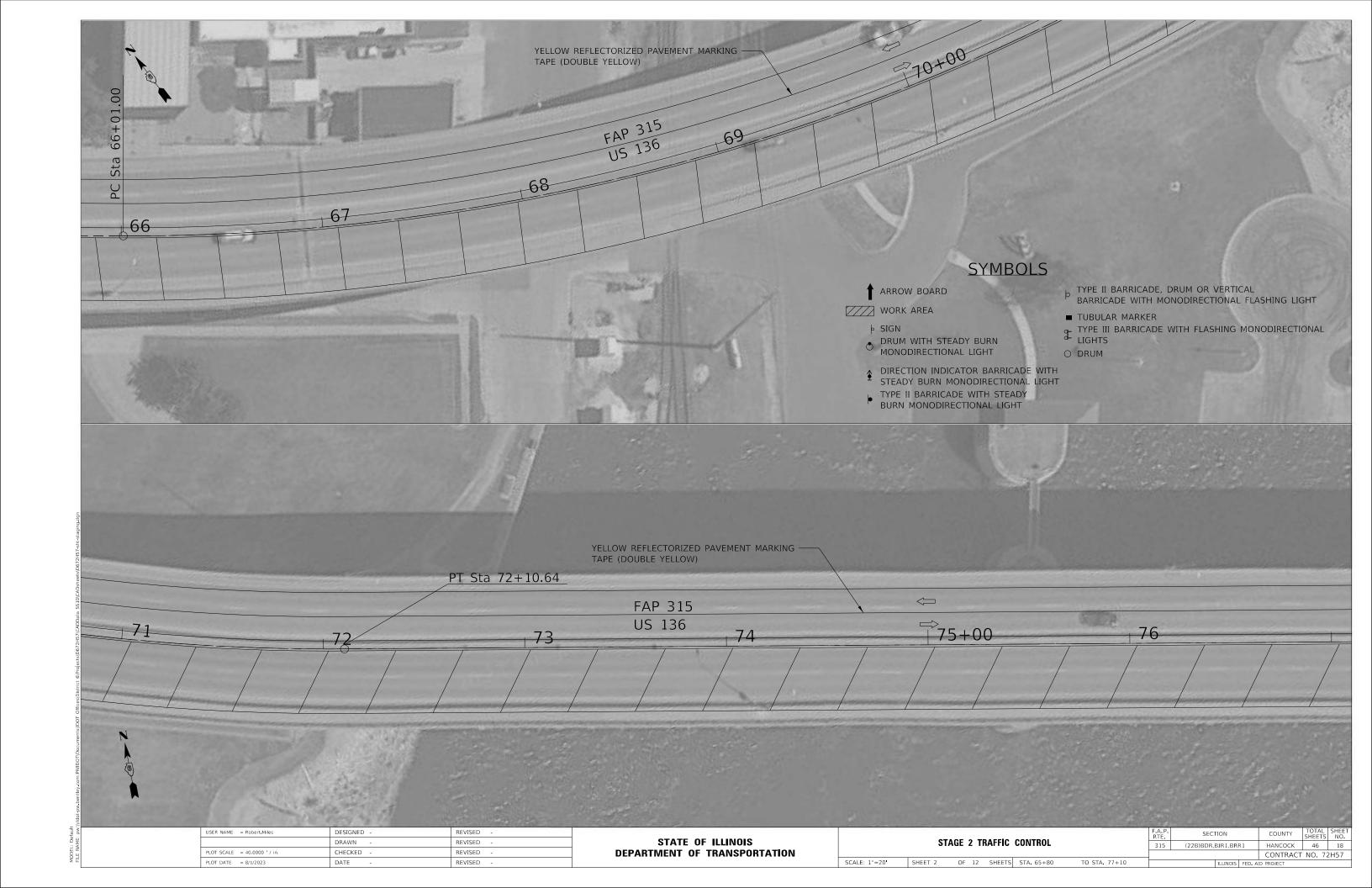


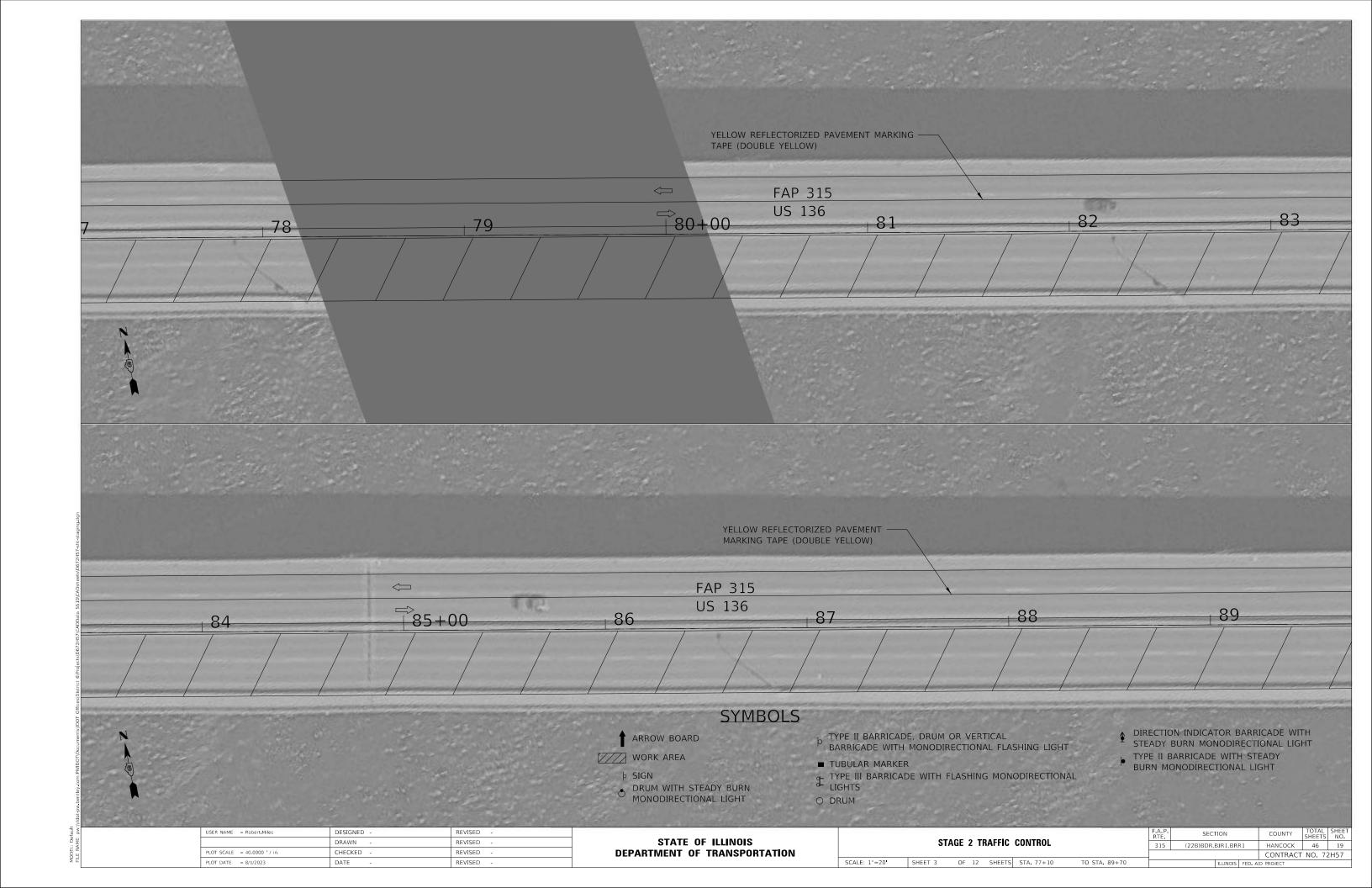


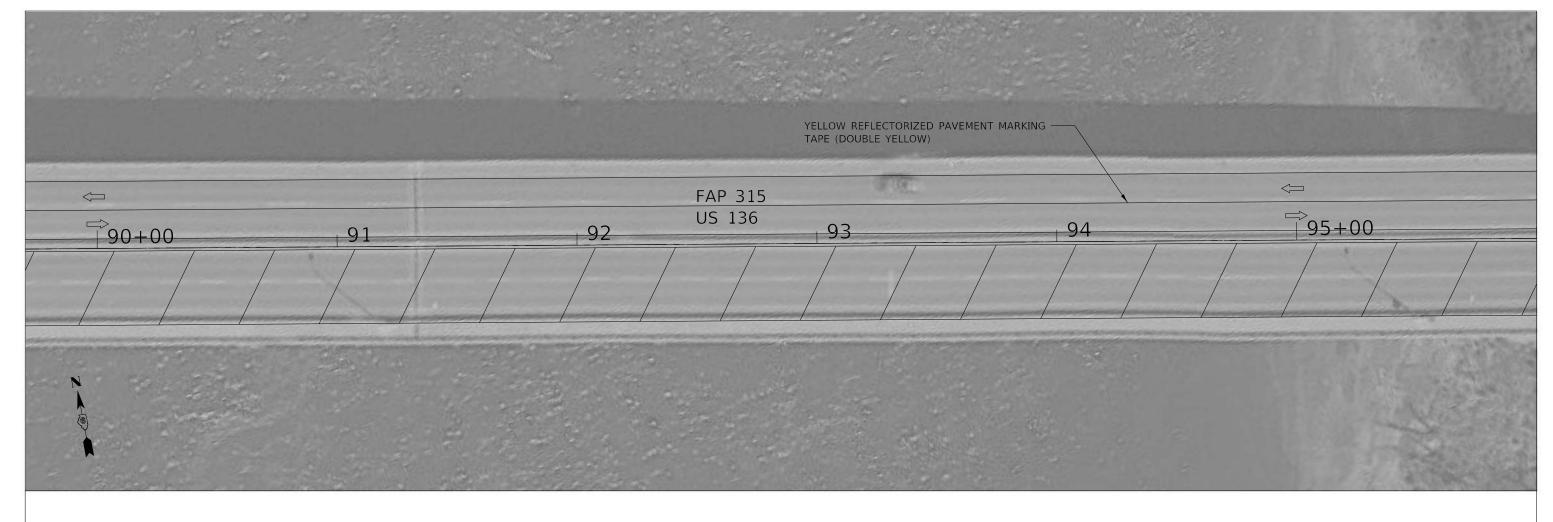












## **SYMBOLS**

ARROW BOARD

WORK AREA

⊧ SIGN

ORUM WITH STEADY BURN MONODIRECTIONAL LIGHT

DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT

TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT

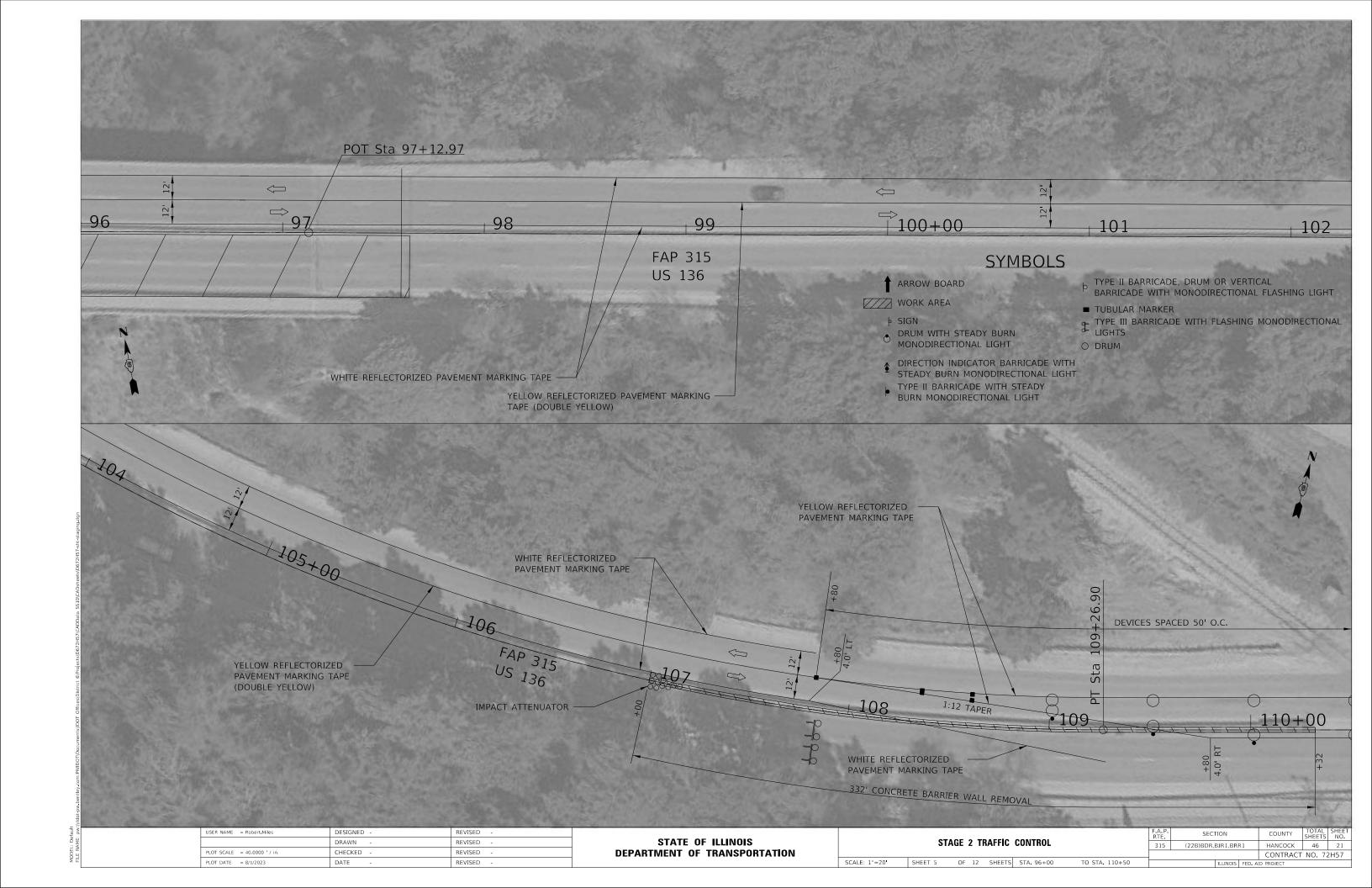
■ TUBULAR MARKER

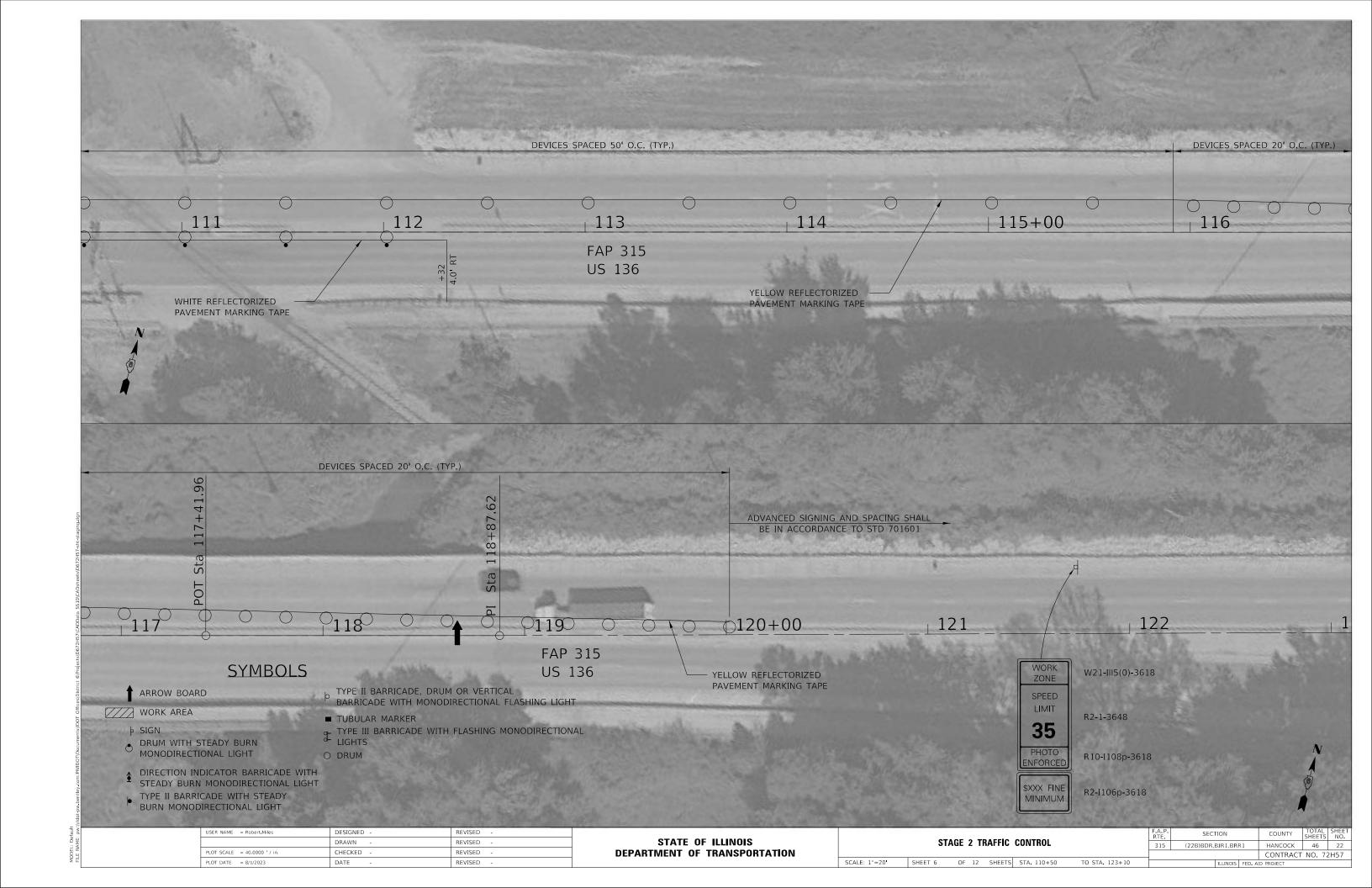
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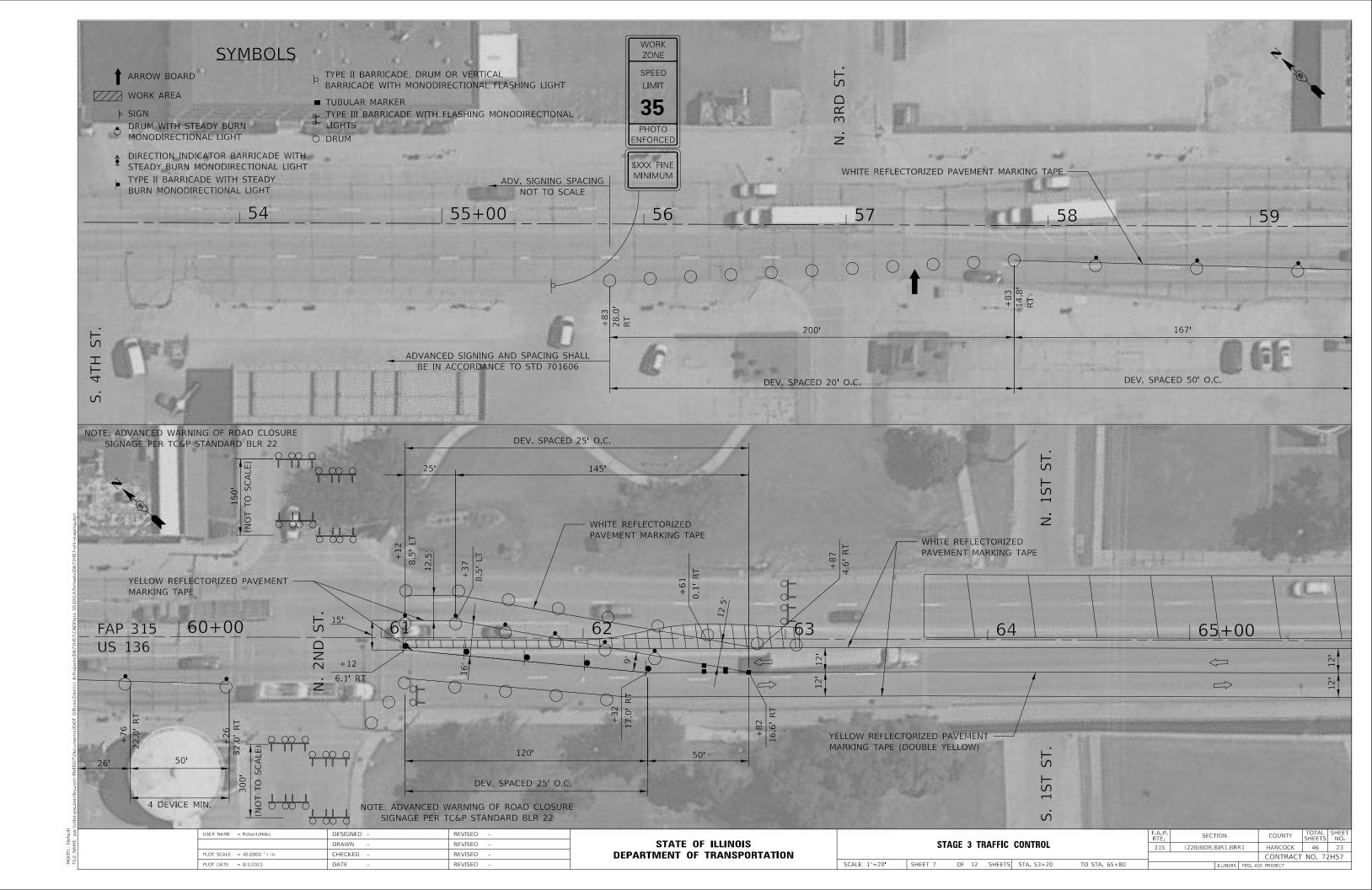
O DRUM

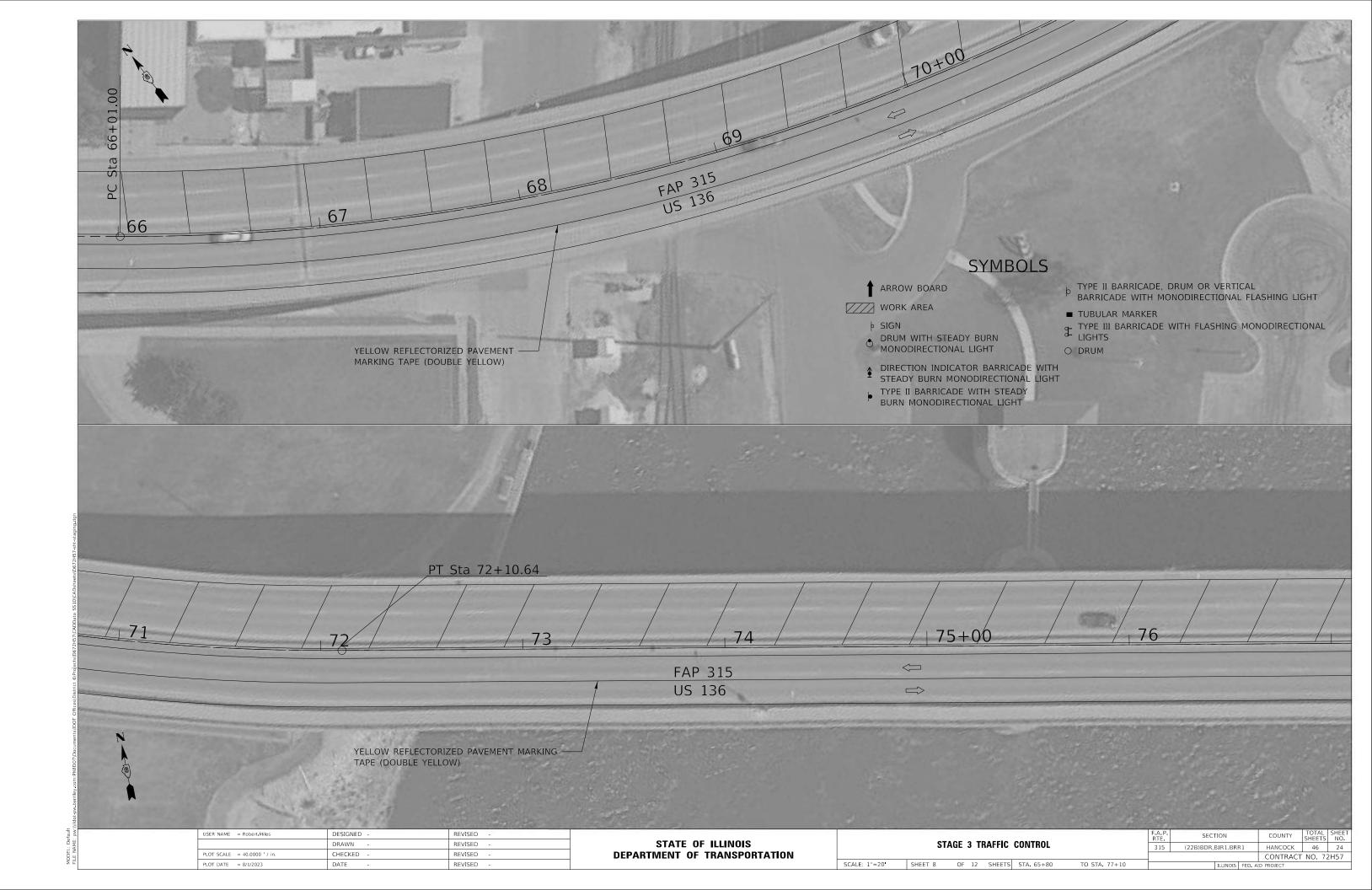
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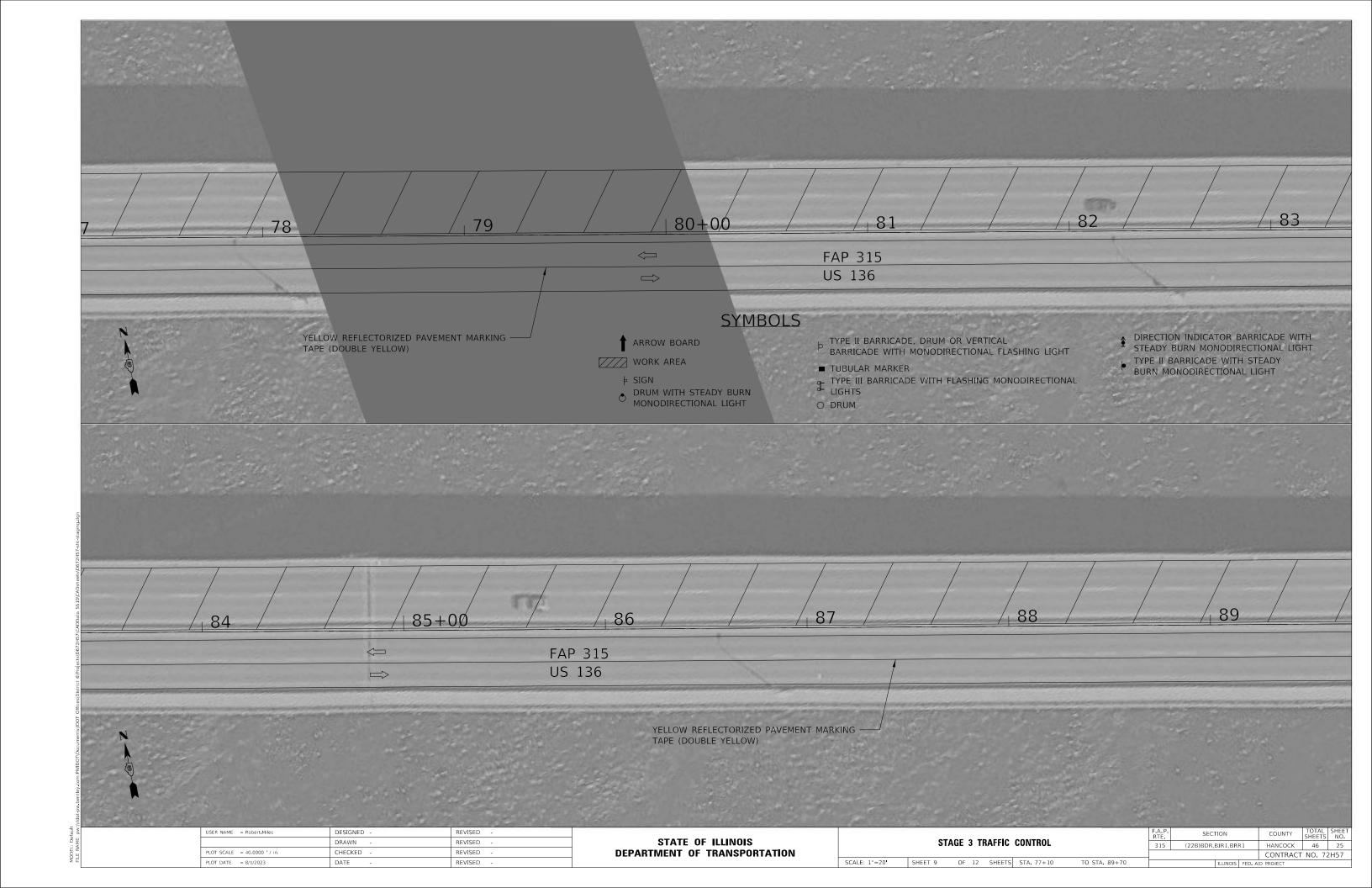
USER NAME = Robert.Miles	DESIGNED -	REVISED -					F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE'
PLOT SCALE = 40,0000 ' / in	DRAWN -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		STAGE 2 TRAFFIC CONTROL			(22B)BDR,BJR1,BRR1	HANCOCK	46	20
PLOT DATE = 8/1/2023	DATE -	REVISED -		SCALE: 1"=20"	SHEET 4 OF 12 SHEETS STA. 89+70	TO STA. 96+00		ILLINOIS FED. AI	CONTRACT D PROJECT	NO. 72	H57

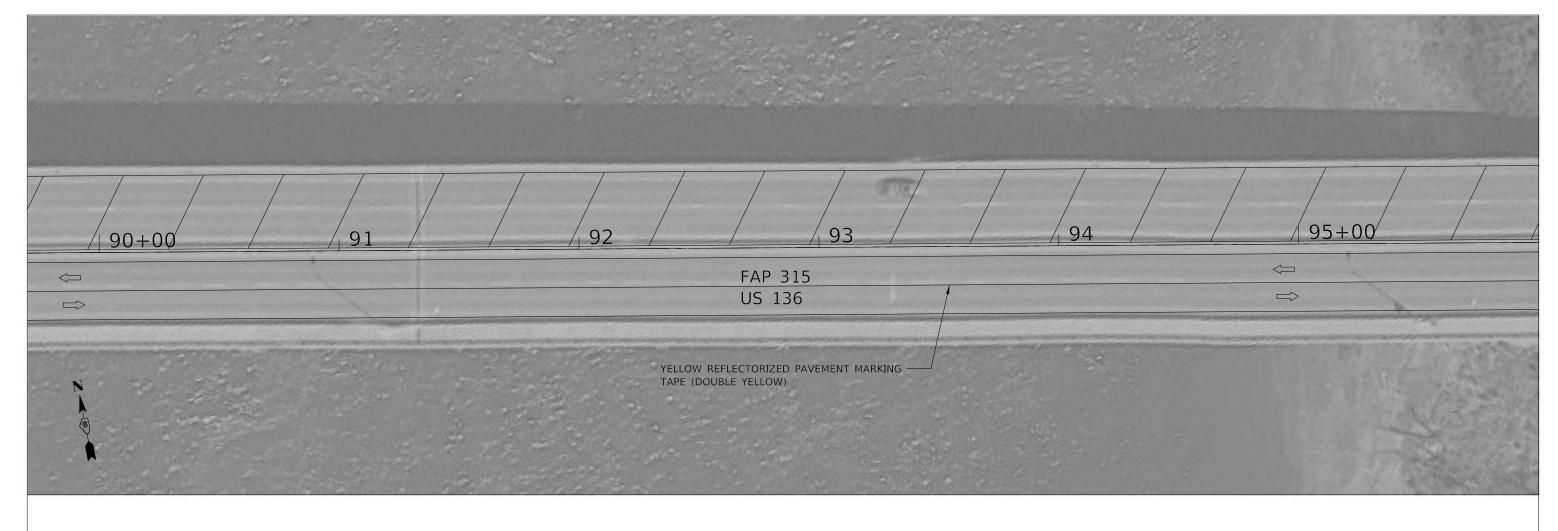












### **SYMBOLS**

ARROW BOARD

WORK AREA

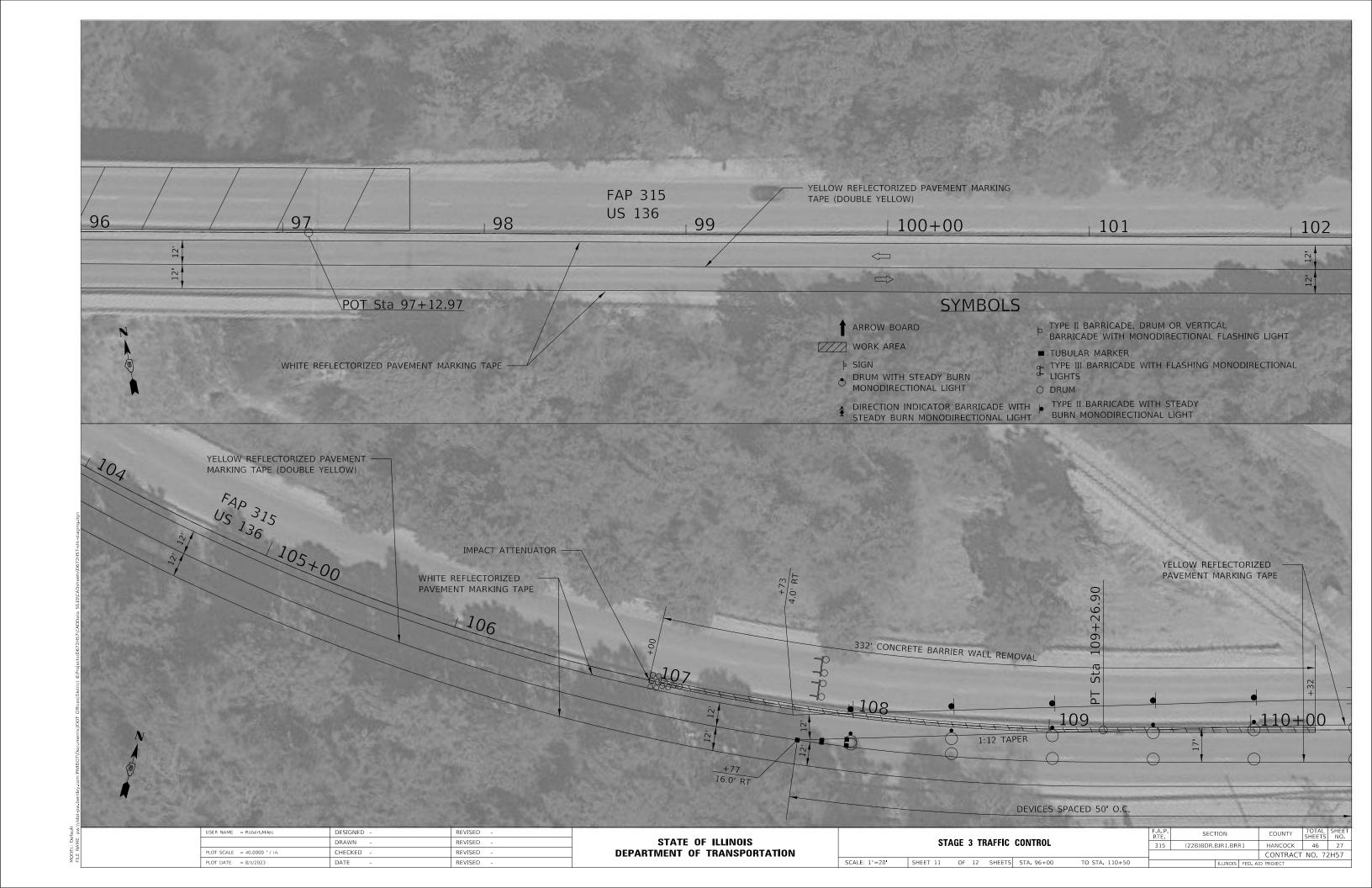
- DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT
- TUBULAR MARKER
- $\proptype{\pro$
- O DRUM

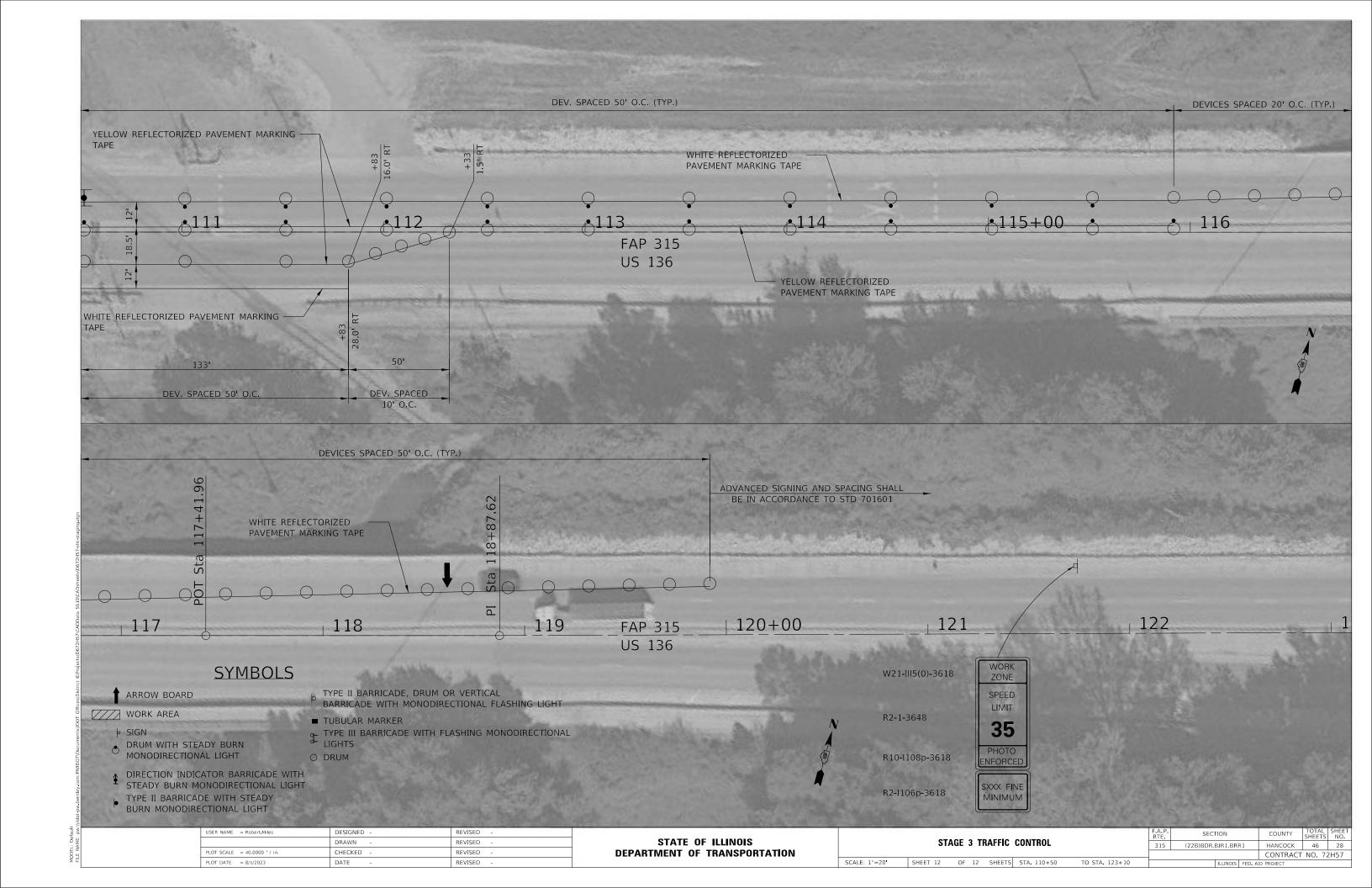
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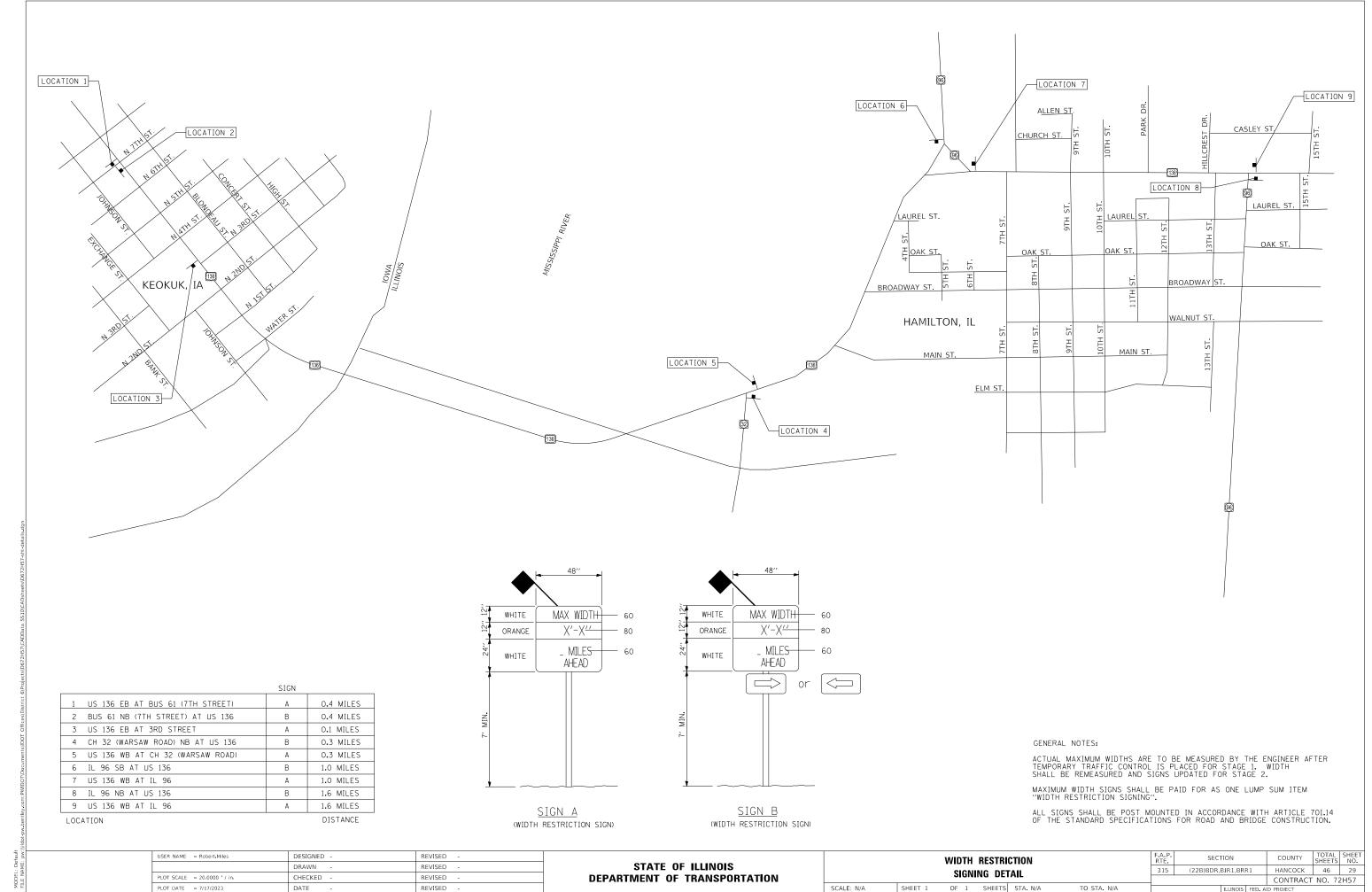
USER NAME = Robert-Miles	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 40.0000 / in.	CHECKED -	REVISED -	
PLOT DATE = 8/1/2023	DATE -	REVISED -	

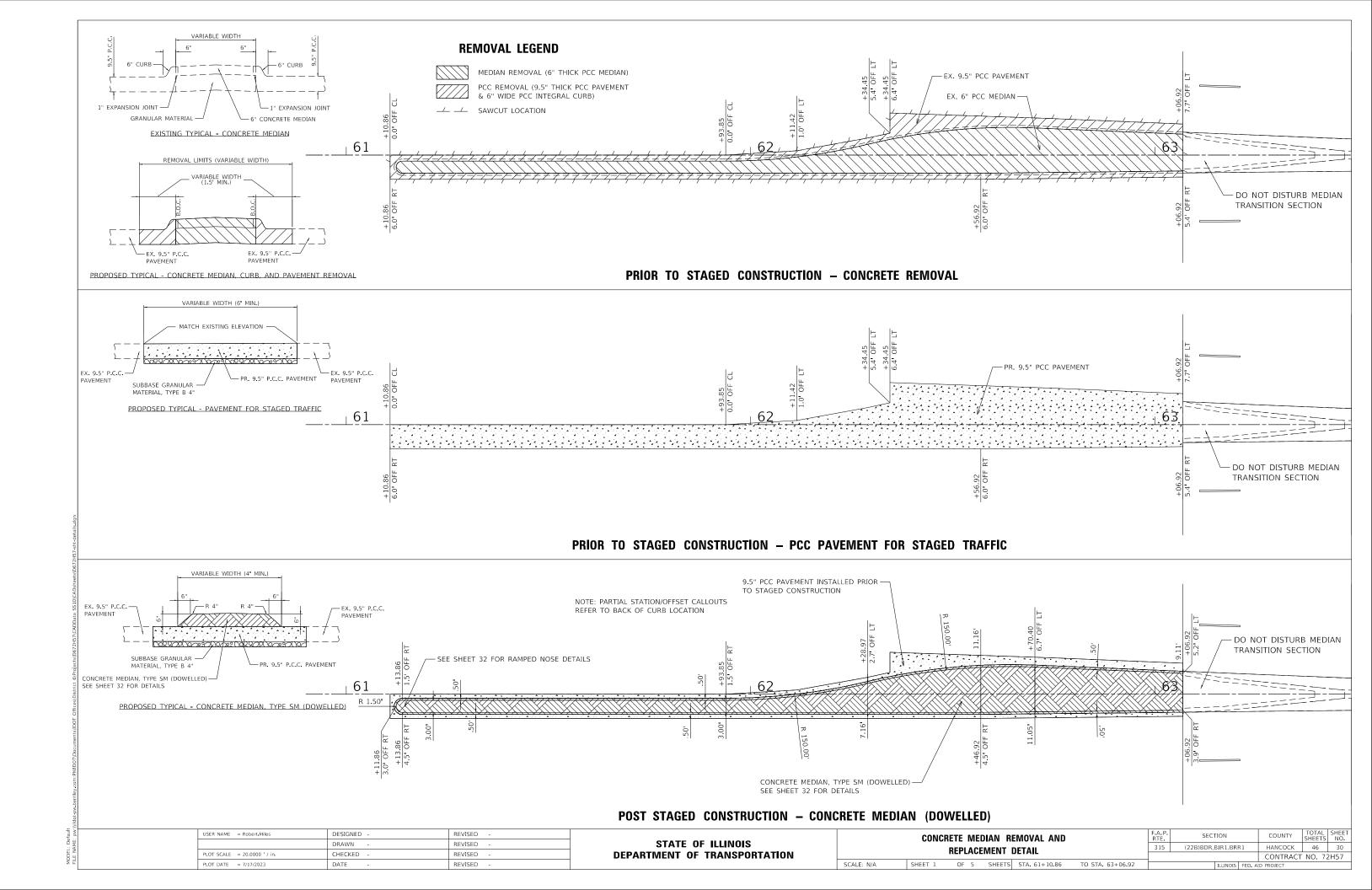
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

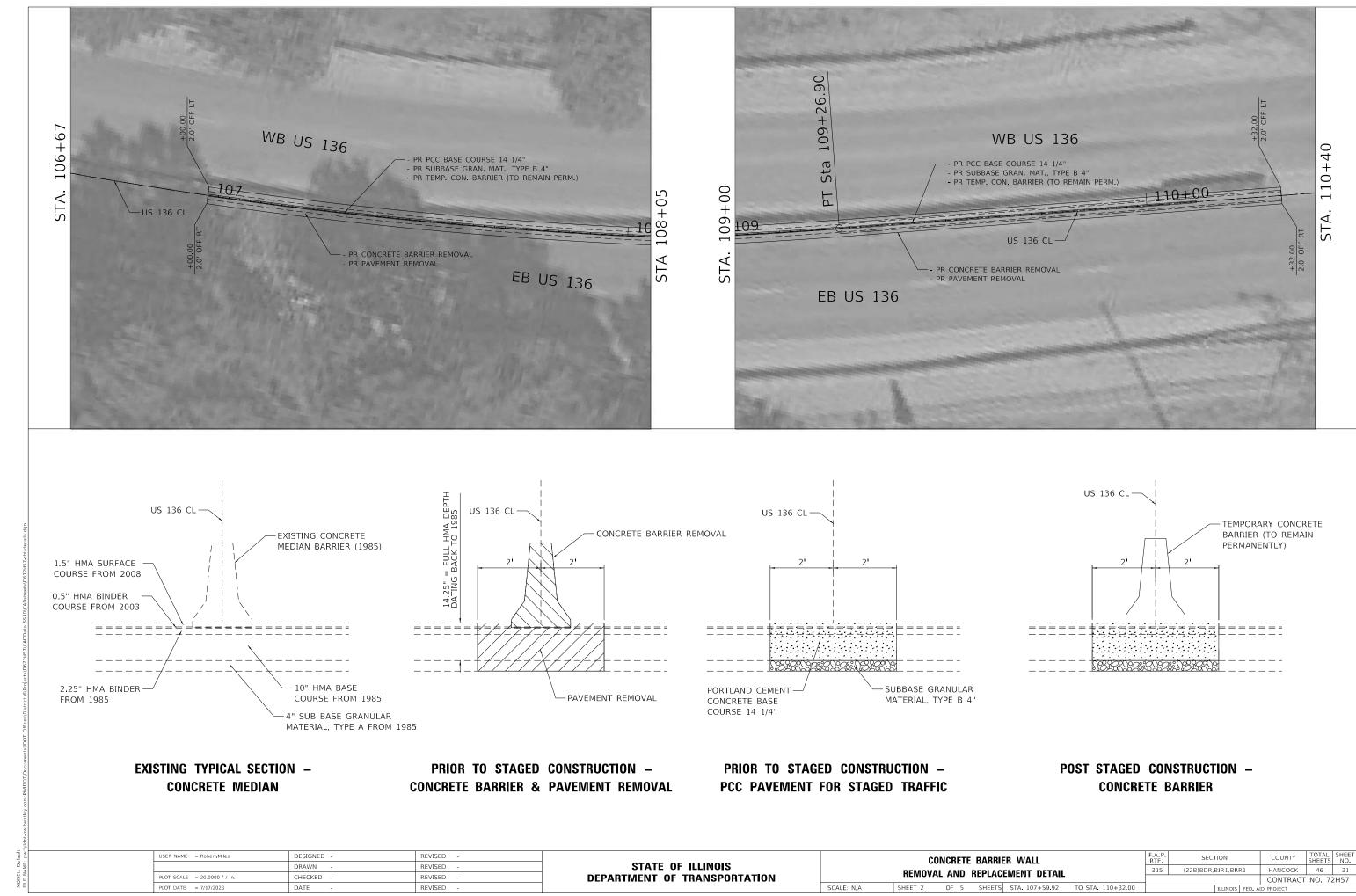
STAGE 3 TRAFFIC CONTROL HANCOCK 46 26 (22B)BDR,BJR1,BRR1 CONTRACT NO. 72H57 SCALE: 1"=20' SHEET 10 OF 12 SHEETS STA. 89+70 TO STA. 96+00



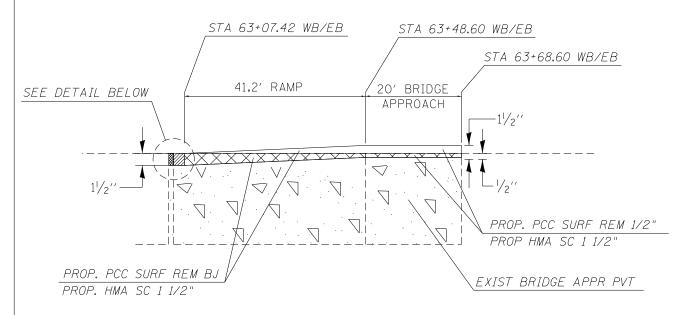


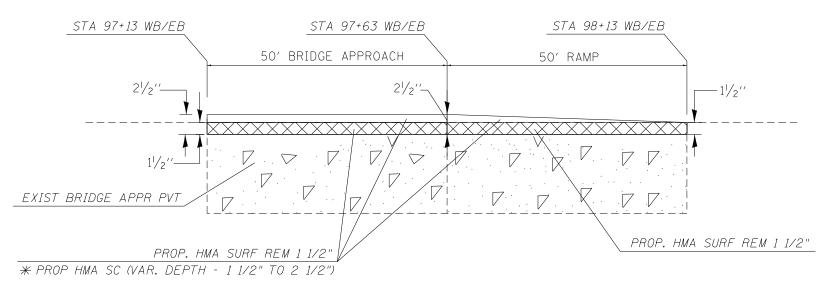






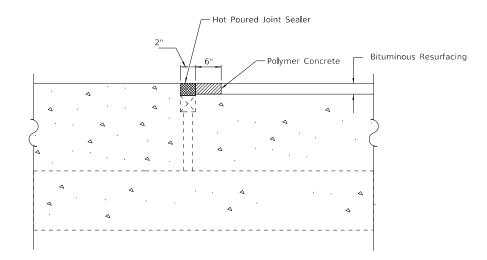
\*\* NOTE: THE MAX LIFT OF THE SURFACE COURSE SHALL BE 1 1/2". THICKNESSES GREATER THAN 1 1/2" SHALL BE INSTALLED IN 2 LIFTS.





US 136 (IOWA SIDE) BUTT JOINT DETAIL

US 136 (ILLINOIS SIDE) BUTT JOINT DETAIL



# NOTES

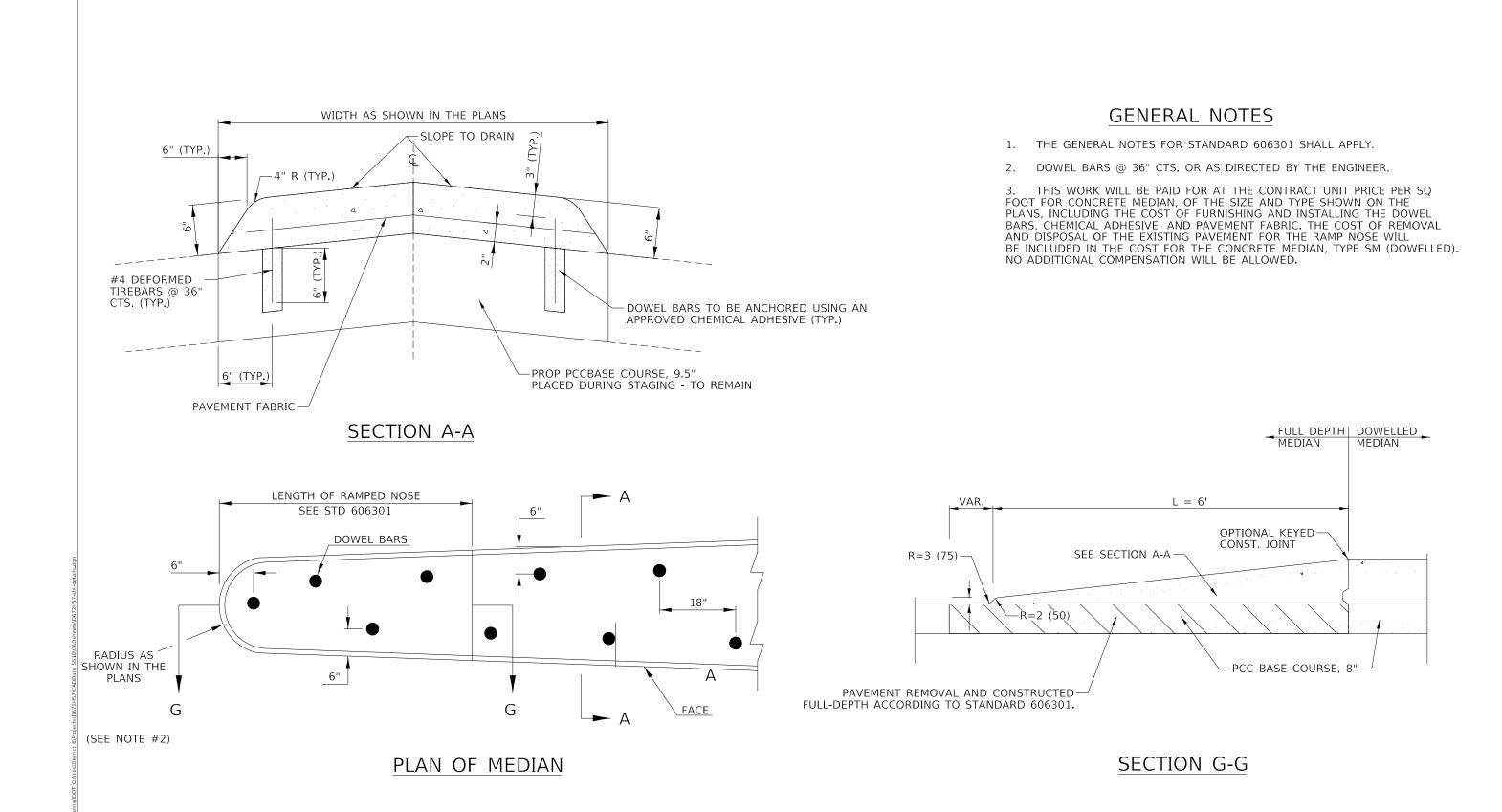
- 1. THE SURFACE PREPARATION OF THE BEAM IS DETAILED IN THE RECURRING SPECIAL FOR POLYMER CONCRETE, AND IS COVERED IN THE COST OF POLYMER CONCRETE.
- 2. CONTRACTOR TO SURFACE OVER EXISTING PREFORMED JOINT SEALER. UPON COMPLETION OF RESURFACING, CONTRACTOR IS TO SAW CUT AT THE EDGE OF THE PJS AND REMOVE THE HMA MATERIAL, COST TO BE INCLUDED WITH HMA RESURFACING ITEMS.
- 3. CONTRACTOR TO SURFACE OVER EXISTING PREFORMED JOINT SEALER. UPON COMPLETION OF RESURFACING, CONTRACTOR IS TO SAW CUT AT THE EDGE OF THE PJS AND REMOVE THE HMA MATERIAL, COST TO BE INCLUDED WITH HMA RESURFACING ITEMS.

# PREFORMED JOINT SEAL TREATMENT (AT PREFORMED JOINT)

USER NAME = Robert-Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 7/17/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

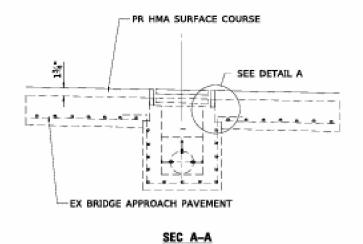
							F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			BUTT J	OINT DE	ETAILS		315	(22B)BDR,BJR1,BRR1	HANCOCK	46	32
ļ									CONTRACT	NO. 72	2H57
	SCALE: N/A	SHEET 3	OF 5	SHEETS	STA. N/A	TO STA. N/A		ILLINOIS FED. A	ID PROJECT		

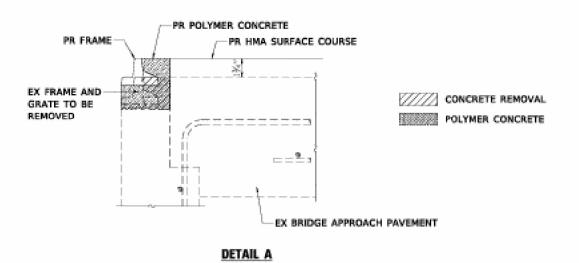


USER NAME = Robert.Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 7/17/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

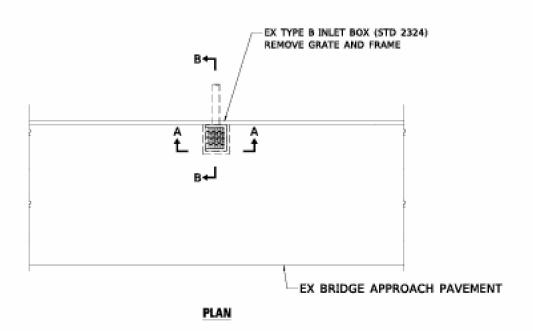
CONCRETE MEDIAN,	F.A.P. RTE.	SECTION	COUNTY	TOTA SHEE
TYPE SM (DOWELLED) DETAIL	315	(22B)BDR,BJR1,BRR	1 HANCOCK	46
THE SW (DOWLLED) DETAIL			CONTRA	CT NO.
SCALE: N/A   SHEET 4 OF 5 SHEETS STA. 61+10.86 TO STA. 63+06.92		ILLINOIS	FED. AID PROJECT	

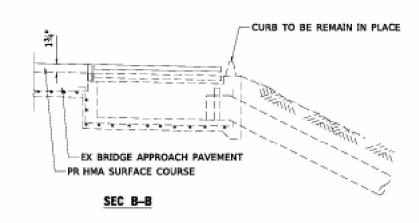




THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW CAST FRAME AND CAST GRATE AS SPECIFIED ON STANDARD 610001 FOR THE TYPE G INLET BOX

GENERAL NOTES



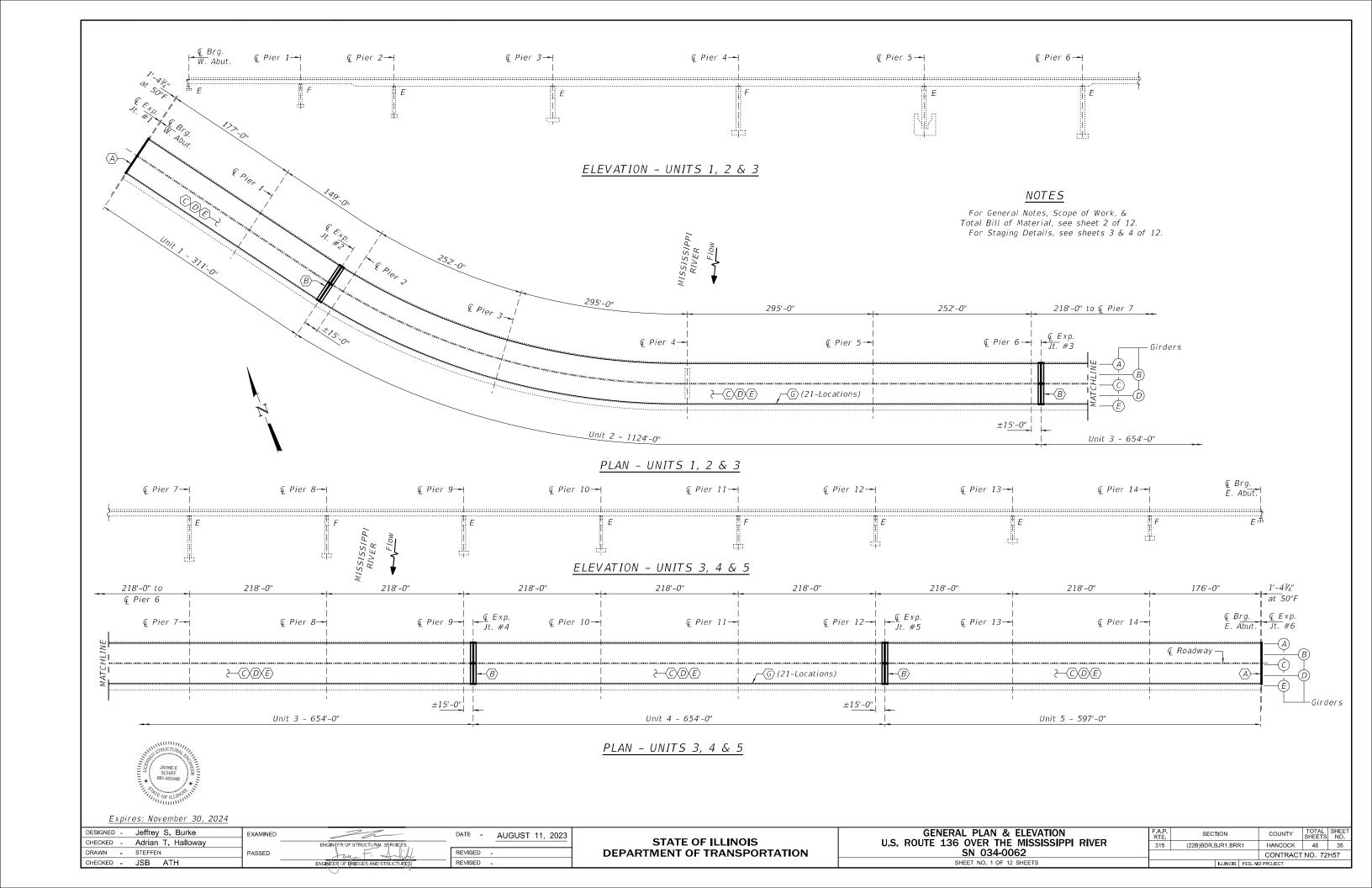


SCALE: N/A

USER NAME = Robert-Miles	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20.0000 / in.	CHECKED -	REVISED -
PLOT DATE = 7/17/2023	DATE -	REVISED -

STATE OF	ILLINOIS
DEPARTMENT OF	TRANSPORTATION

		F.A.P. RTE.			COUNTY	TOTAL SHEETS	SHEET NO.					
FRAME AND GRATE (SPECIAL) DETAIL				315	(22B)BDR,	3JR1,BRI	₹1	HANCOCK	46	34		
		AND U			IAIL					CONTRACT	NO. 72	2H57
	SHEET 5	OF 5	SHEETS	STA. N/A	TO STA. N/A			ILLINOIS	FED. A	ID PROJECT		



#### SCOPE OF WORK

Repair	NBIS #	Member	Location	Deficiency	Proposed Repair
	-	Exp. Joint 1	West Abut.	-	Remove & Replace
Α	-	Exp. Joint 6	East Abut.	-	Existing PJS Exp. Jt.
	55	Exp. Joint 2	Pier 2		
В	56	Exp. Joint 3	Pier 6	Deteriorated & missing Mod. Jt.	Remove & Replace existing 9" (Jts. 2, 4, 5) or 12" (Jt. 3)
D	57	Exp. Joint 4	Pier 9	Spacer Blocks	Modular Expanison Joint
	58	Exp. Joint 5	Pier 12	o passor around	The state of the s
С				-	Bridge Deck Scarification
D	3	Overlay	Thoughout	-	Install Microsilica Conc. Overlay
Ε				-	Diamond Grinding, 1⁄4"
F	4	E.B. Sidewalk Rail	See Table 1	See Table 1	See Table 1
G	24	E.B. Parapet Rail	See Table 2	See Table 2	See Table 2
****H	54	Girder A	West Abut.	Ground Wire	Re-connect Ground Wire
J	40	Bearing	Gir. E at P4	2-Loose Nuts	Tighten 2 Anchor Nuts
K	47	Cross Frame	-	8-Missing Bolts	Install 8 New Bolts
L	60	Girder A	Gir. A at Jt. 3	Missing Bolt	Install New Bolt
****M	33	Conduit Box	50' E. of P13 btwn. C & D	Missing cover, exposed wires, & loose conduit	Install new cover, fix exposed wires, & reattach or tighten conduit
N	<i>52</i>	Bearing C	Pier 14	1-Loose Nut	Tighten SW Anchor Nut
Р	53	Bearing D	Pier 14	1-Loose Nut	Tighten NW Anchor Nut
****R	34	Conduit	E. Abut. btwn. Gir. C & D	Broken Conduit	Replace Conduit

#### TABLE 1 - SIDEWALK RAILING REPAIRS

Span	Location	Location Deficiency			
1	2nd Post E. of W. Abut.	Cracked Welds at Base	Field Weld		
9	Midspan, South Side	Cracked Welds Lower Horiz. Member	Field Weld		

#### TABLE 2 - PARAPET RAILING REPAIRS

Span	Location	Deficiency	Proposed Repair
1	8th Post East of W. Abut.	Missing Anchor Bolt Nut	Install New Nut
3	5th Post East of Joint 2		
3	27th Post East of Joint 2	Construct World on the	
3	28th Post East of Joint 2	Cracked Weld on the Lower Horizontal Member	Field Weld
3	29th Post East of Joint 2	Lower Trottzonear Member	
5	42nd Post West of Joint 3		
8	42nd Post West of Joint 4	Bottom w/ 2" gouge & Cracked Weld	=
8	41st Post West of Joint 4	Cracked Post at Bottom w/ 2" gouge	=
8	30th Post West of Joint 4	Cracked Welds - Upper Horiz. Member	Field Weld
8	28th Post West of Joint 4		
9	7th Post West of Joint 4		
9	6th Post West of Joint 4		
9	4th Post West of Joint 4	Cracked Weld on the	Field Weld
9	1st Post West of Joint 4	Lower Horizontal Member	rieid Weid
11	52nd Post West of Joint 5		
11	47th Post West of Joint 5		
11	40th Post West of Joint 5		
12	3rd Post West of Joint 5	1-Loose Nut	Tighten Nut
13	3rd Post East of Joint 5	1-Missing Bolt	Install New Bolt
13	15th Post East of Joint 5	Cracked Weld on the	Field Weld
14	24th Post East of Joint 5	Lower Horizontal Member	rieiu Weiu

#### GENERAL NOTES

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

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale,

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

Existing 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  $50^\circ$  F.

Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts in painted areas. Bolts  $\frac{3}{4}$ "0, holes  $\frac{13}{16}$ "0, unless otherwise noted.

Current Ratings on File for Existing Structure: Inventory: HS 20.6 Operating: HS 34.6 Live Load Restrictions: No

Inventory and Operating Ratings and Live Load Restrictions are provided for information only.

Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.

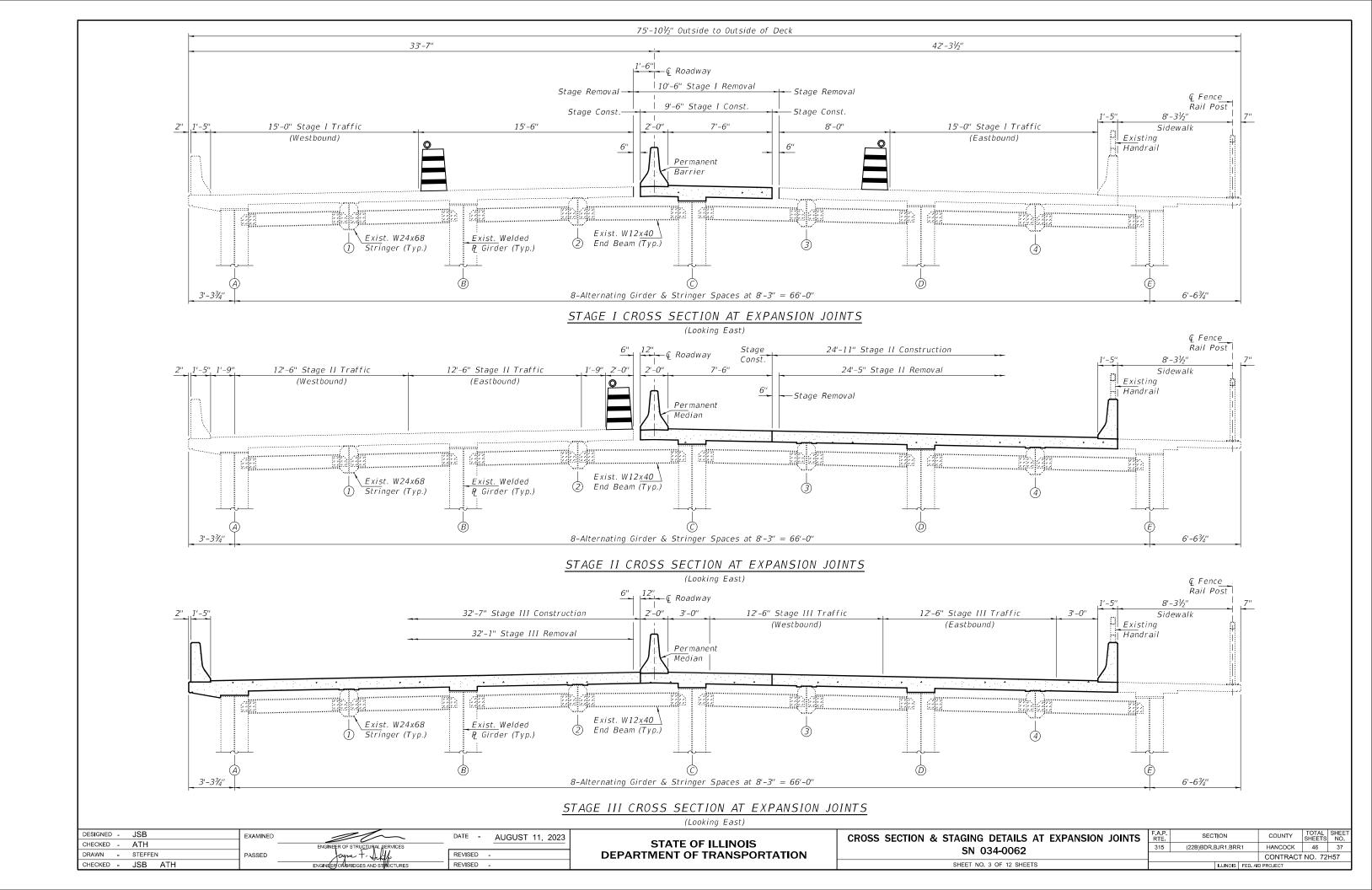
#### TOTAL BILL OF MATERIAL

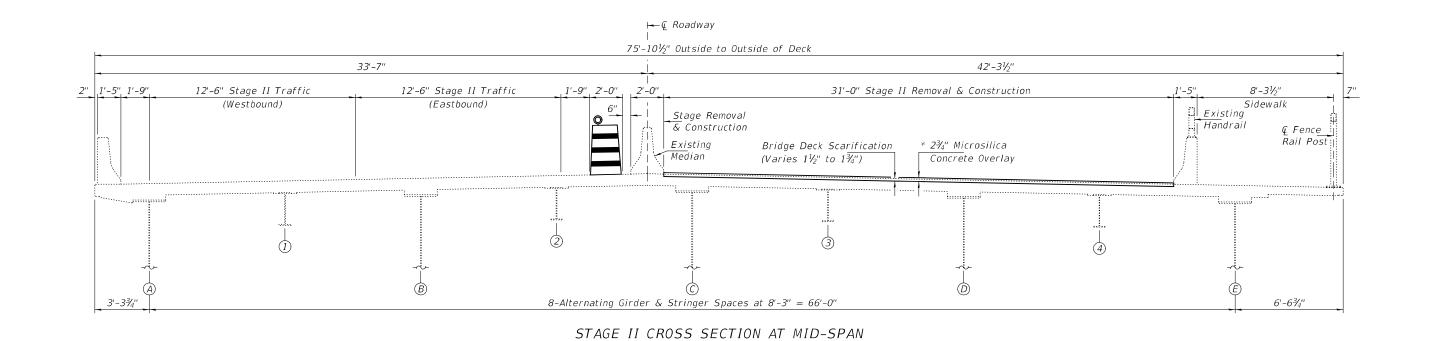
ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	73.1
Concrete Superstructures	Cu. Yd.	77.2
Bridge Deck Scarification, $1\frac{1}{2}$ "	Sq. Yd.	5170
Bridge Deck Scarification, 1¾"	Sq. Yd.	17620
Bridge Deck Microsilica Concrete Overlay, 2¾"	Sq. Yd.	22790
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	17813
Diamond Grinding (Bridge Section)	Sq. Yd.	23009
Modular Expansion Joint, 9"	Foot	198
Modular Expansion Joint, 12"	Foot	66
Preformed Joint Strip Seal	Foot	132
Reinforcement Bars, Epoxy Coated	Pound	24210
Bar Splicers	Each	300
Mechanical Splicers	Each	1976
Drainage Scuppers to be Adjusted	Each	10
Miscellaneous Electrical Work	L. Sum	1
Protective Coat	Sq. Yd.	24865
Deck Slab Repair (Full Depth, Type 1)	Sq. Ft.	10
Structural Steel Repair	L. Sum	1

- \* New Concrete Superstructure areas & Overlay only.
- \*\* Quantity is estimated. Contractor will be paid for actual amount provided at the unit price bid for the work.
- \*\*\* Structural Steel Repair shall include all new bolts, tightening of nuts, and repairs listed in Tables 1 and 2.
- \*\*\*\* Cost of all labor and materials necessary to complete indicated repairs (H, M & R) for Items #54, #33 & #34, and in accordance with application sections of the Standard Specifications for Road and Bridge Construction, is included in the Lump Sum cost for Miscellaneous Electrical Work.

DESIGNED -	JSB	EXAMINED		DATE -	AUGUST 11, 2023
CHECKED -	ATH		ENGINEER OF STRUCTURAL SERVICES		7100001 11, 2020
RAWN -	STEFFEN	PASSED	Jayne F. Jefff	REVISED	-
CHECKED -	JSB ATH		ENGINEER OF BRIDGES AND STRUCTURES	REVISED	-

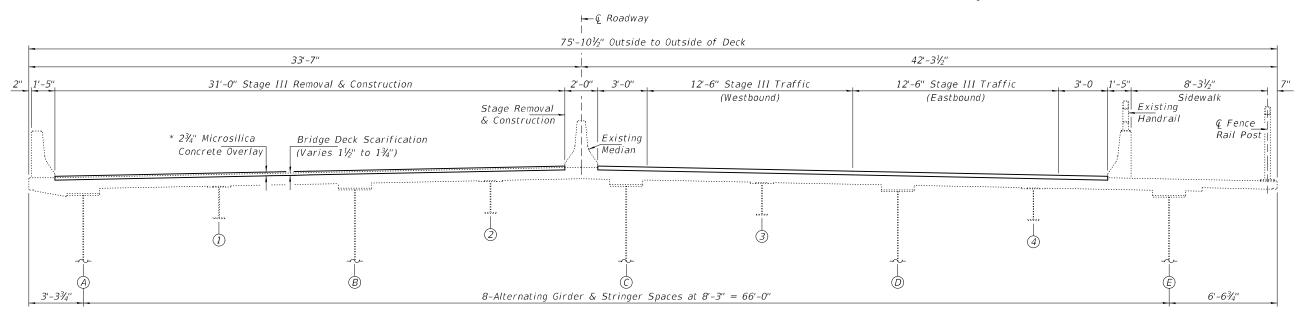
F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
315	(22B)BDR,BJR1,BRR1	HANCOCK	46	36	
		CONTRACT NO. 72H57			





(Looking East)

st Prior to  $rac{1}{2}$ " Diamond Grinding.

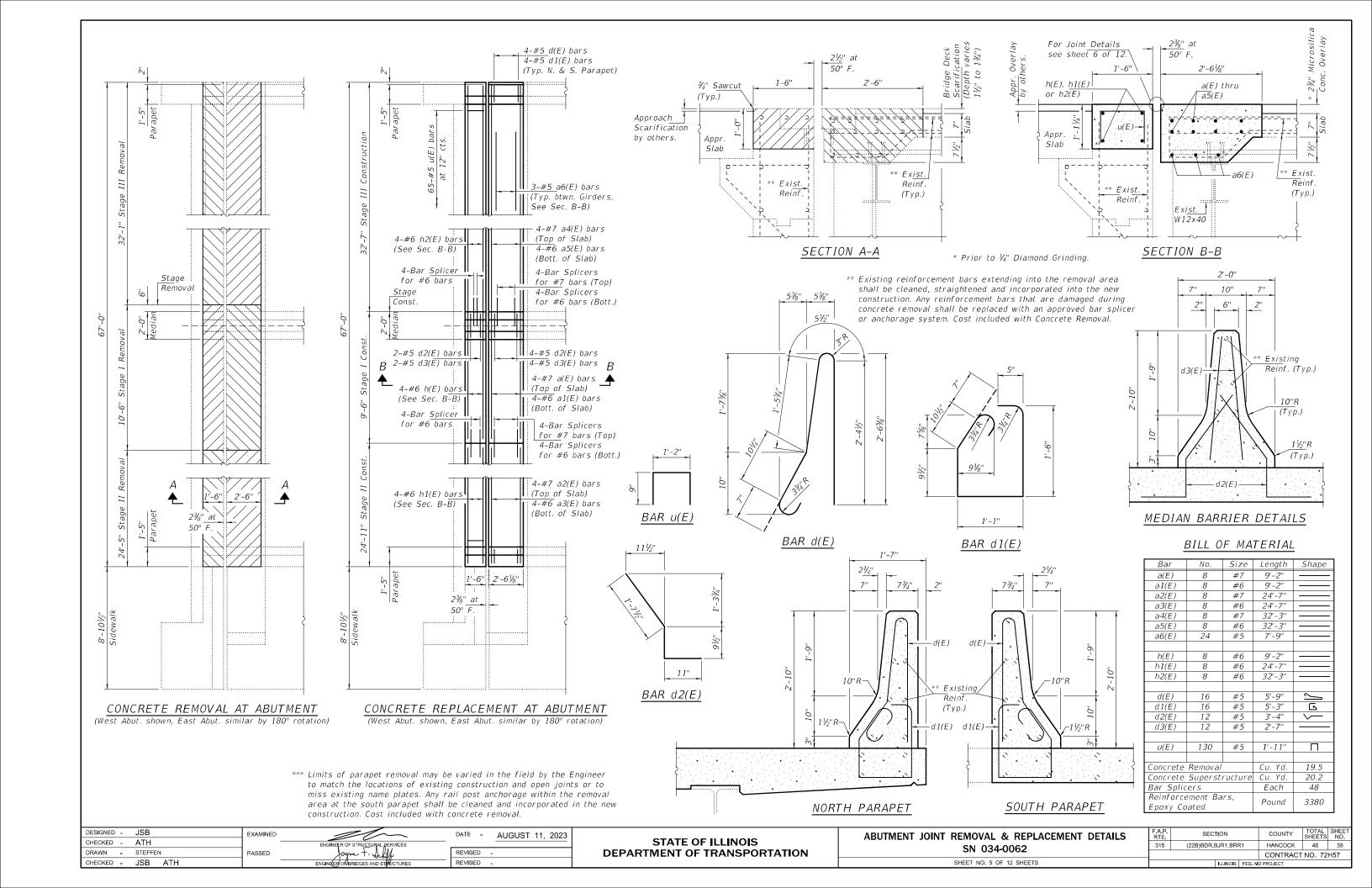


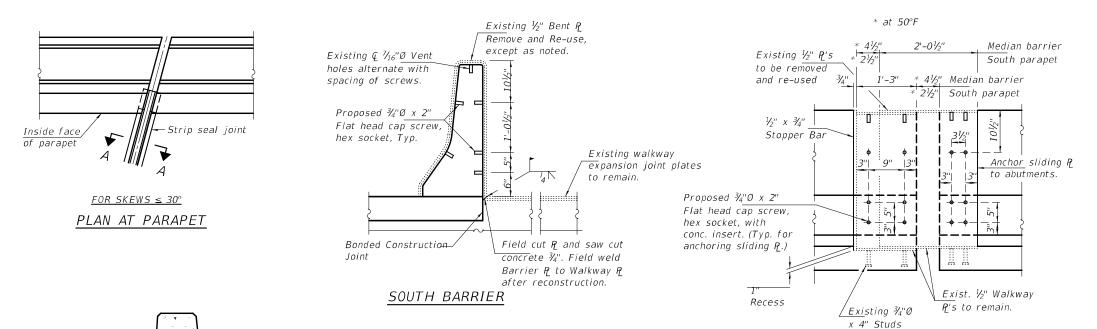
# STAGE III CROSS SECTION AT MID-SPAN (Looking East)

Notes:

For Scupper Adjustment Details & Overlay Treatment at Drains, see sheet 8 of 12.

DESIGNED - JSB	EXAMINED		DATE - AUGUST 11, 2023	STATE OF ILLINOIS	STAGING DETAILS FOR OVERLAY	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - ATH DRAWN - STEFFEN	PASSED	ENGINEER OF STRUCTURAL SERVICES  JOYNE F. J. L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 034-0062	315	(22B)BDR,BJR1,BRR1	HANCOCK CONTRACT	46 F NO. 72	38 157
CHECKED - JSB ATH		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 4 OF 12 SHEETS		ILLINOIS FED. AI			-





#### ELEVATION OF SOUTH BARRIER AT EXPANSION JOINT

(Median Barrier Similar)

#### Note

The strip seal shall be made continuous and shall have a minimum thickness of ½". 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.

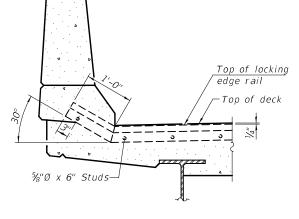
The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" 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  $\frac{3}{6}$ " 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.

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.

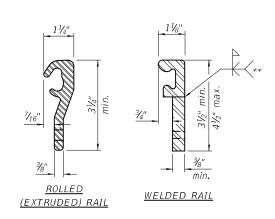


# $\frac{ELEVATION \ AT \ PARAPET}{(Skews \le 30^{\circ})}$

#### Locking edge rail-Locking edge rail-11/2" at 50° F at 50° F Top of concrete -Strip seal Top of concrete -Strip seal \* $\frac{1}{8}$ "Ø x 6" studs at 6" cts. (alternate angled/bent studs with horizontal studs) at 50° F at 50° F $\frac{3}{6}$ "Ø threaded rods in $\frac{7}{16}$ "Ø holes at $\pm 4$ '-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 SHOWING ROLLED RAIL JOINT SHOWING WELDED RAIL JOINT off flush with the plates after concrete is set.

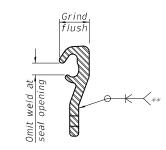
#### SECTION A-A

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



#### 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.

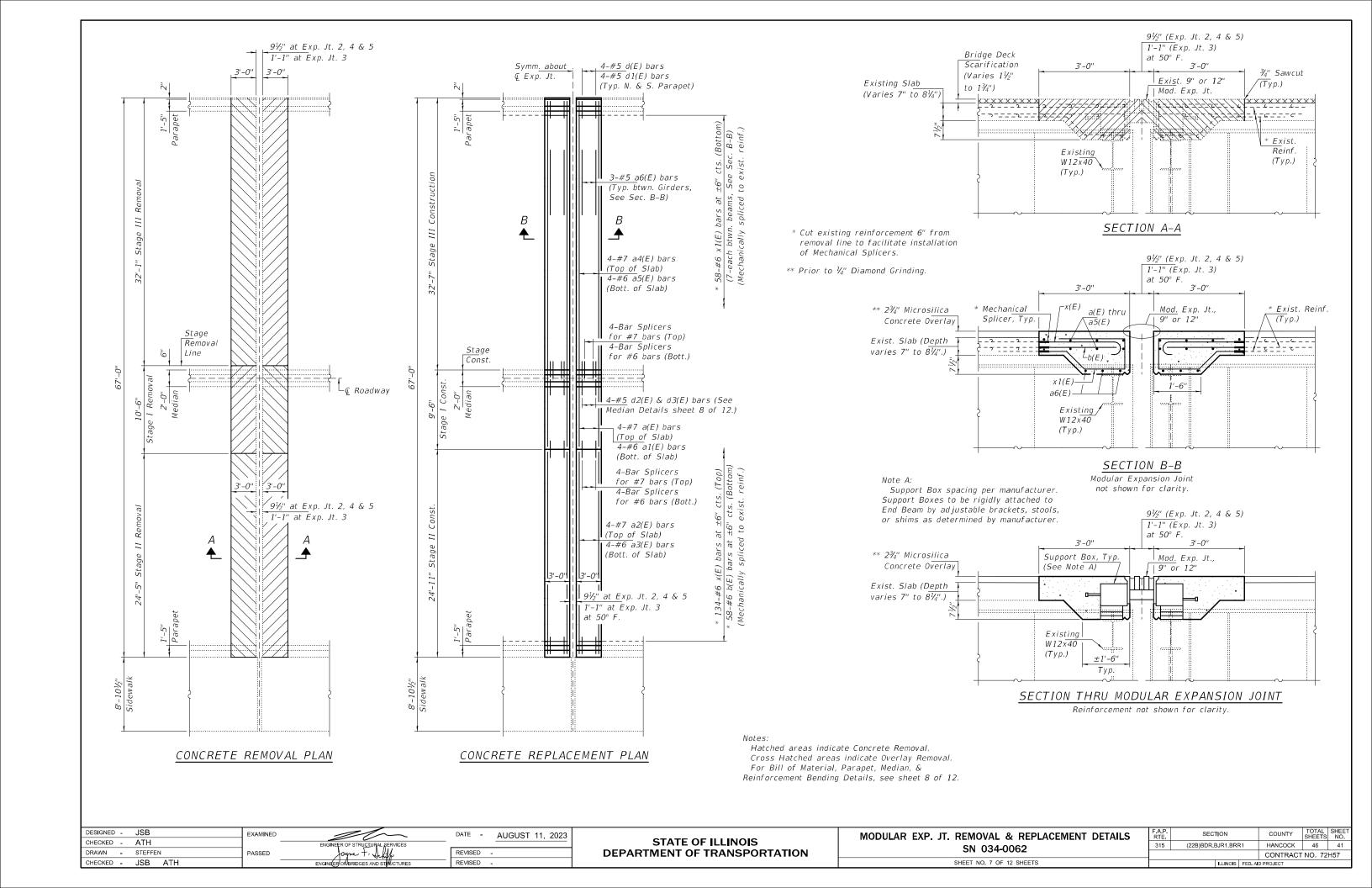
#### BILL OF MATERIAL

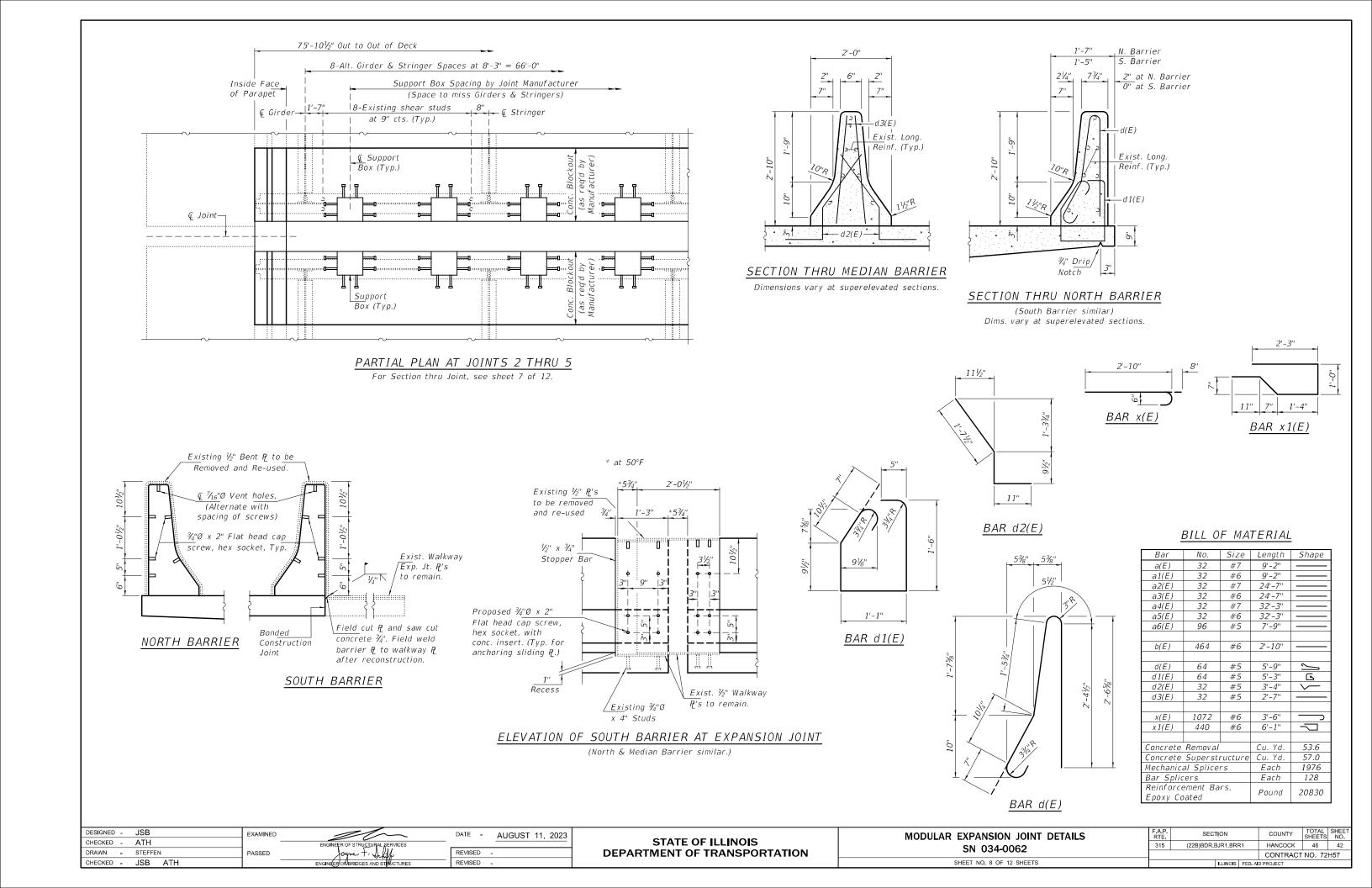
Item	Unit	Total
Preformed Joint Strip Seal	Foot	132

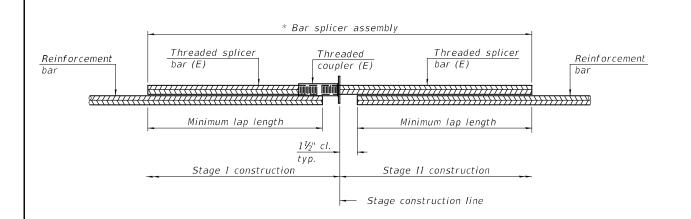
2-25-20
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DESIGNED -	JSB	EXAMINED		DATE -	AUGUST 11, 2023
CHECKED -	ATH	-	ENGINEER OF STRUCTURAL SERVICES		7100001 11, 2020
DRAWN -	STEFFEN	PASSED	Jayne F. Jeff	REVISED	-
CHECKED	ICD ATH			DEMCED	

F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.	
315	(22B)BDR,BJR1,BR	HANCOCK	46	40	
		CONTRACT	NO. 72	H57	







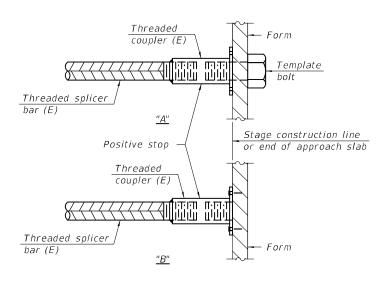
#### STANDARD BAR SPLICER ASSEMBLY PLAN

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.

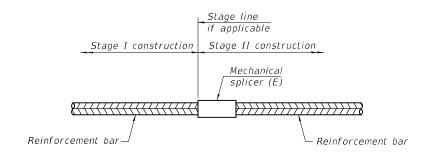
Location	Bar size	No. assemblies required	Minimum Iap length		
Hatchblock	#6	16	5'-0"		
Exp. Jt. 1 & 6	#6	16	4'-5"		
Exp. Jt. 1 & 6	#7	16	5'-2"		
Exp. Jt. 2 thru 5	#6	64	4'-5"		
Exp. Jt. 2 thru 5	#7	64	5'-2"		



#### 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
Exp. Jt. 2 thru 5	#6	1976

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.

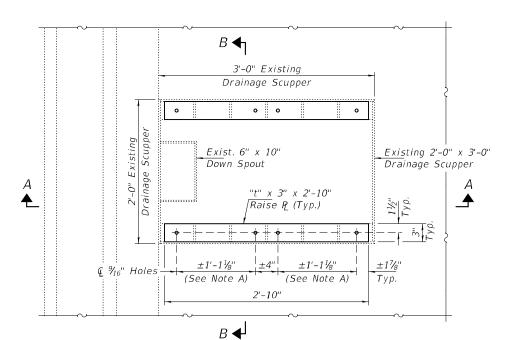
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

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

BSD-1

2-1-2023

DESIGNED -	JSB	EXAMINED		DATE -	AUGUST 11, 2023
CHECKED -	ATH		ENGINEER OF STRUCTURAL SERVICES		7,00001 11, 2020
DRAWN -	STEFFEN	PASSED	Jayne F. Jelf	REVISED	-
CHECKED -	JSB ATH		ENGINEER OF BRIDGES AND STRUCTURES	REVISED	_



#### SCUPPER ADJUSTMENT PLAN

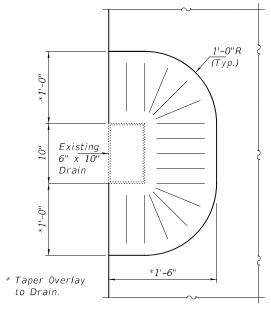
Existing Grates not shown for clarity. (See Drain Location Table for Dim. "t")

Note A:

Field drill holes in new Raise R's using existing 1½" Raise R's or existing drain grate as template.

#### 2'-0" x 3'-0" DRAIN LOCATIONS

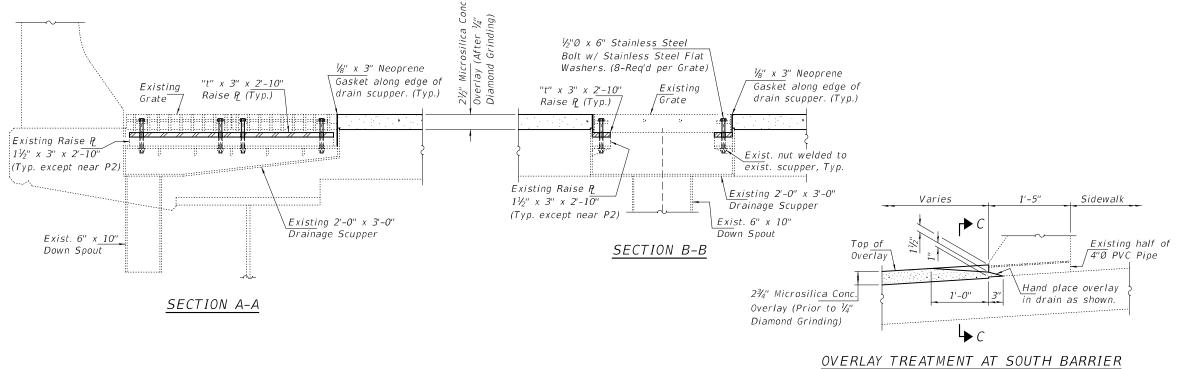
Station	Location	Qty.	Existing Raise P's	Dim. "t"
65+43.83	Near P1	2	11/2"	3/4''
66+77.21	Near P2	2	0"	21/4"
69+52.24	Near P3	2	1 1/2"	3/4"
72+47.17	Near P4	2	1 1/2"	3/4"
72+90.00	E. of P4	1	11/2"	3/4"
73+38.00	E. of P4	1	11/2"	3/4"



OVERLAY TREATMENT AT

6" x 10" DRAINS

(76-Locations)



SECTION C-C

1'-0"

Existing half of 4"Ø PVC Pipe

1'-0"

 $\top_{Top\ of}$ 

[∣0verlay

OVERLAY TREATMENT AT SOUTH BARRIER

CURB DRAINS BETWEEN STA. 64+50 & 73+50

DESIGNED -	JSB	EXAMINED
CHECKED -	ATH	
DRAWN -	STEFFEN	PASSED
CHECKED -	ISB ATH	] -

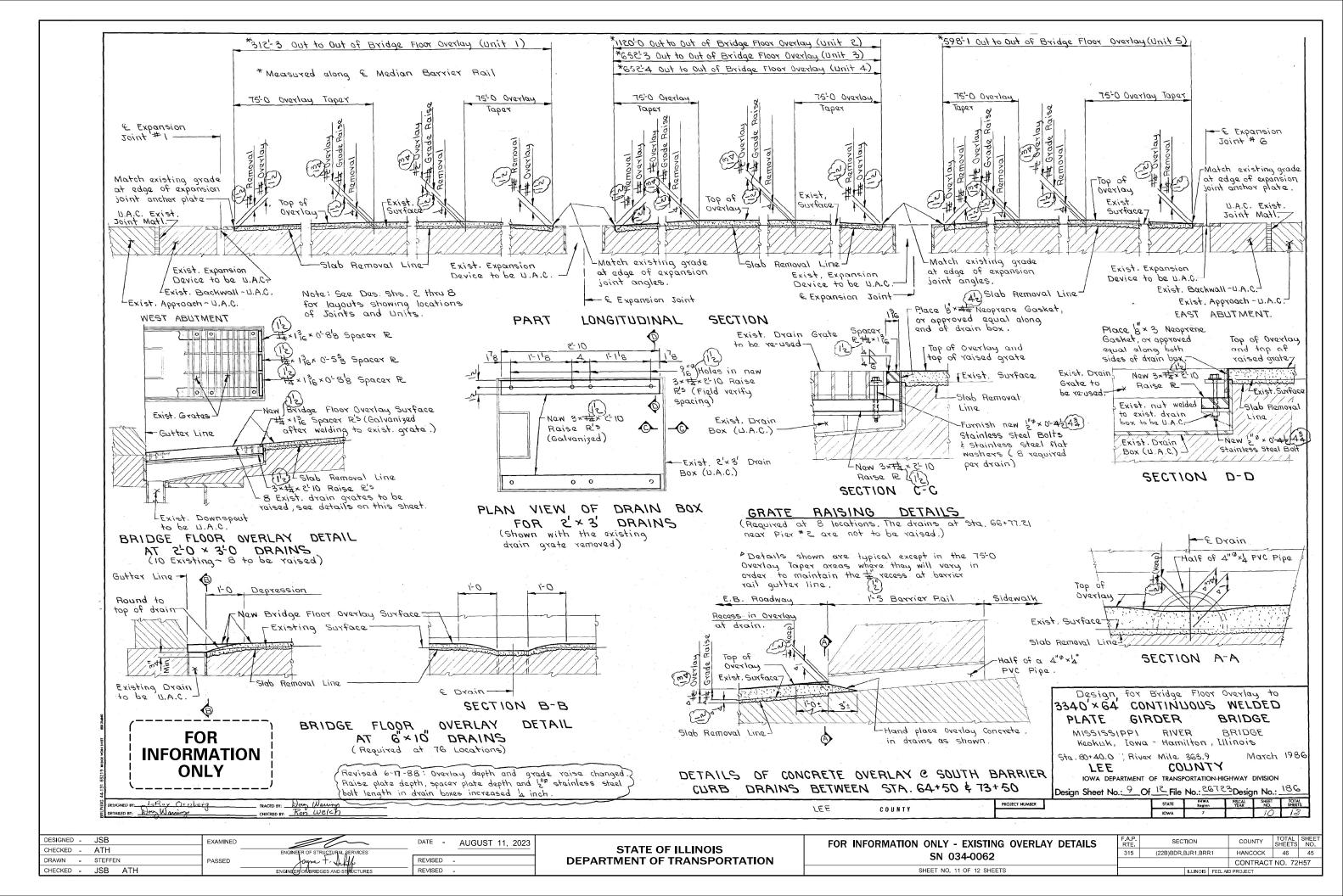
engineer of structural services	
ENGINE ER OF BRIDGES AND STRUCTURES	

REVISED -

REVISED

AUGUST 11, 2023	STATE OF ILLINOIS
-	DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS	F.A.P. RTE	SECTION			COUNTY	TOTAL SHEETS	SHEET NO.
SN 034-0062	315	(22B)BDR,BJR1,BRR1			HANCOCK	46	44
314 034-0002	CONTRACT				NO. 72	H57	
HEET NO. 10 OF 12 SHEETS			LLINOIS	FED AL	D PROJECT		



# THIS SHEET INTENTIONALLY LEFT BLANK

DESIGNED - JSB

CHECKED - ATH

DRAWN - STEFFEN

CHECKED - JSB ATH

ENGINEER OF STRUCTURAL SERVICES
PASSED

ENGINEER OF STRUCTURAL SERVICES
PROVINCES ON DEPARTMENT OF TRANSPORTATION

SHEET NO. 12 OF 12

SHEET NO. 12 OF 12