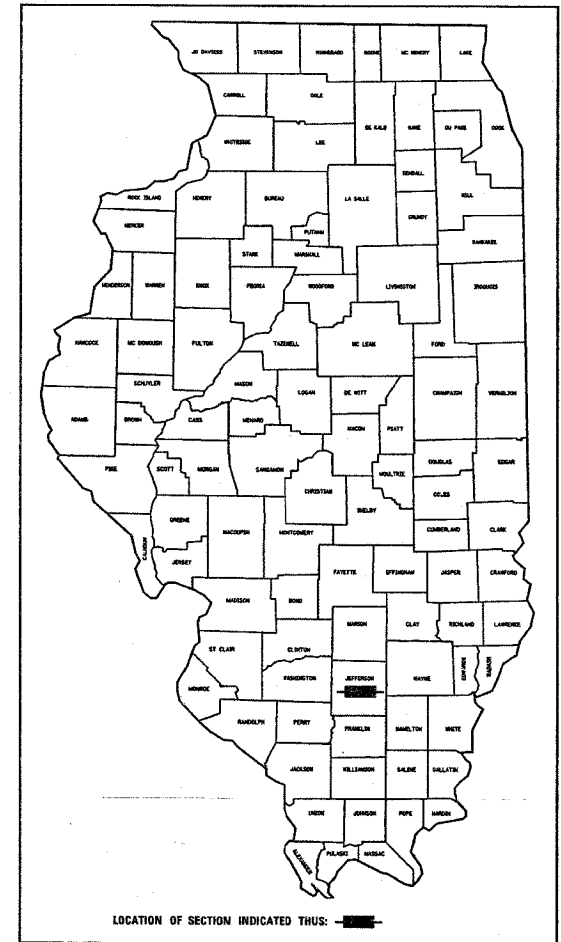


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL HIGHWAY PROJECT

FAP ROUTE 821 (IL ROUTE 15)
SECTION (13-2)RS-1, 13ZRS-3
PROJECT NO. F-0821(037)
BITUMINOUS RESURFACING
JEFFERSON COUNTY
C-97-066-04

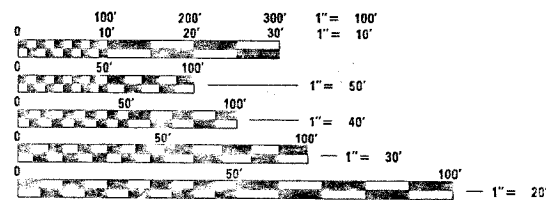
FAP R/L	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	#	JEFFERSON	11	1
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT NO.	
		• (13-2)RS-1,13ZRS-3		CONTRACT NO.
		D-97-029-04		74048



SEE SHEET 2 FOR INDEX OF SHEETS

STATION EQUATIONS

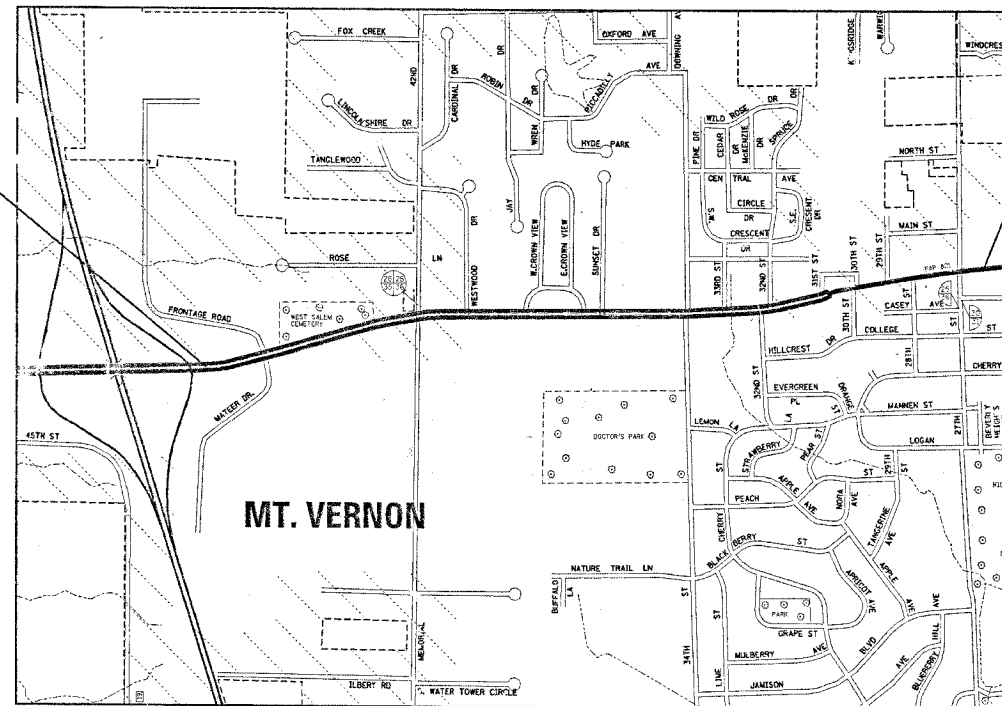
STA. 564+83.45 BK = STA. 564+89.51 AH
STA. 584+41.68 BK = STA. 584+40.70 AH
STA. 594+72.11 BK = STA. 594+69.74 AH



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 EXCAVATION
1-800-892-0123

PROJECT BEGINS
STA. 543+46



PROJECT ENDS
STA. 612+60



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10-28 2004

Stacy S. Phillips
DISTRICT ENGINEER

20

ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION

December 10, 2004
Nike Hine
ENGINEER OF DESIGN AND ENVIRONMENT

December 10, 2004
Victor Mosenko
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF
THE STATE OF ILLINOIS

CONTRACT NO. 74048

2003 ADT = 24,400

GROSS LENGTH = 6911.29 FEET = 1.31 MILES
NET LENGTH = 6911.29 FEET = 1.31 MILES

SEAL

TOWNSHIPS : SHILOH, MOUNT VERNON

steffenmk
10/26/2004
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PROJECT ENGINEER : MARK DAUGHERTY
SQUAD LEADER : BRIAN LEWIS
DESIGNER :
TELEPHONE : 217/342-3951 EX 360

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10/26/2004
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GEN/IND

FAP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	*	JEFFERSON	11	2
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

CONTRACT NO. 74048
• (13-2)RS-2,13ZRS-3

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2002; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THE WORK INCLUDED IN SECTION (13-2)RS-1, 13ZRS-3 CONSISTS OF BITUMINOUS SURFACE REMOVAL, PAVEMENT PATCHING, RESURFACING WITH BITUMINOUS CONCRETE, THERMOPLASTIC PAVEMENT MARKING, DETECTOR LOOPS, AND OTHER WORK NECESSARY TO COMPLETE THE SECTION.

THE TOP SURFACE OF THE EXISTING OPEN GRADED ASPHALT FRICTION SURFACE COURSE IS 5/8" ABOVE THE GUTTER FLAG. THE PROPOSED MILLING AND RESURFACING DEPTHS ARE DESIGNED TO PRODUCE A 1/4" STEP DOWN FROM RESURFACING TO GUTTER FLAG.

THE RESIDENT ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE CURING TIME FOR THE BITUMINOUS SURFACE COURSE.

THE CONTRACTOR SHALL PRESERVE AND PROTECT THE EXISTING PERMANENT SURVEY MARKERS AT THE LOCATIONS LISTED IN THE PLANS ALONG THE CENTERLINE OF THE ROADWAY. A QUANTITY HAS BEEN PROVIDED FOR REPLACEMENT IN CASE ANY OF THE MARKERS ARE DESTROYED. THE DISTRICT CHIEF OF SURVEYS SHALL BE CONSULTED PRIOR TO PLACEMENT OF ANY NEW MARKERS.

THE DETECTOR LOOP, TYPE I PAY ITEM IS INCLUDED FOR REPLACEMENT OF LOOPS EXPECTED TO BE DESTROYED BY THE MILLING.

BITUMINOUS SURFACE REMOVAL - BUTT JOINT WILL NOT BE PAID FOR SEPARATELY, COST SHALL BE INCLUDED IN THE UNIT PRICE FOR BITUMINOUS SURFACE REMOVAL VARIABLE DEPTH.

THE CONTRACTOR SHALL PROVIDE INTERNET ACCESS TO THE BITUMINOUS PLANT QUALITY CONTROL LAB SO THAT BITUMINOUS PLANT REPORTS CAN BE E-MAILED TO THE DISTRICT HEADQUARTERS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICES FOR OTHER ITEMS IN THE CONTRACT.

PREFORMED PLASTIC PAVEMENT MARKINGS, TYPE B • LINE 6" HAS BEEN INCLUDED TO ALLOW PLACEMENT OF THE WHITE DASHES BETWEEN LANES. PREFORMED PLASTIC PAVEMENT MARKING TYPE B SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS FOR PREFORMED PLASTIC PAVEMENT MARKING TYPE A AS SPECIFIED IN ARTICLE 780.07(c) OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION."

BITUMINOUS MATERIALS (PRIME COAT) SHALL BE EITHER RC-70 OR SS-1HP.

VIBRATORY ROLLERS IN DYNAMIC MODE WILL NOT BE PERMITTED.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

APPLICATION	AC/PG	RAP %	DESIGN AIR VOIDS	MIXTURE COMPOSITION	FRICTION AGGREGATE
POLYMERIZED BIT CONC SURFACE COURSE MIX "E" N90	SBS PG 70-22	0%	4.0% @ N=90	IL - 9.5 OR 12.5	MIXTURE E

COST OF REMOVAL OF TEMPORARY RAMP SHALL BE INCLUDED IN THE UNIT PRICE FOR TEMPORARY RAMP.

COST OF BITUMINOUS WEDGE PLACEMENT AND REMOVAL AT MANHOLES AND VALVE BOXES WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE PRICE FOR "BITUMINOUS CONCRETE REMOVAL (VARIABLE DEPTH)".

INDEX OF SHEETS

SHEET NO	TITLE
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS
3	SUMMARY OF QUANTITIES
4	SCHEDULES & TYPICAL SECTION
5-10	PLAN SHEETS
11	TYPICAL APPLICATION OF PAVEMENT MARKINGS

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

000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
606001-02	CONCRETE CURB AND COMBINATION CONCRETE CURB AND GUTTER
667101	PERMANENT SURVEY MARKERS
701602-02	LANE CLOSURE (URBAN), MULTILANE WITH BIDIRECTIONAL LEFT TURN LANE
701701-04	LANE CLOSURE (URBAN), MULTILANE INTERSECTION
702001-05	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS OF RAISED REFLECTIVE PAVEMENT MARKERS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS

REVISIONS	
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ILLINOIS DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES
&
INDEX OF SHEETS**

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FAP EST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	*	JEFFERSON	11	3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

CONTRACT NO. 74048
• (13-2)RS-2,13ZRS-3

SUMMARY OF QUANTITIES			URBAN 80% FED. 20% STATE TOTAL QUANTITIES		CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		I 000-2A		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	4865	4865		
40600895	CONSTRUCTING TEST STRIP	EACH	1	1		
40600990	TEMPORARY RAMP	SQ YD	590	590		
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	48652	48652		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	10	10		
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	1	1		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	10	10		
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	9	9		
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	3	3		
67100100	MOBILIZATION	L SUM	1	1		
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1	1		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1		
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	10,370	10,370		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1730	1730		
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	982.8	982.8		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	18650	18650		
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	3250	3250		
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	620	620		
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	490	490		
78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 6"	FOOT	3260	3260		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	530	530		
78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	170	170		
* 88600100	DETECTOR LOOP, TYPE I	FOOT	1960	1960		
X4066538	POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "E", N90	TON	3406	3406		

*SPECIALTY ITEMS

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ILLINOIS DEPARTMENT OF TRANSPORTATION

**SUMMARY
OF
QUANTITIES**

SCALE: VERT.
HORIZ.
DATE

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FAP DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	•	JEFFERSON	11	4

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT NO.
 CONTRACT NO. 74048
 • (13-2)RS-2,13ZRS-3

COMBINATION CURB & GUTTER REMOVAL

RT. STA. 584+54 TO 584+64 10 FEET

COMBINATION CONCRETE CURB & GUTTER TYPE B6.24

RT. STA. 584+54 TO 584+64 10 FEET

THERMOPLASTIC PAVEMENT MARKINGS

	WHITE	YELLOW
LETTERS & SYMBOLS	982.8 SQ FT	
LINE - 4"		18650 FEET
LINE - 6"	3250 FEET	
LINE - 12"		620 FEET
LINE - 24"	490 FEET	

RAISED REFLECTIVE PAVEMENT MARKERS

CRYSTAL MONO-DIRECTIONAL	208 EACH
AMBER BI-DIRECTIONAL	322 EACH

THERMOPLASTIC PAVEMENT MARKING REMOVAL

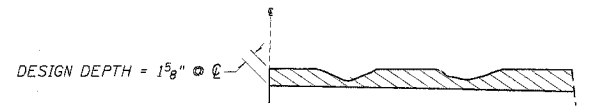
SW QUADRANT OF 42ND & BROADWAY	
25 FEET OF STOP BAR	50 SQ FT
24 FEET OF CROSSWALK	24 SQ FT
NORTH LEG OF 42ND ST	
18 FEET OF STOP BAR	36 SQ FT
18 FEET OF CROSSWALK	18 SQ FT
SW QUADRANT OF 34TH & BROADWAY	
16 FEET OF STOP BAR	32 SQ FT
NE QUADRANT OF 34TH & BROADWAY	
5 FEET OF STOP BAR	10 SQ FT
TOTAL	170 SQ FT

PERMANENT SURVEY MARKERS, TYPE 1

STA 543+72	1 EACH
STA 564+83.45	1 EACH
STA 567+00	1 EACH
STA 574+66.41	1 EACH
STA 584+41.68	1 EACH
STA 587+58.65	1 EACH
STA 593+85.32	1 EACH
STA 597+67.81	1 EACH
STA 603+66.75	1 EACH

SAVE & PROTECT SURVEY MARKERS

STA 543+72
STA 564+83.45
STA 567+00
STA 574+66.41
STA 584+41.68
STA 587+58.65
STA 593+85.32
STA 597+67.81
STA 603+66.75



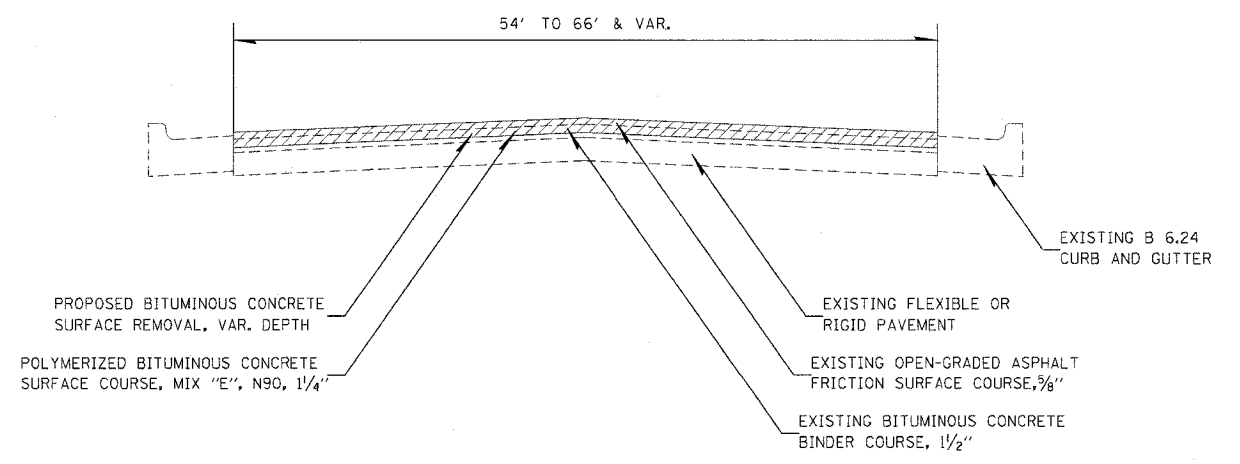
NOTES:

- MILLING SHALL BE DONE TO ATTAIN A 3/6" SLOPE IN CROWN SECTIONS
- THE AVERAGE DEPTH OF MILLING IS ESTIMATED TO BE 1 5/8" BUT MAY VARY IN ISOLATED LOCATIONS.

BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH) DETAIL

PAVING SCHEDULE

STATION TO STATION	LENGTH	EXISTING PAVEMENT WIDTH	AREA	BITUMINOUS MATERIALS (PRIME COAT)	POLYMERIZED BITUMINOUS CONCRETE SURFACE COURSE, MIX "E", N90	BITUMINOUS SURFACE REMOVAL, VAR. DEPTH
543+46 TO 557+42	1396.00	66	10237	1024	717	10237
557+42 TO 564+83.45	741.45	66	5437	544	381	5437
564+83.45BK = 564+89.51AH	EQUATION					
564+89.51 TO 574+66.41	976.90	66	7164	716	501	7164
574+66.41 TO 584+41.68	975.27	66	7152	715	501	7152
584+41.68BK = 584+40.70AH	EQUATION					
584+40.70 TO 590+75	634.30	66	4652	465	326	4652
590+75 TO 594+72.11	397.11	66-55	2669	267	187	2669
594+72.11BK = 594+69.74AH	EQUATION					
594+69.74 TO 595+25	55.26	55-54	333	33	23	333
595+25 TO 601+84	659.00	54	3954	395	277	3954
601+84 TO 608+41	657.00	54-64	4307	431	301	4307
603+41 TO 612+60	419.00	64-54	2747	275	192	2747
TOTALS			48652	4865	3406	48652



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULES & TYPICAL SECTIONS

SCALE: VERT. _____
 HORIZ. _____

DATE _____ DRAWN BY _____
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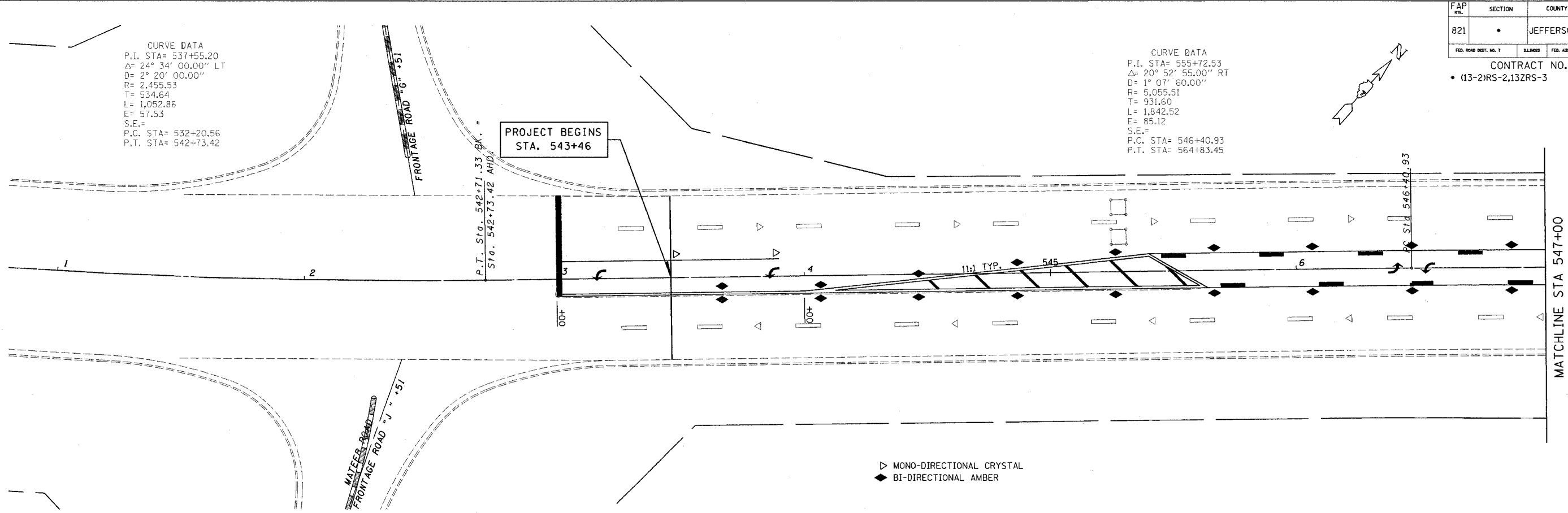
FAP RTL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821		JEFFERSON	11	5
FED. ROAD DIST. NO. 1		SLIDING	FED. AID PROJECT NO.	

CONTRACT NO. 74048
• (13-2)RS-2,13ZRS-3

CURVE DATA
P.I. STA= 537+55.20
 $\Delta = 24^\circ 34' 00.00''$ LT
D= 2° 20' 00.00"
R= 2,455.53
T= 534.64
L= 1,052.86
E= 57.53
S.E.=
P.C. STA= 532+20.56
P.T. STA= 542+73.42

CURVE DATA
P.I. STA= 555+72.53
 $\Delta = 20^\circ 52' 55.00''$ RT
D= 1° 07' 60.00"
R= 5,055.51
T= 931.60
L= 1,842.52
E= 85.12
S.E.=
P.C. STA= 546+40.93
P.T. STA= 564+83.45

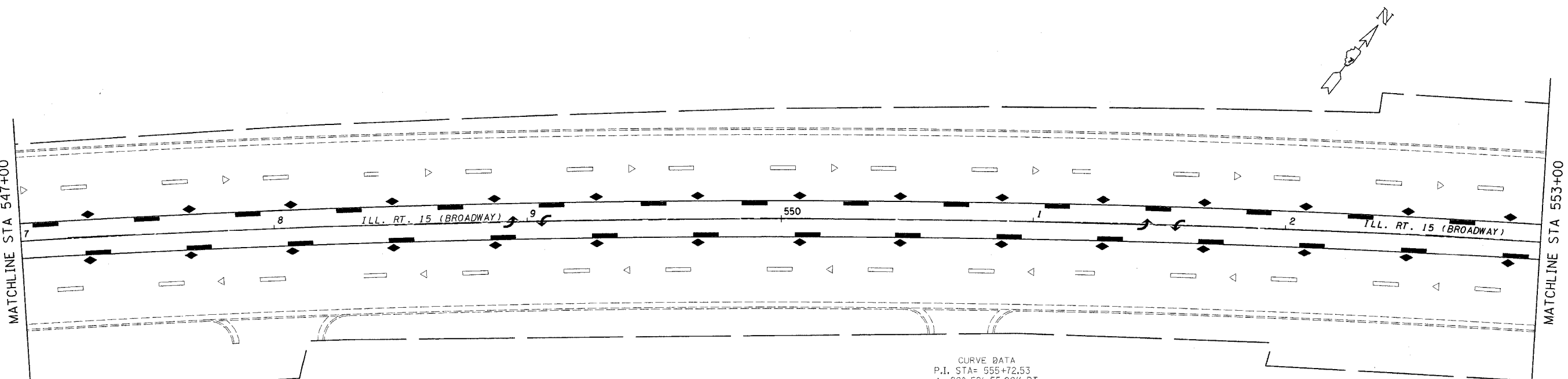
PROJECT BEGINS
STA. 543+46



▷ MONO-DIRECTIONAL CRYSTAL
◆ BI-DIRECTIONAL AMBER

MATCHLINE STA 547+00

MATCHLINE STA 553+00



CURVE DATA
P.I. STA= 555+72.53
 $\Delta = 20^\circ 52' 55.00''$ RT
D= 1° 07' 60.00"
R= 5,055.51
T= 931.60
L= 1,842.52
E= 85.12
S.E.=
P.C. STA= 546+40.93
P.T. STA= 564+83.45

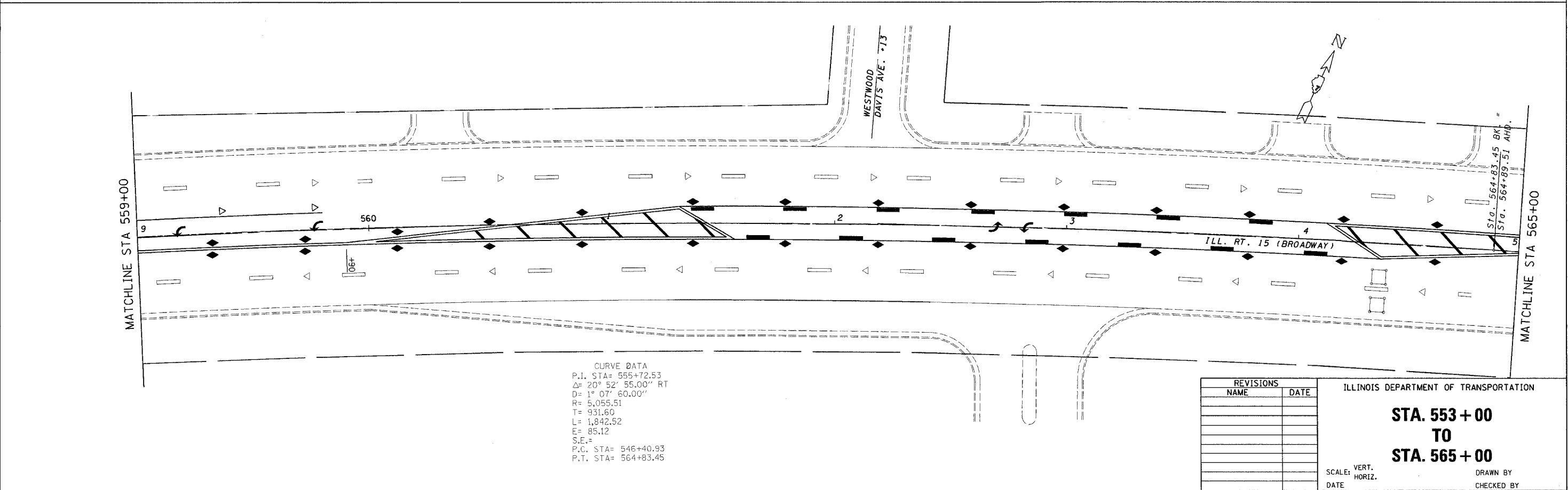
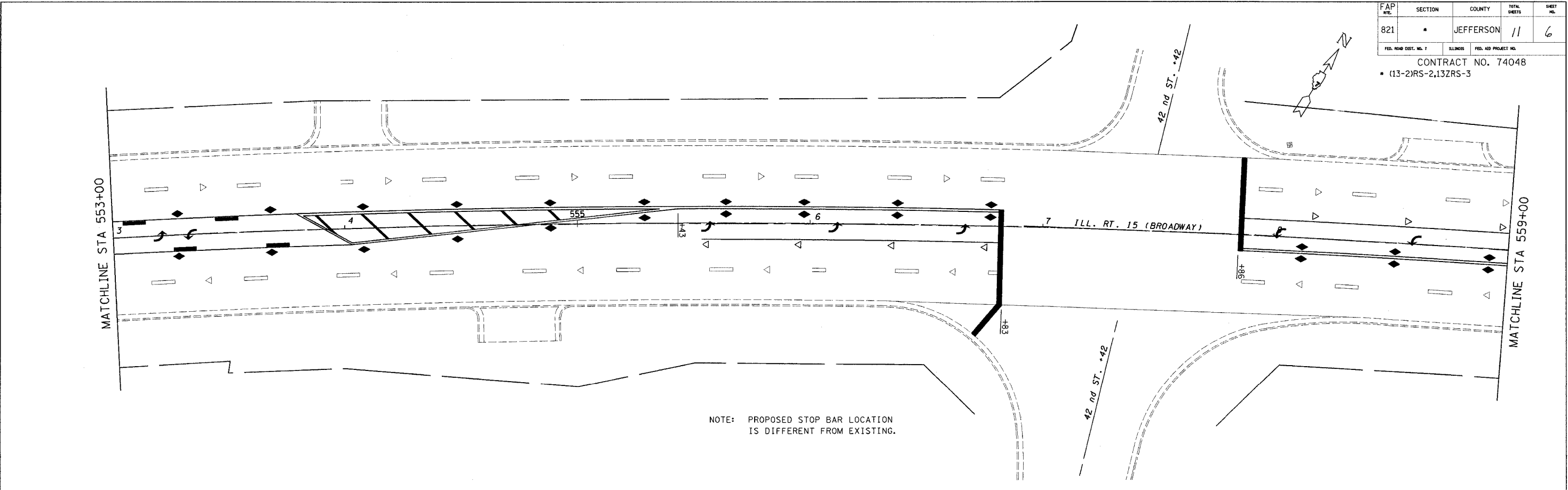
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**STA. 543 + 46
TO
STA. 553 + 00**
SCALE: VERT. DRAWN BY
 HORIZ. CHECKED BY
DATE

FAP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	*	JEFFERSON	11	6
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

CONTRACT NO. 74048
 * (13-2)RS-2.13ZRS-3

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CURVE DATA
 P.I. STA= 555+72.53
 $\Delta = 20^\circ 52' 55.00''$ RT
 $D = 1^\circ 07' 60.00''$
 R= 5,055.51
 T= 931.60
 L= 1,842.52
 E= 85.12
 S.E.=
 P.C. STA= 546+40.93
 P.T. STA= 564+83.45

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**STA. 553 + 00
 TO
 STA. 565 + 00**

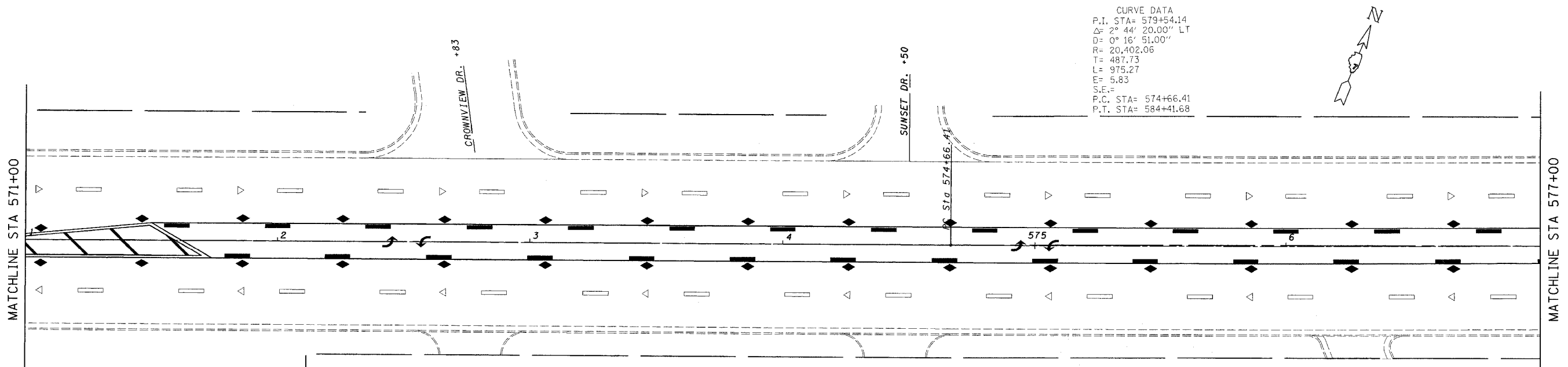
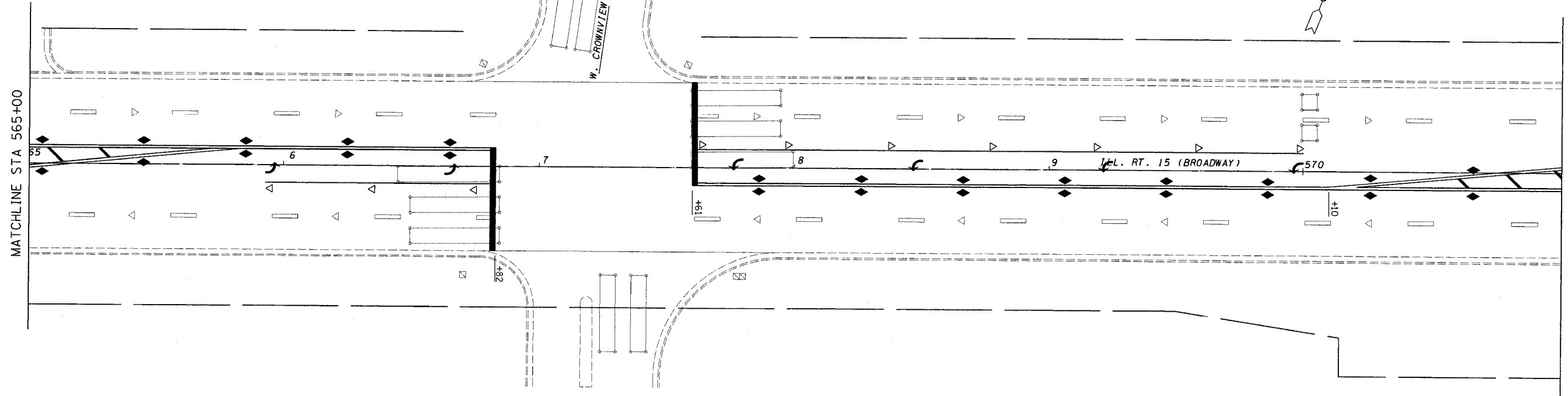
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DATE _____ DRAWN BY _____
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FAP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821		JEFFERSON	11	7
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT NO.	

CONTRACT NO. 74048
 (13-2)RS-2,13ZRS-3



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**STA. 565 + 00
 TO
 STA. 577 + 00**

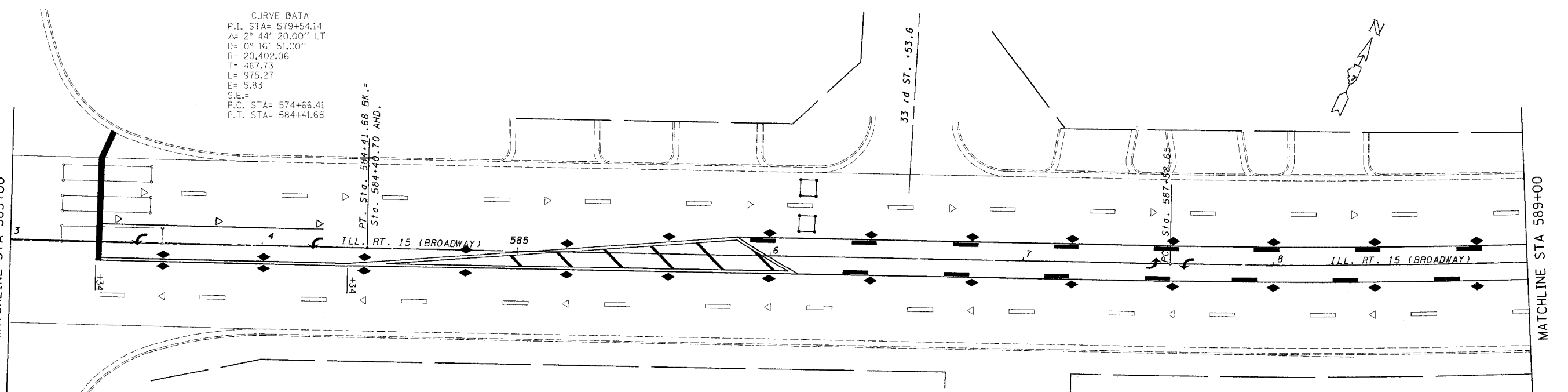
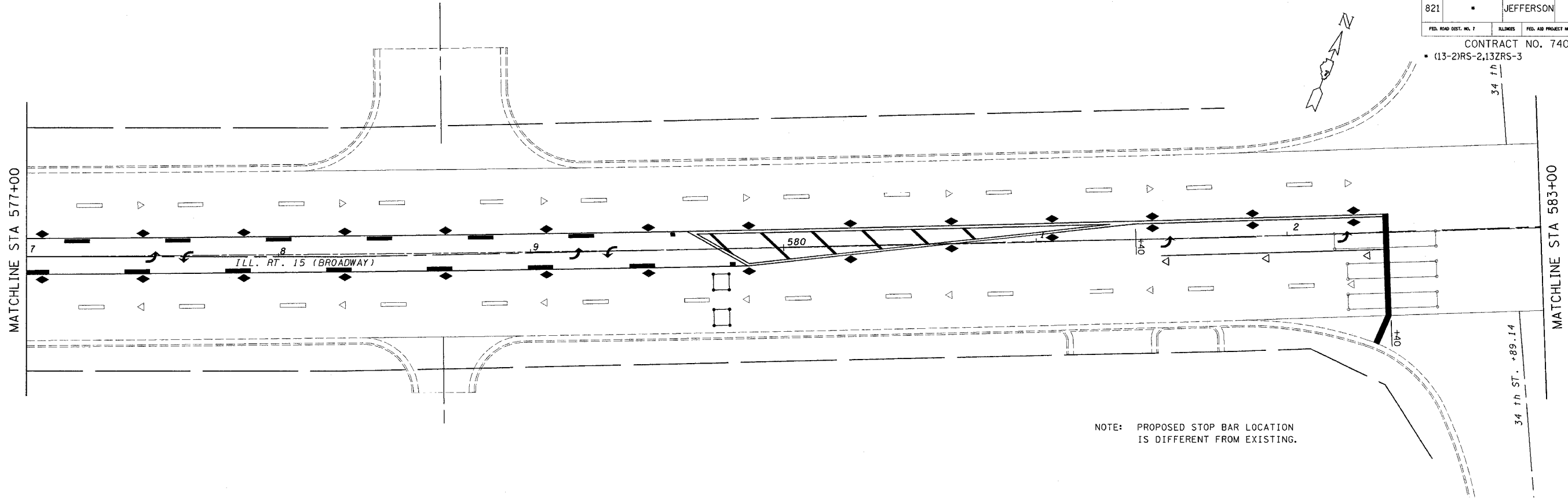
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DATE _____ DRAWN BY _____
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821	*	JEFFERSON	11	8
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

CONTRACT NO. 74048
 (13-2)RS-2,13ZRS-3



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**STA. 577 + 00
 TO
 STA. 589 + 00**

SCALE: VERT. _____
 HORIZ. _____

DATE _____

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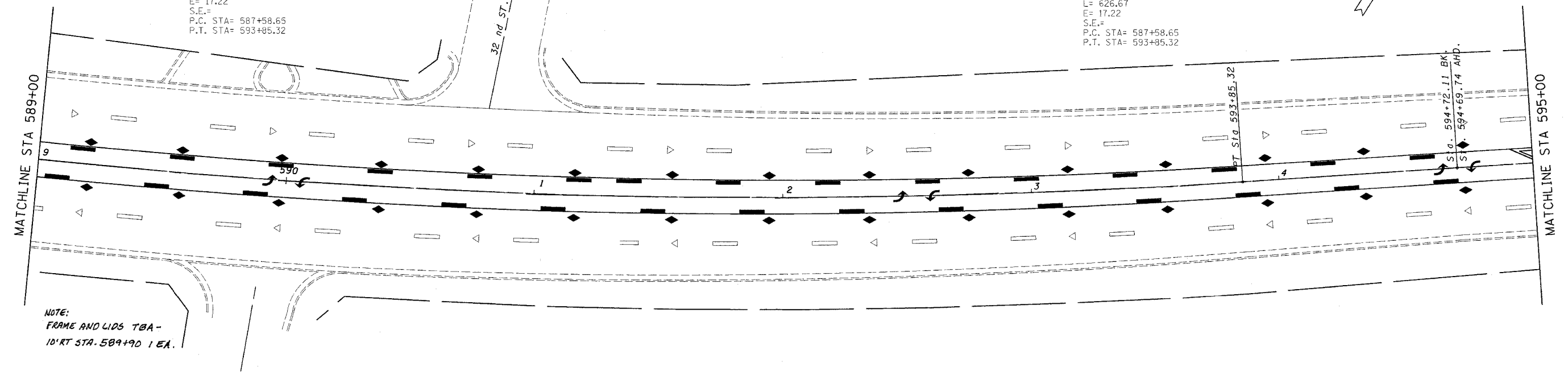
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FAP R/L	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	*	JEFFERSON	//	9
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

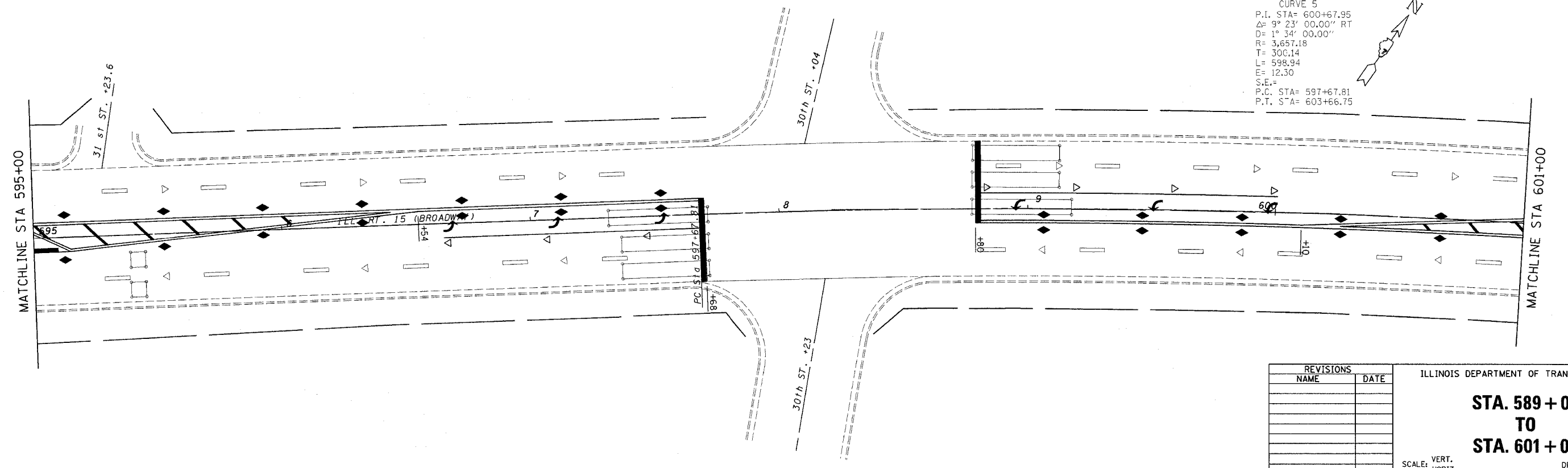
CONTRACT NO. 74048
 (13-2)RS-2.13ZRS-3

CURVE DATA
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 $\Delta = 12^\circ 32' 00.00''$ LT
 $D = 1^\circ 59' 60.00''$
 $R = 2,864.79$
 $T = 314.59$
 $L = 626.67$
 $E = 17.22$
 $S.E. =$
 P.C. STA= 587+58.65
 P.T. STA= 593+85.32

CURVE DATA
 P.I. STA= 590+73.24
 $\Delta = 12^\circ 32' 00.00''$ LT
 $D = 1^\circ 59' 60.00''$
 $R = 2,864.79$
 $T = 314.59$
 $L = 626.67$
 $E = 17.22$
 $S.E. =$
 P.C. STA= 587+58.65
 P.T. STA= 593+85.32



CURVE 5
 P.I. STA= 600+67.95
 $\Delta = 9^\circ 23' 00.00''$ RT
 $D = 1^\circ 34' 00.00''$
 $R = 3,657.18$
 $T = 300.14$
 $L = 598.94$
 $E = 12.30$
 $S.E. =$
 P.C. STA= 597+67.81
 P.T. STA= 603+66.75



REVISIONS	
NAME	DATE

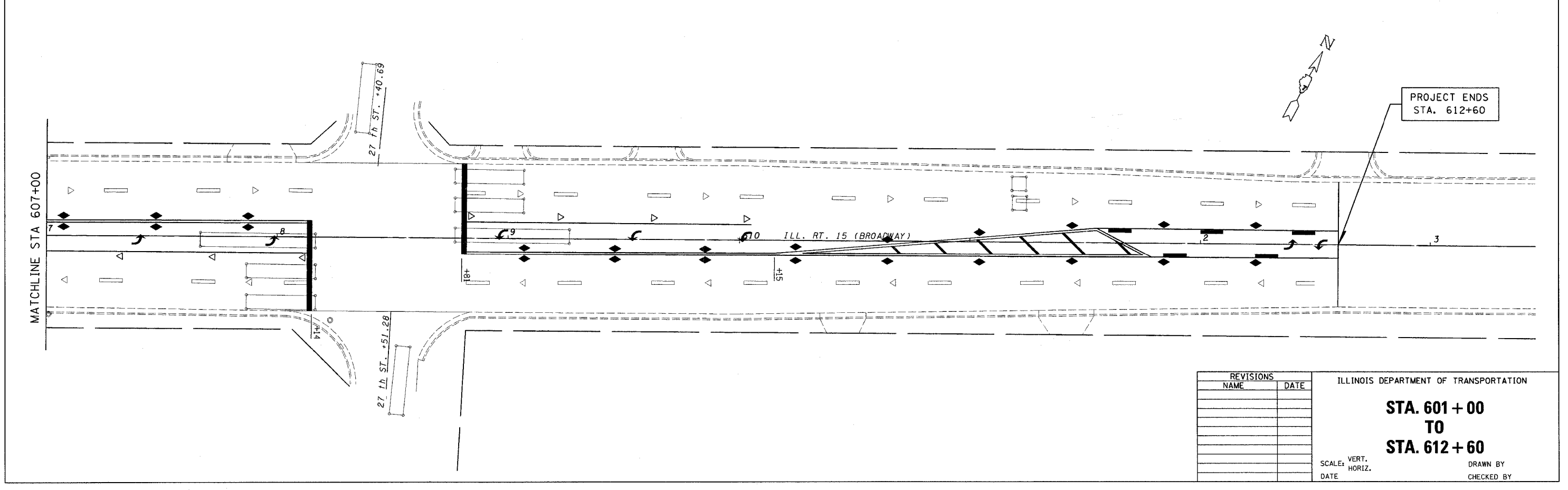
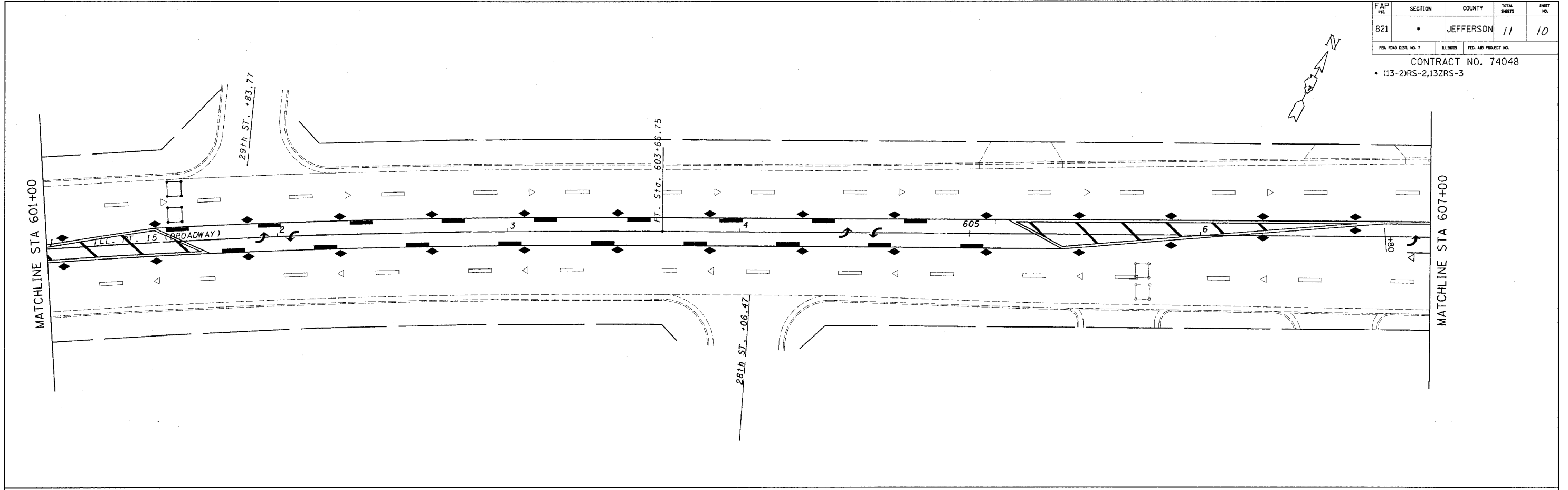
ILLINOIS DEPARTMENT OF TRANSPORTATION
**STA. 589 + 00
 TO
 STA. 601 + 00**
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FAP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821	*	JEFFERSON	11	10
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	

CONTRACT NO. 74048
* (13-2)RS-2,13ZRS-3



REVISIONS	
NAME	DATE

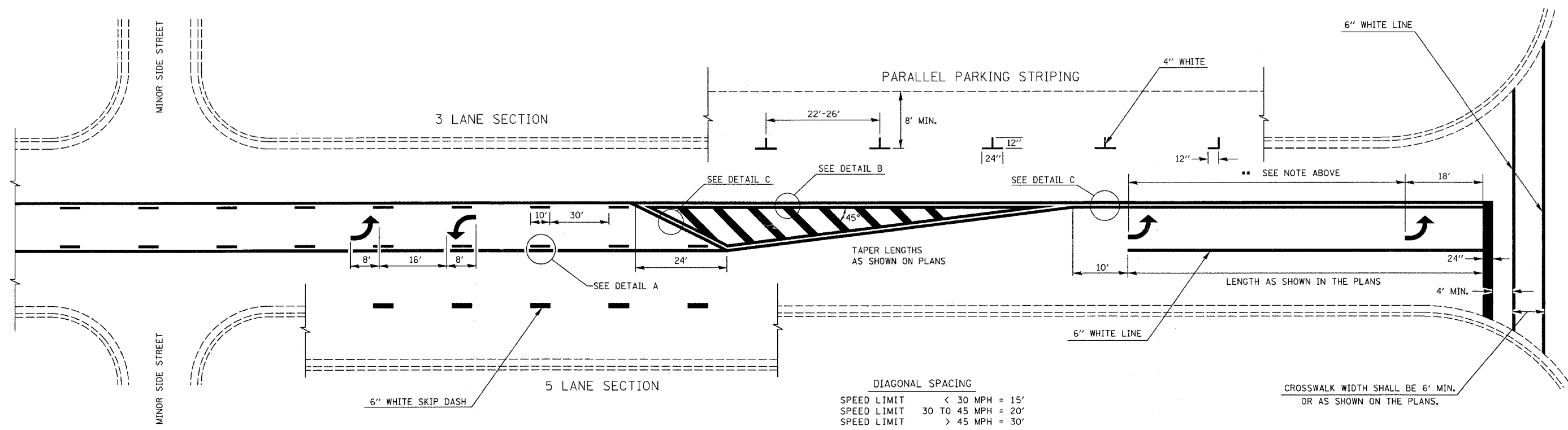
ILLINOIS DEPARTMENT OF TRANSPORTATION
**STA. 601 + 00
TO
STA. 612 + 60**
SCALE: VERT. DATE
HORIZ. DRAWN BY
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FAP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
821		JEFFERSON	//	//
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO.	
CONTRACT NO. 74048				
• (13-2)RS-2,13ZRS-3				

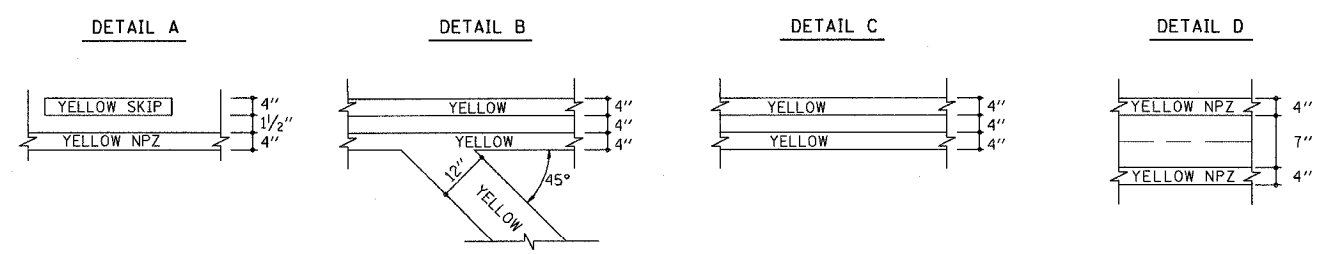
•• PLACE THE FIRST ARROW EVEN WITH THE BEGINNING OF THE TURN BAY.
 PLACE ANOTHER ARROW 18' BACK FROM THE STOP BAR, IF REQUIRED,
 ADD ADDITIONAL ARROWS TO MAINTAIN A MAXIMUM OF 80' SPACING.



TYPICAL BI-DIRECTIONAL TURN LANE MARKINGS
 (SHOWING TRANSITION TO EXCLUSIVE LEFT TURN LANE)

NOTES:

1. NO LESS THAN 2 ARROWS SHALL BE USED.
2. TAPER RATES, LANE WIDTHS, AND STORAGE LENGTHS AS SHOWN ON THE PLANS.
3. AVOID PLACING BI-DIRECTIONAL ARROWS IN INTERSECTIONS.
4. BI-DIRECTIONAL ARROWS SHALL BE SPACED A MAXIMUM OF 250'.



NOT TO SCALE

REVISIONS	
NAME	DATE
MMO	12-99
DRM	08-04

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATION OF PAVEMENT MARKINGS

SCALE: VERT. DATE
 HORIZ. DATE

DRAWN BY
 CHECKED BY